

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

STATE
N.C.

STATE PROJECT REFERENCE NO.
R-2233BB

SUBSURFACE INVESTIGATION

SECTION B

REFERENCE: R-2233BB

PROJECT: 34400

DS
WPA

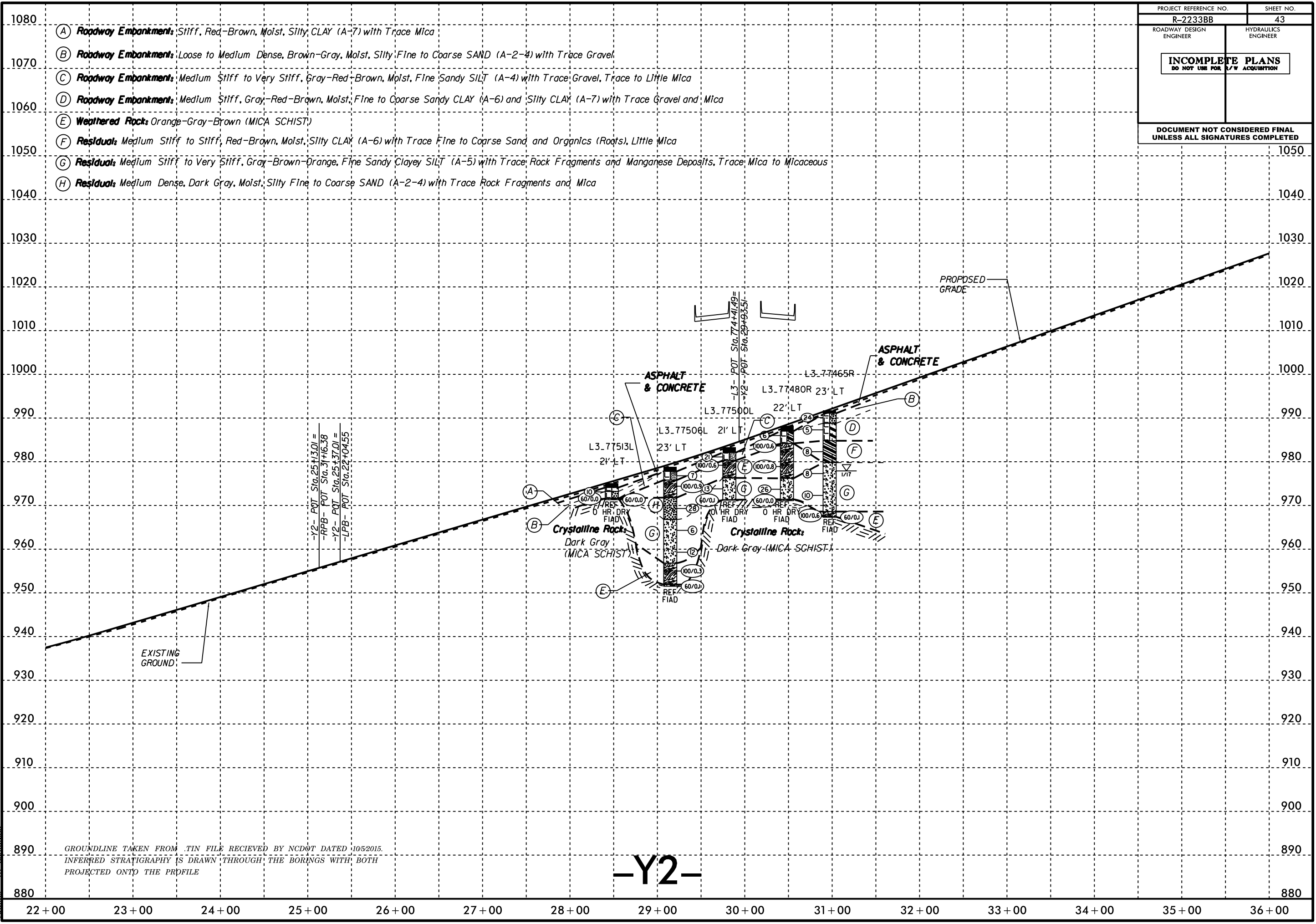
INITIALS

4/6/2017

DATE

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 43
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

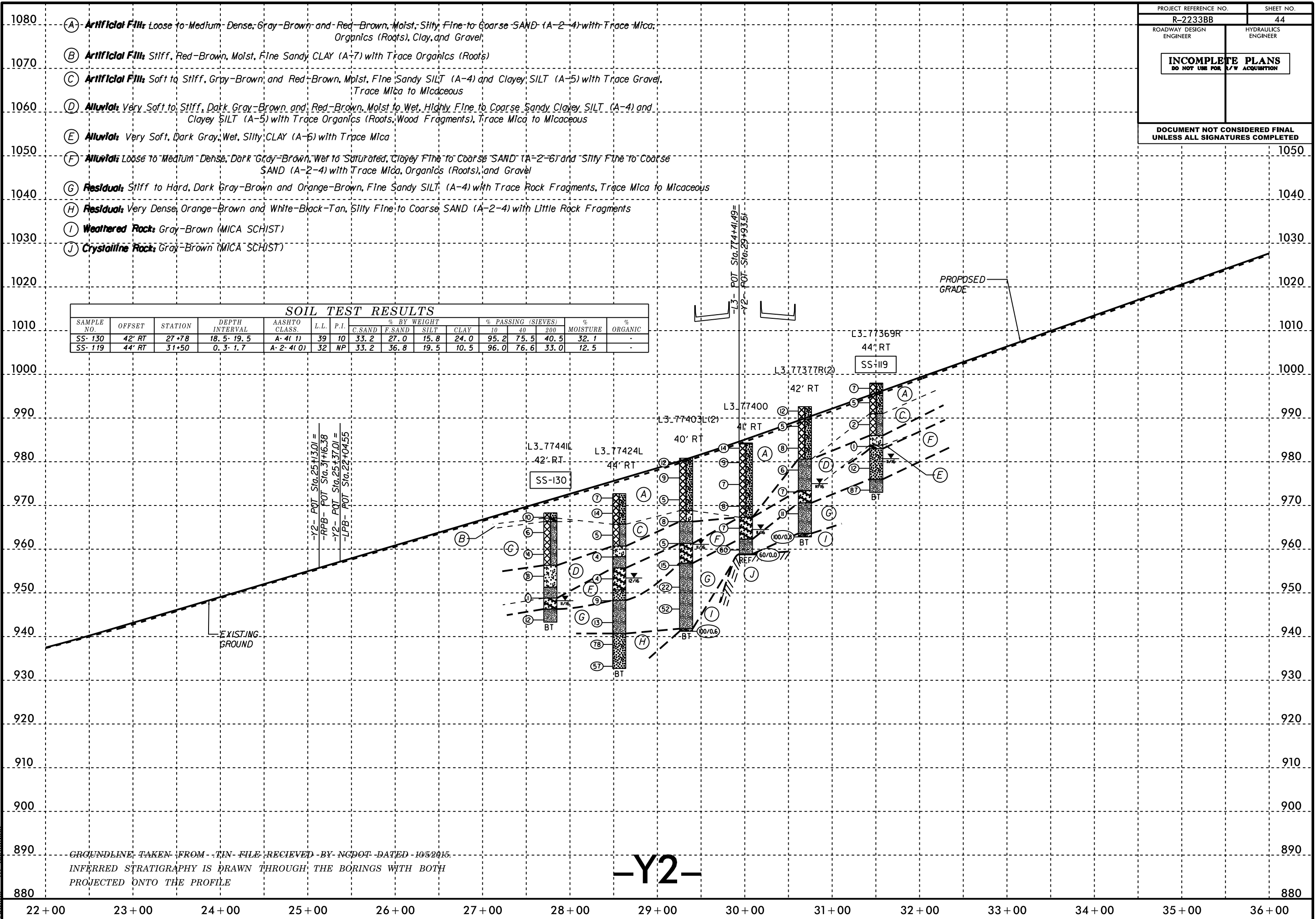
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 Walker - 61 65181058



- (A) **Roadway Embankment:** Stiff, Red-Brown, Moist, Silty, CLAY (A-7) with Trace Mica
- (B) **Roadway Embankment:** Loose to Medium Dense, Brown-Gray, Moist, Silty, Fine to Coarse SAND (A-2-4) with Trace Gravel
- (C) **Roadway Embankment:** Medium Stiff to Very Stiff, Gray-Red-Brown, Moist, Fine Sandy SILT (A-4) with Trace Gravel, Trace to Little Mica
- (D) **Roadway Embankment:** Medium Stiff, Gray-Red-Brown, Moist, Fine to Coarse Sandy CLAY (A-6) and Silty CLAY (A-7) with Trace Gravel and Mica
- (E) **Weathered Rock:** Orange-Gray-Brown (MICA SCHIST)
- (F) **Residual:** Medium Stiff to Stiff, Red-Brown, Moist, Silty CLAY (A-6) with Trace Fine to Coarse Sand and Organics (Roots), Little Mica
- (G) **Residual:** Medium Stiff to Very Stiff, Gray-Brown-Orange, Fine Sandy Clayey SILT (A-5) with Trace Rock Fragments and Manganese Deposits, Trace Mica to Micaceous
- (H) **Residual:** Medium Dense, Dark Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Rock Fragments and Mica

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y2-

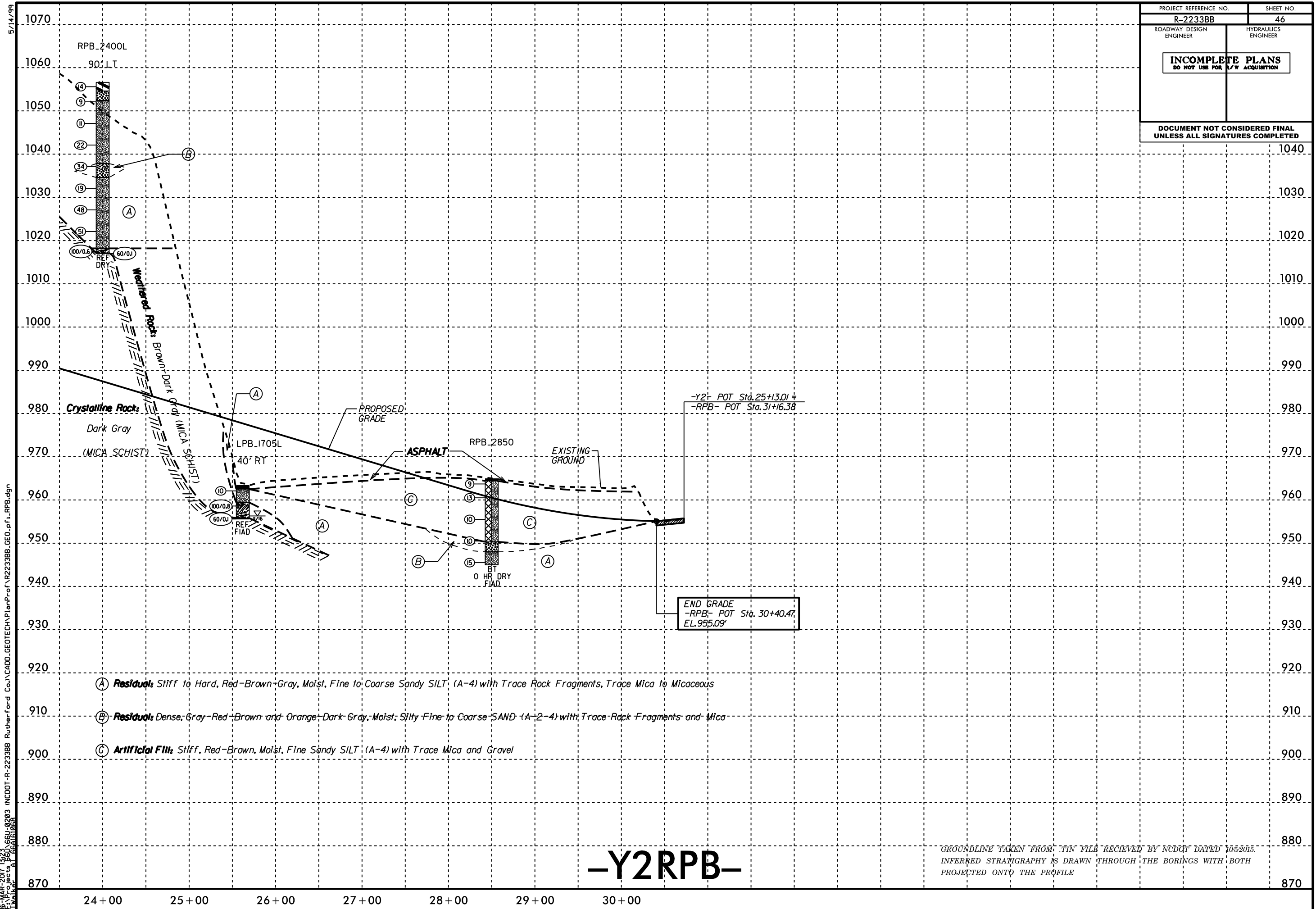


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-Y2-

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 Walker - 66166U

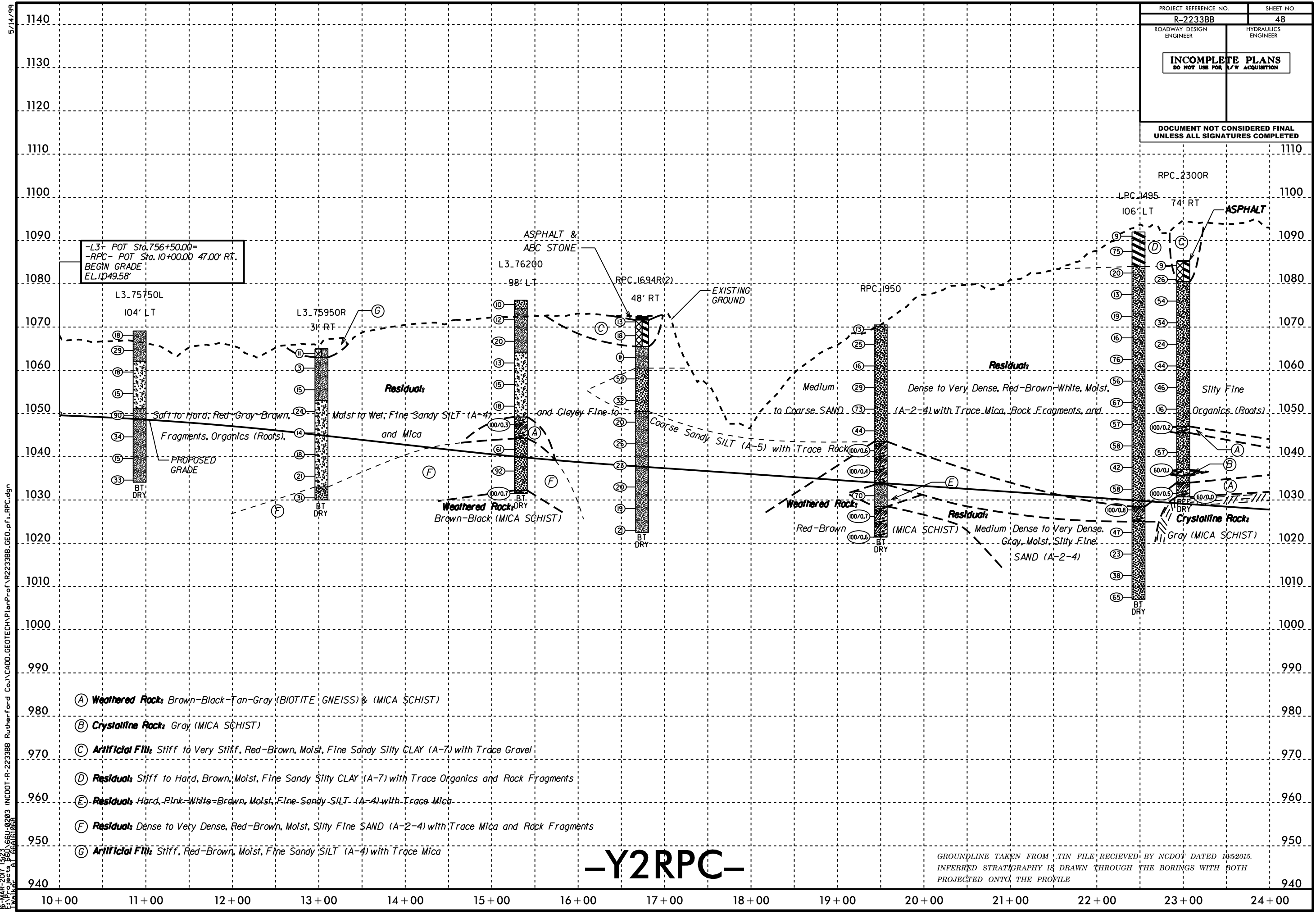
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



-Y2RPB-

GROUNDLINE TAKEN FROM "PIN FILE" RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

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 Walker - AT 66166U0203



-L3+ POT Sta. 756+50.00=
-RPC- POT Sta. 10+00.00 47.00' RT.
BEGIN GRADE
EL. 1049.58'

- (A) Weathered Rocks: Brown-Black-Tan-Gray (BIOTITE GNEISS) & (MICA SCHIST)
- (B) Crystalline Rocks: Gray (MICA SCHIST)
- (C) Artificial Fills: Stiff to Very Stiff, Red-Brown, Moist, Fine Sandy Silty CLAY (A-7) with Trace Gravel
- (D) Residuals: Stiff to Hard, Brown, Moist, Fine Sandy Silty CLAY (A-7) with Trace Organics and Rock Fragments
- (E) Residuals: Hard, Pink-White-Brown, Moist, Fine Sandy SILT (A-4) with Trace Mica
- (F) Residuals: Dense to Very Dense, Red-Brown, Moist, Silty Fine SAND (A-2-4) with Trace Mica and Rock Fragments
- (G) Artificial Fills: Stiff, Red-Brown, Moist, Fine Sandy SILT (A-4) with Trace Mica

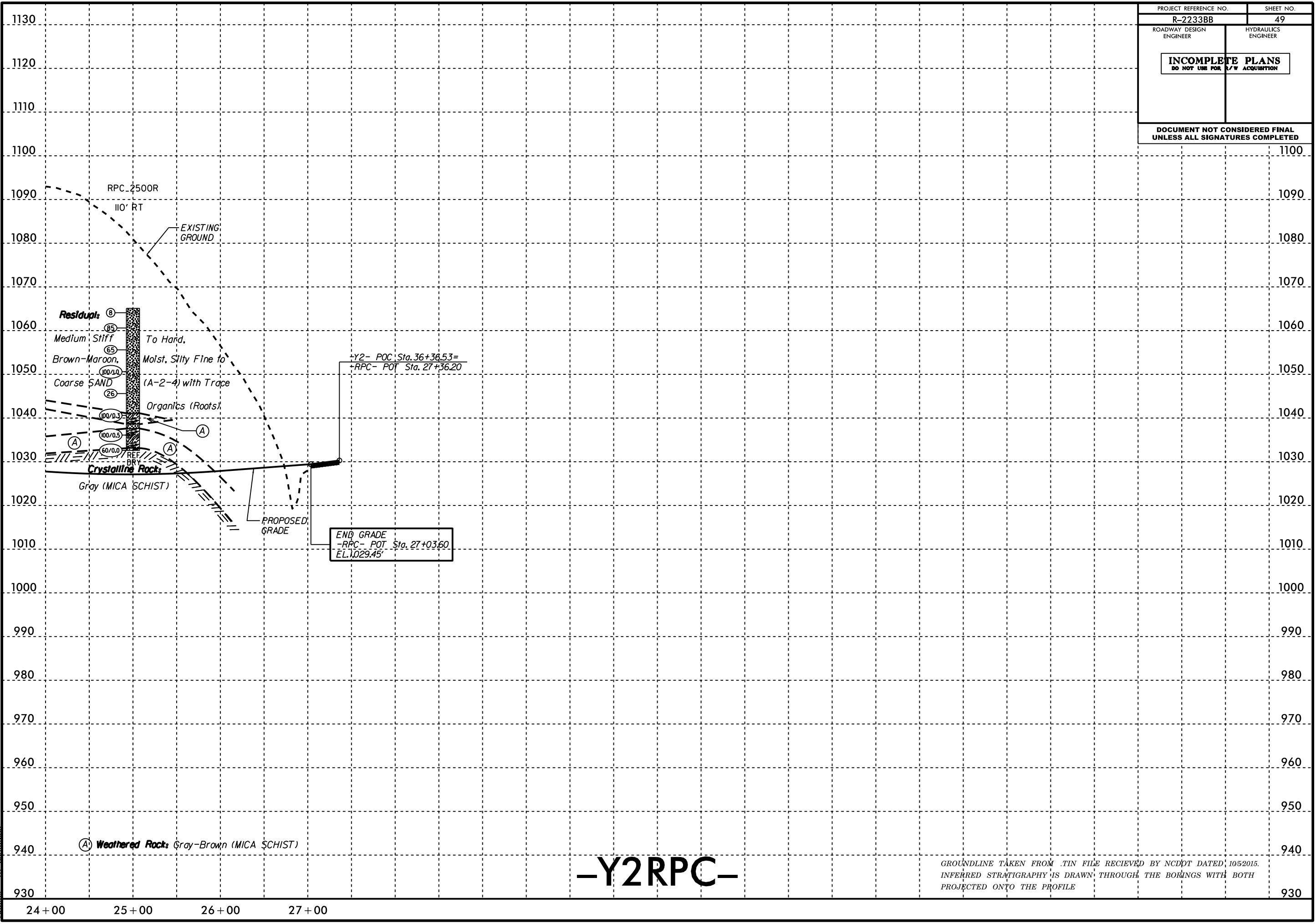
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

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 Walker - B1 6/18/15

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	49
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - AT 66166U



-Y2RPC-

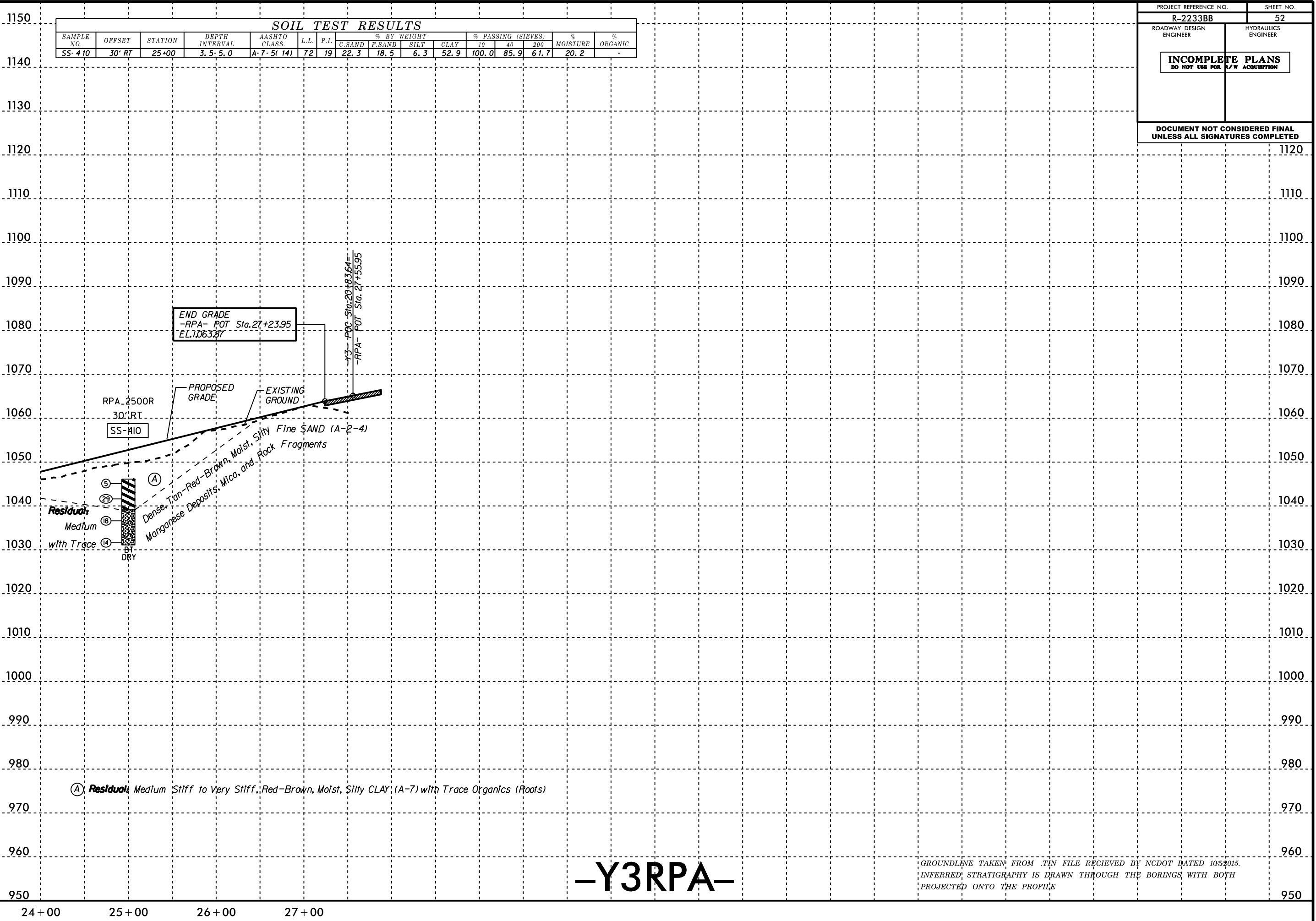
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PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	52
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-410	30' RT	25+00	3.5-5.0	A-7-5(14)	72	19	22.3	18.5	6.3	52.9	100.0	85.9	61.7	20.2	-

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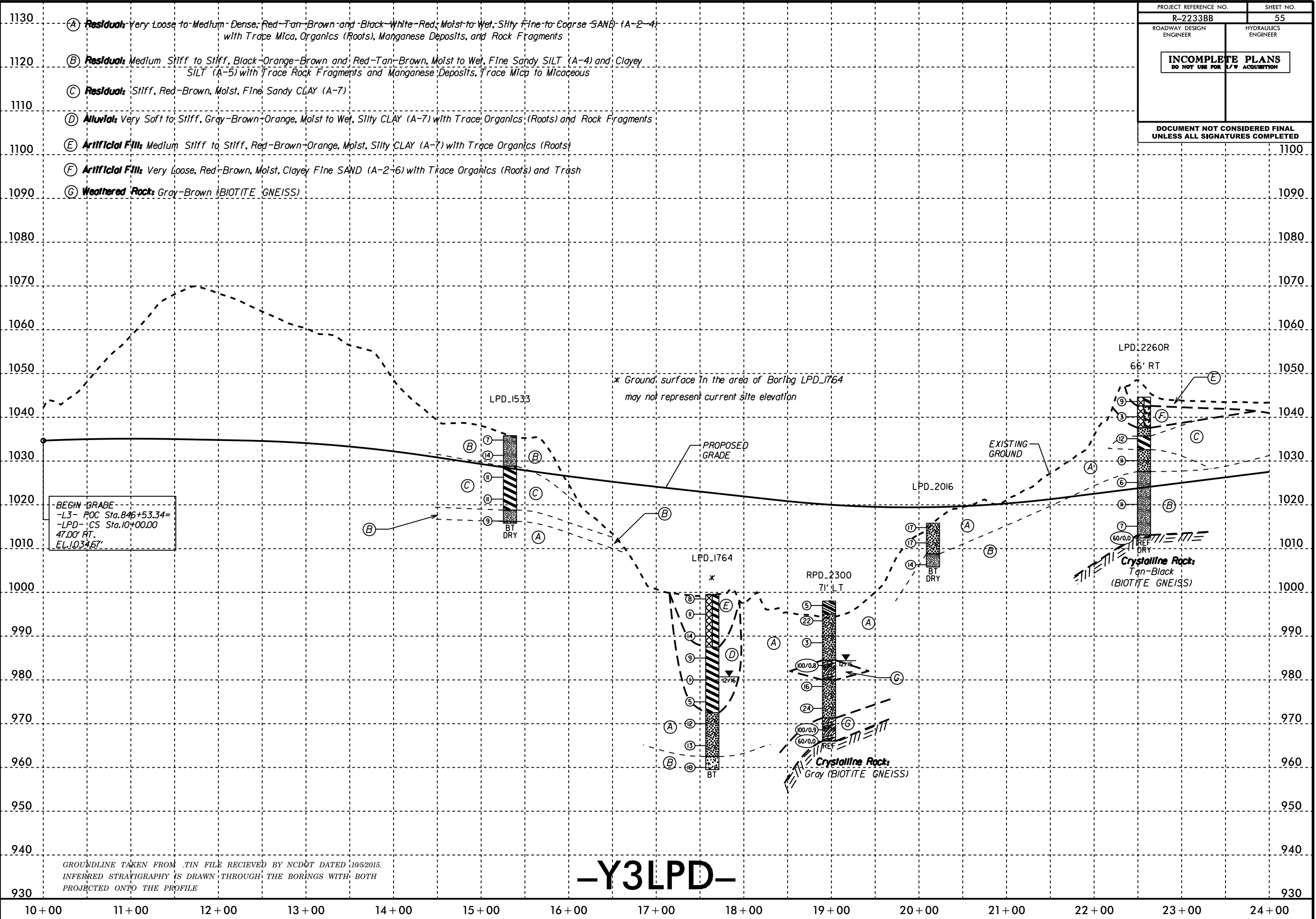
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

