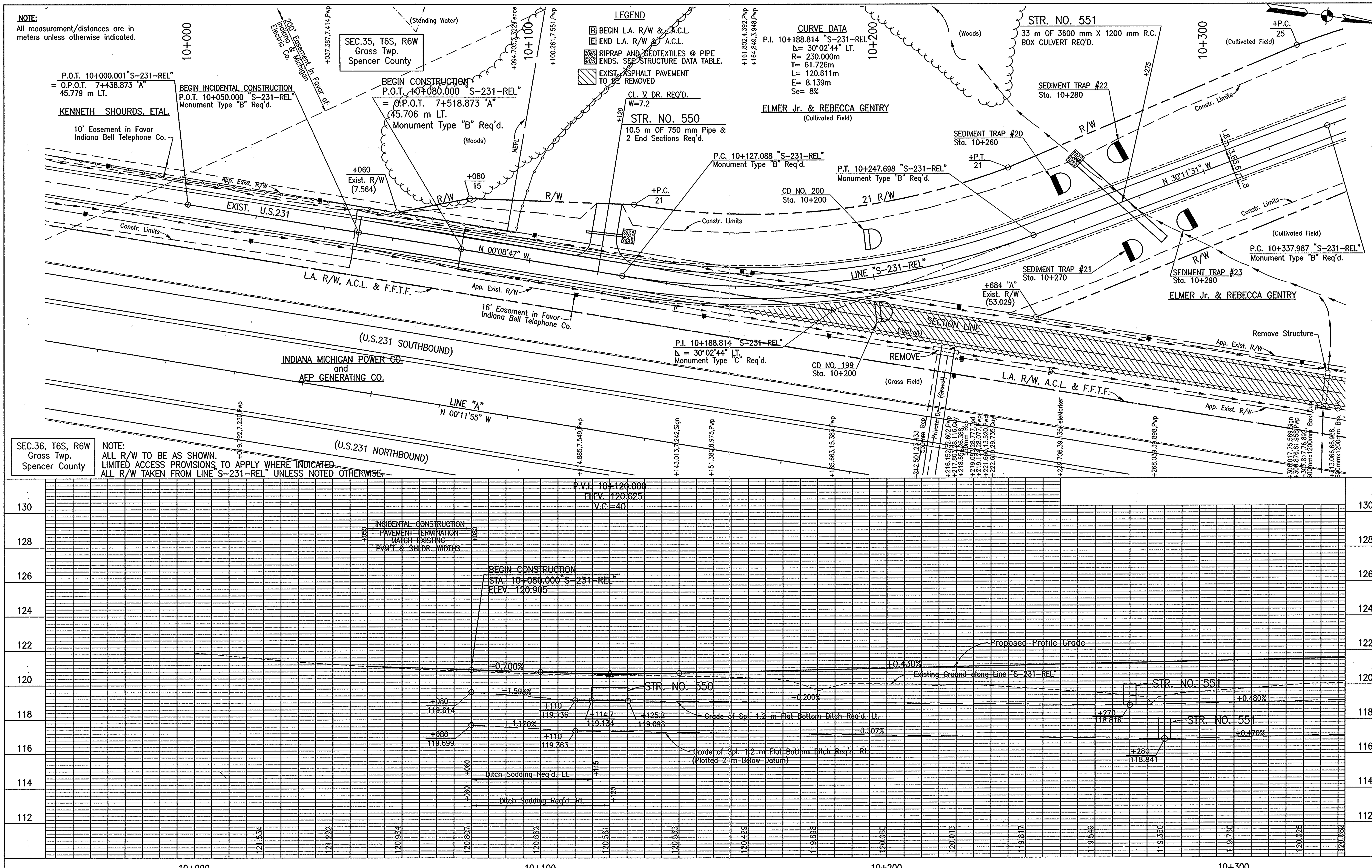
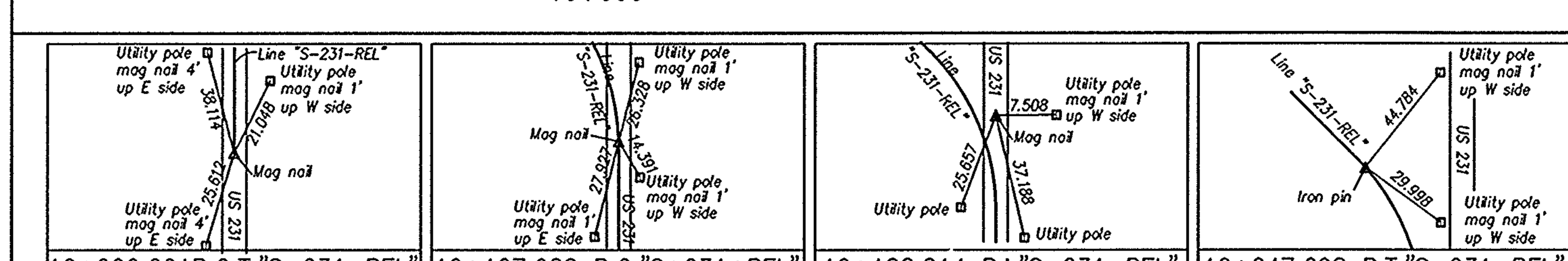
R-26185 2of5





MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Melissa A. Effinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
1:100	8461360
SURVEY BOOK	SHEETS
16722	100 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:8:17
Date: 5/8/2003
Scale: 1=500(PS)
Drawing File: 210_I\DWG\PLAN & PROFILE\phase-1a\pp-231rel-01.dwg (CFits)

STR. NO. 552
14.5 m OF 750 mm PIPE &
2 END SECTIONS REQ'D.

CL. V DR. REQ'D.
W=7.2

P.I. 10+399.601 "S-231-REL"
Δ= 29°59'36" RT.
Monument Type "C" Req'd.

ELMER Jr. & REBECCA GENTRY
(Cultivated Field)

+P.T. 25

25 R/W

Constr. Limits

CD NO. 201
Sta. 10+400

+P.C. 25

LINE "S-231-REL"
N 00°11'55" W

CD NO. 202
Sta. 10+410

20 R/W

N 30°11'31" W

P.C. 10+337.987 "S-231-REL"
Monument Type "B" Req'd.

+P.C. 20

P.T. 10+458.388 "S-231-REL"
Monument Type "B" Req'd.

CURVE DATA
P.I. 10+399.601 "S-231-REL"
Δ= 29°59'36" RT.
R= 230.000
T= 61.614
L= 120.401
E= 8.110
Se= 8%

SEC.35, T6S, R6W
Grass Twp.
Spencer County

NOTE:
All measurement/distances are in meters unless otherwise indicated.

CO. RD. 500 N
S 89°59'02" E
LINE "S-CR500"
N 89°48'05" E
SECTION LINE
(Asphalt)
Scrub
Appr. Exist. R/W
90°12'53"

15 L.A. R/W, A.C.L. & F.F.T.F.
18 L.A. R/W, A.C.L. & F.F.T.F.

+090 "S-CR500"
15

+155 "S-CR500"
18

P.I. 10+130.758 "S-CR500"
Public Road Approach Type "B" Req'd. Lt. & Rt.

P.O.T. 10+516.774 "S-231-REL"
= P.I. 10+130.758 "S-CR500"
Δ = 00°12'53" LT.
Monument Type "B" Req'd.

STR. NO. 553
25.5 m OF 750 mm SMOOTH PIPE
OR 825 mm CORRUGATED PIPE
& 2 END SECTIONS REQ'D.

+550
20

+P.C. 20

20 R/W

Constr. Limits

CD NO. 204
Sta. 10+530

P.C. 10+574.596 "S-231-REL"
Monument Type "B" Req'd.

CD NO. 203
Sta. 10+530

CURVE DATA
P.I. 10+636.774 "S-231-REL"
Δ= 30°15'20" RT.
R= 230.000
T= 62.178
L= 121.454
E= 8.256
Se= 8%

P.I. 10+636.774 "S-231-REL"
Δ= 30°15'20" RT.
Monument Type "C" Req'd.

NORMA J. & RENEE L. PARTRIDGE
(Cultivated Field)

SEC.26, T6S, R6W
Grass Twp.
Spencer County

STR. NO. 554
13 m OF 600 mm PIPE
& 2 END SECTIONS REQ'D.

+654

CD NO. 206
Sta. 10+650

CL. V DR. REQ'D.
W=7.2

CD NO. 205
Sta. 10+650

+P.T. 20

P.T. 10+696.049 "S-231-REL"
Monument Type "B" Req'd.

CD NO. 207
Sta. 10+710

N 30°03'25" E

WARREN W. & LORENE DIMMETT

NEPL

+545,646,41.542,Tree
+548,180,65.383,Tree
+548,647,50.472,Tree
+552,622,35.713,Tree
+558,750,69.238,Tree
+577,748,42.239,Tree
+581,083,44.842,Tree
+583,649,40.879,Tree

LEGEND
B BEGIN L.A. R/W & A.C.L.
E END L.A. R/W & A.C.L.
RIPRAP AND GEOTEXTILES @ PIPE ENDS. SEE STRUCTURE DATA TABLE.

NOTE:
ALL R/W TO BE AS SHOWN.
LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.
ALL R/W TAKEN FROM LINE "S-231-REL" UNLESS NOTED OTHERWISE.

P.V.I. 10+400.000
ELEV. 121.830
V.C.=60

P.V.I. 10+580.000
ELEV. 122.486
V.C.=60

EDGE OF PAVEMENT
STA. 10+513.474 "S-231-REL"
ELEV. 122.965

EDGE OF PAVEMENT
STA. 10+520.074 "S-231-REL"
ELEV. 122.965

+1.000%
+0.430%
-0.300%
+0.250%
+0.650%
+0.290%
+0.480%
+0.470%
+0.813%

STR. NO. 552
STR. NO. 553
STR. NO. 554

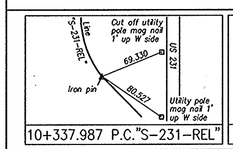
+364.1
119.258
+377.6
119.344
+505
119.944
+505
119.899
+530
121.444
+530
120.835
+620
121.060
+647.6
121.780
+660
121.827

Grade of Spl. 1.2 m Flat Bottom Ditch Req'd. Lt.
Grade of Spl. 1.2 m Flat Bottom Ditch Req'd. Rt. (Plotted 2 m Below Datum)
Grade of Spl. 1.2 m Flat Bottom Ditch Req'd. Lt.
Grade of Spl. 1.2 m Flat Bottom Ditch Req'd. Rt. (Plotted 2 m Below Datum)

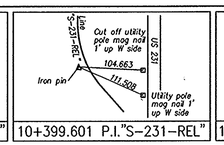
Proposed Profile Grade
Existing Ground along Line "S-231-REL"

120.105 120.136 120.131 120.124 120.098 120.189 120.266 120.402 120.883 121.578 123.209 123.235 123.217 123.090 123.038 123.211 123.459 123.381 123.112 125.005

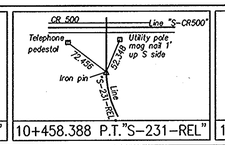
10+400 10+500 10+600 10+700



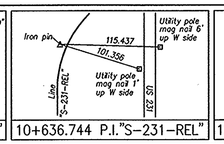
10+337.987 P.C."S-231-REL"



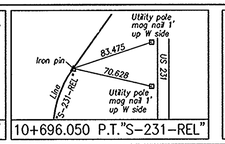
10+399.601 P.I."S-231-REL"



10+458.388 P.T."S-231-REL"



10+636.744 P.I."S-231-REL"



10+696.050 P.T."S-231-REL"

MELISSA ANN ELLINGEN
REGISTERED No. PE19600092 STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Ellingen 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
1:100	8461360
SURVEY BOOK	SHEETS
16722	101 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 15:59:33
Date: 04/22/2003
Scale: 1"=500'(PS)
Drawing File: 210_LOWO\PLAN & PROFILE\phase-1\ps-231rel-02.dwg (CRTis)

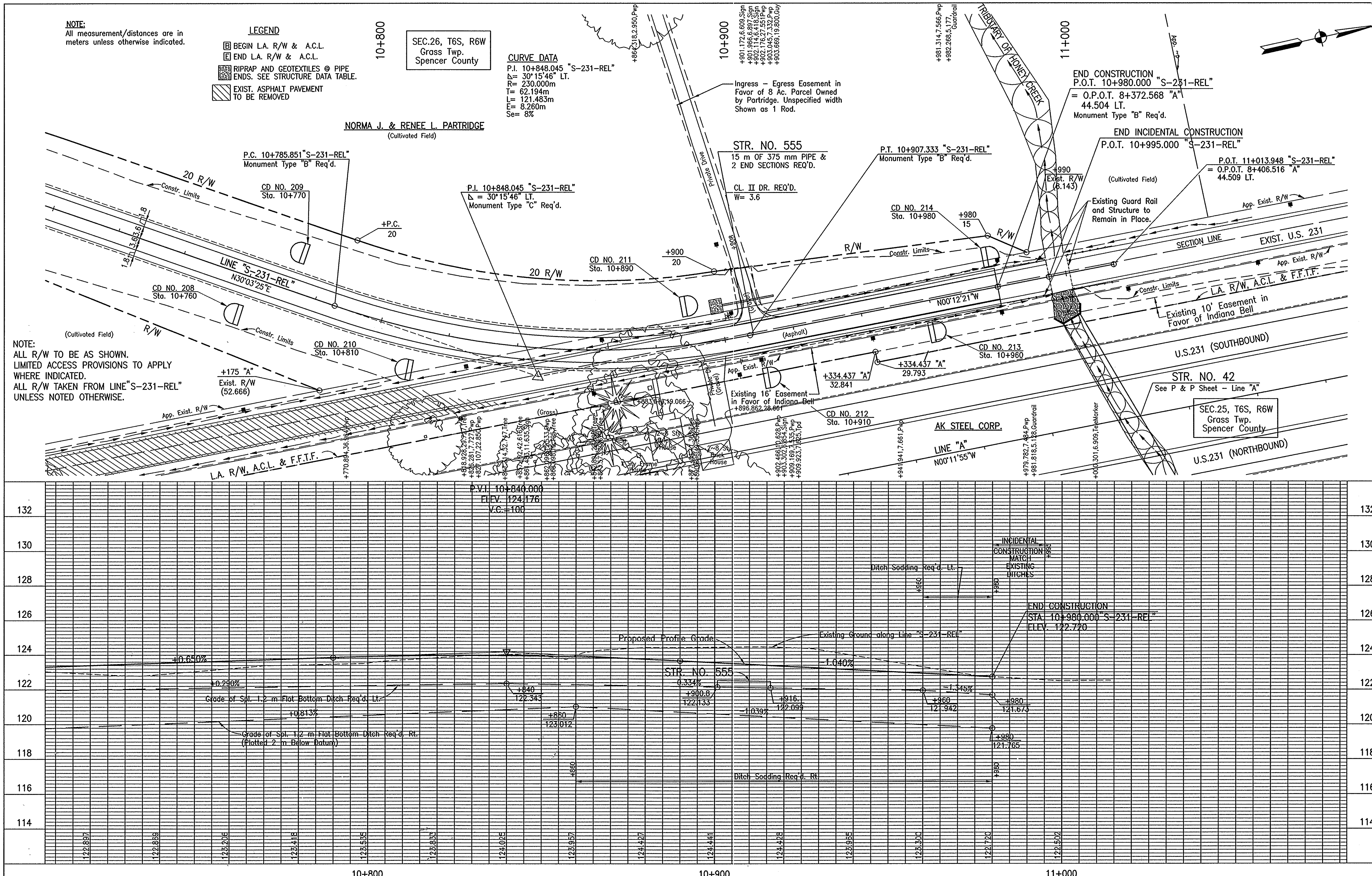
NOTE:
All measurement/distances are in meters unless otherwise indicated.

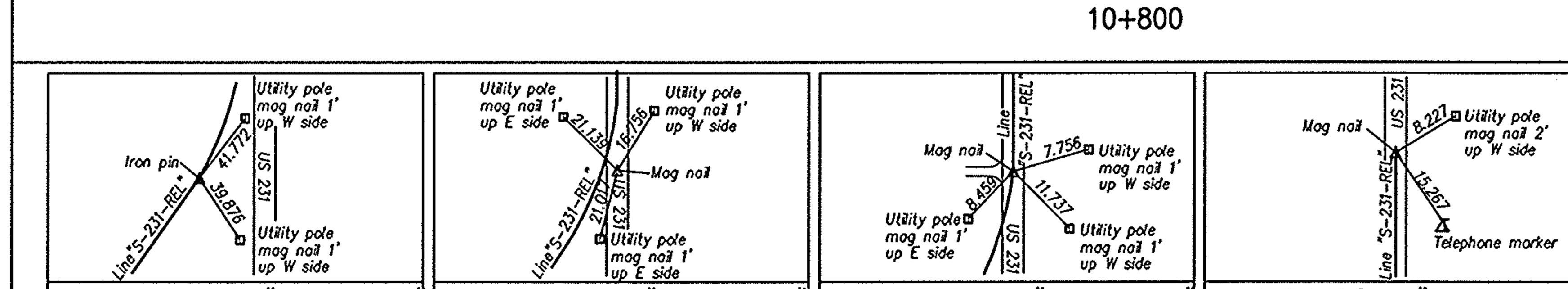
LEGEND

- [B] BEGIN L.A. R/W & A.C.L.
- [E] END L.A. R/W & A.C.L.
- RIPRAP AND GEOTEXTILES @ PIPE ENDS. SEE STRUCTURE DATA TABLE.
- EXIST. ASPHALT PAVEMENT TO BE REMOVED

CURVE DATA
P.I. 10+848.045 "S-231-REL"
Δ= 30°15'46" LT.
R= 230.000m
T= 62.194m
L= 121.483m
E= 8.260m
Se= 8%

NOTE:
ALL R/W TO BE AS SHOWN.
LIMITED ACCESS PROVISIONS TO APPLY WHERE INDICATED.
ALL R/W TAKEN FROM LINE "S-231-REL" UNLESS NOTED OTHERWISE.





MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Melissa A. Effinger (signature) DESIGN ENGINEER	04-22-03 DATE	
DESIGNED: M.A.E.		DRAWN: R.D.S.	
CHECKED: P.L.K.		CHECKED: M.A.E.	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
1:100	8461360
SURVEY BOOK	SHEETS
16722	102 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 16:6:34
Date: 4/21/2003
Scale: 1=500(PS)
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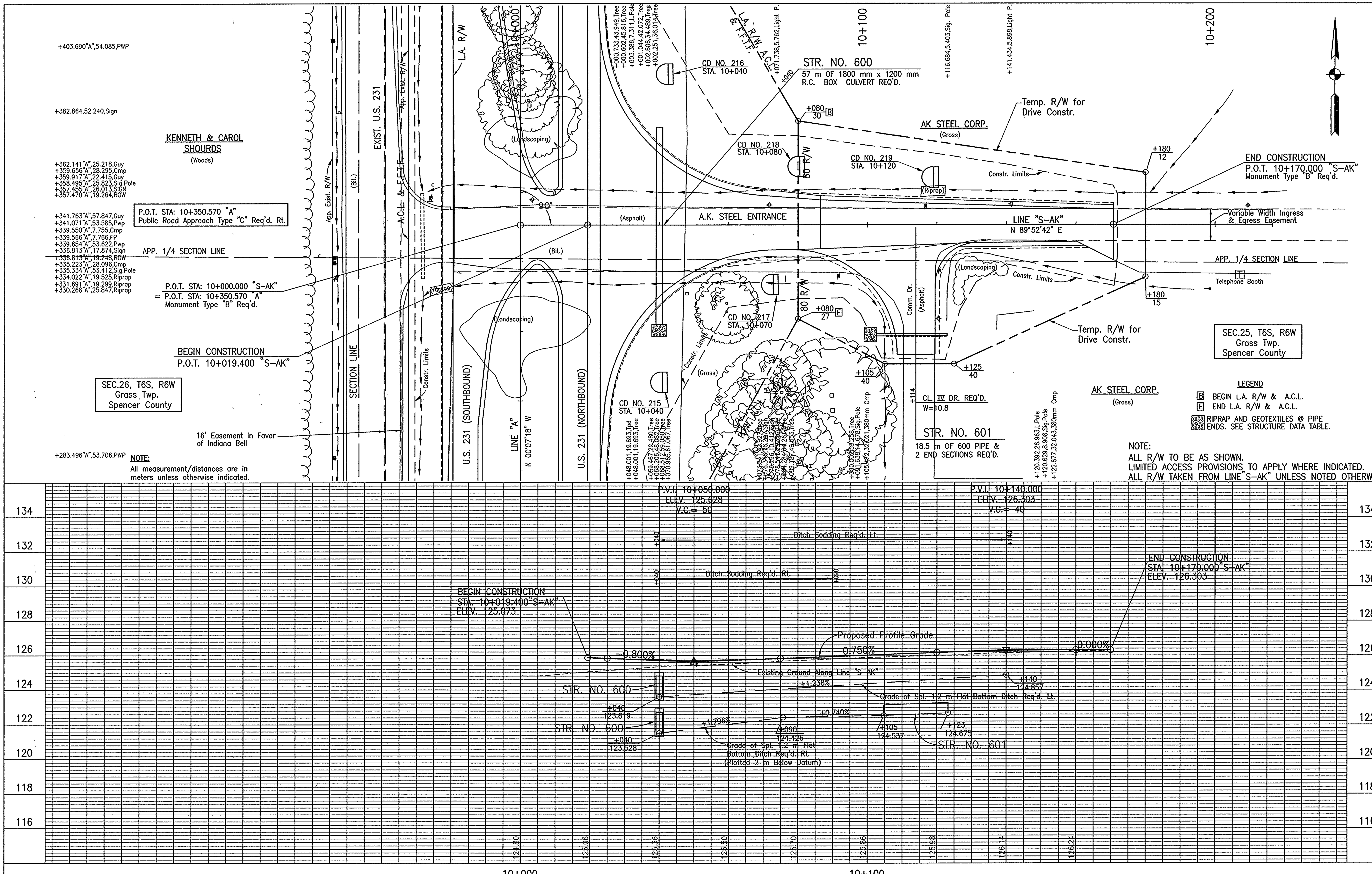
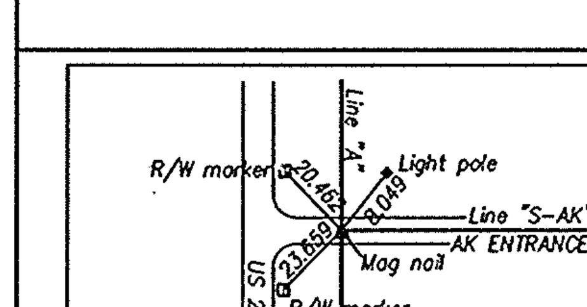
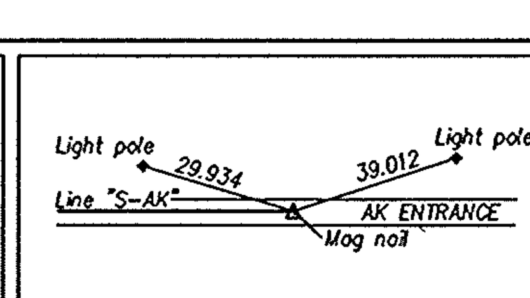




10+000 P.I. "S-AK"



10+170.781 P.O.T. "S-AK"

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melina A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE
LINE "S-AK"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
1:100	8461360
SURVEY BOOK	SHEETS
16722	103 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 10:54:14
Date: 4/16/2003
Scale: 1=500(PS)
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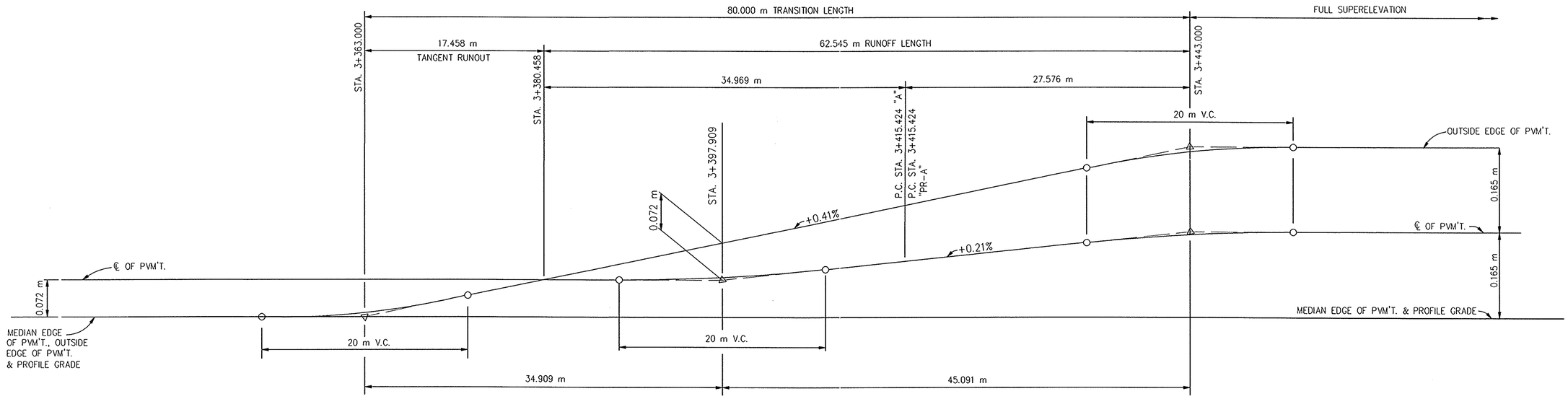
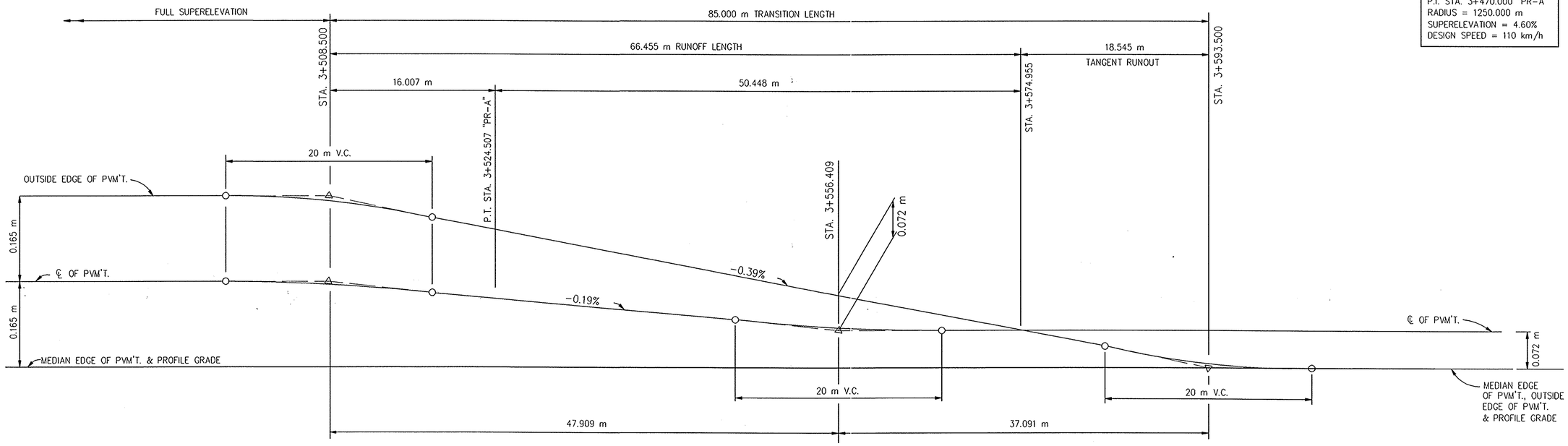


STA 3+353.000 "PR-A" TO STA 3+453.000 "PR-A"



P.I. STA. 3+470.000 "PR-A"
RADIUS = 1250.000 m
SUPERELEVATION = 4.60%
DESIGN SPEED = 110 km/h

STA 3+498.500 "PR-A" TO STA 3+603.500 "PR-A"

NOTE: ALL DIMENSIONS IN METERS

E:\98011\road\STC_1PRA_NB.dwg 3/19/2003 8:18:31 AM UEST

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

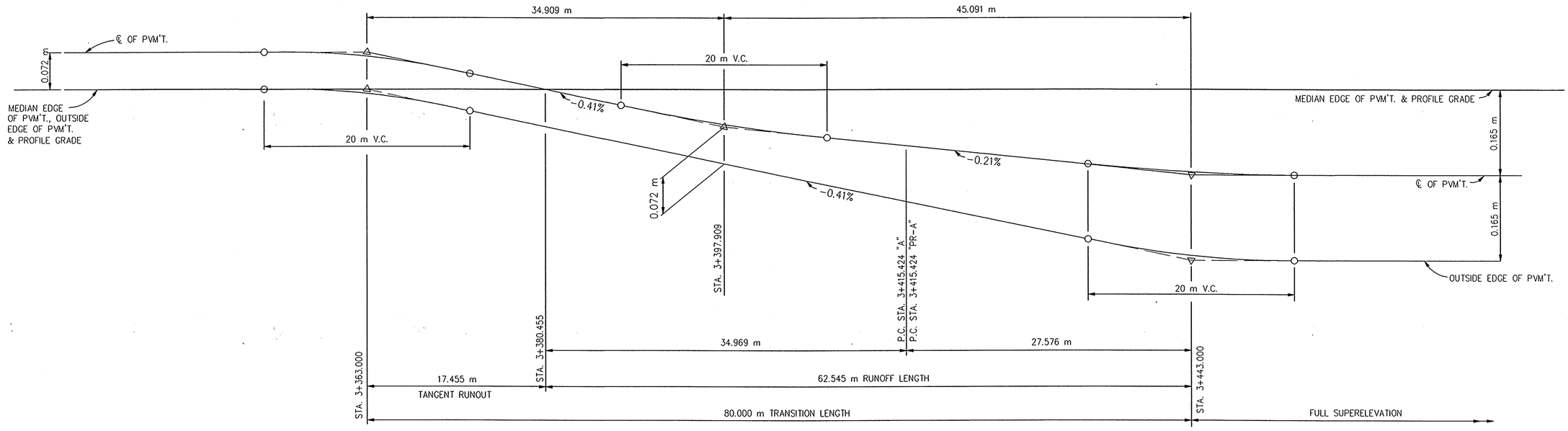
DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

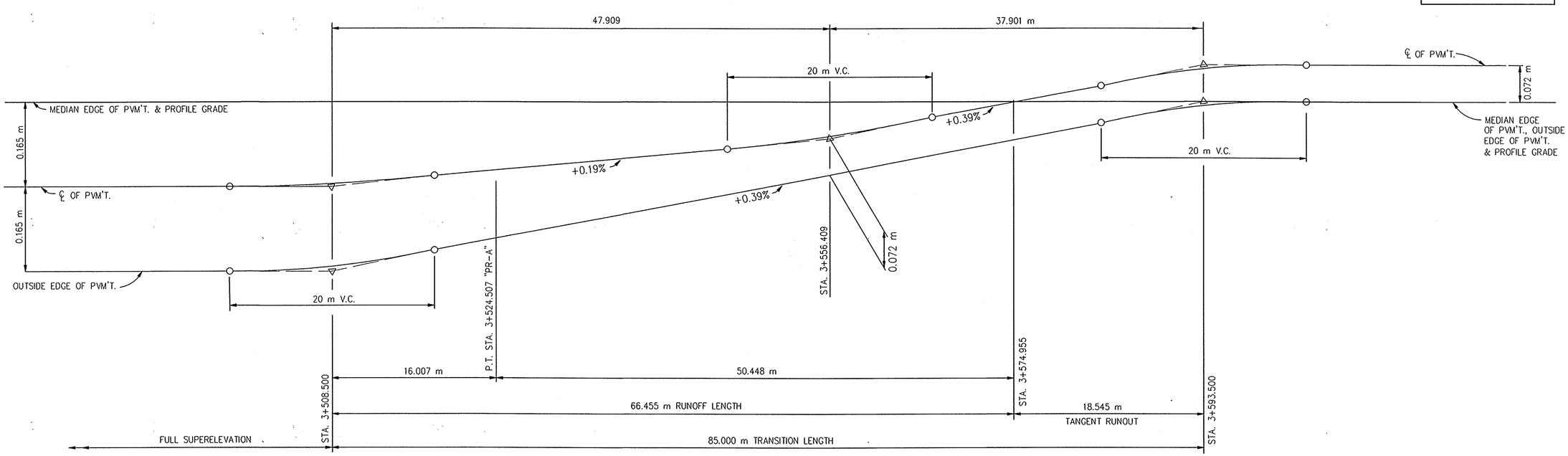
SUPERELEVATION DETAILS
U.S. 231 - NORTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	104 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



STA 3+353.000 "PR-A" TO STA 3+453.000 "PR-A"

P.I. STA. 3+470.000 "PR-A"
RADIUS = 1250.000 m
SUPERELEVATION = 4.60%
DESIGN SPEED = 110 km/h



STA 3+498.500 "PR-A" TO STA 3+603.500 "PR-A"

NOTE: ALL DIMENSIONS IN METERS

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
U.S. 231 - SOUTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	105 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

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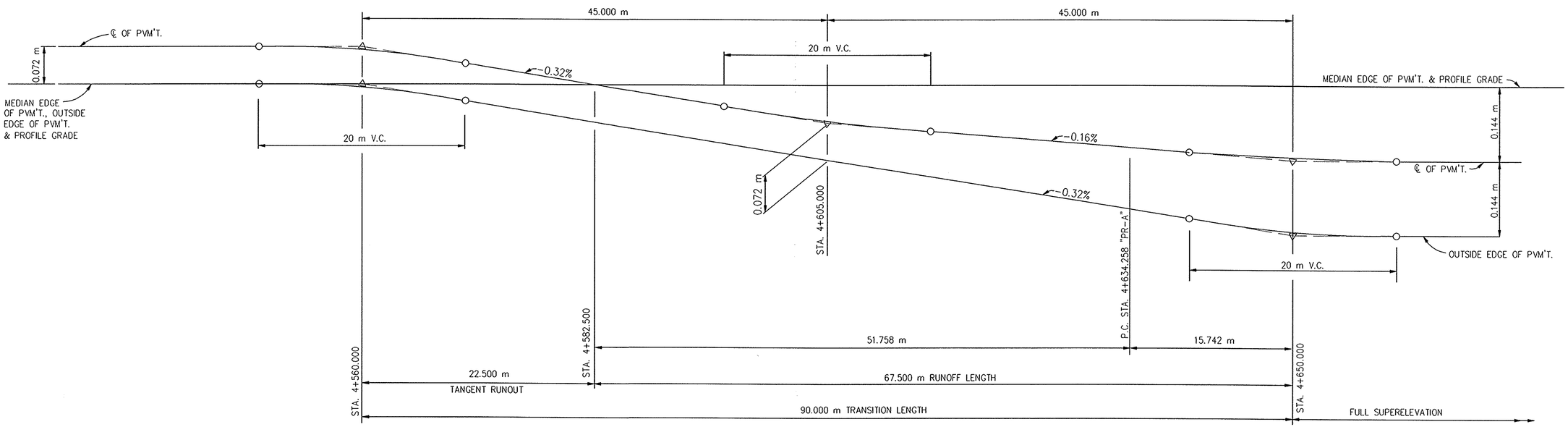
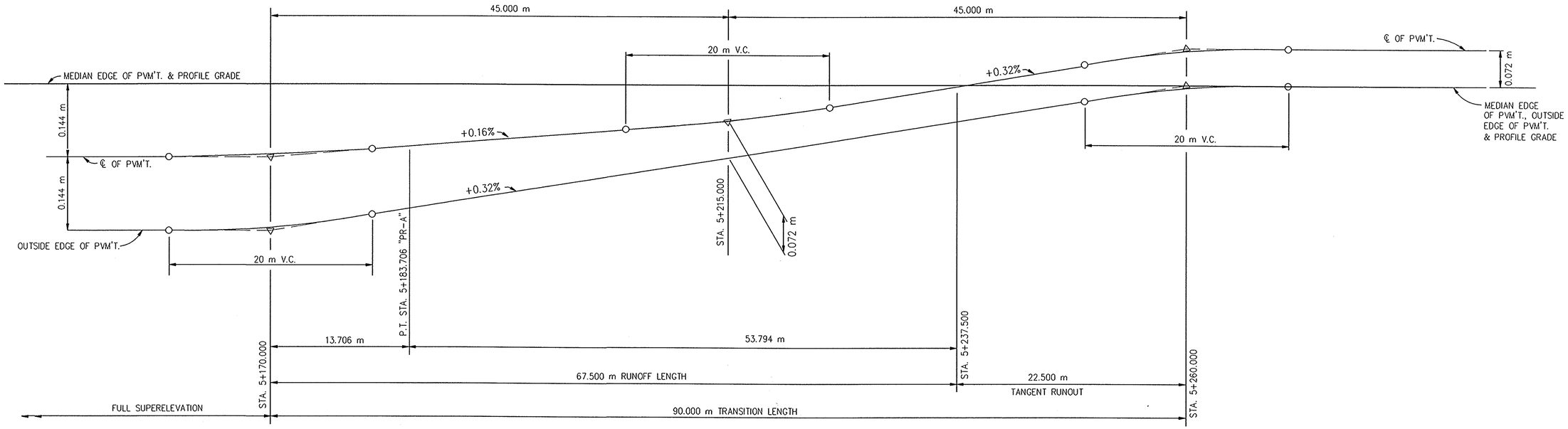


STA 4+550.000 "PR-A" TO STA 4+660.000 "PR-A"

P.I. STA. 4+912.751 "PR-A"
RADIUS = 1450.000 m
SUPERELEVATION = 4.00%
DESIGN SPEED = 110 km/h



STA 5+160.000 "PR-A" TO STA 5+270.000 "PR-A"

NOTE: ALL DIMENSIONS IN METERS

ALAN J. DeLAURAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: DESIGN ENGINEER — DATE 4/22/03

DESIGNED: JMM | DRAWN: JMM
CHECKED: MAT | CHECKED: TQ

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
U.S. 231 - NORTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	106 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

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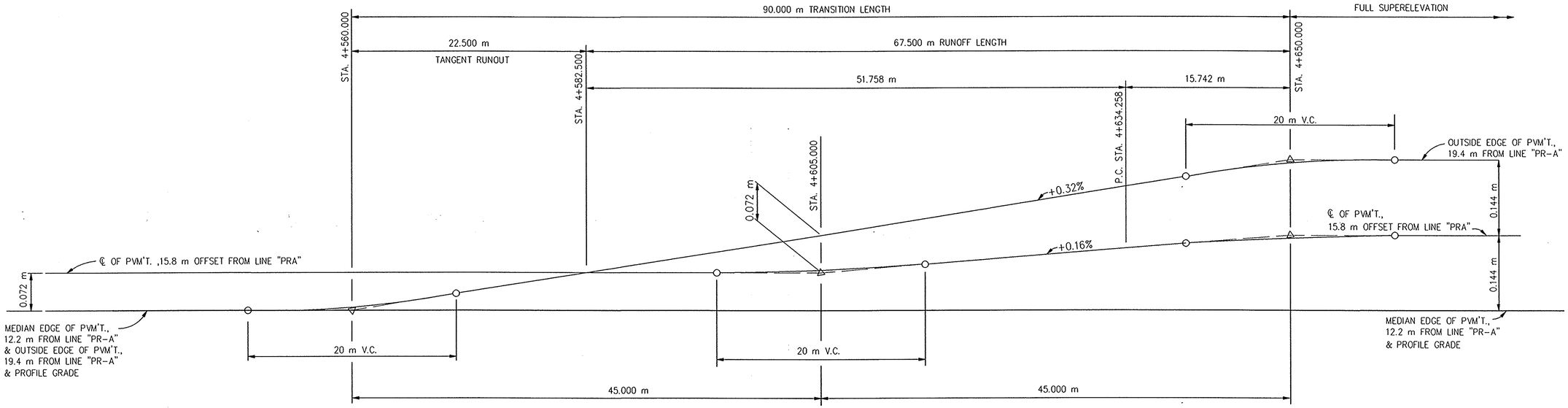
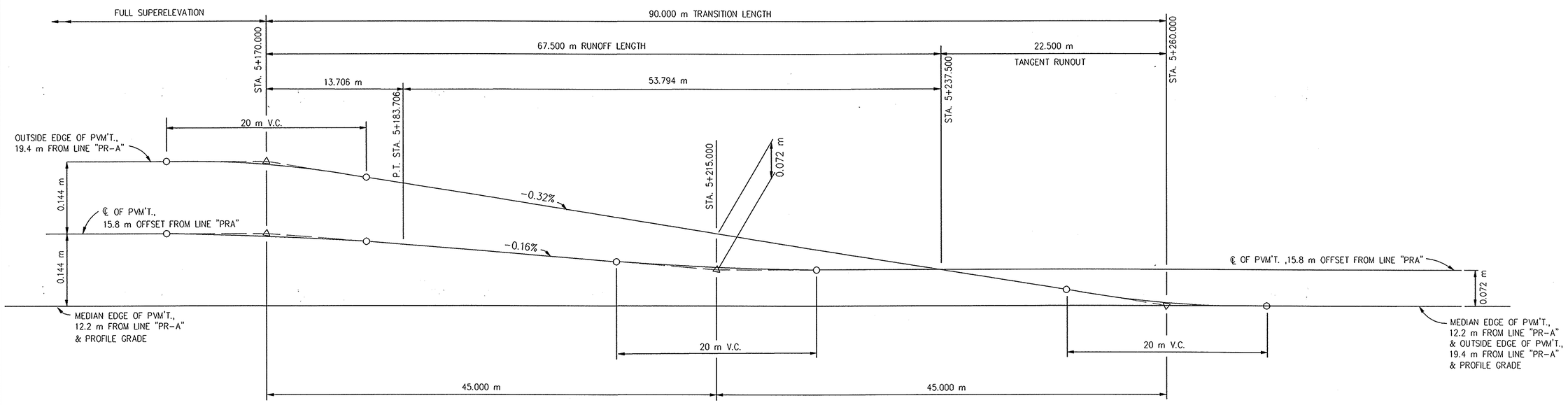


STA 4+550.000 "PR-A" TO STA 4+660.000 "PR-A"

P.I. STA. 4+912.751 "PR-A"
RADIUS = 1450.000 m
SUPERELEVATION = 4.00%
DESIGN SPEED = 110 km/h



STA 5+160.000 "PR-A" TO STA 5+270.000 "PR-A"

NOTE: ALL DIMENSIONS IN METERS

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: TQ

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
U.S. 231 - SOUTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	107 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

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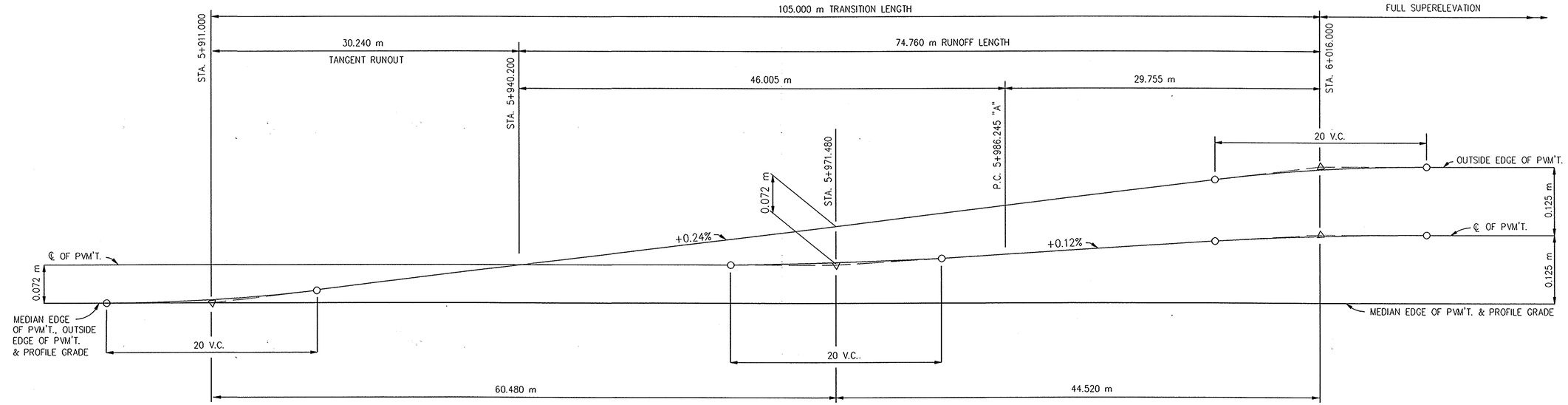
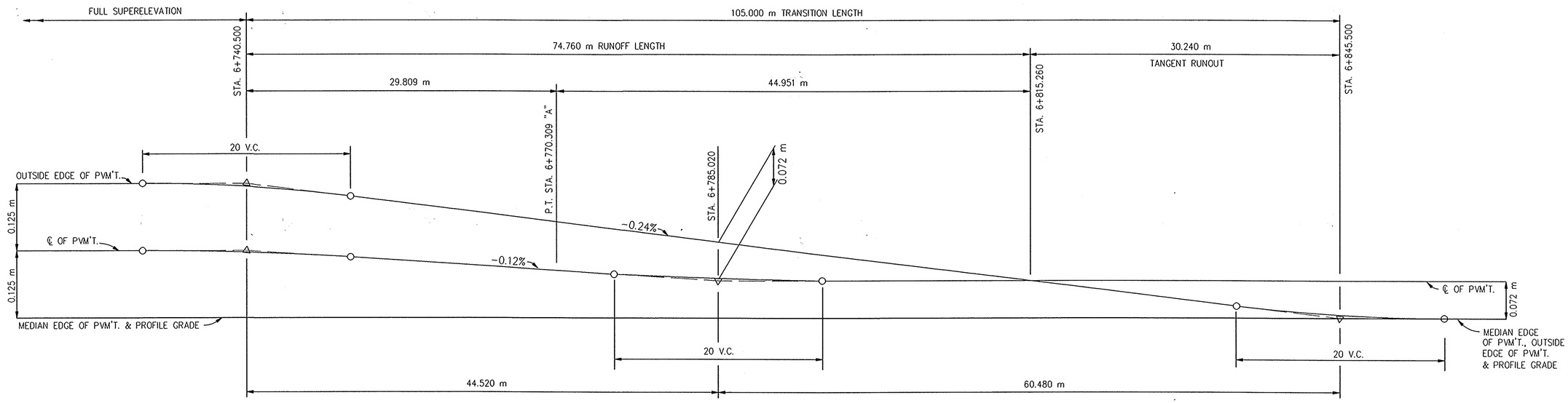


STA 5+901.000 "A" TO STA 6+026.000 "A"

P.I. STA. 6+385.008 "A"
RADIUS = 1745.000 m
SUPERELEVATION = 3.46%
DESIGN SPEED = 110 km/h



STA 6+730.500 "A" TO STA 6+855.500 "A"

NOTE: ALL DIMENSIONS IN METERS

E:\98011\road\STC_2A_NB.DWG - FEB 27, 2003 - 14:32:34

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

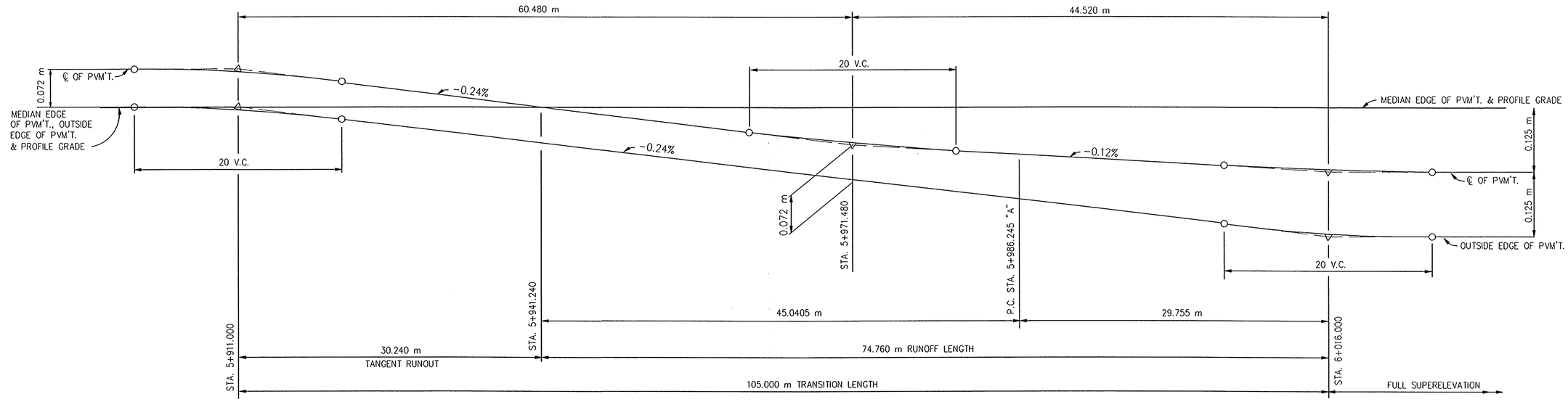
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

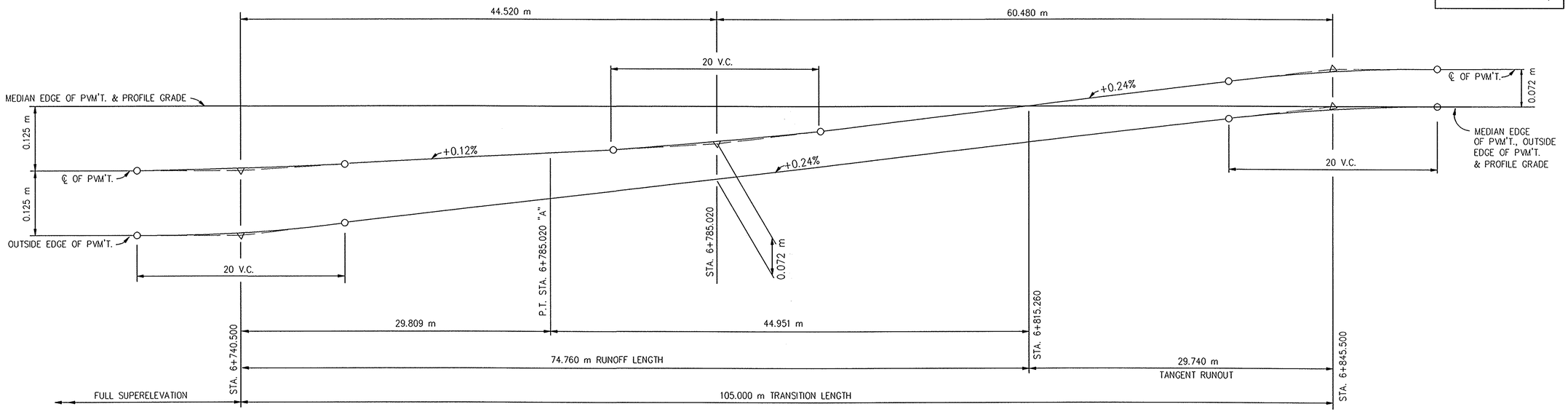
SUPERELEVATION DETAILS
U.S. 231 - NORTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	108 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



STA 5+901.000 "A" TO STA 6+026.000 "A"

P.I. STA. 6+385.008 "A"
RADIUS = 1745.000 m
SUPERELEVATION = 3.46%
DESIGN SPEED = 110 km/h



STA 6+730.500 "A" TO STA 6+855.500 "A"

NOTE: ALL DIMENSIONS IN METERS

E:\98011\road\STC_2A_58.DWG - FEB 27, 2003 - 14:33:11

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

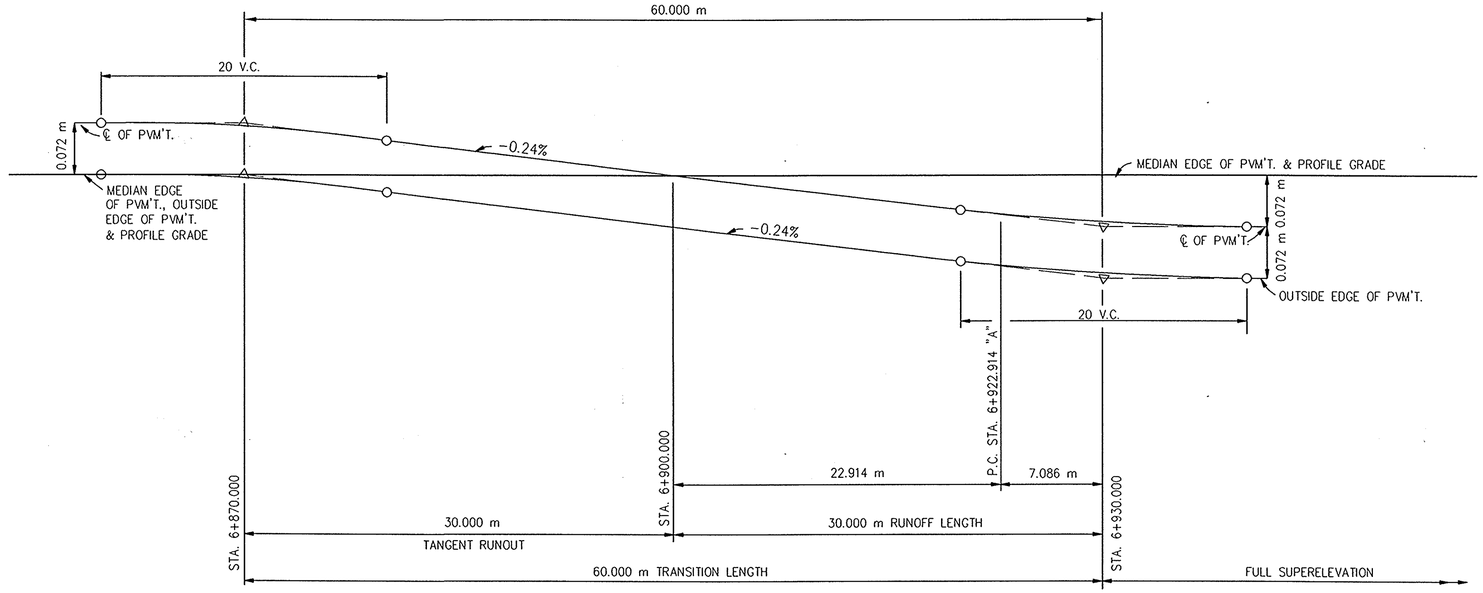
DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

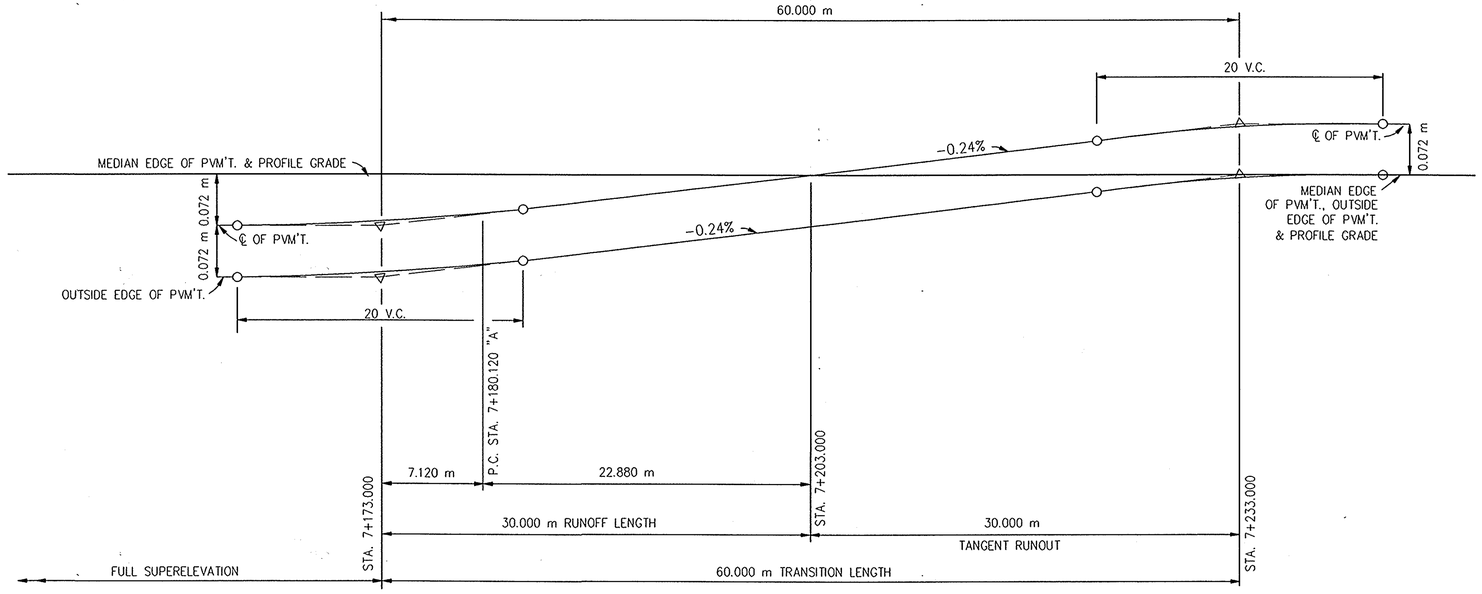
SUPERELEVATION DETAILS
U.S. 231 - SOUTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	.
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	109 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



STA 6+860.000 "A" TO STA 6+940.000 "A"

P.I. STA. 7+051.575 "A"
RADIUS = 3495.000 m
SUPERELEVATION = 2.00%
DESIGN SPEED = 110 km/h



STA 7+163.000 "A" TO STA 7+243.000 "A"

NOTE: ALL DIMENSIONS IN METERS

E:\980111\road\STC_3A_NB.DWG - FEB 27, 2003 - 14:33:45

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

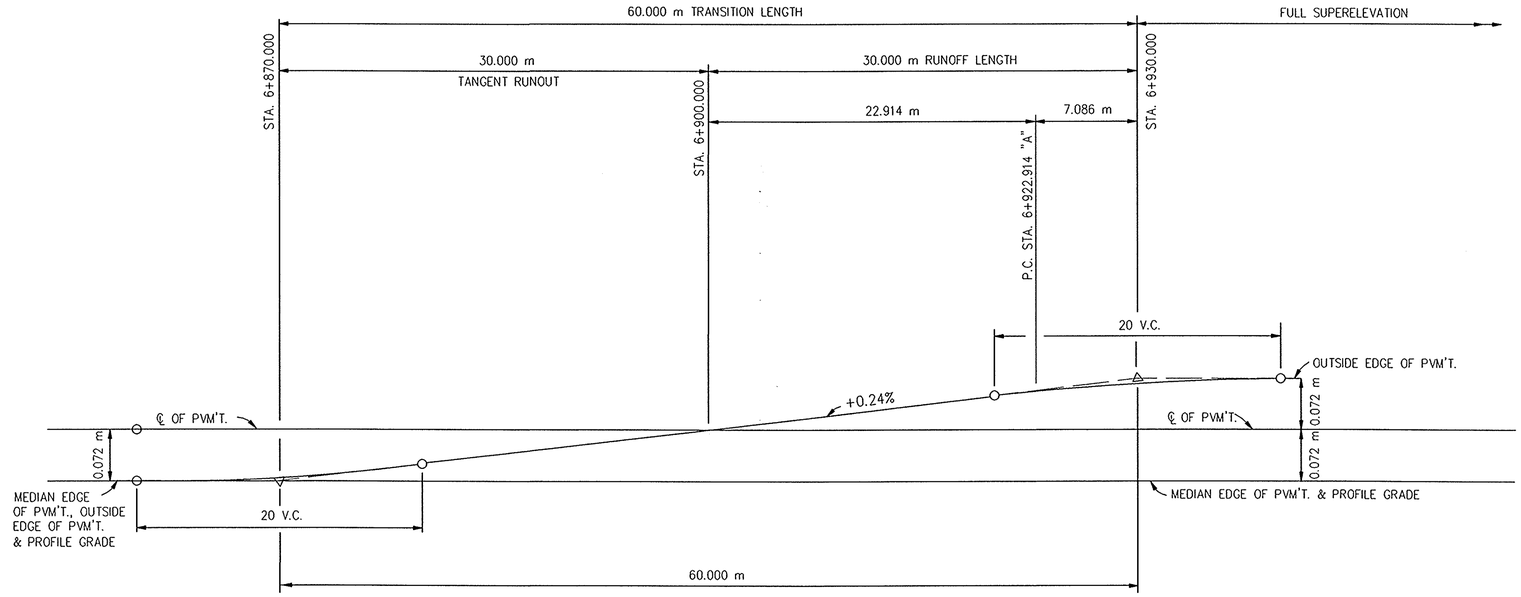
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM | DRAWN: JMM
CHECKED: MAT | CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

