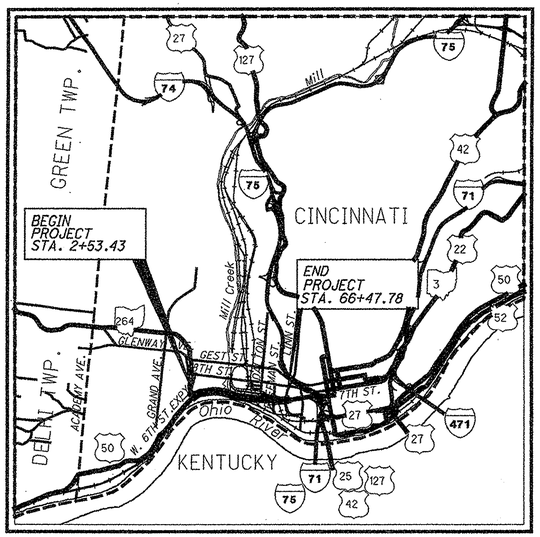


LOCATION MAP

LATITUDE: 39°06'03" N LONGITUDE: 84°32'22" W

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

	WEST OF FREEMAN AVE	EAST OF FREEMAN AVE
CURRENT ADT (2011)	28100	23230
DESIGN YEAR ADT (2031)	25510	21190
DESIGN HOURLY VOLUME (2031)	2300	1560
DIRECTIONAL DISTRIBUTION	51%	56%
TRUCKS (24 HOUR B&C)	1021	464
DESIGN SPEED	55 MPH	55 MPH
LEGAL SPEED	50 MPH	50 MPH
DESIGN FUNCTIONAL CLASSIFICATION: URBAN FREEWAY AND EXPRESSWAY		
NHS PROJECT	YES	

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBERS
US 50 - GRADED SHOULDER WIDTH	12-22-10	68-83
US 50 - VERTICAL ALIGNMENT:		
MAXIMUM GRADES	12-22-10	78-79
STOPPING SIGHT DISTANCE	12-22-10	75-76,78, 81-82
US 50 - SUPERELEVATION:		
RATE OF SUPERELEVATION	12-22-10	68, 76-77, 79-80

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:

TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OH 45242
PHONE: 513 621-1981
WWW.TRANSYSTEMS.COM

ENGINEERS SEAL:

FOR STRUCTURES ONLY

STATE OF OHIO — MICHAEL S. LEMETT E-74344 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Michael S. Lemett
DATE: 11-10-10

ENGINEERS SEAL:

FOR ENTIRE PLAN EXCEPT STRUCTURES

STATE OF OHIO — JOSEPH R. ESPELAGE E-61783 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Joseph R. Espelage
DATE: 11-10-10

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

HAM-50-19.03

PART 2

CITY OF CINCINNATI

HAMILTON COUNTY

FOR PART 1, SEE HAM-50-18.79

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2-3
CENTERLINE REFERENCES	4
TYPICAL SECTIONS	5-8
GENERAL NOTES	9-10
MAINTENANCE OF TRAFFIC	11-62
GENERAL SUMMARY	63-65
SUBSUMMARIES	66-67
US-50 PLAN AND PROFILES	68-83
CROSS SECTIONS	84-85
FREEMAN AVE PLAN	86-88
SUPERELEVATION TABLES	89-90
BARRIER DETAILS	91-95
TRAFFIC CONTROL SUBSUMMARIES	96-103
TRAFFIC CONTROL PLAN	104-110
SIGN DETAILS	112-120
SIGN ELEVATIONS	121-137
OVERHEAD SIGN SUPPORT	138-139
LIGHTING PLAN	140-153
STRUCTURES OVER 20 FEET	154-442
STRUCTURAL FOUNDATION EXPLORATION	

FOR STANDARD CONSTRUCTION DRAWINGS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS, SEE PART 1

PROJECT DESCRIPTION

PAVEMENT OVERLAY AND BRIDGE REHABILITATION (MULTIPLE STRUCTURES) FOR U.S. 50 (6TH STREET EXPRESSWAY) IN CINCINNATI FROM MILE MARKER 19.03 TO MILE MARKER 20.28.

EARTH DISTURBANCE AREAS

N/A (MAINTENANCE PROJECT)

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2010 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEET 11 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____
DATE 11/17/10 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 1/7/11 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E060812

PID NO. 20082

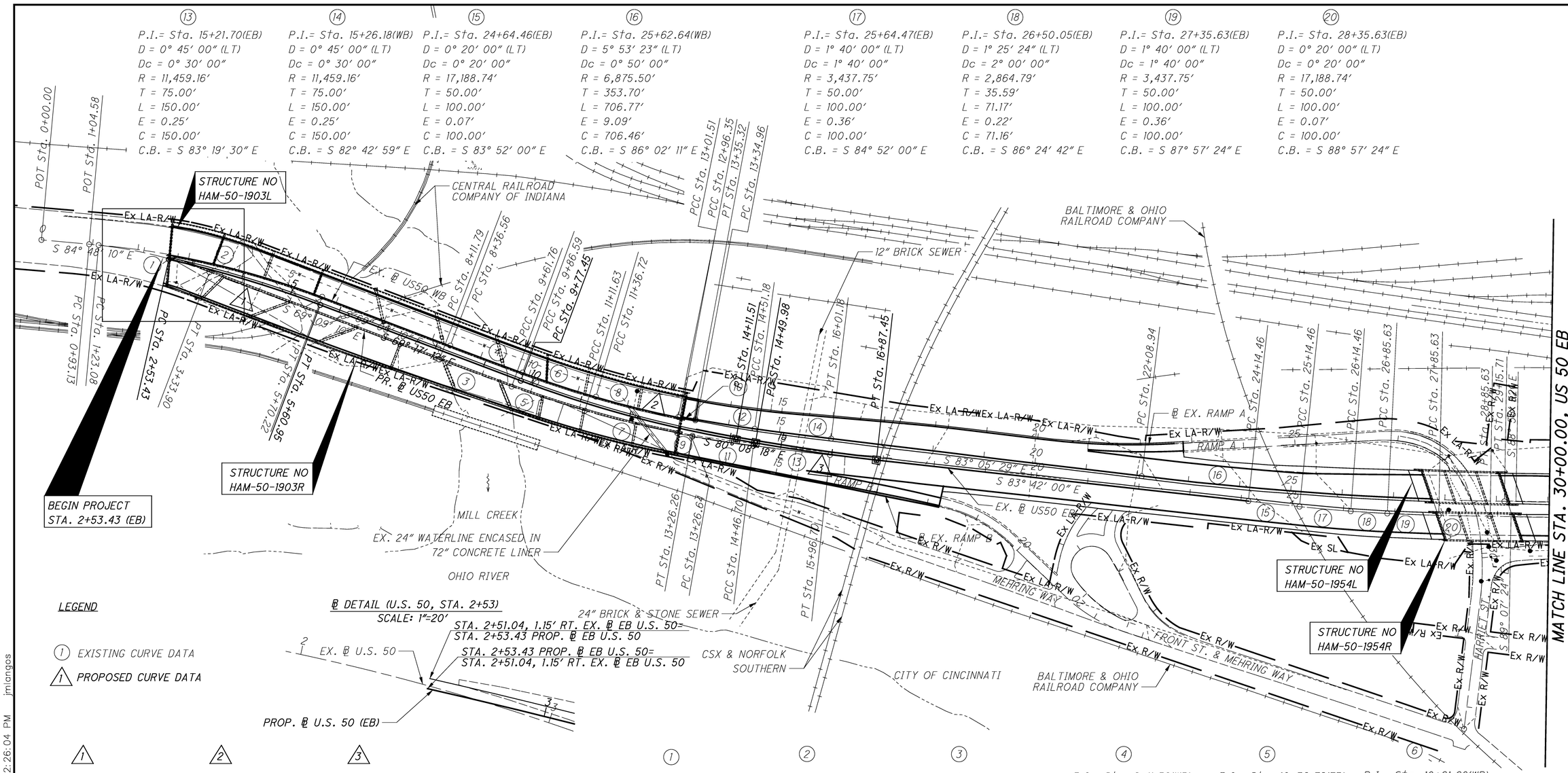
CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
CSX TRANSPORTATION
& RAIL AMERICA (CIND)

HAM-50-19.03

1
442

G:\CN06\0011\Road\sheets\75736GT001.dgn 11/9/2010 2:38:15 PM jrespelage



(13) P.I.= Sta. 15+21.70(EB)
D = 0° 45' 00" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 75.00'
L = 150.00'
E = 0.25'
C = 150.00'
C.B. = S 83° 19' 30" E

(14) P.I.= Sta. 15+26.18(WB)
D = 0° 45' 00" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 75.00'
L = 150.00'
E = 0.25'
C = 150.00'
C.B. = S 82° 42' 59" E

(15) P.I.= Sta. 24+64.46(EB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = S 83° 52' 00" E

(16) P.I.= Sta. 25+62.64(WB)
D = 5° 53' 23" (LT)
Dc = 0° 50' 00"
R = 6,875.50'
T = 353.70'
L = 706.77'
E = 9.09'
C = 706.46'
C.B. = S 86° 02' 11" E

(17) P.I.= Sta. 25+64.47(EB)
D = 1° 40' 00" (LT)
Dc = 1° 40' 00"
R = 3,437.75'
T = 50.00'
L = 100.00'
E = 0.36'
C = 100.00'
C.B. = S 84° 52' 00" E

(18) P.I.= Sta. 26+50.05(EB)
D = 1° 25' 24" (LT)
Dc = 2° 00' 00"
R = 2,864.79'
T = 35.59'
L = 71.17'
E = 0.22'
C = 71.16'
C.B. = S 86° 24' 42" E

(19) P.I.= Sta. 27+35.63(EB)
D = 1° 40' 00" (LT)
Dc = 1° 40' 00"
R = 3,437.75'
T = 50.00'
L = 100.00'
E = 0.36'
C = 100.00'
C.B. = S 87° 57' 24" E

(20) P.I.= Sta. 28+35.63(EB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = S 88° 57' 24" E

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DL
CHECKED JAP

SCHEMATIC PLAN

HAM-50-19.03

2
442

LEGEND

(1) EXISTING CURVE DATA

/1\ PROPOSED CURVE DATA

℄ DETAIL (U.S. 50, STA. 2+53)
SCALE: 1"=20'

STA. 2+51.04, 1.15' RT. EX. ℄ EB U.S. 50=
STA. 2+53.43 PROP. ℄ EB U.S. 50

STA. 2+53.43 PROP. ℄ EB U.S. 50=
STA. 2+51.04, 1.15' RT. EX. ℄ EB U.S. 50

/1\ P.I.= Sta. 4+07.44
D = 7° 57' 21" (RT)
Dc = 2° 35' 13"
R = 2,214.71'
T = 154.01'
L = 307.52'
E = 5.35'
C = 307.28'
C.B. = S 73° 15' 52" E

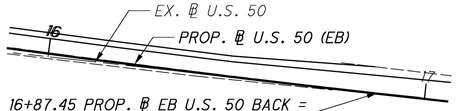
/2\ P.I.= Sta. 11+95.13
D = 10° 51' 06" (LT)
Dc = 2° 30' 00"
R = 2,291.84'
T = 217.68'
L = 434.07'
E = 10.31'
C = 433.42'
C.B. = S 74° 42' 45" E

/3\ P.I.= Sta. 15+68.75
D = 3° 33' 42" (LT)
Dc = 1° 30' 00"
R = 3,820.00'
T = 118.77'
L = 237.47'
E = 1.85'
C = 237.43'
C.B. = S 81° 55' 09" E

Ⓜ ITEM 604, MONUMENT ASSEMBLY

NOTE: THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

℄ DETAIL (U.S. 50, STA. 16+87.45)
SCALE: 1"=20'



STA. 16+87.45 PROP. ℄ EB U.S. 50 BACK =
STA. 16+87.45 EX. ℄ EB U.S. 50 AHEAD

(1) P.I.= Sta. 2+14.27(EB)
D = 15° 39' 00" (RT)
Dc = 6° 30' 00"
R = 881.47'
T = 121.14'
L = 240.77'
E = 8.28'
C = 240.02'
C.B. = S 76° 58' 40" E

(2) P.I.= Sta. 3+48.05(WB)
D = 15° 39' 00" (RT)
Dc = 3° 30' 00"
R = 1,637.02'
T = 224.97'
L = 447.14'
E = 15.39'
C = 445.75'
C.B. = S 76° 58' 40" E

(3) P.I.= Sta. 8+86.78(EB)
D = 0° 45' 00" (LT)
Dc = 0° 30' 00"
R = 11,457.16'
T = 74.99'
L = 149.97'
E = 0.25'
C = 149.97'
C.B. = S 69° 31' 40" E

(4) P.I.= Sta. 9+11.58(WB)
D = 0° 45' 00" (LT)
Dc = 0° 30' 00"
R = 11,461.16'
T = 75.01'
L = 150.03'
E = 0.25'
C = 150.03'
C.B. = S 69° 31' 40" E

(5) P.I.= Sta. 10+36.72(EB)
D = 3° 45' 00" (LT)
Dc = 2° 30' 08"
R = 2,289.83'
T = 74.96'
L = 149.87'
E = 1.23'
C = 149.84'
C.B. = S 71° 46' 40" E

(6) P.I.= Sta. 10+61.68(WB)
D = 3° 45' 00" (LT)
Dc = 2° 29' 52"
R = 2,293.83'
T = 75.09'
L = 150.13'
E = 1.23'
C = 150.10'
C.B. = S 71° 46' 40" E

(7) P.I.= Sta. 12+04.06(EB)
D = 5° 32' 50" (LT)
Dc = 3° 00' 11"
R = 1,907.86'
T = 92.43'
L = 184.71'
E = 2.24'
C = 184.64'
C.B. = S 76° 25' 35" E

(8) P.I.= Sta. 12+19.17(WB)
D = 4° 56' 19" (LT)
Dc = 2° 59' 49"
R = 1,911.86'
T = 82.45'
L = 164.79'
E = 1.78'
C = 164.74'
C.B. = S 76° 07' 20" E

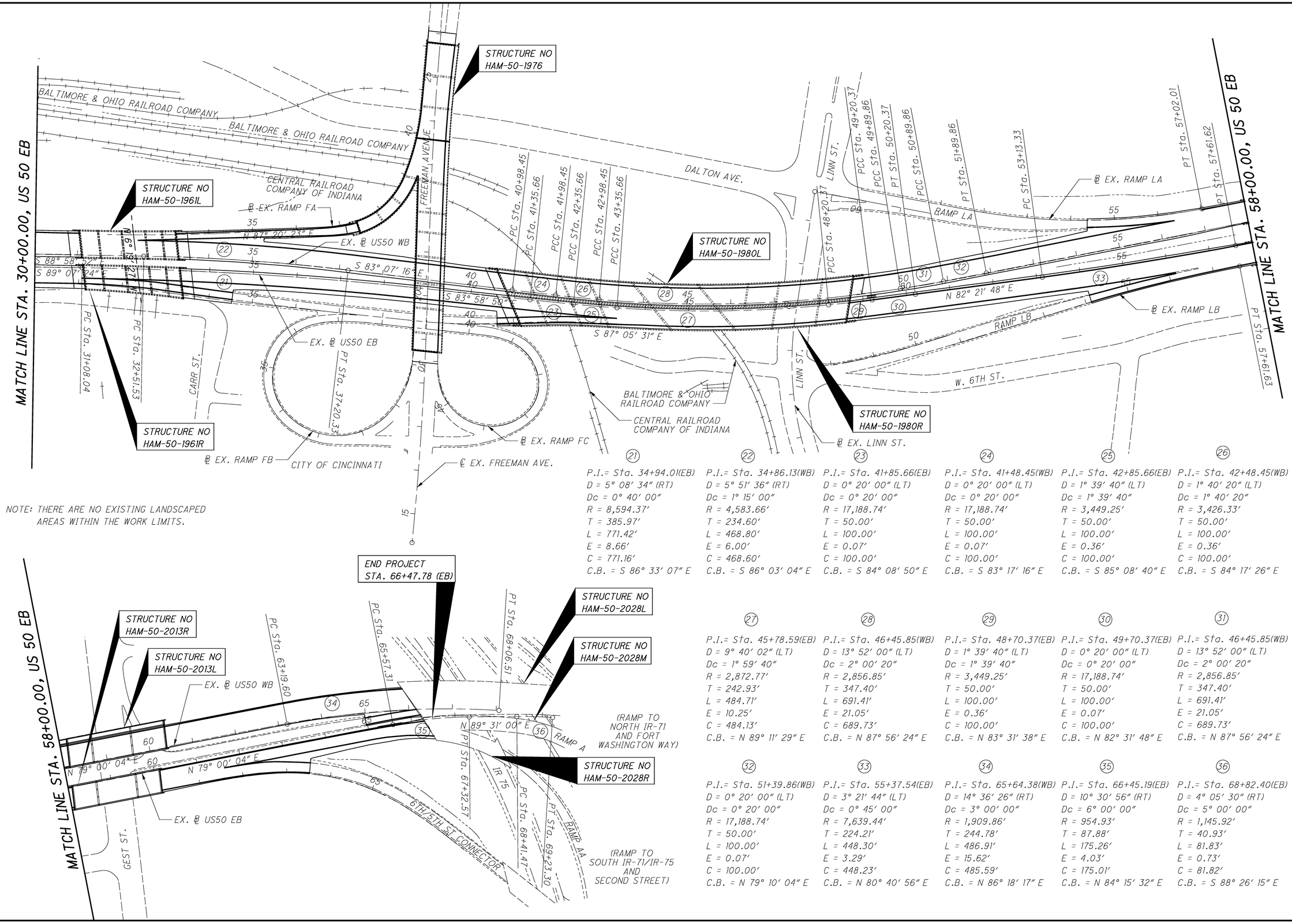
(9) P.I.= Sta. 13+11.30(EB)
D = 0° 44' 54" (LT)
Dc = 2° 30' 08"
R = 2,289.83'
T = 14.96'
L = 29.91'
E = 0.05'
C = 29.91'
C.B. = S 79° 34' 28" E

(10) P.I.= Sta. 13+18.42(WB)
D = 0° 50' 40" (LT)
Dc = 2° 29' 52"
R = 2,293.83'
T = 16.91'
L = 33.81'
E = 0.06'
C = 33.81'
C.B. = S 79° 00' 50" E

(11) P.I.= Sta. 13+86.69(EB)
D = 3° 00' 06" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 60.05'
L = 120.06'
E = 0.79'
C = 120.05'
C.B. = S 81° 26' 58" E

(12) P.I.= Sta. 13+93.08(WB)
D = 2° 54' 20" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
T = 58.12'
L = 116.22'
E = 0.74'
C = 116.21'
C.B. = S 80° 53' 20" E

G:\CN06\0011\Road\Sheets\75736gb001.dgn 11/9/2010 12:26:04 PM jmlangos



(21)
P.I.= Sta. 34+94.01(EB)
D = 5° 08' 34" (RT)
Dc = 0° 40' 00"
R = 8,594.37'
T = 385.97'
L = 771.42'
E = 8.66'
C = 771.16'
C.B. = S 86° 33' 07" E

(22)
P.I.= Sta. 34+86.13(WB)
D = 5° 51' 36" (RT)
Dc = 1° 15' 00"
R = 4,583.66'
T = 234.60'
L = 468.80'
E = 6.00'
C = 468.60'
C.B. = S 86° 03' 04" E

(23)
P.I.= Sta. 41+85.66(EB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = S 84° 08' 50" E

(24)
P.I.= Sta. 41+48.45(WB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = S 83° 17' 16" E

(25)
P.I.= Sta. 42+85.66(EB)
D = 1° 39' 40" (LT)
Dc = 1° 39' 40"
R = 3,449.25'
T = 50.00'
L = 100.00'
E = 0.36'
C = 100.00'
C.B. = S 85° 08' 40" E

(26)
P.I.= Sta. 42+48.45(WB)
D = 1° 40' 20" (LT)
Dc = 1° 40' 20"
R = 3,426.33'
T = 50.00'
L = 100.00'
E = 0.36'
C = 100.00'
C.B. = S 84° 17' 26" E

(27)
P.I.= Sta. 45+78.59(EB)
D = 9° 40' 02" (LT)
Dc = 1° 59' 40"
R = 2,872.77'
T = 242.93'
L = 484.71'
E = 10.25'
C = 484.13'
C.B. = N 89° 11' 29" E

(28)
P.I.= Sta. 46+45.85(WB)
D = 13° 52' 00" (LT)
Dc = 2° 00' 20"
R = 2,856.85'
T = 347.40'
L = 691.41'
E = 21.05'
C = 689.73'
C.B. = N 87° 56' 24" E

(29)
P.I.= Sta. 48+70.37(EB)
D = 1° 39' 40" (LT)
Dc = 1° 39' 40"
R = 3,449.25'
T = 50.00'
L = 100.00'
E = 0.36'
C = 100.00'
C.B. = N 83° 31' 38" E

(30)
P.I.= Sta. 49+70.37(EB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = N 82° 31' 48" E

(31)
P.I.= Sta. 46+45.85(WB)
D = 13° 52' 00" (LT)
Dc = 2° 00' 20"
R = 2,856.85'
T = 347.40'
L = 691.41'
E = 21.05'
C = 689.73'
C.B. = N 87° 56' 24" E

(32)
P.I.= Sta. 51+39.86(WB)
D = 0° 20' 00" (LT)
Dc = 0° 20' 00"
R = 17,188.74'
T = 50.00'
L = 100.00'
E = 0.07'
C = 100.00'
C.B. = N 79° 10' 04" E

(33)
P.I.= Sta. 55+37.54(EB)
D = 3° 21' 44" (LT)
Dc = 0° 45' 00"
R = 7,639.44'
T = 224.21'
L = 448.30'
E = 3.29'
C = 448.23'
C.B. = N 80° 40' 56" E

(34)
P.I.= Sta. 65+64.38(WB)
D = 14° 36' 26" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
T = 244.78'
L = 486.91'
E = 15.62'
C = 485.59'
C.B. = N 86° 18' 17" E

(35)
P.I.= Sta. 66+45.19(EB)
D = 10° 30' 56" (RT)
Dc = 6° 00' 00"
R = 954.93'
T = 87.88'
L = 175.26'
E = 4.03'
C = 175.01'
C.B. = N 84° 15' 32" E

(36)
P.I.= Sta. 68+82.40(EB)
D = 4° 05' 30" (RT)
Dc = 5° 00' 00"
R = 1,145.92'
T = 40.93'
L = 81.83'
E = 0.73'
C = 81.82'
C.B. = S 88° 26' 15" E

HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED DL
CHECKED JAP

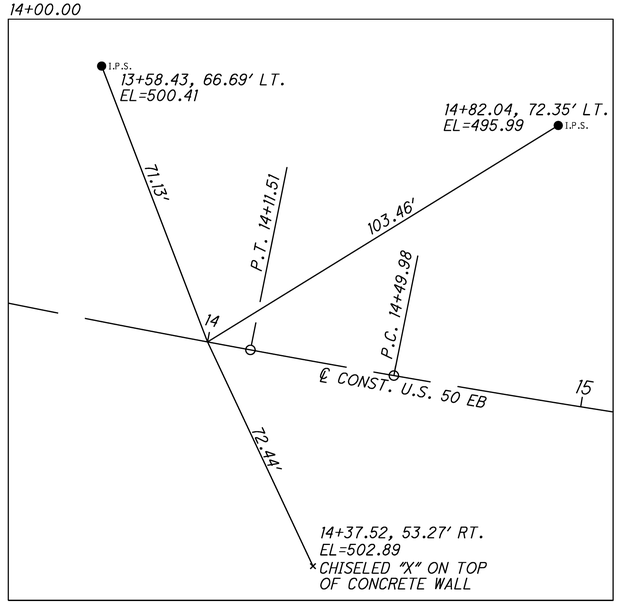
SCHEMATIC PLAN

HAM-50-1903

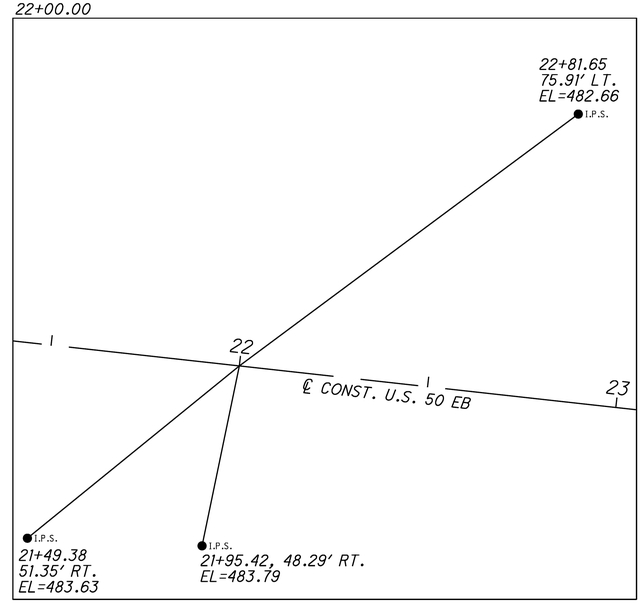
G:\CN06\0011\Road\Sheets\75736gb002.dgn 11/9/2010 12:26:09 PM jmlangos

HAM-50-19.03
CENTERLINE REFERENCES
SCALE: 1"=20'

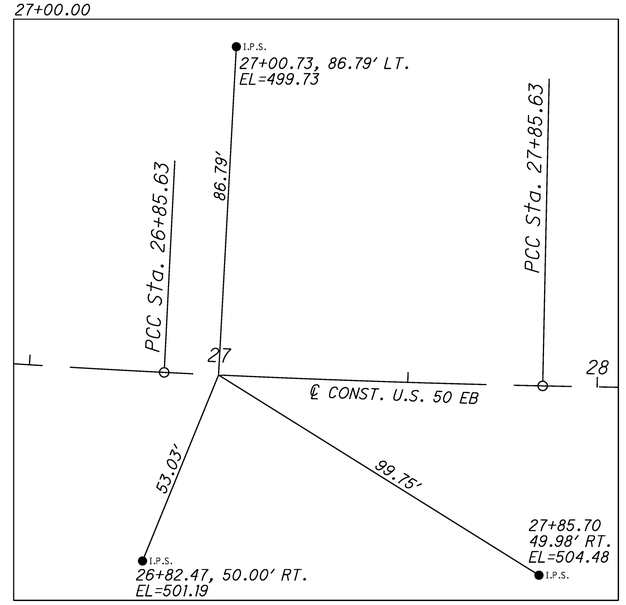
14+00.00



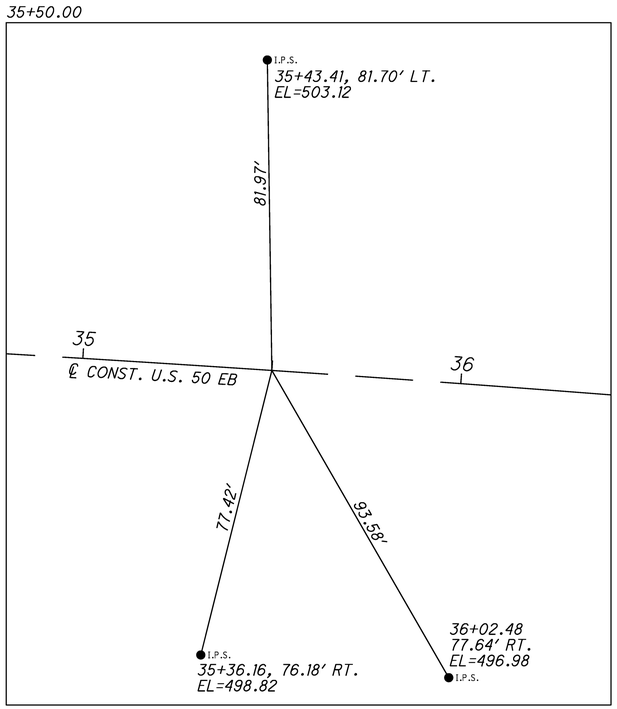
22+00.00



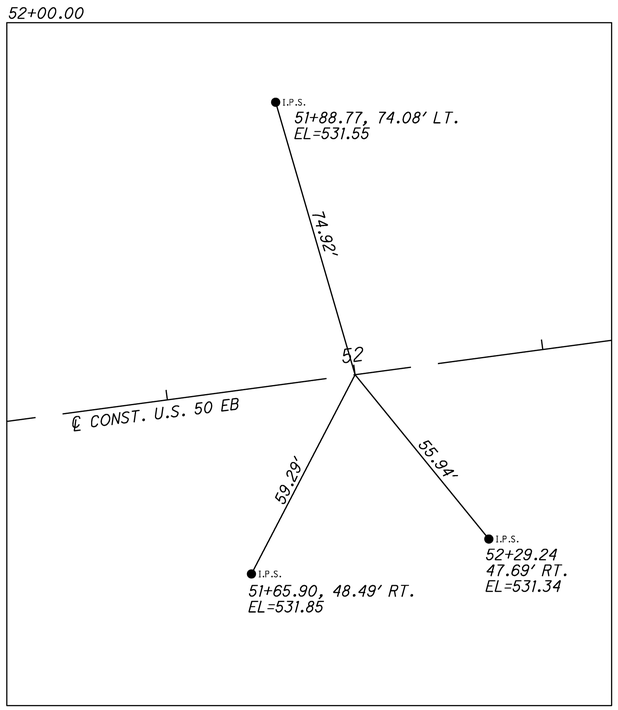
27+00.00



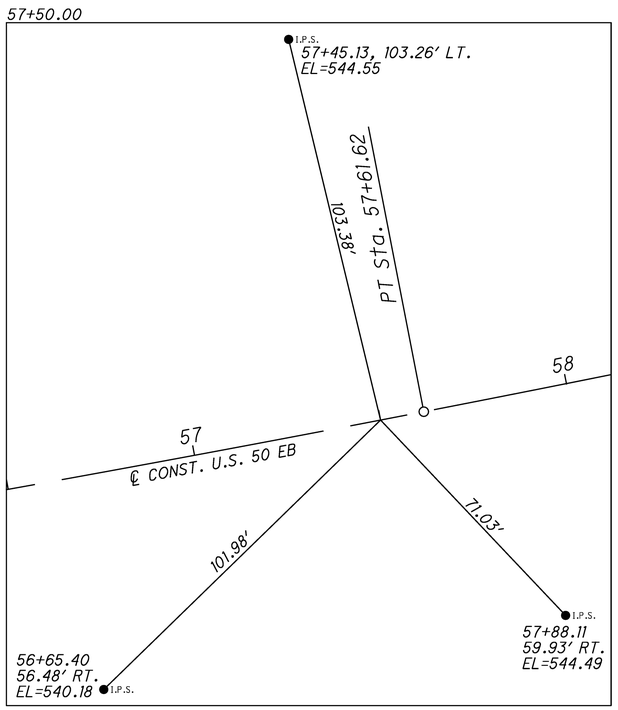
35+50.00



52+00.00



57+50.00



CALCULATED NLC
CHECKED RFM

CENTERLINE REFERENCES

HAM-50-19.03

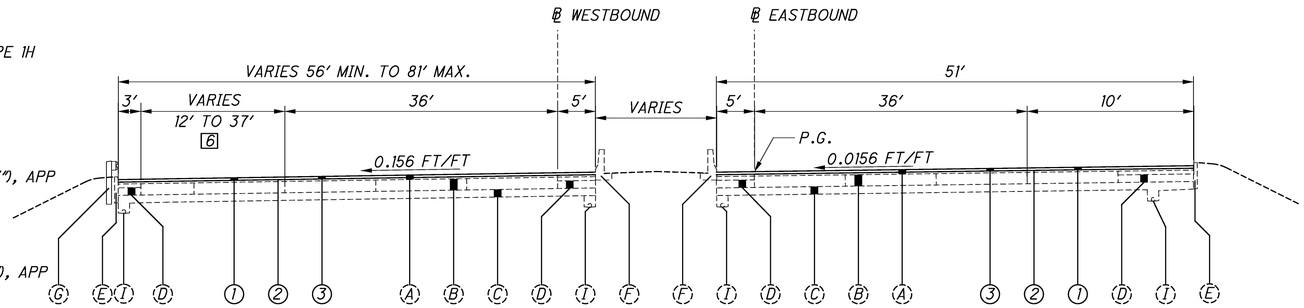
4
442

CENTERLINE REFERENCES.DGN

LEGEND

(1) ITEM 254 - 2" PAVEMENT PLANING, BITUMINOUS
(2) ITEM 407 - TACK COAT
(3) ITEM 448 - 2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1H
(4) ITEM 305 - 9" CONCRETE BASE
(5) ITEM 304 - 6" AGGREGATE BASE
(6) ITEM 622 - CONCRETE BARRIER, TYPE D
(7) ITEM 898 - REINFORCED CONCRETE APPROACH SLAB (T=17"), APP
(8) ITEM 605 - 6" BASE PIPE UNDERDRAIN
(9) ITEM 407 - TACK COAT, 702.13
(10) ITEM 898 - REINFORCED CONCRETE APPROACH SLAB(T=15"), APP
(11) ITEM 204 - SUBGRADE COMPACTION
(12) ITEM 848 - WEARING COURSE REMOVED, ASPHALT
(13) ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED
(14) ITEM 848 - 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION
(15) ITEM 448 - 1" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22
(16) ITEM 302 - 12" ASPHALT CONCRETE BASE, PG64-22

(A) 3" ASPHALT CONCRETE
(B) 9" REINFORCED CONCRETE PAVEMENT
(C) 6" SUBBASE
(D) 3" BITUMINOUS AGGREGATE BASE
(E) CONCRETE CURB, TYPE 6
(F) CONCRETE BARRIER
(G) GUARDRAIL
(H) 4" SIDEWALK
(I) 6" PIPE UNDERDRAIN
(J) CONCRETE CURB, TYPE 2A
(K) 9" AGGREGATE BASE
(L) 6" BITUMINOUS AGGREGATE BASE
(M) 6" AGGREGATE BASE



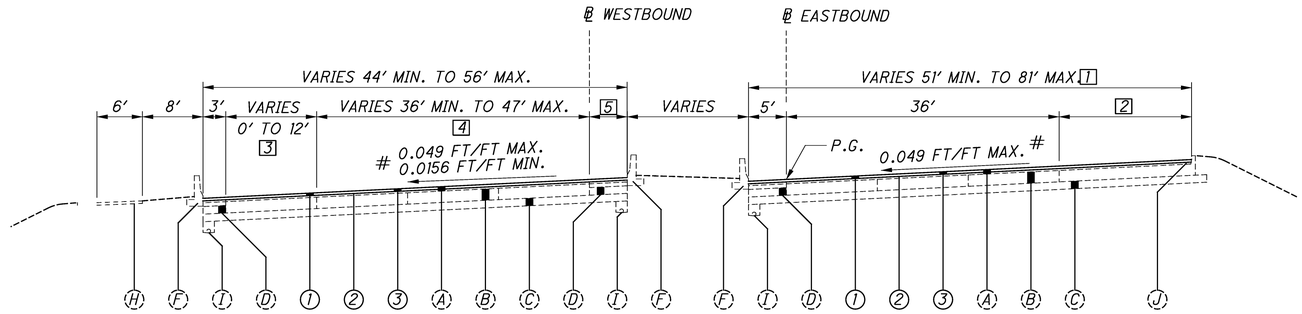
NORMAL SECTION

WESTBOUND

STA. 20+11.35 TO STA. 22+85.00 = 273.65 FT.

EASTBOUND

STA. 18+19.00 TO STA. 22+42.00 = 423.00 FT.



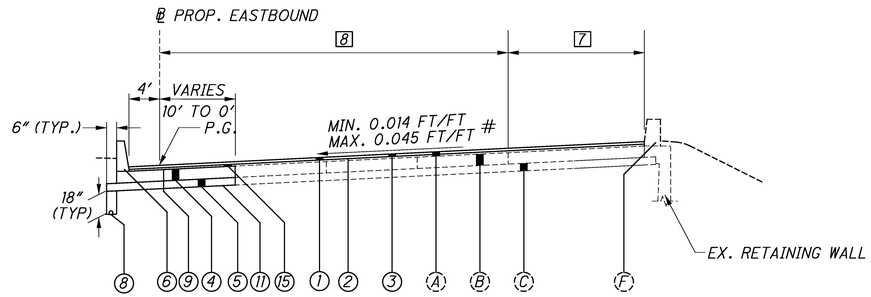
SUPERELEVATED SECTION

WESTBOUND

STA. 13+35.32 TO STA. 20+11.35 = 676.03 FT.
STA. 22+85.00 TO STA. 27+48.00 = 463.00 FT.

EASTBOUND

STA. 16+87.45 TO STA. 18+19.00 = 131.55 FT.
STA. 22+42.00 TO STA. 27+56.11 = 514.11 FT.



SUPERELEVATED SECTION

EASTBOUND

STA. 13+32.05 TO STA. 16+87.45 = 355.40 FT.

BRIDGE LIMITS

STA. 2+53.43 TO STA. 13+02.05 EB
STA. 2+62.53 TO STA. 13+10.32 WB
STA. 27+81.11 TO STA. 29+32.88 EB
STA. 27+73.00 TO STA. 29+25.33 WB
STA. 31+09.63 TO STA. 33+33.18 EB
STA. 31+08.93 TO STA. 33+32.24 WB
STA. 40+85.46 TO STA. 48+69.14 EB
STA. 40+81.11 TO STA. 48+75.70 WB
STA. 58+08.79 TO STA. 60+14.06 EB
STA. 58+12.32 TO STA. 60+39.84 WB

[1] VARIES 70' TO 81'
STA. 16+87.45 TO STA. 18+19.00

51' STA. 22+42.00 TO STA. 27+56.11

[2] VARIES 29' TO 40'
STA. 16+87.45 TO STA. 18+19.00

[3] VARIES 0' TO 12'
STA. 14+51.18 TO STA. 18+29.00

10' STA. 22+85.00 TO STA. 25+22.00

VARIES 10' TO 8.5'
STA. 25+22.00 TO STA. 27+48.00

[4] VARIES 36' TO 47'
STA. 25+22.00 TO STA. 27+48.00

[5] VARIES 3' TO 5'
STA. 13+35.32 TO STA. 14+05.00

5' STA. 14+05.00 TO STA. 20+11.35

[6] VARIES 12' TO 37'
STA. 20+50.00 TO STA. 22+85.00

[7] 0' STA. 13+32.00 TO STA. 13+90.00

VARIES 0' TO 29'
STA. 13+90.00 TO STA. 16+87.45
(INCLUDES 3' SHOULDER)

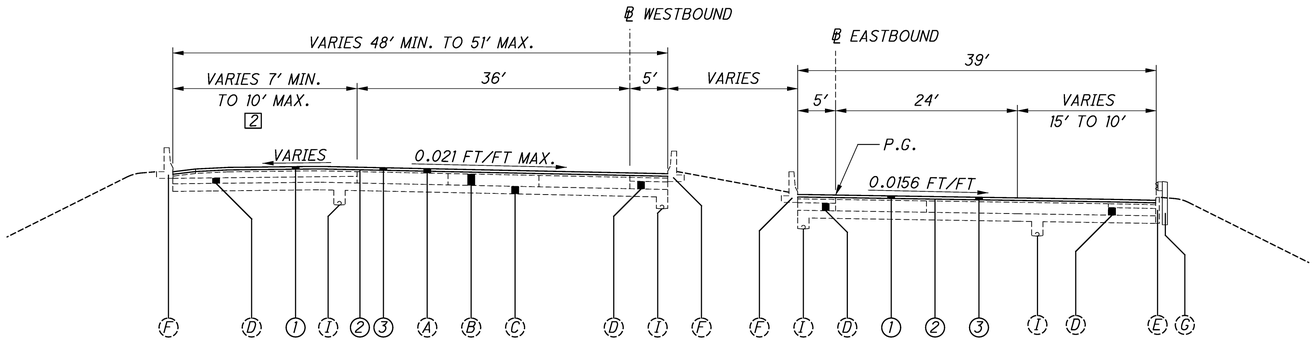
[8] 48' STA. 13+32.05 TO STA. 13+90.00
36' STA. 13+90.00 TO STA. 16+87.45

SEE SUPERELEVATION TABLE FOR ADDITIONAL DETAILS

TYPICAL SECTIONS

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736gy001.dgn 11/9/2010 12:26:12 PM jmlangos



SUPERELEVATED SECTION - RIGHT

WESTBOUND

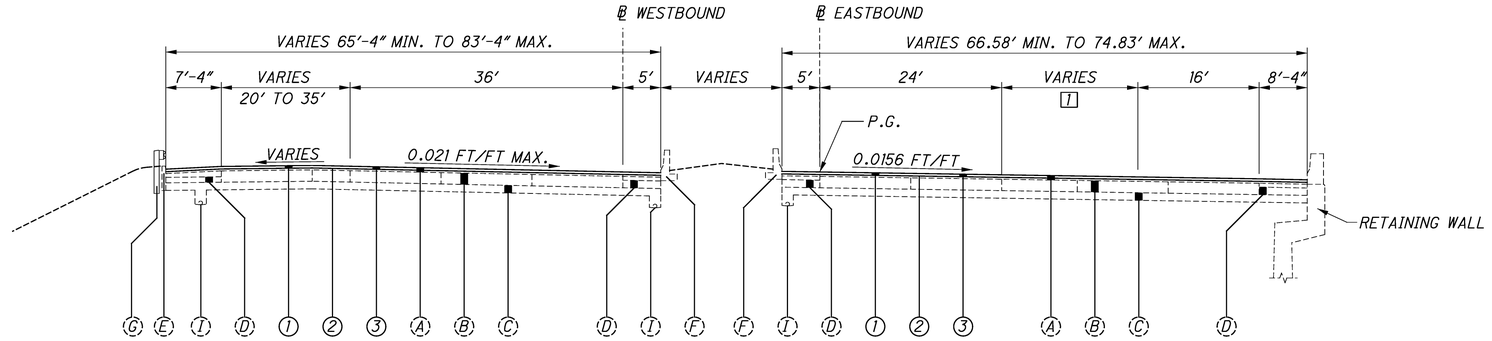
STA. 35+20.00 TO STA. 40+56.11 = 536.11 FT.

EASTBOUND

STA. 34+55.81 TO STA. 40+60.46 = 604.65 FT.

1 VARIES 13.25′ TO 21.5′
STA. 33+58.18 TO STA. 34+55.81

2 10′ STA. 35+20.00 TO STA. 37+50.00
VARIES 10′ TO 7′
STA. 37+50.00 TO STA. 39+50.00
7′ STA. 39+50.00 TO STA. 40+56.11



SUPERELEVATED SECTION - RIGHT

WESTBOUND

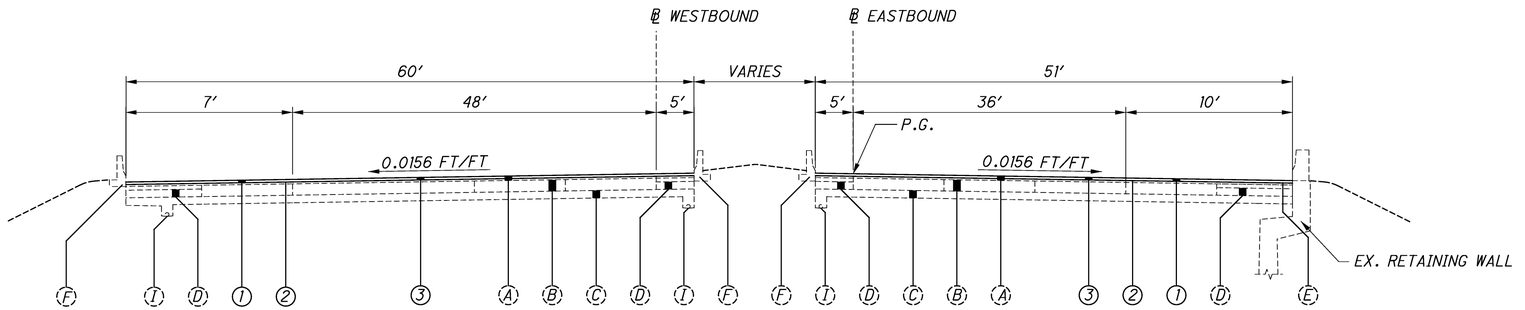
STA. 33+57.24 TO STA. 35+20.00 = 162.76 FT.

EASTBOUND

STA. 33+58.18 TO STA. 34+55.81 = 97.63 FT.

EXISTING APPROACH SLABS (NO WORK)

STA. 40+60.46 TO STA. 40+85.46 (EB)
STA. 40+56.11 TO STA. 40+81.11 (WB)
STA. 48+69.14 TO STA. 48+94.14 (EB)
STA. 48+75.70 TO STA. 49+00.70 (WB)
STA. 57+83.79 TO STA. 58+08.79 (EB)
STA. 60+14.06 TO STA. 60+39.06 (EB)
STA. 57+87.32 TO STA. 58+12.32 (WB)
STA. 60+39.84 TO STA. 60+64.84 (WB)



NORMAL SECTION

WESTBOUND

STA. 29+50.33 TO STA. 30+83.93 = 133.60 FT.

EASTBOUND

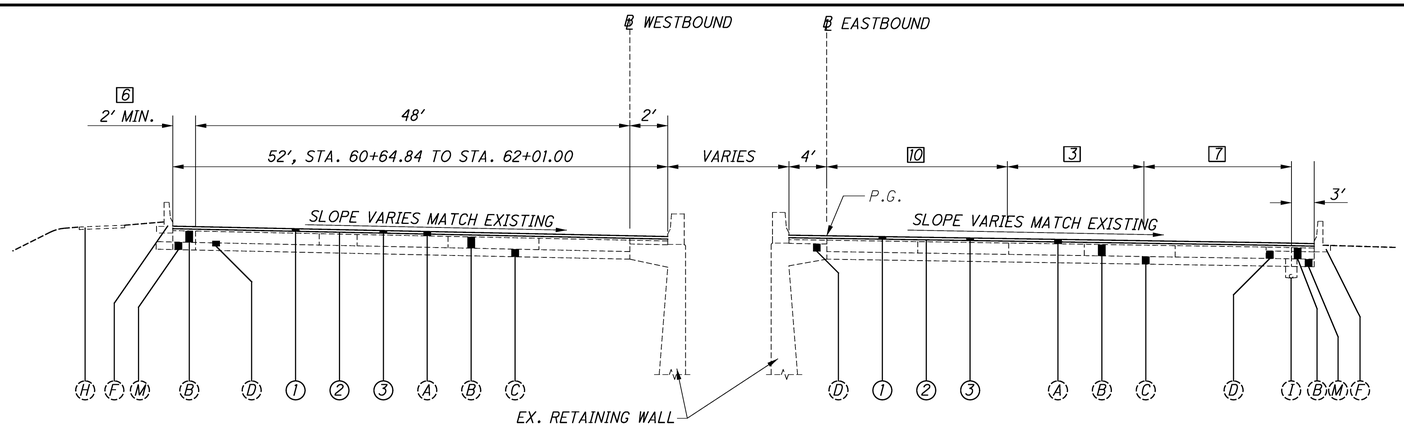
STA. 29+57.88 TO STA. 30+84.63 = 126.75 FT.

FOR SUPERELEVATION TABLE SEE SHEET 89 & 90

TYPICAL SECTIONS

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736gy002.dgn 11/9/2010 12:26:14 PM jmlangos



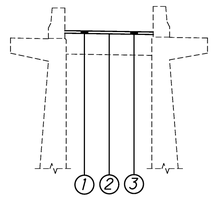
SUPERELEVATED SECTION - RIGHT

WESTBOUND

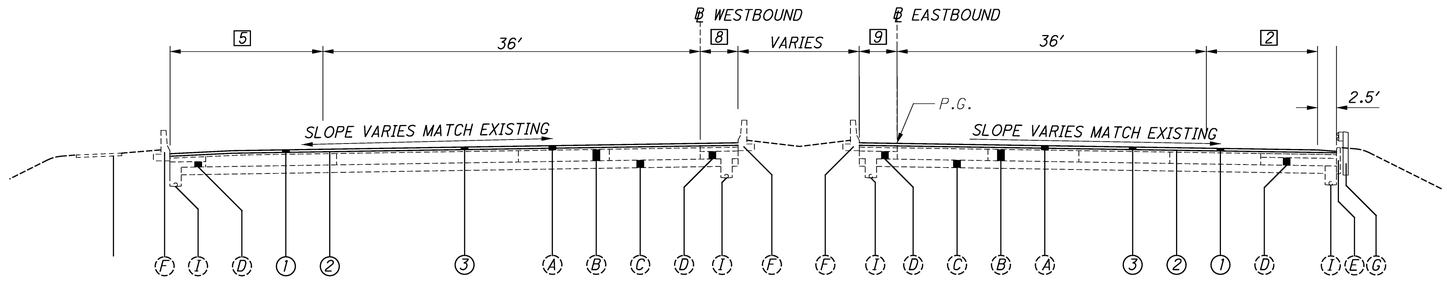
STA. 60+64.84 TO STA. 66+18.56 = 553.72 FT.

EASTBOUND

STA. 60+39.06 TO STA. 66+29.03 = 589.97 FT.



STA. 65+00.00 TO STA. 66+18.56 = 118.56 FT.

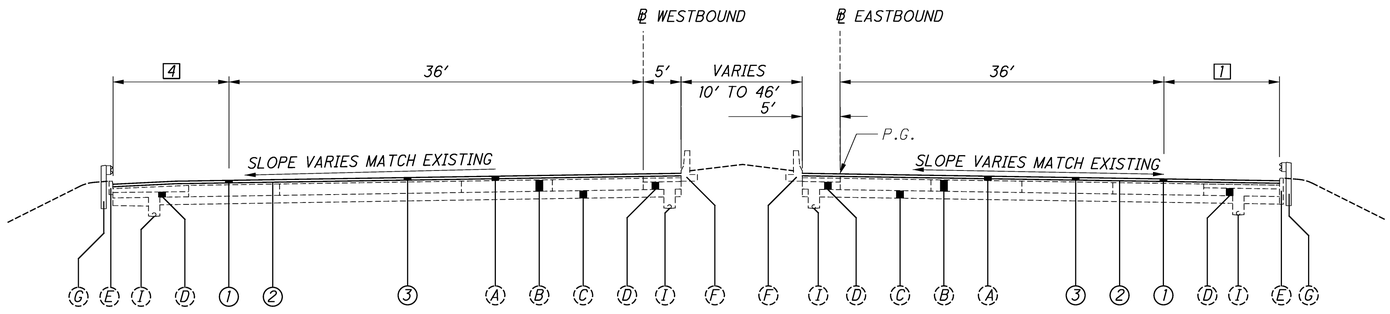


WESTBOUND

STA. 54+33.41 TO STA. 57+87.32 = 353.91 FT.

EASTBOUND

STA. 54+13.86 TO STA. 57+83.79 = 369.93 FT.



WESTBOUND

STA. 49+00.70 TO STA. 54+33.41 = 532.71 FT.

EASTBOUND

STA. 48+94.14 TO STA. 54+13.86 = 519.72 FT.

1 VARIES 5′ TO 10′
STA. 48+94.14 TO STA. 54+13.86

2 VARIES 39′ TO 18′
STA. 54+13.86 TO STA. 56+15.00

18′ STA. 56+15.00 TO STA. 57+83.79

3 0′ STA. 60+39.06 TO STA. 61+60.00

VARIES 0′ TO 25.50′
STA. 61+60.00 TO STA. 63+58.00

VARIES 15′ TO 7′
STA. 63+58.00 TO STA. 66+47.78

4 VARIES 6′ TO 40′
STA. 49+00.70 TO STA. 54+33.41

5 VARIES 40′ TO 10′
STA. 54+33.41 TO STA. 57+87.32

6 2′ STA. 60+64.84 TO STA. 62+01.00

VARIES 2′ TO 3′
STA. 62+01.00 TO STA. 66+18.56

7 24′ STA. 61+60.00 TO STA. 63+58.00

0′ STA. 63+58.00 TO STA. 66+29.03

8 VARIES 5′ TO 2′
STA. 57+00.00 TO STA. 57+87.32

9 VARIES 5′ TO 2′
STA. 56+15.00 TO STA. 57+83.79

10 24′ STA. 60+39.06 TO STA. 65+23.00

VARIES 24′ TO 33′
STA. 65+23.00 TO STA. 66+29.03

FOR LEGEND SEE SHEET

TYPICAL SECTIONS

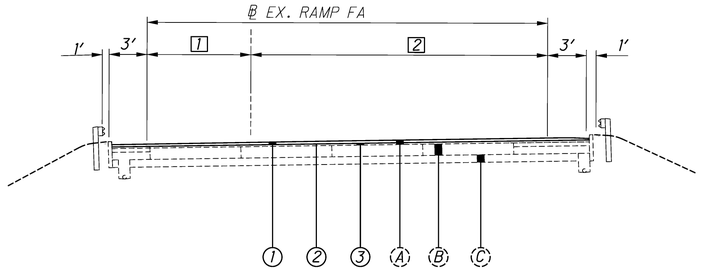
HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736gy003.dgn 11/9/2010 12:26:16 PM jmlangos

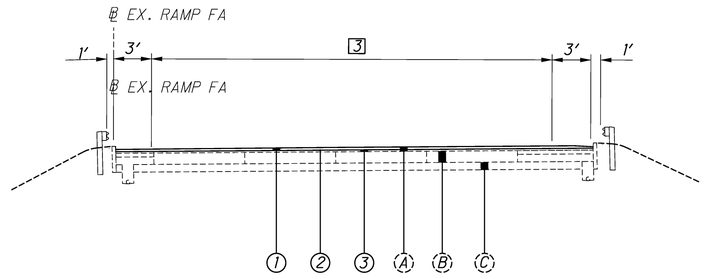
[1] VARIES 1.75′ TO 0.5′
STA. 35+25.00 TO STA. 36+55.39

[2] VARIES 12.55′ TO 16.50′
STA. 35+25.00 TO STA. 36+55.39

[3] VARIES 17′ TO 20′
STA. 36+55.39 TO STA. 37+13.31



RAMP FA
STA. 35+25.00 TO STA. 36+55.39 = 130.39 FT.



RAMP FA
STA. 36+55.39 TO STA. 37+13.31 = 57.92 FT.

[4] 55′-9″ STA. 27+48.00 TO STA. 27+73.00
55′-9″ STA. 29+25.33 TO STA. 29+50.33
55′-9″ STA. 30+83.93 TO STA. 31+08.93
59′-5″ STA. 33+32.24 TO STA. 33+57.24

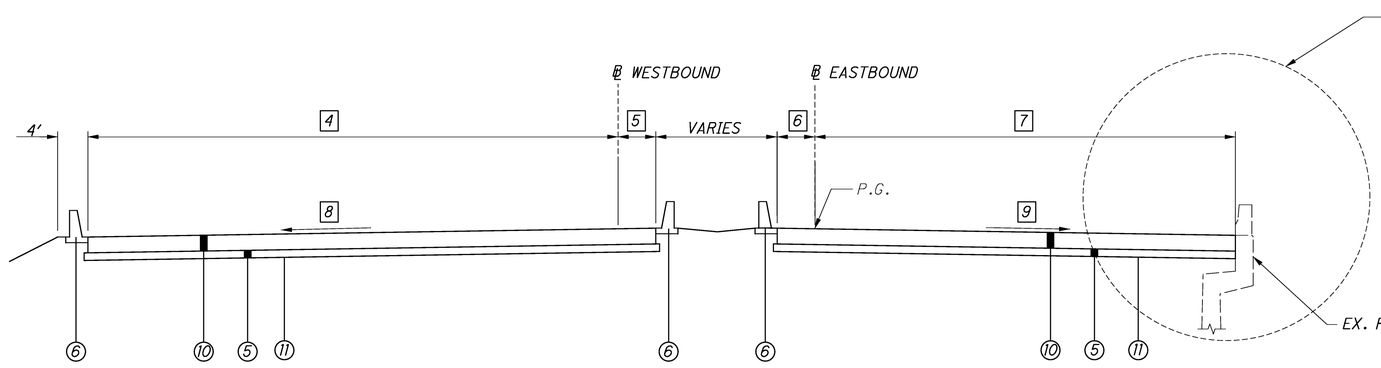
[5] 5′-5″ STA. 27+48.00 TO STA. 27+73.00
5′-9″ STA. 29+25.33 TO STA. 29+50.33
5′-3″ STA. 30+83.93 TO STA. 31+08.93
5′-9″ STA. 33+32.24 TO STA. 33+57.24

[6] 5′-5″ STA. 27+56.11 TO STA. 27+81.11
5′-9″ STA. 29+32.88 TO STA. 29+57.88
5′-9″ STA. 30+84.63 TO STA. 31+09.63
5′-9″ STA. 33+33.18 TO STA. 33+58.18

[7] 46′-9″ STA. 27+56.11 TO STA. 27+81.11
43′-0″ STA. 29+32.88 TO STA. 29+57.88
47′-5″ STA. 30+84.63 TO STA. 31+09.63
62′-4″ STA. 33+33.18 TO STA. 33+58.18

[8] 0.0088 STA. 27+48.00 TO STA. 27+73.00
0.0106 STA. 29+25.33 TO STA. 29+50.33
0.0117 STA. 30+83.93 TO STA. 31+08.93
0.0124 STA. 33+32.24 TO STA. 33+57.24

[9] 0.0087 STA. 27+56.11 TO STA. 27+81.11
0.0080 STA. 29+32.88 TO STA. 29+57.88
0.0158 STA. 30+84.63 TO STA. 31+09.63
0.0138 STA. 33+33.18 TO STA. 33+58.18



WESTBOUND **APPROACH SLABS** **EASTBOUND**

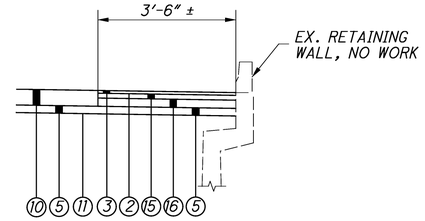
STA. 27+56.11 TO STA. 27+81.11 (EB) = 25.00 FT
STA. 29+32.88 TO STA. 29+57.88 (EB) = 25.00 FT
STA. 27+48.00 TO STA. 27+73.00 (WB) = 25.00 FT
STA. 29+25.33 TO STA. 29+50.33 (WB) = 25.00 FT
STA. 30+84.63 TO STA. 31+09.63 (EB) = 25.00 FT
STA. 33+33.18 TO STA. 33+58.18 (EB) = 25.00 FT
STA. 30+83.93 TO STA. 31+08.93 (WB) = 25.00 FT
STA. 33+32.24 TO STA. 33+57.24 (WB) = 25.00FT

SEE DETAIL A
STA. 29+25.33 TO STA. 29+50.33

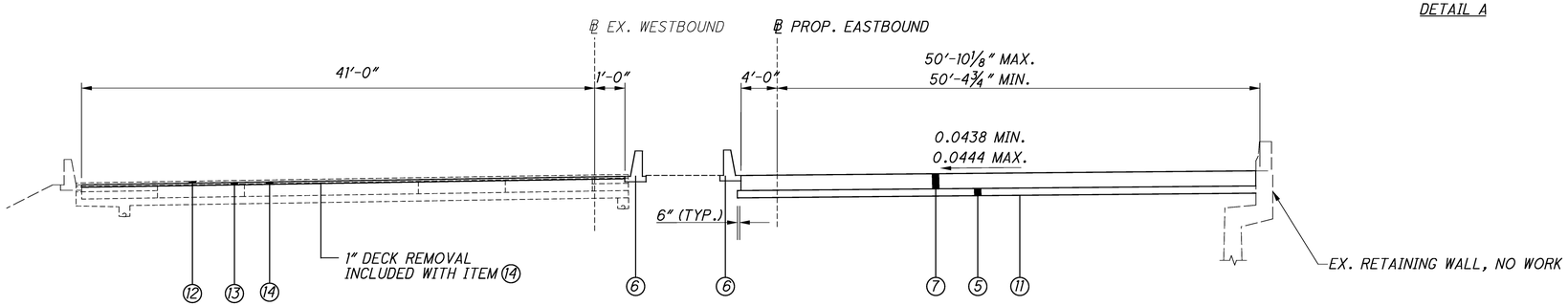
EXISTING APPROACH SLABS (NO WORK)
STA. 40+60.46 TO STA. 40+85.46 (EB)
STA. 40+56.11 TO STA. 40+81.11 (WB)
STA. 48+69.14 TO STA. 48+94.14 (EB)
STA. 48+75.70 TO STA. 49+00.70 (WB)
STA. 57+83.79 TO STA. 58+08.79 (EB)
STA. 60+14.06 TO STA. 60+39.06 (EB)
STA. 57+87.32 TO STA. 58+12.32 (WB)
STA. 60+39.84 TO STA. 60+64.84 (WB)

EX. RETAINING WALL, NO WORK

FOR ADDITIONAL DIMENSION AND ELEVATION DETAILS,
SEE BRIDGE SHEETS 316, 317 , 376, AND 377



DETAIL A



APPROACH SLAB

STA. 13+02.05 TO STA. 13+32.05 = 30.00 FT. (EB)
STA. 13+10.32 TO STA. 13+35.32 = 25.00 FT. (WB)

FOR ADDITIONAL APPROACH SLAB DETAILS,
SEE STRUCTURAL SHEETS

FOR LEGEND SEE SHEET 5

TYPICAL SECTIONS

HAM-50-19.03

G:\CN06\011\Road\Sheets\75736gy004.dgn 11/9/2010 12:26:17 PM jmlangos

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

Aaron Wright
Duke Energy Corp. (Electric)
139 East 4th St, Room 467A
Cincinnati, OH 45202
Phone: 513-287-3674

Laura Mate
Duke Energy Corp. (Gas)
139 East 4th St, Room 460A
Cincinnati, OH 45202
Phone: 513-287-2594

Mark Conner
Cincinnati Bell Telephone
221 East 4th Street, Bldg 121-900
Cincinnati, Ohio 45201
Phone: 513-565-7043

Gary Napier
Time Warner Cable
11252 Cornell Park Dr
Cincinnati, OH 45242
Phone: 513-469-5483

Jon Hunseder
Cincinnati Water Works
4747 Spring Grove Ave
Cincinnati, OH 45232
Phone: 513-591-6856

Rob Franklin
Metropolitan Sewer District of Greater Cincinnati
1600 Gest Street
Cincinnati, OH 45204
Phone: 513-557-7188

John Brazina
City of Cincinnati Transportation and Engineering
801 Plum Street, Room 450
City Hall
Cincinnati, Ohio 45202
Phone: 513-352-6249

Joe Thomas
Sprint Fiber Optic
11370 Enterprise Park Dr.
Sharonville, Ohio 45241
Phone: 513-612-4204

Al Guest
MCI Network Services, Inc./ Verizon - Fiber Optic
120 Ravine Street
Akron, Ohio 44303
Phone 330-253-8267

Tim Taylor
Level 3 Communications
400 Pike Street (Suite 300)
Cincinnati, Ohio 45202
Phone: 513-632-1806

ASBESTOS REMOVAL

WHEN REMOVING EXISTING BRIDGE DECK AND ABUTMENT BACKWALLS, THE EXISTING LIGHTING CONDUITS MAY BE ASBESTOS LINED CONDUIT. THE EXISTING ASBESTOS LINED CONDUIT IS IDENTIFIED IN THE BRIDGE PLANS. IF IT IS UNKNOWN WHETHER THE EXISTING CONDUIT IS ASBESTOS LINED, TEST THE PIPE BY USING A DEPARTMENT PREQUALIFIED ENVIRONMENTAL CONSULTANT TO DETERMINE IF IT IS AN ASBESTOS LINED CONDUIT. IF IT IS DETERMINED THAT THE CONDUIT CONTAINS ASBESTOS, THEN A CERTIFIED ASBESTOS CONTRACTOR MUST PERFORM THE REMOVAL. DISPOSE OF ALL ASBESTOS LINED CONDUIT AT A SOLID WASTE FACILITY THAT IS LICENSED BY THE LOCAL HEALTH DEPARTMENT AND PERMITTED BY THE OEPA.
THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:
ITEM 202 ASBESTOS PIPE REMOVED 1000 FT

DEMOLITION AND RENOVATION

THE CONTRACTOR SHALL COMPLETE AN OHIO EPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS TO THE OHIO EPA AT LEAST TEN(10) WORKING DAYS BEFORE OPERATIONS BEGIN.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

EXISTING PLANS

EXISTING PLANS ENTITLED HAM-50-20.43, HAM-50-19.38, AND HAM-50-19.76 MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON.

ELEVATION DATUM

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND THE GEOID03 GEOID. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83 (NSRS 2007)), AND THE GRS80 ELLIPSOID.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO 2. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 604, MONUMENT ASSEMBLY 3 EA

PROFILE AND ALIGNMENT

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY STATE FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS AS DIRECTED BY THE ENGINEER:

659, SEEDING AND MULCHING	500 SQ. YD.
659, COMMERCIAL FERTILIZER	0.07 TON
659, WATER	2.7 M. GAL.

CONSTRUCTION NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (513) 932-7651 OR EMAIL AT D08.PIO.FORM@DOT.STATE.OH.US. THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRHUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING TH FHWA STANDAR HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

ITEM 630, REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115, AS PER PLAN

THIS ITEM SHALL MEET THE REQUIREMENTS OF ITEM 630 IN ADDITION TO THE FOLLOWING:

CONTRACTOR WILL BE REQUIRED TO PREPARE A SUBMITTAL PACKAGE FOR THE RAILROAD THAT INCLUDES, BUT NOT LIMITED TO: PLANS SHEETS, LOCATION OF CRANES, PICK LOCATIONS, OPERATING RADII, CRANE CHARTS, BOOM PLANS, DATA SHEETS, WEIGHTS OF PICKS, ETC., ALL IN ACCORDANCE TO CSXT'S "CONSTRUCTION SUBMISSION CRITERIA", AS ISSUED APRIL 3, 2009. ALL LIFTING EQUIPTMENT AND CONNECTION DEVICES SHALL HAVE A CAPACITY FOR 150% OF THE ACTUAL LIFTING LOAD. THE FACTOR OF SAFETY PROVIDED BY THE MANUFACTURER IN THE LIFTING CAPACITY DATA SHALL NOT CONSIDERED IN THE 150% REQUIREMENTS. DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR HIS SEAL AND SIGNATURE. THE OVERHEAD SIGN TRUSS REMOVAL PROCEDURE MUST BE APPROVED BY CSXT'S ENGINEERING DEPARTMENT OR ITS REPRESENTATIVE. CSTX REQUIRES UP TO 30 DAYS TO REVIEW SUBMITTALS IN ORDER TO PROVIDE COMMENTS AND/OR APPROVALS.

CALCULATED JG CHECKED JR

GENERAL NOTES

HAM-50-19.03

C:\CN06\0011\Road\Sheets\75736gn001.dgn 11/9/2010 12:26:19 PM jmlangos

ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER SUPPLEMENTAL SPECIFICATIONS 888 AND 898, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN SUPPLEMENTAL SPECIFICATIONS 898 AND 888 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX ESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT . . . . . 30%.

PAYMENT FOR TESTING, INSPECTION AND QUALITY CONTROL WILL BE INCLUDED WITH THE APPROPRIATE LUMP-SUM CONCRETE ITEM.

CALCULATED JG CHECKED JR

GENERAL NOTES

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736gn001.dgn 11/9/2010 12:26:21 PM jmlangos

SEQUENCE OF CONSTRUCTION

FOR PURPOSE OF DISCUSSION OF THE SEQUENCE OF CONSTRUCTION NOTES, "LEFT" AND "RIGHT" DESIGNATES THE DIRECTION OF TRAVEL OF THE TRAFFIC AND DOES NOT NECESSARILY REFLECT THE DIRECTION OF THE MAINLINE OR RAMP STATIONING. FOR SIMPLIFICATION, OF THE SEQUENCE OF CONSTRUCTION TEXT, DESIGNATION OF "CONSTRUCT PAVEMENT" INCLUDES ALL ANCILLARY ITEMS SUCH AS PAVEMENT REPAIR, RESURFACING, ETC ADJACENT TO THAT PAVEMENT SECTION. "NIGHTTIME WORK" SHALL BE BETWEEN THE HOURS OF 9 P.M. AND 6 A.M. SHOULD THE CONTRACTOR FAIL TO ADHERE TO THE TIME RESTRICTIONS SPECIFIED IN THESE PLANS FOR "NIGHTTIME WORK," THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $50 FOR EACH MINUTE THE NIGHTTIME LANE CLOSURE RESTRICTIONS ARE VIOLATED.

PRE-PHASE 1 CONSTRUCTION

CONSTRUCT WORK ZONE PAVEMENT ALONG THE RIGHT SIDES OF US 50 EASTBOUND AND US 50 WESTBOUND AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLAN. CONSTRUCT THE PROPOSED OVERHEAD SIGNING.

PHASE 1 - US 50 EASTBOUND

MAINTAIN ONE (1) AND (2) LANES EASTBOUND UTILIZING THE RIGHT SIDE OF THE EXISTING BRIDGE STRUCTURES, EXISTING PAVEMENT AND WORK ZONE PAVEMENT CONSTRUCTED IN PRE-PHASE 1. ALL EASTBOUND US 50 ENTRANCE AND EXIT RAMPS ARE TO REMAIN OPEN.

CONSTRUCT THE LEFT SIDE OF STRUCTURE HAM-50-1903 R DECK REPLACEMENT AND WIDENING, THE LEFT SIDE OF STRUCTURE HAM-50-1954 R DECK REPLACEMENT, THE LEFT SIDE OF STRUCTURE HAM-50-1980 R DECK RESURFACING, THE LEFT SIDE OF STRUCTURE HAM-50-R (PAINTING OPERATIONS SHALL BE NIGHTIME WORK, MAINTAINING ACCESS AT ALL TIMES) DECK RESURFACING AND CONSTRUCT THE LEFT SIDE OF THE US 50 EASTBOUND MAINLINE PAVEMENT THROUGOUT THE PROJECT LIMIT. IN ADDITION, CONSTRUCT THE RIGHT SIDE OF OVERHEAD STRUCTURE HAM-50-1976 DECK RESURFACING.

PHASE 1 - US 50 WESTBOUND

MAINTAIN ONE (1) AND (2) LANES WESTBOUND UTILIZING THE RIGHT SIDE OF THE EXISTING BRIDGE STRUCTURES, EXISTING PAVEMENT AND WORK ZONE PAVEMENT CONSTRUCTED IN PRE-PHASE 1. ALL WESTBOUND US 50 ENTRANCE AND EXIT RAMPS ARE TO REMAIN OPEN.

CONSTRUCT THE LEFT SIDE OF STRUCTURE HAM-50-2013 L DECK RESURFACING, THE LEFT SIDE OF STRUCTURE HAM-50-1980 L DECK RESURFACING, THE LEFT SIDE OF STRUCTURE HAM-50-1961 L DECK REPLACEMENT, THE LEFT SIDE OF STRUCTURE HAM-50-1954 L DECK REPLACEMENT, THE LEFT SIDE OF STRUCTURE HAM-50-1903 L DECK RESURFACING AND CONSTRUCT THE LEFT SIDE OF THE US 50 WESTBOUND MAINLINE PAVEMENT THROUGHOUT THE PROJECT LIMIT. IN ADDITION, CONSTRUCT THE RIGHT SIDE OF OVERHEAD STRUCTURE HAM-50-1976 DECK RESURFACING. (CLOSURE SHALL BE LIMITED TO 30 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED).

PHASE 1A - US 50 EASTBOUND (REMAINING PORTION OF RAMP TO IR 71)

CLOSE THE US 50 EASTBOUND RAMP CROSS STRUCTURE HAM-50-2028M TO IR 71 FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN. DETOUR THE THRU TRAFFIC TO IR 71 AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE LEFT SIDE OF THE US 50 PAVEMENT FROM APPROXIMATELY STA. 63+85 TO STA. 66+35. PHASE 1A SHALL BE LIMITED TO 14 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED.

PHASE 1B - US 50 WESTBOUND (REMAINING PORTION OF EXIT RAMP TO GEST STREET)

CLOSE THE US 50 WESTBOUND EXIT RAMP TO GEST STREET FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE EXIT RAMP PAVEMENT. PHASE 1B SHALL BE LIMITED TO 14 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED.

PHASE 2 - US 50 EASTBOUND

MAINTAIN ONE (1) AND (2) LANES EASTBOUND UTILIZING THE LEFT SIDE OF THE RECONSTRUCTED BRIDGE STRUCTURES AND RECONSTRUCTED PAVEMENT COMPLETED IN PHASE 1 AND PHASE 1A. ALL EASTBOUND US 50 ENTRANCE AND EXIT RAMPS ARE TO REMAIN OPEN WITH THE EXCEPTION OF RAMP FB (NORTHBOUND AND SOUTHBOUND FREEMAN AVE. ENTRANCE RAMP TO US 50 EASTBOUND) AND RAMP FC (US 50 EASTBOUND EXIT RAMP TO NORTHBOUND AND SOUTHBOUND FREEMAN AVENUE). RAMP FB AND RAMP FC ARE TO BE DETOURED AS SHOWN IN THE PLAN.

CONSTRUCT THE RIGHT SIDE OF STRUCTURE HAM-50-1903 L DECK REPLACEMENT AND WIDENING, THE RIGHT SIDE OF STRUCTURE HAM-50-1954 R DECK REPLACEMENT, THE RIGHT SIDE OF STRUCTURE HAM-50-1961 R DECK REPLACEMENT, THE RIGHT SIDE OF STRUCTURE HAM-50-1980 R DECK RESURFACING, THE RIGHT SIDE OF STRUCTURE HAM-50-2013 R DECK RESURFACING, (PAINTING OPERATIONS SHALL BE NIGHTIME WORK, MAINTAINING ACCESS AT ALL TIMES) CONSTRUCT THE COLLECTOR DISTRIBUTOR RAOD PAVEMENT AND RAMP EXIT AND ENTERANCE CORES BETWEEN RAMP FB AND RAMP FC AND CONSTRUCT THE RIGHT SIDE OF THE US 50 EASTBOUND MAINLINE PAVEMENT THROUGHOUT THE PROJECT LIMIT. IN ADDITION, CONSTRUCT THE LEFT SIDE OF OVERHEAD STRUCTURE HAM-50-1976 DECK RESURFACING. CLOSURE SHALL BE LIMITED TO 30 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED).

PHASE 2 - US 50 WESTBOUND

MAINTAIN ONE (1) AND (2) LANES WESTBOUND UTILIZING THE LEFT SIDE OF THE RECONSTRUCTED BRIDGE STRUCTURES AND RECONSTRUCTED PAVEMENT COMPLETED IN PHASE 1 AND PHASE 1B. ALL WESTBOUND US 50 ENTRANCE AND EXIT RAMPS ARE TO REMAIN OPEN WITH THE EXCEPTION OF RAMP FA (SOUTHBOUND FREEMAN AVE. TO US 50 WESTBOUND). RAMP FA IS TO BE DETOURED AS SHOWN IN THE PLAN.

CONSTRUCT THE RIGHT SIDE OF STRUCTURE HAM-50-2013 L DECK RESURFACING, THE RIGHT SIDE OF STRUCTURE HAM-50-1980 L DECK RESURFACING, THE RIGHT SIDE OF STRUCTURE HAM-50-1961 L DECK REPLACEMENT, THE RIGHT SIDE OF STRUCTURE HAM-50-1954 L DECK REPLACEMENT (PAINTING OPERATIONS SHALL BE NIGHTIME WORK, MAINTAINING ACCESS AT ALL TIMES), THE RIGHT SIDE OF STRUCTURE HAM-50-1903 L DECK RESURFACING, CONSTRUCT RAMP FA PAVEMENT AND COSTRUCT THE RIGHT SIDE OF THE US 50 WEST-BOUND MAINLINE PAVEMENT THROUGHOUT THE PROJECT LIMIT. IN ADDITION, CONSTRUCT THE RIGHT SIDE OF OVERHEAD STRUCTURE HAM-50-1976 DECK RESURFACING. (CLOSURE SHALL BE LIMITED TO 30 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED).

DURING PHASE 2A, NO MORE THAN ONE ADDITIONAL RAMP MAY BE CLOSED AT ANY TIME. (NO ONE RAMP SHALL BE CLOSED TO TRAFFIC MORE THAN 14 CALANDER DAYS. THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $5,000 FOR EACH DAY THE CLOSURE LIMIT IS EXCEEDED).

US 50 EASTBOUND (REMAINING PORTION OF EXIT RAMP TO MEHRING WAY)

CLOSE THE US 50 EXIT RAMP TO MEHRING WAY FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE LEFT SIDE OF THE US 50 MAINLINE PAVEMENT AND EXIT RAMP GORE.

US 50 EASTBOUND (REMAINING PORTION OF ENTRANCE RAMP LB FROM LINN STREET AND EXIT RAMP TO WEST 5TH STREET)

CLOSE THE US 50 ENTRANCE RAMP LB (US 50 ENTRANCE RAMP FROM LINN STREET) AND THE EXIT RAMP TO WEST 5TH STREET FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE RIGHT SIDE OF THE US 50 MAINLINE PAVEMENT AND ENTRANCE AND EXIT RAMP GORES.

CLOSE THE US 50 EASTBOUND RAMP TO IR 75 SB FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN. DETOUR THE THRU TRAFFIC TO IR 75 SB AS SHOWN IN THE PLAN. THE RAMP TO IR 75 SB IS TO BE DETOURED AS SHOWN IN THE PLAN.

CONSTRUCT THE REMINING PORTION OF THE RIGHT SIDE OF THE US 50 PAVEMENT FROM APPROXIMATELY STA. 64+46 TO STA. 66+51.

US 50 WESTBOUND (REMAINING PORTION OF EXIT RAMP LA TO LINN STREET)

CLOSE THE US 50 EXIT RAMP LA TO LINN STREET FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE RIGHT SIDE OF THE US 50 MAINLINE PAVEMENT AND EXIT RAMP GORE.

US 50 WESTBOUND (REMAINING PORTION OF ENTRANCE RAMP FROM HARRIET STREET)

CLOSE THE US 50 ENTRANCE RAMP FROM HARRIET STREET FOR A NIGHTIME WORK OPERATION AS SHOWN IN THE PLAN.

CONSTRUCT THE REMAINING PORTION OF THE RIGHT SIDE OF THE US 50 MAINLINE PAVEMENT AND ENTRANCE RAMP GORE.

POST PHASE 2 CONSTRUCTION

REOPEN ALL EASTBOUND AND WESTBOUND US 50 RECONSTRUCTED BRIDGE STRUCTURES, RECONSTRUCTED MAINLINE PAVEMENT AND RAMPS WITHIN THE CONSTRUCTION AREA AND RESTORE ALL NORMAL TRAFFIC PATTERNS.

ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASON-ABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAIN-TENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 1.5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 1 M. GAL

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF CMS 614.04 AND 614.11.

WORK ZONE LANE LINE, CLASS 1, 642 PAINT	1.0 MI.
WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE 1	0.85 MI.
WORK ZONE LANE LINE, CLASS 1, 740.06, TYPE 1	1.0 MI.
WORK ZONE EDGE LINE, CLASS 1, 642 PAINT	6.0 MI.
WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1	6.8 MI.
WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT	4300 FT.
WORK ZONE CHANNELIZING LINE, CLASS 1, 740.06, TYPE 1	1650 FT.
WORK ZONE DOTTED LINE, CLASS 1, 740.06, TYPE 1	700 FT.
WORK ZONE LANE LINE CLASS III, 642 PAINT	2.0 MI.
WORK ZONE CENTER LINE CLASS III, 642 PAINT	0.85 MI.
WORK ZONE EDGE LINE CLASS III, 642 PAINT	6.0 MI.
WORK ZONE CHANNELIZING LINE CLASS III, 642 PAINT	3000 FT.
WORK ZONE DOTTED LINE LINE CLASS III, 642 PAINT	250 FT.

ITEM 614, BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EX-CEPT THAT THE SPACING SHALL BE 50 FEET. AN ESTIMATED QUANTITY OF 55 EACH OF ITEM 614 BARRIER REFLECTOR, TYPE B AND 12 EACH OF ITEM 614 OBJECT MARKER, 1 -WAY HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC (SECTION 642-2).

COORDINATION WITH PART 1

THE MAINTENANCE OF TRAFFIC PLANS SHOWN IN PART 2 SHALL BE COORDINATED WITH THE PART 1 (WALD VOGEL) PORTION OF THE PROJECT. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC COORDINATION PLAN FOR APPROVAL PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES.

CALCULATED JG CHECKED JR

MAINTENANCE OF TRAFFIC GENERAL NOTES

HAM-50-19.03

G:\CN06\0011\Road\CL\MN001.dgn 11/9/2010 12:26:22 PM jmlangos

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

   THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: QSCZCVR-T4
DRAWING NAME: QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
REVISION DATE: 5/13/99 REV. J
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-10
DRAWING NAME: QUADGUARD SYSTEM CONCRETE PAD, CZ, QG
REVISION DATE: 11/19/97 REV. D
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-16
DRAWING NAME: QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, QG
REVISION DATE: 7/30/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 354051Z
DRAWING NAME: QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, QG, 24, 30, 36
REVISION DATE: 5/17/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-18
DRAWING NAME: TRANSITION ASSEMBLY, 4 OFFSET, QG
REVISION DATE: 6/25/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35400260
DRAWING NAME: QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
REVISION DATE: 11/19/97 REV. C
ODOT APPROVAL DATE: 8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

   THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: SS450
DRAWING NAME: CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
REVISION DATE: 3/12/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS455
DRAWING NAME: TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 2/18/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS461
DRAWING NAME: TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS462
DRAWING NAME: TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99
ODOT APPROVAL DATE: 8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

   THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIEDIN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DRAWING NUMBER: A040416
DRAWING NAME: UNIVERSAL TAU-II PARTS LIST
REVISION DATE: 4/22/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040420
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
REVISION DATE: 4/28/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040105
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
REVISION DATE: 1/07/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: BO40239
DRAWING NAME: APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
REVISION DATE: 4/21/04
ODOT APPROVAL DATE: 10/16/04

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 400 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC. THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 4 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

G:\CN06\0011\Road\CL\MN002.dgn 11/9/2010 12:26:25 PM jmlangos

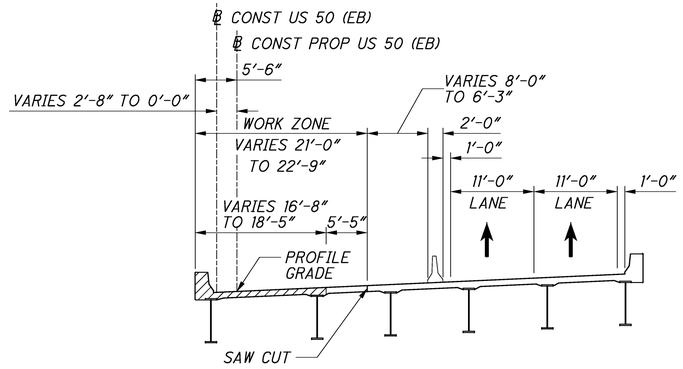
ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT.)

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

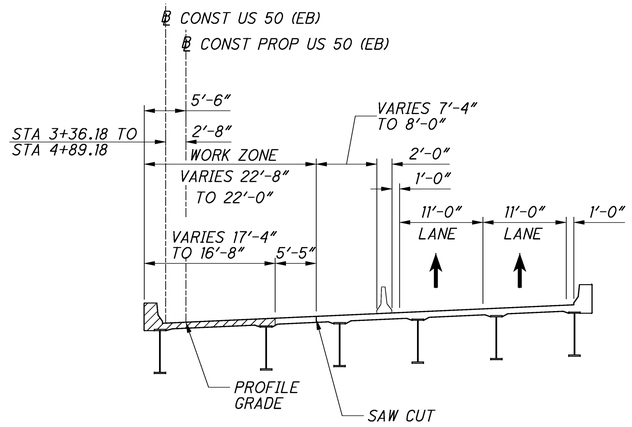
THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE. PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER. ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 60 DAY.

C:\CN06\0011\Road\CL\WN003.dgn 11/9/2010 12:26:28 PM jmlangos



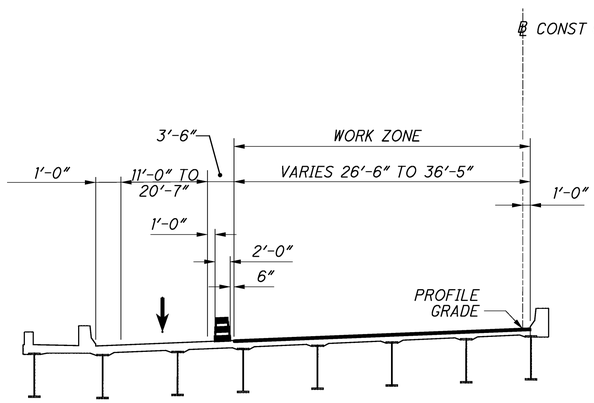
HAM-50-1903 BRIDGE

RIGHT - PROP ℄ STA. 4+89.22 TO STA. 7+18.06



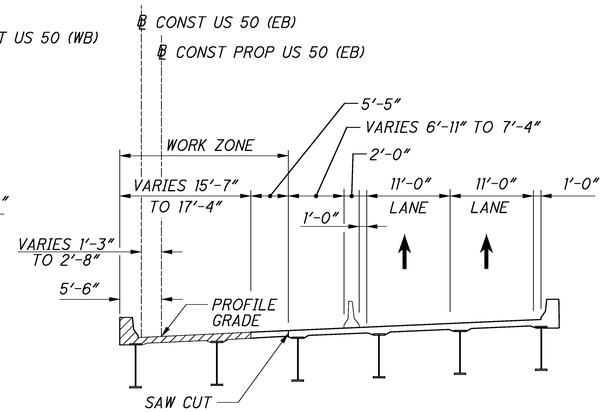
HAM-50-1903 BRIDGE

RIGHT - PROP ℄ STA. 3+36.18 TO STA. 4+89.22



HAM-50-1903 BRIDGE

LEFT - STA. 2+62.39 TO STA. 13+09.06



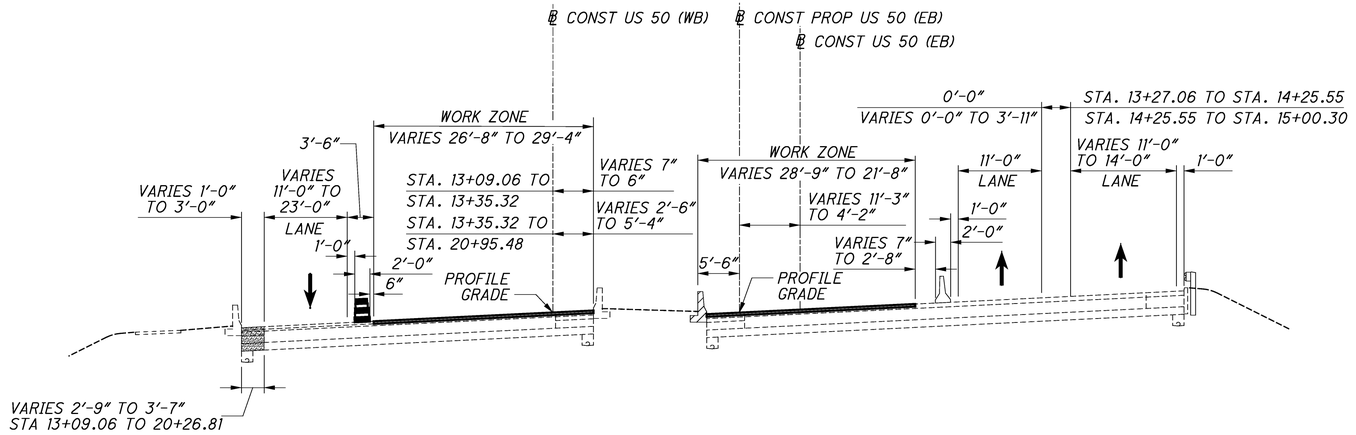
RIGHT - PROP ℄ STA. 2+54.58 TO STA. 3+36.18

DECK RECONSTRUCTION

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

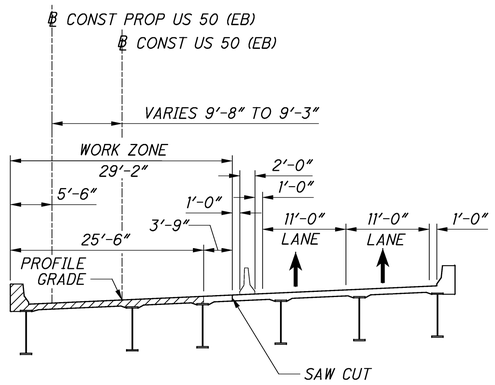
HAM-50-19.03

G:\CN06\0011\Road\CL\757736my001.DGN 11/9/2010 12:26:30 PM jmlangos



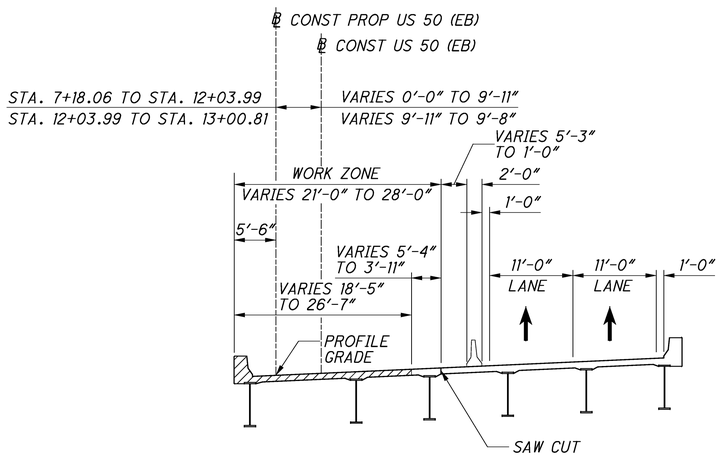
LEFT - STA. 13+09.06 TO STA. 20+95.48

RIGHT - PROP ℄ STA. 13+27.06 TO STA. 15+00.30



HAM-50-1903 BRIDGE APPROACH SLAB

RIGHT - PROP ℄ STA. 13+02.06 TO STA. 13+27.06



HAM-50-1903 BRIDGE

RIGHT - PROP ℄ STA. 7+18.06 TO STA. 13+02.06

DECK RECONSTRUCTION

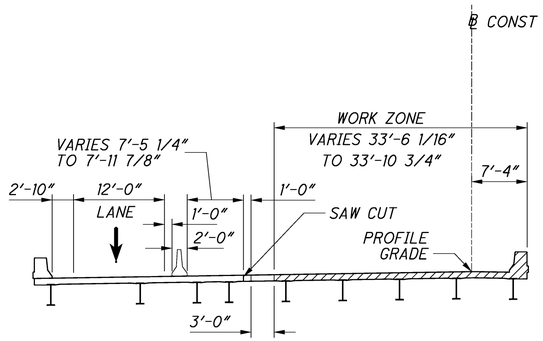
PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

TRAFFIC TYPICAL SECTIONS - PHASE 1

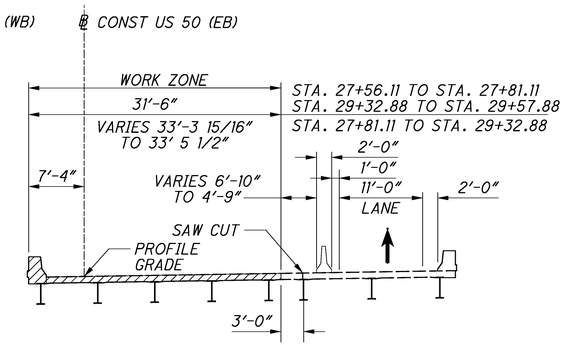
MAINTENANCE OF TRAFFIC

HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:31 PM jmlangos



LEFT - STA. 27+73.00 TO STA. 29+25.33

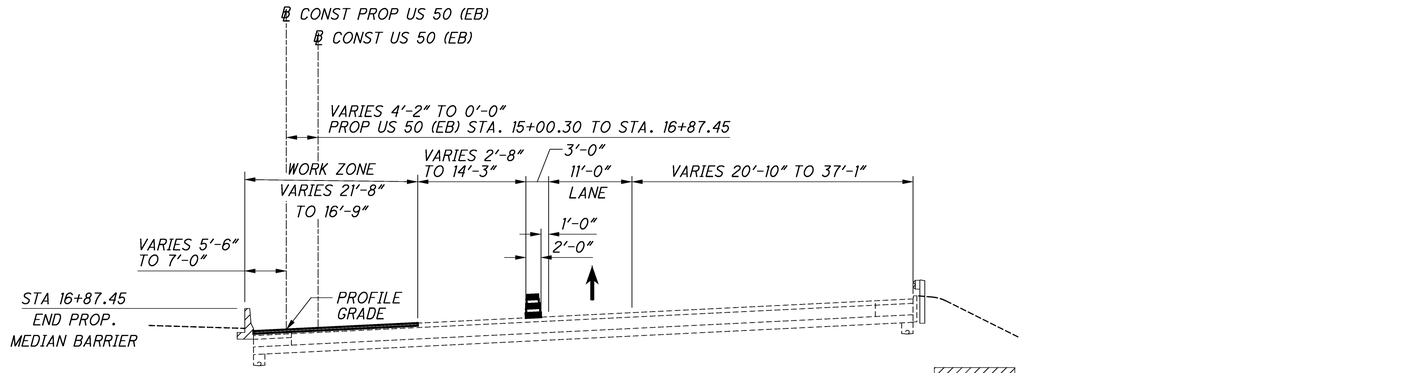


RIGHT - STA. 27+56.11 TO STA. 29+57.88

HAM-50-1954 BRIDGE

LEFT - STA. 20+95.48 TO STA. 27+73.00

RIGHT - STA. 18+22.50 TO STA. 27+56.11

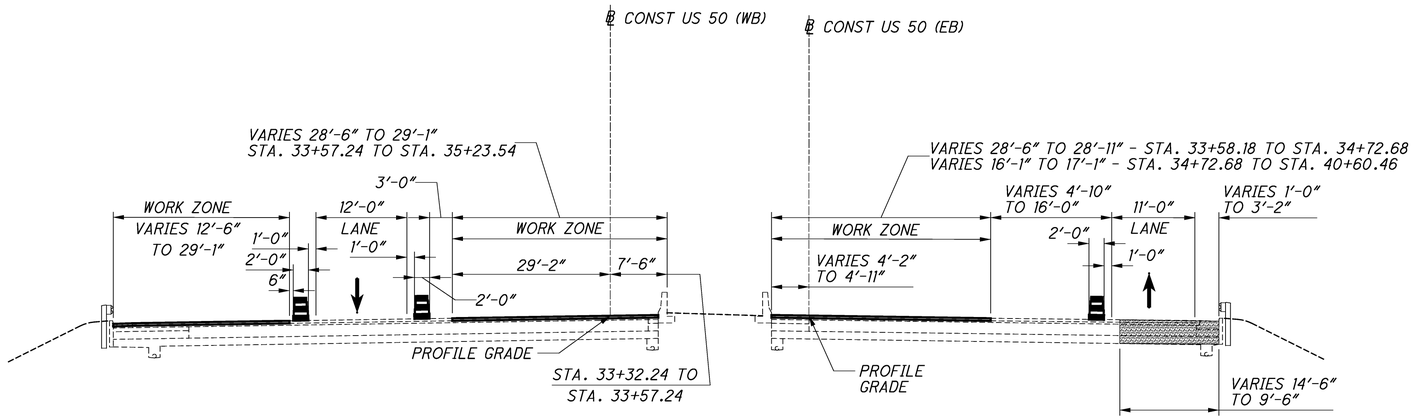


RIGHT - PROP ℄ STA. 15+00.30 TO EXISTING ℄ STA. 18+22.50

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

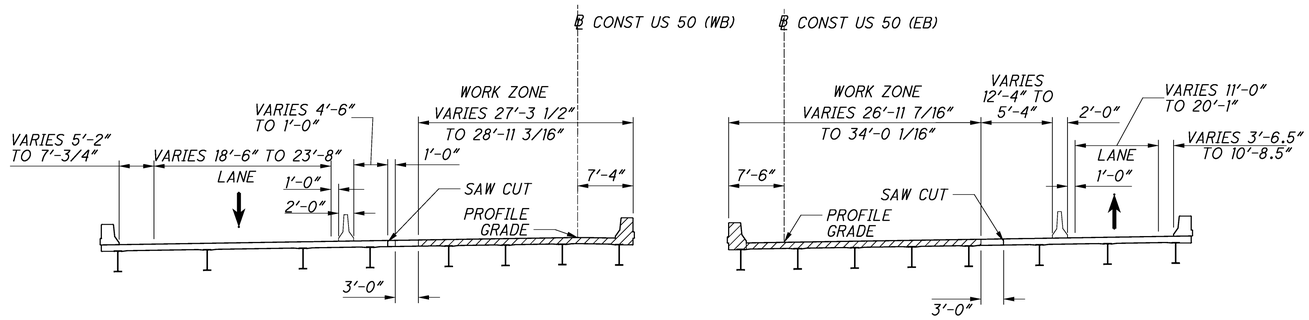
HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:31 PM jmlangos



LEFT - STA. 33+32.24 TO STA. 35+23.54

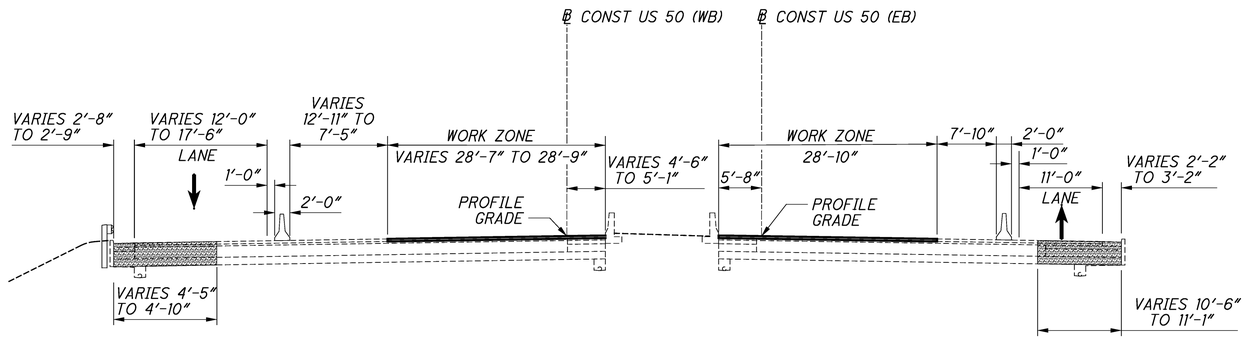
RIGHT - STA. 33+58.18 TO STA. 40+60.46



LEFT - STA. 30+83.93 TO STA. 33+32.24

RIGHT - STA. 30+84.63 TO STA. 33+58.18

HAM-50-1961 BRIDGE



LEFT - STA. 29+25.33 TO STA. 30+83.93

RIGHT - STA. 29+57.88 TO STA. 30+84.63

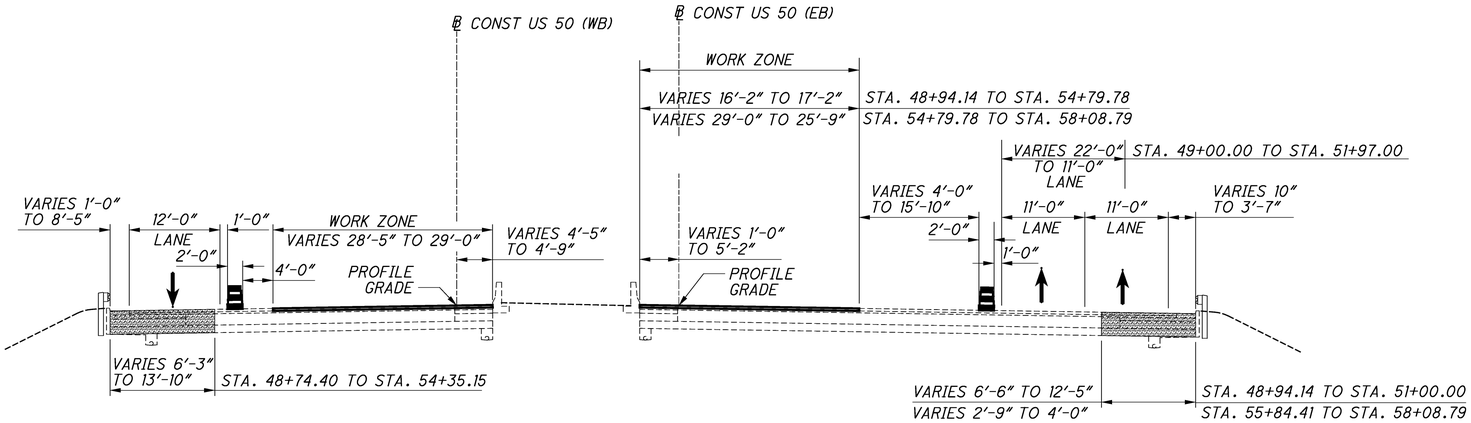
DECK RECONSTRUCTION

PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

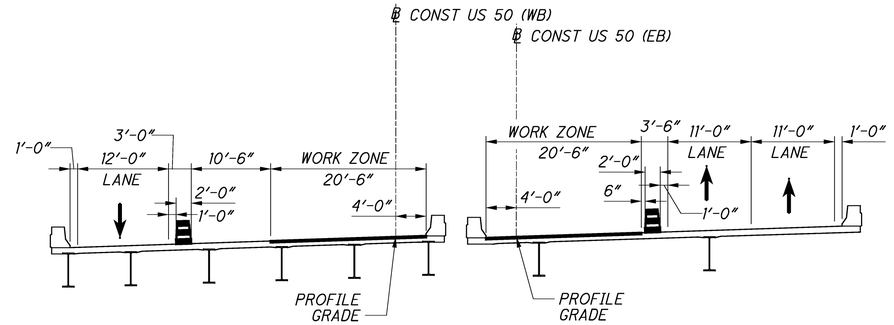
HAM-50-19.03

C:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:32 PM jmlangos



LEFT - STA. 48+75.70 TO STA. 56+64.76

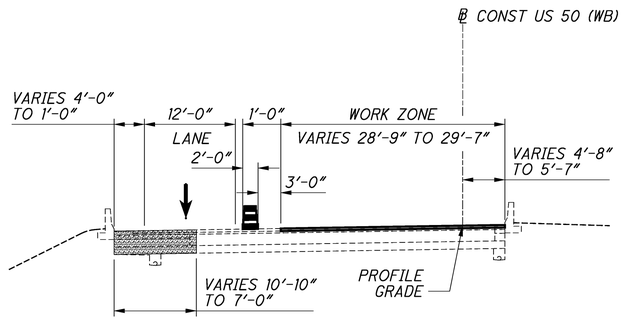
RIGHT - STA. 48+94.14 TO STA. 58+08.79



HAM-50-1980 BRIDGE

LEFT - STA. 40+81.11 TO STA. 48+75.70

RIGHT - STA. 40+60.46 TO STA. 48+94.14

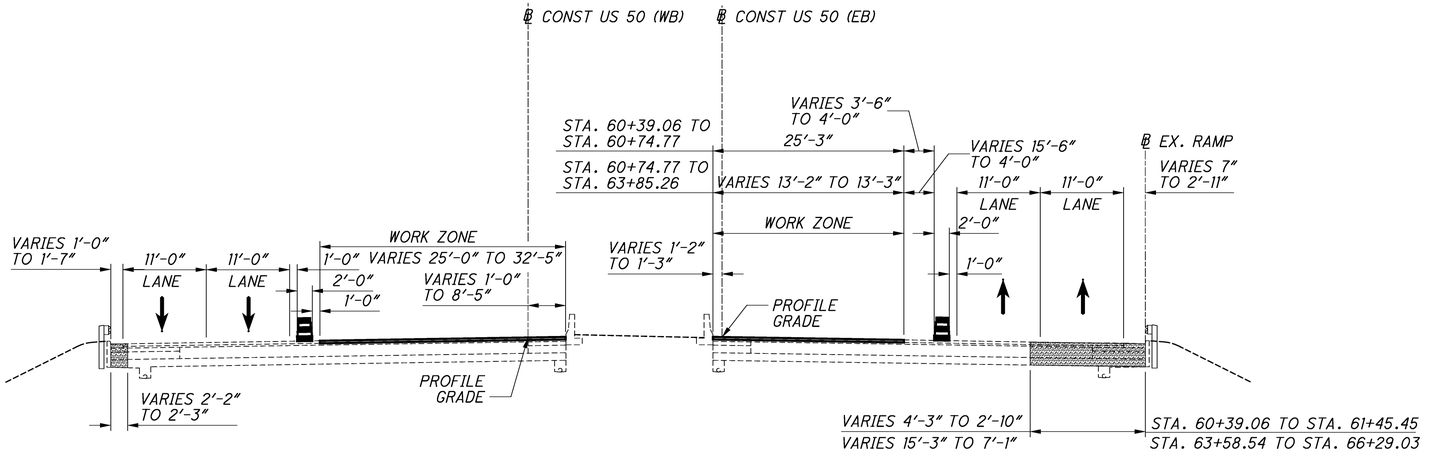


LEFT - STA. 35+23.54 TO STA. 40+81.11

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

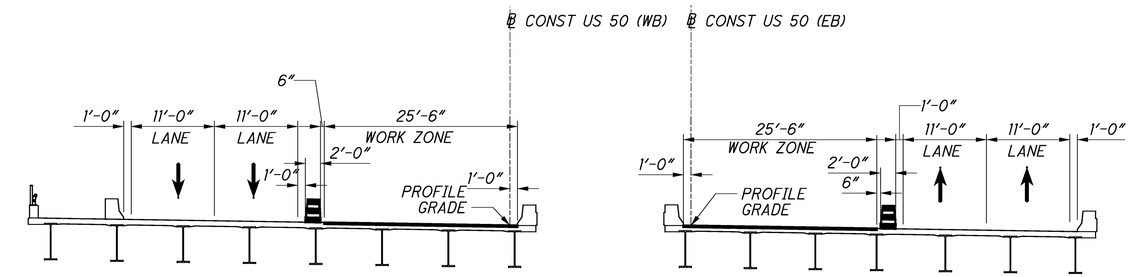
HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:33 PM jmlangos



LEFT - STA. 60+39.84 TO STA. 66+18.56

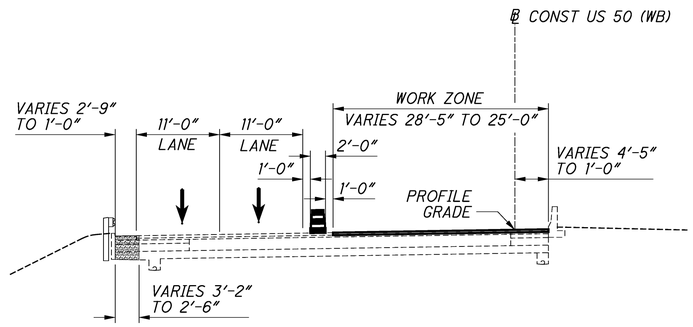
RIGHT - STA. 60+39.06 TO STA. 66+29.03



LEFT - STA. 58+12.32 TO STA. 60+39.84

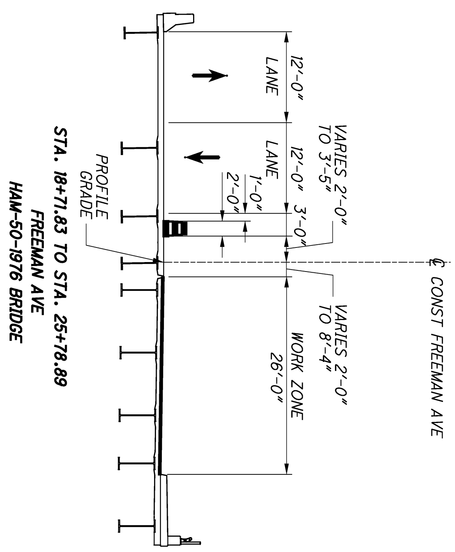
RIGHT - STA. 58+08.79 TO STA. 60+39.06

HAM-50-2013 BRIDGE

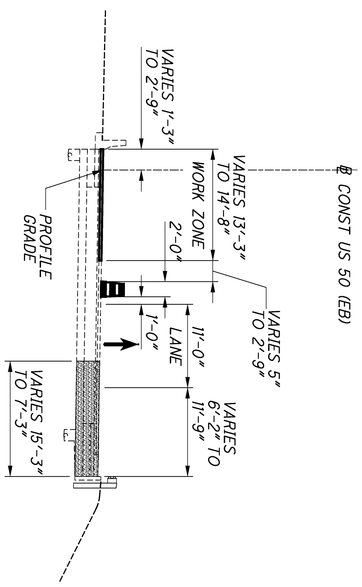


LEFT - STA. 56+64.76 TO STA. 58+12.32

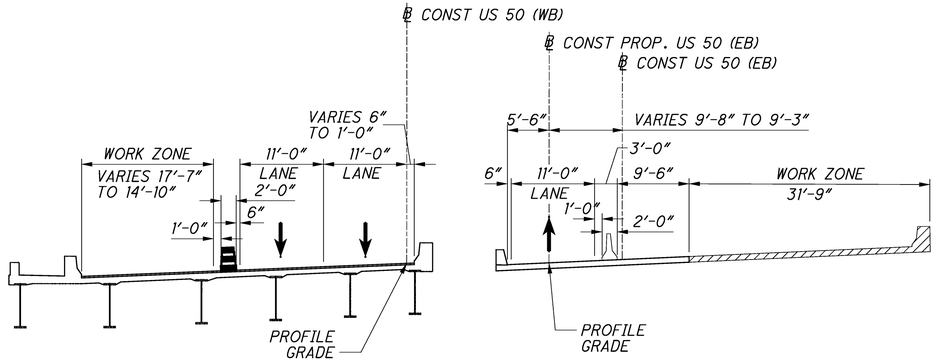
C:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:33 PM jmlangos



STA. 18+71.83 TO STA. 25+78.89
FREEMAN AVE
HAM-50-1976 BRIDGE



RIGHT - STA. 63+85.26 TO STA. 66+29.03



HAM-50-1903 BRIDGE

LEFT - STA. 9+65.22 TO STA. 13+34.96

APPROACH SLAB

RIGHT - PROP ℄ STA. 13+02.06 TO STA. 13+27.06

HAM-50-1903 BRIDGE

LEFT - STA. 2+62.39 TO STA. 9+65.22

RIGHT - PROP ℄ STA. 7+18.03 TO STA. 13+02.06

HAM-50-1903 BRIDGE

RIGHT - ℄ STA. 2+54.58 TO STA. 7+18.06

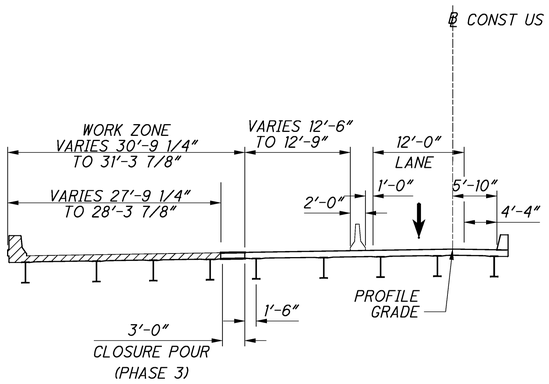
DECK RECONSTRUCTION

TRAFFIC TYPICAL SECTIONS - PHASE 2

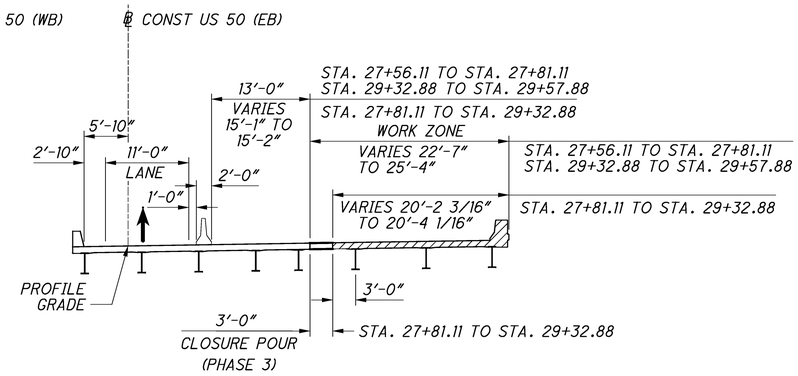
MAINTENANCE OF TRAFFIC

HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:34 PM jmlangos



LEFT - STA. 27+73.00 TO STA. 29+25.33



RIGHT - ℄ STA. 27+56.11 TO STA. 29+57.88

HAM-50-1954 BRIDGE

LEFT - STA. 19+57.78 TO STA. 27+73.00

RIGHT - ℄ STA. 18+43.61 TO STA. 27+56.11

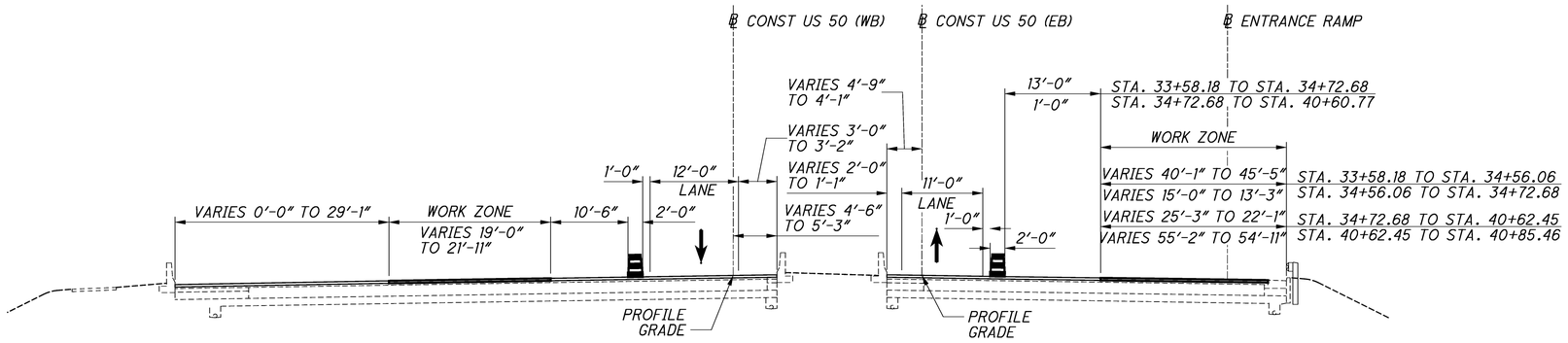
LEFT - STA. 13+34.96 TO STA. 19+57.78

RIGHT - PROP. ℄ STA. 13+27.06 TO EXISTING ℄ STA. 18+43.61

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

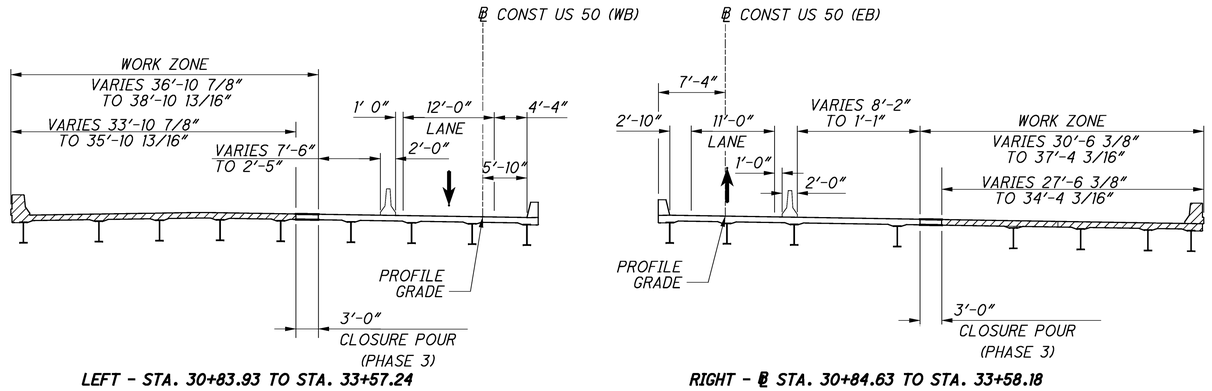
HAM-50-19.03

G:\CN06\0011\Road\CL 75736my001.DGN 11/9/2010 12:26:34 PM jmlangos



LEFT - STA. 33+57.24 TO STA. 40+81.11

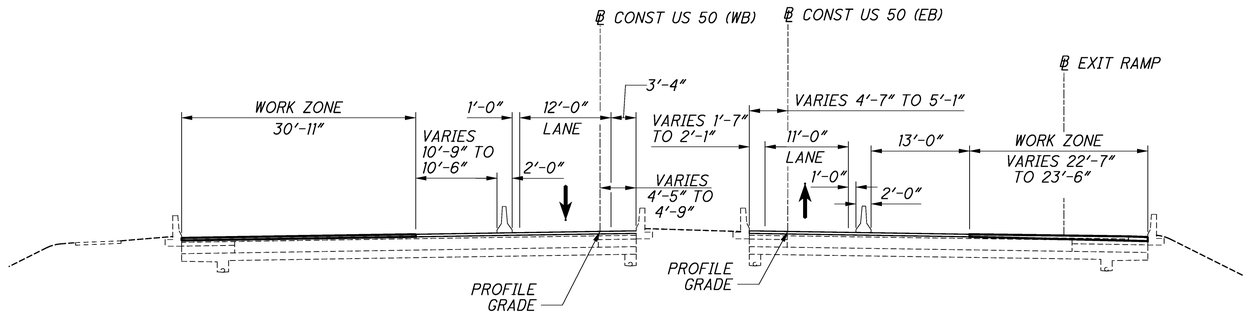
RIGHT - ℄ STA. 33+58.18 TO STA. 40+85.46



LEFT - STA. 30+83.93 TO STA. 33+57.24

RIGHT - ℄ STA. 30+84.63 TO STA. 33+58.18

HAM-50-1961 BRIDGE



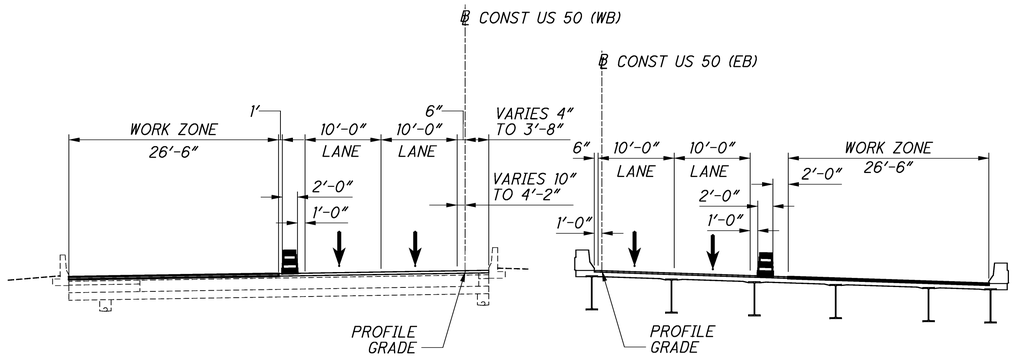
LEFT - STA. 29+25.33 TO STA. 30+83.93

RIGHT - ℄ STA. 29+57.88 TO STA. 30+84.63

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:35 PM jmlangos

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

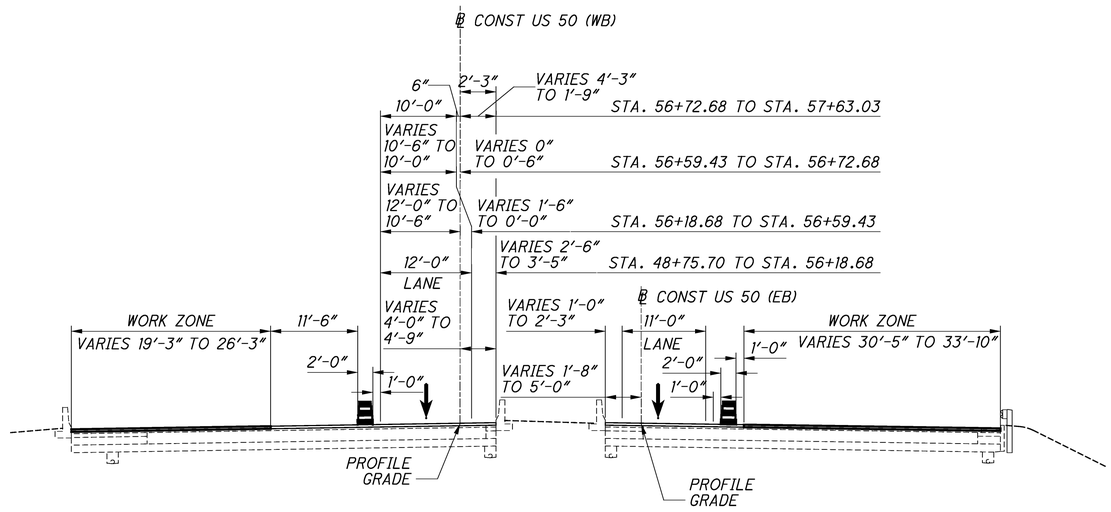
HAM-50-19.03



LEFT - STA. 57+63.03 TO STA. 58+12.32
STA. 60+39.84 TO STA. 66+18.56

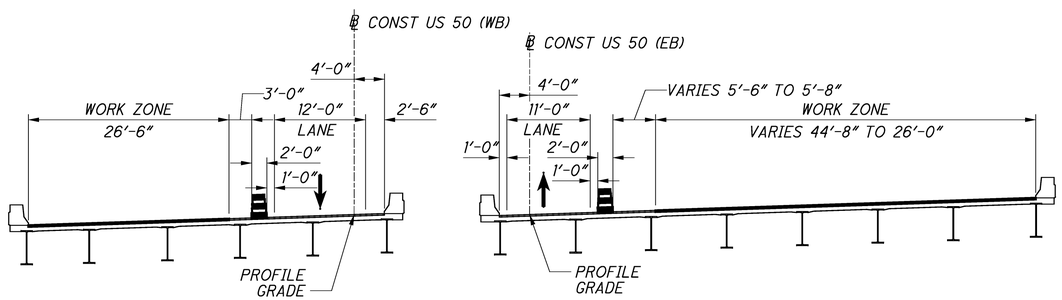
RIGHT - STA. 57+83.79 TO STA. 60+39.06

HAM-50-2013 BRIDGE (R)



LEFT - STA. 48+75.70 TO STA. 57+63.03

RIGHT - STA. 48+94.14 TO STA. 57+83.79



LEFT - STA. 40+81.11 TO STA. 48+75.70

RIGHT - ℄ STA. 40+85.46 TO STA. 48+94.14

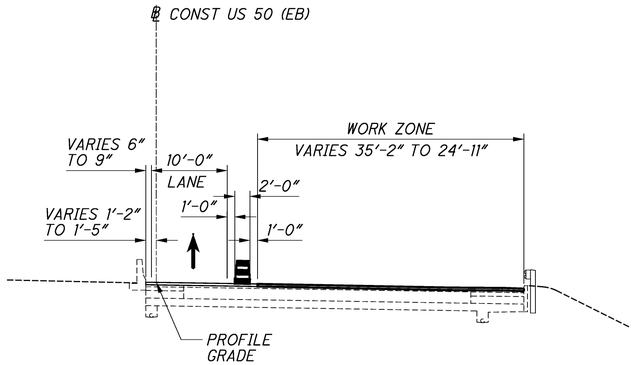
HAM-50-1980 BRIDGE

TRAFFIC TYPICAL SECTIONS - PHASE 2

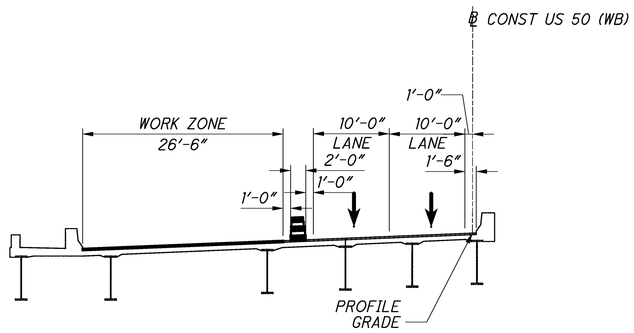
MAINTENANCE OF TRAFFIC

HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:35 PM jmlangos



RIGHT - STA. 60+39.06 TO STA. 65+38.24



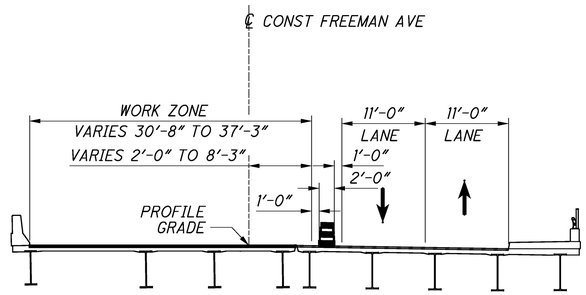
HAM-50-2013 BRIDGE (L)

LEFT - STA. 58+12.32 TO STA. 60+39.84

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

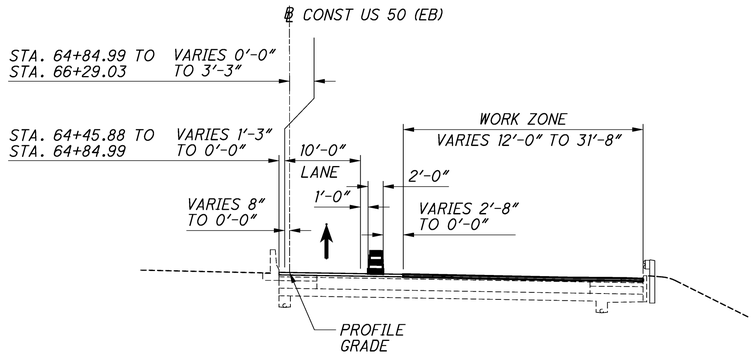
HAM-50-19.03

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:36 PM jmlangos

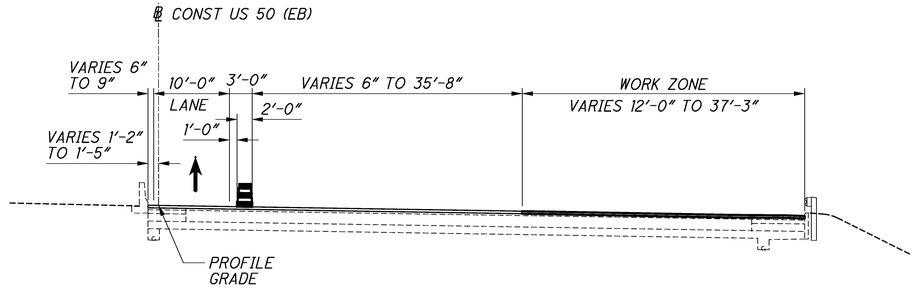


STA. 18+71.83 TO STA. 25+78.89
FREEMAN AVE
HAM-50-1976 BRIDGE

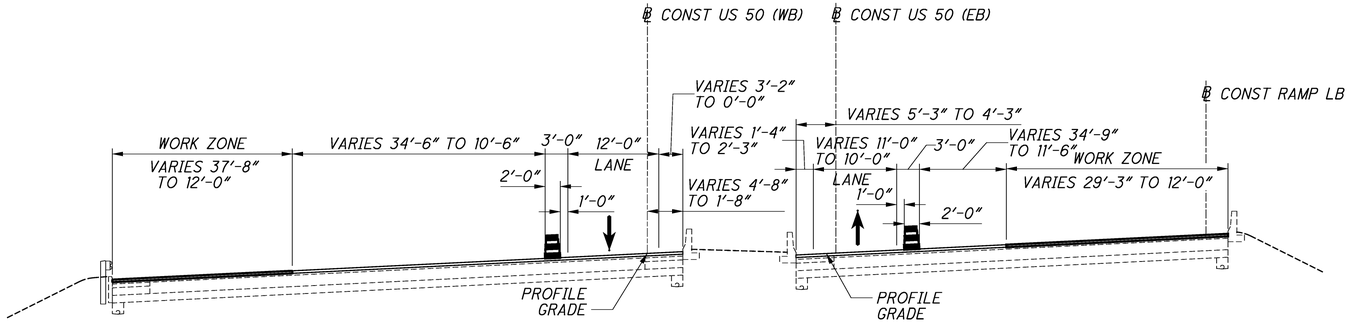
C:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:33 PM jmlangos



RIGHT - STA. 64+45.88 TO STA. 66+29.03

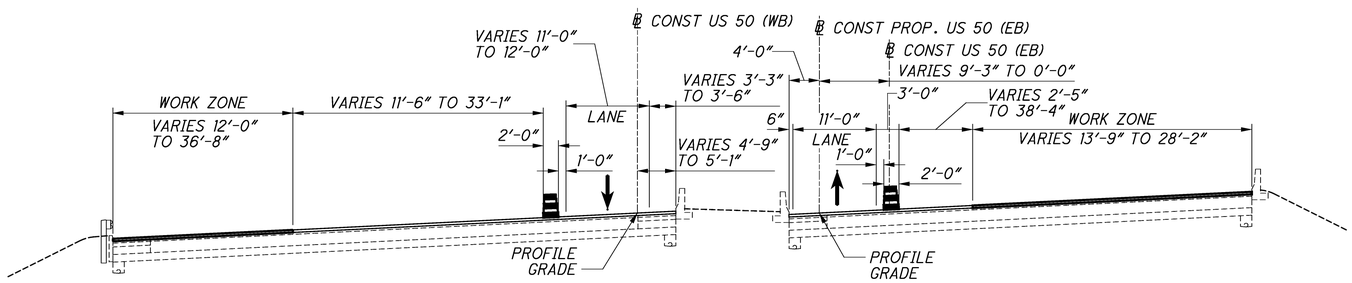


RIGHT - STA. 60+74.77 TO STA. 63+51.97



LEFT - STA. 54+35.19 TO STA. 57+63.03

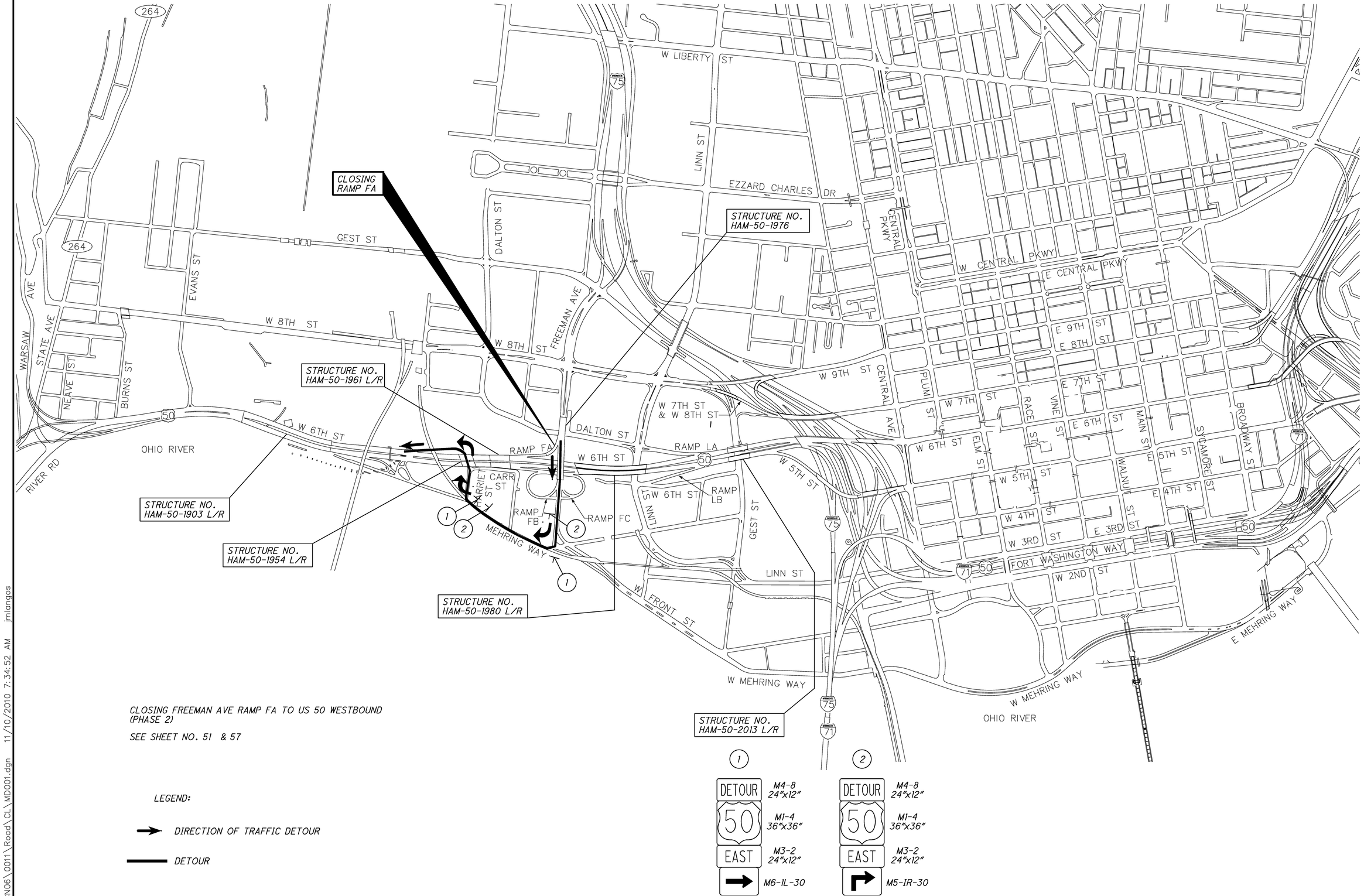
RIGHT - ℄ STA. 54+12.36 TO ℄ STA. 57+70.16



LEFT - STA. 20+03.10 TO STA. 22+86.69

RIGHT - PROP. ℄ STA. 13+87.87 TO EXISTING ℄ STA. 18+21.12

G:\CN06\0011\Road\CL\75736my001.DGN 11/9/2010 12:26:36 PM jmlangas



CLOSING FREEMAN AVE RAMP FA TO US 50 WESTBOUND (PHASE 2)

SEE SHEET NO. 51 & 57

LEGEND:

DIRECTION OF TRAFFIC DETOUR

DETOUR

(1)

DETOUR	M4-8 24"x12"
50	M1-4 36"x36"
EAST	M3-2 24"x12"
	M6-1L-30

(2)

DETOUR	M4-8 24"x12"
50	M1-4 36"x36"
EAST	M3-2 24"x12"
	M5-1R-30

HORIZONTAL SCALE IN FEET
0 250 500 1000

CALCULATED JG
CHECKED JE

MAINTENANCE OF TRAFFIC DETOUR PLAN-PHASE 2

HAM-50-19.03

29
442

C:\CN06\0011\Road\CL\MD001.dgn 11/10/2010 7:34:52 AM jmlangos

MAINTENANCE OF TRAFFIC DETOUR PLAN

HAM-50-19.03

CALCULATED JG
CHECKED JR

HORIZONTAL SCALE IN FEET
0 250 500 1000

CLOSING RAMP FB

STRUCTURE NO. HAM-50-1976

STRUCTURE NO. HAM-50-1961 L/R

STRUCTURE NO. HAM-50-1903 L/R

STRUCTURE NO. HAM-50-1954 L/R

STRUCTURE NO. HAM-50-1980 L/R

STRUCTURE NO. HAM-50-2013 L/R

CLOSING FREEMAN AVE RAMP FB TO US 50 EASTBOUND (PHASE 2)

SEE SHEET NO. 51

LEGEND:

DIRECTION OF TRAFFIC DETOUR

DETOUR

	1	2	3	4	5
DETOUR	M4-8 24"x12"	M4-8 24"x12"	M4-8 24"x12"	M4-8 24"x12"	M4-8 24"x12"
50	M1-4 36"x36"	M1-4 36"x36"	M1-4 36"x36"	M1-4 36"x36"	M1-4 36"x36"
EAST	M3-2 24"x12"	M3-2 24"x12"	M3-2 24"x12"	M3-2 24"x12"	M3-2 24"x12"
	M6-3-30	M6-1L-30	M6-1R-30	M5-1L-30	M5-1R-30

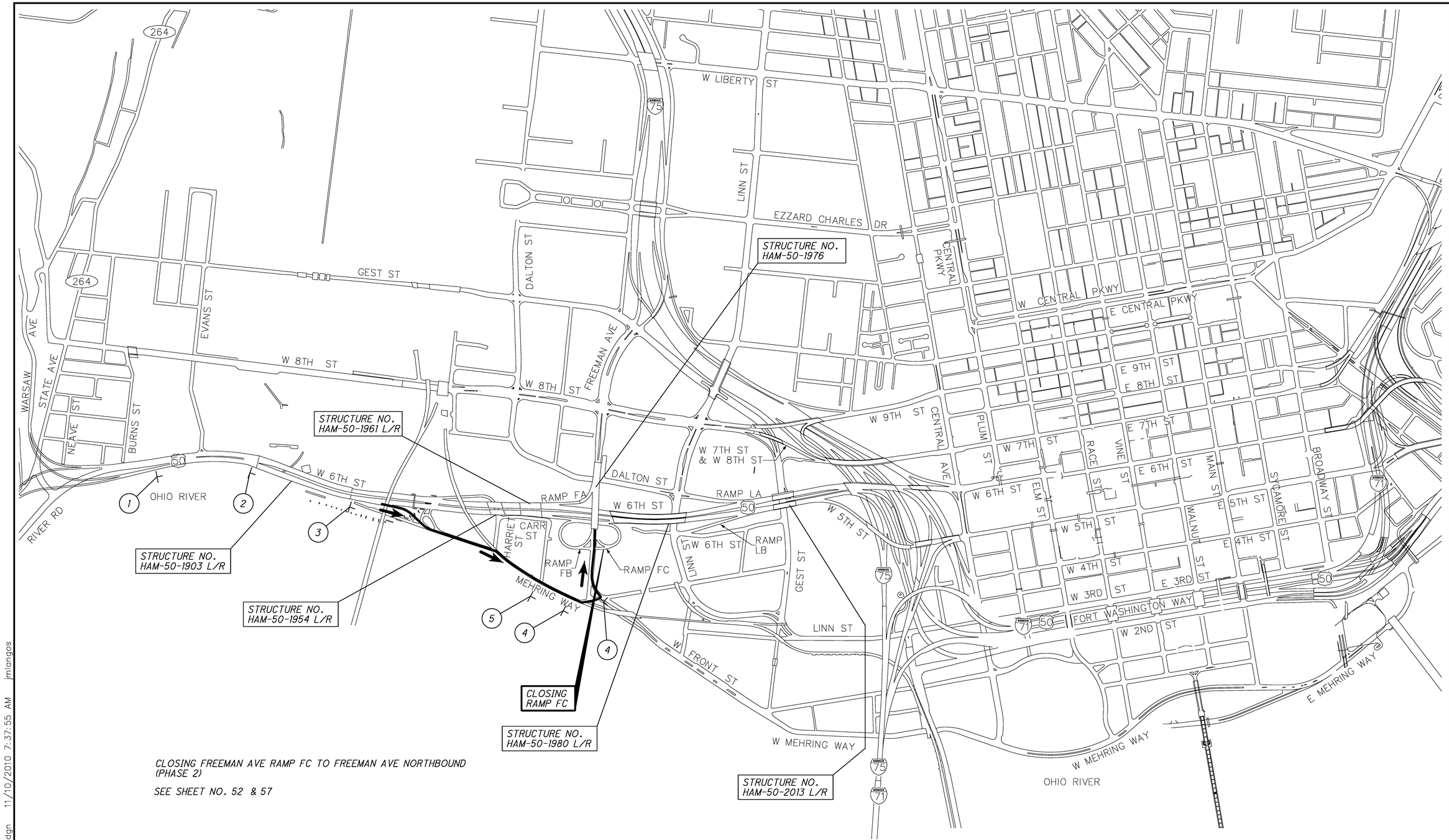
G:\CN06\0011\Road\CL\MD001.dgn 11/10/2010 7:35:20 AM jmlangos

MAINTENANCE OF TRAFFIC
DETOUR PLAN-PHASE 2

HAM-50-19.03

CALCULATED JG
CHECKED JR

HORIZONTAL SCALE IN FEET
0 250 500 1000



CLOSING FREEMAN AVE RAMP FC TO FREEMAN AVE NORTHBOUND (PHASE 2)

SEE SHEET NO. 52 & 57

LEGEND:

DIRECTION OF TRAFFIC DETOUR

DETOUR

1

FREEMAN AVE.
EXIT
CLOSED

2

DETOUR AHEAD W20-2-48

FREEMAN AVE. D3-1

3

FREEMAN AVE. D3-1

DETOUR M4-9R 48"x36"

4

FREEMAN AVE. D3-1

DETOUR M4-9L 48"x36"

5

FREEMAN AVE. D3-1

DETOUR M4-8

M5-1L-30

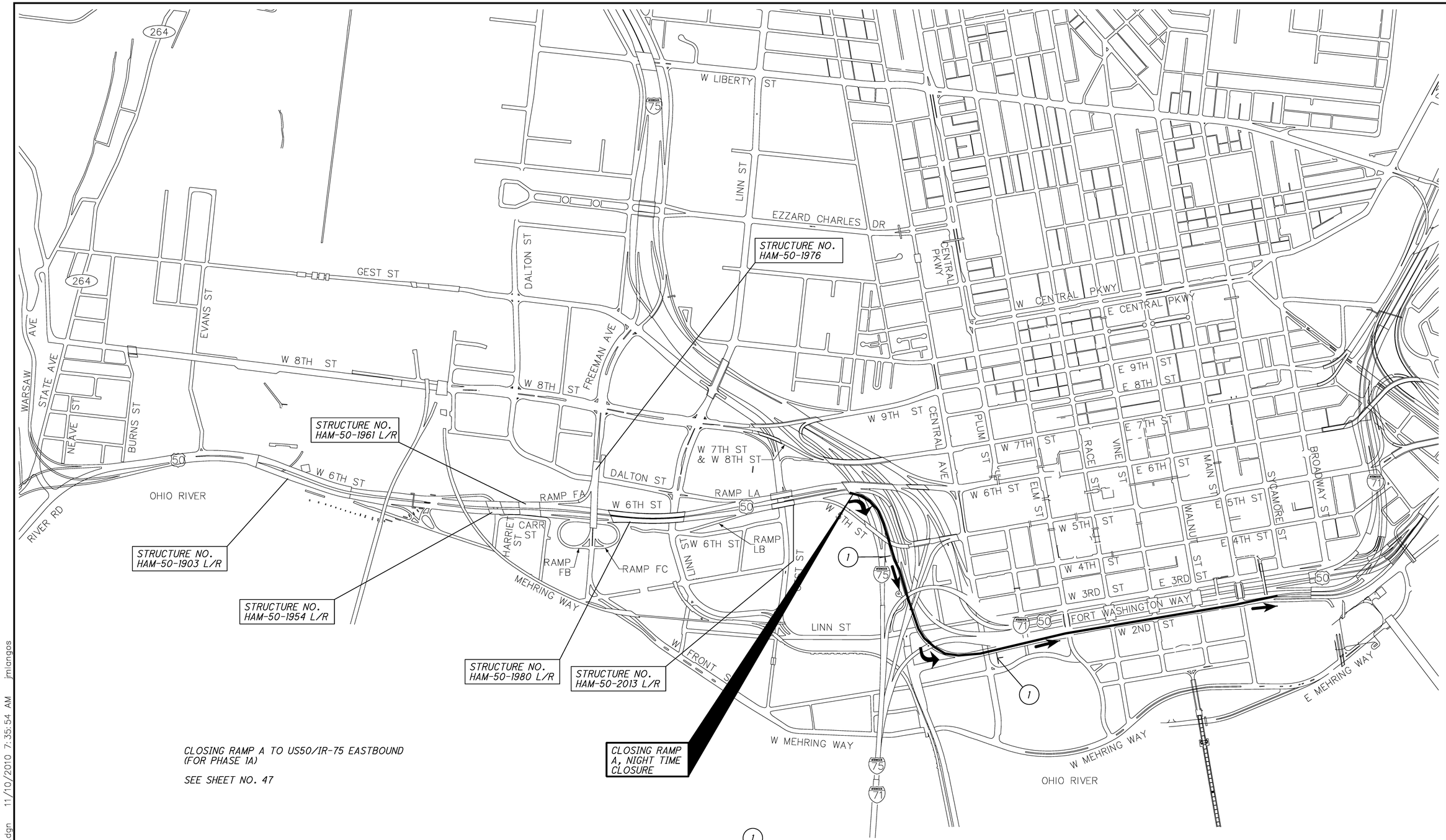
G:\CN06\0011\Road\CL\MD001.dgn 11/10/2010 7:37:55 AM jmlangos

MAINTENANCE OF TRAFFIC DETOUR PLAN-PHASE 1A

HAM-50-19.03

CALCULATED JG | CHECKED JR

HORIZONTAL SCALE IN FEET
0 250 500 1000



CLOSING RAMP A TO US50/IR-75 EASTBOUND (FOR PHASE 1A)

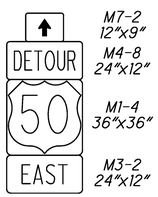
SEE SHEET NO. 47

LEGEND:

DIRECTION OF TRAFFIC DETOUR

DETOUR

1



M7-2 12"x9"
M4-8 24"x12"
M1-4 36"x36"
M3-2 24"x12"

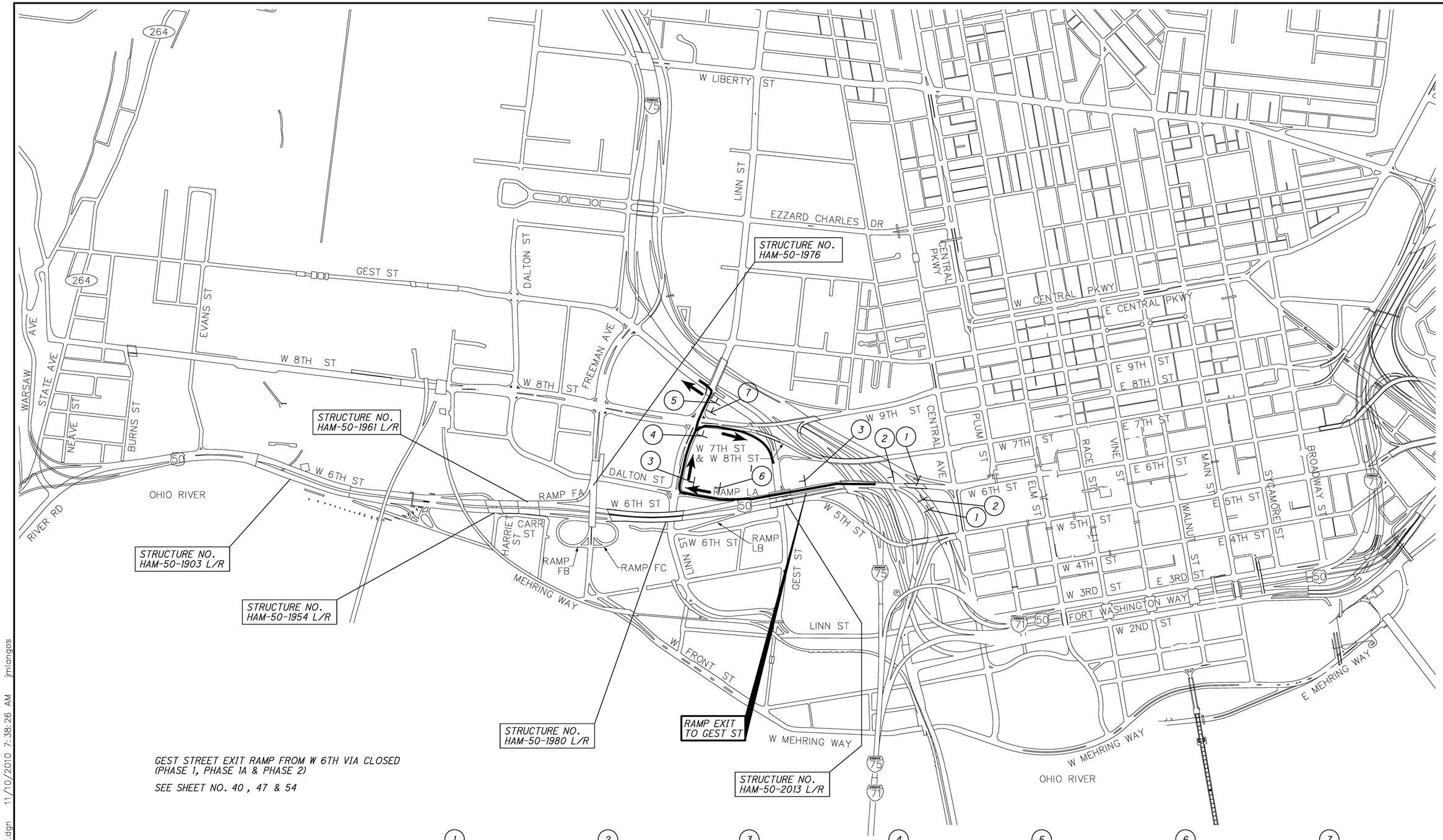
G:\CN06\0011\Road\CL\MD001.dgn 11/10/2010 7:35:54 AM jmlangos

MAINTENANCE OF TRAFFIC
DETOUR PLAN-PHASE 1, 1A, 2

HAM-50-19.03

CALCULATED JG
CHECKED JR

HORIZONTAL SCALE IN FEET
0 250 500 1000



GEST STREET EXIT RAMP FROM W 6TH VIA CLOSED
(PHASE 1, PHASE 1A & PHASE 2)

SEE SHEET NO. 40 , 47 & 54

LEGEND:

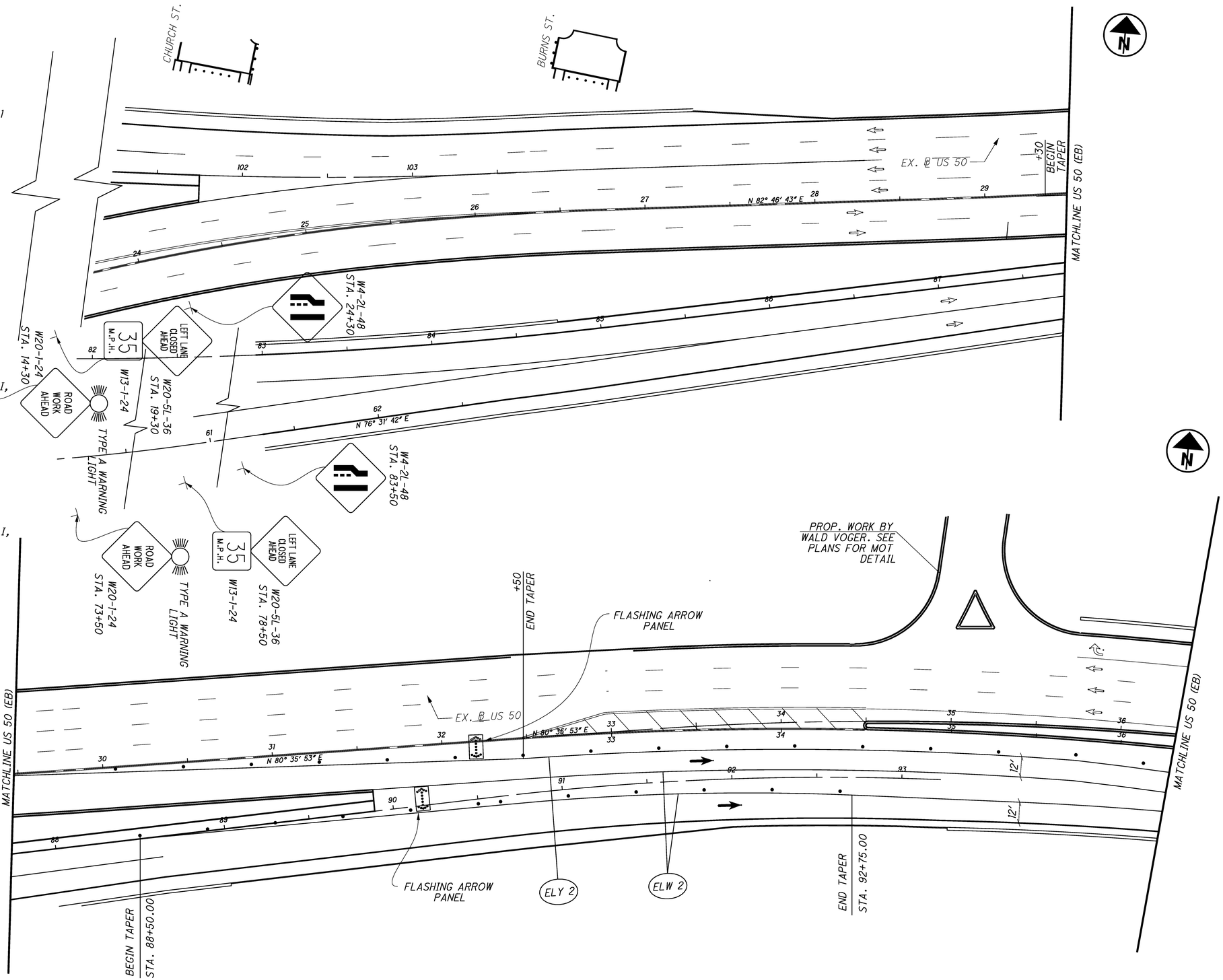
- DIRECTION OF TRAFFIC DETOUR
- DETOUR

1. GEST ST. EXIT CLOSED
2. DETOUR AHEAD W20-2-48 / GEST ST. D3-1
3. GEST ST. D3-1 / DETOUR M4-9R 48"x36"
4. GEST ST. D3-1 / SOUTH M3-3-24 / DETOUR M4-9R 48"x36"
5. GEST ST. D3-1 / WEST M3-4-24 / DETOUR M4-9L 48"x36"
6. GEST ST. D3-1 / DETOUR M4-8 / M5-1R-30
7. GEST ST. D3-1 / WEST M3-4-24 / DETOUR M4-8 / M5-1L-30

G:\CN06\0011\Road\CL\MD001.dgn 11/10/2010 7:38:26 AM jmlangos

PAVEMENT MARKING LEGEND

ELW 1	WORK ZONE EDGE LINE WHITE, CLASS 1 642 PAINT
ELY 1	WORK ZONE EDGE LINE YELLOW, CLASS 1 642 PAINT
CL 1	WORK ZONE CENTER LINE, CLASS 1 642 PAINT
LL 1	WORK ZONE LANE LINE, CLASS 1 642 PAINT
CH 1	WORK ZONE CHANNELIZING LINE, CLASS 1 642 PAINT
DL 1	WORK ZONE DOTTED LINE, CLASS 1 642 PAINT
ELW 2	WORK ZONE EDGE LINE WHITE, CLASS I, 740.06, TYPE I
ELY 2	WORK ZONE EDGE LINE YELLOW, CLASS I, 740.06, TYPE I
CL 2	WORK ZONE CENTER LINE CLASS I, 740.06, TYPE I
LL 2	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE I
CH 2	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I
DL 2	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I



LEGEND

- DRUMS
- PORTABLE CONCRETE BARRIER (PCB)
- IMPACT ATTENUATOR
- DIRECTION OF TRAFFIC
- EXISTING DIRECTION OF TRAFFIC
- PHASE CONSTRUCTION
- OVER NIGHT PHASE CONSTRUCTION
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

FOR ADDITIONAL MAINTENANCE OF TRAFFIC SIGNING SEE STANDARD CONSTRUCTION DRAWINGS: MT-35.10, MT-95.30, MT-95.32, MT 95.40, MT-98.10, MT-98.20, MT-98.22, MT-98.29, MT-99.50, MT-101.70, & MT-102.20

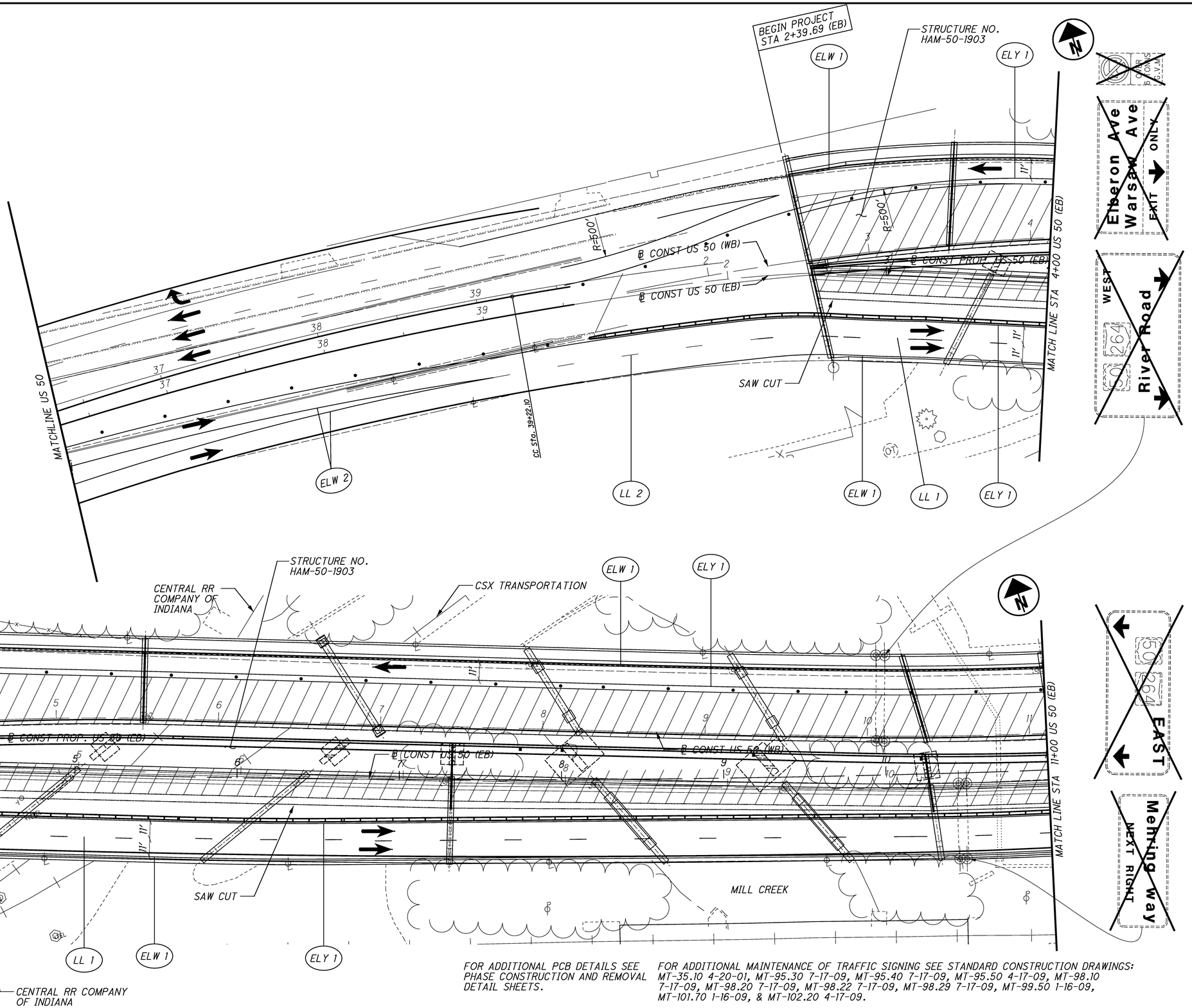
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50 PHASE 1

HAM-50-19.03

G:\CN06\0011\Road\CL\MP000.dgn 11/9/2010 12:27:09 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR ADDITIONAL MAINTENANCE OF TRAFFIC SIGNING SEE STANDARD CONSTRUCTION DRAWINGS: MT-35.10 4-20-01, MT-95.30 7-17-09, MT-95.40 7-17-09, MT-95.50 4-17-09, MT-98.10 7-17-09, MT-98.20 7-17-09, MT-98.22 7-17-09, MT-98.29 7-17-09, MT-99.50 1-16-09, MT-101.70 1-16-09, & MT-102.20 4-17-09.

G:\CN06\0011\Road\CL\MP001.dgn 11/9/2010 12:27:17 PM jmlangos

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50
STA 0+00 TO STA 11+00 PHASE 1

HAM-50-19.03

MAINTENANCE OF TRAFFIC - US 50
STA 11+00 TO STA 25+00 PHASE 1

HAM-50-19.03

CALCULATED RMP
CHECKED HB

HORIZONTAL SCALE IN FEET
0 15 30 60

STRUCTURE NO. HAM-50-1903

MATCH LINE STA 11+00 US 50 (EB)

℄ CONST PROP. US 50 (EB)

℄ CONST US 50 (WB)

℄ CONST US 50 (EB)

SAW CUT

P.I. 14+26
R=7315'
(LANE LINE)

MATCH LINE STA 18+00 US 50 (EB)

R=7315'

CSX & NORFOLK SOUTHERN

TO 75 NORTH
Freeman Ave
EXIT ½ MILE
STA. 16+13 (EB)

To Freeman Ave
EXIT ½ MILE
NORTH

Mehring Way

STA. 16+13 (EB)

EXIT

OC-96-48
STA. 16+25

R1-2-60
STA. 21+07

W4-1R-48
STA. 22+90

CSX TRANSPORTATION

MATCH LINE STA 18+00 US 50 (EB)

℄ CONST US 50 (WB)

℄ CONST US 50 (EB)

MATCH LINE STA 25+00 US 50 (EB)

R=7315'

P.I. 18+48
R=7315'

To Freeman Ave
EXIT ONLY
NORTH
(AHEAD-24+10)

TO 75 NORTH
Freeman Ave
EXIT ONLY
STA. 23+00 (EB)

NEXT RIGHT
(COVER EX.)

Elberon Ave
Warsaw Ave
EXIT ONLY

FREEWAY ENDS
½ MILE

CORR
C.V.M.

ARTIMIS DYNAMIC MESSAGE SIGN
(NO WORK)

ELW 1
ELY 1
LL 1
CH 1

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

G:\CN06\0011\Road\CL\MP002.dgn 11/9/2010 12:27:34 PM jmlangos

MAINTENANCE OF TRAFFIC - US 50
STA 25+00 TO STA 39+00 PHASE 1

HAM-50-19.03

37
442

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

MATCH LINE STA 25+00 US 50 (EB)

MATCH LINE STA 32+00 US 50 (EB)

MATCH LINE STA 39+00 US 50 (EB)

STRUCTURE NO. HAM-50-1954

STRUCTURE NO. HAM-50-1961

STRUCTURE NO. HAM-50-1976

SAW CUT

℄ CONST US 50 (EB)

℄ CONST US 50 (WB)

℄ CONST RAMP FA

℄ CONST FREEMAN AVE

℄ RAMP FB

℄ HARRIET ST

CARR ST

CSX TRANSPORTATION

R1-2-60 STA. 33+52

W4-IR-48 STA. 35+25

ELW 1 ELY 1 CH 1

264 Fifth St Downtown EXIT 1/2 MILE STA. 38+60 (EB)

50 EAST TO 75 SOUTH TO 71

50 EAST TO SOUTH 75 Freeman Ave EXIT ONLY STA. 38+45 (EB)

TO 75 NORTH Freeman Ave EXIT ONLY STA. 38+45 (EB)

TO 75 NORTH Freeman Ave EXIT ONLY STA. 34+00 (EB)

50 EAST TO 75 NORTH EXIT ONLY

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

G:\CN06\0011\Road\CL\MP003.dgn 11/9/2010 12:27:41 PM jmlangos

CSX TRANSPORTATION RAILROAD TRACKS

STRUCTURE NO. HAM-50-1976

CSX TRANSPORTATION RAILROAD TRACKS

STRUCTURE NO. HAM-50-1980

MATCH LINE STA 39+00 US 50 (EB)

MATCH LINE STA 46+00 US 50 (EB)

℄ CONST US 50 (WB)

℄ CONST US 50 (EB)

℄ RAMP FC

℄ CONST FREEMAN AVENUE

W4-2R-36

STA. 41+01

ELW 1

ELY 1

CH 1

LL 1

℄ LINN STREET

MATCH LINE STA 46+00 US 50 (EB)

MATCH LINE STA 53+00 US 50 (EB)

℄ CONST US 50 (WB)

℄ CONST US 50 (EB)

STRUCTURE NO. HAM-50-1980

℄ RAMP LB

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

NORTH EAST 69 (1) SOUTH
Second St
Fifth St
1/4 MILE
264
(NO WORK)

Dalton Ave
Linn St
NORTH
SOUTH

Dalton Ave
Linn St.
SOUTH
NORTH

TO 50 EAST
TO 75 SOUTH
STA. 49+27 (RAMP LB)

TO 50 EAST
TO 75 SOUTH

Sixth St
Gest St

Sixth St
Gest St
STA. 49+27 (RAMP LB)

HORIZONTAL SCALE IN FEET
0 15 30 60

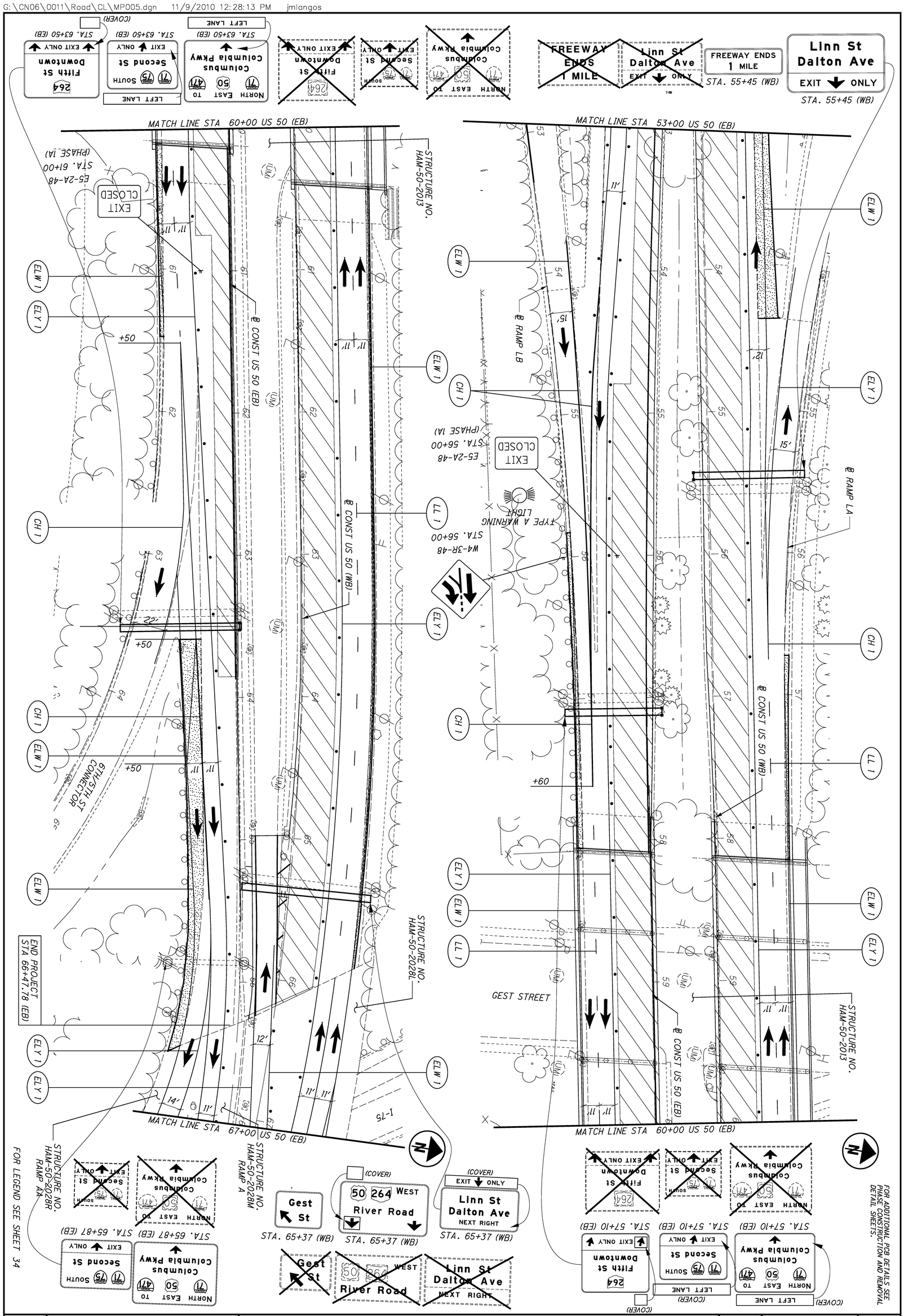
CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50
STA 39+00 TO STA 53+00 - PHASE 1

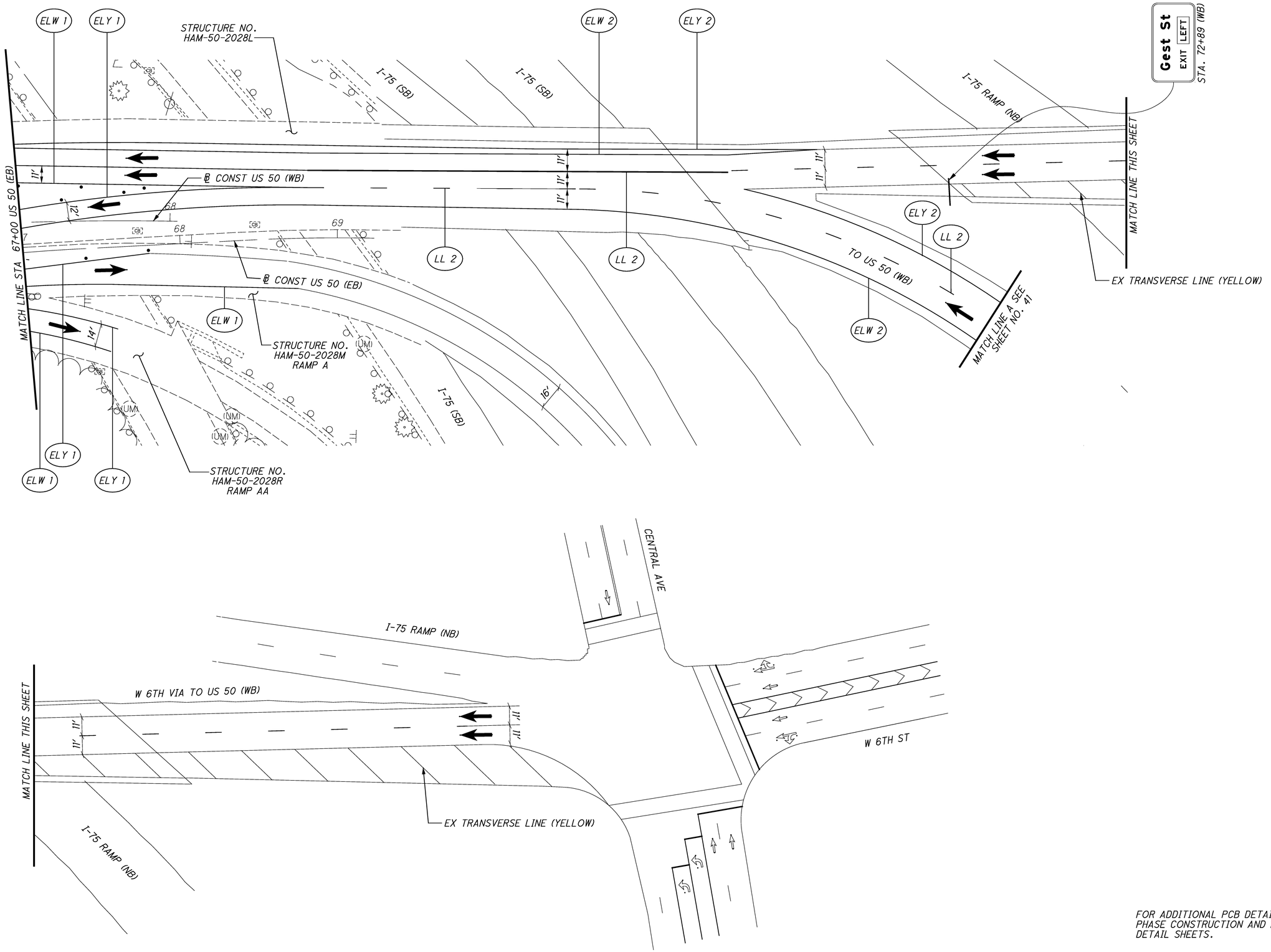
HAM-50-19.03

C:\CN06\0011\Road\CL\WP004.dgn 11/9/2010 12:27:58 PM jmlangos

G:\CN06\0011\Road\CL\MP005.dgn 11/9/2010 12:28:13 PM jmlangos



39 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 53+00 TO STA 67+00 - PHASE 1	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

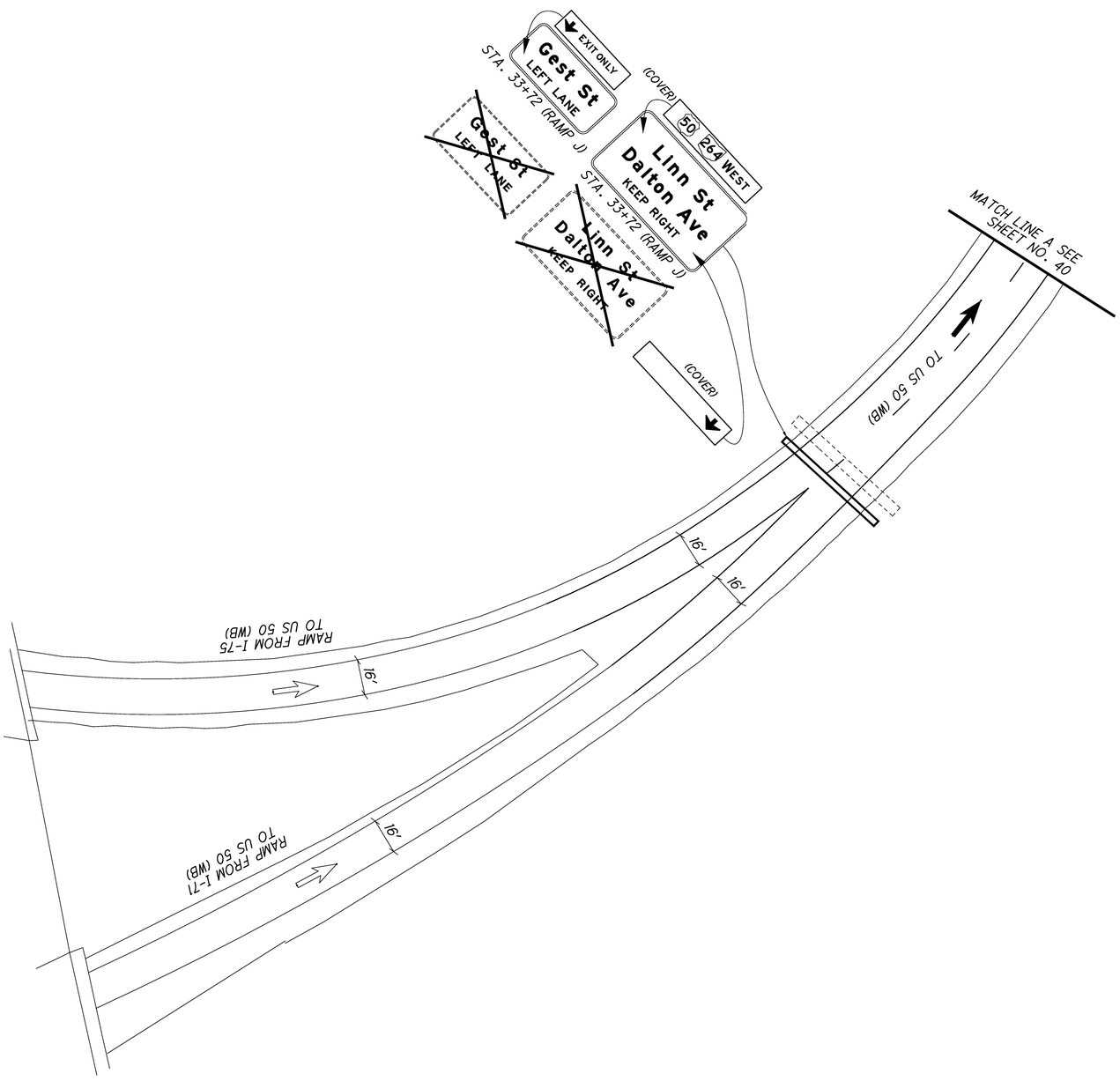
CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50
STA 67+00 TO CENTRAL AVE - PHASE 1

HAM-50-19.03

40
442

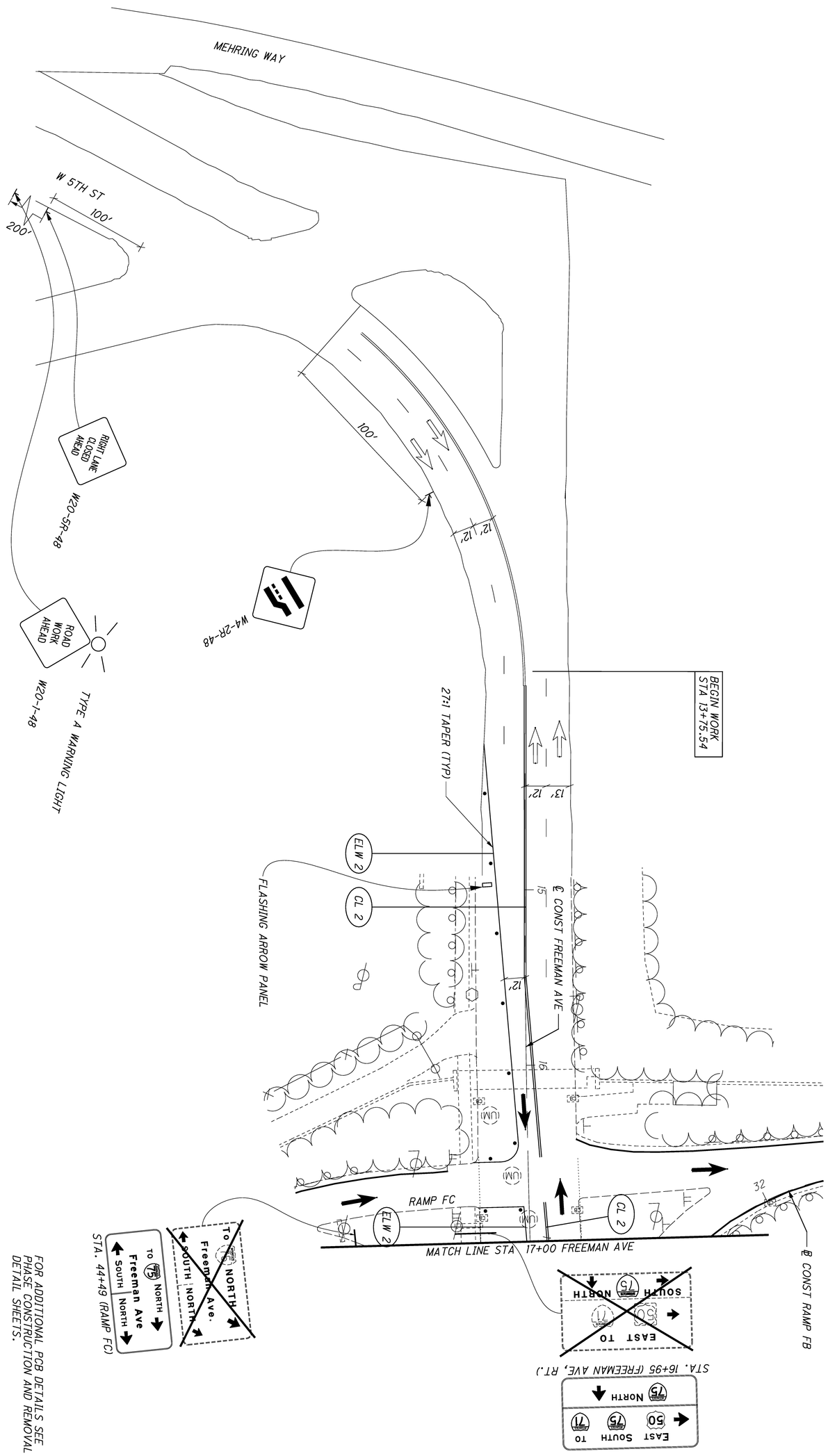
G:\CN06\0011\Road\CL\MP006.dgn 11/9/2010 3:16:56 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

G:\CN06\0011\Road\CL\MP007.dgn 11/9/2010 3:19:13 PM jmlangos

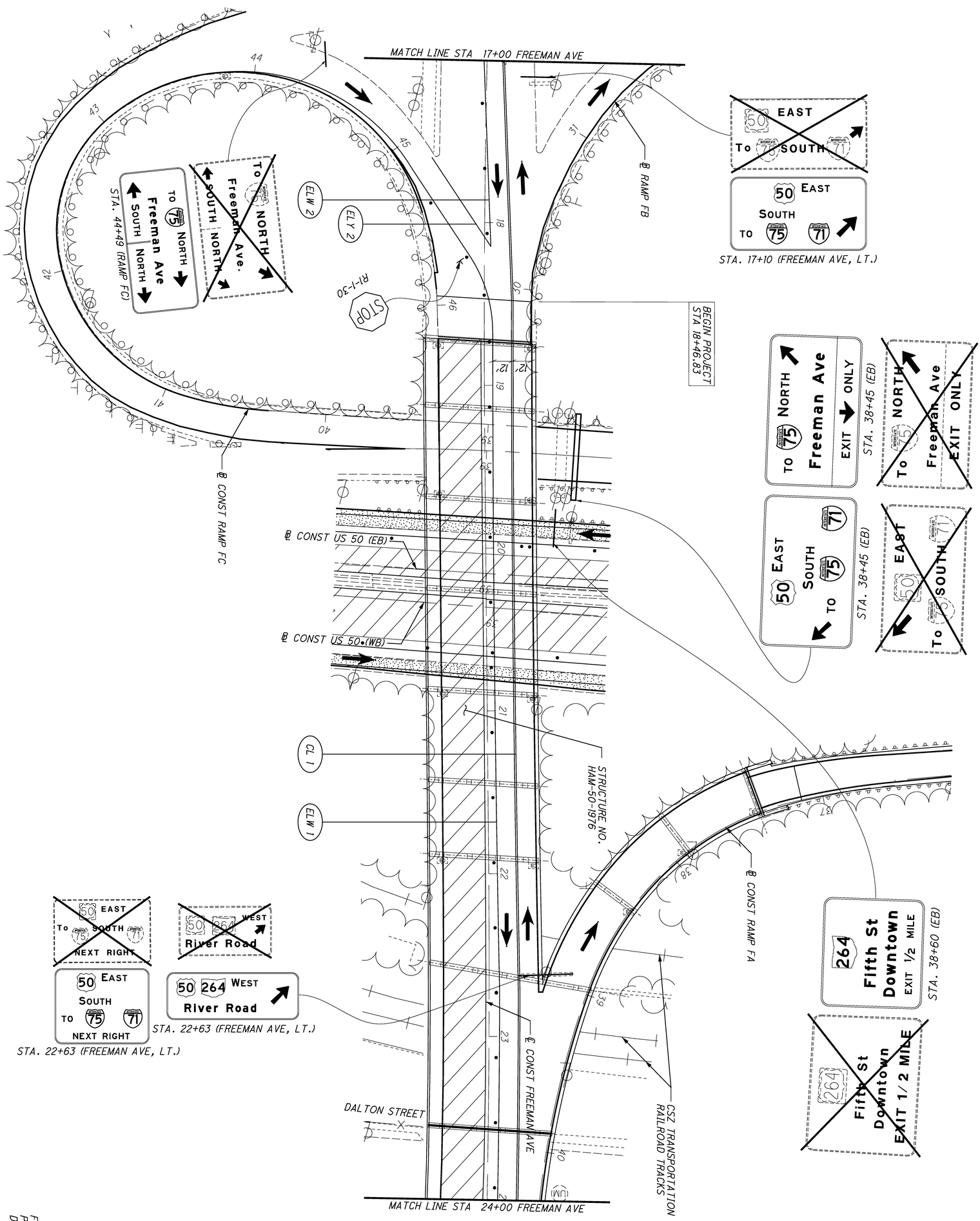


FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

42 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 14+00 TO STA 17+00 - PHASE 1	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

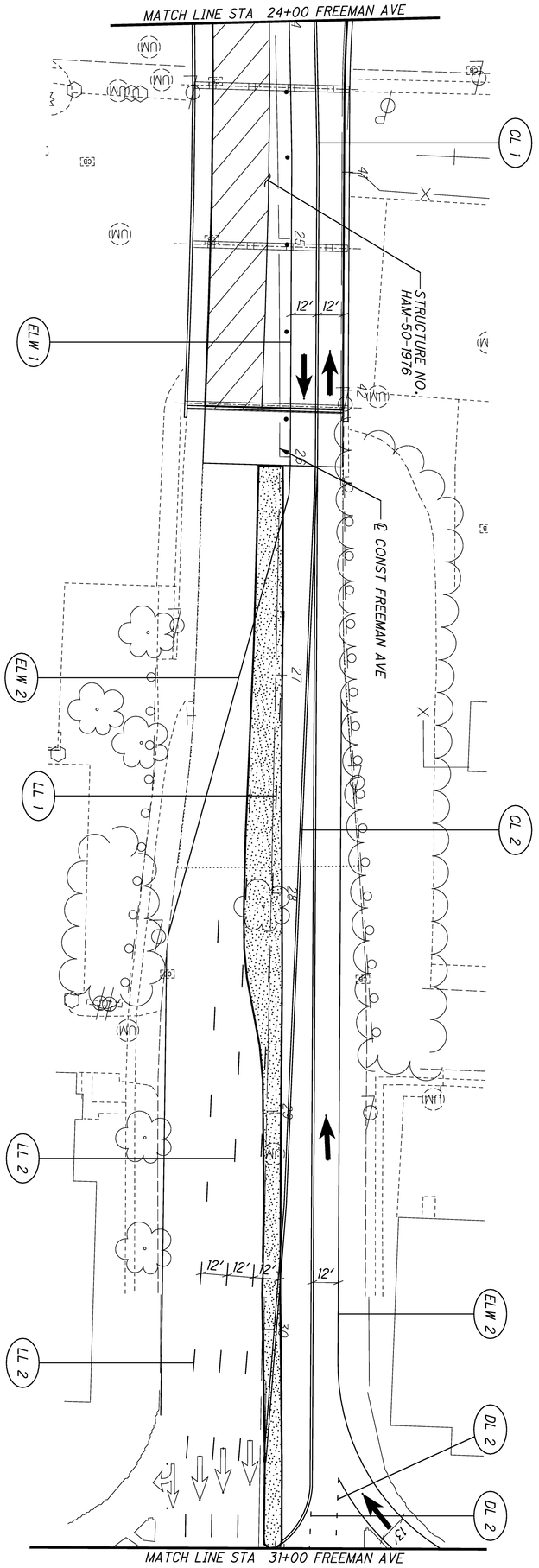
G:\CN06\0011\Road\CL\MP008.dgn 11/9/2010 12:28:31 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

43 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 17+00 TO STA 24+00 - PHASE 1	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

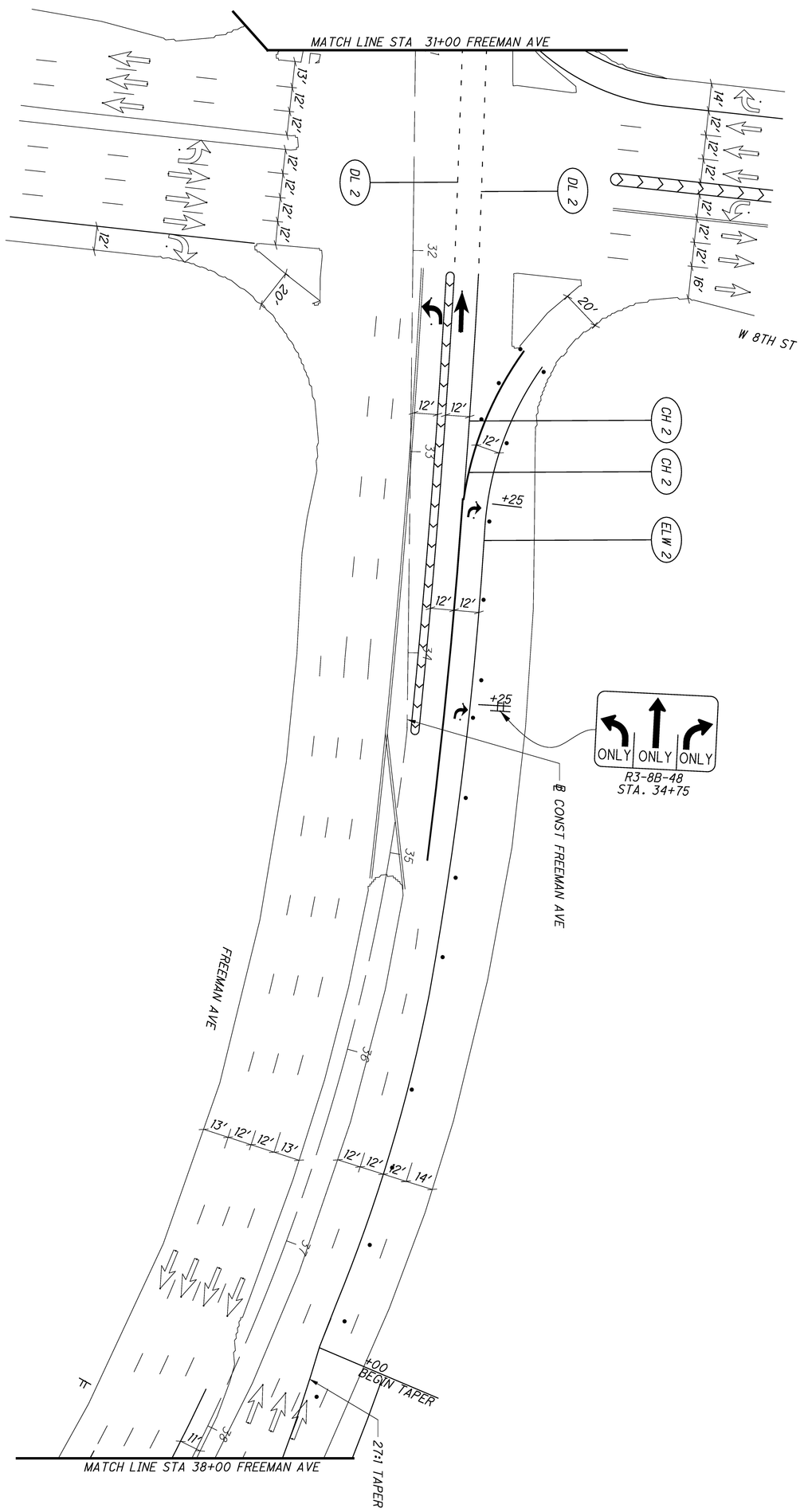


FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

44 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 24+00 TO STA 31+00 - PHASE 1	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\CL\MP010.dgn 11/9/2010 3:21:04 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

45 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 31+00 TO STA 38+00 - PHASE 1	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

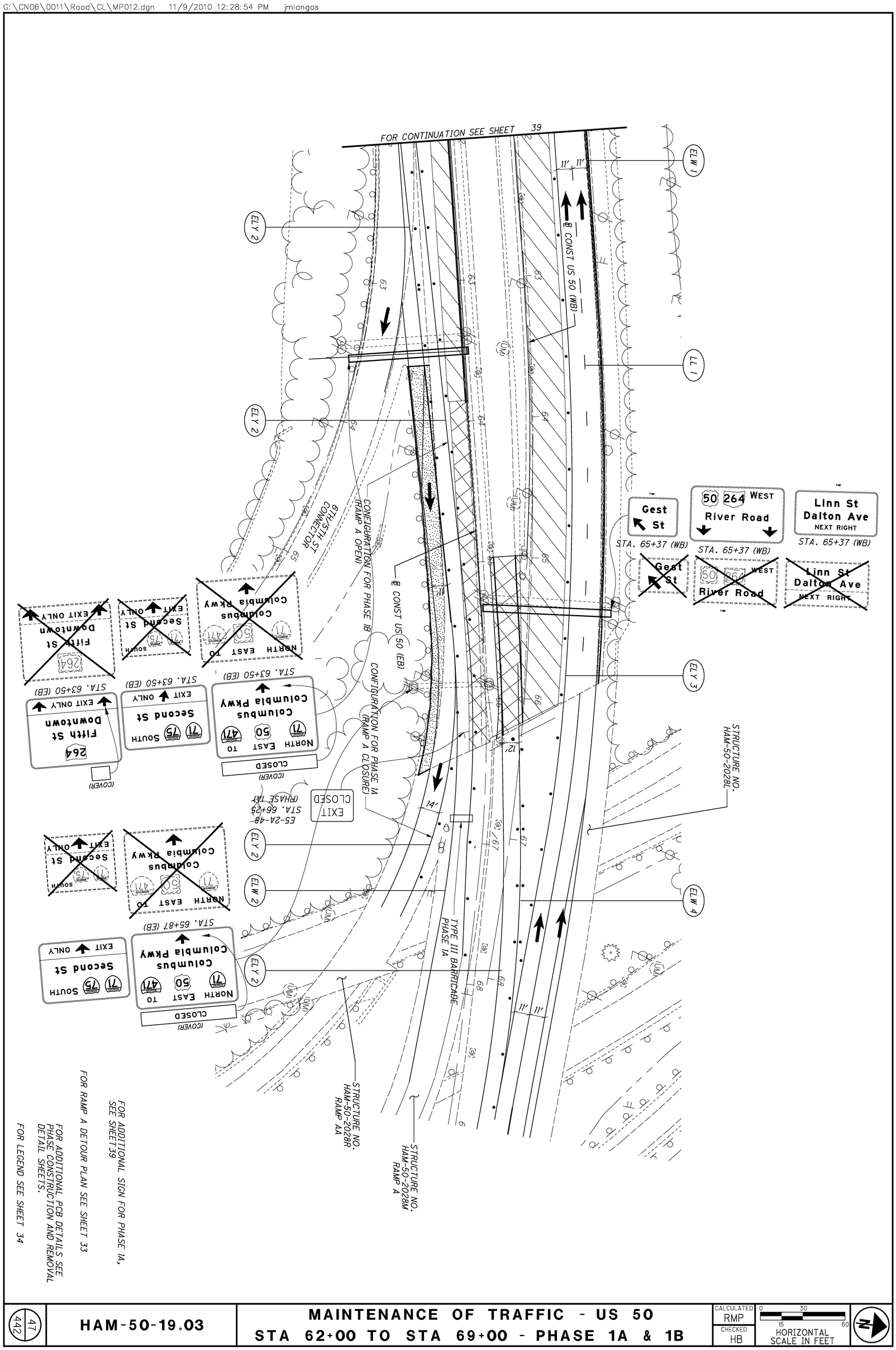
CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - FREEMAN AVE
STA 38+00 TO STA 41+00 - PHASE 1

HAM-50-19.03

G:\CN06\0011\Road\CL\MP011.dgn 11/9/2010 3:30:10 PM jmlangos

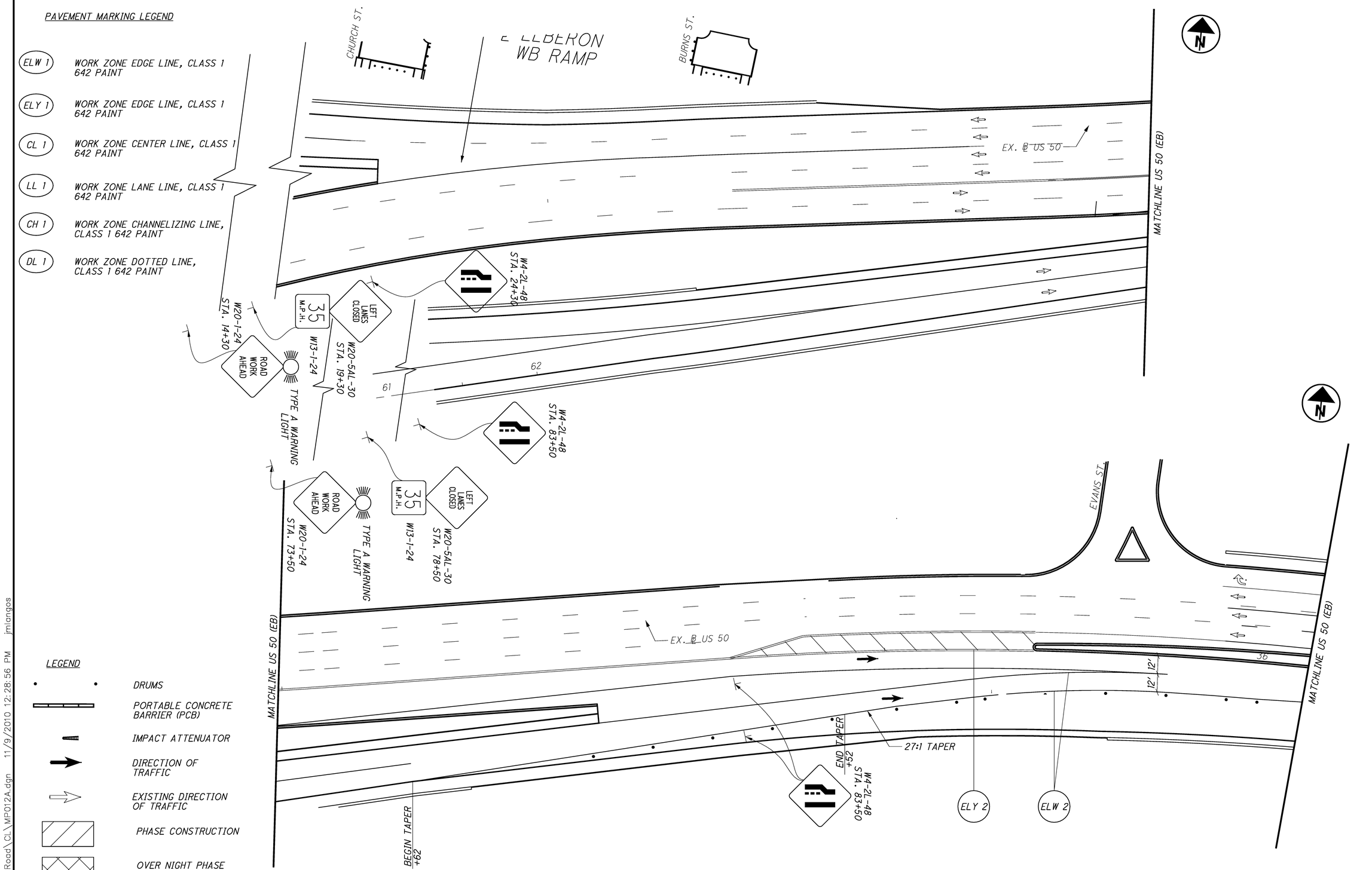
G:\CN06\0011\Road\CL\MP012.dgn 11/9/2010 12:28:54 PM jmlangos



47 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 62+00 TO STA 69+00 - PHASE 1A & 1B	CALCULATED RMP CHECKED HB	0 15 30 60 HORIZONTAL SCALE IN FEET

PAVEMENT MARKING LEGEND

ELW 1	WORK ZONE EDGE LINE, CLASS 1 642 PAINT
ELY 1	WORK ZONE EDGE LINE, CLASS 1 642 PAINT
CL 1	WORK ZONE CENTER LINE, CLASS 1 642 PAINT
LL 1	WORK ZONE LANE LINE, CLASS 1 642 PAINT
CH 1	WORK ZONE CHANNELIZING LINE, CLASS 1 642 PAINT
DL 1	WORK ZONE DOTTED LINE, CLASS 1 642 PAINT



LEGEND

- DRUMS
- PORTABLE CONCRETE BARRIER (PCB)
- IMPACT ATTENUATOR
- DIRECTION OF TRAFFIC
- EXISTING DIRECTION OF TRAFFIC
- PHASE CONSTRUCTION
- OVER NIGHT PHASE CONSTRUCTION
- PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR ADDITIONAL MAINTENANCE OF TRAFFIC SIGNING SEE STANDARD CONSTRUCTION DRAWINGS: MT-35.10 4-20-01, MT-95.30 7-17-09, MT-95.40 7-17-09, MT-95.50 4-17-09, MT-98.10 7-17-09, MT-98.20 7-17-09, MT-98.22 7-17-09, MT-98.29 7-17-09, MT-99.50 1-16-09, MT-101.70 1-16-09, & MT-102.20 4-17-09.

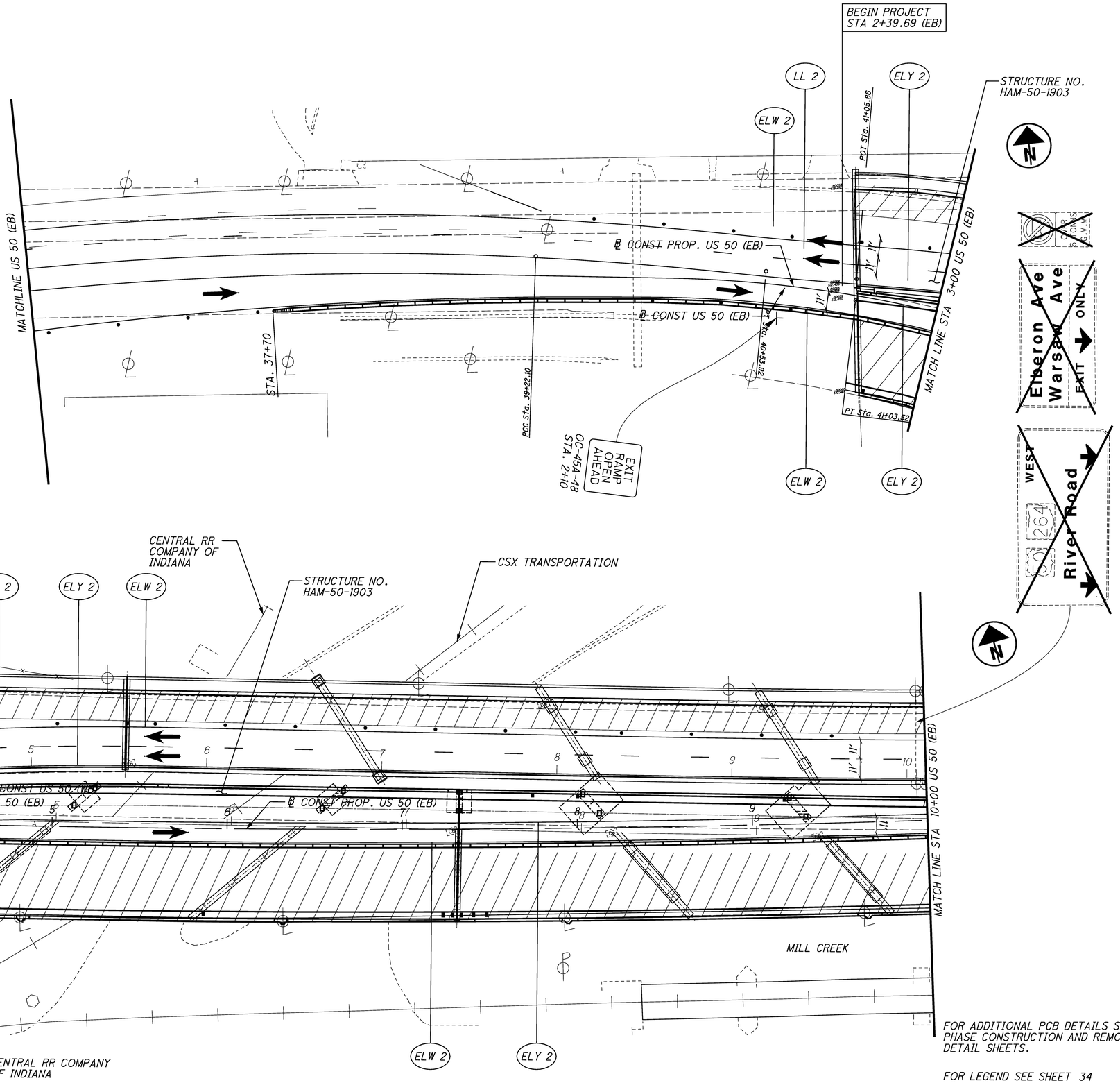
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50 PHASE 2

HAM-50-19.03

G:\CN06\0011\Road\CL\MP012A.dgn 11/9/2010 12:28:56 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

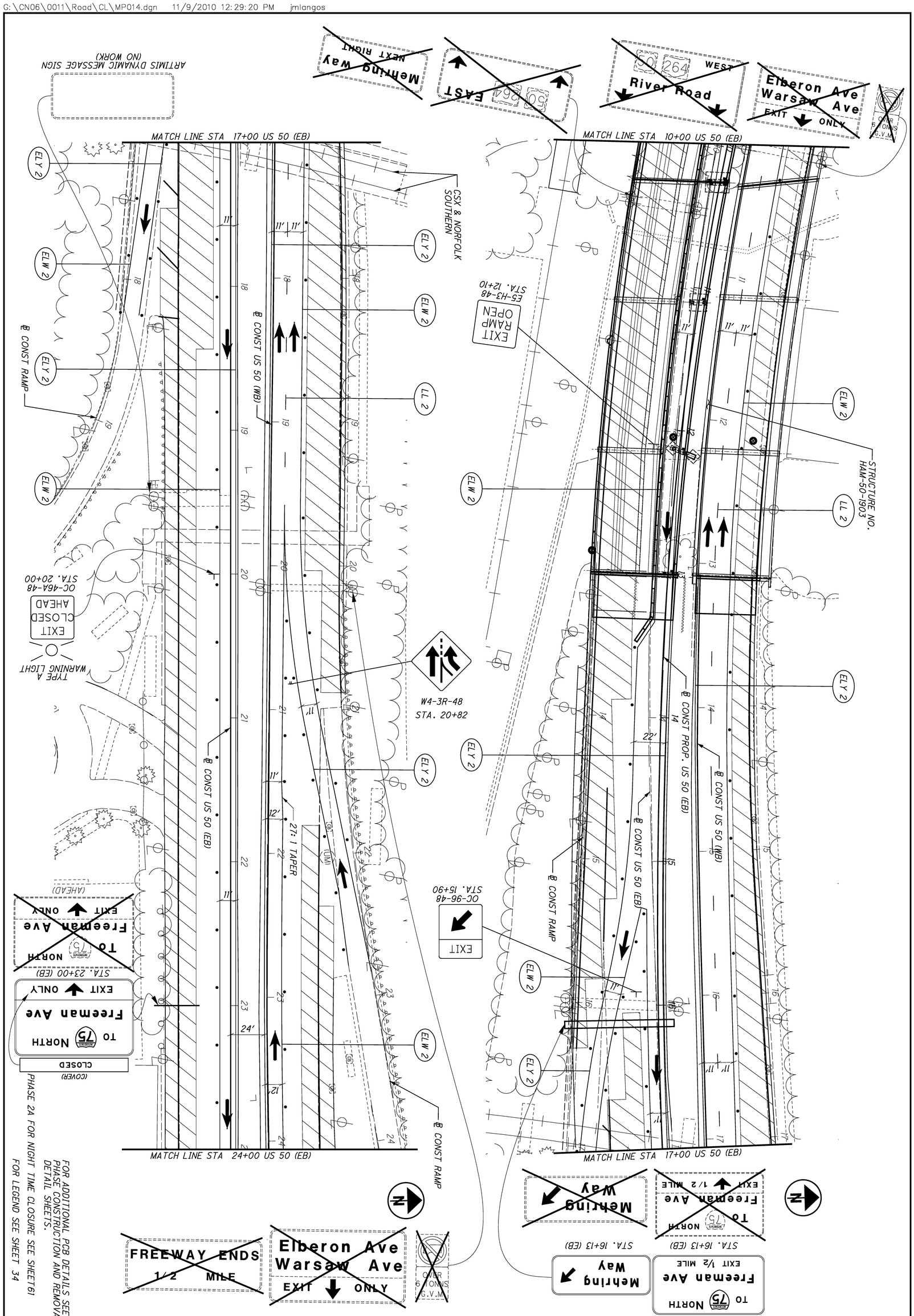
CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50
STA 0+00 TO STA 10+00 - PHASE 2

HAM-50-19.03

G:\CN06\0011\Road\CL\WP013.dgn 11/9/2010 12:29:04 PM jmlangos

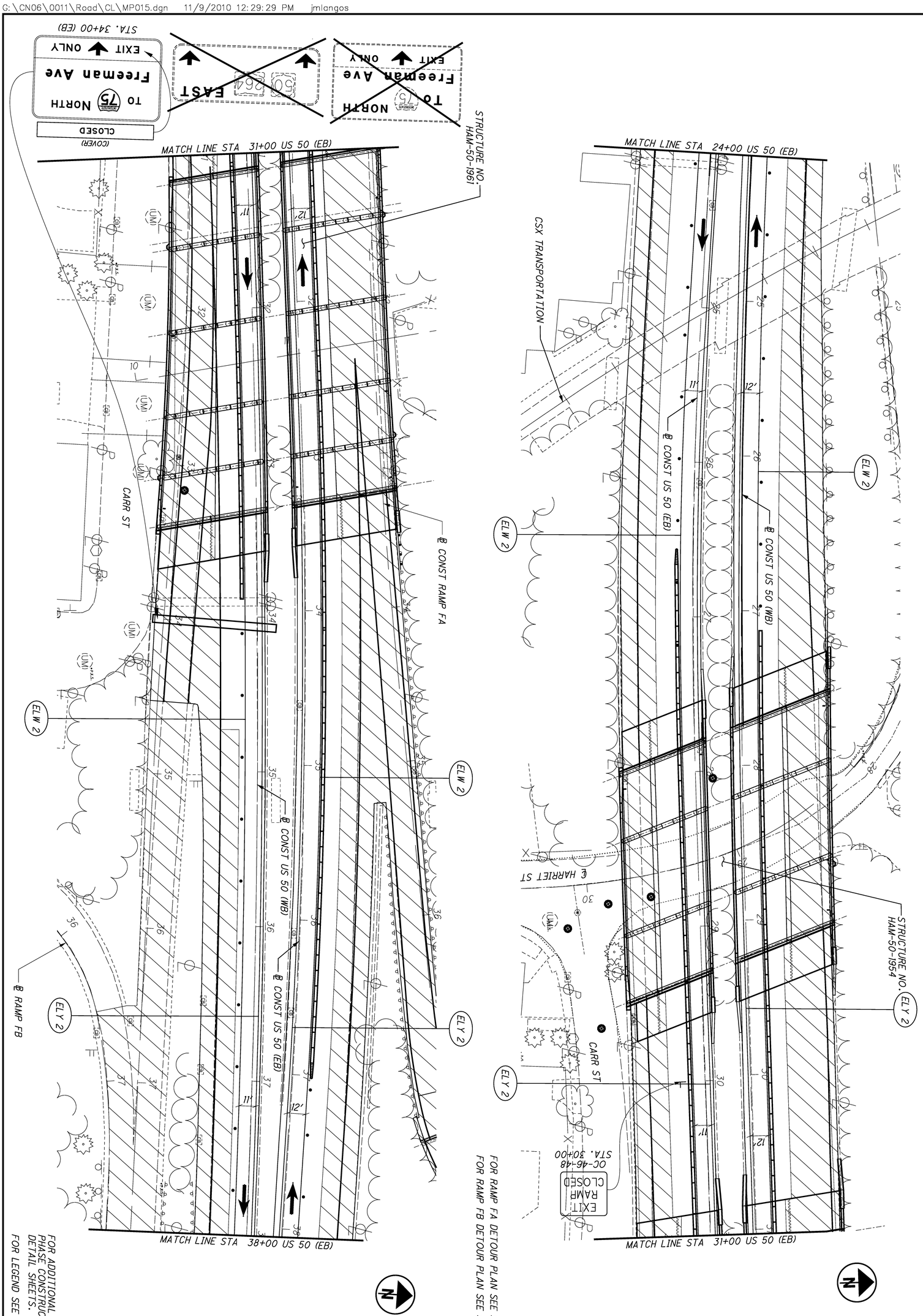
G:\CN06\0011\Road\CL\MP014.dgn 11/9/2010 12:29:20 PM jmlangos



PHASE 2A FOR NIGHT TIME CLOSURE SEE SHEET 61
FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

50 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 10+00 TO STA 24+00 - PHASE 2	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\CL\MP015.dgn 11/9/2010 12:29:29 PM jmlangos



FOR RAMP FA DETOUR PLAN SEE SHEET 29
FOR RAMP FB DETOUR PLAN SEE SHEET 30

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.
FOR LEGEND SEE SHEET 34

51 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 24+00 TO STA 38+00 - PHASE 2	CALCULATED RMP CHECKED HB	0 15 30 60 HORIZONTAL SCALE IN FEET

STRUCTURE NO. HAM-50-1976

CSX TRANSPORTATION RAILROAD TRACKS

CSX TRANSPORTATION RAILROAD TRACKS

STRUCTURE NO. HAM-50-1980

ELW 2

ELY 2

℄ CONST US 50 (WB)

℄ CONST US 50 (EB)

MATCH LINE STA 38+00 US 50 (EB)

MATCH LINE STA 45+00 US 50 (EB)

℄ CONST FREEMAN AVENUE

℄ RAMP FC

FOR RAMP FC DETOUR PLAN SEE SHEET 31

Fifth St Downtown EXIT 1/2 MILE

264

Fifth St Downtown EXIT ½ MILE

STA. 38+60 (EB)

50 EAST TO 75 SOUTH 71

TO 75 NORTH Freeman Ave EXIT ONLY

50 EAST TO 75 SOUTH 71

TO 75 NORTH Freeman Ave EXIT ONLY

STA. 38+45 (EB)

(NO WORK)

NORTH 71 EAST 50

Second St 75 SOUTH

Fifth St 1/4 MILE 264

℄ LINN STREET

(COVER) CLOSED

CSX TRANSPORTATION RAILROAD TRACKS

STRUCTURE NO. HAM-50-1980

℄ RAMP LB

50 EAST TO 75 SOUTH 71

STA. 49+27 (RAMP LB)

TO 75 SOUTH 71 EAST 50

Sixth St Gest St

Sixth St Gest St

STA. 49+27 (RAMP LB)

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 35

G:\CN06\0011\Road\CL\MP016.dgn 11/9/2010 12:29:44 PM jmlangos

HORIZONTAL SCALE IN FEET

0 15 30 60

CALCULATED RMP

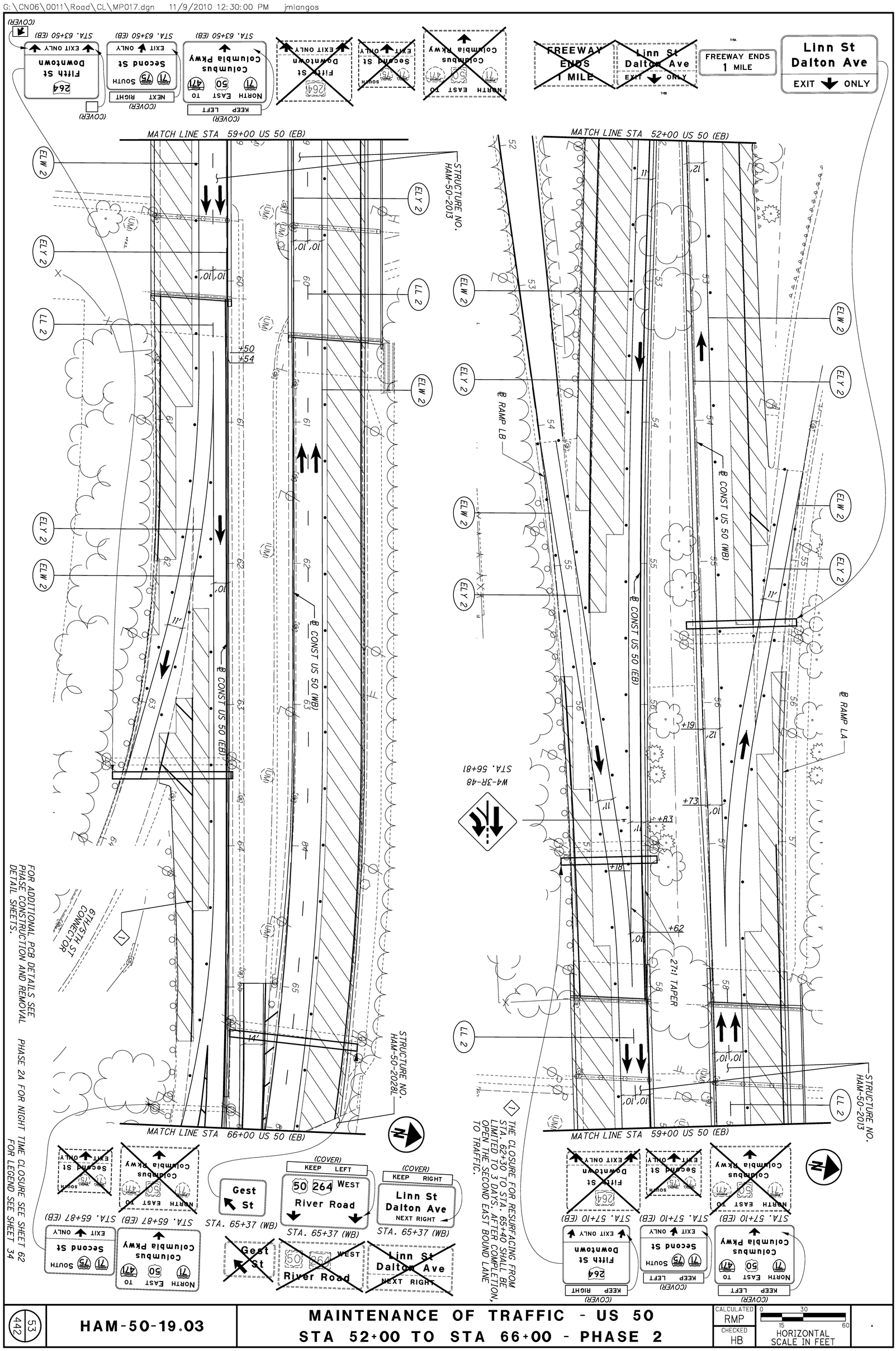
CHECKED HB

MAINTENANCE OF TRAFFIC - US 50

STA 38+00 TO STA 52+00 - PHASE 2

HAM-50-19.03

G:\CN06\0011\Road\CL\MP017.dgn 11/9/2010 12:30:00 PM jmlangos

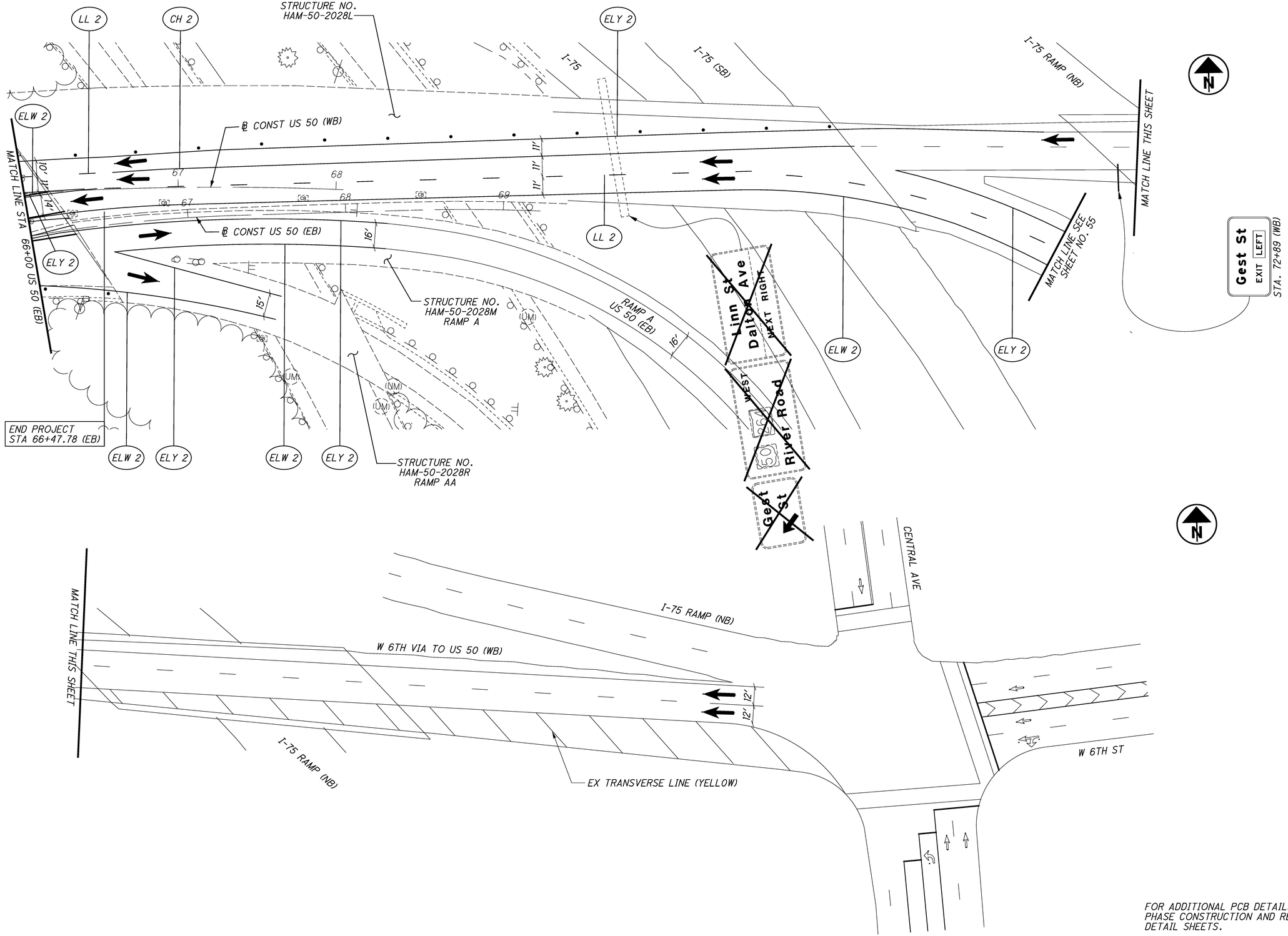


FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

PHASE 2A FOR NIGHT TIME CLOSURE SEE SHEET 62
FOR LEGEND SEE SHEET 34

1 THE CLOSURE FOR RESURFACING FROM STA. 62+30 TO STA. 65+40 SHALL BE LIMITED TO 3 DAYS. AFTER COMPLETION, OPEN THE SECOND EAST BOUND LANE TO TRAFFIC.

53 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 52+00 TO STA 66+00 - PHASE 2	CALCULATED RMP CHECKED HB	0 15 30 60 HORIZONTAL SCALE IN FEET



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HP

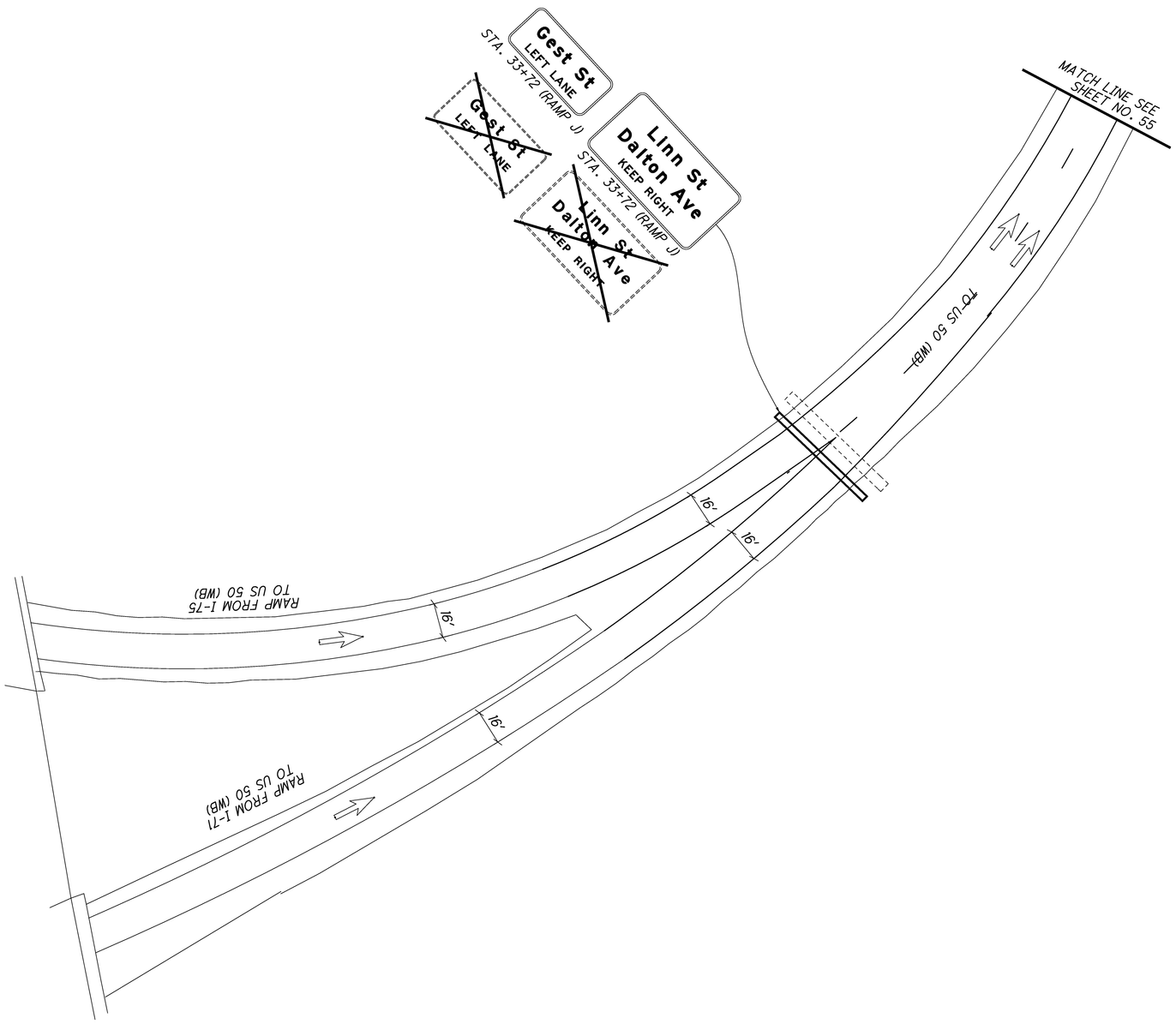
MAINTENANCE OF TRAFFIC - US 50
STA 66+00 TO CENTRAL AVE - PHASE 2

HAM-50-19.03

54
442

G:\CN06\0011\Road\CL\MPD18.dgn 11/9/2010 3:23:09 PM jmlangos

G:\CN06\0011\Road\CL\MP018A.dgn 11/9/2010 3:23:57 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

55 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 RAMPS TO US 50 (WB) PHASE 2	CALCULATED RMP CHECKED HP	0 30 15 60 HORIZONTAL SCALE IN FEET

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 15+00 TO STA 17+00 - PHASE 2

HAM-50-19.03

G:\CN06\0011\Road\CL\MP019.dgn 11/9/2010 3:24:25 PM jmlangos

MAINTENANCE OF TRAFFIC - FREEMAN AVE
STA 17+00 TO STA 24+00 - PHASE 2

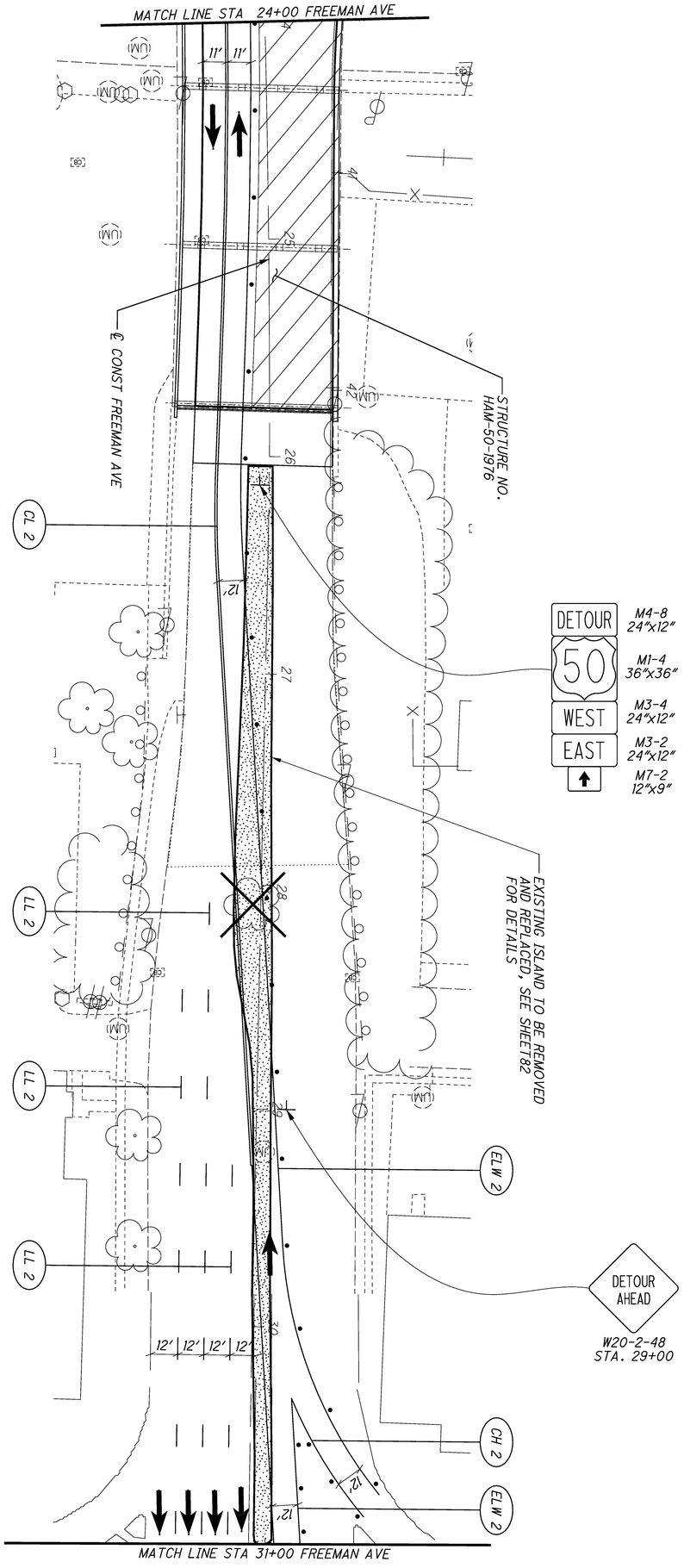
HAM-50-19.03

CALCULATED RMP
CHECKED HB

HORIZONTAL SCALE IN FEET
0 15 30 60

57
442

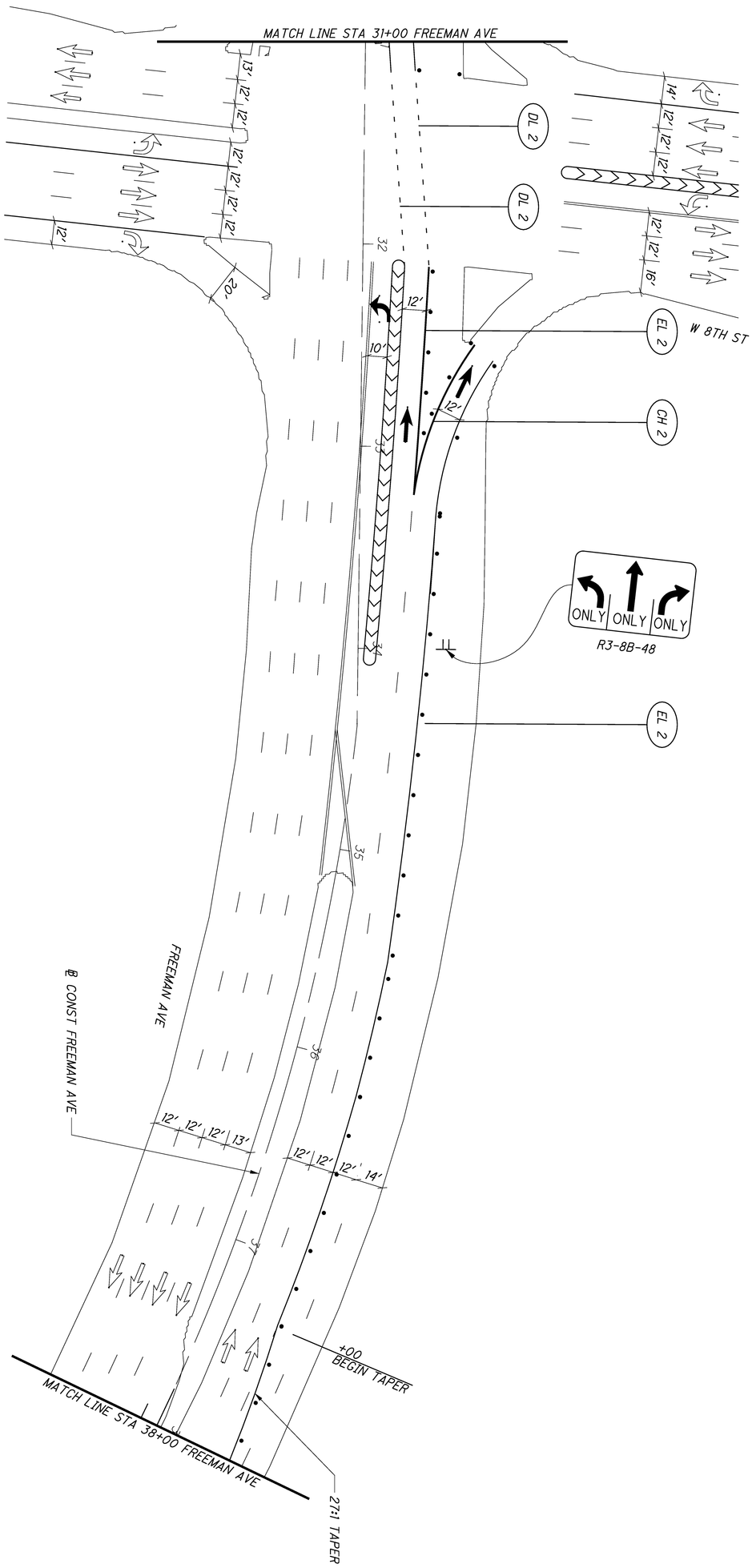
G:\CN06\0011\Road\CL\MP020.dgn 11/9/2010 12:30:16 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

G:\CN06\0011\Road\CL\MP022.dgn 11/9/2010 3:34:59 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

59
442

HAM-50-19.03

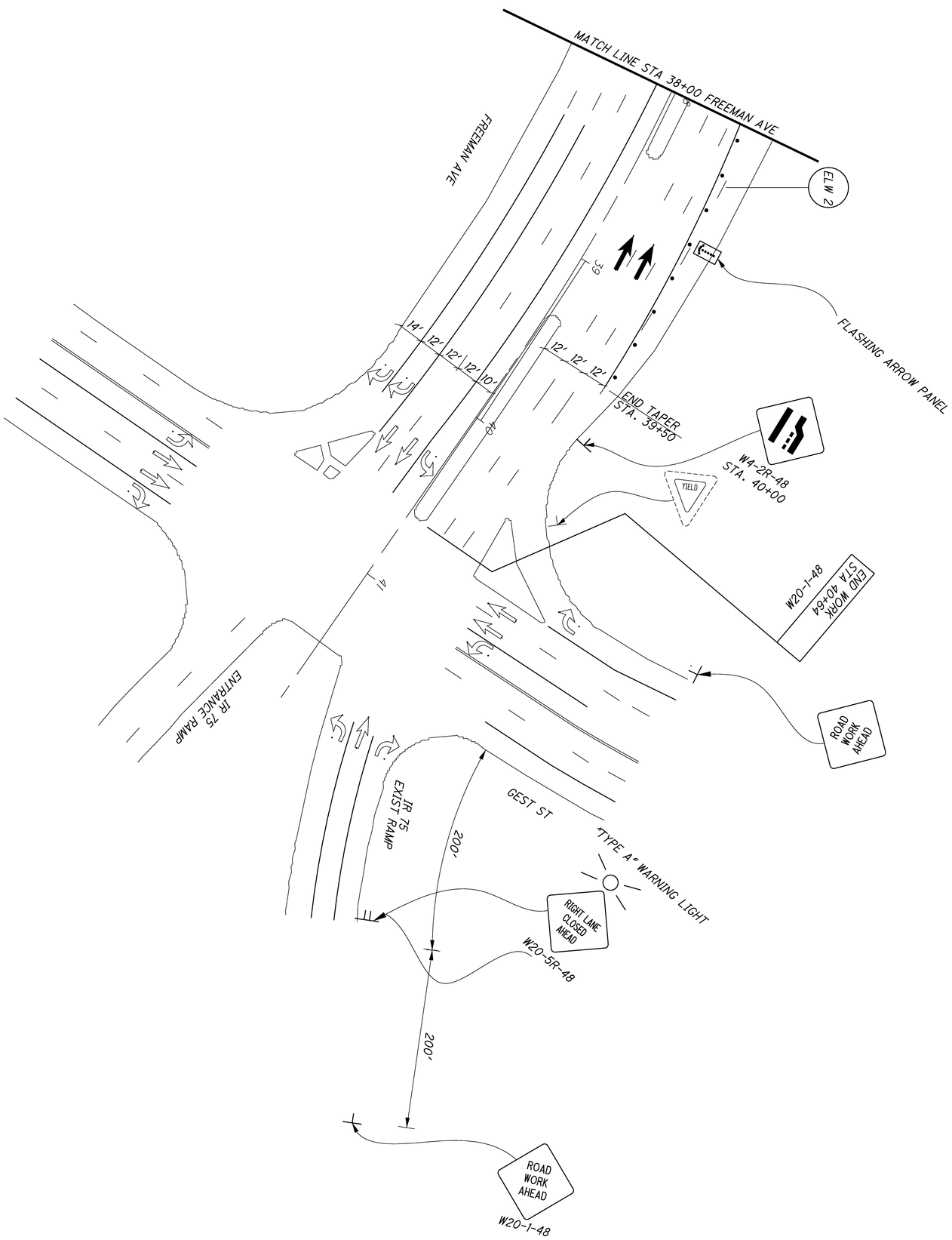
MAINTENANCE OF TRAFFIC - FREEMAN AVE
STA 31+00 TO STA 38+00 - PHASE 2

CALCULATED RMP
CHECKED HB

0 15 30 60
HORIZONTAL SCALE IN FEET

N

G:\CN06\0011\Road\CL\MP023.dgn 11/9/2010 3:35:58 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

60 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - FREEMAN AVE STA 38+00 TO STA 41+00 - PHASE 2	CALCULATED RMP CHECKED HB	0 15 30 60 HORIZONTAL SCALE IN FEET

STRUCTURE NO.
HAM-50-1903

ELW 1
LL 1
ELY 2
℄ ENTRANCE RAMP
CSX & NORFOLK SOUTHERN
℄ CONST US 50 (WB)
℄ CONST PROP. US 50 (EB)
℄ CONST US 50 (EB)
℄ EXIT RAMP
ELY 2
ELW 2
MATCH LINE STA 18+00 US 50 (EB)

TO 75 NORTH
Freeman Ave
EXIT ½ MILE
STA. 16+10 (EB)

To 75 NORTH
Freeman Ave
EXIT ½ MILE
STA. 16+25 (EB)

Mehring Way

CLOSED

Elberon Ave
Warsaw Ave
EXIT ONLY

FREEWAY ENDS
½ MILE

DYNAMIC MESSAGE SIGN
(NO WORK)

ELW 4
ELY 4
LL 2
ELY 6
ELW 6
℄ ENTRANCE RAMP
CSX TRANSPORTATION
UMM
℄ CONST US 50 (WB)
℄ CONST US 50 (EB)
℄ EXIT RAMP
ELY 5
ELW 5
MATCH LINE STA 18+00 US 50 (EB)

TO 75 NORTH
Freeman Ave
EXIT ONLY
17'X11'
STA. 23+00 (EB), RT.

FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED RMP
CHECKED HB

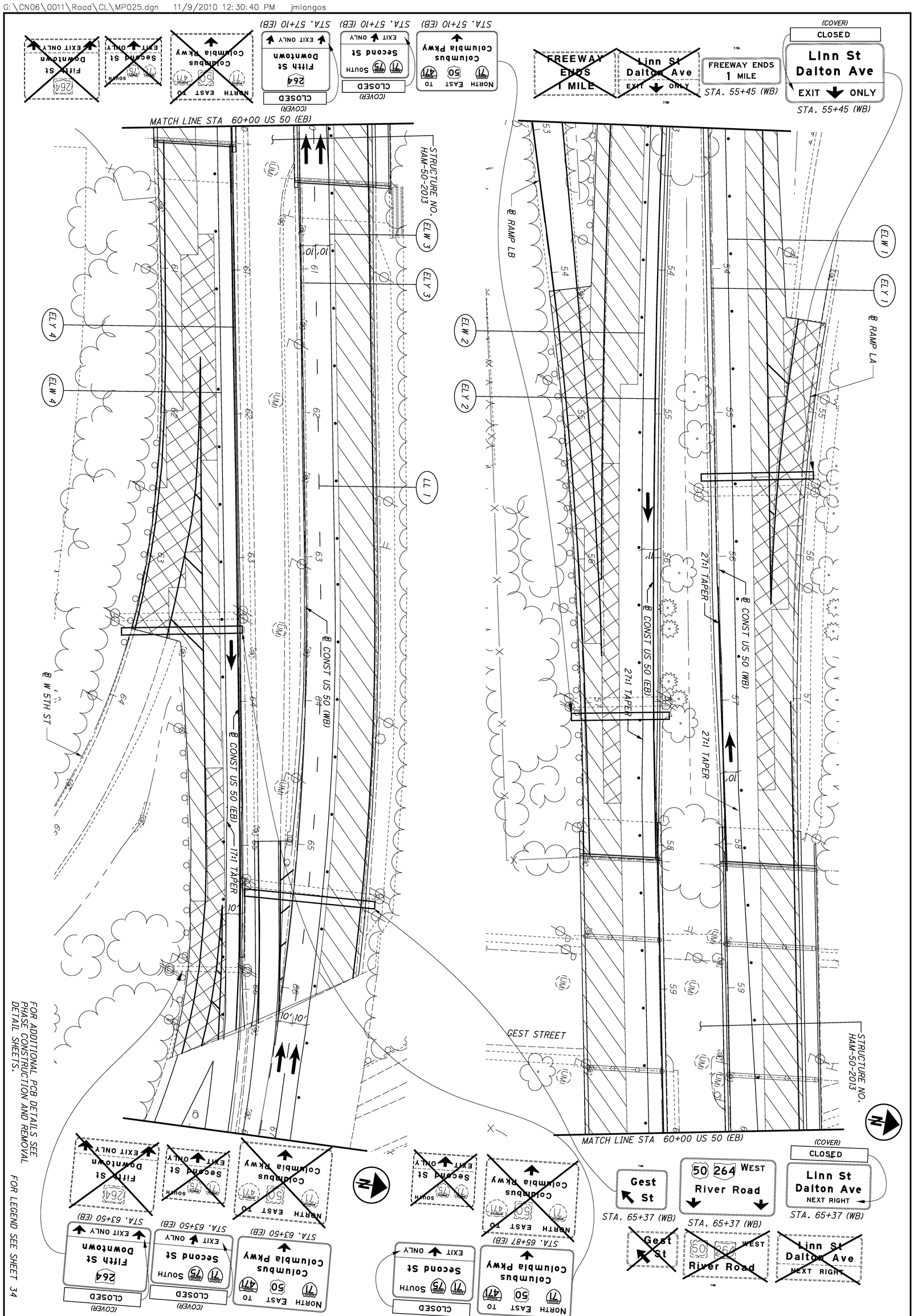
MAINTENANCE OF TRAFFIC - US 50
STA 11+00 TO STA 25+00 - PHASE 2A

HAM-50-19.03

61
442

G:\CN06\0011\Road\CL\MP024.dgn 11/9/2010 12:30:34 PM jmlangos

G:\CN06\0011\Road\CL\MP025.dgn 11/9/2010 12:30:40 PM jmlangos



FOR ADDITIONAL PCB DETAILS SEE PHASE CONSTRUCTION AND REMOVAL DETAIL SHEETS.

FOR LEGEND SEE SHEET 34

62 / 442	HAM-50-19.03	MAINTENANCE OF TRAFFIC - US 50 STA 53+00 TO STA 67+00 - PHASE 2A	CALCULATED RMP CHECKED HB	0 30 15 60 HORIZONTAL SCALE IN FEET

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	9		66	67			85		97	98									
																		ROADWAY	
	LUMP													201	11000	LUMP		CLEARING AND GRUBBING	
			230											202	30800	230	SQ YD	TRAFFIC ISLAND REMOVED	
	1000													202	35700	1000	FT	ASBESTOS PIPE REMOVED	
			96											202	38000	96	FT	GUARDRAIL REMOVED	
			1											202	58200	1	EACH	INLET REMOVED	
							240							203	10000	240	CU YD	EXCAVATION	
				500										204	10000	500	SQ YD	SUBGRADE COMPACTION	
				46000										254	01000	46000	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE (2")	
			429											SPECIAL	45130000	429	FT	PRESSURE RELIEF JOINT, TYPE A	
	3													604	38500	3	EACH	MONUMENT ASSEMBLY	
			110											606	13000	110	FT	GUARDRAIL, TYPE 5	
			4											606	35000	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
			3											606	35100	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			630											609	54000	630	SQ YD	6" CONCRETE TRAFFIC ISLAND	
			11											622	10200	11	EACH	BARRIER TRANSITION	92
			2											622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D	
			542											622	24000	542	FT	CONCRETE BARRIER, TYPE D	
			12											622	90000	12	FT	BARRIER, MISC.: BARRIER, STA. 34+00	94
			12											622	90000	12	FT	BARRIER, MISC.: BARRIER, STA. 63+50	95
														SPECIAL	69098400	**LUMP**		**SPECIAL-MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL TESTING & INSPECTION**	
																		EROSION CONTROL	
	500													659	10000	500	SQ YD	SEEDING AND MULCHING	
	0.07													659	20000	0.07	TON	COMMERCIAL FERTILIZER	
	2.7													659	35000	2.7	M GAL	WATER	
																		PAVEMENT	
				4										302	46000	4	CU YD	ASPHALT CONCRETE BASE, PG64-22	
				85										304	20000	85	CU YD	AGGREGATE BASE	
				475										305	13000	475	SQ YD	9" CONCRETE BASE	
				4375										407	10000	4375	GALLON	TACK COAT	
				35										407	13900	35	GALLON	TACK COAT, 702.13	
				15										448	46020	15	CY YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22	
				2600										448	50000	2600	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H	
																		DRAINAGE	
			20											603	00510	20	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
			5											603	04400	5	FT	12" CONDUIT, TYPE B	
			24											603	04600	24	FT	12" CONDUIT, TYPE C	
			1											604	20530	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
			1											604	20600	1	EACH	INLET ADJUSTED TO GRADE	
			335											605	14000	335	FT	6" BASE PIPE UNDERDRAINS	

CALCULATED JG
CHECKED JR

GENERAL SUMMARY

HAM-50-19.03

63
442

G:\CN06\0011\Road\sheets\75736GG001.dgn 11/10/2010 11:07:11 AM jmlangos

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
11	12			97	98	99	100	101	102	103								
																	TRAFFIC CONTROL	
				750									621	00100	750	EACH	RPM	
						6	3		18				625	32000	27	EACH	GROUND ROD	
					560								630	03100	560	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
								57					630	07000	57	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT , W8X18	
								64					630	08000	64	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT , W12X30	
								5					630	09000	5	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
						1							630	20300	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 3	
						1							630	20400	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 4	
						2							630	20500	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5	
						1							630	20700	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 7	
						1							630	21000	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10	
							1						630	30300	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-9.30, DESIGN 3	
									2				630	35500	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6	
									6				630	45500	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	
									1				630	55000	1	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65	
									1				630	66500	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.115	
							1						630	74500	1	EACH	OVERHEAD SIGN SUPPORT, MISC.: PLAN INSERT SHEET TYPE TC-10.48, DESIGN 4	138
							1						630	74500	1	EACH	OVERHEAD SIGN SUPPORT, MISC.: PLAN INSERT SHEET TYPE TC-10.48, DESIGN 4,	125
																	USING EXISTING FOUNDATION	
					2								630	79600	2	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED TYPE I	
					175								630	80100	175	SQ FT	SIGN, FLAT SHEET	
								351					630	80200	351	SQ FT	SIGN, GROUND MOUNTED EXTRUSHEET	
						740	426		3308				630	80224	4474	SQ FT	SIGN, OVERHEAD EXTRUSHEET	
					1								630	80510	1	EACH	SIGN, STREET NAME	
								5					630	84500	5	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
						6	2		14				630	84510	22	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
					15								630	84900	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
								2					630	85400	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	
					23								630	86002	23	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
								5					630	86102	5	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
					2				1				630	86310	3	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
									1				630	87100	1	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
						4	5		18	17			630	87400	44	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
					12								630	87500	12	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
					2								630	87520	2	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
							1						630	89703	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, AS PER PLAN	125
						4							630	89706	4	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	
							1			5			630	89708	6	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-9.30	
									8				630	89804	8	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115	
									1				630	89805	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE	
																	TC-15.115, AS PER PLAN	
							1						630	89902	1	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: REMOVAL OF	138
																	OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-10.48	
				4									644	00100	4	MILE	EDGE LINE	
				2.9									644	00200	2.9	MILE	LANE LINE	
				3700									644	00400	3700	FT	CHANNELIZING LINE	
				200									644	00700	200	FT	TRANSVERSE/DIAGONAL LINE	
				2.5									646	10000	2.5	MILE	EDGE LINE	
				2.6									646	10100	2.6	MILE	LANE LINE	
				0.2									646	10200	0.2	MILE	CENTER LINE	
				660									646	10300	660	FT	CHANNELIZING LINE	
				50									646	10600	50	FT	TRANSVERSE/DIAGONAL LINE	

CALCULATED JG
CHECKED JR

GENERAL SUMMARY

HAM-50-19.03

64
442

G:\CN06\0011\Road\Sheets\75736CG002.dgn 11/9/2010 12:30:48 PM jmlangos

SHEET NUMBER											PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			11	12		99	100	101	102	103								
																	LIGHTING	
																	FOR LIGHTING GENERAL SUMARY SEE SHEET	142
																	MAINTENANCE OF TRAFFIC	
													604	09000	12	EACH	CATCH BASIN ADJUSTED TO GRADE	
				400									614	11110	400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
			6										614	12350	6	EACH	WORK ZONE IMPACT ATTENUATOR	
													614	12420	LUMP		DETOUR SIGNING	
			55										614	13300	55	EACH	BARRIER REFLECTOR, TYPE B	
			12										614	13350	12	EACH	OBJECT MARKER, ONE WAY	
			60										614	18400	60	DAYS	PORTABLE CHANGEABLE MESSAGE SIGN	
			1.00										614	20100	1	MILE	WORK ZONE LANE LINE, CLASS I, 642 PAINT	
			2.00										614	20550	2	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
			0.85										614	21200	0.85	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE 1	
			0.85										614	21550	0.85	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
			1.00										614	20200	1	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE 1	
			6.00										614	22100	6	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	
			6.80										614	22200	6.8	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE 1	
			6.00										614	22350	6	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
			4300										614	23200	4300	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	
			1650										614	23400	1650	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE 1	
			3000										614	23680	3000	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
			700										614	24400	700	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE 1	
			250										614	24610	250	FT	WORK ZONE DOTTED LINE, CLASS III, 642 PAINT	
													615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
													615	20000	6000	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
			1										616	10000	1	M GAL	WATER	
													622	40020	1300	FT	PORTABLE CONCRETE BARRIER, 32"	
													622	40040	1400	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	
																	FOR STRUCTURAL QUANTITIES SEE SHEETS:	
																	HAM-50-1903L	160
																	HAM-50-1903R	184
																	HAM-50-1954L	278
																	HAM-50-1954R	279
																	HAM-50-1961L	328
																	HAM-50-1961R	329
																	HAM-50-1976	388
																	HAM-50-1980	404
																	HAM-50-2013	429
													SPECIAL	10810000	LUMP		CPM PROGRESS SCHEDULE	
													614	11000	LUMP		MAINTAINING TRAFFIC	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													624	10000	LUMP		MOBILIZATION	
													SPECIAL		LUMP			

CALCULATED JG
CHECKED JR

GENERAL SUMMARY

HAM-50-19.03

G:\CN06\0011\Road\sheets\75736GG003.dgn 11/10/2010 10:38:33 AM jmlangos

REF. NO.	SHEET NO.	STATION TO STATION		SIDE	202 INLET REMOVED EA	202 GUARDRAIL REMOVED FT	202 TRAFFIC ISLAND REMOVED SQ YD	451 PRESSURE RELIEF JOINT, TYPE A FT	603 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET FT	603 12" CONDUIT, TYPE B FT	603 12" CONDUIT, TYPE C FT	604 INLET, NO. 3 FOR SINGLE SLOPE BARRIER TYPE D EA	604 INLET ADJUSTED TO GRADE EA	605 6" BASE PIPE UNDERDRAINS FT	606 GUARDRAIL, TYPE 5 FT	606 BRIDGE TERMINAL ASSEMBLY, TYPE 1 EA	606 BRIDGE TERMINAL ASSEMBLY, TYPE 2 EA	609 6" CONCRETE TRAFFIC ISLAND SQ YD	622 BARRIER TRANSITION EA	622 CONCRETE BARRIER, TYPE D FT	622 BARRIER, MISC.: BARRIER, STA. 34+00 FT	622 BARRIER, MISC.: BARRIER, STA. 63+50 FT	622 CONCRETE BARRIER END SECTION, TYPE D EA
D1	68	2+53	2+61	RT							8												
D2	68	3+32	3+40	RT							8												
D1	69	4+20	4+28	RT							8												
P1	71	13+32.05		L/R				56															
B1	71 , 73	13+32.05	16+87.45	LT															1	336			
R1	73	14+63.00		RT	1																		
D1	73	14+63.15		LT						5		1											
D2	73	16+23.86		RT									1										
UD1	71 , 73	13+32.05	16+87.45	LT					20					335									
P1	76	27+48.00		LT				66															
P2	76	27+56.11		L/R				56															
B1	76	27+23.62	27+37.62	LT																			1
B2	76	27+29.80	27+61.80	RT															1	12			
B3	76	27+36.11	27+68.11	LT															1	12			
B4	76	29+19.86	29+50.36	LT															1	11			
GR1	76	27+00.62	27+27.45	LT											25		1						
P1	77	30+83.93		LT				61															
P2	77	30+84.63		RT				53															
P3	77	33+57.24		L/R				66															
P4	77	33+58.18		L/R				71															
B1	77	29+46.09	29+76.09	LT															1	10			
B2	77	29+47.88	29+77.88	LT															1	10			
B3	77	30+53.47	30+85.47	LT															1	12			
B4	77	30+63.93	30+94.93	RT															1	11			
B5	77	33+36.54	33+56.54	LT																			1
B6	77	33+45.24	33+77.24	RT															1	12			
B7	77	33+47.18	33+78.18	LT															1	11			
B8	77	30+53.47	30+83.47	LT															1	10			
B9	77	33+94	34+06	RT																	12		
GR1	77	33+45.35	33+76.60	LT											25	1							
GR1	78	36+97.02	37+28.27	LT											30		1						
GR2	78	36+93.11	37+24.36	RT											30		1						
GR1	86	18+32.00	18+63.25	LT												1							
GR2	86	18+27.74	18+58.99	RT												1							
R1	86	18+32.00	18+63.25	LT						32													
R2	86	18+27.74	18+58.99	RT						32													
GR1	88	26+07.44	26+38.69	LT												1							
R1	88	26+07.44	26+38.69	LT						32													
R2	88	26+05	31+00	L/R			630																
C1	88	26+05	31+00	L/R														630					
B1	80	49+10	49+30	LT																40			
B1	83	65+23	65+78	LT																55			
B1	83	63+44	63+56	LT																		12	
TOTALS CARRIED TO GENERAL SUMMARY					1	96	630	429	20	5	24	1	1	335	110	4	3	630	11	542	12	12	2

CALCULATED JG CHECKED JR

ROADWAY AND DRAINAGE SUBSUMMARY

HAM-50-19.03

G:\CN06\0011\Road\sheets\75736GS001.dgn 11/10/2010 10:40:29 AM jmlangos

STATION TO STATION		SIDE	LENGTH L	PLANIMETERED SURFACE AREA (FULL DEPTH)	PLANIMETERED SURFACE AREA (RESURFACING)		204 SUBGRADE COMPACTION	254 PAVEMENT PLANING, ASPHALT CONCRETE (2")	302 ASPHALT CONCRETE BASE, PG64-22 (12")	304 AGGREGATE BASE(6")	305 9" CONCRETE BASE	407 TACK COAT @ 0.075 GAL/SY	407 TACK COAT, 702.13 @ 0.075 GAL/SY	448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1H (2")	448 ASPHALT CONCRETE INTERMEDIATE COURSE, PG64-22 (1")				
							SQ YD	SQ YD	CU YD	CU YD	SQ YD	GALLON	GALLON	CU YD	CU YD				
EASTBOUND				SQ FT	SQ FT														
13+32.05	27+56.11	L/R	1424.06	4022	77887		446.89	8654.11		77.83	446.89	649.06	33.52	480.78	12.41				
29+57.88	30+84.63	L/R	126.75		6290			698.89				52.42		38.83					
33+58.18	40+60.46	L/R	702.28		43894			4877.11				365.78		270.95					
48+94.12	57+83.79	L/R	889.67		50321			5591.22				419.34		310.62					
60+39.06	66+47.78	L/R	608.72		28714			3190.44				239.28		177.25					
29+25.33	29+50.33	RT	25.00	96			10.67		3.56	5.13	10.67	0.80	0.80	0.59	0.30				
(SHOULDER WORK)																			
WESTBOUND																			
13+35.32	27+48.00	L/R	1412.68		76,336			8481.78				636.13		471.21					
29+50.33	30+83.93	L/R	133.60		8308			923.11				69.23		51.28					
33+57.24	40+56.11	L/R	698.87		42,662			4740.22				355.52		263.35					
49+00.70	57+87.32	L/R	886.62		48,937			5437.44				407.81		302.08					
60+64.84	66+18.56	L/R	553.72		30,583			3398.11				254.86		188.78					
						TOTALS	457.56	45992.44	3.56	82.96	457.56	3450.23	34.32	2555.73	12.71				
TOTALS TO GENERAL SUMMARY							500	46000	4	85	475	4375	35	2600	15				

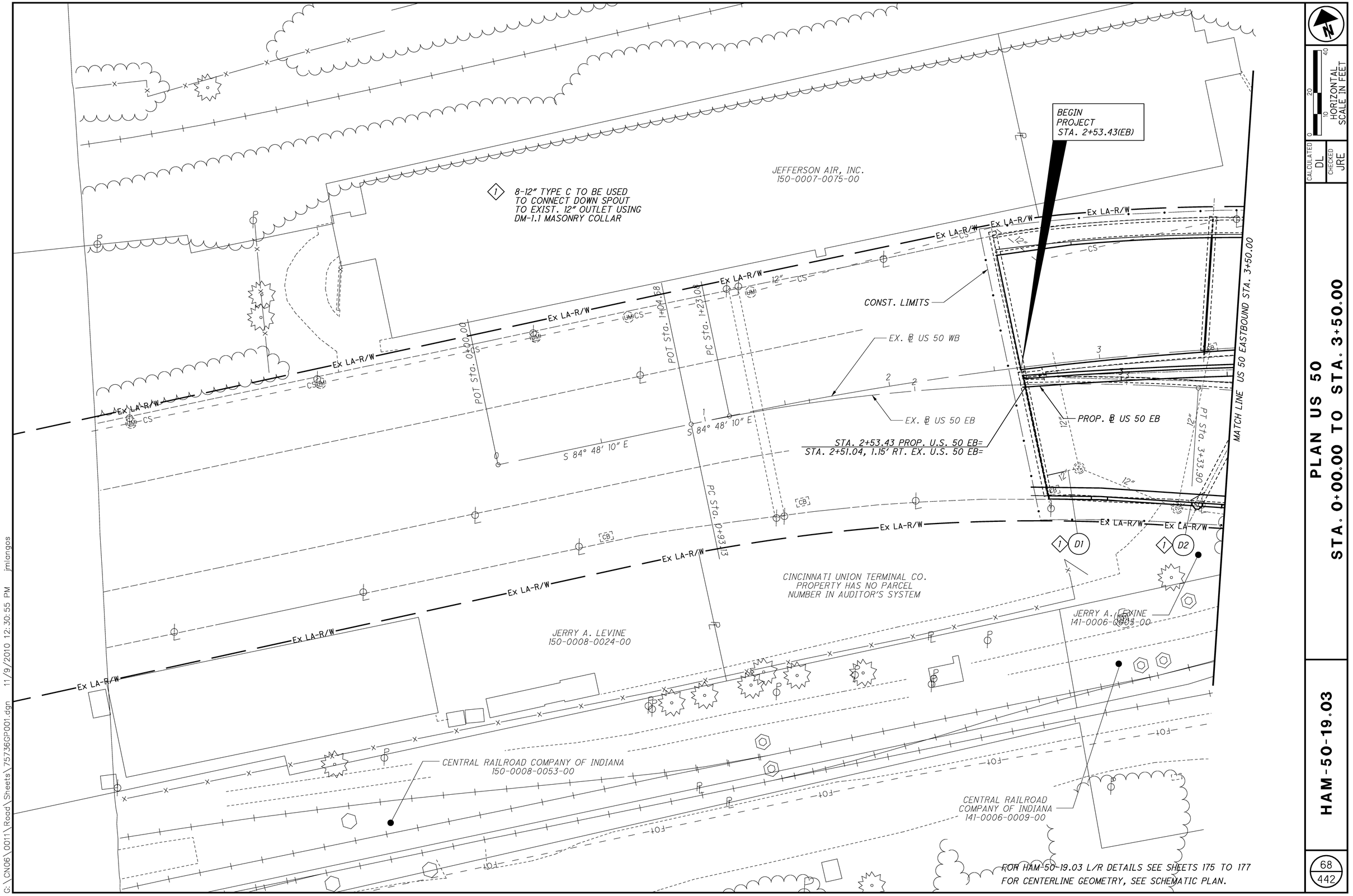
CALCULATED JG CHECKED JR

PAVEMENT CALCULATIONS

HAM-50-19.03

67
442

G:\CN06\0011\Road\Sheets\75736GS002.dgn 11/9/2010 12:30:53 PM jmlangos



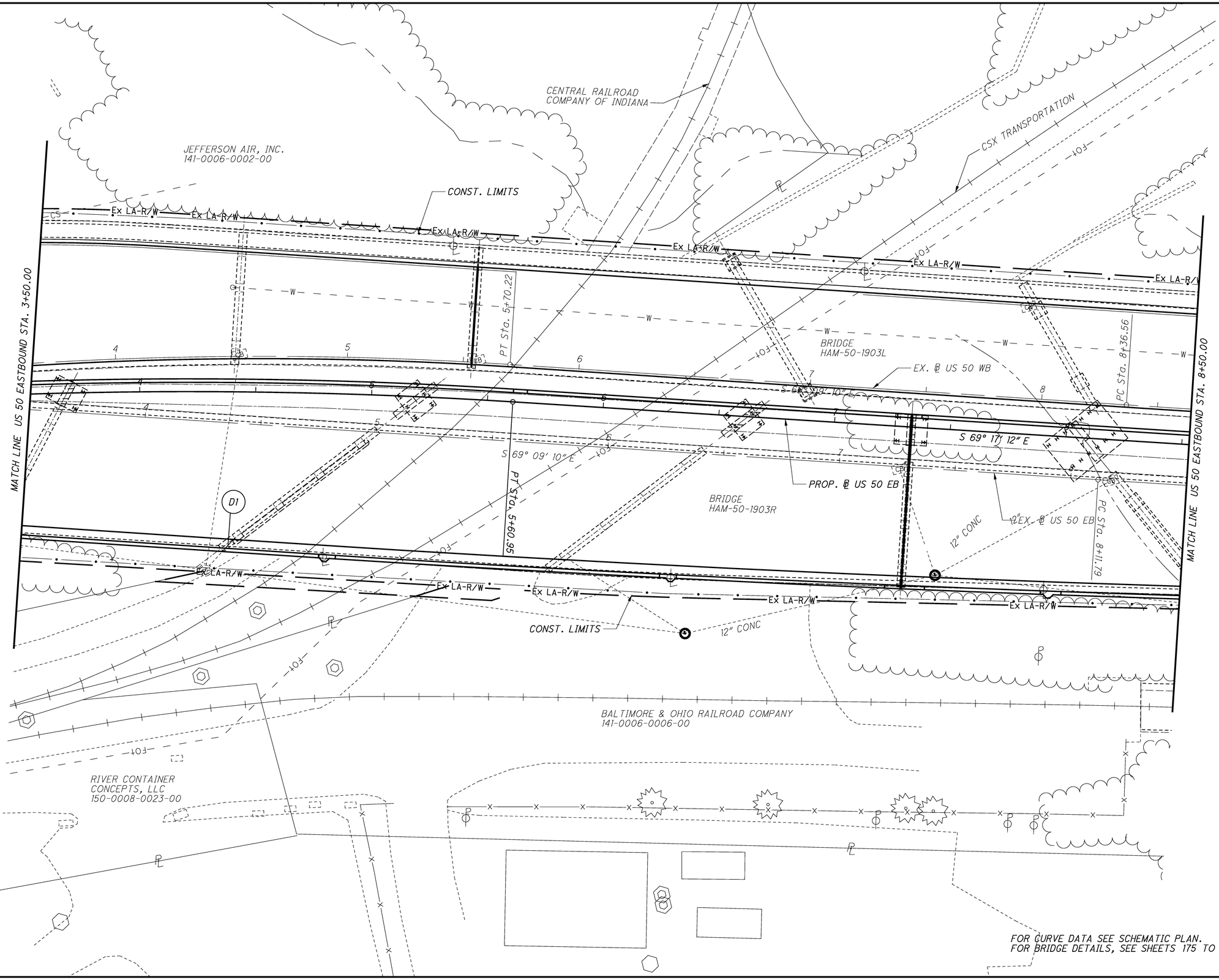
N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED DL CHECKED JRE

PLAN
STA. 0+00.00 TO STA. 3+50.00
HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736GP001.dgn 11/9/2010 12:30:55 PM jmlangos



HORIZONTAL SCALE IN FEET
0 10 20 40

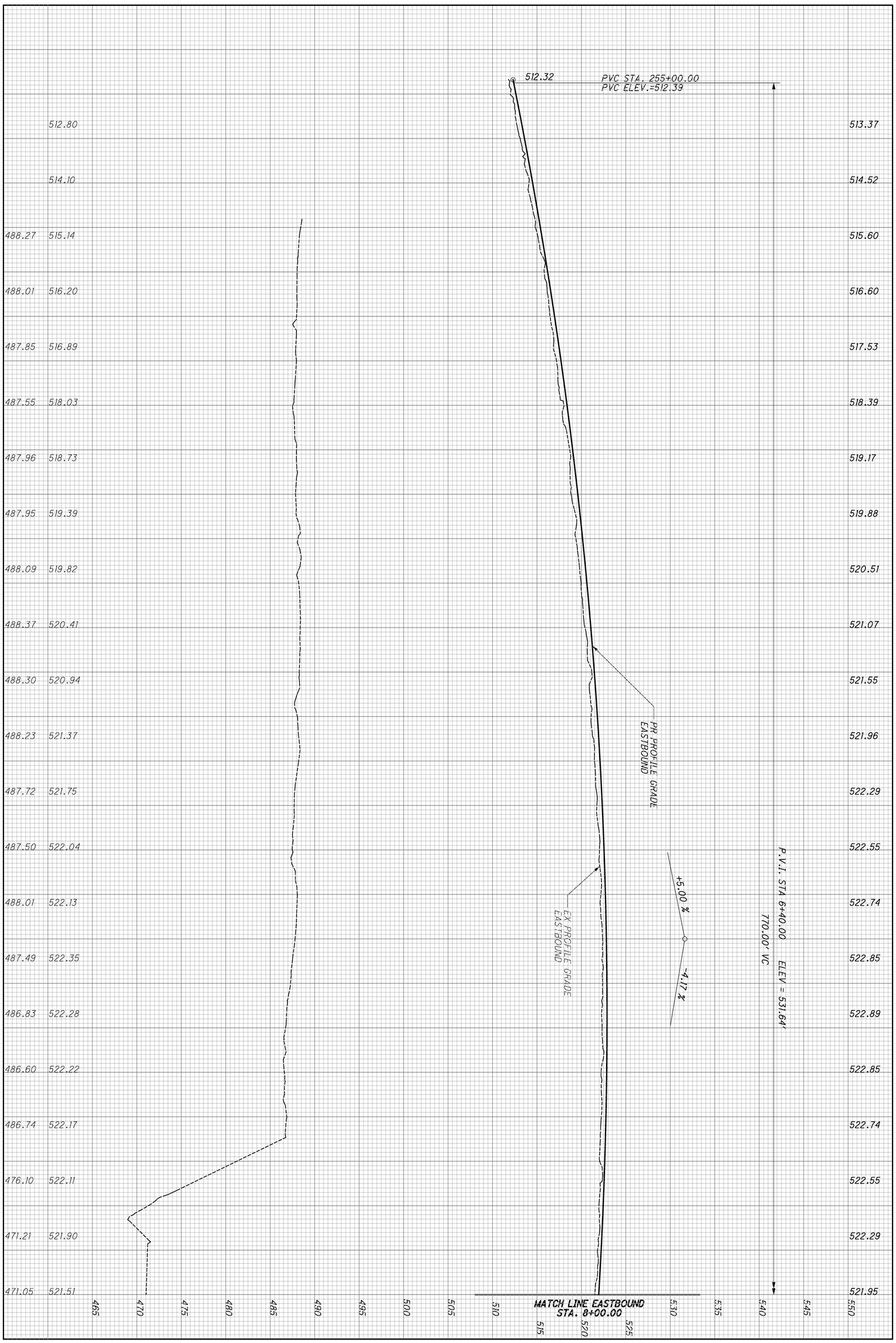
CALCULATED DL
CHECKED JRE

PLAN US 50
STA. 3+50.00 TO STA. 8+50.00

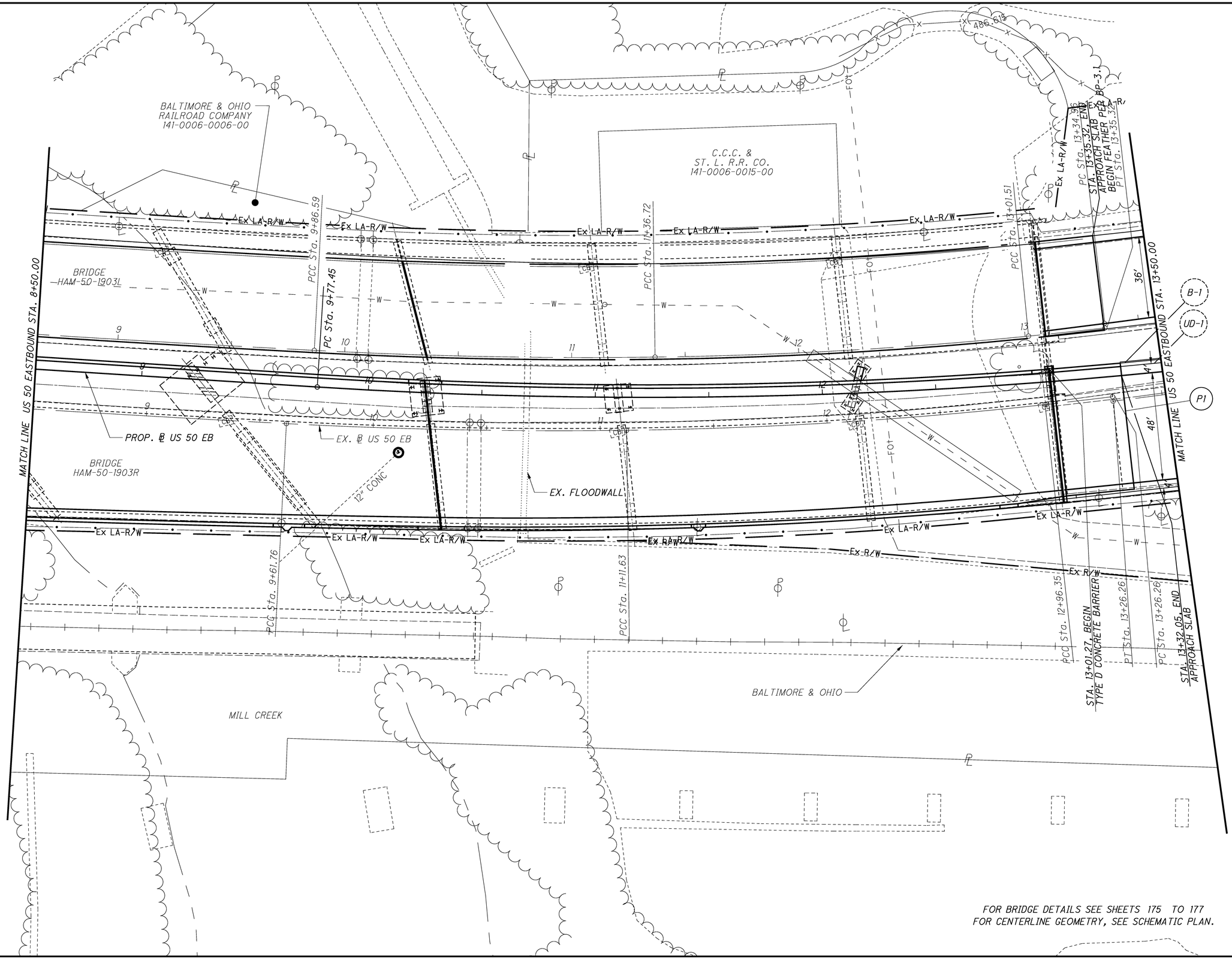
HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736CP002.dgn 11/9/2010 12:30:57 PM jmlangos

G:\CN06\0011\Road\Sheets\75736GF001.dgn 11/9/2010 12:30:58 PM jmlangos



70 442	HAM-50-19.03	US 50 EASTBOUND PROFILE STA. 2+50.00 TO STA. 8+00.00	CALCULATED TMK CHECKED CTW



FOR BRIDGE DETAILS SEE SHEETS 175 TO 177
FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DL
CHECKED JRE

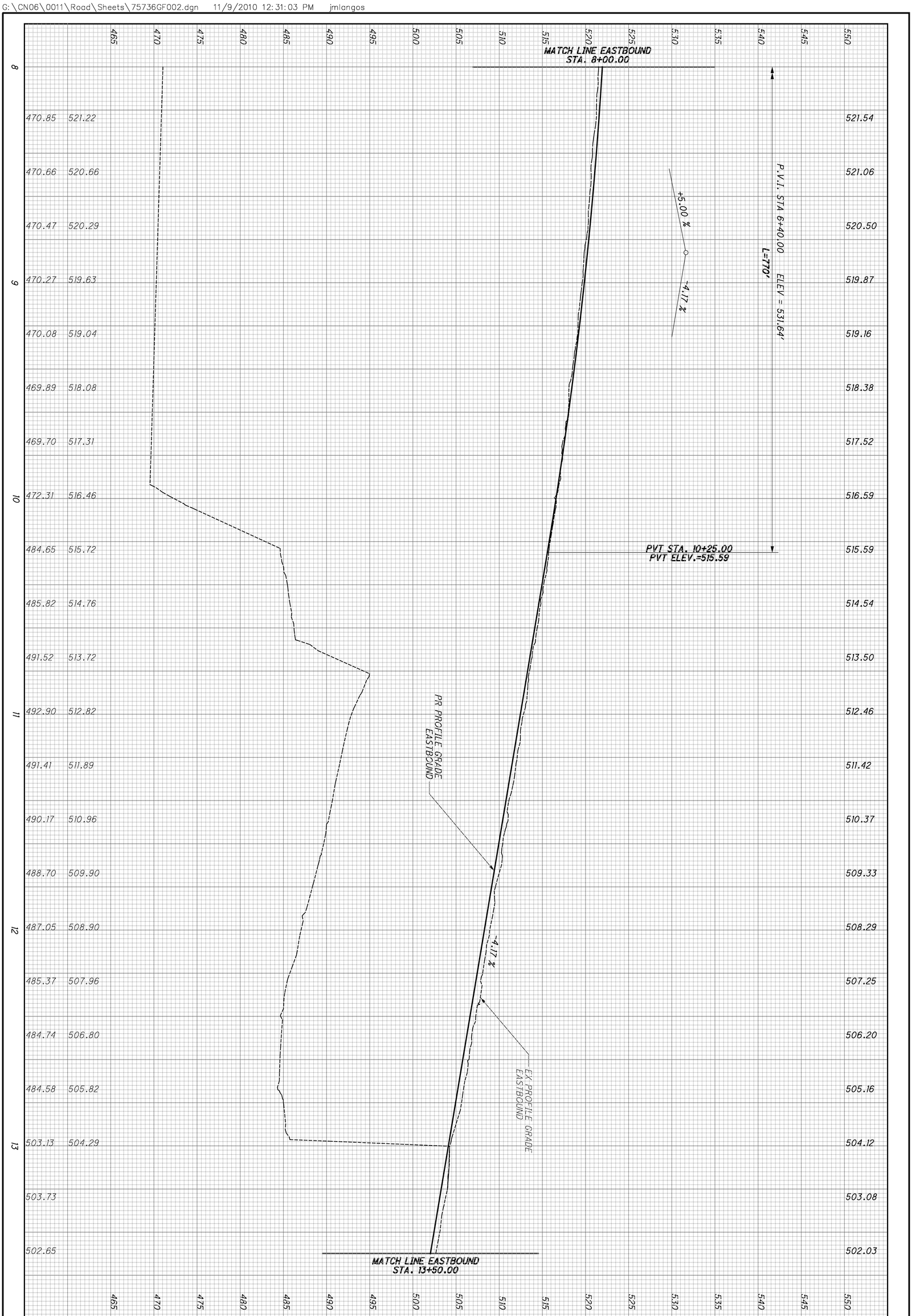
PLAN US 50
STA. 8+50.00 TO STA. 13+50.00

HAM-50-19.03

71
442

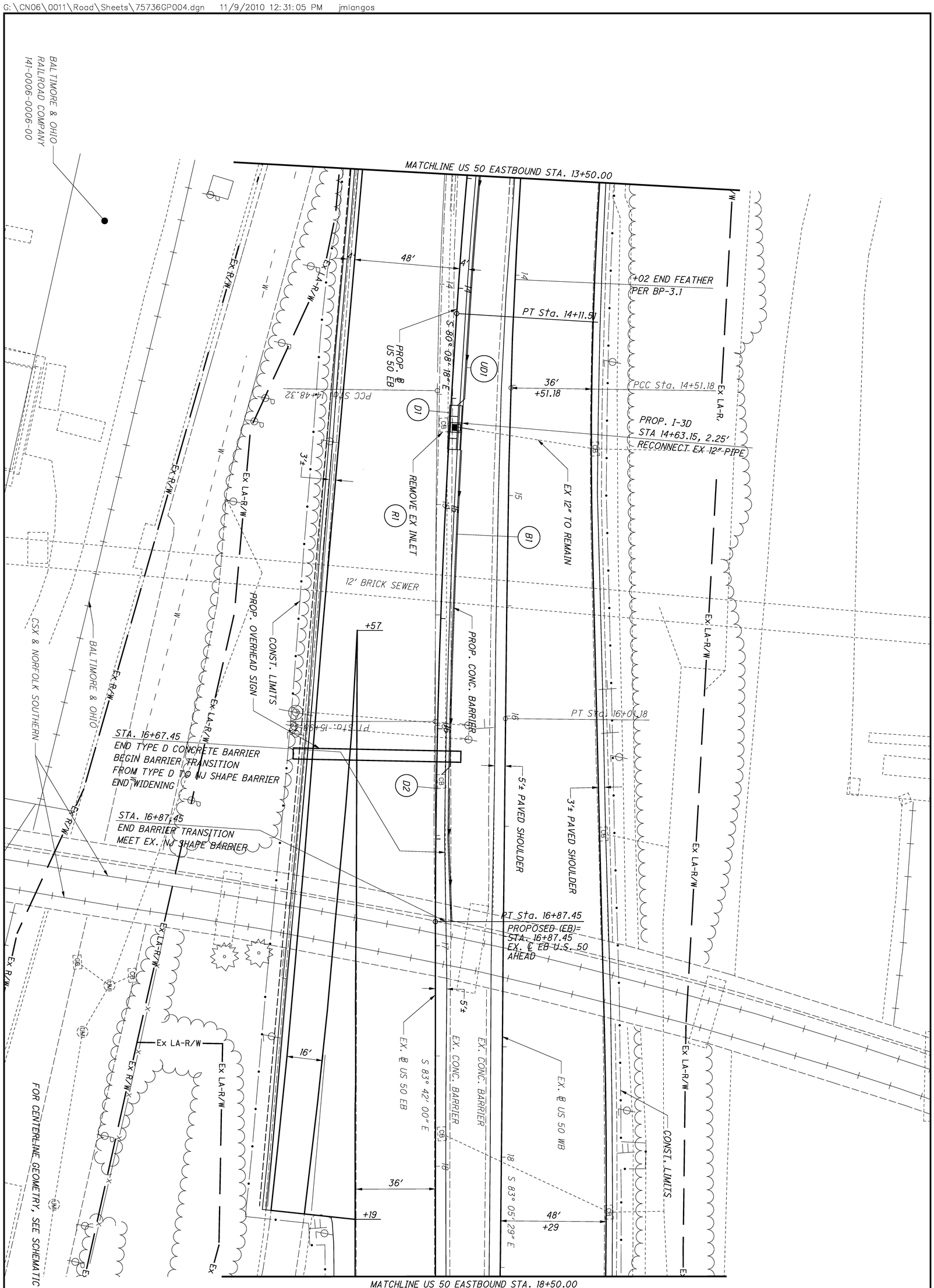
C:\CN06\0011\Road\Sheets\75736GP003.dgn 11/9/2010 12:31:01 PM jmlangos

G:\CN06\0011\Road\Sheets\75736GF002.dgn 11/9/2010 12:31:03 PM jmlangos



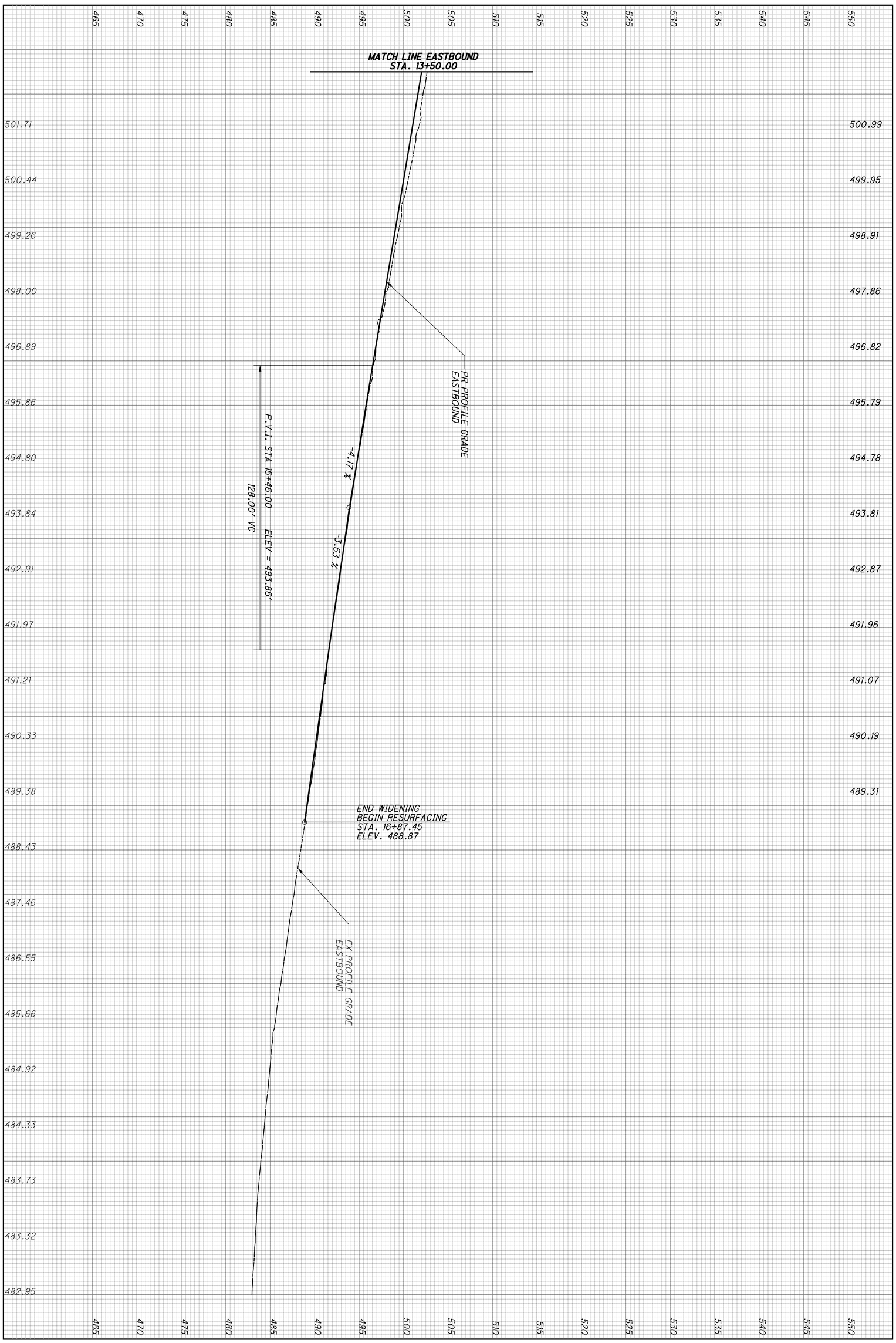
72 / 442	HAM-50-19.03	US 50 EASTBOUND PROFILE STA. 8+00.00 TO STA. 13+50	CALCULATED TMK CHECKED CTW

G:\CN06\0011\Road\Sheets\75736GP004.dgn 11/9/2010 12:31:05 PM jmlangos



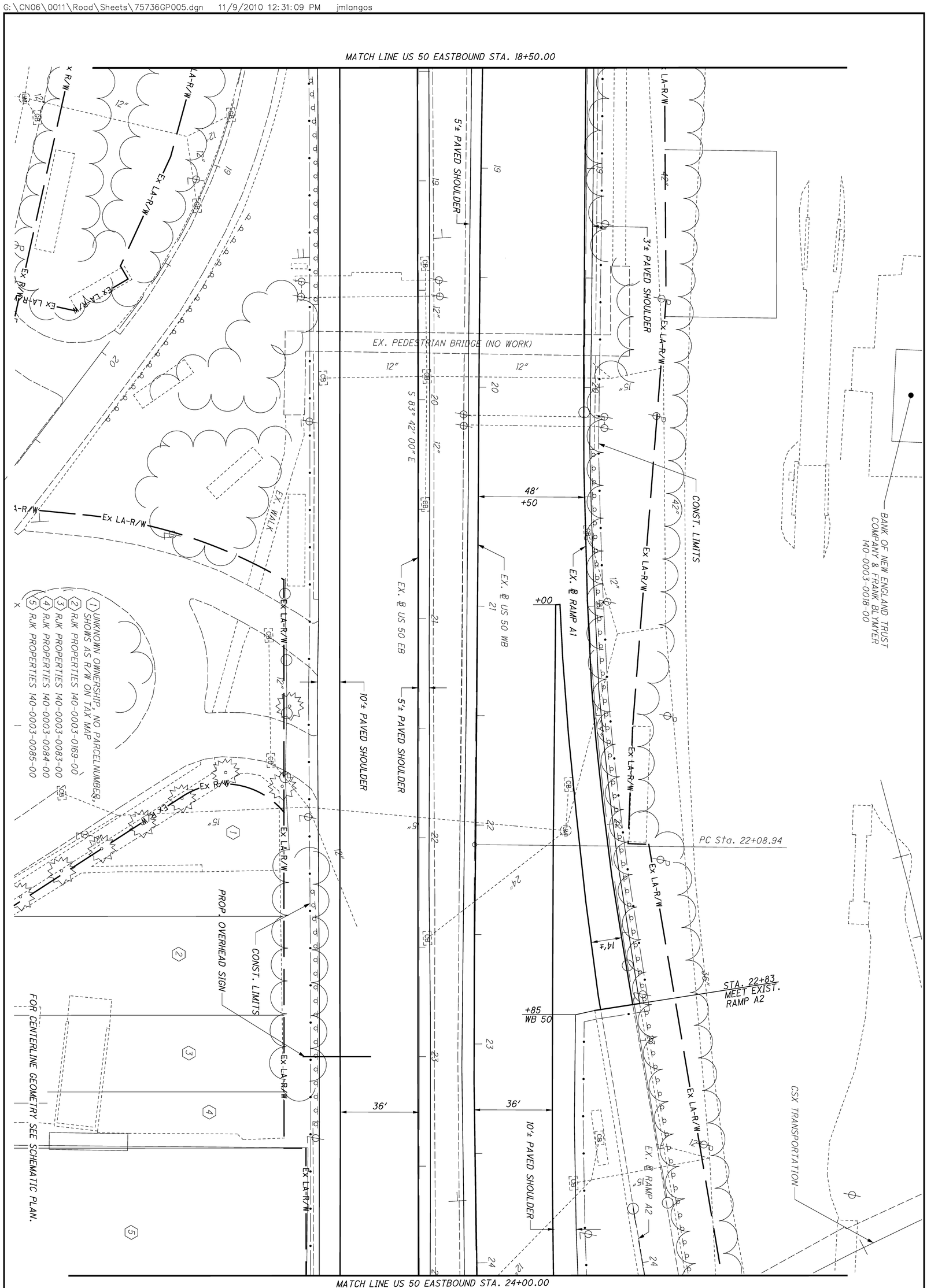
73 / 442	HAM-50-19.03	PLAN US 50 STA. 13+50.00 TO STA. 18+50.00	CALCULATED DL CHECKED JRE	0 20 10 40 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736GF003.dgn 11/9/2010 12:31:07 PM jmlangos



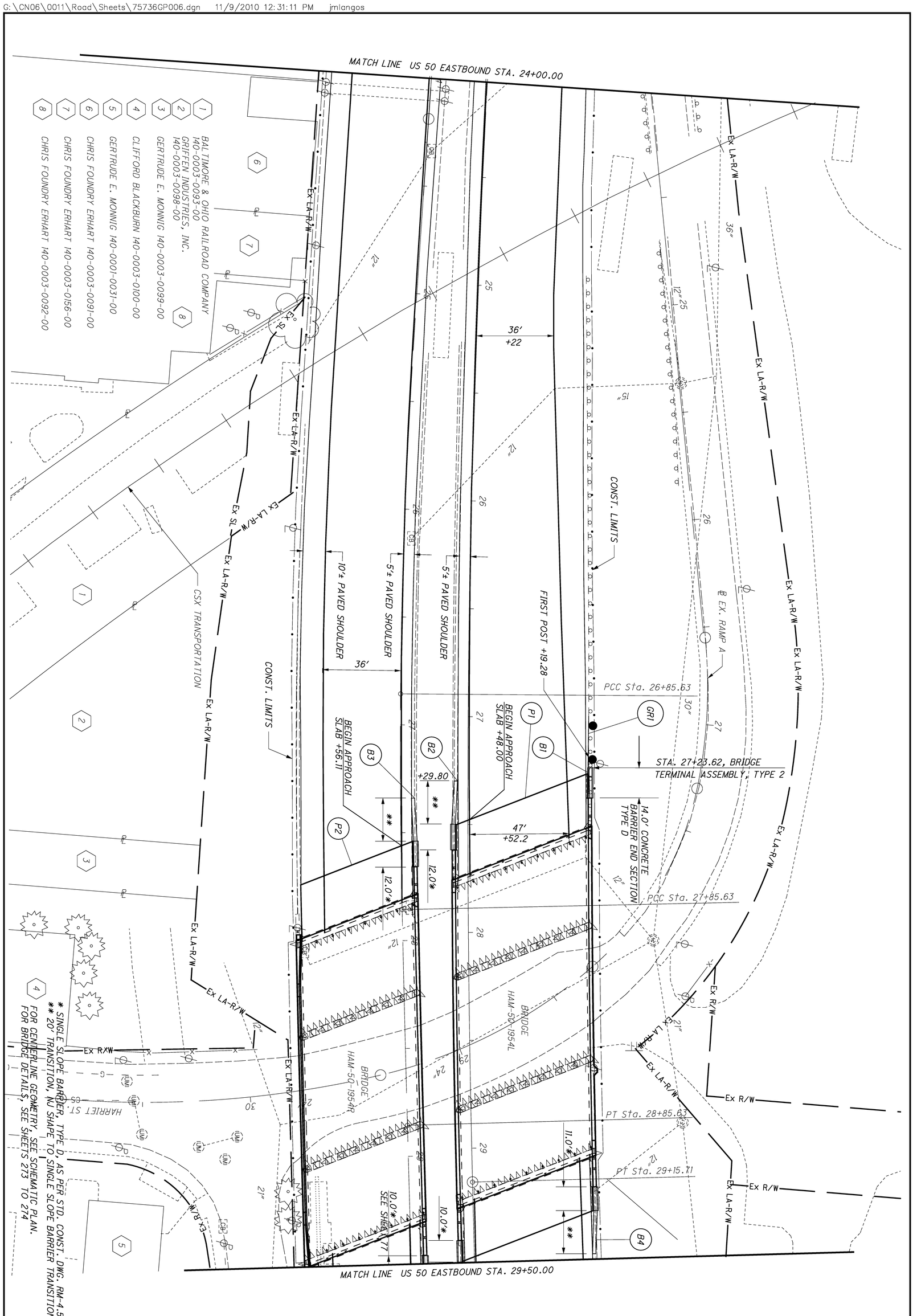
74 442	HAM-50-19.03	US 50 EASTBOUND PROFILE STA. 13+50.00 TO STA. 19+00.00	CALCULATED TMK CHECKED CTW

G:\CN06\0011\Road\Sheets\75736GP005.dgn 11/9/2010 12:31:09 PM jmlangos



75 442	HAM-50-19.03	PLAN US 50 STA. 18+50.00 TO 24+00.00	CALCULATED TMK / CHECKED CTW	0 20 / 10 40 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736GP006.dgn 11/9/2010 12:31:11 PM jmlangos



* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONST. DWG. RM-4.5
** 20' TRANSITION, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION
FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.
FOR BRIDGE DETAILS, SEE SHEETS 273 TO 274

76 442	HAM-50-19.03	PLAN US 50 STA. 24+00.00 TO 29+50.00	CALCULATED JG / CHECKED JR	0 20 / 10 40 HORIZONTAL SCALE IN FEET

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONST. DWG. RM-4.5
** 20' TRANSITION, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

1 GERTRUDE E. MONNIG 140-0001-0031-00
2 GERTRUDE E. MONNIG 140-0001-0035-00
3 THE H. BELMER CO. 138-0004-0086-00
4 THE H. BELMER CO. 138-0004-0087-00

QUEENSGATE INDUSTRIAL PARTNERS I, LLC 140-0003-0001-00

CONSOLIDATED RAIL CORPORATION 140-0001-0068-00

THE CENTRAL RAILROAD COMPANY OF INDIANA 140-0001-0077-00

MATCH LINE US 50 EASTBOUND STA. 29+50.00

MATCH LINE US 50 EASTBOUND STA. 35+00.00

Ex LA-R/W

Ex R/W

CONST. LIMITS

7'± PAVED SHOULDER

5'± PAVED SHOULDER

10'± PAVED SHOULDER

B1 B2 B3 B4 B5 B6 B7 B8 B9

P1 P2 P3 P4

GR1

** 12.0'* 10.0'* 11.0'*

48' 36' 24' 16' 14'±

END APPROACH SLAB +50.33

BEGIN APPROACH SLAB +83.93

END APPROACH SLAB +57.88

BEGIN APPROACH SLAB +84.63

END APPROACH SLAB +57.24

END APPROACH SLAB +58.18

FIRST POST +51.60

14.0' TYPE D BARRIER END SECTION

STA. 33+52.13, BRIDGE TERMINAL ASSEMBLY, TYPE 1

PC Sta. 32+91.53

PC Sta. 31+08.04

BRIDGE HAM-50-1961L

EX. ℄ US 50 WB

EX. ℄ US 50 EB

BRIDGE HAM-50-1961R

℄ EX. RAMP FA

℄ EX. C-D ROAD

PROP. OVERHEAD SIGN

S 88° 58' 52" E

S 89° 07' 24" E

72" CARR ST.

54" CS

12" CS

15" CS

21" CS

18" CS

8'-4" +53 MEET EXIST.

GRIFFEN INDUSTRIES, INC. 140-0001-0013-00

IMF, INC. 140-0001-0045-00

HODGEPODGE TOYS, LLC 140-0001-0030-00 10665/1362

FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.
FOR BRIDGE DETAILS, SEE SHEETS 323 TO 324

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JG
CHECKED JR

PLAN US 50
STA. 29+50.00 TO 35+00.00

HAM-50-19.03

77
442

CENTRAL RAILROAD
COMPANY OF INDIANA
138-0004-0136-00

Ex LA-R/W

CINCINNATI SOUTHERN
RAILWAY COMPANY
138-0004-0271-00

54" CS

BEGIN APPROACH
SLAB +13.31

BTA, TYPE 2

GR1

℄ EX. RAMP FA

RAMP FA

17'± +55

20'

14'± +11

BTA, TYPE 2

GR2

CONST. LIMITS

12"

10'± PAVED SHOULDER

+20

12"

12"

10'

36' +50

EX. ℄ US 50 WB

36

37

12"

12"

378'
S83°E

57'
N83°W

38

39

40

5'

24'

EX. ℄ US 50 EB

CONST. LIMITS

PROP. OVERHEAD SIGN

12"

12"

10'±

EX. ℄ C-D ROAD

15"

35

36

37

38

18"

12"

12"

12"

15"

12"

12"

RAMP FB

36

EX. ℄ RAMP FB

PROP. OVERHEAD SIGN

CINCINNATI SOUTHERN
RAILWAY COMPANY
138-0004-0088-00

Ex LA-R/W

CENTRAL RAILROAD
COMPANY OF INDIANA
138-0005-0225-00

Ex LA-R/W

Ex LA-R/W

BRIDGE
HAM-50-1976

FREEMAN AVE.

21

22

20

16'

7'

36' +50

S 83° 58' 50" E

PT Sta. 37+20.33

PCC Sta. 38+79.46

MATCH LINE US 50 EASTBOUND STA.35+00.00

MATCH LINE US 50 EASTBOUND STA. 40+00.00

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONST. DWG. RM-4.5
** 20' TRANSITION, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.
FOR BRIDGE DETAILS, SEE SHEETS 384 TO 386

N

HORIZONTAL
SCALE IN FEET
0 10 20 40

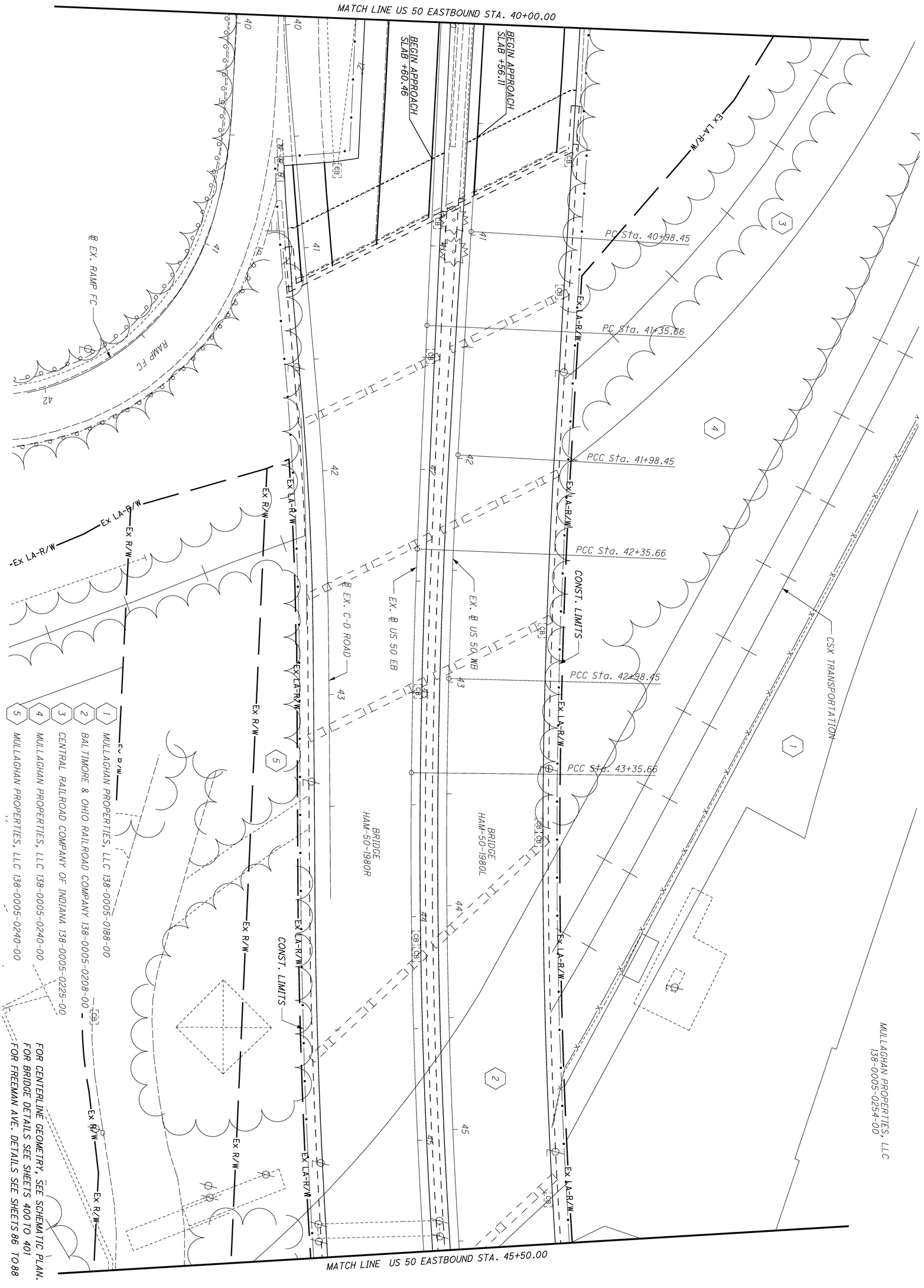
CALCULATED JG
CHECKED JR

PLAN US 50
STA. 35+00.00 TO 40+00.00

HAM-50-19.03

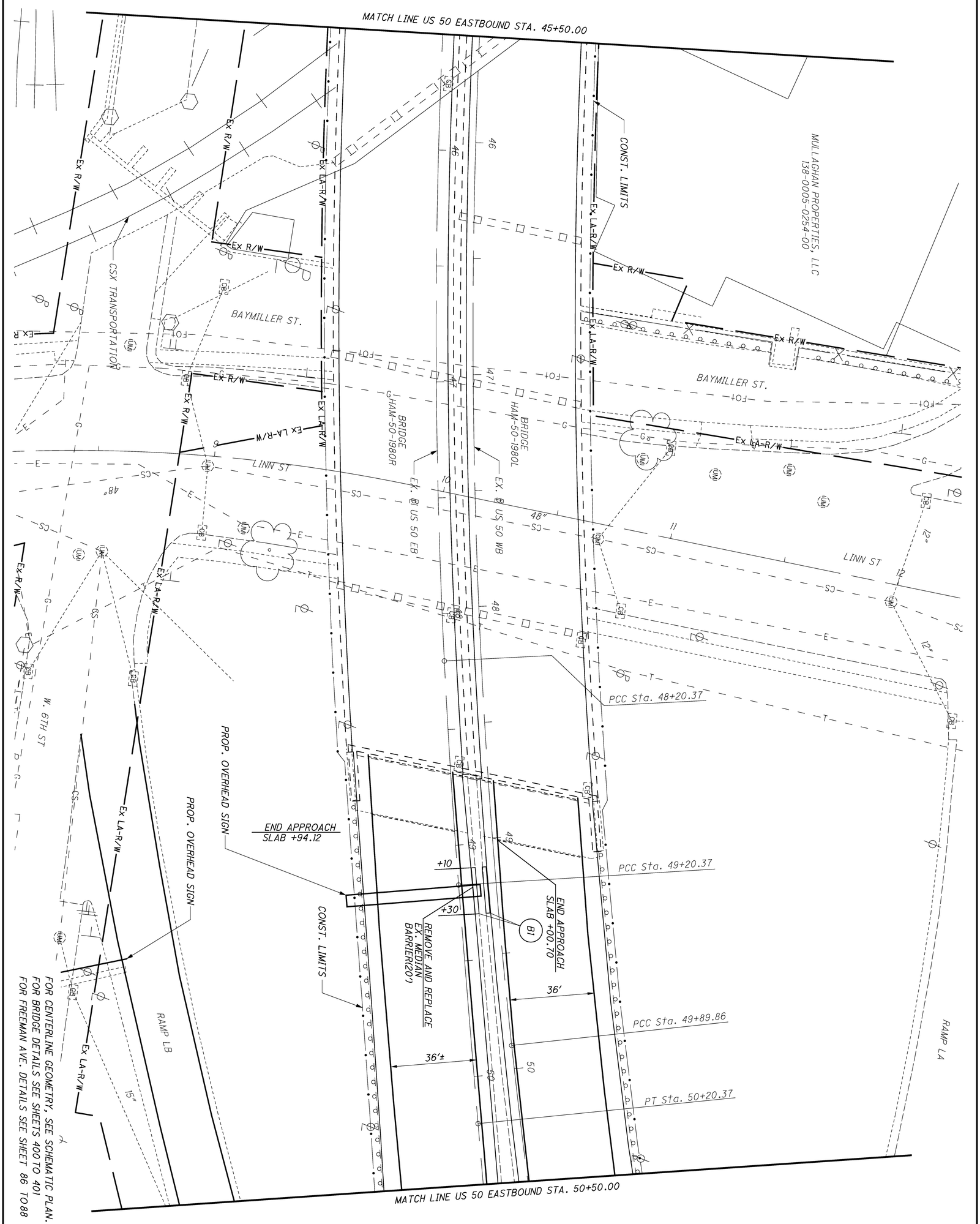
78
442

G:\CN06\0011\Road\Sheets\75736GP009.dgn 11/9/2010 12:31:19 PM jmlangos



79 / 442	HAM-50-19.03	PLAN US 50 STA. 40+00.00 TO 45+50.00	CALCULATED JG CHECKED JR	0 10 20 40 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736GP010.dgn 11/9/2010 12:31:21 PM jmlangos



80 / 442	HAM-50-19.03	PLAN US 50 STA. 45+50.00 TO 50+50.00	CALCULATED JG CHECKED JR	0 10 20 40 HORIZONTAL SCALE IN FEET

PREMIER OFFICE PARK, LLC
136-0003-0070-00

Ex R/W

Ex LA-R/W

Ex LA-R/W

Ex LA-

PREMIER OFFICE PARK, LLC
136-0003-0070-00

TAPPAN PROPERTIES,
LIMITED PARTNERSHIP
136-0003-0231-00

GEST ST.

Ex LA-R/W

CONST. LIMITS

PT Sta. 57+61.62

BRIDGE
HAM-50-2013L

EX. ℄ US 50 WB

N 79° 00' 04" E

BEGIN APPROACH
SLAB +87.32

BEGIN APPROACH
SLAB +83.79

END APPROACH
SLAB +64.84

END APPROACH
SLAB +39.06

EX. ℄ US 50 EB

BRIDGE
HAM-50-2013R

℄ EX. RAMP

PROP. OVERHEAD SIGN

CONST. LIMITS

Ex R/W

CALDWELL REALTY CO.
136-0004-0241-00

MATCH LINE US 50 EASTBOUND STA. 56+00.00

MATCH LINE US 50 EASTBOUND STA. 61+50.00

FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.
FOR BRIDGE DETAILS SEE SHEET 427

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JG
CHECKED JR

PLAN US 50
STA. 56+00.00 TO 61+50.00

HAM-50-19.03

82
442

G:\CN06\0011\Road\Sheets\75736GP012.dgn 11/9/2010 12:31:24 PM jmlangos

TAPPAN PROPERTIES,
LIMITED PARTNERSHIP
136-0003-0231-00

Ex LA-R/W

IR 75

CONST. LIMITS

PROP. OVERHEAD SIGN

MATCH LINE US 50 EASTBOUND STA. 61+50.00

EX. ℄ US 50 WB

END
PROJECT
STA. 66+47.78

BRIDGE
HAM-50-2028L

STA. 66+18.56

BARRIER, TYPE D
PER STD. DWG. RM-4.4

PC Sta. 63+19.60

N 79° 00′ 04″ E

EX. ℄ US 50 EB

+23 MEET EX. BARRIER

+78 MEET EX. BARRIER

N 89° 31′ 00″ E
BRIDGE
HAM-50-2028M

BRIDGE
HAM-50-2028R

PC Sta. 65+57.31

CONST. LIMITS

MEET EXIST. STA. 63+52

6TH/5TH ST CONNECTOR

PROP. OVERHEAD SIGN

FOR CENTERLINE GEOMETRY, SEE SCHEMATIC PLAN.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JG
CHECKED JR

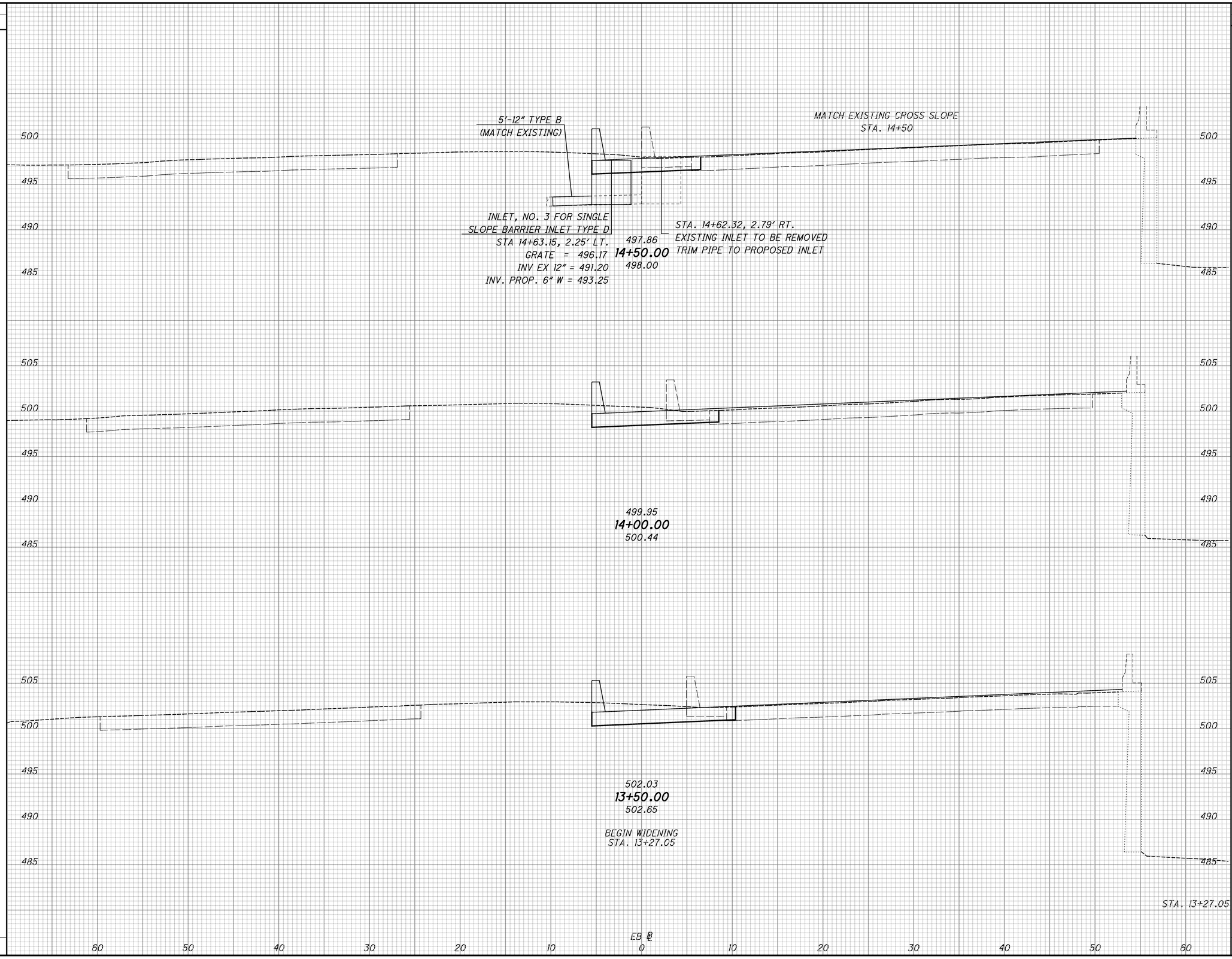
PLAN US 50
STA. 61+50.00 TO 67+00.00

HAM-50-19.03

83
442

G:\CN06\0011\Road\Sheets\75736GP013.dgn 11/9/2010 12:31:26 PM jmlangos

SEEDING	
END WIDTH	SQ. YDS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18		39	
21		45	
24		20	
23		104	

CALCULATED JG
CHECKED JR

CROSS SECTIONS
STA. 13+50.00 TO STA. 14+50.00

HAM-50-19.03

84
442

G:\CN06\0011\Road\Sheets\75736XS001.dgn 11/9/2010 12:31:28 PM jmlangos

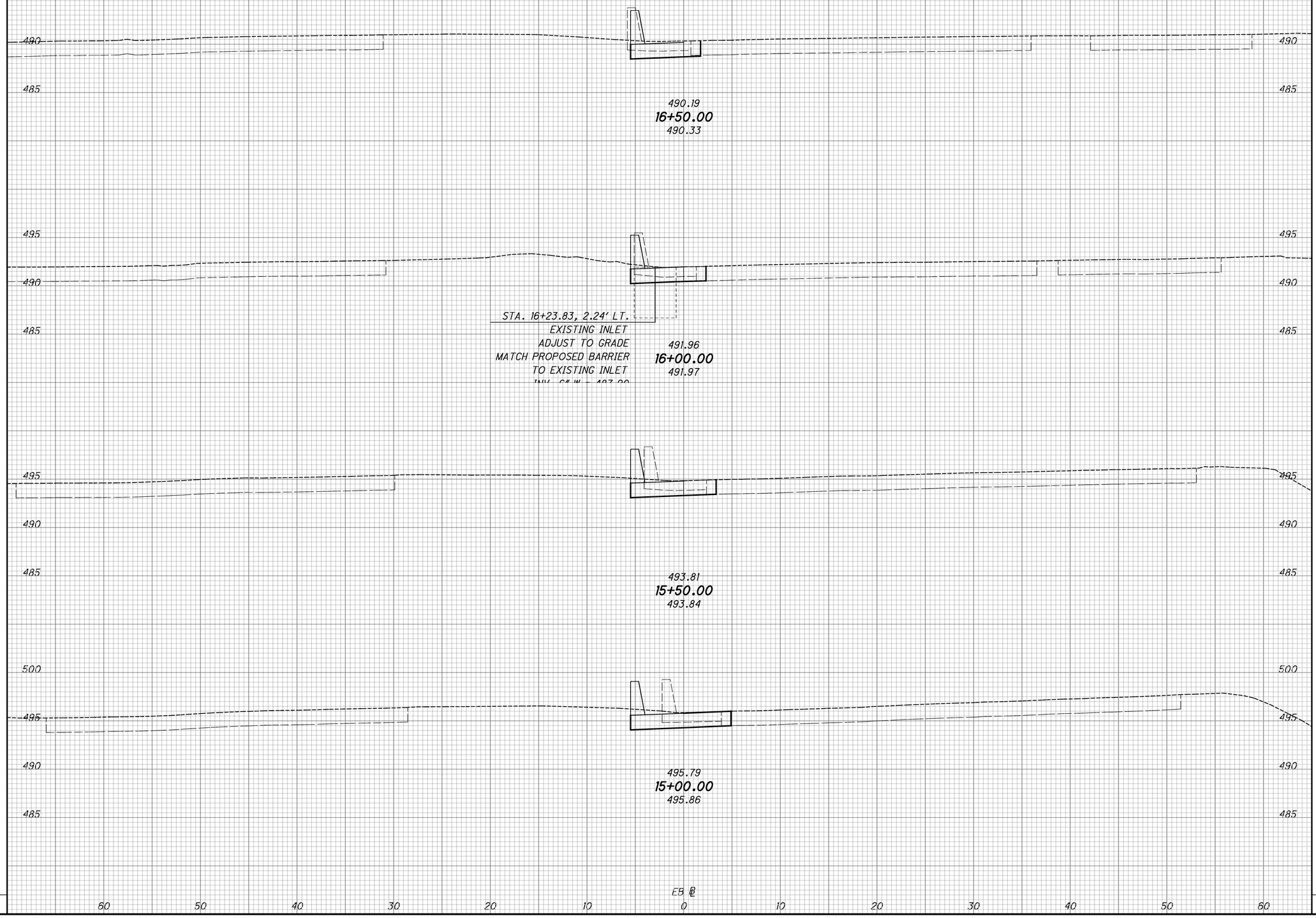
SEEDING	
END WIDTH	SQ. YDS.

