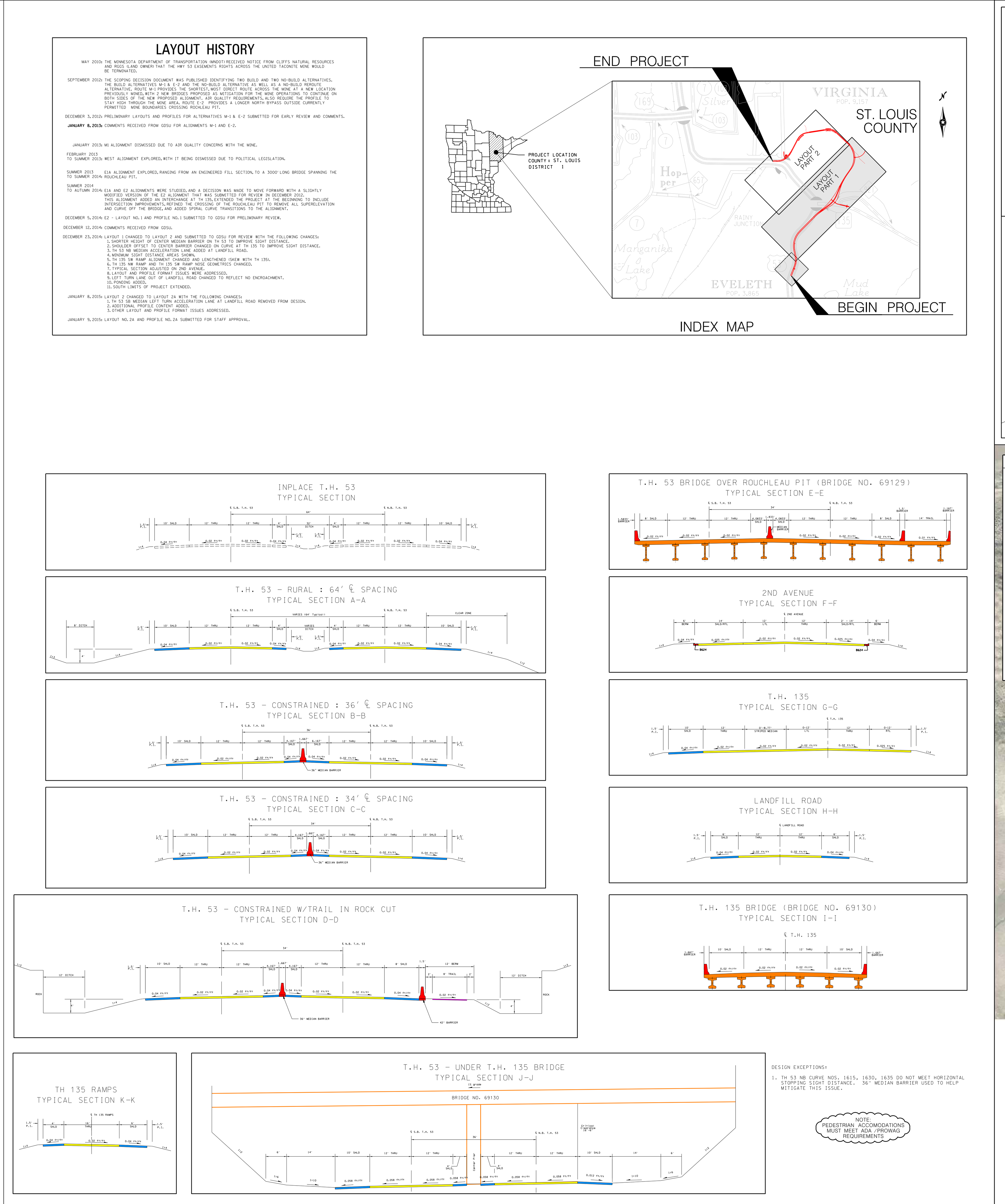
Appendix B – Layout and Profile

Note: Full size versions of the layout and profile are available in the electronic versions of the Final EIS (i.e., CDs and the project website).

- Preferred Alternative Layout
- Preferred Alternative Profile
- Proposed Drainage Area Map


LAYOUT HISTORY
END PROJECT
ST. LOUIS COUNTY
BEGIN PROJECT
INDEX MAP

T.H. 53 RELOCATION
LAYOUT PART 1
INSET
TO EVELETH
LEGEND
UNITED TACONITE MINE
ST. LOUIS COUNTY
TO SB TH 135
TO SB TH 53
NB TH 53
TO NB TH 53
EXISTING
TO SB TH 53
SB TH 53
NB TH 53
DRAINAGE DITCHES
LANDFILL RD
LANDFILL RD
LANDFILL ROAD
U.S. T.H. 53
SCHOOL TRUST LAND SECTION 4(F)
U.S. T.H. 53
T.H. 135
LANDFILL RD
CR 621
BOURGIN RD
TO GILBERT
MIDWAY (CITY OF VIRGINIA)
MATCH LINE SEE INSET

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AMERICAN SOCIETY OF CIVIL ENGINEERS

LAYOUT No. 30 - PART 2 OF 2
T.H.53 VICINITY OF VIRGINIA, MINNESOTA
FROM 1350 FEET SOUTH OF VERMILLION DRIVE TO
TO 2ND AVENUE WEST IN VIRGINIA
2015 Scale: 1 inch = 100 ft.
By: SEH Inc.
Revised By: Date: Description:
Revised By: Date: Description:
Revised By: Date: Description:
Revised By: Date: Description:
Revised By: Date: Description:
Last Revised Date: (/ /)
Revised Date: (/ /)
Date Plotted: 4/17/2015
S.P. 6358-95; T.H.53 ALL(TRNK PKG) 64(TH135)
S.A.P. ; ; ;
Sheet No. 30 of 41 Sheets
For APPROVAL
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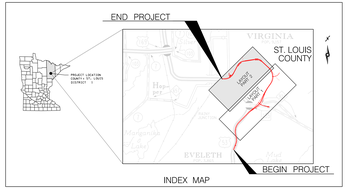
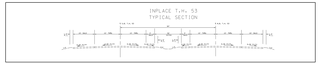
Edcy No. 3787
SEH Project No. 00.00000.000

Level I LAYOUT APPROVAL
Program year Letting date: 00/00/00
Reviewed By: 00/00/00 Design Engineer Signature Date
Reviewed By: District Traffic Engineer Date
Reviewed By: District Design Engineer Date
Reviewed By: Area Engineering Engineer Date
Reviewed By: Transportation Service Engineer Date
Approved By: State Traffic Engineer Date

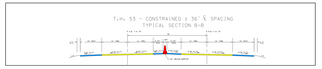
Approval of a Level I Layout does not constitute approval of the design, but only indicates acceptance of the general location, grade, and alignment. Approval of the design is required prior to the letting.
Approved Date: 00/00/00
District Design Engineer

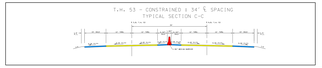


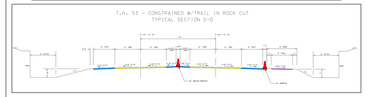
INDEX MAP

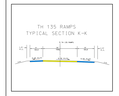

INPLACE T.H. 53
TYPICAL SECTION

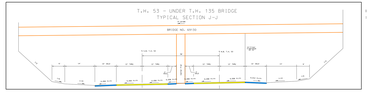
T.H. 53 - RURAL ± 64' ℄ SPACING
TYPICAL SECTION A-A