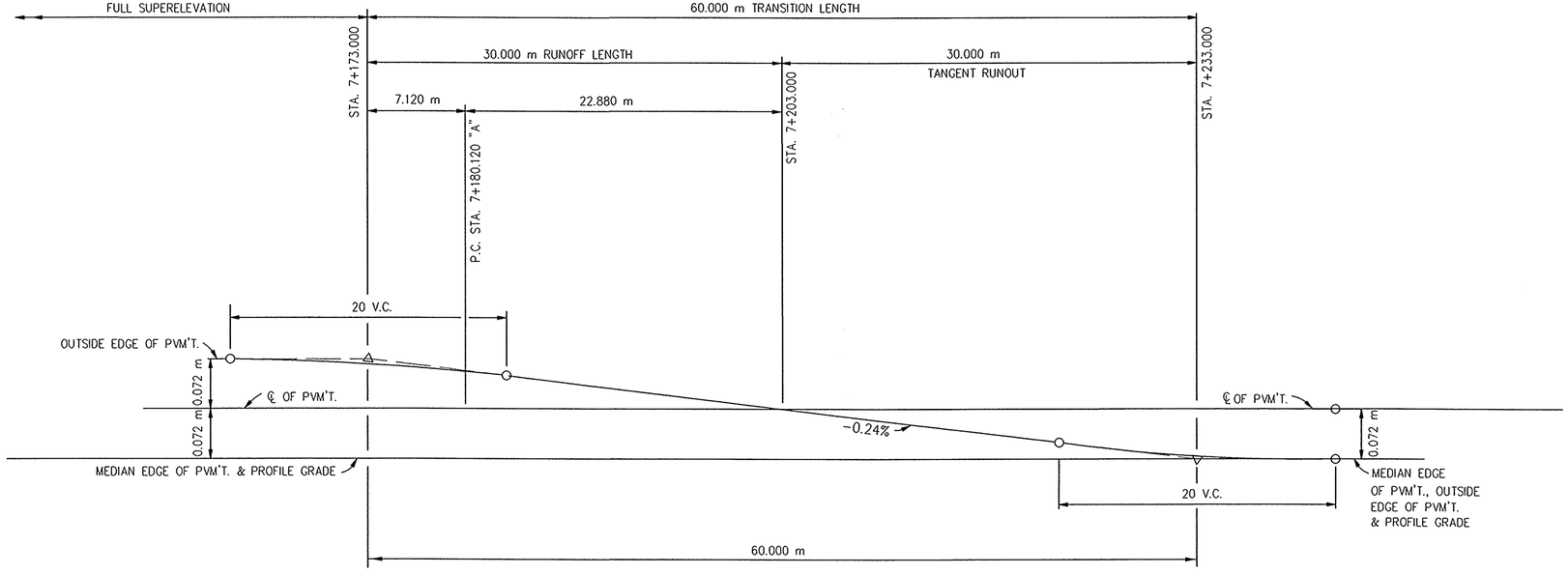
SUPERELEVATION DETAILS
U.S. 231 - NORTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1: 200	
VERTICAL SCALE	DESIGNATION
1: 4	8461360
SURVEY BOOK	SHEETS
16722	110 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



STA 6+860.000 "A" TO STA 6+940.000 "A"

P.I. STA. 7+051.575 "A"
RADIUS = 3495.000 m
SUPERELEVATION = 2.00%
DESIGN SPEED = 110 km/h



STA 7+163.000 "A" TO STA 7+243.000 "A"

NOTE: ALL DIMENSIONS IN METERS

E:\98011\road\STC_3a_SB.DWG - feb 27, 2003 - 14:34:29

ALAN J. DeLAURA REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

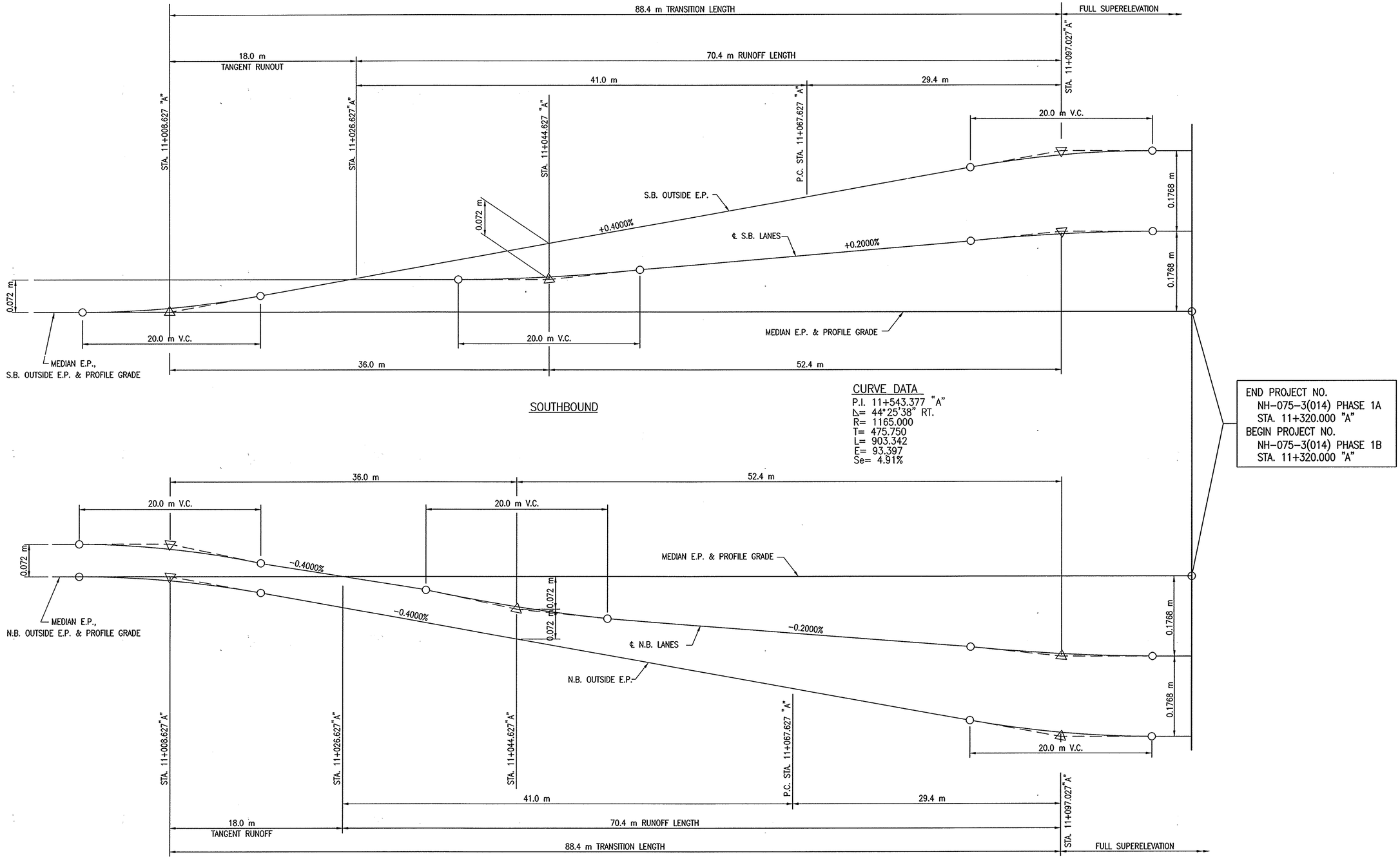
RECOMMENDED FOR APPROVAL Alan J. DeLaura 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: TQ

INDIANA DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
U.S. 231 - SOUTHBOUND LANES

HORIZONTAL SCALE	BRIDGE FILE
1:200	.
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	111 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



Time: 10:56:43
Date: 4/16/2003
Scale: 1"=20'
Drawing File: 210_\DWG\SUPER DIAGRAMS\phase-1a\Super-a-01.dwg (CPitts)

MELISSA ANN ELLINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Ellinger 04-22-03
DESIGN ENGINEER DATE

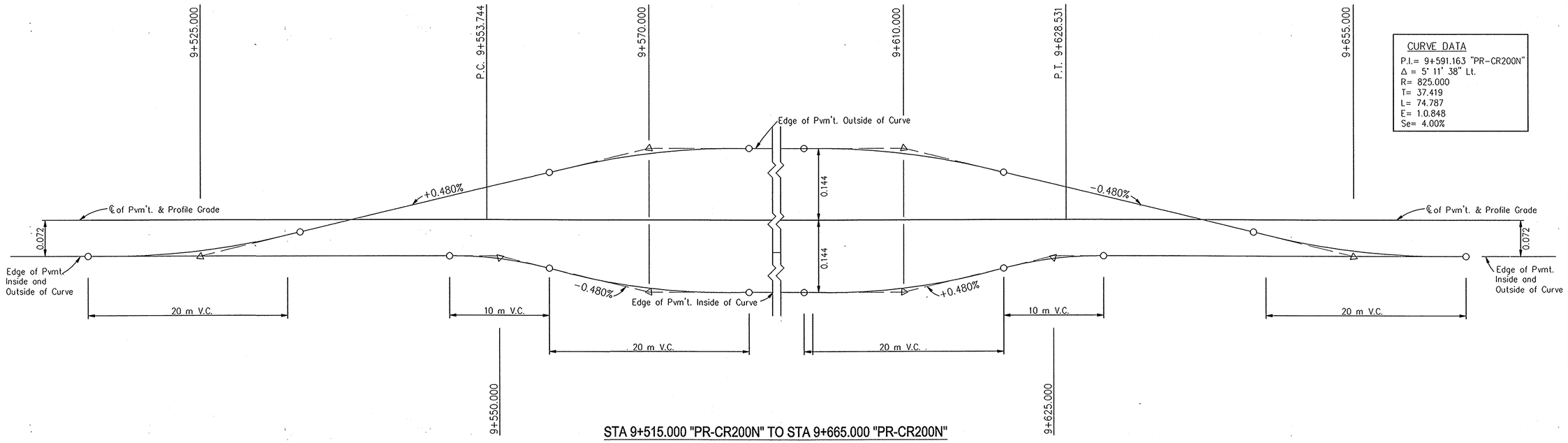
DESIGNED: J.A.T. DRAWN: J.W.M.
CHECKED: M.A.E. CHECKED: J.A.T

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
NONE	
VERTICAL SCALE	DESIGNATION
NONE	8461360

SURVEY BOOK	SHEETS
16722	112 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



CURVE DATA

P.I.= 9+591.163 "PR-CR200N"
Δ = 5° 11' 38" Lt.
R= 825.000
T= 37.419
L= 74.787
E= 1.0.848
Se= 4.00%

STA 9+515.000 "PR-CR200N" TO STA 9+665.000 "PR-CR200N"

NOTE: ALL DIMENSIONS IN METERS

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLaunay 6/12/03
DESIGN ENGINEER DATE

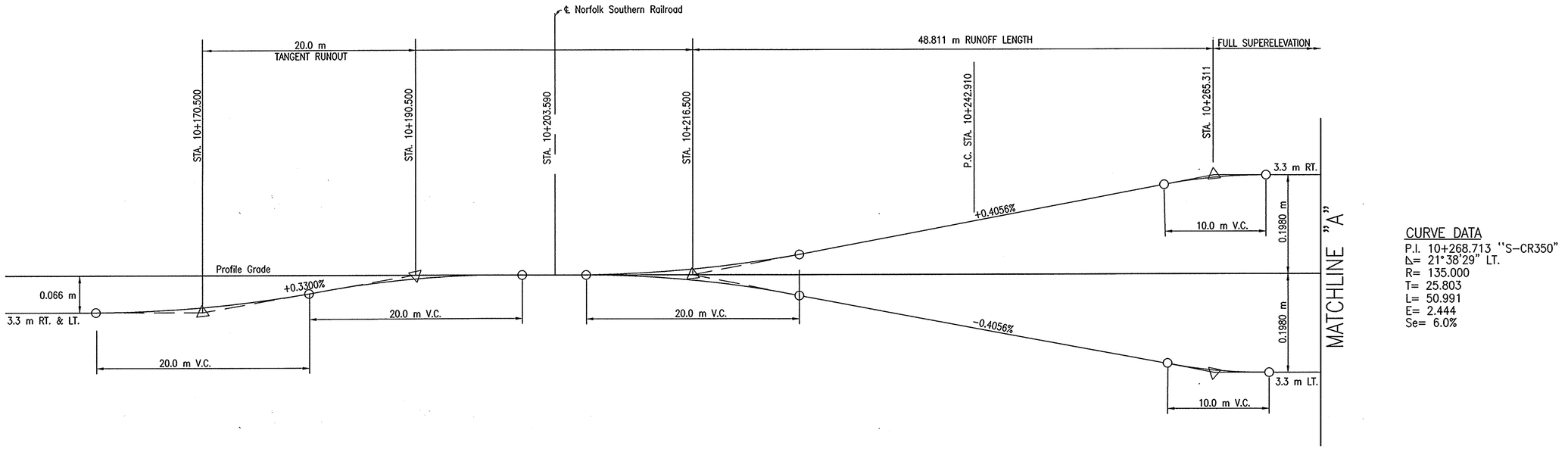
DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

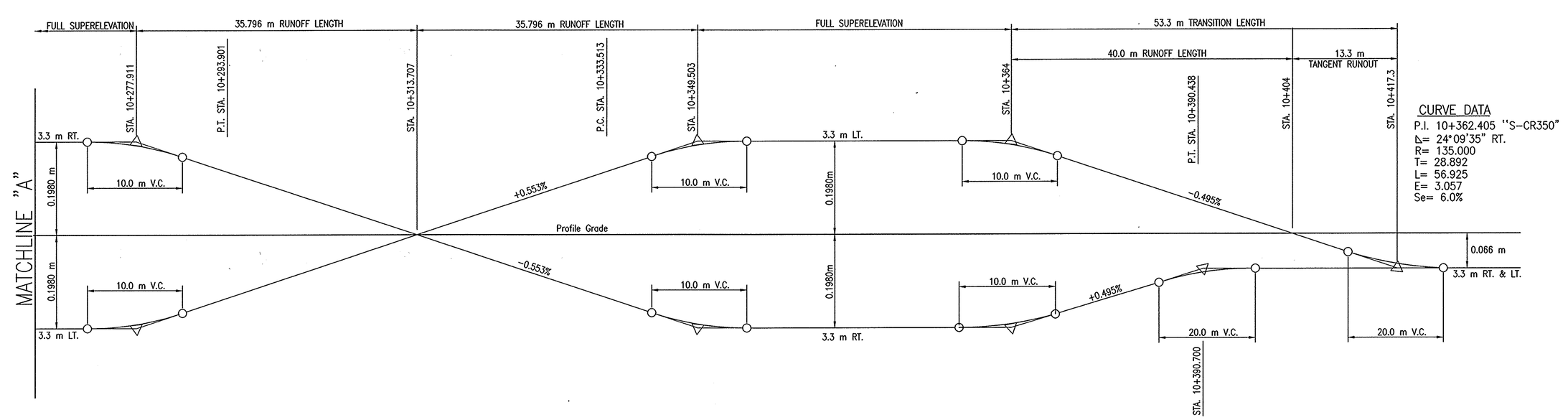
SUPERELEVATION DETAILS
COUNTY ROAD 200N

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:4	8461360
SURVEY BOOK	SHEETS
16722	113 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

E:\98011\road\STC_200_NB.DWG - DEC 04, 2001 - 14:21:01



CURVE DATA
P.I. 10+268.713 "S-CR350"
Δ= 21°38'29" LT.
R= 135.000
T= 25.803
L= 50.991
E= 2.444
Se= 6.0%



CURVE DATA
P.I. 10+362.405 "S-CR350"
Δ= 24°09'35" RT.
R= 135.000
T= 28.892
L= 56.925
E= 3.057
Se= 6.0%

STA. 10+160.500 "S-CR350" TO STA. 10+427.3 "S-CR350"

Time: 10:57:50
Date: 4/16/2003
Scale: 1"=500
Drawing File: 210_A:\DWG\SUPER DIAGRAMS\phase-1\s(CR350-1.dwg (CFitts)

MELISSA ANN ETTINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Ettinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: J.A.T. DRAWN: J.W.M.
CHECKED: M.A.E. CHECKED: J.A.T

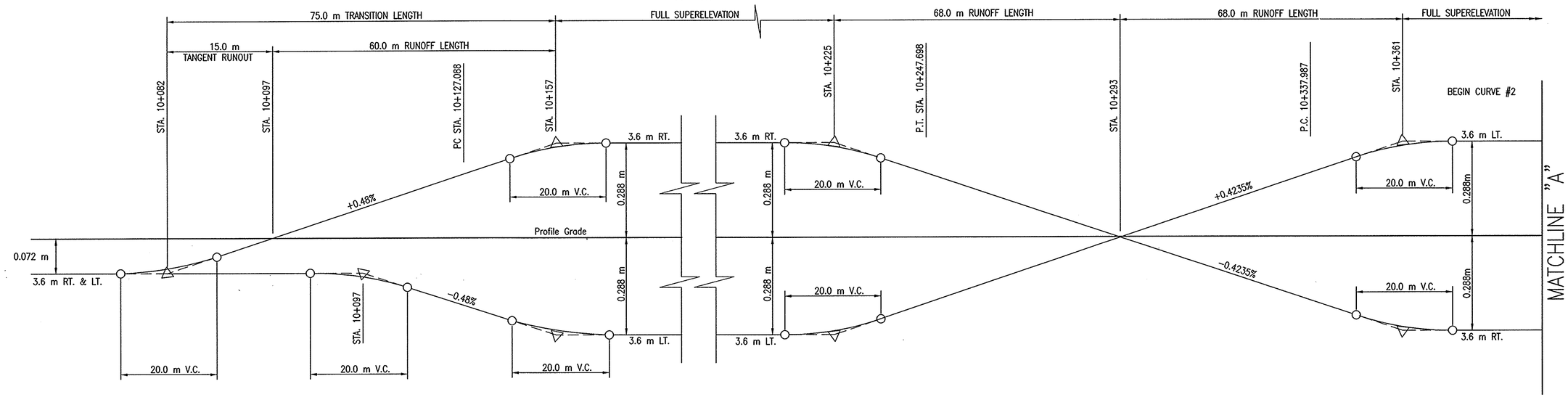
INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
LINE "S-CR350"

HORIZONTAL SCALE	BRIDGE FILE
NONE	
VERTICAL SCALE	DESIGNATION
NONE	8461360
SURVEY BOOK	SHEETS
16722	114 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

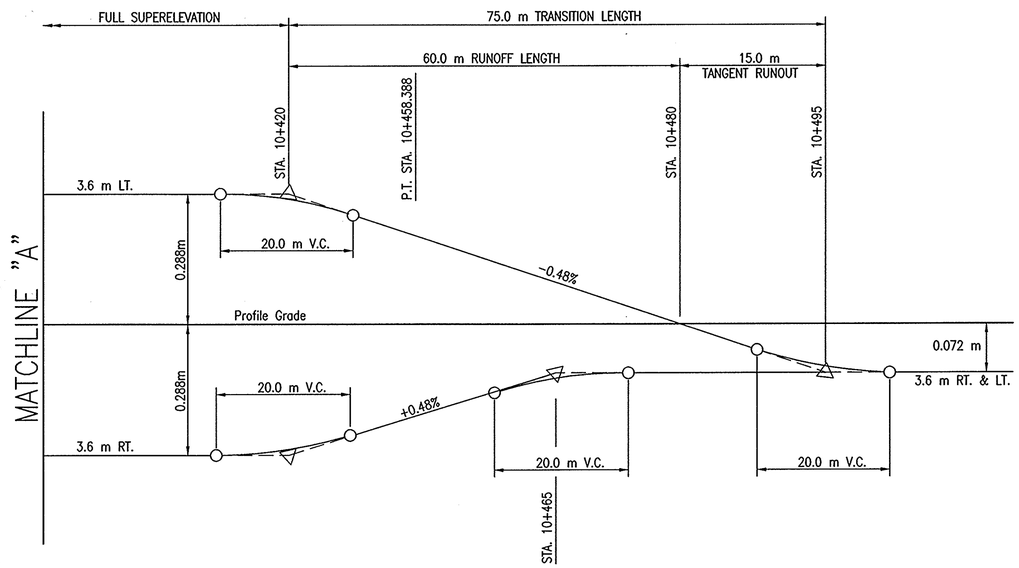
CURVE DATA

P.I. 10+188.814 "S-231-REL"
Δ= 30°02'44" LT.
R= 230.000m
T= 61.726m
L= 120.611m
E= 8.139m
Se= 8%



CURVE DATA

P.I. 10+399.601 "S-231-REL"
Δ= 29°59'36" RT.
R= 230.000
T= 61.614
L= 120.401
E= 8.110
Se= 8%



STA. 10+072 "S-231-REL" TO STA. 10+505 "S-231-REL"

MELISSA ANN LEFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: J.A.T. DRAWN: J.W.M.
CHECKED: M.A.E. CHECKED: J.A.T

INDIANA DEPARTMENT OF TRANSPORTATION

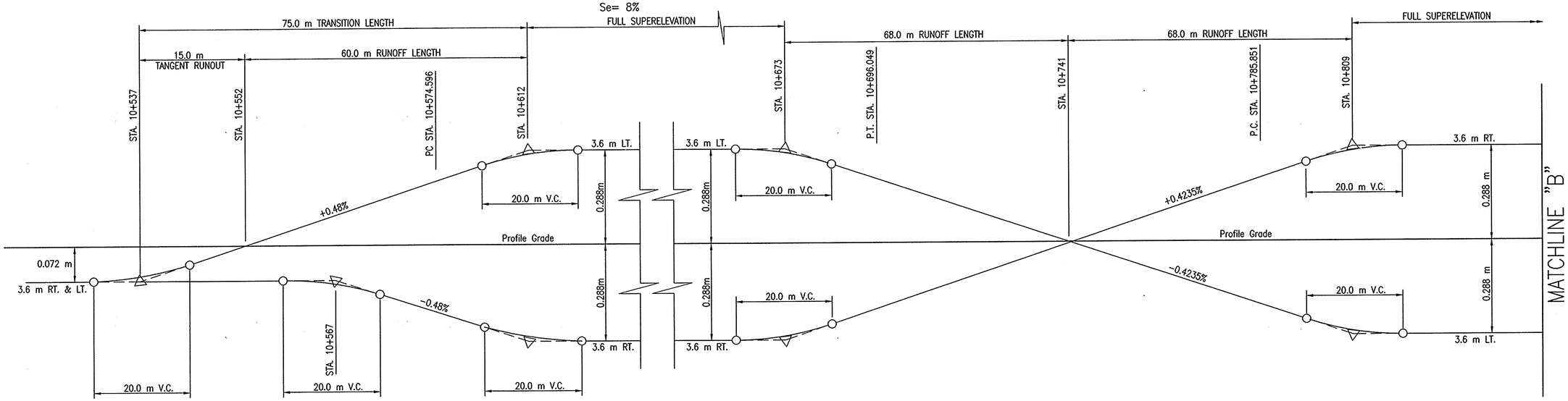
SUPERELEVATION DETAILS LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
NONE	
VERTICAL SCALE	DESIGNATION
NONE	8461360
SURVEY BOOK	SHEETS
16722	115 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 10:58:60
Date: 4/16/2003
Scale: as noted
Drawing File: 210_\VDW\SUPER DIAGRAMS\phase-1o\231REL-1.dwg (CFits)

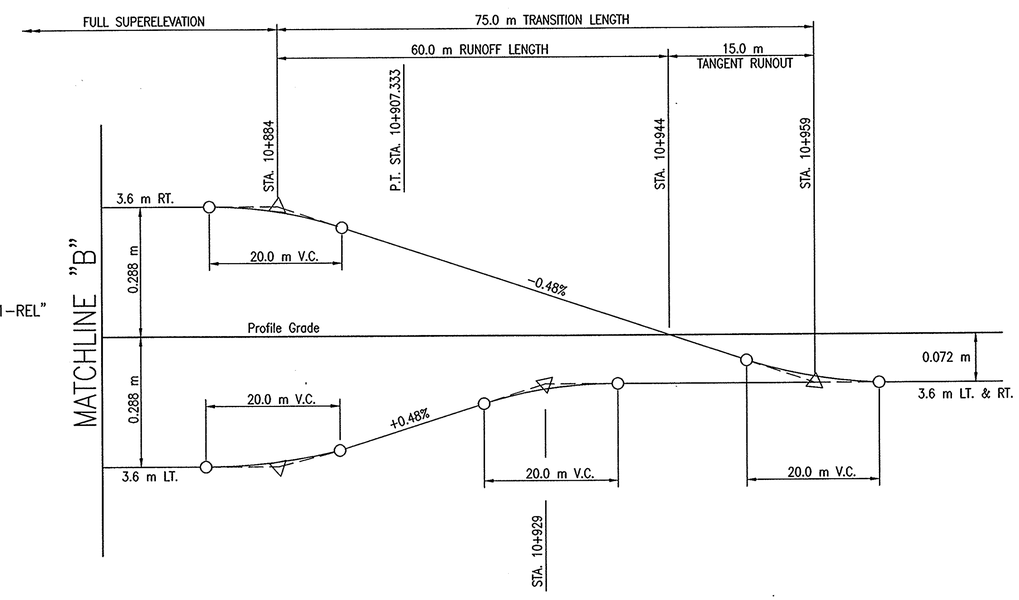
CURVE DATA

P.I. 10+636.774 "S-231-REL"
Δ= 30°15'20" RT.
R= 230.000
T= 62.178
L= 121.454
E= 8.256
Se= 8%



CURVE DATA

P.I. 10+848.045 "S-231-REL"
Δ= 30°15'46" LT.
R= 230.000m
T= 62.194m
L= 121.483m
E= 8.260m
Se= 8%



STA. 10+527 "S-231-REL" TO STA. 10+969 "S-231-REL"

Time: 11:07
Date: 4/16/2003
Scale: 1=40
Drawing File: 210_\DWG\SUPER DIAGRAMS\phase-1\s231REL-2.dwg (GFitts)

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

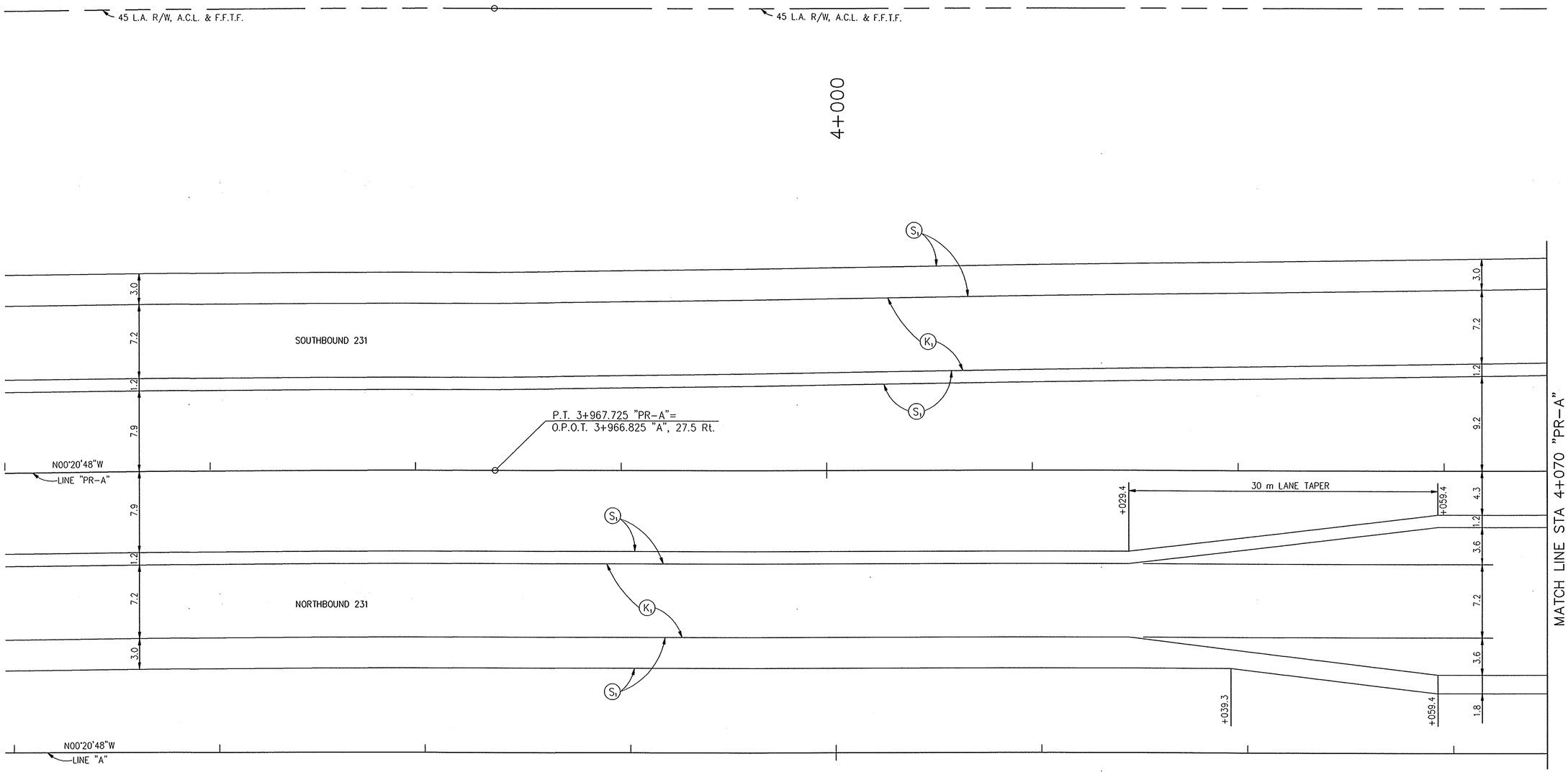
RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: J.A.T. DRAWN: J.W.M.
CHECKED: M.A.E. CHECKED: J.A.T

INDIANA DEPARTMENT OF TRANSPORTATION

SUPERELEVATION DETAILS
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
NONE	
VERTICAL SCALE	DESIGNATION
NONE	8461360
SURVEY BOOK	SHEETS
16722	116 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



LEGEND – PR-A

(K_1) 90kg/m² QC/QA-HMA, 4, 76, Surface 9.5 mm, on
150kg/m² QC/QA-HMA, 4, 76, Intermediate 19.0 mm, on
240kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
165kg/m² QC/QA-HMA, 5, 76, Intermediate, C19.0 mm, on
210kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
Subgrade Treatment, Type A

(S_1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on
270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type A

E:\98011\roadVid_231_cepent_01.dwg 3/19/2003 10:37:34 AM UEST

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

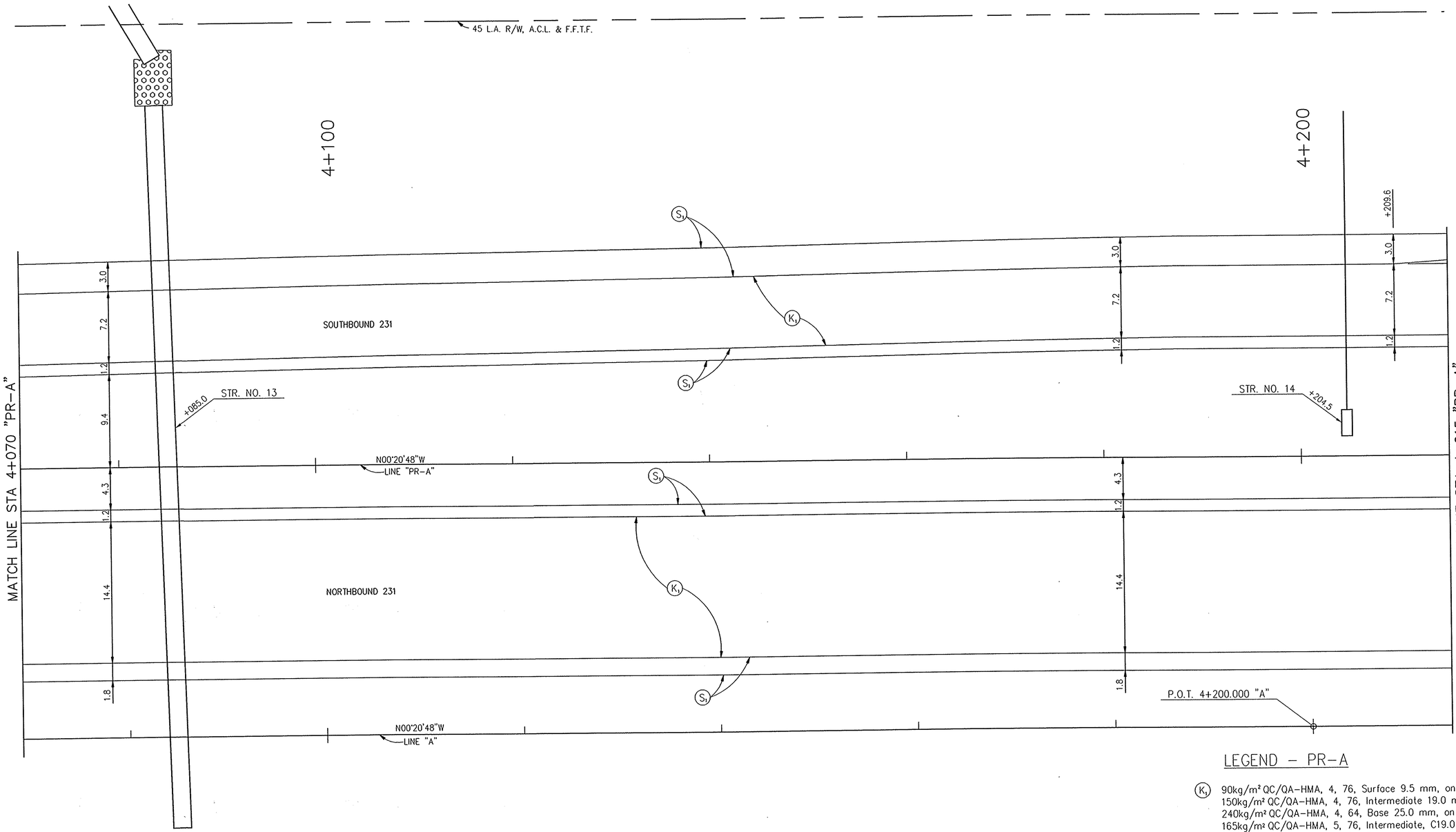
DESIGNED: JMM DRAWN: JRG

CHECKED: AJD CHECKED: AJD

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	117 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)



LEGEND – PR-A

(K1) 90kg/m² QC/QA-HMA, 4, 76, Surface 9.5 mm, on
150kg/m² QC/QA-HMA, 4, 76, Intermediate 19.0 mm, on
240kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
165kg/m² QC/QA-HMA, 5, 76, Intermediate, C19.0 mm, on
210kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
Subgrade Treatment, Type A

(S1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on
270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type A

E:\98011\roadkid_231_aepent_02.dwg 3/19/2003 10:38:49 AM UEST

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: JMM DRAWN: JRC

CHECKED: AJD CHECKED: AJD

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	118 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

FOR CONT. OF LINE "PR-AEPENT" SEE SHEET 137

45 L.A. R/W, A.C.L. & F.F.T.F.

4+300

LINE "PR-AEPENT"
S89°39'12"W

+263.567 "PR-A"
35.2 Lt.

+275.8

+305.967 "PR-A"
35.2 Lt.

+293.8

12.2 R

+227.5

+263.6

+306.0

1.2 | 18.0 | 1.2

1.8

SOUTHBOUND 231

MATCH LINE STA 4+215 "PR-A"

+222.8

+255.4

+253.860 "PR-A"
6.6 Lt.

16.5 R

3.0 R

+262.948 "PR-A"
3.4 Lt.

+241.567 "PR-A"
45.0 Lt.

45.0 R

N00°20'48"W
LINE "PR-A"

P.O.T. 4+284.767 "PR-A"
=P.O.T. 5+000.000 "PR-AEPENT"

+328.0

+327.967 "PR-A"
36.4 Lt.

+327.967 "PR-A"
35.9 Rt.

+325.0

STR. NO. 15

3.0 R

+306.585 "PR-A"
0.3 Rt.

45.0 R

MATCH LINE STA 4+360 "PR-A"

+241.6

NORTHBOUND 231

+226.4

+328.0

+343.8

1.8 R

N00°20'48"W
LINE "A"

3.6 (F. to F.)

+226.367 "PR-A"
69.9 Rt.

50.0 R

+343.767 "PR-A"
69.9 Rt.

50.0 R

LEGEND – PR-AEPENT

(K2) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5mm, on 270kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0mm, on 200 mm of Compacted Aggregate, No 53, Base on Subgrade Treatment, Type D

(S3) 180kg/m² QC/QA-HMA, 1, 64, Base 25.0mm, on 150 mm, Compacted Aggregate, No 53, Base, on Subgrade Treatment, Type D

(13) Concrete Curb

(D2) HMA for Approaches 90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on 270kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on 200kmm Compacted Aggregate, No. 53, Base, on Subgrade Treatment, Type D

(D3) HMA for Approaches 90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on 150kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on 480kg/m² QC/QA-HMA, 2, 64, Base 25.0 mm, on Subgrade Treatment, Type D

(26) Sodding

LEGEND – PR-A

(K1) 90kg/m² QC/QA-HMA, 4, 76, Surface 9.5 mm, on 150kg/m² QC/QA-HMA, 4, 76, Intermediate 19.0 mm, on 240kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on 165kg/m² QC/QA-HMA, 5, 76, Intermediate, C19.0 mm, on 210kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on Subgrade Treatment, Type A

(S1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on 270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on 200 mm of Compacted Aggregate, No 53, Base on Subgrade Treatment, Type A

FOR CONT. OF LINE "PR-AEPENT" SEE SHEET 138

E:\98011\road\id_231_aepent_03.dwg 3/19/2003 10:40:18 AM UEST

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

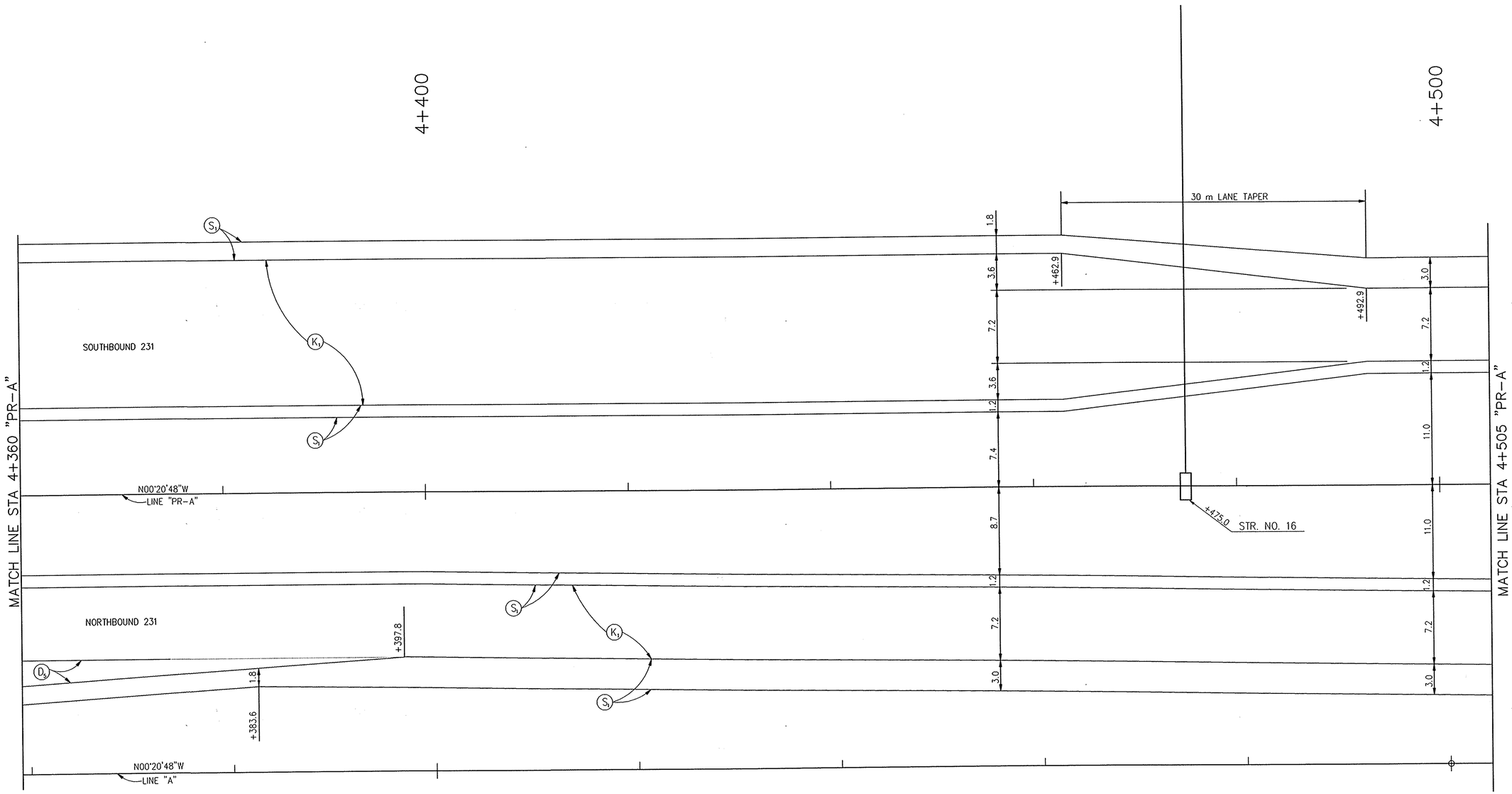
DESIGNED: JMM | DRAWN: JRG

CHECKED: AJD | CHECKED: AJD

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	119 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)



LEGEND – PR-A

(K1) 90kg/m² QC/QA-HMA, 4, 76, Surface 9.5 mm, on
150kg/m² QC/QA-HMA, 4, 76, Intermediate 19.0 mm, on
240kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
165kg/m² QC/QA-HMA, 5, 76, Intermediate, C19.0 mm, on
210kg/m² QC/QA-HMA, 4, 64, Base 25.0 mm, on
Subgrade Treatment, Type A

(S1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on
270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type A

(D3) 90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on
150kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on
480kg/m² QC/QA-HMA, 2, 64, Base 25.0 mm, on
Subgrade Treatment, Type D

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM DRAWN: JRG
CHECKED: AJD CHECKED: AJD

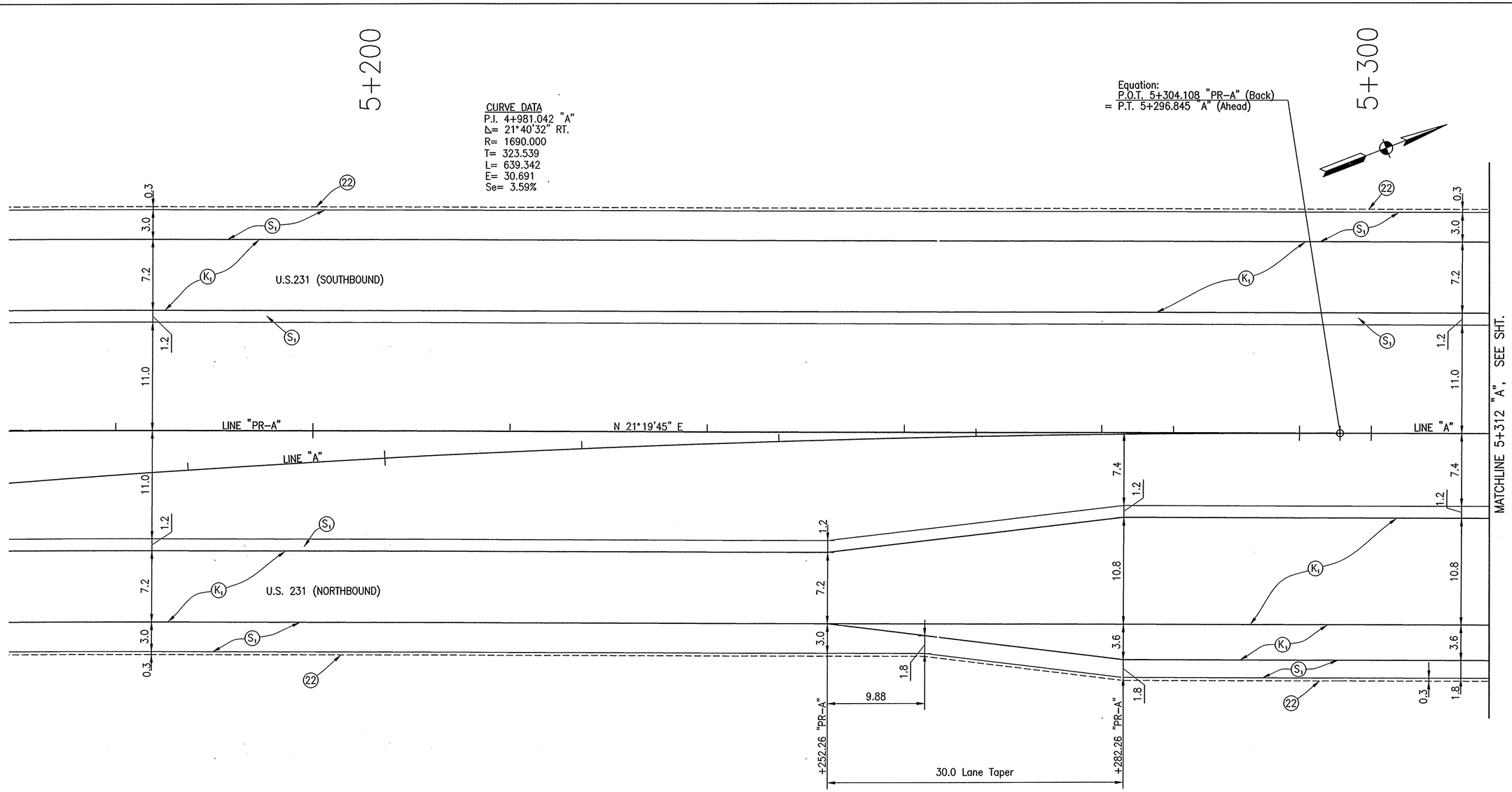
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	120 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

E:\98011\road\id_231_aepent_04.dwg 3/19/2003 10:41:48 AM UEST

E:\98011\road\id_231_aepent4.dwg - 10/01/02 - 3:17:56



LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Time: 11:21
Date: 4/16/2003
Design File: 210_\DWG\const-details\phase-1\cd-a-10.dwg (GFitts)
Drawing File: 210_\DWG\const-details\phase-1\cd-a-10.dwg (GFitts)

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	121 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

5+400

STR. NO. 24 +466

MATCHLINE 5+312 "A", SEE SHT. 121

MATCHLINE 5+462 "A", SEE SHT. 140

U.S. 231 (SOUTHBOUND)

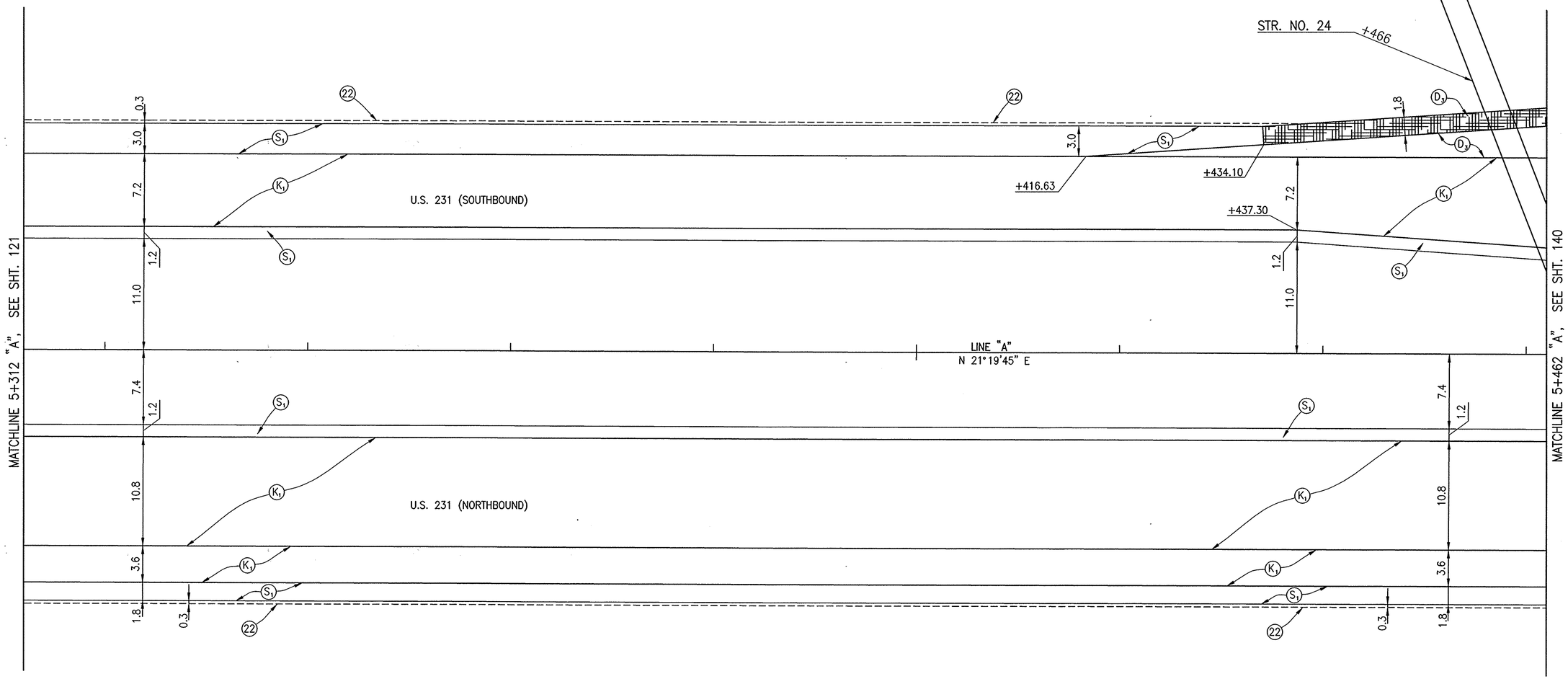
U.S. 231 (NORTHBOUND)

LINE "A"
N 21°19'45" E

+416.63

+434.10

+437.30



LEGEND

(D3) HMA for Approaches 360 Kg/m²
90 Kg/m² QC/QA–HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA–HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN ENGLINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Englinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

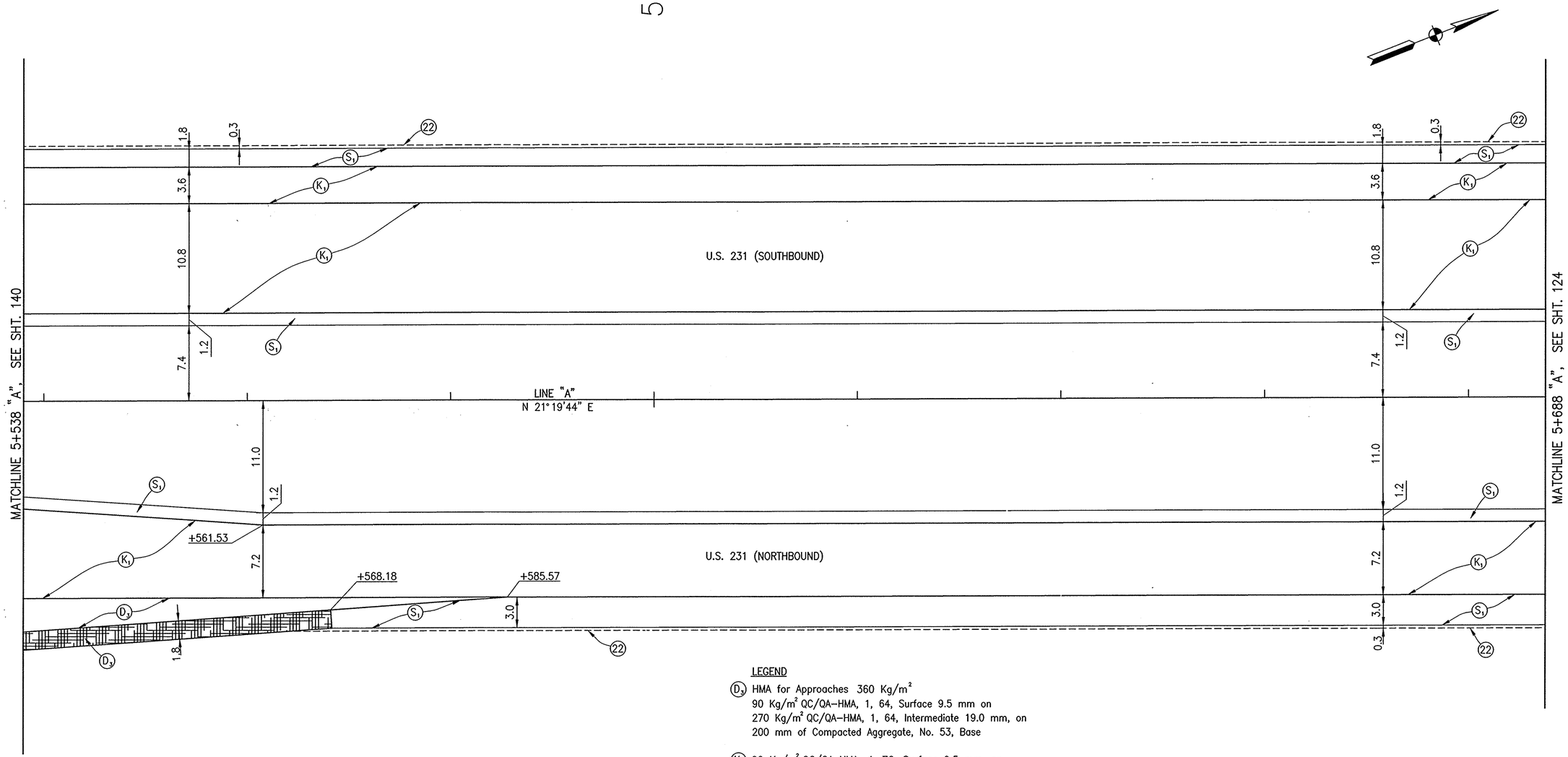
INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	122 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 1:17:50
Date: 1/7/2003
Scale: 1"=1'(PS)
Drawing File: 210_IU\DWG\const-details\phase-1\cd-a-11.dwg (CFits)

5+600



LEGEND

(D3) HMA for Approaches 360 Kg/m²
90 Kg/m² QC/QA–HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA–HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	123 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:12:46
Date: 4/16/2003
Scale: 1=40(PS)
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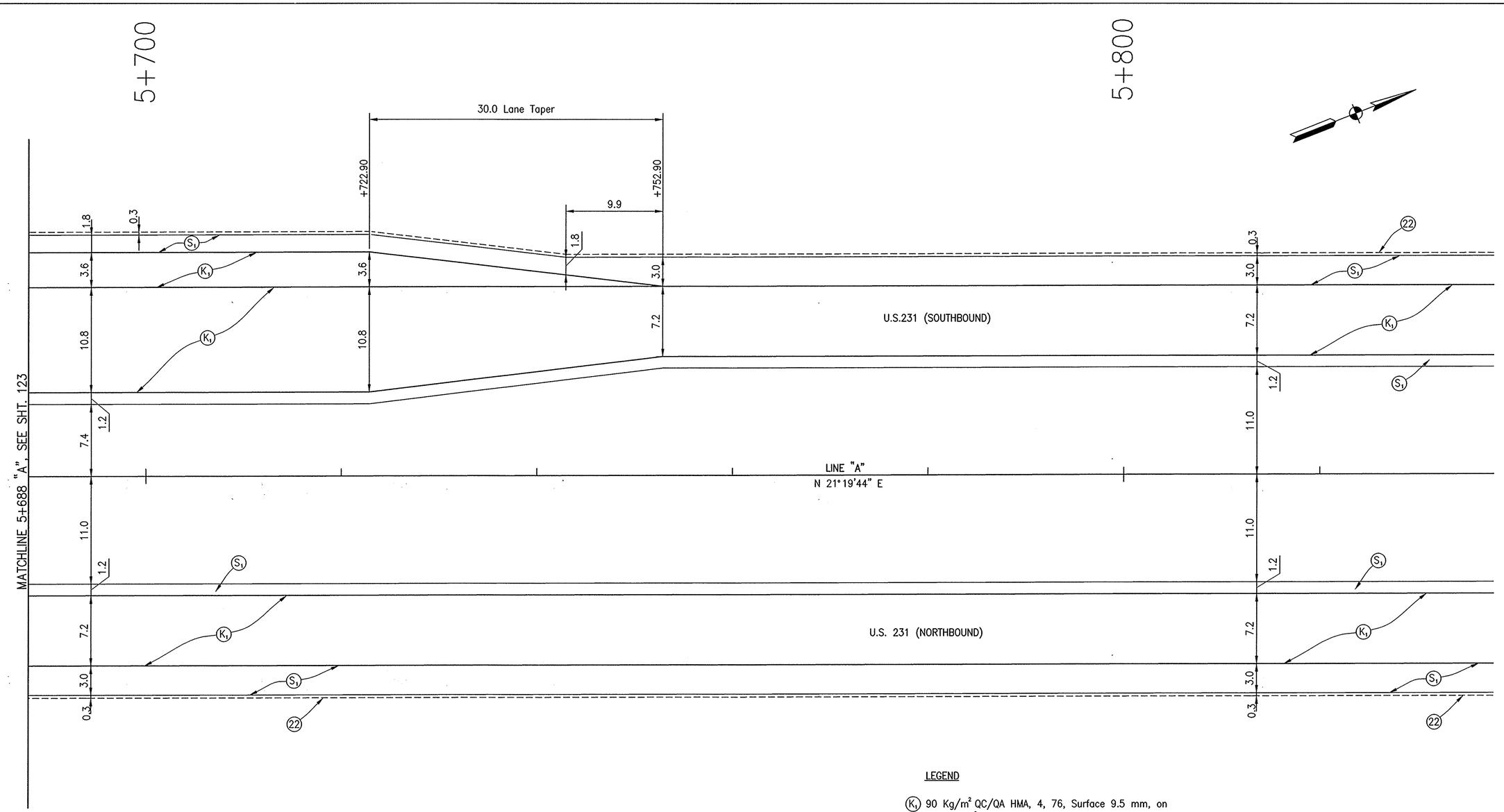

LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	124 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:14:37
Date: 4/14/2003
Scale: 1"=40(PS)
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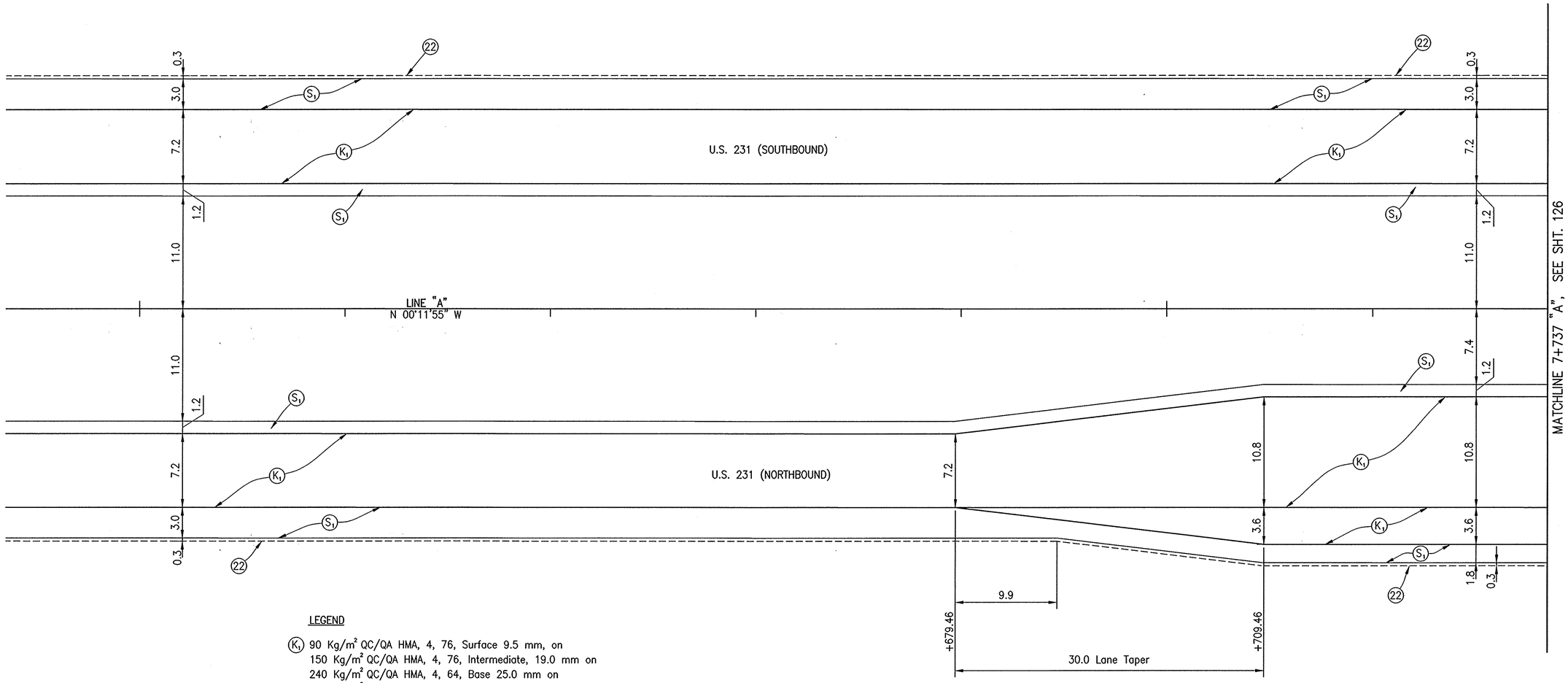


LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ANN MELISSA EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

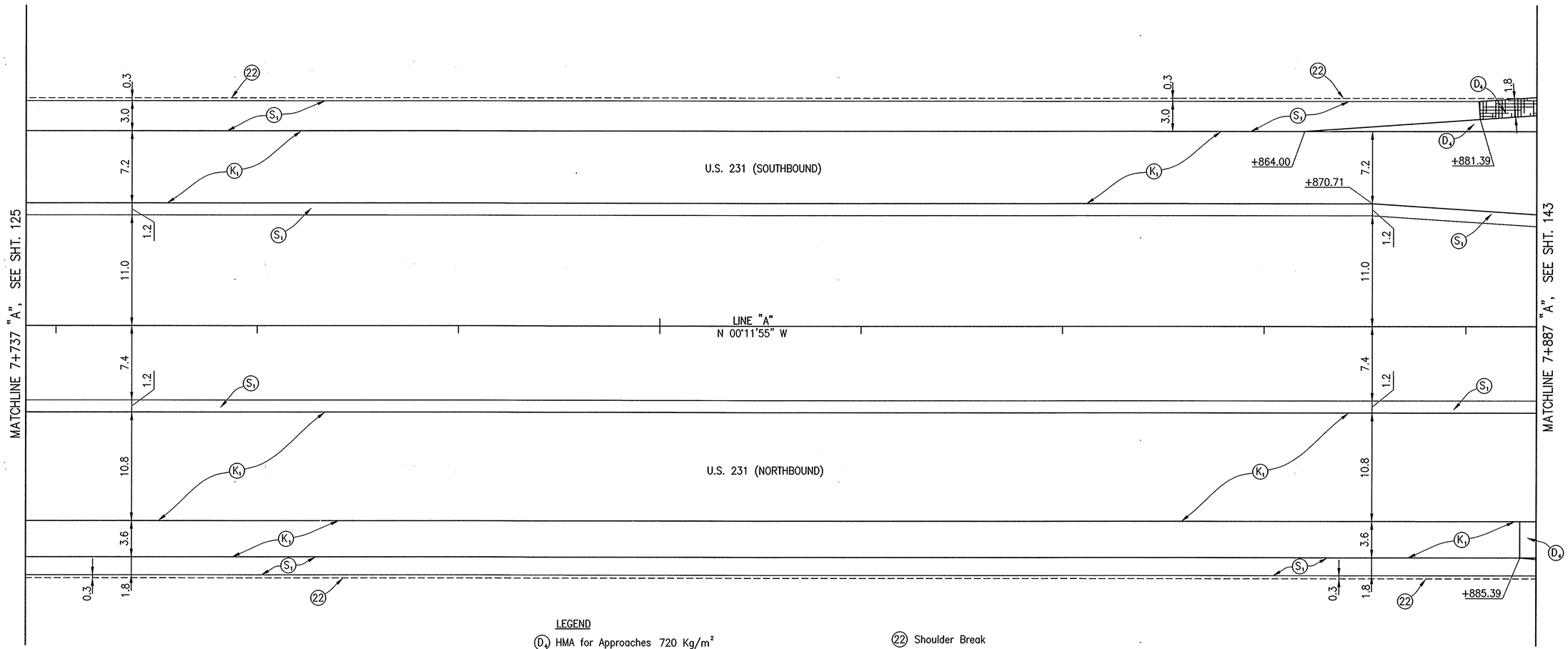
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 500N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	125 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:15:50
Date: 4/16/2003
Scale: 1=1.0000
Drawing File: 210_\DWG\const-details\phase-1a\cd-a-14.dwg (GFitts)

7+800



LEGEND

D_4 HMA for Approaches 720 Kg/m²
90 Kg/m² QC/QA–HMA, 2, 64, Surface 9.5 mm on
150 Kg/m² QC/QA–HMA, 2, 64, Intermediate 19.0 mm, on
480 Kg/m² QC/QA–HMA, 2, 64, Base 25.0 mm

K_1 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

S_1 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 500N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	126 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:30:38
Date: 4/16/2003
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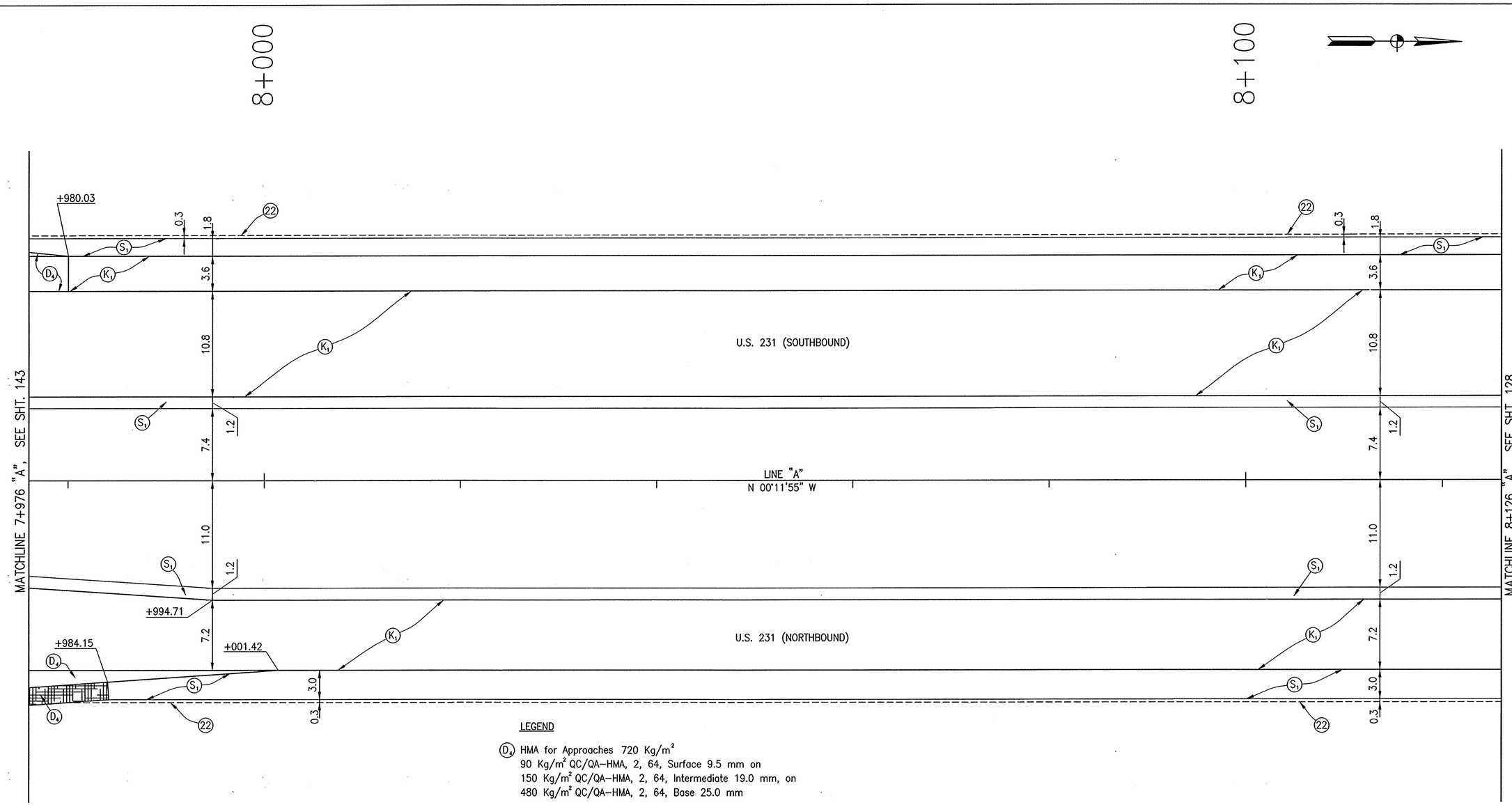


LEGEND

(D_4) HMA for Approaches 720 Kg/m²
90 Kg/m² QC/QA–HMA, 2, 64, Surface 9.5 mm on
150 Kg/m² QC/QA–HMA, 2, 64, Intermediate 19.0 mm, on
480 Kg/m² QC/QA–HMA, 2, 64, Base 25.0 mm

(K_1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S_1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Time: 11:38:56
Date: 4/16/2003
Scale: 1=1(PS)
Drawing File: 210_\DWG\const-details\phase-1a\cd-a-16.dwg (CFits)

MELISSA ANN ENFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

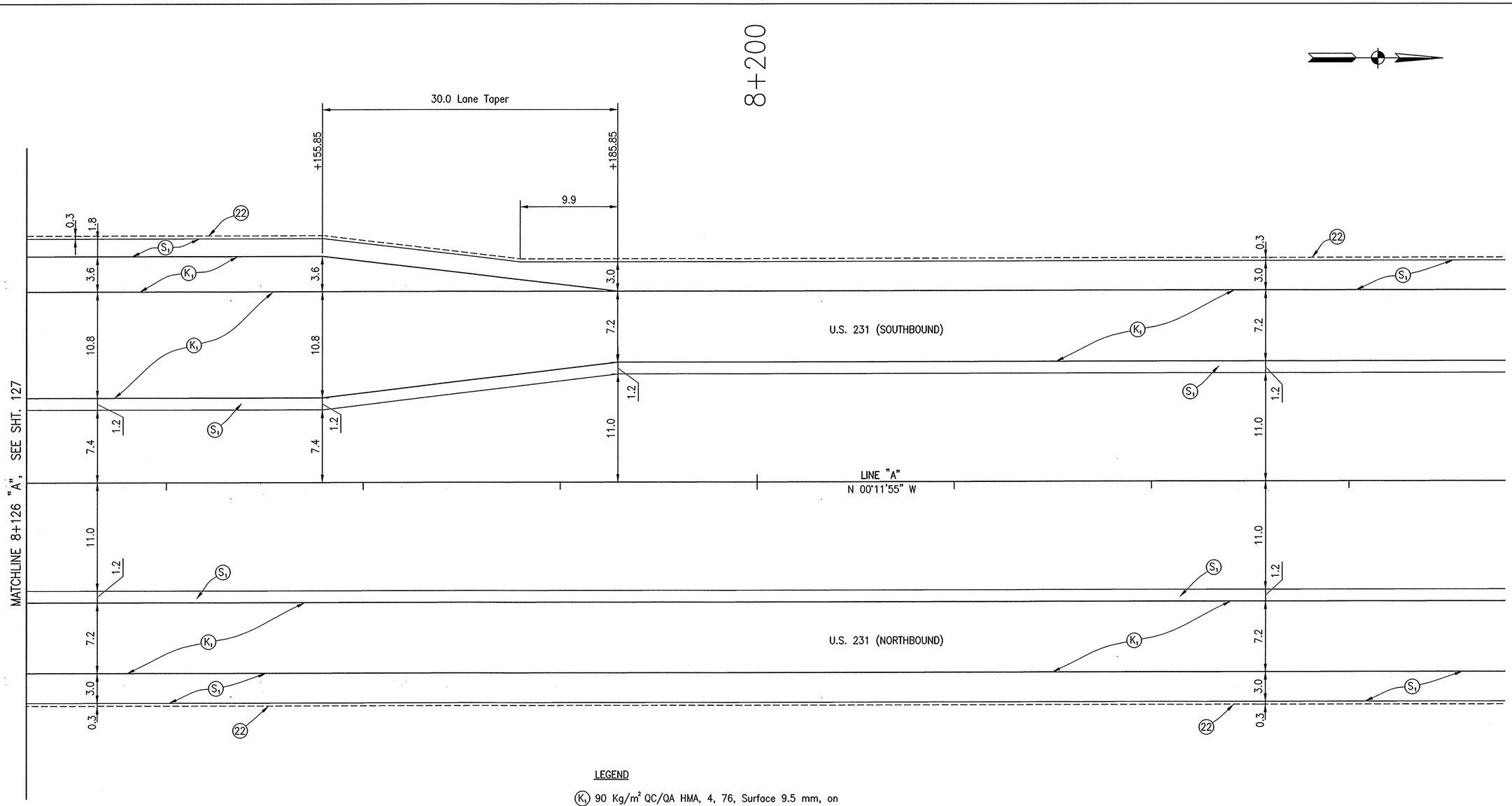
RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 500N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	127 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT CO. RD. 500N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	128 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:40:53
Date: 4/16/2003
Scale: 1=1.0000
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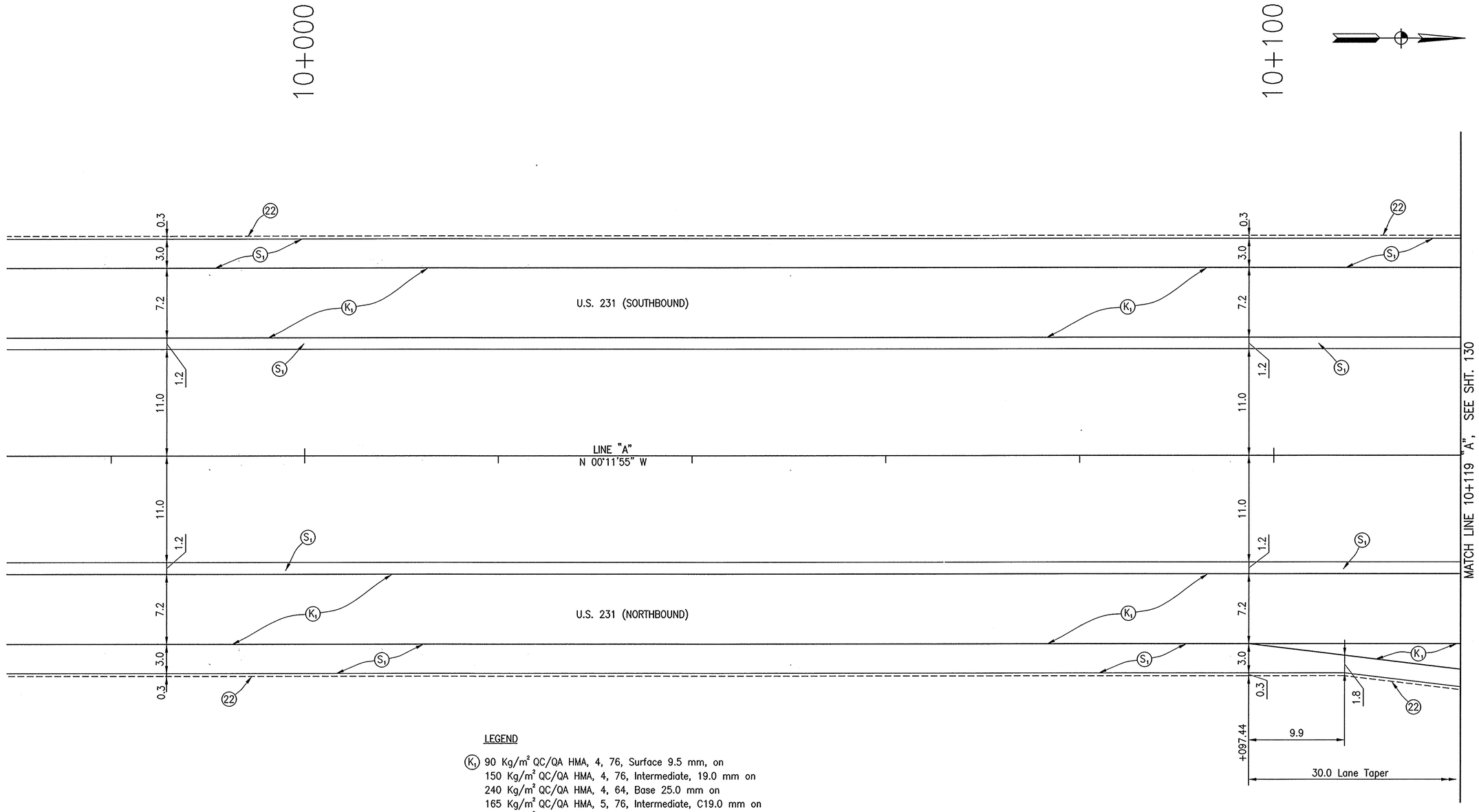


LEGEND

(K_1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S_1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Time: 11:42:19
Date: 4/10/2003
Drawing File: 210_1\DWG\const-details\phase-1a\cd-a-18.dwg (GFiis)

MELISA ANN ETTINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melina A. Ettinger 04-22-03
DESIGN ENGINEER DATE

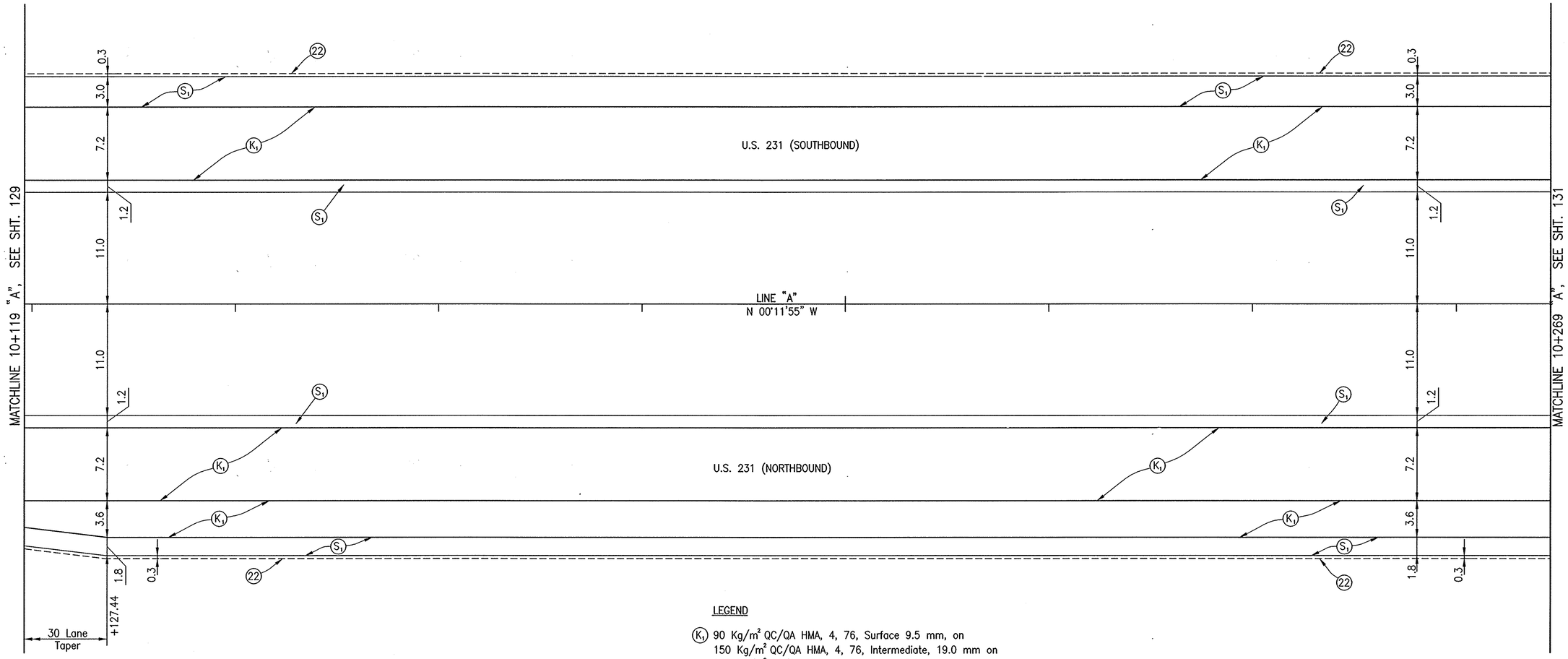
DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT AK STEEL ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	129 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

10+200



LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT AK STEEL ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	130 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:44:0
Date: 4/4/2003
Scale: 1"=40(PS)
Drawing File: 210_\DWG\const-details\phase-1a\cd-c-19.dwg (CFits)

10+300

10+400

P.O.T. STA: 10+000.000 "S–AK"
= P.O.T. STA: 10+350.570 "A"
Public Road Approach Type "C"
Req'd. Rt.

MATCHLINE 10+269 "A", SEE SHT. 130

MATCHLINE 10+419 "A", SEE SHT. 132

U.S. 231 (SOUTHBOUND)

U.S. 231 (NORTHBOUND)

LINE "A"
N 00°11'55" W

90°00'00"

+327.81 "A"
3.91 Lt.

+337.50 "A"
4.88 Rt.

+309.92 "A"
30.55 Rt.

+362.61 "A"
8.61 Rt.

+378.57 "A"
28.98 Rt.

+293.37 "A"
74.00 Rt.

+408.97 "A"
72.84 Rt.

LINE "S–AK"
S 89°52'42" E

A.K. STEEL ENTRANCE

STR No. 600 +040

MATCHLINE 10+047 "A", SEE SHT. 144

LEGEND

(D1) HMA for Approaches 855 Kg/m²
90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Melissa Ann Effinger
Registered
No. PE19600092
State of Indiana
Professional Engineer

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

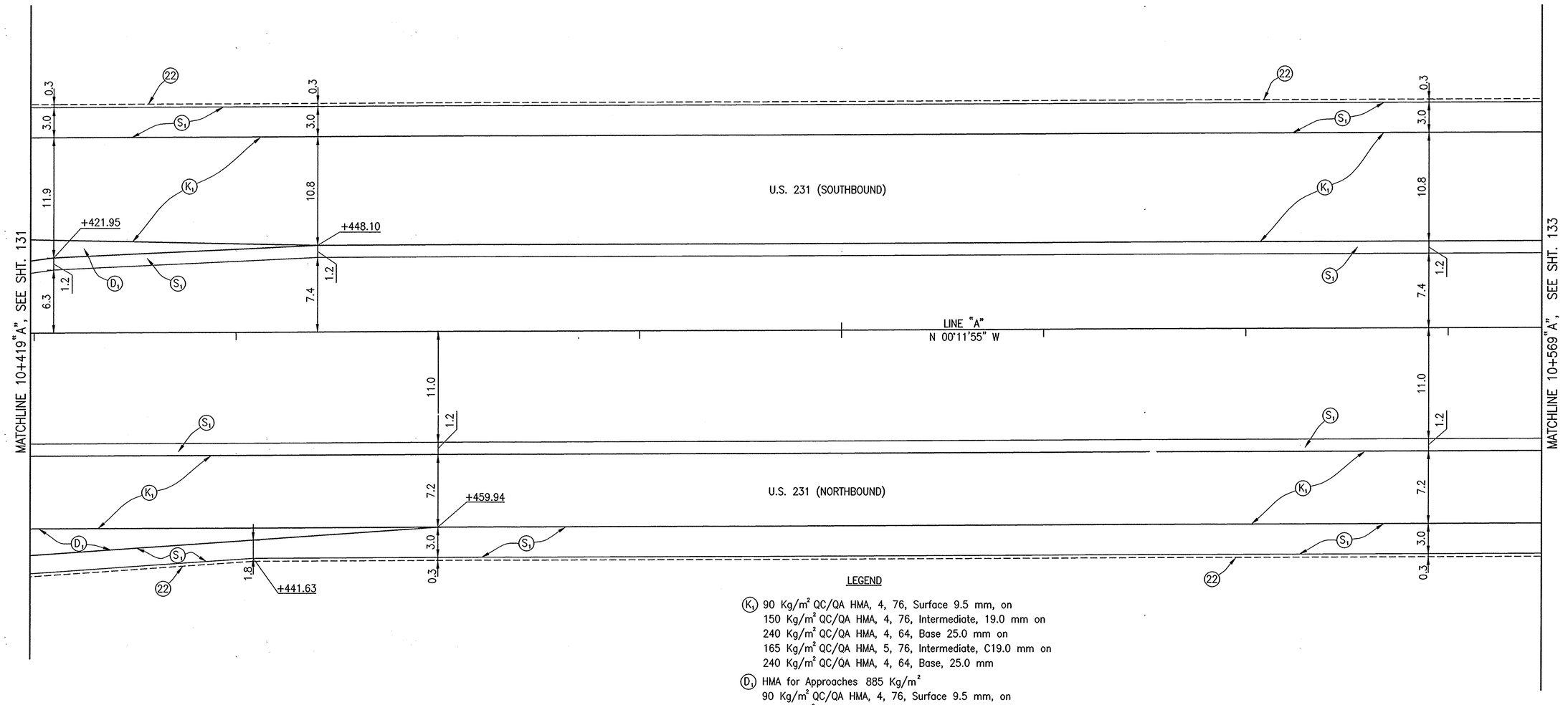
INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT AK STEEL ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	131 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 16:17:31
Date: 4/22/2003
Scale: 1"=40'(PS)
Drawing File: 210_(1)WG\const-details\phase-1\cd-s-20.dwg (CFits)

10+500



LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(D1) HMA for Approaches 885 Kg/m²
90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT AK STEEL ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	132 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 16:22:39
Date: 4/21/2003
Scale: 1=100
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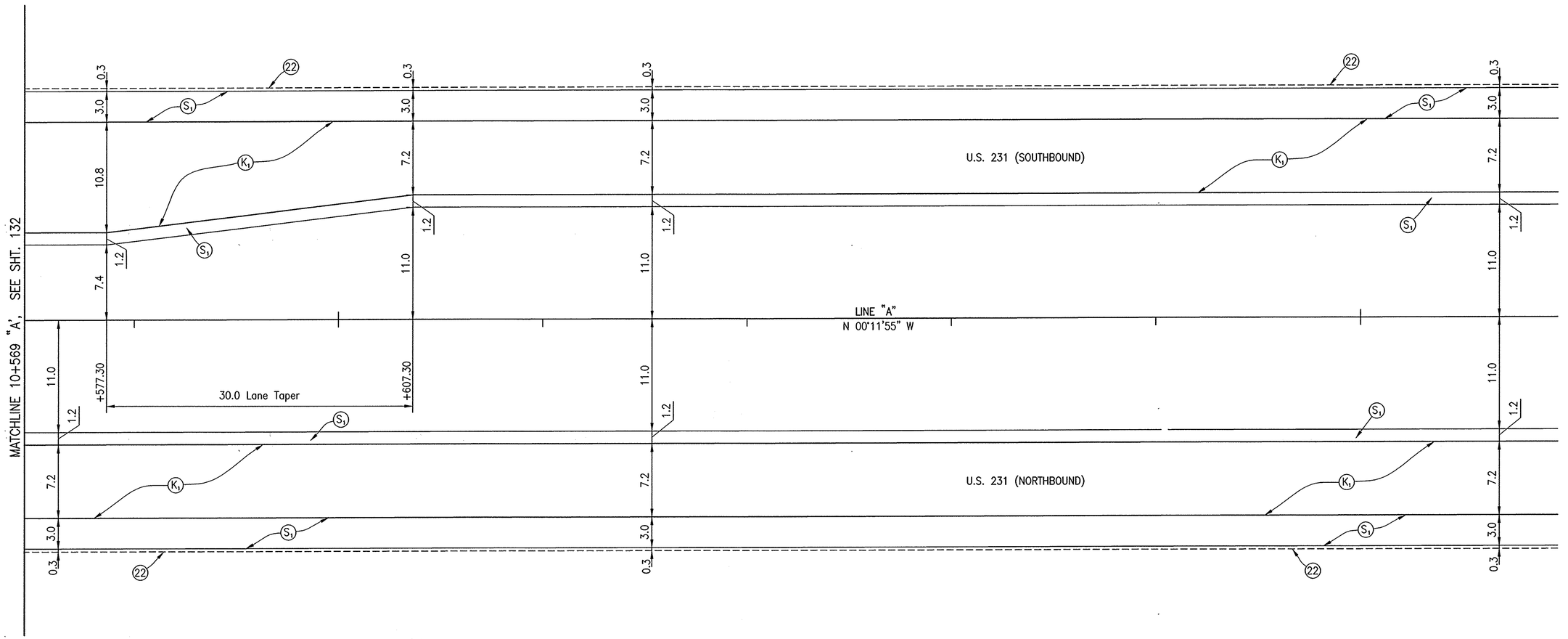

LEGEND

(K1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(S1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN ETTINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Ettinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
U.S. 231 AT AK STEEL ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	133 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:58:00
Date: 4/16/2003
Scale: 1"=40'(PS)
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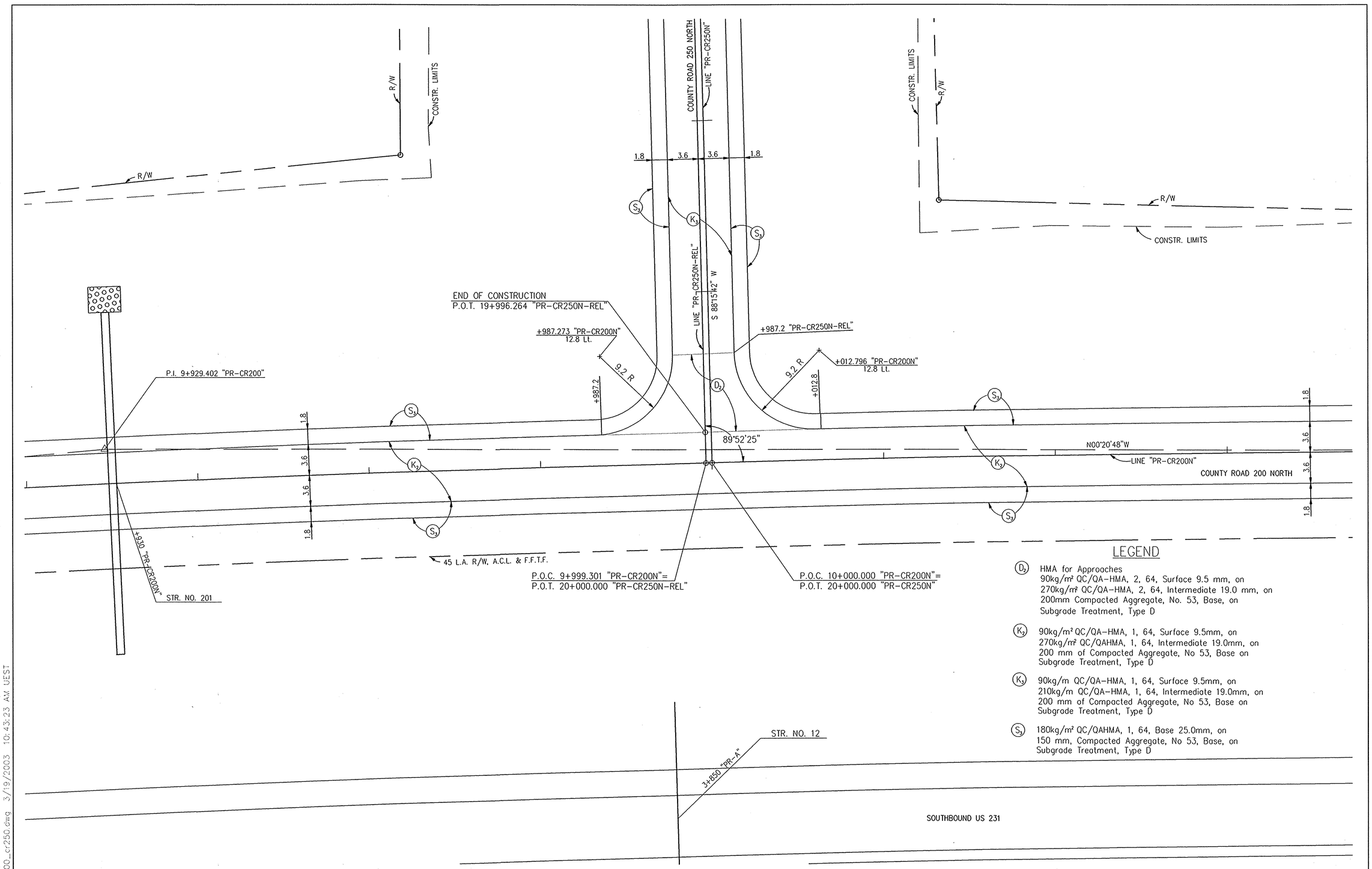


LEGEND

(D_2) HMA for Approaches
90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on
270kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on
200mm Compacted Aggregate, No. 53, Base, on
Subgrade Treatment, Type D

(K_2) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5mm, on
270kg/m² QC/QAHMA, 1, 64, Intermediate 19.0mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type D

(K_3) 90kg/m QC/QA-HMA, 1, 64, Surface 9.5mm, on
210kg/m QC/QA-HMA, 1, 64, Intermediate 19.0mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type D

(S_3) 180kg/m² QC/QAHMA, 1, 64, Base 25.0mm, on
150 mm, Compacted Aggregate, No 53, Base, on
Subgrade Treatment, Type D

ALAN J. DeLAURAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Alan J. DeLauray 4/22/03
DESIGN ENGINEER — DATE

DESIGNED: JMM | DRAWN: JRG
CHECKED: AJD | CHECKED: AJD

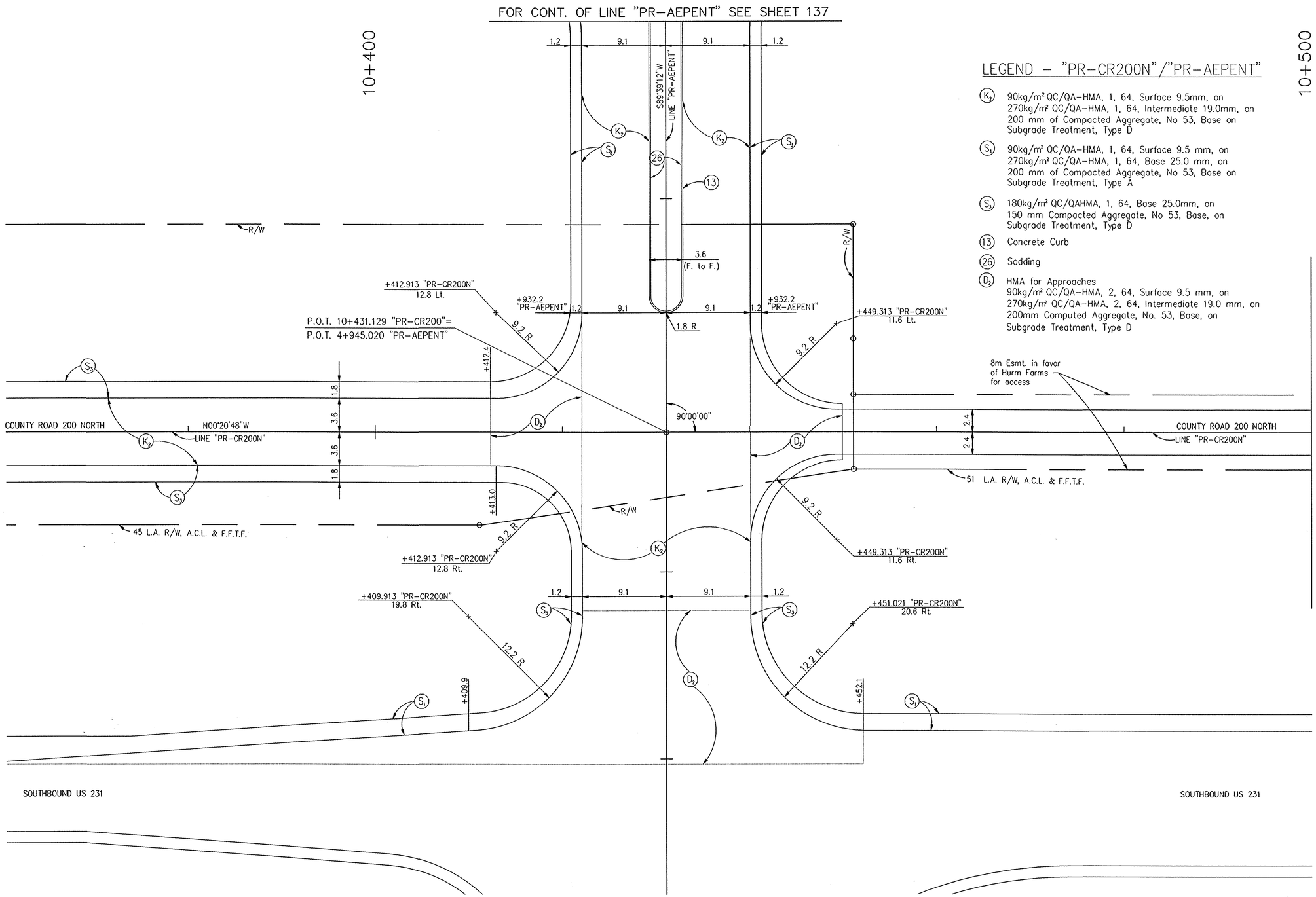
INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
CR200N / CR250N INTERSECTION

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	134 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

E:\98011\road\dr-cr200-cr250.dwg - 9/6/2002 - 3:17:56

E:\98011\road\id_cr200_cr250.dwg 3/19/2003 10:43:23 AM UEST



LEGEND – "PR-CR200N"/"PR-AEPENT"

- (K2) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5mm, on 270kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0mm, on 200 mm of Compacted Aggregate, No 53, Base on Subgrade Treatment, Type D
- (S1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on 270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on 200 mm of Compacted Aggregate, No 53, Base on Subgrade Treatment, Type A
- (S3) 180kg/m² QC/QAHMA, 1, 64, Base 25.0mm, on 150 mm Compacted Aggregate, No 53, Base, on Subgrade Treatment, Type D
- (13) Concrete Curb
- (26) Sodding
- (D2) HMA for Approaches 90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on 270kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on 200mm Computed Aggregate, No. 53, Base, on Subgrade Treatment, Type D

E:\98011\road\id_cr200_AEPENT.dwg 3/19/2003 10:44:46 AM UEST

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: DESIGN ENGINEER — DATE 4/22/03

DESIGNED: JMM | DRAWN: JRG

CHECKED: AJD | CHECKED: AJD

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
CR200N AT AEP/ENTRANCE

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	135 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

Monument Type "C" Req'd
P.O.T. Sta. 4+500.000 "A"

SEC. 11, T7S, R6W
Ohio Twp.
Spencer County

10+500

+882.260 "PR-AEPENT"
31.68 Rt.

TEMP. R/W FOR SIDESLOPE CONSTR.

Constr. Limits

+475
60

9.2 R

+895.799 "PR-AEPENT"
11.8 Rt.

+895.799 "PR-AEPENT"
11.8 Rt.

LINE "PR-AEPENT"

+451
22.2

22.2 R/W

R/W

+R/W(451.252)
4

48m

LINE "PR-CR200"
N00°20'48"W

90°00'00"

45 L.A. R/W,
A.C.L. & F.F.T.F.

R/W

E +265 "PR-A"
45

+305 "PR-A"
51 B

51 "PR-A" L.A. R/W, A.C.L. & F.F.T.F.

8 m Esmt. in favor
of Hurm Farms
for access

END PAVING "PR-CR200N"
STA. 10+449.913 "PR-CR200N"
BEGIN CONSTRUCTION CLASS V DRIVE

P.C. 10+530.824 "PR-CR200N"

P.O.T. 10+431.129 "PR-CR200N"=
P.O.T. 4+945.000 "PR- AEPENT"

S88°39'12"W

CURVE DATA
P.I.= 10+560.000 "PR-CR200N"
Δ=16°35'59" Lt.
R= 200
T= 29.176
L= 57.944
E= 2.117
Se= NC

+510
20

+510
10

+PC
10

+PC
4

+PT
10

+PT
4

+PL
10

+PL
4

+PL
55 "PR-A"

+400 "PR-A"
51

L.A. R/W, A.C.L. & F.F.T.F.

P.T. 10+588.768 "PR-CR200N"

P.I. 10+560.000 "PR-CR200N"

N16°56'47"W

END CONSTRUCTION CLASS V DRIVE
STA. 10+590.384 "PR-CR200N"

HURM FARMS

CD NO. 20
STA 4+570.000 "PR-A"

+PC
90 "PR-A"

L.A. R/W, A.C.L. & F.F.T.F.

Constr. Limits

CD NO. 20
STA 4+515.000 "PR-A"

NOTE:
All measurement/distances are in meters unless otherwise indicated.
ALL R/W DESCRIBED FROM LINE "PR-CR200N" EXCEPT AS SHOWN.
LIMITED ACCESS R/W PROVISIONS TO APPLY WHERE INDICATED.

STR. NO. 15
See sheet 65

STR. NO. 16
See sheet 65

N.E.P.L.

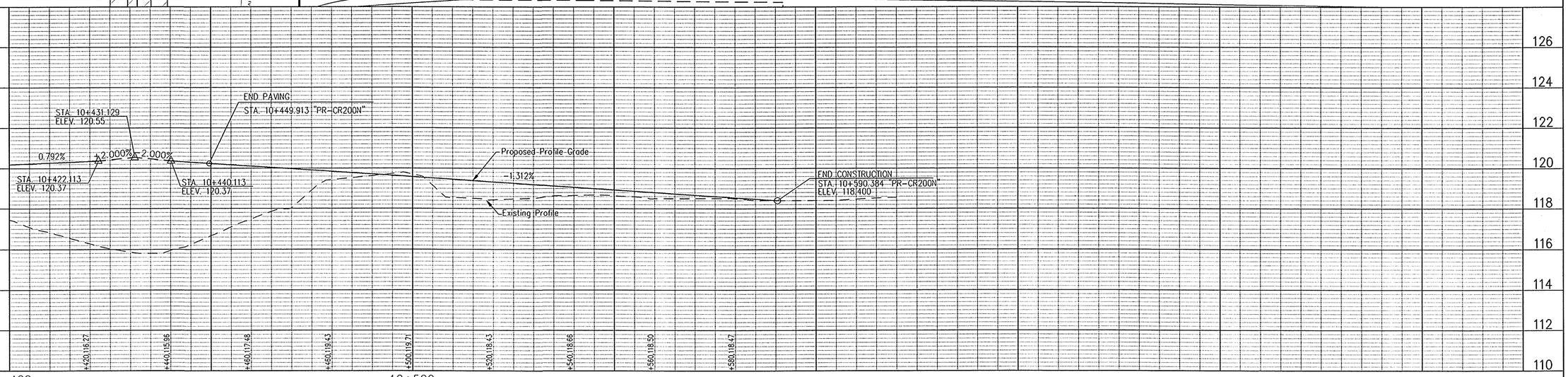
LINE "PR-A"

90°00'00"

(Asphalt)

(Trail)

3.0
7.2
1.2
11.0
1.2
11.0
1.2
7.2



E:\98011\road\pp04r-cr-c200.dwg 3/19/2003 10:47:24 AM WEST

ALAN J. DeLAUNAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

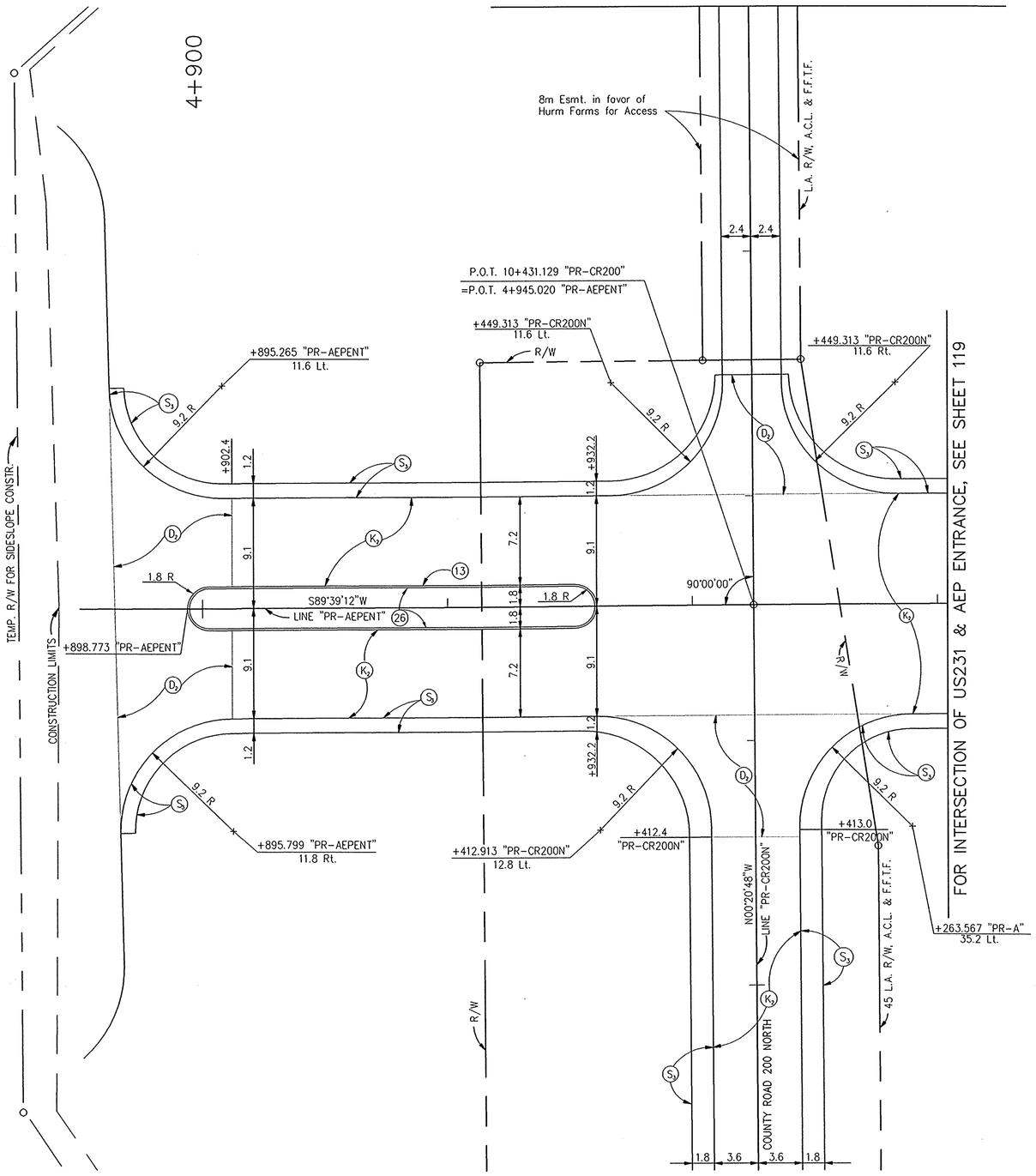
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER
4/22/03
DATE

DESIGNED: JMM
DRAWN: JRG
CHECKED: AJD
CHECKED: AJD

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
CLASS V DRIVE

HORIZONTAL SCALE	BRIDGE FILE
1:500	-
VERTICAL SCALE	DESIGNATION
1:100	8461360
SURVEY BOOK	SHEETS
16722	136 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)



LEGEND – "PR-CR200N"/"PR-AEPENT"

(D2) HMA for Approaches
90kg/m QC/QA-HMA, 2, 64, Surface 9.5 mm, on
270kg/m QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on
200mm Computed Aggregate, No. 53, Base, on
Subgrade Treatment, Type D

(K2) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5mm, on
270kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type D

(S1) 90kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm, on
270kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm, on
200 mm of Compacted Aggregate, No 53, Base on
Subgrade Treatment, Type A

(S3) 180kg/m² QC/QAHMA, 1, 64, Base 25.0mm, on
150 mm, Compacted Aggregate, No 53, Base, on
Subgrade Treatment, Type D

(13) Concrete Curb

(26) Sodding

E:\98011\roadway\d_aepent_01.dwg 3/5/2003 11:25:41 AM UEST

ALAN J. DeLAMAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: JMM DRAWN: JRG

CHECKED: AJD CHECKED: KAC

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1: 200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	137 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

5+100

FOR INTERSECTION OF LINE "PR-AEPENT", SEE SHEET 119

R/W

+069.9

1.2

9.0

7.2

D_s

S_3

+140.0

+155.0

K_s

3.6 (F. to F.)

13

26

S89°39'12"W

LINE "PR-AEPENT"

MATCH EXISTING CURB

MATCH EXISTING CURB

+167.5

+197.7

167.6

+189.4

R/W

R/W

LEGEND - PR-AEPENT

(D) HMA for Approaches
90kg/m HMA TYPE "A", Surface, on
150kg/m HMA TYPE "A", Intermediate, on
200mm Compacted Aggregate, No. 53, Base

(D_s) HMA for Approaches
90kg/m² QC/QA-HMA, 2, 64, Surface 9.5mm, on
150kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0mm, on
480 kg/m² QC/QA-HMA, 2, 64, Base, 25.0mm, on

(K_s) 90kg/m² QC/QA-HMA, 2, 64, Surface 9.5 mm, on
150kg/m² QC/QA-HMA, 2, 64, Intermediate 19.0 mm, on
480kg/m² QC/QA-HMA, 2, 64, Base 25.0 mm, on
Subgrade Treatment, Type D

(S_3) 180kg/m² QC/QAHMA, 1, 64, Base 25.0mm, on
150 mm, Compacted Aggregate, No 53, Base, on
Subgrade Treatment, Type D

(13) Concrete Curb

(26) Sodding

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

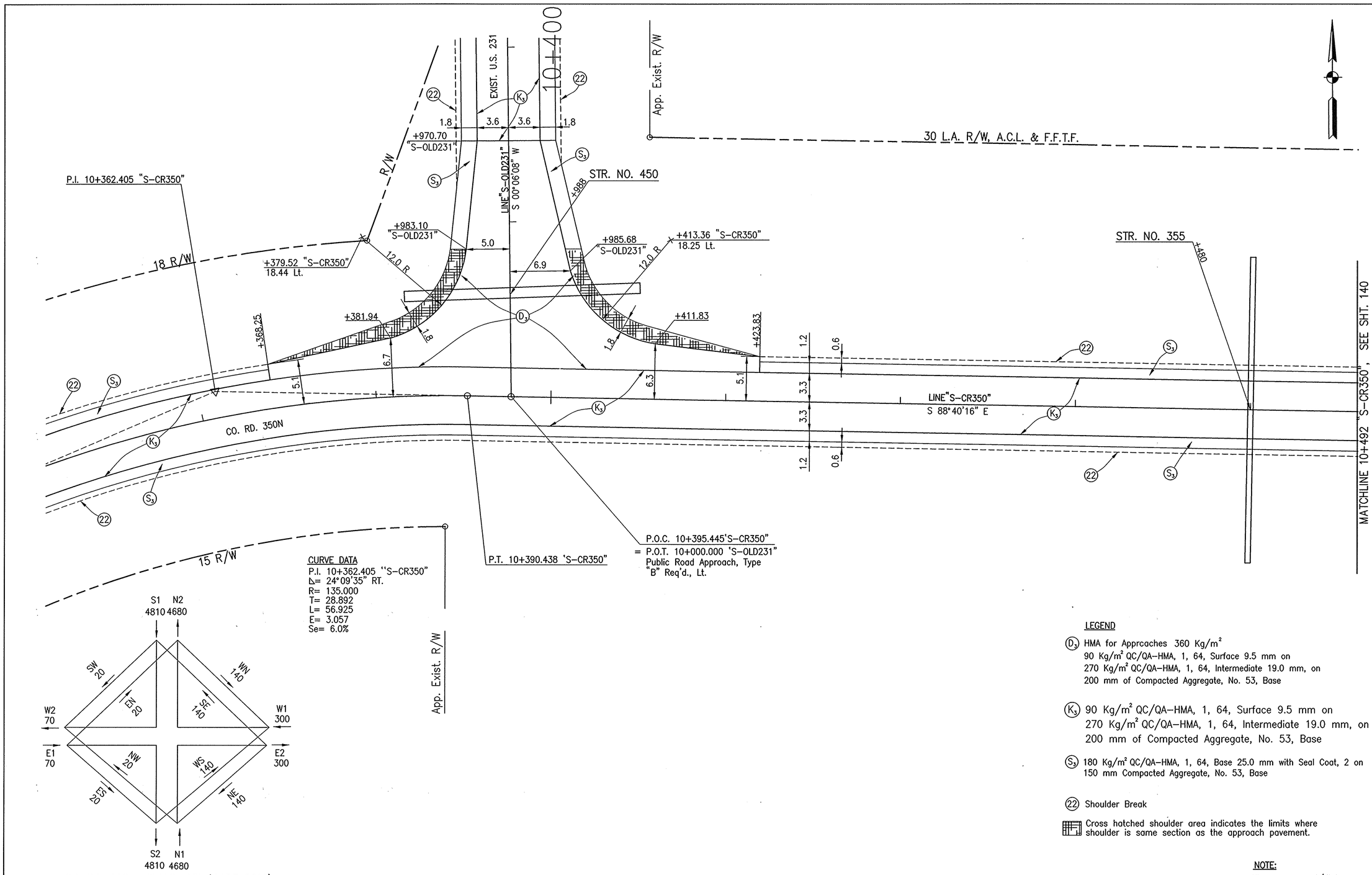
DESIGNED: JMM DRAWN: JRG
CHECKED: AJD CHECKED: AJD

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAIL
US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	138 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)

E:\980\11\road\id_aepent_02.dwg 3/5/2003 11:25:45 AM UEST



CO. RD. 350N AT U.S. 231 (AADT 2016)

CURVE DATA
P.I. 10+362.405 "S-CR350"
Δ= 24°09'35" RT.
R= 135.000
T= 28.892
L= 56.925
E= 3.057
Se= 6.0%

LEGEND

(D3) HMA for Approaches 360 Kg/m²
90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K3) 90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(S3) 180 Kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
OLD U.S. 231 AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	139 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 13:10:46
Date: 14-APR-2003
Scale: 1:40 (F90)
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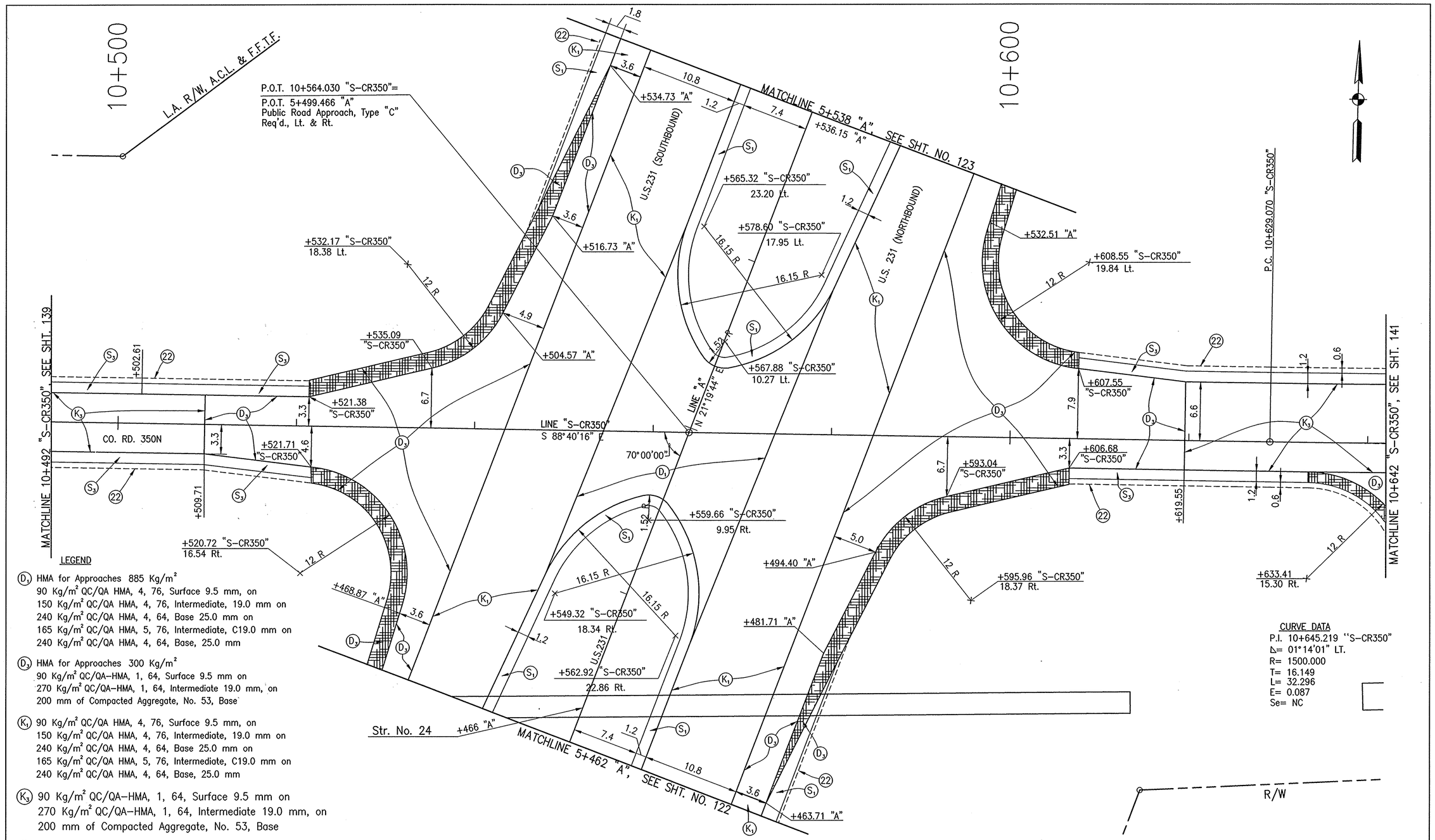

LEGEND

D_1 HMA for Approaches 885 Kg/m²
90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

D_3 HMA for Approaches 300 Kg/m²
90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

K_1 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

K_3 90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

S_1 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base on

S_3 180 Kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

CURVE DATA
P.I. 10+645.219 "S-CR350"
Δ= 01°14'01" LT.
R= 1500.000
T= 16.149
L= 32.296
E= 0.087
Se= NC

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN ETTINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Ettinger 04-22-03
DESIGN ENGINEER / DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
CO. RD. 350N AT U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	140 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 15:32:20
Date: 1/21/2003
Scale: 1=40(PS)
Drawing File: 210_\DWG\const-details\phase-1\d-350-02.dwg (CFits)

CURVE DATA
P.I. 10+645.219 "S-CR350"
Δ= 01°14'01" LT.
R= 1500.000
T= 16.149
L= 32.296
E= 0.087
Se= NC

10+700

R/W

30 R/W

R/W

P.I. 10+645.219 "S-CR350"

P.T. 10+661.366 "S-CR350"

END CONSTRUCTION
P.O.T. 10+780.000 "S-CR350"

45.0 Lane Taper

+689.86

+734.86

MATCHLINE 10+642 "S-CR350", SEE SHT. 140

LINE "S-CR350"
S 89°54'17" E

CO. RD. 350N

1.2
6.6
3.3
S_3
22
K_3
0.6

D_3

15.0 R

+667.30
18.30' Rt.

+652.41
18.20' Rt.

ENTRANCE TO A.E.P.