24+00 25+00 26+00 27+00 950

5/14/99

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 55
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BEGIN GRADE
 -L3- POC Sta. 846+53.34=
 -LPD- CS Sta. 10+00.00
 47.00 FT.
 EL. 1034.67

* Ground surface in the area of Boring LPD.1764
 may not represent current site elevation

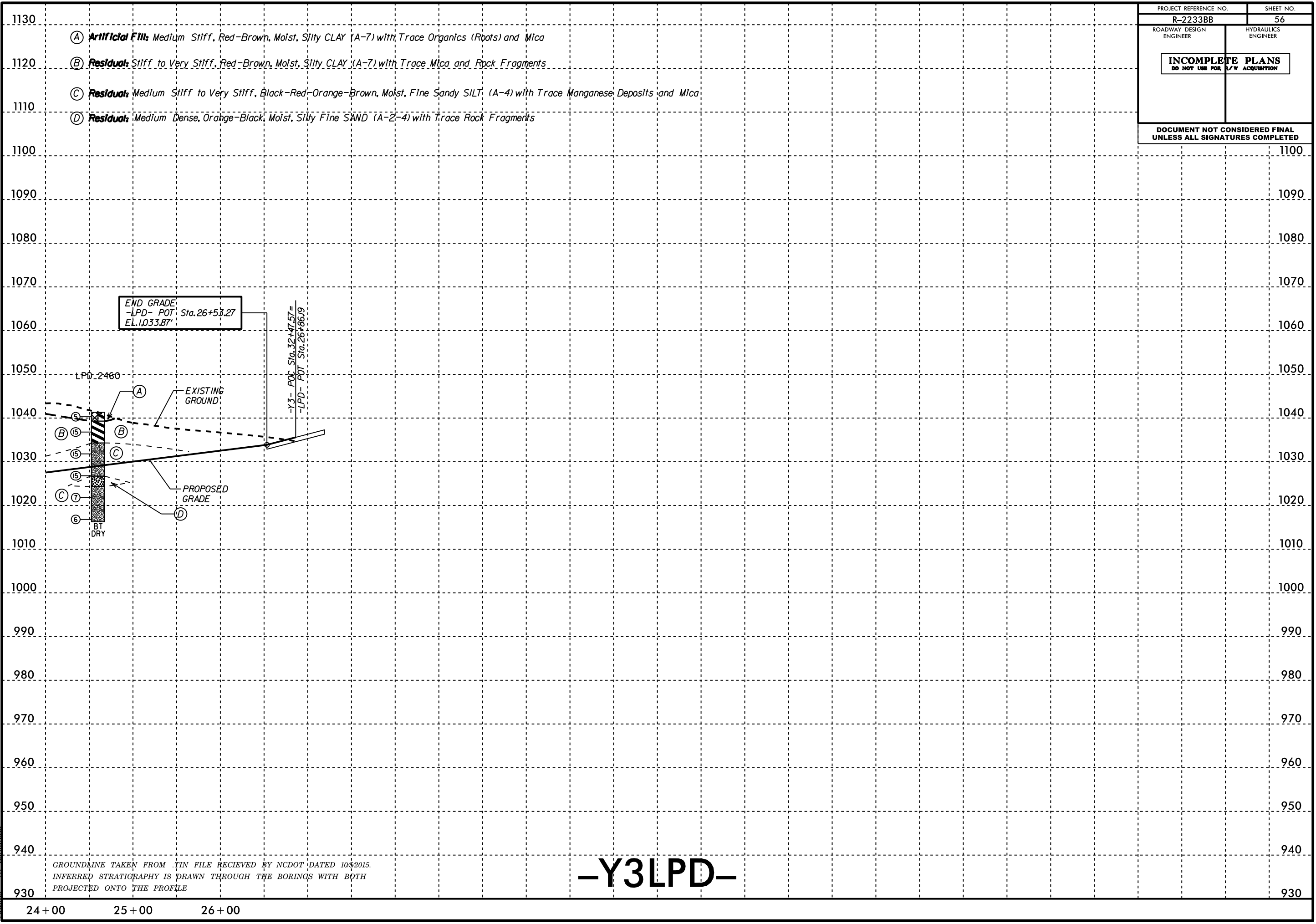
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 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y3LPD-

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PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	56
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - BT 66166U

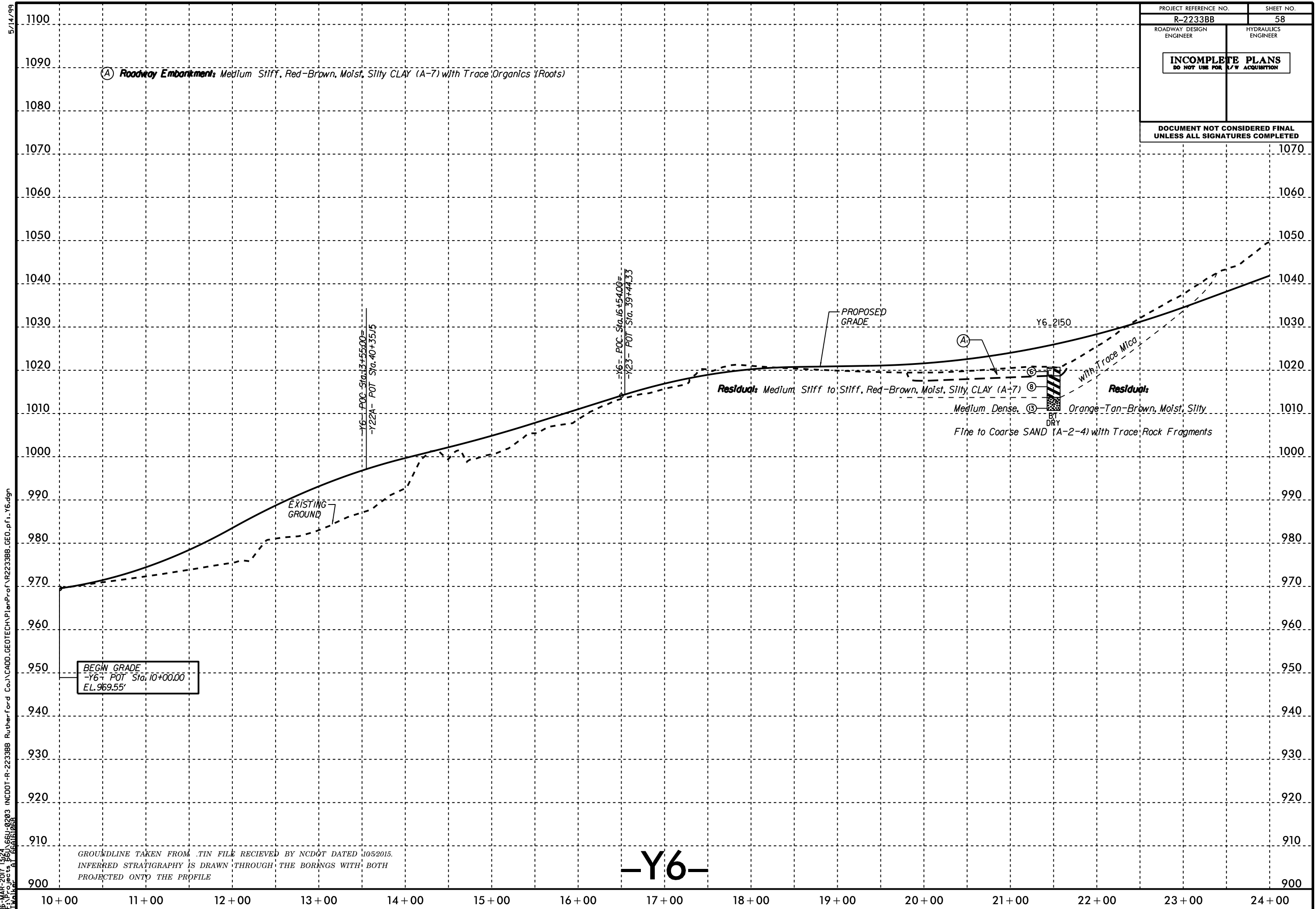


GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/3/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y3LPD-

24 + 00 25 + 00 26 + 00

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	58
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

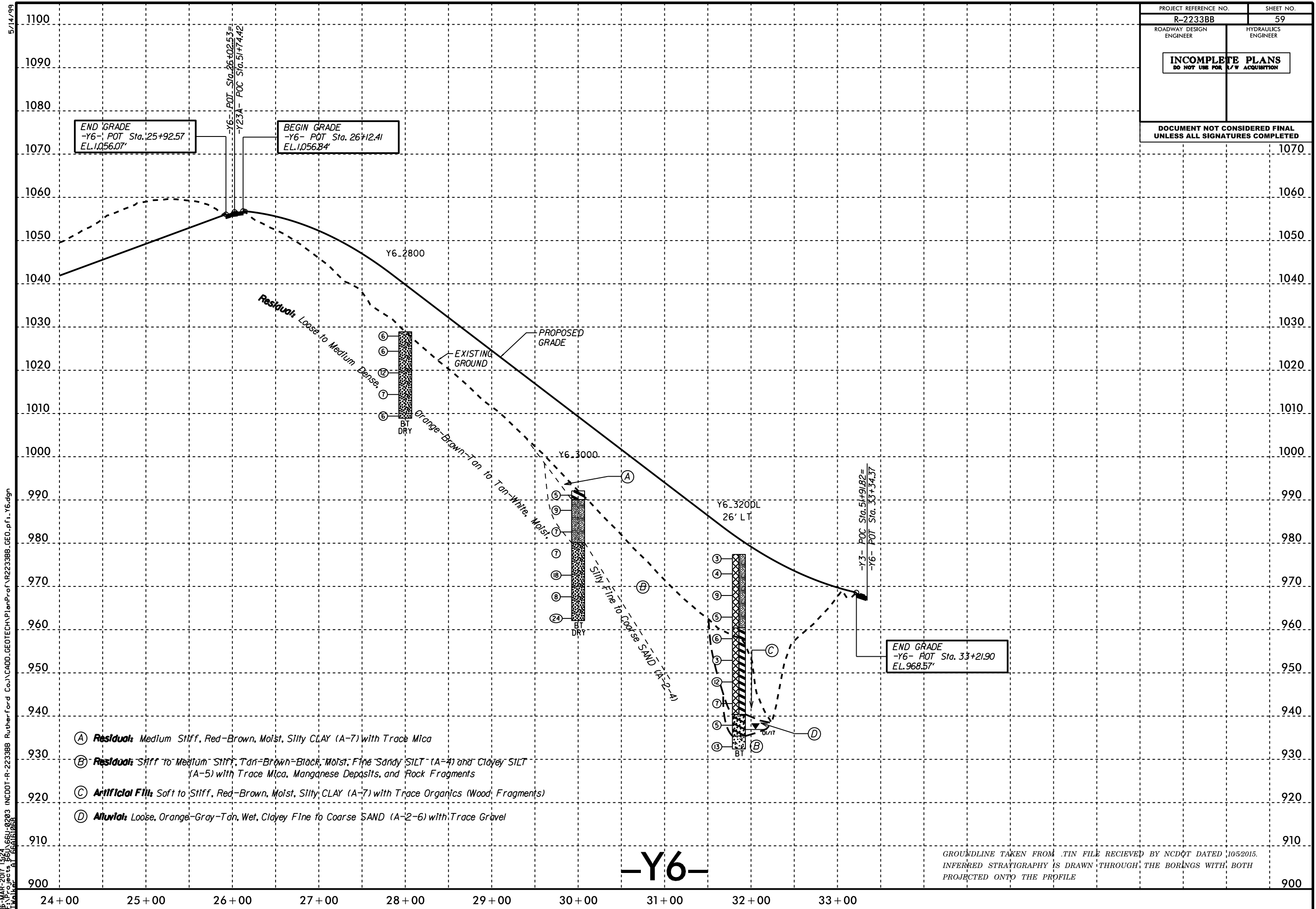


GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

-Y6-

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 Walker - AT 66166U

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00



END GRADE
-Y6- POT Sta. 25+92.57
EL. 1056.07'

BEGIN GRADE
-Y6- POT Sta. 26+12.41
EL. 1056.84'

END GRADE
-Y6- POT Sta. 33+21.90
EL. 968.57'

- (A) **Residual:** Medium Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica
- (B) **Residual:** Stiff to Medium Stiff, Tan-Brown-Black, Moist, Fine Sandy SILT (A-4) and Clayey SILT (A-5) with Trace Mica, Manganese Deposits, and Rock Fragments
- (C) **Artificial Fill:** Soft to Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Organics (Wood Fragments)
- (D) **Alluvial:** Loose, Orange-Gray-Tan, Wet, Clayey Fine to Coarse SAND (A-2-6) with Trace Gravel

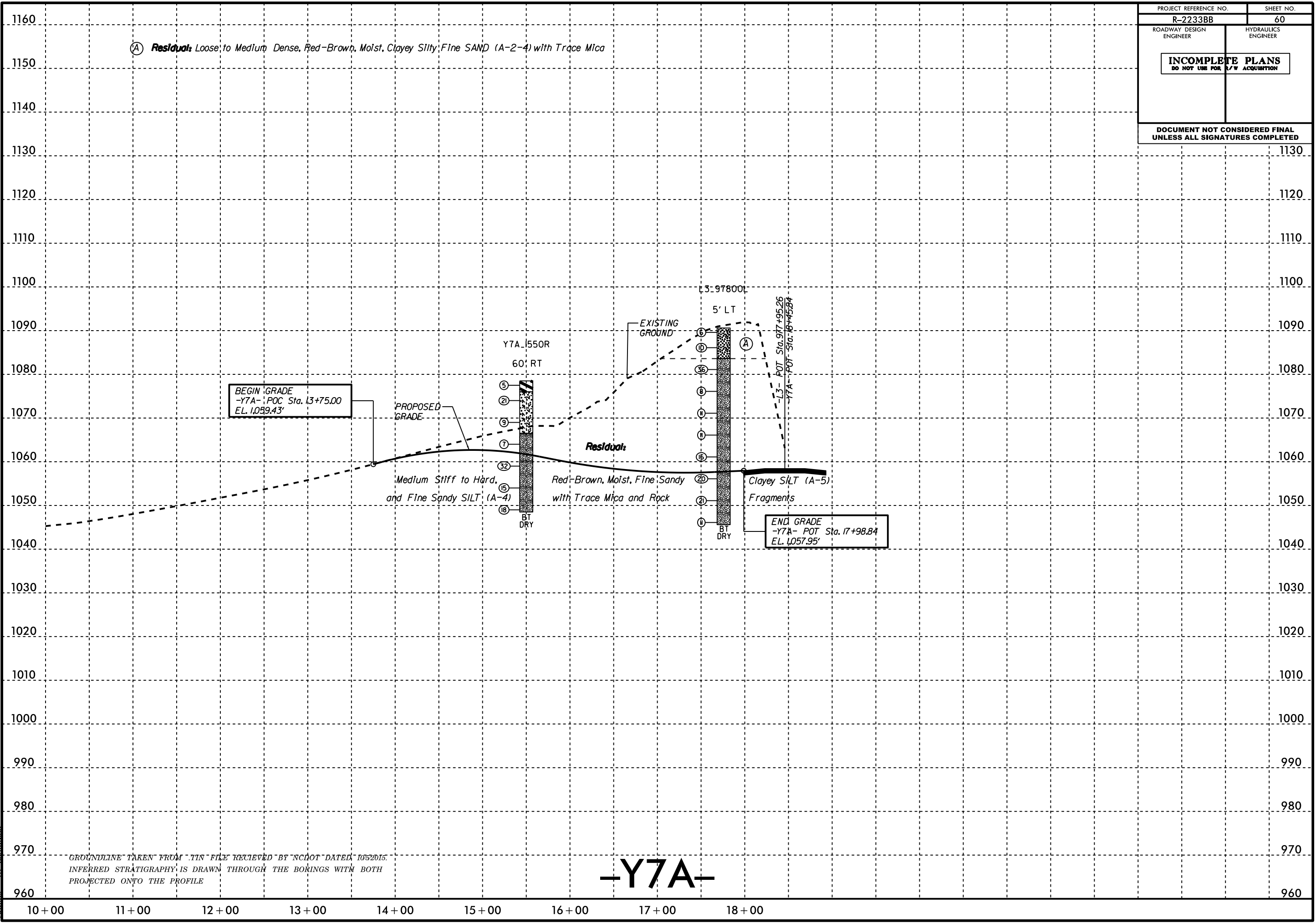
-Y6-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

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 Walker - AT 66166U

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 60
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

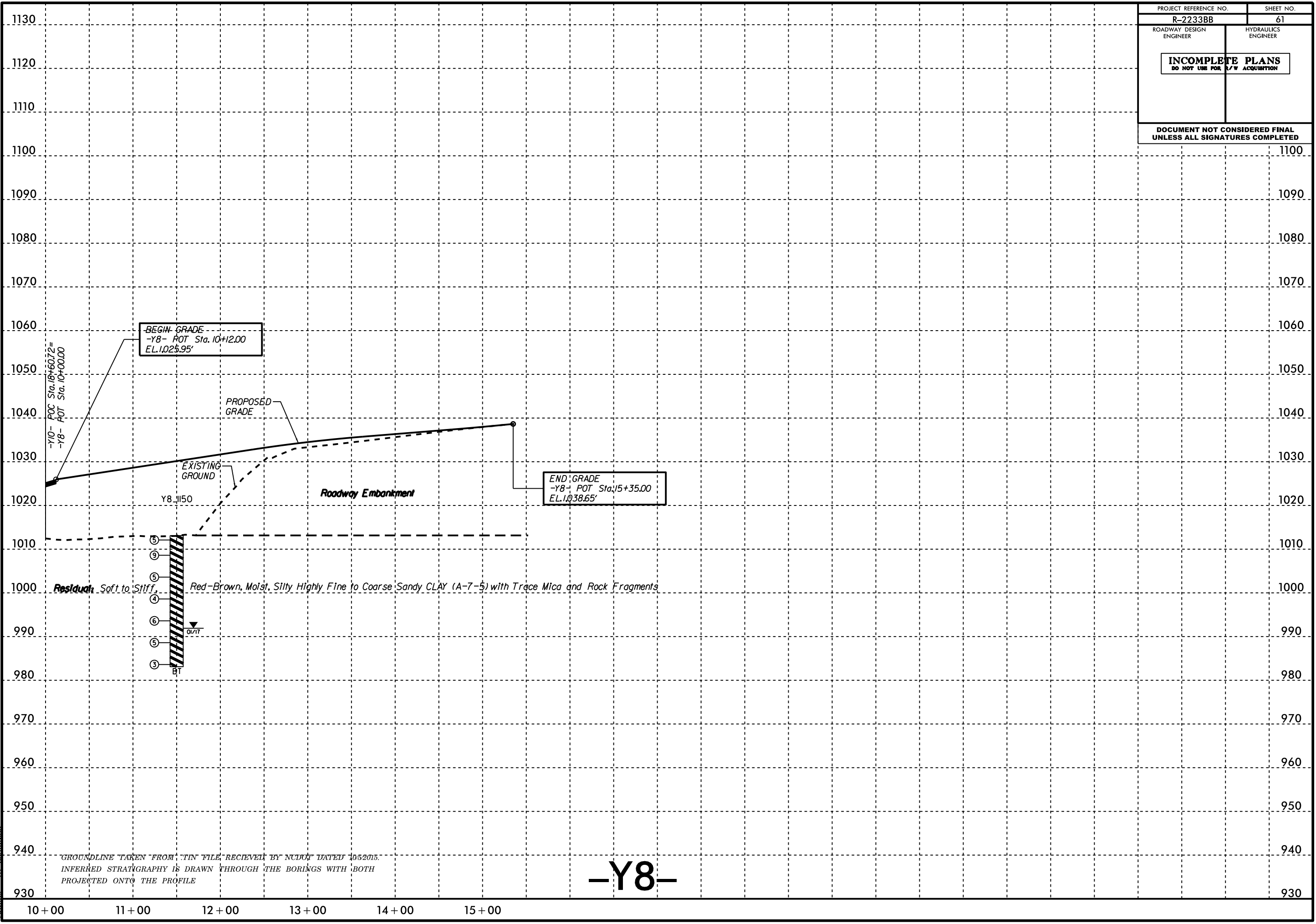
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 Walker - AT 66166J



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 61
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - 61



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y8-

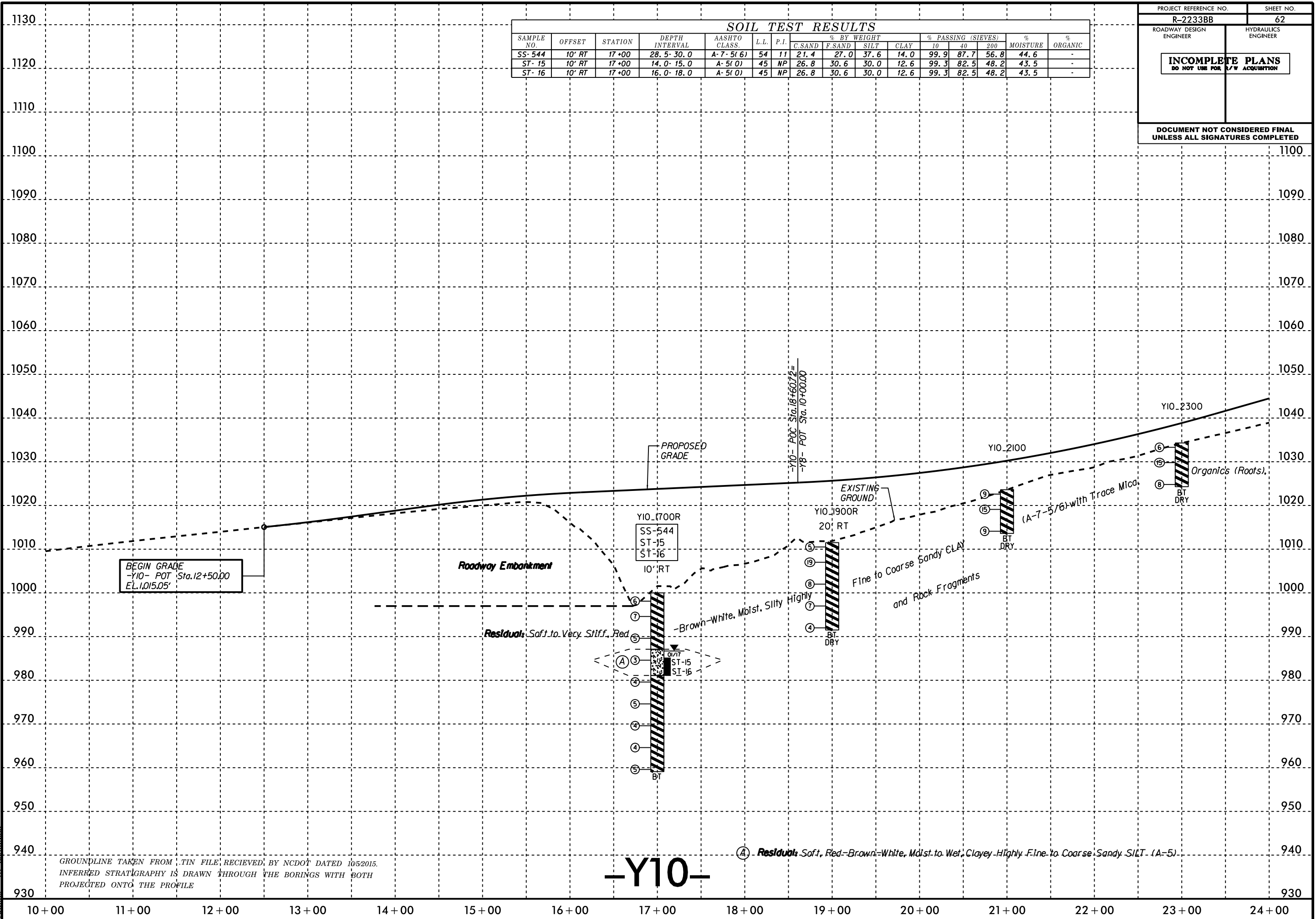
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 1120
 1110
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 1060
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 1020
 1010
 1000
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 970
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 940
 930

10+00 11+00 12+00 13+00 14+00 15+00

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 Walker - AT 66166U

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-544	10' RT	17+00	28.5-30.0	A-7-5(6)	54	11	21.4	27.0	37.6	14.0	99.9	87.7	56.8	44.6	-
ST-15	10' RT	17+00	14.0-15.0	A-5(0)	45	NP	26.8	30.6	30.0	12.6	99.3	82.5	48.2	43.5	-
ST-16	10' RT	17+00	16.0-18.0	A-5(0)	45	NP	26.8	30.6	30.0	12.6	99.3	82.5	48.2	43.5	-

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 62
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

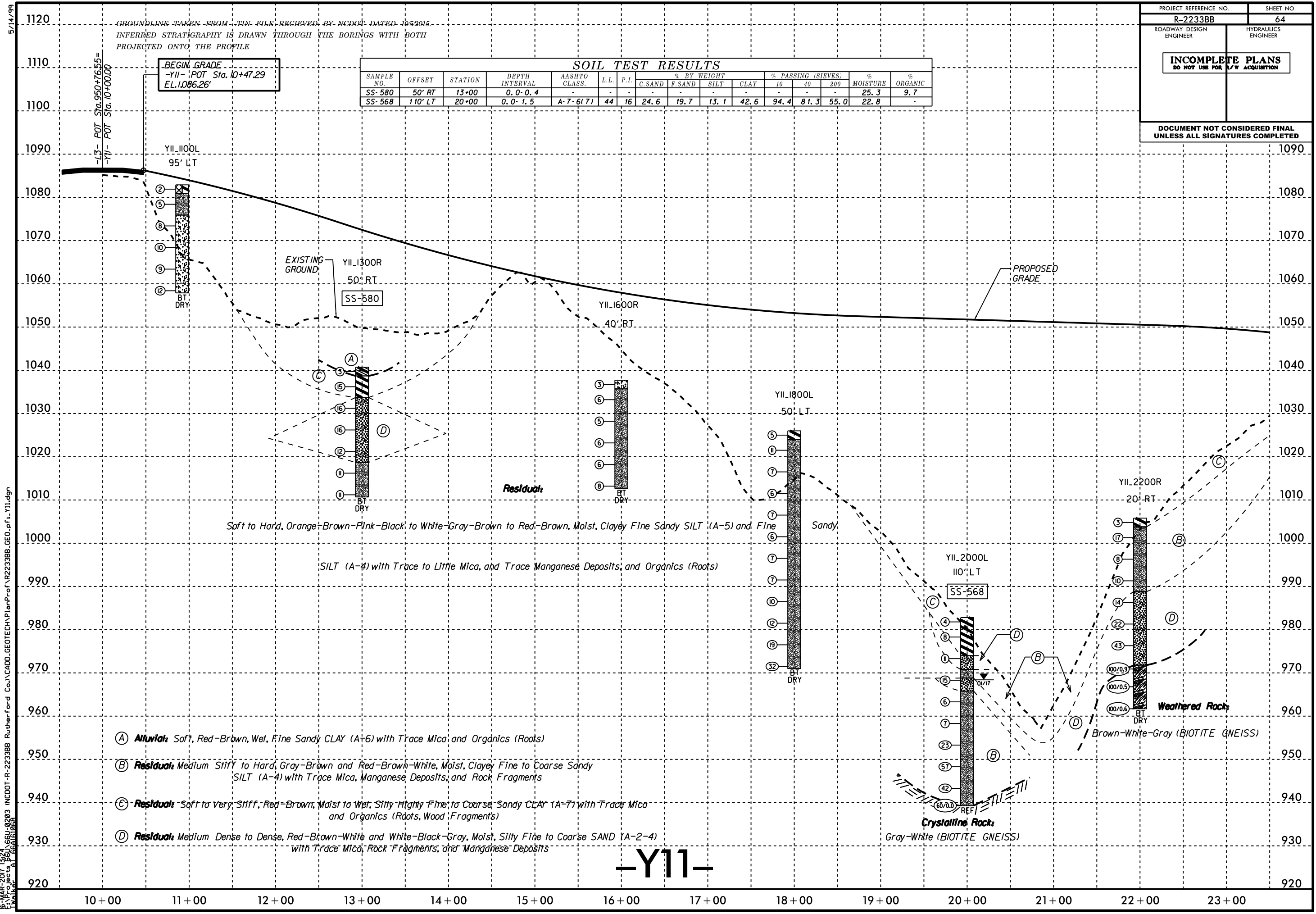


GROUNDLINE TAKEN FROM .TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y10-