STA. 16+87.45

END WIDENING
STA. 16+87.45

TOTAL EARTHWORK US 50
CARRIED TO GENERAL SUMMARY

ITEM 203 EXCAVATION 240 CU YD



END AREA		VOLUME	
CUT	FILL	CUT	FILL
10		23	
12		23	
12		26	
14		30	
16		34	
		136	

CALCULATED JG
CHECKED JR

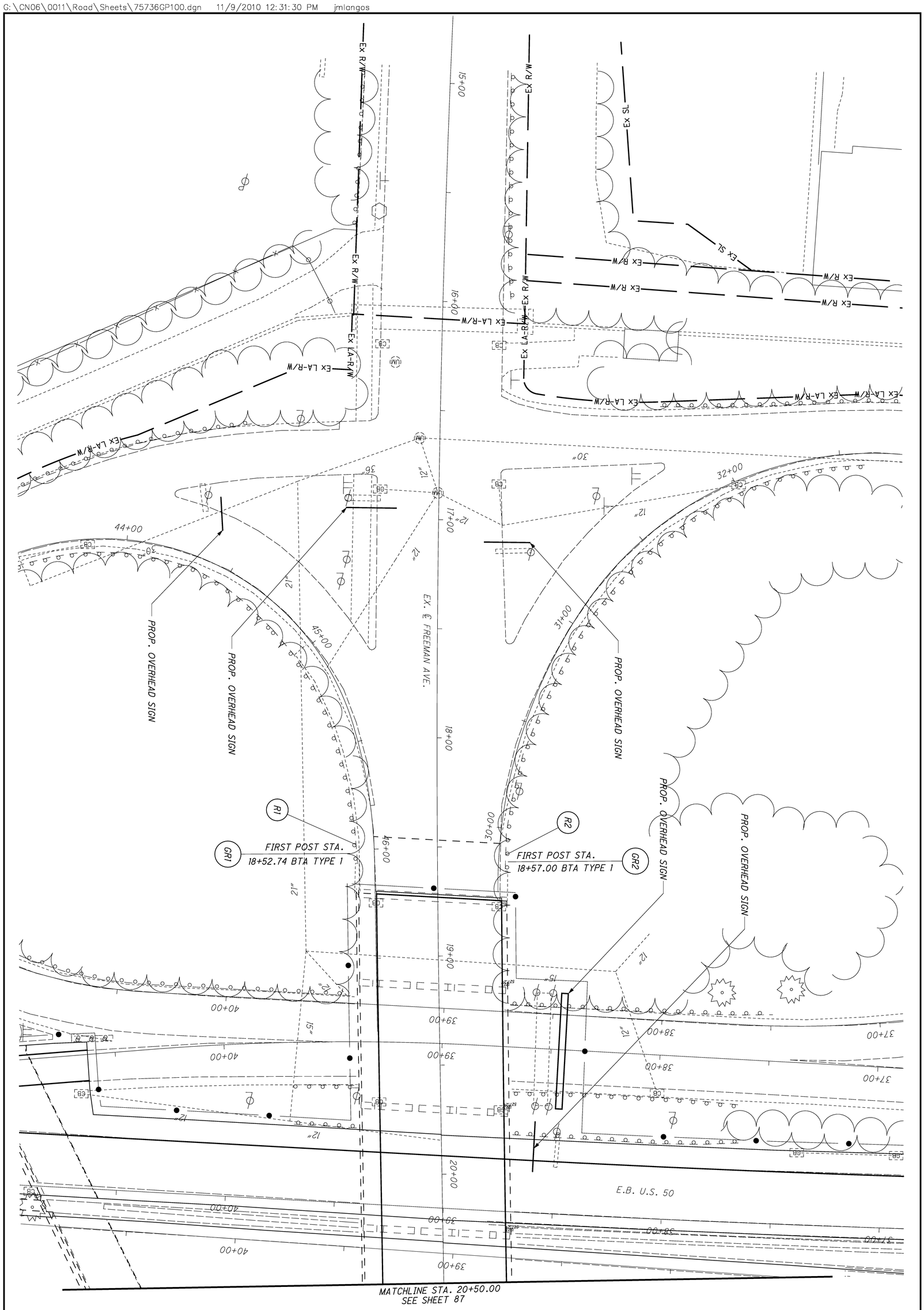
CROSS SECTIONS
STA. 15+00.00 TO STA. 16+50.00

HAM-50-19.03

85
442

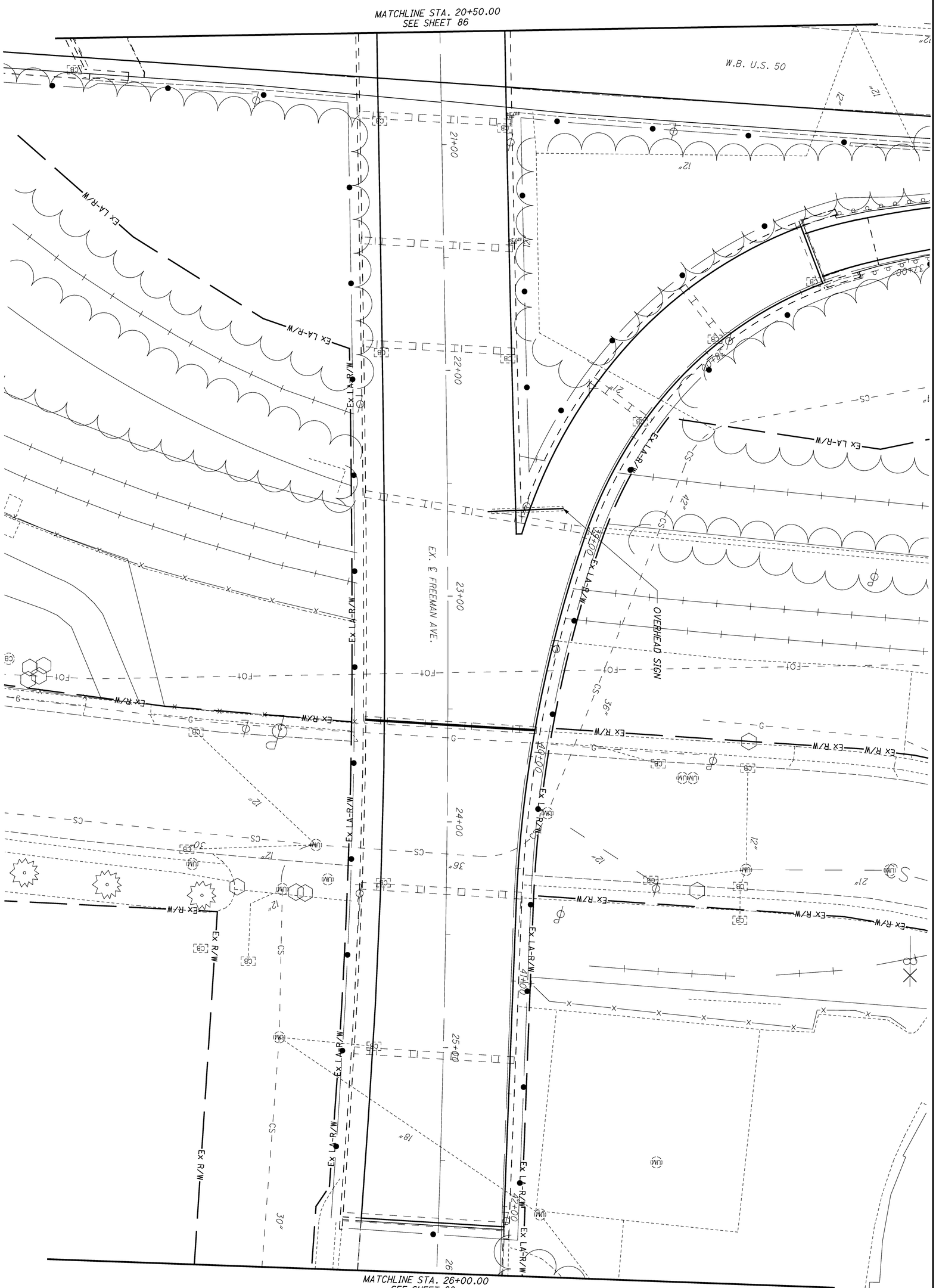
G:\CN06\0011\Road\sheets\75736XS001.dgn 11/10/2010 11:08:30 AM jmlangos

G:\CN06\0011\Road\Sheets\75736GP100.dgn 11/9/2010 12:31:30 PM jmlangos

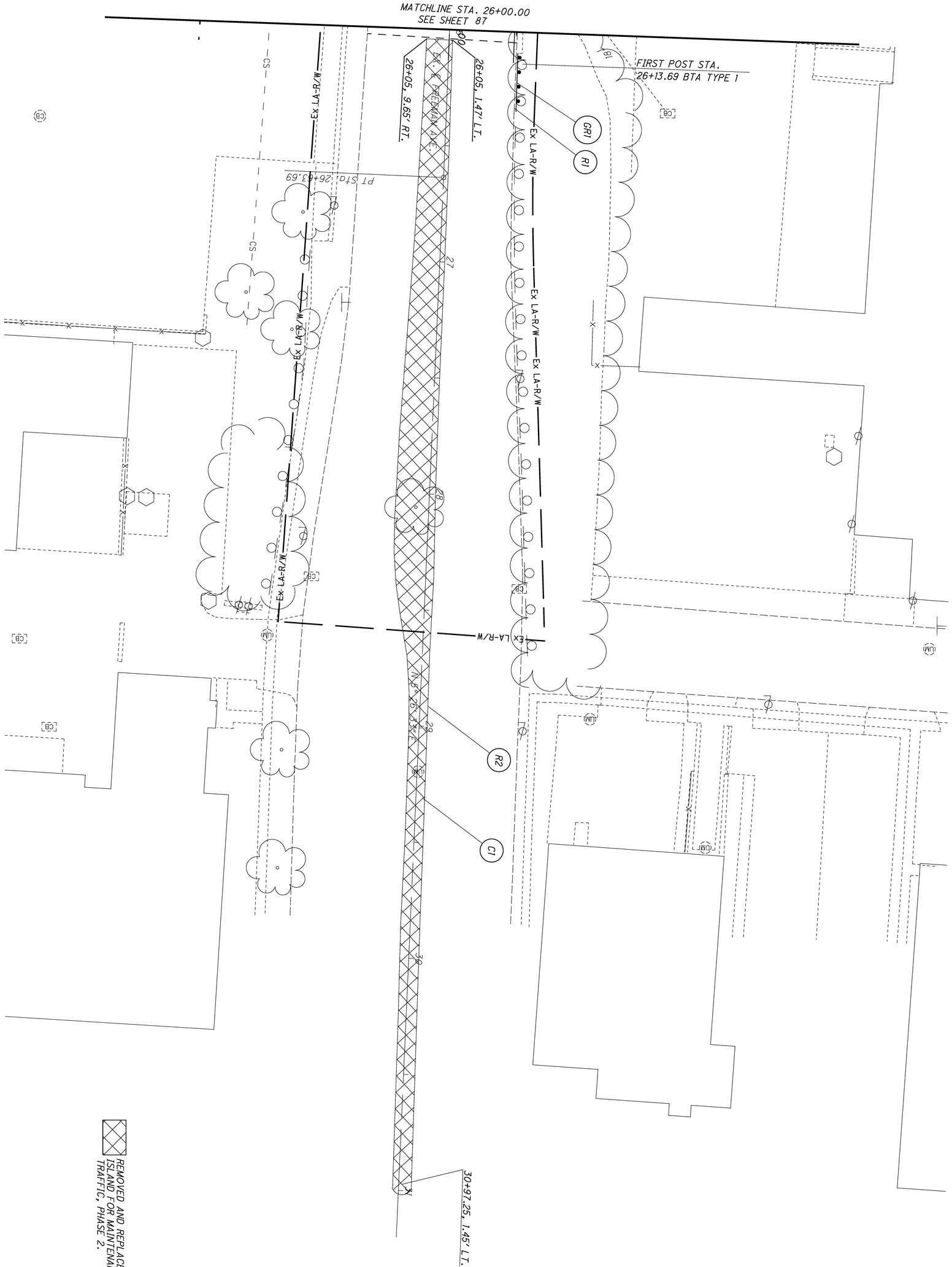


86 / 442	HAM-50-19.03	PLAN FREEMAN AVENUE STA. 15+00.00 TO STA. 20+50.00	CALCULATED JG CHECKED JR	0 10 20 40 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736GP101.dgn 11/9/2010 12:31:32 PM jmiangos



87 / 442	HAM-50-19.03	PLAN FREEMAN AVENUE STA. 20+50.00 TO 26+00.00	CALCULATED JG CHECKED JR	0 20 10 40 HORIZONTAL SCALE IN FEET	N



HAM-50-19.03

PLAN FREEMAN AVENUE

CALCULATED JG
CHECKED JR

0 10 20 40
HORIZONTAL SCALE IN FEET

SUPERELEVATION TABLE (PROP. AREA ONLY EASTBOUND STA. 2+53+43 TO STA. 14+50.00)

P.I. STA. 4+07.44	Dc = 2°35'13"

P.I. STA. 11+95.13	Dc = 2°30'00"

P.I. STA. 15+68.75	Dc = 1°30'00"

STATION	EB INSIDE SHOULDER			BASELINE CONTROL	EB PAVEMENT			EB OUTSIDE SHOULDER			STATION	REMARKS
	SHOULDER ELEVATION	SHOULDER SLOPE	SHOULDER WIDTH	PROFILE GRADE	PAVEMENT SLOPE	PAVEMENT WIDTH	EDGE OF PAVEMENT ELEVATION	SHOULDER WIDTH	SHOULDER SLOPE	SHOULDER ELEVATION		
2+53.43	512.21	-0.0284	4.00	512.32	-0.0416	48.00	510.32	4.00	-0.0416	510.16	2+53.43	FULL SUPER, MATCH EXISTING
2+75.00	513.26	-0.0284	4.00	513.37	-0.0416	48.00	511.37	4.00	-0.0416	511.21	2+75.00	
3+00.00	514.41	-0.0284	4.00	514.52	-0.0416	48.00	512.52	4.00	-0.0416	512.36	3+00.00	
3+25.00	515.49	-0.0284	4.00	515.60	-0.0416	48.00	513.60	4.00	-0.0416	513.44	3+25.00	
3+50.00	516.49	-0.0284	4.00	516.60	-0.0416	48.00	514.60	4.00	-0.0416	514.44	3+50.00	
3+61.27	516.92	-0.0284	4.00	517.03	-0.0416	48.00	515.03	4.00	-0.0416	514.87	3+61.27	END FULL SUPER, BEGIN TRANSITION
3+75.00	517.41	-0.0298	4.00	517.53	-0.0402	48.00	515.60	4.00	-0.0402	515.44	3+75.00	
4+00.00	518.26	-0.0324	4.00	518.39	-0.0376	48.00	516.58	4.00	-0.0400	516.42	4+00.00	
4+25.00	519.03	-0.0349	4.00	519.17	-0.0351	48.00	517.49	4.00	-0.0400	517.33	4+25.00	
4+50.00	519.73	-0.0375	4.00	519.88	-0.0325	48.00	518.32	4.00	-0.0400	518.16	4+50.00	
4+75.00	520.35	-0.0400	4.00	520.51	-0.0300	48.00	519.07	4.00	-0.0400	518.91	4+75.00	
5+00.00	520.91	-0.0400	4.00	521.07	-0.0274	48.00	519.75	4.00	-0.0400	519.59	5+00.00	
5+25.00	521.39	-0.0400	4.00	521.55	-0.0248	48.00	520.36	4.00	-0.0400	520.20	5+25.00	
5+50.00	521.80	-0.0400	4.00	521.96	-0.0223	48.00	520.89	4.00	-0.0400	520.73	5+50.00	
5+60.95	521.95	-0.0400	4.00	522.11	-0.0212	48.00	521.09	4.00	-0.0400	520.93	5+60.95	PT STA. 5+60.95
5+75.00	522.13	-0.0400	4.00	522.29	-0.0197	48.00	521.34	4.00	-0.0400	521.18	5+75.00	
6+00.00	522.39	-0.0400	4.00	522.55	-0.0172	48.00	521.73	4.00	-0.0400	521.57	6+00.00	
6+25.00	522.58	-0.0400	4.00	522.74	-0.0146	48.00	522.04	4.00	-0.0400	521.88	6+25.00	
6+50.00	522.69	-0.0400	4.00	522.85	-0.0121	48.00	522.27	4.00	-0.0400	522.11	6+50.00	
6+75.00	522.73	-0.0400	4.00	522.89	-0.0095	48.00	522.43	4.00	-0.0400	522.27	6+75.00	
7+00.00	522.69	-0.0400	4.00	522.85	-0.0069	48.00	522.52	4.00	-0.0400	522.36	7+00.00	
7+25.00	522.58	-0.0400	4.00	522.74	-0.0044	48.00	522.53	4.00	-0.0400	522.37	7+25.00	
7+50.00	522.39	-0.0400	4.00	522.55	-0.0018	48.00	522.46	4.00	-0.0400	522.30	7+50.00	
7+67.77	522.21	-0.0400	4.00	522.37	0.0000	48.00	522.37	4.00	-0.0400	522.21	7+67.77	FLAT
7+75.00	522.13	-0.0400	4.00	522.29	0.0007	48.00	522.33	4.00	-0.0400	522.17	7+75.00	
7+84.38	522.01	-0.0400	4.00	522.17	0.0017	48.00	522.25	4.00	-0.0400	522.09	7+84.38	
8+00.00	521.79	-0.0400	4.00	521.95	0.0033	48.00	522.11	4.00	-0.0400	521.95	8+00.00	
8+25.00	521.38	-0.0400	4.00	521.54	0.0059	48.00	521.82	4.00	-0.0400	521.66	8+25.00	
8+50.00	520.90	-0.0400	4.00	521.06	0.0084	48.00	521.46	4.00	-0.0400	521.30	8+50.00	
8+75.00	520.34	-0.0400	4.00	520.50	0.0110	48.00	521.03	4.00	-0.0400	520.87	8+75.00	
9+00.00	519.71	-0.0400	4.00	519.87	0.0135	48.00	520.52	4.00	-0.0400	520.36	9+00.00	
9+25.00	519.00	-0.0400	4.00	519.16	0.0161	48.00	519.93	4.00	-0.0400	519.77	9+25.00	
9+50.00	518.22	-0.0400	4.00	518.38	0.0186	48.00	519.28	4.00	-0.0400	519.12	9+50.00	
9+75.00	517.36	-0.0400	4.00	517.52	0.0212	48.00	518.54	4.00	-0.0400	518.38	9+75.00	
9+77.45	517.27	-0.0400	4.00	517.43	0.0215	48.00	518.46	4.00	-0.0400	518.30	9+77.45	PC STA. 9+77.45
10+00.00	516.43	-0.0400	4.00	516.59	0.0238	48.00	517.73	4.00	-0.0400	517.57	10+00.00	
10+25.00	515.43	-0.0400	4.00	515.59	0.0263	48.00	516.85	4.00	-0.0400	516.69	10+25.00	
10+50.00	514.38	-0.0400	4.00	514.54	0.0289	48.00	515.93	4.00	-0.0400	515.77	10+50.00	
10+75.00	513.34	-0.0400	4.00	513.50	0.0314	48.00	515.01	4.00	-0.0386	514.85	10+75.00	
11+00.00	512.30	-0.0400	4.00	512.46	0.0340	48.00	514.09	4.00	-0.0360	513.95	11+00.00	
11+25.00	511.26	-0.0400	4.00	511.42	0.0366	48.00	513.17	4.00	-0.0334	513.04	11+25.00	
11+50.00	510.21	-0.0400	4.00	510.37	0.0391	48.00	512.25	4.00	-0.0309	512.12	11+50.00	
11+75.00	509.50	0.0417	4.00	509.33	0.0417	48.00	511.33	4.00	-0.0283	511.22	11+75.00	
12+00.00	508.47	0.0442	4.00	508.29	0.0442	48.00	510.41	4.00	-0.0258	510.31	12+00.00	
12+07.49	508.16	0.0450	4.00	507.98	0.0450	48.00	510.14	4.00	-0.0250	510.04	12+07.49	END TRANSITION, BEGIN FULL SUPER
12+25.00	507.43	0.0450	4.00	507.25	0.0450	48.00	509.41	4.00	-0.0250	509.31	12+25.00	
12+50.00	506.38	0.0450	4.00	506.20	0.0450	48.00	508.36	4.00	-0.0250	508.26	12+50.00	

SEE SHEET NO. 90

CALCULATED JRE
CHECKED DL

SUPERELEVATION TABLE CURVES 1, 2, 3
EASTBOUND HAM-50-19.03

HAM-50-19.03

G:\CN06\0011\Road\Sheets\757360E001.dgn 11/9/2010 12:31:34 PM jmlangos

SUPERELEVATION TABLE (PROP. AREA ONLY EASTBOUND STA. 2+53.43 TO STA. 14+50.00)

P.I. STA. 4+07.44	Dc = 2°35'13"	P.I. STA. 11+95.13	Dc = 2°30'00"	P.I. STA. 15+68.75	Dc = 1°30'00"

STATION	EB INSIDE SHOULDER			BASELINE CONTROL	EB PAVEMENT			EB OUTSIDE SHOULDER			STATION	REMARKS
	SHOULDER ELEVATION	SHOULDER SLOPE	SHOULDER WIDTH	PROFILE GRADE	PAVEMENT SLOPE	PAVEMENT WIDTH	EDGE OF PAVEMENT ELEVATION	SHOULDER WIDTH	SHOULDER SLOPE	SHOULDER ELEVATION		
					SEE SHEET NO. 89							
12+73.49	505.40	0.0450	4.00	505.22	0.0450	48.00	507.38	4.00	-0.0250	507.28	12+73.49	END FULL SUPER
12+75.00	505.34	0.0450	4.00	505.16	0.0450	48.00	507.32	4.00	-0.0250	507.22	12+75.00	
13+00.00	504.30	0.0445	4.00	504.12	0.0445	48.00	506.25	4.00	-0.0255	506.15	13+00.00	
13+25.00	503.26	0.0439	4.00	503.08	0.0439	48.00	505.19	3.82	-0.0261	505.09	13+25.00	
13+50.00	502.20	0.0434	4.00	502.03	0.0434	48.00	504.11	3.56	-0.0266	504.02	13+50.00	
13+75.00	501.16	0.0428	4.00	500.99	0.0428	48.00	503.05	3.50	-0.0272	502.95	13+75.00	
14+00.00	500.12	0.0423	4.00	499.95	0.0423	48.00	501.98	3.44	-0.0277	501.88	14+00.00	
14+25.00	499.08	0.0417	4.00	498.91	0.0417	48.00	500.91		-0.0283	500.91	14+25.00	
14+50.00	498.02	0.0412	4.00	497.86	0.0412	48.00	499.84	3.10	-0.0288	499.75	14+50.00	MATCH EXIST. SUPER AT STA. 14+50

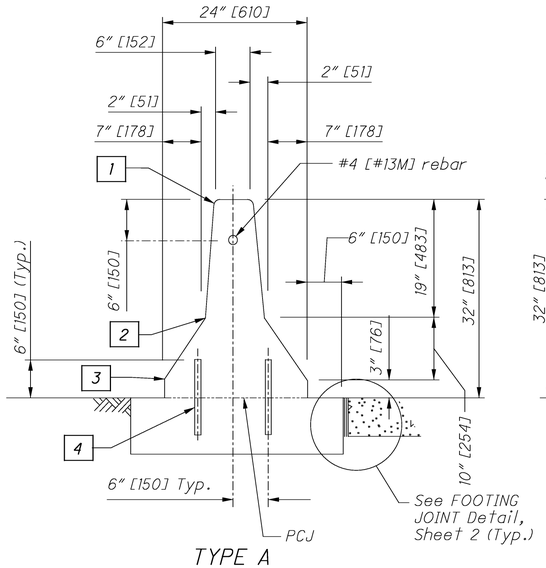
CALCULATED JRE
CHECKED DL

SUPERELEVATION TABLE, CURVES 1, 2, 3
EASTBOUND HAM-50-19.03

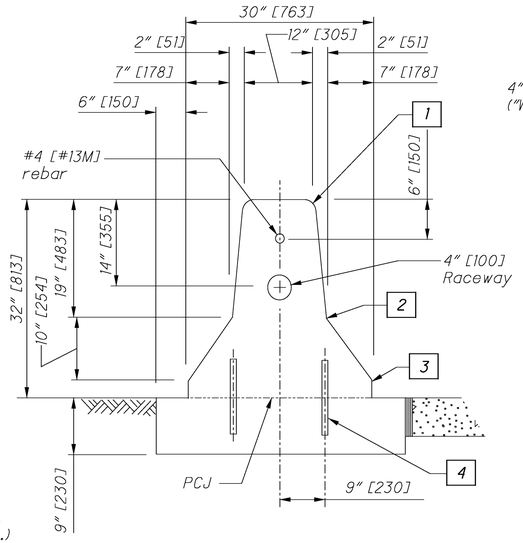
HAM-50-19.03

90
442

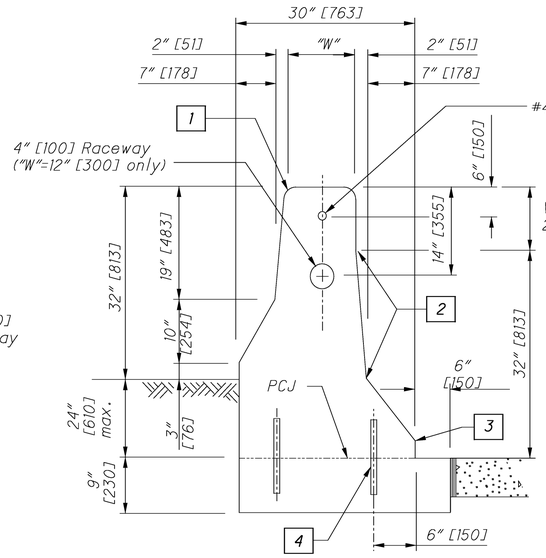
G:\CN06\0011\Road\Sheets\757366E001.dgn 11/9/2010 12:31:35 PM jmlangos



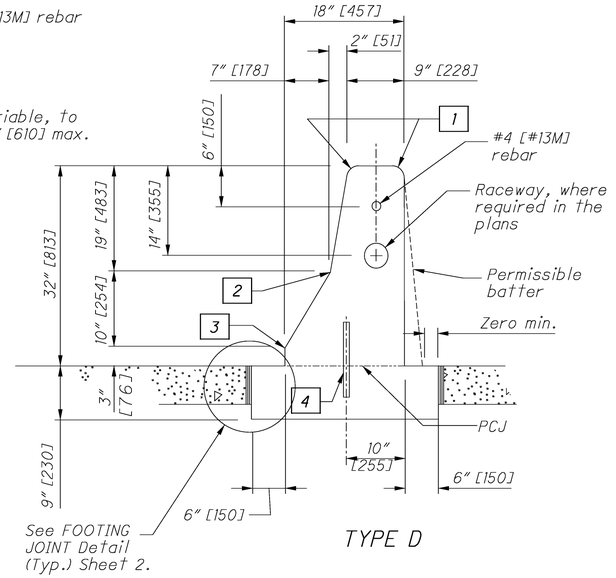
TYPE A



TYPE B



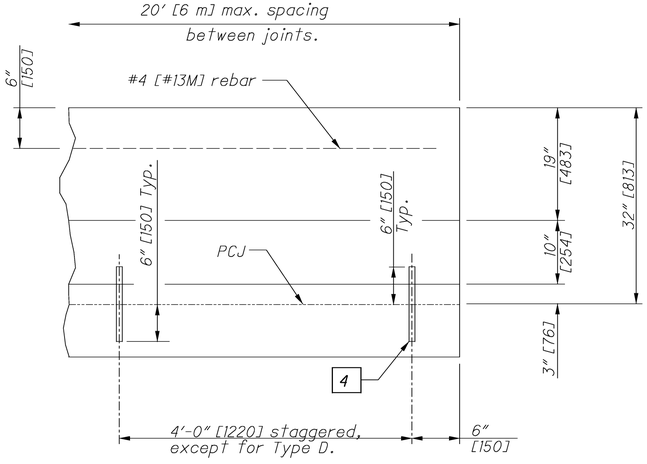
TYPE C



TYPE D

NORMAL 32 INCH SECTIONS

"W" = 6" [152] or 12" [305] barrier width, as specified in the plans.



32" [813-mm] BARRIER
BARRIER ELEVATION

NOTES

JOINTS: Unsealed contraction joints spaced at 20' [6 m] maximum shall be constructed throughout the run of Concrete Barrier except that expansion joints shall be used at the center line of and around each bridge pier column and on either side of overhead sign supports, inlets and light pole foundations. If the inlet top is slip formed, the expansion joints adjacent to it may be omitted.

Contraction joints may be constructed with metal inserts inside the forms, preformed full width joint filler, a grooving tool, or by sawing. Inserts, tooled joints, and sawed joints shall have a 3" [75] minimum depth. All joints shall be constructed for the full height of the barrier including the footing. Sawing shall be done as soon as curing will allow, to prevent spalling.

FOOTING JOINTS: The vertical walls between the barrier footing and a concrete pavement or concrete base shall be provided with a sealed joint as shown on Sheet 2. Sealing material shall conform to CMS 705.04.

PCJ = Permissible Construction Joint

MEASUREMENT: Item 622, Concrete Barrier, including transitions and pier sections as detailed on the New Jersey Shape Barrier Transition drawing, is paid for in linear feet (meters) as one of the four types (A, B, C or D) or as Type A1 and B1, (for 50" [1270] high barrier), with appropriate deductions for other items such as:

Item 604 - I-3 Median Inlet	20 Lin Ft. [6 Meters].
Item 625 - Light Pole Foundation or Pullbox	2.5 Lin. Ft. [1 Meter].
Item 630 - Overhead Sign Support Foundation	10 Lin. Ft. [3 Meters].
Item 630 - Barrier Wall Assembly	10 Lin. Ft. [3 Meters].

TRANSITIONS: Linear transitions between the different types of barrier detailed on this Standard Drawing shall occur between contraction joints spaced no closer than 10' [3 m].

RACEWAY: The contractor shall ensure that the electrical raceway is clear of internal obstructions. Cost of the 4" [100] polyvinyl chloride raceway and No. 10 AWG copper-clad or aluminum-clad wire if needed for future installation of circuits shall be included in the unit cost per Linear Foot [Meter] for Item 622 - Concrete Barrier, Type ____ .

STATION MARKING: The Station marking shall be impressed in the "green" concrete on both sides at the top of the barrier if specified in the plans. The cost shall be incidental to the unit cost per Linear Foot [Meter] bid for Item 622 - Concrete Barrier, Type ____ .

REFLECTORIZATION: Barrier reflectorization shall be installed in accordance with CMS 626.

LEGEND

1. 1" [25] radius or ¾" [19] chamfer.
2. Permissible 10" [250] radius.
3. Permissible 1" [25] radius.
4. #8 [#25M] epoxy coated Deformed Steel Bars, 1'-0" [305] long, spaced 4'-0" [1220] between successive Bars on a staggered pattern except in Type D. Omit Dowels when the top is constructed integrally with the Base.

All metric dimensions (in brackets []) are in millimeters unless otherwise noted.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

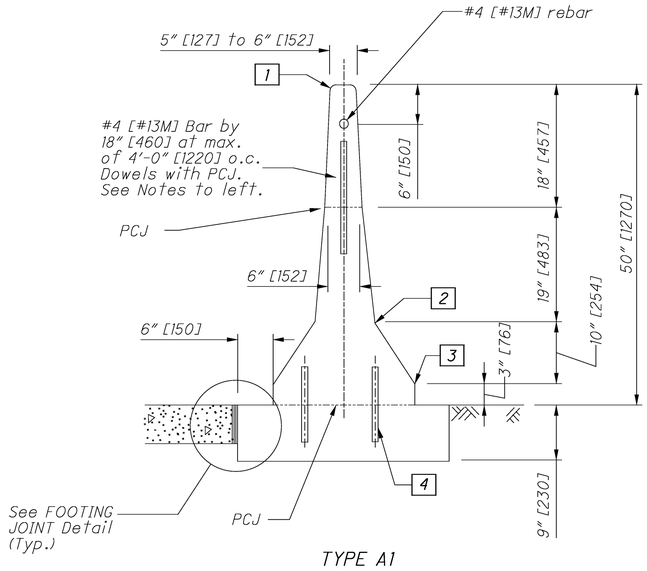
NEW JERSEY SHAPE CONCRETE BARRIER

HAM-50-19.03

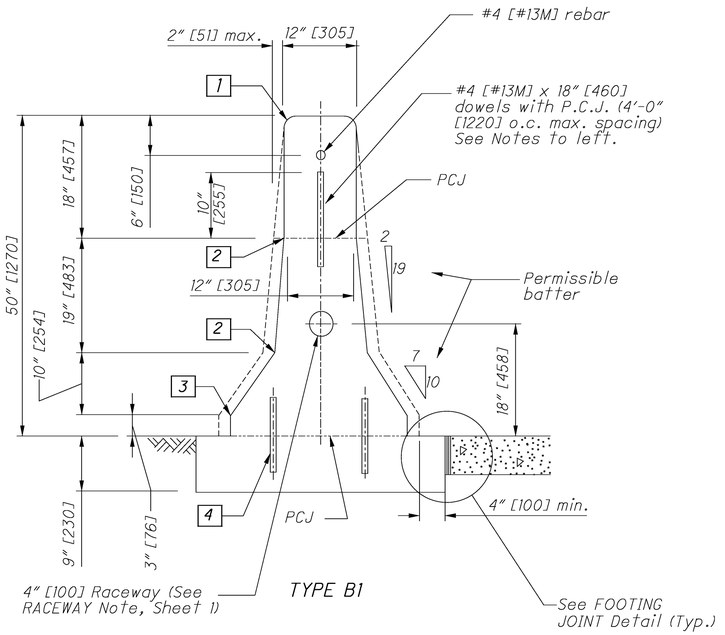
1 / 2

91
442

G:\CN06\0011\Road\sheets\75736GM001.dgn 11/9/2010 12:31:37 PM jmlangos



TYPE A1

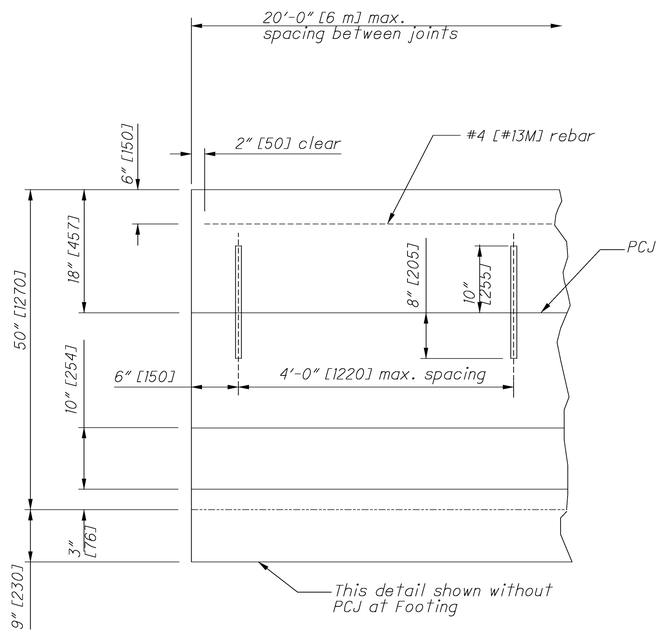


TYPE B1

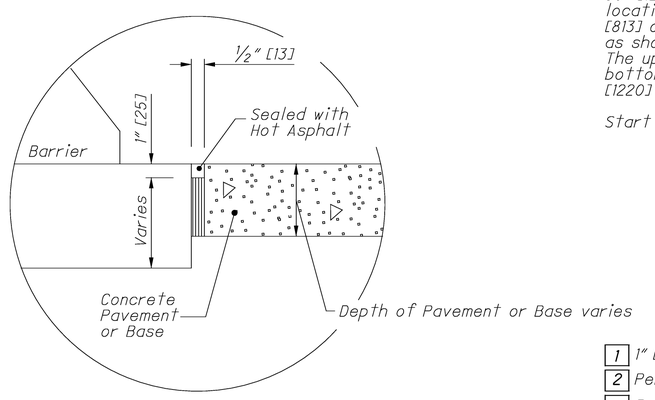
50" [1270-mm] BARRIERS - TYPICAL SECTIONS

See Type A and Type B Normal Section Details (Sheet 1) for dimensions that are not shown.

All metric dimensions (in brackets []) are in millimeters unless otherwise noted.



50" [1270-mm] BARRIER
BARRIER ELEVATION



FOOTING JOINT DETAIL
See FOOTING NOTE on Sheet 1.

NOTES

50" [1270-mm] BARRIER: High barrier shall be built in locations specified in the plans. Construct the lower 32" [813] of the barrier base using the same dimensions as as shown in the corresponding Normal Section on Sheet 1. The upper 18" [457] may be constructed integrally with the bottom, or separately with #4 [#13M] rebar dowels at 4'-0" [1220] maximum spacing.

Start and end dowels 6" [150] from barrier contraction joints.

LEGEND

1. *1" [25] radius or 3/4" [19] chamfer.*
2. *Permissible 10" [250] radius.*
3. *Permissible 1" [25] radius.*
4. *#8 [#25M] epoxy coated deformed Steel Bars, 1'-0" [305] long, spaced 4'-0" [1220] between successive Bars on a staggered pattern except in Type D. Omit Dowels when the top is constructed integrally with the Base.*

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

PLAN INSERT SHEET

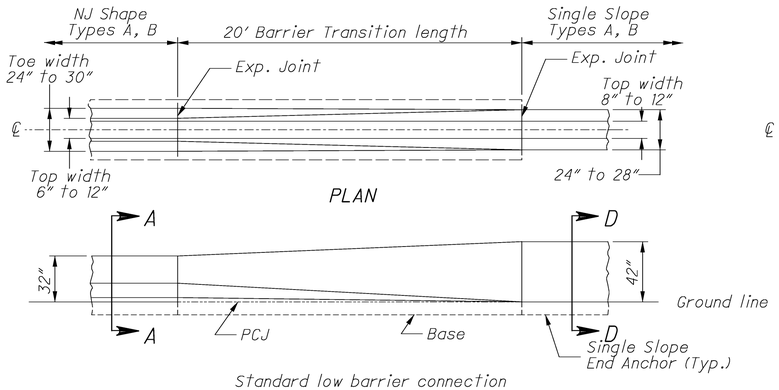
NEW JERSEY SHAPE CONCRETE BARRIER

HAM-50-19.03

2 / 2

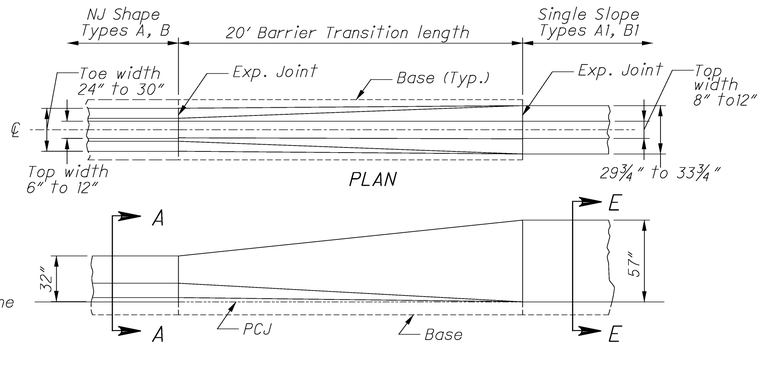
92
442

G:\CN06\0011\Road\sheets\75736GM001.dgn 11/9/2010 12:31:36 PM jmlangos



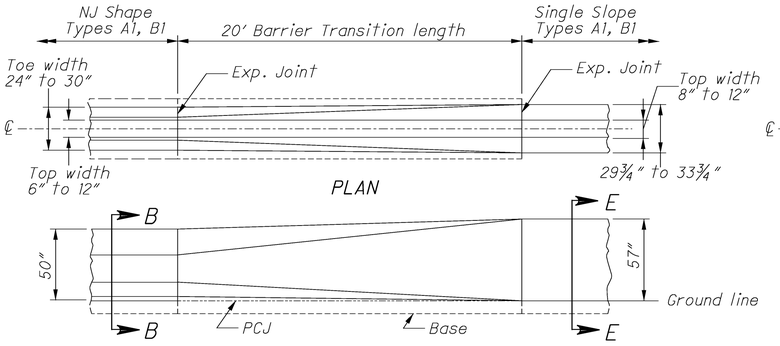
Standard low barrier connection

ELEVATION



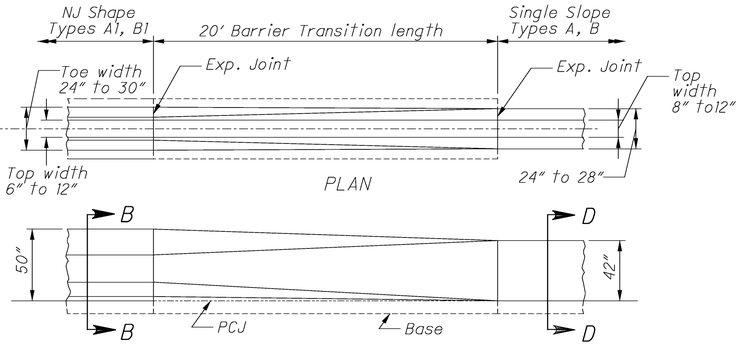
Atypical use

ELEVATION



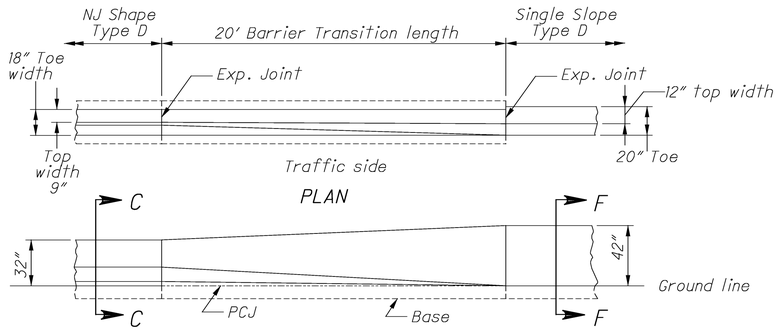
Standard tall barrier connection

ELEVATION



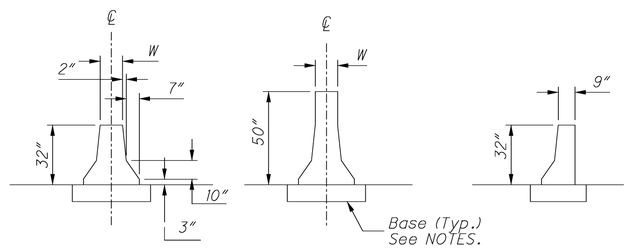
Atypical use

ELEVATION



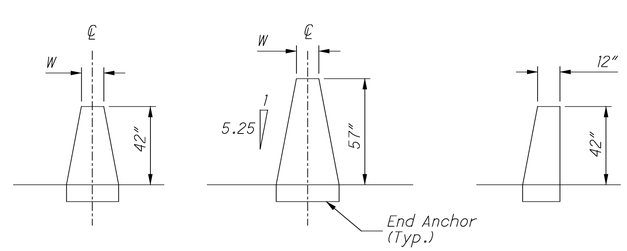
Standard Roadside barrier connection

ELEVATION



NJ SHAPE SECTIONS

See Plan Insert sheets for specific NJ Shape Concrete barrier details.



SINGLE SLOPE SECTIONS

See SCD RM-4.3 and RM-4.5 for specific Single Slope concrete barrier details.

NOTES

GENERAL: This insert details the Barrier Transition, to connect existing NJ Concrete Barrier (safety shape) to a new run of Single Slope Concrete Barrier at locations shown on the plans. For NJ barrier shape and other details see the respective plan insert sheets. For Single Slope barrier details, see SCD RM-4.3 (RM-4.5 for Type D).

ADJACENT CONCRETE BARRIER RUNS: Remove any tapered end sections, Impact attenuators, or other guardrail hardware from existing barrier end. The barrier to barrier transition is not intended to be used at transition sections (those shown on SCD RM-4.4), Inlets, or on Type C or C1 Barrier. If proposed adjacent single slope barrier is Type A or A1, the Barrier Transiton should contain horizontal reinforcing steel similiar to that required in the respective single slope barrier. Reinforcement is not shown and should be detailed separately. The adjacent single slope end should be terminated with a reinforced End Anchor as detailed on the SCDs.

BARRIER FACE TRANSITION: To prevent vehicle snagging, a smooth transition from the safety shape face to the single slope face is made over a 20' length. The actual shape of the Transition is dependent on both the adjacent NJ barrier and the single slope barrier Types, as detailed on the plans. The contractor and Engineer will agree on a construction method to ensure a smooth barrier face.

MATERIALS: Materials are same for those shown on RM-4.3 and RM-4.5, except that cast-in-place is the only acceptable method. Edges may be chamfered or radiused as shown on those drawings.

CONCRETE BASE: Construct base as shown on the NJ shape insert sheets, including the methods detailing the footing joint, Permissible Construction Joint (PCJ), and Dowelling requirements. The width of the base matches the existing NJ barrier.

JOINTS: Construct joints as shown on respective barrier drawings.

RACEWAYS: When specified, place raceway(s) to match raceway elevation in adjoining segments. Place to obtain maximum concrete cover.

METRIC UNITS: Refer to respective barrier drawings or inserts for metric dimensions.

PAYMENT: This Barrier Transiton shall include all material and labor needed to construct this 20' section, including any raceways, reinforcing steel, dowels and other necessary incidentals. Payment shall be made at the unit price for Item 622 - Barrier Transition, Each.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 10-20-06 | CHECKED

NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

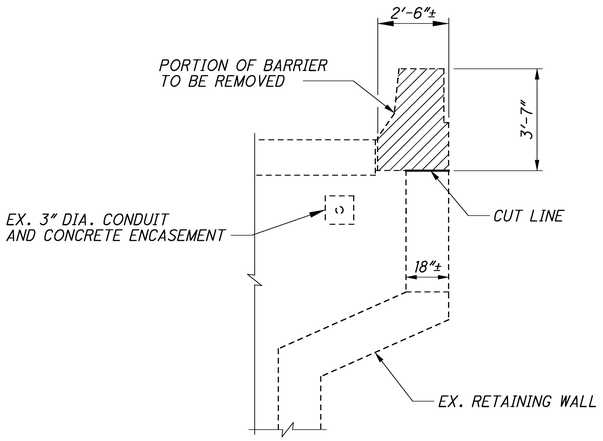
PLAN INSERT SHEET

HAM-50-19.03

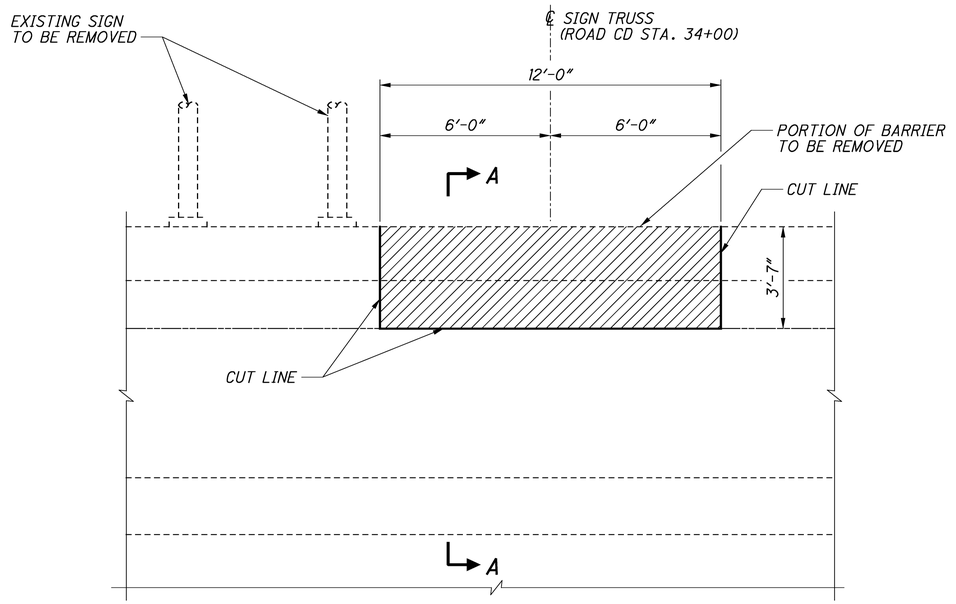
1 / 1

93
442

G:\CN06\0011\Road\sheets\75736GM003.dgn 11/10/2010 7:48:43 AM jmlangos

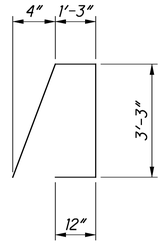


SECTION A-A
(REMOVAL)

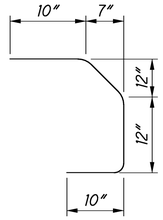


ELEVATION
(REMOVAL)

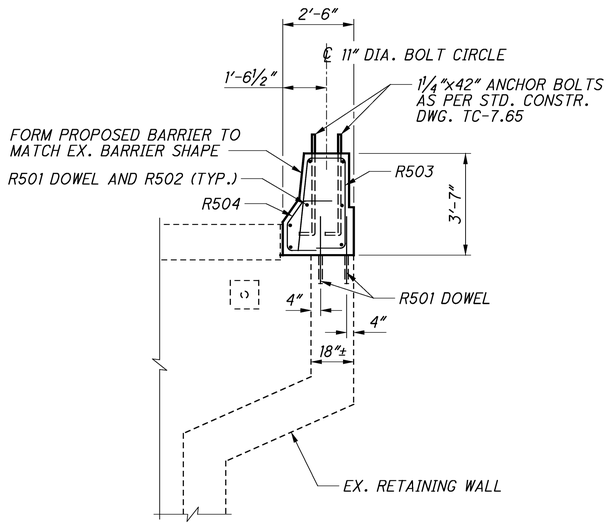
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE
REINFORCING STEEL LIST				
R501	32	2'-6"	83	STR.
R502	7	11'-8"	85	STR.
R503	9	8'-6"	80	BENT
R504	9	3'-9"	35	BENT



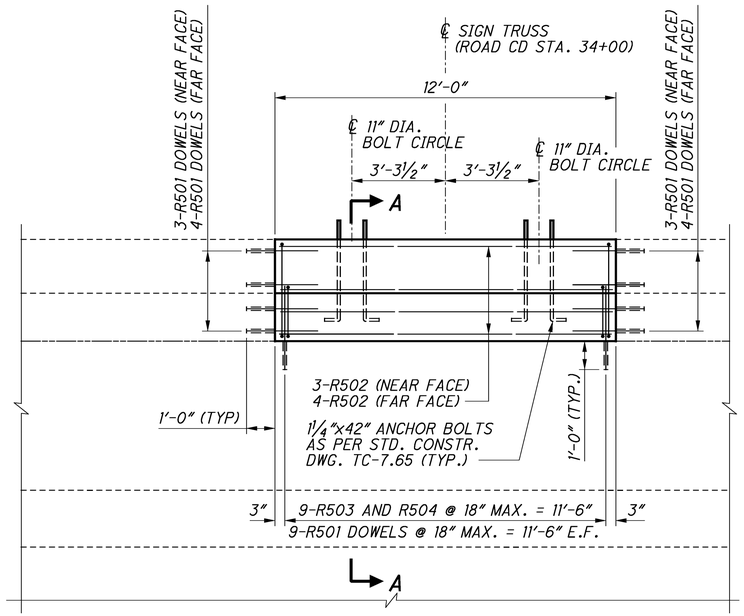
R503



R504



SECTION A-A
(PROPOSED)



ELEVATION
(PROPOSED)

NOTES:

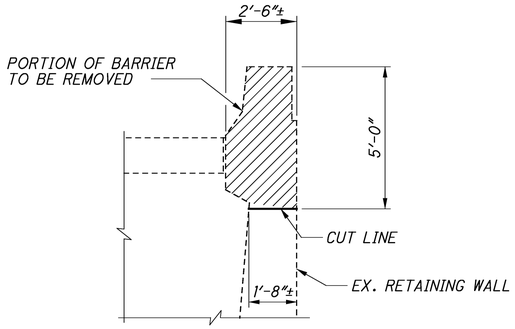
1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED AND THE FIRST TWO NUMBERS WHERE THREE NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

CALCULATED | CHECKED

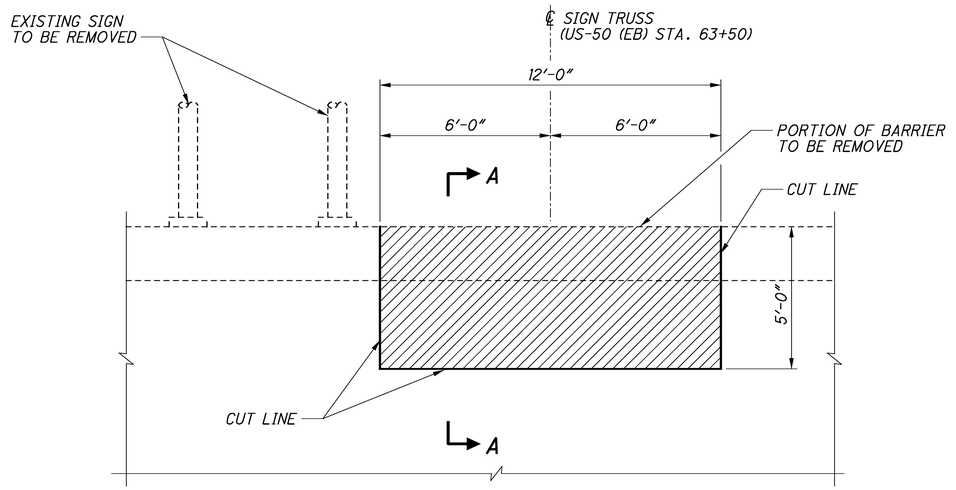
BARRIER MOUNTED SIGN SUPPORT DETAIL

HAM-50-19.03

G:\CN06\0011\Road\sheets\75736GM004.dgn 11/9/2010 12:31:41 PM jmlangos

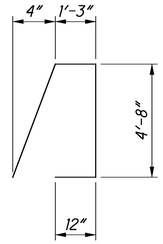


SECTION A-A
(REMOVAL)

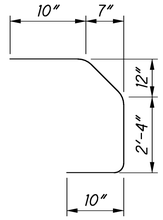


ELEVATION
(REMOVAL)

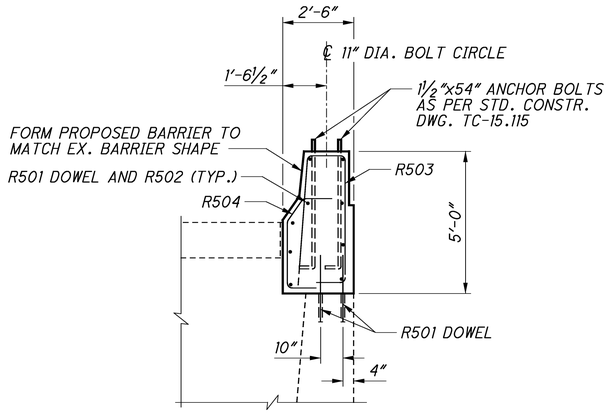
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE
REINFORCING STEEL LIST				
R501	36	2'-6"	94	STR.
R502	9	11'-8"	110	STR.
R503	9	11"-4"	106	BENT
R504	9	5'-1"	48	BENT
		TOTAL	358	



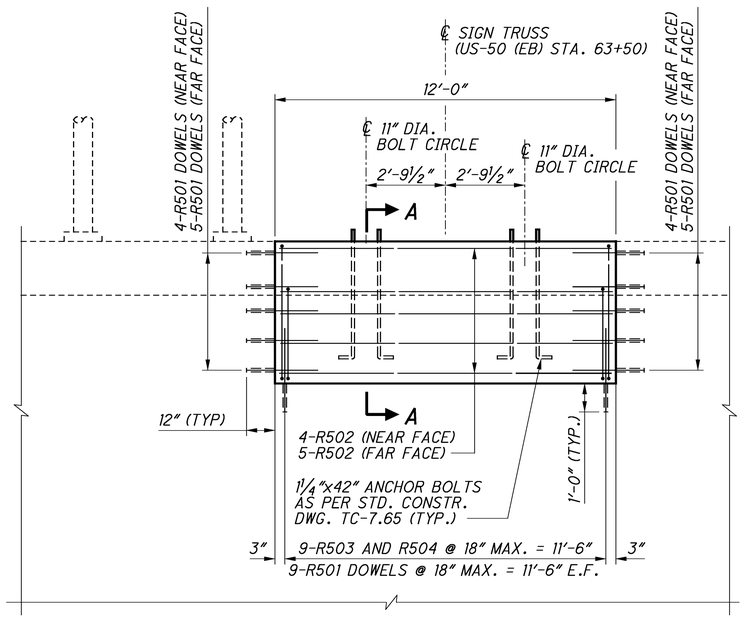
R503



R504



SECTION A-A
(PROPOSED)



ELEVATION
(PROPOSED)

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED AND THE FIRST TWO NUMBERS WHERE THREE NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

CALCULATED | CHECKED

BARRIER MOUNTED SIGN SUPPORT DETAIL

HAM-50-19.03

G:\CN06\0011\Road\sheets\75736GM005.dgn 11/9/2010 12:31:43 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RPM, WHITE	621 RPM, YELLOW	644 LANE LINE	644 EDGE LINE (White)	644 EDGE LINE (Yellow)	644 CHANNELIZING LINE	644 TRANSVERSE/ DIAGONAL LINE	646 LANE LINE	646 EDGE LINE (White)	646 EDGE LINE (Yellow)	646 CHANNELIZING LINE	646 TRANSVERSE/ DIAGONAL LINE	646 CENTER LINE
						EA	EA	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	FT	FT	MILE
104 , 105	EW-1	US-50 EB/RAMP B	2+53	18+24	RT	20			0.094					0.203				
104 , 105	EW-2	US-50 WB/RAMP A	2+53	22+83	LT	26			0.180					0.205				
105 , 106	EW-3	RAMP B/CDR	18+24	34+53	RT	21			0.215					0.094				
105 , 106	EW-4	RAMP A/RAMP FA	22+83	42+14	LT	25			0.181					0.185				
106 , 108	EW-5	US-50 WB	35+24	54+39	LT	24			0.197					0.166				
106 , 107	EW-6	US-50 EB	34+53	40+65	RT	8			0.116									
107 , 108	EW-7	US-50 EB	40+65	54+13	RT	17			0.098					0.157				
108 , 109	EW-8	US-50 EB	54+13	63+52	RT	12			0.129					0.049				
108 , 109	EW-9	US-50 WB	54+39	66+19	LT	15			0.170					0.053				
109	EW-10	US-50 WB	63+52	66+18	RT	4			0.050									
110	EW-11	FREEMAN AVENUE	18+68	23+04	LT									0.082				
110	EW-12	FREEMAN AVENUE	18+68	25+82	RT									0.135				
110	EW-13	RAMP FB	29+92	39+00	C	12			0.172									
110	EW-14	RAMP FC	39+00	45+90	C	9			0.131									
108 , 109	EW-15	RAMP LB	48+00	54+13	C	8			0.116									
107 , 108	EW-16	RAMP LA	50+50	54+39	C	5			0.074									
104 To 109	EY-1	US-50 EB	2+53	66+48	C		80			0.707					0.504			
104 To 109	EY-2	US-50 WB	2+53	64+98	RT		79			0.665					0.518			
106	EY-3	US-50 WB	35+24	37+38	RT		3			0.042								
109	EY-4	US-50 WB	64+98	66+19	LT		2			0.023								
110	EY-5	RAMP FB	30+50	37+40	LT		9			0.131								
110	EY-6	RAMP FC	39+60	45+50	LT		8			0.112								
110	EY-7	CD ROAD	34+53	36+90	LT		3			0.096								
108 , 109	EY-8	RAMP LB	48+00	54+13	LT		8			0.116								
108 , 109	EY-9	RAMP LA	50+50	54+39	LT		5			0.075								
110	CL-1	FREEMAN AVENUE	18+68	25+82	C													0.135
105	CH-1	US-50 EB	14+91	18+24	RT		9				333							
105	CH-2	US-50 EB	15+50	18+24	RT		7				294							
105	CH-3	US-50 WB	20+92	22+83	LT		5				191							
105	CH-4	US-50 WB	20+92	22+83	LT		5				191							
106	CH-5	US-50 WB	32+40	35+24	LT		8				285							
106	CH-6	US-50 WB	32+65	35+24	LT		7				259							
106	CH-7	US-50 EB	31+10	34+53	RT		9				256					87		
106	CH-8	US-50 EB	31+58	34+53	RT		8				208					87		
107	CH-9	US-50 EB	40+65	43+40	RT											275		
107	CH-10	US-50 EB	40+65	42+72	RT											207		
108	CH-11	US-50 WB	54+39	56+18	LT		5				179							
108	CH-12	US-50 WB	54+39	56+30	LT		5				191							
108	CH-13	US-50 EB	54+13	56+68	RT		7				255							
108	CH-14	US-50 EB	54+20	56+68	RT		7				248							
108 , 109	CH-15	US-50 EB	61+60	63+53	RT		5				192							
108 , 109	CH-16	US-50 EB	62+00	63+52	RT		4				152							
109	CH-17	US-50 WB	64+98	66+19	LT		4				121							
109	CH-18	US-50 WB	64+98	66+19	LT		4				121							
109	CH-19	US-50 EB	65+40	66+41	RT		3				202							
105	TL-1	US-50 EB	14+91	18+24	RT							41						
106	TL-2	US-50 EB	31+58	34+53	RT							42					41	
108	TL-3	US-50 WB	54+39	56+18	RT							35						
109	TL-4	US-50 EB	61+60	63+52	RT							58						
109	TL-5	US-50 EB	64+98	66+19	LT							11						
109	TL-6	US-50 EB	64+98	66+19	RT							9						
		SUBTOTAL				206	299		1.923	1.967				1.329	1.022			
TOTALS CARRIED TO SHEET 97						505			3.890		3678	196		2.351		656	41	0.135

CALCULATED JG CHECKED JE

PAVEMENT MARKING SUBSUMMARY

HAM-50-19.03

96
442

G:\CN06\0011\Road\Sheets\75736TS001.dgn 11/9/2010 12:31:44 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RPM, WHITE	621 RPM, YELLOW	644 LANE LINE	644 EDGE LINE (White)	644 EDGE LINE (Yellow)	644 CHANNELIZING LINE	644 TRANSVERSE/ DIAGONAL LINE	646 LANE LINE	646 EDGE LINE (White)	646 EDGE LINE (Yellow)	646 CHANNELIZING LINE	646 TRANSVERSE/ DIAGONAL LINE	646 CENTER LINE			
						EA	EA	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	FT	FT	MILE			
104 To 110	LL-1	US-50 EB	2+53	66+48	RT	54		0.707					0.504								
104 To 106	LL-2	US-50 EB	2+53	31+00	RT	24		0.271					0.268								
104 To 105	LL-3	US-50 EB	2+53	14+91	RT	11		0.031					0.203								
104 To 106	LL-4	US-50 WB	2+53	66+19	LT	54		0.688					0.518								
104 To 106	LL-5	US-50 WB	2+53	66+19	LT	54		0.688					0.518								
105	LL-6	US-50 WB	20+23	20+92	LT	1		0.013													
107	LL-7	US-50 EB	43+40	61+60	RT	16		0.191					0.153								
108	LL-8	US-50 EB	56+68	63+52	RT	6		0.081					0.049								
110	LL-9	US-50 WB	56+18	66+19	LT	9		0.137					0.053								
110	LL-10	FREEMAN AVENUE	18+68	25+82	LT								0.135								
110	LL-11	FREEMAN AVENUE	18+68	25+82	RT								0.135								
110	LL-12	CD ROAD	37+40	39+60	C	2		0.042													
		SUBTOTAL SHEET	96			505			1.923	1.967	3678	196		1.329	1.022	656	41	0.135			
		SUBTOTAL THIS SHEET				231	2.849						2.536								
		TOTAL				736	2.849	1.923	1.967	3678	196		2.536	1.329	1.022	656	41	0.135			
TOTALS CARRIED TO GENERAL SUMMARY						750	2.9	4.0		3700	200		2.6	2.5		660	50	0.2			

CALCULATED JG CHECKED JR

PAVEMENT MARKING SUBSUMMARY

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736TS002.dgn 11/9/2010 12:31:46 PM jmlangos

SIGNING SUBSUMMARY

CALCULATED JG CHECKED JR

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 SIGN, FLAT SHEET SQ FT	SIGN, STREET NAME EACH		GROUND MOUNTED SUPPORT, No. 3 POST FT		REMOVAL OF GROUND MOUNTED SIGN & DISPOSAL EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT & DISPOSAL EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 1 EACH	REMOVAL OF STRUCTURE MOUNTED SIGN & DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN & DISPOSAL EACH	REMOVAL OF POLE MOUNTED SIGN & REERECTION EACH				
104	S-1	US-50 WB	10+60	L/R	R2-1-24 (2)	24"x30"	10.0							2	2						
105	S-2	US-50 EB	18+30	RT	E5-H1-72	24"x30"	5.0			12,12		1	2								
105	S-3	US-50 EB	19+35	RT	R2-1-36	36"x48"	12.0			14,14		1	2								
105	S-4	US-50 WB	20+10	LT	W3-5-36	36"x36"	9.0			14,14						1					
					W3-5-36	36"x36"	9.0			14,14						1					
105	S-5	US-50 WB	23+85	LT	W4-1R-36	36"x36"	9.0			14,14						2					
106	S-6	HARRIET STREET	30+55	LT	M3-4-24	24"x12"	2.0			17											
					M1-4-24-2	24"x24"	4.0					1	1								
					M1-5-30-3	24"x30"	5.0					1									
					D3-H6-48	-		1													
					M5-2L-21	21"x15"	2.2					1									
106	S-7	US-50 EB	33+90	RT	W4-1R-36	36"x36"	9.0			13,13						1					
106	S-8	US-50 EB	35+00	RT	E5-H1-72	24"x30"	5.0			12,12		1	2								
106	S-9	US-50 EB	36+80	RT	R1-2-36	36"x36"	9.0			14,14		1	2								
107	S-10	US-50 EB	38+50	RT	W4-3R-36	36"x36"	9.0			14,14		1				1					
107	S-11	US-50 EB	40+00	RT	W13-3-24	24"x30"	5.0			12,12		1	2								
107	S-12	US-50 EB	40+85	RT	E5-H1-72	24"x30"	5.0			12,12		1	2								
107	S-13	US-50 EB	41+00	RT	W1-6R-36	36"x18"	4.5			11,11		1	2								
108	S-14	US-50 WB	54+00	LT	E5-H1-72	24"x30"	5.0			12,12		1	2								
108	S-15	US-50 WB	53+90	LT	W13-2-24	24"x30"	5.0			12,12		1	2								
109	S-16	US-50 WB	62+95	LT	R2-1-24	24"x30"	5.0			12,12		1	2								
109	S-17	US-50 WB	65+35	LT	M3-1-30	30"x15"	3.2			18,18						1					
					M1-1-36	36"x36"	9.0									1					
					M7-4L	12"x9"	0.8									1					
					SPEC	-											1				
					SPEC	-											1				
109	S-18	US-50 EB	65+75	RT	W13-3-24	24"x30"	5.0			12,12						1					
109	S-19	US-50 EB	65+25	LT	W1-8R-18	18"x24"	3.0			12						1					
109	S-20	US-50 EB	67+37	RT	E5-H1-72	24"x30"	5.0			12,12		1	2								
106	S-21	US-50 WB	36+50	RT	W4-1R-36	36"x36"	9.0			14,14						1					
108	S-22	US-50 EB	53+00	RT	W4-1R-36	36"x36"	9.0			14,14											
SUBTOTAL							172.7	1	0	553	0	15	23	2	2	12	2				
TOTALS CARRIED TO GENERAL SUMMARY							175.0	1		560		15	23	2	2	12	2				

HAM-50-19.03

98
442

G:\CN06\0011\Road\Sheets\75736TS003.dgn 11/9/2010 12:31:47 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625	630												
							GROUND ROD	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 3	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 4	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 5	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 7	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10		SIGN, OVERHEAD EXTRUSHEET	RIGID OVERHEAD SIGN SUPPORT FOUNDATION		REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30			
							EACH	EACH	EACH	EACH	EACH	EACH		SQ FT	EACH		EACH	EACH			
105	C-1	US50 EB	23+00	RT		204 x 132	1					1		187	1						
107	C-2	US50 EB	38+60	RT		156 x 144	1				1			156	1						
108	C-3	RAMP LA	51+90	RT	E1-H3-180	180 x 96	1			1				120	1						
109	C-4	US50 WB	72+89	RT		132 x 72	1	1						66	1						
110	C-5	FREEMAN AVE	16+95	RT	E1-H3-180	180 x 96	1			1				120	1						
110	C-6	FREEMAN AVE	17+10	LT	E1-H3-156	156 x 84	1		1					91	1						
107	CR-1	US50 EB	38+50	RT		156 x 120											1	1			
108	CR-2	RAMP LA	52+00	RT		192 x 90											1	1			
110	CR-3	FREEMAN AVE	16+91	RT		156 x 90											1	1			
110	CR-4	FREEMAN AVE	17+14	LT		156 x 66											1	1			
TOTALS CARRIED TO GENERAL SUMMARY							6	1	1	2	1	1		740	6		4	4			

CALCULATED DL CHECKED JRE

CANTILEVER SIGNING SUBSUMMARY

HAM-50-19.30

G:\CN06\0011\Road\Sheets\75736TS004.dgn 11/9/2010 12:31:48 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625		630												
							GROUND ROD	OVERHEAD SIGN SUPPORT, MISC.: PLAN INSERT SHEET TYPE TC-10.48, DESIGN 4	OVERHEAD SIGN SUPPORT, MISC.: PLAN INSERT SHEET TYPE TC-10.48, DESIGN 4, USING EXISTING FOUNDATION	OVERHEAD SIGN SUPPORT, TYPE TC - 9.30, DESIGN 3	SIGN, OVERHEAD EXTRUSHEET	RIGID OVERHEAD SIGN SUPPORT FOUNDATION		REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, AS PER PLAN	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-10.48		REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-9.30			
							EACH	EACH	EACH	EACH	SQ FT	EACH		EACH	EACH	EACH		EACH			
107	BC-1A	RAMP LB	49+27	RT	E1-H3-156	156 x 84	1	1			91	1									
107	BC-1B	RAMP LB	49+27	RT	E1-H3-132	132 x 72					66										
110	BC-2A	FREEMAN AVE	22+63	LT	E1-H1-120	120 x 96	1		1		80										
110	BC-2B	FREEMAN AVE	22+63	LT	E1-H1-168	168 x 72					84										
110	CM-1	RAMP FC	44+47	LT	E1-H3-180	180 x 84	1			1	105	1									
107	BCR-1A	RAMP LB	49+32	RT		156 x 78								1		1					
107	BCR-1B	RAMP LB	49+32	RT		108 x 60								1							
110	BCR-2A	FREEMAN AVE	22+63	LT		156 x 84								1	1						
110	BCR-2B	FREEMAN AVE	22+63	LT		156 x 60								1							
110	CMR-1	RAMP FC	44+30	LT		120 x 78								1					1		
TOTALS CARRIED TO GENERAL SUMMARY							3	1	1	1	426	2		5	1	1		1			

CALCULATED DL
CHECKED JRE

BUTTERFLY, CANTILEVER & CENTER MOUNT SIGNING SUBSUMMARY

HAM-50-19.30

100
442

G:\CN06\0011\Road\Sheets\75736TS005.dgn 11/9/2010 12:31:49 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630														
							GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W12X30	BREAKAWAY STRUCTURAL BEAM CONNECTION	SIGN, GROUND MOUNTED EXTRUSHEET	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION		REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL							
							FT	EACH	EACH	SQ FT	EACH		EACH	EACH							
105	B-1	US50 WB	18+00	LT		252 x 84	18.5/19.2/19.4		3	147	3										
108	B-2	US50 EB	51+50	RT		204 x 144		29.2/34.6	2	204	2										
105	BR-1	US50 WB	17+97	LT		144 x 48							1	2							
108	BR-2	US50 EB	51+90	RT		168 x 114							1	3							
TOTALS CARRIED TO GENERAL SUMMARY							57	64	5	351	5		2	5							

CALCULATED DL
CHECKED JRE

BEAM MOUNTED SIGNING SUBSUMMARY

HAM-50-19.30

101
442

C:\CN06\0011\Road\Sheets\75736TS006.dgn 11/9/2010 12:31:50 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625 GROUND ROD EACH		630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6 EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8 SQ FT	OVERHEAD SIGN SUPPORT, TYPE TC-15.115 EACH	SIGN, OVERHEAD EXTRUSHEET SQ FT	RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65 EACH		REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115 EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115, AS PER PLAN EACH	
105	T-1A	US50 EB	16+13	LT/RT		204 x 108	2					153									
105	T-1B	US50 EB	16+13	LT/RT		180 x 72				1		90	2								
106	T-2	ROAD CD	34+00	LT/RT		204 x 132	2			1		187	1								
107	T-3A	RAMP FB	38+45	LT/RT		216 x 132	2		1			198	2								
107	T-3B	RAMP FB	38+45	LT/RT		216 x 132						198									
107	T-4	US50 EB	49+20	LT/RT		348 x 228	2			1			2			1					
108	T-5A	US50 EB	57+10	LT/RT		228 x 168	2					266	2								
108	T-5B	US50 EB	57+10	LT/RT		192 x 132				1		176									
108	T-5C	US50 EB	57+10	LT/RT		192 x 168						224									
108	T-6A	US50 WB	55+45	LT/RT		144 x 48	2			1		48	2								
108	T-6B	US50 WB	55+45	LT/RT		180 x 108						135									
109	T-7A	US50 EB	63+50	LT/RT		228 x 168	2					266									
109	T-7B	US50 EB	63+50	LT/RT		192 x 132					1	176									
109	T-7C	US50 EB	63+50	LT/RT		204 x 156						221									
109	T-8A	US50 EB	65+87	LT/RT		228 x 168						266									
109	T-8B	US50 EB	65+87	LT/RT		192 x 132						176									
109	T-9A	US50 WB	65+37	LT/RT		108 x 84	2					63									
109	T-9B	US50 WB	65+37	LT/RT		204 x 120				1		170	1	1							
109	T-9C	US50 WB	65+37	LT/RT		180 x 96						120									
109	T-10A	RAMP J	33+72	LT/RT		132 x 60	2		1			55	2								
109	T-10B	RAMP J	33+72	LT/RT		180 x 96						120									
104	TR-1A	US50 EB	10+47	LT/RT		192 x 72												1		1	
104	TR-1B	US50 EB	10+47	LT/RT		168 x 60												1			
104	TR-2A	US50 WB	10+08	LT/RT		192 x 96												1		1	
104	TR-2B	US50 WB	10+08	LT/RT		168 x 84												1			
105	TR-3A	US50 EB	16+00	LT/RT		192 x 72												1			
105	TR-3B	US50 EB	16+00	LT/RT		192 x 96												1		1	
105	TR-3C	US50 EB	16+00	LT/RT		168 x 60												1			
105	TR-4	US50 EB	24+09	LT/RT		168 x 84												1		1	
105	TR-5A	US50 WB	20+16	LT/RT		144 x 60												1			
105	TR-5B	US50 WB	20+16	LT/RT		168 x 84												1		1	
						48"X48"												1			
106	TR-6	US50 EB	28+80	RT		180 x 72											1				
106	TR-7A	US50 EB	33+90	LT/RT		168 x 96												1			
106	TR-7B	US50 EB	33+90	LT/RT		192 x 72												1		1	
107	TR-8A	ROAD CD	38+54	LT/RT		216 x 84												1			
107	TR-8B	ROAD CD	38+54	LT/RT		180 x 96												1		1	
107	TR-9	US50 EB	45+40	LT/RT		348 x 228															1
108	TR-10A	US50 EB	57+00	LT/RT		176 x 132												1			
108	TR-10B	US50 EB	57+00	LT/RT		168 x 120												1		1	
108	TR-10C	US50 EB	57+00	LT/RT		176 x 120												1			
TOTALS CARRIED TO GENERAL SUMMARY							18		2	6	1	3308	14	1		1	1	18	8	1	

CALCULATED DL CHECKED JRE

TRUSS OVERHEAD SIGNING SUBSUMMARY 1/2

HAM-50-19.30

C:\CN06\0011\Road\Sheets\75736TS007.dgn 11/9/2010 12:31:51 PM jmlangos

SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	625		630											
							GROUND ROD		OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	OVERHEAD SIGN SUPPORT, TYPE TC-15.115	SIGN, OVERHEAD EXTRUSHEET	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TC-7.65		REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115		
							EACH		EACH	SQ FT	EACH	SQ FT	EACH	EACH		EACH	EACH	EACH	EACH	
108	TR-11A	US50 WB	55+55	LT/RT		192 x 96												1		
108	TR-11B	US50 WB	55+55	LT/RT		168 x 84												1	1	
108	TR-11C	US50 WB	55+55	LT/RT		168 x 84												1		
109	TR-12A	US50 EB	63+40	LT/RT		192 x 132												1		
109	TR-12B	US50 EB	63+40	LT/RT		168 x 120												1	1	
109	TR-12C	US50 EB	63+40	LT/RT		192 x 120												1		
109	TR-13A	US50 EB	65+86	LT/RT		180 x 120												1		
109	TR-13B	US50 EB	65+86	LT/RT		120 x 108												1		
109	TR-14A	US50 WB	65+31	LT/RT		84 x 72												1		
109	TR-14B	US50 WB	65+31	LT/RT		192 x 108												1	1	
109	TR-14C	US50 WB	65+31	LT/RT		204 x 96												1		
109	TR-14D	US50 WB	65+31	LT/RT		168 x 96												1		
109	TR-15A	US50 WB	69+74	LT/RT														1		
109	TR-15B	US50 WB	69+74	LT/RT														1	1	
109	TR-15C	US50 WB	69+74	LT/RT														1		
109	TR-16A	RAMP J	33+82	LT/RT														1	1	
109	TR-16B	RAMP J	33+82	LT/RT														1		
TOTALS CARRIED TO GENERAL SUMMARY																		17	5	

CALCULATED DL CHECKED JRE

TRUSS OVERHEAD SIGNING SUBSUMMARY 2/2

HAM-50-19.30

103
442

G:\CN06\0011\Road\Sheets\75736TS008.dgn 11/9/2010 12:31:52 PM jmlangos

TRAFFIC CONTROL PLAN US 50
STA. 0+00.00 TO STA. 13+50.00

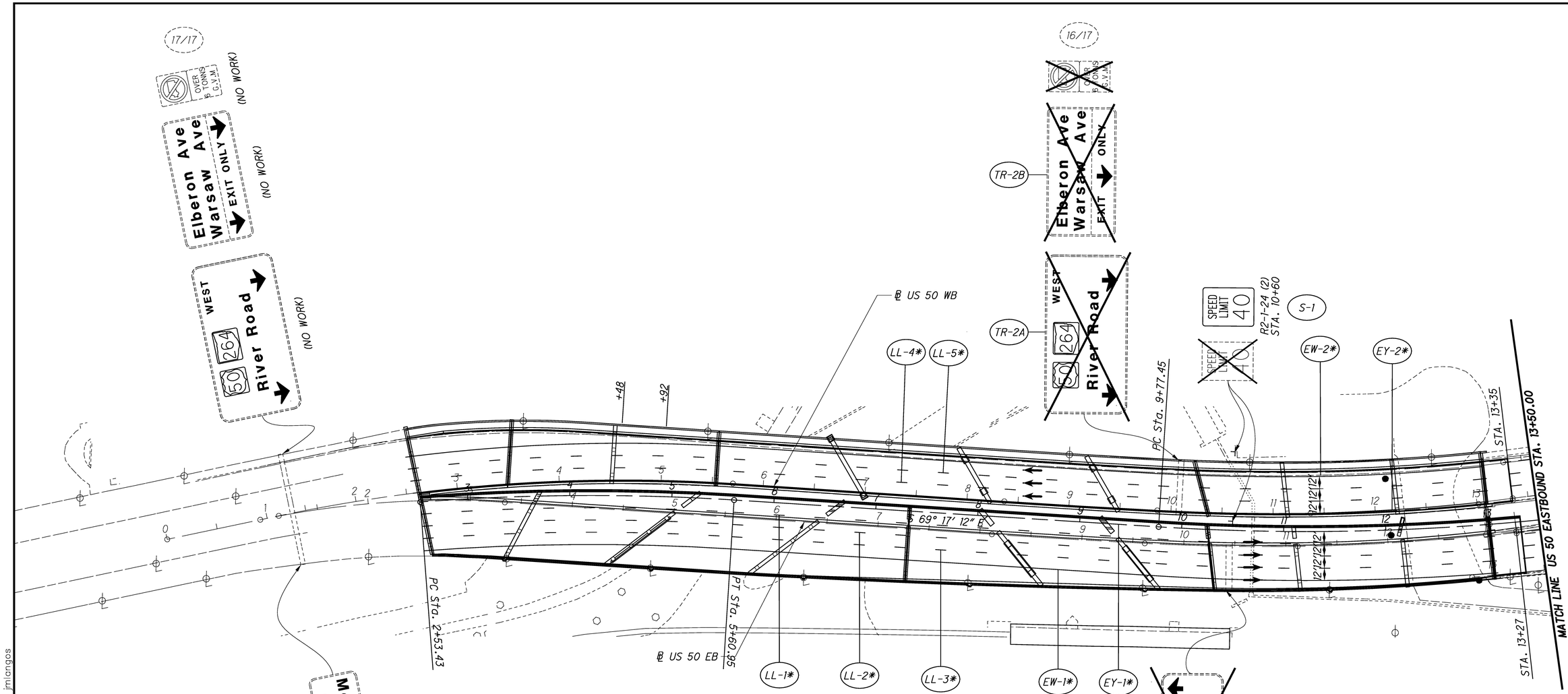
HAM-50-19.03

104
442

CALCULATED DL
CHECKED JRE

0 25 50 100
HORIZONTAL SCALE IN FEET

N



LEGEND

LL-1	ITEM 644 - LANE LINE
EW-1	ITEM 644 - EDGE LINE, (WHITE)
EY-1	ITEM 644 - EDGE LINE, (YELLOW)
CH-1	ITEM 644 - CHANNELIZING LINE
TL-1	ITEM 644 - TRANSVERSE LINE
LL-1*	ITEM 646 - LANE LINE
EW-1*	ITEM 646 - EDGE LINE, (WHITE)
EY-1*	ITEM 646 - EDGE LINE, (YELLOW)
CH-1*	ITEM 646 - CHANNELIZING LINE
TL-1*	ITEM 646 - TRANSVERSE LINE

EXISTING SIGN

EXISTING SIGN TO BE REMOVED

PROPOSED SIGN

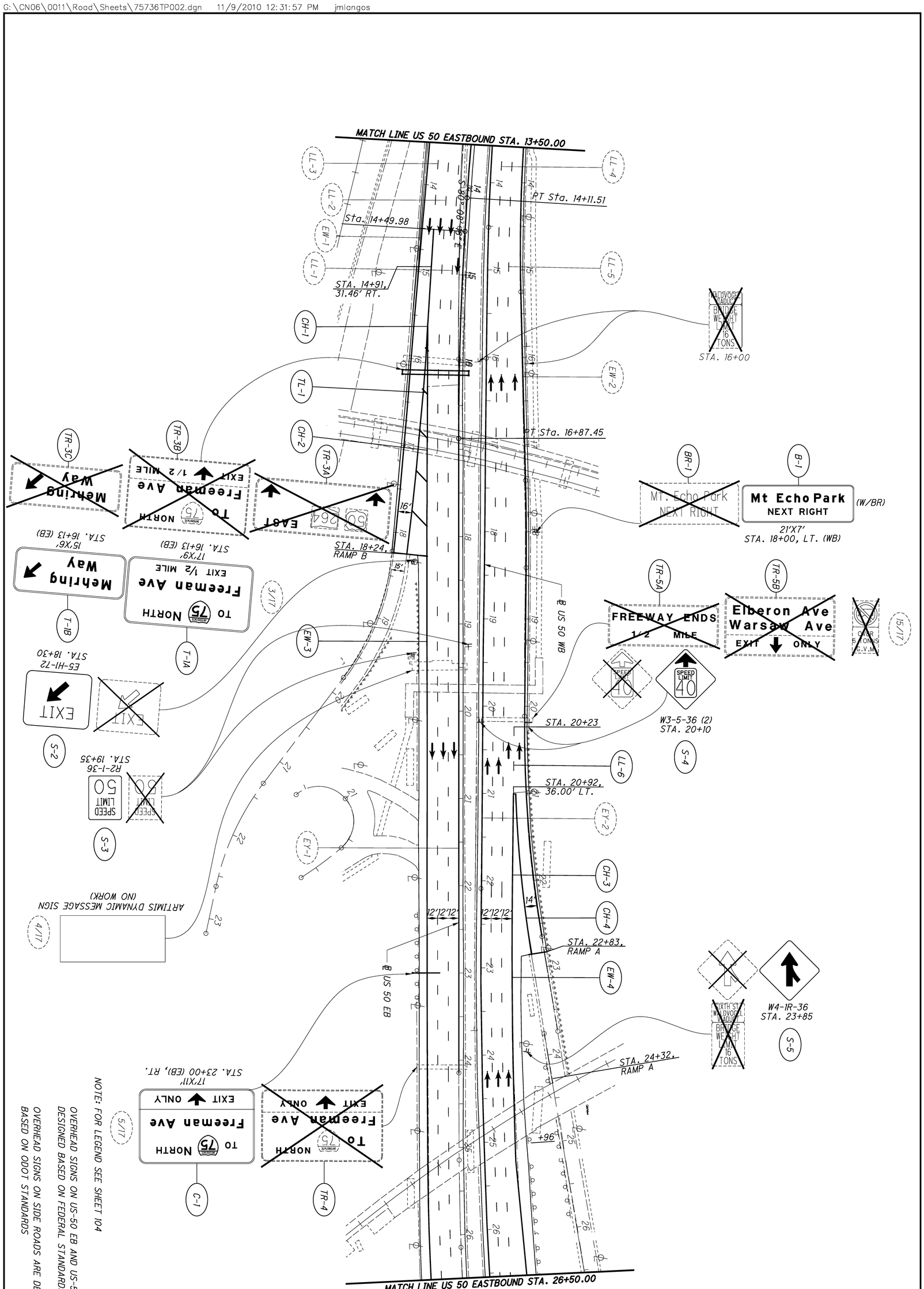
PROPOSED	EXISTING	
		OVERHEAD TRUSS SIGN SUPPORT
		OVERHEAD CANTILEVER SIGN SUPPORT
⊥	⊥	ONE POST SIGN, GROUND MOUNTED
⊥⊥	⊥⊥	TWO POST SIGN, GROUND MOUNTED
⊥⊥⊥	⊥⊥⊥	THREE POST SIGN, GROUND MOUNTED
⊥	⊥	SINGLE POST SIGN, BACK TO BACK, GROUND MOUNTED

NOTE: OVERHEAD SIGNS ON US-50 EB AND US-50 WB ARE DESIGNED BASED ON FEDERAL STANDARDS

OVERHEAD SIGNS ON SIDE ROADS ARE DESIGNED BASED ON ODOT STANDARDS

G:\CN06\0011\Road\Sheets\75736TP001.dgn 11/9/2010 12:31:55 PM jmlangos

G:\CN06\0011\Road\Sheets\75736TP002.dgn 11/9/2010 12:31:57 PM jmlangos



NOTE: FOR LEGEND SEE SHEET 104

OVERHEAD SIGNS ON US-50 EB AND US-50 WB ARE DESIGNED BASED ON FEDERAL STANDARDS

OVERHEAD SIGNS ON SIDE ROADS ARE DESIGNED BASED ON ODOT STANDARDS

105 442

HAM-50-19.03

TRAFFIC CONTROL PLAN US 50
STA. 13+50.00 TO STA. 26+50.00

CALCULATED DL
CHECKED JRE

0 25 50 100
HORIZONTAL SCALE IN FEET

TRAFFIC CONTROL PLAN US 50
STA. 26+50.00 TO STA. 38+00.00

HAM-50-19.03

CALCULATED DL
CHECKED JRE

HORIZONTAL SCALE IN FEET
0 25 50 100

S-21 W4-1R-36 STA. 36+50

℄ US 50 WB

MATCH LINE US 50 EASTBOUND STA. 26+50.00

STA. 27+30
STA. 27+56
STA. 29+50
STA. 29+71
STA. 30+78
STA. 30+85
STA. 31+58, 24.16' RT.
STA. 32+65, 37.13' LT.
STA. 33+57
STA. 33+66 CDR
STA. 34+53 CDR
STA. 35+24
STA. 37+38, RAMP FA

EW-4* EY-2* LL-4* LL-5* EY-2 EW-4 CH-5 CH-6 EW-5 EY-3
LL-4 LL-5 EW-3* LL-2* LL-1* EY-1 EY-1* LL-1 LL-2 CH-7* CH-8* TL-2* TL-2 CH-7 CH-8 EW-6 EY-7

RAMP FA
CD ROAD
RAMP FB
CARR ST.
HARRIET ST.

℄ US 50 EB

MATCH LINE US 50 EASTBOUND STA. 38+00.00

TR-6 WEST 50 264 River Road

S-6 STA. 30+55
WEST 50 264 RIVER ROAD
M3-4-24
M1-4-24-2
M1-5-30-3
D3-H6-48
M5-2L-21

TR-7A EAST 50 264

TR-7B TO 75 NORTH Freeman Ave EXIT ONLY

S-7 W4-1R-36 STA. 33+90

T-2 TO 75 NORTH Freeman Ave EXIT ONLY
17'X11' STA. 34+00 (ROAD CD), RT.

S-8 EXIT
E5-1H-72 STA. 35+00

S-9 YIELD
R1-2-36 STA. 36+80

6/17

NOTE: FOR LEGEND SEE SHEET 104

OVERHEAD SIGNS ON US-50 EB AND US-50 WB ARE DESIGNED BASED ON FEDERAL STANDARDS

OVERHEAD SIGNS ON SIDE ROADS ARE DESIGNED BASED ON ODOT STANDARDS

G:\CN06\0011\Road\Sheets\75736TP003.dgn 11/9/2010 12:31:59 PM jmlangos

NOTE: FOR LEGEND SEE SHEET 104

OVERHEAD SIGNS ON US-50 EB AND US-50 WB ARE DESIGNED BASED ON FEDERAL STANDARDS

OVERHEAD SIGNS ON SIDE ROADS ARE DESIGNED BASED ON ODOT STANDARDS

CALCULATED DL
CHECKED JRE

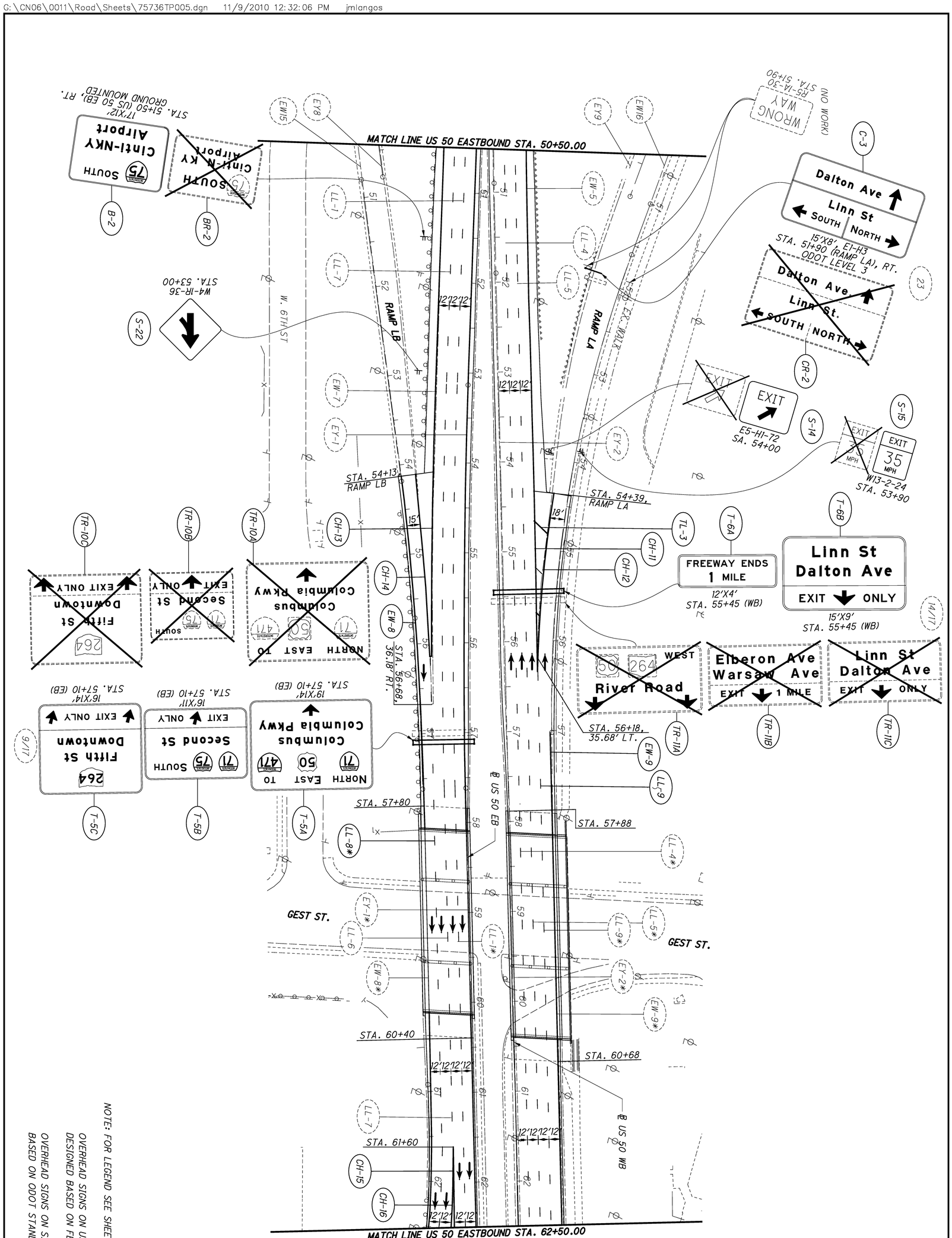
TRAFFIC CONTROL PLAN US 50
STA. 38+00.00 TO STA. 50+50.00

HAM-50-19.03

107
442

G:\CN06\0011\Road\Sheets\75736TP004.dgn 11/9/2010 12:32:03 PM jmlangos

G:\CN06\0011\Road\Sheets\75736TP005.dgn 11/9/2010 12:32:06 PM jmlangos

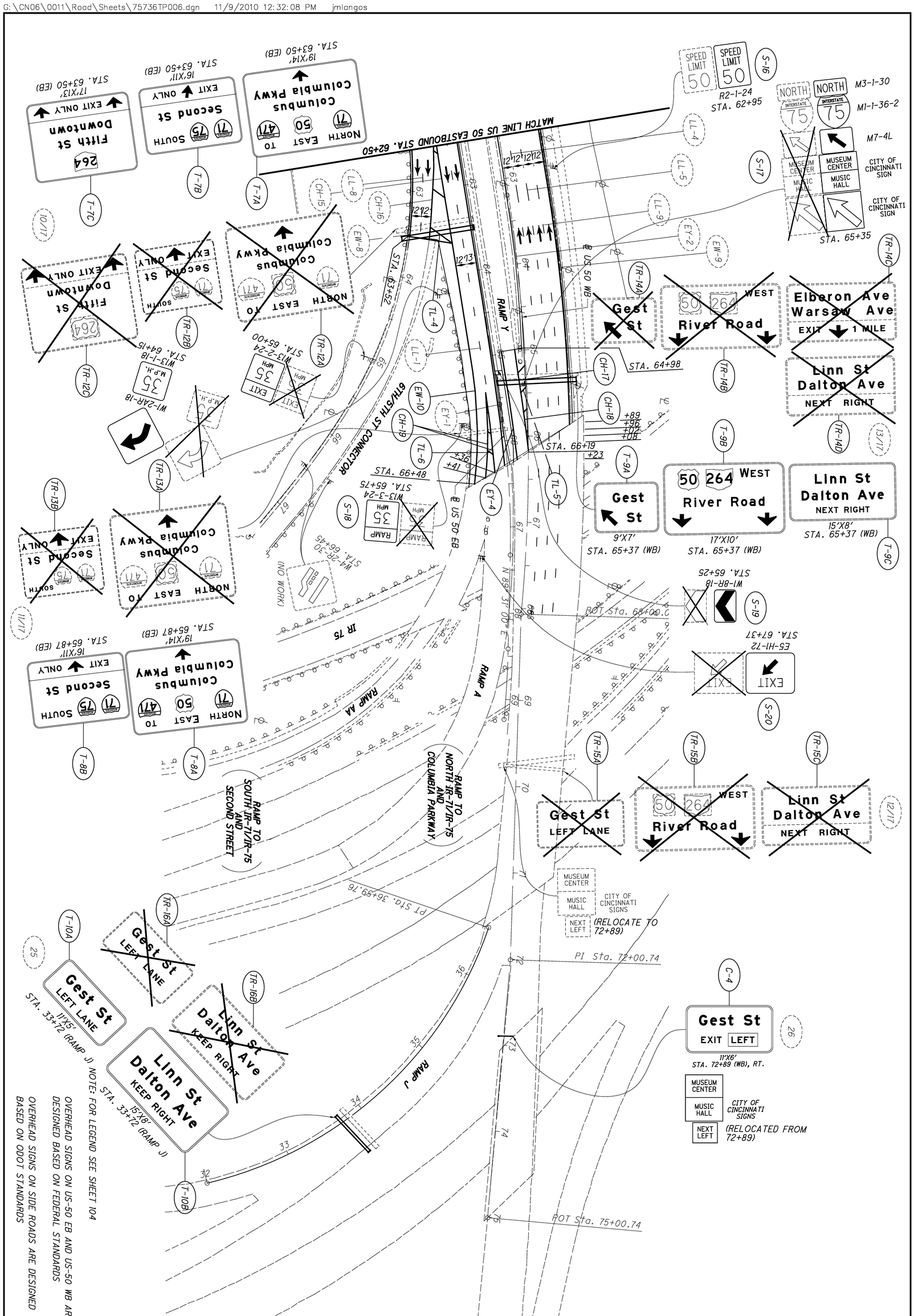


NOTE: FOR LEGEND SEE SHEET 104

OVERHEAD SIGNS ON US-50 EB AND US-50 WB ARE DESIGNED BASED ON FEDERAL STANDARDS

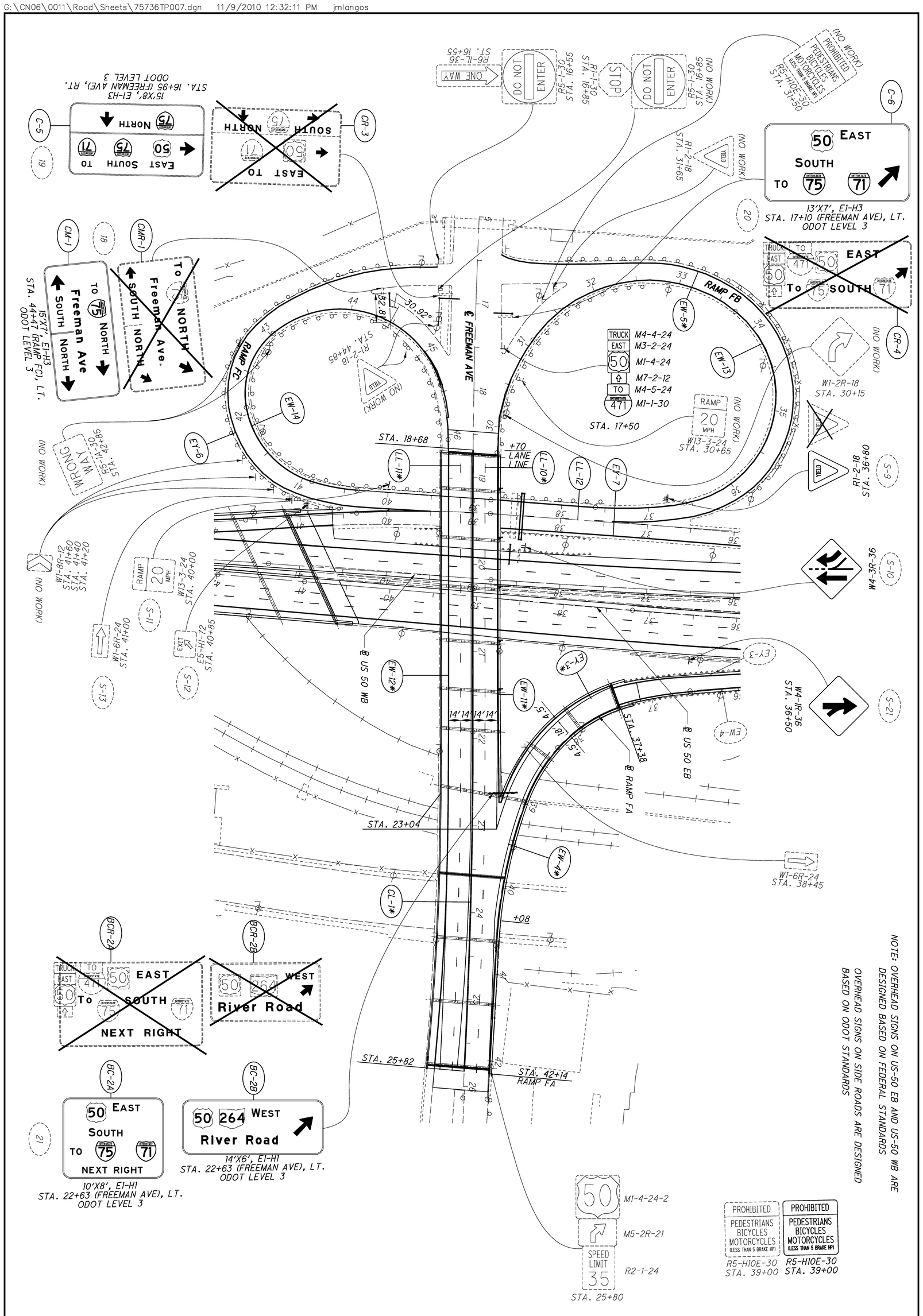
OVERHEAD SIGNS ON SIDE ROADS ARE DESIGNED BASED ON ODOT STANDARDS

108 / 442	HAM-50-19.03	TRAFFIC CONTROL PLAN US 50 STA. 50+50.00 TO STA. 62+50.00	CALCULATED DL CHECKED JRE	0 50 25 100 HORIZONTAL SCALE IN FEET



109 / 442	HAM-50-19.03	TRAFFIC CONTROL PLAN US 50 STA. 62+50.00 TO STA. 69+23.30	CALCULATED DL CHECKED JRE	0 50 25 100 HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736TP007.dgn 11/9/2010 12:32:11 PM jmlangos



110 / 442	HAM-50-19.03	TRAFFIC CONTROL PLAN FREEMAN AVENUE STA. 16+00.00 TO STA. 26+00.00	CALCULATED DL CHECKED JRE	0 50 25 100 HORIZONTAL SCALE IN FEET

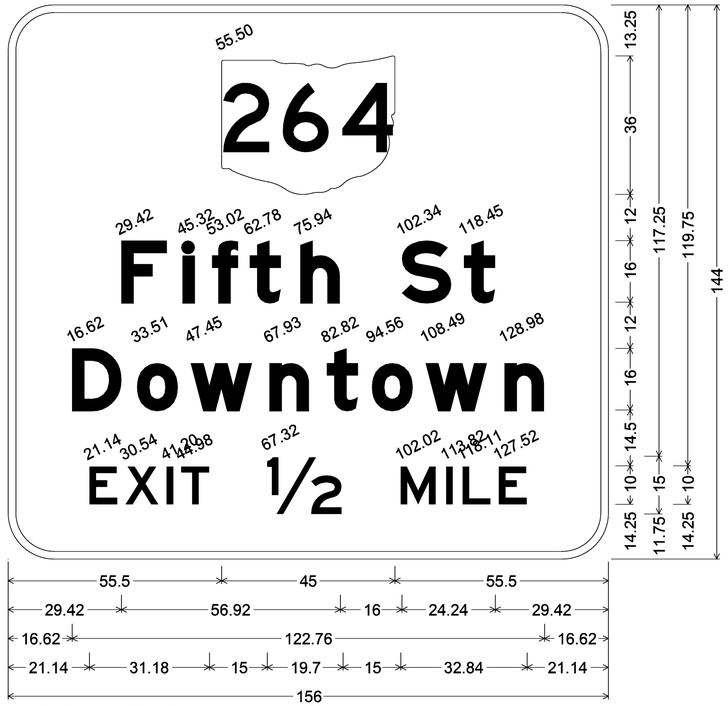
C-1 STA. 23+00, US50 EB

T-2 STA. 34+00, ROAD CD



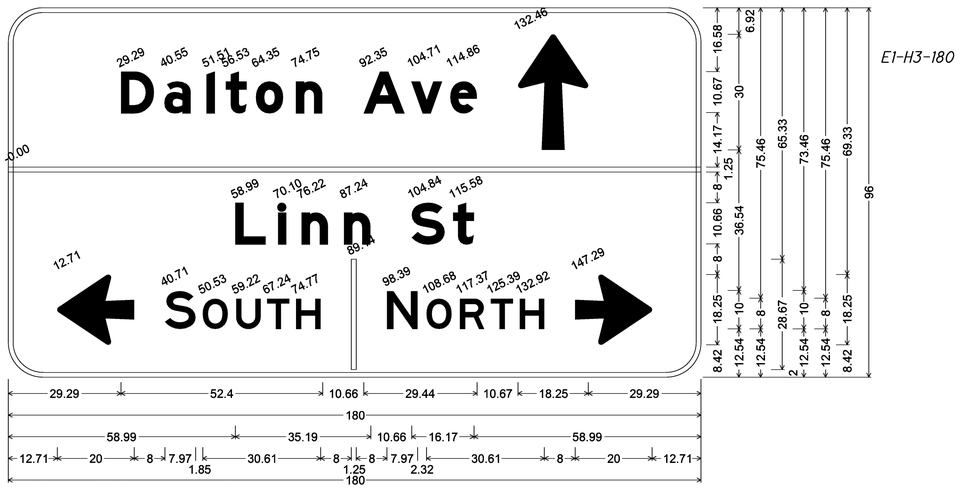
12.00" Radius, 2.00" Border, White on Green;
[TO] E; Interstate 75 M1-1; [NORTH] E; [Freeman Ave] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; Down Arrow C-1 - 22.00" 270°; [ONLY] E;

C-2 STA. 38+60, US50 EB



12.00" Radius, 2.00" Border, White on Green;
State Highway 264 M1-H5-36-3; [Fifth St] E Mod; [Downtown] E Mod;
[EXIT ½ MILE] E;

C-3 STA. 51+90, RAMP LA



E1-H3-180

9.00" Radius, 1.25" Border, White on Green;
[Dalton Ave] E Mod; Arrow A-3 - 30.00" 90°; [Linn St] E Mod; Arrow B-3 - 20.00" 180°; [SOUTH] E; [NORTH] E;
Arrow B-3 - 20.00" 0°;

C-4 STA. 72+89, US50 WB



9.00" Radius, 2.00" Border, White on Green;
[Gest St] E Mod; [EXIT] E; Rectangle Yellow;

ITEM 630, SIGN, OVERHEAD EXTRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG CHECKED JR

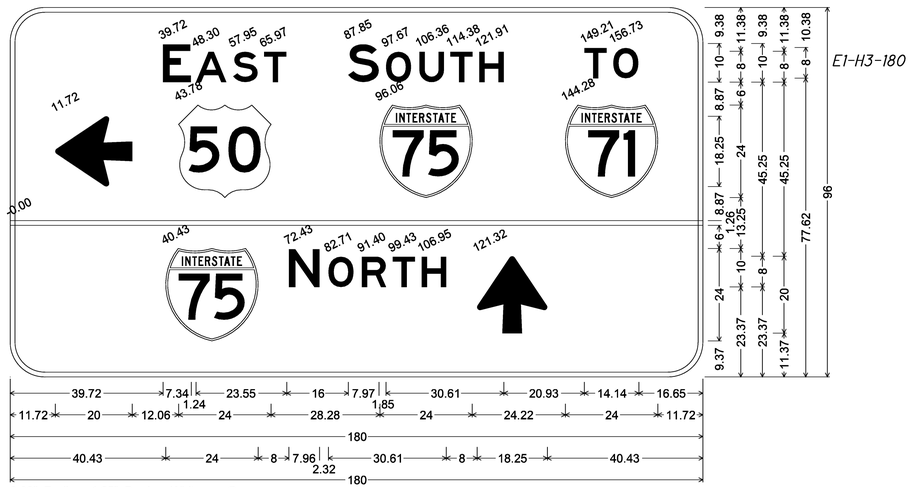
SIGN DETAILS

HAM-50-19.03

C:\CN06\0011\Road\Sheets\75736TD001.dgn 11/9/2010 12:32:13 PM jmlangos

C-5

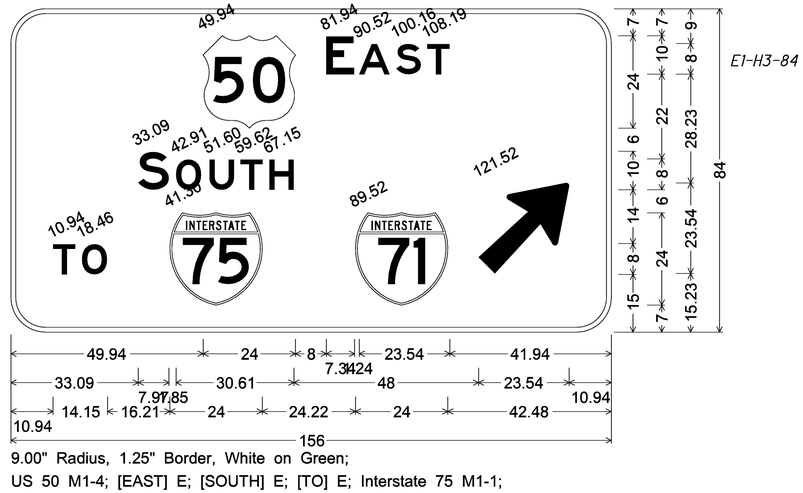
STA. 16+95, FREEMAN AVE



9.00" Radius, 1.25" Border, White on Green;
[EAST] E; [SOUTH] E; [TO] E; Arrow B-3 - 20.00" 180°; US 50 M1-4; Interstate 75 M1-1; Interstate 71 M1-1;
Interstate 75 M1-1; [NORTH] E; Arrow B-3 - 20.00" 90°;

C-6

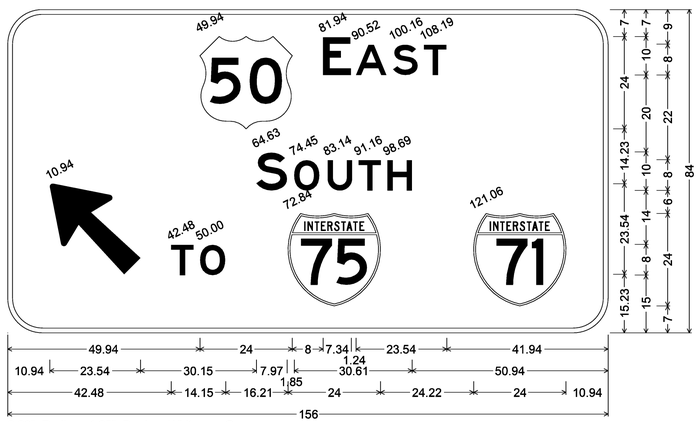
STA. 17+10, FREEMAN AVE



9.00" Radius, 1.25" Border, White on Green;
US 50 M1-4; [EAST] E; [SOUTH] E; [TO] E; Interstate 75 M1-1;
Interstate 71 M1-1; Arrow A-3 - 30.00" 45°;

BC-1A

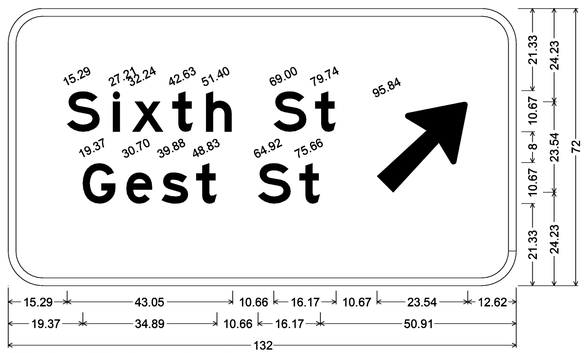
STA. 49+27, RAMP LB



9.00" Radius, 1.25" Border, White on Green;
US 50 M1-4; [EAST] E; Arrow A-3 - 30.00" 135°; [SOUTH] E; [TO] E; Interstate 75 M1-1;
Interstate 71 M1-1;

BC-1B

STA. 49+27, RAMP LB



9.00" Radius, 2.00" Border, White on Green;
[Sixth St] E; [Gest St] E; Arrow A-3 - 30.00" 45°;

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

SIGN DETAILS

HAM-50-19.03

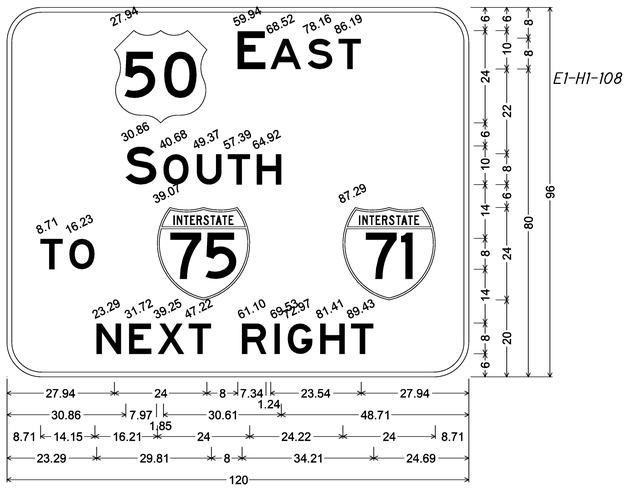
G:\CN06\0011\Road\Sheets\75736TD002.dgn 11/9/2010 12:32:16 PM jmlangos

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

BC-2A

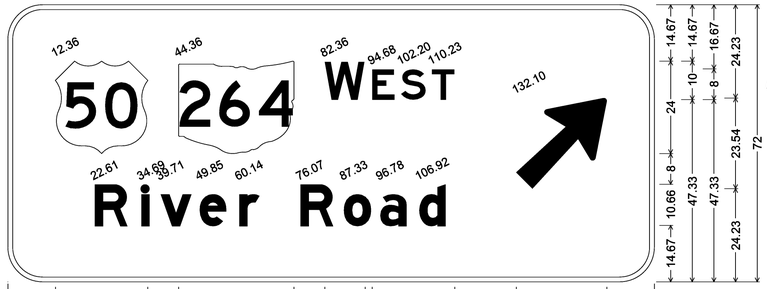
STA. 22+63, FREEMAN AVE



9.00" Radius, 1.25" Border, White on Green;
US 50 M1-4; [EAST] E; [SOUTH] E; [TO] E; Interstate 75 M1-1;
Interstate 71 M1-1; [NEXT RIGHT] E [ ] RomanS;

BC-2B

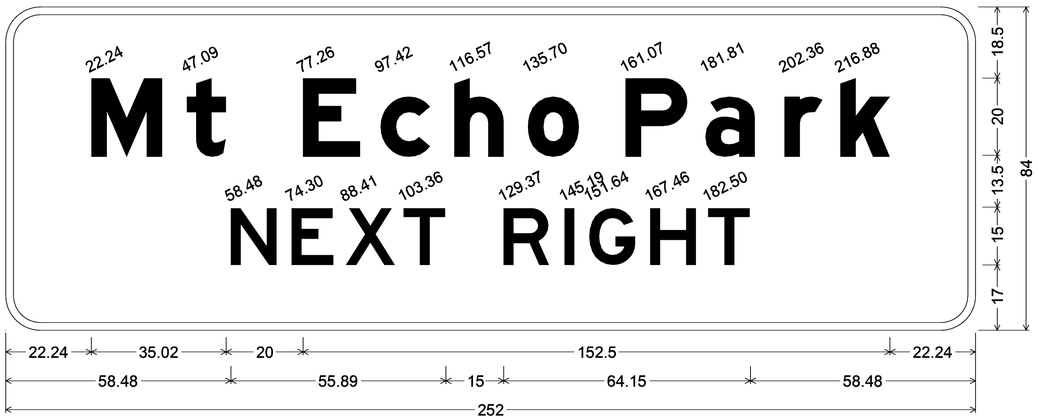
STA. 22+63, FREEMAN AVE



9.00" Radius, 1.25" Border, White on Green;
US 50 M1-4; State Highway 264 M1-H5-24-3; [WEST] E; [River Road] E Mod; Arrow A-3 - 30.00" 45°;

B-1

STA. 18+00, US50 WB



9.00" Radius, 2.00" Border, White on Brown;
[Mt EchoPark] E Mod; [NEXT RIGHT] E;

B-2

STA. 51+50, US50 EB



12.00" Radius, 2.00" Border, White on Green;
Interstate 75 M1-1; [SOUTH] E; [Cinti-NKY] E Mod; [Airport] E Mod;

CALCULATED JG
CHECKED JR

SIGN DETAILS

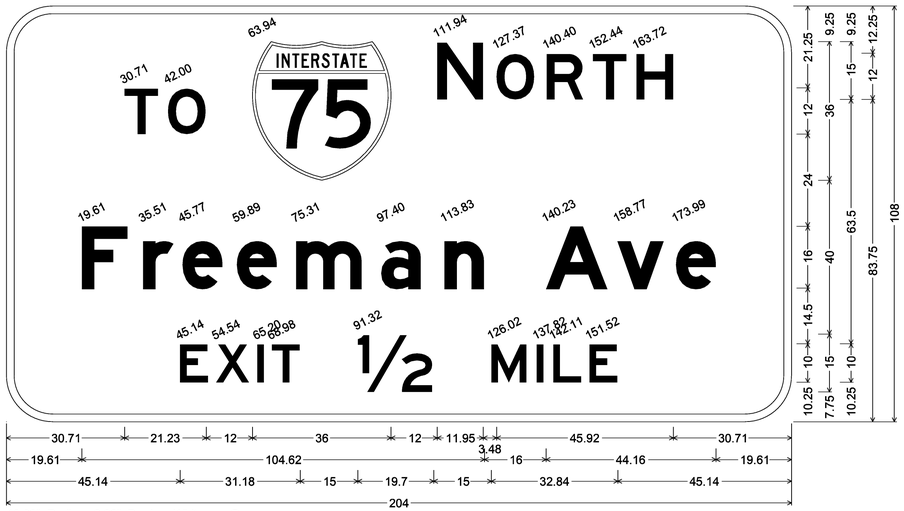
HAM-50-19.03

113
442

G:\CN06\0011\Road\Sheets\75736TD003.dgn 11/9/2010 12:32:18 PM jmlangos

T-1A

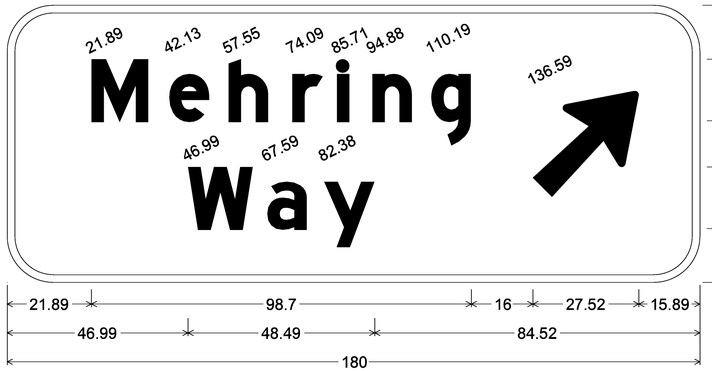
STA. 16+13, US50 EB



12.00" Radius, 2.00" Border, White on Green;
[TO] E; Interstate 75 M1-1; [NORTH] E; [Freeman Ave] E Mod; [EXIT ½ MILE] E;

T-1B

STA. 16+13, US50 EB



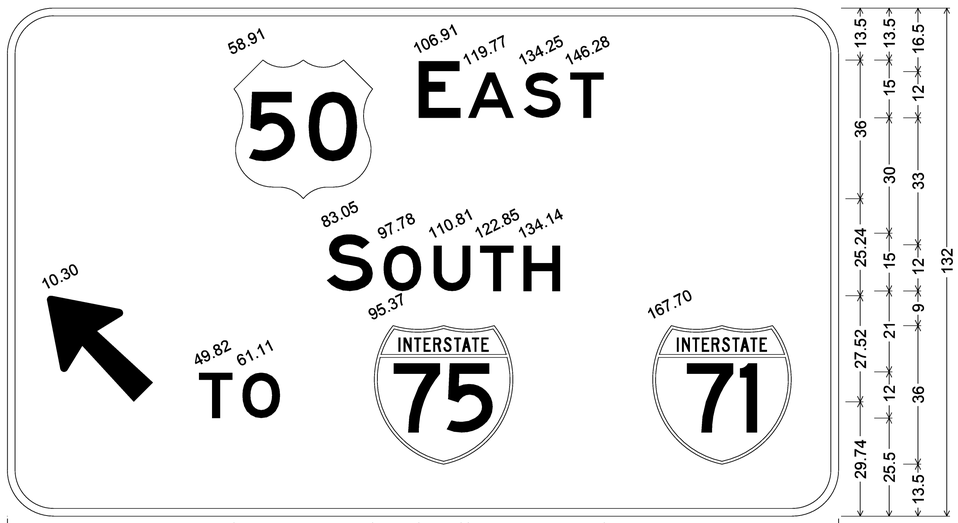
12.00" Radius, 2.00" Border, White on Green;
[Mehring] E Mod; [Way] E Mod; Arrow A-1 - 35.00" 45°;

ITEM 630, SIGN, OVERHEAD EXTRUSHEET AND, ITEM 630, SIGN, GROUND MOUNTED EXTRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

T-3A

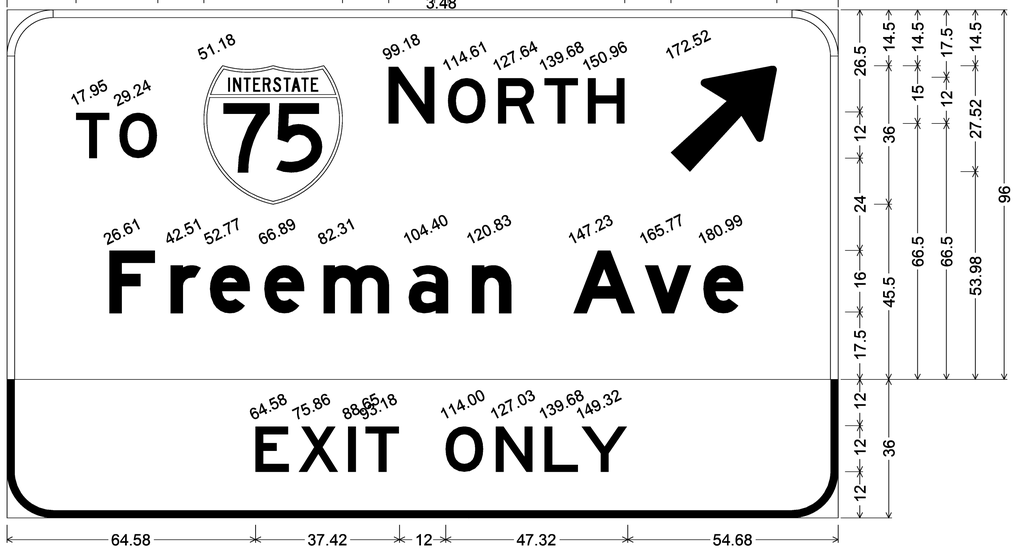
STA. 38+45, RAMP FB



12.00" Radius, 2.00" Border, White on Green;
US 50 M1-4; [EAST] E; Arrow A-1 - 35.00" 135°; [SOUTH] E; [TO] E; Interstate 75 M1-1;
Interstate 71 M1-1;

T-3B

STA. 38+45, RAMP FB



12.00" Radius, 2.00" Border, White on Green;
[TO] E; Interstate 75 M1-1; [NORTH] E; Arrow A-1 - 35.00" 45°; [Freeman Ave] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; [ONLY] E;

CALCULATED JG
CHECKED JR

SIGN DETAILS

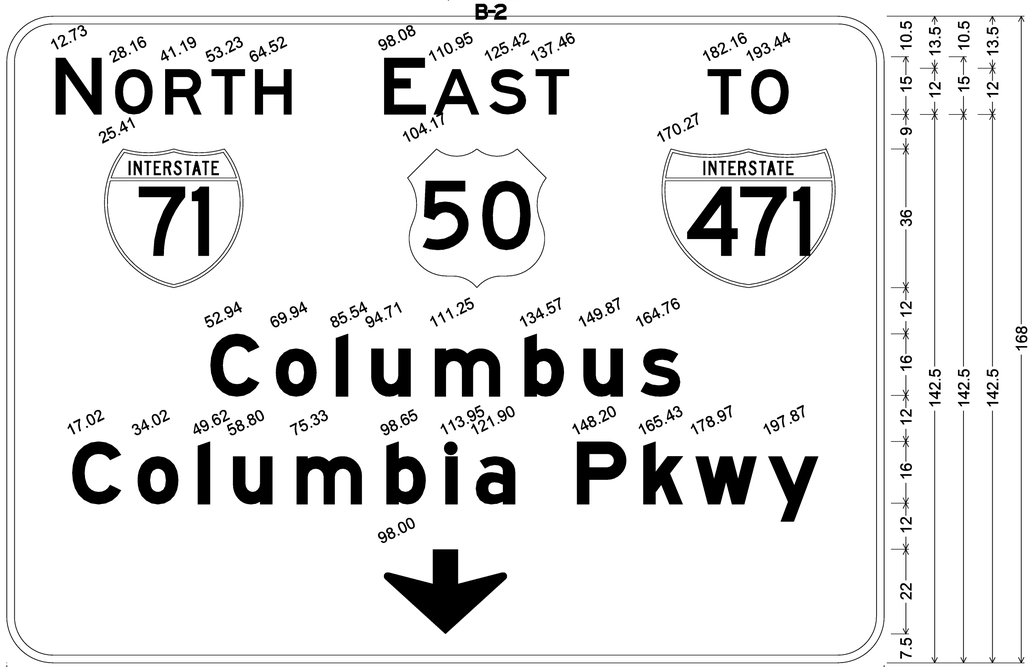
HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736TD004.dgn 11/9/2010 12:32:20 PM jmlangos

T-5A

STA. 57+10, US50 EB

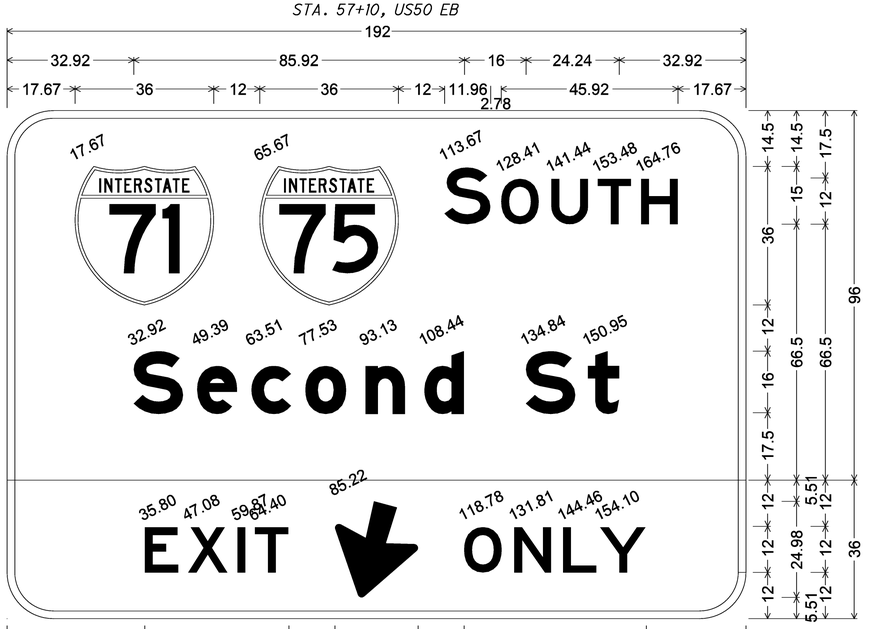
B-2



12.00" Radius, 2.00" Border, White on Green;
[NORTH] E; [EAST] E; [TO] E; Interstate 71 M1-1; US 50 M1-4; Interstate 471 M1-1; [Columbus] E Mod;
[Columbia Pkwy] E Mod; Down Arrow C-1 - 22.00" 270°;

T-5B

STA. 57+10, US50 EB



12.00" Radius, 2.00" Border, White on Green;
Interstate 71 M1-1; Interstate 75 M1-1; [SOUTH] E; [Second St] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; Arrow B-1 - 25.00" 255°; [ONLY] E;

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

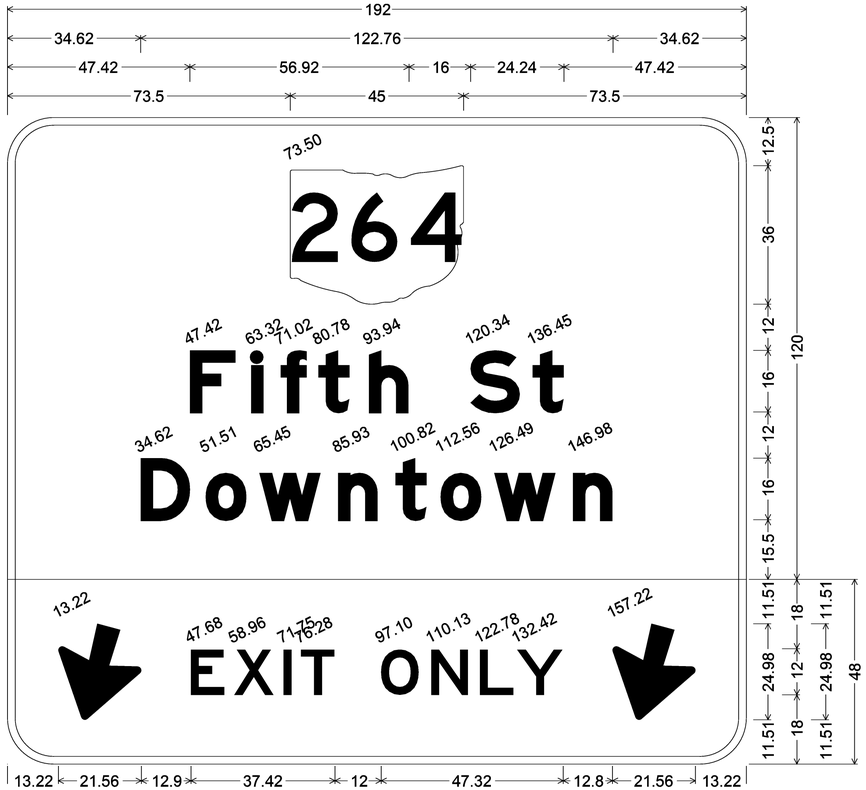
SIGN DETAILS

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736TD005.dgn 11/9/2010 12:32:22 PM jmlangos

T-5C

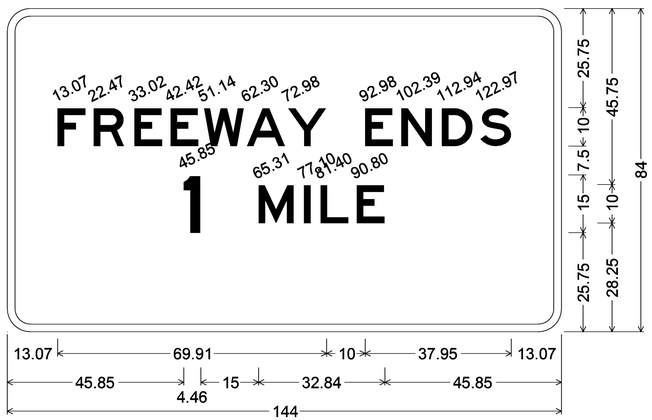
STA. 57+10, US50 EB



12.00" Radius, 2.00" Border, White on Green;
State Highway 264 M1-H5-36-3; [Fifth St] E Mod; [Downtown] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
Arrow B-1 - 25.00" 255°; [EXIT] E; [ONLY] E; Arrow B-1 - 25.00" 255°;

T-6A

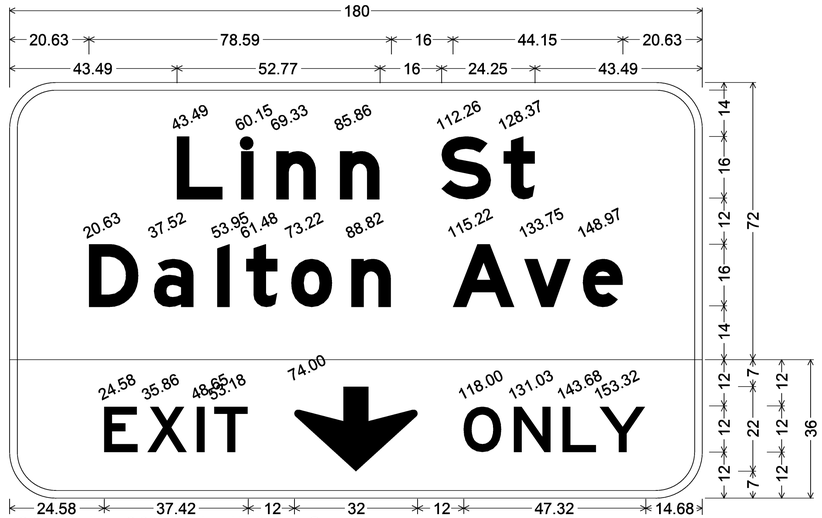
STA. 55+45, US50 WB



6.00" Radius, 2.00" Border, Black on Yellow;
[FREEWAY ENDS] E; [1 MILE] E;

T-6B

STA. 55+45, US50 WB



12.00" Radius, 2.00" Border, White on Green;
[Linn St] E Mod; [Dalton Ave] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; Down Arrow C-1 - 22.00" 270°; [ONLY] E;

ITEM 630, SIGN, OVERHEAD EXTRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

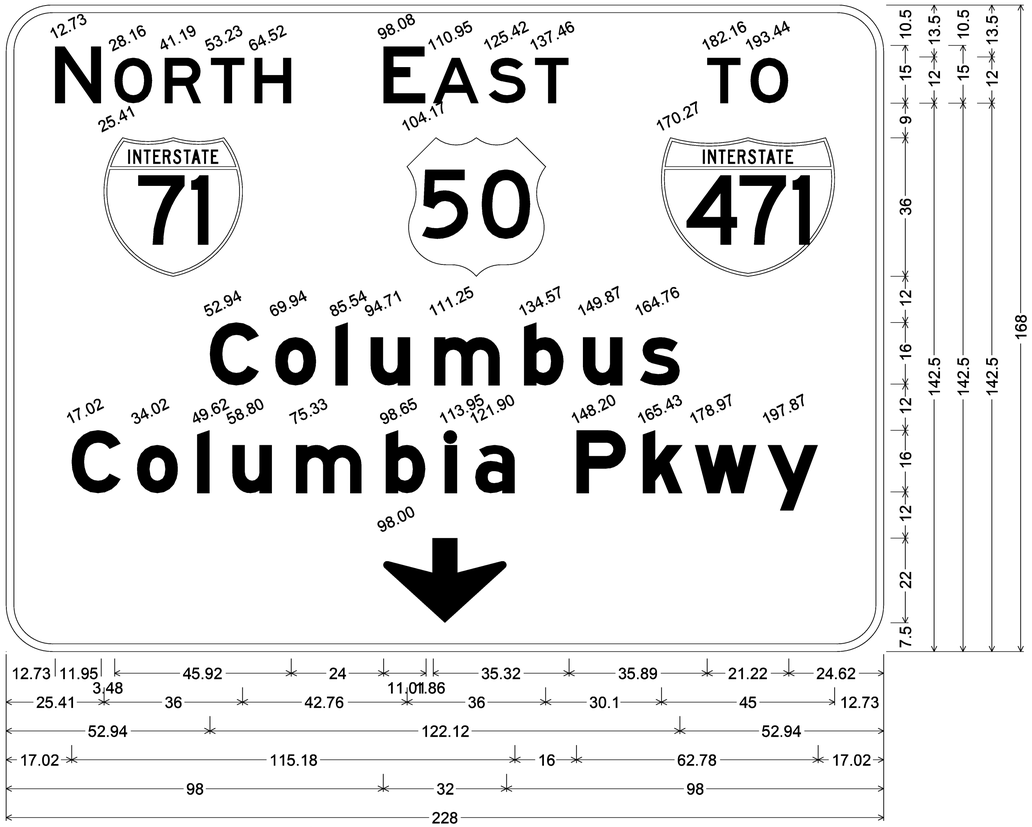
SIGN DETAILS

HAM-50-19.03

C:\CN06\0011\Road\Sheets\757367D006.dgn 11/9/2010 12:32:24 PM jmlangos

T-7A

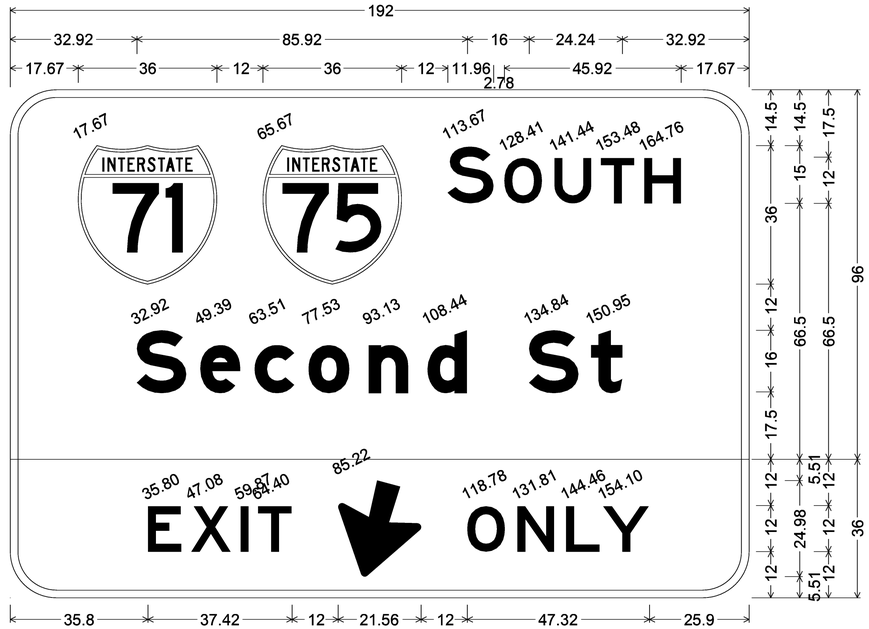
STA. 63+50, US50 EB



12.00" Radius, 2.00" Border, White on Green;
[NORTH] E; [EAST] E; [TO] E; Interstate 71 M1-1; US 50 M1-4; Interstate 471 M1-1; [Columbus] E Mod;
[Columbia Pkwy] E Mod; Down Arrow C-1 - 22.00" 270°;

T-7B

STA. 63+50, US50 EB



12.00" Radius, 2.00" Border, White on Green;
Interstate 71 M1-1; Interstate 75 M1-1; [SOUTH] E; [Second St] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; Arrow B-1 - 25.00" 255°; [ONLY] E;

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

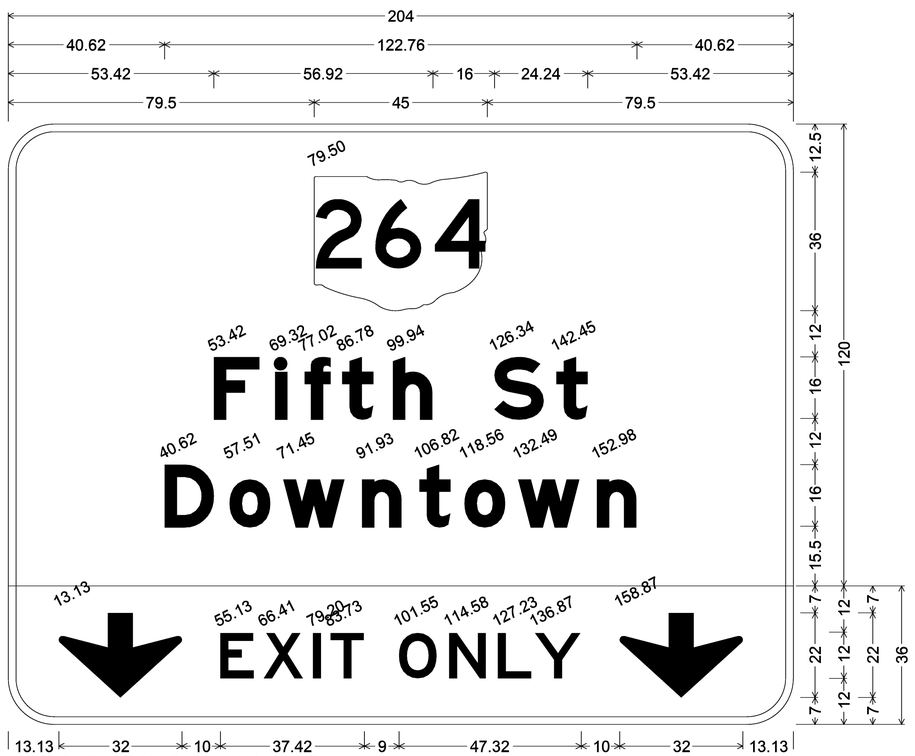
SIGN DETAILS

HAM-50-19.03

C:\CN06\0011\Road\Sheets\75736TD007.dgn 11/9/2010 12:32:26 PM jmlangos

T-7C

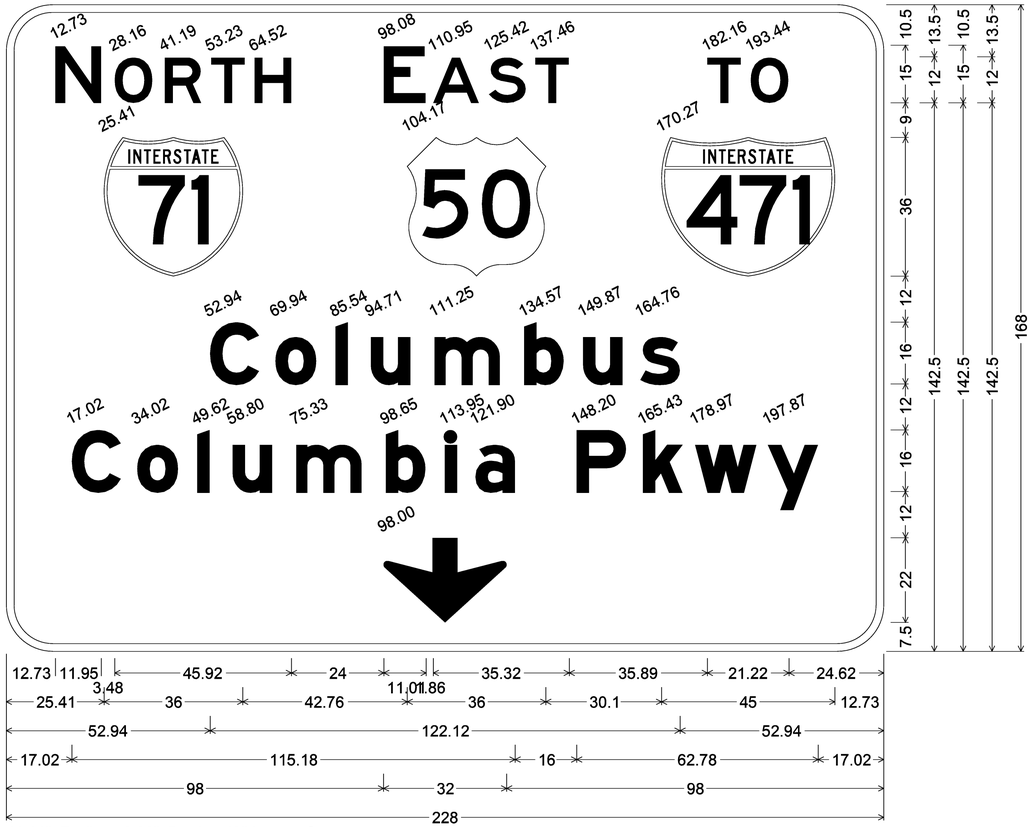
STA. 63+50, US50 EB



12.00" Radius, 2.00" Border, White on Green;
State Highway 264 M1-H5-36-3; [Fifth St] E Mod; [Downtown] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
Down Arrow C-1 - 22.00" 270°; [EXIT] E; [ONLY] E; Down Arrow C-1 - 22.00" 270°;

T-8A

STA. 65+87, US50 EB



12.00" Radius, 2.00" Border, White on Green;
[NORTH] E; [EAST] E; [TO] E; Interstate 71 M1-1; US 50 M1-4; Interstate 471 M1-1; [Columbus] E Mod;
[Columbia Pkwy] E Mod; Down Arrow C-1 - 22.00" 270°;

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

SIGN DETAILS

HAM-50-19.03

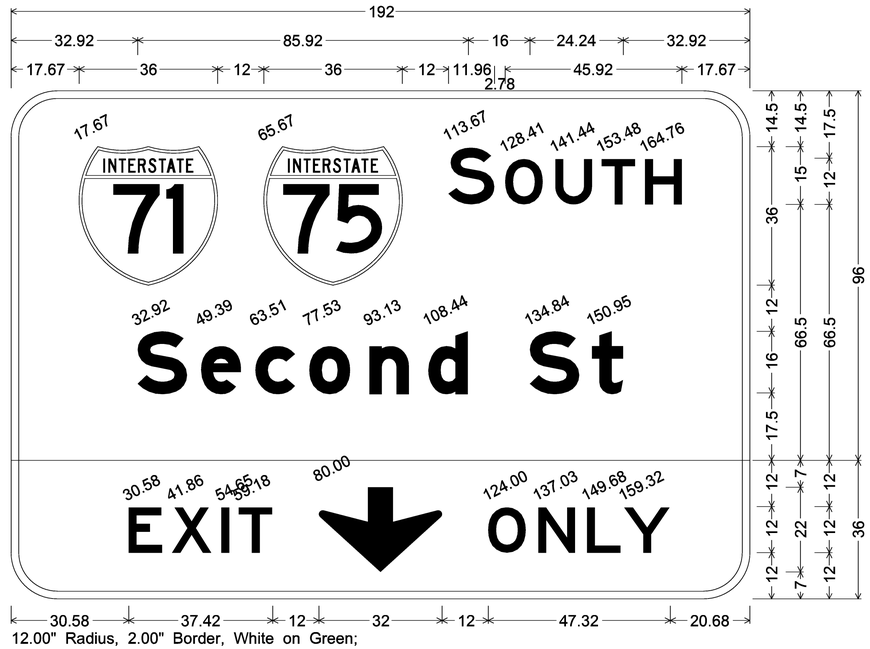
G:\CN06\0011\Road\Sheets\75736TD008.dgn 11/9/2010 12:32:27 PM jmlangos

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

T-8B

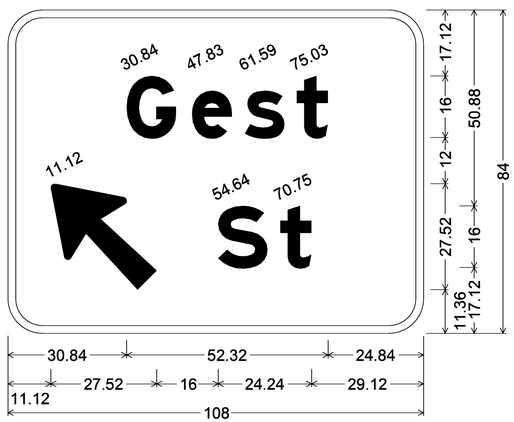
STA. 65+87, US50 EB



12.00" Radius, 2.00" Border, White on Green;
Interstate 71 M1-1; Interstate 75 M1-1; [SOUTH] E; [Second St] E Mod;
12.00" Radius, 2.00" Border, Black on Yellow;
[EXIT] E; Down Arrow C-1 - 22.00" 270°; [ONLY] E;

T-9A

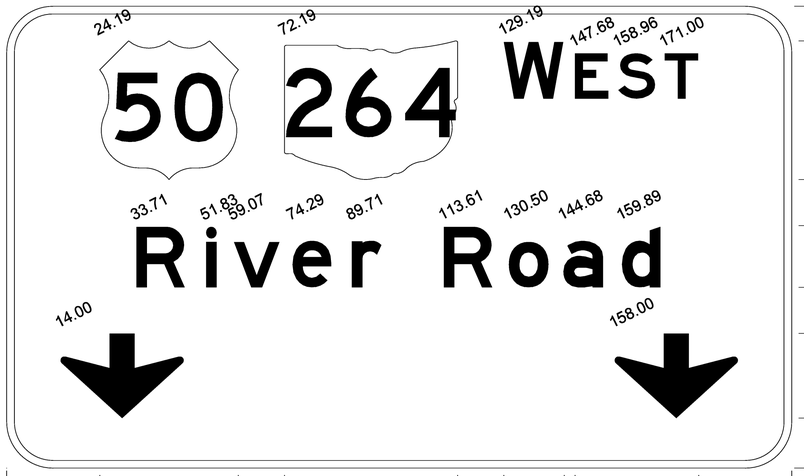
STA. 65+37, US50 WB



9.00" Radius, 2.00" Border, White on Green;
[Gest] E Mod; Arrow A-1 - 35.00" 135°;
[St] E Mod;

T-9B

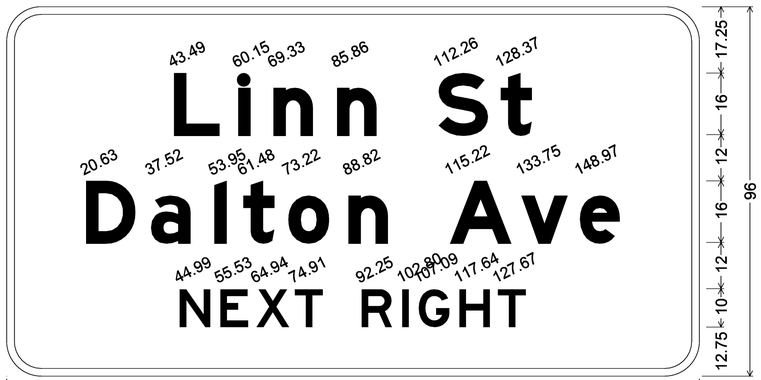
STA. 65+37, US50 WB



12.00" Radius, 2.00" Border, White on Green;
US 50 M1-4; State Highway 264 M1-H5-36-3; [WEST] E; [River Road] E;
Down Arrow C-1 - 22.00" 270°; Down Arrow C-1 - 22.00" 270°;

T-9C

STA. 65+37, US50 WB



9.00" Radius, 2.00" Border, White on Green;
[Linn St] E Mod; [Dalton Ave] E Mod; [NEXT RIGHT] E;

CALCULATED JG
CHECKED JR

SIGN DETAILS

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736TD009.dgn 11/9/2010 12:32:29 PM jmlangos

T-10A

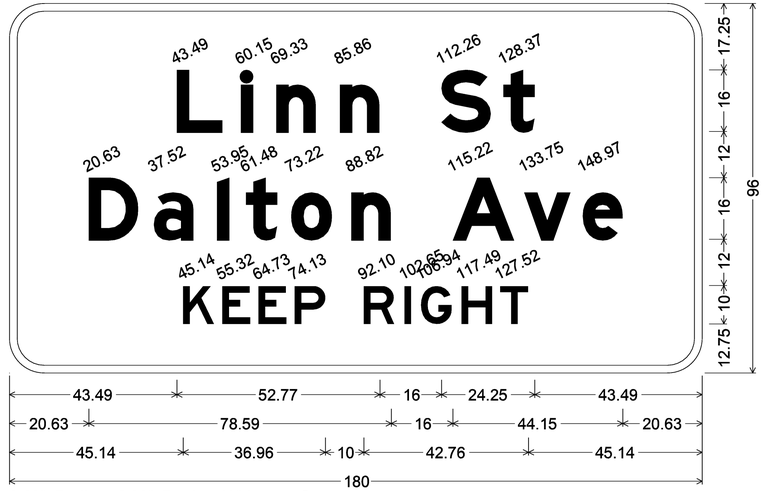
STA. 33+72, RAMP J



9.00" Radius, 2.00" Border, White on Green;
[Gest St] E Mod; [LEFT LANE] E;

T-10B

STA. 33+72, RAMP J



9.00" Radius, 2.00" Border, White on Green;
[Linn St] E Mod; [Dalton Ave] E Mod; [KEEP RIGHT] E;

ITEM 630, SIGN, OVERHEAD EXTHRUSHEET AND,
ITEM 630, SIGN, GROUND MOUNTED EXTHRUSHEET

THE DESIGNABLE EXTRUSHEET GUIDE SIGNS SHOWN IN THIS PLAN WERE DESIGNED USING THE FHWA STANDARD HIGHWAY ALPHABETS. THE CONTRACTOR SHALL USE CLEARVIEW FONTS FOR THESE SIGNS AS REQUIRED IN SECTION 630.04 OF CONSTRUCTION AND MATERIAL SPECIFICATIONS. DO NOT REVISE OVERALL SIGNS FROM WHAT IS SHOWN IN THE PLANS. THE EDGE SPACE BETWEEN THE BORDER AND THE TEXT MAY BE REDUCED FROM WHAT IS NORMALLY ACCEPTABLE TO ACHIEVE THE SIGN WIDTHS SHOWN. IF THIS RESULTS IN CROWDING OF THE BORDER, A SLIGHT REDUCTION IN INTER-LETTER AND INTER-WORD SPACING MAY BE USED.

CALCULATED JG
CHECKED JR

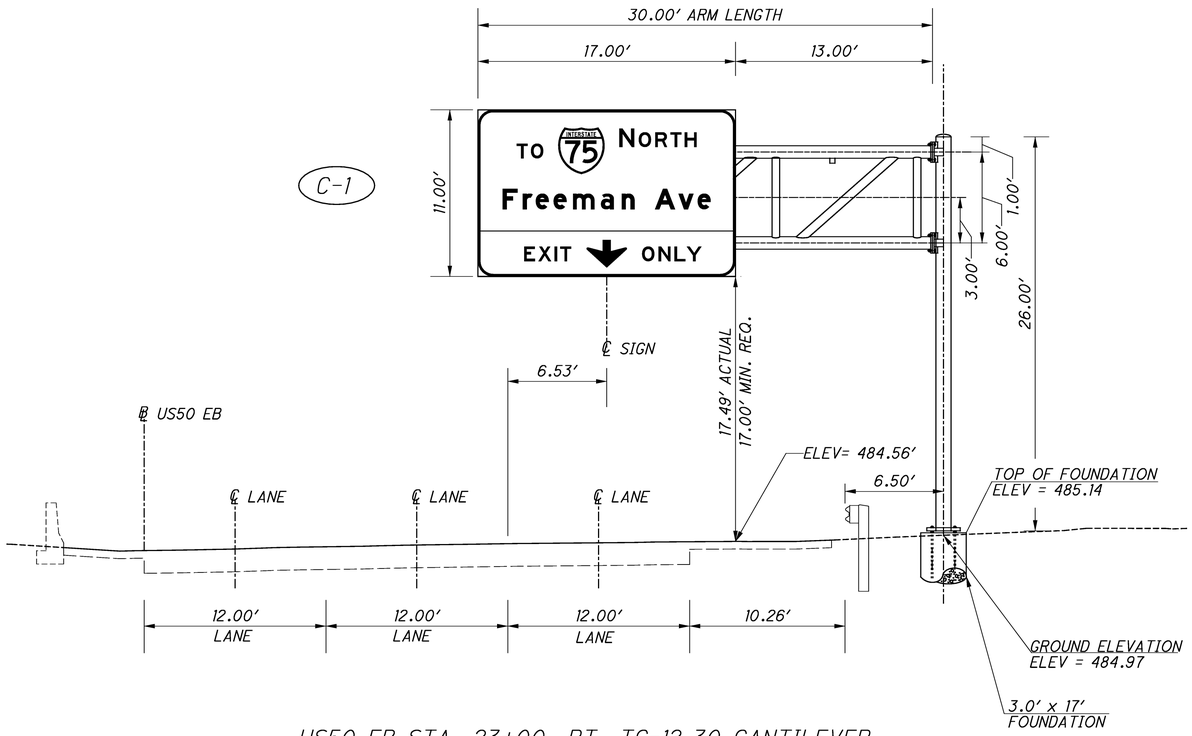
SIGN DETAILS

HAM-50-19.03

120
442

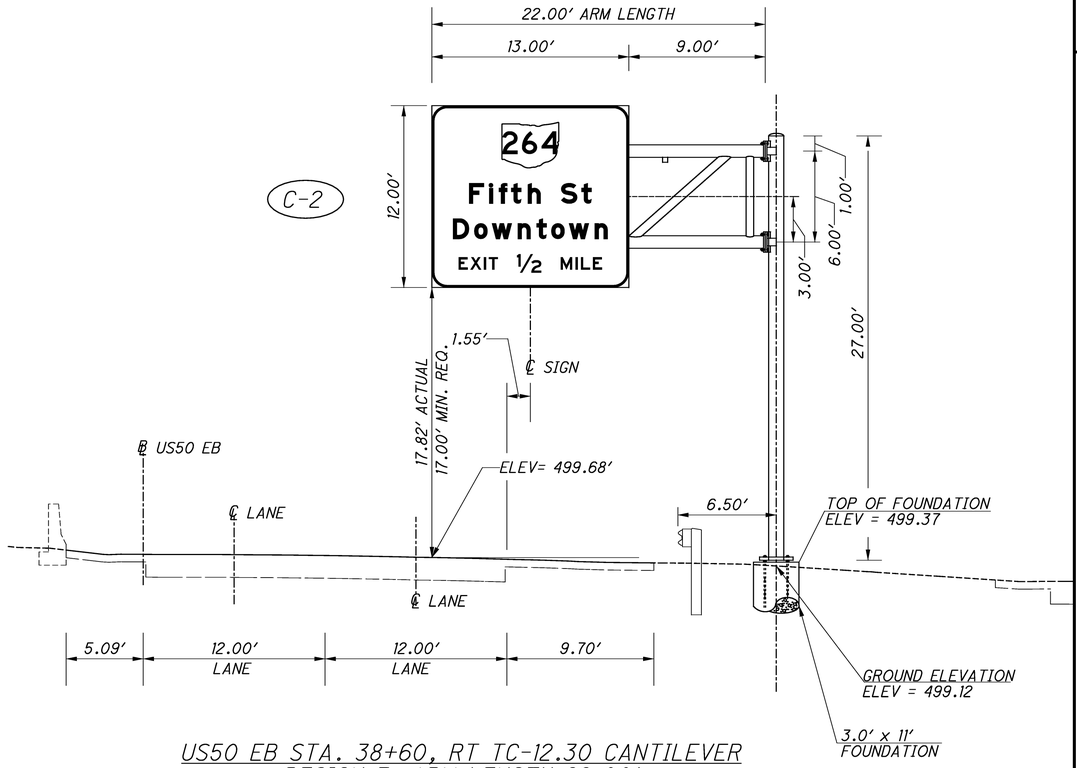
G:\CN06\0011\Road\Sheets\75736TD010.dgn 11/9/2010 12:32:31 PM jmlangos

C-1



US50 EB STA. 23+00, RT, TC-12.30 CANTILEVER
DESIGN 10, ARM LENGTH 30.00'
FHWA (OVERHEAD)

C-2



US50 EB STA. 38+60, RT TC-12.30 CANTILEVER
DESIGN 7, ARM LENGTH 22.00'
FHWA (OVERHEAD)

HORIZONTAL SCALE IN FEET
0 2.5 5 10

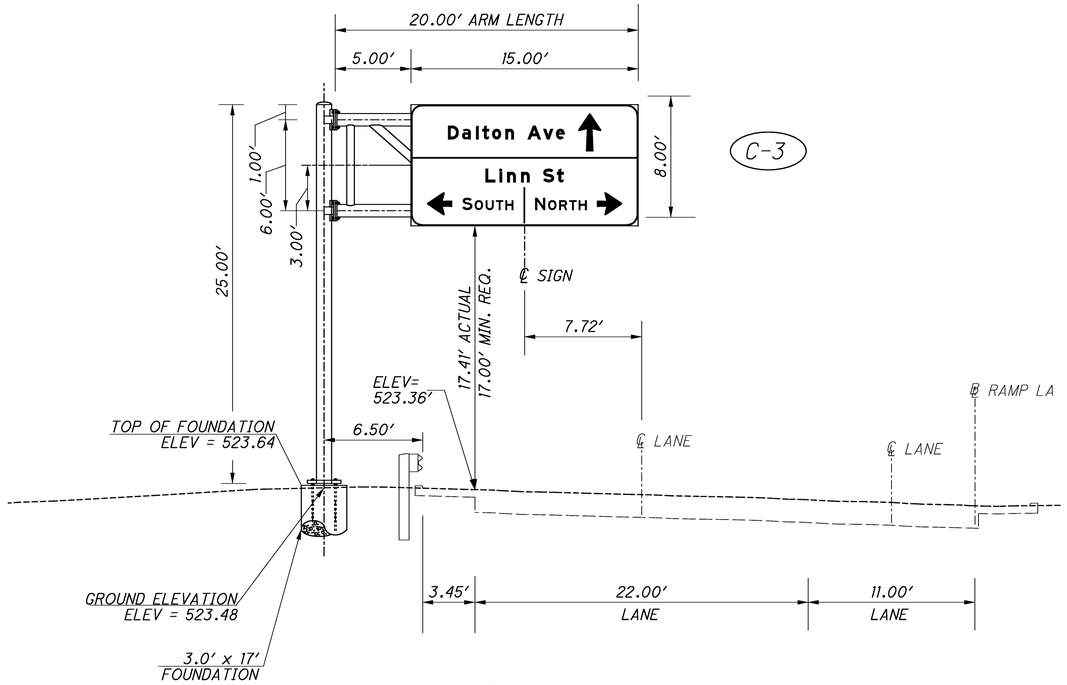
CALCULATED DL
CHECKED JRE

SIGN ELEVATIONS
CANTILEVER INSTALLATIONS

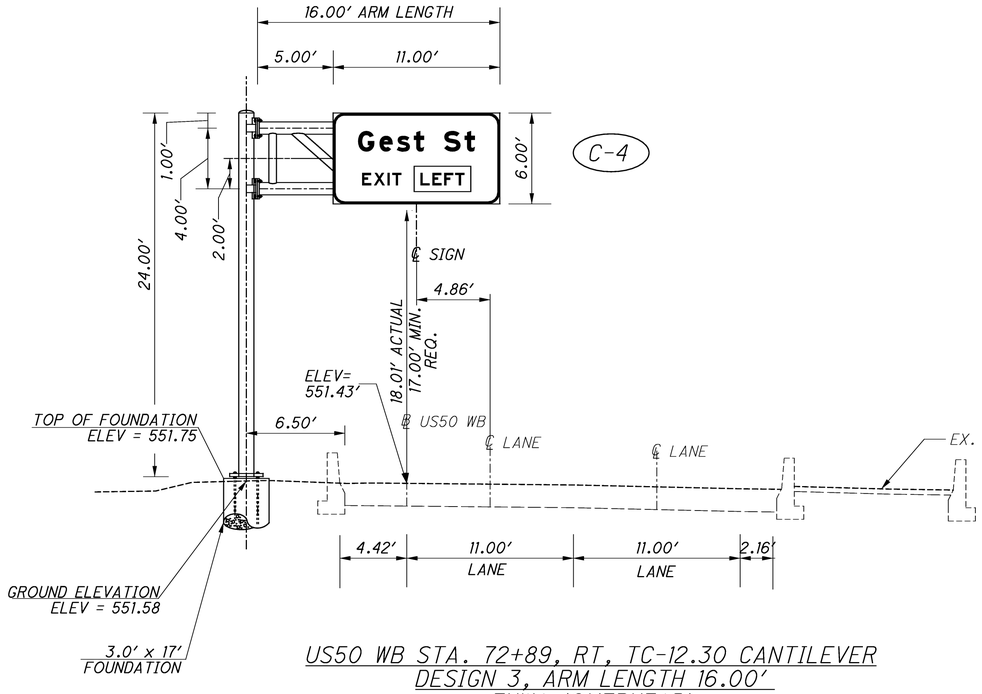
HAM-50-19.03

121
442

G:\CN06\0011\Road Sheets\75736TE001.dgn 11/9/2010 12:32:33 PM jmlangos



RAMP LA STA. 51+90, RT TC-12.30 CANTILEVER
DESIGN 5, ARM LENGTH 20.00'
ODOT LEVEL 3



US50 WB STA. 72+89, RT, TC-12.30 CANTILEVER
DESIGN 3, ARM LENGTH 16.00'
FHWA (OVERHEAD)

SIGN ELEVATIONS
CANTILEVER INSTALLATIONS

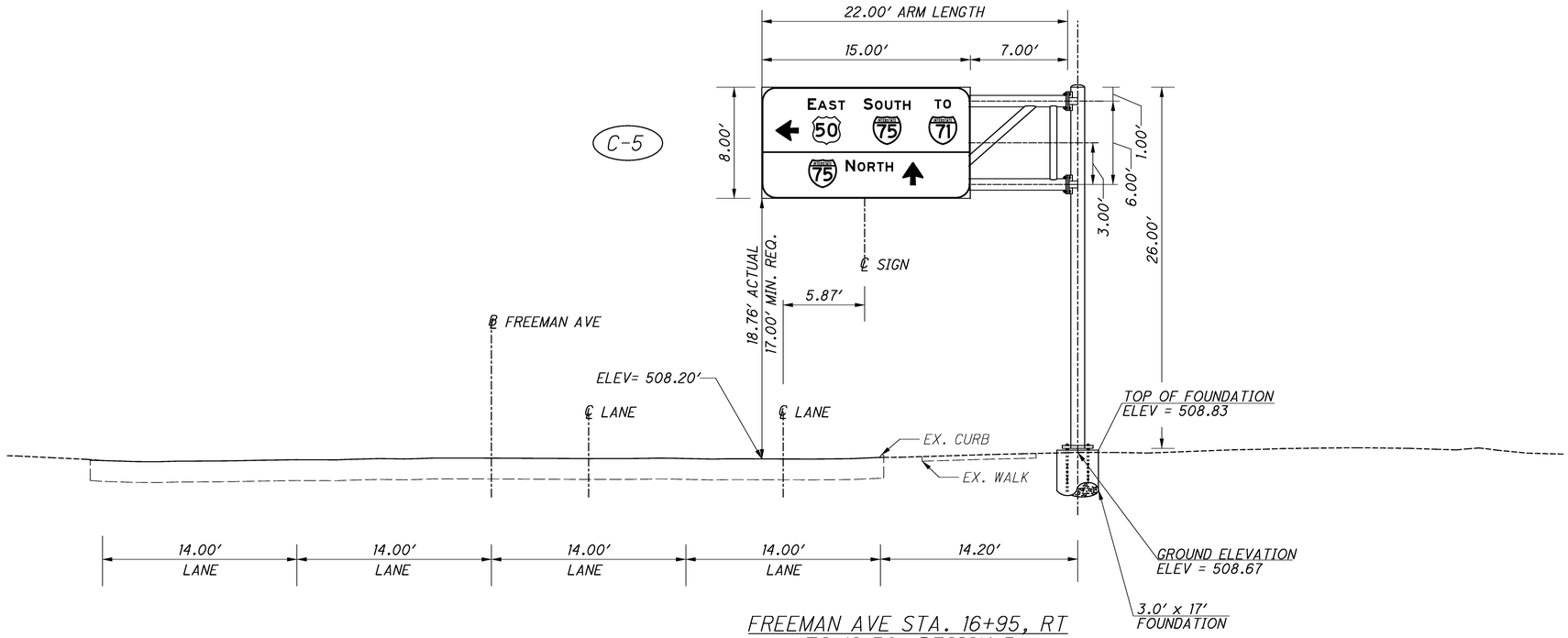
HAM-50-19.03

122
442

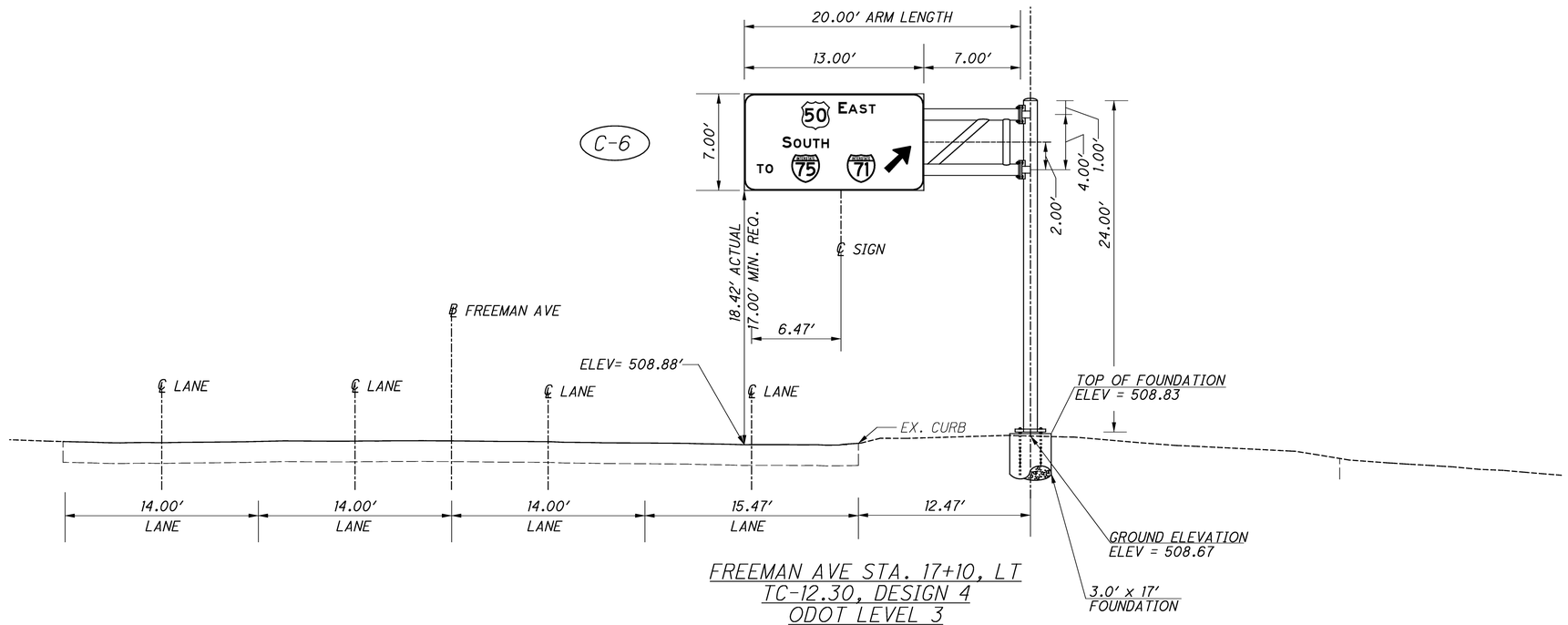
CALCULATED DL
CHECKED JRE

HORIZONTAL SCALE IN FEET
0 2.5 5 10

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:33 PM jmlangos



FREEMAN AVE STA. 16+95, RT
TC-12.30, DESIGN 5
ODOT LEVEL 3



FREEMAN AVE STA. 17+10, LT
TC-12.30, DESIGN 4
ODOT LEVEL 3

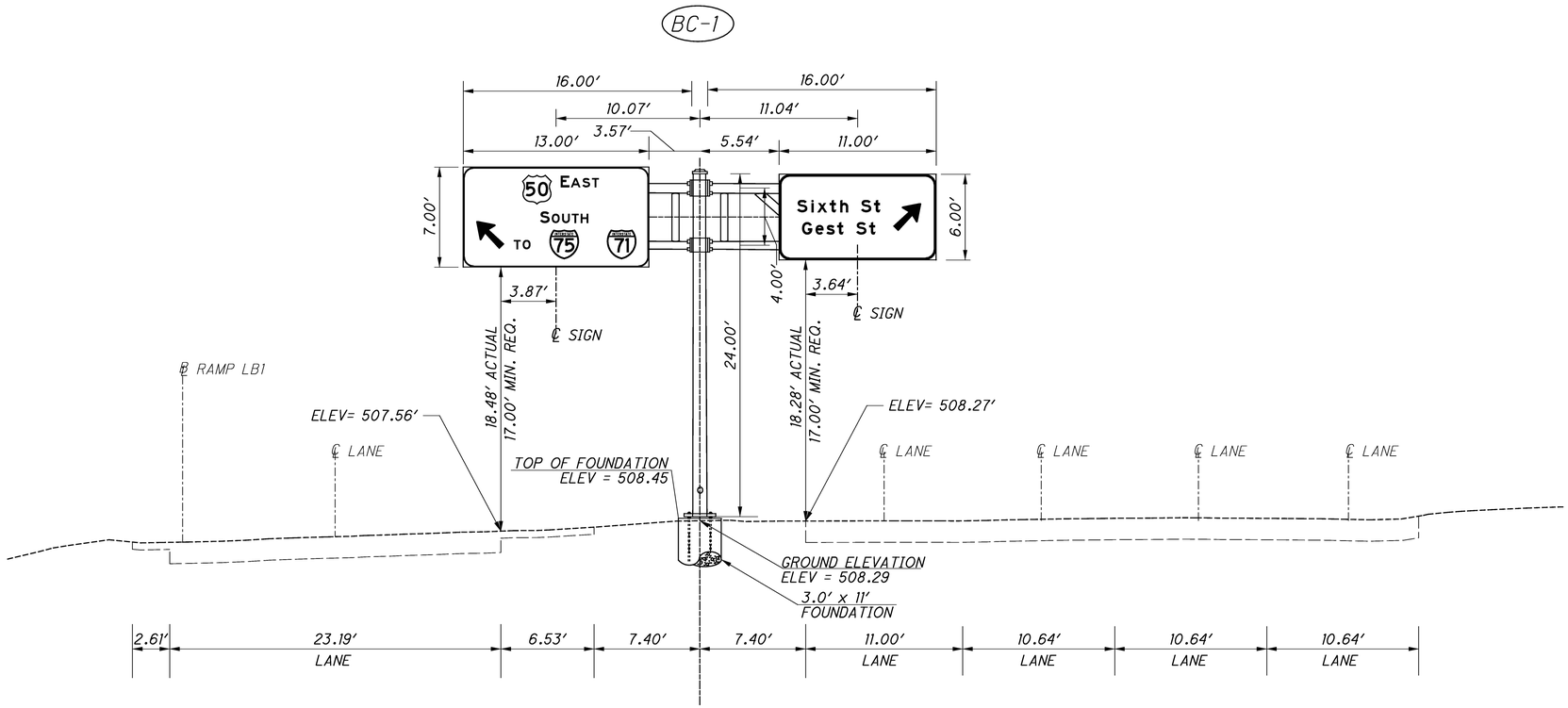
SIGN ELEVATIONS
CANTILEVER INSTALLATIONS

HAM-50-19.03

CALCULATED DL
CHECKED JRE

HORIZONTAL SCALE IN FEET
0 2.5 5 10

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:34 PM jmlangos



RAMP LB STA. 49+27, RT
TC-10.48, DESIGN 4
ODOT LEVEL 3

NOTE:

1. **ITEM 630 - REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-10.48**

   REMOVAL OF OVERHEAD SIGN SUPORT AND DISPOSAL SHALL BE AS PER, PLAN INSERT SHEET TYPE TC-10.48

HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DL
CHECKED JRE

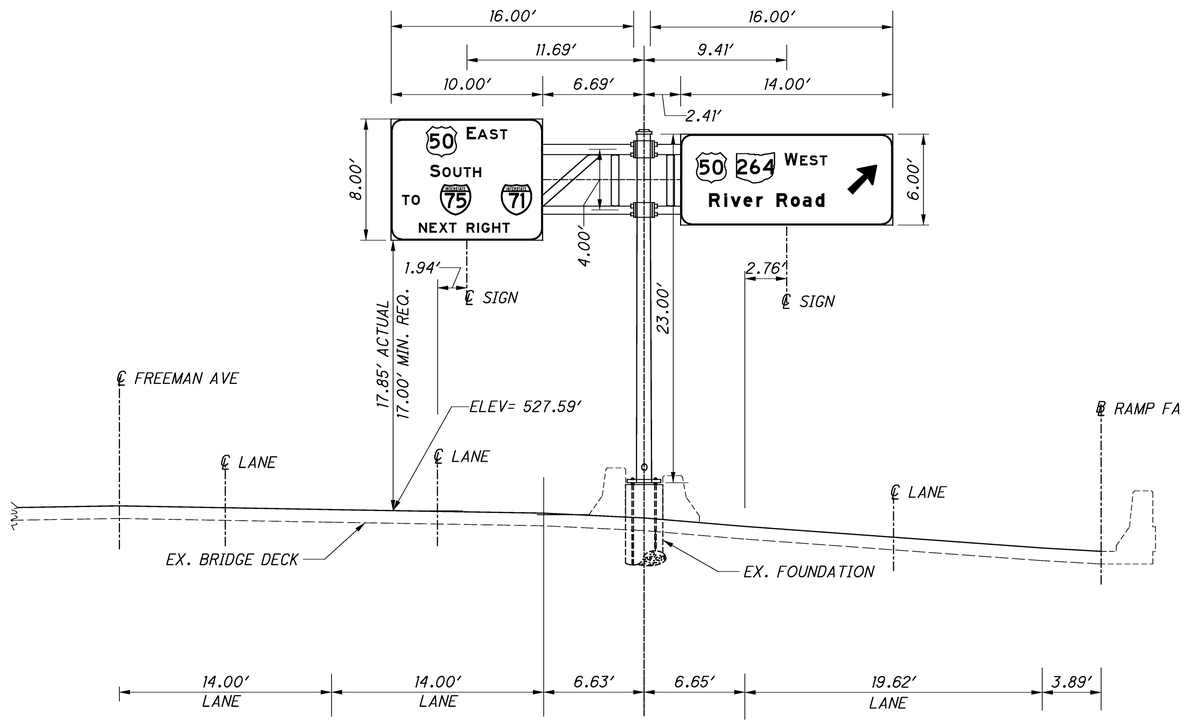
SIGN ELEVATIONS
BUTTERFLY CANTILEVER INSTALLATIONS

HAM-50-19.03

124
442

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:34 PM jmlangos

BC-2



FREEMAN AVE STA. 22+63, LT
TC-10.48, DESIGN 4
ODOT LEVEL 3

NOTE:

1. USE EXISTING FOUNDATION

2. **ITEM 630 - OVERHEAD SIGN SUPPORT, MISC.: PLAN INSERT SHEET TYPE TC-10.48, DESIGN 4, USING EXISTING FOUNDATION**

   INSTALL OVERHEAD SIGN SUPPORT AS PER, PLAN INSERT SHEET TC-10.48, DESIGN 4, EXCEPT THE CONTRACTOR SHALL MATCH THE EXISTING BOLT PATTERN.

3. **ITEM 630 - REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, AS PER PLAN**

   REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL SHALL BE AS PER, PLAN INSERT SHEET TYPE TC-10.48, EXCEPT THE EXISTING FOUNDATION SHALL NOT BE DISTURBED.

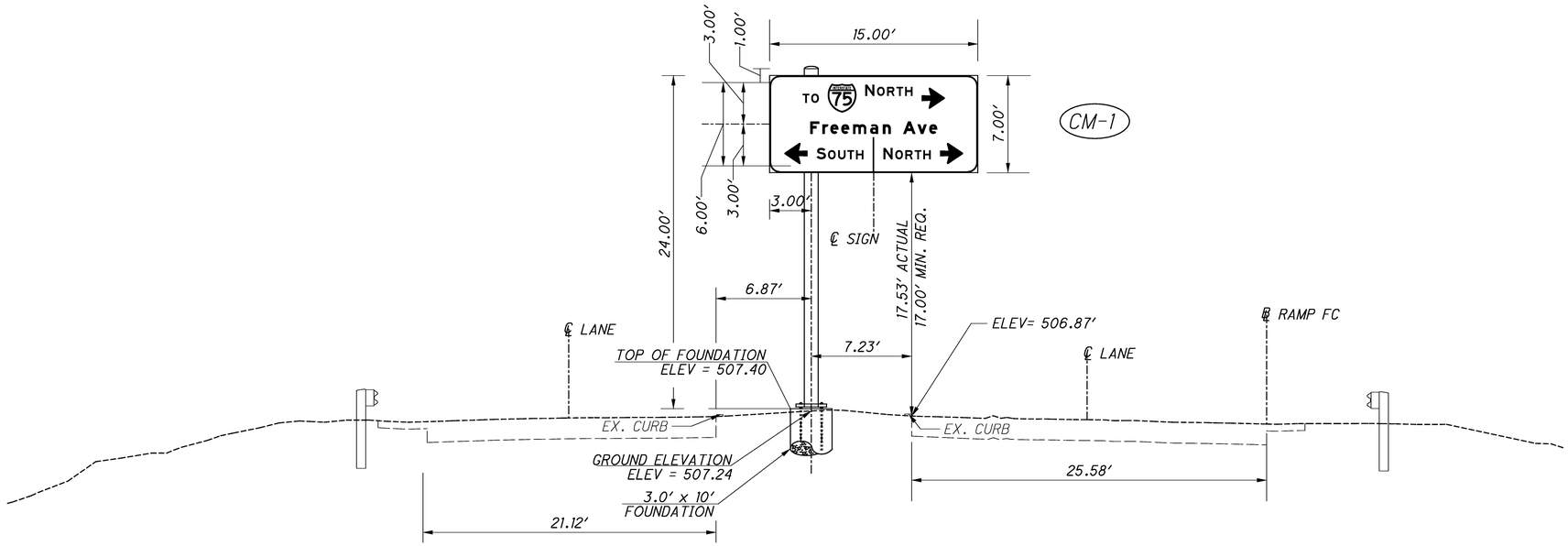
HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DL
CHECKED JRE

SIGN ELEVATIONS
BUTTERFLY CANTILEVER INSTALLATIONS

HAM-50-19.03

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:34 PM jmlangos



RAMP FC STA. 44+47, LT, TC-9.30 CENTER MOUNT
DESIGN 3
ODOT LEVEL 3

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:35 PM jmlangos

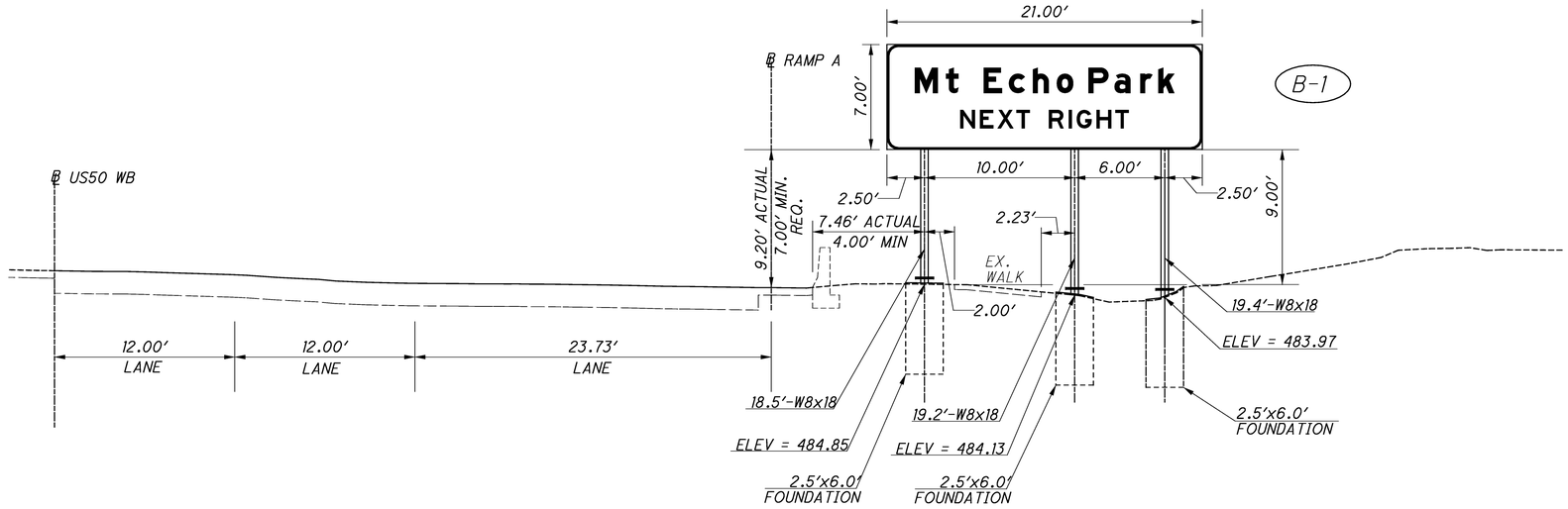
HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DL
CHECKED JRE

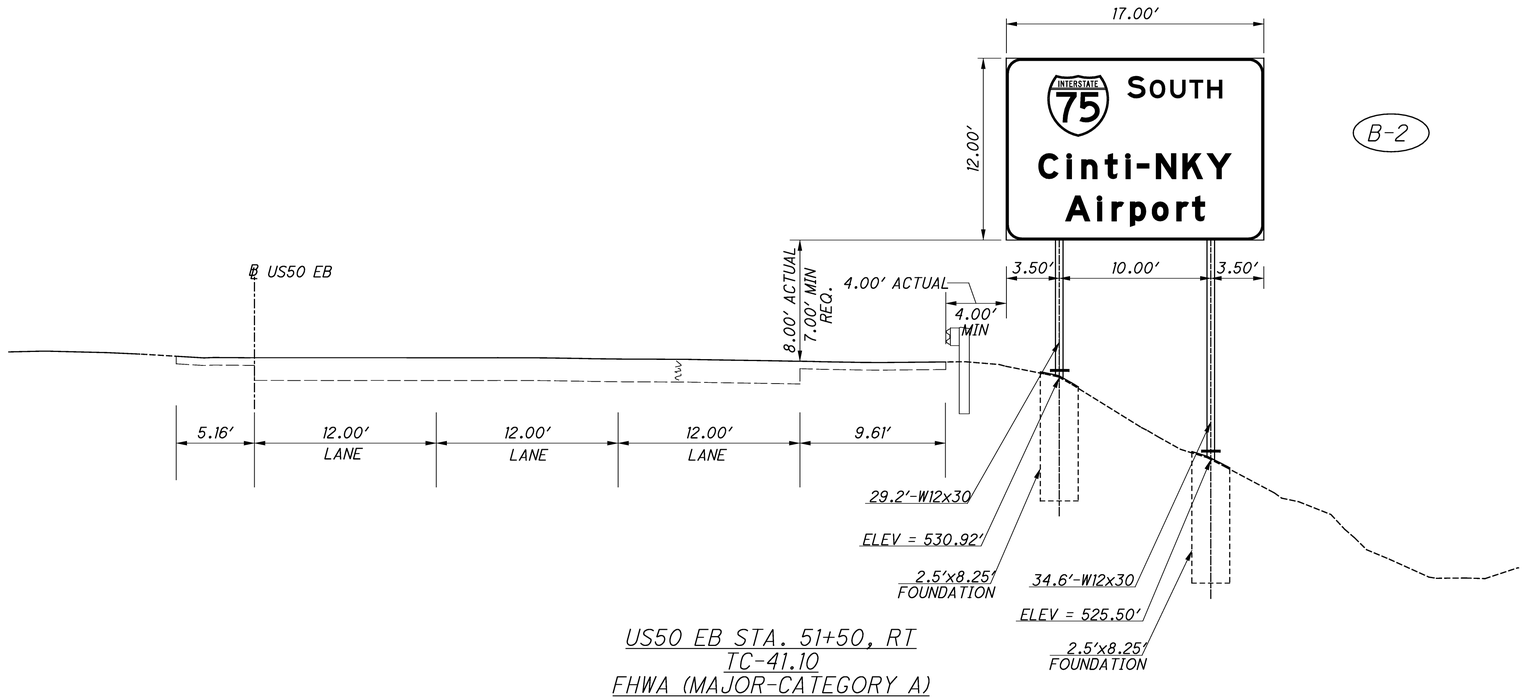
SIGN ELEVATIONS
SEMI-OVERHEAD INSTALLATIONS

HAM-50-19.03

126
442



US50 WB STA. 18+00, LT
TC-41.10
FHWA (MAJOR-CATEGORY A)
GROUND MOUNTED



US50 EB STA. 51+50, RT
TC-41.10
FHWA (MAJOR-CATEGORY A)
GROUND MOUNTED

HORIZONTAL SCALE IN FEET
0 2.5 5 10
CALCULATED DL
CHECKED JRE

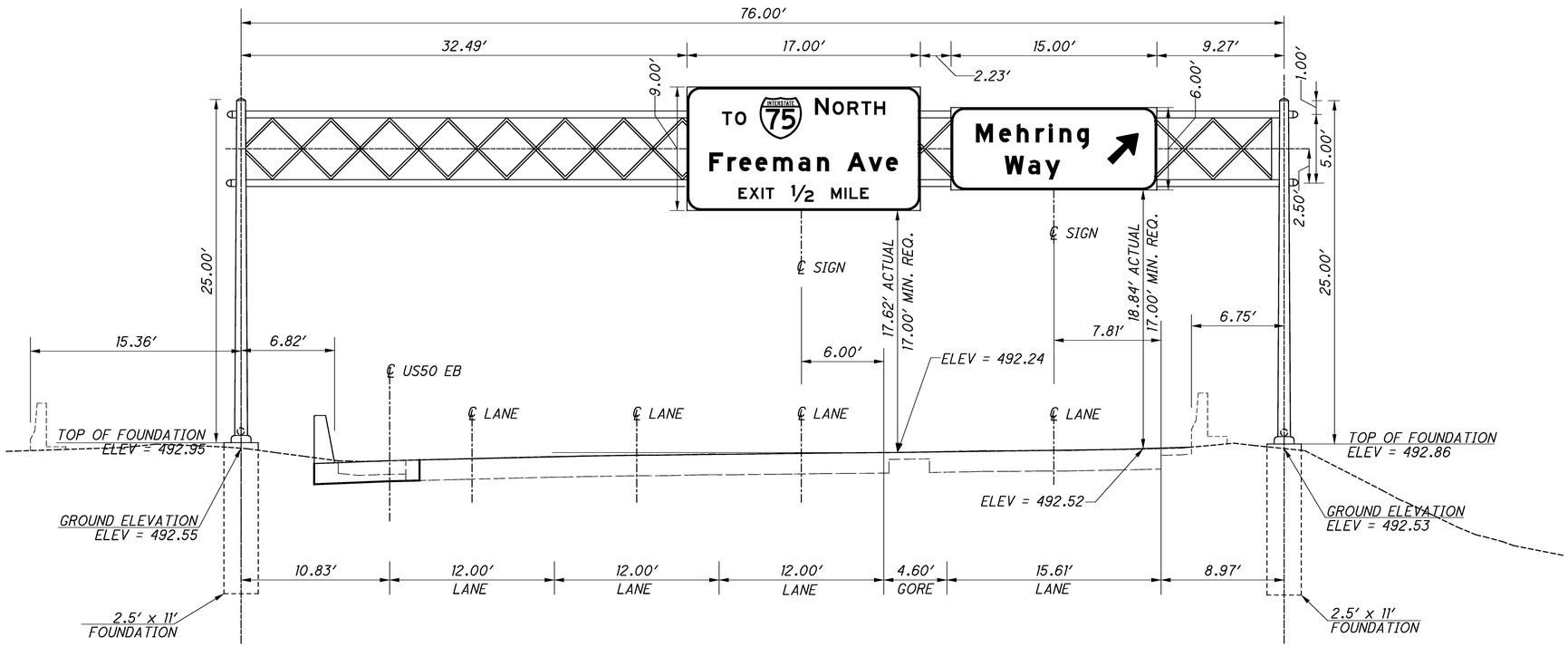
SIGN ELEVATIONS
BEAM MOUNTED INSTALLATIONS

HAM-50-19.03

127
442

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:35 PM jmlangos

T-1



US50 (EB) STA. 16+13
TC-7.65, DESIGN 8
FHWA (OVERHEAD)

0 2.5 5 10
HORIZONTAL
SCALE IN FEET

CALCULATED DL
CHECKED JRE

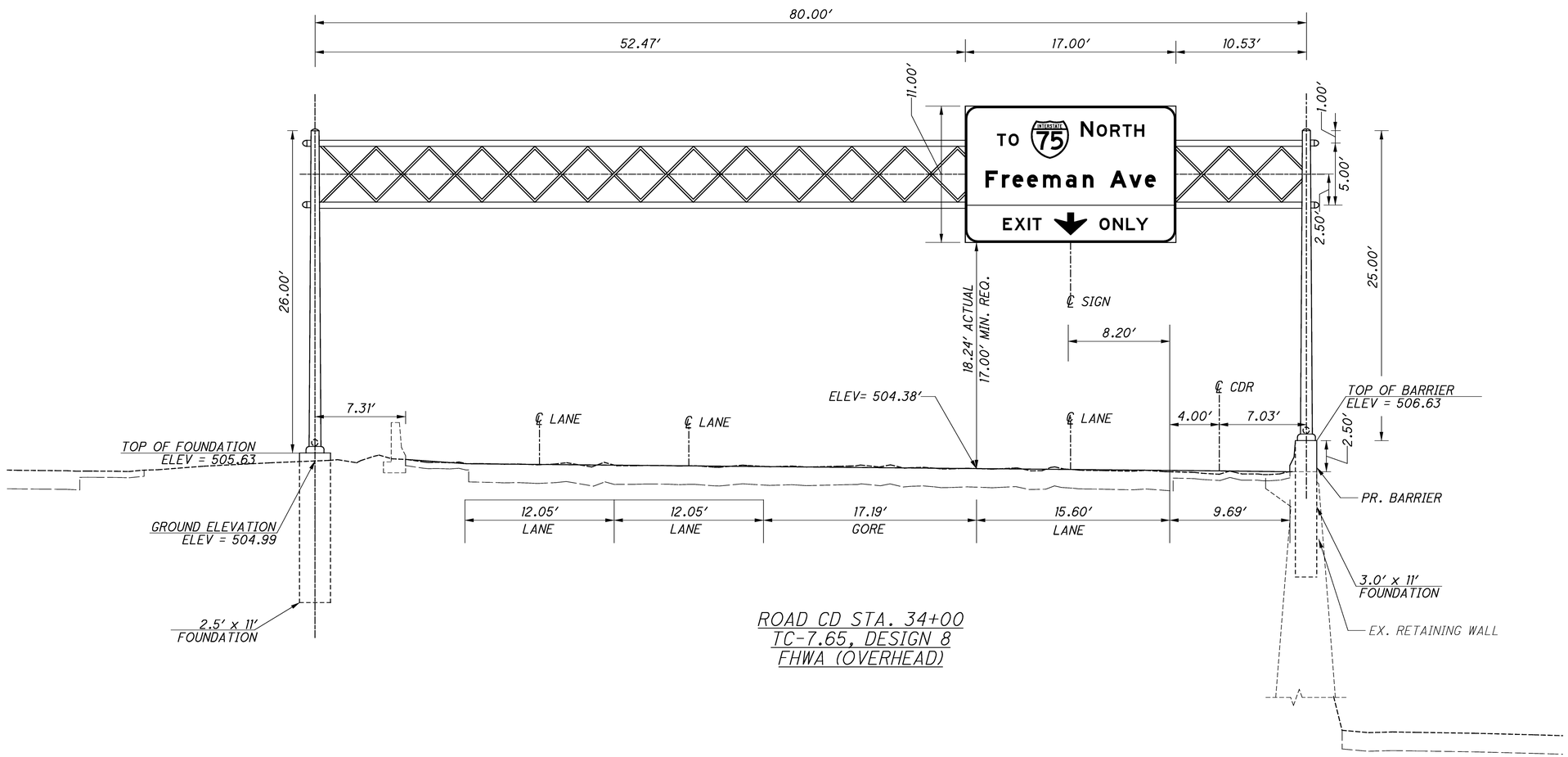
SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

128
442

C:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:35 PM jmlangos

T-2



ROAD CD STA. 34+00
TC-7.65, DESIGN 8
FHWA (OVERHEAD)

0 2.5 5 10 HORIZONTAL SCALE IN FEET

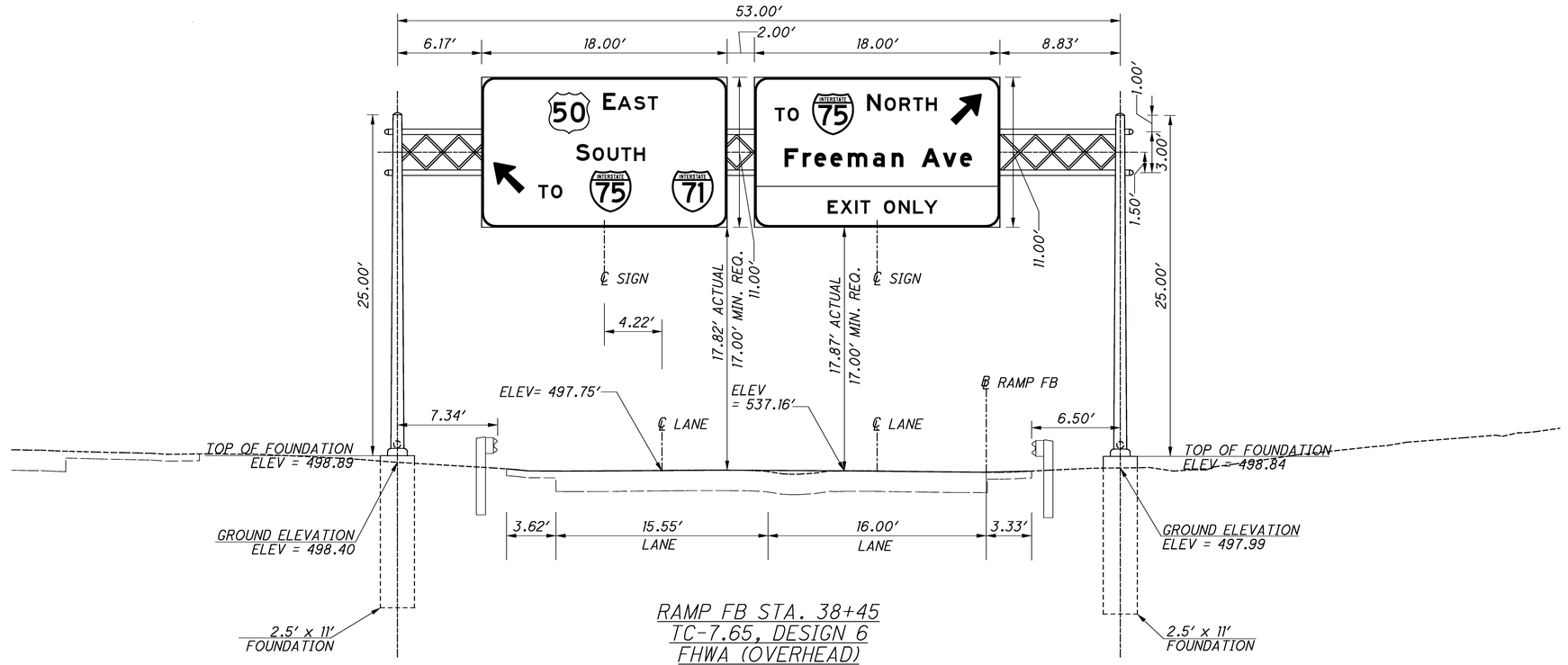
CALCULATED DL
CHECKED JRE

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

G:\CN06\001\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:36 PM jmlangos

T-3



RAMP FB STA. 38+45
TC-7.65, DESIGN 6
FHWA (OVERHEAD)

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:36 PM jmlangos

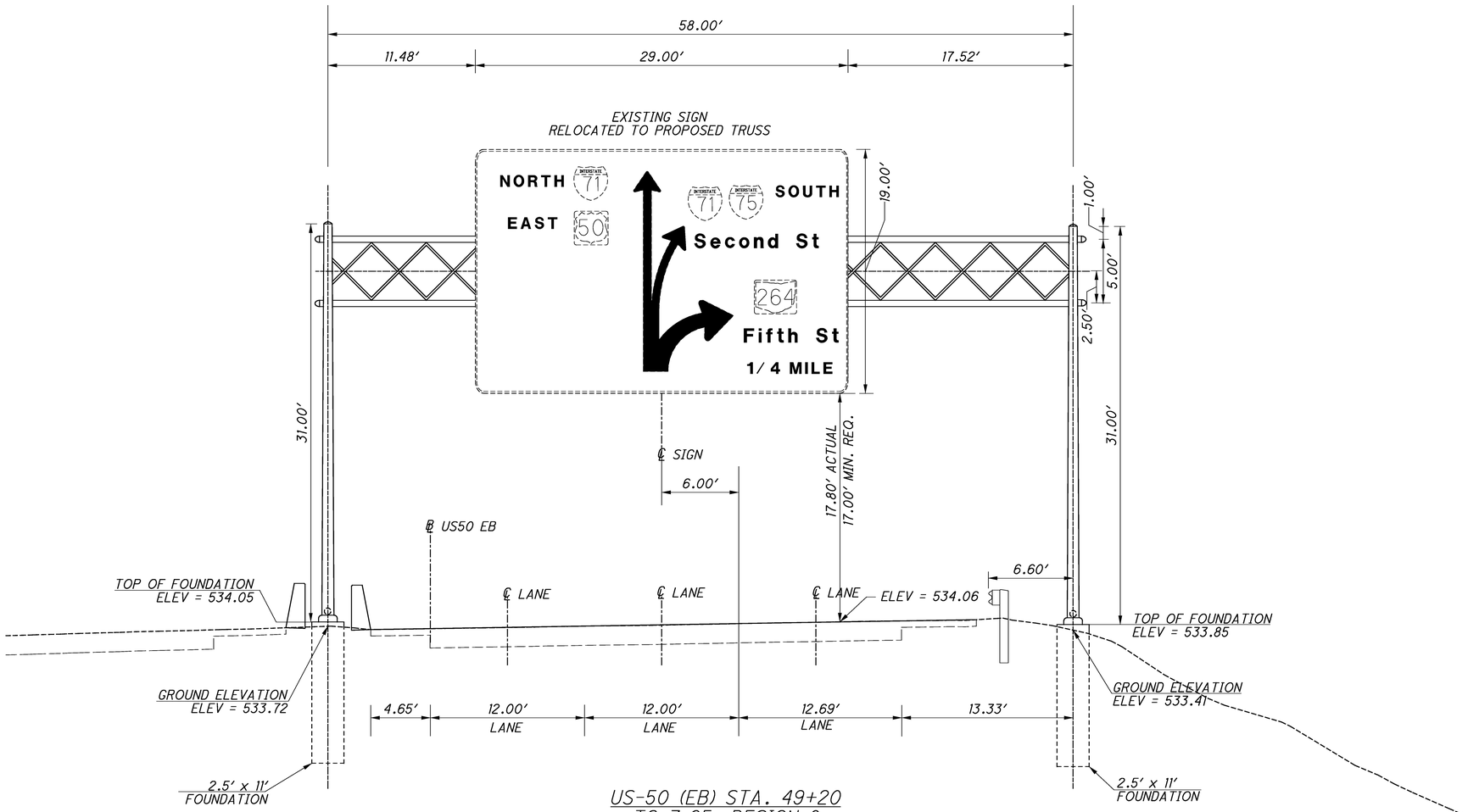
CALCULATED DL
CHECKED JRE

0 2.5 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

T-4



US-50 (EB) STA. 49+20
TC-7.65, DESIGN 8

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

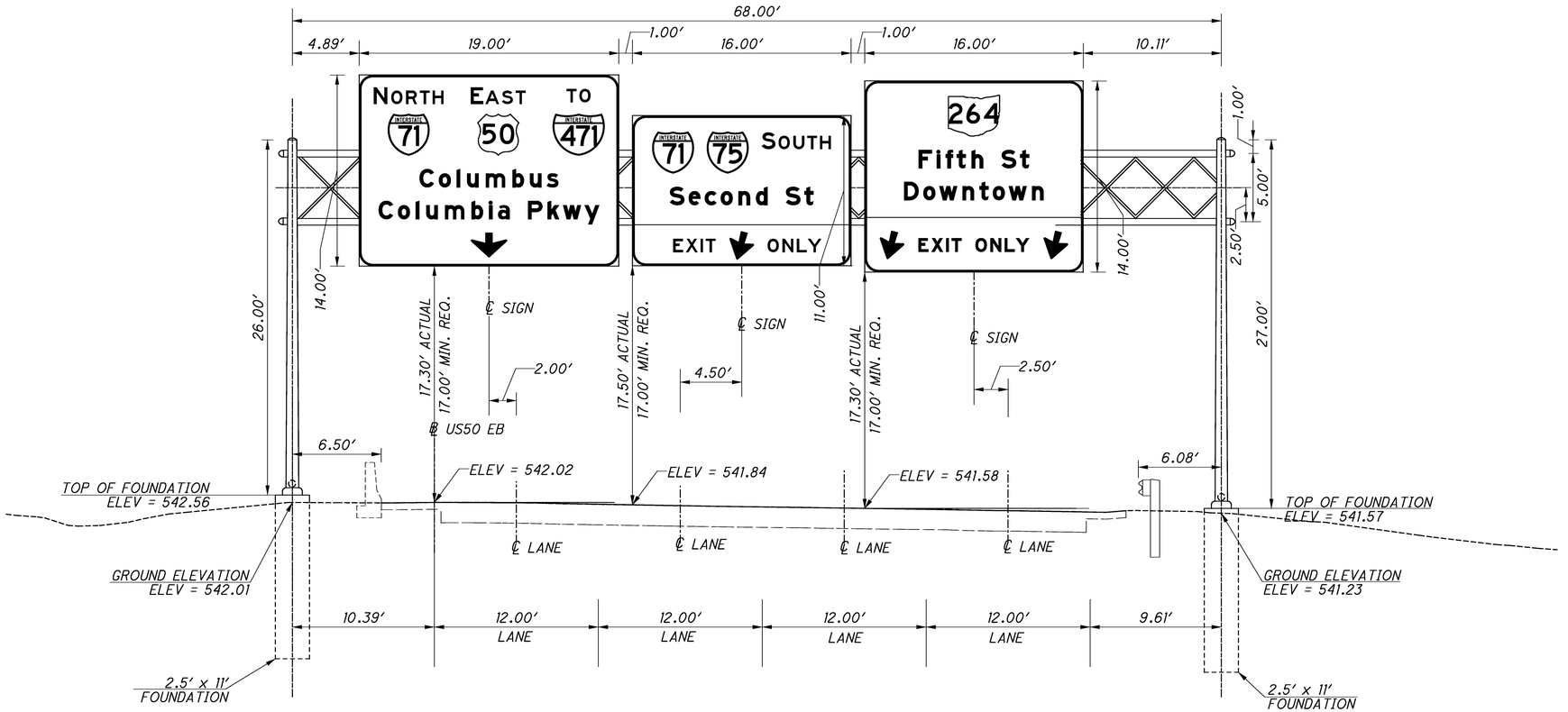
HAM-50-19.03

CALCULATED DL
CHECKED JRE

0 2.5 5 10
HORIZONTAL SCALE IN FEET

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:36 PM jmlangos

T-5



US-50 (EB) STA. 57+10
TC-7.65, DESIGN 8
FHWA (OVERHEAD)

NOTE:
SIGNS CLOSER TO THE POLES ARE NOT CENTERED ON THE ARMS

0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED DL
CHECKED JRE

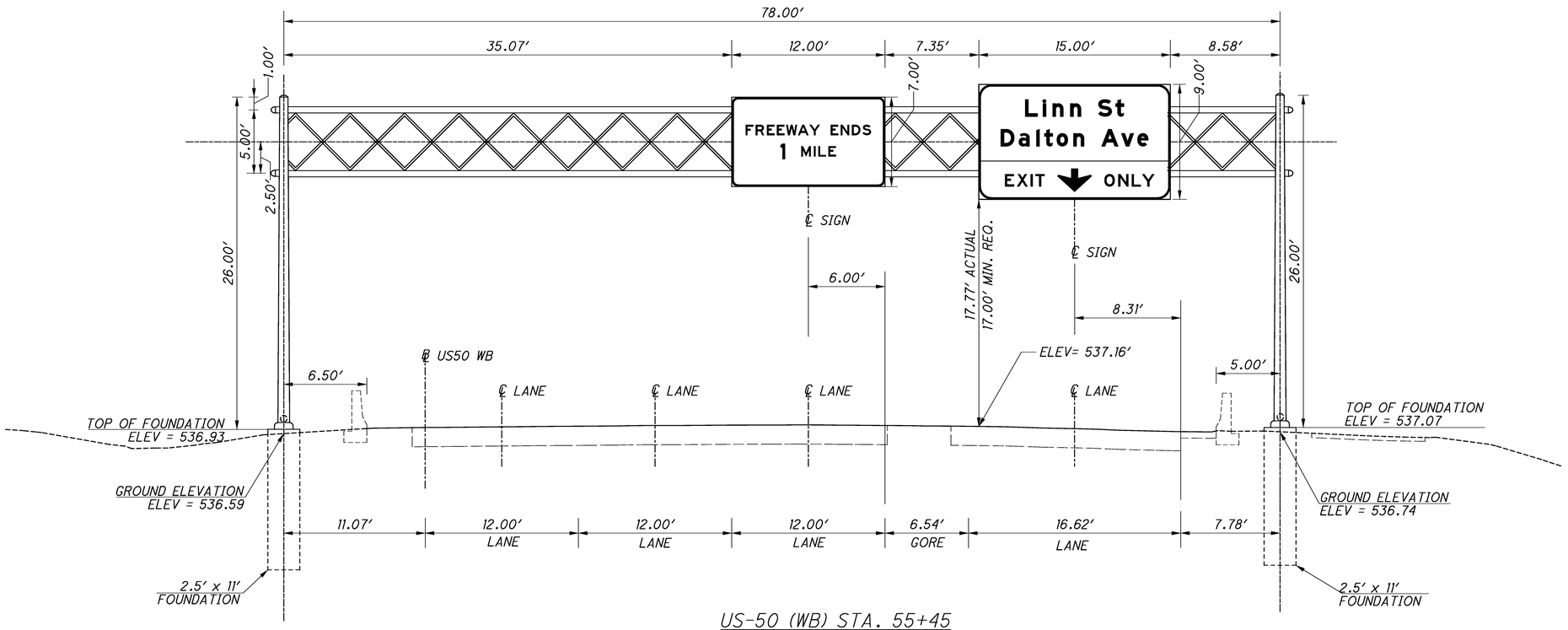
SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

132
442

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:37 PM jmlangos

T-6



US-50 (WB) STA. 55+45
TC-7.65, DESIGN 8
FHWA (OVERHEAD)

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:37 PM jmlangos

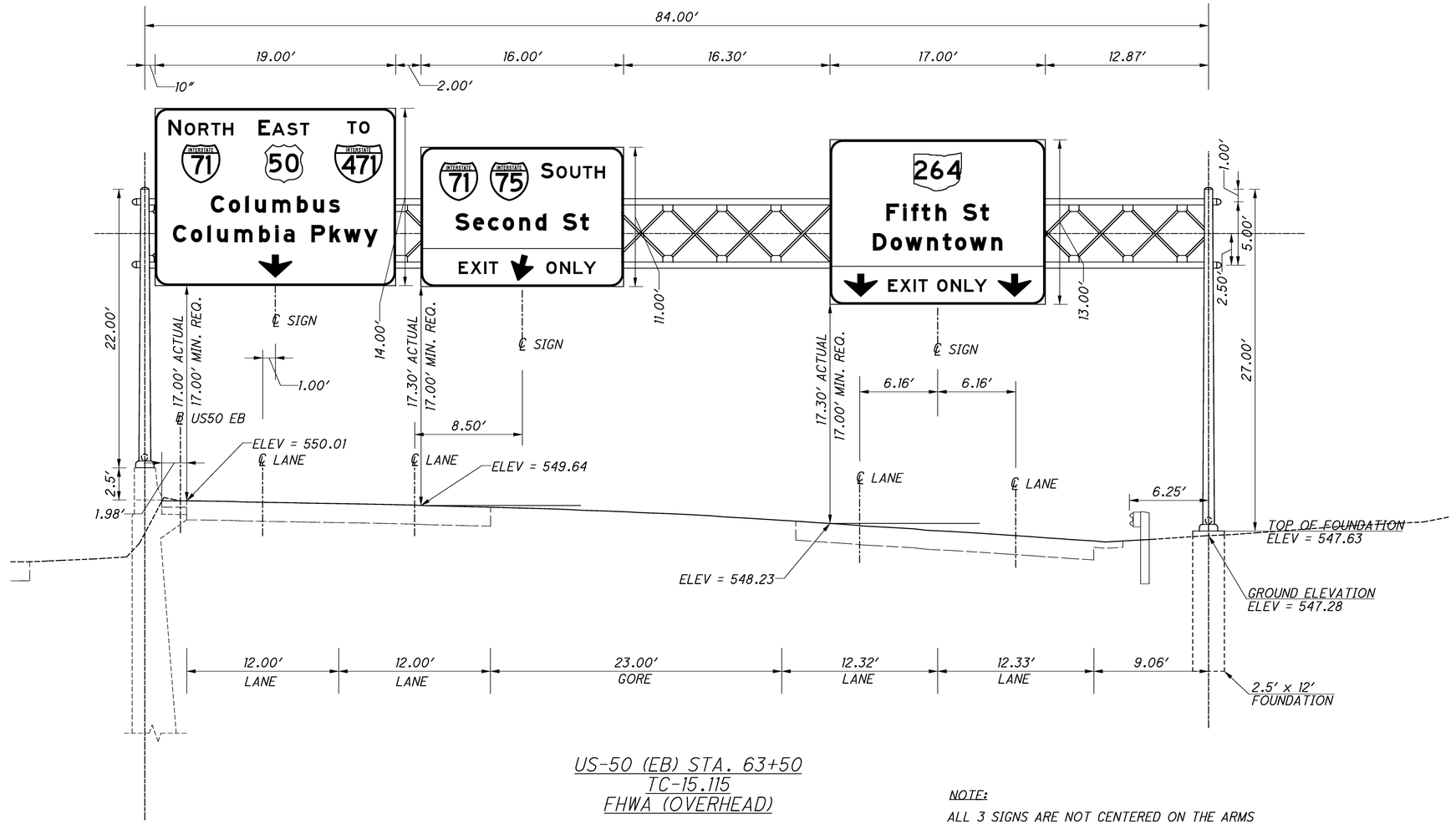
0 2.5 5 10 HORIZONTAL SCALE IN FEET

CALCULATED DL | CHECKED JRE

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

T-7



US-50 (EB) STA. 63+50
TC-15.115
FHWA (OVERHEAD)

NOTE:
ALL 3 SIGNS ARE NOT CENTERED ON THE ARMS

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:37 PM jmlangos

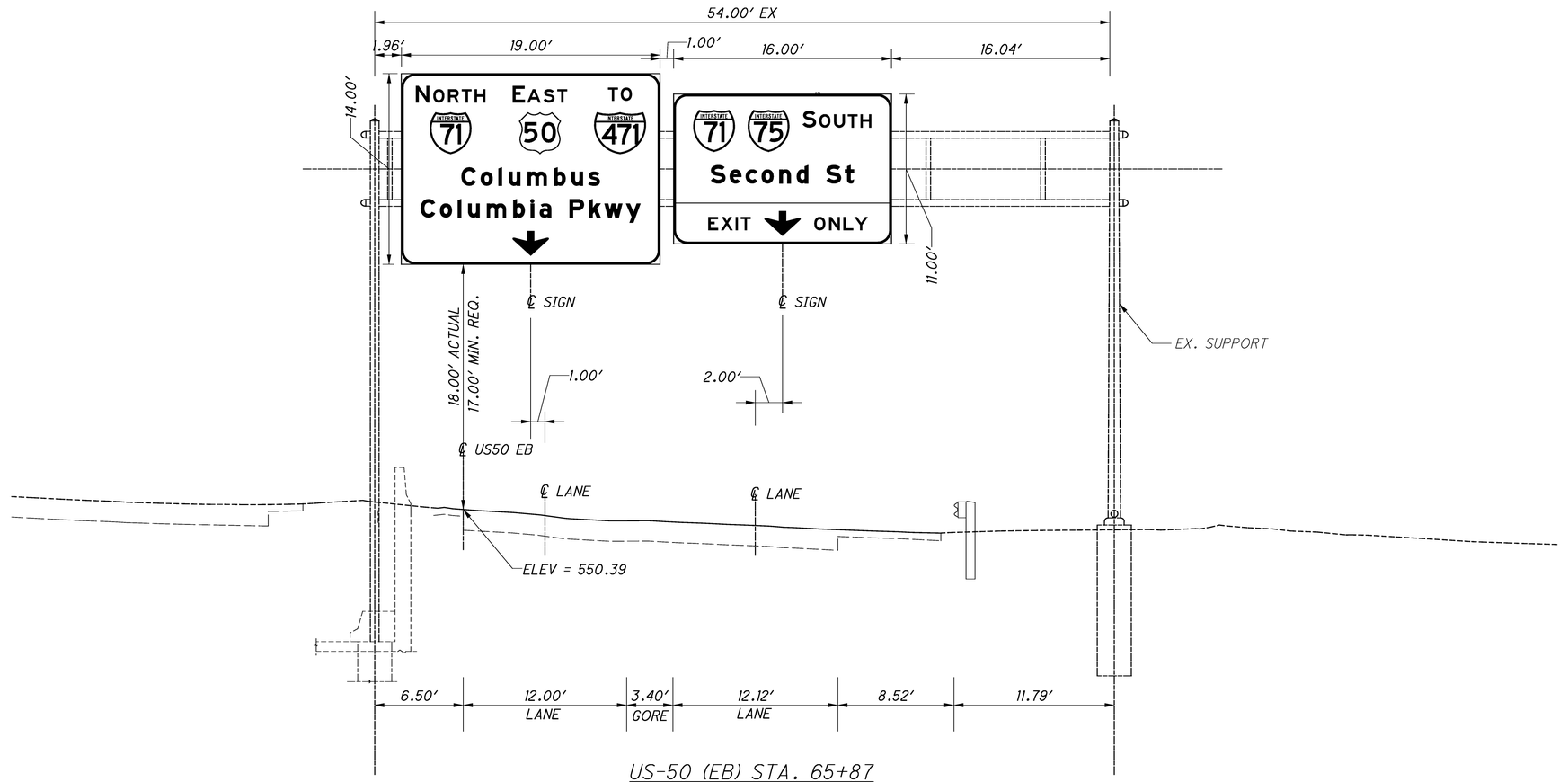
HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED DL
CHECKED JRE

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

T-8



US-50 (EB) STA. 65+87
EXISTING SUPPORT
FHWA (OVERHEAD)

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:38 PM jmlangos

HORIZONTAL SCALE IN FEET
0 2.5 5 10

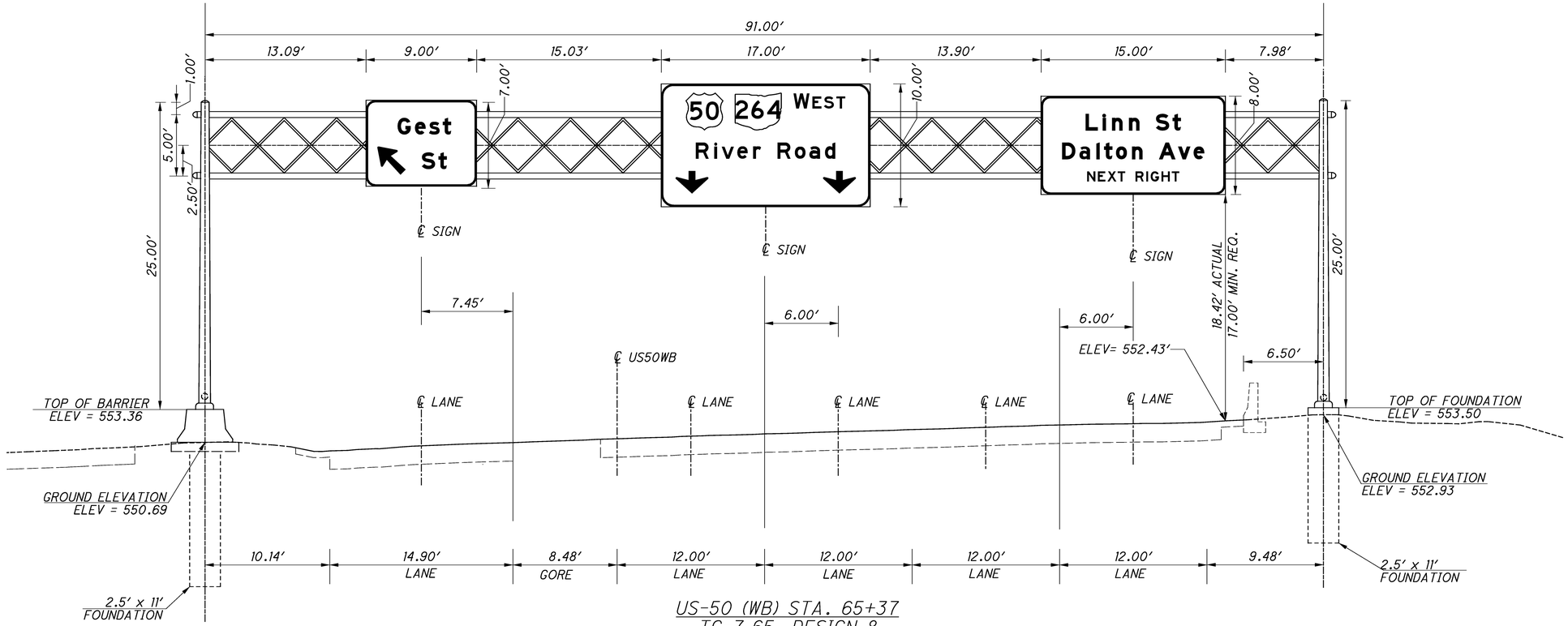
CALCULATED DL
CHECKED JRE

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

135
442

T-9



US-50 (WB) STA. 65+37
TC-7.65, DESIGN 8
FHWA (OVERHEAD)

0 2.5 5 10
HORIZONTAL
SCALE IN FEET

CALCULATED DL
CHECKED JRE

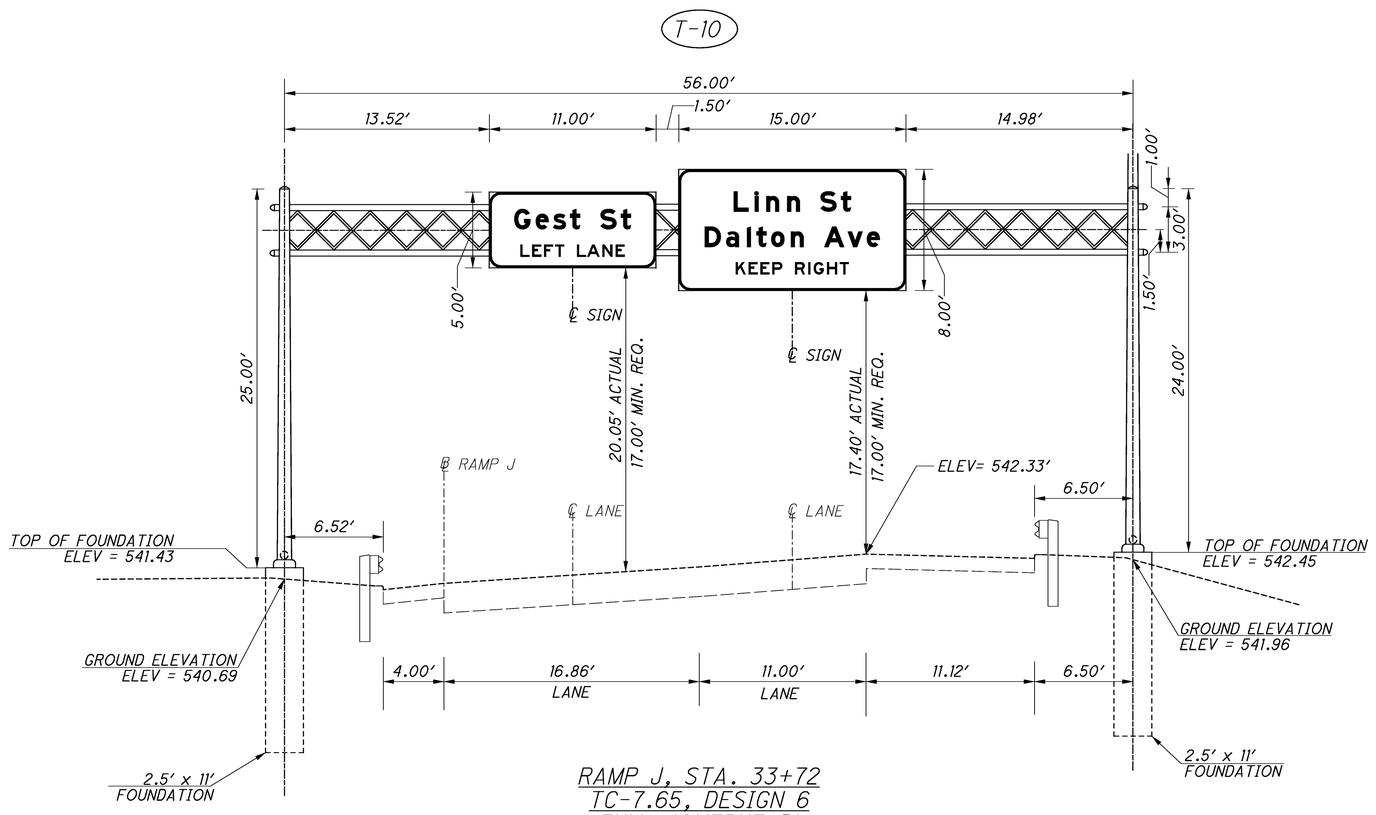
SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

HAM-50-19.03

136
442

G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:38 PM jmlangos

T-10



RAMP J, STA. 33+72
TC-7.65, DESIGN 6
FHWA (OVERHEAD)

SIGN ELEVATIONS
TRUSS OVERHEAD INSTALLATIONS

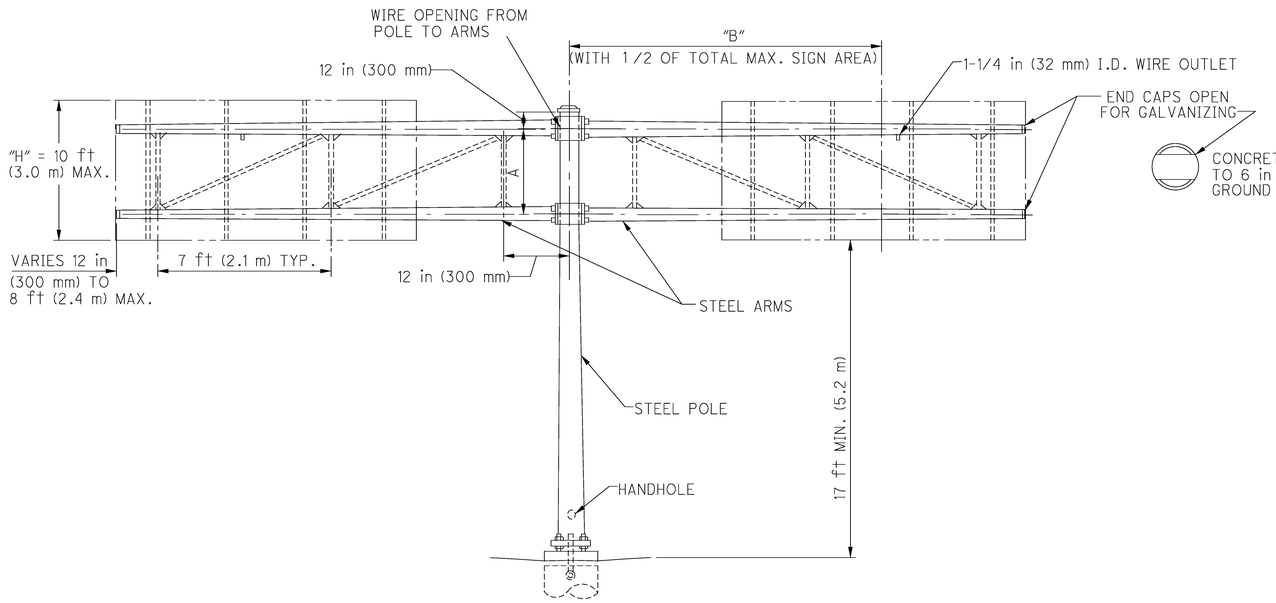
HAM-50-19.03

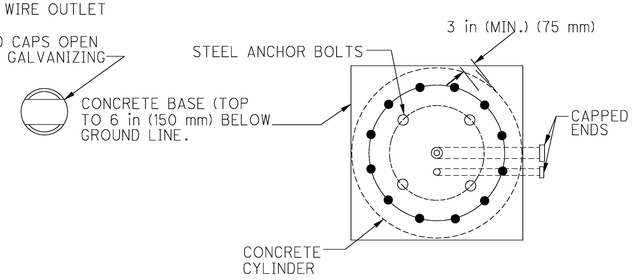
137
442

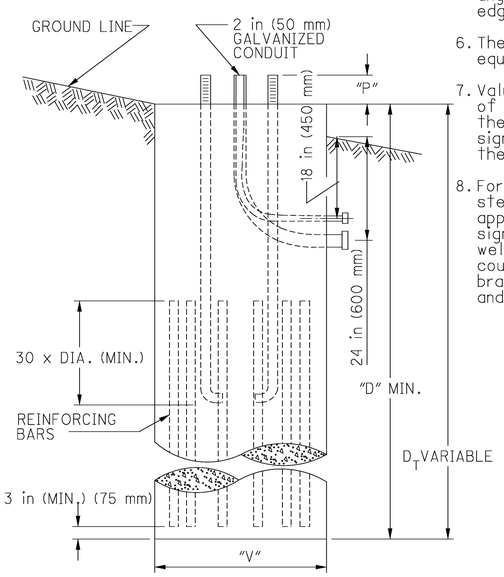
CALCULATED DL
CHECKED JRE

0 2.5 5 10
HORIZONTAL
SCALE IN FEET

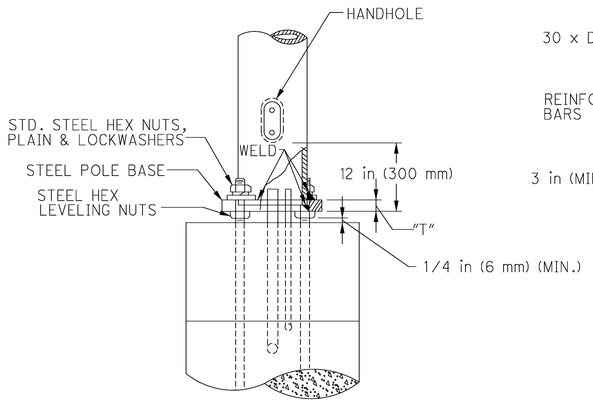
G:\CN06\0011\Road\Sheets\75736TE001.dgn 11/9/2010 12:32:38 PM jmlangos

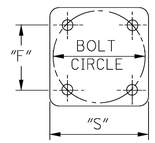




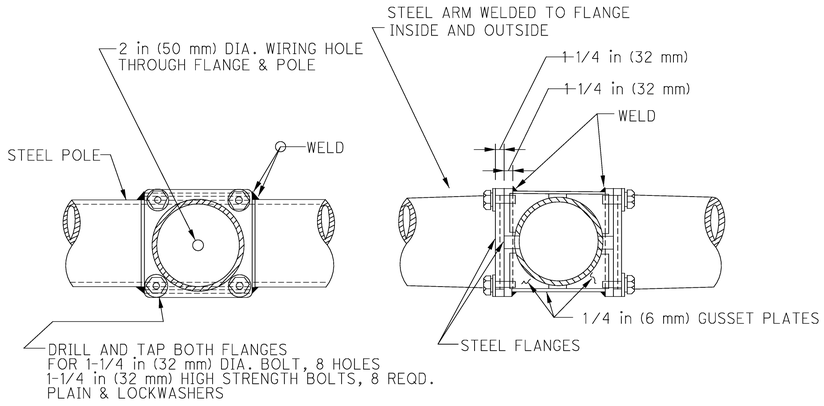


FOUNDATION DETAIL





POLE DETAIL



ARM ATTACHMENT DETAIL

NOTES

1. For sign attachment assemblies to be furnished with this support, construction details and location of handholes and switch enclosure mounting brackets, see Standard Construction Drawings TC-22.10 and TC-22.20.
2. For modification of the pole to support roadway lighting, see Standard Construction Drawings TC-22.10 and HL-10.12.
3. Weld the base plate to two ply poles with AWS prequalified welds in conformance with 730.04.
4. Provide a removable galvanized cast iron plug for all unused couplings and wire outlets.
5. Arms 20 feet (6.1 m) and over in length shall be truss type using 3 x 3 x 3/8 inches (75 mm x 75 mm x10 mm) angles welded to gusset plates with the inside edges of the arm parallel.
6. The maximum sign area on each side of the pole equals 1/2 the maximum total area in the chart.
7. Values of "B" may be exceeded provided the product of the actual sign areas times the distance from the centerline of the pole to the centerline of the sign does not exceed the product of "B" times 1/2 the maximum sign area.
8. For signs under 20 feet (6.0 m) long, weld one threaded steel 1-1/4 inch (32 mm) pipe coupling to the top chord approximately 12 inches (300 mm) outboard of the first sign bracket. For signs 20 foot (6.0 m) long or over, weld a second threaded steel 1 1/4 inch (32 mm) pipe coupling 12 inches (300 mm) outboard of the second sign bracket. Remove all sharp edges inside the chord and pipe coupling.

OFFICE OF TRAFFIC ENGINEERING

DESIGNED	REVIEWED
	LAM
REVISION DATE	CHECKED
11/27/06	

PIS NUMBER 202510

PLAN INSERT SHEET

OVERHEAD SIGN SUPPORT TYPE TC-10.48

HAM-50-19.03

1 / 2

138 / 442

G:\CN06\0011\Road\Sheets\75736TM001.dgn 11/9/2010 12:32:39 PM jmlangos

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED

DESIGN NO.	POLE SIZE	ARM SIZE	A (FT)	B (FT)	"D" MIN. (FT)	F	P	S	T	BOLT CIRCLE	ANCHOR BOLT SIZE	V (FT)	MAX SIGN AREA (SQ FT)	REINF. BARS	
														SIZE	NO.
1	.239x18x14.64x24 ft-0 in	.179x5.7x4.02x12 ft-0 in	4	8	9	18	8-3/8	26-1/2	2	25-1/2	2 x 96	3	160	3/4	12
2	.239x18x14.64x24 ft-0 in	.179x6.9x4.66x16 ft-0 in	4	12	9	18	8-3/8	26-1/2	2	25-1/2	2 x 96	3	160	3/4	12
3	.299x18x14.64x24 ft-0 in	.179x7.5x5.82x12 ft-0 in	4	8	1 1	18	9-3/8	26-1/2	2-1/2	25-1/2	2-1/4 x 108	3	240	1	12
4	.299x18x14.64x24 ft-0 in	.179x8.3x6.06x16 ft-0 in	4	12	1 1	18	9-3/8	26-1/2	2-1/2	25-1/2	2-1/4 x 108	3	240	1	12
5	.299x18x14.64x24 ft-0 in	.179x10x7.2x20 ft-0 in	4	16	1 1	18	9-3/8	26-1/2	2-1/2	25-1/2	2-1/4 x 108	3	220	1	12
6	2ply .239x18x14.5x25 ft-0 in	.179x10x7.48x18 ft-0 in	6	10	14	18	1 1-1/4	26-1/2	3	25-1/2	3 x 144	3	360	1-1/8	12
7	2ply .239x18x14.5x25 ft-0 in	.179x1 1x7.92x22 ft-0 in	6	14	14	18	1 1-1/4	26-1/2	3	25-1/2	3 x 144	3	360	1-1/8	12
8	2ply .299x18x14.5x25 ft-0 in	.179x12.5x9.14x24 ft-0 in	6	14	17	18	1 1-1/4	26-1/2	3	25-1/2	3 x 168	3	480	1-1/4	12
9	2ply .299x18x14.5x25 ft-0 in	.239x12.5x8.58x28 ft-0 in	6	18	17	18	1 1-1/4	26-1/2	3	25-1/2	3 x 168	3	480	1-1/4	12

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE NOTED

DESIGN NO.	POLE SIZE	ARM SIZE	A (m)	B (m)	"D" MIN. (m)	F	P	S	T	BOLT CIRCLE	ANCHOR BOLT SIZE	V (m)	MAX SIGN AREA (m2)	REINF. BARS	
														SIZE	NO.
1	6.07x457x372x7.3 m	4.55x145x102x3.7 m	1.2	2.4	2.7	457	213	673	51	648	51x2.4 m	0.9	14.9	19	36M
2	6.07x457x372x7.3 m	4.55x175x118x4.9 m	1.2	3.7	2.7	457	213	673	51	648	51x2.4 m	0.9	14.9	19	36M
3	7.59x457x372x7.3 m	4.55x190x148x3.7 m	1.2	2.4	3.4	457	238	673	64	648	57x2.7 m	0.9	22.3	25	36M
4	7.59x457x372x7.3 m	4.55x211x154x4.9 m	1.2	3.7	3.4	457	238	673	64	648	57x2.7 m	0.9	22.3	25	36M
5	7.59x457x372x7.3 m	4.55x254x183x6.1 m	1.2	4.9	3.4	457	238	673	64	648	57x2.7 m	0.9	20.5	25	36M
6	2ply 6.07x457x368x7.6 m	4.55x254x190x5.5 m	1.8	3.1	4.3	457	286	673	76	648	76x3.7 m	0.9	33.5	29	36M
7	2ply 6.07x457x368x7.6 m	4.55x279x201x6.7 m	1.8	4.3	4.3	457	286	673	76	648	76x3.7 m	0.9	33.5	29	36M
8	2ply 7.59x457x368x7.6 m	4.55x317x232x7.3 m	1.8	4.3	5.2	457	286	673	76	648	76x4.3 m	0.9	44.6	32	36M
9	2ply 7.59x457x368x7.6 m	4.55x317x218x8.5 m	1.8	5.5	5.2	457	286	673	76	648	76x4.3 m	0.9	44.6	32	36M

G:\CN06\0011\Road\Sheets\75736TM001.dgn 11/9/2010 12:32:40 PM jmlangos

OFFICE OF TRAFFIC ENGINEERING

DESIGNED | REVIEWED LAM

REVISION DATE 11/27/06 | CHECKED

PIS NUMBER 202510

PLAN INSERT SHEET

OVERHEAD SIGN SUPPORT
TYPE TC-10.48

HAM-50-19.03

625, CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN

THIS ITEM SHALL CONSIST OF CLEANING AN EXISTING CONDUIT BY REMOVING EXISTING CABLES, MUD AND DEBRIS SO THAT NEW CABLE CAN BE INSTALLED. INCIDENTAL TO THE CLEANING IS THE INSTALLATION OF BUSHINGS AND/OR COUPLINGS ON THE ENDS OF EXISTING CONDUIT AS REQUIRED. MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFF OF THE PROJECT SITE. DISTURBED AREAS SHALL BE PROPERLY RESTORED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN" PER FOOT OF CONDUIT CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, DISCONNECT CIRCUIT, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR TRANSFORMER BASE.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED FROM THE PULL BOX SO THAT NO CABLE IS LEFT IN THE BOX.

DISCONNECTION AT A TRANSFORMER BASE SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL CONNECTOR KITS. ALL DUCT-CABLE NOT TO BE REUSED SHALL BE REMOVED FROM THE TRANSFORMER BASE AND THE EXISTING CONDUIT IN THE FOUNDATION SHALL BE CLEANED OF ALL CABLE AND DEBRIS SO THAT THE NEW DUCT-CABLE CAN BE INSTALLED. ALL EXISTING CABLE TO REMAIN ACTIVE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT CABLE LEFT FOR RE-CONNECTION.

THOSE WIRES THAT ARE TO REMAIN ON ACTIVE CIRCUITS SHALL HAVE A WATER-RESISTANT SEAL AT THE CUT END. THE WATER-RESISTANT SEAL SHALL BE ACCOMPLISHED BY PLUGGING THE DEACTIVATED PORT OF AN EXISTING CONNECTOR KIT OR BY INSTALLING A CABLE SPLICE KIT ON THE CUT END OF THE CABLE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 625, "DISCONNECT CIRCUIT, AS PER PLAN" AT EACH EACH LOCATION WHERE DISCONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, LIGHTING, MISC.: REMOVAL OF EXISTING UNDERPASS LIGHTING

THIS ITEM OF WORK SHALL CONSIST OF THE COMPLETE REMOVAL OF THE EXISTING UNDERPASS LIGHTING FOR STRUCTURES 1954L&R.

THE REMOVAL SHALL INCLUDE THE LUMINAIRES, CIRCUIT CABLE, CONDUIT RUNS AND JUNCTION BOXES FROM THE LOCATION OF THE EXISTING CIRCUIT BRANCH TO THE UNDERPASS LIGHTING.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625 "LIGHTING, MISC.: REMOVAL OF EXISTING UNDERPASS LIGHTING" FOR THE ENTIRE EXISTING UNDERPASS LIGHTING SYSTEM TEM AND SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, LUMINAIRE, CONVENTIONAL, STYLE B, TYPE III, 250 WATT HPS, 240 VOLT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR CONVENTIONAL LIGHTING UNITS WITH AN IES TYPE III DISTRIBUTION AND 250 WATT HIGH PRESSURE SODIUM LAMPS SHALL BE AMERICAN ELECTRIC "SERIES 125" WITH PHOTOMETRIC DISTRIBUTION AE3842, COOPER "OVD" WITH PHOTOMETRIC DISTRIBUTION OVD2S3F, GENERAL ELECTRIC "M-400" WITH PHOTOMETRIC DISTRIBUTION 1015, OR EQUAL AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "LUMINAIRE, CONVENTIONAL, STYLE B, TYPE II, 250 WATT HPS, 240 VOLT, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, LUMINAIRE, UNDERPASS, 150 WATT HPS, 240 VOLT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR UNDERPASS LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR UNDERPASS LIGHTING UNITS SHALL BE AMERICAN ELECTRIC "SIDELIGHT SERIES 582" WITH PHOTOMETRIC DISTRIBUTION AE2081I, GENERAL ELECTRIC "VERSAFLOOD II WALLIGHTER" WITH PHOTOMETRIC DISTRIBUTION 8578, HOLOPHANE "WALLPACK II" TEST WITH PHOTOMETRIC DISTRIBUTION 33263, OR EQUAL AS APPROVED BY THE ENGINEER.

LUMINAIRES FOR UNDERPASS LIGHTING UNIT WHICH ARE WALL MOUNTED SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSES.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LUMINAIRE, UNDERPASS, 150 WATT HPS, 240 VOLT, AS PER PLAN" FOR EACH LUMINAIRE WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, CONDUIT, MISC.: 1-1/4", 731.08, FLEXIBLE

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING FLEXIBLE CONDUIT CONFORMING TO 731.08 AS PART OF THE UNDERPASS LIGHTING INSTALLED IN THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "CONDUIT, MISC.: 1-1/4", 731.08, FLEXIBLE" FOR FLEXIBLE CONDUIT INSTALLED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "LUCALOX," OSRAM SYLVANIA "LUMALUX," PHILIPS "CERAMALUX," OR EQUAL APPROVED BY THE ENGINEER.

LIGHT POLE ANCHOR BOLTS, MISC.: SET FOR PILASTER MOUNTED LIGHT POLE

WHEN A LIGHT POLE IS MOUNTED ON A PILASTER ON A BRIDGE PARAPET OR ON A RETAINING WALL, THE REQUIRED ANCHOR BOLTS MAY DIFFER IN LENGTH AND/OR SHAPE FROM THOSE REQUIRED WHEN THE POLE IS MOUNTED ON A CAST-IN-PLACE DRILLED SHAFT FOUNDATION. THE COST DIFFERENTIAL FOR FURNISHING SUCH BOLTS IS INCLUDED HEREIN.

IN ADDITION, THERE IS NO FOUNDATION CONSTRUCTION ITEM IN WHICH TO INCLUDE THE SETTING OF THE ANCHOR BOLTS. THUS, THE SETTING OF THE ANCHOR BOLTS INTO THE PILASTER IS ALSO PART OF THIS WORK.

PAYMENT WILL BE MADE AT EACH SUCH POLE LOCATION AT THE UNIT PRICE BID FOR EACH CMS ITEM 625, "LIGHT POLE ANCHOR BOLTS, MISC.: SET FOR PILASTER MOUNTED LIGHT POLE" AND SHALL BE FULL COMPENSATION FOR FURNISHING AND PLACING THE SET OF ANCHOR BOLTS REQUIRED.

625, JUNCTION BOXES, AS PER PLAN

THE JUNCTION BOX SHALL HAVE AN EMBOSSMENT IN THE BACK OF THE BOX THAT SHALL BE DRILLED AND TAPPED FOR A 1/4"-20 CAP SCREW FOR CONNECTION OF GROUNDS.

WHEN ENCASED IN CONCRETE, THE JUNCTION BOX SHALL HAVE INWARD FLANGED COVERS AND MAY HAVE IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, SLIP HOLES FIELD DRILLED TO ACCOMMODATE THE CONDUITS ENTERING THE BOX SO LONG AS EACH METALLIC CONDUIT IS EQUIPPED WITH A GROUNDING BUSHING JUMPED TO THE BOX ITSELF.

WHEN SURFACE MOUNTED, THE JUNCTION MAY HAVE IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, FIELD INSTALLED HUBS TO ACCOMMODATE THE CONDUITS ENTERING THE BOX.

CONDUIT EXPANSION AND DEFLECTION

EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, APPLETON TYPE AX, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, APPLETON TYPE DF, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

625, POWER SERVICE REFURBISHED, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF THOSE PORTIONS OF AN EXISTING POWER SERVICE NOT BEING REUSED AND THE INSTALLATION OF NEW POWER SERVICE COMPONENTS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

ALL EXISTING LIGHTING CIRCUIT CABLES AND SPLICES SHALL BE REMOVED FROM THE ADJACENT EXISTING PULL BOX AND FROM CONDUIT BETWEEN THE PULL BOX AND THE POWER SERVICE ENCLOSURE. WHERE EXISTING CONDUIT IS TO BE REUSED, THE CONDUIT SHALL BE CLEANED OF MUD AND DEBRIS. THE ENCLOSURE AND OTHER RELATED COMPONENTS OF THE POWER SERVICE SHALL BE CLEANED OF ALL MUD, DEBRIS AND EXISTING FUSES SHALL BE REMOVED AND DISCARDED.

THE EXISTING CONTROL TRANSFORMER, PHOTOCELL AND CONTACTOR COIL SHALL BE REMOVED AND SHALL BE REPLACED WITH A NEW LINE VOLTAGE CONTACTOR COIL AND A NEW PHOTO CELL. THE POWER SERVICE SHALL BE WIRED AS SHOWN IN STANDARD DRAWINGS AND AS DETAILED IN THE PLANS.

THE GROUND AREA IN THE VICINITY OF THE POWER SERVICE SHALL BE FREE OF ALL DEBRIS, AND SHALL HAVE GRASS TRIMMED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR EACH CMS ITEM 625, "POWER SERVICE REFURBISHED, AS PER PLAN" AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY WORKMANLIKE MANNER.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

625, LIGHT POLE, MISC.: CINCINNATI STANDARD #11A9D40

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING A LIGHT POLE AT LOCATIONS DESIGNATED IN THE PLANS. THE LIGHT POLES WILL BE INSTALLED ON STRUCTURE PARAPETS. NEW ANCHOR BOLTS SHALL BE FURNISHED

POLES SHALL CONFORM TO CITY OF CINCINNATI STANDARD CONSTRUCTION DRAWING ES-10-3. POLE SHALL HAVE DAVIT TYPE ARM. DESIGN DESIGNATION IS 11A9D40.

IN ADDITION, A NEW DECAL FOR THE NEW IDENTIFICATION NUMBER FURNISHED AND INSTALLED.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "LIGHT POLE, MISC.: CINCINNATI STANDARD #11A9D40" FOR EACH POLE RE-ERECTED WHICH SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED | CHECKED

LIGHTING GENERAL NOTES

HAM-50-19.03

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LN001.dgn 11/10/2010 12:52:08 PM mtneihelsel

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. A QUANTITY OF ONE IS PROVIDED IN THE LIGHTING GENERAL SUMMARY AS A CONTINGENCY ITEM.

LIGHTING LEGEND

EXISTING	PROPOSED	DESCRIPTION
⊄	⊄	CONVENTIONAL LIGHTING
	◗	UNDERPASS LIGHTING (100W HPS)
△		CONTROL CENTER
⋯⋯	▬▬	CONDUIT (CIRCUIT CABLE AND SIZE AS NOTED)
⊡	⊡	PULL BOX

CALCULATED | CHECKED

LIGHTING GENERAL NOTES

HAM-50-19.03

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LN002.dgn 11/10/2010 12:52:10 PM mtreihelsel

SHEET NUMBER												PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
				143		144													
				22										625	00500	22	EACH	CONNECTOR KIT, TYPE II	
				11										625	10500	11	EACH	LIGHT POLE, MISC.: CINCINNATI STANDARD #11A9D40	140
				11										625	10620	11	EACH	LIGHT POLE ANCHOR BOLTS, MISC.: SET FOR PILASTER MOUNTED POLE	140
				8853										625	23302	8853	FT	NO. 6 AWG 5000 VOLT DISTRIBUTION CABLE	
				1100										625	23400	1100	FT	NO. 10 AWG POLE AND BRACKET CABLE	
				283										625	25200	283	FT	CONDUIT, 1-1/4", 725.04	
				9										625	25920	9	FT	CONDUIT, MISC.: 1-1/4", 731.08, FLEXIBLE	140
				455										625	25911	455	FT	CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN	140
				11										625	26251	11	EACH	LUMINAIRE, CONVENTIONAL, STYLE B, TYPE III, 250 WATT HPS, 240 VOLT, AS PER PLAN	140
				3										625	27501	3	EACH	LUMINAIRE, UNDERPASS, 150 WATT HPS, 240 VOLT, AS PER PLAN	140
				33										625	29000	33	FT	TRENCH	
				5										625	29901	5	EACH	JUNCTION BOX, AS PER PLAN	140
						5								625	33000	5	EACH	STRUCTURE GROUNDING SYSTEM	
						1								625	34011	1	EACH	POWER SERVICE REFURBISHED, AS PER PLAN	140
						1								625	37100	1	EACH	SERVICE TO UNDERPASS LIGHTING	
						1								625	39520	1	EACH	PULL BOX CLEANED	
														SPECIAL	62540000	LUMP		MAINTAIN EXISTING LIGHTING	141
														SPECIAL	62540010	1	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT	141
						11								625	75400	11	EACH	LIGHT POLE REMOVED	
						11								625	75506	11	EACH	LUMINAIRE REMOVED	
						7								625	75801	7	EACH	DISCONNECT CIRCUIT, AS PER PLAN	140
						2								625	98000	2	EACH	LIGHTING, MISC.: REMOVAL OF EXISTING UNDERPASS LIGHTING	140

CALCULATED

CHECKED

LIGHTING GENERAL SUMMARY

HAM-50-19.03

142
442

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LG001.dgn 11/10/2010 12:52:12 PM mtneiheisel

REFERENCE NO.	SHEET NO.	SIDE	NODE	STATION TO STATION		625 CONNECTOR KIT, TYPE II EACH	625 LIGHT POLE, MISC.: CINCINNATI STANDARD #11A9D40 EACH	625 LIGHT POLE ANCHOR BOLTS, MISC.: SET FOR PILASTER MOUNTED POLE EACH	625 NO. 6 AWG 5000 VOLT DISTRIBUTION CABLE FT	625 NO. 10 AWG POLE AND BRACKET CABLE FT			625 CONDUIT, 1-1/4", 725.04 FT	625 CONDUIT, MISC.: 1-1/4", 731.08, FLEXIBLE FT	625 CONDUIT CLEANED AND CABLES REMOVED, AS PER PLAN FT	625 LUMINAIRE, CONVENTIONAL, STYLE B, TYPE II, 250 WATT HPS, 240 VOLT, AS PER PLAN EACH	625 LUMINAIRE, UNDERPASS, 150 WATT HPS, 240 VOLT, AS PER PLAN EACH			625 TRENCH FT	625 JUNCTION BOX, AS PER PLAN EACH		
				U.S. 50 EB																			
	145	RT	1-1-1	01+99.00																			
	145	RT		01+99.00	02+62.00				219						63								
	145		1903R																				
	145	RT		02+62.00	03+33.31				244														
	145	RT	1-1-2	03+33.31		2	1	1		100						1							
	145	RT		03+33.31	04+81.51				475														
	145	RT	1-1-3	04+81.51		2	1	1		100						1							
	145	RT		04+81.51	06+33.83				487														
	145	RT	1-1-4	06+33.83		2	1	1		100						1							
	145	RT		06+33.83	07+92.00				505														
	145	RT	1-1-5	07+92.00		2	1	1		100						1							
	145	RT		07+92.00	09+68.10				558														
	145	RT	1-1-6	09+68.10		2	1	1		100						1							
	145	RT		09+68.10	11+45.06				561														
	145	RT	1-1-7	11+45.06		2	1	1		100						1							
	145	RT		11+45.06	13+02.12				501														
	145	RT		13+02.12	13+17.00				75						15								
	145	RT	1-1-8	13+17.00																			
				U.S. 50 WB																			
	146	LT	3-5-6	27+22.00																			
	146	LT		27+22.00	27+23.50				35						2								
	146		1954L																				
	146	LT		27+23.50	29+50.00				710														
	146	LT	3-5-8	28+65.00		2	1	1	285	100			85			1						1	
	146	LT		29+50.00	30+20.00				240						70								
	146	LT	3-5-9	30+20.00																			
	146	LT		30+20.00	30+56.00				148						36								
	146	LT		30+56.00	33+50.50				914														
	146		1961L																				
	146	LT	3-5-10	31+46.00		2	1	1		100						1							
	146	LT	3-5-11	32+88.00		2	1	1	90	100			20			1						1	
	146	LT		33+50.50	34+56.00				347						105.5								
	146	LT	3-5-12	34+56.00																			
				U.S. 50 EB																			
	146		1954R																				
	146	RT	2-4-4	27+93.00																			
	146	RT		27+93.00	27+96.00				39						3								
	146	RT		27+96.00	29+53.00				501														
				HARRIET ST./RAMP A																			
	148	RT	2-6-11	28+58.00													1						
	148	RT		28+58.00	29+14.00				288				80	6								2	
	148	RT	2-6-10	29+14.00													1						
	148	RT		29+14.00	29+67.00				180				50	3								1	
	148	RT	2-6-9	29+67.00													1						
	148	RT		29+67.00	30+00.00				183				48								33		
	148	RT	PB, B4-1	30+00.00																			
	148	RT	CC2	30+00.00																			
				U.S. 50 EB																			
	146	RT		29+53.00	29+75.50				98						22.5								
	146	RT	2-4-5	29+75.50																			
	146	RT		29+75.50	31+13.50				444						138								
	146		1961R																				
	146	RT		31+13.50	33+45.50				726														
	146	RT	2-4-6	31+59.00		2	1	1		100						1							
	146	RT	2-4-7	33+09.00		2	1	1		100						1							
TOTALS CARRIED TO LIGHTING GENERAL SUMMARY						22	11	11	8853	1100			283	9	455	11	3			33	5		

CALCULATED | CHECKED

LIGHTING SUBSUMMARY

HAM-50-19.03

143
442

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LS001.dgn 11/10/2010 12:52:13 PM mtreiheisel

REFERENCE NO.	SHEET NO.	SIDE	NODE	STATION TO STATION			625 STRUCTURE GROUNDING SYSTEM EACH	625 POWER SERVICE REFURBISHED, AS PER PLAN EACH	625 SERVICE TO UNDERPASS LIGHTING EACH		625 PULL BOX CLEANED EACH			625 LIGHT POLE REMOVED EACH	625 LUMINAIRE REMOVED EACH	625 DISCONNECT CIRCUIT, AS PER PLAN EACH	625 LIGHTING, MISC.: REMOVAL OF EXISTING UNDERPASS LIGHTING EACH						
				U.S. 50 EB																				
	145	RT	1-1-1	01+99.00												1								
	145	RT		01+99.00		02+62.00																		
	145		1903R				1																	
	145	RT		02+62.00		03+33.31																		
	145	RT	1-1-2	03+33.31										1	1									
	145	RT		03+33.31		04+81.51																		
	145	RT	1-1-3	04+81.51										1	1									
	145	RT		04+81.51		06+33.83																		
	145	RT	1-1-4	06+33.83										1	1									
	145	RT		06+33.83		07+92.00																		
	145	RT	1-1-5	07+92.00										1	1									
	145	RT		07+92.00		09+68.10																		
	145	RT	1-1-6	09+68.10										1	1									
	145	RT		09+68.10		11+45.06																		
	145	RT	1-1-7	11+45.06										1	1									
	145	RT		11+45.06		13+02.12																		
	145	RT		13+02.12		13+17.00																		
	145	RT	1-1-8	13+17.00												1								
				U.S. 50 WB																				
	146	LT	3-5-6	27+22.00												1								
	146	LT		27+22.00		27+23.50																		
	146		1954L				1											1						
	146	LT		27+23.50		29+50.00																		
	146	LT	3-5-8	28+65.00										1	1									
	146	LT		29+50.00		30+20.00																		
	146	LT	3-5-9	30+20.00												1								
	146	LT		30+20.00		30+56.00																		
	146	LT		30+56.00		33+50.50																		
	146		1961L				1																	
	146	LT	3-5-10	31+46.00										1	1									
	146	LT	3-5-11	32+88.00										1	1									
	146	LT		33+50.50		34+56.00																		
	146	LT	3-5-12	34+56.00												1								
				U.S. 50 EB																				
	146		1954R				1											1						
	146	RT	2-4-4	27+93.00												1								
	146	RT		27+93.00		27+96.00																		
	146	RT		27+96.00		29+53.00																		
				HARRIET ST./RAMP A																				
	148	RT	2-6-11	28+58.00																				
	148	RT		28+58.00		29+14.00																		
	148	RT	2-6-10	29+14.00																				
	148	RT		29+14.00		29+67.00																		
	148	RT	2-6-9	29+67.00					1															
	148	RT		29+67.00		30+00.00																		
	148	RT	PB, B4-1	30+00.00							1													
	148	RT	CC2	30+00.00				1																
				U.S. 50 EB																				
	146	RT		29+53.00		29+75.50																		
	146	RT	2-4-5	29+75.50												1								
	146	RT		29+75.50		31+13.50																		
	146		1961R				1																	
	146	RT		31+13.50		33+45.50																		
	146	RT	2-4-6	31+59.00										1	1									
	146	RT	2-4-7	33+09.00										1	1									
TOTALS CARRIED TO LIGHTING GENERAL SUMMARY							5	1	1		1			11	11	7	2							

CALCULATED | CHECKED

LIGHTING SUBSUMMARY

HAM-50-19.03

144
442

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LS002.dgn 11/10/2010 12:52:14 PM mtreitreisel

EXISTING LIGHTING CONTROL CENTER DATA PER EXISTING PLANS [HAM-50-19.36, 1992]. CONTRACTOR SHALL VERIFY.

EX. LIGHT POLE (1-2-6) TO REMAIN, NO WORK

(S2-2) REMOVAL OF SIGN LIGHTING, SEE SIGNING PLANS FOR DETAILS AND QUANTIFYING

EX. LIGHT POLE (1-2-1) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-2) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-3) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-4) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-5) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-7) TO REMAIN, NO WORK

EX. LIGHT POLE (1-2-8) TO REMAIN, NO WORK

BEGIN PROJECT STA. 2+39.69 (EB)

MILL CREEK

CSX TRANSPORTATION

CENTRAL RAILROAD COMPANY OF INDIANA

EX. SIGN (S2-1) TO REMAIN
EX. CIRCUIT 2 TERMINATES

CONST. LIMITS

Ex LA-R/W

℄ EX. ℄ US 50 WB

BRIDGE HAM-50-1903L

BRIDGE HAM-50-1903R

PC Sta. 2+53.83

PC Sta. 4+09.96

PC Sta. 9+77.45

PT Sta. 14+11.51

PC Sta. 14+49.98

S 69° 09' 10" E

S 69° 17' 12" E

S 80° 08' 10" E

STRUCUTRE GROUNDING SYSTEM

PROP. ℄ US 50 EB

EX. ℄ US 50 EB

EX. CIRCUIT 2 CONTINUES EAST

EX. CIRCUITS 1 & 3 CONTINUE EAST

CONST. LIMITS

BALTIMORE & OHIO

OHIO RIVER

Ex R/W

EX. LIGHT POLE (1-1-1) TO REMAIN EX. CIRCUIT 1 TERMINATES

STA. 2+67, 53'± RT, ℄ US 50 EB
2" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER (TYP.)

STA. 3+33.31, 54' RT ℄ US 50 EB (1-1-2)
REMOVE EX. POLE FROM STRUCTURE; PROP. CONV. LUMINAIRE ON DAVIT ARM LIGHT POLE ON NEW PARAPET; (TYP.)

STA. 4+81.51, 54' RT, ℄ US 50 EB (1-1-3)

STA. 6+33.83, 54' RT, ℄ US 50 EB (1-1-4)

STA. 7+92.00, 54' RT, ℄ US 50 EB (1-1-5)

STA. 9+68.10, 54' RT, ℄ US 50 EB (1-1-6)

STA. 11+45.06, 54' RT, ℄ US 50 EB (1-1-7)

STA. 13+02.12, 53'± RT, ℄ US 50 EB
2" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER (TYP.)

STA. 14+60±, RT, ℄ US 50 EB
EX. CONTROL CENTER #1 (CC1); EXISTING LIGHTING CIRCUITS 1, 2 & 3

(A) AT EX. LIGHT POLE LOCATIONS DISCONNECT EXISTING CIRCUIT TOWARDS PROPOSED WORK;

REMOVE CABLES AND CLEAN CONDUIT IN PARAPET/WALL;

MAKE CONDUIT SPLICE CONNECTION MATCHING EXISTING CONDUIT SIZE AT PARAPET/WALL CONSTRUCTION JOINT;

INSTALL DISTRIBUTION CABLES TO RE-ESTABLISH CIRCUIT

REMOVAL OF SIGN LIGHTING (S1-3), SEE SIGNING PLANS FOR DETAILS AND QUANTIFYING

(A) EX. LIGHT POLE (1-1-8) TO REMAIN

EX. LIGHT POLE (1-1-9) TO REMAIN, NO WORK

N

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED .
CHECKED .

LIGHTING PLAN US 50
STA. 1+00 TO STA. 15+00

HAM-50-19.03

145
442

G:_CN06\0011\Road\CO-LIGHTING\SHEET\75736LP001.dgn 11/10/2010 12:52:17 PM mtreihleisel

EXISTING LIGHTING CONTROL CENTER DATA PER EXISTING PLANS [HAM-50-19.36, 1992]. CONTRACTOR SHALL VERIFY.

STA. 31+46, 54' LT ℄ US 50 WB (3-5-10)
REMOVE EX. POLE FROM STRUCTURE;
PROP. CONV. LIGHT POLE ON NEW PARAPET;
PROP. CONV. LUMINAIRE ON DAVIT ARM. (TYP.)

(A) AT EX. LIGHT POLE LOCATIONS DISCONNECT EXISTING CIRCUIT TOWARDS PROPOSED WORK;

REMOVE CABLES AND CLEAN CONDUIT IN PARAPET/WALL;

MAKE CONDUIT SPLICE CONNECTION MATCHING EXISTING CONDUIT SIZE AT PARAPET/WALL CONSTRUCTION JOINT;

INSTALL DISTRIBUTION CABLES TO RE-ESTABLISH CIRCUIT

(B) REMOVE EX. STRUCTURE UNDERPASS LIGHTING:
1954L; 3-5a-1, 3-5a-2
1954R; 2-6-9, 2-6-10

INSTALL UNDERPASS LIGHTING:
1954R; 2-6-9, 2-6-10
1654L; 2-6-11

FOR DETAILS, SEE SHEET 148.

(C) WORK CONSISTS OF RE-ESTABLISHING CIRCUIT TIE-IN AT NEAREST SALVAGABLE EXISTING JUNCTION BOX MOUNTED TO BRIDGE PIER CAP. IF NONE, ACCESS CONDUIT AND PLACE A NEW JUNCTION BOX AND INSTALL 1-1/4" CONDUIT TO STRUCTURE MOUNTED LIGHT POLE AT 3-5-8 AND 3-5-11 AS APPLICABLE.

QUANTITIES ACCOUNTED FOR AT POLES 3-5-8 AND 3-5-11 LOCATIONS.

(C) STA. 28+65, 54' LT ℄ US 50 WB (3-5-8)
REMOVE EX. POLE FROM STRUCTURE;
PROP. CONV. LIGHT POLE ON NEW PARAPET;
PROP. CONV. LUMINAIRE ON DAVIT ARM. (TYP.)
CONTINUE BRANCH CIRCUIT TO LIGHTING ALONG RAMP A.

EX. LIGHT POLE (3-5-7) RAMP A TO REMAIN; NO WORK

STA. 27+23.5, 57'± TO STA. 29+50, 56'± LT EX. ℄ US 50 WB 3" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER

STRUCTURE GROUNDING SYSTEM, 2 EA. (196IL&R)

STA. 30+56, 56'± TO STA. 33+50.5', 61.5'± LT EX. ℄ US 50 WB 3" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER

(A) EX. LIGHT POLE (3-5-9) TO REMAIN

(C) STA. 32+88.00, 54' LT ℄ US 50 WB (3-5-11)
REMOVE EX. POLE FROM STRUCTURE;
PROP. CONV. LIGHT POLE ON NEW PARAPET;
PROP. CONV. LUMINAIRE ON DAVIT ARM. (TYP.)
CIRCUIT SERVICE COMES FROM BELOW STRUCTURE.

(A) EX. LIGHT POLE (3-5-6) TO REMAIN

EX. PB RAMP A

EX. LIGHT POLE (3-5-12) TO REMAIN

EX. LIGHT POLE (3-5-13) TO REMAIN; NO WORK

EX. LIGHT POLE (3-5-14) TO REMAIN; NO WORK

EX. LIGHT POLE (3-5-16) TO REMAIN; NO WORK

EX. PB, B5-1 UNDER STRUCTURE TO CC3

EX. LIGHT POLE (3-5-15) TO REMAIN; NO WORK

(B) REMOVE EX. STRUCTURE UNDERPASS LIGHTING (1954L; 3-5a-1, 3-5a-2 AND 1954R; 2-6-9, 2-6-10); INSTALL 1954L&R; 2-6-9, 2-6-10 & 2-6-11

BRIDGE HAM-50-1954L29

BRIDGE HAM-50-1954R

BRIDGE HAM-50-196IL

BRIDGE HAM-50-196IR

S 88° 58' 52" E

S 89° 07' 24" E

EX. ℄ US 50 WB

EX. ℄ US 50 EB

STRUCTURE GROUNDING SYSTEM, 2 EA. (1954L&R)

CONST. LIMITS

(A) EX. LIGHT POLE (2-4-4) TO REMAIN

STA. 27+96, 48'± TO STA. 29+53, 48'± RT EX. ℄ US 50 EB 3" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER

EX. CONTROL CENTER (CC2), RAMP A.

EX. PULL BOX, B4-1, RAMP A ACCESS FOR NEW CONDUIT AND CIRCUIT TO UNDERPASS LIGHTING (3) SPLICE KITS

(S4-7c) REMOVAL OF STRUCTURE MOUNTED SIGN LIGHTING, SEE SIGNING PLANS FOR DETAILS AND QUANTIFYING

EX. LIGHT POLE (2-6-7) TO REMAIN; NO WORK

(A) EX. LIGHT POLE (2-4-5) TO REMAIN

EX. LIGHT POLE (2-6-6) TO REMAIN; NO WORK

EX. LIGHT POLE (2-6-8) TO REMAIN; NO WORK

STA. 31+13.5, 51' RT± TO STA. 33+45.5, 65'± RT EX. ℄ US 50 EB 3" CONDUIT IN PROPOSED STRUCTURE PARAPET SHALL MATCH EXISTING LOCATION AS DIRECTED BY THE ENGINEER

STA. 31+59, 53' RT EX. ℄ US 50 EB (2-4-6)
REMOVE EX. POLE FROM STRUCTURE;
PROP. CONV. LIGHT POLE ON NEW PARAPET;
PROP. CONV. LUMINAIRE ON DAVIT ARM.

EX. LIGHT POLE (4-7-5) TO REMAIN; NO WORK

EX. LIGHT POLE (4-8-9) TO REMAIN, NO WORK

EX. LIGHT POLE (4-7-3) TO REMAIN; NO WORK

(S4-7) REMOVAL OF STRUCTURE MOUNTED SIGN LIGHTING, SEE SIGNING PLANS FOR DETAILS AND QUANTIFYING

EX. LIGHT POLE (4-7-4) TO REMAIN; NO WORK

EX. CONTROL CENTER (CC3), W. 6TH ST. CIRCUIT CONDUIT GOES UNDER STRUCTURE TO NORTH SIDE FOR CIRCUIT #5.

STA. 33+09.00, 62'± RT EX. ℄ US 50 EB (2-4-7)
REMOVE EX. POLE FROM STRUCTURE;
PROP. CONV. LIGHT POLE ON NEW PARAPET;
PROP. CONV. LUMINAIRE ON DAVIT ARM.

EX. LIGHT POLE (4-8-10) TO REMAIN; NO WORK

EX. LIGHT POLE (4-8-1) TO REMAIN; NO WORK

HARRIET ST.

GERTRUBE-EL MONNIG 140-0001-0035-00

SLOO ST.

EARP ST.

W. 6TH ST.

RAMP A

RAMP FA

RAMP FB

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED . CHECKED .

LIGHTING PLAN - US 50
STA. 26+50.00 TO STA. 38+00.00

HAM-50-19.03

146
442

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LP002.dgn 11/10/2010 12:52:20 PM mtreiheisel

CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	* EX. CIRCUIT LOAD (AMPS)	PROP. CIRCUIT LOAD (AMPS)	* EX. FUSE SIZE (AMPS)	PROP. FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CC1 14+60± RT ℄ US 50 EB	120/240 VAC	16.3 (* EX.) 12.8 (PROP.)	3-#2 (* EX.)	100 (* EX.)	1	32.0	23.0	40		#6	CITY OF CINCINNATI
					2	26.1	20.7	40		#6	
					3	9.8	N/C	20		#6	
NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE GENERAL NOTES AND STANDARD DRAWINGS											

CONTROL CENTER 'CC1':

CIRCUIT "1": REMOVE AND REPLACE STRUCTURE PARAPET-MOUNTED LIGHTING.
REMOVE SIGN LIGHTING TO OVERHEAD SIGN S1-3.
CIRCUIT "2": REMOVE SIGN LIGHTING TO OVERHEAD SIGNS S2-2 & S2-5.
CIRCUIT "3": REMOVE SIGN LIGHTING TO OVERHEAD SIGN S3-4.

CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	* EX. CIRCUIT LOAD (AMPS)	PROP. CIRCUIT LOAD (AMPS)	* EX. FUSE SIZE (AMPS)	PROP. FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CC2 30+00± RT ℄ RAMP A HARRIET ST.	120/240 VAC	7.0 (* EX.) 5.5 (PROP.)	3-#2 (* EX.)	60 (* EX.)	4	17.8	10.6	30		#6	CITY OF CINCINNATI
					6	11.2	12.1	30		#6	
NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE GENERAL NOTES AND STANDARD DRAWINGS											

CONTROL CENTER 'CC2':

CIRCUIT "4": REMOVE AND REPLACE STRUCTURE PARAPET-MOUNTED LIGHTING.
REMOVE SIGN LIGHTING TO OVERHEAD SIGN S4-7C.
CIRCUIT "6": REMOVE EXISTING AND INSTALL NEW UNDERPASS LIGHTING.
REMOVE SIGN LIGHTING TO OVERHEAD SIGN S.

CONTROL CENTER	LINE VOLTS	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CONDUCTOR SIZE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NUMBER	* EX. CIRCUIT LOAD (AMPS)	PROP. CIRCUIT LOAD (AMPS)	* EX. FUSE SIZE (AMPS)	PROP. FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CC3 33+15± RT ℄ US 50 EB (W. 6TH ST.)	120/240 VAC	5.9 (* EX.) 5.4 (PROP.)	3-#2 (* EX.)	100 (* EX.)	5	22.4	N/C	30		#6	CITY OF CINCINNATI
					5a	2.0	0.0	20		#6	
NOTE: FOR ADDITIONAL CONTROL CENTER DETAILS, SEE GENERAL NOTES AND STANDARD DRAWINGS											

CONTROL CENTER 'CC3':

CIRCUIT "5": REMOVE AND REPLACE STRUCTURE PARAPET-MOUNTED LIGHTING.
CIRCUIT "5a": REMOVE UNDERPASS LIGHTING. WILL BE REPLACED IN CIRCUIT "6".

THE REMOVAL OF OTHER OVERHEAD SIGNS THROUGHOUT THIS PROJECT WILL REDUCE THE TOTAL LOAD OF OTHER LIGHTING CIRCUITS. SEE SIGNING PLANS FOR REMOVALS.

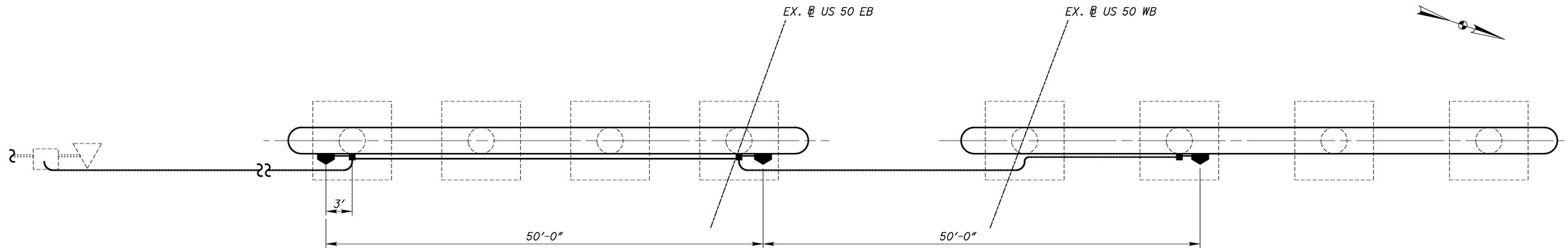
* EXISTING LIGHTING CONTROL CENTER DATA PER EXISTING PLANS [HAM-50-19.36, 1992]. CONTRACTOR SHALL VERIFY.

CALCULATED | CHECKED

LIGHTING CIRCUIT DETAILS

HAM-50-19.03

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LC001.dgn 11/10/2010 12:52:23 PM mtreiheisel

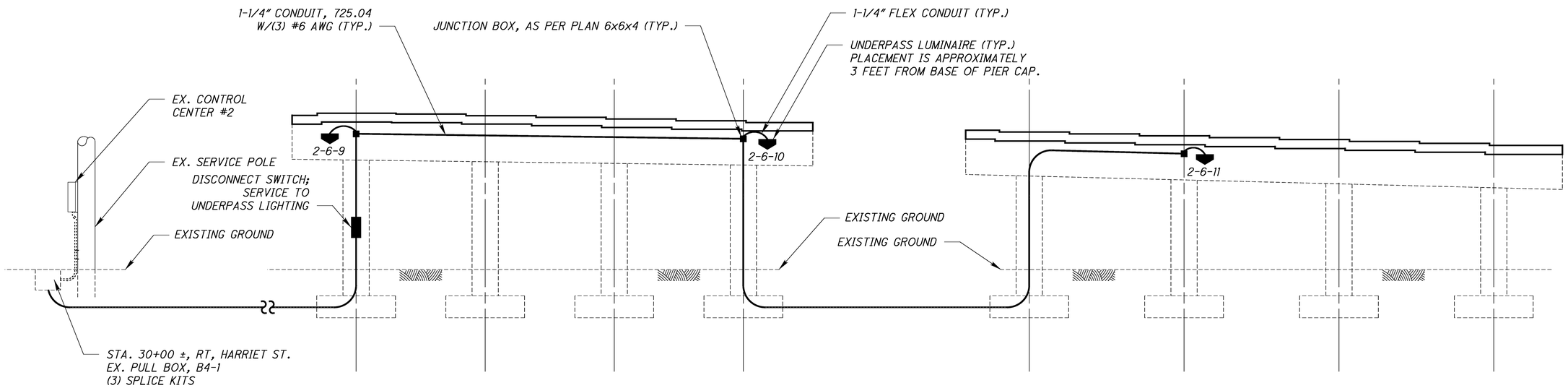


CAP PLAN

STRUCTURE NO. HAM-50-1954 R (OVER HARRIET STREET) PIER 1

CAP PLAN

STRUCTURE NO. HAM-50-1954 L (OVER HARRIET STREET) PIER 1



ELEVATION

STRUCTURE NO. HAM-50-1954 R (OVER HARRIET STREET) PIER 1
LOOKING WEST

ELEVATION

STRUCTURE NO. HAM-50-1954 L (OVER HARRIET STREET) PIER 1
LOOKING WEST

EFFECTIVE LUMINAIRE MOUNTING HEIGHTS
ARE APPROX. 14'-16' ABOVE EXISTING
GROUND.

CALCULATED | CHECKED

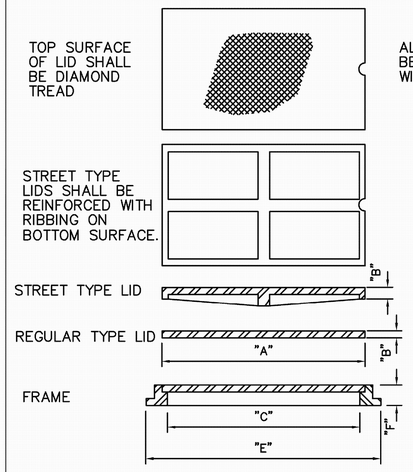
UNDERPASS LIGHTING DETAILS - HAM-50-1954L&R

HAM-50-19.03

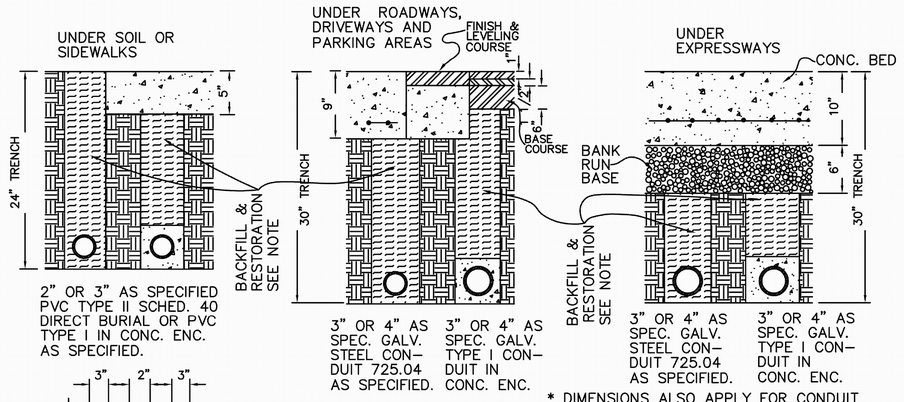
148
442

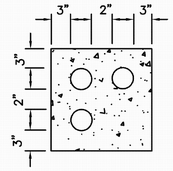
G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LD001.dgn 11/10/2010 12:52:25 PM mtreiheisel

TYPICAL PULLBOX FRAME & COVER DIMENSIONS



TYPICAL CONDUIT INSTALLATIONS



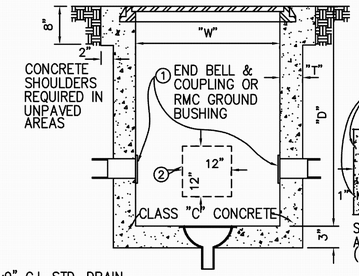


TYPICAL CONCRETE ENCASEMENT DIMENSION FOR 1 OR MORE CONDUITS. 3" COVER ON ALL SIDES AND 2" SPACING BETWEEN CONDUITS.

* DIMENSIONS ALSO APPLY FOR CONDUIT JACKED UNDER PAVEMENT.

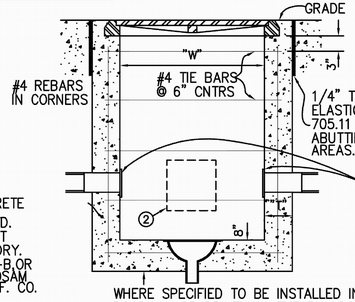
BACKFILL SHALL COMPLY TO ITEM 625.12
RESTORATION SHALL COMPLY TO ITEM 603.09
PVC CONDUIT SHALL BE CONCRETE ENCASED WHERE INSTALLED IN SLOPE AREAS AND WHERE PRIMARY CABLE (ABOVE 600 VOLT CLASS) IS SPECIFIED TO BE INSTALLED IN THE CONDUIT. CONCRETE ENCASEMENT SHALL BE CLASS "C" CONCRETE.

TYPICAL PULLBOX CONSTRUCTION METHODS



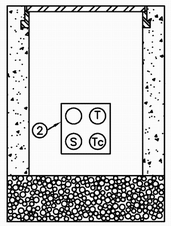
9"x9" C.I. STD. DRAIN OUTLET (NEENAH FOUNDRY CO.-R-4933-B, OR EQUIVALENT BY JOSAM OR ZURN MFG. CO. (SEE NOTES)

USE WHERE DRAINAGE TO SEWER SYSTEM SPECIFIED (TYPE "AD", "BD", "CD", "ED", "FD", & "HD" PULLBOXES)



WHERE SPECIFIED TO BE INSTALLED IN A ROADWAY OR DRIVEWAY, THE PULLBOX SHALL BE CONSTRUCTED (AS ABOVE) WITH 8" WALLS, REINFORCING STEEL, & A STREET TYPE (HEAVY-DUTY) FRAME & COVER. (TYPE "D" & "G" PULLBOXES)

TYPICAL U.G. CABLING ASSIGNMENT SHOWING FOUR DUCT

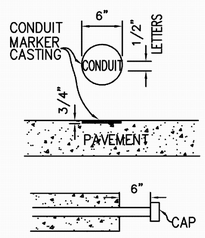


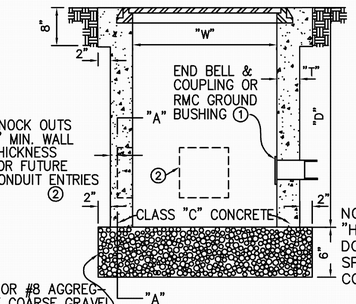
USE MANUFACTURER'S STANDARD SPACERS. INSTALL IN ACCORDANCE WITH MANUFACTURERS RECOMMENDED METHODS.

ALL CABLES INSTALLED IN CONDUIT SHALL BE IDENTIFIED BY RESPECTIVE CKT. ETC., AND SHALL BE MAINTAINED IN THE SAME DUCT THROUGHOUT THE ENTIRE RUN.

◯ SPARE (RESERVE FOR COMM DIV.)
Ⓣ LOCAL TRAFFIC (TOP. ST. SIDE)
Ⓣc TRAFFIC SIG. INTERCONNECTION (BOTTOM-ST. SIDE)
Ⓢ STREET LIGHTING- (BOTTOM-FIELD SIDE)

CONDUIT MARKER
(USE WHERE CONDUIT TERMINATE UNDERGROUND)





#7 OR #8 AGGREGATE COARSE GRAVEL THOUROUGHLY COMPACTED.

(TYPE "A", "B", "C", "E", "F", & "H" PULLBOXES)

NOTE: PULLBOX "H", IS THE DOWNTOWN A SPECIAL, WITH COMPOSITE LID.

DESIGN DATA

PULLBOX DIMENSIONS (INCHES) & CLASS						DESIGN COND. USE PER PULLBOX SIZE	FRAME & COVER DIMENSIONS (IN INCHES) **					
CLASSIFICATION OR TYPE AS SPECIFIED			INSIDE WALL	WALL THICKNESS MIN.	OVERALL DEPTH	MAX. NO. OF COND. PER PULLBOX WALL W/MAX. COND. SIZE4"	NOMINAL SIZE OF LID	NOMINAL THICKNESS OF LID±1/16	NOMINAL SIZE OF OPENING ±1/8	NOMINAL FRAME SIZE ±1/8	FRAME DEPTH	* DESIGN NO.
REGULAR	STREET	W/DRAIN	"W"	"T"	"D"		"A"	"B"	"C"	"E"	"F"	
A		AD	10X 18	3	30	2	10 3/4"x18 3/4"	1/2	10x 18	16x 24	3	R-6684-2 E-1840
B		BD	17X 17	3	30	2	17 5/8"x17 5/8" 18"x 18"± 1/8"	1/2	17x 17	22x 22	3	R-6681-2 E-1846
C		CD	24X 24	3	36	4 & STREET CROSSING	23 3/4"x23 3/4" 24"x 24"	1	22x 22	30x 30	3	R-6683-2 E-1850
	D		22X 22	8	36	4	23 3/4"x23 3/4"	1 1/2	22x 22	28x 28	4	R-1878-A5
E		ED	24X 36	4	36	4 { 24" SIDES) 6 { 36" SIDES)	24"x 36" 25"x 37"	1	23x 34 3/4 24x 36	29x 41 29 1/4x 41	3 1/8 2 1/2	R-6685-5 E-1871
F		FD	36X 36	4	42	12	37"x 37"	1	36x 36	42x 42	3 1/2	E-1843
	G		36X 36	8	42	12	37 1/2"x37 1/2"	1 1/2	36x 36	42x 42	4	R-1878-A10
H		HD	20X 20	3	32	2 & STREET CROSSING	21 13/16"x21 13/16"	1 3/4	19 13/16 x 19 13/16	23 5/16 x 23 5/16	2 7/16	R-1883-E4 PA2222WA00

FRAME ONLY

COMPOSITE LID

* REFER TO ACCEPTABLE FRAMES & COVERS FURNISHED BY: CHRIS ERHARDT FOUNDRY & MACHINE CO., CINCINNATI, OHIO ("E" NUMBERS); NEENAH FOUNDRY CO., NEENAH, WISC. ("R" NUMBERS)

** IF SPECIFIED, PULLBOX LIDS MAY BE COMPOSITE MATERIAL MEETING DETAILED SPECIFATIONS PROVIDED IN THE PLANS.

NOTES:

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
5	OHIO		

FRAME & COVER**

REGULAR TYPE PULLBOX FRAMES & COVERS SHALL BE CONSTRUCTED OF GRAY IRON MEETING THE REQUIREMENTS OF ASTM-A48, CLASS 30, WITH MINIMUM TENSILE STRENGTH OF 30,000 PSI.

STREET TYPE PULLBOX FRAMES & COVERS SHALL BE CONSTRUCTED OF DUCTILE IRON MEETING THE REQUIREMENTS OF ASTM A-536, GRADE 60-40-18, WITH A MIN. TENSILE STRENGTH OF 60,000 PSI.

ALL FRAMES & COVERS SHALL BE OF UNIFORM QUALITY & FREE FROM BLOWHOLES, HARDSPOTS, SHRINKAGE DISTORATION, & OTHER DEFECTS, AND SHALL HAVE THE DIMENSIONS SPECIFIED IN THE DESIGN DATA TABLE.

COVERS (OR LIDS) SHALL BE TREADED AND EQUIPPED WITH PICK HOLES FOR LIFTING LID OFF FRAME. WHEN FLANGE AND LID ARE NOT CASTED IN THE PULLBOX, THEY SHOULD BE BOLTED DOWN & CAPPED WITH CONCRETE.

PULLBOX CONSTRUCTION

PULLBOX SHALL BE CONSTRUCTED AS SHOWN, & WITH FRAME, SHALL BE CAST IN PLACE, OR APPROVED PRE-CAST WITH FRAME PRECAST INTO BOX AND WITH REIN., EXCEPT STREET TYPE BOXES.

EXISTING PULLBOXES MAY BE MODIFIED WITH CONCRETE BRICK MEETING REQUIREMENTS OF ITEM 704.02. IF CONCRETE BRICK IS USED, THE SIDE WALLS SHALL HAVE A MINIMUM THICKNESS OF 7 1/2", AND BRICK MASONRY SHALL HAVE CONSTRUCTED IN ACCORDANCE WITH ITEM 602.

STREET TYPE PULLBOXES SHALL BE CAST-IN-PLACE CLASS "C" CONCRETE WITH REINFORCING MEETING THE REQUIREMENTS OF ITEM 709.01

DRAINAGE

WHERE A PULLBOX IS SPECIFIED TO BE DRAINED TO THE SEWER SYSTEM, A 9"x9" CAST IRON STANDARD DRAIN OUTLET, WITH LID, (NEENAH FOUNDRY CO. R-4933-B, OR EQUIVALENT BY JOSAM OR ZURN MGF. CO.) SHALL BE INSTALLED AT THE BOTTOM OF PULLBOX AND CONNECTED TO A 3" CAST IRON PIPE DRAIN LINE TO THE SPECIFIED SEWER CONNECTION. DRAIN LINE SHALL HAVE A MIN. SLOPE OF 1/4" PER FOOT TOWARD SEWER. CAST IRON PIPE, ELBOWS, & OTHER FITTINGS SHALL CONFORM TO REQUIREMENTS OF ASTM-A-74.

UNLESS OTHERWISE SPECIFIED, PULLBOX DRAINAGE SHALL CONSIST OF 6" OF COMPACTED, COARSE, WASHED GRAVEL #7 OR #8 AGGREGATE PER ITEM 703.

CONDUIT ENTRIES

① A CONDUIT ENTRY THROUGH A PULLBOX WALL SHALL CONSIST OF AN END BELL & COUPLING WHICH SHALL PROTRUDE BEYOND THE OUTER FACE OF THE WALL, SUFFICIENT IN SIZE & LENGTH FOR CONNECTION TO THE PROPOSED DUCT SYSTEM IF RMC CONDUIT, A GROUND BUSHING MUST BE PROVIDED.

② A SECTION OF EACH WALL SHALL BE KNOCHED AND RECESSED FOR PROPOSED AND FUTURE CONDUIT ENTRIES. (SEE DETAIL)

WHEN CONDUITS ARE INSTALLED, ALL OPENINGS & SPACES SHALL BE FILLED WITH CLASS "C" CONCRETE & FINISHED OR POINTED UP TO SATISFACTION OF THE ENGINEER.

IN CUTTING OR BREAKING INTO WALLS WHERE THE INSTALLATION OF ADDITIONAL CONDUIT IS SPECIFIED CONNECTED TO AN EXISTING PULLBOX, ANY DAMAGE TO THE WALL SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

UNDERGROUND CONDUIT

ALL CONDUIT SPECIFIED AS PVC TYPE I, (TYPE DB OR SCHEDULE 40) SHALL BE CONCRETE ENCASED.
(NOTE:- ALL UNDERGROUND CONDUIT SHALL BE PVC, CONCRETE ENCASED, UNLESS SPECIFIED OTHERWISE ON THE PLANS.)
ALL CONDUIT SPECIFIED AS DIRECT BURIAL SHALL BE:
PVC- TYPE II (INDUSTRIAL SCHEDULE 40- HEAVY WALL) OR,
RIGID METAL CONDUIT (RMC)- 725.04
MAXIMUM CONDUIT RUN BETWEEN PULLBOXES SHALL NOT EXCEED 150 FT. (UNLESS SPECIFIED ON PLANS). EACH UN-USED CONDUIT SHALL BE PROVIDED WITH A #10 AWG. SOLID COPPER PULL WIRE.

BACKFILL

EXCAVATED MATERIAL SHALL BE USED AS BACKFILL. BACKFILL SHALL BE PLACED IN LAYERS AND TAMPED TO PREVENT FUTURE SETTLEMENT OF BACKFILL MATERIAL IN ACCORDANCE WITH 625.12

RESTORATION

SHALL COMPLY WITH 603.09

SPECIFICATION NUMBERS REFFER TO OHIO DEPT. OF TRANSP., "CONSTR. & MATERIAL" SPECS. & ASTM SPECIFICATIONS.
CITY OF CINCINNATI SUPPLEMENTAL SPECS. TO O.D.O.T. C & M SPECS. ITEM 1322 ALSO APLLIES FOR CITY PROJECTS AND CONTRACTS.

STATE OF OHIO
STEVEN GERALD BAILEY
49331
REGISTERED
PROFESSIONAL ENGINEER

ELEC.SERVICE & UNDERGROUND SYSTEMS (ES-2)

STANDARD PULLBOXES & CONDUIT SYSTEM

CITY OF CINCINNATI
DEPT. OF TRANSPORTATION & ENGINEERING
DIV. OF TRAFFIC ENGR.

APPROVED Steve Bailey DATE 3-4-99

DESIGN	REVISION	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
S.C.H.	Steve Bailey	8/3/04	UPDATE				
T.E.							
	APPROVED	9/14/94					ES-2-1

CALCULATED | CHECKED

LIGHTING DETAILS

HAM-50-19.03

149
442

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LD010.dgn 11/10/2010 12:52:26 PM mtreiheisel

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR

WOOD SERVICE POLE C.G.&E. CO. OWNED UNLESS OTHERWISE SPECIFIED.

120/240V SECONDARY SERVICE.

SERVICE WIRE SHOULD HAVE COLOR INSULATED CONDUCTORS OF APPROPRIATE COLORS, BLACK, RED & WHITE. FOR AN 120 VOLT SERVICE, USE BLACK & WHITE.

MIN. 1'

PVC WEATHERHEAD SERVICE ENTRANCE. PROVIDE CONDUCTORS SUFFICIENT LENGTH (AT LEAST 3') TO MAINTAIN AN ACCEPTABLE DRIP LOOP. C.G.&E. SHALL MAKE THE POWER CONNECTION TO THEIR SECONDARY LINES.

1'

THERE MUST BE A PIPE STRAP WITHIN 1' OF A WEATHERHEAD.

PHOTO ELECTRIC CELL (WHERE SPECIFIED). FACE THE WINDOW OF SENSING ELEMENT DUE NORTH (SPEC 1324.01).

TYP. MINIMUM 1' DRIP LOOP.

2' – 0"

BOTTOM OF DRIP LOOP MUST MAINTAIN 40" ABOVE COMMUNICATION (COM.) ZONE.

1" PVC CONDUIT AND WEATHERHEAD (PHOTO CELL).

TYP. 1" (FOR TRAFFIC SIGNAL SERVICE) PVC CONDUIT SEE CHART FOR ENCLOSURE SERVICE SIZE.

POLE GROUND WIRE RECESSED IN POLE.

Ⓒ PIPE STRAPS 2' APART

Ⓜ

PVC MALE ADAPTER

Ⓛ Ⓑ Ⓜ

TYP. SAFETY SWITCH, DISCONNECT OR LIGHTING CONTROLLER AS SPEC.

Ⓓ FASTEN ENCLOSURE TO POLE WITH 4 EA. 1/4" X 2–1/2" GALV. LAG SCREWS

Ⓖ Ⓒ 2 EACH RIGID LB FITTINGS FOR SERVICE AND PHOTO CELL CONTROL

2'

8'–0"

2" ALUM. OR GALV. STEEL CONDUIT RISER SCHED. 40 (725.04)

CONDUIT CLEARANCE TO POLE, 1" MIN. TO 2" MAX.

Ⓒ Ⓕ 3"

⑤ INST. GROUND ROD & WIRE WHERE SERVICE POLE NOT FURNISHED BY C.G.&E. CO. (SPEC 1320).

1'

2" CONC. ENCASED PVC OR RMC CONDUIT AS SPECIFIED ON PLANS WHERE PULLBOX NOT ADJACENT TO POLE.

⑥ USE CONDULET FITTING WHERE NO PULLBOX WITHIN 5 FT. OF POLE OTHERWISE CONTINUE RISER TO PULLBOX.

SIDE VIEW
(WOOD POLE)

LOAD SIZING			
CABINET OR ENCLOSURE SIZE (AMPERES)	POWER CABLE SIZE (AWG)	MAX. FUSE SIZE (AMPS)	POWER SERVICE CONDUIT SIZE (INCHES)
UP TO 50	#6	40	1
50 TO 80	#4	65	1–1/2
80 TO 100	#2	90	1–1/2

Ⓜ

Ⓓ 2 EACH RIGID CONDULET L.B.'S

Ⓛ Ⓑ DRILL 2 EA. 3/8" WEEP HOLES IN BOTTOM OF CABINET. NOTE: DRILL THIRD HOLE IF POLE GND. WIRE REQUIRED.

2" GALV. STL. PIPE OR 2" ALUM. CONDUIT, SCHED. 40 (713.04)

FRONT VIEW
(WOOD POLE)

LIGHTING CONTROL CENTER

(SPECS #1312,1321,1324)

Ⓐ PROVIDE 2–1" COUPLING WHEN STREET LIGHTING CONTROLLER IS TO BE INSTALLED ON A STEEL POLE. COUPLINGS TO BE INSTALLED 8' FROM POLE BASE PLATE AND AT 180°, (OPPOSITE CURB SIDE) UNLESS SPECIFIED.

Ⓑ SPLIT BOLT CONNECTOR,DOSSERT,BLACKBURN, MCGRAW–EDISON OR APPROVED EQUAL.

Ⓒ GALV. OR MALL.IRON CONDUIT 2 HOLE PIPE STRAP.

Ⓓ DRILL 3/8" DRAIN HOLE IN LOWEST PART OF CABINET AND FITTINGS.

Ⓖ CONNECT #4 COPPER GROUND TO POLE GROUND LUG WHEN STREET LIGHTING CONTROLLER IS TO BE INSTALLED ON A STEEL POLE.

Ⓛ GROUNDING LUG LOCATED INSIDE OF CABINET. BLACKBURN L125, T&B SERIES 1300 OR APPROVED EQUAL.

Ⓜ STAINLESS STEEL BANDING 1/32"x3/4".

Ⓒ CONDUIT CLAMPS USE DOUBLE HOLE TYPE. (PIPE STRAP)

SECURE WITH GALV. NAILS

1" PVC SERVICE WEATHERHEAD CONNECTED TO 1" FLEX DUCT INSIDE OF POLE

PHOTO–ELECTRIC CELL & MOUNTING SOCKET (ORIENT NORTH) (SPEC#1324.01)

12"

6"

CG&E 120/240V SECONDARY #4 TRIPLEX

1" HALF COUPLING WELDED AT 180°

Ⓜ 1 COUPLING (SIZE PER PLAN) FOR SERVICE WIRE

Ⓜ STREET LIGHTING CONTROLLER 120/240V.(SIZE AS PER PLAN) NEMA 4X STAINLESS STEEL ENCLOSURE(SPEC.#1324.03)

Ⓓ 1 COUPLING FOR STREET LIGHTING (SIZE PER PLAN) SUPPLY WIRE.

8'

Ⓖ

6" OF GRAVEL
REFER TO ES–2–1

STEEL POLE
FRONT VIEW

4" PIPE CAP

S.S. BANDING STAND–OFF

Ⓜ 6"

2'

Ⓐ

4" GALVANIZED STEEL CONDUIT (725.04)

5' 6"

Ⓒ

#6 AWG GROUND WIRE

ADJACENT PULLBOX 3/4" PVC CONDUIT

1'

1" X 10' GROUND ROD

SEE FOUNDATION DETAILS (ES–1–2) DESIGN #FDN25

CLASS "C" CONCRETE

2" PVC CONDUIT TYPE I CONCRETE ENCASED, UNLESS OTHERWISE SPECIFIED.

1045 POWER POST
SIDE VIEW

STATE OF OHIO
STEVEN GERALD BAILEY
49331
REGISTERED
PROFESSIONAL ENGINEER

S.C.H.	Steve Bailey	7/23/04	UPDATE

DESIGN	REVISION APPROVED	DATE	WO #
JEW		2/16/99	

STREET LIGHTING INSTALLATIONS (ES–7)

STREET LIGHTING CONTROLLER MOUNTING DETAILS

CITY OF CINCINNATI
DEPT. OF TRANSPORTATION & ENGINEERING
DIV. OF TRAFFIC ENGR.

APPROVED: Steve Bailey DATE: 3–4–99

SCALE	SOURCE	DRAWN	FILE NO.
NONE		JEW	ES–7–1

CALCULATED | CHECKED

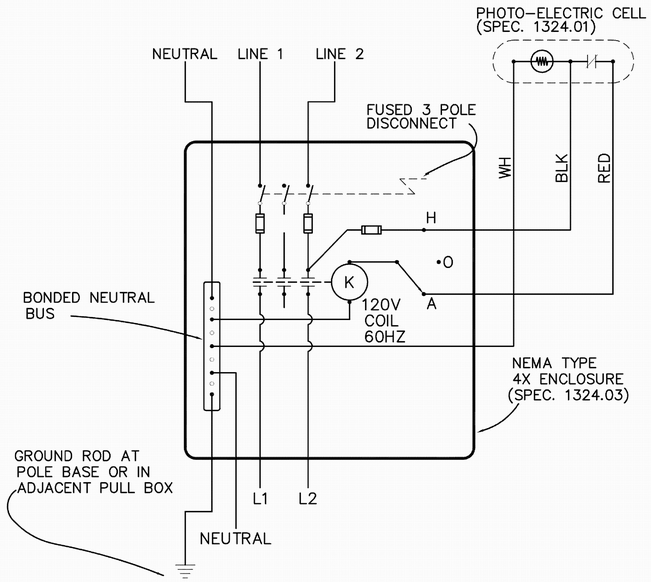
LIGHTING DETAILS

HAM–50–19.03

150
442

G:\CN06\0011\Road\CO–LIGHTING\SHEET\75736LD011.dgn 11/10/2010 12:52:53 PM mtreiheisel

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR



STREET LIGHTING CONTROLLER, 120/240 VOLT
SINGLE PHASE, 3 WIRE, GROUNDED NEUTRAL
(SPEC. 1324.03)

LOAD SIZING			
CABINET OR ENCLOSURE SIZE (AMPERES)	POWER CABLE SIZE (AWG)	MAX. FUSE SIZE (AMPS)	POWER SERVICE CONDUIT SIZE (INCHES)
UP TO 50	#6	40	1
50 TO 80	#4	65	1-1/2
80 TO 100	#2	90	1-1/2

ENCLOSURE:

NEMA TYPE 4X ENCLOSURE FABRICATED FROM 16 GAGE OR OR HEAVIER AISI TYPE 302, 303 OR 304 ANNEALED STAINLESS STEEL. FULLY WELD ALL SEAMS TO AND ALL FASTENINGS IN THE ASSEMBLY OR MOUNTING OF THE ENCLOSURES TO CONFORM TO ASTMA A-320 (AISI-300 SERIES). FOR COMPLETE DETAILS REFER TO SECTION 1324.03 OF THE CONSTRUCTION & MATERIAL SPECIFICATIONS CITY OF CINCINNATI SUPPLEMENT.

STATE OF OHIO
STEVEN GERALD BAILEY
49331
REGISTERED PROFESSIONAL ENGINEER

S.C.H. Steve Bailey		9/15/04 UPDATE					
DESIGN	REVISION APPROVED	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
JEW		5-6-03				JEW	ES-7-2

STREET LIGHTING INSTALLATIONS (ES-7)

STREET LIGHTING CONTROLLER DETAILS

CITY OF CINCINNATI
DEPT. OF TRANSPORTATION & ENGINEERING
DIV. OF TRAFFIC ENGINEERING

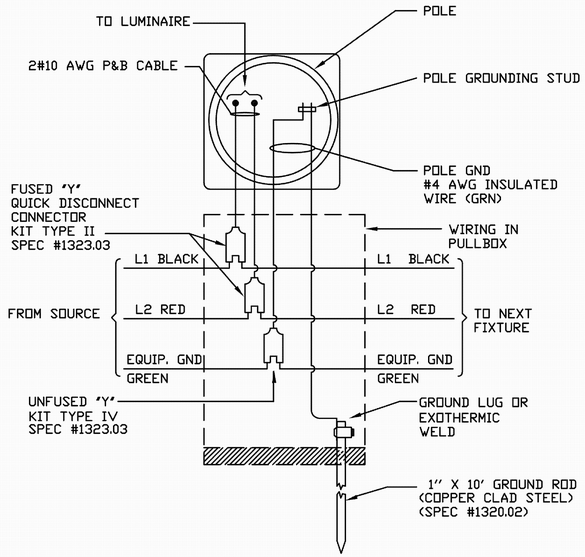
APPROVED: Steve Bailey DATE: 4/25/05

CALCULATED | CHECKED

LIGHTING DETAILS

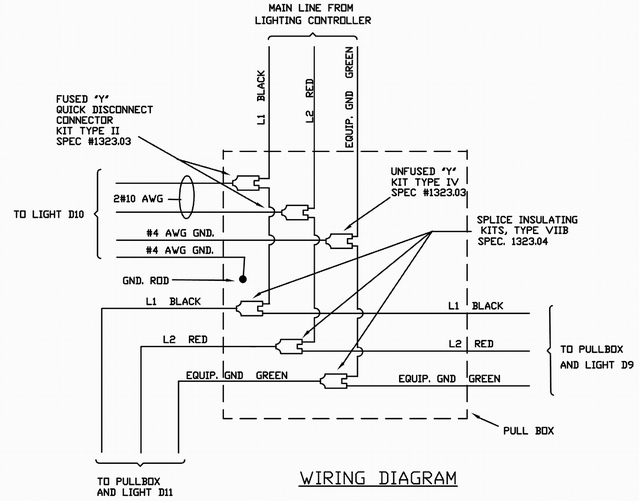
HAM-50-19.03

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LD012.dgn 11/10/2010 12:53:16 PM mtneireisel

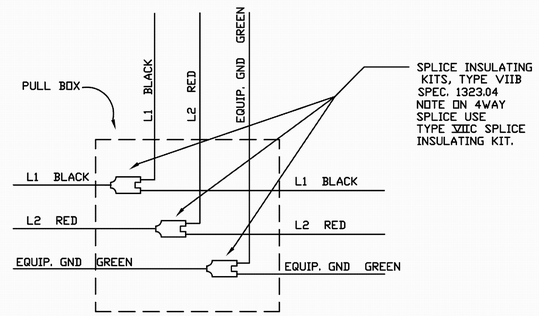


WIRING DIAGRAM

POLE W/PULLBOX

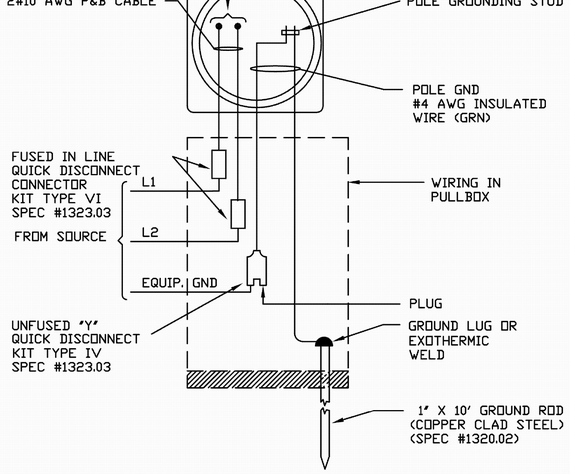


WIRING DIAGRAM



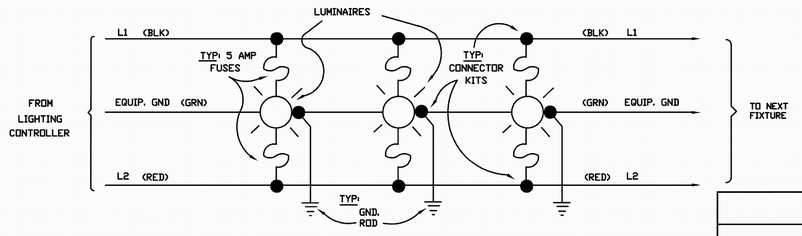
WIRING DIAGRAM

3 WAY SPLICE IN A PULL BOX



WIRING DIAGRAM

POLE W/PULLBOX
END OF LINE



TYPICAL CIRCUIT WIRING SCHEMATIC

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR

FUSES

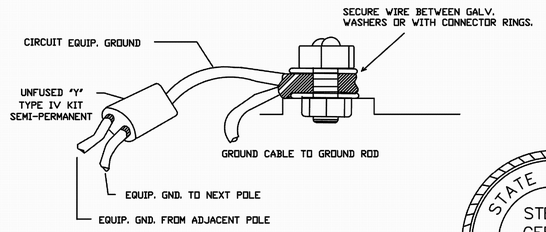
ALL FUSES 200,000 A.I.C. CURRENT LIMITING FUSES FOR LIGHTING CONNECTOR KITS: 15 AMP UL CLASS CC.