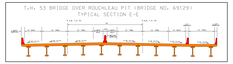

T.H. 53 - CONSTRAINED ± 36' ℄ SPACING
TYPICAL SECTION B-B


T.H. 53 - CONSTRAINED ± 34' ℄ SPACING
TYPICAL SECTION C-C

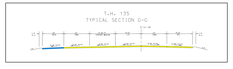

T.H. 53 - CONSTRAINED W/TRAIL IN ROCK CUT
TYPICAL SECTION D-D

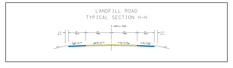

TH 135 RAMPS
TYPICAL SECTION K-K

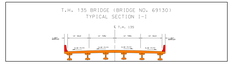

T.H. 53 - UNDER T.H. 135 BRIDGE
TYPICAL SECTION J-J
BRIDGE NO. 69130


T.H. 53 BRIDGE OVER ROUCHLEAU PIT (BRIDGE NO. 69129)
TYPICAL SECTION E-E

2ND AVENUE
TYPICAL SECTION F-F

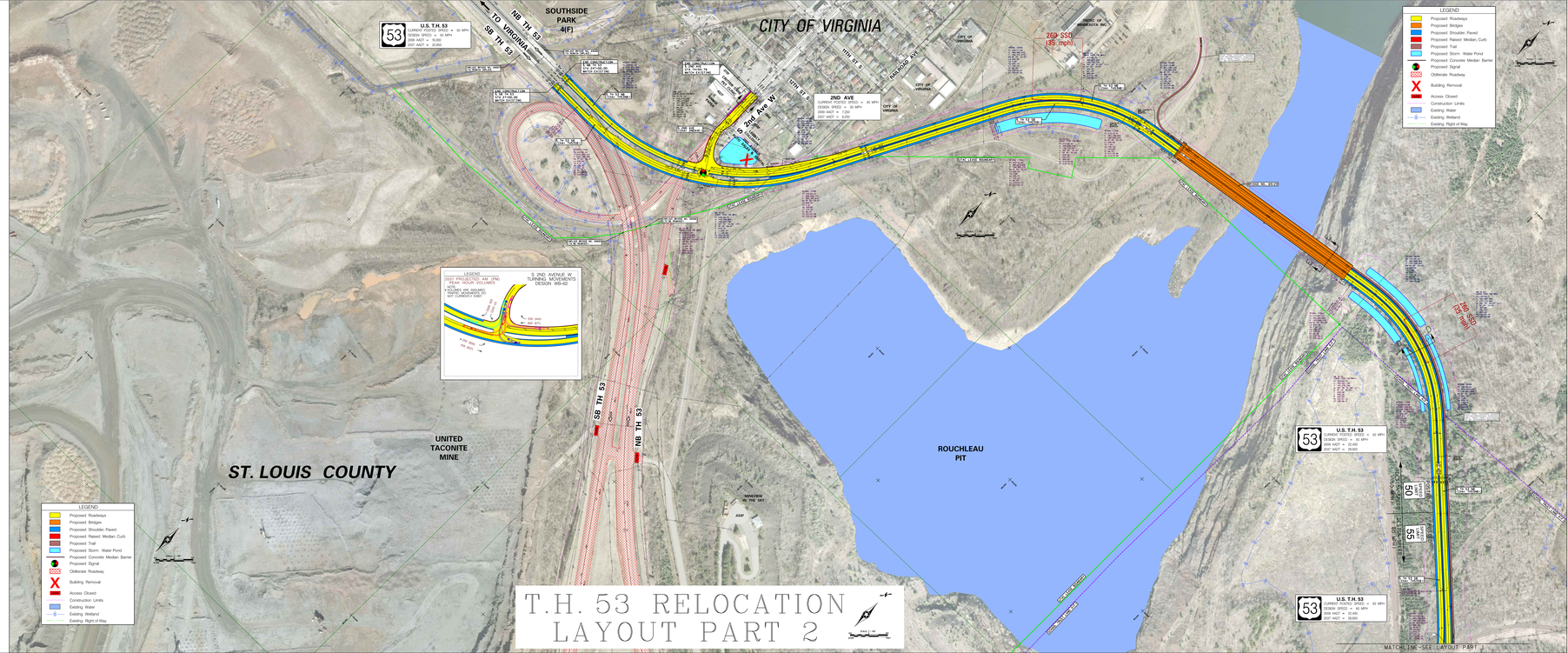

T.H. 135
TYPICAL SECTION G-G


LANDFILL ROAD
TYPICAL SECTION H-H


T.H. 135 BRIDGE (BRIDGE NO. 69130)
TYPICAL SECTION I-I

DESIGN EXCEPTIONS:
T.H.53 AB LOOP RDS. (SET: 1025, 1026, 1028 DO NOT MEET HORIZONTAL SIGHT DISTANCE. DO NOTHING ACCEPTABLE DUE TO HIGH MITIGATE THIS ISSUE.

TRUNCATED ACCELERATION/DECELERATION LANES DUE TO ROUCHLEAU PIT



PROFILE No. 2A PART 1 OF 2

T.H. 53 VICINITY OF VIRGINIA, MINNESOTA

FROM 1390 FEET SOUTH OF VERMILLION DRIVE TO
930 FEET WEST OF 2ND AVENUE
IN VIRGINIA, MN

Prepared JANUARY 2015 Scale: Hor. 1 inch = 100 ft.
By SEH, Inc. Vert. 1 inch = 10 ft.

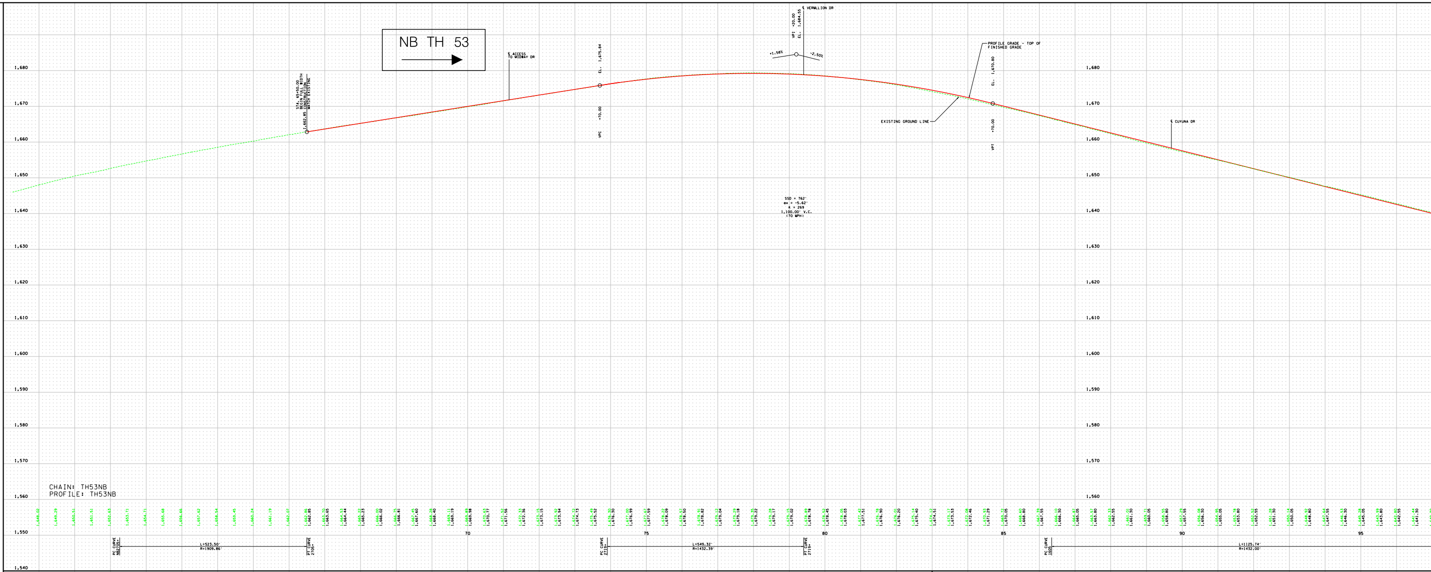
The alignment and grades shown on this map are tentative and subject to change without notice.

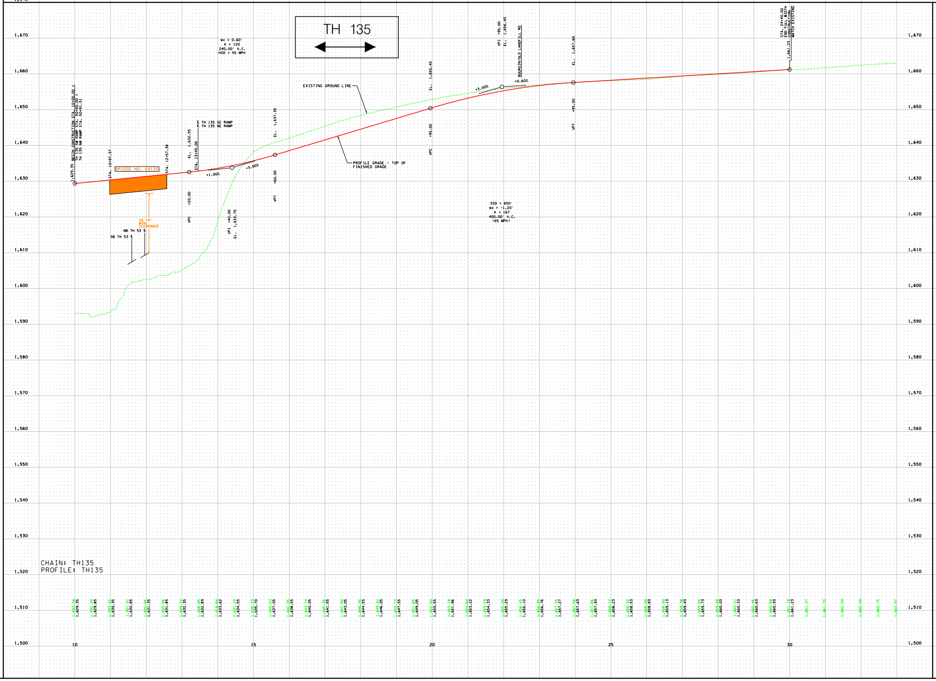
Staff Approval
Date:

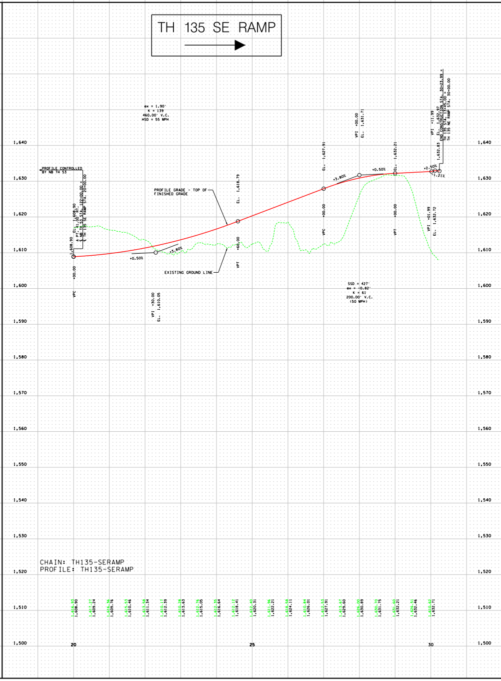
S.P. 6918-80 T.H. 53 A.J. T17662 PPMS Activity 1140
S.P. T.H. A.J. PPMS Activity
S.A.P.