(A) Residuals Soft, Red-Brown-White, Moist to Wet, Clayey Highly Fine to Coarse Sandy SILT. (A-5)

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-580	50' RT	13+00	0.0-0.4	-	-	-	-	-	-	-	-	-	-	25.3	9.7
SS-568	110' LT	20+00	0.0-1.5	A-7-6(7)	44	16	24.6	19.7	13.1	42.6	94.4	81.3	55.0	22.8	-



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE PROFILE

BEGIN GRADE
-Y11- POT Sta. 10+47.29
EL. 1086.26'

-L3- POT Sta. 950+76.55 =
-Y11- POT Sta. 10+00.00

Y11-1100L
95' LT

EXISTING GROUND
Y11-1300R
50' RT
SS-580

Y11-1600R
40' RT

Y11-1800L
50' LT

Y11-2000L
110' LT
SS-568

Y11-2200R
20' RT

Residuals

Soft to Hard, Orange-Brown-Pink-Black to White-Gray-Brown to Red-Brown, Moist, Clayey Fine Sandy SILT (A-5) and Fine SILT (A-4) with Trace to Little Mica, and Trace Manganese Deposits, and Organics (Roots)

Sandy

Weathered Rock

Brown-White-Gray (BIOTITE GNEISS)

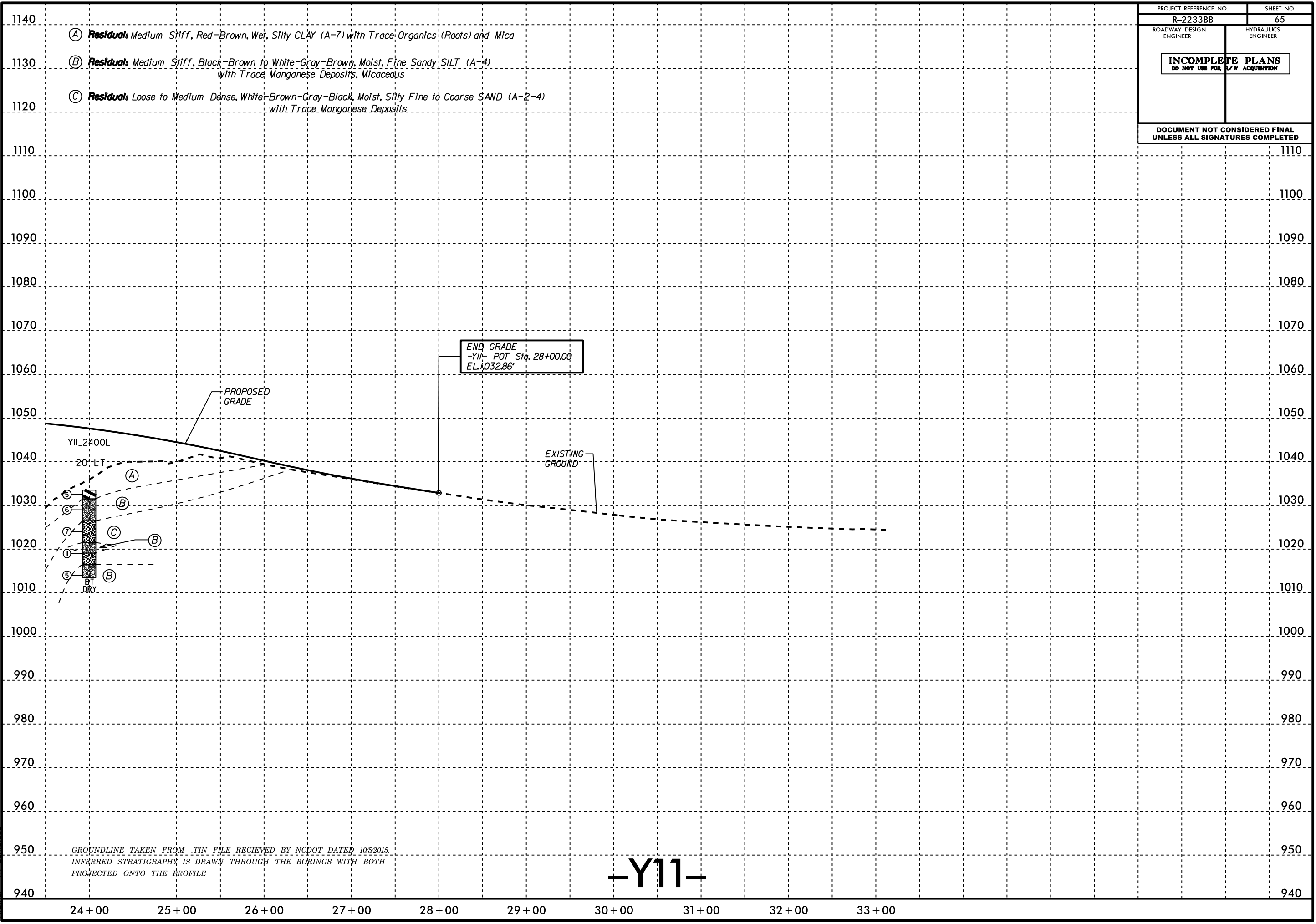
Crystalline Rock
Gray-White (BIOTITE GNEISS)

-Y11-

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 Walker - AT 6541068

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	65
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

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 Walker - AT 66166J

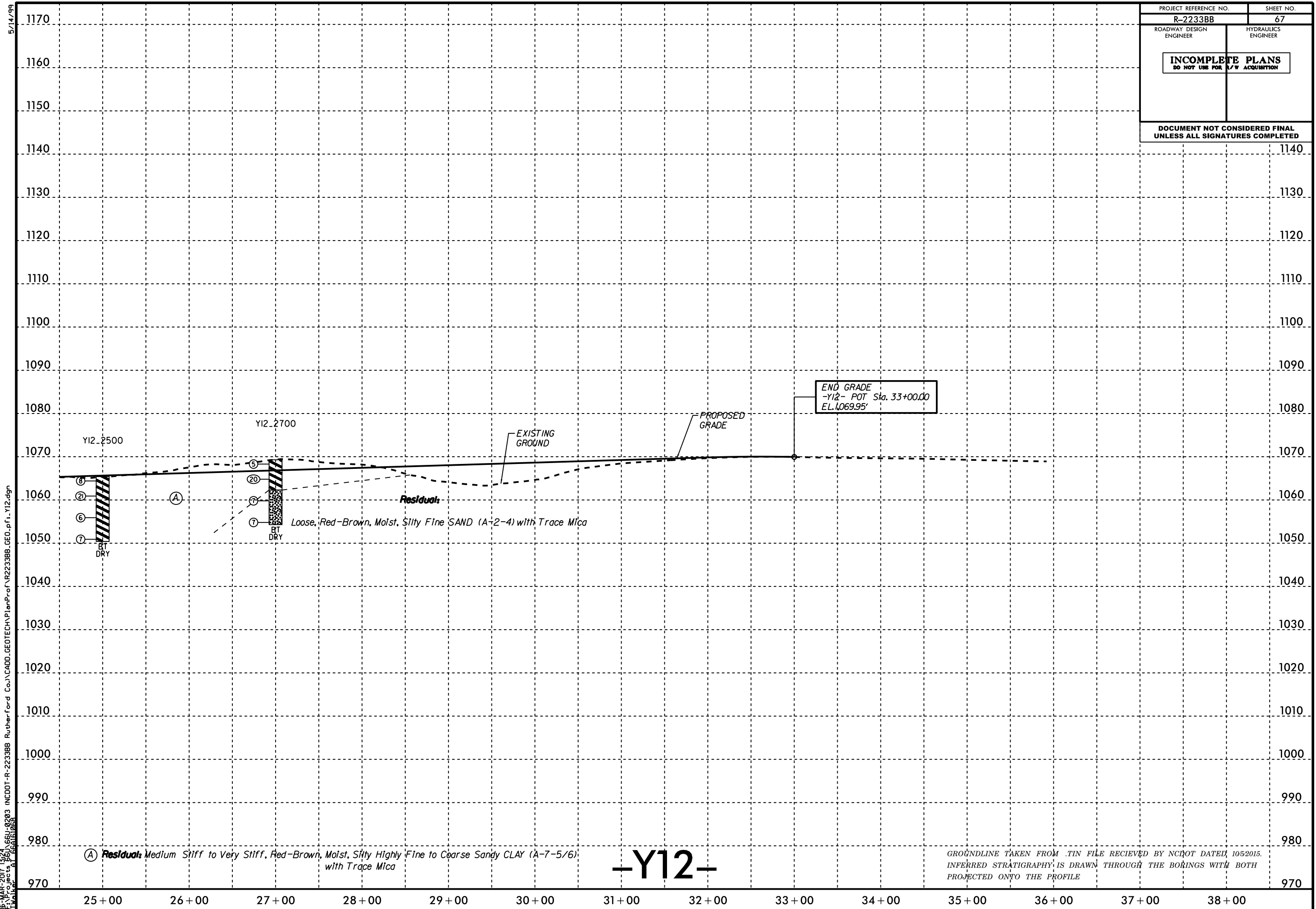


- (A) **Residual:** Medium Stiff, Red-Brown, Wet, Silty CLAY (A-7) with Trace Organics (Roots) and Mica
- (B) **Residual:** Medium Stiff, Black-Brown to White-Gray-Brown, Moist, Fine Sandy SILT (A-4) with Trace Manganese Deposits, Micaceous
- (C) **Residual:** Loose to Medium Dense, White-Brown-Gray-Black, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Manganese Deposits.

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y11-

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 67
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR A/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



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 Walker - BT

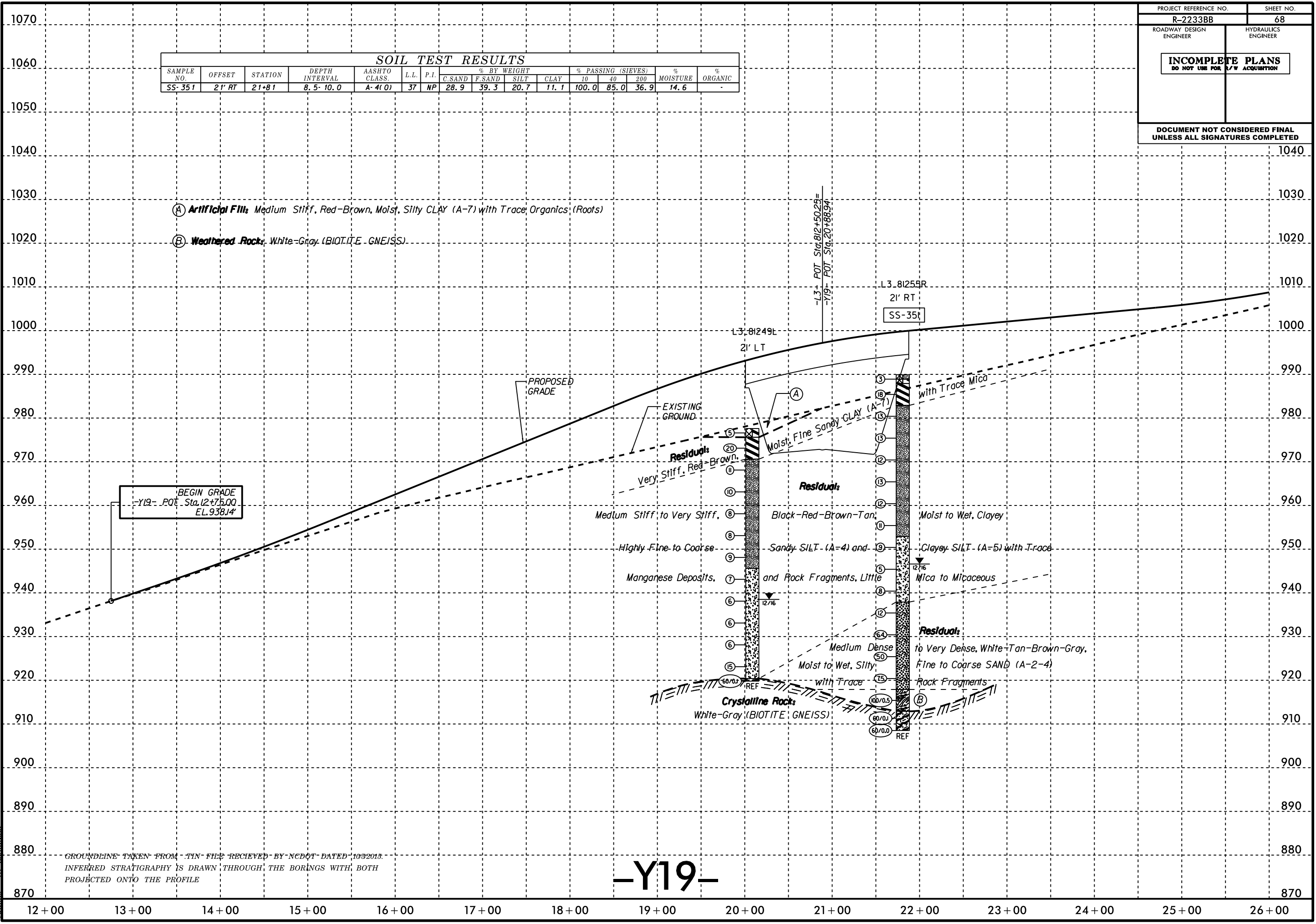
(A) **Residuals** Medium Stiff to Very Stiff, Red-Brown, Moist, Silty Highly Fine to Coarse SANDY CLAY (A-7-5/6) with Trace Mica

-Y12-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-351	2' RT	21+81	8.5-10.0	A-4(0)	37	NP	28.9	39.3	20.7	11.1	100.0	85.0	36.9	14.6	-

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 Walker - 6/15/16



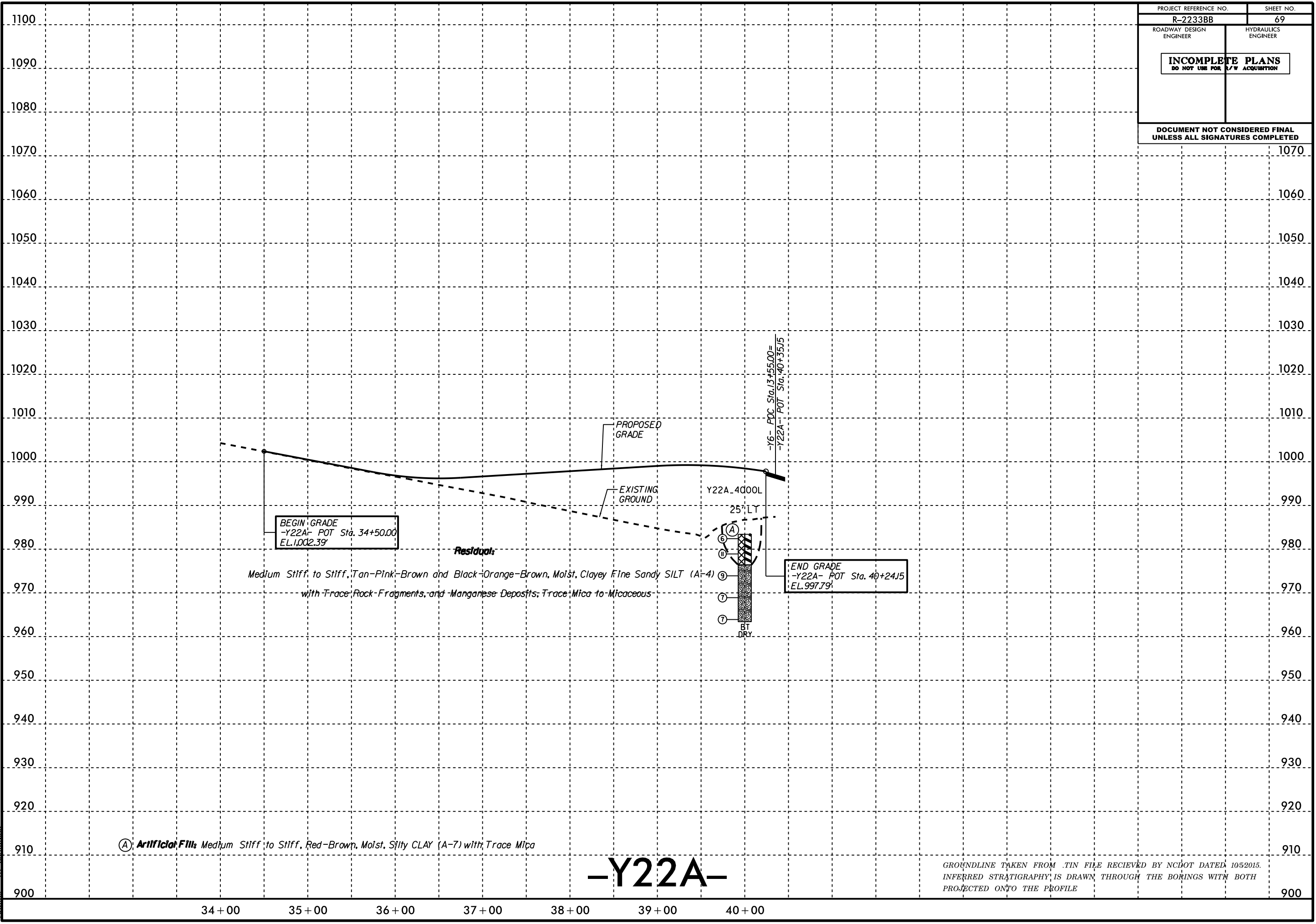
GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/3/2013.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE PROFILE

-Y19-

12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00

PROJECT REFERENCE NO.	SHEET NO.
R-2233BB	69
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
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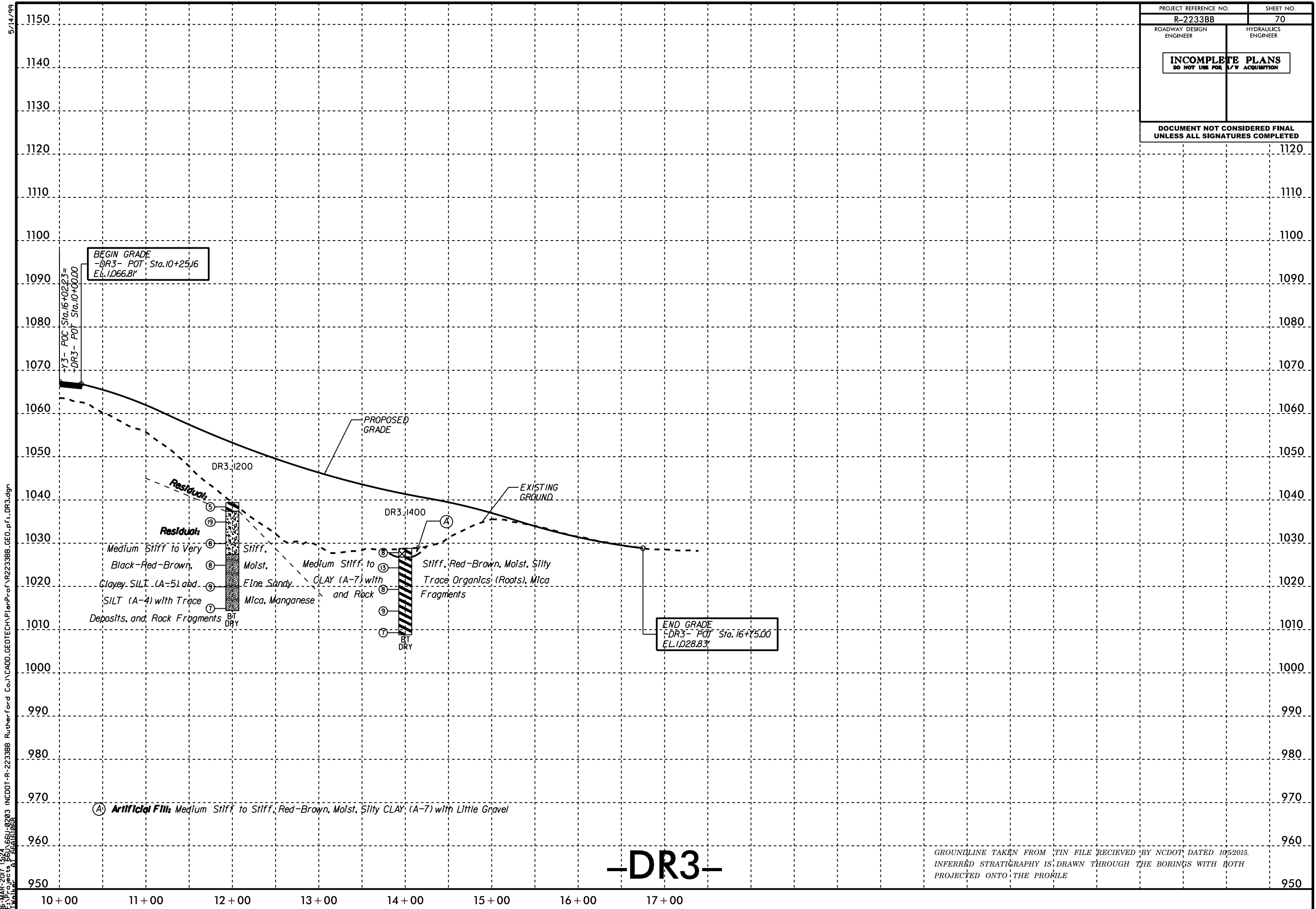
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 Walker - 61651058



1070
1060
1050
1040
1030
1020
1010
1000
990
980
970
960
950
940
930
920
910
900

34+00 35+00 36+00 37+00 38+00 39+00 40+00

PROJECT REFERENCE NO. R-2233BB	SHEET NO. 70
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



BEGIN GRADE
-DR3- POT Sta. 10+25.16
E.L. 1066.81'

END GRADE
-DR3- POT Sta. 16+75.00
E.L. 1028.83'

(A) Artificial Fill: Medium Stiff to Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Little Gravel

-DR3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT, DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE PROFILE

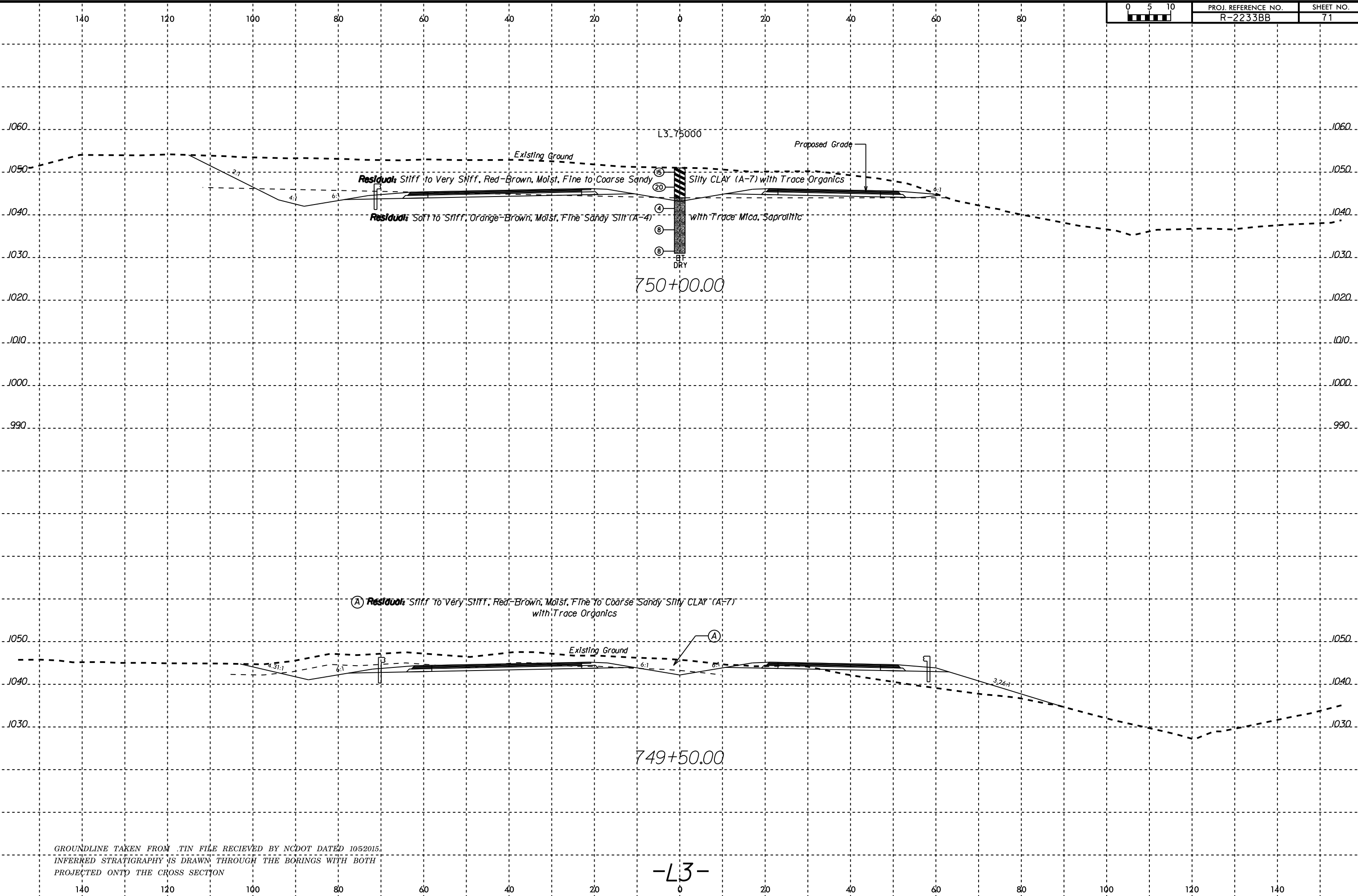
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 Walker - AT 65181068

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
71



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E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_RDY_xsi.L3.dgn
A Walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

