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PROJECT: REFERENCE: U-5935

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

MULTI-USE PATH
SUBSURFACE INVESTIGATION

COUNTY WILSON
 PROJECT DESCRIPTION U.S. 301 ROADWAY AND
PEDESTRIAN IMPROVEMENTS

INVENTORY

CONTENTS

LINE	STATION	PLAN & PROFILE
EY17	11+00 - 25+00	3
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EY20	7+00 - 21+00	6
EY20	21+00 - 35+00	7
EY20	35+00 - 49+00	8
EY20	49+00 - 63+00	9

CROSS SECTIONS

LINE	STATION	SHEETS
EY17	10+85.52 - 13+50	10 - 13
EY17	14+50 - 18+00	13 - 16
EY17	19+00 - 30+50	17 - 26
EY17	31+50 - 41+00	27 - 34
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EY17	43+50	36
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EY20	8+50 - 12+00	37 - 39
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EY20	21+50 - 27+00	45 - 49
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EY20	30+00 - 35+00	50 - 54
EY20	45+50 - 47+50	54 - 56
EY20	49+00 - 56+50	57 - 62

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5935	1	62

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- NOTES:
- THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
 - BY HAVING REQUESTED THIS INFORMATION, THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PERSONNEL

M. RAWLS

G. GOSLIN

S. TIERNAN

T. WILLIAMS

INVESTIGATED BY R. KRAL

DRAWN BY C. CHANDLER

CHECKED BY S. LANEY

SUBMITTED BY S&ME, INC

DATE JUNE 2017



Robert E. Kral
 rkral@smeinc.com
 2017.06.09 15:59:
 12 -05'00'

SIGNATURE DATE

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

Table with multiple columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, PLASTICITY, COLOR.

Areas of Special Geotechnical Interest

The following existing subsurface conditions have been identified as areas of special interest for the project. These conditions and their impacts to the project are further discussed in the S&ME Roadway Subsurface Recommendations Report dated June 2017 and Recommendations Letter Report dated June 2017.

Highly Plastic Clays: Some soil samples selected for laboratory testing had plasticity indexes of greater than 15. Soils exhibiting plasticity indexes greater than 15 were encountered along the proposed alignment at the following locations:

<u>Line</u>	<u>Station (+/-)</u>	
-EY17-	10+85.52	to 45+29.59
-EY20-	8+50	to 10+25
-EY20-	11+25	to 12+25
-EY20-	15+25	to 34+75
-EY20-	46+00	to 49+25
-EY20-	54+25	to 56+75

A discussion of these plastic soils is located below in the section titled "Soil Properties."

Loose/Soft Soils: Loose/soft soils were encountered on the project and may impact subgrade or embankment construction. These soils were found at the following locations:

<u>Line</u>	<u>Station (+/-)</u>	
-EY17-	25+00	to 30+50
-EY20-	10+50	to 16+00

A discussion of these loose/soft soils is located below in the section titled "Soil Properties."

Groundwater: High groundwater tables, seasonal high groundwater, as well as potential perched groundwater above or within 6 feet of proposed grade were encountered at the following locations:

<u>Line</u>	<u>Station (+/-)</u>	
-EY17-	25+50	to 30+50
-EY17-	35+50	to 45+29.59
-EY20-	30+50	to 40+00

Physiography, Geology and Surface Water

The project site is located in the city of Wilson, Wilson County, North Carolina. The topography in the area is generally flat. The project area is generally along existing roadways in a commercialized area.

June 9, 2017

PROJECT: Mult-Use Path - Geotechnical Report - Inventory
 COUNTY: Wilson
 DESCRIPTION: US 301 Roadway and Pedestrian Improvements (Multi-Use Path) from the intersection of Lipscomb Rd and US 301 to the intersection of Ward Boulevard and Herring Avenue, and from the intersection of Ward Boulevard and Herring Avenue to the intersection of Herring Avenue and Firestone Parkway.
 SUBJECT: Geotechnical Report - Inventory

Project Description

The project is part of improvements to US 301 in Wilson County, North Carolina. A proposed multi-use path was investigated as part of this project. The multi-use path runs parallel to Ward Boulevard and Herring Avenue between the intersections of Lipscomb Rd and US 301 to the intersection of Ward Boulevard and Herring Avenue, and from the intersection of Ward Boulevard and Herring Avenue to the intersection of Herring Avenue and Firestone Parkway. The total length of the project is approximately 1.46 miles. Based on our review of the multi-use path cross sections, embankment fill heights, and cut depths in the order of 3 feet are proposed. The alignments investigated include -EY17- and -EY20-.

S&ME drilled a total of 18 soil test borings between March 10, 2017 and March 13, 2017 to explore the general subsurface conditions at the project site. The borings locations were selected and located in the field by S&ME personnel using a handheld Global Positioning System (GPS) unit.

A track-mounted Diedrich D-50 was used to advance the soil test borings for the project. Hollow-stem, continuous flight augering techniques were used. A Standard Penetration Test (SPT) was performed at designated intervals in the soil test borings in general accordance with ASTM D1586. SPTs are performed to provide an index for estimating soil strength and density and to provide samples for soil classification. SPTs were performed with a hydraulic automatic hammer (Autohammer). All boreholes were backfilled with soil cuttings after drilling was completed.

The following alignments were investigated for this project:

<u>Line</u>	<u>Station (+/-)</u>	
-EY17-	10+85.52	to 45+29.59
-EY20-	8+50	to 56+75

Geologically, the site is located within the Yorktown basal formation of the Coastal Plain Physiographic Province of North Carolina. Coastal Plain deposits generally consist of poorly consolidated sediments which include gravel, sands, silts, clays, limestones and other sedimentary rocks. The deposits of the Coastal Plain form a wedge shape block that increases in thickness from an edge along its northwestern border (Fall Line), to a thickness on the order to one-half mile along the coast.

The Coastal Plain deposits dip gently towards the sea, at a rate of a few feet per mile. In general, the older formations are found outcropping toward the inner edge of the Coastal Plain. Successively younger units are found outcropping closer to the sea. The older (deeper) Coastal Plain sediments date back to the Cretaceous period and are overlain by successively younger sediments of the Tertiary and Quaternary periods.

The Coastal Plain Physiographic Province can be physiographically divided into the Upper Coastal Plain subprovince and the Lower Coastal Plain subprovince. The Upper Coastal Plain is located between the Lower Coastal Plain and Piedmont formations and is topographically similar to the Piedmont. Unconsolidated wind-blown dune deposits are frequently located in the Upper Coastal Plain in close proximity to the Piedmont. The Lower Coastal Plain is located between the Upper Coastal Plain and the Atlantic Ocean. The Lower Coastal Plain consists of younger, less consolidated formations and typically has very gently sloping topography and a groundwater depth of less than 10 feet. The site in Wilson is located in the Upper Coastal Plain.

Near-surface and upper soils often consist of more recent undifferentiated deposits of inter-bedded sands, silts, and clays. Deeper deposits also consist of sands, silts, or clays but can be defined as particular formations with distinguishable characteristics and engineering properties.

Soil Properties

Generalized subsurface conditions for the project are described below. For more detailed soil descriptions and stratifications at a particular test location, the respective profile and cross section should be reviewed.

The soil test borings generally encountered roadway embankment material and Undivided Coastal Plain soils to the boring termination depths.

Roadway Embankment Soils: Roadway embankment soils were encountered in some soil test borings to depths ranging from 1.8 to 3.3 feet below the existing ground surface. The roadway embankment soils generally consisted of sandy clay (A-6) and silty and clayey sand (A-2-4 and A-2-6). Consistencies/relative densities ranging from stiff and loose to medium dense were recorded in the roadway embankment soils.

Undivided Coastal Plain Soils: Beneath the roadway embankment in a number of borings and from the ground surface in the remaining borings, Undivided Coastal Plain soils were encountered. The Undivided Coastal Plain soils generally consisted of sandy clay and clay (A-6, A-7-5, and A-7-6), sandy silts (A-4), clayey sands (A-2-6), and sand (A-3). Consistencies/relative densities ranging from soft to hard and loose to dense were recorded in Undivided Coastal Plain soils. The Undivided Coastal Plain soil samples selected for laboratory testing exhibit liquid limits ranging from 28 to 78 and plasticity indexes from 16 to 55.