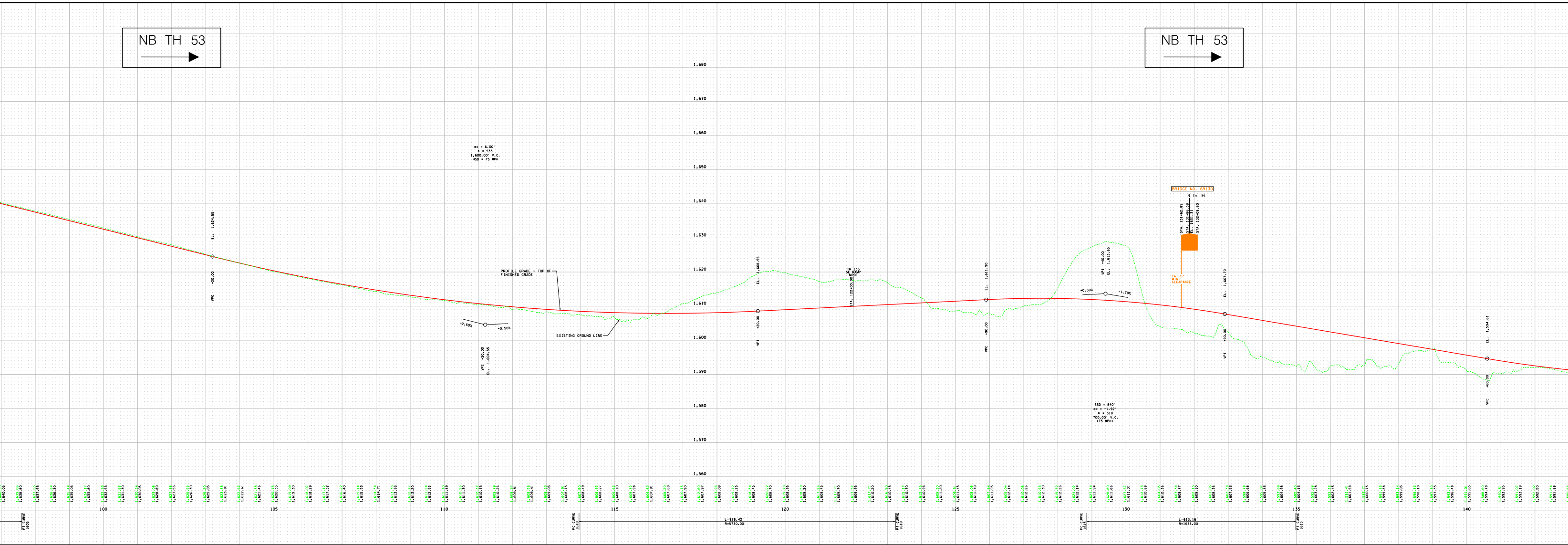
Copy To: STAFF For: APPROVAL

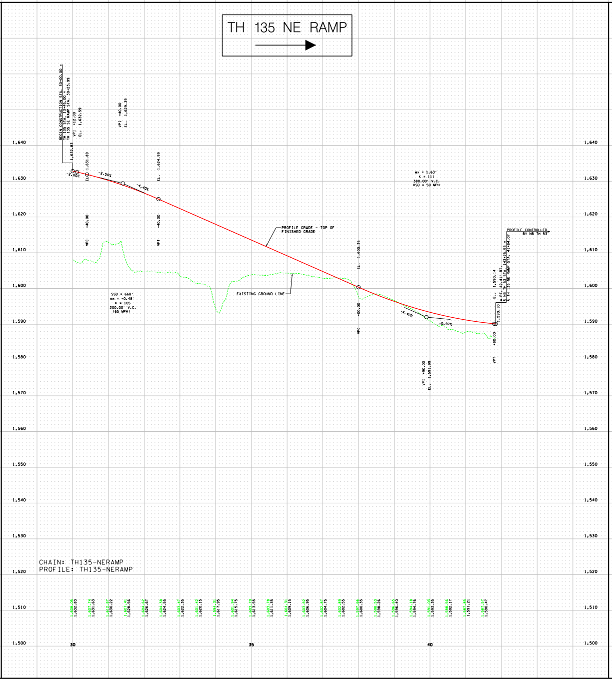
DESIGN FILE: S:\KO\M\Mnt01\121913\4-prelim-dsgn-rprts\Preferred Alternative\FinalLayouts\121913_lo1_prof.dgn
DATE: 1/15/2015

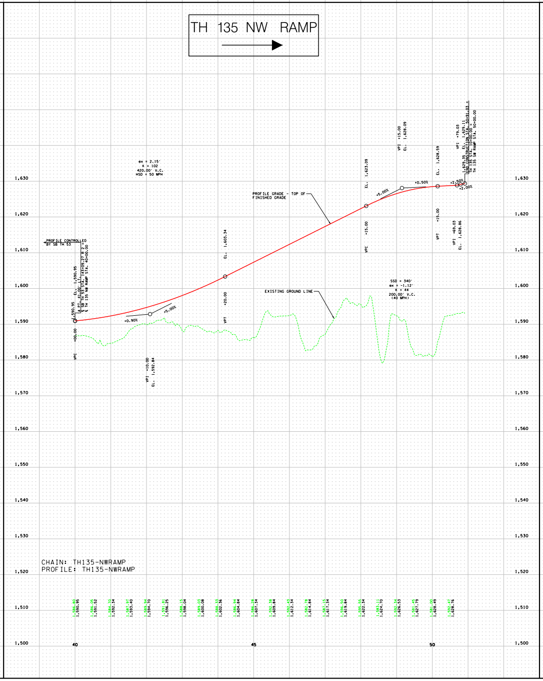

NB TH 53
STA. 65+50.00 BEGIN FULL WIDTH CONSTRUCTION MATCH EXISTING
1,662.85
℄ ACCESS TO MIDWAY DR
VPC +70.00 EL. 1,675.84
℄ VERMILLION DR
VPI +20.00 EL. 1,684.55
+1.58%
-2.50%
SSD = 762'
ex = -5.62'
K = 269
1,100.00' V.C.
(70 MPH)
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
VPT +70.00 EL. 1,670.80
℄ CUYUNA DR
CHAIN: TH53NB
PROFILE: TH53NB
PC CURVE NB2705+
L=523.50'
R=1909.86'
PT CURVE 2705+
PC CURVE 2719+
L=549.32'
R=1432.39'
PT CURVE 2719+
PC CURVE
L=1125.74'
R=1432.00'
70
75
80
85
90
95

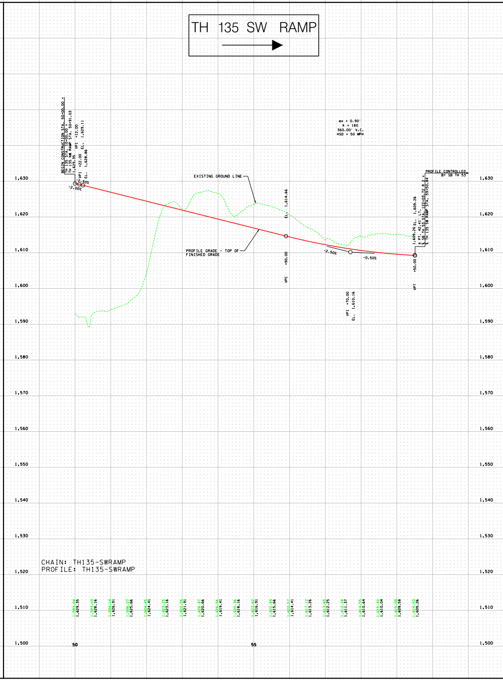

TH 135
ex = 0.60'
K = 120
240.00' V.C.
HSD = 55 MPH
1,629.35 BEGIN CONSTRUCTION STA. 10+00.00 = TH 135 SW RAMP STA. 50+00.00 = TH 135 NW RAMP STA. 50+91.51
STA. 10+97.37
BRIDGE NO. 69130
STA. 12+57.38
16'-6" MIN. CLEARANCE
NB TH 53 ℄
SB TH 53 ℄
VPC +20.00 EL. 1,632.55
STA. 13+45.00
℄ TH 135 SE RAMP
℄ TH 135 NE RAMP
+1.00%
+3.00%
VPI +40.00 EL. 1,633.75
VPT +60.00 EL. 1,637.35
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
VPC +95.00 EL. 1,650.40
VPI +95.00 EL. 1,656.40
BOURGIN/OLD LANDFILL RD
+3.00%
+0.60%
VPT +95.00 EL. 1,657.60
SSD = 650'
ex = -1.20'
K = 167
400.00' V.C.
(65 MPH)
STA. 24+40.00 END FULL WIDTH CONSTRUCTION MATCH EXISTING
1,661.23
CHAIN: TH135
PROFILE: TH135
10
15
20
25
30