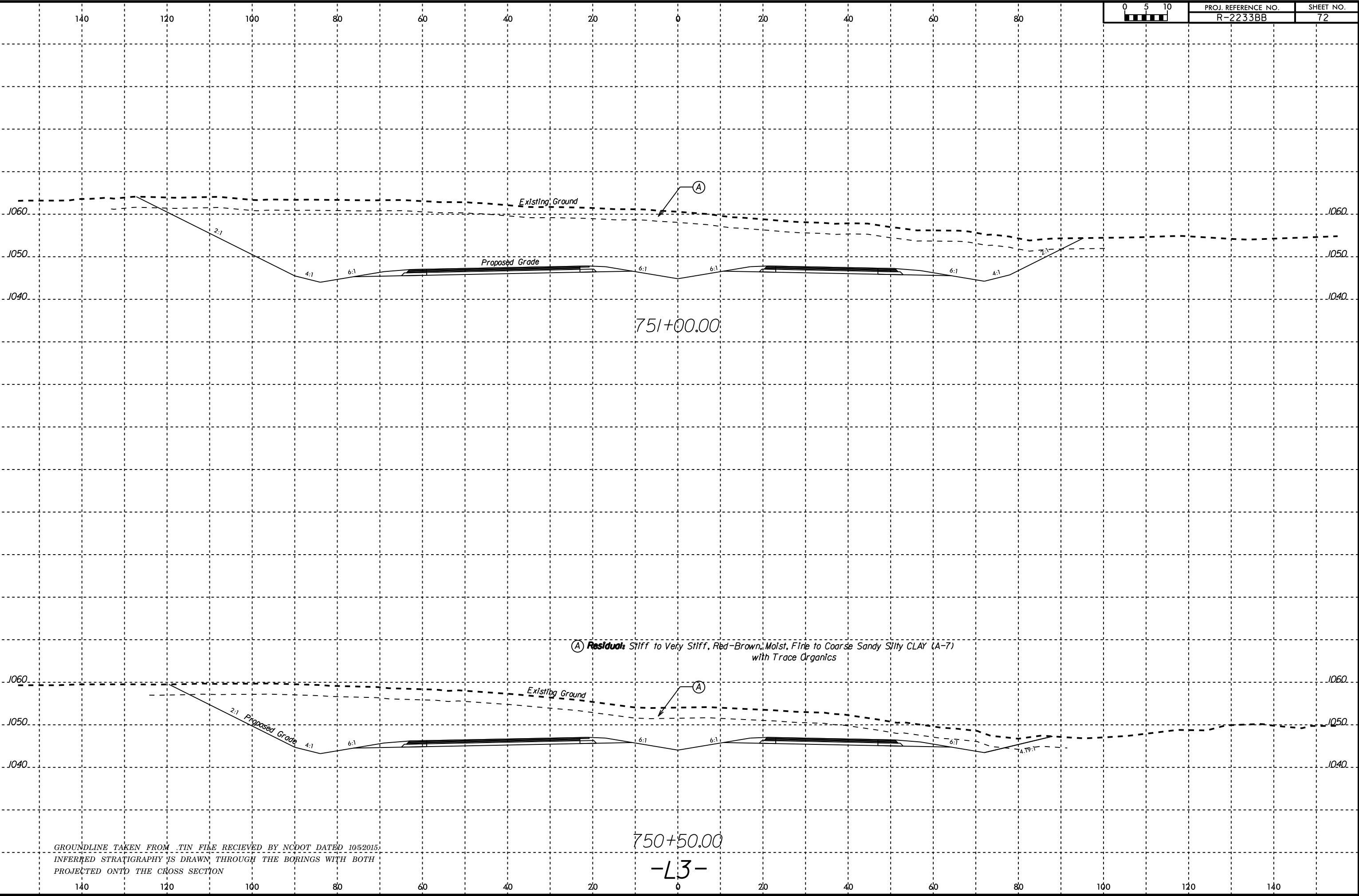
-L3-

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
72



751+00.00

(A) Residuals: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy Silty CLAY (A-7) with Trace Organics

750+50.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

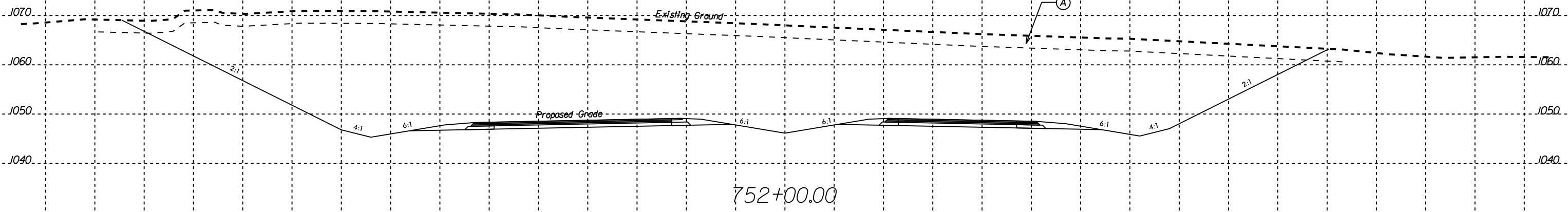
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Walker

6/23/16

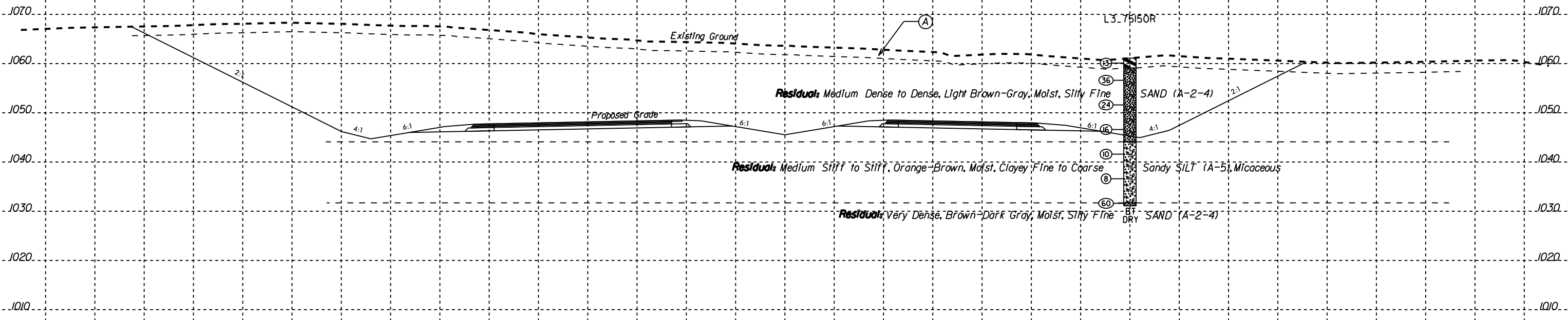


PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
73



752+00.00



751+50.00

-L3-

- 13.75150R
- 36
- 24
- 16
- 10
- 8
- 60
- BT DRY

Residual: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy Silty CLAY (A-7) with Trace Organics

Residual: Medium Dense to Dense, Light Brown-Gray, Moist, Silty Fine SAND (A-2-4)

Residual: Medium Stiff to Stiff, Orange-Brown, Moist, Clayey, Fine to Coarse Sandy SILT (A-5), Micaceous

Residual: Very Dense, Brown-Dark Gray, Moist, Silty Fine SAND (A-2-4)

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

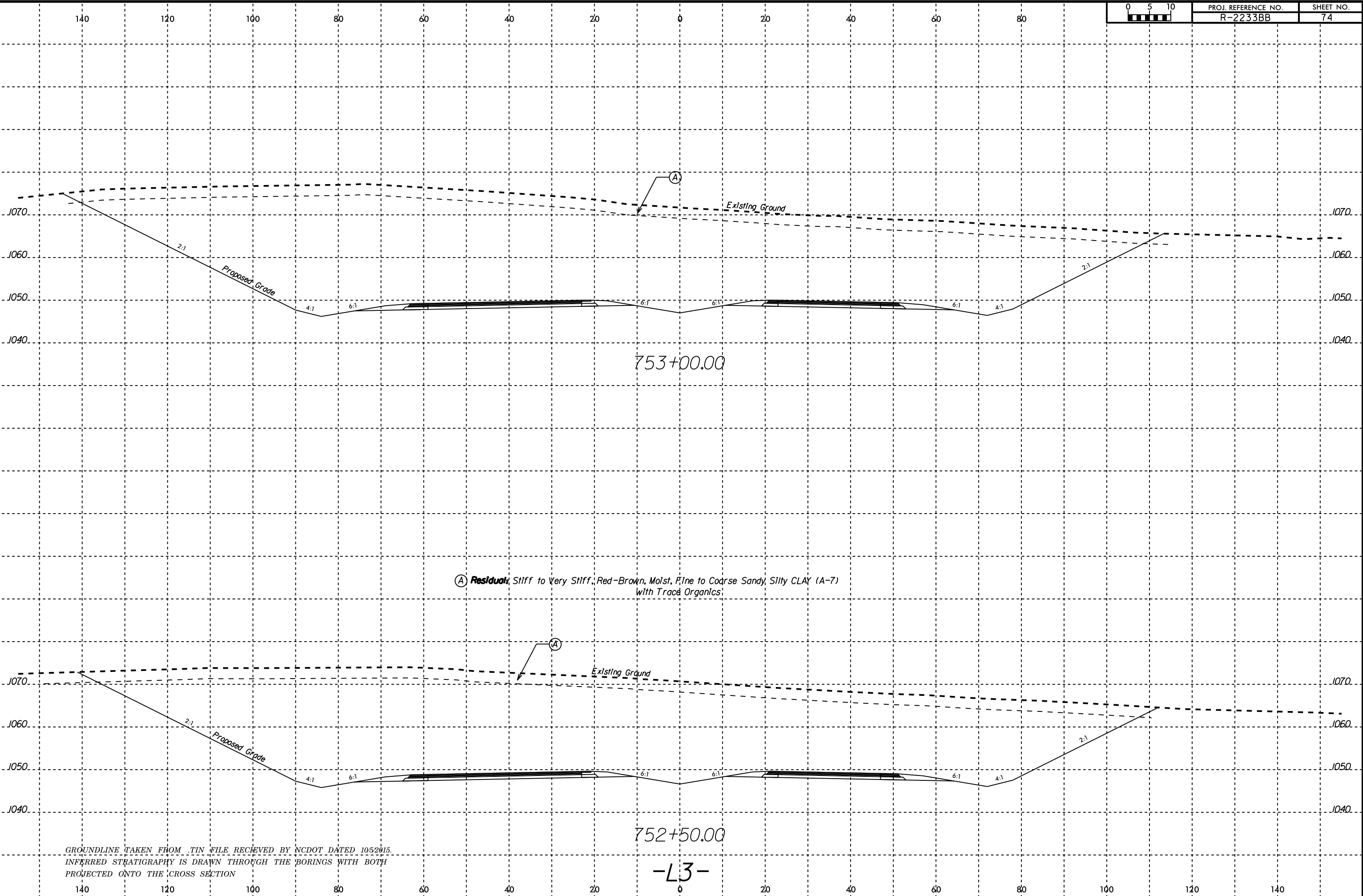
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Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
74



753+00.00

(A) Residual, Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy, Silty CLAY (A-7) with Trace Organics

752+50.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

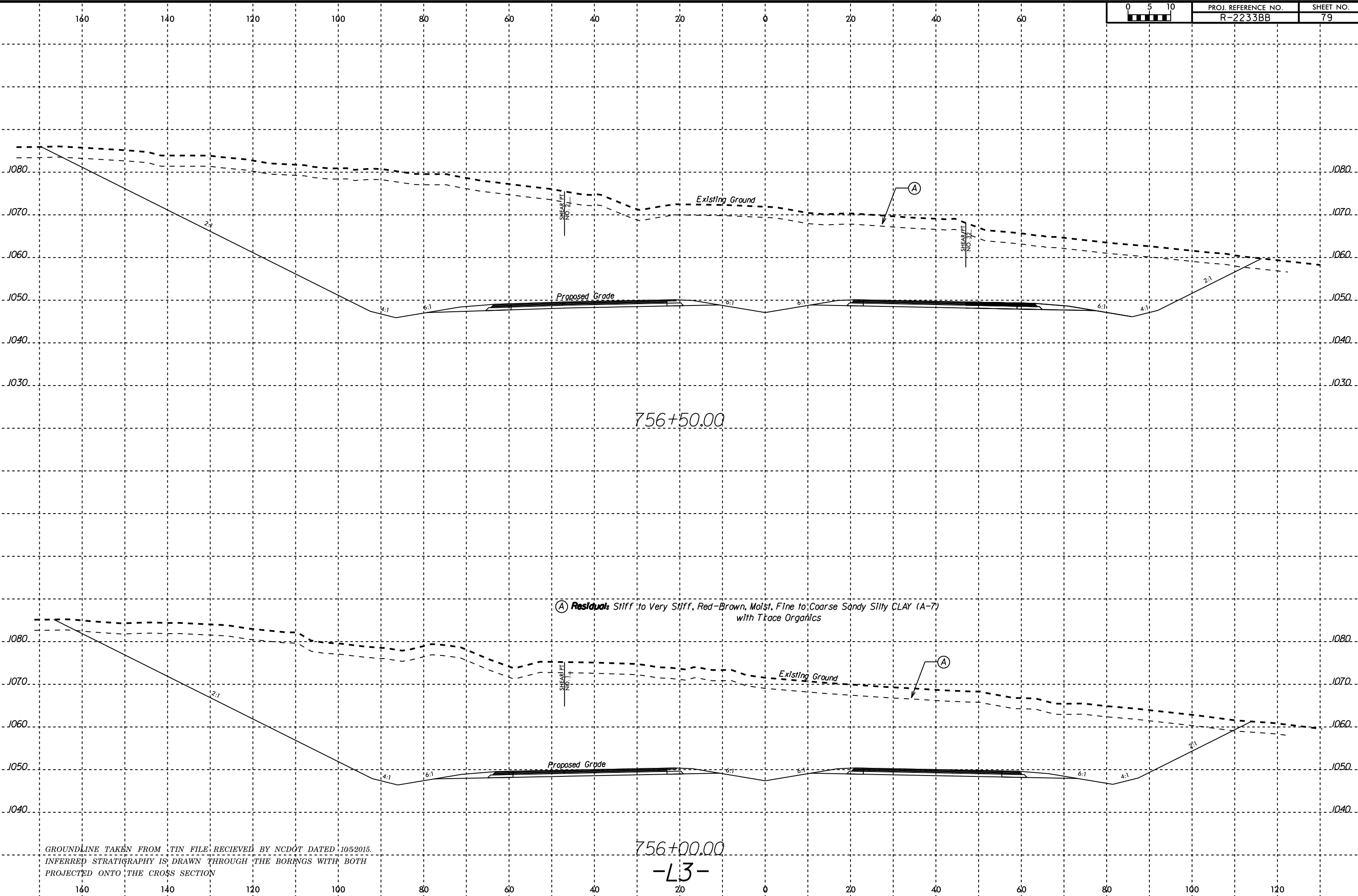
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A: Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
79



756+50.00

(A) Residual: Stiff to Very Stiff, Red-Brown, Moist, Fine to Coarse Sandy Silty CLAY (A-7) with Trace Organics

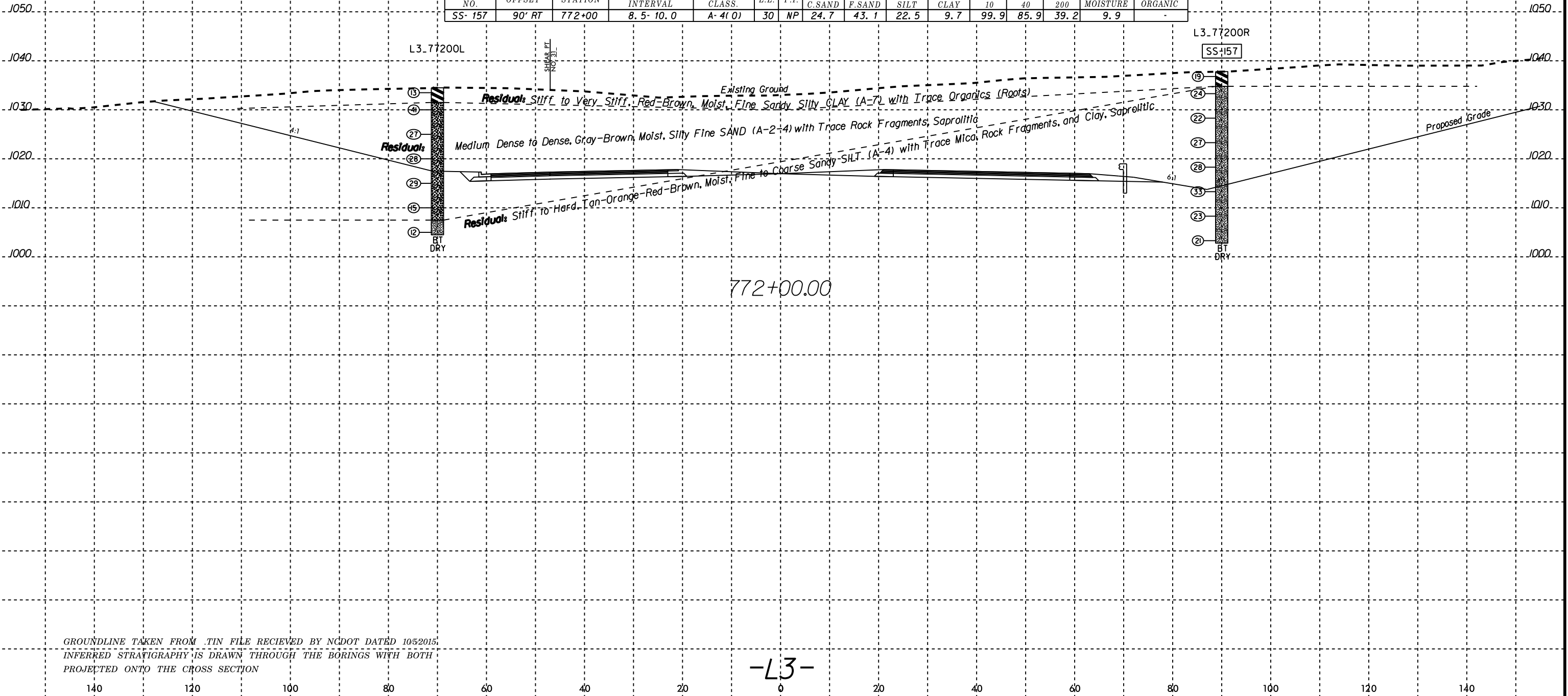
756+00.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:21
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T Walker

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-157	90' RT	772+00	8.5-10.0	A-4(0)	30	NP	24.7	43.1	22.5	9.7	99.9	85.9	39.2	9.9	-



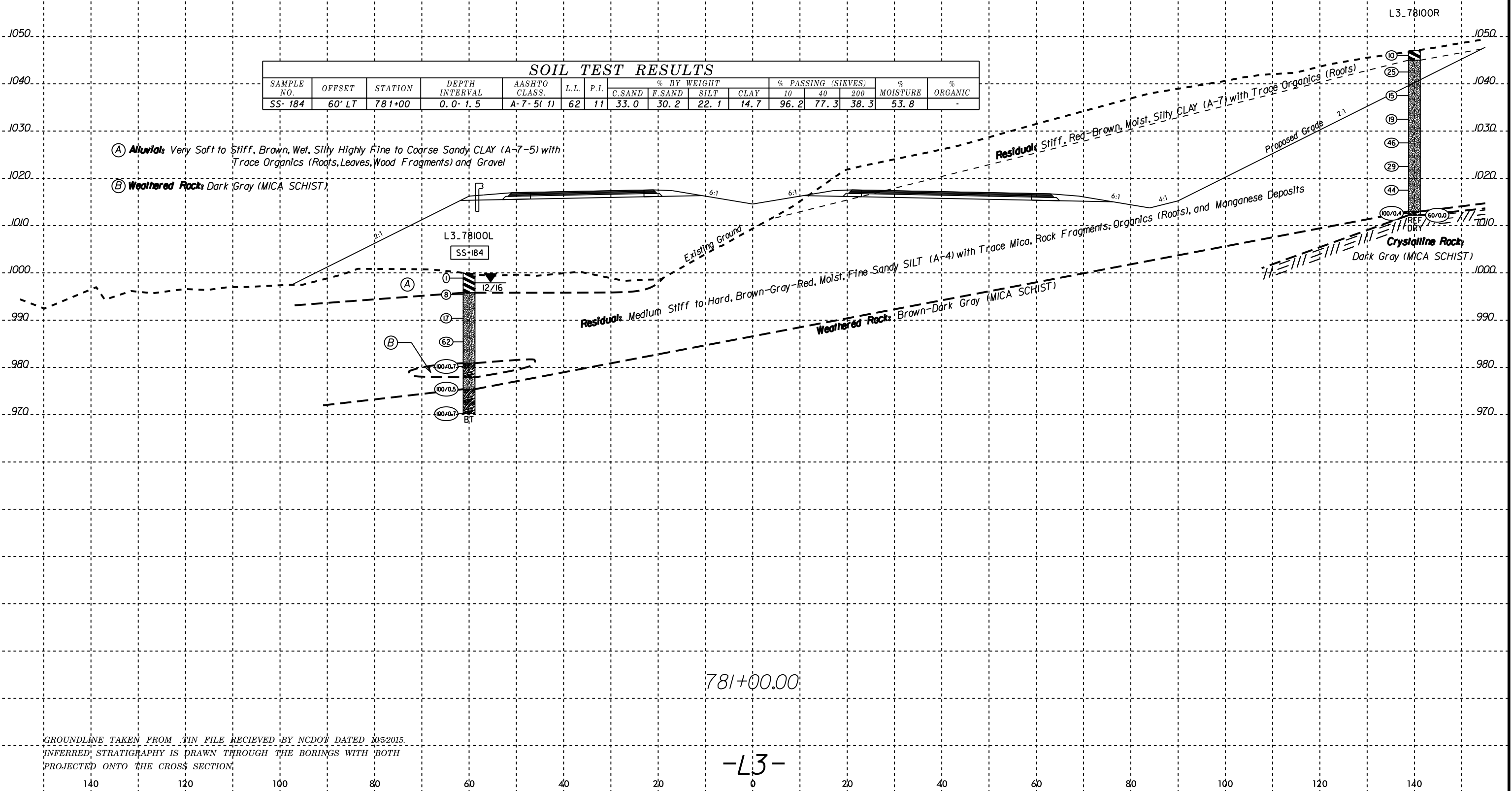
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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-184	60' LT	781+00	0.0-1.5	A-7-5(1)	62	11	33.0	30.2	22.1	14.7	96.2	77.3	38.3	53.8	-

(A) **Alluvial:** Very Soft to Stiff, Brown, Wet, Silty High Fine to Coarse Sandy CLAY (A-7-5) with Trace Organics (Roots, Leaves, Wood Fragments) and Gravel

(B) **Weathered Rocks:** Dark Gray (MICA SCHIST)



781+00.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION.

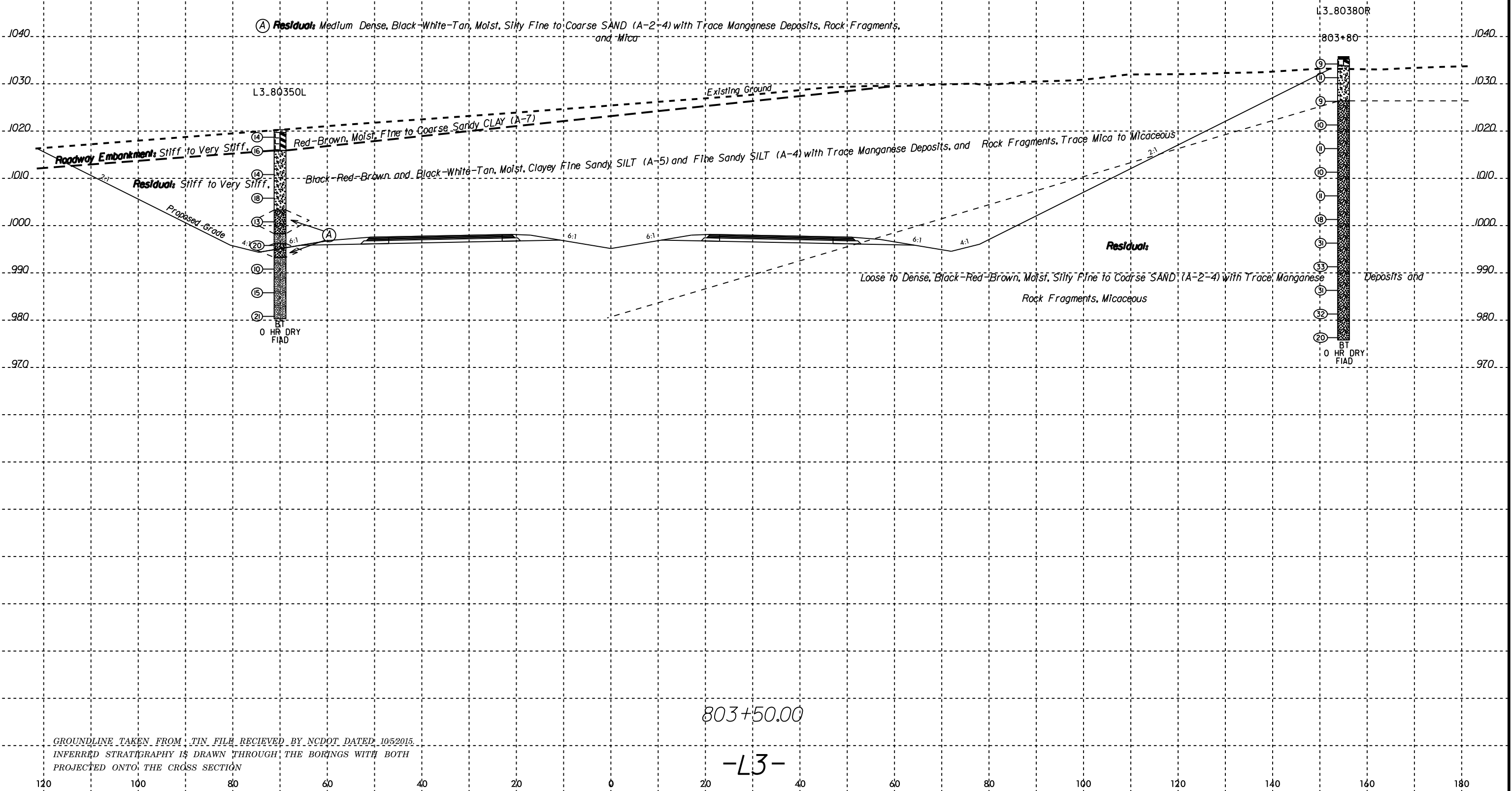
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 T:\Walker

6/23/16

120 100 80 60 40 20 0 20 40 60 80 100 120



PROJ. REFERENCE NO. R-2233BB SHEET NO. 88



(A) Residual: Medium Dense, Black-White-Tan, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Manganese Deposits, Rock Fragments, and Mica

L3.80350L

Existing Ground

L3.80380R

803+80

Roadway Embankment: Stiff to Very Stiff

Residual: Stiff to Very Stiff

Red-Brown, Moist, Fine to Coarse Sandy CLAY (A-7)

Black-Red-Brown and Black-White-Tan, Moist, Clayey Fine Sandy SILT (A-5) and Fine Sandy SILT (A-4) with Trace Manganese Deposits, and Rock Fragments, Trace Mica to Micaceous

Residual:

Loose to Dense, Black-Red-Brown, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Manganese Deposits and Rock Fragments, Micaceous