+649

R/W

Mod. Class IV Drive Re'q.
W=7.2

Str. No. 356

LEGEND

D_3 HMA for Approaches 360 Kg/m²
90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

K_3 90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

S_3 180 Kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

22 Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
NORTH ENT. TO A.E.P. AT CO. RD. 350N

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	141 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 13:42:28
Date: 4/22/2003
Scale: 1"=40'(PS)
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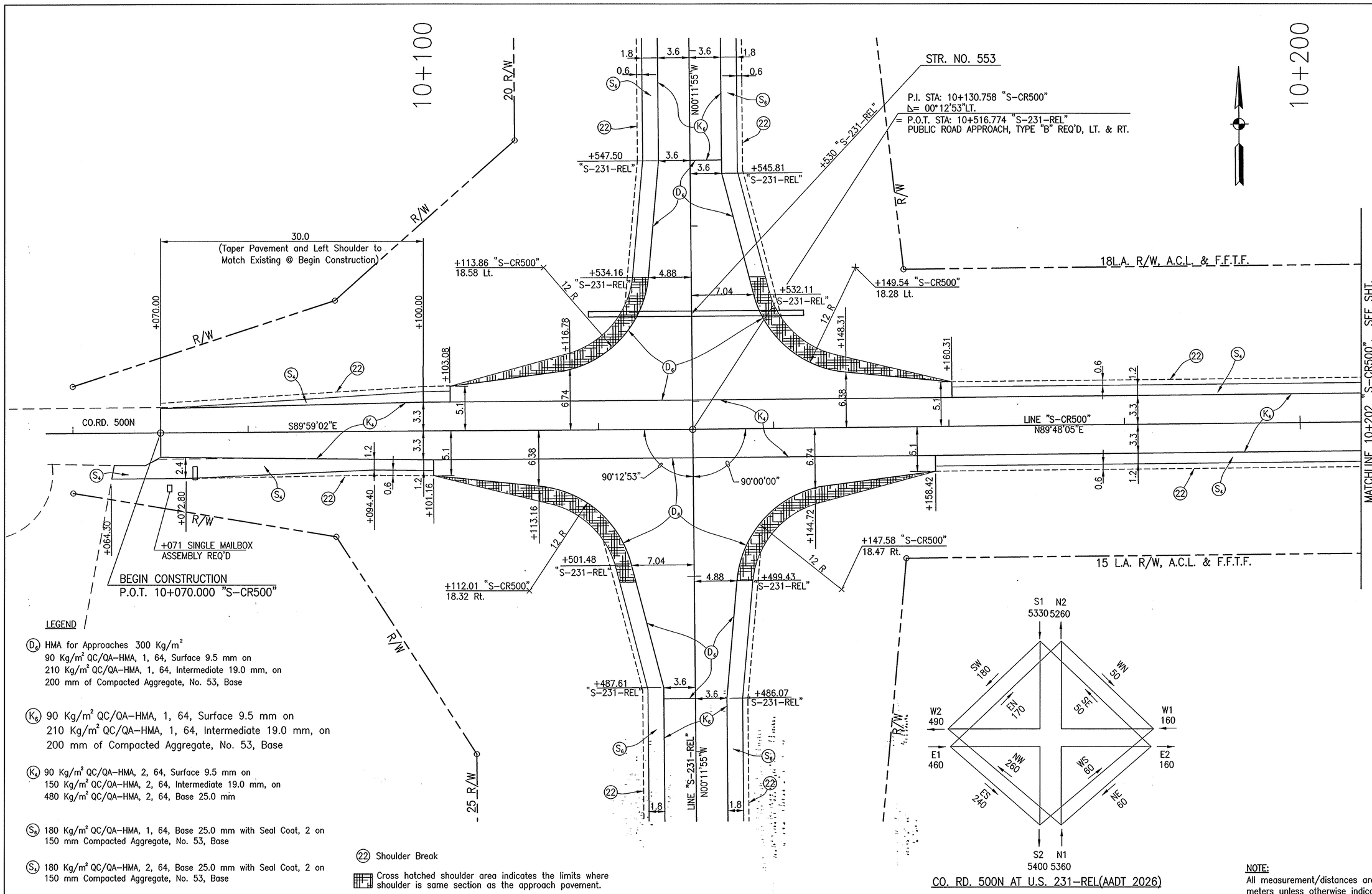


LEGEND

(D$_6$) HMA for Approaches 300 Kg/m^2
90 Kg/m^2 QC/QA–HMA, 1, 64, Surface 9.5 mm on
210 Kg/m^2 QC/QA–HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K$_6$) 90 Kg/m^2 QC/QA–HMA, 1, 64, Surface 9.5 mm on
210 Kg/m^2 QC/QA–HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K$_4$) 90 Kg/m^2 QC/QA–HMA, 2, 64, Surface 9.5 mm on
150 Kg/m^2 QC/QA–HMA, 2, 64, Intermediate 19.0 mm, on
480 Kg/m^2 QC/QA–HMA, 2, 64, Base 25.0 mm

(S$_6$) 180 Kg/m^2 QC/QA–HMA, 1, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(S$_4$) 180 Kg/m^2 QC/QA–HMA, 2, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

CO. RD. 500N AT U.S. 231–REL(AADT 2026)

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Time: 16:33:58
Date: 4/21/2003
Scale: 1"=100'
Drawing File: 210_\DWG\const-details\phase-1\cd-500-01.dwg (CFitts)

MELISA ANN ETTINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melisa A. Ettinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
CO. RD. 500N AT 231–REL

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	142 of 196
CONTRACT	PROJECT
R–26185	NH–075–3(014)

MATCHLINE 7+976 "A", SEE SHT. NO. 127

MATCHLINE 10+202 "S-CR500", SEE SHT. 142

MATCHLINE 7+887 "A", SEE SHT. NO. 126

L.A. R/W

15 L.A. R/W, A.C.L. & F.F.T.F.

L.A. R/W, A.C.L. & F.F.T.F.

45 L.A. R/W, A.C.L. & F.F.T.F.

STR. NO. 500

STR. NO. 501

LINE "A" N 00°11'55" W

LINE "S-CR500" N89°48'05"E

U.S. 231 (NORTHBOUND)

U.S. 231 (SOUTHBOUND)

U.S. 231

CO.RD. 500N

10+300

+963.61"A"

+949.82"A"

+940.71"A"

+949.42"A"

+924.71"A"

+916.00"A"

+915.72"A"

+904.39"A"

+246.92 "S-CR500" 18.39 Lt.

+249.40 "S-CR500"

+236.08 "S-CR500"

+237.19 "S-CR500"

+249.39 "S-CR500"

+248.12 "S-CR500" 16.53 Rt.

+276.54 "S-CR500" 22.50 Lt.

+290.71 "S-CR500" 22.00 Lt.

+283.19 "S-CR500" 10.21 Lt.

+283.19 "S-CR500" 9.70 Rt.

+275.61 "S-CR500" 22.26 Rt

+289.76 "S-CR500" 22.82 Rt.

+318.20 "S-CR500" 16.53 Lt.

+316.93 "S-CR500"

+329.13 "S-CR500"

+330.22 "S-CR500"

+316.92 "S-CR500"

+319.31 "S-CR500" 19.13 Rt.

90°00'00"

16.15 R

1.52 R

12 R

+210

+320

P.O.T. 10+283.158 "S-CR500"
= P.O.T. 7+932.707 "A"
PUBLIC ROAD APPROACH, TYPE "C" REQ'D LT. AND RT.

LEGEND

(D_1) HMA for Approaches 885 Kg/m²
90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(D_4) HMA for Approaches 720 Kg/m²
90 Kg/m² QC/QA–HMA, 2, 64, Surface 9.5 mm on
150 Kg/m² QC/QA–HMA, 2, 64, Intermediate 19.0 mm, on
480 Kg/m² QC/QA–HMA, 2, 64, Base 25.0 mm

(K_1) 90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(K_4) 90 Kg/m² QC/QA–HMA, 2, 64, Surface 9.5 mm on
150 Kg/m² QC/QA–HMA, 2, 64, Intermediate 19.0 mm, on
480 Kg/m² QC/QA–HMA, 2, 64, Base 25.0 mm

(S_1) 90 Kg/m² QC/QA HMA, 1, 64, Surface 9.5 mm w/ Shoulder Corrugations on
270 Kg/m² QC/QA HMA, 1 ,64, Base, 25.0 mm on
200 mm Compacted Aggregate, No. 53, Base on

(S_4) 180 Kg/m² QC/QA–HMA, 2, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

Time: 10:25:5
Date: 4/22/2003
User: mdavis
Drawing File: 210_\DWG\const-details\phase-1a\cd-500-02.dwg (CTitle)

MELISSA ANN EVERINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

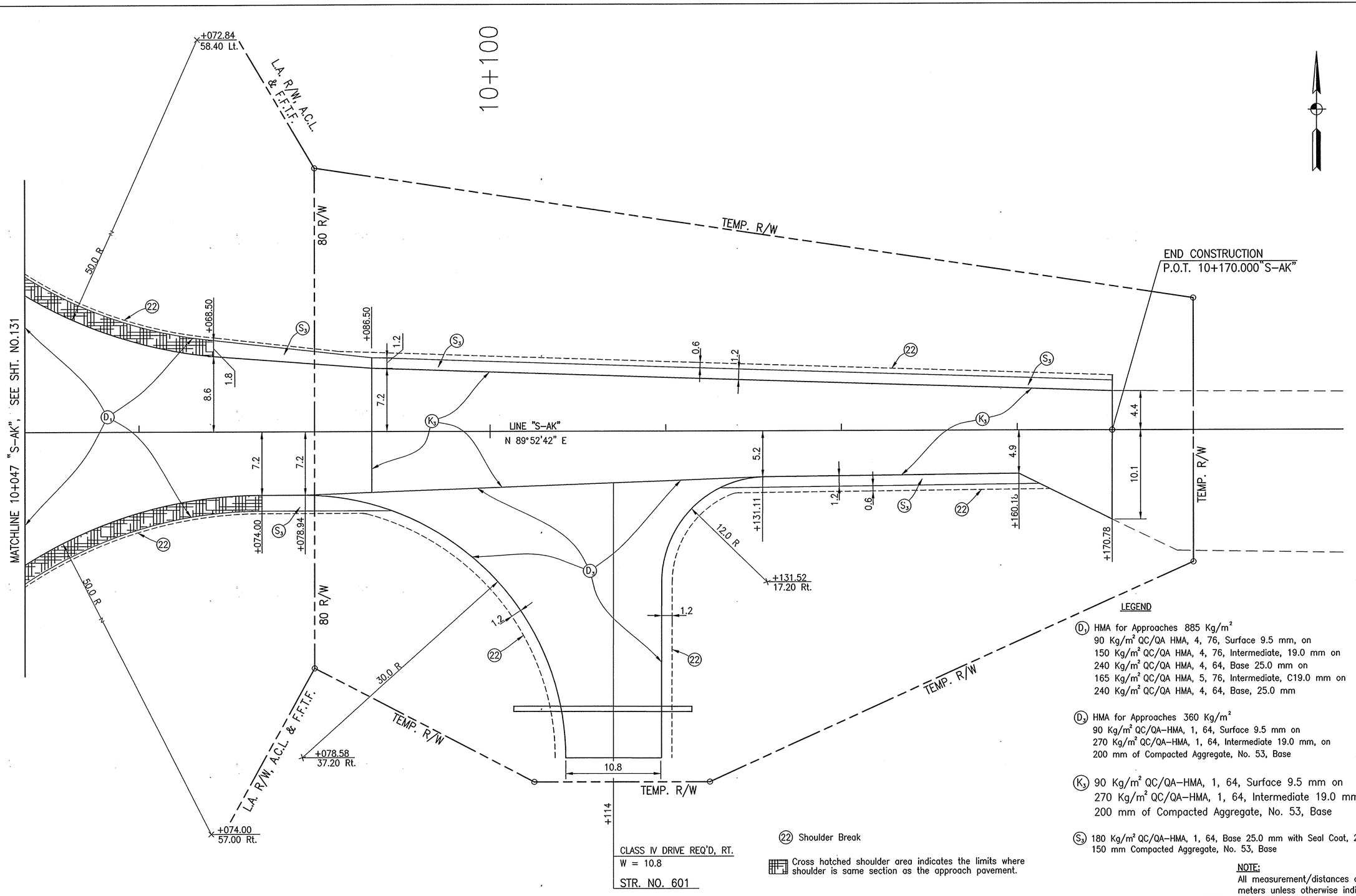
RECOMMENDED FOR APPROVAL Melissa A. Everinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
CO. RD. 500N AT U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	143 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



LEGEND

(D1) HMA for Approaches 885 Kg/m²
90 Kg/m² QC/QA HMA, 4, 76, Surface 9.5 mm, on
150 Kg/m² QC/QA HMA, 4, 76, Intermediate, 19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base 25.0 mm on
165 Kg/m² QC/QA HMA, 5, 76, Intermediate, C19.0 mm on
240 Kg/m² QC/QA HMA, 4, 64, Base, 25.0 mm

(D3) HMA for Approaches 360 Kg/m²
90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(K3) 90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(S3) 180 Kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm with Seal Coat, 2 on
150 mm Compacted Aggregate, No. 53, Base

(22) Shoulder Break

Cross hatched shoulder area indicates the limits where shoulder is same section as the approach pavement.

NOTE:
All measurement/distances are in meters unless otherwise indicated.

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS
AK STEEL ENTRANCE AT U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	144 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

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Date: 4/16/2003
Scale: 1"=40'(PS)
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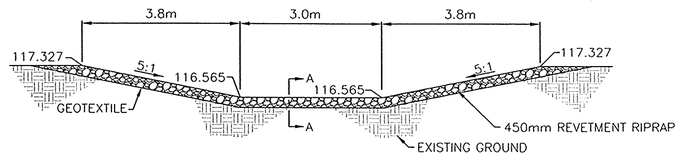
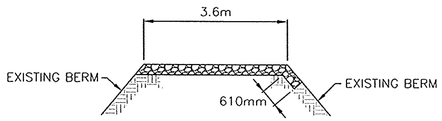


ELEVATION



SECTION A–A

OVERFLOW WEIR DETAIL

NO SCALE

E:\9801\Roadway\sei.dwg 08/14/01 03:32: PM PM WEST

NOTES:

All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLaunay 4/22/03
DESIGN ENGINEER DATE

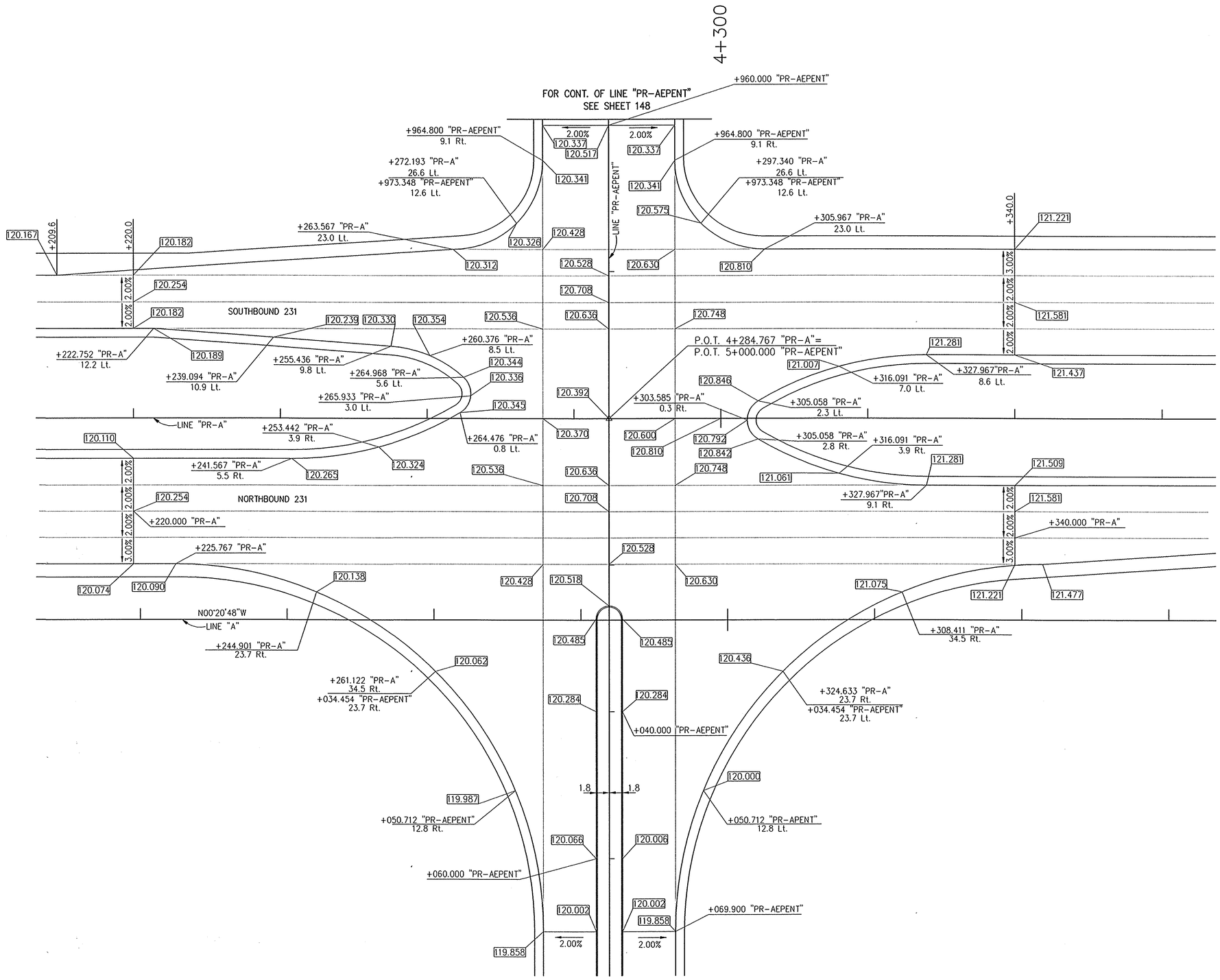
DESIGNED: AJD DRAWN: JRG

CHECKED: AJD CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

MISC. DETAILS

HORIZONTAL SCALE	BRIDGE FILE
N/A	-
VERTICAL SCALE	DESIGNATION
-	8461360
SURVEY BOOK	SHEETS
16722	145 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



E:\98011\roca\SE_231_01.dwg 4/17/2003 11:14:58 AM UEST

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

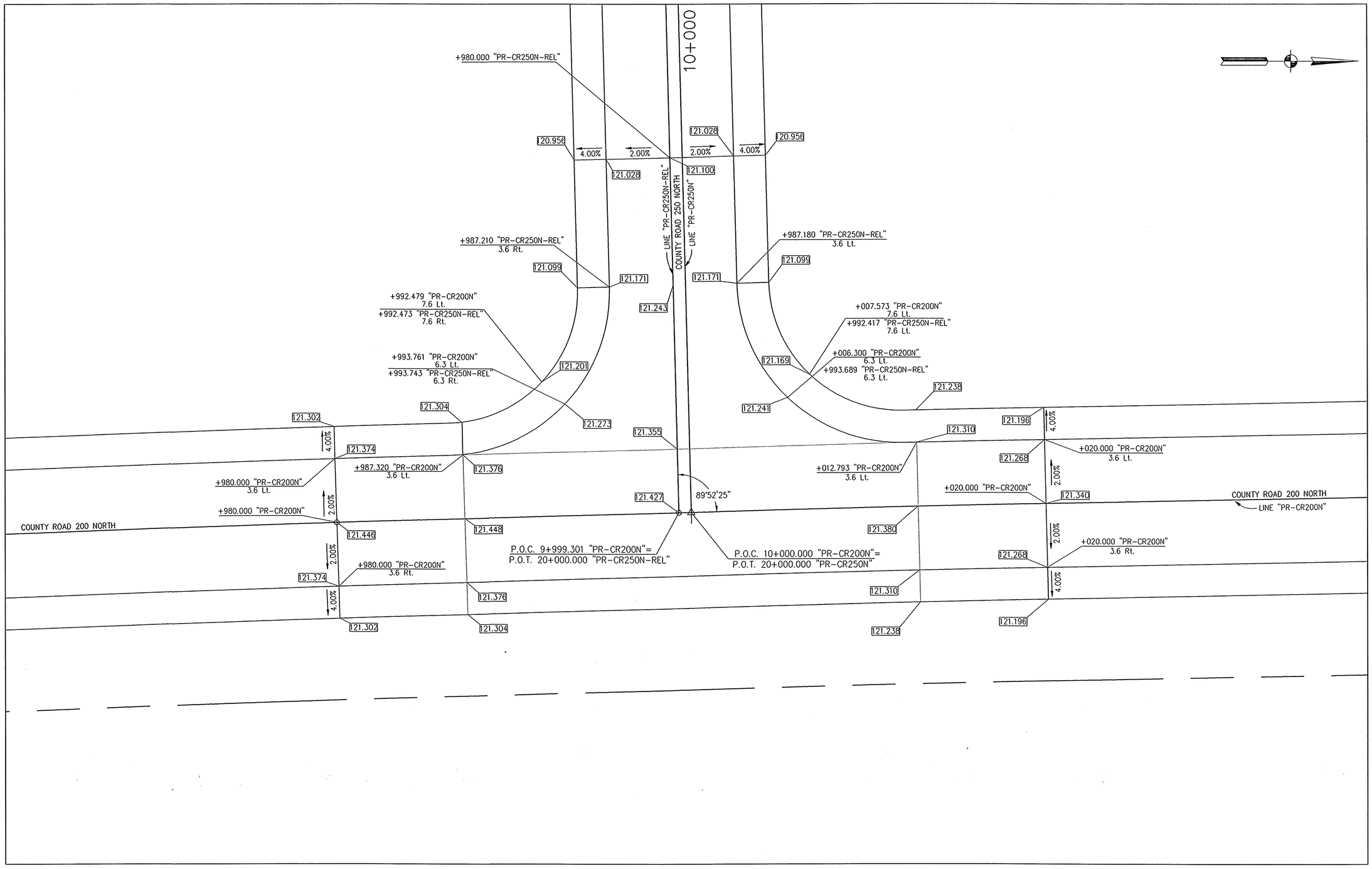
DESIGNED: JMM DRAWN: JRG

CHECKED: AJD CHECKED: AJD

INDIANA DEPARTMENT OF TRANSPORTATION

SPOT ELEVATIONS DETAIL US 231 AT PR-AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	146 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)



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ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

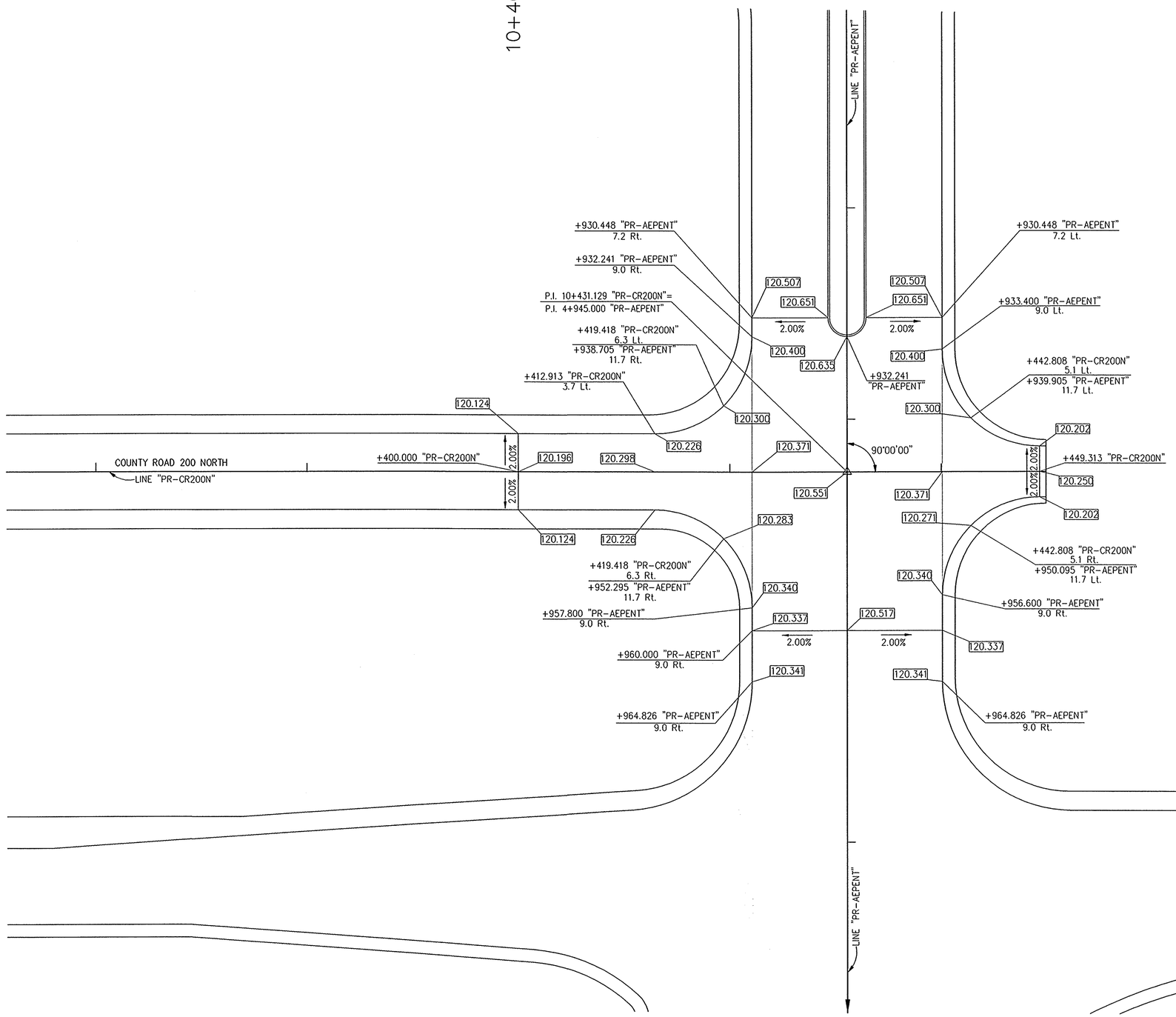
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: JMM DRAWN: JRG
CHECKED: JMM CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

SPOT ELEVATION DETAIL
CR200N / CR250N-REL INTERSECTION

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	147 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)



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ALAN J. DeLAURAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

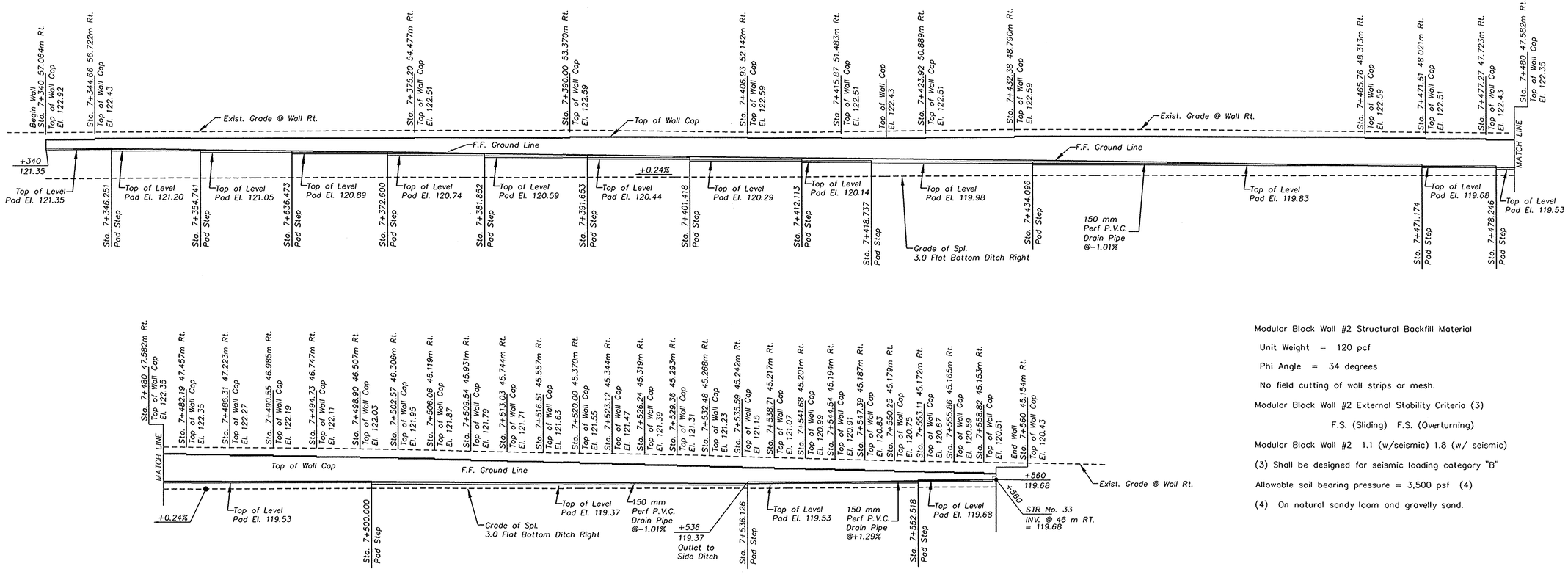
DESIGNED: JMM | DRAWN: JRG

CHECKED: JMM | CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

SPOT ELEVATION DETAIL CR200N AT AEPENT

HORIZONTAL SCALE	BRIDGE FILE
1:200	.
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	148 of 196
CONTRACT	PROJECT
R 26185	NH-075-3 (014)



Modular Block Wall #2 Structural Backfill Material

Unit Weight = 120 pcf

Phi Angle = 34 degrees

No field cutting of wall strips or mesh.

Modular Block Wall #2 External Stability Criteria (3)

F.S. (Sliding) F.S. (Overturning)

Modular Block Wall #2 1.1 (w/seismic) 1.8 (w/ seismic)

(3) Shall be designed for seismic loading category "B"

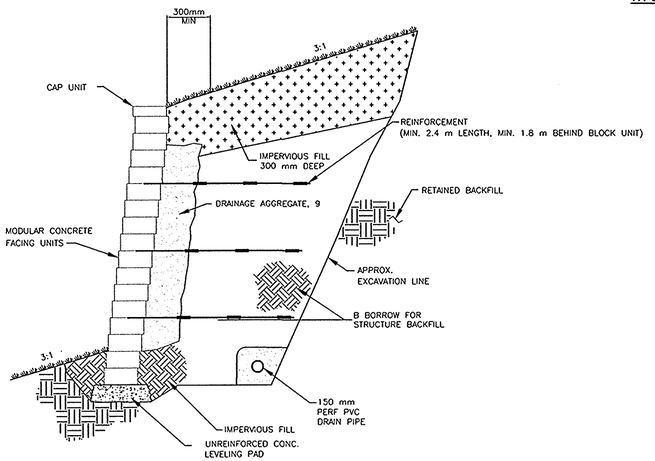
Allowable soil bearing pressure = 3,500 psf (4)

(4) On natural sandy loam and gravelly sand.

MODULAR BLOCK WALL No. 2 (FRONT FACE)

Sta. 7+340 Line "A", 57m Rt. to Sta. 7+560 Line "A", 45m Rt.

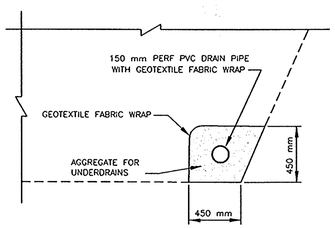
NOTE: AREAS WITH NEED FOR GEOGRID REINFORCEMENT TO BE DETERMINED IN SHOP DRAWINGS



TYPICAL SECTION– MODULAR BLOCK WALL (REINFORCED)

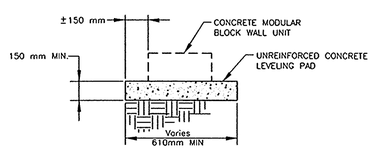
MODULAR CONCRETE UNIT

SCALE: NONE



SUBDRAIN DETAIL

SCALE: NONE



LEVELING PAD DETAIL

SCALE: NONE

ESTIMATE OF QUANTITIES WALL No. 2	
Face Units, Concrete	394.0 m^2
Wall Erection	394.0 m^2
Leveling Pad, Concrete	220 m
Structure Backfill	710.0 m^3
B BORROW	400.2 m^3

NOTES:

For additional information and details, see Dwgs.150

Wall Stations and Offsets are measured from the front face of Precast Panels.

All measurement/distances are in meters unless otherwise indicated.

All stationing from Line "A" except as shown.

E:\98011\road\mselda.dwg 01/31/02 02:05:10 PM UEST

KLINN J. DeLANEY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLaney 4/22/03
DESIGN ENGINEER DATE

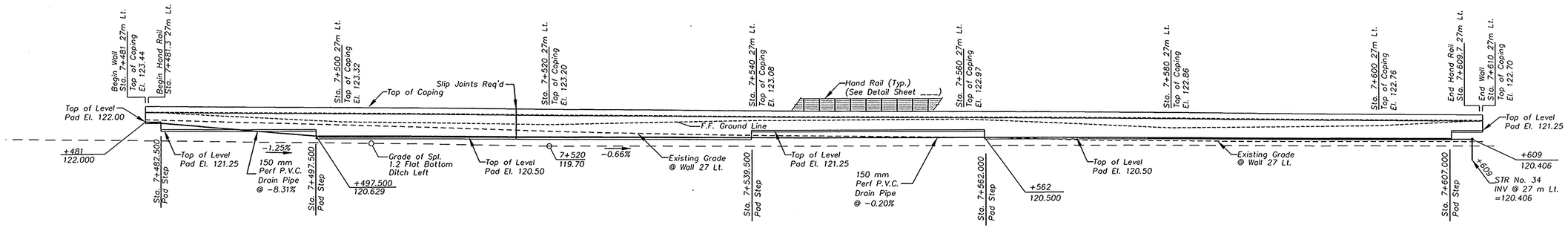
DESIGNED: JMM DRAWN: TAN

CHECKED: AJD CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

MODULAR BLOCK WALL DETAILS
LINE "A" - U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1:200	-
VERTICAL SCALE	DESIGNATION
-	8461360
SURVEY BOOK	SHEETS
16722	149 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



MSE #3 Structural Backfill Materiol

Unit Weight = 120 pcf

Phi Angle = 34 degrees

No field cutting of wall strips or mesh.

MSE #3 External Stability Criteria (4)

F.S. (Sliding) F.S. (Overturning)

MSE Wall #3 1.1 (w/seismic) 1.8 (w/ seismic)

(4) Shall be designed for seismic loading category "B"

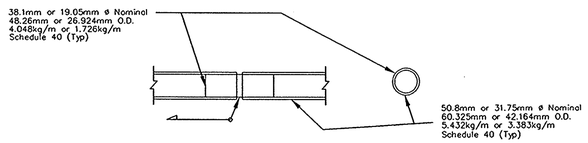
Allowable soil bearing pressure = 3,500 psf (5)

(5) On natural gravelly sand

MSE WALL No. 3 (REAR FACE)

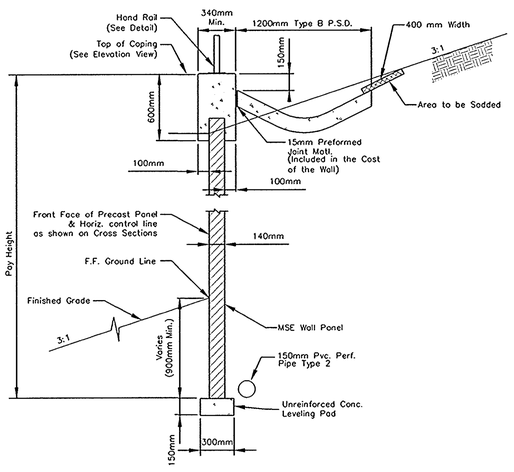
Sta. 7+481 Line "A", 27m Lt. to Sta. 7+610 Line "A", 27m Lt.

ESTIMATE OF QUANTITIES WALL No. 3	
Face Panels, Concrete	223.0 m^2
Wall Erection	223.0 m^2
Leveling Pad, Concrete	129.0 m
Structure Backfill	317.7 m^3
B Borrow	400.2 m^3
Handrail	128.4 m



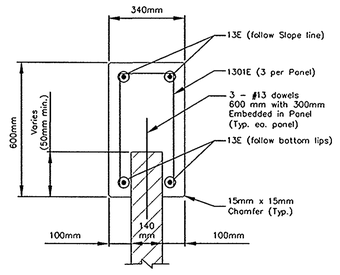
SPLICE DETAIL FOR 50.8 mm AND 31.75mm RAIL

No Scale



MSE WALL DETAIL

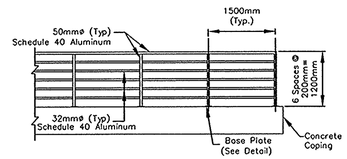
No Scale



C.I.P. COPING DETAIL

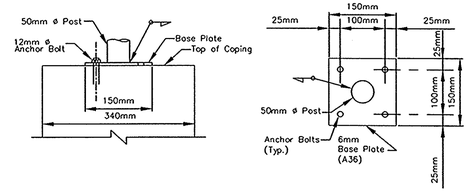
Note: 12mm Expansion Joints in C.I.P. shall be at 6 panel Intervals

No Scale



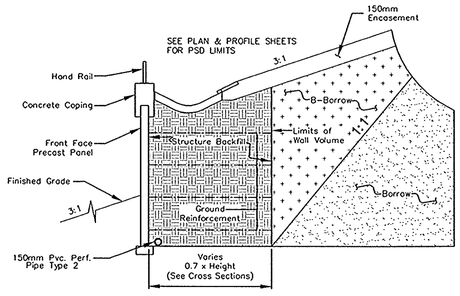
HAND RAIL DETAIL

No Scale



BASE PLATE DETAILS

No Scale



For Estimating Quantities Only

TYPICAL SECTION

No Scale

NOTES:

Wall Stations and Offsets are measured from the front face of Precast Panels.

All measurement/distances are in meters unless otherwise indicated.

"E" Denotes Epoxy Coated Reinforcing Steed. All stationing from Line "A" except as shown

E:\98011\roadwsec1.dwg 08/14/01 03:30:21 PM PM WEST

ALAN J. DELAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLaunay 4/22/03
DESIGN ENGINEER DATE

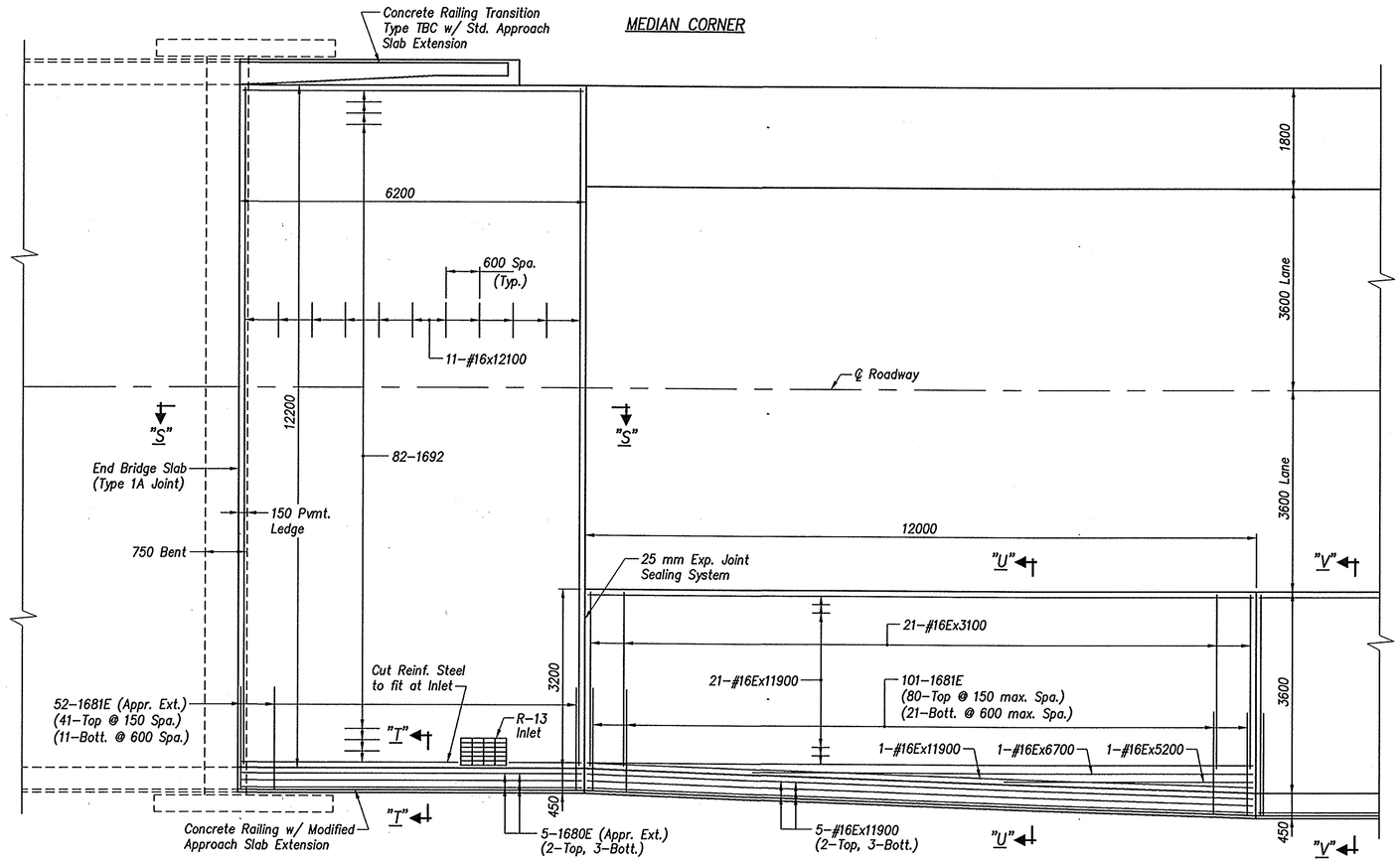
DESIGNED: JMM DRAWN: TAN

CHECKED: AJD CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

MSE WALL DETAILS
LINE "A" - U.S. 231

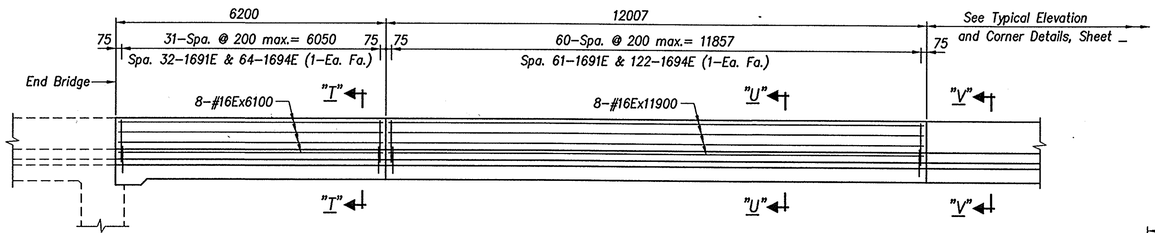
HORIZONTAL SCALE	BRIDGE FILE
1:200	.
VERTICAL SCALE	DESIGNATION
.	8461360
SURVEY BOOK	SHEETS
16722	150 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)



OUTSIDE CORNER

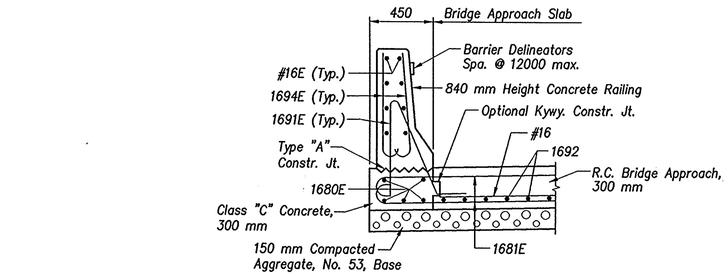
TYPICAL APPROACH PLAN

Scale: 1:50



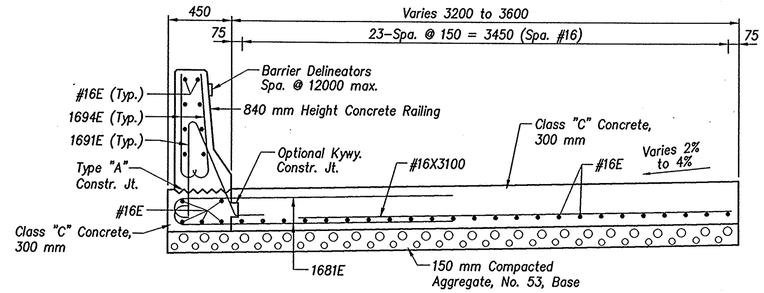
TYPICAL OUTSIDE CORNER RAILING ELEVATION

No Scale



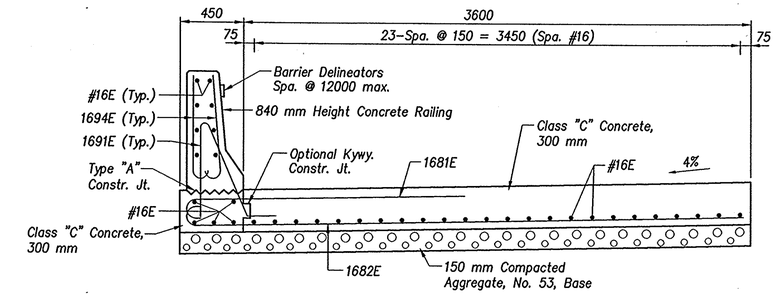
SECTION "T–T"

No Scale



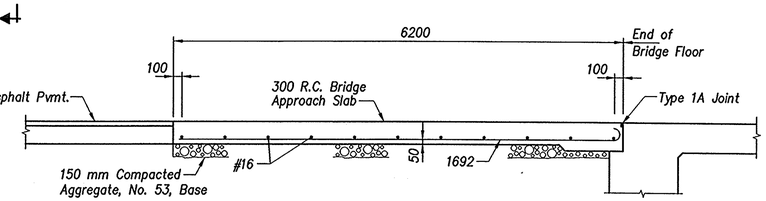
SECTION "U–U"

No Scale



SECTION "V–V"

No Scale



SECTION "S–S"

No Scale

NOTES:

All dimensions are in millimeters (mm) and all elevations are in meters (m), except as noted

For Reinforcing Bar Notes, see Std. Dwg. 703–BRST–01.

"E" Denotes Epoxy Coated Reinforcing Steel.

For Additional Bridge Railing Details, see Std. Dwgs. 706–BCBR–01, 03 & 04.

For Additional Bridge Railing Transition Details, see Std. Dwgs. 706–TTBC–01, 02 & 03.

For Additional Bridge Railing Transition Slab Extension Details, see Std. Dwgs. 706–TASE–01 & 5.

For Bill of Materials, see Sheet 153.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

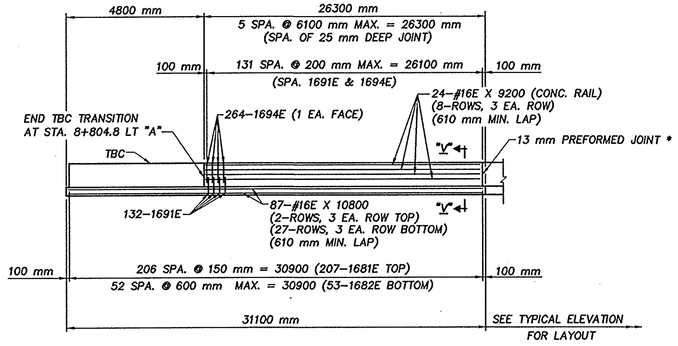
DESIGNED: GSG DRAWN: DAB

CHECKED: MAT CHECKED: GSG

INDIANA DEPARTMENT OF TRANSPORTATION

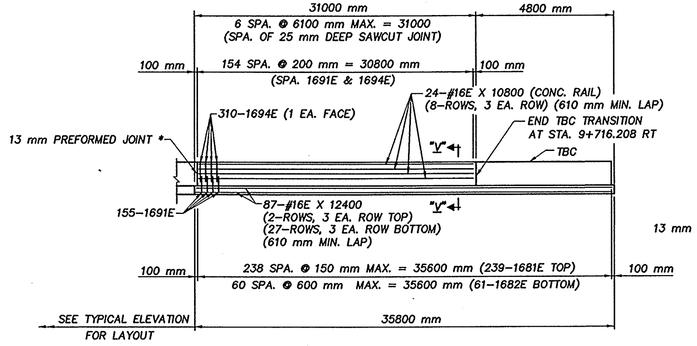
CONCRETE APPROACH AND RAILING DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	8461360
SURVEY BOOK	SHEETS
16722	151 of 196
CONTRACT	PROJECT
R–26185	NH–075–3(014)



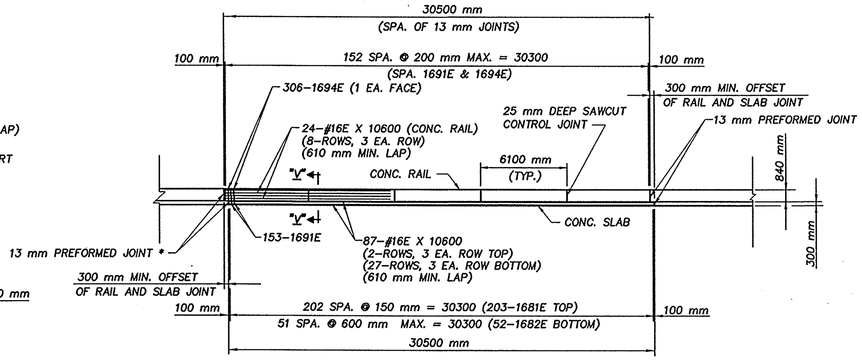
SOUTHWEST CORNER BRIDGE RAIL DETAIL

NO SCALE



NORTHEAST CORNER BRIDGE RAIL DETAIL

NO SCALE



* JOINT TO BE 25 mm @ STA. 9+215.298 LT AND RT LINE "A"
AND STA. 9+270.508 LT AND RT LINE "A"

TYPICAL 30500 mm BRIDGE RAIL ELEVATION

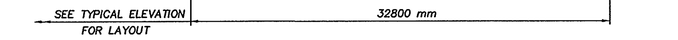
NO SCALE

SOUTHWEST RAIL: BEGIN AT STA. 8+800 LT LINE "A" (SEE SOUTHWEST CORNER BRIDGE RAIL DETAIL), ADD 12 SEGMENTS OF 30500 mm TYPICAL RAIL, ADD (SEE TYPICAL APPROACH PLAN & TYPICAL OUTSIDE CORNER RAILING ELEVATION), END AT STA. 9+215.298 LT LINE "A"

NORTHWEST RAIL: BEGIN AT STA. 9+270.508 LT LINE "A" (SEE NORTHWEST CORNER BRIDGE RAIL DETAIL), ADD 17 SEGMENTS OF 30500 mm TYPICAL RAIL, ADD (SEE TYPICAL APPROACH PLAN & TYPICAL OUTSIDE CORNER RAILING ELEVATION), END AT STA. 9+840 LT LINE "A"

SOUTHEAST RAIL: BEGIN AT STA. 8+804.093 RT LINE "A" (SEE SOUTHEAST CORNER BRIDGE RAIL DETAIL), AND 12 SEGMENTS OF 30500 mm TYPICAL RAIL, ADD (SEE TYPICAL APPROACH PLAN & TYPICAL OUTSIDE CORNER RAILING ELEVATION), END AT STA. 9+215.298 RT LINE "A"

NORTHEAST RAIL: BEGIN AT STA. 9+270.508 RT LINE "A" (SEE NORTHEAST CORNER BRIDGE RAIL DETAIL), ADD 13 SEGMENTS OF 30500 mm TYPICAL RAIL, ADD (SEE TYPICAL APPROACH PLAN & TYPICAL OUTSIDE CORNER RAILING ELEVATION), END AT STA. 9+721 RT LINE "A"

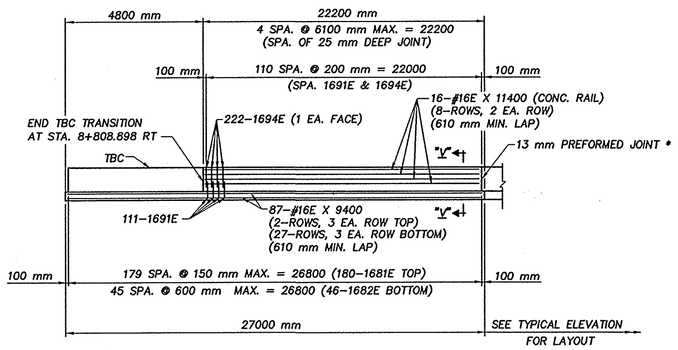


NORTHWEST CORNER BRIDGE RAIL DETAIL

NO SCALE

BRIDGE RAIL ELEVATION STA. 7+481 TO 7+610 LT.

NO SCALE



SOUTHEAST CORNER BRIDGE RAIL DETAIL

NO SCALE

NOTES:

All measurement/distances are in meters unless otherwise indicated.

"E" Denotes Epoxy Coated Reinforcing Steel.

For reinforcing bar notes, see STD. DWG. 703-BRST-01.

For additional bridge railing details, see STD. DWG. 706-BCBR-01, 03 & 04.

For additional bridge railing transition details, see STD. DWG. 706-TTBC-01, 02 & 03.

For Bill of Materials, see Sheet 153.

For Section "V-V", see Sheet 151.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: GSG DRAWN: DAB
CHECKED: MAT CHECKED: GSG

INDIANA DEPARTMENT OF TRANSPORTATION

CONCRETE BARRIER WALL DETAILS
LINE "A" - U.S. 231

HORIZONTAL SCALE	BRIDGE FILE
1:200	.
VERTICAL SCALE	DESIGNATION
.	8461360
SURVEY BOOK	SHEETS
16722	152 of 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

SOUTHWEST APPROACH BILL OF MATERIALS

REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight(kg)
1692	82	6175	
#16	11	12100	
Total Reinforcing Steel			992
EPOXY COATED REINFORCING STEEL			
1680E	5	6240	
1681E	2796	2020	
1682E	677	3690	
1691E	2061	1680	
1694E	4122	920	
#16E	35	11900	
#16E	87	10800	
#16E	1332	10600	
#16E	24	9200	
#16E	1	6700	
#16E	8	6100	
#16E	1	5200	
#16E	21	3100	
		Total #16E	48506
TBC Transitions (2 @ 201 kg. Ea.)			402
Std. TBC Approach Slab Extension			171
Total Epoxy Coated Reinf. Steel			49079
CONCRETE			
R.C. Bridge Approach, 300 mm			78 m^2
Class "C"			497.2 m^3
Class "C" in Railing			97.3 m^3
MISCELLANEOUS			
Comp. Aggregate, No. 53, Base			617.6 m^3
TBC Railing Transition			2 Ea.
Surface Seal			821 m^2
Barrier Delineators			35 Ea.

SOUTHEAST APPROACH BILL OF MATERIALS

REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight(kg)
1692	82	6175	
#16	11	12100	
Total Reinforcing Steel			992
EPOXY COATED REINFORCING STEEL			
1680E	5	6240	
1681E	2769	2020	
1682E	670	3690	
1691E	2040	1680	
1694E	4080	920	
#16E	35	11900	
#16E	16	11400	
#16E	1332	10600	
#16E	87	9400	
#16E	1	6700	
#16E	8	6100	
#16E	1	5200	
#16E	21	3100	
		Total #16E	48018
TBC Transitions (2 @ 201 kg. Ea.)			402
Std. TBC Approach Slab Extension			171
Total Epoxy Coated Reinf. Steel			48591
CONCRETE			
R.C. Bridge Approach, 300 mm			78 m^2
Class "C"			492.2 m^3
Class "C" in Railing			96.3 m^3
MISCELLANEOUS			
Comp. Aggregate, No. 53, Base			611.9 m^3
TBC Railing Transition			2 Ea.
Surface Seal			813 m^2
Barrier Delineators			34 Ea.

NORTHWEST APPROACH BILL OF MATERIALS

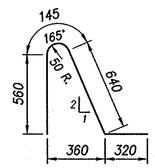
REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight(kg)
1692	82	6175	
#16	11	12100	
Total Reinforcing Steel			992
EPOXY COATED REINFORCING STEEL			
1680E	5	6240	
1681E	3823	2020	
1682E	940	3690	
1691E	2834	1680	
1694E	5668	920	
#16E	35	11900	
#16E	87	11400	
#16E	1887	10600	
#16E	24	9800	
#16E	1	6700	
#16E	8	6100	
#16E	1	5200	
#16E	21	3100	
		Total #16E	66689
TBC Transitions (2 @ 201 kg. Ea.)			402
Std. TBC Approach Slab Extension			171
Total Epoxy Coated Reinf. Steel			67262
CONCRETE			
R.C. Bridge Approach, 300 mm			78 m^2
Class "C"			684.5 m^3
Class "C" in Railing			133.8 m^3
MISCELLANEOUS			
Comp. Aggregate, No. 53, Base			840 m^3
TBC Railing Transition			2 Ea.
Surface Seal			1130 m^2
Barrier Delineators			48 Ea.

NORTHEAST APPROACH BILL OF MATERIALS

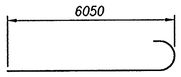
REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight(kg)
1692	82	6175	
#16	11	12100	
Total Reinforcing Steel			992
EPOXY COATED REINFORCING STEEL			
1680E	5	6240	
1681E	3031	2020	
1682E	737	3690	
1691E	2237	1680	
1694E	4474	920	
#16E	87	12400	
#16E	35	11900	
#16E	24	10800	
#16E	1443	10600	
#16E	1	6700	
#16E	8	6100	
#16E	1	5200	
#16E	21	3100	
		Total #16E	52650
TBC Transitions (2 @ 201 kg. Ea.)			402
Std. TBC Approach Slab Extension			171
Total Epoxy Coated Reinf. Steel			53223
CONCRETE			
R.C. Bridge Approach, 300 mm			78 m^2
Class "C"			539.9 m^3
Class "C" in Railing			105.6 m^3
MISCELLANEOUS			
Comp. Aggregate, No. 53, Base			668.5 m^3
TBC Railing Transition			2 Ea.
Surface Seal			892 m^2
Barrier Delineators			38 Ea.

STA. 7+481 TO 7+610 LT. BILL OF MATERIALS

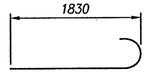
EPOXY COATED REINFORCING STEEL			
Mark & Size	No. of Bars	Length	Weight(kg)
1681E	859	2020	
1682E	220	3690	
1691E	623	1680	
1694E	1246	920	
#16E	24	11400	
#16E	333	10600	
#16E	87	9900	
		Total #16E	14596
TBC Transition			201
Total Epoxy Coated Reinf. Steel			14797
CONCRETE			
Class "C"			156.7 m^3
Class "C" in Railing			29.4 m^3
MISCELLANEOUS			
Comp. Aggregate, No. 53, Base			185.8 m^3
TBC Railing Transition			1 Ea.
Surface Seal			249 m^2
Barrier Delineators			11 Ea.



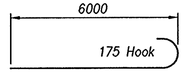
1691Ex1680



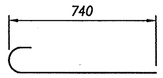
1680Ex6240



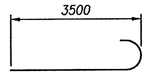
1681Ex2020



1692x6175



1694Ex920



1682Ex3690

NOTES:

All dimensions are in millimeters (mm) and all elevations are in meters (m), except as noted

For Reinforcing Bar Notes, see Std. Dwg. 703-BRST-01.

"E" Denotes Epoxy Coated Reinforcing Steel.