Groundwater

Groundwater level measurements were attempted in the borings at the completion of drilling and after a period of 24 hours in select borings. Groundwater was typically less than 6 feet below existing grades in most borings throughout the project corridor. Areas that exhibit high groundwater (groundwater within 6 feet of proposed subgrade) are discussed in "Areas of Special Geotechnical Interest."

Fluctuations of groundwater levels can occur due to seasonal variations such as rainfall, runoff, and other factors not evident at the time of exploration. The possibility of groundwater fluctuations should be considered when developing the design and construction plans for this project.

Due to their relatively low permeability, or percolation rate, the surficial and near-surface clayey soils will impede the infiltration of rainwater. Therefore, after heavy rainfall ponded water may be perched on the clayey soil layers for extended periods of time.

Closure

S&ME, Inc. appreciates the opportunity to provide our services on this project. Please contact us if you have any questions regarding this report or if we may be of further assistance.

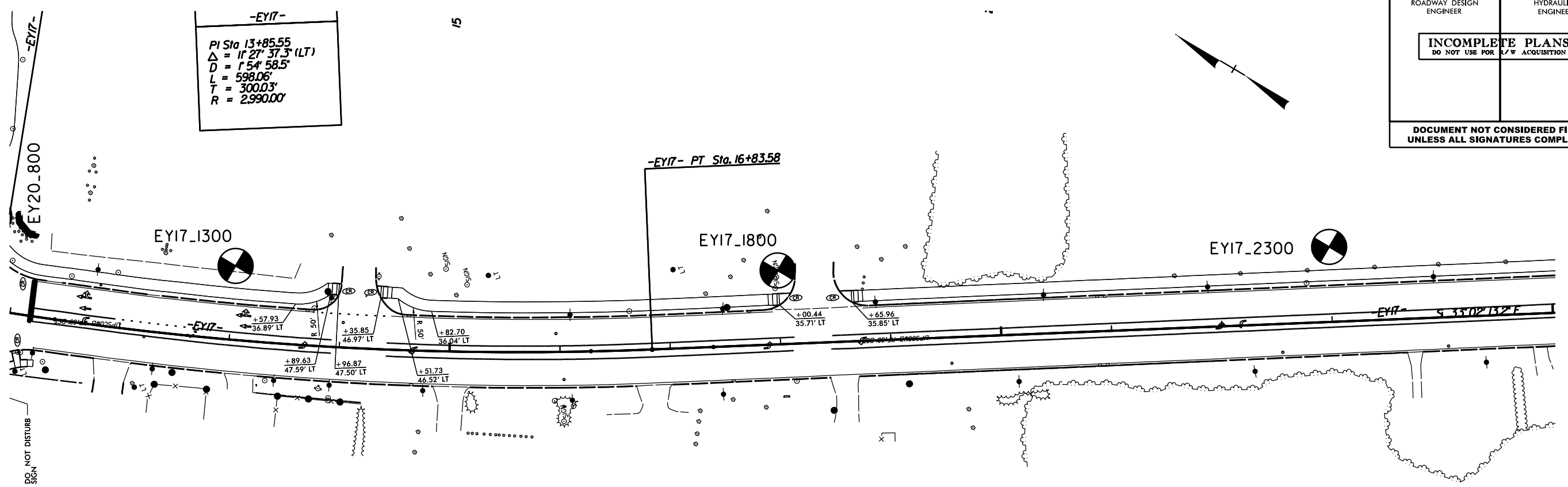
Sincerely,

S&ME, Inc.

Robert E. Kral, P.E.
Project Engineer



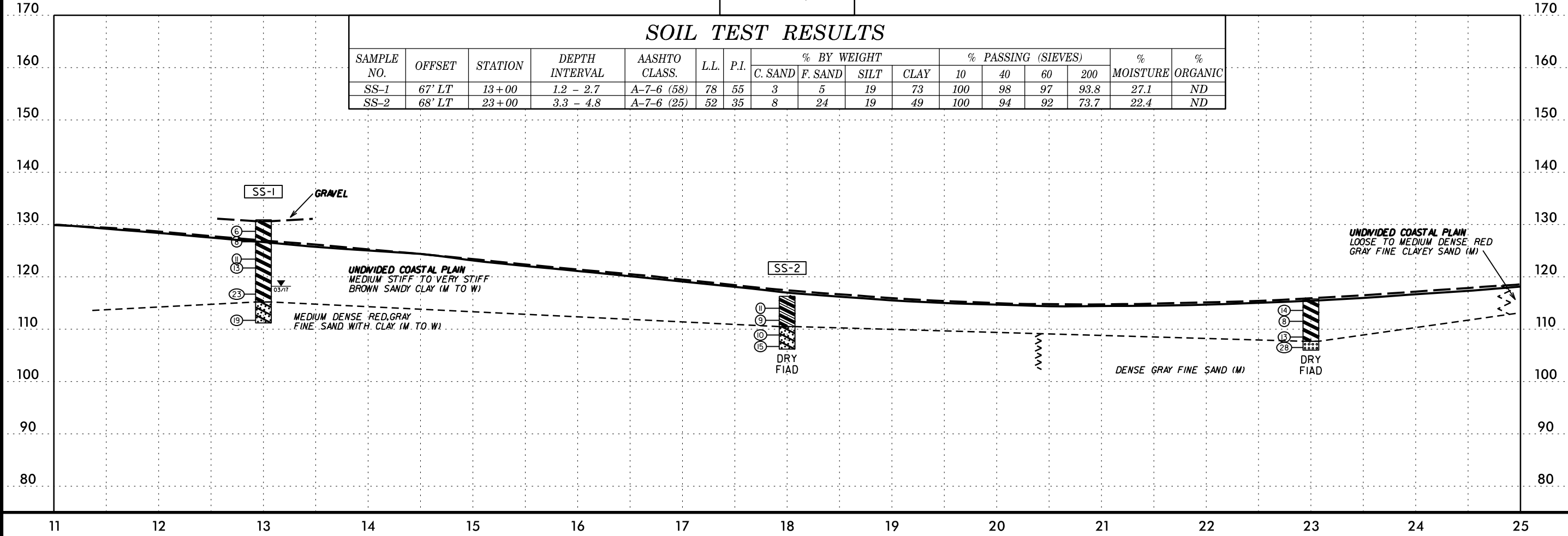
Mary Rawls
Mary Rawls, E.I.
Project Professional



EY17

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	60	200		
SS-1	67' LT	13+00	1.2 - 2.7	A-7-6 (58)	78	55	3	5	19	73	100	98	97	93.8	27.1	ND
SS-2	68' LT	23+00	3.3 - 4.8	A-7-6 (25)	52	35	8	24	19	49	100	94	92	73.7	22.4	ND