BT
0 HR DRY
FIAD

BT
0 HR DRY
FIAD

803+50.00

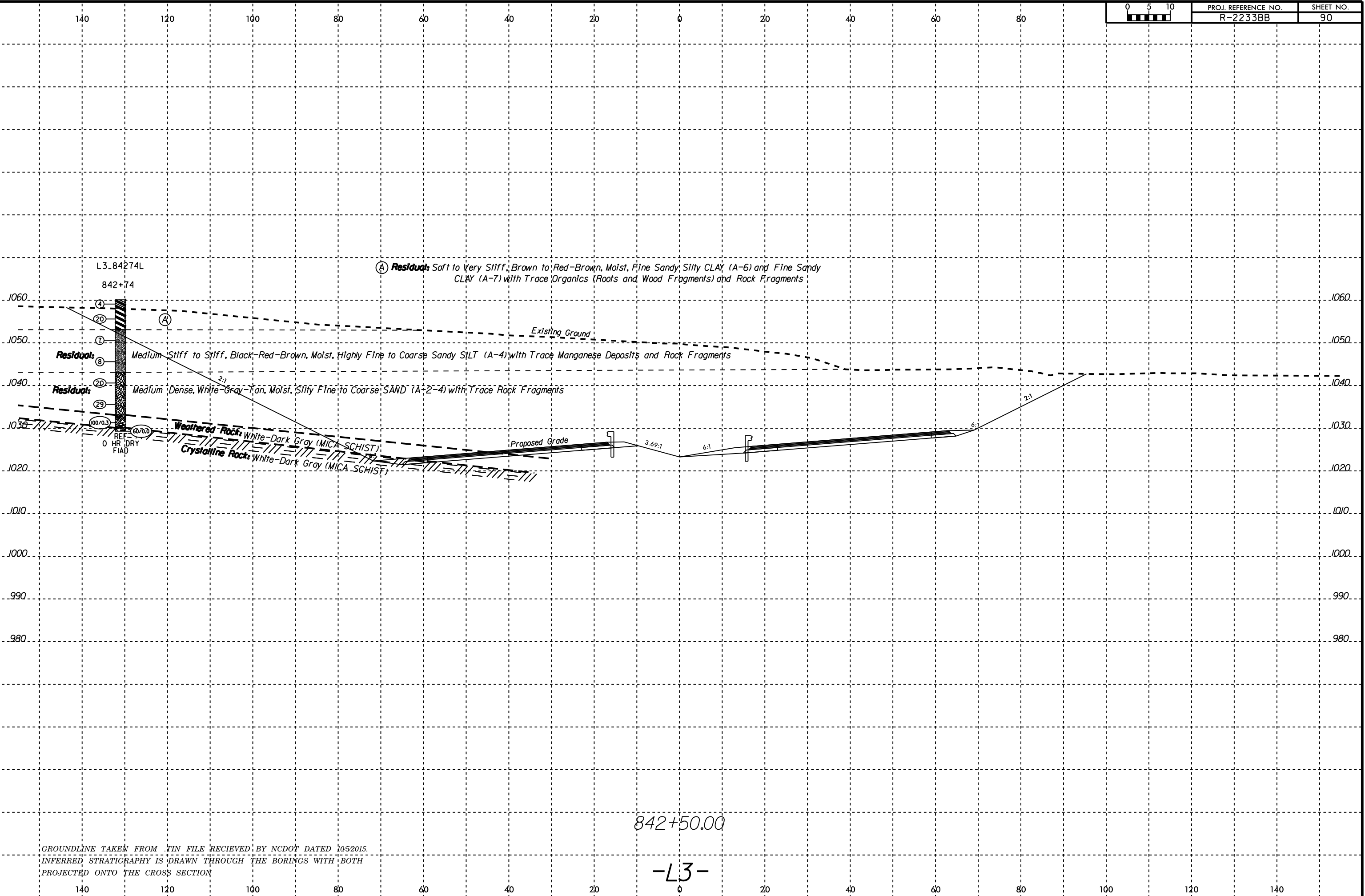
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GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:32
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66166
Walker

40

120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180



842+50.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:32
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Walker
Rutherford Co.\CAADD_GEO\TECH\asc\2233BB_RDY_xsl\L3.dgn

6/23/16

140

120

100

80

60

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20

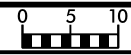
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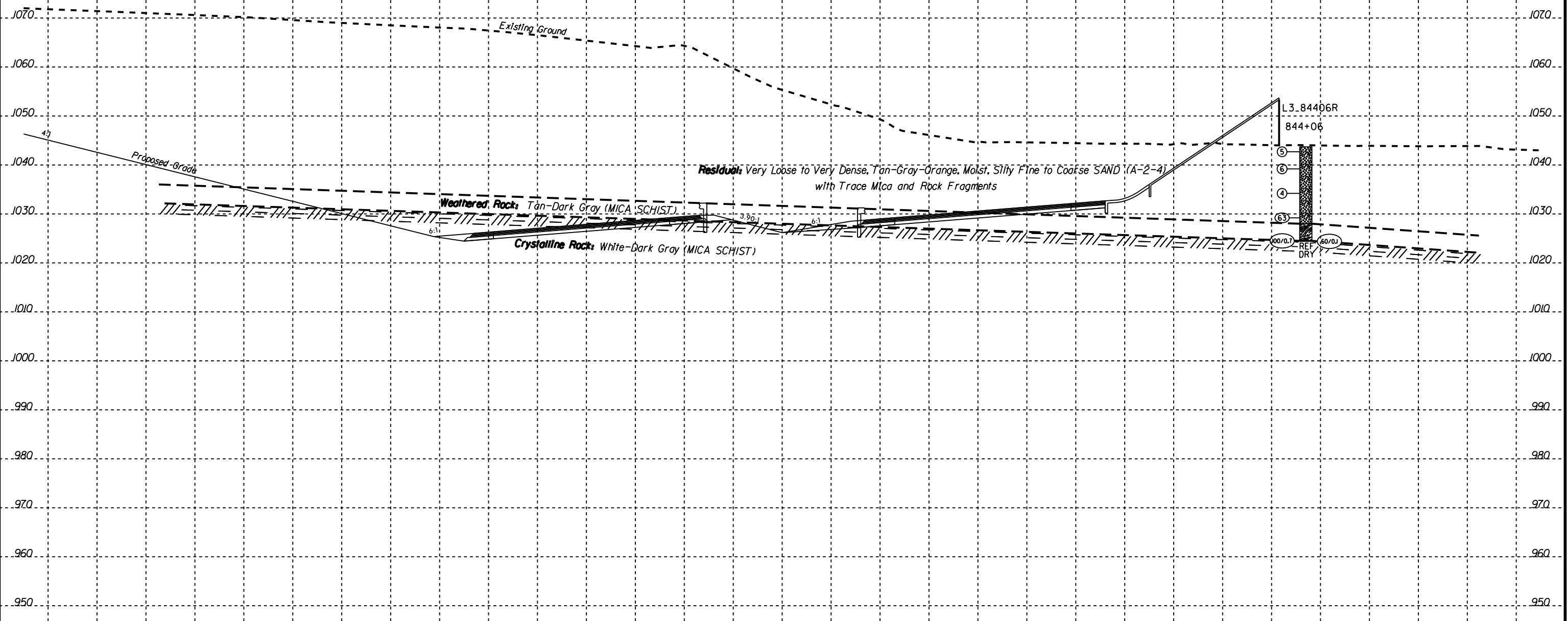
60

80



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
93



GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

844+00.00
-L3-

140

120

100

80

60

40

20

0

20

40

60

80

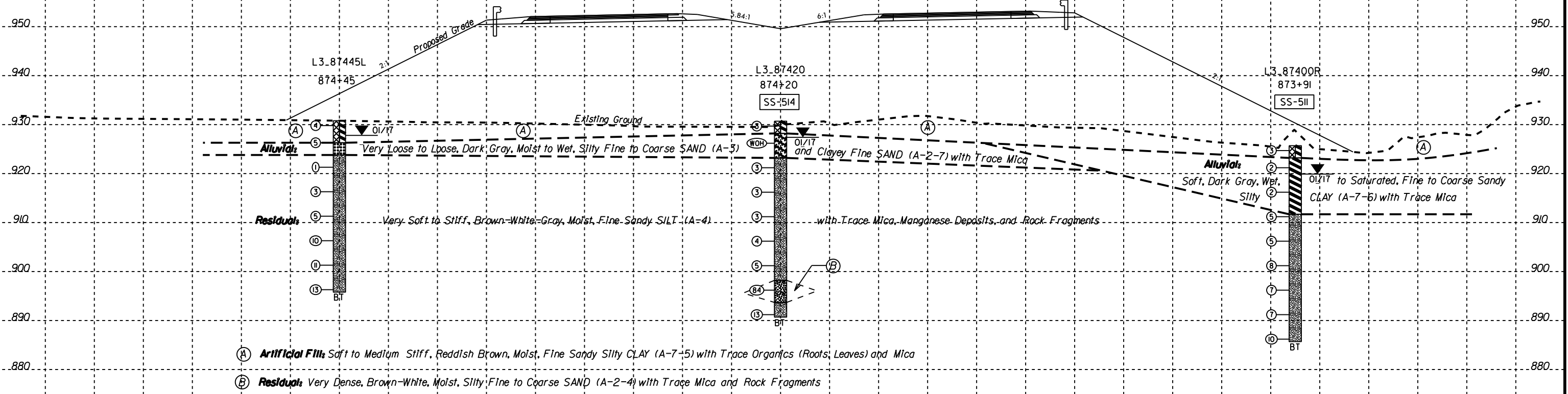
100

120

140

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 Project: 2233BB
 User: Walker

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-511	105' RT	873+91	3.5-5.0	A-7-6(3)	41	14	42.0	14.6	18.3	25.1	98.3	70.0	44.2	39.9	-
SS-514	CL	874+20	0.0-1.5	A-7-5(11)	47	15	3.3	31.3	29.0	36.4	100.0	99.2	69.3	35.0	-



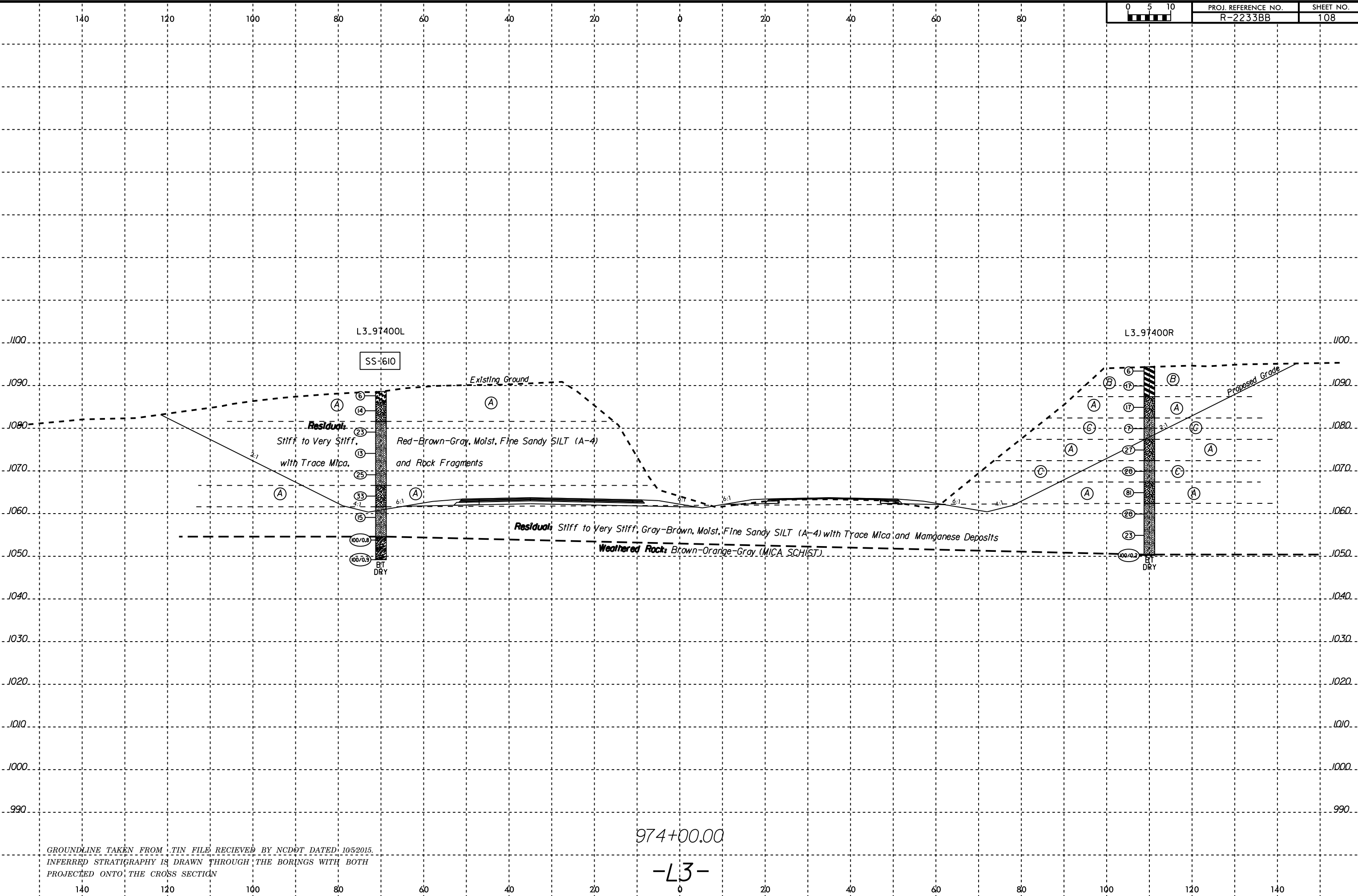
874+00.00

-L3-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:32 E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_RDY_xsl\L3.dgn

6/23/16



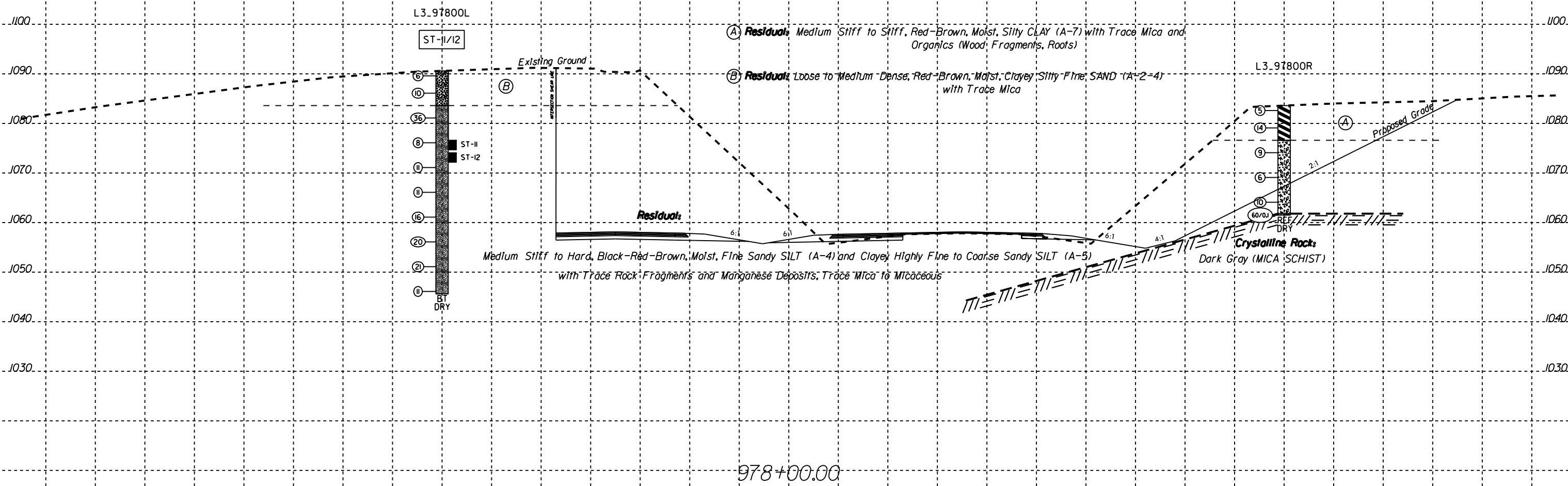
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GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

974+00.00

-L3-

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
							ST-11	70' LT	978+00	14.0-16.0	A-7-5(11)	56	16		
ST-12	70' LT	978+00	18.5-20.5	A-7-5(11)	56	16	18.0	19.9	24.4	37.7	100.0	89.5	64.8	29.5	-



Residual Medium Stiff to Hard, Black-Red-Brown, Moist, Fine Sandy SILT (A-4) and Clayey Highly Fine to Coarse Sandy SILT (A-5) with Trace Rock Fragments and Manganese Deposits; Trace Mica to Micaceous

(A) Residual Medium Stiff to Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica and Organics (Wood Fragments, Roots)

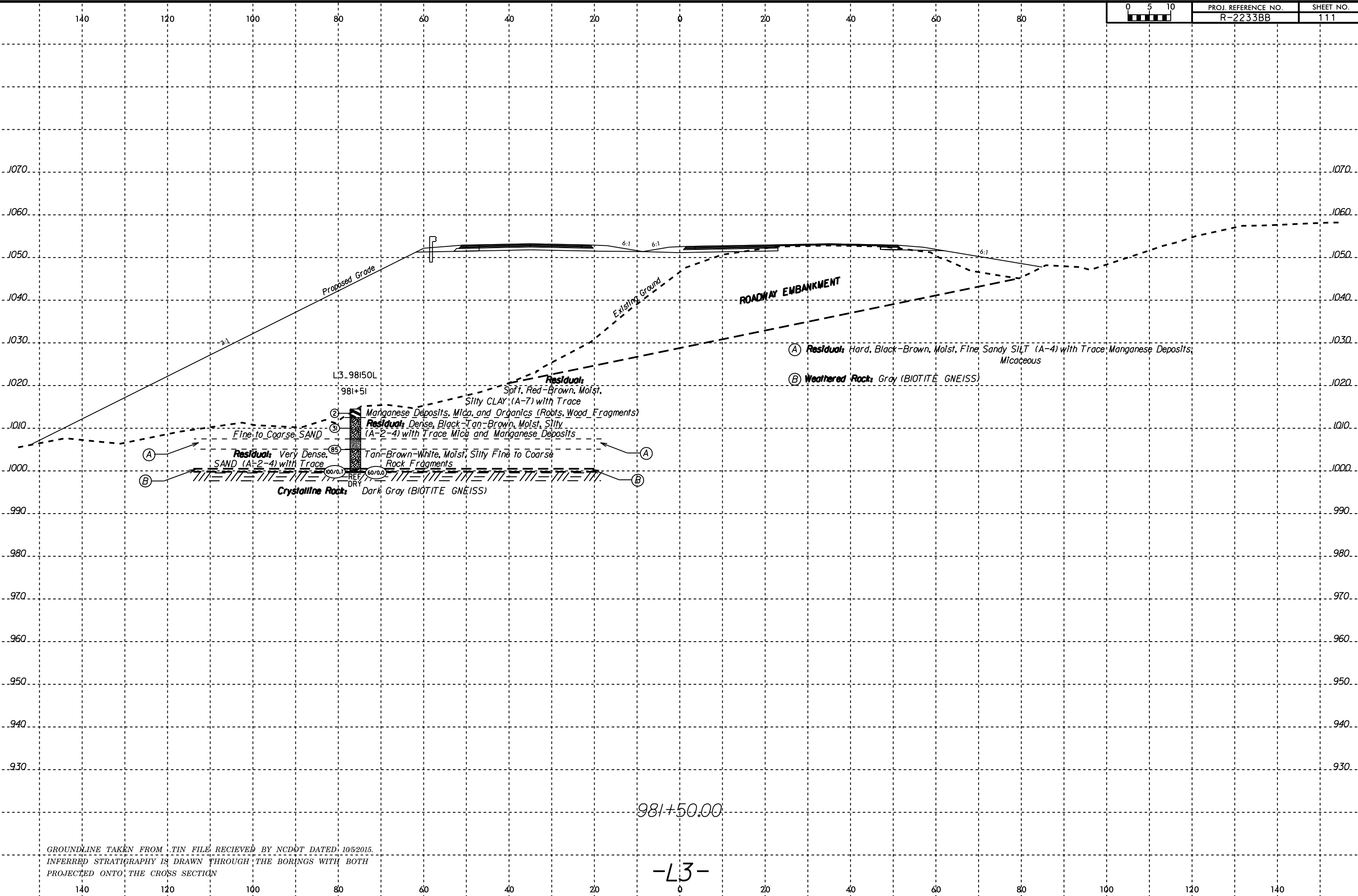
(B) Residual Loose to Medium Dense, Red-Brown, Moist, Clayey Silty Fine SAND (A-2-4) with Trace Mica

Crystalline Rock: Dark Gray (MICA SCHIST)

978+00.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED: 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION



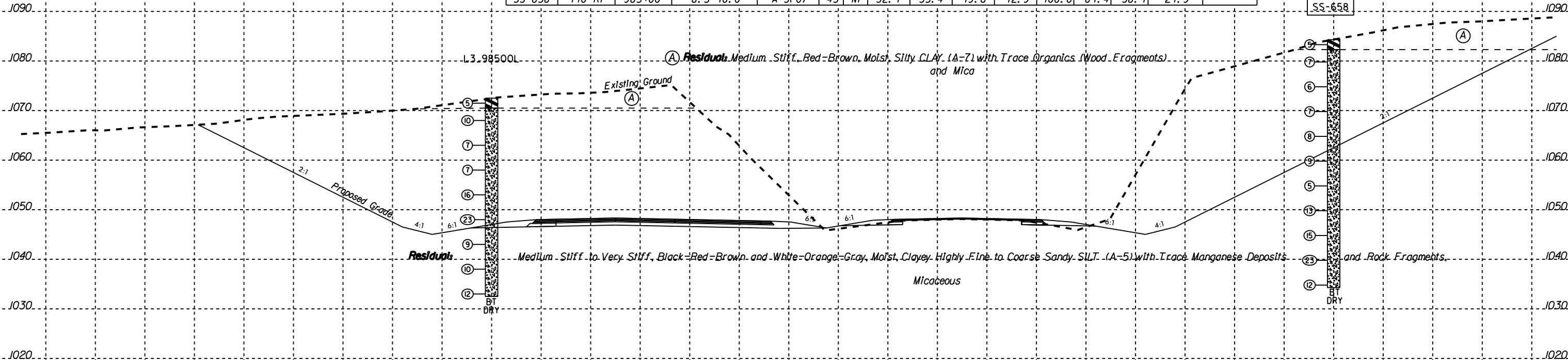
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Walker

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED: 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

981+50.00

-L3-

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-658	110' RT	985+00	8.5-10.0	A-5(0)	45	NP	32.1	35.4	19.6	12.9	100.0	81.4	38.1	21.9	-



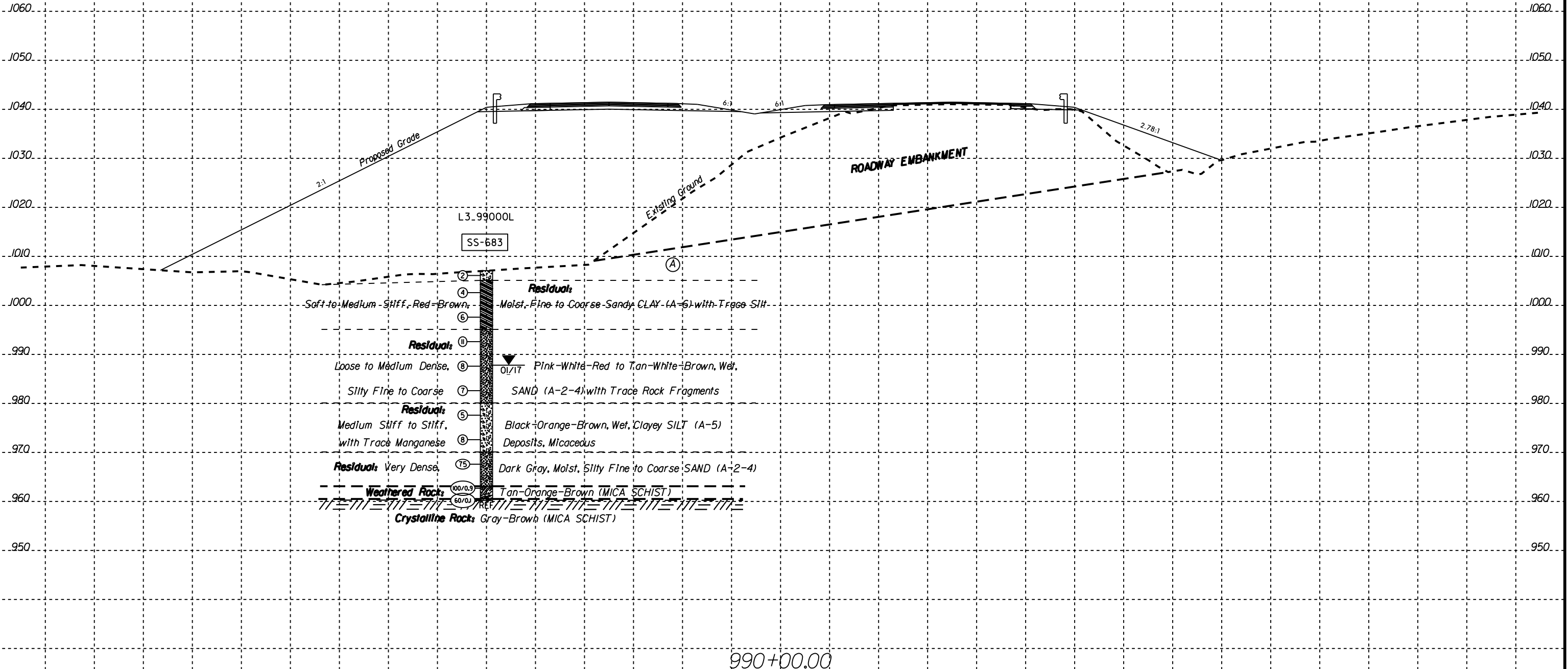
985+00.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-683	60' LT	990+00	3.5-5.0	A-6(4)	40	11	28.7	21.6	8.3	41.4	97.8	82.2	51.1	20.5	-

Ⓐ Residuals Soft, Red-Brown, Wet, Clayey SILT (A-5) with Trace Organics (Wood Fragments, Roots), Mica, and Fine to Coarse Sand



990+00.00

-L3-

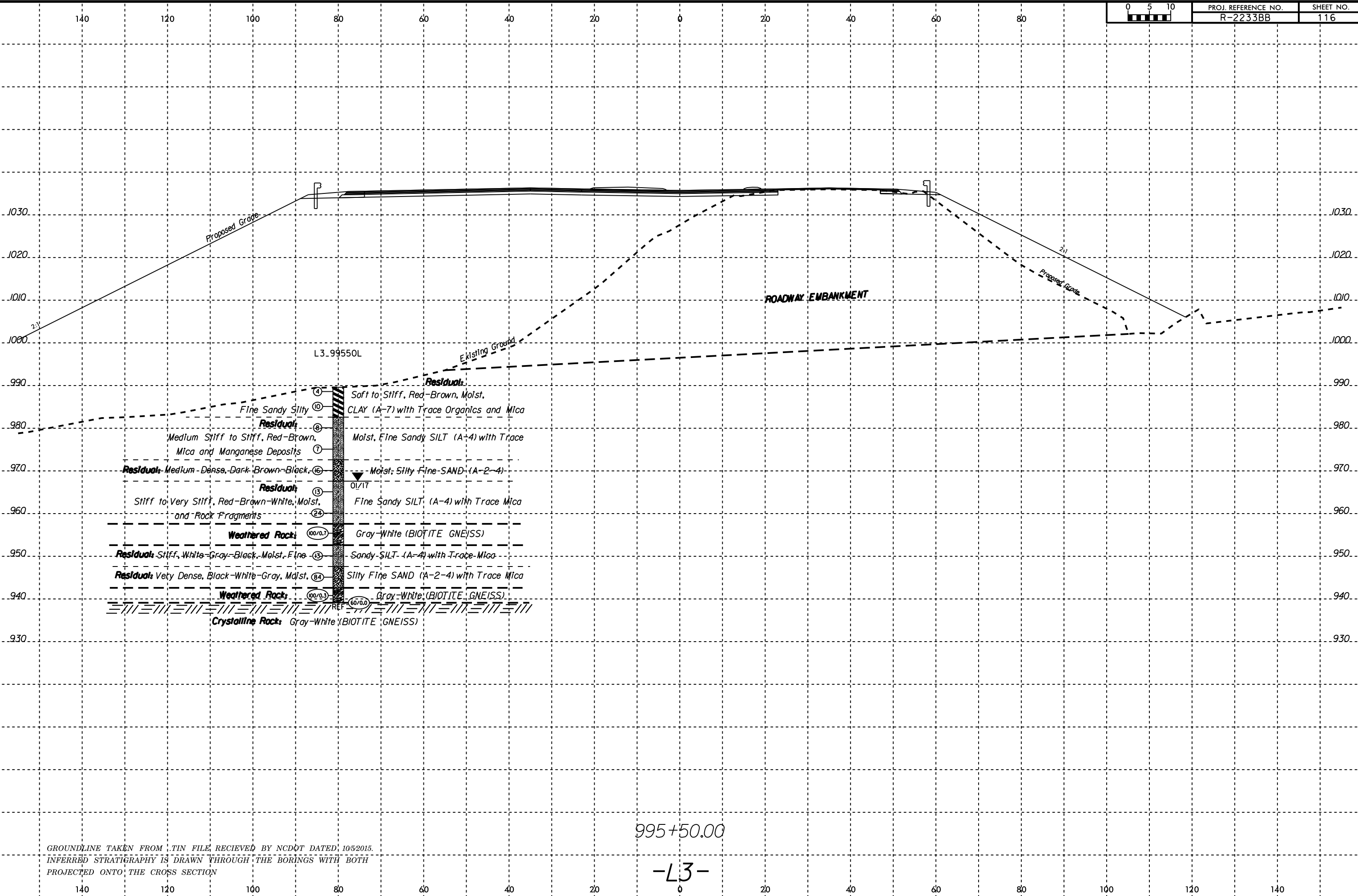
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 INFERRRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
116