FUSES FOR CONTROL LINE, MAIN SERVICE & LIGHTING CABINET (SIZE PER PLAN) UL CLASS RK5 DUAL ELEMENT, TIME DELAY.

CONNECTOR/SPLICE KITS

TYPE II UNFUSED Y QUICK DISCONNECT TYPE
TYPE IV UNFUSE Y TYPE SEMI-PERMANENT
TYPE VI FUSED IN LINE QUICK DISCONNECT TYPE
TYPE VIIA IN LINE SPLICE KIT
TYPE VIIB Y TYPE SPLICE KIT
TYPE VIIC H TYPE SPLICE KIT

SBC-SPLIT BOLT CONNECTOR.
COVER WITH ELECTRICAL TAPE AND APPLY LIBERAL COAT OF "SKOTCH KOTE" FOR A WATERTIGHT SPLICE/CONNECTION.



DETAIL

3-WIRE, EQUIPMENT GROUND CONNECTION TO POLE LUG.

STATE OF OHIO
STEVEN GERALD BAILEY
49331
REGISTERED
PROFESSIONAL ENGINEER

S.C.H.	Steve Bailey	9/15/04	UPDATE	
DESIGN	REVISION APPROVED	DATE	WO #	
JEW		5-6-03		

STREET LIGHTING INSTALLATIONS (ES-7)

CONNECTOR KIT INSTALLATION & POLE WIRING DIAGRAMS

CITY OF CINCINNATI
DEPT. OF TRANSPORTATION & ENGINEERING
DIV. OF TRAFFIC ENGINEERING

APPROVED Steve Bailey DATE 4-27-05

SCALE	SOURCE	DRAWN	FILE NO.
		RCS	ES-7-3

CALCULATED | CHECKED

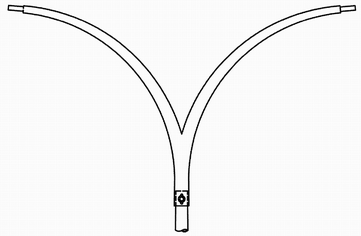
LIGHTING DETAILS

HAM-50-19.03

G:\CN06\0011\Road\CO-LIGHTING\SHEET\75736LD013.dgn 11/10/2010 12:53:26 PM mtneiheisel

TWIN DAVIT ARM DESIGN

ORIENT ON POLE AS SPECIFIED



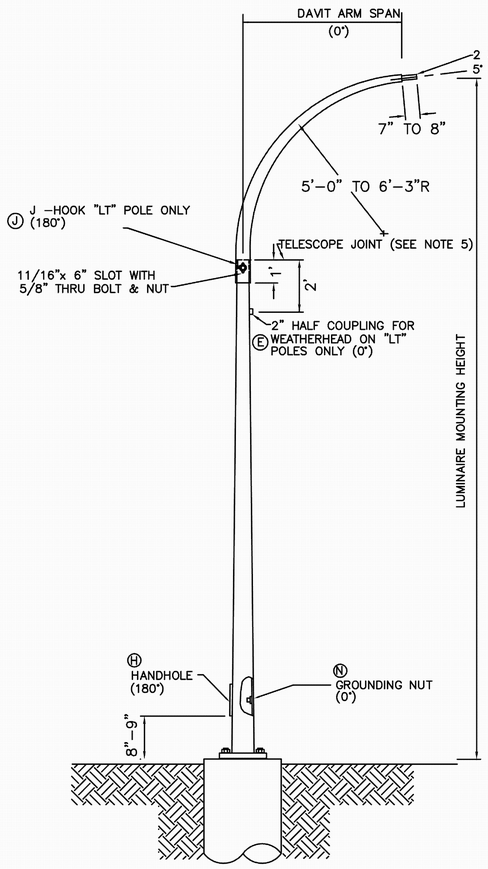
POLE PHYSICAL PROPERTIES

POLE DATA			ANCHOR BOLTS			BASE DIMENSIONS (IN.)			POLE DESIGN NUMBER				FOUNDATION DESIGN NUMBER
									6 FT. DAVIT ARM		9 FT. DAVIT ARM		
HEIGHT [LUMINAIRE MTG.HEIGHT] (FT.)	BASE DIA. (IN.)	GAUGE	SIZE (IN.)	P BOLT PROJ. (IN.)	H SEE NOTE Ⓐ	B BOLT CIRCLE (IN.)	S DIM.	T DIM. (IN.)	SINGLE ARM	TWIN ARM	SINGLE ARM	TWIN ARM	
25	7 1/2	11	1x 40	2 1/4	–	10 1/2	11	1	11A6D25	11A6DD25	–	–	FDN–1
30	8	11	1x 40	2 1/4	–	11	11 1/2	1	11A6D30	11A6DD30	11A9D30	11A9DD30	FDN–2
35	9	11	1x 40	2 1/2	–	12 1/2	13	1 1/4	11A6D35	11A6DD35	11A9D35	11A9DD35	FDN–3
40	9 1/2	11	1x 40	2 1/2	–	13	13 1/2	1 1/4	11A6D40	11A6DD40	11A9D40	11A9DD40	FDN–4
35 Ⓑ	9	3x 3	1 3/4x90	3 3/4	–	15	15 5/8	2	33A6D35	–	33A9D35	–	FDN–10

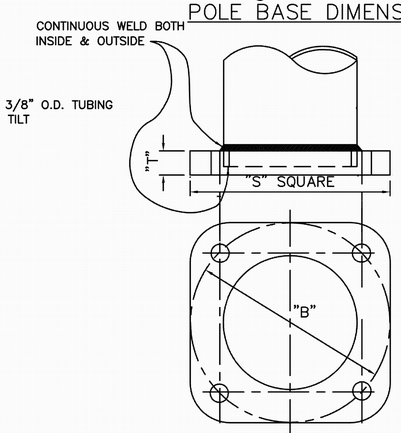
Ⓐ –BOLT HOLES IN BASE 1/4" LARGER IN DIA. THAN ANCHOR BOLT DIA. –MAY BE CIRCULAR OR SLOTTED.
Ⓑ –"LT" TYPE POLE SHAFT SHALL BE 27'– 6" IN LENGTH.

TYPICAL DAVIT ARM TYPE POLE DESIGN

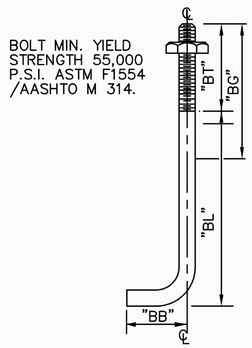
LIGHTING "L" OR LIGHTING & TRAFFIC "LT"



POLE BASE DIMENSIONS



ANCHOR BOLTS

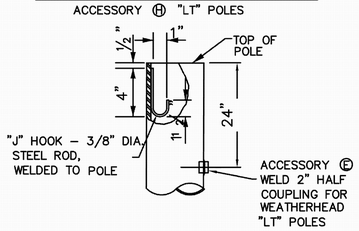


NOTE: GALVANIZING "BG" (THREAD LENGTH) + 1" TO 4". LEVELING NUTS, ANCHOR NUTS, & LEVELING SHIMS SHALL BE GALVANIZED PER ASTM A–153. ANCHOR BOLTS, ANCHOR NUTS, & LEVELING NUTS SHALL CONFORM TO ASTM A–563 GRADE A.

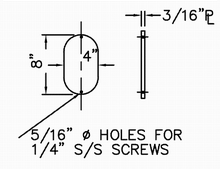
LEVELING SHIMS SHALL HAVE A MIN. 10,000 LB. BREAKING STRENGTH. ANCHOR BOLTS SHALL BE "L" SHAPED.

"J" HOOK WIRE SUPPORT

ACCESSORY Ⓗ "LT" POLES

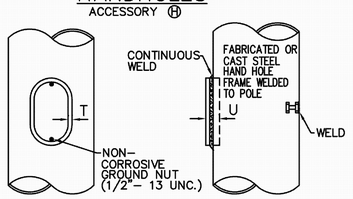


HAND HOLE COVER



HANDHOLES

ACCESSORY Ⓗ



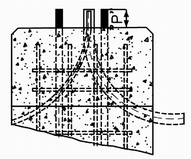
ACCESSORY Ⓝ

ALTERNATE GROUND NUT LOCATION MAY BE PROVIDED ON HANDHOLE FRAME (POLE INTERIOR) BUT SHALL NOT BE POSITIONED SO AS TO RESTRICT OR IMPEDE ACCESS TO POLE INTERIOR.

ANCHOR BOLTS DIMENSIONS (INCHES)

BOLT SIZE	"BB"	"BL"	"BT"	"BG"
1"x 40"	4	30	6	8
1 1/2"x 60"	6	45	9	11

"P" BOLT PROJECTION



ANCHOR BOLTS FOR BRIDGE MOUNTED POLES

ANCHOR BOLTS MUST MEET THE REQUIREMENTS HEREIN, EXCEPT THE BOLTS SHALL BE "U" SHAPED AND MUST EXTEND INTO THE FIRST POUR OF THE STRUCTURE.

GENERAL NOTES

POLES SHALL BE ANCHOR BASE AND FABRICATED OF STEEL MATERIAL AND SHALL COMPLY WITH AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" WITH THE FOLLOWING EXCEPTIONS/AND/OR ADDITIONS:

1. DESIGN WIND LOAD SHALL BE BASED ON 90 MILES PER HOUR.
2. MINIMUM YIELD STRENGTH AFTER FABRICATION SHALL BE 55,000 P.S.I.
3. SHAFT CONSTRUCTION SHALL MEET THE REQUIREMENTS OF O.D.O.T. SPEC. 725.01–B.
4. SHAFT SHALL BE TUBULAR TAPERED AND SHALL PROVIDE A 0.14 INCHES/FOOT TAPER.
5. THE DAVIT ARM SHALL TELESCOPE WITH A SLIP FIT OVER THE MAIN SHAFT AND BE SECURED WITH A 5/8" MIN. STAINLESS STEEL HEX HEAD THROUGH BOLT & NUT. ONE– PIECE POLE ACCEPTABLE FOR 25' SIZE.
6. BASE PLATES SHALL BE STRUCTURAL STEEL ASTM–36 AND SHALL BE SECURED TO THE SHAFT WITH TWO CONTINUOUS WELDS PER O.D.O.T. SPEC. 725.01. SURFACES SHALL THOROUGHLY COATED WITH AN ALUMINUM IMPREGNATED CAULKING COMPOUND.
7. 4 EACH CAST IRON, STEEL OR ALUMINUM BOLT COVERS SHALL BE PROVIDED WITH STAINLESS STEEL BOLTS TO SECURED COVER TO BASE.
8. WELDING SHALL COMPLY WITH O.D.O.T. SPEC. 513.21 AND SHALL BE CONTINUOUS WELDS DEVELOPING THE FULL STRENGTH OF THE POLE.
9. POLE FINISH
   POLE FINISH SHALL BE SPECIFIED AS ONE OF THE FOLLOWING
   A) GALVANIZED PER O.D.O.T. SPEC. 725.01–H.
   B) GALVANIZED & PAINTED POLES PER O.D.O.T. SPEC. 725.01–I.
   C) PAINTED POLES– ALL STEEL SHALL BE PRIME PAINTED (INTERIOR AND EXTERIOR) WITH ZINC RICH DUST PRIMER OR RUST INHIBITIVE PRIMER PER F–73 SPEC.

BASE TYPE
A– ANCHOR BASE

LIGHTING ARM TYPE
D– DAVIT ARM (SINGLE)
DD– DAVIT ARM (TWIN)

II A 9 D 35

POLE GAUGE
LIGHTING ARM LENGTH
LUMINAIRE MOUNTING HEIGHT

STATE OF OHIO
STEVEN GERALD BAILEY
49331
REGISTERED
PROFESSIONAL ENGINEER

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
5	OHIO		

MANUFACTURER FURNISHED EQUIPMENT – POLES (ES–10)

LIGHTING POLES WITH DAVIT ARMS

CITY OF CINCINNATI
DEPT. OF PUBLIC WORKS
DIV. OF TRAFFIC ENGR.

APPROVED Steve Bailey DATE 3-4-99

DESIGN	REVISION / APPROVED	DATE	WO #	SCALE	SOURCE	DRAWN	FILE NO.
S.C.H.	Steve Bailey	3/1/05	UPDATE	–		VGRD	ES–10–3
		01/19/95					

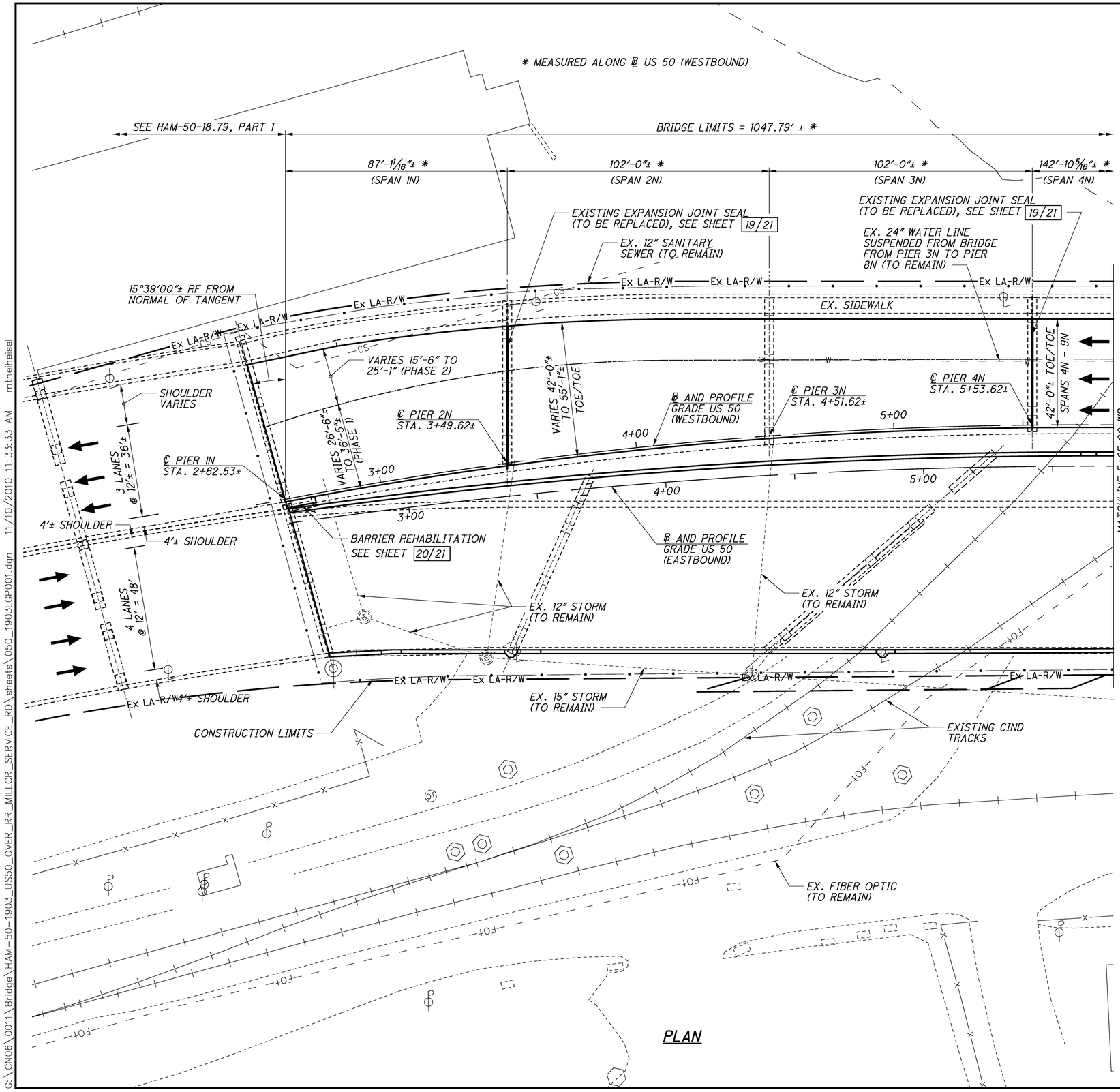
CALCULATED | CHECKED

LIGHTING DETAILS

HAM-50-19.03

153
442

G:\CN06\0011\Road\CO–LIGHTING\SHEET\75736LD014.dgn 11/10/2010 12:53:39 PM mtreiheisel



NOTES:

EXISTING UTILITIES TO REMAIN.

DESIGN TRAFFIC:
2011 ADT = 30910 2011 ADTT = 1236
2031 ADT = 28580 2031 ADTT = 1143
DIRECTIONAL DISTRIBUTION = 0.51

EXISTING STRUCTURE

TYPE: SPAN 1N IS SIMPLE GIRDER, SPANS 2N THRU 9N ARE CONTINUOUS GIRDERS. REINFORCED CONCRETE DECK AND SUBSTRUCTURES.

SPANS: 87'-1 1/16"±, 102'-0"±, 102'-0"±, 142'-10 5/16"±, 125'-0"±, 125'-0"±, 89'-6"±, 78'-11 3/16"±, 107'-6 1/4"±, 86'-0"± (MEASURED C/C BRG. ALONG ℄ US 50 WB)

ROADWAY: VARIES; 42'-0"± MIN. F/F CURBS, 6'-0"± SIDEWALK.

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 2" ASPHALT CONCRETE, 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: VARIES (HORIZONTALLY CURVED AND TANGENT)

SUPERELEVATION: VARIES

STRUCTURAL FILE NUMBER: 3102807

DATE BUILT: 1965±

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK:

REMOVE EXISTING 2" ASPHALT OVERLAY, REMOVE EXISTING 1½" MICRO-SILICA CONCRETE OVERLAY AND 1" OF EXISTING DECK USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON THE EXISTING DECK, PATCH CONCRETE SURFACES AS PER ITEM 519, RETROFIT OUT-OF-PLANE BENDING CRACKS ABOVE CROSSFRAME STIFFENERS AND WELD STIFFENERS TO GIRDER FLANGES, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY-URETHANE, FEDERAL COLOR NUMBER 17778, REMOVE TACK WELDS AND PERFORM ULTRASONIC IMPACT TREATMENT AROUND STIFFENER WELDS ON PIER 5N STEEL CAP, REPLACE EXPANSION JOINT STRIP SEAL GLANDS AT PIERS 2N, 4N, 7N, AND THE FORWARD ABUTMENT, CLEAN BRIDGE DRAINAGE SYSTEM.

TYPE: SPAN 1N IS SIMPLE GIRDER, SPANS 2N THRU 9N ARE CONTINUOUS GIRDERS. REINFORCED CONCRETE DECK AND SUBSTRUCTURES.

SPANS: 87'-1 1/16"±, 102'-0"±, 102'-0"±, 142'-10 5/16"±, 125'-0"±, 125'-0"±, 89'-6"±, 78'-11 3/16"±, 107'-6 1/4"±, 86'-0"± (MEASURED C/C BRG. ALONG ℄ US 50 WB)

ROADWAY: VARIES, 42'-0"± MIN. TOE/TOE CURBS, 6'-0"± SIDEWALK.

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

WEARING SURFACE: 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: VARIES (HORIZONTALLY CURVED AND TANGENT)

SUPERELEVATION: VARIES

STRUCTURAL FILE NUMBER: 3102807

DATE BUILT: 1965±

COORDINATES: LONGITUDE 84°32'42" W
LATITUDE 39°06'06" N

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DRAWN	REVIEWED	DATE
MSW	MSL	11/12/10
DESIGNED	CHECKED	REVISED
PJP	SSM	

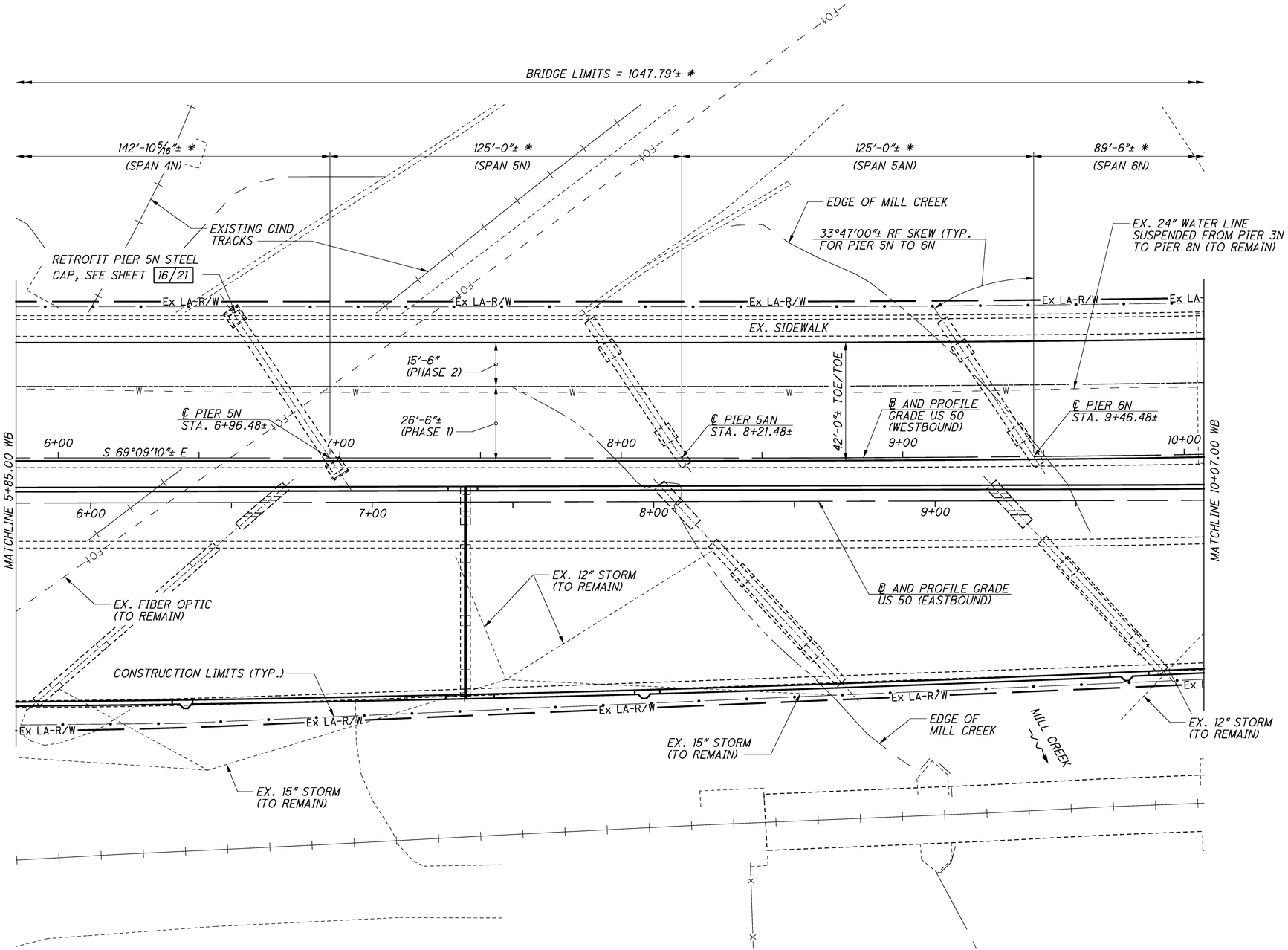
STRUCTURE FILE NUMBER 3102807

HAMILTON COUNTY
STA. 2+62.53
STA. 13+10.32

GENERAL PLAN
HAM-50-1903L
US 50 OVER CSRR; NSRR; MILL CREEK; PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGP001.dgn 11/10/2010 11:33:33 AM mtreiheisel



PLAN

* MEASURED ALONG ℄ US 50 (WESTBOUND)

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGP002.dgn 11/10/2010 11:33:35 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

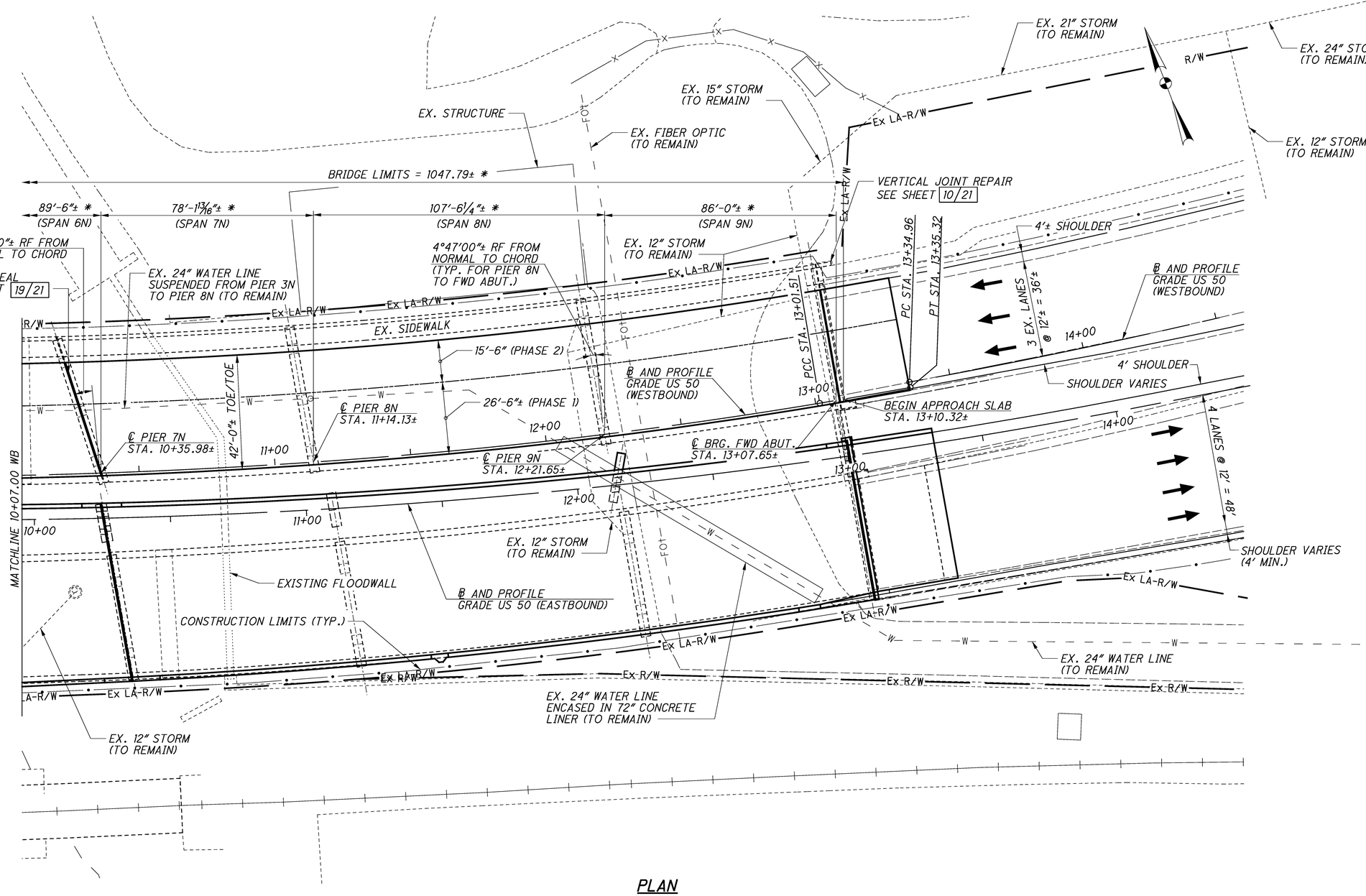
HAMILTON COUNTY
STA. 2+62.53
STA. 13+10.32

GENERAL PLAN
HAM-50-1903L
US 50 OVER CSRR; NSRR; MILL CREEK; PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

2 / 21

155
442



PLAN

* MEASURED ALONG ℄ US 50 (WESTBOUND)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

HAMILTON COUNTY
STA. 2+62.53
STA. 13+10.32

GENERAL PLAN
HAM-50-1903L
US 50 OVER CSRR; NSRR; MILL CREEK; PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

3 / 21

156
442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGP003.dgn 11/10/2010 11:33:37 AM mtreiheisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
AS-1-81, REVISED 07-19-02
EXJ-4-87, REVISED 07-19-02

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
842 DATED 01-19-07
848 DATED 04-16-10

REFERENCE SHALL BE MADE TO SPECIAL PROVISION FOR:
ULTRASONIC IMPACT TREATMENT DATED 6-22-04.

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

DESIGN DATA:
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD:
2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
SEALING OF CONCRETE SURFACES

MAINTENANCE OF TRAFFIC: TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS: CONSTRUCTION PLANS FOR EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

NON-USE OF ASBESTOS-CONTAINING MATERIALS: THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS.THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONT.):

ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS: THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, PAINTING, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTORS WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

FULL PENETRATION OF DECK REMOVAL: CONTRACTOR WILL BE REQUIRED TO INSTALL PLYWOOD PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE AREA OF ANY FULL DECK PENETRATION, AND OVER THE CSXT RAILROAD SPAN, (SPANS 4N AND 5N). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE DECK IS PENETRATED AND WILL STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE PLYWOOD PROTECTION.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR THE ABUTMENTS, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.

ITEM 513 - STRUCTURAL STEEL, MISC.: WELDING STRUCTURAL STEEL, AS PER PLAN: THIS ITEM INCLUDES WELDING THE GIRDER WEB STIFFENERS TO THE GIRDER TOP AND BOTTOM FLANGES AT ALL CROSSFRAME LOCATIONS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK AND WHERE NOT INCIDENTAL TO THE COMPLETION OF OTHER WORK PAID FOR UNDER THIS CONTRACT. PAYMENT SHALL BE MADE AT THE BID PRICE PER FOOT.

ITEM 513 - STRUCTURAL STEEL, MISC.: GRINDING PER FOOT: THIS ITEM INCLUDES GRINDING MISCELLANEOUS TACK WELDS ON PIER 5N STEEL CAP AS DIRECTED BY THE ENGINEER. THIS INCLUDES GRINDING THE INTERMITTENT TACK WELDS BETWEEN THE BACKER BARS AND PIER CAP BOTTOM FLANGE AND WEB PLATES, GRINDING THE INTERMITTENT TACK WELDS BETWEEN THE DIAPHRAGM CONNECTION BENT PLATES AND THE PIER CAP WEBS, GRINDING THE 4 TACK WELDS ON THE INSIDE FACE OF THE BOTTOM FLANGE PLATE BETWEEN GIRDERS 3 AND 4 AND GRINDING THE INTERMITTENT TACK WELDS ON THE OUTSIDE FACE OF THE BOTTOM FLANGE PLATE.

GRIND THE WELDS SMOOTH AND PROVIDE A SURFACE FINISH OF 250 MIL ACCORDING TO ANSI B46.1.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK AND WHERE NOT INCIDENTAL TO THE COMPLETION OF OTHER WORK PAID FOR UNDER THIS CONTRACT. PAYMENT SHALL BE MADE AT THE BID PRICE PER FOOT.

ITEM 513 - STRUCTURAL STEEL, MISC.: FATIGUE RETROFIT, ULTRASONIC IMPACT TREATMENT: THIS ITEM CONSISTS OF INSPECTING THE EXISTING WELDS ALONG THE HORIZONTAL STIFFENER PLATES ABOVE AND BELOW THE 24" WATERLINE AT PIER 5N STEEL CAP, AND PERFORMING ULTRASONIC IMPACT TREATMENT IN ACCORDANCE WITH THE 6-22-2004 SPECIAL PROVISION PROVIDED BELOW.

1. DESCRIPTION: THIS WORK SHALL CONSIST OF APPLYING ULTRASONIC IMPACT TREATMENT (UIT) TO FATIGUE PRONE WELDED DETAILS AS INDICATED IN THE PLANS.

2. UIT CONTRACTOR QUALIFICATIONS: THE CONTRACTOR SHALL ENGAGE A FIRM COMPETENT AND PROFICIENT IN THE USE OF ULTRASONIC IMPACT TREATMENT. THE UIT FIRM SHALL HAVE HAD EXPERIENCE WITH SIMILAR TYPES OF WORK ON TREATMENT OF BRIDGE DETAILS IN PREVIOUS PROJECTS. THE LIST OF PROJECTS, THEIR LOCATIONS, KEY PERSONNEL DIRECTLY INVOLVED IN PERFORMANCE AND SUPERVISION OF THE WORK AND THE NAMES OF A CURRENT CONTACT PERSON FOR EACH OF THE PROJECTS SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.

3. EQUIPMENT REQUIREMENTS: THE UIT FIRM SHALL FURNISH COMPLETE UIT TOOLING REQUIREMENTS, INCLUDING, BUT NOT LIMITED TO 1 ELECTRONIC CONTROL UNITS WITH POWER SOURCE, 1 UIT TOOLS, ALL REQUIRED TOOL TIP SETS; ADDITIONAL TREATMENT PINS, AS REQUIRED; CLOSED CIRCUIT COOLING SYSTEM; COMPLETE SET OF EXTENSION CABLES AND COOLING HOSES; ALL NECESSARY ADJUSTMENT AND MAINTENANCE TOOLS FOR THE UIT SYSTEM; AND ALL EQUIPMENT CONSUMABLES REQUIRED DURING THE APPLICATION OF UIT. THE UIT SHALL BE PERFORMED USING EQUIPMENT WITH A FREQUENCY OF EITHER 27 KHZ OR 36 KHZ, USING A POWER OUTPUT RATING OF AT MINIMUM 800 WATTS.

ITEM 513 - STRUCTURAL STEEL, MISC.: FATIGUE RETROFIT, ULTRASONIC IMPACT TREATMENT (CONT.):

THE CONTRACTOR SHALL FURNISH ALL NECESSARY SAFETY EQUIPMENT, INCLUDING, BUT NOT LIMITED TO, SAFETY HARNESSES, VESTS, GLASSES, EARPLUGS, ETC. THE CONTRACTOR SHALL FURNISH ALL NECESSARY PERMITS, MEANS OF ACCESS, TRAFFIC CONTROL, AND 110 V, 60 HZ, 3 HW AC WITH A MINIMUM OF THREE OUTLETS POWER SUPPLY.

4. TRAINING: IF THE CONTRACTOR'S PERSONNEL ARE NOT TRAINED OPERATORS PREVIOUSLY CERTIFIED BY THE UIT FIRM, THEN THE UIT FIRM SHALL PROVIDE TRAINING FOR THE CONTRACTOR'S PERSONNEL. THE TRAINING INCLUDES THE SETUP OF ALL NECESSARY EQUIPMENT, AND THE ESTABLISHMENT OF QUALITY CONTROL PROCEDURES. SPECIFICALLY, THE UIT FIRM SHALL PROVIDE:

a. A TECHNICAL PROCEDURE MANUAL DEFINING THE TREATMENT METHODOLOGY AND PARAMETERS FOR THE SUCCESSFUL OPERATION OF THE TOOL TO ACHIEVE THE DESIRED RESULTS.

b. A TECHNICAL PROCEDURE INSPECTION GUIDE COVERING THE DETAILS OF THE QUALITY ASSURANCE PROGRAM TO BE CONDUCTED TO ENSURE THAT THE TREATMENT METHODOLOGY HAS BEEN APPLIED IN ACCORDANCE WITH THE INSTRUCTIONS GIVEN IN THE TECHNICAL PROCEDURE MANUAL.

c. UIT TREATMENT TRAINING OF CONTRACTOR PERSONNEL. A MINIMUM OF TWO INDIVIDUALS SHALL BE TRAINED ON-SITE WITH A COMPREHENSIVE TRAINING PROGRAM ON THE GENERAL OPERATION OF THE TOOL AND THE GUIDELINES FOR THE TECHNICAL TREATMENT APPLICATION FOR THIS PROJECT.

d. QUALITY INSPECTION TRAINING OF CONTRACTOR PERSONNEL. A MINIMUM OF TWO INDIVIDUALS, OTHER THAN THOSE APPLYING THE TREATMENT, SHALL BE TRAINED TO CARRY OUT COMPLETE AND THOROUGH INSPECTIONS OF THE TREATMENT BEING UNDERTAKEN.

THE CONTRACTOR SHALL FURNISH ADEQUATE PERSONNEL ASSIGNED TO THE UIT WORK.

5. PROCEDURES: PRIOR TO THE APPLICATION OF UIT THE WELDS MUST BE INSPECTED. ANY CRACKS NOT IDENTIFIED IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO UIT TREATMENT. ANY WELD DEFECTS OR CRACKS AT OR NEAR THE WELD MUST BE REPAIRED PRIOR TO TREATMENT.

UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER, THE FOLLOWING SHALL APPLY IN THE APPLICATION OF UIT:

THE AXIS OF THE UIT IMPACTING PINS DURING APPLICATION SHOULD BE HELD PERPENDICULAR TO THE DIRECTION OF TRAVEL. THE TOOL MUST BE CONTINUOUSLY ADJUSTED TO ENSURE THE PERPENDICULAR ORIENTATION TO THE DIRECTION OF TRAVEL IS MAINTAINED. ALL PIN TIPS SHOULD MAKE CONTACT WITH THE WELD TOE SIMULTANEOUSLY. DURING TREATMENT, THE TOOL SHALL NOT REMAIN STATIONARY FOR AN EXTENDED PERIOD OF TIME. THE APPLICATION OF UIT SHALL INCLUDE TREATMENT OF AN ADDITIONAL AREA OF ½" AROUND THE ENTIRE DEFECT. ON STITCH WELDED AREAS, EACH DEFECT SHALL BE CONSIDERED A SEPARATE DEFECT. RATE OF TRAVEL OF THE TOOL IS APPROXIMATELY 2 FEET PER MINUTE FOR FULL EFFECT.

6. METHOD OF MEASUREMENT AND BASIS OF PAYMENT: ULTRASONIC IMPACT TREATMENT WILL NOT BE MEASURED SEPARATELY BUT WILL BE PAID FOR AT A LUMP SUM PRICE FOR EACH STRUCTURE LOCATION. THIS PRICE WILL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT, MATERIALS, MOBILIZATION, TRAINING, AND INCIDENTALS NECESSARY TO PERFORM THE WORK.

PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
513	LUMP	STRUCTURAL STEEL, MISC.: FATIGUE RETROFIT, ULTRASONIC IMPACT TREATMENT

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGN001.dgn 11/10/2010 11:33:39 AM mtreinelsel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

GENERAL NOTES
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

STRUCTURE GENERAL NOTES (CONT.)

ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN: THIS ITEM INCLUDES THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED AT LOCATIONS SPECIFIED IN THE FIELD AS DIRECTED BY THE ENGINEER.

1. CLEAN THE AREAS BY PENCIL ABRASIVE BLASTING TO REMOVE PAINT, RUST AND ANY OTHER FOREIGN MATERIAL FROM THE SURFACE OF THE PLATES AND ADJACENT WELDS, OR AS DESIGNATED IN THE PLANS.

2. THE ENGINEER SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE THE INVESTIGATION FOR CRACK PRESENCE. ALL GRINDING MUST BE DONE CAUTIOUSLY ESPECIALLY IN TENSION ZONES.

3. THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING (NDT) IN THE AREAS USING MAGNETIC PARTICLE EXAMINATION OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. CONTRACTORS' PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS.

THE PENCIL ABRASIVE BLASTING SHALL CONFORM TO THE FOLLOWING:

THE DESIGNATED NDT AREAS SHALL BE CLEANED TO A SURFACE QUALITY EQUAL TO PREPARATION GRADE SA 2 1/2. SINCE INTENT OF THE PENCIL BLASTING IS TO ENHANCE THE VISUAL AND NDT DETECTION, A GENTLE BLAST SHALL BE USED SUCH THAT THE SURFACE IS NOT PEENED OR OTHERWISE COLD WORKED. SILICA SAND SHALL NOT BE USED. THE BLASTING SHALL BE PERFORMED USING A MAXIMUM COMPRESSED AIR PRESSURE OF 100 PSI, A HOSE NOZZLE DIAMETER OF 1/4" ± 1/16" AND A GRADE 30/60 COAL SLAG ABRASIVE OR EQUIVALENT. BLASTERS USED FOR SURFACE PREPARATION OF STRUCTURAL STEEL PAINTING SHALL NOT BE USED FOR PENCIL BLASTING. AFTER ABRASIVE BLASTING IS COMPLETE, THE CLEANED AREA SHALL BE AIR BLOWN CLEAN.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER PRIOR TO THE START OF THE WORK THAT HE CAN SATISFACTORILY PERFORM PENCIL ABRASIVE BLASTING ACCORDING TO THESE SPECIFICATIONS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE FOR EACH CLEANED AREA PER SIDE OF THE GIRDER.

ITEM 513 - STRUCTURAL STEEL, MISC.: 2" STRESS RELIEF HOLES, AS PER PLAN: THIS ITEM INCLUDES THE DRILLING OF 2" DIAMETER HOLES IN THE GIRDER WEBS AND ANY NECESSARY CLIPPING OF CROSSFRAME ANGLES TO PERFORM THIS WORK, AT THE LOCATIONS SPECIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL INSPECT ALL TOP OF CROSSFRAME TO WEB CONNECTIONS (SPANS IN THRU 6N) FOR OUT-OF-PLANE BENDING CRACKS. THE ENDS OF THE CRACKS SHALL BE LOCATED AS DESCRIBED IN ITEM 516 STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT, AS PER PLAN. WEB CRACKS SHALL BE TREATED BY REMOVING THE CRACK TIP BY DRILLING THE 2" DIAMETER HOLE LOCATED AS DETERMINED BY AND UNDER THE DIRECTION OF THE ENGINEER. HOLES SHALL BE GROUND SMOOTH TO BE FREE OF RAGGED EDGES AND IN ACCORDANCE WITH CMS 513.19.

THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING (NDT) IN THE AREAS USING MAGNETIC PARTICLE EXAMINATION OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. CONTRACTORS' PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS.

PAYMENT FOR THE DRILLING OF THE 2" HOLES AND ALL SUBSEQUENT NDT TESTING ON THE DRILLED HOLE SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE FOR EACH HOLE.

ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN: THIS ITEM CONSISTS OF FIELD PAINTING DAMAGED STRUCTURAL STEEL BY PERFORMING SURFACE PREPARATION AND APPLYING A THREE-COAT PAINT SYSTEM TO THE UNCOATED STEEL AND FEATHERED REMOVAL AREAS OF EXISTING COATINGS.

CMS 514.06 THROUGH 514.10 APPLY. REMOVE EXISTING PAINT COATING TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER ACCORDING TO SSPC-SP 15, COMMERCIAL GRADE POWER TOOL CLEANING, OR EQUAL AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 3. THE ENGINEER WILL USE SSPC-VIS 3 TO DETERMINE THE ACCEPTANCE OF THE COMMERCIAL GRADE POWER TOOL CLEANING. FEATHER THE EXISTING PAINT TO EXPOSE A MINIMUM OF 1/2 INCH OF EACH COAT. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO CMS 514.13.D.

ROUND ALL EXPOSED CORNERS OF MAIN MATERIAL AS NECESSARY TO ACHIEVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A 45 DEGREE ANGLE.

APPLY THE PRIME AND INTERMEDIATE COATS OF THE SPECIFIED THREE-COAT PAINT SYSTEM, CMS 708.02, ACCORDING TO CMS 514.15, 514.16, 514.17, AND 514.20 TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER. TINT THE INTERMEDIATE COAT TO APPROXIMATELY THE SAME COLOR AS THE EXISTING FINISH COLOR. MATCH THE COLOR TO THE ENGINEERS SATISFACTION. THE ENGINEER WILL DETERMINE THE PRIME COAT THICKNESS; PRIME AND INTERMEDIATE COAT THICKNESS USING A TYPE 2 MAGNETIC GAGE AT SPOT LOCATIONS. EACH COAT OF PAINT SHALL MEET THE MINIMUM DRY FILM THICKNESS REQUIREMENTS OF CMS 514.20. APPLY PAINT AS FOLLOWS:

A. APPLY THE PRIME COAT ONLY TO THE SURFACE OF THE BARE STEEL AND THE EXISTING PRIME COAT EXPOSED BY FEATHERING. DO NOT APPLY THE PRIME COAT TO THE ADJACENT INTERMEDIATE COAT.

B. APPLY THE INTERMEDIATE COAT ONLY TO THE NEW PRIME COAT AND THE EXISTING INTERMEDIATE COAT EXPOSED BY FEATHERING. DO NOT APPLY THE INTERMEDIATE COAT TO THE ADJACENT FINISH COAT.

AT THE PERIMETER OF THE REPAIR AREA, APPLY THE PRIME AND INTERMEDIATE COATS USING A BRUSH. APPLY THE FINISH COAT USING EITHER BRUSH OR SPRAY. IN LIEU OF BRUSHING THE USE OF MASKING AREAS NOT TO BE COATED AND SPRAY TO FEATHERED REMOVAL LINES MAY BE PERFORMED.

BLEND REPAIR AREAS WITH THE ADJACENT COATING AND PROVIDE A FINISHED SURFACE IN THE PATCHED AREAS THAT IS SMOOTH AND HAS AN EVEN PROFILE WITH THE ADJACENT SURFACE.

THE DEPARTMENT WILL MEASURE FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN BY THE NUMBER OF SQUARE FEET OF STRUCTURAL STEEL PAINTED. ALL REQUIREMENTS OF THIS SPECIFICATION ARE CONSIDERED INCIDENTAL TO THE WORK. THE DEPARTMENT WILL DETERMINE THE SURFACE AREA BY TAKING EXACT FIELD MEASUREMENTS OF ALL PAINTED SURFACES AND CALCULATIONS.

DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR:

ITEM	UNIT	DESCRIPTION
514	SQUARE FEET	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN

ITEM 514 - FIELD PAINTING, MISC.: FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU): THIS ITEM INCLUDES THE PIER 5N STEEL CAP INTERIOR RETROFIT REGIONS AS A REPAIR TO THE EXISTING PAINT AFTER THE RETROFIT WORK.

THE INTERIOR OF THE CAP IS CONSIDERED AS A CONFINED SPACE AND MAY REQUIRE EXTRA PRECAUTIONS TO ACCOMPLISH THE CONTRACT WORK. THIS MAY INCLUDE SPECIAL METHODS OF VENTILATION, PAINT REMOVAL, PAINT APPLICATION AND/OR OTHER PRECAUTIONS DEEMED NECESSARY BY THE CONTRACTOR. ANY SPECIAL EQUIPMENT OR PROCEDURES NECESSARY TO COMPLETE THIS WORK SHALL BE AT NO ADDITIONAL COST TO THE STATE AND SHALL BE INCLUDED IN THE APPROPRIATE BID ITEMS. THE PAINT MAY BE APPLIED TO THE INTERIOR SURFACES BY BRUSHES OR ROLLERS. AIRLESS SPRAY IS ALLOWED ONLY IF OVERSPRAY IS CONTAINED BY END CLOSURES.

INTERIOR PAINT AT THE EXISTING STEEL PIER CAP SHALL BE WHITE, FEDERAL COLOR NUMBER 27925.

THIS ITEM SHALL CONSIST OF:

1. A COMPLETE WASHDOWN OF ALL STEEL USING A POWER WASHER WITH 7,000 PSI MINIMUM AT NOZZLE WITH A FLOW RATE OF 3-4 GAL/MIN. THE NOZZLE IS TO BE HELD PERPENDICULAR TO AND NO MORE THAN 12" FROM THE STEEL SURFACE.

2. SOLVENT CLEANING AS NEEDED.

3. SPOT CLEANING TO REMOVE ALL RUST, MILL SCALE, UNSOUND PAINT, ETC., USING POWER TOOLS SUCH AS: NEEDLE GUNS, DESCALERS, ABRASIVE WHEELS, DISCS, ROTARY IMPACT FLAPS, WIRE BRUSHES, ETC. (SEE SSPC-SP 11) THE APPEARANCES OF THE SURFACE AFTER POWER TOOL CLEANING SHALL CORRESPOND TO THE PICTORIAL STANDARDS OF SSPC-SP 11.

4. A TEST SECTION TO VERIFY COMPATIBILITY OF PRIMER WITH EXISTING PAINT.

5. SPOT PRIME USING TWO COATS OF AN APPROVED EPOXY MASTIC (5 MILS MINIMUM EACH COAT).

6. A COMPLETE TOP COAT USING A URETHANE (3 MILS MIN.).

7. ALL PROVISIONS OF OZEU PROPOSAL NOTE WILL APPLY TO THIS PROJECT, EXCEPT THOSE WHICH DIRECTLY CONFLICT WITH THIS NOTE.

8. THE FOLLOWING EXCEPTIONS APPLY TO THIS PROJECT:

a. AREAS OF RUST, UNSOUND (I.E., PEELING, FLAKING) PAINT, ETC. SHALL BE REMOVED BY HAND TOOL OR POWER TOOL CLEANING. THE REMOVAL SHALL EXTEND OUT ADEQUATELY TO LEAVE ONLY SOUND, WELL-BONDED EXISTING PAINT, AND SHALL BE FEATHER-EDGED 2" MINIMUM FROM THE BARE STEEL TO THE SOUND TOP COAT AROUND THE PERIMETER OF EACH SPOT CLEANED.

THE INTENT OF THIS SPECIFICATION IS TO PROVIDE FOR CLEANING AND PAINTING OF THE BRIDGE WITHOUT THE USE OF ABRASIVE BLASTING. THE CONTRACTOR MAY CHOOSE TO USE SELECTIVE ABRASIVE BLASTING ON THIS PROJECT IN CONJUNCTION WITH HAND TOOL CLEANING. HOWEVER, ANY ABRASIVE BLASTING MUST BE ACCOMPANIED WITH CONTAINMENT, COLLECTION, STORAGE, TESTING, AND DISPOSAL OF ALL BLASTING DEBRIS IN ACCORDANCE WITH THE PROVISIONS OF OZEU AND WASTE CONTROL PROPOSAL NOTES, EXCEPT NO SEPARATE PAYMENT WILL BE MADE FOR WASTE CONTROL. VACUUM BLASTING WILL ALSO BE CONSIDERED ACCEPTABLE, PROVIDING ALL ABRASIVE MATERIAL IS RECYCLED.

b. MINIMUM MIL THICKNESS OF EACH COAT OF PAINT SHALL BE VERIFIED WITH A POSITECTOR.

ITEM 514 - FIELD PAINTING, MISC.: FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU) (CONT.)

PAINT COMPATIBILITY TEST SECTION:

BEFORE ANY PAINTING CAN BEGIN ON THIS BRIDGE (AND AT LEAST 24 HOURS PRIOR TO PAINTING), A 2' x 2' SECTION OF EXISTING SOUND PAINT SHALL BE REMOVED DOWN TO BARE METAL. THE PRIMER TO BE USED SHALL BE APPLIED TO THE TEST SECTION MAKING SURE THAT PRIMER OVERLAPS EXPOSED EDGES OF SOUND PAINT. ANY LIFTING, WRINKLING, OR OTHER DETRIMENTAL EFFECTS ON THE SURROUNDING SOUND PAINT WITHIN THE FIRST 24 HOURS SHALL BE GROUNDS FOR DISAPPROVAL OF THE SELECTED PRIMER AND ANOTHER PRIMER SHALL BE SELECTED FOLLOWED BY ANOTHER TEST SECTION. THE COST OF THESE SECTIONS SHALL BE INCLUDED FOR PAYMENT WITH SURFACE PREPARATION.

COATINGS WHICH WILL BE ACCEPTABLE (PENDING ACCEPTABILITY OF TEST SECTIONS) ARE:

CARBOLINE CO.
2150 SCHUETZ RD.
ST. LOUIS, MO 63146
800-848-4645
PRIMER - CARBOMASTIC 15
TOP COAT - CARBOTHANE 134 HS

PPG PROTECTIVE AND MARINE COATINGS
11605 VIMY RIDGE RD.
ALEXANDER, AR 72002
888-977-4762
PRIMER - AMERLOCK 400 OR 400 AL
TOP COAT - AMERCOAT 450 HS

POLY-CARB, INC.
33095 BAINBRIDGE RD.
SOLON, OH 44139
866-765-9227
PRIMER - MARK 60.1: ULTRAPOX II
TOP COAT - MARK 73.2: ULTRAKOTE II

THE SHERWIN - WILLIAMS CO.
2121 NEW WORLD DR.
COLUMBUS, OH 43207
800-524-5979
PRIMER - EPOXY MASTIC ALUMINUM II B62S100/B60V100
TOP COAT - POLYURETHANE B65 SERIES/B60 V2

PRIMER AND TOP COAT MUST BE BY SAME MANUFACTURER.

BASIS OF PAYMENT:

ITEM	UNIT	DESCRIPTION
514	SQUARE FOOT	FIELD PAINTING, MISC.: SURFACE PREPARATION (EEU)
514	SQUARE FOOT	FIELD PAINTING, MISC.: SPOT PRIME, TWO COATS (EPOXY)
514	SQUARE FOOT	FIELD PAINTING, MISC.: COMPLETE COAT FINISH (URETHANE)

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGN002.dgn 11/10/2010 11:33:42 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102807

GENERAL NOTES
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

STRUCTURE GENERAL NOTES (CONT.)

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN: THE EXISTING STRIP SEAL GLAND SHALL BE REPLACED THE FULL LENGTH OF THE DECK JOINT. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO ENSURE THE NEW SEAL WILL FIT THE EXISTING STEEL EXTRUSION. THE STRIP SEAL SHALL BE INSTALLED IN ONE PIECE FULL LENGTH.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT: THE EXISTING VERTICAL EXPANSION JOINT BETWEEN THE ABUTMENT AND WINGWALL SHALL BE REPAIRED WITH POLYURETHANE FOAM AS INDICATED IN THE PLANS WITH THE MATERIAL PER SUPPLEMENTAL SPECIFICATION 842. THE JOINT SHALL BE THOROUGHLY CLEANED AS DIRECTED BY THE ENGINEER.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM: THIS ITEM CONSISTS OF REMOVING ALL DIRT AND DEBRIS FROM THE ROADWAY DECK NEAR THE CURB AND MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, COLLECTION BOXES, HOPPERS, HORIZONTAL CONDUCTORS, DOWNSPOUTS, UNDERGROUND STORM SEWERS AND MANHOLES TO THE CITY STORM SEWERS OR PIPE OUTLET, AFTER THE DIRT AND DEBRIS ARE REMOVED. THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH CLEAN WATER MAKING CERTAIN THAT WATER FLOWS SMOOTHLY TO ITS OUTLET.

CONTRACTOR SHALL DETERMINE THE EXTENT OF WORK REQUIRED FOR THIS ITEM BY EXAMINATION OF EXISTING BRIDGE PLANS AND BY FIELD INVESTIGATION.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEM. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION PRIOR TO BEGINNING WORK AND AGAIN AT THE COMPLETION OF THE WORK. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

ALL DIRT AND DEBRIS SHALL BE REMOVED FORM THE BRIDGE SITE AND PROPERLY DISPOSED OF.

THE CLEANOUTS OF THE BRIDGE DRAINAGE SYSTEM SHALL NOT BEGIN UNTIL ALL OTHER WORK UNDER THIS CONTRACT IS COMPLETED, INCLUDING PAINTING OF STRUCTURAL STEEL AND SEALING OF CONCRETE SURFACE.

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE CLEANING AND CLEARING OF THE BRIDGE DRAINAGE SYSTEM SHALL BE INCLUDED IN THE PRICE FOR ITEM 518- STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION: THIS ITEM CONSISTS OF CUTTING HOLES IN DOWNSPOUTS AS DIRECTED BY THE ENGINEER TO ALLOW FOR DRAINAGE OF WATER ONTO THE GROUND SHOULD THE UNDERGROUND DRAINAGE PIPE BECOME CLOGGED IN THE FUTURE.

THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF LOCATIONS TO BE MODIFIED. THE COST OF ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THIS WORK IS INCLUDED WITH THE ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

CONTRACTOR WILL BE REQUIRED TO REMOVE AND DISPOSE ALL CONCRETE DEBRIS GENERATED FROM CONCRETE PATCHING. EQUIPMENT REQUIRED TO PERFORM CONCRETE PATCHING MUST MAINTAIN AT LEAST A MINIMUM HORIZONTAL CLEARANCE OF 12 FEET MEASURED PERPENDICULAR TO THE CENTERLINE OF THE NEAREST TRACK.

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LGN003.dgn 11/10/2010 11:33:44 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

GENERAL NOTES
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

CALCULATED BY: JDG

ESTIMATED QUANTITIES - HAM-50-1903L - FUNDING: MAJOR BRIDGE NHS

CHECKED BY: MTN

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP		4, 20
509	10000	292	POUND	EPOXY COATED REINFORCING STEEL			292		
510	10001	28	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN			28		4, 20
511	34400	3	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			3		
512	10100	6149	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	189	2019	3941		
512	10600	2	FT	CONCRETE REPAIR BY EPOXY INJECTION		2			
513	95000	1306	FT	STRUCTURAL STEEL, MISC.: WELDING STRUCTURAL STEEL, AS PER PLAN			1306		4
513	95000	279	FT	STRUCTURAL STEEL, MISC.: GRINDING PER FOOT		279			4
513	95020	LUMP		STRUCTURAL STEEL, MISC.: FATIGUE RETROFIT, ULTRASONIC IMPACT TREATMENT			LUMP		4
513	95030	320	EACH	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN			320		5
513	95030	320	EACH	STRUCTURAL STEEL, MISC.: 2" STRESS RELIEF HOLES, AS PER PLAN			320		5
514	20001	1293	SQ FT	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN			1293		5, 15, 16
514	27700	140	SQ FT	FIELD PAINTING, MISC.: SURFACE PREPARATION (EEU)		140			5, 16
514	27700	280	SQ FT	FIELD PAINTING, MISC.: SPOT PRIME, TWO COATS (EPOXY)		280			5, 16
514	27700	140	SQ FT	FIELD PAINTING, MISC.: COMPLETE COAT FINISH (URETHANE)		140			5, 16
516	01301	193	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN	45	148			6
516	10001	42	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN	42				19
516	14600	25	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT	25				6
518	62200	13	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				13	6
518	62200	7	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				7	6
519	11101	348	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	12	336			6, 10-14
848	10201	5259	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)			5259		
848	20000	5259	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION (1" EXISTING DECK REMOVAL)			5259		
848	30200	365	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			365		
848	50000	525	SQ YD	HAND CHIPPING			525		
848	50100	LUMP		TEST SLAB			LUMP		
848	50200	26	CU YD	FULL DEPTH REPAIR			26		
848	50300	5259	SQ YD	WEARING COURSE REMOVED, ASPHALT (T=2")			5259		
848	50320	5259	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=1½")			5259		
848	50340	2100	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			2100		

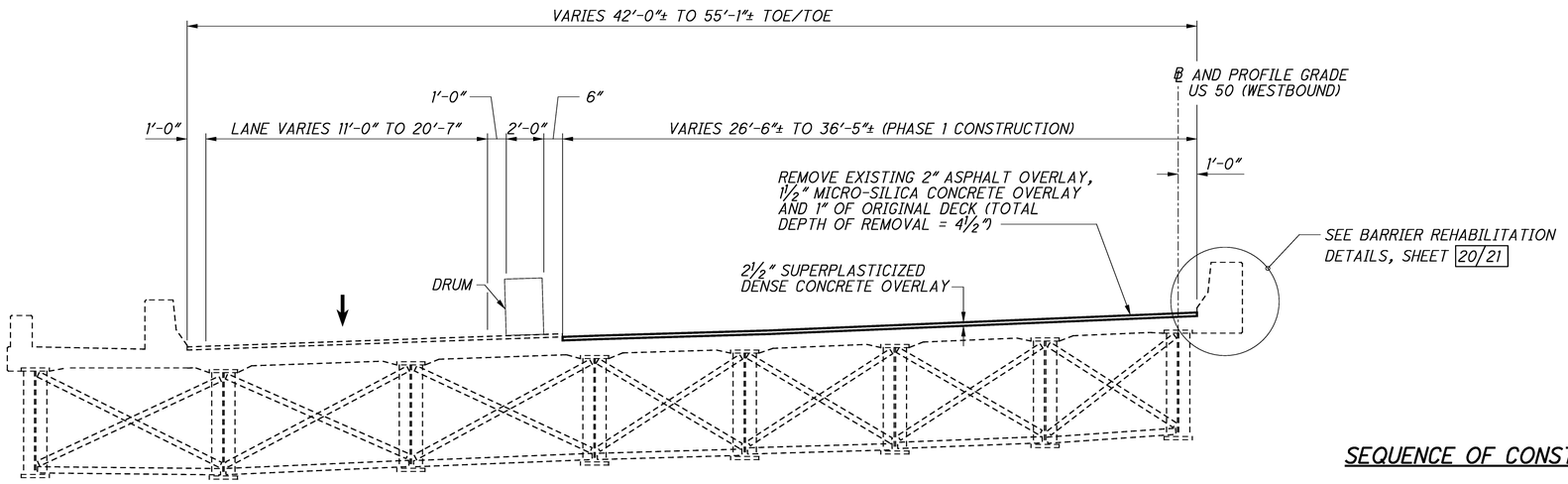
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LEQ001.dgn 11/10/2010 11:33:45 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102807

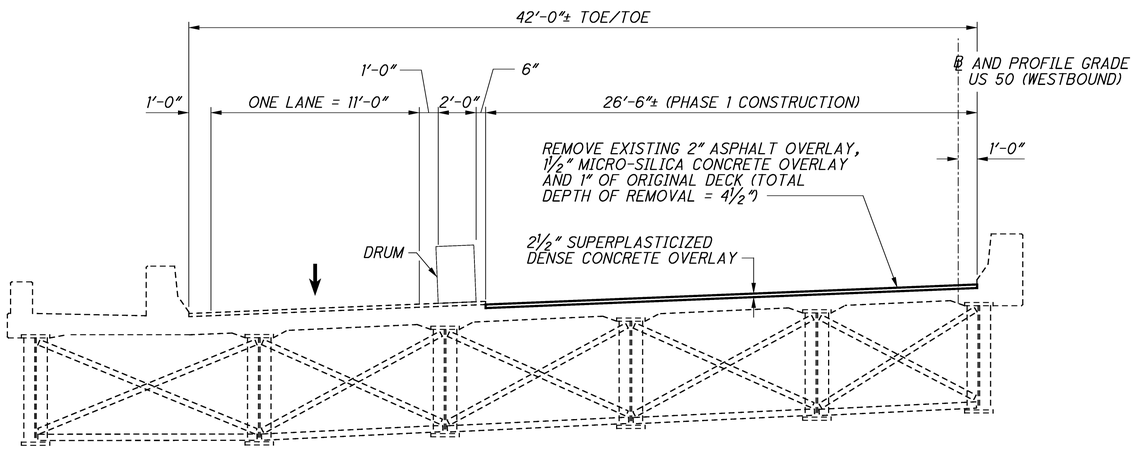
ESTIMATED QUANTITIES
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736



LEFT BRIDGE PHASE 1

(STA. 2+62± TO STA. 5+70±, LOOKING EAST)



LEFT BRIDGE PHASE 1

(STA. 5+70± TO STA. 13+10±, LOOKING EAST)

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL DRUMS ON BRIDGE DECK AS SHOWN AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. REMOVE EXISTING 2" NOMINAL ASPHALT OVERLAY TO PHASE 1 CONSTRUCTION LIMITS.
3. USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, REMOVE EXISTING 1½" MICRO-SILICA CONCRETE OVERLAY AND 1" OF ORIGINAL DECK TO PHASE 1 CONSTRUCTION LIMITS.
4. REHABILITATE EXISTING INSIDE BARRIER.
5. PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO PHASE 1 CONSTRUCTION LIMITS
6. SEAL EXISTING AND REHABILITATED BARRIER WITH EPOXY-URETHANE SEALANT.

PHASE 2

7. RELOCATE DRUMS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
8. REMOVE EXISTING 2" NOMINAL ASPHALT OVERLAY TO PHASE 2 CONSTRUCTION LIMITS.
9. USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, REMOVE EXISTING 1½" MICRO-SILICA CONCRETE OVERLAY AND 1" OF ORIGINAL DECK TO PHASE 2 CONSTRUCTION LIMITS.
10. PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO PHASE 2 CONSTUCTION LIMITS.
11. SEAL EXISTING BARRIERS AND SIDEWALK SURFACES WITH EPOXY-URETHANE SEALANT.
12. REMOVE DRUMS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.
13. PATCH AND SEAL SUBSTRUCTURE CONCRETE SURFACES.
14. CLEAN BRIDGE DRAINAGE SYSTEM.

NOTES:

1. DRUMS SHALL BE INSTALLED AS PER ROADWAY DRAWINGS AND APPLICABLE ODOT STANDARD MAINTENANCE OF TRAFFIC DRAWINGS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

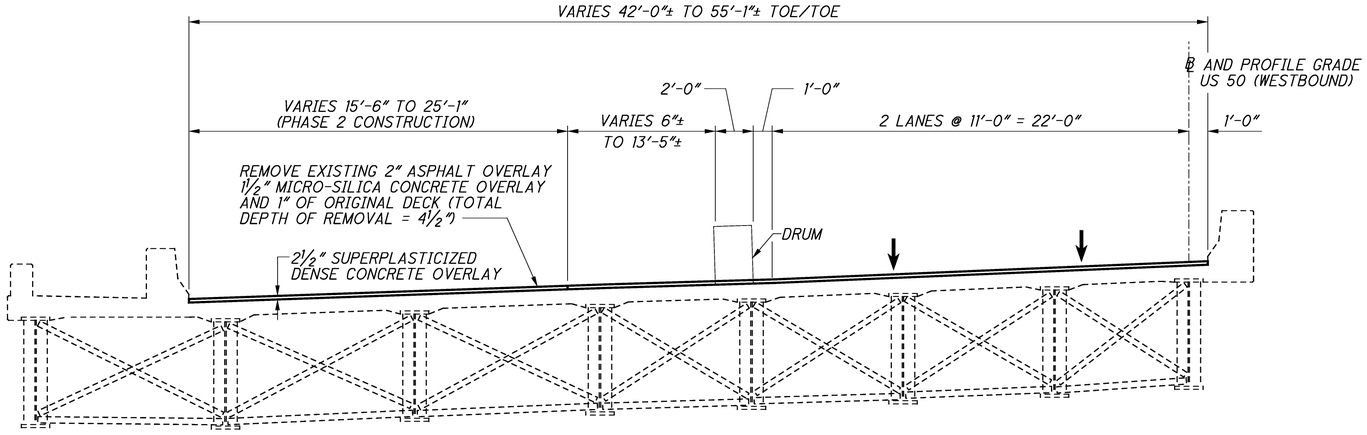
PHASE 1 CONSTRUCTION DETAILS
HAM-50-19.03L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

8 / 21

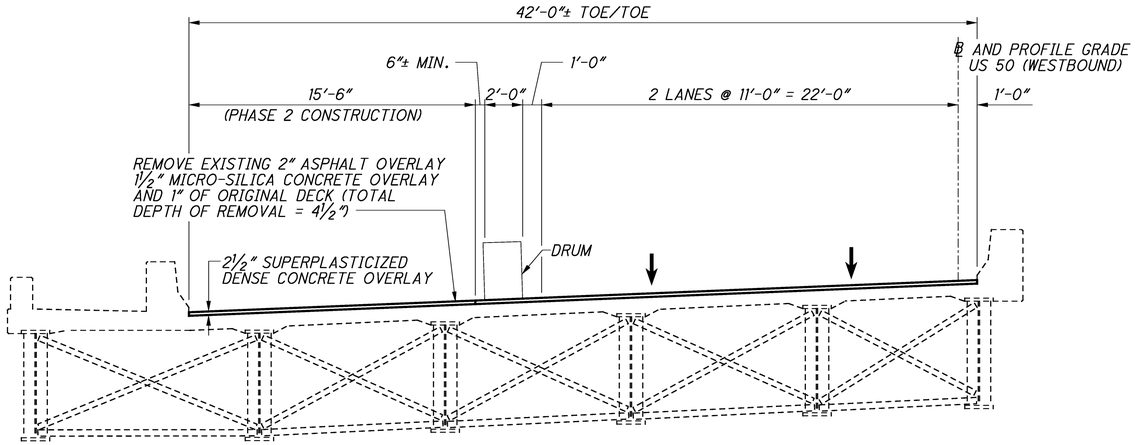
161
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LPC001.dgn 11/10/2010 11:33:46 AM mtreiheisel



LEFT BRIDGE PHASE 2

(STA. 2+62± TO STA. 5+70±, LOOKING EAST)



LEFT BRIDGE PHASE 2

(STA. 5+70± TO STA. 13+10±, LOOKING EAST)

NOTES:

1. FOR ADDITIONAL PHASE CONSTRUCTION INFORMATION, SEE SHEET 8/21.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MDC	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

PHASE 2 CONSTRUCTION DETAILS

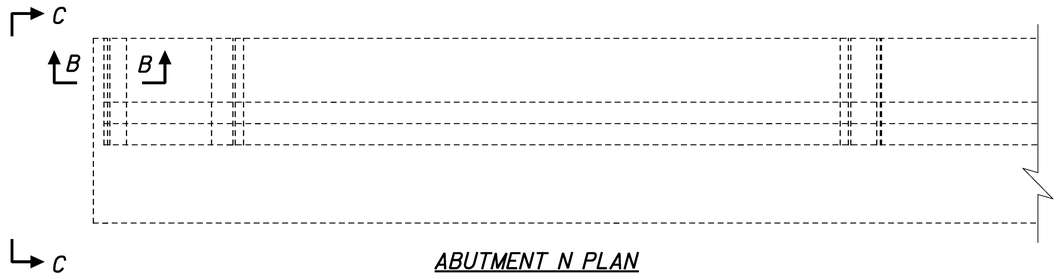
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

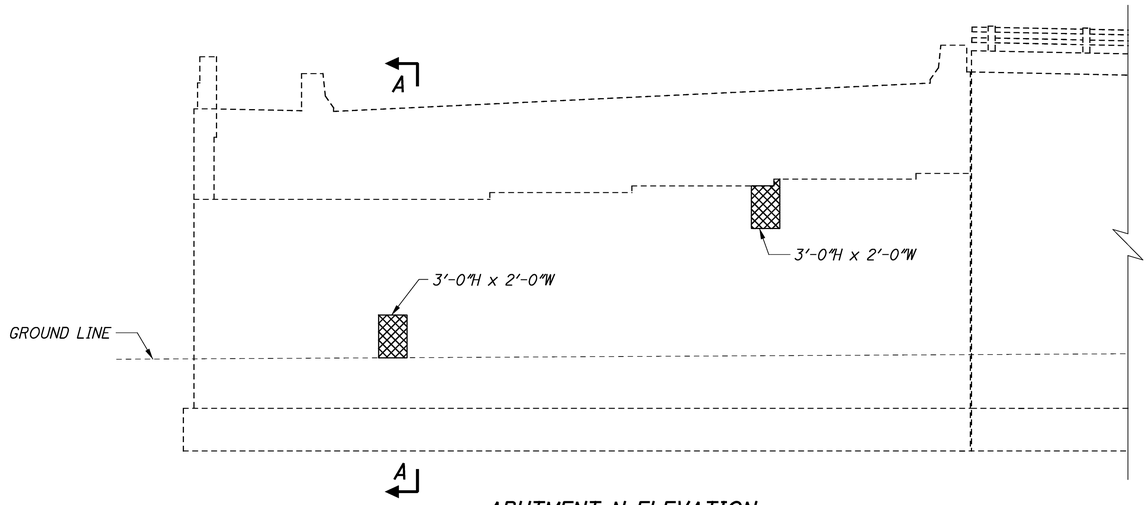
9/21

162/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LPC002.dgn 11/10/2010 11:33:48 AM mtreiheisel

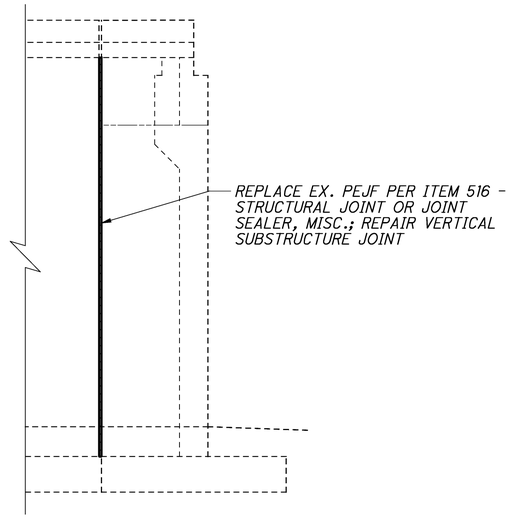


ABUTMENT N PLAN



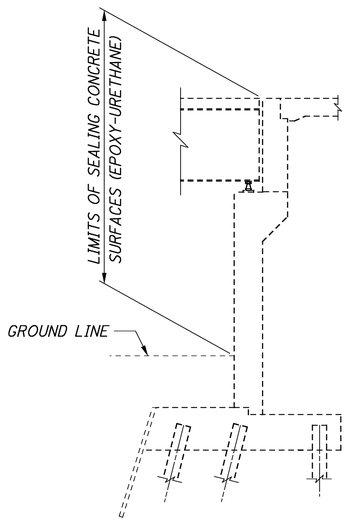
ABUTMENT N ELEVATION

(LOOKING EAST)

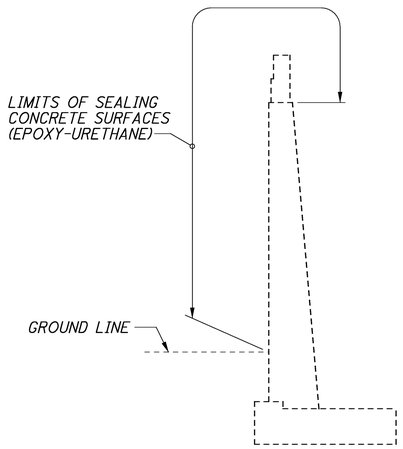


VIEW C-C - ABUTMENT N ELEVATION

(LOOKING SOUTH)



SECTION A-A
ABUTMENT SEALING LIMITS



SECTION B-B
WINGWALL SEALING LIMITS

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
FWD. ABUT. N	12.0	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING OF CONCRETE IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF ABUTMENT AND WING WALLS, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAILS.

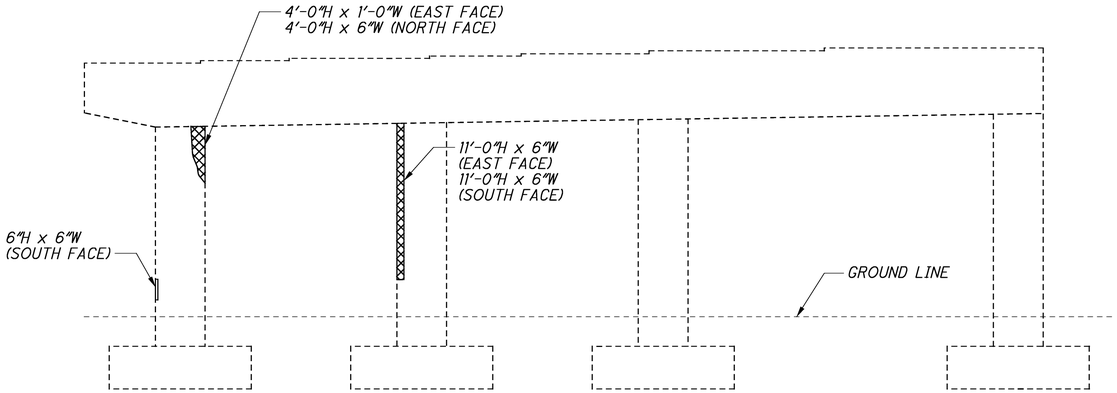
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

ABUTMENT N REPAIR DETAILS
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

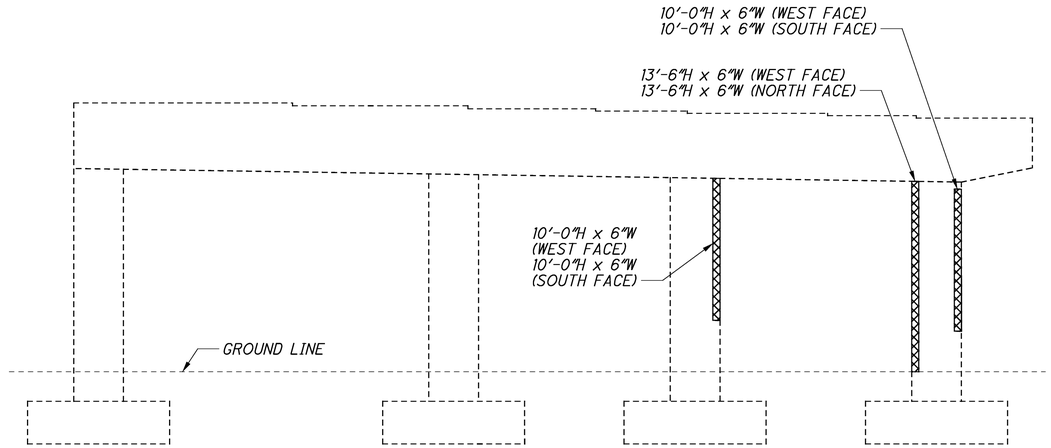
HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LAF001.dgn 11/10/2010 11:33:49 AM mtreiheisel



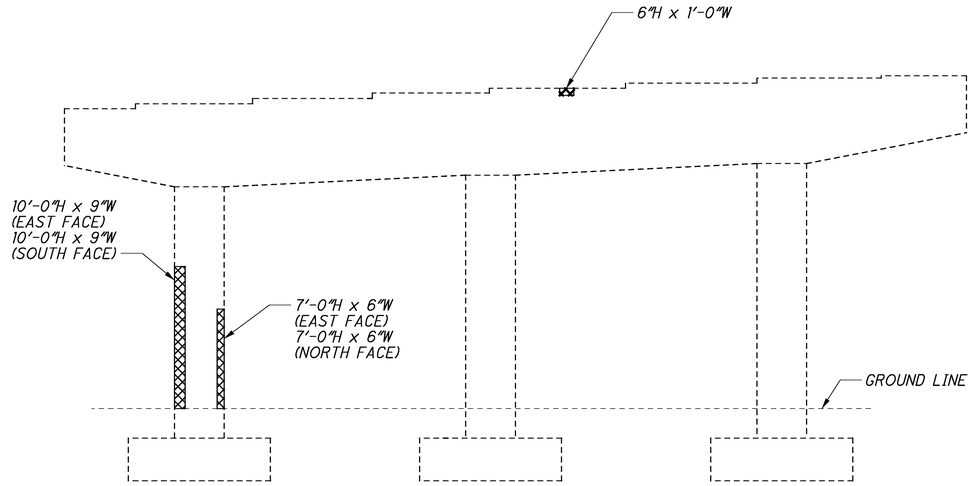
PIER 1N - EAST ELEVATION

(LOOKING WEST)



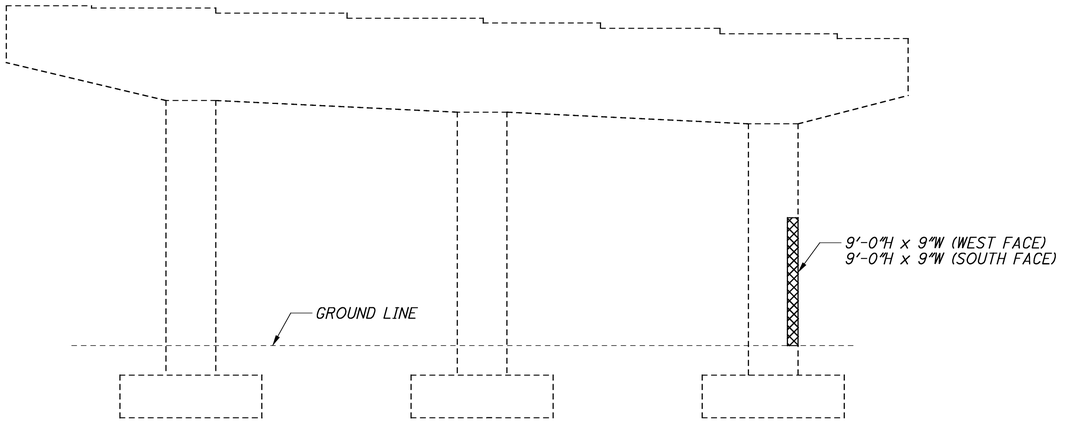
PIER 1N - WEST ELEVATION

(LOOKING EAST)



PIER 2N - EAST ELEVATION

(LOOKING WEST)



PIER 2N - WEST ELEVATION

(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES

ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 1N EAST	17.25	0
PIER 1N WEST	33.5	0
PIER 2N EAST	22.5	0
PIER 2N WEST	13.5	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 13/21 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

PIER 1N & 2N REPAIR DETAILS

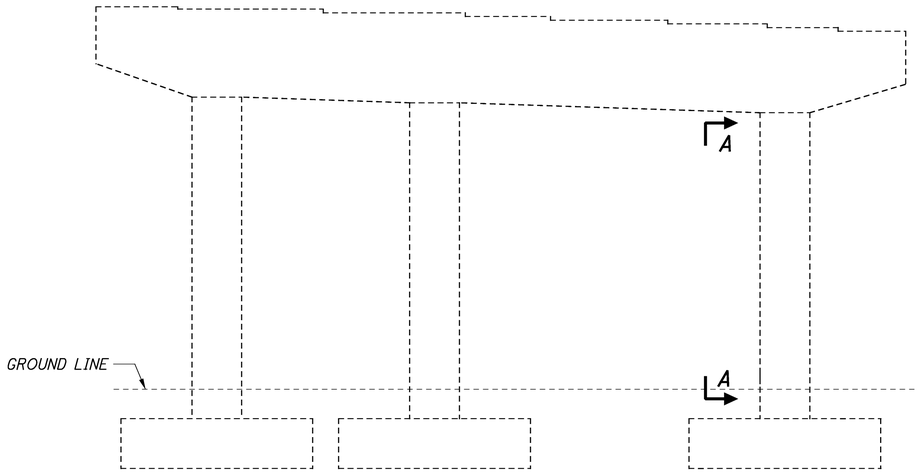
HAM-50-1903L

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

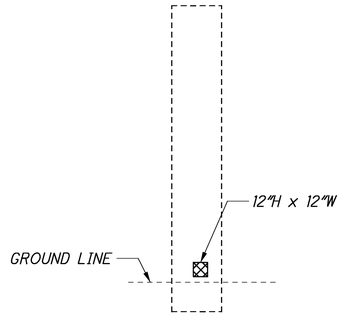
HAM-50-19.03

PID No. 75736

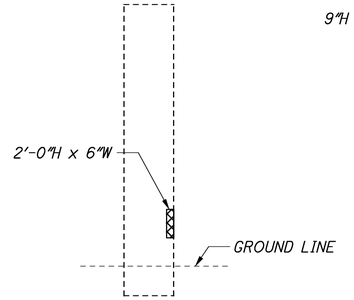
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LPI001.dgn 11/10/2010 11:33:51 AM mtneiheisel



PIER 3N - WEST ELEVATION
(LOOKING EAST)



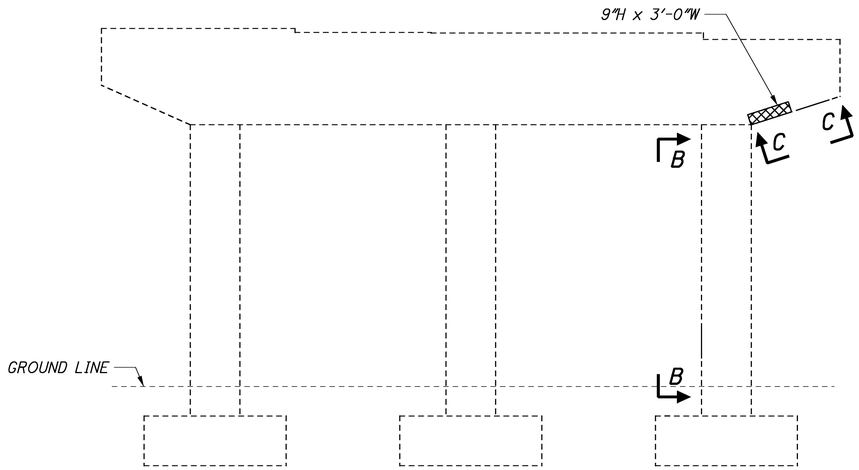
SECTION A-A



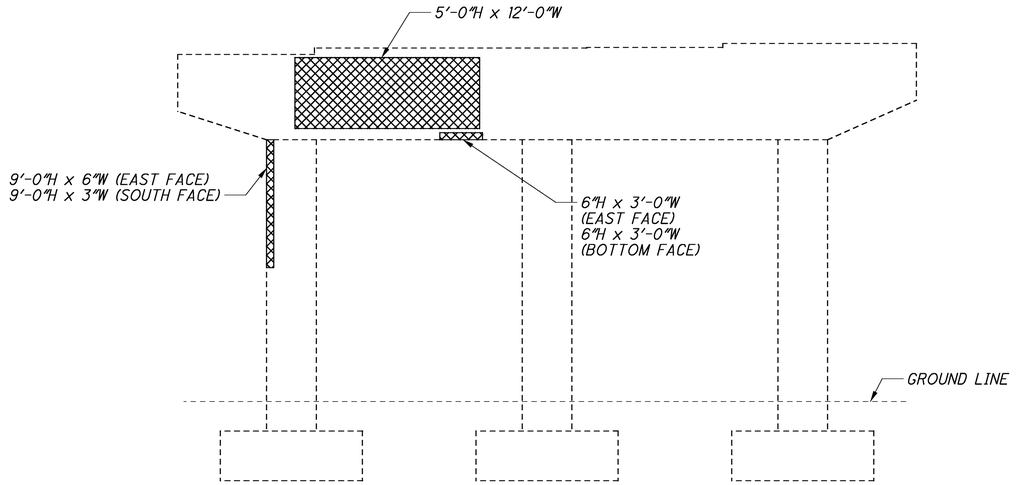
SECTION B-B



SECTION C-C



PIER 4N - WEST ELEVATION
(LOOKING EAST)



PIER 4N - EAST ELEVATION
(LOOKING WEST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES

ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
PIER 3N WEST	1.0	0
PIER 4N WEST	5.5	2.0
PIER 4N EAST	69.75	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 13/21 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

PIER 3N & 4N REPAIR DETAILS

HAM-50-1903L

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

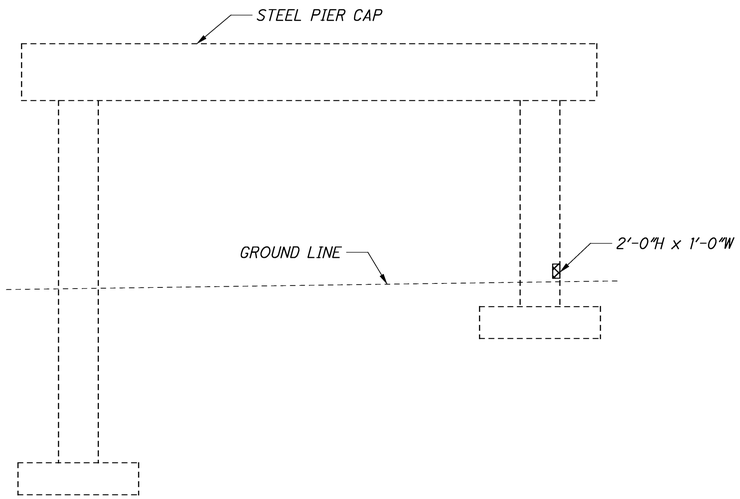
HAM-50-19.03

PID No. 75736

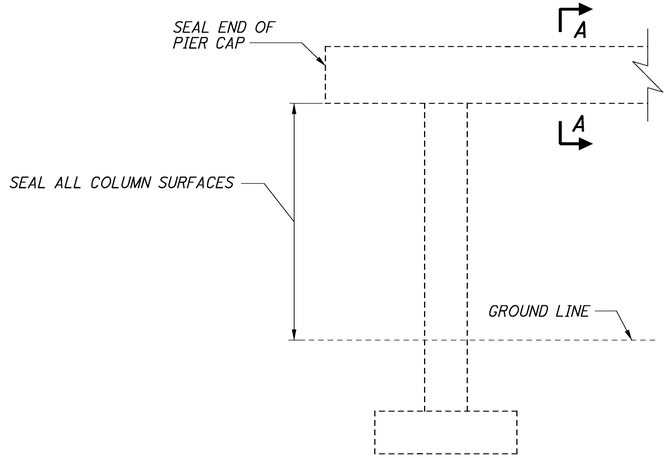
12 / 21

165 / 442

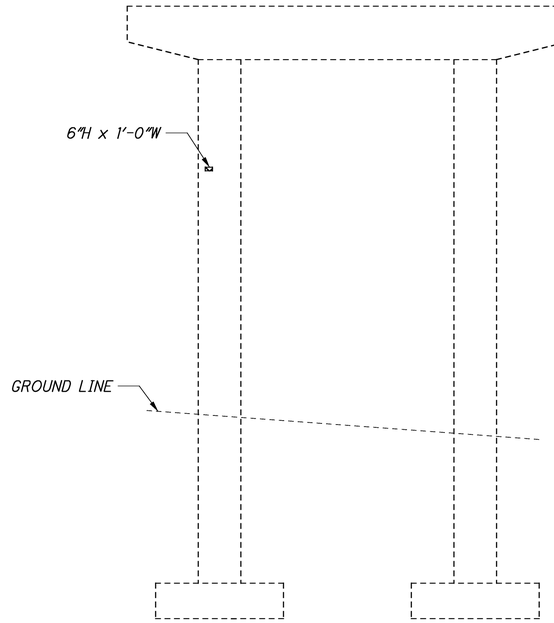
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LPI002.dgn 11/10/2010 11:33:52 AM mtreitheisel



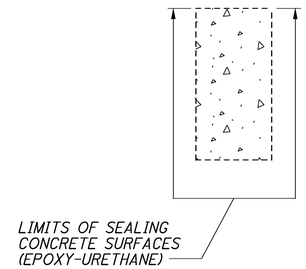
PIER 5N - WEST ELEVATION
(LOOKING EAST)



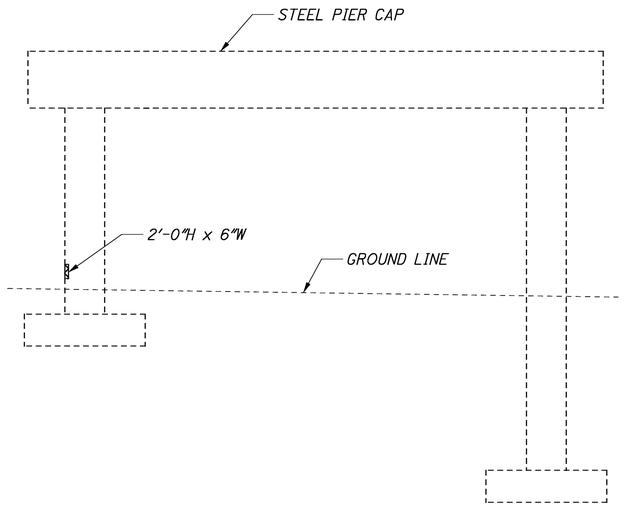
LIMITS OF SEALING PIER CONCRETE SURFACES (EPOXY-URETAHANE) (TYPICAL ALL PIERS EXCEPT PIER 5N CAP)



PIER 6N - WEST ELEVATION
(LOOKING EAST)



SECTION A-A



PIER 5N - EAST ELEVATION
(LOOKING WEST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
PIER 5N WEST	2.0	0
PIER 5N EAST	1.0	0
PIER 6N WEST	0.5	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL THIS SHEET.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102807

PIER 5N & 6N REPAIR DETAILS

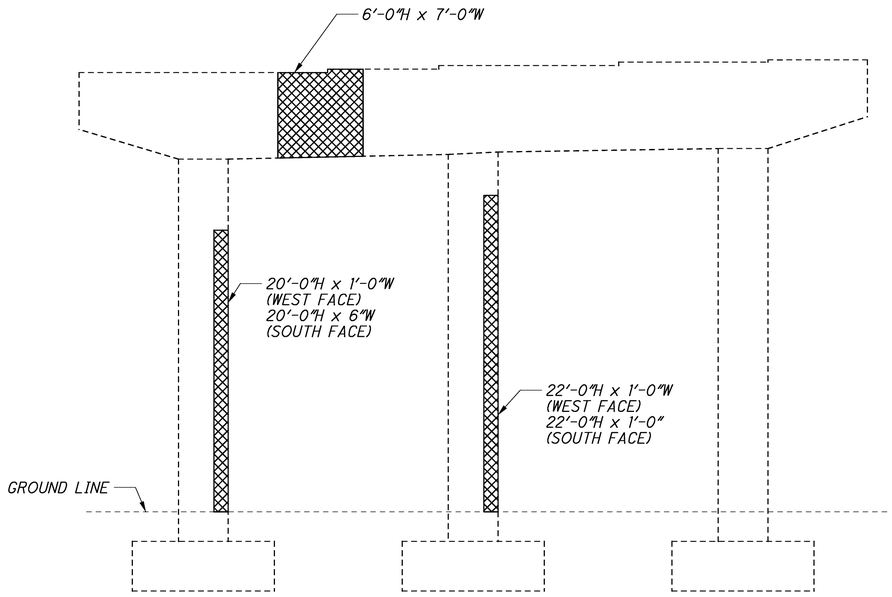
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

13 / 21

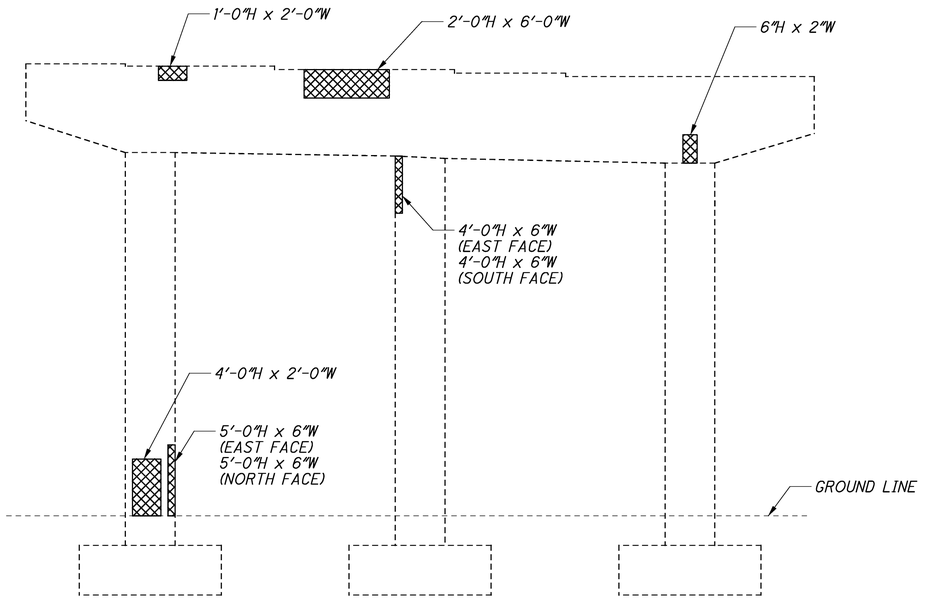
166
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LPI003.dgn 11/10/2010 11:33:53 AM mtreitheisel



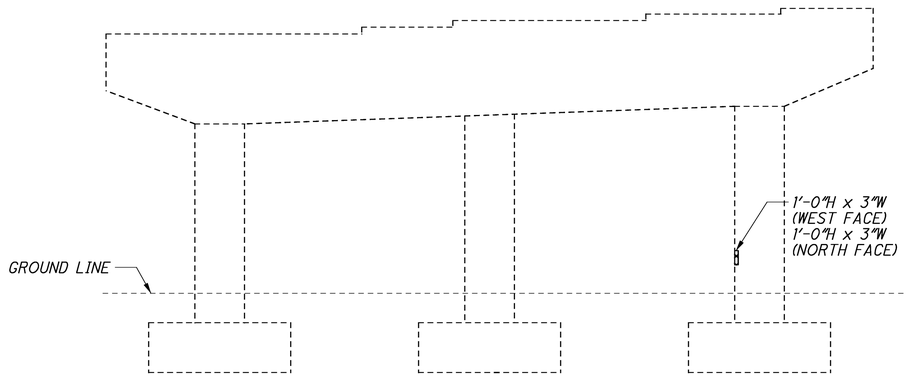
PIER 7N - WEST ELEVATION

(LOOKING EAST)



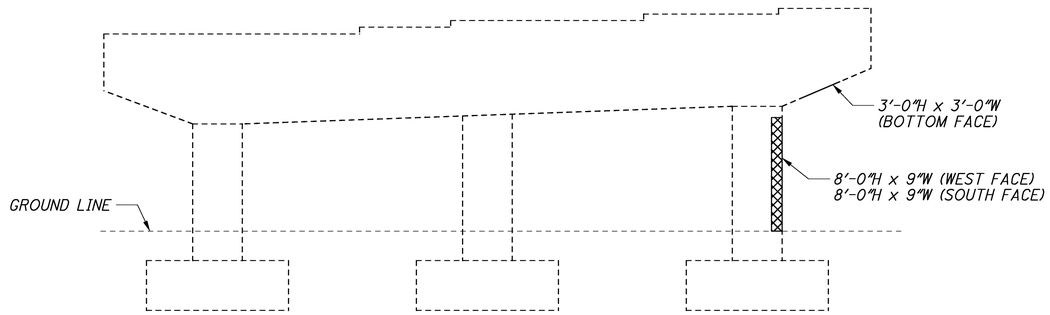
PIER 7N - EAST ELEVATION

(LOOKING WEST)



PIER 8N - WEST ELEVATION

(LOOKING EAST)



PIER 9N - WEST ELEVATION

(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES

ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 7N WEST	116.0	0
PIER 7N EAST	31.1	0
PIER 8N WEST	0.5	0
PIER 9N WEST	21.0	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 13/21 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102807	

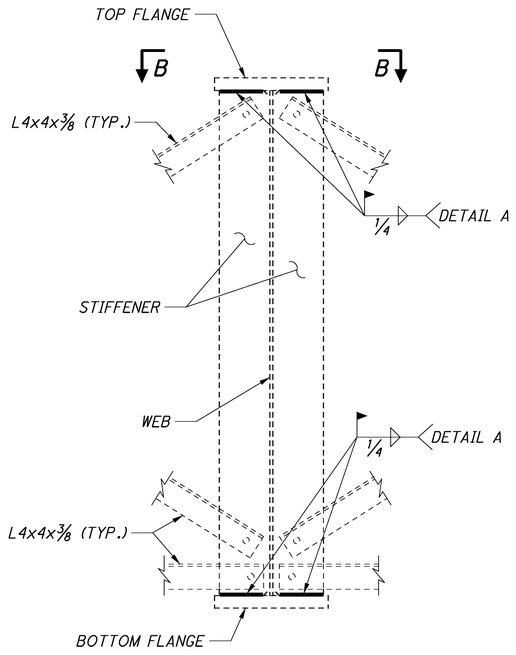
PIER 7N, 8N, & 9N REPAIR DETAILS
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

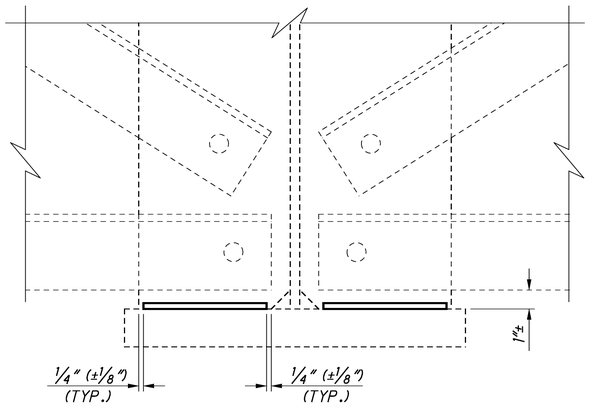
14 / 21

167
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LP1004.dgn 11/10/2010 11:33:55 AM mtreitheisel

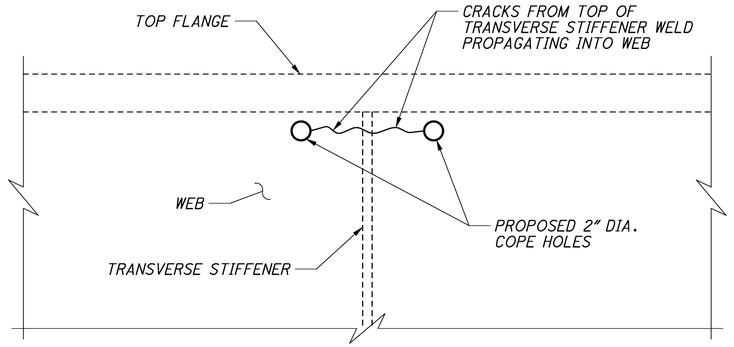


INTERMEDIATE CROSSFRAME STIFFENER RETROFIT DETAIL (TYPICAL ALL INTERMEDIATE CROSSFRAMES)

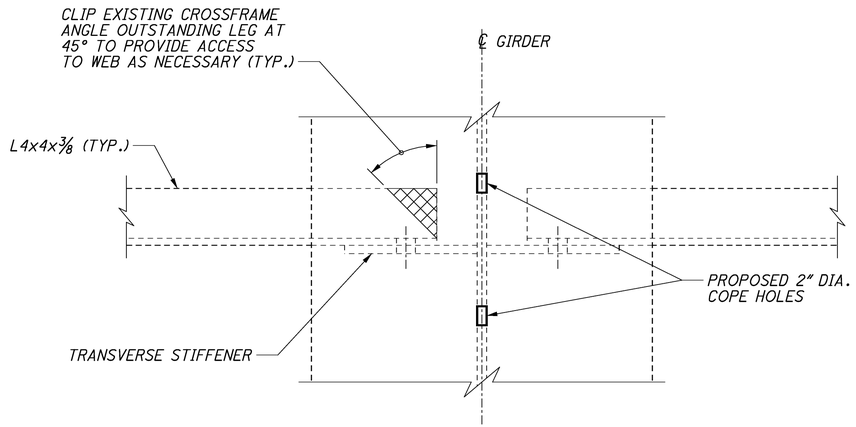


DETAIL A

(BOTTOM FLANGE SHOWN TOP FLANGE SIMILAR)



CRACK REPAIR DETAIL



VIEW B-B

NOTES:

1. FINAL LOCATION FOR CRACK REPAIR WILL BE DETERMINED IN THE FIELD BY THE ENGINEER AT TIME OF CONSTRUCTION.
2. LOCATIONS OF RETROFITS AND REPAIRS ARE TO BE PAINTED PER ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN.
3. FOR ADDITIONAL PAINTING, STIFFENER RETROFIT, AND CRACK REPAIR INFORMATION, SEE GENERAL NOTES SHEETS 4/21 AND 5/21.

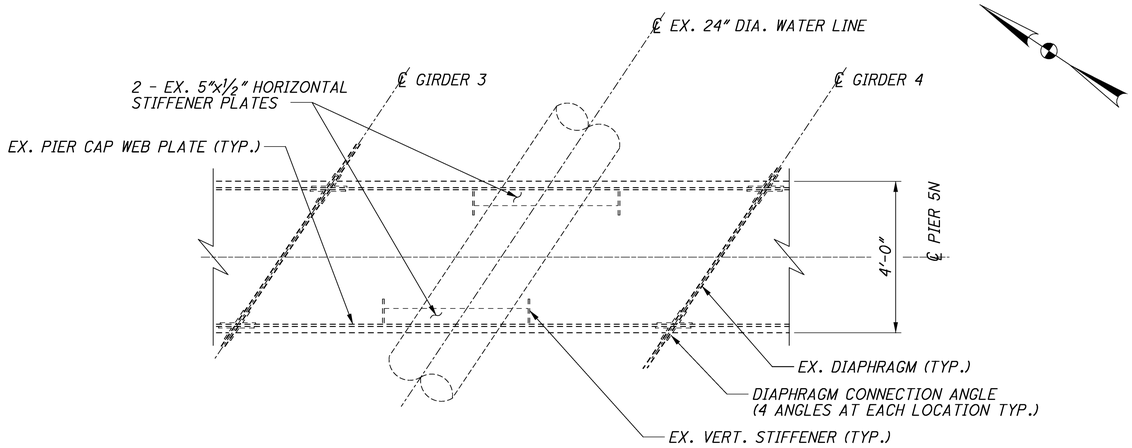
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

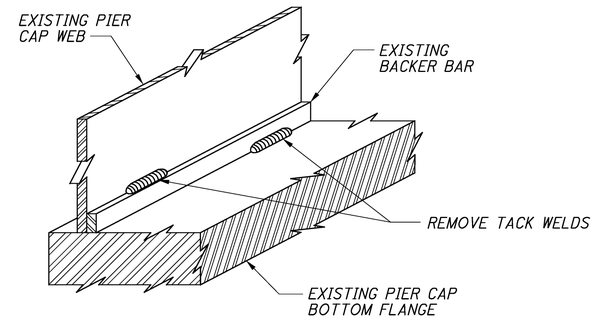
GIRDER CRACK REPAIR AND STIFFENER RETROFIT (LEFT BRIDGE)
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

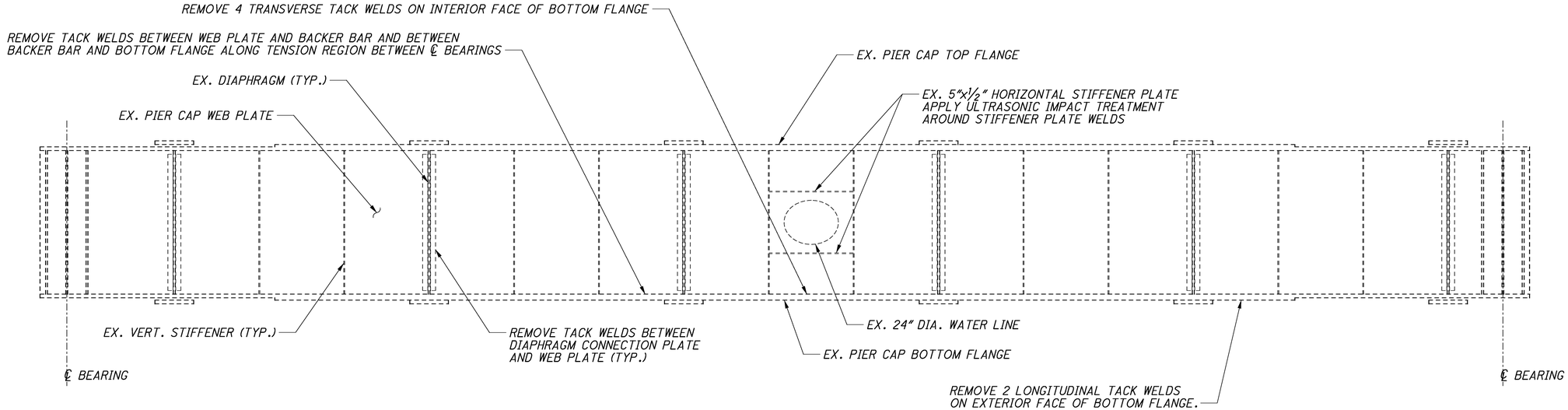
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LSD001.dgn 11/10/2010 11:33:56 AM mtreiheisel



PARTIAL PLAN



BACKING BAR TACK WELD REMOVAL DETAIL



ELEVATION

(INTERIOR FACE OF EAST WEB SHOWN, WEST WEB SIMILAR)

NOTES:

1. ALL TACK WELDS ARE TO BE REMOVED BY GRINDING.
2. INTERIOR GRINDING LOCATIONS ON STEEL PIER CAP TO BE PAINTED PER ITEM 514 - PAINTING MISC.: FIELD PAINTING OF EXISTING STEEL, USING EPOXY AND URETHANE (EEU).
3. EXTERIOR GRINDING LOCATIONS ON STEEL PIER CAP TO BE PAINTED PER ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN.
4. FOR ADDITIONAL PAINTING, ULTRASONIC IMPACT, AND TACK WELD REMOVAL INFORMATION, SEE GENERAL NOTES SHEETS 4/21 AND 5/21.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

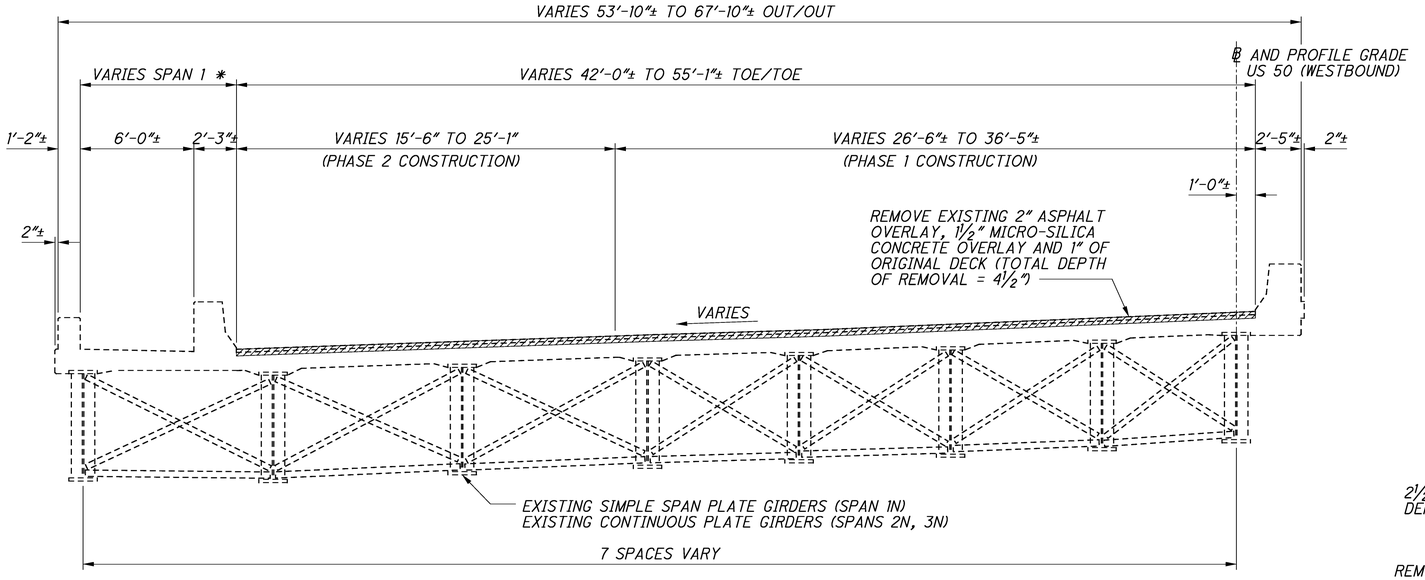
PIER 5N STEEL PIER CAP RETOFIT DETAILS
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

16 / 21

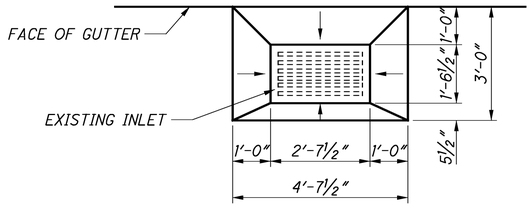
169
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LSD002.dgn 11/10/2010 11:33:57 AM mtreiheisel

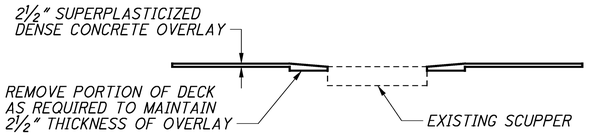


EXISTING TRANSVERSE SECTION

(WESTBOUND SPANS STA. 2+62± TO STA. 5+70±)

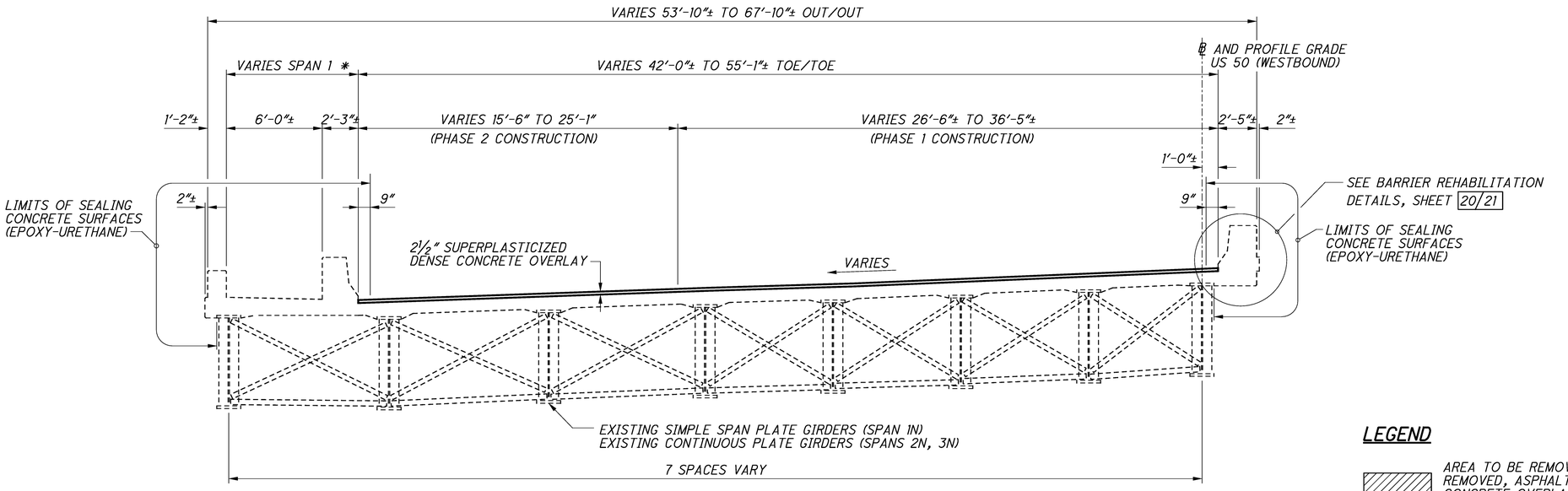


SCUPPER PLAN



SECTION THRU SCUPPER

* NJ SHAPED PARAPET STARTS 35'-0"± INTO SPAN IN.



PROPOSED TRANSVERSE SECTION

(WESTBOUND SPANS STA. 2+62± TO STA. 5+70±)

LEGEND

AREA TO BE REMOVED AS PER ITEM 848 - WEARING COURSE REMOVED, ASPHALT (2" NOMINAL THICKNESS) AND EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)

NOTES:

1. FOR OVERLAY REMOVAL AND REPLACEMENT DETAILS SEE SHEET 18/21.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MSL		3102807	

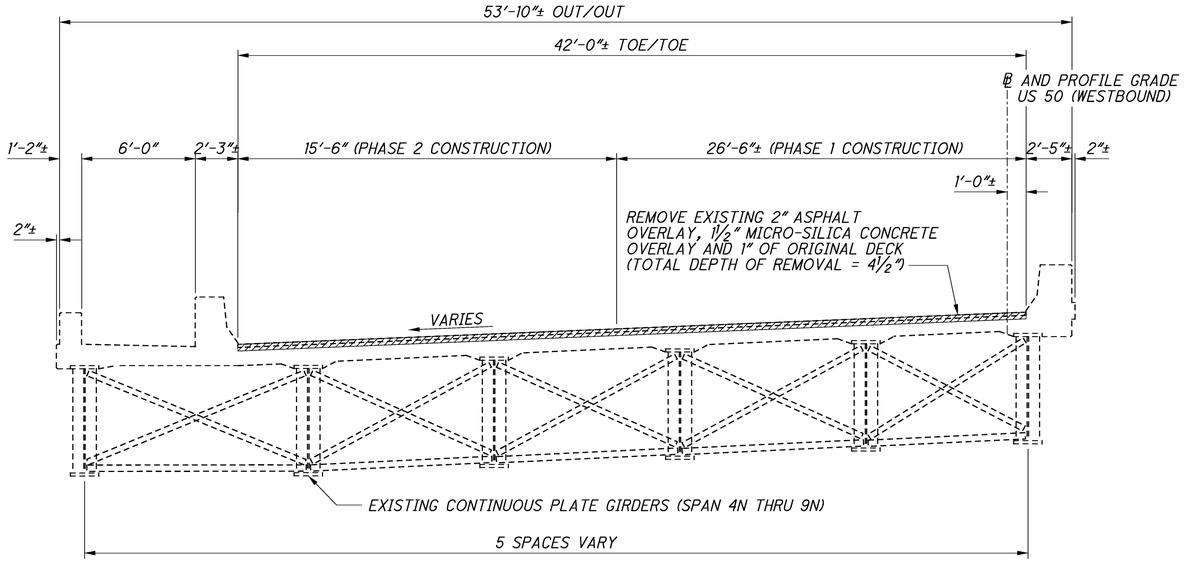
TRANSVERSE SECTION AND SCUPPER DETAIL
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

17 / 21

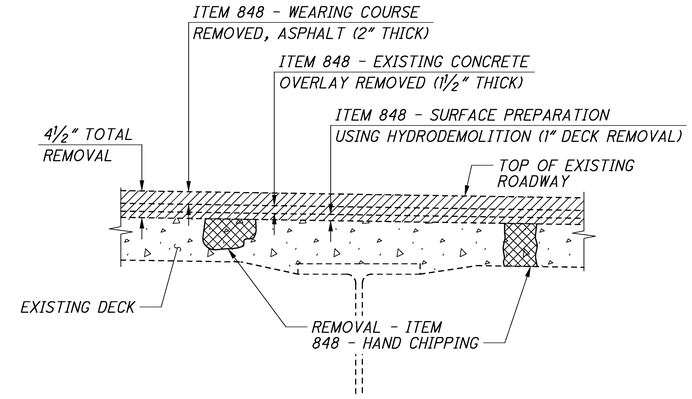
170
442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LTS001.dgn 11/10/2010 11:33:59 AM mtreiheisel

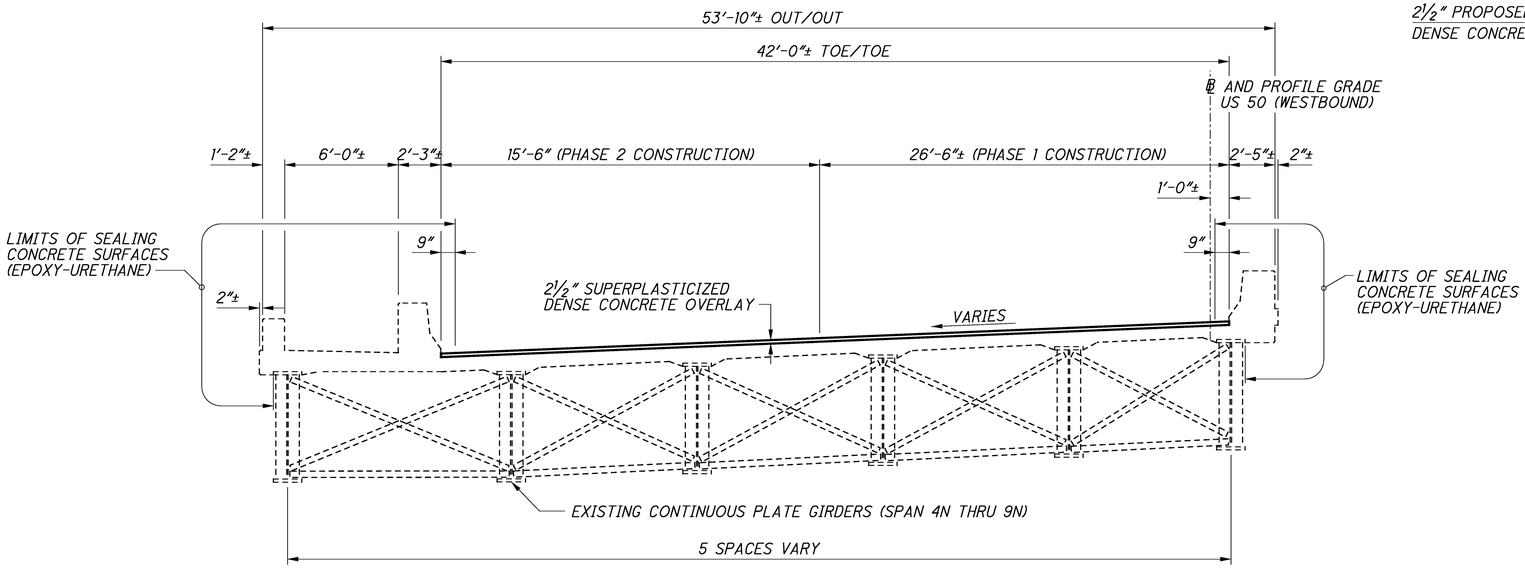


EXISTING TRANSVERSE SECTION

(WESTBOUND STA. 5+70± TO STA. 13+10'±, LOOKING EAST)

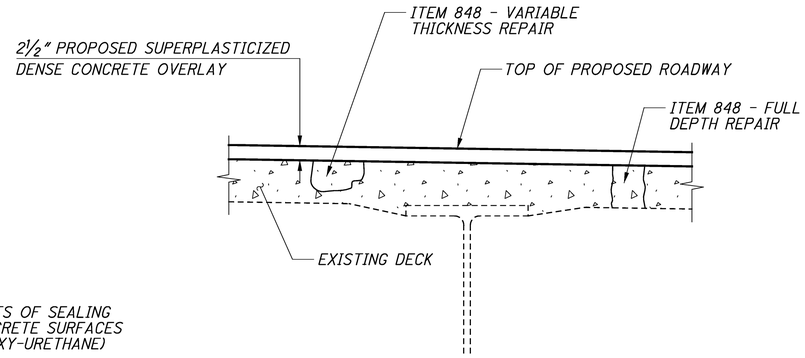


OVERLAY REMOVAL DETAIL



PROPOSED TRANSVERSE SECTION

(WESTBOUND STA. 5+70± TO STA. 13+10'±, LOOKING EAST)



OVERLAY REPLACEMENT DETAIL

LEGEND

AREA TO BE REMOVED AS PER ITEM 848 - WEARING COURSE REMOVED, ASPHALT (2" NOMINAL THICKNESS) AND EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - HAND CHIPPING

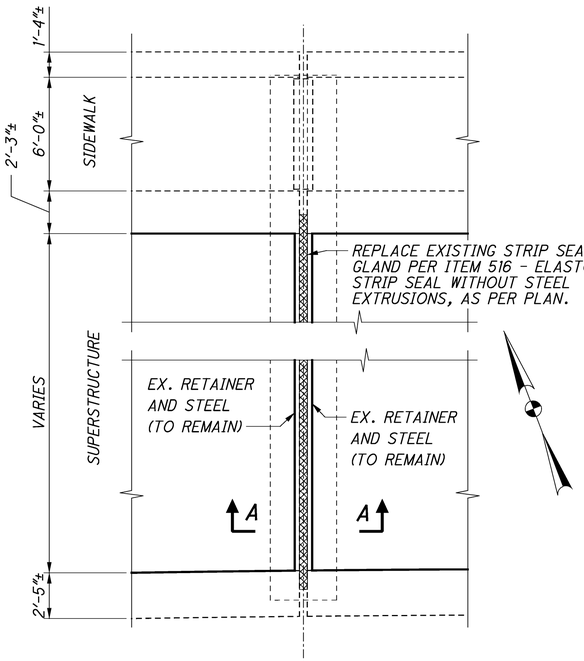
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102807	

TRANSVERSE SECTION
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

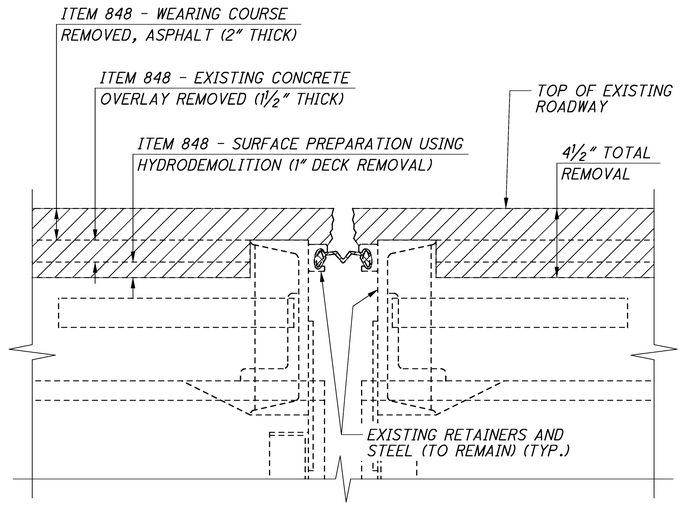
HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LTS002.dgn 11/10/2010 11:34:00 AM mtreiheisel



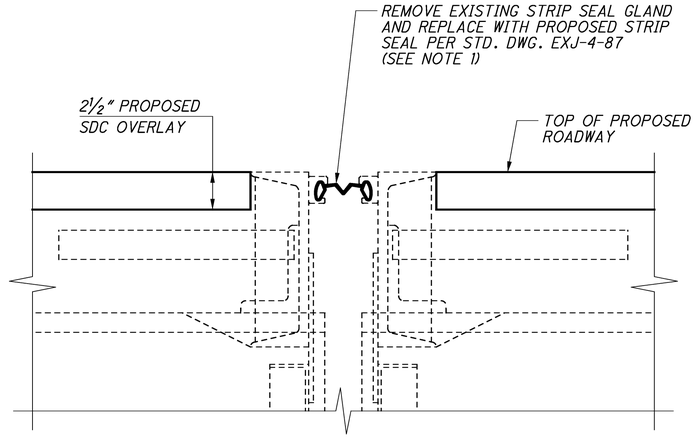
PIER 4N PARTIAL PLAN

(PIERS 2N & 7N SIMILAR)

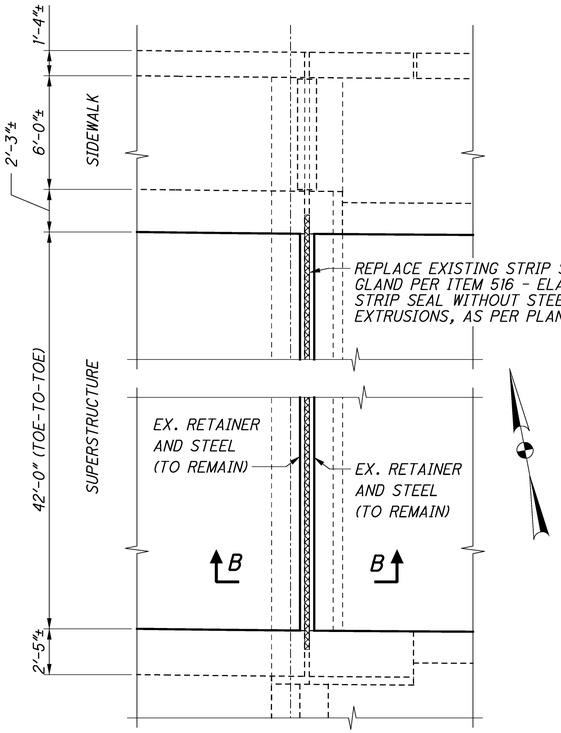


SECTION A-A

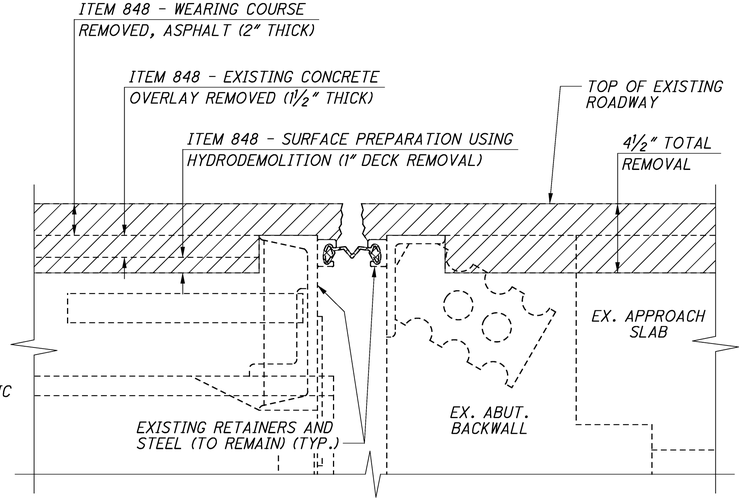
(REMOVAL)



SECTION A-A

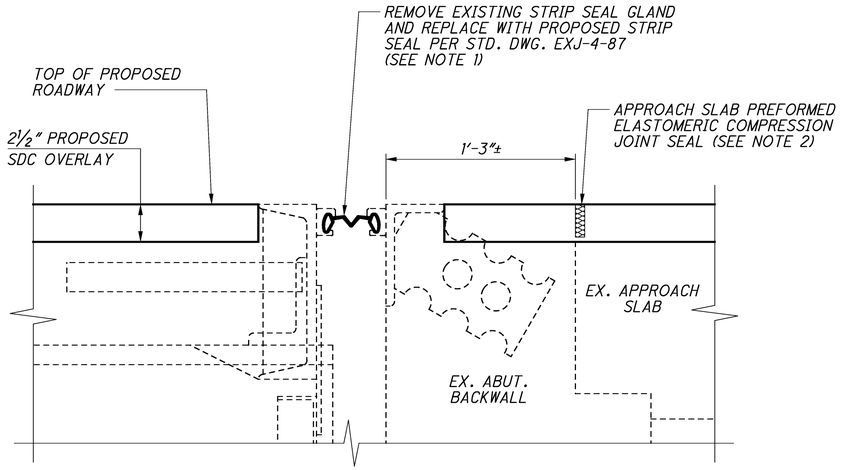


ABUTMENT N PARTIAL PLAN



SECTION B-B

(REMOVAL)



SECTION B-B

LEGEND

SDC = SUPERPLASTICIZED DENSE CONCRETE

AREA TO BE REMOVED AS PER ITEM 848 - WEARING COURSE REMOVED, ASPHALT (2" NOMINAL THICKNESS) AND EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2½" THICK)

INDICATES LOCATION OF STRIP SEAL GLAND TO BE REPLACED PER ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN.

NOTES:

1. THE EXISTING STRIP SEAL GLAND SHALL BE REPLACED THE FULL LENGTH OF THE DECK JOINT. THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO ENSURE THE NEW SEAL WILL FIT THE EXISTING STEEL EXTRUSION. THE STRIP SEAL SHALL BE INSTALLED IN ONE PIECE FULL LENGTH AND SHALL BE PAID FOR WITH ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN.
2. FOR APPROACH SLAB PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL DETAILS, SEE DETAIL B OF STD. DWG. AS-1-81 SHEET 2 OF 3. PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL TO BE PAID FOR WITH ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN.

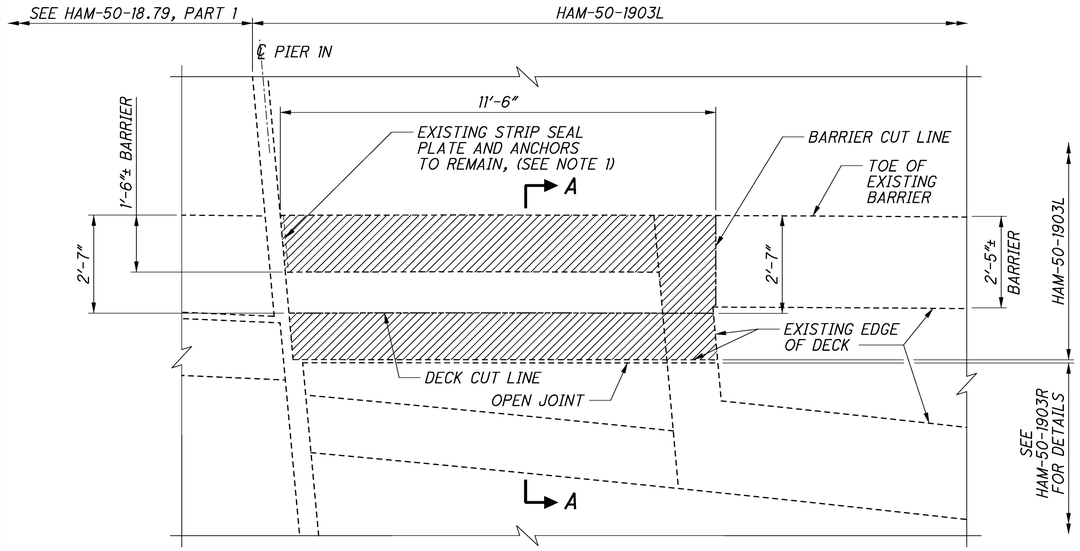
DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DESIGNED: PJP | DRAWN: MTN | REVIEWED: MSL | DATE: 11/12/10
CHECKED: SSM | REVISED: | STRUCTURE FILE NUMBER: 3102807

EXPANSION JOINT DETAILS

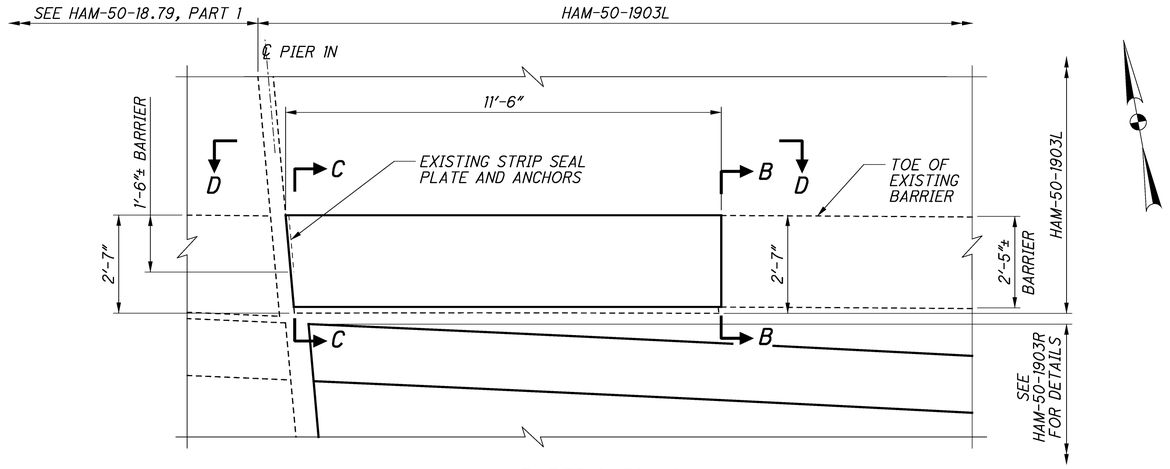
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

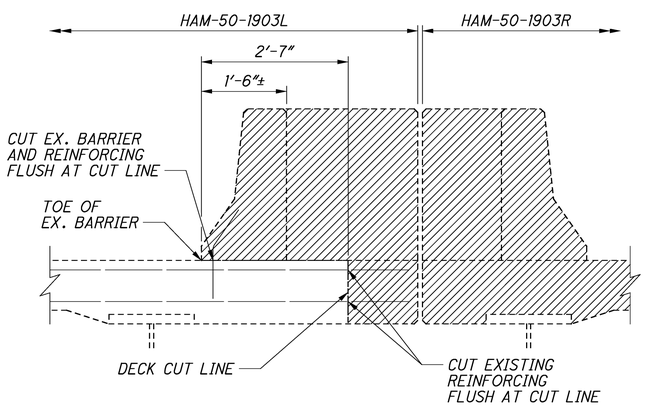
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LMD001.dgn 11/10/2010 11:34:01 AM mtreiheisel



PARTIAL PLAN
(REMOVAL)

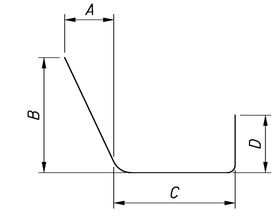


PARTIAL PLAN

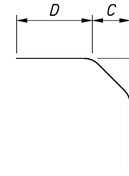


SECTION A-A

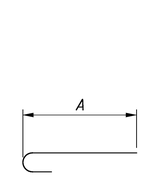
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	INC
PARAPET REINFORCING STEEL LIST									
	1 SR	2'-10"			2'-3"				
S501	OF	TO	42	16	TO				0'-1"
	12	3'-10"			3'-3"				
	1 SR	4'-10"						2'-3"	
S502	OF	TO	67	10	0'-2"	1'-7"	1'-3"	TO	0'-1"
	12	5'-10"						3'-3"	
S503	8	11'-2"	93	STR					
S504	4	3'-0"	13	STR					
S601	12	2'-7"	47	13	0'-10"	0'-10"	0'-7"	0'-10"	
S602	12	1'-8"	30	STR					
		TOTAL	292						



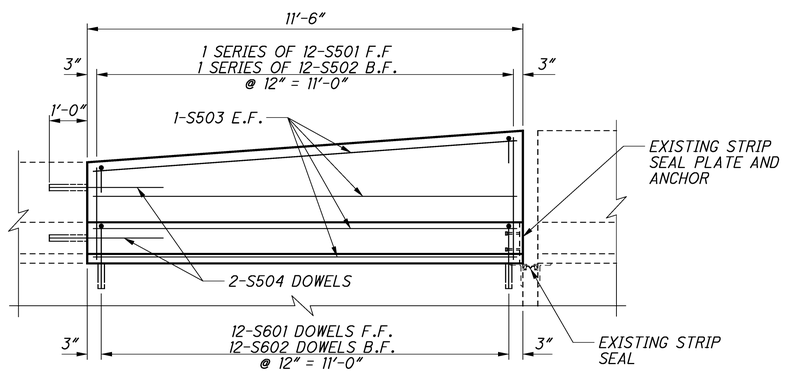
TYPE-10



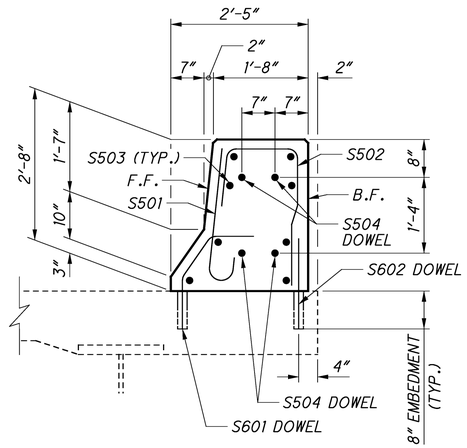
TYPE-13



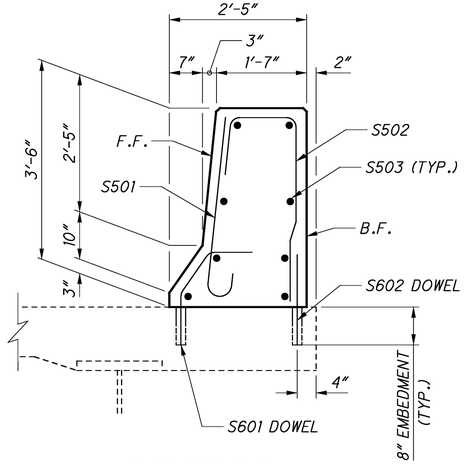
TYPE-16



VIEW D-D



SECTION B-B



SECTION C-C

LEGEND:

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

F.F. = FRONT FACE
B.F. = BACK FACE

NOTES:

1. HAND CHIP CONCRETE AROUND EXISTING STRIP SEAL PLATE AND ANCHORS AS NOT TO DAMAGE EXISTING STRIP SEAL.
2. FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN, SEE SHEET 4/21.
3. ALL REINFORCING STEEL TO BE EPOXY COATED.
4. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN JDG | CHECKED MTN | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102807

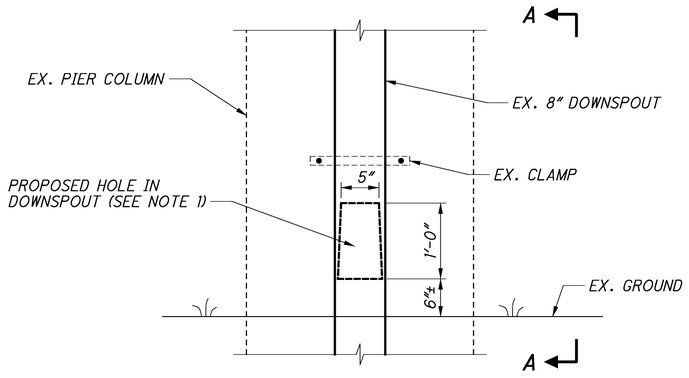
BARRIER REHABILITATION DETAILS AT PIER 1N
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

20 / 21

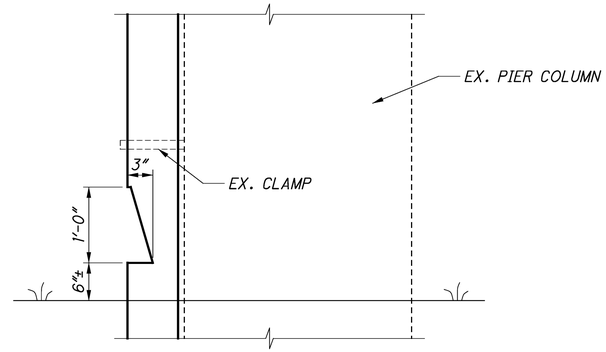
173 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LDP001.dgn 11/10/2010 11:34:03 AM mtreiheisel



DOWNSPOUT MODIFICATION DETAIL

ONE LOCATION AT PIERS 1N, 2N, 3N, 4N, 7N, 8N, AND 9N



VIEW A-A

NOTES:

1. CUT HOLES IN EXISTING DOWNSPOUTS AS DIRECTED BY THE ENGINEER. WORK IS TO BE PAID FOR WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102807	

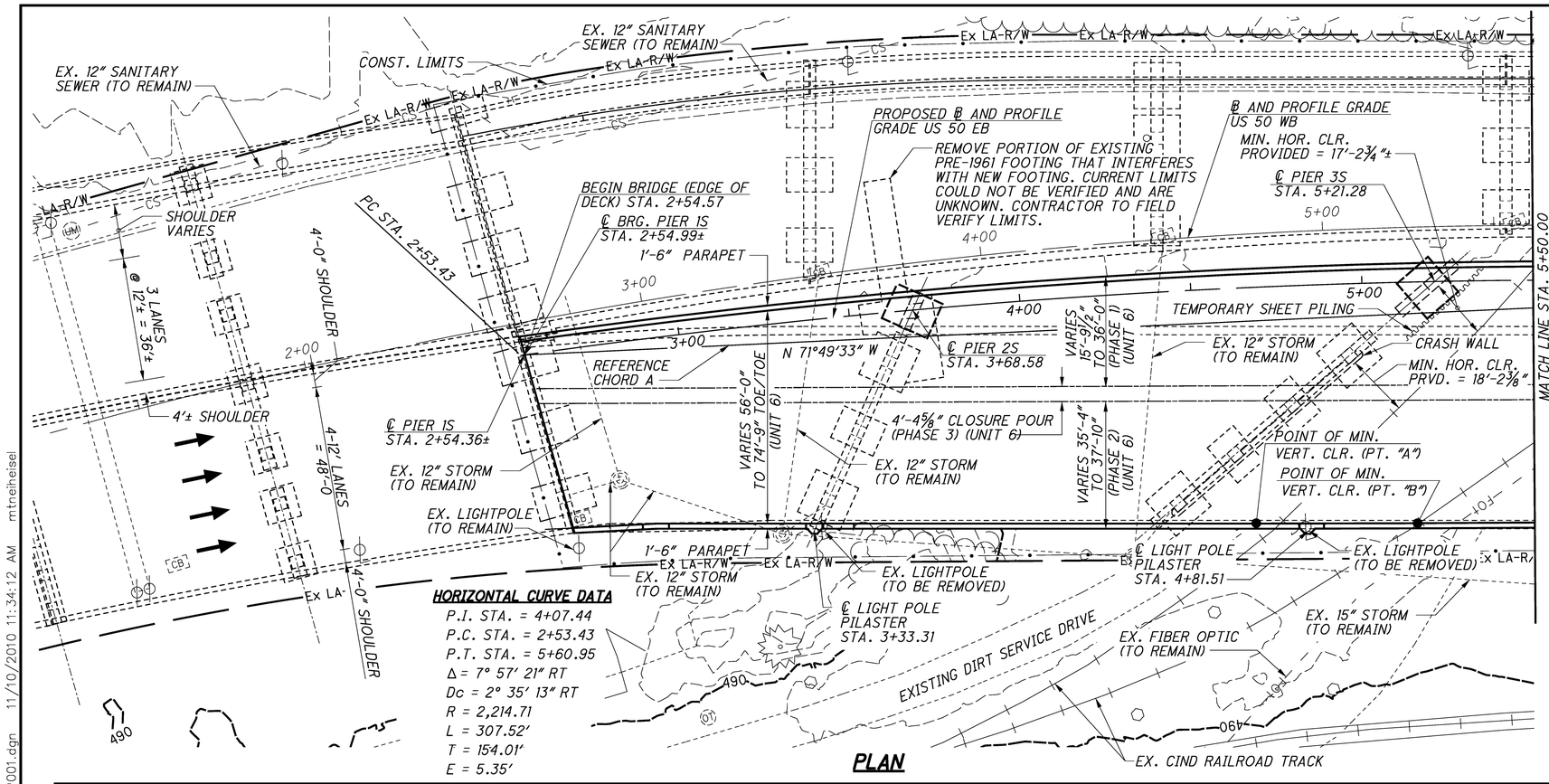
DOWNSPOUT MODIFICATION DETAILS
HAM-50-1903L
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK, AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

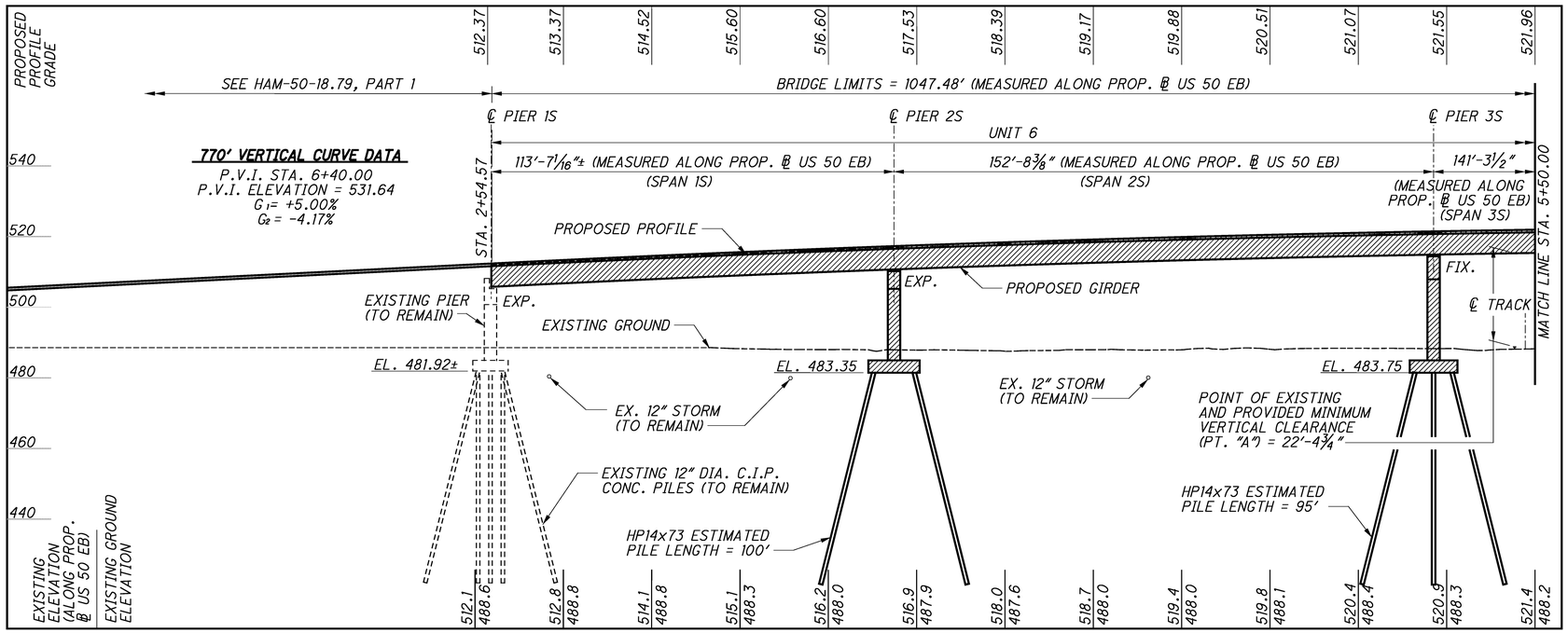
21 / 21

174
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903LMD002.dgn 11/10/2010 11:34:05 AM mtneiheisel



PLAN



PROFILE ALONG PROPOSED ℄ US 50 EB BRIDGE

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.
ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
FOR BENCHMARK INFORMATION, SEE SHEET 4/98.

LEGEND

⌖ BORING LOCATION
⊕ SURVEY BENCHMARK

DESIGN TRAFFIC:
2011 ADT = 30910 2011 ADTT = 1236
2031 ADT = 28580 2031 ADTT = 1143
DIRECTIONAL DISTRIBUTION = 0.51

EXISTING STRUCTURE

TYPE: 4 CONTINUOUS SPANS 66"± WEB STEEL PLATE GIRDER,
3 CONTINUOUS SPANS 66"± WEB STEEL PLATE GIRDER,
3 CONTINUOUS SPANS 48"± WEB STEEL PLATE GIRDER
WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 109'-9⅝"±, 137'-0"±, 140'-6"±, 90'-5⅛"±, 90'-5⅛"±, 117'-6⅛"±, 88'-1½"±, 84'-0"±, 105'-0"±, 84'-0"± C/C BRGS. (MEASURED ALONG EX. ℄ US 50 EASTBOUND)

ROADWAY: VARIES 42'-0"± MINIMUM F/F CURB

LOADING: CF 2000-(57) ADEQUATE FOR AASHO ALTERNATE LOADINGS

WEARING SURFACE: 2" ASPHALT CONCRETE, 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY.

SKEW: VARIES

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: VARIES (COMPOUND HORIZONTAL CURVES AND TANGENT)

SUPERELEVATION: VARIES

STRUCTURAL FILE NUMBER: 3102815

DATE BUILT: 1965±

DISPOSITION: EXISTING REINFORCED CONCRETE DECK TO BE REMOVED AND EXISTING SUPERSTRUCTURE TO BE WIDENED AND MADE COMPOSITE.

PROPOSED STRUCTURE

PROPOSED WORK: ADD NEW A709 GRADE 50 PLATE GIRDER LINES TO SUPPORT NEW AND WIDENED COMPOSITE REINFORCED CONCRETE DECK. WIDEN EXISTING PIERS AND ABUTMENTS AS NECESSARY AND PROVIDE ROCKER OR BOLSTER BEARINGS AT SUBSTRUCTURE LOCATIONS TO SUPPORT NEW GIRDERS. PATCH CONCRETE SURFACES AS PER ITEM 519, PAINT EXISTING SUPERSTRUCTURE STEEL, RETROFIT EXISTING STIFFENERS AND WELD TO TOP FLANGES. SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778, AND REDESIGN BRIDGE DRAINAGE SYSTEM.

TYPE: 4 CONTINUOUS SPANS 66" WEB STEEL PLATE GIRDER (UNIT 6),
3 CONTINUOUS SPANS 66" WEB STEEL PLATE GIRDER (UNIT 7),
3 CONTINUOUS SPANS 48" WEB STEEL PLATE GIRDER (UNIT 8)
WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON REINFORCED CONCRETE PIERS AND ABUTMENT.

SPANS: UNIT 6 - 113'-7 1/16"±, 152'-8⅜", 141'-3½", 70'-6⅝",
UNIT 7 - 74'-2½", 117'-10⅝", 100'-1⅝",
UNIT 8 - 84'-9⅛", 104'-0⅛", 85'-8 3/16"
(MEASURED ALONG PROPOSED ℄ US 50 EASTBOUND)

ROADWAY: VARIES 54'-11" TO 74'-9" TOE/TOE PARAPET

WEARING SURFACE: 1" MONOLITHIC CONCRETE

LOADING: HS20 CASE II AND ALTERNATE MILITARY 60 PSF FUTURE WEARING SURFACE

SKEW: FOR SKEW SEE PROPOSED LAYOUT ON SHEET 7/98

APPROACH SLAB: 30'-0" LONG (AS-1-81)

ALIGNMENT: VARIES

SUPERELEVATION: VARIES, SEE DECK CROSS-SLOPE TRANSITION DETAIL ON SHEET 4/98

COORDINATES: LATITUDE 39°06'06" N
LONGITUDE 84°32'42" W

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

HAMILTON COUNTY
STA. 2+54.57
STA. 13+02.05

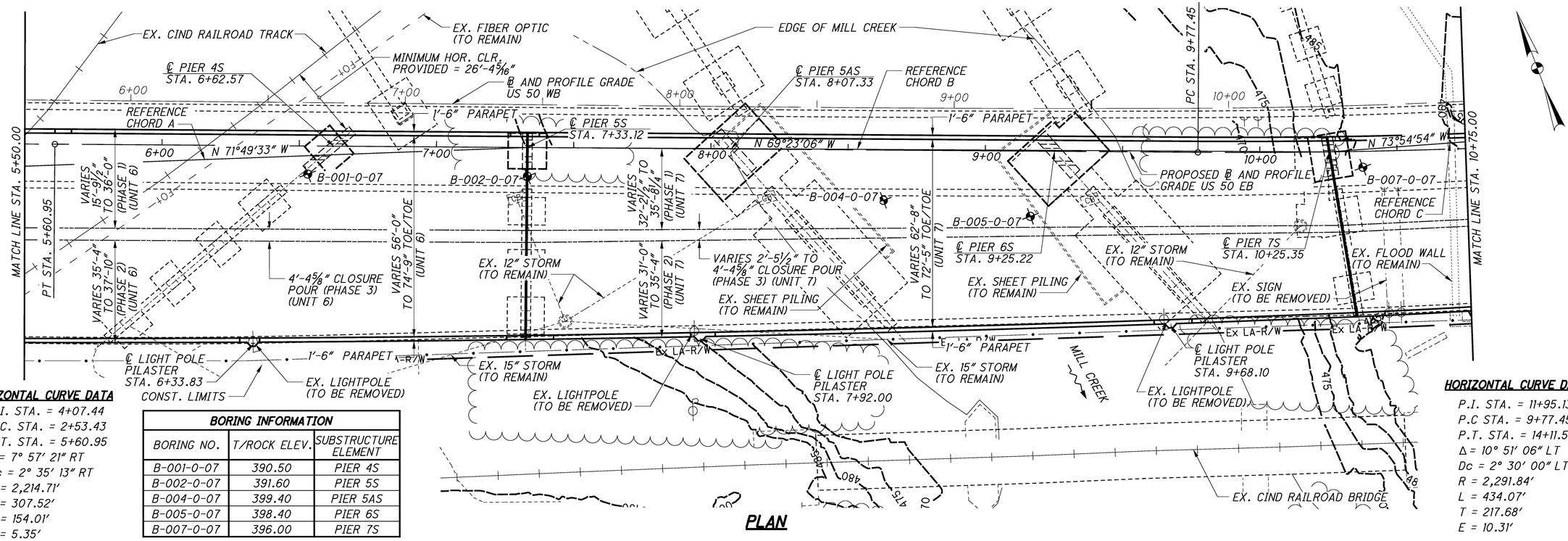
SITE PLAN
HAM-50-1903R
US 50 OVER CENT. RR OF IND.; MILL CREEK AND PRIVATE DRIVE

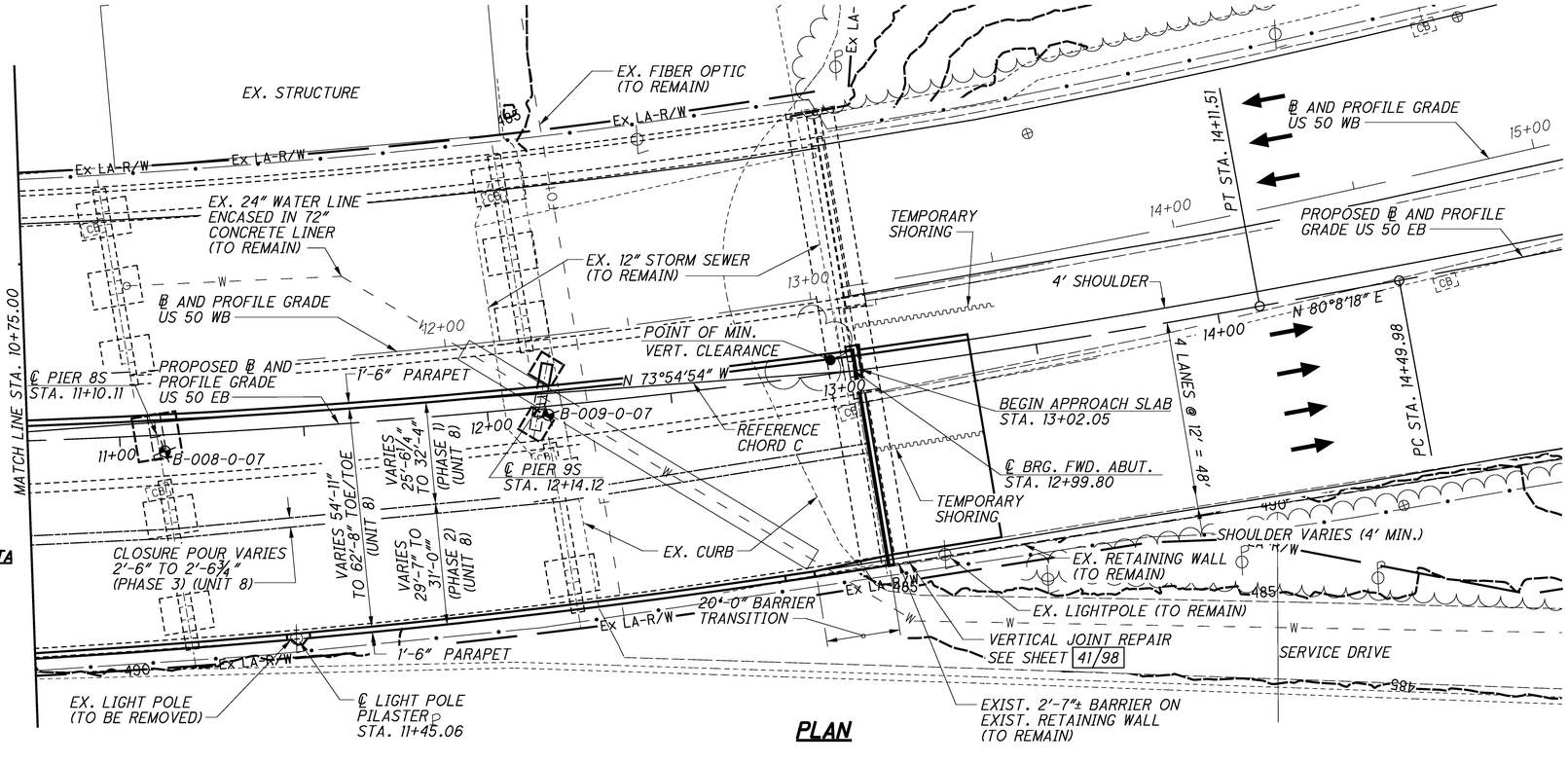
HAM-50-19.03
PID No. 75736

1/98

175/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSP001.dgn 11/10/2010 11:34:12 AM mtreinelsel


EX. CIND RAILROAD TRACK
EX. FIBER OPTIC (TO REMAIN)
MINIMUM HOR. CLR. PROVIDED = 26'-4 1/16"
℄ AND PROFILE GRADE US 50 WB
EDGE OF MILL CREEK
℄ PIER 4S STA. 6+62.57
℄ PIER 5S STA. 7+33.12
℄ PIER 5AS STA. 8+07.33
REFERENCE CHORD A
REFERENCE CHORD B
REFERENCE CHORD C
1'-6" PARAPET
N 71°49'33" W
N 69°23'06" W
N 73°54'54" W
PC STA. 9+77.45
PROPOSED ℄ AND PROFILE GRADE US 50 EB
B-001-0-07
B-002-0-07
B-004-0-07
B-005-0-07
B-007-0-07
MATCH LINE STA. 5+50.00
PT STA. 5+60.95
MATCH LINE STA. 10+75.00
VARIES 15'-9 1/2" TO 36'-0" (PHASE 1) (UNIT 6)
VARIES 35'-4" TO 37'-10" (PHASE 2) (UNIT 6)
VARIES 56'-0" TO 74'-9" TOE/TOE (UNIT 6)
VARIES 32'-2 1/2" TO 35'-8 1/4" (PHASE 1) (UNIT 7)
VARIES 31'-0" TO 35'-4" (PHASE 2) (UNIT 7)
VARIES 62'-8" TO 72'-5" TOE/TOE (UNIT 7)
4'-4 5/8" CLOSURE POUR (PHASE 3) (UNIT 6)
VARIES 2'-5 1/8" TO 4'-4 5/8" CLOSURE POUR (PHASE 3) (UNIT 7)
EX. 12" STORM (TO REMAIN)
EX. SHEET PILING (TO REMAIN)
EX. 15" STORM (TO REMAIN)
EX. LIGHTPOLE (TO BE REMOVED)
℄ LIGHT POLE PILASTER STA. 6+33.83
℄ LIGHT POLE PILASTER STA. 7+92.00
℄ LIGHT POLE PILASTER STA. 9+68.10
℄ PIER 6S STA. 9+25.22
℄ PIER 7S STA. 10+25.35
EX. SIGN (TO BE REMOVED)
EX. FLOOD WALL (TO REMAIN)
CONST. LIMITS
Ex LA-R/W
1'-6" PARAPET
MILL CREEK
EX. CIND RAILROAD BRIDGE
475
480
485
490
495
500
505
510
515
520
525
530
535
540
545
550
555
560
565
570
575
580
585
590
595
600
605
610
615
620
625
630
635
640
645
650
655
660
665
670



PLAN

HORIZONTAL CURVE DATA

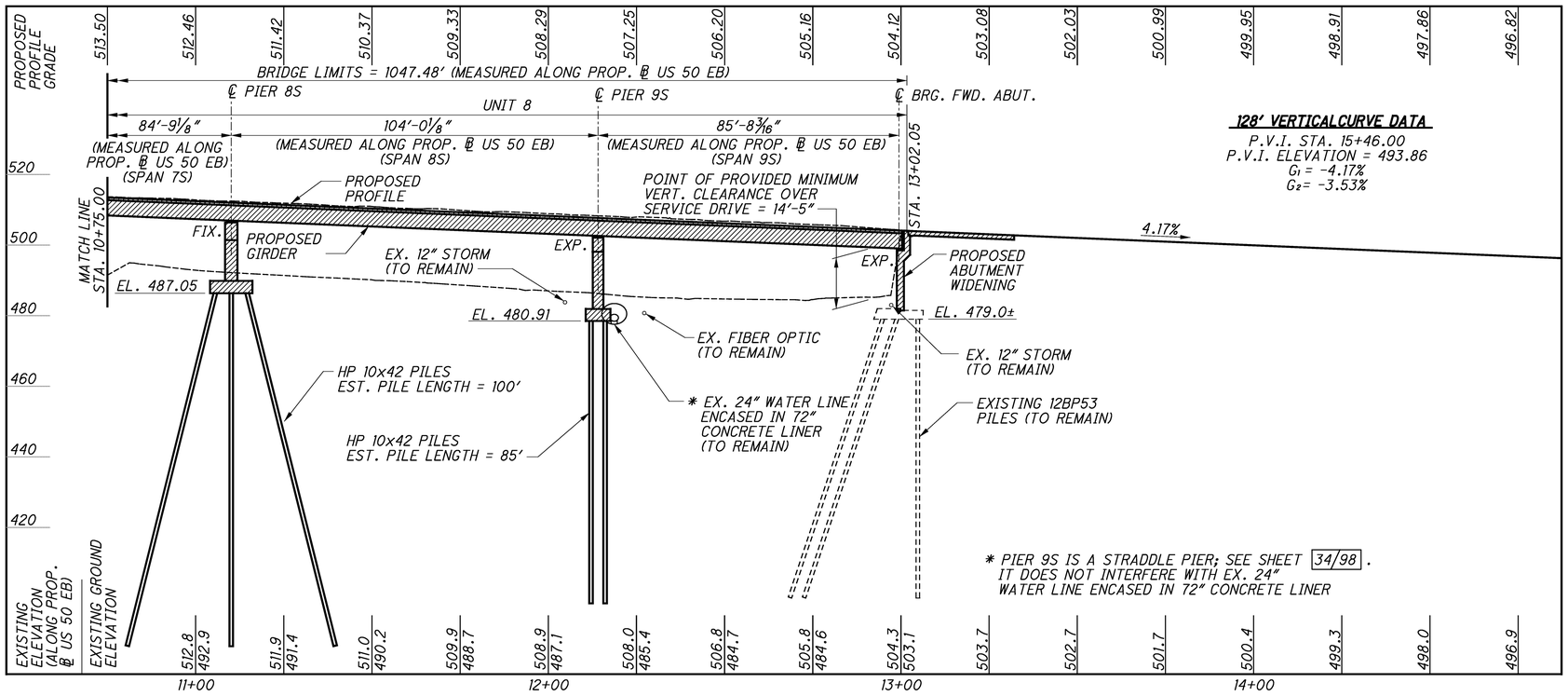
P.I. STA. = 11+95.13
P.C STA. = 9+77.45
P.T. STA. = 14+11.51
Δ = 10° 51′ 06″ LT
Dc = 2° 30′ 00″ LT
R = 2,291.84′
L = 434.07′
T = 217.68′
E = 10.31′

HORIZONTAL CURVE DATA

P.I. STA. = 15+68.75
P.C. STA. = 14+49.98
P.T. STA. = 16+87.45
Δ = 3° 33′ 42″ LT
Dc = 1° 30′ 00″ LT
R = 3,820.00′
L = 237.47′
T = 118.77′
E = 1.85′

BORING INFORMATION

BORING NO.	T/ROCK ELEV.	SUBSTRUCTURE ELEMENT
B-008-0-07	390.80	PIER 8S
B-009-0-07	401.60	PIER 9S



PROFILE ALONG PROPOSED ℄ US 50 EB BRIDGE

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

HAMILTON COUNTY
STA. 2+54.57
STA. 13+02.05

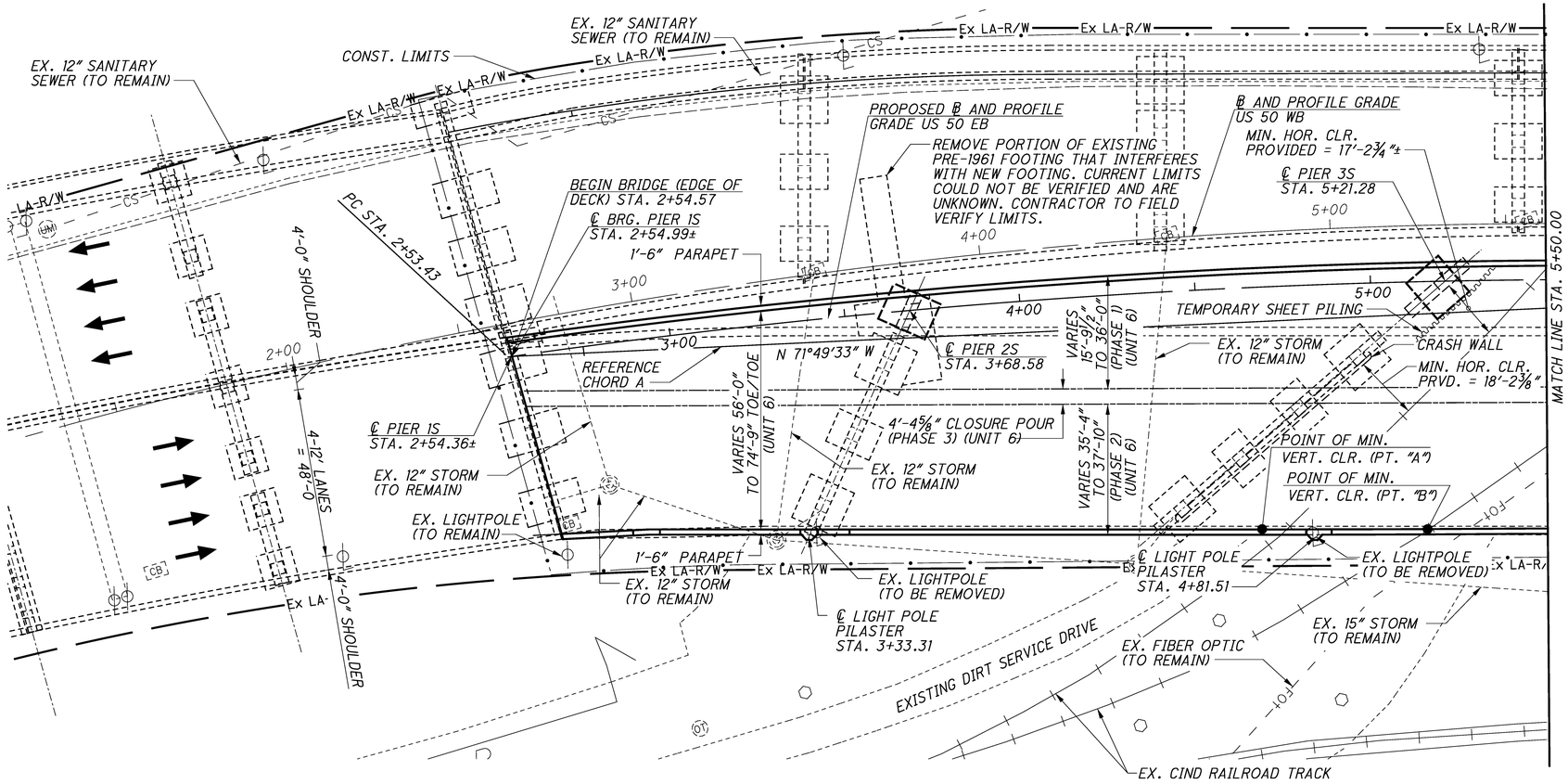
SITE PLAN
HAM-50-1903R
US 50 OVER CENT. RR OF IND.; MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

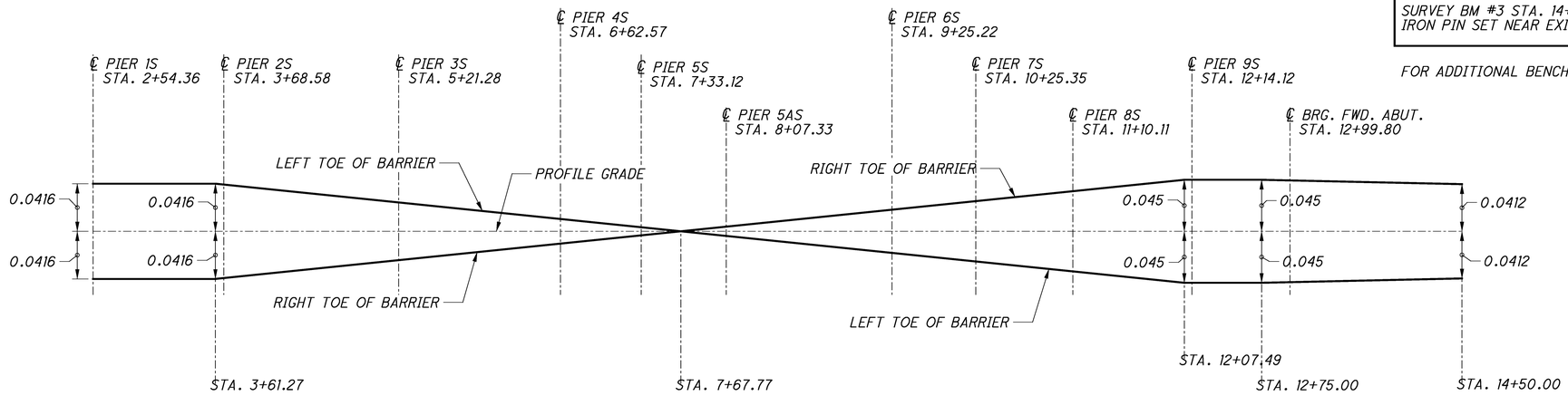
3 / 98

177
442

G:\CN06\001\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSP003.dgn 11/10/2010 11:34:18 AM mtreiheisel



PLAN



SUPERELEVATION TRANSITION DETAIL

HORIZONTAL CURVE DATA

P.I. STA. = 4+07.44
P.C. STA. = 2+53.43
P.T. STA. = 5+60.95
Δ = 7° 57' 21" RT
Dc = 2° 35' 13" RT
R = 2,214.71
L = 307.52'
T = 154.01'
E = 5.35'

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE.
ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

LEGEND

⊕ BORING LOCATION
⊕ SURVEY BENCHMARK

DESIGN TRAFFIC:
2011 ADT = 30910 2011 ADTT = 1236
2031 ADT = 28580 2031 ADTT = 1143
DIRECTIONAL DISTRIBUTION = 0.51

BENCHMARK DATA

SURVEY BM #1 STA. 13+58.43 (℄ US 50 (EB)), ELEV. 500.41, OFFSET 66.69' LT. IRON PIN SET NEAR EXISTING US 50 (WB) SHOULDER.

SURVEY BM #2 STA. 14+37.52 (℄ US 50 (EB)), ELEV. 502.89, OFFSET 53.27' RT. CHISELED "X" ON TOP OF CONCRETE WALL NEAR EXISTING US 50 (EB) SHOULDER.

SURVEY BM #3 STA. 14+82.04 (℄ US 50 (EB)), ELEV. 495.99, OFFSET 72.35' LT. IRON PIN SET NEAR EXISTING US 50 (WB) SHOULDER.

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 4/442

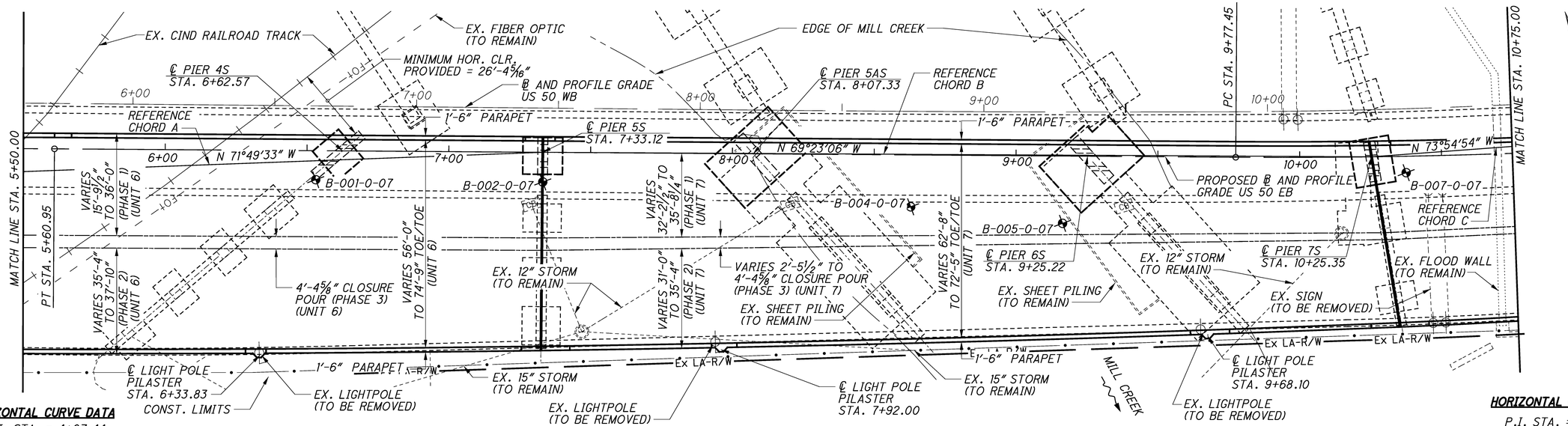
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

GENERAL PLAN
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RGP001.dgn 11/10/2010 11:34:21 AM mtreinerisel



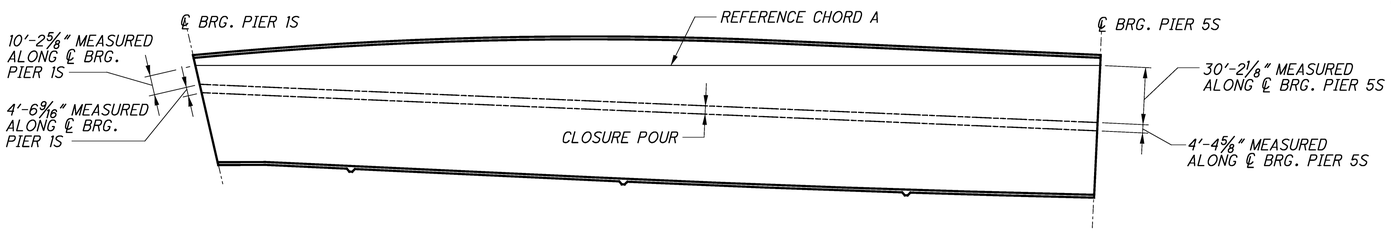
HORIZONTAL CURVE DATA

P.I. STA. = 4+07.44
P.C. STA. = 2+53.43
P.T. STA. = 5+60.95
Δ = 7° 57′ 21″ RT
Dc = 2° 35′ 13″ RT
R = 2,214.71′
L = 307.52′
T = 154.01′
E = 5.35′

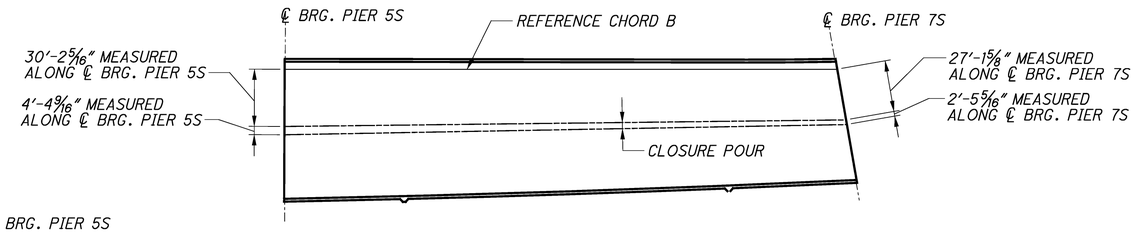
HORIZONTAL CURVE DATA

P.I. STA. = 11+95.13
P.C STA. = 9+77.45
P.T. STA. = 14+11.51
Δ = 10° 51′ 06″ LT
Dc = 2° 30′ 00″ LT
R = 2,291.84′
L = 434.07′
T = 217.68′
E = 10.31′

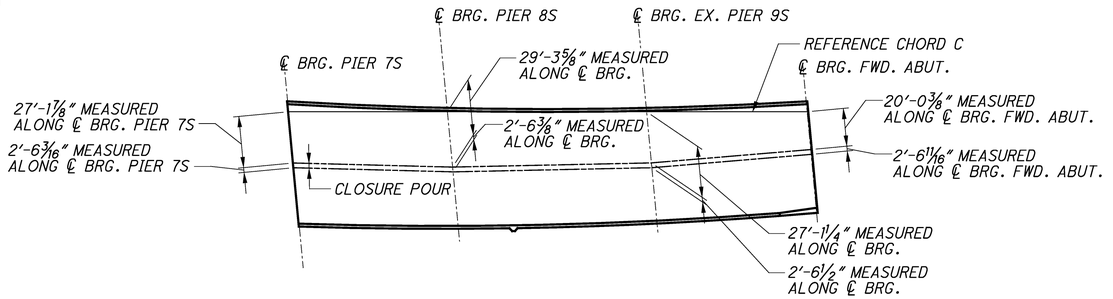
PLAN



CLOSURE POUR SCHEMATIC
(UNIT 6)



CLOSURE POUR SCHEMATIC
(UNIT 7)



CLOSURE POUR SCHEMATIC
(UNIT 8)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

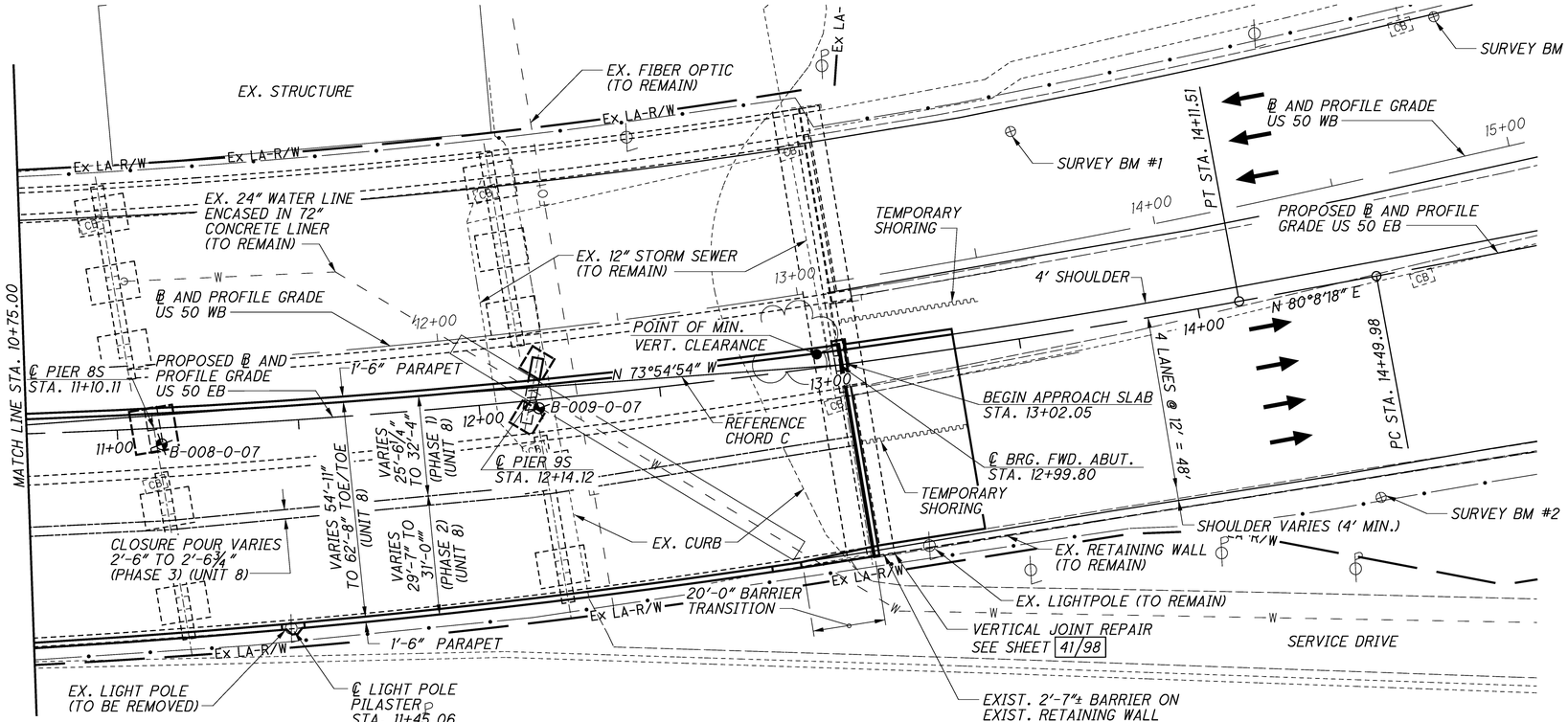
GENERAL PLAN
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

5 / 98

179 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RGP002.dgn 11/10/2010 11:34:24 AM mtneiheisel



PLAN

HORIZONTAL CURVE DATA

P.I. STA. = 11+95.13
P.C STA. = 9+77.45
P.T. STA. = 14+11.51
Δ = 10° 51′ 06″ LT
Dc = 2° 30′ 00″ LT
R = 2,291.84′
L = 434.07′
T = 217.68′
E = 10.31′

HORIZONTAL CURVE DATA

P.I. STA. = 15+68.75
P.C. STA. = 14+49.98
P.T. STA. = 16+87.45
Δ = 3° 33′ 42″ LT
Dc = 1° 30′ 00″ LT
R = 3,820.00′
L = 237.47′
T = 118.77′
E = 1.85′

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RGP003.dgn 11/10/2010 11:34:26 AM mtneihe

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

GENERAL PLAN
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

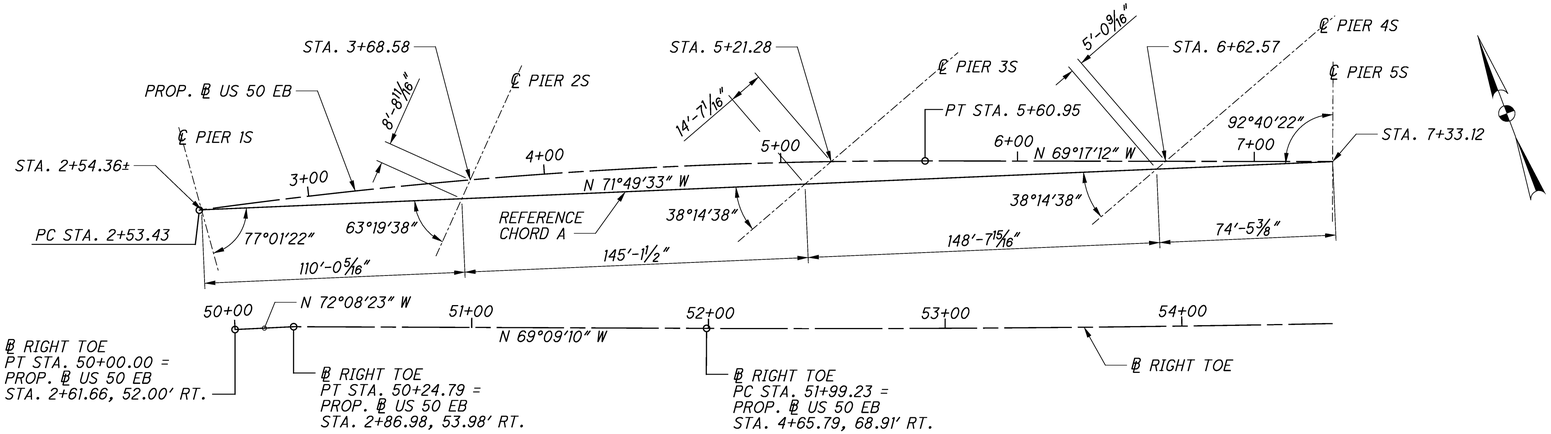
HAM-50-19.03
PID No. 75736

6 / 98

180 / 442

PROP. US 50 EB
HORIZONTAL CURVE DATA

P.I. STA. 4+07.44
P.C. STA. 2+53.43
P.T. STA. 5+60.95
Δ = 7° 57′ 21″ RT
Dc = 2° 35′ 13″ RT
R = 2,214.71
L = 307.52′
T = 154.01′
E = 5.35′



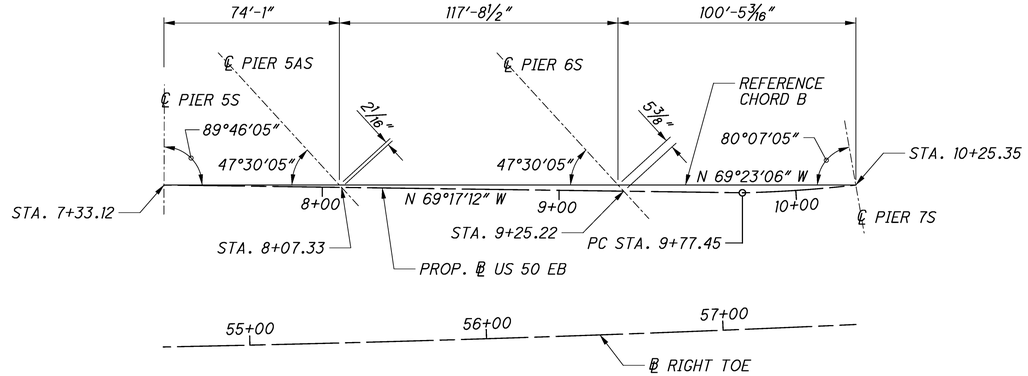
℄ RIGHT TOE
HORIZONTAL CURVE DATA

P.I. STA. 54+82.04
P.C. STA. 51+99.23
P.T. STA. 57+64.74
Δ = 2° 52′ 43″ LT
Dc = 0° 30′ 33″ LT
R = 11,255.45
L = 565.51′
T = 282.81′
E = 3.55′

REFERENCE CHORD LAYOUT
(UNIT 6)

PROP. US 50 EB
HORIZONTAL CURVE DATA

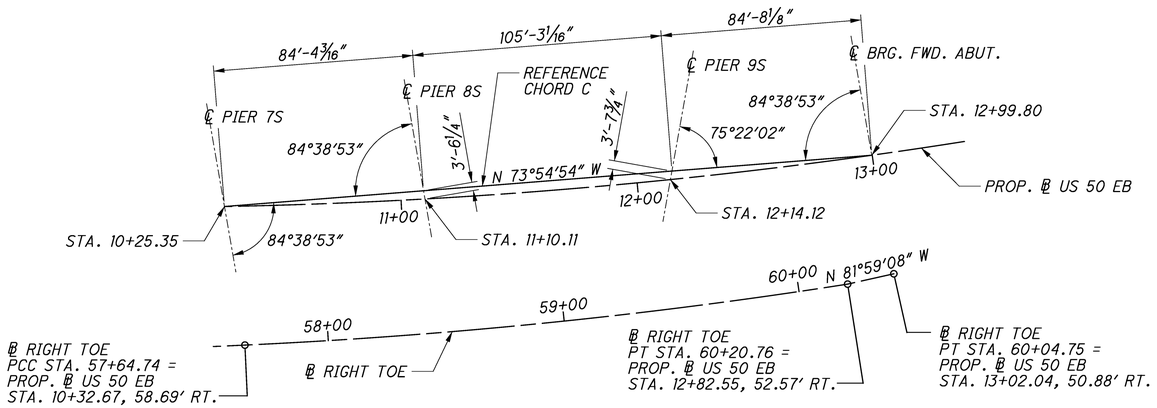
P.I. STA. 11+95.13
P.C STA. 9+77.45
P.T. STA. 14+11.51
Δ = 10° 51′ 06″ LT
Dc = 2° 30′ 00″ LT
R = 2,291.84′
L = 434.07′
T = 217.68′
E = 10.31′



REFERENCE CHORD LAYOUT
(UNIT 7)

℄ RIGHT TOE
HORIZONTAL CURVE DATA

P.I. STA. 58+92.88
P.C.C. STA. 57+64.74
P.T. STA. 60+20.76
Δ = 6° 15′ 31″ LT
Dc = 2° 26′ 40″ LT
R = 2,343.84′
L = 256.02′
T = 128.14′
E = 3.50′



REFERENCE CHORD LAYOUT
(UNIT 8)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

REFERENCE CHORD LAYOUT (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

7 / 98

181
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RGP004.dgn 11/10/2010 11:34:28 AM mtneiheisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

A-1-69, REVISED 07-19-02	PCB-91, REVISED 07-19-02
AS-1-81, REVISED 07-19-02	RB-1-55, REVISED 02-02-59
EXJ-4-87, REVISED 07-19-02	SBR-1-99, REVISED 07-19-02
GSD-1-96, REVISED 07-19-02	

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
842 DATED 01-19-07
898 DATED 10-15-10

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS20, CASE II AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 60 LBS/SQ.FT.

DESIGN DATA:
CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
PROPOSED STRUCTURAL STEEL - ASTM A709 GRADE 50 (YIELD STRENGTH 50,000 PSI)
EXISTING STRUCTURAL STEEL - ASTM A709 GRADE 33 (YIELD STRENGTH 33,000 PSI)

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

MAINTENANCE OF TRAFFIC: TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

UTILITY LINES: THE UTILITIES SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS: CONSTRUCTION PLANS FOR EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

NON-USE OF ASBESTOS-CONTAINING MATERIALS: THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS.THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

CONSTRUCTION CLEARANCE: MAINTAIN A CONSTRUCTION CLEARANCE OF 12 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 23 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 6 FEET FROM THE CENTER OF TRACKS AT ALL TIMES.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL GIRDERS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONT.):

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

EXISTING WELDED ATTACHMENTS: REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS; AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, PAINTING, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

FULL PENETRATION OF DECK REMOVAL: CONTRACTOR WILL BE REQUIRED TO INSTALL PLYWOOD PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE AREA OF ANY FULL DECK PENETRATION, AND OVER THE CSXT RAILROAD SPAN (SPAN 3S). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE DECK IS PENETRATED AND WILL STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE PLYWOOD PROTECTION.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN: THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF THE EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF THE EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

PILES TO BEDROCK: DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES TO A MINIMUM RESISTANCE OF 20 BLOWS PER INCH [25 MM] OR BY CONTACTING HARD BEDROCK AND THE PILE RECEIVING AT LEAST 20 BLOWS. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL. INSTEAD OF DRIVING TO REFUSAL, THE CONTRACTOR MAY PERFORM DYNAMIC LOAD TESTING ACCORDING TO C&MS 523 TO ESTABLISH A DRIVING CRITERIA FOR EACH PILE TYPE AND CAPACITY. ESTABLISH THE DRIVING CRITERIA TO ACHIEVE THE ULTIMATE BEARING VALUE GIVEN BELOW FOR THE PILES. PAYMENT FOR DYNAMIC LOAD TESTING PERFORMED AT THE CONTRACTOR'S OPTION IS INCLUDED IN THE UNIT PRICE PAY ITEM FOR PILES DRIVEN.

THE ULTIMATE BEARING VALUE IS 228 TONS PER PILE FOR THE HP 14X73 PILES AT PIERS 2S TO 7S. THE ULTIMATE BEARING VALUE IS 134 TONS PER PILE FOR THE HP 10X42 PILES AT PIERS 8S AND 9S.

PIER 2S PILES (HP 14X73):
4 PILES 105 FEET LONG, ORDER LENGTH

PIER 3S PILES (HP 14X73):
6 PILES 100 FEET LONG, ORDER LENGTH

PIER 4S PILES (HP 14X73):
6 PILES 100 FEET LONG, ORDER LENGTH

PIER 5S PILES (HP 14X73):
4 PILES 95 FEET LONG, ORDER LENGTH

PIER 5AS PILES (HP 14X73):
13 PILES 40 FEET LONG, ORDER LENGTH

PIER 6S PILES (HP 14X73):
4 PILES 35 FEET LONG, ORDER LENGTH

PIER 7S PILES (HP 14X73):
4 PILES 90 FEET LONG, ORDER LENGTH

PIER 8S PILES (HP 10X42):
6 PILES 105 FEET LONG, ORDER LENGTH

PIER 9S PILES (HP 10X42):
8 PILES 90 FEET LONG, ORDER LENGTH

PILE SPLICES: IN LIEU OF USING THE FULL PENETRATION BUTT WELDS SPECIFIED IN CMS 507.09 TO SPLICE STEEL H-PILES, THE CONTRACTOR MAY USE A MANUFACTURED H-PILE SPLICER. FURNISH SPLICERS FROM THE FOLLOWING MANUFACTURER:

ASSOCIATED PILE AND FITTING CORPORATION
P.O. BOX 1048
262 RUTHERFORD BLVD.
CLIFTON, NEW JERSEY 07014
PHONE: 800-526-9047

INSTALL AND WELD THE SPLICER TO THE PILE SECTIONS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN ASSEMBLY PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN PJP | CHECKED MTN | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

GENERAL NOTES
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RGN001.dgn 11/10/2010 11:34:29 AM mtneiheisel

STRUCTURE GENERAL NOTES

ITEM 510 DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR THE ABUTMENTS, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN: ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.04 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE STRUCTURAL, WELDING, AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM:

ALL INTERMEDIATE CROSSFRAMES, END CROSSFRAMES, AND END DIAPHRAGMS BETWEEN PROPOSED GIRDER G8R AND EXISTING GIRDER G9.

INTERMEDIATE AND END CROSSFRAMES BETWEEN EXISTING GIRDERS G9 THRU G14 THAT ARE NOTED FOR REPLACEMENT.

ITEM 513 - STRUCTURAL STEEL, MISC.: WELDING STRUCTURAL STEEL, AS PER PLAN: THIS ITEM INCLUDES WELDING THE GIRDER WEB STIFFENERS TO THE GIRDER TOP AND BOTTOM FLANGES AT ALL CROSSFRAME LOCATIONS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK AND WHERE NOT INCIDENTAL TO THE COMPLETION OF OTHER WORK PAID FOR UNDER THIS CONTRACT. PAYMENT SHALL BE MADE AT THE BID PRICE PER FOOT.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPER-STRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR REOPOSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISABLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NON-DESTRUCTIVE TESTING, AS PER PLAN: THIS ITEM INCLUDES THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED AT LOCATIONS SPECIFIED IN THE FIELD AS DIRECTED BY THE ENGINEER.

1. CLEAN THE AREAS BY PENCIL ABRASIVE BLASTING TO REMOVE PAINT, RUST AND ANY OTHER FOREIGN MATERIAL FROM THE SURFACE OF THE PLATES AND ADJACENT WELDS, OR AS DESIGNATED IN THE PLANS.

2. THE ENGINEER SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE THE INVESTIGATION FOR CRACK PRESENCE. ALL GRINDING MUST BE DONE CAUTIOUSLY ESPECIALLY IN TENSION ZONES.

3. THE CONTRACTOR SHALL PERFORM NON-DESTRUCTIVE TESTING (NDT) IN THE AREAS USING MAGNETIC PARTICLE EXAMINATION OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. CONTRACTORS' PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS.

THE PENCIL ABRASIVE BLASTING SHALL CONFORM TO THE FOLLOWING:

THE DESIGNATED NDT AREAS SHALL BE CLEANED TO A SURFACE QUALITY EQUAL TO PREPARATION GRADE SA 2 1/2. SINCE INTENT OF THE PENCIL BLASTING IS TO ENHANCE THE VISUAL AND NDT DETECTION, A GENTLE BLAST SHALL BE USED SUCH THAT THE SURFACE IS NOT PEENED OR OTHERWISE COLD WORKED. SILICA SAND SHALL NOT BE USED. THE BLASTING SHALL BE PERFORMED USING A MAXIMUM COMPRESSED AIR PRESSURE OF 100 PSI, A HOSE NOZZLE DIAMETER OF 1/4" ± 1/16" AND A GRADE 30/60 COAL SLAG ABRASIVE OR EQUIVALENT. BLASTERS USED FOR SURFACE PREPARATION OF STRUCTURAL STEEL PAINTING SHALL NOT BE USED FOR PENCIL BLASTING. AFTER ABRASIVE BLASTING IS COMPLETE, THE CLEANED AREA SHALL BE AIR BLOWN CLEAN.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER PRIOR TO THE START OF THE WORK THAT HE CAN SATISFACTORILY PERFORM PENCIL ABRASIVE BLASTING ACCORDING TO THESE SPECIFICATIONS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE FOR EACH CLEANED AREA PER SIDE OF THE GIRDER.

ITEM 513 - STRUCTURAL STEEL, MISC.: 2" STRESS RELIEF HOLES, AS PER PLAN: THIS ITEM INCLUDES THE DRILLING OF 2" DIAMETER HOLES IN THE GIRDER WEBS AND ANY NECESSARY CLIPPING OF CROSSFRAME ANGLES TO PERFORM THIS WORK, AT THE LOCATIONS SPECIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL INSPECT ALL TOP OF CROSSFRAME TO WEB CONNECTIONS FOR OUT-OF-PLANE BENDING CRACKS. THE ENDS OF THE CRACKS SHALL BE LOCATED AS DESCRIBED IN ITEM 516 STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING AND NDT, AS PER PLAN. THE CONTRACTOR SHALL PREFORM NON-DESTRUCTIVE TESTING (NDT) IN THE AREAS USING MAGNETIC PARTICAL EXAMINATION OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT FOR CRACKS. THE CONTRACTOR'S PERSONNEL PERFORMING NDT SHALL BE QUALIFIED AS PER 513.25 OF THE CMS. WEB CRACKS SHALL BE TREATED BY REMOVING THE CRACK TIP BY DRILLING THE 2" DIAMETER HOLE LOCATED AS DETERMINED BY AND UNDER THE DIRECTION OF THE ENGINEER. ALL 2" DIAMETER HOLES SHALL BE GROUND SMOOTH ACCORDING TO CMS 513.19.

PAYMENT FOR THE DRILLING OF THE 2" HOLES AND ALL SUBSEQUENT ND TESTING ON THE DRILLED HOLE SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS, AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE BID PRICE FOR EACH HOLE.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN: OUTSIDE FACE AND BOTTOM FLANGES OF THE FASCIA GIRDERS ARE TO BE PAINTED FEDERAL COLOR NUMBER 27038, (BLACK, 30% SHEEN). ALL REMAINING BRIDGE SUPERSTRUCTURE ELEMENTS ARE TO BE PAINTED FEDERAL COLOR NUMBER 10324 (DARK NEUTRAL).

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT: THE EXISTING VERTICAL EXPANSION JOINT BETWEEN THE ABUTMENT AND WINGWALL SHALL BE REPAIRED WITH POLYURETHANE FOAM AS INDICATED IN THE PLANS WITH THE MATERIAL PER SUPPLEMENTAL SPECIFICATION 842. THE JOINT SHALL BE THOROUGHLY CLEANED AS DIRECTED BY THE ENGINEER.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

CONTRACTOR WILL BE REQUIRED TO REMOVE AND DISPOSE ALL CONCRETE DEBRIS GENERATED FROM CONCRETE PATCHING. EQUIPMENT REQUIRED TO PERFORM CONCRETE PATCHING MUST MAINTAIN AT LEAST A MINIMUM HORIZONTAL CLEARANCE OF 12 FEET MEASURED PERPENDICULAR TO THE CENTERLINE OF THE NEAREST TRACK.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN: FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN: THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

INSPECTION OF EXISTING STRUCTURAL STEEL: THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES AND BEAMS OR GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE DEPARTMENT WILL PAY FOR THE COST ASSOCIATED WITH THIS INSPECTION WITH ITEM 898, QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

DECK PLACEMENT DESIGN ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

IN UNITS 6 AND 7 WHERE MULTIPLE SUBSTRUCTURE SKEW ANGLES ARE PRESENT, IT HAS BEEN ASSUMED THAT THE DECK PLACEMENT WILL CONSIST OF A PARTIAL DEPTH POUR, TO DEFLECT THE GIRDERS, FOLLOWED BY PLACEMENT OF THE REMAINING DECK THICKNESS WITH A FINISHING MACHINE. A DESCRIPTION OF THE DECK PLACEMENT FOLLOWS.

PLACE AND CONSOLIDATE A PARTIAL DEPTH POUR OF 7 1/2". PLACE THE PARTIAL DEPTH POUR BEGINNING FROM THE SHORTEST END SPAN OF THE RESPECTIVE CONSTRUCTION STAGE. PLACE THE PARTIAL DEPTH POUR AS CLOSE AS PRACTICAL TO THE SUBSTRUCTURE SKEW ANGLES. CLEARLY INDICATE THE SUBSTRUCTURE LOCATIONS AND MID POINTS OF EACH GIRDER SPAN TO AID IN PLACING CONCRETE ALONG SKEW ANGLES. FOLLOWING THE PARTIAL DEPTH PLACEMENT OF THE SHORTEST END SPAN AND ONE HALF OF THE ADJACENT SPAN BEGIN PLACEMENT OF THE REMAINING DECK THICKNESS USING A FININSHING MACHINE. PLACE THE FINISHING MACHINE NORMAL TO EITHER EDGE OF THE DECK. MAINTAIN A SEPARATION BETWEEN THE PARTIAL DEPTH POUR AND FINISHING MACHINE OF APPROXIMATELY ONE SPAN UNTIL COMPLETION OF THE PARTIAL DEPTH POUR.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 0.98 KIPS FOR A TOTAL MACHINE LOAD OF 7.8 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103 INCHES.

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 INCHES.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65 INCHES.

ITEM 516 - BEARING REPLACEMENT, ROCKER, AS PER PLAN

REPLACE THE SPECIFIED BEARINGS TO THE EXACT DIMENSIONS AS THE ORIGINAL PLAN DRAWINGS AND IN ACCORDANCE WITH 516, EXCEPT THAT THE MASONRY PLATE THICKNESS SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE THE PRESENT HEIGHT AS FIELD MEASURED BY THE CONTRACTOR BETWEEN THE BOTTOM FLANGE AND THE BEAM SEAT. ONE STEEL SHIM WILL BE ALLOWED, IF NECESSARY, BUT MUST BE WELDED TO THE MASONRY PLATE FOR THE ENTIRE PERIMETER. UPON COMPLETION, ALL BEARING SURFACES SHALL BE IN FULL CONTACT WITH THE MATING PLATES AND BEAM SEAT. ADDITIONALLY, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE ADJACENT BEARINGS REMAIN IN FULL CONTACT AFTER INSTALLATION OF THE NEW BEARING.

1. REPLACE PIER 2 ABUTMENT ROCKER BEARING OF GIRDER 14. (REFERENCE SHEET 154/227 OF THE 1962 PLANS FOR GIRDER NAMING CONVENTION.)
2. REPLACE FWD ABUTMENT ROCKER BEARING OF GIRDER 9. (REFERENCE SHEET 157/227 OF THE 1962 PLANS FOR GIRDER NAMING CONVENTION.)

THE DEPARTMENT WILL MEASURE THIS WORK PER BEARING (EACH).

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, BEARING REPLACEMENT, ROCKER, AS PER PLAN.

I:\projects\HAM\us050\19.03_pid75736\Design\CADD\050_1903RGN002.dgn 25-JAN-2011 12:50PM tscanlon

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN CAS | CHECKED MTN | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

GENERAL NOTES
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

CALCULATED BY: MTN

ESTIMATED QUANTITIES - HAM-50-1903R - FUNDING: 100% MAJOR BRIDGE

CHECKED BY: CAS

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	8
202	22900	119	SQ YD	APPROACH SLAB REMOVED				119	
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LUMP	9
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00100	1350	FT	STEEL PILES HP10X42, FURNISHED		1350			
507	00150	1280	FT	STEEL PILES HP10X42, DRIVEN		1280			
507	00300	3020	FT	STEEL PILES HP14X73, FURNISHED		3020			
507	00350	2815	FT	STEEL PILES HP14X73, DRIVEN		2815			
509	10000	962356	POUND	EPOXY COATED REINFORCING STEEL	5320	149299	807737		
510	10001	256	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	198	58			8
512	10100	6425	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	156	3530	2739		
512	10300	465	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			465		
513	10201	159134	POUND	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			159134		8
513	10280	565642	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 4			565642		
513	20000	16473	EACH	WELDED STUD SHEAR CONNECTORS			16473		
513	90000	6537	POUND	STRUCTURAL STEEL, MISC.: SEISMIC PEDESTAL ARMOR	357	6180			
513	95000	1236	FT	STRUCTURAL STEEL, MISC.: WELDING STRUCTURAL STEEL, AS PER PLAN			1236		9
513	95030	306	EACH	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NON-DESTRUCTIVE TESTING, AS PER PLAN			306		9
513	95030	306	EACH	STRUCTURAL STEEL, MISC.: 2" STRESS RELIEF HOLES, AS PER PLAN			306		9
514	00050	118253	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			118253		
514	00056	118253	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			118253		
514	00060	168443	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			168443		
514	00067	168443	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			168443		9
514	00504	105	MAN HOUR	GRINDING, FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			105		
514	10000	82	EACH	FINAL INSPECTION REPAIR			82		
516	11210	260	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			260		
516	13400	385	SQ FT	3/4" PREFORMED EXPANSION JOINT FILLER		385			
516	13600	105	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	105				
516	14600	25	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT	25				10
516	46000	6	EACH	BEARING DEVICE, BOLSTER		6			
516	46200	18	EACH	BEARING DEVICE, ROCKER	2	16			
516	46201	2	EACH	BEARING DEVICE, ROCKER, AS PER PLAN	1	1			9
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LUMP	9
518	12301	17	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			17		91
518	21200	24	CU YD	POROUS BACKFILL WITH FILTER FABRIC	24				
518	40000	15	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	15				
518	51201	420	FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	13	407			89-91
518	60031	39	FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN		39			91
519	11101	62	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	3	59			9, 37-41
898	10211	2306	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN			2306		9
898	10709	187	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=17"), AS PER PLAN				187	9
898	11000	336	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	1		330	5	
898	20101	668	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER ABOVE FOOTING), AS PER PLAN		668			36
898	20151	24	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT), AS PER PLAN	24				21
898	20300	407	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (FOOTING)		407			

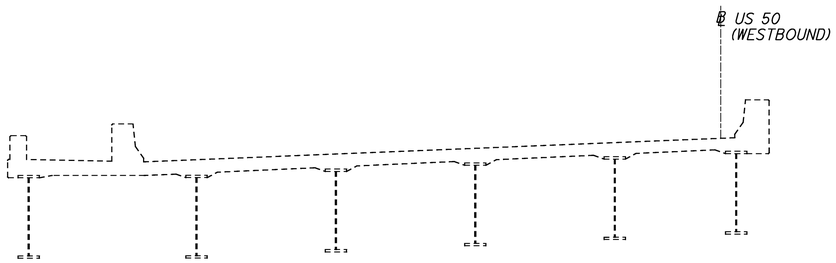
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

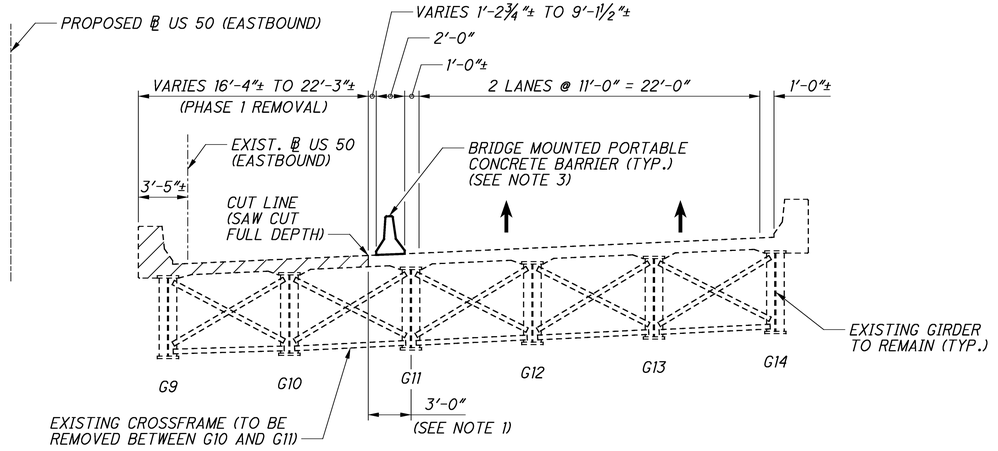
ESTIMATED QUANTITIES
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

I:\projects\HAM\us050\19.03_pid75736\Design\CADD\050_1903REQ001.dgn 25-JAN-2011 1:04PM tscanlon

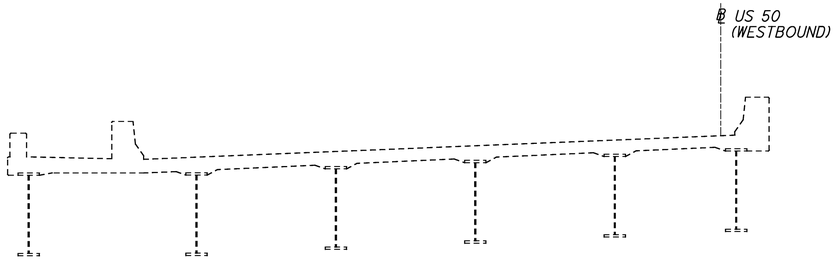


LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

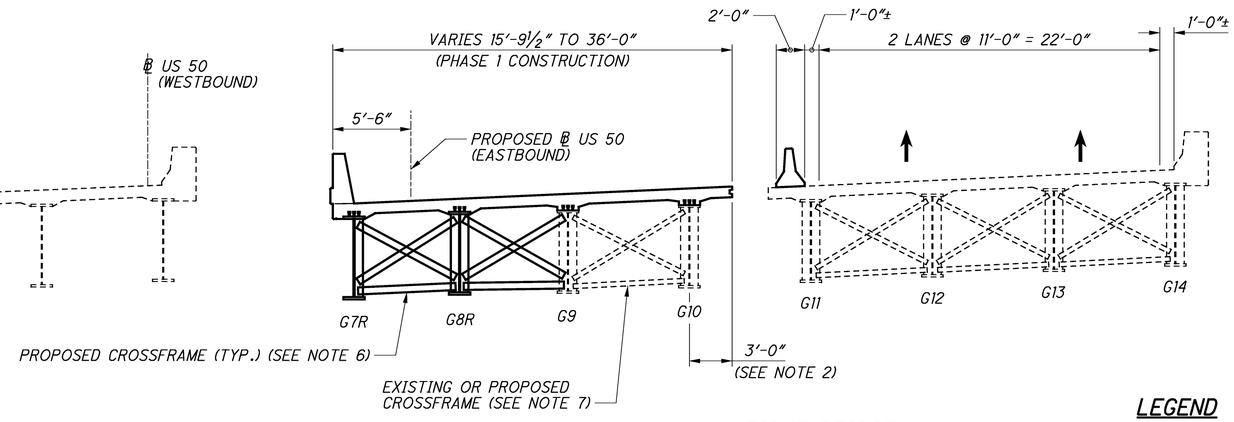


RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 1 REMOVAL



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 1 CONSTRUCTION

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

SEQUENCE OF CONSTRUCTION:

PHASE 1

1. INSTALL BRIDGE MOUNTED PORTABLE CONCRETE BARRIER ON BRIDGE DECK AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. INSTALL TEMPORARY SHORING/SHEETING NEEDED FOR EXCAVATION DURING PHASE 1 REMOVAL.
3. REMOVE DECK, PORTIONS OF SUBSTRUCTURE (ABUTMENT AND RETAINING WALL) AND PORTIONS OF APPROACH SLAB TO LIMITS SHOWN IN PHASE 1 REMOVAL.
4. CONSTRUCT PROPOSED SUBSTRUCTURE AND POSITION PROPOSED BEARINGS FOR PROPOSED GIRDERS G7R AND G8R.
5. ERECT PROPOSED GIRDERS G7R AND G8R. ERECT PROPOSED CROSSFRAMES BETWEEN GIRDERS G7R THRU G10 (SEE NOTE 7).
6. CONSTRUCT DECK SLAB AND APPROACH SLAB TO PHASE 1 LIMITS.

PHASE 2

7. REMOVE TEMPORARY SHORING/SHEETING.
8. RELOCATE BRIDGE MOUNTED PORTABLE CONCRETE BARRIERS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
9. REMOVE DECK, PORTIONS OF SUBSTRUCTURE (ABUTMENT) AND PORTIONS OF APPROACH SLAB LIMITS SHOWN IN PHASE 2 REMOVAL.
10. REMOVE AND REPLACE APPROPRIATE EXISTING CROSSFRAMES BETWEEN EXISTING GIRDERS G11, G12, G13, AND G14 (SEE NOTE 3, SHEET 12/98).
11. CONSTRUCT DECK SLAB AND FORWARD ABUTMENT TO PHASE 2 LIMITS.

PHASE 3

12. ERECT PROPOSED CROSSFRAMES BETWEEN EXISTING GIRDERS G10 AND G11 (BENEATH CLOSURE POUR)
13. CAST CLOSURE POUR FOR DECK SLAB.
14. CONSTRUCT REMAINING SECTION OF APPROACH SLAB
15. REMOVE PORTABLE CONCRETE BARRIERS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.

NOTES:

1. CUT LINE IS CONSTANT 3'-0" FROM ℄ EXISTING GIRDER 11 ALONG ENTIRE LENGTH OF BRIDGE.
2. RIGHT EDGE OF NEW DECK IN PHASE 1 IS CONSTANT 3'-0" FROM ℄ EXISTING GIRDER 10 ALONG ENTIRE LENGTH OF BRIDGE.
3. DURING PHASE 1 CONSTRUCTION/REMOVAL, BARRIER SEGMENTS ON EXISTING BRIDGE DECK IN UNIT 6 (PIER 1S TO PIER 5S) SHALL BE UNANCHORED. IN UNITS 7 AND 8 (PIERS 5S TO FWD. ABUT.) BARRIER SEGMENTS SHALL BE FASTENED USING THREE (3) 1" DIA H.S. ANCHOR BOLTS. ALL ANCHORS SHALL BE PLACED ON TRAFFIC SIDE OF BARRIER WITH ANCHOR PATTERN SYMETRICAL ABOUT THE CENTER OF EACH SECTION.
4. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 622 FOR PAYMENT.
5. PORTABLE CONCRETE BARRIER SHALL CONFORM TO STANDARD DRAWING PCB-91.
6. FOR PROPOSED CROSSFRAME DETAILS, SEE FRAMING PLAN AND GIRDER DETAIL SHEETS 44/98 THROUGH 57/98 .
7. SEVERAL EXISTING CROSSFRAMES POSITIONED BETWEEN EXISTING GIRDERS G9 AND G10 ARE TO BE REMOVED AND REPLACED WITH NEW CROSSFRAMES DURING PHASE 1. SEE FRAMING PLAN SHEETS 44/98 THROUGH 50/98 FOR WHICH EXISTING CROSSFRAMES ARE TO BE REMOVED AND REPLACED. PROPOSED REPLACEMENT CROSSFRAME DETAILS ARE SHOWN ON GIRDER DETAIL SHEET 57/98 .
8. FOR HAM-50-1903L PHASE CONSTRUCTION DETAILS REFER TO HAM-50-1903L DETAIL SHEETS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

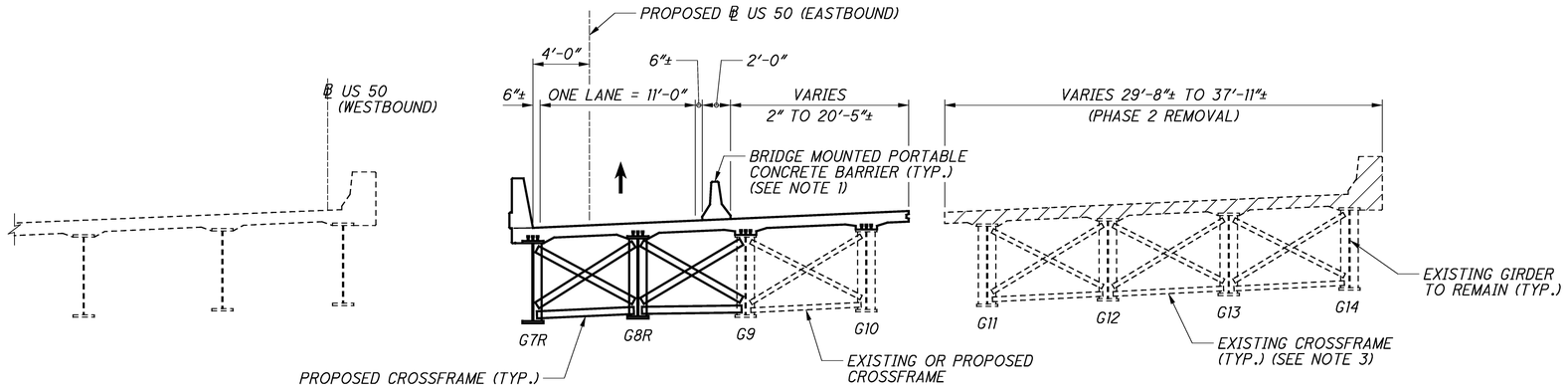
PHASE 1 REMOVAL AND CONSTRUCTION DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

11 / 98

185 / 442

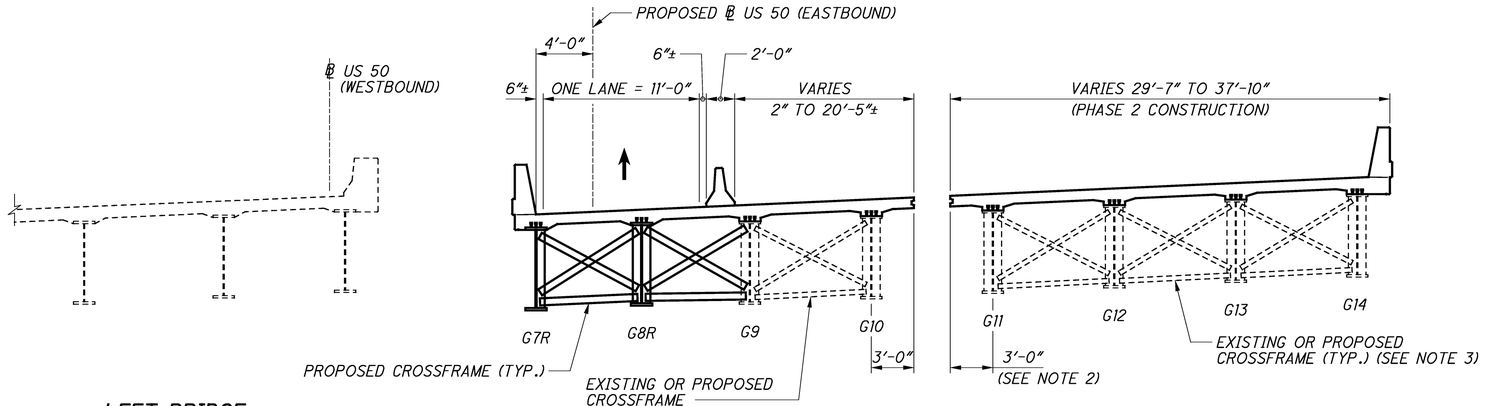
11/10/2010 11:34:35 AM mtneiheisel
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPC001.dgn



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

PHASE 2 REMOVAL

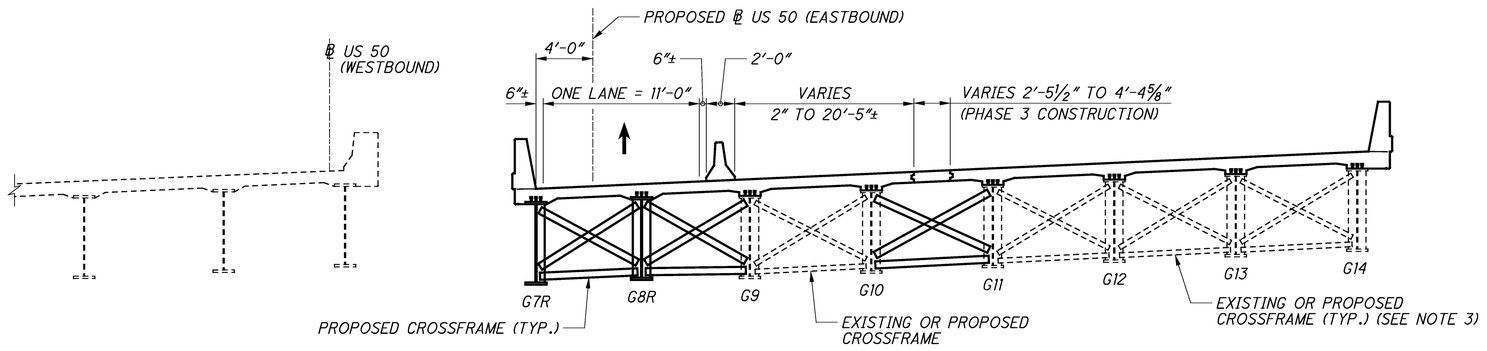
RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

PHASE 2 CONSTRUCTION

RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

PHASE 3 CONSTRUCTION

RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. DURING PHASE 2 CONSTRUCTION/REMOVAL, BARRIER SEGMENTS BETWEEN WEST END OF DECK AND STA. 2+66.27 ON NEW BRIDGE DECK SHALL BE ANCHORED USING TWO (2) 1″ DIA. H.S. THROUGH BOLTS. ALL ANCHORS SHALL BE PLACED ON THE TRAFFIC SIDE OF THE BARRIER WITH ANCHOR PATTERN SYMMETRICAL ABOUT THE CENTER OF EACH SECTION. BARRIER SEGMENTS BETWEEN STATIONS 2+66.27 AND 12+99.80 SHALL BE UNANCHORED.
2. LEFT EDGE OF NEW DECK IN PHASE 2 IS CONSTANT 3′-0″ FROM ℄ EXISTING GIRDER 11 ALONG ENTIRE LENGTH OF BRIDGE.
3. SEVERAL EXISTING CROSSFRAMES POSITIONED BETWEEN EXISTING GIRDERS G11, G12, G13, AND G14 ARE TO BE REMOVED AND REPLACED WITH NEW CROSSFRAMES DURING PHASE 2. SEE FRAMING PLAN SHEETS 44/98 THROUGH 50/98 FOR WHICH EXISTING CROSSFRAMES ARE TO BE REMOVED AND REPLACED. PROPOSED REPLACEMENT CROSSFRAME DETAILS ARE SHOWN ON GIRDER DETAIL SHEET 57/98.
4. FOR ADDITIONAL SEQUENCE OF CONSTRUCTION INFORMATION AND NOTES SEE SHEET 11/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

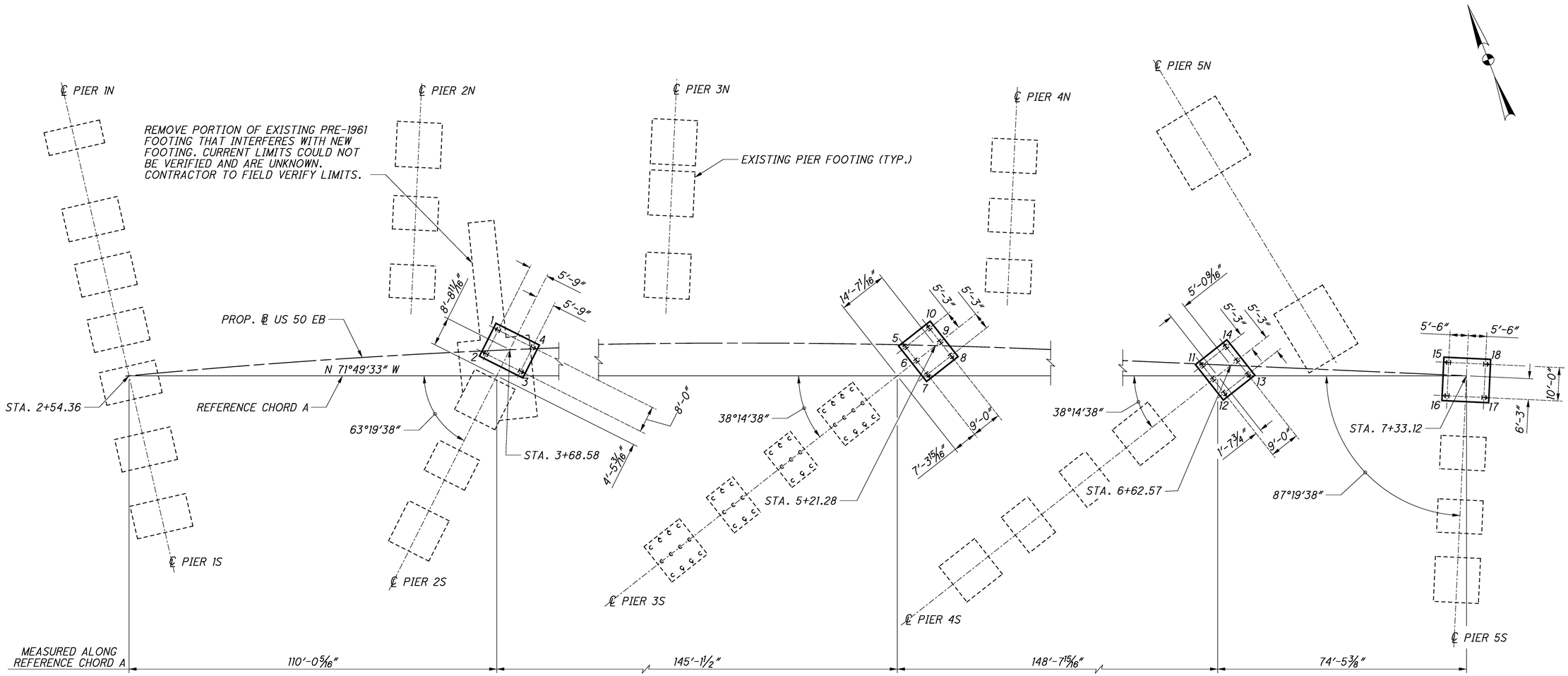
PHASE 2 REMOVAL AND CONSTRUCTION DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

12 / 98

186
442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPC002.dgn 11/10/2010 11:34:36 AM mtneihetsel



FOUNDATION PLAN
(UNIT 6)

LEGEND
- VERTICAL HP14x73 PILE
- HP14x73 PILE (4:1 BATTER)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

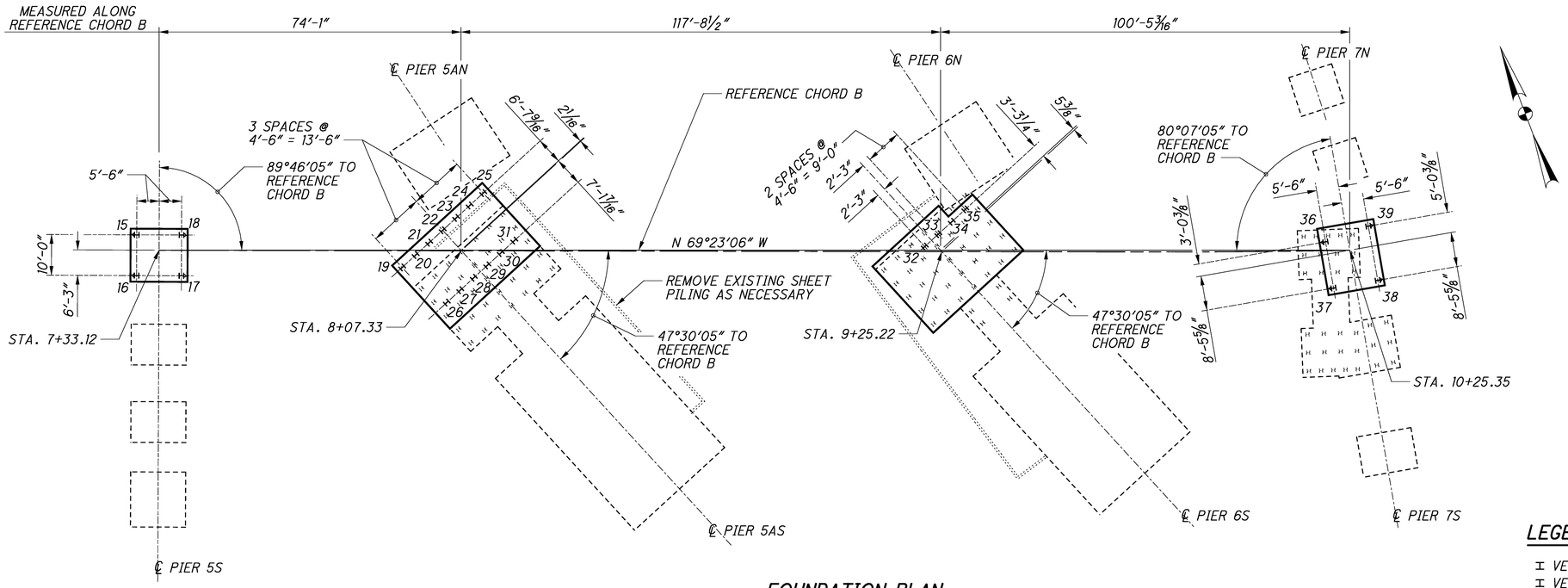
FOUNDATION PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

13 / 98

187
442

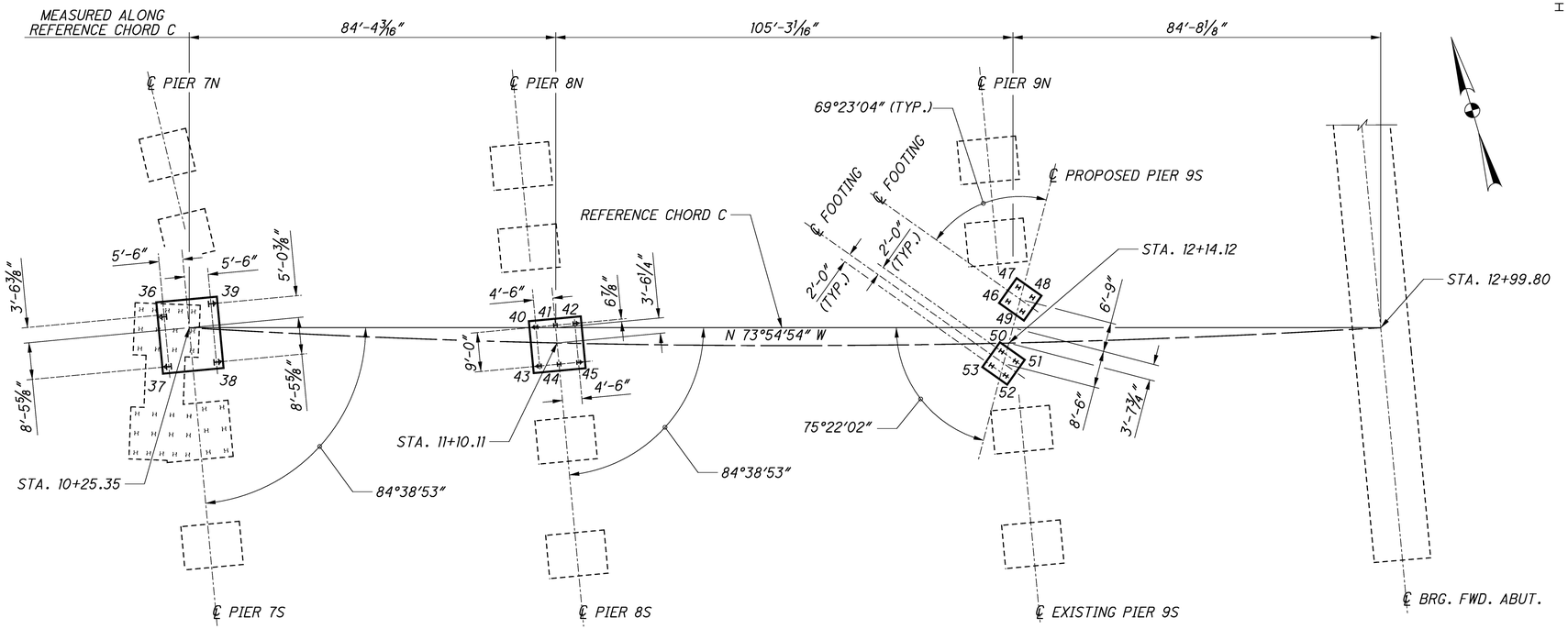
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RFP001.dgn 11/10/2010 11:34:38 AM mtreinelsel



FOUNDATION PLAN
(UNIT 7)

LEGEND

- VERTICAL HP14x73 PILE (PIER 5S THRU PIER 7S)
- VERTICAL HP10x42 PILE (PIER 8S AND PIER 9S)
- HP14x73 PILE (4:1 BATTER) (PIER 5S THRU PIER 7S)
- HP10x42 PILE (4:1 BATTER) (PIER 8S AND PIER 9S)
- VERTICAL HP14x73 PILE



FOUNDATION PLAN
(UNIT 8)

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DESIGNED: MTN | DRAWN: JDG | CHECKED: SSM | REVIEWED: MSL | DATE: 11/12/10 | REVISED: | STRUCTURE FILE NUMBER: 3102815

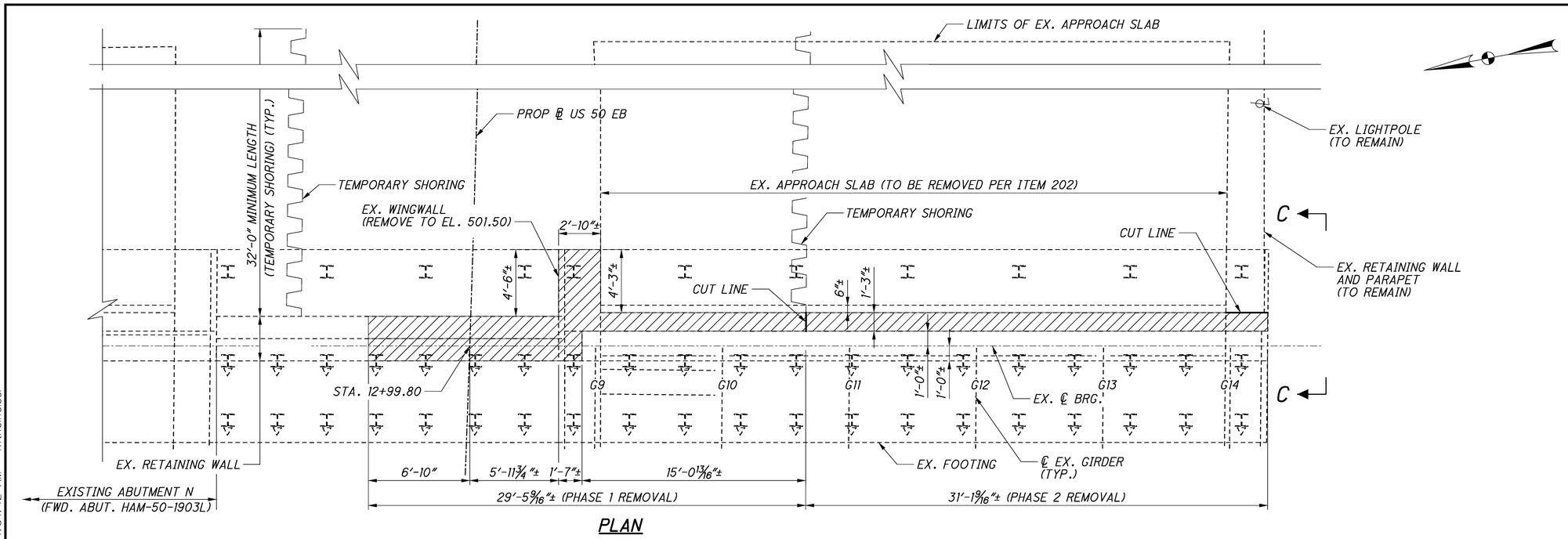
FOUNDATION PLAN - UNIT 7 AND UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

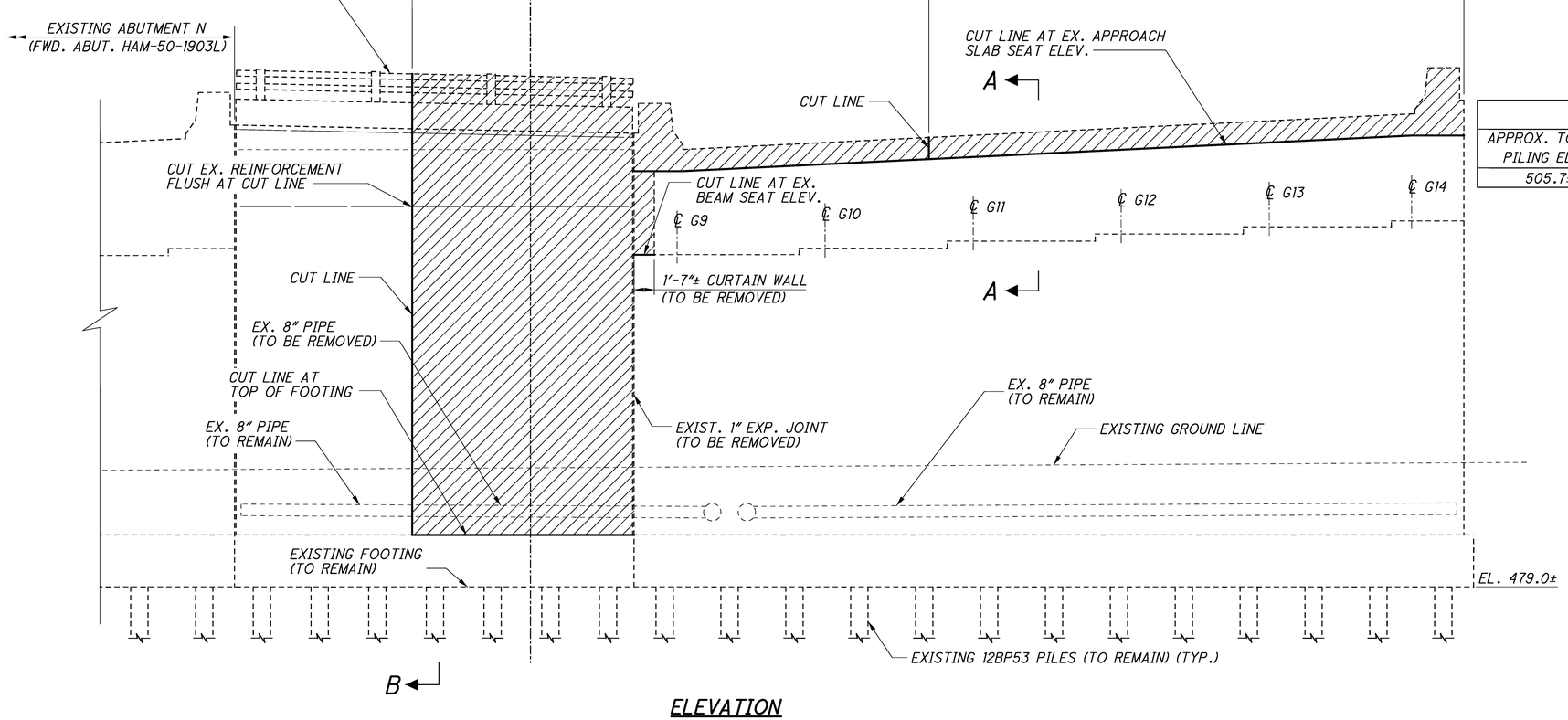
14 / 98

188 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RFP002.dgn 11/10/2010 11:34:40 AM mtneiheisel



PLAN



ELEVATION

TEMPORARY SHEET PILING INFORMATION (ASTM A572)			
APPROX. TOP OF PILING ELEV.	MIN. BTM. OF PILING ELEV.	MIN. SECTION MODULUS (IN³/FT)	MIN. DEPTH BELOW BTM. FOOTING (FT)
505.7±	428.70	59.4	50.3

LEGEND:

- EX. VERTICAL 12BP53 PILE
- EX. 1:3 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. SEE SHEET 8/98 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 16/98 FOR SECTION A-A, SECTION B-B, AND VIEW C-C.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AND EXISTING RETAINING WALL AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

FORWARD ABUTMENT AND RETAINING WALL REMOVAL DETAILS

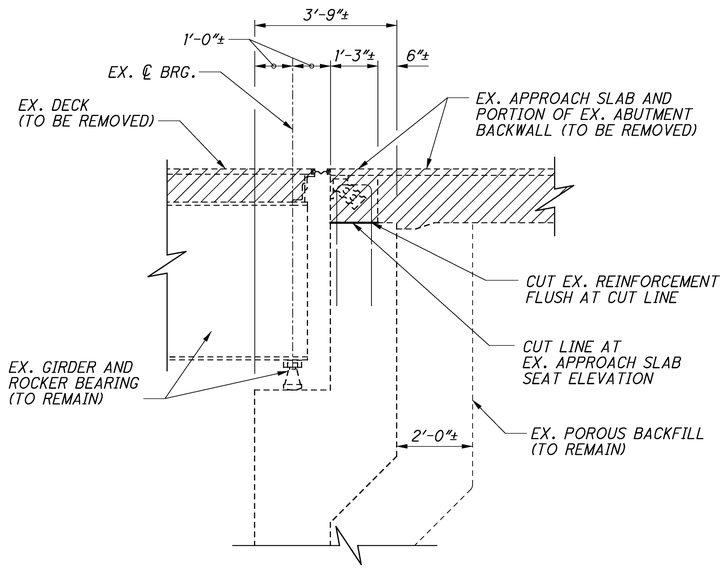
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

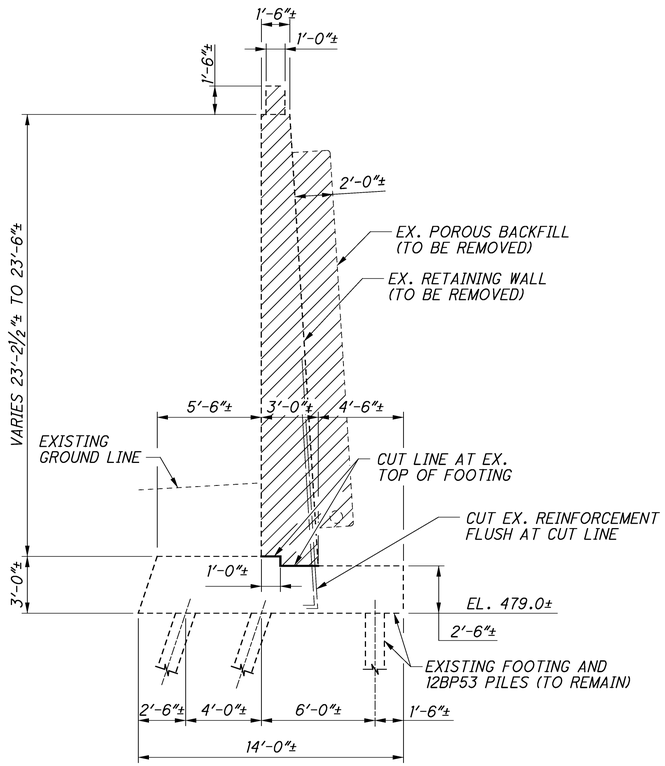
15/98

189
442

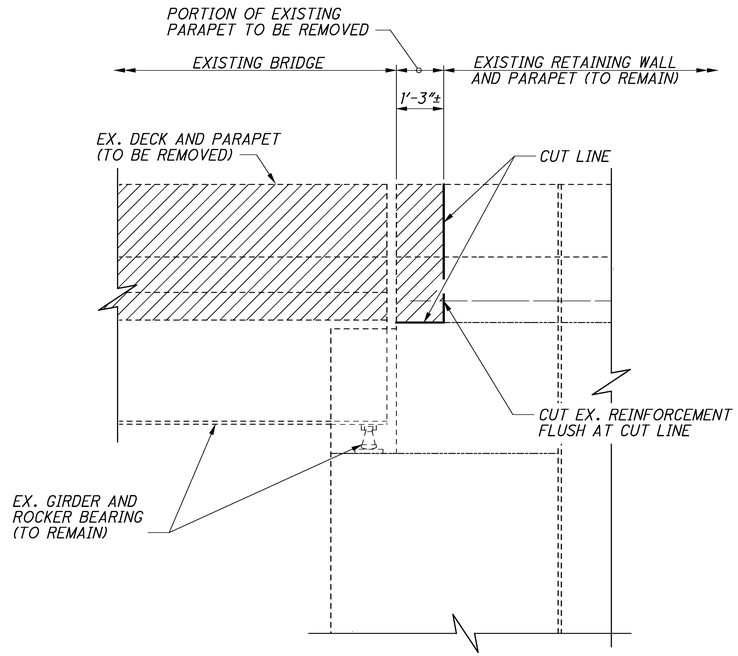
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRE001.dgn 11/10/2010 11:34:42 AM mtneiheisel



SECTION A-A



SECTION B-B



VIEW C-C

LEGEND:

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

SEE SHEET 15/98 FOR ADDITIONAL NOTES.

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRE002.dgn 11/10/2010 11:34:44 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

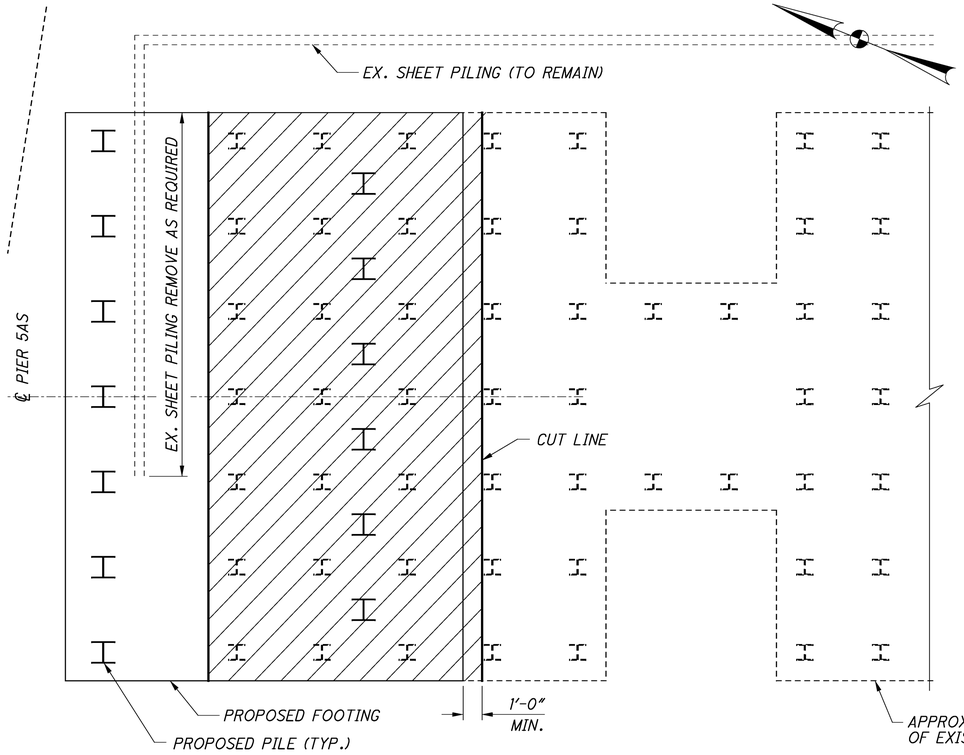
FORWARD ABUTMENT AND RETAINING WALL REMOVAL DETAILS

HAM-50-1903R

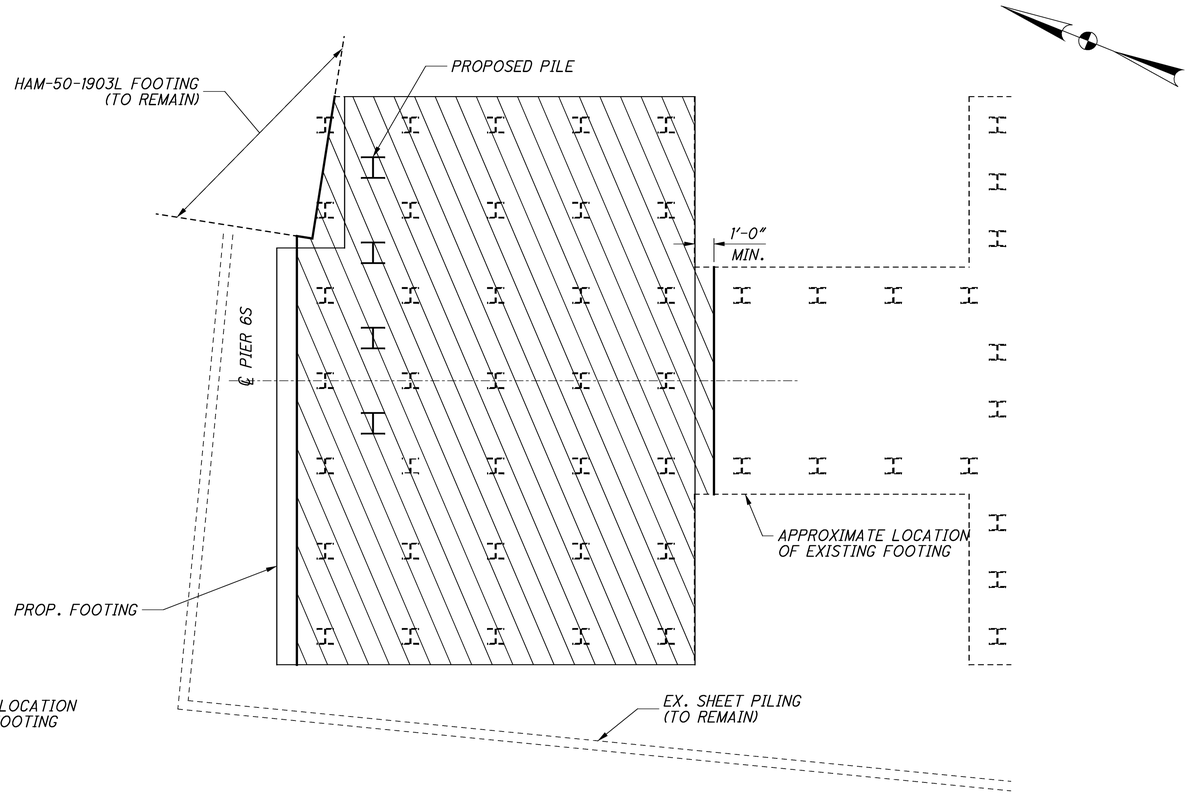
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03

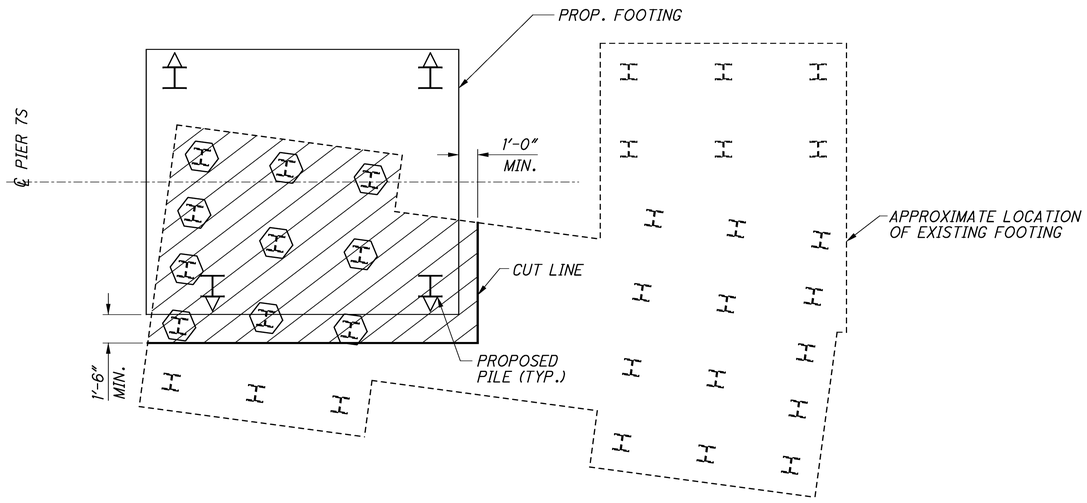
PID No. 75736



PIER 5AS PARTIAL FOOTING PLAN



PIER 6S PARTIAL FOOTING PLAN



PIER 7S PARTIAL FOOTING PLAN

LEGEND

- PROPOSED PILE
- EXISTING PILE
- EXISTING PILE REMOVED TO PROPOSED BOTTOM OF FOOTING ELEVATION
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. SEE SHEET 8/98 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. FOR PIER DETAILS OF PIERS 5AS, 6S, AND 7S SEE SHEETS 28/98 THRU 32/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	PJP	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		3102815	

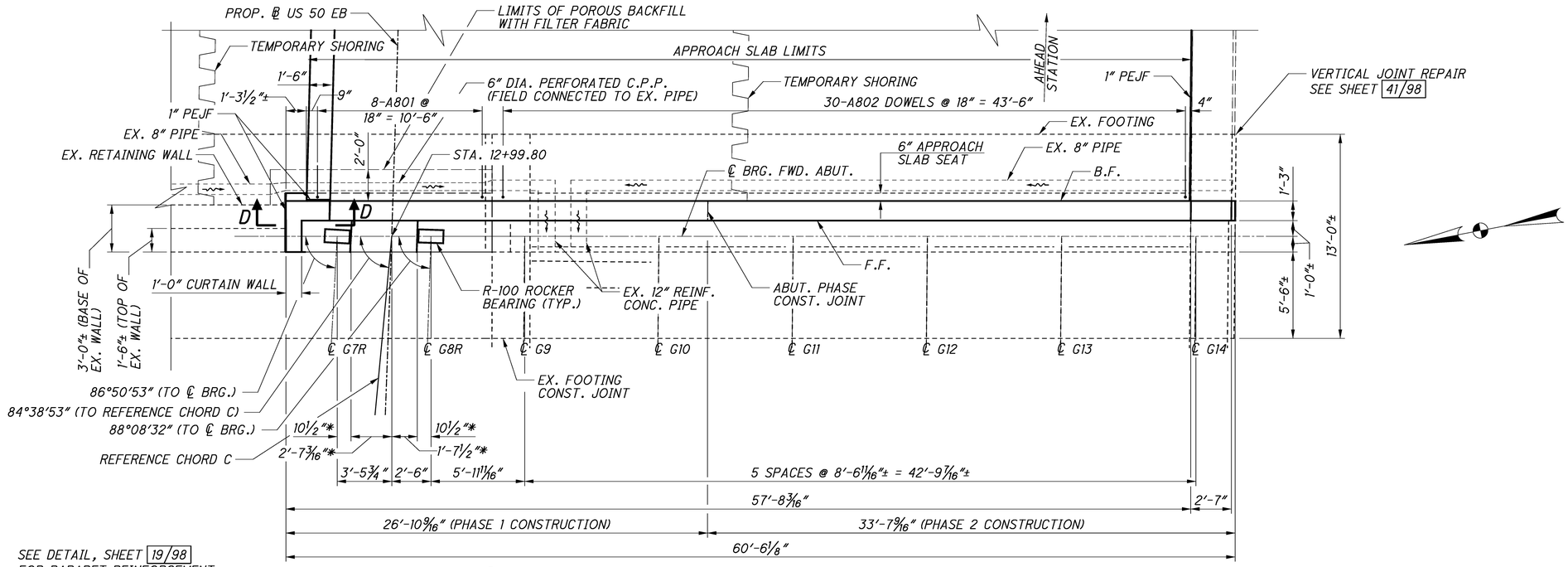
PIER 5AS, 6S AND 7S FOUNDATION REMOVAL DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

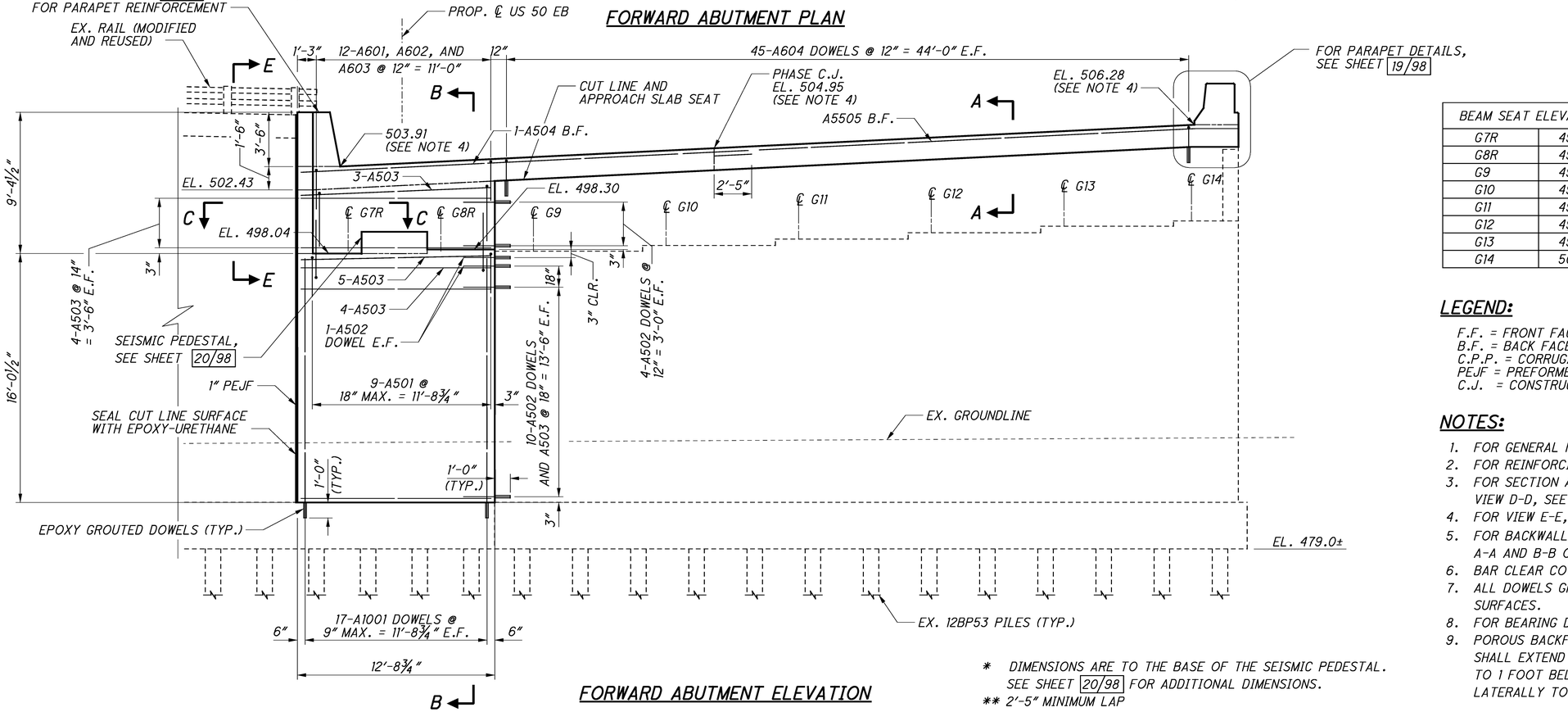
17 / 98

191
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRE003.dgn 11/10/2010 11:34:46 AM mtneiheisel



FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION

* DIMENSIONS ARE TO THE BASE OF THE SEISMIC PEDESTAL. SEE SHEET 20/98 FOR ADDITIONAL DIMENSIONS.
** 2'-5" MINIMUM LAP

BEAM SEAT ELEVATIONS	
G7R	498.04
G8R	498.30
G9	498.19±
G10	498.56±
G11	498.97±
G12	499.38±
G13	499.80±
G14	500.14±

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
C.P.P. = CORRUGATED POLYETHYLENE PIPE
PEJF = PREFORMED EXPANSION JOINT FILLER
C.J. = CONSTRUCTION JOINT

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 96/98.
3. FOR SECTION A-A, SECTION B-B, SECTION C-C, AND VIEW D-D, SEE SHEET 19/98.
4. FOR VIEW E-E, SEE SHEET 19/98.
5. FOR BACKWALL ELEVATION LOCATIONS SEE SECTIONS A-A AND B-B ON SHEET 19/98.
6. BAR CLEAR COVER IS 2" UNLESS NOTED OTHERWISE.
7. ALL DOWELS GROUTED 1'-0" INTO EXISTING CONCRETE SURFACES.
8. FOR BEARING DETAILS, SEE SHEET 66/98.
9. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | STRUCTURE FILE NUMBER 3102815 | REVISED

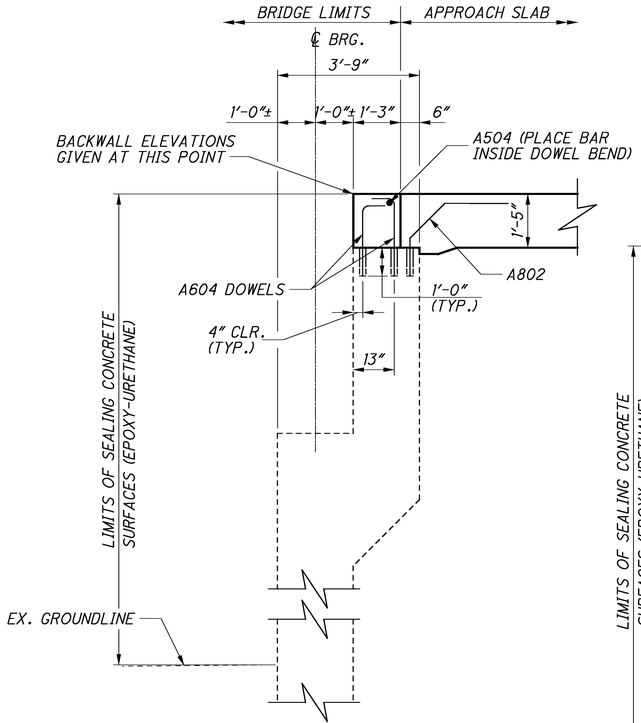
FORWARD ABUTMENT PLAN AND ELEVATION
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

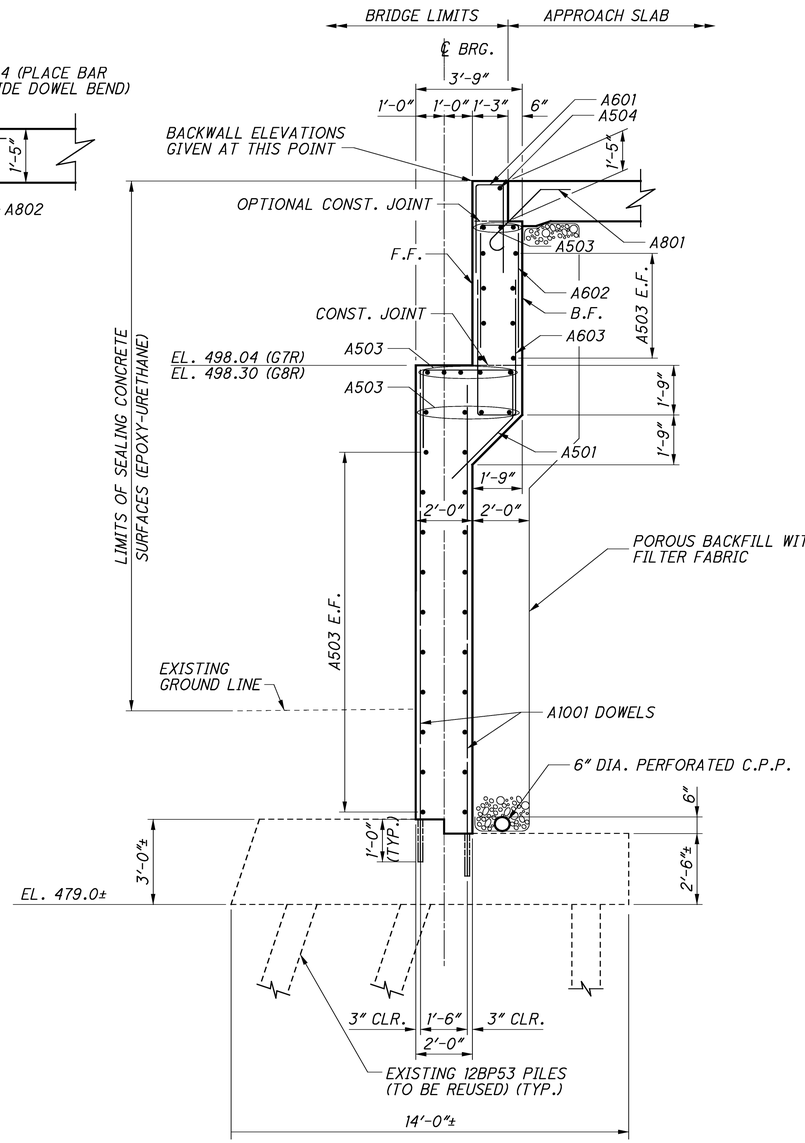
18 / 98

192 / 442

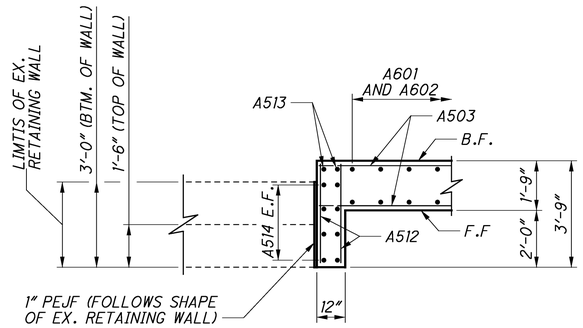
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RAF001.dgn 11/10/2010 11:34:48 AM mtneiheisel



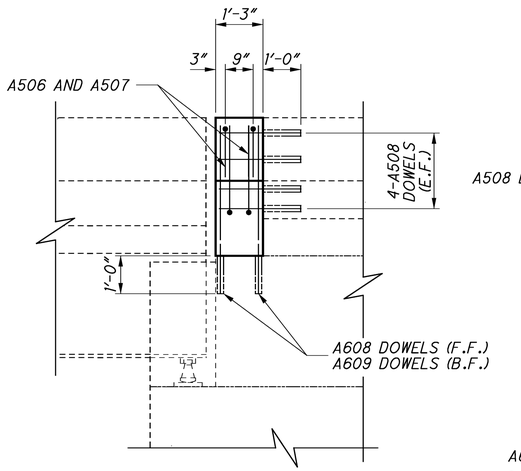
SECTION A-A



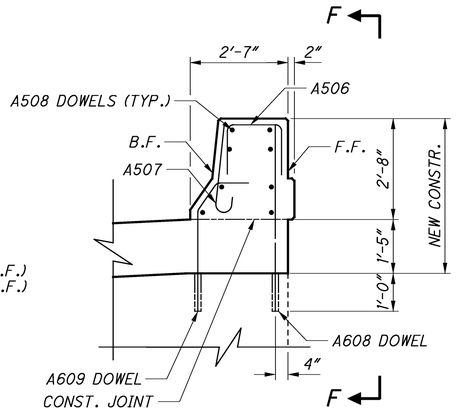
SECTION B-B



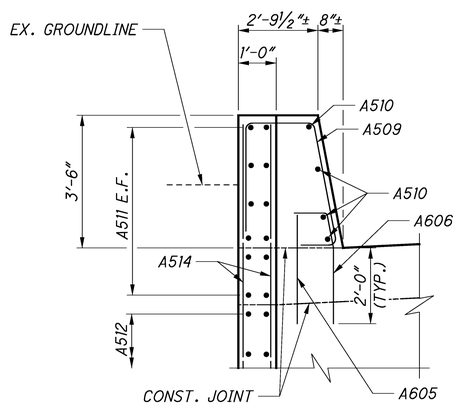
SECTION C-C



VIEW F-F

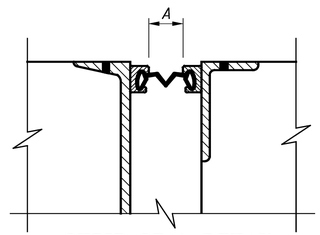


PARAPET DETAIL



SECTION D-D

AMBIENT TEMP.	DIMENSION "A" (IN.)
30°	1 5/16"
40°	1 3/16"
50°	1 1/8"
60°	1 1/2"
70°	1 3/8"
80°	1 3/16"
90°	1 1/16"



STRIP SEAL DETAIL

LEGEND

E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
C.P.P. = CORRUGATED POLYETHYLENE PIPE

NOTES:

1. BAR CLEAR COVER IS 2" UNLESS NOTED OTHERWISE.
2. BACKWALL CONCRETE: IN ADDITION TO 511.10, DO NOT PLACE BACKWALL CONCRETE ABOVE THE OPTIONAL CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

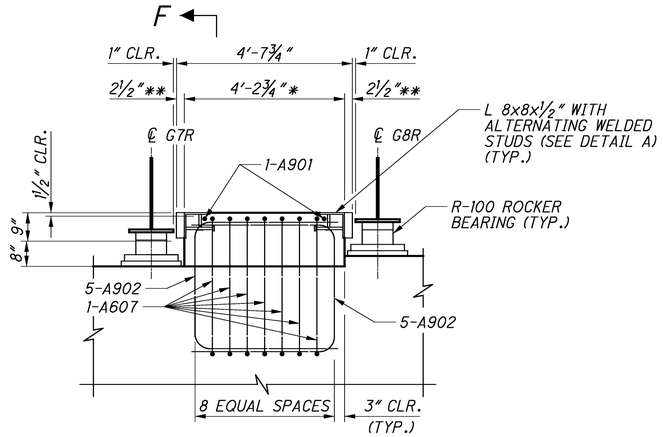
FORWARD ABUTMENT DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

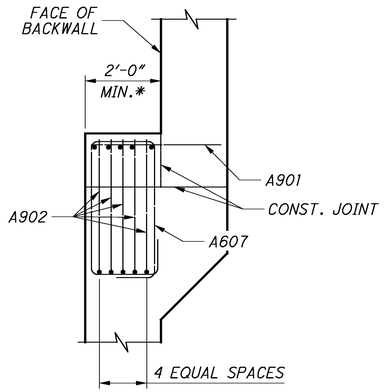
19 / 98

193 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RAF002.dgn 11/10/2010 11:34:50 AM mtneihe1sel



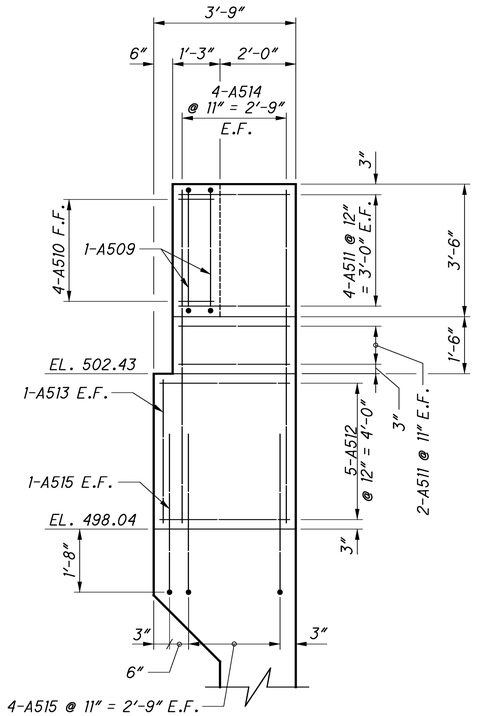
SEISMIC PEDESTAL DETAIL



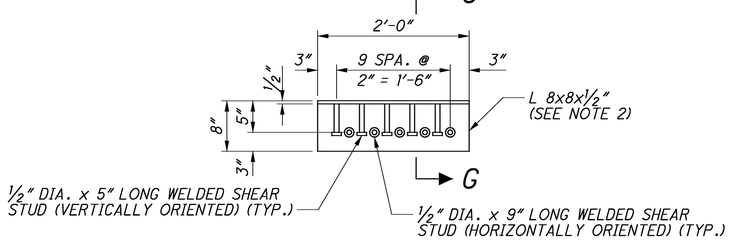
SECTION F-F

* THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERATIONS SHALL BE ¼" DEEP MINIMUM.

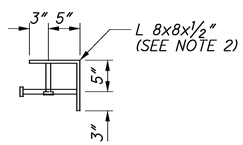
** REPRESENTS REQUIRED TOTAL THICKNESS OF FILL PLATES. SEE FILL PLATE DETAILS ON SHEET 36/98 FOR ADDITIONAL DETAILS AND DIMENSIONS.



VIEW E-E



DETAIL A



SECTION G-G

NOTES:

1. BAR CLEAR COVER IS 2" UNLESS NOTED OTHERWISE.
2. STUDDED L 8x8x½", FILL PLATES, WELDS, AND PLACEMENT TO BE PAYED FOR WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SEISMIC PEDESTAL ARMOR.
3. FOR ADDITIONAL NOTES, SEE SHEET 36/98 .

DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

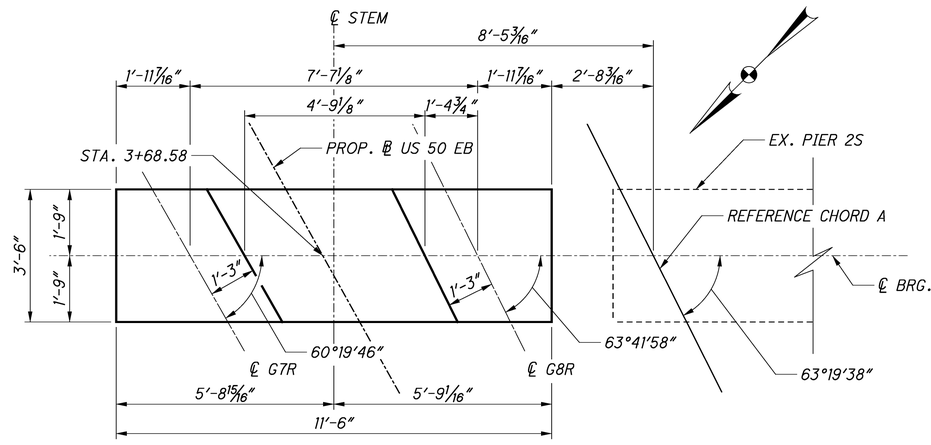
FORWARD ABUTMENT DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

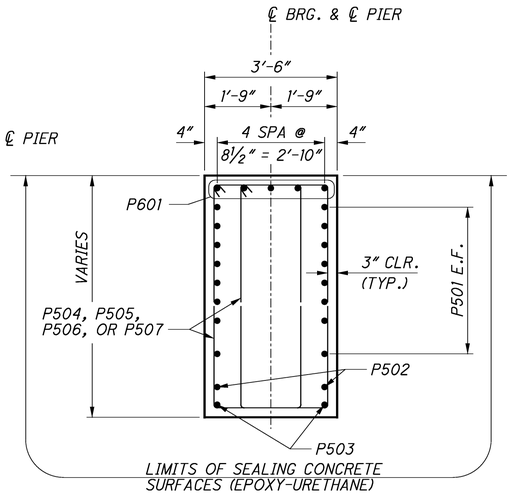
20/98

194/442

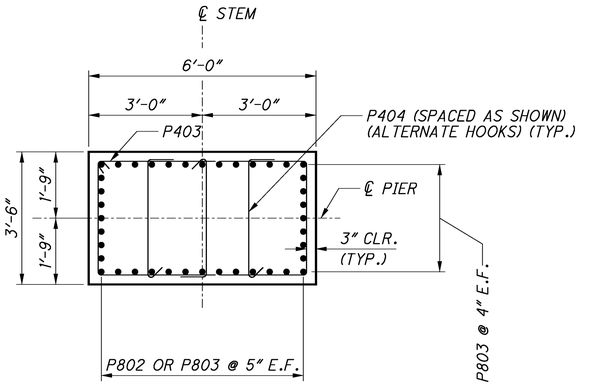
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RAF003.dgn 11/10/2010 11:34:51 AM mtreiheisel



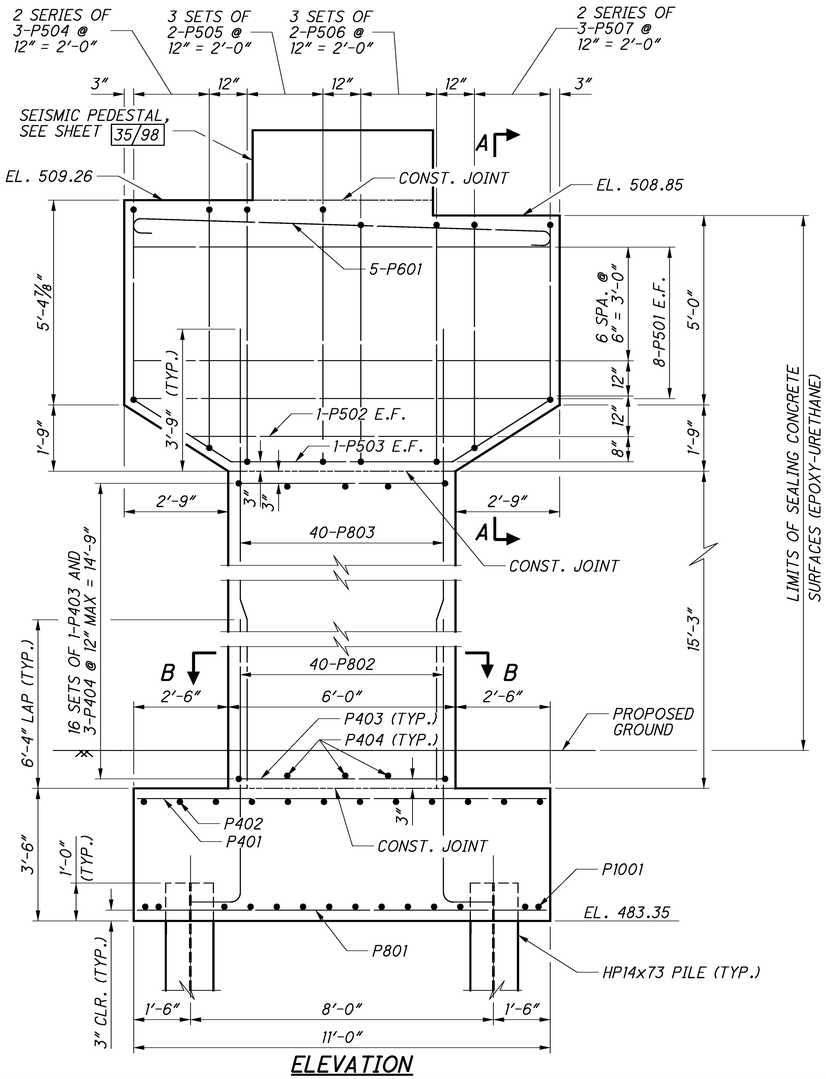
PLAN



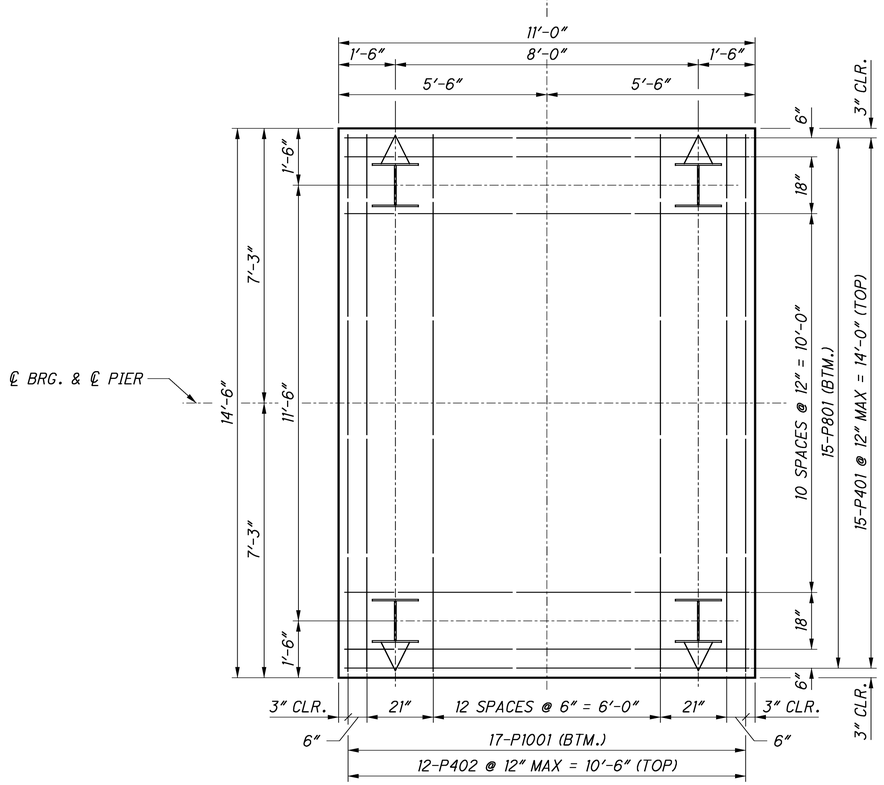
SECTION A-A



SECTION B-B



ELEVATION



FOOTING PLAN

LEGEND

E.F. = EACH FACE

1:4 BATTERED HP14x73 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

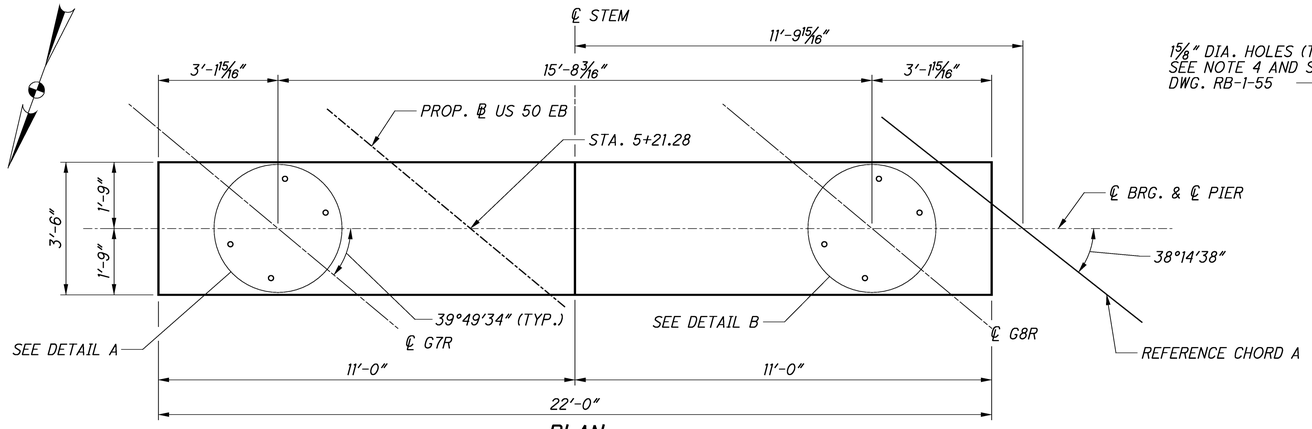
PIER 2S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

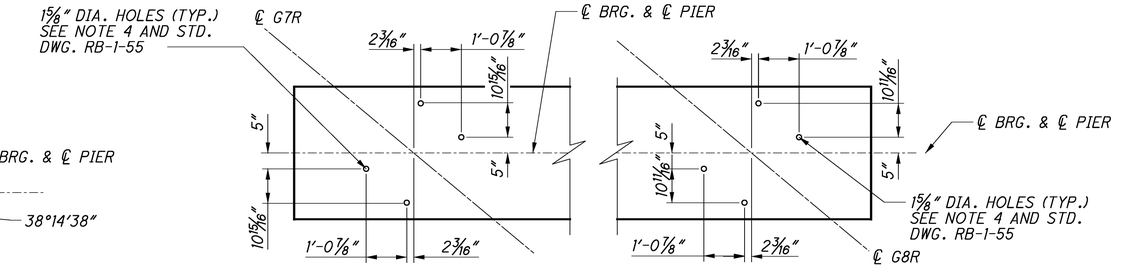
21/98

195/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI001.dgn 11/10/2010 11:34:53 AM mtreiheisel

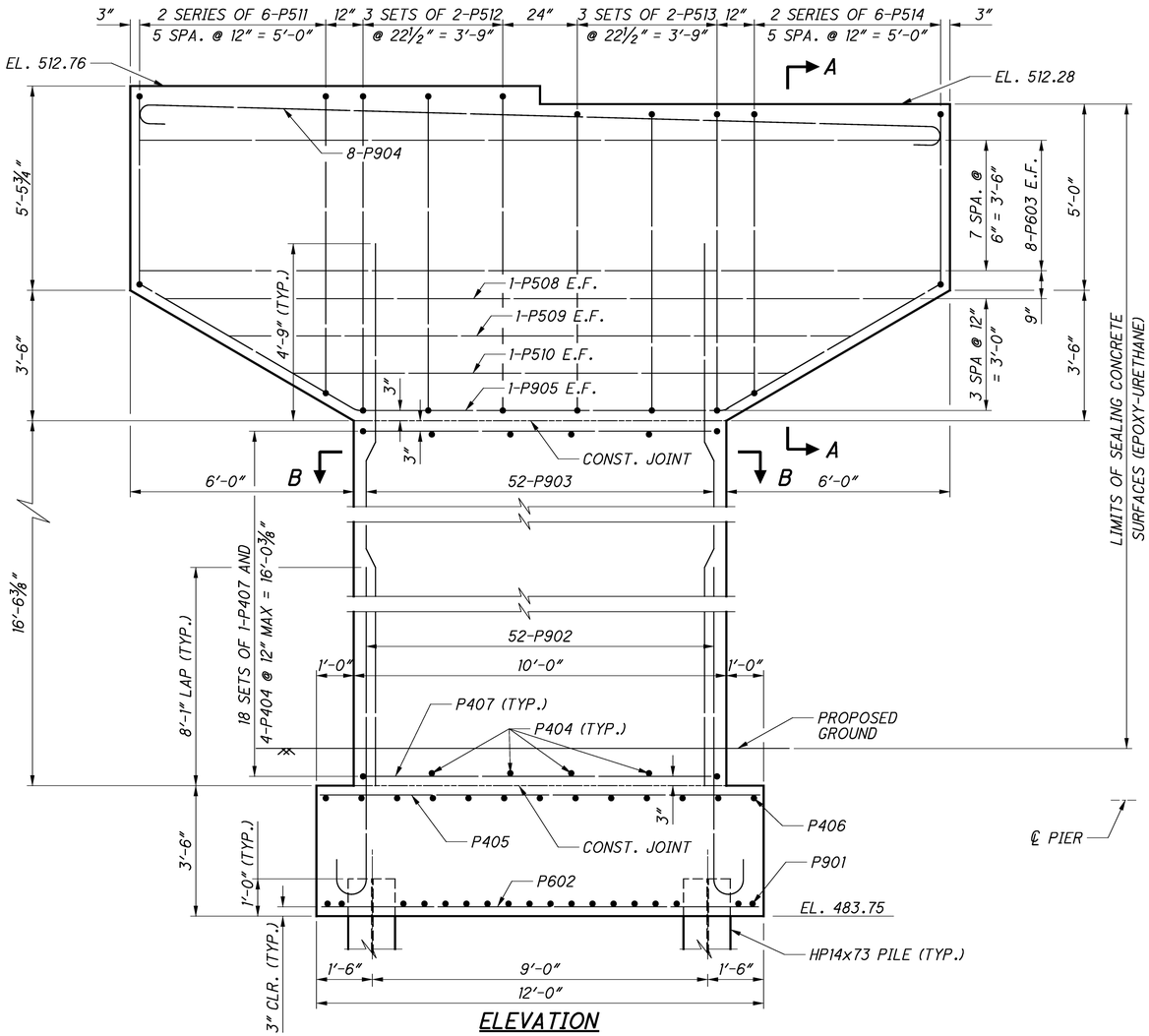


PLAN

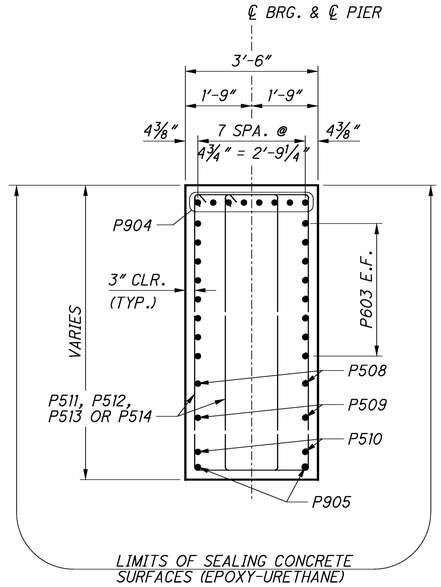


DETAIL A

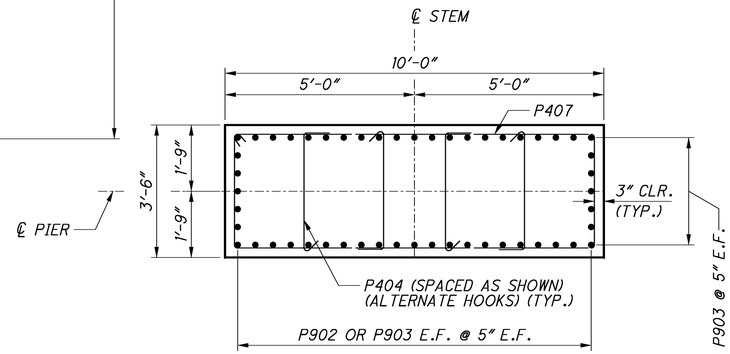
DETAIL B



ELEVATION



SECTION A-A



SECTION B-B

LEGEND

E.F. = EACH FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.
4. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

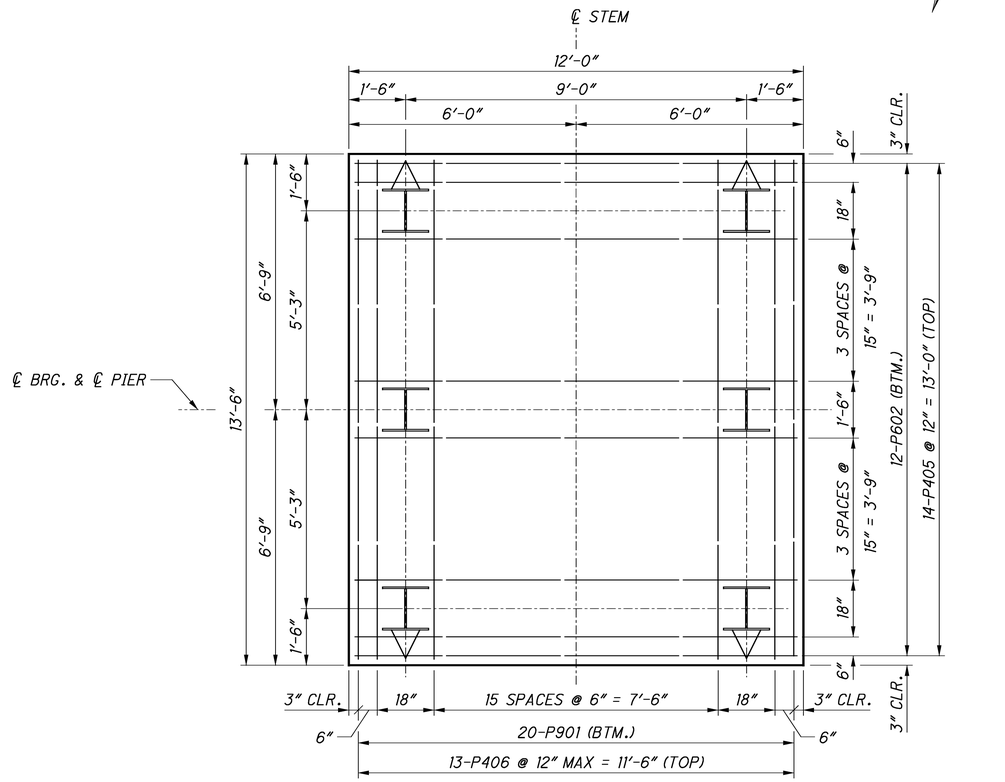
PIER 3S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

22/98

196/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI002.dgn 11/10/2010 11:34:55 AM mtneiheisel



FOOTING PLAN

LEGEND

1:4 BATTERED HP14x73 PILE

VERTICAL HP14x73 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI003.dgn 11/10/2010 11:34:56 AM mtneiheisel

PIER 3S FOUNDATION DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

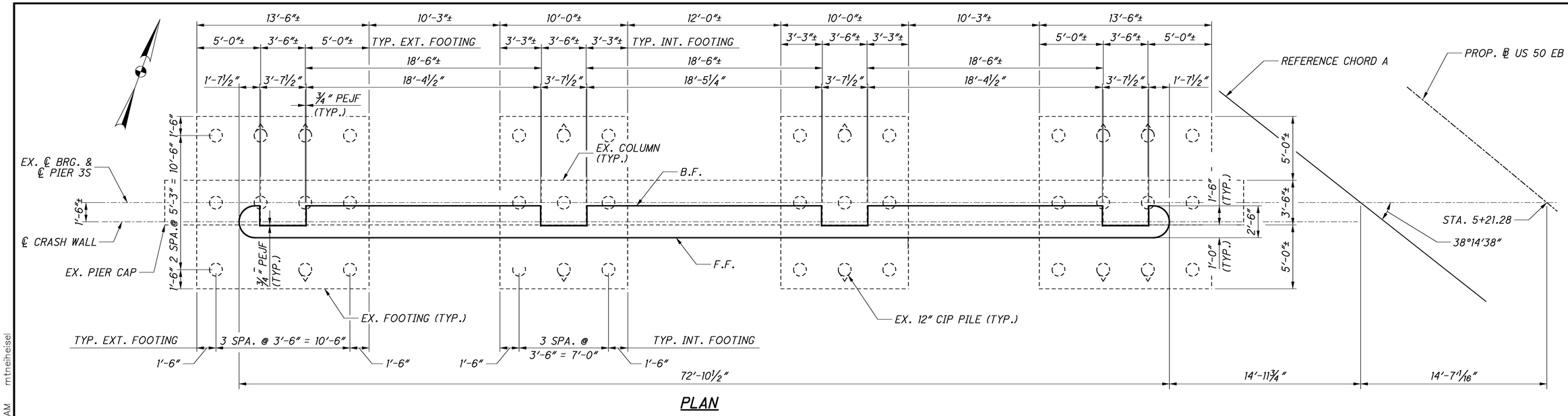
DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

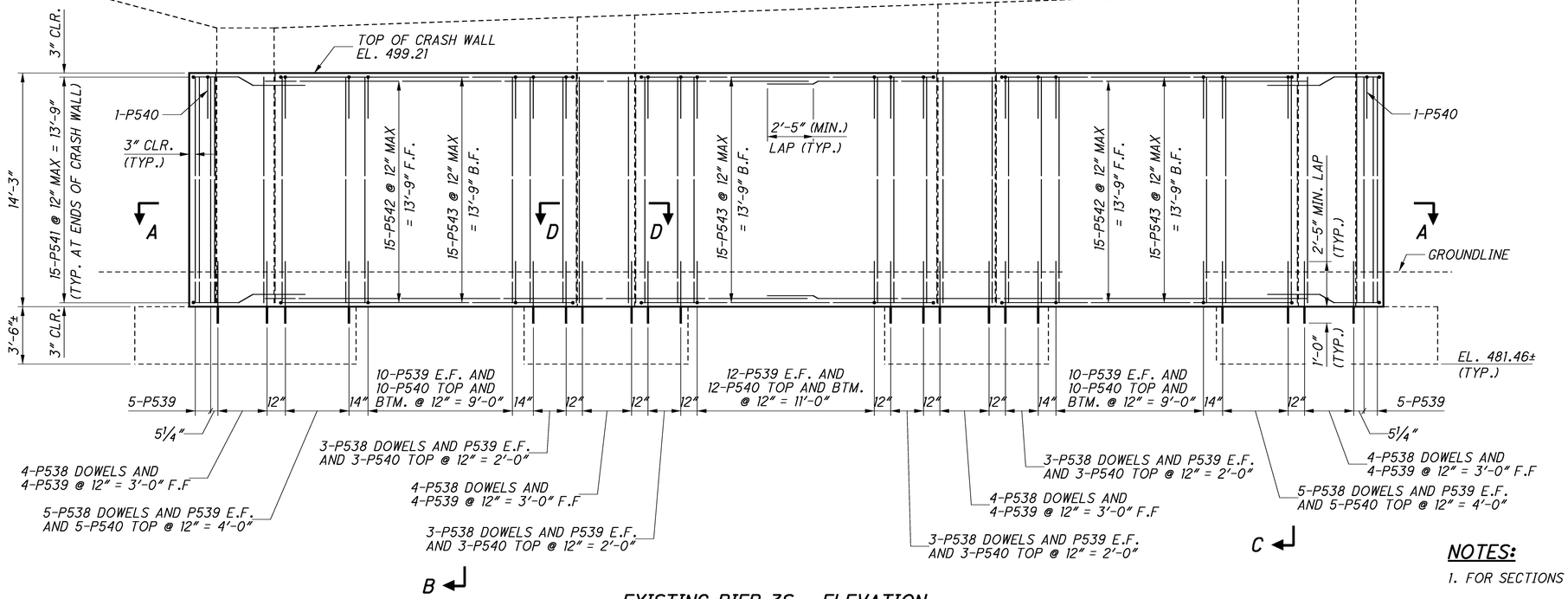
HAM-50-19.03
PID No. 75736

23/98

197/442



PLAN



EXISTING PIER 3S - ELEVATION

LEGEND

E.F. = EACH FACE
F.F = FRONT FACE
B.F. BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER
◌ = EX. 12" CIP PILE
◌ = EX. 12" BATTERED CIP PILE

NOTES:

1. FOR SECTIONS A-A, B-B, C-C, AND D-D, SEE SHEET 25/98.
2. FOR GENERAL NOTES SEE SHEET 8/98.
3. FOR REINFORCING LIST SEE SHEET 93/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

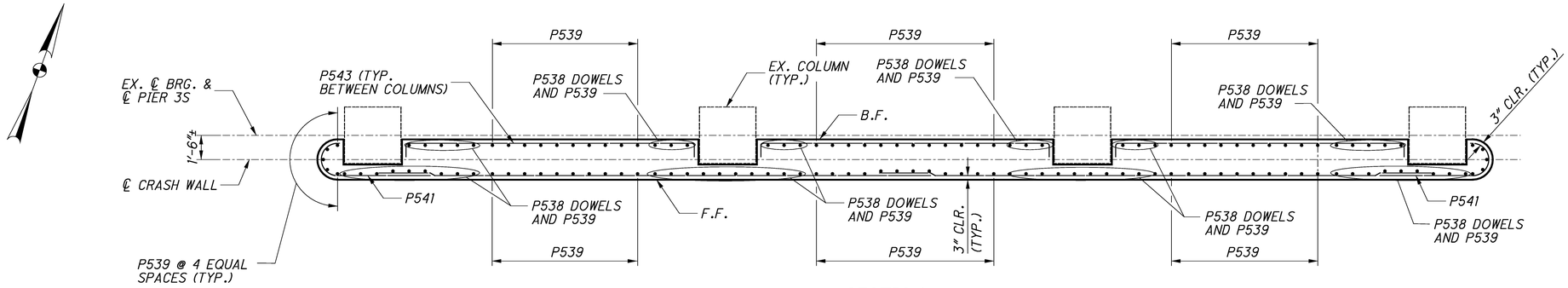
PIER 3S CRASH WALL DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

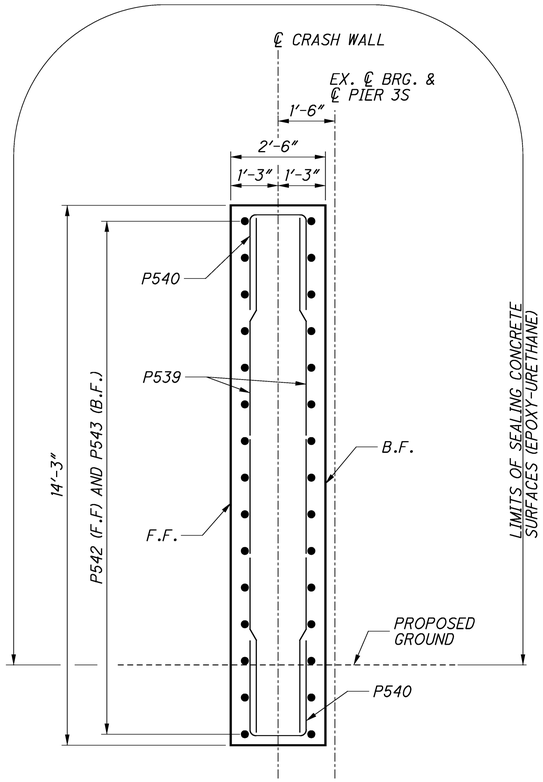
24/98

198/442

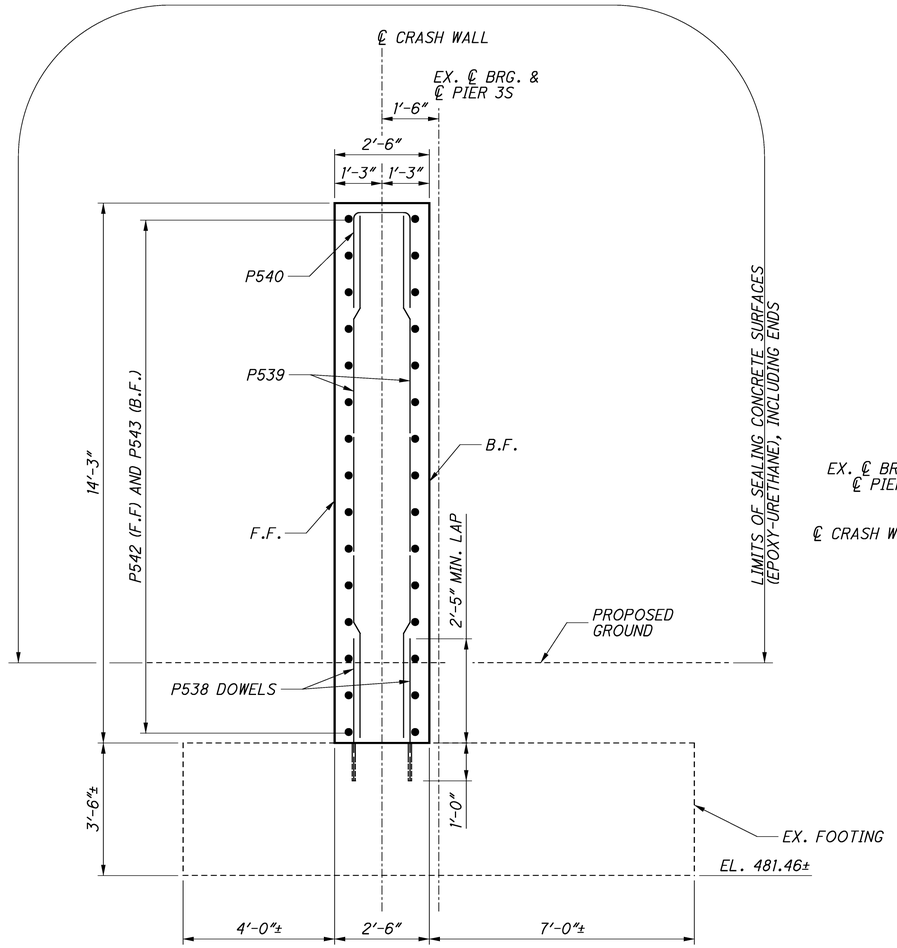
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD001.dgn 11/10/2010 11:34:58 AM mtneiheisel



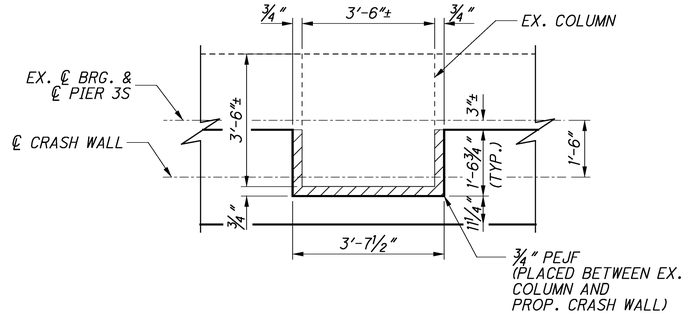
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

LEGEND

E.F. = EACH FACE
F.F = FRONT FACE
B.F. = BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. FOR ADDITIONAL NOTES SEE SHEET 8/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

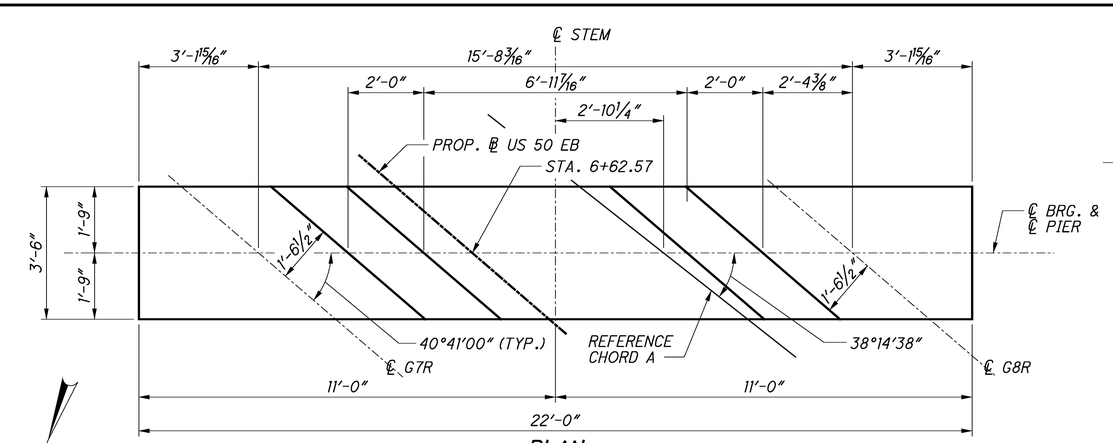
PIER 3S CRASH WALL DETAILS

HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

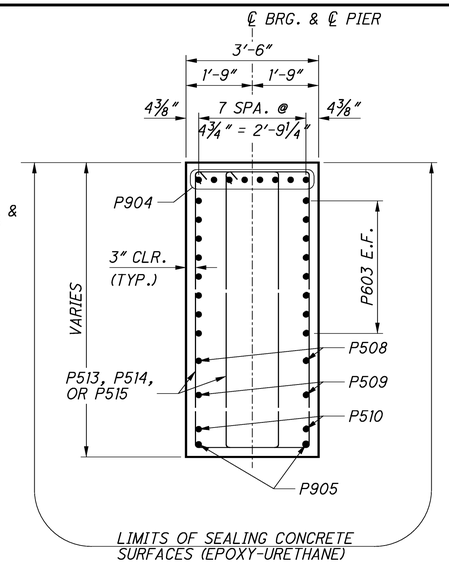
HAM-50-19.03
PID No. 75736

25/98
199/442

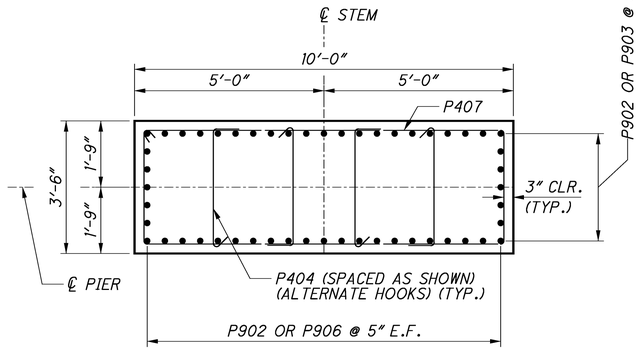
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD002.dgn 11/10/2010 11:35:00 AM mtneihetsel



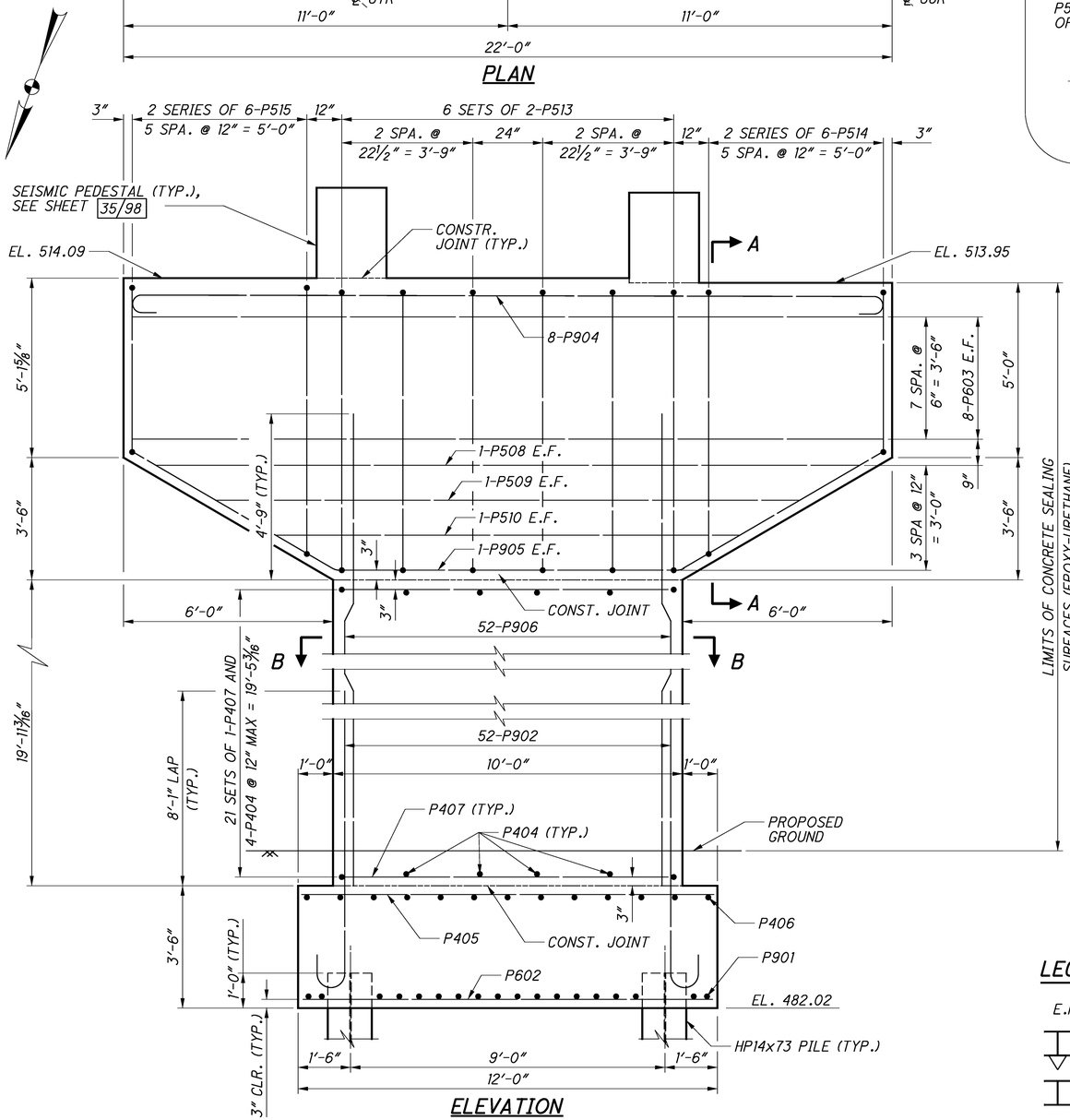
PLAN



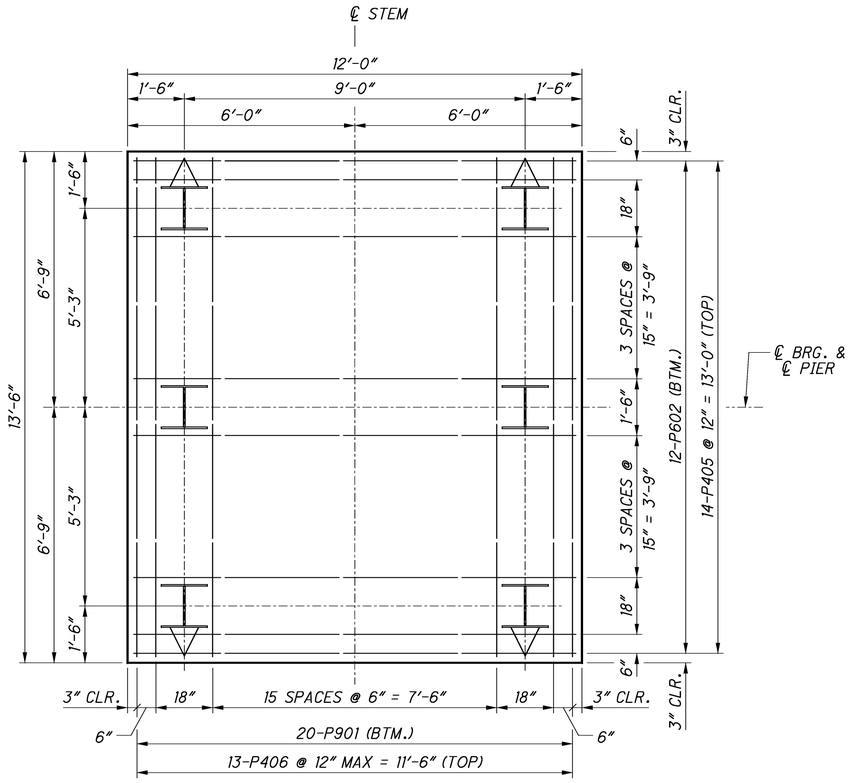
SECTION A-A



SECTION B-B



ELEVATION



FOOTING PLAN

LEGEND

E.F. = EACH FACE

1:4 BATTERED HP14x73 PILE

VERTICAL HP14x73 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

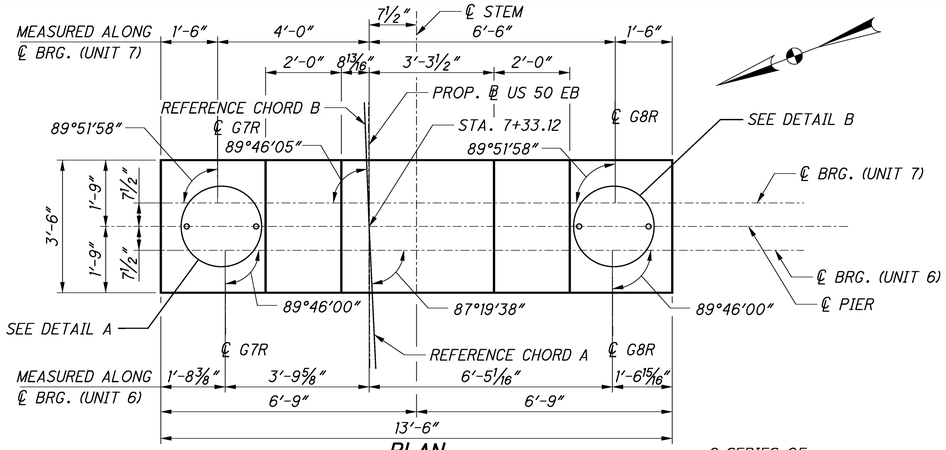
PIER 4S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

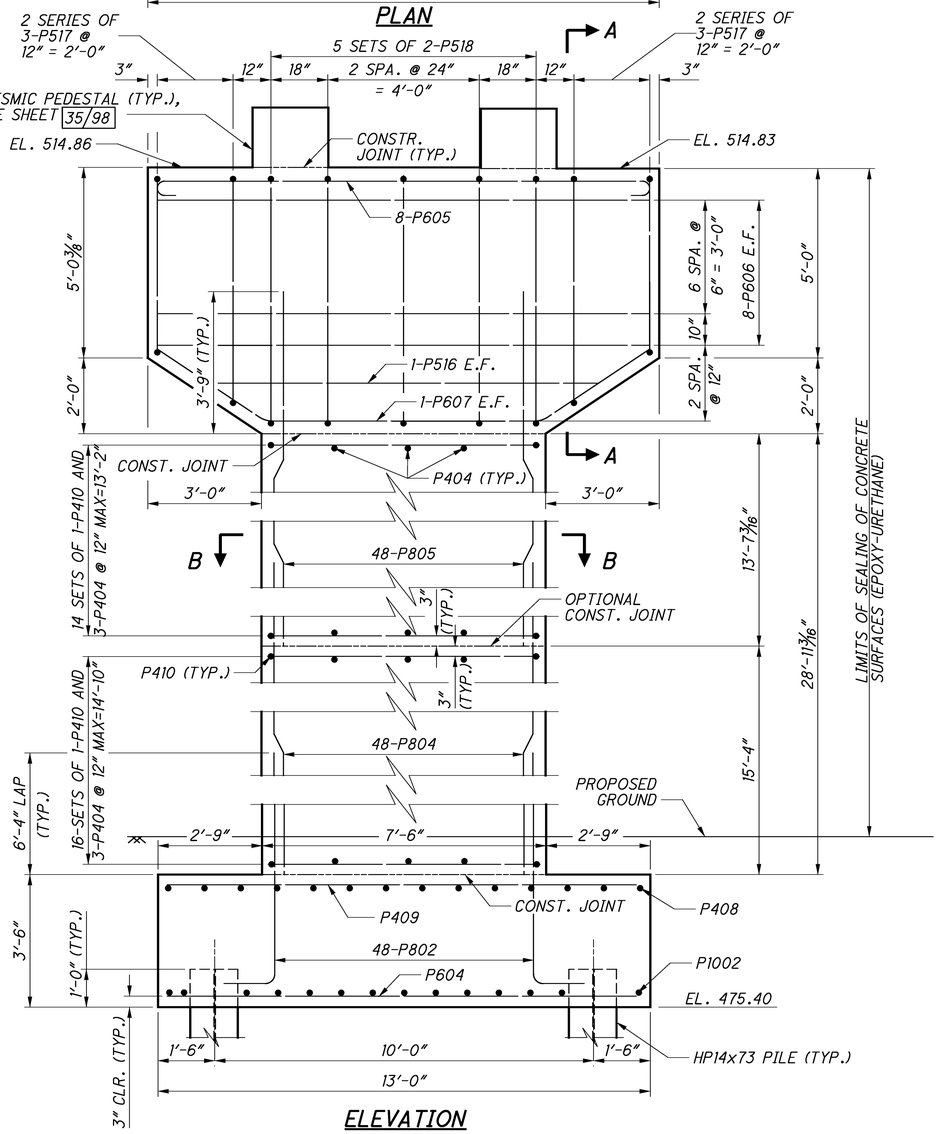
26/98

200/442

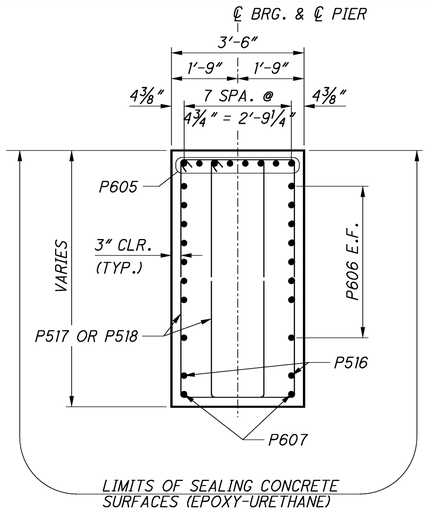
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI004.dgn 11/10/2010 11:35:01 AM mtreiheisel



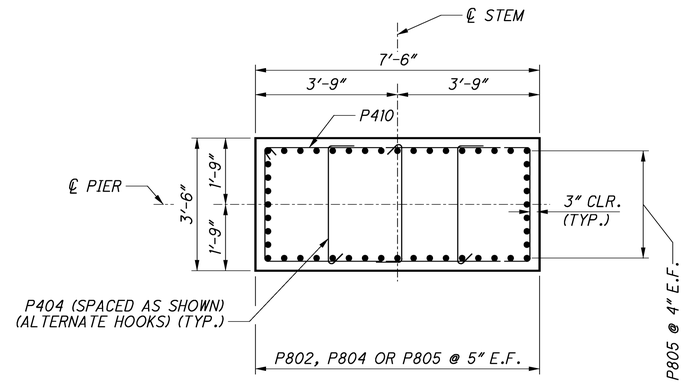
PLAN



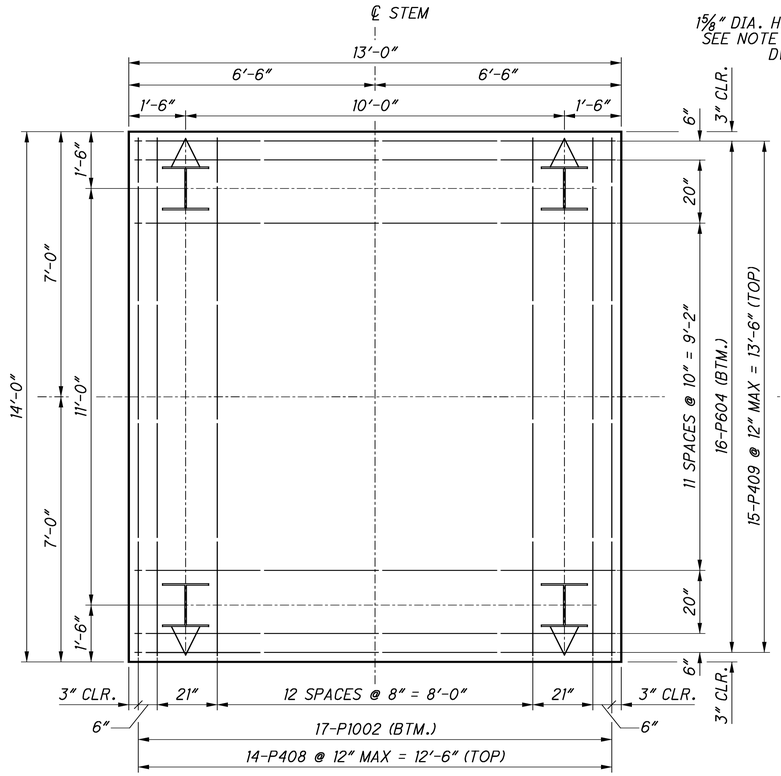
ELEVATION



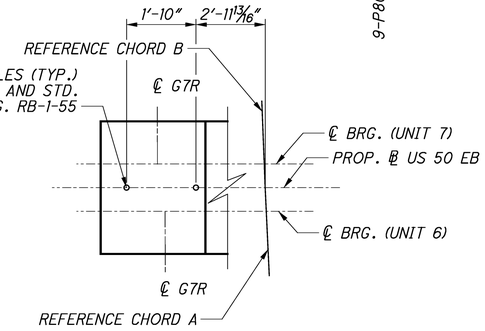
SECTION A-A



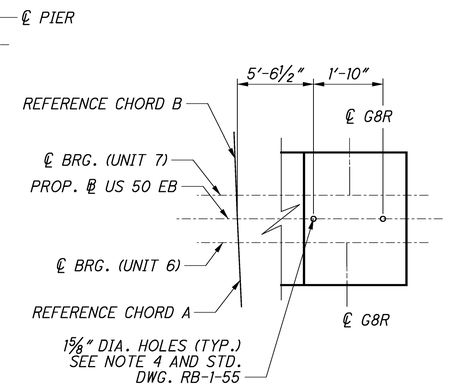
SECTION B-B



FOOTING PLAN



DETAIL A



DETAIL B

LEGEND

E.F. = EACH FACE

1:4 BATTERED HP14x73 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

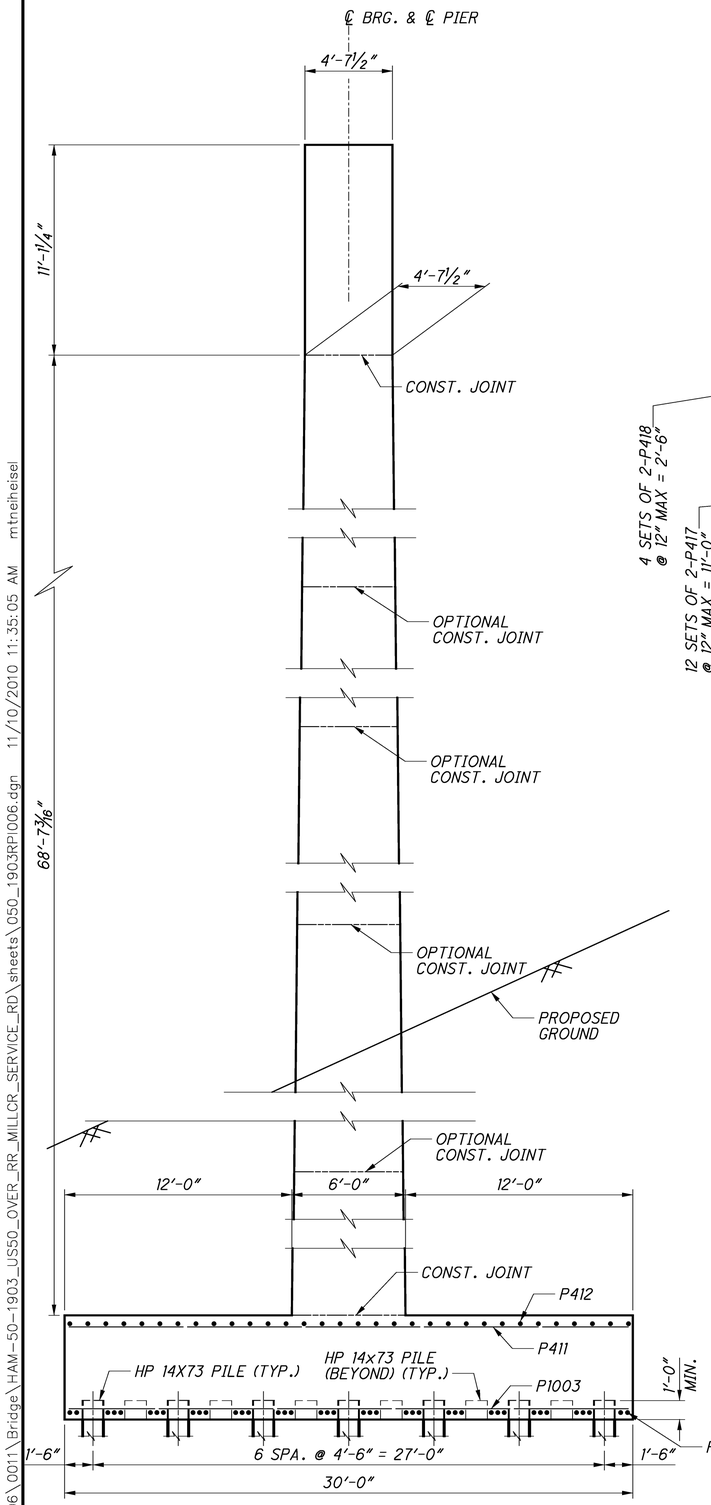
PIER 5S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

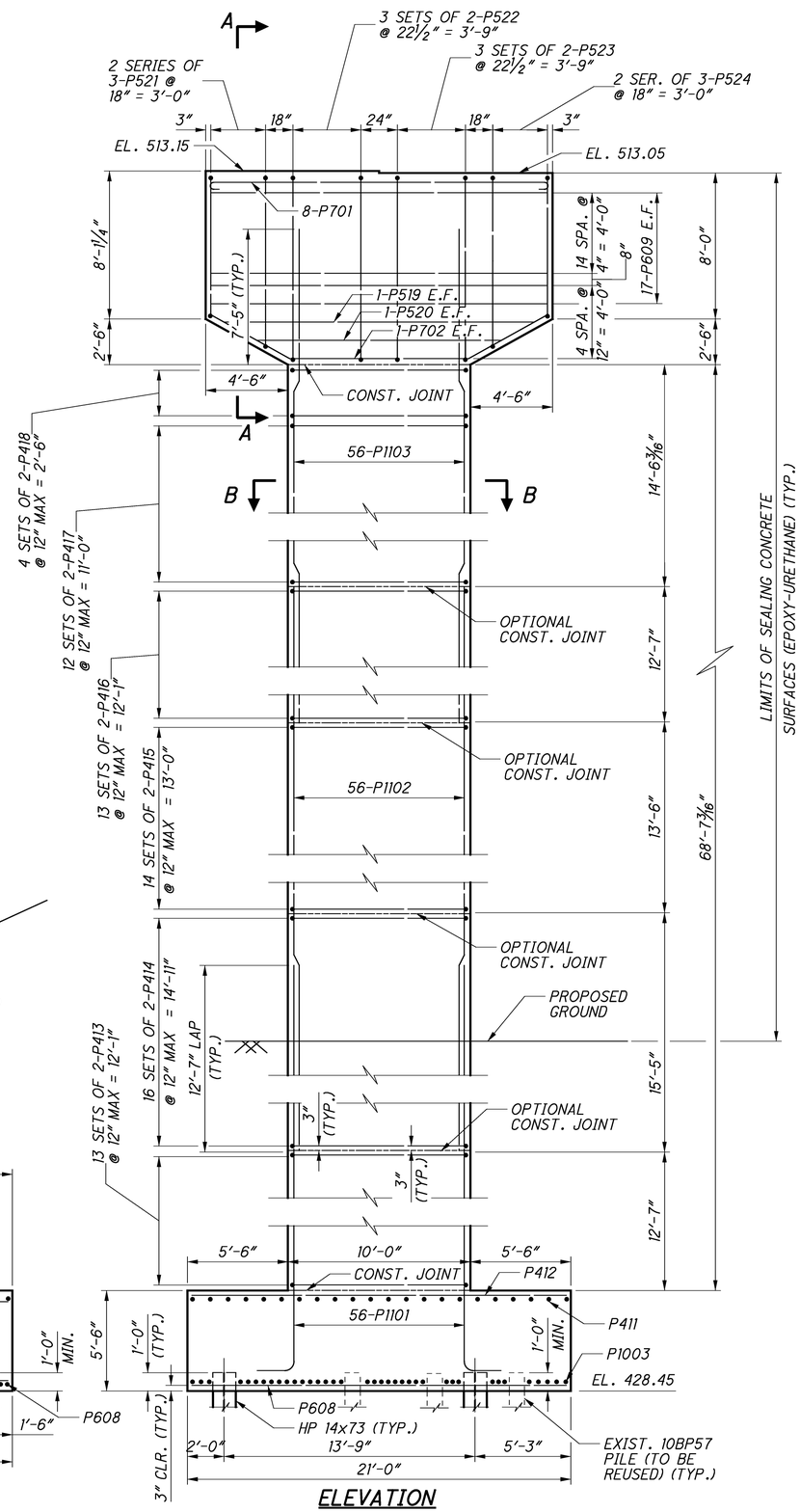
27/98

201/442

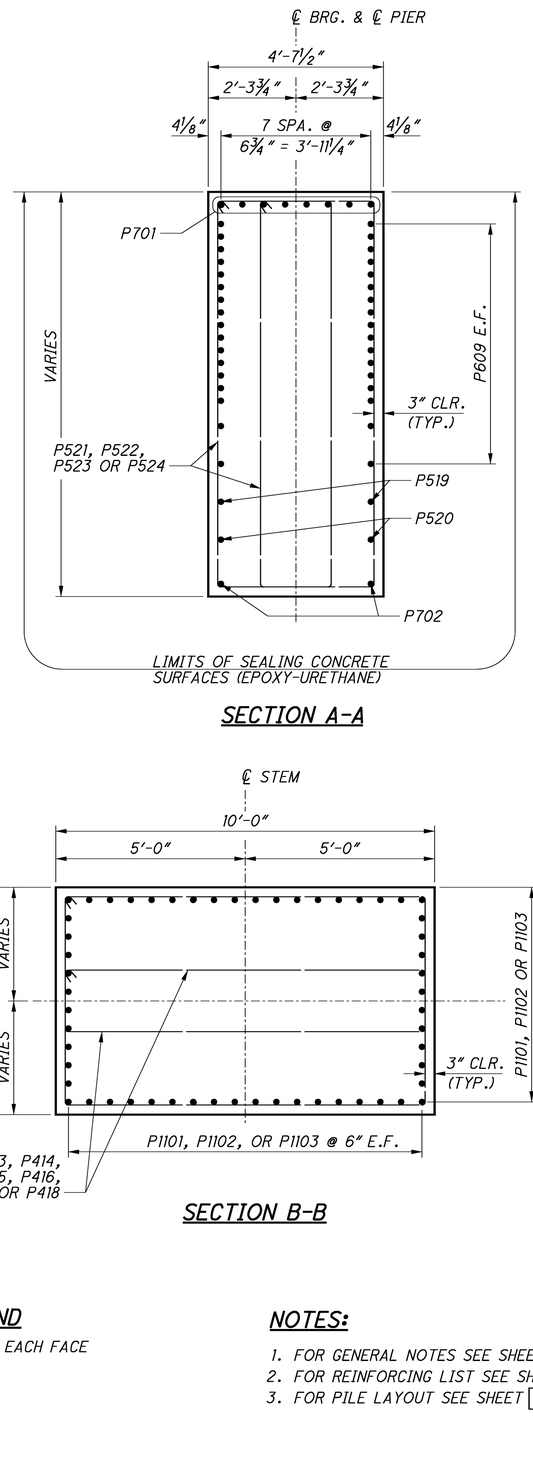
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI005.dgn 11/10/2010 11:35:03 AM mtneiheisel



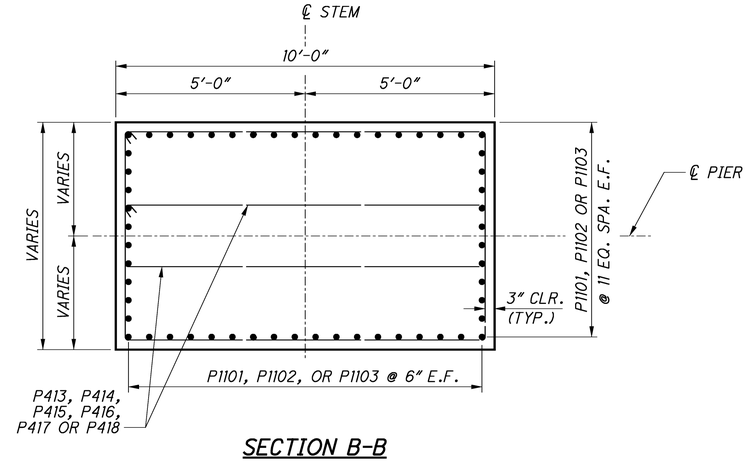
NORTH END ELEVATION



ELEVATION



SECTION A-A



SECTION B-B

LEGEND

E.F. = EACH FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

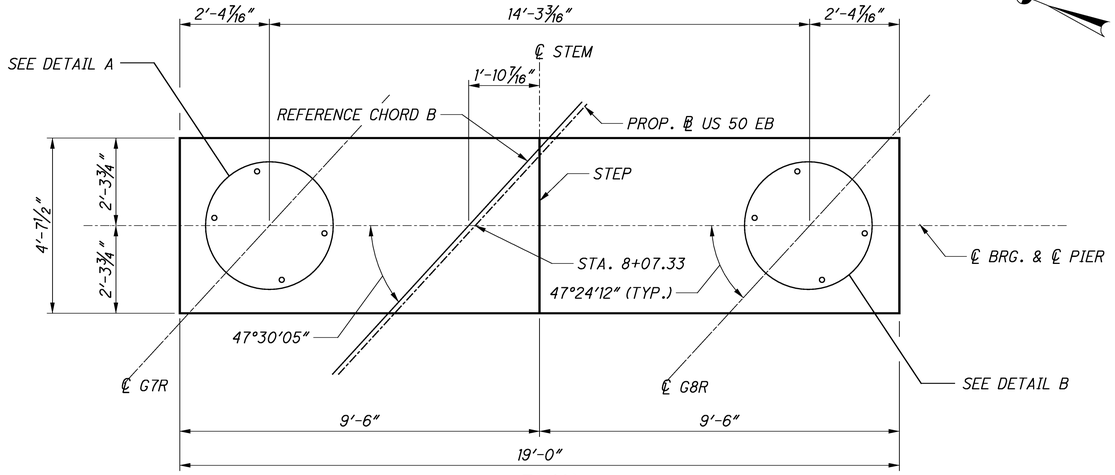
PIER 5AS DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

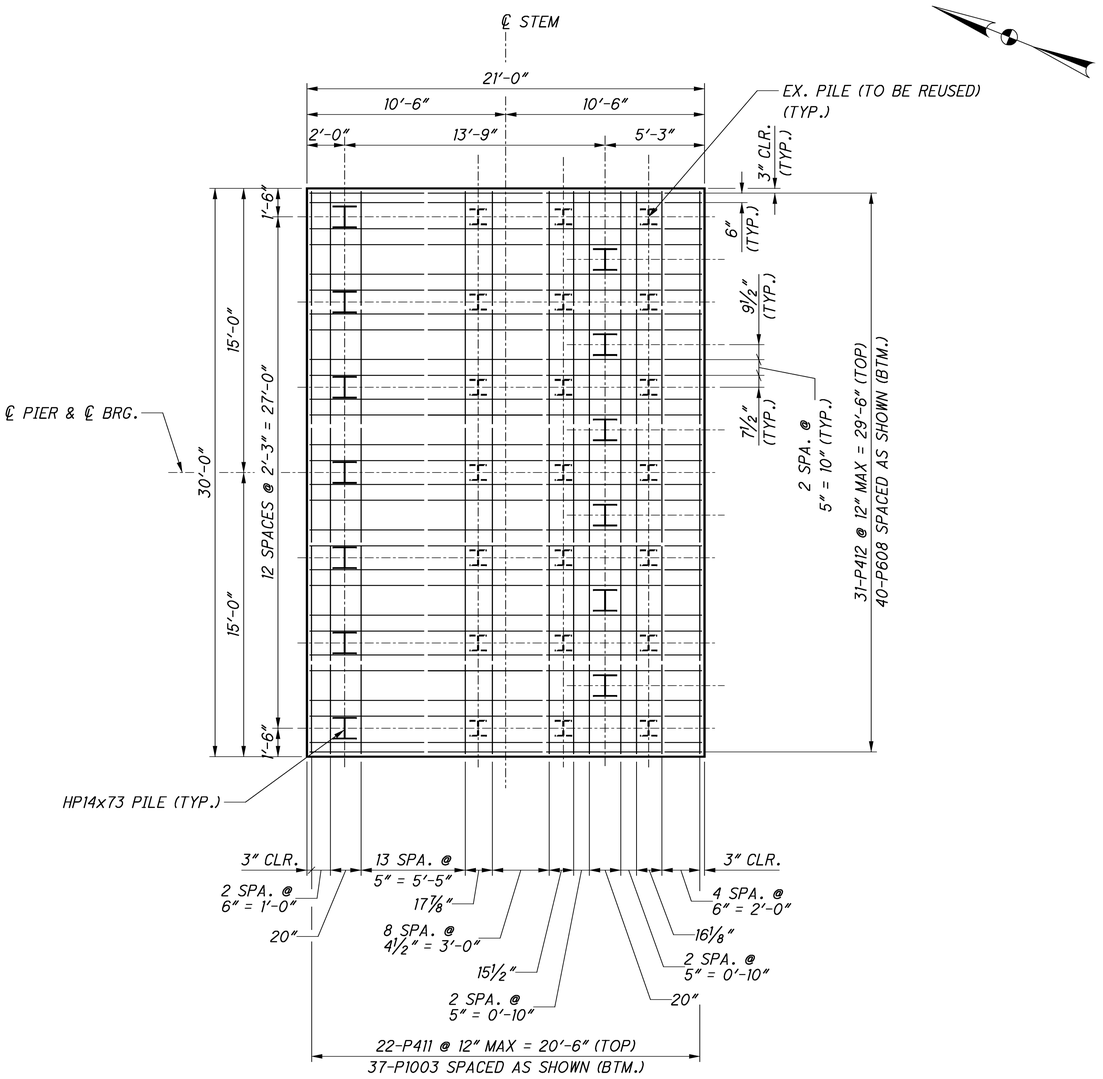
28/98

202/442

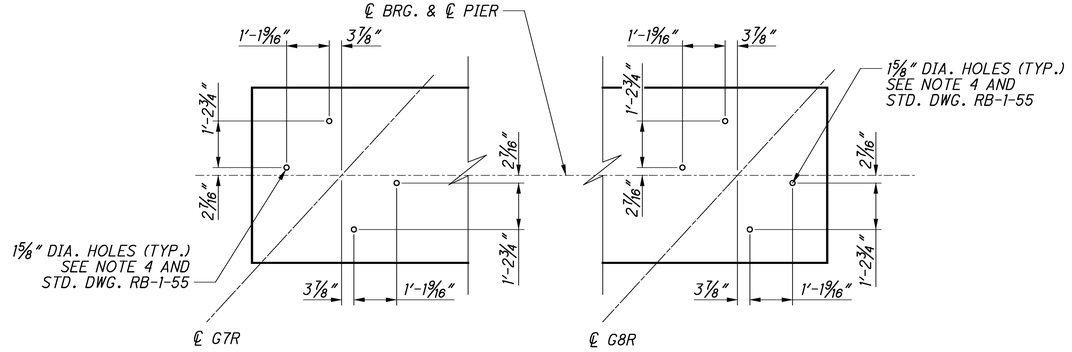
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI006.dgn 11/10/2010 11:35:05 AM mtreiheisel



PLAN



FOOTING PLAN



DETAIL A

DETAIL B

LEGEND

- VERTICAL HP14X73
- EXISTING 10BP57 (TO BE REUSED)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.
4. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

PIER 5AS DETAILS

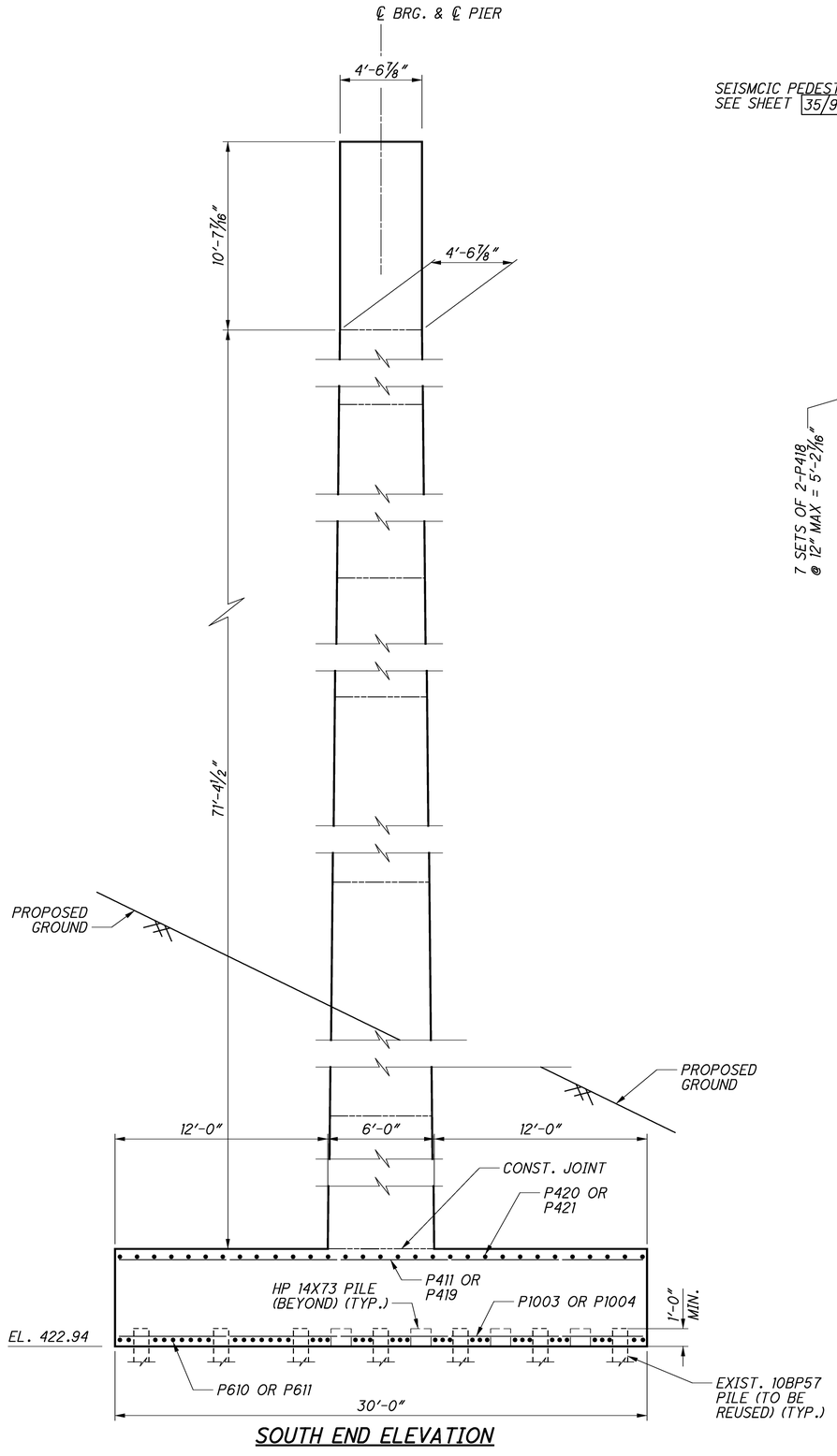
HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

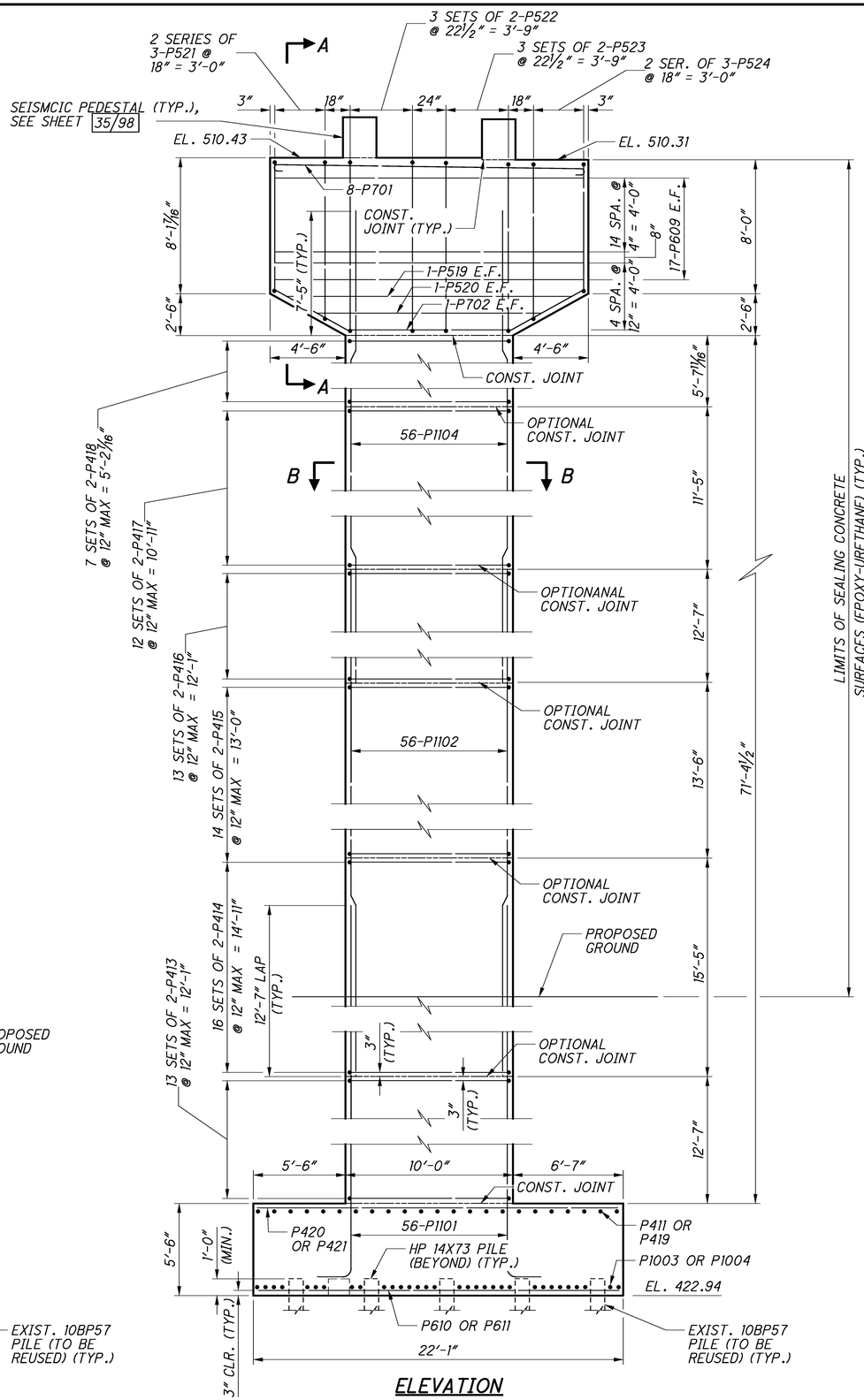
HAM-50-19.03

PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1007.dgn 11/10/2010 11:35:06 AM mtreiheisel



SOUTH END ELEVATION



ELEVATION

LEGEND

E.F. = EACH FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.
4. FOR SECTION A-A AND B-B SEE SHEET 31/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

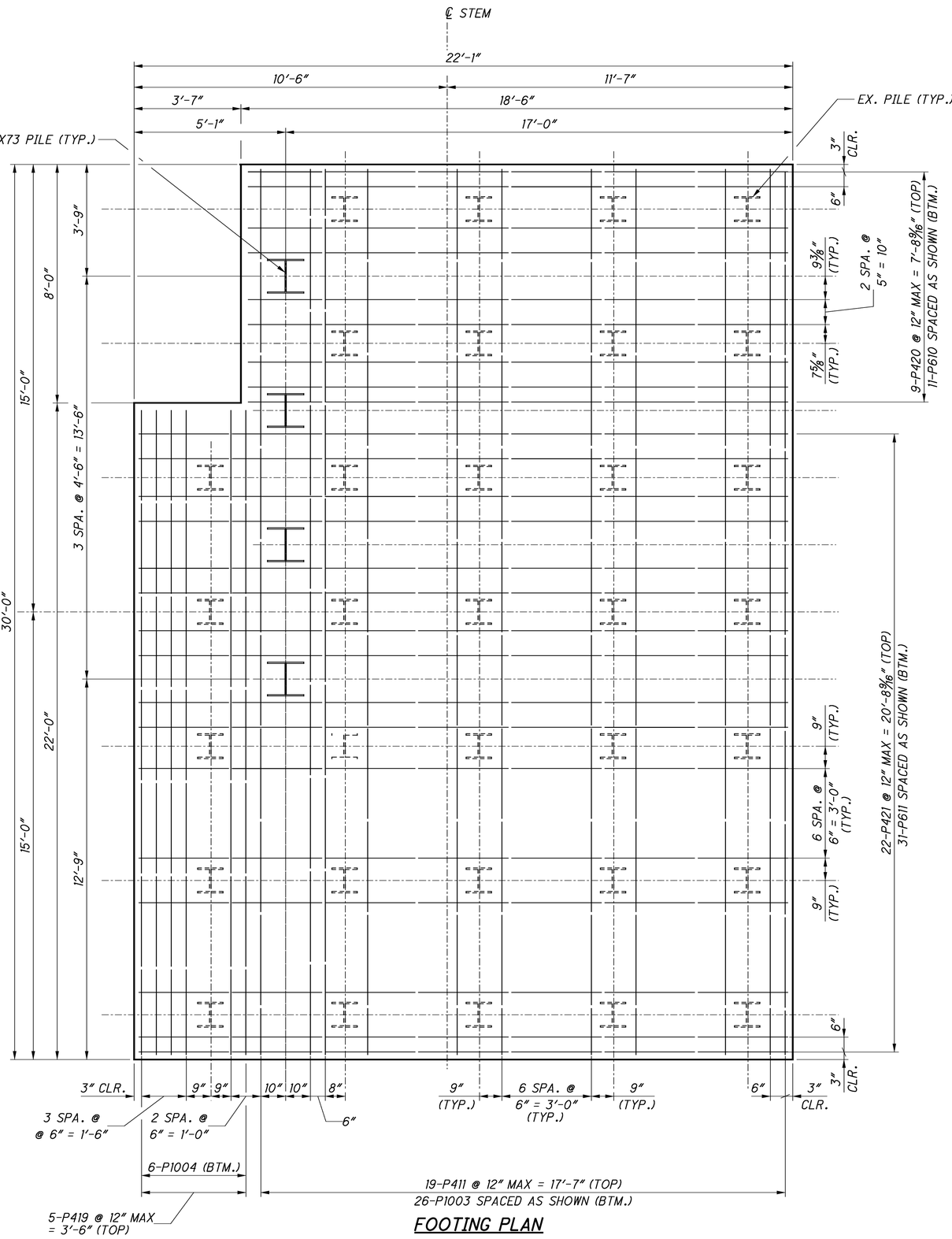
PIER 6S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

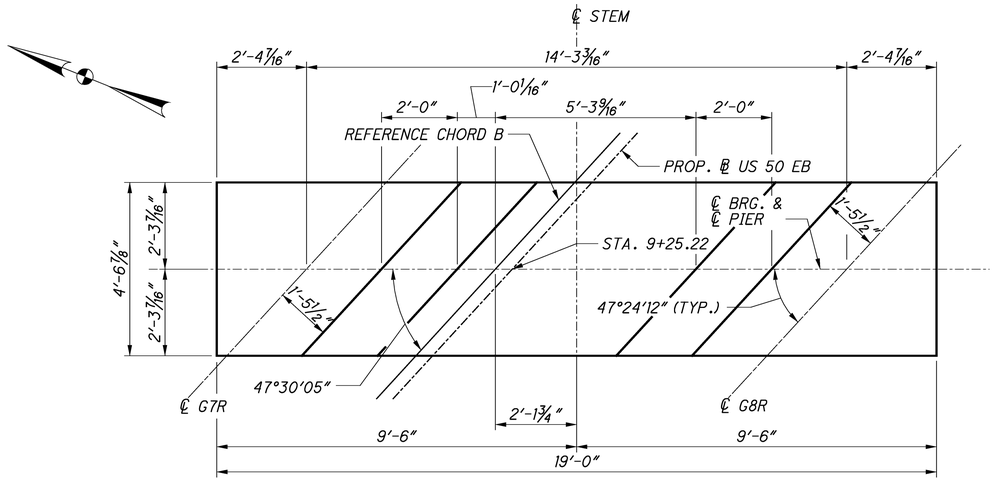
30/98

204/442

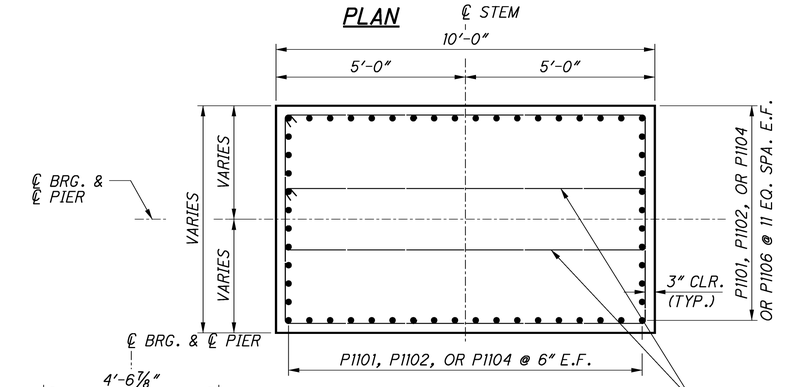
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1008.dgn 11/10/2010 11:35:08 AM mtneiheisel



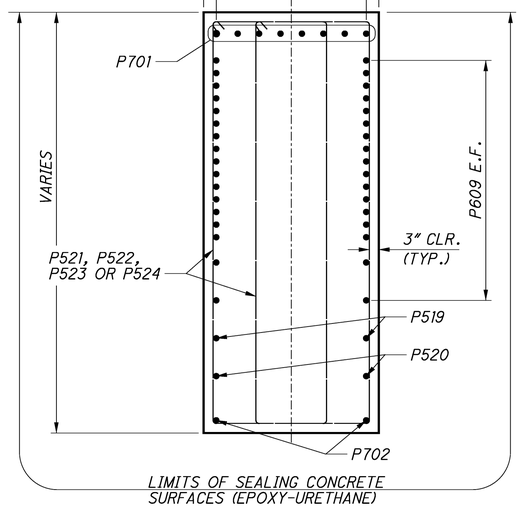
FOOTING PLAN



PLAN



SECTION B-B



SECTION A-A

LEGEND

E.F. = EACH FACE

VERTICAL HP14X73

EXISTING 10BP57 (TO BE REUSED)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

PIER 6S DETAILS

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

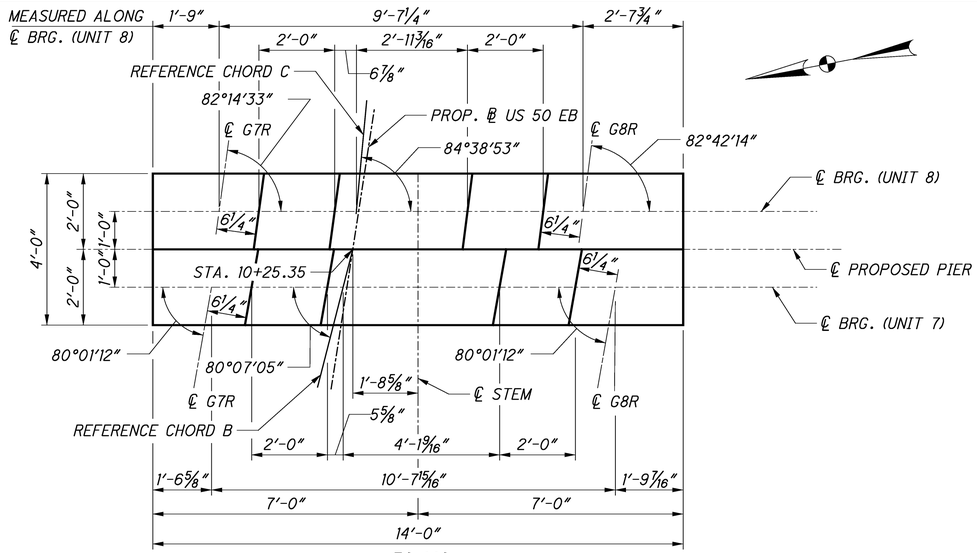
HAM-50-19.03

PID No. 75736

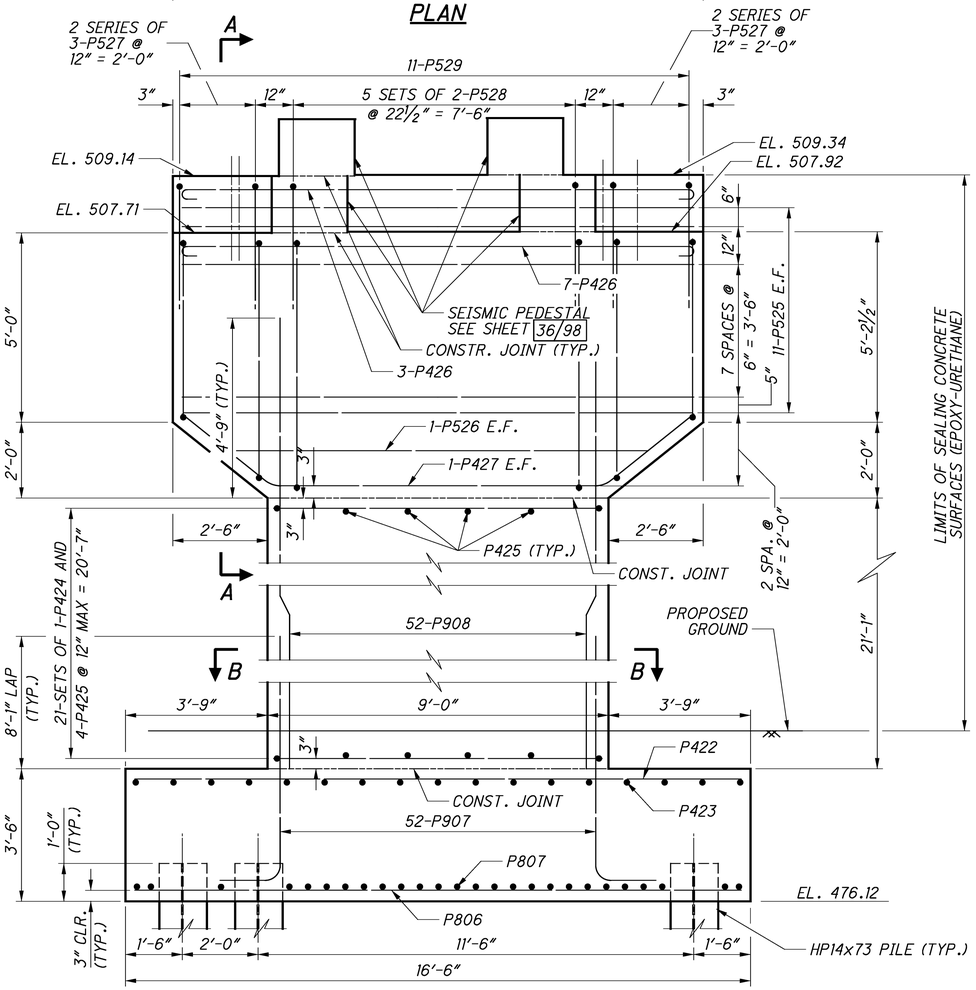
31 / 98

205 / 442

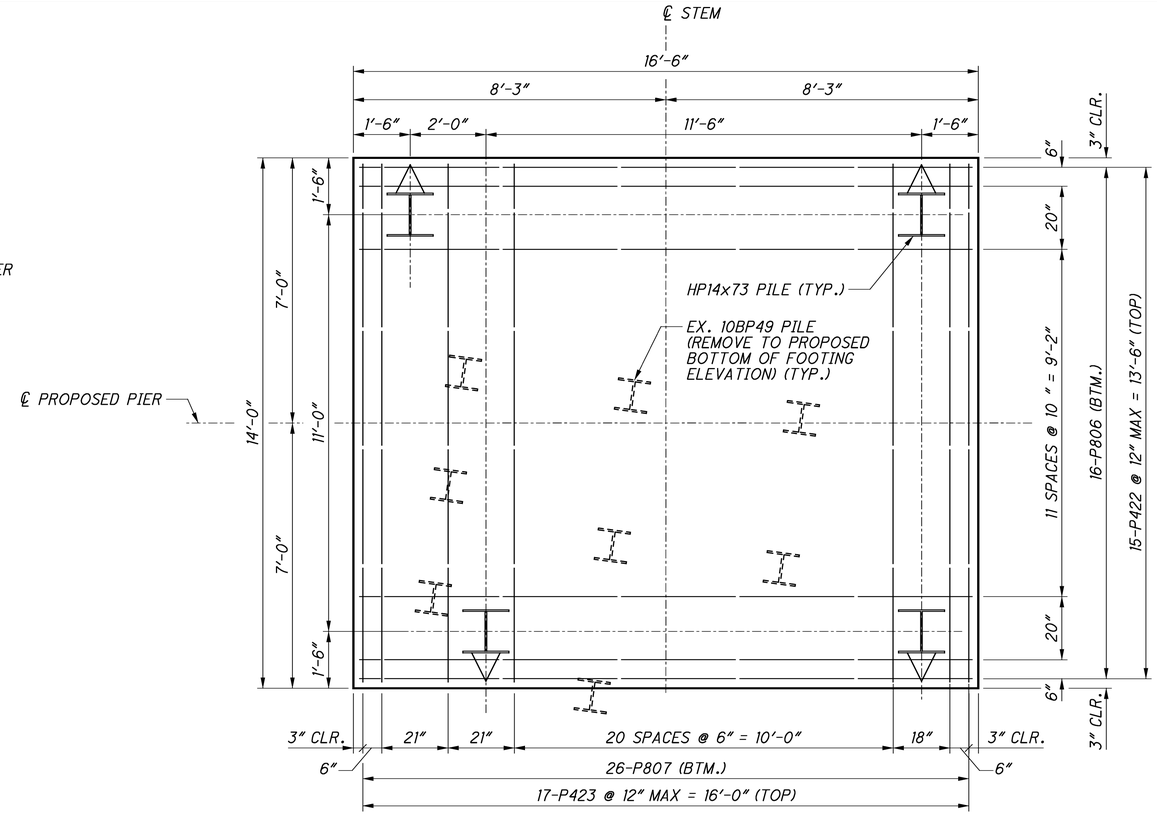
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1009.dgn 11/10/2010 11:35:10 AM mtraelheisel



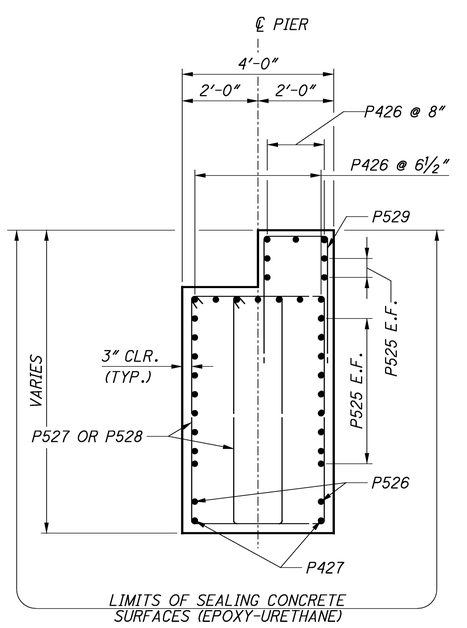
PLAN



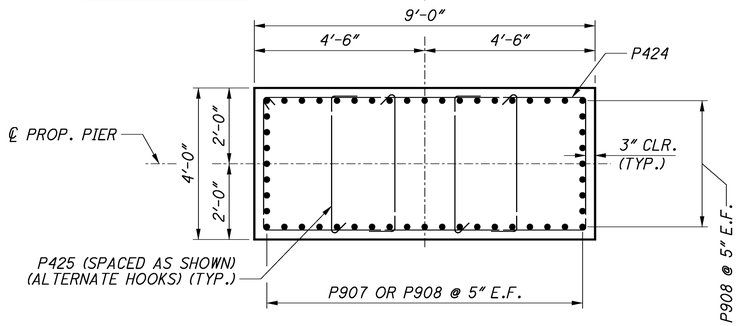
ELEVATION



FOOTING PLAN



SECTION A-A



SECTION B-B

LEGEND

E.F. = EACH FACE

1:4 BATTERED HP14x73 PILE

EX. VERTICAL 10BP49 PILE (REMOVE TO PROPOSED BOTTOM OF FOOTING ELEVATION)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

PIER 7S DETAILS

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

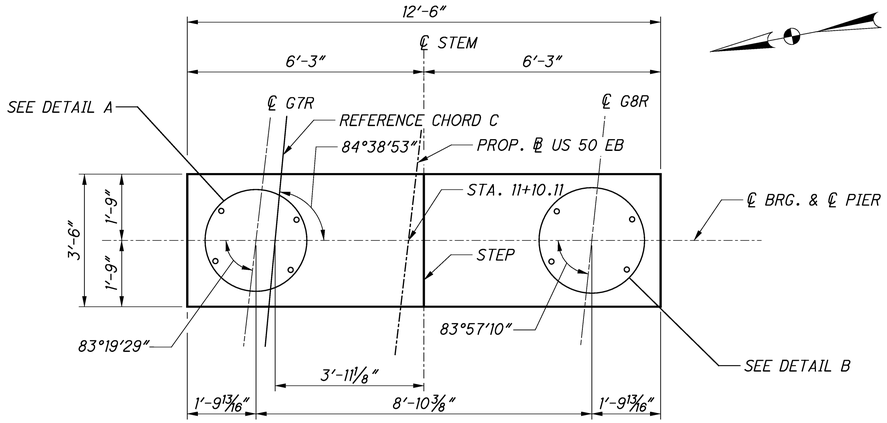
HAM-50-19.03

PID No. 75736

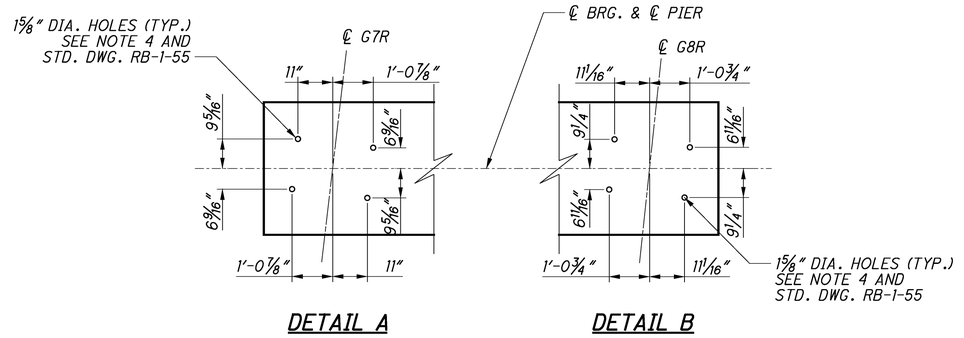
32/98

206/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI010.dgn 11/10/2010 11:35:11 AM mtneiheisel

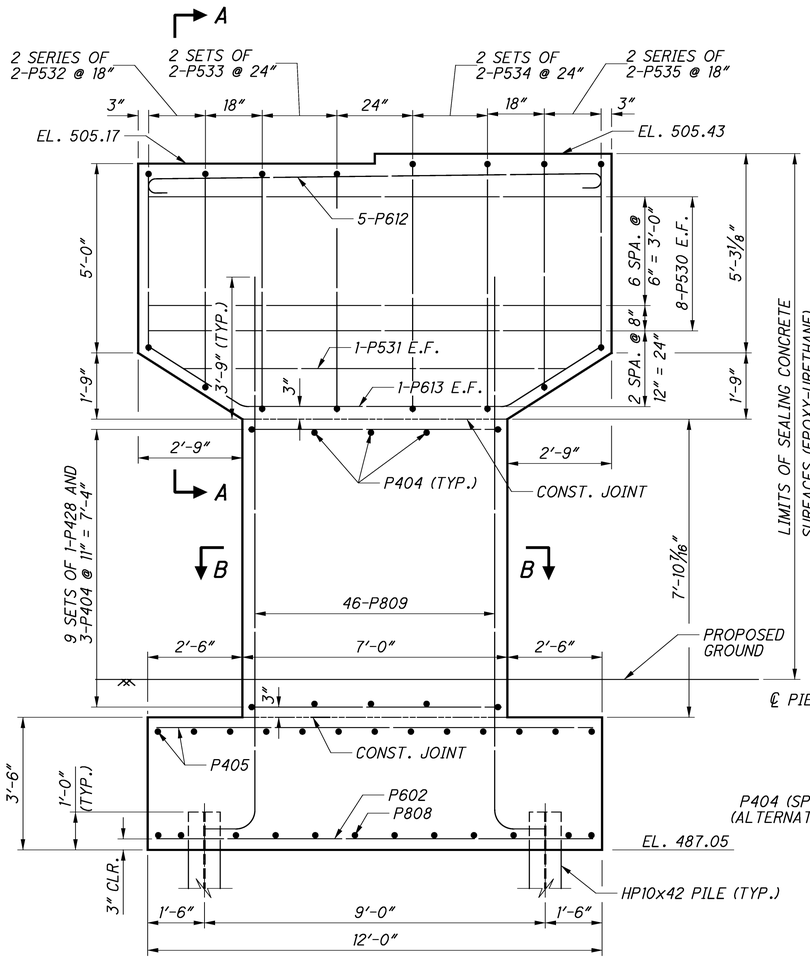


PLAN

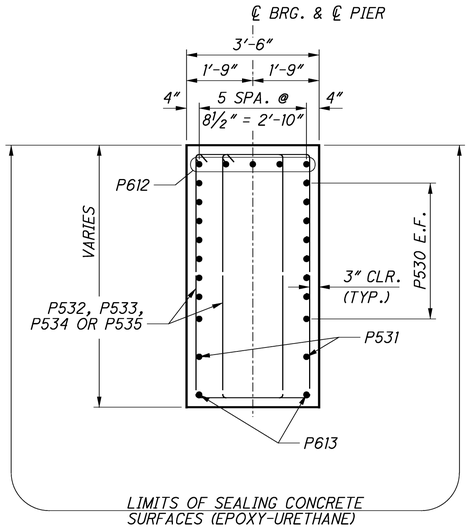


DETAIL A

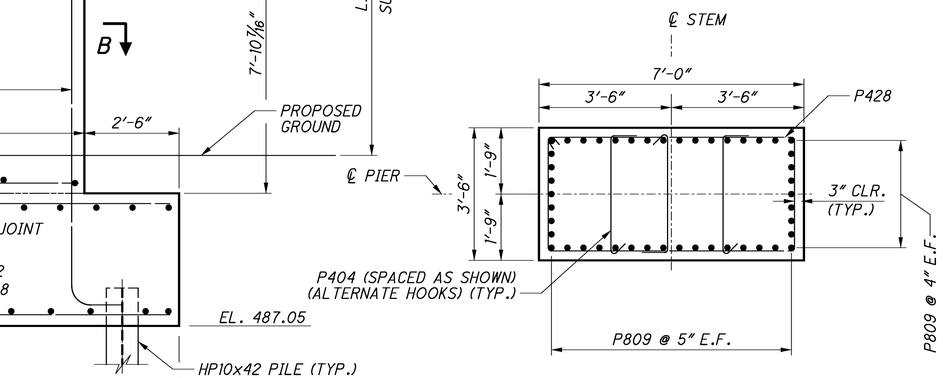
DETAIL B



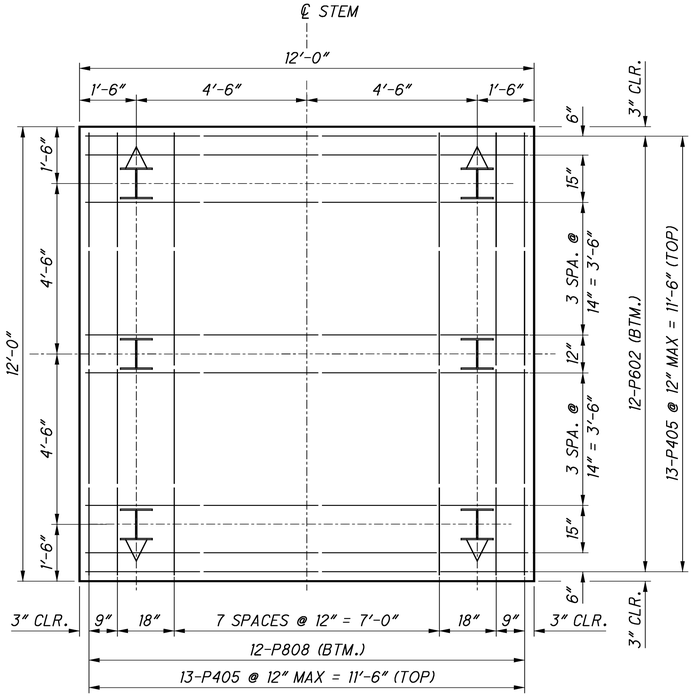
ELEVATION



SECTION A-A



SECTION B-B



FOOTING PLAN

LEGEND

E.F. = EACH FACE

1:4 BATTERED HP10x42 PILE

VERTICAL HP10X42 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.
4. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

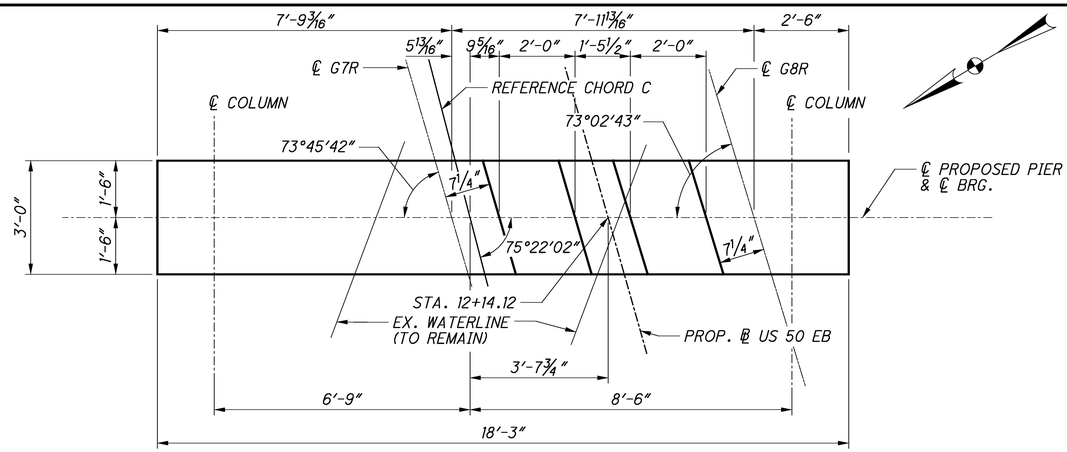
PIER 8S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

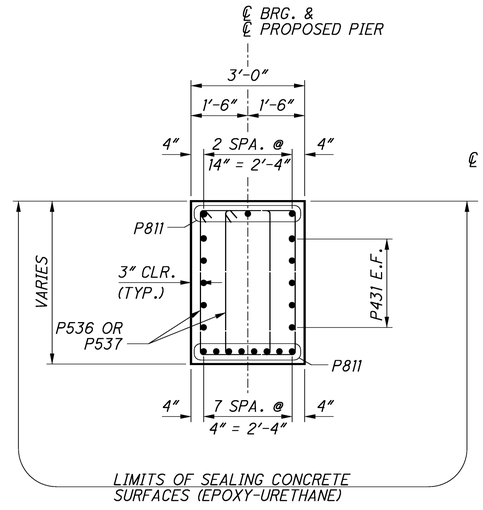
33/98

207/442

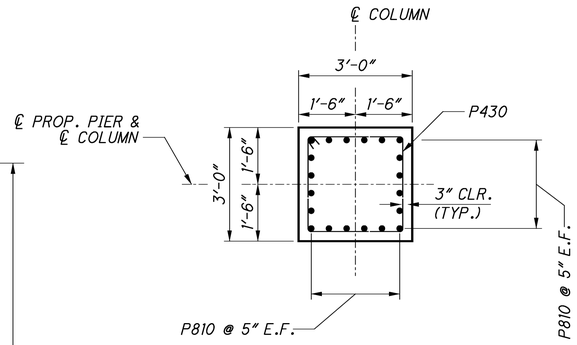
C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI011.dgn 11/10/2010 11:35:13 AM mtneiheisel



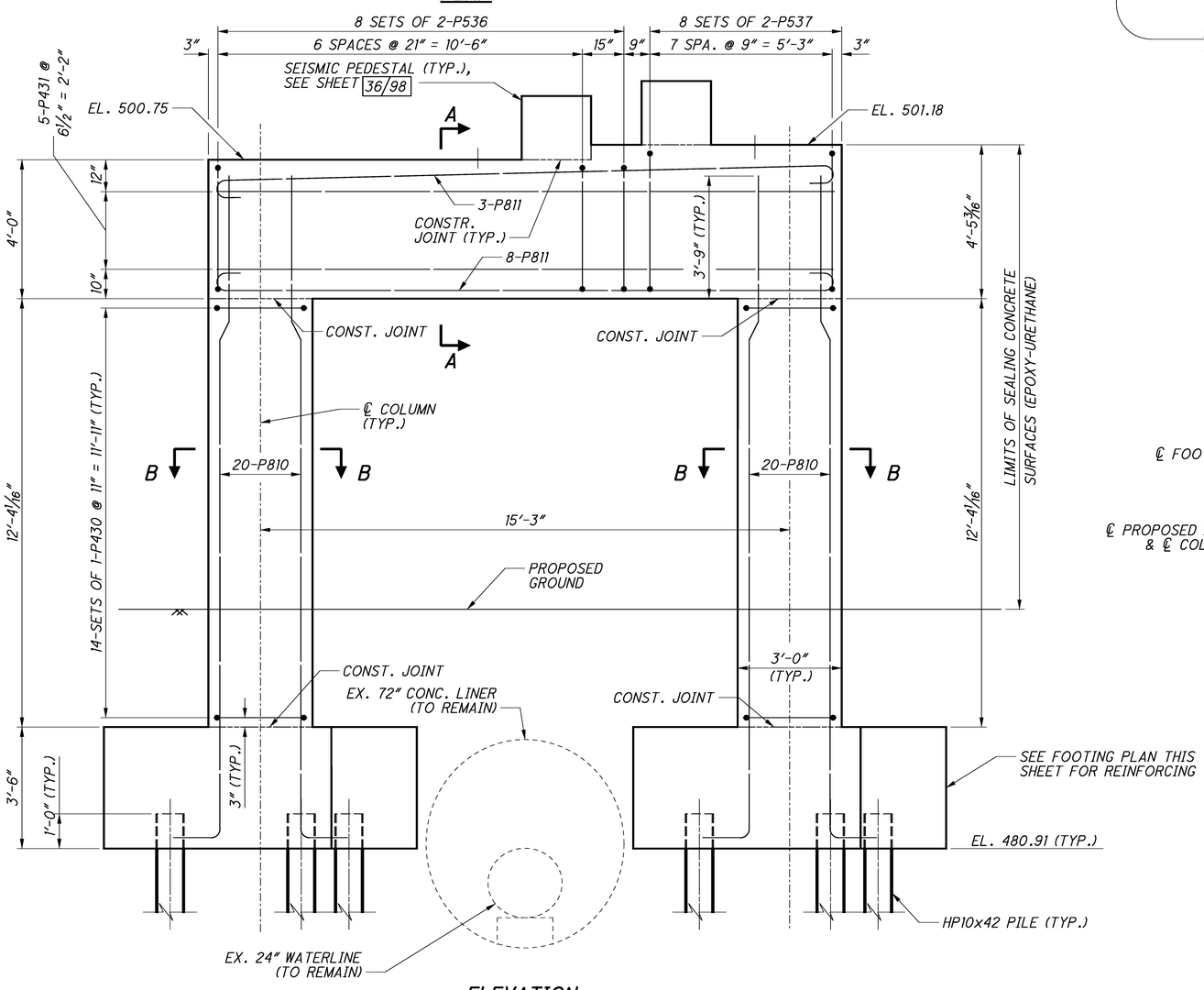
PLAN



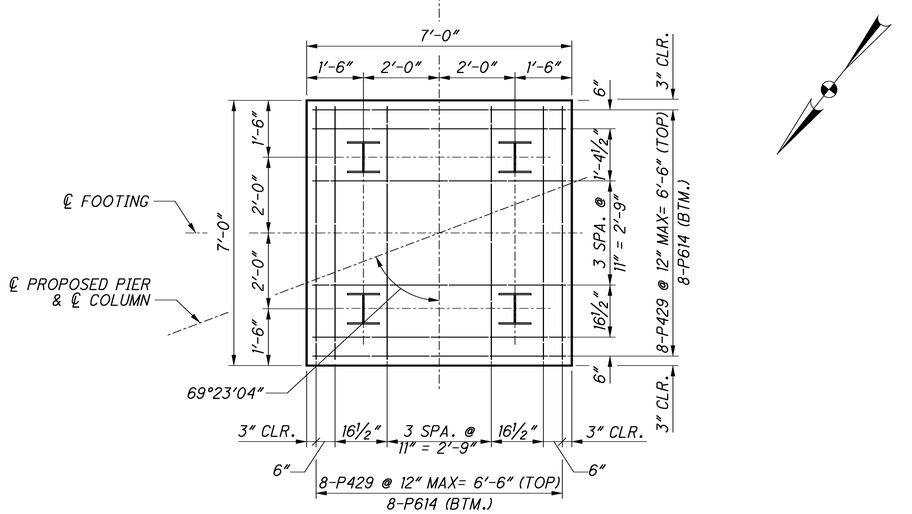
SECTION A-A



SECTION B-B



ELEVATION



FOOTING PLAN

LEGEND

E.F. = EACH FACE

I VERTICAL HP10x42 PILE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR REINFORCING LIST SEE SHEET 93/98.
3. FOR PILE LAYOUT SEE SHEET 13/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
CAS	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

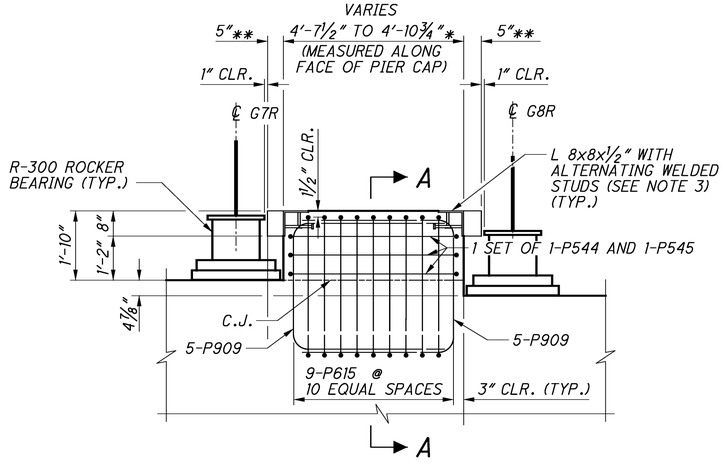
PIER 9S DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

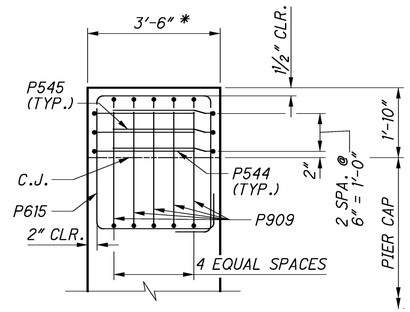
34 / 98

208 / 442

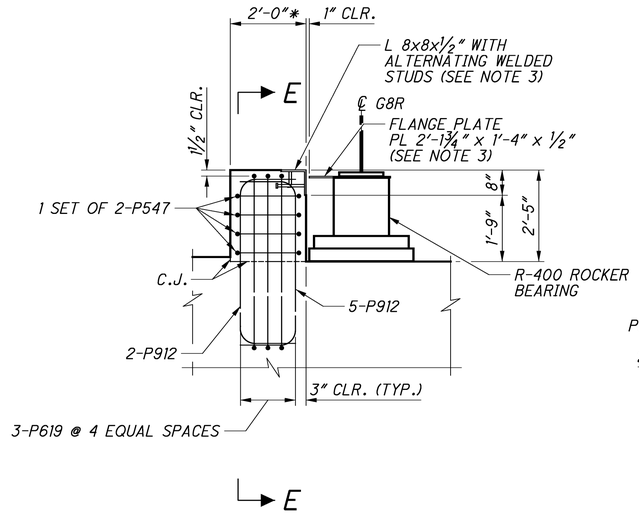
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1012.dgn 11/10/2010 11:35:15 AM mtreihleisel



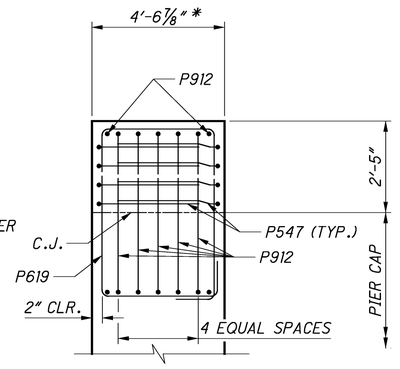
PIER 2S



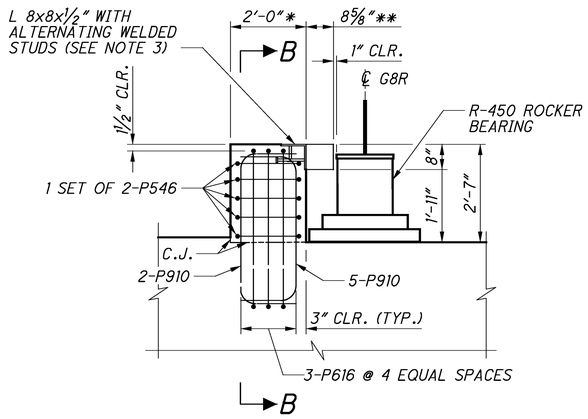
SECTION A-A



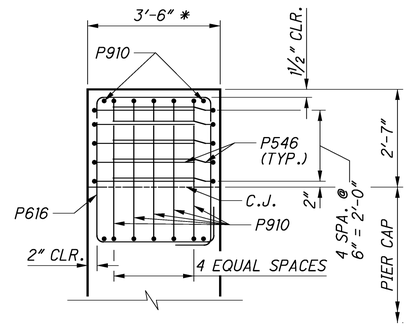
PIER 6S



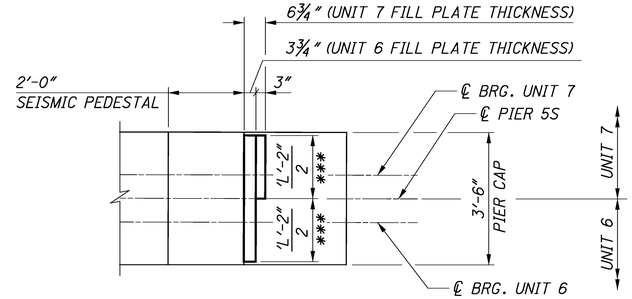
SECTION E-E



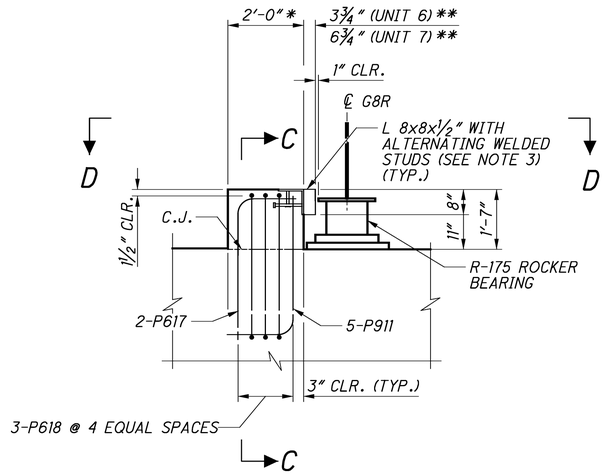
PIER 4S



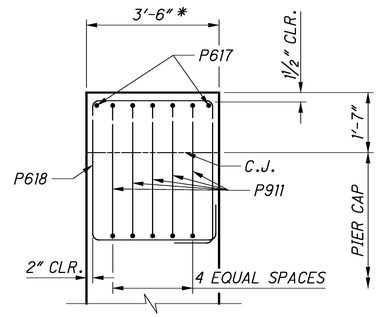
SECTION B-B



VIEW D-D



PIER 5S



SECTION C-C

* SURFACE IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERATIONS SHALL BE ¼" DEEP MINIMUM.

** REPRESENTS REQUIRED TOTAL THICKNESS OF FILL PLATES. SEE FILL PLATE DETAILS ON SHEET 36/98 FOR ADDITIONAL DETAILS AND DIMENSIONS.

*** SEE TABLE ON SHEET 36/98 FOR LENGTH 'L'

LEGEND:

C.J. = CONSTRUCTION JOINT

NOTES:

1. BAR CLEAR COVER IS 2" UNLESS NOTED OTHERWISE.
2. FOR ALL PIERS EXCEPT PIER 2S, RIGHT SEISMIC PEDESTAL IS SHOWN FOR SIMPLICITY; LEFT PEDESTAL SIMILAR.
3. FOR ADDITIONAL DETAILS AND NOTES SEE SHEET 36/98 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

PEIR SEISMIC PEDESTAL DETAILS

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

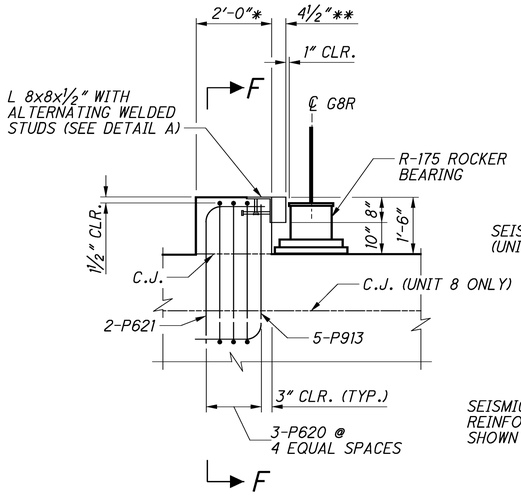
HAM-50-19.03

PID No. 75736

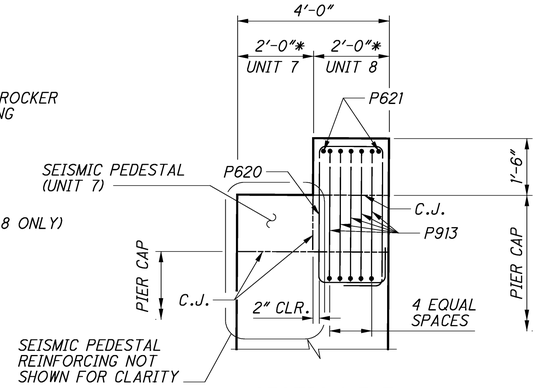
35 / 98

209 / 442

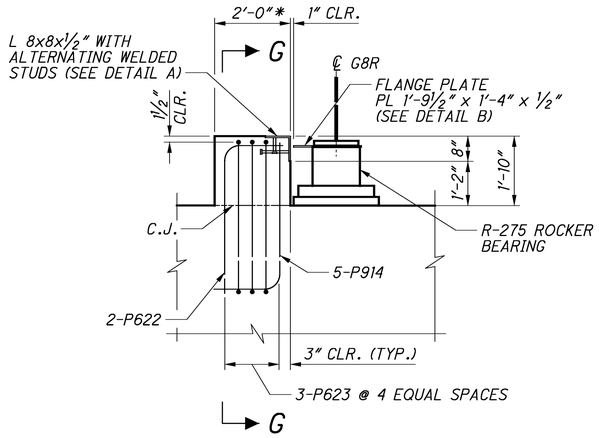
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI018.dgn 11/10/2010 11:35:16 AM mtreihleisel



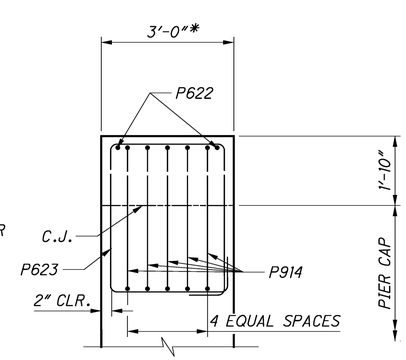
PIER 7S



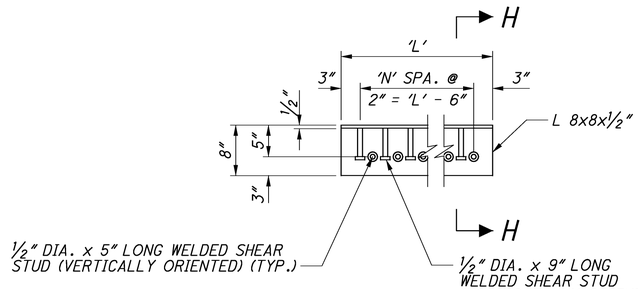
SECTION F-F



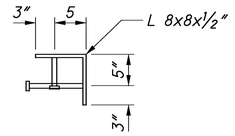
PIER 9S



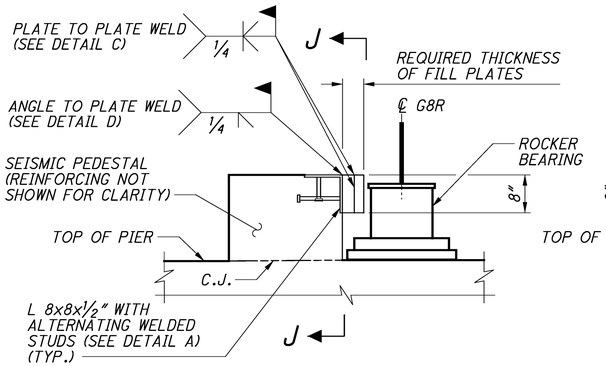
SECTION G-G



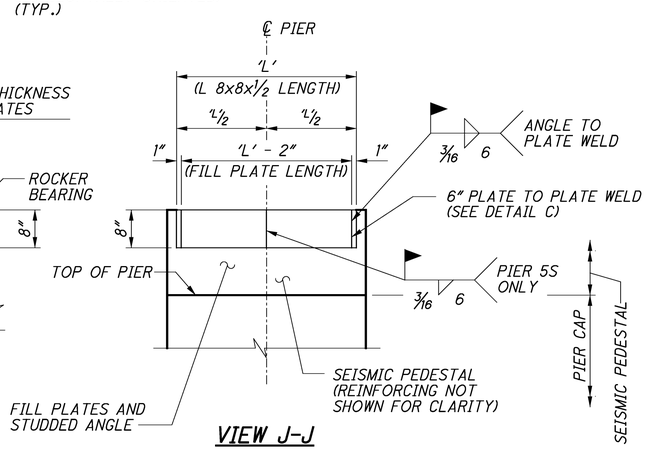
DETAIL A



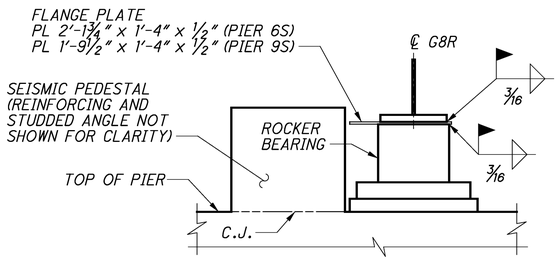
SECTION H-H



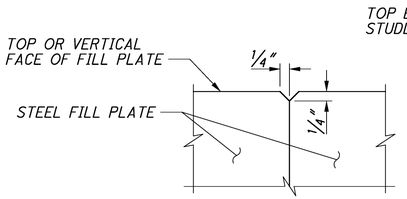
FILL PLATE DETAILS
(PIERS 2S, 4S, 5S, AND 7S)



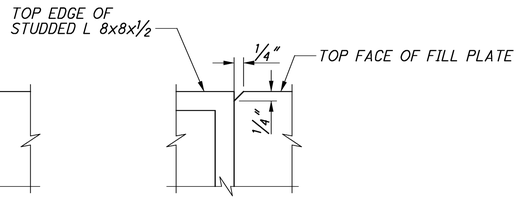
VIEW J-J



DETAIL B
(PIERS 6S AND 9S)



DETAIL C
(TOP OF FILL PLATE AND 6" ON VERTICAL FACE)



DETAIL D
(TOP OF FILL PLATE ONLY)

L8x8x½ DIMENSIONS		
LOCATION	'L'	'N'
2S	3'-6"	18
4S	4'-6"	24
5S	3'-6"	18
6S	5'-6"	30
7S	1'-10"	8
9S	2'-10"	14

LEGEND:

C.J. = CONSTRUCTION JOINT

* THE SURFACE IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERATIONS SHALL BE ¼" DEEP MINIMUM.

** REPRESENTS REQUIRED TOTAL THICKNESS OF FILL PLATES. SEE FILL PLATE DETAILS THIS SHEET FOR ADDITIONAL DETAILS AND DIMENSIONS.

NOTES:

1. BAR CLEAR COVER IS 2" UNLESS NOTED OTHERWISE.
2. FOR SIMPLICITY, RIGHT SEISMIC PEDESTAL SHOWN; LEFT PEDESTAL SIMILAR.
3. TOTAL FILL PLATE THICKNESS SHALL MATCH REQUIRED AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING NUMBER AND THICKNESS OF FILL PLATES NEEDED TO MEET TOTAL REQUIRED THICKNESS. MINIMUM FILL PLATE THICKNESS SHALL BE ½".
4. STRUCUTRAL STEEL FOR WELDED FLANGE PLATE AT PIER 6S AND PIER 9S SHALL BE ASTM A709 GRADE 50. WELDS SHALL BE FABRICATED WITH E70XX ELECTRODE.
5. STUDDED L 8x8x½, FILL PLATES, FLANGE PLATES (IF NEEDED) WELDS, AND PLACEMENT TO BE PAID FOR WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SEISMIC PEDESTAL ARMOR.

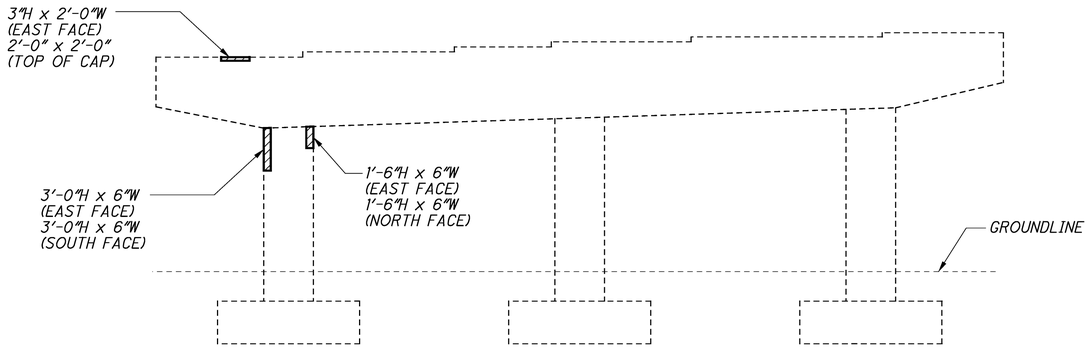
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

PEIR SEISMIC PEDESTAL DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

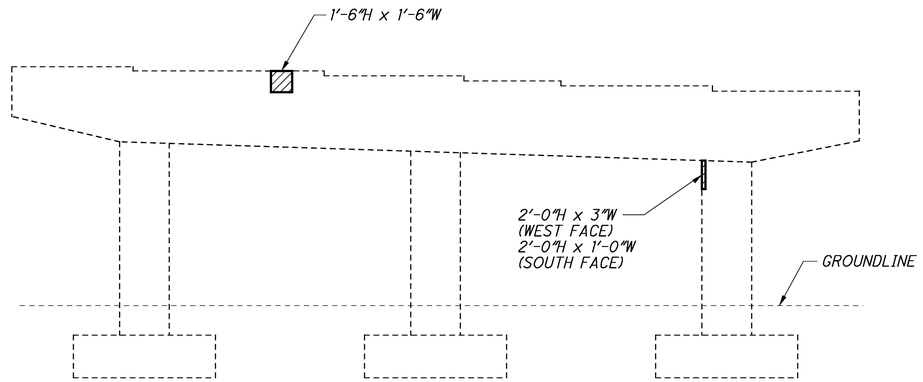
HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI019.dgn 11/10/2010 11:35:18 AM mtreitheisel



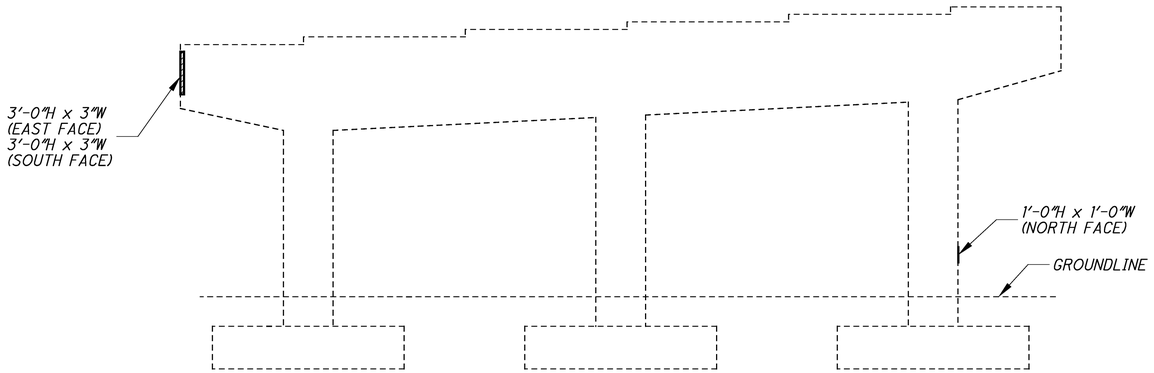
PIER 1S - EAST ELEVATION

(LOOKING WEST)



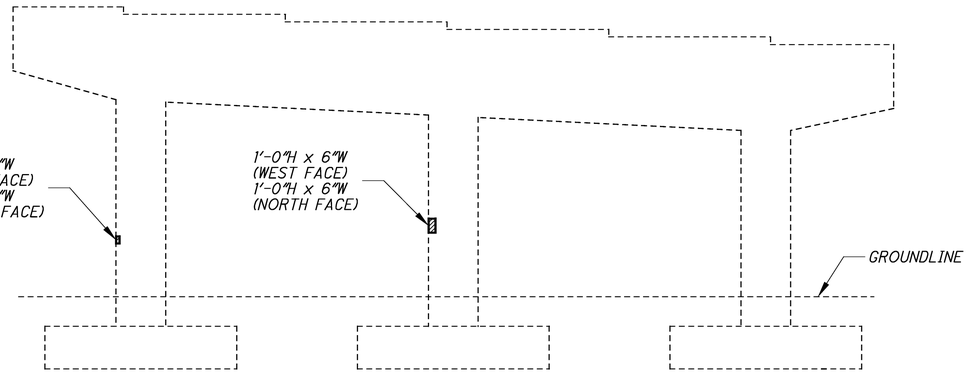
PIER 1S - WEST ELEVATION

(LOOKING EAST)



PIER 2S - EAST ELEVATION

(LOOKING WEST)



PIER 2S - WEST ELEVATION

(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES

ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 1S EAST	9.00	0
PIER 1S WEST	4.75	0
PIER 2S EAST	2.50	0
PIER 2S WEST	1.25	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 40/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

EXISTING PIERS 1S AND 2S REPAIR DETAILS

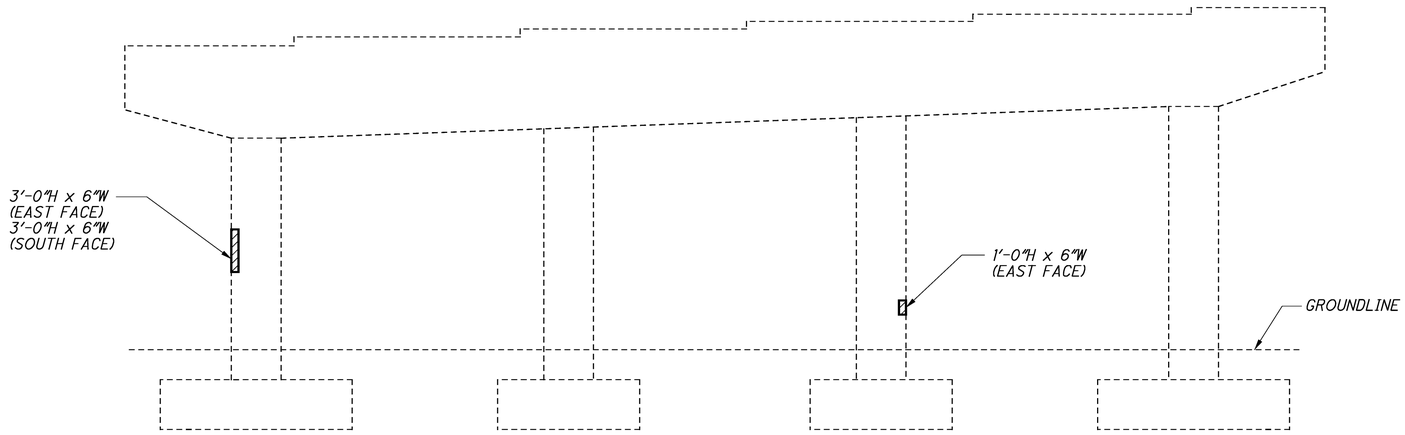
HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03

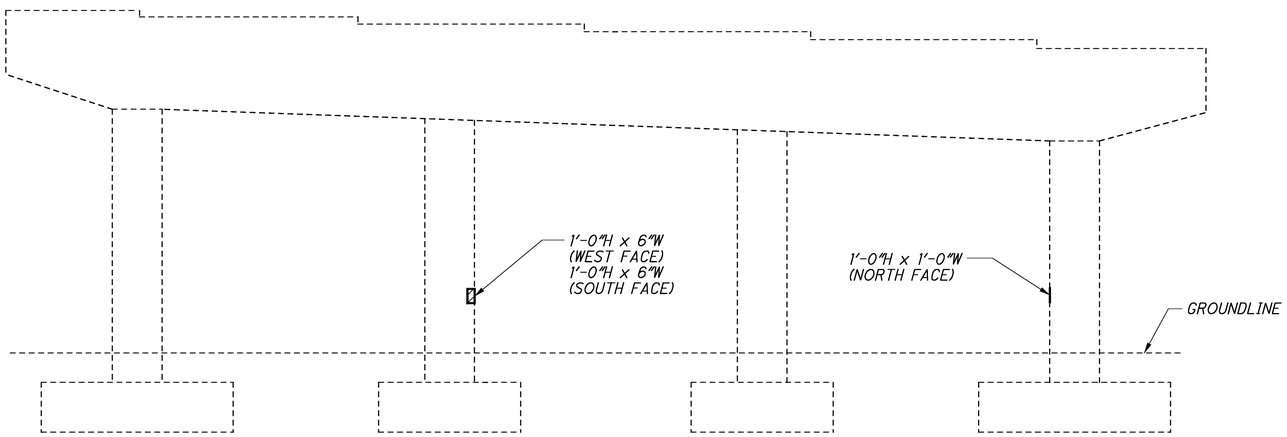
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1013.dgn 11/10/2010 11:35:20 AM mtreitheisel



PIER 3S - EAST ELEVATION

(LOOKING WEST)



PIER 3S - WEST ELEVATION

(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 3S EAST	3.50	0
PIER 3S WEST	2.00	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 40/98.
4. REPAIR EXISTING PIER 3S SURFACES PRIOR TO PLACEMENT OF CRASH WALL. FOR CRASH WALL DETAILS, SEE SHEETS 24/98 AND 25/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

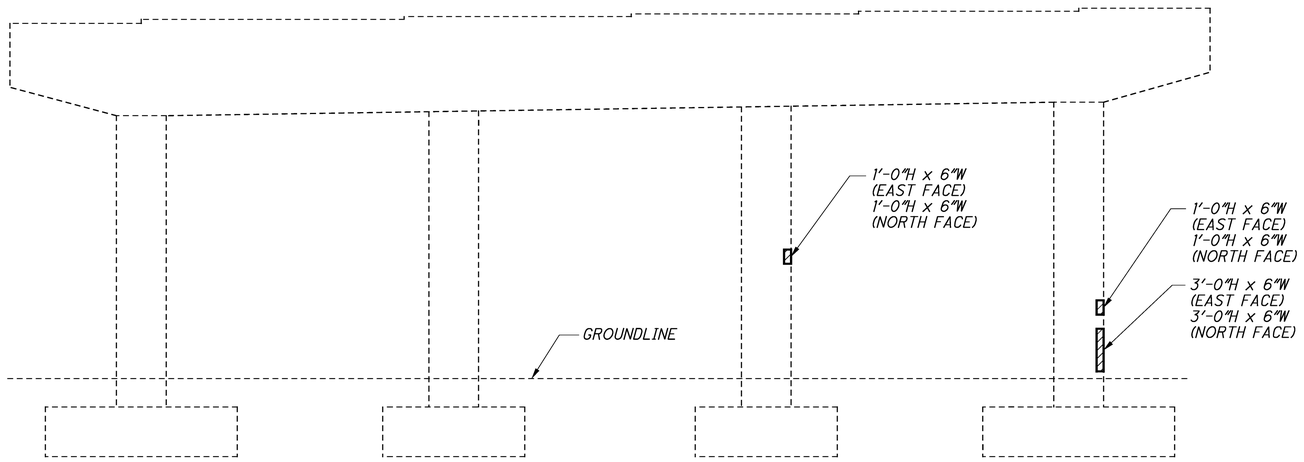
DESIGNED	DRAWN	REVIEWED	DATE
SSM	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

EXISTING PIER 3S REPAIR DETAILS

HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

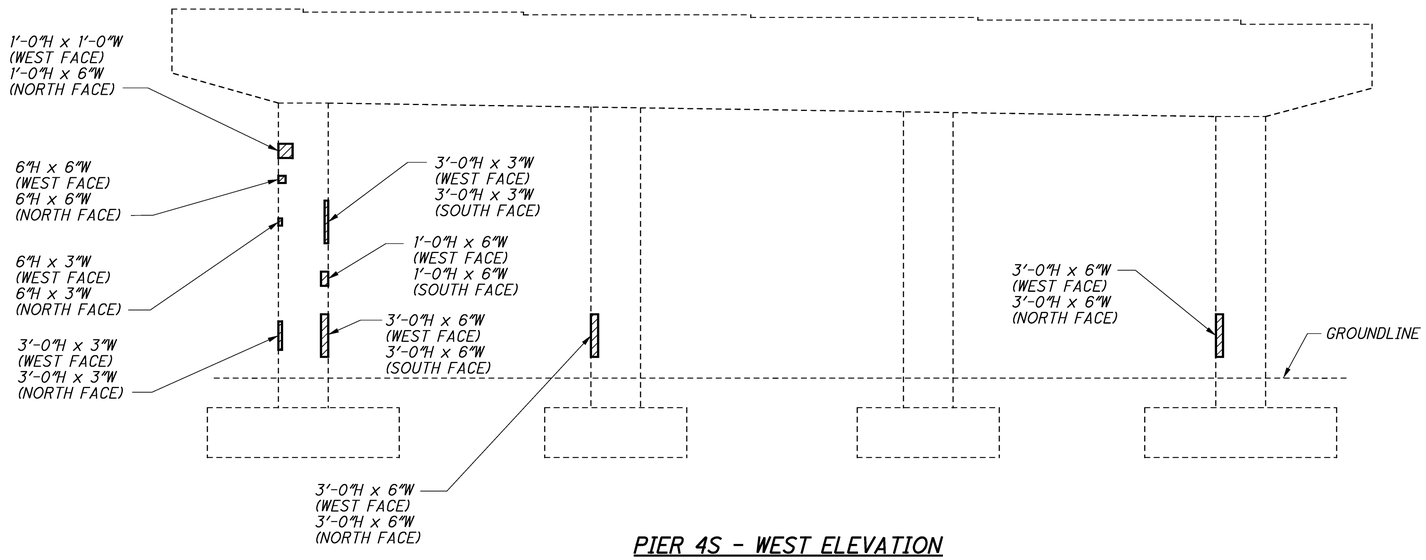
HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI014.dgn 11/10/2010 11:35:21 AM mtreitheisel



PIER 4S - EAST ELEVATION

(LOOKING WEST)



PIER 4S - WEST ELEVATION

(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 4S EAST	5.00	0
PIER 4S WEST	15.25	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 40/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

EXISTING PIER 4S REPAIR DETAILS

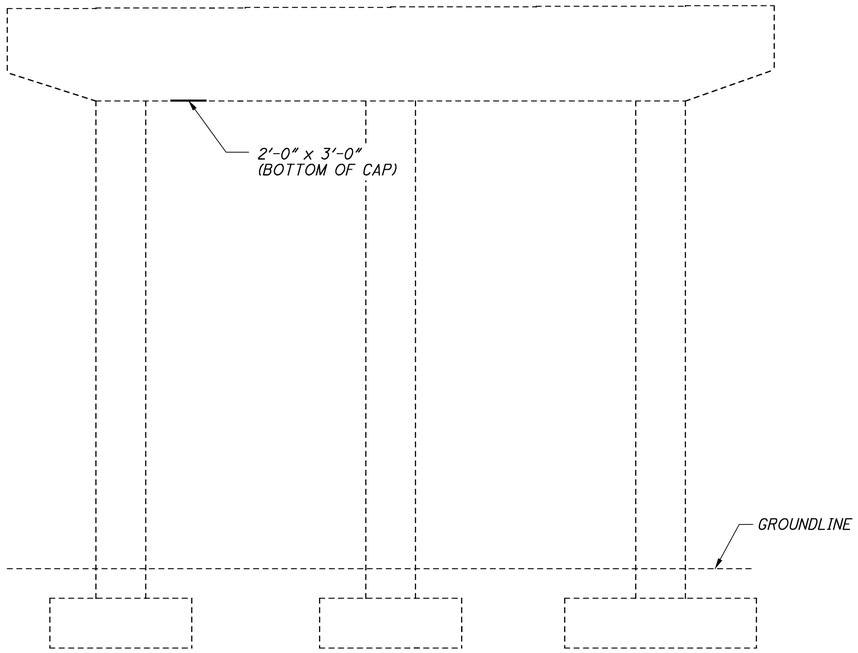
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

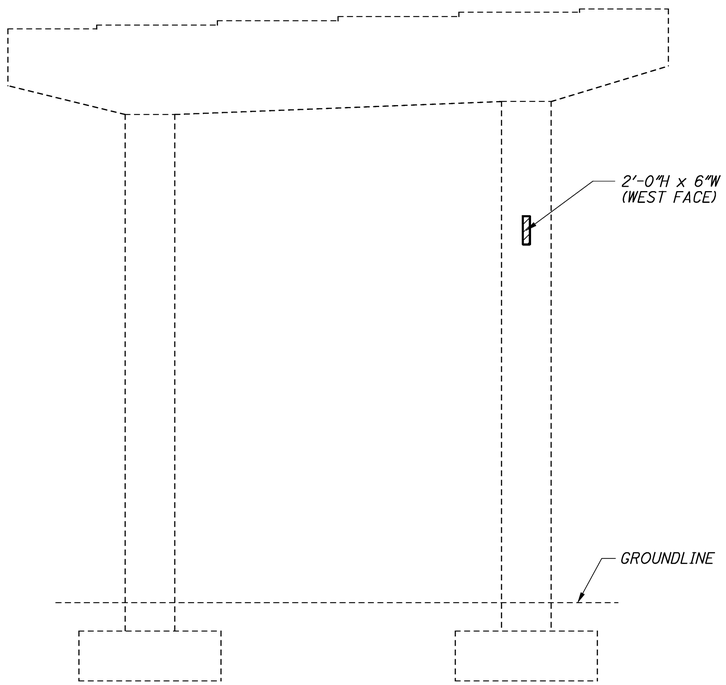
39/98

213/442

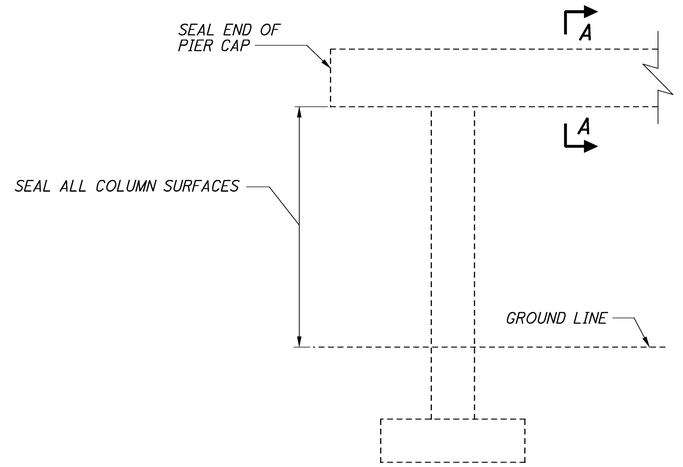
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RPI015.dgn 11/10/2010 11:35:22 AM mtnelheisel



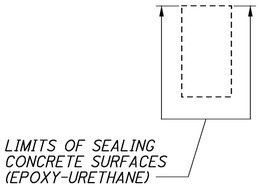
PIER 5S - WEST ELEVATION
(LOOKING EAST)



PIER 7S - WEST ELEVATION
(LOOKING EAST)



LIMITS OF SEALING PIER CONCRETE SURFACES (EPOXY-URETAHANE)



SECTION A-A

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 5S WEST	6.00	0
PIER 7S WEST	1.00	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. FOR TYPICAL SEALING DETAIL SEE THIS SHEET.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

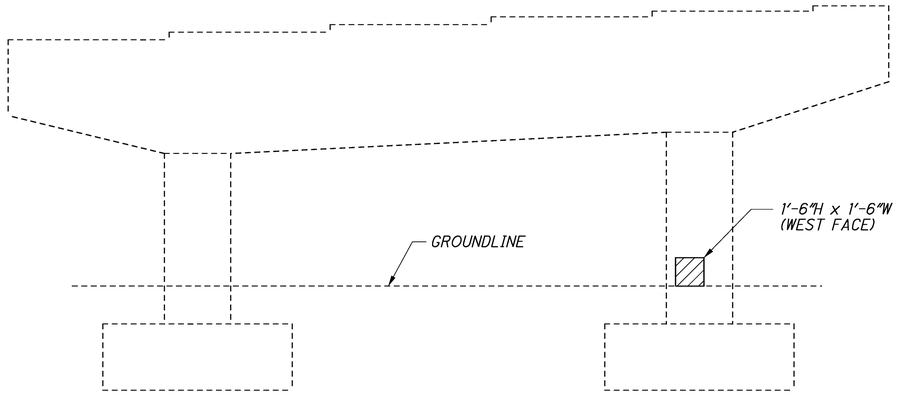
DESIGNED	DRAWN	REVIEWED	DATE
SSM	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

EXISTING PIERS 5S AND 7S REPAIR DETAILS

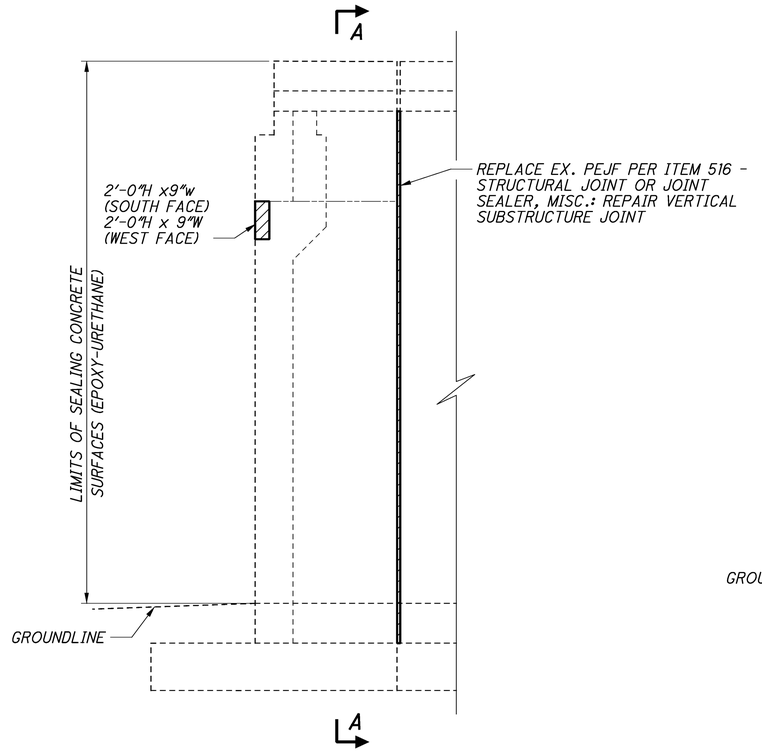
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

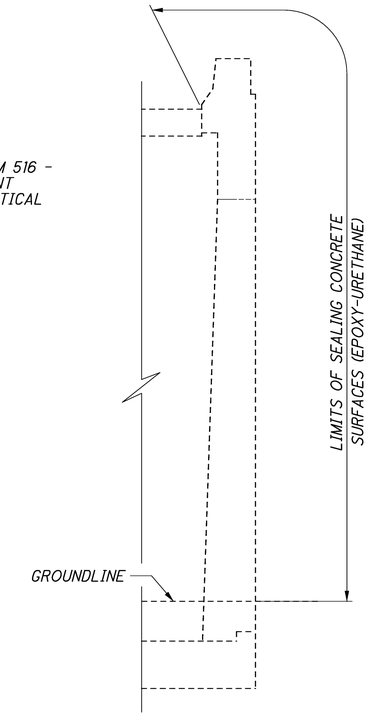
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1016.dgn 11/10/2010 11:35:24 AM mtreiheisel



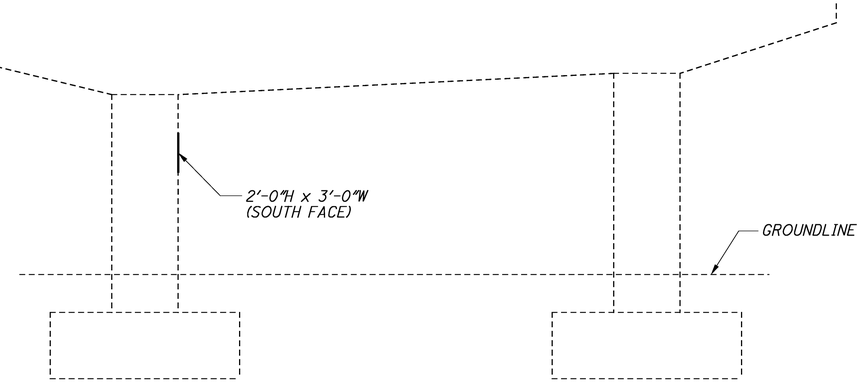
PIER 8S - WEST ELEVATION
(LOOKING EAST)



FWD. ABUTMENT - SOUTH ELEVATION
(LOOKING NORTH)



SECTION A-A



PIER 9S - WEST ELEVATION
(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

PEJF = PREFORMED EXPANSION JOINT FILLER

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
PIER 8S WEST	2.25	0
PIER 9S WEST	6.00	0
FWD. ABUT. S	3.00	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 40/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

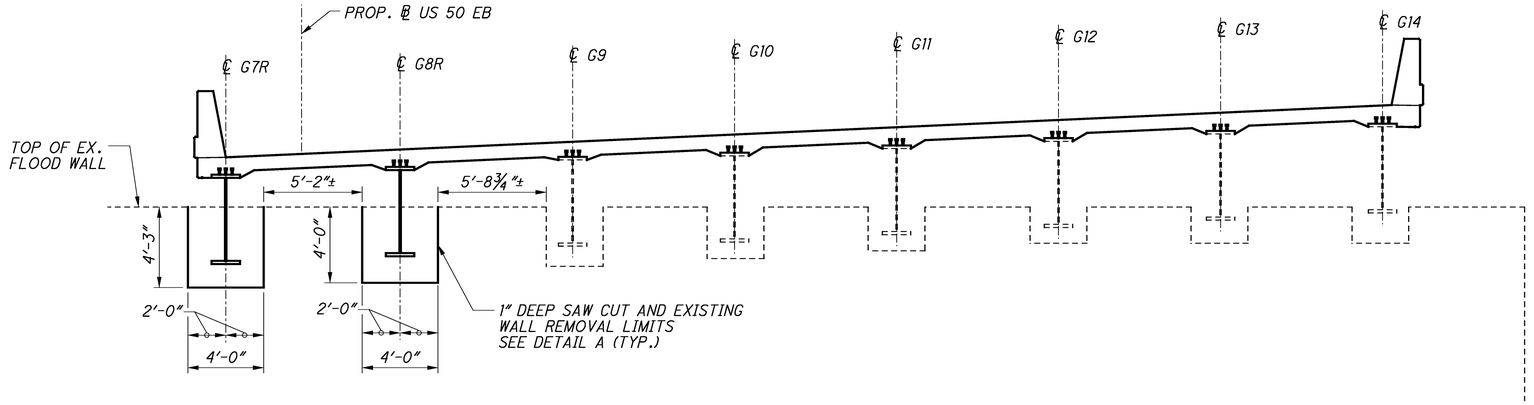
DESIGNED	DRAWN	REVIEWED	DATE
SSM	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

EXISTING PIER 8S, PIER 9S, AND FWD. ABUTMENT REPAIR DETAILS

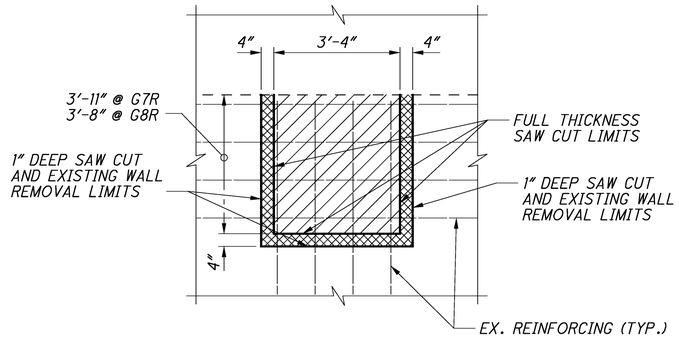
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RP1017.dgn 11/10/2010 11:35:25 AM mtreitheisel



FLOOD WALL REMOVAL DETAIL

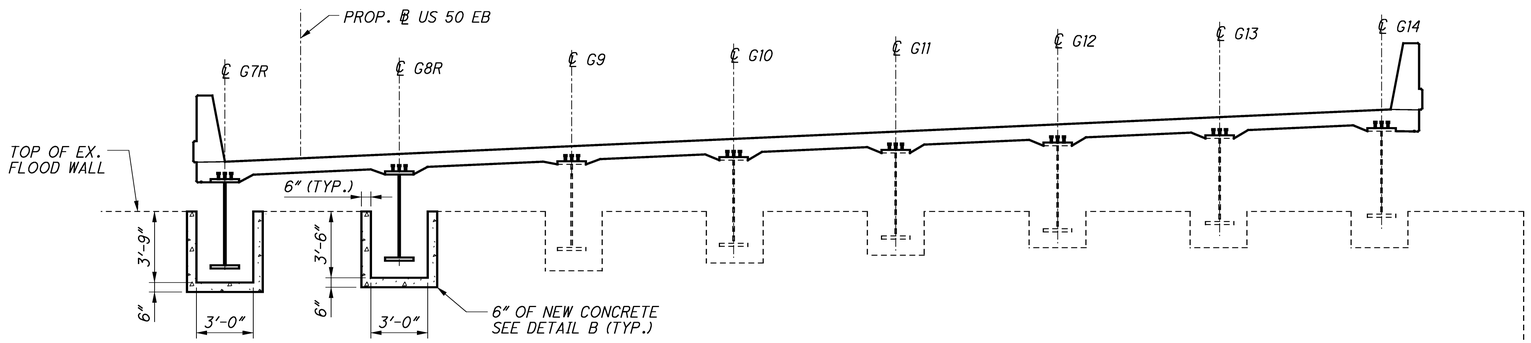


DETAIL A

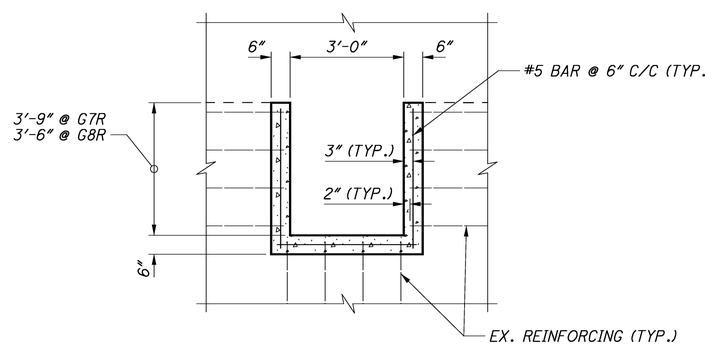
DENOTES PORTION OF FLOODWALL TO BE REMOVED ACCORDING TO ITEM 202 SAW CUT FULL THICKNESS OF WALL TO REMOVE EXISTING CONCRETE AND REINFORCING.

DENOTES PORTION OF FLOODWALL TO BE REMOVED ACCORDING TO ITEM 202. CONCRETE TO BE REMOVED BY USING PNEUMATIC CHIPPING HAMMER. EXISTING REINFORCING IN THIS REGION TO REMAIN.

DENOTES NEW CONCRETE



FLOOD WALL DETAIL



DETAIL B

NOTES:

1. FOR FLOOD WALL CLOSURE DETAIL SEE SHEET 43/98.

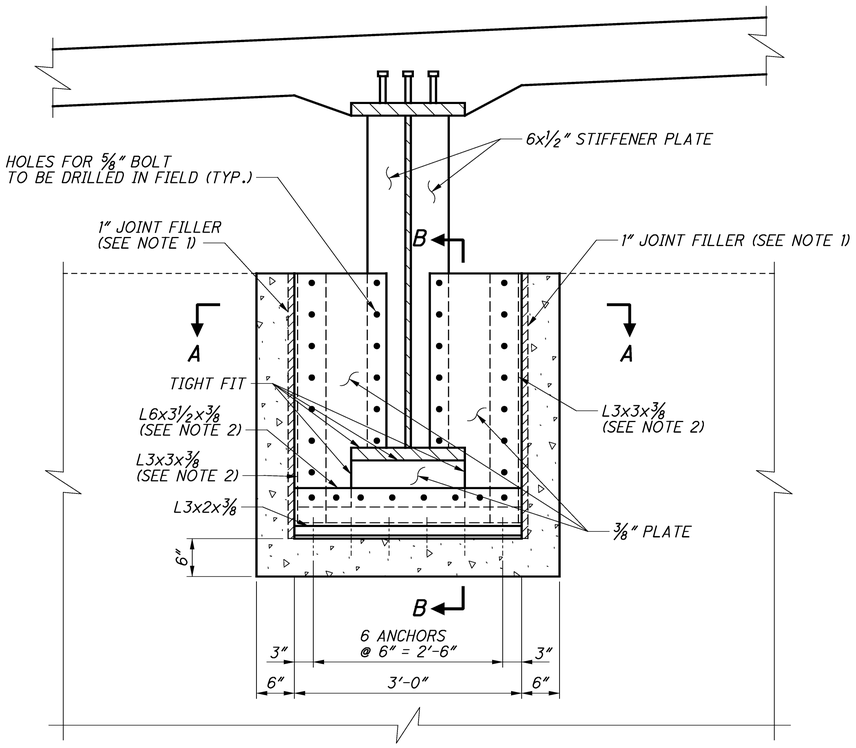
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

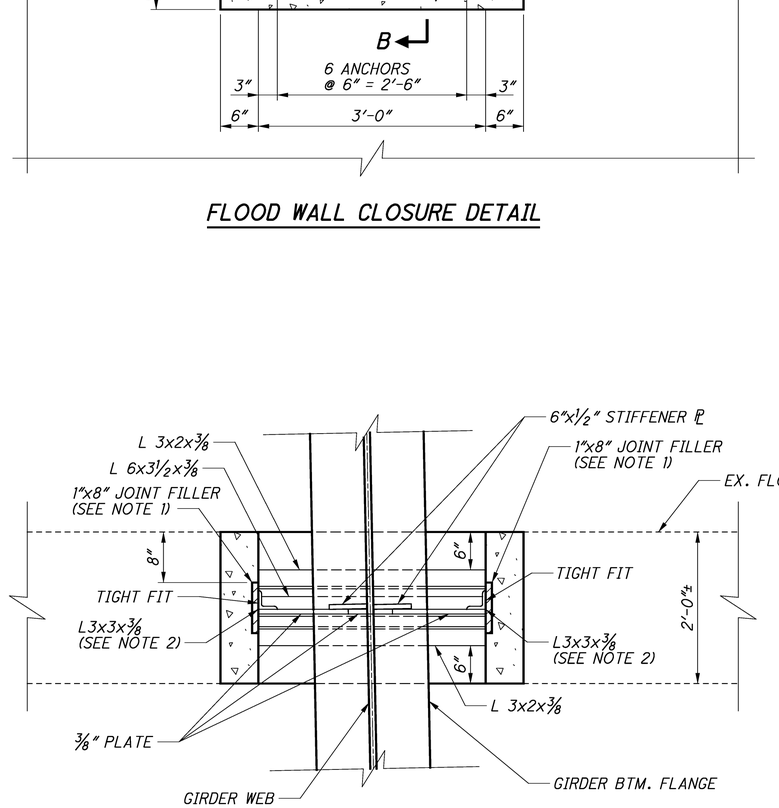
FLOOD WALL DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

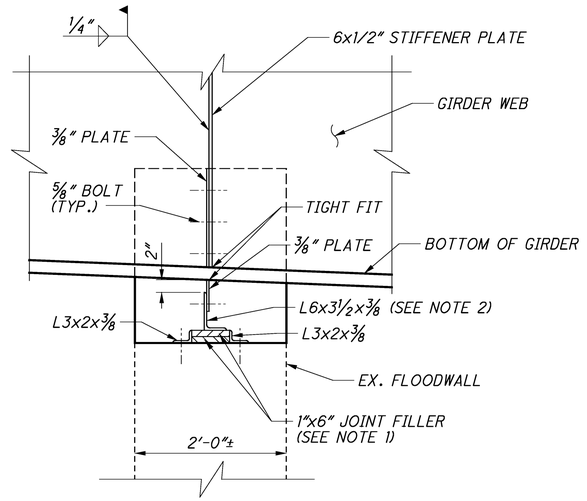
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD003.dgn 11/10/2010 11:35:26 AM mtneiheisel



FLOOD WALL CLOSURE DETAIL



SECTION A-A



SECTION B-B

NOTES:

1. 1" JOINT FILLER SHALL BE GRAY SPONGE RUBBER PREFORMED EXPANSION JOINT FILLER CONFORMING TO CMS 711.28.
2. ANGLES AGAINST THE 1" JOINT FILLER MUST BE SMOOTH TO PREVENT GRABBING OR MOVEMENT OF THE JOINT MATERIAL.

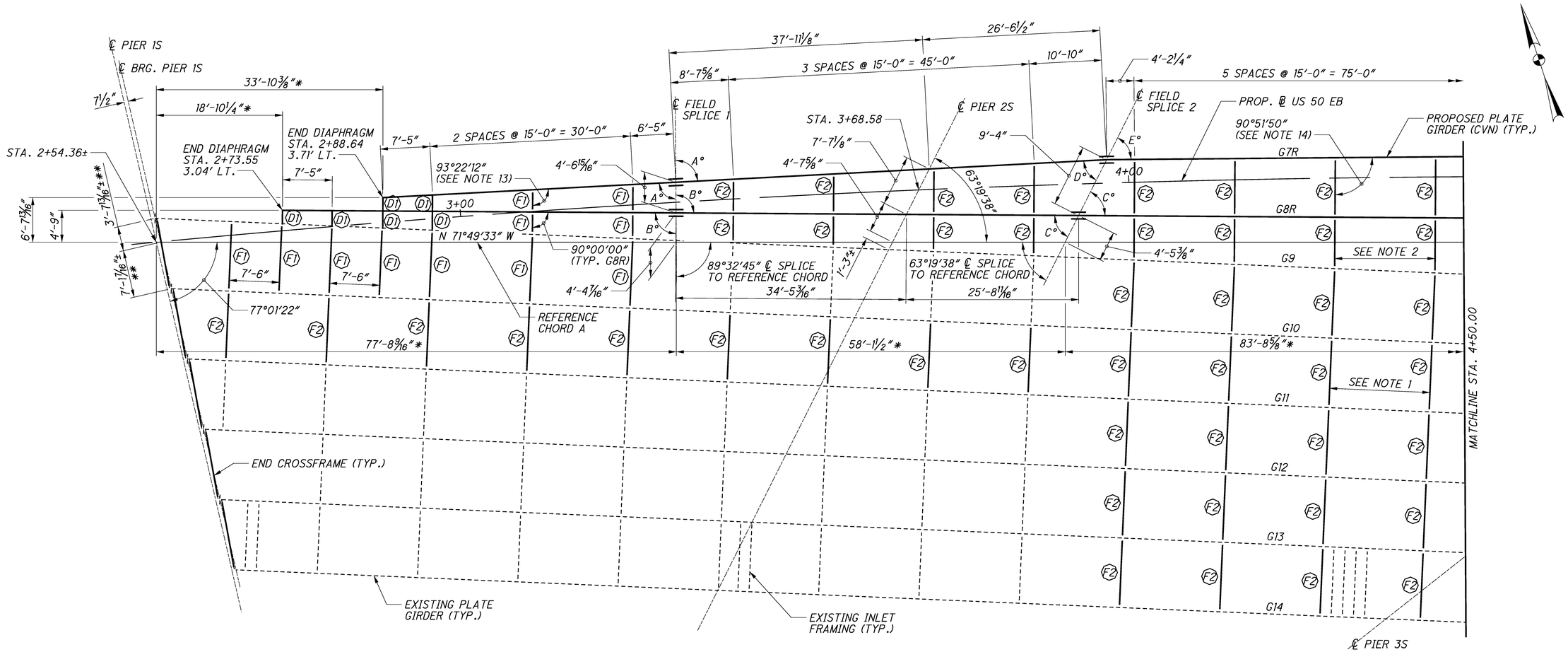
DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

FLOOD WALL CLOSURE DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD004.dgn 11/10/2010 11:35:27 AM mtneiheisel



FRAMING PLAN
(UNIT 6)

GIRDER ANGLE
A° = 87°27′24″
B° = 90°49′36″
C° = 63°41′59″
D° = 60°19′46″
E° = 62°50′09″

LEGEND

- (D1) DENOTES TYPE D1 DIAPHRAGM
- (F1) DENOTES TYPE F1 CROSSFRAME
- (F2) DENOTES TYPE F2 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD
- ** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 63/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 59/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 51/98 AND 52/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. ANGLE BETWEEN G7R AND CROSSFRAME OR DIAPHRAGM. TYPICAL BETWEEN END OF G7R AND FIELD SPLICE 2.
14. ANGLE BETWEEN G7R AND CROSSFRAME. TYPICAL BETWEEN FIELD SPLICE 2 AND FIELD SPLICE 3.

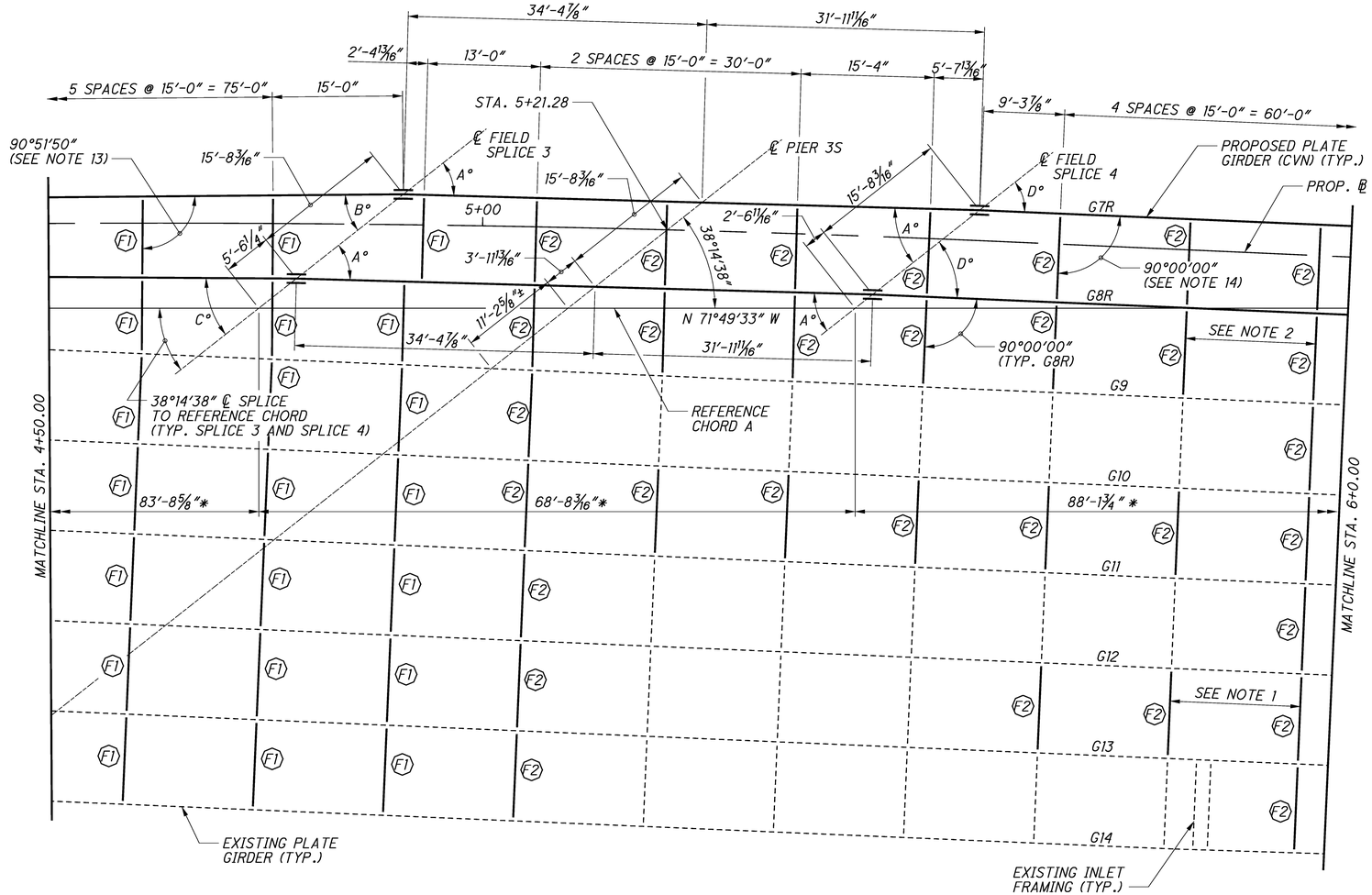
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

FRAMING PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD013.dgn 11/10/2010 11:35:29 AM mtneiheisel



GIRDER ANGLE
A° = 39°49'44"
B° = 37°45'09"
C° = 38°36'58"
D° = 40°41'00"

LEGEND

- (F1) DENOTES TYPE F1 CROSSFRAME
- (F2) DENOTES TYPE F2 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD

FRAMING PLAN
(UNIT 6)

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 63/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 59/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 51/98 AND 52/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. ANGLE BETWEEN G7R AND CROSSFRAME. TYPICAL BETWEEN FIELD SPLICE 2 AND FIELD SPLICE 3.
14. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 3 THRU PIER 5S.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

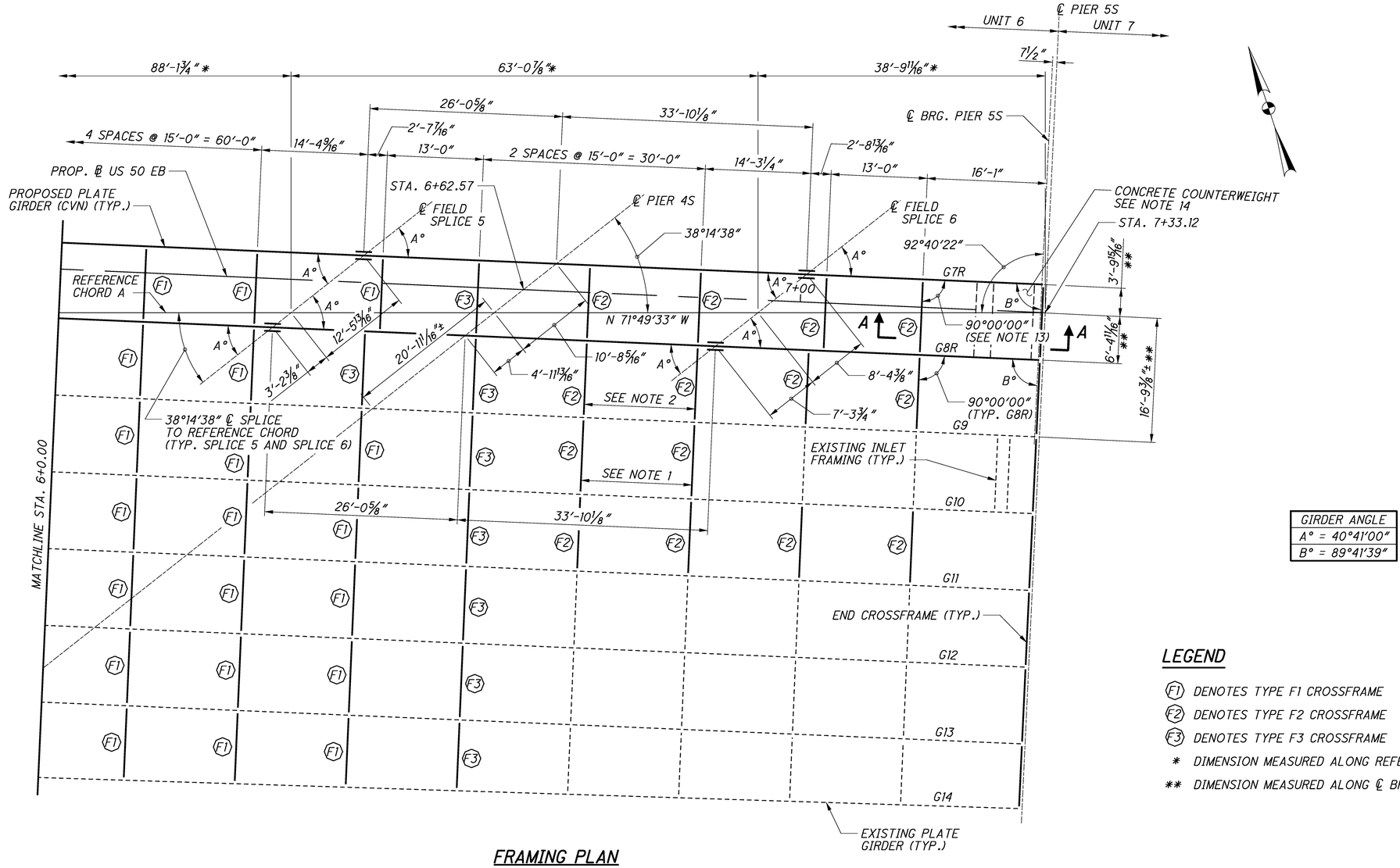
FRAMING PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

45 / 98

219
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD014.dgn 11/10/2010 11:35:31 AM mtreiheisel



GIRDER ANGLE
A° = 40°41′00″
B° = 89°41′39″

LEGEND

- (F1) DENOTES TYPE F1 CROSSFRAME
- (F2) DENOTES TYPE F2 CROSSFRAME
- (F3) DENOTES TYPE F3 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD
- ** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD

FRAMING PLAN

(UNIT 6)

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 63/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 59/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 51/98 AND 52/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 3 THRU PIER 5S.
14. FOR CONCRETE COUNTERWEIGHT DETAILS AND SECTION A-A, SEE SHEET 79/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

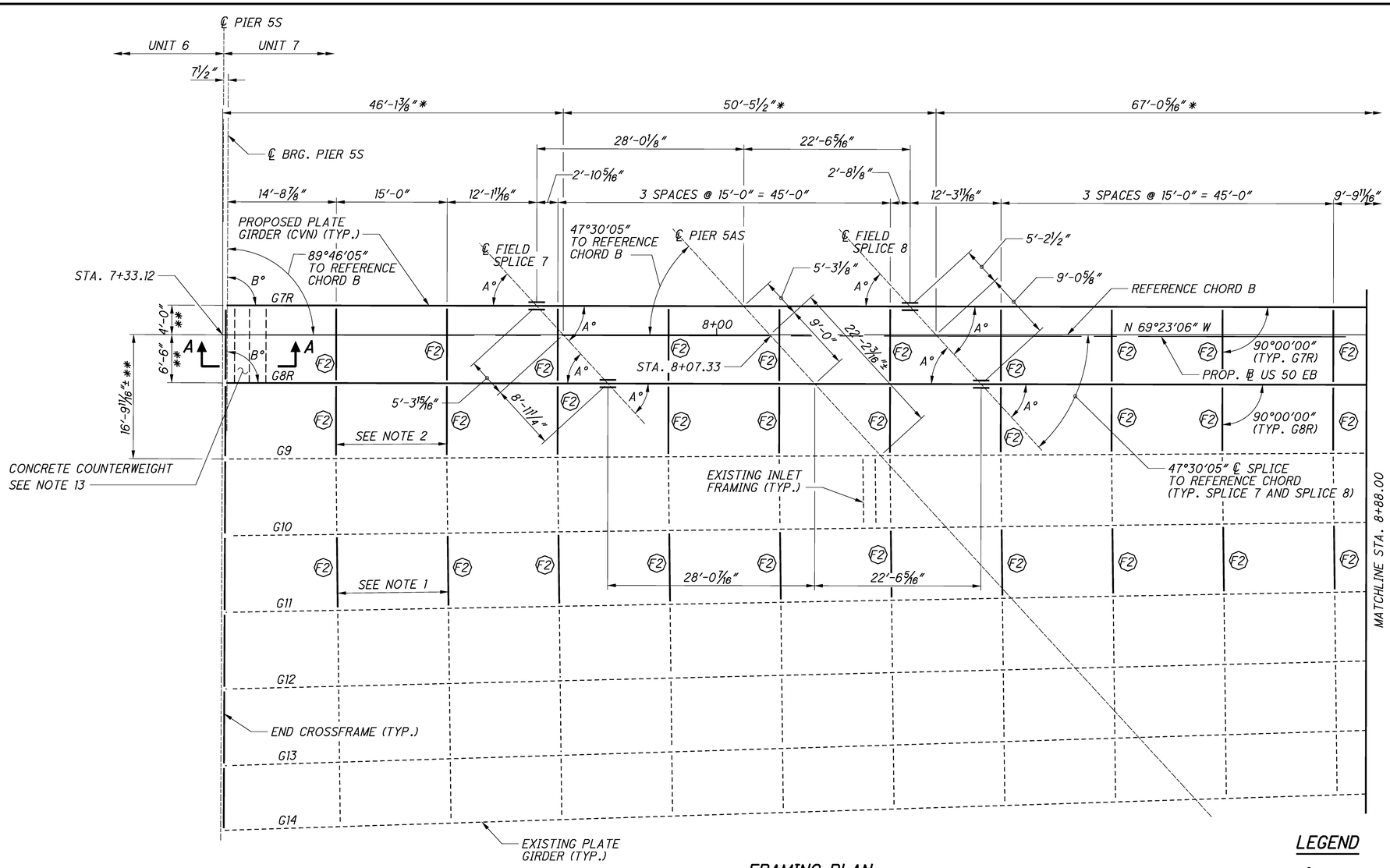
FRAMING PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

46/98

220/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD015.dgn 11/10/2010 11:35:33 AM mtreiheisel



GIRDER ANGLE
A° = 47°24'12"
B° = 89°51'58"

FRAMING PLAN

(UNIT 7)

LEGEND

- (F2) DENOTES TYPE F2 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD
- ** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 64/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 60/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 53/98 AND 54/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. FOR CONCRETE COUNTERWEIGHT DETAILS AND SECTION A-A, SEE SHEET 79/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

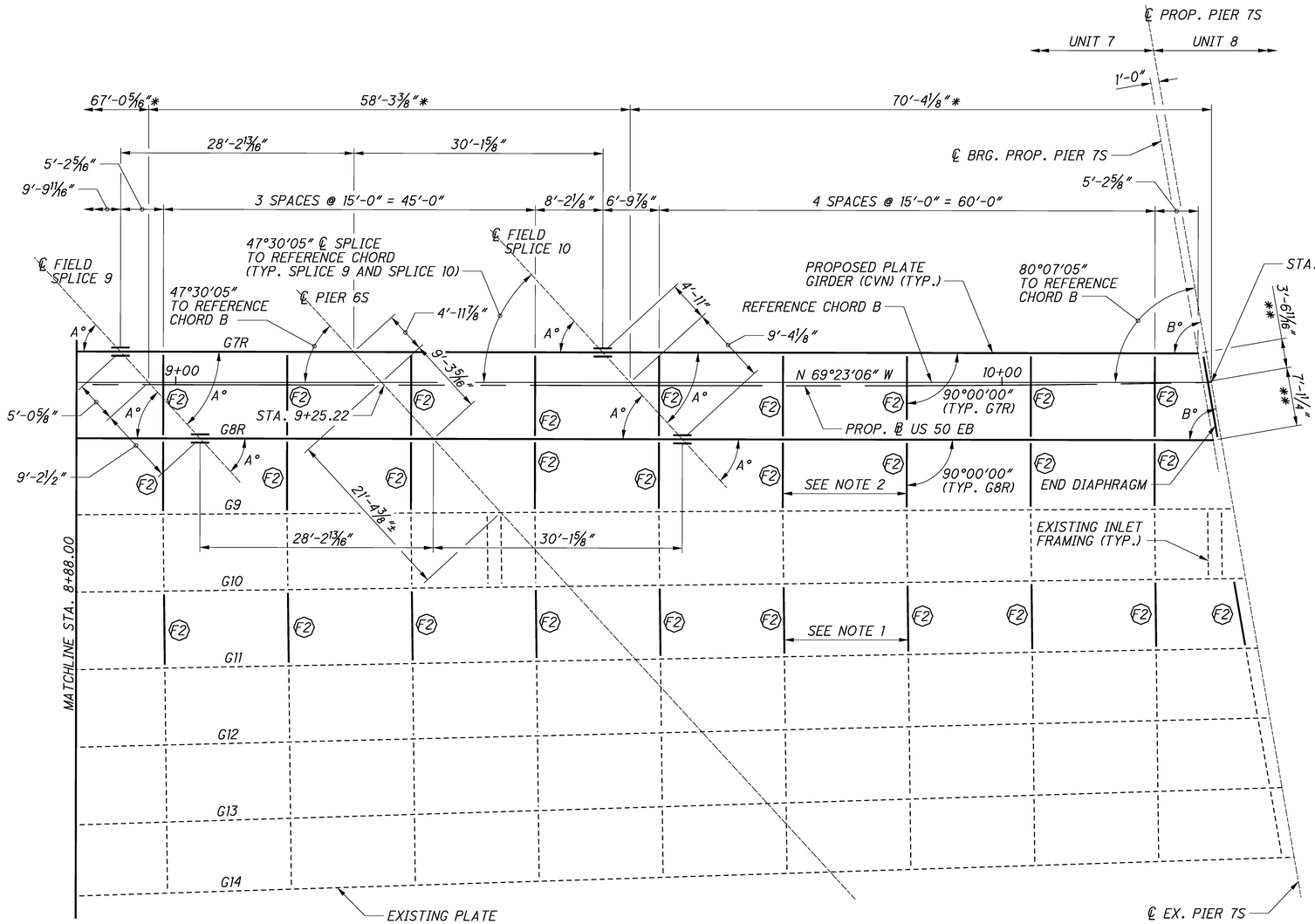
FRAMING PLAN - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

47/98

221/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD016.dgn 11/10/2010 11:35:34 AM mtneiheisel



FRAMING PLAN

(UNIT 7)

GIRDER ANGLE
A° = 47°24'12"
B° = 80°01'12"

LEGEND

(F2) DENOTES TYPE F2 CROSSFRAME

* DIMENSION MEASURED ALONG REFERENCE CHORD

** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 64/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 60/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS, SEE SHEETS 53/98 AND 54/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.

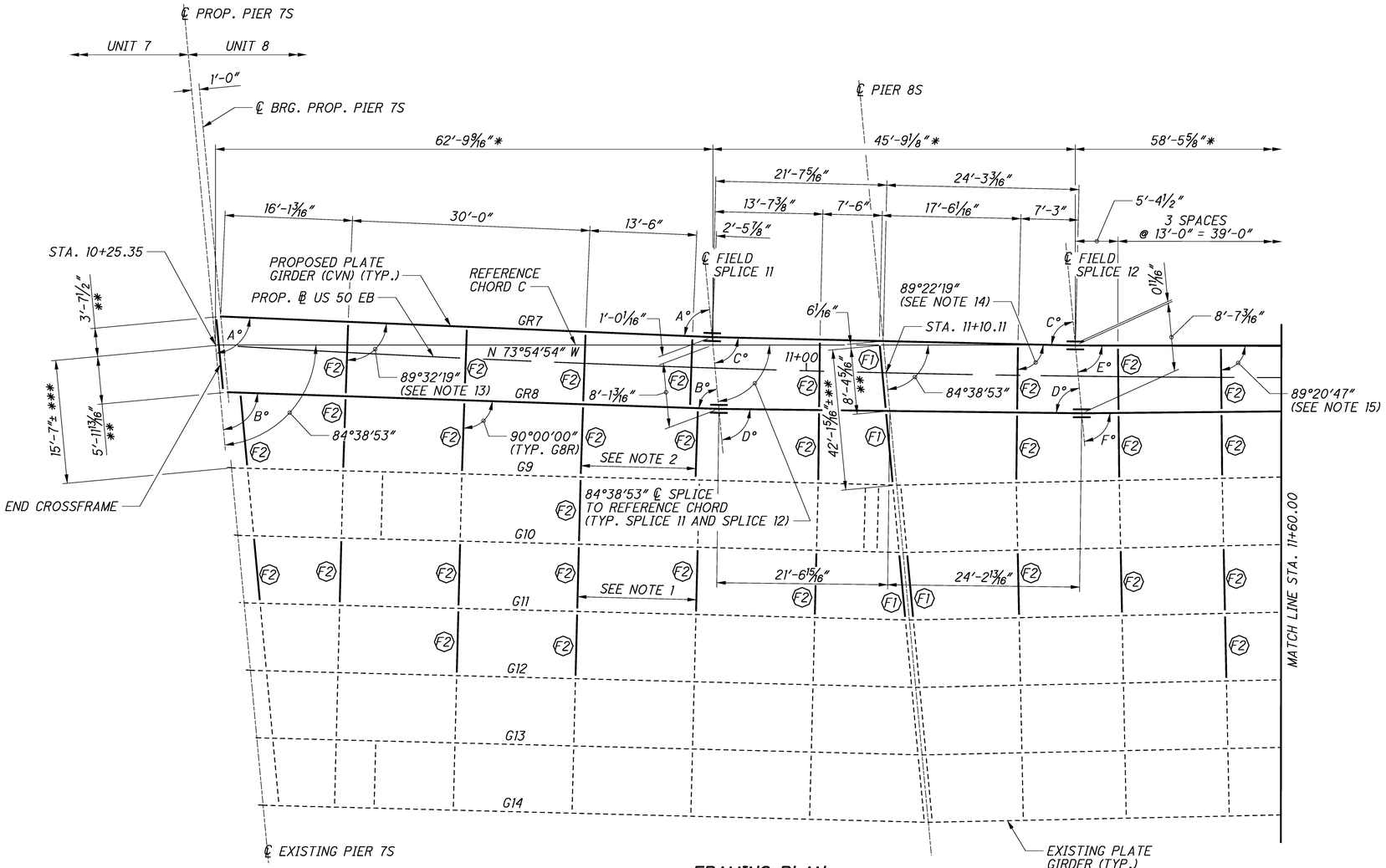
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

FRAMING PLAN - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD017.dgn 11/10/2010 11:35:36 AM mtneiheisel



FRAMING PLAN

(UNIT 8)

GIRDER ANGLE
A° = 82°14'33"
B° = 82°42'14"
C° = 83°19'29"
D° = 83°57'10"
E° = 84°32'24"
F° = 85°11'37"

LEGEND

- (F1) DENOTES TYPE F1 CROSSFRAME
- (F2) DENOTES TYPE F2 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD
- ** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD
- *** DIMENSION MEASURED ALONG ℄ EXISTING PIER 7S TO REFERENCE CHORD

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 65/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 61/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 55/98 AND 56/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. ANGLE BETWEEN G7R AND CROSSFRAME. TYPICAL BETWEEN ℄ PROP. PIER 7S AND FIELD SPLICE 11.
14. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 11 AND FIELD SPLICE 12.
15. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 12 AND FIELD SPLICE 13.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

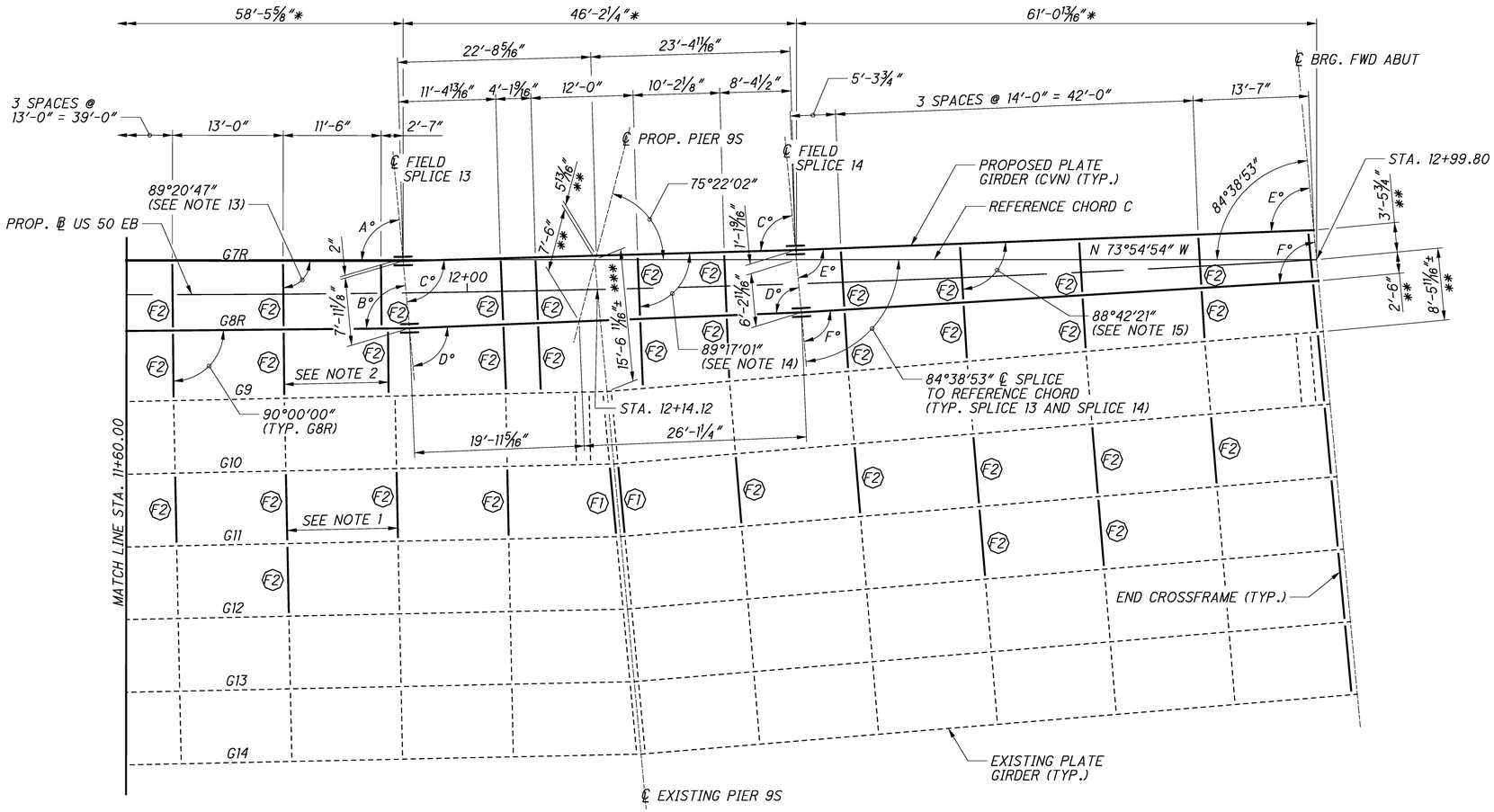
FRAMING PLAN - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

49/98

223/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD018.dgn 11/10/2010 11:35:38 AM mtneiheisel



GIRDER ANGLE
A° = 84°32′24″
B° = 85°11′37″
C° = 86°15′13″
D° = 86°58′12″
E° = 86°50′53″
F° = 88°08′33″

LEGEND

- (F1) DENOTES TYPE F1 CROSSFRAME
- (F2) DENOTES TYPE F2 CROSSFRAME
- * DIMENSION MEASURED ALONG REFERENCE CHORD
- ** DIMENSION MEASURED ALONG ℄ BRG. TO REFERENCE CHORD
- *** DIMENSION MEASURED ALONG ℄ EXISTING PIER 9S TO REFERENCE CHORD

FRAMING PLAN

(UNIT 8)

NOTES:

1. PAYMENT FOR INTERMEDIATE AND END CROSSFRAMES BETWEEN G9 AND G14 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO MATCH EXISTING CROSSFRAME LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
2. PAYMENT FOR END DIAPHRAGMS, INTERMEDIATE CROSSFRAMES, AND END CROSSFRAMES BETWEEN G8R AND G9 SHALL BE LEVEL UF. THESE CROSSFRAMES SHALL BE SPACED TO ALIGN WITH EXISTING STIFFENER LOCATIONS. CONTRACTOR TO FIELD VERIFY CROSSFRAME DIMENSIONS AND LOCATIONS.
3. FOR GENERAL NOTES SEE SHEET 8/98.
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 65/98.
5. FOR FIELD SPLICE DETAIL, SEE SHEET 61/98.
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 57/98.
7. INTERMEDIATE CROSSFRAMES BETWEEN GIRDERS G10 AND G11 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
8. FOR END CROSSFRAME DETAILS, SEE STD. DWG. GSD-1-96.
9. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
10. FOR PROPOSED AND EXISTING GIRDER ELEVATIONS SEE SHEETS 55/98 AND 56/98.
11. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
13. ANGLE BETWEEN G7R AND CROSSFRAME. TYPICAL BETWEEN FIELD SPLICE 12 AND FIELD SPLICE 13.
14. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 13 AND FIELD SPLICE 14.
15. ANGLE BETWEEN G7R AND CROSSFRAME, TYPICAL BETWEEN FIELD SPLICE 14 AND ℄ BRG. FORWARD ABUTMENT.

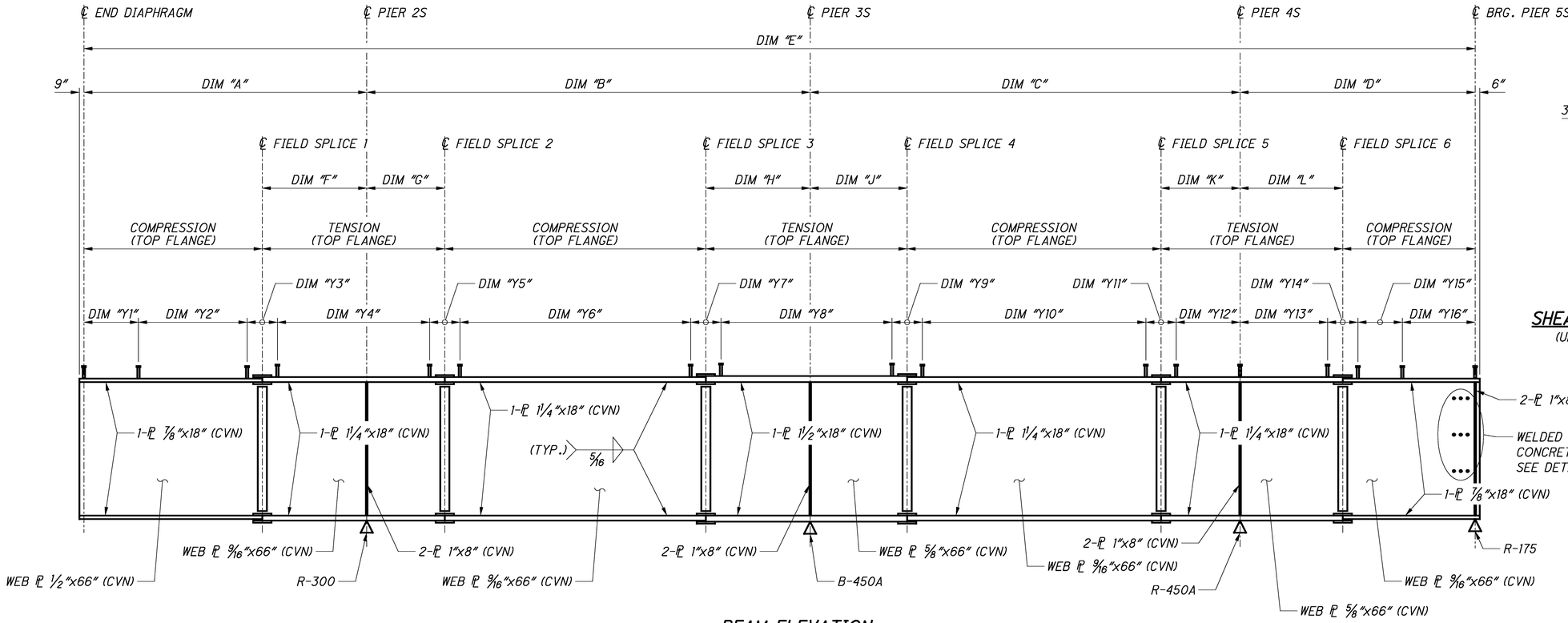
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

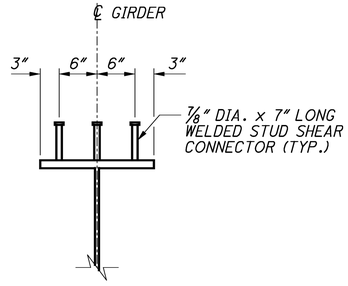
FRAMING PLAN - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD019.dgn 11/10/2010 11:35:39 AM mtneiheisel



BEAM ELEVATION
(UNIT 6 - GIRDERS 7R & 8R)



SHEAR CONNECTOR DETAIL
(UNIT 6 - GIRDERS 7R & 8R)

SPAN LENGTHS

	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
GIRDER 7R	81'-9 1/8"	155'-1 5/8"	141'-8 11/16"	65'-7 15/16"	444'-3 3/8"
GIRDER 8R	93'-3 1/16"	146'-2 1/4"	141'-8 11/16"	77'-6 1/8"	458'-8 1/8"

FIELD SPLICE DIMENSIONS

	DIM "F"	DIM "G"	DIM "H"	DIM "J"	DIM "K"	DIM "L"
GIRDER 7R	37'-11 1/8"	26'-6 1/2"	34'-4 7/8"	31'-11 11/16"	26'-0 5/8"	33'-10 1/8"
GIRDER 8R	34'-5 3/16"	25'-8 11/16"	34'-4 7/8"	31'-11 11/16"	26'-0 5/8"	33'-10 1/8"

SHEAR STUD SPACING

	DIM "Y1"	DIM "Y2"	DIM "Y3"	DIM "Y4"	DIM "Y5"	DIM "Y6"	DIM "Y7"	DIM "Y8"
GIRDER 7R	26 SPA. @ 8" = 17'-4"	14 SPA. @ 21" = 24'-6"	4'-5 13/16"	34 SPA. @ 21" = 59'-6"	4'-11 7/16"	51 SPA. @ 21" = 89'-3"	5'-0 7/16"	35 SPA. @ 21" = 61'-3"
GIRDER 8R	24 SPA. @ 9" = 18'-0"	22 SPA. @ 21" = 38'-6"	4'-4 13/16"	32 SPA. @ 21" = 56'-0"	3'-11 13/16"	47 SPA. @ 21" = 82'-3"	4'-5 11/16"	35 SPA. @ 21" = 61'-3"

	DIM "Y9"	DIM "Y10"	DIM "Y11"	DIM "Y12"	DIM "Y13"	DIM "Y14"	DIM "Y15"	DIM "Y16"
GIRDER 7R	5'-0 7/16"	45 SPA. @ 21" = 78'-9"	4'-5 1/16"	14 SPA. @ 21" = 24'-6"	27 SPA. @ 14" = 31'-6"	3'-11 3/16"	9 SPA. @ 14" = 10'-6"	29 SPA. @ 8" = 19'-4"
GIRDER 8R	5'-0 7/16"	45 SPA. @ 21" = 78'-9"	4'-5 1/16"	14 SPA. @ 21" = 24'-6"	27 SPA. @ 14" = 31'-6"	4'-1 3/8"	15 SPA. @ 14" = 17'-6"	32 SPA. @ 9" = 24'-0"

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 63/98.
3. FOR FIELD SPLICE DETAIL, SEE SHEET 59/98.
4. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.
6. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
7. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
8. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. GSD-1-96.
9. FOR PROPOSED ROCKER AND BOLSTER DETAILS, SEE SHEET 66/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

GIRDER ELEVATION - UNIT 6 (RIGHT BRIDGE)

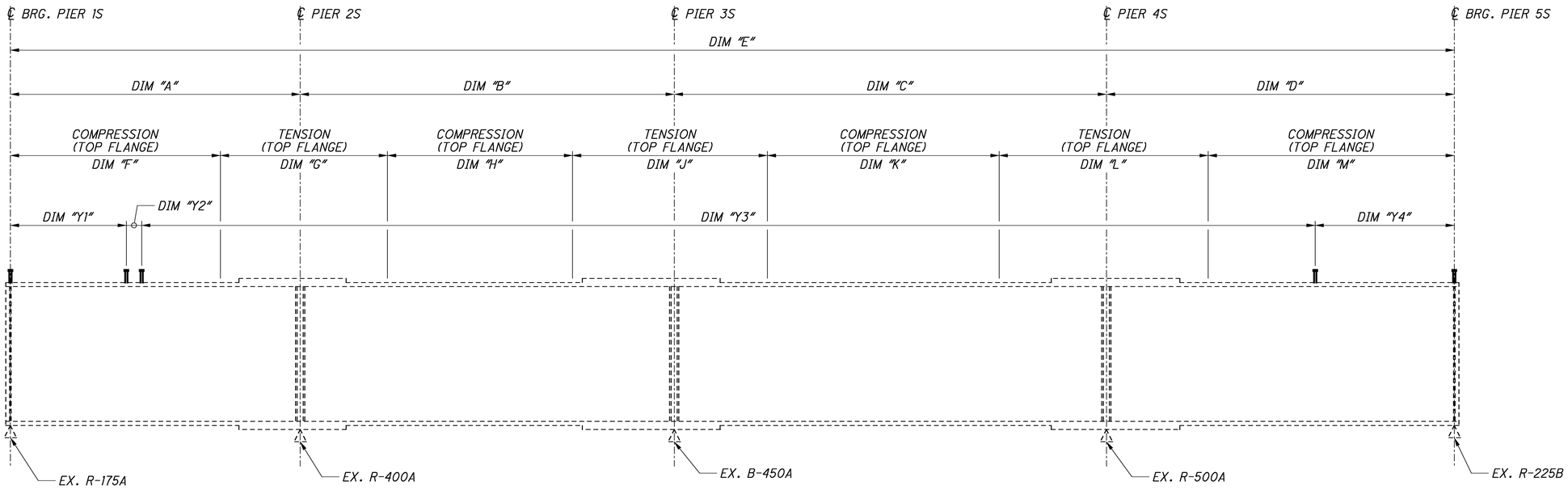
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

51/98

225/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD020.dgn 11/10/2010 11:35:41 AM mtneiheisel

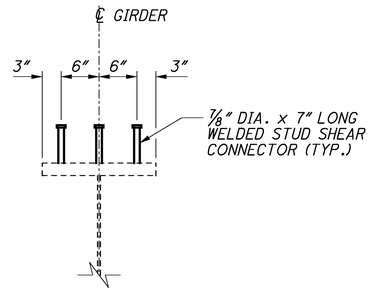


BEAM ELEVATION
(UNIT 6 - GIRDERS 9 THRU 14)

SPAN LENGTHS					
	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
GIRDER 9	109′-8 15/16″±	136′-11 15/16″±	141′-2″±	89′-6 5/8″±	477′-5 1/2″±
GIRDER 10	102′-2 1/2″±	129′-7 1/16″±	141′-2″±	101′-7 1/8″±	474′-6 5/8″±
GIRDER 11	94′-8″±	122′-2 3/16″±	141′-2″±	113′-7 9/16″±	471′-7 3/4″±
GIRDER 12	87′-1 9/16″±	114′-9 5/16″±	141′-2″±	125′-8 1/16″±	468′-8 15/16″±
GIRDER 13	79′-7 1/8″±	107′-4 7/16″±	141′-2″±	137′-8 1/2″±	465′-10 1/16″±
GIRDER 14	72′-0 5/8″±	99′- 11 9/16″±	141′-2″±	149′-9 3/16″±	462′-11 3/8″±

TENSION AND COMPRESSION AREAS							
	DIM "F"	DIM "G"	DIM "H"	DIM "J"	DIM "K"	DIM "L"	DIM "M"
GIRDER 9	75′-11 1/16″	62′-3 3/8″	73′-4 9/16″	68′-2 3/4″	79′-11 1/16″	60′-10 3/16″	56′-10 9/16″
GIRDER 10	72′-7 7/16″	59′-0 1/4″	68′-0 13/16″	64′-3 13/16″	78′-3 1/4″	63′-6 5/8″	68′-8 7/16″
GIRDER 11	68′-7 3/16″	54′-6 13/16″	60′-5 1/2″	63′-7 7/16″	75′-8 7/8″	68′-3 1/4″	80′-4 11/16″
GIRDER 12	61′-10 11/16″	52′-7 3/16″	54′-4 7/16″	61′-2 1/16″	74′-6 15/16″	71′-11 1/2″	92′-2 1/16″
GIRDER 13	57′-0 5/8″	46′-11 5/8″	53′-3 13/16″	56′-5 3/4″	74′-0″	74′-4 11/16″	103′-7 1/2″
GIRDER 14	51′-5 3/4″	41′-8 1/2″	47′-10 1/16″	57′-1 7/16″	74′-3″	79′-1 1/16″	111′-5 7/16″

SHEAR STUD SPACING				
	DIM "Y1"	DIM "Y2"	DIM "Y3"	DIM "Y4"
GIRDER 9	30 SPA. @ 9″ = 22′-6″	17 1/2″	234 SPA. @ 21″ = 409′-6″	44 SPA. @ 12″ = 44′-0″
GIRDER 10	41 SPA. @ 12″ = 41′-0″	18 5/8″	224 SPA. @ 21″ = 392′-0″	40 SPA. @ 12″ = 40′-0″
GIRDER 11	39 SPA. @ 12″ = 39′-0″	19 3/4″	220 SPA. @ 21″ = 385′-0″	46 SPA. @ 12″ = 46′-0″
GIRDER 12	36 SPA. @ 12″ = 36′-0″	14 15/16″	218 SPA. @ 21″ = 381′-6″	50 SPA. @ 12″ = 50′-0″
GIRDER 13	33 SPA. @ 12″ = 33′-0″	19 1/16″	215 SPA. @ 21″ = 376′-3″	55 SPA. @ 12″ = 55′-0″
GIRDER 14	32 SPA. @ 12″ = 32′-0″	20 3/8″	211 SPA. @ 21″ = 369′-3″	60 SPA. @ 12″ = 60′-0″



SHEAR CONNECTOR DETAIL
(UNIT 6 - GIRDERS 9 THRU 14)

NOTES:

1. FOR EXISTING ROCKER AND BOLSTER DETAILS, SEE SHEET 159 OF 227 OF THE 1962 SIXTH ST. EXPRESSWAY HAM-50-19.38 DRAWINGS

2. FOR ADDITIONAL NOTES SEE SHEET 51/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

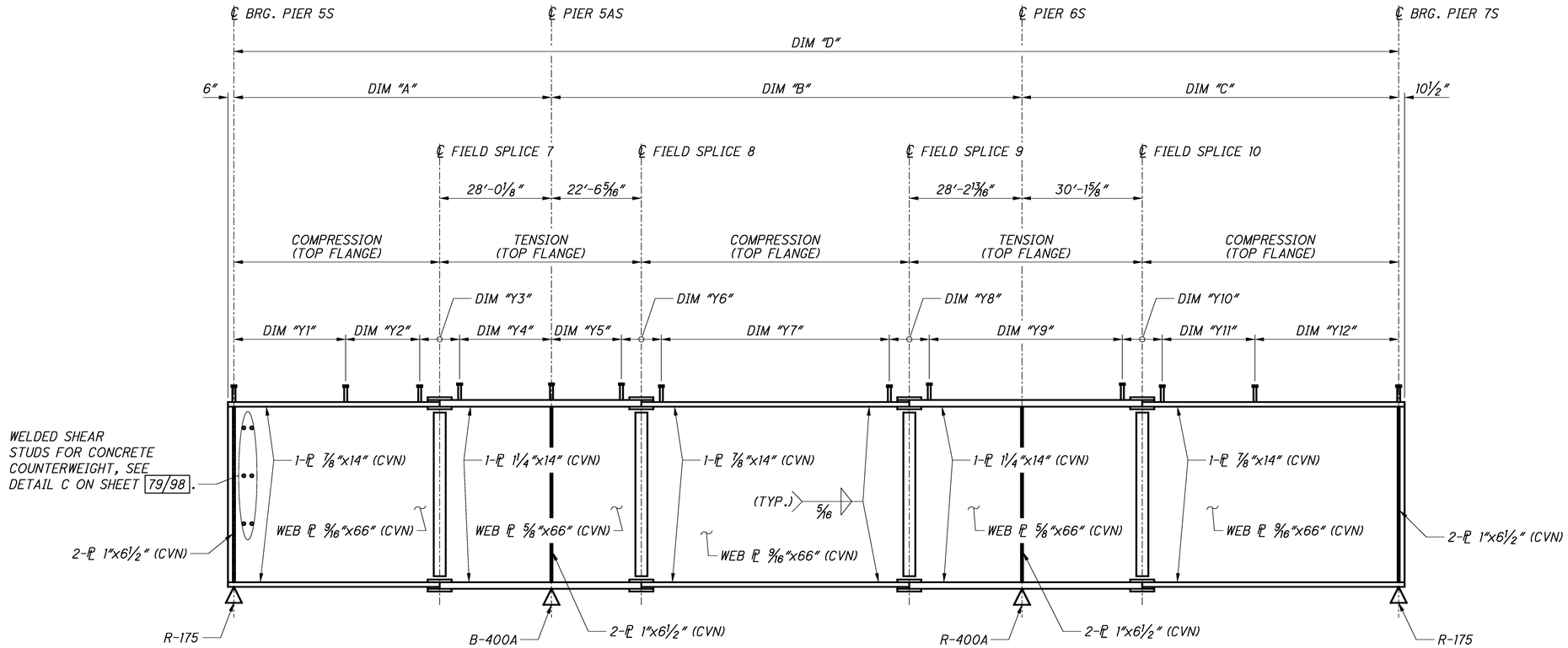
GIRDER ELEVATION - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

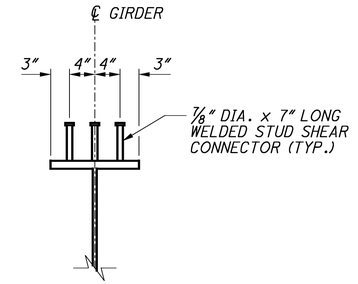
52/98

226/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD021.dgn 11/10/2010 11:35:42 AM mtneiheisel



BEAM ELEVATION
(UNIT 7 - GIRDERS 7R & 8R)



SHEAR CONNECTOR DETAIL
(UNIT 7 - GIRDERS 7R & 8R)

SPAN LENGTHS

	DIM "A"	DIM "B"	DIM "C"	DIM "D"
GIRDER 7R	69'-10 11/16"	117'-10 11/16"	102'-2⅛"	289'-11½"
GIRDER 8R	79'-6⅞"	117'-10 11/16"	94'-4 7/16"	291'-9 15/16"

SHEAR STUD SPACING

	DIM "Y1"	DIM "Y2"	DIM "Y3"	DIM "Y4"	DIM "Y5"	DIM "Y6"
GIRDER 7R	28 SPA. @ 12" = 28'-0"	10 SPA. @ 14" = 11'-8"	4'-3¾"	23 SPA. @ 14" = 26'-10"	13 SPA. @ 18" = 19'-6"	4'-2"
GIRDER 8R	32 SPA. @ 12" = 32'-0"	15 SPA. @ 14" = 17'-6"	4'-1 15/16"	23 SPA. @ 14" = 26'-10"	13 SPA. @ 18" = 19'-6"	4'-2"

	DIM "Y7"	DIM "Y8"	DIM "Y9"	DIM "Y10"	DIM "Y11"	DIM "Y12"
GIRDER 7R	42 SPA. @ 18" = 63'-0"	4'-3 1/16"	36 SPA. @ 18" = 54'-0"	4'-8 11/16"	19 SPA. @ 18" = 28'-6"	41 SPA. @ 12" = 41'-0"
GIRDER 8R	42 SPA. @ 18" = 63'-0"	4'-3 1/16"	36 SPA. @ 18" = 54'-0"	4'-5"	14 SPA. @ 18" = 21'-0"	41 SPA. @ 12" = 41'-0"

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 64/98.
3. FOR FIELD SPLICE DETAIL, SEE SHEET 60/98.
4. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.
6. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
7. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
8. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. GSD-1-96.
9. FOR PROPOSED ROCKER AND BOLSTER DETAILS, SEE SHEET 66/98.

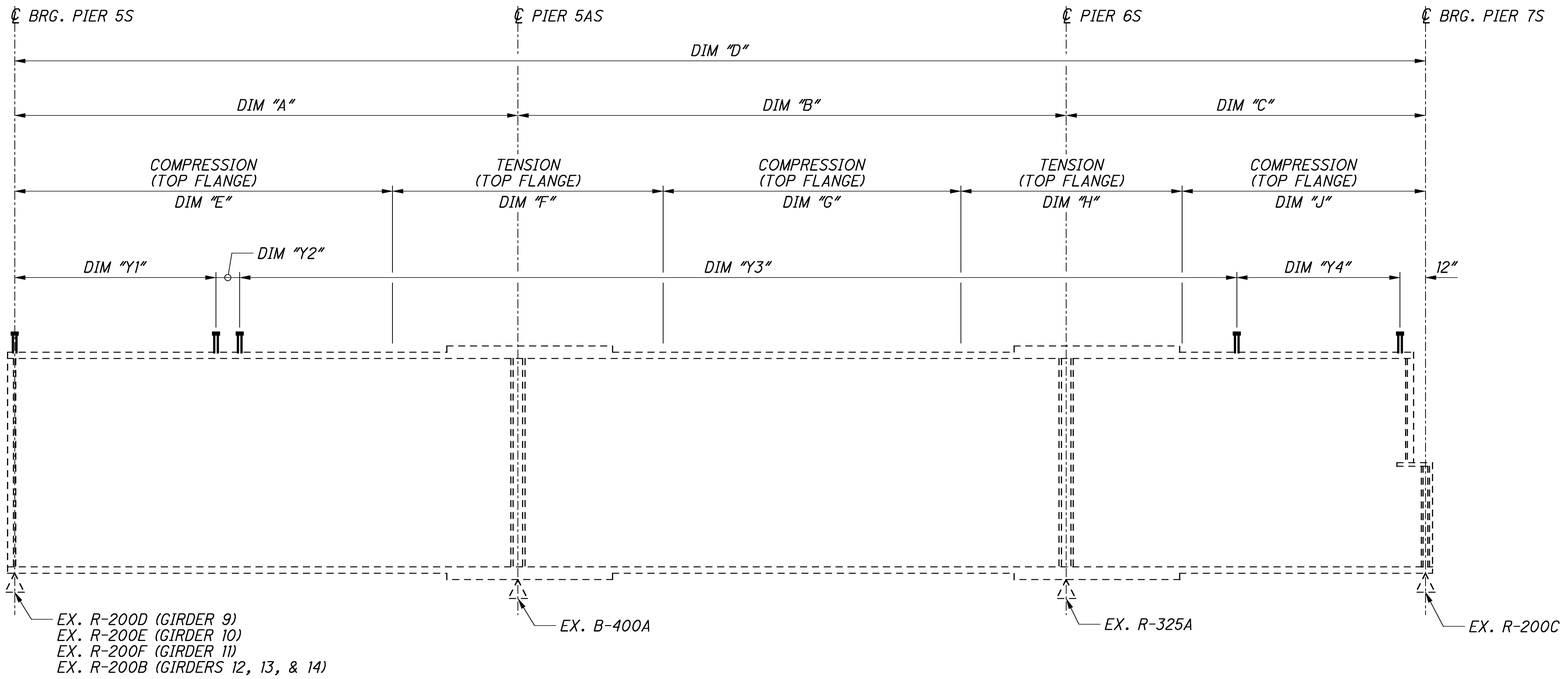
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

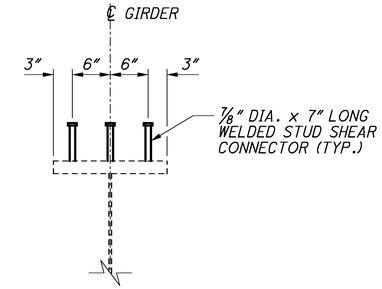
GIRDER ELEVATION - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD022.dgn 11/10/2010 11:35:44 AM mtneiheisel



BEAM ELEVATION
(UNIT 7 - GIRDERS 9 THRU 14)



SHEAR CONNECTOR DETAIL
(UNIT 7 - GIRDERS 9 THRU 14)

SPAN LENGTHS

	DIM "A"	DIM "B"	DIM "C"	DIM "D"
GIRDER 9	88'-6 3/16"±	117'-1 7/8"±	89'-2 13/16"±	294'-10 7/8"±
GIRDER 10	97'-5 3/8"±	116'-5 9/16"±	82'-6 1/4"±	296'-5 3/16"±
GIRDER 11	106'-3 7/16"±	115'-9 9/16"±	75'-10 5/8"±	297'-11 1/16"±
GIRDER 12	115'-0 7/16"±	115'-1 3/4"±	69'-4 1/8"±	299'-6 5/16"±
GIRDER 13	123'-8 7/16"±	114'-6 3/16"±	62'-10 7/16"±	301'-1 1/16"±
GIRDER 14	131'-5 3/16"±	114'-5 1/8"±	56'-8 7/8"±	302'-7 1/4"±

TENSION AND COMPRESSION AREAS

	DIM "E"	DIM "F"	DIM "G"	DIM "H"	DIM "J"
GIRDER 9	63'-2 5/8"	52'-3"	64'-4 1/16"	52'-6 3/4"	62'-6 1/16"
GIRDER 10	71'-6 3/8"	55'-6 5/8"	62'-0 5/8"	50'-10 15/16"	56'-4 11/16"
GIRDER 11	79'-9 3/4"	57'-1 13/16"	62'-10 11/16"	46'-8 1/2"	51'-4 15/16"
GIRDER 12	87'-10 5/16"	61'-2 1/4"	60'-7 9/16"	43'-9 1/2"	46'-0 11/16"
GIRDER 13	96'-7 5/16"	64'-3 5/8"	58'-0 3/8"	41'-8 1/4"	40'-5 1/2"
GIRDER 14	102'-5 5/8"	69'-4 15/16"	56'-1 5/16"	41'-11 7/8"	32'-7 1/2"

SHEAR STUD SPACING

	DIM "Y1"	DIM "Y2"	DIM "Y3"	DIM "Y4"
GIRDER 9	41 SPA. @ 15" = 51'-3"	13 7/8"	118 SPA. @ 21" = 206'-6"	35 SPA. @ 12" = 35'-0"
GIRDER 10	32 SPA. @ 15" = 40'-0"	14 3/16"	127 SPA. @ 21" = 222'-3"	32 SPA. @ 12" = 32'-0"
GIRDER 11	34 SPA. @ 15" = 42'-6"	17 7/16"	128 SPA. @ 21" = 224'-0"	29 SPA. @ 12" = 29'-0"
GIRDER 12	37 SPA. @ 15" = 46'-3"	21 5/16"	126 SPA. @ 21" = 220'-6"	30 SPA. @ 12" = 30'-0"
GIRDER 13	40 SPA. @ 15" = 50'-0"	19 1/16"	122 SPA. @ 21" = 213'-6"	35 SPA. @ 12" = 35'-0"
GIRDER 14	42 SPA. @ 15" = 52'-6"	19 1/4"	122 SPA. @ 21" = 213'-6"	34 SPA. @ 12" = 34'-0"

NOTES:

1. FOR EXISTING ROCKER AND BOLSTER DETAILS, SEE SHEET 159 OF 227 OF THE 1962 SIXTH ST. EXPRESSWAY HAM-50-19.38 DRAWINGS

2. FOR ADDITIONAL NOTES SEE SHEET 53/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

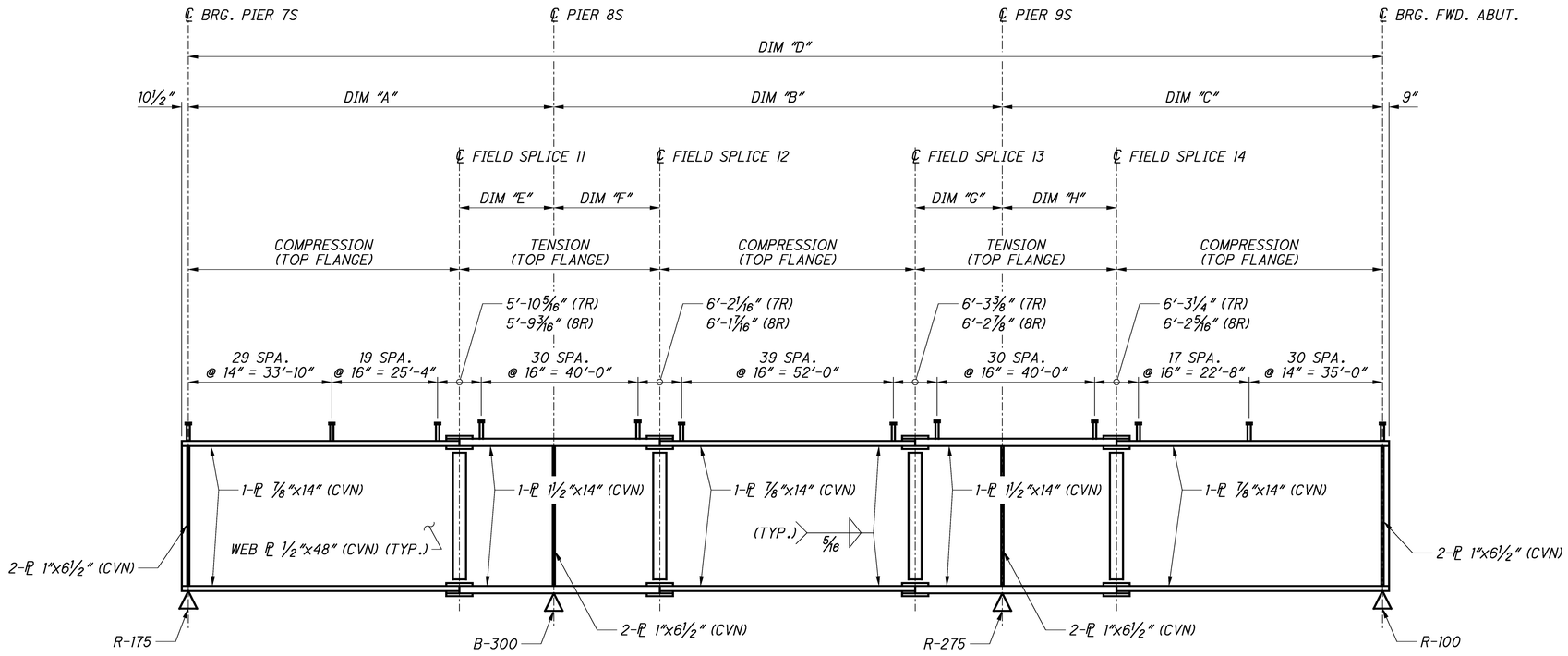
GIRDER ELEVATION - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

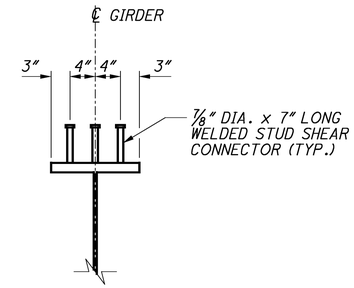
54/98

228/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD023.dgn 11/10/2010 11:35:45 AM mtneiheisel



BEAM ELEVATION
(UNIT 8 - GIRDERS 7R & 8R)



SHEAR CONNECTOR DETAIL
(UNIT 8 - GIRDERS 7R & 8R)

SPAN LENGTHS				
	DIM "A"	DIM "B"	DIM "C"	DIM "D"
GIRDER 7R	83'-8 3/8"	105'-5 1/4"	84'-3 7/16"	273'-5 1/16"
GIRDER 8R	83'-7 1/4"	102'-7 3/16"	86'-11 5/16"	273'-1 3/4"

FIELD SPLICE DIMENSIONS				
	DIM "E"	DIM "F"	DIM "G"	DIM "H"
GIRDER 7R	21'-7 5/16"	24'-3 3/16"	22'-8 5/16"	23'-4 11/16"
GIRDER 8R	21'-6 15/16"	24'-2 13/16"	19'-11 5/16"	26'-1 1/4"

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 65/98.
3. FOR FIELD SPLICE DETAIL, SEE SHEET 61/98.
4. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.
6. ALL PROPOSED STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
7. ALL PROPOSED STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
8. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. GSD-1-96.
9. FOR PROPOSED ROCKER AND BOLSTER DETAILS, SEE SHEET 66/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MSL		3102815	

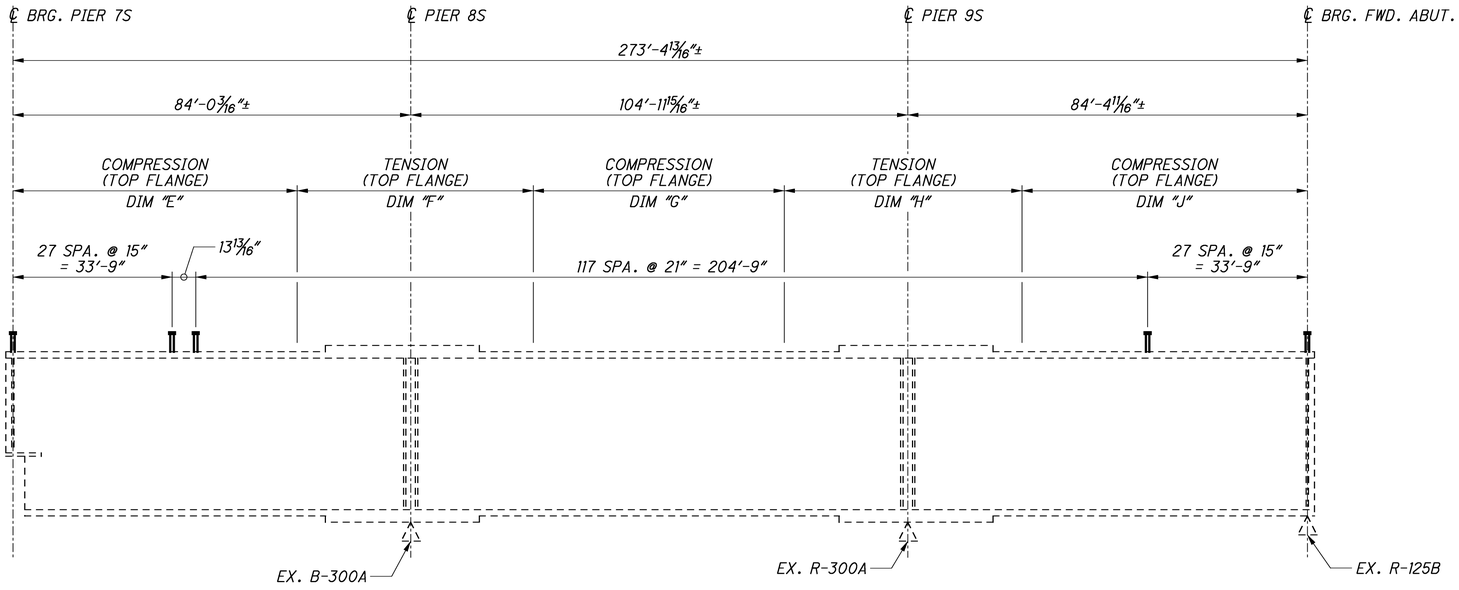
GIRDER ELEVATION - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

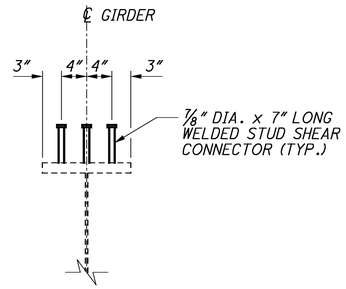
55/98

229/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD024.dgn 11/10/2010 11:35:47 AM mtneiheisel



BEAM ELEVATION
(UNIT 8 - GIRDERS 9 THRU 14)



SHEAR CONNECTOR DETAIL
(UNIT 8 - GIRDERS 9 THRU 14)

TENSION AND COMPRESSION AREAS					
	DIM "E"	DIM "F"	DIM "G"	DIM "H"	DIM "J"
GIRDER 9	59'-5 7/8"	50'-10 3/16"	52'-7 15/16"	49'-9 3/4"	60'-7 1/8"
GIRDER 10	60'-0"	50'-3 5/8"	52'-8 1/2"	50'-1 5/16"	60'-2 3/4"
GIRDER 11	60'-0 1/2"	49'-10 7/16"	53'-0"	50'-2 1/2"	60'-3 3/8"
GIRDER 12	60'-1 3/16"	49'-8 1/2"	53'-0 1/8"	50'-3 3/4"	60'-3 1/4"
GIRDER 13	60'-0"	49'-9 1/8"	52'-11 3/16"	50'-6 1/8"	60'-2 7/16"
GIRDER 14	60'-0 3/4"	49'-10 3/16"	52'-8 3/4"	50'-8 1/16"	60'-1 1/8"

NOTES:

1. FOR EXISTING ROCKER AND BOLSTER DETAILS, SEE SHEET 159 OF 227 OF THE 1962 SIXTH ST. EXPRESSWAY HAM-50-19.38 DRAWINGS
2. FOR ADDITIONAL NOTES SEE SHEET 55/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

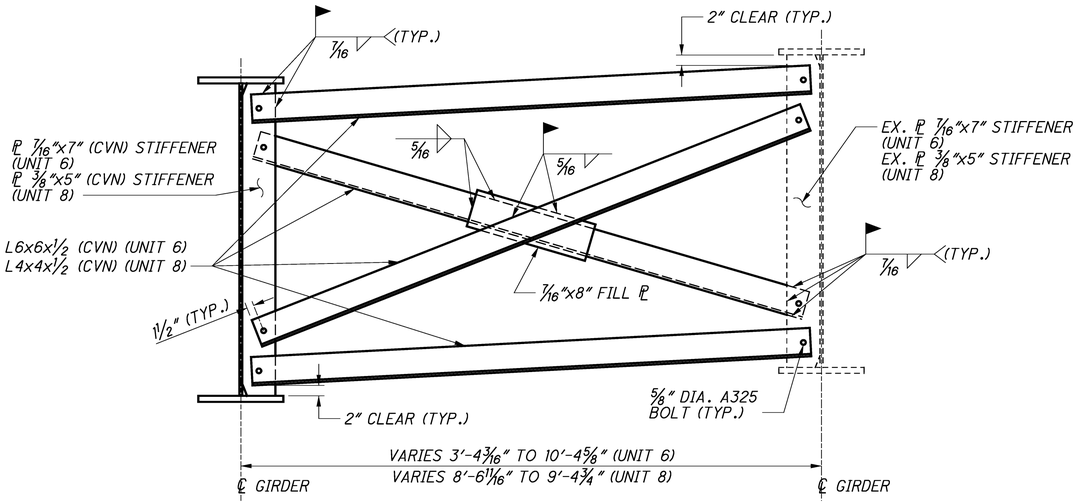
GIRDER ELEVATION - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

56/98

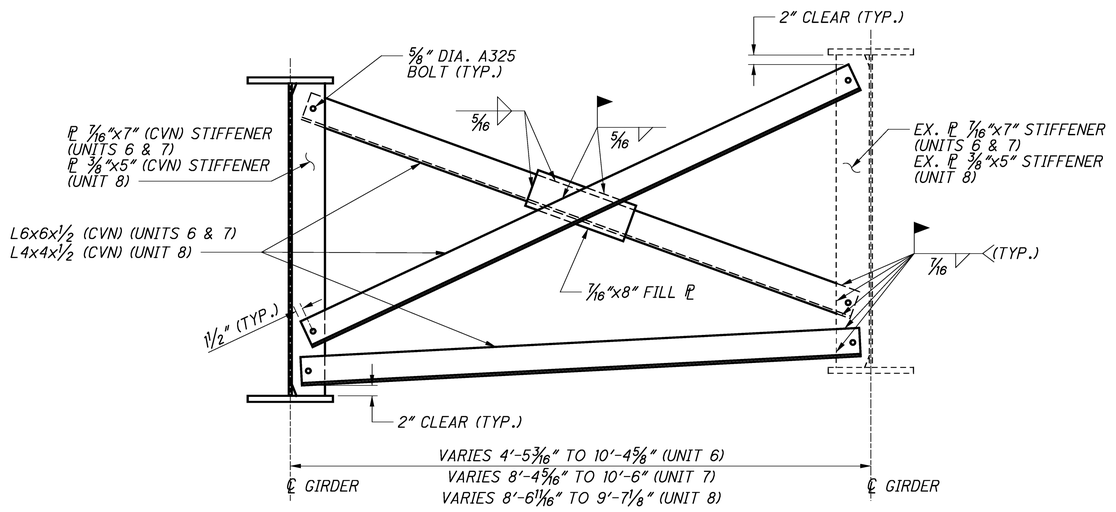
230/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD025.dgn 11/10/2010 11:35:48 AM mtneiheisel



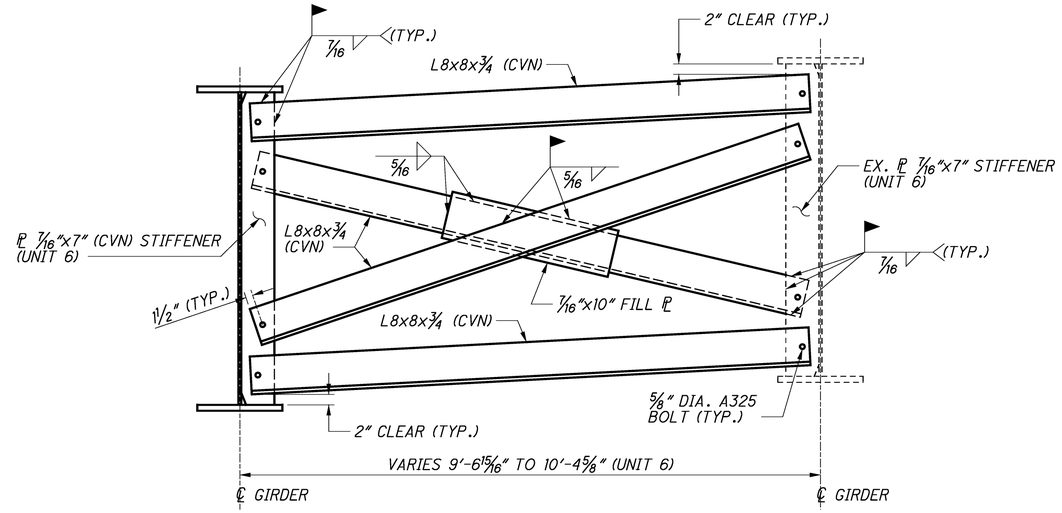
INTERMEDIATE CROSSFRAME TYPE F1 - UNITS 6 & 8

MINIMUM WELD LENGTH
TOP AND BOTTOM CHORDS = 16" (UNIT 6), 10 1/2" (UNIT 8)
DIAGONALS = 14" (UNIT 6), 10" (UNIT 8)



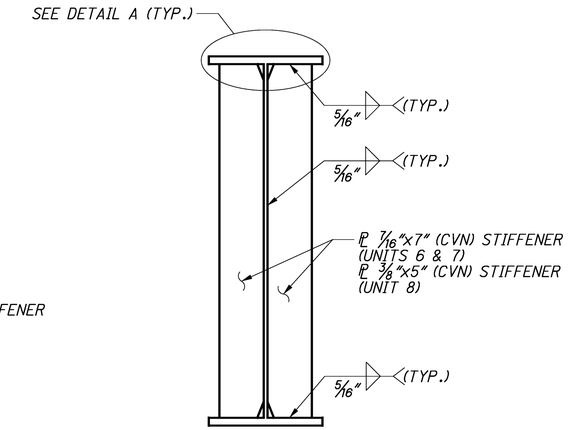
INTERMEDIATE CROSSFRAME TYPE F2 - UNITS 6, 7, & 8

MINIMUM WELD LENGTH
BOTTOM CHORD = 16" (UNITS 6 & 7), 10 1/2" (UNIT 8)
DIAGONALS = 14" (UNITS 6 & 7), 10" (UNIT 8)



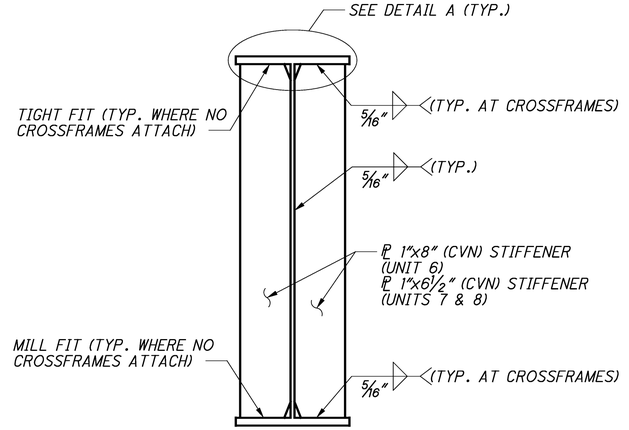
INTERMEDIATE CROSSFRAME TYPE F3 - UNIT 6

MINIMUM WELD LENGTH
TOP AND BOTTOM CHORDS = 19"
DIAGONALS = 17 1/2"

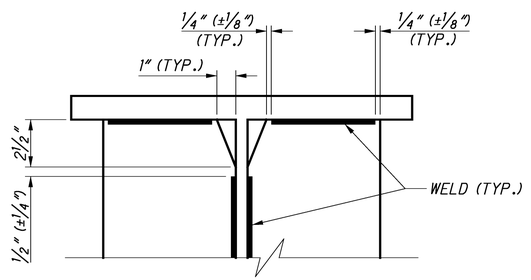


INTERMEDIATE STIFFENER DETAIL

NO INTERMEDIATE STIFFENER REQUIRED
ON EXTERIOR FACE OF GIRDER (G7R)



BEARING STIFFENER DETAIL



DETAIL A

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
4. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE STD. DWG. GSD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

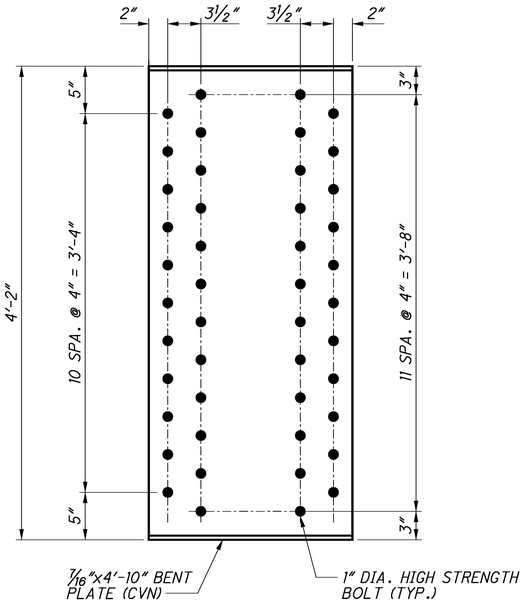
FRAMING DETAILS (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

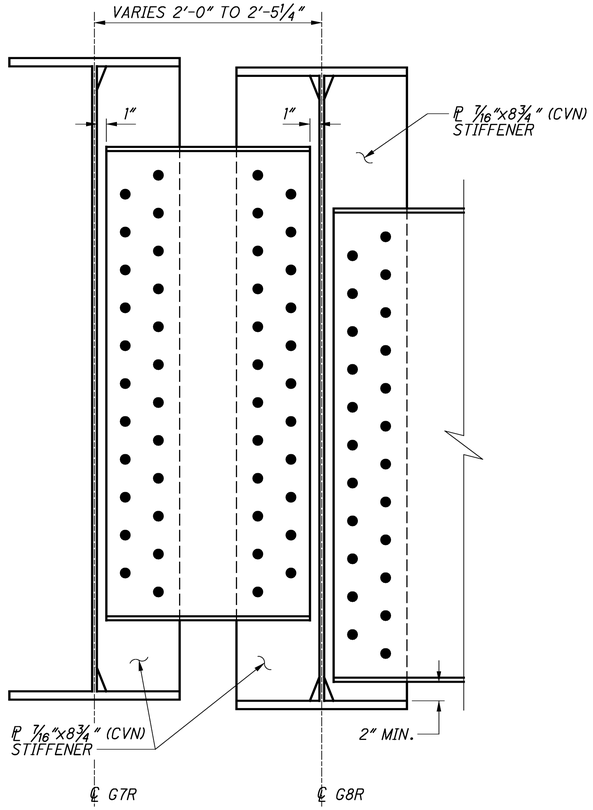
57/98

231/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD027.dgn 11/10/2010 11:35:49 AM mtneihe1sel

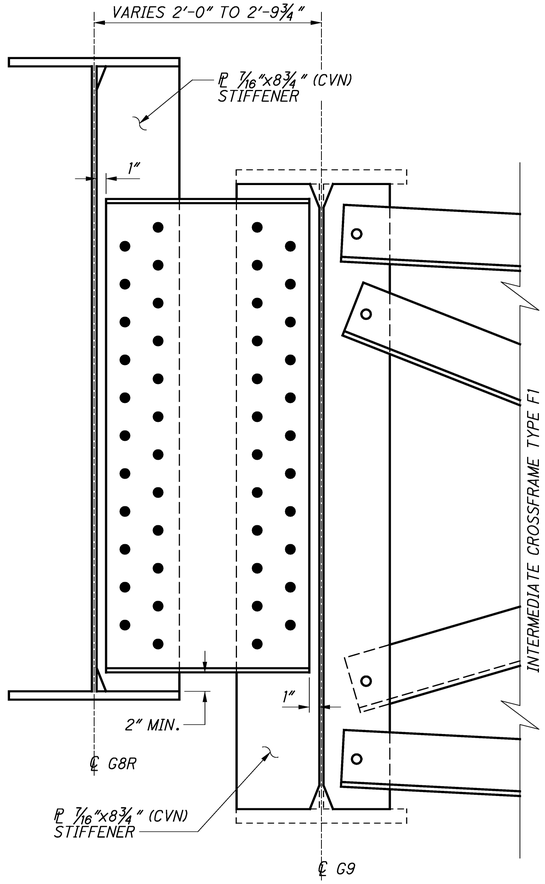


BOLT LAYOUT FOR END DIAPHRAGM D1



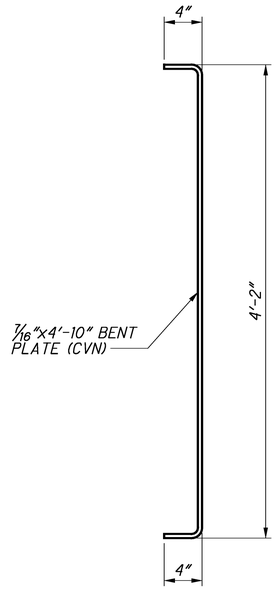
END DIAPHRAGM TYPE D1 - UNIT 6

(BETWEEN PROPOSED GIRDERS 7R AND 8R)

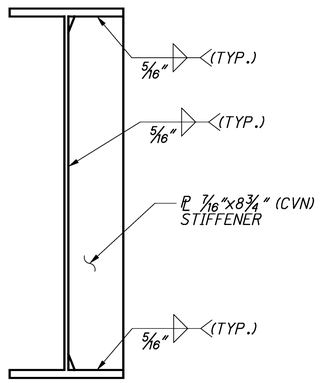


END DIAPHRAGM TYPE D1 - UNIT 6

(BETWEEN PROPOSED GIRDER 8R AND EXISTING GIRDER 9)



BENT PLATE DIAGRAM FOR END DIAPHRAGM D1



END DIAPHRAGM STIFFENER DETAIL

FOR WELD CLEARANCES SEE DETAIL A ON SHEET 57/98.

NOTES:

1. END DIAPHRAGM BETWEEN PROPOSED GIRDERS G7R AND G8R TO BE PAID FOR WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 4.
2. END DIAPHRAGM BETWEEN PROPOSED GIRDER G8R AND EXISTING GIRDER G9 TO BE PAID FOR WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.
3. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
4. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
5. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
6. HIGH STRENGTH BOLTS SHALL BE 1" DIA. A325 TYPE 1 GALVANIZED.
7. FOR ADDITIONAL FRAMING DETAILS AND NOTES, SEE SHEET 44/98.
8. FOR GENERAL NOTES SEE SHEET 8/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

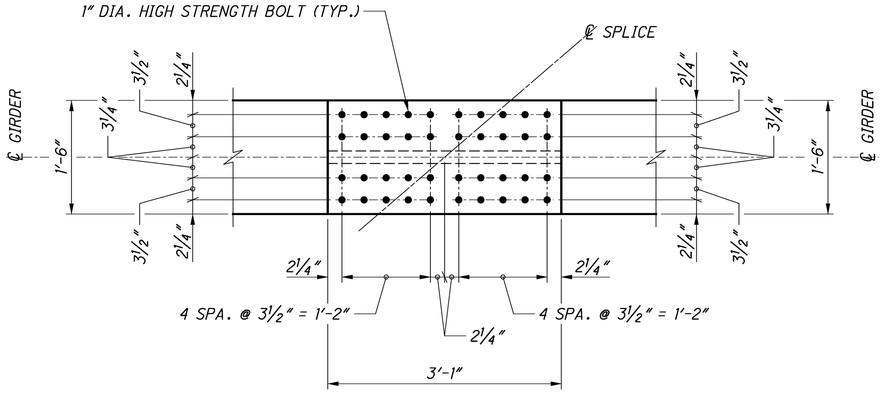
END DIAPHRAGM DETAILS - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

58/98

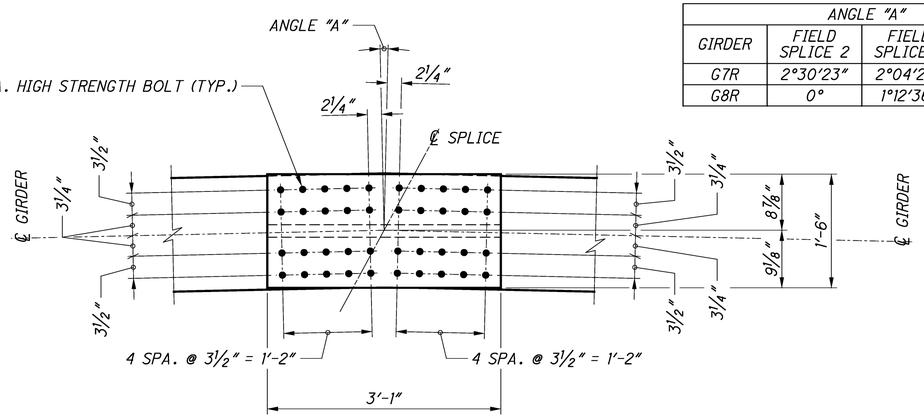
232/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD028.dgn 11/10/2010 11:35:51 AM mtneiheisel



PLAN - FLANGE SPLICE - UNIT 6

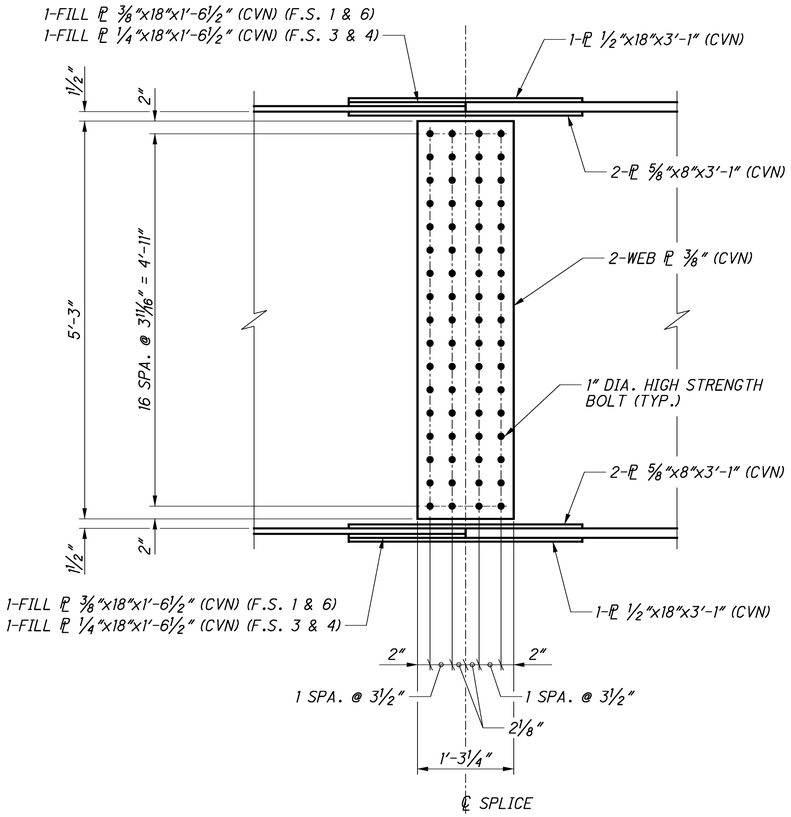
GIRDER 7R FIELD SPLICES 1, 5, & 6
GIRDER 8R FIELD SPLICES 1, 2, 5, & 6



ANGLE "A"			
GIRDER	FIELD SPLICE 2	FIELD SPLICE 3	FIELD SPLICE 4
G7R	2°30'23"	2°04'26"	0°51'26"
G8R	0°	1°12'36"	0°51'26"

PLAN - FLANGE SPLICE - UNIT 6

GIRDER 7R FIELD SPLICES 2, 3, & 4
GIRDER 8R FIELD SPLICES 3, & 4



ELEVATION - WEB SPLICE - UNIT 6

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
4. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
5. HIGH STRENGTH BOLTS SHALL BE 1" DIA. A325 TYPE 1 GALVANIZED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MSL	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102815	

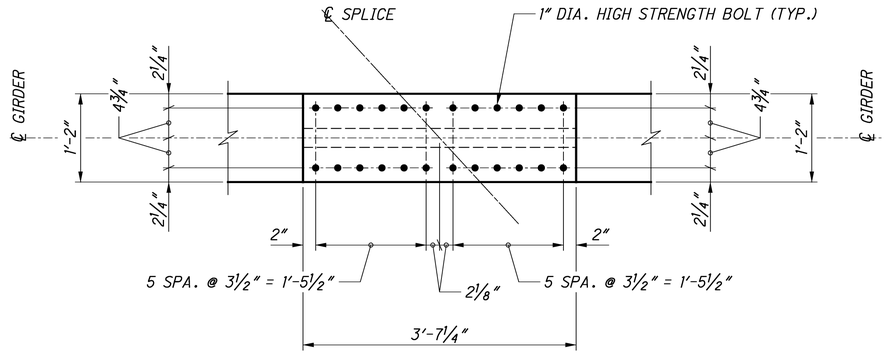
GIRDER SPLICE DETAILS - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

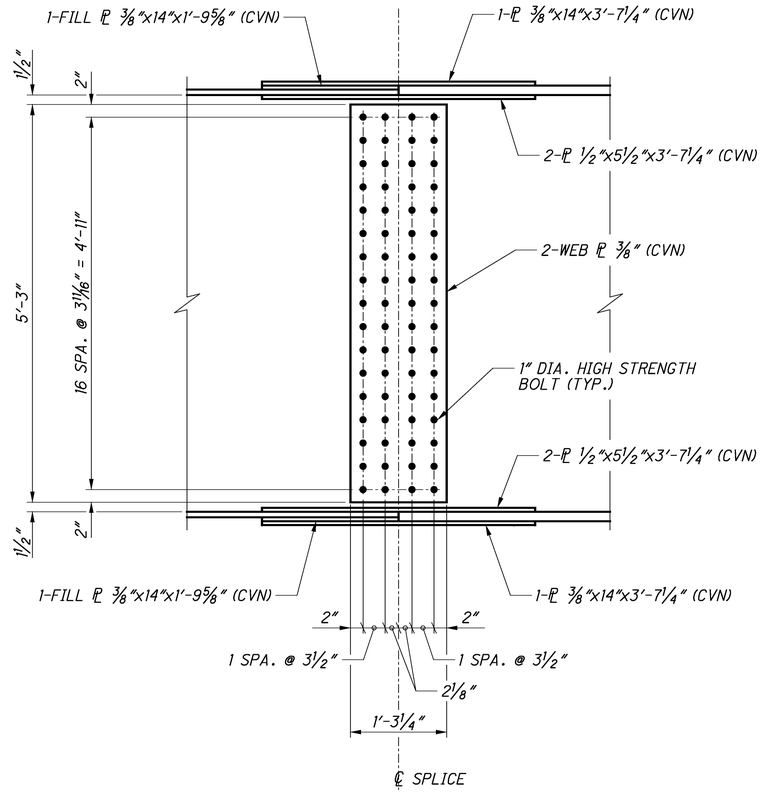
59/98

233/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD029.dgn 11/10/2010 11:35:52 AM mtneihetsel



PLAN - FLANGE SPLICE - UNIT 7



ELEVATION - WEB SPLICE - UNIT 7

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
4. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
5. HIGH STRENGTH BOLTS SHALL BE 1" DIA. A325 TYPE 1 GALVANIZED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MSL	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102815	

GIRDER SPLICE DETAILS - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

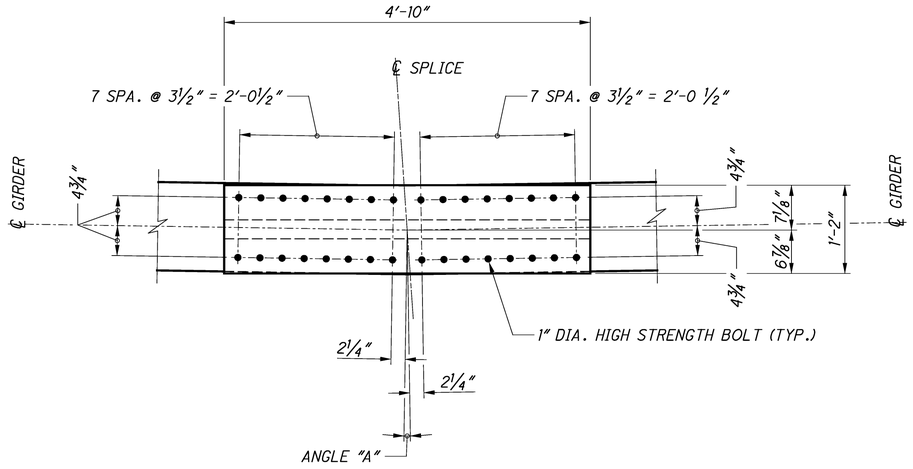
HAM-50-19.03
PID No. 75736

60/98

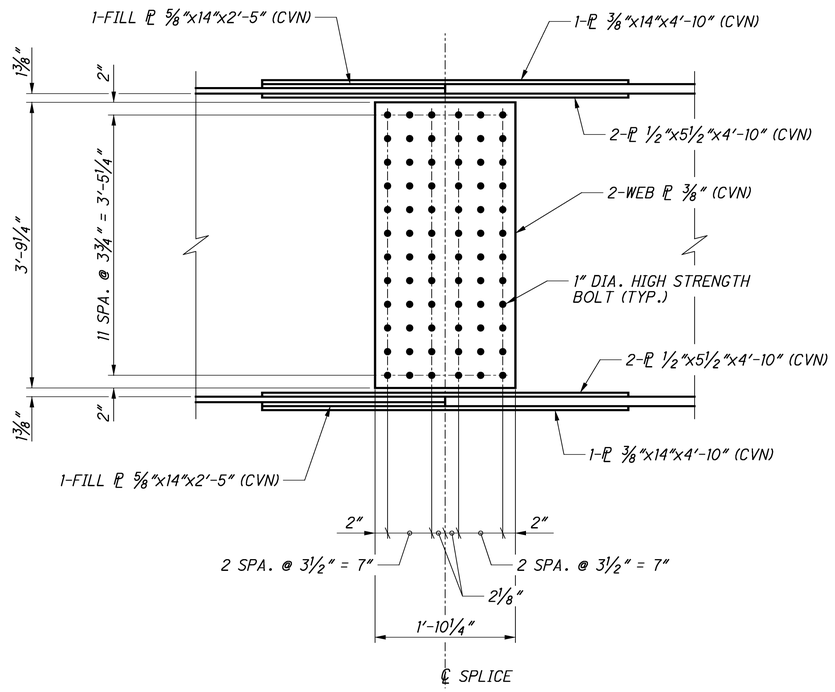
234/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD030.dgn 11/10/2010 11:35:53 AM mtneiheisel

ANGLE "A"				
GIRDER	FIELD SPLICE 11	FIELD SPLICE 12	FIELD SPLICE 13	FIELD SPLICE 14
G7R	1°04'56"	1°12'55"	1°42'49"	0°35'40"
G8R	1°14'56"	1°14'28"	1°46'35"	1°10'21"



PLAN - FLANGE SPLICE - UNIT 8



ELEVATION - WEB SPLICE - UNIT 8

NOTES:

1. FOR GENERAL NOTES SEE SHEET 8/98.
2. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
4. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.
5. HIGH STRENGTH BOLTS SHALL BE 1" DIA. A325 TYPE 1 GALVANIZED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MSL	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102815	

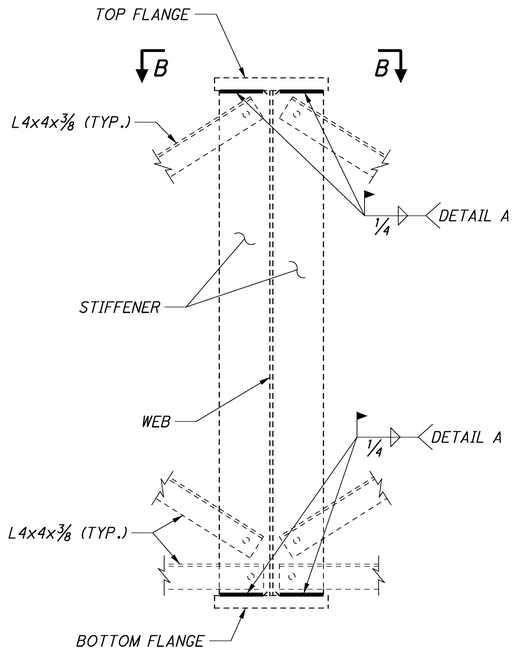
GIRDER SPLICE DETAILS - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

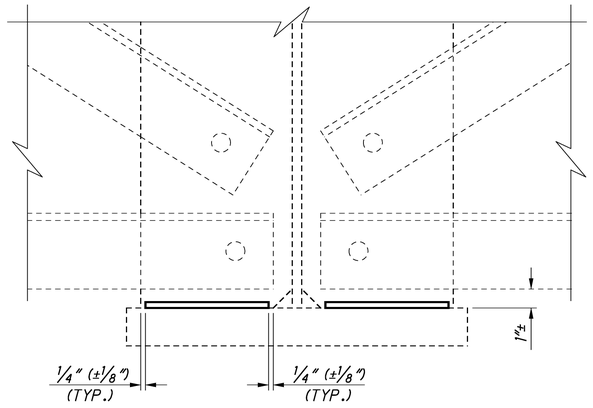
61/98

235/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD031.dgn 11/10/2010 11:35:55 AM mtreiheisel

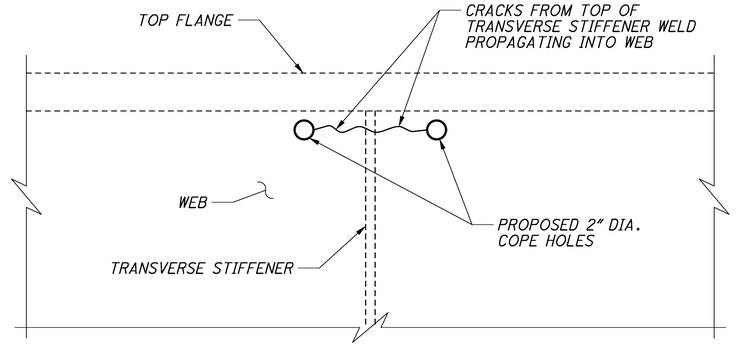


INTERMEDIATE CROSSFRAME STIFFENER RETROFIT DETAIL (TYPICAL ALL INTERMEDIATE CROSSFRAMES)

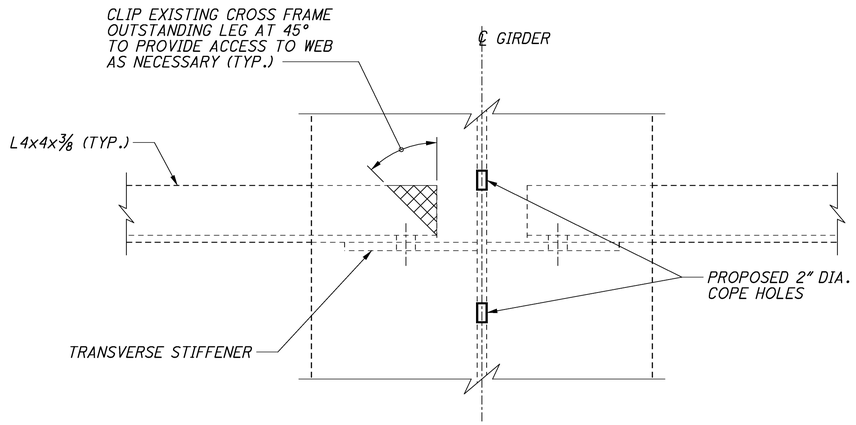


DETAIL A

(BOTTOM FLANGE SHOWN TOP FLANGE SIMILAR)



CRACK REPAIR DETAIL



VIEW B-B

NOTES:

1. FINAL LOCATION FOR CRACK REPAIR WILL BE DETERMINED IN THE FIELD BY THE ENGINEER AT TIME OF CONSTRUCTION.

2. FOR ADDITIONAL STIFFENER RETROFIT, AND CRACK REPAIR INFORMATION, SEE GENERAL NOTES SHEETS 8/98 AND 9/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

GIRDER CRACK REPAIR AND STIFFENER RETROFIT (RIGHT BRIDGE)

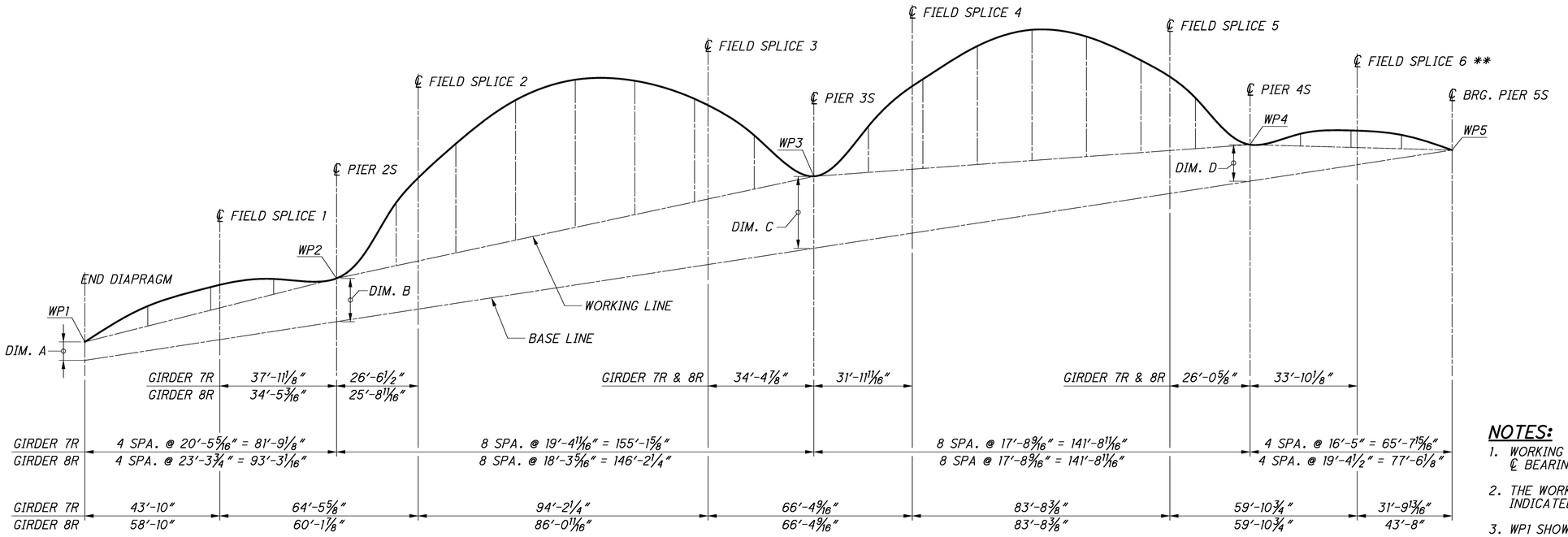
HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03

PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD026.dgn 11/10/2010 11:35:56 AM mtneihe1sel



CAMBER DIAGRAM

(UNIT 6 - SPANS 1S, 2S, 3S, & 4S)

WORK POINT DIMENSIONS				
MEMBER	DIM. A	DIM. B	DIM. C	DIM. D
GIRDER 7R	¾″	21¹¹⁄₁₆″	35¹⁄₁₆″	17¾″
GIRDER 8R	⁹⁄₁₆″	21⅜″	34⅞″	20³⁄₁₆″

* DOES NOT INCLUDE FUTURE WEARING SURFACE

** GIRDER 7R IS SHOWN. FIELD SPLICE 6 OF GIRDER 8R FALLS BEFORE THE ½ MARK.

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. WP1 SHOWS THE INITIAL POSITION OF THE GIRDER END PRIOR TO SUPPORT DEFLECTION.
4. DIMENSION A IS THE DEFLECTION DUE TO GIRDER SELF WEIGHT, NON-COMPOSITE DEAD LOAD, AND COMPOSITE DEAD LOAD AT THE END SUPPORT.
5. THE BASE LINE IS A STRAIGHT LINE BETWEEN THE FINAL POSITION OF WP1 & WP5.
6. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
7. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION, (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DEFLECTION AND CAMBER TABLE (VALUE INCHES)

HAM-50-1903R GIRDER 7R (EXT.)	END DIAPH.	SPAN 1S				PIER 2S	SPAN 2S									PIER 3S	SPAN 3S									PIER 4S	SPAN 4S				PIER 5S
		1/4	1/2	SPLICE 1	3/4		1/8	SPLICE 2	1/4	3/8	1/2	5/8	3/4	SPLICE 3	7/8		1/8	SPLICE 4	1/4	3/8	1/2	5/8	3/4	SPLICE 5	7/8		1/4	1/2	SPLICE 6	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	-1/16	0	0	0	0	-1/8	-1/8	-1/4	-3/8	-3/8	-5/16	-3/16	-3/16	-1/16	0	-1/16	-3/16	-3/16	-5/16	-3/8	-5/16	-1/4	-3/16	-1/8	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	0	1/16	1/16	1/8	0	-3/8	-9/16	-13/16	-1 1/8	-1 1/4	-1	-9/16	-1/2	-3/16	0	-1/4	-9/16	-5/8	-1	-1 3/16	-1 1/16	-3/4	-1/2	-5/16	0	1/16	1/16	1/16	0	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/8	-1/8	-1/8	-1/16	-1/16	0	0	0	-1/16	-1/16	-1/8	-1/8	-1/8	-1/16	-1/16	-1/16	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-1/16	1/16	1/16	1/8	0	-9/16	-3/4	-1 1/8	-1 5/8	-1 3/4	-1 1/16	-1 3/16	-3/4	-1/4	0	-5/16	-1 3/16	-7/8	-1 7/16	-1 11/16	-1 1/2	-1 1/16	-3/4	-1/2	0	1/16	1/16	1/16	0	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/16	-1/16	-1/16	-1/8	0	9/16	3/4	1 1/8	1 5/8	1 3/4	1 1/16	1 3/16	3/4	1/4	0	5/16	1 3/16	7/8	1 1/16	1 11/16	1 1/2	1 1/16	3/4	1/2	0	-1/16	-1/16	-1/16	0	0
VERTICAL CURVE CORRECTION	0	3/4	1	1	3/4	0	2	2 5/8	3 5/16	4	4 1/4	4	3 5/16	3 1/16	1 15/16	0	1 9/16	2 9/16	2 3/4	3 3/8	3 5/8	3 3/8	2 11/16	2 3/16	1 9/16	0	9/16	3/4	3/4	9/16	0
TOTAL REQUIRED CAMBER	0	1 3/16	15/16	15/16	5/8	0	2 9/16	3 3/8	4 1/16	5 5/8	6	5 7/16	4 1/8	3 13/16	2 3/16	0	1 7/8	3 3/8	3 5/8	4 13/16	5 5/16	4 1/8	3 3/4	2 15/16	2 1/16	0	1/2	1 1/16	1 1/16	9/16	0

HAM-50-1903R GIRDER 8R (INT.)	END DIAPH.	SPAN 1S				PIER 2S	SPAN 2S									PIER 3S	SPAN 3S									PIER 4S	SPAN 4S				PIER 5S
		1/4	1/2	SPLICE 1	3/4		1/8	SPLICE 2	1/4	3/8	1/2	5/8	3/4	SPLICE 3	7/8		1/8	SPLICE 4	1/4	3/8	1/2	5/8	3/4	SPLICE 5	7/8		1/4	SPLICE 6	1/2	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	-1/16	-1/16	-1/16	0	0	-1/16	-1/8	-3/16	-1/4	-5/16	-1/4	-1/8	-1/8	-1/16	0	-1/16	-1/8	-3/16	-1/4	-5/16	-1/4	-3/16	-1/8	-1/16	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-3/16	-1/8	-1/16	1/16	0	-1/4	-7/16	-5/8	-15/16	-1	-1 3/16	-1/2	-7/16	-3/16	0	-3/16	-1/2	-9/16	-1/8	-1	-15/16	-5/8	-7/16	-1/4	0	0	-1/16	-1/8	-1/8	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	-1/16	-1/16	0	0	0	0	-1/16	-1/16	-1/16	-1/8	-1/16	-1/16	-1/16	0	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-5/16	-1/4	-1/8	1/16	0	-5/16	-5/8	-7/8	-1 1/4	-1 7/16	-1 1/8	-1 1/16	-5/8	-1/4	0	-1/4	-1 1/16	-1 3/16	-1 3/16	-1 3/8	-1 1/4	-7/8	-5/8	-5/16	0	0	-1/16	-1/8	-1/8	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	5/16	1/4	1/8	-1/16	0	5/16	5/8	7/8	1 1/4	1 7/16	1 1/8	1 1/16	5/8	1/4	0	1/4	1 1/16	1 3/16	1 3/16	1 3/8	1 1/4	7/8	5/8	5/16	0	0	1/16	1/8	1/8	0
VERTICAL CURVE CORRECTION	0	15/16	1 1/4	1 3/16	15/16	0	1 3/8	1 7/8	2 7/16	3 1/16	3 5/16	3 3/16	2 5/8	2 1/2	1 9/16	0	1 9/16	2 1/2	2 11/16	3 3/8	3 5/8	3 3/8	2 11/16	2 3/16	1 9/16	0	13/16	1 1/16	1 1/16	13/16	0
TOTAL REQUIRED CAMBER	0	1 1/4	1 1/2	1 5/16	7/8	0	1 11/16	2 1/2	3 5/16	4 5/16	4 3/4	4 5/16	3 5/16	3 1/8	1 13/16	0	1 13/16	3 3/16	3 1/2	4 9/16	5	4 5/8	3 9/16	2 13/16	1 7/8	0	13/16	1 1/8	1 3/16	15/16	0

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

DEFLECTION AND CAMBER TABLES - UNIT 6 (RIGHT BRIDGE)

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03

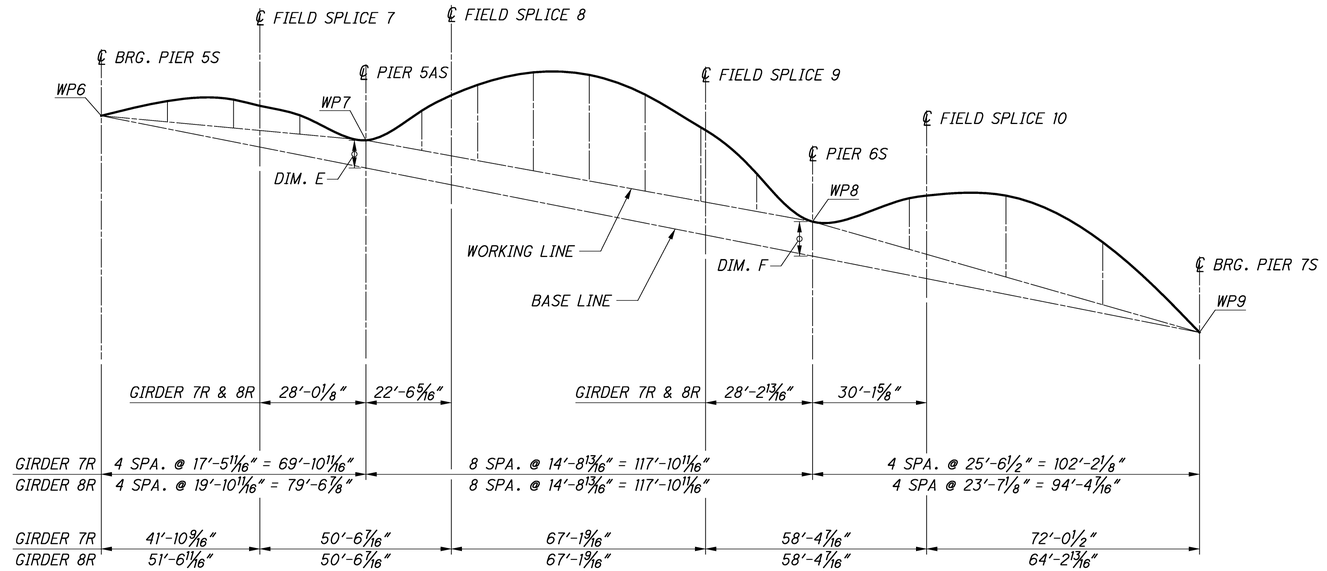
PID No. 75736

63/98

237/442

11/10/2010 11:35:57 AM mtneiheisel

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD001.dgn



CAMBER DIAGRAM

(UNIT 7 - SPANS 5S, 5AS, & 6S)

WORK POINT DIMENSIONS		
MEMBER	DIM. E	DIM. F
GIRDER 7R	10¹⁵⁄₁₆″	13⅝″
GIRDER 8R	12″	13³⁄₁₆″

DEFLECTION AND CAMBER TABLE (VALUE INCHES)

HAM-50-1903R GIRDER 7R (EXTERIOR)	PIER 5S	SPAN 5S				PIER 5AS	SPAN 5AS									PIER 6S	SPAN 6S				PIER 7S
		1/4	1/2	SPLICE 7	3/4		1/8	SPLICE 8	1/4	3/8	1/2	5/8	3/4	SPLICE 9	7/8		1/4	SPLICE 10	1/2	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	0	0	0	0	0	-1/16	-1/16	-1/8	-3/16	-3/16	-3/16	-1/8	-1/8	-1/16	0	-1/16	-1/16	-3/16	-1/8	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/16	-1/16	0	0	0	-3/16	-5/16	-7/16	-11/16	-3/4	-5/8	-7/16	-3/8	-1/8	0	-1/4	-5/16	-5/8	-9/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0	0	0	-1/16	-1/16	-1/16	0
TOTAL DEAD LOAD DEFLECTION	0	-1/16	-1/16	0	0	0	-1/4	-7/16	-5/8	-15/16	-1	-7/8	-5/8	-9/16	-3/16	0	-5/16	-7/16	-7/8	-3/4	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/16	1/16	0	0	0	1/4	7/16	5/8	15/16	1	7/8	5/8	9/16	3/16	0	5/16	7/16	7/8	3/4	0
VERTICAL CURVE CORRECTION	0	5/8	7/8	13/16	5/8	0	1 1/16	1 9/16	1 1/8	2 5/16	2 1/2	2 5/16	1 7/8	1 13/16	1 1/16	0	1 3/8	1 1/2	1 13/16	1 5/16	0
TOTAL REQUIRED CAMBER	0	11/16	15/16	13/16	5/8	0	1 5/16	2	2 1/2	3 1/4	3 1/2	3 3/16	2 1/2	2 3/8	1 1/4	0	1 11/16	1 15/16	2 11/16	2 1/16	0

HAM-50-1903R GIRDER 8R (INTERIOR)	PIER 5S	SPAN 5S				PIER 5AS	SPAN 5AS									PIER 6S	SPAN 6S				PIER 7S
		1/4	1/2	SPLICE 7	3/4		1/8	SPLICE 8	1/4	3/8	1/2	5/8	3/4	SPLICE 9	7/8		1/4	SPLICE 10	1/2	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	-1/16	-1/16	0	0	0	-1/16	-1/16	-1/8	-1/8	-1/8	-1/8	-1/16	-1/16	-1/16	0	-1/16	-1/16	-1/8	-1/8	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-3/16	-3/16	-1/8	-1/16	0	-3/16	-5/16	-7/16	-5/8	-11/16	-5/8	-3/8	-3/8	-1/8	0	-1/4	-5/16	-1/2	-1/2	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/16	0	0	0	0	0	0	-1/16	-1/16	0
TOTAL DEAD LOAD DEFLECTION	0	-1/4	-1/4	-1/8	-1/16	0	-1/4	-3/8	-5/8	-13/16	-1/8	-13/16	-7/16	-7/16	-3/16	0	-5/16	-3/8	-11/16	-11/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/4	1/4	1/8	1/16	0	1/4	3/8	5/8	13/16	1/8	13/16	7/16	7/16	3/16	0	5/16	3/8	11/16	11/16	0
VERTICAL CURVE CORRECTION	0	7/8	1 1/8	1 1/16	7/8	0	1 1/16	1 1/2	1 7/8	2 5/16	2 1/2	2 5/16	1 7/8	1 13/16	1 1/16	0	1 1/8	1 5/16	1 7/8	1 1/16	0
TOTAL REQUIRED CAMBER	0	1 1/8	1 3/8	1 3/16	15/16	0	1 5/16	1 7/8	2 1/2	3 1/8	3 3/8	3 1/8	2 5/16	2 1/4	1 1/4	0	1 1/16	1 11/16	2 9/16	1 3/4	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP6 & WP9.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION, (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

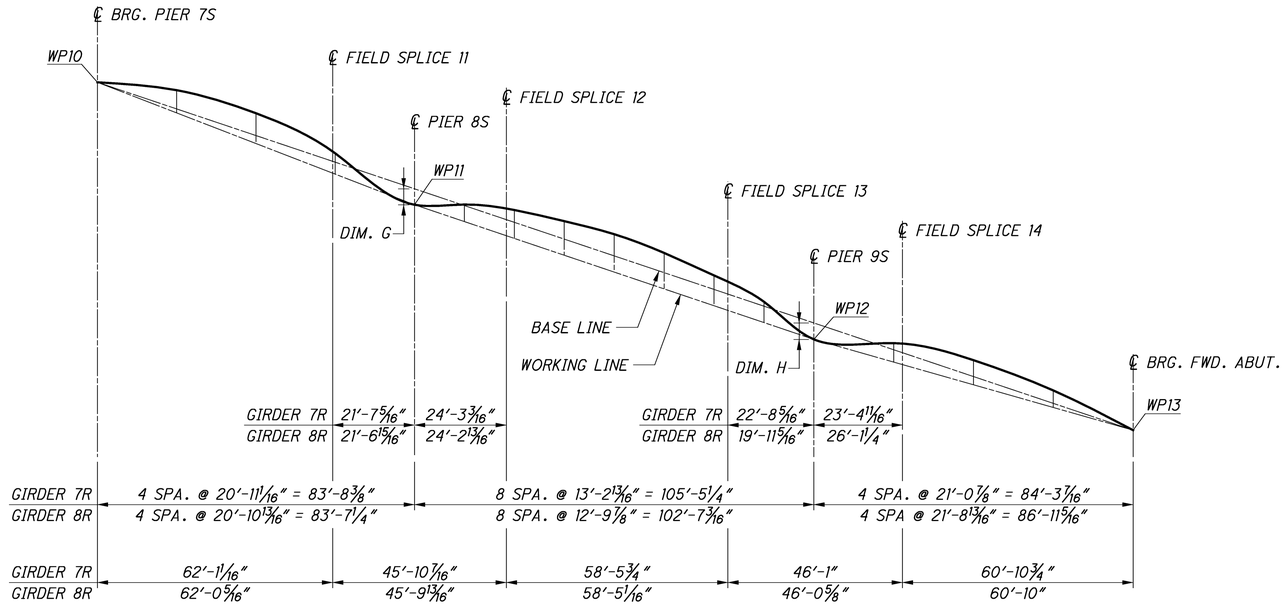
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

DEFLECTION AND CAMBER TABLES - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD002.dgn 11/10/2010 11:35:59 AM mtneiheisel



CAMBER DIAGRAM

(UNIT 8 - SPANS 7S, 8S, & 9S)

WORK POINT DIMENSIONS		
MEMBER	DIM. G	DIM. H
GIRDER 7R	-5/16"	-1/2"
GIRDER 8R	5/16"	1/2"

DEFLECTION AND CAMBER TABLE (VALUE INCHES)

HAM-50-1903R GIRDER 7R (EXTERIOR)	PIER 7S	SPAN 7S				PIER 8S	SPAN 8S									PIER 9S	SPAN 9S				FWD. ABUT.
		1/4	1/2	SPLICE 11	3/4		1/8	SPLICE 12	1/4	3/8	1/2	5/8	3/4	SPLICE 13	7/8		1/4	SPLICE 14	1/2	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	-1/8	-1/8	-1/16	-1/16	0	0	-1/16	-1/16	-1/8	-1/8	-1/8	-1/16	-1/16	0	0	-1/16	-1/16	-1/8	-1/8	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/2	-5/8	-5/16	-1/4	0	-1/16	-1/4	-1/4	-7/16	-9/16	-1/2	-5/16	-1/4	-1/8	0	-3/16	-1/4	-1/2	-3/8	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	-1/16	-1/16	0	0	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0	0	0	-1/16	-1/16	-1/16	-1/16	0
TOTAL DEAD LOAD DEFLECTION	0	-11/16	-13/16	-3/8	-5/16	0	-1/16	-3/8	-3/8	-5/8	-3/4	-11/16	-7/16	-5/16	-1/8	0	-5/16	-3/8	-11/16	-9/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	11/16	13/16	3/8	5/16	0	1/16	3/8	3/8	5/8	3/4	11/16	7/16	5/16	1/8	0	5/16	3/8	11/16	9/16	0
GEOMETRIC CAMBER ADJUSTMENT	0	-1/16	-1/16	0	0	0	0	1/16	1/16	0	0	0	1/16	1/8	1/16	0	-1/16	-1/8	-1/8	-1/8	0
TOTAL REQUIRED CAMBER	0	5/8	3/4	3/8	5/16	0	1/16	7/16	7/16	5/8	3/4	11/16	1/2	7/16	3/16	0	1/4	1/4	9/16	7/16	0

HAM-50-1903R GIRDER 8R (INTERIOR)	PIER 7S	SPAN 7S				PIER 8S	SPAN 8S									PIER 9S	SPAN 9S				FWD. ABUT.
		1/4	1/2	SPLICE 11	3/4		1/8	SPLICE 12	1/4	3/8	1/2	5/8	3/4	SPLICE 13	7/8		1/4	SPLICE 14	1/2	3/4	
DEFLECTION DUE TO GIRDER SELF WEIGHT	0	-1/8	-1/8	-1/16	-1/16	0	0	-1/16	-1/16	-1/8	-1/8	-1/8	-1/16	-1/16	0	0	-1/16	-1/16	-1/8	-1/8	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/2	-5/8	-5/16	-5/16	0	-1/16	-1/4	-1/4	-7/16	-1/2	-1/2	-5/16	-3/16	-1/8	0	-3/16	-1/4	-1/2	-7/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	-1/16	-1/16	0	0	0	0	0	0	-1/16	-1/16	-1/16	-1/16	0	0	0	0	-1/16	-1/16	-1/16	0
TOTAL DEAD LOAD DEFLECTION	0	-11/16	-13/16	-3/8	-3/8	0	-1/16	-5/16	-5/16	-5/8	-11/16	-11/16	-7/16	-1/4	-1/8	0	-1/4	-3/8	-11/16	-5/8	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	11/16	13/16	3/8	3/8	0	1/16	5/16	5/16	5/8	11/16	11/16	7/16	1/4	1/8	0	1/4	3/8	11/16	5/8	0
GEOMETRIC CAMBER ADJUSTMENT	0	-1/16	0	1/16	1/16	0	1/16	1/16	1/16	1/16	1/16	1/16	1/8	3/16	1/8	0	0	0	-1/16	-1/16	0
TOTAL REQUIRED CAMBER	0	5/8	13/16	7/16	7/16	0	1/8	3/8	3/8	11/16	3/4	3/4	9/16	7/16	1/4	0	1/4	3/8	5/8	9/16	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP10 & WP13.
4. CAMBER DIAGRAM SHOWS GIRDER 7R WITH NEGATIVE WORK POINT DIMENSIONS FROM THE BASE LINE FOR G AND H.
5. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
6. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION, (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

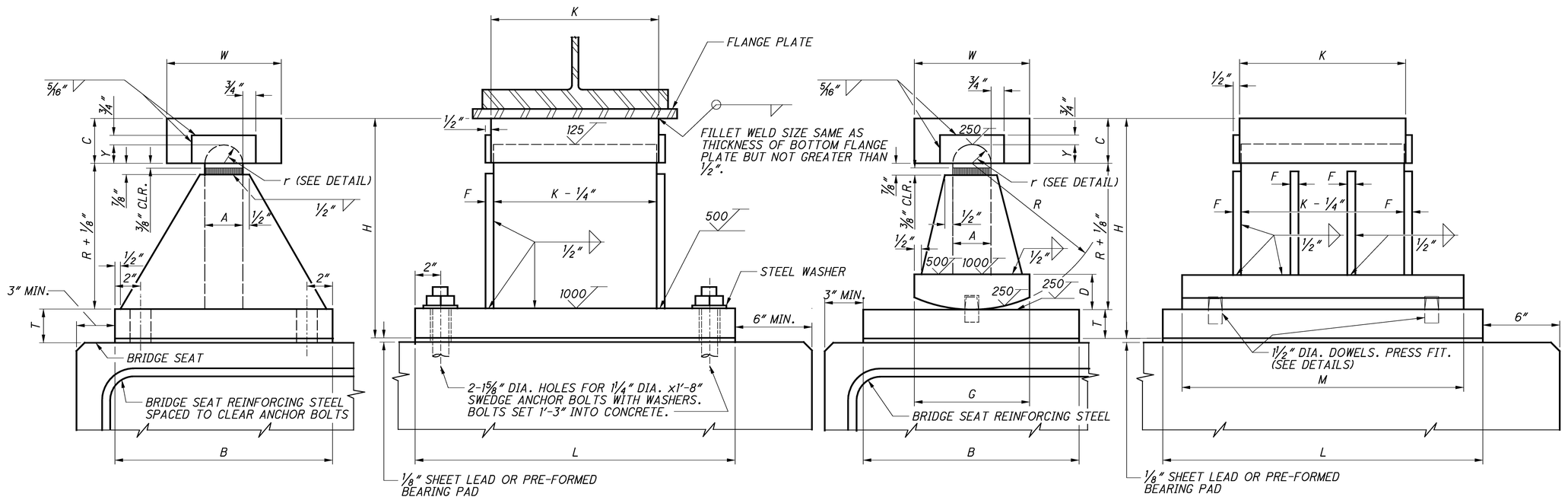
DEFLECTION AND CAMBER TABLES - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

65 / 98

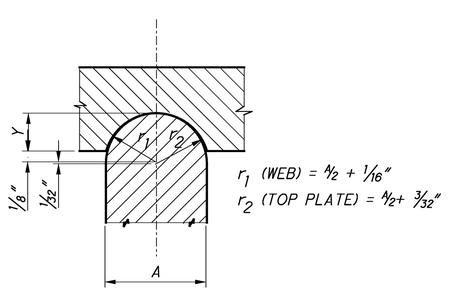
239 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD003.dgn 11/10/2010 11:36:00 AM mtneiheisel

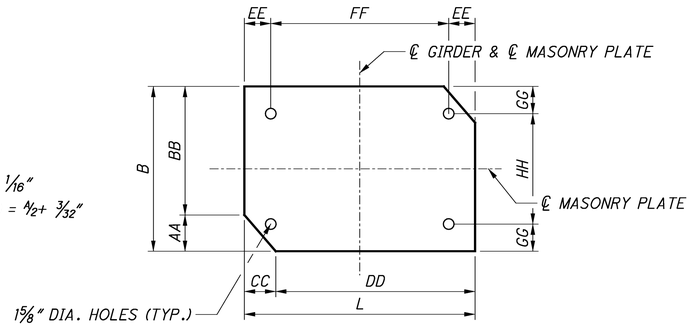


STRUCTURAL STEEL BOLSTER
SEE TABLE BELOW FOR ADDITIONAL DIMENSIONS

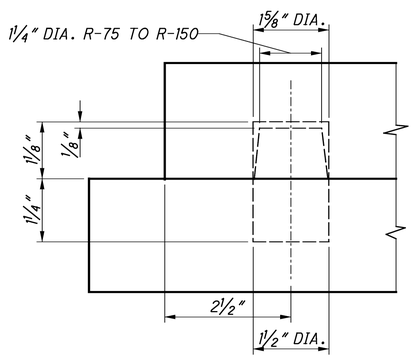
STRUCTURAL STEEL ROCKER
SEE TABLE BELOW FOR ADDITIONAL DIMENSIONS



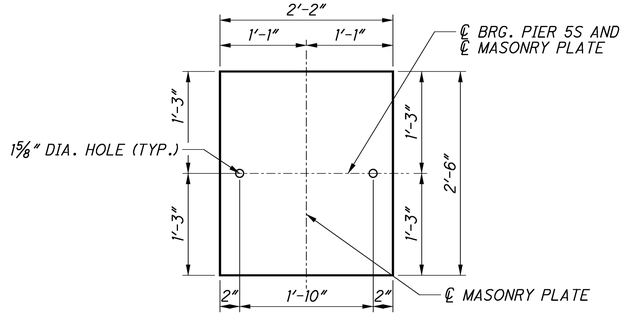
TOP BEARING DETAIL



MASONRY PLATE PLAN DETAILS
SEE TABLE FOR ADDITIONAL DIMENSIONS



DOWEL DETAIL



DETAIL A - COMMON MASONRY PLATE (PIER 5S)

BOLSTER NO.	ROCKER NO.	DIMENSIONS												
		A	B	C	D	F	G	H	K	L	M	R	T	W	Y
B-400	R-400	4 1/2"	24"	6 1/2"	4"	7/8"	14 1/2"	25 1/8"	16 1/2"	33"	30"	14 1/2"	4"	16"	2 3/16"
B-450	R-450	4 1/2"	25"	6 3/4"	4 1/2"	1"	16"	26 3/8"	16 1/2"	35"	27"	15 1/2"	4"	16"	2 3/16"

NOTE: COMMON MASONRY PLATE USED AT PIER 5S. SEE DETAL A THIS SHEET FOR PLAN GEOMETRY OF COMMON MASONRY PLATE. THICKNESS OF COMMON MASONRY PLATE WILL MATCH THAT DESCRIBED BY STD. DWG. NO. RB-1-55 FOR THE R-175 BEARING.

PIER LOCATION	BRG. TYPE	DIMENSIONS							
		AA	BB	CC	DD	EE	FF	GG	HH
2S	R-300	-	-	-	-	-	-	-	-
3S	B-450	5 3/8"	1'-7 5/8"	4 3/4"	2'-6 1/4"	4"	2'-3"	4 1/8"	1'-4 3/4"
4S	R-450	5 3/8"	1'-7 5/8"	4 3/4"	2'-6 1/4"	-	-	-	-
5S	R-175	-	-	-	-	-	-	-	-
5AS	B-400	-	-	-	-	-	-	-	-
6S	R-400	-	-	-	-	-	-	-	-
7S	R-175	-	-	-	-	-	-	-	-
8S	B-300	-	-	-	-	-	-	-	-
9S	R-275	-	-	-	-	-	-	-	-
FWD. ABUT.	R-100	-	-	-	-	-	-	-	-

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

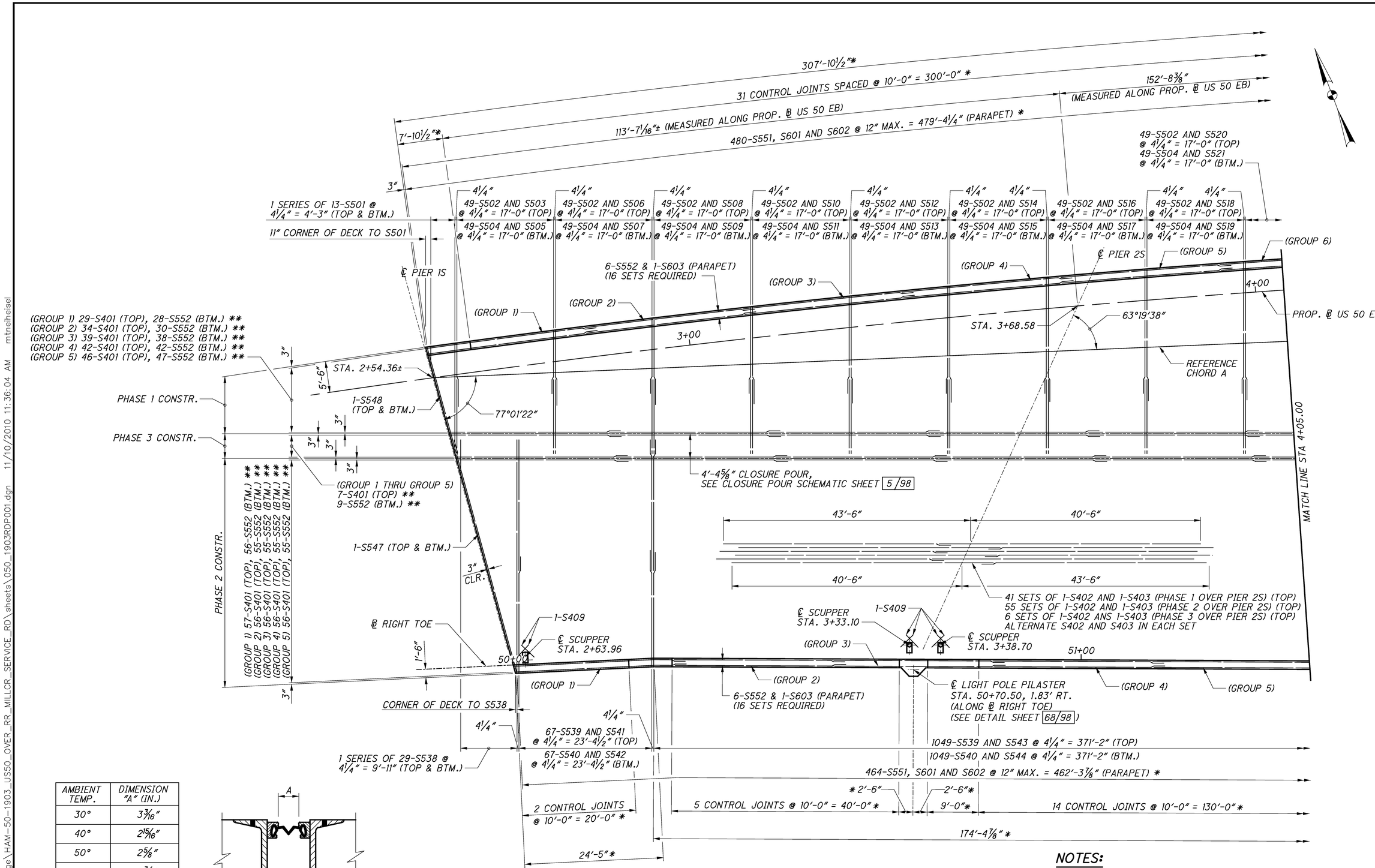
BEARING DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

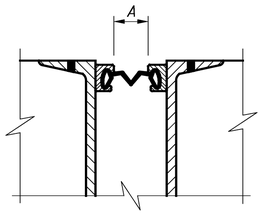
66 / 98

240
442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RBR001.dgn 11/10/2010 11:36:02 AM mtneiheisel



AMBIENT TEMP.	DIMENSION "A" (IN.)
30°	3 3/16"
40°	2 15/16"
50°	2 5/8"
60°	2 3/8"
70°	2 1/8"
80°	1 13/16"
90°	1 9/16"



STRIP SEAL DETAIL
(AT PIER 1S)

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

DECK PLAN
(UNIT 6)

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 8/98.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
3. FOR TRANSVERSE SECTION, SEE SHEET 76/98.
4. FOR GENERAL PLAN, SEE SHEETS 4/98 THRU 6/98.
5. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR AND EXISTING GIRDERS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

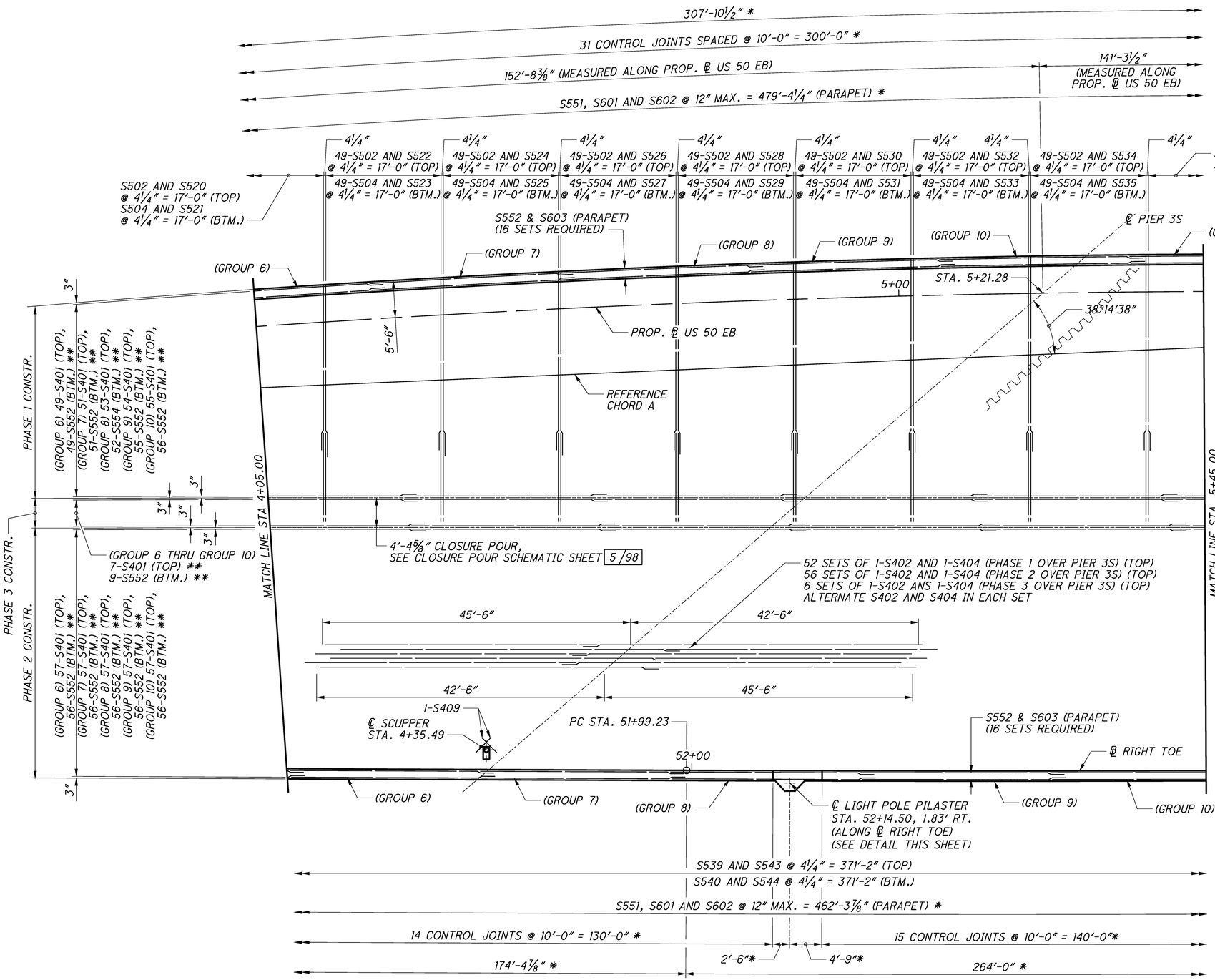
DECK PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

67/98

241/442

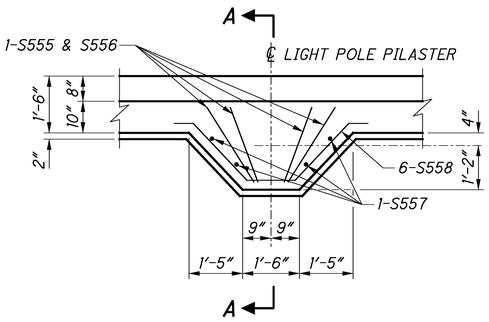
C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP001.dgn 11/10/2010 11:36:04 AM mtneiheisel



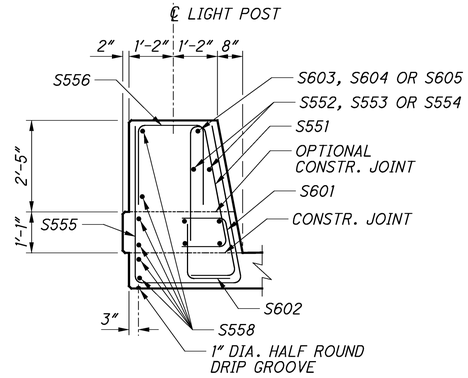
DECK PLAN
(UNIT 6)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"



LIGHT POLE PILASTER DETAIL
FOR ADDITIONAL DETAILS SEE STANDARD CONSTRUCTION DRAWING HL-20.14



SECTION A-A

NOTES:
1. FOR NOTES, SEE SHEET 67/98 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

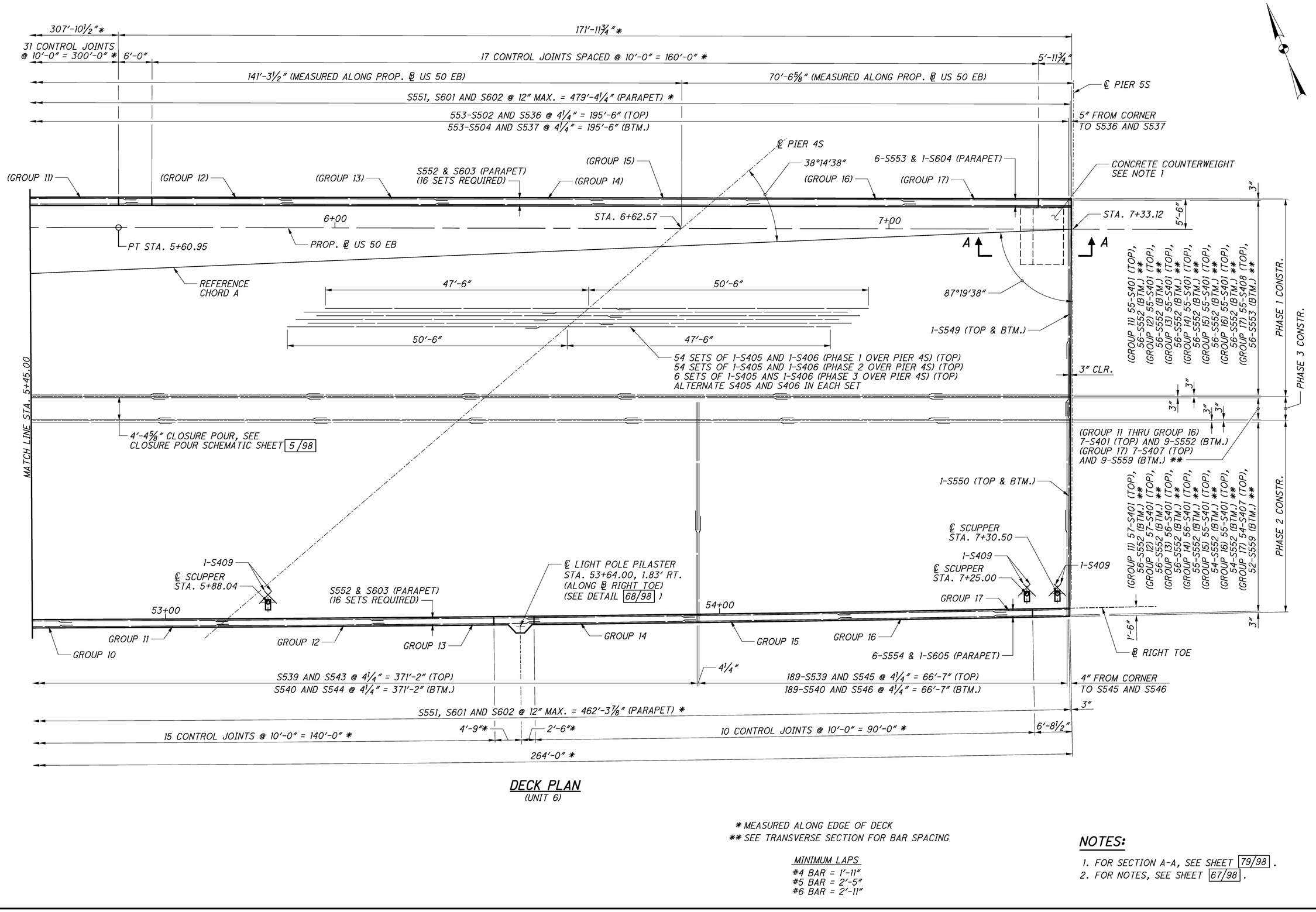
DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

DECK PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

68/98
242/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP002.dgn 11/10/2010 11:36:06 AM mtneihaisel



DECK PLAN
(UNIT 6)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR SECTION A-A, SEE SHEET 79/98 .
2. FOR NOTES, SEE SHEET 67/98 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

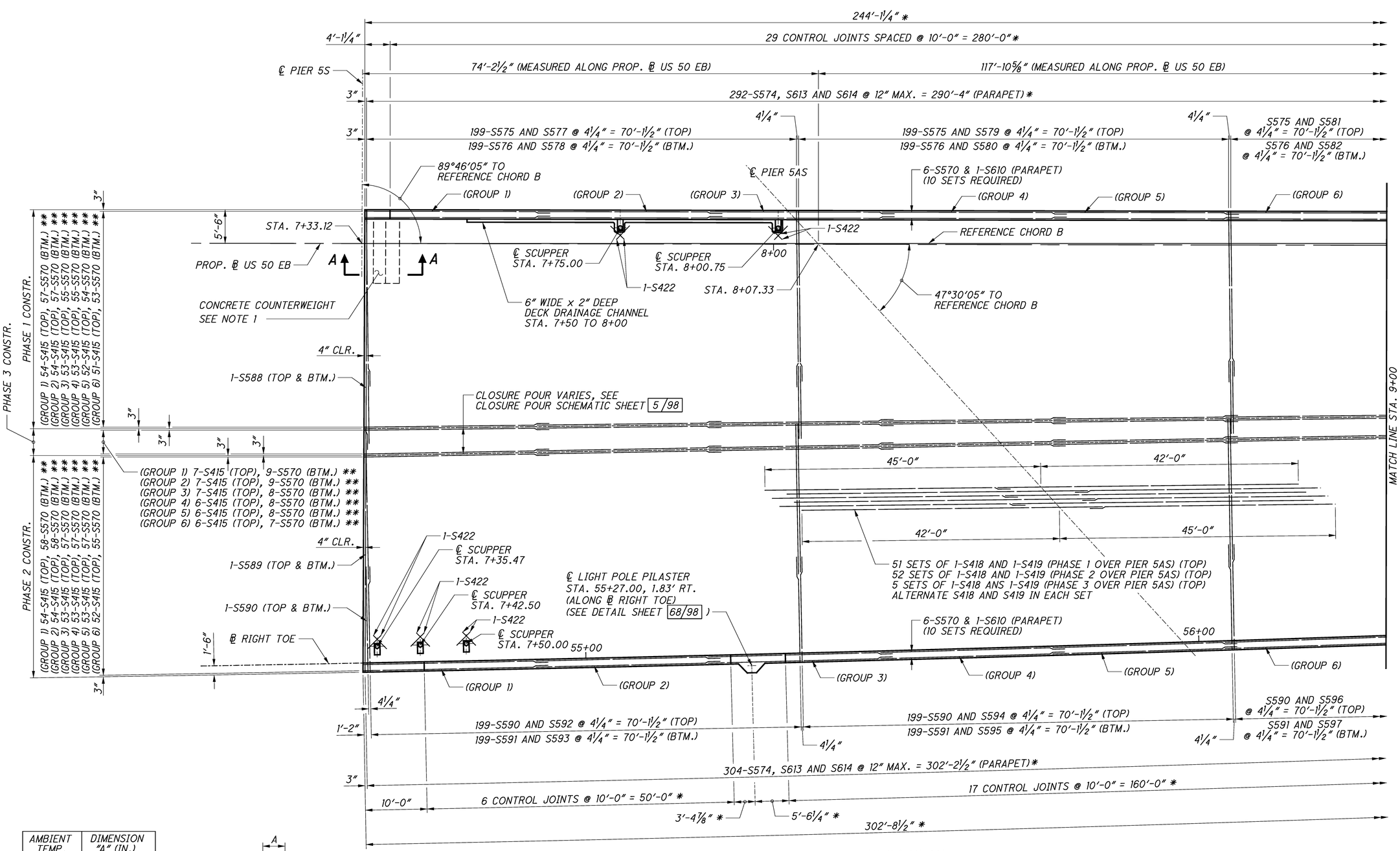
DECK PLAN - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

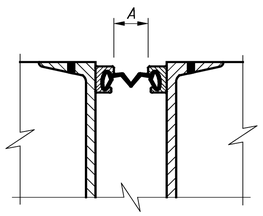
69/98

243/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP003.dgn 11/10/2010 11:36:07 AM mtneihetsel



AMBIENT TEMP.	DIMENSION "A" (IN.)
30°	3¼″
40°	2¹⁵⁄₁₆″
50°	2⁹⁄₁₆″
60°	2¼″
70°	1¹⁵⁄₁₆″
80°	1⁹⁄₁₆″
90°	1¼″



STRIP SEAL DETAIL
(AT PIER 5S)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1′-11″
#5 BAR = 2′-5″
#6 BAR = 2′-11″

DECK PLAN
(UNIT 7)

NOTES:

1. SECTION A-A, SEE SHEET 79/98.
2. FOR GENERAL NOTES, SEE SHEET 8/98.
3. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
4. FOR TRANSVERSE SECTION, SEE SHEET 77/98.
5. FOR GENERAL PLAN, SEE SHEETS 4/98 THRU 6/98.
6. TRANSVERSE REINFORCING IN PHASE 1 CONSTR. IS PLACED NORMAL TO PHASE 1 CLOSURE POUR LINE. TRANSVERSE REINFORCING IN PHASE 2 CONSTR. IS PLACED NORMAL TO PHASE 2 CLOSURE POUR LINE.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

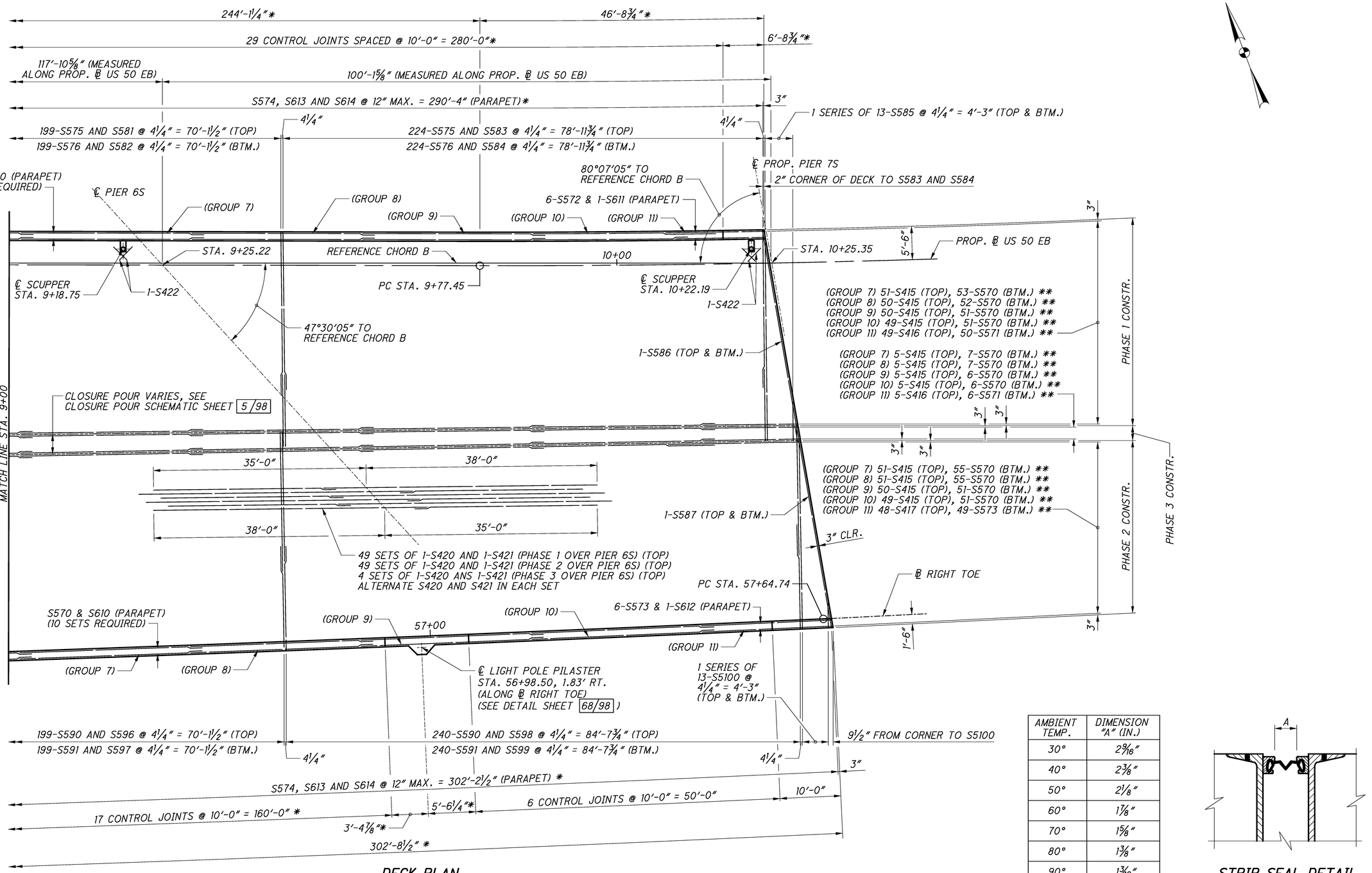
DECK PLAN - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

70/98

244/442

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP004.dgn 11/10/2010 11:36:09 AM mtneihaisel



DECK PLAN
(UNIT 7)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

AMBIENT TEMP.	DIMENSION "A" (IN.)
30°	2⁹⁄₁₆"
40°	2⅜"
50°	2⅛"
60°	1⅞"
70°	1⅝"
80°	1⅜"
90°	1³⁄₁₆"

STRIP SEAL DETAIL
(AT PIER 7S)

NOTES:
1. FOR NOTES, SEE SHEET 70/98 .

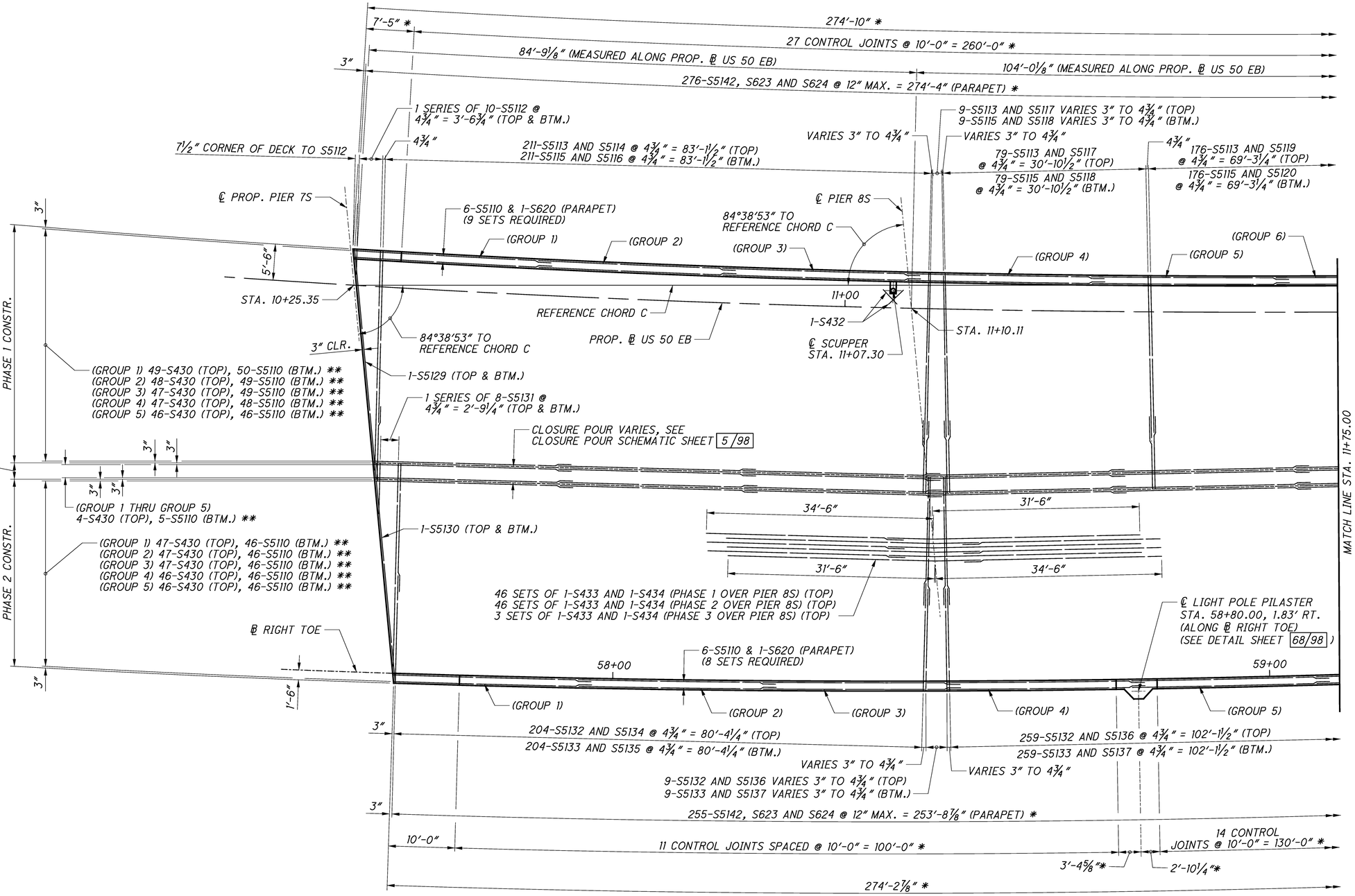
DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DESIGNED MTN | DRAWN JDG | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

DECK PLAN - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

71/98
245/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP005.dgn 11/10/2010 11:36:11 AM mtreiheisel



DECK PLAN
(UNIT 8)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 8/98.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
3. FOR TRANSVERSE SECTION, SEE SHEET 78/98.
4. FOR GENERAL PLAN, SEE SHEETS 4/98 THRU 5/98.
5. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR AND EXISTING GIRDERS.

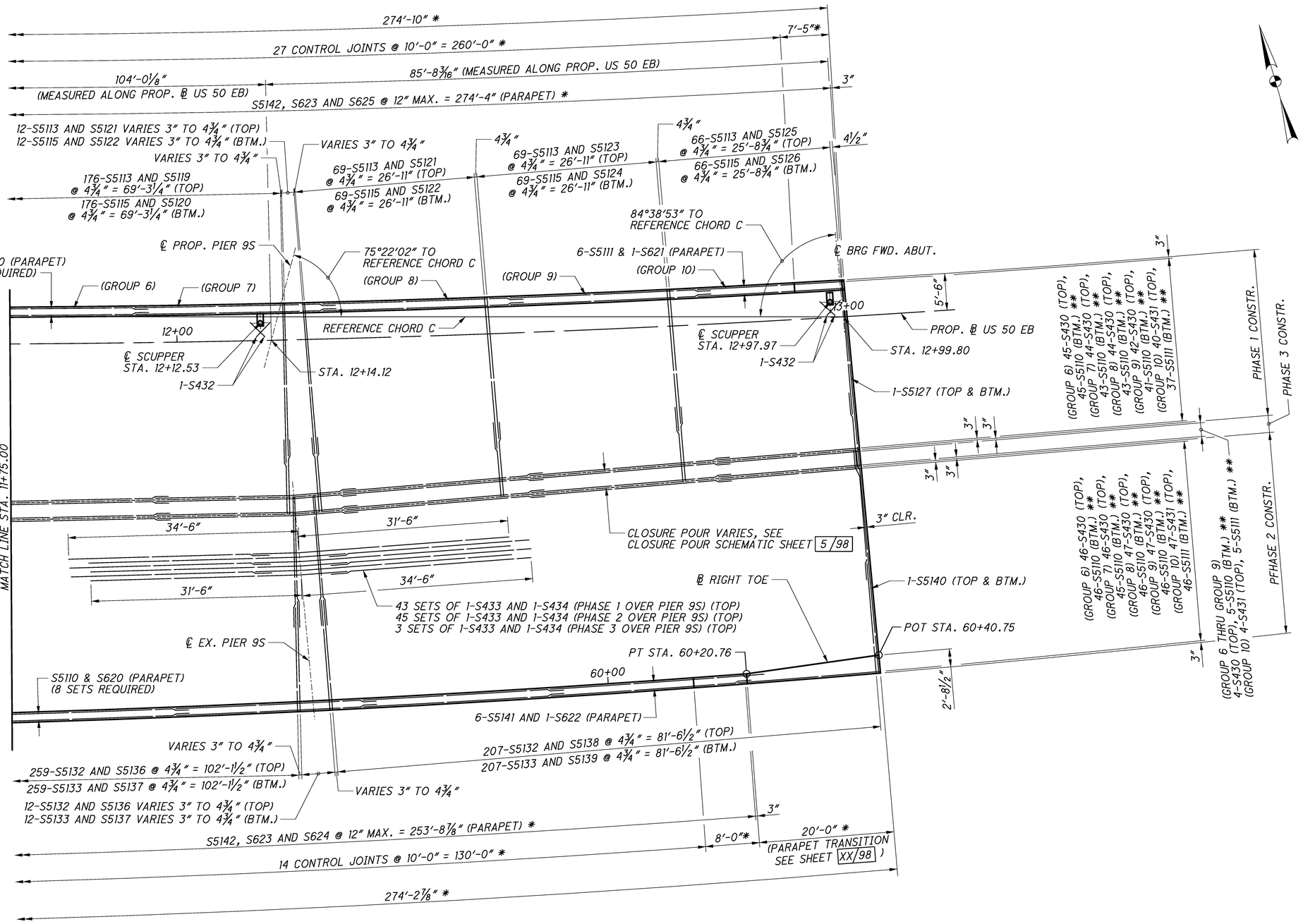
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

DECK PLAN - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP006.dgn 11/10/2010 11:36:13 AM mtneiheisel



DECK PLAN
(UNIT 8)

* MEASURED ALONG EDGE OF DECK
** SEE TRANSVERSE SECTION FOR BAR SPACING

MINIMUM LAPS
#4 BAR = 1'-11"
#5 BAR = 2'-5"
#6 BAR = 2'-11"

NOTES:

1. FOR NOTES, SEE SHEET 72/98 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

DECK PLAN - UNIT 8 (RIGHT BRIDGE)

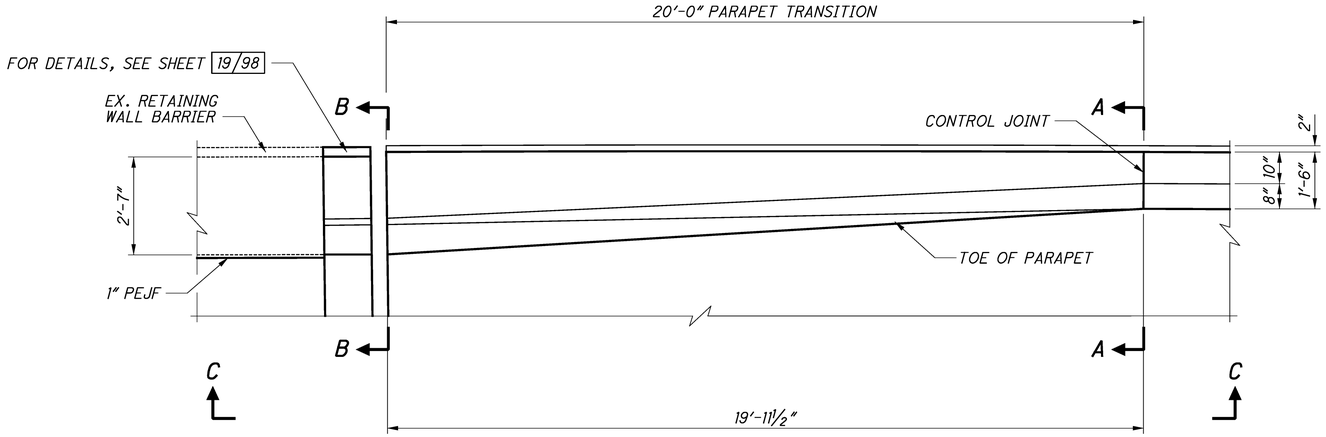
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

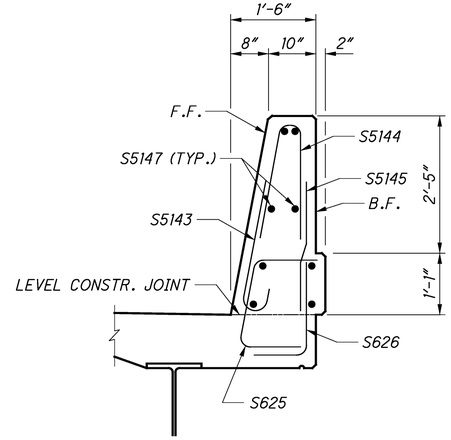
73/98

247/442

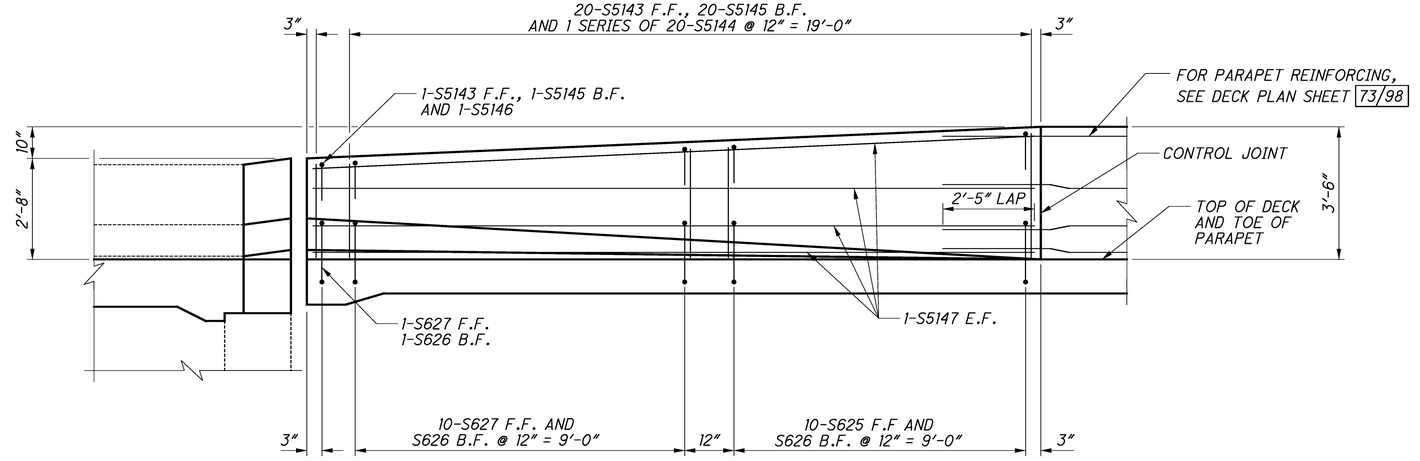
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP007.dgn 11/10/2010 11:36:14 AM mtneiheisel



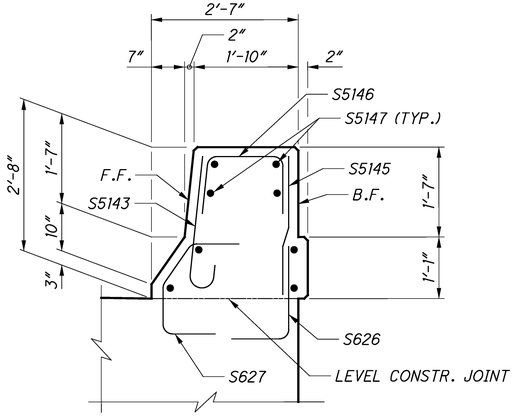
PARAPET TRANSITION PLAN



SECTION A-A



PARAPET TRANSITION ELEVATION
VIEW C-C



SECTION B-B

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP008.dgn 11/10/2010 11:36:16 AM mtneiheisel

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

PARAPET TRANSITION DETAILS - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

ANTICIPATED HAUNCH DEPTH

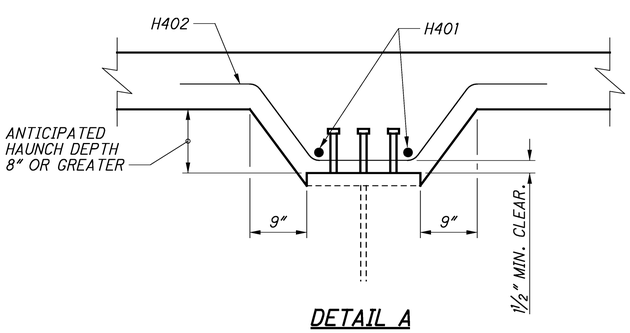
	UNIT 6				UNIT 7				UNIT 8			
	SPAN 1S	SPAN 2S	SPAN 3S	SPAN 4S	SPAN 5S	SPAN 5AS	SPAN 6S		SPAN 7S	SPAN 8S	SPAN 9S	
	PIER 1	PIER 2S	PIER 3S	PIER 4S	PIER 5S	PIER 5AS	PIER 6S	PIER 7S	PIER 7S	PIER 8S	PIER 9S	FWD. ABUT.
GIRDER 9	12 1/8"	8 1/8"	6 3/4"	9 5/16"	11 9/16"	9 3/16"	8 15/16"	10 15/16"	8 3/4"	7 7/16"	6 5/8"	4 1/16"
GIRDER 10	10 13/16"	7 3/4"	5 1/8"	7 9/16"	10 3/4"	8 3/16"	7 15/16"	9 13/16"	7 1/16"	5 1/8"	7 1/8"	4 3/4"
GIRDER 11	11"	6 1/8"	3 5/8"	5 3/16"	9 1/16"	6 3/4"	6 1/2"	8 3/8"	6 1/16"	4 11/16"	5 1/16"	4 5/8"
GIRDER 12	11 3/8"	5 9/16"	2 3/16"	4 1/8"	6 7/8"	5 1/8"	5 5/16"	6 7/8"	4 15/16"	3 3/8"	5 1/16"	3 5/16"
GIRDER 13	11 3/8"	5 3/8"	1 3/8"	2 5/8"	5 3/8"	3 5/8"	3 11/16"	5 13/16"	3 3/4"	1 15/16"	4 11/16"	3 3/8"
GIRDER 14	11 1/2"	4 3/16"	0"	1 5/8"	4 3/4"	3 1/16"	3 1/8"	4 15/16"	3"	1 1/16"	5 3/8"	3 3/4"

ESTIMATE OF REINFORCING

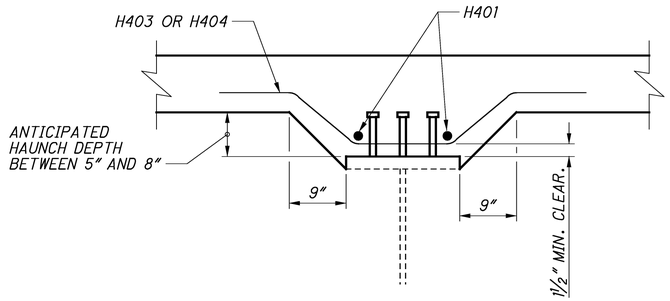
	SPAN 1S		SPAN 2S		SPAN 3S		SPAN 4S		SPAN 5S	
	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS
GIRDER 9	310-H402	8-H401	160-H402 229-H403	10-H401	220-H403 178-H402	10-H401	253-H402	8-H401	251-H402	8-H401
GIRDER 10	289-H402	8-H401	367-H403	10-H401	400-H403	10-H401	286-H402	8-H401	275-H402	8-H401
GIRDER 11	166-H402 104-H403	8-H401	156-H403	4-H401	-	-	89-H402 233-H403	8-H401	137-H402 163-H403	8-H401
GIRDER 12	144-H402 104-H403	8-H401	-	-	-	-	243-H403	6-H401	325-H403	8-H401
GIRDER 13	128-H402 100-H403	6-H401	-	-	-	-	-	-	-	-
GIRDER 14	99-H402 86-H403	6-H401	-	-	-	-	-	-	-	-

ESTIMATE OF REINFORCING

	SPAN 5AS		SPAN 6S		SPAN 7S		SPAN 8S		SPAN 9S	
	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS	HAUNCH STIRRUP	LONGITUDINAL BARS
GIRDER 9	332-H402	10-H401	251-H402	8-H401	212-H404	6-H401	266-H404	8-H401	160-H404	6-H401
GIRDER 10	328-H403	10-H401	233-H402	6-H401	214-H404	6-H401	266-H404	8-H401	192-H404	6-H401
GIRDER 11	328-H403	10-H401	214-H403	6-H401	176-H404	6-H401	158-H404	6-H401	116-H404	4-H401
GIRDER 12	325-H403	10-H401	199-H403	6-H401	-	-	-	-	-	-
GIRDER 13	-	-	69-H403	2-H401	-	-	-	-	-	-
GIRDER 14	-	-	-	-	-	-	-	-	-	-



DETAIL A



DETAIL B

NOTES:

1. HAUNCHES OVER 8 INCHES IN DEPTH SHALL BE REINFORCED AS SHOWN IN DETAIL A ON THIS SHEET. HAUNCHES BETWEEN 5" AND 8" IN DEPTH SHALL BE REINFORCED AS SHOWN IN DETAIL B ON THIS SHEET. HAUNCH STIRRUPS SHALL BE AT THE SAME SPACING AS THE TRANSVERSE DECK REINFORCING.
2. INCLUDE THE COST OF ADDITIONAL CONCRETE ASSOCIATED WITH VARIABLE DEPTH HAUNCH TREATMENT WITH ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN.
3. FOR REINFORCING LIST, SEE SHEETS 97/98 AND 98/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102815

HAUNCH DETAILS

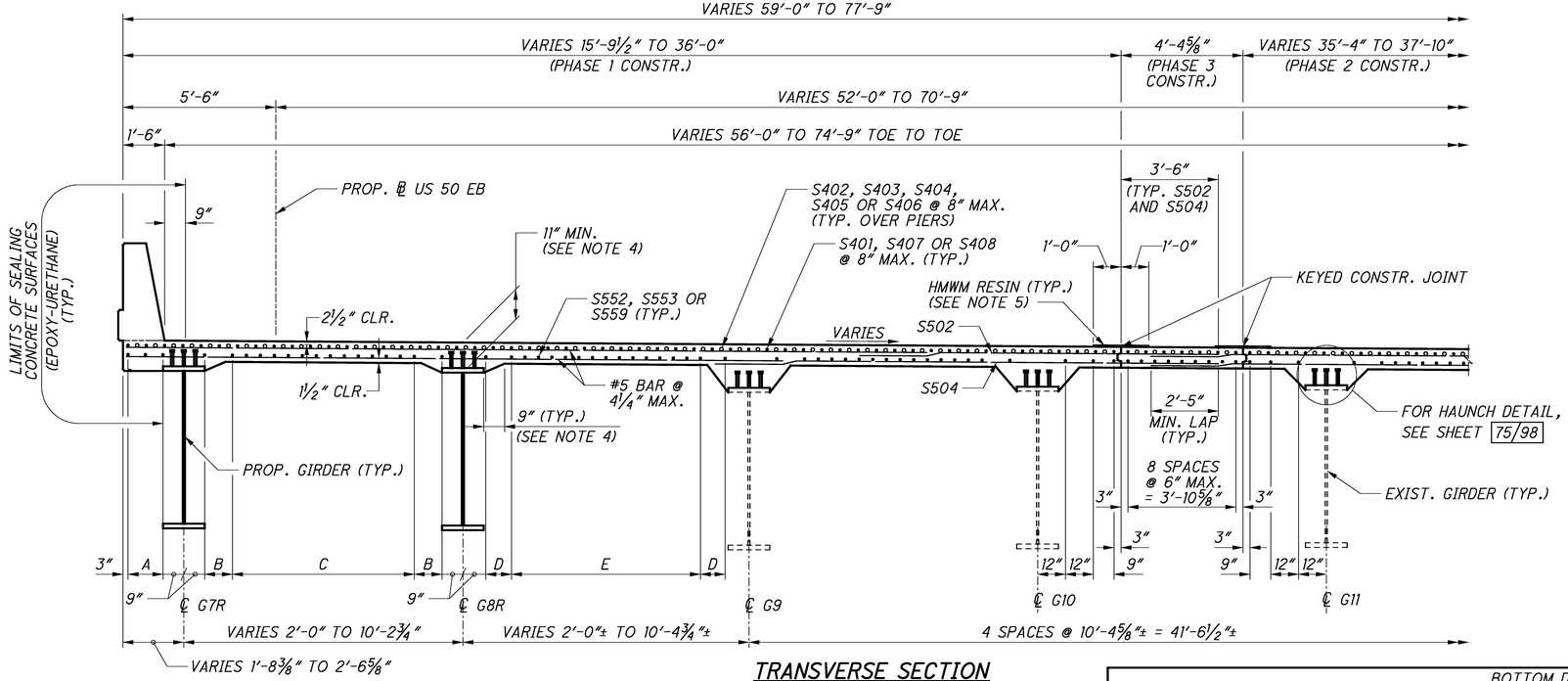
HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

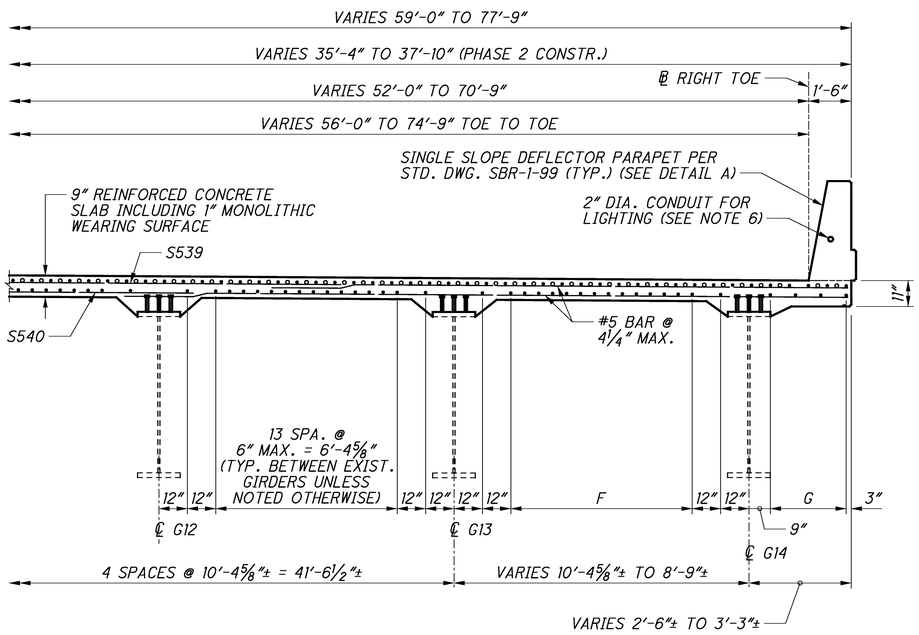
HAM-50-19.03

PID No. 75736

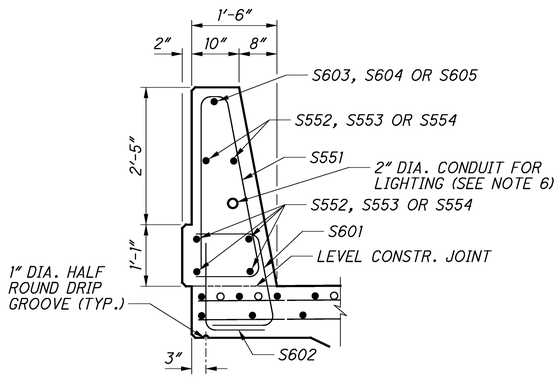
C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP009.dgn 11/10/2010 11:36:18 AM mtneiheisel



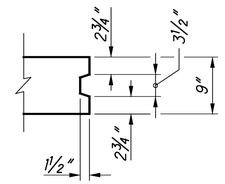
TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)



TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)



DETAIL A



KEYED CONSTRUCTION JOINT DETAIL
(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

BOTTOM DECK REINFORCING SPACING							
	A	B	C	D	E	F	G
(GROUP 1)	5 BARS @ 8" MAX.	0"	0"	0"	2 BARS @ 6" MIN.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 2)	3 BARS @ 8" MAX.	8" MAX.	2 BARS @ 8" MAX.	8" MAX.	2 BARS @ 6" MAX.	14 BARS @ 6" MAX.	4 BARS @ 8" MAX.
(GROUP 3)	4 BARS @ 8" MAX.	6" MAX.	6 BARS @ 6" MAX.	6" MAX.	5 BARS @ 6" MAX.	14 BARS @ 6" MAX.	4 BARS @ 8" MAX.
(GROUP 4)	4 BARS @ 8" MAX.	7" MAX.	9 BARS @ 6" MAX.	8" MAX.	6 BARS @ 6" MAX.	14 BARS @ 6" MAX.	4 BARS @ 8" MAX.
(GROUP 5)	4 BARS @ 8" MAX.	10" MAX.	12 BARS @ 6" MAX.	8" MAX.	8 BARS @ 6" MAX.	14 BARS @ 6" MAX.	4 BARS @ 8" MAX.
(GROUP 6)	4 BARS @ 8" MAX.	11" MAX.	12 BARS @ 6" MAX	11" MAX.	10 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 7)	4 BARS @ 8" MAX.	12" MAX.	13 BARS @ 6" MAX.	12" MAX.	11 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 8)	4 BARS @ 8" MAX.	12" MAX.	14 BARS @ 6" MAX.	12" MAX.	13 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 9)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 10)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 11)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 12)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 13)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	14 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 14)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	13 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 15)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	12 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 16)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	12 BARS @ 6" MAX.	5 BARS @ 8" MAX.
(GROUP 17)	3 BARS @ 8" MAX.	12" MAX.	15 BARS @ 6" MAX.	12" MAX.	15 BARS @ 6" MAX.	11 BARS @ 6" MAX.	4 BARS @ 8" MAX.

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8/98 AND 9/98.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 86/98, 84/98 AND 81/98.
4. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES OVER PROPOSED GIRDERS G7R AND G8R AS WELL AS AN AVERAGE HAUNCH THICKNESS OF 7 INCHES IN UNIT 6, 7 INCHES IN UNIT 7, AND 5 INCHES IN UNIT 8 OVER EXISTING GIRDERS G9 THROUGH G14. THE HAUNCH HAS A CONSTANT WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
5. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
6. PROPOSED 2" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK).
7. THE USE OF STAY IN PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.
8. CLOSURE POURS SHALL NOT BE NONPERFORMED WITHOUT THE WRITTEN APPROVAL FROM THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

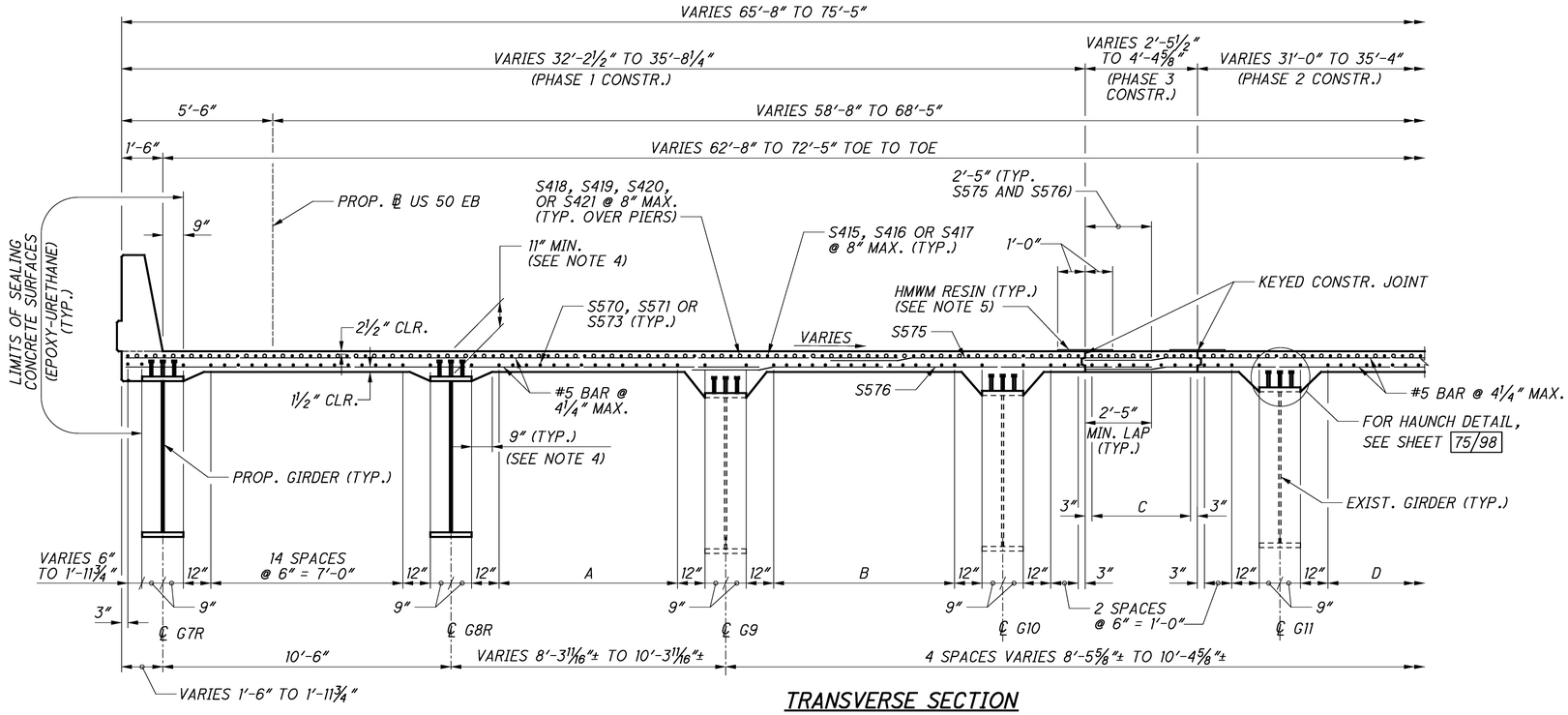
TRANSVERSE SECTION - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

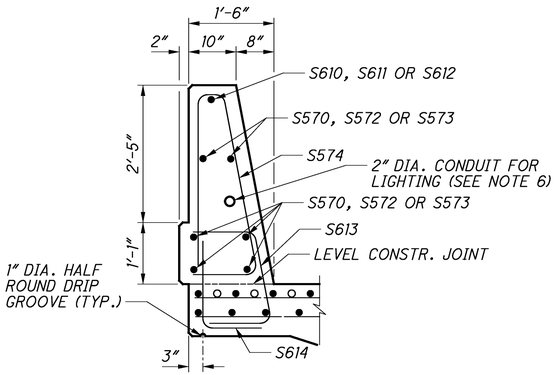
76/98

250/442

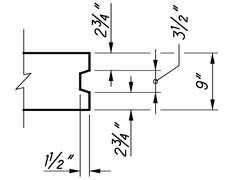
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RTS001.dgn 11/10/2010 11:36:19 AM mtreiheisel



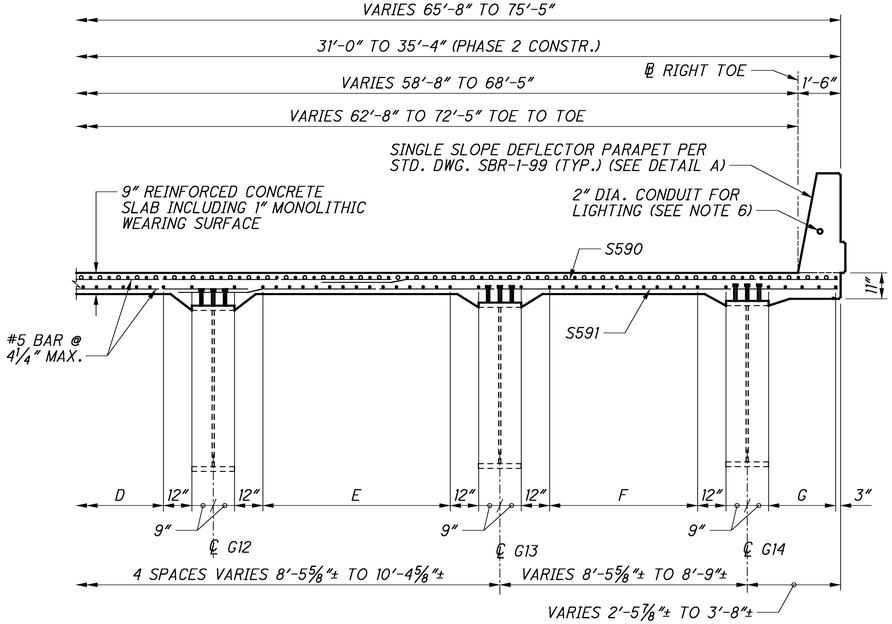
TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)



DETAIL A



KEYED CONSTRUCTION JOINT DETAIL
(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)



TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)

BOTTOM DECK REINFORCING SPACING							
	A	B	C	D	E	F	G
(GROUP 1)	15 BARS @ 6" MAX.	15 BARS @ 6" MAX.	9 BARS @ 6" MAX.	15 BARS @ 6" MAX.	15 BARS @ 6" MAX.	12 BARS @ 6" MAX.	6 BARS @ 6" MAX.
(GROUP 2)	15 BARS @ 6" MAX.	15 BARS @ 6" MAX.	9 BARS @ 6" MAX.	15 BARS @ 6" MAX.	15 BARS @ 6" MAX.	12 BARS @ 6" MAX.	6 BARS @ 6" MAX.
(GROUP 3)	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	8 BARS @ 6" MAX.	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 4)	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	8 BARS @ 6" MAX.	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 5)	13 BARS @ 6" MAX.	14 BARS @ 6" MAX.	8 BARS @ 6" MAX.	14 BARS @ 6" MAX.	14 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 6)	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	7 BARS @ 6" MAX.	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 7)	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	7 BARS @ 6" MAX.	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 8)	12 BARS @ 6" MAX.	13 BARS @ 6" MAX.	7 BARS @ 6" MAX.	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	12 BARS @ 6" MAX.	7 BARS @ 6" MAX.
(GROUP 9)	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	6 BARS @ 6" MAX.	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	5 BARS @ 6" MAX.
(GROUP 10)	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	6 BARS @ 6" MAX.	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	5 BARS @ 6" MAX.
(GROUP 11)	11 BARS @ 6" MAX.	12 BARS @ 6" MAX.	6 BARS @ 6" MAX.	12 BARS @ 6" MAX.	12 BARS @ 6" MAX.	11 BARS @ 6" MAX.	4 BARS @ 6" MAX.