ALAN J. DeLAWAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

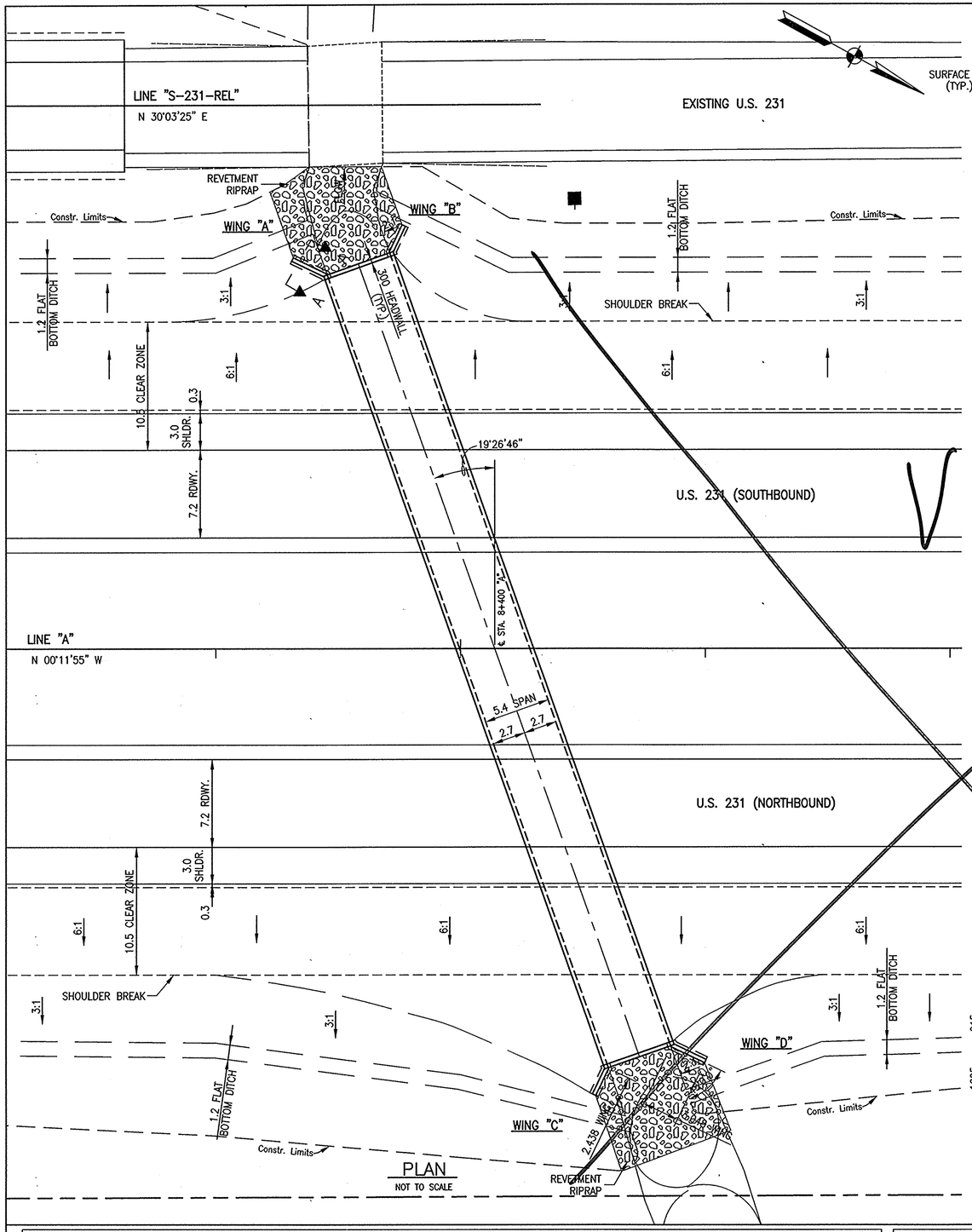
DESIGNED: GSG DRAWN: DAB

CHECKED: MAT CHECKED: GSG

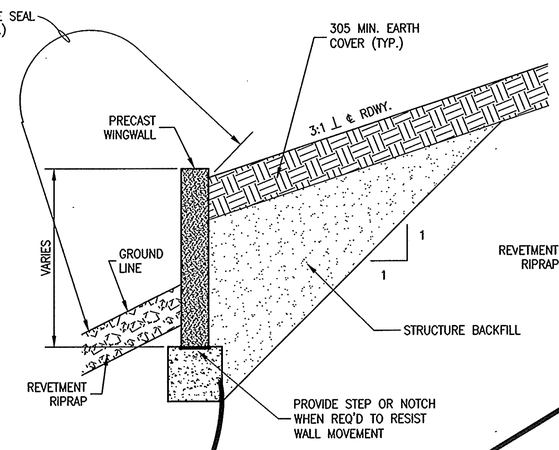
INDIANA DEPARTMENT OF TRANSPORTATION

CONCRETE APPROACH AND RAILING DETAILS

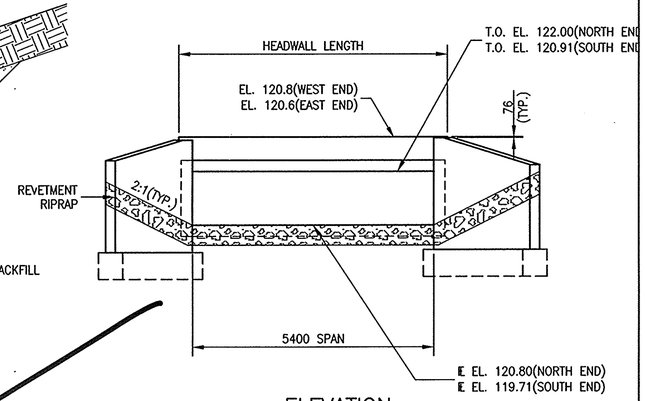
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	8461360
SURVEY BOOK	SHEETS
16722	153 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



PLAN
NOT TO SCALE



SECTION "A-A"
NOT TO SCALE

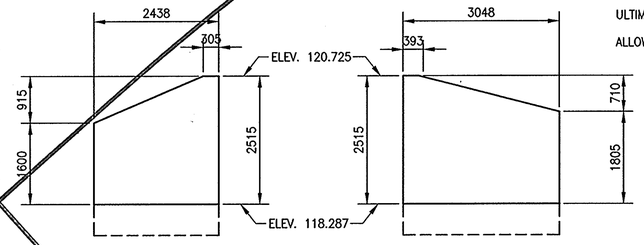


ELEVATION
NOT TO SCALE

V012

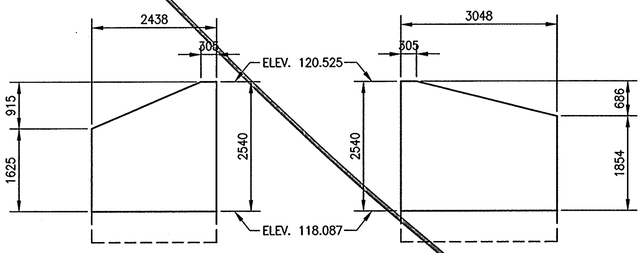
WINGWALL SOIL PARAMETERS

ANGLE OF FRICTION BETWEEN WINGWALL FOOTING AND FOUNDATION SOIL (S)	= 17°
ANGLE OF INTERNAL FRICTION OF THE FOUNDATION SOIL (ø)	= 0°
ULTIMATE COHESION OF FOUNDATION SOIL (C)	= 38 kN/m²
ULTIMATE ADHESION BETWEEN FOUNDATION SOIL AND CONCRETE (C_A)	= 29 kN/m²
ALLOWABLE SOIL BEARING PRESSURE	= 191 kN/m²



WING "B" ELEVATION
NOT TO SCALE

WING "A" ELEVATION
NOT TO SCALE



WING "C" ELEVATION
NOT TO SCALE

WING "D" ELEVATION
NOT TO SCALE

BILL OF MATERIALS

ITEM	QTY.	UNITS
WINGWALL		
WING "A"	6.72	m^2
WING "B"	5.16	m^2
WING "C"	5.18	m^2
WING "D"	6.75	m^2
TOTAL	23.81	m^2
STRUCTURE BACKFILL		
WING "A"	5.27	m^3
WING "B"	5.02	m^3
WING "C"	5.03	m^3
WING "D"	6.64	m^3
TOTAL	21.96	m^3

NOTES:

ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Melissa A. Effinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E. | DRAWN: R.D.S.
CHECKED: P.L.K. | CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 42
WINGWALL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NOT TO SCALE	
VERTICAL SCALE	DESIGNATION
NOT TO SCALE	8461360

SURVEY BOOK	SHEETS
16722	154 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 17:19:22
Date: 4/21/2003
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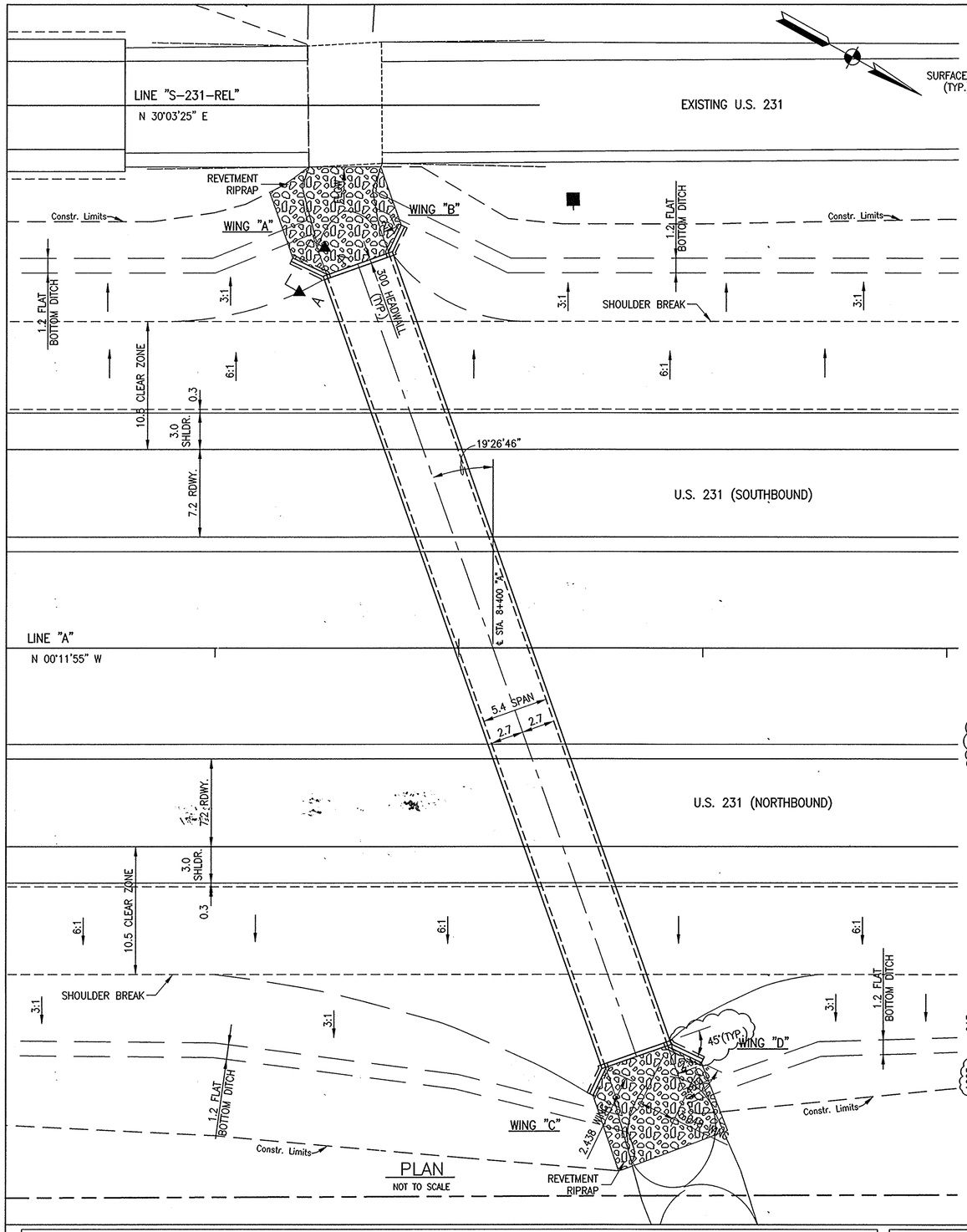
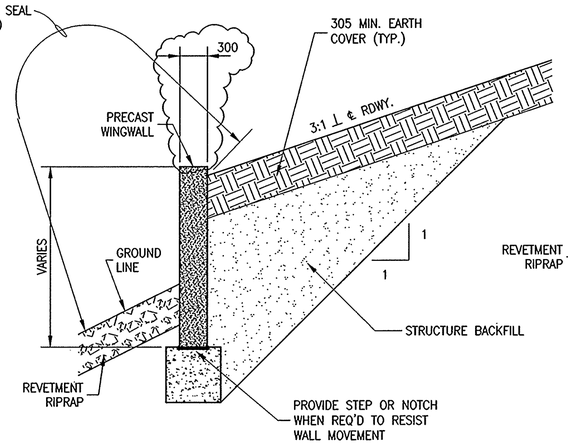
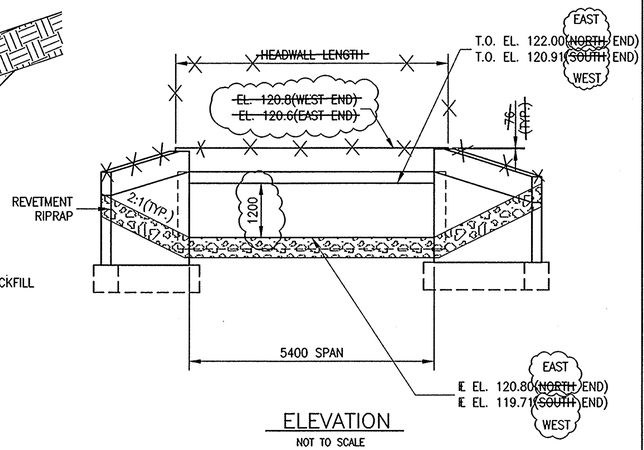


PLAN
NOT TO SCALE



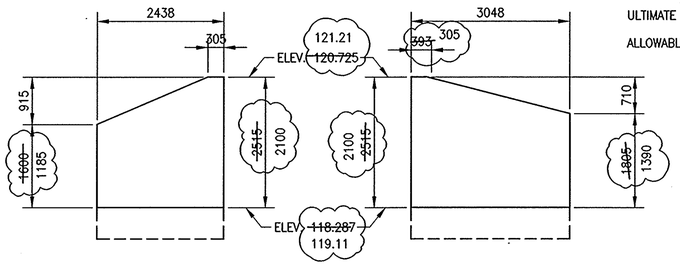
SECTION "A-A"
NOT TO SCALE



ELEVATION
NOT TO SCALE

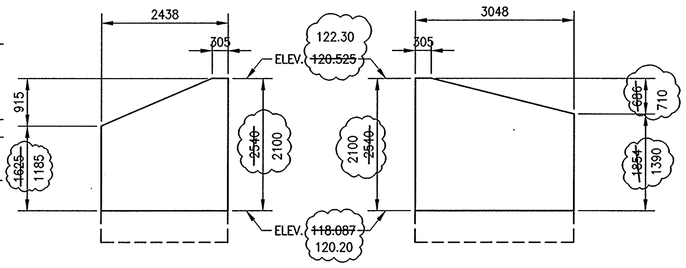
WINGWALL SOIL PARAMETERS

ANGLE OF FRICTION BETWEEN WINGWALL FOOTING AND FOUNDATION SOIL (S)	= 17°
ANGLE OF INTERNAL FRICTION OF THE FOUNDATION SOIL (ø)	= 0°
ULTIMATE COHESION OF FOUNDATION SOIL (C)	= 38kN/m^2
ULTIMATE ADHESION BETWEEN FOUNDATION SOIL AND CONCRETE (C_A)	= 29kN/m^2
ALLOWABLE SOIL BEARING PRESSURE	= 191kN/m^2



WING "B" ELEVATION
NOT TO SCALE

WING "A" ELEVATION
NOT TO SCALE



WING "C" ELEVATION
NOT TO SCALE

WING "D" ELEVATION
NOT TO SCALE

BILL OF MATERIALS

ITEM	QTY.	UNITS
WINGWALL		
WING "A"	5.43 ~~6.72~~	m^2
WING "B"	4.14 ~~5.16~~	m^2
WING "C"	4.14 ~~5.18~~	m^2
WING "D"	5.43 ~~6.75~~	m^2
TOTAL	19.14 ~~23.81~~	m^2
STRUCTURE BACKFILL		
WING "A"	5.27	m^3
WING "B"	5.02	m^3
WING "C"	5.03	m^3
WING "D"	6.64	m^3
TOTAL	21.96	m^3

NOTES:

ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.

03/22/04 – REV. WINGWALLS, DELETED HEADWALL

MELISSA ANN EFFINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melissa A. Effinger 08-04-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 42
WINGWALL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NOT TO SCALE	
VERTICAL SCALE	DESIGNATION
NOT TO SCALE	8461360

SURVEY BOOK	SHEETS
16722	154A of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 14:33:17
Date: 3/23/2004
Scale: 1"=50'PS
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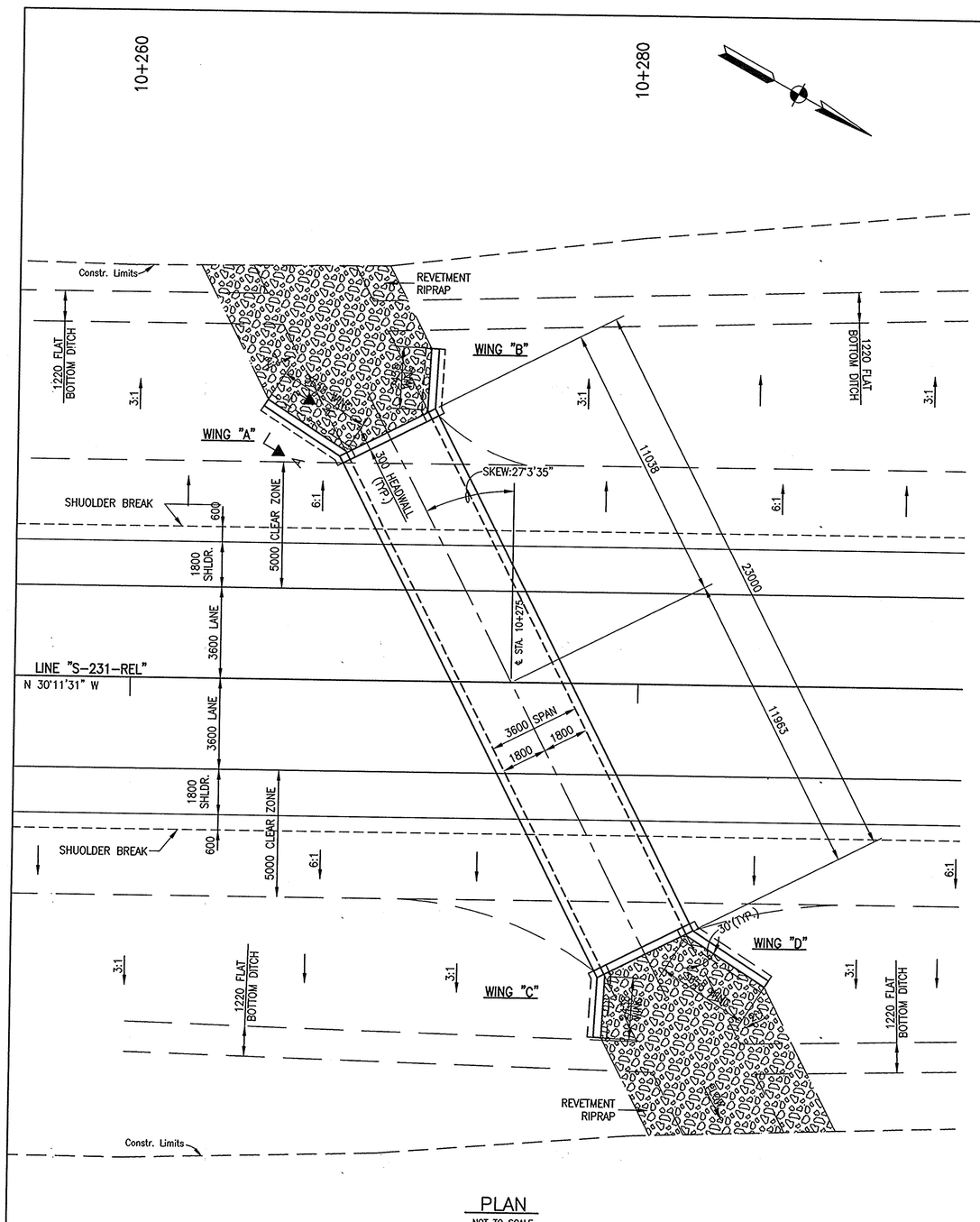
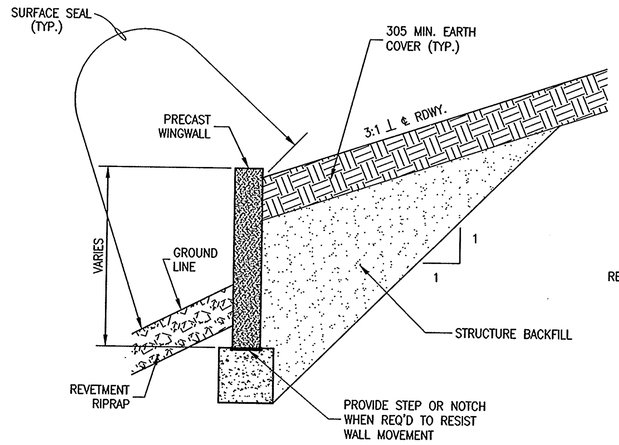
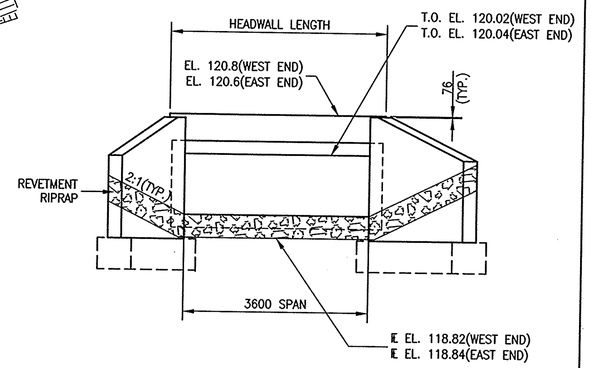


PLAN
NOT TO SCALE



SECTION "A–A"
NOT TO SCALE



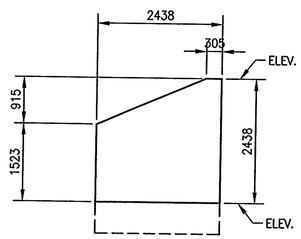
ELEVATION
NOT TO SCALE

WINGWALL SOIL PARAMETERS

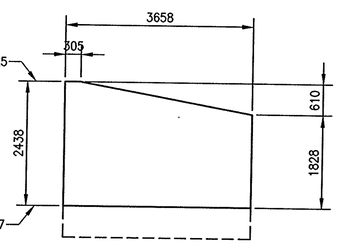
ANGLE OF FRICTION BETWEEN WINGWALL FOOTING AND FOUNDATION SOIL (S)	= 29°
ANGLE OF INTERNAL FRICTION OF THE FOUNDATION SOIL (ø)	= 32°
ULTIMATE COHESION OF FOUNDATION SOIL (C)	= 0
ULTIMATE ADHESION BETWEEN FOUNDATION SOIL AND CONCRETE (C_A)	= 0
ALLOWABLE SOIL BEARING PRESSURE	= 77kN/m²

WING "B" ELEVATION
NOT TO SCALE

WING "A" ELEVATION
NOT TO SCALE



WING "C" ELEVATION
NOT TO SCALE



WING "D" ELEVATION
NOT TO SCALE

BILL OF MATERIALS

ITEM	QTY.	UNITS
WINGWALL		
WING "A"	7.05	m^2
WING "B"	5.05	m^2
WING "C"	4.97	m^2
WING "D"	7.90	m^2
TOTAL	24.97	m^2
STRUCTURE BACKFILL		
WING "A"	6.83	m^3
WING "B"	4.92	m^3
WING "C"	4.83	m^3
WING "D"	7.80	m^3
TOTAL	24.38	m^3

NOTES:

ALL DIMENSIONS ARE IN MILLIMETERS (mm) AND ALL ELEVATIONS ARE IN METERS (m), EXCEPT AS NOTED.

MELISA ANN ETTINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Melisa A. Ettinger 04-22-03
DESIGN ENGINEER DATE

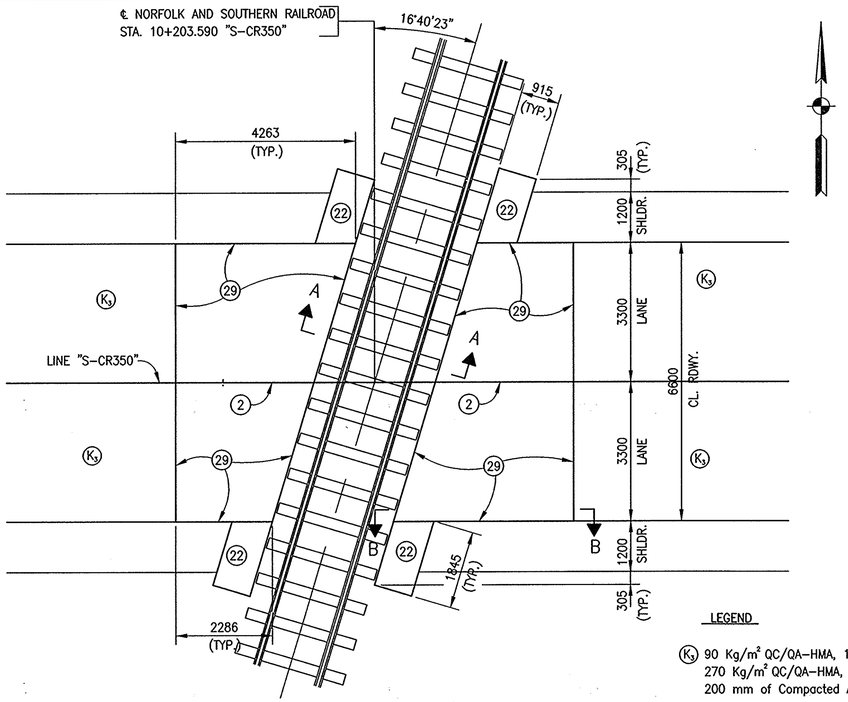
DESIGNED: M.A.E. DRAWN: R.D.S.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 551
WINGWALL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
NOT TO SCALE	
VERTICAL SCALE	DESIGNATION
NOT TO SCALE	8461360
SURVEY BOOK	SHEETS
16722	155 of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 1:22:28
Date: 4/22/2003
Scale: 1=50(PS)
Drawing File: 210_1\DWG\Misc Details\phase-1a\231-REL-CULVERT-1.dwg (GFitts)



PLAN

BILL OF MATERIALS

REINFORCING STEEL			
SIZE & MARK	NO. OF BARS	LENGTH	MASS (kg)
1601	88	2210	
#16	8	6700	
TOTAL REINFORCING STEEL			385
MISCELLANEOUS			(QTY.)
CEMENT CONCRETE HEADER –			
TYPE "C" (4 @ 1.85)			7.4 m
TYPE "D" (2 @ 21.5 m²)			43 m²
TYPE "O" COMPACTED AGGREGATE (2 @ 8.85 Mg)			17.7 Mg

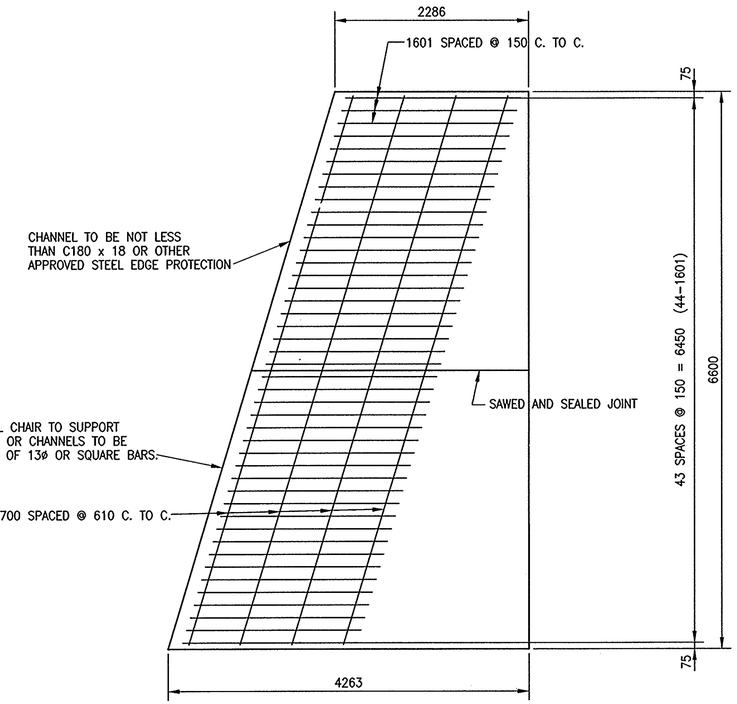
LEGEND

(Ks) 90 Kg/m² QC/QA–HMA, 1, 64, Surface 9.5 mm on 270 Kg/m² QC/QA–HMA, 1, 64, Intermediate 19.0 mm, on 200 mm of Compacted Aggregate, No. 53, Base

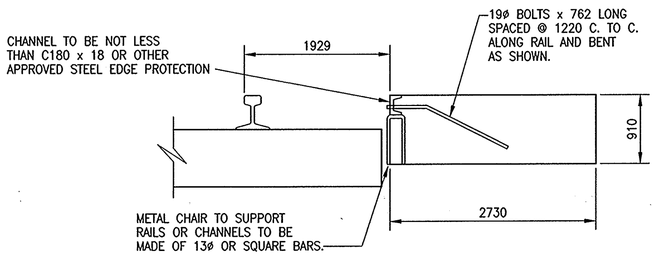
(2) SAWED AND SEALED JOINT

(22) CONCRETE HEADER TYPE "C"

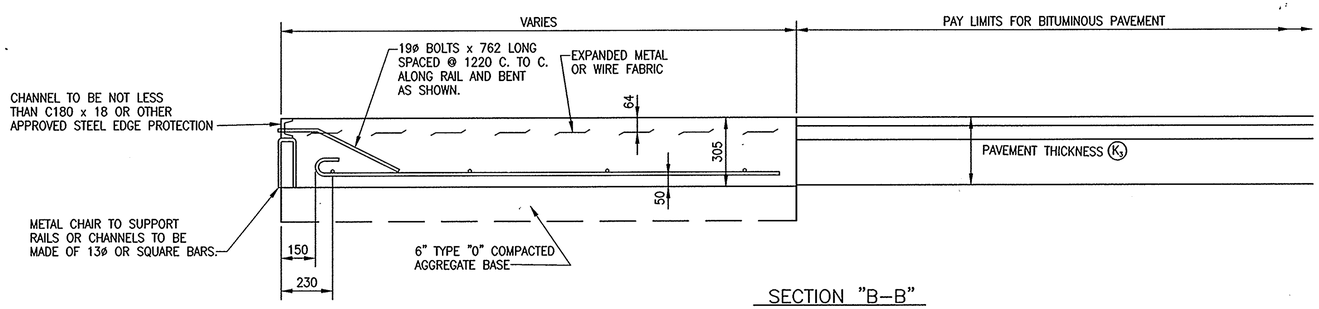
(29) CONCRETE HEADER TYPE "D"



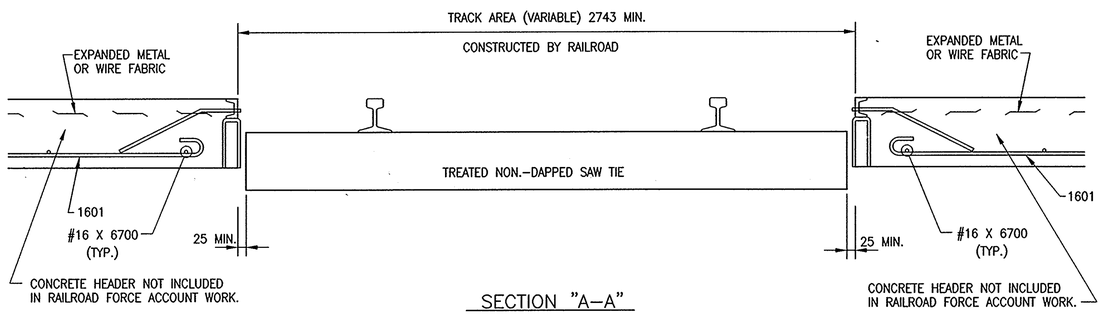
REINFORCING STEEL PLAN



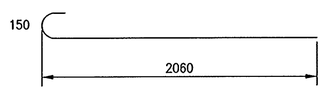
CONCRETE HEADER TYPE "C"



SECTION "B–B"



SECTION "A–A"



1601 X 2210

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Date: 4/16/2003
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MELISSA ANN ELLINGER REGISTERED No. PE19600092 STATE OF INDIANA PROFESSIONAL ENGINEER

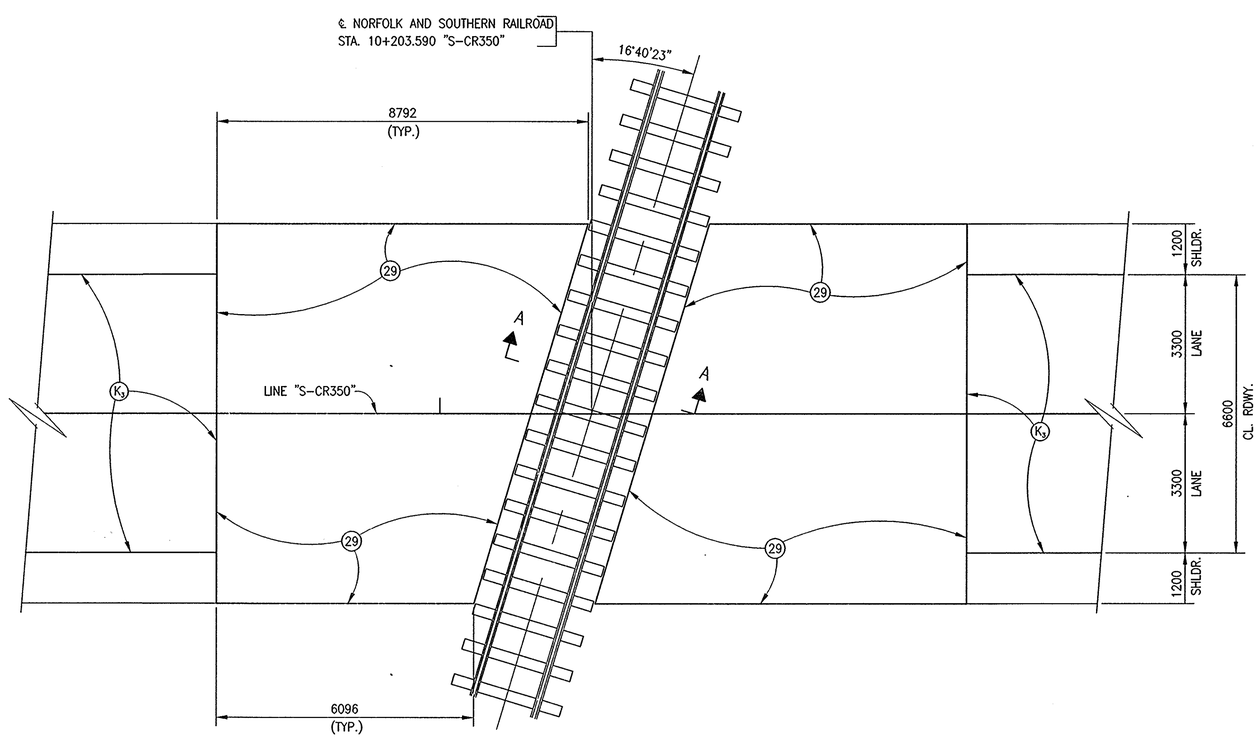
RECOMENDED FOR APPROVAL Melissa A. Ellinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E. DRAWN: C.L.F.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

AT GRADE CROSSING DETAILS
CO. RD. 350 N.

HORIZONTAL SCALE	BRIDGE FILE
N.T.S.	
VERTICAL SCALE	DESIGNATION
N.T.S.	8461360
SURVEY BOOK	SHEETS
16722	156 of 196
CONTRACT	PROJECT
R–26185	NH–075–3(014)

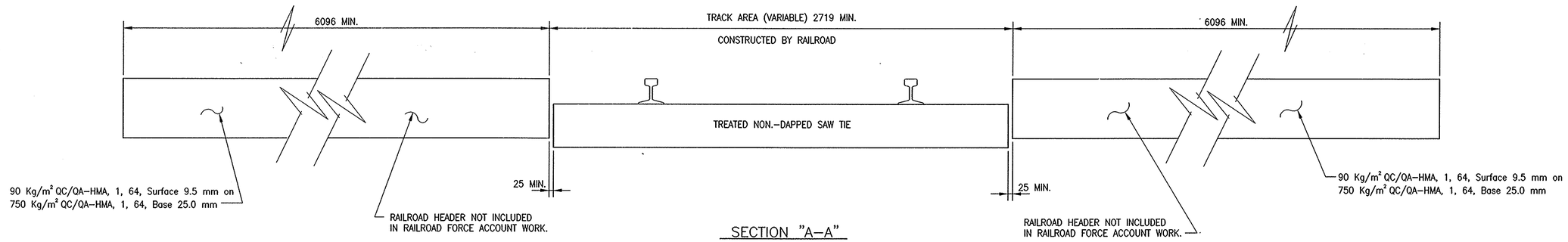


PLAN

LEGEND

(Ks) 90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
270 Kg/m² QC/QA-HMA, 1, 64, Intermediate 19.0 mm, on
200 mm of Compacted Aggregate, No. 53, Base

(29) RAILROAD HEADER HMA
(90 Kg/m² QC/QA-HMA, 1, 64, Surface 9.5 mm on
750 Kg/m² QC/QA-HMA, 1, 64, Base 25.0 mm)
TO BE PAID PER EACH, 2 REQ'D.



SECTION "A-A"

12/11/03 SHEET ADDED

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMENDED FOR APPROVAL: Melissa A. Effinger 08-04-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E. | DRAWN: C.L.F.
CHECKED: P.L.K. | CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

AT GRADE CROSSING DETAILS
CO. RD. 350 N.

HORIZONTAL SCALE	BRIDGE FILE
N.T.S.	
VERTICAL SCALE	DESIGNATION
N.T.S.	8461360
SURVEY BOOK	SHEETS
16722	156A of 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

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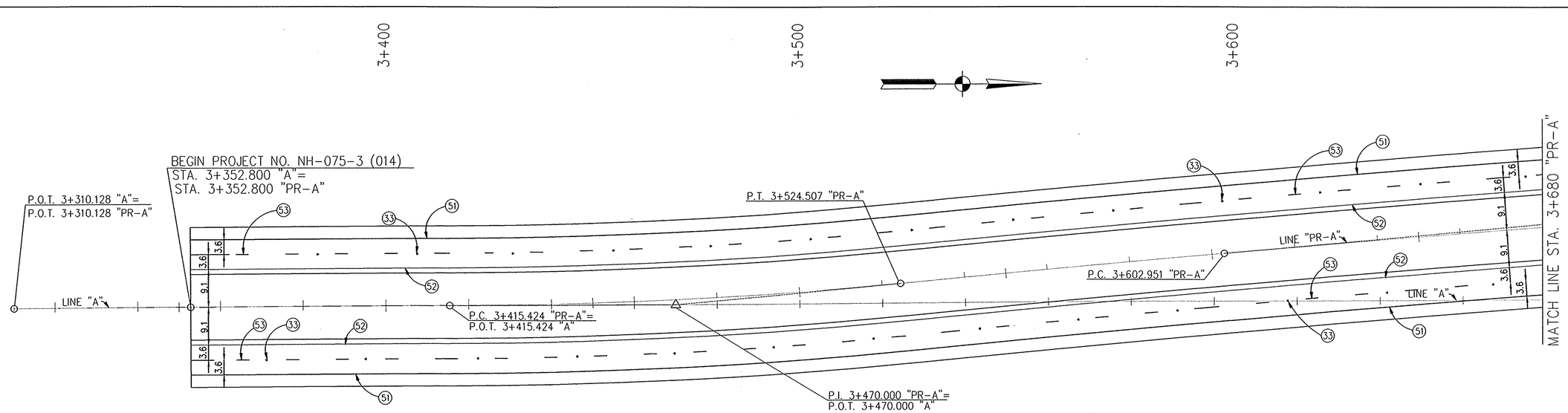


LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

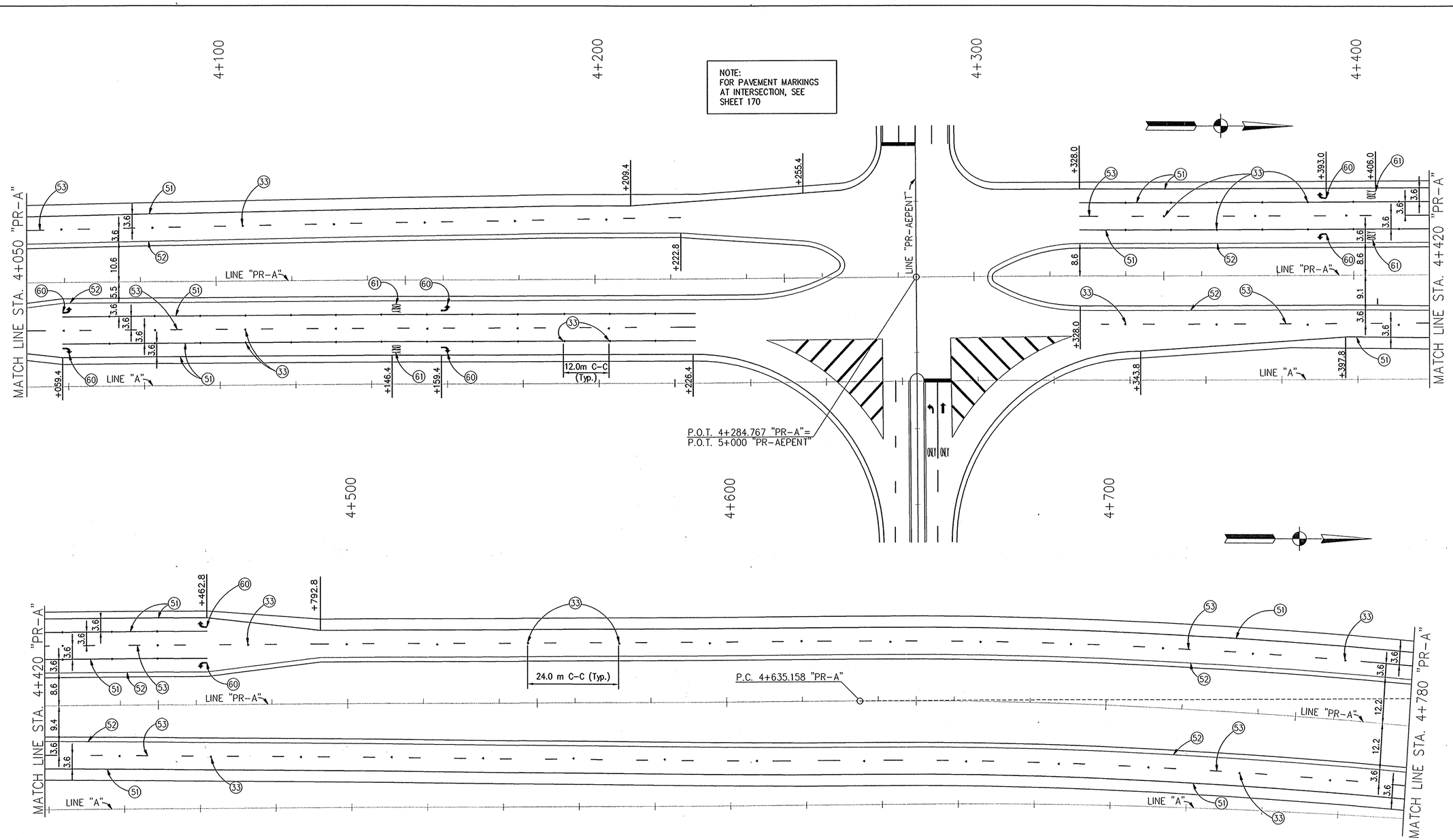
RECOMMENDED FOR APPROVAL: Alan J. DeLauray 4/22/03
DESIGN ENGINEER — DATE

DESIGNED: TAN | DRAWN: TAN
CHECKED: JMM | CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"/"PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	157 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

(60) Pavement Message Markings, Thermplastic, Lane Indication Arrow

(61) Pavement Message Markings, Thermplastic, Word (ONLY)

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAMAR REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: TAN DRAWN: TAN

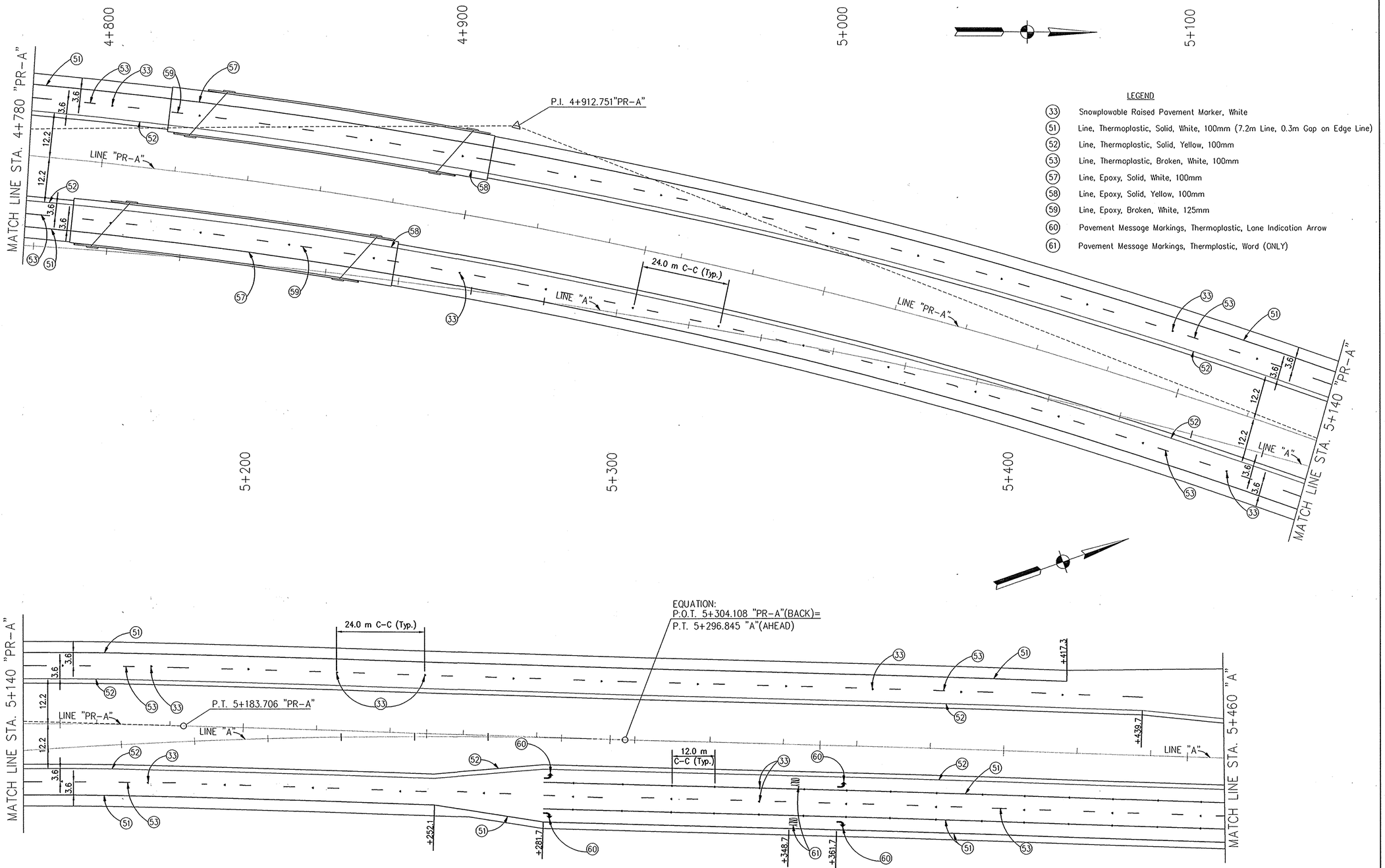
CHECKED: JMM CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"/"PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	158 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)

FILENAME: C:\Projects\98011\Pavement Markings\ 98011_pav2.dwg DATE: DEC 10, 2001 TIME: 10:19 AM OPERATOR: jch



LEGEND

(33)	Snowplowable Raised Pavement Marker, White
(51)	Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)
(52)	Line, Thermoplastic, Solid, Yellow, 100mm
(53)	Line, Thermoplastic, Broken, White, 100mm
(57)	Line, Epoxy, Solid, White, 100mm
(58)	Line, Epoxy, Solid, Yellow, 100mm
(59)	Line, Epoxy, Broken, White, 125mm
(60)	Pavement Message Markings, Thermoplastic, Lane Indication Arrow
(61)	Pavement Message Markings, Thermplastic, Word (ONLY)

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

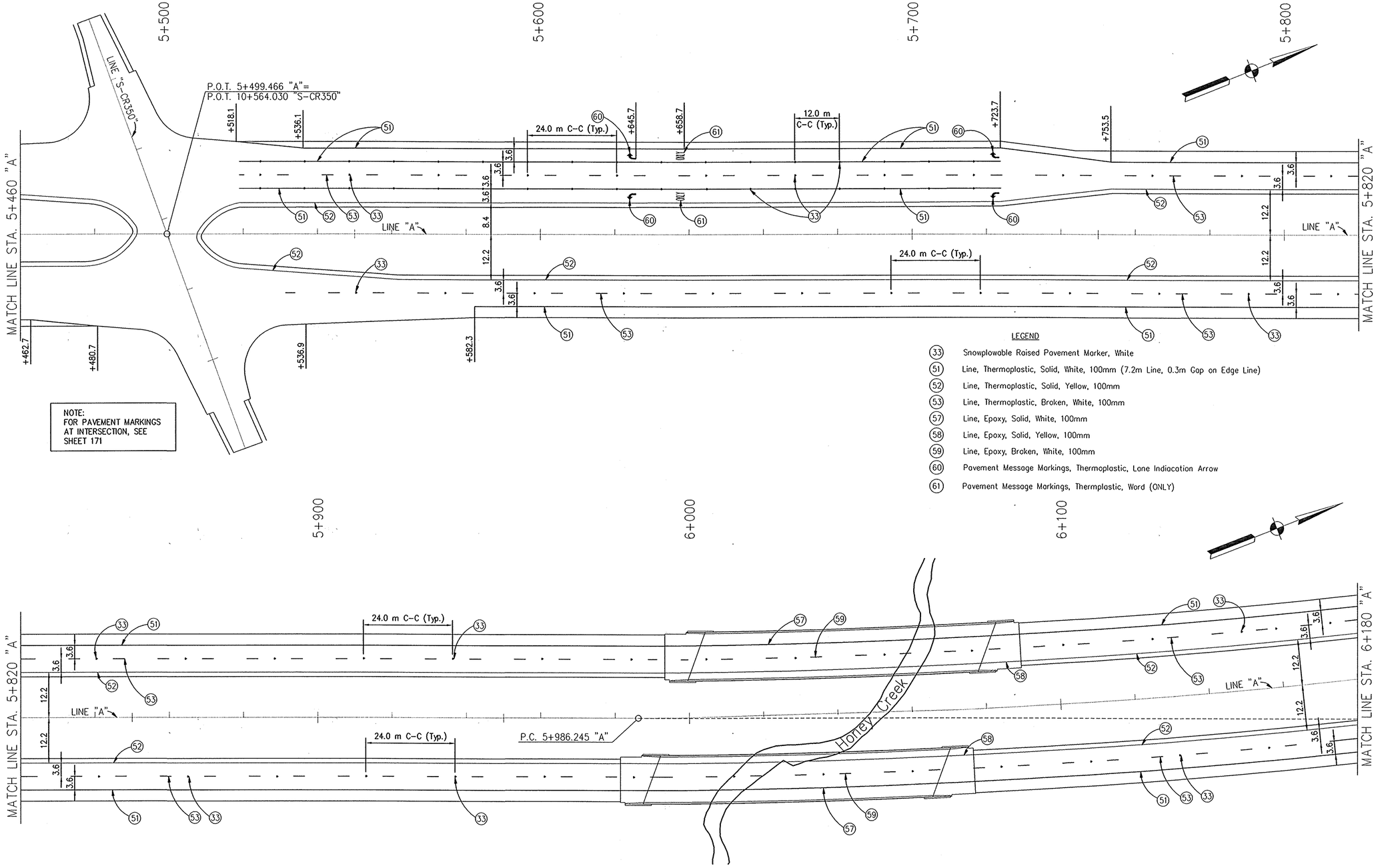
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: TAN DRAWN: TAN
CHECKED: JMM CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"/"PR-A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	159 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

(33) Snowplowable Raised Pavement Marker, White
(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)
(52) Line, Thermoplastic, Solid, Yellow, 100mm
(53) Line, Thermoplastic, Broken, White, 100mm
(57) Line, Epoxy, Solid, White, 100mm
(58) Line, Epoxy, Solid, Yellow, 100mm
(59) Line, Epoxy, Broken, White, 100mm
(60) Pavement Message Markings, Thermoplastic, Lane Indiacation Arrow
(61) Pavement Message Markings, Thermplastic, Word (ONLY)

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

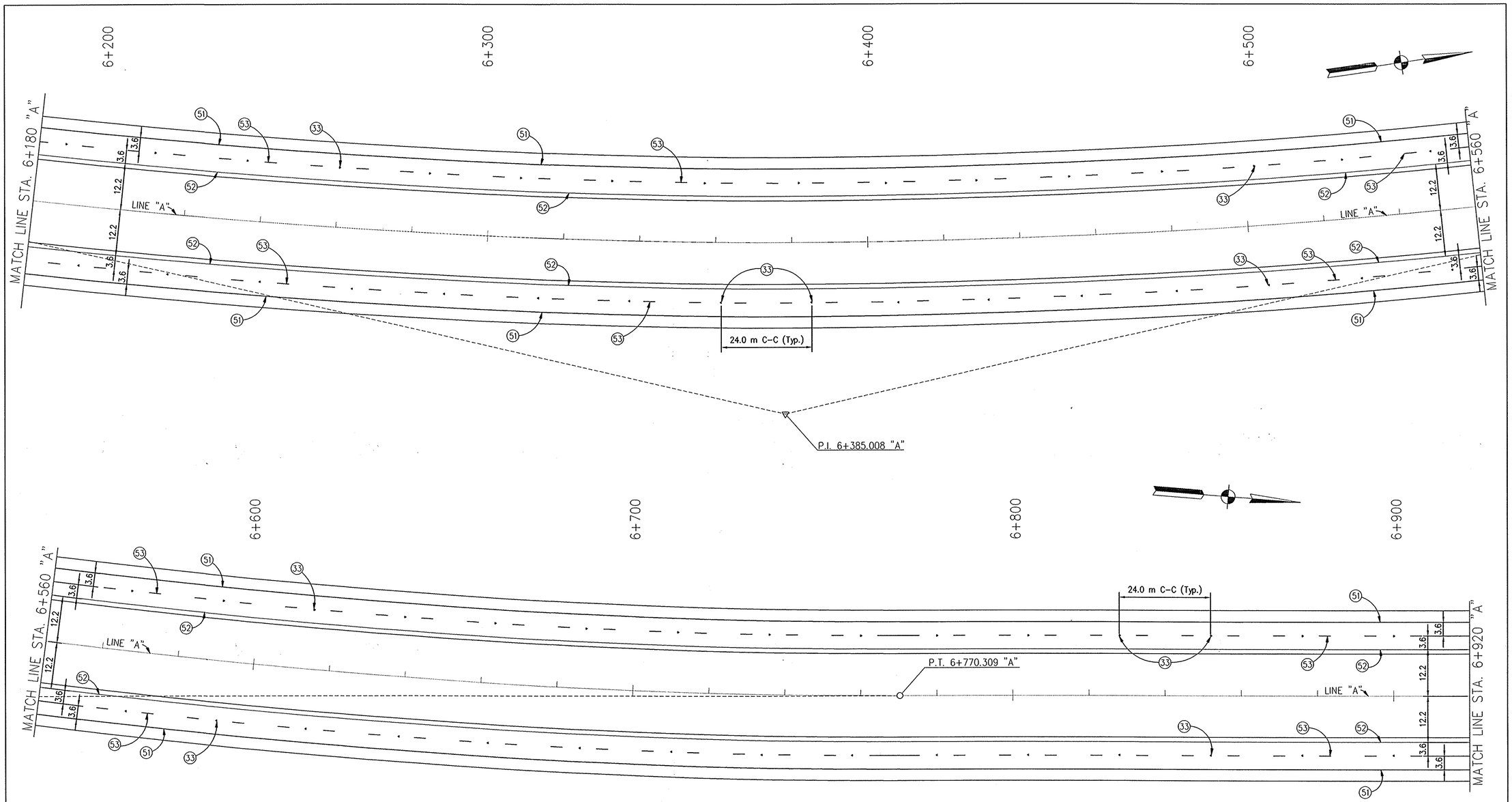
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: TAN DRAWN: TAN
CHECKED: JMM CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	.
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	160 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

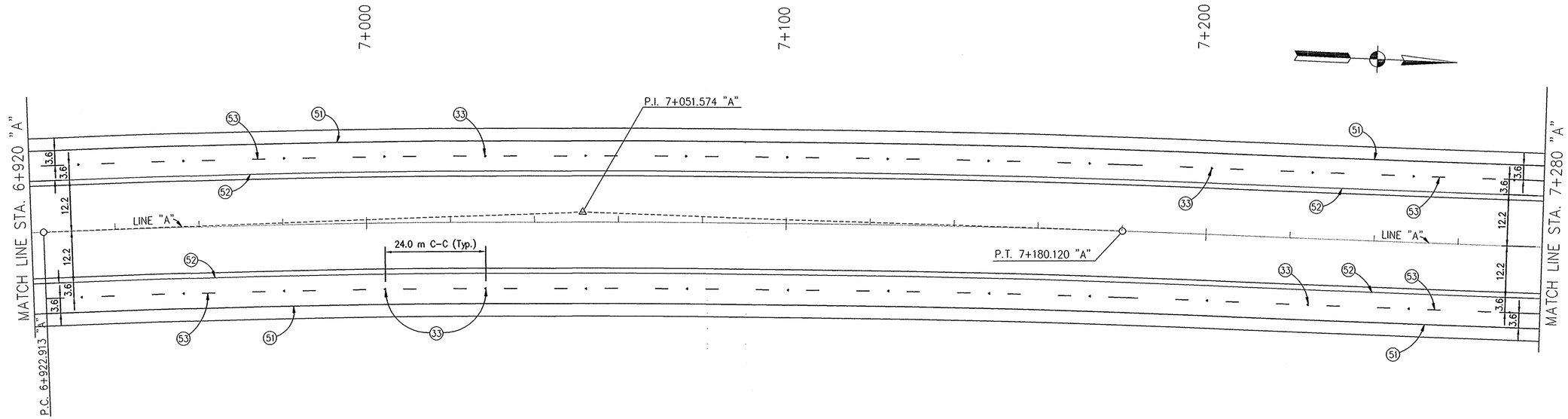
DESIGNED: TAN DRAWN: TAN

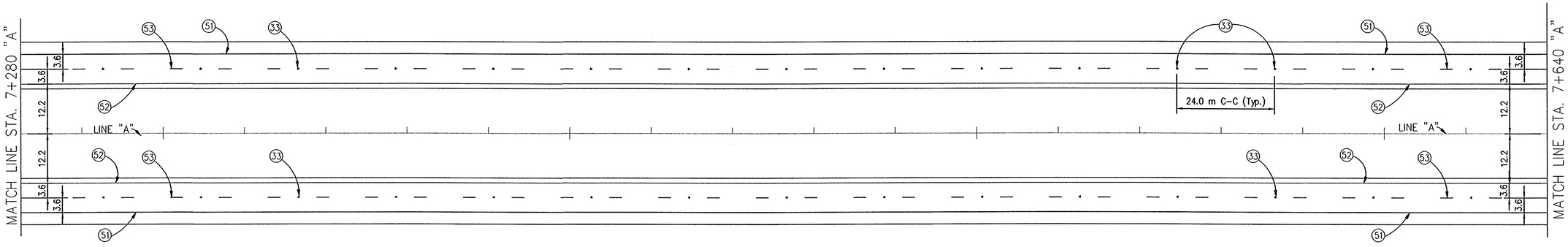
CHECKED: JMM CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	161 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)





LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

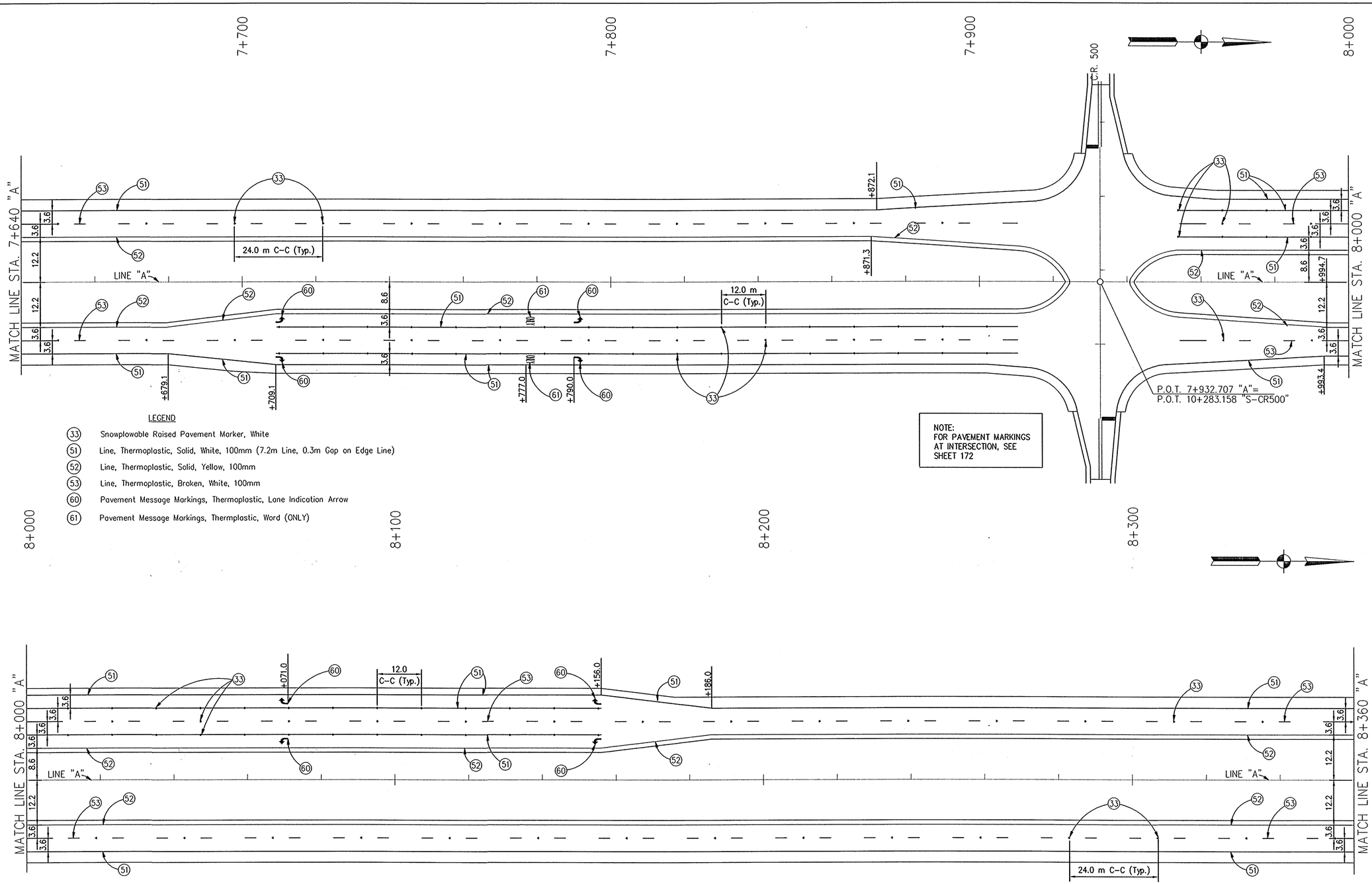
RECOMMENDED FOR APPROVAL: Alan J. DeLaunay 4/22/03
DESIGN ENGINEER — DATE

DESIGNED: TAN | DRAWN: TAN
CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL #6
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	162 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



NOTE:
All measurement/distances are in meters unless otherwise indicated.

FLAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Flan J. DeLaunay 4/22/03 (DESIGN ENGINEER / DATE)

DESIGNED: TAN | DRAWN: TAN

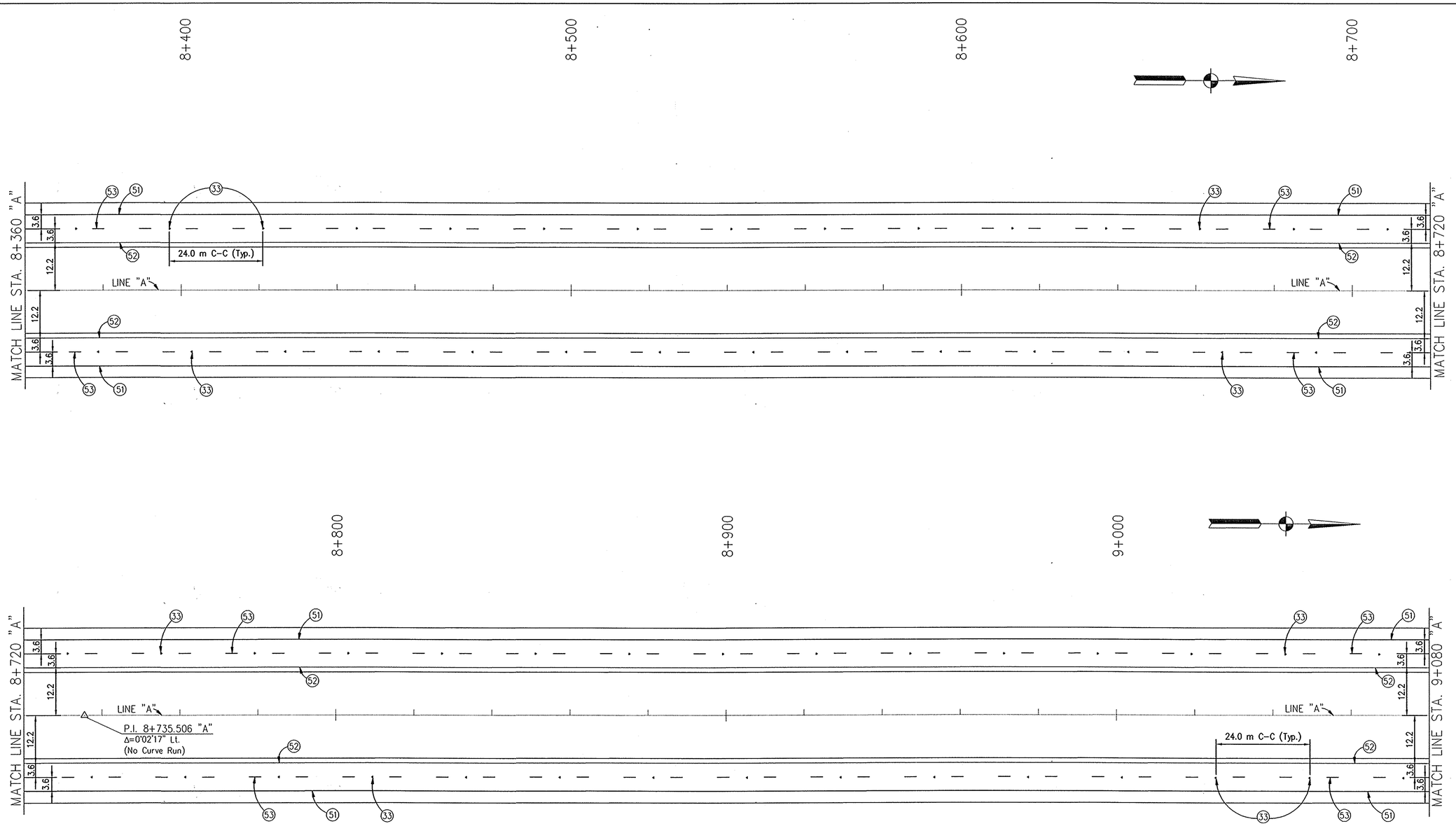
CHECKED: MAT | CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	163 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)

FILENAME: C:\Projects\98011\Pavement Markings\ 98011_pav7.dwg DATE: DEC 10, 2001 TIME: 10:18 AM OPERATOR: jph



LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

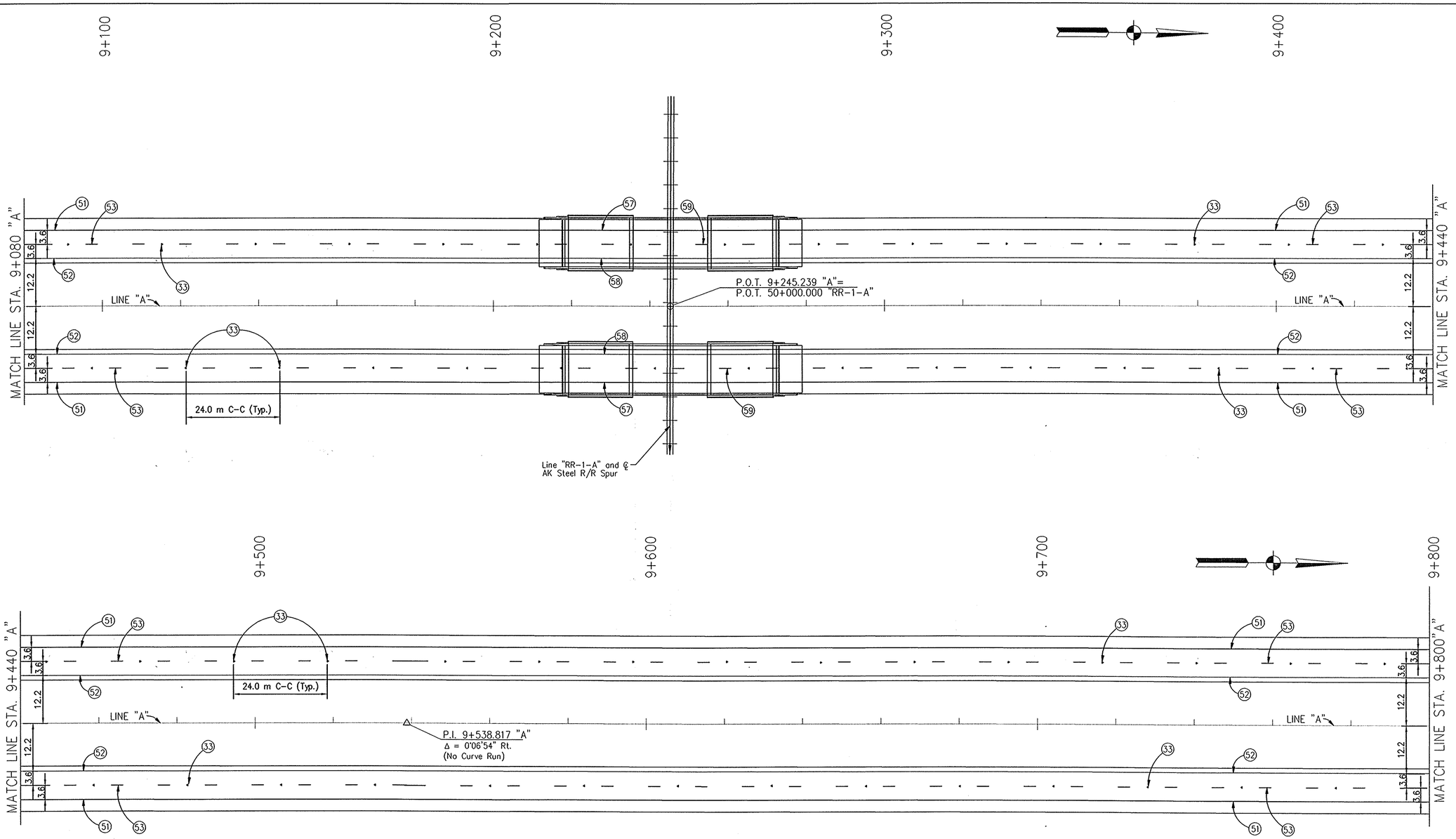
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: TAN DRAWN: TAN
CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	164 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

(33) Snowplowable Raised Pavement Marker, White
(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)
(52) Line, Thermoplastic, Solid, Yellow, 100mm
(53) Line, Thermoplastic, Broken, White, 100mm
(57) Line, Epoxy, Solid, White, 100mm
(58) Line, Epoxy, Solid, Yellow, 100mm
(59) Line, Epoxy, Broken, White, 100mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

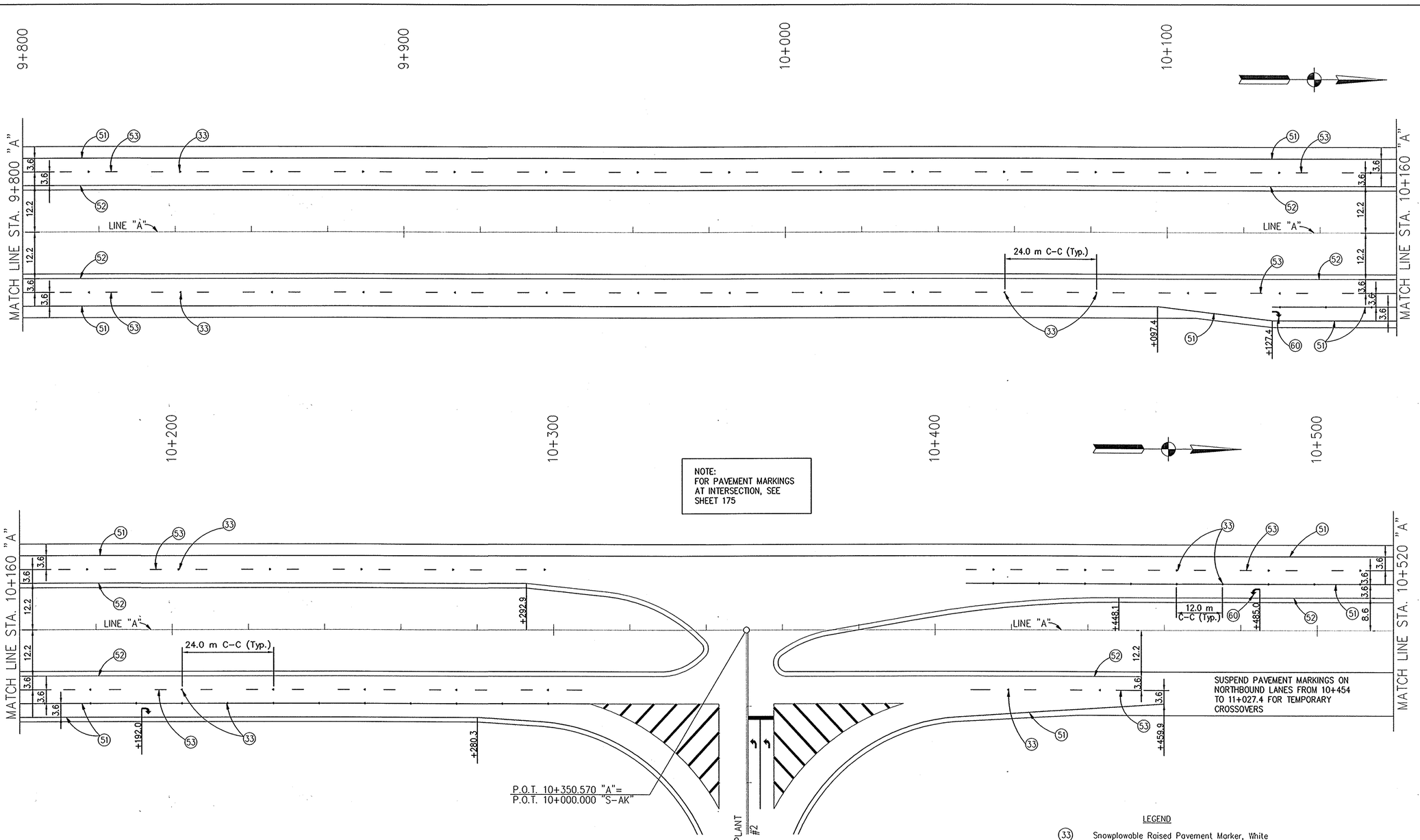
RECOMMENDED FOR APPROVAL Alan J. DeLauray 4/22/03
DESIGN ENGINEER DATE

DESIGNED: TAN DRAWN: TAN
CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	165 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



NOTE:
FOR PAVEMENT MARKINGS AT INTERSECTION, SEE SHEET 175

LEGEND

- (33) Snowplowable Raised Pavement Marker, White
- (51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)
- (52) Line, Thermoplastic, Solid, Yellow, 100mm
- (53) Line, Thermoplastic, Broken, White, 100mm
- (54) Transverse Markings, Thermoplastic, Solid, White, Crosshatch Line, 600mm
- (56) Transverse Markings, Thermoplastic, Solid, White, Stop Line, 600mm
- (60) Pavement Message Markings, Thermoplastic, Lane Indication Arrow

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLANNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

DESIGNED: TAN DRAWN: TAN

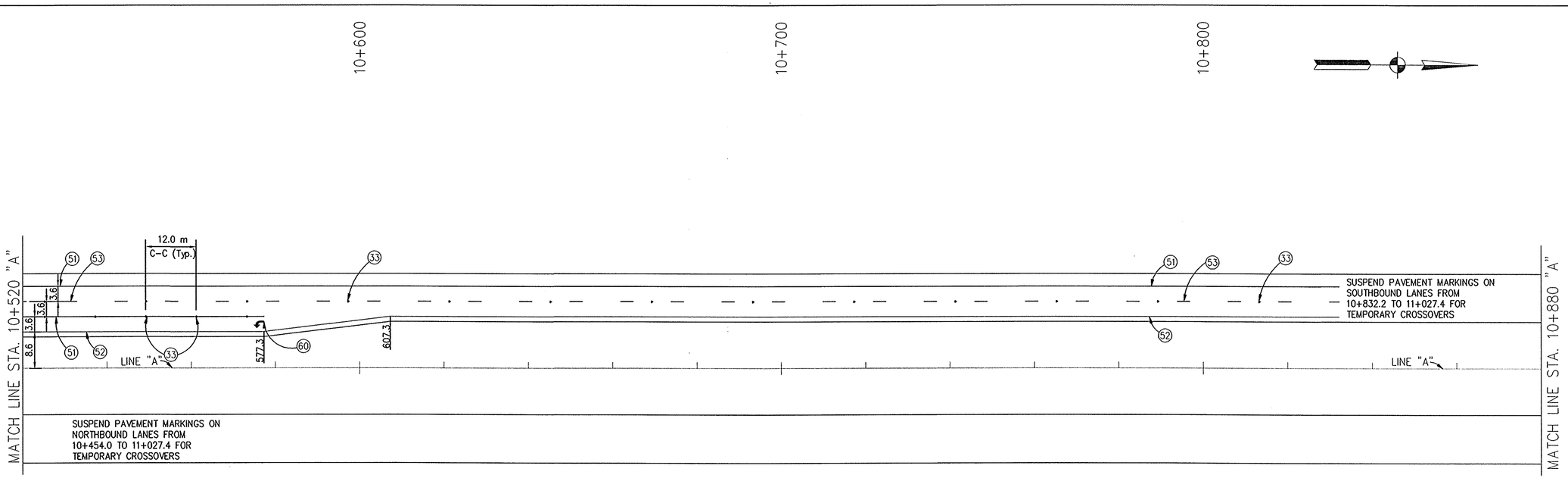
CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	166 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)

FILENAME: C:\Projects\980111\Pavement Markings\ 980111_pav10.dwg DATE: DEC 10, 2001 TIME: 10:19 AM OPERATOR: jph



LEGEND

(33) Snowplowable Raised Pavement Marker, White

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(53) Line, Thermoplastic, Broken, White, 100mm

(60) Pavement Message Markings, Thermoplastic, Lane Indication Arrow

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAMAR REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

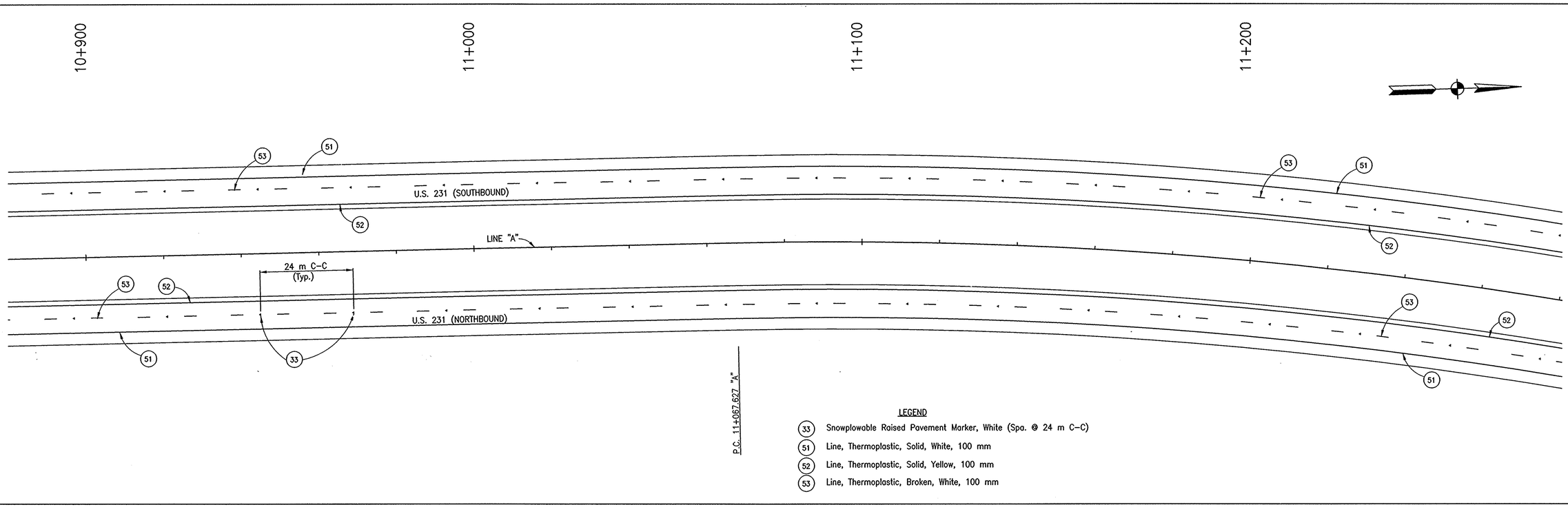
DESIGNED: TAN DRAWN: TAN

CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
U.S. 231 - LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	167 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

(33) Snowplowable Raised Pavement Marker, White (Spa. @ 24 m C–C)
(51) Line, Thermoplastic, Solid, White, 100 mm
(52) Line, Thermoplastic, Solid, Yellow, 100 mm
(53) Line, Thermoplastic, Broken, White, 100 mm

MELISSA ANN LEINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Melissa A. Leinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E. DRAWN: J.W.M.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	168 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 11:10:56
Date: 4/16/2003
Scale: 1"=40'(PS)
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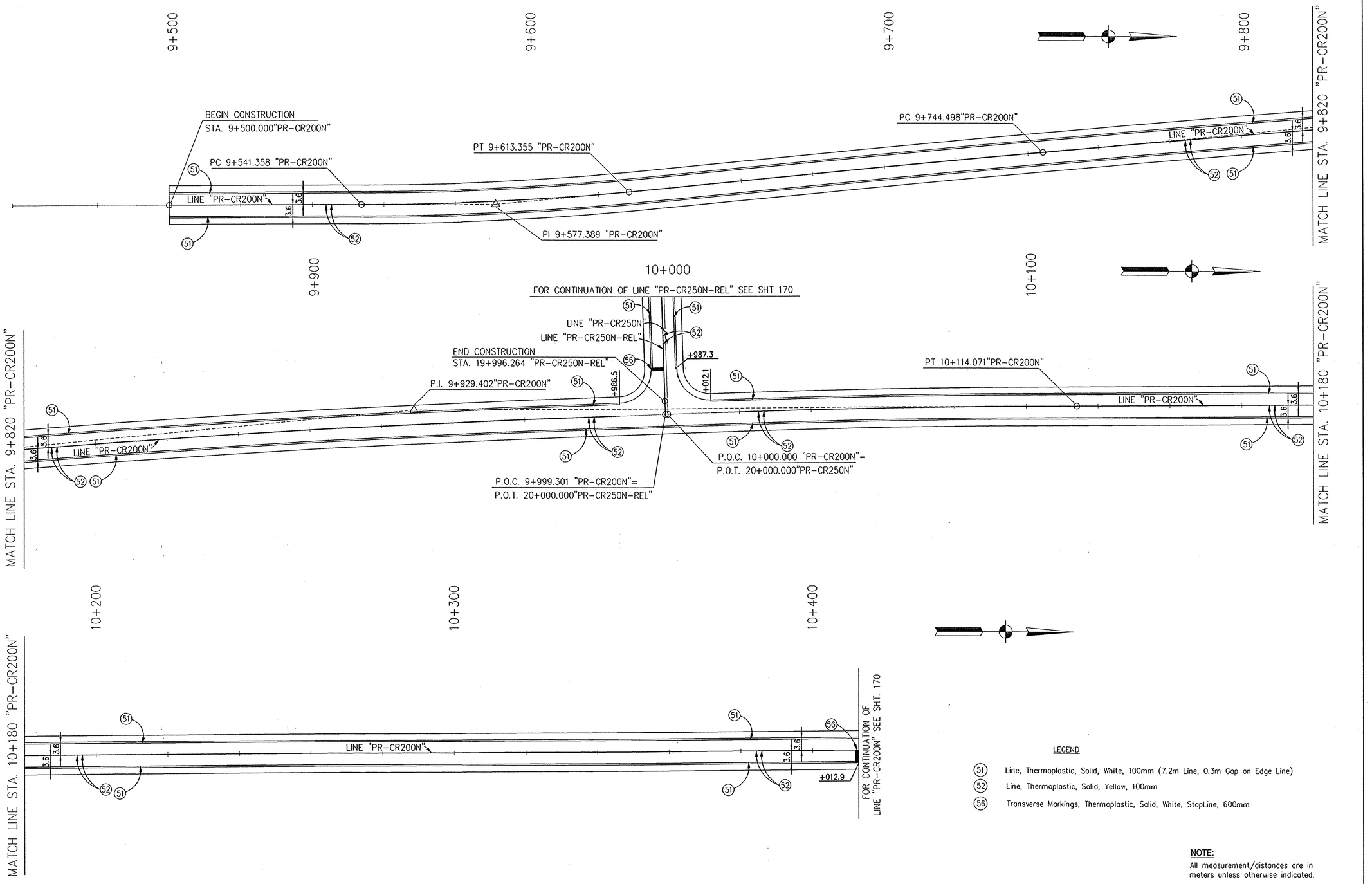


LEGEND

(51) Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)

(52) Line, Thermoplastic, Solid, Yellow, 100mm

(56) Transverse Markings, Thermoplastic, Solid, White, StopLine, 600mm

NOTE:
All measurement/distances are in meters unless otherwise indicated.

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

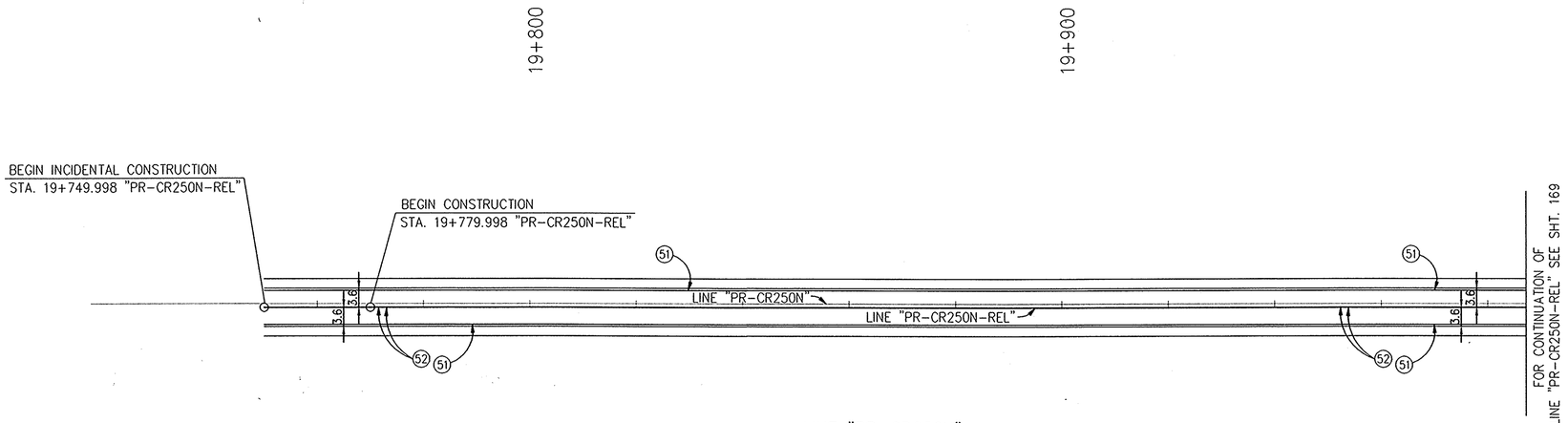
DESIGNED: TAN DRAWN: TAN

CHECKED: JMM CHECKED: MAT

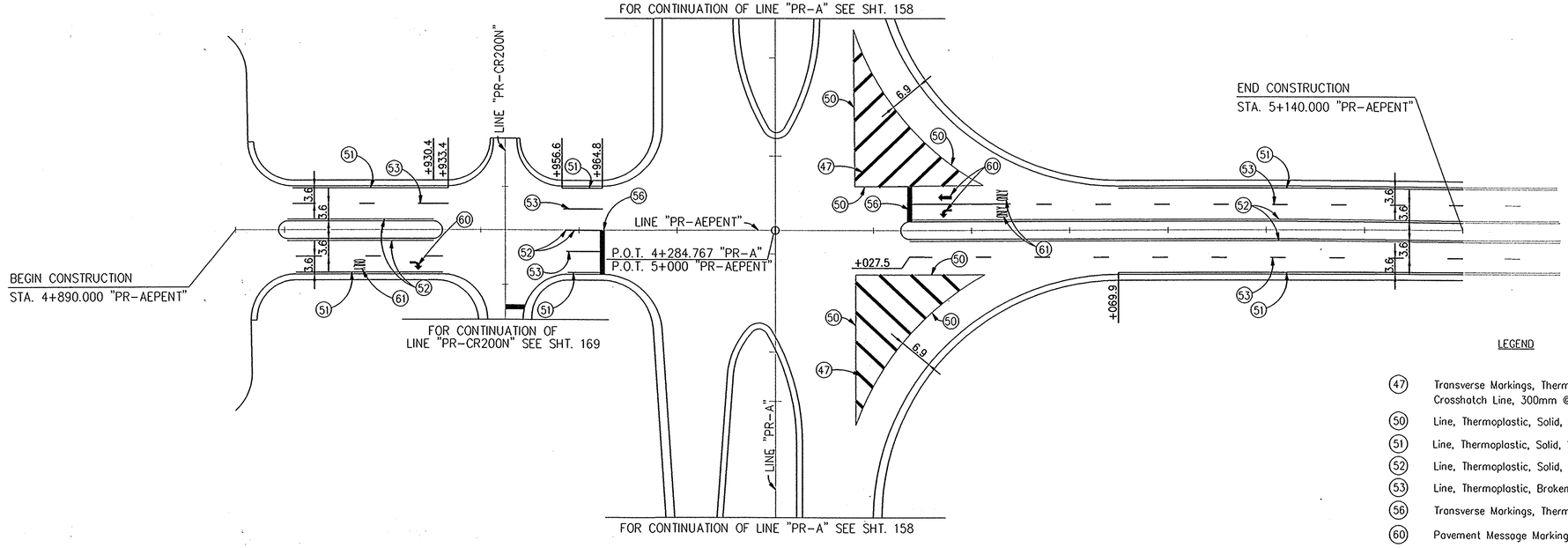
INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
LINE "PR-CR200N"

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	169 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LINE "PR-CR250N"



LINE "PR-AEPENT"

LEGEND

(47)	Transverse Markings, Thermoplastic, Solid, White, Crosshatch Line, 300mm @ 6m spacing
(50)	Line, Thermoplastic, Solid, White, 200mm
(51)	Line, Thermoplastic, Solid, White, 100mm (7.2m Line, 0.3m Gap on Edge Line)
(52)	Line, Thermoplastic, Solid, Yellow, 100mm
(53)	Line, Thermoplastic, Broken, White, 100mm
(56)	Transverse Markings, Thermoplastic, Solid, White, StopLine, 600mm
(60)	Pavement Message Markings, Thermplastic, Lane Indication Arrow
(61)	Pavement Message Markings, Thermplastic, Word (ONLY)

NOTE:
All measurement/distances are in meters unless otherwise indicated.

JAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 4/22/03 DATE

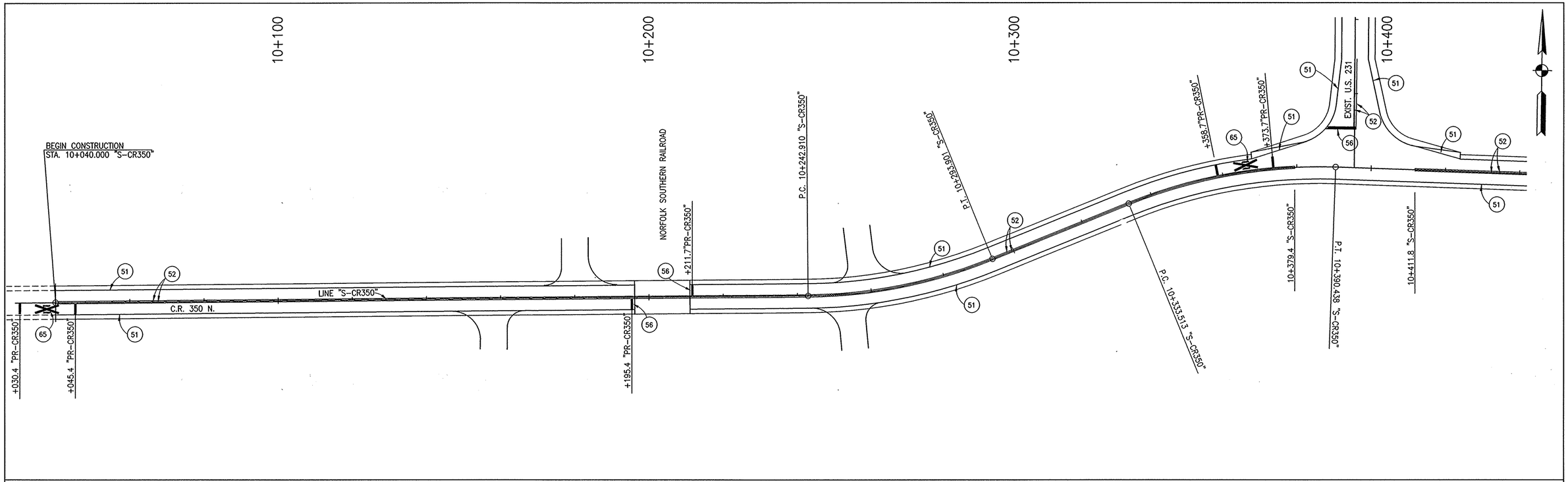
DESIGNED: TAN DRAWN: TAN

CHECKED: JMM CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
LINES "CR250N"&"PR-AEPENT"

HORIZONTAL SCALE	BRIDGE FILE
1:100	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	170 of 196
CONTRACT	PROJECT
R26185	NH-075-3 (014)



LEGEND

- (51) Line, Thermoplastic, Solid, White, 100 mm
- (52) Line, Thermoplastic, Solid, Yellow, 100 mm
- (53) Line, Thermoplastic, Broken, White, 125 mm
- (56) Transverse Markings, Thermoplastic, Solid, White, Stop Line, 600 mm
- (60) Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- (61) Pavement Message Markings, Thermoplastic, Word (ONLY)
- (65) Pavement Message Markings, Thermoplastic, Word (RXR)

Time: 14:20:35
Date: 4/16/2003
Scale: 1=1(PSO)
Drawing File: 210_\ (UNV) PAVE-MARKING\phase-1\pm-350-01.dwg (CFits)

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

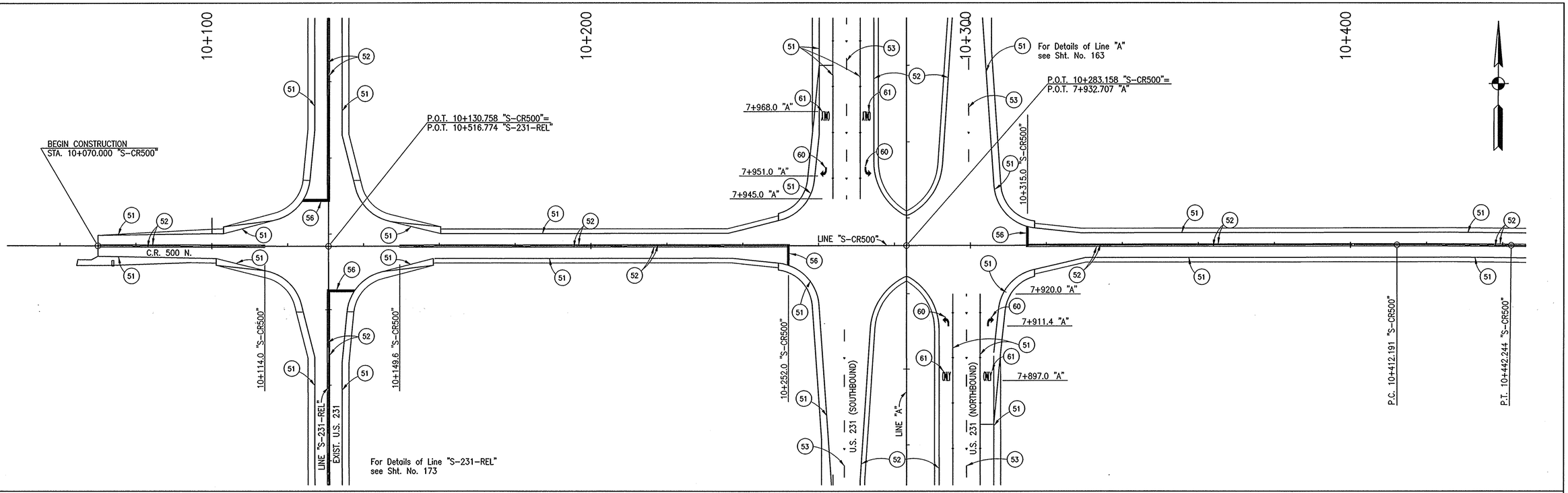
RECOMMENDED FOR APPROVAL: Melissa A. Effinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E | DRAWN: J.W.M.
CHECKED: P.L.K. | CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "S-CR350"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	171 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



LEGEND

- (51) Line, Thermoplastic, Solid, White, 100 mm
- (52) Line, Thermoplastic, Solid, Yellow, 100 mm
- (53) Line, Thermoplastic, Broken, White, 125 mm
- (56) Transverse Markings, Thermoplastic, Solid, White, Stop Line, 600 mm
- (60) Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- (61) Pavement Message Markings, Thermoplastic, Word (Only)

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Melissa A. Effinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E — DRAWN: J.W.M.
CHECKED: P.L.K. — CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "S-CR500"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	172 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 14:21:36
Date: 4/16/2003
Last Modified:
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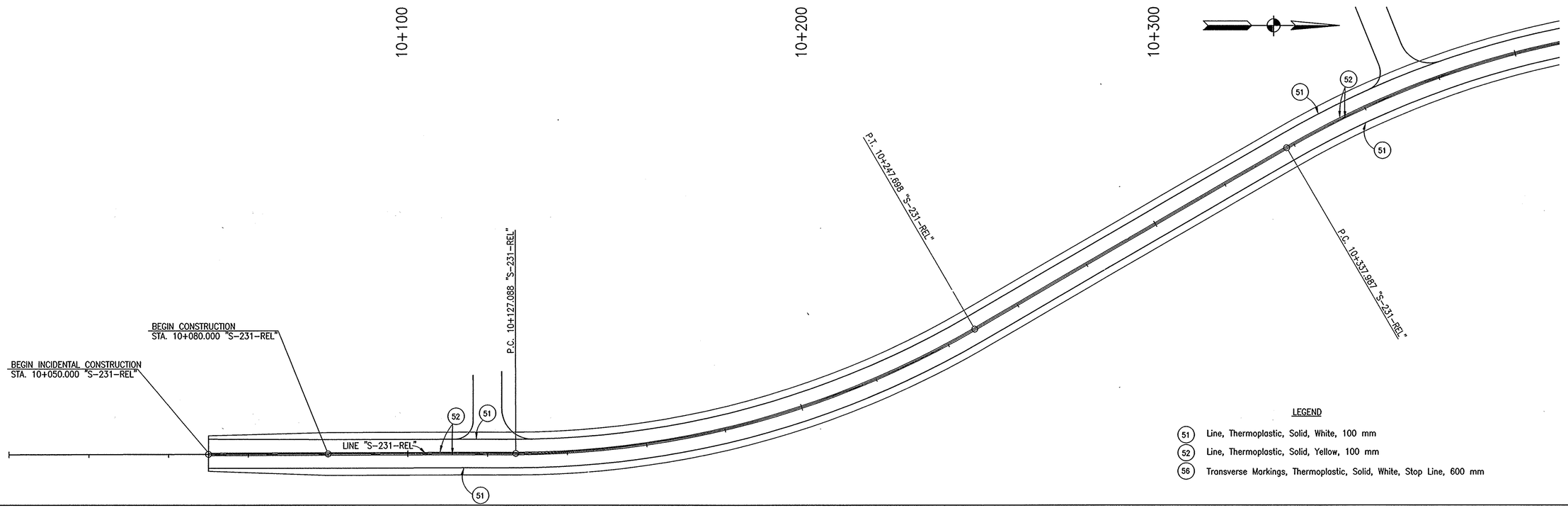

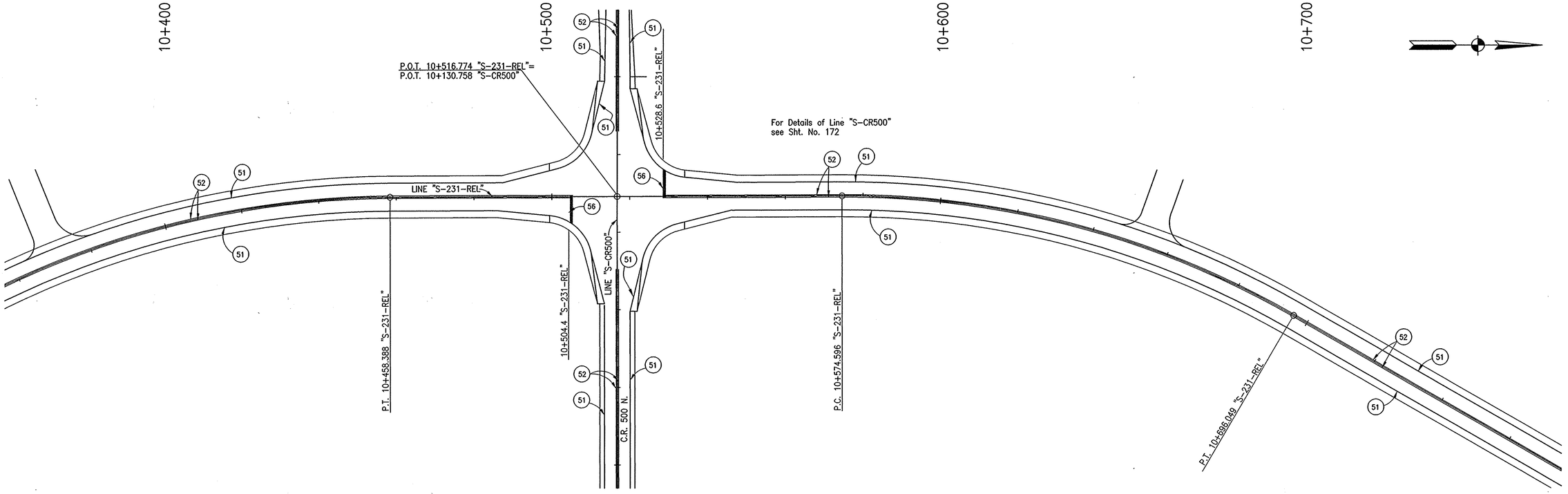

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Drawing File: 210_\DWG\PAVE-MARKING\phase-1\pvm-231rel-01.dwg (CFitts)

MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

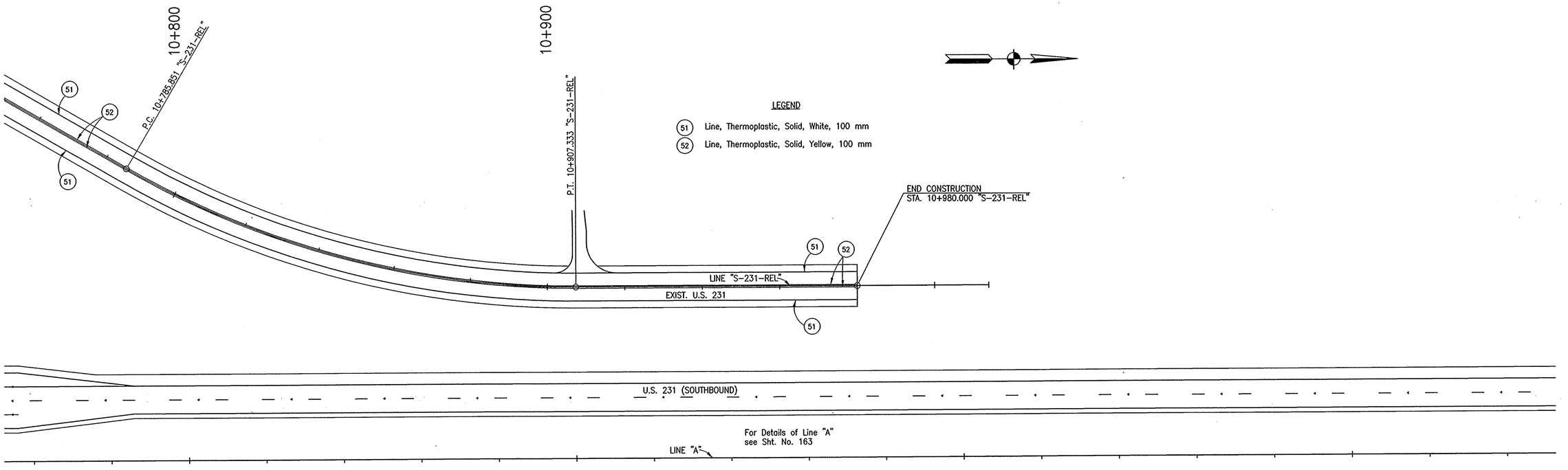
RECOMMENDED FOR APPROVAL: Melissa A. Effinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E	DRAWN: J.W.M.
CHECKED: P.L.K.	CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	173 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



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MELISSA ANN EFFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

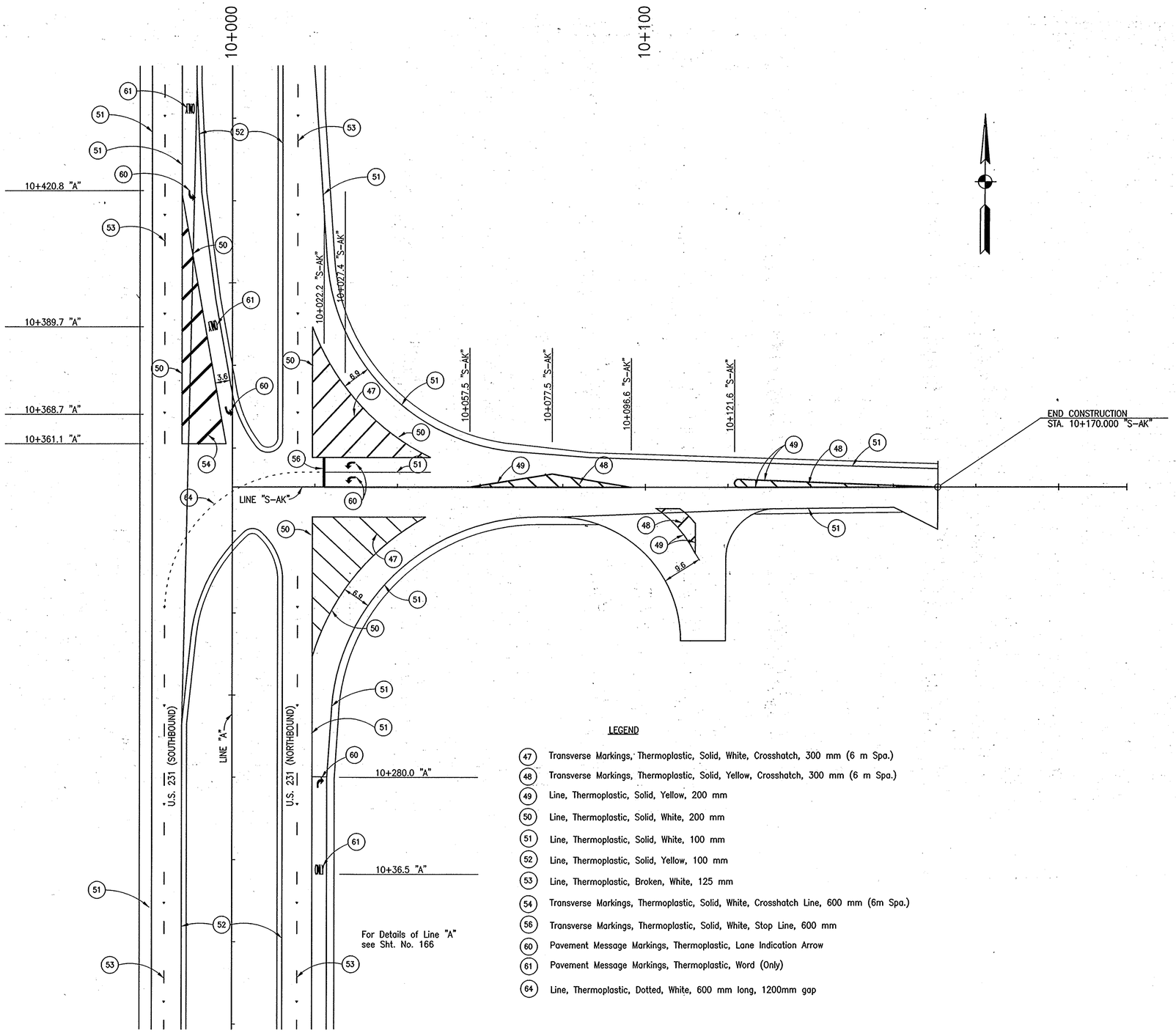
RECOMMENDED FOR APPROVAL Melissa A. Effinger 04-22-03
DESIGN ENGINEER DATE

DESIGNED: M.A.E DRAWN: J.W.M.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "S-231-REL"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	174 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)



LEGEND

- (47) Transverse Markings, Thermoplastic, Solid, White, Crosshatch, 300 mm (6 m Spa.)
- (48) Transverse Markings, Thermoplastic, Solid, Yellow, Crosshatch, 300 mm (6 m Spa.)
- (49) Line, Thermoplastic, Solid, Yellow, 200 mm
- (50) Line, Thermoplastic, Solid, White, 200 mm
- (51) Line, Thermoplastic, Solid, White, 100 mm
- (52) Line, Thermoplastic, Solid, Yellow, 100 mm
- (53) Line, Thermoplastic, Broken, White, 125 mm
- (54) Transverse Markings, Thermoplastic, Solid, White, Crosshatch Line, 600 mm (6m Spa.)
- (56) Transverse Markings, Thermoplastic, Solid, White, Stop Line, 600 mm
- (60) Pavement Message Markings, Thermoplastic, Lane Indication Arrow
- (61) Pavement Message Markings, Thermoplastic, Word (Only)
- (64) Line, Thermoplastic, Dotted, White, 600 mm long, 1200mm gap

ANN MELISSA ESFINGER
REGISTERED
No. PE19600092
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Melissa A. Esfinger 04-22-03
DESIGN ENGINEER — DATE

DESIGNED: M.A.E. DRAWN: J.W.M.
CHECKED: P.L.K. CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKINGS
LINE "S-AK"

HORIZONTAL SCALE	BRIDGE FILE
1:500	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	175 OF 196
CONTRACT	PROJECT
R-26185	NH-075-3(014)

Time: 16:2:26
Date: 4/22/2003
Scale: 1"=40'(PS)
Drawing File: 210_I\DWG\PAVE-MARKING\phase-1a\pm-ak-01.dwg (CFiits)

RIGHT-OF-WAY MONUMENT

STATION	LEFT	RIGHT	NO. REQ'D
Line "PR-A"			
4+268.000		200.000	1
4+303.000		200.000	1
Line "A"			
5+930.000		55.000	1
5+986.245		55.000	1
6+155.505	39.000		1
6+163.500	38.379		1
6+164.967	33.524		1
6+225.708	30.822		1
6+263.296	25.866		1
6+299.253	24.014		1
7+684.000	53.029		1
8+175.000	52.666		1
10+900.000		49.909	1
11+000.000		54.000	1
11+067.627		63.000	1
11+140.404	35.146		1
11+140.567	32.103		1
11+277.219	50.000		1
Line "PR-CR200N"			
9+538.377	20.0		1
9+554.028	18.4		1
9+628.531	20.0		1
9+744.498	32.2		1
9+880.000	32.2		1
9+965.000	37.0		1
10+027.098	30.0		1
10+114.071	27.2		1
10+140.000	12.2		1
10+230.000	22.2		1
10+451.000	22.2		1
10+452.000	4.0		1
Line "PR-CR250N-REL"			
19+750.000	EX R/W		1
19+750.000		EX R/W	1
19+780.000	27.20		1
19+790.300	32.00		1
Line "S-CR350"			
10+010.000	4.858	5.161	2
10+040.000	12.000	12.000	2
10+183.565		14.000	1
10+192.647	16.500		1
10+215.219		14.500	1
10+224.748	17.500		1
10+242.910	18.000	15.000	2
10+285.461		15.000	1
10+293.901	18.000	15.000	2
10+333.513	18.000	15.000	2
10+380.000	18.000		1
10+387.264	40.000		1
10+387.899		15.000	1
10+410.752	30.000		1
10+500.000	30.000		1
10+680.000	30.000		1
10+710.000		35.000	1
10+740.000	30.000		1
10+768.416	18.788		1
10+768.513		17.788	1
SUBTOTAL			59

RIGHT-OF-WAY MONUMENT

STATION	LEFT	RIGHT	NO. REQ'D
Line "S-231-REL"			
10+060.000	7.564		1
10+080.000	15.000		1
10+127.088	21.000		1
10+247.698	21.000		1
10+337.987	25.000	20.000	2
10+458.388	25.000	20.000	2
10+480.000	25.000		1
10+550.000	20.000		1
10+574.596	20.000	20.000	2
10+696.049	20.000	20.000	2
10+785.851	20.000		1
10+900.000	20.000		1
10+980.000	15.000		1
10+990.000	8.143		1
Line "S-CR500"			
10+060.000	5.364	6.831	2
10+090.000	15.000	12.000	2
10+155.000	18.000	15.000	2
10+225.000	18.000	15.000	2
10+350.000	21.000	25.000	2
10+410.000	21.000	25.000	2
10+540.000	5.802	4.256	2
Line "S-AK"			
10+080.000	30.000	27.000	2
10+105.000	40.000		1
10+125.000	40.000		1
10+180.000	12.000	15.000	2
SUBTOTAL			38
TOTAL			97

MONUMENT TABLE

STATION	LEFT	CENTER-LINE	RIGHT	TYPE A	TYPE B	TYPE C	TYPE D	SECTION CORNER
LINE "PR-A"								
P.O.T. 3+352.800		X				1		
P.C. 3+415.424		X				1		
P.I. 3+470.000		X				1		
P.T. 3+524.507		X				1		
P.C. 3+602.951		X				1		
P.I. 3+785.454		X				1		
P.T. 3+967.725		X				1		
P.O.T. 4+284.767		X			1			
P.C. 4+635.154		X				1		
P.I. 4+912.751		X				1		
P.T. 5+183.706		X				1		
LINE "A"								
P.T. 5+296.845 (AHEAD)		X				1		
P.O.T. 5+499.466		X			1			
P.O.T. 5+800.000		X				1		
P.C. 5+986.245		X				1		
P.O.S.T. (P.I.+250.000)		X				1		
P.O.C. 6+200.000		X				1		
P.I. 6+385.008			X			1		
P.O.C. 6+500.000		X				1		
P.T. 6+770.309		X				1		
P.C. 6+922.914		X				1		
P.I. 7+051.575		X				1		
P.T. 7+180.120		X				1		
P.O.T. 7+400.000		X				1		
P.O.T. 7+700.000		X				1		
P.O.T. 8+000.000		X				1		
P.O.T. 8+300.000		X				1		
P.O.T. 8+600.000		X				1		
P.I. 8+735.506		X				1		
P.O.T. 9+000.000		X				1		
P.O.T. 10+100.000		X				1		
P.O.T. 10+350.570		X			1			
P.O.T. 10+525.000		X				1		
P.O.T. 10+700.000		X				1		
P.C. 11+067.627		X				1		
P.O.C. 11+320.000		X				1		
Line "PR-CR200N"								
P.O.T. 9+499.097		X			1			
P.C. 9+541.358		X			1			
P.I. 9+577.389			X		1			
P.T. 9+628.531		X			1			
P.C. 9+744.498		X			1			
P.I. 9+929.402	X				1			
P.T. 10+114.071		X			1			
P.O.T. 10+431.129		X			1			
SUBTOTAL					11	33		

MONUMENT TABLE

STATION	LEFT	CENTER-LINE	RIGHT	TYPE A	TYPE B	TYPE C	TYPE D	SECTION CORNER
LINE "PR-CR250N-REL"								
P.O.T. 19+779.988	X				1			
P.O.T. 20+000.000	X				1			
LINE "S-CR350"								
P.O.T. 10+040.0					1			
P.C. 10+242.910					1			
P.I. 10+268.713					1			
P.T. 10+293.901					1			
P.C. 10+333.513					1			
P.I. 10+362.405					1			
P.T. 10+390.438					1			
P.C. 10+629.070					1			
P.I. 10+645.219					1			
P.T. 10+661.366					1			
P.O.T. 10+750.0					1			
LINE "S-231-REL"								
P.O.T. 10+080.0					1			
P.C. 10+127.088					1			
P.I. 10+188.814						1		
P.T. 10+247.698					1			
P.C. 10+337.987					1			
P.I. 10+399.601						1		
P.T. 10+458.388					1			
P.C. 10+574.596					1			
P.I. 10+636.774						1		
P.T. 10+696.049					1			
P.C. 10+785.851					1			
P.I. 10+848.045						1		
P.T. 10+907.333					1			
P.O.T. 10+980.0					1			
LINE "S-CR500"								
P.O.T. 10+070.0					1			
P.I. 10+130.758					1			
P.C. 10+412.191					1			
P.I. 10+427.218					1			
P.T. 10+442.244					1			
P.O.T. 10+500.0					1			
LINE "S-AK"								
P.O.T. 10+000.0					1			
P.O.T. 10+170.0					1			
SUBTOTAL					31	4		
TOTAL					42	37		

ALAN J. DeLAURAY
REGISTERED
No 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

4/22/03

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

MONUMENT TABLE

HORIZONTAL SCALE: N/A	BRIDGE FILE:
VERTICAL SCALE: N/A	DESIGNATION: 8461360
SURVEY BOOK: 16722	SHEETS: 176 of 196
CONTRACT: R 26185	PROJECT: NH-075-3(014)

PAVED SIDE DITCH AND SODDING SUMMARY TABLE

LOCATION					PAVED SIDE DITCH						RIPRAP DITCH					SODDING						NURSERY SODDING FOR LAWNS
FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	ACTUAL LENGTH	CUT OFF WALLS (2.4 m EQUIV. LENGTH EACH)	LUGS (2.4 m EQUIV. LENGTH EACH)	TOTAL EQUIVALENT PAY LENGTHS TYPE			CLASS I RIPRAP	CLASS II RIPRAP	REVETMENT RIPRAP	UNIFORM RIPRAP	GEOTEXTILES	FOR PAVED SIDE DITCHES	FOR DITCHES	SODDING AT BREAK POINTS (CLEAR ZONE)	FOR SHOULDER	SODDING AT BRIDGE CONE	TOTAL SODDING	
									"B"													
					m	EACH	EACH	m	m	m	Mg	Mg	Mg	Mg	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
Line "PR-A"																						
3+350	4+240	X																712.0			712.0	
3+350	4+240			X														712.0			712.0	
3+352.8	4+260		X														2177.3				2177.3	
3+778	4+268	X															4894.8				4894.8	
3+792	3+888			X													297.3				297.3	
4+310	4+810		X														1200.0				1200.0	
4+452	4+588	X															744.5				744.5	
4+900	5+304.108		X														969.9				969.9	
Line "A"																						
5+296.845	5+490.270		X														464.2				464.2	
5+392	5+487.500			X													522.8				522.8	
5+508.670	5+980		X														1131.2				1131.2	
5+692	5+768	X															279.2				279.2	
6+080	7+923.510		X														4400.4				4400.4	
6+357	7+520	X																930.4			930.4	
6+357	7+917			X														1248.0			1248.0	
6+512	6+608	X															297.3				297.3	
7+322	7+528	X															618.0				618.0	
7+481	7+610	X			129	5			134.0				31.1		49.1	51.6					51.6	
7+640	7+920	X																224.0			224.0	
7+941.910	9+209.098		X														3041.3				3041.3	
7+945.600	9+211			X														1012.3			1012.3	
7+960	9+225	X																1012.0			1012.0	
8+352	8+423			X													662.1				662.1	
8+372	8+392	X											53.6		83.5							
8+395	8+488	X											249.2		375.3							
8+800	8+807	X									73.1				102.9							
8+800	8+807			X							95.6				132.5							
9+273	10+310			X														829.6			829.6	
9+276.808	10+339.370		X														2550.1				2550.1	
9+280	10+880	X																1280.0			1280.0	
9+720	9+727			X							90.0				125.1							
9+840	9+847	X									67.5				95.5							
10+360.200	10+880		X														1247.5				1247.5	
10+390	10+708			X													2965.4				2965.4	
10+390	10+880			X														392.0			392.0	
10+392	10+508	X															359.3				359.3	
10+552	10+648	X															266.3				266.3	
10+692	10+752	X															185.8				185.8	
10+752	10+775	X									82.1				103.1							
10+772	10+815			X							238.0				268.3							
10+785	10+807	X									78.6				98.8							
10+815	10+848			X									88.4		135.5							
10+848	10+970			X													377.8				377.8	
10+880	11+320		X														1056.0				1056.0	
10+880	11+100	X																176.0			176.0	
10+880	11+120			X														192.0			192.0	
10+970	11+070			X									250.0		400.0							
10+970	11+030	X															180.0				180.0	
11+030	11+090	X											150.0		240.0							
11+070	11+140			X													210.0				210.0	
11+090	11+120	X															90.0				90.0	
11+190	11+250			X													180.0				180.0	
11+220	11+320	X																80.0			80.0	
11+220	11+320			X														80.0			80.0	
11+250	11+320			X									175.0		280.0							
11+300	11+320	X											50.0		80.0							
Line "PR-CR200N"																						
10+052.000	10+128.000	X															91.2				91.2	
10+272.000	10+368.000	X															115.2				115.2	
Line "S-CR350"																						
10+040	10+070	X															90.0				90.0	
10+260	10+320			X														48.0			48.0	
10+320	10+380	X																48.0			48.0	
10+380	10+494			X													342.0				342.0	
10+410	10+480	X															210.0				210.0	
Line "S-231-REL"																						
10+080	10+115	X																28.0			28.0	
10+080	10+505			X														340.0			340.0	
10+080	10+115	X															105.0				105.0	
10+080	10+120			X													120.0				120.0	
10+125	10+505	X																304.0			304.0	
10+530	10+648	X																94.0			94.0	
10+530	10+980			X														360.0			360.0	
10+660	10+905	X																196.0			196.0	
10+860	10+980			X													360.0				360.0	
10+910	10+980	X																56.0			56.0	
10+960	10+980	X															60.0				60.0	
Line "S-CR500"																						
10+080	10+125	X											112.5		180.0							
10+125	10+505	X																304.0			304.0	
10+125	10+145	X															60.0				60.0	
10+210	10+250	X															120.0				120.0	
10+320	10+500	X															540.0				540.0	
10+320	10+500			X													540.0				540.0	
Line "S-AK"																						
10+040	10+140	X															300.0				300.0	
10+040	10+090			X													150.0				150.0	
TOTALS					129.0	5			134.0		724.9		1159.8		2749.6	51.6	34571.9	10658.3			45281.8	

ALAN J. DeLAURAY REGISTERED No. 20175 INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Alan J. DeLauray — DESIGN ENGINEER — 4/22/03 DATE

DESIGNED: J.A.T. | DRAWN: J.A.T.