L3-99550L

ROADWAY EMBANKMENT

Proposed Grade

Existing Ground

2:1

Proposed Grade

- ④ Soft to Stiff, Red-Brown, Moist, Fine Sandy SILTY CLAY (A-7) with Trace Organics and Mica
- ⑤ Medium Stiff to Stiff, Red-Brown, Mica and Manganese Deposits, Moist, Fine Sandy SILT (A-4) with Trace Mica
- ⑥ Residual: Medium-Dense, Dark-Brown-Black, Moist, Silty Fine SAND (A-2-4)
- ⑬ Residual: Stiff to Very Stiff, Red-Brown-White, Moist, and Rock Fragments, Fine Sandy SILT (A-4) with Trace Mica
- ⑭ Weathered Rock: Gray-White (BIOTITE GNEISS)
- ⑮ Residual: Stiff, White-Gray-Black, Moist, Fine Sandy SILT (A-4) with Trace Mica
- ⑯ Residual: Very Dense, Black-White-Gray, Moist, Silty Fine SAND (A-2-4) with Trace Mica
- ⑰ Weathered Rock: Gray-White (BIOTITE GNEISS)
- ⑱ Crystalline Rock: Gray-White (BIOTITE GNEISS)

995+50.00

-L3-

GROUNDLINE TAKEN FROM .TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
117

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970

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950

940

930

920

1040

1030

1020

1010

1000

990

980

970

960

950

940

930

920

Proposed Grade

6:1

6:1

Existing Ground

ROADWAY EMBANKMENT

L3_99700L

Residuals

Soft to Stiff, Dark Brown, Moist, Fine Sandy
Residuals Stiff, Red-Brown to Gray-White, Moist,
and Rock Fragments, Little Mica

Residuals

Loose to Medium-Dense, Brown-Gray, Moist

4

13

10

9

5

12

16

01/17

Weathered Rock

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00/0.4

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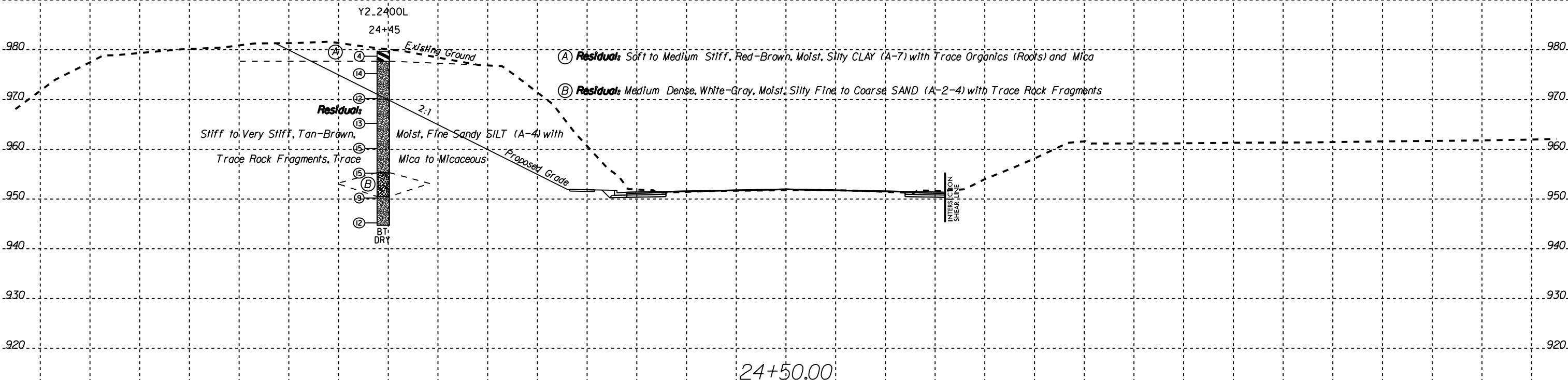
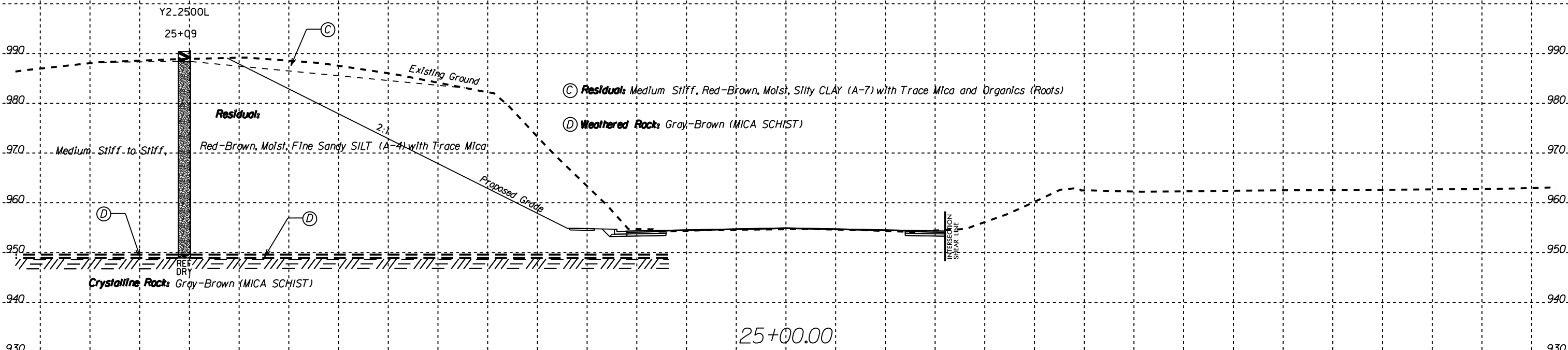
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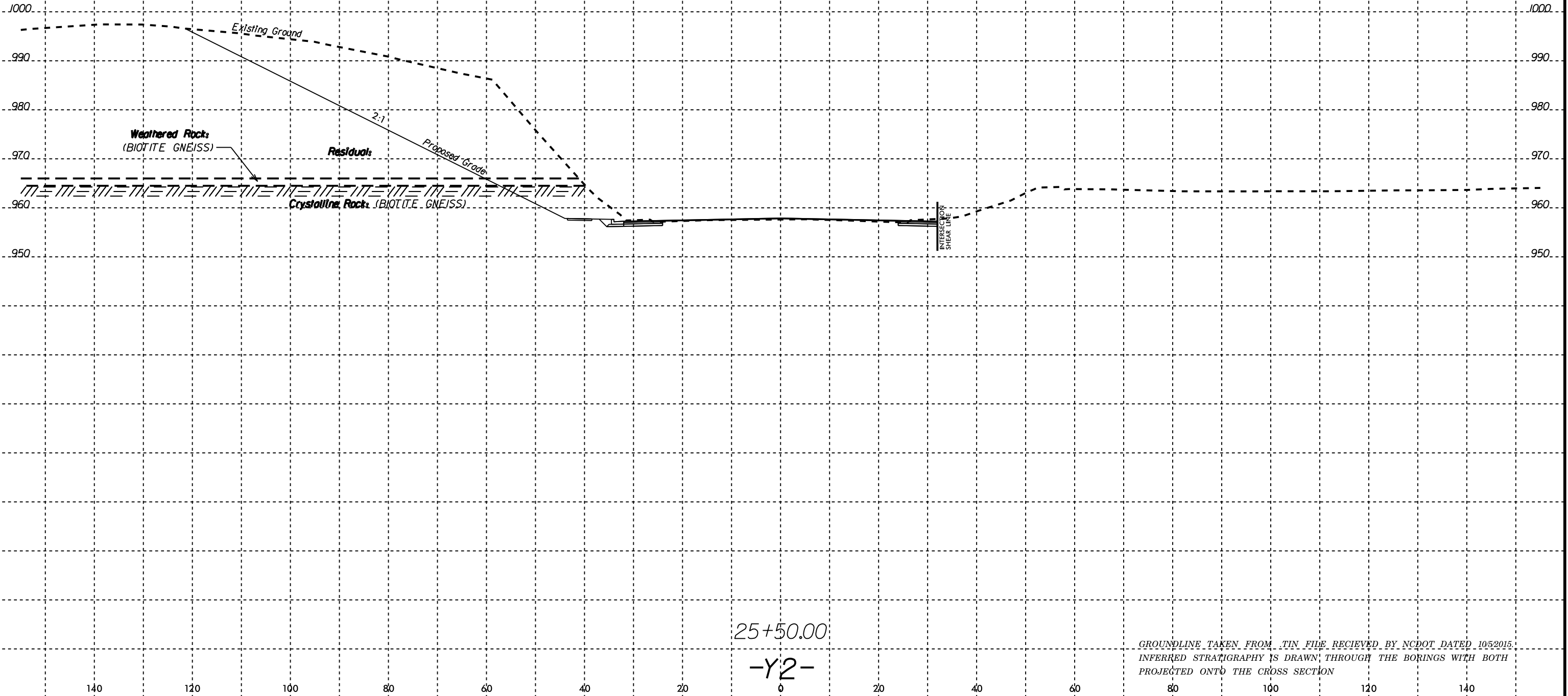


6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	120

PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	120



16-MAR-2017 13:25
 E:\Projects\66166\66166-0203 INCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB-geo.xst.Y2.dgn
 Walker

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

140

120

100

80

60

40

20

0

20

40

60

80

1010

1000

990

980

970

960

950

1010

1000

990

980

970

960

950

Y2-2600L

Existing Ground

Residuals

Stiff to Very Stiff

Crystalline Rocks: Gray-White (BIOTITE GNEISS)

REF

DRY

60/04

Red-Brown, Moist, Fine Sandy SILT (A-4)

with Trace Mica

2:1

(A) Residuals: Stiff to Very Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica, Organics (Roots), and Rock Fragments

(B) Residuals: Medium Dense, Brown-Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica

(C) Weathered Rocks: Gray-White (BIOTITE GNEISS)

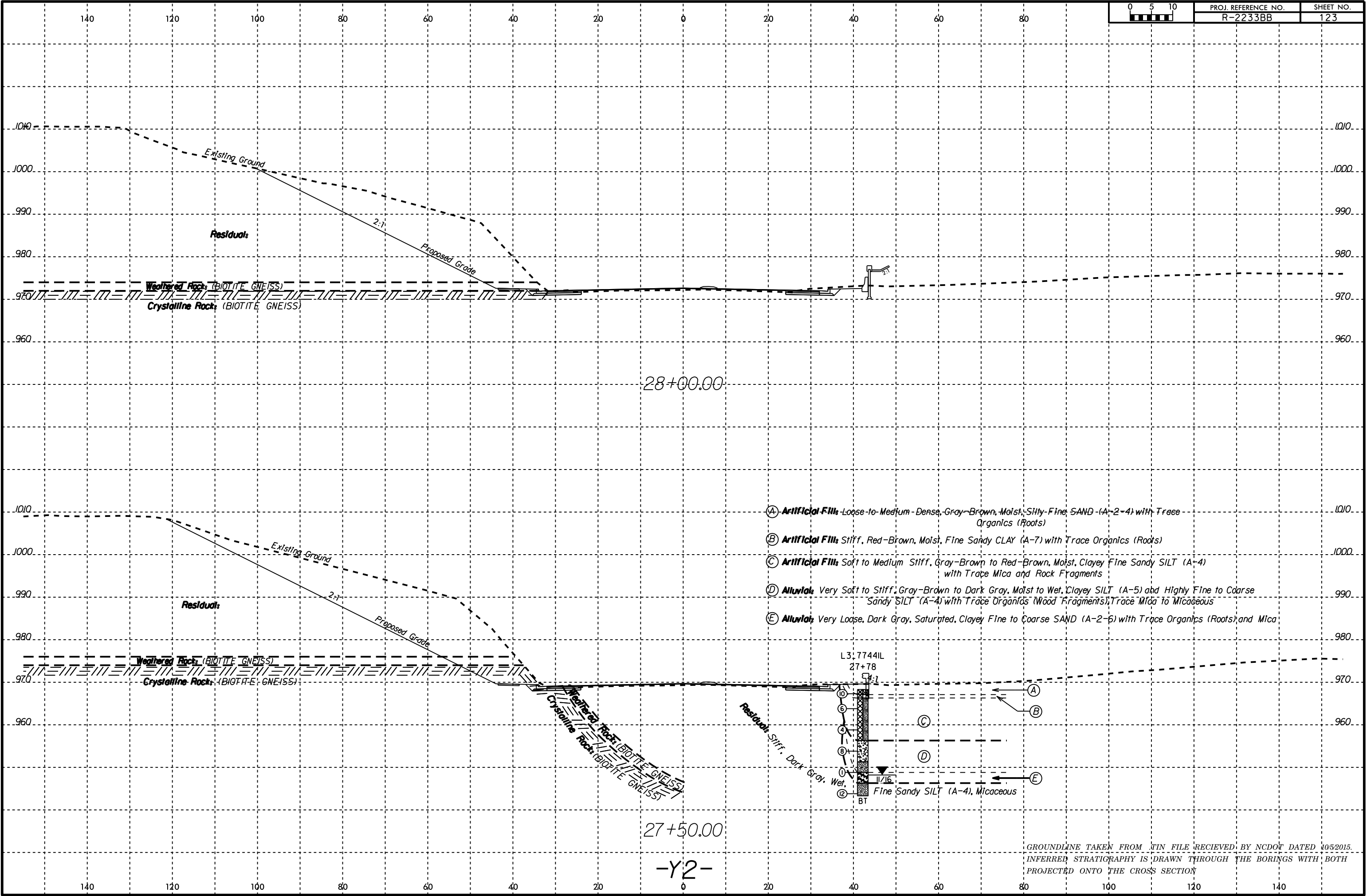
Proposed Grade

INTERSECTION
BREAK LINE

26+00.00

-Y2-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION



27+50.00
-Y2-

6/23/16

140

120

100

80

60

40

20

0

20

40

60

80



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	124

PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	124

1020

1010

1000

990

980

970

1020

1010

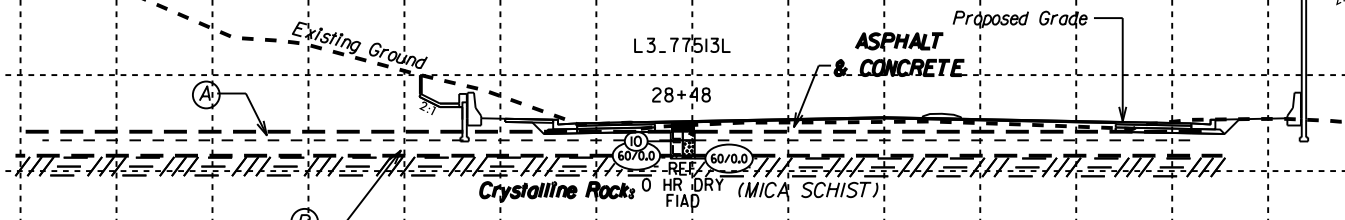
1000

990

980

970

- (A) Roadway Embankment: Stiff, Red-Brown, Moist, Silty CLAY (A-7) with Trace Mica
- (B) Roadway Embankment: Loose to Medium Dense, Brown-Gray, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Gravel



28+50.00

-Y2-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

15-MAR-2017 13:25
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 Walker

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
125

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1080

1070

1060

1050

1040

1030

Existing Ground

2:1 Proposed Grade

Residual:

Weathered Rock: (MICA SCHIST)

Crystalline Rock: (MICA SCHIST)

4:1

6:1

6:1

6:1

SEAL PIT

15+44.00

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Walker
6/23/16

140

120

100

80

60

40

20

0

20

40

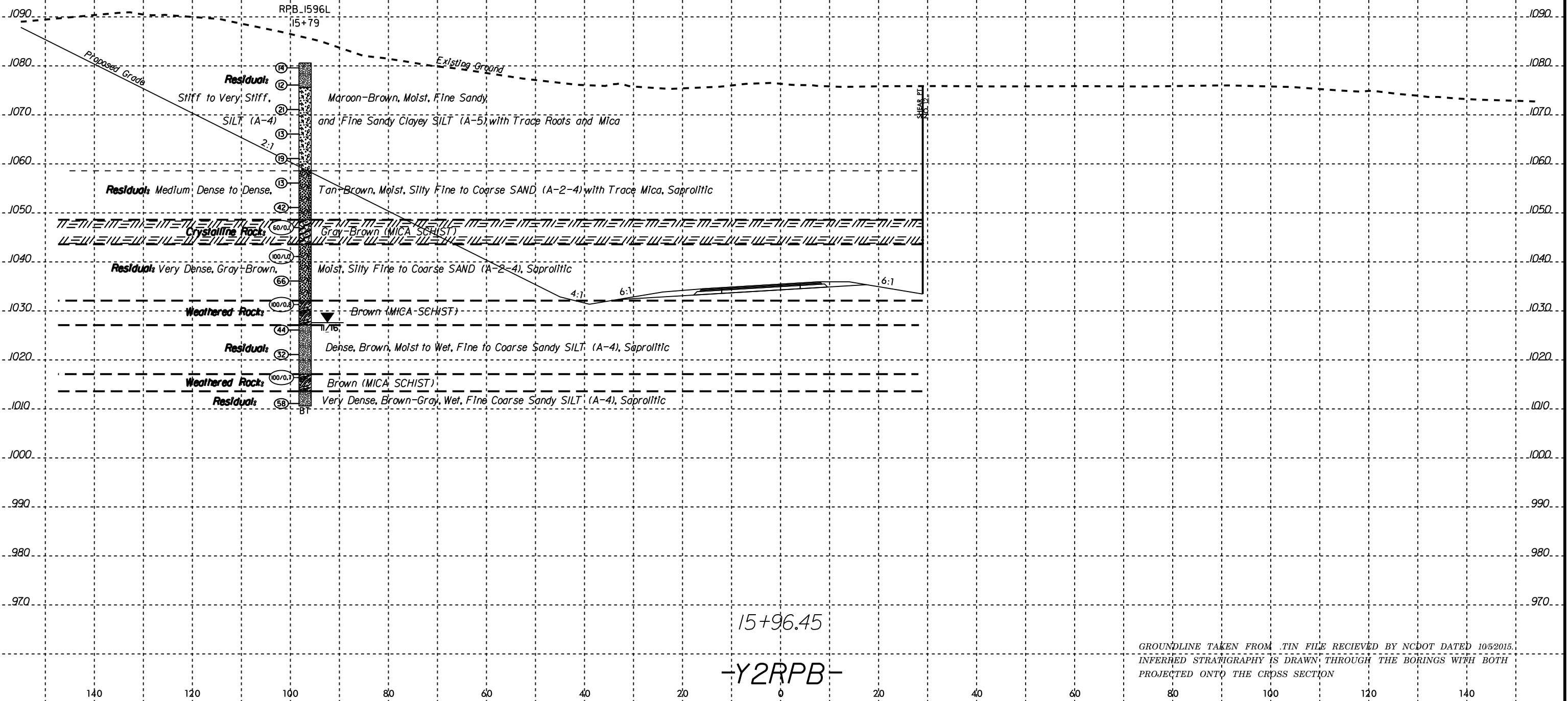
60

80

100

120

140



15-MAR-2017 13:25
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Walker

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
127

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1020

1010

1080

1070

1060

1050

1040

1030

1020

1010

Artificial Fill

Existing Ground

Residuals

3:1
Proposed Grade

SHEAR PT.
NO. 18

4:1

3:1

4:1

4:1

6:1

6:1

4:1

Crystalline Rocks (MICA SCHIST)

18+68.33

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

I:\MAR-2017\1325
E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\R2233BB_geo_xsl_RPB.dgn
Walker
6/23/16

140

120

100

80

60

40

20

0

20

40

60

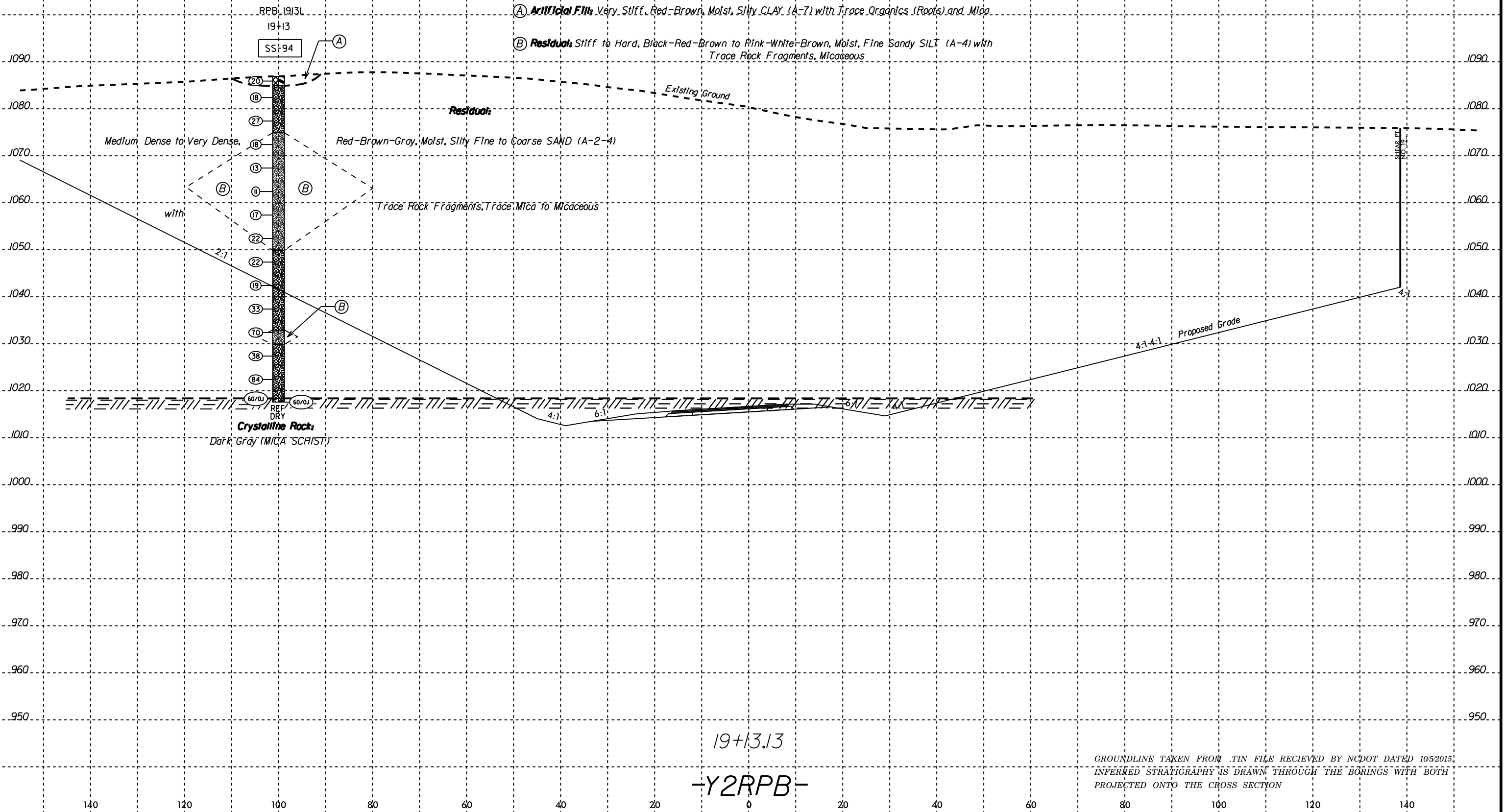
80

100

120

140

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-94	100' LT	19+13	38.5-40.0	A-2-4(0)	36	NP	41.3	28.1	19.9	10.7	93.2	65.7	32.0	12.9	-



19+13.13

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015. INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ON THE CROSS SECTION

15-MAR-2017 13:25 E:\Projects\661661\661661-0203 NCDOT-R-2233BB Rutherford Co.\CA000.GEOTECH\asc\VR2233BB_geo_xsl_RPB.dgn

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
129

140

120

100

80

60

40

20

0

20

40

60

80

1080

1070

1060

1050

1040

1030

1020

1010

1080

1070

1060

1050

1040

1030

1020

1010

Existing Ground

2:1

Proposed Grade

Residual

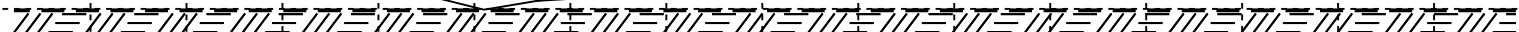
4:1

6:1

6:1

4:1

Crystalline Rocks (MICA SCHIST)



19+57.47

-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

I:\MAR-2017\1326
E:\Projects\66166\66166-1\203 INCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_geo_xsl_RPB.dgn
Walker
6/23/16