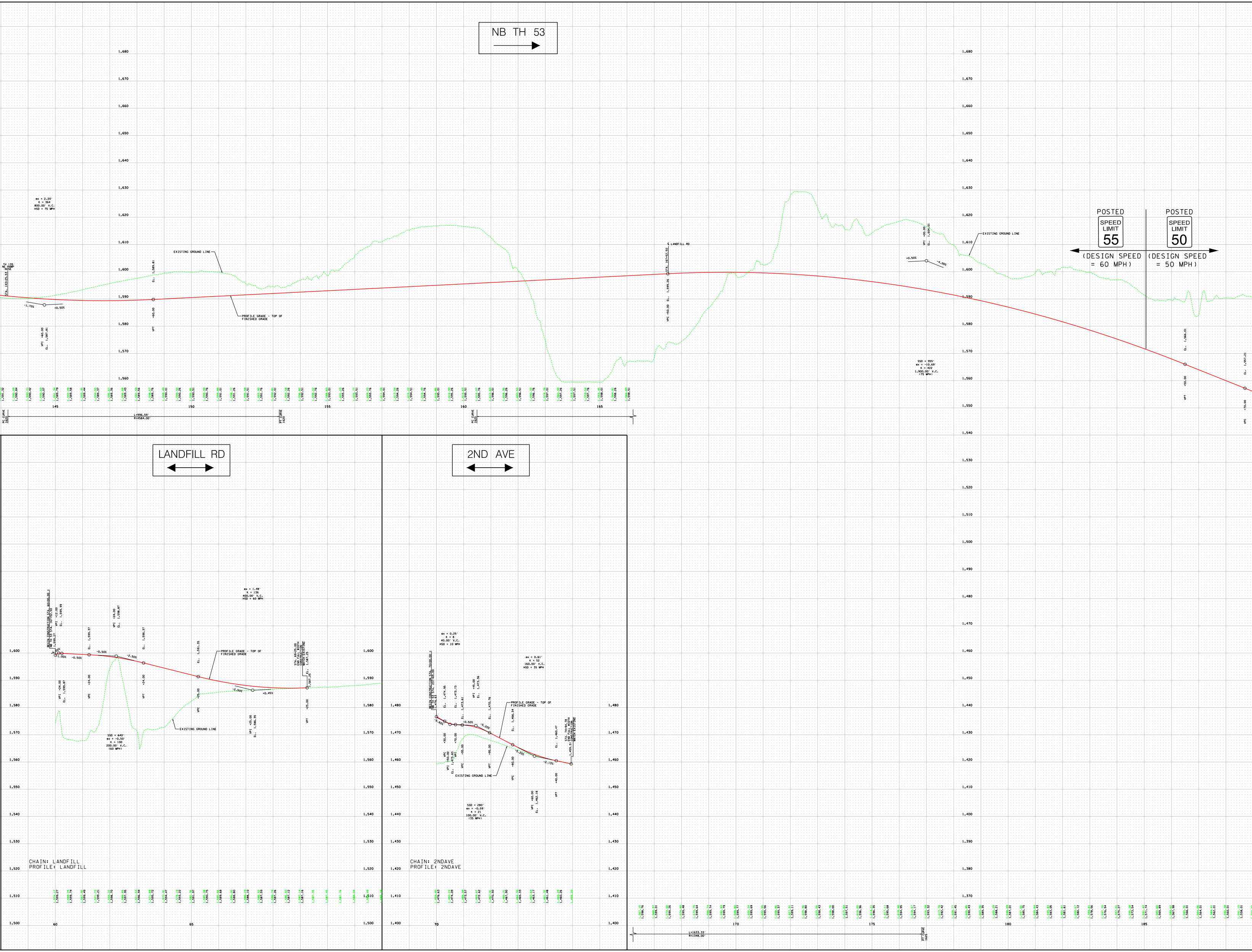

TH 135 SE RAMP
ex = 1.90'
K = 139
460.00' V.C.
HSD = 55 MPH
PROFILE CONTROLLED BY NB TH 53
VPC +00.00 EL. 1,608.90
A PT. 41.00' RT. ℄ NB TH 53 STA. 122+00.00 = ℄ TH 135 SE RAMP STA. 20+00.00
1,608.90
+0.50%
+3.80%
VPI +30.00 EL. 1,610.05
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
VPT +60.00 EL. 1,618.79
VPC +00.00 EL. 1,627.91
+3.80%
VPI +00.00 EL. 1,631.71
+0.50%
VPT +00.00 EL. 1,632.21
SSD = 427'
ex = -0.82'
K = 61
200.00' V.C.
(50 MPH)
VPI +01.99 EL. 1,632.72
+2.50%
-1.21%
1,632.83
VPI +11.99 EL. 1,632.97
END CONSTRUCTION STA. 30+23.99 = TH 135 STA. 13+45.00 = TH 135 NE RAMP STA. 30+00.00
CHAIN: TH135-SERAMP
PROFILE: TH135-SERAMP
20
25
30


NB TH 53
NB TH 53
ex = 6.00'
K = 533
1,600.00' V.C.
HSD = 75 MPH
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
-2.50%
+0.50%
+0.50%
-1.70%
SSD = 840'
ex = -1.92'
K = 318
700.00' V.C.
(75 MPH)
BRIDGE NO.
TH 135
CLEARANCE
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
100
105
110
115
120
125
130
135
140
L=928.42'
R=5730.00'
L=613.36'
R=1673.00'


TH 135 NE RAMP
-2.50%
-4.40%
ex = 1.63'
K = 111
360.00' V.C.
HSD = 50 MPH
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
SSD = 668'
ex = -0.48'
K = 105
200.00' V.C.
(65 MPH)
-4.40%
-0.97%
PROFILE CONTROLLED BY NB TH 53
CHAIN: TH135-NERAMP
PROFILE: TH135-NERAMP
30
35
40


TH 135 NW RAMP
ex = 2.15'
K = 102
420.00' V.C.
HSD = 50 MPH
PROFILE GRADE - TOP OF FINISHED GRADE
PROFILE CONTROLLED BY SB TH 53
+0.90%
+5.00%
+5.00%
+0.50%
EXISTING GROUND LINE
SSD = 340'
ex = -1.12'
K = 44
200.00' V.C.
(40 MPH)
CHAIN: TH135-NWRAMP
PROFILE: TH135-NWRAMP
40
45
50


TH 135 SW RAMP
ex = 0.90'
K = 180
360.00' V.C.
HSD = 50 MPH
EXISTING GROUND LINE
PROFILE CONTROLLED BY SB TH 53
PROFILE GRADE - TOP OF FINISHED GRADE
-2.50%
-0.50%
CHAIN: TH135-SWRAMP
PROFILE: TH135-SWRAMP
50
55


NB TH 53
ex = 2.20'
K = 364
800.00' V.C.
HSD = 75 MPH
TH 135 NE RAMP NOSE
STA. 143+25.53
-1.70%
+0.50%
VPI +60.00
EL. 1,587.81
VPT +60.00
EL. 1,589.81
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
℄ LANDFILL RD
STA. 167+52.50
VPC +50.00 EL. 1,599.26
VPI +00.00
EL. 1,604.01
+0.50%
-4.00%
SSD = 955'
ex = -10.69'
K = 422
1,900.00' V.C.
(75 MPH)
POSTED
SPEED LIMIT 55
(DESIGN SPEED = 60 MPH)
POSTED
SPEED LIMIT 50
(DESIGN SPEED = 50 MPH)
VPT +50.00
EL. 1,566.01
VPC +70.00
EL. 1,557.21
PC CURVE 1620
L=996.59'
R=4584.00'
PT CURVE 1620
PC CURVE 1625
L=1633.33'
R=1348.00'
PT CURVE 1625
145
150
155
160
165
170
175
180
185
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
LANDFILL RD
BEGIN CONSTRUCTION STA. 60+00.00 = NB TH 53 STA. 167+52.50
1,599.27
VPI +12.00
EL. 1,599.99
+6.00%
-1.00%
-0.50%
VPI +24.00
EL. 1,599.87
EL. 1,599.37
VPC +24.00
VPI +24.00
EL. 1,598.87
-2.50%
EL. 1,596.37
VPT +24.00
ex = 1.48'
K = 136
400.00' V.C.
HSD = 60 MPH
EL. 1,591.35
VPC +25.00
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
SSD = 640'
ex = -0.50'
K = 100
200.00' V.C.
(60 MPH)
-2.50%
+0.45%
VPI +25.00
EL. 1,586.35
STA. 69+25.00
END FULL WIDTH CONSTRUCTION
MATCH EXISTING
EL. 1,587.25
VPT +25.00
CHAIN: LANDFILL
PROFILE: LANDFILL
60
65
2ND AVE
BEGIN CONSTRUCTION STA. 70+00.00 = NB TH 53 STA. 237+69.00
1,476.63
ex = 0.25'
K = 8
40.00' V.C.
HSD = 10 MPH
-5.60%
EL. 1,474.95
VPC +30.00
EL. 1,473.73
+70.00
VPI +50.00
EL. 1,473.83
EL. 1,473.61
VPC +95.00
VPI +45.00
EL. 1,473.36
-0.50%
-5.20%
EL. 1,470.76
VPT +95.00
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
ex = 0.61'
K = 52
160.00' V.C.
HSD = 35 MPH
EL. 1,466.34
VPC +80.00
-5.20%
VPI +60.00
EL. 1,462.18
-2.13%
EL. 1,460.47
VPT +40.00
STA. 74+94.78
END FULL WIDTH CONSTRUCTION
MATCH EXISTING
1,459.31
SSD = 280'
ex = -0.59'
K = 21
100.00' V.C.
(35 MPH)
CHAIN: 2NDAVE
PROFILE: 2NDAVE
70