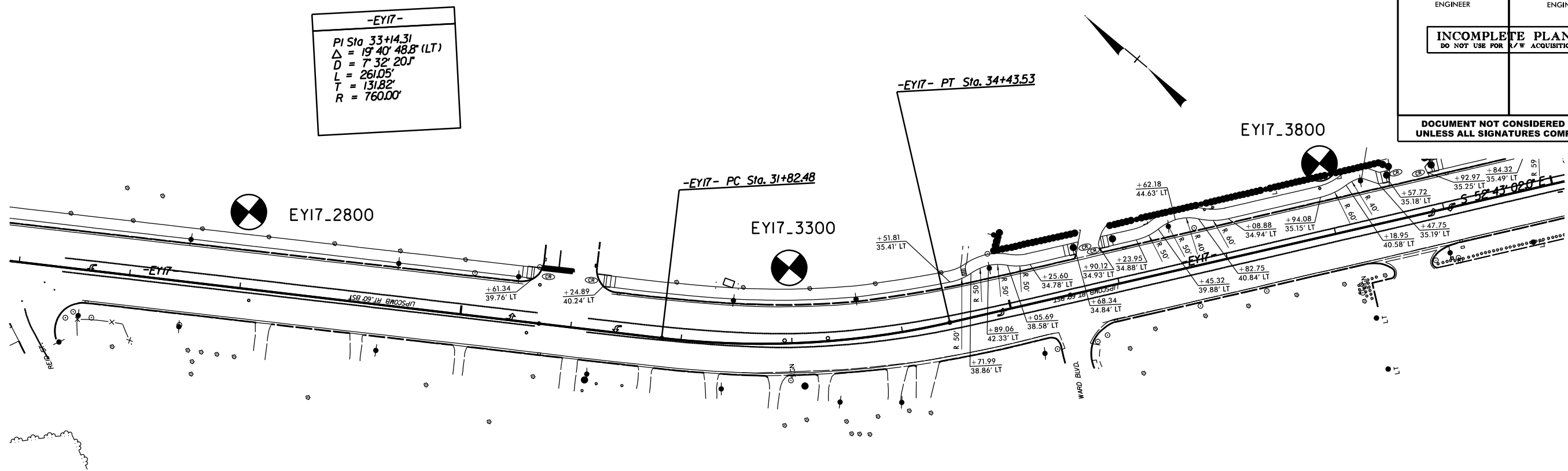


REVISIONS

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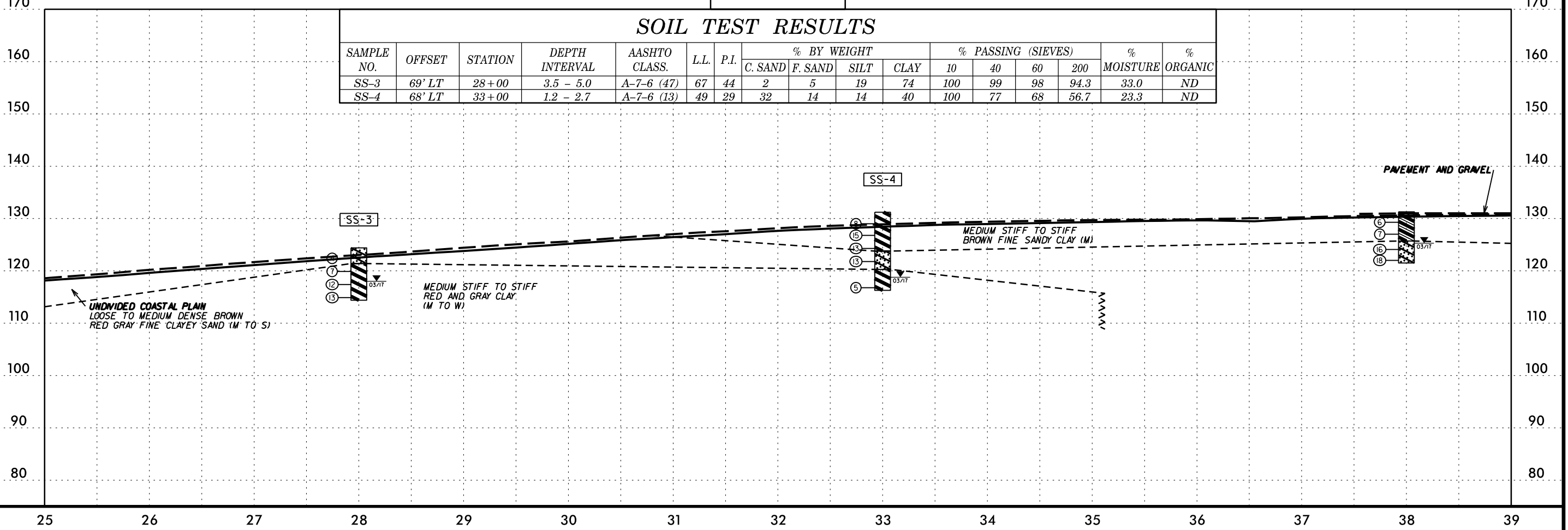


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EY17

SOIL TEST RESULTS

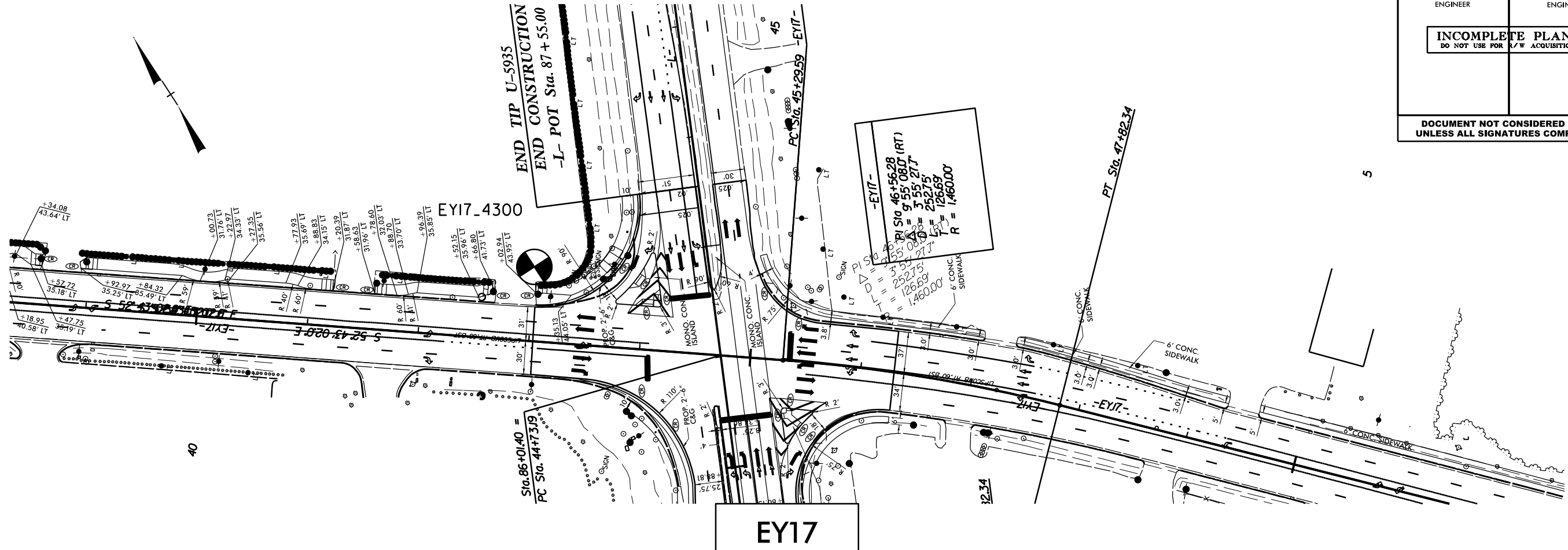
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							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-3	69' LT	28+00	3.5 - 5.0	A-7-6 (47)	67	44	2	5	19	74	100	99	98	94.3	33.0	ND
SS-4	68' LT	33+00	1.2 - 2.7	A-7-6 (13)	49	29	32	14	14	40	100	77	68	56.7	23.3	ND



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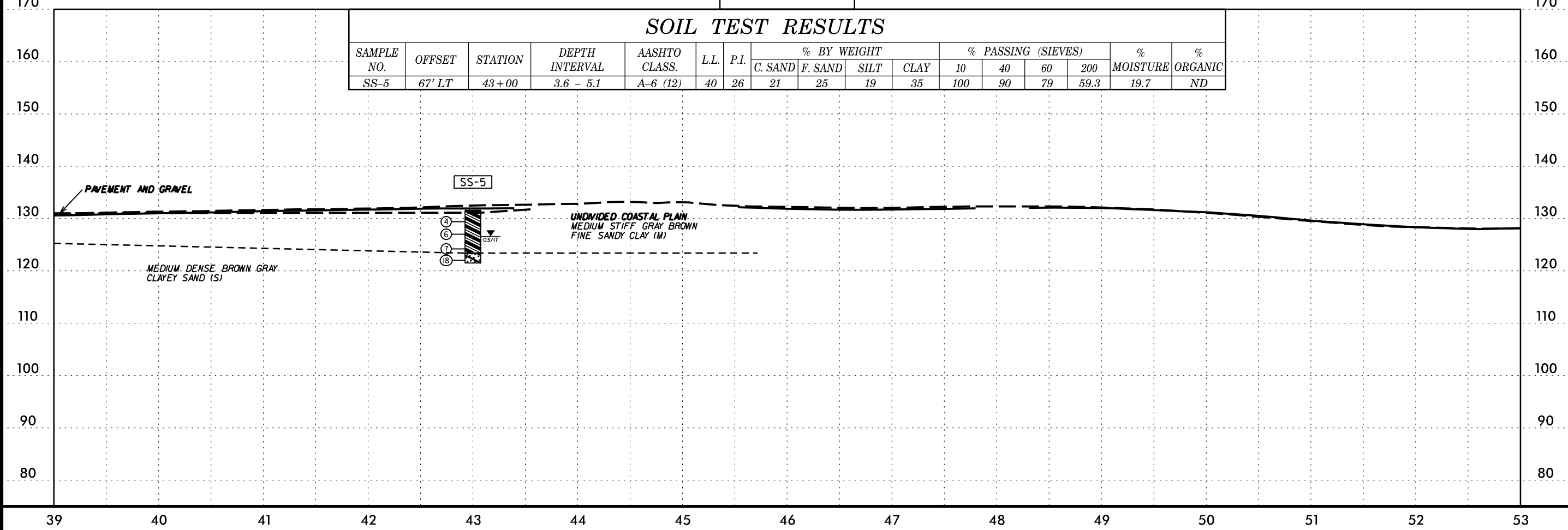