140

120

100

80

60

40

20

0

20

40

60

80

100

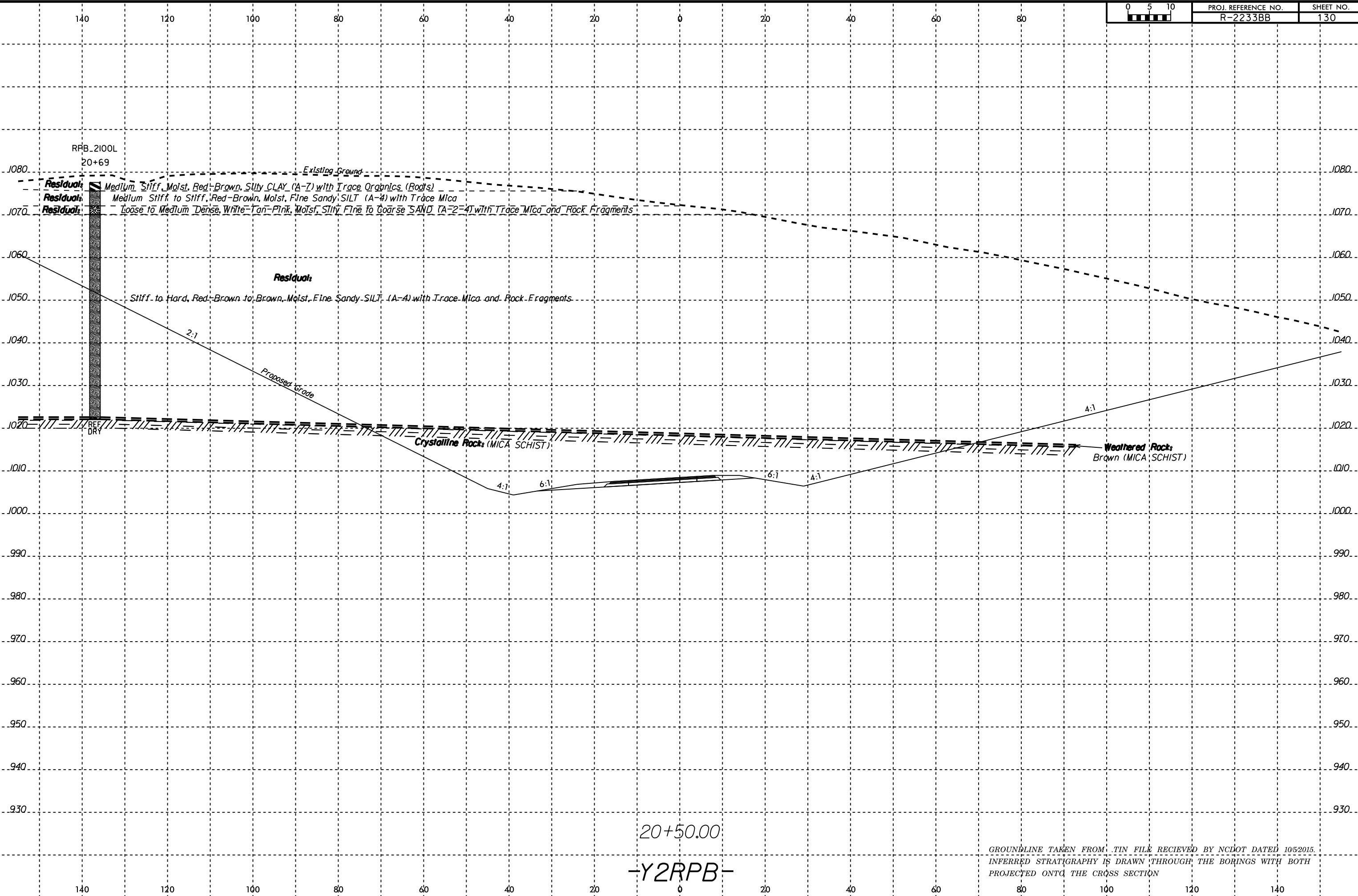
120

140

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	130



20+50.00
 -Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

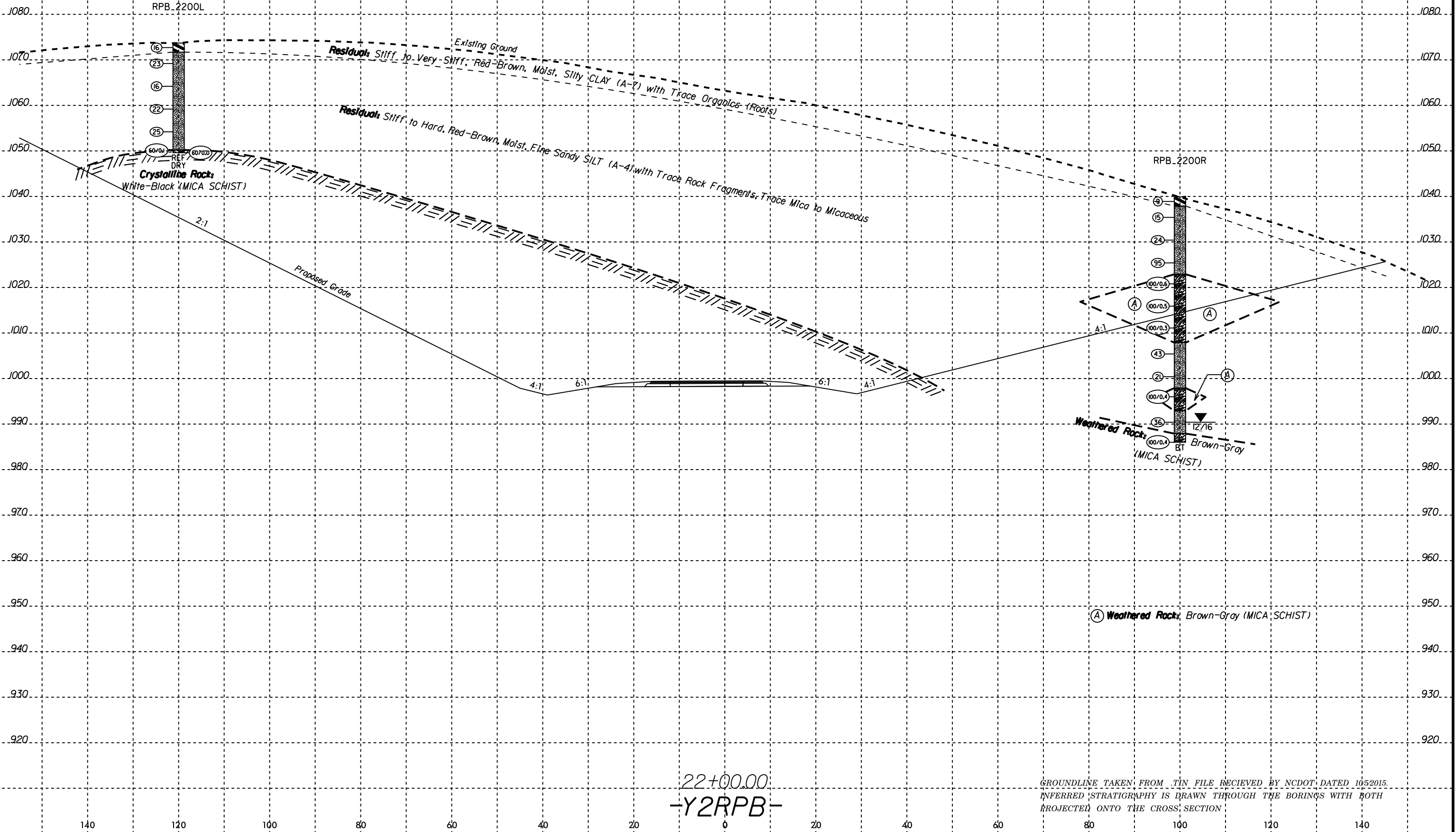
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 Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
132



15-MAR-2017 13:26
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Walker

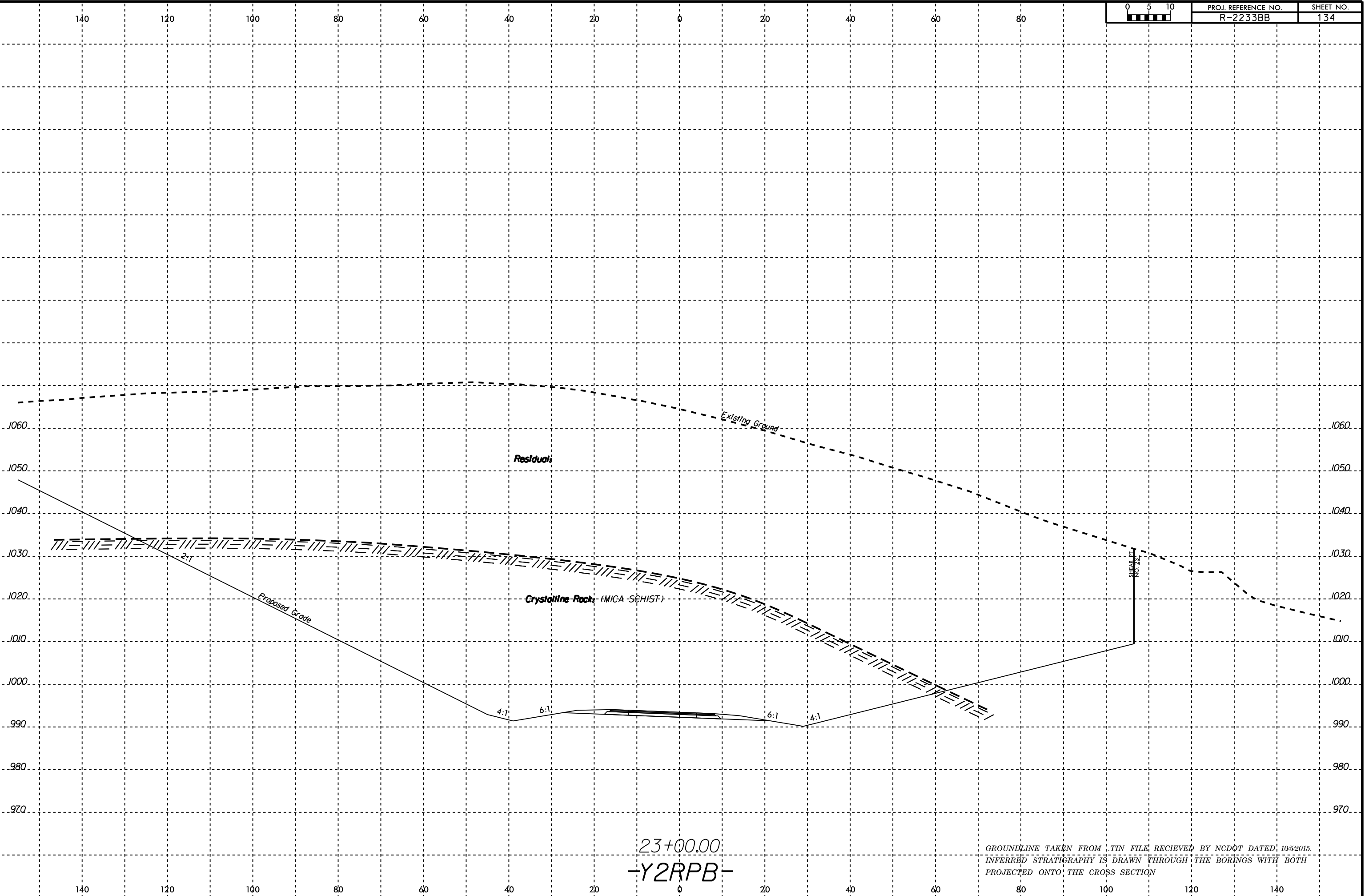
22+00.00
-Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	134



I:\MAR-2017\1326
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 Walker
 6/23/16

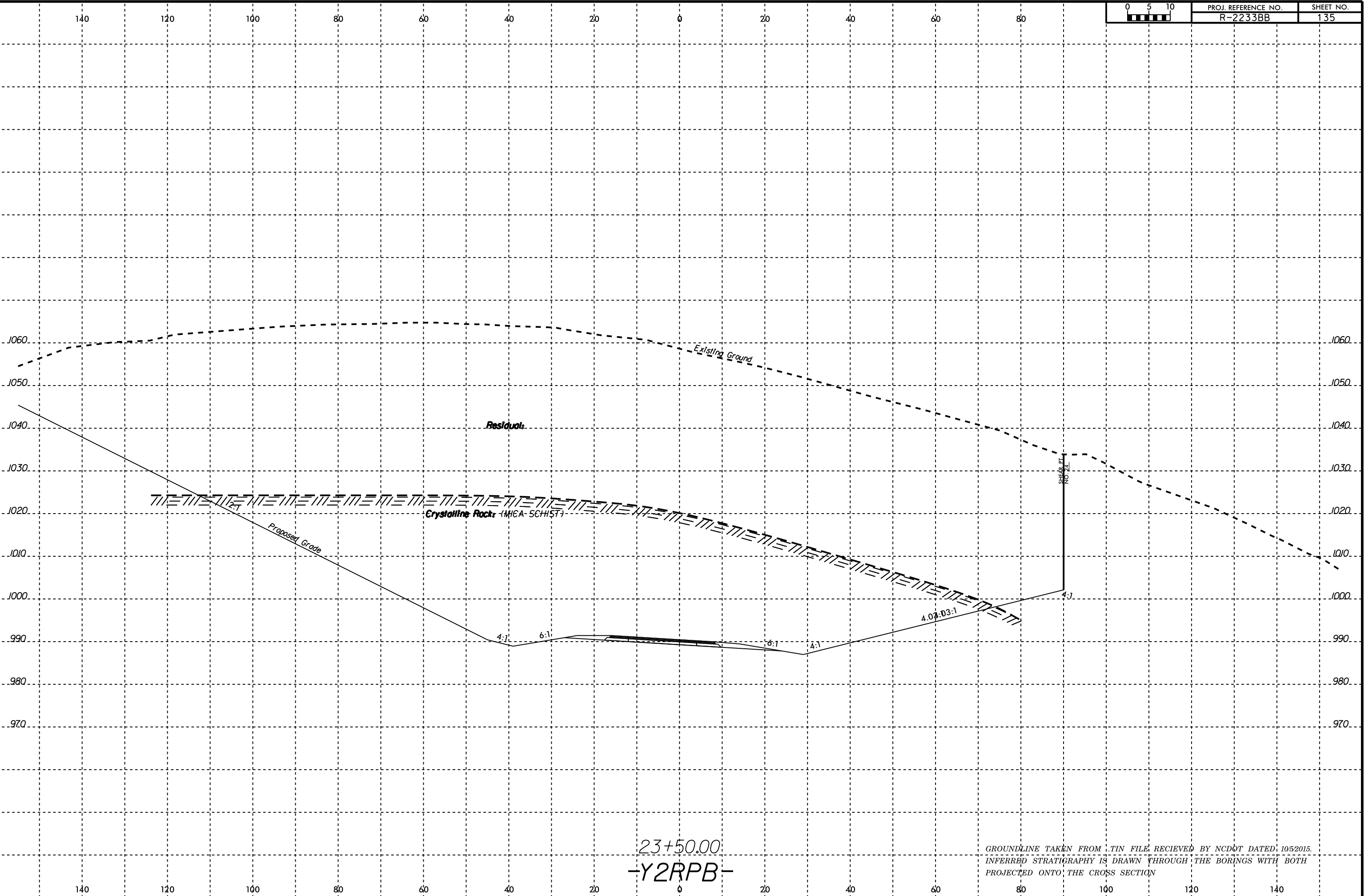
23+00.00
 -Y2RPB-

GROUNDLINE TAKEN FROM TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION

6/23/16

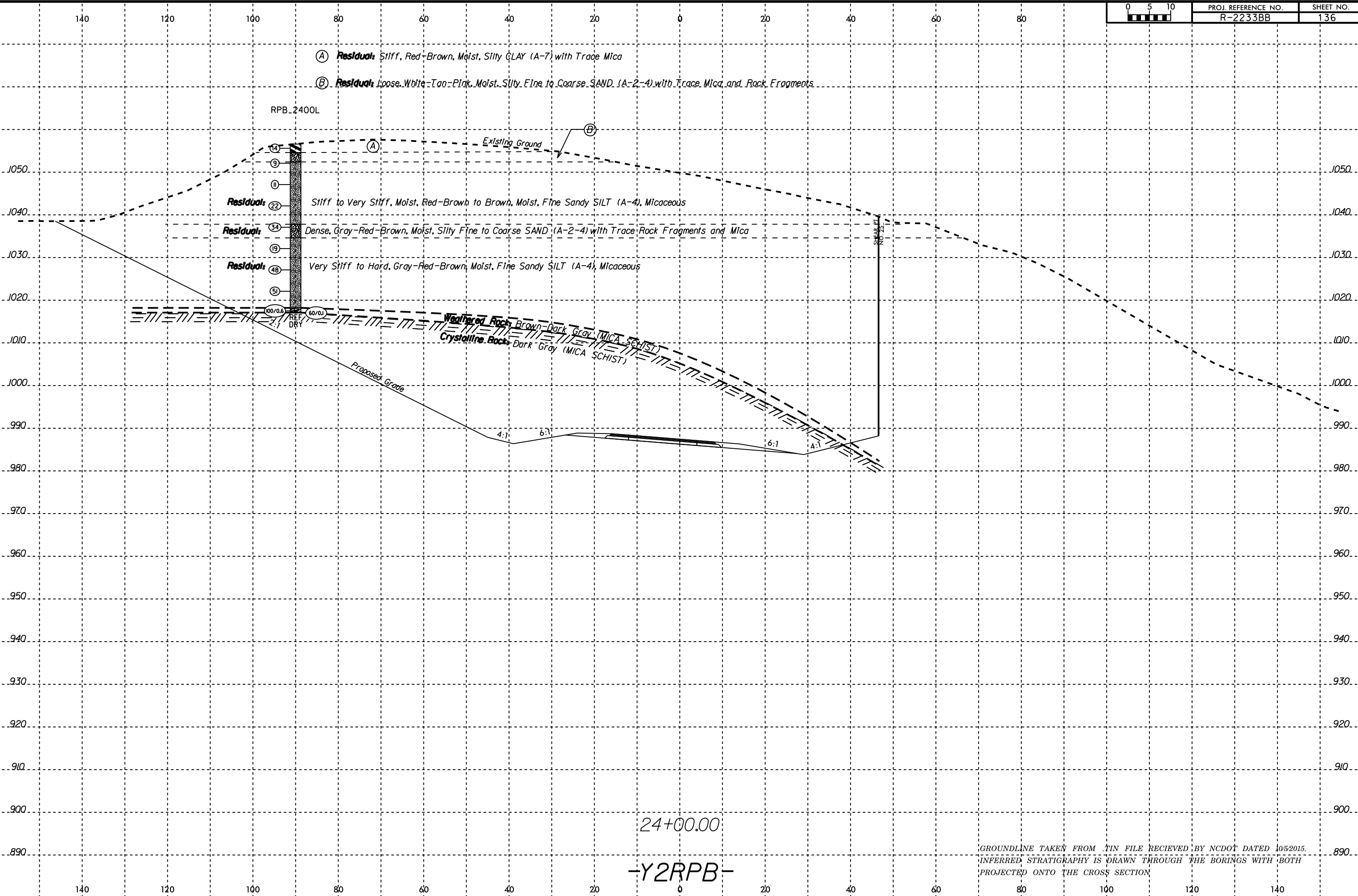


PROJ. REFERENCE NO.	SHEET NO.
R-2233BB	135



I:\MAR-2017\1326
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 Walker
 6/23/16

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
 INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
 PROJECTED ONTO THE CROSS SECTION



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Walker

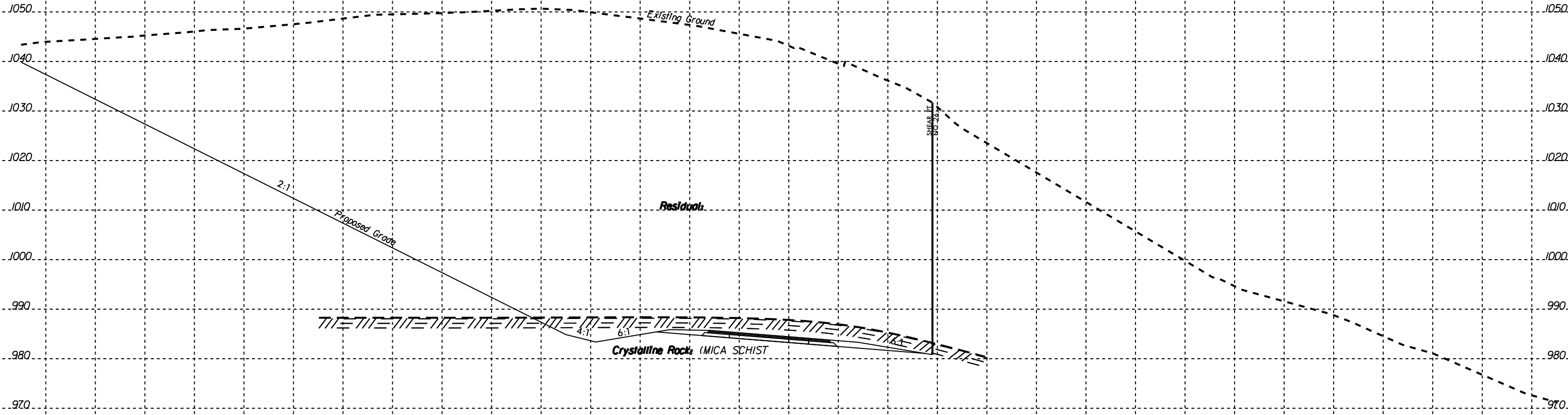
GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
137

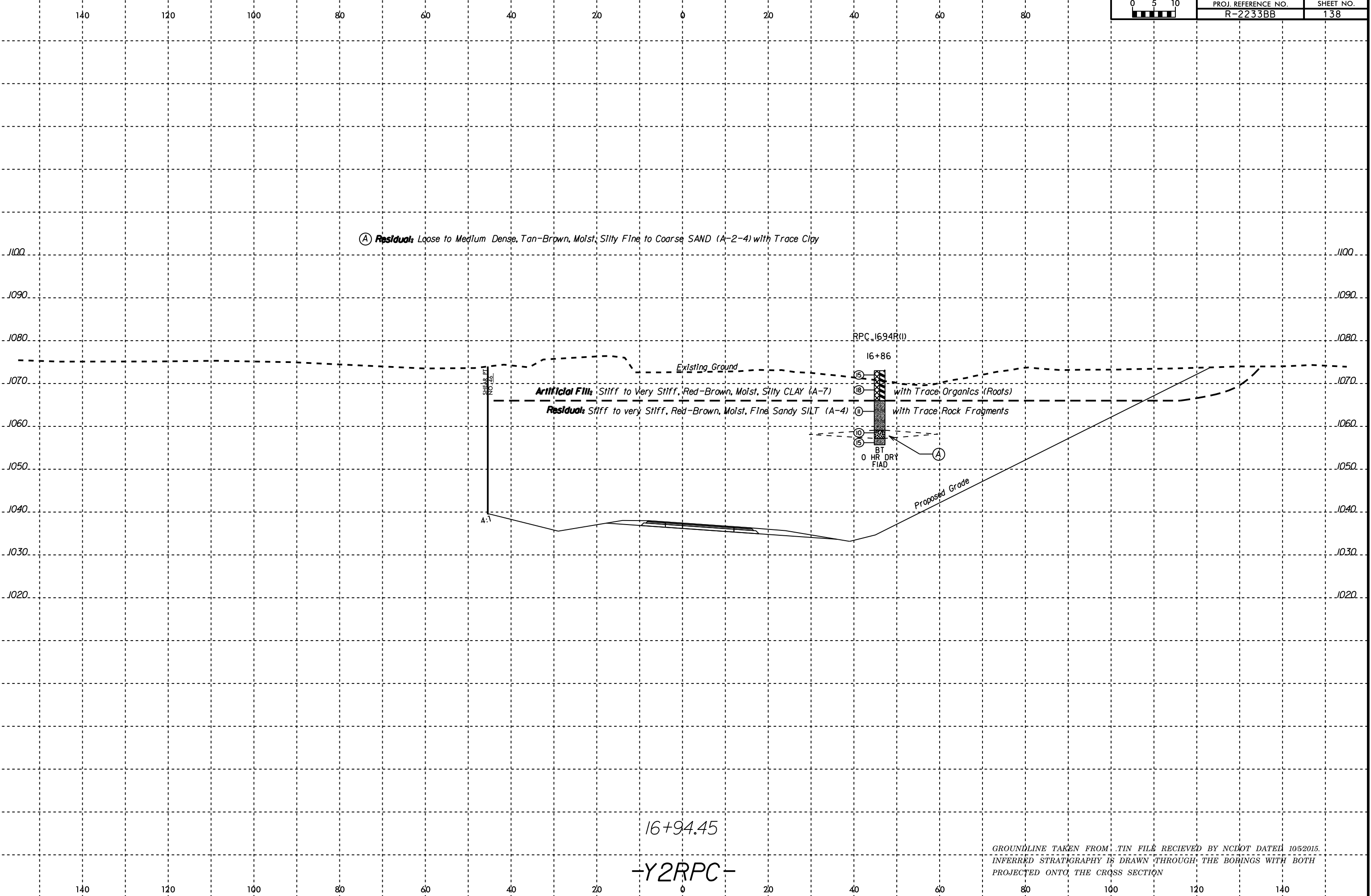


24+50.00

-Y2RPB-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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E:\Projects\66166\66166-0203 INCDOT-R-2233BB Rutherford Co.\CA00D_GEO1TECH\asc\VR2233BB_geo_xsi_1_RPB.dgn
Walker



Ⓐ **Residual:** Loose to Medium Dense, Tan-Brown, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Clay

Existing Ground

Artificial Fill: Stiff to Very Stiff, Red-Brown, Moist, Silty CLAY (A-7)

Residual: Stiff to very Stiff, Red-Brown, Moist, Fine Sandy SILT (A-4)

RPC 1694R(1)

16+86

15

18

10

15

15

BT
0 HR DRY
FIAD

Proposed Grade

Ⓐ

4:1

16+94.45

-Y2RPC-

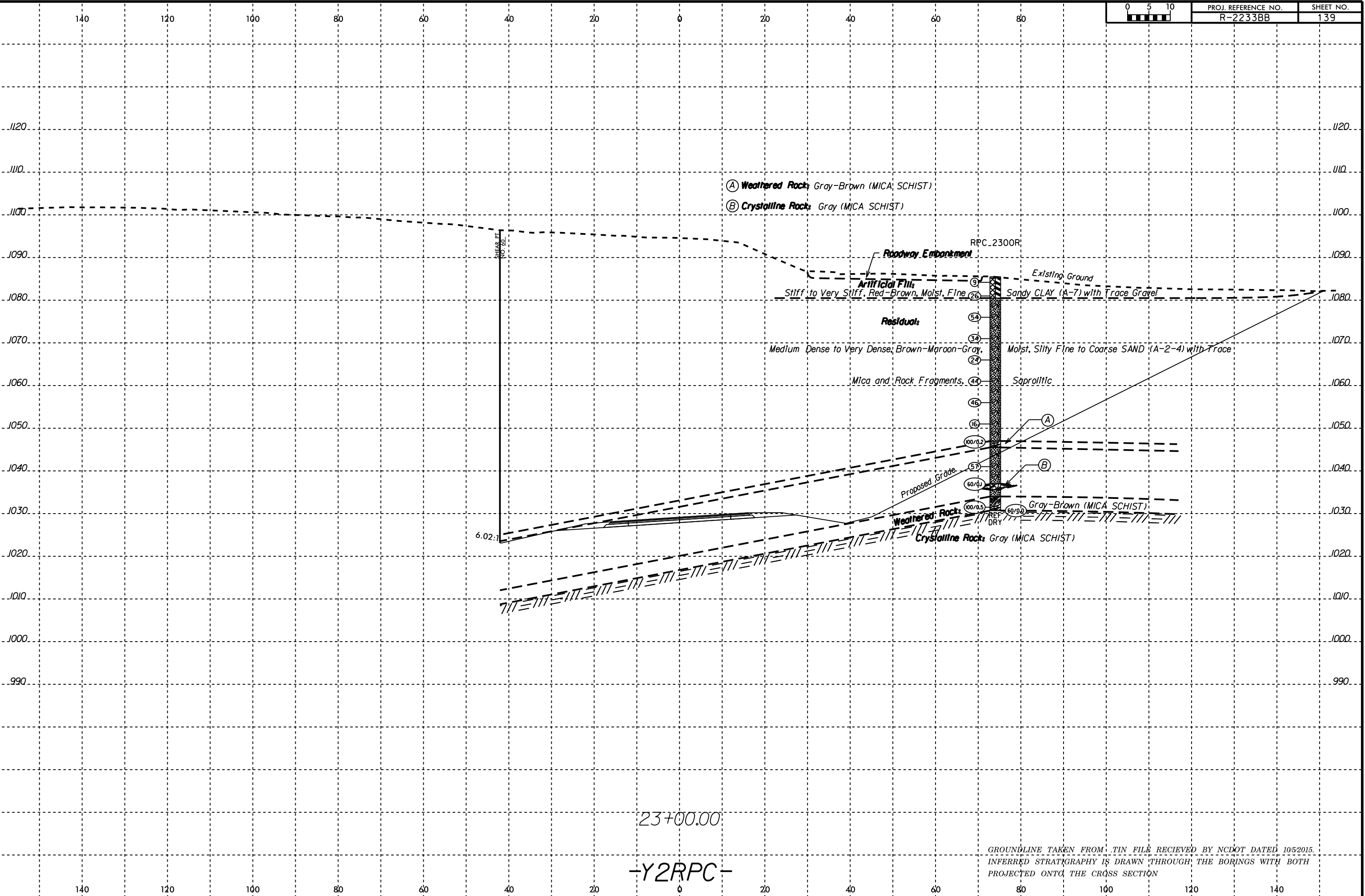
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INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
139



- (A) Weathered Rock: Gray-Brown (MICA, SCHIST)
- (B) Crystalline Rock: Gray (MICA SCHIST)