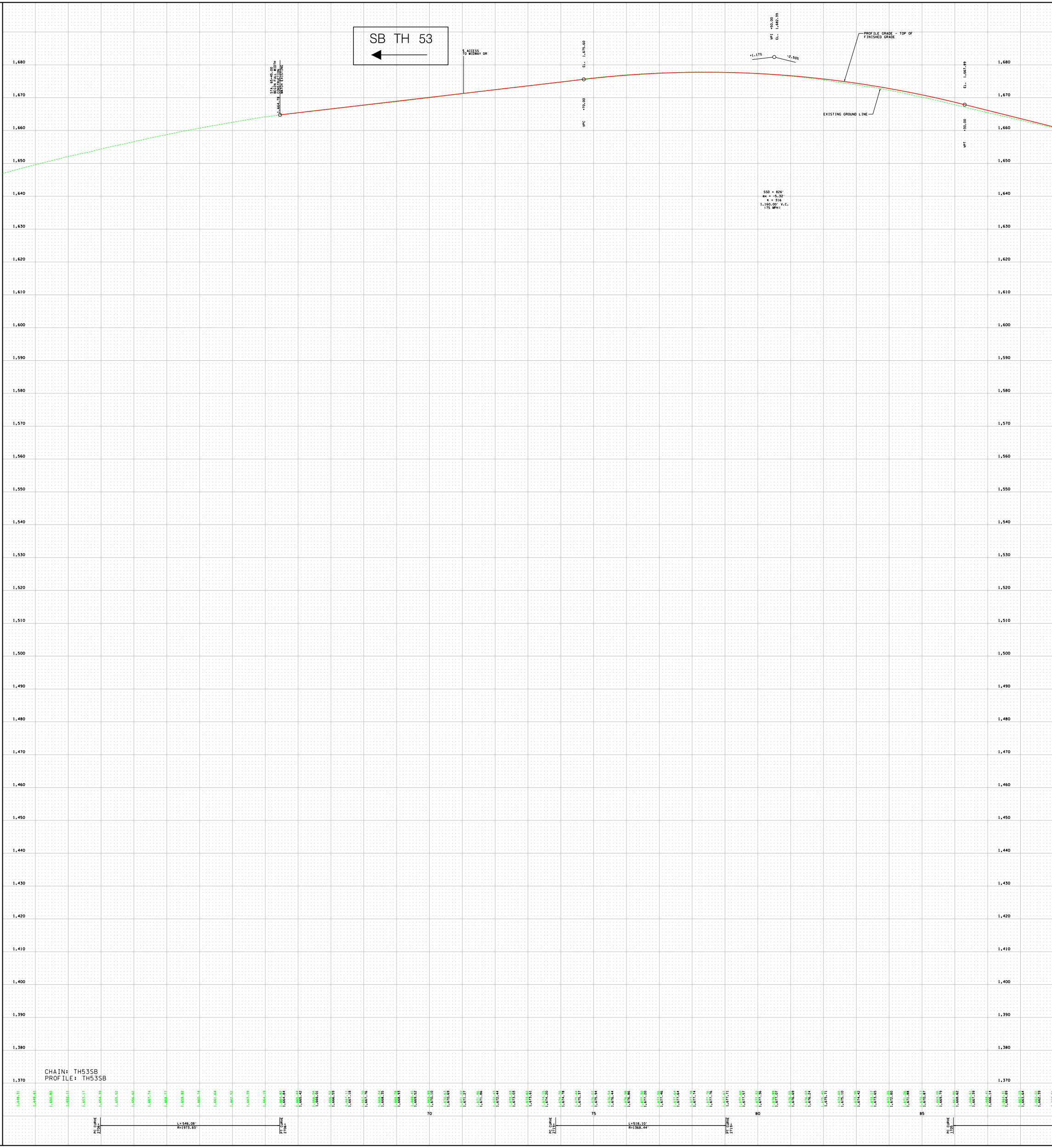
NB TH 53
NB TH 53
ex = 1.88'
K = 667
1,000.00' V.C.
HSD = 75 MPH
PROFILE GRADE - TOP OF FINISHED GRADE
-4.00%
-2.50%
VPI +70.00
EL. 1,537.21
EL. 1,524.71
VPT +70.00
STA. 199+75.00
BRIDGE NO. 69129
STA. 211+00.00
EL. 1,490.46
VPC +40.00
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
ex = 5.80'
K = 552
1,600.00' V.C.
HSD = 75 MPH
-2.50%
+0.40%
VPI +40.00
EL. 1,470.46
EL. 1,473.66
VPT +40.00
EL. 1,475.90
VPC +00.00
℄ 2ND AVE
STA. 237+69.00
+0.40%
-1.02%
VPI +50.00
EL. 1,478.50
SSD = 1408'
ex = -2.31'
K = 914
1,300.00' V.C.
(75 MPH)
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
STA. 247+00.00
END FULL WIDTH CONSTRUCTION
MATCH EXISTING
EL. 1,471.85
VPT +00.00
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
190
195
200
205
210
215
220
225
230
235
240
245
PC CURVE 1630
L=591.91'
R=883.00'
PT CURVE 1630
CURRENT TOP OF WATER ELEV. =1310.0
PC CURVE 1635
L=621.62'
R=883.00'
PT CURVE 1635
PC CURVE 1640
L=1058.14'
R=1146.00'
PT CURVE 1640

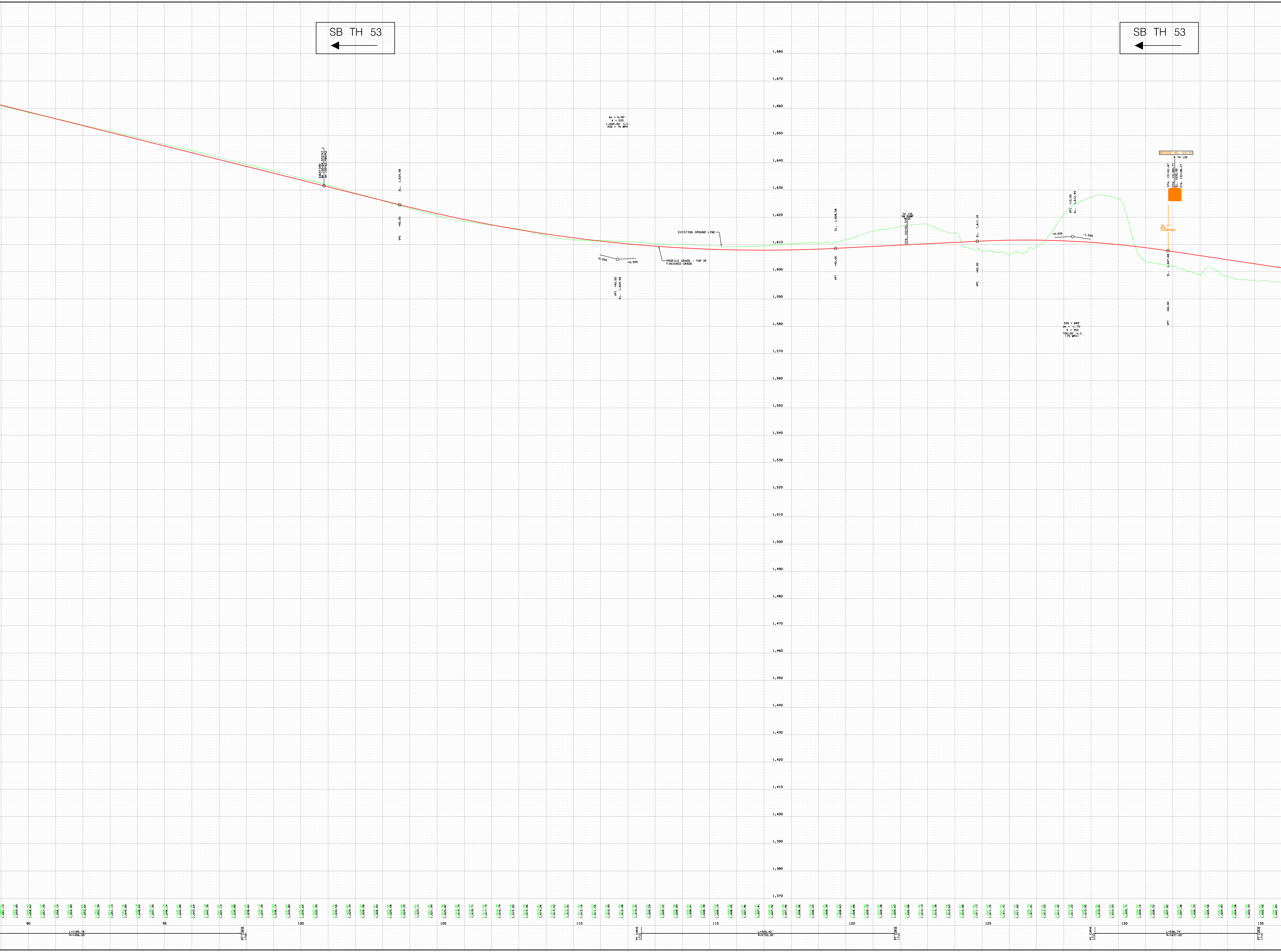
PROFILE No. 2A PART 2 OF 2
T.H. 53 VICINITY OF VIRGINIA, MINNESOTA
FROM 1390 FEET SOUTH OF VERMILLION DRIVE TO
930 FEET WEST OF 2ND AVENUE
IN VIRGINIA, MN
Prepared JANUARY 2015 Scale: Hor. 1 inch = 100 ft.
By SEH, Inc. Vert. 1 inch = 10 ft.