REVISIONS

EY17

SOIL TEST RESULTS

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							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-5	67' LT	43+00	3.6 - 5.1	A-6 (12)	40	26	21	25	19	35	100	90	79	59.3	19.7	ND

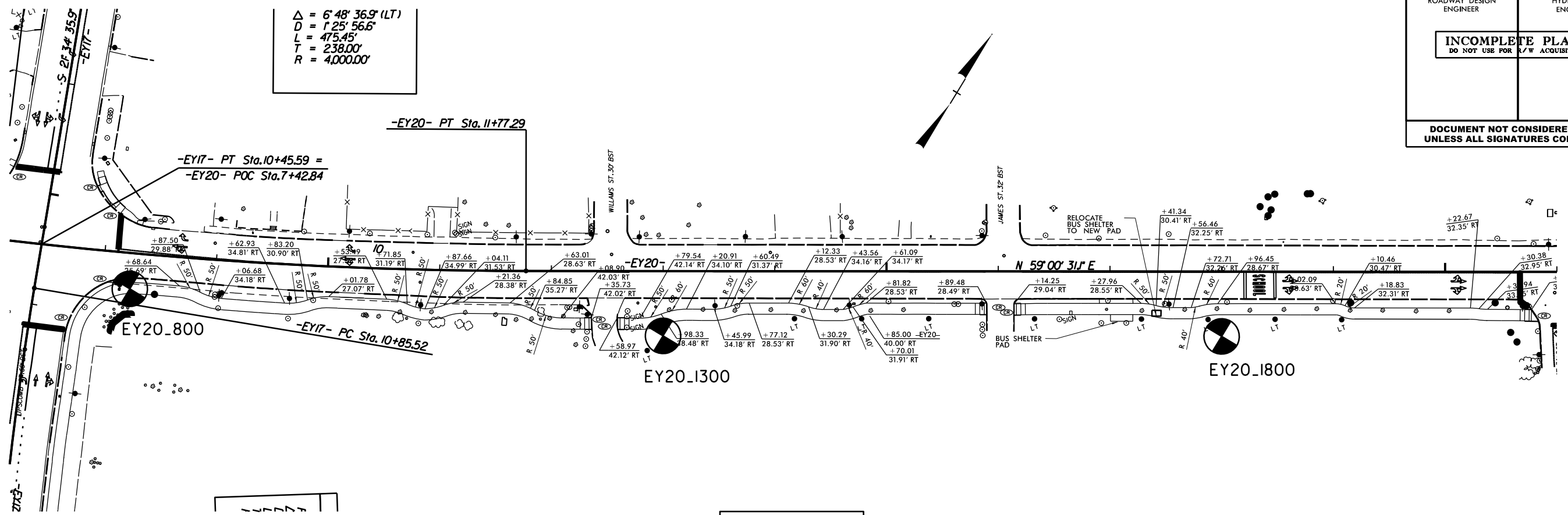


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DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

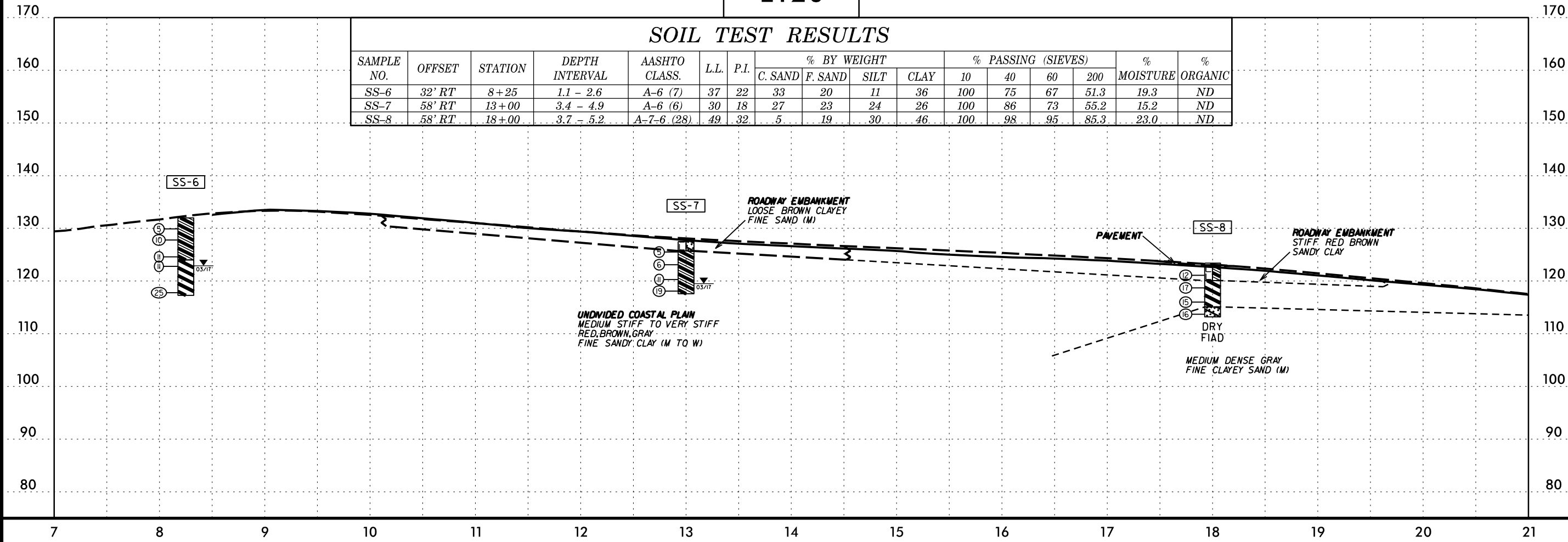
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 $D = 1' 25' 56.6"$
 $L = 475.45'$
 $T = 238.00'$
 $R = 4000.00'$



EY20

SOIL TEST RESULTS

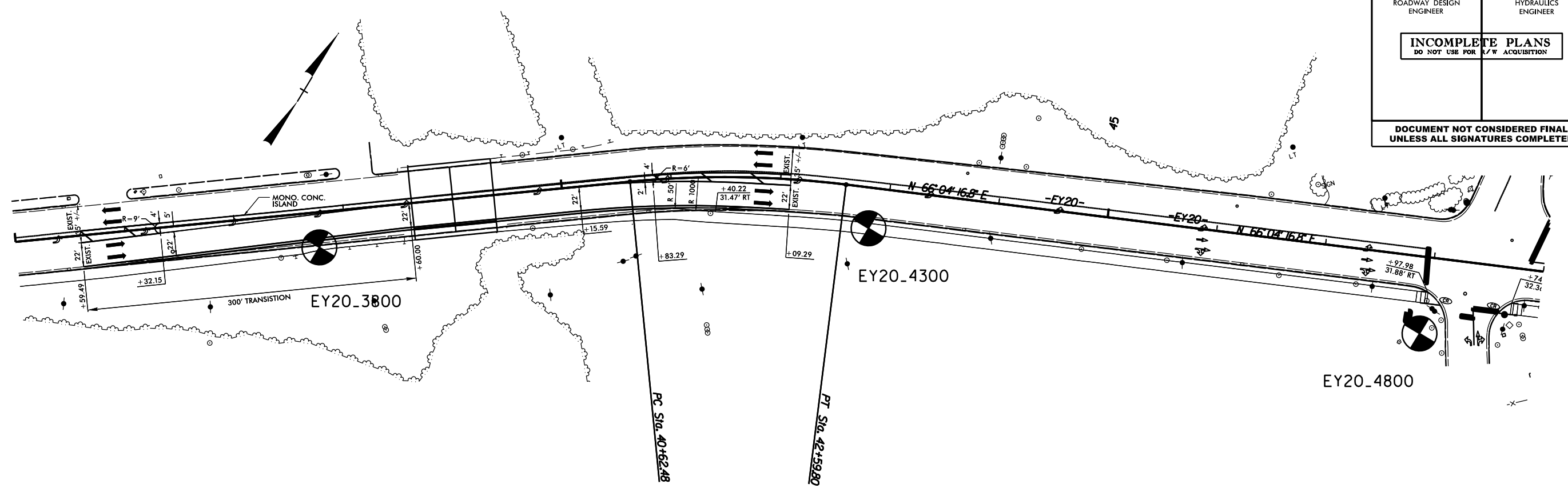
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							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-6	32' RT	8+25	1.1 - 2.6	A-6 (7)	37	22	33	20	11	36	100	75	67	51.3	19.3	ND
SS-7	58' RT	13+00	3.4 - 4.9	A-6 (6)	30	18	27	23	24	26	100	86	73	55.2	15.2	ND
SS-8	58' RT	18+00	3.7 - 5.2	A-7-6 (28)	49	32	5	19	30	46	100	98	95	85.3	23.0	ND