CHECKED: M.A.E. | CHECKED: M.A.E.

INDIANA DEPARTMENT OF TRANSPORTATION

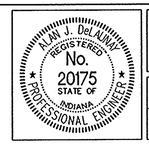
PAVED SIDE DITCH, RIPRAP AND SODDING SUMMARY TABLE

HORIZONTAL SCALE	BRIDGE FILE
NONE	
VERTICAL SCALE	DESIGNATION
NONE	8461360
SURVEY BOOK	SHEETS
16722	177 OF 196
CONTRACT	PROJECT
R26185	NH-075-3(014)

TEMPORARY EROSION & SEDIMENT CONTROL TABLE

LOCATION			LEFT	MEDIAN	RIGHT	SODDING DITCH CHECK	RIPRAP DITCH CHECK	PERIMETER PROTECTION	TEMPORARY CHECK DAM	SEDIMENT TRAP	SEDIMENT BASIN	DITCH INLET PROTECTION	CURB INLECT PROTECTION	CULVERT PIPE PROTECTION	PAVED DITCH	SLOPE DRAIN
STATION	TO STATION	LINE				m^2	Mg	m	Mg	Mg	m^3	EACH	EACH	EACH	m	m
3+352.800		PR-A	X		X				12.4							
3+500.000		PR-A		X								1				
3+600.000		PR-A	X		X				12.4							
3+755.000		PR-A	X						7.64							
3+840.000		PR-A			X				6.18							
3+850.000		PR-A		X								1				
3+880.000		PR-A			X				6.18							
3+920.000		PR-A	X						15.2							
3+970.000		PR-A	X						15.2							
4+020.000		PR-A	X						15.2							
4+060.000		PR-A			X				15.2							
4+070.000		PR-A	X						15.2							
4+100.000		PR-A	X						15.9							
4+140.000		PR-A	X						17.3							
4+180.000		PR-A	X						22.2							
4+200.000		PR-A			X				6.18							
4+204.545		PR-A		X								1				
4+220.000		PR-A	X						26.6							
4+325.000		PR-A		X								1				
4+475.000		PR-A		X								1				
4+515.000		PR-A	X						8.80							
4+570.000		PR-A	X						8.80							
4+600.000		PR-A			X				8.80							
4+740.000		PR-A	X						8.80							
4+900.000		PR-A			X				8.80							
5+040.000		PR-A	X						8.80							
5+050.000		PR-A		X								1				
5+150.000		PR-A			X				8.80							
5+175.000		PR-A		X								1				
5+235.000		PR-A	X						8.80							
5+300.000		PR-A		X								1				
5+400.000		A			X				8.80							
5+430.000		A	X						8.80							
5+435.000		A			X				8.80							
5+470.000		A			X				8.80							
5+480.000		A		X								1				
5+550.000		A	X						6.18							
5+616.573		A		X								1				
5+650.000		A		X								1				
5+700.000		A	X						6.18							
5+730.000		A	X						6.18							
5+800.000		A	X						6.18							
5+825.000		A		X								1				
5+860.000		A	X						6.18							
6+020.000		A			X					9.2						
6+025.000		A	X						6.18							
6+060.000		A			X				8.80							
6+100.000		A	X							4.3						
6+250.000		A		X								1				
6+260.000		A	X						8.80							
6+270.000		A			X				8.80							
6+425.674		A		X								1				
6+450.000		A		X								1				
6+460.000		A	X						8.80							
6+520.000		A			X				8.80							
6+552.000		A	X						8.80							
6+640.000		A		X								1				
6+770.000		A			X				8.80							
6+800.000		A	X						6.18							
6+860.000		A		X								1				
7+000.000		A	X						6.18							
7+020.000		A			X				8.80							
SUBTOTAL									434.4	13.5		17.0				

LOCATION			LEFT	MEDIAN	RIGHT	SODDING DITCH CHECK	RIPRAP DITCH CHECK	PERIMETER PROTECTION	TEMPORARY CHECK DAM	SEDIMENT TRAP	SEDIMENT BASIN	DITCH INLET PROTECTION	CURB INLECT PROTECTION	CULVERT PIPE PROTECTION	PAVED DITCH	SLOPE DRAIN
STATION	TO STATION	LINE				m^2	Mg	m	Mg	Mg	m^3	EACH	EACH	EACH	m	m
7+080.000		A		X								1				
7+190.000		A	X						6.18							
7+270.000		A			X				8.80							
7+378.000		A	X						6.18							
7+426.000		A	X						6.18							
7+474.000		A	X						6.18							
7+515.000		A			X				8.80							
7+520.000		A	X						6.18							
7+520.000		A		X								1				
7+760.000		A	X						6.18							
7+765.000		A			X				8.80							
7+780.000		A	X						6.18							
7+780.000		A		X								1				
7+900.000		A		X								1				
7+960.000		A		X								1				
8+055.000		A	X						6.18							
8+110.000		A			X				8.80							
8+150.000		A	X						6.18							
8+160.000		A		X								1				
8+205.000		A			X				8.80							
8+300.000		A			X				8.80							
8+360.000		A		X								1				
8+375.000		A			X				8.80							
8+390.000		A			X				8.80							
8+405.000		A			X				8.80							
8+425.000		A			X				8.80							
8+494.000		A			X				8.80							
8+560.000		A		X								1				
8+563.000		A			X				8.80							
8+780.000		A		X								1				
8+800.000		A	X						6.18							
8+860.000		A			X				8.80							
9+000.000		A		X								1				
9+480.000		A		X								1				
9+700.000		A		X								1				
9+855.000		A			X				8.80							
9+860.000		A	X						6.18							
9+920.000		A		X								1				
10+055.000		A			X				8.80							
10+120.000		A		X								1				
10+158.000		A		X								1				
10+160.000		A	X						6.18							
10+400.000		A			X				8.80							
10+420.000		A		X								1				
10+460.000		A	X						6.18							
10+490.000		A			X				8.80							
10+510.000		A	X						6.18							
10+560.000		A		X								1				
10+580.000		A			X				8.80							
10+610.000		A	X						6.18							
10+640.000		A	X						6.18							
10+670.000		A			X				8.80							
10+715.000		A			X				8.80							
10+725.000		A	X						6.18							
10+755.000		A	X						6.18							
10+760.000		A		X								1				
10+810.000		A			X					4.3						
10+850.000		A	X						6.18							
10+880.000		A			X				6.18							
SUBTOTAL									299.6	4.3		18.0				
SUBTOTAL THIS SHEET									734.0	17.8		35.0				



4/22/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION &
SEDIMENT CONTROL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	178 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

TEMPORARY EROSION & SEDIMENT CONTROL TABLE

LOCATION			LEFT	MEDIAN	RIGHT	SODDING DITCH CHECK	RIPRAP DITCH CHECK	PERIMETER PROTECTION	TEMPORARY CHECK DAM	SEDIMENT TRAP	SEDIMENT BASIN	DITCH INLET PROTECTION	CURB INLECT PROTECTION	CULVERT PIPE PROTECTION	PAVED DITCH	SLOPE DRAIN
STATION	TO STATION	LINE				m²	Mg	m	EACH	EACH	m³	EACH	EACH	EACH	m	m
10+960.000		A		X								1				
11+000.000		A			X				6.18							
11+080.000		A	X		X				12.4							
11+140.000		A	X		X				12.4							
11+120.000		A		X								1				
11+220.000		A			X				6.18							
11+240.000		A			X				6.18							
11+280.000		A		X								1				
9+500.000		PR-CR200N	X						6.18							
9+810.000		PR-CR200N	X						6.18							
9+940.000		PR-CR200N	X						6.18							
10+300.000		PR-CR200N	X						6.18							
10+325.000		PR-CR200N	X						6.18							
10+350.000		PR-CR200N	X						6.18							
19+800.000		PR-CR250N-REL			X				6.18							
19+805.000		PR-CR250N-REL	X						6.18							
19+890.000		PR-CR250N-REL			X				6.18							
19+900.000		PR-CR250N-REL	X						6.18							
10+040.000		S-CR350	X		X				12.4							
10+120.000		S-CR350			X				6.18							
10+150.000		S-CR350			X				6.18							
10+160.000		S-CR350	X						6.18							
10+240.000		S-CR350			X				6.18							
10+280.000		S-CR350	X						6.18							
10+360.000		S-CR350			X				6.18							
10+390.000		S-CR350			X				6.18							
10+040.000		S-CR350	X						6.18							
10+420.000		S-CR350	X		X				12.4							
10+440.000		S-CR350	X						6.18							
10+450.000		S-CR350			X				6.18							
10+460.000		S-CR350	X						6.18							
10+470.000		S-CR350			X				6.18							
10+480.000		S-CR350	X						6.18							
10+490.000		S-CR350			X				6.18							
10+510.000		S-CR350	X						6.18							
10+610.000		S-CR350	X						6.18							
10+660.000		S-CR350	X						6.18							
10+745.000		S-CR350	X							5.3						
10+695.000	10+780.000	S-CR350			X			85.0								
10+755.000	10+780.000	S-CR350	X					25.0								
10+150.000		S-CR500	X						6.18							
10+185.000		S-CR500	X						6.18							
10+205.000		S-CR500	X							4.3						
10+215.000		S-CR500	X							4.3						
10+320.000		S-CR500			X				6.18							
10+330.000		S-CR500	X						6.18							
10+360.000		S-CR500			X				6.18							
10+380.000		S-CR500	X						6.18							
10+400.000		S-CR500			X				6.18							
10+420.000		S-CR500	X						6.18							
10+440.000		S-CR500			X				6.18							
10+460.000		S-CR500	X						6.18							
10+200.000		S-231-REL	X		X				12.4							
10+260.000		S-231-REL	X							4.3						
10+270.000		S-231-REL			X					4.3						
10+280.000		S-231-REL	X							4.3						
10+290.000		S-231-REL			X					4.3						
10+400.000		S-231-REL	X						6.18							
10+410.000		S-231-REL			X				6.18							
10+530.000		S-231-REL	X		X				12.4							
10+650.000		S-231-REL	X		X				12.4							
10+710.000		S-231-REL			X				6.18							
10+760.000		S-231-REL			X				6.18							
SUBTOTAL								**110.0**	**358.7**	**31.1**		**3.0**				

LOCATION			LEFT	MEDIAN	RIGHT	SODDING DITCH CHECK	RIPRAP DITCH CHECK	PERIMETER PROTECTION	TEMPORARY CHECK DAM	SEDIMENT TRAP	SEDIMENT BASIN	DITCH INLET PROTECTION	CURB INLECT PROTECTION	CULVERT PIPE PROTECTION	PAVED DITCH	SLOPE DRAIN
STATION	TO STATION	LINE				m²	Mg	m	Mg	Mg	m³	EACH	EACH	EACH	m	m
10+770.000		S-231-REL	X						6.18							
10+810.000		S-231-REL			X				6.18							
10+860.000	10+980.000	S-231-REL			X				2							
10+890.000		S-231-REL	X						6.18							
10+910.000		S-231-REL			X				6.18							
10+960.000		S-231-REL			X				6.18							
10+980.000		S-231-REL	X						6.18							
10+070.000		S-AK			X				6.18							
10+080.000		S-AK	X						6.18							
SUBTOTAL									**51.4**							
SUBTOTAL FROM LEFT COLUMN								**110.0**	**358.7**	**31.1**		**3.0**				
SUBTOTAL FROM PREV SHEET								**734.0**	**17.8**	**0.0**		**35.0**				
TOTAL								**844.0**	**428.0**	**31.1**		**38.0**				

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

[signature] 4/23/03

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

TEMPORARY EROSION & SEDIMENT CONTROL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	.
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	179 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (Appr. Type or Class)	WIDTH	LENGTH	RADII	DIST. BEYOND R/W LINE	SURFACE BEYOND			GRADE		EXCAVATION		SKEW	HMA FOR APPROACHES					QC/QA-HMA, 4, 76, Surface 9.5mm	QC/QA-HMA, 4, 76, Intermediate 19.0mm	QC/QA-HMA, 4, 64, Base 25.0mm	QC/QA-HMA 5, 76, Intermed C19.0mm	QC/QA-HMA, 1, 64, Surface 9.5 mm	QC/QA-HMA, 2, 64, Surface 9.5 mm	QC/QA-HMA, 2, 64, Intermediate, 19.0mm	QC/QA-HMA, 1, 64, Intermediate, 19.0mm	QC/QA-HMA 2, 64, Base 25.0mm	QC/QA-HMA 1, 64, Intermediate 19.0 mm	QC/QA-HMA 1, 64, Base 25.0 mm	QC/QA-HMA 1, 64, Base 25.0 mm	QC/QA-HMA 2, 64, Base 25.0 mm		HMA, Type B, Surface	HMA Type B, Intermediate	HMA Type B, Base	SURFACE MILLING, ASPHALT	SEAL COAT		HMA MAT'L FOR		COMPACTED AGGREGATE BASE, NO. 53			SUBGRADE TREATMENT			CEMENT CONC. PVMT. FOR DRIVES	REMARKS
						COMPACTED AGGREGATE	BITUMIN.	CONCRETE						kg/m²					kg/m²																	Type		PRIME COAT	TACK COAT	Depth (mm)			Type			mm	
									1	2	Cut	Fill		240	300	360	720	885	90	150	240	165	90	90	150	210	480	270	270	180	180		90	150	150		2	5			100	150	200	A	B	D	150	
		m	m	m	m	m²	m²	m²	%	%	m³	m³		Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg	Mg		Mg	Mg	Mg	m²	m²	m²	Mg	Mg	Mg	Mg	m²	m²	m²	m²	
Lines "PR-A" & "A"																																													
Mainline																																													
3+352.8 to 10+880											290756	1349049							10437.8	17406.2	55824.4	21677.5	4654.0						18514.9									82.1	140.8			20022.1	174769.2			
10+880 to 11+320											16413	65957							570.2	960.3	3197.6	1314.7	332.6						1103.0									6.3	10.1		2029.7	1336.5	2784.0			
MOT - Line "MOT-2"																																306.7	971.2	255.6				2.7	2.3		606.5	1617.3	5120.8			
MOT - Line "MOT-NB"&"MOT-SB"																																90.2	285.6	100.2				1.6	0.8		237.8	475.7	2846.0			
MOT - Line "MOT-3"																																67.3	213.1	64.4				1.2	0.8		155.3	354.9	1946.2			
MOT - Line "MOT-4"																																26.0	82.3	43.3				0.5	0.3		102.8	137.1	566.0			
Temp Connection AEP																																43.2	136.8	24.0				0.8	0.3		57.0	227.8	479.4			
Temp Connection AKS																																14.6	46.2	5.4				0.1	0.1		12.8	77.0	238.0			
Sta. 5+499.468 Rt.	Road Approach "C"	9.9	31.0	12/12					0.4				20			361.5																										476.6					
Sta. 5+499.468 Lt.	Road Approach "C"	6.6	29.7	12/12					0.4				20			409.7																										540.0					
Sta. 7+932.707 Lt.	Road Approach "C"	6.6	24.0	12/12					1.0								640.3																										305.3					
Sta. 7+932.707 Rt.	Road Approach "C"	6.6	24.0	12/12					1.0								640.3																										305.3				790.4	
Sta. 10+350.570 Rt.	Mod. Road Approach "C"	14.4	63.4	50.0/50.0					0.8									2337.2																											3046		
Line "PR-CR200N"																																													
Mainline											15182	27384				91.9							591.8					1787.9								3289.0		15.9	1.9		1428.5	3179.3			10623.8	
Line "PR-S-CR250-REL"																																													
Mainline											15482	2447				37.0							134.3			323.0									792.9		3.8	0.5		344.4	766.4			1555.2	
Line "PR-AEPENT"																																													
Mainline											636	8999				248.5	762.9						86.1	90.9	155.2	270.8	516.8			117.8	84.4				654.3		2.8	3		307.8	934.0			2620.7	
Sta. Lt.	Class IV Drive								0.2		0	0		27.1																															
Sta. Rt.	Class IV Drive								0.2		0	0		20.4																															
Line "S-CR350"																																													
Mainline											5241	14489											414.6					1149.4		259.6						66.0	1442.4		9.3	1.2		1459.6	2057.0			2208.0	
Sta. 10+158.000 Rt.	Class V Drive	7.2	10.4	4.6 / 7.7					6.9		0	17																																	
Sta. 10+180.000 Lt.	Class V Drive	7.2	12.8	4.6 / 7.7					0.8		1	16																																	
Sta. 10+254.000 Rt.	Class V Drive	7.2	11.5	4.6 / 7.7					7.5		0	18																																	
Sta. 10+258.000 Lt.	Class V Drive	7.2	14.7	4.6 / 7.7					2.2		0	13																																	
Sta. 10+395.455 Lt.	Road Approach "B"	7.2	26.0	12.0/12.0					0.2							187.8																										247.6		541.6		
Sta. 10+649.000 Rt.	Mod. Road Approach "B"	7.2	34.0	12.0/15.0					0.7							135.9																										179.1					
Line "S-OLD231"																																													
Mainline											183	32											32.8					99.5		40.9						227.0		0.9	0.1		161.4	177.9			570.0	
Line "S-CR500"																																													
Mainline											6611	3416												199.5	336.3		1096.3				148.0					822.2		5.0	0.6		778.3	1101.8			1920.0	
Sta. 10+130.758 Lt.	Road Approach "B"	6.6	27.4	12.0/12.0					0.8						164.7																										260.6		274.5			
Sta. 10+130.758 Rt.	Road Approach "B"	6.6	27.4	12.0/12.0					1.0						165.6																										262.0		274.5			
Line "S-231-REL"																																													
Mainline											14873	16040											582.3			1281.6				570.2					72.0	3167.8		10.2	1.7		2543.8	2947.9			5386.5	
Sta. 10+120.000 Lt.	Class V Drive	7.2	16.6	4.6 / 7.7					4.9		0	25																																	
Sta. 10+371.000 Lt.	Class V Drive	7.2	21.0	4.6 / 7.7					10.0		0	82																																	
Sta. 10+654.000 Lt.	Class V Drive	7.2	16.2	4.6 / 7.2					3.4		0	10																																	
Sta. 10+908.000 Lt.	Class II Drive	7.2	16.2	4.6 / 7.7					-9.5		88	0			22.2																										0.02		35.1			
Line "S-AK"																																													
Mainline											2806	936											88.8					268.2		34.4						191.0		1.9	0.3		176.2	476.4			1278.0	
Sta. 10+114.000 Rt.	Class IV Drive	10.8	31.4	12.0 / 30.0					0.4		1	0				209.2																										275.8					
Total											368273	1488932		48	353	1682	2044	2337	11008	18367	59022	22992	6917	290	492	1875	1613	3305	19618	1023	232		548	1735	493	138	10587		145	170		10402	38777	188750	11371	19718	

MATTHEW A. TAYLOR REGISTERED No. 10200109 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 1/29/04

DESIGNED: MAE — DRAWN: PKW

CHECKED: MAE — CHECKED: JLM

INDIANA DEPARTMENT OF TRANSPORTATION

APPROACH TABLE

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION 8461360
SURVEY BOOK 16722	SHEETS 180A OF 196
CONTRACT R 26185	PROJECT NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE										OUTLET PIPE				OUTLET PROTECTORS												Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
		150 mm																						Outside Left	Median Left	Median Right	Outside Right	
		(m)	(m2)	(m3)	(Mg)	%		(Y/N)					(m)							(m3)	(Mg)							
A-LT	3+352.800							120.183	Y			2	9.0	3+352.800	120.132	OP-1	118.006			5.8		OP-1	1	X				
	3+550.000	197.2	443.7	38.8				120.972	Y			2	11.0	3+550.000	120.915	OP-3	118.317			7.0		OP-3	1	X				
A-LT MEDIAN	3+352.800							120.183	Y			2	17.0	3+352.800	120.132	OP-1	118.006			10.9		OP-1	1	X				
	3+550.000	197.2	443.7	38.8				120.972	Y			2	19.0	3+550.000	120.915	OP-3	118.317			12.2		OP-3	1	X				
A-RT MEDIAN	3+352.800							120.183	Y			2	15.0	3+352.800	120.138	OP-2	118.006			9.6		OP-2	1				X	
	3+550.000	197.2	443.7	38.8				120.972	Y			2	18.0	3+550.000	120.918	OP-4	118.400			11.5		OP-4	1				X	
A-RT	3+352.800							120.183	Y			2	7.0	3+352.800	120.15	OP-2	118.006			4.5		OP-2	1				X	
	3+550.000	197.2	443.7	38.8				120.972	Y			2	10.0	3+550.000	120.918	OP-4	118.400			6.4		OP-4	1				X	
A-LT	3+550.000						0.2	120.972	Y			2	11.0	3+550.000	120.915	OP-5	118.317			7.0		OP-5	1	X				
	3+698.305	148.3	333.7	29.2				121.432	N																			
A-LT MEDIAN	3+550.000						0.2	120.972	Y			2	19.0	3+550.000	120.915	OP-5	118.317			12.2		OP-5	1	X				
	3+698.305	148.3	333.7	29.2				121.432	N																			
A-RT MEDIAN	3+550.000						0.2	120.972	Y			2	18.0	3+550.000	120.918	OP-6	118.400			11.5		OP-6	1				X	
	3+698.305	148.3	333.7	29.2				121.432	N																			
A-RT	3+550.000						0.2	120.972	Y			2	10.0	3+550.000	120.942	OP-6	118.400			6.4		OP-6	1				X	
	3+698.305	148.3	333.7	29.2				121.432	N																			
A-LT	3+698.305							121.432	N																			
	3+800.000	101.7	228.8	20.0			0.2	121.154	Y			2	10.0	3+800.000	121.1	OP-7	117.838			6.4		OP-7	1	X				
A-LT MEDIAN	3+698.305							121.432	N																			
	3+800.000	101.7	228.8	20.0			0.2	121.154	Y			2	18.0	3+800.000	121.1	OP-7	117.838			11.5		OP-7	1	X				
A-RT MEDIAN	3+698.305							121.432	N																			
	3+800.000	101.7	228.8	20.0			0.2	121.154	Y			2	16.0	3+800.000	121.105	OP-8	118.900			10.2		OP-8	1				X	
A-RT	3+698.305							121.432	N																			
	3+800.000	101.7	228.8	20.0			0.2	121.154	Y			2	8.0	3+800.000	121.106	OP-8	118.900			5.1		OP-8	1				X	
A-LT	3+800.000							121.154	N																			
	3+900.000	100.0	225.0	19.7				120.651	Y			2	10.0	3+900.000	120.597	OP-9	118.486			6.4		OP-9	1	X				
A-LT MEDIAN	3+800.000							121.154	N																			
	3+900.000	100.0	225.0	19.7				120.651	Y			2	18.0	3+900.000	120.597	OP-9	118.486			11.5		OP-9	1	X				
A-RT MEDIAN	3+800.000							121.154	N																			
	3+900.000	100.0	225.0	19.7				120.651	Y			2	15.0	3+900.000	120.606	OP-10	117.833			9.6		OP-10	1				X	
A-RT	3+800.000							121.154	N																			
	3+900.000	100.0	225.0	19.7				120.651	Y			2	7.0	3+900.000	120.606	OP-10	117.833			4.5		OP-10	1				X	
A-LT	3+900.000							120.651	Y			2	10.0	3+900.000	120.597	OP-11	118.486			6.4		OP-11	1	X				
	4+090.000	190.0	427.5	37.4				119.689	Y			2	10.0	4+090.000	119.635	OP-13	116.535			6.4		OP-13	1	X				
A-LT MEDIAN	3+900.000							120.651	Y			2	18.0	3+900.000	120.597	OP-11	118.486			11.5		OP-11	1	X				
	4+090.000	190.0	427.5	37.4				119.689	Y			2	18.0	4+090.000	119.635	OP-13	116.535			11.5		OP-13	1	X				
A-RT MEDIAN	3+900.000							120.651	Y			2	15.0	3+900.000	120.606	OP-12	117.833			9.6		OP-12	1				X	
	4+090.000	190.0	427.5	37.4				119.617	Y			2	17.0	4+090.000	119.566	OP-14	117.225			10.9		OP-14	1				X	
A-RT	3+900.000							120.651	Y			2	7.0	3+900.000	120.63	OP-12	117.833			4.5		OP-12	1				X	
	4+090.000	190.0	427.5	37.4				119.617	Y			2	9.0	4+090.000	119.566	OP-14	117.225			5.8		OP-14	1				X	
A-LT	4+090.000							119.689	N																			
	4+204.543	114.5	257.7	22.5			0.2	119.184	Y			2	10.0	4+204.543	119.13	OP-15	118.100			6.4		OP-15	1	X				
A-LT MEDIAN	4+090.000							119.689	N																			
	4+204.543	114.5	257.7	22.5			0.2	119.184	Y			2	18.0	4+204.543	119.13	OP-15	118.100			11.5		OP-15	1	X				
A-RT MEDIAN	4+090.000							119.617	N																			
	4+204.543	114.5	257.7	22.5			0.2	119.112	Y			2	15.0	4+204.543	119.067	OP-16	117.614			9.6		OP-16	1				X	
A-RT	4+090.000							119.617	N																			
	4+204.543	114.5	257.7	22.5			0.2	119.112	Y			2	7.0	4+204.543	119.067	OP-16	117.614			4.5		OP-16	1				X	
A-LT	4+204.543							119.184	Y			2	10.0	4+204.543	119.13	OP-17	118.100			6.4		OP-17	1	X				
	4+380.000	175.5	394.8	34.5			0.2	121.380	Y			2	8.0	4+380.000	121.311	OP-19	117.285			5.1		OP-19	1	X				
A-LT MEDIAN	4+204.543							119.184	Y			2	18.0	4+204.543	119.13	OP-17	118.100			11.5		OP-17	1	X				
	4+380.000	175.5	394.8	34.5			0.2	121.380	Y			2	23.0	4+380.000	121.311	OP-19	117.285			14.7		OP-19	1	X				
A-RT MEDIAN	4+204.543							119.112	Y			2	15.0	4+204.543	119.067	OP-18	117.614			9.6		OP-18	1				X	
	4+380.000	175.5	394.8	34.5			0.2	121.452	Y			2	23.0	4+380.000	121.383	OP-20	117.779			14.7		OP-20	1				X	
SUBTOTAL		3933.3	8850.0	773.7								76.0	517.0							330.9			38					

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

Alan J. DeLauray 9/24/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	181 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE									OUTLET PIPE				OUTLET PROTECTORS										Remarks
	Underdrain Pipe Limits	Pipe, Type 4 150 mm	Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
																							Outside Left	Median Left	Median Right	Outside Right	
		(m)	(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)							
A-RT	4+204.543						119.112	Y			2	7.0	4+204.543	119.088	OP-18	117.614			4.5		OP-18	1				X	
	4+380.000	175.5	394.8	34.5		0.2	121.452	Y			2	8.0	4+380.000	121.383	OP-20	117.779			5.1		OP-20	1				X	
A-LT	4+380.000						121.380	Y			2	8.0	4+380.000	121.311	OP-21	117.285			5.1		OP-21	1	X				
	4+580.000	200.0	450.0	39.3			126.022	Y			2	8.0	4+580.000	125.974	OP-23	116.885			5.1		OP-23	1	X				
A-LT MEDIAN	4+380.000						121.380	Y			2	23.0	4+380.000	121.311	OP-21	117.285			14.7		OP-21	1	X				
	4+580.000	200.0	450.0	39.3			126.022	Y			2	16.0	4+580.000	125.974	OP-23	116.885			10.2		OP-23	1	X				
A-RT MEDIAN	4+380.000						121.452	Y			2	23.0	4+380.000	121.383	OP-22	117.779			14.7		OP-22	1				X	
	4+580.000	200.0	450.0	39.3			126.022	Y			2	16.0	4+580.000	125.974	OP-24	117.379			10.2		OP-24	1				X	
A-RT	4+380.000						121.452	Y			2	8.0	4+380.000	121.428	OP-22	117.779			5.1		OP-22	1				X	
	4+580.000	200.0	450.0	39.3			126.022	Y			2	8.0	4+580.000	125.974	OP-24	117.379			5.1		OP-24	1				X	
A-LT	4+580.000						126.022	Y			2	8.0	4+580.000	125.974	OP-25	116.885			5.1		OP-25	1	X				
	4+780.000	200.0	450.0	39.3			128.625	Y			2	8.0	4+780.000	128.571	OP-27	116.485			5.1		OP-27	1	X				
A-LT MEDIAN	4+580.000						126.022	Y			2	16.0	4+580.000	125.974	OP-25	116.885			10.2		OP-25	1	X				
	4+780.000	200.0	450.0	39.3			128.369	Y			2	18.0	4+780.000	128.315	OP-27	116.485			11.5		OP-27	1	X				
A-RT MEDIAN	4+580.000						126.022	Y			2	16.0	4+580.000	125.974	OP-26	117.379			10.2		OP-26	1				X	
	4+780.000	200.0	450.0	39.3			128.369	Y			2	16.0	4+780.000	128.321	OP-28	116.979			10.2		OP-28	1				X	
A-RT	4+580.000						126.022	Y			2	8.0	4+580.000	125.998	OP-26	117.379			5.1		OP-26	1				X	
	4+780.000	200.0	450.0	39.3			128.113	Y			2	6.0	4+780.000	128.065	OP-28	116.979			3.8		OP-28	1				X	
A-LT	4+780.000						128.625	Y			2	8.0	4+780.000	128.571	OP-29	116.485			5.1		OP-29	1	X				
	4+816.760	36.8	82.7	7.2			128.803	N																			
A-LT MEDIAN	4+780.000						128.369	Y			2	18.0	4+780.000	128.315	OP-29	116.485			11.5		OP-29	1	X				
	4+816.760	36.8	82.7	7.2			128.542	N																			
A-RT MEDIAN	4+780.000						128.369	Y			2	16.0	4+780.000	128.321	OP-30	116.979			10.2		OP-30	1				X	
	4+793.415	13.4	30.2	2.6			128.542	N																			
A-RT	4+780.000						128.113	Y			2	6.0	4+780.000	128.095	OP-30	116.979			3.8		OP-30	1				X	
	4+793.415	13.4	30.2	2.6			128.187	N																			
A-LT	4+904.204						128.928	N																			
	4+980.000	75.8	170.5	14.9		0.2	128.644	Y			2	6.0	4+980.000	128.596	OP-31	116.085			3.8		OP-31	1	X				
A-LT MEDIAN	4+904.204						128.655	N																			
	4+980.000	75.8	170.5	14.9		0.2	128.388	Y			2	16.0	4+980.000	128.34	OP-31	116.085			10.2		OP-31	1	X				
A-RT MEDIAN	4+883.334						128.655	N																			
	4+980.000	96.7	217.5	19.0		0.2	128.388	Y			2	16.0	4+980.000	128.34	OP-32	116.579			10.2		OP-32	1				X	
A-RT	4+883.334						128.382	N																			
	4+980.000	96.7	217.5	19.0		0.2	128.132	Y			2	6.0	4+980.000	128.084	OP-32	116.579			3.8		OP-32	1				X	
A-LT	4+980.000						128.644	N																			
	5+100.000	120.0	270.0	23.6			127.538	Y			2	7.0	5+100.000	127.493	OP-33	115.845			4.5		OP-33	1	X				
A-LT MEDIAN	4+980.000						128.388	N																			
	5+100.000	120.0	270.0	23.6			127.282	Y			2	15.0	5+100.000	127.237	OP-33	115.845			9.6		OP-33	1	X				
A-RT MEDIAN	4+980.000						128.388	N																			
	5+100.000	120.0	270.0	23.6			127.282	Y			2	15.0	5+100.000	127.237	OP-34	116.339			9.6		OP-34	1				X	
A-RT	4+980.000						128.132	N																			
	5+100.000	120.0	270.0	23.6			127.026	Y			2	7.0	5+100.000	126.981	OP-34	116.339			4.5		OP-34	1				X	
A-LT	5+100.000						127.538	Y			2	7.0	5+100.000	127.493	OP-35	115.845			4.5		OP-35	1	X				
	5+300.000	200.0	450.0	39.3			123.766	Y			2	7.0	5+300.000	123.721	OP-37	115.444			4.5		OP-37	1	X				
A-LT MEDIAN	5+100.000						127.282	Y			2	15.0	5+100.000	127.237	OP-35	115.845			9.6		OP-35	1	X				
	5+300.000	200.0	450.0	39.3			123.622	Y			2	15.0	5+300.000	123.577	OP-37	115.444			9.6		OP-37	1	X				
A-RT MEDIAN	5+100.000						127.282	Y			2	15.0	5+100.000	127.237	OP-36	116.339			9.6		OP-36	1				X	
	5+300.000	200.0	450.0	39.3			123.550	Y			2	15.0	5+300.000	123.505	OP-38	115.939			9.6		OP-38	1				X	
A-RT	5+100.000						127.026	Y			2	7.0	5+100.000	127.005	OP-36	116.339			4.5		OP-36	1				X	
	5+300.000	200.0	450.0	39.3			123.550	Y			2	7.0	5+300.000	123.505	OP-38	115.939			4.5		OP-38	1				X	
A-LT	5+300.000						123.766	Y			2	7.0	5+300.000	123.721	OP-39	115.444			4.5		OP-39	1	X				
	5+460.000	160.0	360.0	31.5			120.076	Y			2	6.0	5+460.000	120.028	OP-41	115.154			3.8		OP-41	1	X				
A-LT MEDIAN	5+300.000						123.622	Y			2	15.0	5+300.000	123.577	OP-39	115.444			9.6		OP-39	1	X				
	5+460.000	160.0	360.0	31.5			120.076	Y			2	16.0	5+460.000	120.028	OP-41	115.154			10.2		OP-41	1	X				
A-RT MEDIAN	5+300.000						123.550	Y			2	15.0	5+300.000	123.505	OP-40	115.939			9.6		OP-40	1				X	
	5+460.000	160.0	360.0	31.5			120.004	Y			2	16.0	5+460.000	119.956	OP-42	114.489			10.2		OP-42	1				X	
SUBTOTAL		3980.7	8956.6	783.0							88	520.0							332.8			44					

ALAN J. DeLAURIA
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

DESIGNED: JMM DRAWN: JMM
CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	-
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	182 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE										OUTLET PIPE								OUTLET PROTECTORS									Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. ____	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. ____	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. ____	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. ____	Outlet Protector Type	Location				
			150 mm																					Outside Left	Median Left	Median Right	Outside Right	
			(m)	(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)						
A-RT	5+300.000							123.550	Y			2	7.0	5+300.000	123.529	OP-40	115.939			4.5		OP-40	1				X	
	5+460.000		160.0	360.0	31.5			120.004	Y			2	6.0	5+460.000	119.956	OP-42	114.489			3.8		OP-42	1				X	
A-LT	5+460.000							120.076	Y			2	6.0	5+460.000	120.028	OP-43	115.154			3.8		OP-43	1	X				
	5+616.602		156.6	352.4	30.8		0.2	118.717	Y			2	8.0	5+616.602	118.648	OP-45	116.707			5.1		OP-45	1	X				
A-LT MEDIAN	5+460.000							120.076	Y			2	16.0	5+460.000	120.028	OP-43	115.154			10.2		OP-43	1	X				
	5+616.602		156.6	352.4	30.8		0.2	118.717	Y			2	23.0	5+616.602	118.648	OP-45	116.707			14.7		OP-45	1	X				
A-RT MEDIAN	5+460.000							120.004	Y			2	16.0	5+460.000	119.956	OP-44	114.489			10.2		OP-44	1				X	
	5+616.602		156.6	352.4	30.8		0.2	118.789	Y			2	18.0	5+616.602	118.735	OP-46	116.170			11.5		OP-46	1				X	
A-RT	5+460.000							120.004	Y			2	6.0	5+460.000	119.98	OP-44	114.489			3.8		OP-44	1				X	
	5+616.602		156.6	352.4	30.8		0.2	118.789	Y			2	8.0	5+616.602	118.735	OP-46	116.170			5.1		OP-46	1				X	
A-LT	5+616.602							118.717	Y			2	8.0	5+616.602	118.648	OP-47	116.707			5.1		OP-47	1	X				
	5+740.000		123.4	277.6	24.3		0.2	119.533	N																			
A-LT MEDIAN	5+616.602							118.717	Y			2	23.0	5+616.602	118.648	OP-47	116.707			14.7		OP-47	1	X				
	5+740.000		123.4	277.6	24.3		0.2	119.533	N																			
A-RT MEDIAN	5+616.602							118.789	Y			2	18.0	5+616.602	118.735	OP-48	116.170			11.5		OP-48	1				X	
	5+740.000		123.4	277.6	24.3		0.2	119.533	N																			
A-RT	5+616.602							118.789	Y			2	8.0	5+616.602	118.765	OP-48	116.170			5.1		OP-48	1				X	
	5+740.000		123.4	277.6	24.3		0.2	119.533	N																			
A-LT	5+740.000							119.533	Y			2	8.0	5+740.000	119.476	OP-49	117.781			5.1		OP-49	1	X				
	5+940.000		200.0	450.0	39.3			121.262	Y			2	9.0	5+940.000	121.211	OP-51	116.686			5.8		OP-51	1	X				
A-LT MEDIAN	5+740.000							119.533	Y			2	19.0	5+740.000	119.476	OP-49	117.781			12.2		OP-49	1	X				
	5+940.000		200.0	450.0	39.3			121.334	Y			2	17.0	5+940.000	121.283	OP-51	116.686			10.9		OP-51	1	X				
A-RT MEDIAN	5+740.000							119.533	Y			2	17.0	5+740.000	119.482	OP-50	115.680			10.9		OP-50	1				X	
	5+940.000		200.0	450.0	39.3			121.334	Y			2	16.0	5+940.000	121.286	OP-52				10.2		OP-52	1				X	
A-RT	5+740.000							119.533	Y			2	9.0	5+740.000	119.506	OP-50	115.680			5.8		OP-50	1				X	
	5+940.000		200.0	450.0	39.3			121.406	Y			2	8.0	5+940.000	121.358	OP-52				5.1		OP-52	1				X	
A-LT	5+940.000							121.262	Y			2	9.0	5+940.000	121.211	OP-53	116.686			5.8		OP-53	1	X				
	5+993.456		53.5	120.3	10.5		0.2	121.236	N																			
A-LT MEDIAN	5+940.000							121.334	Y			2	17.0	5+940.000	121.283	OP-53	116.686			10.9		OP-53	1	X				
	5+993.456		53.5	120.3	10.5		0.2	121.531	N																			
A-RT MEDIAN	5+940.000							121.334	Y			2	16.0	5+940.000	121.286	OP-54	114.737			10.2		OP-54	1				X	
	5+981.448		41.4	93.3	8.2		0.2	121.501	N																			
A-RT	5+940.000							121.406	Y			2	8.0	5+940.000	121.382	OP-54	114.737			5.1		OP-54	1				X	
	5+981.448		41.4	93.3	8.2		0.2	121.753	N																			
A-LT	6+089.965							121.212	N																			
	6+180.000		90.0	202.6	17.7			120.655	Y			2	8.0	6+180.000	120.604	OP-55	115.809			5.1		OP-55	1	X				
A-LT MEDIAN	6+089.965							121.462	N																			
	6+180.000		90.0	202.6	17.7			120.905	Y			2	17.0	6+180.000	120.854	OP-55	115.809			10.9		OP-55	1	X				•
A-RT MEDIAN	6+075.849							121.506	N																			
	6+180.000		104.2	234.3	20.5			120.905	Y			2	17.0	6+180.000	120.854	OP-56	115.809			10.9		OP-56	1				X	
A-RT	6+075.849							121.756	N																			
	6+180.000		104.2	234.3	20.5			121.155	Y			2	8.0	6+180.000	121.104	OP-56	115.809			5.1		OP-56	1				X	
A-LT	6+180.000							120.655	Y			2	8.0	6+180.000	120.604	OP-57	115.809			5.1		OP-57	1	X				
	6+340.000		160.0	360.0	31.5			119.131	Y			2	8.0	6+340.000	119.08	OP-59	118.160			5.1		OP-59	1	X				
A-LT MEDIAN	6+180.000							120.905	Y			2	17.0	6+180.000	120.854	OP-57	115.809			10.9		OP-57	1	X				
	6+340.000		160.0	360.0	31.5			119.381	Y			2	17.0	6+340.000	119.33	OP-59	118.160			10.9		OP-59	1	X				
A-RT MEDIAN	6+180.000							120.905	Y			2	17.0	6+180.000	120.854	OP-58	115.809			10.9		OP-58	1				X	
	6+340.000		160.0	360.0	31.5			119.381	Y			2	17.0	6+340.000	119.33	OP-60	116.194			10.9		OP-60	1				X	
A-RT	6+180.000							121.155	Y			2	8.0	6+180.000	121.131	OP-58	115.809			5.1		OP-58	1				X	
	6+340.000		160.0	360.0	31.5			119.631	Y			2	8.0	6+340.000	119.58	OP-60	116.194			5.1		OP-60	1				X	
A-LT	6+340.000							119.131	N																			
	6+425.674		85.7	192.8	16.9		0.2	118.814	Y			2	8.0	6+425.674	118.763	OP-61	118.417			5.1		OP-61	1	X				•
A-LT MEDIAN	6+340.000							119.381	N																			
	6+425.674		85.7	192.8	16.9		0.2	119.064	Y			2	17.0	6+425.674	119.013	OP-61	118.417			10.9		OP-61	1	X				•
SUBTOTAL			3469.5	7806.4	682.5							80	499.0							319.4			40					

ALAN J. DeLANEY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	183 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE									OUTLET PIPE						OUTLET PROTECTORS								Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
			150 mm																					Outside Left	Median Left	Median Right	Outside Right	
			(m)	(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)							
A-RT MEDIAN	6+340.000							119.381	N																		
	6+425.674		85.7	192.8	16.9		0.2	119.064	Y			2	17.0	6+425.674	119.013	OP-62	116.401			10.9		OP-62	1				X	
A-RT	6+340.000							119.631	N																			
	6+425.674		85.7	192.8	16.9		0.2	119.315	Y			2	8.0	6+425.674	119.264	OP-62	116.401			5.1		OP-62	1				X	
A-LT	6+425.674							118.814	Y			2	8.0	6+425.674	118.763	OP-63	118.417			5.1		OP-63	1	X				•
	6+600.000		174.3	392.2	34.3		0.2	119.650	Y			2	50.0	6+600.000	119.5	OP-65	116.820			32.0		OP-65	1	X				OUT TO RT DITCH
A-LT MEDIAN	6+425.674							119.064	Y			2	17.0	6+425.674	119.013	OP-63	118.417			10.9		OP-63	1	X				•
	6+600.000		174.3	392.2	34.3		0.2	119.900	Y			2	40.0	6+600.000	119.78	OP-65	116.820			25.6		OP-65	1	X				OUT TO RT DITCH
A-RT MEDIAN	6+425.674							119.064	Y			2	17.0	6+425.674	119.013	OP-64	116.401			10.9		OP-64	1				X	
	6+600.000		174.3	392.2	34.3		0.2	119.900	Y			2	17.0	6+600.000	119.849	OP-66	116.820			10.9		OP-66	1				X	
A-RT	6+425.674							119.315	Y			2	8.0	6+425.674	#REF!	OP-64	116.401			5.1		OP-64	1				X	•
	6+600.000		174.3	392.2	34.3		0.2	120.150	Y			2	8.0	6+600.000	120.099	OP-66	116.820			5.1		OP-66	1				X	
A-LT	6+600.000							119.650	Y			2	50.0	6+600.000	119.5	OP-67	116.820					OP-67	1	X				OUT TO RT DITCH
	6+760.000		160.0	360.0	31.5			120.632	Y			2	10.0	6+760.000	120.575	OP-69	120.180			6.4		OP-69	1	X				•
A-LT MEDIAN	6+600.000							119.900	Y			2	40.0	6+600.000	119.78	OP-67	116.820			25.6		OP-67	1	X				OUT TO RT DITCH
	6+760.000		160.0	360.0	31.5			120.846	Y			2	19.0	6+760.000	120.789	OP-69	120.180			12.2		OP-69	1	X				
A-RT MEDIAN	6+600.000							119.900	Y			2	17.0	6+600.000	119.849	OP-68	116.820			10.9		OP-68	1				X	
	6+760.000		160.0	360.0	31.5			120.846	Y			2	19.0	6+760.000	120.789	OP-70	117.205			12.2		OP-70	1				X	
A-RT	6+600.000							120.150	Y			2	8.0	6+600.000	120.12	OP-68	116.820			5.1		OP-68	1				X	
	6+760.000		160.0	360.0	31.5			121.060	Y			2	10.0	6+760.000	121.003	OP-70	117.205			6.4		OP-70	1				X	
A-LT	6+760.000							120.632	Y			2	10.0	6+760.000	120.575	OP-71	120.180			6.4		OP-71	1	X				•
	6+860.000		100.0	225.0	19.7			121.438	N																			
A-LT MEDIAN	6+760.000							120.846	Y			2	19.0	6+760.000	120.789	OP-71	120.180			12.2		OP-71	1	X				
	6+860.000		100.0	225.0	19.7			121.438	N																			
A-RT MEDIAN	6+760.000							120.846	Y			2	19.0	6+760.000	120.789	OP-72	117.205			12.2		OP-72	1				X	
	6+860.000		100.0	225.0	19.7			121.438	N																			
A-RT	6+760.000							121.060	Y			2	10.0	6+760.000	121.027	OP-72	117.205			6.4		OP-72	1				X	
	6+860.000		100.0	225.0	19.7			121.438	N																			
A-LT	6+860.000							121.438	Y			2	11.0	6+860.000	121.378	OP-73	119.940			7.0		OP-73	1	X				
	7+020.000		160.0	360.0	31.5			122.574	Y			2	9.0	7+020.000	122.52	OP-77	120.960			5.8		OP-77	1	X				
A-LT MEDIAN	6+860.000							121.438	Y			2	20.0	6+860.000	121.378	OP-73	119.940			12.8		OP-73	1	X				
	7+020.000		160.0	360.0	31.5			122.430	Y			2	18.0	7+020.000	122.376	OP-77	120.960			11.5		OP-77	1	X				
A-RT MEDIAN	6+860.000							121.438	Y			2	20.0	6+860.000	121.378	OP-74	117.445			10.2		OP-74	1				X	
	7+020.000		160.0	360.0	31.5			122.430	Y			2	18.0	7+020.000	122.232	OP-78	117.830			10.2		OP-78	1				X	
A-RT	6+860.000							121.438	Y			2	9.0	6+860.000	121.378	OP-74	117.445			4.5		OP-74	1				X	
	7+020.000		160.0	360.0	31.5			122.286	Y			2	9.0	7+020.000	123.238	OP-78	117.830			4.5		OP-78	1				X	
A-LT	7+020.000							122.574	Y			2	9.0	7+020.000	122.376	OP-77	120.960			4.5		OP-77	1	X				
	7+140.000		120.0	270.0	23.6			123.265	N																			
A-LT MEDIAN	7+020.000							122.430	Y			2	18.0	7+020.000	122.376	OP-77	120.960			11.5		OP-77	1	X				
	7+140.000		120.0	270.0	23.6			123.121	N																			
A-RT MEDIAN	7+020.000							122.430	Y			2	18.0	7+020.000	122.232	OP-78	117.830			10.2		OP-78	1				X	
	7+140.000		120.0	270.0	23.6			123.121	N																			
A-RT	7+020.000							122.286	Y			2	9.0	7+020.000	122.232	OP-78	117.830			4.5		OP-78	1				X	
	7+140.000		120.0	270.0	23.6			122.977	N																			
A-LT	7+140.000							123.265	Y			2	7.0	7+140.000	123.067	OP-79	121.320			4.5		OP-79	1	X				
	7+260.000		120.0	270.0	23.6			123.763	N																			
A-LT MEDIAN	7+140.000							123.121	Y			2	18.0	7+140.000	123.067	OP-79	121.320			11.5		OP-79	1	X				
	7+260.000		120.0	270.0	23.6			123.763	N																			
A-RT MEDIAN	7+140.000							123.121	Y			2	16.0	7+140.000	122.497	OP-80	118.119			10.2		OP-80	1				X	
	7+260.000		120.0	270.0	23.6			123.763	N																			
A-RT	7+140.000							122.977	Y			2	7.0	7+140.000	122.497	OP-80	118.119			4.5		OP-80	1				X	
	7+260.000		120.0	270.0	23.6			123.763	N																			
A-LT	7+260.000							123.763	Y			2	7.0	7+260.000	123.712	OP-81	121.788			4.5		OP-81	1	X				
	7+313.877		53.9	121.2	10.6		0.2	123.881	N																			
A-LT MEDIAN	7+260.000							123.763	Y			2	17.0	7+260.000	123.712	OP-81	121.788			10.9		OP-81	1	X				
	7+313.877		53.9	121.2	10.6		0.2	123.881	N																			
SUBTOTAL			3616.4	8136.9	711.3							80	661.0							380.8			40					

ALAN J. DeLAURA REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED: JMM	DRAWN: JMM
CHECKED: MAT	CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	184 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE									OUTLET PIPE				OUTLET PROTECTORS									Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
		150 mm																						Outside Left	Median Left	Median Right	Outside Right	
		(m)		(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)						
A-RT MEDIAN	7+260.000							123.763	Y			2	17.0	7+260.000	123.712	OP-82	118.408			10.9		OP-82	1				X	
	7+313.877		53.9	121.2	10.6		0.2	123.881	N																			
A-RT	7+260.000							123.763	Y			2	7.0	7+260.000	123.712	OP-82	118.408			4.5		OP-82	1				X	
	7+313.877		53.9	121.2	10.6		0.2	123.881	N																			
A-LT	7+313.877							123.881	N																			
	7+430.000		116.1	261.3	22.8		0.2	123.443	Y			2	7.0	7+430.000	123.392	OP-83	120.824			4.5		OP-83	1	X				
A-LT MEDIAN	7+313.877							123.881	N																			
	7+430.000		116.1	261.3	22.8		0.2	123.443	Y			2	17.0	7+430.000	123.392	OP-83	120.824			10.9		OP-83	1	X				
A-RT MEDIAN	7+313.877							123.881	N																			
	7+430.000		116.1	261.3	22.8		0.2	123.443	Y			2	17.0	7+430.000	123.392	OP-84	118.817			10.9		OP-84	1				X	
A-RT	7+313.877							123.881	N																			
	7+430.000		116.1	261.3	22.8		0.2	123.443	Y			2	7.0	7+430.000	123.392	OP-84	118.817			4.5		OP-84	1				X	
A-LT	7+430.000							123.443	N																			
	7+550.000		120.0	270.0	23.6			122.690	Y			2	6.0	7+550.000	122.642	OP-85	119.963			3.8		OP-85	1	X				
A-LT MEDIAN	7+430.000							123.443	N																			
	7+550.000		120.0	270.0	23.6			122.690	Y			2	16.0	7+550.000	122.642	OP-85	119.963			10.2		OP-85	1	X				
A-RT MEDIAN	7+430.000							123.443	N																			
	7+550.000		120.0	270.0	23.6			122.690	Y			2	17.0	7+550.000	122.639	OP-86	119.106			10.9		OP-86	1				X	
A-RT	7+430.000							123.443	N																			
	7+550.000		120.0	270.0	23.6			122.690	Y			2	7.0	7+550.000	122.639	OP-86	119.106			4.5		OP-86	1				X	
A-LT	7+550.000							122.690	N																			
	7+670.000		120.0	270.0	23.6			122.125	Y			2	7.0	7+670.000	122.074	OP-87	119.693			4.5		OP-87	1	X				
A-LT MEDIAN	7+550.000							122.690	N																			
	7+670.000		120.0	270.0	23.6			122.125	Y			2	17.0	7+670.000	122.074	OP-87	119.693			10.9		OP-87	1	X				
A-RT MEDIAN	7+550.000							122.690	N																			
	7+670.000		120.0	270.0	23.6			122.053	Y			2	17.0	7+670.000	122.002	OP-88	119.394			10.9		OP-88	1				X	
A-RT	7+550.000							122.690	N																			
	7+670.000		120.0	270.0	23.6			122.053	Y			2	7.0	7+670.000	122.002	OP-88	119.394			4.5		OP-88	1				X	
A-LT	7+670.000							122.125	N																			
	7+790.000		120.0	270.0	23.6			121.774	Y			2	7.0	7+790.000	121.723	OP-89	119.492			4.5		OP-89	1	X				
A-LT MEDIAN	7+670.000							122.125	N																			
	7+790.000		120.0	270.0	23.6			121.774	Y			2	17.0	7+790.000	121.723	OP-89	119.492			10.9		OP-89	1	X				
A-RT MEDIAN	7+670.000							122.053	N																			
	7+790.000		120.0	270.0	23.6			121.702	Y			2	23.0	7+790.000	121.633	OP-90	119.702			14.7		OP-90	1				X	
A-RT	7+670.000							122.053	N																			
	7+790.000		120.0	270.0	23.6			121.702	Y			2	7.0	7+790.000	121.633	OP-90	119.702			4.5		OP-90	1				X	
A-LT	7+790.000							121.774	N																			
	7+910.000		120.0	270.0	23.6		0.2	121.534	Y			2	7.0	7+910.000	121.45	OP-91	120.441			4.5		OP-91	1	X				
A-LT MEDIAN	7+790.000							121.774	N																			
	7+910.000		120.0	270.0	23.6		0.2	121.534	Y			2	28.0	7+910.000	121.45	OP-91	120.441			17.9		OP-91	1	X				
A-RT MEDIAN	7+790.000							121.702	N																			
	7+910.000		120.0	270.0	23.6		0.2	121.534	Y			2	30.0	7+910.000	121.444	OP-92	120.143			19.2		OP-92	1				X	
A-RT	7+790.000							121.702	N																			
	7+910.000		120.0	270.0	23.6		0.2	121.534	Y			2	7.0	7+910.000	121.444	OP-92	120.143			4.5		OP-92	1				X	
A-LT	7+910.000							121.638	Y			2	7.0	7+910.000	121.569	OP-97	120.577			4.5		OP-97	1	X				
	8+060.122		150.1	337.8	29.5		0.2	121.734	Y			2	7.0	8+060.122	121.665	OP-99	120.885			4.5		OP-99	1	X				
A-LT MEDIAN	7+910.000							121.638	Y			2	23.0	7+910.000	121.569	OP-97	120.577			14.7		OP-97	1	X				
	8+060.122		155.2	349.3	30.5		0.2	121.734	Y			2	23.0	8+060.122	121.665	OP-99	120.885			14.7		OP-99	1	X				
A-RT MEDIAN	7+910.000							121.638	Y			2	21.0	7+910.000	121.575	OP-98	120.270			13.4		OP-98	1				X	
	8+060.122		155.2	349.3	30.5		0.2	121.806	Y			2	21.0	8+060.122	121.743	OP-100	120.420			13.4		OP-100	1				X	
A-RT	7+910.000							121.638	Y			2	7.0	7+910.000	121.575	OP-98	120.270			4.5		OP-98	1				X	
	8+060.122		150.1	337.8	29.5		0.2	121.806	Y			2	7.0	8+060.122	121.743	OP-100	120.420			4.5		OP-100	1				X	
A-LT	8+060.122							121.734	Y			2	7.0	8+060.122	121.665	OP-99	120.885			4.5		OP-99	1	X				
	8+130.000		69.9	157.2	13.7		0.2	121.874	N																			
SUBTOTAL			3172.8	7138.8	624.1							62	415.0							265.6			31					

DESIGNED: JMM	DRAWN: JMM
CHECKED: MAT	CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	185 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