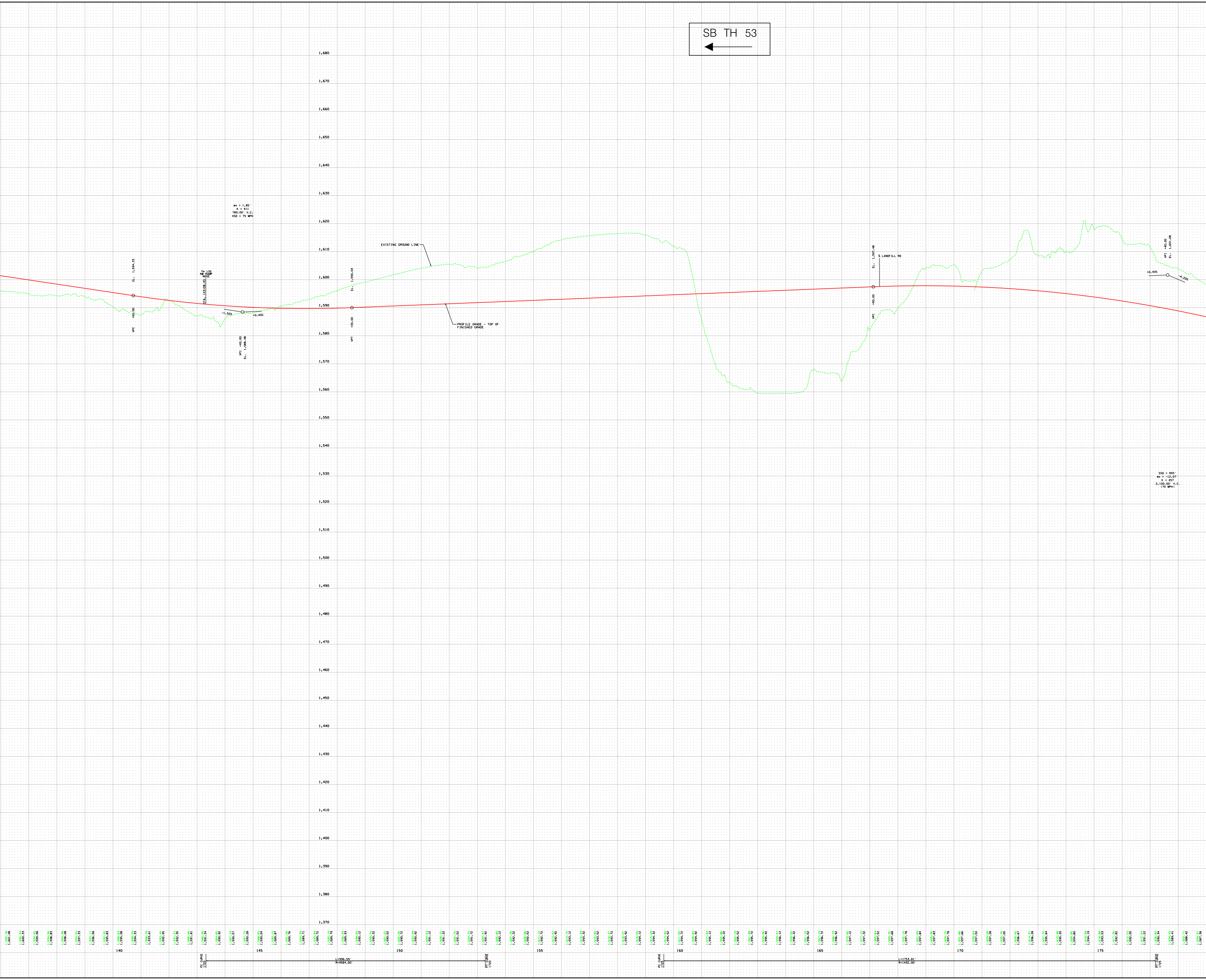
The alignment and grades shown on this map are tentative and subject to change without notice.	Staff Approval Date:

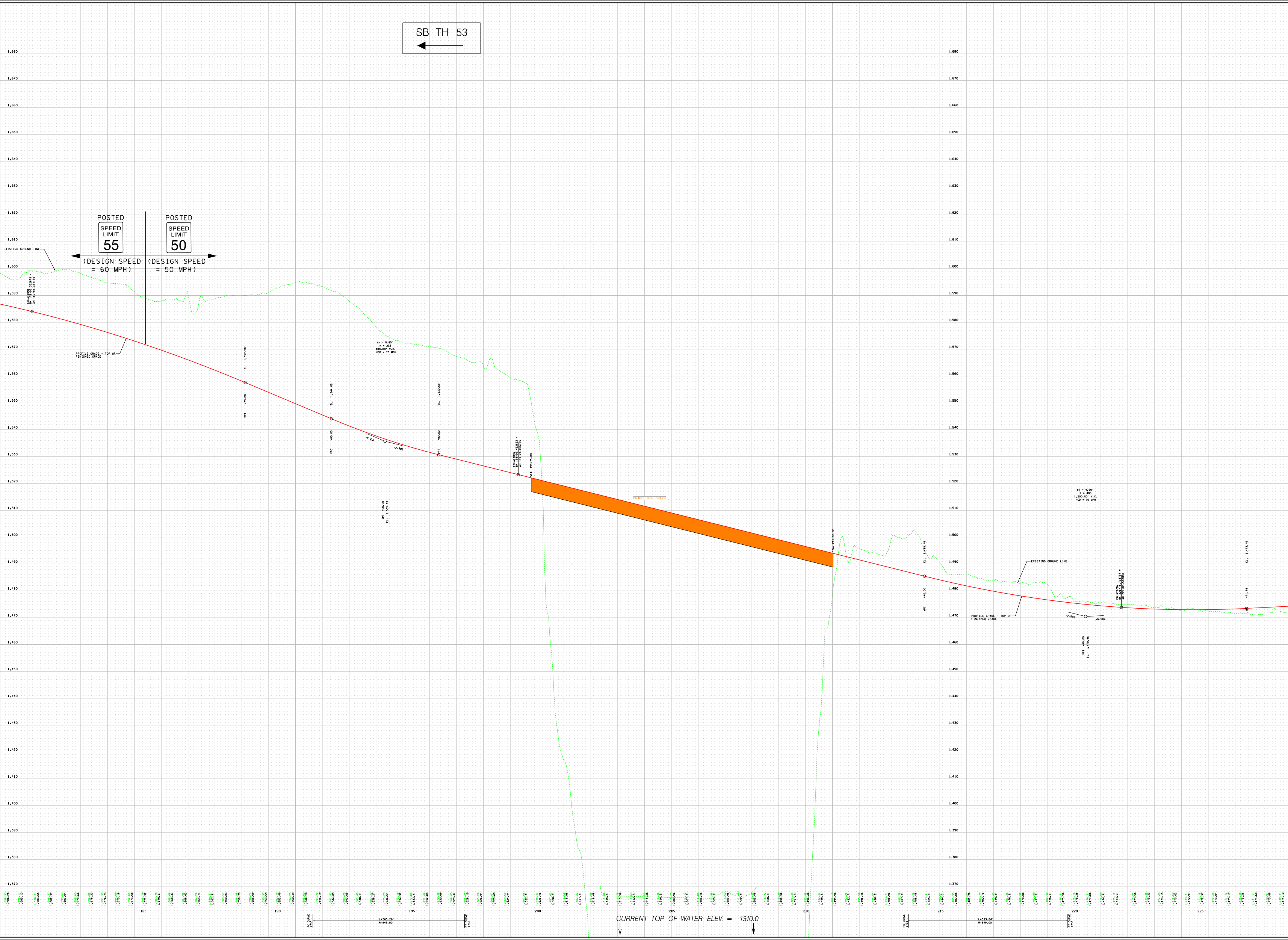
S.P. 6918-80 T.H. 53 A.J. T17662 PPMS Activity 1140
S.P. T.H. ... A.J. PPMS Activity
S.A.P.
Copy To: STAFF For: APPROVAL