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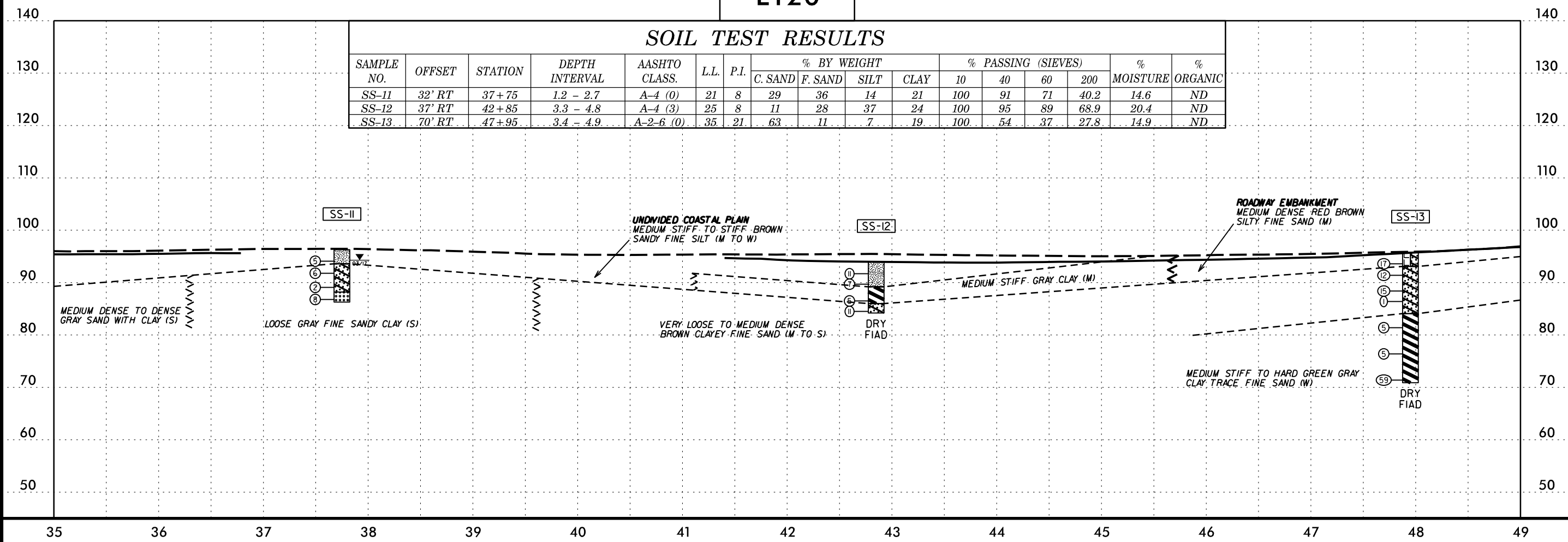
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EY20

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	60	200		
SS-11	32' RT	37+75	1.2 - 2.7	A-4 (0)	21	8	29	36	14	21	100	91	71	40.2	14.6	ND
SS-12	37' RT	42+85	3.3 - 4.8	A-4 (3)	25	8	11	28	37	24	100	95	89	68.9	20.4	ND
SS-13	70' RT	47+95	3.4 - 4.9	A-2-6 (0)	35	21	63	11	7	19	100	54	37	27.8	14.9	ND