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8/98 AND 9/98.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 87/98, 85/98 AND 82/98.
4. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES OVER PROPOSED GIRDERS G7R AND G8R AS WELL AS AN AVERAGE HAUNCH THICKNESS OF 7 INCHES IN UNIT 6, 7 INCHES IN UNIT 7, AND 5 INCHES IN UNIT 8 OVER EXISTING GIRDERS G9 THROUGH G14. THE HAUNCH HAS A CONSTANT WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
5. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
6. PROPOSED 2" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK).
7. THE USE OF STAY IN PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.
8. CLOSURE POURS SHALL NOT BE NONPERFORMED WITHOUT THE WRITTEN APPROVAL FROM THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

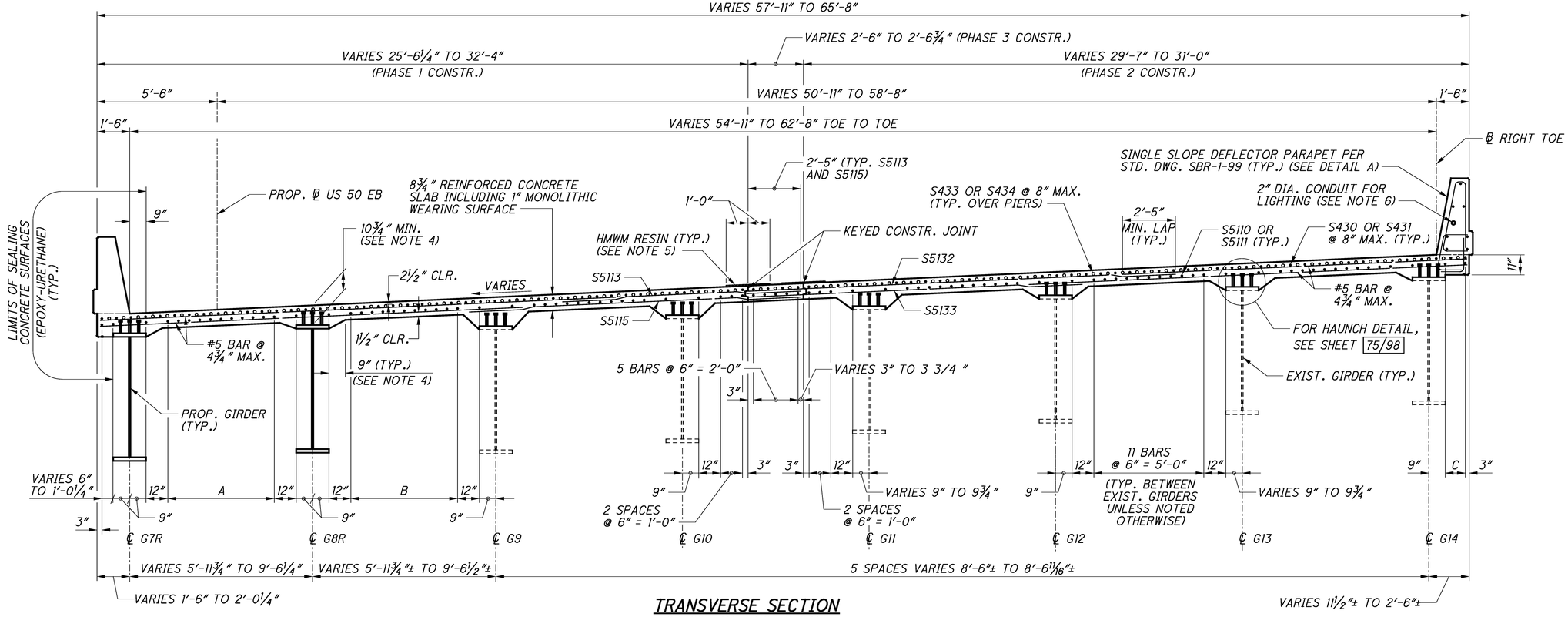
TRANSVERSE SECTION - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

77/98

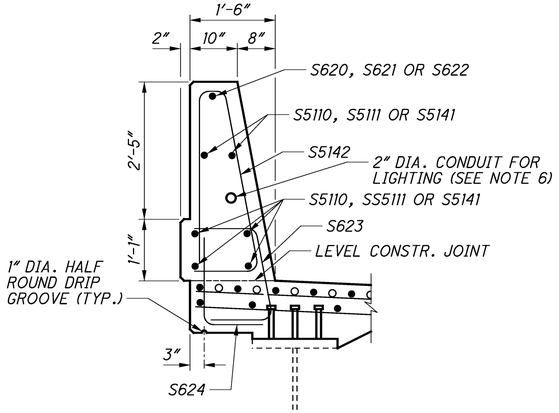
251/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RTS002.dgn 11/10/2010 11:36:21 AM mtreiheisel

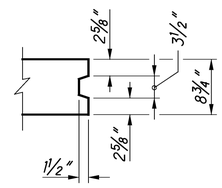


TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)

BOTTOM DECK REINFORCING SPACING			
	A	B	C
(GROUP 1)	13 BARS @ 6" MAX.	14 BARS @ 6" MAX.	3 BARS @ 10" MAX.
(GROUP 2)	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	3 BARS @ 10" MAX.
(GROUP 3)	13 BARS @ 6" MAX.	13 BARS @ 6" MAX.	3 BARS @ 8" MAX.
(GROUP 4)	12 BARS @ 6" MAX.	13 BARS @ 6" MAX.	3 BARS @ 6" MAX.
(GROUP 5)	11 BARS @ 6" MAX.	12 BARS @ 6" MAX.	3 BARS @ 6" MAX.
(GROUP 6)	11 BARS @ 6" MAX.	11 BARS @ 6" MAX.	3 BARS @ 6" MAX.
(GROUP 7)	10 BARS @ 6" MAX.	10 BARS @ 6" MAX.	2 BARS @ 3" MIN.
(GROUP 8)	10 BARS @ 6" MAX.	10 BARS @ 6" MAX.	3 BARS @ 7" MAX.
(GROUP 9)	9 BARS @ 6" MAX.	9 BARS @ 6" MAX.	3 BARS @ 9" MAX.
(GROUP 10)	7 BARS @ 6" MAX.	7 BARS @ 6" MAX.	3 BARS @ 9" MAX.



DETAIL A



KEYED CONSTRUCTION JOINT DETAIL
(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 8/98 AND 9/98.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 97/98 AND 98/98.
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 88/98, 85/98 AND 83/98.
4. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES OVER PROPOSED GIRDERS G7R AND G8R AS WELL AS AN AVERAGE HAUNCH THICKNESS OF 7 INCHES IN UNIT 6, 7 INCHES IN UNIT 7, AND 5 INCHES IN UNIT 8 OVER EXISTING GIRDERS G9 THROUGH G14. THE HAUNCH HAS A CONSTANT WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH GIRDER FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
5. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
6. PROPOSED 2" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK).
7. THE USE OF STAY IN PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.
8. CLOSURE POURS SHALL NOT BE NONPERFORMED WITHOUT THE WRITTEN APPROVAL FROM THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

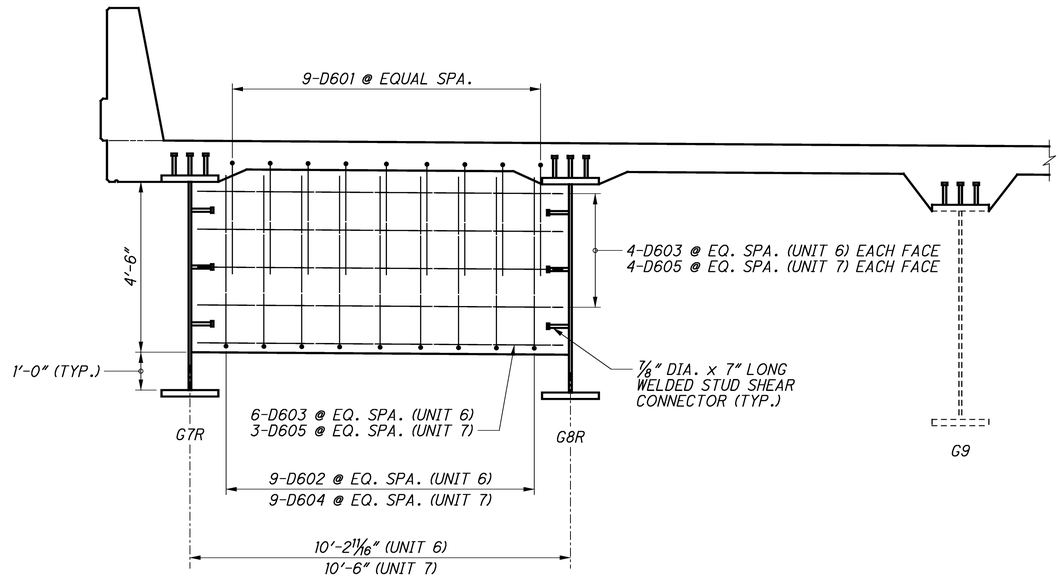
TRANSVERSE SECTION - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

78/98

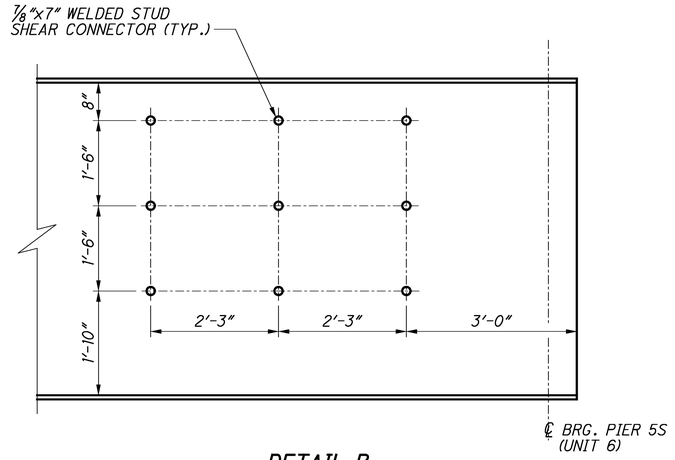
252/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RTS003.dgn 11/10/2010 11:36:23 AM mtneiheisel



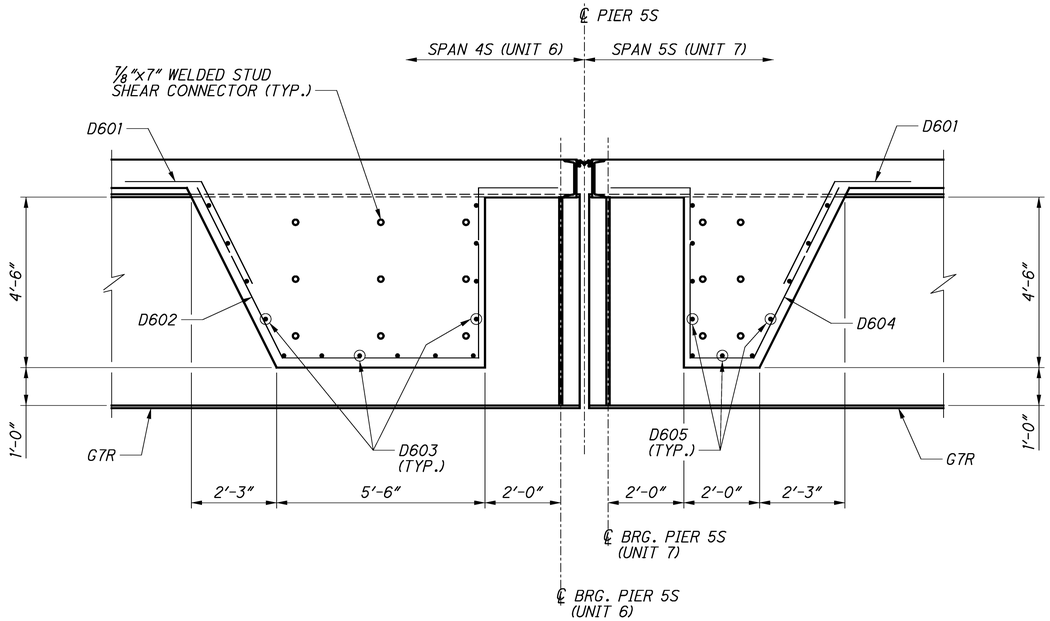
COUNTERWEIGHT ELEVATION

(PIER 5S - LOOKING UPSTATION)

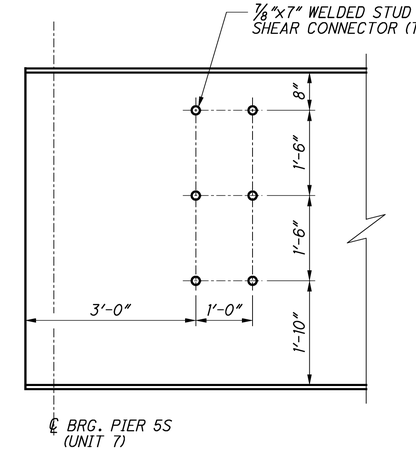


DETAIL B

(GIRDER 7R SHOWN, GIRDER 8R SIMILAR)



SECTION A-A



DETAIL C

(GIRDER 7R SHOWN, GIRDER 8R SIMILAR)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

COUNTERWEIGHT DETAIL - UNIT 6 & 7 (RIGHT BRIDGE)

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03

PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD032.dgn 11/10/2010 11:36:25 AM mtneihetsel

FINAL DECK SURFACE ELEVATIONS - UNIT 6

			℄ BRG. PIER 1S/ END DIAPH.	SPAN 1S				PIER 2S	SPAN 2S									PIER 3S
				1/4	1/2	FIELD SPLICE 1	3/4		1/8	FIELD SPLICE 2	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 3	7/8	
PHASE 1	LEFT TOE	STATION	2+54.45	2+83.54	3+12.63	3+32.46	3+41.71	3+70.80	3+90.21	3+97.05	4+09.62	4+29.03	4+48.44	4+67.85	4+87.25	4+91.44	5+06.66	5+26.07
		OFFSET	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT
		ELEVATION	512.53	513.94	515.24	516.07	516.45	517.55	518.22	518.44	518.85	519.43	519.97	520.46	520.91	521.00	521.31	521.67
	GIRDER 7R	STATION	2+88.64	3+09.05	3+29.46	3+32.40	3+49.87	3+70.28	3+89.64	3+96.78	4+09.00	4+28.36	4+47.73	4+67.09	4+86.45	4+90.82	5+05.81	5+25.18
		OFFSET	3.71 LT	3.26 LT	3.01 LT	2.99 LT	2.94 LT	3.06 LT	3.35 LT	3.50 LT	3.27 LT	3.05 LT	3.00 LT	3.12 LT	3.41 LT	3.50 LT	3.33 LT	3.25 LT
		ELEVATION	514.16	515.06	515.91	516.03	516.72	517.49	518.17	518.42	518.80	519.38	519.91	520.41	520.87	520.97	521.28	521.63
	PROFILE GRADE LINE	STATION	2+54.99	2+83.38	3+11.78	3+32.25	3+40.18	3+68.58	3+87.67	3+94.89	4+06.75	4+25.84	4+44.93	4+64.02	4+83.10	4+86.49	5+02.19	5+21.28
		OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ELEVATION	512.39	513.76	515.04	515.90	516.22	517.30	517.98	518.22	518.61	519.20	519.74	520.24	520.70	520.77	521.11	521.48
	GIRDER 8R	STATION	2+73.55	2+96.75	3+19.99	3+32.17	3+43.27	3+66.59	3+84.87	3+92.33	4+03.17	4+21.48	4+39.80	4+58.12	4+76.45	4+78.60	4+94.77	5+13.10
		OFFSET	3.04 LT	1.02 LT	0.75 RT	1.59 RT	2.29 RT	3.57 RT	4.41 RT	4.71 RT	5.09 RT	5.63 RT	6.01 RT	6.25 RT	6.33 RT	6.33 RT	6.60 RT	6.76 RT
		ELEVATION	513.43	514.42	515.36	515.83	516.25	517.08	517.71	517.95	518.30	518.87	519.40	519.89	520.35	520.41	520.77	521.15
	GIRDER 9	STATION	2+54.51	2+81.69	3+08.96		3+36.30	3+63.71	3+80.85		3+98.01	4+15.18	4+32.38	4+49.59	4+66.81		4+84.05	5+01.29
		OFFSET	3.56 LT	0.01 RT	3.25 RT		6.14 RT	8.71 RT	10.13 RT		11.43 RT	12.59 RT	13.62 RT	14.52 RT	15.28 RT		15.92 RT	16.41 RT
		ELEVATION	512.52	513.68	514.78		515.81	516.76	517.34		517.89	518.42	518.92	519.39	519.84		520.26	520.65
	GIRDER 10	STATION	2+55.94	2+81.38	3+06.89		3+32.46	3+58.10	3+74.38		3+90.68	4+07.00	4+23.33	4+39.68	4+56.05		4+72.42	4+88.80
		OFFSET	7.12 RT	10.44 RT	13.46 RT		16.20 RT	18.64 RT	20.03 RT		21.31 RT	22.46 RT	23.50 RT	24.42 RT	25.22 RT		25.90 RT	26.46 RT
		ELEVATION	512.14	513.24	514.27		515.23	516.14	516.71		517.26	517.79	518.29	518.77	519.23		519.66	520.07
	PHASE 1 CONST. JT.	STATION	2+56.35	2+81.28	3+06.28		3+31.35	3+56.47	3+72.50		3+88.55	4+04.62	4+20.71	4+36.81	4+52.92		4+69.04	4+85.17
		OFFSET	10.20 RT	13.45 RT	16.41 RT		19.10 RT	21.50 RT	22.89 RT		24.16 RT	25.31 RT	26.35 RT	27.27 RT	28.08 RT		28.77 RT	29.34 RT
		ELEVATION	512.04	513.11	514.12		515.07	515.96	516.52		517.07	517.60	518.11	518.59	519.05		519.49	519.90

FINAL DECK SURFACE ELEVATIONS - UNIT 6

			PIER 3S	SPAN 3S									PIER 4S	SPAN 4S					℄ BRG. PIER 5S
				1/8	FIELD SPLICE 4	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 5	7/8		1/4	FIELD SPLICE 6	1/2	FIELD SPLICE 6	3/4	
PHASE 1	LEFT TOE	STATION	5+26.07	5+43.69	5+57.68	5+60.95	5+78.96	5+96.61	6+14.26	6+31.91	6+41.21	6+49.56	6+67.21	6+83.53		6+99.86	7+00.98	7+16.18	7+32.51
		OFFSET	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT		4.0 LT	4.0 LT	4.0 LT	4.0 LT
		ELEVATION	521.67	521.95	522.16	522.20	522.42	522.59	522.73	522.83	522.87	522.90	522.92	522.92		522.88	522.87	522.81	522.70
	GIRDER 7R	STATION	5+25.18	5+42.87	5+57.10	5+60.55	5+78.27	5+95.98	6+13.70	6+31.41	6+40.80	6+49.13	6+66.85	6+83.26		6+99.68	7+00.69	7+16.09	7+32.51
		OFFSET	3.25 LT	3.33 LT	3.50 LT	3.50 LT	3.53 LT	3.56 LT	3.59 LT	3.63 LT	3.64 LT	3.66 LT	3.69 LT	3.72 LT		3.74 LT	3.75 LT	3.77 LT	3.80 LT
		ELEVATION	521.63	521.93	522.14	522.18	522.40	522.58	522.72	522.83	522.87	522.89	522.92	522.91		522.88	522.87	522.81	522.70
	PROFILE GRADE LINE	STATION	5+21.28	5+38.94	5+53.03	5+56.60	5+74.26	5+91.92	6+09.59	6+27.25	6+36.57	6+44.91	6+62.57	6+80.05	6+96.35	6+97.53		7+15.02	7+32.50
		OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0
		ELEVATION	521.48	521.79	522.00	522.05	522.28	522.48	522.63	522.75	522.80	522.83	522.88	522.89	522.86	522.86		522.79	522.69
	GIRDER 8R	STATION	5+13.10	5+30.87	5+45.17	5+48.64	5+66.39	5+84.11	6+01.83	6+19.54	6+28.92	6+37.26	6+54.97	6+74.35	6+88.82	6+93.73		7+13.11	7+32.48
		OFFSET	6.76 RT	6.78 RT	6.69 RT	6.71 RT	6.71 RT	6.68 RT	6.65 RT	6.62 RT	6.60 RT	6.59 RT	6.56 RT	6.52 RT	6.50 RT	6.49 RT		6.45 RT	6.42 RT
		ELEVATION	521.15	521.49	521.73	521.79	522.05	522.27	522.46	522.60	522.67	522.71	522.79	522.82	522.82	522.82		522.76	522.67
	GIRDER 9	STATION	5+01.29	5+19.07		5+36.85	5+54.63	5+72.32	5+89.97	6+07.61		6+25.26	6+42.90	6+65.29		6+87.68		7+10.07	7+32.46
		OFFSET	16.41 RT	16.79 RT		17.02 RT	17.11 RT	17.09 RT	17.06 RT	17.03 RT		17.00 RT	16.97 RT	16.93 RT		16.89 RT		16.85 RT	16.81 RT
		ELEVATION	520.65	521.02		521.35	521.65	521.92	522.15	522.34		522.49	522.61	522.70		522.74		522.71	522.63
	GIRDER 10	STATION	4+88.80	5+06.66		5+24.52	5+42.38	5+60.25	5+77.91	5+95.55		6+13.20	6+30.84	6+56.24		6+81.64		7+07.04	7+32.43
		OFFSET	26.46 RT	26.93 RT		27.26 RT	27.45 RT	27.49 RT	27.46 RT	27.43 RT		27.40 RT	27.37 RT	27.33 RT		27.28 RT		27.24 RT	27.20 RT
		ELEVATION	520.07	520.48		520.86	521.21	521.52	521.79	522.03		522.23	522.39	522.55		522.64		522.66	522.59
	PHASE 1 CONST. JT.	STATION	4+85.17	5+03.05		5+20.94	5+38.83	5+56.72	5+74.42	5+92.07		6+09.71	6+27.36	6+53.62		6+79.89		7+06.16	7+32.43
		OFFSET	29.34 RT	29.85 RT		30.21 RT	30.42 RT	30.50 RT	30.47 RT	30.44 RT		30.41 RT	30.38 RT	30.33 RT		30.29 RT		30.24 RT	30.20 RT
		ELEVATION	519.90	520.32		520.71	521.07	521.40	521.68	521.93		522.14	522.32	522.51		522.61		522.64	522.58

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. ALL STATIONS AND OFFSETS SHOWN ARE FROM ℄ PROP. US 50 EB.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

TOP OF DECK TABLE - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

80/98

254/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD004.dgn 11/10/2010 11:36:26 AM mtneihetsel

FINAL DECK SURFACE ELEVATIONS - UNIT 6

			℄ BRG. PIER 1S	SPAN 1S			PIER 2S	SPAN 2S							PIER 3S
				1/4	1/2	3/4		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	PHASE 2 CONST. JT.	STATION	2+56.96	2+81.15	3+05.40	3+29.71	3+54.08	3+69.75	3+85.43	4+01.13	4+16.85	4+32.59	4+48.33	4+64.09	4+79.85
		OFFSET	14.71 RT	17.85 RT	20.73 RT	23.34 RT	25.69 RT	27.06 RT	28.32 RT	29.47 RT	30.50 RT	31.43 RT	32.25 RT	32.96 RT	33.56 RT
		ELEVATION	511.88	512.92	513.90	514.82	515.69	516.24	516.79	517.32	517.83	518.31	518.78	519.22	519.63
	GIRDER 11	STATION	2+57.38	2+81.06	3+04.79	3+28.59	3+52.44	3+67.85	3+83.29	3+98.74	4+14.21	4+29.69	4+45.18	4+60.69	4+76.20
		OFFSET	17.80 RT	20.86 RT	23.68 RT	26.24 RT	28.55 RT	29.91 RT	31.16 RT	32.31 RT	33.34 RT	34.27 RT	35.10 RT	35.82 RT	36.43 RT
		ELEVATION	511.77	512.79	513.75	514.66	515.51	516.05	516.60	517.13	517.64	518.12	518.59	519.03	519.45
	GIRDER 12	STATION	2+58.84	2+80.73	3+02.68	3+24.68	3+46.73	3+61.27	3+75.83	3+90.41	4+05.00	4+19.60	4+34.22	4+48.85	4+63.48
		OFFSET	28.47 RT	31.29 RT	33.89 RT	36.28 RT	38.46 RT	39.77 RT	40.99 RT	42.12 RT	43.15 RT	44.09 RT	44.93 RT	45.68 RT	46.33 RT
		ELEVATION	511.40	512.34	513.23	514.08	514.88	515.38	515.92	516.44	516.95	517.44	517.91	518.36	518.78
	GIRDER 13	STATION	2+60.31	2+80.40	3+00.55	3+20.74	3+40.96	3+54.63	3+68.30	3+82.00	3+95.71	4+09.42	4+23.16	4+36.90	4+50.65
		OFFSET	39.15 RT	41.72 RT	44.11 RT	46.32 RT	48.34 RT	49.61 RT	50.80 RT	51.90 RT	52.92 RT	53.85 RT	54.70 RT	55.47 RT	56.16 RT
		ELEVATION	511.03	511.89	512.71	513.49	514.24	514.72	515.22	515.73	516.23	516.72	517.19	517.64	518.07
	GIRDER 14	STATION	2+61.79	2+80.07	2+98.40	3+16.75	3+35.14	3+47.92	3+60.71	3+73.51	3+86.33	3+99.15	4+11.99	4+24.84	4+37.70
		OFFSET	49.82 RT	52.14 RT	54.32 RT	56.34 RT	58.22 RT	59.43 RT	60.57 RT	61.65 RT	62.64 RT	63.57 RT	64.42 RT	65.21 RT	65.92 RT
		ELEVATION	510.66	511.44	512.19	512.91	513.59	514.05	514.49	514.99	515.49	515.96	516.43	516.88	517.31
	RIGHT TOE	STATION	2+62.10	2+80.21	2+98.29	3+16.37	3+34.48	3+47.09	3+59.72	3+72.35	3+85.00	3+97.66	4+10.34	4+23.02	4+35.71
		OFFSET	52.04 RT	53.48 RT	55.35 RT	57.41 RT	59.34 RT	60.59 RT	61.77 RT	62.89 RT	63.93 RT	64.90 RT	65.80 RT	66.63 RT	67.39 RT
		ELEVATION	510.58	511.39	512.14	512.85	513.52	513.97	514.40	514.89	515.38	515.85	516.31	516.76	517.19

FINAL DECK SURFACE ELEVATIONS - UNIT 6

			PIER 3S	SPAN 3S							PIER 4S	SPAN 4S							℄ BRG. PIER 5S
				1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	PHASE 2 CONST. JT.	STATION	4+79.85	4+97.76	5+15.68	5+33.61	5+51.53	5+69.33	5+86.97	6+04.62	6+22.26	6+36.03	6+49.80	6+63.57	6+77.34	6+91.11	7+04.88	7+18.65	7+32.42
		OFFSET	33.56 RT	34.10 RT	34.50 RT	34.76 RT	34.87 RT	34.86 RT	34.83 RT	34.80 RT	34.77 RT	34.75 RT	34.72 RT	34.70 RT	34.68 RT	34.65 RT	34.63 RT	34.60 RT	34.58 RT
		ELEVATION	519.63	520.08	520.49	520.87	521.21	521.52	521.78	522.01	522.20	522.33	522.43	522.51	522.57	522.60	522.61	522.60	522.56
	GIRDER 11	STATION	4+76.20	4+94.13	5+12.08	5+30.02	5+47.97	5+65.84	5+83.49	6+01.13	6+18.78	6+32.98	6+47.19	6+61.39	6+75.59	6+89.80	7+04.00	7+18.21	7+32.41
		OFFSET	36.43 RT	37.00 RT	37.43 RT	37.72 RT	37.86 RT	37.87 RT	37.84 RT	37.81 RT	37.78 RT	37.75 RT	37.73 RT	37.70 RT	37.68 RT	37.65 RT	37.63 RT	37.61 RT	37.58 RT
		ELEVATION	519.45	519.91	520.33	520.72	521.08	521.40	521.68	521.92	522.12	522.26	522.38	522.47	522.53	522.57	522.59	522.58	522.55
	GIRDER 12	STATION	4+63.48	4+81.49	4+99.52	5+17.55	5+35.58	5+53.62	5+71.42	5+89.07	6+06.72	6+22.42	6+38.13	6+53.84	6+69.55	6+85.26	7+00.97	7+16.68	7+32.39
		OFFSET	46.33 RT	47.00 RT	47.53 RT	47.92 RT	48.16 RT	48.26 RT	48.25 RT	48.21 RT	48.18 RT	48.16 RT	48.13 RT	48.10 RT	48.08 RT	48.05 RT	48.02 RT	47.99 RT	47.97 RT
		ELEVATION	518.78	519.28	519.75	520.18	520.59	520.95	521.28	521.57	521.82	522.01	522.17	522.30	522.40	522.48	522.52	522.53	522.52
	GIRDER 13	STATION	4+50.65	4+68.74	4+86.84	5+04.95	5+23.07	5+41.19	5+59.32	5+77.01	5+94.65	6+11.87	6+29.08	6+46.29	6+63.51	6+80.72	6+97.93	7+15.15	7+32.36
		OFFSET	56.16 RT	56.94 RT	57.57 RT	58.05 RT	58.40 RT	58.60 RT	58.65 RT	58.62 RT	58.59 RT	58.56 RT	58.53 RT	58.50 RT	58.47 RT	58.44 RT	58.41 RT	58.38 RT	58.35 RT
		ELEVATION	518.07	518.62	519.13	519.61	520.05	520.46	520.84	521.17	521.47	521.72	521.93	522.11	522.26	522.36	522.44	522.48	522.48
	GIRDER 14	STATION	4+37.70	4+55.86	4+74.05	4+92.24	5+10.44	5+28.65	5+46.86	5+64.94	5+82.59	6+01.31	6+20.03	6+38.75	6+57.46	6+76.18	6+94.90	7+13.62	7+32.34
		OFFSET	65.92 RT	66.79 RT	67.53 RT	68.12 RT	68.56 RT	68.86 RT	69.01 RT	69.03 RT	69.00 RT	68.76 RT	68.52 RT	68.29 RT	68.05 RT	67.82 RT	67.58 RT	67.34 RT	67.11 RT
		ELEVATION	517.31	517.90	518.46	518.98	519.47	519.93	520.35	520.74	521.07	521.39	521.67	521.91	522.10	522.25	522.36	522.42	522.45
	RIGHT TOE	STATION	4+35.71	4+53.89	4+72.08	4+90.28	5+08.49	5+26.71	5+44.94	5+63.09	5+80.73	5+99.68	6+18.64	6+37.59	6+56.54	6+75.49	6+94.44	7+13.39	7+32.34
		OFFSET	67.39 RT	68.36 RT	69.18 RT	69.83 RT	70.31 RT	70.62 RT	70.76 RT	70.72 RT	70.60 RT	70.44 RT	70.25 RT	70.02 RT	69.77 RT	69.48 RT	69.16 RT	68.81 RT	68.42 RT
		ELEVATION	517.19	517.78	518.35	518.88	519.37	519.84	520.27	520.66	521.01	521.34	521.63	521.87	522.07	522.23	522.35	522.42	522.44

NOTES:

1. *FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.*
2. *ALL STATIONS AND OFFSETS SHOWN ARE FROM ℄ PROP. US 50 EB.*

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

TOP OF DECK TABLE - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD005.dgn 11/10/2010 11:36:28 AM mtneihe1sel

FINAL DECK SURFACE ELEVATIONS - UNIT 7

			℄ BRG. PIER 5S	SPAN 5S				PIER 5AS	SPAN 5AS								PIER 6S	SPAN 6S				℄ BRG. PIER 7S
				1/4	1/2	FIELD SPLICE 7	3/4		1/8	FIELD SPLICE 8	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 9	7/8		1/4	FIELD SPLICE 10	1/2	3/4	
PHASE 1	LEFT TOE	STATION	7+33.76	7+51.23	7+68.70	7+75.64	7+86.18	8+03.65	8+18.39	8+26.17	8+33.12	8+47.86	8+62.59	8+77.33	8+92.07	8+93.30	9+06.80	9+21.54	9+47.08	9+51.67	9+72.63	9+99.34	10+23.72
		OFFSET	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT
		ELEVATION	522.69	522.55	522.36	522.28	522.14	521.88	521.64	521.50	521.37	521.07	520.75	520.40	520.03	519.99	519.63	519.20	518.40	518.25	517.52	516.52	515.53
	GIRDER 7R	STATION	7+33.76	7+51.23	7+68.70	7+75.64	7+86.18	8+03.65	8+18.39	8+26.17	8+33.12	8+47.86	8+62.59	8+77.33	8+92.07	8+93.30	9+06.80	9+21.54	9+47.08	9+51.67	9+72.63	9+98.21	10+23.79
		OFFSET	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	3.91 LT	3.53 LT
		ELEVATION	522.69	522.55	522.36	522.28	522.14	521.88	521.64	521.50	521.37	521.07	520.75	520.40	520.03	519.99	519.63	519.20	518.40	518.25	517.52	516.57	515.54
	PROFILE GRADE LINE	STATION	7+33.75	7+52.14	7+70.54	7+79.31	7+88.93	8+07.33	8+22.06	8+29.85	8+36.80	8+51.54	8+66.27	8+81.01	8+95.75	8+96.98	9+10.48	9+25.22	9+50.00	9+55.35	9+74.78	9+99.56	10+24.34
		OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ELEVATION	522.68	522.53	522.34	522.24	522.11	521.84	521.60	521.46	521.33	521.03	520.70	520.36	519.98	519.95	519.58	519.15	518.38	518.20	517.53	516.61	515.61
	GIRDER 8R	STATION	7+33.73	7+53.63	7+73.52	7+85.29	7+93.41	8+13.30	8+28.04	8+35.83	8+42.78	8+57.51	8+72.25	8+86.99	9+01.72	9+02.96	9+16.46	9+31.19	9+54.79	9+61.33	9+77.45	10+01.90	10+25.42
		OFFSET	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.5 RT	6.63 RT	7.00 RT
		ELEVATION	522.66	522.51	522.31	522.17	522.07	521.78	521.53	521.39	521.26	520.96	520.64	520.29	519.91	519.88	519.51	519.08	518.34	518.13	517.58	516.68	515.75
	GIRDER 9	STATION	7+33.71	7+55.84	7+77.97		8+00.09	8+22.22	8+36.87		8+51.51	8+66.16	8+80.80	8+95.44	9+10.09		9+24.73	9+39.38	9+61.68		9+83.95	10+06.11	10+28.27
		OFFSET	16.81 RT	16.66 RT	16.50 RT		16.35 RT	16.20 RT	16.10 RT		16.00 RT	15.90 RT	15.80 RT	15.70 RT	15.60 RT		15.50 RT	15.40 RT	15.25 RT		15.10 RT	15.12 RT	15.36 RT
		ELEVATION	522.62	522.48	522.27		522.01	521.68	521.44		521.17	520.87	520.54	520.19	519.82		519.42	518.99	518.29		517.53	516.72	515.86
	GIRDER 10	STATION	7+33.68	7+58.04	7+82.40		8+06.76	8+31.12	8+45.68		8+60.24	8+74.79	8+89.35	9+03.91	9+18.47		9+33.02	9+47.58	9+68.21		9+88.72	10+09.14	10+29.55
		OFFSET	27.19 RT	26.86 RT	26.54 RT		26.21 RT	25.88 RT	25.69 RT		25.49 RT	25.30 RT	25.10 RT	24.91 RT	24.71 RT		24.52 RT	24.32 RT	24.04 RT		23.79 RT	23.71 RT	23.81 RT
		ELEVATION	522.59	522.45	522.24		521.96	521.60	521.35		521.08	520.78	520.46	520.11	519.73		519.33	518.91	518.26		517.56	516.82	516.03
	PHASE 1 CONST. JT.	STATION	7+33.68	7+58.72	7+83.76		8+08.81	8+33.85	8+48.41		8+62.96	8+77.52	8+92.08	9+06.63	9+21.19		9+35.75	9+50.30	9+70.38		9+90.31	10+10.16	10+30.01
		OFFSET	30.19 RT	29.85 RT	29.52 RT		29.18 RT	28.85 RT	28.65 RT		28.46 RT	28.26 RT	28.06 RT	27.87 RT	27.67 RT		27.48 RT	27.28 RT	27.01 RT		26.78 RT	26.71 RT	26.82 RT
		ELEVATION	522.58	522.44	522.23		521.94	521.58	521.33		521.06	520.76	520.43	520.08	519.71		519.31	518.88	518.25		517.57	516.85	516.10

FINAL DECK SURFACE ELEVATIONS - UNIT 7

			℄ BRG. PIER 5S	SPAN 5S							PIER 5AS	SPAN 5AS							PIER 6S	SPAN 6S			℄ BRG. PIER 7S
				1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/4	1/2	3/4	
PHASE 2	PHASE 2 CONST. JT.	STATION	7+33.67	7+46.61	7+59.55	7+72.50	7+85.44	7+98.39	8+11.33	8+24.27	8+37.22	8+51.69	8+66.16	8+80.63	8+95.11	9+09.58	9+24.05	9+38.52	9+52.99	9+72.51	9+91.84	10+11.11	10+30.38
		OFFSET	34.57 RT	34.31 RT	34.05 RT	33.80 RT	33.54 RT	33.28 RT	33.03 RT	32.77 RT	32.51 RT	32.22 RT	31.94 RT	31.65 RT	31.36 RT	31.07 RT	30.78 RT	30.50 RT	30.21 RT	29.82 RT	29.48 RT	29.30 RT	29.53 RT
		ELEVATION	522.56	522.51	522.43	522.34	522.22	522.08	521.92	521.75	521.55	521.30	521.03	520.73	520.41	520.06	519.68	519.28	518.85	518.24	517.58	516.88	516.15
	GIRDER 11	STATION	7+33.66	7+46.94	7+60.23	7+73.51	7+86.79	8+00.08	8+13.36	8+26.64	8+39.93	8+54.40	8+68.87	8+83.34	8+97.82	9+12.29	9+26.76	9+41.23	9+55.70	9+74.67	9+93.41	10+12.12	10+30.83
		OFFSET	37.57 RT	37.31 RT	37.04 RT	36.78 RT	36.51 RT	36.25 RT	35.99 RT	35.72 RT	35.46 RT	35.17 RT	34.88 RT	34.59 RT	34.31 RT	34.02 RT	33.73 RT	33.44 RT	33.16 RT	32.78 RT	32.46 RT	32.29 RT	32.28 RT
		ELEVATION	522.55	522.50	522.42	522.33	522.21	522.07	521.91	521.73	521.53	521.28	521.01	520.71	520.38	520.03	519.66	519.26	518.83	518.23	517.59	516.92	516.21
	GIRDER 12	STATION	7+33.64	7+48.01	7+62.38	7+76.76	7+91.13	8+05.51	8+19.88	8+34.26	8+48.63	8+63.02	8+77.41	8+91.80	9+06.19	9+20.57	9+34.96	9+49.35	9+63.74	9+81.00	9+98.03	10+15.06	10+32.09
		OFFSET	47.95 RT	47.57 RT	47.19 RT	46.82 RT	46.44 RT	46.06 RT	45.68 RT	45.30 RT	44.93 RT	44.55 RT	44.17 RT	43.79 RT	43.41 RT	43.03 RT	42.65 RT	42.28 RT	41.90 RT	41.44 RT	41.08 RT	40.84 RT	40.74 RT
		ELEVATION	522.51	522.47	522.40	522.31	522.19	522.05	521.88	521.68	521.46	521.21	520.94	520.64	520.31	519.96	519.59	519.19	518.76	518.21	517.64	517.03	516.39
	GIRDER 13	STATION	7+33.61	7+49.07	7+64.52	7+79.98	7+95.43	8+10.88	8+26.34	8+41.79	8+57.25	8+71.56	8+85.86	9+00.17	9+14.48	9+28.78	9+43.09	9+57.40	9+71.70	9+87.20	10+02.58	10+17.96	10+33.35
		OFFSET	58.33 RT	57.83 RT	57.32 RT	56.82 RT	56.31 RT	55.81 RT	55.30 RT	54.80 RT	54.30 RT	53.83 RT	53.36 RT	52.89 RT	52.43 RT	51.96 RT	51.49 RT	51.03 RT	50.56 RT	50.07 RT	49.67 RT	49.38 RT	49.20 RT
		ELEVATION	522.48	522.45	522.39	522.30	522.18	522.03	521.85	521.64	521.40	521.15	520.88	520.58	520.25	519.90	519.53	519.12	518.69	518.20	517.68	517.14	516.58
	GIRDER 14	STATION	7+33.59	7+50.01	7+66.43	7+82.85	7+99.27	8+15.69	8+32.11	8+48.53	8+64.95	8+79.25	8+93.54	9+07.84	9+22.13	9+36.43	9+50.72	9+65.02	9+79.27	9+93.09	10+06.92	10+20.76	10+34.59
		OFFSET	67.08 RT	66.53 RT	65.98 RT	65.43 RT	64.88 RT	64.33 RT	63.78 RT	63.22 RT	62.67 RT	62.19 RT	61.71 RT	61.23 RT	60.75 RT	60.27 RT	59.79 RT	59.31 RT	58.84 RT	58.41 RT	58.08 RT	57.83 RT	57.66 RT
		ELEVATION	522.45	522.43	522.38	522.29	522.17	522.02	521.83	521.61	521.36	521.11	520.83	520.53	520.21	519.85	519.47	519.07	518.64	518.20	517.74	517.26	516.76
	RIGHT TOE	STATION	7+33.59	7+50.25	7+66.92	7+83.58	8+00.24	8+16.91	8+33.57	8+50.23	8+66.89	8+81.13	8+95.37	9+09.61	9+23.84	9+38.08	9+52.32	9+66.55	9+80.70	9+94.20	10+07.71	10+21.22	10+34.74
		OFFSET	68.40 RT	68.03 RT	67.64 RT	67.23 RT	66.79 RT	66.32 RT	65.83 RT	65.32 RT	64.78 RT	64.30 RT	63.80 RT	63.29 RT	62.75 RT	62.20 RT	61.63 RT	61.05 RT	60.44 RT	59.90 RT	59.41 RT	59.00 RT	58.64 RT
		ELEVATION	522.44	522.43	522.38	522.29	522.17	522.02	521.83	521.61	521.35	521.10	520.82	520.52	520.20	519.84	519.47	519.06	518.63	518.20	517.75	517.27	516.78

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. ALL STATIONS AND OFFSETS SHOWN ARE FROM ℄ PROP. US 50 EB.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102815

TOP OF DECK TABLE - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

82/98

256/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD006.dgn 11/10/2010 11:36:30 AM mtneihe1sel

FINAL DECK SURFACE ELEVATIONS - UNIT 8

			℄ BRG. PIER 7S	SPAN 7S 1/4	SPAN 7S 1/2	SPAN 7S FIELD SPLICE 11	SPAN 7S 3/4	PIER 8S	SPAN 8S 1/8	SPAN 8S FIELD SPLICE 12	SPAN 8S 1/4	SPAN 8S 3/8	SPAN 8S 1/2	SPAN 8S 5/8	SPAN 8S 3/4	SPAN 8S FIELD SPLICE 13	SPAN 8S 7/8	PIER 9S	SPAN 9S 1/4	SPAN 9S FIELD SPLICE 14	SPAN 9S 1/2	SPAN 9S 3/4	℄ BRG. FWD. ABUT.
PHASE 1	LEFT TOE	STATION	10+25.74	10+46.72	10+67.69	10+87.98	10+88.66	11+09.64	11+22.84	11+33.93	11+36.04	11+49.25	11+62.45	11+75.65	11+88.86	11+92.50	12+02.06	12+15.26	12+36.36	12+38.68	12+57.46	12+78.56	12+99.66
		OFFSET	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT	4.0 LT
		ELEVATION	515.45	514.57	513.68	512.83	512.80	511.92	511.36	510.89	510.80	510.25	509.69	509.14	508.58	508.43	508.02	507.47	506.59	506.50	505.71	504.83	503.95
	GIRDER 7R	STATION	10+25.80	10+46.76	10+67.72	10+87.99	10+88.68	11+09.64	11+22.84	11+33.95	11+36.04	11+49.25	11+62.45	11+75.65	11+88.85	11+92.52	12+02.05	12+15.26	12+36.36	12+38.69	12+57.47	12+78.58	12+99.68
		OFFSET	3.64 LT	3.92 LT	4.00 LT	3.90 LT	3.90 LT	4.00 LT	3.96 LT	3.87 LT	3.89 LT	3.98 LT	4.00 LT	3.93 LT	3.80 LT	3.74 LT	3.87 LT	3.97 LT	3.98 LT	3.97 LT	3.99 LT	3.83 LT	3.47 LT
		ELEVATION	515.46	514.57	513.68	512.83	512.80	511.92	511.36	510.90	510.81	510.25	509.69	509.14	508.59	508.44	508.03	507.47	506.59	506.50	505.71	504.84	503.98
	PROFILE GRADE LINE	STATION	10+26.36	10+47.30	10+68.23	10+88.49	10+89.17	11+10.11	11+23.11	11+34.36	11+36.11	11+49.11	11+62.11	11+75.12	11+88.12	11+92.83	12+01.12	12+14.12	12+35.54	12+38.93	12+56.96	12+78.38	12+99.80
		OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		ELEVATION	515.53	514.66	513.78	512.94	512.91	512.04	511.49	511.03	510.95	510.41	509.87	509.33	508.78	508.59	508.24	507.70	506.81	506.67	505.91	505.02	504.13
	GIRDER 8R	STATION	10+27.26	10+48.11	10+68.96	10+89.14	10+89.81	11+10.67	11+23.47	11+34.85	11+36.26	11+49.06	11+61.86	11+74.66	11+87.46	11+93.16	12+00.26	12+13.07	12+34.76	12+39.13	12+56.46	12+78.17	12+99.88
		OFFSET	5.85 RT	5.43 RT	5.19 RT	5.13 RT	5.12 RT	4.81 RT	4.71 RT	4.68 RT	4.65 RT	4.42 RT	4.25 RT	4.16 RT	4.15 RT	4.16 RT	3.98 RT	3.70 RT	3.41 RT	3.37 RT	2.96 RT	2.62 RT	2.50 RT
		ELEVATION	515.65	514.78	513.91	513.08	513.05	512.18	511.65	511.18	511.12	510.59	510.05	509.52	508.99	508.75	508.45	507.91	506.99	506.81	506.07	505.15	504.23
	GIRDER 9	STATION	10+28.27	10+49.13	10+70.00		10+90.87	11+11.75	11+24.78		11+37.82	11+50.87	11+63.92	11+76.97	11+90.02		12+03.08	12+16.14	12+37.10		12+58.08	12+79.07	13+00.08
		OFFSET	15.37 RT	14.78 RT	14.37 RT		14.16 RT	14.15 RT	13.62 RT		13.16 RT	12.78 RT	12.48 RT	12.25 RT	12.10 RT		12.01 RT	12.01 RT	10.84 RT		9.85 RT	9.07 RT	8.47 RT
		ELEVATION	515.86	515.01	514.15		513.31	512.47	511.92		511.38	510.84	510.30	509.76	509.23		508.70	508.16	507.23		506.31	505.40	504.49
	GIRDER 10	STATION	10+29.56	10+50.34	10+71.13		10+91.93	11+12.73	11+25.71		11+38.71	11+51.70	11+64.70	11+77.71	11+90.71		12+03.72	12+16.73	12+37.61		12+58.52	12+79.43	13+00.36
		OFFSET	23.83 RT	23.24 RT	22.85 RT		22.65 RT	22.64 RT	22.12 RT		21.67 RT	21.29 RT	20.99 RT	20.77 RT	20.62 RT		20.54 RT	20.54 RT	19.37 RT		18.40 RT	17.61 RT	17.02 RT
		ELEVATION	516.03	515.20	514.37		513.55	512.73	512.20		511.67	511.14	510.61	510.09	509.57		509.05	508.52	507.59		506.68	505.77	504.86
	PHASE 1 CONST. JT.	STATION	10+30.01	10+50.76	10+71.53		10+92.30	11+13.07	11+26.04		11+39.01	11+51.99	11+64.98	11+77.97	11+90.96		12+03.95	12+16.94	12+37.79		12+58.67	12+79.56	13+00.46
		OFFSET	26.81 RT	26.23 RT	25.85 RT		25.65 RT	25.64 RT	25.11 RT		24.66 RT	24.29 RT	23.99 RT	23.76 RT	23.61 RT		23.54 RT	23.54 RT	22.37 RT		21.39 RT	20.61 RT	20.23 RT
		ELEVATION	516.10	515.27	514.45		513.63	512.82	512.29		511.77	511.25	510.72	510.21	509.69		509.17	508.64	507.72		506.80	505.90	504.99

FINAL DECK SURFACE ELEVATIONS - UNIT 8

			℄ BRG. PIER 7S	SPAN 7S 1/4	SPAN 7S 1/2	SPAN 7S 3/4	PIER 8S	SPAN 8S 1/8	SPAN 8S 1/4	SPAN 8S 3/8	SPAN 8S 1/2	SPAN 8S 5/8	SPAN 8S 3/4	SPAN 8S 7/8	PIER 9S	SPAN 9S 1/4	SPAN 9S 1/2	SPAN 9S 3/4	℄ BRG. FWD. ABUT.
PHASE 2	PHASE 2 CONST. JT.	STATION	10+30.38	10+51.11	10+71.86	10+92.60	11+13.35	11+26.31	11+39.27	11+52.24	11+65.21	11+78.18	11+91.16	12+04.13	12+17.11	12+37.95	12+58.80	12+79.67	13+00.55
		OFFSET	29.30 RT	28.72 RT	28.34 RT	28.14 RT	28.14 RT	27.63 RT	27.19 RT	26.82 RT	26.52 RT	26.30 RT	26.15 RT	26.07 RT	26.08 RT	24.92 RT	23.95 RT	23.17 RT	22.58 RT
		ELEVATION	516.15	515.33	514.51	513.70	512.90	512.38	511.85	511.34	510.82	510.30	509.79	509.28	508.75	507.83	506.91	506.01	505.10
	GIRDER 11	STATION	10+30.83	10+51.54	10+72.25	10+92.97	11+13.70	11+26.64	11+39.58	11+52.53	11+65.48	11+78.44	11+91.40	12+04.36	12+17.32	12+38.13	12+58.95	12+79.79	13+00.65
		OFFSET	32.29 RT	31.71 RT	31.33 RT	31.14 RT	31.14 RT	30.62 RT	30.18 RT	29.81 RT	29.52 RT	29.29 RT	29.15 RT	29.07 RT	29.08 RT	27.91 RT	26.94 RT	26.16 RT	25.58 RT
		ELEVATION	516.21	515.40	514.59	513.79	512.99	512.47	511.96	511.44	510.93	510.42	509.91	509.41	508.87	507.95	507.04	506.14	505.23
	GIRDER 12	STATION	10+32.09	10+52.72	10+73.37	10+94.01	11+14.66	11+27.55	11+40.45	11+53.35	11+66.26	11+79.17	11+92.08	12+04.99	12+17.90	12+38.63	12+59.38	12+80.15	13+00.93
		OFFSET	40.75 RT	40.18 RT	39.81 RT	39.63 RT	39.64 RT	39.12 RT	38.68 RT	38.32 RT	38.03 RT	37.81 RT	37.67 RT	37.60 RT	37.61 RT	36.45 RT	35.49 RT	34.71 RT	34.13 RT
		ELEVATION	516.39	515.60	514.81	514.03	513.25	512.75	512.25	511.75	511.25	510.75	510.25	509.76	509.23	508.32	507.41	506.50	505.60
	GIRDER 13	STATION	10+33.35	10+53.91	10+74.47	10+95.04	11+15.61	11+28.46	11+41.31	11+54.17	11+67.03	11+79.89	11+92.75	12+05.62	12+18.48	12+39.14	12+59.81	12+80.50	13+01.20
		OFFSET	49.21 RT	48.66 RT	48.30 RT	48.12 RT	48.14 RT	47.63 RT	47.20 RT	46.84 RT	46.55 RT	46.34 RT	46.20 RT	46.13 RT	46.14 RT	44.99 RT	44.03 RT	43.26 RT	42.68 RT
		ELEVATION	516.58	515.81	515.04	514.28	513.52	513.03	512.54	512.05	511.57	511.08	510.60	510.12	509.59	508.68	507.78	506.87	505.96
	GIRDER 14	STATION	10+34.59	10+55.08	10+75.57	10+96.06	11+16.56	11+29.36	11+42.17	11+54.98	11+67.79	11+80.60	11+93.42	12+06.24	12+19.06	12+39.64	12+60.24	12+80.85	13+01.48
		OFFSET	57.67 RT	57.13 RT	56.78 RT	56.61 RT	56.63 RT	56.13 RT	55.70 RT	55.35 RT	55.07 RT	54.86 RT	54.72 RT	54.66 RT	54.67 RT	53.53 RT	52.57 RT	51.81 RT	51.23 RT
		ELEVATION	516.76	516.01	515.27	514.52	513.79	513.31	512.83	512.36	511.89	511.42	510.95	510.48	509.95	509.04	508.14	507.24	506.33
	RIGHT TOE	STATION	10+34.74	10+55.22	10+75.68	10+96.13	11+16.56	11+29.38	11+42.20	11+55.01	11+67.82	11+80.62	11+93.42	12+06.22	12+19.02	12+39.65	12+60.27	12+80.89	13+01.47
		OFFSET	58.64 RT	58.14 RT	57.64 RT	57.14 RT	56.64 RT	56.33 RT	56.01 RT	55.70 RT	55.38 RT	55.07 RT	54.76 RT	54.44 RT	54.13 RT	53.62 RT	53.11 RT	52.61 RT	50.93 RT
		ELEVATION	516.78	516.04	515.29	514.54	513.79	513.32	512.85	512.37	511.90	511.42	510.95	510.47	509.93	509.05	508.17	507.28	506.32

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.
2. ALL STATIONS AND OFFSETS SHOWN ARE FROM ℄ PROP. US 50 EB.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

TOP OF DECK TABLE - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

83 / 98

257
442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD007.dgn 11/10/2010 11:36:33 AM mtneiheisel

TOP OF HAUNCH ELEVATIONS - UNIT 6

		℄ BRG. PIER 1S/ END DIAPH.	SPAN 1S				PIER 2S	SPAN 2S									PIER 3S
			1/4	1/2	FIELD SPLICE 1	3/4		1/8	FIELD SPLICE 2	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 3	7/8	
PHASE 1	GIRDER 7R	513.46	514.34	515.18	515.30	515.97	516.74	517.46	517.72	518.12	518.73	519.28	519.76	520.18	520.26	520.54	520.88
	GIRDER 8R	512.71	513.71	514.64	515.10	515.50	516.33	516.98	517.24	517.61	518.20	518.74	519.22	519.65	519.70	520.04	520.40
	GIRDER 9	511.77	512.97	514.07		515.07	516.01	516.61		517.19	517.74	518.24	518.70	519.13		519.52	519.90
	GIRDER 10	511.39	512.52	513.56		514.50	515.39	515.97		516.54	517.09	517.60	518.07	518.51		518.92	519.32

TOP OF HAUNCH ELEVATIONS - UNIT 6

		PIER 3S	SPAN 3S								PIER 4S	SPAN 4S					℄ BRG. PIER 5S
			1/8	FIELD SPLICE 4	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 5	7/8		1/4	FIELD SPLICE 6	1/2	FIELD SPLICE 6	3/4	
PHASE 1	GIRDER 7R	520.88	521.20	521.44	521.49	521.74	521.94	522.07	522.14	522.16	522.17	522.17	522.16		522.12	522.12	522.05	521.95
	GIRDER 8R	520.40	520.76	521.03	521.09	521.38	521.61	521.79	521.91	521.96	521.99	522.04	522.07	522.08	522.07		522.02	521.92
	GIRDER 9	519.90	520.28		520.64	520.94	521.25	521.47	521.64		521.76	521.86	521.96		522.01		521.98	521.88
	GIRDER 10	519.32	519.75		520.15	520.50	520.84	521.11	521.32		521.49	521.64	521.82		521.93		521.94	521.84

TOP OF HAUNCH ELEVATIONS - UNIT 6

		℄ BRG. PIER 1S	SPAN 1S			PIER 2S	SPAN 2S							PIER 3S
			1/4	1/2	3/4		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	GIRDER 11	511.02	512.07	513.04	513.92	514.76	515.31	515.87	516.41	516.93	517.41	517.86	518.29	518.70
	GIRDER 12	510.65	511.62	512.52	513.34	514.13	514.63	515.19	515.72	516.23	516.71	517.17	517.61	518.03
	GIRDER 13	510.28	511.16	511.99	512.76	513.49	513.97	514.48	515.00	515.51	515.99	516.45	516.89	517.32
	GIRDER 14	509.91	510.70	511.46	512.17	512.84	513.30	513.75	514.26	514.75	515.22	515.68	516.13	516.56

TOP OF HAUNCH ELEVATIONS - UNIT 6

		PIER 3S	SPAN 3S							PIER 4S	SPAN 4S							℄ BRG. PIER 5S
			1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	GIRDER 11	518.70	519.17	519.62	520.01	520.39	520.70	520.96	521.18	521.37	521.52	521.65	521.75	521.84	521.88	521.89	521.86	521.80
	GIRDER 12	518.03	518.55	519.04	519.47	519.90	520.25	520.56	520.83	521.07	521.27	521.45	521.61	521.73	521.80	521.83	521.82	521.77
	GIRDER 13	517.32	517.88	518.41	518.89	519.36	519.76	520.12	520.43	520.72	520.98	521.23	521.44	521.60	521.71	521.77	521.77	521.73
	GIRDER 14	516.56	517.17	517.74	518.27	518.78	519.22	519.62	519.99	520.32	520.67	520.98	521.25	521.47	521.62	521.71	521.73	521.70

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10 | CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

TOP OF HAUNCH TABLES - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD008.dgn 11/10/2010 11:36:35 AM mtneiheisel

TOP OF HAUNCH ELEVATIONS - UNIT 7

		℄ BRG. PIER 5S	SPAN 5S				PIER 5AS	SPAN 5AS									PIER 6S	SPAN 6S				℄ BRG. PIER 7S
			1/4	1/2	FIELD SPLICE 7	3/4		1/8	FIELD SPLICE 8	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 9	7/8		1/4	FIELD SPLICE 10	1/2	3/4	
PHASE 1	GIRDER 7R	521.94	521.80	521.61	521.53	521.39	521.13	520.91	520.78	520.66	520.38	520.07	519.71	519.31	519.28	518.89	518.45	517.67	517.53	516.83	515.87	514.79
	GIRDER 8R	521.91	521.77	521.58	521.43	521.32	521.03	520.79	520.66	520.54	520.26	519.95	519.59	519.20	519.16	518.77	518.33	517.61	517.41	516.87	515.97	515.00
	GIRDER 9	521.87	521.75	521.55		521.27	520.93	520.70		520.45	520.17	519.85	519.49	519.10		518.68	518.24	517.56		516.82	516.01	515.11
	GIRDER 10	521.84	521.74	521.53		521.23	520.85	520.61		520.36	520.08	519.76	519.41	519.01		518.59	518.16	517.52		516.84	516.09	515.28

TOP OF HAUNCH ELEVATIONS - UNIT 7

		℄ BRG. PIER 5S	SPAN 5S							PIER 5AS	SPAN 5AS							PIER 6S	SPAN 6S			℄ BRG. PIER 7S
			1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/4	1/2	3/4	
PHASE 2	GIRDER 11	521.80	521.78	521.72	521.64	521.52	521.37	521.19	520.99	520.78	520.53	520.28	519.99	519.68	519.32	518.94	518.52	518.08	517.48	516.86	516.19	515.46
	GIRDER 12	521.76	521.75	521.71	521.63	521.52	521.36	521.16	520.95	520.71	520.46	520.20	519.92	519.61	519.25	518.87	518.45	518.01	517.46	516.90	516.29	515.64
	GIRDER 13	521.73	521.74	521.71	521.63	521.52	521.35	521.15	520.91	520.65	520.41	520.14	519.86	519.54	519.19	518.80	518.38	517.94	517.45	516.94	516.40	515.83
	GIRDER 14	521.70	521.72	521.71	521.64	521.52	521.35	521.13	520.88	520.61	520.36	520.09	519.80	519.49	519.14	518.75	518.33	517.89	517.45	516.99	516.51	516.01

TOP OF HAUNCH ELEVATIONS - UNIT 8

		℄ BRG. PIER 7S	SPAN 7S			PIER 8S	SPAN 8S							PIER 9S	SPAN 9S				℄ BRG. FWD. ABUT.
			1/4	1/2	FIELD SPLICE 11	3/4		1/8	FIELD SPLICE 12	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 13	7/8		1/4	FIELD SPLICE 14	1/2	3/4	
PHASE 1	GIRDER 7R	514.73	513.88	513.01	512.13	512.10	511.19	510.64	510.19	510.10	509.56	509.02	508.45	507.89	507.73	507.31	506.74	505.88	505.79	505.03	504.15	503.25
	GIRDER 8R	514.92	514.10	513.24	512.38	512.35	511.45	510.93	510.47	510.42	509.90	509.37	508.83	508.29	508.04	507.73	507.18	506.28	506.10	505.38	504.46	503.50
	GIRDER 9	515.13	514.32	513.47		512.60	511.74	511.20		510.67	510.15	509.61	509.07	508.52		507.97	507.43	506.52		505.63	504.71	503.76
	GIRDER 10	515.30	514.51	513.69		512.84	512.00	511.47		510.96	510.45	509.93	509.40	508.86		508.33	507.79	506.88		505.99	505.08	504.13

TOP OF HAUNCH ELEVATIONS - UNIT 8

		℄ BRG. PIER 7S	SPAN 7S			PIER 8S	SPAN 8S							PIER 9S	SPAN 9S			℄ BRG. FWD. ABUT.
			1/4	1/2	3/4		1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/4	1/2	3/4	
PHASE 2	GIRDER 11	515.48	514.71	513.90	513.08	512.26	511.75	511.25	510.75	510.24	509.72	509.20	508.68	508.14	507.24	506.36	505.44	504.50
	GIRDER 12	515.66	514.91	514.13	513.32	512.52	512.03	511.54	511.05	510.56	510.05	509.55	509.04	508.50	507.61	506.72	505.81	504.87
	GIRDER 13	515.85	515.11	514.35	513.57	512.79	512.31	511.83	511.35	510.87	510.38	509.89	509.40	508.86	507.97	507.08	506.18	505.23
	GIRDER 14	516.03	515.31	514.57	513.81	513.06	512.59	512.12	511.66	511.19	510.71	510.23	509.76	509.22	508.33	507.45	506.54	505.60

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

TOP OF HAUNCH TABLES - UNIT 7 & 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD009.dgn 11/10/2010 11:36:36 AM mtneihetsel

SCREED ELEVATIONS - UNIT 6

		℄ BRG. PIER 1S	SPAN 1S				PIER 2S	SPAN 2S									PIER 3S
			1/4	1/2	FIELD SPLICE 1	3/4		1/8	FIELD SPLICE 2	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 3	7/8	
PHASE 1	LEFT TOE	512.53	513.98	515.28	516.09	516.45	517.55	518.25	518.49	518.92	519.53	520.08	520.55	520.96	521.04	521.33	521.67
	PROFILE GRADE LINE	512.39	513.80	515.08	515.92	516.23	517.30	518.01	518.27	518.68	519.30	519.85	520.33	520.75	520.82	521.13	521.48
	PHASE 1 CONST. JT.	512.04	513.14	514.16		515.09	515.96	516.53		517.10	517.65	518.16	518.64	519.08		519.49	519.90

SCREED ELEVATIONS - UNIT 6

		PIER 3S	SPAN 3S								PIER 4S	SPAN 4S					℄ BRG. PIER 5S
			1/8	FIELD SPLICE 4	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 5	7/8		1/4	FIELD SPLICE 6	1/2	FIELD SPLICE 6	3/4	
PHASE 1	LEFT TOE	521.67	521.98	522.21	522.26	522.51	522.70	522.83	522.90	522.92	522.93	522.92	522.91		522.87	522.87	522.80	522.70
	PROFILE GRADE LINE	521.48	521.81	522.05	522.11	522.38	522.58	522.73	522.82	522.85	522.86	522.88	522.88	522.85	522.85		522.79	522.69
	PHASE 1 CONST. JT.	519.90	520.33		520.75	521.11	521.47	521.75	521.97		522.16	522.32	522.52		522.65		522.67	522.58

SCREED ELEVATIONS - UNIT 6

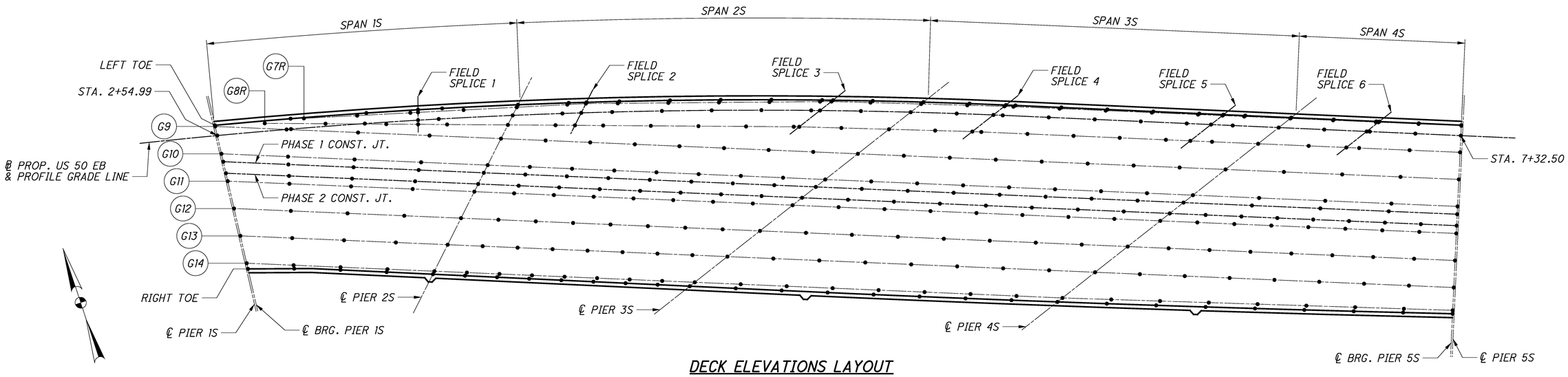
		℄ BRG. PIER 1S	SPAN 1S			PIER 2S	SPAN 2S							PIER 3S
			1/4	1/2	3/4		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	PHASE 2 CONST. JT.	511.88	512.95	513.94	514.84	515.69	516.25	516.81	517.36	517.87	518.35	518.80	519.22	519.63
	RIGHT TOE	510.58	511.40	512.16	512.85	513.52	513.97	514.41	514.91	515.40	515.86	516.32	516.76	517.19

SCREED ELEVATIONS - UNIT 6

		PIER 3S	SPAN 3S							PIER 4S	SPAN 4S							℄ BRG. PIER 5S
			1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/8	1/4	3/8	1/2	5/8	3/4	7/8	
PHASE 2	PHASE 2 CONST. JT.	519.63	520.09	520.53	520.90	521.27	521.57	521.82	522.02	522.20	522.34	522.45	522.55	522.62	522.66	522.66	522.63	522.56
	RIGHT TOE	517.19	517.80	518.38	518.91	519.43	519.88	520.29	520.66	521.01	521.36	521.68	521.96	522.19	522.35	522.44	522.47	522.44

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.



DECK ELEVATIONS LAYOUT
(UNIT 6 - SPANS 1S, 2S, 3S, & 4S)

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

SCREED ELEVATIONS TABLE - UNIT 6 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

86 / 98

260 / 442

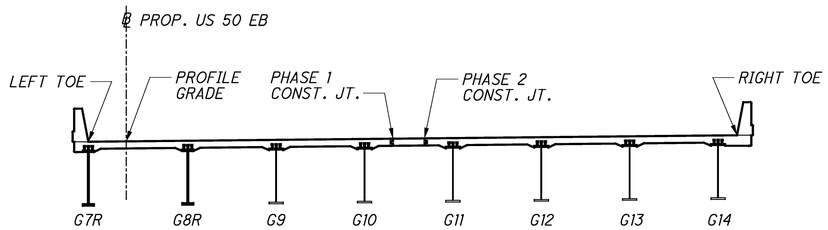
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD010.dgn 11/10/2010 11:36:38 AM mtneiheisel

SCREED ELEVATIONS - UNIT 7

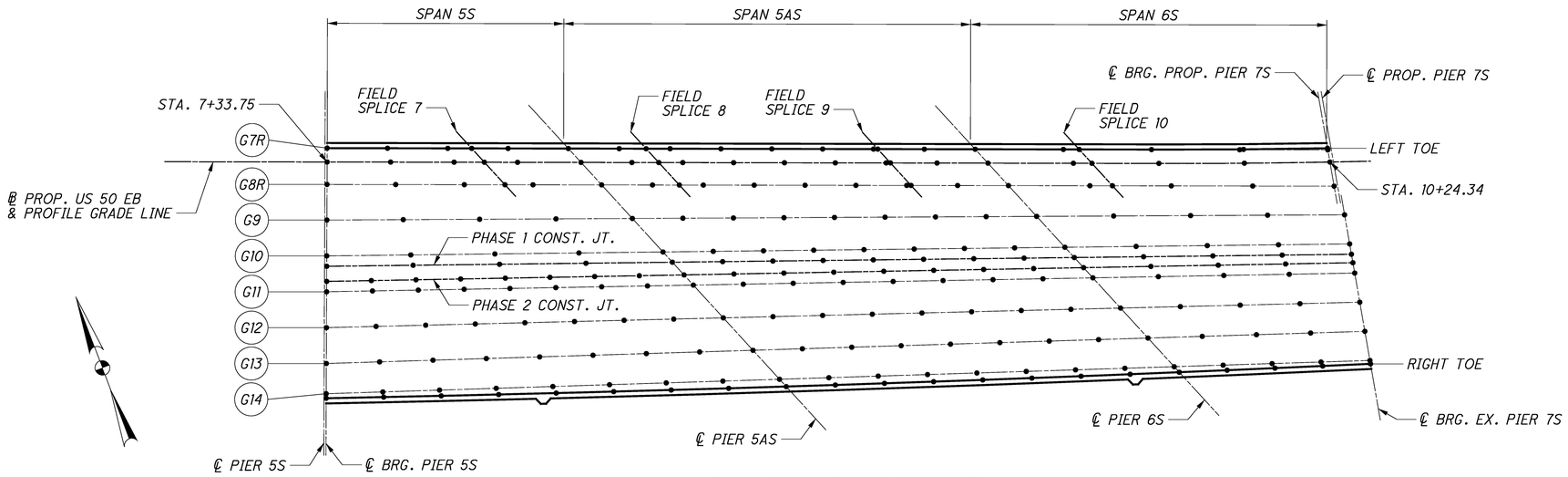
PHASE 1		SPAN 5S					SPAN 5AS										SPAN 6S					
	℄ BRG. PIER 5S	1/4	1/2	FIELD SPLICE 7	3/4	PIER 5AS	1/8	FIELD SPLICE 8	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 9	7/8	PIER 6S	1/4	FIELD SPLICE 10	1/2	3/4	℄ BRG. PIER 7S
LEFT TOE	522.69	522.55	522.36	522.28	522.14	521.88	521.66	521.53	521.41	521.13	520.82	520.46	520.06	520.03	519.64	519.20	518.42	518.28	517.58	516.57	515.53
PROFILE GRADE LINE	522.68	522.54	522.34	522.24	522.11	521.84	521.61	521.49	521.37	521.09	520.77	520.41	520.02	519.98	519.59	519.15	518.40	518.23	517.59	516.66	515.61
PHASE 1 CONST. JT.	522.58	522.48	522.27		521.96	521.58	521.34		521.08	520.80	520.48	520.13	519.74		519.32	518.88	518.26		517.60	516.88	516.10

SCREED ELEVATIONS - UNIT 7

PHASE 2		SPAN 5S								SPAN 5AS								SPAN 6S			
	℄ BRG. PIER 5S	1/8	1/4	3/8	1/2	5/8	3/4	7/8	PIER 5AS	1/8	1/4	3/8	1/2	5/8	3/4	7/8	PIER 6S	1/4	1/2	3/4	℄ BRG. PIER 7S
PHASE 2 CONST. JT.	522.56	522.53	522.48	522.40	522.28	522.13	521.95	521.76	521.55	521.31	521.05	520.77	520.45	520.10	519.71	519.29	518.85	518.24	517.60	516.90	516.15
RIGHT TOE	522.44	522.47	522.45	522.39	522.27	522.10	521.88	521.63	521.35	521.10	520.83	520.54	520.23	519.88	519.49	519.07	518.63	518.20	517.75	517.27	516.78



HAM-50-1903R
(LOOKING EAST)



DECK ELEVATIONS LAYOUT
(UNIT 7 - SPANS 5S, 5AS, & 6S)

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102815	

SCREED ELEVATIONS TABLE - UNIT 7 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

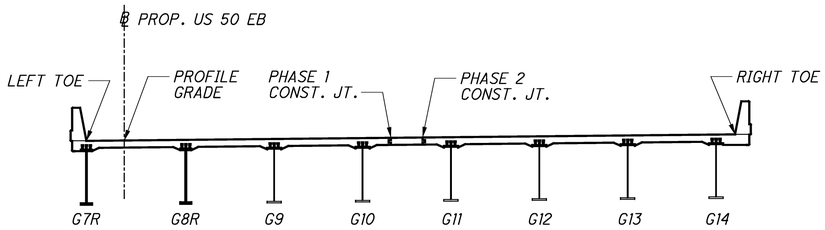
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD011.dgn 11/10/2010 11:36:40 AM mtreinerisel

SCREED ELEVATIONS - UNIT 8

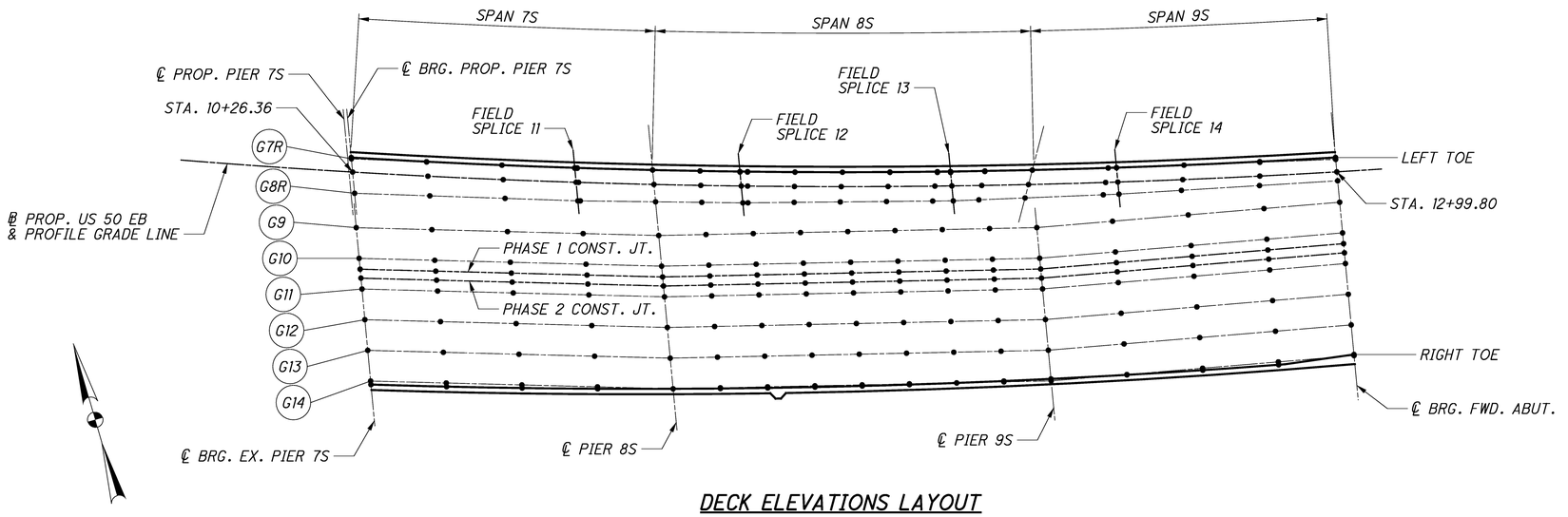
PHASE 1			SPAN 7S				PIER 8S	SPAN 8S									PIER 9S	SPAN 9S					℄ BRG. FWD. ABUT.
		℄ BRG. PIER 7S	1/4	1/2	FIELD SPLICE 11	3/4		1/8	FIELD SPLICE 12	1/4	3/8	1/2	5/8	3/4	FIELD SPLICE 13	7/8		1/4	FIELD SPLICE 14	1/2	3/4		
	LEFT TOE	515.45	514.61	513.74	512.85	512.82	511.92	511.37	510.92	510.83	510.29	509.74	509.18	508.61	508.45	508.03	507.47	506.61	506.52	505.76	504.87	503.95
	PROFILE GRADE LINE	515.53	514.70	513.84	512.96	512.94	512.04	511.50	511.05	510.98	510.45	509.92	509.37	508.81	508.61	508.25	507.70	506.82	506.69	505.96	505.06	504.13
	PHASE 1 CONST. JT.	516.10	515.31	514.49		513.65	512.82	512.30		511.79	511.28	510.77	510.24	509.71		509.18	508.64	507.74		506.85	505.93	504.99

SCREED ELEVATIONS - UNIT 8

PHASE 2		℄ BRG. PIER 7S	SPAN 7S			PIER 8S	SPAN 8S							PIER 9S	SPAN 9S			℄ BRG. FWD. ABUT.
			1/4	1/2	3/4		1/8	1/4	3/8	1/2	5/8	3/4	7/8		1/4	1/2	3/4	
	PHASE 2 CONST. JT.	516.15	515.37	514.56	513.72	512.90	512.38	511.87	511.37	510.86	510.34	509.81	509.29	508.75	507.85	506.96	506.04	505.10
	RIGHT TOE	516.78	516.07	515.32	514.56	513.79	513.32	512.86	512.40	511.93	511.45	510.96	510.48	509.93	509.06	508.20	507.30	506.32



HAM-50-1903R
(LOOKING EAST)



DECK ELEVATIONS LAYOUT
(UNIT 8 - SPANS 7S, 8S, 9S)

NOTES:

1. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

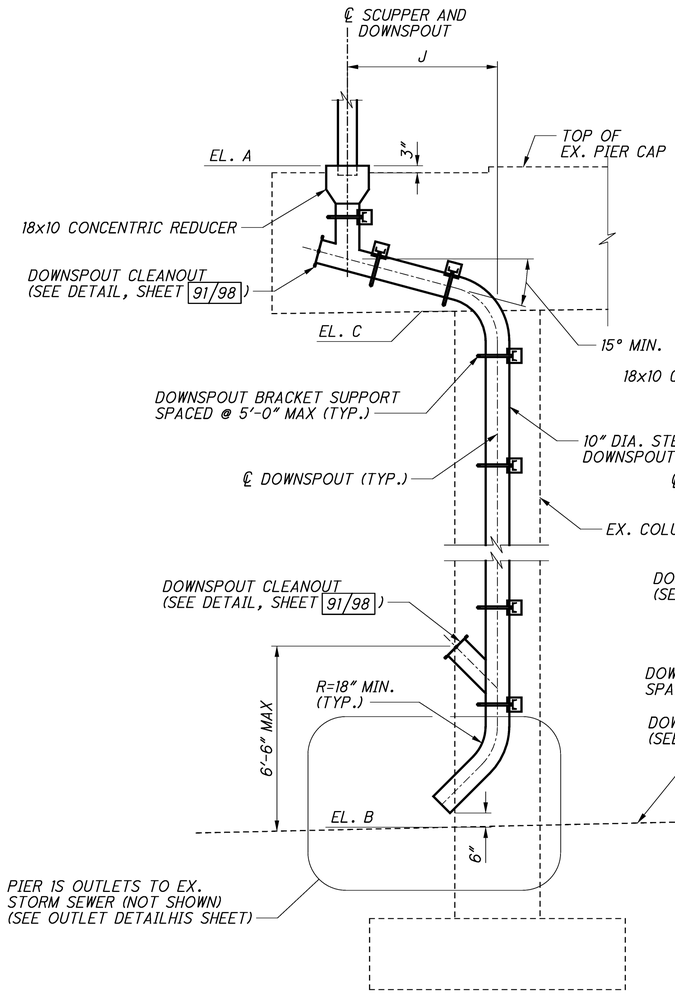
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102815

SCREED ELEVATIONS TABLE - UNIT 8 (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

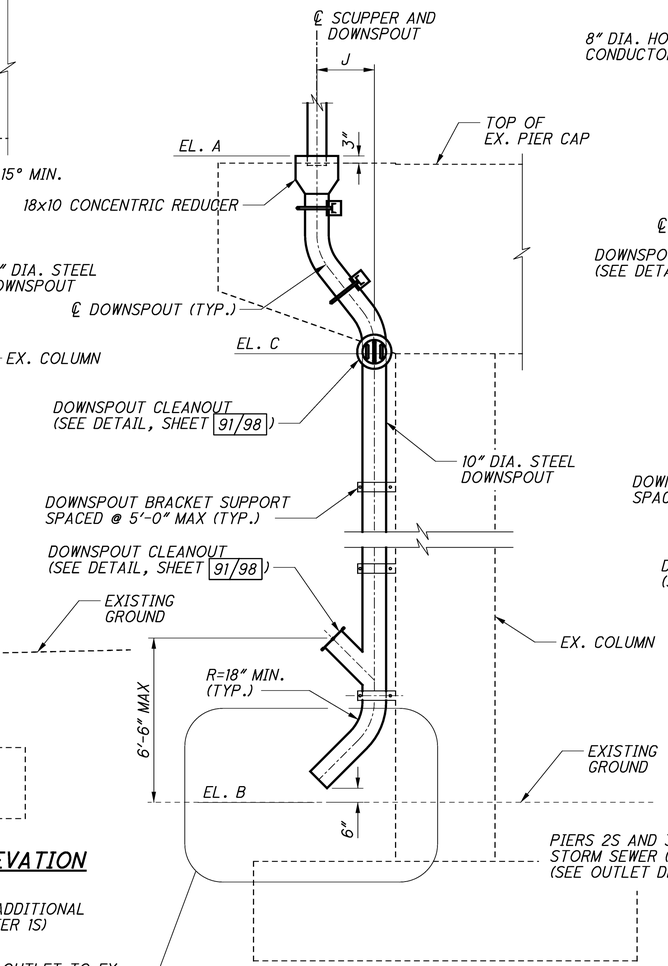
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RSD012.dgn 11/10/2010 11:36:41 AM mtreinheisel



DOWNSPOUT DETAIL A - ELEVATION

PIER 1S AND PIER 4S

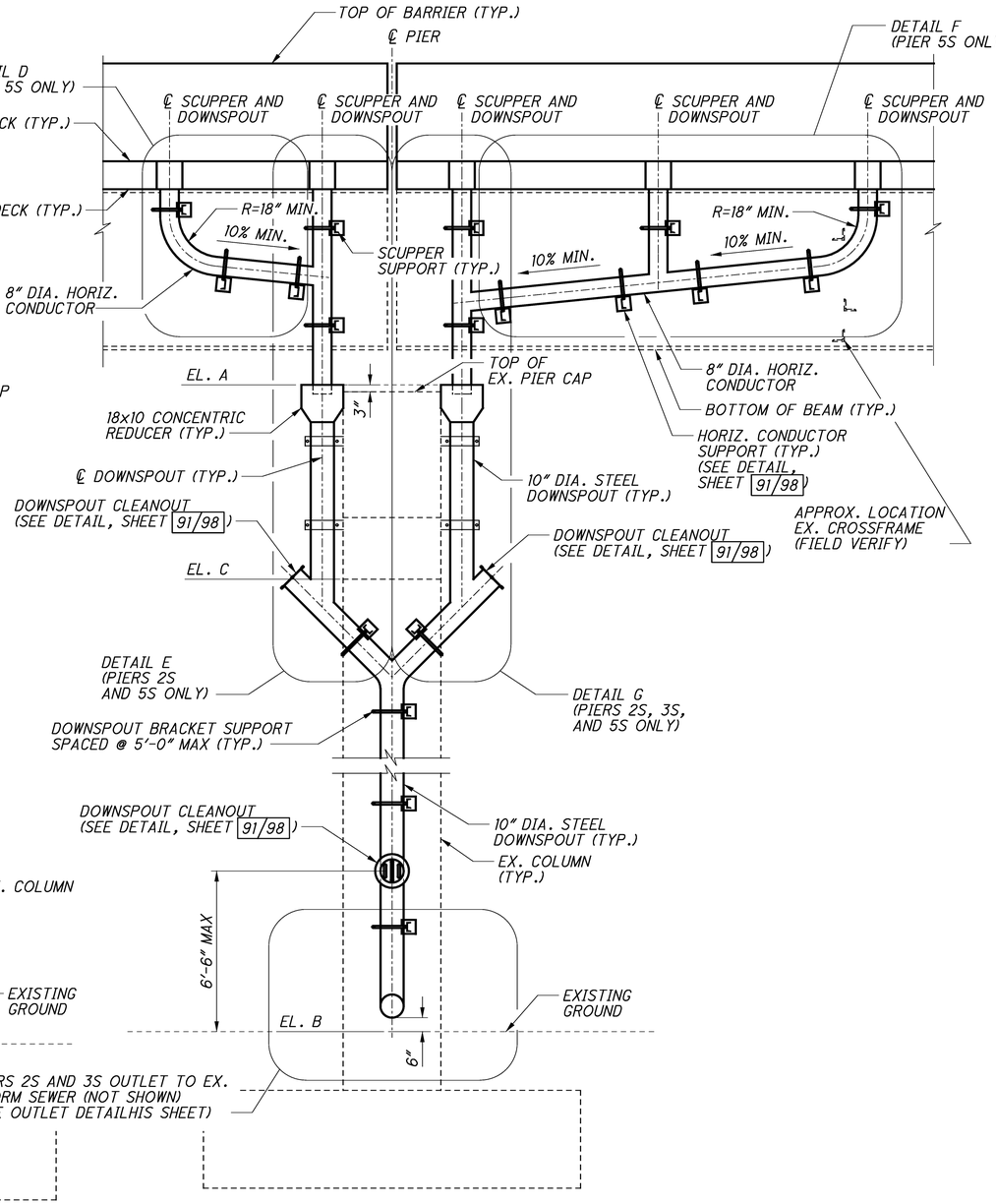
(PIER 4S SHOWN, SEE DETAIL H FOR ADDITIONAL DRAINAGE DETAILS REGARDING PIER 1S)



DOWNSPOUT DETAIL B - ELEVATION

PIER 2S, PIER 3S, AND PIER 5S

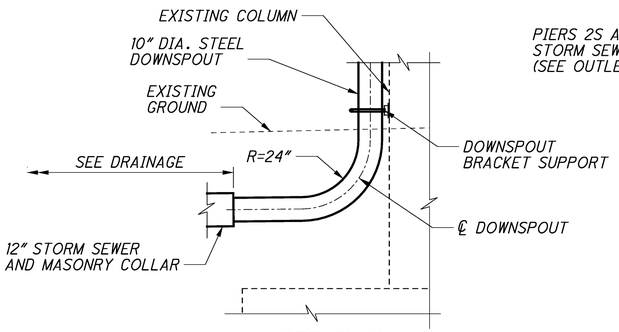
(PIER 5S SHOWN, SEE DETAIL C AND DETAIL H FOR ADDITIONAL DETAILS REGARDING PIERS 2S AND 5S)



DOWNSPOUT DETAIL C - END ELEVATION

PIER 2S, PIER 3S, AND PIER 5S

(PIER 5S SHOWN, SEE DETAIL H FOR ADDITIONAL DRAINAGE DETAILS REGARDING PIERS 2S AND 3S)



DETAIL H

OUTLET TO EX. STORM (PIERS 1S, 2S, AND 3S)

DOWNSPOUT DETAIL ELEVATIONS AND DIMENSIONS				
LOCATION	ELEVATIONS			DIMENSIONS
	A	B	C	J
1S	502.35	490.6±	497.10	9'-3"
2S	505.04	490.4±	498.30	2'-3"
3S	508.71	488.5±	502.00	4'-9"
4S	511.99	488.8±	505.24	1'-6"
5S	514.26	486.3±	507.30	2'-0"

NOTES:

1. FOR ADDITIONAL NOTES AND SCUPPER DETAILS, SEE SHEET 91/98.

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED: MTN | DRAWN: JDG | CHECKED: SSM | REVIEWED: MSL | DATE: 11/12/10 | REVISED: | STRUCTURE FILE NUMBER: 3102815

DRAINAGE DETAILS (RIGHT BRIDGE)

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

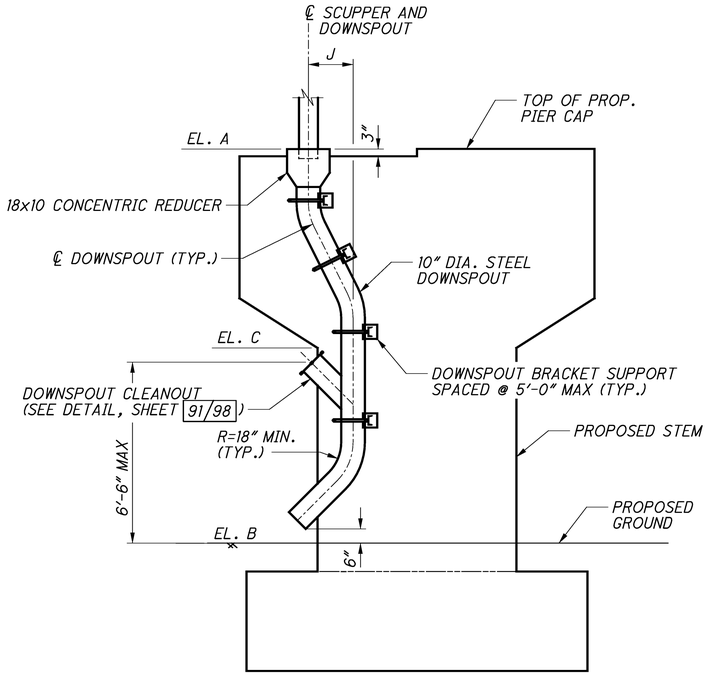
HAM-50-19.03

PID No. 75736

89 / 98

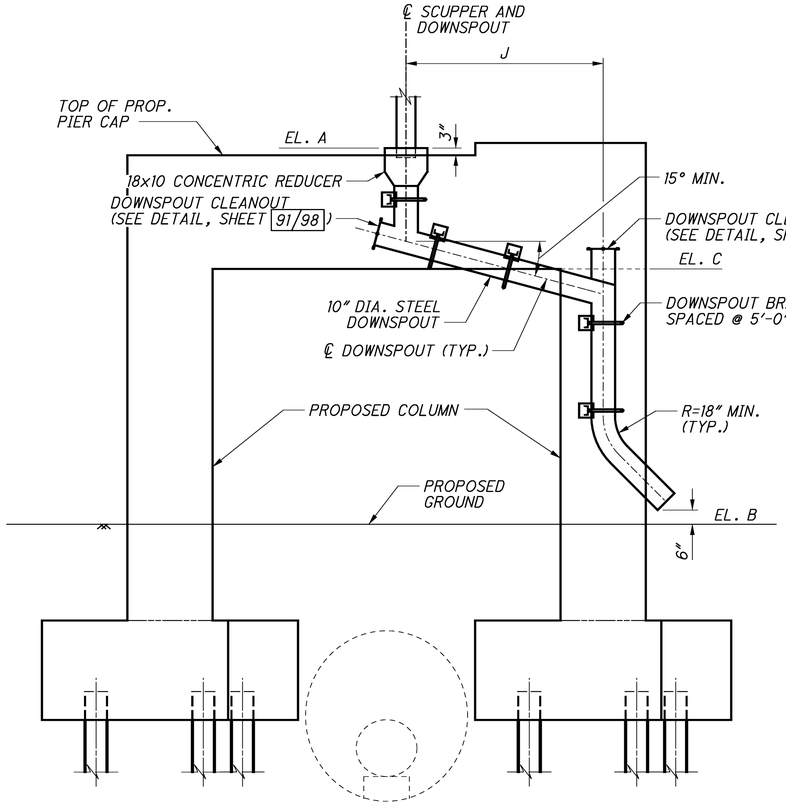
263 / 442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD006.dgn 11/10/2010 11:36:43 AM mtneihesel



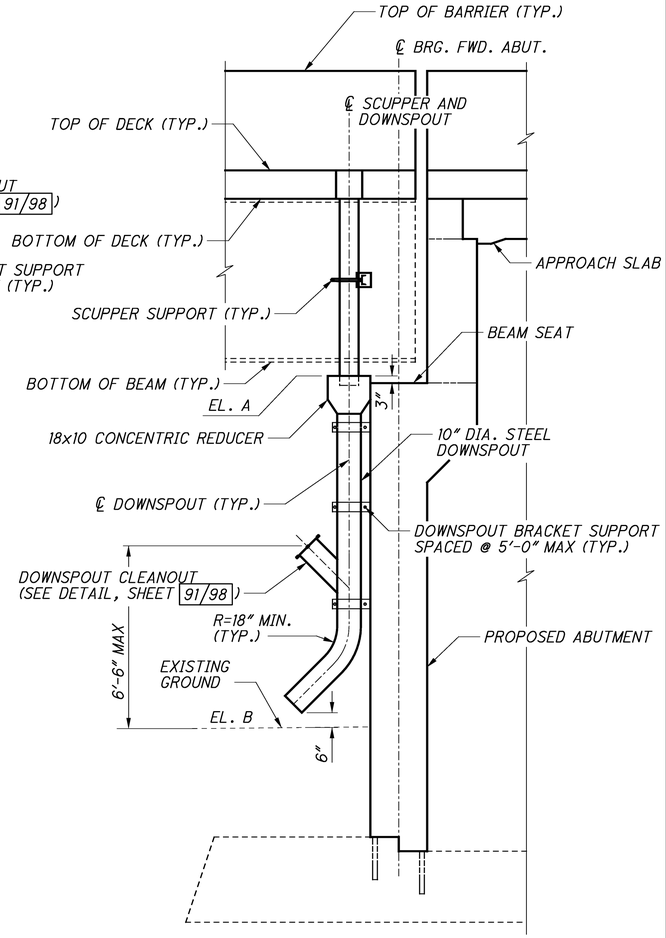
DOWNSPOUT DETAIL K

PIER 5AS, PIER 6S, PIER 7S, AND PIER 8S
(PIER 8S SHOWN, PIERS 5AS, 6S, AND 7S SIMILAR)



DOWNSPOUT DETAIL L

PIER 9S



DOWNSPOUT DETAIL M

FORWARD ABUTMENT

DOWNSPOUT DETAIL ELEVATIONS AND DIMENSIONS				
LOCATION	ELEVATIONS			DIMENSIONS
	A	B	C	J
5AS	513.40	456.2±	502.55	4′-4″
6S	510.72	446.7±	499.85	4′-3″
7S	507.96	484.4±	500.71	1′-4″
8S	505.42	492.3±	498.42	1′-2″
9S	501.47	486.5±	496.79	4′-0″
FWD. ABUT.	498.29	494.9±	-	0

NOTES:

1. FOR ADDITIONAL NOTES AND SCUPPER DETAILS, SEE SHEET 91/98.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

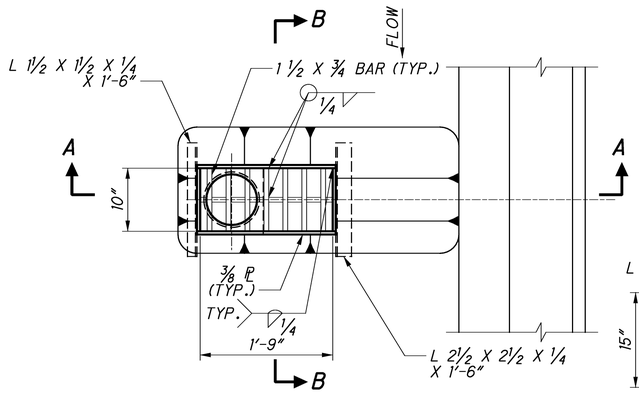
DRAINAGE DETAILS (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

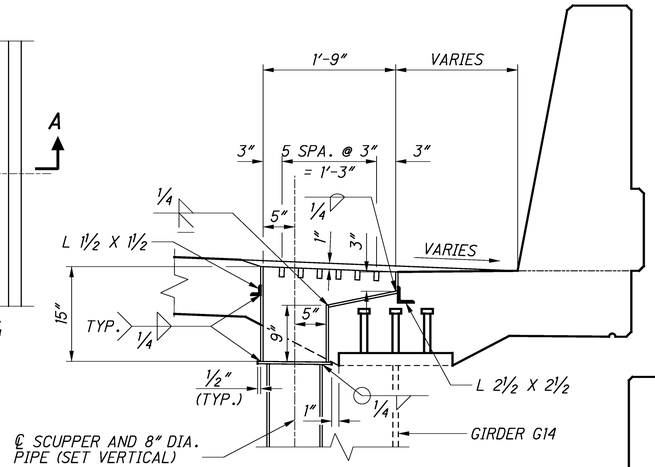
90/98

264/442

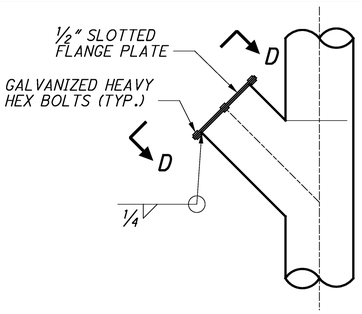
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD007.dgn 11/10/2010 11:36:45 AM mtneiheisel



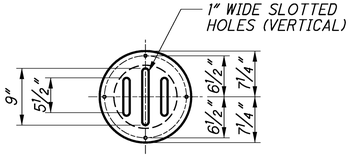
SCUPPER PLAN



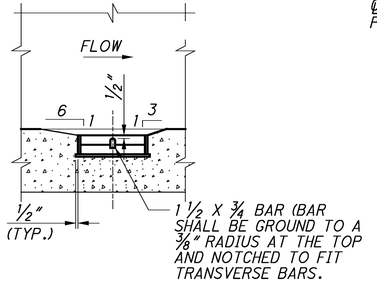
SECTION A-A



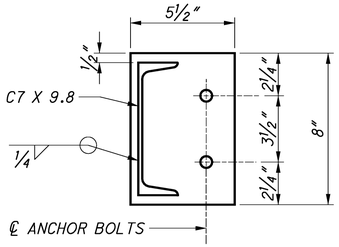
CLEANOUT DETAIL



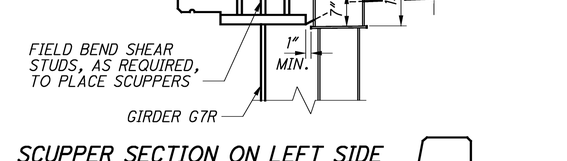
VIEW D-D



SECTION B-B

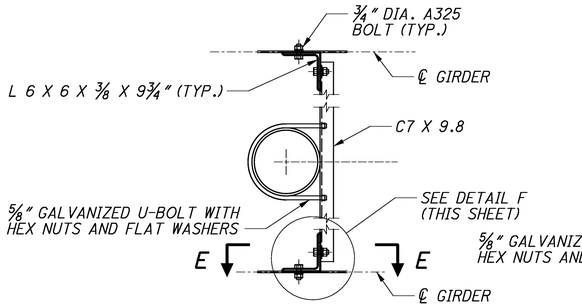


SECTION C-C



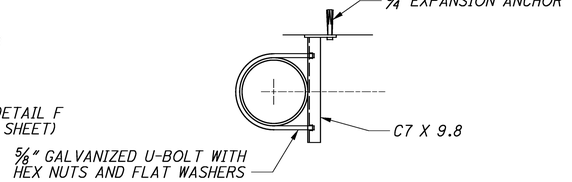
SCUPPER SECTION ON LEFT SIDE

FOR DETAILS NOT SHOWN
SEE SECTION A-A



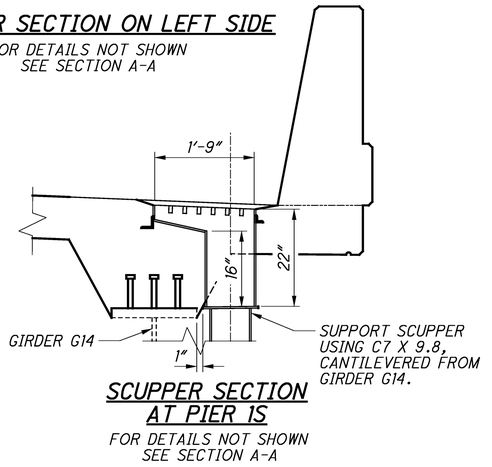
SCUPPER SUPPORT BETWEEN BEAMS

(PLACE SUPPORT 2'-0" ABOVE BOTTOM FLANGE)



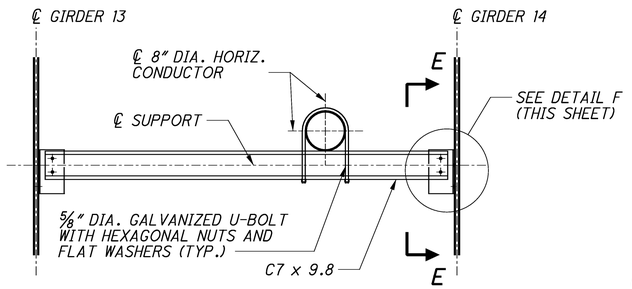
DOWNSPOUT SUPPORT BRACKET AT PIERS

(SPACED AT 5'-0" CENTERS MAX)

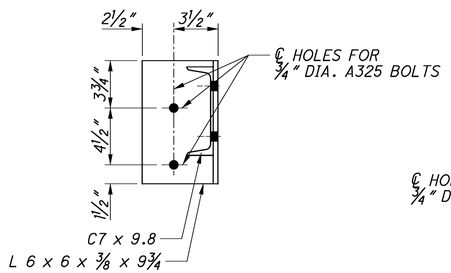


SCUPPER SECTION AT PIER 1S

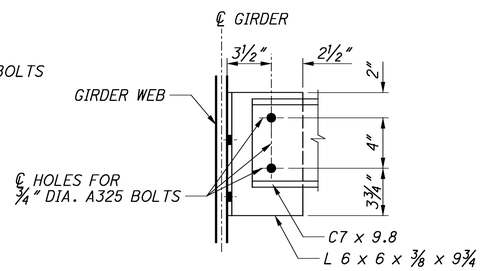
FOR DETAILS NOT SHOWN
SEE SECTION A-A



HORIZONTAL CONDUCTOR SUPPORT



SECTION E-E



DETAIL F

NOTES:

1. SCUPPERS, 8" DIAMETER VERTICAL PIPES AND SPECIALS, CLEANOUTS AND SUPPORT SYSTEMS SHALL BE LOW OR MILD CARBON STEEL CONFORMING TO ITEM 513, AVAILABLE COMMERCIALLY, AND SHALL BE GALVANIZED ACCORDING TO CMS ITEM 711.02.
2. THE SCUPPERS AND SCUPPER SUPPORTS SHALL BE INCLUDED WITH ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, FOR PAYMENT.
3. THE 10" VERTICAL STEEL DOWNSPOUT PIPES WITH SPECIALS, CLEANOUTS, AND SUPPORTS SHALL BE INCLUDED WITH ITEM 518, 10" PIPE DOWNSPOUT INCLUDING SPECIALS, AS PER PLAN, FOR PAYMENT.
4. THE 8" DIAMETER HORIZONTAL CONDUCTOR PIPES SHALL BE POLYVINYL CHLORIDE (PVC) CONFORMING TO CMS 707.45 OR GALVANIZED STEEL CONFORMING TO CMS 748.06. THE 8" DIAMETER HORIZONTAL CONDUCTOR WITH SPECIALS AND HORIZONTAL CONDUCTOR SUPPORTS SHALL BE INCLUDED WITH ITEM 518, 8" PIPE HORIZONTAL CONDUCTORS, AS PER PLAN.
5. STRUCTURAL STEEL FOR PIPE SUPPORTS, INCLUDING ANGLES, CHANNELS AND CONNECTION PLATES SHALL BE ASTM A36 GRADE 36 AND GALVANIZED ACCORDING TO 711.02.
6. PIPE JOINTS FOR VERTICAL STEEL PIPE SHALL BE MADE BY WELDING OR BY USE OF CLAMP-TYPE COUPLINGS HAVING A RING GASKET. ALL WELDING SHALL BE DONE BEFORE GALVANIZING.
7. ALL BOLTS SHALL BE GALVANIZED ACCORDING TO CMS 711.02.
8. FOR ADDITIONAL DRAINAGE DETAILS, SEE SHEETS 89/98 AND 90/98 .
9. FOR PLACEMENT OF ADDITIONAL REINFORCING AT SCUPPERS, SEE SHEET 67/98 THROUGH 73/98 .
10. FOR ATTACHMENT TO PIERS, BOLTS SHALL BE ¾" DIAMETER EXPANSION GALVANIZED BOLT ANCHORS DRILLED IN PLACE. BOLTS SHALL BE CAPABLE OF DEVELOPING A PULLOUT RESISTANCE OF NOT LESS THAN 12,000 LBS.
11. FOR ATTACHMENT TO GIRDERS, BOLTS SHALL BE GALVANIZED ¾" DIAMETER ASTM A325 HIGH STRENGTH STEEL BOLTS. PAYMENT FOR DRILLING BOLT HOLES IN EXISTING GIRDERS SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
12. REMOVE EXISTING SCUPPERS AND DOWNSPOUTS WHEN NO LONGER IN USE. PAYMENT FOR EXISTING SCUPPER AND DOWNSPOUT REMOVAL SHALL BE INCLUDED IN ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
13. ALL DIMENSIONS SHOWN FOR EXISTING STRUCTURES AND FEATURES ARE APPROXIMATE, AND SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING DOWNSPOUTS HAVE BEEN OBTAINED FROM PLANS FOR THE EXISTING STRUCTURE. CONSEQUENTLY, THEY ARE INDICITIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE REQUIREMENTS OF CMS 102.05 AND 105.02, AND SHALL BASE THE CONTRACT BID PRICE UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING PIERS. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.
14. SUBMIT SHOP DRAWINGS ACCORDING TO CMS 501.04 FOR APPROVAL. PREPARATION OF SHOR DRAWINGS SHALL BE INCIDENTAL TO ITEM 518 - SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN, ITEM 518 - 10" PIPE DOWNSPOUT INCLUDING SPECIALS, AS PER PLAN, AND ITEM 518 - 8" PIPE HORIZONTAL CONDUCTORS, ALL AS PER PLAN, FOR PAYMENT.

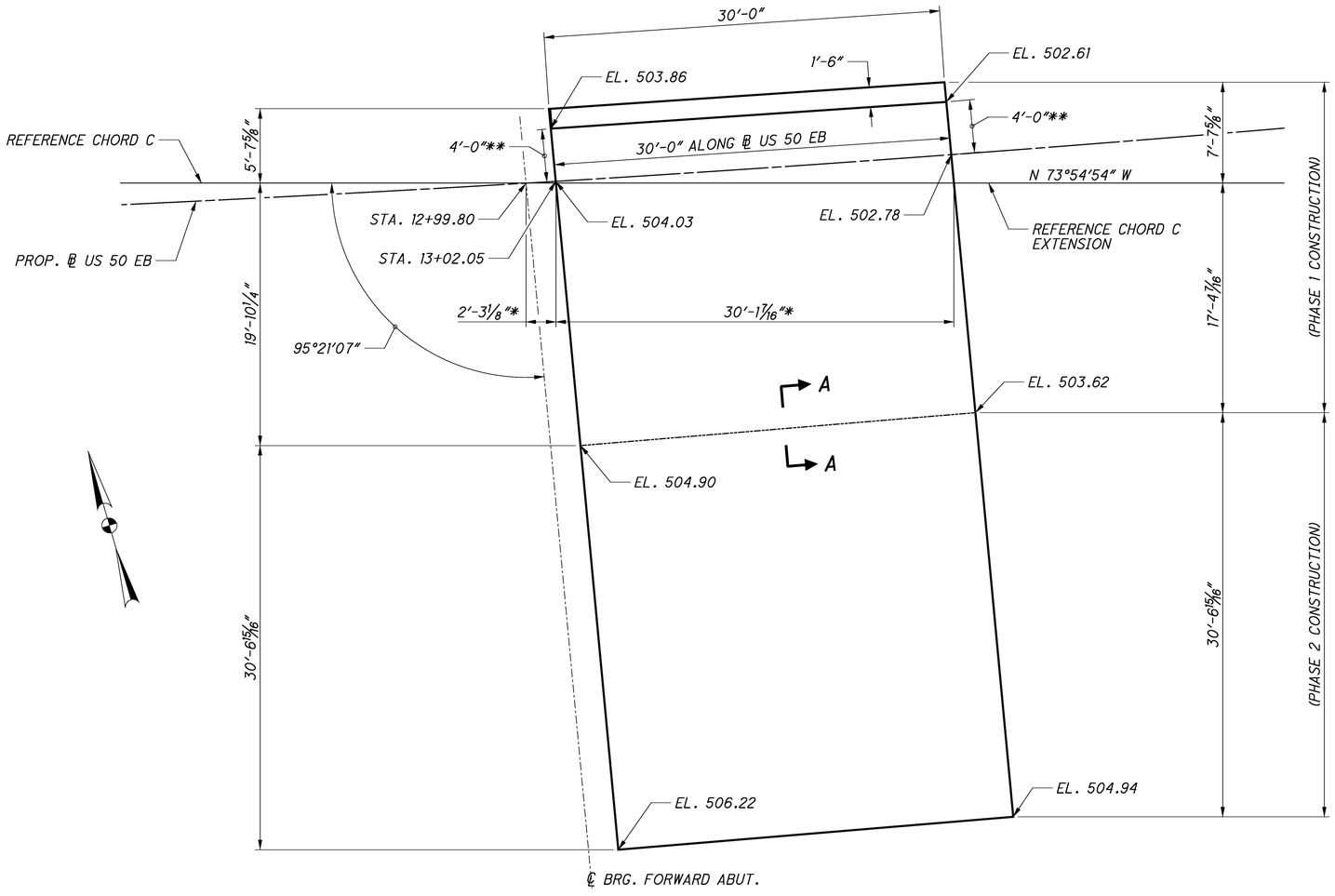
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	PJP	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102815	

DRAINAGE DETAILS (RIGHT BRIDGE)
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

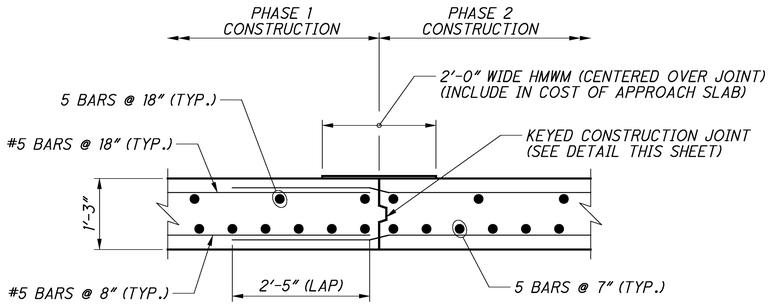
HAM-50-19.03
PID No. 75736

11/10/2010 11:36:47 AM mtneiheisel
C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RMD005.dgn

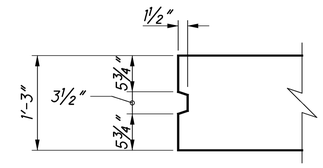


* MEASURED ALONG REFERENCE CHORD EXTENSION
** MEASURED NORMAL TO ℄ AND PROFILE GRADE

APPROACH SLAB PLAN



SECTION A-A



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. SEE STD. DWG. AS-1-81 FOR ADDITIONAL NOTES AND DETAILS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MSL		3102815	

APPROACH SLAB DETAILS
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

92/98

266/442

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RDP010.dgn 11/10/2010 11:36:49 AM mtneiheisel

MARK	NUMBER											LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 2S	PIER 3S	PIER 4S	PIER 5S	PIER 5AS	PIER 6S	PIER 7S	PIER 8S	PIER 9S	CRASH WALL	TOTAL				A	B	C	D	E	R	INC
PIER AND CRASH WALL REINFORCING LIST																					
P401	15										15	10′-8″	107	STR							
P402	12										12	14′-2″	114	STR							
P403	16										16	17′-5″	186	3	5′-6″	3′-0″					
P404	48	72	84	90				27			321	3′-11″	840	9	0′-3″	0′-6″	3′-0″	0′-8″			
P405		14	14					26			54	10′-8″	385	STR							
P406		13	13								26	13′-2″	229	STR							
P407		18	21								39	25′-5″	662	3	9′-6″	3′-0″					
P408				14							14	13′-8″	128	STR							
P409				15							15	12′-8″	127	STR							
P410				30							30	20′-5″	409	3	7′-0″	3′-0″					
P411					22	19					41	29′-8″	813	STR							
P412					31						31	20′-8″	428	STR							
P413					26	26					52	26′-7″	923	3	3′-7″	9′-6″					
P414					32	32					64	26′-3″	1122	3	3′-5″	9′-6″					
P415					28	28					56	25′-9″	963	3	3′-2″	9′-6″					
P416					26	26					52	25′-5″	883	3	3′-0″	9′-6″					
P417					24	24					48	25′-1″	804	3	2′-10″	9′-6″					
P418					8	14					22	24′-7″	361	3	2′-7″	9′-6″					
P419						5					5	21′-8″	72	STR							
P420						9					9	18′-2″	109	STR							
P421						22					22	21′-9″	320	STR							
P422							15				15	16′-2″	162	STR							
P423							17				17	13′-8″	155	STR							
P424							21				21	24′-5″	343	3	8′-6″	3′-6″					
P425							84				84	4′-5″	248	9	0′-3″	0′-6″	3′-6″	0′-8″			
P426							10				10	14′-8″	98	17	13′-8″						
P427							2				2	14′-8″	20	20	1′-10″	2′-4″	8′-9″	2′-4″	1′-10″		
P428								9			9	19′-5″	117	3	6′-6″	3′-0″					
P429									32		32	6′-8″	143	STR							
P430									28		28	10′-5″	195	3	2′-6″	2′-6″					
P431									10		10	17′-11″	120	STR							
P501	16										16	11′-2″	186	STR							
P502	2										2	8′-3″	17	STR							
P503	2										2	11′-10″	25	20	1′-8″	2′-7″	5′-9″	2′-7″	1′-8″		
	2 SR										2 SR	15′-2″			5′-0″						
P504	OF										OF	TO	103	3	TO	2′-3″					0′-7 ½″
	3										3	17′-8″			6′-3″						
P505	6										6	18′-4″	115	3	6′-7″	2′-3″					
P506	6										6	17′-8″	111	3	6′-3″	2′-3″					
	2 SR										2 SR	14′-4″			4′-7″						
P507	OF										OF	TO	98	3	TO	2′-3″					0′-7 ½″
	3										3	16′-10″			5′-10″						
P508		2	2								4	20′-7″	86	STR							
P509		2	2								4	17′-1″	71	STR							
P510		2	2								4	13′-8″	57	STR							
		2 SR									2 SR	15′-2″			5′-1″						
P511		OF									OF	TO	226	3	TO	2′-2″					0′-7″
		6									6	21′-0″			8′-0″						
P512		6									6	22′-2″	139	3	8′-7″	2′-2″					
P513		6	12								18	21′-0″	394	3	8′-0″	2′-2″					
		2 SR	2 SR								4 SR	14′-2″			4′-7″						
P514		OF	OF								OF	TO	428	3	TO	2′-2″					0′-7″
		6	6								6	20′-0″			7′-6″						

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED AND THE FIRST TWO NUMBERS WHERE THREE NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102815

REINFORCING STEEL LIST

HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL003.dgn 11/10/2010 11:36:50 AM mtneiheisel

MARK	NUMBER											LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 2S	PIER 3S	PIER 4S	PIER 5S	PIER 5AS	PIER 6S	PIER 7S	PIER 8S	PIER 9S	CRASH WALL	TOTAL				A	B	C	D	E	R	INC
PIER AND CRASH WALL REINFORCING LIST (CONTINUED)																					
			2 SR								2 SR	14′-4″			4′-8″						
P515			OF								OF	TO	216	3	TO	2′-2″					0′-7″
			6								6	20′-2″			7′-7″						
P516				2							2	10′-11″	23	STR							
				4 SR							4 SR	14′-2″			4′-7″						
P517				OF							OF	TO	194	3	TO	2′-2″					0′-8″
				3							3	16′-10″			5′-11″						
P518				10							10	18′-0″	188	3	6′-6″	2′-2″					
P519					2	2					4	17′-8″	74	STR							
P520					2	2					4	14′-1″	59	STR							
					2 SR	2 SR					4 SR	22′-0″			7′-8″						
P521					OF	OF					OF	TO	296	3	TO	3′-0″					0′-10″
					3	3					3	25′-4″			9′-4″						
P522					6	6					12	26′-10″	336	3	10′-1″	3′-0″					
P523					6	6					12	26′-8″	334	3	10′-0″	3′-0″					
					2 SR	2 SR					4 SR	21′-10″			7′-7″						
P524					OF	OF					OF	TO	294	3	TO	3′-0″					0′-10″
					3	3					3	25′-2″			9′-3″						
P525							22				22	13′-8″	314	STR							
P526							2				2	11′-7″	24	STR							
							4 SR				4 SR	14′-2″			4′-7″						
P527							OF				OF	TO	198	3	TO	2′-2″					0′-10″
							3				3	17′-6″			6′-3″						
P528							10				10	18′-0″	188	3	6′-6″	2′-2″					
P529							11				11	7′-9″	89	2	3′-3″	1′-6″	3′-3″				
P530								16			16	12′-2″	203	STR							
P531								2			2	10′-6″	22	STR							
								2 SR			2 SR	14′-4″			4′-7″						
P532								OF			OF	TO	64	3	TO	2′-3″					1′-0″
								2			2	16′-4″			5′-7″						
P533								4			4	17′-8″	74	3	6′-3″	2′-3″					
P534								4			4	18′-2″	76	3	6′-6″	2′-3″					
								2 SR			2 SR	14′-10″			4′-10″						
P535								OF			OF	TO	66	3	TO	2′-3″					1′-0″
								2			2	16′-10″			5′-10″						
P536									16		16	11′-0″	184	3	3′-5″	1′-9″					
P537									16		16	11′-10″	197	3	3′-10″	1′-9″					
P538										60	60	3′-5″	214	STR							
P539										134	134	13′-9″	1922	STR							
P540										88	88	8′-2″	750	2	3′-3″	1′-11″	3′-3″				
P541										30	30	8′-11″	280	34	1′-1″	6′-9″				0′-11 ½″	
P542										30	30	33′-2″	1038	STR							
P543										45	45	19′-3″	903	2	0′-10″	17′-10″	0′-10″				
P544	3										3	10′-1″	32	35	3′-0″	3′-10″	3′-0″	1′-11″			
P545	3										3	10′-1″	32	35	3′-0″	3′-11″	3′-0″	2′-0″			
P546			20								20	8′-8″	181	35	3′-8″	1′-0″	3′-8″	1′-2″			
P547						16					16	9′-7″	160	35	4′-1″	1′-2″	4′-1″	1′-1″			
P601	5										5	12′-6″	94	17	11′-2″						
P602		12	12					12			36	11′-8″	631	STR							
P603		16	16								32	21′-8″	1041	STR							
P604				16							16	12′-8″	304	STR							
P605				8							8	14′-6″	174	17	13′-2″						
P606				16							16	13′-2″	316	STR							
P607				2							2	14′-0″	42	20	1′-10″	2′-10″	7′-4″	2′-10″	1′-10″		
P608					40						40	20′-8″	1242	STR							

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102815

REINFORCING STEEL LIST

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE EAST

HAM-50-19.03

PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL004.dgn 11/10/2010 11:36:51 AM mtreinleisel

MARK	NUMBER											LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 2S	PIER 3S	PIER 4S	PIER 5S	PIER 5AS	PIER 6S	PIER 7S	PIER 8S	PIER 9S	CRASH WALL	TOTAL				A	B	C	D	E	R	INC
PIER AND CRASH WALL REINFORCING LIST (CONTINUED)																					
P609					34	34					68	18′-8″	1907	STR							
P610						11					11	18′-2″	300	STR							
P611						31					31	21′-9″	1013	STR							
P612								5			5	13′-6″	101	17	12′-2″						
P613								2			2	12′-9″	38	20	1′-7″	2′-6″	6′-10″	2′-6″	1′-7″		
P614									32		32	6′-8″	320	STR							
P615	9										9	16′-4″	221	33	3′-7″	4′-0″					
P616			6								6	20′-4″	183	33	4′-10″	4′-9″					
P617				4							4	5′-1″	31	1	1′-7″	3′-8″					
P618				6							6	15′-0″	135	33	3′-2″	3′-9″					
P619						6					6	21′-10″	197	33	5′-9″	4′-7″					
P620							12				12	11′-10″	213	33	1′-8″	3′-8″					
P621							8				8	5′-0″	60	1	1′-7″	3′-7″					
P622									4		4	5′-4″	32	1	1′-7″	3′-11″					
P623									6		6	14′-8″	132	33	2′-9″	4′-0″					
P701					8	8					16	20′-2″	660	17	18′-8″						
P702					2	2					4	19′-6″	159	20	2′-4″	4′-3″	9′-10″	4′-3″	2′-4″		
P801	15										15	10′-8″	427	STR							
P802	40			48							88	10′-8″	2506	1	1′-4″	9′-7″					
P803	40										40	19′-0″	2029	STR							
P804				48							48	21′-8″	2777	STR							
P805				48							48	17′-2″	2200	STR							
P806							16				16	16′-2″	691	STR							
P807							26				26	13′-8″	949	STR							
P808								12			12	11′-8″	374	STR							
P809								46			46	16′-1″	1965	1	1′-4″	14′-11″					
P810									40		40	20′-7″	2198	1	1′-4″	19′-5″					
P811									11		11	19′-7″	575	17	17′-11″						
P901		20	20								40	13′-2″	1791	STR							
P902		52	52								104	12′-7″	4449	16	11′-4″						
P903		52									52	21′-4″	3772	STR							
P904		8	8								16	24′-2″	1315	17	21′-8″						
P905		2	2								4	23′-1″	314	20	3′-4″	5′-9″	9′-10″	5′-9″	3′-4″		
P906			52								52	24′-9″	4376	STR							
P907							52				52	12′-8″	2239	1	1′-7″	11′-4″					
P908							52				52	25′-10″	4567	STR							
P909	10										10	11′-10″	402	2	4′-3″	3′-11″	4′-3″				
P910			14								14	6′-11″	329	2	1′-5″	4′-8″	1′-5″				
P911				10							10	5′-0″	170	1	1′-7″	3′-8″					
P912						14					14	7′-1″	337	2	1′-7″	4′-6″	1′-7″				
P913							20				20	4′-11″	334	1	1′-7″	3′-7″					
P914									10		10	5′-3″	178	1	1′-7″	3′-11″					
P1001	17										17	14′-2″	1036	STR							
P1002				17							17	13′-8″	1000	STR							
P1003					37	26					63	29′-8″	8042	STR							
P1004						6					6	21′-8″	559	STR							
P1101					56	56					112	32′-1″	19091	1	2′-0″	30′-5″					

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102815

REINFORCING STEEL LIST

HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

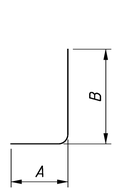
HAM-50-19.03

PID No. 75736

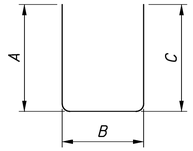
C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL005.dgn 11/10/2010 11:36:53 AM mtneiheisel

MARK	NUMBER											LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 2S	PIER 3S	PIER 4S	PIER 5S	PIER 5AS	PIER 6S	PIER 7S	PIER 8S	PIER 9S	CRASH WALL	TOTAL				A	B	C	D	E	R	INC
PIER AND CRASH WALL REINFORCING LIST (CONTINUED)																					
P1102					56	56					112	41'-4"	24596	STR							
P1103					56						56	34'-5"	10240	STR							
P1104						56					56	37'-2"	11058	STR							
												TOTAL	149,299								

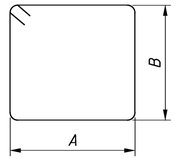
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST											
A501	9	11'-1"	104	12	2'-9"	2'-9"	1'-7"	3'-5"	2'-6"		
A502	32	3'-0"	100	STR							
A503	40	12'-4"	515	STR							
A504	1	29'-0"	30	STR							
A505	1	33'-7"	35	STR							
A506	2	4'-3"	9	2	1'-6"	1'-6"	1'-6"				
A507	2	2'-11"	6	16	2'-4"						
A508	8	2'-0"	17	STR							
A509	2	9'-3"	19	36	1'-0"	3'-2"	0'-8"	1'-10"	3'-2"		
A510	4	0'-11"	4	STR							
A511	12	2'-11"	37	STR							
A512	10	3'-5"	36	STR							
A513	2	4'-2"	9	STR							
A514	8	9'-2"	76	STR							
A515	10	4'-10"	50	1	0'-10"	4'-2"					
A601	12	11'-3"	203	2	5'-1"	1'-5"	5'-1"				
A602	12	8'-1"	146	2	3'-6"	1'-5"	3'-6"				
A603	12	6'-1"	110	2	2'-9"	0'-11"	2'-9"				
A604	90	2'-9"	372	1	0'-9"	2'-2"					
A605	2	2'-11"	9	STR							
A606	2	3'-8"	11	13	2'-0"	0'-11"	0'-2"	0'-10"			
A607	7	11'-8"	123	33	1'-8"	3'-7"					
A608	2	4'-3"	13	13	2'-7"	0'-9"	0'-6"	0'-10"			
A609	2	4'-10"	15	STR							
A801	8	4'-10"	103	18	2'-8"	1'-0"	1'-0"				
A802	30	4'-2"	334	13	1'-3"	0'-11"	0'-11"	1'-9"			
A901	2	3'-5"	23	STR							
A902	10	10'-7"	360	2	3'-10"	3'-6"	3'-10"				
A1001	34	16'-9"	2451	STR							
		TOTAL	5,320								



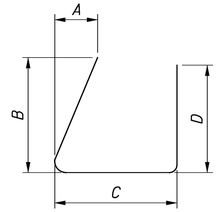
TYPE-1



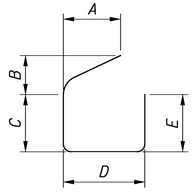
TYPE-2



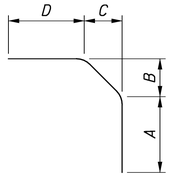
TYPE-3



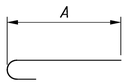
TYPE-9



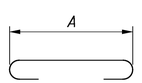
TYPE-12



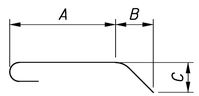
TYPE-13



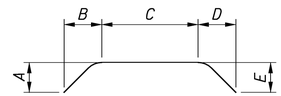
TYPE-16



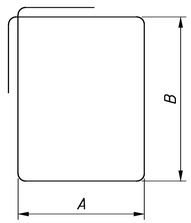
TYPE-17



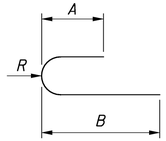
TYPE-18



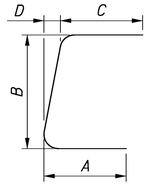
TYPE-20



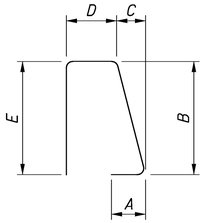
TYPE-33



TYPE-34



TYPE 35



TYPE 36

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED CAS | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102815

REINFORCING STEEL LIST
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL006.dgn 11/10/2010 11:36:54 AM mtneiheisel

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S401	1796	30′-0″	35992	STR							
S402	216	40′-0″	5772	STR							
S403	102	46′-0″	3134	STR							
S404	114	50′-0″	3808	STR							
S405	114	45′-0″	3427	STR							
S406	114	55′-0″	4188	STR							
S407	61	25′-0″	1019	STR							
S408	55	30′-2″	1108	STR							
S409	14	3′-0″	28	STR							
S410 THRU S414 NOT USED											
S415	1096	30′-0″	21964	STR							
S416	54	16′-0″	577	STR							
S417	48	21′-6″	689	STR							
S418	108	40′-0″	2886	STR							
S419	108	49′-0″	3535	STR							
S420	102	30′-0″	2044	STR							
S421	102	45′-0″	3066	STR							
S422	14	3′-0″	28	STR							
S423 THRU S429 NOT USED											
S430	867	30′-0″	17375	STR							
S431	91	21′-9″	1322	STR							
S432	6	3′-0″	12	STR							
S433	186	30′-0″	3727	STR							
S434	186	38′-0″	4721	STR							
	2 SR	2′-7″									
S501	OF	TO	287	STR							1′-4″
	13	18′-7″									
S502	1337	13′-0″	18128	STR							
S503	49	11′-0″	562	STR							
S504	1337	18′-0″	25101	STR							
S505	49	6′-0″	307	STR							
S506	49	13′-1″	669	STR							
S507	49	8′-1″	413	STR							
S508	49	15′-1″	771	STR							
S509	49	10′-1″	515	STR							
S510	49	17′-0″	869	STR							
S511	49	12′-0″	613	STR							
S512	49	18′-9″	958	STR							
S513	49	13′-9″	703	STR							
S514	49	20′-4″	1039	STR							
S515	49	15′-4″	784	STR							
S516	49	21′-9″	1112	STR							
S517	49	16′-9″	856	STR							
S518	49	23′-1″	1180	STR							
S519	49	18′-1″	924	STR							
S520	49	24′-3″	1239	STR							
S521	49	19′-3″	984	STR							
S522	49	25′-3″	1290	STR							
S523	49	20′-3″	1035	STR							
S524	49	26′-2″	1337	STR							
S525	49	21′-2″	1082	STR							
S526	49	26′-11″	1376	STR							

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S527	49	21′-11″	1120	STR							
S528	49	27′-7″	1410	STR							
S529	49	22′-7″	1154	STR							
S530	49	28′-1″	1435	STR							
S531	49	23′-1″	1180	STR							
S532	49	28′-5″	1452	STR							
S533	49	23′-5″	1197	STR							
S534	49	28′-8″	1465	STR							
S535	49	23′-8″	1210	STR							
S536	553	28′-9″	16582	STR							
S537	553	23′-9″	13699	STR							
	2 SR	5′-5″									
S538	OF	TO	1422	STR							1′-3 ½″
	29	41′-7″									
S539	1305	23′-0″	31306	STR							
S540	1305	18′-0″	24500	STR							
S541	67	20′-4″	1421	STR							
S542	67	25′-4″	1770	STR							
S543	1049	20′-0″	21882	STR							
S544	1049	25′-0″	27353	STR							
S545	189	19′-0″	3745	STR							
S546	189	24′-0″	4731	STR							
S547	2	42′-7″	89	STR							
S548	2	19′-2″	40	STR							
S549	2	39′-0″	81	STR							
S550	2	38′-6″	80	STR							
S551	944	7′-5″	7302	23	1′-1″	3′-2″	3′-0″			0′-2 ¾″	
S552	2009	30′-0″	62862	STR							
S553	62	38′-3″	2473	STR							
S554	6	21′-2″	132	STR							
S555	24	10′-1″	252	9	0′-7″	3′-10″	2′-8″	3′-10″			
S556	24	6′-1″	152	2	2′-2″	2′-0″	2′-2″				
S557	24	3′-10″	96	STR							
S558	36	8′-1″	304	21	1′-4″	2′-1″	0′-6″	2′-1″			
S559	61	33′-0″	2100	STR							
S560 THRU S569 NOT USED											
S570	1287	30′-0″	40270	STR							
S571	56	21′-0″	1227	STR							
S572	6	14′-8″	92	STR							
S573	55	26′-6″	1520	STR							
S574	596	7′-5″	4610	23	1′-1″	3′-2″	3′-0″			0′-2 ¾″	
S575	821	11′-9″	10062	STR							
S576	821	16′-0″	13701	STR							
S577	199	28′-8″	5950	STR							
S578	199	24′-5″	5068	STR							
S579	199	27′-8″	5742	STR							
S580	199	23′-5″	4860	STR							
S581	199	26′-9″	5552	STR							
S582	199	22′-6″	4670	STR							
S583	224	25′-10″	6035	STR							
S584	224	21′-7″	5043	STR							
	2 SR	6′-3″									
S585	OF	TO	522	STR							2′-2″
	13	32′-3″									

NOTES:

1. FOR NOTES, SEE SHEET 98/98 .

DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	PJP	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102815	

REINFORCING STEEL LIST
HAM-50-1903R
US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

97/98

271/442

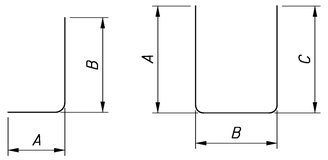
G:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL001.dgn 11/10/2010 11:36:56 AM mtreiheisel

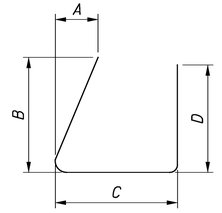
DECK REINFORCING STEEL LIST

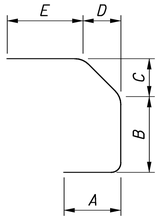
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S586	2	35′-0″	73	STR							
S587	2	33′-6″	70	STR							
S588	2	39′-0″	81	STR							
S589	2	38′-7″	80	STR							
S590	839	17′-0″	14876	STR							
S591	837	22′-9″	19861	STR							
S592	199	25′-0″	5189	STR							
S593	199	19′-3″	3995	STR							
S594	199	24′-2″	5016	STR							
S595	199	18′-6″	3840	STR							
S596	199	23′-0″	4774	STR							
S597	199	17′-3″	3580	STR							
S598	240	21′-4″	5340	STR							
S599	240	15′-7″	3901	STR							
	2 SR	3′-10″									
S5100	OF	TO	470	STR							2′-3″
	13	30′-10″									
S5101 THRU S5109 NOT USED											
S5110	974	30′-0″	30476	STR							
S5111	94	26′-3″	2574	STR							
	2 SR	3′-7″									
S5112	OF	TO	380	STR							3′-3″
	10	32′-10″									
S5113	691	11′-0″	7928	STR							
S5114	211	26′-0″	5722	STR							
S5115	691	15′-2″	10931	STR							
S5116	211	21′-10″	4805	STR							
S5117	88	25′-0″	2295	STR							
S5118	88	20′-10″	1912	STR							
S5119	176	23′-9″	4360	STR							
S5120	176	19′-6″	3580	STR							
S5121	81	22′-8″	1915	STR							
S5122	81	18′-7″	1570	STR							
S5123	69	21′-1″	1517	STR							
S5124	69	17′-0″	1223	STR							
S5125	66	20′-0″	1377	STR							
S5126	66	15′-10″	1090	STR							
S5127	2	27′-10″	58	STR							
S5128 NOT USED											
S5129	2	35′-0″	73	STR							
S5130	2	33′-5″	70	STR							
	2 SR	7′-7″									
S5131	OF	TO	316	STR							3′-3″
	8	30′-4″									
S5132	691	19′-6″	14054	STR							
S5133	691	15′-2″	10931	STR							
S5134	204	16′-3″	3458	STR							
S5135	204	20′-7″	4380	STR							
S5136	280	15′-5″	4502	STR							
S5137	280	19′-9″	5768	STR							
S5138	207	16′-4″	3526	STR							
S5139	207	20′-8″	4462	STR							
S5140	2	33′-4″	70	STR							
S5141	6	36′-4″	227	STR							
S5142	531	7′-5″	4108	23	1′-1″	3′-2″	3′-0″			0′-2 3/4″	

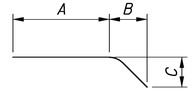
DECK REINFORCING STEEL LIST

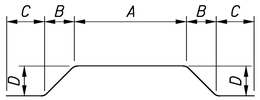
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S5143	21	2′-9″	60	16	2′-4″						
	1 SR	4′-3″				0′-6″					
A5144	OF	TO	97	2	2′-0″	TO	2′-0″				0′-0 1/2″
	20	5′-2″				1′-5″					
S5145	21	2′-4″	51	STR							
S5146	1	3′-2″	3	10	0′-1 1/4″	1′-0″	1′-5″	1′-0″			
S5147	8	19′-8″	164	STR							
S601	944	3′-4″	4726	28	1′-6″	1′-1″					
S602	944	2′-5″	3427	1	1′-1″	1′-6″					
S603	32	30′-0″	1442	STR							
S604	1	46′-3″	69	STR							
S605	1	29′-1″	44	STR							
S606 THRU S609 NOT USED											
S610	20	30′-0″	901	STR							
S611	1	19′-8″	30	STR							
S612	1	31′-6″	47	STR							
S613	596	3′-4″	2984	28	1′-6″	1′-1″					
S614	596	2′-5″	2163	1	1′-1″	1′-6″					
S615 THRU S619 NOT USED											
S620	17	30′-0″	766	STR							
S621	1	30′-9″	46	STR							
S622	1	40′-4″	61	STR							
S623	531	3′-4″	2659	28	1′-6″	1′-1″					
S624	531	2′-5″	1927	1	1′-1″	1′-6″					
S625	10	3′-2″	48	28	1′-6″	1′-0″					
S626	21	3′-8″	116	28	1′-0″	1′-6″					
S627	11	3′-2″	52	14	0′-11″	0′-10″	0′-8 1/2″	0′-6″	0′-9″		
H401	274	30′-0″	5491	STR							
H402	3581	5′-7″	13356	21	1′-2″	0′-9″	1′-0″	1′-0″			
H403	4193	5′-1″	14238	21	1′-2″	0′-9″	1′-0″	0′-8″			
H404	1760	4′-9″	5584	21	0′-10″	0′-9″	1′-0″	0′-8″			
D601	18	5′-0″	135	19	2′-0″	1′-5″	2′-9″				
D602	9	16′-5″	222	34	4′-6″	2′-3″	5′-3″	2′-0″			
D603	14	9′-9″	205	STR							
D604	9	12′-11″	175	34	4′-6″	2′-3″	1′-9″	2′-0″			
D605	11	10′-1″	167	STR							
		TOTAL	807,737								

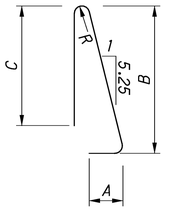


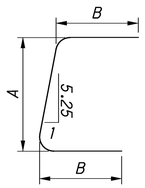


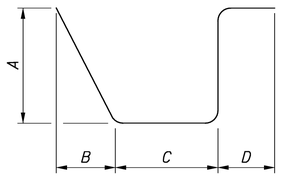












NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DRAWN PJP | DATE 11/12/10
DESIGNED PJP | REVIEWED MSL
CHECKED MTN | REVISED
STRUCTURE FILE NUMBER 3102815

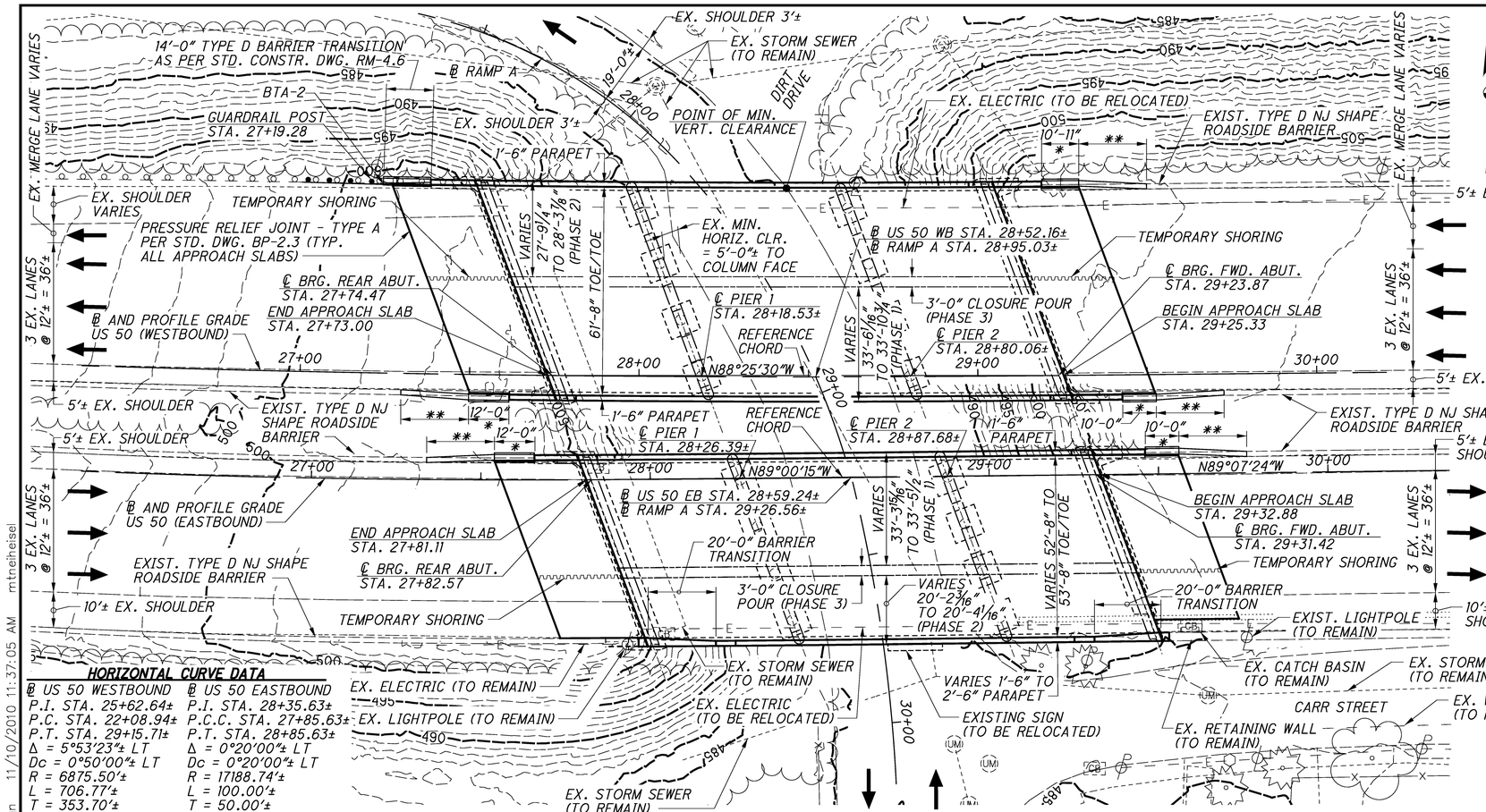
REINFORCING STEEL LIST

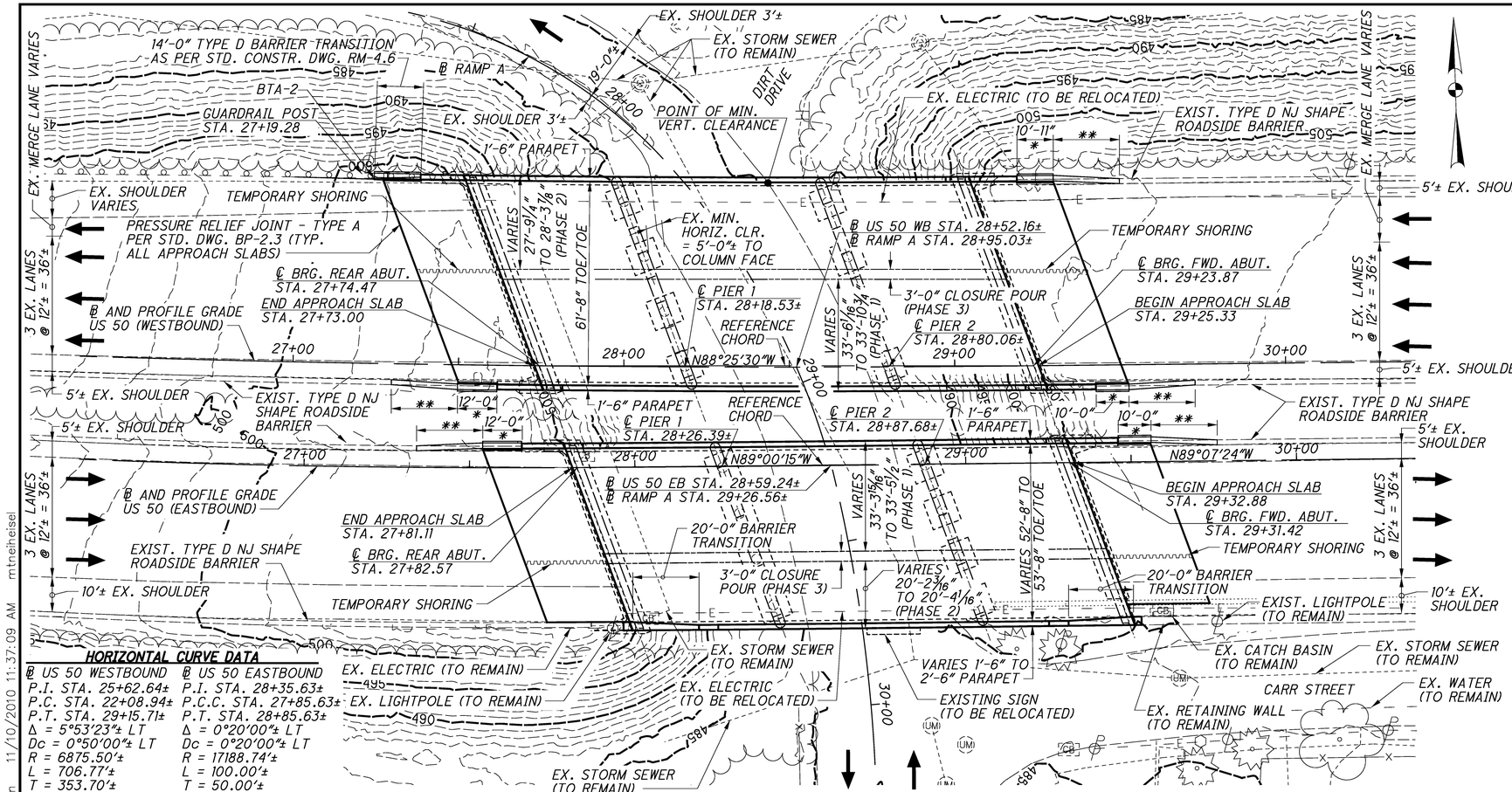
HAM-50-1903R

US 50 OVER CENTRAL RR COMPANY OF INDIANA, MILL CREEK AND PRIVATE DRIVE

HAM-50-19.03
PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1903_US50_OVER_RR_MILLCR_SERVICE_RD\sheets\050_1903RRL002.dgn 11/10/2010 11:36:57 AM mtneiheisel


EX. SHOULDER 3'±
EX. STORM SEWER (TO REMAIN)
14'-0" TYPE D BARRIER TRANSITION AS PER STD. CONSTR. DWG. RM-4.6
℄ RAMP A
BTA-2
GUARDRAIL POST STA. 27+19.28
EX. SHOULDER 3'±
19'-0"±
28+00
DIRT DRIVE
POINT OF MIN. VERT. CLEARANCE
EX. ELECTRIC (TO BE RELOCATED)
EXIST. TYPE D NJ SHAPE ROADSIDE BARRIER
EX. MERGE LANE VARIES
1'-6" PARAPET
EX. SHOULDER VARIES
TEMPORARY SHORING
PRESSURE RELIEF JOINT - TYPE A PER STD. DWG. BP-2.3 (TYP. ALL APPROACH SLABS)
3 EX. LANES @ 12'± = 36'±
℄ BRG. REAR ABUT. STA. 27+74.47
END APPROACH SLAB STA. 27+73.00
℄ AND PROFILE GRADE US 50 (WESTBOUND)
VARIES 27'-9 1/4" TO 28'-3 7/8" (PHASE 2)
61'-8" TOE/TOE
EX. MIN. HORIZ. CLR. = 5'-0"± TO COLUMN FACE
℄ PIER 1 STA. 28+18.53±
REFERENCE CHORD
N88°25'30"W
℄ US 50 WB STA. 28+52.16± ℄ RAMP A STA. 28+95.03±
VARIES 33'-6 1/16" TO 33'-10 3/4" (PHASE 1)
3'-0" CLOSURE POUR (PHASE 3)
℄ PIER 2 STA. 28+80.06± 29+00
℄ BRG. FWD. ABUT. STA. 29+23.87
BEGIN APPROACH SLAB STA. 29+25.33
5'± EX. SHOULDER
10'-11"
10'-0"
12'-0"
1'-6" PARAPET
℄ PIER 1 STA. 28+26.39±
REFERENCE CHORD
N89°00'15"W
℄ US 50 EB STA. 28+59.24± ℄ RAMP A STA. 29+26.56±
VARIES 33'-3 5/16" TO 33'-5 1/2" (PHASE 1)
VARIES 52'-8" TO 53'-8" TOE/TOE
℄ PIER 2 STA. 28+87.68±
1'-6" PARAPET
N89°07'24"W
EXIST. TYPE D NJ SHAPE ROADSIDE BARRIER
BEGIN APPROACH SLAB STA. 29+32.88
℄ BRG. FWD. ABUT. STA. 29+31.42
TEMPORARY SHORING
20'-0" BARRIER TRANSITION
EXIST. LIGHTPOLE (TO REMAIN)
10'± EX. SHOULDER
END APPROACH SLAB STA. 27+81.11
℄ BRG. REAR ABUT. STA. 27+82.57
20'-0" BARRIER TRANSITION
3'-0" CLOSURE POUR (PHASE 3)
VARIES 20'-2 3/16" TO 20'-4 1/16" (PHASE 2)
EXIST. TYPE D NJ SHAPE ROADSIDE BARRIER
℄ AND PROFILE GRADE US 50 (EASTBOUND)
TEMPORARY SHORING
EX. ELECTRIC (TO REMAIN)
EX. LIGHTPOLE (TO REMAIN)
EX. STORM SEWER (TO REMAIN)
EX. ELECTRIC (TO BE RELOCATED)
EX. STORM SEWER (TO REMAIN)
VARIES 1'-6" TO 2'-6" PARAPET
EXISTING SIGN (TO BE RELOCATED)
EX. CATCH BASIN (TO REMAIN)
EX. STORM SEWER (TO REMAIN)
CARR STREET
EX. WATER (TO REMAIN)
EX. RETAINING WALL (TO REMAIN)
EX. SHOULDER 5'±
EX. SHOULDER 5'±
EX. SHOULDER 5'±
EX. SHOULDER 10'±



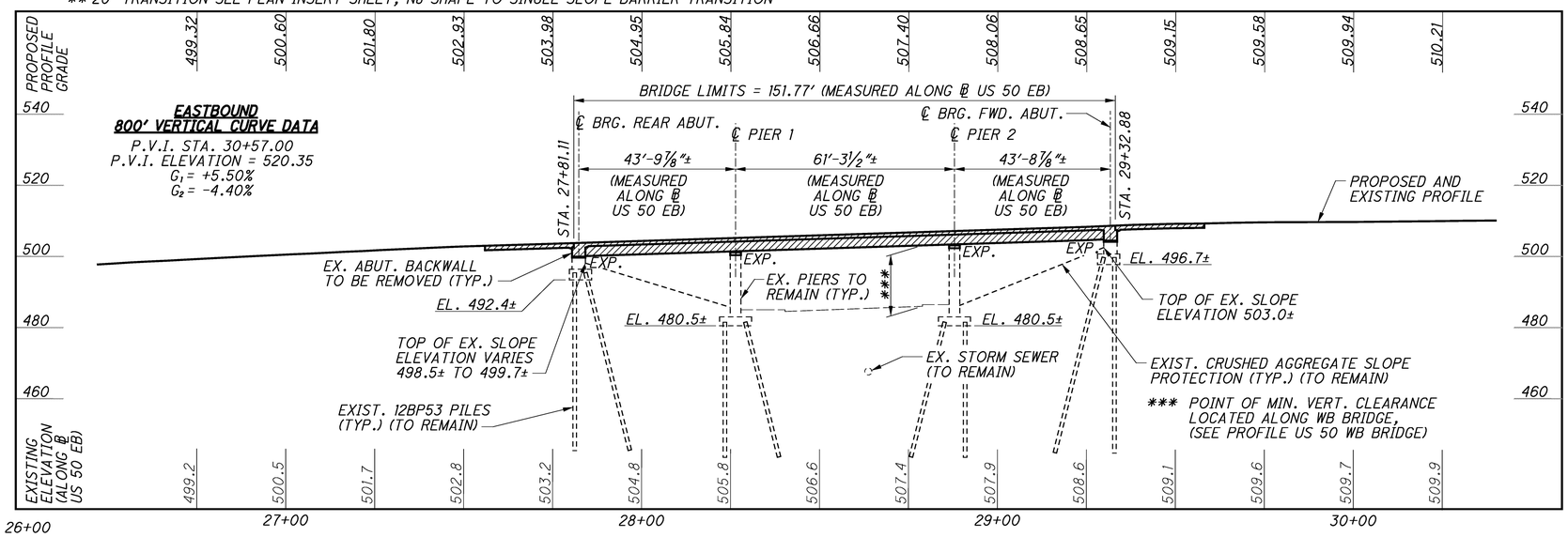
HORIZONTAL CURVE DATA

℄ US 50 WESTBOUND	℄ US 50 EASTBOUND
P.I. STA. 25+62.64±	P.I. STA. 28+35.63±
P.C. STA. 22+08.94±	P.C.C. STA. 27+85.63±
P.T. STA. 29+15.71±	P.T. STA. 28+85.63±
Δ = 5°53'23"± LT	Δ = 0°20'00"± LT
Dc = 0°50'00"± LT	Dc = 0°20'00"± LT
R = 6875.50'±	R = 17188.74'±
L = 706.77'±	L = 100.00'±
T = 353.70'±	T = 50.00'±
E = 9.09'±	E = 0.07'±

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONSTR. DWG. RM-4.5

** 20' TRANSITION SEE PLAN INSERT SHEET, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

PLAN



PROFILE ALONG BASELINE US 50 EB BRIDGE

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

FOR BENCHMARK INFORMATION, SEE SHEET 3/50 .

DESIGN TRAFFIC:

2011 ADT = 30910 2011 ADTT = 1236

2031 ADT = 28580 2031 ADTT = 1143

DIRECTIONAL DISTRIBUTION = 0.51

EXISTING STRUCTURE

TYPE: THREE SPAN CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE

SPANS: 42'-10⅜"±, 61'-3½"±, 42'-9¾"± C/C BRG. (MEASURED ALONG ℄ US 50 EASTBOUND)

ROADWAY: 51'-8" F/F CURB (EB)

LOADING: CF 2000-(57) ADEQUATE FOR AASHTO ALTERNATIVE LOADINGS

WEARING SURFACE: 1¼" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: 19°50'07"± RF AND 19°40'06"± RF (EB)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: 0°20'00"± CURVE LEFT AND TANGENT (EASTBOUND)

SUPERELEVATION: VARIES (EASTBOUND)

STRUCTURAL FILE NUMBER: 3102882

DATE BUILT: 1966±

DISPOSITION: EXISTING SUPERSTRUCTURE TO BE REPLACED

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING SUPERSTRUCTURE, CONVERT ABUTMENTS TO SEMI-INTEGRAL, CONSTRUCT NEW APPROACH SLABS, MODIFY EXISTING PIERS TO ACCOMMODATE NEW ELASTOMERIC BEARINGS, PATCH CONCRETE SURFACES AS PER ITEM 519, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778.

TYPE: THREE SPAN CONTINUOUS ROLLED BEAM, A709 GRADE 50, WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON MODIFIED (SEMI-INTEGRAL) ABUTMENTS AND PIERS.

SPANS: 43'-9⅞"±, 61'-3½"±, 43'-8⅞"± C/C BRG. (MEASURED ALONG ℄ US 50 EASTBOUND)

ROADWAY: VARIES 52'-8" TO 53'-8" TOE/TOE PARAPET (EB)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

LOADING: HS25 CASE II AND ALTERNATE MILITARY 60 PSF FUTURE WEARING SURFACE

SKEW: FOR SKEW SEE PROPOSED EASTBOUND AND WESTBOUND LAYOUT ON SHEET 3/50

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: 0°20'00"± CURVE LEFT AND TANGENT (EASTBOUND)

SUPERELEVATION: VARIES (EASTBOUND)

COORDINATES: LATITUDE 39°06'00" N
LONGITUDE 84°32'12" W

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE 11/12/10
REVIEWED MSL
STRUCTURE FILE NUMBER 3102882
DRAWN MSW
REVISED
DESIGNED SSM
CHECKED PJP

HAMILTON COUNTY
STA. 27+81.11
STA. 29+32.88

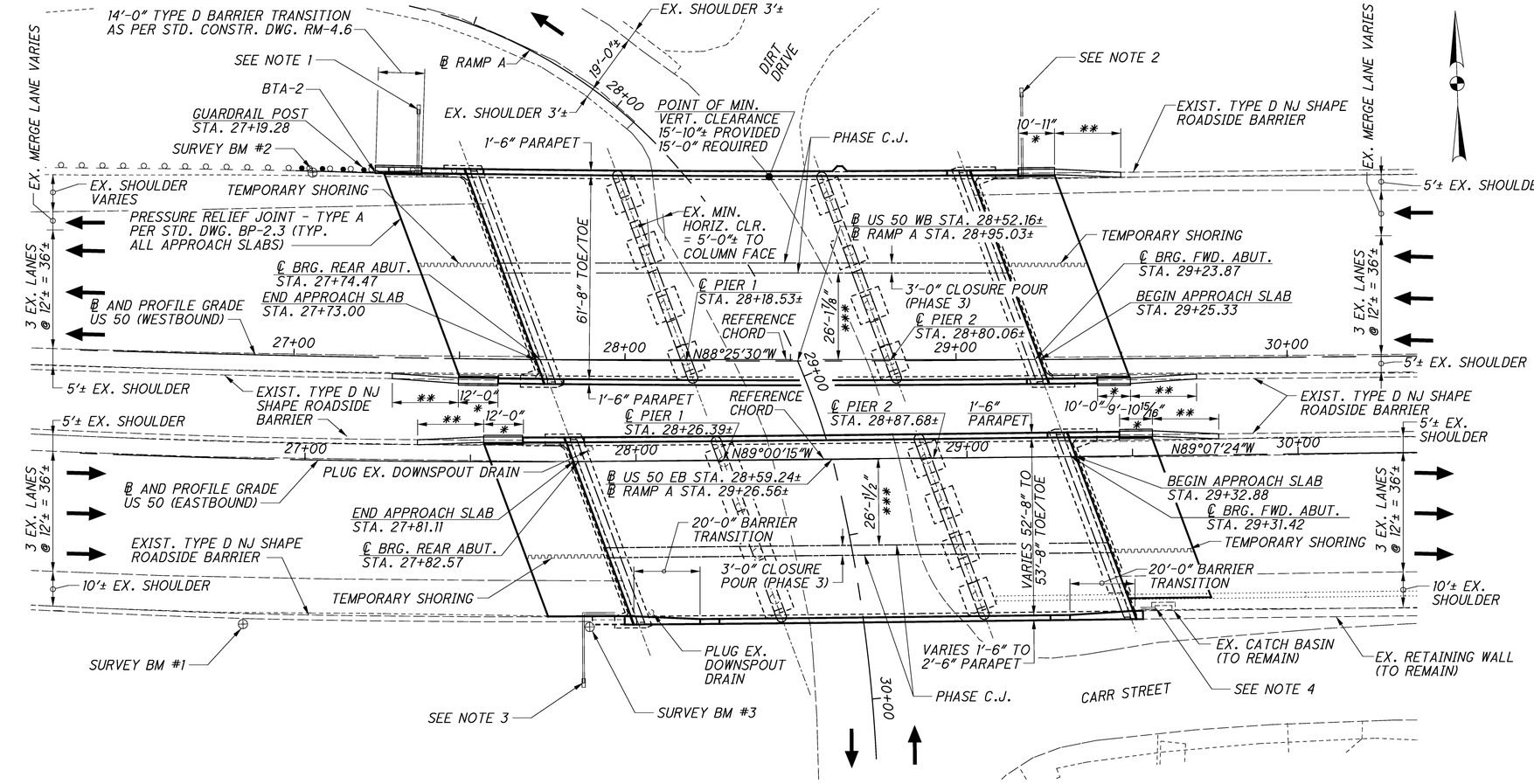
SITE PLAN
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

2 / 50

274
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSP001.dgn 11/10/2010 11:37:09 AM mtreitheisel



HORIZONTAL CURVE DATA

℄ US 50 WESTBOUND	℄ US 50 EASTBOUND
P.I. STA. 25+62.64±	P.I. STA. 28+35.63±
P.C. STA. 22+08.94±	P.C.C. STA. 27+85.63±
P.T. STA. 29+15.71±	P.T. STA. 28+85.63±
Δ = 5°53'23"± LT	Δ = 0°20'00"± LT
Dc = 0°50'00"± LT	Dc = 0°20'00"± LT
R = 6875.50'±	R = 17188.74'±
L = 706.77'±	L = 100.00'±
T = 353.70'±	T = 50.00'±
E = 9.09'±	E = 0.07'±

LEGEND:

C.J. = CONSTRUCTION JOINT

NOTES:

1. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1 INVERT EL. 492.0, ℄ US 50 (WB) STA. 27+36.5, 75' LT.
2. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1 INVERT EL. 497.0, ℄ US 50 (WB) STA. 29+20.5, 81' LT.
3. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1 INVERT EL. 494.5, ℄ US 50 (EB) STA. 27+84.0, 67' RT.
4. OUTLET INTO EXISTING CATCH BASIN, INVERT EL. 499.0, ℄ US 50 (EB) STA. 29+56.3±, 46' RT.
5. FOR SCUPPER LOCATIONS SEE DECK PLAN SHEETS 35/50 AND 37/50 .

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONSTR. DWG. RM-4.5
** 20' TRANSITION SEE PLAN INSERT SHEET, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION
*** MEASURED NORMAL TO REFERENCE CHORD

PLAN

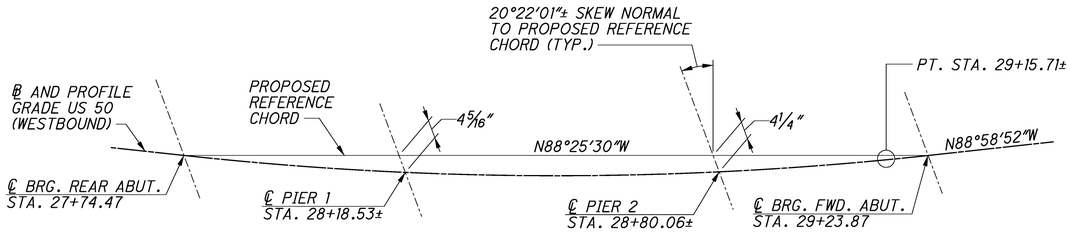
BENCHMARK DATA

SURVEY BM #1 STA. 26+82.47 (℄ US 50 (EB)), ELEV. 501.19, OFFSET 50.00' RT. IRON PIN SET NEAR EXISTING US 50 (EB) SHOULDER.

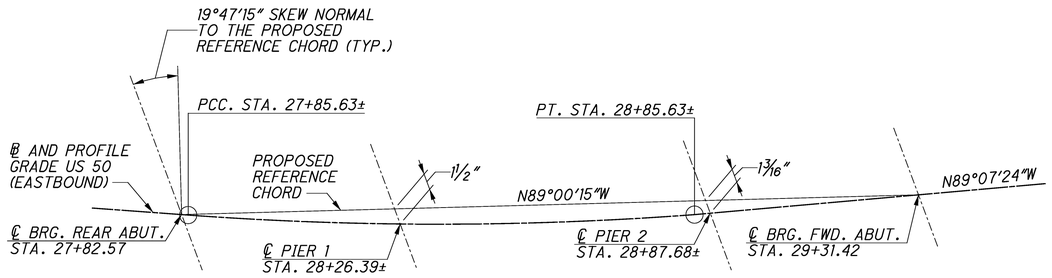
SURVEY BM #2 STA. 27+00.73 (℄ US 50 (EB)), ELEV. 499.73, OFFSET 86.79' LT. IRON PIN SET NEAR EXISTING US 50 (WB) SHOULDER.

SURVEY BM #3 STA. 27+85.70 (℄ US 50 (EB)), ELEV. 504.48, OFFSET 49.98' RT. IRON PIN SET NEAR EXISTING US 50 (EB) SHOULDER.

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 4/442



PROPOSED WESTBOUND LAYOUT



PROPOSED EASTBOUND LAYOUT

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DESIGNED SSM | DRAWN MSW | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED
STRUCTURE FILE NUMBER 3102884 (L) 3102882 (R)
GENERAL PLAN
HAM-50-1954 L/R
US 50 OVER HARRIET STREET
HAM-50-19.03
PID No. 75736
3 / 50
275 / 442
C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CGP001.dgn 11/10/2010 11:37:13 AM mtneihreisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
AS-1-81, REVISED 07-19-02 GSD-1-96, REVISED 07-19-02
SICD-1-96, REVISED 07-19-02 SBR-1-99, REVISED 07-19-02
PCB-91, REVISED 07-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
898 DATED 10-15-10

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS25, CASE II AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) OF 60 LBS/SQ.FT.

DESIGN DATA:
CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60 KSI
PROPOSED STRUCTURAL STEEL - ASTM A709 GRADE 50 YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

MAINTENANCE OF TRAFFIC: TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

UTILITY LINES: THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS: CONSTRUCTION PLANS FOR EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVILABLE FOR REFERENCE.

NON-USE OF ASBESTOS-CONTAINING MATERIALS: THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS.THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS: THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ASBESTOS REMOVAL: WHEN REMOVING EXISTING BRIDGE DECK AND ABUTMENT BACKWALLS, THE EXISTING LIGHTING CONDUITS MAY BE ASBESTOS LINED CONDUIT. THE EXISTING ASBESTOS LINED CONDUIT IS IDENTIFIED IN THE BRIDGE PLANS. IF IT IS UNKNOWN WHETHER THE EXISTING CONDUIT IS ASBESTOS LINED, TEST THE PIPE BY USING A DEPARTMENT PREQUALIFIED ENVIRONMENTAL CONSULTANT TO DETERMINE IF IT IS AN ASBESTOS LINED CONDUIT. IF IT IS DETERMINED THAT THE CONDUIT CONTAINS ASBESTOS, THEN A CERTIFIED ASBESTOS CONTRACTOR MUST PERFORM THE REMOVAL. DISPOSE OF ALL ASBESTOS LINED CONDUIT AT A SOLID WASTE FACILITY THAT IS LICENSED BY THE LOCAL HEALTH DEPARTMENT AND PERMITTED BY THE OEPA. UNLESS THE CONDUIT IS SPECIFICALLY DENOTED IN THE CONTRACT DOCUMENTS AS ITEM 202 ASBESTOS PIPE REMOVAL, PERFORM THE WORK UNDER 109.05.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONT.):

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR THE ABUTMENTS, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 595B-17778, LIGHT NEUTRAL.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN: OUTSIDE FACE AND BOTTOM FLANGES OF THE FASCIA GIRDERS ARE TO BE PAINTED FEDERAL COLOR NUMBER 27038, (BLACK, 30% SHEEN). ALL REMAINING BRIDGE SUPERSTRUCTURE ELEMENTS ARE TO BE PAINTED FEDERAL COLOR NUMBER 10324 (DARK NEUTRAL).

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN: INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN (CONT.):

DESCRIPTION OF TEST	ASTM	REQUIREMENT
THICKNESS, INCHES	D751	0.094 +/- 0.01
BREAKING STRENGTH, GRAB, LBS, MINIMUM	D751	700 X 700 (LONG. X TRANS.)
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS, MINIMUM	D751	9
BURST STRENGTH, PSI, MINIMUM	D751	1400
HEAT AGING, 70 HR, 212° F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40° F, BEND AROUND ¼" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CGN001.dgn 11/10/2010 11:37:15 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | CHECKED SSM | REVIEWED MSL | DATE 11/12/10
REVISED | STRUCTURE FILE NUMBER 3102874 (L) 3102882 (R)

GENERAL NOTES
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

4 / 50

276 / 442

STRUCTURE GENERAL NOTES (CONT.)

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN: FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN: THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

DECK PLACEMENT DESIGN ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.04 KIPS FOR A TOTAL MACHINE LOAD OF 8.3 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT:
DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS USING PRECOMPRESSED EXPANSION JOINT FILLER IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

MATERIALS: THE MATERIAL SHALL BE PRECOMPRESSED EXPANSION JOINT FILLER SUCH AS THE FOLLOWING LIST OR AN APPROVED EQUAL;

2½" WIDE ISO-FLEX HYDROSEAL FROM LYMTAL INTERNATIONAL, INC.
MM EIF-200 EXPANSION JOINT SYSTEM FROM MM SYSTEMS CORP.
2½" WIDE WABO EVAZOTE UV FROM WATSON BOWMAN ACME CORP.
60mm ZED SEAL FROM RJ WATSON INC.

THESE SYSTEMS GENERALLY CONSIST OF TWO COMPONENTS;

1) PREFORMED IMPERMEABLE SELF EXPANDING CLOSED CELL FOAM JOINT FILLER.
2) A ONE OR TWO COMPONENT EPOXY SEALANT.

THE 2½" WIDE ISO-FLEX HYDROSEAL CAN BE OBTAINED FROM;
LYMTAL INTERNATIONAL, INC.
4150 SOUTH LAPEER ROAD
LAKO ORION, MI 48359
PHONE NUMBER: 248-373-8100
WEBSITE: WWW.LYMTAL.COM

THE MM EIF-200 EXPANSION JOINT SYSTEM CAN BE OBTAINED FROM;
MM SYSTEMS CORP.
50 MM WAY
PENDERGRASS, GA 30567
PHONE NUMBER: 866-506-6929
WEBSITE: WWW.MMSYSTEMSCORP.COM

THE 2½" WIDE WABO EVAZOTE UV CAN BE OBTAINED FROM;
WATSON BOWMAN ACME CORPORATION
95 PINEVIEW DRIVE
AMHERST, NY 14228
PHONE NUMBER: 800-677-4922
WEBSITE: WWW.WBACORP.COM

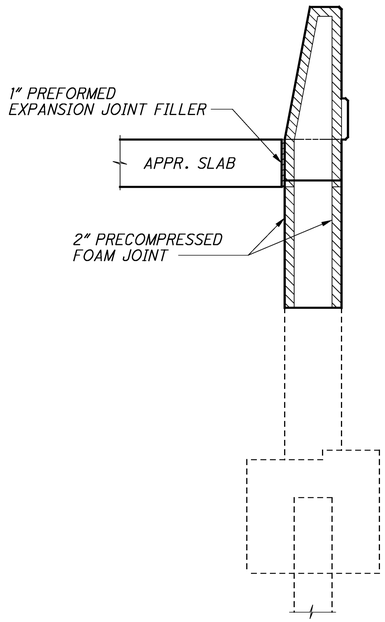
THE 60mm ZED SEAL CAN BE OBTAINED FROM;
RJ WATSON BRIDGE & STRUCTURAL ENGINEERED SYSTEMS
78 JOHN GLENN DRIVE
AMHERST, NY 14228
PHONE NUMBER: 716-691-3301
WEBSITE: WWW.RJWATSON.COM

ALL MATERIAL SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

SURFACE PREPARATION: THE FACES TO WHICH THE SEAL MUST ADHERE SHALL BE DRY, BLASTED CLEAN, AND BE FREE OF FOREIGN MATERIAL SUCH AS FORM RELEASING AGENTS, CURING AGENTS, GREASE, DIRT, DUST, AND ANY OTHER MATERIAL DETRIMENTAL TO ADHESION OF THE SEALANT.

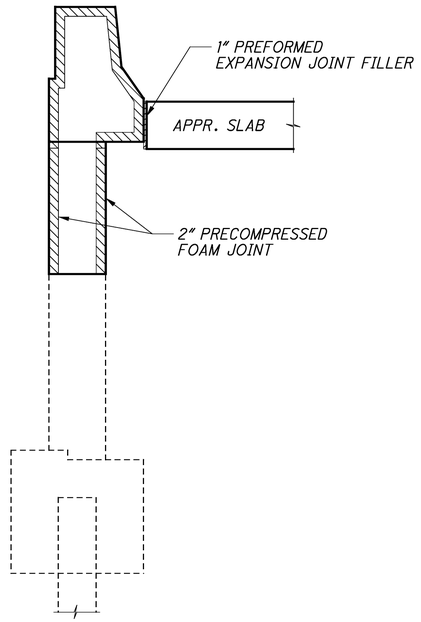
INSTALLATION: THE JOINT FILLER SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS. CONTRACTOR WILL PROVIDE THE FIELD ENGINEER WITH THE MANUFACTURERS INSTALLATION SPECIFICATIONS SEVEN (7) DAYS PRIOR TO THE INSTALLATION.

PAYMENT FOR LABOR, MATERIALS, AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT.



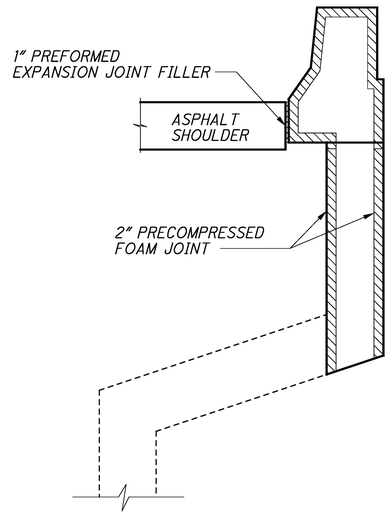
PRECOMPRESSED FOAM JOINT DETAIL A

TYPICAL AT WINGWALLS A, B, C, D, E, AND G



PRECOMPRESSED FOAM JOINT DETAIL B

WINGWALL F



PRECOMPRESSED FOAM JOINT DETAIL C

RIGHT BRIDGE BETWEEN THE FORWARD ABUTMENT AND THE RETAINING WALL ON THE SOUTH SIDE

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CGN002.dgn 11/10/2010 11:37:17 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | CHECKED SSM | REVIEWED MSL | DATE 11/12/10
REVISED
STRUCTURE FILE NUMBER 3102874 (L) 3102882 (R)

GENERAL NOTES
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

ESTIMATED QUANTITIES - HAM-50-1954L - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CALCULATED BY: SSM — CHECKED BY: JDG

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	4
202	22900	332	SQ YD	APPROACH SLAB REMOVED				332	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
509	10000	103806	POUND	EPOXY COATED REINFORCING STEEL	2857	3305	97644		
510	10001	308	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	46	262			4
512	10100	872	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	152	309	411		
512	10300	68	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			68		
512	33000	14	SQ YD	TYPE 2 WATERPROOFING	14				
513	10260	179904	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			179904		
513	20000	5103	EACH	WELDED STUD SHEAR CONNECTORS			5103		
514	00060	12978	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			12978		
514	00067	12978	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			12978		4
516	13900	56	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	56				
516	14021	122	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	122				4
516	14600	75	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT	75				5
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2½" WITH 11"x14"x2" BEVELED LOAD PLATE)	9				
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2½" WITH 11"x14"x2 3/16" BEVELED LOAD PLATE)	9				
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12"x15"x2 5/8" WITH 13"x16"x2 7/16" BEVELED LOAD PLATE)		9			
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12"x15"x2 5/8" WITH 13"x16"x2½" BEVELED LOAD PLATE)		9			
518	12200	3	EACH	SCUPPERS, INCLUDING SUPPORTS			3		
518	21201	89	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	89				14
518	40000	148	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	148				
518	40010	66	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	66				
518	51200	16	FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS		16			
604	36600	2	EACH	PRECAST REINFORCED CONCRETE OUTLET				2	
898	10211	354	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN			354		5
898	10705	342	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN				342	5, 16, 18, 44
898	11001	58	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	9		49		36
898	20110	16	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER CAP)		16			
898	20150	13	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	13				

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LEQ001.dgn 11/10/2010 11:37:18 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102874

ESTIMATED QUANTITIES (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

ESTIMATED QUANTITIES - HAM-50-1954R - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG BR

CALCULATED BY: SSM

CHECKED BY: JDG

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	4
202	22900	287	SQ YD	APPROACH SLAB REMOVED				287	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
509	10000	86166	POUND	EPOXY COATED REINFORCING STEEL	2693	2902	86166		
510	10001	317	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	89	228			4
512	10100	830	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	120	311	399		
512	10300	68	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			68		
512	33000	14	SQ YD	TYPE 2 WATERPROOFING	14				
513	10260	161158	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			161158		
513	20000	4512	EACH	WELDED STUD SHEAR CONNECTORS			4512		
514	00060	11798	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			11798		
514	00067	11798	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			11798		4
516	13600	20	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	20				
516	13900	77	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	77				
516	14021	112	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	112				4
516	14600	79	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT	79				5
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2½" WITH 11"x14"x2" BEVELED LOAD PLATE)	8				
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2½" WITH 11"x14"x2 3/16" BEVELED LOAD PLATE)	8				
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12"x15"x2 5/8" WITH 13"x16"x2 1/16" BEVELED LOAD PLATE)		8			
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (12"x15"x2 5/8" WITH 13"x16"x2½" BEVELED LOAD PLATE)		8			
518	12200	2	EACH	SCUPPERS, INCLUDING SUPPORTS			2		
518	21201	72	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	72				14
518	40000	124	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	124				
518	40010	35	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	35				
604	36600	1	EACH	PRECAST REINFORCED CONCRETE OUTLET				1	
898	10211	308	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN			308		5
898	10705	282	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN				282	5, 21, 23, 45
898	11001	56	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	7		49		38
898	20110	14	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER CAP)		14			
898	20150	21	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	21				

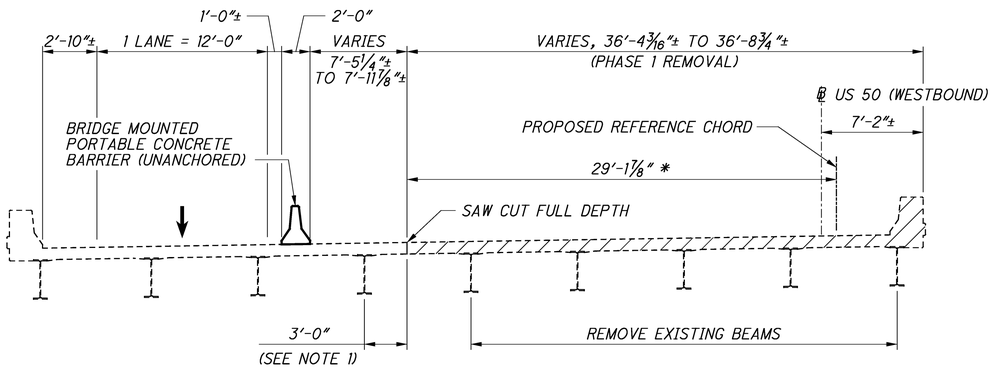
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954REQ001.dgn 11/10/2010 11:37:20 AM mtreifeisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | CHECKED SSM
DRAWN JDG | REVISED
REVIEWED MSL | DATE 11/12/10
STRUCTURE FILE NUMBER 3102882

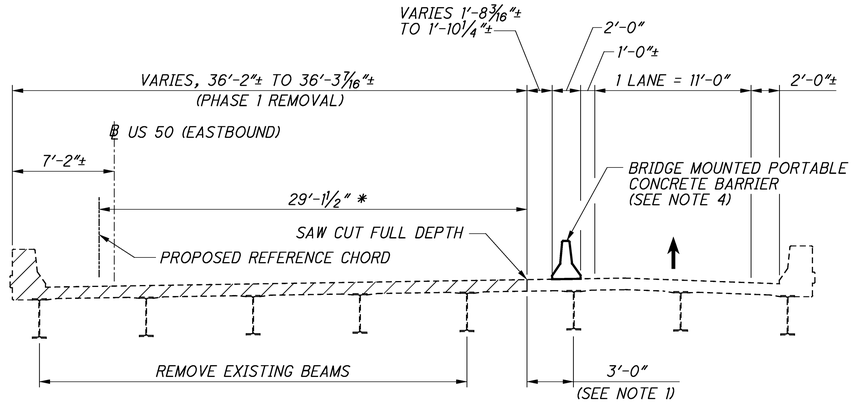
ESTIMATED QUANTITIES (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736



LEFT BRIDGE

(WESTBOUND, LOOKING EAST)

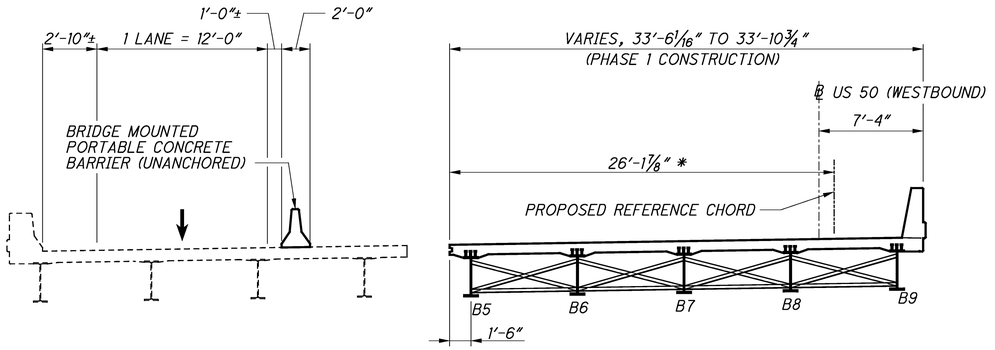


RIGHT BRIDGE

(EASTBOUND, LOOKING EAST)

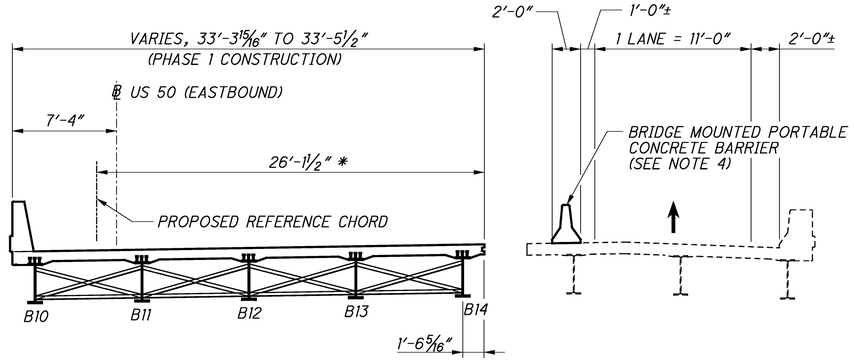
PHASE 1 REMOVAL

* FOR REFERENCE CHORD LOCATION, SEE GENERAL PLAN SHEET 3/50 .



LEFT BRIDGE

(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE

(EASTBOUND, LOOKING EAST)

PHASE 1 CONSTRUCTION

SEQUENCE OF CONSTRUCTION:

PHASE 1

1. INSTALL PORTABLE CONCRETE BARRIER ON BRIDGE DECK AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. INSTALL TEMPORARY SHORING NECESSARY TO ALLOW EXCAVATION FOR PHASE 1 CONSTRUCTION.
3. REMOVE SUPERSTRUCTURE, PORTIONS OF SUBSTRUCTURE (ABUTMENTS AND WINGWALLS), AND PORTIONS OF APPROACH SLAB TO LIMITS SHOWN IN PHASE 1 REMOVAL.
4. CONSTRUCT NEW CONCRETE CAP ON EXISTING PIERS TO PHASE 1 LIMITS.
5. INSTALL NEW ROLLED STEEL BEAMS, CROSSFRAMES, AND BEARINGS.
6. CONSTRUCT THE DECK SLAB, CORRESPONDING END DIAPHRAGMS, AND APPROACH SLAB TO PHASE 1 LIMITS.
7. CONSTRUCT THE INSIDE BRIDGE DEFLECTOR PARAPETS.

PHASE 2

8. RELOCATE PORTABLE CONCRETE BARRIERS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
9. REMOVE SUPERSTRUCTURE, PORTIONS OF SUBSTRUCTURE (ABUTMENTS AND WINGWALLS), AND PORTIONS OF APPROACH SLABS TO LIMITS SHOWN IN PHASE 2 REMOVAL.
10. CONSTRUCT NEW CONCRETE CAP ON EXISTING PIERS TO PHASE 2 LIMITS.
11. INSTALL NEW ROLLED STEEL BEAMS, CROSSFRAMES, AND BEARINGS.
12. CONSTRUCT THE DECK SLAB AND CORRESPONDING END DIAPHRAGMS TO PHASE 2 LIMITS.
13. CONSTRUCT THE OUTSIDE BRIDGE DEFLECTOR PARAPETS.

PHASE 3

14. INSTALL NEW CROSSFRAMES UNDER THE CLOSURE POUR.
15. CAST THE CLOSURE POUR FOR THE END DIAPHRAGMS AND DECK SLAB.
16. REMOVE TEMPORARY SHORING AND CONSTRUCT THE REMAINING APPROACH SLABS.
17. REMOVE PORTABLE CONCRETE BARRIERS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. CUT LINE IS CONSTANT 3'-0" FROM ℄ EXISTING BEAM ALONG ENTIRE LENGTH OF BRIDGE.
2. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 622 FOR PAYMENT.
3. PORTABLE CONCRETE BARRIER SHALL CONFORM TO STANDARD DRAWING PCB-91.
4. FOR THE RIGHT BRIDGE, BARRIER SEGMENTS SHALL BE FASTENED USING TWO (2) 1" DIA. H.S. ANCHOR BOLTS. AS FAR AS PRACTICAL, ANCHORS SHALL BE PLACED ON TRAFFIC SIDE OF BARRIERS. ADDITIONAL ANCHORS MAY BE PLACED ON THE NON-TRAFFIC SIDE OF THE BARRIER SEGMENTS. ADDITIONAL ANCHORS PLACED ON THE NON-TRAFFIC SIDE MUST BE THRU-BOLTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102874 (L) 3102882 (R)	

PHASE 1 REMOVAL AND CONSTRUCTION DETAILS

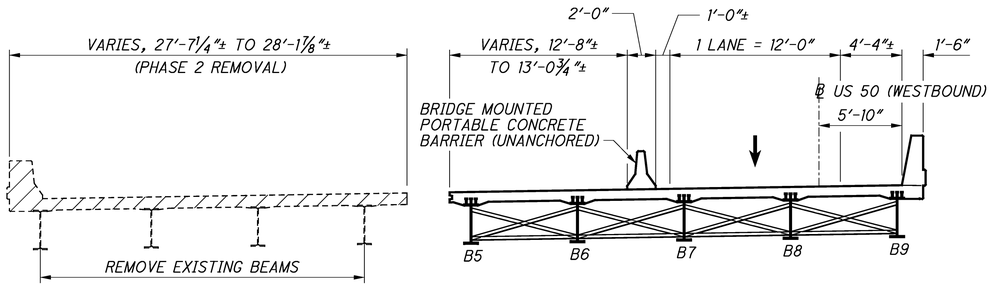
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

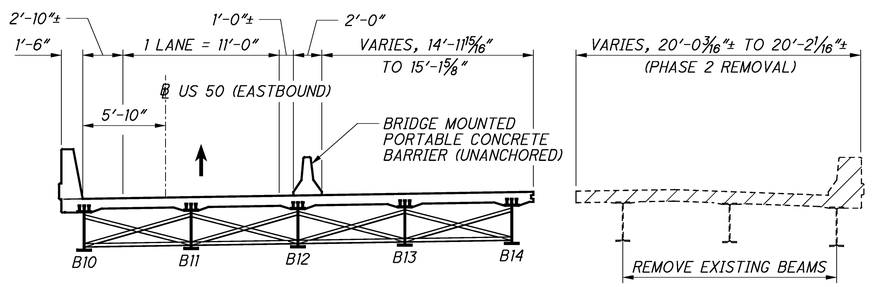
8 / 50

280
442

C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CPC001.dgn 11/10/2010 11:37:21 AM mtreibeisel

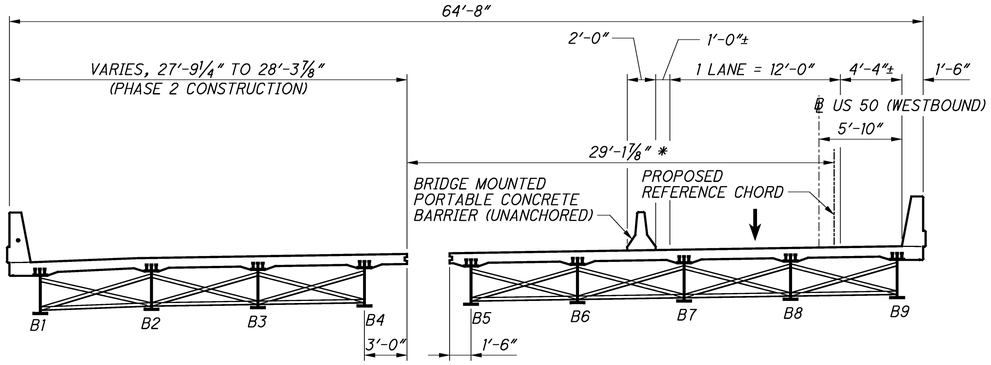


LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

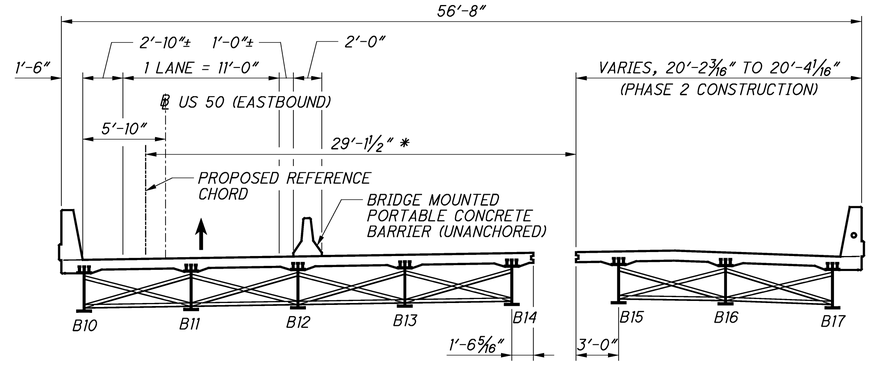


RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 2 REMOVAL



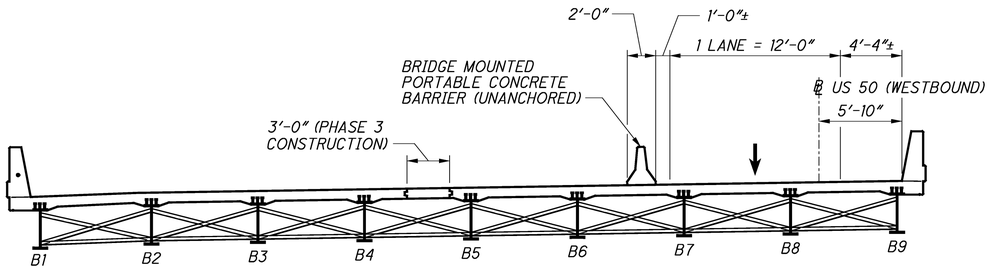
LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



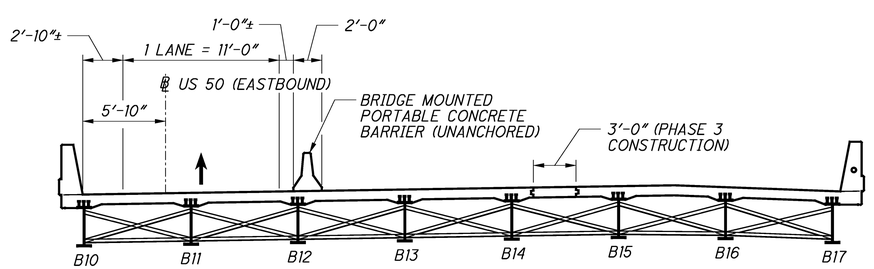
RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

* FOR REFERENCE CHORD LOCATION, SEE GENERAL PLAN SHEET 3/50.

PHASE 2 CONSTRUCTION



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 3 CONSTRUCTION

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. CLOSURE POUR: THE BEAM DIFFERENTIAL DEFLECTIONS ARE GREATER THAN ALLOWED FOR A DECK PLACEMENT WITHOUT A CLOSURE POUR. UNDER NO CIRCUMSTANCE SHALL THE CLOSURE POUR BE ELIMINATED IN THE FIELD WITHOUT APPROVAL FROM THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO.
2. FOR ADDITIONAL PHASE CONSTRUCTION INFORMATION, SEE SHEET 8/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102874 (L) 3102882 (R)	

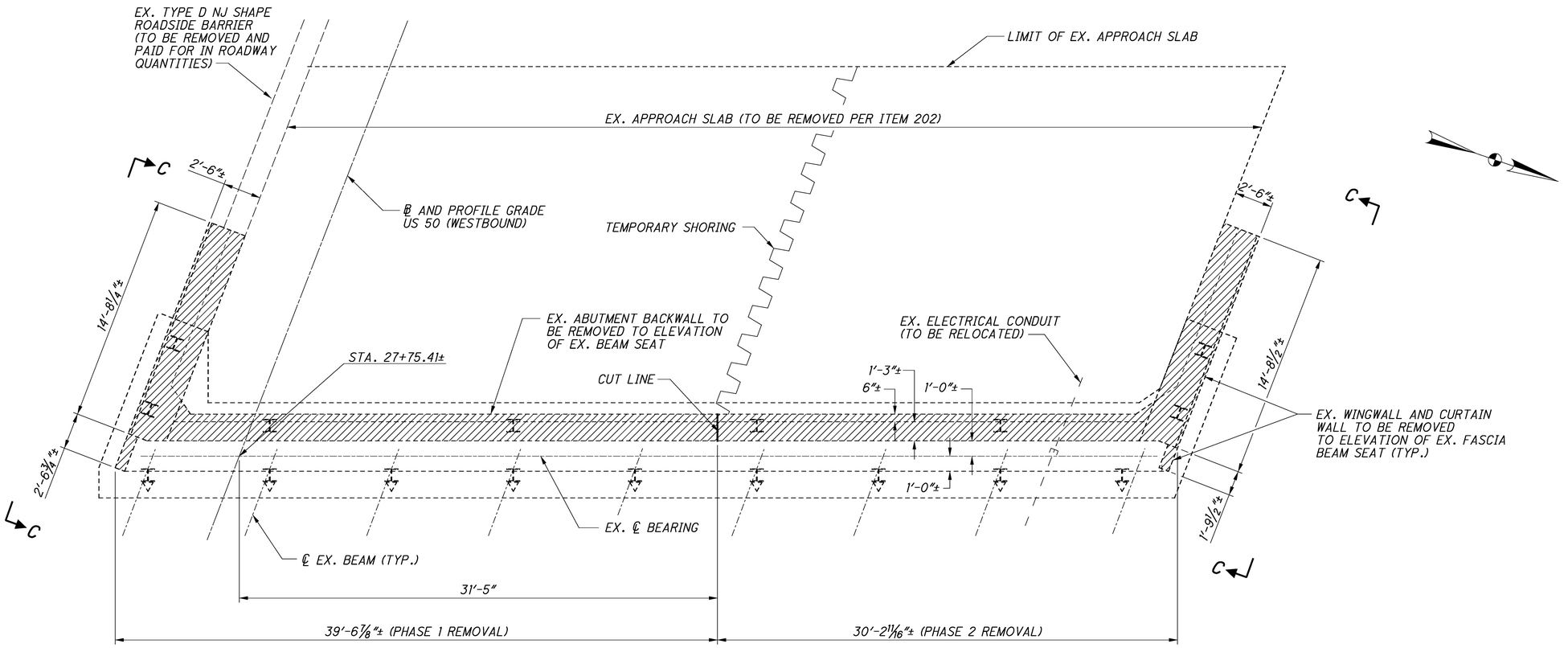
PHASE 2 & 3 REMOVAL AND CONSTRUCTION DETAILS
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

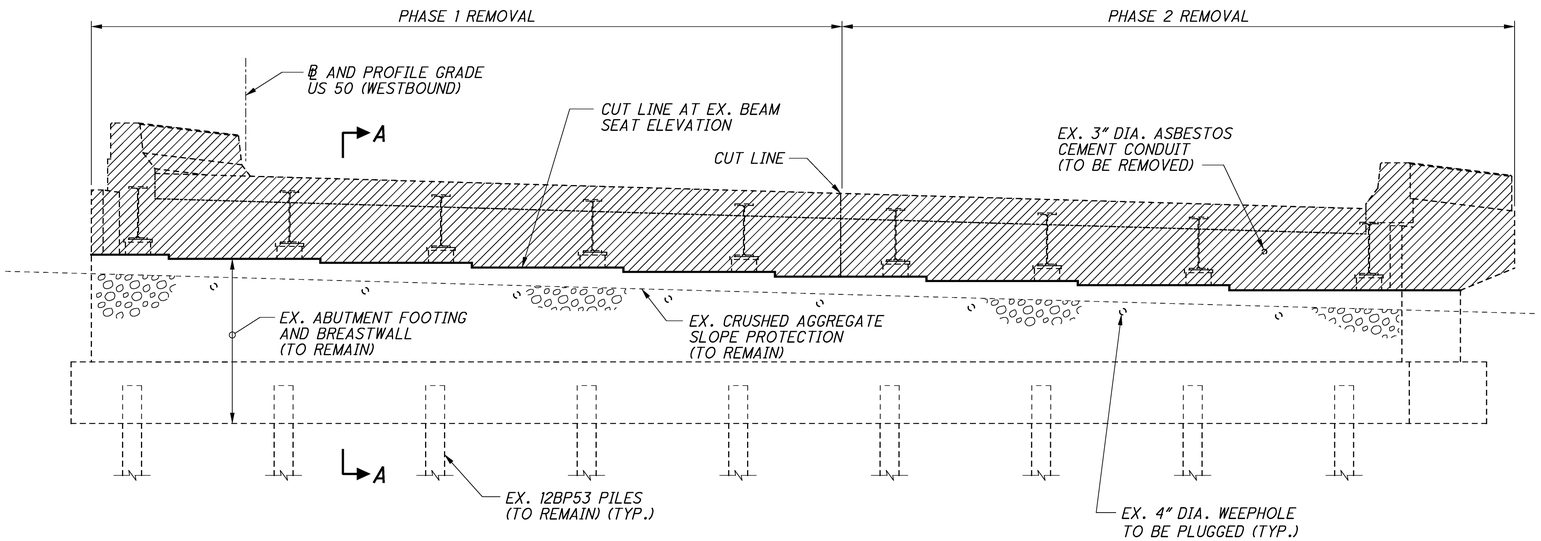
9/50

281
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CPC002.dgn 11/10/2010 11:37:23 AM mtneiheisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/50 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/50 FOR SECTION A-A AND VIEW C-C.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102874	

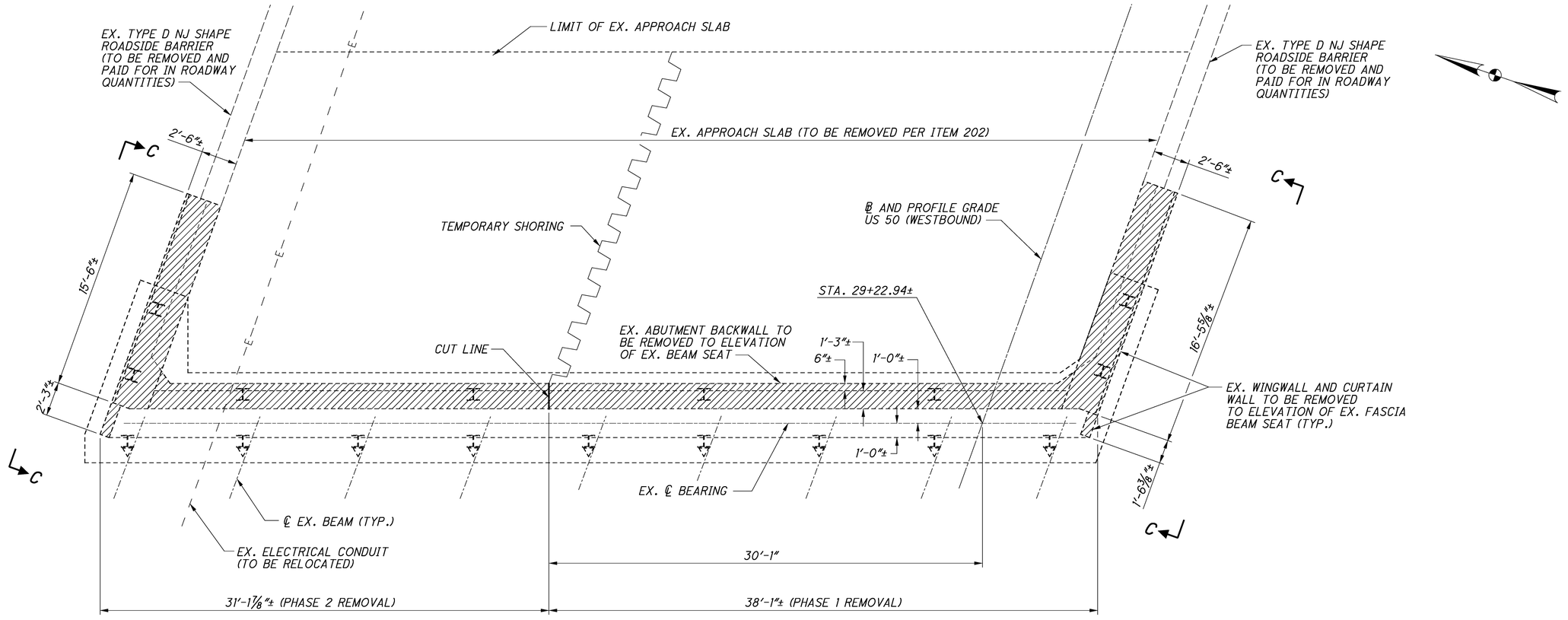
REAR ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

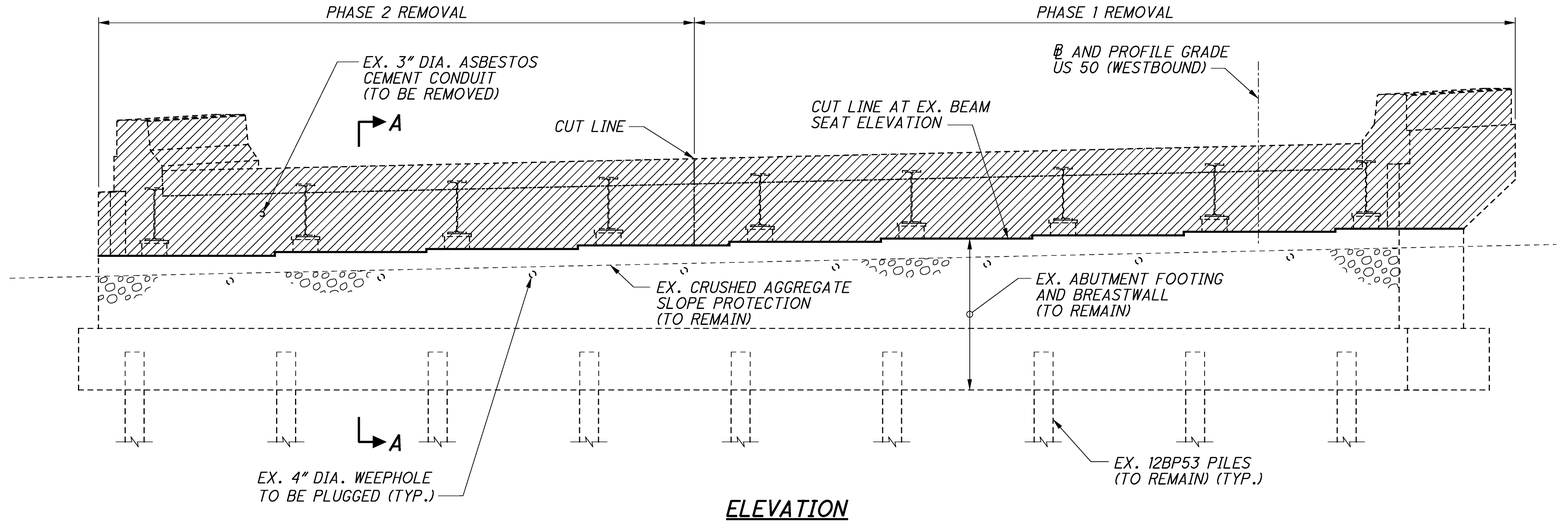
10/50

282/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LRE002.dgn 11/10/2010 11:37:24 AM mtreifeisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/50 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/50 FOR SECTION A-A AND VIEW C-C.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102874	

FORWARD ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)

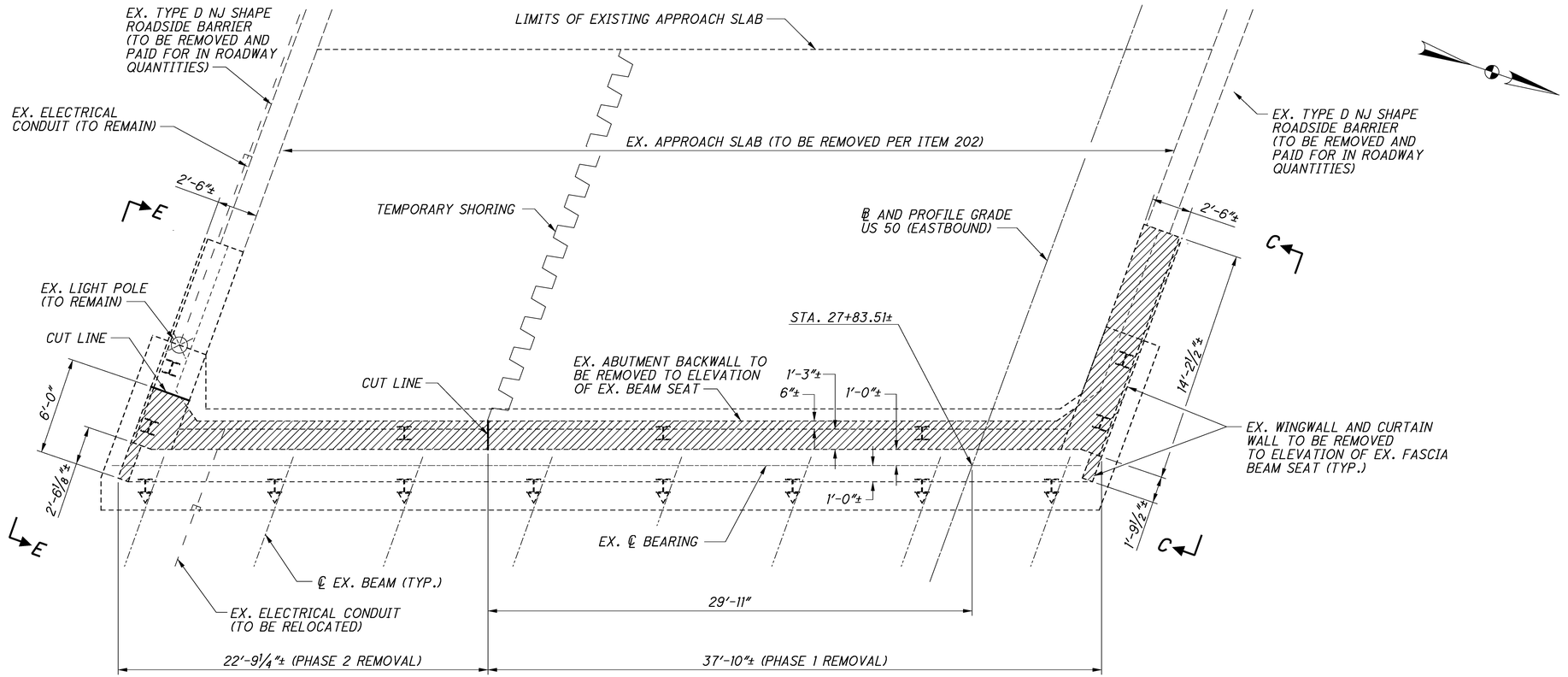
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

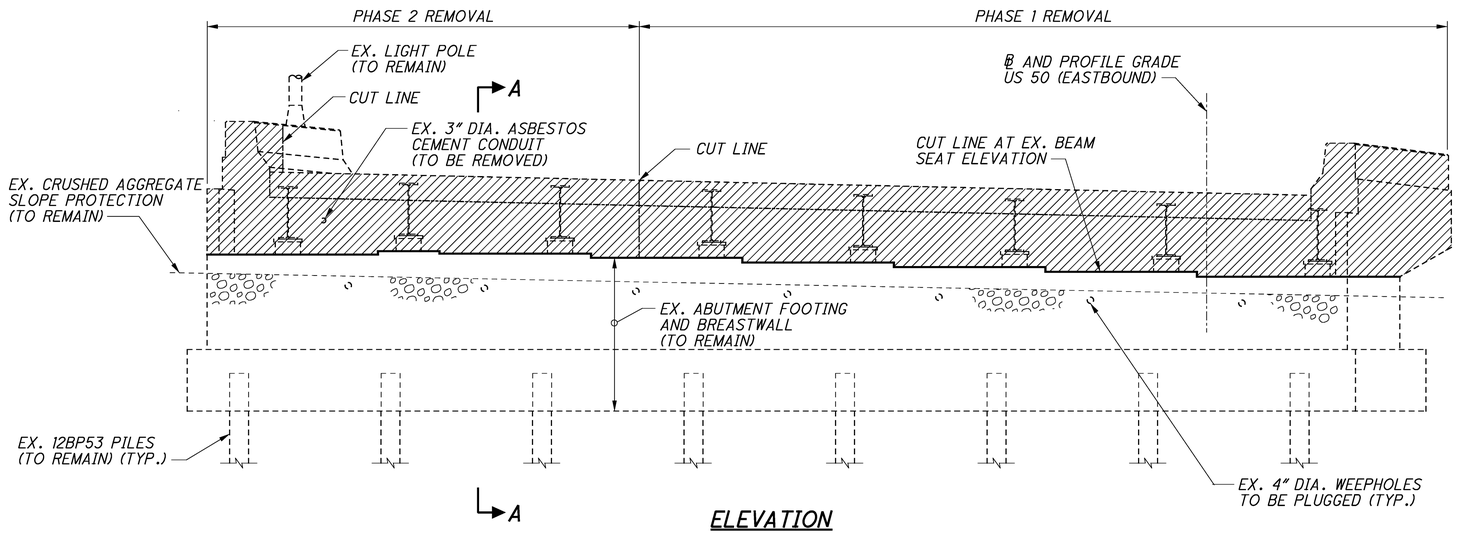
11 / 50

283
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LRE001.dgn 11/10/2010 11:37:26 AM mtneihreisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/50 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/50 FOR SECTION A-A, VIEW C-C AND VIEW E-E.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102882	

REAR ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)

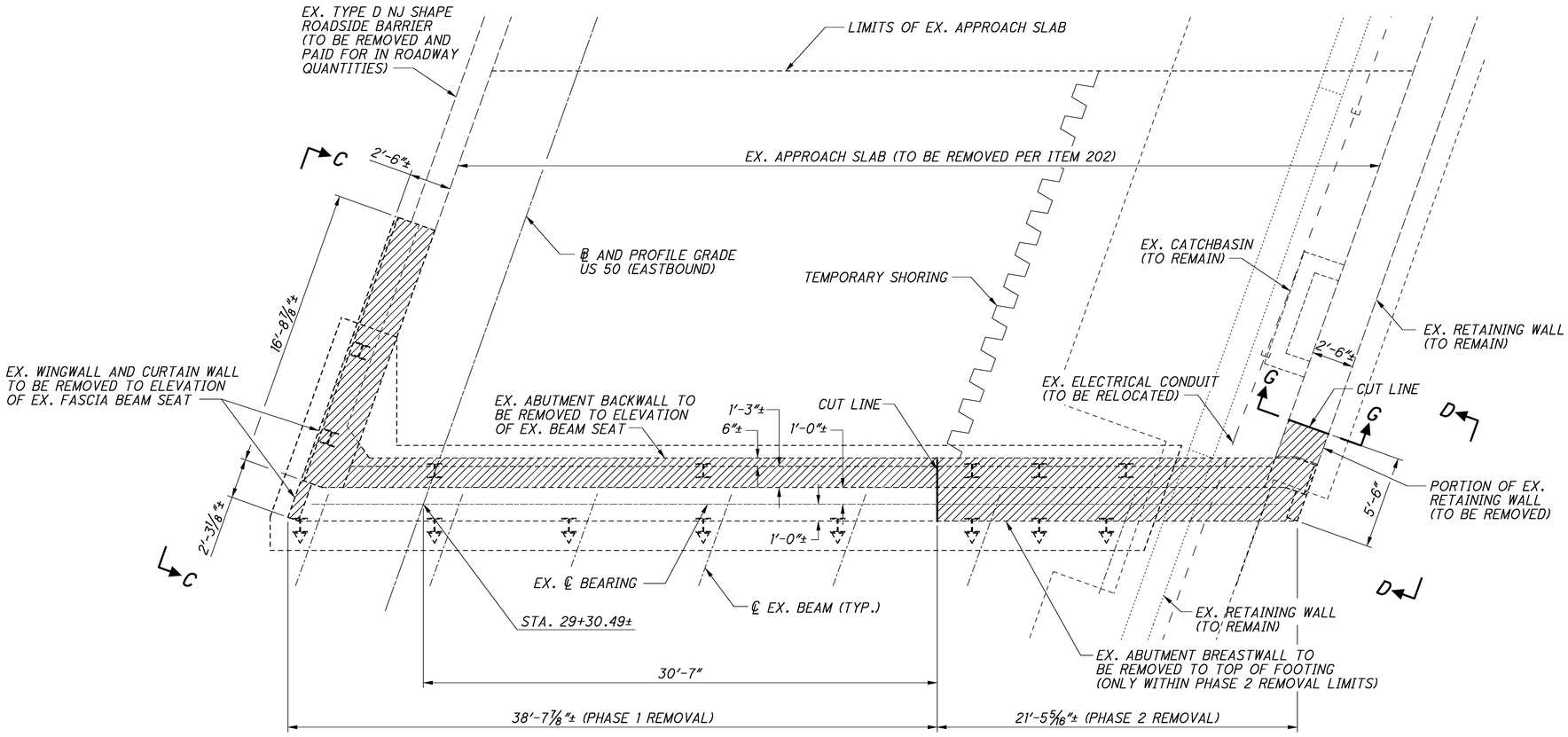
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

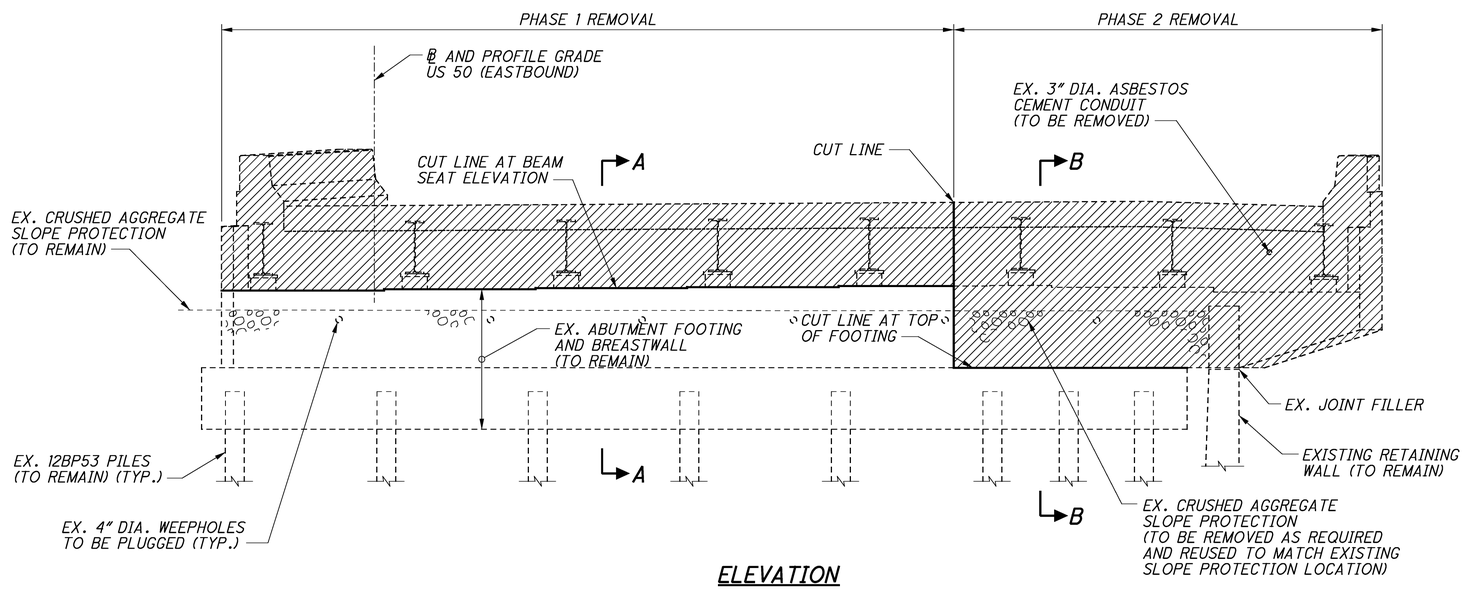
12/50

284/442

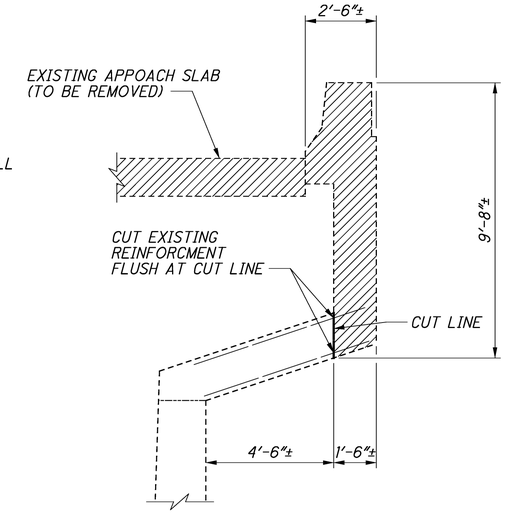
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RRE001.dgn 11/10/2010 11:37:27 AM mtreifreisel



PLAN



ELEVATION



SECTION G-G

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/50 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/50 FOR SECTION A-A, SECTION B-B, VIEW C-C AND VIEW D-D.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102882	

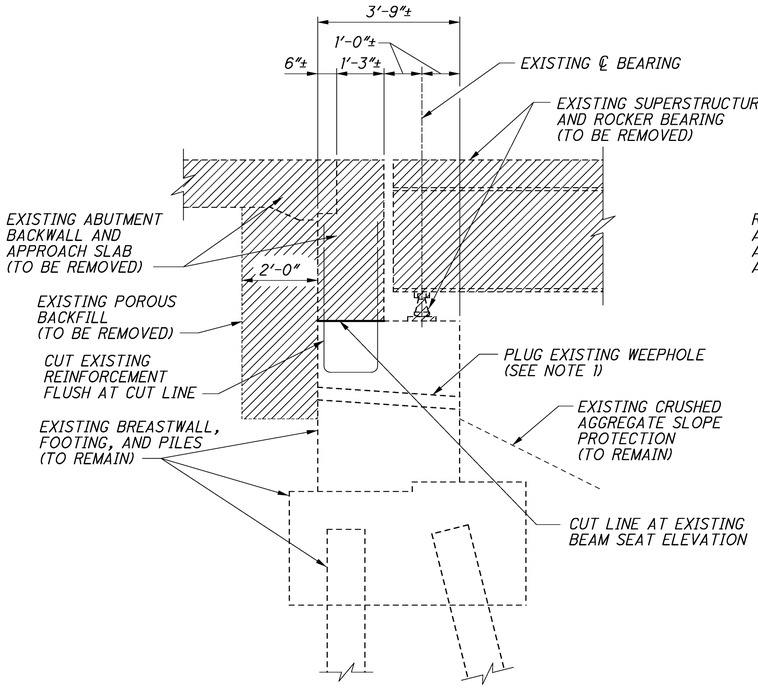
FORWARD ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

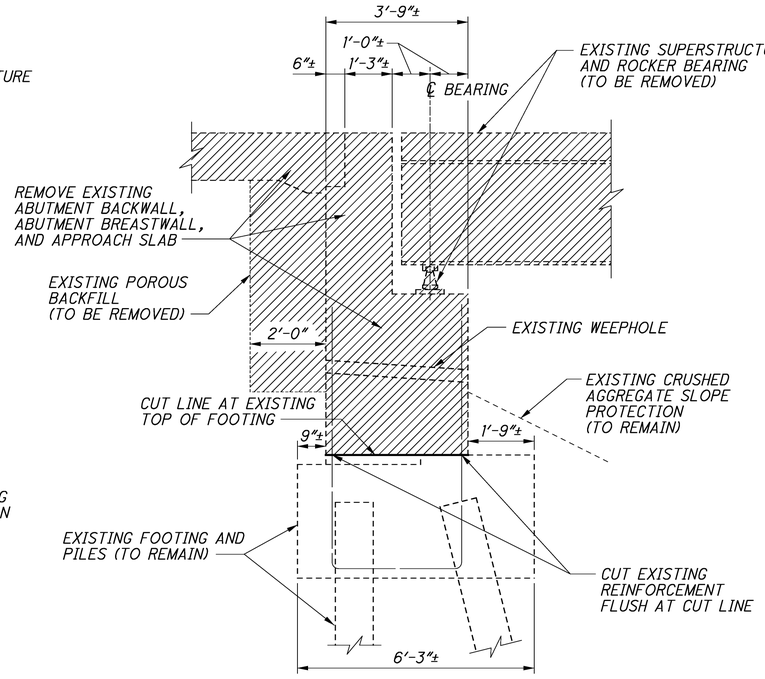
13/50

285/442

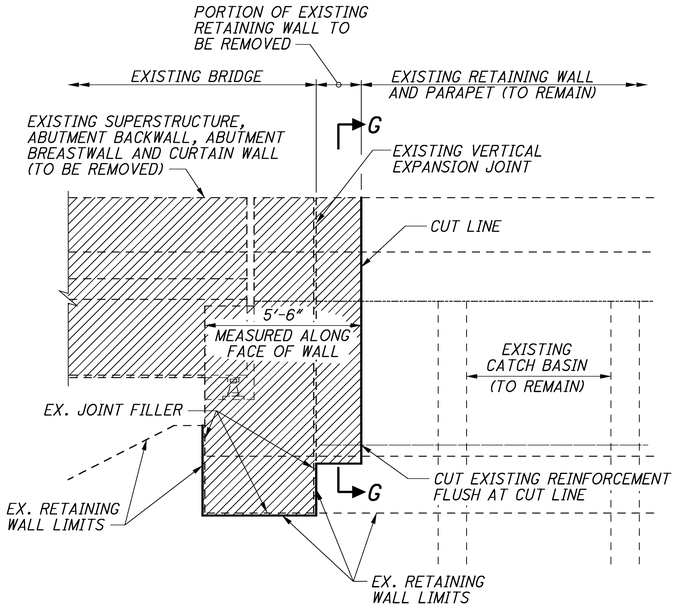
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RRE002.dgn 11/10/2010 11:37:29 AM mtnelhisel



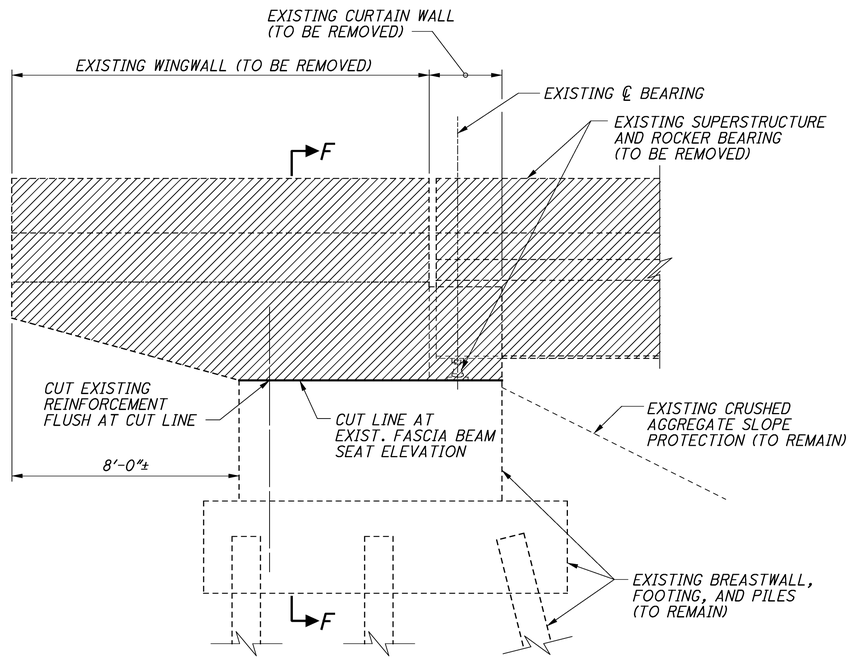
SECTION A-A



SECTION B-B

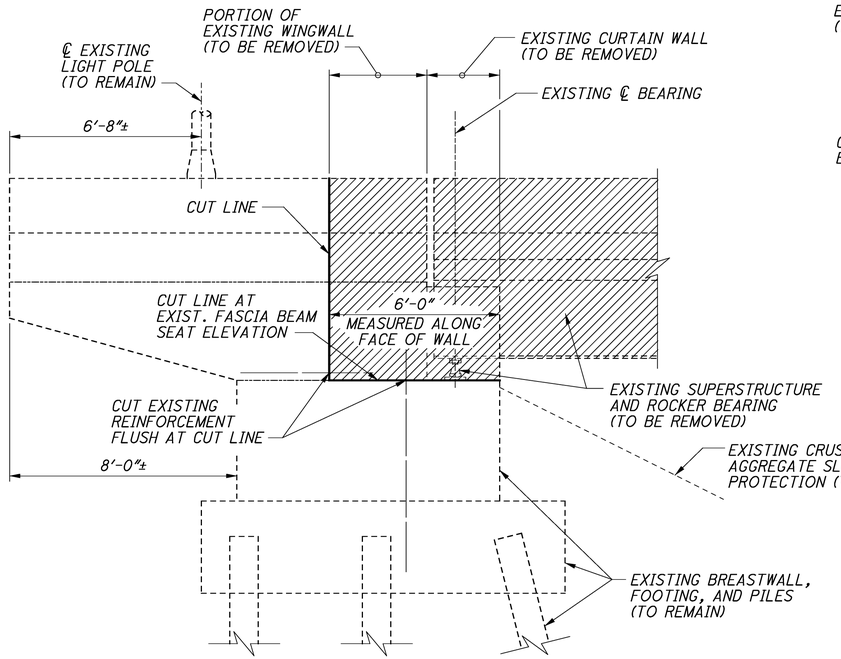


VIEW D-D

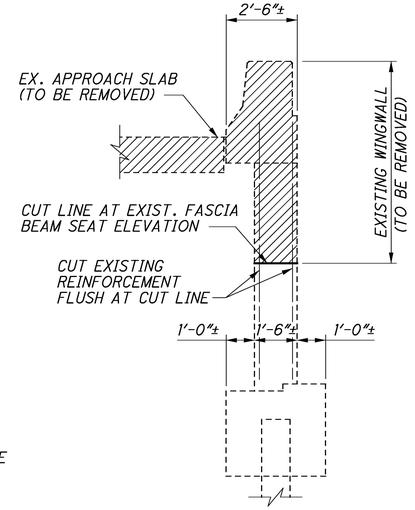


VIEW C-C

(NORTH WINGWALL OF FORWARD ABUTMENT LEFT BRIDGE,
SOUTH WINGWALL OF REAR ABUTMENT LEFT BRIDGE AND
NORTH WINGWALL OF FORWARD ABUTMENT RIGHT BRIDGE SHOWN;
SOUTH WINGWALL OF FORWARD ABUTMENT LEFT BRIDGE,
NORTH WINGWALL OF REAR ABUTMENT LEFT BRIDGE AND
NORTH WINGWALL OF REAR ABUTMENT RIGHT BRIDGE OPPOSITE VIEW)



VIEW E-E



SECTION F-F

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT.
2. SEE SHEET 13/50 FOR SECTION G-G.

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102874 (L) 3102882 (R)	

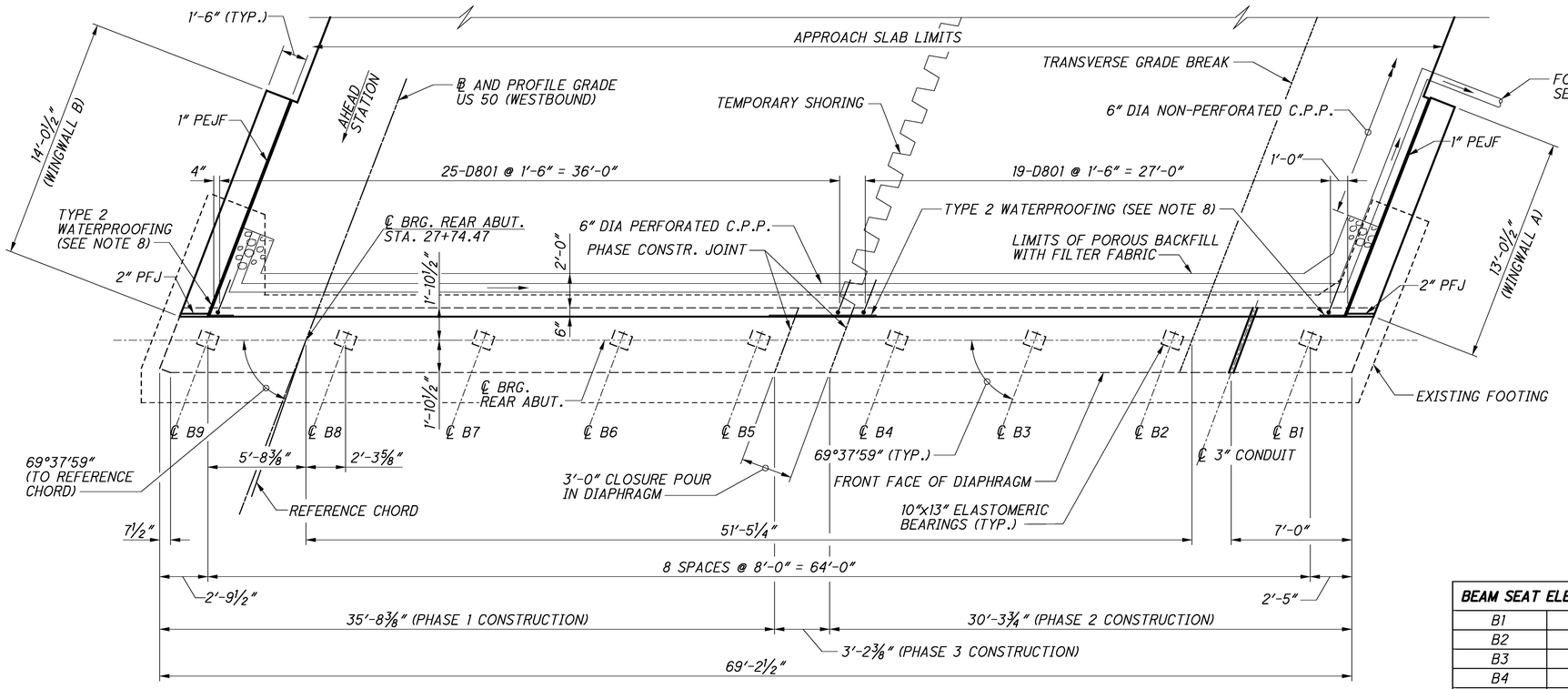
ABUTMENT REMOVAL DETAILS (LEFT AND RIGHT BRIDGE)
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

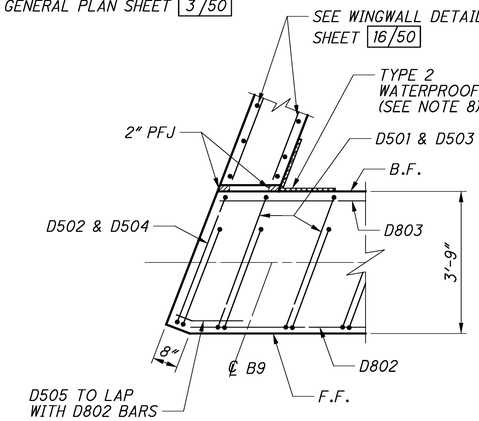
14 / 50

286 / 442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CRE001.dgn 11/10/2010 11:37:31 AM mtneireisel



PLAN

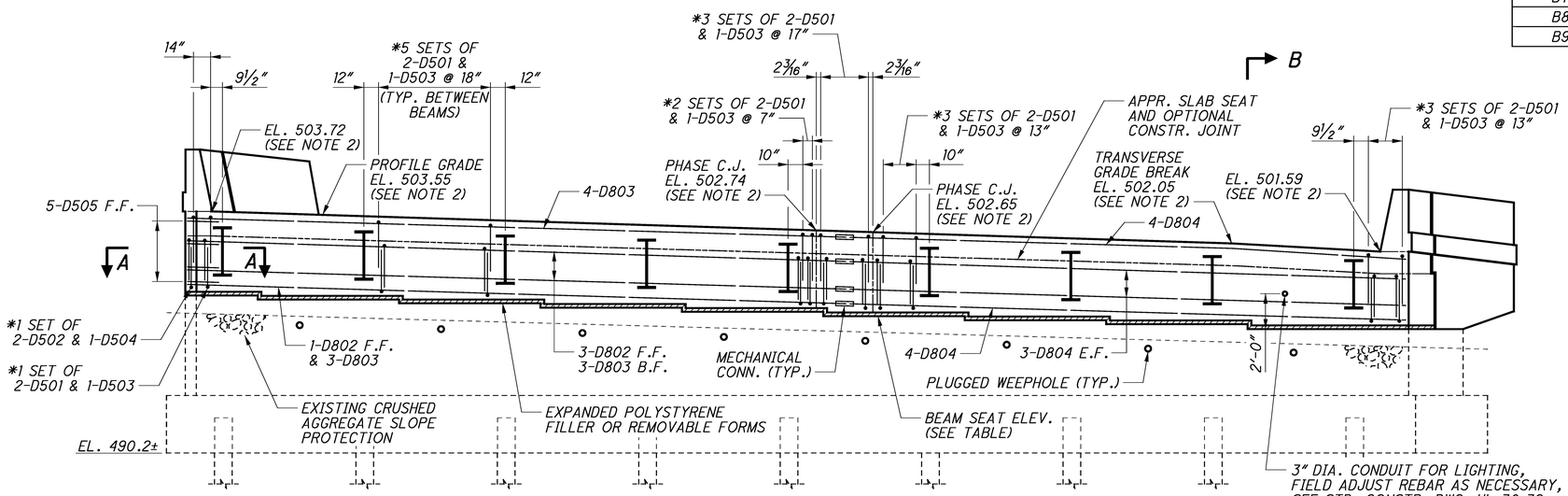


SECTION A-A

BEAM SEAT ELEVATIONS	
B1	497.21±
B2	497.49±
B3	497.71±
B4	497.94±
B5	498.19±
B6	498.42±
B7	498.67±
B8	498.88±
B9	499.11±

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

1. FOR SECTION B-B SEE SHEET 19/50 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION B-B.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 16/50 .
4. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
5. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

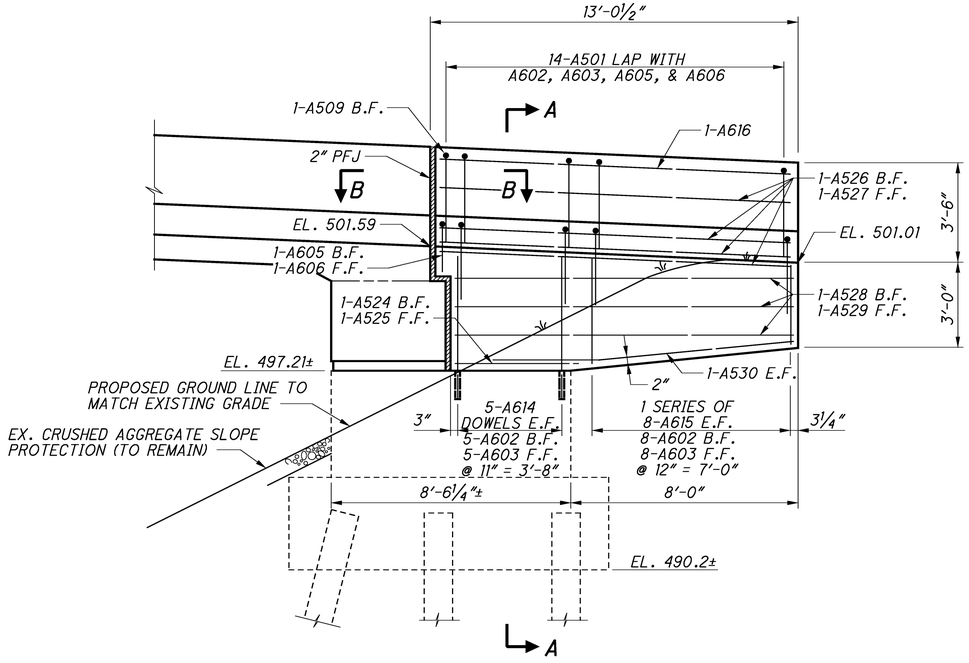
REAR ABUTMENT AND DIAPHRAGM DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

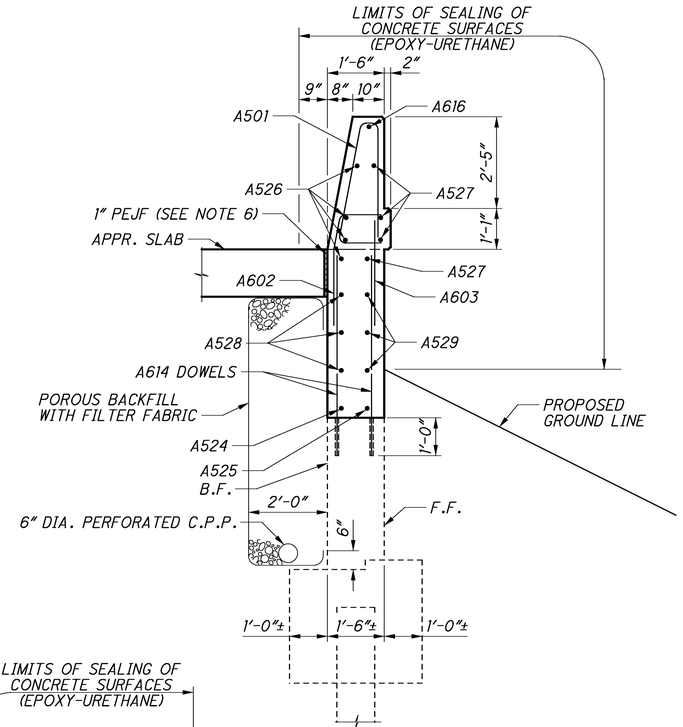
15 / 50

287 / 442

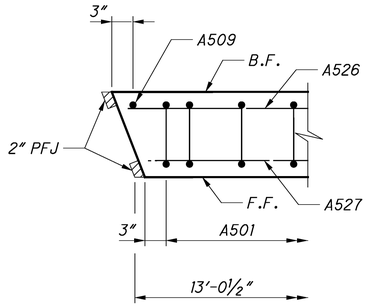
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAR001.dgn 11/10/2010 11:37:33 AM mtneihreisel



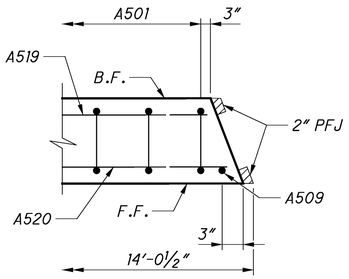
WINGWALL A ELEVATION



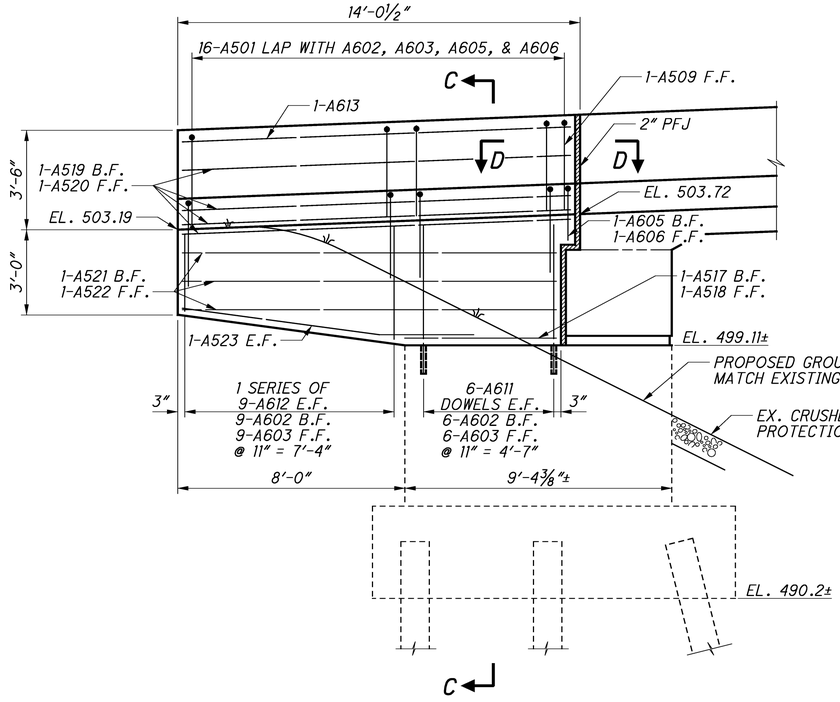
SECTION A-A



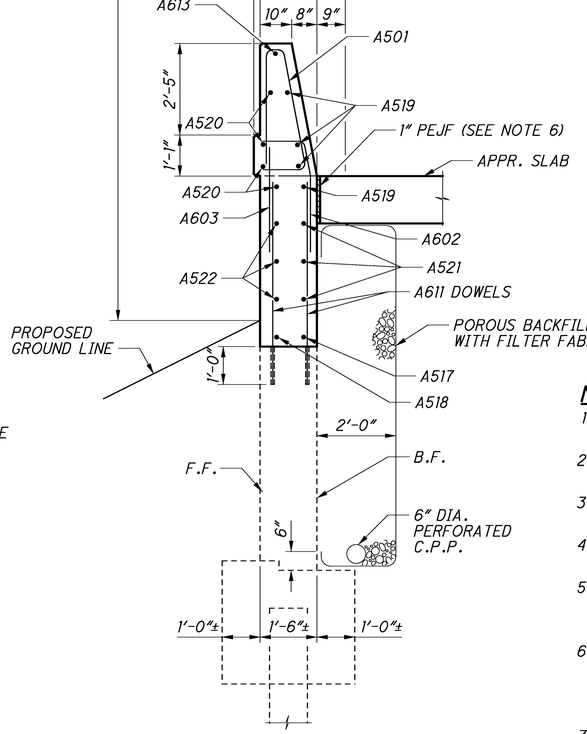
SECTION B-B



SECTION D-D



WINGWALL B ELEVATION



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2″ CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
3. FOR REAR ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 15/50.
4. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1″ PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15″), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 15/50.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/50.

DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102874

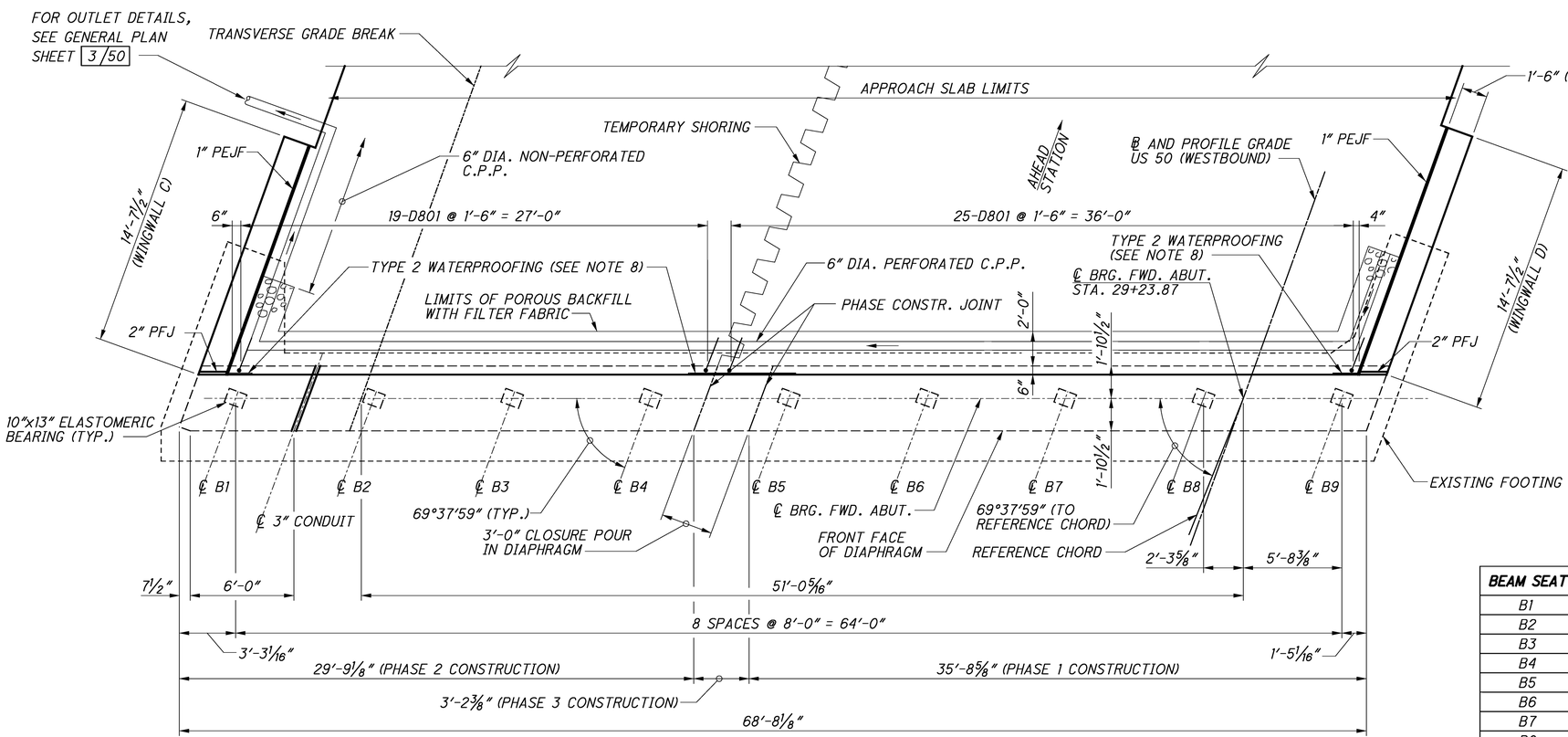
REAR ABUTMENT WINGWALL DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

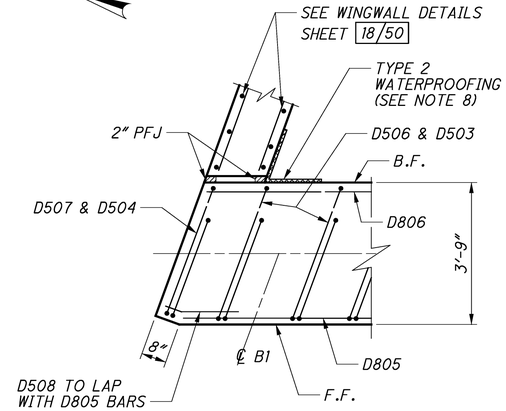
16/50

288
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAR002.dgn 11/10/2010 11:37:34 AM mtreifeisel



PLAN

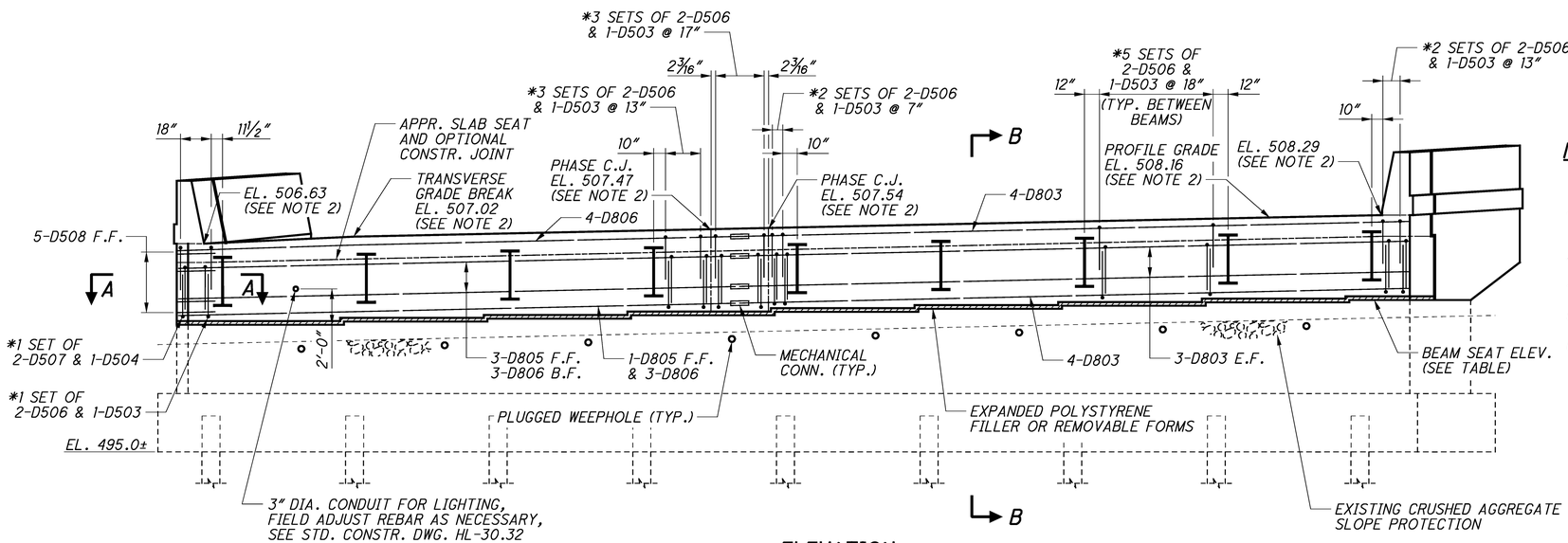


SECTION A-A

BEAM SEAT ELEVATIONS	
B1	502.11±
B2	502.29±
B3	502.45±
B4	502.64±
B5	502.83±
B6	503.00±
B7	503.17±
B8	503.36±
B9	503.49±

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

1. FOR SECTION B-B SEE SHEET 19/50 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION B-B.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 18/50 .
4. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
5. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50.
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DESIGNED MTN | DRAWN MTN | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102874

FORWARD ABUTMENT AND DIAPHRAGM DETAILS (LEFT BRIDGE)

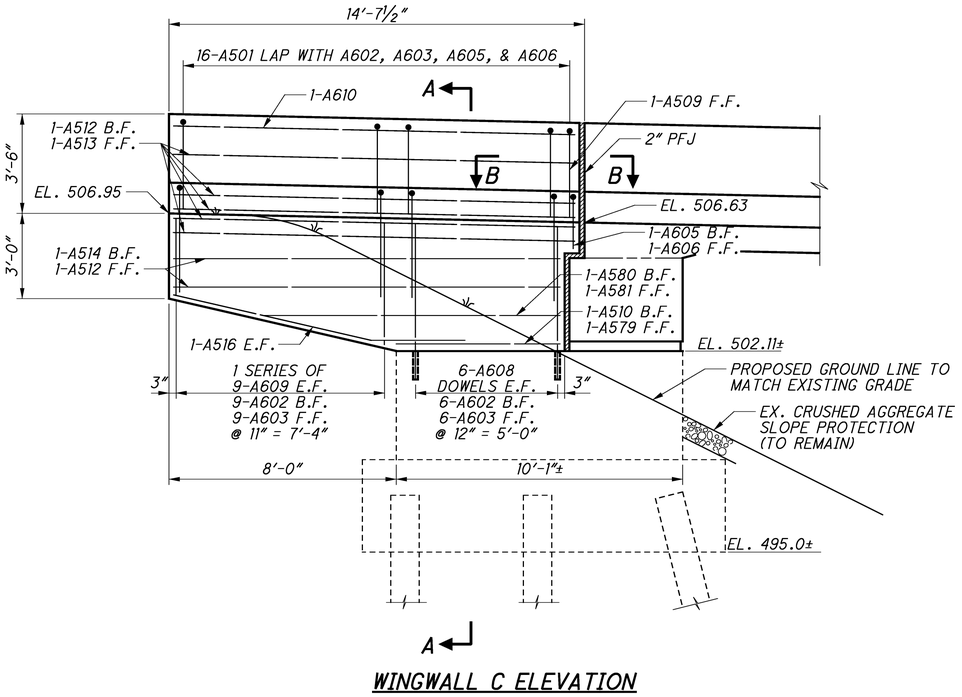
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

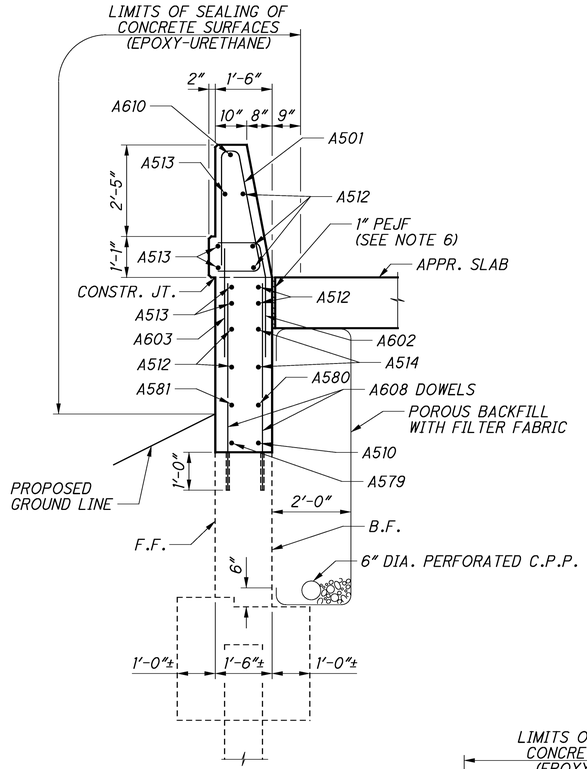
17 / 50

289 / 442

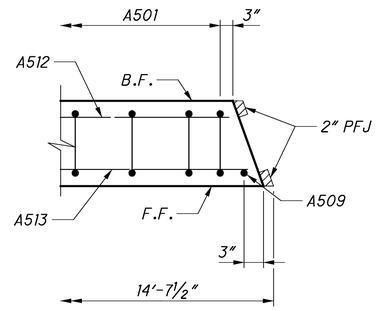
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAF001.dgn 11/10/2010 11:37:36 AM mtneiheisel



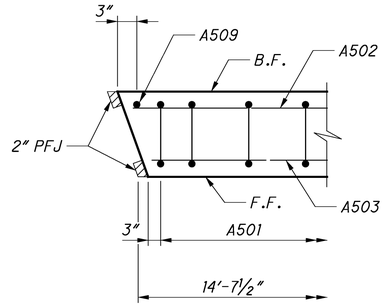
WINGWALL C ELEVATION



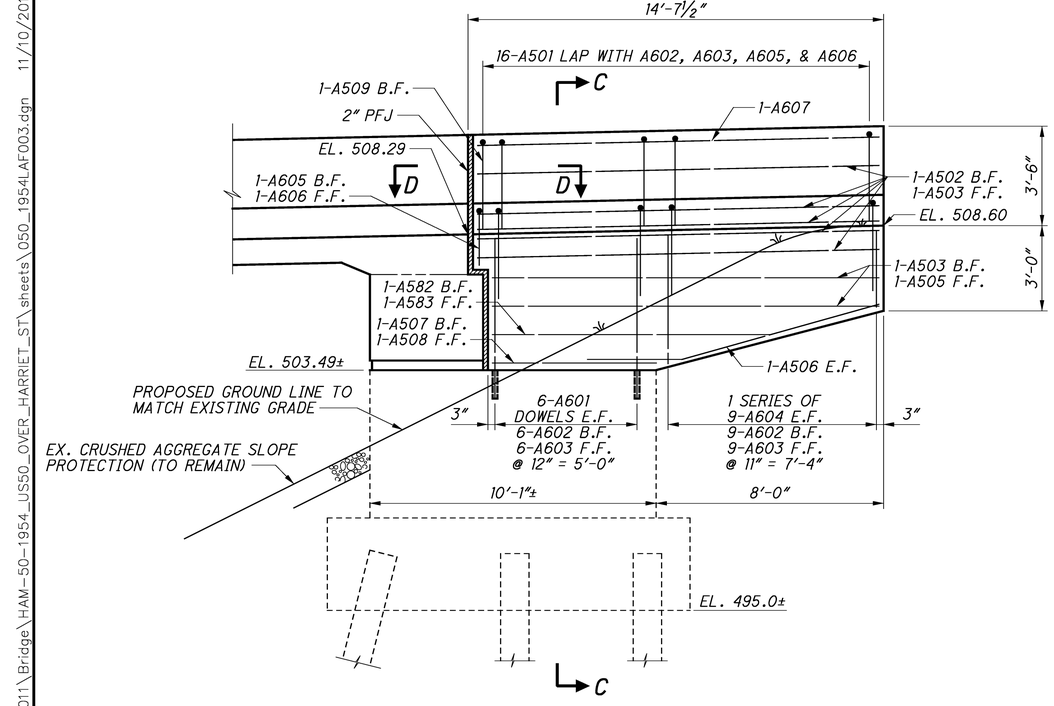
SECTION A-A



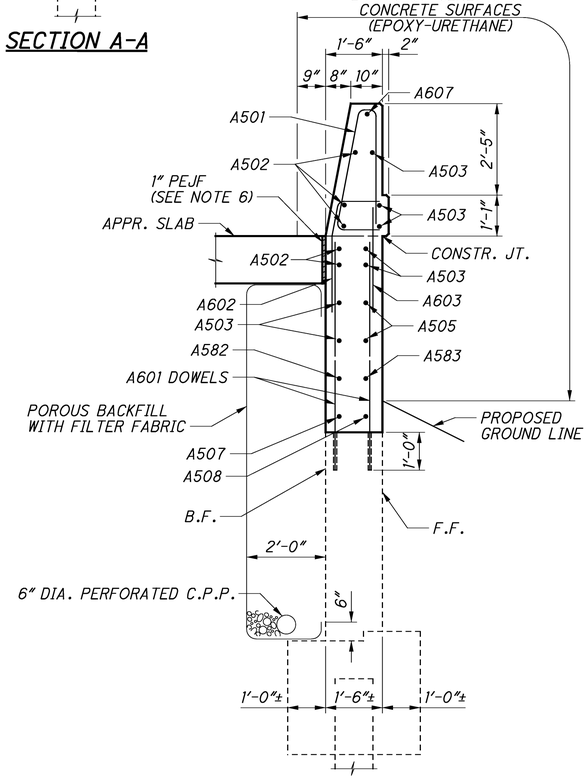
SECTION B-B



SECTION D-D



WINGWALL D ELEVATION



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2″ CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
3. FOR FORWARD ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 17/50.
4. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1″ PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15″), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 17/50.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

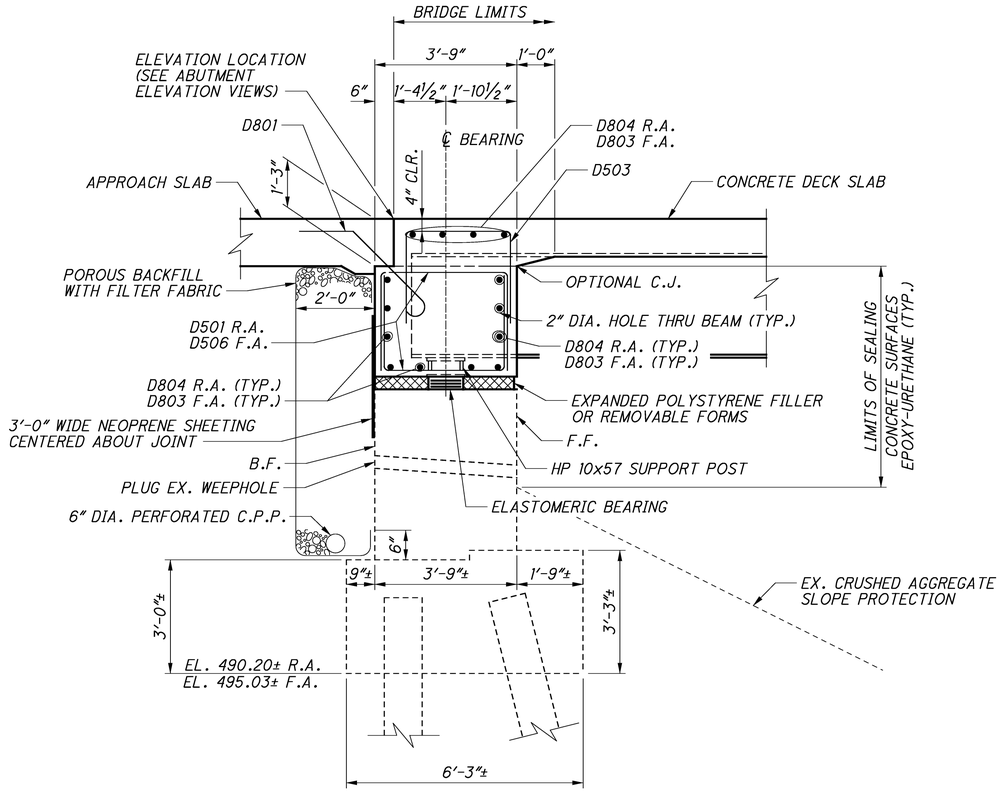
DESIGNED MTN | DRAWN SSM | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102874

FORWARD ABUTMENT WINGWALL DETAILS (LEFT BRIDGE)

HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAF003.dgn 11/10/2010 11:37:38 AM mtreitreisel



SECTION B-B

LEGEND:

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE

NOTES:

1. FOR REAR AND FORWARD ABUTMENT DIAPHRAGM PLAN AND ELEVATIONS, SEE SHEETS 15/50 AND 17/50.

DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

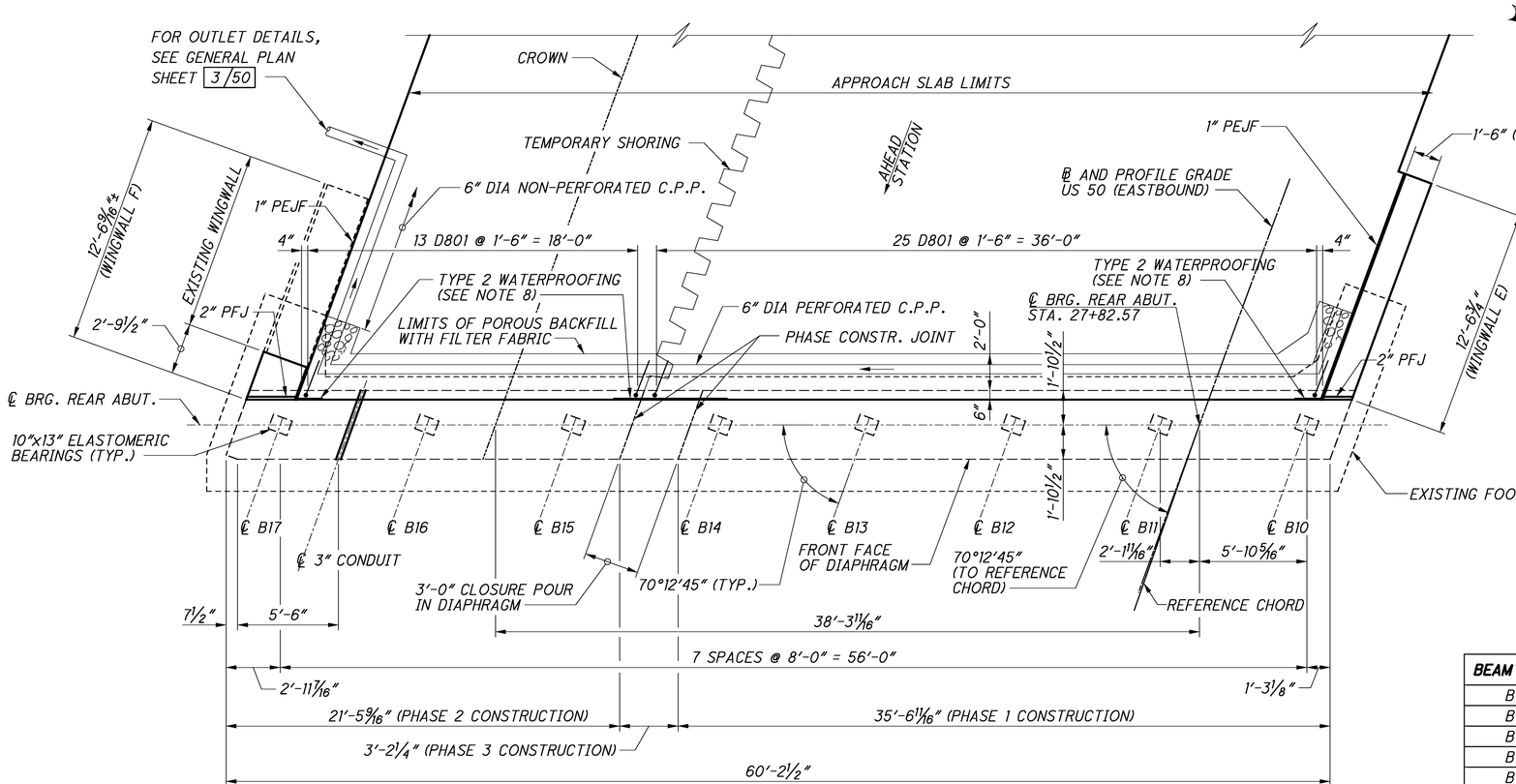
ABUTMENT AND DIAPHRAGM DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

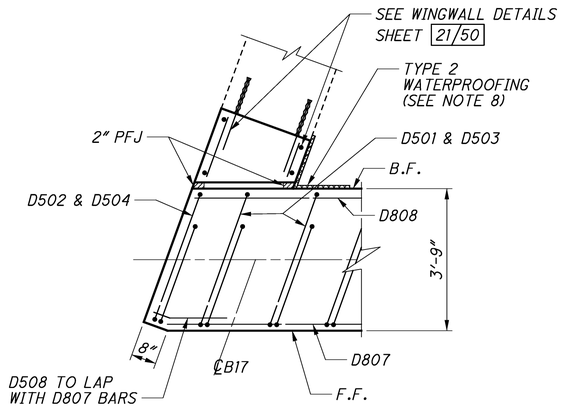
19/50

291/442

C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAF002.dgn 11/10/2010 11:37:39 AM mtreihleisel



PLAN

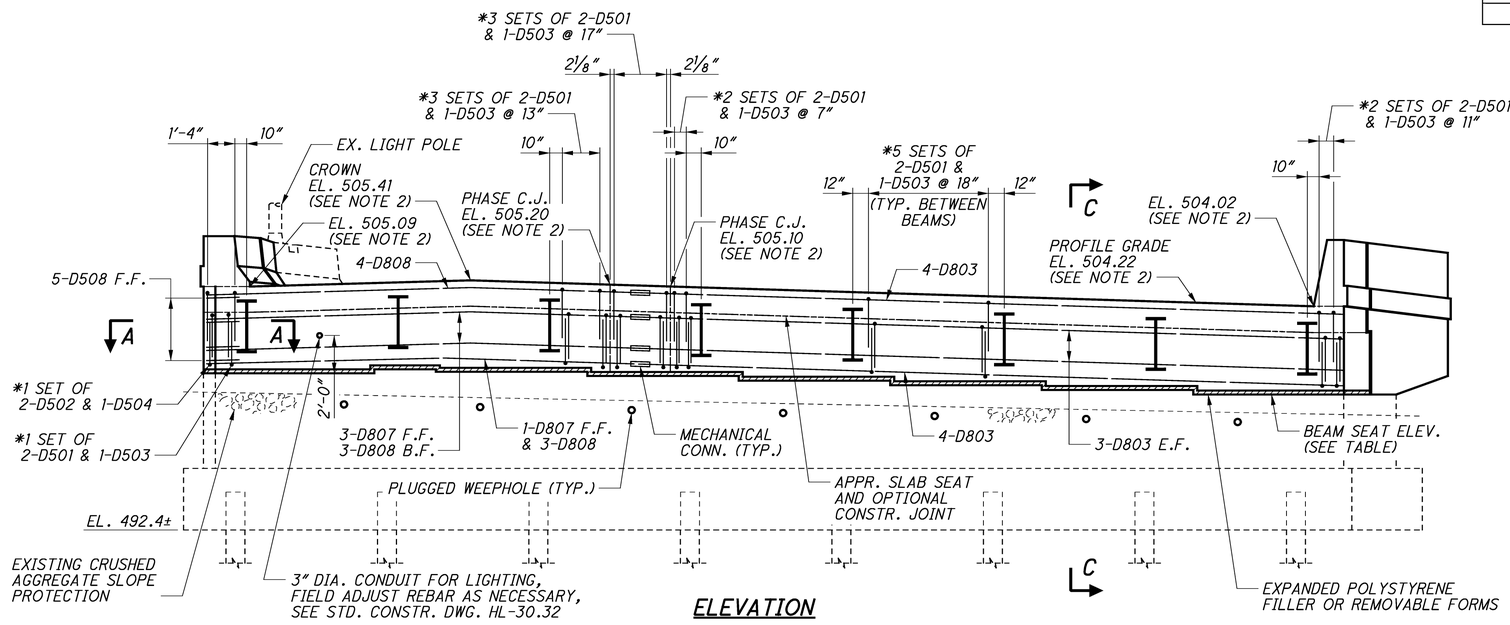


SECTION A-A

BEAM SEAT ELEVATIONS	
B10	499.50±
B11	499.74±
B12	499.99±
B13	500.23±
B14	500.48±
B15	500.70±
B16	500.83±
B17	500.62±

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

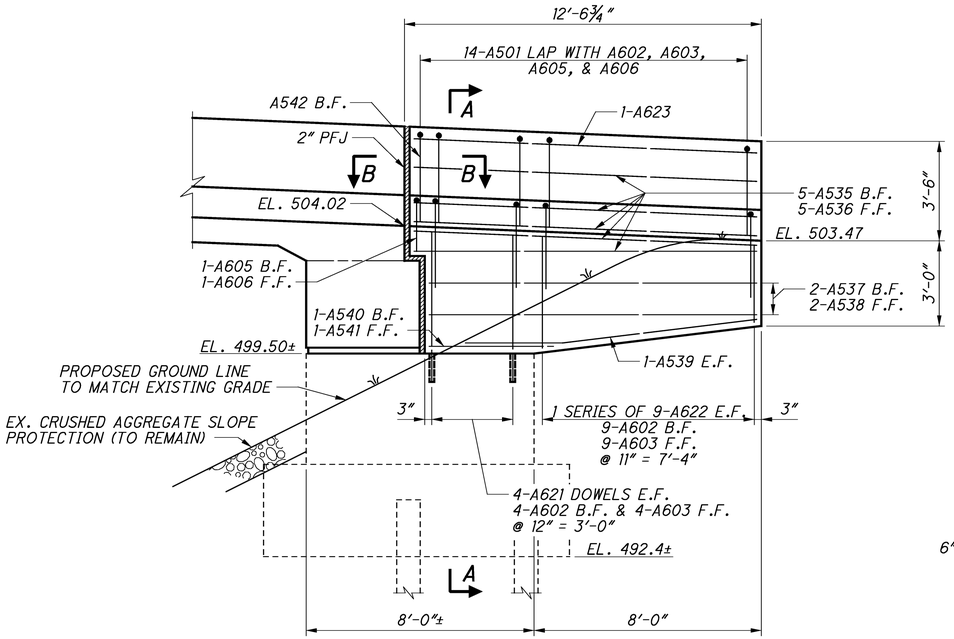
1. FOR SECTION C-C SEE SHEET 24/50 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION C-C.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 21/50 .
4. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
5. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242
DESIGNED MTN
DRAWN MTN
CHECKED SSM
REVIEWED MSL
DATE 11/12/10
STRUCTURE FILE NUMBER 3102882
REVISED

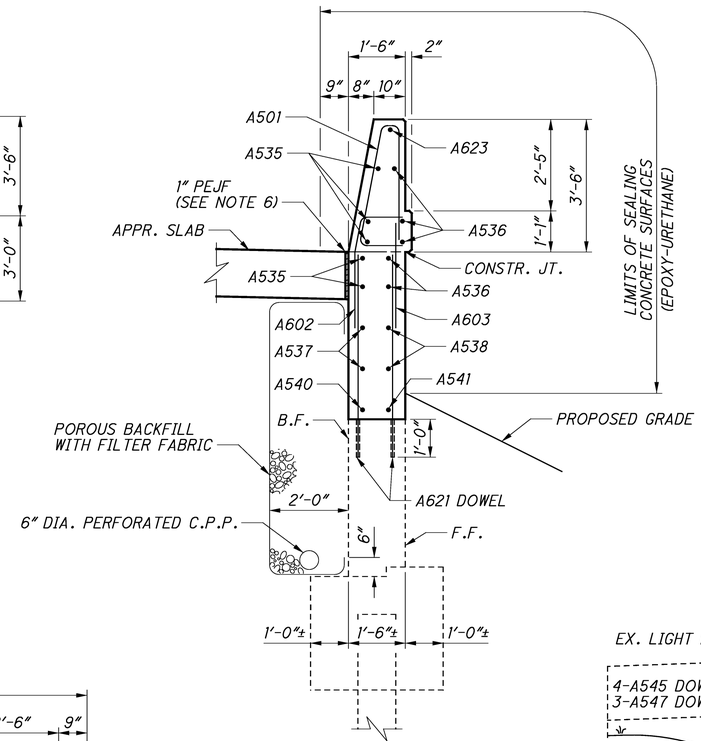
REAR ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

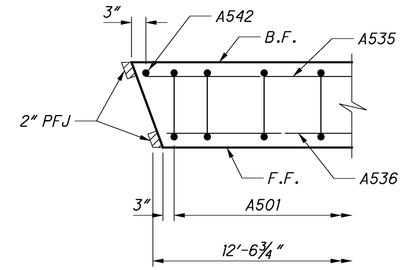
C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAR001.dgn 11/10/2010 11:37:41 AM mtreiheisel



WINGWALL E ELEVATION



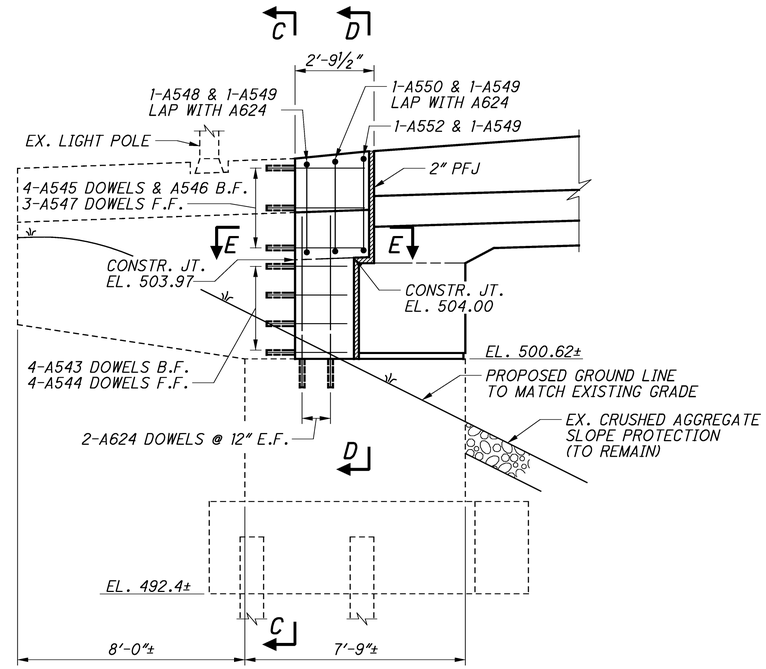
SECTION A-A



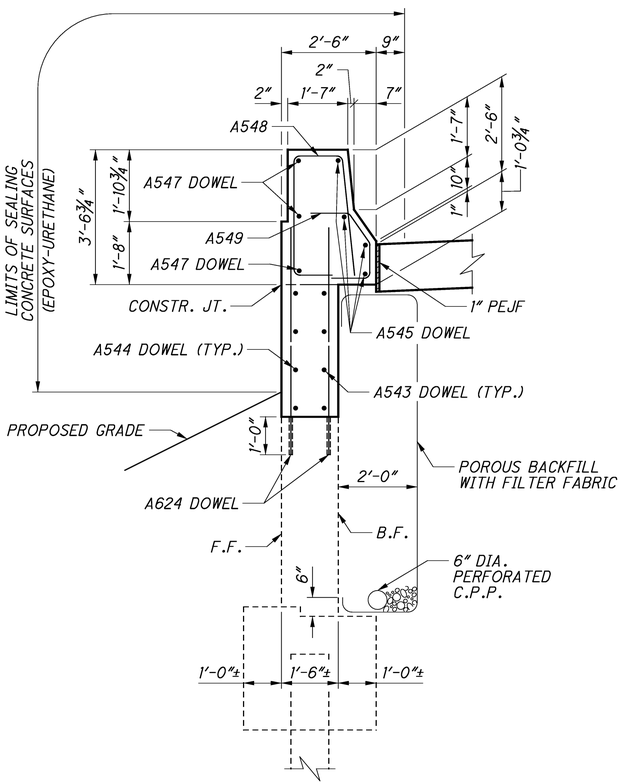
SECTION B-B

LEGEND:

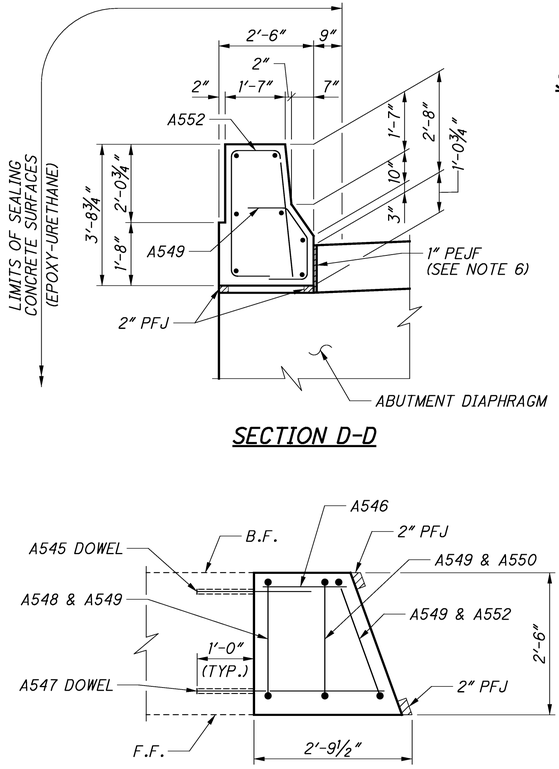
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



WINGWALL F ELEVATION



SECTION C-C



SECTION D-D

SECTION E-E

NOTES:

1. PROVIDE 2" CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
3. FOR REAR ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 20/50.
4. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1" PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 20/50.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

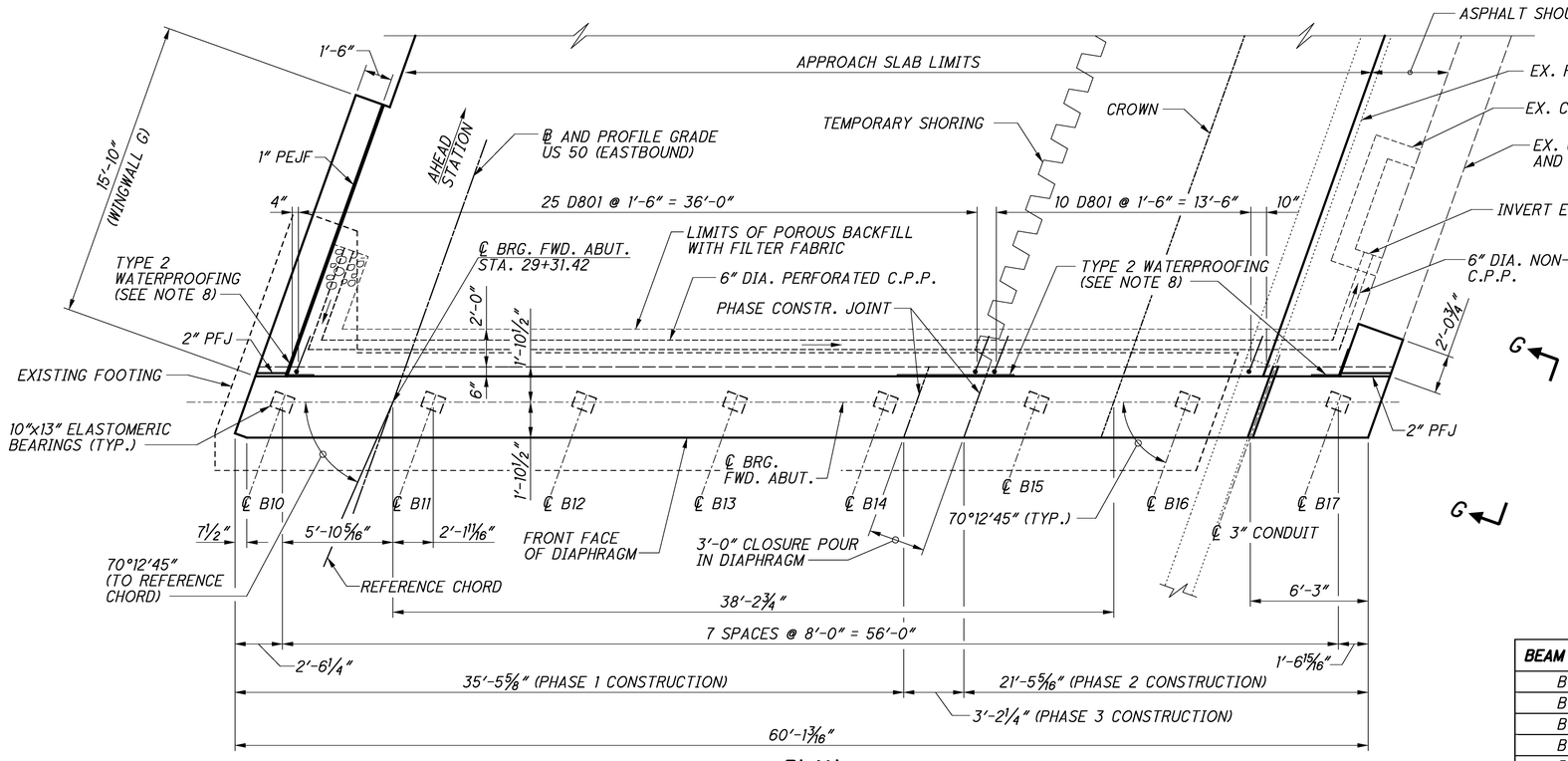
REAR ABUTMENT WINGWALL DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03 PID No. 75736

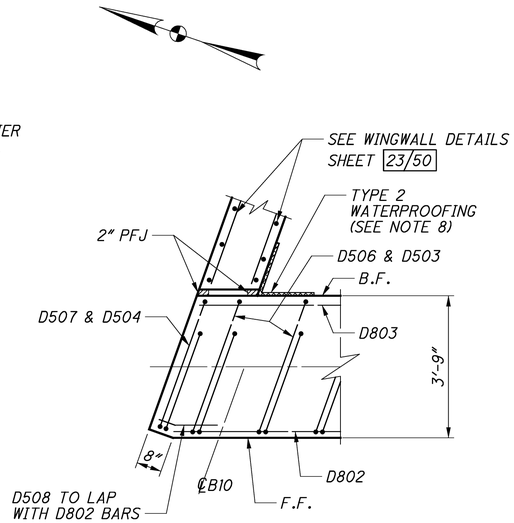
21/50

293/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAR002.dgn 11/10/2010 11:37:43 AM mtneiheisel



PLAN

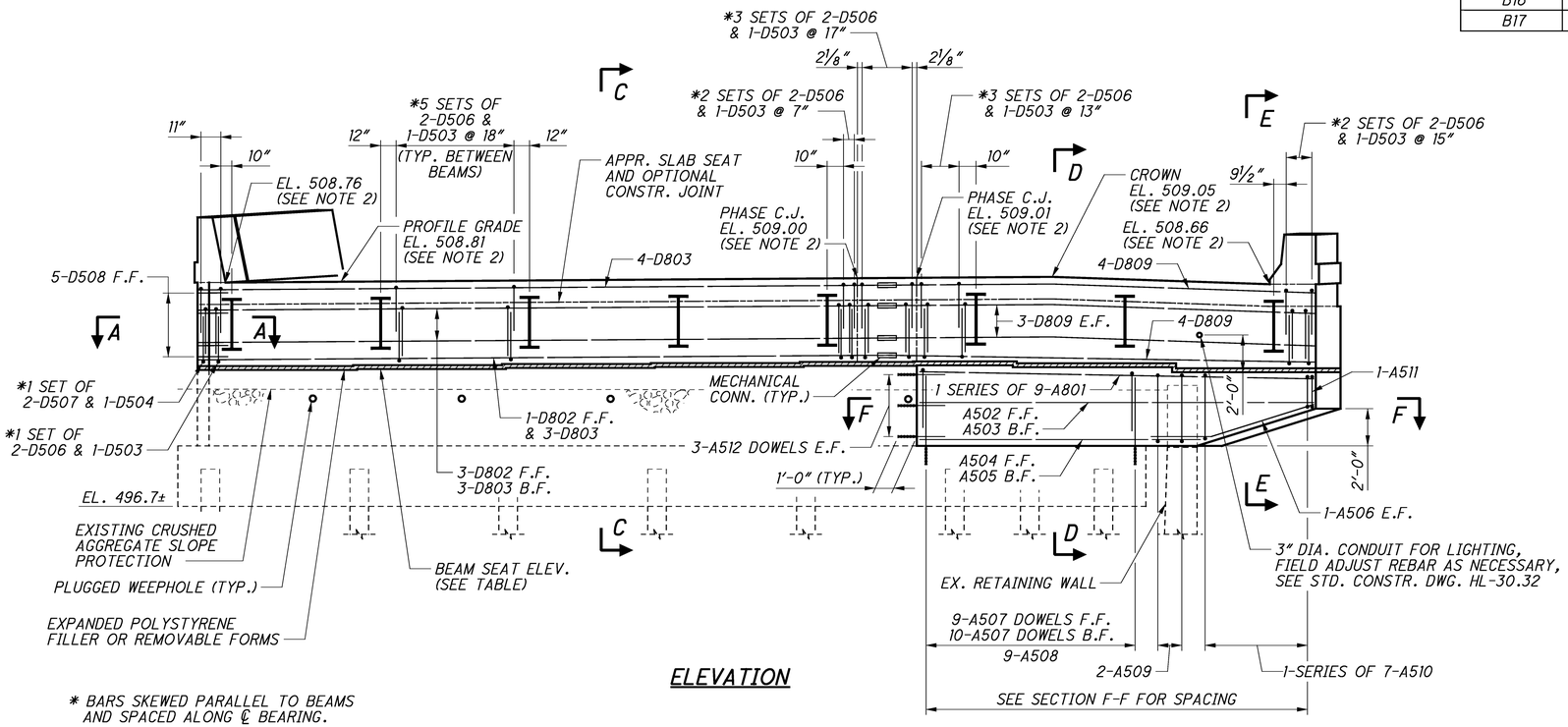


SECTION A-A

BEAM SEAT ELEVATIONS	
B10	503.99±
B11	504.04±
B12	504.10±
B13	504.15±
B14	504.21±
B15	504.24
B16	504.14
B17	503.87

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

1. FOR SECTION C-C, D-D, E-E, AND F-F SEE SHEET 24/50 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTIONS C-C, D-D, E-E.
3. FOR WINGWALL ELEVATION, SECTIONS AND VIEW G-G SEE SHEET 23/50 .
4. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
5. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE 11/12/10
REVIEWED MSL
STRUCTURE FILE NUMBER 3102882
DRAWN SSM
REVISED
DESIGNED MTN
CHECKED SSM

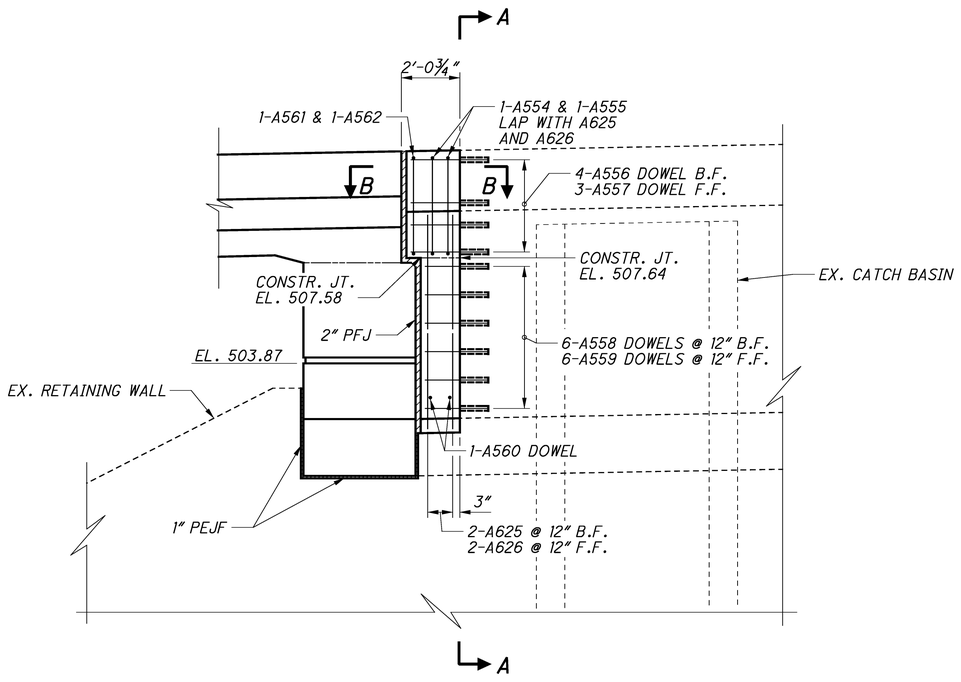
FORWARD ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

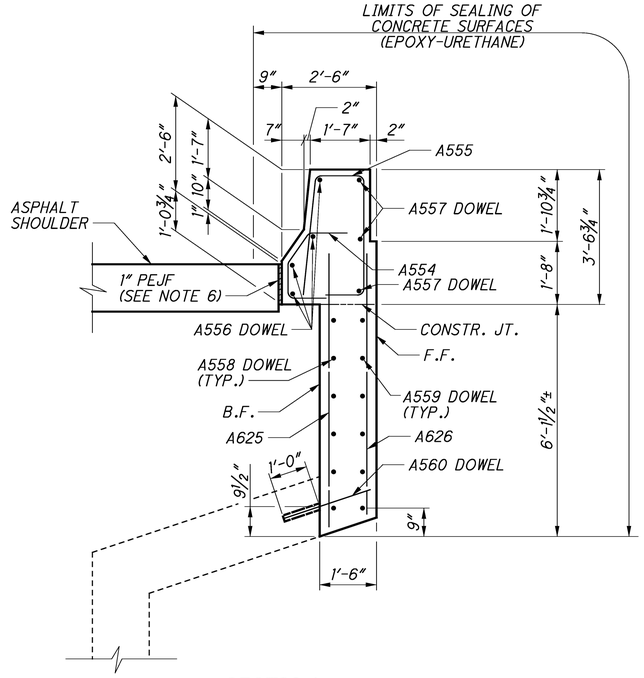
22 / 50

294 / 442

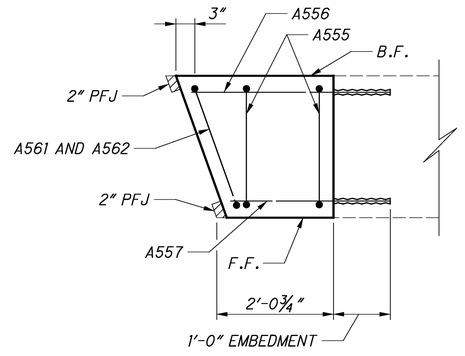
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAF001.dgn 11/10/2010 11:37:45 AM mtreihleisel



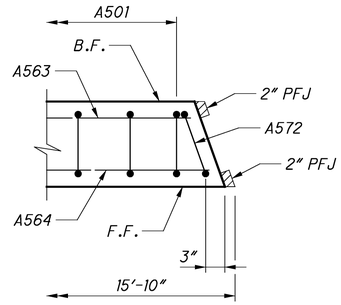
VIEW G-G



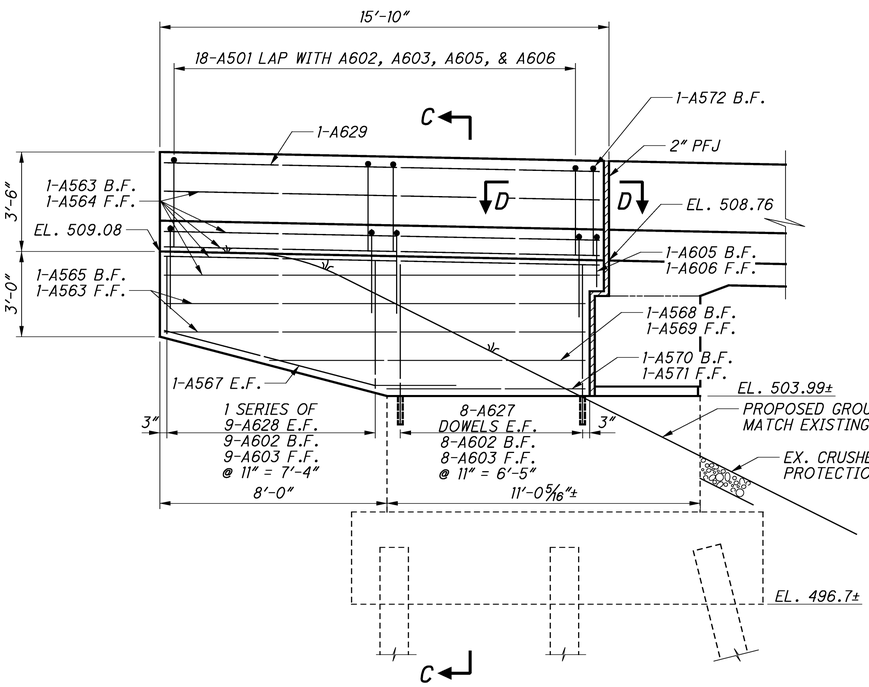
SECTION A-A



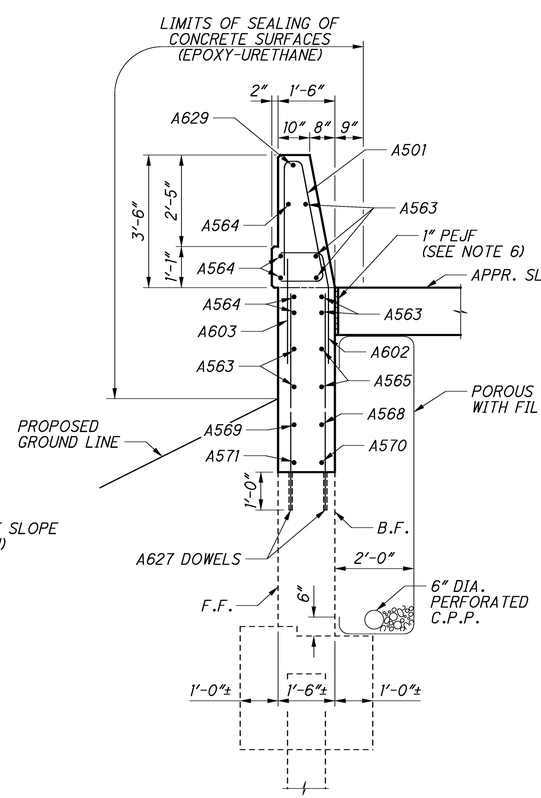
SECTION B-B



SECTION D-D



WINGWALL G ELEVATION



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2" CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
3. FOR FORWARD ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 22/50.
4. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1" PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 22/50.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

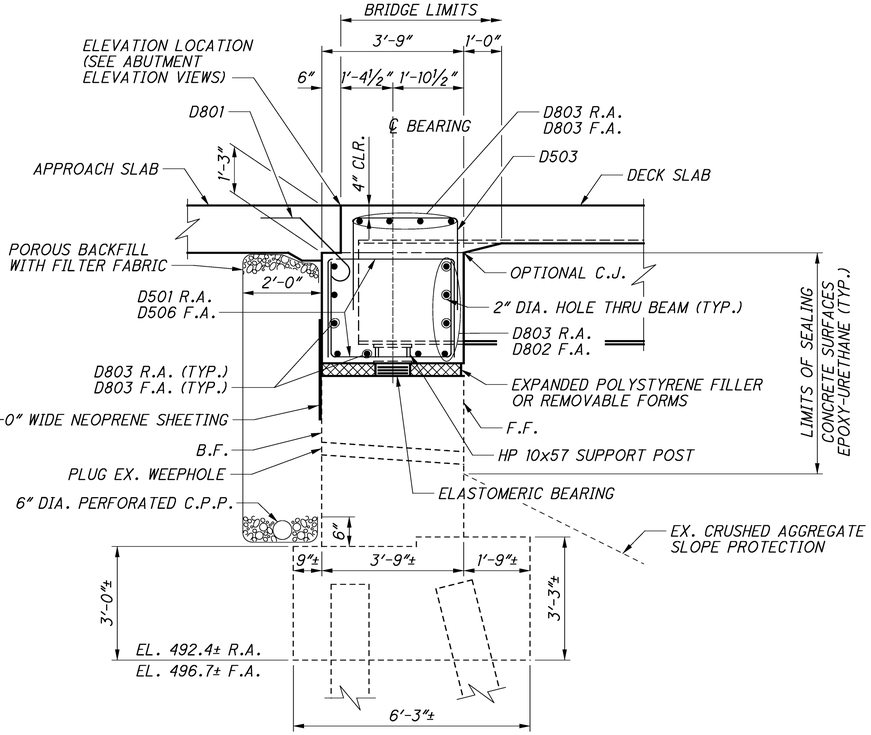
DESIGNED MTN | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102882

FORWARD ABUTMENT WINGWALL DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

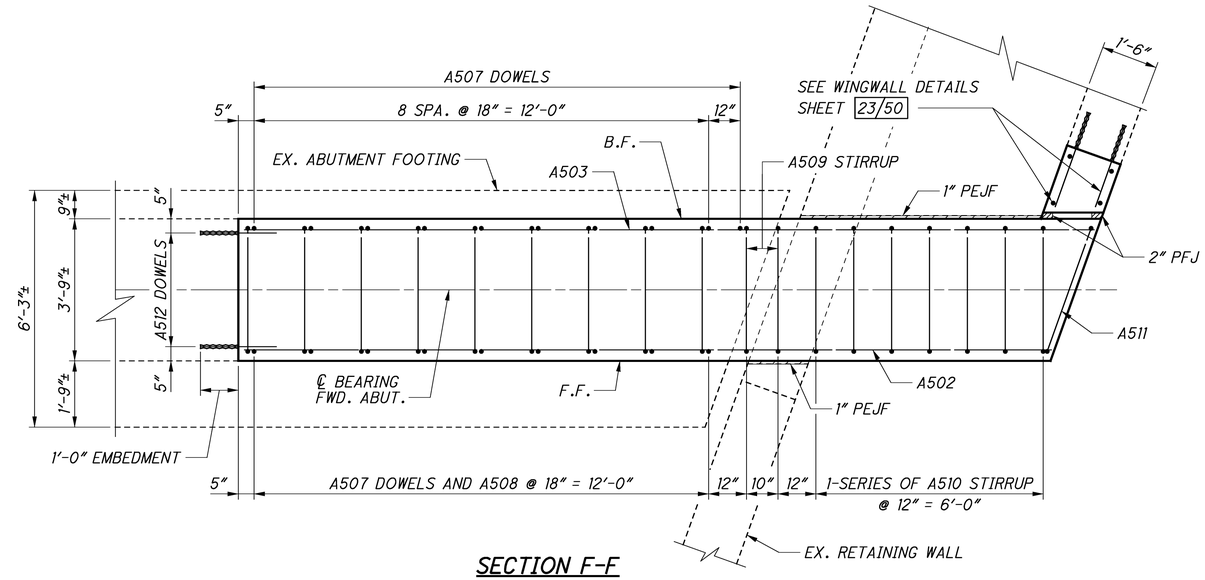
HAM-50-19.03
PID No. 75736

SHEET 23/50
295/442

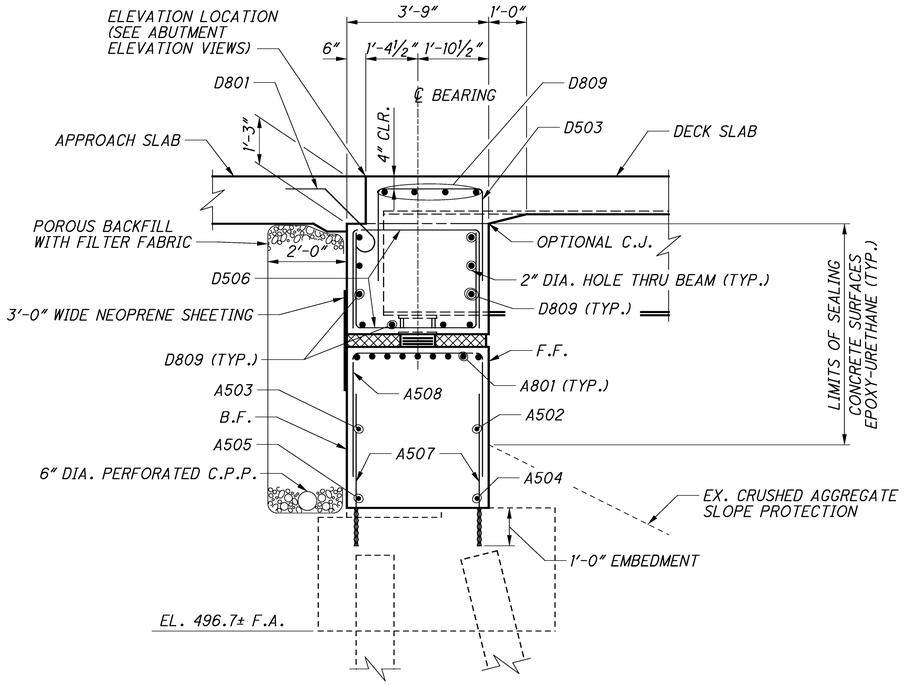
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAF003.dgn 11/10/2010 11:37:46 AM mtneiheisel



SECTION C-C

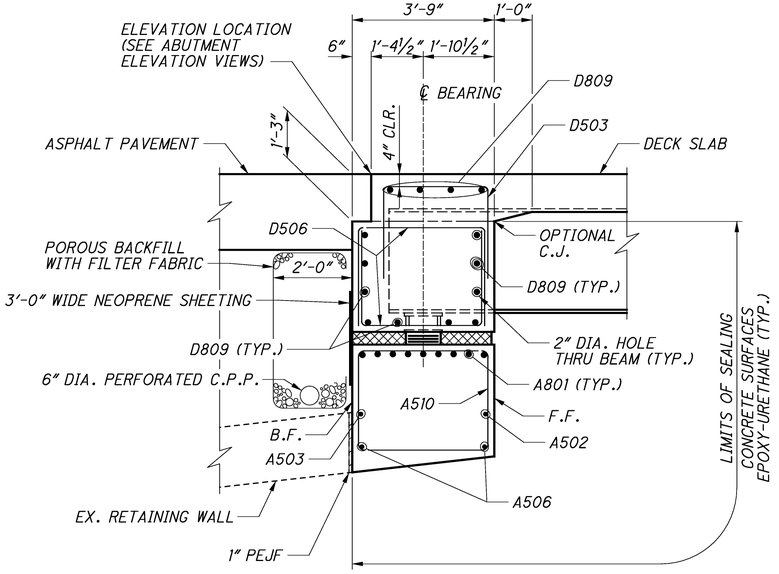


SECTION F-F



SECTION D-D

FOR DETAILS NOT SHOWN SEE SECTION C-C



SECTION E-E

FOR DETAILS NOT SHOWN SEE SECTION C-C

LEGEND:

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR REAR AND FORWARD ABUTMENT/DIAPHRAGM PLAN AND ELEVATIONS, SEE SHEETS 20/50 AND 22/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102882

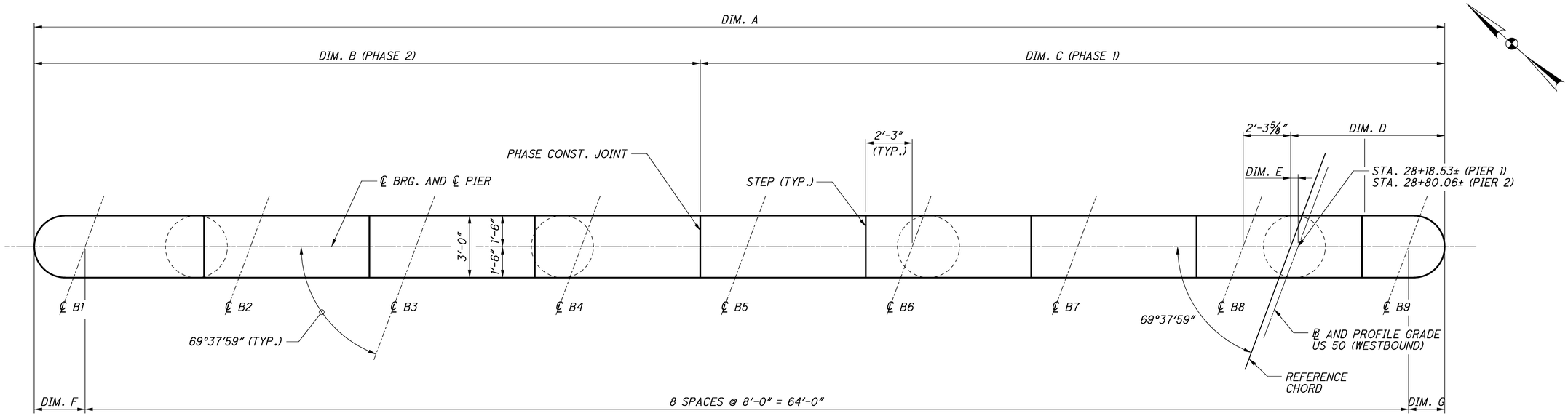
ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

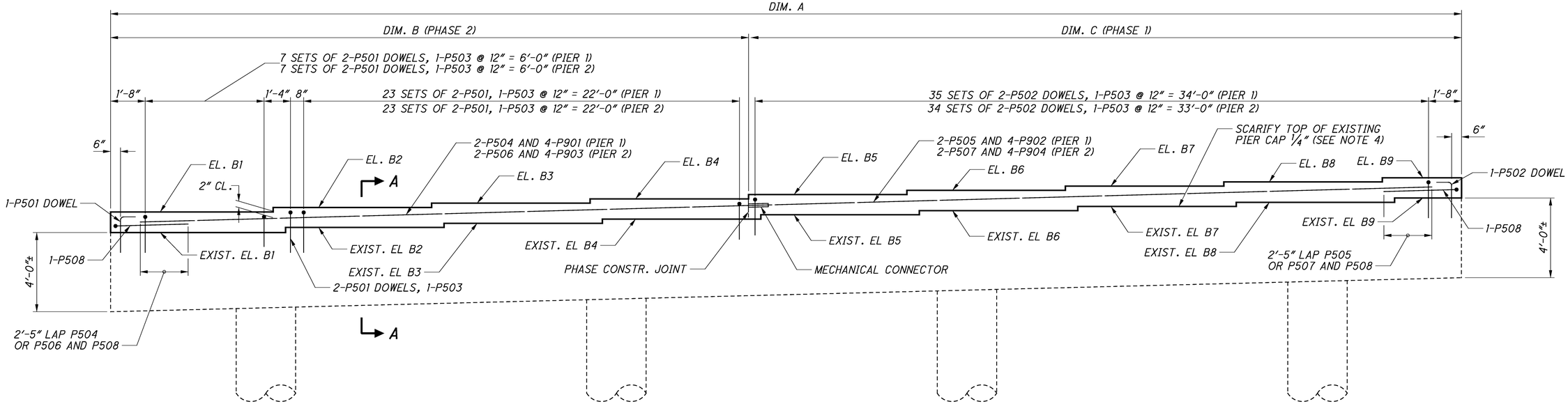
24/50

296/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAF002.dgn 11/10/2010 11:37:48 AM mtneiheisel



PLAN



ELEVATION

DIMENSIONS		
	PIER 1	PIER 2
DIM. A	68′-2½″±	67′-9½″±
DIM. B	32′-2 ½″±	31′-9 ½″±
DIM. C	36′-0″±	36′-0″±
DIM. D	7′-5⅜″±	7′-5⅝″±
DIM. E	4⅝″	4¼″
DIM. F	2′-5½″±	2′-0½″±
DIM. G	1′-9″±	1′-9″±

PIER CAP ELEVATIONS				
	PIER 1		PIER 2	
	EXISTING	PROPOSED	EXISTING	PROPOSED
B1	498.55±	499.41	500.57±	501.44
B2	498.81±	499.81	500.80±	501.83
B3	499.02±	500.03	500.99±	502.02
B4	499.23±	500.25	501.19±	502.22
B5	499.45±	500.47	501.40±	502.41
B6	499.66±	500.68	501.58±	502.61
B7	499.87±	500.90	501.78±	502.80
B8	500.08±	501.11	501.96±	502.99
B9	500.30±	501.32	502.14±	503.18

NOTES:

1. FOR SECTION A-A, SEE SHEET 26/50 .
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
3. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50 .
4. SCARIFY THE EXISTING SEAT AREA TO A DEPTH OF ¼″. INCLUDE WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN.
5. SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102874

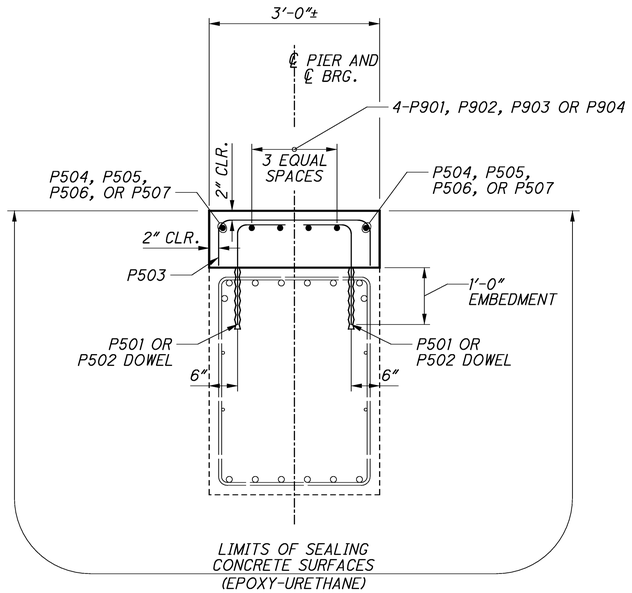
PIER DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

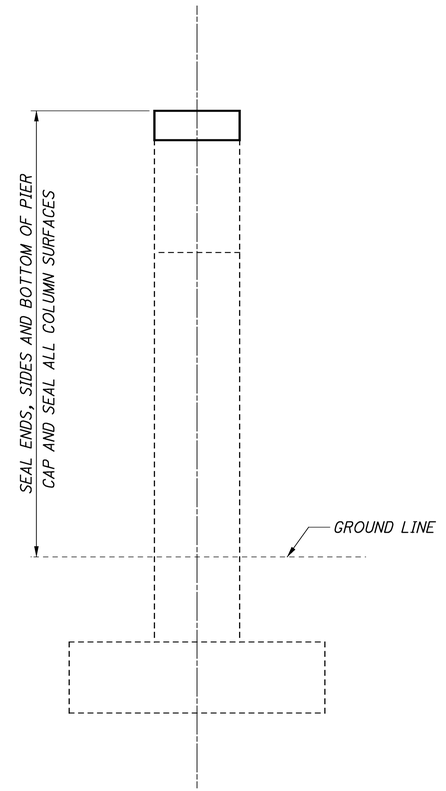
25/50

297/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LPI001.dgn 11/10/2010 11:37:50 AM mtneiheisel



SECTION A-A



LIMITS OF SEALING CONCRETE SURFACES ON PIERS (EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 25/50 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

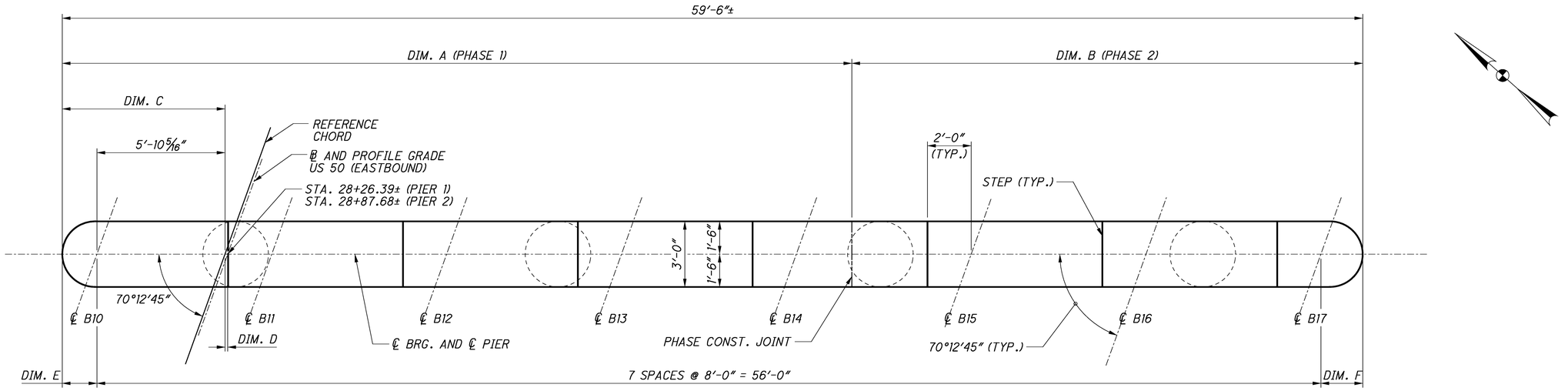
PIER DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

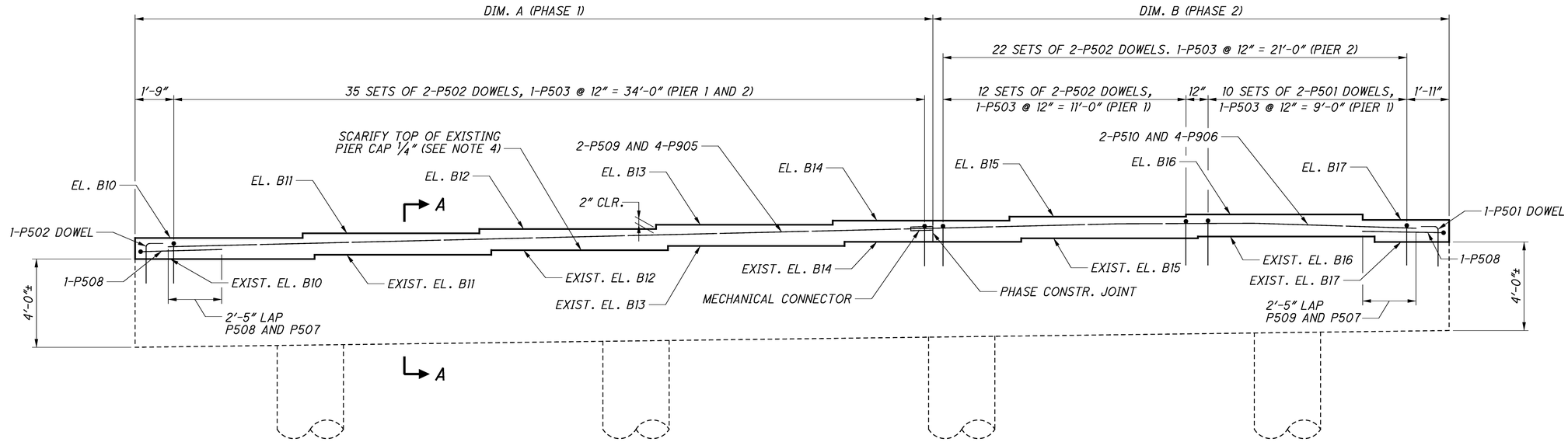
26/50

298/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LPI002.dgn 11/10/2010 11:37:51 AM mtneiheisel



PLAN



ELEVATION

DIMENSIONS		
	PIER 1	PIER 2
DIM. A	36'-1 1/2"±	36'-4"±
DIM. B	23'-4 1/2"±	23'-2"±
DIM. C	7'-5 3/8"±	7'-7 3/8"±
DIM. D	1 1/2"	1 3/16"
DIM. E	1'-7"±	1'-9"±
DIM. F	1'-11"±	1'-9"±

PIER CAP ELEVATIONS				
	PIER 1		PIER 2	
	EXISTING	PROPOSED	EXISTING	PROPOSED
B10	500.75±	501.70	502.57±	503.63
B11	500.94±	501.91	502.75±	503.75
B12	501.15±	502.11	502.85±	503.87
B13	501.34±	502.30	502.96±	503.98
B14	501.53±	502.49	503.06±	504.09
B15	501.69±	502.66	503.17±	504.18
B16	501.77±	502.65	503.14±	504.11
B17	501.52±	502.41	502.87±	503.85

NOTES:

1. FOR SECTION A-A, SEE SHEET 28/50 .
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50 .
3. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50 .
4. SCARIFY THE EXISTING SEAT AREA TO A DEPTH OF 1/4". INCLUDE WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN.
5. SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102882

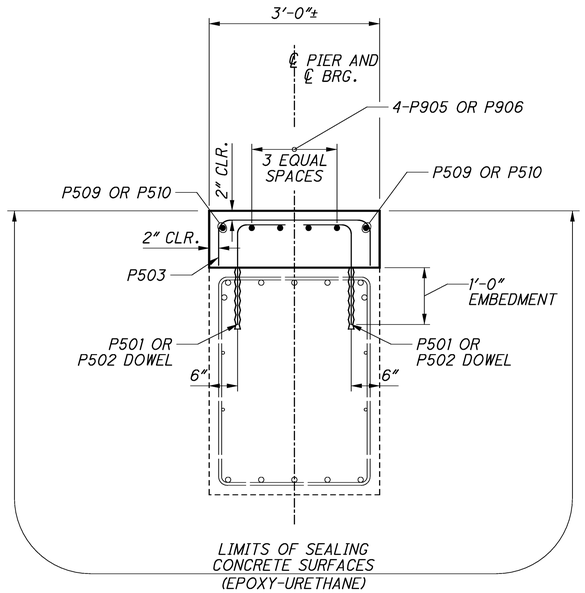
PIER DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

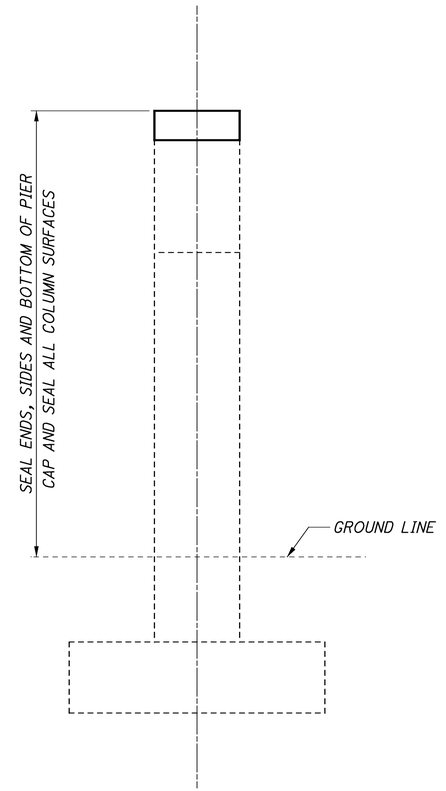
27/50

299/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RP1001.dgn 11/10/2010 11:37:53 AM mtneiheisel



SECTION A-A



LIMITS OF SEALING
CONCRETE SURFACES ON PIERS
(EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 27/50 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102882	

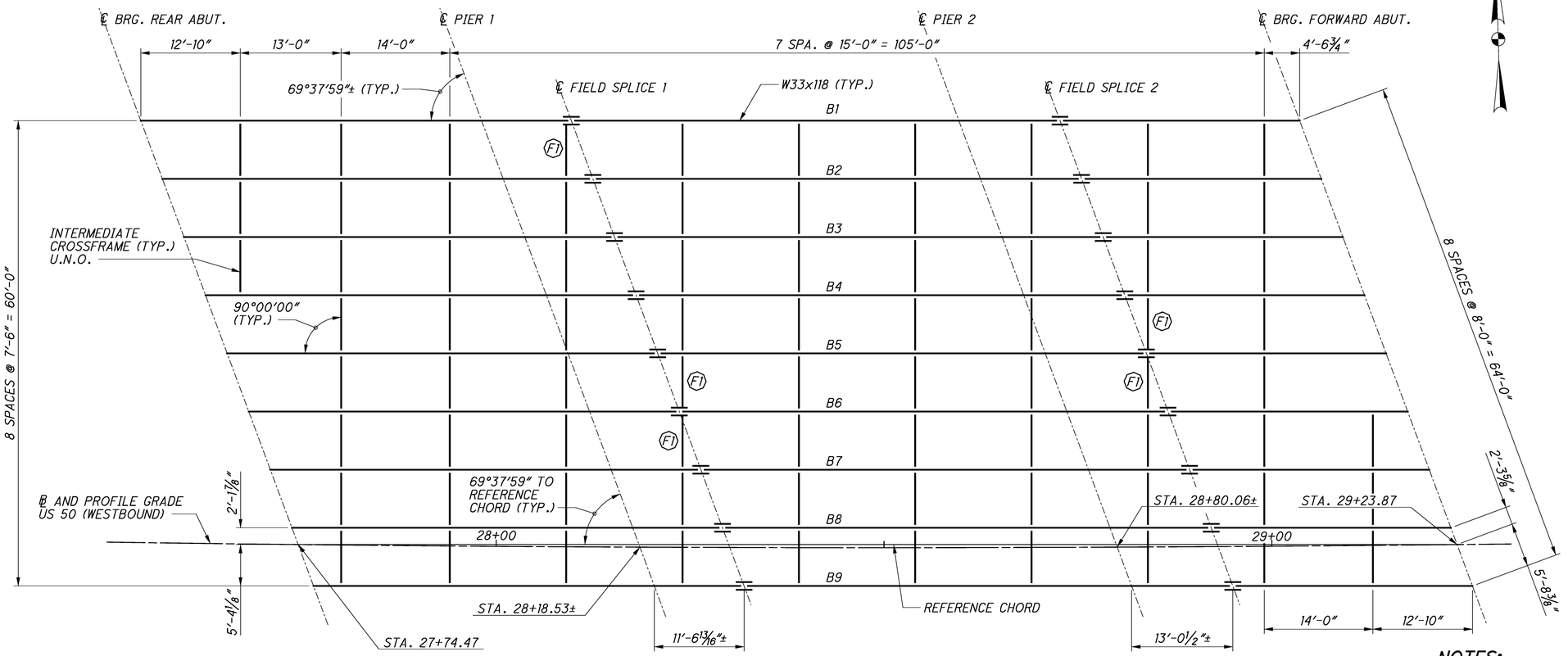
PIER DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

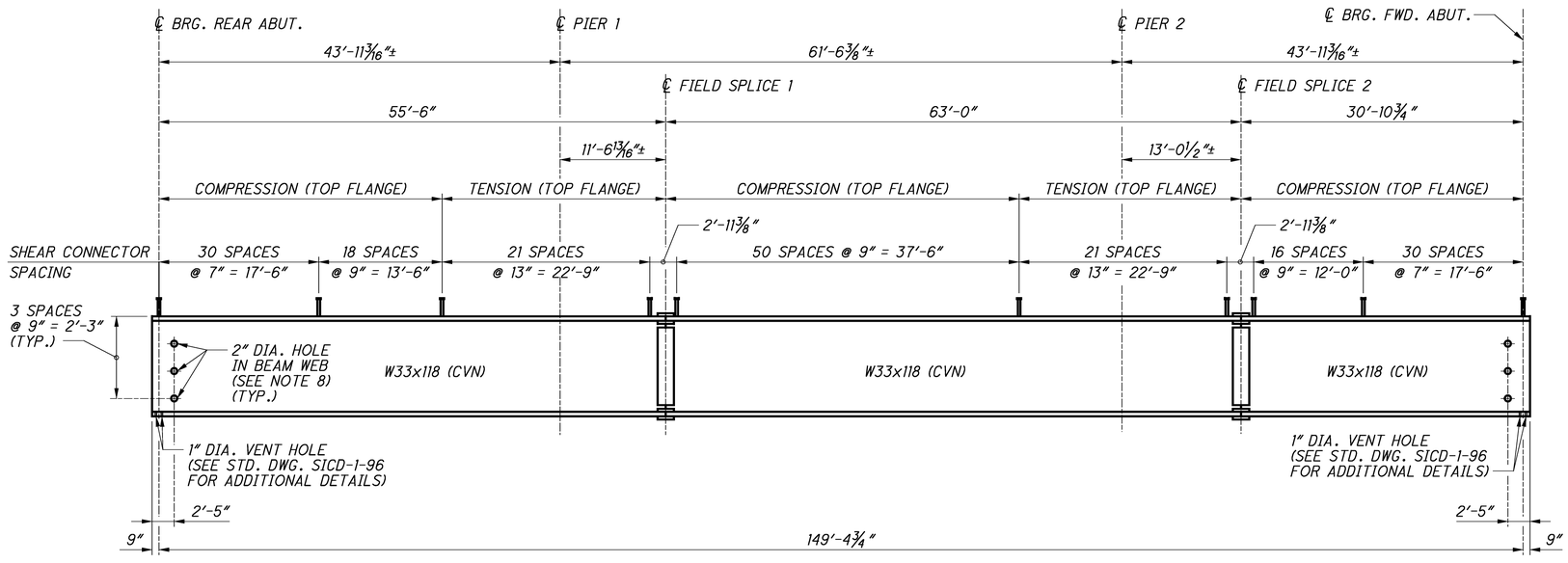
28/50

300
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RPI002.dgn 11/10/2010 11:37:54 AM mtneiheisel



FRAMING PLAN



BEAM ELEVATION

(DIMENSIONS SHOWN ARE MEASURED ALONG ℄ BEAM)

LEGEND:

U.N.O. = UNLESS NOTED OTHERWISE

(F1) DENOTES TYPE F1 CROSSFRAME

NOTES:

1. FOR GENERAL NOTES SEE SHEETS 4/50 AND 5/50 .
2. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 32/50 .
3. FOR FIELD SPLICE DETAIL, SEE SHEET 31/50 .
4. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 31/50 .
5. INTERMEDIATE CROSSFRAMES BETWEEN BEAMS B4 AND B5 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
6. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
7. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR 5/16" FOR GREATER THAN ¾" THICK.
8. DRILLING OF 2" DIA. HOLES IN BEAM WEB AND 1" DIA. VENT HOLES IN BOTTOM FLANGE SHALL BE INCLUDED WITH ITEM 513 FOR PAYMENT.
9. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
10. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102874	

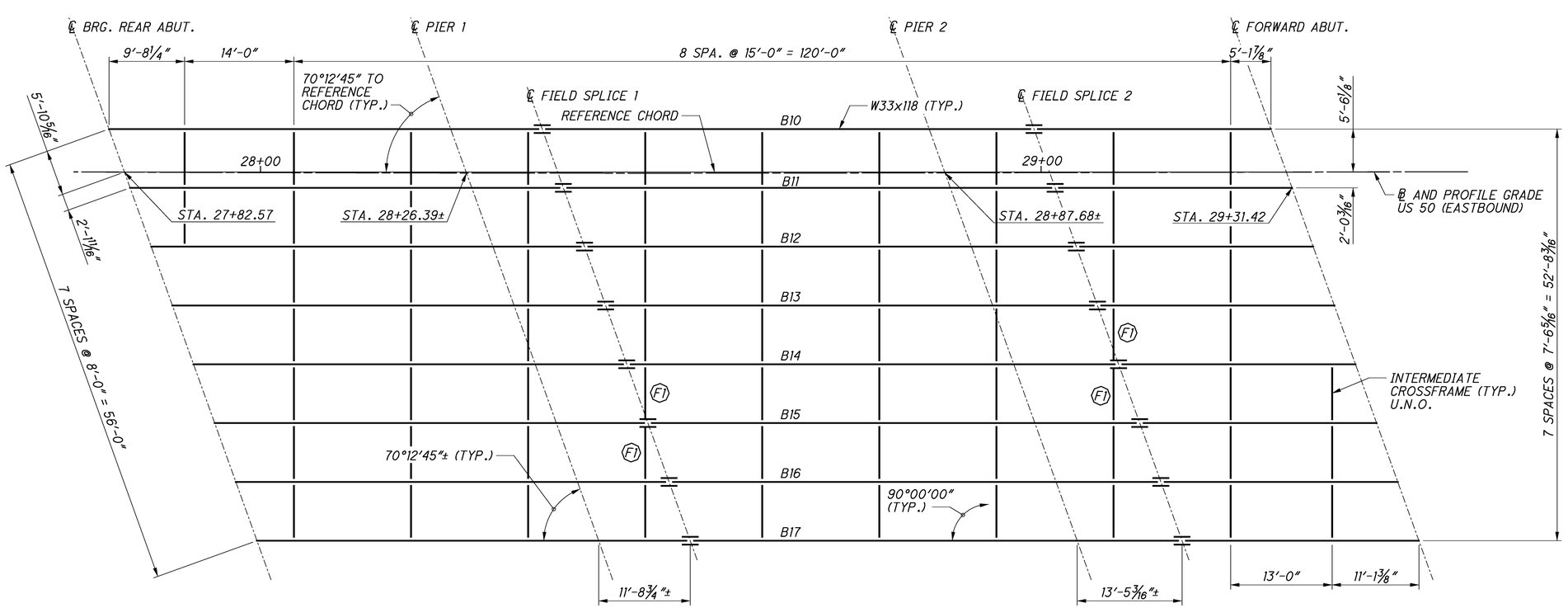
FRAMING PLAN AND BEAM ELEVATION (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

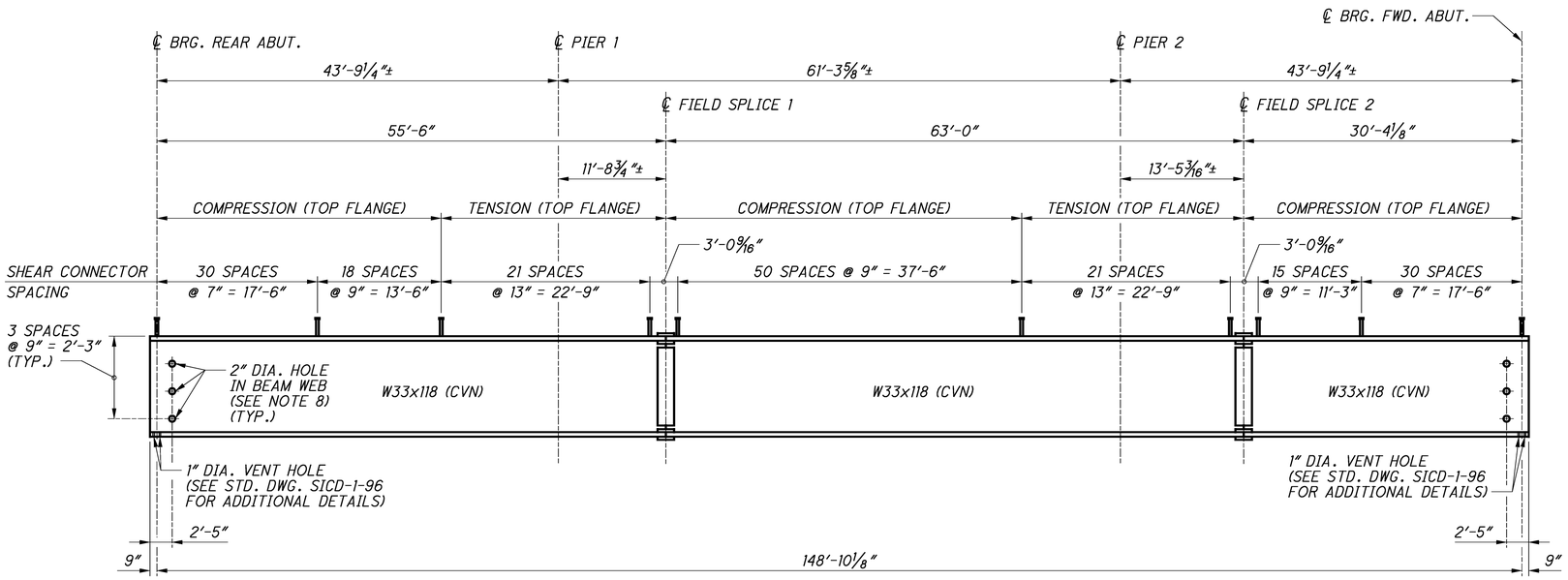
29/50

301/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD001.dgn 11/10/2010 11:37:56 AM mtreitheisel



FRAMING PLAN



BEAM ELEVATION

(DIMENSIONS SHOWN ARE MEASURED ALONG ℄ BEAM)

LEGEND:

U.N.O. = UNLESS NOTED OTHERWISE

(F1) DENOTES TYPE F1 CROSSFRAME

NOTES:

1. FOR GENERAL NOTES SEE SHEETS 4/50 AND 5/50 .
2. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 33/50 .
3. FOR FIELD SPLICE DETAIL, SEE SHEET 31/50 .
4. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 31/50 .
5. INTERMEDIATE CROSSFRAMES BETWEEN BEAMS B14 AND B15 (UNDER THE CLOSURE POUR) SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS BUT PRIOR TO CLOSURE POUR.
6. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
7. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR ⅝" FOR GREATER THAN ¾" THICK.
8. DRILLING OF 2" DIA. HOLES IN BEAM WEB AND 1" DIA. VENT HOLES IN BOTTOM FLANGE SHALL BE INCLUDED WITH ITEM 513 FOR PAYMENT.
9. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
10. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102882	

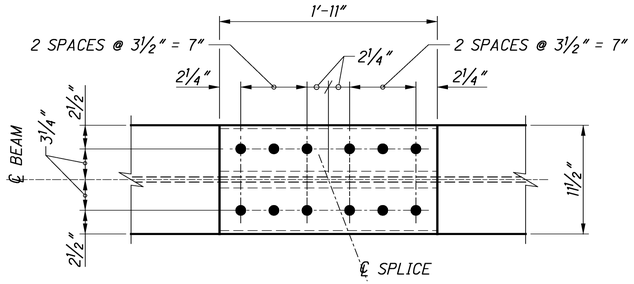
FRAMING PLAN AND BEAM ELEVATION (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

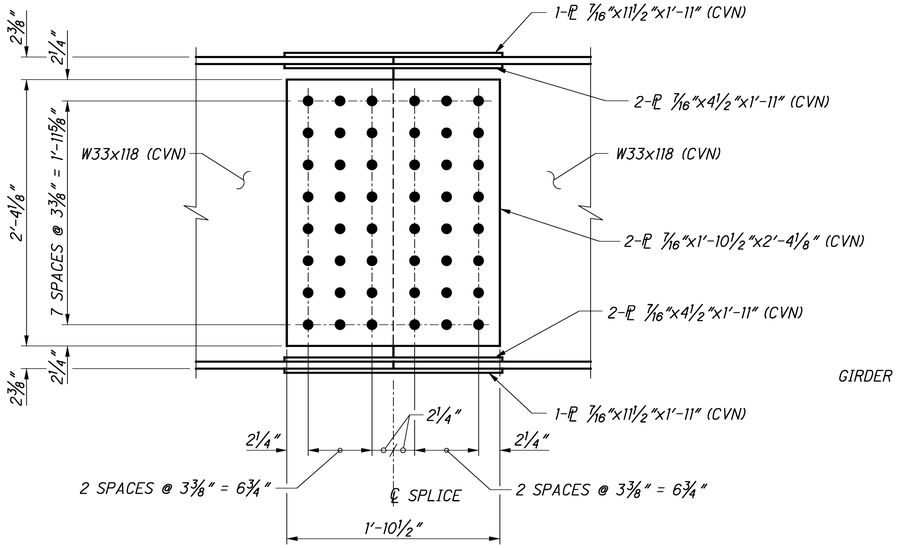
30/50

302/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD002.dgn 11/10/2010 11:37:57 AM mtneiheisel

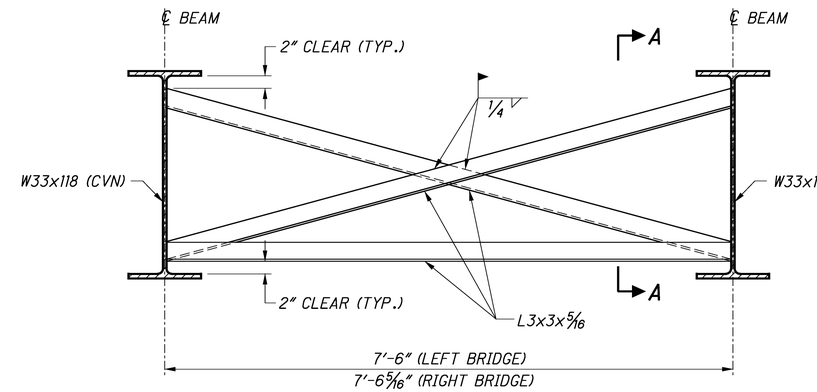


PLAN - FLANGE SPLICE

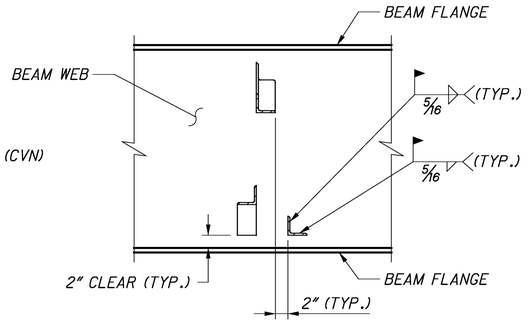


ELEVATION - WEB SPLICE

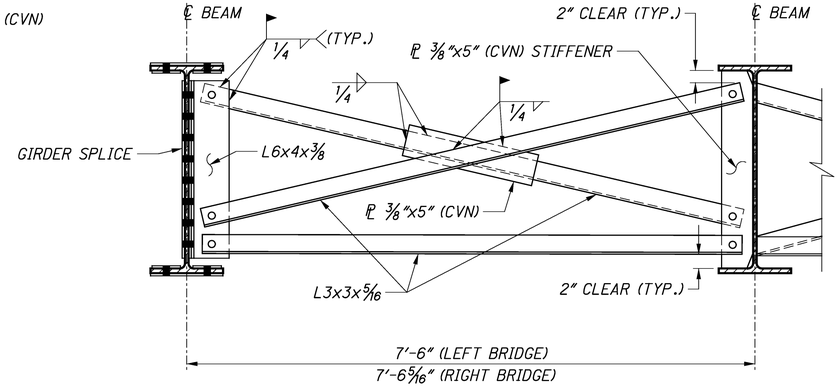
FEILD SPLICE DETAILS



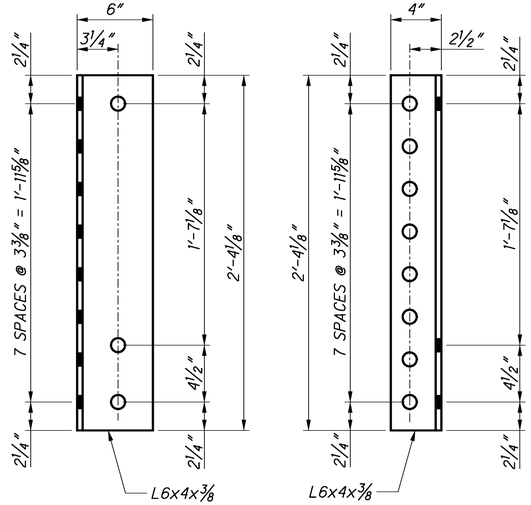
INTERMEDIATE CROSSFRAME DETAIL



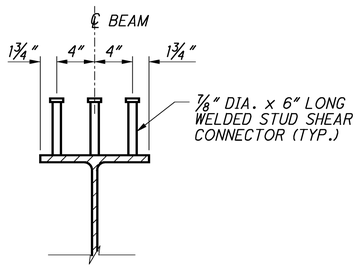
SECTION A-A



INTERMEDIATE CROSSFRAME TYPE F1

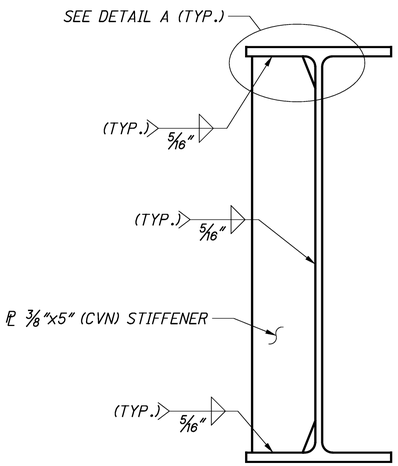


ANGLE DETAIL FOR TYPE F1 CROSSFRAME

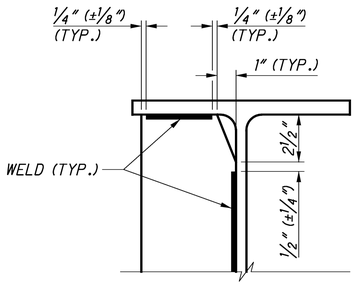


SHEAR CONNECTOR DETAIL

(TYP. ALL GIRDERS)



INTERMEDIATE STIFFENER DETAIL



DETAIL A

NOTES:

1. HIGH STRENGTH BOLTS SHALL BE 1⅛" DIAMETER A325 TYPE 1, GALVANIZED.
2. CVN: WHERE A SHAPE OR A PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. ALL CROSSFRAMES SHALL BE TYPE 1 INTERMEDIATE WELDED CROSSFRAMES UNLESS NOTED OTHERWISE. FOR ADDITIONAL CROSSFRAME DETAILS AND NOTES, SEE STD. DWG. GSD-1-96 SHEET 1 OF 3.
4. STUD SHEAR CONNECTORS TO BE WELDED PER ITEM 513.22.
5. FOR ADDITIONAL FRAMING DETAILS AND NOTES, SEE SHEETS 29/50 AND 30/50.