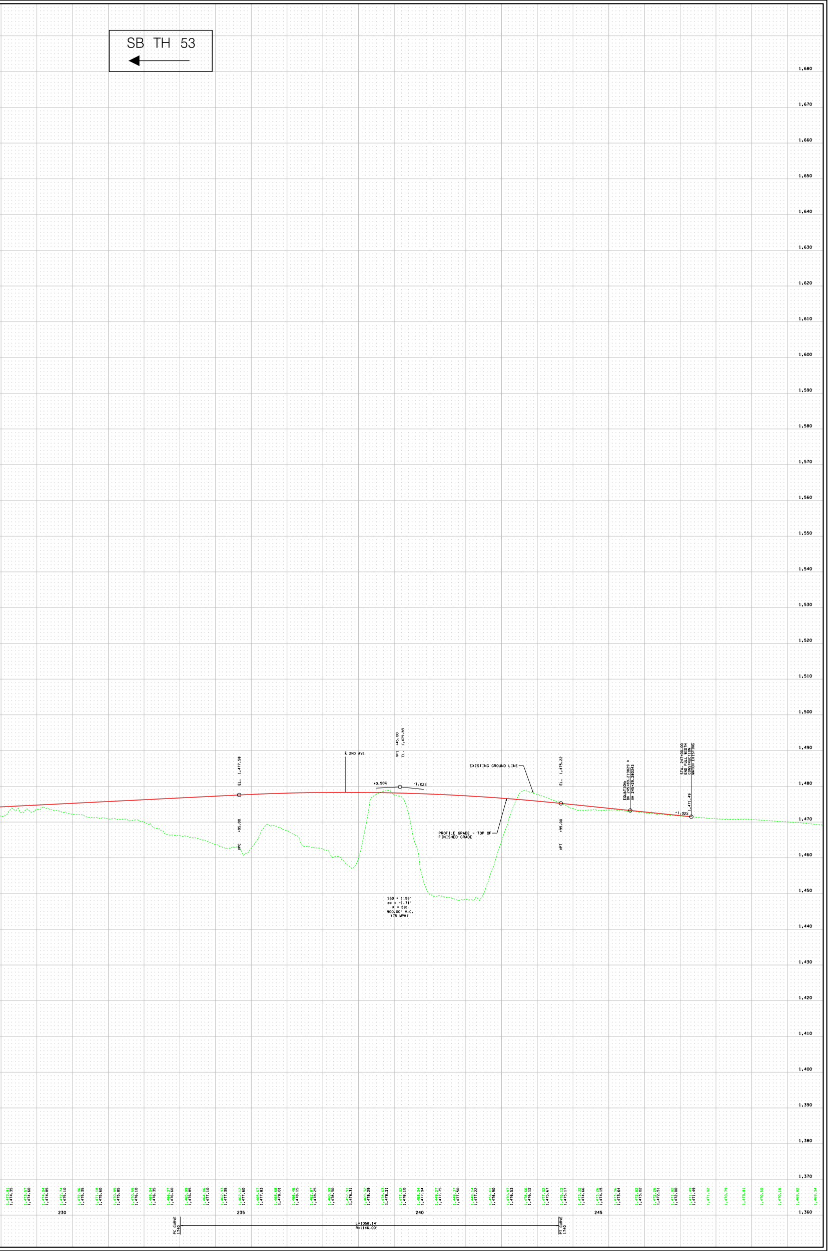
DESIGN FILE: S:\KO\M\Mnt01\121913\4-prelim-dsgn-rprts\Preferred Alternative\FinalLayouts\121913_lo1_prof.dgn
DATE: 1/15/2015

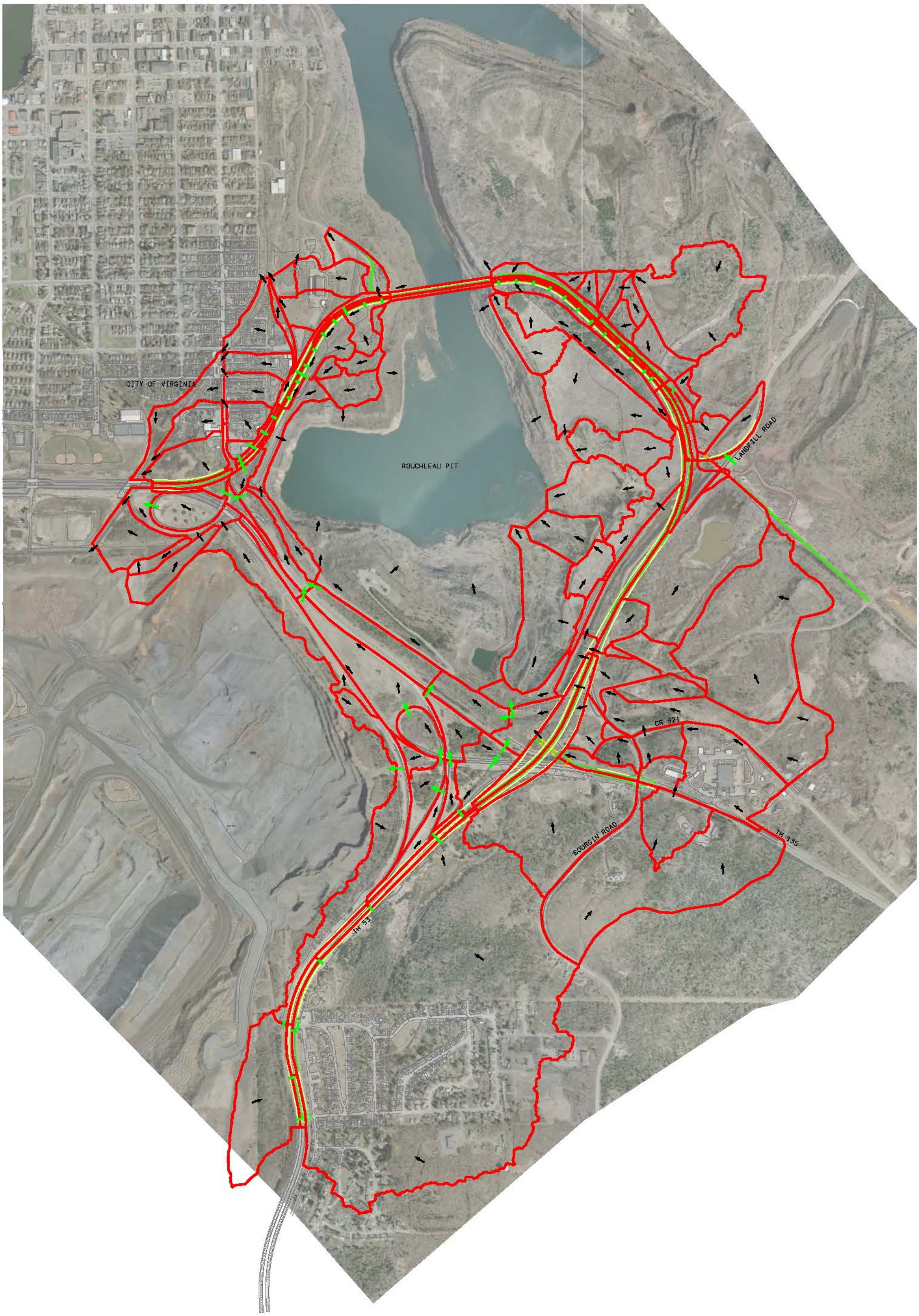

SB TH 53
STA. 65+45.00
BEGIN FULL WIDTH
CONSTRUCTION
MATCH EXISTING
1,664.78
℄ ACCESS TO MIDWAY DR
VPC +70.00
EL. 1,675.60
VPI +50.00
EL. 1,682.39
+1.17%
-2.50%
PROFILE GRADE - TOP OF FINISHED GRADE
EXISTING GROUND LINE
VPT +30.00
EL. 1,667.89
SSD = 826'
ex = -5.32'
K = 316
1,160.00' V.C.
(75 MPH)
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
CHAIN: TH53SB
PROFILE: TH53SB
1,648.31
1,649.61
1,650.80
1,652.11
1,653.17
1,654.39
1,655.52
1,656.62
1,657.74
1,658.77
1,659.82
1,660.74
1,661.64
1,662.52
1,663.39
1,664.19
1,664.82 1,664.84
1,665.44 1,665.42
1,666.04 1,666.01
1,666.52 1,666.59
1,667.11 1,667.18
1,667.70 1,667.76
1,668.24 1,668.35
1,668.78 1,668.93
1,669.41 1,669.52
1,669.99 1,670.10
1,670.63 1,670.69
1,671.22 1,671.27
1,671.86 1,671.86
1,672.43 1,672.44
1,673.03 1,673.03
1,673.62 1,673.61
1,674.15 1,674.20
1,674.70 1,674.78
1,675.44 1,675.37
1,676.07 1,675.94
1,676.54 1,676.44
1,676.98 1,676.86
1,677.30 1,677.20
1,677.55 1,677.46
1,677.64 1,677.64
1,677.78 1,677.74
1,677.76 1,677.76
1,677.67 1,677.71
1,677.60 1,677.57
1,677.32 1,677.36
1,676.99 1,677.07
1,676.55 1,676.69
1,676.03 1,676.24
1,675.40 1,675.71
1,674.65 1,675.10
1,673.95 1,674.42
1,673.17 1,673.65
1,672.25 1,672.80
1,671.26 1,671.88
1,670.17 1,670.87
1,669.05 1,669.79
1,667.86 1,668.62
1,666.61 1,667.39
1,665.41 1,666.14
1,664.31 1,664.89
1,663.15 1,663.64
1,662.01 1,662.39
70
75
80
85
PC CURVE 2706+
L=546.08'
R=1973.83'
PT CURVE 2706+
PC CURVE 2719+
L=518.10'
R=1368.44'
PT CURVE 2719+
PC CURVE 1705