	Underdrain Pipe Limits	UNDERDRAIN PIPE: Pipe, Type 4 150 mm (m)	Geotextile for Underdrains (m2)	Aggregate for Underdrains (m3)	HMA for Underdrains (Mg)	Special Grade %	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required (Y/N)	Connect Underdrain Pipe to Structure No.	Structure Invert Elevation	OUTLET PIPE: 45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe (m)	Outlet Station	Outlet Elevation	OUTLET PROTECTORS: Outlet at Outlet Protector No.	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No.	Structure Invert Elevation	Structure Backfill (m3)	HMA for Underdrains (Mg)	Outlet Protector No.	Outlet Protector Type	Location: Outside Left	Median Left	Median Right	Outside Right	Remarks
A-LT MEDIAN	8+060.122						121.734	Y			2	23.0	8+060.122	121.665	OP-99	120.885			14.7		OP-99	1	X				
	8+130.000	69.9	157.2	13.7		0.2	121.874	N																			
A-RT MEDIAN	8+060.122						121.806	Y			2	17.0	8+060.122	121.755	OP-100	120.420			10.9		OP-100	1				X	
	8+130.000	69.9	157.2	13.7		0.2	121.946	N																			
A-RT	8+060.122						121.806	Y			2	7.0	8+060.122	121.755	OP-100	120.420			4.5		OP-100	1				X	
	8+130.000	69.9	157.2	13.7		0.2	121.946	N																			
A-LT	8+130.000						121.874	Y			2	7.0	8+130.000	121.805	OP-101	121.625			4.5		OP-101	1	X				•
	8+250.000	120.0	270.0	23.6			122.419	N																			
A-LT MEDIAN	8+130.000						121.874	Y			2	23.0	8+130.000	121.805	OP-101	121.625			14.7		OP-101	1	X				•
	8+250.000	120.0	270.0	23.6			122.419	N																			
A-RT MEDIAN	8+130.000						121.946	Y			2	17.0	8+130.000	121.895	OP-102	120.946			10.9		OP-102	1				X	
	8+250.000	120.0	270.0	23.6			122.419	N																			
A-RT	8+130.000						121.946	Y			2	7.0	8+130.000	121.895	OP-102	120.946			4.5		OP-102	1				X	
	8+250.000	120.0	270.0	23.6			122.419	N																			
A-LT	8+250.000						122.419	Y			2	7.0	8+250.000	122.368	OP-103	122.364			4.5		OP-103	1	X				•
	8+370.000	120.0	270.0	23.6			123.106	N																			
A-LT MEDIAN	8+250.000						122.419	Y			2	17.0	8+250.000	122.368	OP-103	122.364			10.9		OP-103	1	X				•
	8+370.000	120.0	270.0	23.6			123.106	N																			
A-RT MEDIAN	8+250.000						122.419	Y			2	17.0	8+250.000	122.368	OP-104	121.704			10.9		OP-104	1				X	
	8+370.000	120.0	270.0	23.6			123.106	N																			
A-RT	8+250.000						122.419	Y			2	7.0	8+250.000	122.368	OP-104	121.704			4.5		OP-104	1				X	
	8+370.000	120.0	270.0	23.6			123.106	N																			
A-LT	8+370.000						123.106	Y			2	5.0	8+370.000	123.064	OP-105	121.168			3.2		OP-105	1	X				
	8+490.000	120.0	270.0	23.6			124.008	N																			
A-LT MEDIAN	8+370.000						123.106	Y			2	14.0	8+370.000	123.064	OP-105	121.168			9.0		OP-105	1	X				
	8+490.000	120.0	270.0	23.6			124.008	N																			
A-RT MEDIAN	8+370.000						123.106	Y			2	17.0	8+370.000	123.055	OP-106	122.109			10.9		OP-106	1				X	
	8+490.000	120.0	270.0	23.6			124.008	N																			
A-RT	8+370.000						123.106	Y			2	7.0	8+370.000	123.055	OP-106	122.109			4.5		OP-106	1				X	
	8+490.000	120.0	270.0	23.6			124.008	N																			
A-LT	8+490.000						124.008	Y			2	7.0	8+490.000	123.957	OP-107	123.678			4.5		OP-107	1	X				•
	8+610.000	120.0	270.0	23.6			125.124	N																			
A-LT MEDIAN	8+490.000						124.008	Y			2	17.0	8+490.000	123.957	OP-107	123.678			10.9		OP-107	1	X				•
	8+610.000	120.0	270.0	23.6			125.124	N																			
A-RT MEDIAN	8+490.000						124.008	Y			2	17.0	8+490.000	123.957	OP-108	121.452			10.9		OP-108	1				X	
	8+610.000	120.0	270.0	23.6			125.124	N																			
A-RT	8+490.000						124.008	Y			2	7.0	8+490.000	123.957	OP-108	121.452			4.5		OP-108	1				X	
	8+610.000	120.0	270.0	23.6			125.124	N																			
A-LT	8+610.000						125.124	Y			2	7.0	8+610.000	125.073	OP-109	123.918			4.5		OP-109	1	X				
	8+730.000	120.0	270.0	23.6			126.465	N																			
A-LT MEDIAN	8+610.000						125.124	Y			2	17.0	8+610.000	125.073	OP-109	123.918			10.9		OP-109	1	X				
	8+730.000	120.0	270.0	23.6			126.465	N																			
A-RT MEDIAN	8+610.000						125.124	Y			2	17.0	8+610.000	125.073	OP-110	122.159			10.9		OP-110	1				X	
	8+730.000	120.0	270.0	23.6			126.465	N																			
A-RT	8+610.000						125.124	Y			2	7.0	8+610.000	125.073	OP-110	122.159			4.5		OP-110	1				X	
	8+730.000	120.0	270.0	23.6			126.465	N																			
A-LT	8+730.000						126.465	Y			2	7.0	8+730.000	126.414	OP-111	124.158			4.5		OP-111	1	X				
	8+850.000	120.0	270.0	23.6			128.036	N																			
A-LT MEDIAN	8+730.000						126.465	Y			2	17.0	8+730.000	126.414	OP-111	124.158			10.9		OP-111	1	X				
	8+850.000	120.0	270.0	23.6			128.036	N																			
A-RT MEDIAN	8+730.000						126.465	Y			2	17.0	8+730.000	126.414	OP-112	122.399			10.9		OP-112	1				X	
	8+850.000	120.0	270.0	23.6			128.036	N																			
A-RT	8+730.000						126.465	Y			2	7.0	8+730.000	126.414	OP-112	122.399			4.5		OP-112	1				X	
	8+850.000	120.0	270.0	23.6			128.036	N																			
SUBTOTAL		**3089.6**	**6951.7**	**607.7**							**54**	**336.0**							**215.0**			**27**					

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	186 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE									OUTLET PIPE								OUTLET PROTECTORS								Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
			150 mm																					Outside Left	Median Left	Median Right	Outside Right	
			(m)	(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)						
A-LT	8+850.000							128.036	Y			2	6.0	8+850.000	127.988	OP-113	126.989			3.8		OP-113	1	X				
	8+950.000		120.0	270.0	23.6			129.807	N																		
A-LT MEDIAN	8+850.000							128.036	Y			2	16.0	8+850.000	127.988	OP-113	126.989			10.2		OP-113	1	X				
	8+970.000		120.0	270.0	23.6			129.807	N																		
A-RT MEDIAN	8+850.000							128.036	Y			2	17.0	8+850.000	127.985	OP-114	126.989			10.9		OP-114	1				X
	8+970.000		120.0	270.0	23.6			129.807	N																		
A-RT	8+850.000							128.036	Y			2	7.0	8+850.000	127.985	OP-114	126.989			4.5		OP-114	1				X
	8+950.000		120.0	270.0	23.6			129.807	N																		
A-LT MEDIAN	8+970.000							129.807	Y			2	16.0	8+970.000	129.759	OP-115	128.759			10.2		OP-115	1	X				
	9+090.000		120.0	270.0	23.6			131.264	N																		
A-RT MEDIAN	8+970.000							129.807	Y			2	17.0	8+970.000	129.756	OP-116	128.759			10.9		OP-116	1				X
	9+090.000		120.0	270.0	23.6			131.264	N																		
A-LT MEDIAN	9+090.000							131.264	Y			2	16.0	9+090.000	131.216	OP-117	129.436			10.2		OP-117	1	X				
	9+210.000		120.0	270.0	23.6			131.906	N																		
A-RT MEDIAN	9+090.000							131.264	Y			2	15.0	9+090.000	131.219	OP-118	129.436			9.6		OP-118	1				X
	9+210.000		120.0	270.0	23.6			131.906	N																		
A-LT MEDIAN	9+280.000							131.906	N																		
	9+400.000		120.0	270.0	23.6			131.253	Y			2	16.0	9+400.000	131.205	OP-119	130.205			10.2		OP-119	1	X				
A-RT MEDIAN	9+280.000							131.906	N																		
	9+400.000		120.0	270.0	23.6			131.253	Y			2	17.0	9+400.000	131.202	OP-120	130.205			10.9		OP-120	1				X
A-LT MEDIAN	9+400.000							131.253	N																		
	9+520.000		120.0	270.0	23.6			129.797	Y			2	16.0	9+520.000	129.749	OP-121	128.749			10.2		OP-121	1	X				
A-RT MEDIAN	9+400.000							131.253	N																		
	9+520.000		120.0	270.0	23.6			129.797	Y			2	17.0	9+520.000	129.746	OP-122	128.749			10.9		OP-122	1				X
A-LT	9+600.000							129.797	N																		
	9+640.000		40.0	270.0	23.6			128.057	Y			2	6.0	9+640.000	128.009	OP-123	127.009			3.8		OP-123	1	X				
A-LT MEDIAN	9+520.000							129.797	N																		
	9+640.000		120.0	270.0	23.6			128.057	Y			2	16.0	9+640.000	128.009	OP-123	127.009			10.2		OP-123	1	X				
A-RT MEDIAN	9+520.000							129.797	N																		
	9+640.000		120.0	270.0	23.6			128.057	Y			2	17.0	9+640.000	128.006	OP-124	127.009			10.9		OP-124	1				X
A-RT	9+600.000							129.797	N																		
	9+640.000		40.0	270.0	23.6			128.057	Y			2	7.0	9+640.000	128.006	OP-124	127.009			4.5		OP-124	1				X
A-LT	9+640.000							128.057	N																		
	9+760.000		120.0	270.0	23.6			126.409	Y			2	6.0	9+760.000	126.361	OP-125	125.361			3.8		OP-125	1	X				
A-LT MEDIAN	9+640.000							128.057	N																		
	9+760.000		120.0	270.0	23.6			126.409	Y			2	16.0	9+760.000	126.361	OP-125	125.361			10.2		OP-125	1	X				
A-RT MEDIAN	9+640.000							128.057	N																		
	9+760.000		120.0	270.0	23.6			126.409	Y			2	17.0	9+760.000	126.358	OP-126	122.428			10.9		OP-126	1				X
A-RT	9+640.000							128.057	N																		
	9+760.000		120.0	270.0	23.6			126.409	Y			2	7.0	9+760.000	126.358	OP-126	122.428			4.5		OP-126	1				X
A-LT	9+760.000							126.409	N																		
	9+880.000		120.0	270.0	23.6			125.402	Y			2	6.0	9+880.000	125.354	OP-127	122.812			3.8		OP-127	1	X				
A-LT MEDIAN	9+760.000							126.409	N																		
	9+880.000		120.0	270.0	23.6			125.402	Y			2	16.0	9+880.000	125.354	OP-127	122.812			10.2		OP-127	1	X				
A-RT MEDIAN	9+760.000							126.409	N																		
	9+880.000		120.0	270.0	23.6			125.402	Y			2	17.0	9+880.000	125.351	OP-128	122.668			10.9		OP-128	1				X
A-RT	9+760.000							126.415	N																		
	9+880.000		120.0	270.0	23.6			125.402	Y			2	7.0	9+880.000	125.351	OP-128	122.668			4.5		OP-128	1				X
A-LT	9+880.000							125.402	N																		
	10+000.000		120.0	270.0	23.6			124.753	Y			2	8.0	10+000.000	124.699	OP-129	123.052			5.1		OP-129	1	X				
A-LT MEDIAN	9+880.000							125.402	N																		
	10+000.000		120.0	270.0	23.6			124.753	Y			2	18.0	10+000.000	124.699	OP-129	123.052			11.5		OP-129	1	X				
A-RT MEDIAN	9+880.000							125.402	N																		
	10+000.000		120.0	270.0	23.6			124.753	Y			2	17.0	10+000.000	124.702	OP-130	122.908			10.9		OP-130	1				X
SUBTOTAL			3080.0	7290.0	637.3							54	357.0							228.5			27				

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	187 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE										OUTLET PIPE				OUTLET PROTECTORS										Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. —	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. —	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. —	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. —	Outlet Protector Type	Location				
			150 mm																					Outside Left	Median Left	Median Right	Outside Right	
			(m)	(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)						
A-RT	9+880.000							125.402	N																		
	10+000.000		120.0	270.0	23.6			124.753	Y			2	7.0	10+000.000	124.702	OP-130	122.908			4.5		OP-130	1				X	
A-LT	10+000.000							124.753	Y			2	8.0	10+000.000	124.699	OP-131	123.052			5.1		OP-131	1	X				
	10+157.808		157.8	355.1	31.0		0.2	124.363	Y			2	9.0	10+157.808	124.309	OP-133	123.368			5.8		OP-133	1	X				
A-LT MEDIAN	10+000.000							124.753	Y			2	18.0	10+000.000	124.699	OP-131	123.052			11.5		OP-131	1	X				
	10+157.808		157.8	355.1	31.0		0.2	124.363	Y			2	18.0	10+157.808	124.309	OP-133	123.368			11.5		OP-133	1	X				
A-RT MEDIAN	10+000.000							124.753	Y			2	17.0	10+000.000	124.702	OP-132	122.908			10.9		OP-132	1				X	
	10+157.808		157.8	355.1	31.0		0.2	124.291	Y			2	19.0	10+157.808	124.234	OP-134	123.224			12.2		OP-134	1				X	
A-RT	10+000.000							124.753	Y			2	7.0	10+000.000	124.702	OP-132	122.908			4.5		OP-132	1				X	
	10+157.808		157.8	355.1	31.0		0.2	124.291	Y			2	7.0	10+157.808	124.234	OP-134	123.224			4.5		OP-134	1				X	
A-LT	10+157.810							124.363	Y			2	9.0	10+157.810	124.309	OP-135	123.368			5.8		OP-135	1	X				
	10+300.000		142.2	319.9	28.0		0.2	124.694	Y			2	9.0	10+300.000	124.667	OP-137	123.652			5.8		OP-137	1	X				
A-LT MEDIAN	10+157.810							124.363	Y			2	18.0	10+157.810	124.309	OP-135	123.368			11.5		OP-135	1	X				
	10+300.000		142.2	319.9	28.0		0.2	124.694	N			2	18.0		124.64	OP-137	123.652			12.2				X				
A-RT MEDIAN	10+157.810							124.291	Y			2	19.0	10+157.810	124.234	OP-136	123.224			12.2		OP-136	1				X	
	10+300.000		142.2	319.9	28.0		0.2	124.694	N			2	19.0		124.64	OP-138	123.508			12.2							X	
A-RT	10+157.810							124.291	Y			2	7.0	10+157.810	124.234	OP-136	123.224			4.5		OP-136	1				X	
	10+300.000		142.2	319.9	28.0		0.2	124.694	Y			2	7.0	10+300.000	124.64	OP-138	123.508			4.5		OP-138	1				X	
A-LT	10+300.000							124.694	Y			2	9.0	10+300.000	124.637	OP-137	123.652			5.8		OP-137	1	X				
	10+400.000		100.0	225.0	19.7			125.172	N																			
A-LT MEDIAN	10+300.000							124.694	Y			2	19.0	10+300.000	124.637	OP-137	123.652			12.2		OP-137	1	X				
	10+400.000		110.0	247.5	21.6			125.172	N																			
A-RT MEDIAN	10+300.000							124.694	Y			2	19.0	10+300.000	124.637	OP-138	123.508			12.2		OP-138	1				X	
	10+400.000		110.0	247.5	21.6			125.172	N																			
A-RT	10+300.000							1224.694	Y			2	7.0	10+300.000	124.637	OP-138	123.508			4.5		OP-138	1				X	
	10+400.000		100.0	225.0	19.7			125.172	N																			
A-LT	10+400.000							125.172	Y			2	9.0	10+400.000	125.079	OP-141	123.812			5.8		OP-141	1	X				
	10+500.000		100.0	225.0	19.7			125.826	N																			
A-LT MEDIAN	10+400.000							125.172	Y			2	31.0	10+400.000	125.079	OP-141	123.812			19.8		OP-141	1	X				
	10+500.000		100.0	225.0	19.7			125.826	N																			
A-RT MEDIAN	10+400.000							125.172	Y			3	20.0	10+400.000	125.112	OP-142	123.619			12.8		OP-142	1				X	
	10+500.000		100.0	225.0	19.7			125.898	N																			
A-RT	10+400.000							125.172	Y			2	7.0	10+400.000	125.112	OP-142	123.619			4.5		OP-142	1				X	
	10+500.000		100.0	225.0	19.7			125.898	N																			
A-LT	10+500.000							125.826	Y			2	9.0	10+500.000	125.757	OP-143	125.000			5.8		OP-143	1	X				
	10+620.000		120.0	270.0	23.6			126.973	N																			
A-LT MEDIAN	10+500.000							125.826	Y			2	23.0	10+500.000	125.757	OP-143	125.000			14.7		OP-143	1	X				
	10+620.000		120.0	270.0	23.6			126.973	N																			
A-RT MEDIAN	10+500.000							125.898	Y			2	17.0	10+500.000	125.847	OP-144	125.046			10.9		OP-144	1				X	
	10+620.000		120.0	270.0	23.6			126.973	N																			
A-RT	10+500.000							125.898	Y			2	7.0	10+500.000	125.847	OP-144	125.046			4.5		OP-144	1				X	
	10+620.000		120.0	270.0	23.6			126.973	N																			
A-LT	10+620.000							126.973	Y			2	10.0	10+620.000	126.913	OP-145	126.671			6.4		OP-145	1	X				*
	10+740.000		120.0	270.0	23.6			128.053	N																			
A-LT MEDIAN	10+620.000							126.973	Y			2	20.0	10+620.000	126.913	OP-145	126.671			12.8		OP-145	1	X				*
	10+740.000		120.0	270.0	23.6			128.053	N																			
A-RT MEDIAN	10+620.000							126.973	Y			2	17.0	10+620.000	126.922	OP-146	126.602			10.9		OP-146	1				X	*
	10+740.000		120.0	270.0	23.6			128.053	N																			
A-RT	10+620.000							126.973	Y			2	7.0	10+620.000	126.922	OP-146	126.602			4.5		OP-146	1				X	*
	10+740.000		120.0	270.0	23.6			128.053	N																			
A-LT	10+740.000							128.053	Y			2	8.0	10+740.000	128.002	OP-147	126.801			5.1		OP-147	1	X				
	10+880.000		140.0	315.0	27.5			129.319	Y			2	8.0	10+880.000	129.239	OP-149	126.526			5.1		OP-149	1	X				
A-LT MEDIAN	10+740.000							128.053	Y			2	17.0	10+740.000	128.002	OP-147	126.801			10.9		OP-147	1	X				
	10+880.000		140.0	315.0	27.5			129.319	Y			2	17.0	10+880.000	129.239	OP-149	126.526			10.9		OP-149	1	X				
A-RT MEDIAN	10+740.000							128.053	Y			2	17.0	10+740.000	128.002	OP-148	126.801			10.9		OP-148	1				X	
	10+880.000		140.0	315.0	27.5			129.319	Y			2	17.0	10+880.000	129.239	OP-150	126.290			10.9		OP-150	1				X	
SUBTOTAL			3520.0	7920.0	692.4							79	531.0							340.5			37					

ALAN J. DeLANEY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	188 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

UNDERDRAIN TABLE

		UNDERDRAIN PIPE										OUTLET PIPE								OUTLET PROTECTORS								Remarks
	Underdrain Pipe Limits	Pipe, Type 4		Geotextile for Underdrains	Aggregate for Underdrains	HMA for Underdrains	Special Grade	Flow Line Elevation @ Underdrain Pipe Limit	Outlet Pipe Required	Connect Underdrain Pipe to Structure No. ___	Structure Invert Elevation	45 Degree Elbows Required (1 or 2)	150 mm Outlet Pipe	Outlet Station	Outlet Elevation	Outlet at Outlet Protector No. ___	Ditch Flow Line Elevation at Outlet Protector	Connect Outlet Pipe to Structure No. ___	Structure Invert Elevation	Structure Backfill	HMA for Underdrains	Outlet Protector No. ___	Outlet Protector Type	Location				
		150 mm																						Outside Left	Median Left	Median Right	Outside Right	
		(m)		(m2)	(m3)	(Mg)	%		(Y/N)				(m)							(m3)	(Mg)							
A-RT	10+740.000							128.053	Y			2	7.0	10+740.000	128.002	OP-148	126.801			4.5		OP-148	1				X	
	10+880.000		140.0	315.0	27.5			129.319	Y			2	7.0	10+880.000	129.239	OP-150	126.290			4.5		OP-150	1				X	
A-LT	10+880.000		100.0	185.0	19.0			129.319	Y			2	8.0	10+880.000	129.239	OP-149	126.526			5.1		OP-149	1	X				
	10+980.000							130.219	N																			
A-LT MEDIAN	10+880.000		100.0	185.0	19.0			129.319	Y			2	8.0	10+880.000	129.239	OP-149	126.526			10.9		OP-149	1	X				
	10+980.000							130.219	N																			
A-RT MEDIAN	10+880.000		100.0	185.0	19.0			129.319	Y			2	8.0	10+880.000	129.239	OP-150	126.290			10.9		OP-150	1				X	
	10+980.000							130.219	N																			
A-RT	10+880.000		100.0	185.0	19.0			129.319	Y			2	8.0	10+880.000	129.239	OP-150	126.290			4.5		OP-150	1				X	
	10+980.000							130.219	N																			
A-LT	10+880.000		100.0	185.0	19.2			129.319	Y			2	8	10+880.000	129.239	OP-149	126.290			1.296		OP-149	1	X				
	10+980.000							130.219	N																			
A-LT MEDIAN	10+880.000		100.0	185.0	19.2			129.319	Y			2	15.2	10+880.000	129.239	OP-149	126.290			0.864		OP-149	1	X				
	10+980.000							130.219	N																			
A-RT MEDIAN	10+880.000		100.0	185.0	19.2			129.319	Y			2	15.2	10+880.000	129.239	OP-150	126.526			1.296		OP-150	1				X	
	10+980.000							130.219	N																			
A-RT	10+880.000		100.0	185.0	19.2			129.319	Y			2	8.0	10+880.000	129.239	OP-150	126.526			0.864		OP-150	1				X	
	10+980.000							130.219	N																			
A-LT	10+980.000		120.0	222.0	23.0			130.219	Y			2	8.0	10+980.000	130.139	OP-151	126.930			1.296		OP-151	1					
	11+100.000							131.653	N																			
A-LT MEDIAN	10+980.000		120.0	222.0	23.0			130.219	Y			2	15.2	10+980.000	130.139	OP-151	126.930			0.864		OP-151	1	X				
	11+100.000							131.299	N																			
A-RT MEDIAN	10+980.000		120.0	222.0	23.0			130.219	Y			2	15.2	10+980.000	130.139	OP-152	126.826			1.296		OP-152	1					
	11+100.000							131.299	N																			
A-RT	10+980.000		120.0	222.0	23.0			130.219	Y			2	8.0	10+980.000	130.139	OP-152	126.826			0.864		OP-152	1				X	
	11+100.000							130.945	N																			
A-LT	11+100.000		120.0	222.0	23.0			131.653	Y			2	8.0	11+100.000	131.253	OP-153	130.997			1.296		OP-153	1					*
	11+220.000							132.733	N																			
A-LT MEDIAN	11+100.000		120.0	222.0	23.0			131.299	Y			2	15.2	11+100.000	131.253	OP-153	130.997			0.864		OP-153	1	X				*
	11+220.000							132.379	N																			
A-RT MEDIAN	11+100.000		120.0	222.0	23.0			131.299	Y			2	15.2	11+100.000	130.865	OP-154	130.597			1.296		OP-154	1					*
	11+220.000							132.379	N																			
A-RT	11+100.000		120.0	222.0	23.0			130.945	Y			2	8.0	11+100.000	130.865	OP-154	130.597			0.864		OP-154	1				X	*
	11+220.000							132.025	N																			
A-LT	11+220.000		100.0	185.0	19.2			132.733	Y			2	8.0	11+220.000	132.233	OP-155	130.446			1.296		OP-155	1					
	11+320.000							133.633	N																			
A-LT MEDIAN	11+220.000		100.0	185.0	19.2			132.379	Y			2	15.2	11+220.000	132.233	OP-155	130.446			0.864		OP-155	1	X				
	11+320.000							133.279	N																			
A-RT MEDIAN	11+220.000		100.0	185.0	19.2			132.379	Y			2	15.2	11+220.000	131.945	OP-156	131.002			1.296		OP-156	1					
	11+320.000							133.279	N																			
A-RT	11+220.000		100.0	185.0	19.2			132.025	Y			2	8.0	11+220.000	131.945	OP-156	131.002			0.864		OP-156	1				X	
	11+320.000							132.925	N																			
SUBTOTAL THIS SHEET			**2300.0**	**4311.0**	**441.5**							**44**	**231.6**							**57.6**			**22**					
SUBTOTAL SHEET 181			**3933.3**	**8850.0**	**773.7**							**76**	**517.0**							**330.9**			**38**					
SUBTOTAL SHEET 182			**3980.7**	**8956.6**	**783.0**							**88**	**520.0**							**332.8**			**44**					
SUBTOTAL SHEET 183			**3469.5**	**7806.4**	**682.5**							**80**	**499.0**							**319.4**			**40**					
SUBTOTAL SHEET 184			**3616.4**	**8136.9**	**711.3**							**80**	**661.0**							**380.8**			**40**					
SUBTOTAL SHEET 185			**3172.8**	**7138.8**	**624.1**							**62**	**415.0**							**265.6**			**31**					
SUBTOTAL SHEET 186			**3089.6**	**6951.7**	**607.7**							**54**	**336.0**							**215.0**			**27**					
SUBTOTAL SHEET 187			**3080.0**	**7290.0**	**637.3**							**54**	**357.0**							**228.5**			**27**					
SUBTOTAL SHEET 188			**3520.0**	**7920.0**	**692.4**							**79**	**531.0**							**340.5**			**37**					
TOTAL			**30162.4**	**67361.5**	**5953.5**							**617**	**4067.6**							**2471.0**			**306**					
													4437.8	<— Includes Elbows														

ALAN J. DeLAURAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

UNDERDRAIN TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	189 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

GUARDRAIL SUMMARY TABLE

LOCATION						W-BEAM GUARDRAIL LENGTH																CURVED W-BEAM GUARDRAIL SYSTEM						
FROM STATION	TO STATION	LEFT	MEDIAN LEFT	MEDIAN RIGHT	RIGHT	STANDARD POST @ 1.905m SPA.	STANDARD POST @ 0.952m SPA.	STANDARD POST @ 0.476m SPA.	DOUBLE FACED @ 1.905m SPA.	SHOP CURVED @ ____ m SPA.	NESTED GUARDRAIL	GUARDRAIL FLARE RATE	GUARDRAIL TRANSITION TYPE TGB	GUARDRAIL TRANSITION TYPE WGB	GUARDRAIL TRANSITION TYPE GP	GUARDRAIL TRANSITION TYPE VH	GUARDRAIL END TREATMENT MS	GUARDRAIL END TREATMENT OS	GUARDRAIL END TREATMENT TYPE 1	CURVED TERMINAL END SECTION	TERMINAL SYSTEM		CONNECTOR SYSTEM		GUARDRAIL REMOVE	GUARDRAIL RESET	REMARKS
						m	m	m	m	m	m	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	TYPE	EACH	TYPE	EACH	m	m	
LINES "PR-A" & "A"																											
4+674.766	4+794.774				X	110.49							1					1									
4+750.656	4+804.070			X					45.72				1				1										
4+873.348	5+193.373				X	320.04							1					1									
4+894.875	4+988.247		X						93.35				1				1										
4+903.117	4+991.228	X				81.92							1					1									
5+885.332	5+982.674				X	89.54							1					1									
5+875.009	5+987.209			X					108.59				1				1										
6+083.498	6+177.214		X						85.73				1				1										
6+088.894	6+200.671	X							102.87				1				1										
7+187.507	7+294.187			X		36.195			62.865				1				1										
7+311.813	7+418.493		X			36.195			62.865				1				1										
7+609.813	7+634.578	X							17.145				1				1										
8+392.788	8+497.563				X	104.775												2									
8+398.230	8+503.005	X							104.775								2										
8+787.135	8+804.280				X	17.145							1					1									
9+126.862	9+210.682			X					100.965				1				1										
9+275.224	9+383.809		X						100.965				1				1										
9+839.813	9+856.958								17.145				1				1										
10+774.864	10+873.924				X	99.060												2									
10+793.600	10+890.755	X							97.155								2										
TOTAL						**895.4**			**1000.1**				**16.0**				**15**	**9**									
TEMP GR FOR MOT																											
4+736.769	4+818.142		X						74.295				1				1										
4+804.163	4+827.023	X				22.860							1					1									
5+962.581	5+987.398		X						24.765				1				1										
5+984.451	5+999.691	X							7.620				1				1										
6+074.303	6+121.647			X					40.005				1				1										
6+076.745	6+084.281				X				7.620				1				1										
7+278.947	7+294.187		X			7.620							1					1									
7+311.813	7+327.053			X		7.620							1					1									
7+465.947	7+481.187	X							7.620				1				1										
8+784.947	8+800.187	X							7.620				1				1										
9+187.822	9+210.682		X			15.240							1					1									
9+275.224	9+298.084			X		15.240							1					1									
9+720.813	9+736.053				X	7.620							1					1									
TOTAL						**76.2**			**169.5**				**13**				**7**	**6**									

ALAN J. DeLAUNAY
REGISTERED
No. 20175
STATE OF INDIANA
PROFESSIONAL ENGINEER

4/22/03

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

GUARDRAIL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	190 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

STRUCTURE DATA TABLE

STRUCTURE NUMBER	LOCATION STATION	LOCATION LEFT	LOCATION RIGHT	LOCATION CROSS	SIZE	PIPE TYPE	MANHOLE, CATCH BASIN, INLET, OR SPECIALTY STRUCTURE	LENGTH	SKEW	COVER	FLOWLINE UP STREAM	FLOWLINE DOWN STREAM	CASTING ELEV.	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	RIVETMENT RIPRAP 450mm DEPTH	RIPRAP CLASS I 600mm DEPTH	RIPRAP CLASS 2 750mm DEPTH	GEOTEXTILE	CONCRETE CLASS A, FOR STRUCTURES	PIPE END SECTION	GRATED BOX END SECTION TYPE	GRATED BOX END SECTION SLOPE	GRATED BOX END SECTION EACH	SAFETY METAL END SECTION SLOPE	SAFETY METAL END SECTION EACH	CONNECT TO STR.	REMARKS
					mm			m		m	ELEV.	ELEV.	TYP.	yr				m^3	Mg	Mg	Mg	m^2	m^3	EACH						TYP.	
LINE "PR-A"																															
11	3+500.0			X	375	5	INLET, P-12A	29.9		0.6	119.915	118.300		75	AB	5.0	1	33.4	3.0			5.0		1							
12	3+850.0			X	375	5	INLET, P-12A	30.3		0.8	120.047	118.534		75	AB	5.0	1	21.5	3.0			5.0		1							
13	4+085.0			X			2.98 sqm PIPE	65.0	1.5 LT	1.8	117.212	116.452		75	AB	6.5	1	452.9		27.4		36.9	3.2								CMPA
14	4+204.5			X	375	5	INLET, P-12A	27.6		0.8	118.340	118.099		75	AB	6.5	1	16.9		1.7		5.9		1							
15	4+325.0			X	375	5	INLET, P-12A	35.3		0.8	119.403	117.889		75	AB	6.5	1	25.0	3.0			5.0		1							
16	4+475.0			X	375	5	INLET, P-12A	50.4		1.0	123.001	118.035		75	AB	7.0	1	72.5	3.0			5.0		1							
17	4+798.0		X		900	2	PIPE	29.3		3.6	116.470	116.410		75	AB	7.0	1	164.9	6.5			10.2		2							
18	4+889.0	X			900	2	PIPE	29.4		3.6	116.770	116.710		75	AB	7.0	1	165.5	6.5			10.2		2							
19	5+050.0			X	375	5	INLET, P-12A	66.4		1.2	126.987	115.945		75	AB	7.0	1	191.3	3.0			5.0		1							
20	5+139.7	X				2	1800x900 BOX CULVERT	120.0		3.4	115.880	115.650		75	AB	7.0	1	1262.8	15.75			26.7									RCP
21	5+175.0			X	375	5	INLET, P-12A	59.7		1.2	125.308	116.200		75	AB	7.5	1	220.4	3.0			5.0								20	
22	5+255.0		X				1800x900 BOX CULVERT	120.0		1.0	116.140	115.900		75	AB	7.5	1	389.2	15.75			26.7									RCP
23	5+300.0			X	375	5	INLET, P-12A	58.7		1.0	122.765	115.444		75	AB	7.5	1	104.3	3.0			5.0		1							
LINE "A"																															
24	5+465.4			X	2100	2	PIPE	107.0	24°LT	1.3	115.154	114.200		75	AB	7.5	1	375.0			30.1	36.9	3.9							
25	5+480.0			X	375	2	INLET, P-12A	11.7		1.0	117.040	117.000		75	AB	7.5	1	9.5	3.0			5.0								24	
26	5+616.6			X	375	5	INLET, P-12A	37.0		1.0	118.906	116.707		75	AB	6.0	1	30.6	3.0			5.0		1							
27	5+650.0			X	375	5	INLET, P-12A	37.1		1.0	117.913	116.834		75	AB	7.0	1	30.7	3.0			5.0		1							
28	5+825.0			X	375	5	INLET, P-12A	36.1		1.3	117.923	117.522		75	AB	6.5	1	40.7	3.0			5.0		1							
29	6+250.0			X	375	5	INLET, P-12A	33.4		1.0	119.521	117.890		75	AB	6.5	1	30.7	3.0			5.0		1							
30	6+425.7			X	375	5	INLET, P-12A	37.2		1.2	119.360	116.398		75	AB	6.5	1	41.9	3.0			5.0		1							
31	6+450.0			X	375	5	INLET, P-12A	37.0		0.0	118.232	116.456		75	AB	6.5	1	42.1	3.0			5.0		1							
32	6+640.0			X	375	5	INLET, P-12A	38.5		1.3	119.279	116.916		75	AB	7.0	1	33.0	3.0			5.0		1							
33	6+860.0			X	375	5	INLET, P-12A	42.2		1.3	120.581	117.445		75	AB	7.0	1	38.4	3.0			5.0		1							
34	7+080.0			X	375	5	INLET, P-12A	39.7		1.2	121.830	117.975		75	AB	7.0	1	40.2	3.0			5.0		1							
35	7+520.0			X	375	5	INLET, P-12A	38.0		1.3	121.917	119.033		75	AB	5.5	1	33.8	3.0			5.0		1							
36	7+609.0	X			375	2	MANHOLE, C-2	6.0		1.3	120.406	119.626		75	AB	5.5	1	3.3	3.0			5.0		1							
37	7+780.0			X	375	5	INLET, P-12A	36.3		1.1	121.036	119.665		75	AB	6.0	1	29.3	3.0			5.0		1							
38	7+900.0			X	375	5	INLET, P-12A	32.3		1.0	120.985	120.107		75	AB	6.0	1	23.5	3.0			5.0		1							

ALAN J. DeLANNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

Alan J. DeLannay 4/22/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	191 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

STRUCTURE DATA TABLE

STRUCTURE NUMBER	LOCATION STATION	LEFT	RIGHT	CROSS	SIZE	PIPE TYPE	MANHOLE, CATCH BASIN, INLET, OR SPECIALTY STRUCTURE	LENGTH	SKEW	COVER	FLOWLINE UP STREAM	FLOWLINE DOWN STREAM	CASTING ELEV.	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	RIVETMENT RIPRAP 450mm DEPTH	RIPRAP CLASS 1 600mm DEPTH	RIPRAP CLASS 2 750mm DEPTH	GEOTEXTILE	CONCRETE CLASS A, FOR STRUCTURES	PIPE END SECTION	GRATED BOX END SECTION			SAFETY METAL END SECTION		CONNECT TO STR.	REMARKS
																									TYPE	SLOPE	EACH	SLOPE	EACH		
					mm			m		m	ELEV.	ELEV.	TYP.	yr				m^3	Mg	Mg	Mg	m^2	m^3	EACH							TYP.	
39	7+960.0			X	375	2	INLET, P-12A	30.5		1.0	121.007	120.270		75	AB	6.0	1	33.7	3.0			5.0		1								
40	8+160.0			X	375	2	INLET, P-12A	26.8		1.2	121.259	121.136		75	AB	6.5	1	24.4	3.0			5.0		1								
41	8+360.0			X	375	2	INLET, P-12A	29.0		1.3	122.092	121.829		75	AB	6.5	1	35.4	3.0			5.0		1								
42	8+403.0			X		2	5400x1200 BOX CULVERT	69.0	22°LT	1.6	120.800	119.710		75	AB	7.0	1	749.6	63.0			97.2										RCP
43	8+560.0			X	375	5	INLET, P-12A	33.2		1.8	123.685	122.059		75	AB	7.5	1	33.2	3.0			5.0		1								WINGWALLS REQ'D
44	8+780.0			X	375	5	INLET, P-12A	38.1		1.2	126.144	122.499		75	AB	7.5	1	48.2	3.0			5.0		1								
45	9+211.0	X			300	2	INLET, R-13	7.0		0.6	131.879	131.100		75	AB	7.5	1	10.1														
46	9+211.0		X		300	2	INLET, R-13	7.0		0.6	131.879	131.240		75	AB	7.5	1	10.1														
47	9+275.0	X			300	2	INLET, R-13	7.0		0.6	131.884	131.240		75	AB	7.5	1	10.1														
48	9+275.0		X		300	2	INLET, R-13	7.0		0.6	131.884	131.230		75	AB	7.5	1	10.1														
49	9+920.0			X	375	5	INLET, P-12A	33.5		1.3	130.200	122.748		75	AB	8.0	1	32.5	3.0			5.0		1								
50	10+120.0			X	375	2	INLET, P-12A	33.0		1.3	123.513	123.148		75	AB	8.0	1	40.3	3.0			5.0		1								
51	10+158.0			X	375	2	INLET, P-12A	30.0		1.3	123.507	123.220		75	AB	8.0	1	36.7	3.0			5.0		1								
52	10+420.0			X	375	5	INLET, P-12A	25.7		5.0	124.612	123.916		75	AB	8.0	1	18.5	3.0			5.0		1								
53	10+560.0			X	375	2	INLET, P-12A	31.4		5.0	125.674	125.500		75	AB	7.5	1	28.5	3.0			5.0		1								
54	10+760.0			X	375	2	INLET, P-12A	30.9		5.0	127.850	126.401		75	AB	7.5	1	47.9	3.0			5.0		1								
55	10+798.0			X		2	3600x1800 BOX CULVERT	72.6	19°LT	5.0	124.999	124.655		75	AB	7.5	1	1865.6	32.2			49.0										RCP
56	10+960.0		X		300	2	INLET, P12A	30.5		1.2	129.150	128.846	129.550	75	N	6.5	1	38.6						1								
57	11+120.0		X		300	2	INLET, P-12A	28.5		0.8	130.588	130.502	130.988	75	N	6.5	1	24.0						1								
58	11+260.0			X	900	1	PIPE	70.0		2.1	130.002	129.727		75	A	6.5	1	316.2	5.6			6.9		2								
59	11+280.0		X		300	2	INLET, P-12A	29.5		1.0	132.028	131.735	132.428	75	N	6.5	1	32.8						1								
	LINE "PR-CR200N"																															
201	9+930.0			X	900	1	PIPE	40.0		1.2	117.826	117.280		75	A	6.5	1	35.5	13.0			20.4		2								
202	10+221.0			X		1	2700x1500 BOX CULVERT	24.0		0.7	116.613	116.565		75	A	6.5	1	82.0														RIPRAP INCLUDED
	LINE "PR-CR250N-REL"																														IN POND SIDESLOPE	
251	19+782.0			X		1	1950 SMOOTH OR	27.0		0.9	116.600	116.400		75	A	6.5	1	13.0			34.3	40.7										2 - CONCRETE
							2400 CORRUGATED PIPE																									ANCHORS REQ'D

ALAN J. DeLANNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

Alan J. DeLannay 4/22/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	192 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

STRUCTURE DATA TABLE

STRUCTURE NUMBER	LOCATION STATION	LEFT	RIGHT	CROSS	SIZE	PIPE TYPE	MANHOLE, CATCH BASIN, INLET, OR SPECIALTY STRUCTURE	LENGTH	SKEW	COVER	FLOWLINE UP STREAM	FLOWLINE DOWN STREAM	CASTING ELEV.	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL	RIVETMENT RIPRAP 450mm DEPTH	RIPRAP CLASS 1 600mm DEPTH	RIPRAP CLASS 2 750mm DEPTH	GEOTEXTILE	CONCRETE CLASS A, FOR STRUCTURES	PIPE END SECTION	GRATED BOX END SECTION				SAFETY METAL END SECTION		CONNECT TO STR.	REMARKS
					mm			m		m	ELEV.	ELEV.	TYP.	yr				m^3	Mg	Mg	Mg	m^2	m^3	EACH	TYPE	SLOPE	EACH	SLOPE	EACH	TYP.	
LINE "S-CR350"																																
350	10+158.0		X			3	0.31 sqm SMOOTH PIPE	11.0		0.4	118.164	118.135		75	N	6.5	2	3.0	4.3			5.4		2								
351	10+180.0	X				3	0.82 sqm SMOOTH PIPE	12.0		0.5	118.244	118.212		75	N	6.5	2	7.9	9.2			11.4		2								
352	10+206.0	X				1	0.82 sqm SMOOTH JACKED PIPE	9.5		0.3	117.954	117.929		75	A	6.5		0.0	9.2			11.4		2								
353	10+254.0		X		375	3		14.0		0.8	117.952	117.923		75	N	6.5	2	2.2		2.1		2.0		2								
354	10+258.0	X				3	0.95 sqm SMOOTH PIPE	12.0		0.5	118.051	118.016		75	N	6.5	2	9.0	10.6			13.1		2								
355	10+480.0			X		1	1350 SMOOTH OR 1650 CORRUGATED PIPE	32.0		2.8 2.6	116.188	115.564		75	A	6.5	1	334.9			17.6	13.1										2 - CONCRETE ANCHORS REQ'D
356	10+649.0		X			1	2100 SMOOTH OR 3000 CORRUGATED PIPE	18.5		3.7 2.8	114.179	114.123		75	A	6.5	2	51.1			37.0	27.4										2 - CONCRETE ANCHORS REQ'D
LINE "S-OLD231"																																
450	9+988.0			X	1200	1	SMOOTH PIPE	25.0		0.5	117.459	117.409		75	A	6.5	1	69.8		11.7		10.8										2 - CONCRETE ANCHORS REQ'D
LINE "S-CR500"																																
500	10+210.0			X		1	1.90 sqm SMOOTH OR 2.42 sqm CORRUGATED PIPE	18.0		0.6 0.3	120.164	119.870		75	A	6.5	1	81.5		25.6		23.7										2 - CONCRETE ANCHORS REQ'D
501	10+320.0			X		1	2.30 sqm SMOOTH	20.5		0.4	120.227	120.169		75	A	6.5	1	96.7		29.6		27.4										2 - CONCRETE ANCHORS REQ'D
LINE "S-231-REL"																																
550	10+120.0	X			750	3	PIPE	10.5		0.3	119.134	119.098		75	N	6.5	2	4.2	4.2			5.2		2								
551	10+275.0			X			3600x1200 BOX CULVERT	33.0		1.0	118.841	118.816		75	A	6.5	1	184.0	26.2			32.4										WINGWALLS REQUIRED
552	10+371.0	X			750	3	PIPE	14.5		0.8	119.334	119.258		75	N	6.5	2	5.8		5.6		5.2		2								
553	10+530.0			X		1	750 SMOOTH OR 825 CORRUGATED PIPE	25.5		0.4 0.3	121.444	120.835		75	A	6.5	1	32.0		5.6		5.2		2								
554	10+654.0	X			600	3	PIPE	13.0		0.6	121.827	121.780		75	N	6.5	2	3.5	3.1			3.8		2								
555	10+908.0	X			375	3	PIPE	15.0		0.9	122.133	122.099		75	N	6.5	2	2.4	1.6			2.0		2								
LINE "S-AK"																																
600	10+040.0			X			1800x1200 BOX CULVERT	57.0		0.2	123.619	123.528		75	A	6.5	1	180.1		17.5		16.2										
601	10+114.0		X		600	3	PIPE	18.5		1.1	124.675	124.537		75	N	6.5	2	5.0	3.1			3.8		2								

MATTHEW A. TAYLOR REGISTERED No. 10200109 STATE OF INDIANA PROFESSIONAL ENGINEER

5/15/03

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	193 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

PIPE MATERIAL TABLE

			STRUCTURE NUMBER																		
			11	12	14	15	16	17	18	19	21	23	24	25	26	27	28	29	30	31	32	33
	PIPE TYPE / SHAPE		5 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR	2 / CIR	2 / CIR	5 / CIR	5 / CIR	5 / CIR	2 / CIR	2 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR	5 / CIR
	SMOOTH PIPE SIZE		375	375	375	375	375	900	900	375	375	375	2100	375	375	375	375	375	375	375	375	375
	CORRUGATED PIPE SIZE		375	375	375	375	375	900	900	375	375	375	2100	375	375	375	375	375	375	375	375	375
	RCP / RCHEP (S)	CLASS						II	II				II	II								
		D 0.3 RATING						60.0	60.0				50.0	50.0								
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)													OK								
	CORRUGGATED PE PIPE, TYPE S * (S)			OK	OK	OK	OK			OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	RIBBED PE PIPE (S)							OK	OK													
	SMOOTH WALL PE PIPE (S)*/ MAXIMUM DR			OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00
	PROFILE WALL PVC PIPE (S)*			OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	SMOOTH WALL PVC PIPE (S)*			OK	OK	OK	OK			OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)							OK	OK					OK								
CORRUGATED STEEL PIPE / PIPE ARCH	FULLY BIT. PAVED AND LINED (S)	CORR. PROFILE						68mm X 13mm	68mm X 13mm				75mm X 25mm									
		THICKNESS						3.51mm	3.51mm				3.51mm									
	ZINC COATED (C)	CORR. PROFILE																				
		THICKNESS																				
	ZINC COATED WITH BPI (C)	CORR. PROFILE																				
		THICKNESS																				
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																				
		THICKNESS																				
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR. PROFILE					68mm X 13mm			68mm X 13mm	68mm X 13mm	68mm X 13mm		68mm X 13mm		68mm X 13mm					68mm X 13mm	68mm X 13mm
		THICKNESS					2.77mm			2.77mm	2.77mm	2.77mm		2.77mm		2.77mm					2.77mm	2.77mm
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																				
		THICKNESS																				
	POLYMER PRECOATED GALVANIZED W/BPI (C)	CORR. PROFILE					68mm X 13mm			68mm X 13mm	68mm X 13mm	68mm X 13mm		68mm X 13mm		68mm X 13mm					68mm X 13mm	68mm X 13mm
		THICKNESS					2.77mm			2.77mm	2.77mm	2.77mm		2.77mm		2.77mm					2.77mm	2.77mm
	FIBER BONDED BITUMINOUS COATED (C)	CORR. PROFILE																				
		THICKNESS																				
	FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE			68mm X 13mm	68mm X 13mm	68mm X 13mm			68mm X 13mm	68mm X 13mm	68mm X 13mm		68mm X 13mm		68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm
		THICKNESS			2.77mm	2.77mm	2.77mm			2.77mm	2.77mm	2.77mm		2.77mm		2.77mm	2.77mm	2.77mm	2.77mm	2.77mm	2.77mm	2.77mm
	CORRUGATED ALUM ALLOY PIPE (C)	CORR. PROFILE																				
		THICKNESS																				
	CORRUGATED ALUM ALLOY PIPE W/BPI (C)	CORR. PROFILE	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm			68mm X 13mm	68mm X 13mm	68mm X 13mm		68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm
		THICKNESS	1.52mm	1.52mm	1.52mm	1.52mm	1.52mm			1.52mm	1.52mm	1.52mm		1.52mm	1.52mm	1.52mm	1.52mm	1.52mm	1.52mm	1.52mm	1.52mm	1.52mm
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																				
		THICKNESS																				
	STR. PLATE ALUMINUM ALLOY PIPE W/CFP (C)	CORR. PROFILE																				
		THICKNESS																				
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE																				
		THICKNESS																				
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE																				
		THICKNESS																				

LEGEND

RCP-	REINFORCED CONCRETE PIPE		
PCHEP-	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE		
PE-	POLYETHYLENE	*-	REFER TO STD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL PAY ITEM DIAMETER
DR-	DIMENSIONAL RATIO		
PVC-	POLYVINYL CHLORIDE		
BIT-	BITUMINOUS	**-	TABULATED THICKNESS REFERS TO TOP & SIDE PLATES BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS
CORR-	CORRUGATION		
BPI-	BITUMINOUS PAVED INVERT		
ALUM-	ALUMINUM		
STR-	STRUCTURAL		
CFP-	CONCRETE FIELD PAVING		
CIR-	CIRCULAR PIPE		
DEF-	DEFORMED PIPE		
(S)-	SMOOTH PIPE		
(C)-	CORRUGATED PIPE MAT'L		
OK-	ACCEPTABLE FOR USE		
(LS)-	LOCK SEAM PIPE REQ'D		

ALAN J. DeLAINAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

4/22/03

DESIGNED: JMM | DRAWN: JMM

CHECKED: MAT | CHECKED: MAT

INDIANA
DEPARTMENT OF TRANSPORTATION

PIPE MATERIAL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	194 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

PIPE MATERIAL TABLE

			STRUCTURE NUMBER																			
			34	35	36	37	38	39	40	41	43	44	45	46	47	48	49	50	51	52	53	54	77
	PIPE TYPE / SHAPE		2 / CIR	5 / CIR	2 / CIR	5 / CIR	5 / CIR	2 / CIR	2 / CIR	2 / CIR	5 / CIR	5 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	5 / CIR	2 / CIR	2/ CIR	5 / CIR	2 / CIR	2/ CIR	2/CIR
	SMOOTH PIPE SIZE		375	375	375	375	375	375	375	375	375	375	300	300	300	300	375	375	375	375	375	375	300
	CORRUGATED PIPE SIZE		375	375	375	375	375	375	375	375	375	375	300	300	300	300	375	375	375	375	375	375	
	RCP / RCHEP (S)	CLASS			II			II	II	II			II	II	II	II		II	II		III	III	II
		D 0.3 RATING			50.0			50.0	50.0	50.0			50.0	50.0	50.0	50.0		50.0	50.0		75.0	75.0	50.0
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)				OK			OK	OK	OK			OK	OK	OK	OK		OK	OK				OK
	CORRUGATED PE PIPE, TYPE S * (S)		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK					OK	OK	OK				OK
	RIBBED PE PIPE (S)																						
	SMOOTH WALL PE PIPE (S)*/ MAXIMUM DR		OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00					OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00
	PROFILE WALL PVC PIPE (S)*		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK					OK	OK	OK	OK	OK	OK	OK
	SMOOTH WALL PVC PIPE (S)*		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK					OK	OK	OK	OK	OK	OK	OK
	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)				OK		OK	OK	OK	OK			OK	OK	OK	OK		OK	OK				OK
CORRUGATED STEEL PIPE / PIPE ARCH	FULLY BIT. PAVED AND LINED (S)	CORR. PROFILE																					
		THICKNESS																					
	ZINC COATED (C)	CORR. PROFILE																					
		THICKNESS																					
	ZINC COATED WITH BPI (C)	CORR. PROFILE																					
		THICKNESS																					
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																					
		THICKNESS																					
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR. PROFILE	68mm X 13mm								68mm X 13mm	68mm X 13mm					68mm X 13mm			68mm X 13mm			
		THICKNESS	2.77mm								2.77mm	2.77mm					2.77mm			2.77mm			
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																					
		THICKNESS																					
	POLYMER PRECOATED GALVANIZED W/BPI (C)	CORR. PROFILE	68mm X 13mm								68mm X 13mm	68mm X 13mm					68mm X 13mm			68mm X 13mm			
		THICKNESS	2.77mm								2.77mm	2.77mm					2.77mm			2.77mm			
	FIBER BONDED BITUMINOUS COATED (C)	CORR. PROFILE																					
		THICKNESS																					
	FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE	68mm X 13mm								68mm X 13mm	68mm X 13mm					68mm X 13mm			68mm X 13mm			
		THICKNESS	2.77mm								2.77mm	2.77mm					2.77mm			2.77mm			
	CORRUGATED ALUM ALLOY PIPE (C)	CORR. PROFILE																					
		THICKNESS																					
	CORRUGATED ALUM ALLOY PIPE W/BPI (C)	CORR. PROFILE	68mm X 13mm	68mm X 13mm		68mm X 13mm	68mm X 13mm				68mm X 13mm	68mm X 13mm					68mm X 13mm			68mm X 13mm			
		THICKNESS	1.52mm	1.52mm		1.52mm	1.52mm				1.52mm	1.52mm					1.52mm			1.52mm			
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																					
		THICKNESS																					
	STR. PLATE ALUMINUM ALLOY PIPE W/CFP (C)	CORR. PROFILE																					
		THICKNESS																					
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE																					
		THICKNESS																					
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE																					
		THICKNESS																					

LEGEND

RCP-	REINFORCED CONCRETE PIPE
PCHEP-	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE
PE-	POLYETHYLENE
DR-	DIMENSIONAL RATIO
PVC-	POLYVINYL CHLORIDE
BIT-	BITUMINOUS
CORR-	CORRUGATION
BPI-	BITUMINOUS PAVED INVERT
ALUM-	ALUMINUM
STR-	STRUCTURAL
CFP-	CONCRETE FIELD PAVING
CIR-	CIRCULAR PIPE
DEF-	DEFORMED PIPE
(S)-	SMOOTH PIPE
(C)-	CORRUGATED PIPE MAT'L
OK-	ACCEPTABLE FOR USE
(LS)-	LOCK SEAM PIPE REQ'D

*- REFER TO STD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL PAY ITEM DIAMETER

**- TABULATED THICKNESS REFERS TO TOP & SIDE PLATES BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS

ALAN J. DeLAUNAY REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

Alan J. DeLaunay 4/22/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE MATERIAL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	195 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)

PIPE MATERIAL TABLE

			STRUCTURE NUMBER																			
			78	79	80	201	251	350	351	352	353	354	355	356	450	500	501	550	552	553	554	555	601
	PIPE TYPE / SHAPE		2/CIR	1/CIR	2/CIR	1/CIR	1/CIR	3/D	3/D	1/D	3/CIR	3/D	1/CIR	1/CIR	1/CIR	1/D	1/CIR	3/CIR	3/CIR	1/CIR	3/CIR	3/CIR	3/CIR
	SMOOTH PIPE SIZE		300	900	300	900	1950	0.31m^2	0.82m^2	0.82m^2	375	0.95m^2	1200	2100	1200	1.55m^2	1350	750	750	750	600	375	600
	CORRUGATED PIPE SIZE			900			2400						1350	3000		2.03m^2	1350	750	750	825	600	375	600
	RCP / RCHEP (S)	CLASS	II	II	II	II	II	HE-A	HE-A	HE-A	II	HE-A	II	II	II	HE-A	II	II	II	II	II	II	II
		D 0.3 RATING	50.0	50.0	50.0	50.0	50.0	30.0	30.0	30.0	50.0	30.0	50.0	60.0	50.0	30.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)		OK	OK	OK	OK					OK								OK			OK	OK
	CORRUGGATED PE PIPE, TYPE S * (S)		OK	OK	OK	OK					OK								OK			OK	OK
	RIBBED PE PIPE (S)			OK																			
	SMOOTH WALL PE PIPE (S)*/ MAXIMUM DR		OK / 26.00	OK / 26.00	OK / 26.00	OK / 26.00					OK / 26.00								OK / 26.00			OK / 26.00	OK / 26.00
	PROFILE WALL PVC PIPE (S)*		OK	OK	OK	OK					OK								OK			OK	OK
	SMOOTH WALL PVC PIPE (S)*		OK	OK	OK	OK					OK								OK			OK	OK
	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)		OK	OK	OK	OK					OK								OK			OK	OK
CORRUGATED STEEL PIPE / PIPE ARCH	FULLY BIT. PAVED AND LINED (S)	CORR. PROFILE																					
		THICKNESS																					
	ZINC COATED (C)	CORR. PROFILE																					
		THICKNESS																					
	ZINC COATED WITH BPI (C)	CORR. PROFILE		68mm X 13mm		68mm X 13mm	75mm X 25mm						68mm X 13mm	75mm X 25mm		68mm X 13mm	68mm X 13mm	68mm X 13mm	68mm X 13mm				
		THICKNESS		4.27mm		4.27mm	4.27mm						4.27mm	4.27mm		4.27mm	4.27mm	3.51mm	3.51mm				
	ALUM. COATED TYPE 2 (C)	CORR. PROFILE																68mm X 13mm	68mm X 13mm				
		THICKNESS																3.51mm	3.51mm				
	ALUM. COATED TYPE 2 W/ BPI (C)	CORR. PROFILE		68mm X 13mm		68mm X 13mm	75mm X 25mm						68mm X 13mm	75mm X 25mm		68mm X 13mm	68mm X 13mm			68mm X 13mm			
		THICKNESS		3.51mm		3.51mm	3.51mm						3.51mm	3.51mm		4.27mm	3.51mm			3.51mm			
	POLYMER PRECOATED GALVANIZED (C)	CORR. PROFILE																68mm X 13mm	68mm X 13mm				
		THICKNESS																3.51mm	3.51mm				
	POLYMER PRECOATED GALVANIZED W/BPI (C)	CORR. PROFILE		68mm X 13mm		68mm X 13mm	75mm X 25mm						68mm X 13mm	75mm X 25mm		69mm X 13mm	68mm X 13mm			68mm X 13mm			
		THICKNESS		3.51mm		3.51mm	3.51mm						3.51mm	3.51mm		4.27mm	3.51mm			3.51mm			
	FIBER BONDED BITUMINOUS COATED (C)	CORR. PROFILE									68mm X 13mm							68mm X 13mm	68mm X 13mm		68mm X 13mm	68mm X 13mm	68mm X 13mm
		THICKNESS									2.77mm							2.77mm	2.77mm		2.77mm	2.77mm	2.77mm
	FIBER BONDED BITUMINOUS COATED W/ BPI (C)	CORR. PROFILE		68mm X 13mm		68mm X 13mm	75mm X 25mm						68mm X 13mm	75mm X 25mm		69mm X 13mm	68mm X 13mm			68mm X 13mm			
		THICKNESS		2.77mm		2.77mm	2.77						2.77mm	2.77		4.27mm	2.77mm			2.77mm			
	CORRUGATED ALUM ALLOY PIPE (C)	CORR. PROFILE									68mm X 13mm							68mm X 13mm	68mm X 13mm		75mm X 25mm	75mm X 25mm	75mm X 25mm
		THICKNESS									1.52mm							1.52mm (LS)	1.52mm		1.52mm	1.52mm	1.52mm
	CORRUGATED ALUM ALLOY PIPE W/BPI (C)	CORR. PROFILE		75mm X 25mm		75mm X 25mm	75mm X 25mm						75mm X 25mm	75mm X 25mm			75mm X 25mm			75mm X 25mm			
		THICKNESS		1.52mm		1.52mm	2.67						1.52mm	4.17mm			1.52mm			1.52mm			
	STR. PLATE ALUMINUM ALLOY PIPE (C)	CORR. PROFILE																					
		THICKNESS																					
	STR. PLATE ALUMINUM ALLOY PIPE W/CFP (C)	CORR. PROFILE												230mm X 64mm									
		THICKNESS																					
	STR. PLATE STEEL PIPE (C)	CORR. PROFILE																					
		THICKNESS																					
	STR. PLATE STEEL PIPE W/ CFP (C)	CORR. PROFILE					230mm X 64mm							150mm X 50mm									
		THICKNESS				2.82mm (3.56mm Bot. Plate)							2.82mm (3.56mm Bot. Plate)										

LEGEND

RCP-	REINFORCED CONCRETE PIPE
PCHEP-	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE
PE-	POLYETHYLENE
DR-	DIMENSIONAL RATIO
PVC-	POLYVINYL CHLORIDE
BIT-	BITUMINOUS
CORR-	CORRUGATION
BPI-	BITUMINOUS PAVED INVERT
ALUM-	ALUMINUM
STR-	STRUCTURAL
CFP-	CONCRETE FIELD PAVING
CIR-	CIRCULAR PIPE
DEF-	DEFORMED PIPE
(S)-	SMOOTH PIPE
(C)-	CORRUGATED PIPE MAT'L
OK-	ACCEPTABLE FOR USE
(LS)-	LOCK SEAM PIPE REQ'D

*-	REFER TO STD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL PAY ITEM DIAMETER
**-	TABULATED THICKNESS REFERS TO TOP & SIDE PLATES BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS

ALAN J. DeLAMAR REGISTERED No. 20175 STATE OF INDIANA PROFESSIONAL ENGINEER

Alan J. DeLamar 4/22/03

DESIGNED: JMM DRAWN: JMM

CHECKED: MAT CHECKED: MAT

INDIANA DEPARTMENT OF TRANSPORTATION

PIPE MATERIAL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	8461360
SURVEY BOOK	SHEETS
16722	196 of 196
CONTRACT	PROJECT
R 26185	NH-075-3(014)