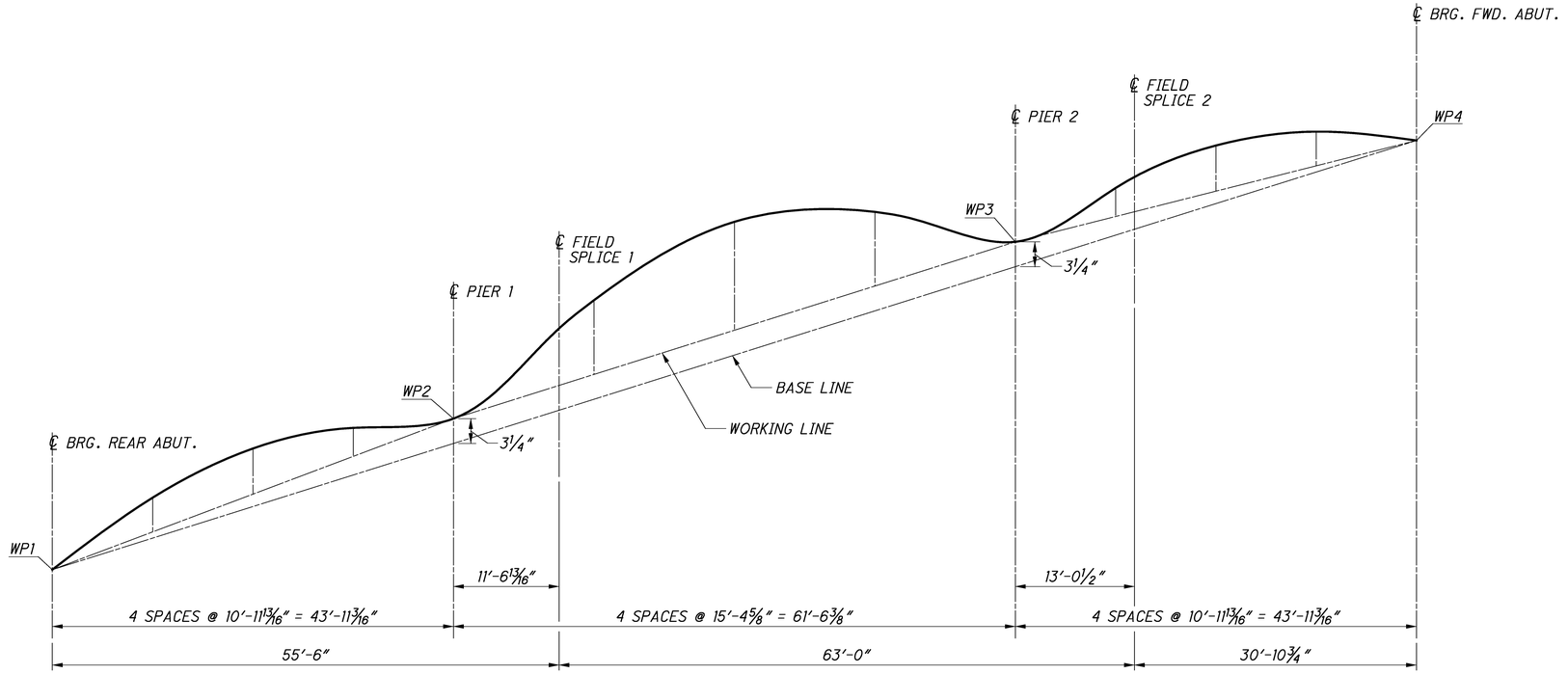
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		31028[illegible] (L) 31028[illegible] (R)	

FRAMING DETAILS (LEFT AND RIGHT BRIDGE)
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD003.dgn 11/10/2010 11:37:58 AM mtneiheisel



CAMBER DIAGRAM

DEFLECTION AND CAMBER TABLE (VALUE INCHES)																
HAM-50-1954L BEAMS 1 THRU 9	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	-1/16	-1/16	-1/16	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/8	-1/8	-1/16	0	-3/16	-1/4	-7/16	-1/4	0	-1/16	-1/16	-1/8	-1/8	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	-1/16	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-1/8	-1/8	-1/16	0	-3/16	-5/16	-9/16	-5/16	0	-1/16	-1/16	-1/8	-1/8	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/8	1/8	1/16	0	3/16	5/16	9/16	5/16	0	1/16	1/16	1/8	1/8	0
VERTICAL CURVE CORRECTION	0	1/4	5/16	1/4	0	7/16	1/2	11/16	1/2	0	1/4	5/16	5/16	1/4	0
TOTAL REQUIRED CAMBER	0	3/8	7/16	5/16	0	5/8	13/16	1 1/4	13/16	0	5/16	3/8	7/16	3/8	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP4.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION, (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

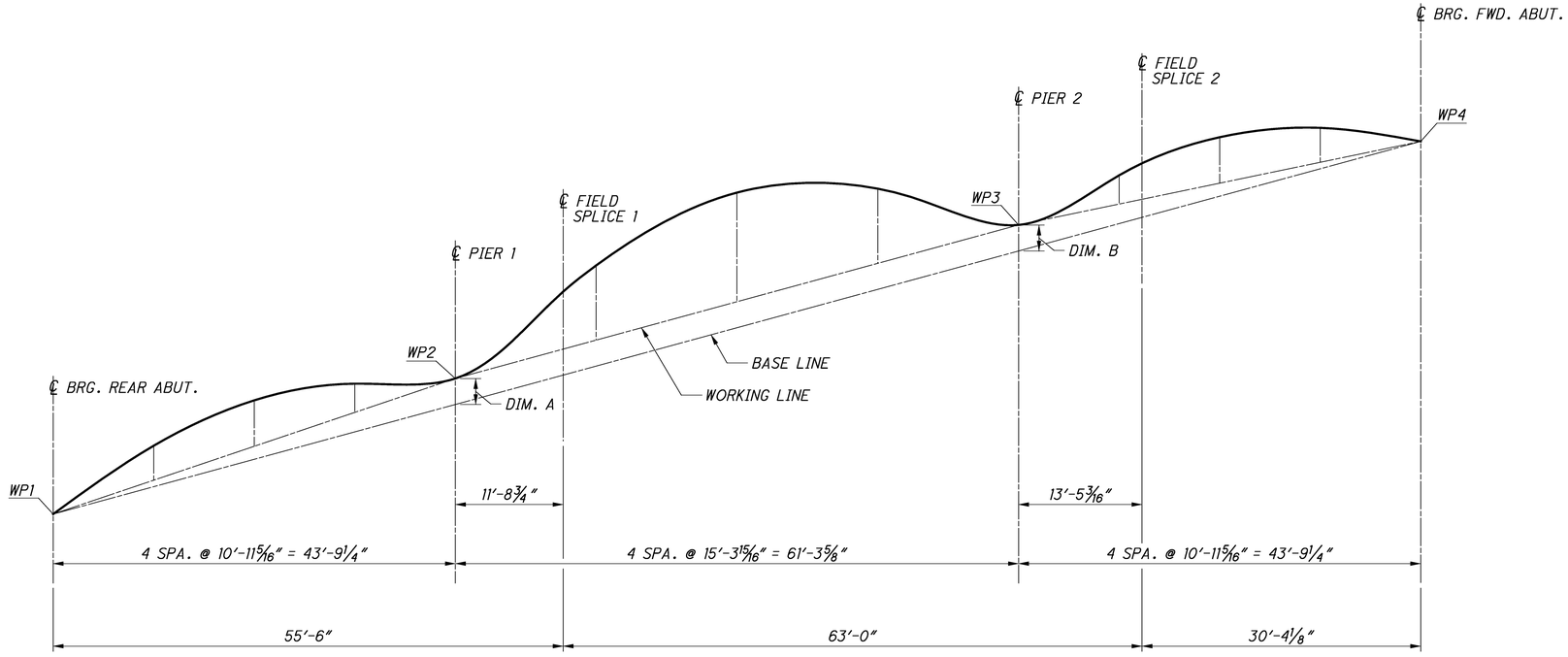
DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

DEFLECTION AND CAMBER TABLES (LEFT BRIDGE)

HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD004.dgn 11/10/2010 11:37:59 AM mtneiheisel



CAMBER DIAGRAM

WORK POINT DIMENSIONS		
MEMBER	DIM. A	DIM. B
BEAM 10	3⅜″	3⁷⁄₁₆″
BEAM 11	3⅜″	3⁷⁄₁₆″
BEAM 12	3⅜″	3⅜″
BEAM 13	3⅜″	3⅜″
BEAM 14	3⅜″	3⅜″
BEAM 15	3⅜″	3⅜″
BEAM 16	3⁹⁄₁₆″	3⁵⁄₁₆″
BEAM 17	3½″	3¼″

DEFLECTION AND CAMBER TABLE (VALUE INCHES)																
HAM-50-1954R BEAMS 10 THRU 17	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	-1⁄16	-1⁄16	-1⁄16	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-⅛	-⅛	-1⁄16	0	-3⁄16	-¼	-7⁄16	-¼	0	-1⁄16	-1⁄16	-⅛	-⅛	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	-1⁄16	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-⅛	-⅛	-1⁄16	0	-3⁄16	-5⁄16	-9⁄16	-5⁄16	0	-1⁄16	-1⁄16	-⅛	-⅛	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	⅛	⅛	1⁄16	0	3⁄16	5⁄16	9⁄16	5⁄16	0	1⁄16	1⁄16	⅛	⅛	0
VERTICAL CURVE CORRECTION	0	¼	⅜	¼	0	7⁄16	½	11⁄16	½	0	¼	5⁄16	⅜	¼	0
TOTAL REQUIRED CAMBER	0	⅜	½	5⁄16	0	5⁄8	13⁄16	1 ¼	13⁄16	0	5⁄16	⅜	½	⅜	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP4.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION,
   (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

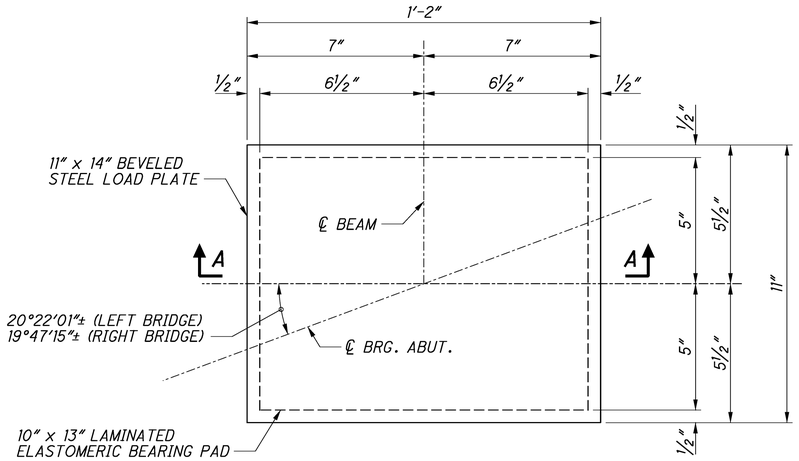
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

DEFLECTION AND CAMBER TABLES (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

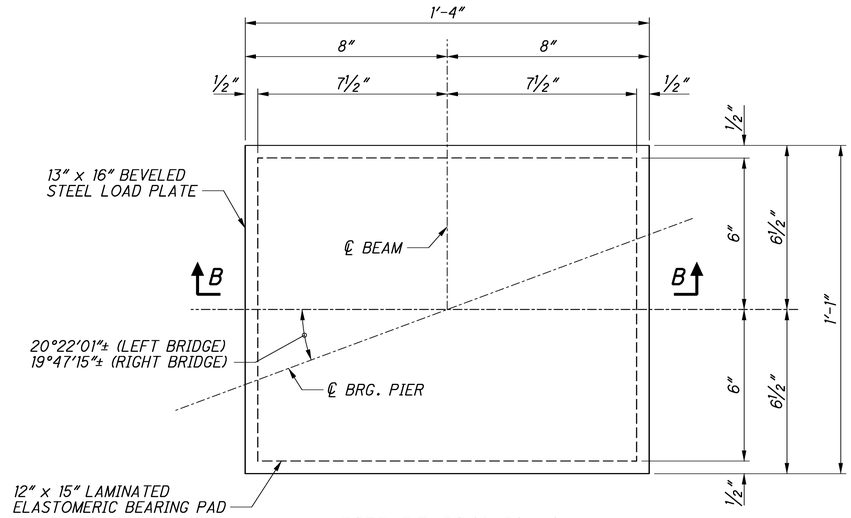
HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD005.dgn 11/10/2010 11:38:01 AM mtreihleisel



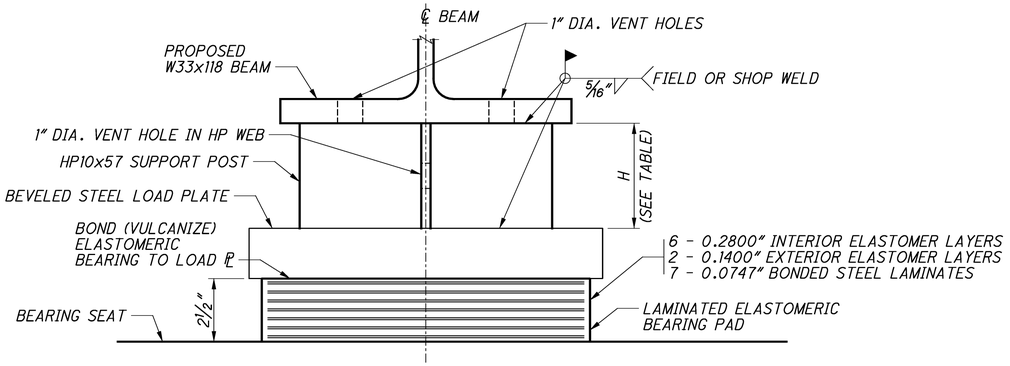
ABUTMENT BEARING PLAN

DEAD LOAD REACTION = 54.45 K
LIVE LOAD W/O IMPACT REACTION = 52.13 K
MAXIMUM DESIGN LOAD = 106.58 K

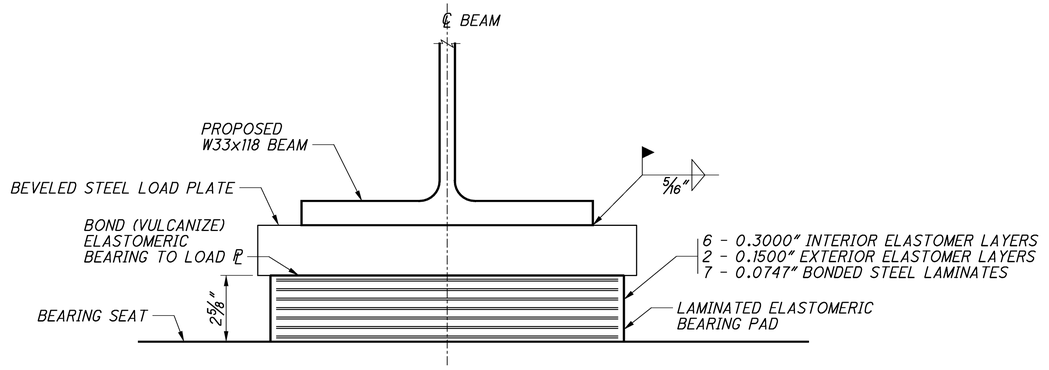


PIER BEARING PLAN

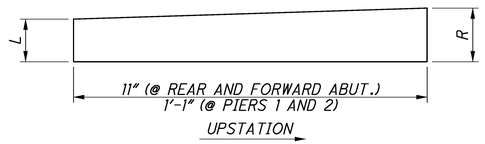
DEAD LOAD REACTION = 90.80 K
LIVE LOAD W/O IMPACT REACTION = 64.44 K
MAXIMUM DESIGN LOAD = 155.24 K



SECTION A-A



SECTION B-B



BEVELED LOAD PLATE ELEVATION

LOCATION	L	R
REAR ABUT.	1¾"	2 3/16"
PIER 1	2 1/16"	2½"
PIER 2	2 1/16"	2 3/16"
FWD. ABUT.	1¾"	2"

LEFT BRIDGE		
HP10x57 SUPPORT POST HEIGHT, H		
BEAM	REAR ABUT. H	FWD. ABUT. H
1	6⅜"	6½"
2	7⅛"	8¾"
3	8 1/16"	9"
4	8⅛"	8⅞"
5	7⅞"	8¾"
6	7 15/16"	8 13/16"
7	7 11/16"	8 15/16"
8	7 15/16"	8¾"
9	7 15/16"	9¼"

RIGHT BRIDGE		
HP10x57 SUPPORT POST HEIGHT, H		
BEAM	REAR ABUT. H	FWD. ABUT. H
10	7 1/16"	9 1/16"
11	7 1/16"	9¼"
12	7½"	9¼"
13	7⅝"	9¼"
14	7 9/16"	9⅛"
15	7¾"	9¼"
16	6⅞"	9⅛"
17	6¼"	9¼"

NOTES:

1. BEVELED STEEL LOAD PLATES AND HP10x57 SUPPORT POSTS SHALL BE ASTM A709 GRADE 50 STEEL AND SHALL HAVE SAME PROTECTIVE COATING AS MAIN STRUCTURAL STEEL.
2. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
3. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F ± 10°F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.
5. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
6. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, INCLUDING LOAD PLATES AND MISC. HARDWARE. PAYMENT WILL BE AT THE UNIT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102874 (L) 3102882 (R)

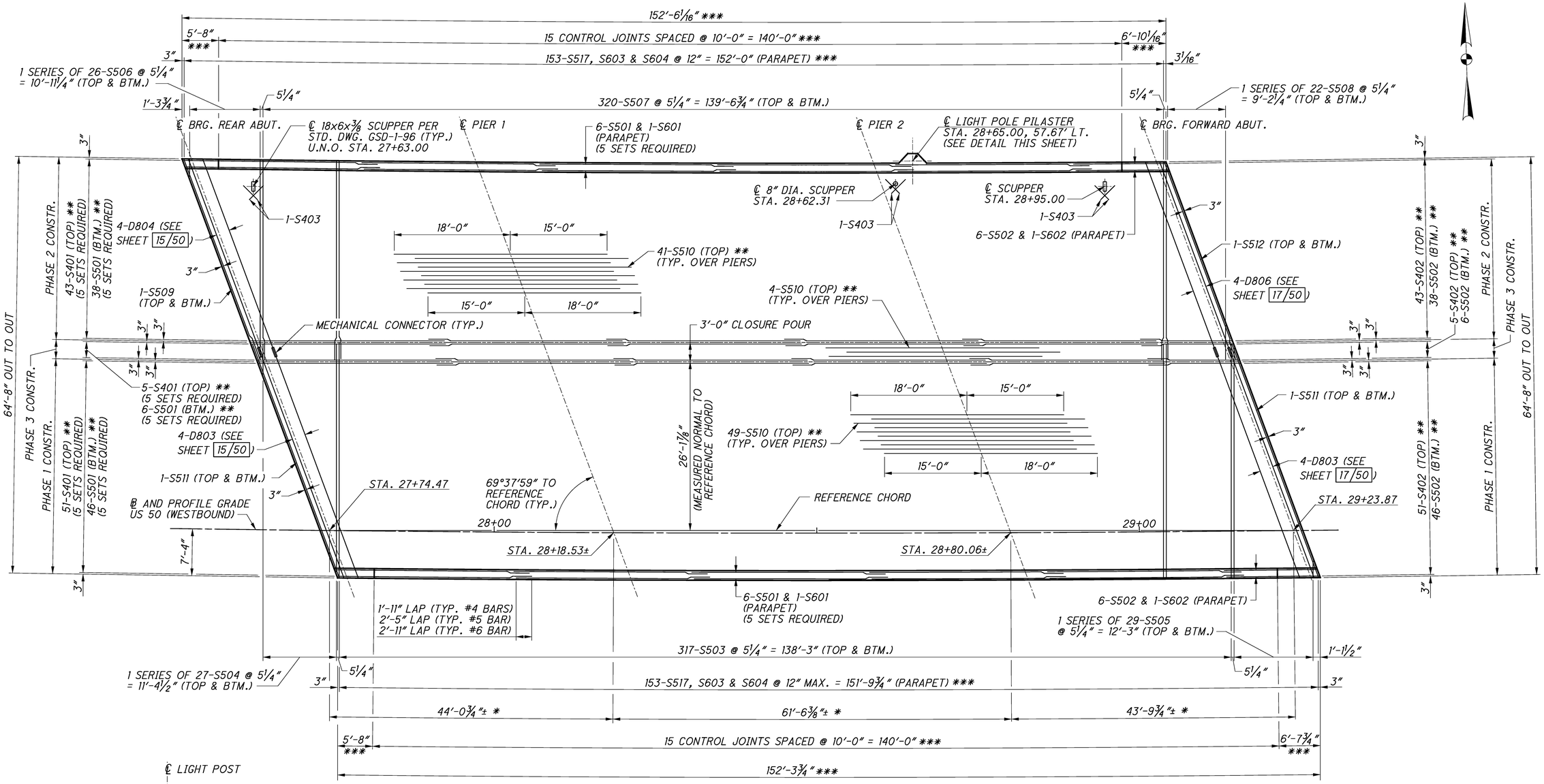
BEARING DETAILS (LEFT AND RIGHT BRIDGE)
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

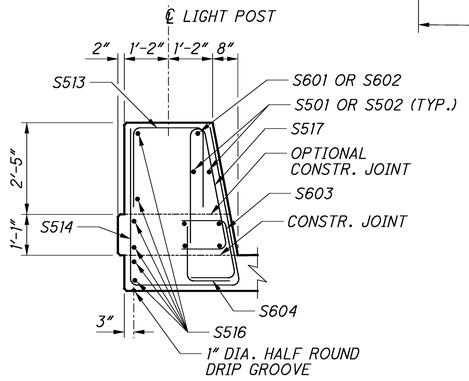
HAM-50-19.03
PID No. 75736

34/50

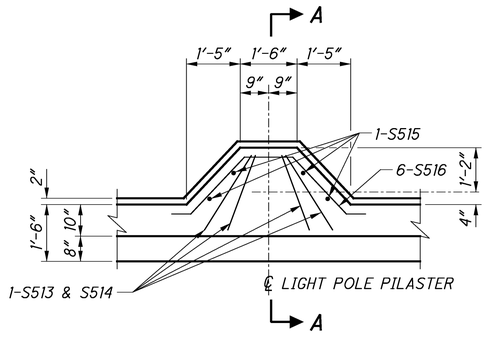
306/442

C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CBR001.dgn 11/10/2010 11:38:02 AM mtreiheisel





SECTION A-A



LIGHT POLE PILASTER DETAIL

FOR ADDITIONAL DETAILS SEE STANDARD CONSTRUCTION DRAWING HL-20.14

DECK PLAN

* MEASURED ALONG ℄ US 50 (WESTBOUND)
** SEE TRANSVERSE SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK

LEGEND

U.N.O. = UNLESS NOTED OTHERWISE

NOTES:

1. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR.
2. FOR TRANSVERSE SECTION, SEE SHEET 36/50 .
3. FOR REINFORCING STEEL LISTS, SEE SHEETS 47/50 AND 48/50.
4. FOR ADDITIONAL NOTES, SEE SHEET 36/50.
5. FOR END DIAPHRAGM DETAIL, SEE SHEET 15/50 AND 17/50 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

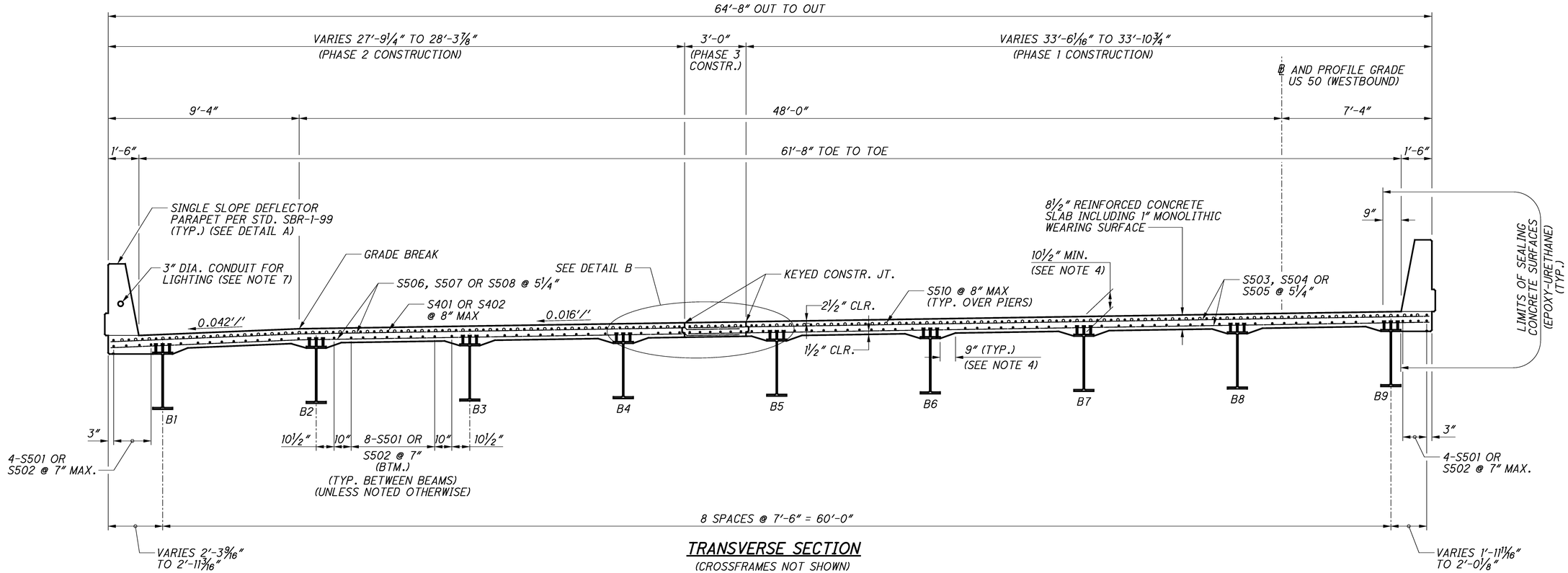
DECK PLAN (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

35/50

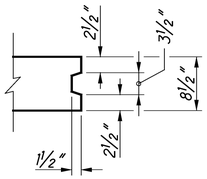
307/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LDP001.dgn 11/10/2010 11:38:03 AM mtneiheisel



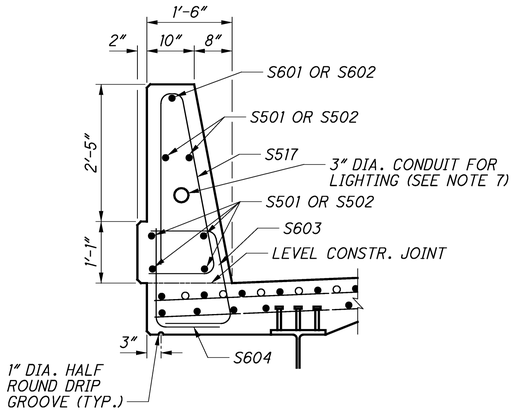
TRANSVERSE SECTION

(CROSSFRAMES NOT SHOWN)

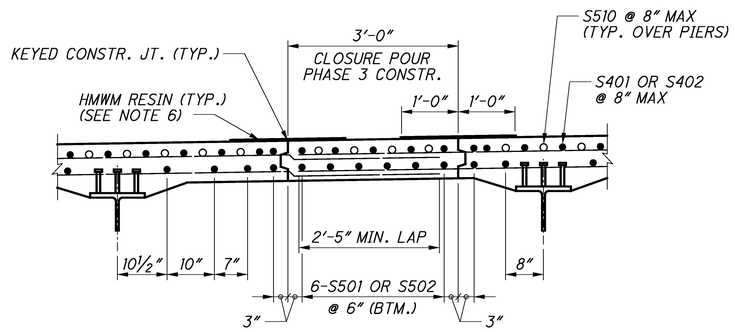


KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR MORE INFORMATION)



DETAIL A



DETAIL B

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 47/50 AND 48/50.
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 41/50 AND 42/50.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
5. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
6. 2′-0″ WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
7. PROPOSED 3″ DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2 CONCRETE, SUPERSTRUCTURE (PARAPET), AS PER PLAN.
8. THE USE OF STAY-IN-PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.

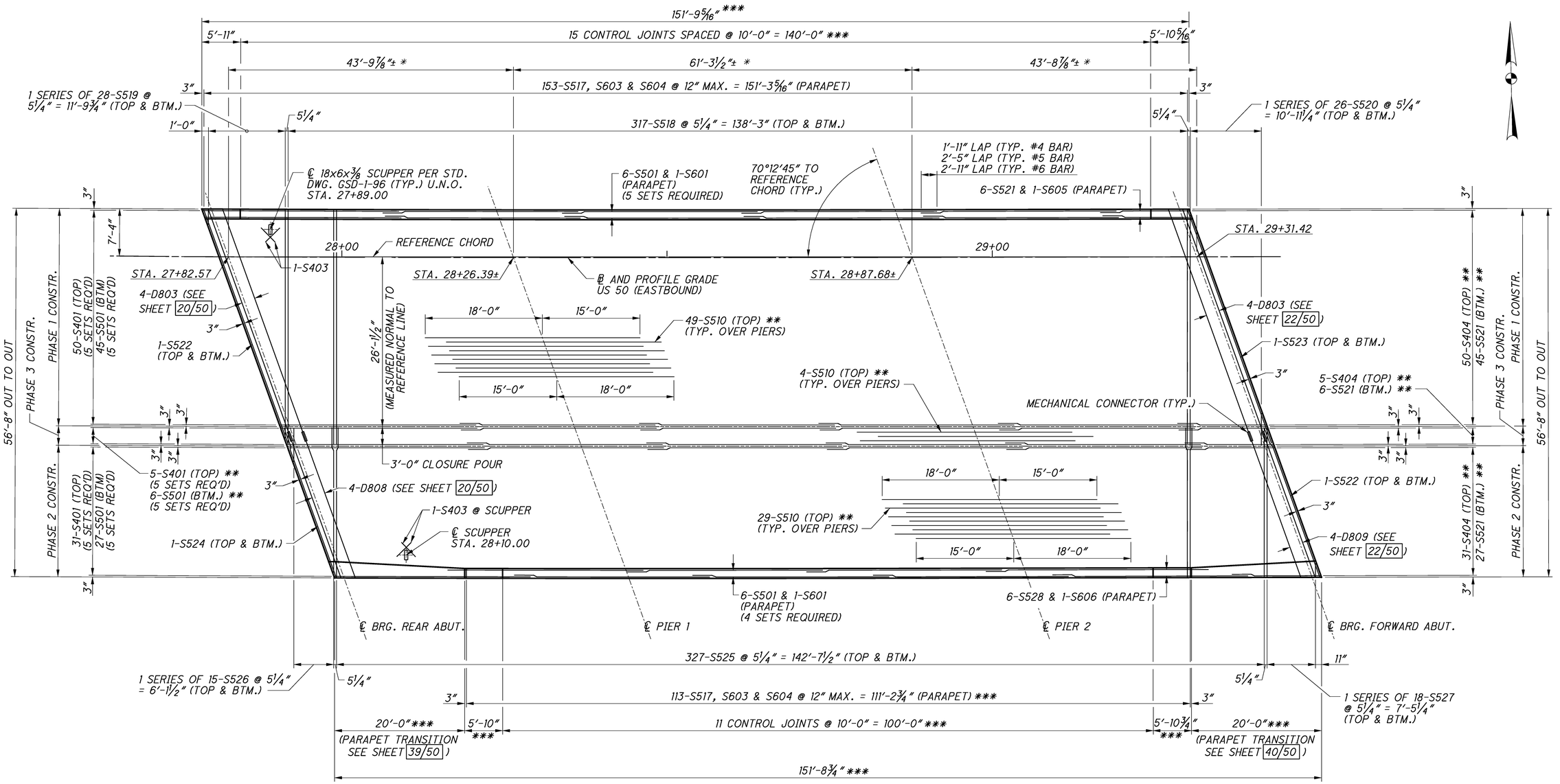
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

TRANSVERSE SECTION (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LTS001.dgn 11/10/2010 11:38:05 AM mtneiheisel



* MEASURED ALONG ℄ US 50 (EASTBOUND)
** SEE TYPICAL SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK

DECK PLAN

LEGEND

U.N.O. = UNLESS NOTED OTHERWISE

NOTES:

1. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR.
2. FOR TRANSVERSE SECTION, SEE SHEET 38/50.
3. FOR REINFORCING STEEL LISTS, SEE SHEETS 49/50 AND 50/50.
4. FOR ADDITIONAL NOTES, SEE SHEET 38/50.
5. FOR END DIAPHRAGM DETAIL, SEE SHEET 20/50 AND 22/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

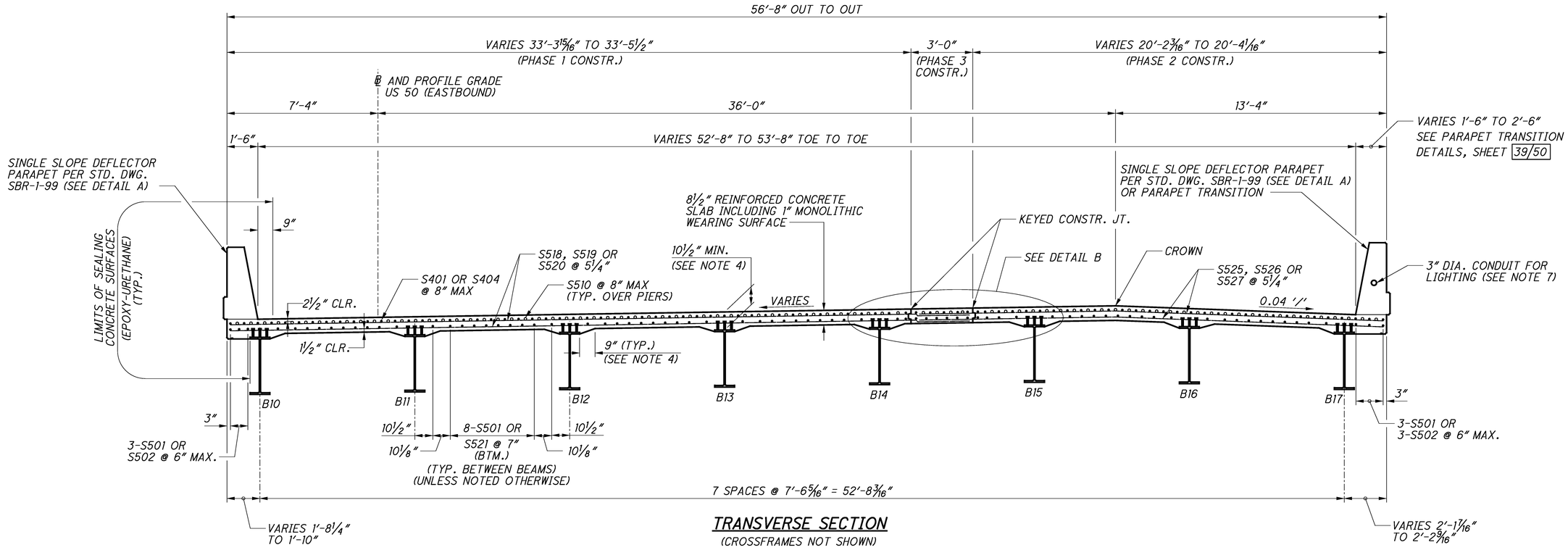
DECK PLAN (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

37/50

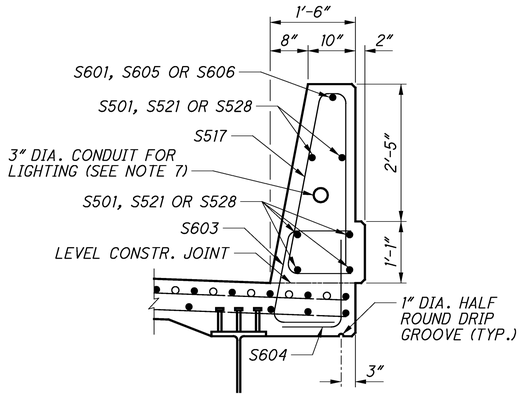
309/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RDP001.dgn 11/10/2010 11:38:07 AM mtreiheisel

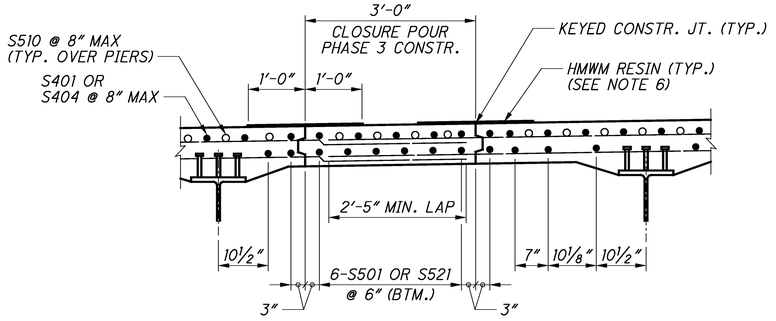


TRANSVERSE SECTION

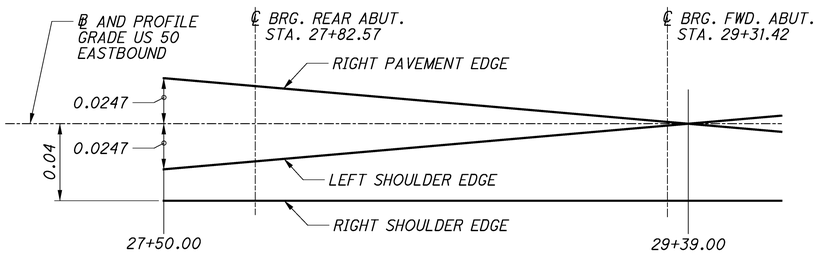
(CROSSFRAMES NOT SHOWN)



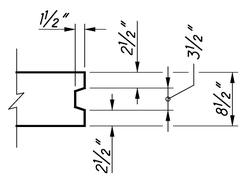
DETAIL A



DETAIL B



SUPERELEVATION TRANSITION DETAIL



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR MORE INFORMATION)

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 4/50 AND 5/50.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 49/50 AND 50/50.
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 41/50 AND 43/50.
4. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT. PLACE CLOSURE POUR CONCRETE IN THE DIAPHRAGM AND DECK CONCURRENTLY.
5. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
6. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
7. PROPOSED 3" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2 CONCRETE, SUPERSTRUCTURE (PARAPET), AS PER PLAN.
8. THE USE OF STAY-IN-PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102882

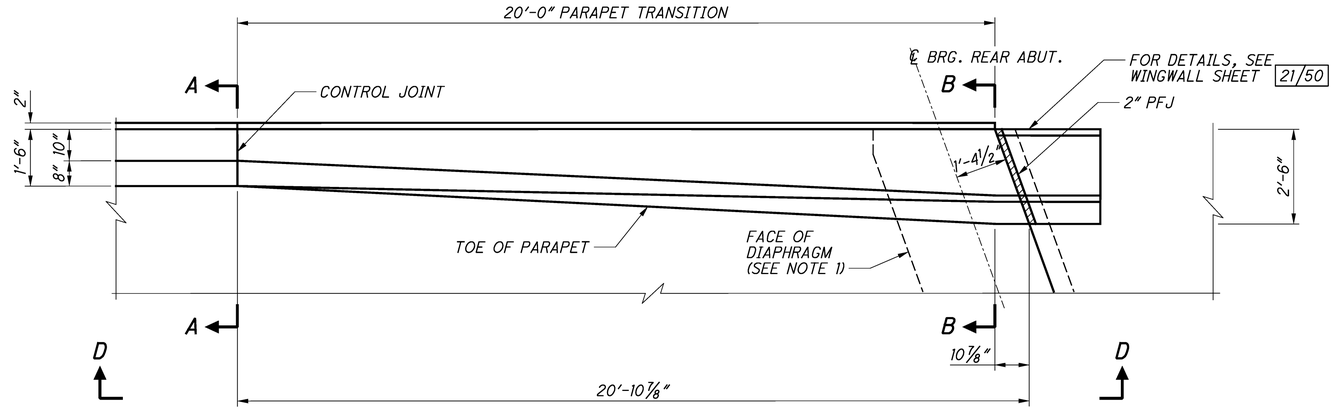
TRANSVERSE SECTION (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

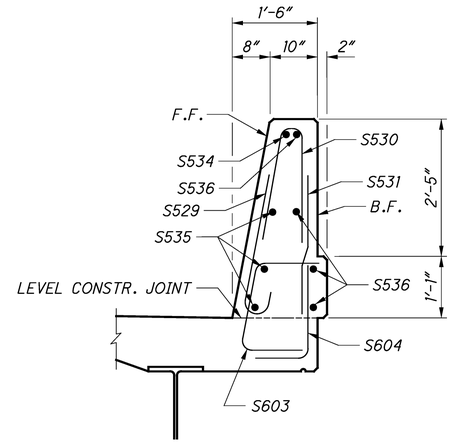
38/50

310/442

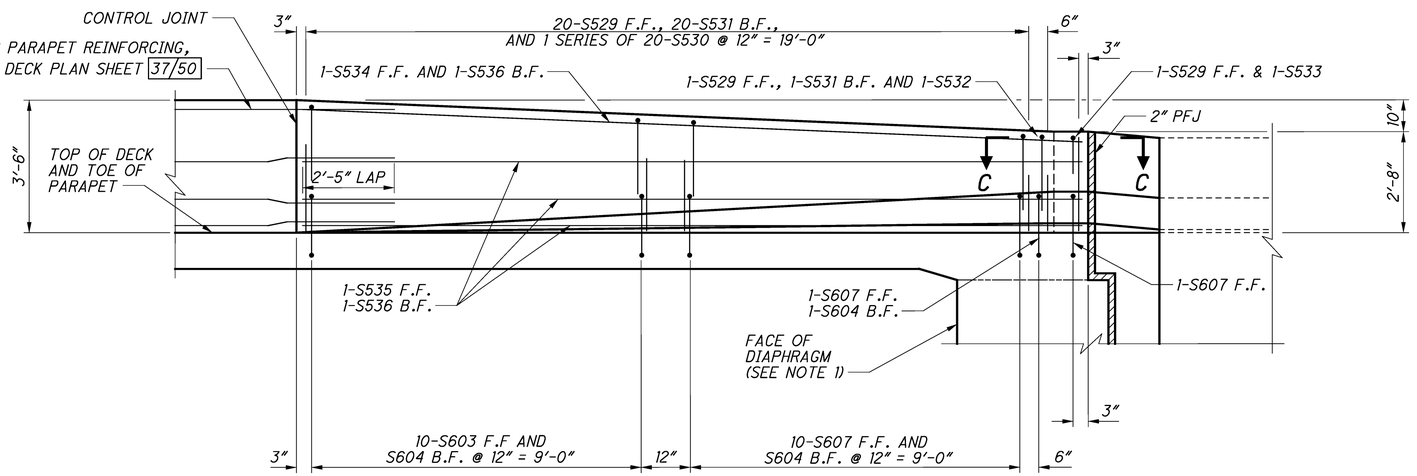
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RTS001.dgn 11/10/2010 11:38:09 AM mtreiteisel



PARAPET TRANSITION PLAN

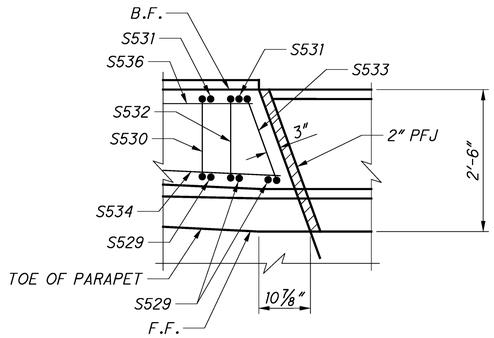


SECTION A-A



PARAPET TRANSITION ELEVATION VIEW D-D

SECTION B-B



SECTION C-C

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR DIAPHRAGM DETAILS, SEE SHEET 20/50 .

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

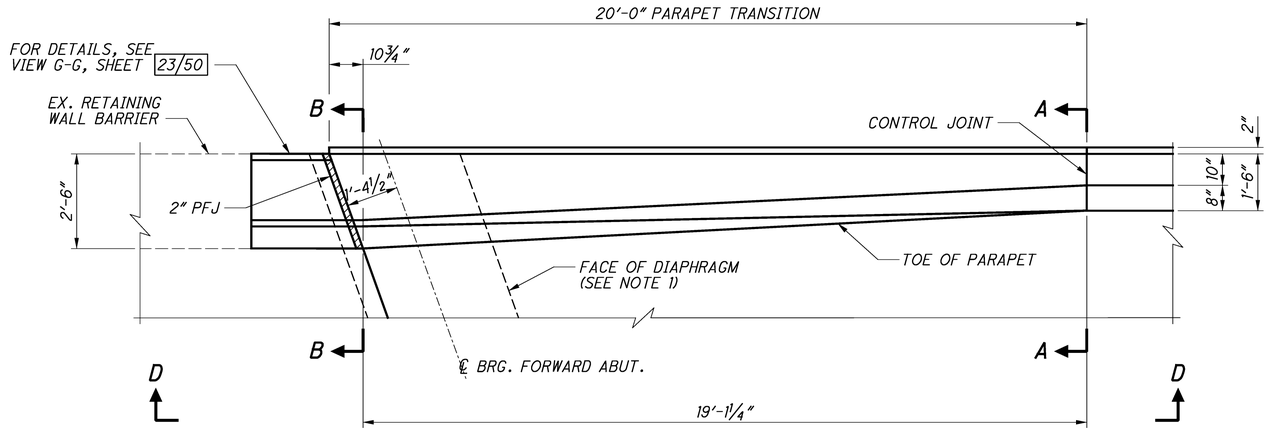
REAR PARAPET TRANSITION DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

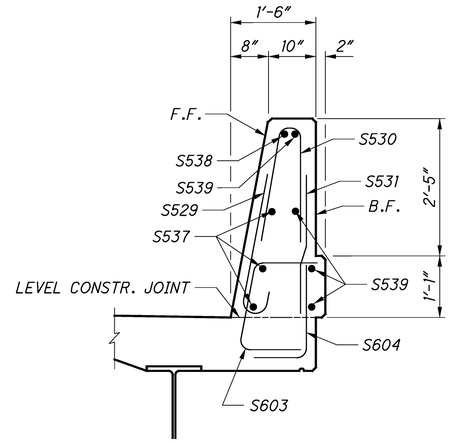
39/50

311/442

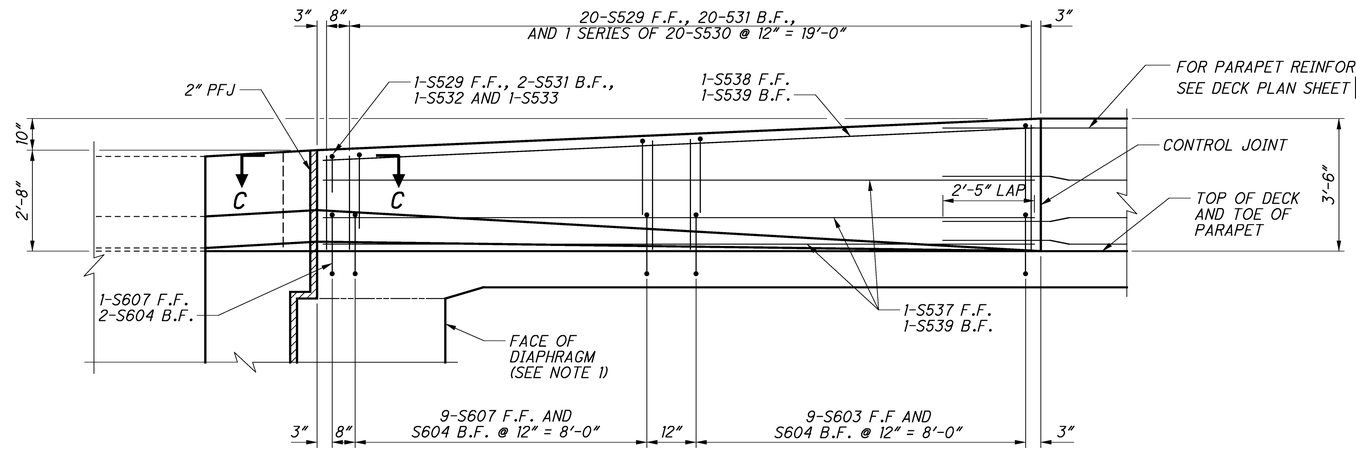
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RDP002.dgn 11/10/2010 11:38:10 AM mtreiheisel



PARAPET TRANSITION PLAN

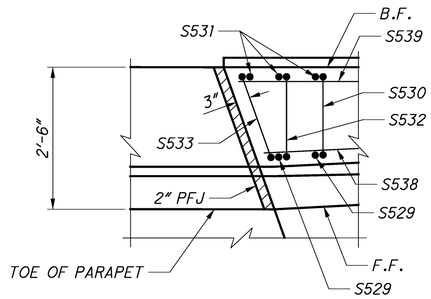


SECTION A-A



PARAPET TRANSITION ELEVATION
VIEW D-D

SECTION B-B



SECTION C-C

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR DIAPHRAGM DETAILS, SEE SHEET 22/50 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

FORWARD PARAPET TRANSITION DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

40/50

312/442

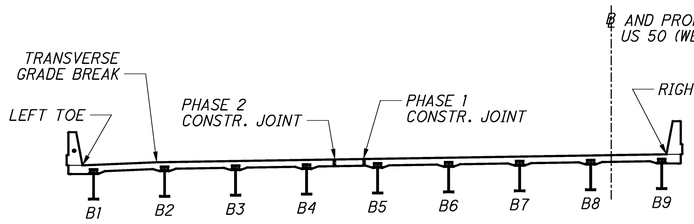
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RDP003.dgn 11/10/2010 11:38:12 AM mtreiheisel

SCREED ELEVATIONS (VALUE FOOT)

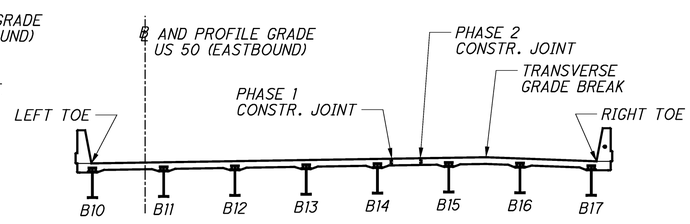
HAM-50-1954L		REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
			1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
LEFT TOE	STATION	27+52.87	27+63.99	27+75.10	27+86.22	27+97.34	28+09.03	28+12.86	28+28.39	28+43.92	28+59.44	28+70.49	28+72.57	28+81.54	28+92.61	29+03.66
	OFFSET	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT
	ELEVATION	501.65	502.11	502.56	502.98	503.39	503.82	503.96	504.50	504.98	505.43	505.74	505.80	506.05	506.33	506.59
TRANSVERSE GRADE BREAK	STATION	27+55.92	27+67.03	27+78.13	27+89.23	28+00.33	28+12.01	28+15.84	28+31.35	28+46.85	28+62.35	28+73.39	28+75.47	28+84.43	28+95.48	29+06.51
	OFFSET	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT	48 LT
	ELEVATION	502.11	502.57	503.00	503.42	503.83	504.26	504.39	504.93	505.40	505.84	506.15	506.20	506.45	506.73	506.99
PHASE 2 CONSTRUCTION JOINT	STATION	27+63.29	27+74.31	27+85.33	27+96.37	28+07.41	28+19.02	28+22.83	28+38.28	28+53.73	28+69.20	28+80.22	28+82.29	28+91.24	29+02.28	29+13.32
	OFFSET	29.03 LT	29.16 LT	29.27 LT	29.36 LT	29.44 LT	29.50 LT	29.51 LT	29.55 LT	29.56 LT	29.53 LT	29.49 LT	29.48 LT	29.43 LT	29.36 LT	29.26 LT
	ELEVATION	502.71	503.15	503.57	503.98	504.37	504.78	504.92	505.44	505.89	506.32	506.62	506.67	506.92	507.19	507.44
PHASE 1 CONSTRUCTION JOINT	STATION	27+64.44	27+75.46	27+86.47	27+97.51	28+08.54	28+20.15	28+23.96	28+39.40	28+54.85	28+70.31	28+81.32	28+83.40	28+92.34	29+03.38	29+14.41
	OFFSET	26.04 LT	26.17 LT	26.28 LT	26.37 LT	26.44 LT	26.50 LT	26.52 LT	26.55 LT	26.56 LT	26.53 LT	26.49 LT	26.48 LT	26.42 LT	26.35 LT	26.25 LT
	ELEVATION	502.80	503.24	503.66	504.06	504.46	504.87	505.00	505.52	505.97	506.40	506.70	506.75	506.99	507.26	507.51
℄ AND PROFILE GRADE US 50 (WESTBOUND)	STATION	27+74.47	27+85.49	27+96.50	28+07.52	28+18.53	28+30.11	28+33.91	28+49.30	28+64.68	28+80.06	28+91.01	28+93.07	29+01.96	29+12.92	29+23.87
	OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ELEVATION	503.60	504.04	504.45	504.83	505.21	505.61	505.74	506.24	506.67	507.08	507.36	507.41	507.64	507.89	508.13
RIGHT TOE	STATION	27+76.71	27+87.72	27+98.71	28+09.72	28+20.73	28+32.30	28+36.09	28+51.46	28+66.83	28+82.19	28+93.13	28+95.19	29+04.07	29+15.02	29+25.97
	OFFSET	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT
	ELEVATION	503.78	504.21	504.62	505.00	505.38	505.77	505.90	506.39	506.82	507.22	507.51	507.56	507.78	508.03	508.26

SCREED ELEVATIONS (VALUE FOOT)

HAM-50-1954R		REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
			1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
LEFT TOE	STATION	27+80.44	27+91.41	28+02.36	28+13.33	28+24.28	28+36.02	28+39.61	28+54.93	28+70.27	28+85.63	28+96.53	28+99.01	29+07.47	29+18.40	29+29.33
	OFFSET	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83' LT
	ELEVATION	504.08	504.52	504.94	505.34	505.73	506.15	506.27	506.78	507.23	507.65	507.94	508.01	508.23	508.49	508.73
℄ AND PROFILE GRADE US 50 (EASTBOUND)	STATION	27+82.57	27+93.53	28+04.48	28+15.44	28+26.39	28+38.12	28+41.71	28+57.03	28+72.36	28+87.68	28+98.61	29+01.10	29+09.55	29+20.48	29+31.42
	OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ELEVATION	504.28	504.72	505.13	505.51	505.89	506.30	506.42	506.91	507.35	507.75	508.03	508.09	508.30	508.56	508.78
PHASE 1 CONSTRUCTION JOINT	STATION	27+92.06	28+02.99	28+13.91	28+24.84	28+35.77	28+47.48	28+51.06	28+66.36	28+81.67	28+96.99	29+07.93	29+10.42	29+18.88	29+29.82	29+40.76
	OFFSET	26.09 RT	26.06 RT	26.03 RT	26.01 RT	26.00 RT	25.99 RT	25.99 RT	26.00 RT	26.02 RT	26.05 RT	26.08 RT	26.08 RT	26.10 RT	26.12 RT	26.14 RT
	ELEVATION	505.15	505.53	505.89	506.23	506.56	506.91	507.01	507.44	507.80	508.13	508.36	508.41	508.59	508.79	508.97
PHASE 2 CONSTRUCTION JOINT	STATION	27+93.15	28+04.07	28+14.99	28+25.92	28+36.85	28+48.56	28+52.14	28+67.43	28+82.74	28+98.06	29+09.00	29+11.49	29+19.95	29+30.89	29+41.84
	OFFSET	29.09 RT	29.05 RT	29.03 RT	29.01 RT	29.00 RT	28.99 RT	28.99 RT	29.00 RT	29.02 RT	29.06 RT	29.08 RT	29.08 RT	29.10 RT	29.12 RT	29.15 RT
	ELEVATION	505.25	505.62	505.98	506.31	506.63	506.97	507.08	507.49	507.85	508.17	508.40	508.44	508.62	508.81	508.99
TRANSVERSE GRADE BREAK	STATION	27+95.66	28+06.59	28+17.51	28+28.44	28+39.37	28+51.07	28+54.65	28+69.94	28+85.23	29+00.55	29+11.48	29+13.97	29+22.42	29+33.35	29+44.29
	OFFSET	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT	36 RT
	ELEVATION	505.46	505.83	506.17	506.48	506.79	507.12	507.22	507.62	507.96	508.26	508.47	508.52	508.68	508.86	509.03
RIGHT TOE	STATION	27+99.59	28+10.71	28+21.78	28+32.71	28+43.62	28+55.32	28+58.89	28+74.17	28+89.46	29+04.78	29+15.71	29+18.20	29+26.65	29+37.45	29+48.18
	OFFSET	46.86 RT	47.42 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.83 RT	47.47 RT	46.91 RT
	ELEVATION	505.14	505.48	505.80	506.11	506.41	506.74	506.84	507.22	507.55	507.85	508.06	508.10	508.25	508.45	508.63



HAM-50-1954L
(LOOKING EAST)



HAM-50-1954R
(LOOKING EAST)

NOTES:

1. OFFSETS FOR HAM-50-1954L ARE BASED ON DISTANCE FROM ℄ AND PROFILE GRADE US 50 (WESTBOUND).
2. OFFSETS FOR HAM-50-1954R ARE BASED ON DISTANCE FROM ℄ AND PROFILE GRADE US 50 (EASTBOUND).
3. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102874 (L) 3102882 (R)

SCREED ELEVATIONS (LEFT AND RIGHT BRIDGE)
HAM-50-1954 L/R
US 50 OVER HARRIET STREET

HAM-50-19.03 PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD006.dgn 11/10/2010 11:38:13 AM mtreifreisel

TOP OF HAUNCH ELEVATIONS (HAM-50-1954L)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
BEAM 1	501.03	501.48	501.92	502.33	502.74	503.16	503.30	503.83	504.31	504.76	505.08	505.13	505.38	505.67	505.94
BEAM 2	501.43	501.89	502.32	502.73	503.14	503.56	503.70	504.23	504.70	505.14	505.45	505.51	505.76	506.04	506.30
BEAM 3	501.67	502.12	502.55	502.96	503.36	503.78	503.91	504.44	504.91	505.34	505.65	505.70	505.95	506.22	506.48
BEAM 4	501.90	502.35	502.78	503.18	503.57	503.99	504.13	504.64	505.11	505.53	505.84	505.89	506.13	506.41	506.66
BEAM 5	502.14	502.58	503.00	503.40	503.79	504.20	504.34	504.85	505.31	505.73	506.03	506.08	506.32	506.59	506.84
BEAM 6	502.37	502.81	503.22	503.62	504.01	504.42	504.55	505.05	505.51	505.92	506.22	506.27	506.51	506.77	507.01
BEAM 7	502.60	503.04	503.45	503.84	504.22	504.63	504.76	505.26	505.70	506.11	506.41	506.46	506.69	506.95	507.19
BEAM 8	502.83	503.26	503.67	504.06	504.43	504.83	504.96	505.46	505.90	506.30	506.59	506.65	506.87	507.13	507.37
BEAM 9	503.06	503.48	503.89	504.27	504.65	505.04	505.17	505.66	506.09	506.49	506.78	506.83	507.05	507.31	507.54

FINAL DECK SURFACE ELEVATIONS (HAM-50-1954L)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
LEFT TOE	501.65	502.11	502.55	502.98	503.39	503.81	503.94	504.47	504.96	505.43	505.74	505.80	506.04	506.32	506.59
BEAM 1	501.74	502.19	502.62	503.04	503.45	503.86	503.99	504.51	505.00	505.47	505.78	505.84	506.08	506.37	506.64
GRADE BREAK	502.11	502.56	503.00	503.42	503.83	504.24	504.37	504.89	505.38	505.84	506.15	506.21	506.44	506.72	506.99
BEAM 2	502.14	502.59	503.02	503.44	503.85	504.26	504.39	504.90	505.39	505.85	506.16	506.22	506.46	506.74	507.01
BEAM 3	502.38	502.82	503.25	503.66	504.06	504.47	504.60	505.11	505.59	506.05	506.35	506.41	506.64	506.92	507.19
BEAM 4	502.61	503.05	503.48	503.89	504.28	504.68	504.81	505.32	505.79	506.24	506.54	506.60	506.83	507.11	507.37
PHASE 2 CJ	502.71	503.14	503.57	503.97	504.37	504.77	504.90	505.40	505.87	506.32	506.62	506.68	506.91	507.18	507.44
PHASE 1 CJ	502.80	503.23	503.66	504.06	504.46	504.85	504.98	505.48	505.95	506.40	506.70	506.75	506.98	507.25	507.51
BEAM 5	502.85	503.28	503.70	504.11	504.50	504.90	505.02	505.52	505.99	506.44	506.73	506.79	507.02	507.29	507.55
BEAM 6	503.08	503.51	503.92	504.33	504.71	505.11	505.23	505.73	506.19	506.63	506.92	506.98	507.20	507.47	507.72
BEAM 7	503.31	503.73	504.15	504.54	504.93	505.32	505.44	505.93	506.39	506.82	507.11	507.17	507.39	507.65	507.90
BEAM 8	503.54	503.96	504.37	504.76	505.14	505.53	505.65	506.13	506.59	507.01	507.30	507.36	507.57	507.83	508.08
℄ CONSTR.	503.60	504.03	504.44	504.83	505.21	505.60	505.72	506.20	506.65	507.08	507.36	507.42	507.63	507.89	508.13
BEAM 9	503.77	504.18	504.59	504.98	505.35	505.74	505.86	506.33	506.78	507.20	507.49	507.54	507.75	508.01	508.25
RIGHT TOE	503.78	504.20	504.61	505.00	505.38	505.76	505.88	506.36	506.80	507.22	507.50	507.56	507.77	508.02	508.26

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102874

TOP OF DECK AND TOP OF HAUNCH ELEVATIONS (LEFT BRIDGE)

HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD007.dgn 11/10/2010 11:38:15 AM mtreitheisel

TOP OF HAUNCH ELEVATIONS (HAM-50-1954R)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
BEAM 10	503.38	503.82	504.24	504.64	505.03	505.44	505.57	506.07	506.53	506.94	507.24	507.30	507.52	507.79	508.03
BEAM 11	503.64	504.07	504.48	504.86	505.23	505.64	505.76	506.24	506.68	507.07	507.35	507.41	507.62	507.87	508.09
BEAM 12	503.90	504.31	504.70	505.07	505.43	505.82	505.94	506.40	506.81	507.18	507.45	507.51	507.71	507.94	508.15
BEAM 13	504.15	504.55	504.93	505.28	505.62	506.00	506.11	506.55	506.94	507.30	507.55	507.60	507.79	508.01	508.20
BEAM 14	504.39	504.78	505.14	505.48	505.81	506.17	506.27	506.70	507.07	507.40	507.64	507.69	507.87	508.07	508.25
BEAM 15	504.63	505.00	505.35	505.67	505.99	506.33	506.43	506.84	507.19	507.50	507.72	507.77	507.94	508.13	508.30
BEAM 16	504.65	505.01	505.35	505.67	505.97	506.30	506.40	506.79	507.11	507.42	507.64	507.68	507.84	508.02	508.19
BEAM 17	504.43	504.78	505.11	505.43	505.73	506.06	506.15	506.54	506.87	507.16	507.37	507.42	507.57	507.75	507.93

FINAL DECK SURFACE ELEVATIONS (HAM-50-1954R)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		1/4	SPLICE 2	1/2	3/4	
LEFT TOE	504.08	504.51	504.93	505.34	505.73	506.14	506.25	506.75	507.21	507.65	507.94	508.01	508.22	508.48	508.73
BEAM 10	504.09	504.52	504.94	505.35	505.74	506.14	506.26	506.75	507.22	507.65	507.95	508.01	508.22	508.49	508.74
℄ CONSTR.	504.28	504.71	505.12	505.51	505.89	506.28	506.40	506.88	507.32	507.74	508.03	508.09	508.29	508.55	508.78
BEAM 11	504.35	504.77	505.18	505.57	505.94	506.33	506.44	506.92	507.36	507.78	508.05	508.12	508.32	508.57	508.80
BEAM 12	504.61	505.01	505.40	505.78	506.14	506.51	506.62	507.07	507.50	507.89	508.16	508.22	508.41	508.64	508.86
BEAM 13	504.86	505.25	505.62	505.99	506.33	506.69	506.79	507.23	507.63	508.00	508.25	508.31	508.49	508.71	508.91
BEAM 14	505.10	505.48	505.84	506.19	506.52	506.86	506.96	507.37	507.75	508.11	508.34	508.40	508.56	508.77	508.96
PHASE 1 CJ	505.15	505.52	505.88	506.23	506.56	506.89	506.99	507.40	507.78	508.13	508.36	508.42	508.58	508.78	508.97
PHASE 2 CJ	505.25	505.61	505.97	506.30	506.63	506.96	507.06	507.46	507.83	508.17	508.40	508.45	508.61	508.80	508.99
BEAM 15	505.34	505.70	506.05	506.38	506.70	507.02	507.12	507.51	507.87	508.21	508.43	508.48	508.63	508.82	509.01
GRADE BREAK	505.46	505.82	506.16	506.48	506.79	507.11	507.20	507.58	507.93	508.26	508.47	508.52	508.67	508.85	509.03
BEAM 16	505.35	505.71	506.05	506.37	506.68	506.99	507.09	507.46	507.79	508.13	508.34	508.39	508.54	508.72	508.89
BEAM 17	505.14	505.48	505.81	506.14	506.44	506.75	506.84	507.21	507.56	507.87	508.08	508.13	508.27	508.45	508.64
RIGHT TOE	505.14	505.47	505.79	506.11	506.41	506.72	506.82	507.19	507.53	507.85	508.05	508.10	508.25	508.44	508.63

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

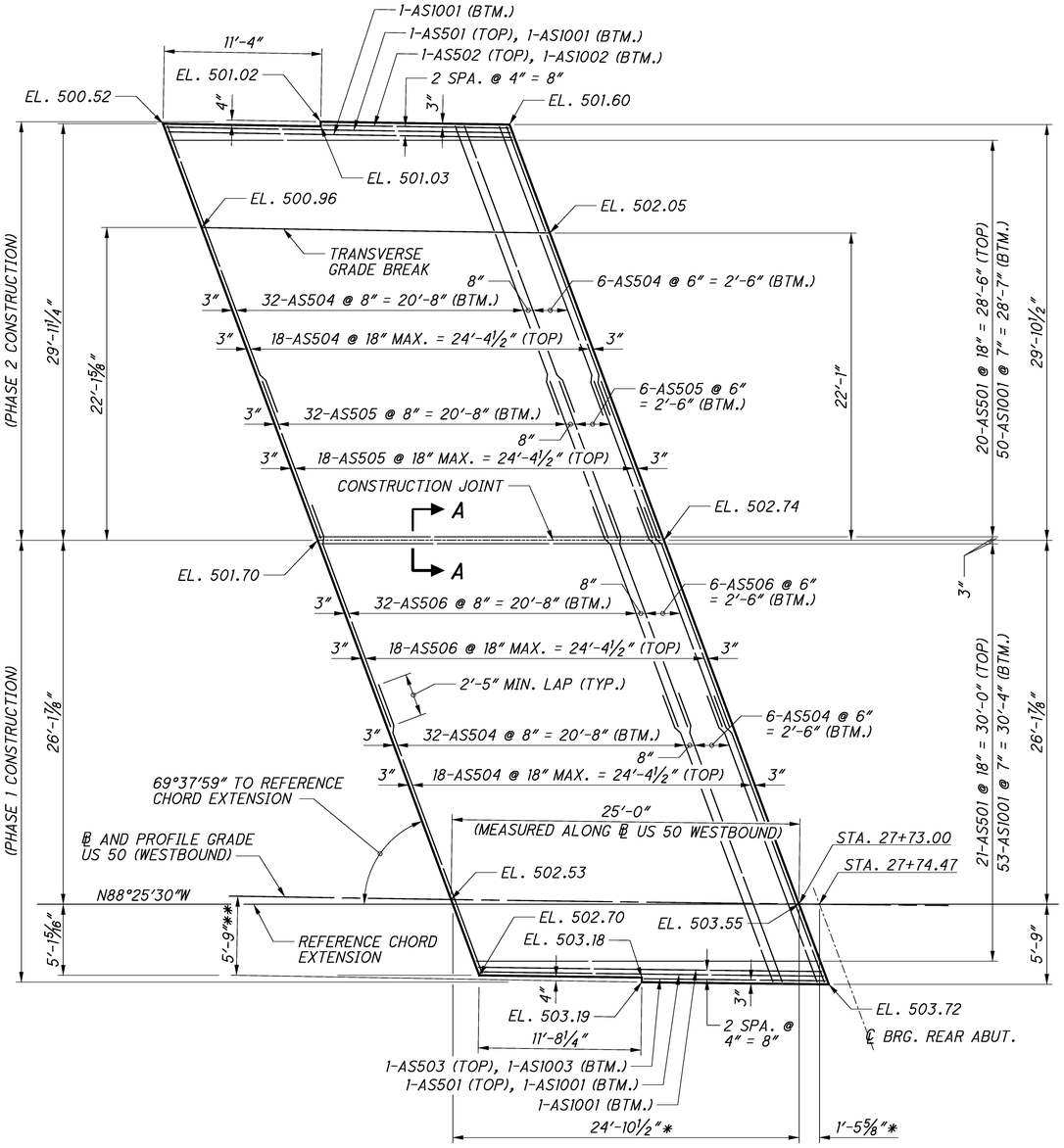
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

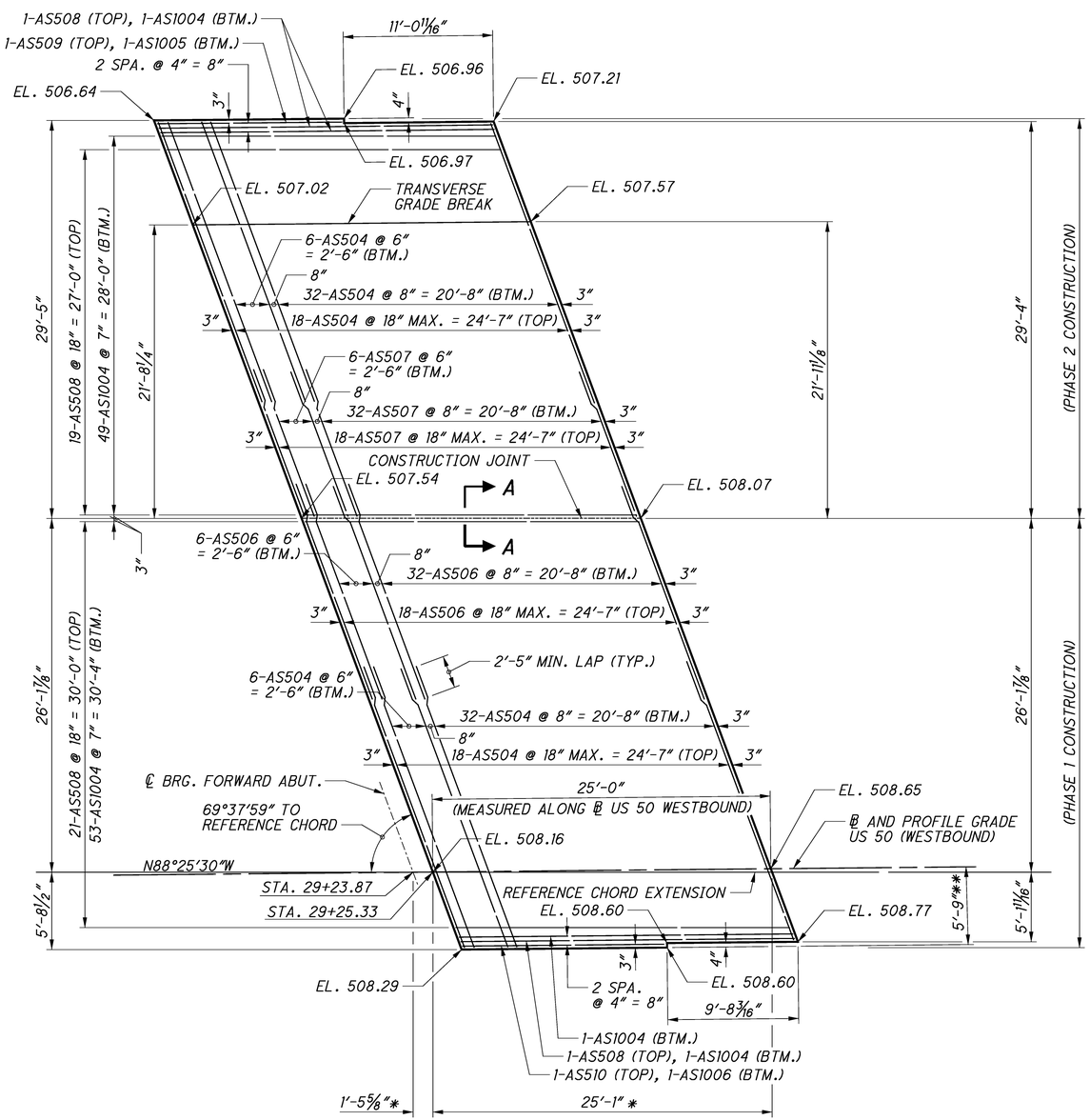
DESIGNED SSM | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102882

TOP OF DECK AND TOP OF HAUNCH ELEVATIONS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

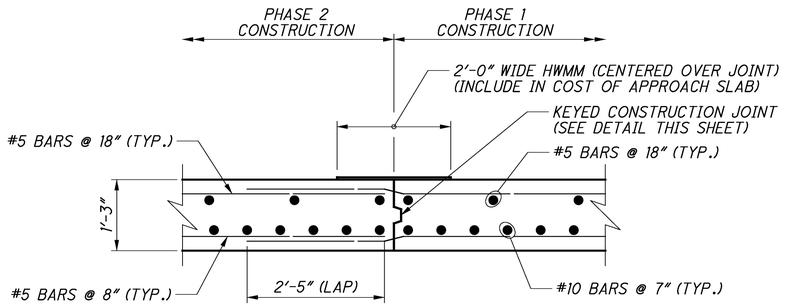
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954CSD008.dgn 11/10/2010 11:38:17 AM mtreitheisel



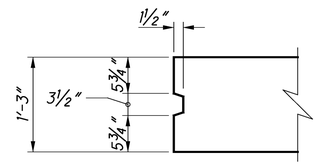


* MEASURED ALONG REFERENCE CHORD EXTENSION
** MEASURED NORMAL TO ℄ AND PROFILE GRADE

APPROACH SLAB PLAN



SECTION A-A



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. THE APPROACH SLAB CONCRETE SHALL NOT BE POURED WITH THE DECK CONCRETE.
2. SEE STD. DWG. AS-1-81 FOR ADDITIONAL NOTES AND DETAILS.
3. FOR REINFORCING STEEL LIST, SEE SHEET 48/50.

DESIGN AGENCY
Tran Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

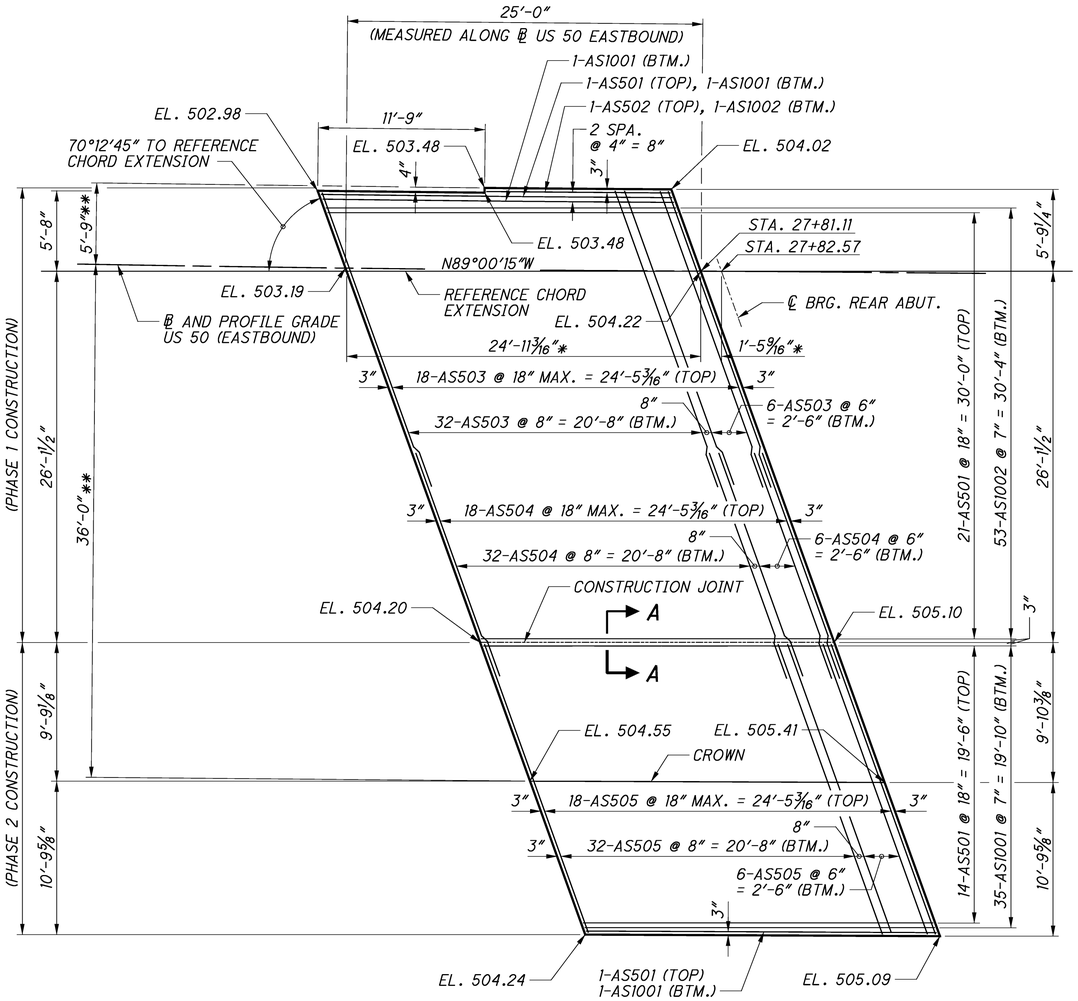
APPROACH SLAB DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

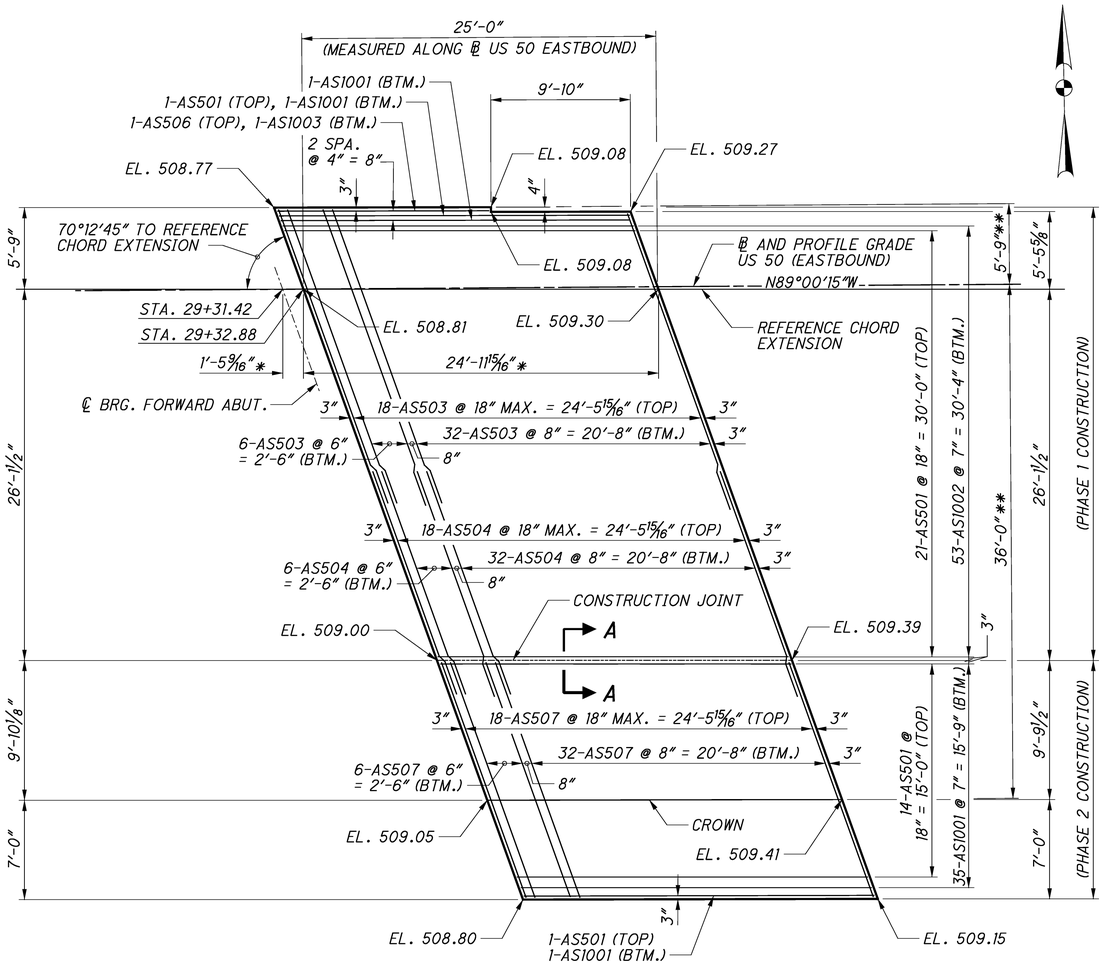
HAM-50-19.03
PID No. 75736

44/50

316/442

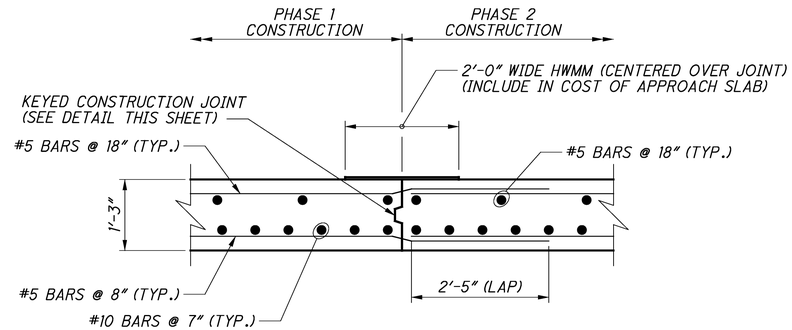
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LAR003.dgn 11/10/2010 11:38:18 AM mtneiheisel



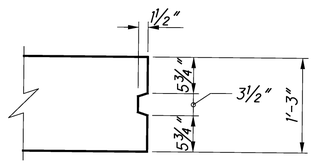


* MEASURED ALONG REFERENCE CHORD EXTENSION
** MEASURED NORMAL TO ℄ AND PROFILE GRADE

APPROACH SLAB PLAN



SECTION A-A



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. THE APPROACH SLAB CONCRETE SHALL NOT BE POURED WITH THE DECK CONCRETE.
2. SEE STD. DWG. AS-1-81 FOR ADDITIONAL NOTES AND DETAILS.
3. FOR REINFORCING STEEL LIST, SEE SHEET 49/50.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102882	

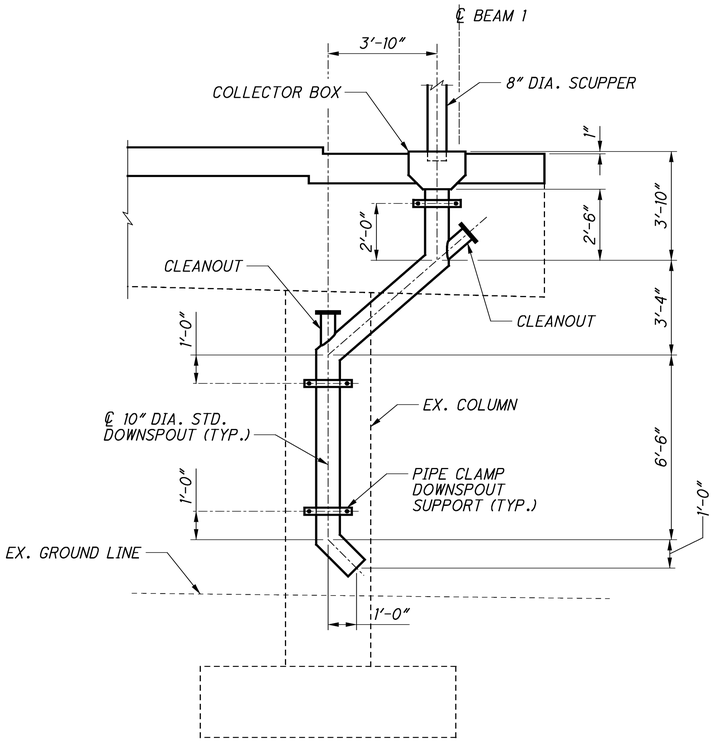
APPROACH SLAB DETAILS (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

45/50

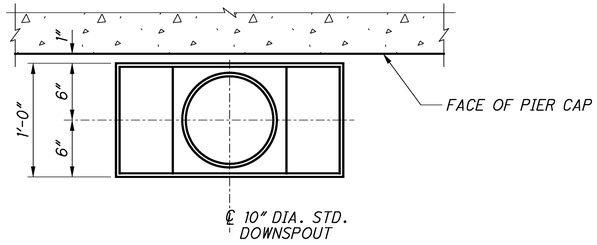
317/442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RAR003.dgn 11/10/2010 11:38:20 AM mtreiheisel

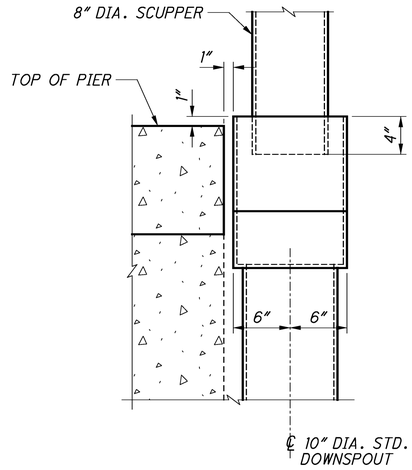


PARTIAL ELEVATION EAST FACE OF PIER 2

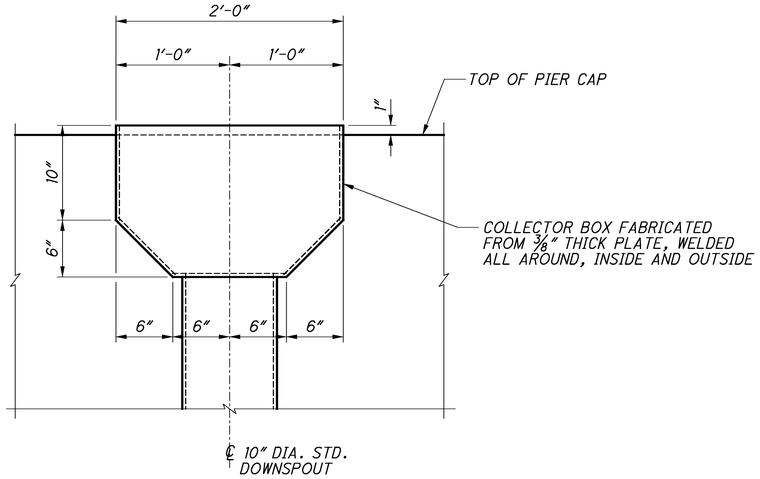
DOWNSPOUT FOR SCUPPER @ STA. 28+62.31



PLAN

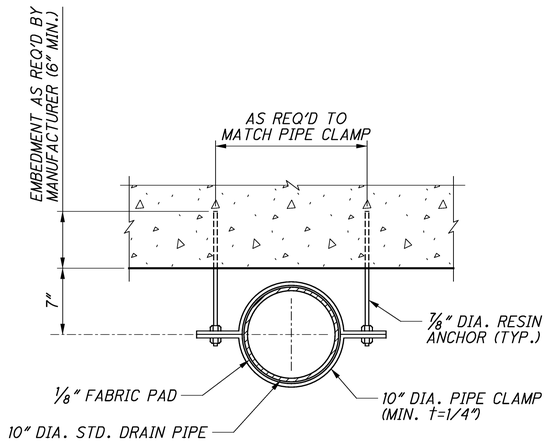


SIDE VIEW

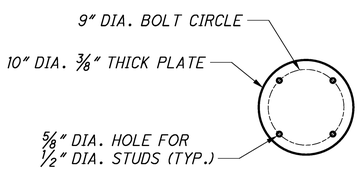


FRONT VIEW

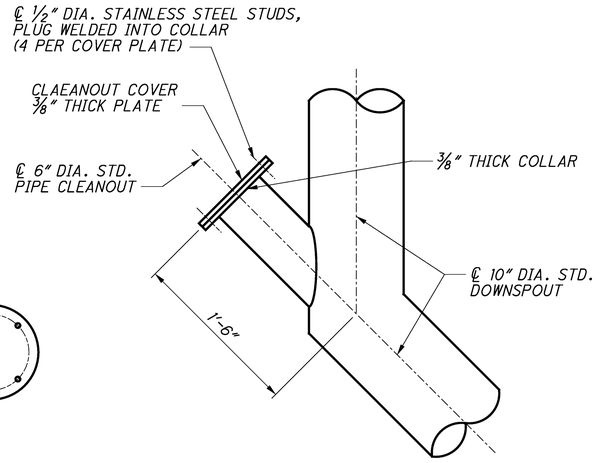
DOWNSPOUT COLLECTOR BOX DETAILS



PIPE CLAMP DOWNSPOUT SUPPORT



CLEANOUT COVER



DOWNSPOUT CLEANOUT DETAIL

NOTES:

1. SCUPPER AND DOWNSPOUT PIPE SHALL BE GALVANIZED STEEL PIPE, IN ACCORDANCE WITH CMS 748.60 .
2. COLLECTOR BOX, CLEANOUT COVERS, PIPE CLAMPS, ANCHORS, NUTS AND WASHERS, AND ALL OTHER MATERIALS REQUIRED FOR DOWNSPOUT INSTALLATION SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102874	

DRAINAGE DETAILS (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LMD001.dgn 11/10/2010 11:38:22 AM mtreiheisel

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST													
A501	30	32	62	7′-5″	480	23	1′-1″	3′-2″	3′-0″			0′-2 ¾″	
A502		5	5	14′-7″	76	STR							
A503		7	7	14′-1″	103	STR							
A504 NOT USED													
A505		2	2	13′-7″	28	STR							
A506		2	2	10′-6″	22	19	8′-0″	2′-5″	0′-9″				
A507		1	1	6′-1″	6	STR							
A508		1	1	5′-9″	6	STR							
A509	2	2	4	3′-3″	14	STR							
A510		1	1	5′-3″	5	STR							
A511 NOT USED													
A512		7	7	13′-7″	99	STR							
A513		5	5	14′-1″	73	STR							
A514		2	2	13′-1″	27	STR							
A515 NOT USED													
A516		2	2	10′-5″	22	19	7′-11″	2′-5″	0′-8″				
A517	1		1	4′-11″	5	STR							
A518	1		1	5′-4″	6	STR							
A519	4		4	13′-1″	55	STR							
A520	4		4	13′-6″	56	STR							
A521	3		3	12′-7″	39	STR							
A522	3		3	13′-0″	41	STR							
A523	2		2	10′-3″	21	19	7′-10″	2′-5″	0′-6″				
A524	1		1	4′-11″	5	STR							
A525	1		1	4′-4″	5	STR							
A526	4		4	12′-9″	53	STR							
A527	4		4	12′-4″	51	STR							
A528	3		3	12′-3″	38	STR							
A529	3		3	11′-10″	37	STR							
A530	2		2	10′-4″	22	1	8′-1″	2′-5″	0′-6″				
A531 THROUGH A578 NOT USED													
A579		1	1	5′-9″	6	STR							
A580		1	1	9′-11″	10	STR							
A581		1	1	10′-4″	11	STR							
A582		1	1	10′-3″	11	STR							
A583		1	1	9′-8″	10	STR							
A601		12	12	5′-7″	101	STR							
A602	28	30	58	3′-10″	334	13	2′-0″	0′-11″	0′-2″	1′-0″			
A603	28	30	58	2′-11″	254	STR							
		2 SR	2 SR	2′-8″									
A604		OF	OF	TO	96	STR							0′-2 ½″
		9	9	4′-5″									
A605	2	2	4	2′-8″	16	13	10 ½″	0′-11″	0′-2″	1′-0″			
A606	2	2	4	1′-9″	11	STR							
A607		1	1	14′-4″	22	STR							
A608		12	12	5′-4″	96	STR							
		2 SR	2 SR	2′-8″									
A609		OF	OF	TO	93	STR							0′-2 ¼″
		9	9	4′-3″									
A610		1	1	13′-8″	21	STR							
A611	12		12	5′-2″	93	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST (CONTINUED)													
	2 SR		2 SR	2′-7″									
A612	OF		OF	TO	87	STR							0′-2″
	9		9	3′-10″									
A613	1		1	13′-4″	20	STR							
A614	10		10	5′-0″	75	STR							
	2 SR		2 SR	2′-7″									
A615	OF		OF	TO	76	STR							0′-2″
	8		8	3′-9″									
A616	1		1	12′-8″	19	STR							
				TOTAL	2,857								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	TOTAL				A	B	C	D	E	R	INC
PIER REINFORCING STEEL LIST													
P501	63	63	126	2′-4″	307	1	0′-10″	1′-8″					
P502	71	69	140	2′-6″	365	1	0′-10″	1′-10″					
P503	66	65	131	4′-1″	558	2	0′-10″	2′-8″	0′-10″				
P504	2		2	30′-10″	64	STR							
P505	2		2	34′-4″	72	STR							
P506		2	2	30′-11″	64	STR							
P507		2	2	33′-10″	71	STR							
P508	2	2	4	9′-0″	38	24	2′-8″	2′-5″				1′-4″	
P901	4		4	30′-10″	419	STR							
P902	4		4	34′-4″	467	STR							
P903		4	4	30′-11″	420	STR							
P904		4	4	33′-10″	460	STR							
				TOTAL	3,305								

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102874

REINFORCIGN STEEL LIST (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

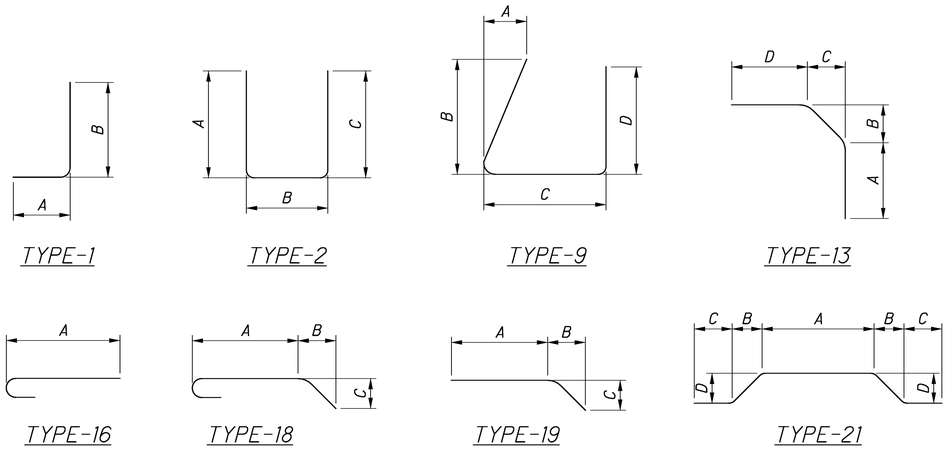
G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LRL001.dgn 11/10/2010 11:38:23 AM mtneiheisel

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S401	495	30'-0"	9920	STR							
S402	99	11'-9"	777	STR							
S403	6	3'-0"	12	STR							
S501	510	30'-0"	15958	STR							
S502	102	14'-3"	1516	STR							
S503	634	36'-3"	23971	STR							
	2 SR	4'-10"									
S504	OF	TO	1129	STR							1'-2"
	27	35'-3"									
	2 SR	2'-5"									
S505	OF	TO	1144	STR							1'-2 1/4"
	29	35'-5"									
	2 SR	2'-6"									
S506	OF	TO	904	STR							1'-1 1/2"
	26	30'-10"									
S507	640	30'-6"	20359	STR							
	2 SR	5'-2"									
S508	OF	TO	832	STR							1'-2 3/4"
	22	31'-1"									
S509	2	33'-1"	69	STR							
S510	188	33'-0"	6471	STR							
S511	4	38'-4"	160	STR							
S512	2	32'-8"	68	STR							
S513	4	6'-3"	26	2	2'-3"	2'-0"	2'-3"				
S514	4	10'-1"	42	9	0'-7"	3'-10"	2'-8"	3'-10"			
S515	4	3'-10"	16	STR							
S516	6	9'-7"	60	21	1'-4"	2'-1"	2'-1"	0'-6"			
S517	306	7'-5"	2367	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
S601	10	30'-0"	451	STR							
S602	2	16'-7"	50	STR							
S603	306	3'-2"	1455	28	1'-6"	1'-0"					
S604	306	2'-4"	1072	1	1'-0"	1'-6"					
		TOTAL	88,829								

MARK	NUMBER REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DIAPHRAGM REINFORCING STEEL LIST													
D501	94		94	8'-8"	850	2	2'-8"	3'-7"	2'-8"				
D502	2		2	8'-6"	18	2	2'-8"	3'-5"	2'-8"				
D503	47	46	93	7'-8"	744	2	2'-7"	2'-9"	2'-7"				
D504	1	1	2	7'-6"	16	2	2'-7"	2'-7"	2'-7"				
D505	5		5	1'-10"	10	19	1'-6"	0'-3 1/2"	0'-1 1/2"				
D506		92	92	8'-10"	848	2	2'-9"	3'-7"	2'-9"				
D507		2	2	8'-8"	18	2	2'-9"	3'-5"	2'-9"				
D508		5	5	2'-0"	10	19	1'-8"	0'-3 1/2"	0'-1 1/2"				
D801	44	44	88	5'-0"	1175	18	2'-10"	1'-0"	1'-0"				
D802	4		4	36'-9"	392	STR							
D803	10	14	24	37'-1"	2376	STR							
D804	14		14	31'-10"	1190	STR							
D805		4	4	31'-0"	331	STR							
D806		10	10	31'-4"	837	STR							
				TOTAL	8,815								

MARK	NUMBER REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
APPROACH SLAB REINFORCING STEEL LIST *													
AS501	43		43	24'-6"	1099	STR							
AS502	1		1	13'-3"	14	STR							
AS503	1		1	13'-0"	14	STR							
AS504	112	112	224	22'-0"	5140	STR							
AS505	56		56	12'-0"	701	STR							
AS506	56	56	112	16'-11"	1976	STR							
AS507		56	56	11'-6"	672	STR							
AS508		43	43	24'-9"	1110	STR							
AS509		1	1	13'-7"	14	STR							
AS510		1	1	14'-10"	15	STR							
AS1001	107		107	25'-11"	11933	16	24'-6"						
AS1002	1		1	14'-8"	63	16	13'-3"						
AS1003	1		1	14'-5"	62	16	13'-0"						
AS1004		106	106	26'-2"	11935	16	24'-9"						
AS1005		1	1	15'-0"	65	16	13'-7"						
AS1006		1	1	16'-3"	70	16	14'-10"						
				TOTAL	34,883								

* REINFORCING INCLUDED WITH APPROACH SLAB FOR PAYMENT



NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102874

REINFORCIGN STEEL LIST (LEFT BRIDGE)
HAM-50-1954L
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954LRL002.dgn 11/10/2010 11:38:24 AM mtreitheisel

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST													
A501	14	18	32	7'-5"	248	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
A502		1	1	21'-4"	22	STR							
A503		1	1	22'-6"	23	STR							
A504		1	1	14'-10"	15	STR							
A505		1	1	16'-0"	17	STR							
A506		2	2	8'-11"	19	19	6'-6"	2'-3"	0'-11 1/2"				
A507		19	19	5'-0"	99	STR							
A508		9	9	10'-10"	102	2	3'-10"	3'-5"	3'-10"				
A509		2	2	14'-10"	31	3	3'-5"	3'-8"					
		1 SR	1 SR	10'-10"				1'-8"					
A510		OF	OF	TO	93	3	3'-5"	TO					0'-3 3/4"
		7	7	14'-8"				3'-7"					
A511		1	1	11'-0"	11	3	3'-6"	1'-8"					
A512 THROUGH A534 NOT USED													
A535	5		5	12'-6"	65	STR							
A536	5		5	12'-1"	63	STR							
A537	2		2	12'-0"	25	STR							
A538	2		2	11'-7"	24	STR							
A539	2		2	10'-3"	21	19	7'-10"	2'-5"	0'-5"				
A540	1		1	4'-8"	5	STR							
A541	1		1	4'-4"	5	STR							
A542 NOT USED													
A543	4		4	2'-1"	9	STR							
A544	4		4	2'-9"	11	STR							
A545	4		4	2'-0"	8	STR							
A546	4		4	1'-7"	7	STR							
A547	3		3	3'-3"	10	STR							
A548	1		1	8'-4"	9	12	3'-2 1/2"	0'-4"	1'-3"	3'-2"	1'-1"		
A549	3		3	3'-4"	10	14	0'-11"	0'-10"	0'-8 1/2"	0'-6"	0'-11"		
A550	1		1	8'-5"	9	12	3'-3 1/2"	0'-4"	1'-3"	3'-2"	1'-1"		
A551 NOT USED													
A552	1		1	8'-7"	9	12	3'-4 1/2"	0'-4"	1'-4"	3'-2"	1'-1"		
A553 NOT USED													
A554		2	2	3'-6"	7	14	0'-11"	0'-10"	0'-8 1/2"	0'-6"	1'-1"		
A555		2	2	8'-4"	17	12	3'-2"	0'-4"	1'-3"	3'-2"	1'-1"		
A556		4	4	3'-1"	13	STR							
A557		3	3	2'-9"	9	STR							
A558		6	6	2'-5"	15	STR							
A559		6	6	2'-0"	13	STR							
A560		2	2	2'-5"	5	STR							
A561		1	1	3'-8"	4	14	1'-0"	0'-10"	0'-8 1/2"	0'-6"	1'-2"		
A562		1	1	8'-6"	9	12	3'-2"	0'-4"	1'-4"	3'-2"	1'-2"		
A563		7	7	14'-8"	107	STR							
A564		5	5	15'-2"	79	STR							
A565		2	2	14'-2"	30	STR							
A567		2	2	10'-6"	22	19	8'-1"	2'-4"	0'-9"				
A568		1	1	10'-8"	11	STR							
A569		1	1	11'-0"	11	STR							
A570		1	1	6'-6"	7	STR							
A571		1	1	6'-10"	7	STR							
A572		1	1	7'-6"	8	23	1'-1"	3'-2"	3'-0"			0'-4"	
A601 NOT USED													
A602	13	17	30	3'-10"	173	13	2'-0"	0'-11"	0'-2"	1'-0"			

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST (CONTINUED)													
A603	13	17	30	2'-11"	131	STR							
A604 NOT USED													
A605	1	1	2	2'-8"	8	13	0'-10 1/2"	0'-11"	0'-2"	1'-0"			
A606	1	1	2	1'-9"	5	STR							
A607 THROUGH A620 NOT USED													
A621	8		8	5'-2"	62	STR							
	2 SR		2 SR	2'-7"									
A622	OF		OF	TO	88	STR							0'-2"
	9		9	3'-11"									
A623	1		1	12'-4"	19	STR							
A624	4		4	6'-0"	36	STR							
A625		2	2	7'-4"	22	STR							
A626		2	2	6'-11"	21	STR							
A627		16	16	5'-7"	134	STR							
		2 SR	2 SR	2'-8"									
A628		OF	OF	TO	100	STR							0'-3"
		9	9	4'-9"									
A629		1	1	15'-0"	23	STR							
		1 SR	1 SR	21'-4"									
A801		OF	OF	TO	527	STR							0'-1 3/4"
		9	9	22'-6"									
				TOTAL	2,693								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
APPROACH SLAB REINFORCING STEEL LIST *													
AS501	37	34	71	24'-7"	1820	STR							
AS502	1		1	12'-10"	13	STR							
AS503	56	56	112	22'-0"	2570	STR							
AS504	56	56	112	16'-9"	1957	STR							
AS505	56		56	21'-6"	1256	STR							
AS506		1	1	14'-10"	15	STR							
AS507		56	56	17'-6"	1022	STR							
AS1001	91	84	175	26'-0"	19579	16	24'-7"						
AS1002	1		1	14'-3"	61	16	12'-10"						
AS1003		1	1	16'-3"	70	16	14'-10"						
				TOTAL	28,363								

* REINFORCING INCLUDED WITH APPROACH SLAB FOR PAYMENT

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102882

REINFORCIGN STEEL LIST (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RRL001.dgn 11/10/2010 11:38:26 AM mtreitheisel

DECK REINFORCING STEEL LIST

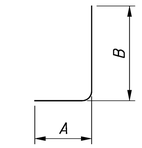
MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
S401	430	30'-0"	8617	STR							
S403	4	3'-0"	8	STR							
S404	86	11'-1"	637	STR							
S501	444	30'-0"	13893	STR							
S502, S503, S504, S505, S506, S507, S508, AND S509 NOT USED											
S510	164	33'-0"	5645	STR							
S511, S512, S513, S514, S515, AND S516 NOT USED											
S517	266	7'-5"	2058	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
S518	634	35'-11"	23750	STR							
	2 SR	2'-2"									
S519	OF	TO	1083	STR							1'-2 1/2"
	28	34'-11"									
	2 SR	4'-10"									
S520	OF	TO	1087	STR							1'-2 1/2"
	26	35'-3"									
S521	84	13'-8"	1197	STR							
S522	4	38'-2"	160	STR							
S523 NOT USED											
S524	4	24'-3"	101	STR							
S525	654	22'-10"	15575	STR							
	2 SR	5'-1"									
S526	OF	TO	425	STR							1'-2 1/2"
	15	22'-1"									
	2 SR	2'-0"									
S527	OF	TO	462	STR							1'-2 1/2"
	18	22'-7"									
S528	6	8'-3"	52	STR							
S529	43	2'-11"	131	16	2'-4"						
	2 SR	4'-3"				0'-6"					
S530	OF	TO	195	2	2'-0"	TO	2'-0"				0'-0 1/2"
	20	5'-2"				1'-5"					
S531	43	2'-4"	105	STR							
S532	2	3'-2"	7	10	0'-1 1/4"	1'-0"	1'-5"	1'-0"			
S533	2	3'-3"	7	10	0'-1 1/4"	1'-0"	1'-6"	1'-0"			
S534	1	20'-2"	21	STR							
S535	3	20'-6"	64	STR							
S536	4	19'-8"	82	STR							
S537	3	18'-10"	59	STR							
S538	1	19'-1"	20	STR							
S539	4	19'-7"	82	STR							
S601	9	30'-0"	406	STR							
S602 NOT USED											
S603	285	3'-2"	1356	28	1'-6"	1'-0"					
S604	307	2'-4"	1076	1	1'-0"	1'-6"					
S605	1	13'-6"	20	STR							
S606	1	8'-3"	12	STR							
S607	22	3'-2"	105	14	0'-11"	0'-10"	0'-8 1/2"	0'-6"	0'-9"		
		TOTAL	78,498								

DIAPHRAGM REINFORCING STEEL LIST

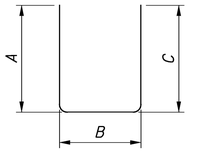
MARK	NUMBER REAR	FWD	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
D501	82		82	8'-8"	741	2	2'-8"	3'-7"	2'-8"				
D502	2		2	8'-6"	18	2	2'-8"	3'-5"	2'-8"				
D503	41	41	82	7'-8"	656	2	2'-7"	2'-9"	2'-7"				
D504	1	1	2	7'-6"	16	2	2'-7"	2'-7"	2'-7"				
D505 NOT USED													
D506			82	8'-10"	755	2	2'-9"	3'-7"	2'-9"				
D507			2	8'-8"	18	2	2'-9"	3'-5"	2'-9"				
D508	5	5	10	1'-11"	20	19	1'-6"	0'-4 1/2"	0'-1 1/2"				
D801	38	35	73	5'-0"	975	18	2'-10"	1'-0"	1'-0"				
D802		4	4	36'-9"	392	STR							
D803	14	10	24	37'-1"	2376	STR							
D804, D805, AND D806 NOT USED													
D807	4		4	22'-7"	241	STR							
D808	10		10	22'-10"	610	STR							
D809		14	14	22'-9"	850	STR							
				TOTAL	7,668								

PIER REINFORCING STEEL LIST

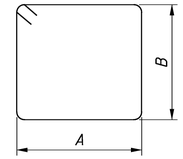
MARK	NUMBER PIER 1	PIER 2	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
P501	21		21	2'-4"	51	1	0'-10"	1'-8"					
P502	95	116	211	2'-6"	550	1	0'-10"	1'-10"					
P503	57	57	114	4'-1"	486	2	0'-10"	2'-8"	0'-10"				
P504, P505, P506, AND P507 NOT USED													
P508	2	2	4	9'-0"	38	24	2'-8"	2'-5"				1'-4"	
P509	2	2	4	34'-10"	145	STR							
P510	2	2	4	21'-10"	91	STR							
P905	4	4	8	34'-10"	947	STR							
P906	4	4	8	21'-10"	594	STR							
				TOTAL	2,902								



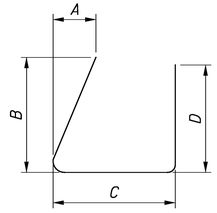
TYPE-1



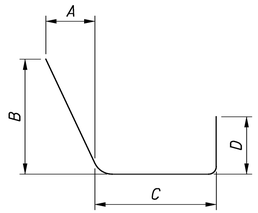
TYPE-2



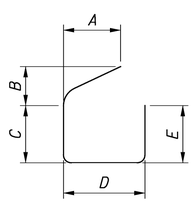
TYPE-3



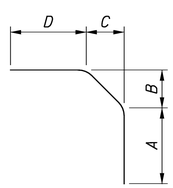
TYPE-9



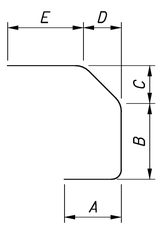
TYPE-10



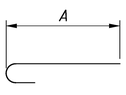
TYPE-12



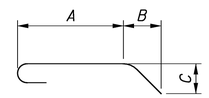
TYPE-13



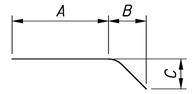
TYPE-14



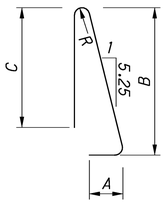
TYPE-16



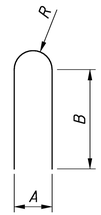
TYPE-18



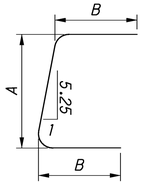
TYPE-19



TYPE-23



TYPE-24



TYPE 28

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE 11/12/10
REVIEWED MSL
STRUCTURE FILE NUMBER 3102882
DRAWN CAS
REVISED
DESIGNED MTN
CHECKED SSM

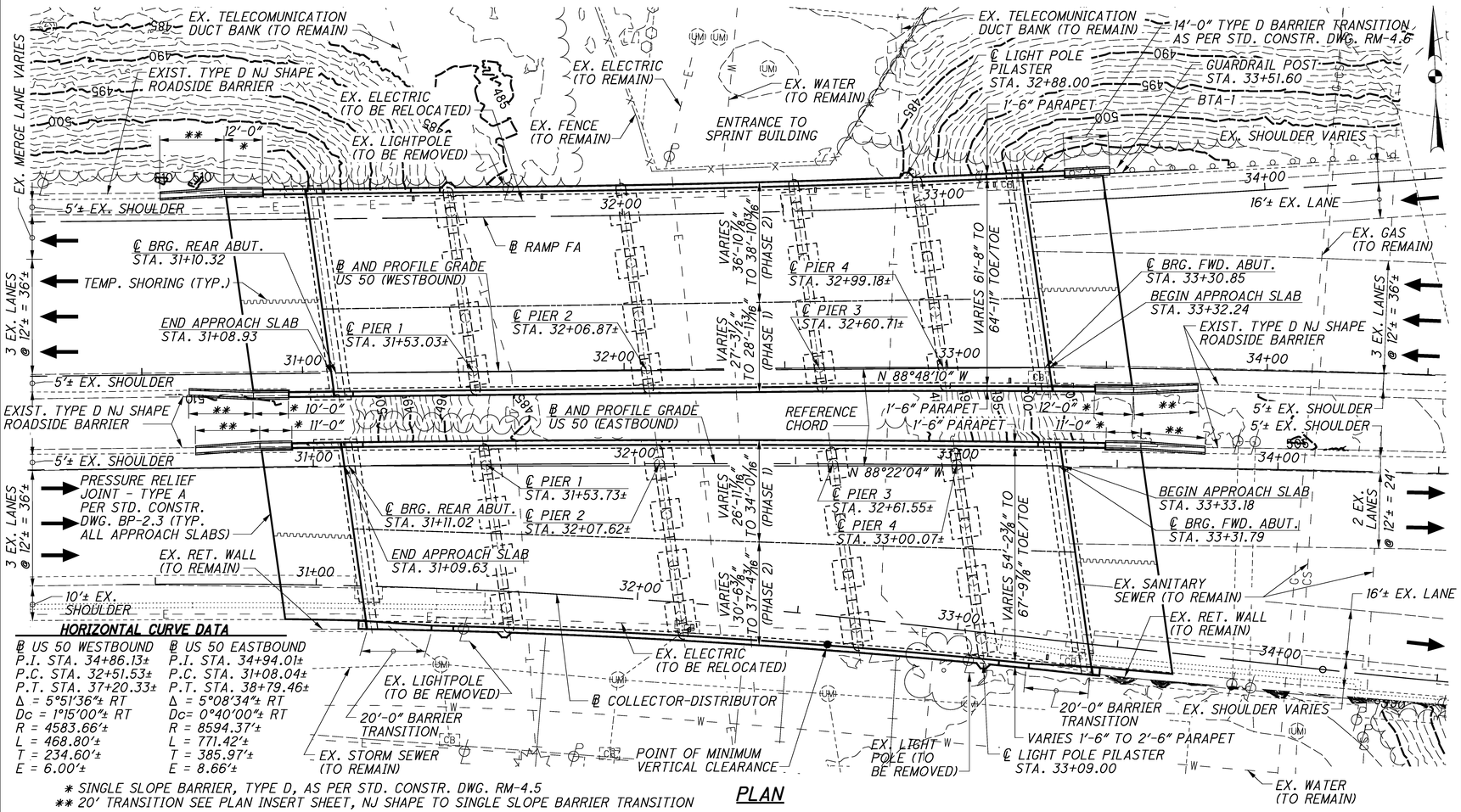
REINFORCIGN STEEL LIST (RIGHT BRIDGE)
HAM-50-1954R
US 50 OVER HARRIET STREET

HAM-50-19.03
PID No. 75736

50 / 50

322
442

G:\CN06\0011\Bridge\HAM-50-1954_US50_OVER_HARRIET_ST\sheets\050_1954RRL002.dgn 11/10/2010 11:38:27 AM mtreiheisel

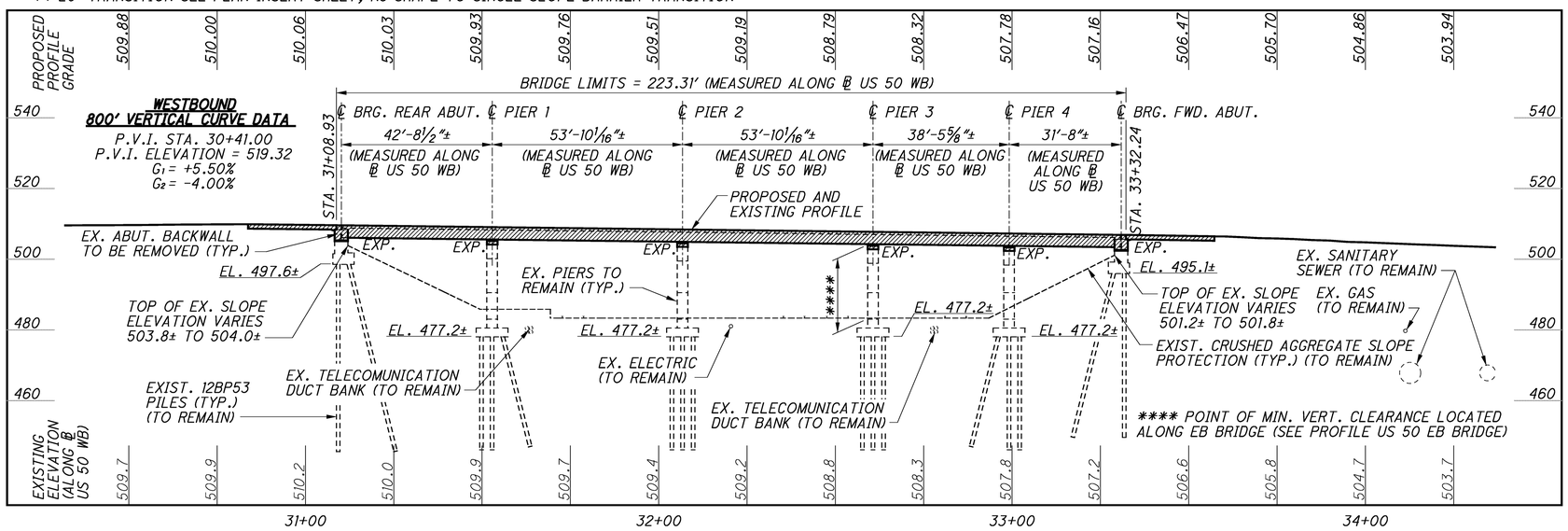


HORIZONTAL CURVE DATA

℄ US 50 WESTBOUND	℄ US 50 EASTBOUND
P.I. STA. 34+86.13±	P.I. STA. 34+94.01±
P.C. STA. 32+51.53±	P.C. STA. 31+08.04±
P.T. STA. 37+20.33±	P.T. STA. 38+79.46±
Δ = 5°51'36"± RT	Δ = 5°08'34"± RT
Dc = 1°15'00"± RT	Dc= 0°40'00"± RT
R = 4583.66'±	R = 8594.37'±
L = 468.80'±	L = 771.42'±
T = 234.60'±	T = 385.97'±
E = 6.00'±	E = 8.66'±

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONSTR. DWG. RM-4.5
** 20' TRANSITION SEE PLAN INSERT SHEET, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

PLAN



PROFILE ALONG BASELINE US 50 WB BRIDGE

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

HORIZONTAL CLEARANCES NOT SHOWN TO UNDEFINED ACCESS DRIVE BENEATH BRIDGE.

FOR BENCHMARK INFORMATION, SEE SHEET 3/61.

DESIGN TRAFFIC:
2011 ADT = 30910 2011 ADTT = 1236
2031 ADT = 28580 2031 ADTT = 1143
DIRECTIONAL DISTRIBUTION = 0.51

EXISTING STRUCTURE

TYPE: FIVE SPAN CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE

SPANS: 41'-10"±, 53'-10 1/16"± C/C BRG. (MEASURED ALONG ℄ US 50 WB) 53'-10 9/16"±, 38'-5½"±, 30'-9⅛"± C/C BRG. (MEASURED ALONG US 50 WB REFERENCE CHORD)

ROADWAY: VARIES F/F CURB (WB)

LOADING: CF 2000-(57) ADEQUATE FOR AASHTO ALTERNATIVE LOADINGS

WEARING SURFACE: 1 ¼" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: 7°21'36"± RF AND 7°40'21"± RF (WESTBOUND)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: TANGENT AND 1°15'00"± CURVE RIGHT (WESTBOUND)

SUPERELEVATION: VARIES (WESTBOUND)

STRUCTURAL FILE NUMBER: 3102912

DATE BUILT: 1966±

DISPOSITION: EXISTING SUPERTRUCTURE TO BE REPLACED

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING SUPERSTRUCTURE, CONVERT ABUTMENTS TO SEMI-INTEGRAL, CONSTRUCT NEW APPROACH SLABS, MODIFY EXISTING PIERS TO ACCOMMODATE NEW ELASTOMERIC BEARINGS, PATCH CONCRETE SURFACES AS PER ITEM 519, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778.

TYPE: FIVE SPAN CONTINUOUS ROLLED BEAM A709 GRADE 50, WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON MODIFIED (SEMI-INTEGRAL) ABUTMENTS AND PIERS.

SPANS: 42'-8½"±, 53'-10 1/16"±, 53'-10 1/16"±, 38'-5⅝"±, 31'-8"± C/C BRG. (MEASURED ALONG ℄ US 50 WB)

ROADWAY: VARIES 61'-8" TO 64'-11" TOE/TOE PARAPET (WB)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

LOADING: HS25 CASE II AND ALTERNATE MILITARY 60 PSF FUTURE WEARING SURFACE

SKEW: FOR SKEW SEE PROPOSED EASTBOUND AND WESTBOUND LAYOUT ON SHEET 3/61.

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: TANGENT AND 1°15'00"± CURVE RIGHT (WESTBOUND)

SUPERELEVATION: VARIES (WESTBOUND)

COORDINATES: LATITUDE 39°06'00" N
LONGITUDE 84°32'06" W

DESIGN AGENCY
Trans Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912	

HAMILTON COUNTY
STA. 31+08.93
STA. 33+32.24

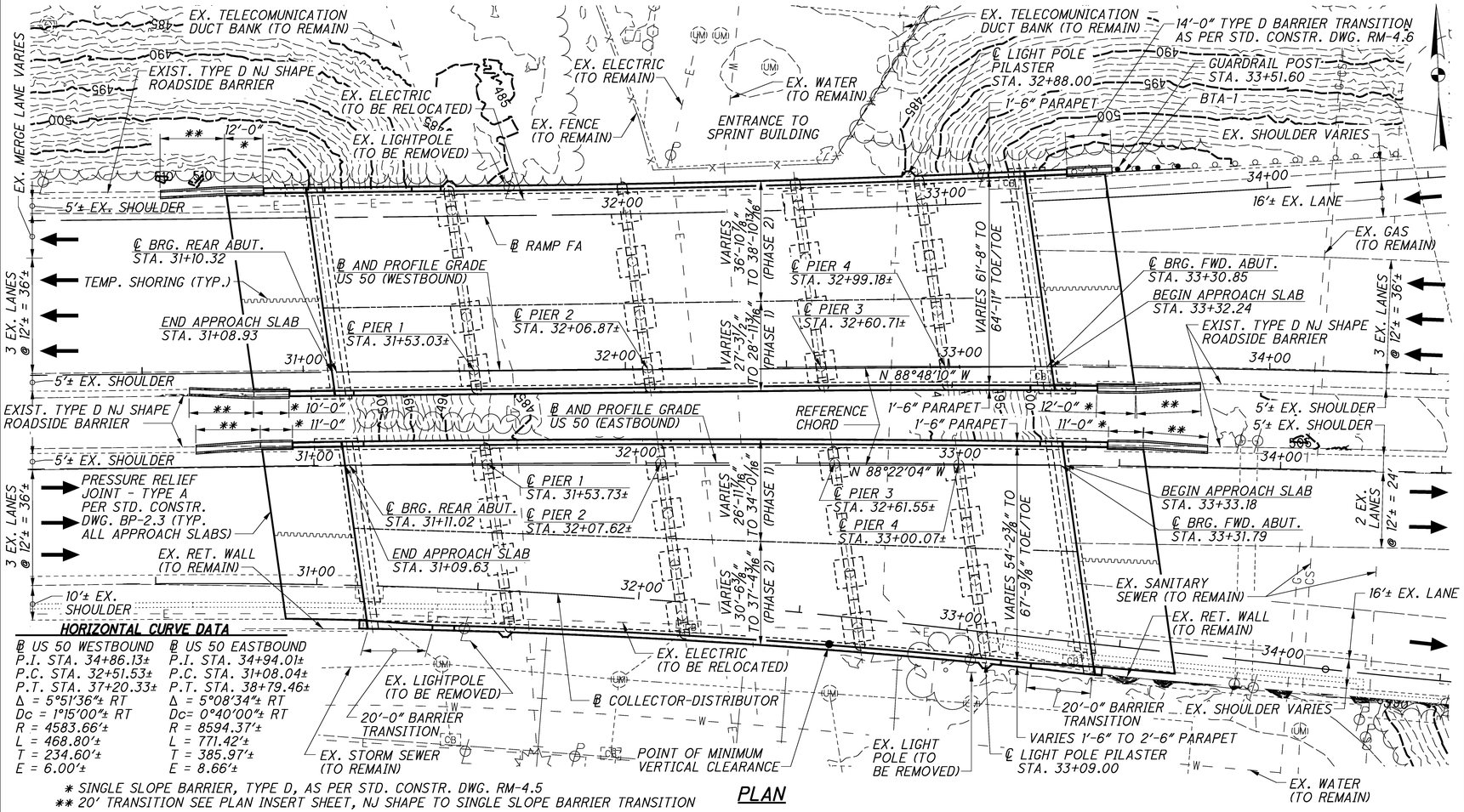
SITE PLAN
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

1 / 61

323
442

11/10/2010 11:38:35 AM mtreiheisel
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSP002.dgn

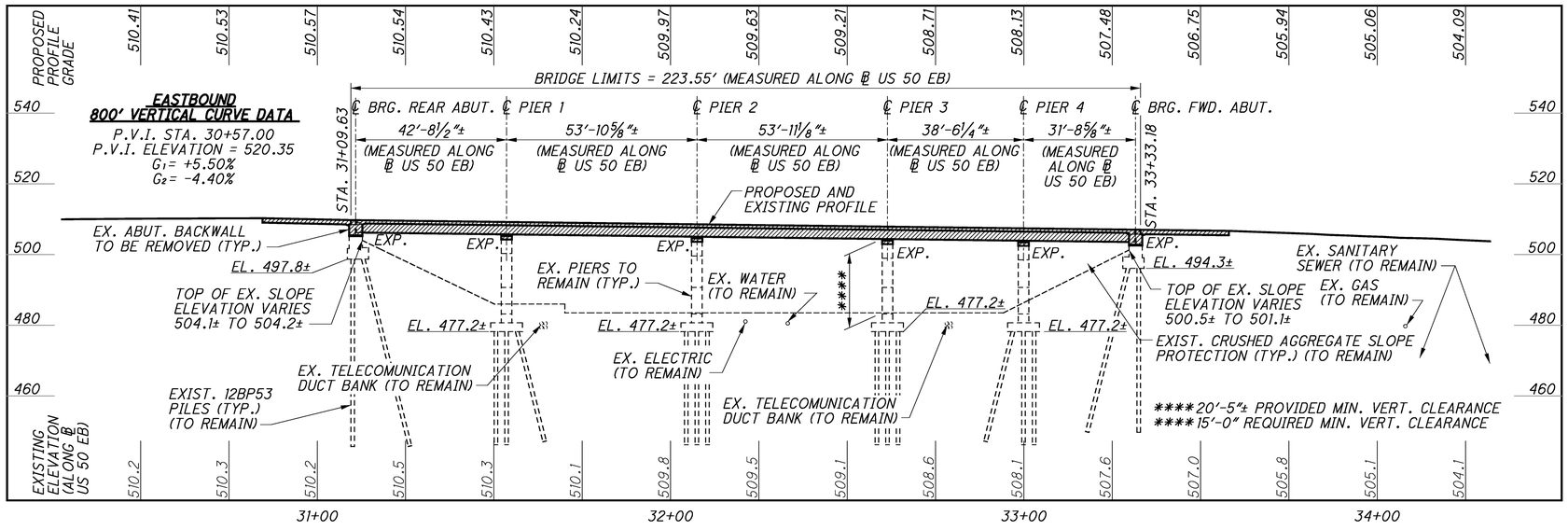


HORIZONTAL CURVE DATA

℄ US 50 WESTBOUND	℄ US 50 EASTBOUND
P.I. STA. 34+86.13±	P.I. STA. 34+94.01±
P.C. STA. 32+51.53±	P.C. STA. 31+08.04±
P.T. STA. 37+20.33±	P.T. STA. 38+79.46±
Δ = 5°51'36"± RT	Δ = 5°08'34"± RT
Dc = 1°15'00"± RT	Dc= 0°40'00"± RT
R = 4583.66'±	R = 8594.37'±
L = 468.80'±	L = 771.42'±
T = 234.60'±	T = 385.97'±
E = 6.00'±	E = 8.66'±

* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONSTR. DWG. RM-4.5
** 20' TRANSITION SEE PLAN INSERT SHEET, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

PLAN



PROFILE ALONG BASELINE US 50 EB BRIDGE

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

HORIZONTAL CLEARANCES NOT SHOWN TO UNDEFINED ACCESS DRIVE BENEATH BRIDGE.

FOR BENCHMARK INFORMATION, SEE SHEET 3/61.

DESIGN TRAFFIC:
2011 ADT = 30910 2011 ADTT = 1236
2031 ADT = 28580 2031 ADTT = 1143
DIRECTIONAL DISTRIBUTION = 0.51

EXISTING STRUCTURE

TYPE: FIVE SPAN CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE

SPANS: 41'-10 11/16"±, 53'-11 1/16"±, 53'-11 1/16"±, 38'-5¾"±, 30'-9 ⅜"± C/C BRGS. (MEASURED ALONG US 50 EB REFERENCE CHORD)

ROADWAY: VARIES F/F CURB (EB)

LOADING: CF 2000-(57) ADEQUATE FOR AASHTO ALTERNATIVE LOADINGS

WEARING SURFACE: 1 ¼" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: 7°58'25"± RF (EASTBOUND)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: 0°40'00"± CURVE RIGHT (EASTBOUND)

SUPERELEVATION: VARIES (EASTBOUND)

STRUCTURAL FILE NUMBER: 3102920

DATE BUILT: 1966±

DISPOSITION: EXISTING SUPERTRUCTURE TO BE REPLACED

PROPOSED STRUCTURE

PROPOSED WORK: REPLACE EXISTING SUPERSTRUCTURE, CONVERT ABUTMENTS TO SEMI-INTEGRAL, CONSTRUCT NEW APPROACH SLABS, MODIFY EXISTING PIERS TO ACCOMMODATE NEW ELASTOMERIC BEARINGS, PATCH CONCRETE SURFACES AS PER ITEM 519, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778.

TYPE: FIVE SPAN CONTINUOUS ROLLED BEAM A709 GRADE 50, WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON MODIFIED (SEMI-INTEGRAL) ABUTMENTS AND PIERS.

SPANS: 42'-8½"±, 53'-10⅝"±, 53'-11⅛"±, 38'-6¼"±, 31'-8⅝"± C/C BRG. (MEASURED ALONG ℄ US 50 EB)

ROADWAY: VARIES 54'-2⅜" TO 67'-9⅞" TOE/TOE PARAPET (EB)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

LOADING: HS25 CASE II AND ALTERNATE MILITARY 60 PSF FUTURE WEARING SURFACE

SKEW: FOR SKEW SEE PROPOSED EASTBOUND AND WESTBOUND LAYOUT ON SHEET 3/61.

APPROACH SLABS: 25'-0" LONG (AS-1-81)

ALIGNMENT: 0°40'00"± CURVE RIGHT (EASTBOUND)

SUPERELEVATION: VARIES (EASTBOUND)

COORDINATES: LATITUDE 39°06'00" N
LONGITUDE 84°32'06" W

DESIGN AGENCY
Trans Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE	REVIEWED	STRUCTURE FILE NUMBER
11/12/10	MSL	3102920

DRAWN	REVISED
JDG	

DESIGNED	CHECKED
SSM	PJP

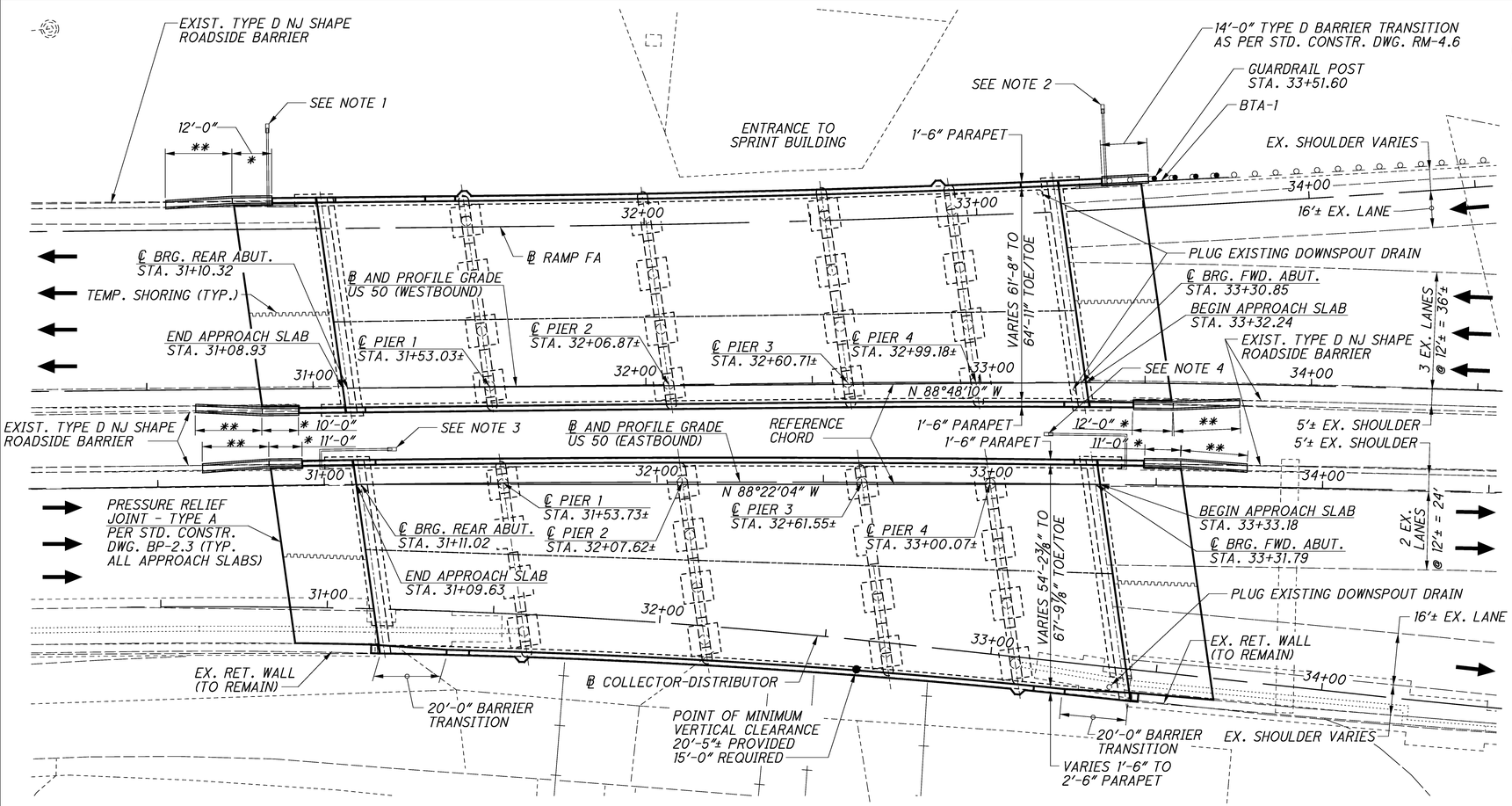
HAMILTON COUNTY
STA. 31+09.63
STA. 33+33.18

SITE PLAN
HAM-50-19.03
PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

2 / 61

324 / 442

11/10/2010 11:38:40 AM mtreiheisel
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSP001.dgn 11/10

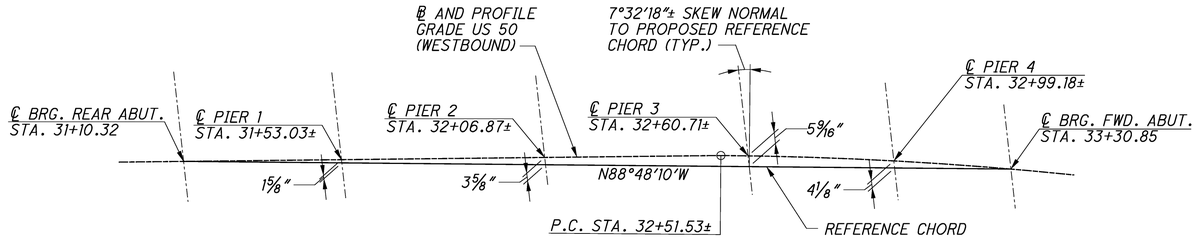


* SINGLE SLOPE BARRIER, TYPE D, AS PER STD. CONSTR. DWG. RM-4.5
** 20' TRANSITION SEE PLAN INSERT SHEET, NJ SHAPE TO SINGLE SLOPE BARRIER TRANSITION

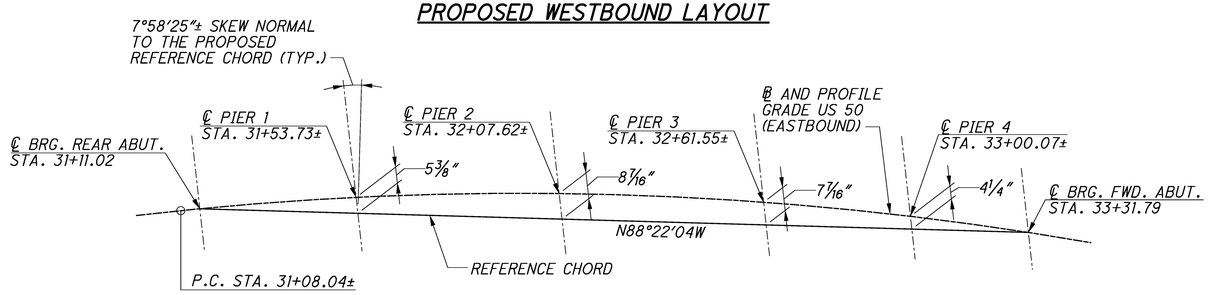
PLAN

HORIZONTAL CURVE DATA

℄ US 50 WESTBOUND	℄ US 50 EASTBOUND
P.I. STA. 34+86.13±	P.I. STA. 34+94.01±
P.C. STA. 32+51.53±	P.C. STA. 31+08.04±
P.T. STA. 37+20.33±	P.T. STA. 38+79.46±
Δ = 5°51'36"± RT	Δ = 5°08'34"± RT
Dc = 1°15'00"± RT	Dc= 0°40'00"± RT
R = 4583.66'±	R = 8594.37'±
L = 468.80'±	L = 771.42'±
T = 234.60'±	T = 385.97'±
E = 6.00'±	E = 8.66'±



PROPOSED WESTBOUND LAYOUT



PROPOSED EASTBOUND LAYOUT

BENCHMARK DATA

SURVEY BM STA. 35+36.16 (℄ US 50 (EB)), ELEV. 498.82, OFFSET 76.18' RT.
IRON PIN SET NEAR EXISTING COLLECTOR-DISTRIBUTOR SHOULDER.

SURVEY BM STA. 35+43.41 (℄ US 50 (EB)), ELEV. 503.12, OFFSET 81.70' LT.
IRON PIN SET NEAR EXISTING US 50 (WB) SHOULDER.

SURVEY BM STA. 36+02.48 (℄ US 50 (EB)), ELEV. 496.98, OFFSET 77.64' RT.
IRON PIN SET NEAR EXISTING COLLECTOR-DISTRIBUTOR SHOULDER.

FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 4/442

NOTES:

1. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1
   INVERT EL. 500.0, ℄ US 50 (WB) STA. 30+87.00, 78' LT.
2. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1
   INVERT EL. 497.5, ℄ US 50 (WB) STA. 33+36.50, 82' LT.
3. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1
   INVERT EL. 500.0, ℄ US 50 (EB) STA. 31+20.50, 11' LT.
4. PRECAST REINFORCED CONCRETE OUTLET, DM-1.1
   INVERT EL. 497.0, ℄ US 50 (EB) STA. 33+17.50, 15' LT.
5. FOR SCUPPER LOCATIONS, SEE DECK PLAN SHEETS 43/61, 44/61, 46/61 AND 47/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102920 (L)	
		3102920 (R)	

GENERAL PLAN
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

3 / 61

325 / 442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CGP001.dgn 11/10/2010 11:38:44 AM mtreineisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
AS-1-81, REVISED 07-19-02 GSD-1-96, REVISED 07-19-02
SICD-1-96, REVISED 07-19-02 SBR-1-99, REVISED 07-19-02
PCB-91, REVISED 07-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
898 DATED 10-15-10

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: HS25, CASE II AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) OF 60 LBS/SQ.FT.

DESIGN DATA:
CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60 KSI
PROPOSED STRUCTURAL STEEL - ASTM A709 GRADE 50 YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

MAINTENANCE OF TRAFFIC: TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

UTILITY LINES: THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS: CONSTRUCTION PLANS FOR EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVILABLE FOR REFERENCE.

NON-USE OF ASBESTOS-CONTAINING MATERIALS: THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS.THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

REMOVAL METHODS: THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN-UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN-UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ASBESTOS REMOVAL: WHEN REMOVING EXISTING BRIDGE DECK AND ABUTMENT BACKWALLS, THE EXISTING LIGHTING CONDUITS MAY BE ASBESTOS LINED CONDUIT. THE EXISTING ASBESTOS LINED CONDUIT IS IDENTIFIED IN THE BRIDGE PLANS. IF IT IS UNKNOWN WHETHER THE EXISTING CONDUIT IS ASBESTOS LINED, TEST THE PIPE BY USING A DEPARTMENT PREQUALIFIED ENVIRONMENTAL CONSULTANT TO DETERMINE IF IT IS AN ASBESTOS LINED CONDUIT. IF IT IS DETERMINED THAT THE CONDUIT CONTAINS ASBESTOS, THEN A CERTIFIED ASBESTOS CONTRACTOR MUST PERFORM THE REMOVAL. DISPOSE OF ALL ASBESTOS LINED CONDUIT AT A SOLID WASTE FACILITY THAT IS LICENSED BY THE LOCAL HEALTH DEPARTMENT AND PERMITTED BY THE OEPA. UNLESS THE CONDUIT IS SPECIFICALLY DENOTED IN THE CONTRACT DOCUMENTS AS ITEM 202 ASBESTOS PIPE REMOVAL, PERFORM THE WORK UNDER 109.05.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (CONT.):

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR THE ABUTMENTS, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 595B-17778, LIGHT NEUTRAL.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN: OUTSIDE FACE AND BOTTOM FLANGES OF THE FASCIA GIRDERS ARE TO BE PAINTED FEDERAL COLOR NUMBER 27038, (BLACK, 30% SHEEN). ALL REMAINING BRIDGE SUPERSTRUCTURE ELEMENTS ARE TO BE PAINTED FEDERAL COLOR NUMBER 10324 (DARK NEUTRAL).

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN: INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN (CONT.):

DESCRIPTION OF TEST	ASTM	REQUIREMENT
THICKNESS, INCHES	D751	0.094 +/- 0.01
BREAKING STRENGTH, GRAB, LBS, MINIMUM	D751	700 X 700 (LONG. X TRANS.)
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS, MINIMUM	D751	9
BURST STRENGTH, PSI, MINIMUM	D751	1400
HEAT AGING, 70 HR, 212° F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40° F, BEND AROUND ¼" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CGN001.dgn 11/10/2010 11:38:46 AM mtreinelsel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242
DATE 11/12/10
REVIEWED MSL
STRUCTURE FILE NUMBER 3102820 (L) 3102820 (R)
DRAWN JDG
REVISED
DESIGNED MTN
CHECKED SSM

GENERAL NOTES
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

STRUCTURE GENERAL NOTES (CONT.)

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN: FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN: THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

DECK PLACEMENT DESIGN ASSUMPTIONS:
THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 1.02 KIPS FOR A TOTAL MACHINE LOAD OF 8.2 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48 IN.

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT:
DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS USING PRECOMPRESSED EXPANSION JOINT FILLER IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

MATERIALS: THE MATERIAL SHALL BE PRECOMPRESSED EXPANSION JOINT FILLER SUCH AS THE FOLLOWING LIST OR AN APPROVED EQUAL;

2½" WIDE ISO-FLEX HYDROSEAL FROM LYMTAL INTERNATIONAL, INC.
MM EIF-200 EXPANSION JOINT SYSTEM FROM MM SYSTEMS CORP.
2½" WIDE WABO EVAZOTE UV FROM WATSON BOWMAN ACME CORP.
60mm ZED SEAL FROM RJ WATSON INC.

THESE SYSTEMS GENERALLY CONSIST OF TWO COMPONENTS;

1) PREFORMED IMPERMEABLE SELF EXPANDING CLOSED CELL FOAM JOINT FILLER.
2) A ONE OR TWO COMPONENT EPOXY SEALANT.

THE 2½" WIDE ISO-FLEX HYDROSEAL CAN BE OBTAINED FROM;
LYMTAL INTERNATIONAL, INC.
4150 SOUTH LAPEER ROAD
LAKO ORION, MI 48359
PHONE NUMBER: 248-373-8100
WEBSITE: WWW.LYMTAL.COM

THE MM EIF-200 EXPANSION JOINT SYSTEM CAN BE OBTAINED FROM;
MM SYSTEMS CORP.
50 MM WAY
PENDERGRASS, GA 30567
PHONE NUMBER: 866-506-6929
WEBSITE: WWW.MMSYSTEMSCORP.COM

THE 2½" WIDE WABO EVAZOTE UV CAN BE OBTAINED FROM;
WATSON BOWMAN ACME CORPORATION
95 PINEVIEW DRIVE
AMHERST, NY 14228
PHONE NUMBER: 800-677-4922
WEBSITE: WWW.WBACORP.COM

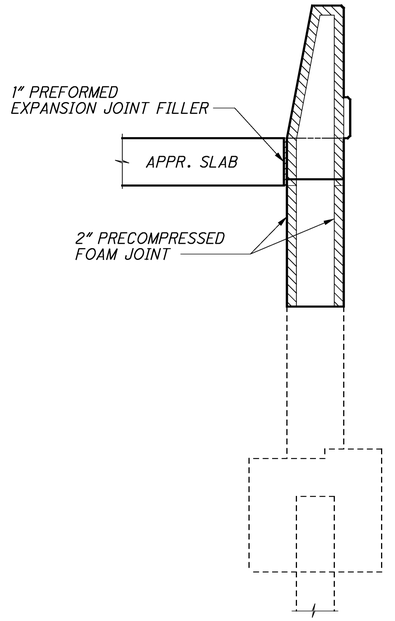
THE 60mm ZED SEAL CAN BE OBTAINED FROM;
RJ WATSON BRIDGE & STRUCTURAL ENGINEERED SYSTEMS
78 JOHN GLENN DRIVE
AMHERST, NY 14228
PHONE NUMBER: 716-691-3301
WEBSITE: WWW.RJWATSON.COM

ALL MATERIAL SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

SURFACE PREPARATION: THE FACES TO WHICH THE SEAL MUST ADHERE SHALL BE DRY, BLASTED CLEAN, AND BE FREE OF FOREIGN MATERIAL SUCH AS FORM RELEASING AGENTS, CURING AGENTS, GREASE, DIRT, DUST, AND ANY OTHER MATERIAL DETRIMENTAL TO ADHESION OF THE SEALANT.

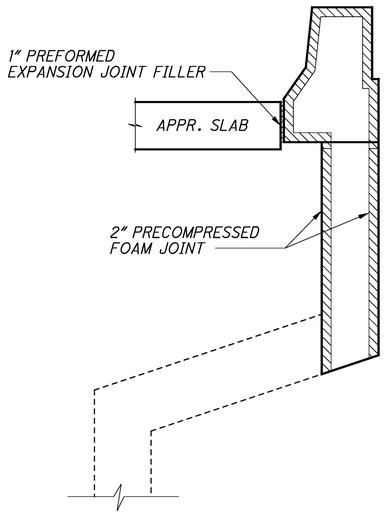
INSTALLATION: THE JOINT FILLER SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS. CONTRACTOR WILL PROVIDE THE FIELD ENGINEER WITH THE MANUFACTURERS INSTALLATION SPECIFICATIONS SEVEN (7) DAYS PRIOR TO THE INSTALLATION.

PAYMENT FOR LABOR, MATERIALS, AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT.



PRECOMPRESSED FOAM JOINT DETAIL A

TYPICAL AT WINGWALLS
A, B, C, D, E, AND G



PRECOMPRESSED FOAM JOINT DETAIL B

RIGHT BRIDGE BETWEEN THE REAR AND FORWARD ABUTMENTS AND THE RETAINING WALLS ON THE SOUTH SIDE

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CGN002.dgn 11/10/2010 11:38:47 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912 (L) 3102920 (R)	

GENERAL NOTES
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

ESTIMATED QUANTITIES - HAM-50-1961L - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CALCULATED BY: SSM — CHECKED BY: JDG

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	4
202	22900	343	SQ YD	APPROACH SLAB REMOVED				343	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
509	10000	155341	POUND	EPOXY COATED REINFORCING STEEL	2598	6344	146399		
510	10001	564	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	42	522			4
512	10100	1671	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	93	958	620		
512	10300	50	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			50		
512	33000	14	SQ YD	TYPE 2 WATERPROOFING	14				
513	10260	267995	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			267995		
513	20000	6669	EACH	WELDED STUD SHEAR CONNECTORS			6669		
514	00060	19478	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			19478		
514	00067	19478	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			19478		4
516	13900	52	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	52				
516	14021	128	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	128				4
516	14600	73	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 2" PRECOMPRESSED FOAM JOINT	73				5
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2 13/16" WITH 11"x14"x1 13/16" BEVELED LOAD PLATE)	9				
516	44101	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x13"x2 13/16" WITH 11"x14"x2" BEVELED LOAD PLATE)	9				
516	44101	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11"x16"x2 5/8" WITH 12"x17"x2 1/4" BEVELED LOAD PLATE)		18			
516	44101	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (11"x16"x2 5/8" WITH 12"x17"x2 3/8" BEVELED LOAD PLATE)		18			
518	12200	5	EACH	SCUPPERS, INCLUDING SUPPORTS			5		
518	21201	82	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	82				14
518	40000	143	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	143				
518	40010	66	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	66				
604	36600	2	EACH	PRECAST REINFORCED CONCRETE OUTLET				2	
898	10211	482	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN			482		5
898	10705	353	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN				353	5, 16, 18, 54
898	11001	81	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	9		72		45
898	20110	31	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER CAP)		31			
898	20150	12	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	12				

V:\DGN\HAM-20082\Part 2\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LEQ001.dgn 07-JAN-2011 10:54AM tsconlon

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102912

ESTIMATED QUANTITIES (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

ESTIMATED QUANTITIES - HAM-50-1961R - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG BR

CALCULATED BY: SSM — CHECKED BY: JDG

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	4
202	22900	336	SQ YD	APPROACH SLAB REMOVED				336	
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
509	10000	159419	POUND	EPOXY COATED REINFORCING STEEL	4595	6071	148753		
510	10001	648	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN	154	494			4
512	10100	1720	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	96	957	667		
512	10300	50	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			50		
512	33000	14	SQ YD	TYPE 2 WATERPROOFING	14				
513	10260	229645	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3			229645		
513	20000	5982	EACH	WELDED STUD SHEAR CONNECTORS			5982		
514	00060	17528	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			17528		
514	00067	17528	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			17528		4
516	13600	27	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	27				
516	13900	79	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	79				
516	14021	132	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN	132				4
516	14600	84	FT	STRUCTURAL JOINT OR JOINT SEALER MISC.: 2" PRECOMPRESSED FOAM JOINT	84				5
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (9"x15"x2 13/16" WITH 10"x16"x2 1/8" BEVELED LOAD PLATE)	8				
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (9"x15"x2 13/16" WITH 10"x16"x2 3/8" BEVELED LOAD PLATE)	8				
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x18"x2 5/8" WITH 11"x19"x2 11/16" BEVELED LOAD PLATE)		8			
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x18"x2 5/8" WITH 11"x19"x2 13/16" BEVELED LOAD PLATE)		8			
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x18"x2 5/8" WITH 11"x19"x2 3/4" BEVELED LOAD PLATE)		8			
516	44101	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (10"x18"x2 5/8" WITH 11"x19"x2 9/16" BEVELED LOAD PLATE)		8			
518	12200	2	EACH	SCUPPERS, INCLUDING SUPPORTS			2		
518	21201	87	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	87				14
518	40000	133	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	133				
518	40010	67	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	67				
518	51201	21	FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN		21			56
604	36600	2	EACH	PRECAST REINFORCED CONCRETE OUTLET				2	
898	10211	511	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN			511		5
898	10705	341	SQ YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15"), AS PER PLAN				341	5, 21, 23, 55
898	11001	80	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	6		74		48
898	20110	32	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER CAP)		32			
898	20150	44	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	44				

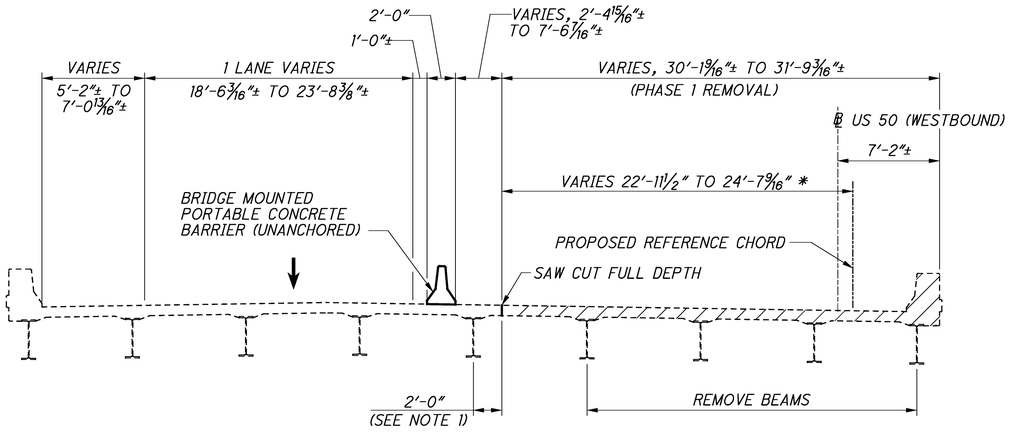
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961REQ001.dgn 11/10/2010 11:38:50 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

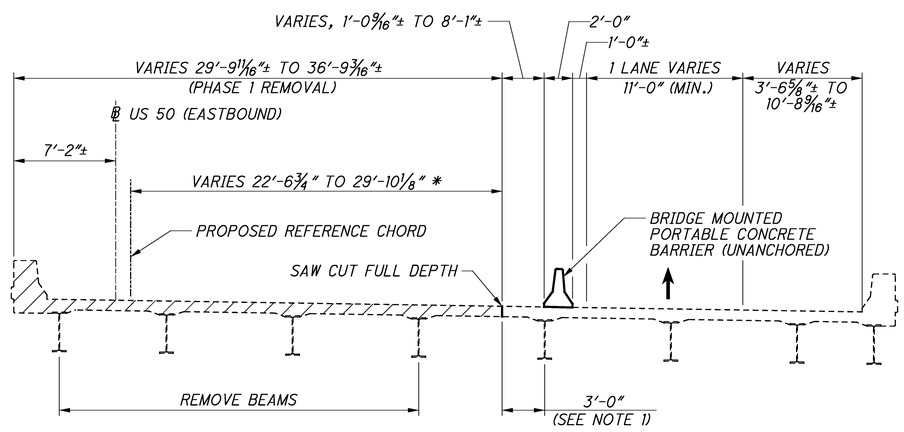
DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102920

ESTIMATED QUANTITIES (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736



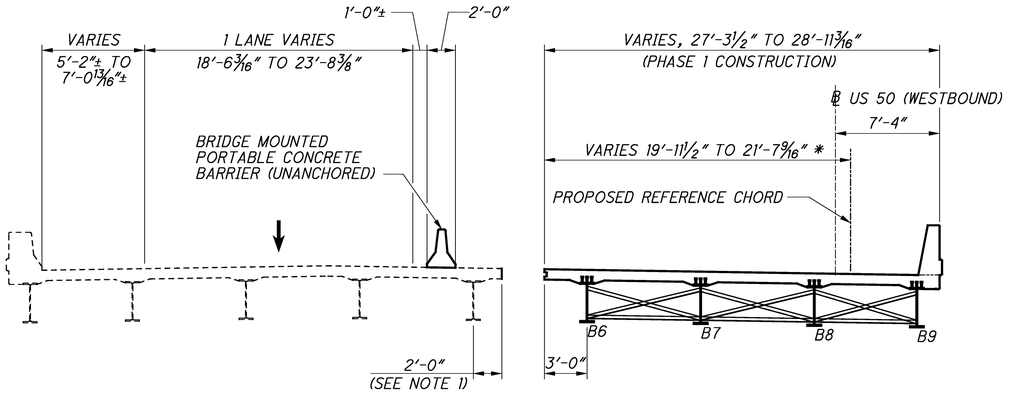
LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



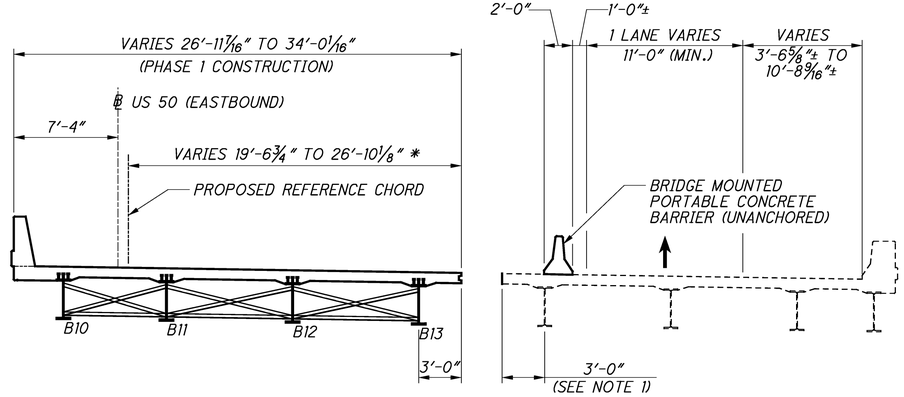
RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 1 REMOVAL

* FOR REFERENCE CHORD LOCATION, SEE GENERAL PLAN SHEET 3/61 .



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 1 CONSTRUCTION

SEQUENCE OF CONSTRUCTION:

PHASE 1

1. INSTALL PORTABLE CONCRETE BARRIER ON BRIDGE DECK AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. INSTALL TEMPORARY SHORING NECESSARY TO ALLOW EXCAVATION FOR PHASE 1 CONSTRUCTION.
3. REMOVE SUPERSTRUCTURE, PORTIONS OF SUBSTRUCTURE (ABUTMENTS AND WINGWALLS), AND PORTIONS OF APPROACH SLAB TO LIMITS SHOWN IN PHASE 1 REMOVAL.
4. CONSTRUCT NEW CONCRETE CAP ON EXISTING PIERS, TO PHASE 1 LIMITS.
5. INSTALL NEW ROLLED STEEL BEAMS, CROSSFRAMES, AND BEARINGS.
6. CONSTRUCT THE DECK SLAB, CORRESPONDING END DIAPHRAGMS, AND APPROACH SLAB TO PHASE 1 LIMITS.
7. CONSTRUCT THE INSIDE BRIDGE DEFLECTOR PARAPETS.

PHASE 2

8. RELOCATE PORTABLE CONCRETE BARRIERS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
9. REMOVE SUPERSTRUCTURE, PORTIONS OF SUBSTRUCTURE (ABUTMENTS AND WINGWALLS), AND PORTIONS OF APPROACH SLABS TO LIMITS SHOWN IN PHASE 2 REMOVAL.
10. CONSTRUCT NEW CONCRETE CAP ON EXISTING PIERS, TO PHASE 2 LIMITS.
11. INSTALL NEW BEARINGS, ROLLED STEEL BEAMS, AND CROSSFRAMES BETWEEN BEAMS B1 THROUGH B5 ON THE LEFT BRIDGE AND BEAMS B14 THROUGH B17 ON THE RIGHT BRIDGE.
12. CONSTRUCT THE DECK SLAB AND CORRESPONDING END DIAPHRAGMS TO PHASE 2 LIMITS.
13. INSTALL CROSSFRAMES BETWEEN BEAMS B5 AND B6 ON THE LEFT BRIDGE AND BEAMS B13 AND B14 ON THE RIGHT BRIDGE.
14. CONSTRUCT THE OUTSIDE BRIDGE DEFLECTOR PARAPETS.
15. REMOVE TEMPORARY SHORING AND CONSTRUCT THE REMAINING APPROACH SLABS.
16. REMOVE PORTABLE CONCRETE BARRIERS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. CUT LINE IS A CONSTANT DIMENSION FROM ℄ EXISTING BEAM ALONG ENTIRE LENGTH OF BRIDGE.
2. PORTABLE CONCRETE BARRIER SHALL BE INCLUDED WITH ITEM 622 FOR PAYMENT.
3. PORTABLE CONCRETE BARRIER SHALL CONFORM TO STANDARD DRAWING PCB-91.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912 (L) 3102920 (R)	

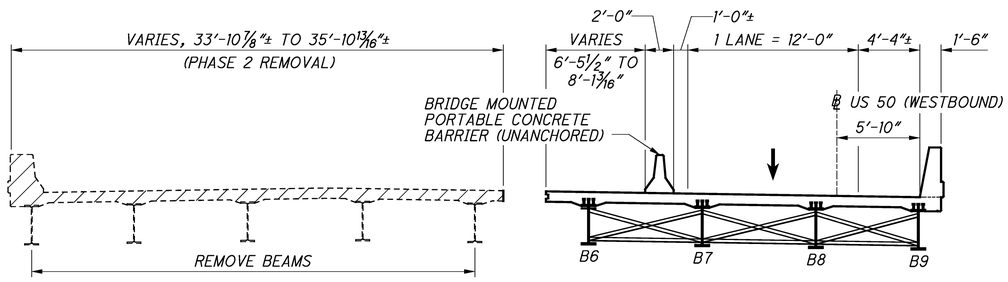
PHASE 1 REMOVAL AND CONSTRUCTION DETAILS
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

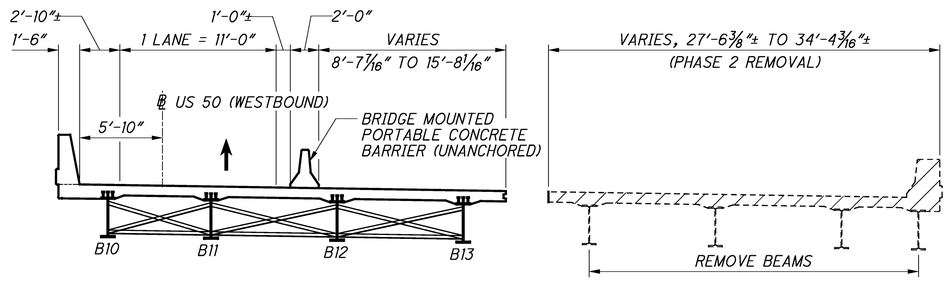
8 / 61

330
442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CPC001.dgn 11/10/2010 11:38:51 AM mtreiheisel



LEFT BRIDGE
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 2 REMOVAL

LEFT BRIDGE
(WESTBOUND, LOOKING EAST)

RIGHT BRIDGE
(EASTBOUND, LOOKING EAST)

PHASE 2 CONSTRUCTION

* FOR REFERENCE CHORD LOCATION, SEE GENERAL PLAN SHEET 3/61 .

LEGEND

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. FOR ADDITIONAL PHASE CONSTRUCTION INFORMATION, SEE SHEET 8/61 .

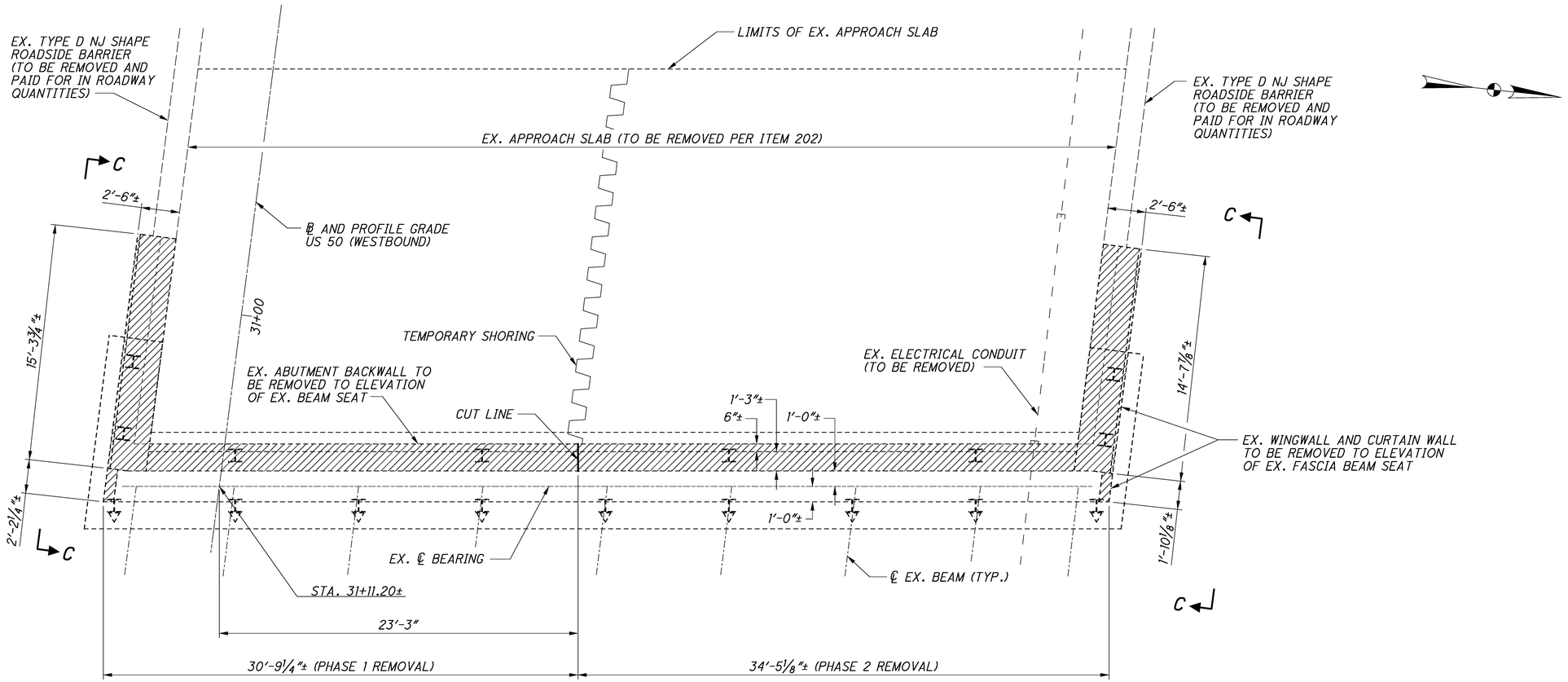
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912 (L) 3102920 (R)	

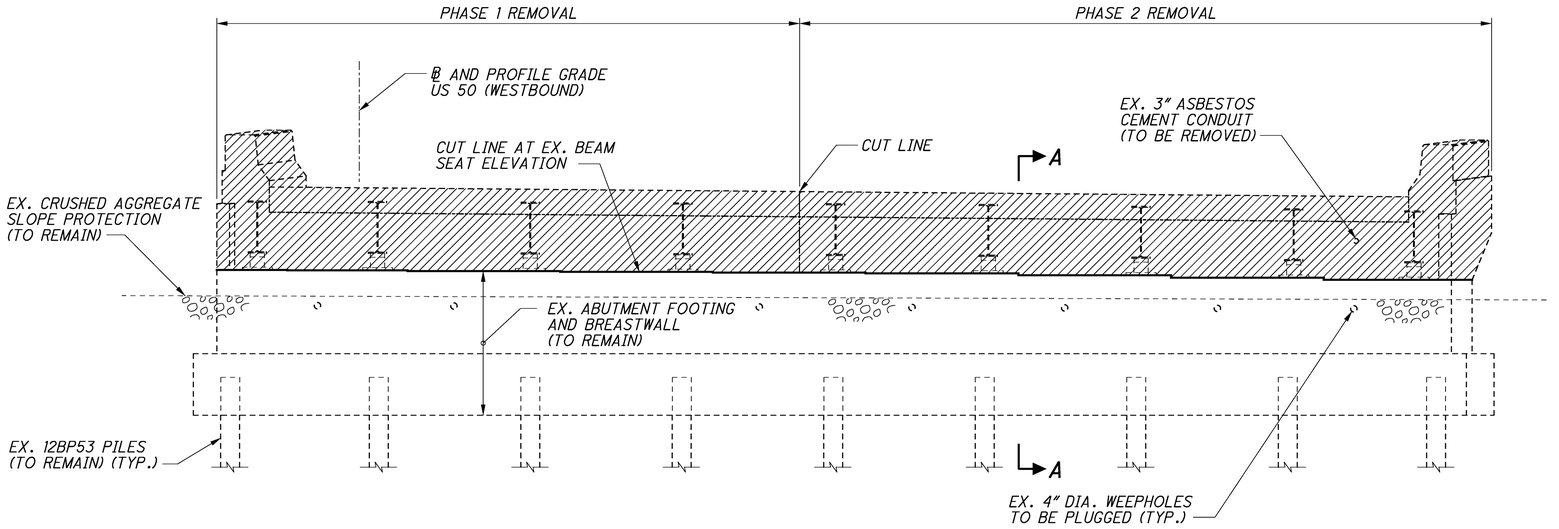
PHASE 2 REMOVAL AND CONSTRUCTION DETAILS
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CPC002.dgn 11/10/2010 11:38:53 AM mtneiheisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/61 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/61 FOR SECTION A-A AND VIEW C-C.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912	

REAR ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)

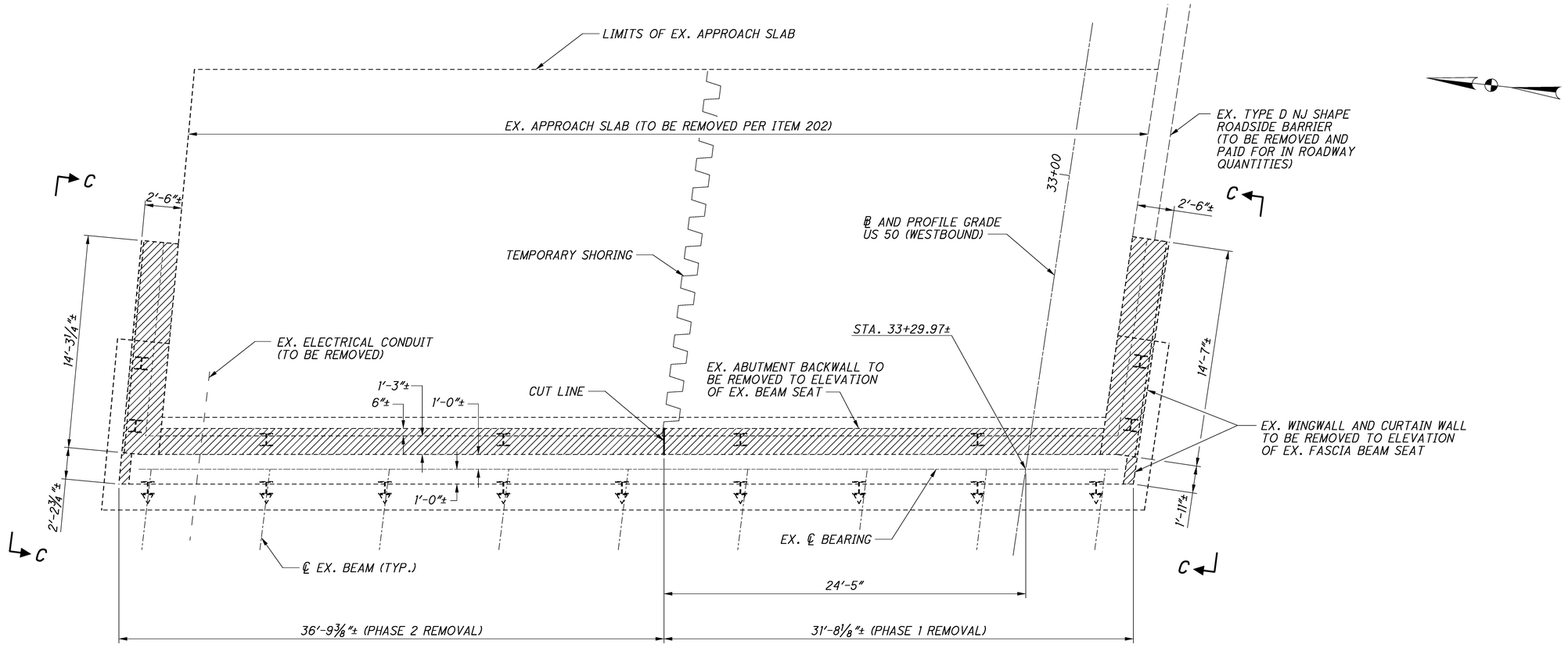
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

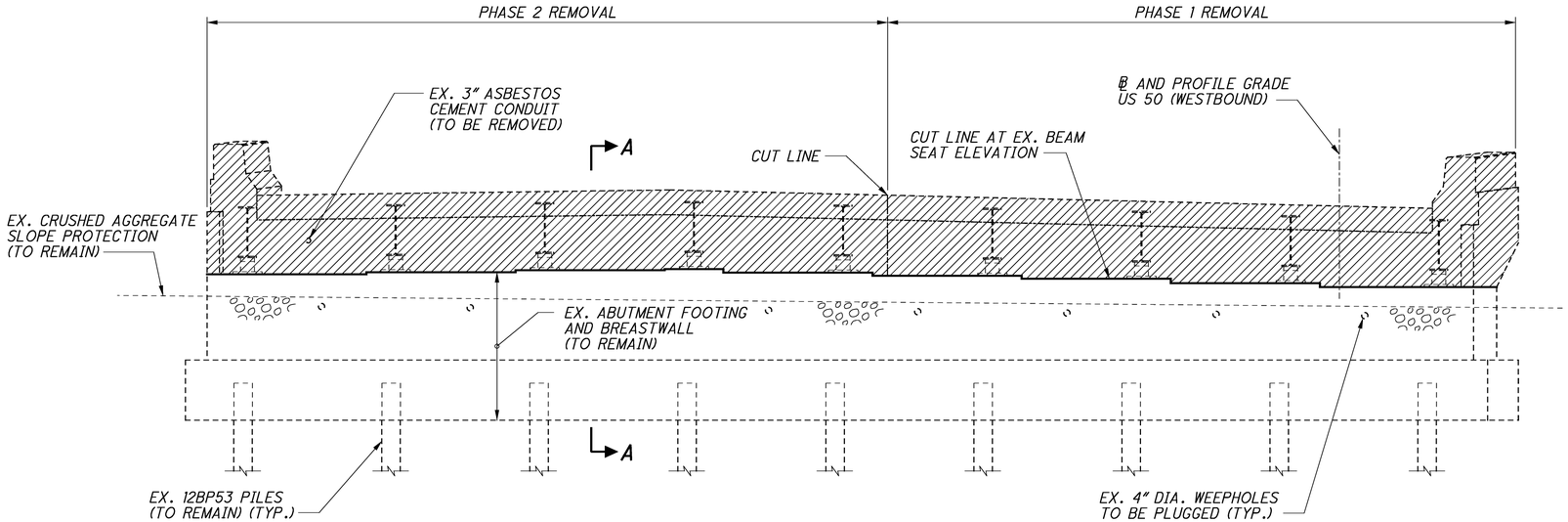
10 / 61

332
442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LREO01.dgn 11/10/2010 11:38:54 AM mtneiheisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/61 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/61 FOR SECTION A-A AND VIEW C-C.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

FORWARD ABUTMENT REMOVAL DETAILS (LEFT BRIDGE)

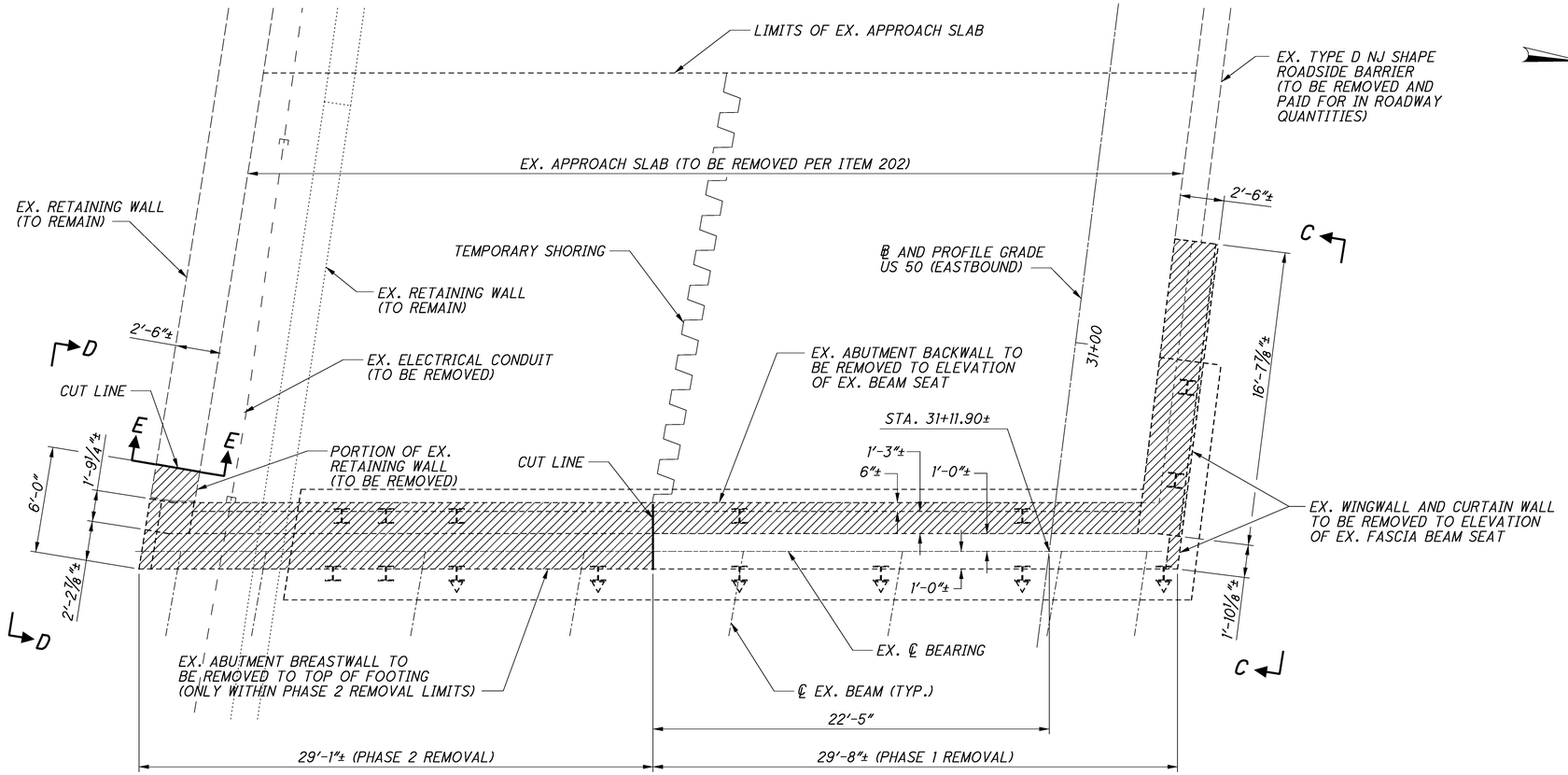
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

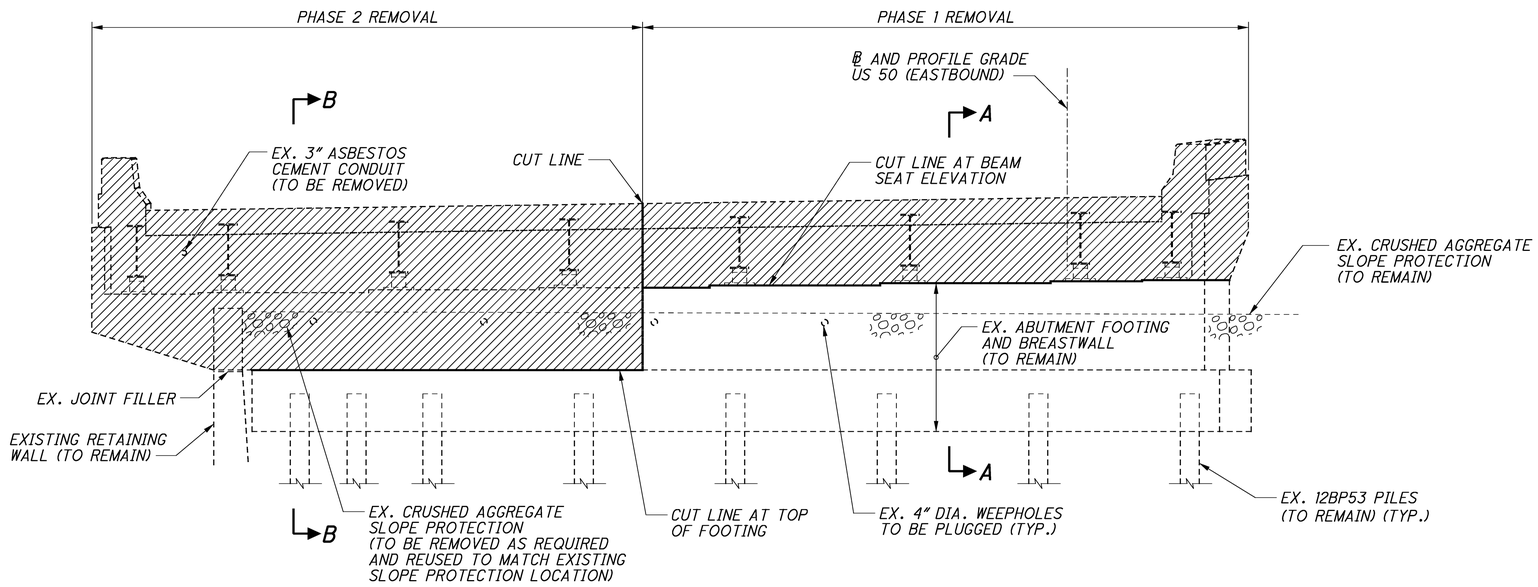
DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912	

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LRE002.dgn 11/10/2010 11:38:56 AM mtreiheisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/61 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/61 FOR SECTION A-A, SECTION B-B, VIEW C-C VIEW D-D AND SECTION E-E.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS AND EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102920	

REAR ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)

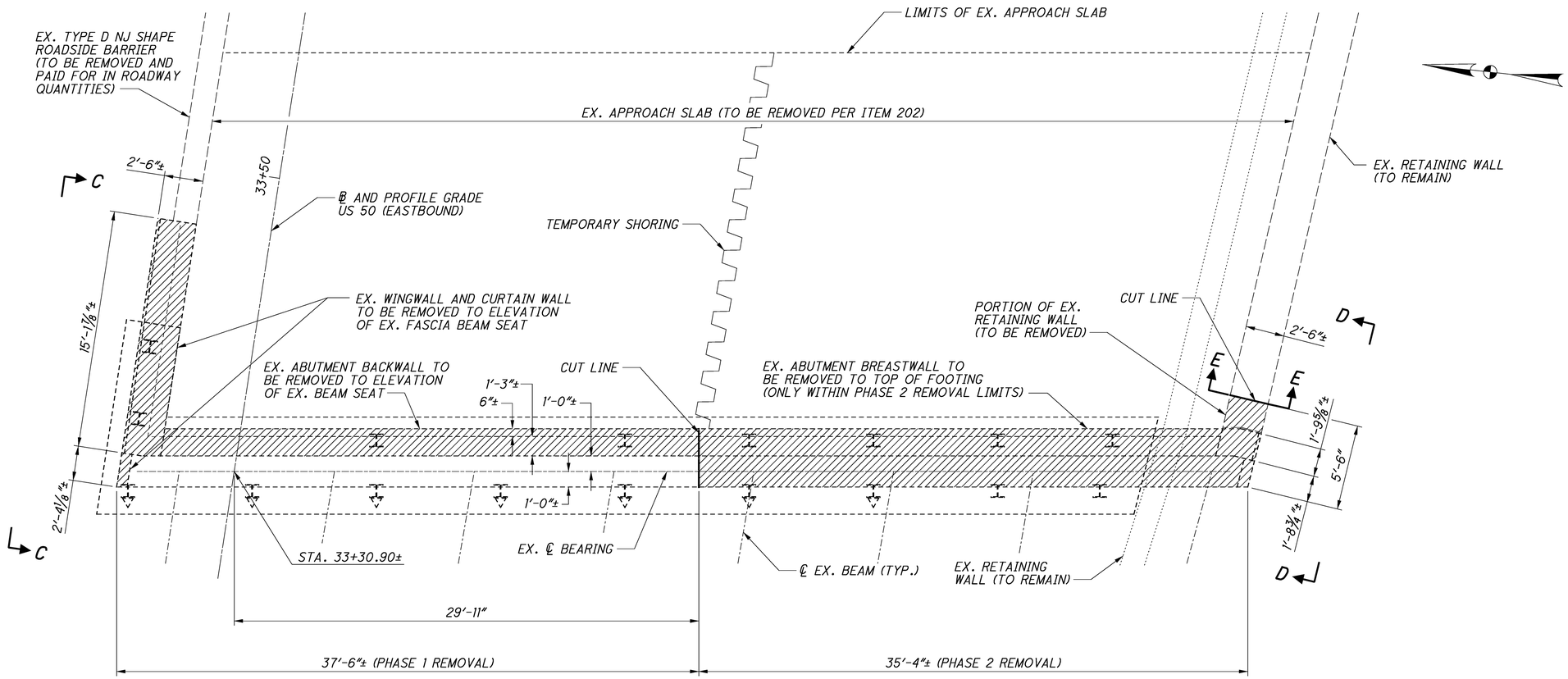
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

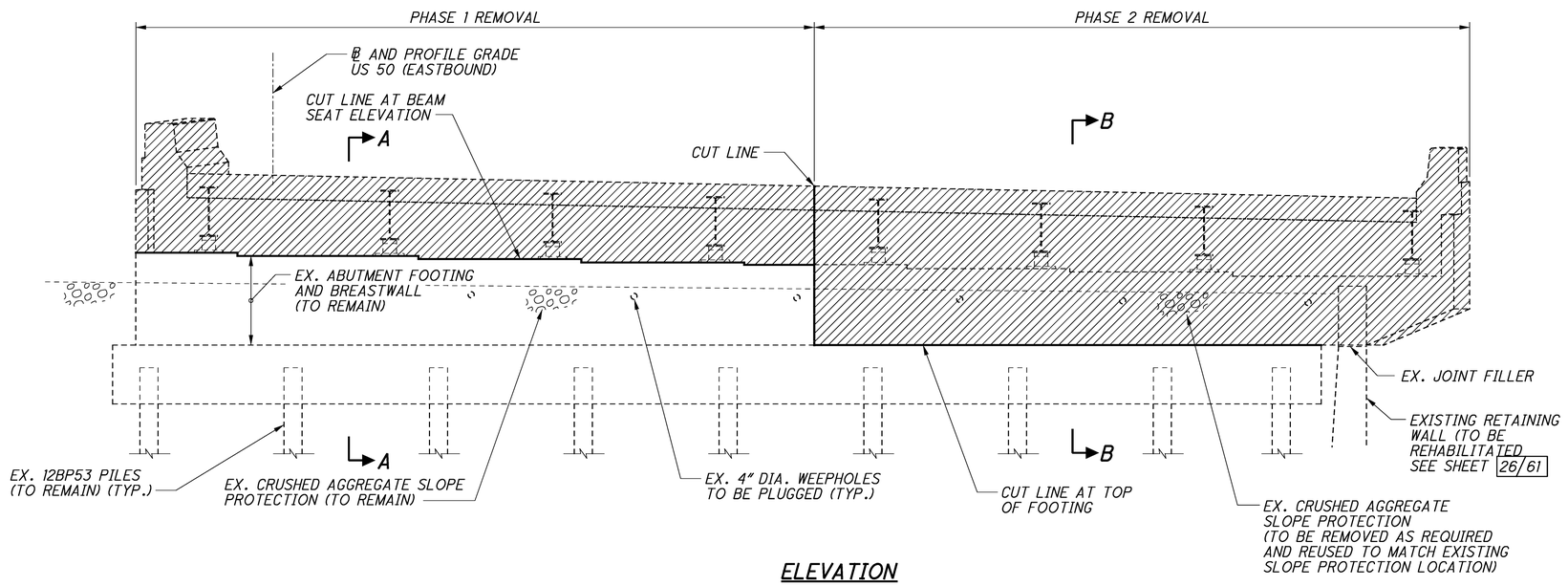
12 / 61

334
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RRE001.dgn 11/10/2010 11:38:57 AM mtreiheisel



PLAN



ELEVATION

LEGEND:

- EXISTING VERTICAL 12BP53 PILE
- EXISTING 1:4 BATTERED 12BP53 PILE
- LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. SEE SHEET 4/61 FOR STRUCTURE GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED.
2. SEE SHEET 14/61 FOR SECTION A-A, SECTION B-B, VIEW C-C, VIEW D-D AND SECTION E-E.
3. ALL EXCAVATION REQUIRED TO REMOVE PORTIONS OF THE EXISTING ABUTMENT AS SHOWN ON THIS SHEET AND REQUIRED TO PLACE PROPOSED POROUS BACKFILL SHALL BE INCIDENTAL TO ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT. ADDITIONAL BACKFILL BEHIND THE ABUTMENT SHALL BE AS PER ITEM 503, UNCLASSIFIED EXCAVATION.
4. TEMPORARY SHORING SHALL BE PAID FOR UNDER ITEM 503 COFFERDAMS EXCAVATION BRACING.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102920	

FORWARD ABUTMENT REMOVAL DETAILS (RIGHT BRIDGE)

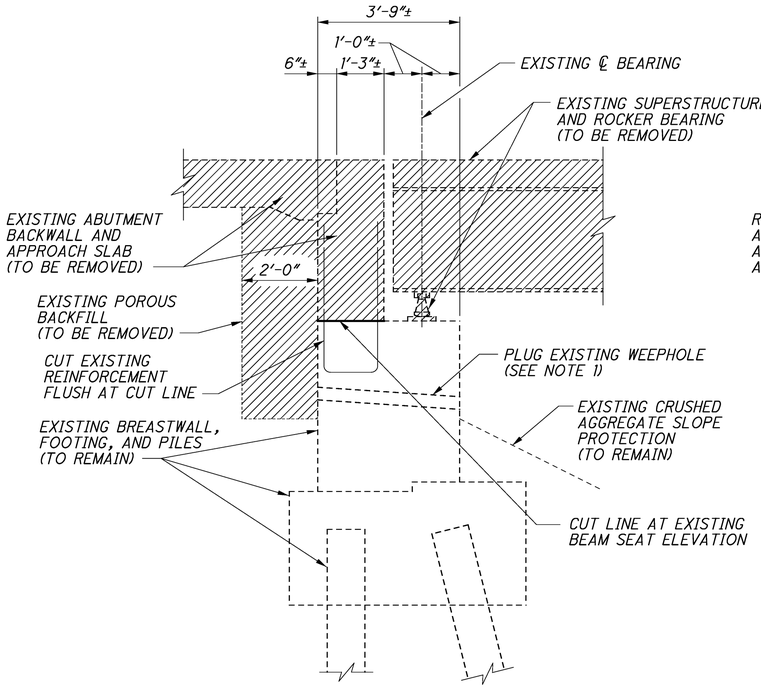
HAM-50-19.03
PID No. 75736

HAM-50-19.61R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

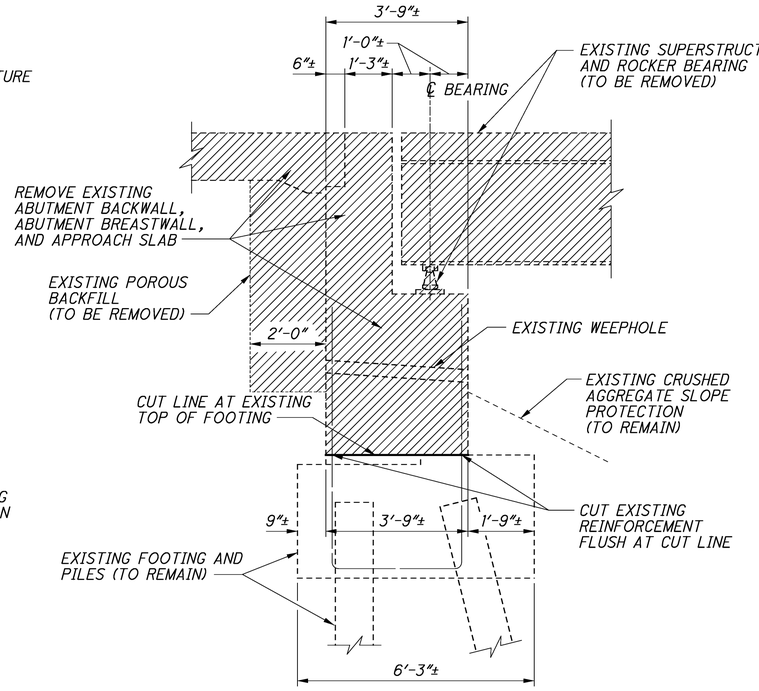
13 / 61

335
442

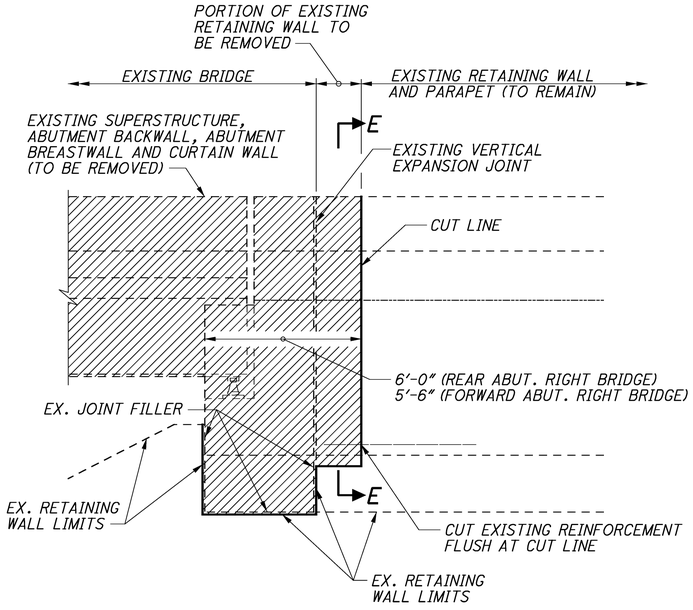
C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RRE002.dgn 11/10/2010 11:38:59 AM mtreiheisel



SECTION A-A

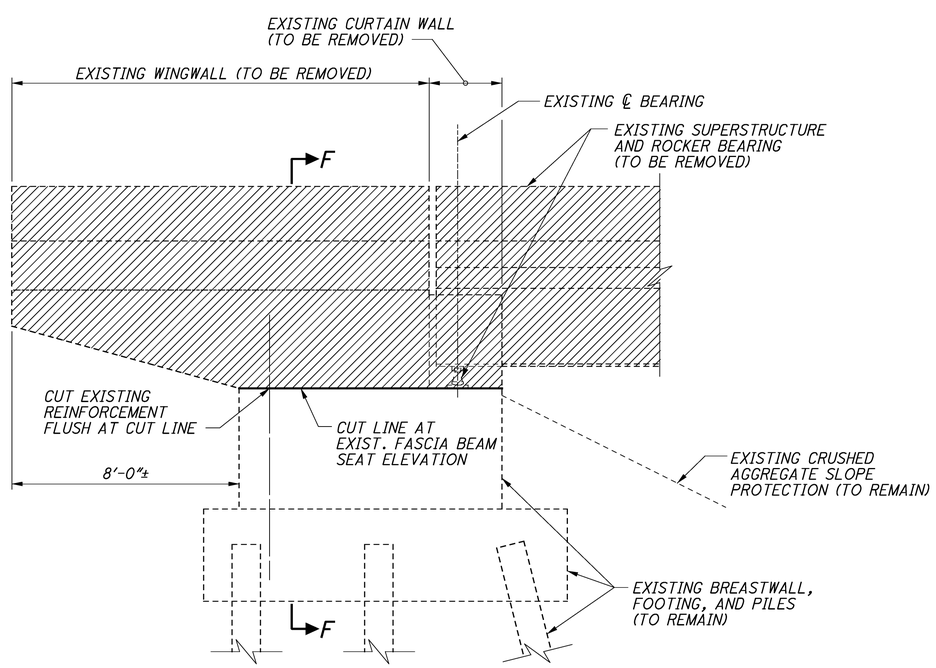


SECTION B-B



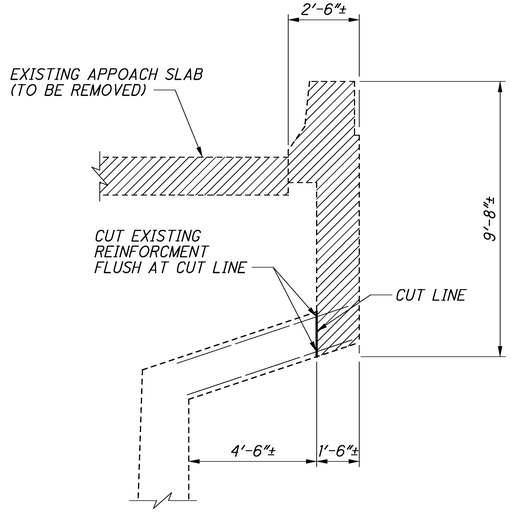
VIEW D-D

(FORWARD ABUTMENT SHOWN
REAR ABUTMENT OPPOSITE VIEW)



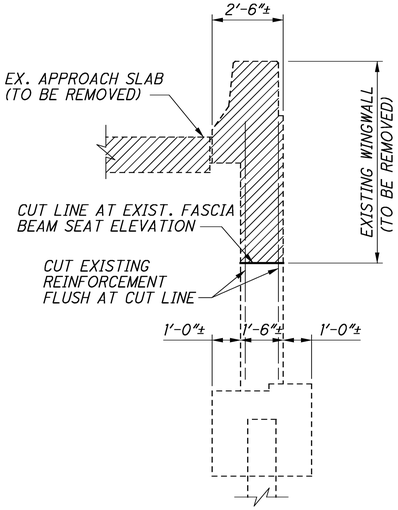
VIEW C-C

(NORTH WINGWALL OF FORWARD ABUTMENT LEFT BRIDGE,
SOUTH WINGWALL OF REAR ABUTMENT LEFT BRIDGE AND
NORTH WINGWALL OF FORWARD ABUTMENT RIGHT BRIDGE SHOWN;
SOUTH WINGWALL OF FORWARD ABUTMENT LEFT BRIDGE,
NORTH WINGWALL OF REAR ABUTMENT LEFT BRIDGE AND
NORTH WINGWALL OF REAR ABUTMENT RIGHT BRIDGE OPPOSITE VIEW)



SECTION E-E

(FORWARD ABUTMENT SHOWN
REAR ABUTMENT OPPOSITE VIEW)



SECTION F-F

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. PLUGGING EXISTING WEEPHOLES SHALL BE INCLUDED WITH ITEM 518, POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN FOR PAYMENT.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102912 (L) 3102920 (R)	

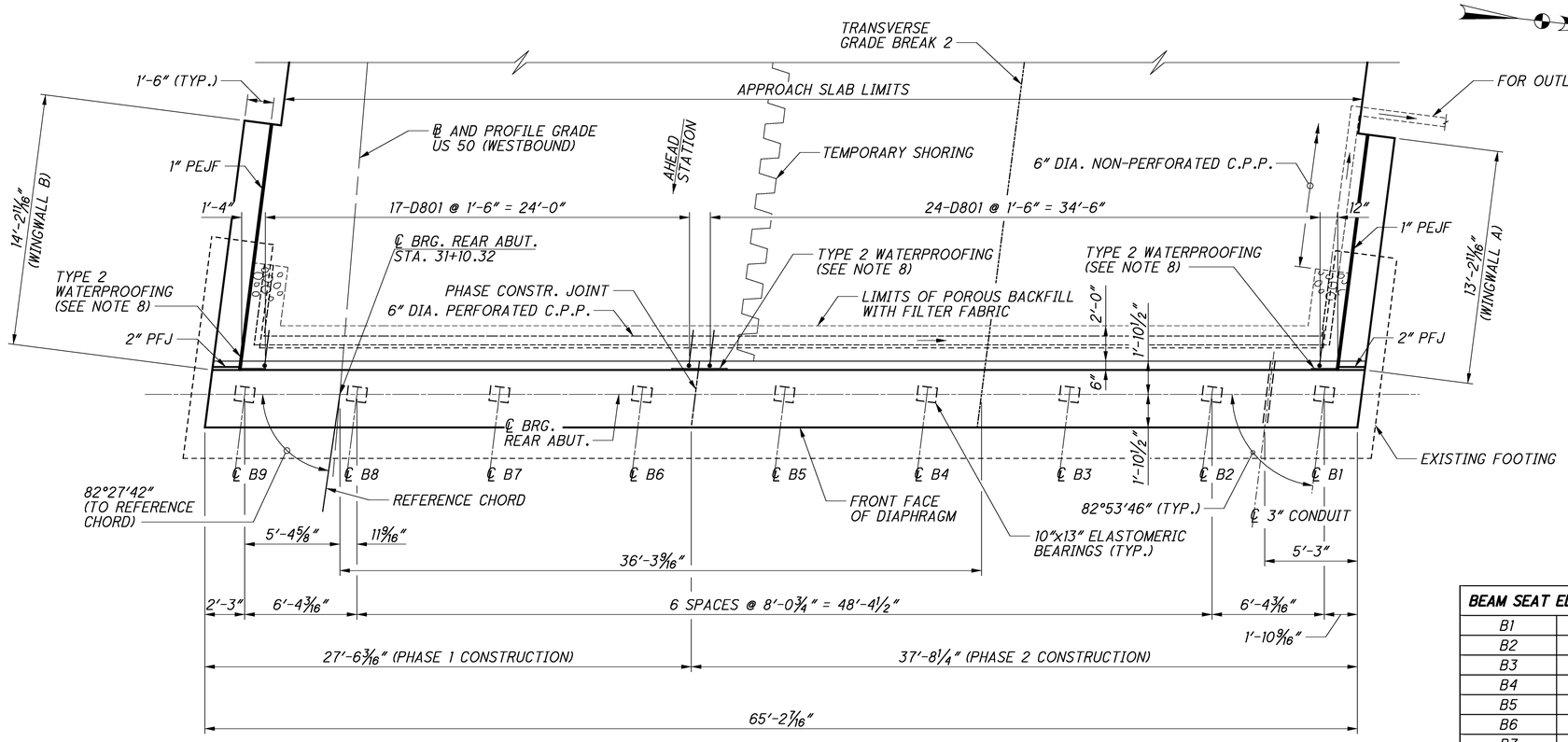
ABUTMENT REMOVAL DETAILS (LEFT AND RIGHT BRIDGE)
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

14 / 61

336
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CRE001.dgn 11/10/2010 11:39:00 AM mtreineisel

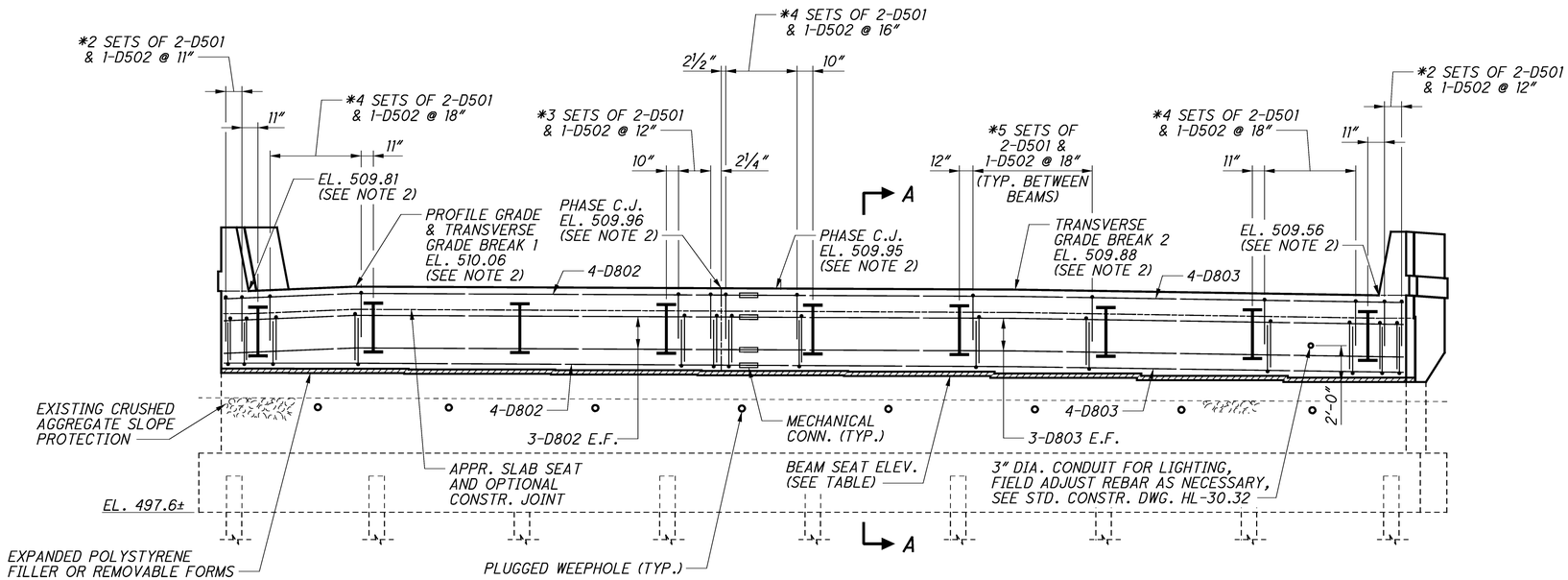


PLAN

BEAM SEAT ELEVATIONS	
B1	504.81±
B2	504.91±
B3	505.04±
B4	505.14±
B5	505.18±
B6	505.22±
B7	505.26±
B8	505.30±
B9	505.31±

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

1. FOR SECTION A-A SEE SHEET 19/61 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION A-A.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 16/61 .
4. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61 .
5. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

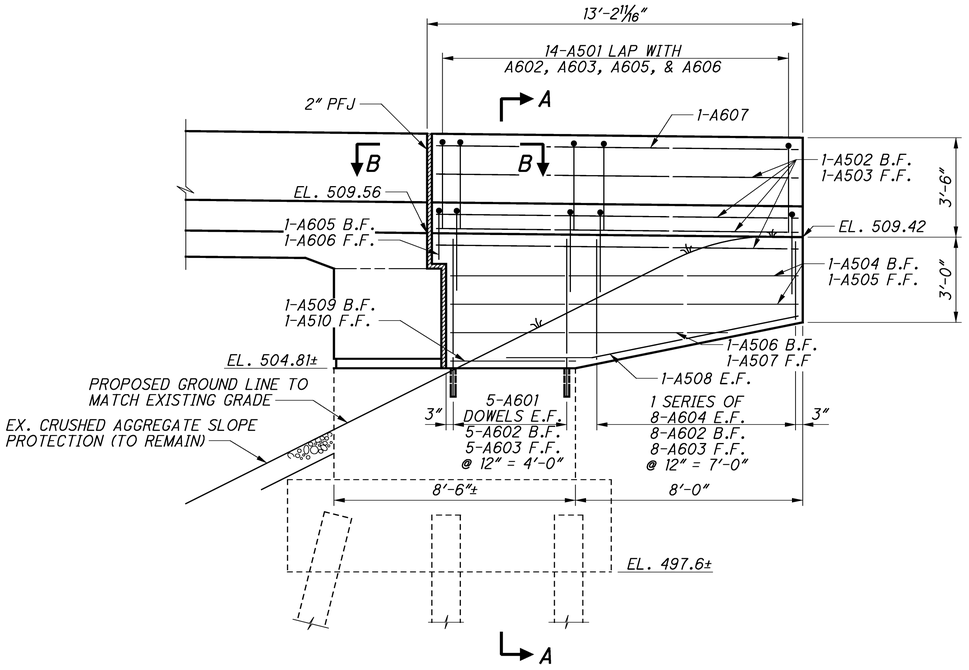
REAR ABUTMENT AND DIAPHRAGM DETAILS (LEFT BRIDGE)
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING
HAM-50-1961L

HAM-50-19.03
PID No. 75736

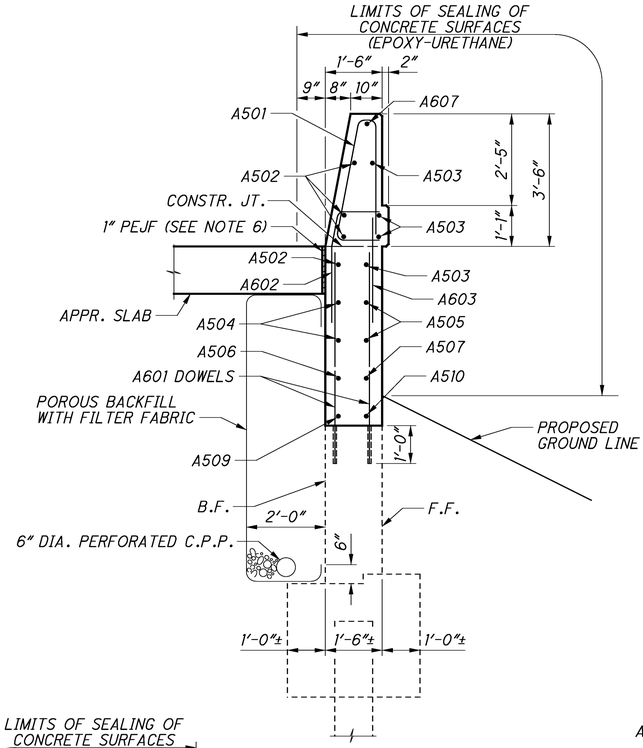
15 / 61

337 / 442

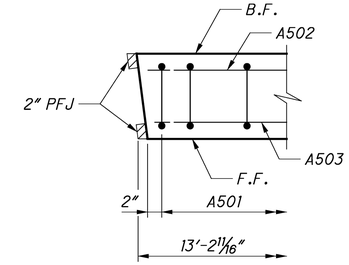
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAR001.dgn 11/10/2010 11:39:02 AM mtreiheisel



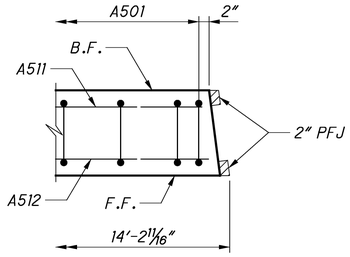
WINGWALL A ELEVATION



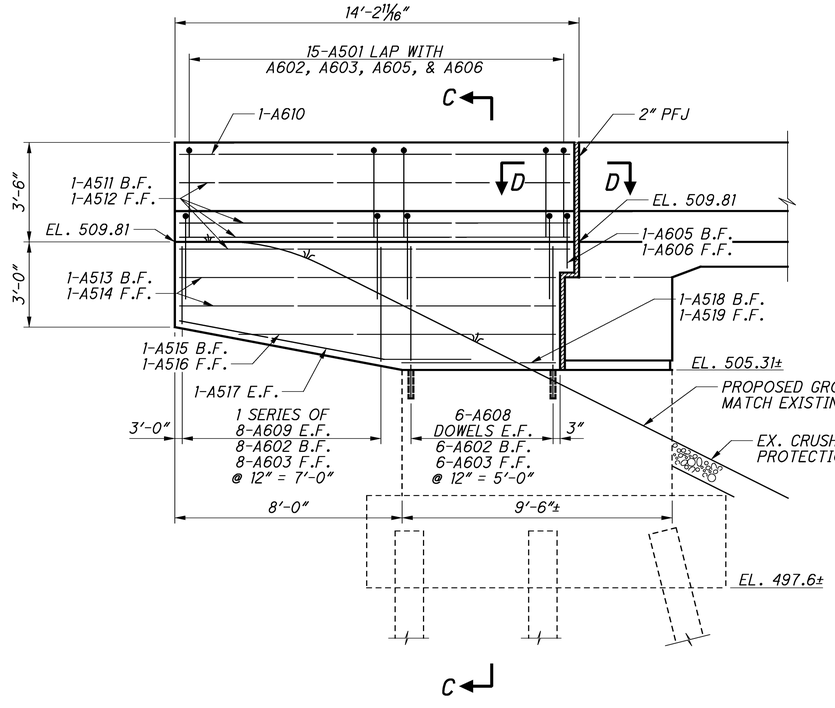
SECTION A-A



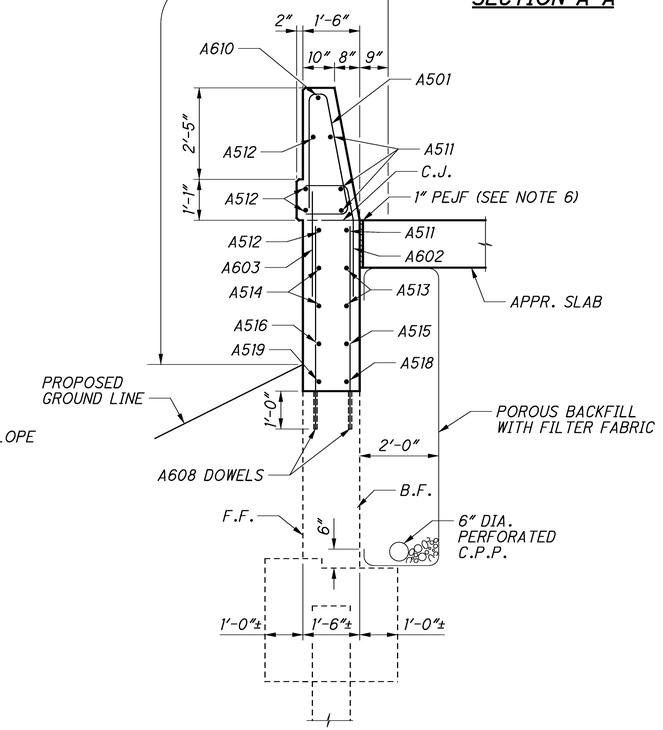
SECTION B-B



SECTION D-D



WINGWALL B ELEVATION



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2″ CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. FOR REAR ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 15/61.
4. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1″ PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15′), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 15/61.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102912

REAR ABUTMENT WINGWALL DETAILS (LEFT BRIDGE)

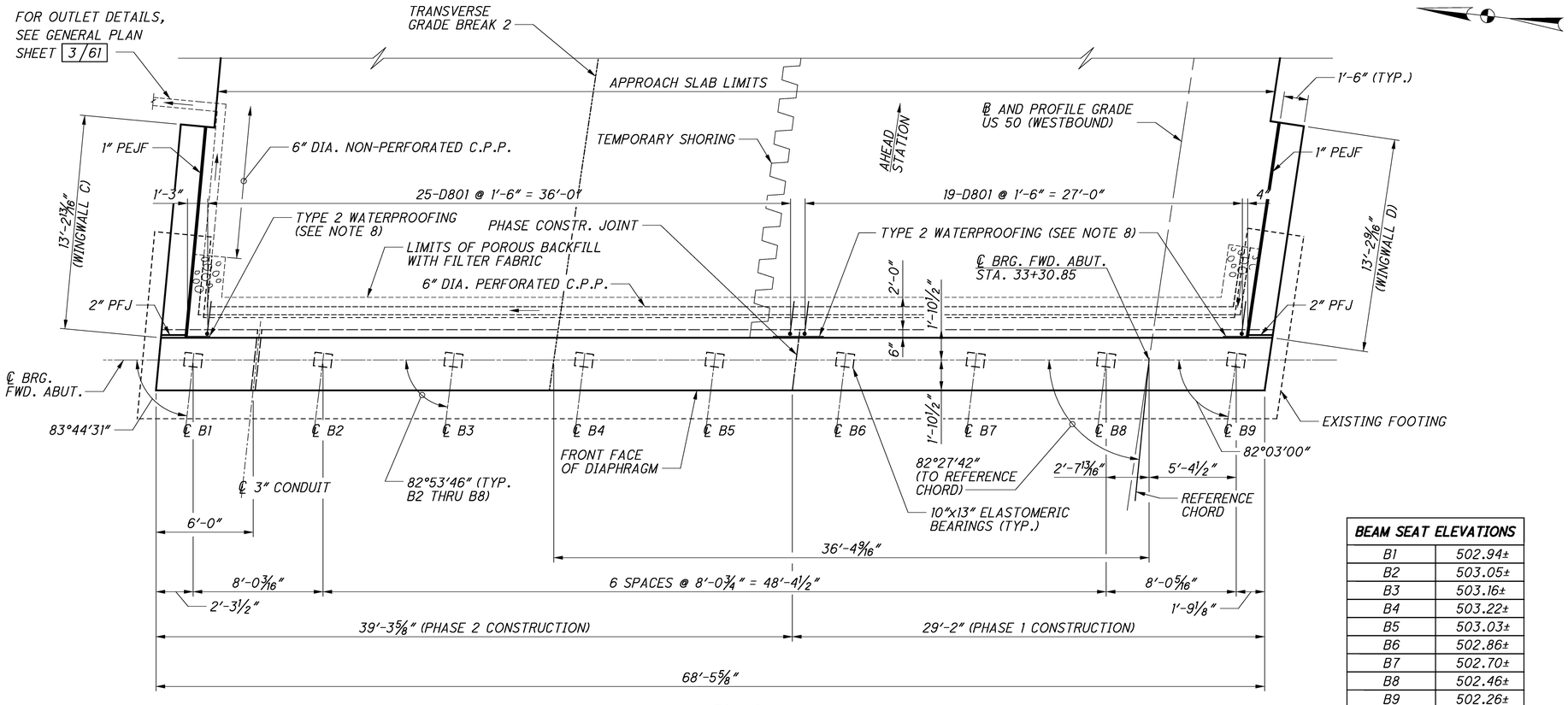
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

16 / 61

338
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAR002.dgn 11/10/2010 11:39:04 AM mtreiheisel

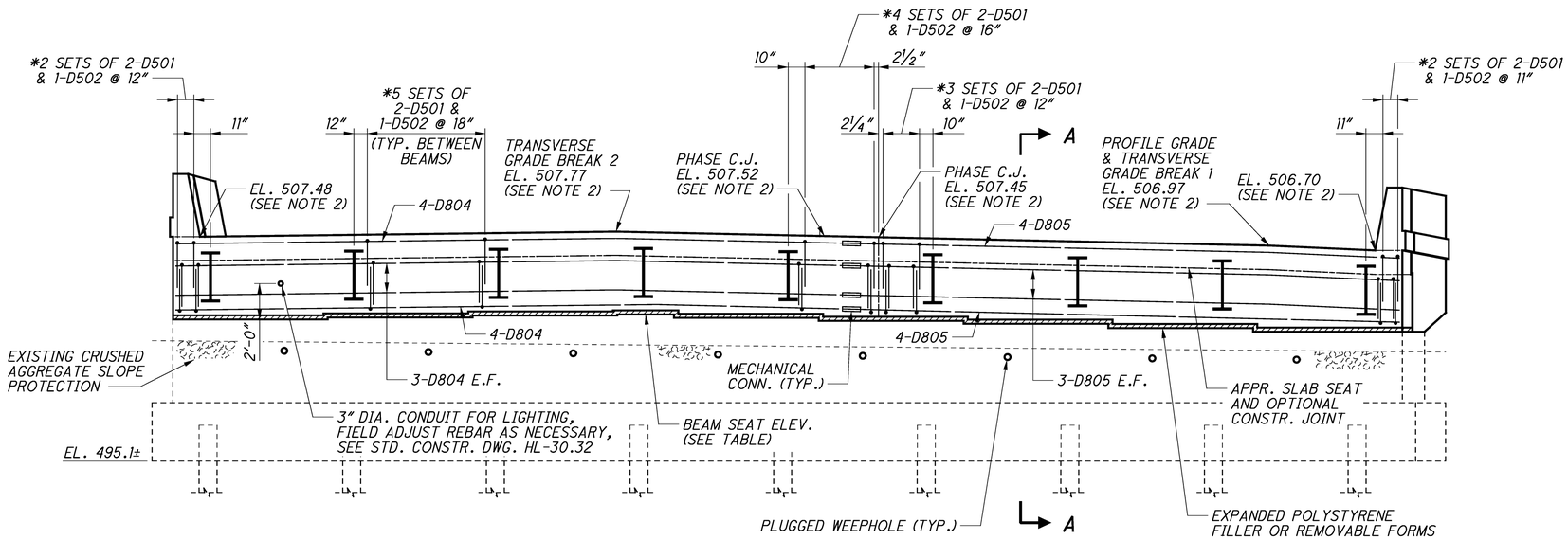


PLAN

BEAM SEAT ELEVATIONS	
B1	502.94±
B2	503.05±
B3	503.16±
B4	503.22±
B5	503.03±
B6	502.86±
B7	502.70±
B8	502.46±
B9	502.26±

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

ELEVATION

NOTES:

1. FOR SECTION A-A SEE SHEET 19/61 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION A-A.
3. FOR WINGWALL ELEVATIONS AND SECTIONS, SEE SHEET 18/61 .
4. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61 .
5. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

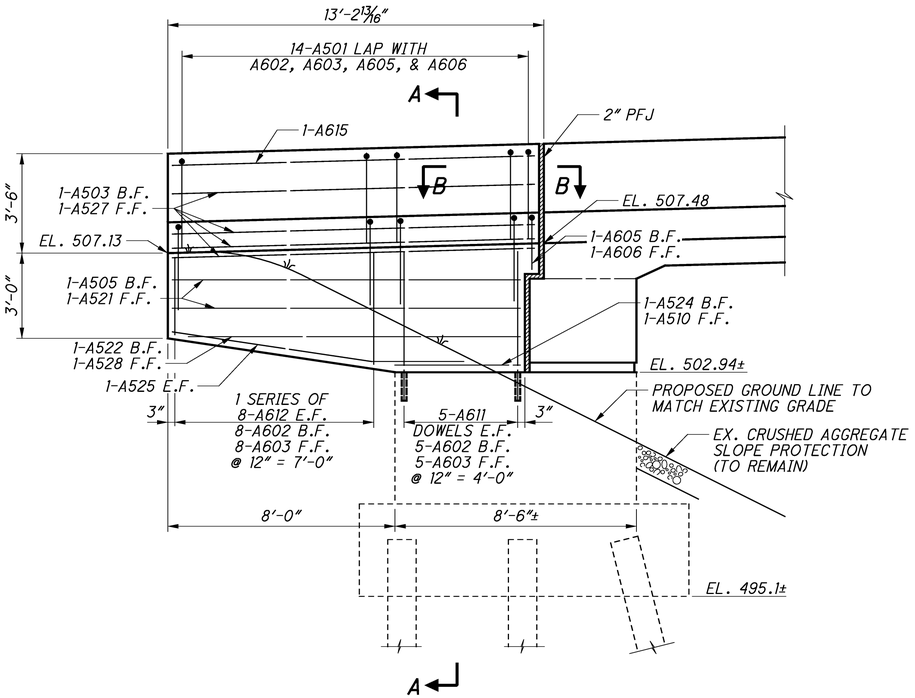
FORWARD ABUTMENT AND DIAPHRAGM DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

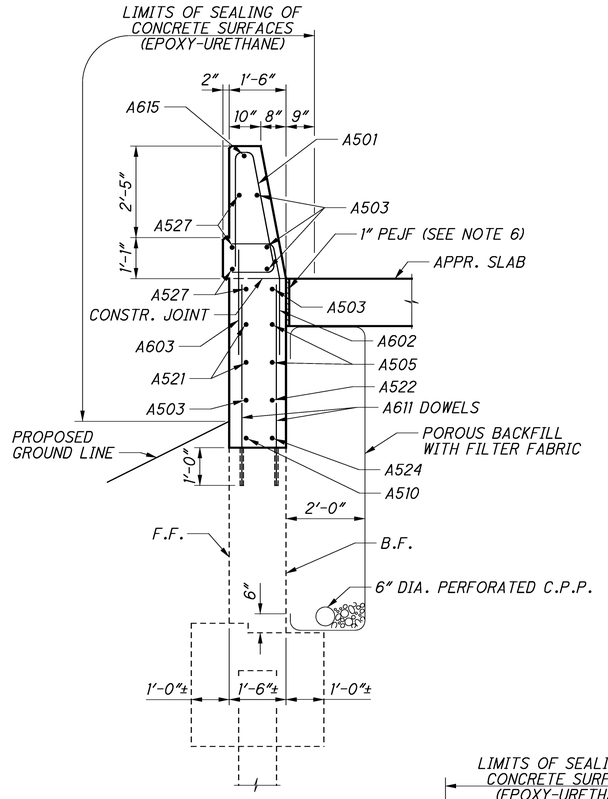
17 / 61

339
442

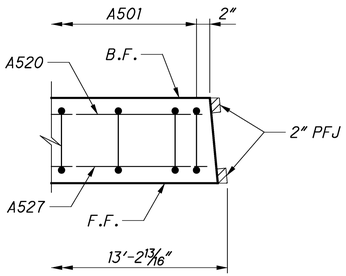
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAF001.dgn 11/10/2010 11:39:06 AM mtnelheisel



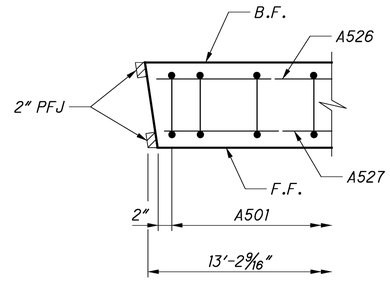
WINGWALL C ELEVATION



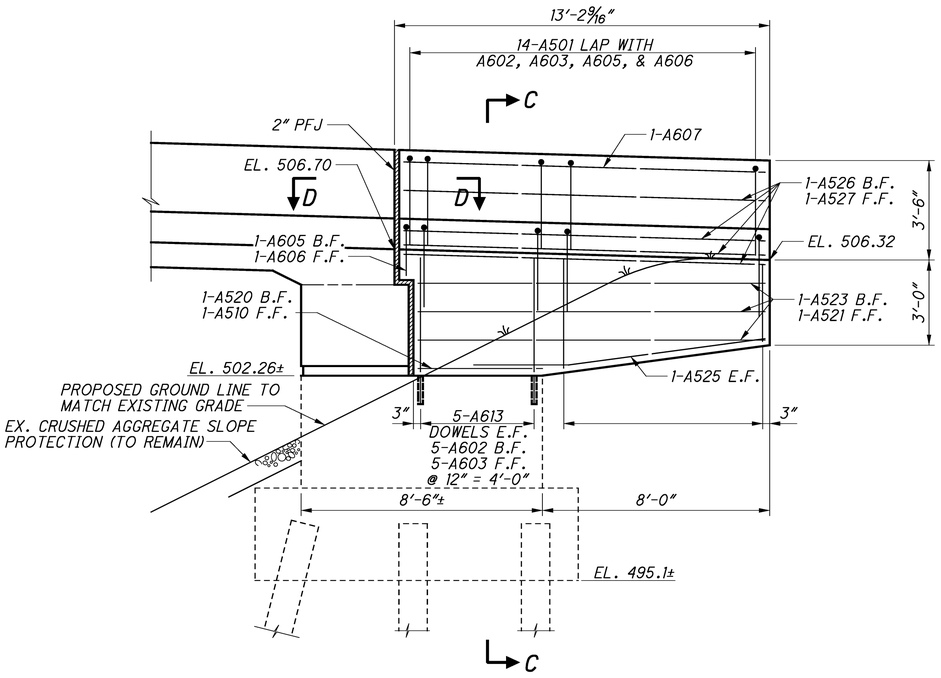
SECTION A-A



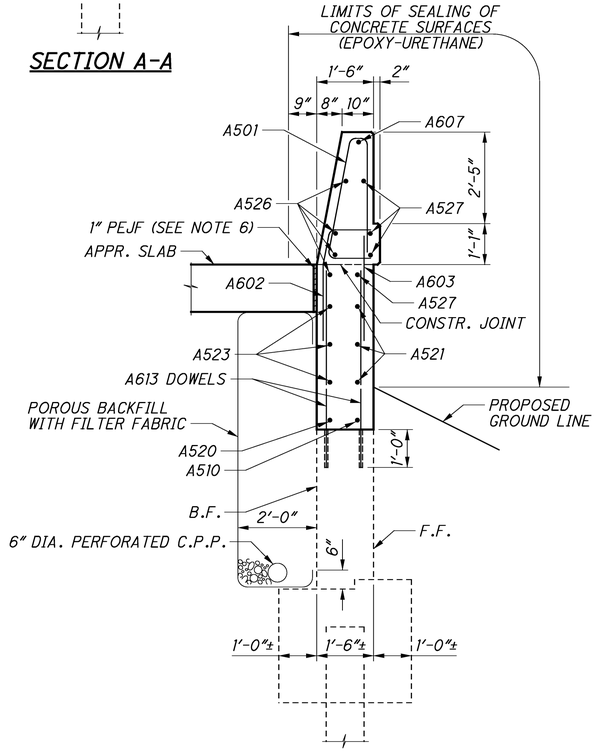
SECTION B-B



SECTION D-D



WINGWALL D ELEVATION



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2" CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. FOR FORWARD ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 17/61.
4. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1" PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15'), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 17/61.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

FORWARD ABUTMENT WINGWALL DETAILS (LEFT BRIDGE)

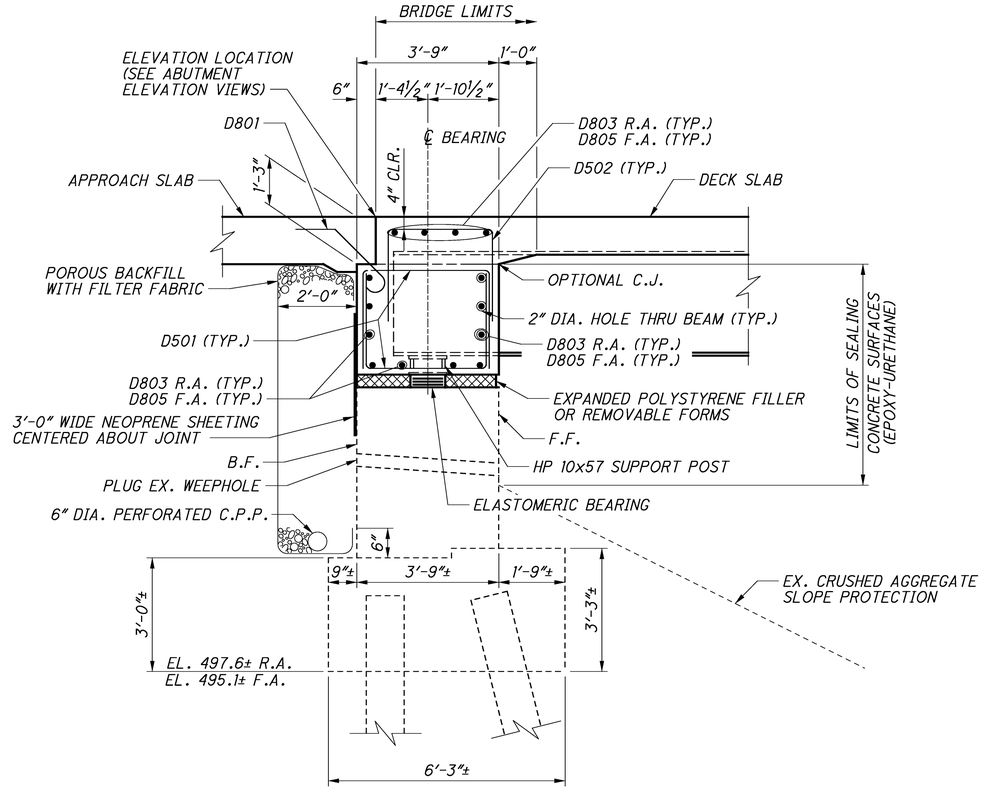
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

18 / 61

340
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAF003.dgn 11/10/2010 11:39:08 AM mtreiheisel



SECTION A-A

LEGEND:

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE

NOTES:

1. FOR REAR AND FORWARD ABUTMENT/DIAPHRAGM PLAN AND ELEVATIONS, SEE SHEETS 15/61 AND 17/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

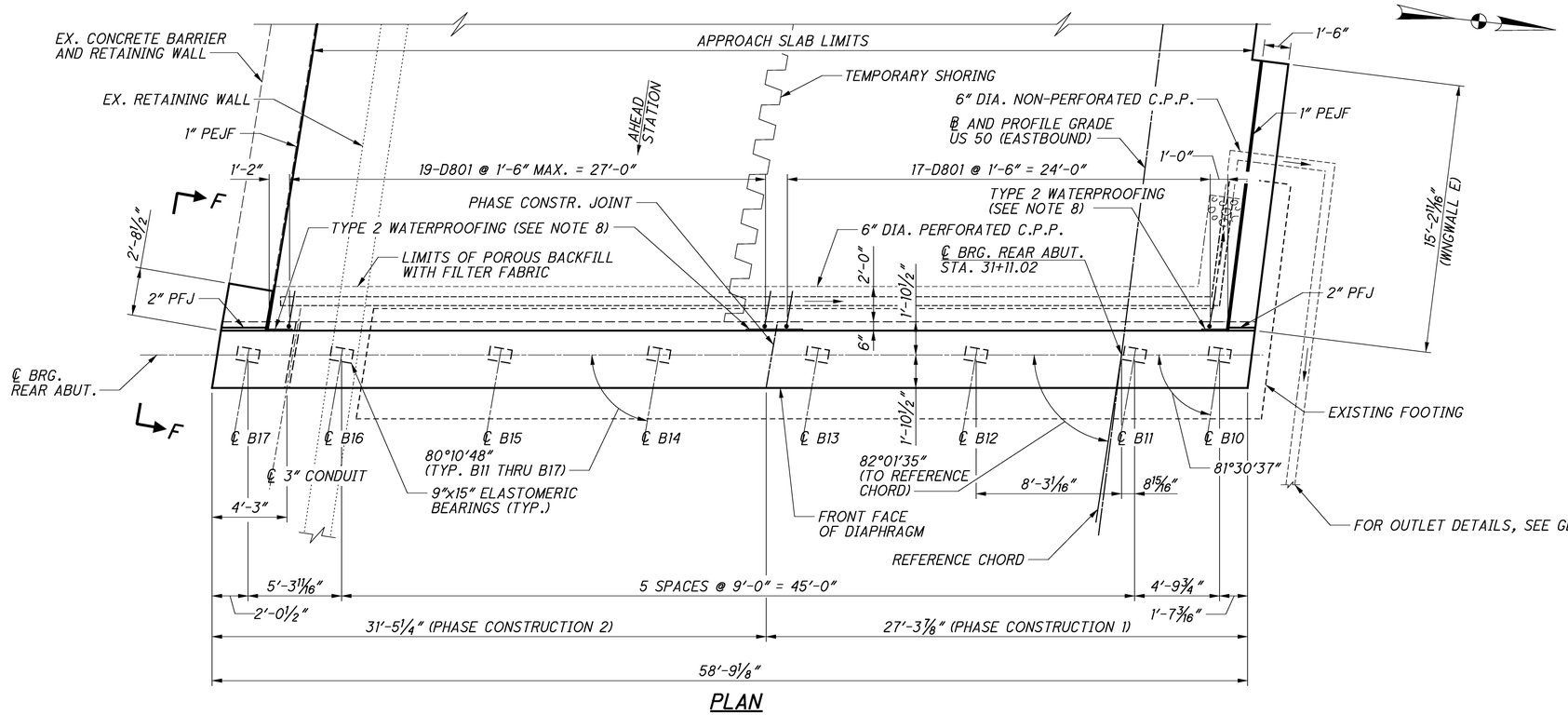
ABUTMENT DIAPHRAGM DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

19 / 61

341
442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAF002.dgn 11/10/2010 11:39:09 AM mtreiheisel

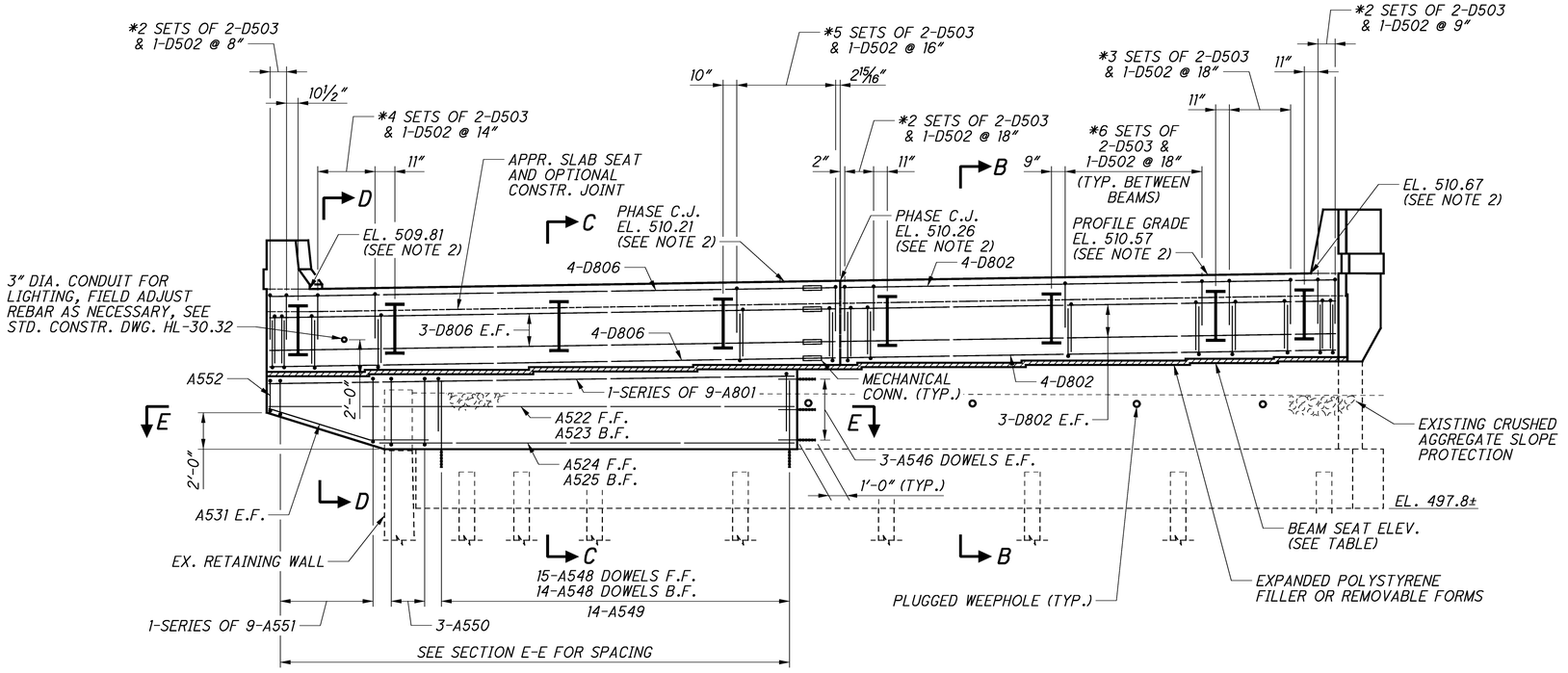


PLAN

BEAM SEAT ELEVATIONS	
B10	505.83±
B11	505.74±
B12	505.64±
B13	505.52±
B14	505.40
B15	505.28
B16	505.13
B17	505.02

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER



ELEVATION

* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

NOTES:

1. FOR SECTIONS B-B, C-C, D-D AND E-E SEE SHEET 24/61 .
2. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION B-B, C-C, AND D-D.
3. FOR WINGWALL ELEVATION AND VIEW F-F, SEE SHEET 21/61 .
4. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61 .
5. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61 , 60/61 AND 61/61 .
6. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
7. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
8. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
9. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

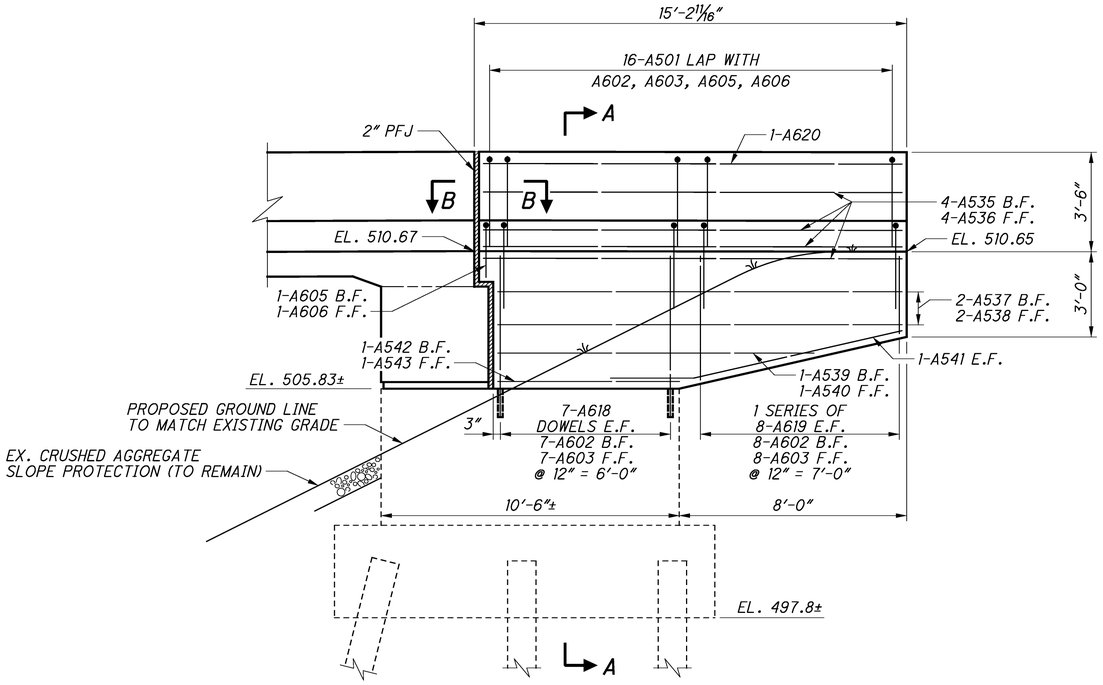
REAR ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)
HAM-50-19.61R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

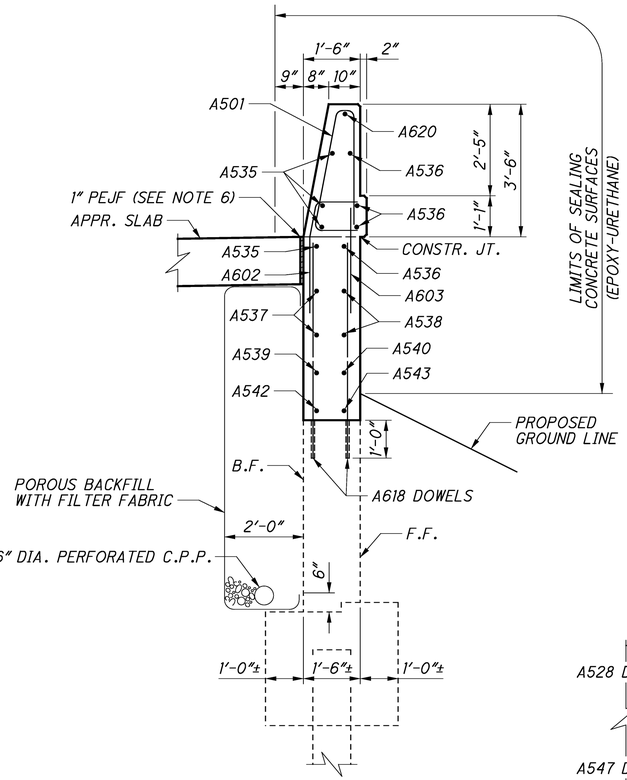
20 / 61

342 / 442

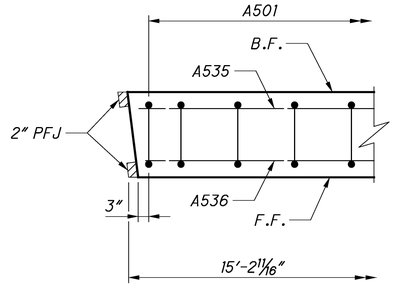
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAR001.dgn 11/10/2010 11:39:11 AM mtneiheisel



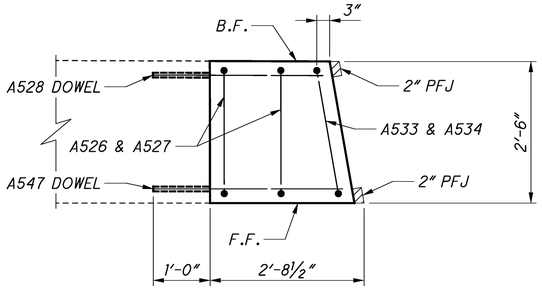
WINGWALL E ELEVATION



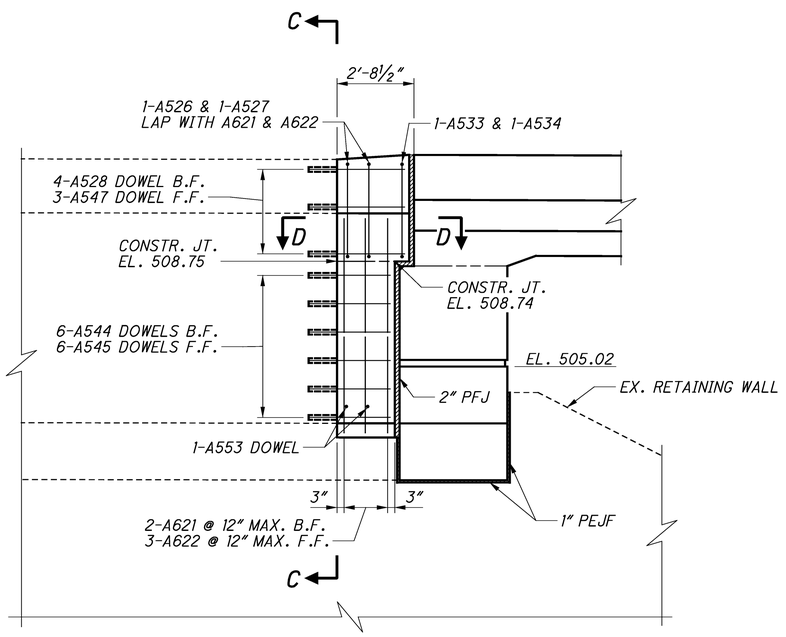
SECTION A-A



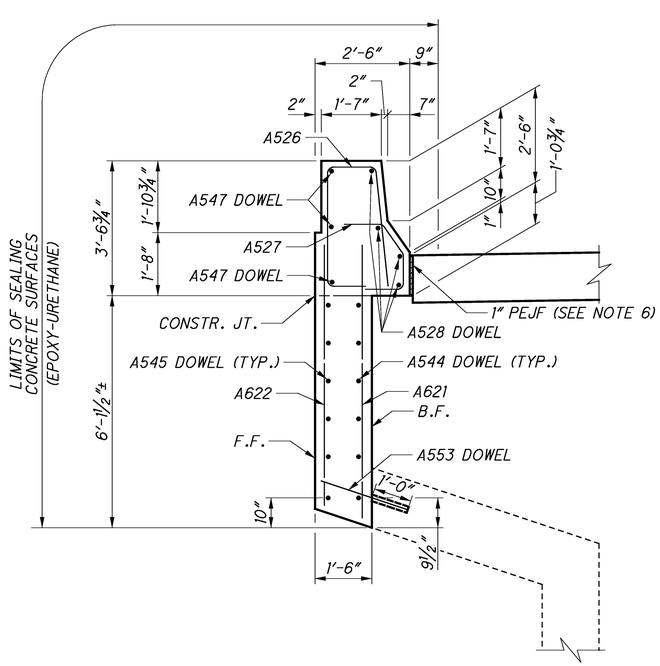
SECTION B-B



SECTION D-D



VIEW F-F



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2″ CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. FOR REAR ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 20/61.
4. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61, 60/61 AND 61/61.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1″ PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15′), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 20/61.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

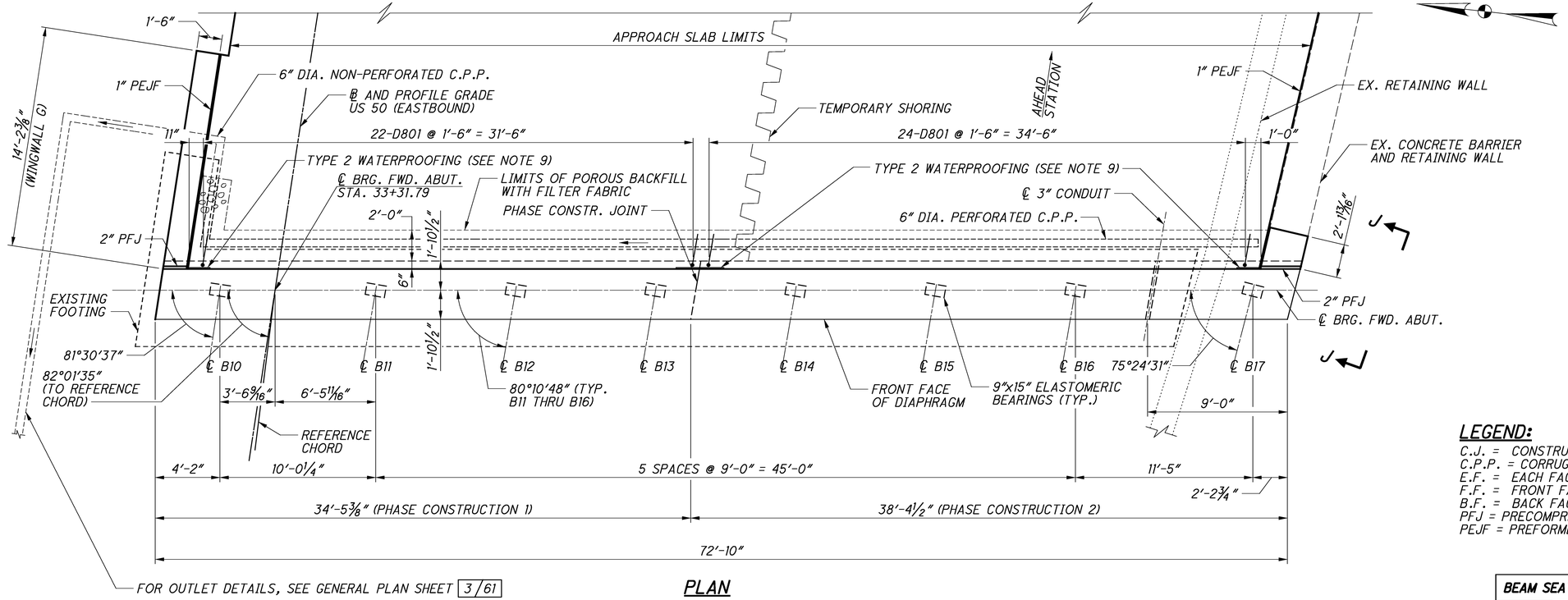
DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

REAR ABUTMENT WINGWALL DETAILS (RIGHT BRIDGE)
HAM-50-19.03
PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

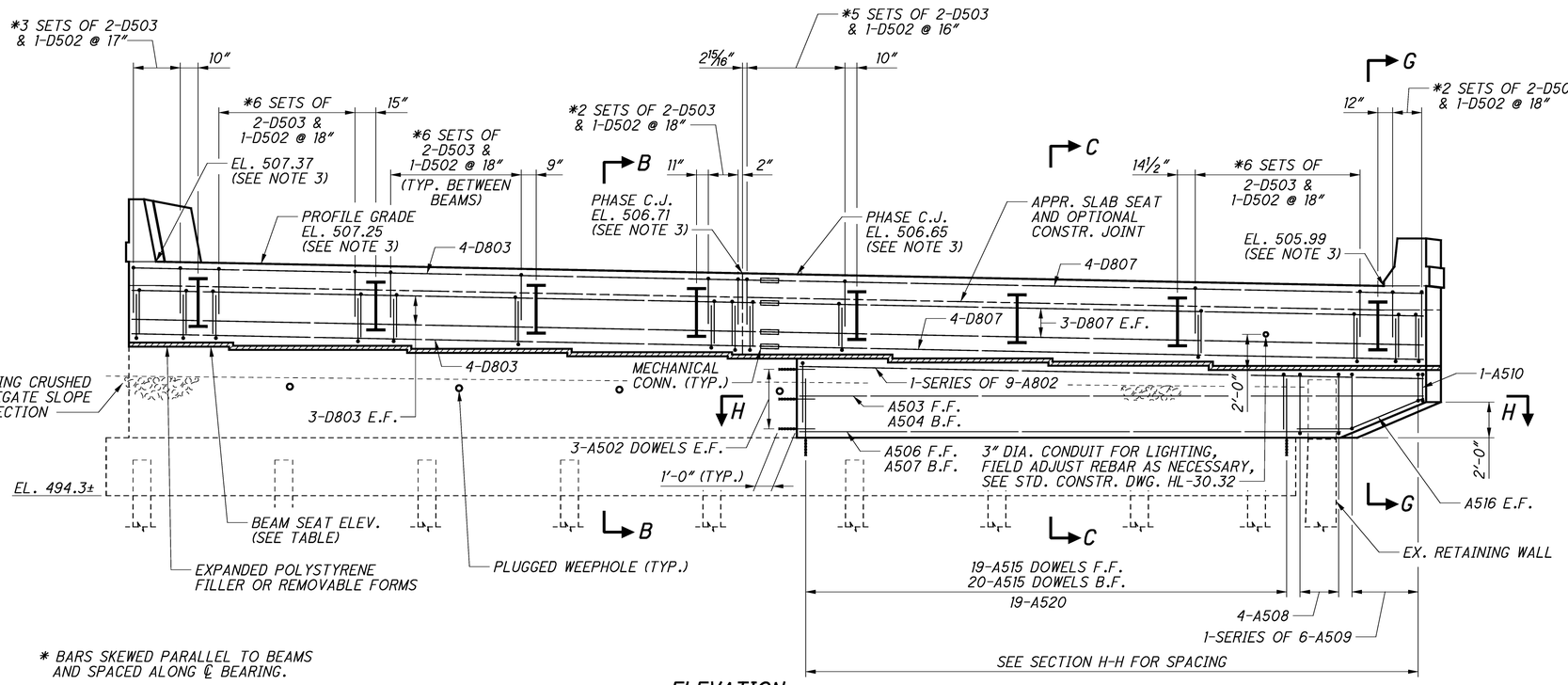
21 / 61

343
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAR003.dgn 11/10/2010 11:39:13 AM mtreinelsel



PLAN



* BARS SKEWED PARALLEL TO BEAMS AND SPACED ALONG ℄ BEARING.

ELEVATION

BEAM SEAT ELEVATIONS	
B10	502.69±
B11	502.51±
B12	502.34±
B13	502.15±
B14	502.02
B15	501.80
B16	501.62
B17	501.38

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. FOR SECTIONS B-B AND C-C SEE SHEET 24/61 .
2. FOR SECTIONS G-G AND H-H SEE SHEET 25/61.
3. ELEVATIONS SHOWN ARE AT END OF APPROACH SLAB. SEE SECTION B-B, C-C, AND G-G.
4. FOR WINGWALL ELEVATION AND VIEW J-J, SEE SHEET 23/61.
5. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
6. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61, 60/61 AND 61/61.
7. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO PLANE OF SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
8. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
9. PLACE TYPE 2 WATERPROOFING 3' WIDE, CENTERED ON VERTICAL JOINT, FROM BOTTOM OF APPROACH SLAB TO TOP OF ABUTMENT SEAT.
10. FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. SICD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102920

FORWARD ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)

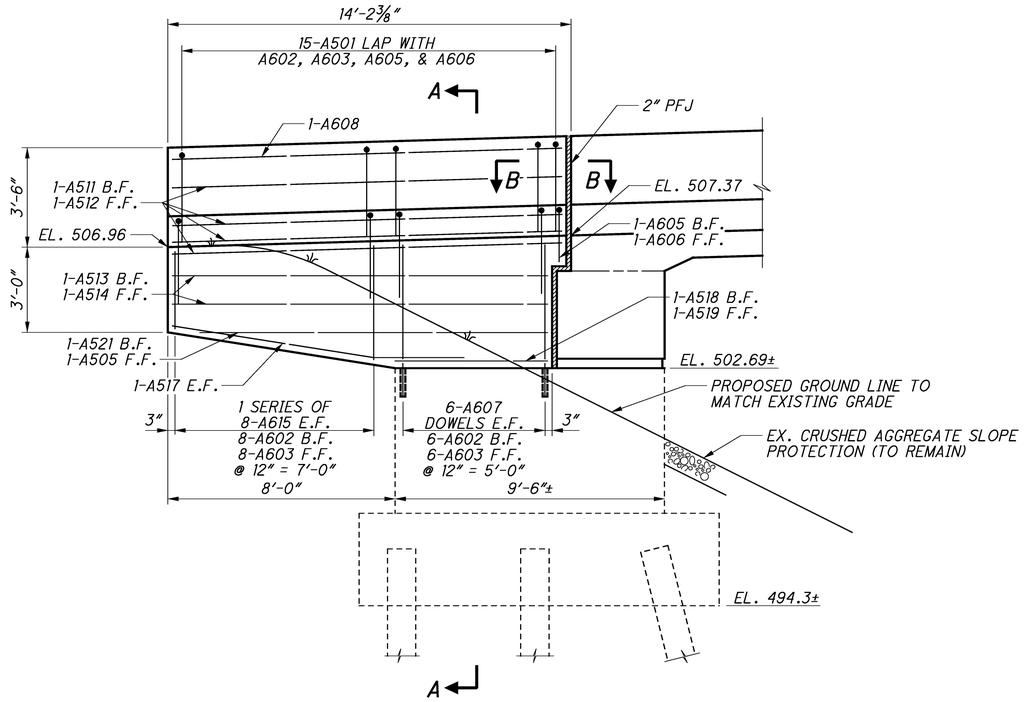
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

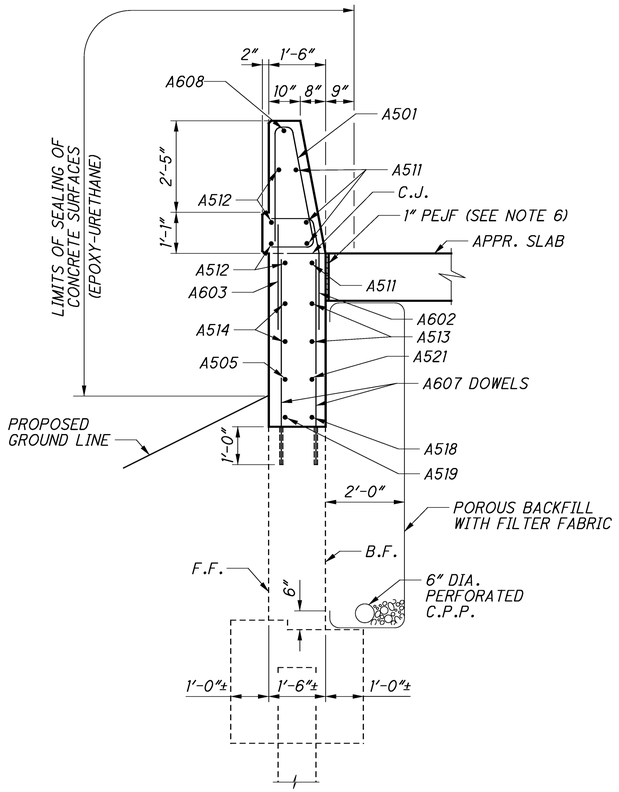
22 / 61

344
442

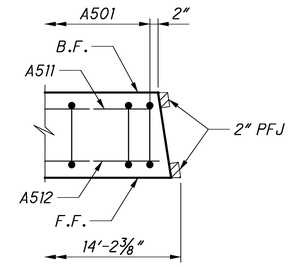
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAF001.dgn 11/10/2010 11:39:15 AM mtneiseisel



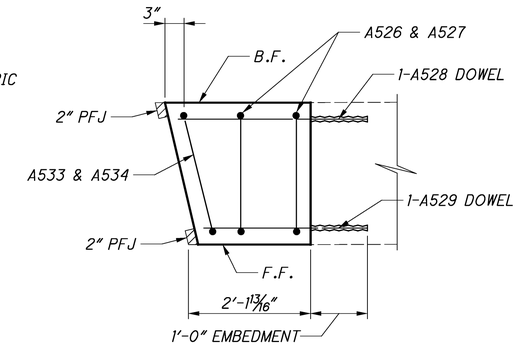
WINGWALL G ELEVATION



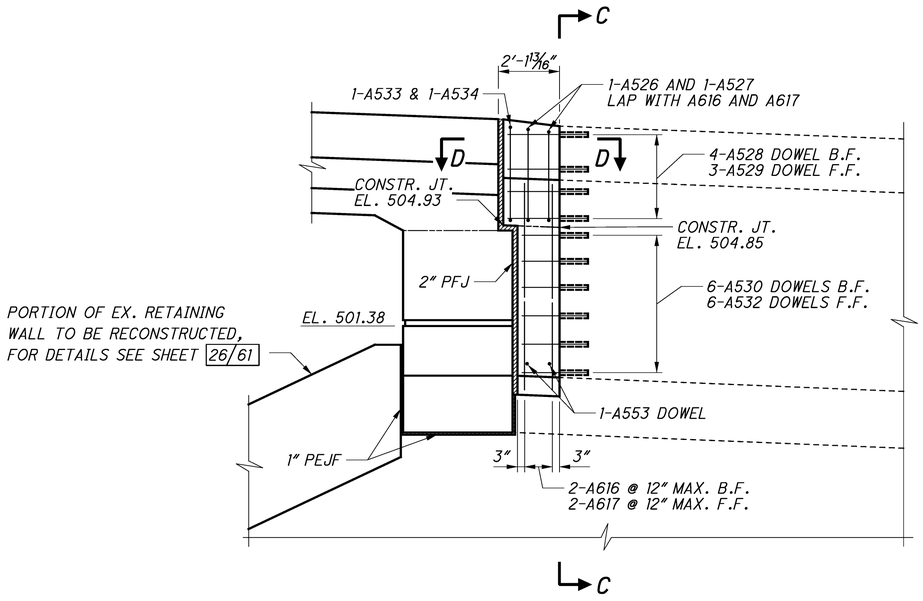
SECTION A-A



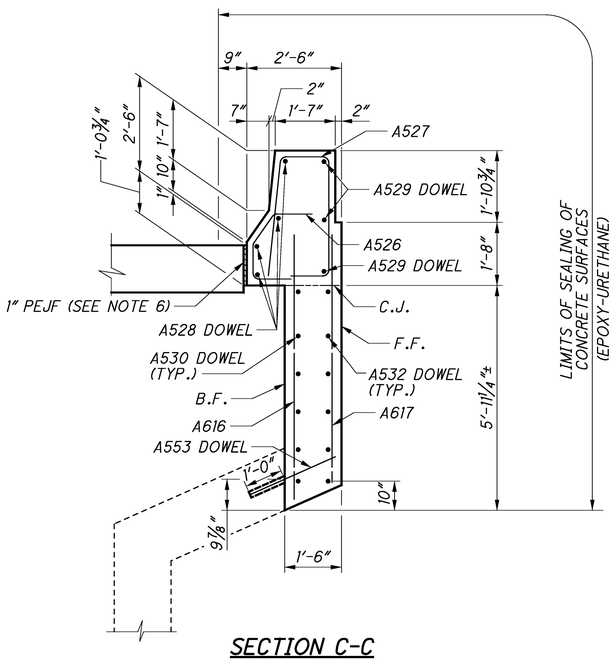
SECTION B-B



SECTION D-D



VIEW J-J



SECTION C-C

LEGEND:

C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT
PEJF = PREFORMED EXPANSION JOINT FILLER

NOTES:

1. PROVIDE 2" CLEARANCE FROM FACE OF CONCRETE TO FACE OF REINFORCING BAR.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. FOR FORWARD ABUTMENT AND DIAPHRAGM PLAN AND ELEVATION, SEE SHEET 22/61.
4. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61, 60/61 AND 61/61.
5. WINGWALL PARAPET CONCRETE SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
6. 1" PEJF BETWEEN THE APPROACH SLAB AND WINGWALL SHALL BE INCLUDED IN ITEM 898-QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), (T=15'), AS PER PLAN FOR PAYMENT.
7. FOR ADDITIONAL NOTES, SEE SHEET 22/61.
8. FOR ADDITIONAL PFJ DETAILS, SEE SHEET 5/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

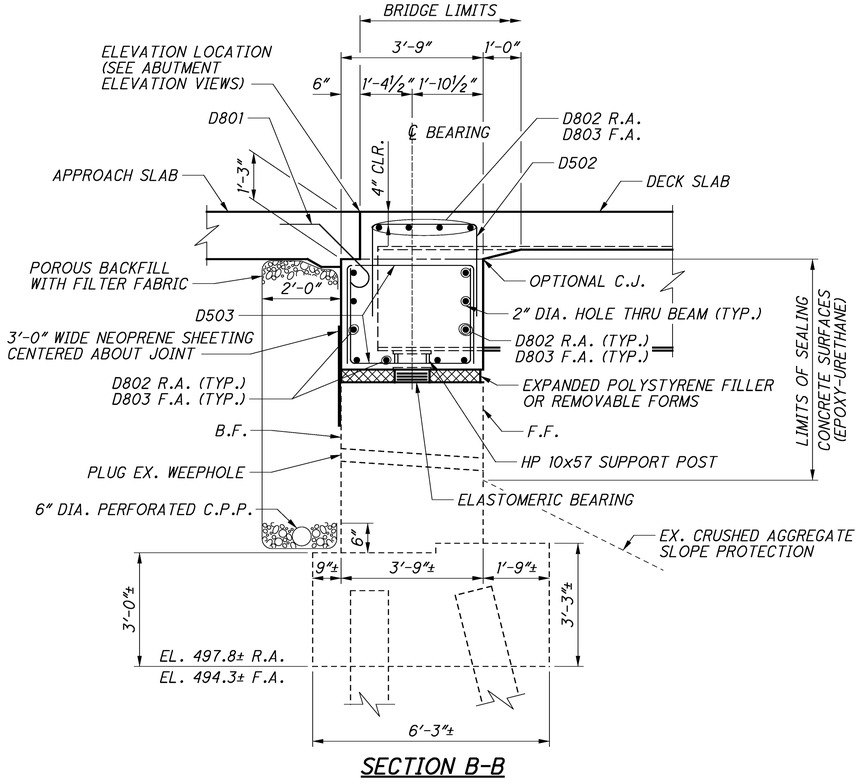
DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

FORWARD ABUTMENT WINGWALL DETAILS (RIGHT BRIDGE)

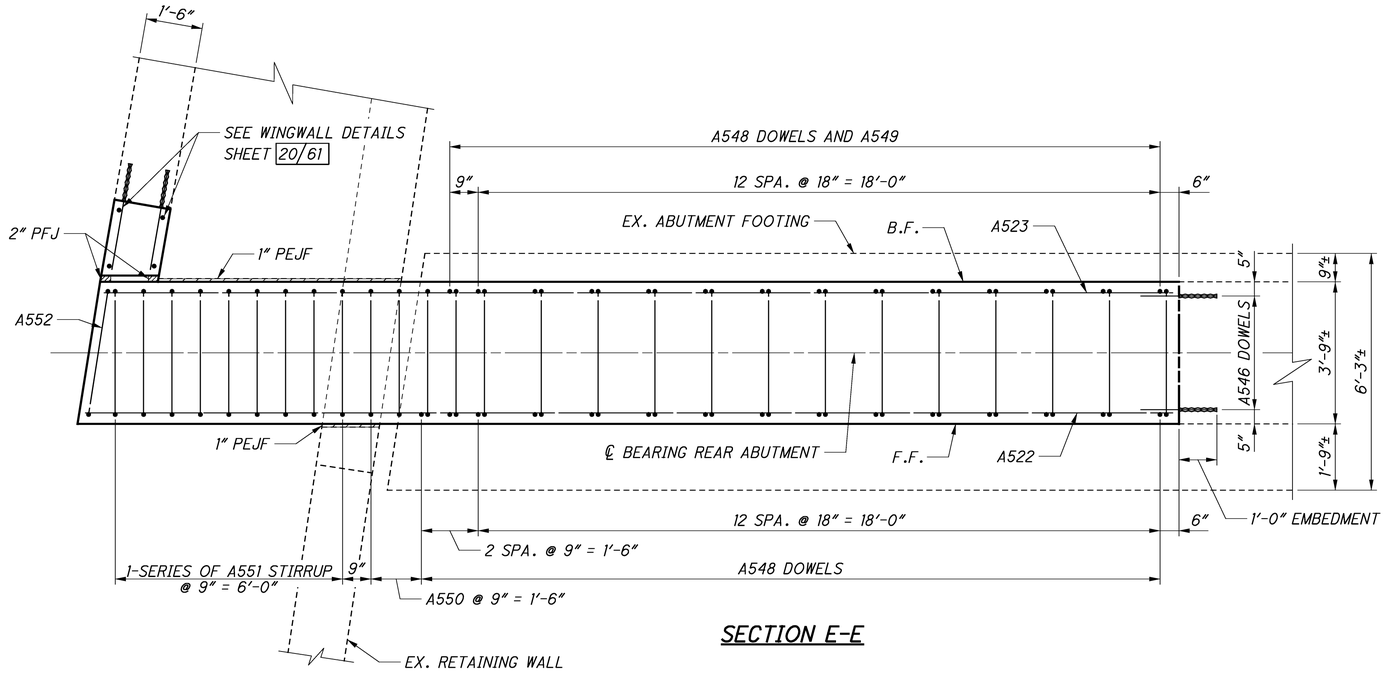
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

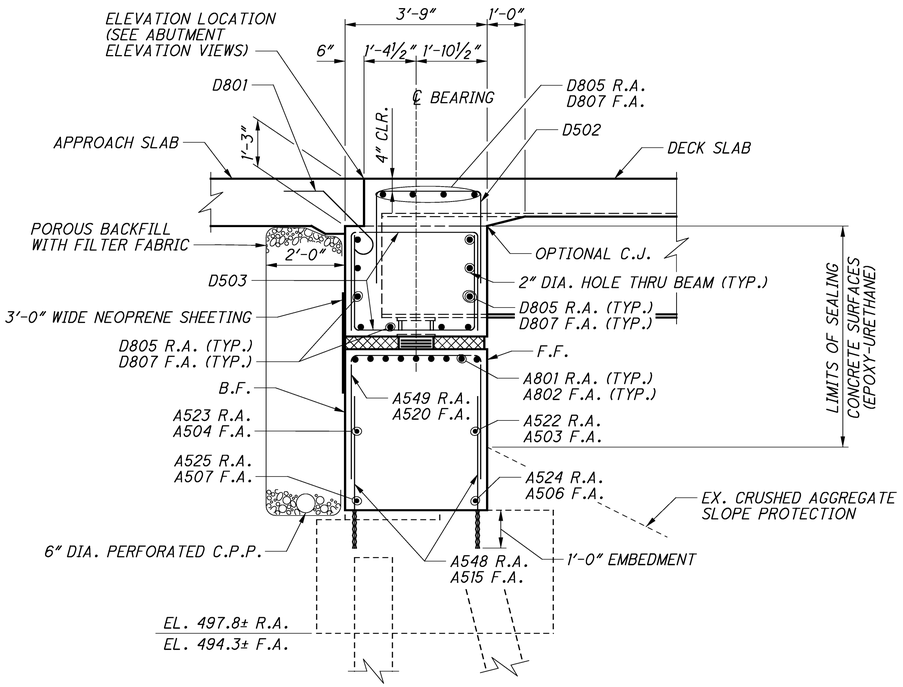
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAF003.dgn 11/10/2010 11:39:17 AM mtreiheisel



SECTION B-B

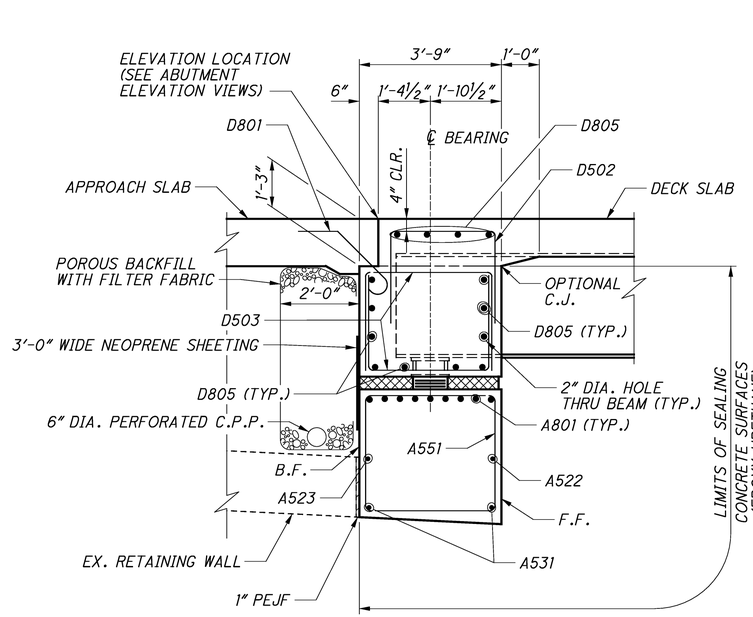


SECTION E-E



SECTION C-C

FOR DETAILS NOT SHOWN SEE SECTION B-B



SECTION D-D

FOR DETAILS NOT SHOWN SEE SECTION B-B

LEGEND:

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR REAR AND FORWARD ABUTMENT/DIAPHRAGM PLAN AND ELEVATIONS, SEE SHEETS 20/61 AND 22/61.