SB TH 53
SB TH 53
EQUATION:
BK 100+84.970747 =
AH 100+62.486442
VPC +40.00 EL. 1,624.58
ex = 6.00'
K = 533
1,600.00' V.C.
HSD = 75 MPH
-2.50%
+0.50%
VPI +40.00 EL. 1,604.58
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
VPT +40.00 EL. 1,608.58
TH 135
SB RAMP
NOSE
STA. 122+03.72
VPC +60.00 EL. 1,611.18
+0.50%
-1.50%
VPI +10.00 EL. 1,612.93
SSD = 889'
ex = -1.75'
K = 350
700.00' V.C.
(75 MPH)
BRIDGE NO. 69130
℄ TH 135
STA. 131+61.67
STA. 131+84.77
EL. 1630.95
STA. 132+08.27
16'-6" MIN. CLEARANCE
VPT +60.00 EL. 1,607.68
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
90
95
100
105
110
115
120
125
130
135
L=1185.76'
R=1496.00'
PT CURVE 1705
PC CURVE 1710
L=928.42'
R=5730.00'
PT CURVE 1710
PC CURVE 1715
L=596.74'
R=1637.00'
PT CURVE 1715


SB TH 53
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
ex = 1.85'
K = 411
780.00' V.C.
HSD = 75 MPH
EL. 1,594.33
+50.00
VPC
TH 135
NB RAMP
NOSE
STA. 143+08.93
-1.50%
+0.40%
VPI +40.00
EL. 1,588.48
EL. 1,590.04
+30.00
VPT
EXISTING GROUND LINE
PROFILE GRADE - TOP OF
FINISHED GRADE
EL. 1,597.48
℄ LANDFILL RD
+90.00
VPC
VPI +40.00
EL. 1,601.68
+0.40%
-4.20%
SSD = 993'
ex = -12.07'
K = 457
2,100.00' V.C.
(75 MPH)
1,595.78 1,601.08
1,595.34 1,600.33
1,594.42 1,599.58
1,594.56 1,598.83
1,594.38 1,598.08
1,594.20 1,597.33
1,593.17 1,596.58
1,592.02 1,595.83
1,588.63 1,595.08
1,588.04 1,594.33
1,588.79 1,593.61
1,590.44 1,592.95
1,591.21 1,592.35
1,588.46 1,591.81
1,586.99 1,591.34
1,584.65 1,590.92
1,587.23 1,590.57
1,587.73 1,590.28
1,588.55 1,590.04
1,590.12 1,589.87
1,591.08 1,589.76
1,592.39 1,589.71
1,593.84 1,589.72
1,595.19 1,589.79
1,596.93 1,589.93
1,598.55 1,590.12
1,599.70 1,590.32
1,601.01 1,590.52
1,602.26 1,590.72
1,603.49 1,590.92
1,604.53 1,591.12
1,605.31 1,591.32
1,605.70 1,591.52
1,604.72 1,591.72
1,604.47 1,591.92
1,605.85 1,592.12
1,607.35 1,592.32
1,608.96 1,592.52
1,611.12 1,592.72
1,613.52 1,592.92
1,614.72 1,593.12
1,615.39 1,593.32
1,615.90 1,593.52
1,616.37 1,593.72
1,616.57 1,593.92
1,616.55 1,594.12
1,615.09 1,594.32
1,613.92 1,594.52
1,611.50 1,594.72
1,598.82 1,594.92
1,577.94 1,595.12
1,565.86 1,595.32
1,562.19 1,595.52
1,561.48 1,595.72
1,559.46 1,595.92
1,559.47 1,596.12
1,559.50 1,596.32
1,561.10 1,596.52
1,567.19 1,596.72
1,566.73 1,596.92
1,570.82 1,597.12
1,577.12 1,597.32
1,585.84 1,597.52
1,589.32 1,597.68
1,592.10 1,597.78
1,601.69 1,597.84
1,605.06 1,597.83
1,604.15 1,597.78
1,601.86 1,597.66
1,599.64 1,597.50
1,604.08 1,597.28
1,605.76 1,597.00
1,609.40 1,596.67
1,614.97 1,596.28
1,607.70 1,595.84
1,610.98 1,595.35
1,609.85 1,594.80
1,618.58 1,594.19
1,618.88 1,593.53
1,617.26 1,592.82
1,612.53 1,592.05
1,612.54 1,591.22
1,606.82 1,590.34
1,604.43 1,589.41
1,602.71 1,588.42
1,599.97 1,587.38
140
145
150
155
160
165
170
175
PC CURVE 1720
L=996.59'
R=4584.00'
PT CURVE 1720
PC CURVE 1725
L=1753.81'
R=1432.00'
PT CURVE 1725


SB TH 53
POSTED SPEED LIMIT 55 (DESIGN SPEED = 60 MPH)
POSTED SPEED LIMIT 50 (DESIGN SPEED = 50 MPH)
EXISTING GROUND LINE
EQUATION: BK 179+96.352875 = AH 180+85.354195
PROFILE GRADE - TOP OF FINISHED GRADE
VPT +79.00 EL. 1,557.58
VPC +00.00 EL. 1,544.09
ex = 0.85' K = 235 400.00' V.C. HSD = 75 MPH
-4.20%
-2.50%
VPI +00.00 EL. 1,535.69
VPT +00.00 EL. 1,530.69
EQUATION: BK 198+96.412622 = AH 199+27.056725
STA. 199+75.00
BRIDGE NO. 69129
STA. 211+00.00
VPC +40.00 EL. 1,485.46
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
ex = 4.50' K = 400 1,200.00' V.C. HSD = 75 MPH
-2.50%
+0.50%
VPI +40.00 EL. 1,470.46
EQUATION: BK 221+73.718737 = AH 222+05.507001
+71.79 EL. 1,473.46
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
185
190
195
200
205
210
215
220
225
PC CURVE 1730
L=565.26' R=849.00'
PT CURVE 1730
CURRENT TOP OF WATER ELEV. = 1310.0
PC CURVE 1735
L=593.84' R=849.00'
PT CURVE 1735


SB TH 53
1,680
1,670
1,660
1,650
1,640
1,630
1,620
1,610
1,600
1,590
1,580
1,570
1,560
1,550
1,540
1,530
1,520
1,510
1,500
1,490
1,480
1,470
1,460
1,450
1,440
1,430
1,420
1,410
1,400
1,390
1,380
1,370
1,360
EL. 1,477.58
VPC +95.00
℄ 2ND AVE
VPI +45.00
EL. 1,479.83
+0.50%
-1.02%
EXISTING GROUND LINE
PROFILE GRADE - TOP OF FINISHED GRADE
SSD = 1158'
ex = -1.71'
K = 591
900.00' V.C.
(75 MPH)
EL. 1,475.22
VPT +95.00
EQUATION:
BK 245+89.219829 =
AH 245+29.280343
STA. 247+00.00
END FULL WIDTH
CONSTRUCTION
MATCH EXISTING
1,471.49
-1.02%
1,472.81 1,474.35
1,473.57 1,474.60
1,474.04 1,474.85
1,472.74 1,475.10
1,472.06 1,475.35
1,471.18 1,475.60
1,470.85 1,475.85
1,470.55 1,476.10
1,469.04 1,476.35
1,466.37 1,476.60
1,465.99 1,476.85
1,464.86 1,477.10
1,462.93 1,477.35
1,462.12 1,477.60
1,465.67 1,477.83
1,468.68 1,478.01
1,466.46 1,478.15
1,462.87 1,478.25
1,460.99 1,478.30
1,457.91 1,478.31
1,469.32 1,478.29
1,478.63 1,478.21
1,477.02 1,478.10
1,458.34 1,477.94
1,449.27 1,477.75
1,448.37 1,477.50
1,448.14 1,477.22
1,456.01 1,476.90
1,470.87 1,476.53
1,478.66 1,476.12
1,477.02 1,475.67
1,475.12 1,475.17
1,473.32 1,474.66
1,473.26 1,474.15
1,473.36 1,473.64
1,472.82 1,473.02
1,472.26 1,472.51
1,471.82 1,472.00
1,471.49 1,471.49
1,471.02
1,470.79
1,470.81
1,470.50
1,470.16
1,469.82
1,469.34
230
235
240
245
PC CURVE 1740
L=1058.14'
R=1146.00'
PT CURVE 1740



LEGEND

- PROPOSED DRAINAGE AREA
- EXISTING CULVERT CROSSINGS/ PROPOSED DITCH SECTION
- FLOW DIRECTION
- PROPOSED CULVERT LOCATION

N

0 500
SCALE IN FEET

MINNESOTA DEPARTMENT OF TRANSPORTATION

Kimley»Horn

MNDOT TH 53 REALIGNMENT
ST. LOUIS COUNTY
PROPOSED DRAINAGE AREA EXHIBIT

FILE:K:\TWC_Civil\State\MNDOT\TH 53 FINAL DESIGN\DESIGN\DRAINAGE\DRAINAGE AREAS\CAD\Microstation\Exhibits\TH53_PDA.dgn PLOTTED/REVISED 4/22/2015