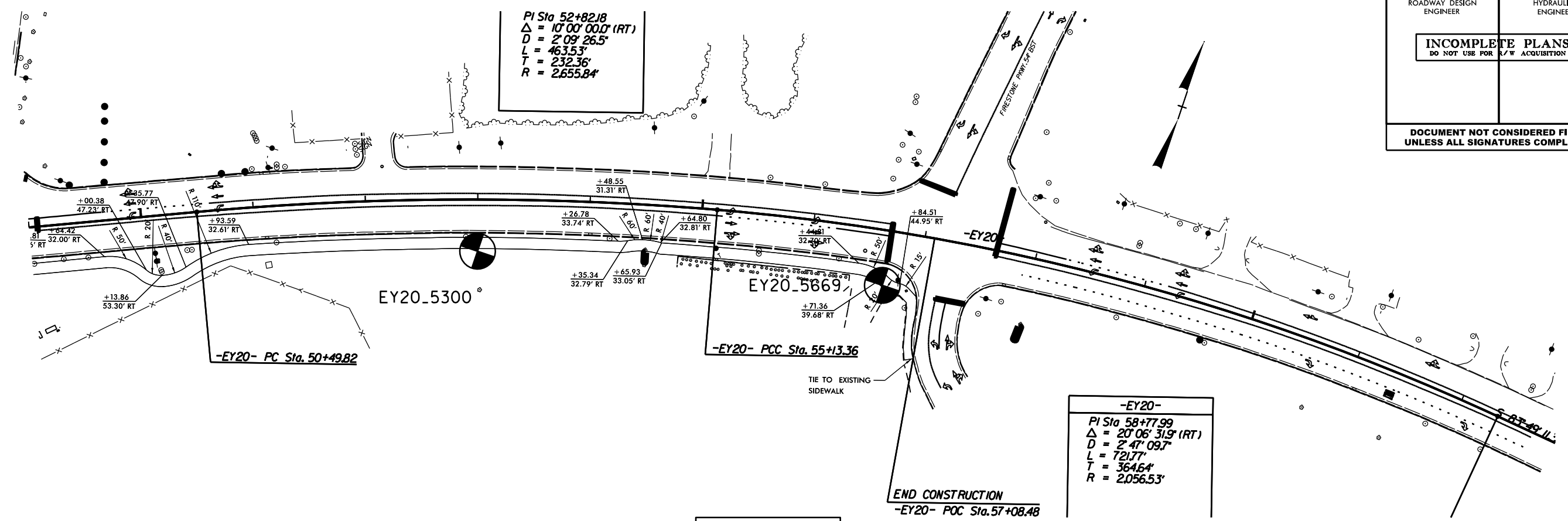


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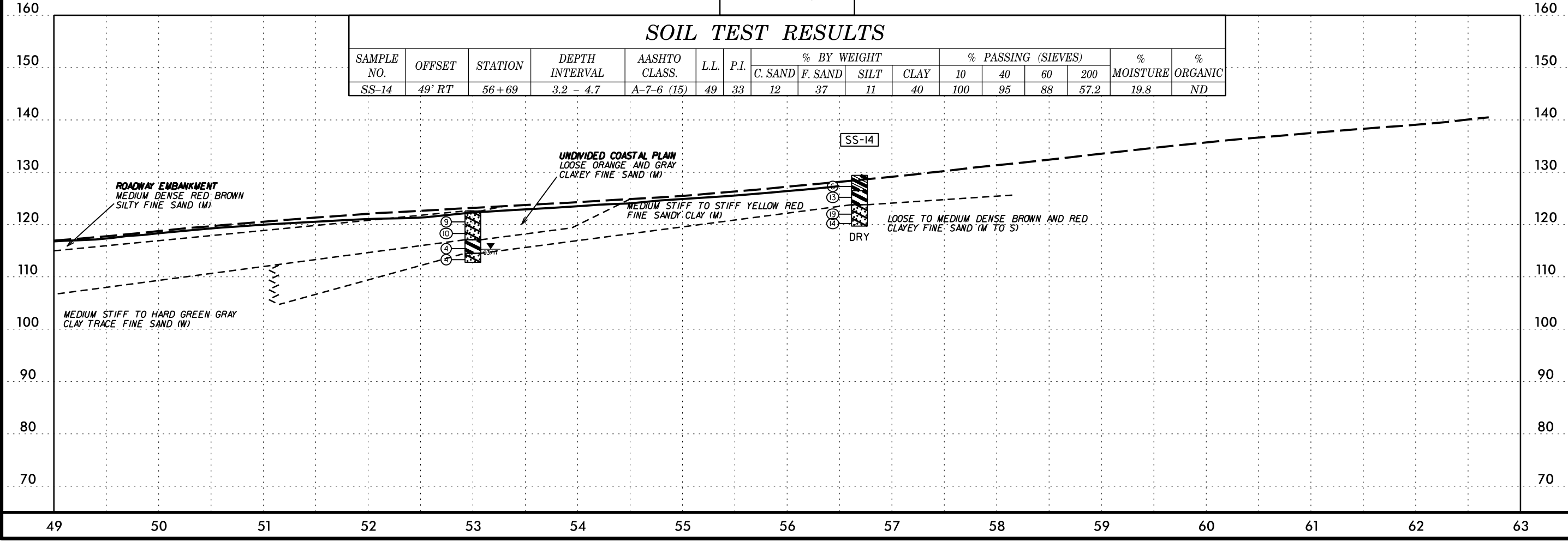
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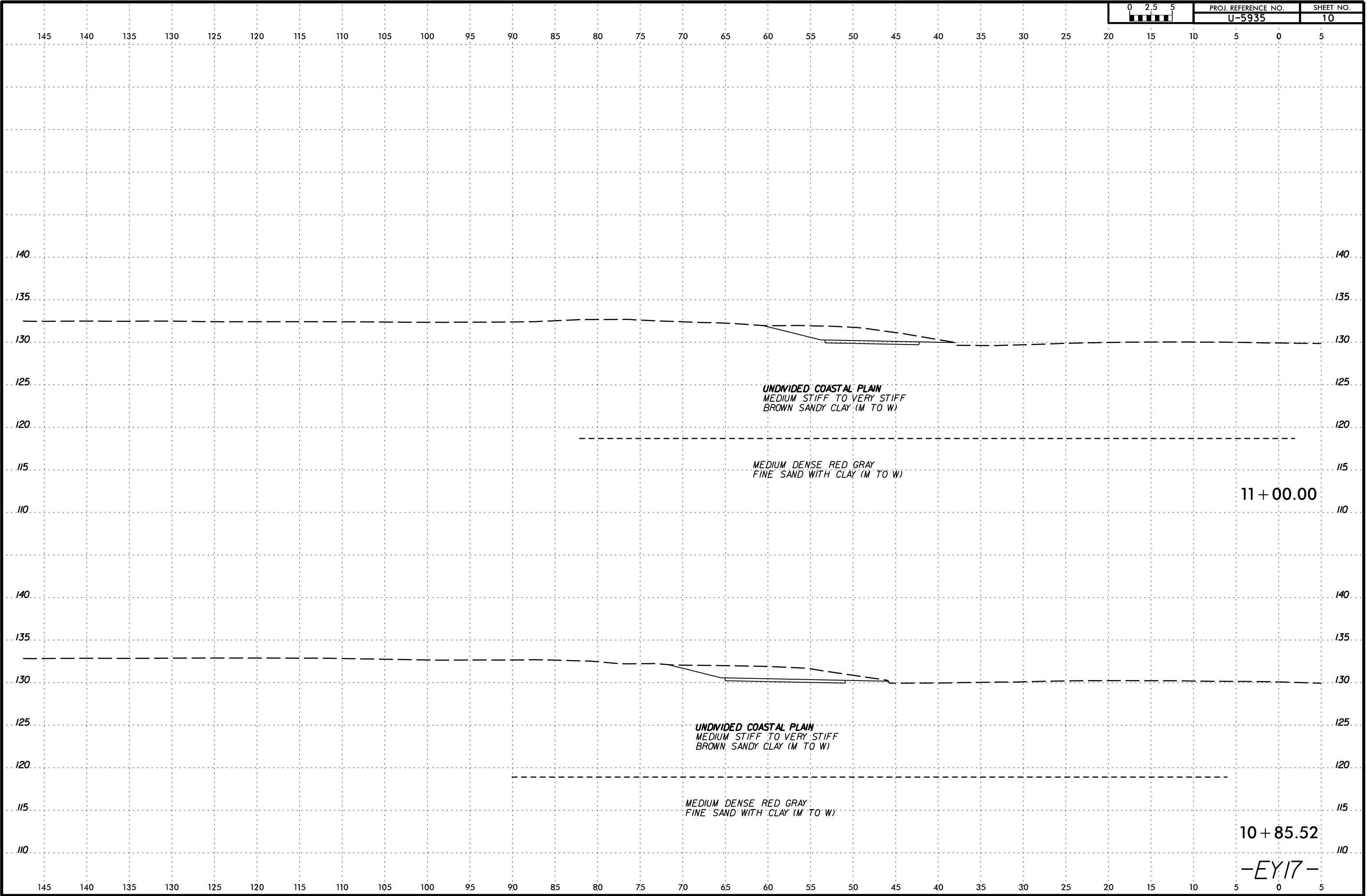
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SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)				% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-14	49' RT	56+69	3.2 - 4.7	A-7-6 (15)	49	33	12	37	11	40	100	95	88	57.2	19.8	ND