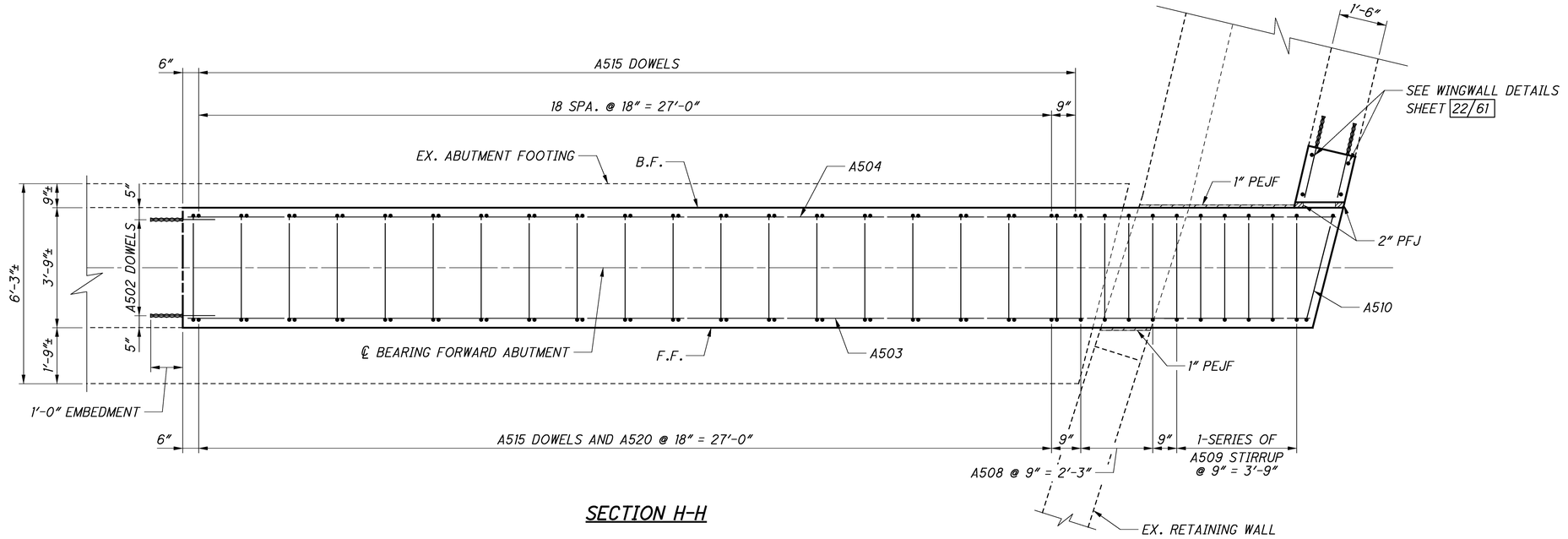
DESIGN AGENCY
Train Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MTN | CHECKED SSM | REVIEWED MSL | DATE 11/12/10
REVISED | STRUCTURE FILE NUMBER 3102920

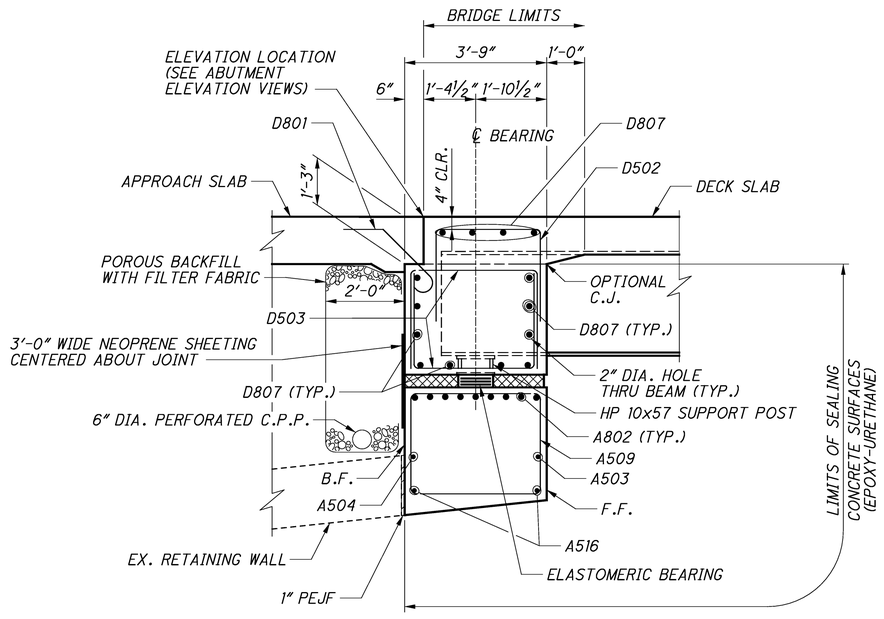
ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)
HAM-50-19.03 PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

24 / 61
346
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAR002.dgn 11/10/2010 11:39:18 AM mtreiheisel



SECTION H-H



SECTION G-G

LEGEND:

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
C.J. = CONSTRUCTION JOINT
C.P.P. = CORRUGATED POLYETHYLENE PIPE
E.F. = EACH FACE
F.F. = FRONT FACE
B.F. = BACK FACE
PEJF = PREFORMED EXPANSION JOINT FILLER
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR FORWARD ABUTMENT/DIAPHRAGM PLAN AND ELEVATIONS, SEE SHEETS 22/61 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

ABUTMENT AND DIAPHRAGM DETAILS (RIGHT BRIDGE)

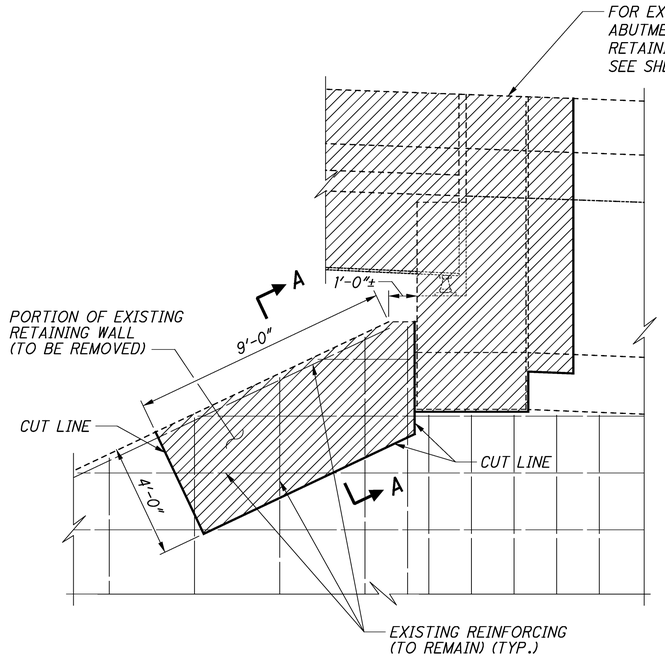
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

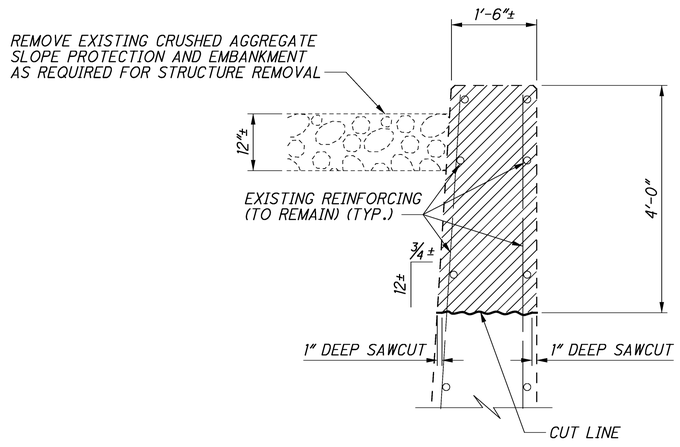
25 / 61

347
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAF002.dgn 11/10/2010 11:39:20 AM mtneiheisel

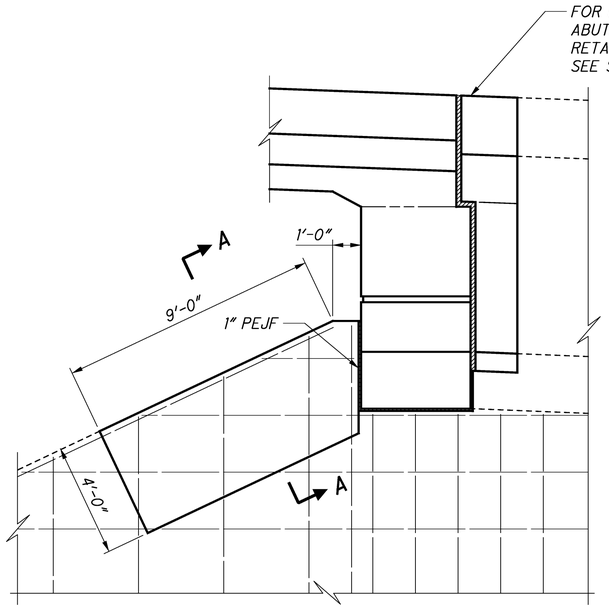


PARTIAL RETAINING WALL ELEVATION
(REMOVAL)

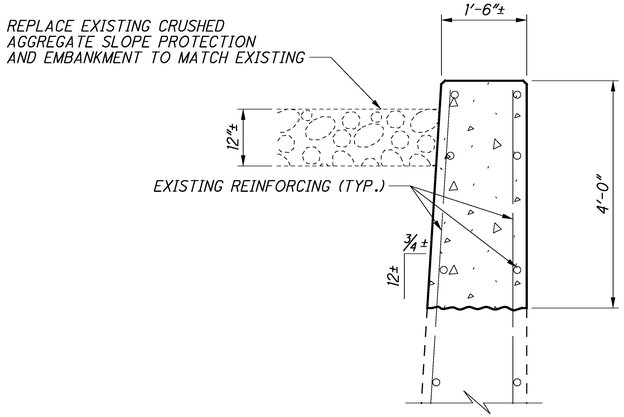


SECTION A-A
(REMOVAL)

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN



PARTIAL RETAINING WALL ELEVATION
(PROPOSED)



SECTION A-A
(PROPOSED)

NOTES:

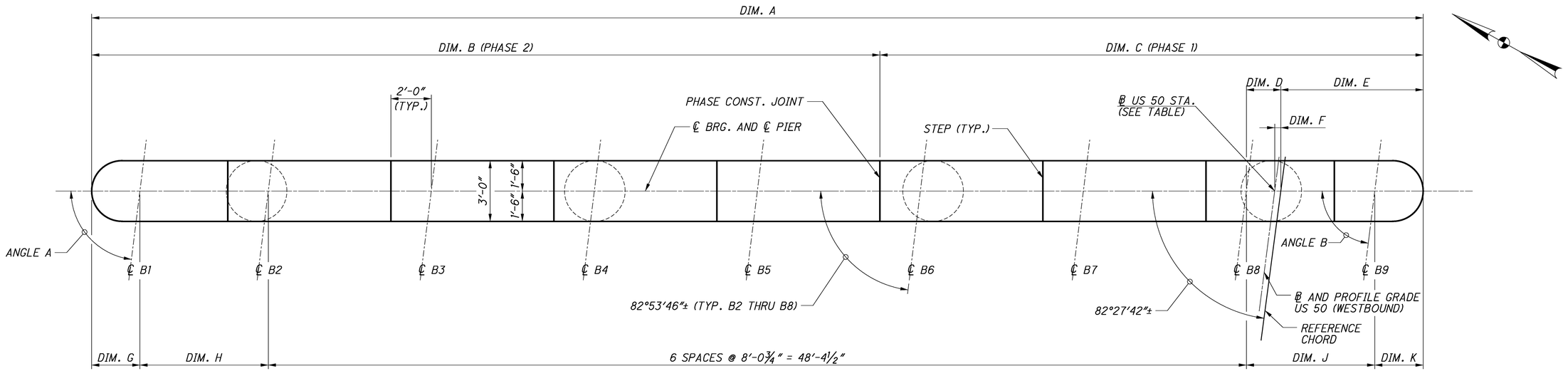
1. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

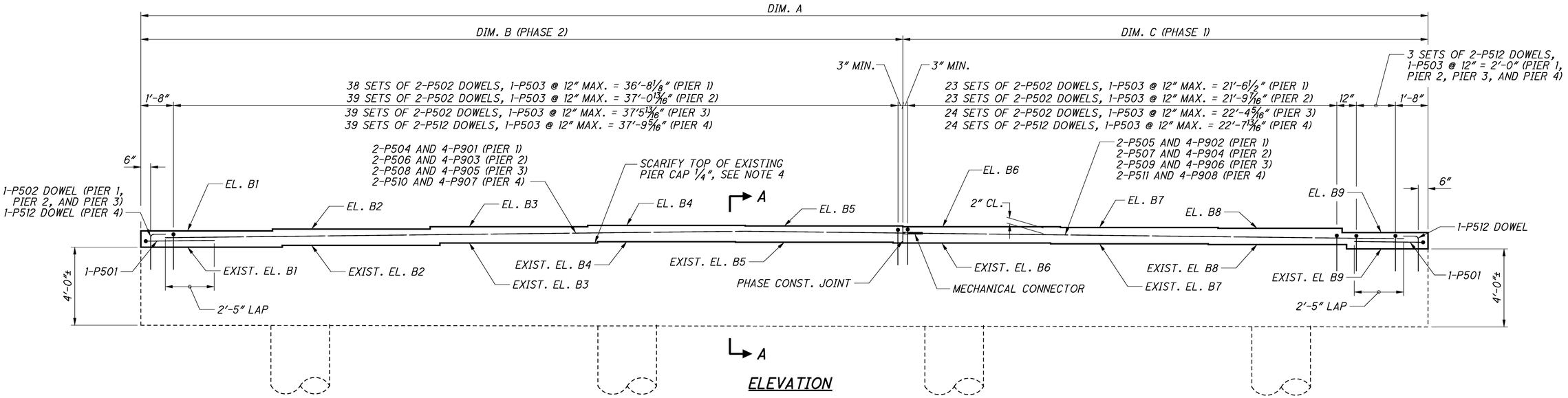
DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

FORWARD ABUTMENT RETAINING WALL REPAIR DETAIL (RIGHT BRIDGE)
HAM-50-19.03
PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAF004.dgn 11/10/2010 11:39:21 AM mtreineisel



PLAN



ELEVATION

DIMENSIONS				
	PIER 1	PIER 2	PIER 3	PIER 4
DIM. A	65'-0⅝"±	65'-10¼"±	66'-8⅛"±	67'-3⅜"±
DIM. B	38'-7⅛"±	38'-11¹³⁄₁₆"±	39'-4³⁄₁₆"±	39'-8⁵⁄₁₆"±
DIM. C	26'-5½"±	26'-10⁷⁄₁₆"±	27'-3⁵⁄₁₆"±	27'-6¹³⁄₁₆"±
DIM. D	1'-3½"	1'-8⅞"	2'-1⅜"	2'-4⅞"
DIM. E	7'-0½"±	7'-0½"±	7'-0⁷⁄₁₆"±	7'-0⅞"±
DIM. F	0'-1⅝"	0'-3⅝"	0'-5⁹⁄₁₆"	0'-4⅛"
DIM. G	1'-11¹⁵⁄₁₆"±	2'-4⅝"±	2'-2¹⁄₁₆"±	1'-10¾"±
DIM. H	6'-4³⁄₁₆"	6'-4³⁄₁₆"	6'-11¾"	7'-6⅜"
DIM. J	6'-4³⁄₁₆"	6'-4³⁄₁₆"	6'-11¾"	7'-6⅝"
DIM. K	1'-11¹³⁄₁₆"±	2'-4¾"±	2'-2¹⁄₁₆"±	1'-10¹¹⁄₁₆"±

℄ US 50 STATIONS				
	PIER 1	PIER 2	PIER 3	PIER 4
STATIONS	31+53.03±	32+06.87±	32+60.71±	32+99.18±

PIER CAP ELEVATIONS								
	PIER 1		PIER 2		PIER 3		PIER 4	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
B1	504.53±	505.56	504.26±	505.29	503.77±	504.73	503.30±	504.13
B2	504.63±	505.65	504.36±	505.38	503.87±	504.83	503.44±	504.23
B3	504.76±	505.77	504.47±	505.50	503.98±	504.94	503.54±	504.34
B4	504.84±	505.86	504.54±	505.56	504.02±	504.99	503.58±	504.38
B5	504.86±	505.87	504.51±	505.53	503.93±	504.89	503.45±	504.25
B6	504.87±	505.88	504.46±	505.49	503.82±	504.80	503.29±	504.11
B7	504.87±	505.88	504.42±	505.45	503.71±	504.70	503.14±	503.97
B8	504.88±	505.89	504.37±	505.41	503.59±	504.60	502.96±	503.82
B9	504.90±	505.67	504.35±	505.19	503.51±	504.35	502.86±	503.54

SKEW ANGLES				
	PIER 1	PIER 2	PIER 3	PIER 4
ANGLE A	82°53'46"±	82°53'46"±	83°44'31"±	83°44'31"±
ANGLE B	82°53'46"±	82°53'46"±	82°03'00"±	82°03'00"±

NOTES:

1. FOR SECTION A-A, SEE SHEET 28/61 .
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61 .
3. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61 .
4. SCARIFY THE EXISTING SEAT AREA TO A DEPTH OF ¼". INCLUDE WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN.
5. SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102912

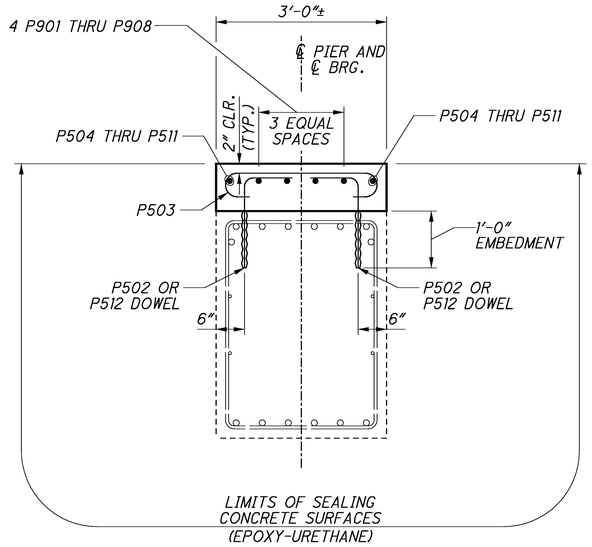
PIER DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

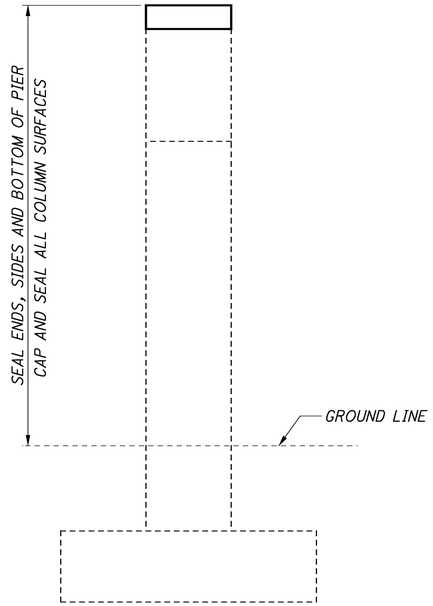
27 / 61

349
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LP1001.dgn 11/10/2010 11:39:23 AM mtneireisel



SECTION A-A



LIMITS OF SEALING CONCRETE SURFACES ON PIERS (EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 27/61 .

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LPI002.dgn 11/10/2010 11:39:25 AM mtreihleisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

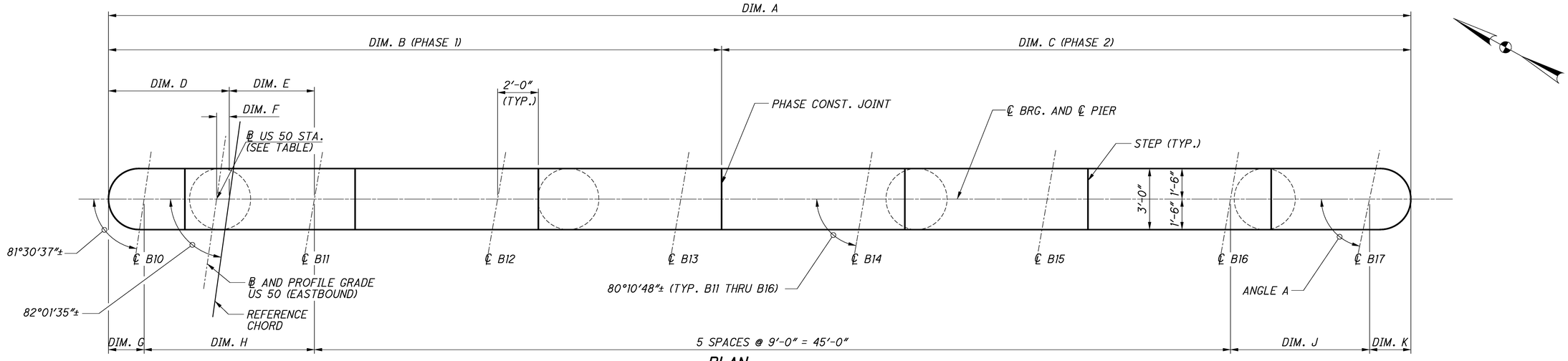
DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

PIER DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

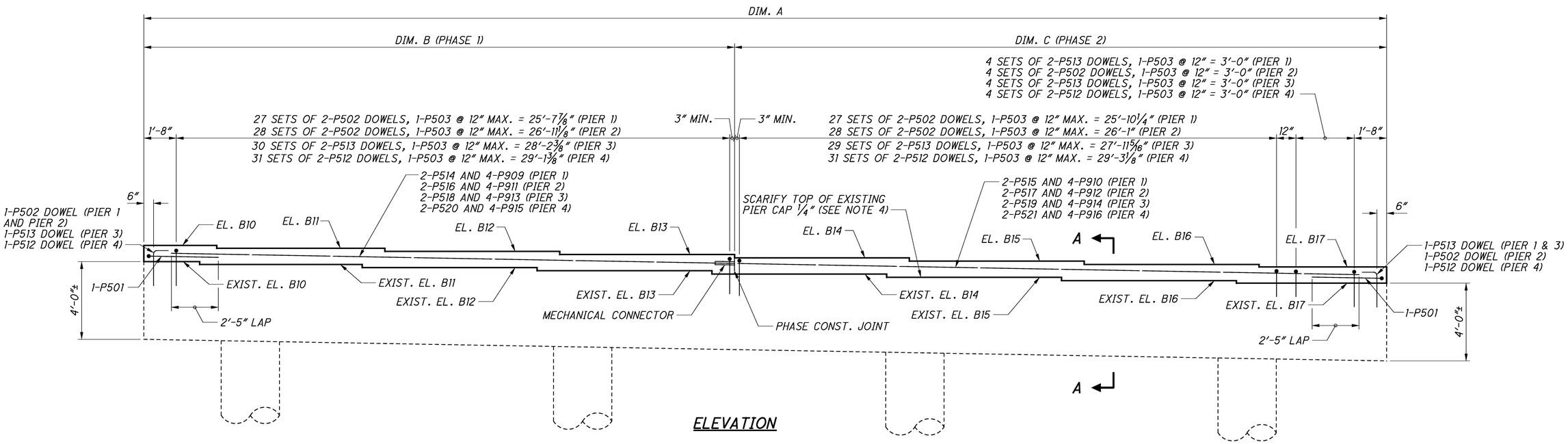
HAM-50-19.03
PID No. 75736

28 / 61

350
442



PLAN



ELEVATION

DIMENSIONS				
	PIER 1	PIER 2	PIER 3	PIER 4
DIM. A	59'-4⅛"±	60'-10⅛"±	63'-11 11/16"±	66'-2½"±
DIM. B	27'-6⅞"±	28'-10⅛"±	30'-1 ⅜"±	31'-0⅜"±
DIM. C	31'-9¼"±	32'-0"±	33'-10 5/16"±	35'-2⅛"±
DIM. D	6'-11"±	6'-5 1/16"±	5'-11 3/16"±	5'-7 1/16"±
DIM. E	0'-7⅞"	2'-5"	4'-2 3/16"	5'-5 5/16"
DIM. F	0'-5⅜"	0'-8 7/16"	0'-7 7/16"	0'-4¼"
DIM. G	1'-9"±	1'-9"±	1'-9"±	1'-9 1/16"±
DIM. H	5'-9⅞"	7'-1⅛"	8'-4⅜"	9'-3⅝"
DIM. J	5'-3 11/16"	5'-3 11/16"	6'-9 5/16"	8'-8⅛"
DIM. K	1'-5 9/16"±	1'-8 5/16"±	2'-0 5/16"±	1'-6"±

℄ US 50 STATIONS				
	PIER 1	PIER 2	PIER 3	PIER 4
STATIONS	31+53.73±	32+07.62±	32+61.55±	33+00.07±

PIER CAP ELEVATIONS								
	PIER 1		PIER 2		PIER 3		PIER 4	
	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED	EXISTING	PROPOSED
B10	505.36±	506.36	504.75±	505.82	504.00±	504.93	503.35±	504.10
B11	505.27±	506.27	504.62±	505.70	503.85±	504.78	503.16±	503.92
B12	505.13±	506.12	504.47±	505.54	503.69±	504.62	502.98±	503.75
B13	504.99±	505.97	504.32±	505.39	503.54±	504.45	502.82±	503.58
B14	504.84±	505.83	504.16±	505.23	503.38±	504.29	502.66±	503.40
B15	504.69±	505.68	504.00±	505.08	503.21±	504.12	502.49±	503.23
B16	504.55±	505.53	503.84±	504.92	503.04±	503.96	502.33±	503.06
B17	504.50±	505.44	503.76±	504.83	502.91±	503.83	502.16±	502.89

ANGLES				
	PIER 1	PIER 2	PIER 3	PIER 4
ANGLE A	80°10'48"±	80°10'48"±	78°10'34"±	75°24'31"±

NOTES:

1. FOR SECTION A-A, SEE SHEET 30/61 .
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61 .
3. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61 , 60/61 AND 61/61 .
4. SCARIFY THE EXISTING SEAT AREA TO A DEPTH OF ¼". INCLUDE WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN.
5. SEALING OF BEAM SEATS: IF THE BEAMS SEATS ARE SEALED WITH AN EPOXY OR NON-EPOXY SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102920

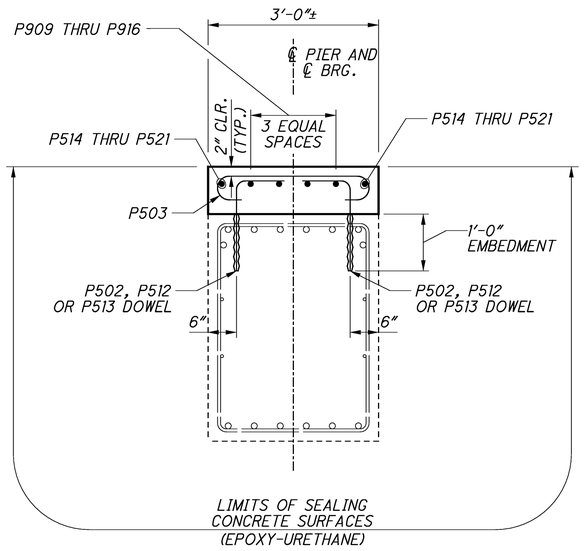
PIER DETAILS (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

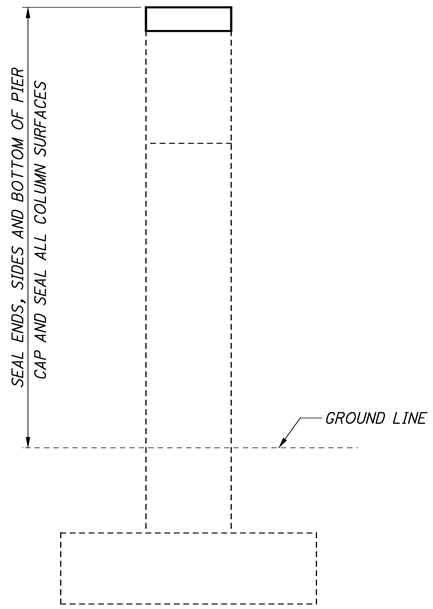
29 / 61

351
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RP1001.dgn 11/10/2010 11:39:26 AM mtreihleisel



SECTION A-A



LIMITS OF SEALING CONCRETE SURFACES ON PIERS (EPOXY-URETHANE)

NOTES:

1. FOR ADDITIONAL NOTES, SEE SHEET 29/61 .

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RPI002.dgn 11/10/2010 11:39:28 AM mtneiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

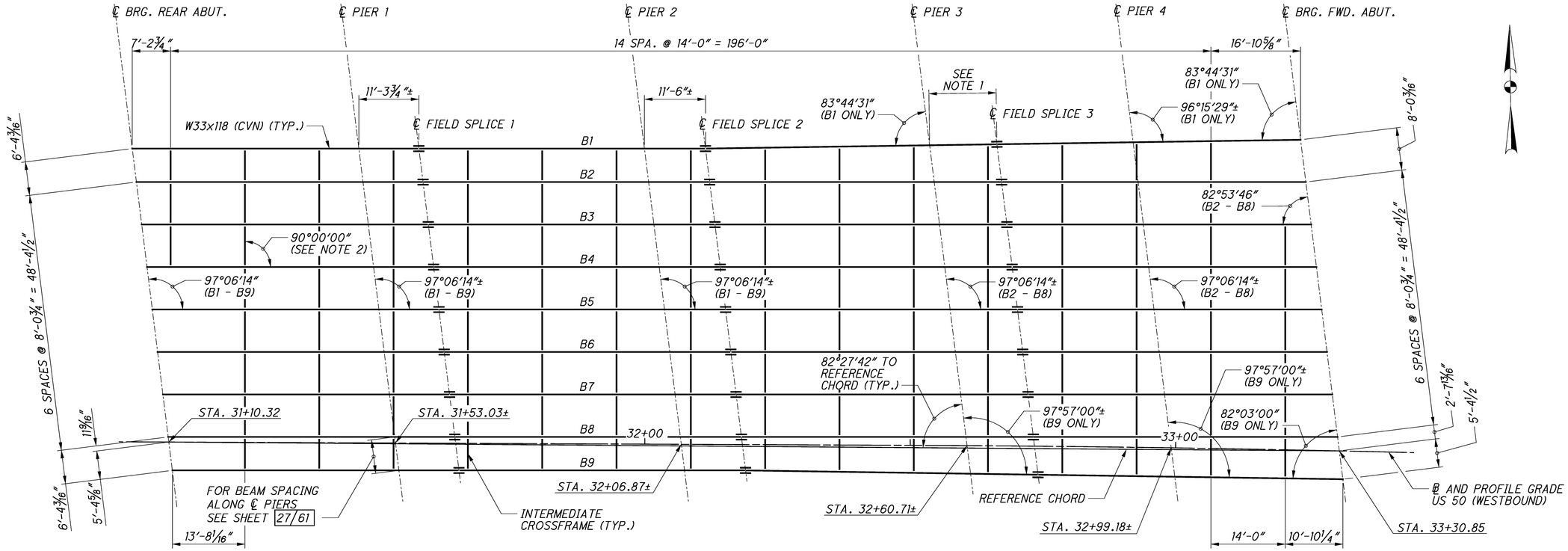
DESIGNED	DRAWN	REVIEWED	DATE
MTN	SSM	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

PIER DETAILS (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

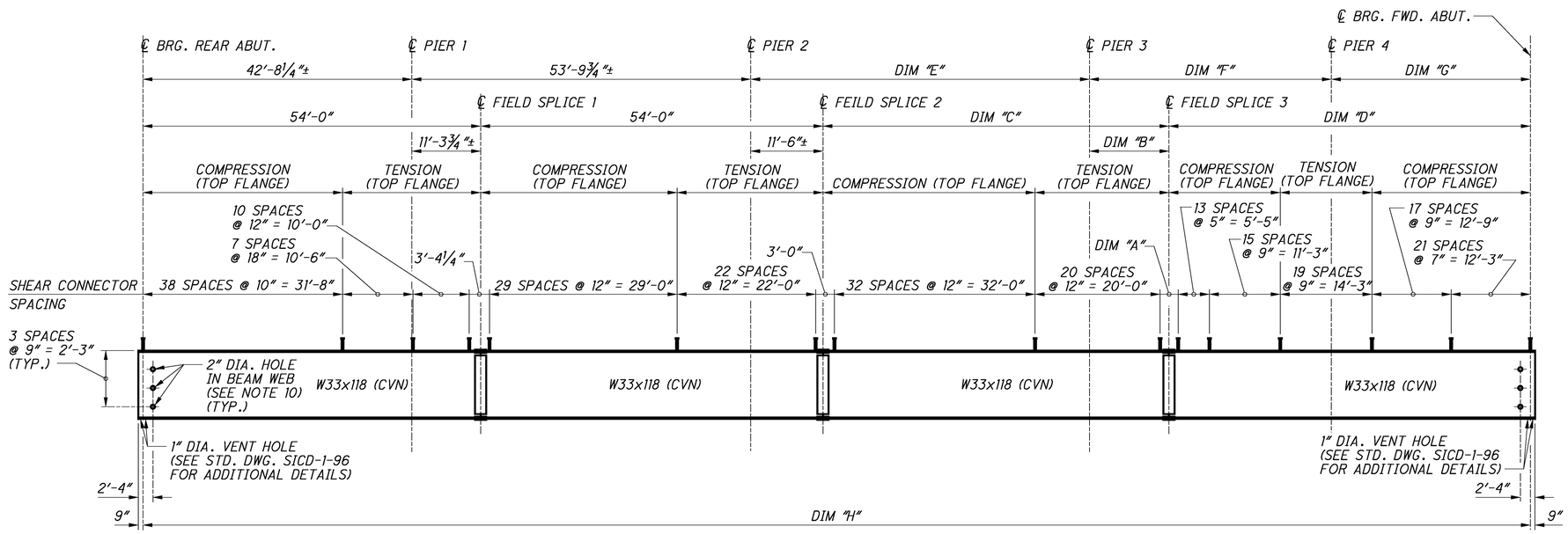
HAM-50-19.03
PID No. 75736

30 / 61

352
442



FRAMING PLAN



BEAM ELEVATION

(DIMENSIONS SHOWN ARE ALONG ℄ BEAM)

	B1	B2 THRU B8	B9
DIM "A"	2'-8⅜"	2'-10⁹⁄₁₆"	3'-1⅜16"
DIM "B"	12'-8¹⁄₁₆"±	12'-8¼"±	12'-8⅝"±
DIM "C"	54'-10⅞"	55'-0"	55'-1⁵⁄₁₆"
DIM "D"	57'-2⅝"	57'-3¹³⁄₁₆"	57'-5⅜16"

	B1	B2 THRU B8	B9
DIM "E"	53'-8⅞"±	53'-9¾"±	53'-10¹¹⁄₁₆"±
DIM "F"	38'-4¹⁄₈"±	38'-4¹⁵⁄₁₆"±	38'-5¾"±
DIM "G"	31'-6⅝"±	31'-7 ¼"±	31'-8"±
DIM "H"	220'-1⅝"±	220'-3¹³⁄₁₆"	220'-6⁷⁄₁₆"

NOTES:

1. FOR FIELD SPLICE LOCATION SEE BEAM ELEVATION.
2. ALL INTERMEDIATE CROSSFRAMES ARE POSITIONED NORMAL TO BEAMS B2 THROUGH B8.
3. FOR GENERAL NOTES SEE SHEETS 4/61 AND 5/61 .
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 37/61 .
5. FOR FIELD SPLICE DETAIL, SEE SHEET 32/61 .
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 32/61 .
7. INTERMEDIATE CROSSFRAMES BETWEEN BEAMS B5 AND B6 SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS.
8. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
9. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR ⅝" FOR GREATER THAN ¾" THICK.
10. DRILLING OF 2" DIA. HOLES IN BEAM WEB AND 1" DIA. VENT HOLES IN BOTTOM FLANGE SHALL BE INCLUDED WITH ITEM 513 FOR PAYMENT.
11. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102912

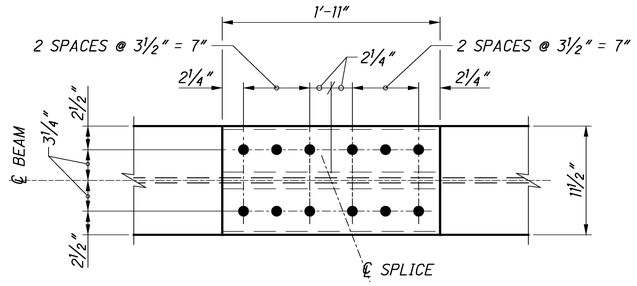
FRAMING PLAN AND BEAM ELEVATION (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

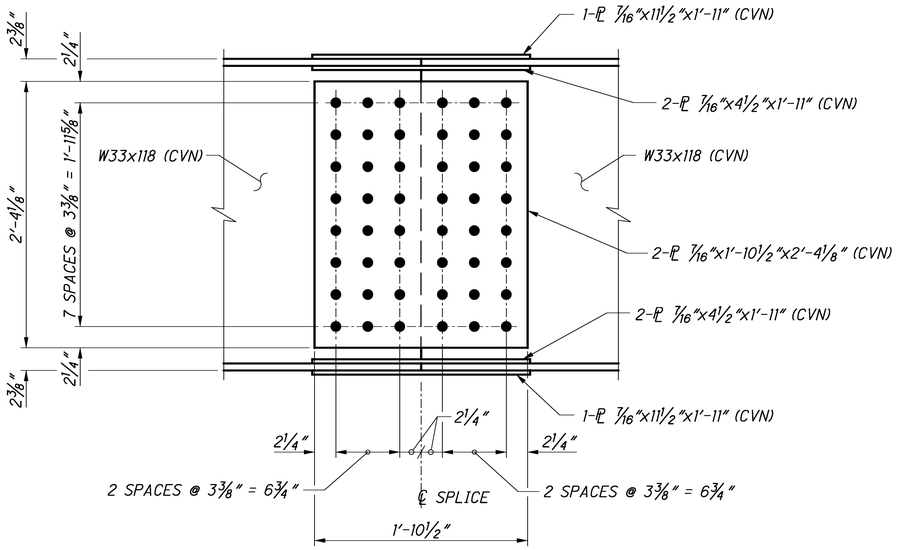
31 / 61

353 / 442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD001.dgn 11/10/2010 11:39:29 AM mtreinelsel

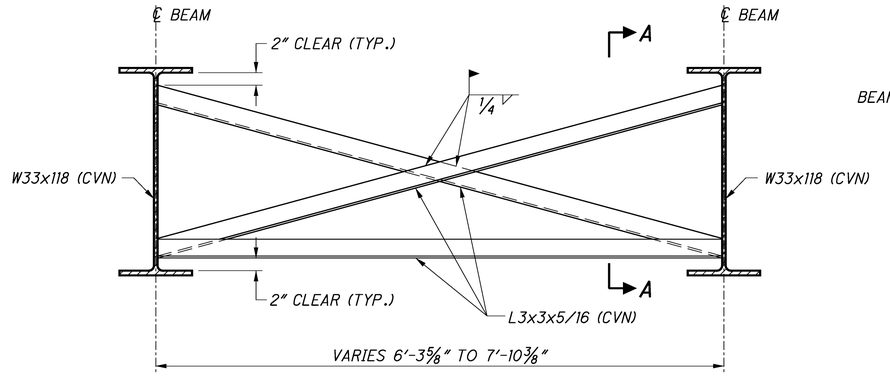


PLAN - FLANGE SPLICE

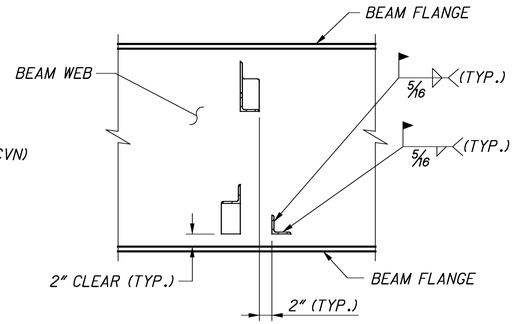


ELEVATION - WEB SPLICE

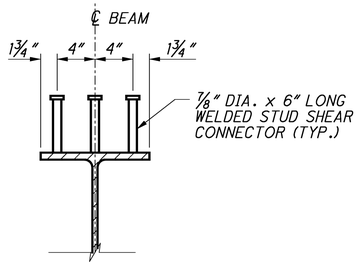
FIELD SPLICE DETAILS



INTERMEDIATE CROSSFRAME DETAIL



SECTION A-A



SHEAR CONNECTOR DETAIL

(TYP. ALL GIRDERS)

NOTES:

1. HIGH STRENGTH BOLTS SHALL BE 1⅛" DIAMETER A325 TYPE 1, GALVANIZED.
2. CVN: WHERE A SHAPE OR A PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. CROSSFRAMES SHALL BE TYPE 1 INTERMEDIATE WELDED CROSSFRAMES. FOR ADDITIONAL CROSSFRAME DETAILS AND NOTES, SEE STD. DWG. GSD-1-96 SHEET 1 OF 3.
4. STUD SHEAR CONNECTORS TO BE WELDED PER ITEM 513.22.
5. FOR ADDITIONAL FRAMING DETAILS AND NOTES, SEE SHEET 31/61 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

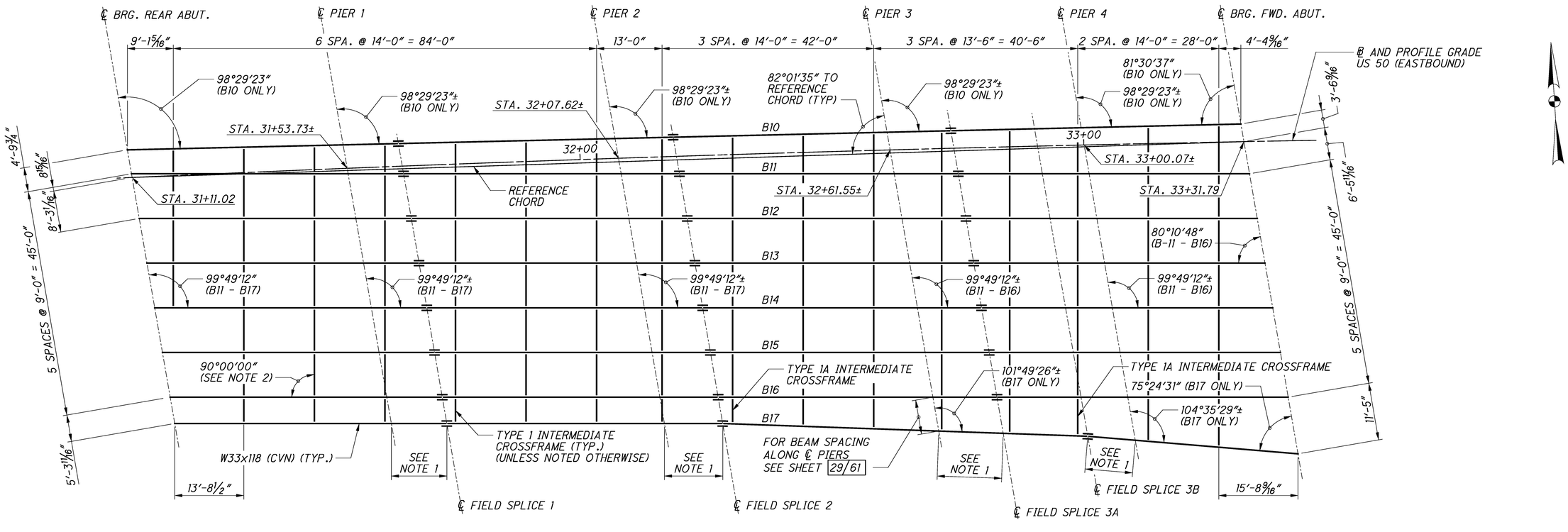
FRAMING DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

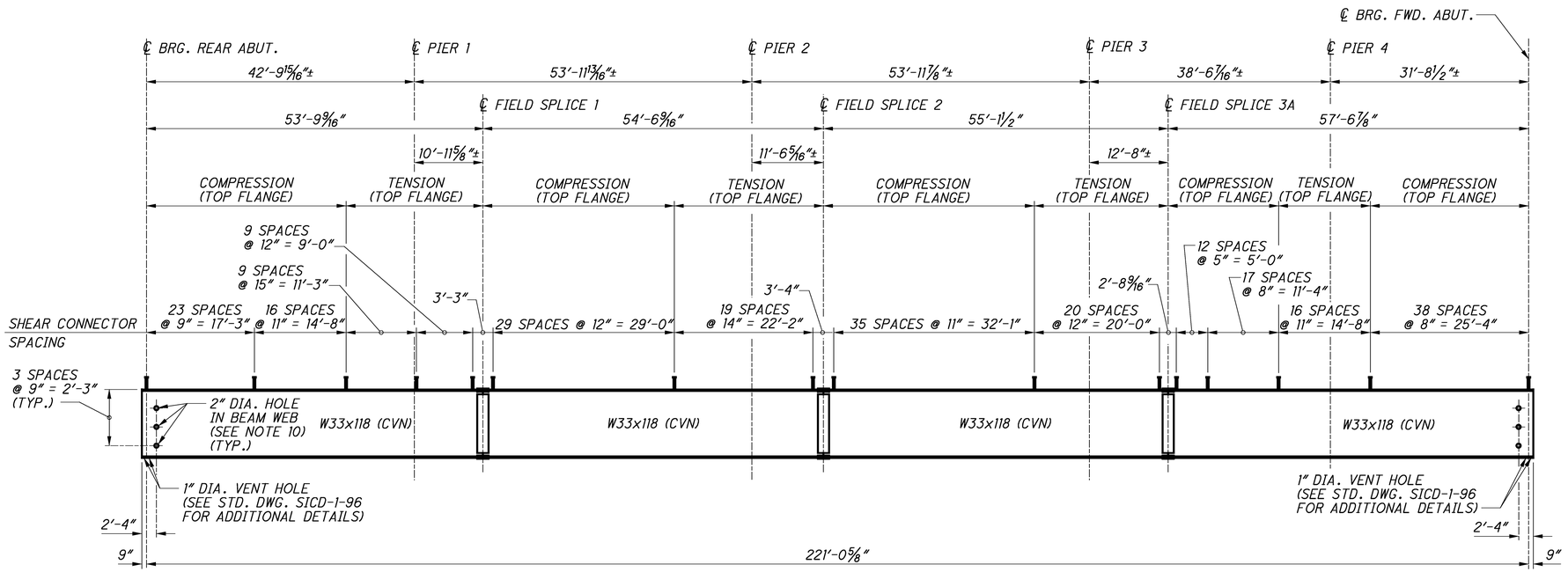
32 / 61

354
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LSD002.dgn 11/10/2010 11:39:31 AM mtneiheisel



FRAMING PLAN



BEAM 10 (B10) ELEVATION

(DIMENSIONS SHOWN ARE MEASURED ALONG ℄ BEAM)

NOTES:

1. FOR FIELD SPLICE LOCATION SEE BEAM ELEVATION.
2. ALL INTERMEDIATE CROSSFRAMES ARE POSITIONED NORMAL TO BEAMS B11 THROUGH B16.
3. FOR GENERAL NOTES SEE SHEETS 4/61 AND 5/61 .
4. FOR DEFLECTION AND CAMBER DIAGRAM, SEE SHEET 39/61 AND 40/61 .
5. FOR FIELD SPLICE DETAIL, SEE SHEET 36/61 .
6. FOR INTERMEDIATE CROSSFRAME DETAILS, SEE SHEET 35/61 .
7. INTERMEDIATE CROSSFRAMES BETWEEN BEAMS B13 AND B14 SHALL BE INSTALLED AFTER PLACEMENT OF PHASE 1 AND PHASE 2 CONSTRUCTION DECK SLABS.
8. CVN: WHERE A SHAPE OR PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
9. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST ¼" FOR THICKNESSES UP TO ¾" OR ⅝" FOR GREATER THAN ¾" THICK.
10. DRILLING OF 2" DIA. HOLES IN BEAM WEB AND 1" DIA. VENT HOLES IN BOTTOM FLANGE SHALL BE INCLUDED WITH ITEM 513 FOR PAYMENT.
11. ALL STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
12. ALL STEEL TO BE SHOP PRIMED AND FIELD PAINTED PER ITEM 514.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102920

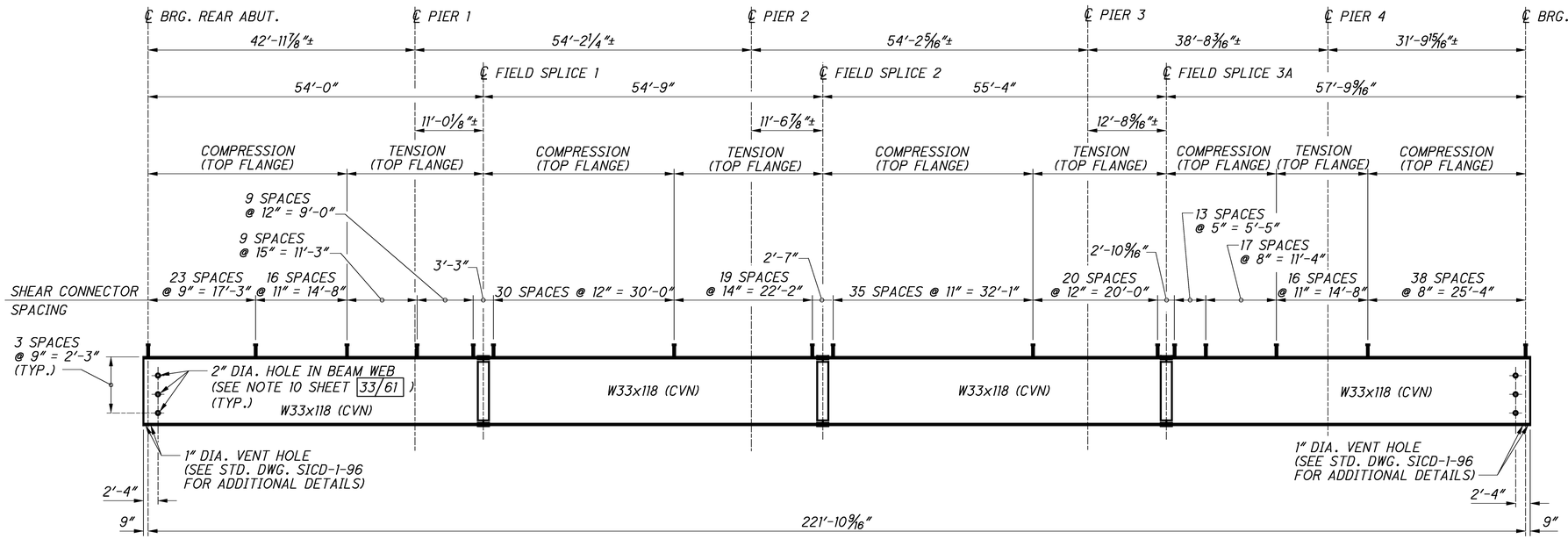
FRAMING PLAN AND BEAM ELEVATION (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

33 / 61

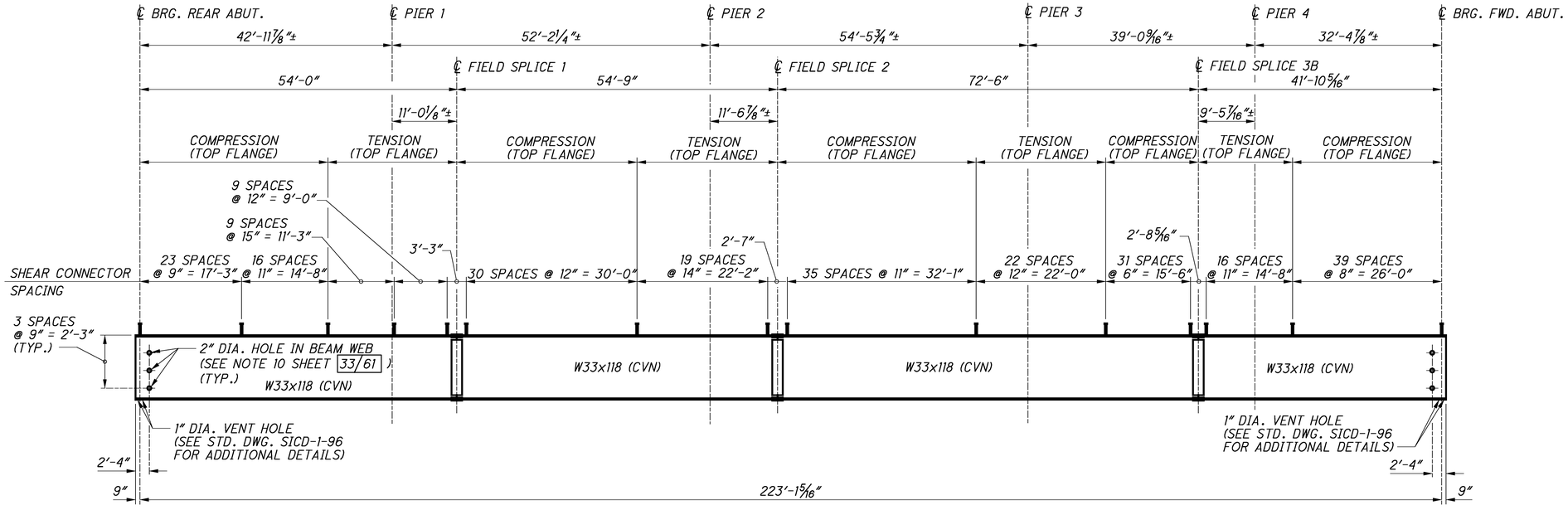
355
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD002.dgn 11/10/2010 11:39:32 AM mtneiheisel



BEAM 11 (B11) THRU BEAM 16 (B16) ELEVATION

(DIMENSIONS SHOWN ARE MEASURED ALONG ℄ BEAM)



BEAM 17 (B17) ELEVATION

(DIMENSIONS SHOWN ARE MEASURED ALONG ℄ BEAM)

NOTES:

1. FOR ADDITIONAL NOTES SEE SHEET 33/61.

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

BEAM ELEVATIONS (RIGHT BRIDGE)

HAM-50-1961R

US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

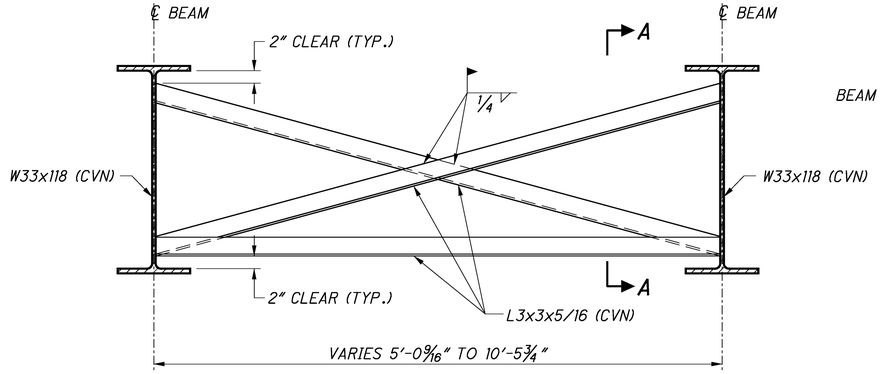
HAM-50-19.03

PID No. 75736

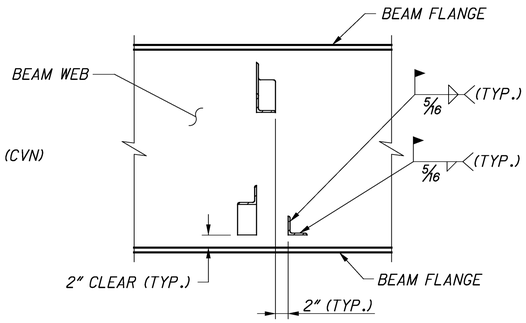
34 / 61

356 / 442

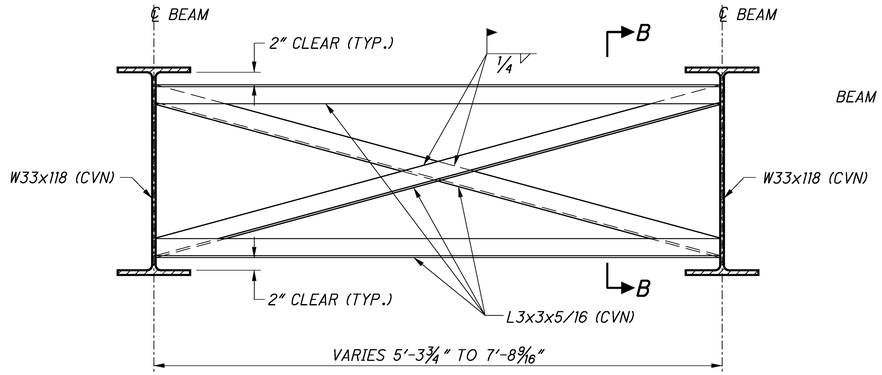
C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD003.dgn 11/10/2010 11:39:34 AM mtreiheisel



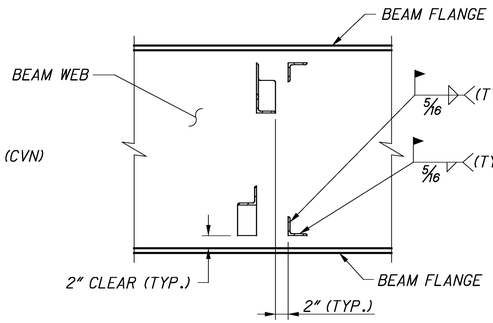
INTERMEDIATE CROSSFRAME DETAIL



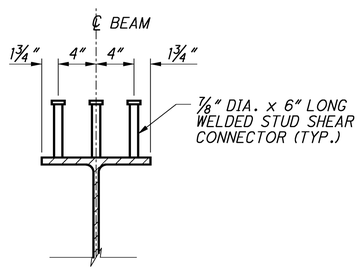
SECTION A-A



TYPE 1A INTERMEDIATE CROSSFRAME DETAIL



SECTION B-B



SHEAR CONNECTOR DETAIL

(TYP. ALL GIRDERS)

NOTES:

1. CVN: WHERE A SHAPE OR A PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
2. ALL CROSSFRAMES, EXCEPT FOR THOSE NOTED IN FRAMING PLAN SHEET 33/61, SHALL BE TYPE 1 INTERMEDIATE WELDED CROSSFRAMES. FOR ADDITIONAL CROSSFRAME DETAILS AND NOTES, SEE STD. DWG. GSD-1-96 SHEET 1 OF 3.
3. STUD SHEAR CONNECTORS TO BE WELDED PER ITEM 513.22.
4. FOR ADDITIONAL FRAMING DETAILS AND NOTES, SEE SHEET 33/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

FRAMING DETAILS (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

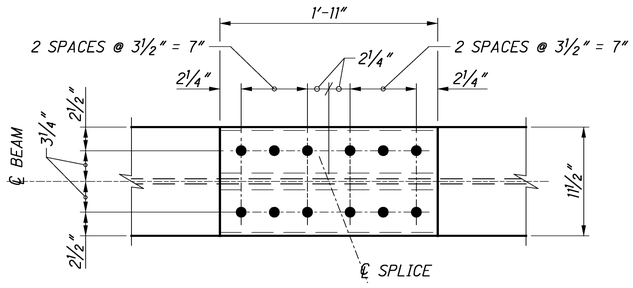
HAM-50-19.03
PID No. 75736

35 / 61

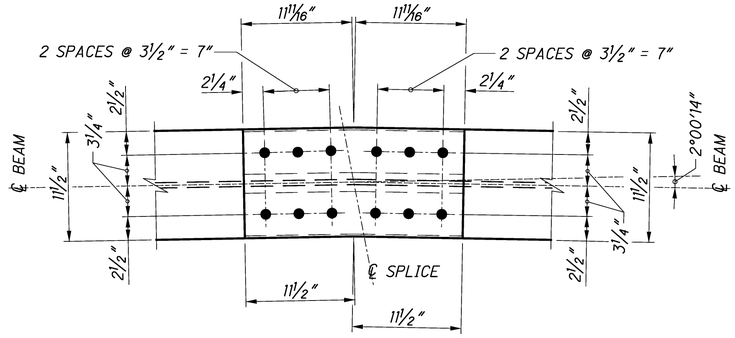
357
442

11/10/2010 11:39:35 AM mtreiheisel

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RSD003.dgn

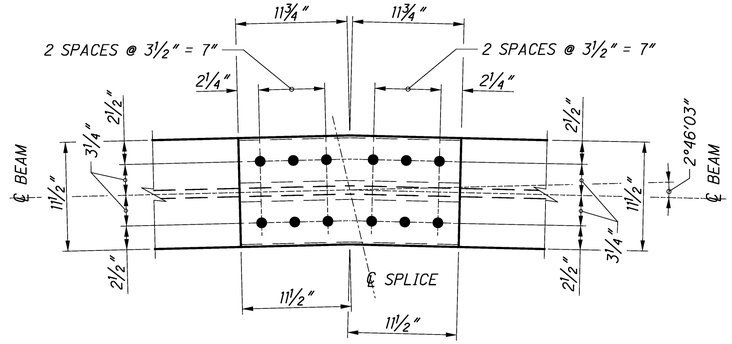


PLAN - FLANGE SPLICE



PLAN - FLANGE SPLICE 2

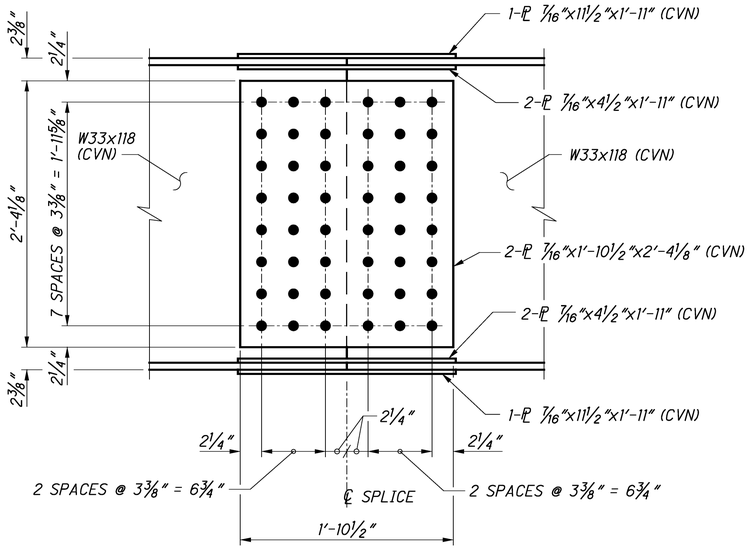
(B17 ONLY)



PLAN - FLANGE SPLICE 3B

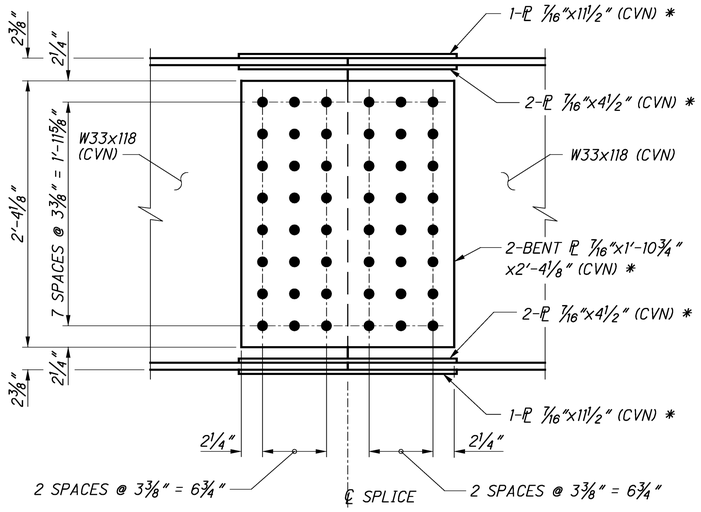
(B17 ONLY)

* SEE PLAN-FLANGE SPLICE FOR ADDITIONAL SPLICE PLATE DIMENSIONS.



ELEVATION - WEB SPLICE

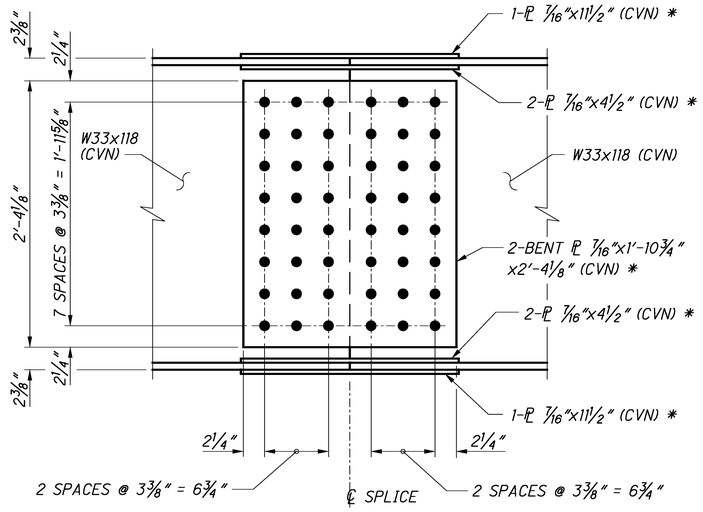
FIELD SPLICE DETAILS



ELEVATION - WEB SPLICE 2

(B17 ONLY)

FIELD SPLICE DETAILS



ELEVATION - WEB SPLICE 3B

(B17 ONLY)

FIELD SPLICE DETAILS

NOTES:

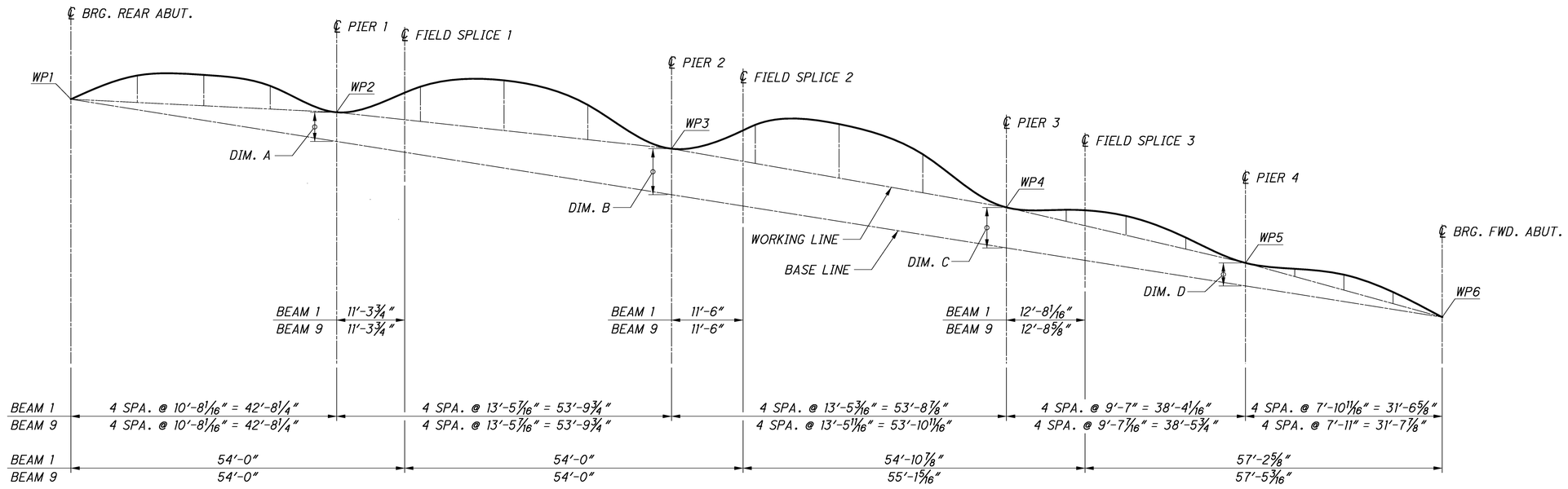
1. HIGH STRENGTH BOLTS SHALL BE 1⅛" DIAMETER A325 TYPE 1, GALVANIZED.
2. CVN: WHERE A SHAPE OR A PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. FOR ADDITIONAL FRAMING DETAILS AND NOTES, SEE SHEET 33/61 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

FRAMING DETAILS (RIGHT BRIDGE)
HAM-50-19.03
PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RSD002.dgn 11/10/2010 11:39:36 AM mtneiheisel



CAMBER DIAGRAM

WORK POINT DIMENSIONS				
MEMBER	DIM. A	DIM. B	DIM. C	DIM. D
BEAM 1	4 13/16″	7 11/16″	7″	4″
BEAM 9	5½″	8¾″	7 9/16″	4 3/16″

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP6.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION,
   (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DEFLECTION AND CAMBER TABLE (VALUE INCHES)

HAM-50-1961L BEAMS 1 AND 9	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3	1/2	3/4		1/4	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	0	0	0	0	0	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/16	-1/8	-1/16	0	-1/16	-1/16	-1/8	-1/16	0	-1/16	-1/8	-3/16	-1/8	0	0	0	0	0	0	0	-1/16	-1/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-1/16	-1/8	-1/16	0	-1/16	-1/16	-1/8	-1/16	0	-1/16	-1/8	-1/4	-1/8	0	0	0	0	0	0	0	-1/16	-1/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/16	1/8	1/16	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/4	1/8	0	0	0	0	0	0	0	1/16	1/16	0
VERTICAL CURVE CORRECTION	0	1/4	5/16	1/4	0	1/4	5/16	3/8	5/16	0	3/8	3/8	1/2	3/8	0	3/16	1/4	1/4	3/16	0	1/8	3/16	1/8	0
TOTAL REQUIRED CAMBER	0	5/16	7/16	5/16	0	5/16	3/8	1/2	3/8	0	7/16	1/2	7/8	1/2	0	3/16	1/4	1/4	3/16	0	1/8	1/4	3/16	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102912	

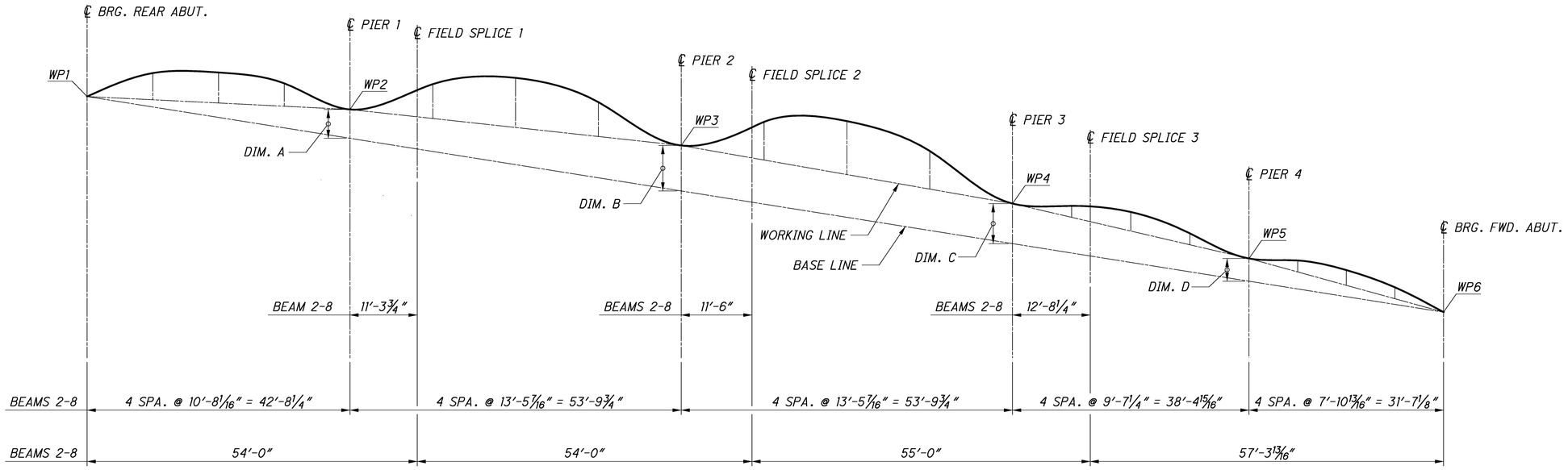
DEFLECTION AND CAMBER TABLES (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

37 / 61

359
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD006.dgn 11/10/2010 11:39:38 AM mtneiheisel



CAMBER DIAGRAM

WORK POINT DIMENSIONS				
MEMBER	DIM. A	DIM. B	DIM. C	DIM. D
BEAM 2	4¾″	7 9/16″	6 15/16″	4″
BEAM 3	4¾″	7⅝″	7″	4″
BEAM 4	4 11/16″	7 9/16″	6 13/16″	3⅞″
BEAM 5	4⅞″	7¾″	6 15/16″	3 15/16″
BEAM 6	5″	7 15/16″	7 1/16″	4″
BEAM 7	5 3/16″	8 3/16″	7 3/16″	4 1/16″
BEAM 8	5 5/16″	8⅜″	7 5/16″	4⅛″

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP6.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION, (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DEFLECTION AND CAMBER TABLE (VALUE INCHES)																								
HAM-50-1961L BEAMS 2 THRU 8	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3	1/2	3/4		1/4	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	0	0	0	0	0	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-⅛	-⅛	-1/16	0	-1/16	-⅛	-3/16	-⅛	0	-⅛	-⅛	-¼	-3/16	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-⅛	-⅛	-1/16	0	-1/16	-⅛	-3/16	-⅛	0	-⅛	-⅛	-5/16	-3/16	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	⅛	⅛	1/16	0	1/16	⅛	3/16	⅛	0	⅛	⅛	5/16	3/16	0	0	0	0	0	0	1/16	1/16	1/16	0
VERTICAL CURVE CORRECTION	0	¼	5/16	¼	0	¼	5/16	⅜	5/16	0	⅜	⅜	½	⅜	0	3/16	¼	¼	3/16	0	⅛	3/16	⅛	0
TOTAL REQUIRED CAMBER	0	⅜	7/16	5/16	0	5/16	7/16	9/16	7/16	0	½	½	13/16	9/16	0	3/16	¼	¼	3/16	0	3/16	¼	3/16	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102912	

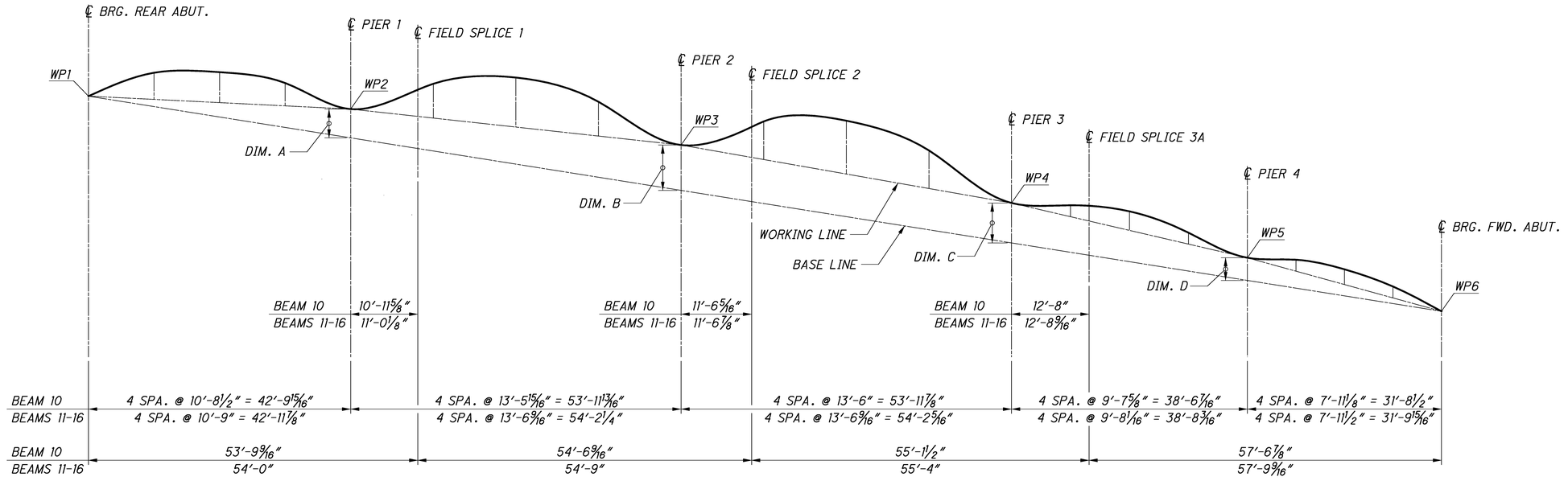
DEFLECTION AND CAMBER TABLES (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

38 / 61

360
442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD005.dgn 11/10/2010 11:39:39 AM mtneiheisel



CAMBER DIAGRAM

WORK POINT DIMENSIONS				
MEMBER	DIM. A	DIM. B	DIM. C	DIM. D
BEAM 10	5⁹⁄₁₆″	8¹³⁄₁₆″	7¾″	4⅜″
BEAM 11	5⅝″	8⅞″	7¹³⁄₁₆″	4⁷⁄₁₆″
BEAM 12	5⅝″	8⅞″	7¹³⁄₁₆″	4⁷⁄₁₆″
BEAM 13	5⅝″	8¹⁵⁄₁₆″	7⅞″	4⁷⁄₁₆″
BEAM 14	5¹¹⁄₁₆″	8¹⁵⁄₁₆″	7⅞″	4⁷⁄₁₆″
BEAM 15	5¹¹⁄₁₆″	8¹⁵⁄₁₆″	7⅞″	4⁷⁄₁₆″
BEAM 16	5¹¹⁄₁₆″	8¹⁵⁄₁₆″	7⅞″	4½″

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP6.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (–) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION,
   (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DEFLECTION AND CAMBER TABLE (VALUE INCHES)																									
HAM-50-1961R BEAMS 10 THRU 16	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3A	1/2	3/4		1/4	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	0	0	0	0	0	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-3/16	-3/16	-1/16	0	-1/8	-1/8	-1/4	-1/8	0	-1/8	-3/16	-5/16	-3/16	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-3/16	-3/16	-1/16	0	-1/8	-1/8	-1/4	-1/8	0	-1/8	-3/16	-3/8	-3/16	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	3/16	3/16	1/16	0	1/8	1/8	1/4	1/8	0	1/8	3/16	3/8	3/16	0	0	0	0	0	0	1/16	1/16	1/16	0
VERTICAL CURVE CORRECTION	0	1/4	5/16	1/4	0	3/8	3/8	9/16	7/16	0	3/8	3/8	9/16	7/16	0	3/16	1/4	5/16	3/16	0	1/8	3/16	1/8	0
TOTAL REQUIRED CAMBER	0	7/16	1/2	5/16	0	1/2	1/2	13/16	1/2	0	1/2	9/16	15/16	5/8	0	3/16	1/4	5/16	3/16	0	3/16	1/4	3/16	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
SSM	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102920	

DEFLECTION AND CAMBER TABLES (RIGHT BRIDGE)

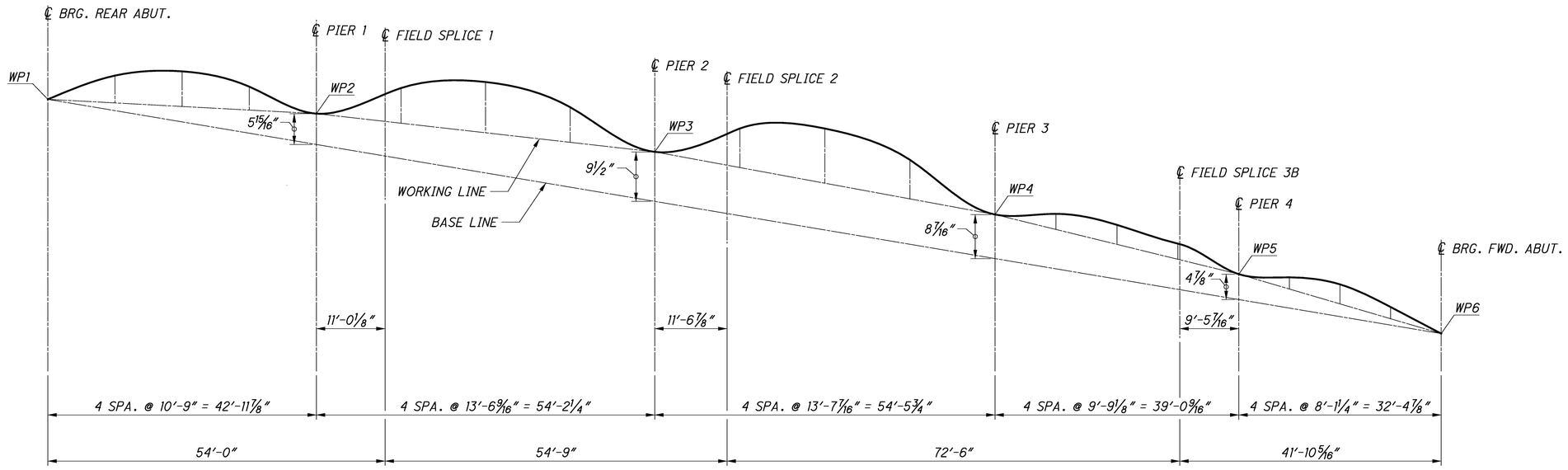
HAM-50-1961R

US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03

PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD007.dgn 11/10/2010 11:39:40 AM mtreiheisel



CAMBER DIAGRAM

NOTES:

1. WORKING POINTS (WP) ARE AT THE TOP OF WEB AT ℄ BEARING.
2. THE WORKING LINE IS A STRAIGHT LINE BETWEEN INDICATED WORKING POINTS.
3. THE BASE LINE IS A STRAIGHT LINE BETWEEN WP1 & WP6.
4. THE TABULATED DEFLECTION AND CAMBER DATA IS MEASURED FROM THE WORKING LINE.
5. (-) DEFLECTIONS REPRESENT DOWNWARD DEFLECTION,
   (+) DEFLECTIONS REPRESENT UPWARD DEFLECTION.

DEFLECTION AND CAMBER TABLE (VALUE INCHES)

HAM-50-1961R BEAM 17	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	1/2	3/4	SPLICE 3B		1/4	1/2	3/4	
DEFLECTION DUE TO BEAM SELF WEIGHT	0	0	0	0	0	0	0	0	0	0	0	0	-1/16	0	0	0	0	0	0	0	0	0	0	0
DEFLECTION DUE TO NON-COMPOSITE DEAD LOAD	0	-1/16	-1/8	-1/16	0	-1/16	-1/16	-1/8	-1/16	0	-1/8	-1/8	-3/16	-1/8	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
DEFLECTION DUE TO COMPOSITE DEAD LOAD*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	0	-1/16	-1/8	-1/16	0	-1/16	-1/16	-1/8	-1/16	0	-1/8	-1/8	-1/4	-1/8	0	0	0	0	0	0	-1/16	-1/16	-1/16	0
CAMBER REQUIRED FOR DEAD LOAD DEFLECTION	0	1/16	1/8	1/16	0	1/16	1/16	1/8	1/16	0	1/8	1/8	1/4	1/8	0	0	0	0	0	0	1/16	1/16	1/16	0
VERTICAL CURVE CORRECTION	0	1/4	5/16	1/4	0	3/8	7/16	9/16	7/16	0	7/16	1/2	5/8	7/16	0	1/4	5/16	5/16	5/16	0	1/8	3/16	1/8	0
TOTAL REQUIRED CAMBER	0	5/16	7/16	5/16	0	7/16	1/2	11/16	1/2	0	9/16	5/8	7/8	9/16	0	1/4	5/16	5/16	5/16	0	3/16	1/4	3/16	0

* DOES NOT INCLUDE FUTURE WEARING SURFACE

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

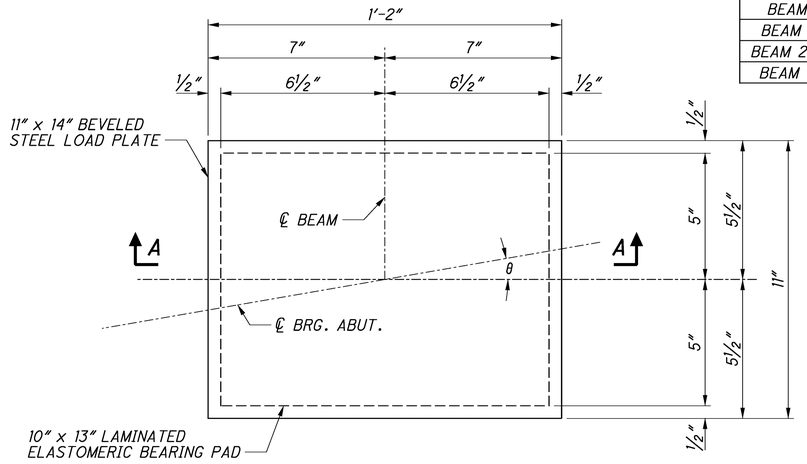
DESIGNED	DRAWN	REVIEWED	DATE
SSM	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102920	

DEFLECTION AND CAMBER TABLES (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

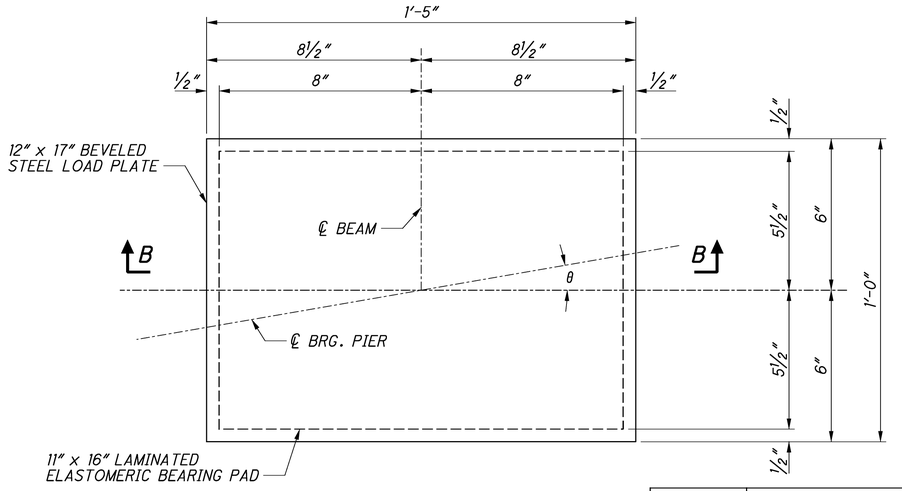
C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD008.dgn 11/10/2010 11:39:42 AM mtneiheisel

BEAM	θ	
	REAR ABUT.	FWD. ABUT.
BEAM 1	7°06'14"	6°15'29"
BEAM 2-8	7°06'14"	7°06'14"
BEAM 9	7°06'14"	7°57'00"



ABUTMENT BEARING PLAN

DEAD LOAD REACTION = 57.87 K
LIVE LOAD W/O IMPACT REACTION = 54.35 K
MAXIMUM DESIGN LOAD = 112.22 K

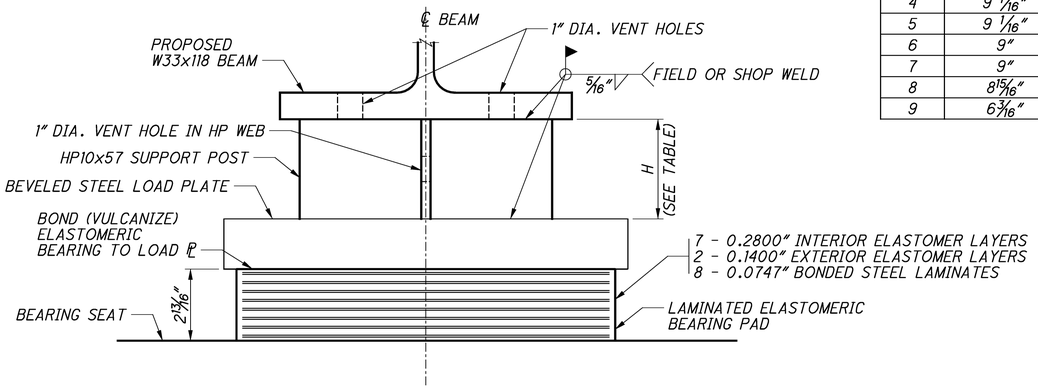


PIER BEARING PLAN

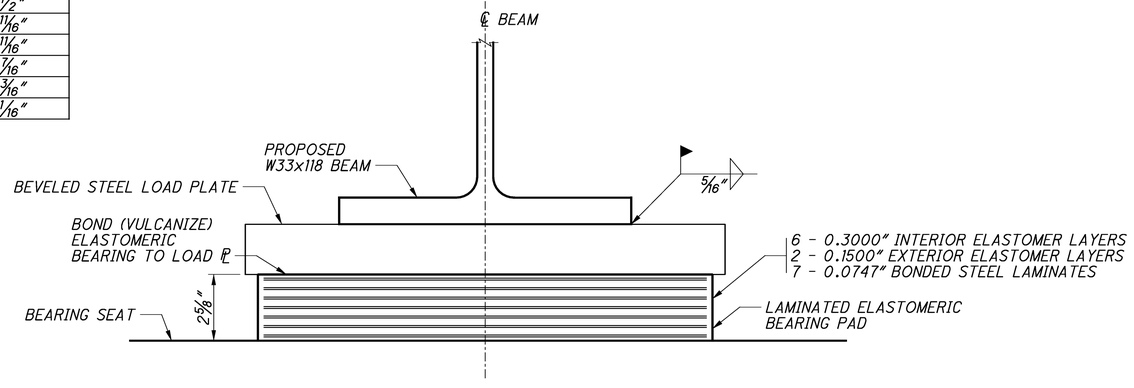
DEAD LOAD REACTION = 88.55 K
LIVE LOAD W/O IMPACT REACTION = 66.72 K
MAXIMUM DESIGN LOAD = 155.27K

BEAM	θ		
	PIER 1 & 2	PIER 3	PIER 4
BEAM 1	7°06'14"±	6°15'29"±	6°15'29"±
BEAM 2-8	7°06'14"±	7°06'14"±	7°06'14"±
BEAM 9	7°06'14"±	7°57'00"±	7°57'00"±

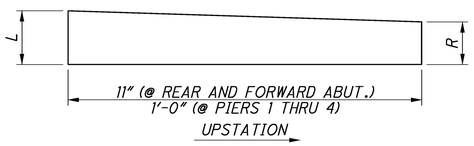
LEFT BRIDGE		
HP10x57 SUPPORT POST HEIGHT, H		
BEAM	REAR ABUT. H	FWD. ABUT. H
1	9⅛"	6 15/16"
2	9⅛"	6¾"
3	9⅛"	6⅝"
4	9 1/16"	6½"
5	9 1/16"	6 1/16"
6	9"	6 1/16"
7	9"	6 1/16"
8	8 15/16"	7 3/16"
9	6 3/16"	6 1/16"



SECTION A-A



SECTION B-B



BEVELED LOAD PLATE ELEVATION

LOCATION	L	R
REAR ABUT.	11 3/16"	11 3/16"
PIER 1	2¼"	2 3/16"
PIER 2	2⅜"	2¼"
PIER 3	2 3/16"	2⅛"
PIER 4	2¼"	1 15/16"
FWD. ABUT.	2"	1 1/16"

NOTES:

1. BEVELED STEEL LOAD PLATES AND HP10x57 SUPPORT POST SHALL BE ASTM A709 GRADE 50 STEEL AND SHALL HAVE SAME PROTECTIVE COATING AS MAIN STRUCTURAL STEEL.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F ± 10°F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.
5. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
6. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, INCLUDING LOAD PLATES AND MISC. HARDWARE. PAYMENT WILL BE AT THE UNIT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN MSW | CHECKED PJP | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102912

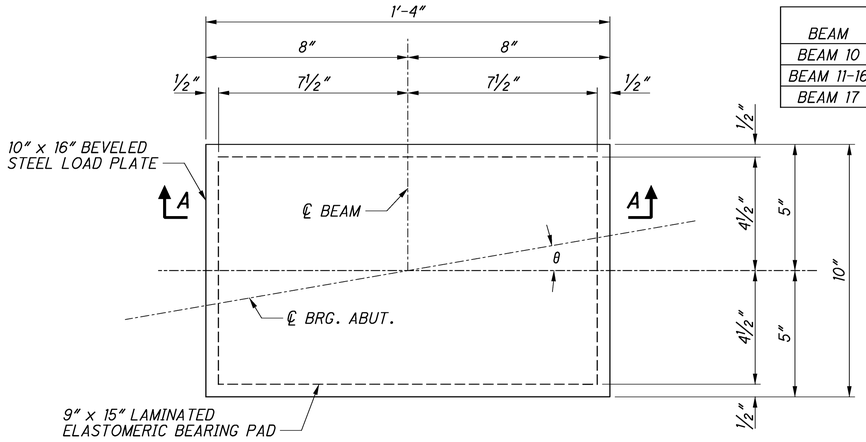
BEARING DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING (E)

HAM-50-19.03
PID No. 75736

41 / 61

363
442

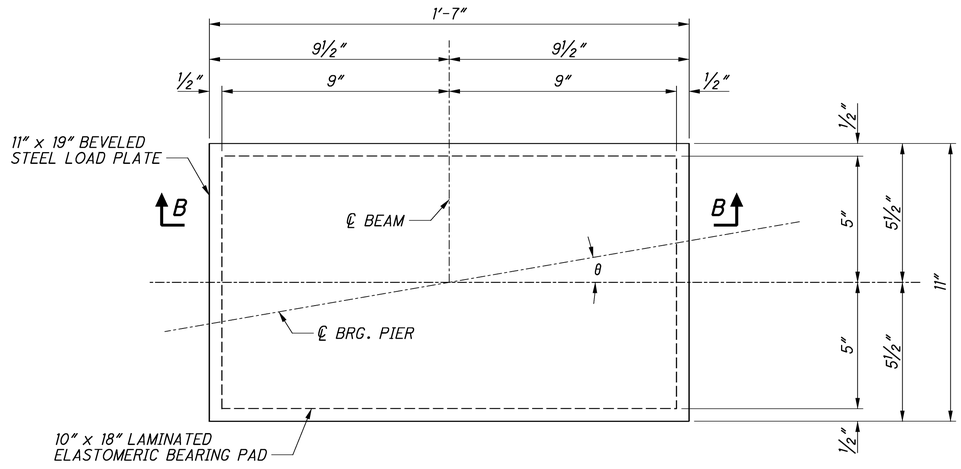
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LBR001.dgn 11/10/2010 11:39:43 AM mtneiheisel



BEAM	θ	
	REAR ABUT.	FWD. ABUT.
BEAM 10	8°29'23"	8°29'23"
BEAM 11-16	9°49'12"	9°49'12"
BEAM 17	9°49'12"	14°35'29"

ABUTMENT BEARING PLAN

DEAD LOAD REACTION = 66.46 K
LIVE LOAD W/O IMPACT REACTION = 59.03 K
MAXIMUM DESIGN LOAD = 125.49 K

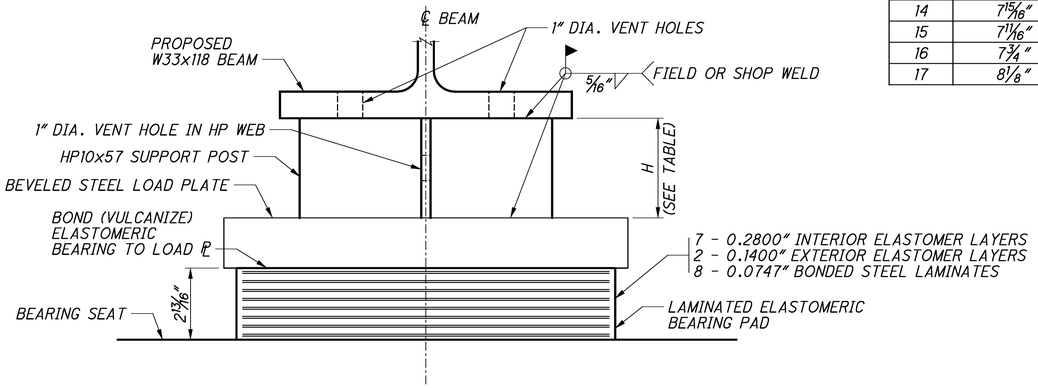


BEAM	θ		
	PIER 1 & 2	PIER 3	PIER 4
BEAM 10	8°29'23"±	8°29'23"±	8°29'23"±
BEAM 11-16	9°49'12"±	9°49'12"±	9°49'12"±
BEAM 17	9°49'12"±	11°49'26"±	14°35'29"±

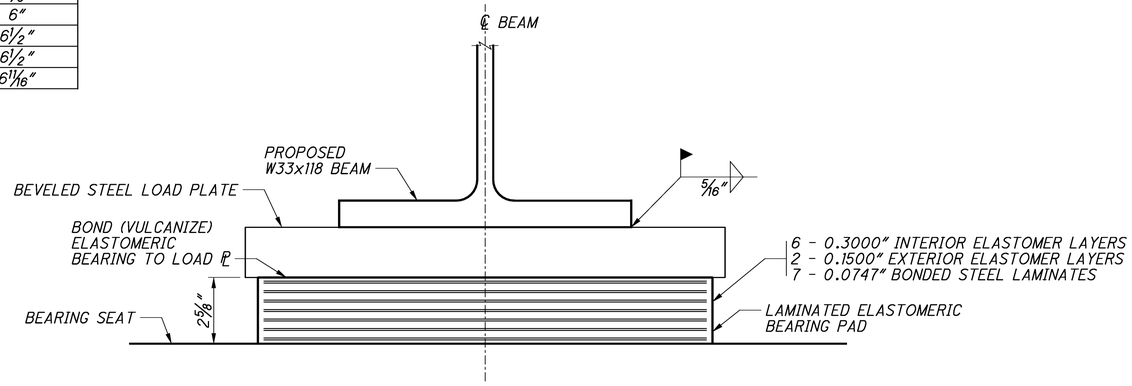
PIER BEARING PLAN

DEAD LOAD REACTION = 104.53 K
LIVE LOAD W/O IMPACT REACTION = 72.69 K
MAXIMUM DESIGN LOAD = 177.22 K

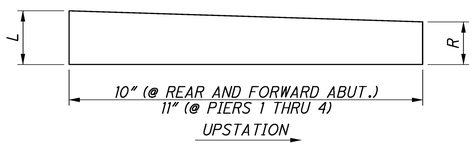
HP10x57 SUPPORT POST HEIGHT, H		
BEAM	REAR ABUT. H	FWD. ABUT. H
10	8 3/4"	6 3/4"
11	8 15/16"	6 9/16"
12	8 7/16"	6 7/16"
13	8 3/16"	6 5/8"
14	7 15/16"	6"
15	7 11/16"	6 1/2"
16	7 3/4"	6 1/2"
17	8 1/8"	6 11/16"



SECTION A-A



SECTION B-B



BEVELED LOAD PLATE ELEVATION

LOCATION	L	R
REAR ABUT.	2 1/8"	2 1/8"
PIER 1	2 1/16"	2 9/16"
PIER 2	2 3/16"	2 5/8"
PIER 3	2 3/4"	2 1/2"
PIER 4	2 9/16"	2 5/16"
FWD. ABUT.	2 3/8"	2 1/16"

NOTES:

1. BEVELED STEEL LOAD PLATES AND HP10x57 SUPPORT POST SHALL BE ASTM A709 GRADE 50 STEEL AND SHALL HAVE SAME PROTECTIVE COATING AS MAIN STRUCTURAL STEEL.
2. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
3. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
4. BEARING REPOSITIONING: IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60°F ± 10°F, RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.
5. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
6. BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS, INCLUDING LOAD PLATES AND MISC. HARDWARE. PAYMENT WILL BE AT THE UNIT PRICE BID FOR ITEM 516, EACH, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE, AS PER PLAN.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

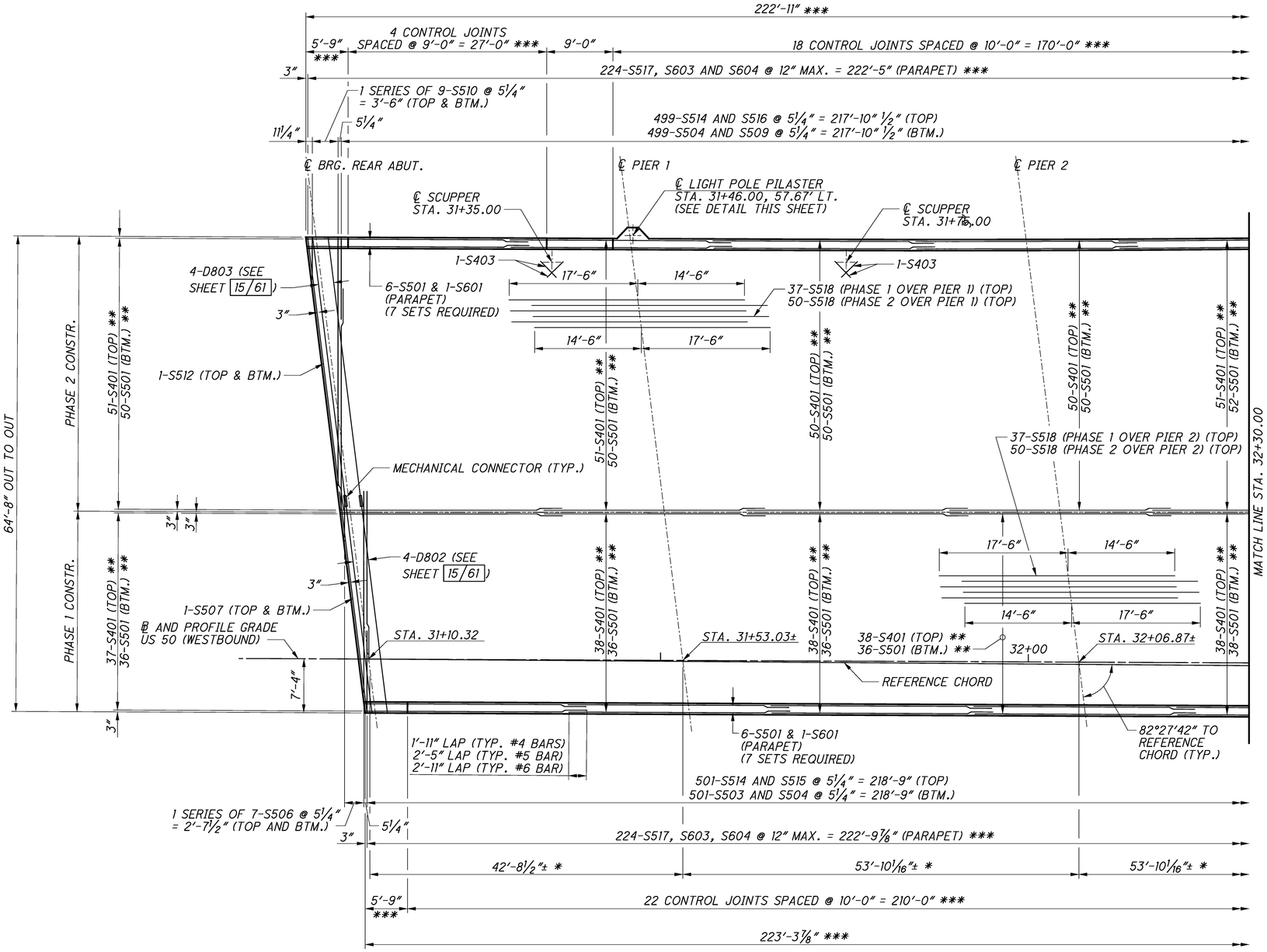
DESIGNED SSM | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED PJP | REVISED | STRUCTURE FILE NUMBER 3102920

BEARING DETAILS (RIGHT BRIDGE)

HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

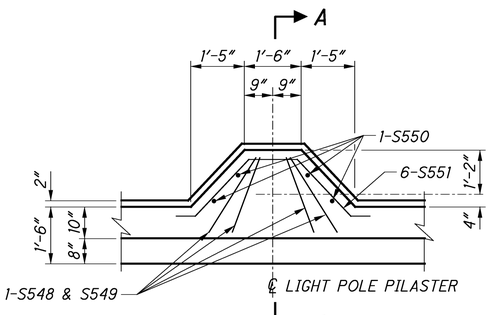
HAM-50-19.03
PID No. 75736

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RBR001.dgn 11/10/2010 11:39:45 AM mtreiniesel



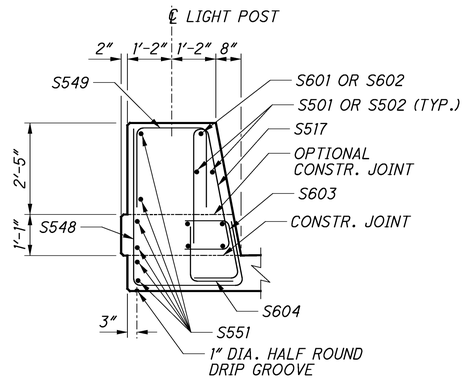
DECK PLAN

* MEASURED ALONG ℄ US 50 (WESTBOUND)
** SEE TRANSVERSE SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK



LIGHT POLE PILASTER DETAIL

FOR ADDITIONAL DETAILS SEE STANDARD CONSTRUCTION DRAWING HL-20.14



SECTION A-A

NOTES:

1. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR.
2. FOR TRANSVERSE SECTION, SEE SHEET 45/61.
3. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61.
4. FOR ADDITIONAL NOTES, SEE SHEET 45/61.
5. FOR END DIAPHRAGM DETAIL, SEE SHEETS 15/61 AND 17/61.

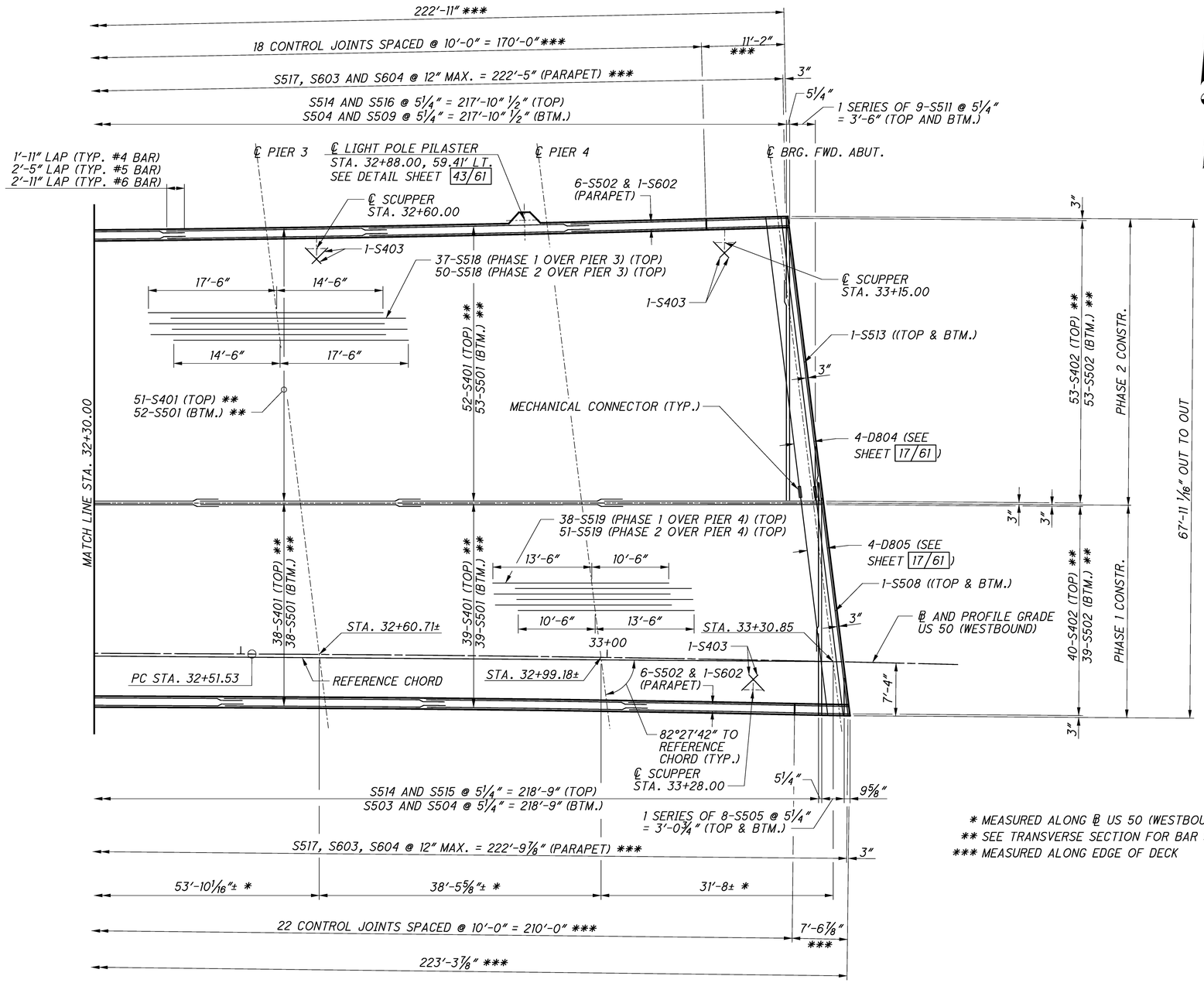
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN JDG | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102912

DECK PLAN (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LDP001.dgn 11/10/2010 11:39:46 AM mtreiheisel



DECK PLAN

* MEASURED ALONG ℄ US 50 (WESTBOUND)
** SEE TRANSVERSE SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK

NOTES

1. FOR NOTES, SEE SHEET 43/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

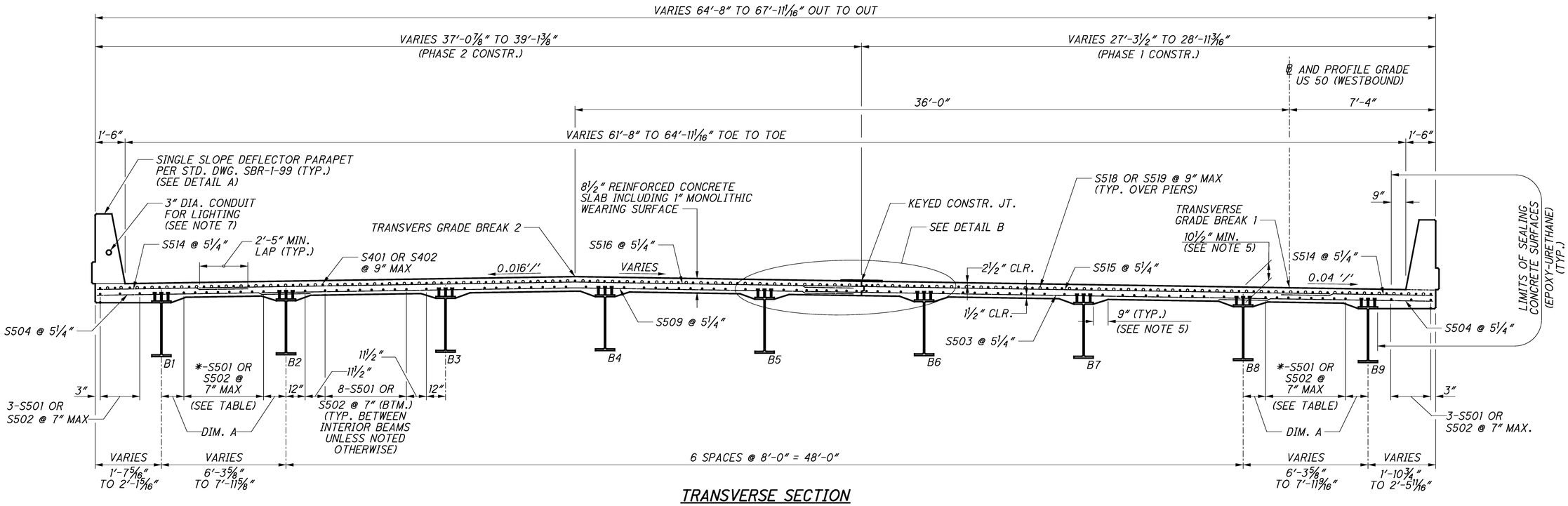
DECK PLAN (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

44/61

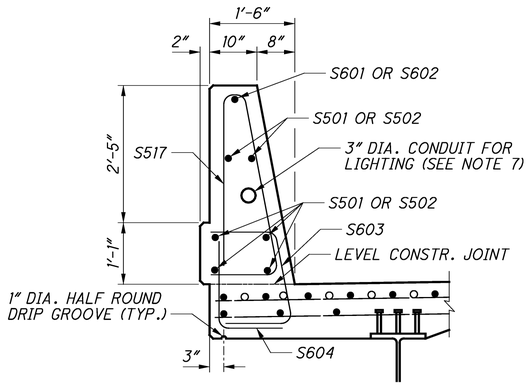
366/442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LDP002.dgn 11/10/2010 11:39:48 AM mtreineisel

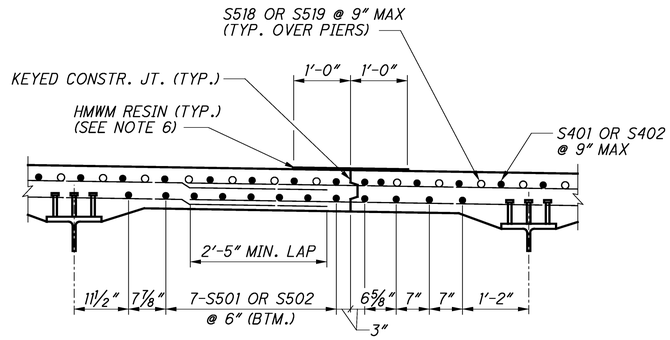


TRANSVERSE SECTION

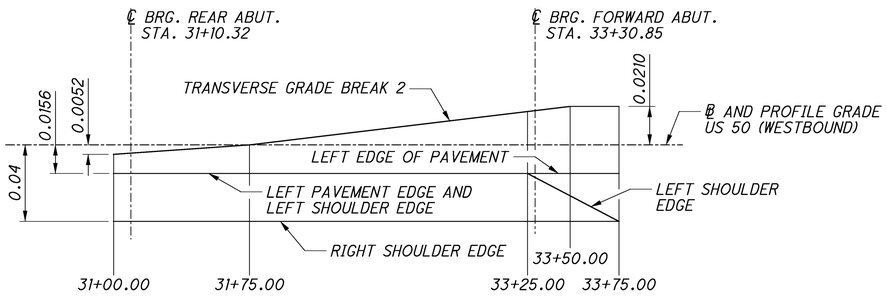
(CROSSFRAMES NOT SHOWN)



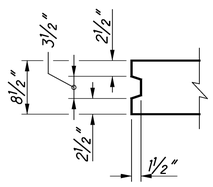
DETAIL A



DETAIL B



SUPERELEVATION TRANSITION DETAIL



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

LOCATION (SEE NOTE 4)	DIM. A	* (NO. OF BARS)
℄ REAR ABUT. TO SPLICE 2	13.5"	8
SPLICE 2 TO SPLICE 3	11.5"	10
SPLICE 3 TO ℄ FWD. ABUT.	13.5"	11

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 57/61 AND 58/61 .
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 51/61 AND 52/61 .
4. FOR BEAM SPLICE LOCATIONS, SEE FRAMING PLAN AND BEAM ELEVATION SHEET 31/61 .
5. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
6. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
7. PROPOSED 3" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN.
8. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
9. THE USE OF STAY-IN-PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MSW | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102912

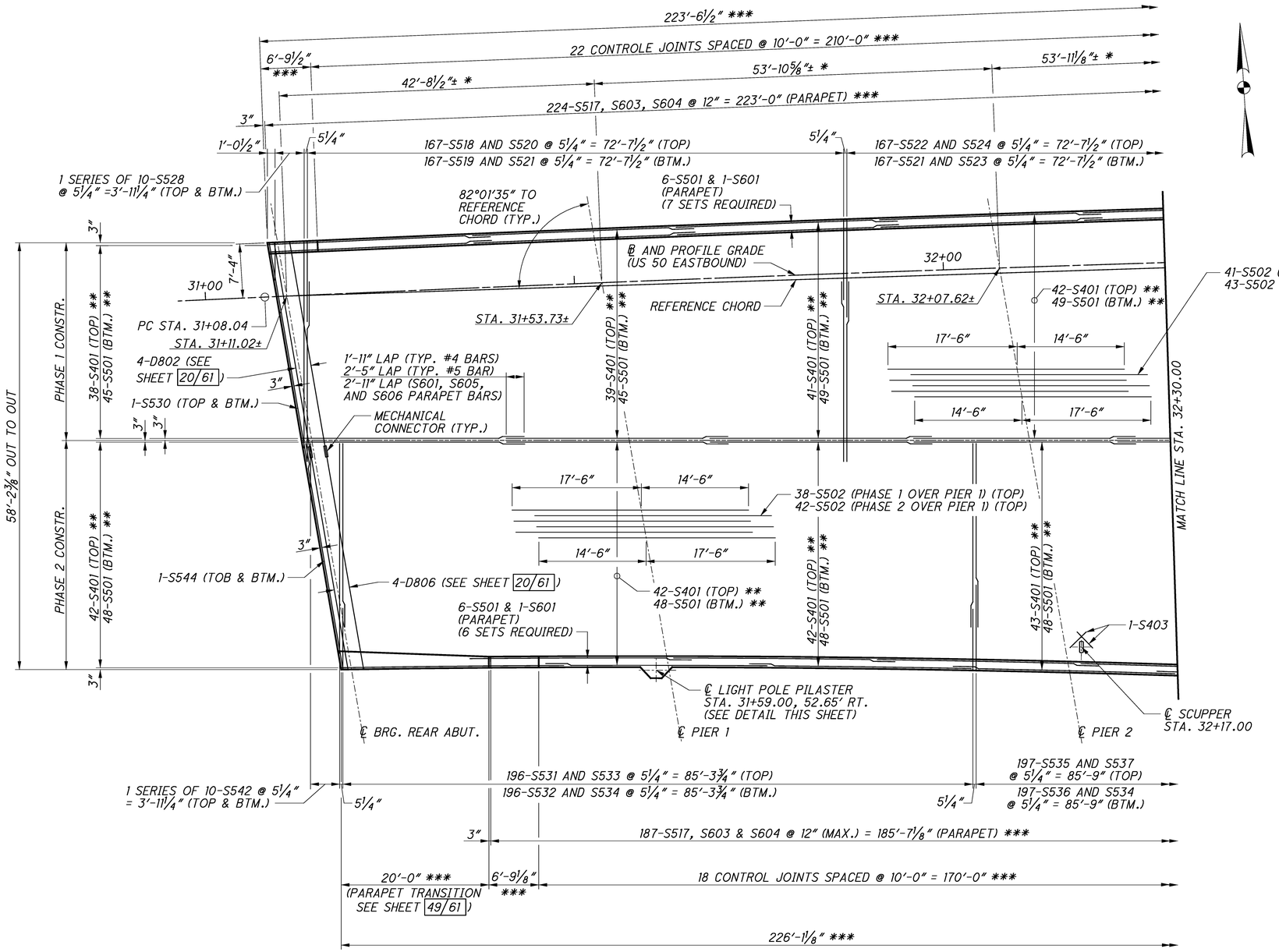
TRANSVERSE SECTION (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR

HAM-50-19.03
PID No. 75736

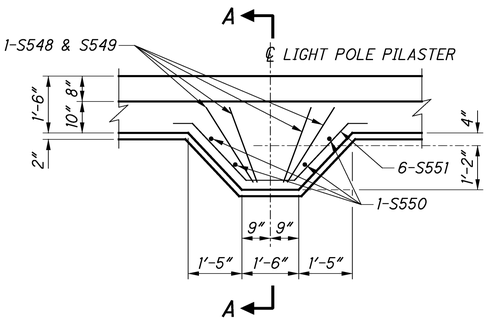
45 / 61

367 / 442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LTS001.dgn 11/10/2010 11:39:49 AM mtreiheisel

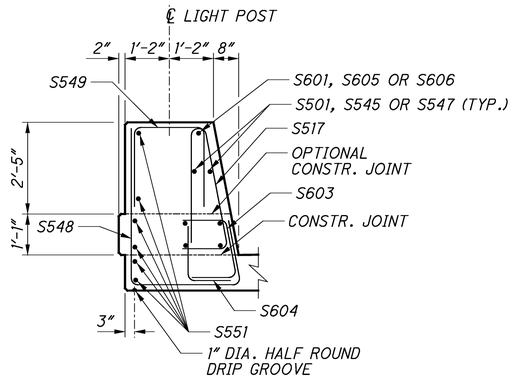


DECK PLAN



LIGHT POLE PILASTER DETAIL

FOR ADDITIONAL DETAILS SEE STANDARD CONSTRUCTION DRAWING HL-20.14



SECTION A-A

* MEASURED ALONG ℄ US 50 (EASTBOUND)
** SEE TRANSVERSE SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK

NOTES:

1. TRANSVERSE REINFORCING IS PLACED NORMAL TO CLOSURE POUR.
2. FOR TRANSVERSE SECTION, SEE SHEET 48/61.
3. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61 , 60/61 AND 61/61.
4. FOR ADDITIONAL NOTES, SEE SHEET 48/61.
5. FOR END DIAPHRAGM DETAIL, SEE SHEET 20/61 AND 22/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

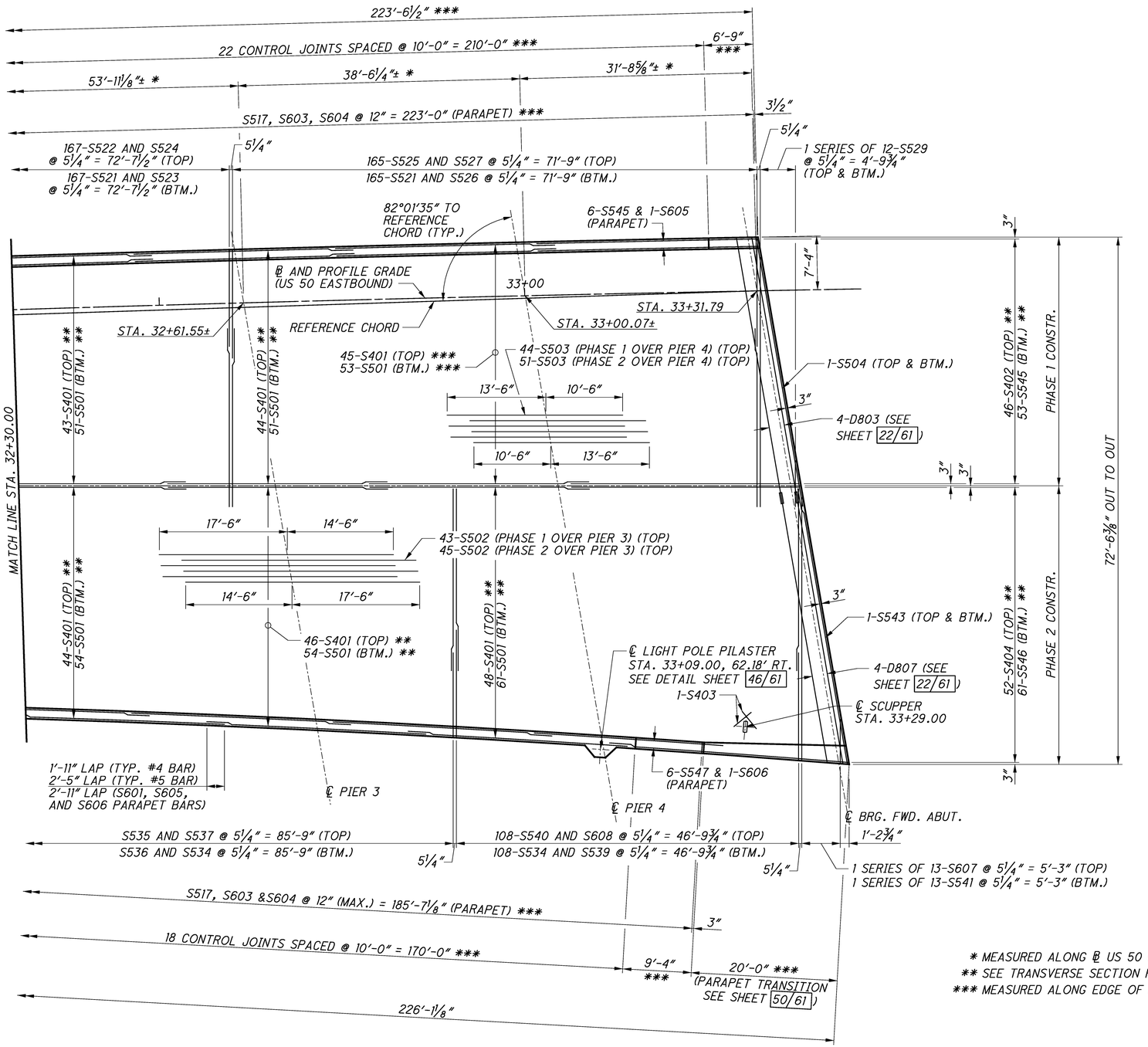
DECK PLAN (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

46 / 61

368 / 442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RDP001.dgn 11/10/2010 11:39:51 AM mtneiheisel



* MEASURED ALONG ℄ US 50 (EASTBOUND)
** SEE TRANSVERSE SECTION FOR BAR SPACING
*** MEASURED ALONG EDGE OF DECK

DECK PLAN

NOTES:

1. FOR NOTES, SEE SHEET 46/61.
2. USE LAP LENGTH OF 2'-11" FOR S608 BARS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

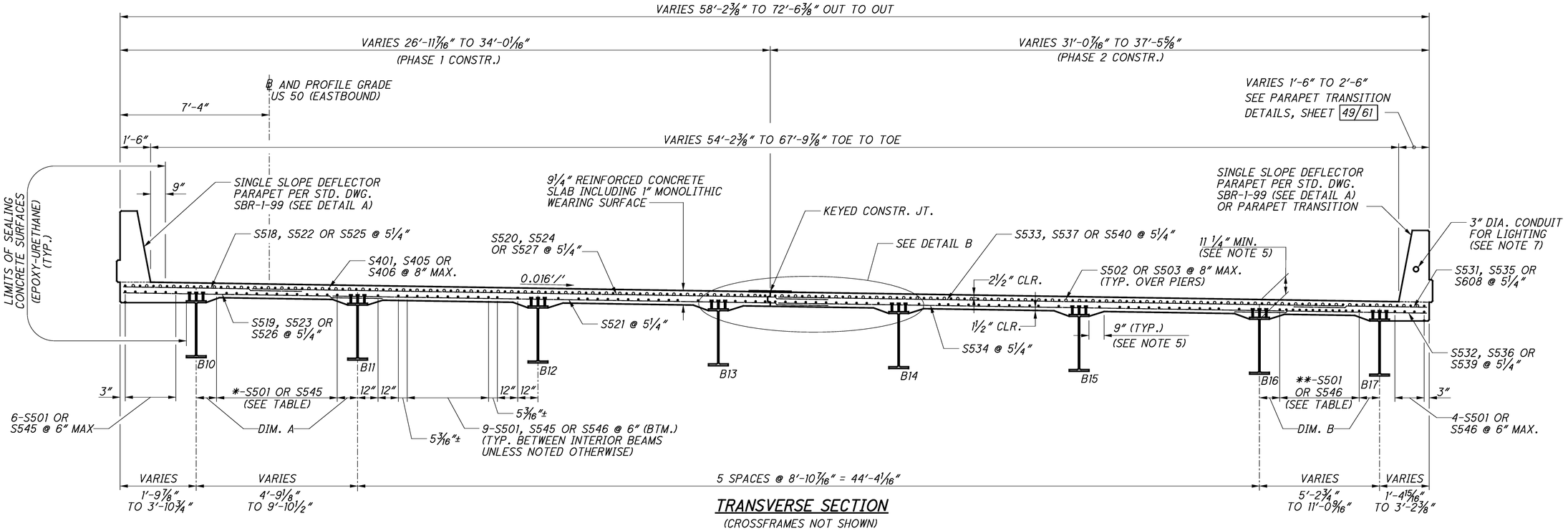
DECK PLAN (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

47 / 61

369
442

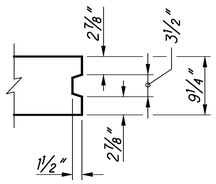
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RDP002.dgn 11/10/2010 11:39:53 AM mtneiheisel



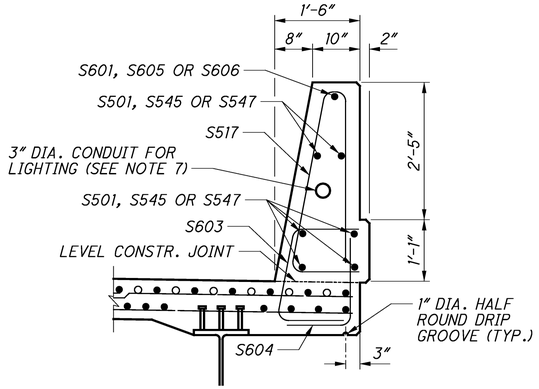
TRANSVERSE SECTION
(CROSSFRAMES NOT SHOWN)

LOCATION (SEE NOTE 4)	DIM. A	* (NO. OF BARS) & SPACING
℄ REAR ABUT. TO SPLICE 1	12"	9 BARS @ 6" MAX
SPLICE 1 TO SPLICE 2	11½"	13 BARS @ 5.5" MAX
SPLICE 2 TO SPLICE 3	11"	15 BARS @ 5.75" MAX
SPLICE 3A TO ℄ FWD. ABUT.	12"	17 BARS @ 6" MAX

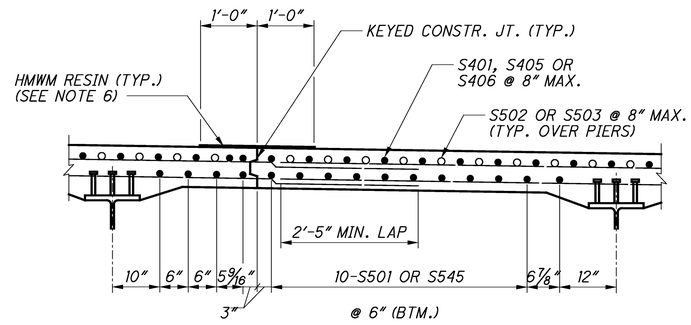
LOCATION (SEE NOTE 4)	DIM. B	** (NO. OF BARS) & SPACING
℄ REAR ABUT. TO SPLICE 1	10½"	7 BARS @ 6" MAX.
SPLICE 1 TO SPLICE 2	10½"	7 BARS @ 6" MAX.
SPLICE 2 TO SPLICE 3	12"	13 BARS @ 6" MAX.
SPLICE 3A TO ℄ FWD. ABUT.	12"	20 BARS @ 6" MAX.



KEYED CONSTRUCTION JOINT DETAIL
(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)



DETAIL A



DETAIL B

NOTES:

1. FOR GENERAL NOTES, SEE SHEETS 4/61 AND 5/61.
2. FOR REINFORCING STEEL LIST, SEE SHEETS 59/61 , 60/61 AND 61/61 .
3. FOR TABLES OF SCREED, TOP OF HAUNCH, AND FINISHED PAVEMENT ELEVATIONS, SEE SHEETS 51/61 AND 53/61.
4. FOR BEAM SPLICE LOCATIONS, SEE FRAMING PLAN AND BEAM ELEVATION SHEETS 33/61 AND 34/61.
5. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A MINIMUM HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS ± 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.24.
6. 2'-0" WIDE HMWM SHALL BE CENTERED OVER KEYED CONSTRUCTION JOINT AND INCLUDED WITH ITEM 512 - SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN - FOR PAYMENT.
7. PROPOSED 3" DIAMETER CONDUIT SHALL BE GALVANIZED STEEL CONDUIT IN CONFORMANCE WITH 725.04. INSTALL CONDUIT IN ACCORDANCE WITH STANDARD HIGHWAY LIGHTING DRAWING HL-30.32. PAYMENT SHALL BE INCLUDED IN ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN.
8. ABUTMENT DIAPHRAGM CONCRETE, PHASED CONSTRUCTION: PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS OF AN INDIVIDUAL PHASE WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE THE HORIZONTAL CONSTRUCTION JOINT BETWEEN THE DIAPHRAGM AND DECK CONCRETE AT THE APPROACH SLAB SEAT.
9. THE USE OF STAY-IN-PLACE FORMS HAS BEEN LOOKED AT AND SHALL NOT BE ALLOWED

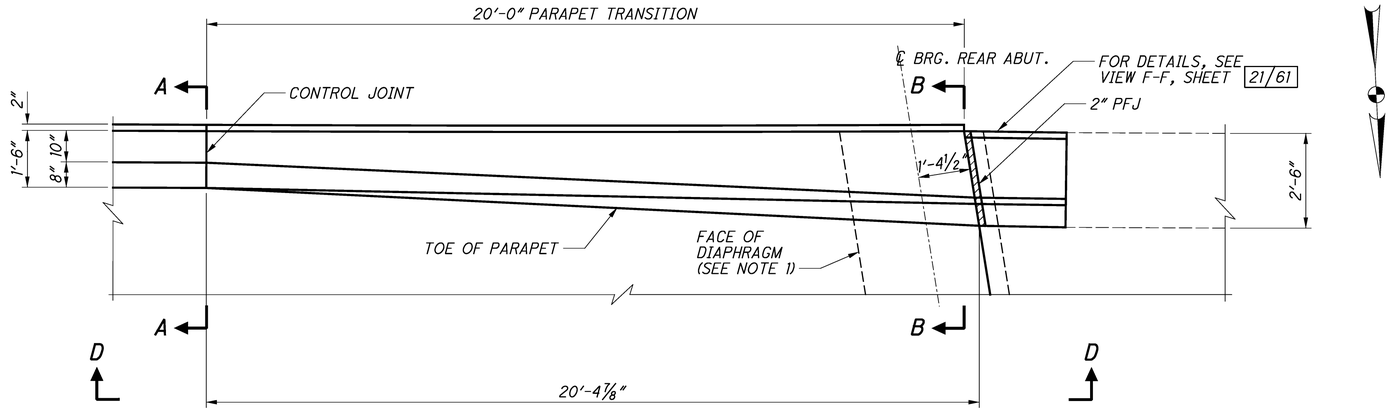
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED | STRUCTURE FILE NUMBER 3102920

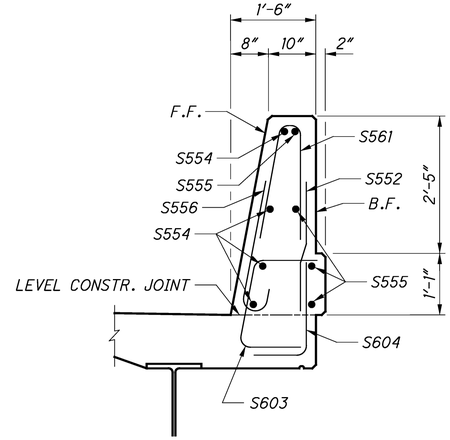
TRANSVERSE SECTION (RIGHT BRIDGE)
HAM-50-19.03 PID No. 75736
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

48 / 61
370
442

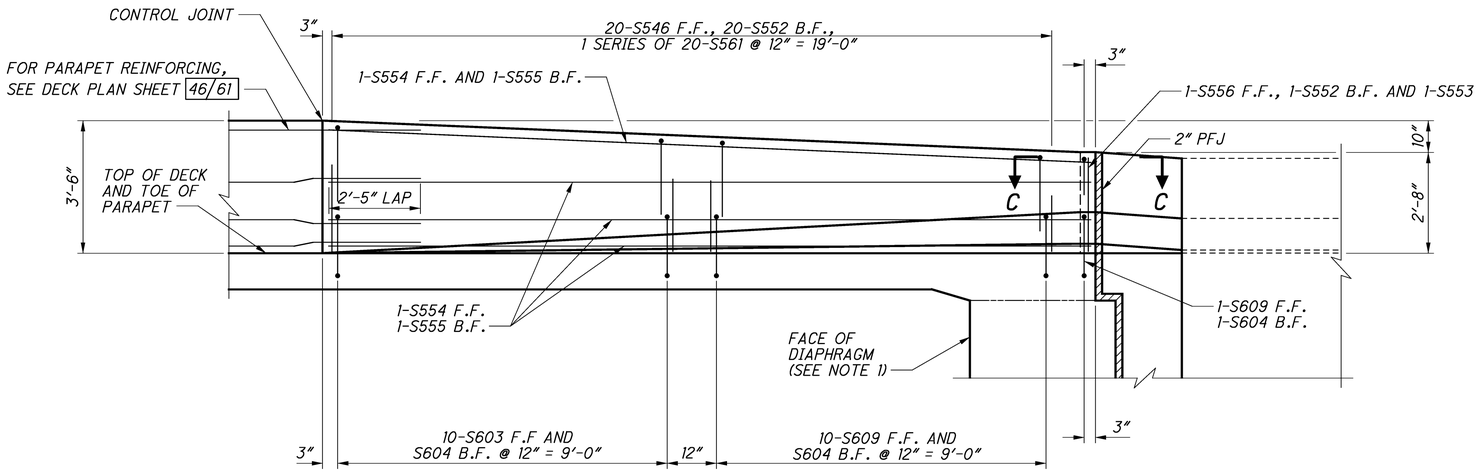
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RTS001.dgn 11/10/2010 11:39:55 AM mtreiheisel



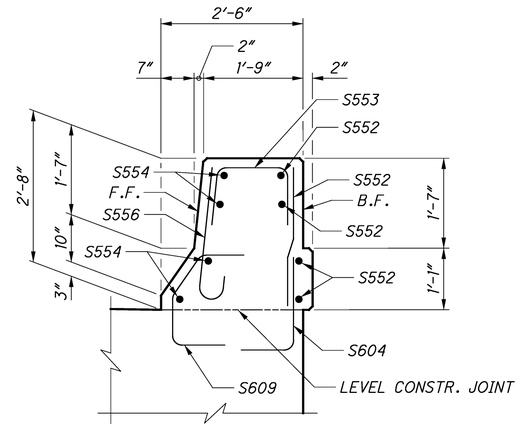
PARAPET TRANSITION PLAN



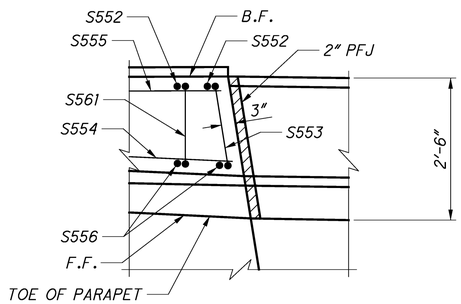
SECTION A-A



PARAPET TRANSITION ELEVATION VIEW D-D



SECTION B-B



SECTION C-C

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR DIAPHRAGM DETAILS, SEE SHEET 20/61 .

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

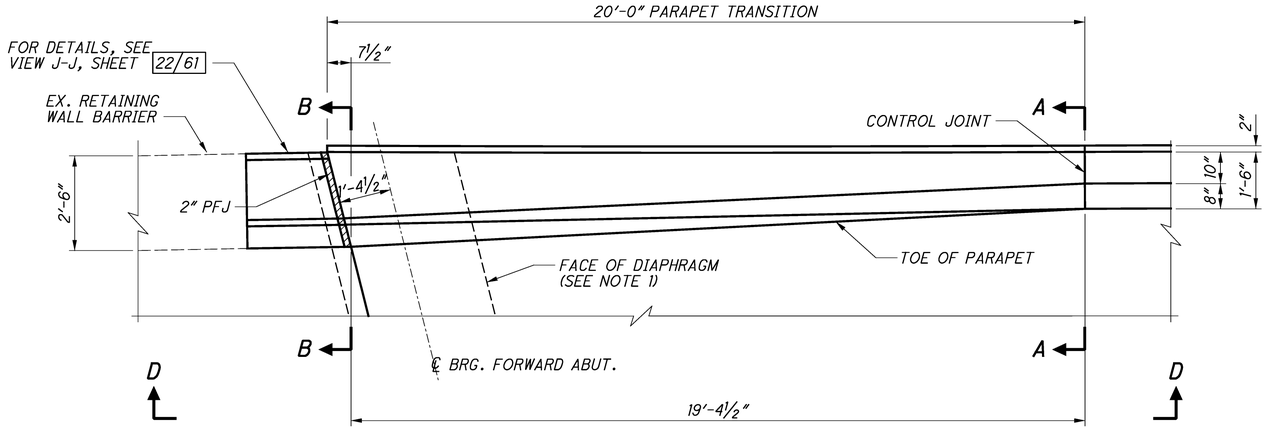
REAR PARAPET TRANSITION DETAILS (RIGHT BRIDGE)
HAM-50-19IR
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

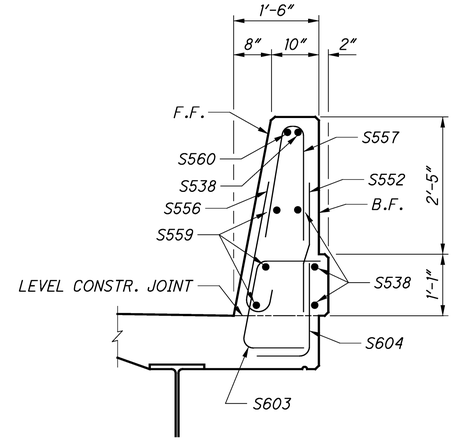
49 / 61

371
442

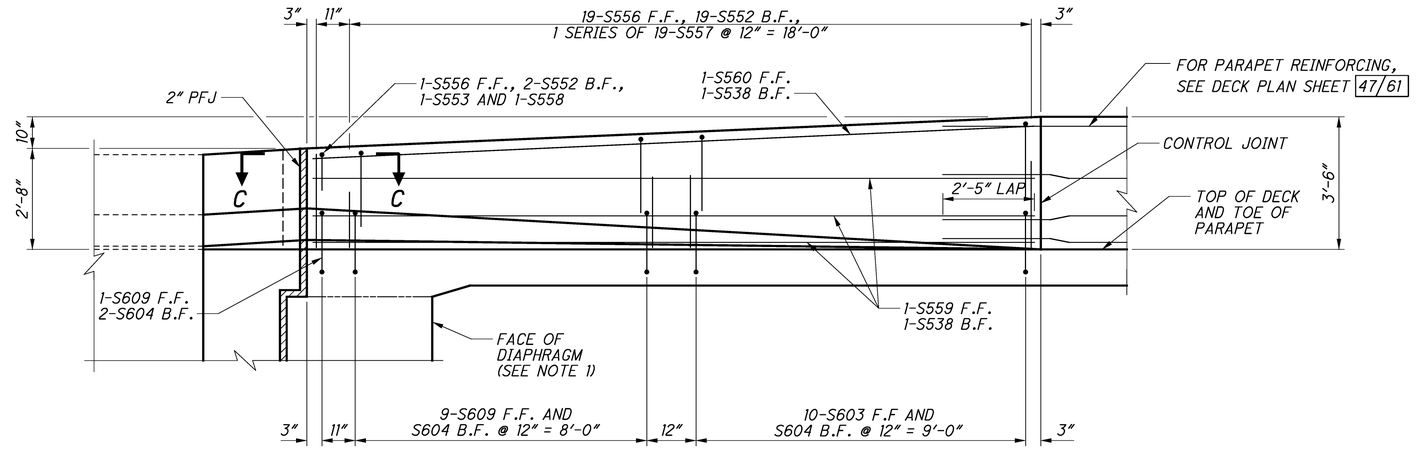
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RDP003.dgn 11/10/2010 11:39:57 AM mtneiheisel



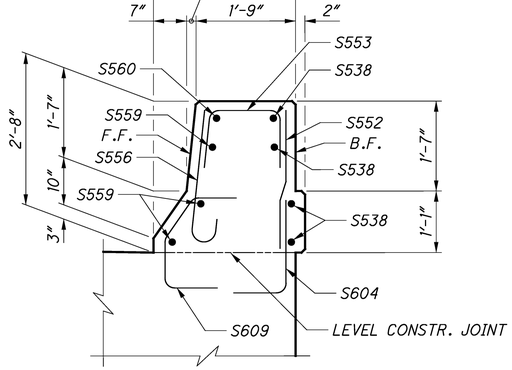
PARAPET TRANSITION PLAN



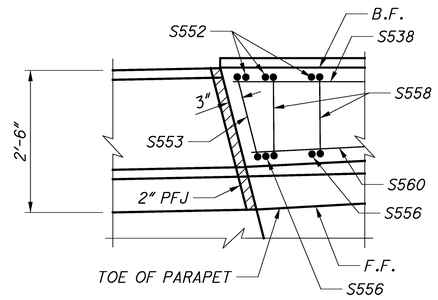
SECTION A-A



PARAPET TRANSITION ELEVATION VIEW D-D



SECTION B-B



SECTION C-C

LEGEND:

F.F. = FRONT FACE
B.F. = BACK FACE
PFJ = PRECOMPRESSED FOAM JOINT

NOTES:

1. FOR DIAPHRAGM DETAILS, SEE SHEET 22/61 .

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

FORWARD TRANSITION DETAILS (RIGHT BRIDGE)

HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

50/61

372/442

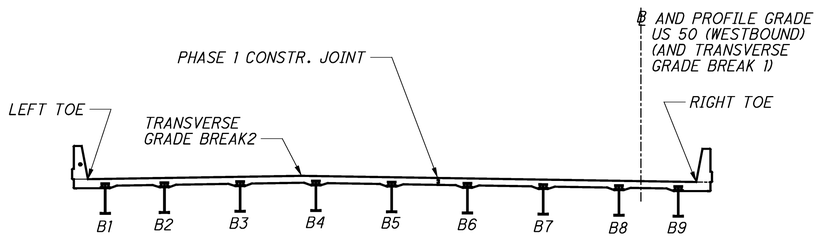
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RDP004.dgn 11/10/2010 11:39:58 AM mtneiheisel

SCREED ELEVATIONS (VALUE FOOT)

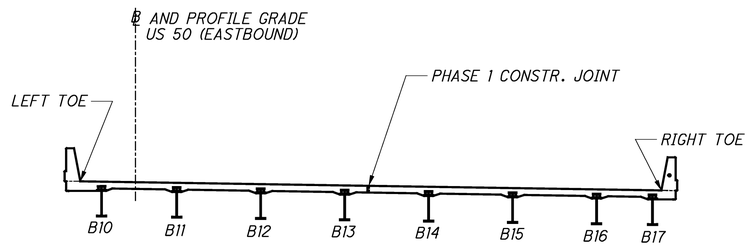
HAM-50-1961L		REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
			1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3	1/2	3/4		1/4	1/2	3/4	
LEFT TOE	STATION	31+03.11	31+13.79	31+24.46	31+35.14	31+45.82	31+57.14	31+59.28	31+72.74	31+86.19	31+99.64	32+11.14	32+13.09	32+26.53	32+39.96	32+53.37	32+62.84	32+65.88	32+72.30	32+81.76	32+91.21	32+98.99	33+06.76	33+14.53	33+22.30
	OFFSET	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.83 LT	55.84 LT	55.87 LT	55.94 LT	56.04 LT	56.06 LT	56.21 LT	56.40 LT	56.63 LT	56.84 LT	56.91 LT	57.08 LT	57.36 LT	57.69 LT	57.98 LT	58.30 LT	58.65 LT	59.03 LT
	ELEVATION	509.57	509.60	509.61	509.60	509.57	509.54	509.53	509.47	509.40	509.31	509.23	509.21	509.09	508.93	508.75	508.62	508.57	508.47	508.31	508.14	508.00	507.84	507.68	507.51
TRANSVERSE GRADE BREAK 2	STATION	31+05.67	31+16.35	31+27.02	31+37.70	31+48.38	31+59.70	31+61.84	31+75.30	31+88.76	32+02.22	32+13.73	32+15.68	32+29.14	32+42.60	32+56.02	32+65.56	32+68.63	32+75.10	32+84.64	32+94.18	33+02.04	33+09.89	33+17.75	33+25.61
	OFFSET	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT	36.00 LT
	ELEVATION	509.88	509.91	509.92	509.90	509.87	509.84	509.84	509.77	509.70	509.60	509.52	509.51	509.39	509.23	509.04	508.90	508.86	508.75	508.60	508.43	508.28	508.13	507.97	507.80
PHASE 1 CONSTRUCTION JOINT	STATION	31+07.74	31+18.41	31+29.08	31+39.75	31+50.42	31+61.74	31+63.88	31+77.33	31+90.78	32+04.23	32+15.74	32+17.69	32+31.14	32+44.59	32+58.01	32+67.58	32+70.65	32+77.14	32+86.69	32+96.25	33+04.11	33+11.98	33+19.84	33+27.70
	OFFSET	19.95 LT	20.03 LT	20.07 LT	20.12 LT	20.17 LT	20.22 LT	20.23 LT	20.29 LT	20.35 LT	20.40 LT	20.45 LT	20.46 LT	20.52 LT	20.58 LT	20.65 LT	20.71 LT	20.74 LT	20.80 LT	20.90 LT	21.03 LT	21.15 LT	21.28 LT	21.42 LT	21.58 LT
	ELEVATION	509.96	509.98	509.97	509.94	509.90	509.85	509.84	509.76	509.66	509.53	509.43	509.41	509.26	509.07	508.86	508.70	508.65	508.54	508.36	508.17	508.01	507.85	507.67	507.49
℄ AND PROFILE GRADE US 50 (WESTBOUND) (AND TRANSVERSE GRADE BREAK 1)	STATION	31+10.32	31+21.00	31+31.67	31+42.35	31+53.03	31+64.35	31+66.49	31+79.95	31+93.41	32+06.87	32+18.38	32+20.33	32+33.79	32+47.25	32+60.71	32+70.33	32+73.42	32+79.94	32+89.56	32+99.18	33+07.09	33+15.01	33+22.93	33+30.85
	OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ELEVATION	510.06	510.05	510.02	509.98	509.92	509.85	509.83	509.73	509.59	509.43	509.29	509.27	509.08	508.85	508.60	508.42	508.36	508.22	508.02	507.80	507.61	507.42	507.22	507.01
RIGHT TOE	STATION	31+11.07	31+21.75	31+32.43	31+43.10	31+53.78	31+65.10	31+67.24	31+80.70	31+94.16	32+07.62	32+19.13	32+21.08	32+34.54	32+48.00	32+61.48	32+71.10	32+74.20	32+80.73	32+90.36	32+99.99	33+07.92	33+15.85	33+23.78	33+31.71
	OFFSET	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT	5.83 RT
	ELEVATION	509.81	509.80	509.78	509.73	509.67	509.60	509.58	509.48	509.34	509.18	509.04	509.01	508.82	508.60	508.34	508.16	508.10	507.96	507.76	507.54	507.35	507.16	506.95	506.74

SCREED ELEVATIONS (VALUE FOOT)

HAM-50-1961R		REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4					PIER 4	SPAN 5			FWD. ABUT.
			1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3A	1/2	3/4	SPLICE 3B		1/4	1/2	3/4	
LEFT TOE	STATION	31+10.28	31+20.95	31+31.62	31+42.29	31+52.96	31+63.90	31+66.43	31+79.89	31+93.35	32+06.81	32+18.31	32+20.28	32+33.75	32+47.23	32+60.70	32+70.33	32+73.35	32+79.95	32+89.57		32+99.20	33+07.12	33+15.05	33+22.97	33+30.89
	OFFSET	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT		5.83 LT	5.83 LT	5.83 LT	5.83 LT	5.83 LT
	ELEVATION	510.66	510.65	510.62	510.57	510.50	510.43	510.41	510.30	510.15	509.98	509.83	509.80	509.60	509.36	509.09	508.90	508.84	508.69	508.47		508.24	508.05	507.85	507.63	507.41
℄ AND PROFILE GRADE US 50 (EASTBOUND)	STATION	31+11.02	31+21.70	31+32.38	31+43.06	31+53.73	31+64.68	31+67.20	31+80.67	31+94.14	32+07.61	32+19.13	32+21.10	32+34.58	32+48.06	32+61.55	32+71.18	32+74.20	32+80.81	32+90.44	32+90.82	33+00.07	33+08.00	33+15.93	33+23.86	33+31.79
	OFFSET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ELEVATION	510.57	510.56	510.53	510.47	510.40	510.33	510.31	510.20	510.05	509.88	509.73	509.70	509.50	509.26	508.99	508.79	508.73	508.58	508.36	508.35	508.13	507.94	507.73	507.52	507.29
PHASE 1 CONSTRUCTION JOINT	STATION	31+13.53	31+24.29	31+35.05	31+45.82	31+56.58	31+67.61	31+70.16	31+83.73	31+97.30	32+10.88	32+22.47	32+24.46	32+38.04	32+51.62	32+65.20	32+74.89	32+77.94	32+84.59	32+94.29		33+03.98	33+11.96	33+19.94	33+27.92	33+35.90
	OFFSET	19.68 RT	20.16 RT	20.62 RT	21.07 RT	21.50 RT	21.93 RT	22.03 RT	22.54 RT	23.02 RT	23.48 RT	23.86 RT	24.35 RT	23.93 RT	24.75 RT	25.13 RT	25.38 RT	25.46 RT	25.63 RT	25.86 RT		26.09 RT	26.26 RT	26.43 RT	26.60 RT	26.75 RT
	ELEVATION	510.26	510.24	510.20	510.13	510.05	509.97	509.95	509.82	509.66	509.47	509.31	509.28	509.07	508.81	508.52	508.32	508.25	508.10	507.87		507.63	507.42	507.21	506.99	506.75
RIGHT TOE	STATION	31+17.21	31+28.06	31+38.90	31+49.69	31+60.49	31+71.57	31+74.12	31+87.77	32+01.42	32+15.08	32+26.76	32+28.76	32+42.46	32+56.17	32+69.89	32+79.69	32+82.78	32+89.51	32+99.33	32+99.71	33+09.15	33+17.25	33+25.33	33+33.37	33+41.41
	OFFSET	48.47 RT	49.33 RT	49.99 RT	50.45 RT	50.88 RT	51.35 RT	51.47 RT	52.11 RT	52.81 RT	53.57 RT	54.27 RT	54.39 RT	55.27 RT	56.20 RT	57.19 RT	57.94 RT	58.18 RT	58.71 RT	59.52 RT	59.55 RT	60.35 RT	61.06 RT	61.79 RT	62.03 RT	62.37 RT
	ELEVATION	509.80	509.77	509.72	509.65	509.56	509.47	509.45	509.31	509.14	508.94	508.76	508.73	508.50	508.23	507.92	507.70	507.63	507.47	507.22	507.21	506.96	506.74	506.51	506.28	506.04



HAM-50-1961L
(LOOKING EAST)



HAM-50-1961R
(LOOKING EAST)

NOTES:

1. OFFSETS FOR HAM-50-1961L ARE BASED ON DISTANCE FROM ℄ AND PROFILE GRADE US 50 (WESTBOUND).
2. OFFSETS FOR HAM-50-1961R ARE BASED ON DISTANCE FROM ℄ AND PROFILE GRADE US 50 (EASTBOUND).
3. SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242

DATE: 11/12/10
REVIEWED: MSL
DRAWN: SSM
REVISED:
DESIGNED: SSM
CHECKED: MTN

STRUCTURE FILE NUMBER: 3102920 (L), 3102921 (R)

SCREED ELEVATIONS (LEFT AND RIGHT BRIDGE)
HAM-50-1961 L/R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

51 / 61

373
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD009.dgn 11/10/2010 11:39:59 AM mtneiheisel

TOP OF HAUNCH ELEVATIONS (HAM-50-1961L)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3	1/2	3/4		1/4	1/2	3/4	
BEAM 1	508.87	508.90	508.91	508.89	508.87	508.84	508.83	508.77	508.70	508.61	508.52	508.51	508.38	508.23	508.05	507.91	507.86	507.76	507.61	507.44	507.29	507.14	506.98	506.81
BEAM 2	508.97	509.00	509.01	508.99	508.97	508.94	508.93	508.87	508.79	508.70	508.62	508.60	508.48	508.33	508.14	508.01	507.96	507.86	507.70	507.54	507.39	507.24	507.08	506.91
BEAM 3	509.10	509.13	509.13	509.12	509.09	509.06	509.05	508.99	508.91	508.82	508.73	508.72	508.60	508.44	508.25	508.12	508.07	507.97	507.81	507.64	507.50	507.34	507.18	507.01
BEAM 4	509.19	509.22	509.22	509.20	509.17	509.14	509.13	509.06	508.99	508.88	508.80	508.78	508.66	508.49	508.30	508.16	508.12	508.01	507.86	507.69	507.54	507.39	507.23	507.06
BEAM 5	509.23	509.25	509.25	509.22	509.18	509.14	509.13	509.06	508.96	508.85	508.75	508.73	508.59	508.41	508.21	508.06	508.01	507.90	507.73	507.55	507.40	507.24	507.07	506.88
BEAM 6	509.27	509.28	509.27	509.24	509.19	509.14	509.13	509.05	508.94	508.81	508.70	508.68	508.53	508.33	508.11	507.95	507.90	507.78	507.60	507.41	507.25	507.08	506.90	506.71
BEAM 7	509.31	509.31	509.29	509.25	509.20	509.14	509.13	509.04	508.92	508.77	508.65	508.63	508.46	508.25	508.01	507.84	507.79	507.66	507.47	507.27	507.10	506.92	506.73	506.53
BEAM 8	509.34	509.34	509.31	509.27	509.21	509.14	509.13	509.02	508.89	508.73	508.59	508.57	508.39	508.16	507.91	507.73	507.67	507.54	507.34	507.13	506.95	506.76	506.56	506.36
BEAM 9	509.12	509.12	509.09	509.05	508.99	508.92	508.91	508.80	508.67	508.51	508.37	508.34	508.15	507.92	507.66	507.47	507.41	507.27	507.07	506.85	506.66	506.47	506.27	506.05

FINAL DECK SURFACE ELEVATIONS (HAM-50-1961L)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4				PIER 4	SPAN 5			FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3	1/2	3/4		1/4	1/2	3/4	
LEFT TOE	509.57	509.59	509.60	509.59	509.57	509.54	509.53	509.46	509.40	509.31	509.22	509.20	509.08	508.92	508.75	508.62	508.57	508.47	508.31	508.14	508.00	507.84	507.68	507.51
BEAM 1	509.58	509.60	509.61	509.60	509.58	509.54	509.53	509.47	509.40	509.32	509.23	509.21	509.08	508.93	508.75	508.62	508.57	508.47	508.31	508.15	508.00	507.85	507.69	507.52
BEAM 2	509.68	509.70	509.70	509.70	509.67	509.64	509.63	509.56	509.49	509.41	509.32	509.30	509.17	509.02	508.85	508.71	508.67	508.57	508.41	508.25	508.10	507.95	507.78	507.62
BEAM 3	509.81	509.82	509.83	509.82	509.80	509.76	509.75	509.68	509.61	509.53	509.43	509.42	509.29	509.13	508.96	508.82	508.78	508.68	508.52	508.35	508.20	508.05	507.89	507.72
GRADE BREAK	509.88	509.90	509.91	509.90	509.87	509.84	509.83	509.76	509.69	509.60	509.51	509.49	509.36	509.21	509.04	508.90	508.86	508.75	508.60	508.43	508.28	508.13	507.97	507.80
BEAM 4	509.90	509.91	509.92	509.90	509.88	509.84	509.83	509.76	509.69	509.59	509.50	509.48	509.34	509.19	509.01	508.87	508.83	508.72	508.56	508.39	508.25	508.09	507.93	507.76
BEAM 5	509.94	509.95	509.94	509.92	509.89	509.84	509.83	509.75	509.66	509.56	509.45	509.43	509.28	509.11	508.92	508.77	508.72	508.61	508.44	508.26	508.10	507.94	507.77	507.59
PHASE 1 CJ	509.96	509.97	509.96	509.93	509.90	509.84	509.83	509.75	509.65	509.53	509.42	509.40	509.24	509.06	508.86	508.70	508.65	508.54	508.36	508.17	508.01	507.84	507.67	507.49
BEAM 6	509.98	509.98	509.97	509.94	509.90	509.84	509.83	509.74	509.64	509.52	509.40	509.38	509.21	509.03	508.82	508.66	508.61	508.49	508.31	508.12	507.96	507.78	507.61	507.42
BEAM 7	510.01	510.01	509.99	509.95	509.91	509.84	509.83	509.73	509.62	509.48	509.35	509.32	509.14	508.94	508.72	508.55	508.50	508.37	508.18	507.98	507.81	507.63	507.44	507.24
BEAM 8	510.05	510.04	510.01	509.97	509.91	509.84	509.83	509.72	509.59	509.44	509.29	509.27	509.07	508.86	508.62	508.44	508.38	508.25	508.05	507.84	507.65	507.46	507.27	507.07
℄ CONSTR.	510.06	510.04	510.01	509.97	509.92	509.84	509.83	509.72	509.58	509.43	509.28	509.26	509.06	508.84	508.60	508.42	508.36	508.22	508.02	507.80	507.61	507.42	507.22	507.01
BEAM 9	509.83	509.82	509.79	509.75	509.70	509.62	509.61	509.50	509.37	509.22	509.07	509.04	508.84	508.62	508.37	508.18	508.12	507.98	507.77	507.55	507.37	507.17	506.97	506.76
RIGHT TOE	509.81	509.80	509.77	509.72	509.67	509.59	509.58	509.47	509.33	509.18	509.03	509.00	508.80	508.59	508.34	508.16	508.10	507.96	507.76	507.54	507.35	507.15	506.95	506.74

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED SSM | DRAWN SSM | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102912

TOP OF DECK AND TOP OF HAUNCH ELEVATIONS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD010.dgn 11/10/2010 11:40:01 AM mtneihiesel

TOP OF HAUNCH ELEVATIONS (HAM-50-1961R)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4					PIER 4	SPAN 5				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3A	1/2	3/4	SPLICE 3B		1/4	1/2	3/4		
BEAM 10	509.88	509.87	509.84	509.78	509.71	509.64	509.62	509.50	509.35	509.17	509.02	509.00	508.80	508.55	508.28	508.09	508.02	507.88	507.66		507.43	507.23	507.03	506.81	506.59
BEAM 11	509.81	509.79	509.75	509.69	509.61	509.54	509.52	509.40	509.23	509.05	508.90	508.87	508.66	508.41	508.13	507.93	507.86	507.71	507.49		507.25	507.05	506.84	506.62	506.39
BEAM 12	509.67	509.65	509.61	509.55	509.47	509.39	509.37	509.25	509.08	508.89	508.74	508.71	508.50	508.25	507.96	507.76	507.69	507.54	507.32		507.08	506.88	506.67	506.45	506.21
BEAM 13	509.53	509.51	509.47	509.40	509.32	509.24	509.22	509.09	508.93	508.74	508.58	508.55	508.34	508.09	507.80	507.59	507.53	507.38	507.15		506.91	506.70	506.49	506.27	506.03
BEAM 14	509.39	509.37	509.32	509.25	509.17	509.09	509.07	508.94	508.78	508.58	508.42	508.39	508.18	507.92	507.63	507.43	507.36	507.21	506.98		506.73	506.53	506.32	506.09	505.86
BEAM 15	509.24	509.22	509.18	509.11	509.03	508.94	508.92	508.79	508.62	508.43	508.26	508.24	508.02	507.76	507.47	507.26	507.19	507.04	506.80		506.56	506.35	506.14	505.91	505.68
BEAM 16	509.10	509.08	509.03	508.96	508.88	508.79	508.77	508.64	508.46	508.27	508.11	508.08	507.86	507.59	507.30	507.09	507.02	506.87	506.63		506.39	506.18	505.97	505.74	505.50
BEAM 17	509.02	508.99	508.94	508.87	508.79	508.70	508.68	508.54	508.37	508.18	508.01	507.98	507.75	507.47	507.18	506.96	506.89	506.73	506.48	506.47	506.22	506.00	505.77	505.52	505.27

FINAL DECK SURFACE ELEVATIONS (HAM-50-1961R)

	REAR ABUT.	SPAN 1			PIER 1	SPAN 2				PIER 2	SPAN 3				PIER 3	SPAN 4					PIER 4	SPAN 5				FWD. ABUT.
		1/4	1/2	3/4		SPLICE 1	1/4	1/2	3/4		SPLICE 2	1/4	1/2	3/4		1/4	SPLICE 3A	1/2	3/4	SPLICE 3B		1/4	1/2	3/4		
LEFT TOE	510.66	510.64	510.61	510.56	510.50	510.42	510.40	510.28	510.14	509.98	509.82	509.79	509.58	509.35	509.09	508.90	508.84	508.69	508.47		508.24	508.05	507.84	507.63	507.41
BEAM 10	510.65	510.63	510.60	510.54	510.48	510.40	510.38	510.26	510.11	509.94	509.78	509.75	509.54	509.31	509.05	508.86	508.79	508.65	508.43		508.20	508.05	507.79	507.58	507.36
℄ CONSTR.	510.57	510.55	510.51	510.47	510.40	510.33	510.31	510.18	510.04	509.88	509.72	509.69	509.48	509.24	508.99	508.79	508.73	508.58	508.36		508.13	508.05	507.73	507.51	507.29
BEAM 11	510.58	510.55	510.51	510.45	510.39	510.30	510.28	510.15	510.00	509.82	509.65	509.62	509.40	509.16	508.90	508.70	508.63	508.48	508.26		508.02	508.05	507.61	507.39	507.16
BEAM 12	510.44	510.41	510.37	510.31	510.24	510.15	510.13	510.00	509.84	509.67	509.50	509.47	509.24	509.00	508.73	508.53	508.46	508.31	508.09		507.85	508.05	507.43	507.21	506.98
BEAM 13	510.30	510.27	510.22	510.16	510.09	510.00	509.98	509.85	509.69	509.51	509.34	509.31	509.08	508.84	508.57	508.36	508.30	508.15	507.92		507.68	508.05	507.26	507.04	506.81
PHASE 1 CJ	510.26	510.23	510.18	510.12	510.05	509.96	509.94	509.80	509.65	509.47	509.29	509.26	509.04	508.79	508.52	508.32	508.25	508.10	507.87		507.63	508.05	507.21	506.98	506.75
BEAM 14	510.16	510.12	510.08	510.02	509.94	509.85	509.83	509.69	509.54	509.35	509.18	509.15	508.92	508.68	508.40	508.20	508.13	507.98	507.75		507.50	508.05	507.08	506.86	506.63
BEAM 15	510.01	509.98	509.93	509.87	509.80	509.70	509.68	509.54	509.38	509.20	509.02	508.99	508.76	508.51	508.24	508.03	507.96	507.81	507.58		507.33	508.05	506.91	506.68	506.45
BEAM 16	509.87	509.84	509.79	509.73	509.65	509.55	509.53	509.39	509.23	509.04	508.87	508.83	508.60	508.35	508.07	507.86	507.79	507.64	507.40		507.16	508.05	506.73	506.50	506.27
BEAM 17	509.79	509.75	509.70	509.64	509.56	509.47	509.44	509.30	509.14	508.95	508.77	508.74	508.50	508.23	507.95	507.73	507.66	507.50	507.25	507.24	506.99	508.05	506.53	506.29	506.04
RIGHT TOE	509.80	509.76	509.71	509.64	509.56	509.47	509.44	509.30	509.13	508.94	508.75	508.72	508.48	508.21	507.92	507.70	507.63	507.47	507.22	507.21	506.96	508.05	506.51	506.28	506.04

NOTES:

1. TOP OF HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM/GIRDER HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
2. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

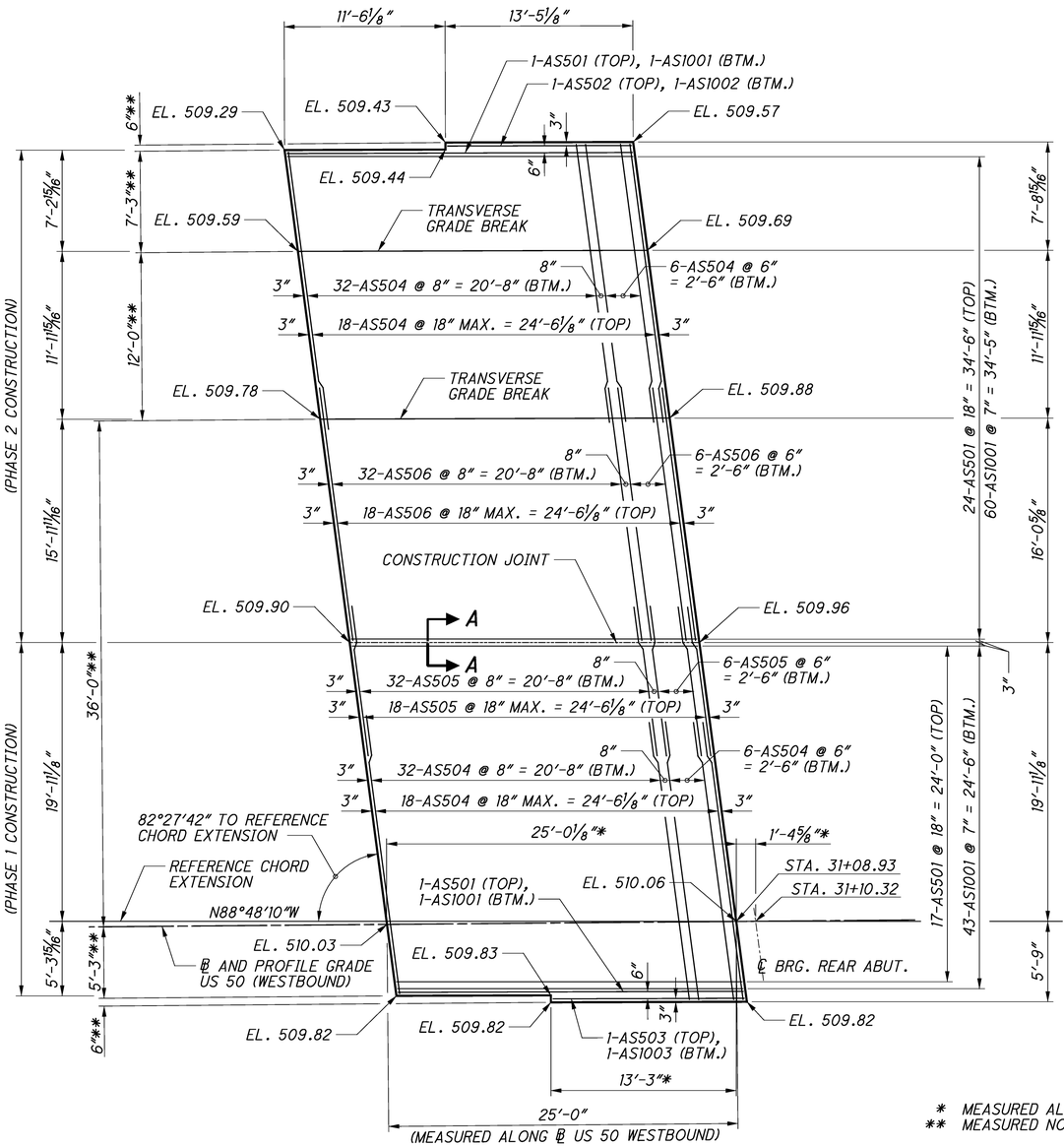
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE 11/12/10
REVIEWED MSL
STRUCTURE FILE NUMBER 3102920
DRAWN SSM
REVISED
DESIGNED SSM
CHECKED MTN

TOP OF DECK AND TOP OF HAUNCH ELEVATIONS (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

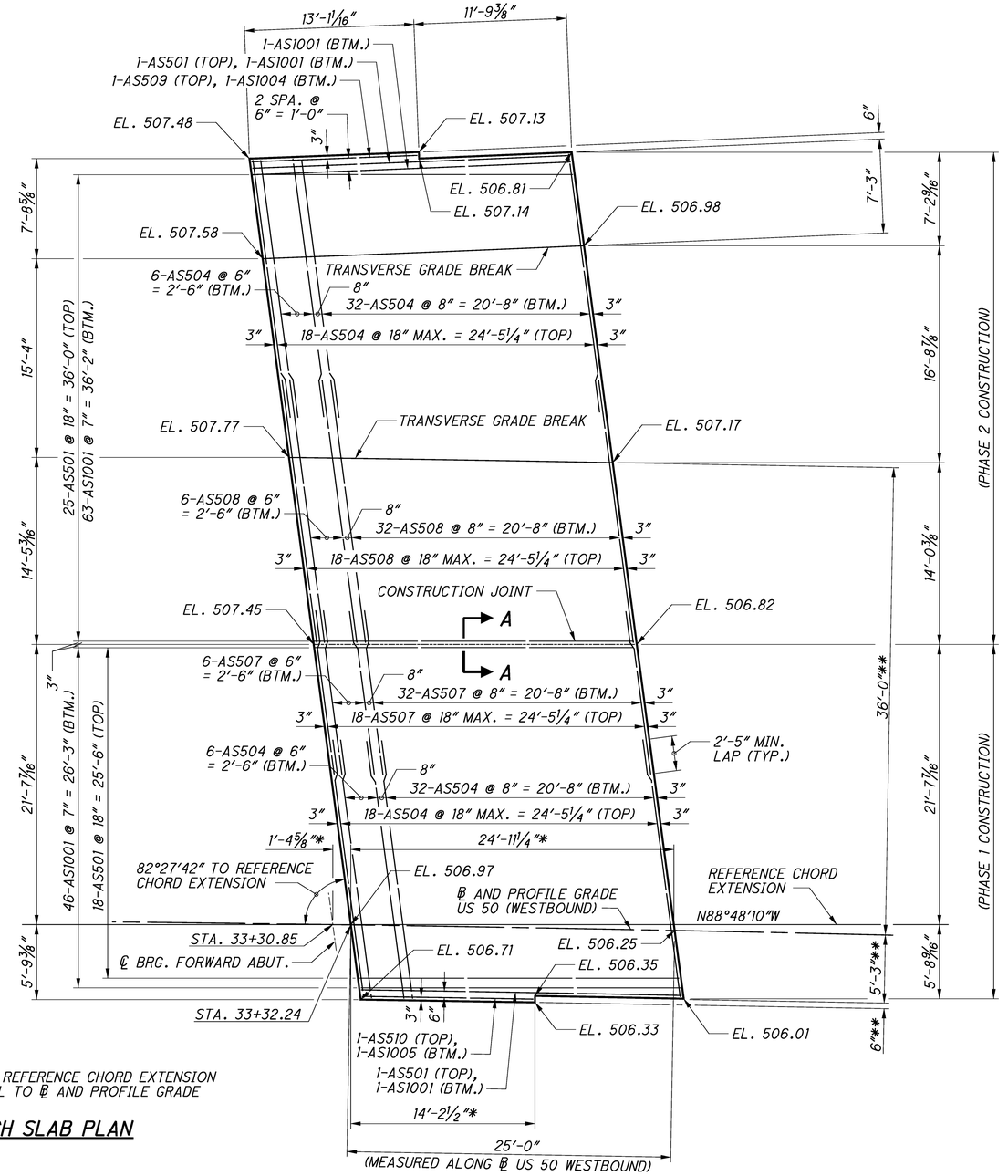
HAM-50-19.03
PID No. 75736

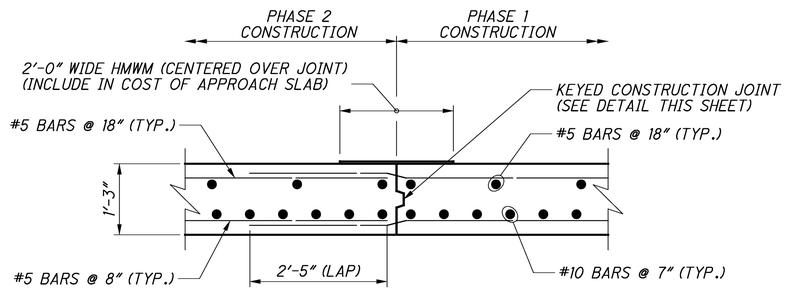
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961CSD011.dgn 11/10/2010 11:40:04 AM mtneiheisel



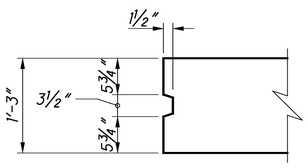
* MEASURED ALONG REFERENCE CHORD EXTENSION
** MEASURED NORMAL TO ℄ AND PROFILE GRADE

APPROACH SLAB PLAN





SECTION A-A



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. THE APPROACH SLAB CONCRETE SHALL NOT BE POURED WITH THE DECK CONCRETE.
2. SEE STD. DWG. AS-1-81 FOR ADDITIONAL NOTES AND DETAILS.
3. FOR REINFORCING STEEL LIST, SEE SHEET 57/61 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102912	

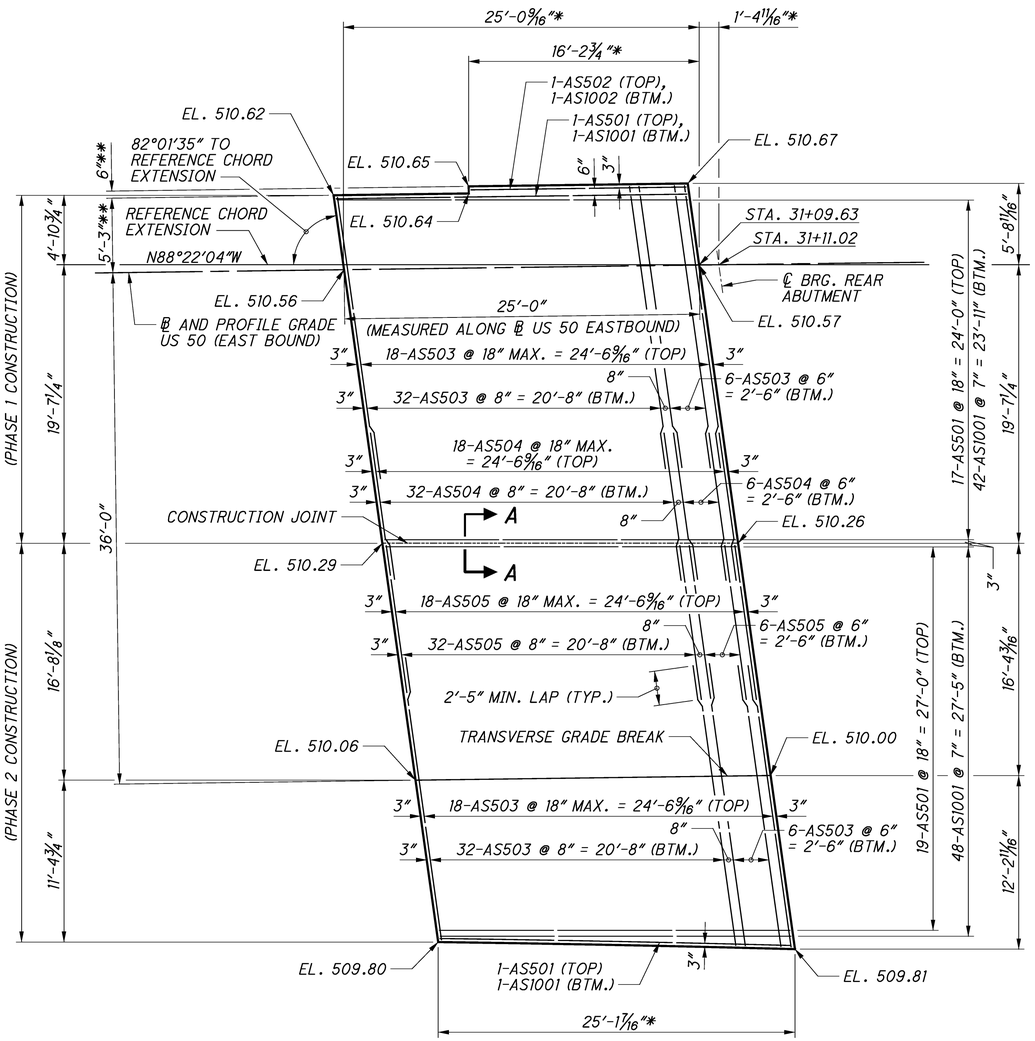
APPROACH SLAB DETAILS (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

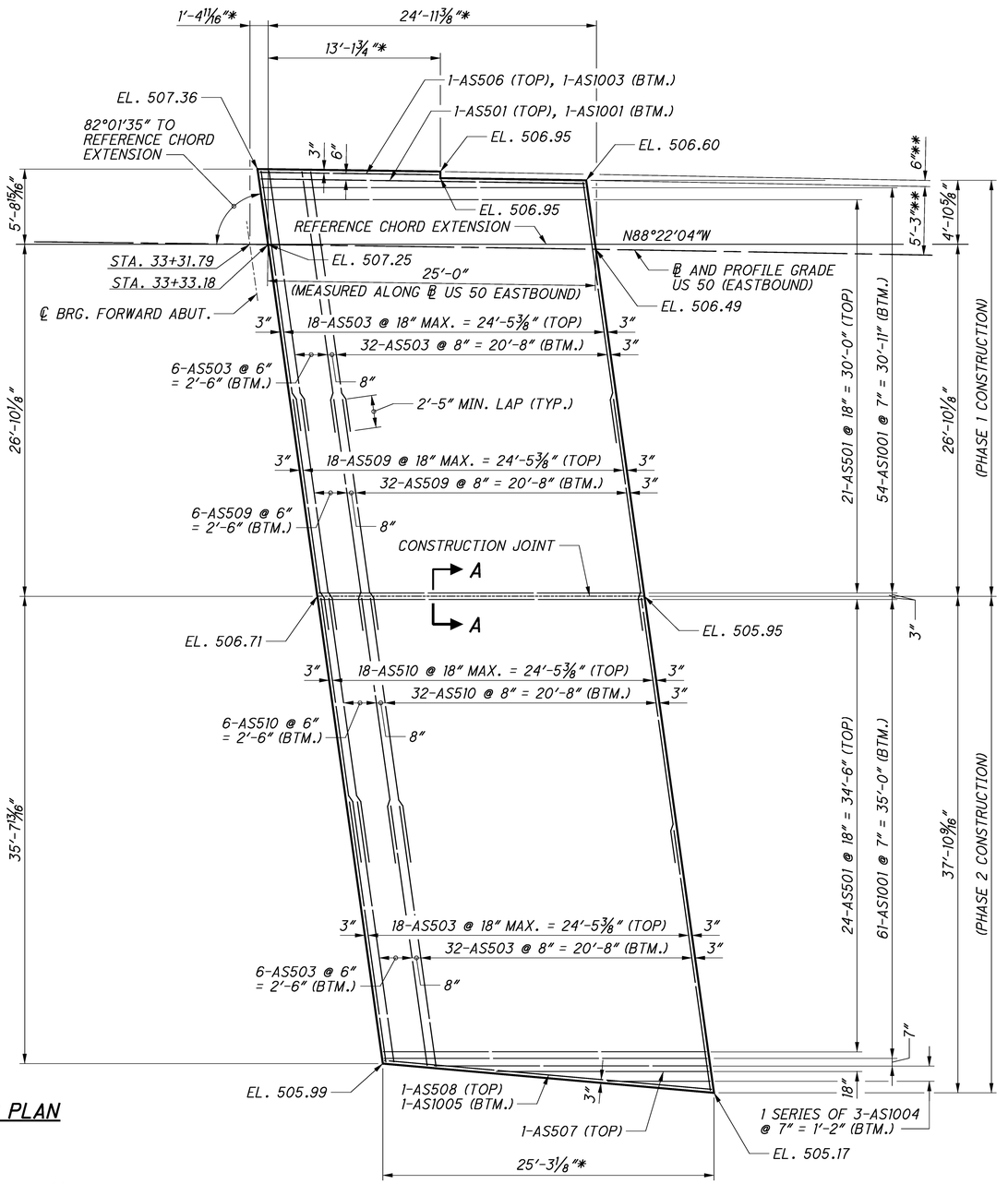
54/61

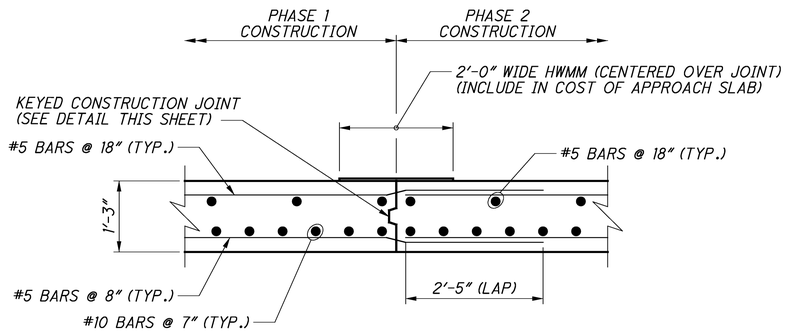
376/442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LAR010.dgn 11/10/2010 11:40:06 AM mtreiheisel



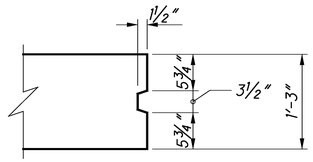
* MEASURED ALONG REFERENCE CHORD EXTENSION
** MEASURED NORMAL TO ℄ AND PROFILE GRADE





SECTION A-A

APPROACH SLAB PLAN



KEYED CONSTRUCTION JOINT DETAIL

(REFER TO CMS 511.12 FOR ADDITIONAL INFORMATION)

NOTES:

1. THE APPROACH SLAB CONCRETE SHALL NOT BE POURED WITH THE DECK CONCRETE.
2. SEE STD. DWG. AS-1-81 FOR ADDITIONAL NOTES AND DETAILS.
3. FOR REINFORCING STEEL LIST, SEE SHEET 61/61.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

APPROACH SLAB DETAILS (RIGHT BRIDGE)

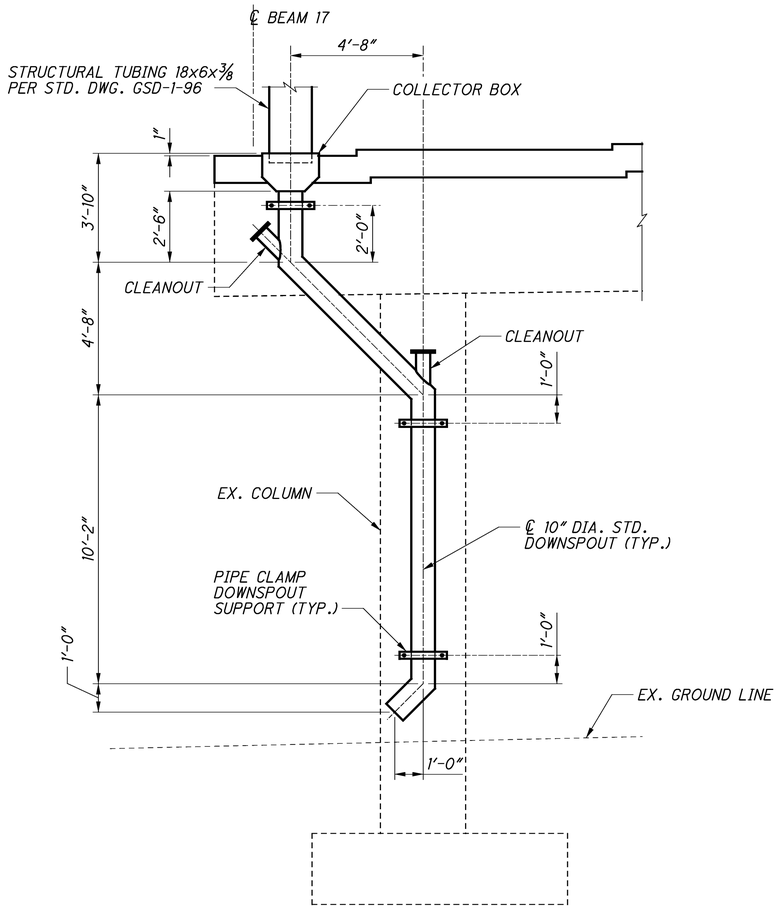
HAM-50-19.61R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

55 / 61

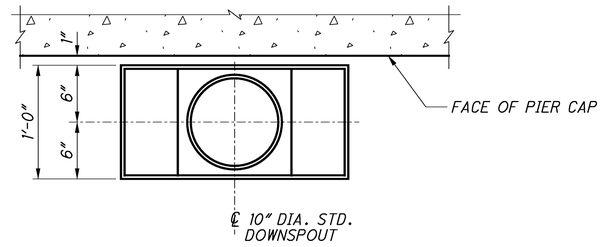
377
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RAR010.dgn 11/10/2010 11:40:08 AM mtreineisel

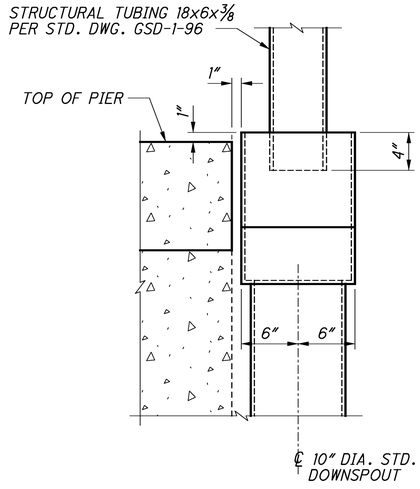


PARTIAL ELEVATION EAST FACE OF PIER 2

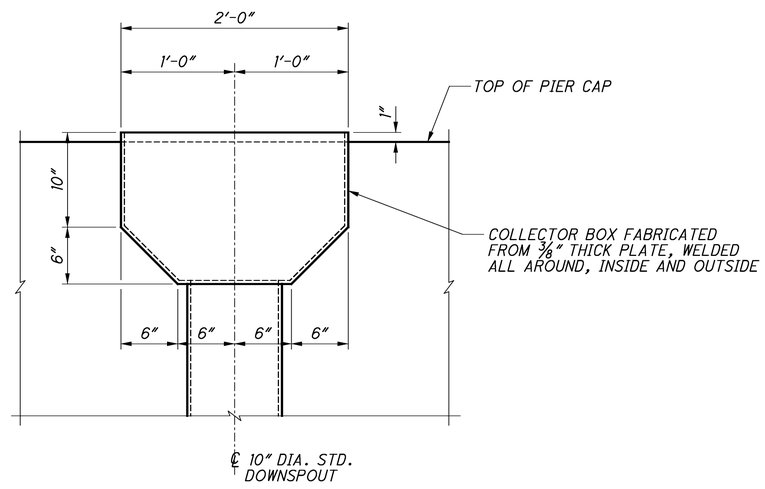
DOWNSPOUT FOR SCUPPER
@ STA. 32+17.00



PLAN

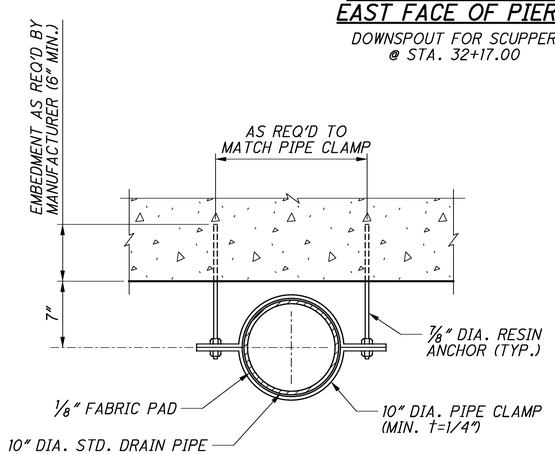


SIDE VIEW

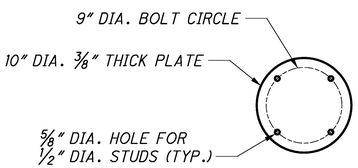


FRONT VIEW

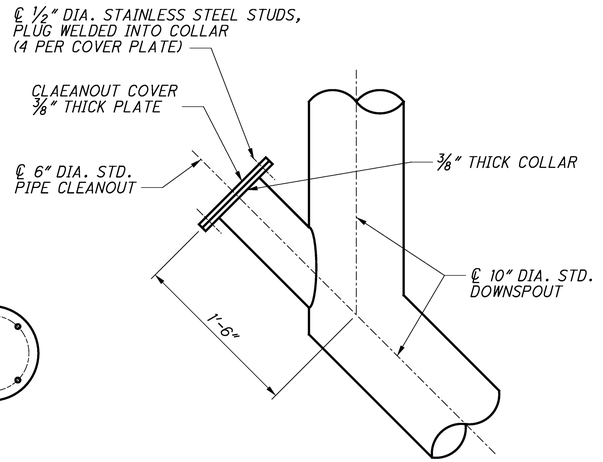
DOWNSPOUT COLLECTOR BOX DETAILS



PIPE CLAMP DOWNSPOUT SUPPORT



CLEANOUT COVER



DOWNSPOUT CLEANOUT DETAIL

NOTES:

1. DOWNSPOUT PIPE SHALL BE GALVANIZED STEEL PIPE, IN ACCORDANCE WITH CMS 748.60 .
2. SCUPPERS, COLLECTOR BOX, CLEANOUT COVERS, PIPE CLAMPS, ANCHORS, NUTS AND WASHERS, AND ALL OTHER MATERIALS REQUIRED FOR DOWNSPOUT INSTALLATION SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02.
3. FOR SCUPPER DETAILS, SEE STD. DWG. GSD-1-96.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	JDG	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

DRAINAGE DETAILS (RIGHT BRIDGE)
HAM-50-196IR
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

56 / 61

378
442

C:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RMD001.dgn 11/10/2010 11:40:10 AM mtreineisel

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST													
A501	29	28	57	7′-5″	441	23	1′-1″	3′-2″	3′-0″			0′-2 3/4″	
A502	4		4	12′-10″	54	STR							
A503	4	4	8	12′-8″	106	STR							
A504	2		2	12′-4″	26	STR							
A505	2	2	4	12′-2″	51	STR							
A506	1		1	9′-10″	10	STR							
A507	1		1	9′-8″	10	STR							
A508	2		2	10′-5″	22	19	8′-0″	2′-4″	0′-7″				
A509	1		1	4′-7″	5	STR							
A510	1	2	3	4′-5″	14	STR							
A511	4		4	13′-6″	56	STR							
A512	4		4	13′-8″	57	STR							
A513	2		2	13′-0″	27	STR							
A514	2		2	13′-2″	27	STR							
A515	1		1	10′-11″	11	STR							
A516	1		1	11′-1″	12	STR							
A517	2		2	10′-4″	22	19	7′-11″	2′-4″	0′-7″				
A518	1		1	5′-2″	5	STR							
A519	1		1	5′-4″	6	STR							
A520		1	1	4′-6″	5	STR							
A521		5	5	12′-3″	64	STR							
A522		1	1	11′-6″	12	STR							
A523		3	3	12′-5″	39	STR							
A524		1	1	4′-3″	4	STR							
A525		4	4	10′-4″	43	19	7′-11″	2′-5″	0′-6″				
A526		4	4	12′-11″	54	STR							
A527		8	8	12′-9″	106	STR							
A528		1	1	11′-8″	12	STR							
A601	10		10	5′-6″	83	STR							
A602	27	26	53	3′-10″	305	13	2′-0″	0′-11″	0′-2″	1′-0″			
A603	27	26	53	2′-11″	232	STR							
	2 SR		2 SR	2′-8″									
A604	OF		OF	TO	82	STR							0′-2 1/2″
	8		8	4′-2″									
A605	2	2	4	2′-8″	16	13	0′-10 1/2″	0′-11″	0′-2″	1′-0″			
A606	2	2	4	1′-9″	11	STR							
A607	1	1	2	12′-10″	39	STR							
A608	12		12	5′-4″	96	STR							
	2 SR		2 SR	2′-8″									
A609	OF		OF	TO	80	STR							0′-2 1/4″
	8		8	4′-0″									
A610	1		1	13′-7″	20	STR							
A611		10	10	5′-3″	79	STR							
		2 SR	2 SR	2′-8″									
A612		OF	OF	TO	79	STR							0′-2 1/4″
		8	8	3′-11″									
A613		10	10	5′-2″	78	STR							
		2 SR	2 SR	2′-8″									
A614		OF	OF	TO	78	STR							0′-2″
		8	8	3′-10″									
A615		1	1	12′-8″	19	STR							
				TOTAL	2,598								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
DIAPHRAGM REINFORCING STEEL LIST													
D501	88	92	180	8′-6″	1596	2	2′-8″	3′-5″	2′-8″				
D502	44	46	90	7′-8″	720	2	2′-8″	2′-7″	2′-8″				
D801	41	44	85	5′-0″	1135	18	2′-10″	1′-0″	1′-0″				
D802	14		14	28′-10″	1078	STR							
D803	14		14	36′-0″	1346	STR							
D804		14	14	37′-7″	1405	STR							
D805		14	14	30′-6″	1140	STR							
				TOTAL	8,420								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
APPROACH SLAB REINFORCING STEEL LIST ✱													
AS501	43	45	88	24′-7″	2256	STR							
AS502	1		1	13′-1″	14	STR							
AS503	1		1	13′-7″	14	STR							
AS504	112	112	224	20′-0″	4673	STR							
AS505	56		56	10′-9″	628	STR							
AS506	56		56	18′-3″	1066	STR							
AS507		56	56	12′-8″	740	STR							
AS508		56	56	20′-5″	1192	STR							
AS509		1	1	12′-9″	13	STR							
AS510		1	1	13′-2″	14	STR							
AS1001	105	112	217	26′-0″	24278	16	24′-7″						
AS1002	1		1	14′-6″	62	16	13′-1″						
AS1003	1		1	15′-0″	65	16	13′-7″						
AS1004		1	1	14′-2″	61	16	12′-9″						
AS1005		1	1	14′-7″	63	16	13′-2″						
				TOTAL	35,139								

✱ REINFORCING INCLUDED WITH APPROACH SLAB FOR PAYMENT

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102912

REINFORCIGN STEEL LIST (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

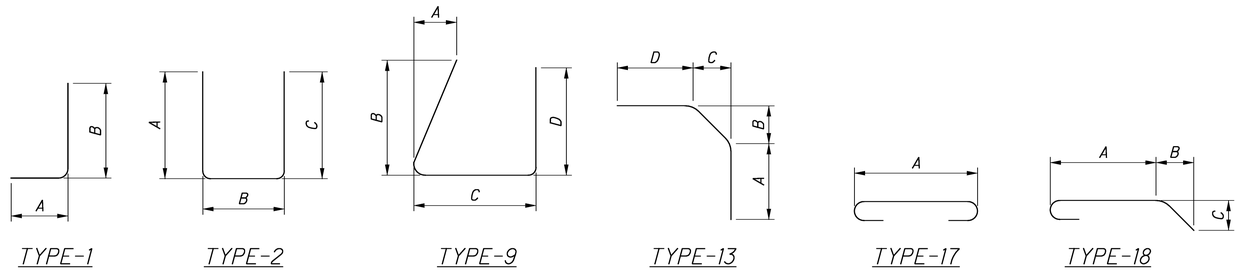
57 / 61

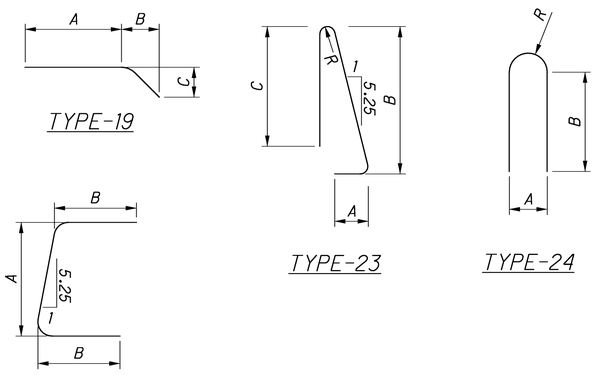
379
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LRL001.dgn 11/10/2010 11:40:11 AM mtneiheisel

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S401	622	30'-0"	12465	STR							
S402	93	26'-3"	1631	STR							
S403	10	3'-0"	20	STR							
S501	700	30'-0"	21903	STR							
S502	104	29'-9"	3227	STR							
S503	501	23'-1"	12062	STR							
S504	1000	11'-0"	11473	STR							
	2 SR	4'-11"									
S505	OF	TO	286	STR							3'-6"
	8	29'-5"									
	2 SR	6'-2"									
S506	OF	TO	244	STR							3'-6 1/4"
	7	27'-3"									
S507	2	30'-1"	63	STR							
S508	2	31'-10"	66	STR							
S509	499	29'-10"	15527	STR							
	2 SR	5'-6"									
S510	OF	TO	367	STR							3'-6"
	9	33'-7"									
	2 SR	7'-3"									
S511	OF	TO	400	STR							3'-6"
	9	35'-4"									
S512	2	37'-2"	78	STR							
S513	2	38'-10"	81	STR							
S514	1000	7'-2"	7475	STR							
S515	501	26'-11"	14065	STR							
S516	499	33'-9"	17565	STR							
S517	448	7'-5"	3466	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
S518	261	32'-0"	8711	STR							
S519	89	24'-0"	2228	STR							
S520 THRU S547 NOT USED											
S548	4	10'-1"	42	9	0'-7"	3'-10"	2'-8"	3'-10"			
S549	4	6'-3"	26	2	2'-3"	2'-0"	2'-3"				
S550	4	3'-10"	16	STR							
S551	6	9'-7"	60	21	1'-4"	2'-1"	2'-1"	0'-6"			
S601	14	30'-0"	631	STR							
S602	2	33'-3"	100	STR							
S603	448	3'-2"	2131	28	1'-6"	1'-0"					
S604	448	2'-4"	1570	1	1'-0"	1'-6"					
		TOTAL	137,979								

MARK	NUMBER PIER 1	PIER 2	PIER 3	PIER 4	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PIER REINFORCING STEEL LIST															
P501	2	2	2	2	8	9'-0"	75	24	2'-8"	2'-5"				1'-4"	
P502	123	125	127		375	2'-6"	978	1	0'-10"	1'-10"					
P503	64	65	66	66	261	3'-10"	1044	17	2'-8"						
P504	2				2	37'-2"	78	STR							
P505	2				2	25'-1"	52	STR							
P506		2			2	37'-6"	78	STR							
P507		2			2	25'-5"	53	STR							
P508			2		2	38'-0"	79	STR							
P509			2		2	26'-0"	54	STR							
P510				2	2	38'-3"	80	STR							
P511				2	2	26'-2"	55	STR							
P512	7	7	7	134	155	2'-2"	350	1	0'-10"	1'-6"					
P901	4				4	31'-2"	424	STR							
P902	4				4	25'-1"	341	STR							
P903		4			4	37'-6"	510	STR							
P904		4			4	25'-5"	346	STR							
P905			4		4	38'-0"	517	STR							
P906			4		4	26'-0"	354	STR							
P907				4	4	38'-3"	520	STR							
P908				4	4	26'-2"	356	STR							
						TOTAL	6,344								





NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | REVIEWED MSL | DATE 11/12/10
CHECKED SSM | REVISED
STRUCTURE FILE NUMBER 3102912

REINFORCIGN STEEL LIST (LEFT BRIDGE)
HAM-50-1961L
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961LRL002.dgn 11/10/2010 11:40:13 AM mtreitheisel

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST													
A501	16	15	31	7′-5″	240	23	1′-1″	3′-2″	3′-0″			0′-2 3/4″	
A502		6	6	2′-0″	13	STR							
A503		1	1	35′-2″	37	STR							
A504		1	1	36′-0″	38	STR							
A505		1	1	12′-2″	13	STR							
A506		1	1	30′-4″	32	STR							
A507		1	1	31′-2″	33	STR							
A508		4	4	14′-4″	60	3	3′-5″	3′-5″					
		1 SR	1 SR	10′-8″				1′-7″					
A509		OF	OF	TO	77	3	3′-5″	TO					0′-3 3/4″
		6	6	13′-10″				3′-2″					
A510		1	1	10′-8″	11	3	3′-6″	1′-6″					
A511		4	4	13′-6″	56	STR							
A512		4	4	13′-8″	57	STR							
A513		2	2	13′-0″	27	STR							
A514		2	2	13′-2″	27	STR							
A515		39	39	4′-7″	186	STR							
A516		2	2	7′-5″	15	19	4′-10″	2′-4″	1′-2″				
A517		2	2	10′-4″	22	19	7′-11″	2′-4″	0′-7″				
A518		1	1	5′-2″	5	STR							
A519		1	1	5′-4″	6	STR							
A520		19	19	10′-2″	201	2	3′-6″	3′-5″	3′-6″				
A521		1	1	12′-1″	13	STR							
A522	1		1	28′-10″	30	STR							
A523	1		1	28′-4″	30	STR							
A524	1		1	22′-9″	24	STR							
A525	1		1	22′-4″	23	STR							
A526	2	2	4	8′-4″	35	12	3′-2″	0′-4″	1′-3″	3′-2″	1′-1″		
A527	2	2	4	3′-4″	14	14	0′-11″	0′-10″	0′-8 1/2″	0′-6″	0′-11″		
A528	4	4	8	3′-1″	26	STR							
A529		3	3	2′-10″	9	STR							
A530		6	6	2′-7″	16	STR							
A531	2		2	9′-1″	19	19	6′-7″	2′-4″	1′-0″				
A532		6	6	2′-4″	15	STR							
A533	1	1	2	8′-9″	18	12	3′-4″	0′-4″	1′-4″	3′-4″	1′-1″		
A534	1	1	2	3′-6″	7	14	1′-0″	0′-10″	0′-8 1/2″	0′-6″	1′-0″		
A535	4		4	14′-10″	62	STR							
A536	4		4	14′-9″	62	STR							
A537	2		2	14′-4″	30	STR							
A538	2		2	14′-3″	30	STR							
A539	1		1	11′-2″	12	STR							
A540	1		1	11′-1″	12	STR							
A541	2		2	10′-5″	22	19	8′-0″	2′-4″	0′-8″				
A542	1		1	6′-6″	7	STR							
A543	1		1	6′-5″	7	STR							
A544	6		6	2′-6″	16	STR							
A545	6		6	2′-9″	17	STR							
A546	6		6	2′-0″	13	STR							
A547	3		3	3′-3″	10	STR							
A548	29		29	4′-11″	149	STR							
A549	14		14	10′-6″	153	2	3′-8″	3′-5″	3′-8″				
A550	3		3	14′-10″	46	3	3′-5″	3′-8″					
	1 SR		1 SR	11′-4″				1′-11″					
A551	OF		OF	TO	124	3	3′-5″	TO					0′-2 3/4″
	9		9	15′-0″				3′-9″					

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENT REINFORCING STEEL LIST (CONTINUED)													
A552	1		1	11′-2″	12	3	3′-6″	1′-9″					
A553	2	2	4	2′-5″	10	STR							
A601 NOT USED													
A602	15	14	29	3′-10″	167	13	2′-0″	0′-11″	0′-2″	1′-0″			
A603	15	14	29	2′-11″	127	STR							
A604 NOT USED													
A605	1	1	2	2′-8″	8	13	0′-10 1/2″	0′-11″	0′-2″	1′-0″			
A606	1	1	2	1′-9″	5	STR							
A607		12	12	5′-4″	96	STR							
A608		1	1	13′-7″	20	STR							
A609 THRU A614 NOT USED													
		2 SR	2 SR	2′-10″									
A615		OF	OF	TO	82	STR							0′-2″
		8	8	4′-0″									
A616		2	2	7′-0″	21	STR							
A617		2	2	6′-7″	20	STR							
A618	14		14	5′-8″	119	STR							
	2 SR		2 SR	2′-8″									
A619	OF		OF	TO	84	STR							0′-2 3/4″
	8		8	4′-4″									
A620	1		1	14′-9″	22	STR							
A621	2		2	7′-3″	22	STR							
A622	3		3	6′-11″	31	STR							
	1 SR		1 SR	28′-4″									
A801	OF		OF	TO	687	STR							0′-0 3/4″
	9		9	28′-10″									
		1 SR	1 SR	35′-2″									
A802		OF	OF	TO	855	STR							0′-1 1/4″
		9	9	36′-0″									
				TOTAL	4,595								

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
DIAPHRAGM REINFORCING STEEL LIST													
D501 NOT USED													
D502	42	48	90	8′-0″	751	2	2′-8″	2′-11″	2′-8″				
D503	84	96	180	8′-8″	1627	2	2′-9″	3′-5″	2′-9″				
D801	36	46	82	5′-0″	1095	18	2′-10″	1′-0″	1′-0″				
D802	14		14	28′-8″	1072	STR							
D803		14	14	35′-9″	1336	STR							
D804 AND D805 NOT USED													
D806	14		14	29′-9″	1112	STR							
D807		14	14	36′-9″	1374	STR							
				TOTAL	8,367								

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL TO BE EPOXY COATED

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED MTN | DRAWN CAS | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102920

REINFORCIGN STEEL LIST (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

59 / 61

381
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RRL001.dgn 11/10/2010 11:40:14 AM mtreiheisel

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S401	599	30'-0"	12004	STR							
S402	46	27'-7"	848	STR							
S403	4	3'-0"	8	STR							
S404	52	29'-6"	1025	STR							
S501	782	30'-0"	24469	STR							
S502	250	32'-0"	8344	STR							
S503	95	24'-0"	2378	STR							
S504	2	37'-2"	78	STR							
S517	411	7'-5"	3179	23	1'-1"	3'-2"	3'-0"			0'-2 3/4"	
S518	167	7'-6"	1306	STR							
S519	167	10'-9"	1872	STR							
S520	167	27'-7"	4804	STR							
S521	499	24'-4"	12664	STR							
S522	167	9'-0"	1568	STR							
S523	167	13'-1"	2279	STR							
S524	167	28'-6"	4964	STR							
S525	165	9'-9"	1678	STR							
S526	165	14'-8"	2524	STR							
S527	165	29'-4"	5048	STR							
	2 SR	4'-11"									
S528	OF	TO	342	STR							2'-6 1/2"
	10	27'-10"									
	2 SR	6'-3"									
S529	OF	TO	505	STR							2'-6 1/4"
	12	34'-1"									
S530	2	29'-11"	62	STR							
S531	196	5'-6"	1124	STR							
S532	196	8'-2"	1669	STR							
S533	196	27'-6"	5622	STR							
S534	501	24'-10"	12976	STR							
S535	197	7'-9"	1592	STR							
S536	197	11'-5"	2346	STR							
S537	197	28'-7"	5873	STR							
S538	4	19'-7"	82	STR							
S539	108	14'-7"	1643	STR							
S540	108	30'-3"	3407	STR							
	1 SR	5'-10"									
S541	OF	TO	282	STR							2'-6"
	13	35'-9"									
	2 SR	5'-8"									
S542	OF	TO	355	STR							2'-6 1/4"
	10	28'-5"									
S543	2	38'-4"	80	STR							
S544	2	30'-10"	64	STR							
S545	59	27'-9"	1708	STR							
S546	61	33'-0"	2100	STR							
S547	6	25'-9"	161	STR							
S548	8	10'-1"	84	9	0'-7"	3'-10"	2'-8"	3'-10"			
S549	8	6'-3"	52	2	2'-3"	2'-0"	2'-3"				
S550	8	3'-10"	32	STR							
S551	12	9'-7"	120	21	1'-4"	2'-1"	2'-1"	0'-6"			
S552	42	2'-4"	102	STR							

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
DECK REINFORCING STEEL LIST											
S553	2	3'-3"	7	10	0'-1 1/4"	1'-0"	1'-6"	1'-0"			
S554	3	20'-0"	63	STR							
S555	4	19'-9"	82	STR							
S556	41	2'-11"	125	16	2'-4"						
	1 SR	4'-3"				0'-6"					
S557	OF	TO	92	2	2'-0"	TO	2'-0"				0'-0 1/2"
	19	5'-2"				1'-5"					
S558	1	3'-2"	3	10	0'-1 1/4"	1'-0"	1'-5"	1'-0"			
S559	4	19'-1"	80	STR							
S560	1	19'-3"	20	STR							
	1 SR	4'-3"				0'-6"					
S561	OF	TO	97	2	2'-0"	TO	2'-0"				0'-0 1/2"
	20	5'-2"				1'-5"					
S601	13	30'-0"	586	STR							
S602 NOT USED											
S603	431	3'-2"	2050	28	1'-6"	1'-0"					
S604	453	2'-4"	1588	1	1'-0"	1'-6"					
S605	1	34'-0"	51	STR							
S606	1	29'-9"	45	STR							
	1 SR	5'-10"									
S607	OF	TO	406	STR							2'-6"
	13	35'-9"									
S608	108	9'-8"	1568	STR							
S609	21	3'-2"	100	14	0'-11"	0'-10"	0'-8 1/2"	0'-6"	0'-9"		
		TOTAL	140,386								

NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

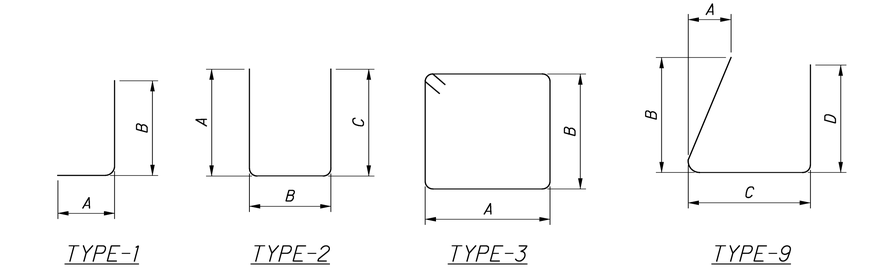
DESIGNED MTN | DRAWN CAS | CHECKED SSM | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102920

REINFORCIGN STEEL LIST (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

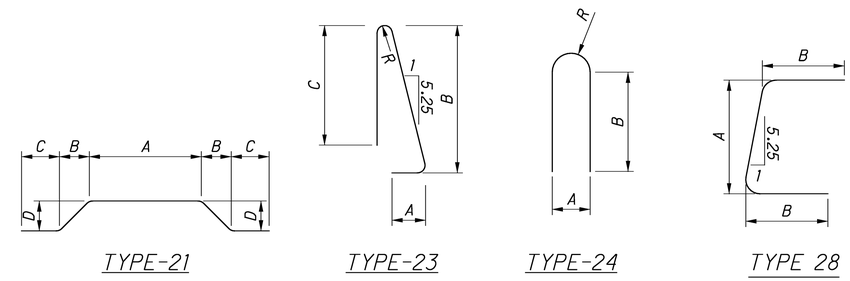
G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RRL002.dgn 11/10/2010 11:40:16 AM mtreiheisel

MARK	NUMBER					LENGTH	WEIGHT	TYPE	DIMENSIONS						
	PIER 1	PIER 2	PIER 3	PIER 4	TOTAL				A	B	C	D	E	R	INC
PIER REINFORCING STEEL LIST															
P501	2	2	2	2	8	9'-0"	75	24	2'-8"	2'-5"				1'-4"	
P502	109	122			231	2'-6"	602	1	0'-10"	1'-10"					
P503	58	60	63	66	247	3'-10"	988	17	2'-8"						
P504 THRU P511 NOT USED															
P512				134	134	2'-2"	303	1	0'-10"	1'-6"					
P513	9		128		137	2'-5"	345	1	0'-10"	1'-9"					
P514	2				2	27'-0"	56	STR							
P515	2				2	30'-2"	63	STR							
P516		2			2	27'-2"	57	STR							
P517		2			2	31'-4"	65	STR							
P518			2		2	28'-6"	59	STR							
P519			2		2	32'-4"	67	STR							
P520				2	2	29'-6"	62	STR							
P521				2	2	33'-8"	70	STR							
P901 THRU P908 NOT USED															
P909	4				4	27'-0"	367	STR							
P910	4				4	30'-2"	410	STR							
P911		4			4	27'-2"	369	STR							
P912		4			4	31'-4"	426	STR							
P913			4		4	28'-6"	388	STR							
P914			4		4	32'-4"	440	STR							
P915				4	4	29'-6"	401	STR							
P916				4	4	33'-8"	458	STR							
					TOTAL		6,071								



MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD.	TOTAL				A	B	C	D	E	R	INC
APPROACH SLAB REINFORCING STEEL LIST ✱													
AS501	38	46	84	24'-8"	2161	STR							
AS502	1		1	15'-1"	16	STR							
AS503	112	112	224	20'-0"	4673	STR							
AS504	56		56	10'-6"	613	STR							
AS505	56		56	11'-0"	642	STR							
AS506		1	1	13'-7"	14	STR							
AS507		1	1	16'-2"	17	STR							
AS508		1	1	25'-0"	26	STR							
AS509		56	56	17'-9"	1037	STR							
AS510		56	56	20'-4"	1188	STR							
AS1001	92	116	208	26'-1"	23345	16	24'-8"						
AS1002	1		1	16'-6"	71	16	15'-1"						
AS1003		1	1	15'-0"	65	16	13'-7"						
		1 SR	1 SR	9'-3"			7'-10"						
AS1004		OF	OF	TO	203	16	TO						6'-6"
		3	3	22'-3"			20'-10"						
AS1005		1	1	26'-5"	114	16	25'-0"						
				TOTAL	34,185								

✱ REINFORCING INCLUDED WITH APPROACH SLAB FOR PAYMENT



NOTES:

1. ALL REINFORCING STEEL TO BE EPOXY COATED
2. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
MTN	CAS	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SSM		3102920	

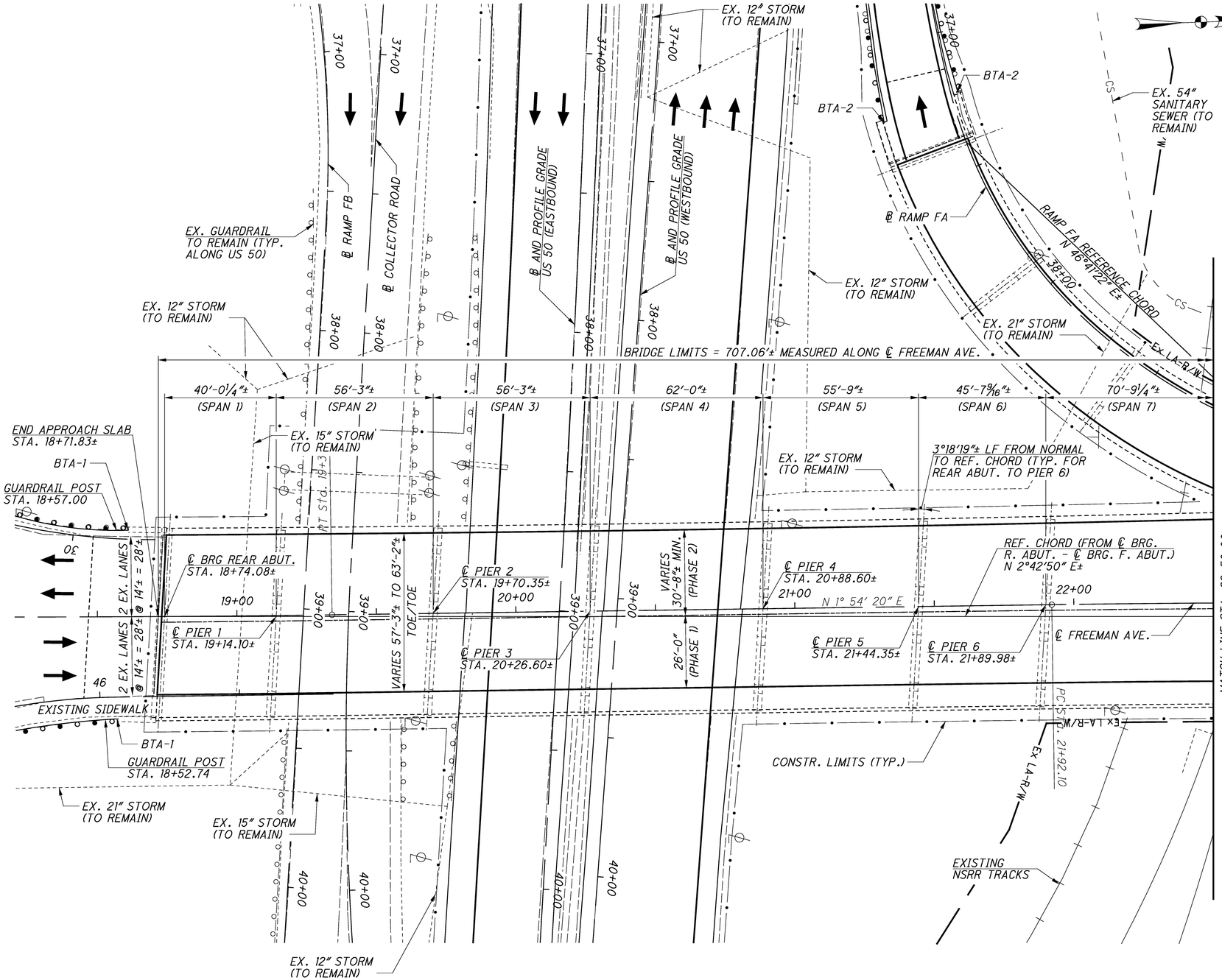
REINFORCIGN STEEL LIST (RIGHT BRIDGE)
HAM-50-1961R
US 50 OVER ABANDONED NORFOLK SOUTHERN RR SIDING

HAM-50-19.03
PID No. 75736

61 / 61

383
442

G:\CN06\0011\Bridge\HAM-50-1961_US50_OVER_NORFOLK_RR\sheets\050_1961RRL003.dgn 11/10/2010 11:40:17 AM mtneiheisel



PLAN

NOTES:

EXISTING UTILITIES TO REMAIN.

DESIGN TRAFFIC:

FREEMAN AVENUE

2011 ADT = 3450 (SB), 4990 (NB) 2011 ADTT = 138 (SB), 200 (NB)
2031 ADT = 3460 (SB), 4990 (NB) 2031 ADTT = 138 (SB), 200 (NB)
DIRECTIONAL DISTRIBUTION = 0.59

RAMP FA

2011 ADT = 3850 2011 ADTT = 154
2031 ADT = 3320 2031 ADTT = 133
DIRECTIONAL DISTRIBUTION = 0.59

EXISTING STRUCTURE

TYPE: SPANS 1 THRU 6 AND 9 THRU 11 ARE CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE; SPANS 7 AND 8 ARE SIMPLE SPAN PLATE GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 40'-0 1/4"±, 56'-3"±, 56'-3"±, 62'-0"±, 55'-9"±, 45'-7 9/16"±, 70'-9 1/4"±, 96'-3"±, 73'-7 9/16"±, 73'-0 1/8"±, 73'-0"± C/C BRG. (MEASURED ALONG ℄ FREEMAN AVENUE)

ROADWAY: VARIES F/F CURBS, 8'-2"± SIDEWALK (EAST SIDE)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 1 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: VARIES (HORIZONTALLY CURVED AND TANGENT)

SUPERELEVATION: 0.016 FT/FT

STRUCTURAL FILE NUMBER: 3102971

DATE BUILT: 1966±

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK:

REMOVE EXISTING 1 1/2" MICRO-SILICA CONCRETE OVERLAY AND 1" OF EXISTING DECK USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2 1/2" SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON THE EXISTING DECK, PATCH CONCRETE SURFACES AS PER ITEM 519, UPGRADE END TERMINAL ASSEMBLIES, REPAIR PARAPET AT NORTHEAST CORNER, REPLACE EXPANSION JOINT STRIP SEAL GLAND AT PIER 8, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY-URETHANE, FEDERAL COLOR NUMBER 17778, CLEAN BRIDGE DRAINAGE SYSTEM.

TYPE: SPANS 1 THRU 6 AND 9 THRU 11 ARE CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE; SPANS 7 AND 8 ARE SIMPLE SPAN PLATE GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 40'-0 1/4"±, 56'-3"±, 56'-3"±, 62'-0"±, 55'-9"±, 45'-7 9/16"±, 70'-9 1/4"±, 96'-3"±, 73'-7 9/16"±, 73'-0 1/8"±, 73'-0"± C/C BRG. (MEASURED ALONG ℄ FREEMAN AVENUE)

ROADWAY: VARIES T/T CURBS, 8'-2"± SIDEWALK (EAST SIDE)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

WEARING SURFACE: 2 1/2" SUPERPLASTICIZED DENSE CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: VARIES (HORIZONTALLY CURVED AND TANGENT)

SUPERELEVATION: 0.016 FT/FT

STRUCTURAL FILE NUMBER: 3102971

COORDINATES: LONGITUDE 84°32'00" W
LATITUDE 39°06'00" N

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102971	

HAMILTON COUNTY
STA. 18+71.83
STA. 25+78.89

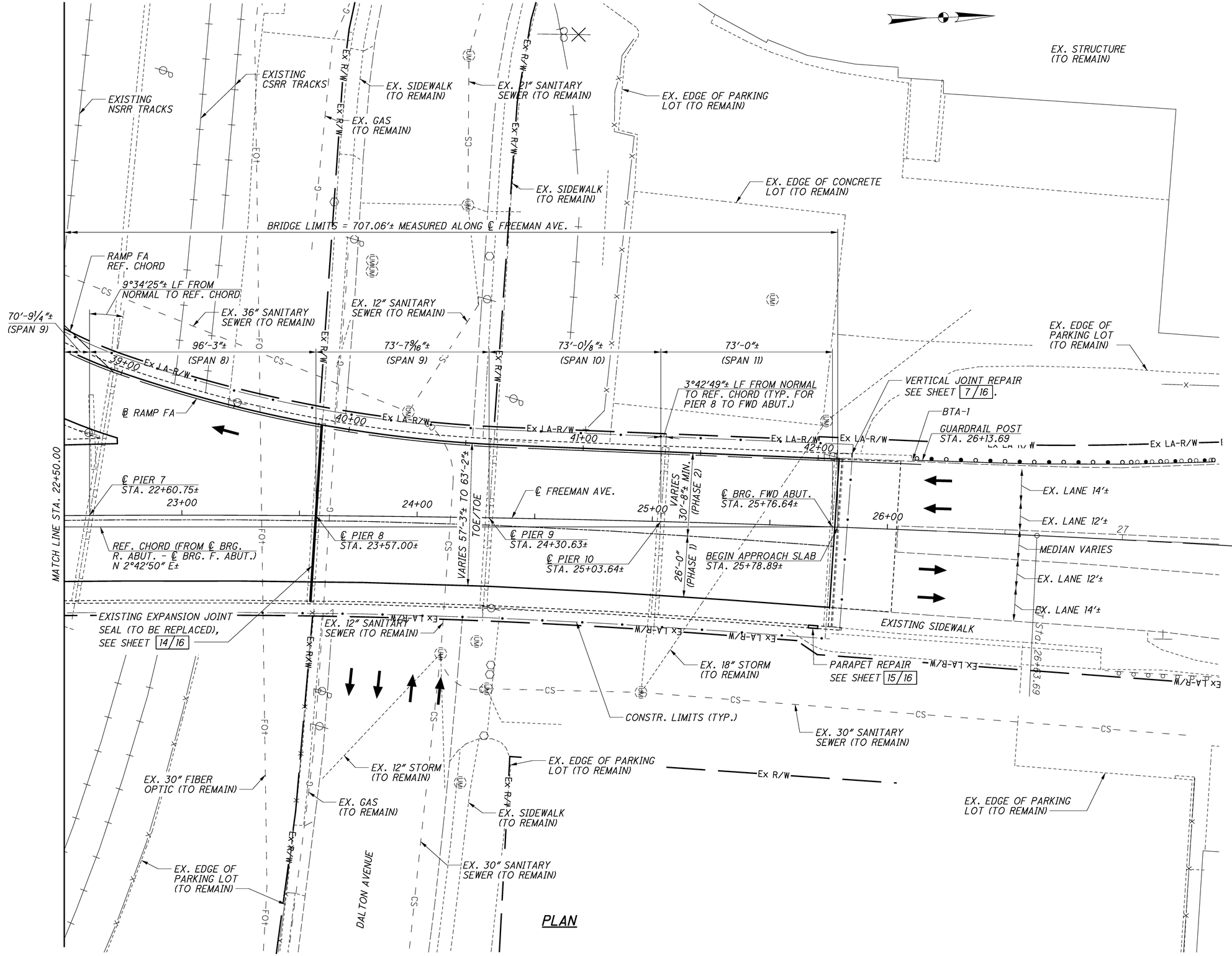
GENERAL PLAN
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

1 / 16

384
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CGP001.dgn 11/10/2010 11:40:20 AM mtreiseisel



PLAN

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102971	

HAMILTON COUNTY
STA. 18+71.83
STA. 25+78.89

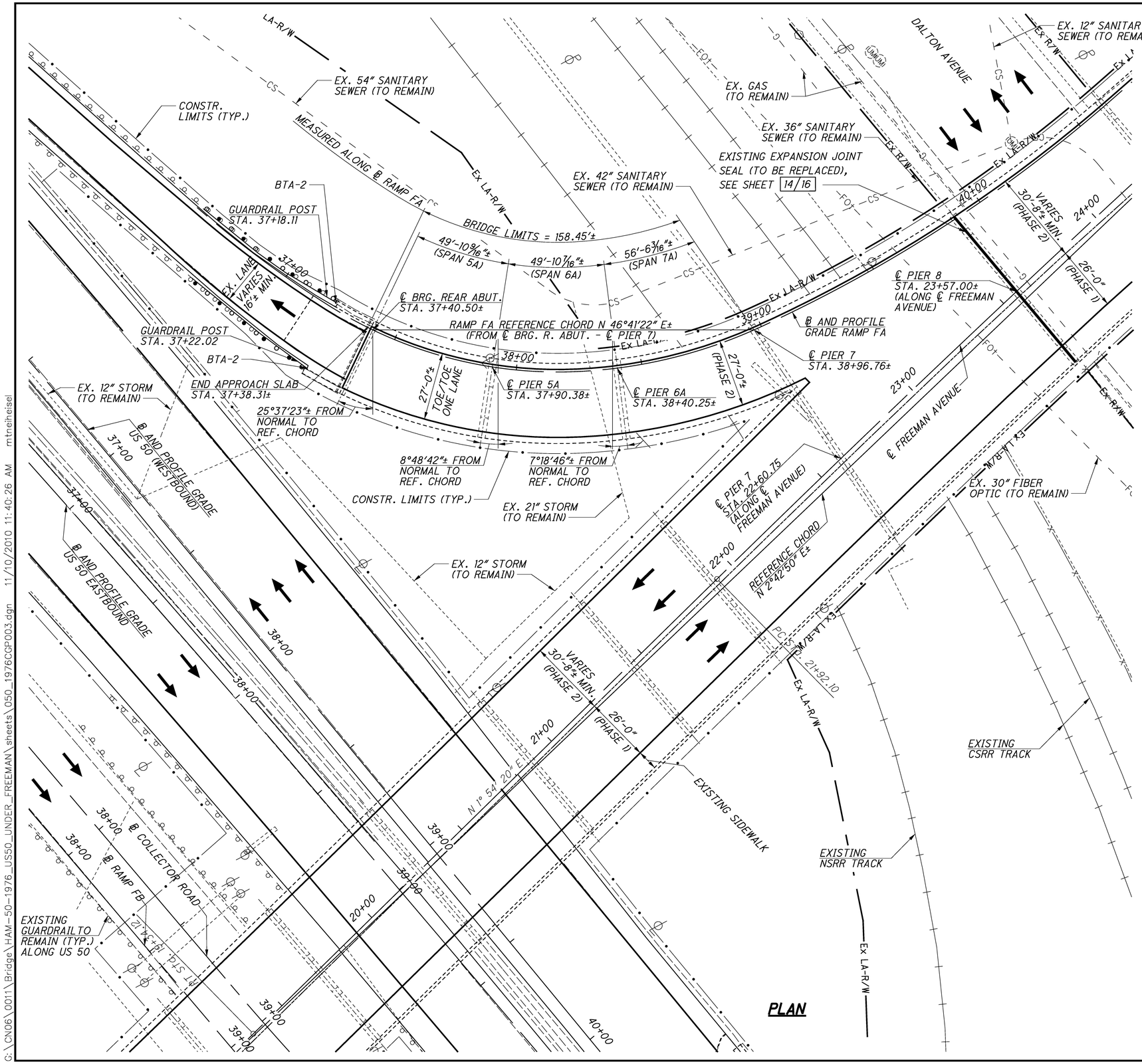
GENERAL PLAN
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

2 / 16

385
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CGP002.dgn 11/10/2010 11:40:23 AM mtreiheisel



NOTES:

EXISTING UTILITIES TO REMAIN.

DESIGN TRAFFIC:

FREEMAN AVENUE

2011 ADT = 3450 (SB), 4990 (NB) 2011 ADTT = 138 (SB), 200 (NB)
2031 ADT = 3460 (SB), 4990 (NB) 2031 ADTT = 138 (SB), 200 (NB)
DIRECTIONAL DISTRIBUTION = 0.59

RAMP FA

2011 ADT = 3850 2011 ADTT = 154
2031 ADT = 3320 2031 ADTT = 133
DIRECTIONAL DISTRIBUTION = 0.59

EXISTING STRUCTURE

TYPE: SPANS 5A, 6A, AND 7A ARE SIMPLE SPAN PLATE GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 49'-10 9/16"±, 49'-10 7/16"±, 56'-0"± C/C BRG. (MEASURED ALONG ℄ RAMP FA)

ROADWAY: 27'-0"± F/F CURBS

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: HORIZONTAL COMPOUND CURVES

SUPERELEVATION: 0.063 FT/FT

STRUCTURAL FILE NUMBER: 3102971

DATE BUILT: 1966±

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK:

REMOVE EXISTING 1½" MICRO-SILICA CONCRETE OVERLAY AND 1" OF EXISTING DECK USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON THE EXISTING DECK, PATCH CONCRETE SURFACES AS PER ITEM 519, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778, CLEAN BRIDGE DRAINAGE SYSTEM.

TYPE: SPANS 5A, 6A, AND 7A ARE SIMPLE SPAN PLATE GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 49'-10 9/16"±, 49'-10 7/16"±, 56'-0"± C/C BRG. (MEASURED ALONG ℄ RAMP FA)

ROADWAY: 27'-0"± F/F CURBS

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

WEARING SURFACE: 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: HORIZONTAL COMPOUND CURVES

SUPERELEVATION: 0.063 FT/FT

STRUCTURAL FILE NUMBER: 3102971

COORDINATES: LONGITUDE 84°32'00"
LATITUDE 39°06'00"

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN MSW | CHECKED MTN | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102971

HAMILTON COUNTY
STA. 18+71.83
STA. 25+78.89

GENERAL PLAN
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

3 / 16

386
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CGP003.dgn 11/10/2010 11:40:26 AM mtreiheisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
EXJ-4-87, REVISED 07-19-09

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):
842 DATED 01-19-07
848 DATED 04-16-10

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

DESIGN DATA:
CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD:
2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
SEALING OF CONCRETE SURFACES

MAINTENANCE OF TRAFFIC: TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS: CONSTRUCTION PLANS FOR EXISTING BRIDGE ARE ON FILE AT THE DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH STATE ROUTE 741, LEBANON, OHIO AND ARE AVAILABLE FOR REFERENCE.

NON-USE OF ASBESTOS-CONTAINING MATERIALS: THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS.THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

CONSTRUCTION CLEARANCE: MAINTAIN A CONSTRUCTION CLEARANCE OF 12 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 23 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 6 FEET FROM THE CENTER OF TRACKS AT ALL TIMES.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN: THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION (FOR REMOVAL OF NORTHEAST PARAPET): SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

CENTER EXPANSION JOINT REPLACEMENT: CONTRACTOR WILL BE REQUIRED TO INSTALL PLYWOOD PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE CENTER EXPANSION JOINT, AND OVER THE CSXT RAILROAD SPAN (SPAN #8). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE WORK BEGINS AND STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE PLYWOOD PROTECTION.

FULL PENETRATION OF DECK REMOVAL: CONTRACTOR WILL BE REQUIRED TO INSTALL PLYWOOD PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE AREA OF ANY FULL DECK PENETRATION, AND OVER THE CSXT RAILROAD SPAN (SPAN #8). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE DECK IS PENETRATED AND WILL STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE PLYWOOD PROTECTION.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN: DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINISH COAT COLOR FOR THE ABUTMENTS, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN: THE CONTRACTOR WILL HAVE TO FIELD DETERMINE THE BRAND AND MODEL OF RETAINER IN THE STRIP SEAL JOINT AND SUPPLY APPROPRIATE REPLACEMENT SEAL.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT: THE EXISTING VERTICAL EXPANSION JOINT BETWEEN THE ABUTMENT AND WINGWALL SHALL BE REPAIRED WITH POLYURETHANE FOAM AS INDICATED IN THE PLANS WITH THE MATERIAL PER SUPPLEMENTAL SPECIFICATION 842. THE JOINT SHALL BE THOROUGHLY CLEANED AS DIRECTED BY THE ENGINEER.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM: THIS ITEM CONSISTS OF REMOVING ALL DIRT AND DEBRIS FROM THE ROADWAY DECK NEAR THE CURB AND MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, COLLECTION BOXES, HOPPERS, HORIZONTAL CONDUCTORS, DOWNSPOUTS, UNDERGROUND STORM SEWERS AND MANHOLES TO THE CITY STORM SEWERS OR PIPE OUTLET, AFTER THE DIRT AND DEBRIS ARE REMOVED. THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH CLEAN WATER MAKING CERTAIN THAT WATER FLOWS SMOOTHLY TO ITS OUTLET.

CONTRACTOR SHALL DETERMINE THE EXTENT OF WORK REQUIRED FOR THIS ITEM BY EXAMINATION OF EXISTING BRIDGE PLANS AND BY FIELD INVESTIGATION.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEM. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION PRIOR TO BEGINNING WORK AND AGAIN AT THE COMPLETION
OF THE WORK. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

ALL DIRT AND DEBRIS SHALL BE REMOVED FORM THE BRIDGE SITE AND PROPERLY DISPOSED OF.

THE CLEANOUTS OF THE BRIDGE DRAINAGE SYSTEM SHALL NOT BEGIN UNTIL ALL OTHER WORK UNDER THIS CONTRACT IS COMPLETED, INCLUDING PAINTING OF STRUCTURAL STEEL AND SEALING OF CONCRETE SURFACE.

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE CLEANING AND CLEARING OF THE BRIDGE DRAINAGE SYSTEM SHALL BE INCLUDED IN THE PRICE FOR ITEM 518- STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION: THIS ITEM CONSISTS OF CUTTING HOLES IN DOWNSPOUTS AS DIRECTED BY THE ENGINEER TO ALLOW FOR DRAINAGE OF WATER ONTO THE GROUND SHOULD THE UNDERGROUND DRAINAGE PIPE(S) BECOME CLOGGED IN THE FUTURE.

THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF LOCATIONS TO BE MODIFIED. THE COST OF ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO PERFORM THIS WORK IS INCLUDED WITH THE ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN: PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

CONTRACTOR WILL BE REQUIRED TO REMOVE AND DISPOSE ALL CONCRETE DEBRIS GENERATED FROM CONCRETE PATCHING. EQUIPMENT REQUIRED TO PERFORM CONCRETE PATCHING MUST MAINTAIN AT LEAST A MINIMUM HORIZONTAL CLEARANCE OF 12 FEET MEASURED PERPENDICULAR TO THE CENTERLINE OF THE NEAREST TRACK. VEHICLES AND OTHER MOTORIZED EQUIPMENT WILL NOT BE PERMITTED BETWEEN THE TRACKS AND THE NORTH FACE OF PIER NO. 7.

C:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CGN001.dgn 11/10/2010 11:40:28 AM mtreiheisel

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242
DESIGNED PJP
DRAWN JDG
CHECKED MTN
REVIEWED MSL
DATE 11/12/10
REVISED
STRUCTURE FILE NUMBER 3102971

GENERAL NOTES
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

CALCULATED BY: SSM

ESTIMATED QUANTITIES - HAM-50-1976 - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CHECKED BY: JDG

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP		4, 15
202	38500	14	FT	BRIDGE RAILING REMOVED	14				
202	75266	8	FT	VANDAL PROTECTION FENCE REMOVED AND RESET	8				
202	98100	1	EACH	REMOVAL MISC.: TYPE C ALUMINUM RAIL POST REMOVED AND RESET			1		
509	10000	33	POUND	EPOXY COATED REINFORCING STEEL			33		
510	10001	10	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN			10		4, 15
511	34400	1	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			1		
512	10100	5881	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	423	2691	2767		
512	10600	56	FT	CONCRETE REPAIR BY EPOXY INJECTION	18	38			
516	01301	79	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN			79		4, 14
516	14600	4	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT	4				4
517	75001	14	FT	RAILING, ALUMINUM, AS PER PLAN	14				7
518	62200	20	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				20	4
518	62200	15	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				15	4
519	11101	151	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	100	51			4, 7-11
848	10200	5294	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			5294		
848	20000	5294	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION (1" EXISTING DECK REMOVAL)			5294		
848	30200	330	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			330		
848	50000	530	SQ YD	HAND CHIPPING			530		
848	50100	LUMP		TEST SLAB			LUMP		
848	50200	13	CU YD	FULL DEPTH REPAIR			13		
848	50320	5294	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=1½")			5294		
848	50340	2000	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			2000		

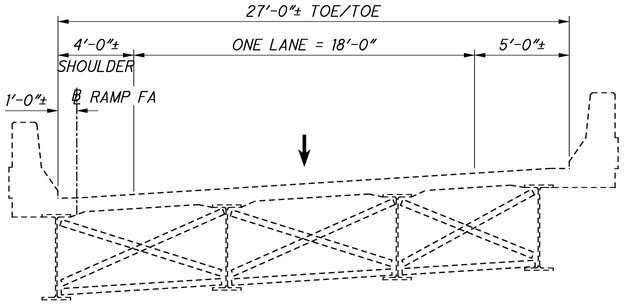
DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN JDG | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102971

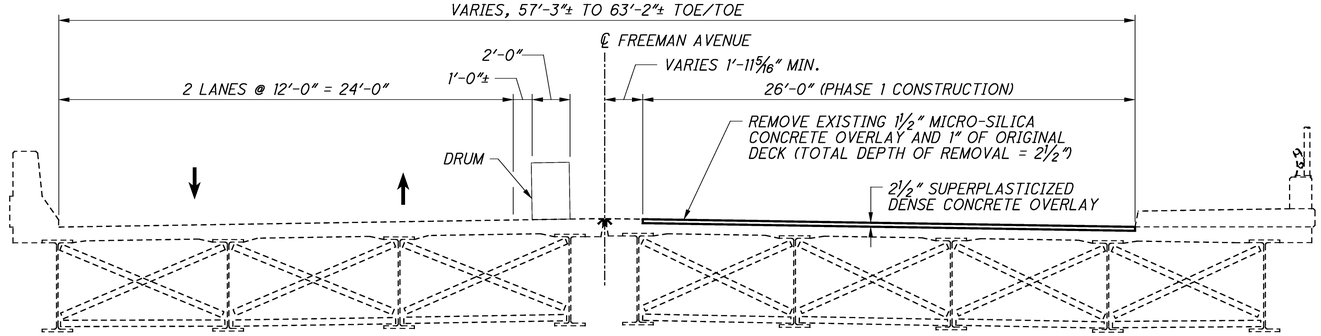
ESTIMATED QUANTITIES
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CEQ001.dgn 11/10/2010 11:40:30 AM mtreiheisel

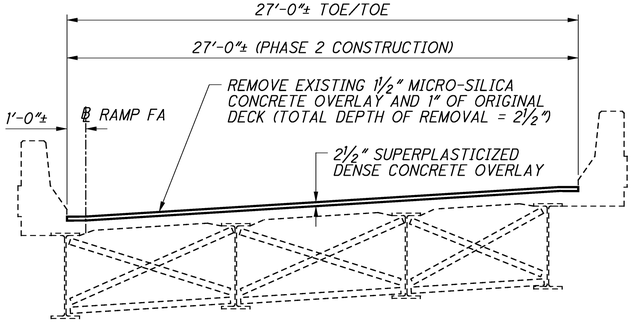


RAMP FA

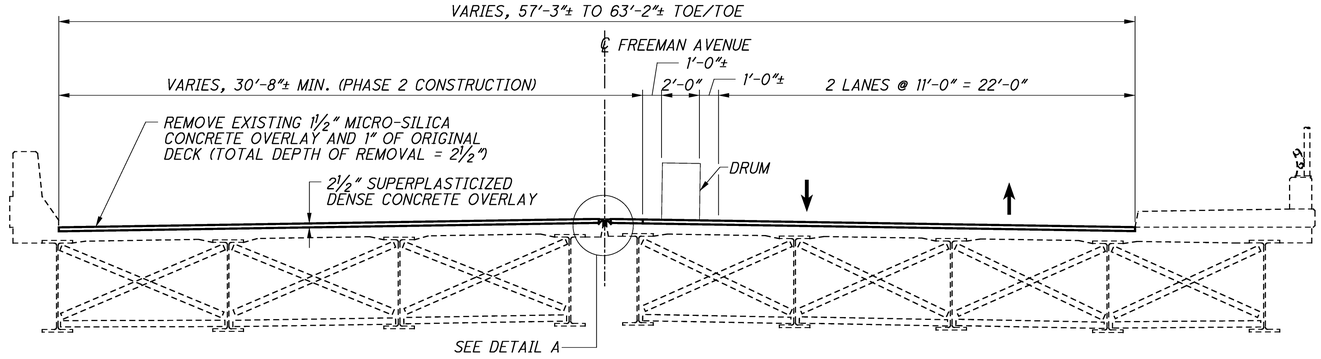


FREEMAN AVENUE

PHASE 1
(LOOKING NORTH)

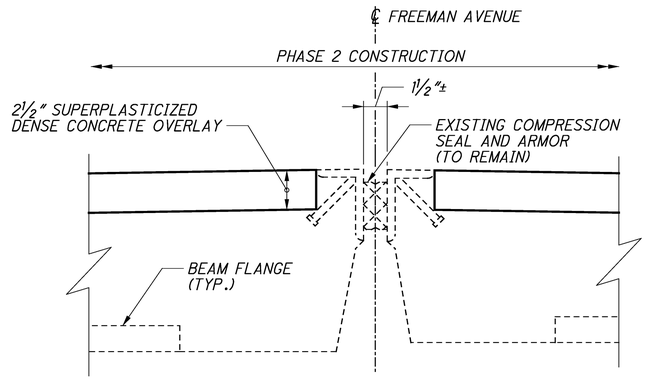


RAMP FA



FREEMAN AVENUE

PHASE 2
(LOOKING NORTH)



DETAIL A

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL DRUMS ON FREEMAN AVENUE BRIDGE DECK AS SHOWN AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, REMOVE EXISTING 1½" MICRO- SILICA CONCRETE OVERLAY AND 1" OF ORIGINAL DECK TO PHASE 1 CONSTRUCTION LIMITS.
3. PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO PHASE 1 CONSTRUCTION LIMITS.
4. SEAL EXISTING BARRIERS AND SIDEWALK WITH EPOXY-URETHANE SEALANT.

PHASE 2

5. RELOCATE DRUMS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
6. USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, REMOVE EXISTING 1½" MICRO-SILICA CONCRETE OVERLAY AND 1" OF ORIGINAL DECK TO PHASE 2 CONSTRUCTION LIMITS.
7. PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY TO PHASE 2 CONSTRUCTION LIMITS.
8. SEAL EXISTING BARRIERS WITH EPOXY-URETHANE SEALANT.
9. REMOVE DRUMS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.
10. PATCH AND SEAL SUBSTRUCTURE CONCRETE SURFACES.
11. CLEAN BRIDGE DRAINAGE SYSTEM.

NOTES:

1. DRUMS SHALL BE INSTALLED AS PER ROADWAY DRAWINGS AND APPLICABLE ODOT STANDARD MAINTENANCE OF TRAFFIC DRAWINGS.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102971	

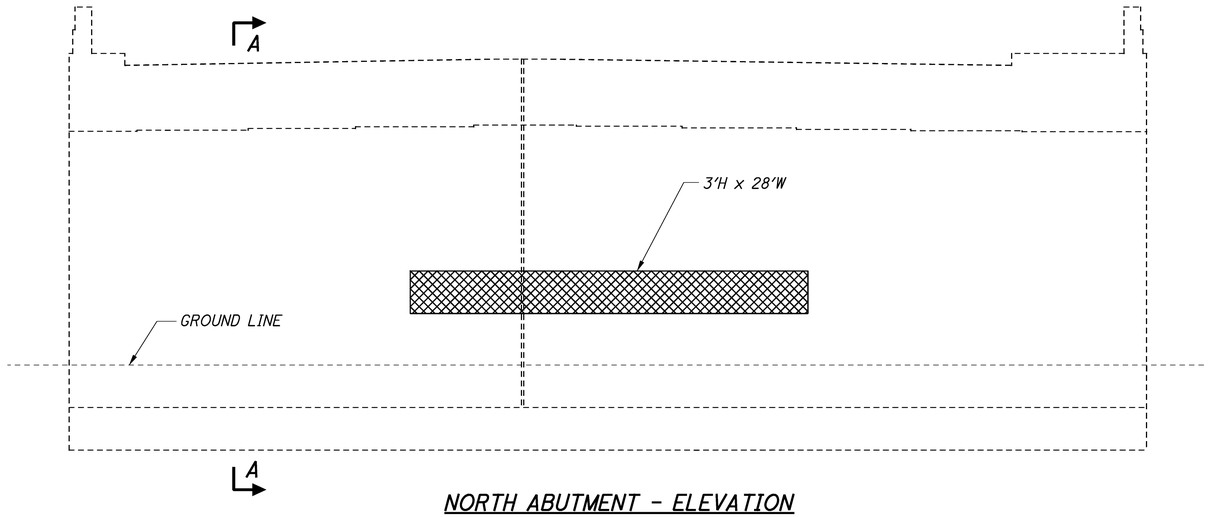
PHASE CONSTRUCTION DETAILS
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

6 / 16

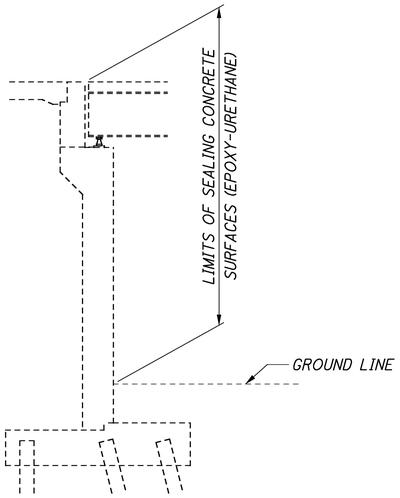
389
442

C:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CPC001.dgn 11/10/2010 11:40:32 AM mtreiheisel



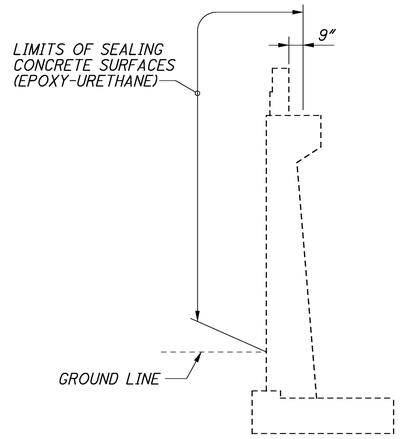
NORTH ABUTMENT - ELEVATION

(LOOKING NORTH)



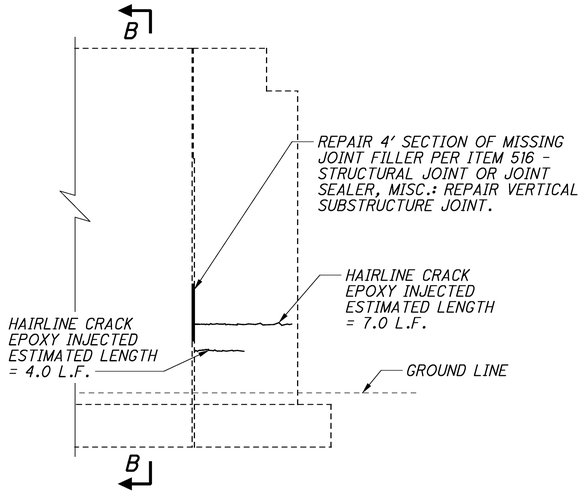
SECTION A-A

ABUTMENT SEALING LIMITS



SECTION B-B

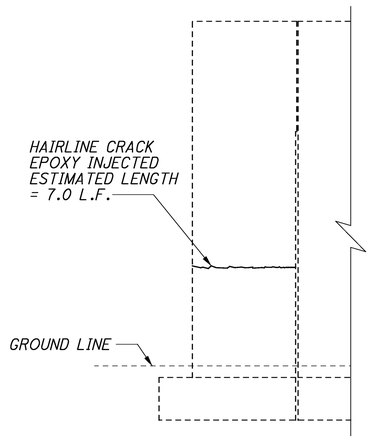
WINGWALL SEALING LIMITS



NORTH ABUTMENT

WEST WINGWALL ELEVATION

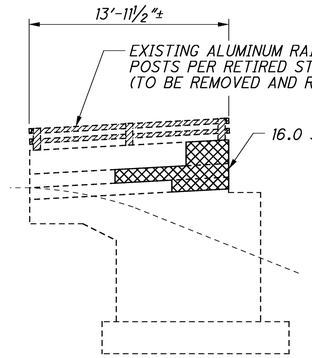
(LOOKING EAST)



NORTH ABUTMENT

EAST WINGWALL ELEVATION

(LOOKING WEST)



SOUTH ABUTMENT

EAST WINGWALL ELEVATION

(LOOKING WEST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
NORTH ABUT.	84.0	18
SOUTH ABUT.	16.0	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. REMOVAL OF EXISTING RAILING WILL BE PAID FOR WITH ITEM 202 - BRIDGE RAILING REMOVED. REPLACEMENT RAILING WILL BE ALUMINUM RAILING WITH TYPE C POSTS PER RETIRED STD. BRIDGE DWG. AR-1-57 AND BE PAID FOR WITH ITEM 517 - RAILING, ALUMINUM, AS PER PLAN.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
JDG	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102971	

ABUTMENT REPAIR DETAILS

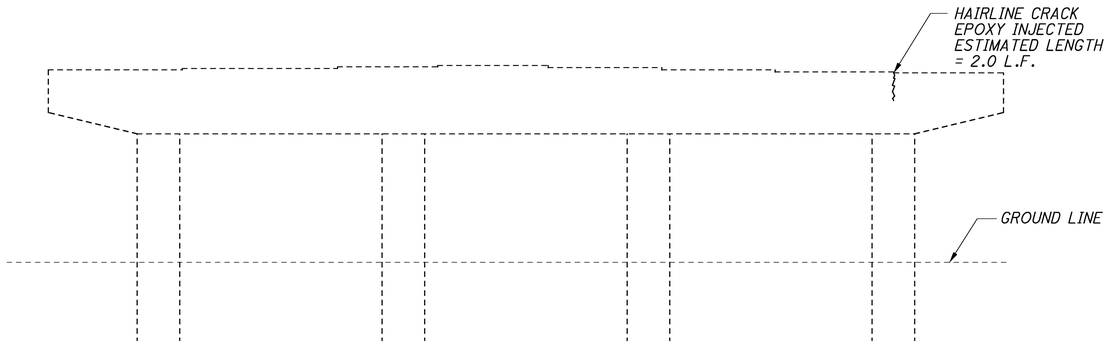
HAM-50-1976

US 50 UNDER FREEMAN AVENUE

HAM-50-19.03

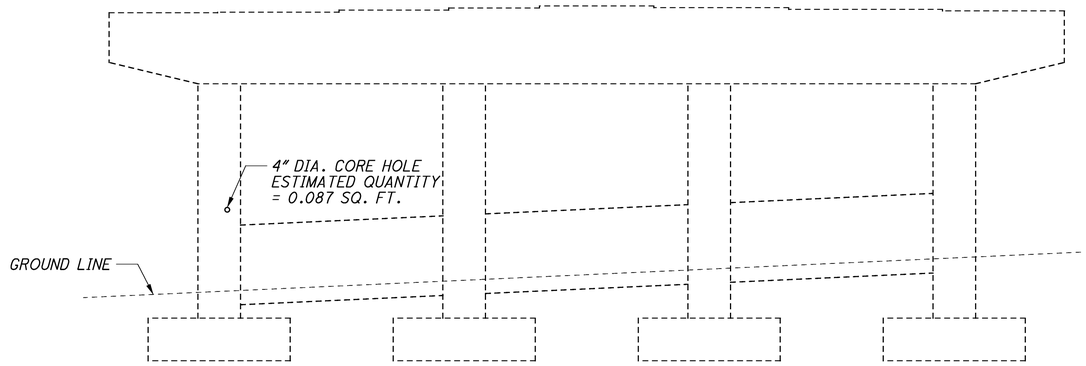
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976AF001.dgn 11/10/2010 11:40:33 AM mtneiheisel



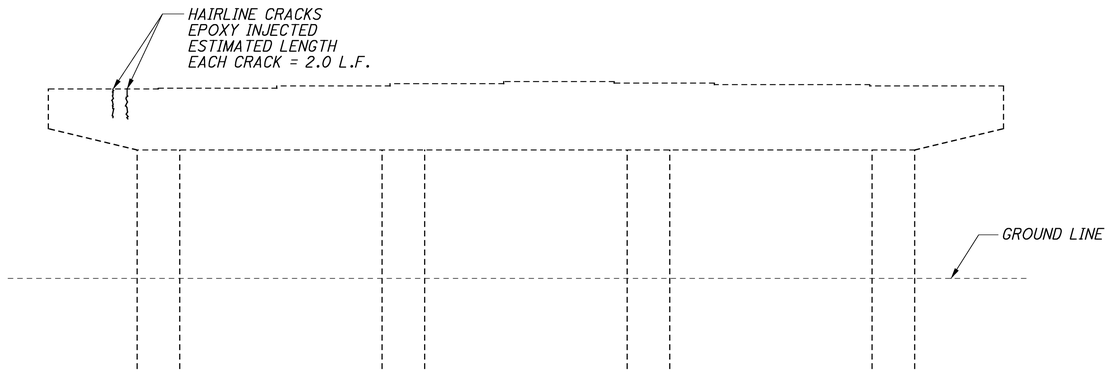
PIER 1 - SOUTH ELEVATION

(LOOKING NORTH)



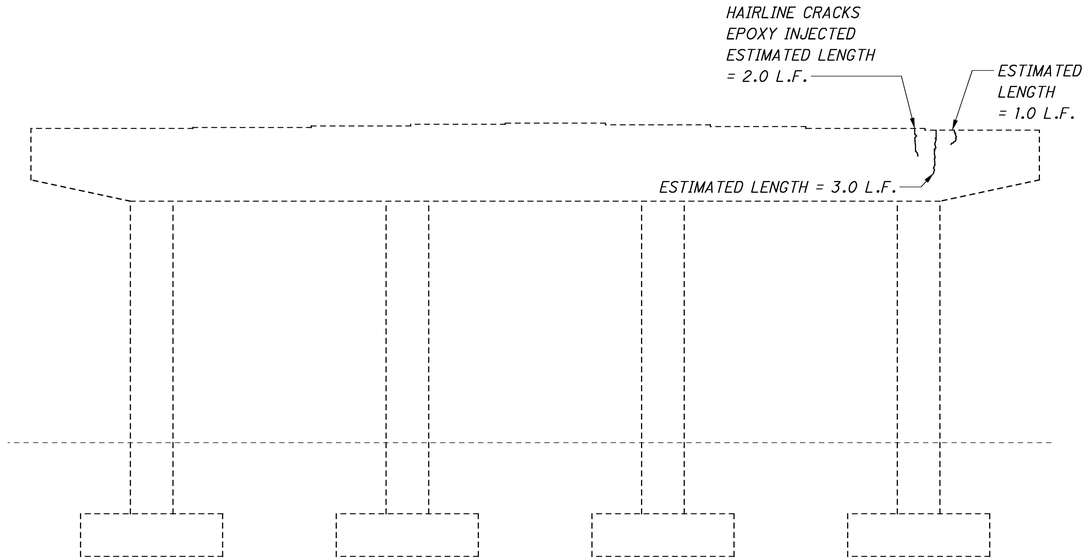
PIER 3 - SOUTH ELEVATION

(LOOKING NORTH)



PIER 1 - NORTH ELEVATION

(LOOKING SOUTH)



PIER 10 - NORTH ELEVATION

(LOOKING SOUTH)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 1 SOUTH	0	2
PIER 1 NORTH	0	4
PIER 3 SOUTH	0.087	0
PIER 10 NORTH	0	6

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 10/16 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
JDG	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102971	

PIER 1, 3, & 10 REPAIR DETAILS

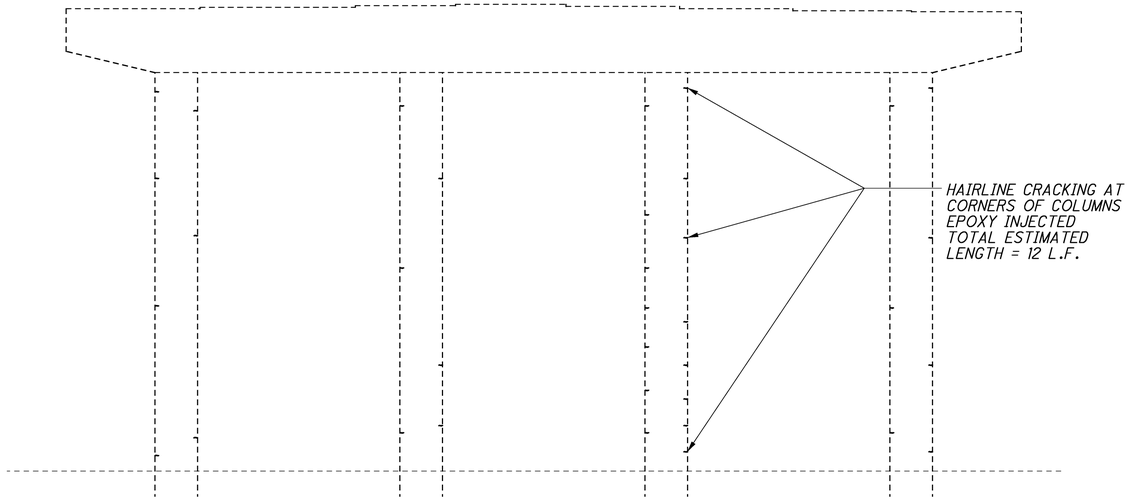
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

8 / 16

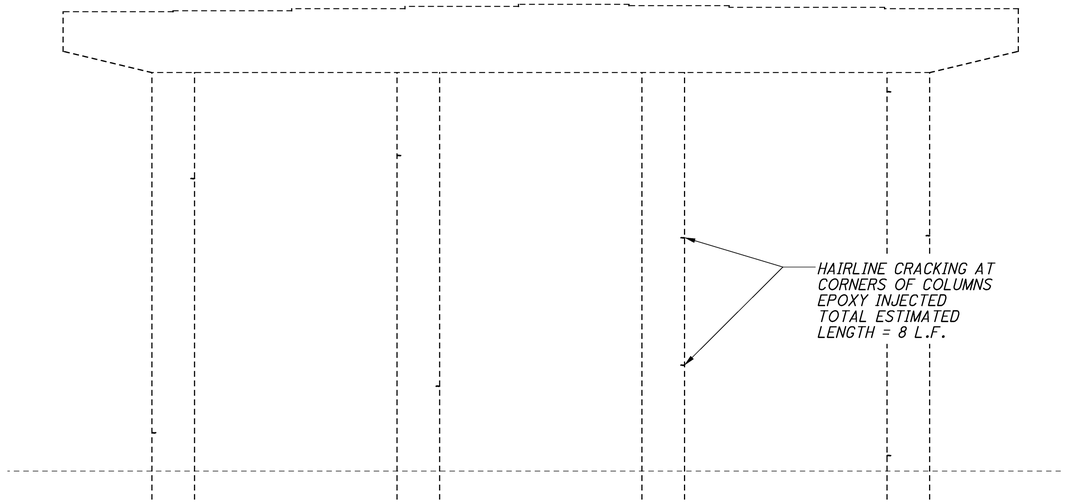
391
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CPI001.dgn 11/10/2010 11:40:35 AM mtneireisel



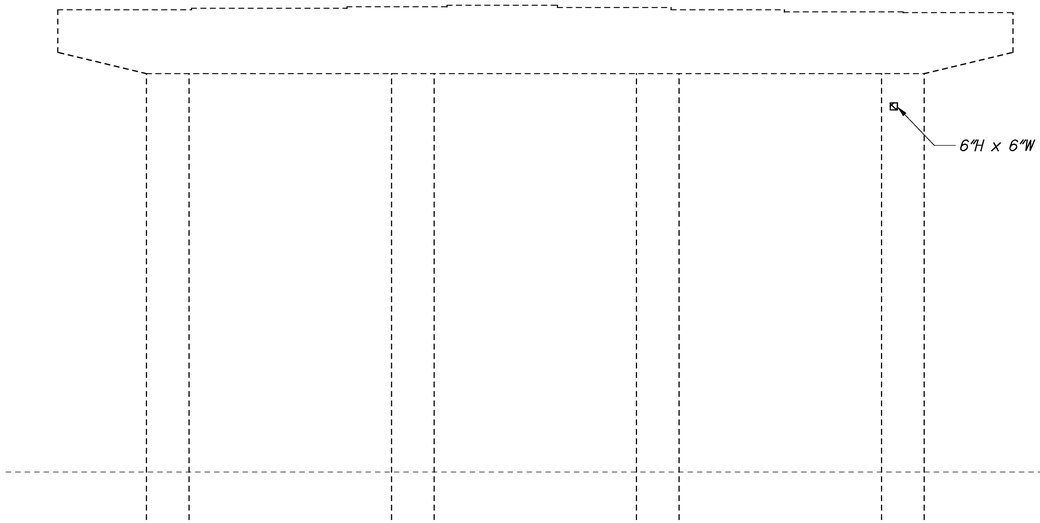
PIER 5 - SOUTH ELEVATION

(LOOKING NORTH)



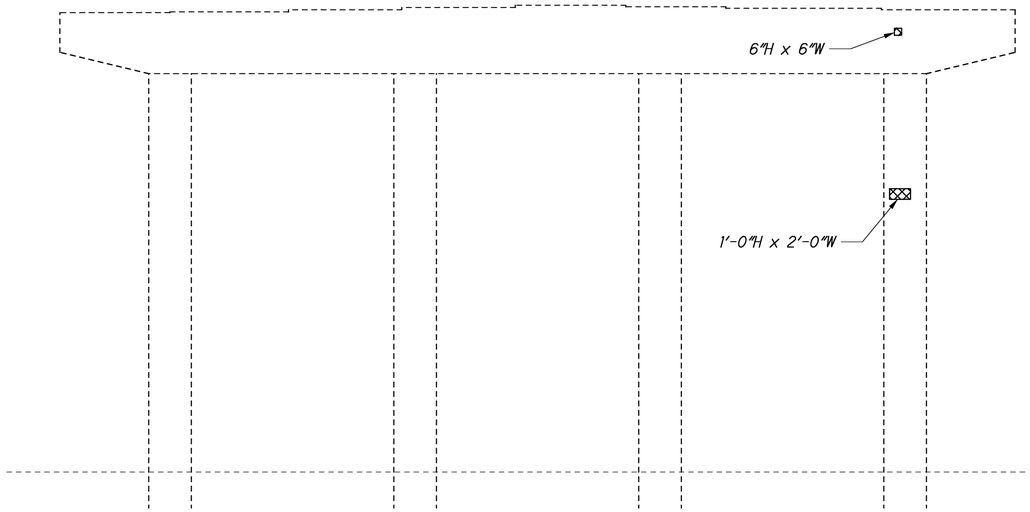
PIER 5 - NORTH ELEVATION

(LOOKING SOUTH)



PIER 6 - SOUTH ELEVATION

(LOOKING NORTH)



PIER 6 - NORTH ELEVATION

(LOOKING SOUTH)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES

ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 5 SOUTH	0	12
PIER 5 NORTH	0	8
PIER 6 SOUTH	0.25	0
PIER 6 NORTH	2.25	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 10/16.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

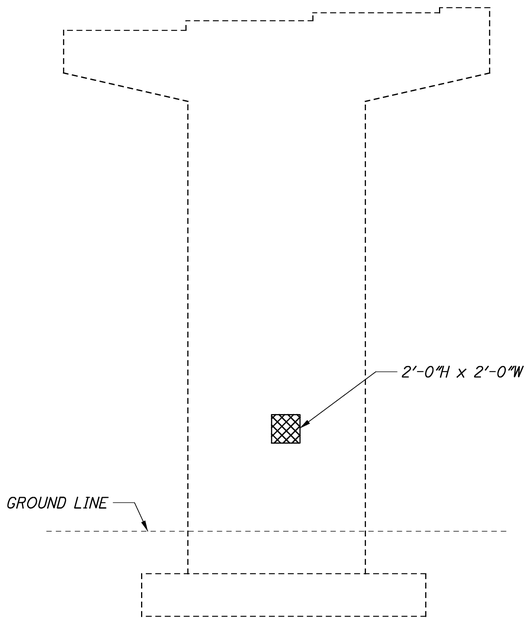
DESIGNED	DRAWN	REVIEWED	DATE
JDG	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102971	

PIER 5 & 6 REPAIR DETAILS

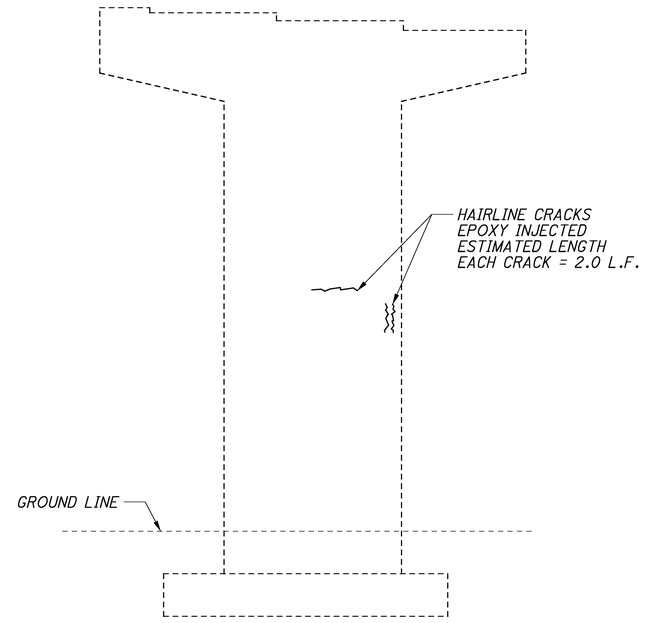
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

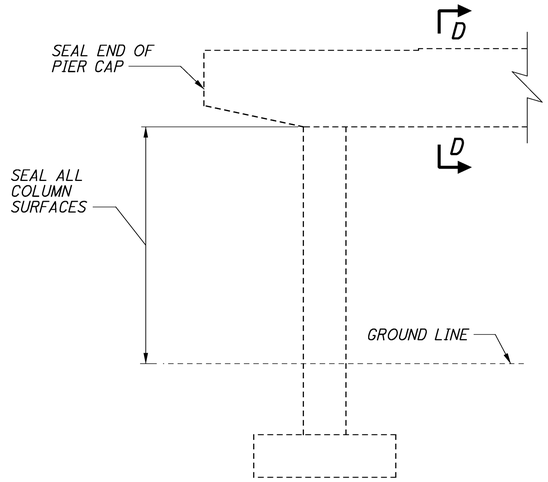
G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CPI002.dgn 11/10/2010 11:40:36 AM mtreitreisel



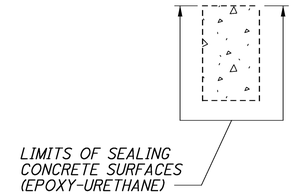
PIER 6A - SOUTH ELEVATION
(LOOKING NORTH)



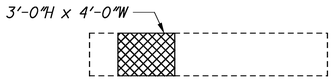
PIER 6A - NORTH ELEVATION
(LOOKING SOUTH)



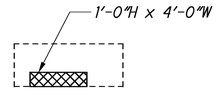
LIMITS OF SEALING PIER CONCRETE
SURFACES (EPOXY-URETHANE) (TYP. ALL PIERS)



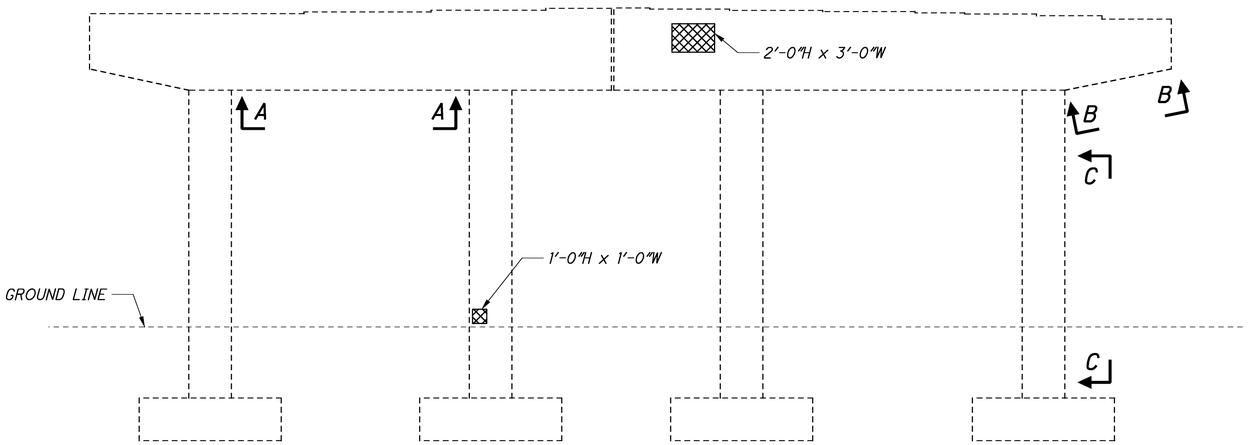
SECTION D-D



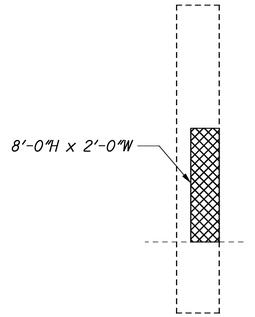
SECTION A-A



SECTION B-B



PIER 8 - NORTH ELEVATION
(LOOKING SOUTH)



SECTION C-C
(LOOKING EAST)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
PIER 6A SOUTH	4.0	0
PIER 6A NORTH	0.0	6
PIER 8 NORTH	39.0	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL THIS SHEET.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
JDG	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102971	

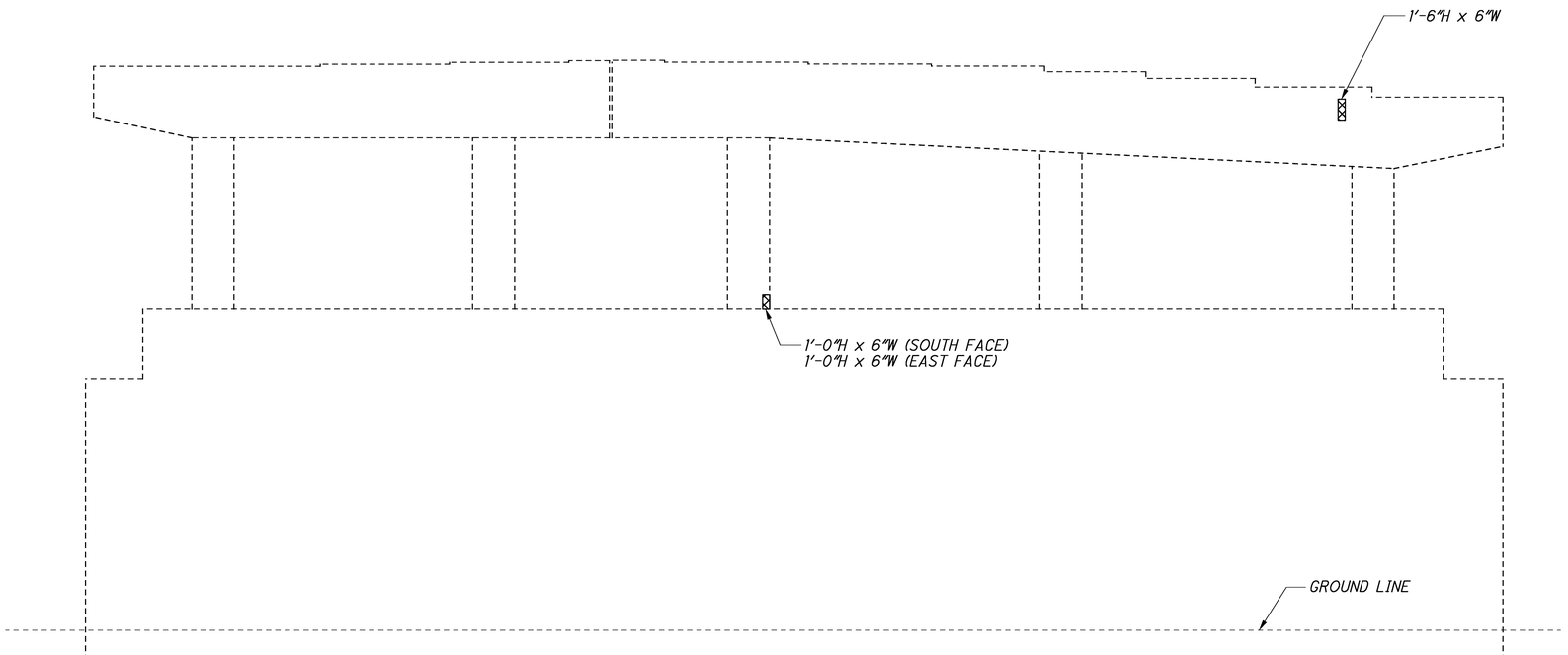
PIER 6A & 8 REPAIR DETAILS
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

10 / 16

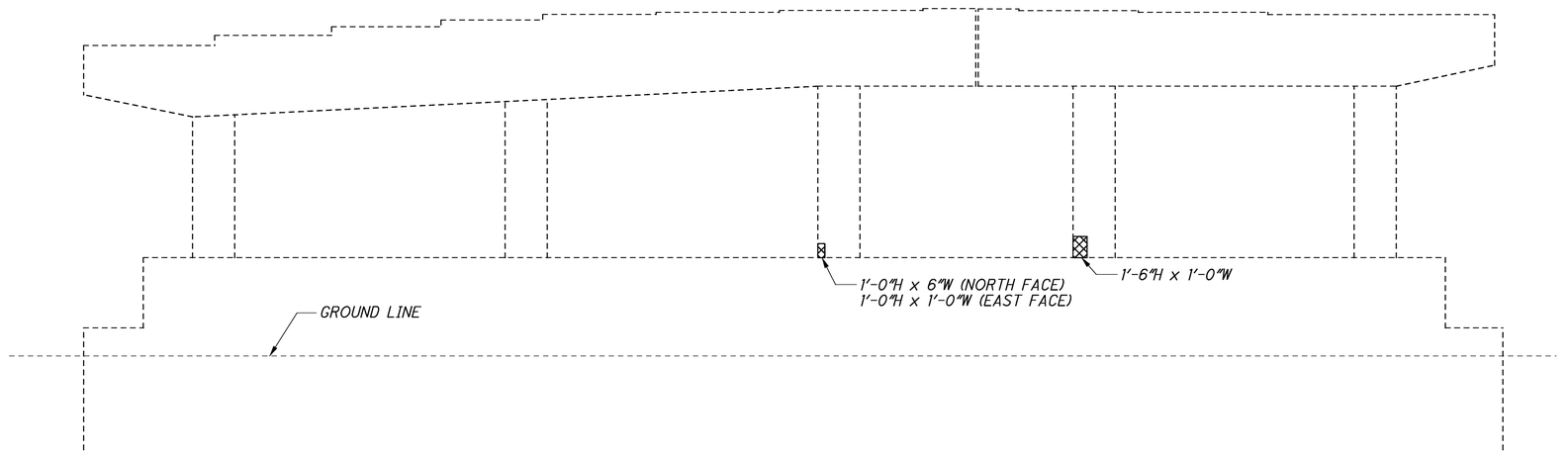
393
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CPI003.dgn 11/10/2010 11:40:38 AM mtreihleisel



PIER 7 - SOUTH ELEVATION

(LOOKING NORTH)



PIER 7 - NORTH ELEVATION

(LOOKING SOUTH)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIRS QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
PIER 7 SOUTH	1.75	0
PIER 7 NORTH	3.0	0

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. SEAL ENTIRE EXPOSED SURFACE AREA OF PIER COLUMNS (OR STEM) AND PIER CAP, EXCEPT FOR TOP HORIZONTAL SURFACE OF CAP, WITH EPOXY-URETHANE. SEE TYPICAL SEALING DETAIL, SHEET 10/16 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
JDG	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PJP		3102971	

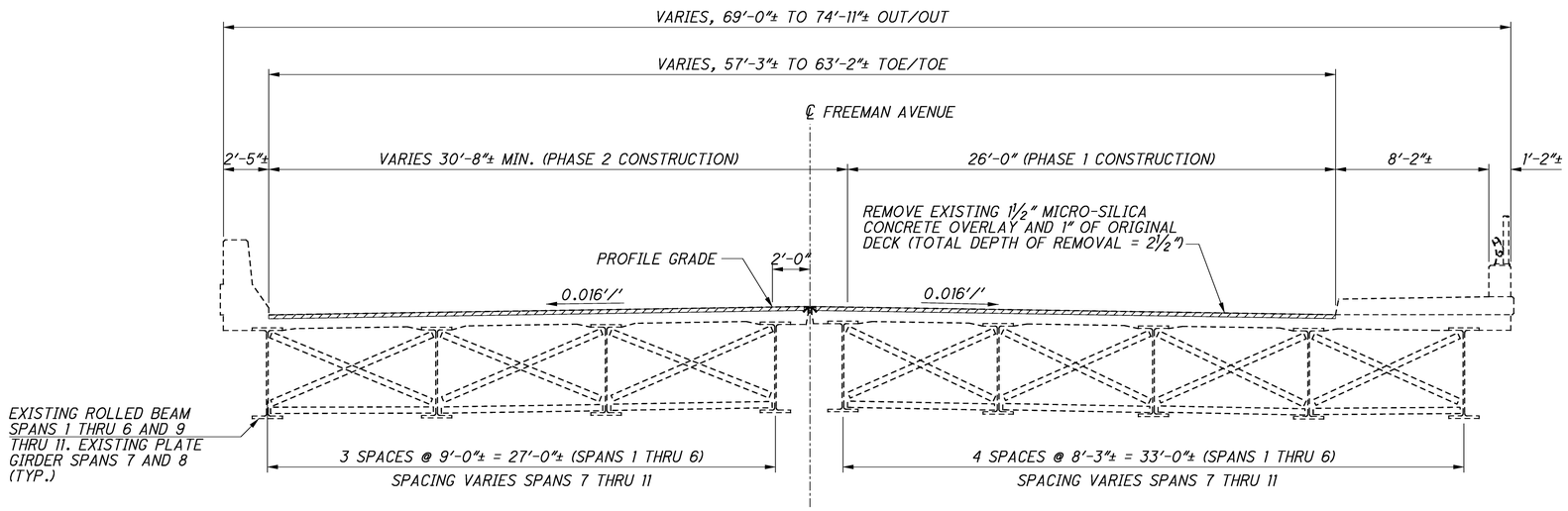
PIER 7 REPAIR DETAILS
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

11 / 16

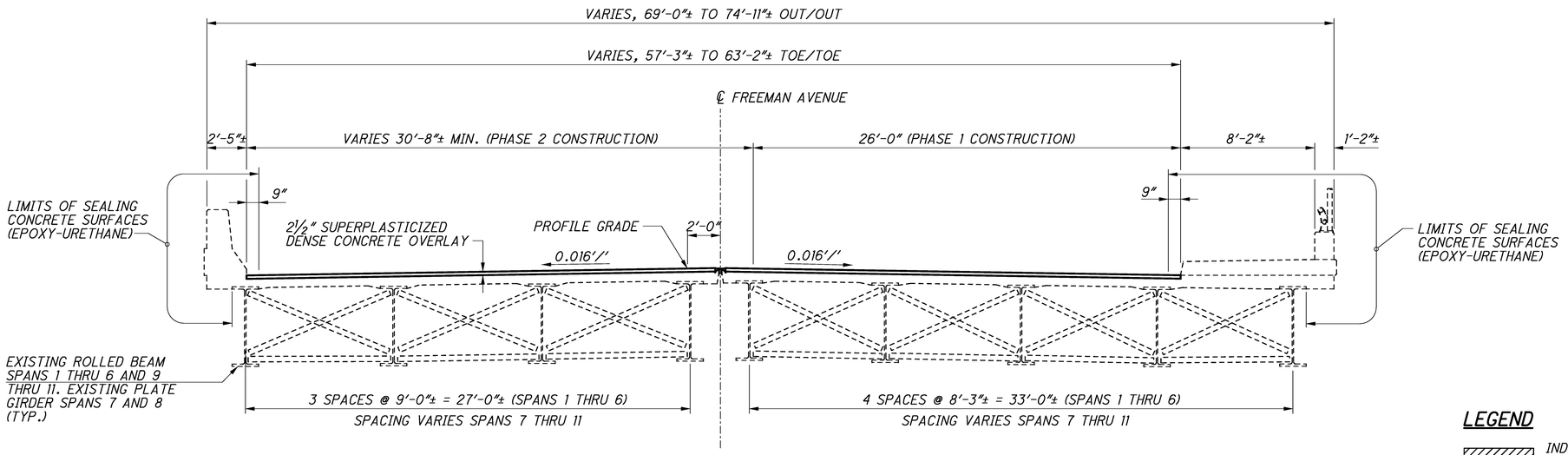
394 / 442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CPI004.dgn 11/10/2010 11:40:39 AM mtreibeisel



EXISTING TRANSVERSE SECTION

(LOOKING NORTH)



PROPOSED TRANSVERSE SECTION

(LOOKING NORTH)

LEGEND

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)

NOTES:

1. FOR OVERLAY REMOVAL AND REPLACEMENT DETAILS SEE SHEET 13/16 .

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 540
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102971	

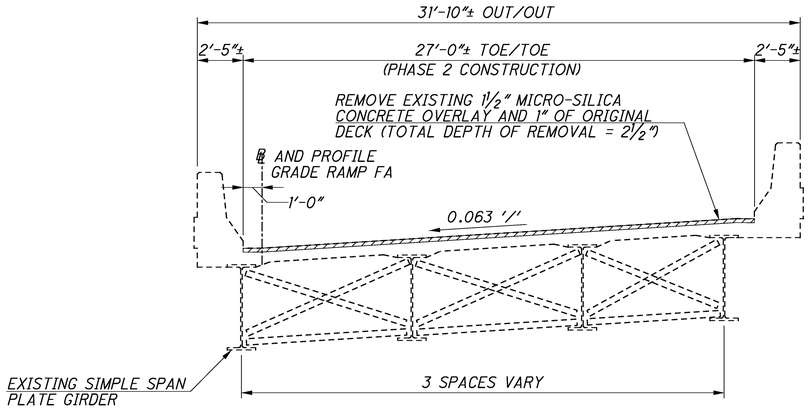
TRANSVERSE SECTION
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

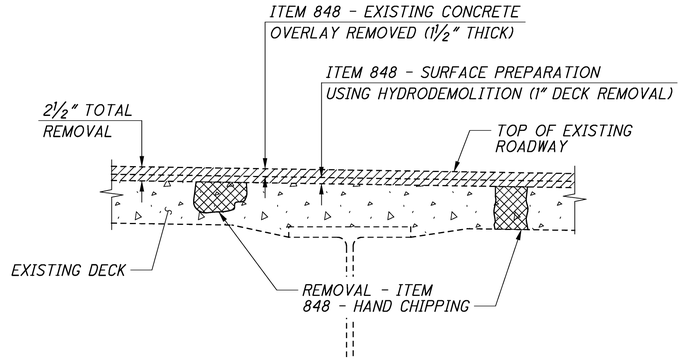
12 / 16

395
442

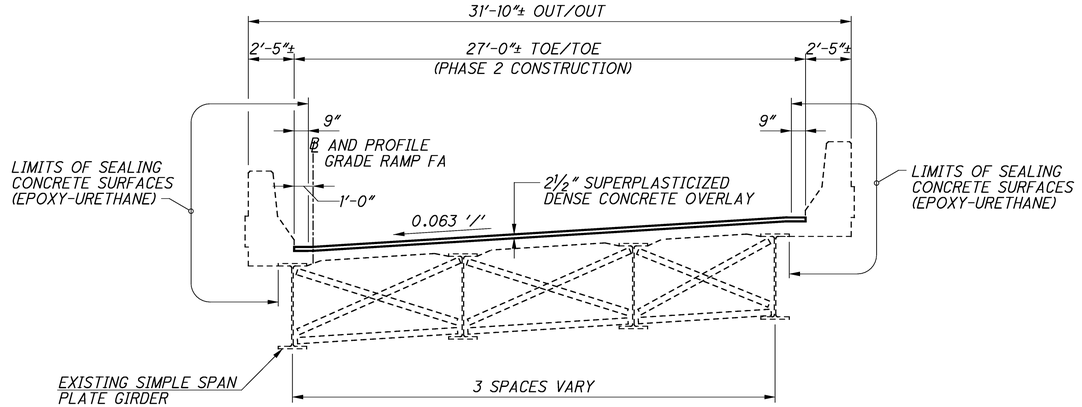
C:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CTS001.dgn 11/10/2010 11:40:40 AM mtneiheisel



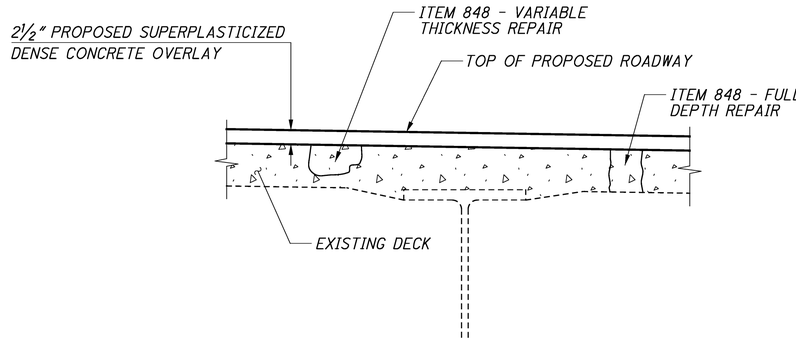
RAMP FA TYPICAL SECTION
(LOOKING NORTH)



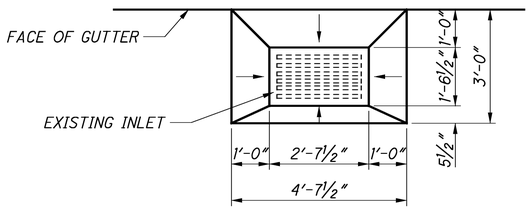
OVERLAY REMOVAL DETAIL



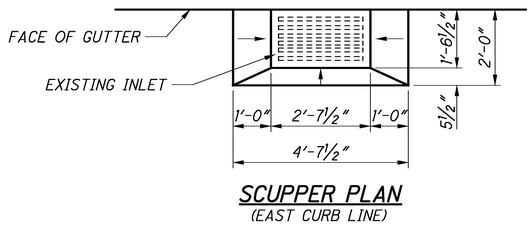
RAMP FA TYPICAL SECTION
(LOOKING NORTH)



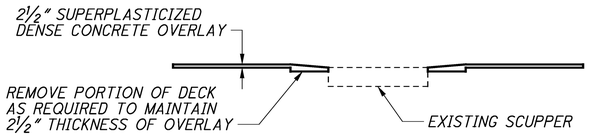
OVERLAY REPLACEMENT DETAIL



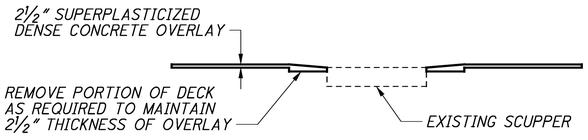
SCUPPER PLAN
(WEST CURB LINE)



SCUPPER PLAN
(EAST CURB LINE)



SECTION THRU SCUPPER
(WEST CURB LINE)



SECTION THRU SCUPPER
(EAST CURB LINE)

LEGEND

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - HAND CHIPPING

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102971

TRANSVERSE SECTION AND SCUPPER DETAILS

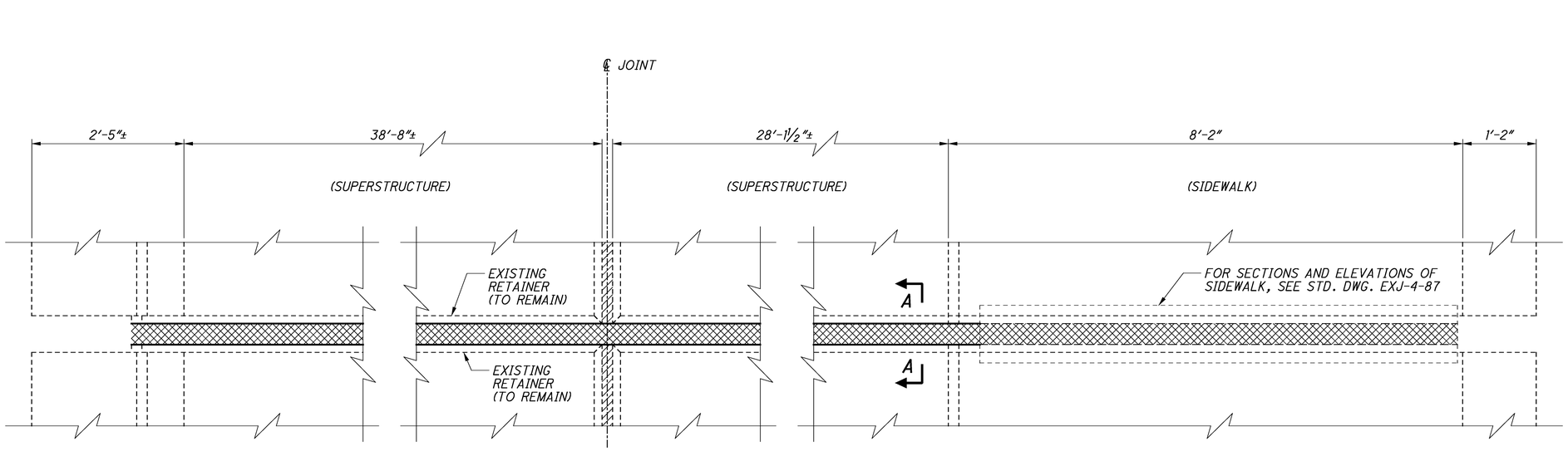
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

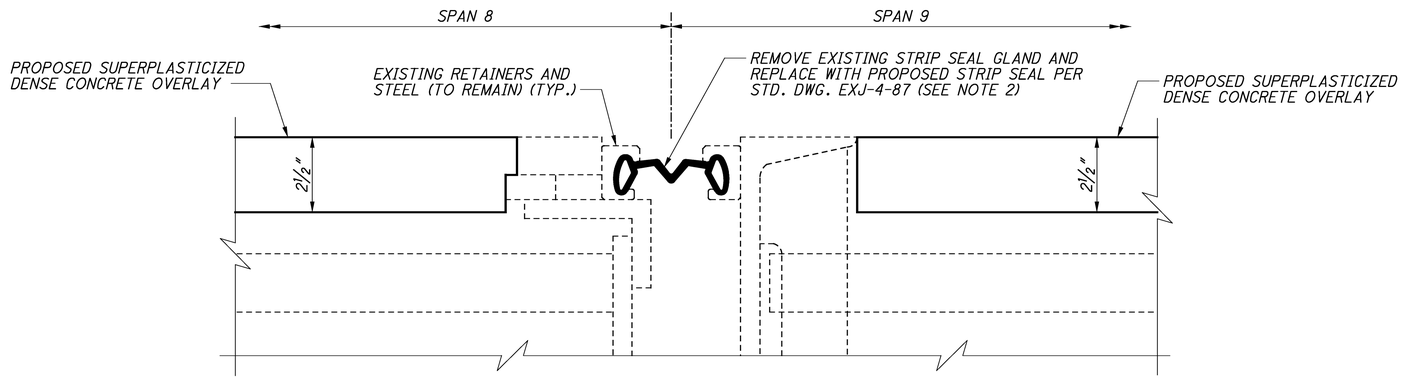
13 / 16

396
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CTS002.dgn 11/10/2010 11:40:42 AM mtreiheisel



PARTIAL PLAN (PIER 8)



SECTION A-A

LEGEND

INDICATES LOCATION OF EXISTING COMPRESSION SEAL (TO REMAIN)

INDICATES LOCATION OF PROPOSED STRIP SEAL GLAND PER ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN.

NOTES:

1. SEE SHEET 4/16 FOR STRUCTURE GENERAL NOTES INCLUDING ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN.
2. THE CONTRACTOR WILL HAVE TO FIELD DETERMINE THE BRAND AND MODEL OF RETAINER IN THE STRIP SEAL JOINT AND SUPPLY APPROPRIATE REPLACEMENT SEAL.

DESIGN AGENCY
Tran Systems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN MSW | REVIEWED MSL | DATE 11/12/10
CHECKED MTN | REVISED | STRUCTURE FILE NUMBER 3102971

EXPANSION JOINT STRIP SEAL GLAND REPLACEMENT DETAILS

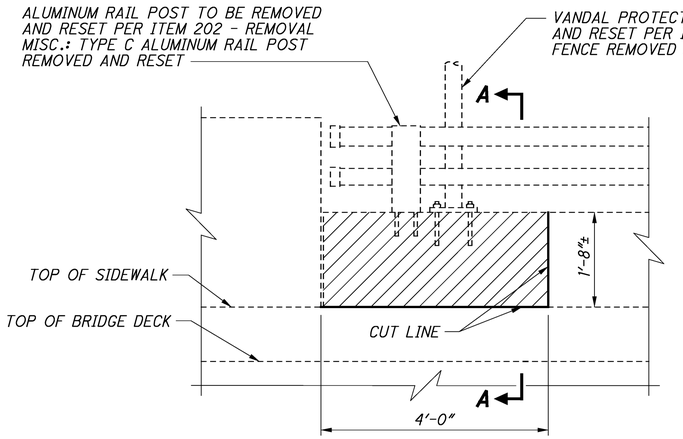
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

14 / 16

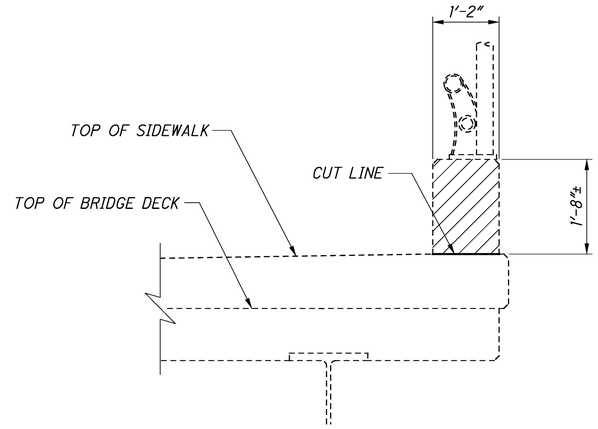
397
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976CMD002.dgn 11/10/2010 11:40:43 AM mtneiheisel

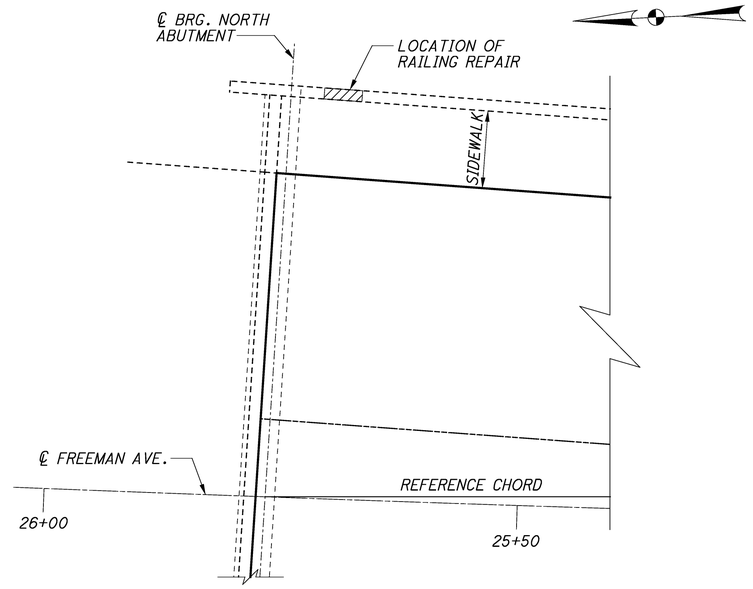


PARAPET REMOVAL DETAIL

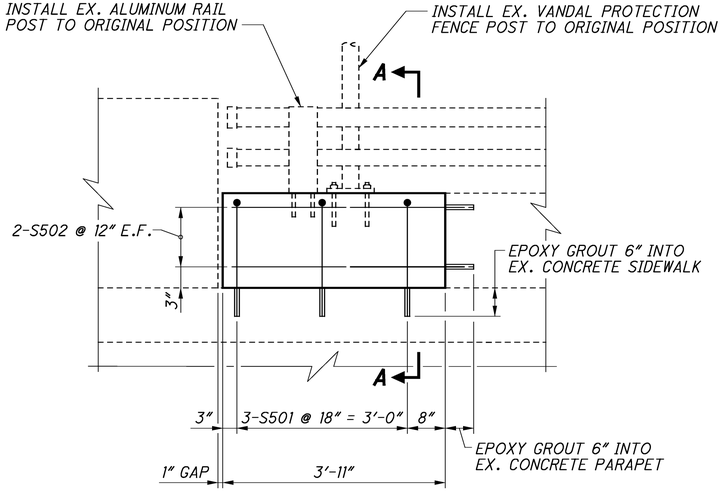
(LOOKING EAST)



SECTION A-A

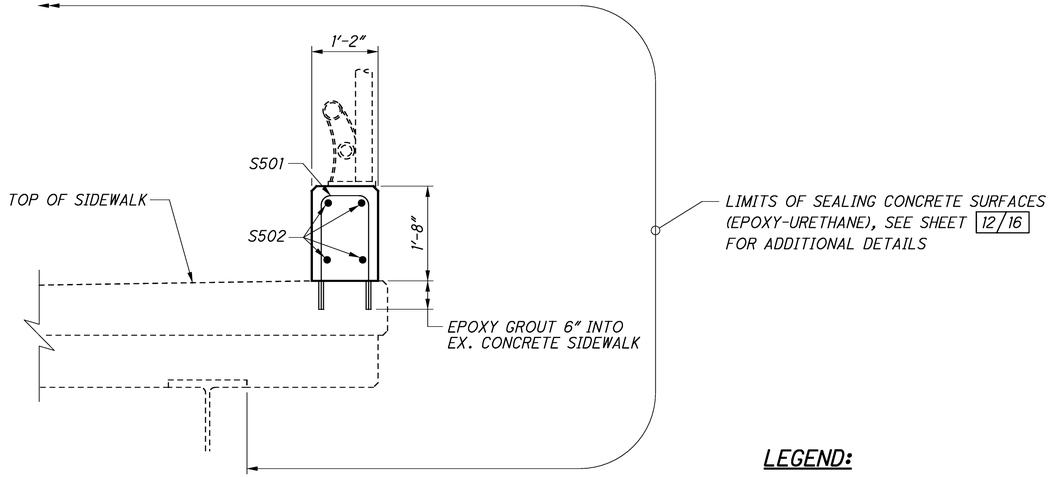


LOCATION PLAN



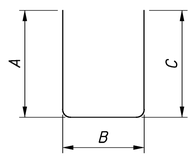
PARAPET REPAIR DETAIL

(LOOKING EAST)



SECTION A-A

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
PARAPET REINFORCING STEEL LIST											
S501	3	4'-10"	15	2	2'-0"	0'-10"	2'-0"				
S502	4	4'-3"	18	STR							
		TOTAL	33								



TYPE-2

LEGEND:

LIMITS OF REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. FOR GENERAL NOTES INCLUDING PORTIONS OF STRUCTURE REMOVED NOTE, SEE SHEET 4/16.
2. ALL REINFORCING STEEL TO BE EPOXY COATED
3. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE NUMBERS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR NUMBERS ARE USED INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE A P1001 IS A NUMBER 10 BAR. P501 IS A NUMBER 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS UNLESS OTHERWISE NOTED.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED PJP | DRAWN JDG | CHECKED MTN | REVIEWED MSL | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3102971

NORTHEAST PARAPET REPAIR DETAILS

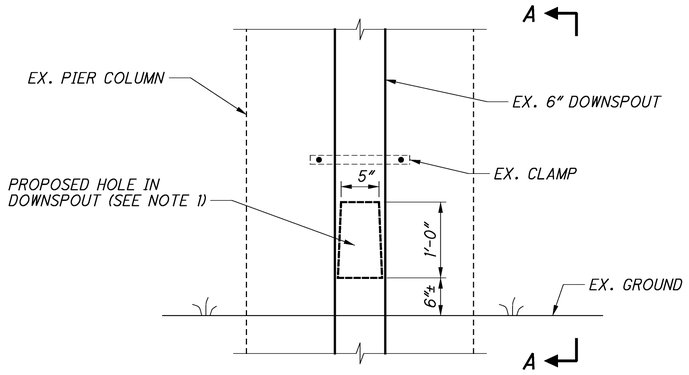
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

15 / 16

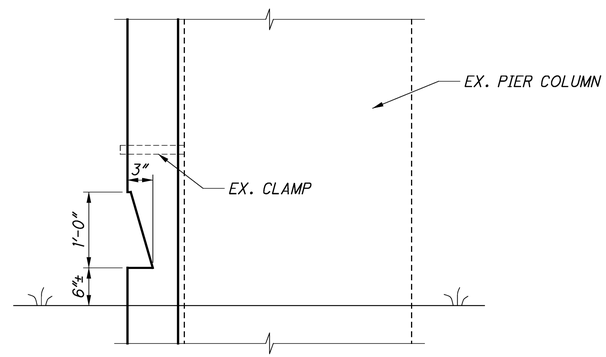
398
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976GMD001.dgn 11/10/2010 11:40:45 AM mtreiheisel



DOWNSPOUT MODIFICATION DETAIL

TWO LOCATIONS AT PIERS 2, 4, 6, 8, 9, AND 10
ONE LOCATION AT PIERS 5A, 6A, AND 7 ON RAMP FA



VIEW A-A

NOTES:

1. CUT HOLES IN EXISTING DOWNSPOUTS AS DIRECTED BY THE ENGINEER. WORK IS TO BE PAID FOR WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3102971	

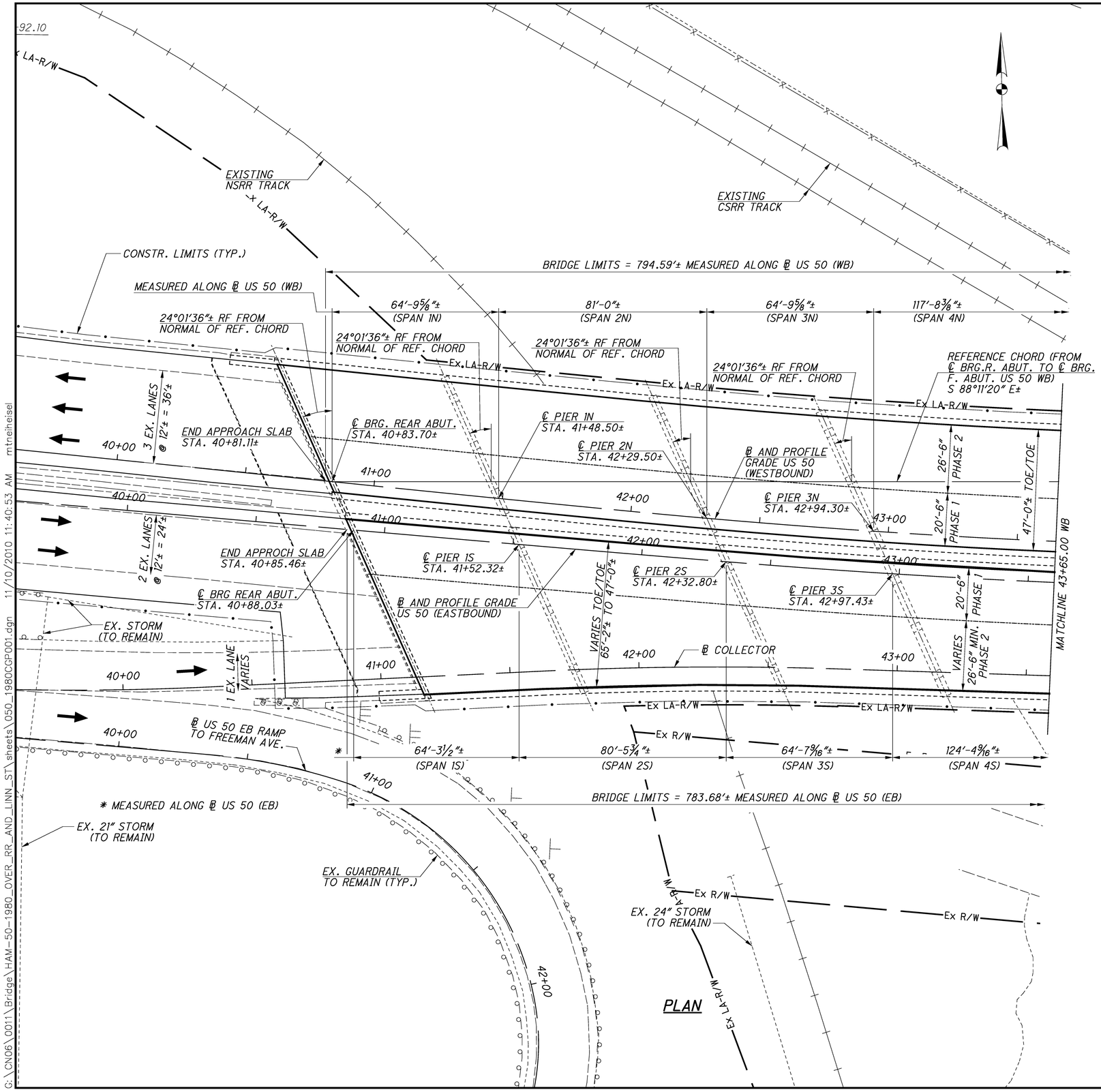
DOWNSPOUT MODIFICATION DETAILS
HAM-50-1976
US 50 UNDER FREEMAN AVENUE

HAM-50-19.03
PID No. 75736

16 / 16

399
442

G:\CN06\0011\Bridge\HAM-50-1976_US50_UNDER_FREEMAN\sheets\050_1976GMD003.dgn 11/10/2010 11:40:46 AM mtneiheisel



PLAN

C:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980CGP001.dgn 11/10/2010 11:40:53 AM mtneiheisel

NOTES:

EXISTING UTILITIES TO REMAIN.

DESIGN TRAFFIC:
2011 ADT = 23230 2011 ADTT = 465
2031 ADT = 21190 2031 ADTT = 424
DIRECTIONAL DISTRIBUTION = 0.56

EXISTING STRUCTURE

TYPE: SPANS 1N THRU 3N AND 1S THRU 3S CONTINUOUS ROLLED BEAMS WITH CONCRETE DECK AND SUBSTRUCTURE. SPANS 4N, 5N, 5AN, 6N, 7N, 8N AND 4S, 5S, 6S, 7S, 8S CONTINUOUS PLATE GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 8 OF VARYING LENGTH FOR EB STRUCTURE (MEASURED C/C BRG. ALONG ℄ US 50 EB). 9 OF VARYING LENGTH FOR WB STRUCTURE (MEASURED C/C BRG. ALONG ℄ US 50 WB).

ROADWAY: VARIES 65'-2"± TO 47'-0"± T/T PARAPET (EB), 47'-0"± T/T PARAPET (WB)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: COMPOUND HORIZONTAL CURVES

SUPERELEVATION: VARIES

STRUCTURAL FILE NUMBER: 3103064 (EASTBOUND)
3103005 (WESTBOUND)

DATE BUILT: 1966±

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY AND 1" OF EXISTING DECK USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON THE EXISTING DECK, PATCH CONCRETE SURFACES AS PER ITEM 519, SPOT PAINT SUPERSTRUCTURE STEEL WITH SYSTEM OZEU, REFURBISH ABUTMENT BEARINGS, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778, CLEAN BRIDGE DRAINAGE SYSTEM, RELOCATE OVERHEAD SIGN TRUSS OFF BRIDGE TO STA. 49+25.00.

TYPE: SPANS IN THRU 3N AND 1S THRU 3S CONTINUOUS ROLLED BEAMS WITH CONCRETE DECK AND SUBSTRUCTURE. SPANS 4N, 5N, 5AN, 6N, 7N, 8N AND 4S, 5S, 6S, 7S, 8S CONTINUOUS PLATE GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 8 OF VARYING LENGTH FOR EB STRUCTURE (MEASURED C/C BRG. ALONG ℄ US 50 EB). 9 OF VARYING LENGTH FOR WB STRUCTURE (MEASURED C/C BRG. ALONG ℄ US 50 WB).

ROADWAY: VARIES 65'-2"± TO 47'-0"± T/T PARAPET (EB), 47'-0"± T/T PARAPET (WB)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

WEARING SURFACE: 2½" SUPERPLASTICIZED DENSE CONCRETE

SKEW: VARIES (SEE PLAN)

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: COMPOUND HORIZONTAL CURVES

SUPERELEVATION: VARIES

STRUCTURAL FILE NUMBER: 3103064 (EASTBOUND)
3103005 (WESTBOUND)

COORDINATES: LONGITUDE 84°31'54" W
LATITUDE 39°06'00" N

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DATE 11/12/10
REVIEWED RER
DRAWN MSW
DESIGNED PJP
CHECKED MSL
REVISED
STRUCTURE FILE NUMBER 3103005 (L) 3103064 (R)

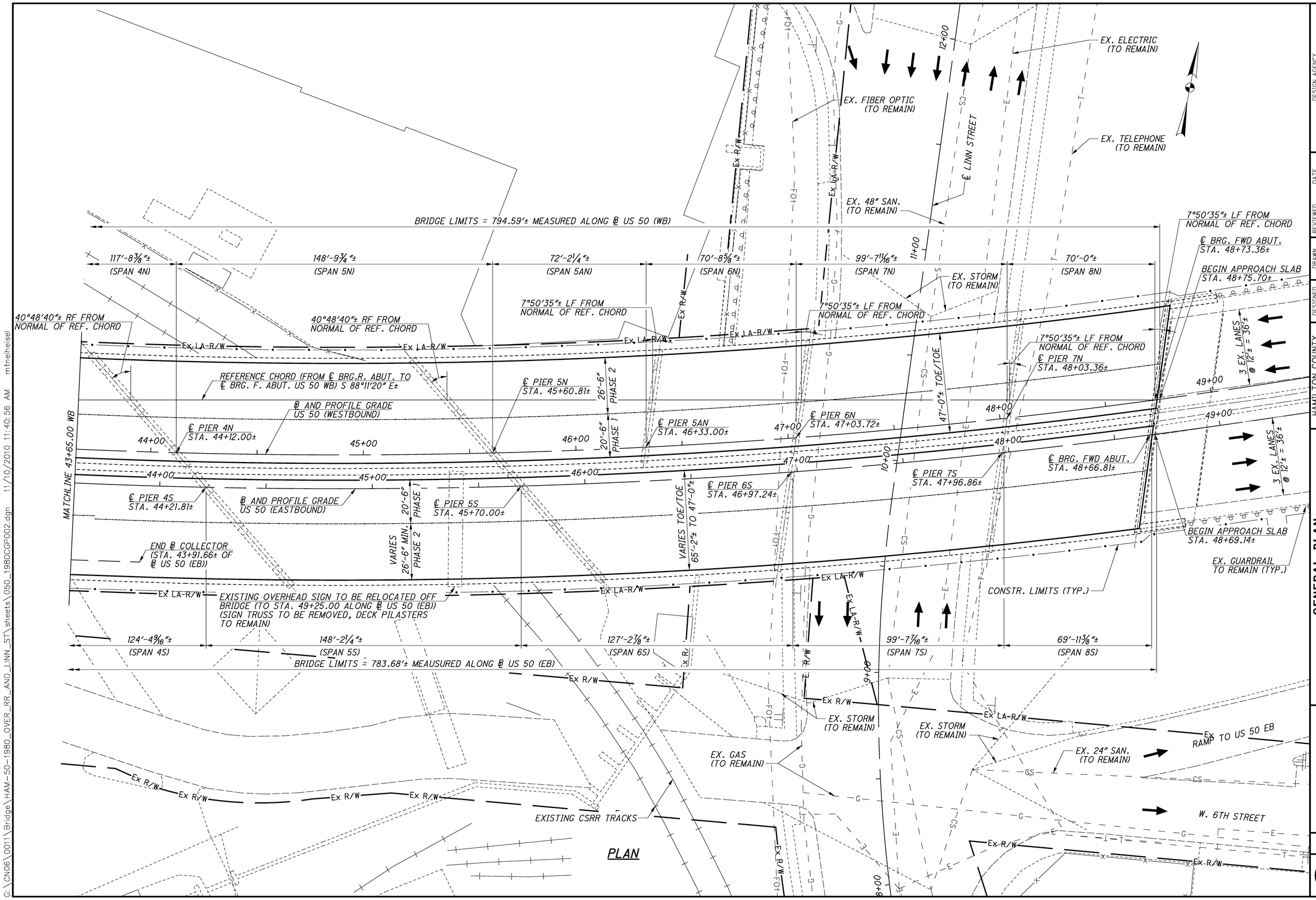
HAMILTON COUNTY
STA. 40+81.11 TO 48+75.70 (L)
STA. 40+85.46 TO 48+69.14 (R)

GENERAL PLAN
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

1 / 27

400
442



PLAN

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MSW	RER	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MSL		3103065 (L) 3103064 (R)	

HAMILTON COUNTY
STA. 40+81.11 TO 48+75.70 (L)
STA. 40+85.46 TO 48+69.14 (R)

GENERAL PLAN
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

2 / 27

401 / 442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980CGP002.dgn 11/10/2010 11:40:56 AM mtneiheisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

848 DATED 04-16-10

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPIRATION OFFICIALS, 17TH EDITION - 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL.

DESIGN LOADING (BOTH STRUCTURES):

CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

DECK PROTECTION METHOD:

2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
SEALING OF CONCRETE SURFACES

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS:

PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH SR 741 LEBANON, OHIO 45036 (PHONE: 800-831-2142)

MAINTENANCE OF TRAFFIC:

TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

NON-USE OF ASBESTOS-CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

CONSTRUCTION CLEARANCE

MAINTAIN A CONSTRUCTION CLEARANCE OF 12 FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 23 FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL, AND 6 FEET FROM THE CENTER OF TRACKS AT ALL TIMES.

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

THE FINISH COAT COLOR FOR THE ABUTMENT, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, PAINTING, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN:

THIS ITEM CONSISTS OF FIELD PAINTING DAMAGED STRUCTURAL STEEL BY PERFORMING SURFACE PREPARATION AND APPLYING A TWO-COAT PAINT SYSTEM TO THE UNCOATED STEEL AND FEATHERED REMOVAL AREAS OF EXISTING COATINGS.