SHEAR STRESS

6.02:1

23+00.00

-Y2RPC-

GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
141

140

120

100

80

60

40

20

0

20

40

60

80

1100

1090

1080

1070

1060

1050

1040

1030

1020

1100

1090

1080

1070

1060

1050

1040

1030

1020

Existing Ground

Residuals

Proposed Grade

Weathered Rocks (MICA SCHIST)

Residuals

Weathered Rocks (MICA SCHIST)

Crystalline Rock (MICA SCHIST)

SHEAR PT
NO. 61

24+00.00

-Y2RPC-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

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Rutherford Co.\CA00D.GEOTECH\asc\VR2233BB_geo_xsl_RPC.dgn
Walker

140

120

100

80

60

40

20

0

20

40

60

80

100

120

140

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
144

140

120

100

80

60

40

20

0

20

40

60

80

1090

1080

1070

1060

1050

1040

1030

1020

1090

1080

1070

1060

1050

1040

1030

1020

SHEAR PLANE
NO. 64

Existing Ground

Residuals

Proposed Grade

Weathered Rocks (MICA SCHIST)

Crystalline Rocks (MICA SCHIST)

25+50.00

-Y2RPC-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

I:\MAR-2017\1326
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Walker
6/23/16

140

120

100

80

60

40

20

0

20

40

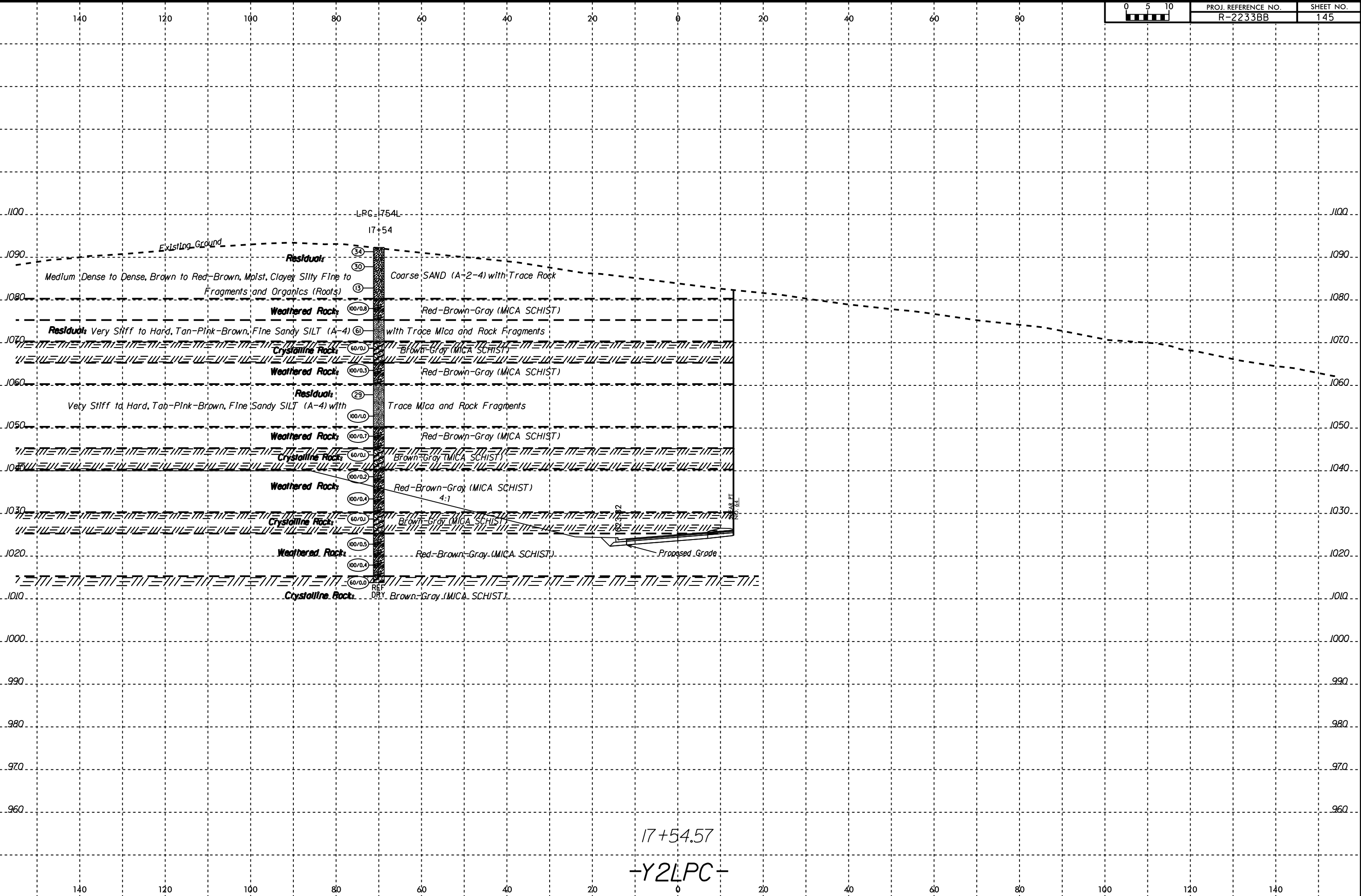
60

80

100

120

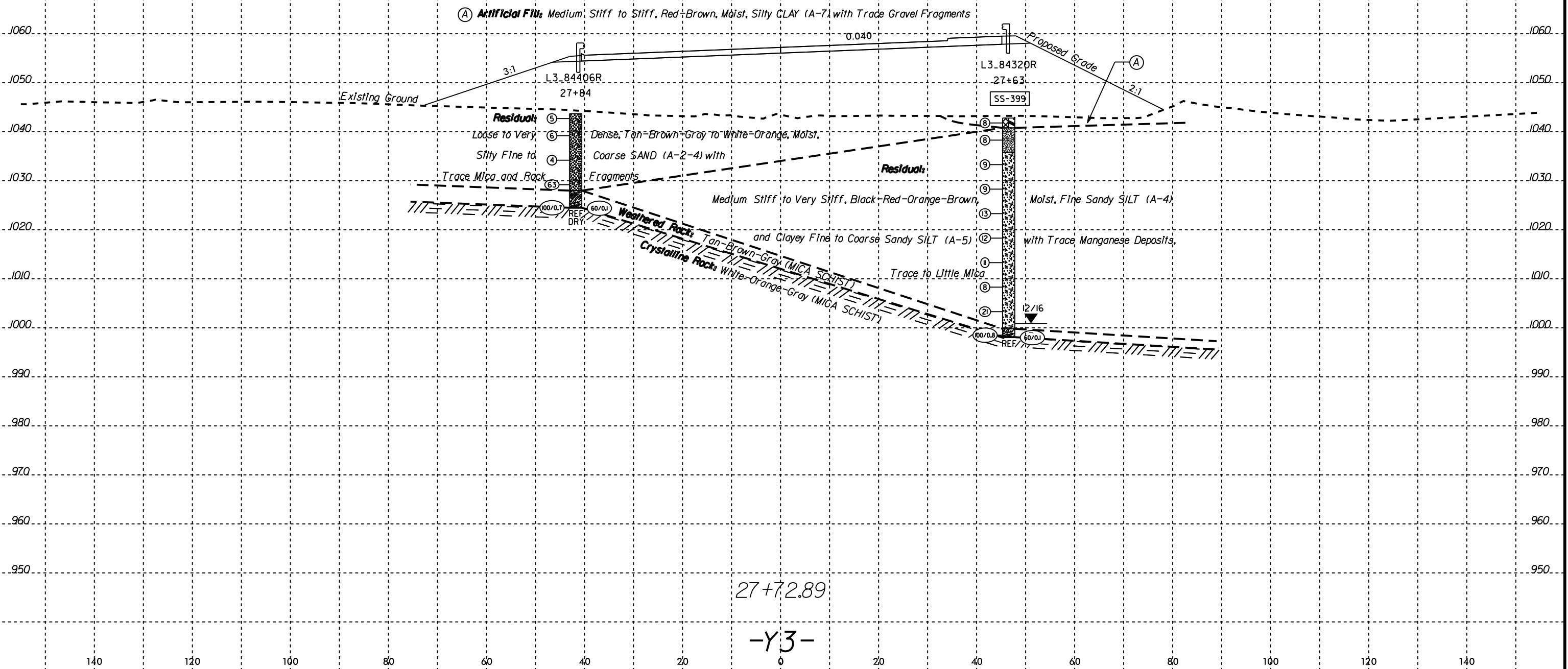
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17+54.57
-Y2LPC-

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-399	47' RT	27+63	8.5-10.0	A-5(10)	55	10	13.8	14.9	55.3	16.0	99.1	89.5	73.7	28.1	-



27+72.89

-Y3-

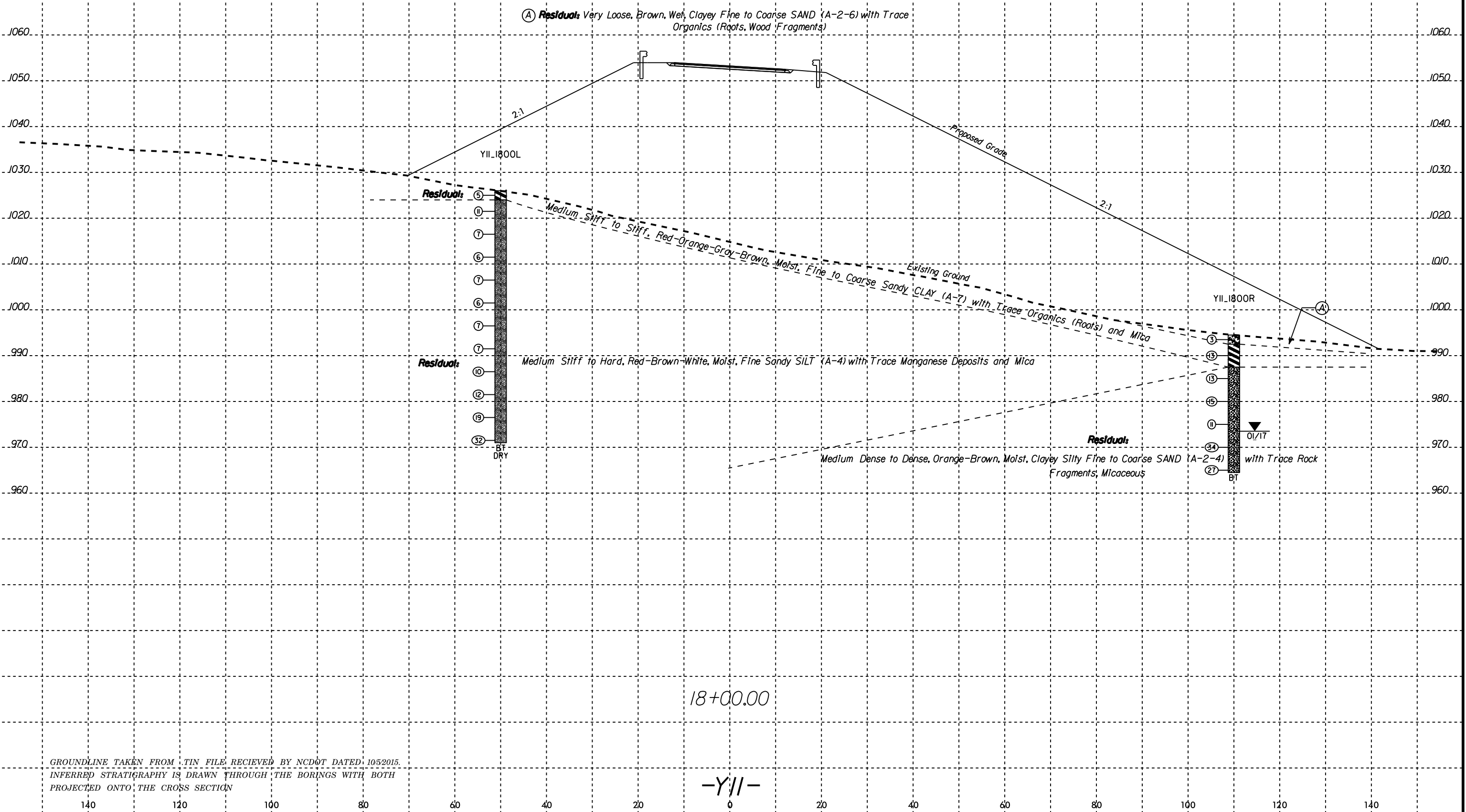
6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
148

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Walker



GROUNDLINE TAKEN FROM .TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

6/23/16

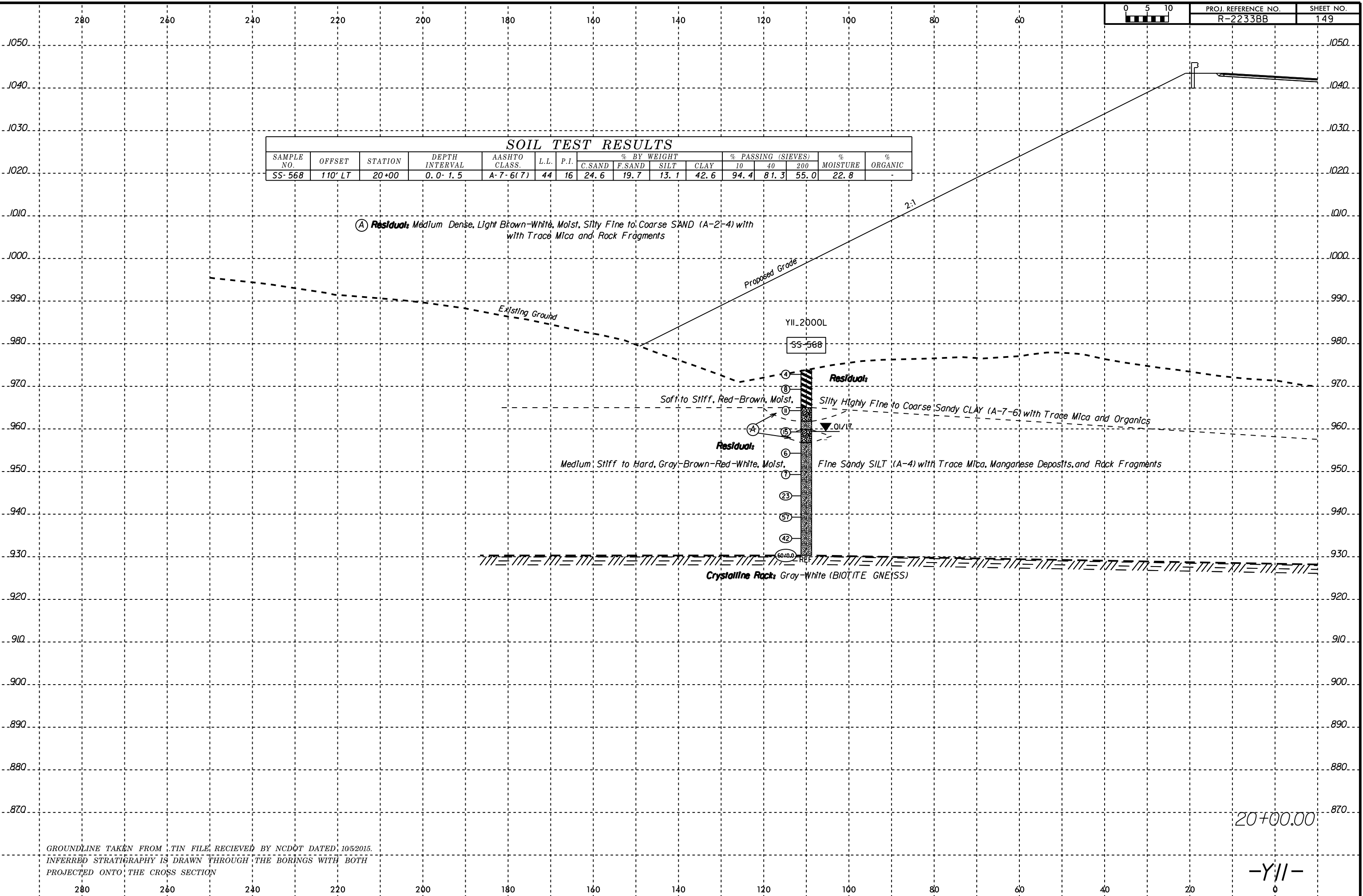


PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
149

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-568	110' LT	20+00	0.0-1.5	A-7-6(7)	44	16	24.6	19.7	13.1	42.6	94.4	81.3	55.0	22.8	-

(A) **Residuals**: Medium Dense, Light Brown-White, Moist, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Rock Fragments



GROUNDLINE TAKEN FROM .TIN FILE, RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

20+00.00

-Y11-

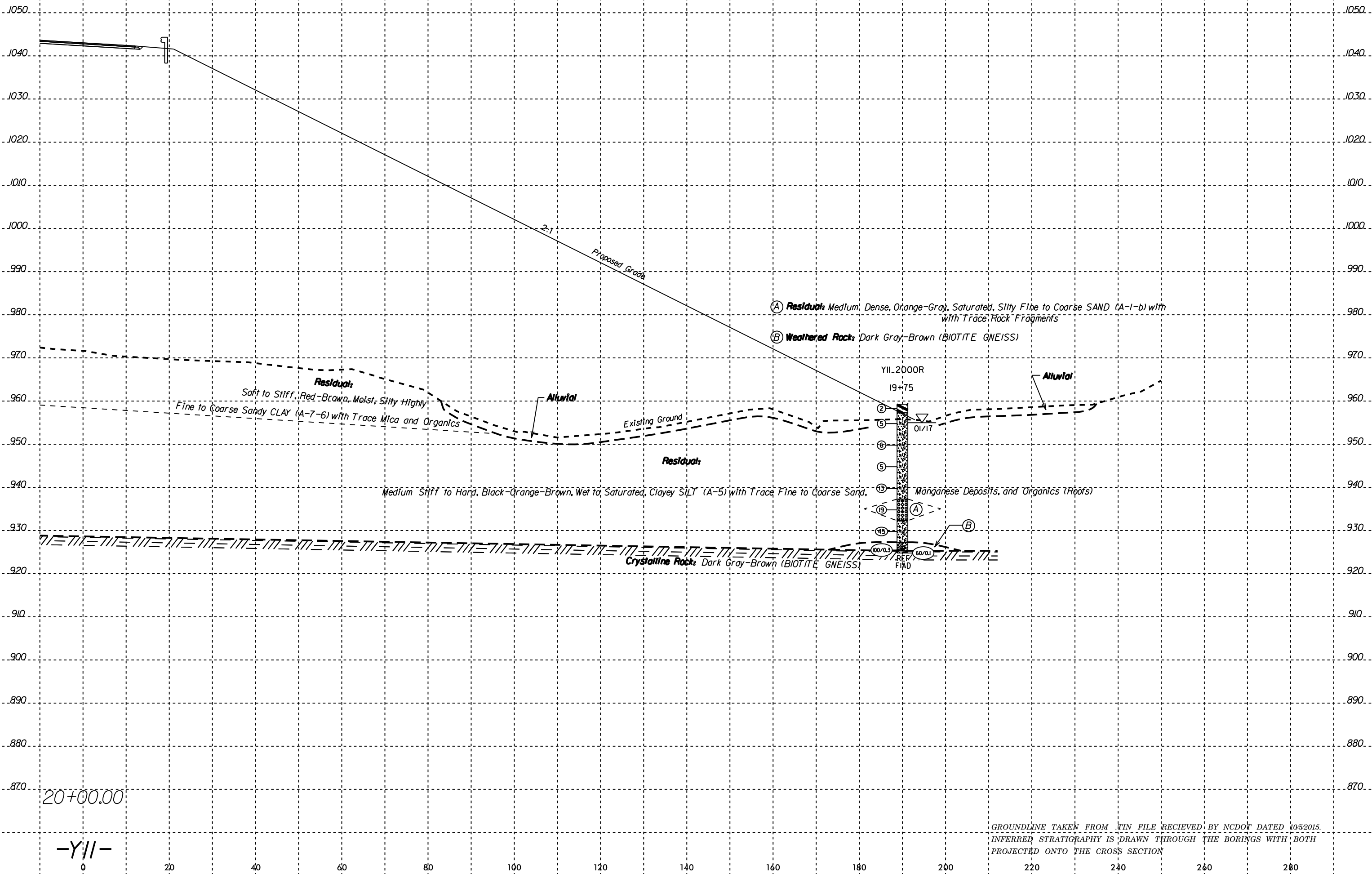
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A Walker

6/23/16



PROJ. REFERENCE NO.
R-2233BB

SHEET NO.
150



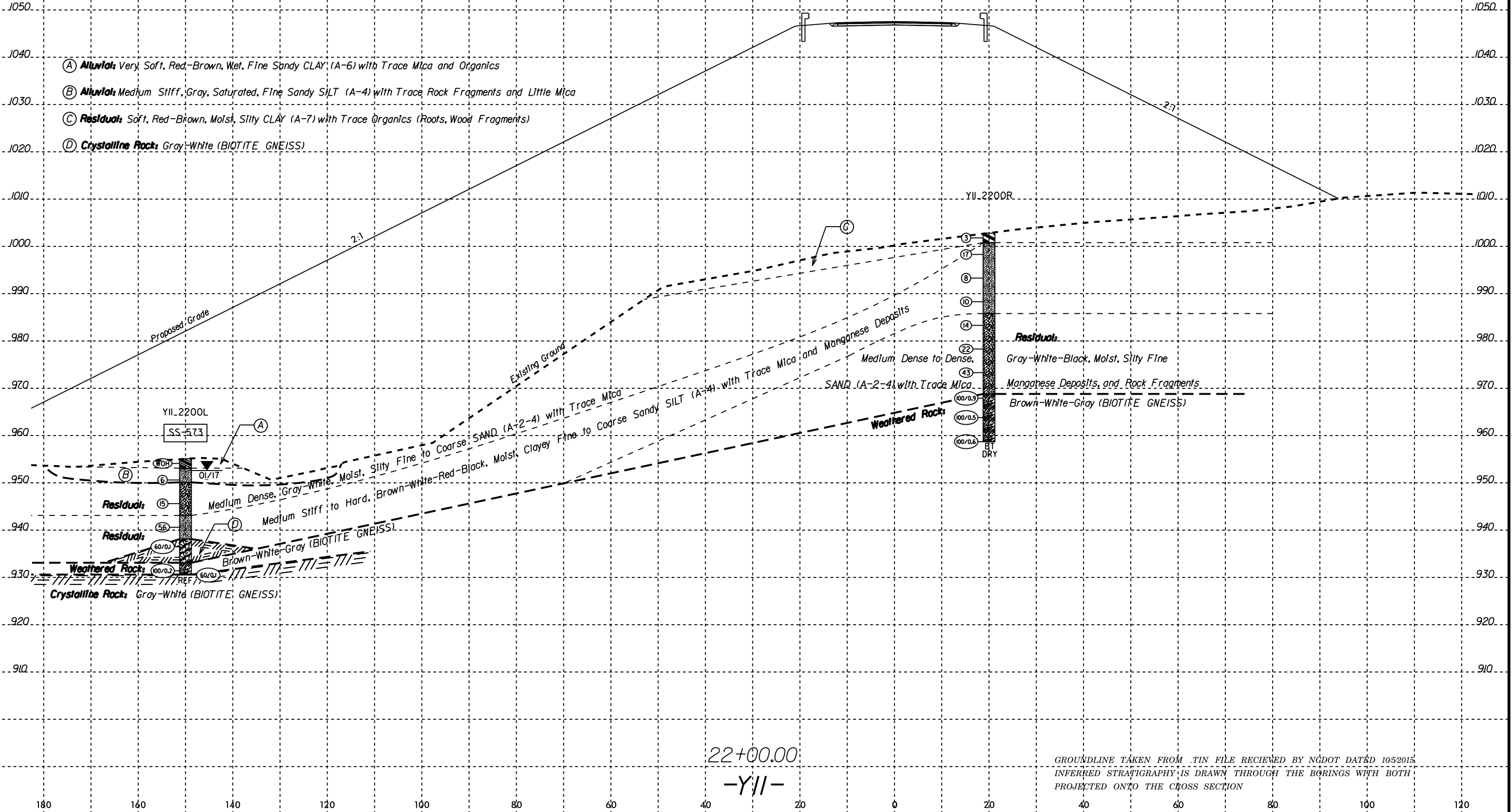
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E:\Projects\66166\66166-0203 NCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\VR2233BB_geo_xsl_Y11.dgn
Walker

20+00.00

-Y11-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

SOIL TEST RESULTS														
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)		% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40		
SS-573	150' LT	22+00	0, 0-0.5	-	-	-	-	-	-	-	-	-	37.7	10.2



15-MAR-2017 13:26
E:\Projects\6601661\0203 INCDOT-R-2233BB Rutherford Co.\CA00.GEOTECH\asc\R2233BB-geo-ssi-YII.dgn
Walker

22+00.00
-YII-

GROUNDLINE TAKEN FROM TIN FILE RECEIVED BY NCDOT DATED 10/5/2015.
INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH
PROJECTED ONTO THE CROSS SECTION

GEOTECHNICAL BORING REPORT

BORE LOG

WBS 34400.1.S5		TIP R-2233BB		COUNTY RUTHERFORD		GEOLOGIST M. Arnold										
SITE DESCRIPTION US 221 South of Business (Charlotte Rd.) to SR 1366 (Roper Loop Rd.)							GROUND WTR (ft)									
BORING NO. L3_77377R(1)		STATION 773+77		OFFSET 67 ft RT		ALIGNMENT -L3-										
COLLAR ELEV. 992.5 ft		TOTAL DEPTH 4.3 ft		NORTHING 600,593		EASTING 1,121,674										
DRILL RIG/HAMMER EFF./DATE F&R2175 CME-55 86% 02/16/2016			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 11/20/16		COMP. DATE 11/20/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
995																
	992.2	0.3	6	5	4									992.5	GROUND SURFACE	0.0
														991.9	ASPHALT	0.6
990														989.5	ARTIFICIAL FILL	3.0
	989.0	3.5												988.2	Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Mica and Clay	4.3
	988.2	4.3	100/0.4												(BOULDER)	
			60/0.0												Boring Terminated by Auger Refusal at Elevation 988.2 ft in Artificial Fill (BOULDER)	
															Note: 1) Boring offset to L3_77377R(2)	

WBS 34400.1.S5		TIP R-2233BB		COUNTY RUTHERFORD		GEOLOGIST M. Arnold										
SITE DESCRIPTION US 221 South of Business (Charlotte Rd.) to SR 1366 (Roper Loop Rd.)							GROUND WTR (ft)									
BORING NO. L3_77403L(1)		STATION 774+03		OFFSET 67 ft LT		ALIGNMENT -L3-										
COLLAR ELEV. 980.9 ft		TOTAL DEPTH 20.4 ft		NORTHING 600,598		EASTING 1,121,537										
DRILL RIG/HAMMER EFF./DATE F&R2175 CME-55 86% 02/16/2016			DRILL METHOD H.S. Augers			HAMMER TYPE Automatic										
DRILLER S. Davis		START DATE 11/20/16		COMP. DATE 11/20/16		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	SOIL AND ROCK DESCRIPTION	DEPTH (ft)		
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
985																
	980.6	0.3	6	10	15									980.9	GROUND SURFACE	0.0
980														980.3	ASPHALT	0.6
	977.4	3.5	4	7	6										ARTIFICIAL FILL	
															Brown, Silty Fine to Coarse SAND (A-2-4) with Trace Mica, Gravel, and Clay	
975																
	972.4	8.5	4	4	3											
970																
	967.4	13.5	2	2	3											
965															Red-Brown, Clayey SILT (A-5) with Trace Gravel, Micaceous	14.5
	964.2	16.7	WOH	WOH	WOH										Rubber, Plastic, and Metal Trash	16.6
	961.2	19.7	72	28/0.2											Boring Terminated by Auger Refusal at Elevation 960.5 ft in Rubber, Plastic, and Metal Trash (ARTIFICIAL FILL)	20.4
															Note: 1) Boring Terminated due to trash, offset to L3_774703L(2)	

NCDOT BORE DOUBLE R2233BB_GEO_BH.GPJ_NC_DOT.GDT 3/16/17