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-EY17-

DATE: 6/23/16
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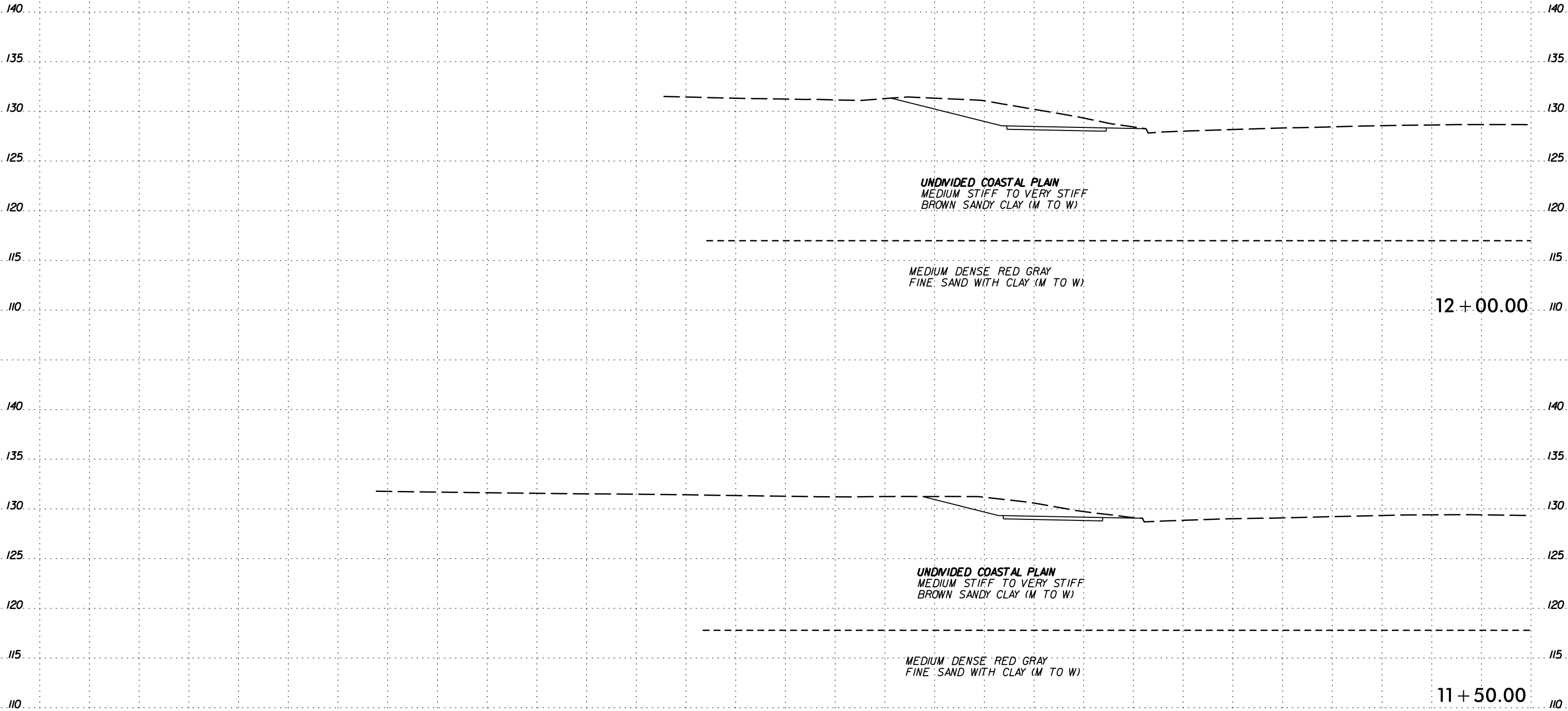
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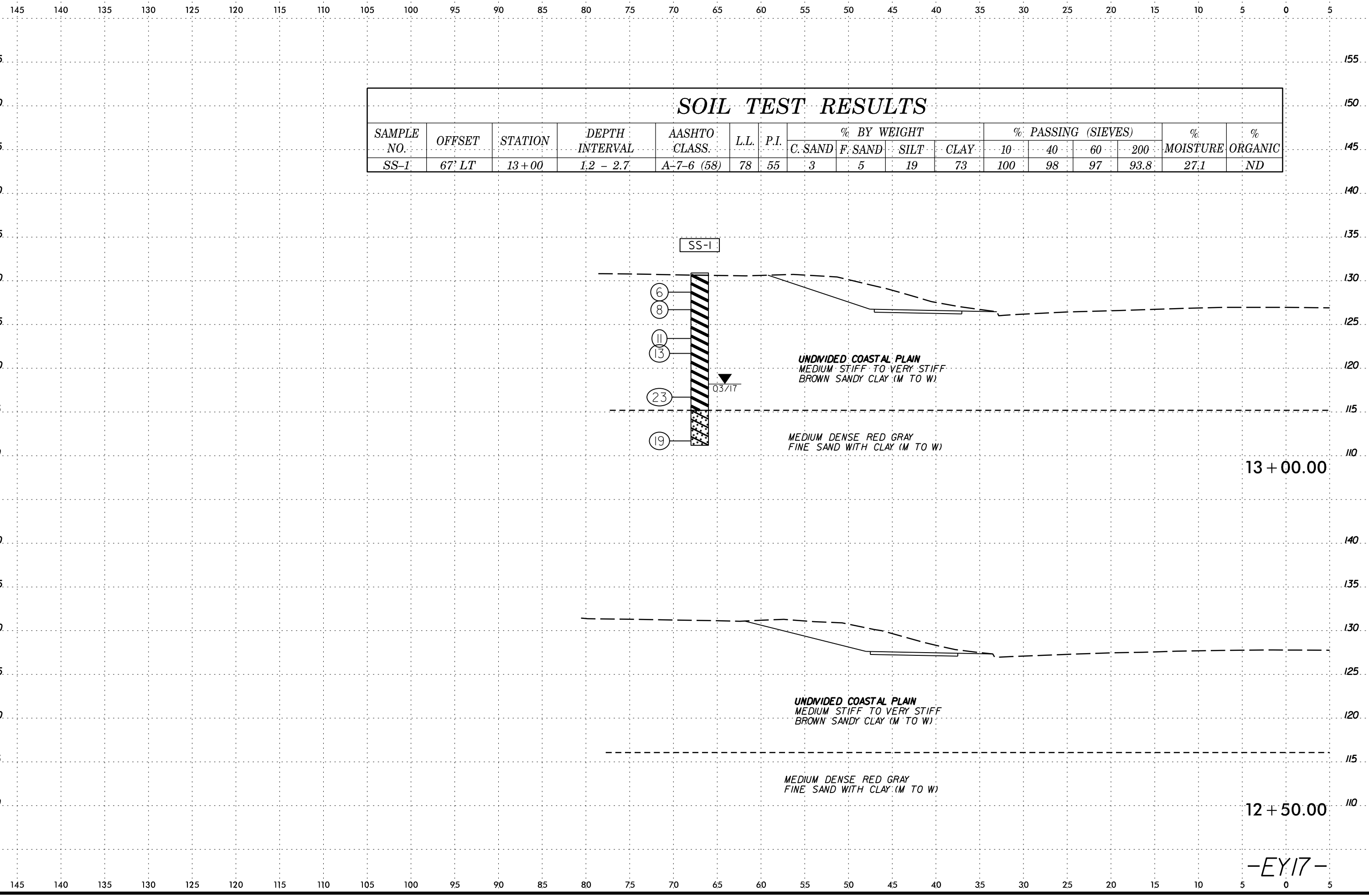


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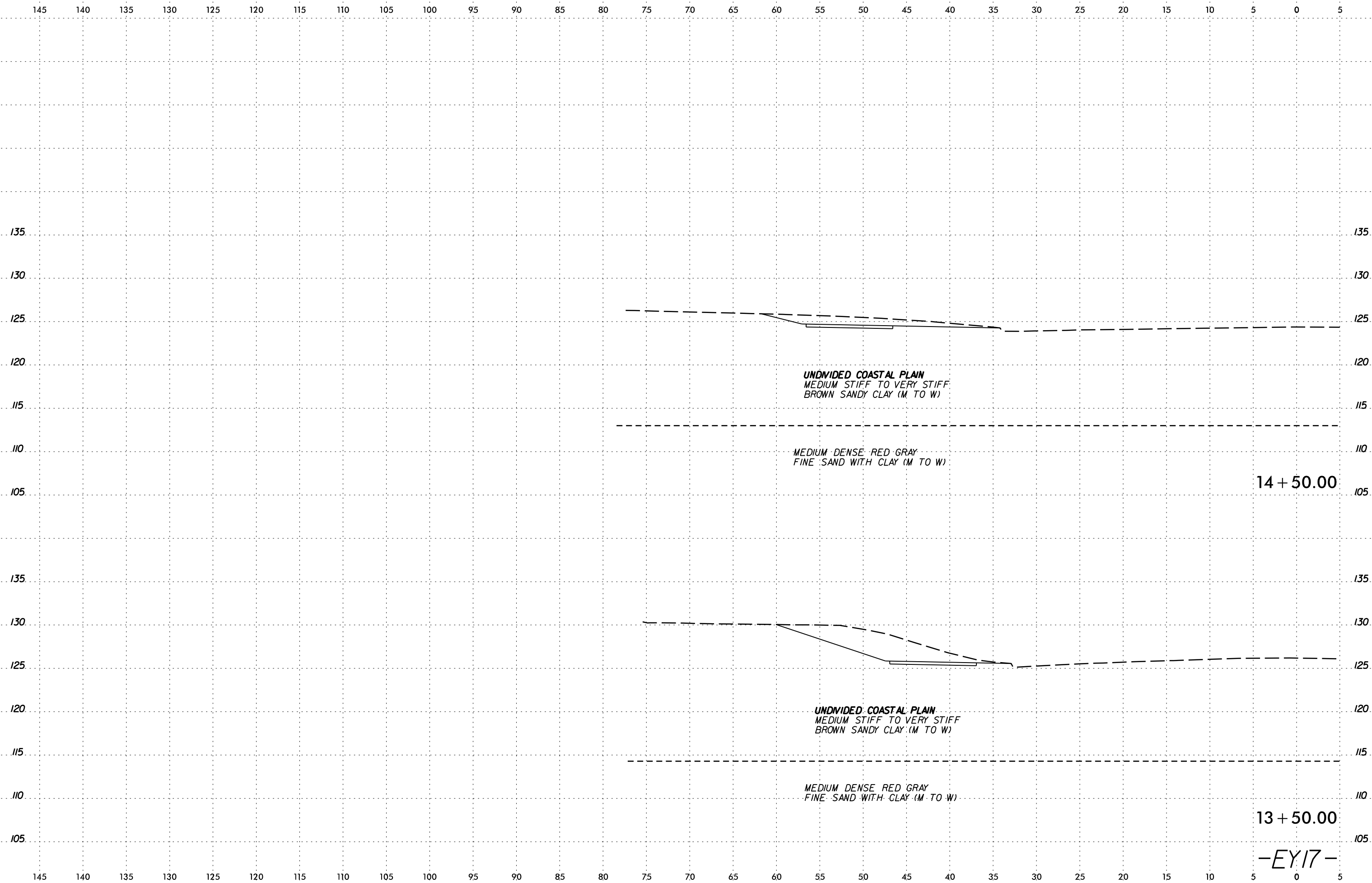
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							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-1	67' LT	13+00	1.2 - 2.7	A-7-6 (58)	78	55	3	5	19	73	100	98	97	93.8	27.1	ND