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, PAINTING, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTORS WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

CMS 514.06 THROUGH 514.10 APPLY. REMOVE EXISTING PAINT COATING TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER ACCORDING TO SSPC-SP 15, COMMERCIAL GRADE POWER TOOL CLEANING, OR EQUAL AS SHOWN ON THE PICTORIAL SURFACE PREPARATION STANDARDS FOR PAINTING STEEL SURFACES SHOWN IN SSPC-VIS 3. THE ENGINEER WILL USE SSPC-VIS 3 TO DETERMINE THE ACCEPTANCE OF THE COMMERCIAL GRADE POWER TOOL CLEANING. FEATHER THE EXISTING PAINT TO EXPOSE A MINIMUM OF ½ INCH OF EACH COAT. CONTAIN AND DISPOSE OF WASTE GENERATED BY THE CLEANING ACCORDING TO CMS 514.13.D.

ROUND ALL EXPOSED CORNERS OF MAIN MATERIAL AS NECESSARY TO ACHIEVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A 45 DEGREE ANGLE.

ITEM 514 - FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN (CONT.):

APPLY THE PRIME AND INTERMEDIATE COATS OF THE SPECIFIED THREE-COAT PAINT SYSTEM, CMS 708.02, ACCORDING TO CMS 514.15, 514.16, 514.17, AND 514.20 TO CONTRACT LIMITS OR AS DIRECTED BY THE ENGINEER. TINT THE INTERMEDIATE COAT TO APPROXIMATELY THE SAME COLOR AS THE EXISTING FINISH COLOR. MATCH THE COLOR TO THE ENGINEERS SATISFACTION. THE ENGINEER WILL DETERMINE THE PRIME COAT THICKNESS; PRIME AND INTERMEDIATE COAT THICKNESS USING A TYPE 2 MAGNETIC GAGE AT SPOT LOCATIONS. EACH COAT OF PAINT SHALL MEET THE MINIMUM DRY FILM THICKNESS REQUIREMENTS OF CMS 514.20. APPLY PAINT AS FOLLOWS:

A. APPLY THE PRIME COAT ONLY TO THE SURFACE OF THE BARE STEEL AND THE EXISTING PRIME COAT EXPOSED BY FEATHERING. DO NOT APPLY THE PRIME COAT TO THE ADJACENT INTERMEDIATE COAT.

B. APPLY THE INTERMEDIATE COAT ONLY TO THE NEW PRIME COAT AND THE EXISTING INTERMEDIATE COAT EXPOSED BY FEATHERING. DO NOT APPLY THE INTERMEDIATE COAT TO THE ADJACENT FINISH COAT.

AT THE PERIMETER OF THE REPAIR AREA, APPLY THE PRIME AND INTERMEDIATE COATS USING A BRUSH. APPLY THE FINISH COAT USING EITHER BRUSH OR SPRAY. IN LIEU OF BRUSHING THE USE OF MASKING AREAS NOT TO BE COATED AND SPRAY TO FEATHERED REMOVAL LINES MAY BE PERFORMED.

BLEND REPAIR AREAS WITH THE ADJACENT COATING AND PROVIDE A FINISHED SURFACE IN THE PATCHED AREAS THAT IS SMOOTH AND HAS AN EVEN PROFILE WITH THE ADJACENT SURFACE.

THE DEPARTMENT WILL MEASURE FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN BY THE NUMBER OF SQUARE FEET OF STRUCTURAL STEEL PAINTED. ALL REQUIREMENTS OF THIS SPECIFICATION ARE CONSIDERED INCIDENTAL TO THE WORK. THE DEPARTMENT WILL DETERMINE THE SURFACE AREA BY TAKING EXACT FIELD MEASUREMENTS OF ALL PAINTED SURFACES AND CALCULATIONS.

DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR:

ITEM	UNIT	DESCRIPTION
514	SQUARE FEET	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN

ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISHED BEARING DEVICES, AS PER PLAN.

ITEM 516 - BEARING DEVICE, ROCKER, AS PER PLAN:

EXISTING ROCKER BEARINGS TO BE REPLACED AS DIRECTED BY THE ENGINEER.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

IF ANY STRUCTURES ARE JACKED ABOVE THE CSXT RAILROAD SPAN, THEN THE CONTRACTOR WILL BE REQUIRED TO PREPARE A SUBMITTAL PACKAGE THAT INCLUDES, BUT NOT LIMITED TO: PROCEDURES, PLANS SHEETS, THE JACKING SYSTEM/SCHEME, CALCULATIONS, TIME SCHEDULES, DATA SHEETS, STRUCTURE WEIGHTS, ETC. ALL JACKING EQUIPMENT AND DEVICES SHALL HAVE A CAPACITY FOR 150% OF THE ACTUAL LOAD. THE FACTOR OF SAFETY PROVIDED BY THE MANUFACTURER IN THE DEVICE CAPACITY DATA SHALL NOT BE CONSIDERED IN THE 150% REQUIREMENTS. DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR HIS SEAL AND SIGNATURE. THE BRIDGE JACKING PROCEDURE MUST BE APPROVED BY CSXT'S ENGINEERING DEPARTMENT OR ITS REPRESENTATIVE. CSXT REQUIRES UP TO 30 DAYS TO REVIEW SUBMITTALS IN ORDER TO PROVIDE COMMENTS AND/OR APPROVALS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM:

THIS ITEM CONSISTS OF REMOVING ALL DIRT AND DEBRIS FROM THE ROADWAY DECK NEAR THE CURB AND MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, COLLECTION BOXES, HOPPERS, HORIZONTAL CONDUCTORS, DOWNSPOUTS, UNDERGROUND STORM SEWERS AND MANHOLES TO THE CITY STORM SEWERS OR PIPE OUTLET, AFTER THE DIRT AND DEBRIS ARE REMOVED. THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH CLEAN WATER MAKING CERTAIN THAT WATER FLOWS SMOOTHLY TO ITS OUTLET.

CONTRACTOR SHALL DETERMINE THE EXTENT OF WORK REQUIRED FOR THIS ITEM BY EXAMINATION OF EXISTING BRIDGE PLANS AND BY FIELD INVESTIGATION.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEM. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION PRIOR TO BEGINNING WORK AND AGAIN AT THE COMPLETION OF THE WORK. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

ALL DIRT AND DEBRIS SHALL BE REMOVED FORM THE BRIDGE SITE AND PROPERLY DISPOSED OF.

THE CLEANOUTS OF THE BRIDGE DRAINAGE SYSTEM SHALL NOT BEGIN UNTIL ALL OTHER WORK UNDER THIS CONTRACT IS COMPLETED, INCLUDING PAINTING OF STRUCTURAL STEEL AND SEALING OF CONCRETE SURFACE.

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE CLEANING AND CLEARING OF THE BRIDGE DRAINAGE SYSTEM SHALL BE INCLUDED IN THE PRICE FOR ITEM 518- STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION:

THIS ITEM CONSISTS OF CUTTING HOLES IN DOWNSPOUTS AS DIRECTED BY THE ENGINEER TO ALLOW FOR DRAINAGE OF WATER ONTO THE GROUND SHOULD THE UNDERGROUND DRAINAGE PIPE(S) BECOME CLOGGED IN THE FUTURE.

THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF LOCATIONS TO BE MODIFIED. THE COST OF ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO PERFORM THIS WORK IS INCLUDED WITH THE ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN:

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

CONTRACTOR WILL BE REQUIRED TO REMOVE AND DISPOSE ALL CONCRETE DEBRIS GENERATED FROM CONCRETE PATCHING. EQUIPMENT REQUIRED TO PERFORM CONCRETE PATCHING MUST MAINTAIN AT LEAST A MINIMUM HORIZONTAL CLEARANCE OF 12 FEET MEASURED PERPENDICULAR TO THE CENTERLINE OF THE NEAREST TRACK.

THE PATCHING QUANTITIES SHOWN IN ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 25% TO ACCOUNT FOR FUTURE DETERIORATION.

ITEM 848 - SURFACE PREPARATION USING HYDRODEMOLITION, AS PER PLAN

FILTER FABRIC PROTECTION: IF SURFACE CLEANING DEBRIS, PAINTING, OVER SPRAY FOR SEALING PROTECTION OR HYDRODEMOLITION ACTIVITIES ARE CAPABLE OF CONTAMINATING THE TRACK AND BALLAST, THEN FILTER FABRIC WILL BE REQUIRED TO COVER THE TRACK AND BALLAST FOR THE LIMITS NECESSARY TO PROTECT THE TRACK. CONTRACTORS WILL BE REQUIRED TO FURNISH, INSTALL AND MAINTAIN FOR THE DURATION OF THE WORK.

ITEM 848 - FULL DEPTH REPAIR, AS PER PLAN

FULL PENETRATION OF DECK REMOVAL: CONTRACTOR WILL BE REQUIRED TO INSTALL PLYWOOD PROTECTION WITHIN THE GIRDERS, DIRECTLY BELOW THE AREA OF ANY FULL DECK PENETRATION, AND OVER THE CSXT RAILROAD SPANS, (SPANS 2N, 2S, 5N, AND 5S). PROTECTION WILL NEED TO BE INSTALLED BEFORE THE DECK IS PENETRATED AND WILL STAY IN PLACE FOR THE DURATION OF THE CONSTRUCTION ACTIVITIES. IN ADDITION, FILTER FABRIC PROTECTION WILL BE REQUIRED TO PROTECT THE TRACK AND BALLAST DIRECTLY UNDER THE PLYWOOD PROTECTION.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJS		3103005/3103064	

GENERAL NOTES
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980GN001.dgn 11/10/2010 11:40:58 AM mtreiheisel

STRUCTURE GENERAL NOTES (CONT.)

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPROX. - APPROXIMATE
ASTM - AMERICAN SOCIETY OF TESTING AND MATERIALS

B.F. - BACK FACE
BOT. - BOTTOM
BRGS. - BEARINGS

℄ - CENTERLINE
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONTRUCTION JOINT
CLR. - CLEARANCE
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. - CONSTRUCTION

DIA./ϕ - DIAMETER
DWG. - DRAWING

E.F. - EACH FACE
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING

F.A. - FORWARD ABUTMENT
F.F. - FRONT FACE
F/F - FACE TO FACE
FTG. - FOOTING
FT/FT - FOOT PER FOOT
FWD. - FORWARD

IR - INTERSTATE ROUTE

JT. - JOINT

LT. - LEFT

MAX. - MAXIMUM
MIN. - MINIMUM
MOT - MAINTENANCE OF TRAFFIC

NB - NORTHBOUND
N.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE

O/O - OUT TO OUT

P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER

R.A. - REAR ABUTMENT
RT. - RIGHT

SB - SOUTHBOUND
S.O. - SERIES OF
SPA. - SPACES OR SPACING
STA. - STATION
STD. - STANDARD
STR. - STRAIGHT

TEMP. - TEMPORARY
T/T - TOE TO TOE
TYP. - TYPICAL

VERT. - VERTICAL

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980GN002.dgn 11/10/2010 11:41:00 AM mtreiheisel

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJS		3103005/3103064	

GENERAL NOTES
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

ESTIMATED QUANTITIES - HAM-50-1980L - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CALCULATED BY: AJS — CHECKED BY: SK

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
512	10100	3776	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	193	1714	1832	38	
512	10600	12	FT	CONCRETE REPAIR BY EPOXY INJECTION		12			
514	20001	30	SQ FT	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN			30		3
516	45305	11	EACH	REFURBISH BEARING DEVICES, AS PER PLAN			11		3
516	46201	1	EACH	BEARING DEVICE, ROCKER, AS PER PLAN			1		3
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		3
518	62200	8	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				8	3
518	62200	5	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				5	3
519	11101	120	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	21	99			3
848	10200	4198	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			4198		
848	20001	4198	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION, AS PER PLAN			4198		3
848	30200	260	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			260		
848	50000	420	SQ YD	HAND CHIPPING			420		
848	50100	LUMP		TEST SLAB			LUMP		
848	50201	11	CU YD	FULL DEPTH REPAIR, AS PER PLAN			11		3
848	50320	4198	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=2½") NOMINAL THICKNESS			4198		
848	50340	1600	SQ YD	REMOVAL DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			1600		

ESTIMATED QUANTITIES - HAM-50-1980R - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CALCULATED BY: AJS — CHECKED BY: SK

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
512	10100	3633	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	204	1618	1774	38	
512	10600	15	FT	CONCRETE REPAIR BY EPOXY INJECTION	7	8			
514	20001	18	SQ FT	FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN			18		3
516	45305	14	EACH	REFURBISH BEARING DEVICES, AS PER PLAN			14		3
516	46201	1	EACH	BEARING DEVICE, ROCKER, AS PER PLAN			1		3
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		3
518	62200	9	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				9	3
518	62200	5	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				5	3
519	11101	559	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11	548			3
848	10200	4188	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			4188		
848	20001	4188	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION, AS PER PLAN			4188		3
848	30200	260	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			260		
848	50000	420	SQ YD	HAND CHIPPING			420		
848	50100	LUMP		TEST SLAB			LUMP		
848	50201	46	CU YD	FULL DEPTH REPAIR, AS PER PLAN			46		3
848	50320	4188	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=2½"") NOMINAL THICKNESS			4188		
848	50340	1600	SQ YD	REMOVAL DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			1600		

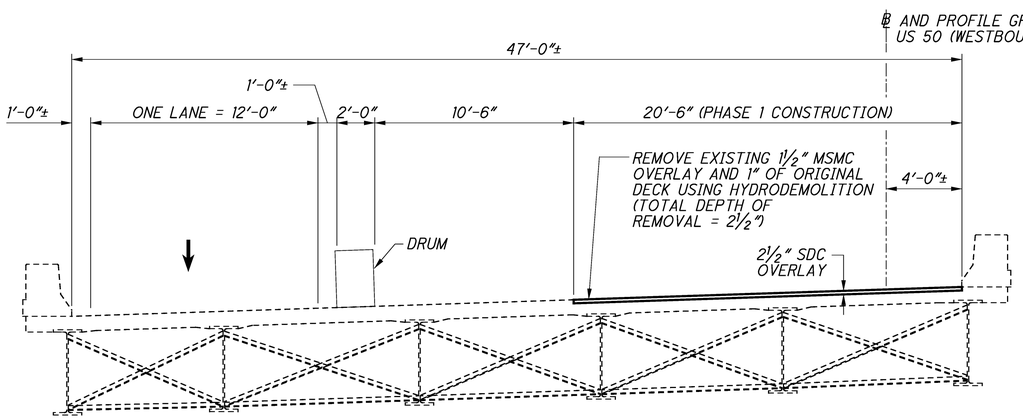
G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980EQ001.dgn 11/10/2010 11:41:02 AM mtneireisel

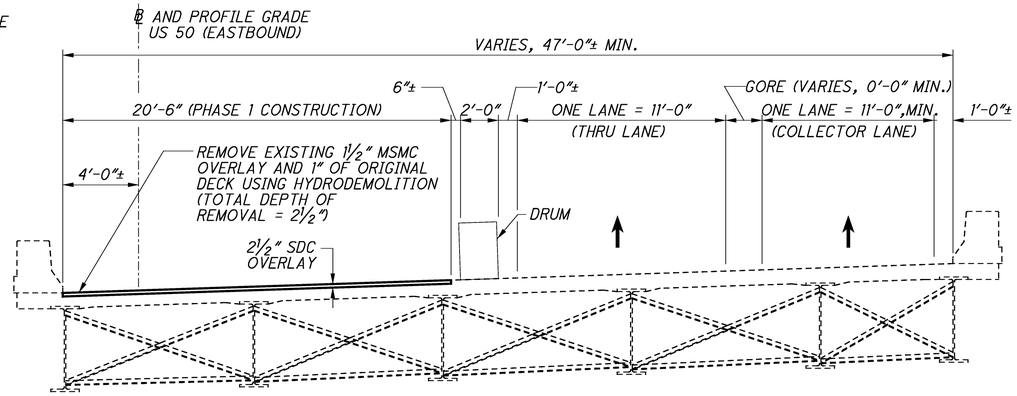
DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED TME/YSJ | DRAWN WEC | REVIEWED KVB | DATE 11/12/10
CHECKED AJS | REVISED | STRUCTURE FILE NUMBER 3103005 (L) 3103064 (R)

ESTIMATED QUANTITIES
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

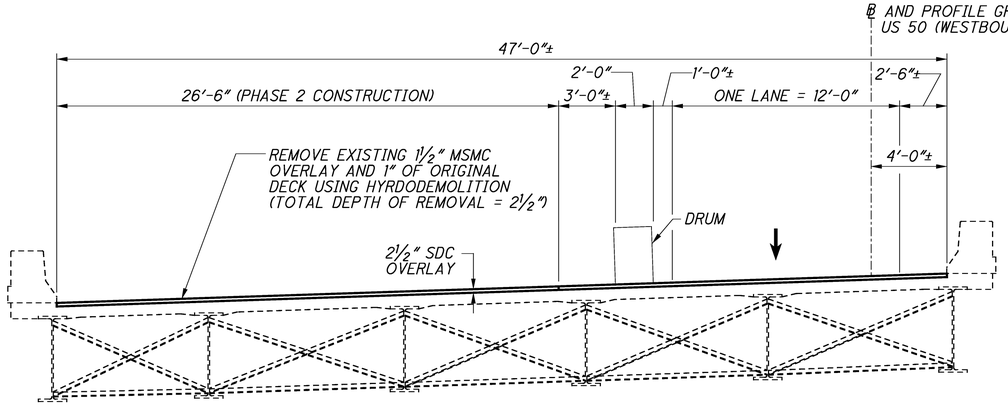
HAM-50-19.03
PID No. 75736

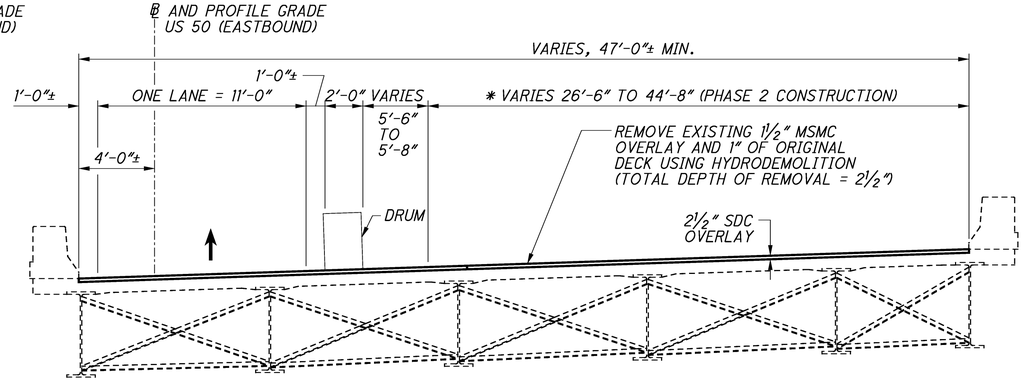




L/R BRIDGE PHASE 1

(LOOKING EAST)





*AT WEST END OF EASTBOUND STRUCTURE, WIDTH IS BASED ON THRU LANE, COLLECTOR LANE AND GORE.

L/R BRIDGE PHASE 2

(LOOKING EAST)

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL DRUMS ON BRIDGE DECKS AS SHOWN AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. REMOVE EXISTING MSMC OVERLAY (1½" NORMAL), AND 1" OF THE ORIGINAL DECK TO PHASE 1 CONSTRUCTION LIMITS USING HYDRO-DEMOLITION PER SUPPLEMENTAL SPECIFICATION 848.
3. PLACE NEW 2½" SDC OVERLAY TO PHASE 1 CONSTRUCTION LIMITS PER SUPPLEMENTAL SPECIFICATION 848.
4. SEAL EXISTING BARRIERS WITH EPOXY-URETHANE SEALANT.

PHASE 2

5. RELOCATE DRUMS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
6. REMOVE EXISTING MSMC OVERLAY (1½" NORMAL), AND 1" OF THE ORIGINAL DECK TO PHASE 2 CONSTRUCTION LIMITS USING HYDRO-DEMOLITION PER SUPPLEMENTAL SPECIFICATION 848.
7. PLACE NEW 2½" SDC OVERLAY TO PHASE 2 CONSTRUCTION LIMITS PER SUPPLEMENTAL SPECIFICATION 848.
8. SEAL EXISTING BARRIERS WITH EPOXY-URETHANE SEALANT.
9. REMOVE DRUMS AND REROUTE TRAFFIC TO FINAL CONFIGURATION.
10. PATCH AND SEAL SUBSTRUCTURE CONCRETE SURFACES.
11. CLEAN BRIDGE DRAINAGE SYSTEM.

LEGEND:

SDC - SUPERPLASTICIZED DENSE CONCRETE
MSMC - MICRO-SILICA MODIFIED CONCRETE

NOTES:

DRUMS SHALL BE INSTALLED AS PER ROADWAY DRAWINGS AND APPLICABLE ODOT STANDARD MAINTENANCE OF TRAFFIC DRAWINGS.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103065 (L) 3103064 (R)	

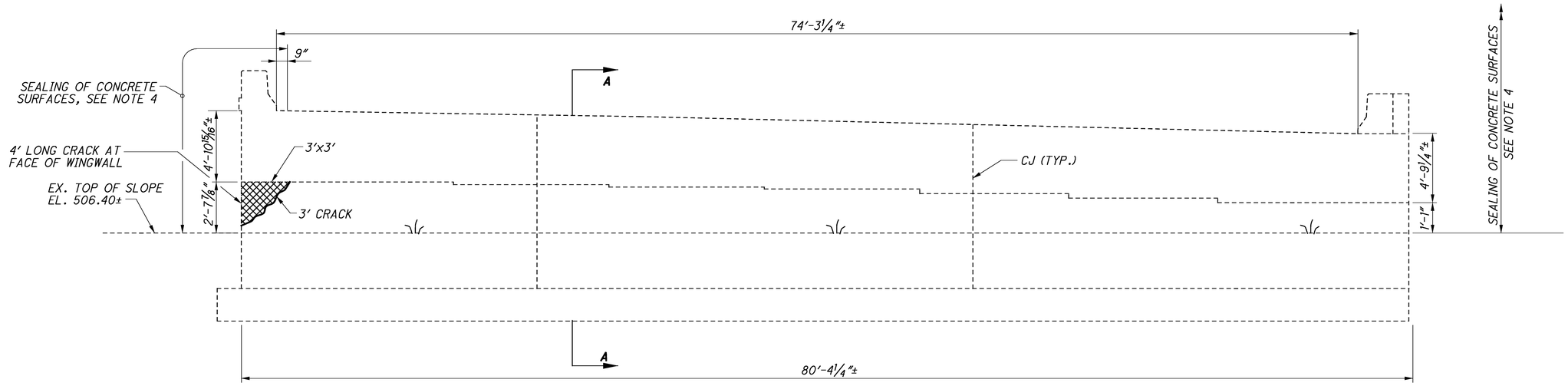
PHASE CONSTRUCTION DETAILS
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

6 / 27

405
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980CPC001.dgn 11/10/2010 11:41:03 AM mtneihaisel



ELEVATION - REAR ABUTMENT

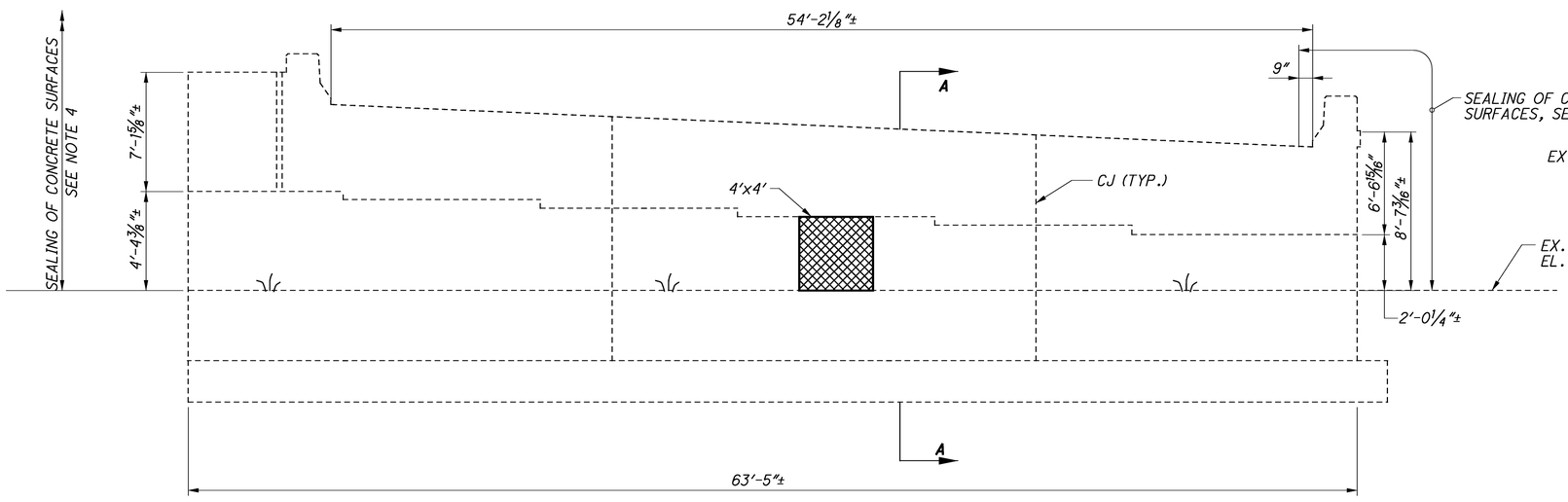
RIGHT BRIDGE
(EASTBOUND)

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

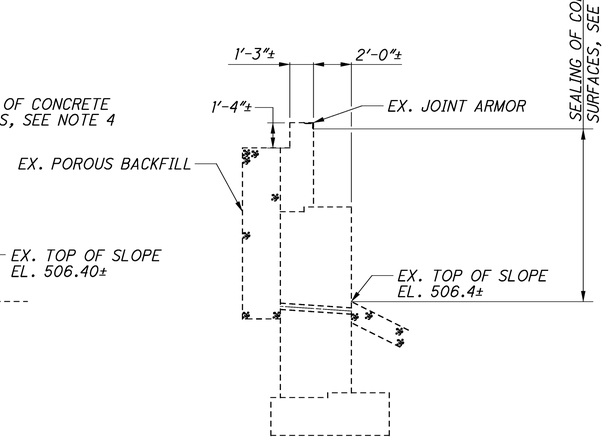
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
REAR ABUT.	PATCH (FT²)	EPOXY INJECTION (FT)
RIGHT	9	7
LEFT	16	



ELEVATION - REAR ABUTMENT

LEFT BRIDGE
(WESTBOUND)



SECTION A-A

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.
5. FOR WINGWALL SECTION, SEE SHEET 8/27.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005/3103064	

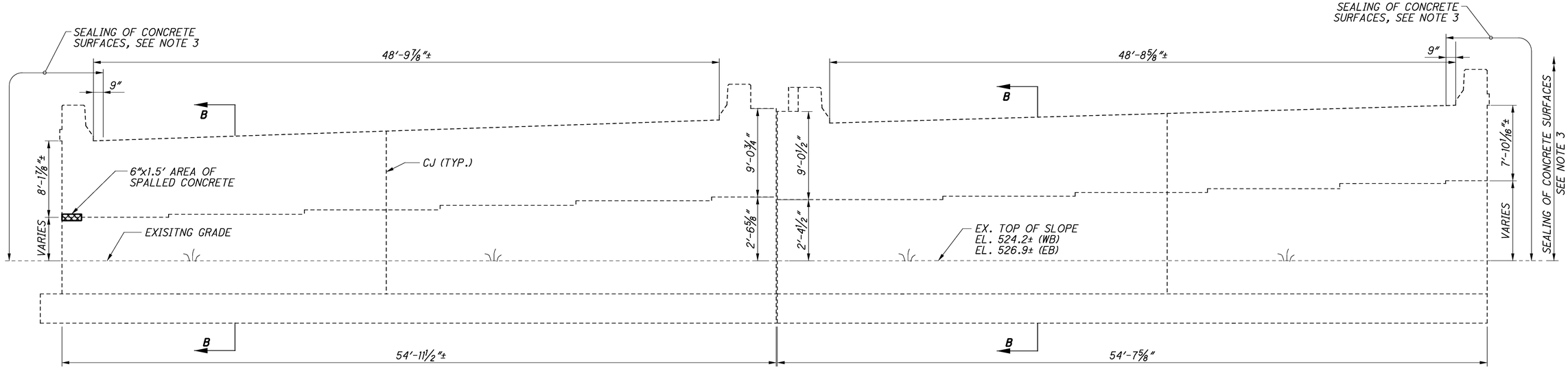
ABUTMENT DETAILS
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

7/27

406
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980AR001.dgn 11/10/2010 11:41:05 AM mtneihreisel



ELEVATION - FORWARD ABUTMENT

CONCRETE SURFACE TO BE PATCHED = 1 SQ. FT.

LEGEND

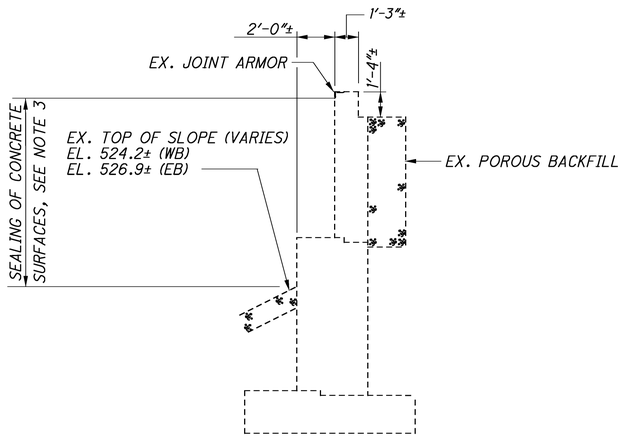
AREA TO BE PATCHED PER ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

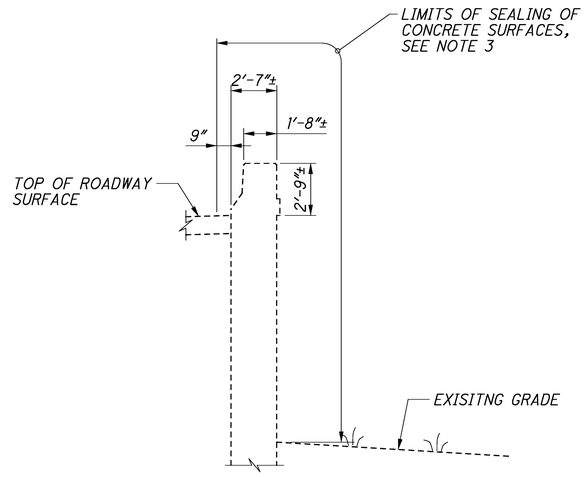
SUMMARY OF REPAIR QUANTITIES		
ELEVATION.	PATCH (FT²)	EPOXY INJECTION (FT)
FORWARD ABUT.	1	

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.



SECTION B-B



TYPICAL WINGWALL SEALING DETAILS

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED TME/YSJ | DRAWN MSW | CHECKED SK | REVIEWED KVB | DATE 11/12/10 | REVISED | STRUCTURE FILE NUMBER 3103005/3103064

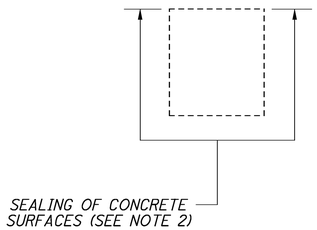
ABUTMENT DETAILS
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

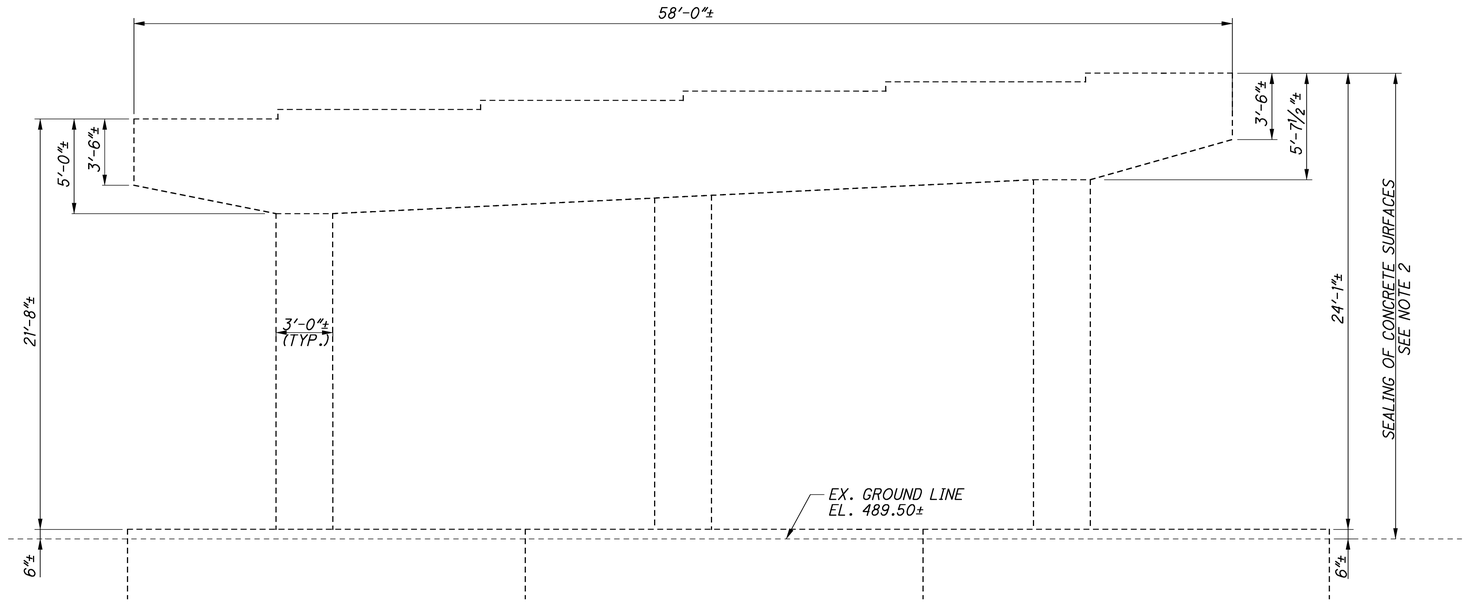
8 / 27

407
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980AF001.dgn 11/10/2010 11:41:07 AM mtneiheisel



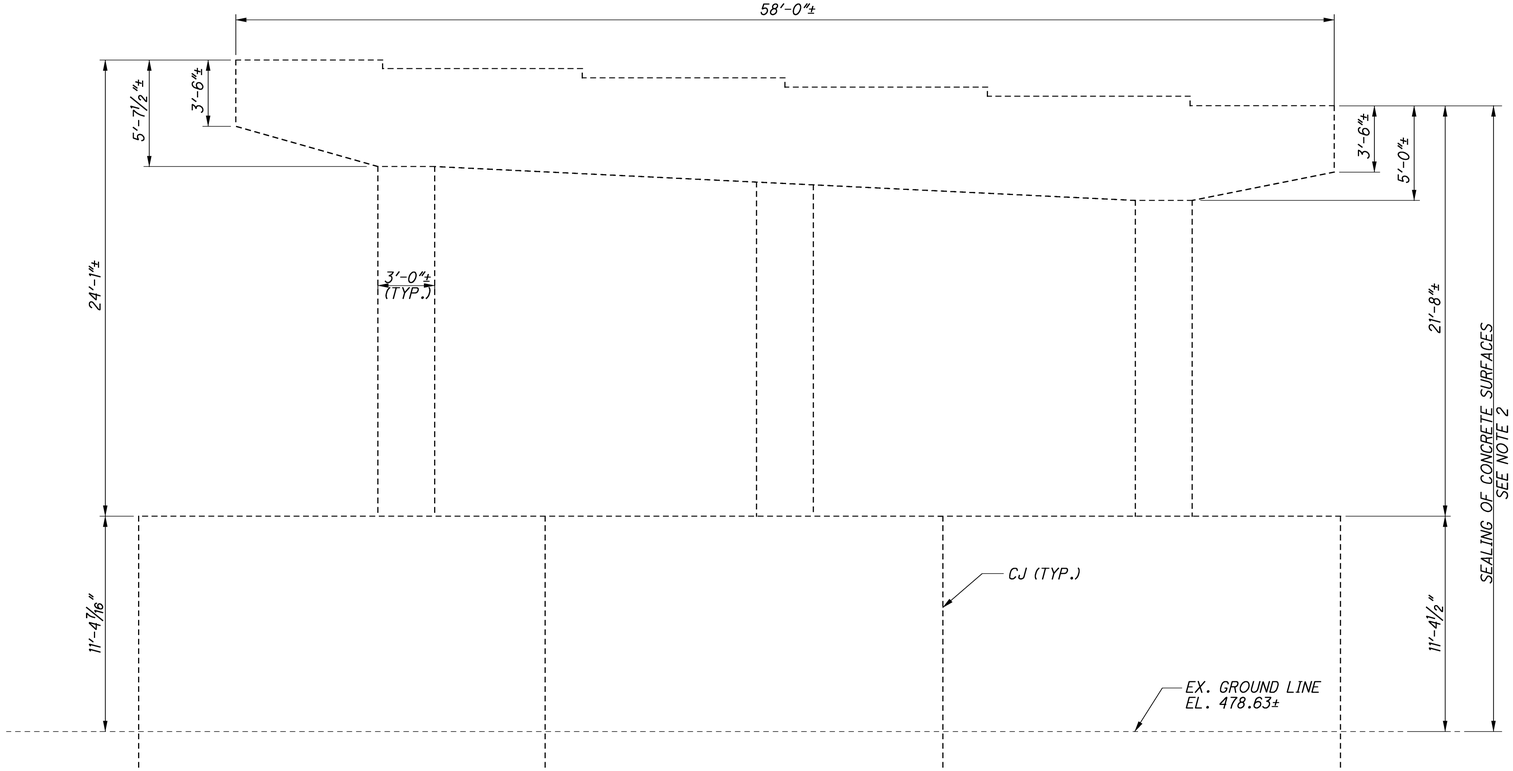
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 1N

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 1N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

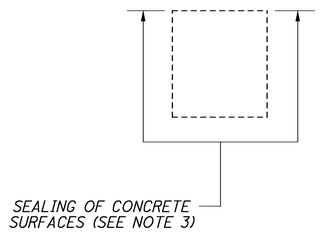
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

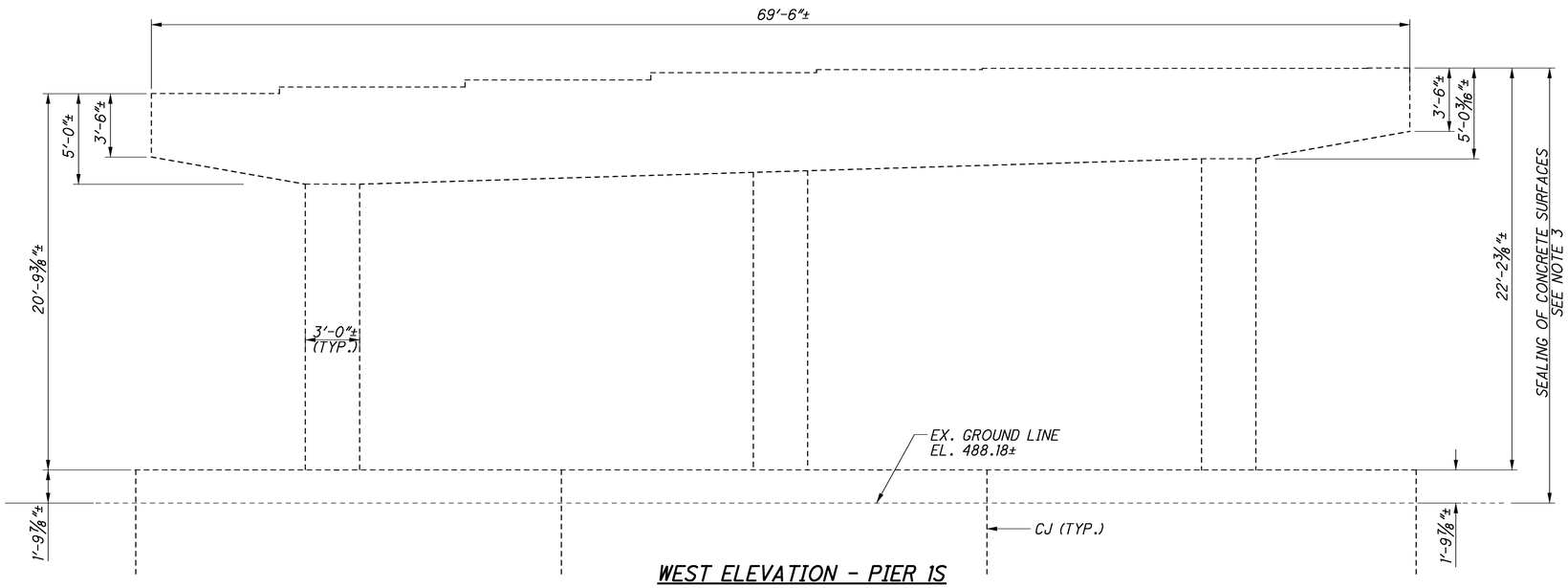
9 / 27

408
442

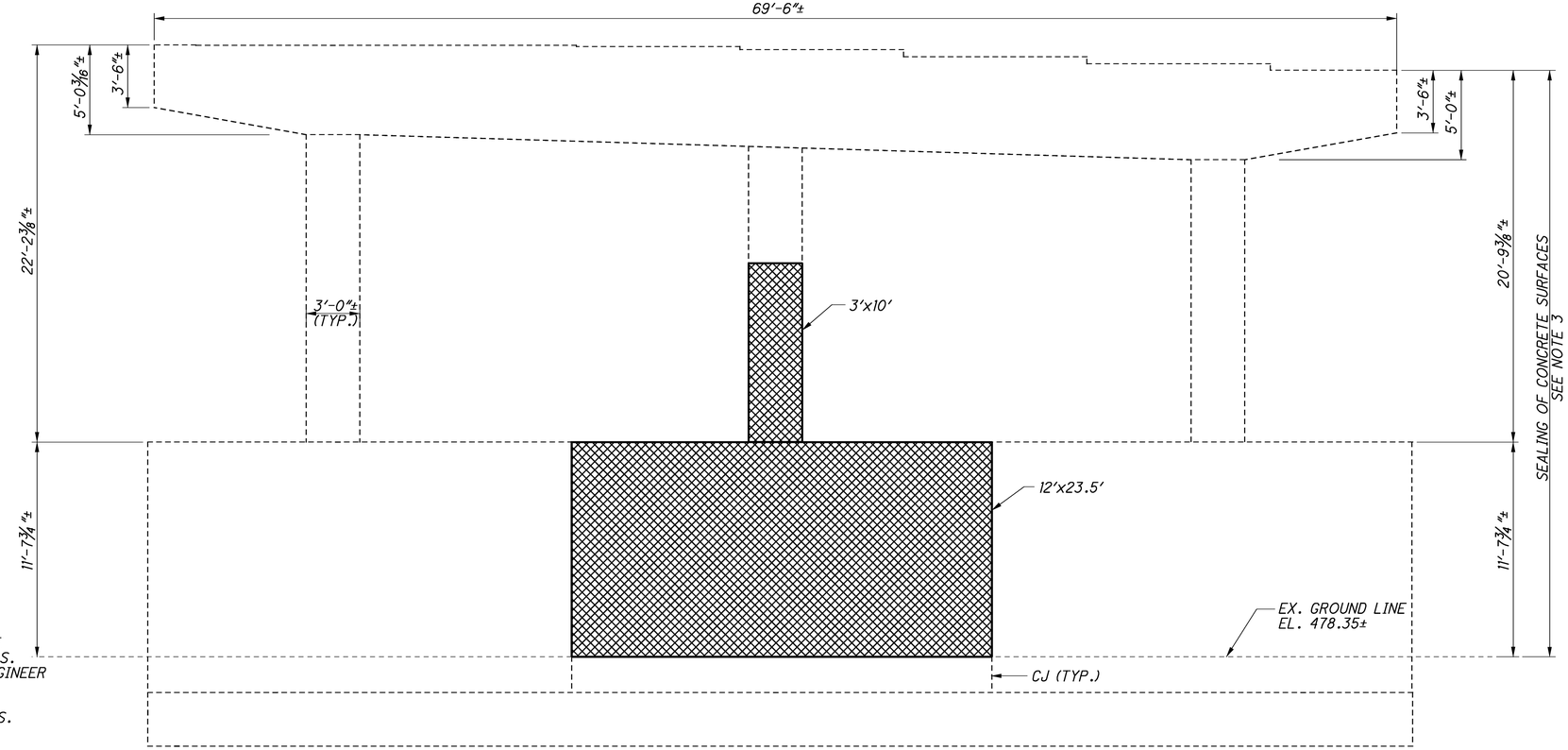
G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI001.dgn 11/10/2010 11:41:08 AM mtreitheisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 1S



EAST ELEVATION - PIER 1S

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 1S		
EAST 1S	312	

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

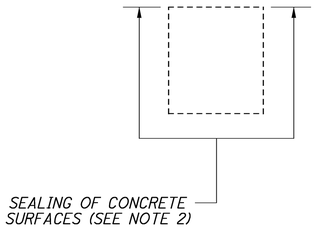
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

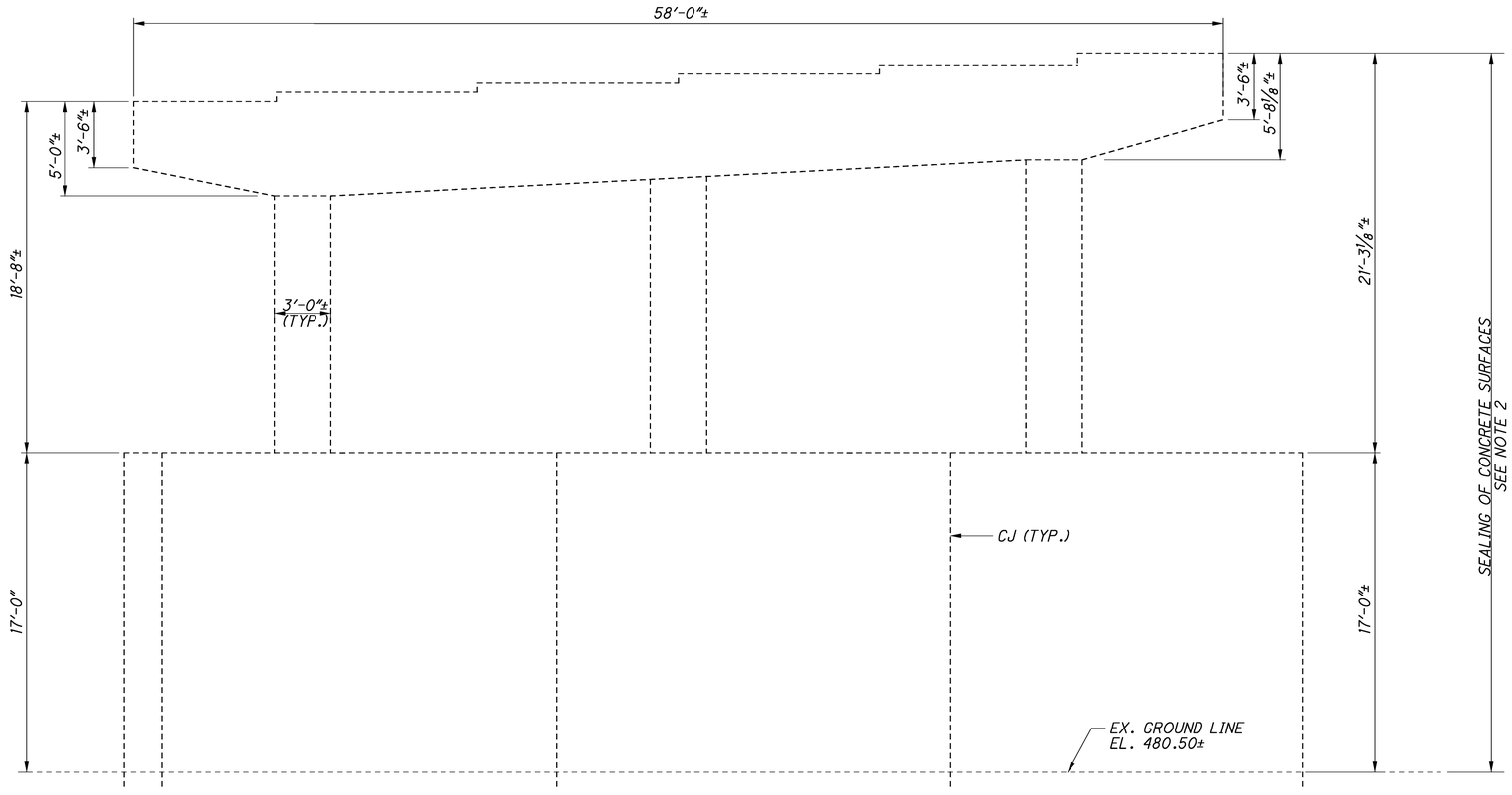
10 / 27

409
442

C:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI001.dgn 11/10/2010 11:41:10 AM mtreitneisel



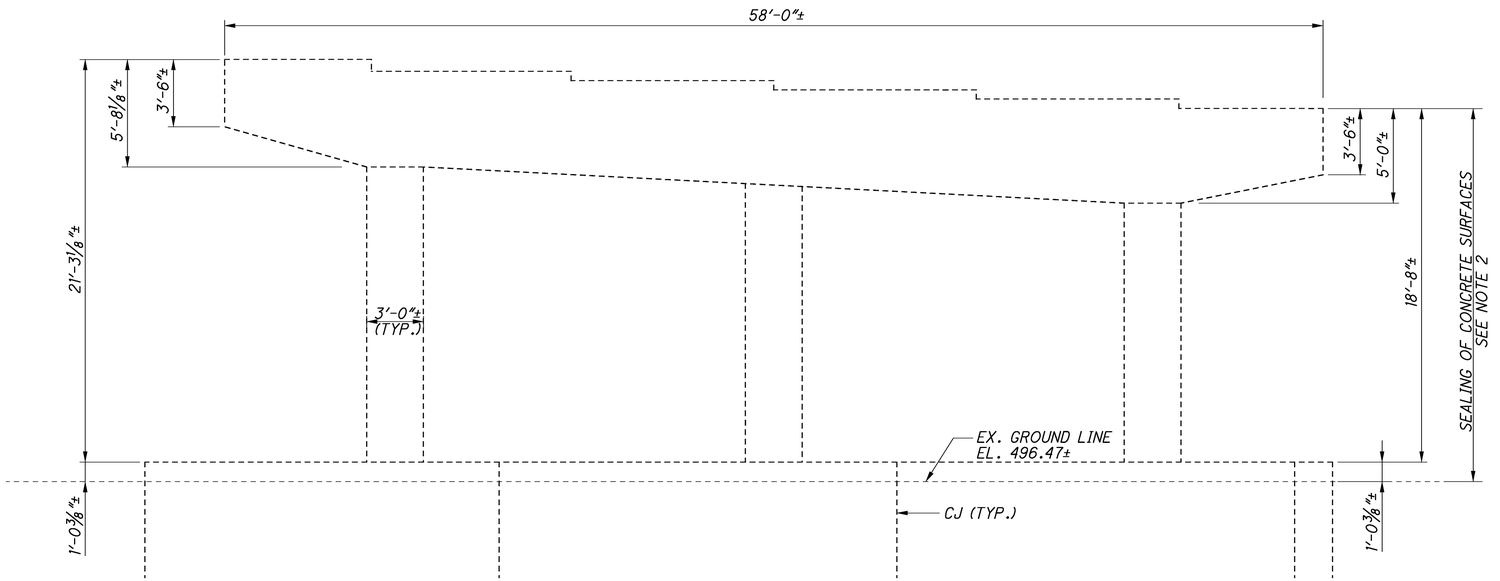
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 2N

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 2N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

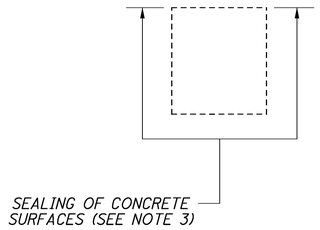
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

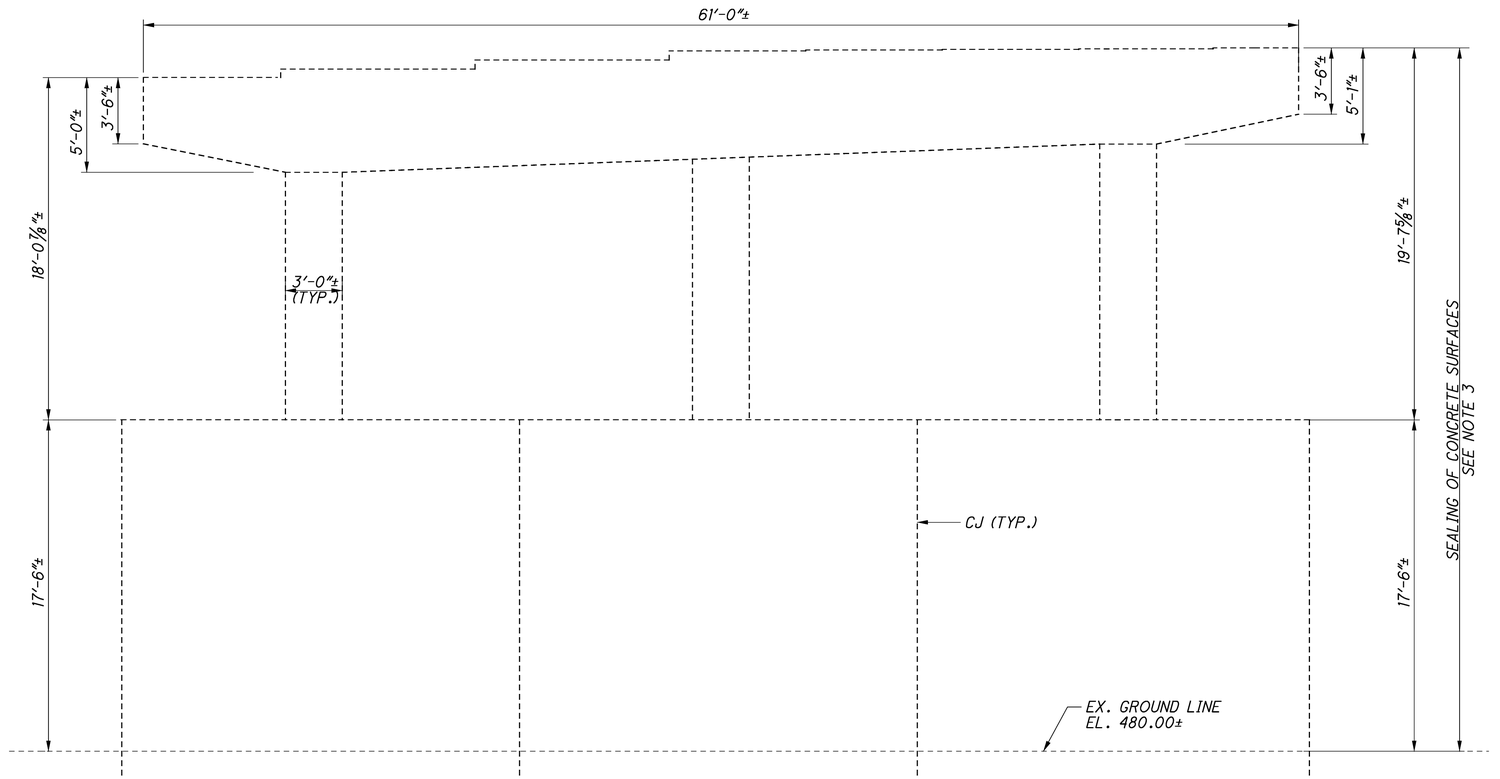
11 / 27

410
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI002.dgn 11/10/2010 11:41:11 AM mtneihreisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 2S

LEGEND

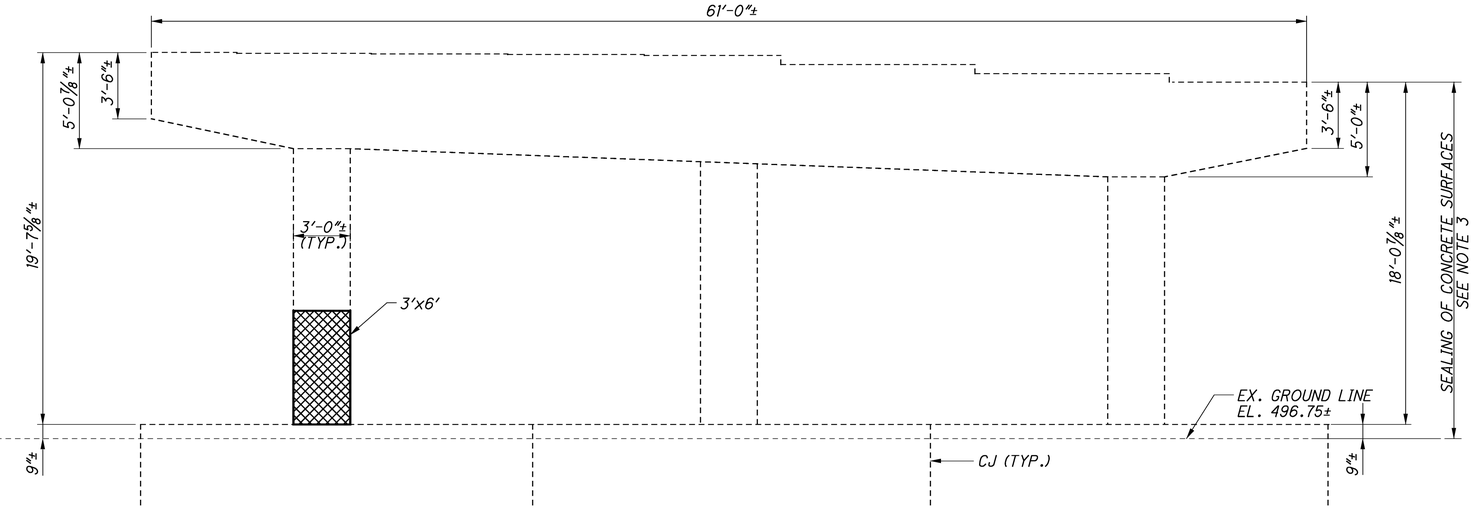
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 2S		
EAST 2S	18	

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 2S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

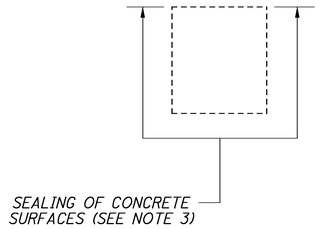
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

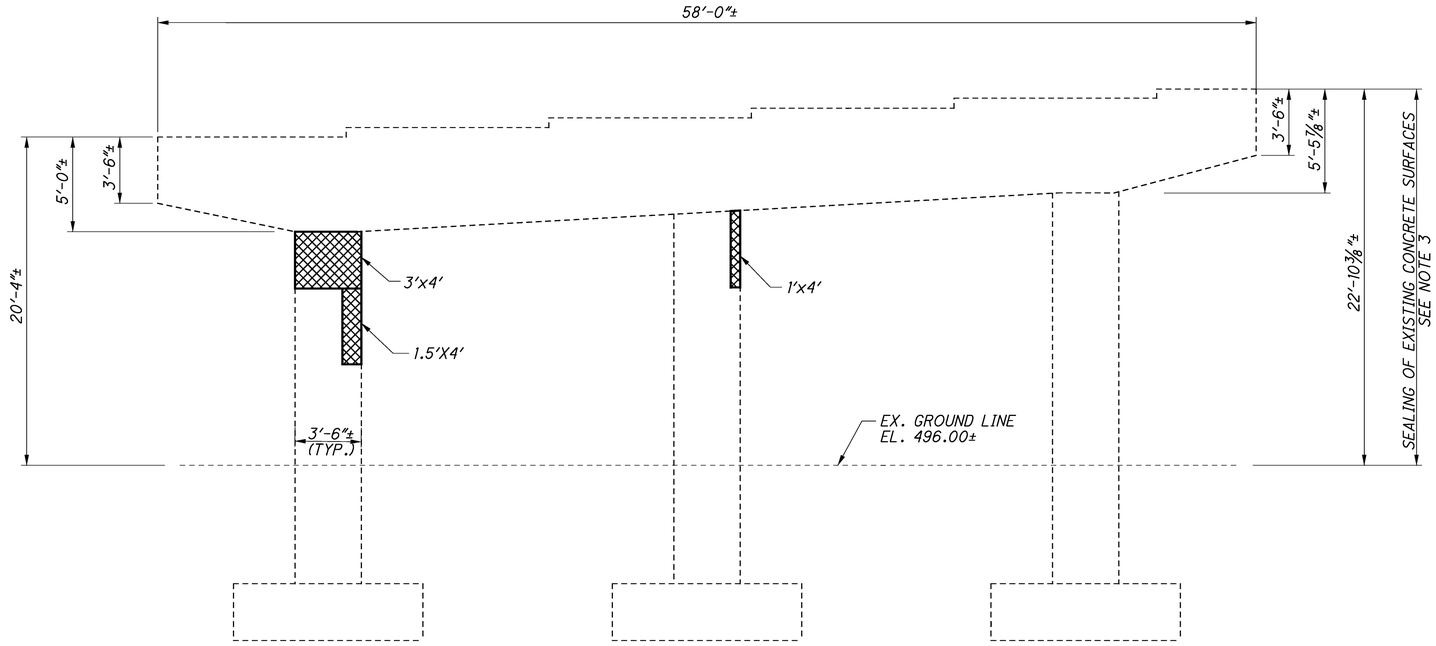
12 / 27

411
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI002.dgn 11/10/2010 11:41:12 AM rmtneiseisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 3N

LEGEND

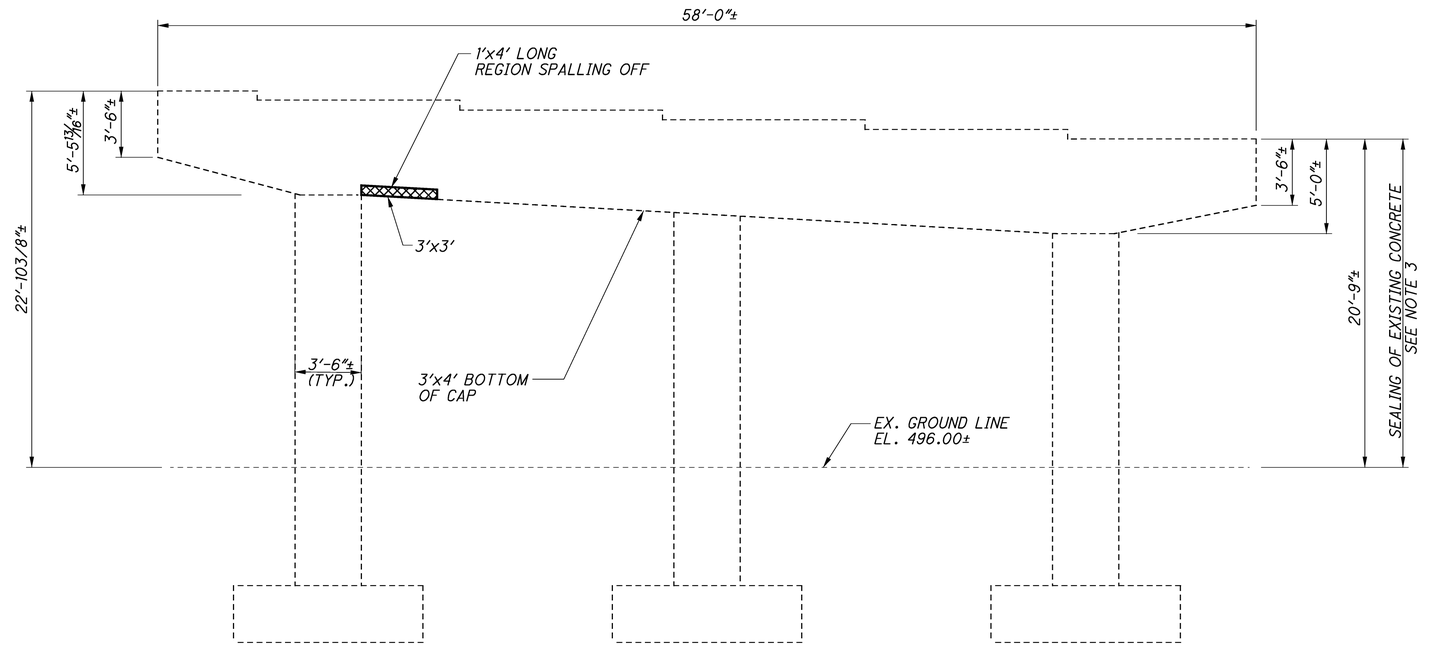
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 3N	22	
EAST 3N	25	

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 3N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

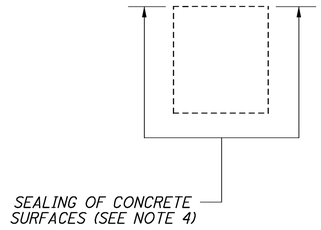
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

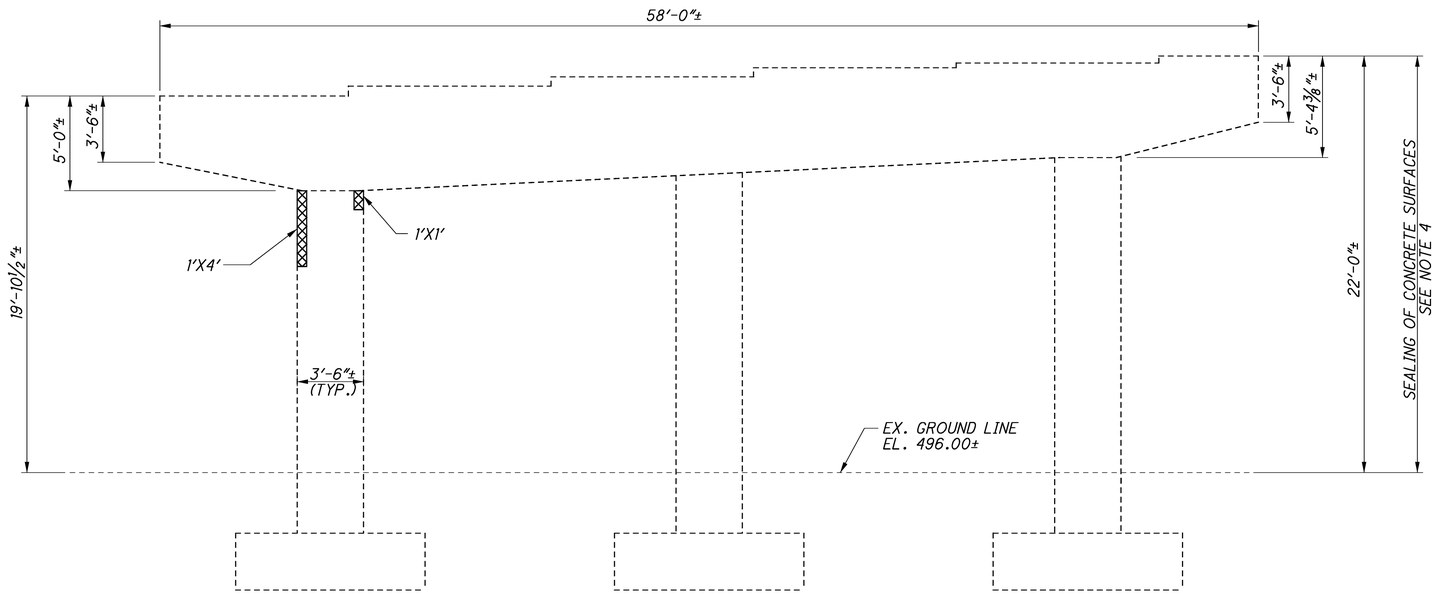
13 / 27

412
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI003.dgn 11/10/2010 11:41:13 AM mtreihreisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 3S

LEGEND

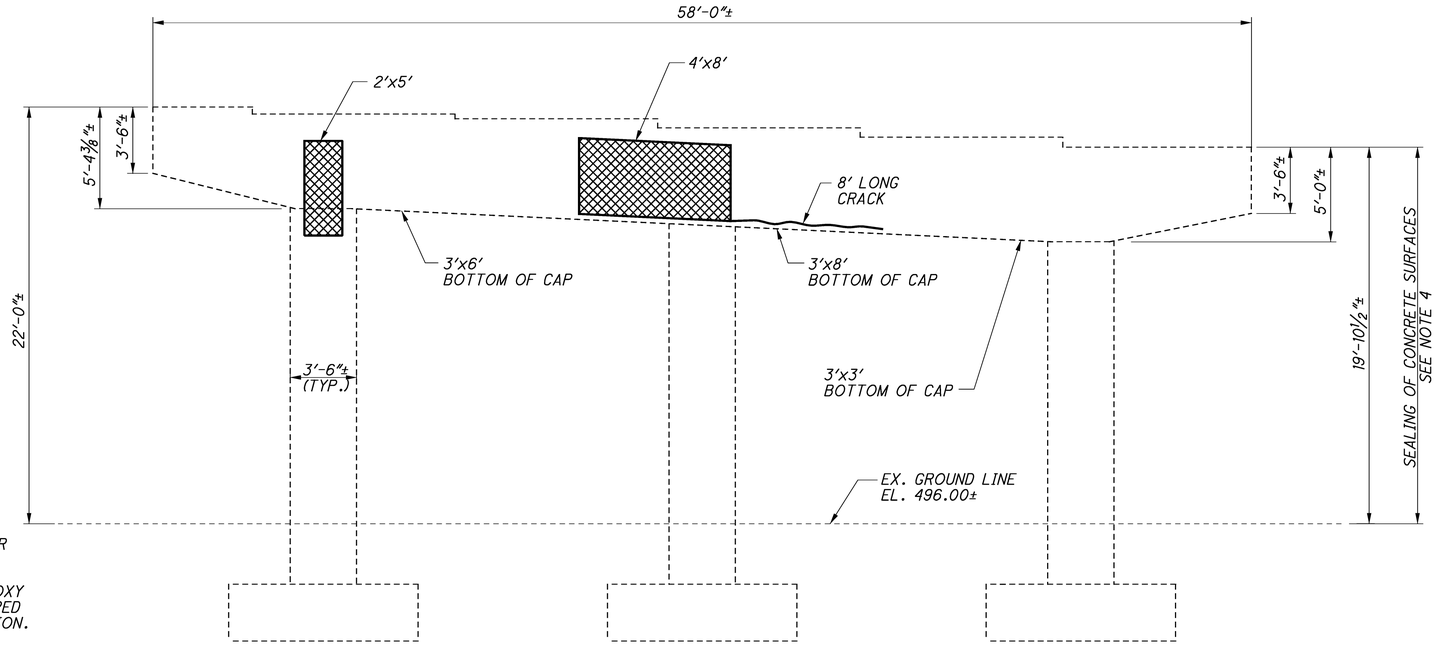
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 3S	5	
EAST 3S	93	8

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 3S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

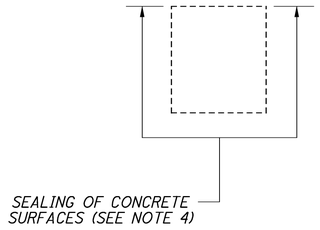
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

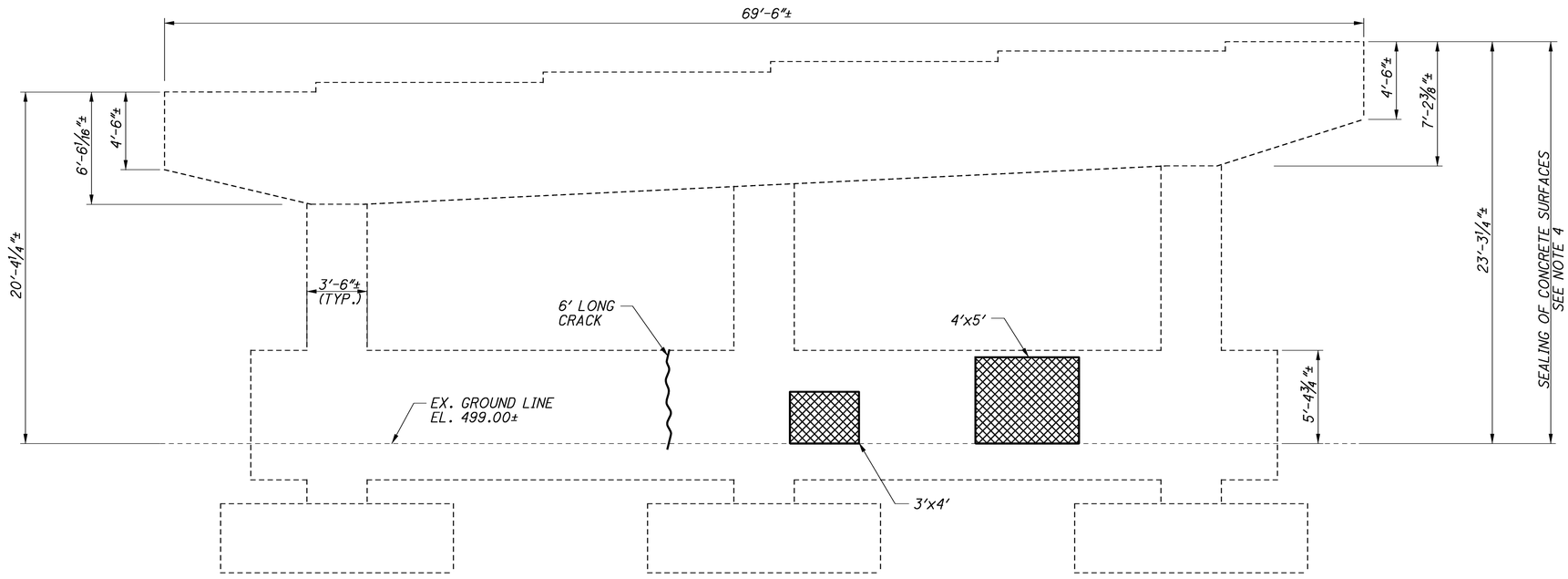
14 / 27

413
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI003.dgn 11/10/2010 11:41:15 AM mtneiheisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 4N

LEGEND

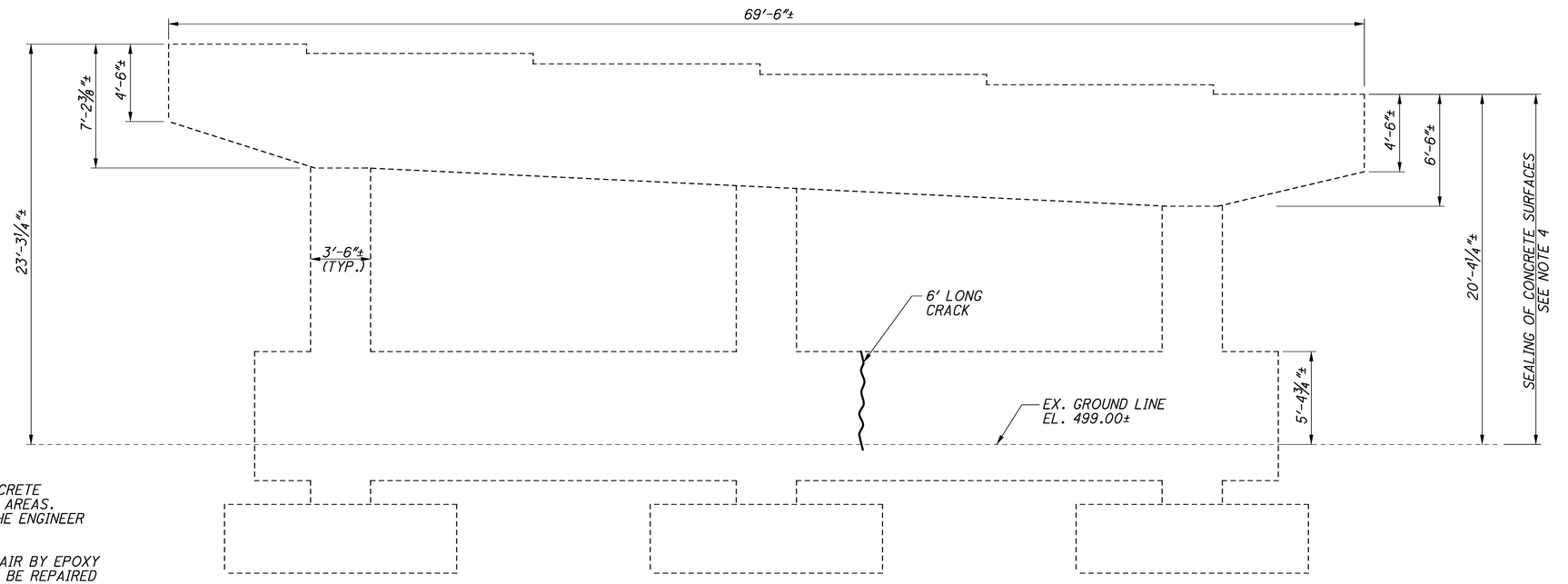
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 4N	32	6
EAST 4N		6

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 4N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

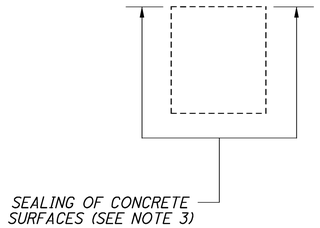
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

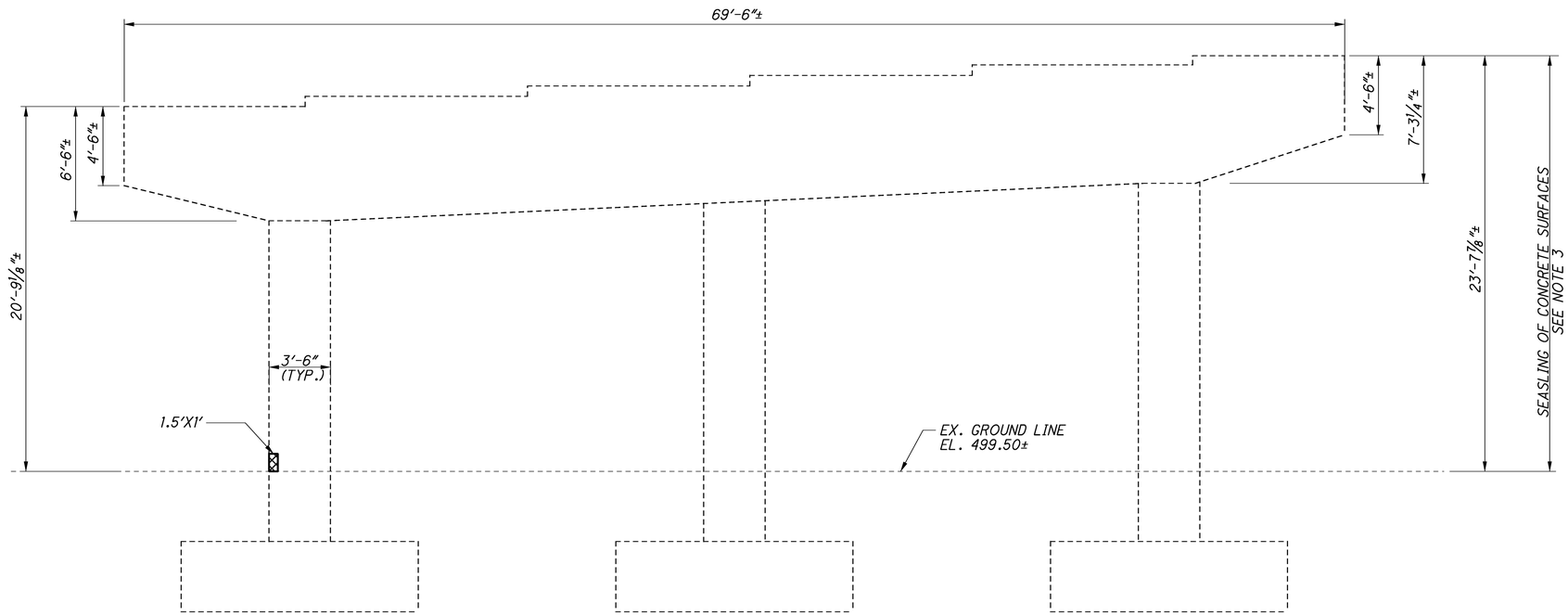
15 / 27

414
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI004.dgn 11/10/2010 11:41:16 AM mtreitheisel



PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 4S

LEGEND

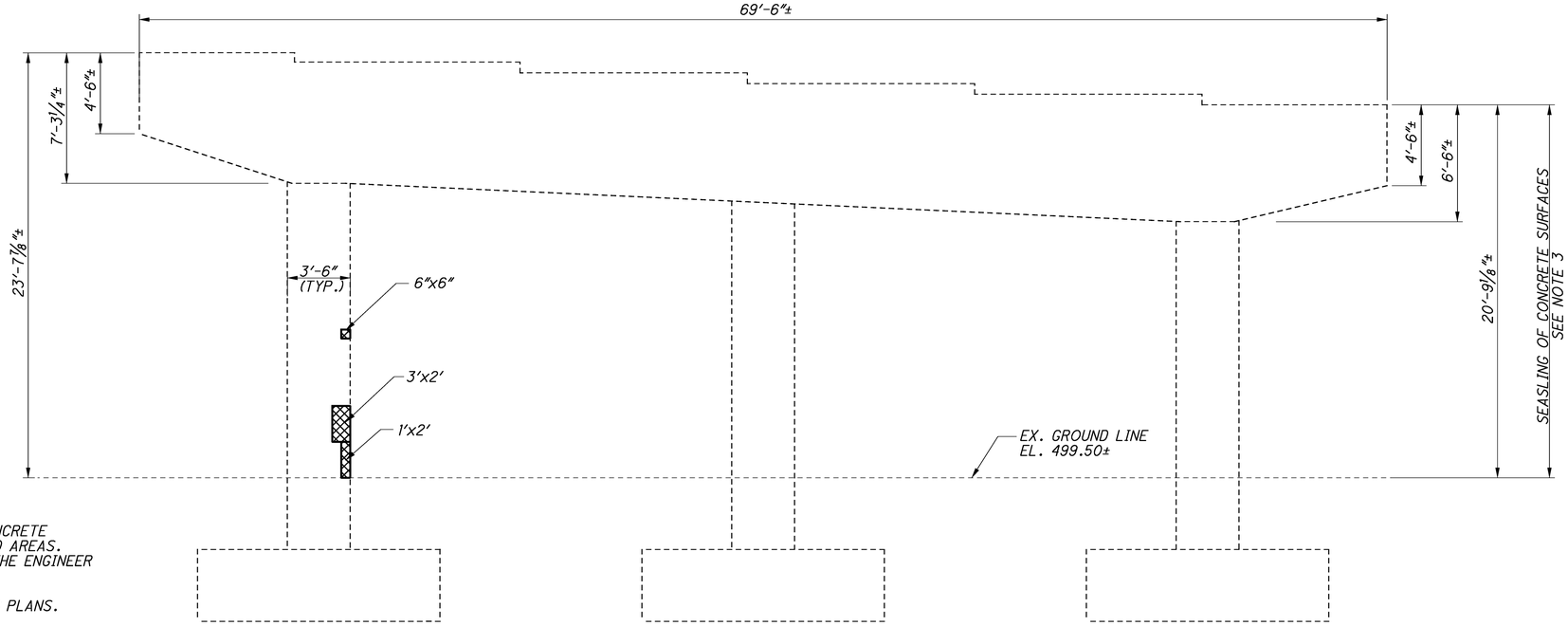
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 4S	1.5	
EAST 4S	8.25	

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 4S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

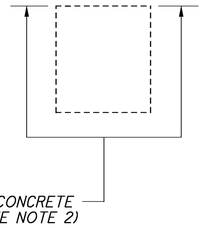
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

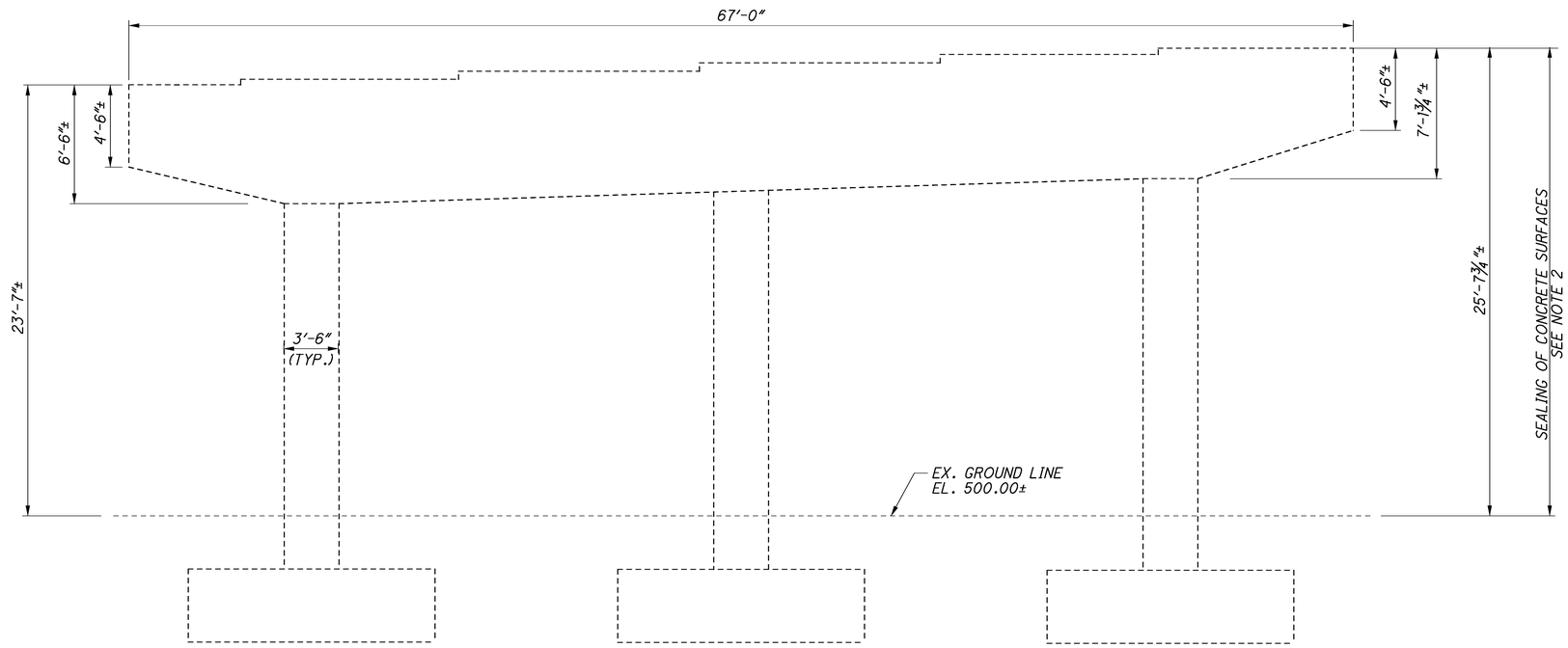
16 / 27

415
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI004.dgn 11/10/2010 11:41:17 AM mtneiheisel



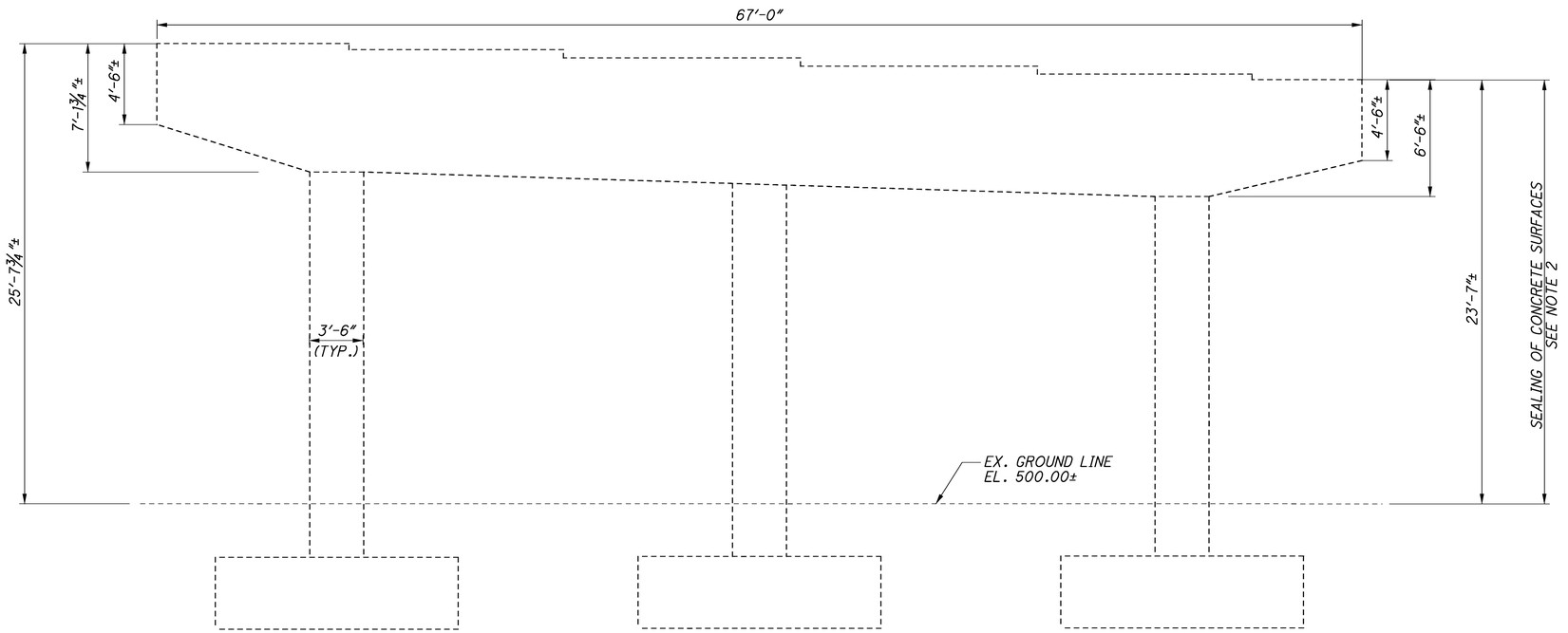
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 5N

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 5N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

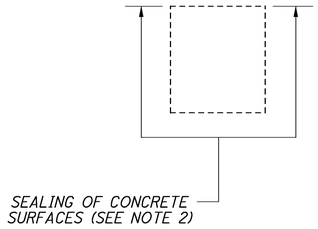
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

17 / 27

416
442

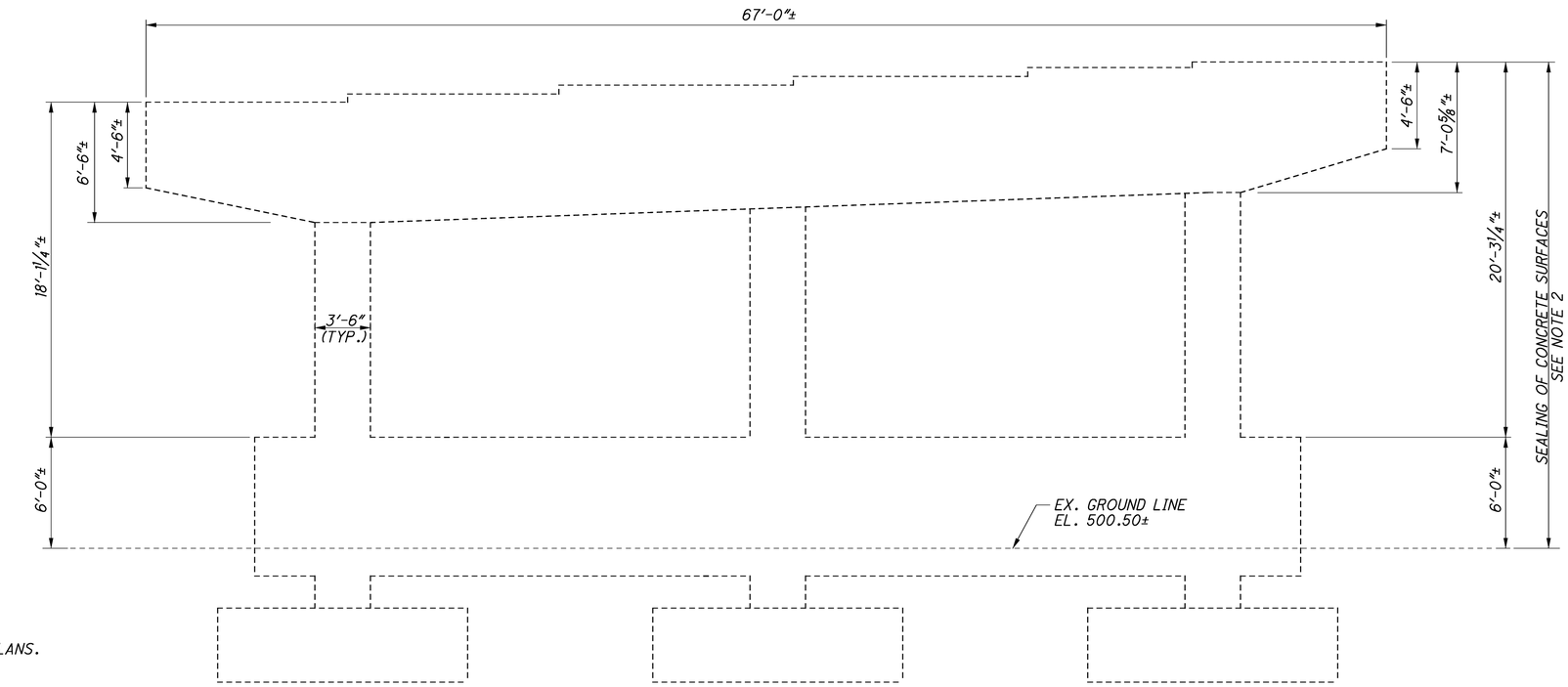
G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI005.dgn 11/10/2010 11:41:18 AM mtreitheisel



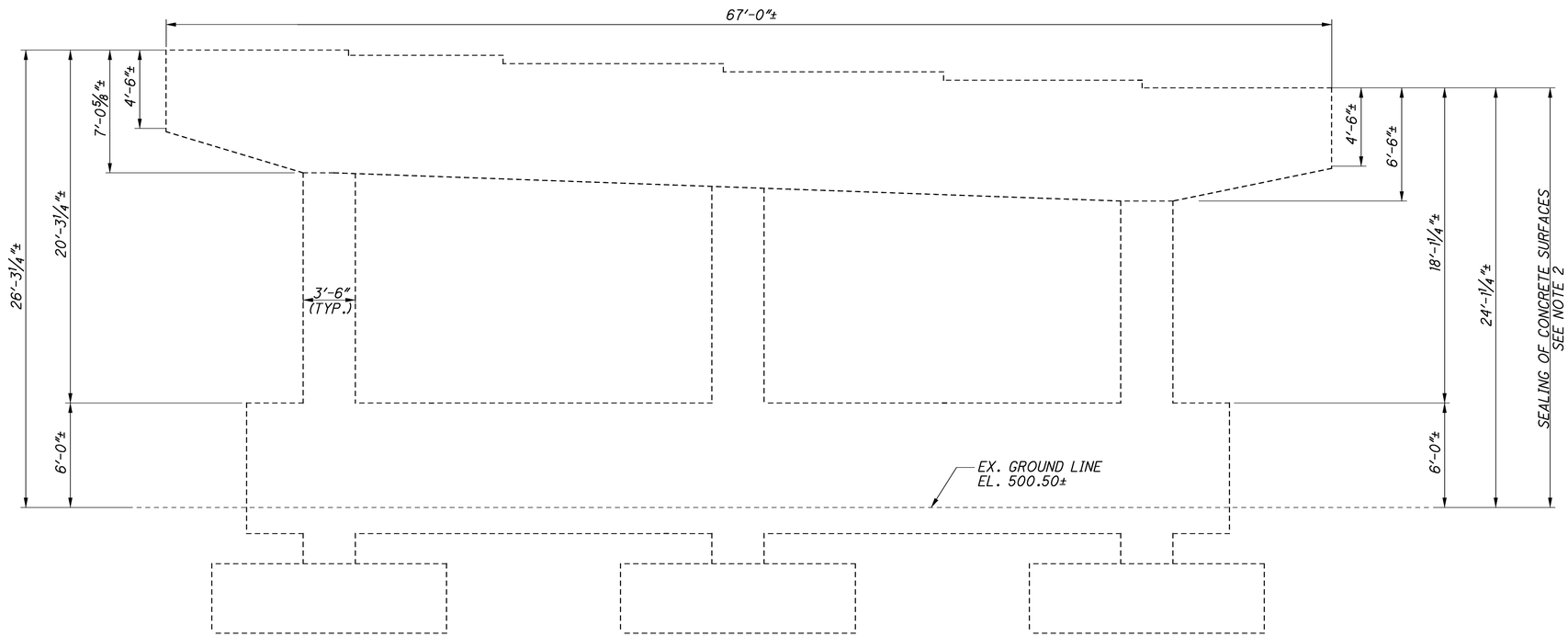
PIER CAP SEALING LIMITS

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



WEST ELEVATION - PIER 5S



EAST ELEVATION - PIER 5S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

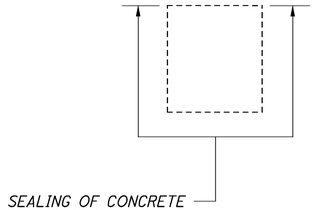
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

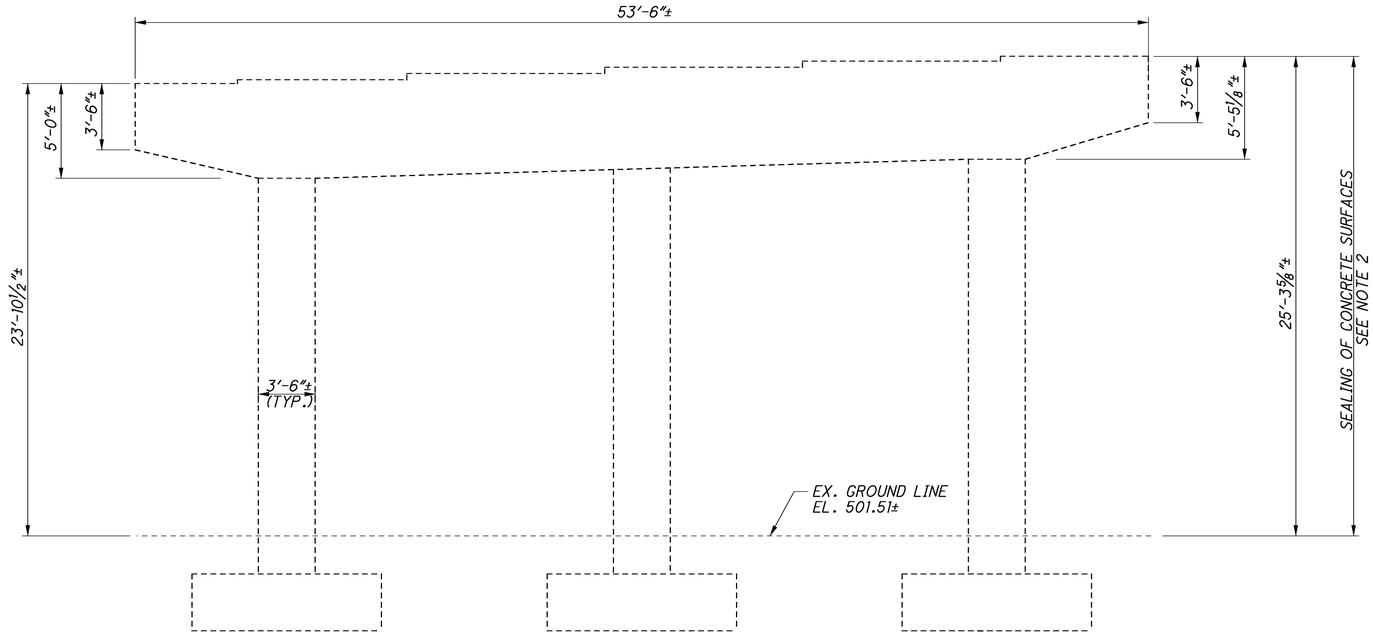
18 / 27

417
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI005.dgn 11/10/2010 11:41:20 AM mtreiheisel



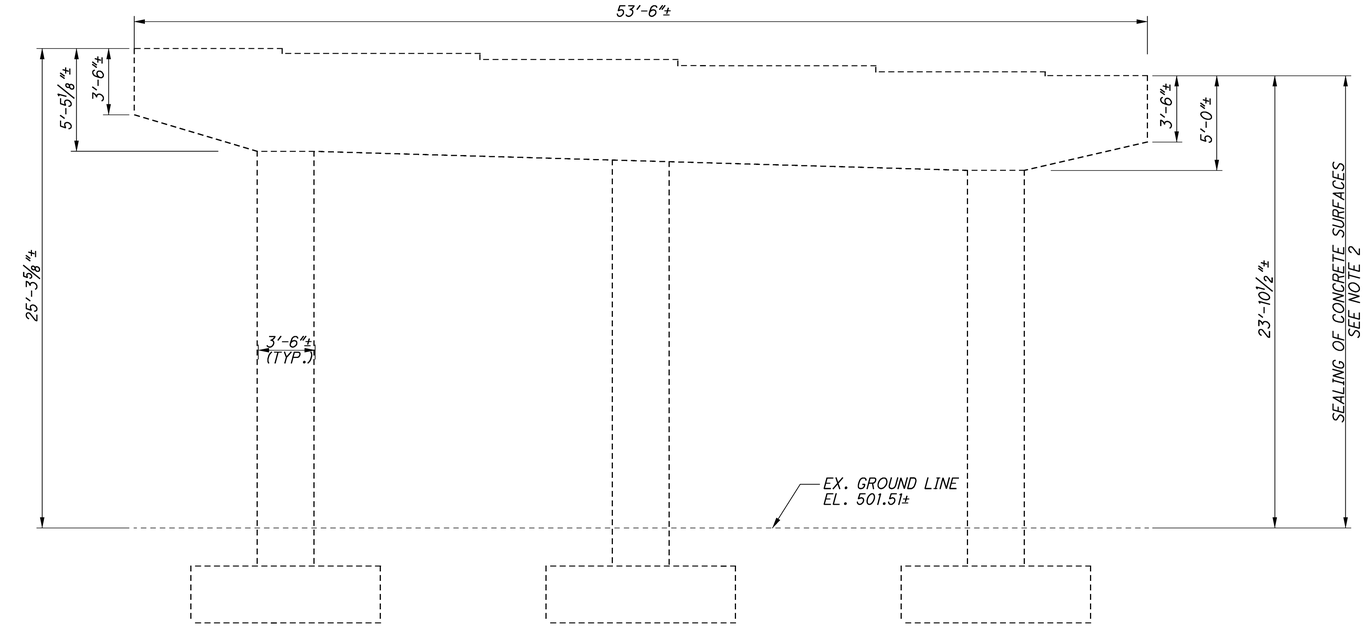
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 5AN

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 5AN

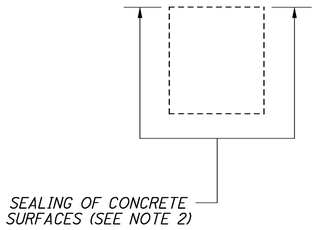
G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LP1005A.dgn 11/10/2010 11:41:21 AM mtneiheisel

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

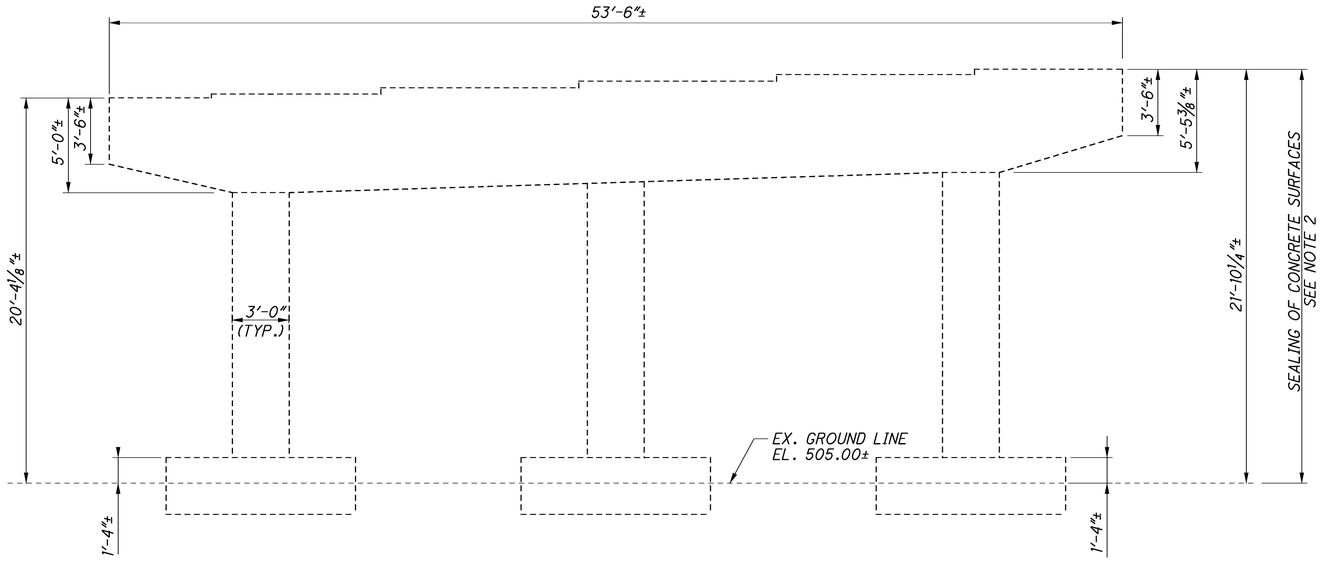
DESIGNED TME/YSJ
DRAWN MSW
REVIEWED KVB
DATE 11/12/10
CHECKED SK
REVISED
STRUCTURE FILE NUMBER 3103005

PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736



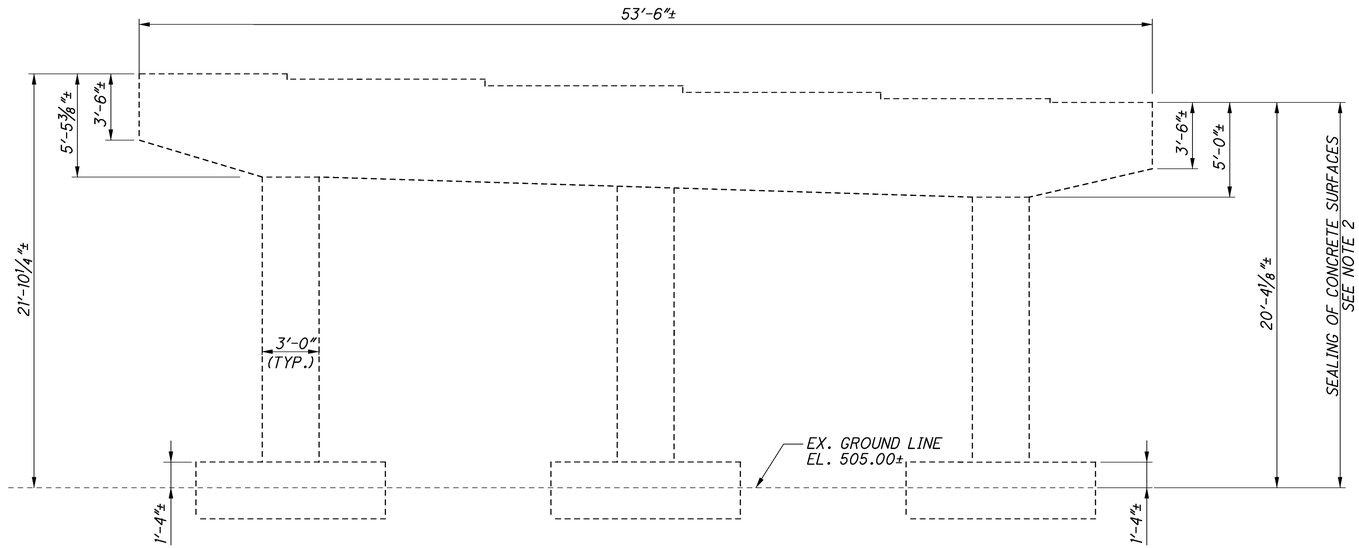
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 6N

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 6N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

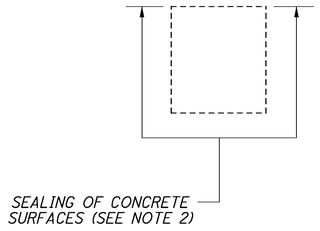
PIER PATCHING & SEALING LIMITS - PIER 6N
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

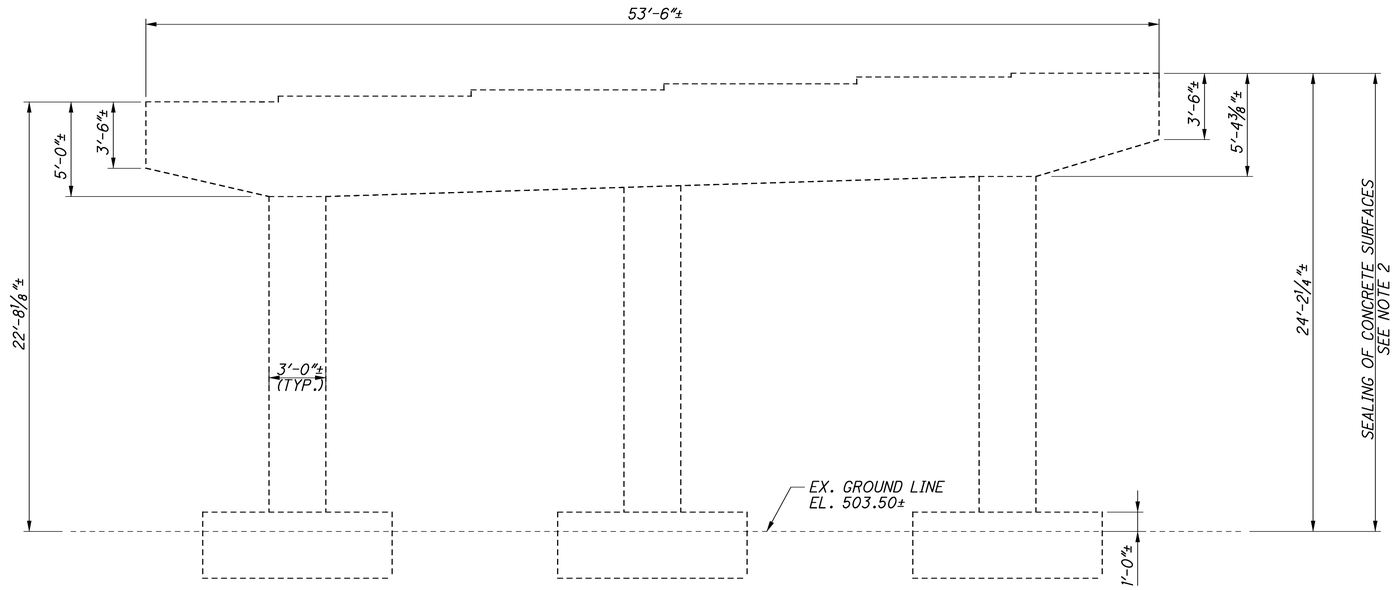
20 / 27

419
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LP1006.dgn 11/10/2010 11:41:22 AM mtneihisel



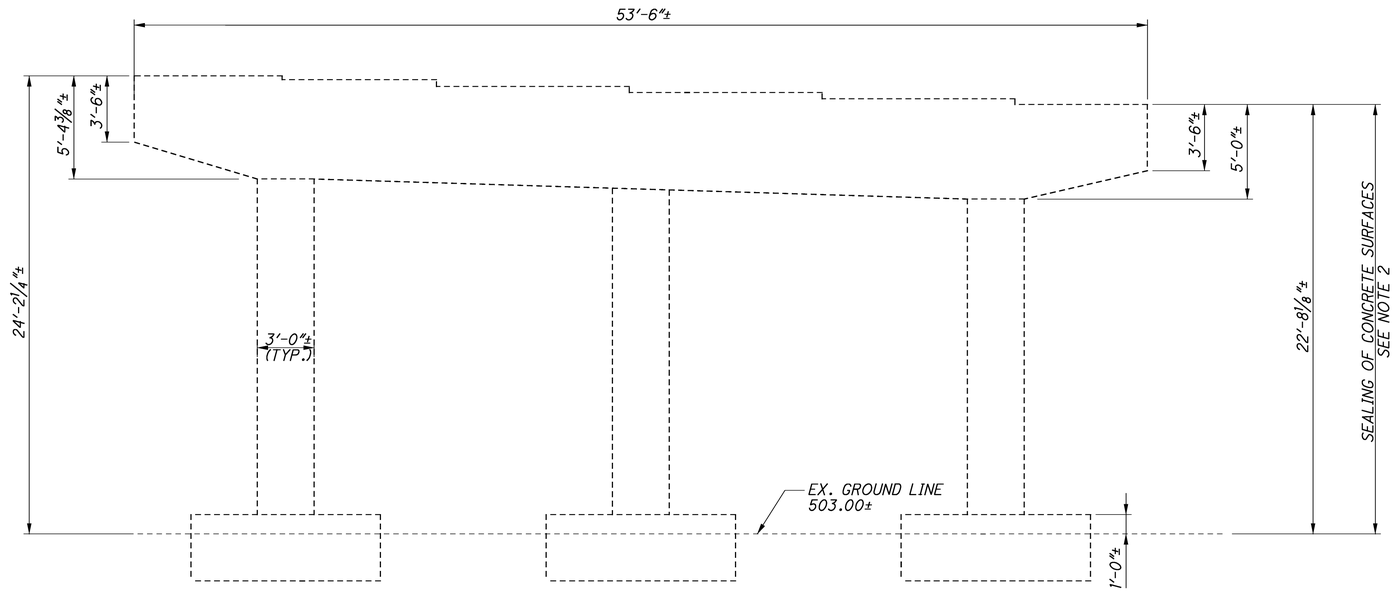
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 6S

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 6S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

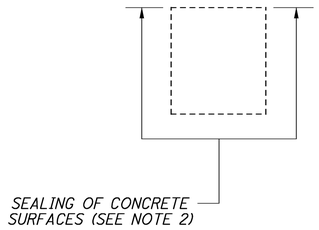
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

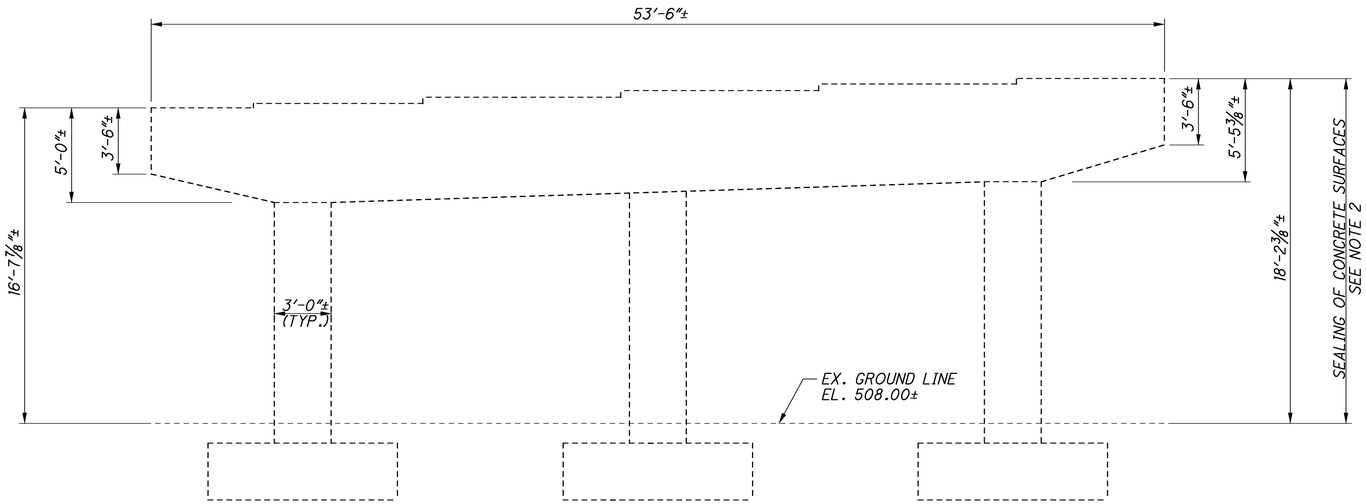
21 / 27

420
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI006.dgn 11/10/2010 11:41:23 AM mtreiheisel



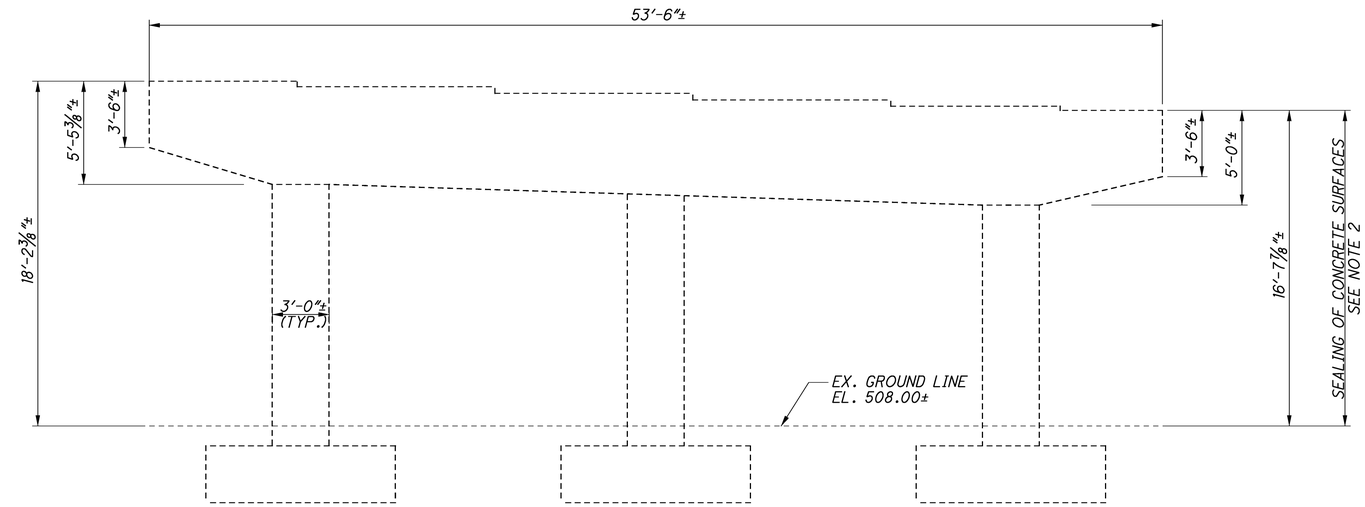
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 7N

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 7N

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005	

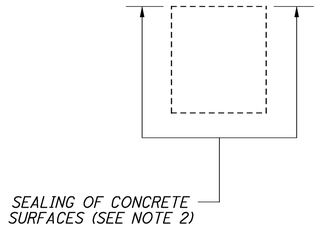
PIER DETAILS
HAM-50-1980L
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

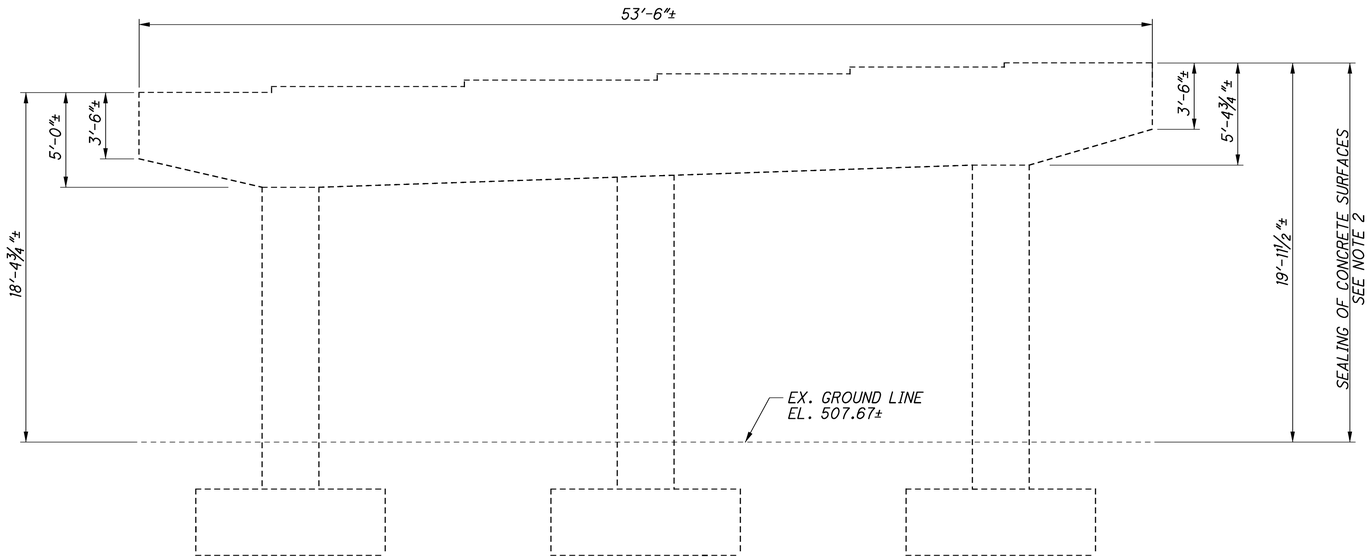
22 / 27

421
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980LPI007.dgn 11/10/2010 11:41:25 AM mtreiheisel



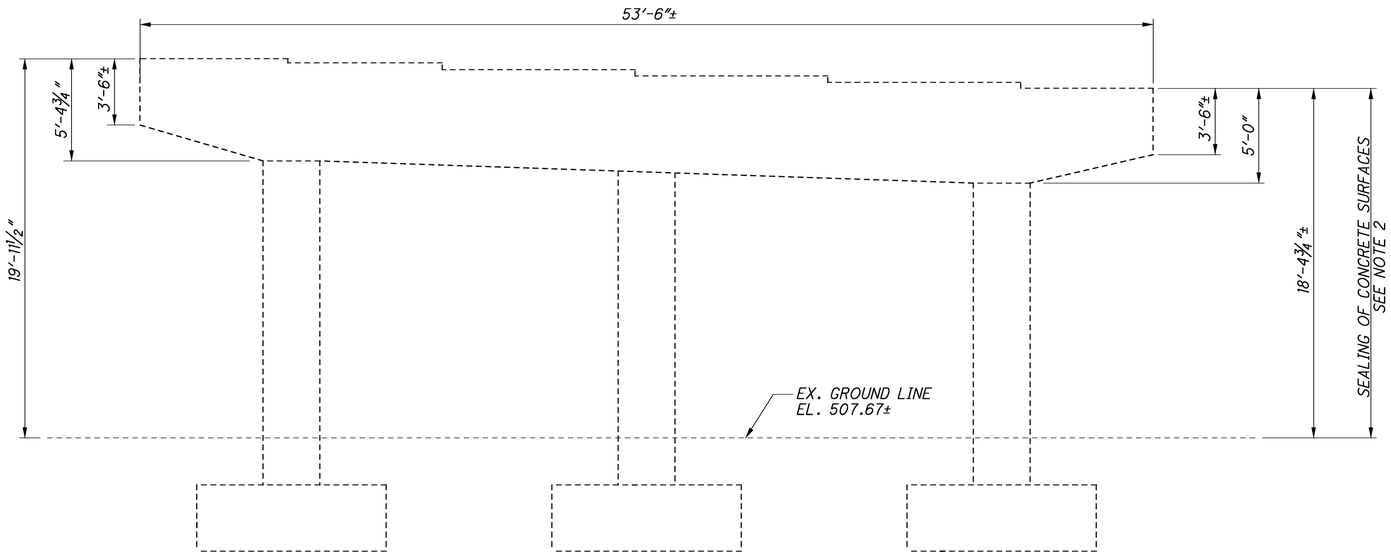
PIER CAP SEALING LIMITS



WEST ELEVATION - PIER 7S

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.



EAST ELEVATION - PIER 7S

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103064	

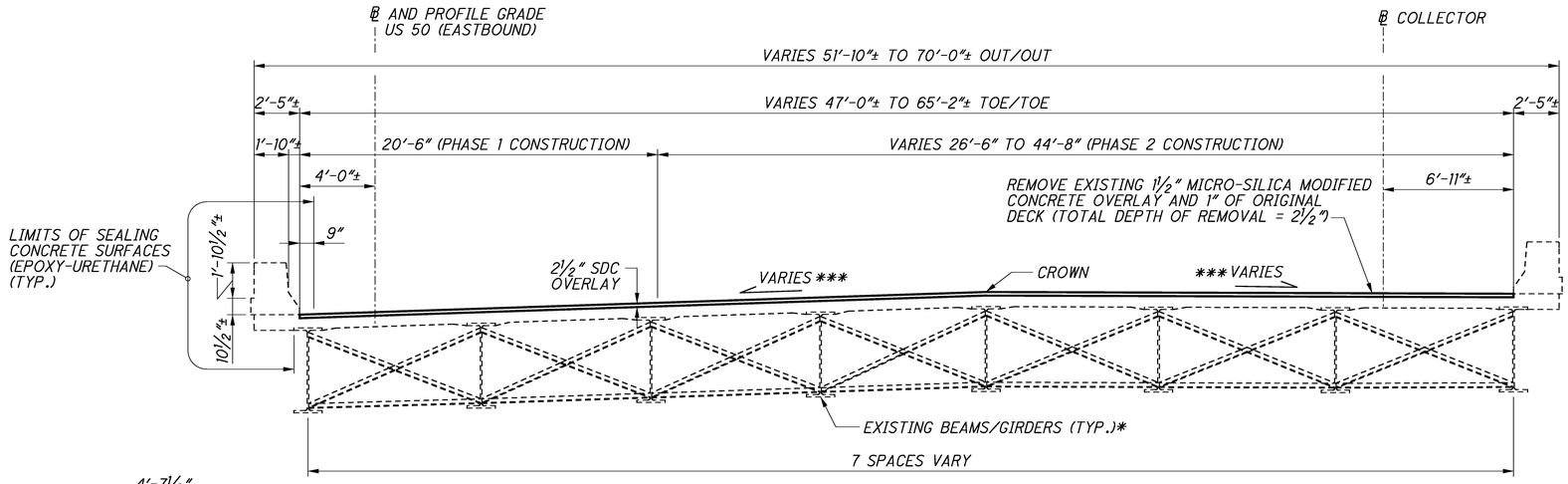
PIER DETAILS
HAM-50-1980R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

23 / 27

422
442

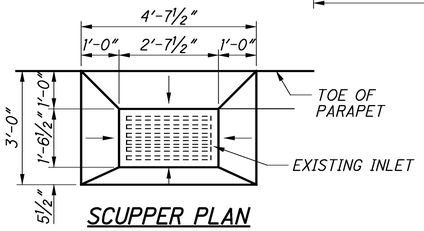
G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980RPI007.dgn 11/10/2010 11:41:26 AM mtreiheisel



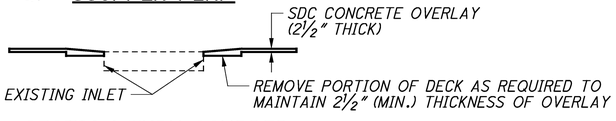
RIGHT BRIDGE TRANSVERSE SECTION

(EASTBOUND SPANS IS THRU 3S, LOOKING EAST)

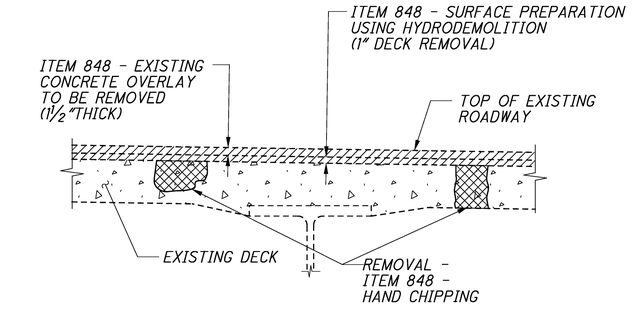
* WESTBOUND SPANS IN THRU 3N AND EASTBOUND SPANS IS THRU 3S ARE CONTINUOUS ROLLED BEAMS. WESTBOUND SPANS 4N THRU 8N AND EASTBOUND SPANS 4S THRU 8S ARE CONTINUOUS PLATE GIRDERS.



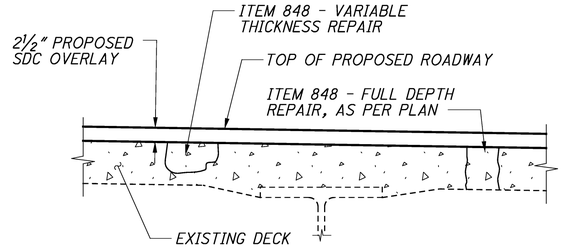
SCUPPER PLAN



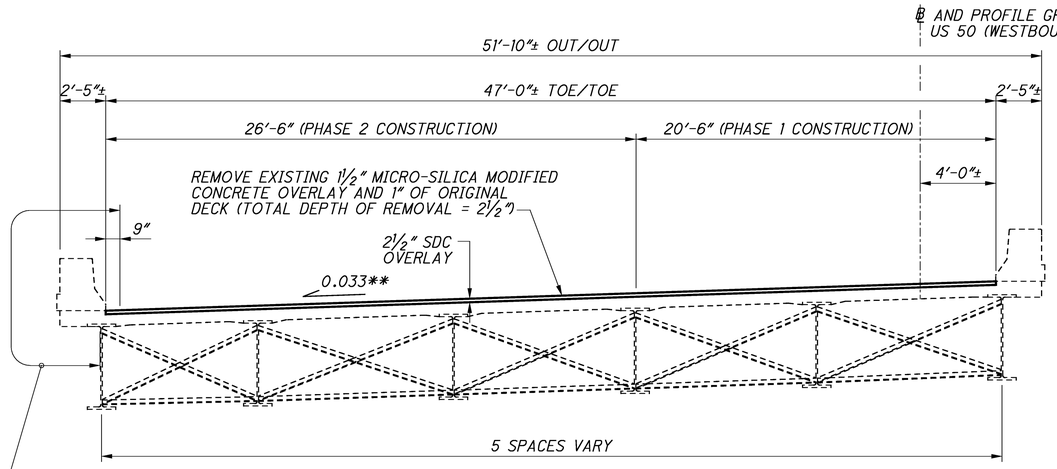
SECTION THRU SCUPPER



OVERLAY REMOVAL DETAIL

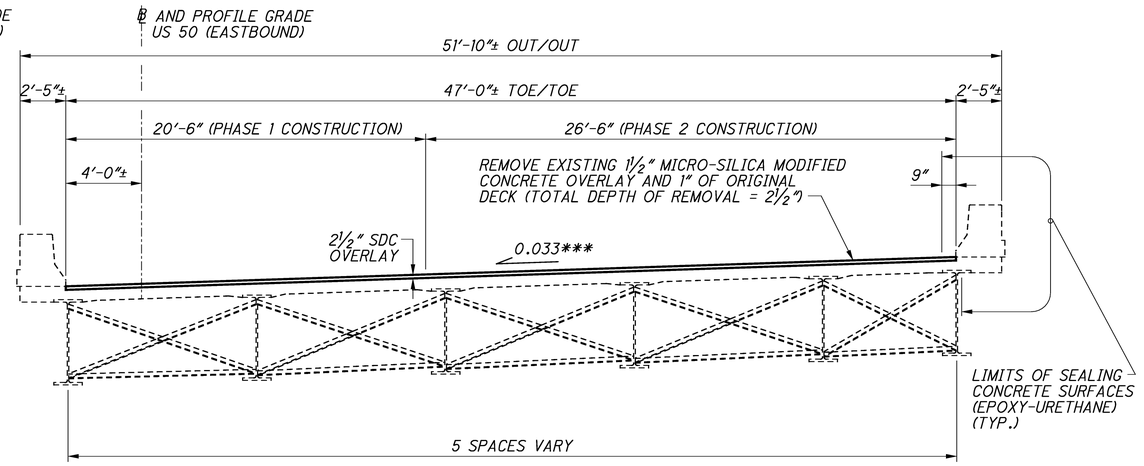


OVERLAY REPLACEMENT DETAIL



LEFT BRIDGE TRANSVERSE SECTION

(WESTBOUND SPANS 1N THRU 8N, LOOKING EAST)



RIGHT BRIDGE TRANSVERSE SECTION

(EASTBOUND SPANS 4S THRU 8S, LOOKING EAST)

LEGEND

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SDC OVERLAY USING HYDRODEMOLITION (2½" THICK)

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - HAND CHIPPING

SDC - SUPERPLASTICIZED CONCRETE OVERLAY

** SUPERELEVATION 0.033 FROM STA. 42+98.45 THRU SPAN 8N (WESTBOUND). VARIES AT OTHER LOCATIONS.

*** SUPERELEVATION 0.033 FROM STA. 43+91.66 TO STA. 48+20.37 (EASTBOUND). VARIES AT OTHER LOCATIONS.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		3103005 (U) 3103064 (R)	

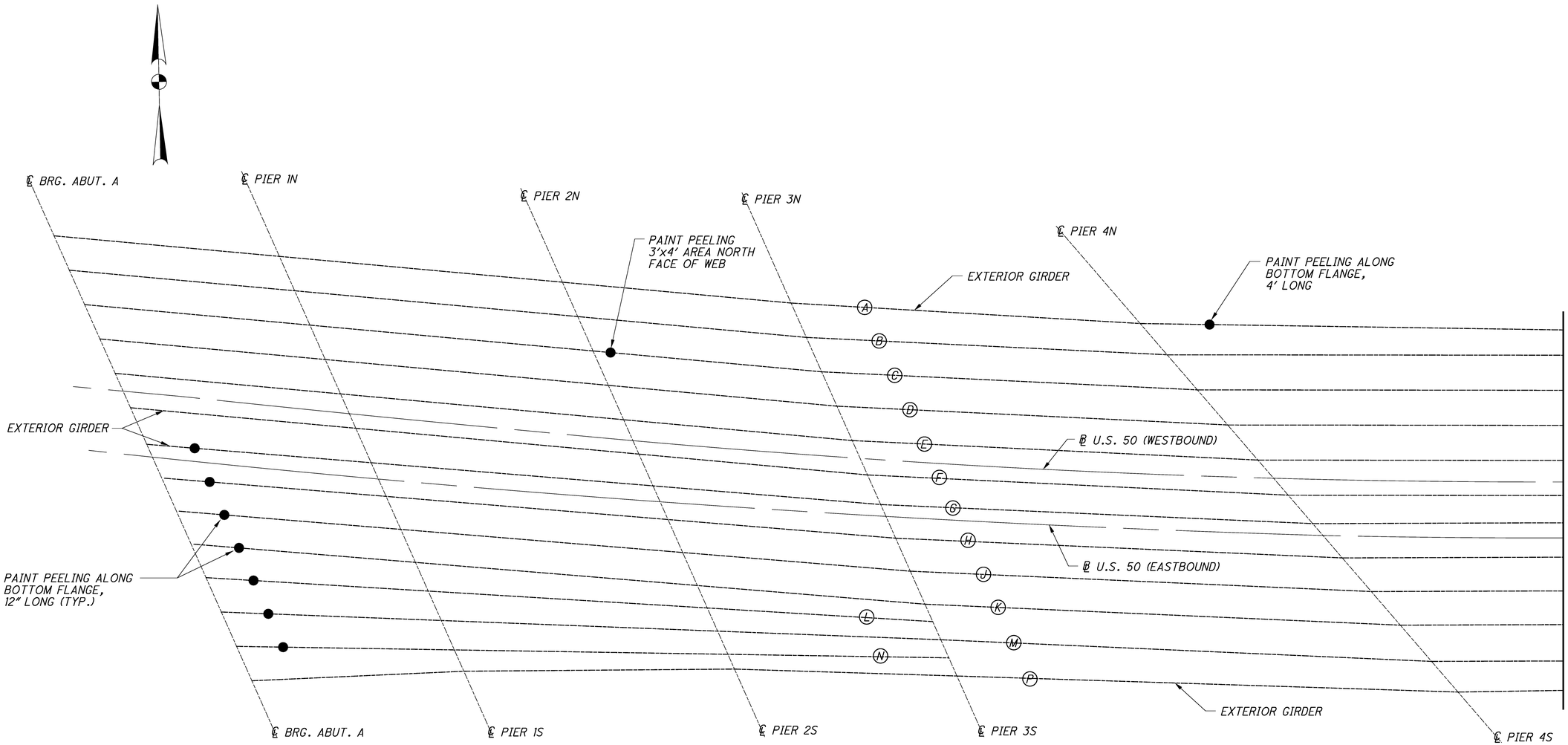
TRANSVERSE SECTION
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

24 / 27

423
442

C:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980CTS001.dgn 11/10/2010 11:41:27 AM mtreiheisel



PLAN

FIELD PAINTING OF DAMAGED STRUCTURAL STEEL AREAS = 20 SQ. FT. (WB)
FIELD PAINTING OF DAMAGED STRUCTURAL STEEL AREAS = 9 SQ. FT. (EB)

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJS		3103005/3103064	

SUPPERSTRUCTURE SPOT PAINTING PLAN - 1

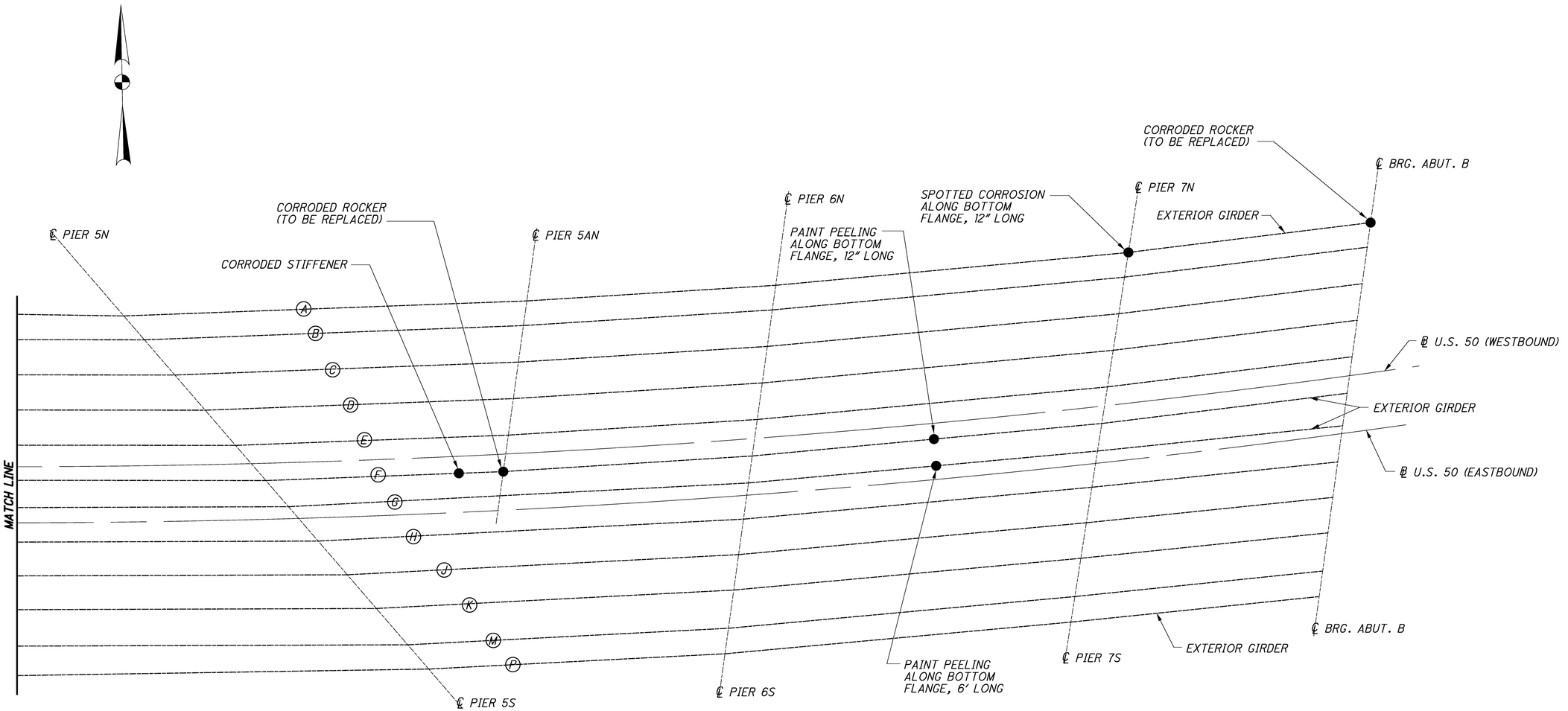
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

25/27

424/442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980M0001.dgn 11/10/2010 11:41:29 AM mtreihleisel



PLAN

FIELD PAINTING OF DAMAGED STRUCTURAL STEEL AREAS = 10 SQ. FT. (WB)
FIELD PAINTING OF DAMAGED STRUCTURAL STEEL AREAS = 9 SQ. FT. (EB)

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
TME/YSJ	MSW	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJS		3103005/3103064	

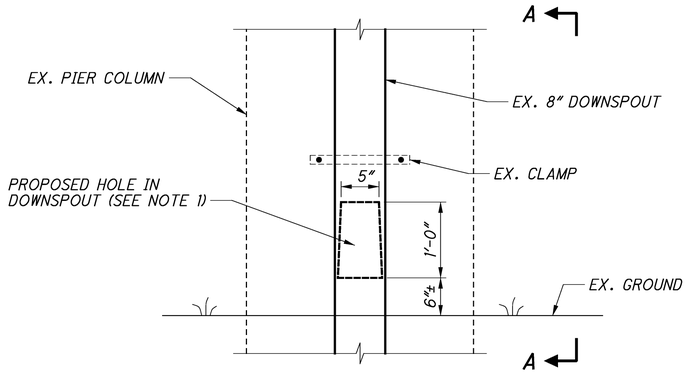
SUPPERSTRUCTURE SPOT PAINTING PLAN - 2
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

26 / 27

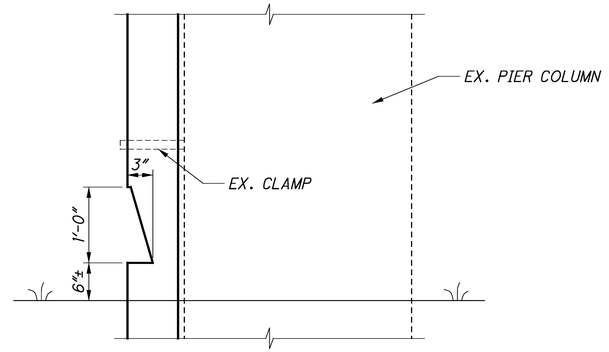
425
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980MD002.dgn 11/10/2010 11:41:30 AM mtneiheisel



DOWNSPOUT MODIFICATION DETAIL

ONE LOCATION AT PIERS 1N, 3N, 4N, 5N, AND 7N ON THE LEFT BRIDGE
ONE LOCATION AT PIERS 1S, 3S, 4S, 5S, AND 7S ON THE RIGHT BRIDGE



VIEW A-A

NOTES:

1. CUT HOLES IN EXISTING DOWNSPOUTS AS DIRECTED BY THE ENGINEER. WORK IS TO BE PAID FOR WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3103005/3103064	

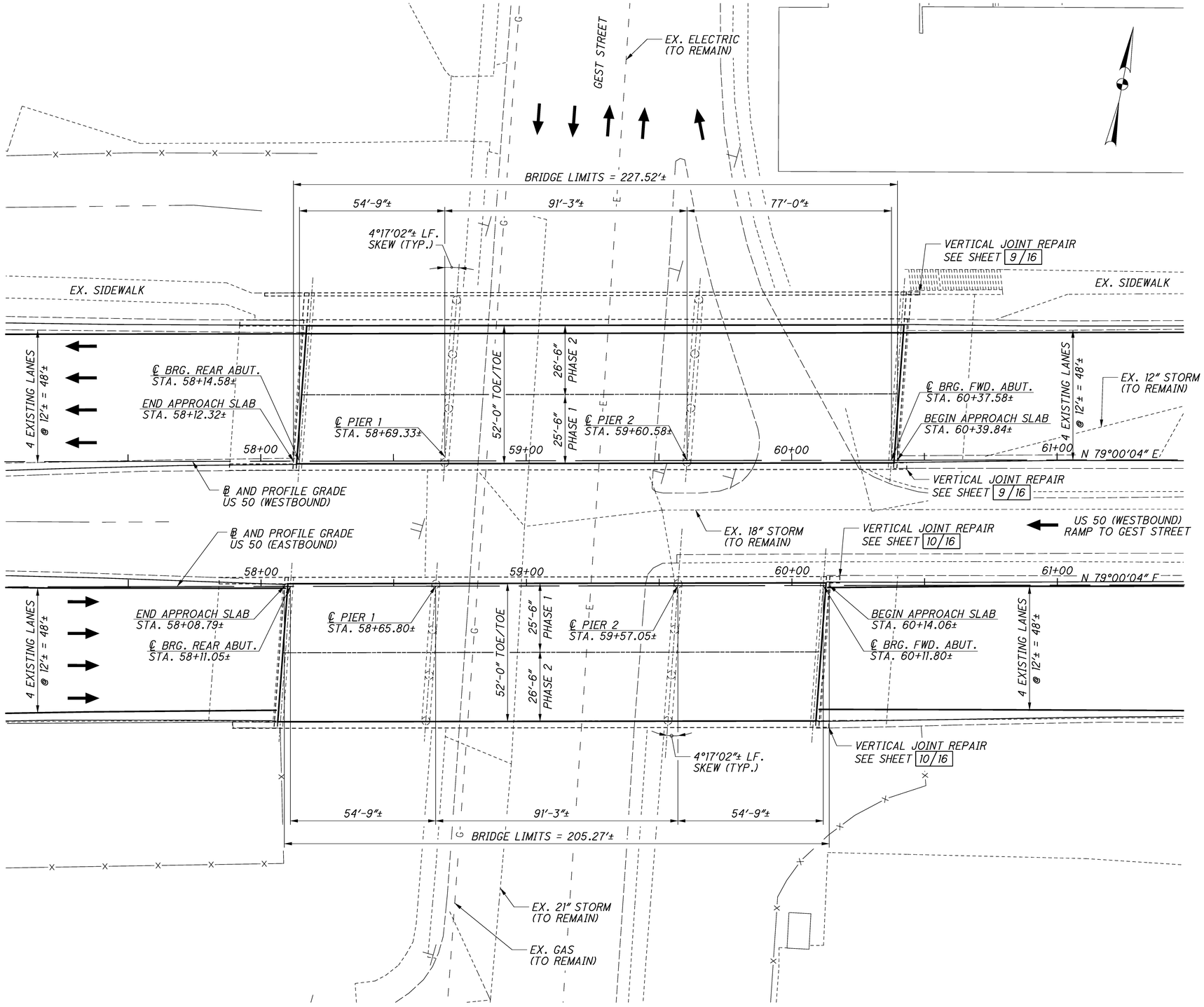
DOWNSPOUT MODIFICATION DETAILS
HAM-50-1980 L/R
US 50 OVER NSRR; CSRR; LINN STREET

HAM-50-19.03
PID No. 75736

27/27

426
442

G:\CN06\0011\Bridge\HAM-50-1980_OVER_RR_AND_LINN_ST\sheets\050_1980MD003.dgn 11/10/2010 11:41:31 AM mtreihleisel



PLAN

NOTES:

EXISTING UTILITIES TO REMAIN.

DESIGN TRAFFIC:
2011 ADT = 23230 2011 ADTT = 465
2031 ADT = 21190 2031 ADTT = 424
DIRECTIONAL DISTRIBUTION = 0.56

EXISTING STRUCTURE

TYPE: THREE SPAN CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 54'-9"±, 91'-3"±, 54'-9"± C/C BRG. (ALONG ℄ US 50 EB)
54'-9"±, 91'-3"±, 77'-0"± C/C BRG. (ALONG ℄ US 50 WB)

ROADWAY: 52'-0"± F/F CURB (EB & WB), 9'-0"± SIDEWALK (WB)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 1½" MICRO-SILICA MODIFIED CONCRETE OVERLAY

SKEW: 4°17'02"± LF.

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

STRUCTURAL FILE NUMBER: 3103129 (EASTBOUND)
3103099 (WESTBOUND)

DATE BUILT: 1963±

DISPOSITION: TO BE REHABILITATED

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING 1½" MICRO-SILCA MODIFIED CONCRETE OVERLAY AND 1" OF EXISTING DECK USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848, PLACE NEW 2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY ON THE EXISTING DECK, PATCH CONCRETE SURFACES AS PER ITEM 519, PAINT SUPERSTRUCTURE STEEL WITH SYSTEM OZEU, REFURBISH ABUTMENT BEARINGS, SEAL SUPERSTRUCTURE AND SUBSTRUCTURE WITH EPOXY URETHANE, FEDERAL COLOR NUMBER 17778, CLEAN BRIDGE DRAINAGE SYSTEM, INJECT VERTICAL EXPANSION JOINT BETWEEN NORTH RETAINING WALL AND EAST ABUTMENT OF EASTBOUND (RIGHT) STRUCTURE.

TYPE: THREE SPAN CONTINUOUS ROLLED BEAM WITH CONCRETE DECK AND SUBSTRUCTURE.

SPANS: 54'-9"±, 91'-3"±, 54'-9"± C/C BRG. (ALONG ℄ US 50 EB)
54'-9"±, 91'-3"±, 77'-0"± C/C BRG. (ALONG ℄ US 50 WB)

ROADWAY: 52'-0"± TOE/TOE PARAPET (EB & WB), 9'-0"± SIDEWALK (WB)

LOADING: CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING

WEARING SURFACE: 2½" SUPERPLASTICIZED DENSE CONCRETE

SKEW: 4°17'02"± LF.

APPROACH SLABS: AS-1-81 (25'-0" LONG)

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

STRUCTURAL FILE NUMBER: 3103129 (EASTBOUND)
3103099 (WESTBOUND)

COORDINATES: LONGITUDE 84°31'36"
LATITUDE 39°06'06"

DESIGN AGENCY: TranSystems, 4555 LAKE FOREST DRIVE, SUITE 640, CINCINNATI, OHIO 45242
DATE: 11/12/10
REVIEWED: RER
STRUCTURE FILE NUMBER: 3103099 (L) 3103129 (R)
DRAWN: JDG
REVISED:
DESIGNED: PJP
CHECKED: MSL

HAMILTON COUNTY
STA. 58+12.32±TO 60+39.84±(L)
STA. 58+08.79±TO 60+14.06±(R)

GENERAL PLAN
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

1 / 16

427 / 442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013GGP001.dgn 11/10/2010 11:41:33 AM mtneiheisel

STRUCTURE GENERAL NOTES

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

842	DATED	01-19-07
848	DATED	04-16-10

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPIRATION OFFICIALS, 17TH EDITION - 2002 AND THE O.D.O.T. BRIDGE DESIGN MANUAL.

DESIGN LOADING (BOTH STRUCTURES):

CF-2000-(57) ADEQUATE FOR AASHO ALTERNATIVE LOADING (EQUIVALENT TO AASHTO HS20-44 LOADING)

DECK PROTECTION METHOD:

2½" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
SEALING OF CONCRETE SURFACES

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

EXISTING STRUCTURE PLANS:

PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 8 OFFICE, 505 SOUTH SR 741 LEBANON, OHIO 45036 (PHONE: 800-831-2142)

MAINTENANCE OF TRAFFIC:

TRAFFIC WILL BE MAINTAINED DURING BRIDGE CONSTRUCTION. BRIDGE MUST BE BUILT IN ACCORDANCE WITH MAINTENANCE OF TRAFFIC GENERAL NOTES AND PLANS.

NON-USE OF ASBESTOS-CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 512 -SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

THE FINISH COAT COLOR FOR THE ABUTMENT, PIERS, AND PARAPETS SHALL BE FEDERAL COLOR NO. 17778, LIGHT NEUTRAL.

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN:

OUTSIDE FACE AND BOTTOM FLANGES OF THE FASCIA GIRDERS ARE TO BE PAINTED FEDERAL COLOR NUMBER 27038, (BLACK, 30% SHEEN). ALL REMAINING BRIDGE SUPERSTRUCTURE ELEMENTS ARE TO BE PAINTED FEDERAL COLOR NUMBER 10324 (DARK NEUTRAL).

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT

THE EXISTING VERTICAL EXPANSION JOINT BETWEEN THE ABUTMENT AND WINGWALL SHALL BE REPAIRED WITH POLYURETHANE FOAM AS INDICATED IN THE PLANS WITH THE MATERIAL PER SUPPLEMENTAL SPECIFICATION 842. THE JOINT SHALL BE THOROUGHLY CLEANED AS DIRECTED BY THE ENGINEER.

ITEM 516, REFURBISH BEARING DEVICES, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISHED BEARING DEVICES, AS PER PLAN.

ITEM 516 - BEARING DEVICE, ROCKER, AS PER PLAN:

EXISTING ROCKER BEARINGS TO BE REPLACED AS DIRECTED BY THE ENGINEER.

ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518, STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM:

THIS ITEM CONSISTS OF REMOVING ALL DIRT AND DEBRIS FROM THE ROADWAY DECK NEAR THE CURB AND MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, COLLECTION BOXES, HOPPERS, HORIZONTAL CONDUCTORS, DOWNSPOUTS, UNDERGROUND STORM SEWERS AND MANHOLES TO THE CITY STORM SEWERS OR PIPE OUTLET, AFTER THE DIRT AND DEBRIS ARE REMOVED. THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH CLEAN WATER MAKING CERTAIN THAT WATER FLOWS SMOOTHLY TO ITS OUTLET.

CONTRACTOR SHALL DETERMINE THE EXTENT OF WORK REQUIRED FOR THIS ITEM BY EXAMINATION OF EXISTING BRIDGE PLANS AND BY FIELD INVESTIGATION.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEM. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION PRIOR TO BEGINNING WORK AND AGAIN AT THE COMPLETION OF THE WORK. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

ALL DIRT AND DEBRIS SHALL BE REMOVED FORM THE BRIDGE SITE AND PROPERLY DISPOSED OF.

THE CLEANOUTS OF THE BRIDGE DRAINAGE SYSTEM SHALL NOT BEGIN UNTIL ALL OTHER WORK UNDER THIS CONTRACT IS COMPLETED, INCLUDING PAINTING OF STRUCTURAL STEEL AND SEALING OF CONCRETE SURFACE.

THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE CLEANING AND CLEARING OF THE BRIDGE DRAINAGE SYSTEM SHALL BE INCLUDED IN THE PRICE FOR ITEM 518- STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION:

THIS ITEM CONSISTS OF CUTTING HOLES IN DOWNSPOUTS AS DIRECTED BY THE ENGINEER TO ALLOW FOR DRAINAGE OF WATER ONTO THE GROUND SHOULD THE UNDERGROUND DRAINAGE PIPE(S) BECOME CLOGGED IN THE FUTURE.

THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF LOCATIONS TO BE MODIFIED. THE COST OF ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO PERFORM THIS WORK IS INCLUDED WITH THE ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN:

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

THE PATCHING QUANTITIES SHOWN IN ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 25% TO ACCOUNT FOR FUTURE DETERIORATION.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

ABUT. - ABUTMENT
ADT - AVERAGE DAILY TRAFFIC
ADTT - AVERAGE DAILY TRUCK TRAFFIC
APPROX. - APPROXIMATE
ASTM - AMERICAN SOCIETY OF TESTING AND MATERIALS

B.F. - BACK FACE
BOT. - BOTTOM
BRGS. - BEARINGS

℄ - CENTERLINE
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONTRUCTION JOINT
CLR. - CLEARANCE
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. - CONSTRUCTION

DIA./ϕ - DIAMETER
DWG. - DRAWING

E.F. - EACH FACE
E/P - EDGE OF PAVEMENT
E/S - EDGE OF SHOULDER
EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING

F.A. - FORWARD ABUTMENT
F.F. - FRONT FACE
F/F - FACE TO FACE
FTG. - FOOTING
FT/FT - FOOT PER FOOT
FWD. - FORWARD

IR - INTERSTATE ROUTE

JT. - JOINT

LT. - LEFT

MAX. - MAXIMUM
MIN. - MINIMUM
MOT - MAINTENANCE OF TRAFFIC

NB - NORTHBOUND
N.C.P.P. - NON-PERFORATED CORRUGATED PLASTIC PIPE

O/O - OUT TO OUT

P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER

R.A. - REAR ABUTMENT
RT. - RIGHT

SB - SOUTHBOUND
S.O. - SERIES OF
SPA. - SPACES OR SPACING
STA. - STATION
STD. - STANDARD
STR. - STRAIGHT

TEMP. - TEMPORARY
T/T - TOE TO TOE
TYP. - TYPICAL

VERT. - VERTICAL

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099/3103129	

GENERAL NOTES
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

2 / 16

428
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CGN001.dgn 11/10/2010 11:41:35 AM mtreiheisel

CALCULATED BY: SK

ESTIMATED QUANTITIES - HAM-50-2013L - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CHECKED BY: LYH

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
512	10100	1453	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	290	264	899	38	
512	10600	42	FT	CONCRETE REPAIR BY EPOXY INJECTION	34	8			
514	00050	20602	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			20602		
514	00056	20602	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			20602		
514	00060	20602	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			20602		
514	00067	20602	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			20602		2
514	00504	30	MAN HR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			30		
514	10000	12	EACH	FINAL INSPECTION REPAIR			12		
516	14600	34	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT				34	
516	45305	16	EACH	REFURBISH BEARING DEVICES, AS PER PLAN			16		2
516	46201	1	EACH	BEARING DEVICE, ROCKER, AS PER PLAN			1		2
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		2
518	62200	4	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				4	2
518	62200	4	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				4	2
519	11101	78	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	62	16			2
848	10200	1300	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			1300		
848	20000	1300	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			1300		
848	30200	81	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			81		
848	50000	130	SQ YD	HAND CHIPPING			130		
848	50100	LUMP		TEST SLAB			LUMP		
848	50200	4	CU YD	FULL DEPTH REPAIR			4		
848	50320	1300	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=1½") NOMINAL THICKNESS			1300		
848	50340	500	SQ YD	REMOVAL DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			500		

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CEQ001.dgn 11/10/2010 11:41:37 AM mtneiheisel

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	ZHM	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099	

ESTIMATED QUANTITIES
HAM-50-2013L
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

CALCULATED BY: SK

ESTIMATED QUANTITIES - HAM-50-2013R - FUNDING: DISTRICT 8'S PRESERVATION ALLOCATION-BRDG NHS

CHECKED BY: LYH

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	SEE SHEET NO.
512	10100	1097	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	350	239	508		
512	10600	68	FT	CONCRETE REPAIR BY EPOXY INJECTION	68				
514	00050	16264	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			16264		
514	00056	16264	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			16264		
514	00060	16264	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			16264		
514	00067	16264	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			16264		2
514	00504	24	MAN HR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			24		
514	10000	10	EACH	FINAL INSPECTION REPAIR			10		
516	14600	39	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: REPAIR VERTICAL SUBSTRUCTURE JOINT				39	
516	45305	14	EACH	REFURBISH BEARING DEVICES, AS PER PLAN			14		2
516	46201	1	EACH	BEARING DEVICE, ROCKER, AS PER PLAN			1		2
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		2
518	62200	3	EACH	STRUCTURE DRAINAGE, MISC.: CLEANING BRIDGE DRAINAGE SYSTEM				3	2
518	62200	3	EACH	STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION				3	2
519	11101	36	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	26	10			2
848	10200	1172	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			1172		
848	20000	1172	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			1172		
848	30200	81	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			81		
848	50000	130	SQ YD	HAND CHIPPING			130		
848	50100	LUMP		TEST SLAB			LUMP		
848	50200	3	CU YD	FULL DEPTH REPAIR			3		
848	50320	1172	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (T=1½") NOMINAL THICKNESS			1172		
848	50340	500	SQ YD	REMOVAL DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			500		

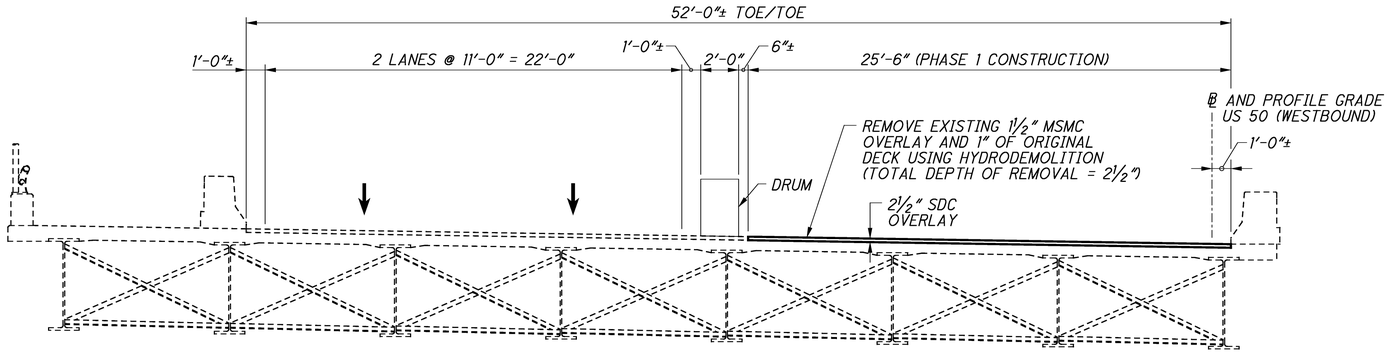
V:\DGN\HAM-20082\Part 2\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CEQ002.dgn 07-JAN-2011 11:05AM tscanlon

DESIGN AGENCY
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016
RPM ENGINEERS

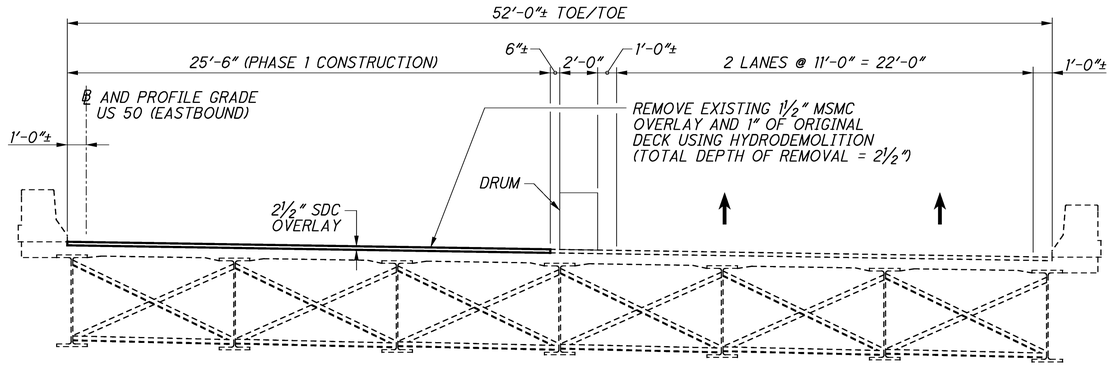
DESIGNED SK | DRAWN ZHM | REVIEWED KVB | DATE 11/12/10
CHECKED LYH | REVISED | STRUCTURE FILE NUMBER 3103129

ESTIMATED QUANTITIES
HAM-50-2013R
US 50 OVER GEST STREET

HAM-50-19.03
PID No. 75736



LEFT BRIDGE PHASE 1
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE PHASE 1
(EASTBOUND, LOOKING EAST)

LEGEND:

SDC - SUPERPLASTICIZED DENSE CONCRETE
MSMC - MICOR-SILICA MODIFIED CONCRETE

SEQUENCE OF CONSTRUCTION

PHASE 1

1. INSTALL DRUMS ON BRIDGE DECKS AS SHOWN AND BEGIN PHASE 1 MAINTENANCE OF TRAFFIC.
2. REMOVE EXISTING CONCRETE OVERLAY (1½" NORMAL), AND 1" OF THE ORIGINAL DECK TO PHASE 1 CONSTRUCTION LIMITS USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848.
3. PLACE NEW 2½" SDC OVERLAY TO PHASE 1 CONSTRUCTION LIMITS PER SUPPLEMENTAL SPECIFICATION 848.
4. SEAL EXISTING BARRIERS WITH EPOXY-URETHANE SEALANT.

PHASE 2

5. RELOCATE DRUMS AS SHOWN IN PHASE 2. REROUTE TRAFFIC AS SHOWN.
6. REMOVE EXISTING MSMC OVERLAY (1½" NORMAL), AND 1" OF THE ORIGINAL DECK TO PHASE 2 CONSTRUCTION LIMITS USING HYDRODEMOLITION PER SUPPLEMENTAL SPECIFICATION 848.
7. PLACE NEW 2½" SDC OVERLAY TO PHASE 2 CONSTRUCTION LIMITS PER SUPPLEMENTAL SPECIFICATION 848.
8. SEAL EXISTING BARRIERS AND SIDEWALK WITH EPOXY-URETHANE SEALANT.
9. REMOVE DRUMS AND REROUTE TRAFFICE TO FINAL CONFIGURATION.
10. PATCH AND SEAL SUBSTRUCTURE CONCRETE SURFACES.
11. CLEAN BRIDGE DRAINAGE SYSTEM.

NOTES:

1. DRUMS SHALL BE INSTALLED AS PER ROADWAY DRAWINGS AND APPLICABLE ODOT STANDARD MAINTENANCE OF TRAFFIC DRAWINGS.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103068 (L) 3103129 (R)	

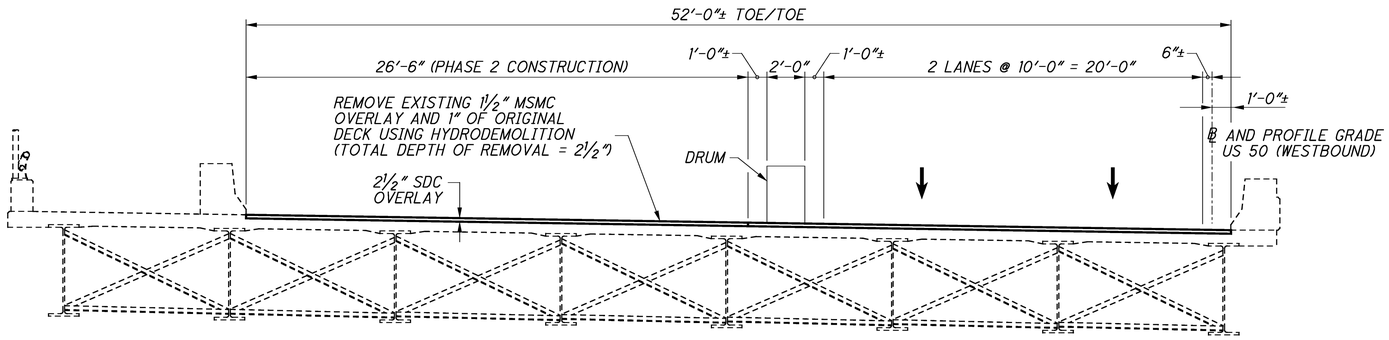
PHASE 1 CONSTRUCTION DETAILS
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

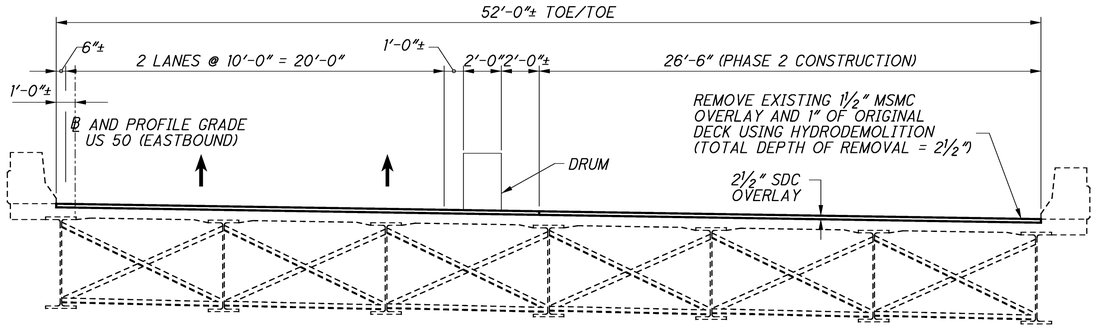
5 / 16

431
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CPC002.dgn 11/10/2010 11:41:40 AM mtreinerisel



LEFT BRIDGE PHASE 2
(WESTBOUND, LOOKING EAST)



RIGHT BRIDGE PHASE 2
(EASTBOUND, LOOKING EAST)

LEGEND:

SDC - SUPERPLASTICIZED DENSE CONCRETE
MSMC - MICRO-SILICA MODIFIED CONCRETE

NOTES:

1. FOR SEQUENCE OF CONSTRUCTION SEE SHEET 5/16

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3100068 (U) 3103129 (R)	

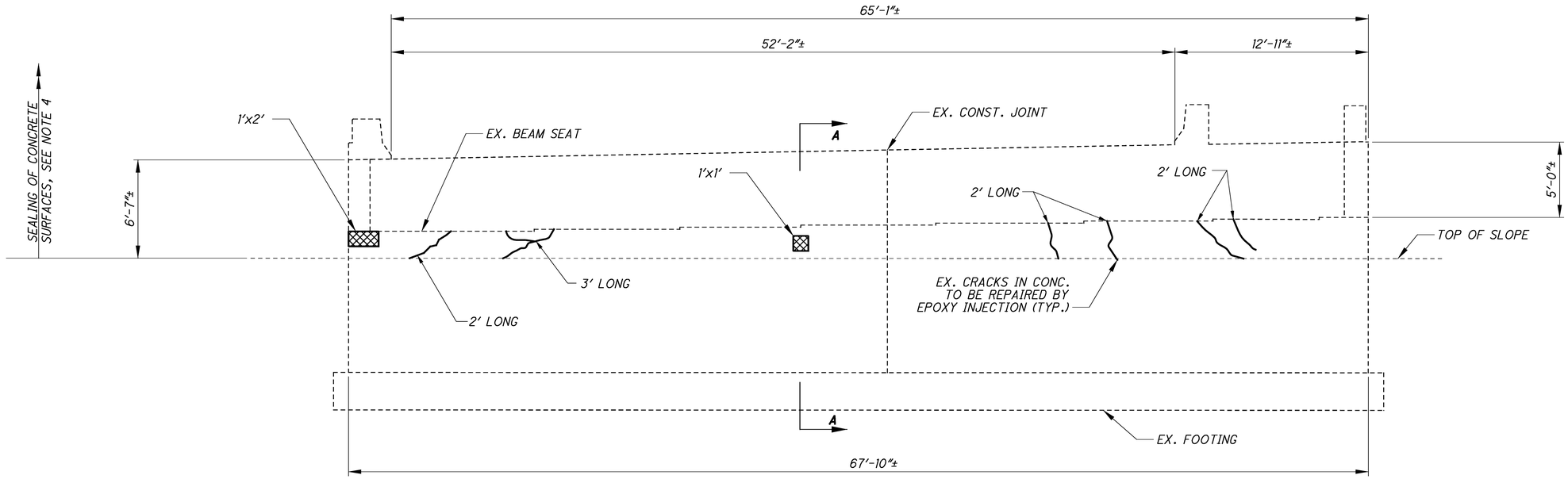
PHASE 2 CONSTRUCTION DETAILS
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

6 / 16

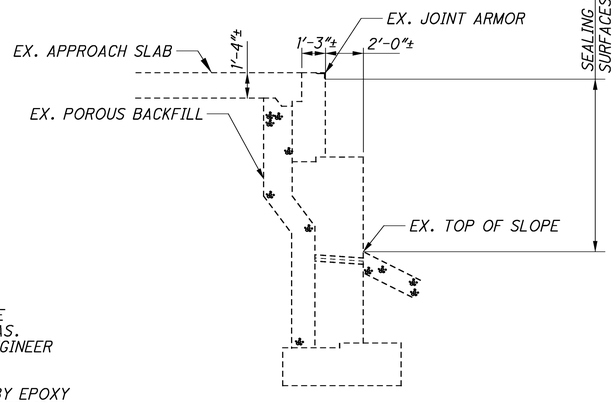
432
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CPC001.dgn 11/10/2010 11:41:41 AM mtreiheisel



ELEVATION - REAR ABUTMENT

LEFT BRIDGE
(WESTBOUND)



SECTION A-A

LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
REAR ABUTMENT	3	13

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.
5. SEE SHEET 8/16 FOR WINGWALL SECTION.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099	

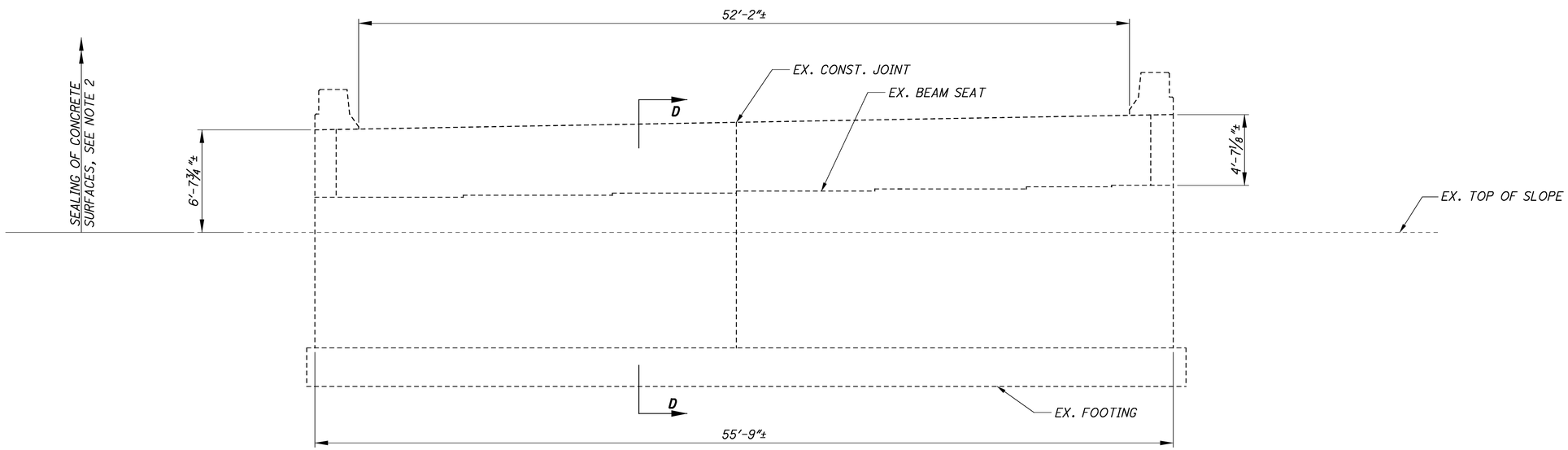
REAR ABUTMENT DETAILS
HAM-50-2013L
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

7 / 16

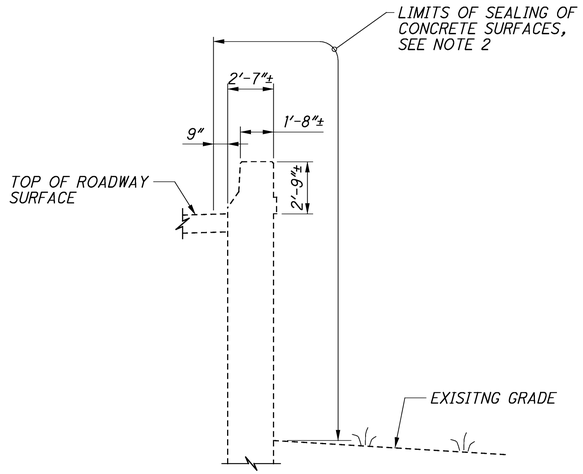
433
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013LAR001.dgn 11/10/2010 11:41:42 AM mtneiheisel

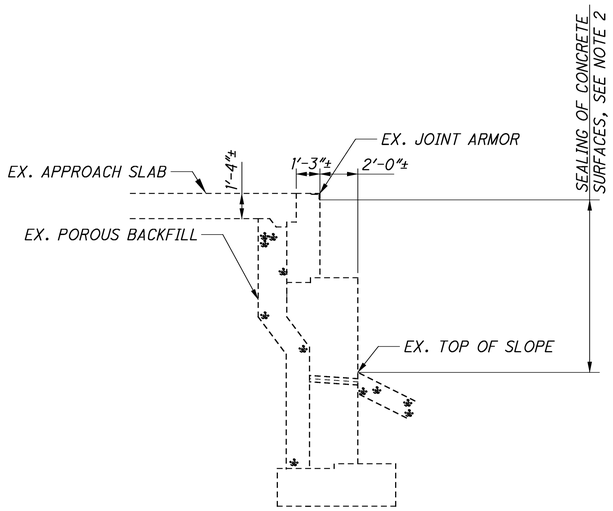


ELEVATION - REAR ABUTMENT

RIGHT BRIDGE
(EASTBOUND)



TYPICAL WINGWALL SEALING DETAILS



SECTION D-D

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103129	

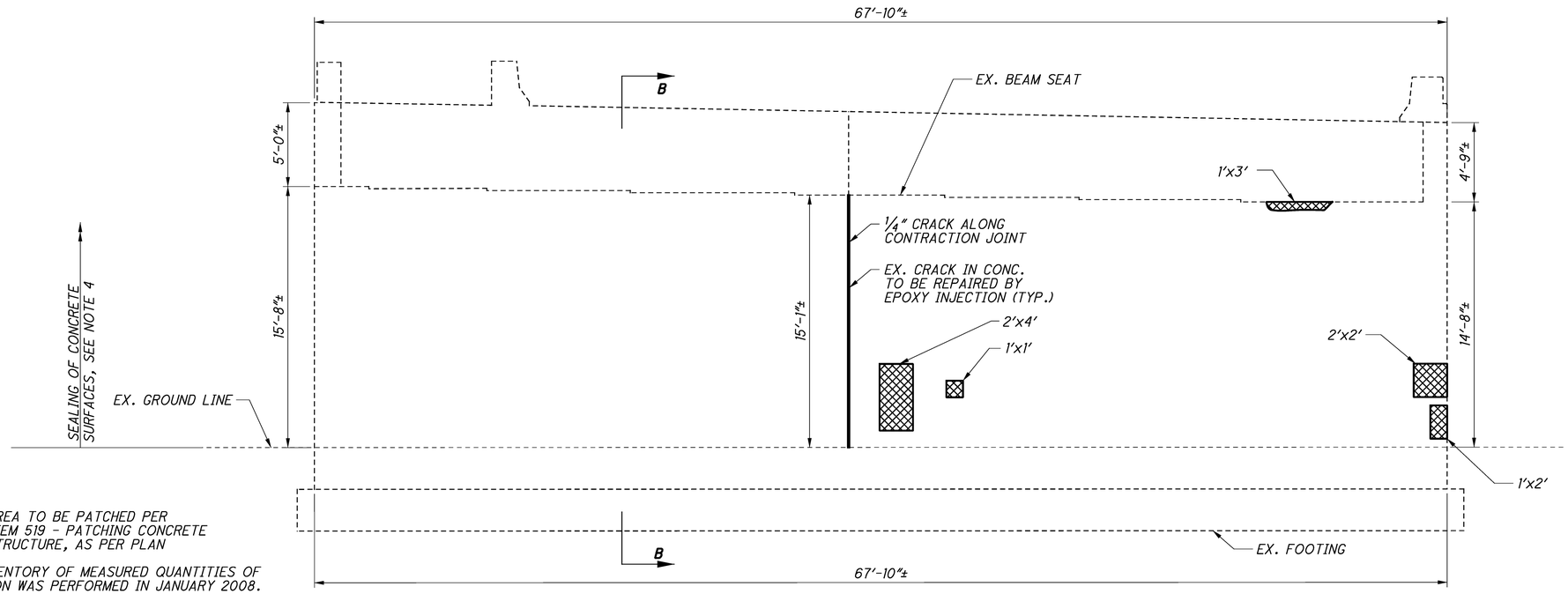
REAR ABUTMENT DETAILS
HAM-50-2013R
US 50 OVER GEST STREET

HAM-50-19.03
PID No. 75736

8 / 16

434
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013RAR001.dgn 11/10/2010 11:41:44 AM mtneiheisel



LEGEND

AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

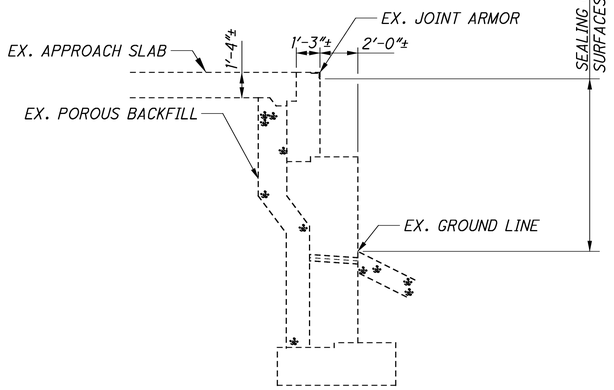
ELEVATION - FORWARD ABUTMENT

LEFT BRIDGE
(WESTBOUND)

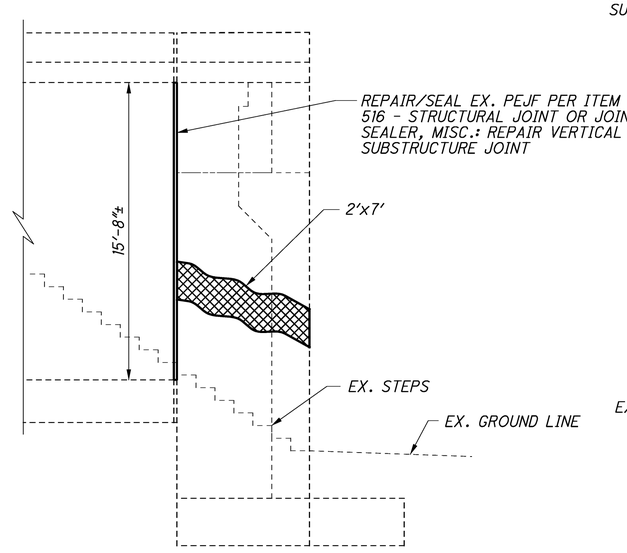
NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.
5. FOR WINGWALL SECTION, SEE SHEET 8/16.

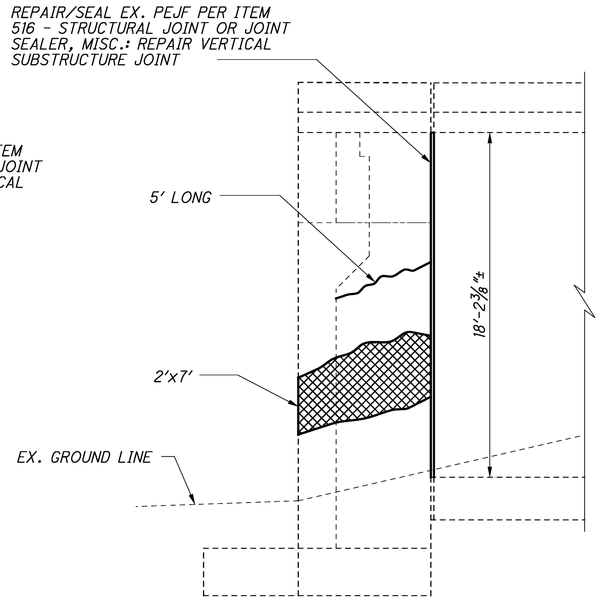
SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
FORWARD ABUT.	46	21



SECTION B-B



NORTH WINGWALL ELEVATION



SOUTH WINGWALL ELEVATION

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099	

FORWARD ABUTMENT DETAILS
HAM-50-2013L
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

9 / 16

435
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013LAF001.dgn 11/10/2010 11:41:45 AM mtreihleisel

LEGEND

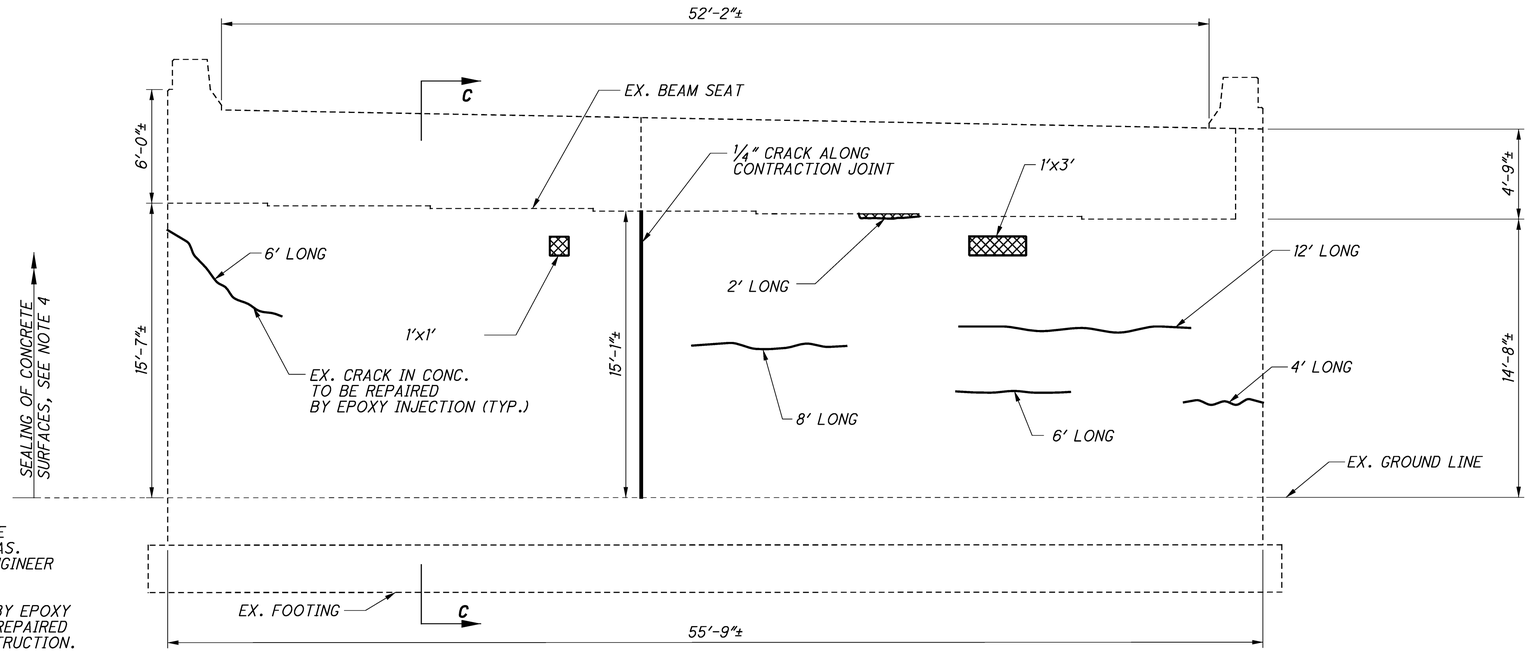
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
FORWARD ABUT.	21	68

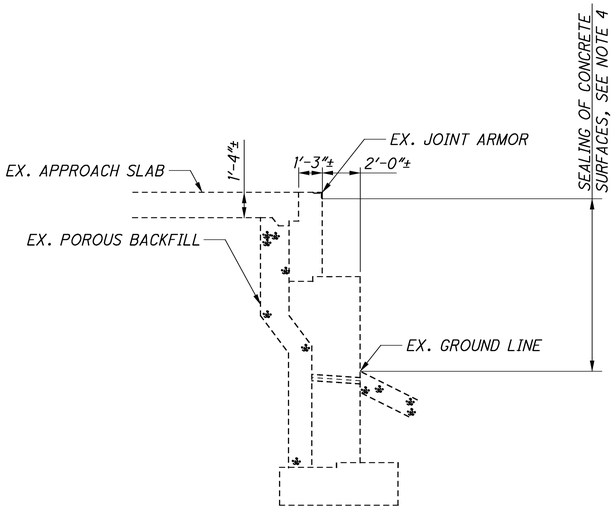
NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
3. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
4. SEAL ALL EXPOSED CONCRETE SURFACE AREAS OF ABUTMENT, WINGWALLS, AND BACKWALL AS SHOWN ON THE PLANS WITH EPOXY-URETHANE.
5. FOR WINGWALL SECTION, SEE SHEET 8/16.

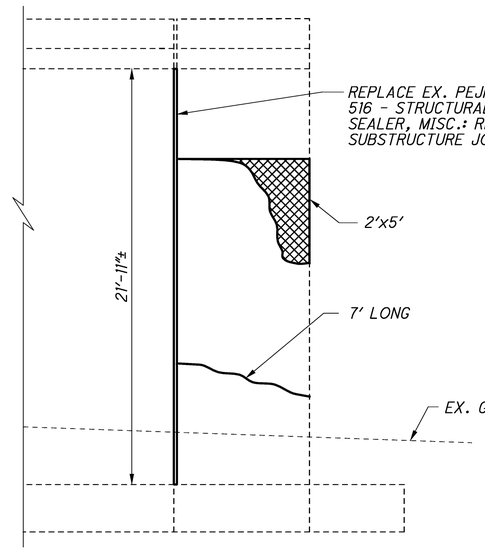


ELEVATION - FORWARD ABUTMENT

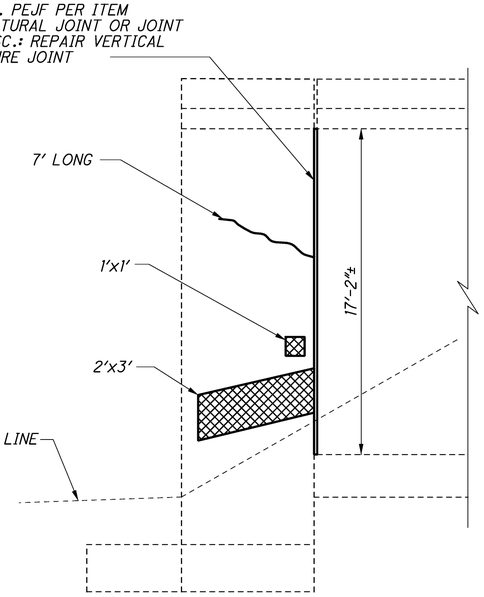
RIGHT BRIDGE
(EASTBOUND)



SECTION C-C



NORTH WINGWALL ELEVATION



SOUTH WINGWALL ELEVATION

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103129	

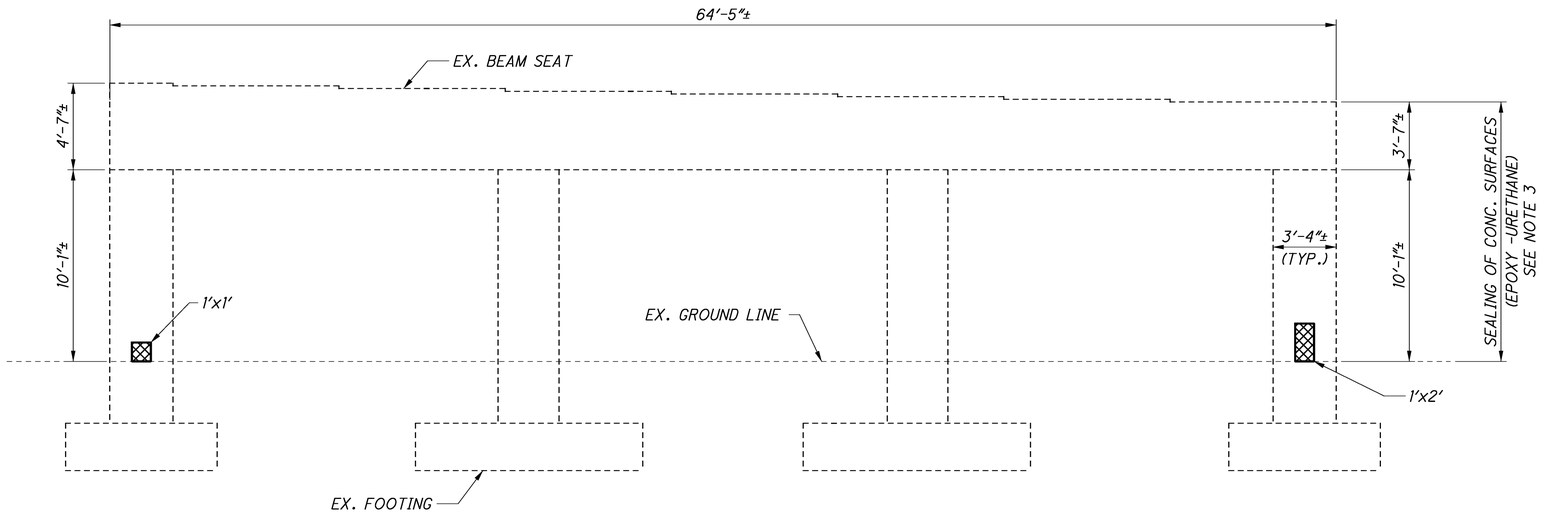
FORWARD ABUTMENT DETAILS
HAM-50-2013R
US 50 OVER GEST STREET

HAM-50-19.03
PID No. 75736

10 / 16

436
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013RAF001.dgn 11/10/2010 11:41:46 AM mtneihisel

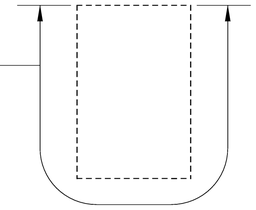


LEGEND

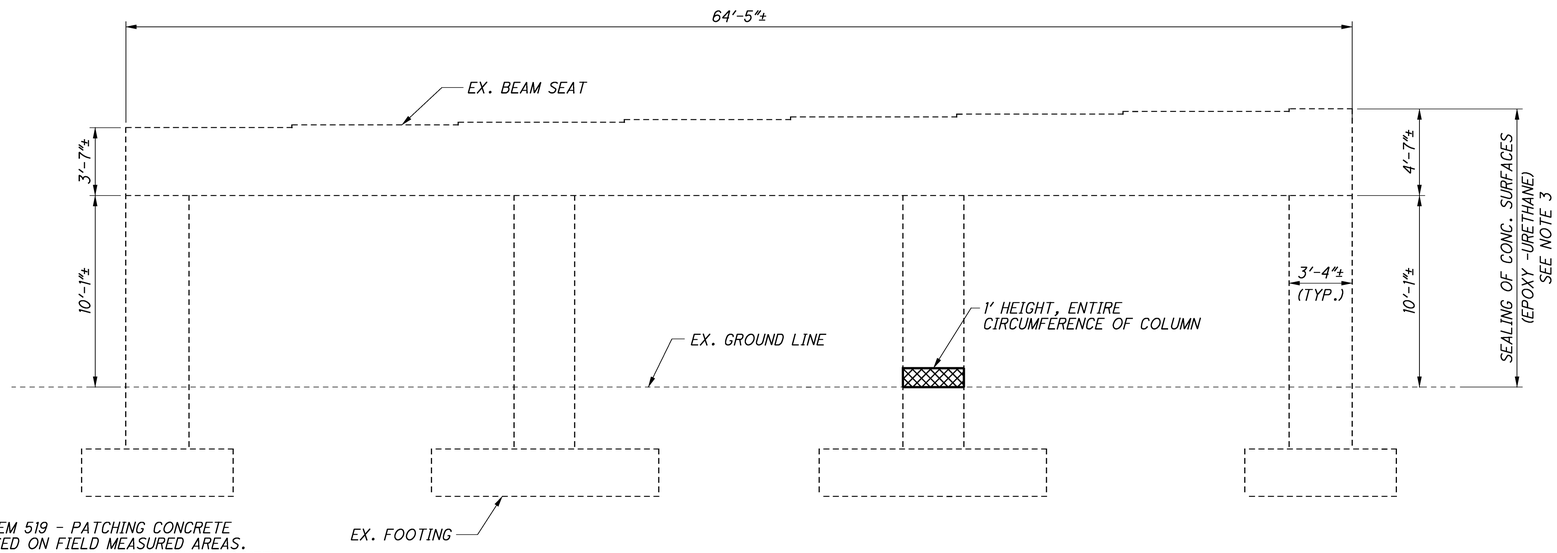
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

WEST ELEVATION - PIER 1L



PIER CAP SEALING LIMITS



EAST ELEVATION - PIER 1L

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT^2)	EPOXY INJECTION (FT)
WEST 1L	3	
EAST 1L	10	

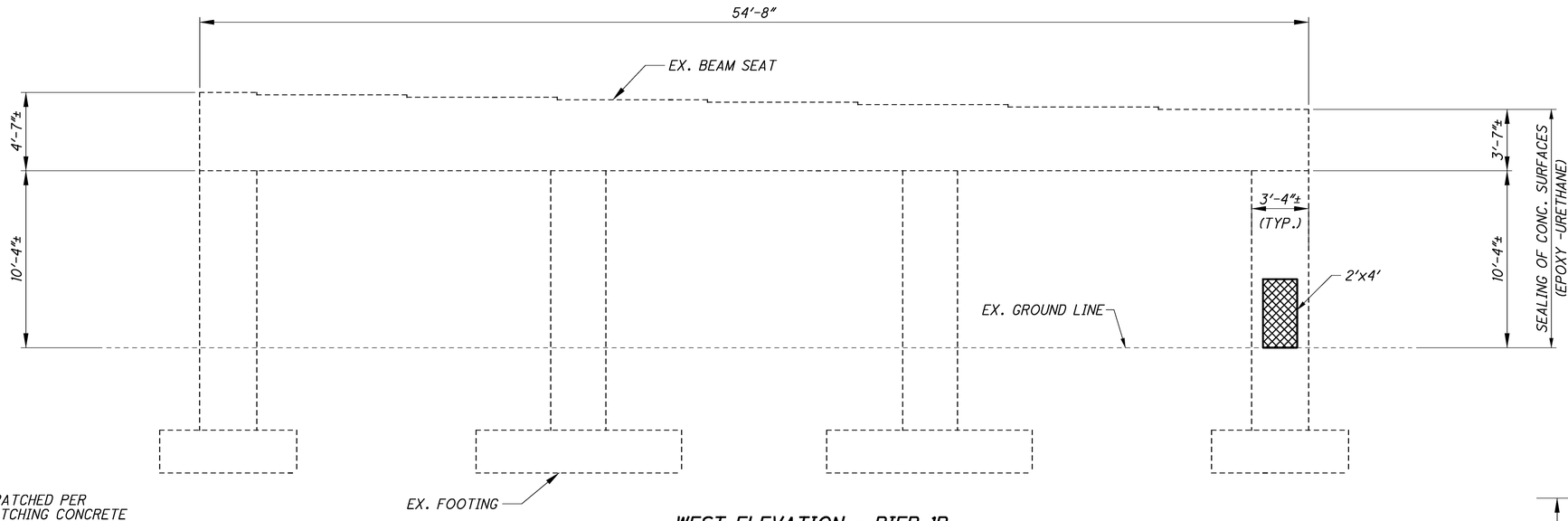
DESIGN AGENCY
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016
RPM ENGINEERS

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099	

PIER 1L DETAILS
HAM-50-2013L
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013LPI001.dgn 11/10/2010 11:41:48 AM mtneihetsel



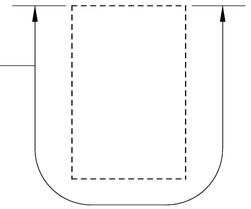
WEST ELEVATION - PIER 1R

LEGEND

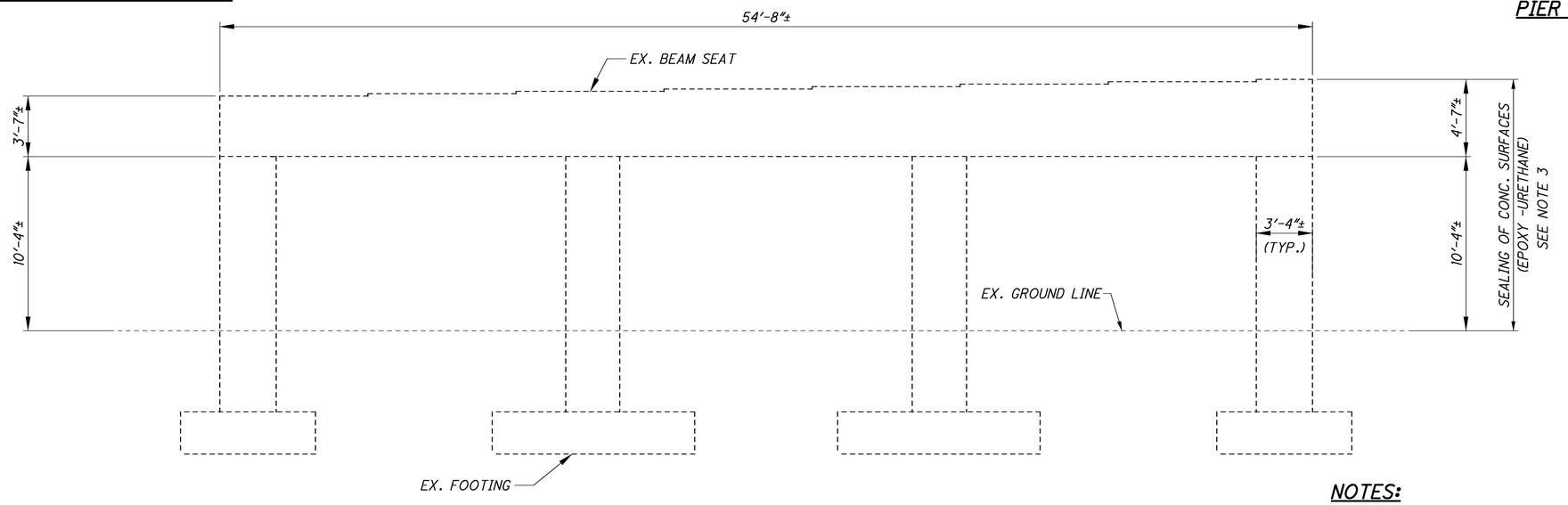
AREA TO BE PATCHED PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 1R	8	
EAST 1R		



PIER CAP SEALING LIMITS



EAST ELEVATION - PIER 1R

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN, IS BASED ON FIELD MEASURED AREAS. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.

DESIGN AGENCY
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103129	

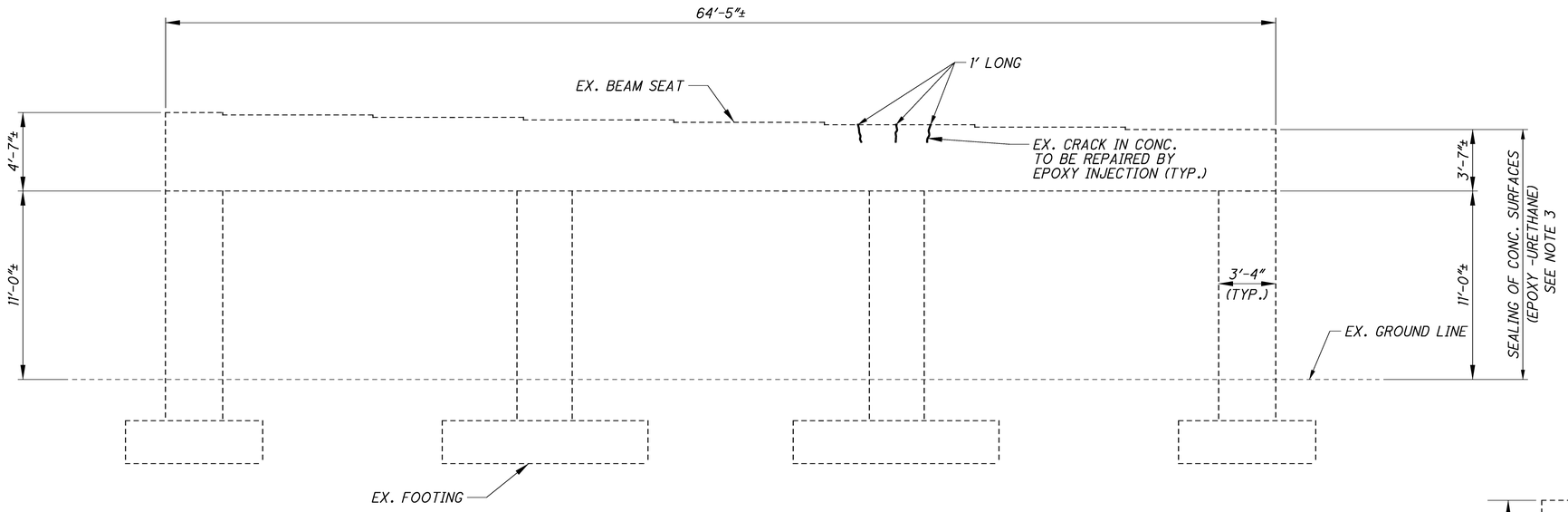
PIER 1R DETAILS
HAM-50-2013R
US 50 OVER GEST STREET

HAM-50-19.03
PID No. 75736

12 / 16

438
442

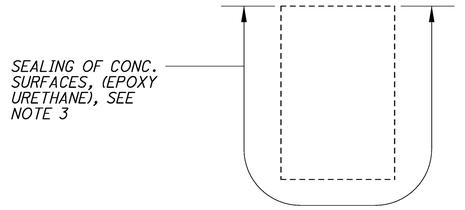
G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013RP1001.dgn 11/10/2010 11:41:49 AM mtneiheisel



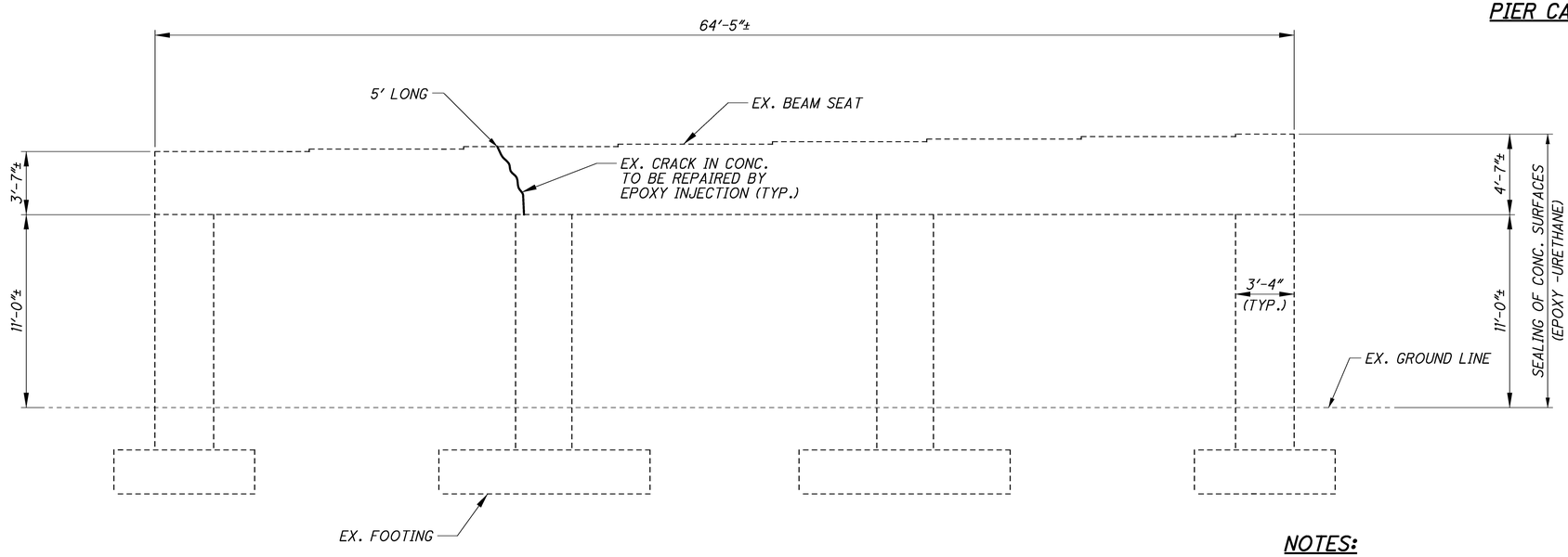
WEST ELEVATION - PIER 2L

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JANUARY 2008.

SUMMARY OF REPAIR QUANTITIES		
ELEVATION	PATCH (FT²)	EPOXY INJECTION (FT)
WEST 2L		3
EAST 2L		5



PIER CAP SEALING LIMITS



EAST ELEVATION - PIER 2L

NOTES:

1. THE ESTIMATED QUANTITY FOR ITEM 512 - CONCRETE REPAIR BY EPOXY INJECTION, IS PER FIELD MEASUREMENT. FINAL AREAS TO BE REPAIRED WILL BE DETERMINED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
2. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
3. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.

DESIGN AGENCY
RPM ENGINEERS, INC
5500 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103099	

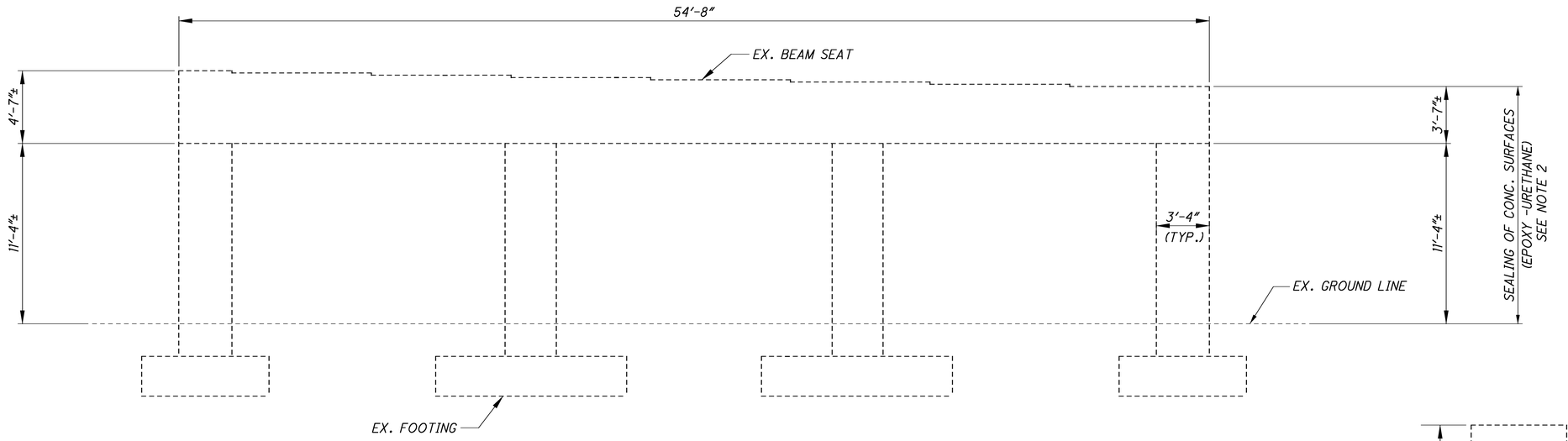
PIER 2L DETAILS
HAM-50-2013L
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

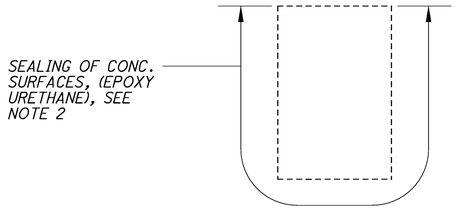
13 / 16

439 / 442

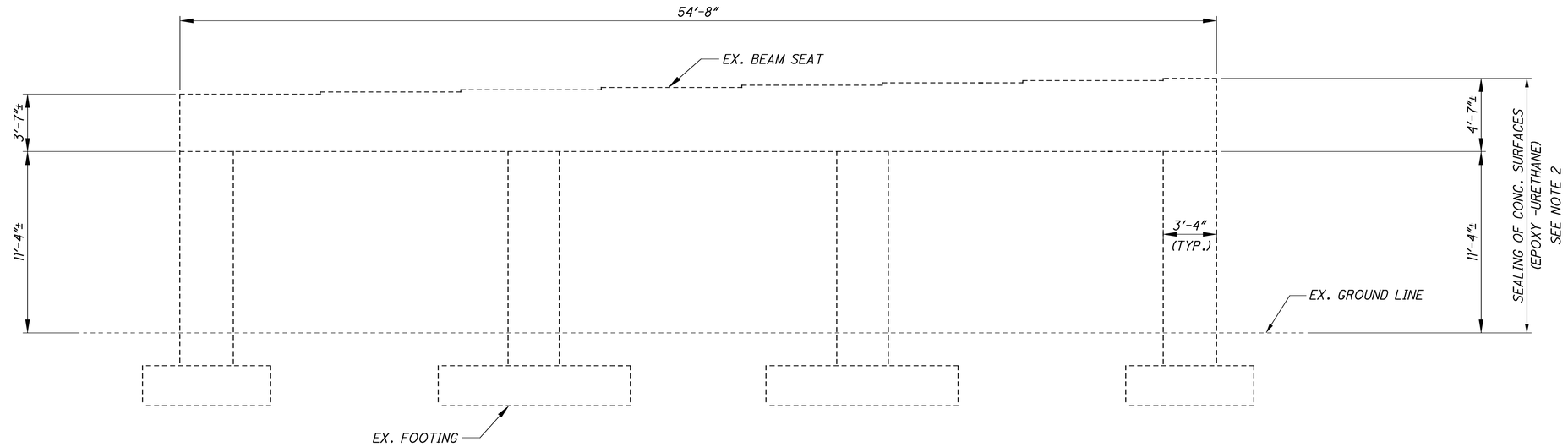
C:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013LPI002.dgn 11/10/2010 11:41:51 AM mtneihaisel



WEST ELEVATION - PIER 2R



PIER CAP SEALING LIMITS



EAST ELEVATION - PIER 2R

NOTES:

1. DIMENSIONS AND ELEVATIONS SHOWN ARE FROM EXISITNG PLANS.
2. SEAL ALL EXPOSED CONCRETE SURFACE AREAS AS SHOWN ON THE PLANS WITH EPOXY-URETHANE, EXCEPT TOP OF PIER CAP.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103129	

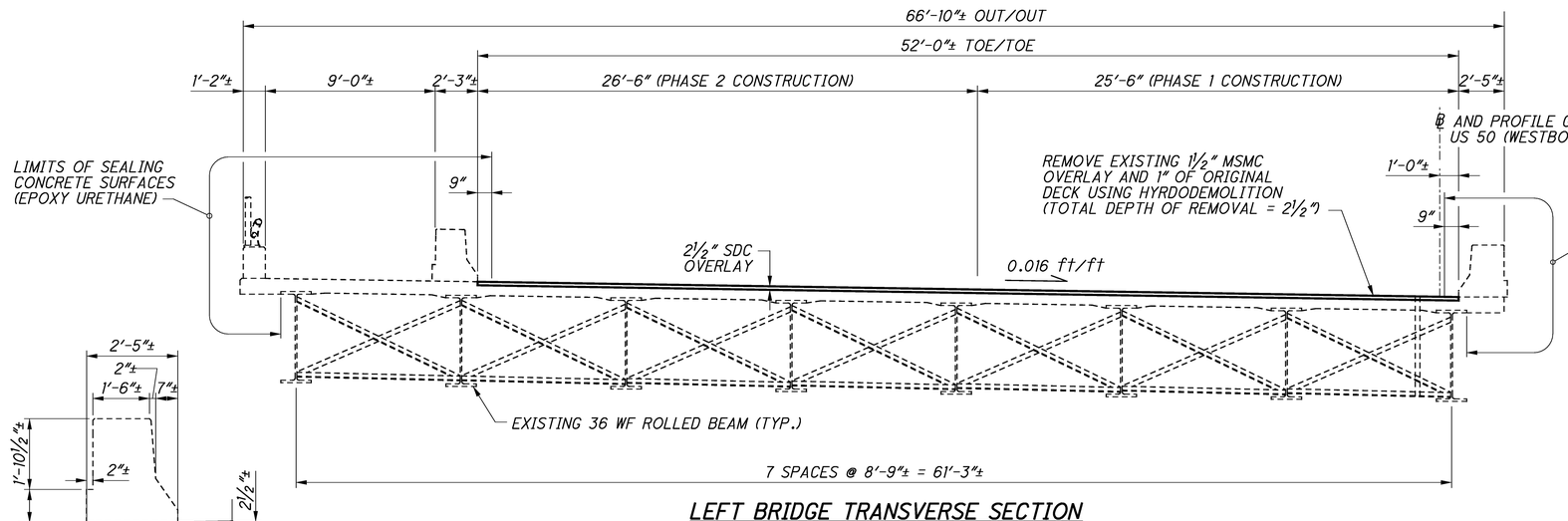
PIER 2R DETAILS
HAM-50-2013R
US 50 OVER GEST STREET

HAM-50-19.03
PID No. 75736

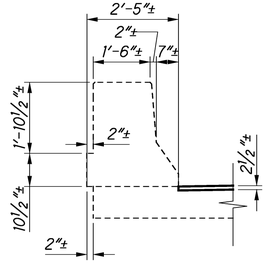
14 / 16

440
442

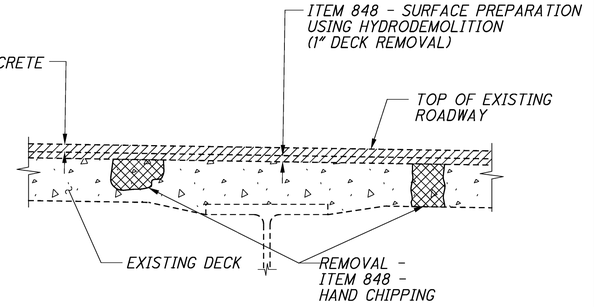
G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013RPI002.dgn 11/10/2010 11:41:52 AM mtreitheisel



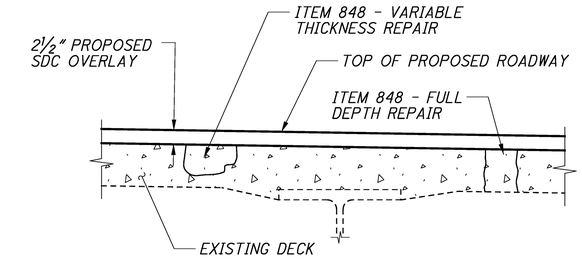
LEFT BRIDGE TRANSVERSE SECTION
(WESTBOUND, LOOKING EAST)



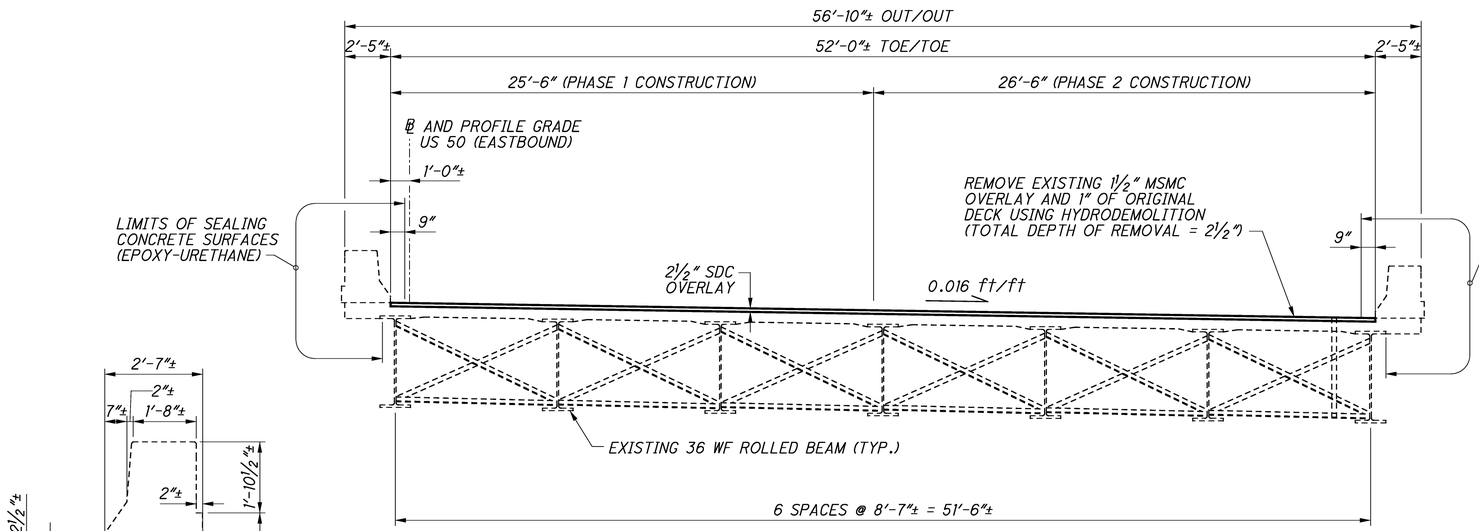
LEFT PARAPET DETAIL (LEFT BRIDGE ONLY)



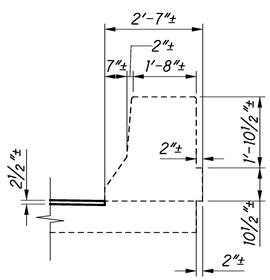
OVERLAY REMOVAL DETAIL



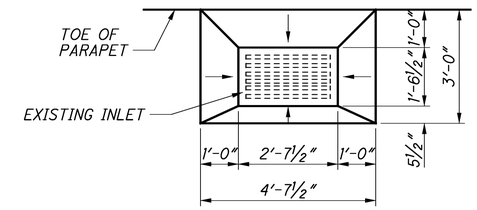
OVERLAY REPLACEMENT DETAIL



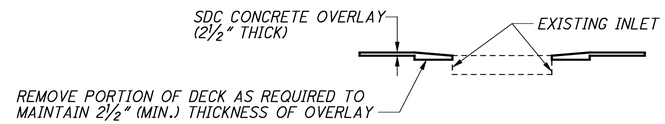
RIGHT BRIDGE TRANSVERSE SECTION
(EASTBOUND, LOOKING EAST)



TYPICAL PARAPET DETAIL



SCUPPER PLAN



SECTION THRU SCUPPER

LEGEND

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED (1½" NOMINAL THICKNESS) AND/OR ITEM 848 - SDC OVERLAY USING HYDRODEMOLITION (2½" THICK)

INDICATES AREA TO BE REMOVED AS PER ITEM 848 - HAND CHIPPING

SDC - SUPERPLASTICIZED DENSE CONCRETE
MSMC - MICRO-SILICA MODIFIED CONCRETE

NOTES:
PAINT EXISTING SUPERSTURCTURE STEEL WITH SYSTEM OZEU.

DESIGN AGENCY
R·P·M ENGINEERS
RPM ENGINEERS, INC
5900 WILCOX PLACE
DUBLIN, OHIO 43016

DESIGNED	DRAWN	REVIEWED	DATE
SK	TME	KVB	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LYH		3103068 (L) 3103129 (R)	

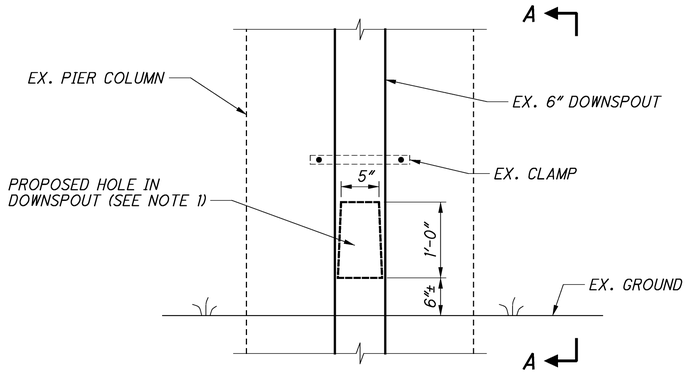
TRANSVERSE SECTION
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

15 / 16

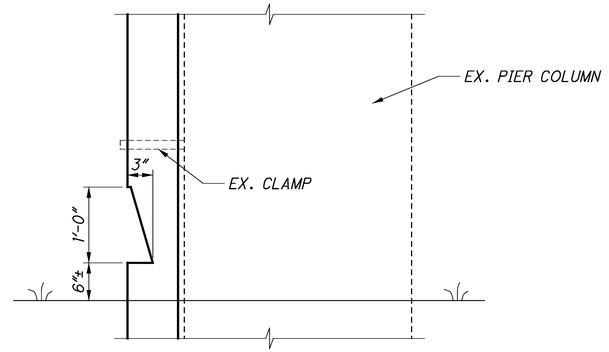
441
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CTS001.dgn 11/10/2010 11:41:53 AM mtreiheisel



DOWNSPOUT MODIFICATION DETAIL

ONE LOCATION AT PIERS 1L, 1R, 2L, AND 2R
TWO LOCATIONS AT REAR ABUTMENT LEFT BRIDGE
ONE LOCATION AT REAR ABUTMENT RIGHT BRIDGE



VIEW A-A

NOTES:

1. CUT HOLES IN EXISTING DOWNSPOUTS AS DIRECTED BY THE ENGINEER. WORK IS TO BE PAID FOR WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: DOWNSPOUT MODIFICATION.

DESIGN AGENCY
TranSystems
4555 LAKE FOREST DRIVE, SUITE 640
CINCINNATI, OHIO 45242

DESIGNED	DRAWN	REVIEWED	DATE
PJP	MTN	MSL	11/12/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTN		3103088 (L) 3103129 (R)	

DOWNSPOUT MODIFICATION DETAILS
HAM-50-2013 L/R
US 50 OVER GEST STREET; US 50 WESTBOUND RAMP

HAM-50-19.03
PID No. 75736

16 / 16

442
442

G:\CN06\0011\Bridge\HAM-50-2013_US50_OVER_GEST_ST\sheets\050_2013CMD001.dgn 11/10/2010 11:41:55 AM mtreiheisel

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF WIDENING THE EXISTING STATE ROUTE 50 TEN-SPAN BRIDGE OVER CENTRAL RAILROAD OF INDIANA, MILL CREEK, AND PRIVATE DRIVE FROM PIER 4S TO THE FORWARD ABUTMENT. THE PROJECT INCLUDES WIDENING OF THE BRIDGE APPROACH UPSTATION OF THE FORWARD ABUTMENT.

HISTORIC RECORDS

FOURTEEN BORINGS WERE ADVANCED FOR THE EXISTING EASTBOUND AND WESTBOUND BRIDGES IN 1961. THE PLAN LOCATIONS OF THESE BORINGS ARE SHOWN AND GRAPHIC LOGS OF THESE BORINGS ARE SHOWN ON THE PROFILE IF NOT CONFLICTING WITH THE BORINGS PERFORMED AS A PART OF THIS EXPLORATION.

GEOLOGY

THE STRUCTURE SITE IS LOCATED IN THE OUTER BLUEGRASS REGION, NEAR THE CONFLUENCE AND FLOODPLAINS OF THE MILL CREEK AND THE OHIO RIVER. THE MILL CREEK VALLEY IS COMPRISED OF RECENT ALLUVIUM AND GLACIAL OUTWASH FROM THE LATE WISCONSINAN GEOLOGIC PERIOD AND IS UNDERLAIN BY SEDIMENTARY SHALE AND LIMESTONE BEDROCK OF THE POINT PLEASANT AND KOPE FORMATIONS, BOTH REPRESENTING THE ORDOVICIAN GEOLOGIC PERIOD.

RECONNAISSANCE

A RECONNAISSANCE WAS PERFORMED ON JUNE 11, 2008 TO OBSERVE BORING ACCESS ROUTES AND LAND USE. THE SURROUNDING AREA IS MAINLY INDUSTRIAL WEST OF MILL CREEK. THERE IS A FLOODWALL, MAINTENANCE BUILDING, AND ASSOCIATED GROUNDS AND DRIVES EAST OF MILL CREEK THAT IS OWNED AND MAINTAINED BY THE CITY OF CINCINNATI.

SUBSURFACE EXPLORATION

ONE BORING WAS ADVANCED AT EACH PIER THAT WILL BE WIDENED (PIERS 4S, 5S, 5AS, 6S, 7S, 8S, 9S), PLUS ONE ADDITIONAL BORING EACH AT PIERS 5AS AND 6S TO CONFIRM THE PRESENCE OF AN EXISTING FOOTING AND ITS THICKNESS. THE BORINGS FOR PIER 5AS AND PIER 6S WERE DRILLED FROM A FLOATING PLANT FROM THE MILL CREEK. TWO BORINGS WERE ADVANCED FOR ROADWAY WIDENING PURPOSES WITH A SMALL, PORTABLE DRILL AND UNCALIBRATED HAMMER AT THE EAST END OF THE STRUCTURE, FOR A TOTAL OF ELEVEN BORINGS.

THE BORINGS WERE ADVANCED USING 3.25-INCH INSIDE DIAMETER HOLLOW-STEM AUGERS. STANDARD PENETRATION TEST (SPT) AND UNDISTURBED SHELBY TUBE (ST) SAMPLES WERE OBTAINED FOR THE UPPER 30 FEET AT 2.5-FOOT INTERVALS AND AT 5-FOOT INTERVALS BELOW THIS DEPTH. THE HAMMER SYSTEM USED WAS LAST CALIBRATED ON JUNE 18, 2007, AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 80 PERCENT. UPON ENCOUNTERING BEDROCK, NQ-SIZED ROCK CORING EQUIPMENT WAS USED TO OBTAIN 10 TO 20 FEET OF ROCK CORE SAMPLE.

EXPLORATION FINDINGS

THE TEST BORINGS DISCLOSED THREE PRIMARY SOIL HORIZONS: 10 TO 20 FEET OF FILL MATERIAL, 30 TO 45 FEET OF ALLUVIAL FINE-GRAINED SOILS, AND 25 TO 50 FEET OF ALLUVIAL COARSE-GRAINED SOILS. THE FILL MATERIAL WAS DESCRIBED AS SANDY SOIL WITH VARYING AMOUNTS OF SILT, CLAY AND GRAVEL (A-2-6, A-1-b, A-2-4, A-4A). THE ALLUVIAL FINE-GRAINED SOILS WERE DESCRIBED AS SILT AND CLAY WITH VARYING AMOUNTS OF SAND (A-6A, A-7-6, A-4A, A-4B, AND A-6B). THE COARSE-GRAINED ALLUVIAL SOILS WERE DESCRIBED AS SANDY SOILS WITH VARYING AMOUNTS OF GRAVEL (A-3A, A-1-A, A-2-4, AND A-1-B).

BEDROCK WAS ENCOUNTERED IN THE PIER WIDENING BORINGS AT ELEVATIONS RANGING FROM 390.5 FEET (B-001) TO 401.6 FEET (B-009). THE BEDROCK WAS GENERALLY DESCRIBED AS SHALE (55 TO 70 PERCENT OF THE UNIT) WITH INTERBEDDED LIMESTONE (30 TO 45 PERCENT OF THE UNIT). THE SHALE WAS DESCRIBED AS GRAY, SLIGHTLY TO HIGHLY WEATHERED, AND WEAK TO STRONG WITH LAMINATED TO THIN BEDDING. THE LIMESTONE WAS DESCRIBED AS GRAY, CRYSTALLINE, FOSSILIFEROUS, AND STRONG WITH LAMINATED TO THIN BEDDING.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED OCTOBER 2008.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE SOIL PROFILE SHEETS HAS BEEN SO REPORTED. ADDITIONAL SUBSURFACE EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE, THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1600 WEST BROAD STREET OR THE OFFICE OF STRUCTURAL ENGINEERING AT 1980 WEST BROAD STREET.

LEGEND

DESCRIPTION	ODOT CLASS	2007 CLASSIFIED MECH./VISUAL		1961 CLASSIFIED MECH.
GRAVEL AND/OR STONE FRAGMENTS	*A-1-a*	*10*	*12*	*13*
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	*A-1-b*	*13*	*21*	*22*
GRAVEL WITH SAND AND SILT	*A-2-4*	*4*	*4*	*8*
GRAVEL WITH SAND, SILT, AND CLAY	*A-2-6*	*2*	*10*	*0*
FINE SAND	*A-3*	*2*	*3*	*6*
COARSE AND FINE SAND	*A-3a*	*4*	*11*	*14*
SANDY SILT	*A-4a*	*3*	*8*	*37*
SILT	*A-4b*	*2*	*8*	*10*
SILT AND CLAY	*A-6a*	*10*	*3*	*21*
SILTY CLAY	*A-6b*	*4*	*10*	*1*
CLAY	*A-7-6*	*4*	*11*	*12*
	TOTAL	*58*	*101*	*144*
SHALE INTERBEDDED WITH LIMESTONE	*VISUAL*			
BOULDERY ZONE	*VISUAL*			
CONCRETE FOOTING	*VISUAL*			
UNCONTROLLED FILL	*VISUAL*			
BARGE DECK = X = APPROXIMATE THICKNESS	*VISUAL*			
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	*VISUAL*			

BORING LOCATION - PLAN VIEW.

HISTORIC BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC INDICATES WATER CONTENT IN PERCENT.

N_{60} INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

X/Y/Z NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (*SPT*):
X= NUMBER OF BLOWS FOR FIRST 6 INCHES.
Y= NUMBER OF BLOWS FOR SECOND 6 INCHES.
Z= NUMBER OF BLOWS FOR THIRD 6 INCHES.

● INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

⊖ INDICATES A NON-PLASTIC MATERIAL WITH A MOISTURE CONTENT GREATER THAN 25 % OR GREATER THAN 19 % WITH A WET APPEARANCE.

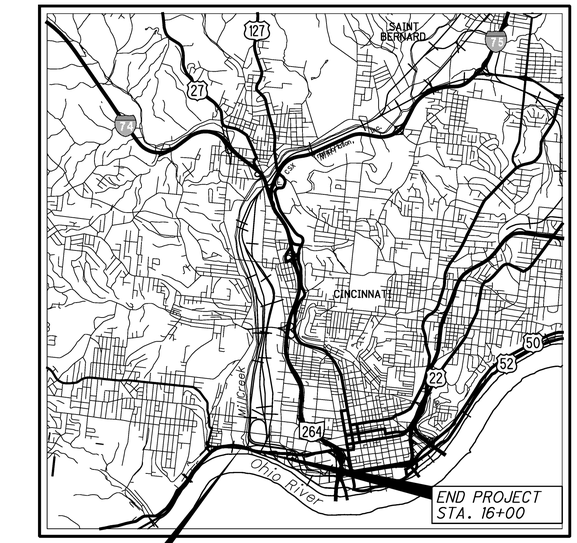
W— INDICATES FREE WATER ELEVATION.

SS INDICATES A SPLIT SPOON SAMPLE.

NP INDICATES A NON-PLASTIC SAMPLE.

TR INDICATES TOP OF ROCK.

ST INDICATES A SHELBY TUBE SAMPLE.



LOCATION MAP
SCALE IN MILES
0 1 2 3 4

PARTICLE SIZE DEFINITIONS

12″	3″	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS	COBBLES	GRAVEL	COARSE SAND	FINE SAND	SILT	CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE		

D_{50} VALUES			
BORING NO.	SAMPLE NO.	ELEVATION	D_{50} VALUE
B-003	SS-1	447.3′ - 445.8′	1.6 mm
B-004	SS-1	445.0′ - 443.5′	1.6 mm
	SS-2	443.5′ - 442.0′	3.9 mm
	SS-3	442.0′ - 440.5′	1.3 mm
	SS-4	440.5′ - 439.0′	6.1 mm
B-005	SS-2	456.4′ - 454.9′	1.8 mm
	SS-4	439.4′ - 437.9′	1.7 mm
B-006	SS-1	445.3′ - 443.8′	2.9 mm
	SS-2	443.8′ - 442.3′	0.82 mm

RECON. - EMK/DBR 06/11/08
DRILLING - TC/JF/MM 6/08-8/08
DRAWN - MJ 10/08; CW 4/10
REVIEWED - EMK 10/22/08; 4/10

DESIGN AGENCY
STANTEC CONSULTING SERVICES INC.
CINCINNATI, OHIO

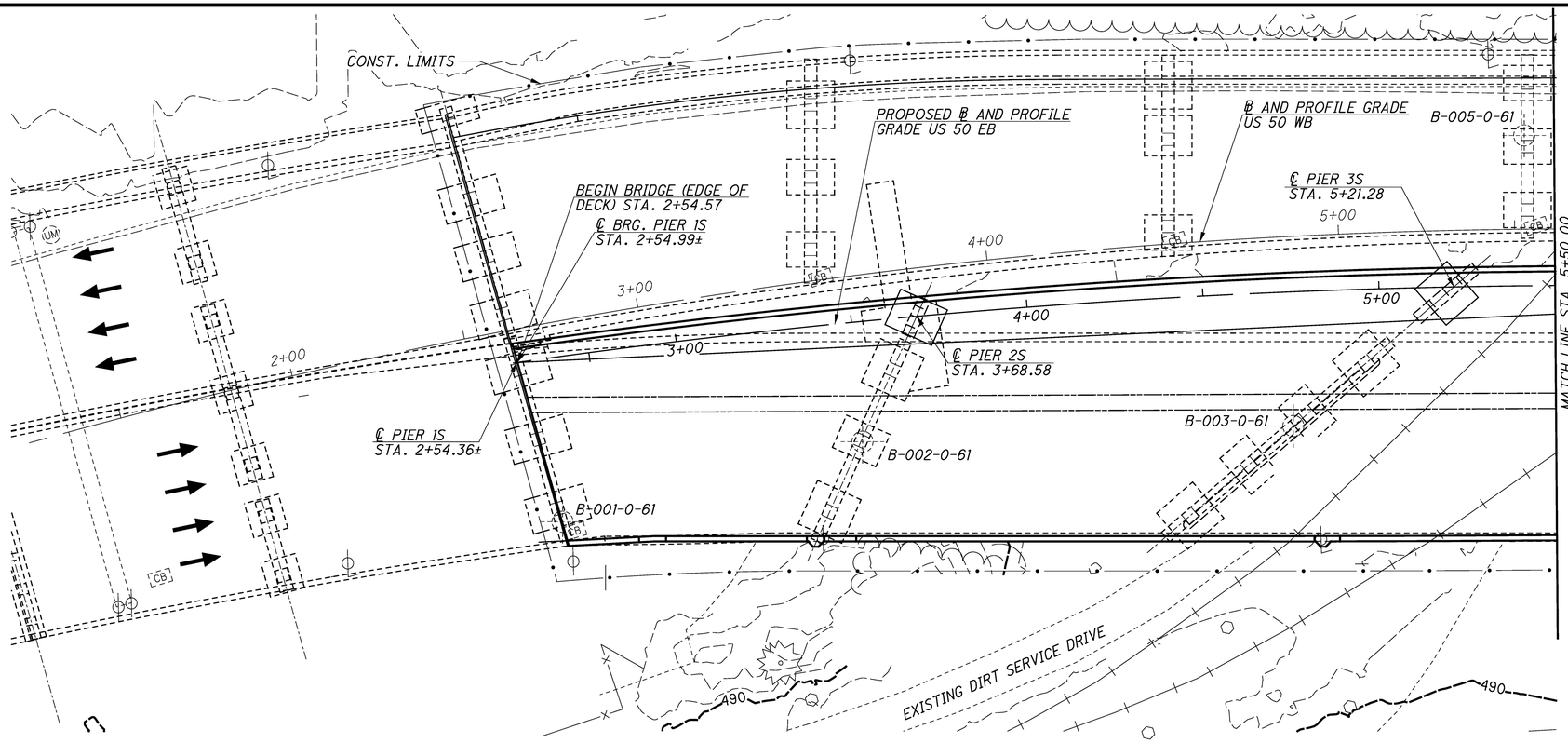
PID NO. 75736

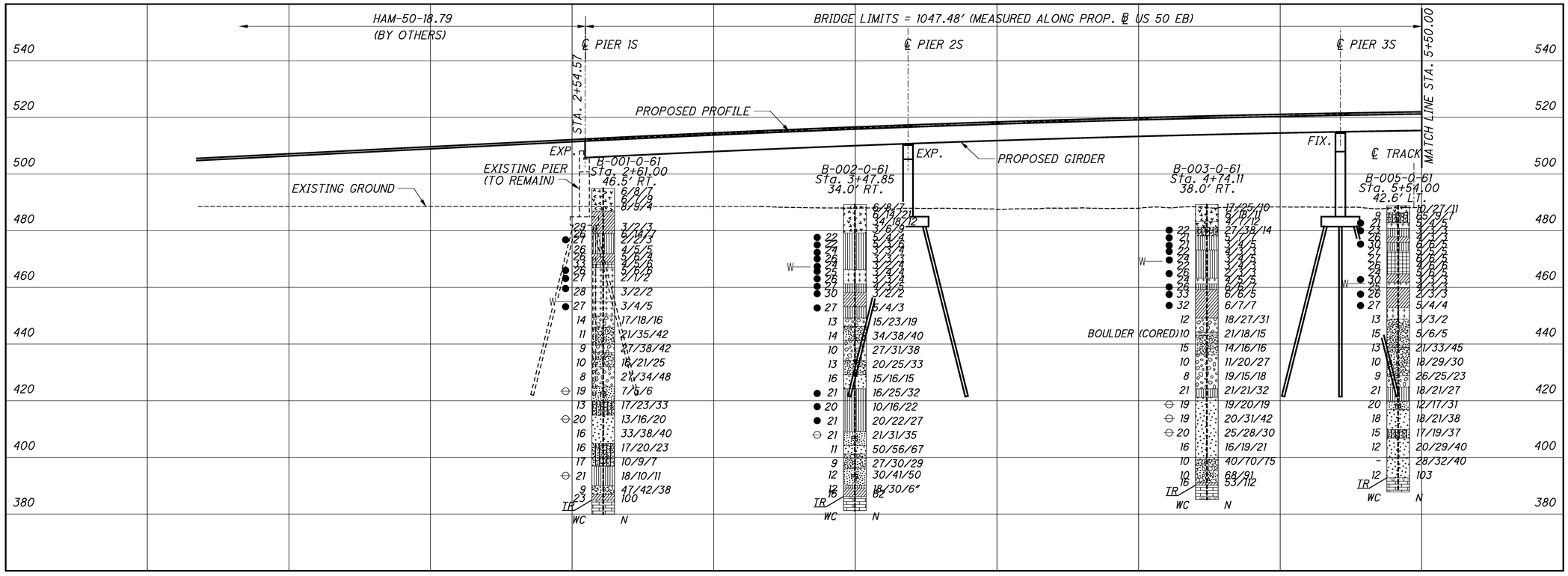
STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

HAM-50-19.03

1 / 22

G:\CN06\0011\Bridge\Foundation_Exploration\75736ZC001.dgn 11/10/2010 1:14:28 PM mtreiheisel





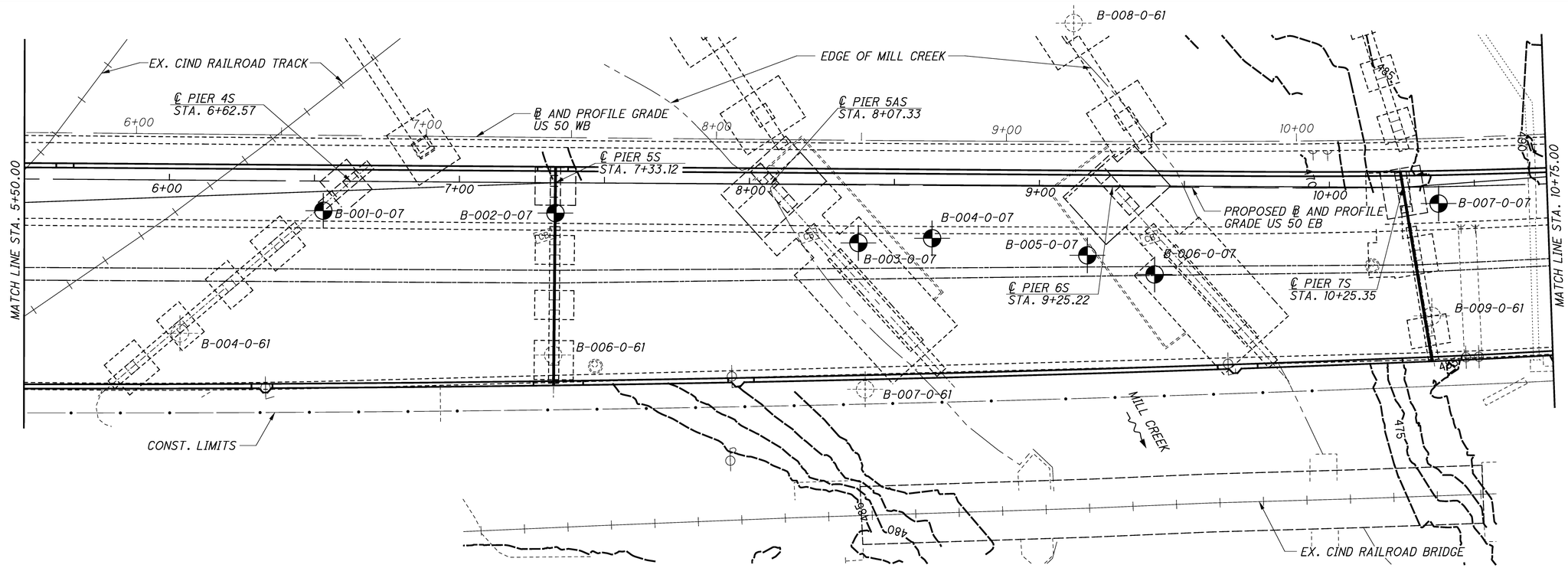
STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

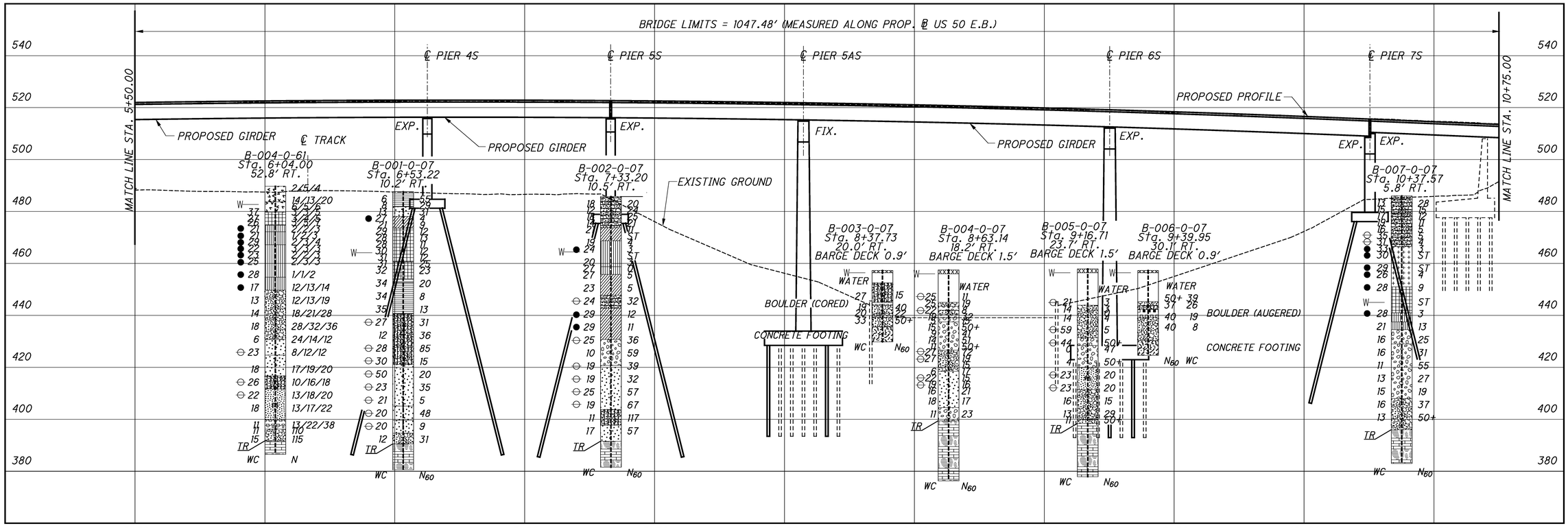
HAM-50-19.03

DRAWN CW
CHECKED EMK

HORIZONTAL SCALE IN FEET
0 10 20 40

G:\CN06\0011\Bridge\Foundation_Exploration\757362P001.dgn 11/10/2010 1:14:30 PM mtreiheisel





STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

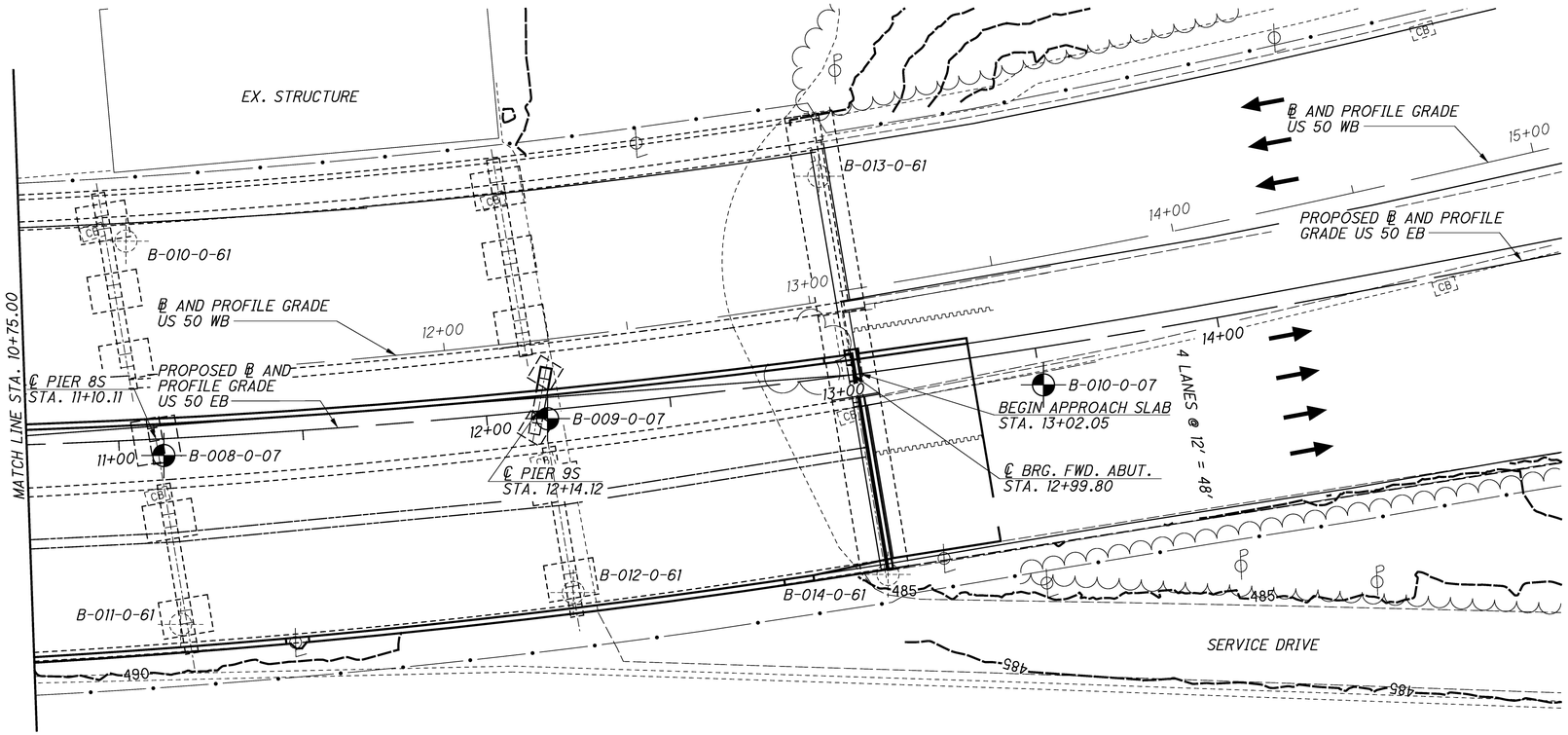
HAM-50-19.03

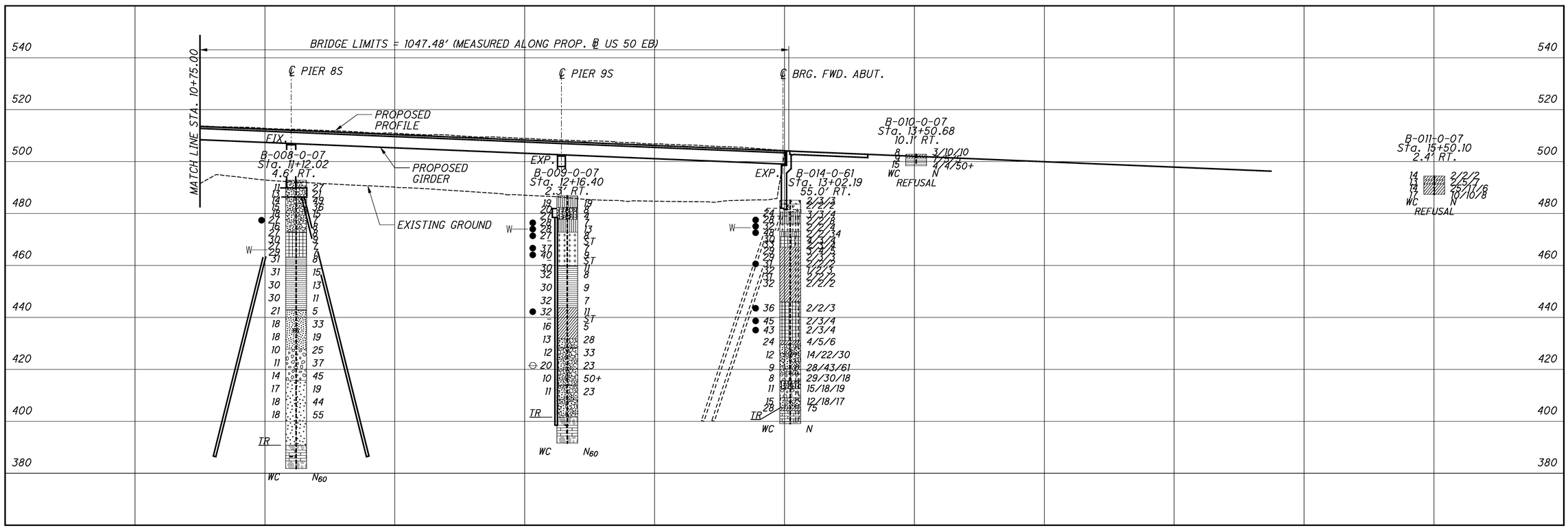
DRAWN CW
CHECKED EMK

HORIZONTAL SCALE IN FEET
0 10 20 40

3 / 22

G:\CN06\0011\Bridge\Foundation_Exploration\757367P002.dgn 11/10/2010 1:14:33 PM mtneihreisel





HORIZONTAL SCALE IN FEET
0 10 20 40

DRAWN CW
CHECKED EMK

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

HAM-50-19.03

4 / 22

G:\CN06\0011\Bridge\Foundation_Exploration\757367P003.dgn 11/10/2010 1:14:36 PM mtneireisel

LOG OF BORING

BORING NO: B-001-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 6+53.22,10.3' RT. SURFACE ELEV.: 487.6' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/16/08 DATE COMPLETED: 6/17/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 464.5'
NORTHING: 407,793.08 EASTING: 1,388,387.29 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
487.6'	0																	
						VERY STIFF TO HARD, DARK GRAY SILTY CLAY, LITTLE SAND, TRACE GRAVEL, MOIST													
485.6'	2																	
		32/11/30	55				SS-1	7									6	A-6b Visual
483.6'	4																	
		13/12/10	29				SS-2	33									8	A-6b Visual
481.6'	6					5.8'												
						MEDIUM DENSE, BROWN, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, MOIST (FILL)	SS-2b	33										21	A-3a Visual
479.6'	8	12/7/16	31				SS-3	13									13	A-3a Visual
477.6'	10					9.5'												
		0/1/2	4			SOFT TO STIFF, BROWN AND GRAY, SILT AND CLAY, SOME SAND, TRACE GRAVEL, MOIST -FINE SAND LAYERS ARE INTERBEDDED	SS-4	87	1	1	22	46	30	29	18	11	27	A-6a
475.6'	12																	
		0/2/5	9				SS-5	93	7	3	18	46	26	29	18	11	21	A-6a
473.6'	14					14.0'												
						STIFF, BROWN AND GRAY, CLAY, AND SILT, TRACE SAND, MOIST												
471.6'	16	0/3/6	12				SS-6	93			SAME AS SS-7						29	A-7-6 Visual
469.6'	18	1/4/6	13				SS-7	100	0	1	7	51	41	43	22	19	28	A-7-6
467.6'	20																	
		0/3/5	11				SS-8	100			SAME AS SS-7						28	A-7-6 Visual
465.6'	22					22.0'												
		2/4/5	12			STIFF TO VERY STIFF, BROWN CLAY, AND SILT, SOME SAND, MOIST	SS-9	100	0	1	30	49	47	45	23	22	30	A-7-6
463.6'	24																	
461.6'	26	3/4/5	12				SS-10	100			SAME AS SS-9						31	A-7-6 Visual
459.6'	28	2/7/12	25				SS-11	100			SAME AS SS-9						31	A-7-6 Visual
457.6'	30																	
		5/6/11	23				SS-12	100			SAME AS SS-9						32	A-7-6 Visual
455.6'	32																	
453.6'	34					33.5'												
		6/6/9	20			MEDIUM STIFF TO VERY STIFF, BROWN SILTY CLAY, LITTLE SAND, MOIST TO WET	SS-13	93	0	1	10	47	42	38	22	16	34	A-6b
451.6'	36																	
449.6'	38																	
447.6'	40																	
		6/4/2	8				SS-14	100			SAME AS SS-13						34	A-6b Visual
445.6'	42																	
443.6'	44																	
441.6'	46	4/5/5	13				SS-15	67			SAME AS SS-13						35	A-6b Visual
439.6'	48					47.0'												
						MEDIUM DENSE TO VERY DENSE, BROWN, BLACK AND GRAY GRAVEL WITH SAND AND SILT, LITTLE CLAY, WET -STRONG HYDROCARBON ODOR													
437.6'	50																	
		4/8/15	31				SS-16	73			SAME AS SS-18						27	A-2-4 Visual
435.6'	52																	
433.6'	54																	
431.6'	56	7/10/17	36				SS-17	33			SAME AS SS-18						12	A-2-4 Visual
429.6'	58																	
427.6'	60																	
		26/31/33	85				SS-18	80	46	27	10	6	11	22	15	7	28	A-2-4
425.6'	62																	
423.6'	64																	
421.6'	66	3/4/7	15				SS-19	33			SAME AS SS-18						30	A-2-4 Visual
						66.5'												
419.6'	68					MEDIUM DENSE, BROWN AND GRAY, COARSE AND FINE SAND, LITTLE SILT, TRACE CLAY, TRACE GRAVEL													
417.6'	70																	

BORING CONTINUED

LOG OF BORING (CONTINUED)

BORING NO: B-001-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 6+53.2,10.3' RT. SURFACE ELEV.: 487.6' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/16/08 DATE COMPLETED: 6/17/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 464.5'
NORTHING: 407,793.08 EASTING: 1,388,387.29 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
417.6'	70	3/5/10	20			VERY DENSE, BROWN, BLACK AND GRAY, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, WET	SS-20	33	2	6	71	14	6	NP	NP	NP	50	A-3a
415.6'	72																	
413.6'	74					75.0'												
411.6'	76	4/13/13	35			LOOSE TO VERY DENSE, GRAY, COARSE AND FINE SAND, TRACE SILT, TRACE CLAY, TRACE GRAVEL, WET	SS-21	47			SAME AS SS-24						23	A-3a Visual
409.6'	78																	
407.6'	80	2/2/2	5				SS-22	73			SAME AS SS-24						21	A-3a Visual
405.6'	82																	
403.6'	84																	
401.6'	86	6/19/17	48				SS-23	100			SAME AS SS-24						20	A-3a Visual
399.6'	88																	
397.6'	90	8/4/3	9				SS-24	93	3	16	69	8	4	NP	NP	NP	20	A-3a
395.6'	92					93.0'												
393.6'	94					DENSE, BROWN, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, WET												
391.6'	96	5/14/9	31				SS-25	100									12	A-1-b Visual
389.6'	98	40%		8.9	1.1	TOP OF ROCK/BEGIN CORE 97.1' SHALE (60%) WITH INTERBEDDED LIMESTONE (40%), SHALE; GRAY, SLIGHTLY TO MODERATELY WEATHERED, THIN TO LAMINATED BEDDING, SLIGHTY STRONG TO WEAK, LIMESTONE; GRAY, STRONG, THIN BEDDING, FOSSILIFEROUS, UNIT RQD = 40%, LOSS = 11%												
387.6'	100																	
385.6'	102																	
383.6'	104																	
381.6'	106																	

BOTTOM OF BORING = 107.1'

LOG OF BORING

BORING NO: B-002-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 7+33.2,10.5' RT. SURFACE ELEV.: 485.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/19/08 DATE COMPLETED: 6/23/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 464.5'
NORTHING: 407,793.08 EASTING: 1,388,387.29 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
485.8'	0																	
483.8'	2					MEDIUM DENSE, BROWN, BLACK AND WHITE GRAVEL AND STONE FRAGMENTS WITH SAND, SILT AND CLAY, CONCRETE AND ASPHALT FRAGMENTS, DAMP TO MOIST (FILL)													
481.8'	4	9/6/9	20				SS-1	67			SAME AS SS-2						18	A-2-6 Visual
479.8'	6	11/11/7	24				SS-2	73	57	10	11	9	13	31	19	12	12	A-2-6
477.8'	8	11/7/12	25				SS-3	60			SAME AS SS-2						18	A-2-6 Visual
475.8'	10	9/7/9	21				SS-4	20			SAME AS SS-2						14	A-2-6 Visual
473.8'	12					12.0'												
471.8'	14	5/4/4	11			STIFF, BROWN AND DARK BROWN, SILT AND CLAY, LITTLE GRAVEL, LITTLE SAND, MOIST	SS-5	73	11	6	7	37	39	37	22	15	21	A-6a
469.8'	16	ST					ST-6	0										
467.8'	18	2/1/2	4			17.0' VERY SOFT TO SOFT, BROWN, SANDY SILT, SOME TO LITTLE CLAY, TRACE GRAVEL, MOIST TO WET	SS-7	87			SAME AS SS-8						19	A-4a Visual
465.8'	20	1/1/1	3				SS-8	93	2	2	27	49	20	22	16	6	24	A-4a
463.8'	22	ST					ST-9	0			SAME AS SS-8							A-4a Visual
461.8'	24	0/1/1	3				SS-10	73			SAME AS SS-8						20	A-4a Visual
459.8'	26	0/0/0	0				SS-11	80			SAME AS SS-8						27	A-4a Visual
457.8'	28																	
455.8'	30	0/1/3	5			30.0' MEDIUM STIFF, GRAY AND DARK GRAY, SILT AND CLAY, LITTLE TO TRACE SAND, TRACE GRAVEL, MOIST	SS-12	87			SAME AS SS-13						27	A-6a Visual
453.8'	32																	
451.8'	34																	
449.8'	36	1/2/2	5			-INTERBEDDED COARSE AND FINE SAND LAYERS ARE PRESENT	SS-13	93	1	2	15	59	23	32	12	10	23	A-6a
447.8'	38					38.0'												
445.8'	40					DENSE, GRAY, GRAVEL WITH SAND, SILT AND CLAY, WET												
443.8'	42	7/9/13	32				SS-14	73									24	A-2-6 Visual
441.8'	44					43.0' STIFF, GRAY, SILT AND CLAY, SOME GRAVEL, LITTLE SAND, WET												
439.8'	46	3/6/3	12				SS-15	80	22	2	13	41	22	29	18	11	29	A-6a
437.8'	48																	
435.8'	50																	
433.8'	52	4/3/5	11				SS-16	73			SAME AS SS-15						29	A-6a Visual
431.8'	54																	
429.8'	56	7/13/14	36			55.0' DENSE TO VERY DENSE, BROWN, DARK BROWN AND BLACK, GRAVEL AND/ OR STONE FRAGMENTS, SOME SAND, TRACE SILT, TRACE CLAY, WET	SS-17	100			SAME AS SS-18						25	A-1-a Visual
427.8'	58																	
425.8'	60	16/16/28	59				SS-18	73	68	16	9	4	3	NP	NP	NP	10	A-1-a
423.8'	62																	
421.8'	64																	
419.8'	66	11/16/13	39			65.0' DENSE TO VERY DENSE, BROWN AND GRAY, COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, MOIST TO WET	SS-19	60			SAME AS SS-20						19	A-3a Visual
417.8'	68																	
415.8'	70																	

BORING CONTINUED

LOG OF BORING (CONTINUED)

BORING NO: B-002-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 7+33.2,10.5' RT. SURFACE ELEV.: 485.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/19/08 DATE COMPLETED: 6/23/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 464.5'
NORTHING: 407,793.08 EASTING: 1,388,387.29 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
415.8'	70																	
		5/10/14	32			DENSE TO VERY DENSE, BROWN AND GRAY, COARSE AND FINE SAND, LITTLE SILT, TRACE GRAVEL, TRACE CLAY, MOIST TO WET	SS-20	73	7	10	66	11	6	NP	NP	NP	19	A-3a
413.8'	72																	
411.8'	74																	
409.8'	76	6/16/27	57				SS-21	73			SAME AS SS-20						25	A-3a Visual
407.8'	78																	
405.8'	80																	
		14/22/28	67				SS-22	100			SAME AS SS-20						19	A-3a Visual
403.8'	82					82.0'												
401.8'	84					VERY DENSE, BROWN AND GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, MOIST													
399.8'	86	10/38/50	117				SS-23	87	37	10	32	15	6	NP	NP	NP	11	A-2-4
397.8'	88					88.0'												
395.8'	90					VERY DENSE, BROWN AND GRAY, COARSE AND FINE SAND, LITTLE GRAVEL, TRACE SILT, TRACE CLAY, MOIST													
		16/18/25	57				SS-24	100	11	37	41	8	3	NP	NP	NP	17	A-3a
393.8'	92																	
391.8'	94					TOP OF ROCK/BEGIN CORE 94.2'												
389.8'	96	49%		10.0	0.0	SHALE (55%) WITH INTERBEDDED LIMESTONE (45%), SHALE; GRAY, SLIGHTLY TO MODERATELY WEATHERED, SLIGHTY STRONG TO WEAK, THIN TO THINLY LAMINATED BEDDING, LIMESTONE; LIGHT GRAY, STRONG, CRYSTALLINE, THIN TO LAMINATED BEDDING, FOSSILIFEROUS, UNIT RQD = 49%, LOSS = 0%												
387.8'	98																	
385.8'	100																	
383.8'	102																	
381.8'	104																	

BOTTOM OF BORING = 104.2'

LOG OF BORING

BORING NO: B-003-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 8+37.7,20.2' RT. SURFACE ELEV.: 457.3' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 8/05/08 DATE COMPLETED: 8/05/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 456.4'
NORTHING: 407,718.69 EASTING: 1,388,556.38 SEALING/BACKFILLING TYPE: N/A HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	% AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
457.3'	0					BARGE DECK												
						0.9'												
455.3'	2					WATER												
453.3'	4					4.8'												
451.3'	6					MEDIUM DENSE, GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, WET												
449.3'	8																	
447.3'	10	3/4/7	15				SS-1	53	48	11	10	25	6	NP	NP	NP	27	A-2-4
445.3'	12					12.2'												
		34%				LIMESTONE BOULDER (CORED 12.2'-13.5')	RC-1											Visual
443.3'	14					13.5'												
		7/13/17	40			MEDIUM DENSE TO VERY DENSE, GRAY AND BROWN, GRAVEL WITH SAND, TRACE SILT AND CLAY, WET	SS-2	27	75	12	5	7	1	NP	NP	NP	19	A-1-b
441.3'	16	10/8/8	22				SS-3	47			SAME AS SS-2						20	A-1-b Visual
		33/50+	50+				SS-4	31	67	9	8	16	-	NP	NP	NP	33	A-1-b
439.3'	18																	
437.3'	20																	
435.3'	22					21.7'												
		84%				CONCRETE FOOTING, TOP 12' FRAGMENTED, STEEL REBAR AT TOP (DIAMETER UNIDENTIFIABLE), 1.25" DIAMETER REBAR 12" ABOVE BOTTOM OF FOOTING, BOTTOM 2" FRAGMENTED	RC-2											Visual
433.3'	24																	
431.3'	26																	
						27.5'												

BOTTOM OF BORING = 27.5'

LOG OF BORING

BORING NO: B-004-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 8+63.1,18.2' RT. SURFACE ELEV.: 457.5' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 8/11/08 DATE COMPLETED: 8/13/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 456.0'
NORTHING: 407,711.38 EASTING: 1,388,580.78 SEALING/BACKFILLING TYPE: N/A HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
457.5'	0																	
						BARGE DECK 1.5'												Visual
455.5'	2					WATER												
																		Visual
453.5'	4																	
451.5'	6																	
449.5'	8																	
447.5'	10																	
445.5'	12					12.5'												
443.5'	14	0/1/7	11			MEDIUM DENSE, DARK GRAY TO BLACK, GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET 14.0'	SS-5	53	46	25	13	12	4	NP	NP	NP	25	A-1-b
		15/6/8	19			MEDIUM DENSE, BROWN, GRAVEL, AND SAND, TRACE SILT AND CLAY, WET 15.5'	SS-2	73	56	24	12	6	2	NP	NP	NP	25	A-1-a
441.5'	16	6/4/2	8			LOOSE, DARK GRAY TO BLACK, GRAVEL WITH SAND, TRACE SILT, WET 17.0'	SS-3	67	35	46	11	8	0	NP	NP	NP	22	A-1-b
439.5'	18	11/16/8	32			DENSE, DARK GRAY TO BLACK, GRAVEL, SOME SAND, TRACE SILT AND CLAY, WET 18.4'	SS-4	53	63	21	7	7	2	NP	NP	NP	19	A-1-a
437.5'	20	8/7/4	15			MEDIUM DENSE, DARK GRAY TO BLACK, GRAVEL, TRACE SAND, WET 20.0'	SS-5	27	97	2	1	0	0	NP	NP	NP	5	A-1-a
435.5'	22	50+	50+			DENSE TO VERY DENSE, DARK GRAY TO GRAY, GRAVEL, LITTLE SAND, TRACE SILT, WET	SS-6	13				SAME AS SS-7					15	A-1-a Visual
433.5'	24	14/22/9	41				SS-7	53	85	8	3	5	0	NP	NP	NP	9	A-1-a
431.5'	26	14/25/13	51				SS-8	40				SAME AS SS-7					14	A-1-a Visual
429.5'	28	50+	50+				SS-9	7				SAME AS SS-7					11	A-1-a Visual
427.5'	30	49/49/5	72			30.9'	SS-10	60				SAME AS SS-7					27	A-1-a Visual
425.5'	32	7/6/8	19			MEDIUM DENSE, DARK GRAY TO BROWN, GRAVEL, WITH SAND AND LITTLE SILT AND CLAY, WET	SS-11	47	60	5	11	13	11	NP	NP	NP	27	A-1-b
423.5'	34																	
421.5'	36	2/4/7	15				SS-12	27				SAME AS SS-11						A-1-b Visual
419.5'	38	3/5/8	17				SS-13	27				SAME AS SS-11					6	A-1-b Visual
417.5'	40	2/4/7	15			39.0' MEDIUM DENSE, GRAY, COARSE AND FINE SAND WITH LITTLE SILT AND TRACE GRAVEL AND CLAY, WET	SS-14	100				SAME AS SS-15					22	A-3a Visual
415.5'	42																	
413.5'	44	3/4/8	16				SS-15	100	9	17	46	22	6	NP	NP	NP	19	A-3a
411.5'	46	2/7/9	21				SS-16	100				SAME AS SS-15					16	A-3a Visual
409.5'	48																	
407.5'	50	6/7/6	17				SS-17	100				SAME AS SS-15					18	A-3a Visual
405.5'	52																	
403.5'	54	7/8/9	23			53.0' MEDIUM DENSE, BROWN TO GRAY, GRAVEL WITH LITTLE SAND AND TRACE SILT, WET	SS-18	100	83	10	5	2	0	NP	NP	NP	11	A-1-a
401.5'	56																	
399.5'	58					TOP OF ROCK BEGIN CORE 58.1'												
397.5'	60					SHALE (70%) INTERBEDDED WITH LIMESTONE (30%), SHALE: GRAY, WEAK TO SLIGHTLY STRONG, THINLY LAMINATED TO THIN BEDDED. LIMESTONE: LIGHT GRAY, MODERATELY STRONG, THIN BEDDED, FOSSILIFEROUS, UNIT RQD = 59%, LOSS = 1%												
395.5'	62	49		2.9	0.0													
393.5'	64																	
391.5'	66	44		9.7	0.3													
389.5'	68																	
387.5'	70																	
385.5'	72																	
383.5'	74																	
381.5'	76	78		10.0	0.0													
379.5'	78																	
377.5'	80					BOTTOM OF BORING = 81.2'												

LOG OF BORING

BORING NO: B-005-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 9+16.7,23.7' RT. SURFACE ELEV.: 457.9' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 8/07/08 DATE COMPLETED: 8/08/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 456.4'
NORTHING: 407,687.30 EASTING: 1,388,628.94 SEALING/BACKFILLING TYPE: SLOPE INCLINOMETER/PEA GRAVEL HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
457.9'	0					BARGE DECK												
						1.5'												Visual
455.9'	2					WATER												
																		Visual
453.9'	4																	
451.9'	6																	
449.9'	8																	
447.9'	10																	
445.9'	12																	
443.9'	14					14.0'												
		1/1/1	3			VERY LOOSE TO MEDIUM STIFF, GRAY, GRAVEL WITH SAND AND	SS-1	7									21	A-1-b Visual
441.9'	16	1/1/1	3			TRACE SILT, WET	SS-2	80	47	41	7	5	0	NP	NP	NP	14	A-1-b
439.9'	18	0/0/0	0				SS-3	0										
		7/2/1	4				SS-4	33	43	33	18	6	0	NP	NP	NP	14	A-1-b
437.9'	20																	
435.9'	22																	
433.9'	24	2/2/2	5				SS-5	7			SAME AS SS-4						59	A-1-b Visual
431.9'	26																	
						26.5'												
429.9'	28	15/50+	50+			DENSE TO VERY DENSE, GRAY, GRAVEL WITH SOME SAND AND TRACE SILT AND CLAY, WET	SS-6	60	63	15	9	10	3	NP	NP	-	44	A-1-a
427.9'	30	3/5/30	47				SS-7	7			SAME AS SS-6						0	A-1-a Visual
425.9'	32																	
423.9'	34																	
421.9'	36	50+	50+				SS-8	20			SAME AS SS-6						4	A-1-a Visual
419.9'	38					38.0'												
417.9'	40					MEDIUM DENSE, GRAY, FINE SAND WITH LITTLE GRAVEL, TRACE COARSE SAND, SILT, AND CLAY, WET												
		10/8/7	20				SS-9	100	12	6	73	8	1	NP	NP	-	23	A-3
415.9'	42																	
413.9'	44																	
411.9'	46	3/5/10	20				SS-10	93			SAME AS SS-9						23	A-3 Visual
						46.5'												
409.9'	48					MEDIUM DENSE, BROWN TO GRAY, GRAVEL WITH SAND AND TRACE SILT AND CLAY, WET												
407.9'	50																	
		3/5/6	15				SS-11	27			SAME AS SS-12						16	A-1-b Visual
405.9'	52																	
403.9'	54																	
401.9'	56	11/11/11	29				SS-12	73	47	29	11	8	5	NP	NP	NP	13	A-1-b
399.9'	58																	
		50+	50+			TOP OF ROCK BEGIN CORE	SS-13	0									11	A-1-b Visual
397.9'	60					59.5'												
395.9'	62					SHALE (65%) INTERBEDDED WITH LIMESTONE (35%) SHALE: GRAY, WEAK TO SLIGHTLY STRONG, SLIGHTLY WEATHERED, THINLY LAMINATED TO THIN BEDDED, LIMESTONE: LIGHT GRAY, MODERATELY STRONG, THIN BEDDED, FOSSILIFEROUS, UNIT RQD = 68%, LOSS = 0%												
393.9'	64																	
391.9'	66	68		6.8	0.5													
389.9'	68					SHALE (75%) INTERBEDDED WITH LIMESTONE (25%) SHALE: GRAY, WEAK TO SLIGHTLY STRONG, SLIGHTLY WEATHERED, THINLY LAMINATED TO THIN BEDDED. LIMESTONE: LIGHT GRAY, MODERATELY STRONG, THIN BEDDED, FOSSILIFEROUS, UNIT RQD = 46%, LOSS = 0%												
		46		10.0	0.0													
387.9'	70																	
385.9'	72																	
383.9'	74																	
381.9'	76																	
379.9'	78	46		3.2	0.0	SHALE (60%) INTERBEDDED WITH LIMESTONE (40%) SHAL: GRAY, WEAK TO SLIGHTLY STRONG, SLIGHTLY WEATHERED, THINLY LAMINATED TO THIN BEDDED. LIMESTONE: LIGHT GRAY, MODERATELY STRONG, THIN BEDDED, FOSSILIFEROUS, UNIT RQD = 46%, LOSS = 0%												
377.9'	80																	

BOTTOM OF BORING = 80.0'

LOG OF BORING

BORING NO: B-006-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 9+39.9,30.1' RT. SURFACE ELEV.: 457.3' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 8/06/08 DATE COMPLETED: 8/07/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 456.4'
NORTHING: 407,673.07 EASTING: 1,388,648.41 SEALING/BACKFILLING TYPE: N/A HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
457.3'	0					BARGE DECK 0.9'												Visual
455.3'	2					WATER												Visual
453.3'	4																	
451.3'	6																	
449.3'	8																	
447.3'	10																	
445.3'	12					12.0'												
	14	21/50+	50+			VERY DENSE, GRAY, GRAVEL WITH SAND, LITTLE SILT, TRACE CLAY, WET 13.5'	SS-1	53	54	13	11	18	4	NP	NP	NP	39	A-1-b
443.3'		11/13/15	37			DENSE, GRAY, GRAVEL WITH SAND AND SILT, TRACE CLAY, WET 15.0'	SS-2	60	42	15	17	22	4	NP	NP	NP	26	A-2-4
441.3'	16					BOULDER (AUGERED)												
439.3'	18					18.0'												
		7/13/17	40			DENSE, GRAY, GRAVEL WITH SAND, TRACE SILT AND CLAY, WET	SS-3	60	75	12	5	7	1	NP	NP	NP	19	A-1-b
437.3'	20																	
435.3'	22																	
		19/13/17	40				SS-4	13			SAME AS SS-3						8	A-1-b Visual
433.3'	24																	
431.3'	26																	
						BEGIN CORE 27.0'												
429.3'	28	96%		5.7	0.0	CONCRETE FOOTING, 1.25" STEEL REBAR AT 17" ABOVE BOTTOM OF FOOTING												
427.3'	30																	
425.3'	32																	

BOTTOM OF BORING = 32.7'

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

DRAWN CW
CHECKED EMK

LOG OF BORING

BORING NO: B-007-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 10+37.5,5.8' RT. SURFACE ELEV.: 486.0' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/23/08 DATE COMPLETED: 6/24/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 444.0'
NORTHING: 407,662.00 EASTING: 1,388,748.75 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
486.0'	0																	
484.0'	2					LOOSE TO MEDIUM DENSE, BROWN, BLACK AND GRAY, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, SILT AND CLAY, CONCRETE AND BRICK FRAGMENTS, MOIST TO WET (FILL)												
482.0'	4	7/5/16	28				SS-1	20			SAME AS SS-2						13	A-2-6 Visual
480.0'	6	8/5/6	15				SS-2	73	50	11	13	17	9	32	21	11	15	A-2-6
478.0'	8	7/5/4	12				SS-3	27			SAME AS SS-2						17	A-2-6 Visual
476.0'	10	3/4/4	11				SS-4	7			SAME AS SS-2						19	A-2-6 Visual
474.0'	12	2/2/2	5				SS-5	7			SAME AS SS-2						16	A-2-6 Visual
472.0'	14	3/2/2	5				SS-6	73			SAME AS SS-2						35	A-2-6 Visual
470.0'	16	1/1/2	4				SS-7	67			SAME AS SS-2						31	A-2-6 Visual
468.0'	18					19.5'												
466.0'	20	1/1/1	3			VERY SOFT TO SOFT, GRAY AND DARK GRAY, SILT, SOME SAND, LITTLE CLAY, TRACE GRAVEL, MOIST TO WET -INTERBEDDED COARSE AND FINE SAND LAYERS	SS-8	67			SAME AS SS-11						33	A-4b Visual
464.0'	22	0/0/0	0				SS-9	87			SAME AS SS-11						30	A-4b Visual
462.0'	24	ST					ST-10	100			SAME AS SS-11						36	A-4b Visual
460.0'	26	0/0/0	0				SS-11	100	1	1	28	54	16	29	20	9	29	A-4b
458.0'	28	0/0/3	4				SS-12	100			SAME AS SS-11						26	A-4b Visual
456.0'	30																	
454.0'	32																	
452.0'	34					35.0'												
450.0'	36	1/2/5	9			MEDIUM STIFF, BROWN, CLAY, AND SILT, TRACE SAND, MOIST	SS-13	100	0	2	5	57	36	41	23	18	28	A-7-6
448.0'	38																	
446.0'	40	ST					ST-14	50			SAME AS SS-13						24	A-7-6 Visual
444.0'	42																	
442.0'	44					45.0'												
440.0'	46	0/0/2	3			SOFT TO STIFF, BROWN AND GRAY, SANDY SILT, LITTLE CLAY, WET -INTERBEDDED COARSE AND FINE SAND LAYERS ARE PRESENT	SS-15	100	0	4	39	43	14	22	15	7	28	A-4a
438.0'	48																	
436.0'	50	4/4/6	13				SS-16	100			SAME AS SS-15						21	A-4a Visual
434.0'	52					51.5'												
432.0'	54					MEDIUM DENSE, BROWN AND GRAY, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, WET													
430.0'	56	4/7/12	25				SS-17	73	11	46	27	14	2	NP	NP	NP	16	A-1-a
428.0'	58					57.0'												
426.0'	60	5/12/11	31			DENSE TO VERY DENSE, BROWN, GRAY AND BLACK, GRAVEL, SOME SAND, TRACE CLAY, TRACE SILT, WET	SS-18	67			SAME AS SS-19						16	A-1-a Visual
424.0'	62																	
422.0'	64																	
420.0'	66	11/14/27	55				SS-19	73	61	22	9	6	2	NP	NP	NP	11	A-1-a
418.0'	68																	
416.0'	70																	

BORING CONTINUED

LOG OF BORING (CONTINUED)

BORING NO: B-007-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 10+37.5,5.8' RT. SURFACE ELEV.: 486.0' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/23/08 DATE COMPLETED: 6/24/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 444.0'
NORTHING: 407,662.00 EASTING: 1,388,748.75 SEALING/BACKFILLING TYPE: AUGER CUTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
416.0'	70	19/12/8	27			MEDIUM DENSE, GRAY AND BLACK, GRAVEL, SOME SAND, TRACE CLAY, TRACE SILT, BROWN, WET	SS-20	80			SAME	AS SS	-19				13	A-1-a Visual
414.0'	72																	
412.0'	74																	
410.0'	76	5/5/9	19				SS-21	87			SAME	AS SS	-19				15	A-1-a Visual
408.0'	78					78.0'												
406.0'	80					DENSE TO VERY DENSE, BROWN AND GRAY, GRAVEL WITH SAND, TRACE SILT, TRACE CLAY, WET													
404.0'	82	16/12/16	37				SS-22	73	42	23	26	8	1	NP	NP	NP	16	A-1-b
402.0'	84																	
400.0'	86	6/6/50+	50+				SS-23	73			SAME	AS SS	-22				13	A-1-b Visual
398.0'	88																	
396.0'	90					TOP OF ROCK/BEGIN CORE 90.0'												
394.0'	92	19%		2.3	1.7	SHALE (60%) WITH INTERBEDDED LIMESTONE (40%), SHALE: GRAY, MODERATELY TO HIGHLY WEATHERED, WEAK, THIN TO VERY THIN BEDDING, LIMESTONE: LIGHT GRAY, STRONG, CRYSTALLINE, THIN BEDDED, UNIT RQD = 19%, LOSS = 43%													
392.0'	94					94.0'												
390.0'	96	66%		9.0	0.0	SHALE (60%) WITH INTERBEDDED LIMESTONE (40%), SHALE: GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO SLIGHTLY STRONG, THIN TO THINLY LAMINATED BEDDING, LIMESTONE: LIGHT GRAY, STRONG, CRYSTALLINE, THIN TO LAMINATED BEDDED, FOSSILIFEROUS; FEW VERY THIN BEDDED CLAY SEEMS PRESENT, UNIT RQD = 66%, LOSS = 0%													
388.0'	98																	
386.0'	100																	
384.0'	102																	

BOTTOM OF BORING = 103.0'

LOG OF BORING

BORING NO: B-008-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 11+12.0,4.5' RT. SURFACE ELEV.: 492.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/17/08 DATE COMPLETED: 6/18/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 466.0'
NORTHING: 407,639.73 EASTING: 1,388,820.13 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
492.8'	0																	
490.8'	2					LOOSE TO DENSE, DARK BROWN, GRAY AND RED, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, LITTLE SILT, TRACE CLAY, BRICK AND ASPHALT FRAGMENTS, DAMP TO MOIST (FILL)												
488.8'	4	6/7/13	27				SS-1	67				SAME AS SS-4					11	A-1-b Visual
486.8'	6	5/5/11	21				SS-2	100				SAME AS SS-4					13	A-1-b Visual
484.8'	8	8/19/18	49				SS-3	93				SAME AS SS-4					14	A-1-b Visual
482.8'	10	14/17/10	36				SS-4	100	33	20	22	17	8	27	23	4	15	A-1-b
480.8'	12	3/5/6	15				SS-5	60				SAME AS SS-4					18	A-1-b Visual
478.8'	14	5/2/3	7				SS-6	67				SAME AS SS-4					27	A-1-b Visual
476.8'	16	3/3/3	8				SS-7	13				SAME AS SS-4					16	A-1-b Visual
474.8'	18																	
472.8'	20					20.0'												
470.8'	22	1/2/4	8			MEDIUM STIFF TO STIFF, BROWN, CLAY, TRACE SAND, TRACE GRAVEL, MOIST	SS-8	87				SAME AS SS-9					27	A-7-6 Visual
468.8'	24	2/2/5	9				SS-9	93	1	1	5	57	36	43	24	19	30	A-7-6
466.8'	26	1/1/4	7				SS-10	93				SAME AS SS-9					27	A-7-6 Visual
464.8'	28	0/1/4	7				SS-11	93				SAME AS SS-9					29	A-7-6 Visual
462.8'	30					29.5'												
460.8'	32	2/2/4	8			MEDIUM STIFF TO STIFF, BROWN, SILTY CLAY, TRACE SAND, MOIST TO WET	SS-12	93				SAME AS SS-14					31	A-6b Visual
458.8'	34																	
456.8'	36	2/4/7	15				SS-13	93				SAME AS SS-14					31	A-6b Visual
454.8'	38																	
452.8'	40	2/4/6	13				SS-14	100	0	0	6	53	41	39	22	17	30	A-6b
450.8'	42																	
448.8'	44																	
446.8'	46	2/3/5	11				SS-15	100				SAME AS SS-14					30	A-6b Visual
444.8'	48																	
442.8'	50					50.0'												
440.8'	52	1/2/2	5			LOOSE TO DENSE, GRAY, FINE SAND, TRACE SILT, TRACE CLAY, WET	SS-16	100				SAME AS SS-17					21	A-3 Visual
438.8'	54																	
436.8'	56	10/10/15	33				SS-17	100	0	21	70	8	1	NP	NP	NP	18	A-3
434.8'	58																	
432.8'	60	2/8/6	19				SS-18	100				SAME AS SS-17					18	A-3 Visual
430.8'	62																	
428.8'	64					65.0'												
426.8'	66	10/12/7	25			MEDIUM DENSE TO DENSE, BROWN AND GRAY, GRAVEL AND/ OR STONE FRAGMENTS, SOME SAND, TRACE SILT, TRACE CLAY, WET	SS-19	33				SAME AS SS-20					10	A-1-a Visual
424.8'	68																	
422.8'	70																	

BORING CONTINUED

LOG OF BORING (CONTINUED)

BORING NO: B-008-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 11+12.0,4.5' RT. SURFACE ELEV.: 492.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/17/08 DATE COMPLETED: 6/18/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 466.0'
NORTHING: 407,639.73 EASTING: 1,388,820.13 SEALING/BACKFILLING TYPE: AUGER CUTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
422.8'	70																	
		6/16/12	37			MEDIUM DENSE TO DENSE, BROWN AND GRAY, GRAVEL, SOME SAND, TRACE SILT, TRACE CLAY, WET	SS-20	60	60	22	12	5	1	NP	NP	NP	11	A-1-a
420.8'	72																	
418.8'	74																	
416.8'	76	10/15/19	45				SS-21	73				SAME AS SS-20					14	A-1-a Visual
						77.0'												
414.8'	78					MEDIUM DENSE TO VERY DENSE, BROWN AND GRAY, COARSE AND FINE SAND, LITTLE GRAVEL, LITTLE SILT, TRACE CLAY, MOIST												
412.8'	80																	
		2/4/10	19				SS-22	80				SAME AS SS-23					17	A-3a Visual
410.8'	82																	
408.8'	84																	
406.8'	86	10/14/19	44				SS-23	87	11	15	54	17	3	NP	NP	NP	18	A-3a
404.8'	88																	
402.8'	90																	
		28/20/21	55				SS-24	100				SAME AS SS-23					18	A-3a Visual
398.8'	92																	
396.8'	94																	
394.8'	96																	
392.8'	98																	
390.8'	100																	
388.8'	102					TOP OF ROCK/BEGIN CORE												
386.8'	104					SHALE (60%) WITH INTERBEDDED LIMESTONE (40%), SHALE: GRAY, SLIGHTLY TO MODERATELY WEATHERED, WEAK TO STRONG, THIN TO THINLY LAMINATED BEDDING, LIMESTONE: LIGHT GRAY, STRONG, VERY THIN TO THIN BEDDED, FOSSILIFEROUS, UNIT RQD = 22%, LOSS = 10%												
384.8'	106	22%		8.1	0.9													
382.8'	108																	
380.8'	110																	

BOTTOM OF BORING = 111.0'

LOG OF BORING

BORING NO: B-009-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 12+16.4,2.3' RT. SURFACE ELEV.: 486.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/18/08 DATE COMPLETED: 6/19/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 474.5'
NORTHING: 407,612.97 EASTING: 1,388,921.20 SEALING/BACKFILLING TYPE: AUGER CUTTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
486.8'	0																	
484.8'	2					VERY STIFF, BROWN, BLACK AND RED, SANDY SILT, AND TO SOME GRAVEL, LITTLE CLAY, ASPHALT AND BRICK FRAGMENTS, DAMP (FILL)													
482.8'	4	7/7/7	19			4.5'	SS-1	73									19	A-4a Visual
480.8'	6	3/3/3	8			VERY LOOSE TO LOOSE, BROWN, BLACK AND RED, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND AND SILT, LITTLE CLAY, ASPHALT AND BRICK FRAGMENTS, MOIST (FILL)	SS-2	47	31	16	18	24	11	NP	NP	NP	20	A-2-4
478.8'	8	2/1/2	4			9.0'	SS-3	80			SAME AS SS-2						27	A-2-4 Visual
476.8'	10	3/2/3	7			MEDIUM STIFF TO STIFF, DARK GRAY AND BLACK, SANDY SILT, SOME TO LITTLE CLAY, TRACE GRAVEL, MOIST (FILL)	SS-4	80	1	3	31	47	18	NP	NP	NP	28	A-4a
474.8'	12																	
472.8'	14	2/3/7	13			14.0'	SS-5	80			SAME AS SS-4						28	A-4a Visual
470.8'	16	4/2/4	8			MEDIUM STIFF TO STIFF, GRAY, SILT, SOME TO LITTLE SAND, SOME TO LITTLE CLAY, TRACE GRAVEL, MOIST TO WET	SS-6	67	7	3	19	53	18	31	21	10	27	A-4b
468.8'	18	ST					ST-7	100			SAME AS SS-6						42	A-4b Visual
466.8'	20	2/3/2	7				SS-8	60			SAME AS SS-6						37	A-4b Visual
464.8'	22																	
462.8'	24	2/4/5	9				SS-9	13			SAME AS SS-6						40	A-4b Visual
460.8'	26	ST					ST-10	85			SAME AS SS-6						30	A-4b Visual
458.8'	28	2/4/4	11			27.0' MEDIUM STIFF TO STIFF, GRAY AND BROWN,SILTY CLAY, TRACE SAND, MOIST TO WET	SS-11	100			SAME AS SS-12						30	A-6b Visual
456.8'	30	2/2/4	8				SS-12	100	0	0	3	54	43	40	23	17	32	A-6b
454.8'	32																	
452.8'	34																	
450.8'	36	2/2/5	9				SS-13	93			SAME AS SS-12						30	A-6b Visual
448.8'	38																	
446.8'	40	2/2/3	7				ST-14	25			SAME AS SS-12						32	A-6b Visual
444.8'	42																	
442.8'	44					43.0' SOFT TO STIFF, GRAY, SILT AND CLAY, LITTLE SAND, WET -FINE SAND LAYERS ARE INTERBEDDED													
440.8'	46	2/3/5	11				SS-15	100	0	0	13	56	30	35	22	13	32	A-6a
438.8'	48																	
436.8'	50	ST					ST-16	100			SAME AS SS-15						29	A-6a Visual
434.8'	52																	
432.8'	54					55.0'												
430.8'	56	2/2/2	5			LOOSE TO VERY DENSE, BROWN AND BLACK, GRAVEL AND/OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET	SS-17	100			SAME AS SS-19						16	A-1-b Visual
428.8'	58																	
426.8'	60	15/10/11	28				SS-18	87			SAME AS SS-19						13	A-1-b Visual
424.8'	62																	
422.8'	64																	
420.8'	66	9/8/17	33				SS-19	93	38	39	15	7	1	NP	NP	NP	12	A-1-b
418.8'	68																	
416.8'	70																	

BORING CONTINUED

LOG OF BORING (CONTINUED)

BORING NO: B-009-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 12+16.4,2.3' RT. SURFACE ELEV.: 486.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/18/08 DATE COMPLETED: 6/19/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: 474.5'
NORTHING: 407,612.97 EASTING: 1,388,921.20 SEALING/BACKFILLING TYPE: AUGER CUTINGS HAMMER SYSTEM TYPE: CME SAFETY
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: 80

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
416.8'	70	6/8/9	23			LOOSE TO VERY DENSE, BROWN AND BLACK, GRAVEL AND/ OR STONE FRAGMENTS WITH SAND, TRACE SILT, TRACE CLAY, WET	SS-20	87			SAME	AS SS-19					20	A-1b Visual
414.8'	72																	
412.8'	74																	
410.8'	76	50+	50+			-ENCOUNTERED BOULDER AT 75.0'-75.2'	SS-21	13			SAME	AS SS-19					10	A-1b Visual
408.8'	78																	
406.8'	80	6/8/9	23				SS-22	7			SAME	AS SS-19					11	A-1b Visual
404.8'	82																	
402.8'	84					TOP OF ROCK/BEGIN CORE												
400.8'	86					SHALE (60%) WITH INTERBEDDED LIMESTONE (40%), SHALE: GRAY, LAMINATED TO THIN BEDDING, WEAK TO SLIGHTLY STRONG, CONTAINS FOSSILS, LIMESTONE: LIGHT GRAY, LAMINATED TO THIN BEDDING, STRONG, CRYSTALLINE, FOSSILIFEROUS, UNIT RQD = 39%, LOSS = 17%												
398.8'	88																	
396.8'	90																	
394.8'	92																	
392.8'	94	39%		8.3	1.7													

BOTTOM OF BORING = 95.2'

LOG OF BORING (CONTINUED)

BORING NO: B-010-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 13+50.7,10.1' RT. SURFACE ELEV.: 502.8' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/25/08 DATE COMPLETED: 6/25/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: N/A
NORTHING: 407,574.90 EASTING: 1,389,050.57 SEALING/BACKFILLING TYPE: AUGER CUTINGS HAMMER SYSTEM TYPE: MANUAL DROP
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: N/A

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
502.8'	0																	
		3/10/10	20			VERY STIFF, BROWN AND GRAY, SILT AND CLAY, AND GRAVEL, SOME SAND, DAMP (FILL)	SS-1	-	38	8	14	23	17	29	18	11	8	A-6a
500.8'	2					1.5'												
		7/5/5	10			STIFF, BROWN AND GRAY, SILTY CLAY, SOME GRAVEL, SOME SAND, DAMP (FILL)	SS-2	-	22	6	16	35	21	38	22	16	9	A-6b
498.8'	4	4/4/50+	50+				SS-3	-			SAME AS SS-2						15	A-6b Visual

AUGER REFUSAL/BOTTOM OF BORING = 4.4'

LOG OF BORING (CONTINUED)

BORING NO: B-011-0-07 BASELINE, STATION & OFFSET: PRO. EB. US-50 STA. 15+50.1,2.3' RT. SURFACE ELEV.: 494.4' PROJECT IDENTIFICATION: HAM-50-19.03
DATE STARTED: 6/25/08 DATE COMPLETED: 6/25/08 METHOD: 3.25" ID HS AUGER WATER ELEV.: N/A
NORTHING: 407,548.83 EASTING: 1,389,248.76 SEALING/BACKFILLING TYPE: AUGER CUTINGS HAMMER SYSTEM TYPE: MANUAL DROP
QUANTITY: N/A CALIBRATION DATE: 6/18/07 ER: N/A

ELEV.	DEPTH	STD. PEN./ RQD	N_{60}	REC. FT	LOSS FT	DESCRIPTION	SAMPLE TYPE & NO.	% REC.	PHYSICAL CHARACTERISTICS % AGG	% C.S.	% F.S.	% SILT	% CLAY	LL	PL	PI	WC	ODOT CLASS
494.4'	0																	
		2/2/2	4			SOFT TO STIFF, BROWN, SILT AND CLAY, SOME SAND, LITTLE GRAVEL, DAMP (FILL)	SS-1	-	14	7	16	37	26	35	21	14	14	A-6a
492.4'	2																	
		2/5/7	12			3.0'	SS-2	-			SAME AS SS-1						13	A-6a Visual
490.4'	4	25/17/6	23			VERY STIFF, BROWN, SILT AND CLAY, AND SOME GRAVEL, SOME SAND, DAMP (FILL)	SS-3	-	31	10	12	28	19	35	20	15	14	A-6a
		10/10/8	18				SS-4	-	21	11	14	31	24	37	22	15	17	A-6a
488.4'	6																	

AUGER REFUSAL/BOTTOM OF BORING = 7.0'

UNCONFINED COMPRESSION TEST
(ASTM D 2166)

Project Name HAM-50-19.03 — Project Number 175537015
Source B-007, 25.0'-27.0' — Lab ID 117
Visual Description medium stiff gray silty clay with little sand, moist
Recovered 2.1'
Test Interval 26.0' - 26.5'

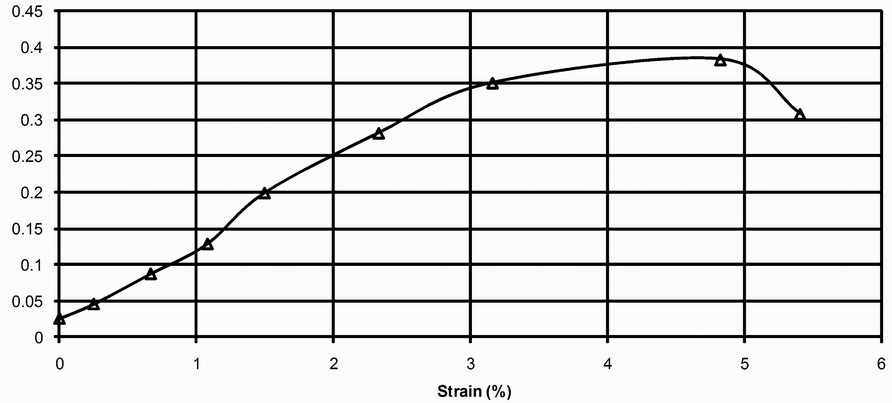
Specimen Type: Undisturbed
LL N/A
PL N/A
PI N/A
Date Extruded 07/14/2008
Date Tested 07/16/2008

Initial Wet Density (pcf)	123.9
Initial Dry Density (pcf)	91.2
Initial Moisture Content (%)	35.9
Specific Gravity	N/A
Degree of Saturation (%)	N/A
Average Height (in)	6.007
Average Diameter (in)	2.830
Height to Diameter Ratio	2.1

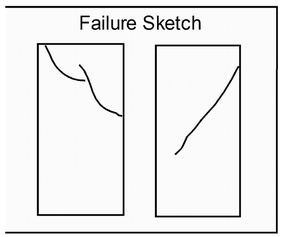
MC Taken Before Test, From Trimmings

Unconfined Compressive Strength (tsf)	0.38
Undrained Shear Strength (tsf)	0.19
Strain at Maximum Stress (%)	4.83
Strain rate to failure (% / min.)	0.75

Stress vs. Strain



Failure Sketch



Pocket Penetrometer Reading (tsf) 1.75
Torvane Reading (kg/cm^2) .1

Comments

UNCONFINED COMPRESSION TEST
(ASTM D 2166)

Project Name HAM-50-19.03 — Project Number 175537015
Source B-007, 40.0'-42.0' — Lab ID 121
Visual Description soft brown clay and sand, wet
Recovered 1'
Test Interval 41.4' - 41.9'

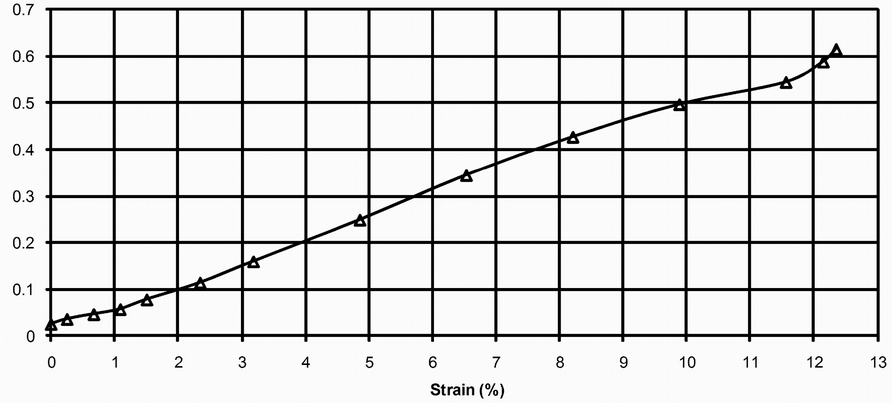
Specimen Type: Undisturbed
LL N/A
PL N/A
PI N/A
Date Extruded 07/14/2008
Date Tested 07/16/2008

Initial Wet Density (pcf)	126.7
Initial Dry Density (pcf)	102.4
Initial Moisture Content (%)	23.7
Specific Gravity	N/A
Degree of Saturation (%)	N/A
Average Height (in)	5.970
Average Diameter (in)	2.813
Height to Diameter Ratio	2.1

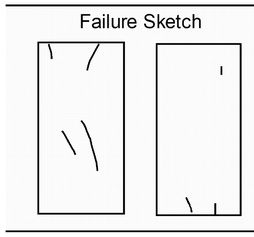
MC Taken Before Test, From Trimmings

Unconfined Compressive Strength (tsf)	0.61
Undrained Shear Strength (tsf)	0.31
Strain at Maximum Stress (%)	12.35
Strain rate to failure (% / min.)	0.84

Stress vs. Strain



Failure Sketch



Pocket Penetrometer Reading (tsf) N/A
Torvane Reading (kg/cm^2) N/A

Comments

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

DRAWN CW
CHECKED EMK

HAM-50-19.03

G:\CN06\0011\Bridge\Foundation_Exploration\75736ZL015.dgn 11/10/2010 1:14:58 PM mtreibeisel

UNCONFINED COMPRESSION TEST
(ASTM D 2166)

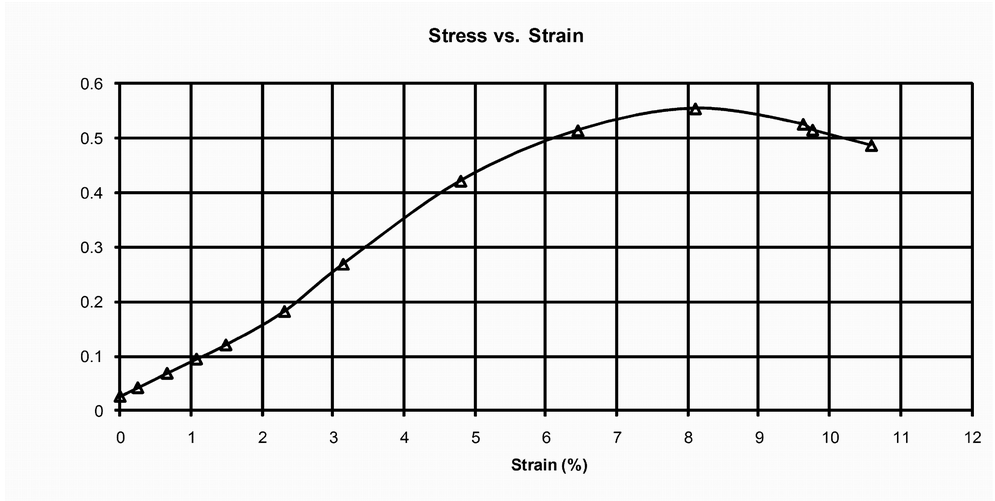
Project Name HAM-50-19.03 — Project Number 175537015
Source B-009, 17.5'-19.5' — Lab ID 63
Visual Description medium stiff gray lean silty clay with little sand, moist
Recovered 2'
Test Interval 18.5' - 19.0'

Specimen Type: Undisturbed
LL N/A
PL N/A
PI N/A
Date Extruded 07/14/2008
Date Tested 07/16/2008

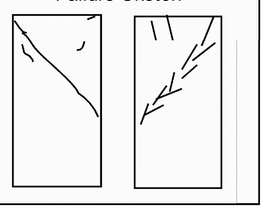
Initial Wet Density (pcf)	118.2
Initial Dry Density (pcf)	83.4
Initial Moisture Content (%)	41.7
Specific Gravity	N/A
Degree of Saturation (%)	N/A
Average Height (in)	6.047
Average Diameter (in)	2.813
Height to Diameter Ratio	2.1

MC Taken Before Test, From Trimmings

Unconfined Compressive Strength (tsf)	0.55
Undrained Shear Strength (tsf)	0.28
Strain at Maximum Stress (%)	8.1
Strain rate to failure (% / min.)	0.73



Failure Sketch



Pocket Penetrometer Reading (tsf) .75
Torvane Reading (kg/cm^2) .06

Comments

UNCONFINED COMPRESSION TEST
(ASTM D 2166)

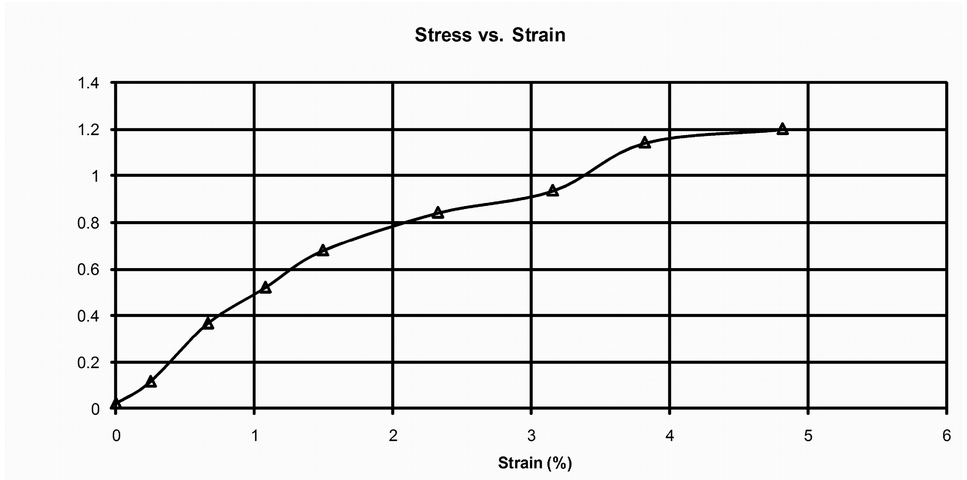
Project Name HAM-50-19.03 — Project Number 175537015
Source B-009, 25.0'-27.0' — Lab ID 66
Visual Description Need!
Recovered 1.7'
Test Interval 26.0' - 26.5'

Specimen Type: Undisturbed
LL N/A
PL N/A
PI N/A
Date Extruded 07/14/2008
Date Tested N/A

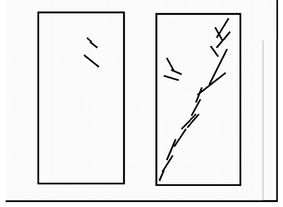
Initial Wet Density (pcf)	123.1
Initial Dry Density (pcf)	95.0
Initial Moisture Content (%)	29.5
Specific Gravity	N/A
Degree of Saturation (%)	N/A
Average Height (in)	6.017
Average Diameter (in)	2.843
Height to Diameter Ratio	2.1

MC Taken Before Test, From Trimmings

Unconfined Compressive Strength (tsf)	1.20
Undrained Shear Strength (tsf)	0.60
Strain at Maximum Stress (%)	4.82
Strain rate to failure (% / min.)	0.33



Failure Sketch



Pocket Penetrometer Reading (tsf) 1
Torvane Reading (kg/cm^2) .05

Comments

DRAWN CW
CHECKED EMK

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

HAM-50-19.03

G:\CN06\0011\Bridge\Foundation_Exploration\757367L016.dgn 11/10/2010 1:15:05 PM mtreiheisel

UNCONFINED COMPRESSION TEST
(ASTM D 2166)

Project Name HAM-50-19.03 Project Number 175537015
Source B-009, 50.0'-52.0' Lab ID 72
Visual Description stiff gray silty clay with traces of sand, moist

Recovered 2'
Test Interval 50.2' - 50.7'

Specimen Type: Undisturbed

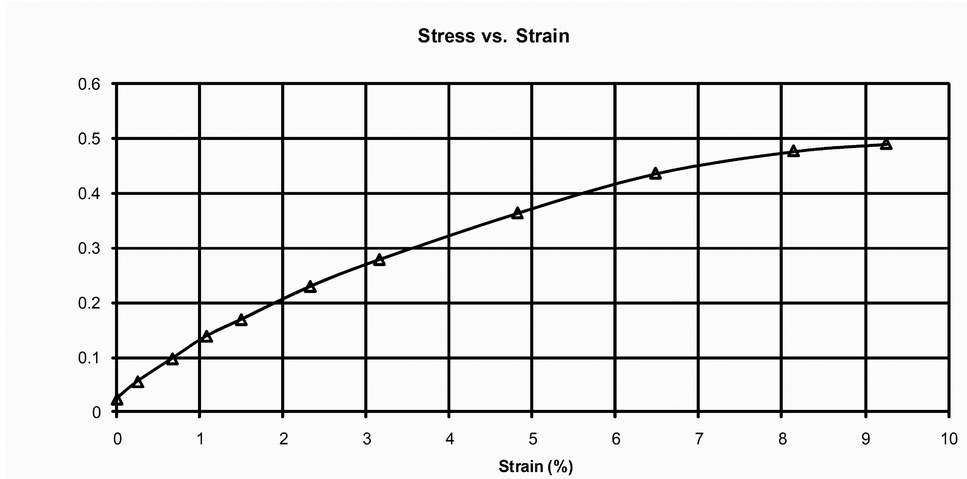
LL N/A
PL N/A
PI N/A

Date Extruded 07/14/2008
Date Tested 07/16/2008

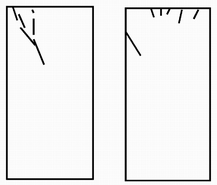
Initial Wet Density (pcf)	119.6
Initial Dry Density (pcf)	93.0
Initial Moisture Content (%)	28.6
Specific Gravity	N/A
Degree of Saturation (%)	N/A
Average Height (in)	6.017
Average Diameter (in)	2.840
Height to Diameter Ratio	2.1

MC Taken Before Test, From Trimmings

Unconfined Compressive Strength (tsf)	0.49
Undrained Shear Strength (tsf)	0.24
Strain at Maximum Stress (%)	9.26
Strain rate to failure (% / min.)	0.64



Failure Sketch



Pocket Penetrometer Reading (tsf) 2.0
Torvane Reading (kg/cm^2) .19

Comments

STRUCTURE FOUNDATION EXPLORATION
BRIDGE NO. HAM-50-19.03 OVER MILL CREEK

DRAWN CW CHECKED EMK

HAM-50-19.03

22/22

G:\CN06\0011\Bridge\Foundation_Exploration\757367L017.dgn 11/10/2010 1:15:13 PM mtneiheisel