13 + 00.00

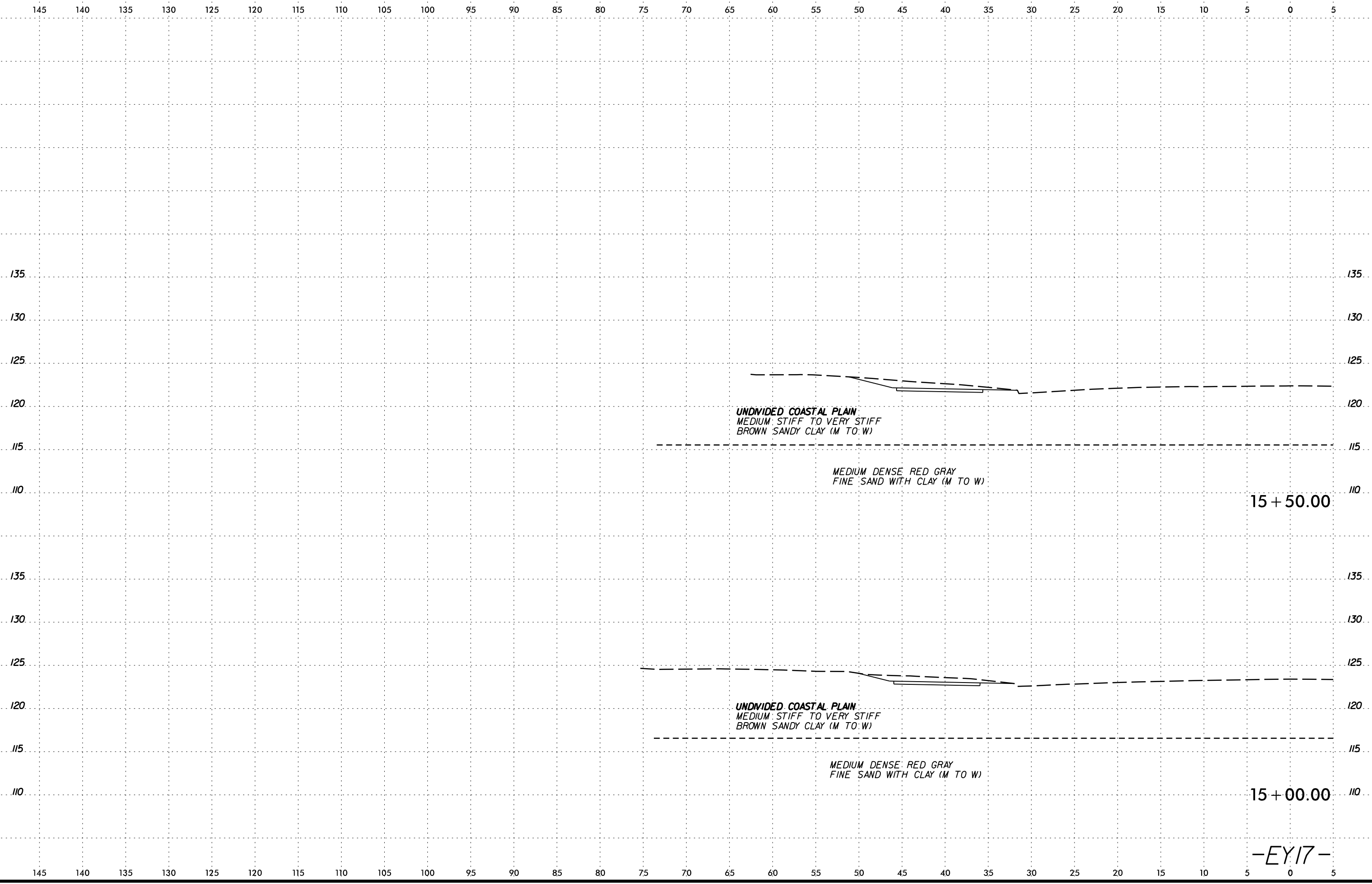
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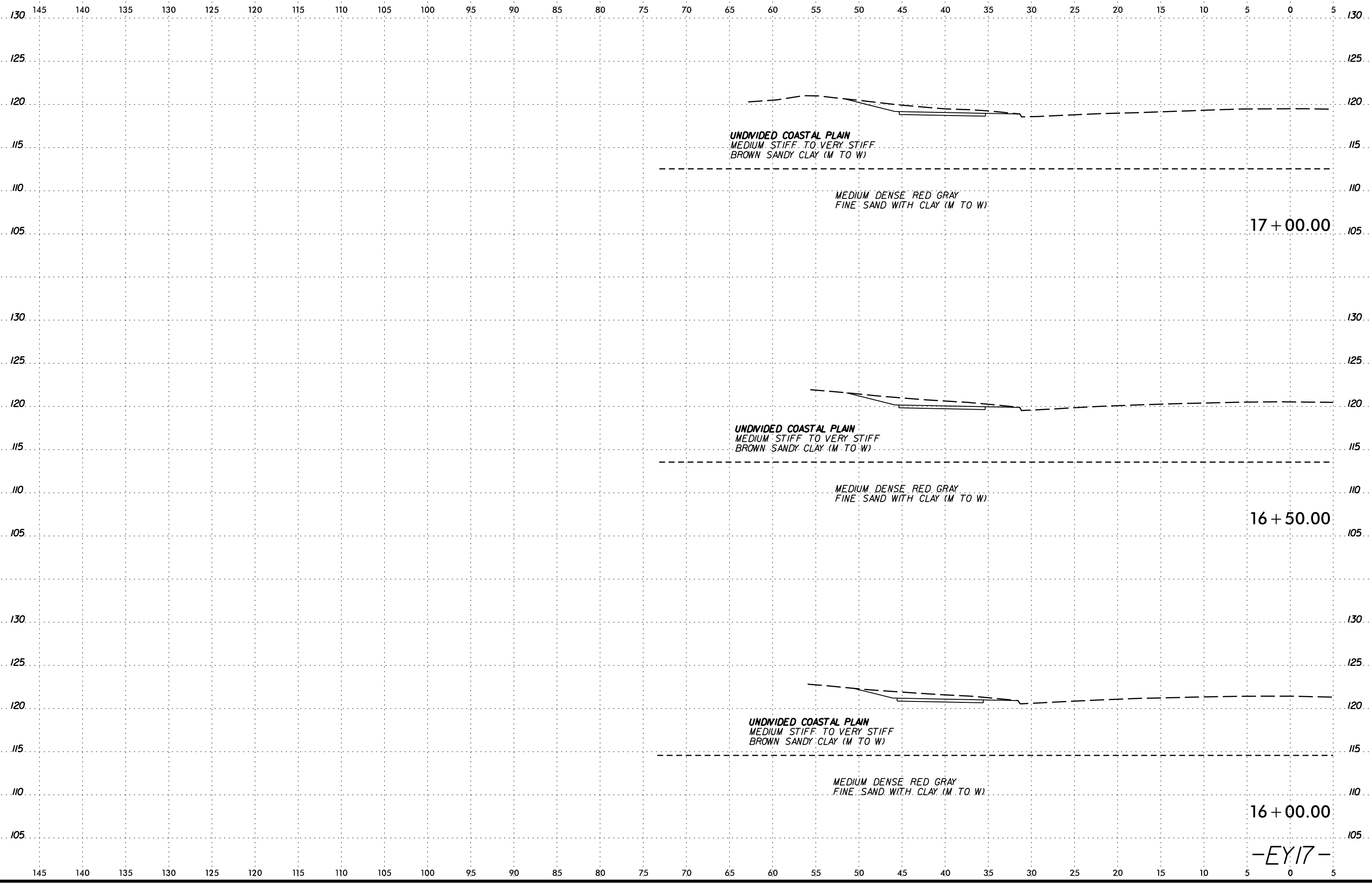


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SOIL TEST RESULTS

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	60	200		
SS-2	68' LT	23+00	3.3 - 4.8	A-7-6 (25)	52	35	8	24	19	49	100	94	92	73.7	22.4	ND

130

125

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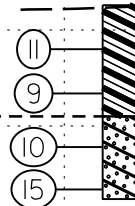
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SS-2



UNDIVIDED COASTAL PLAIN
 MEDIUM STIFF TO VERY STIFF
 BROWN SANDY CLAY (M TO W)

MEDIUM DENSE RED GRAY
 FINE SAND WITH CLAY (M TO W)

18 + 00.00

UNDIVIDED COASTAL PLAIN
 MEDIUM STIFF TO VERY STIFF
 BROWN SANDY CLAY (M TO W)

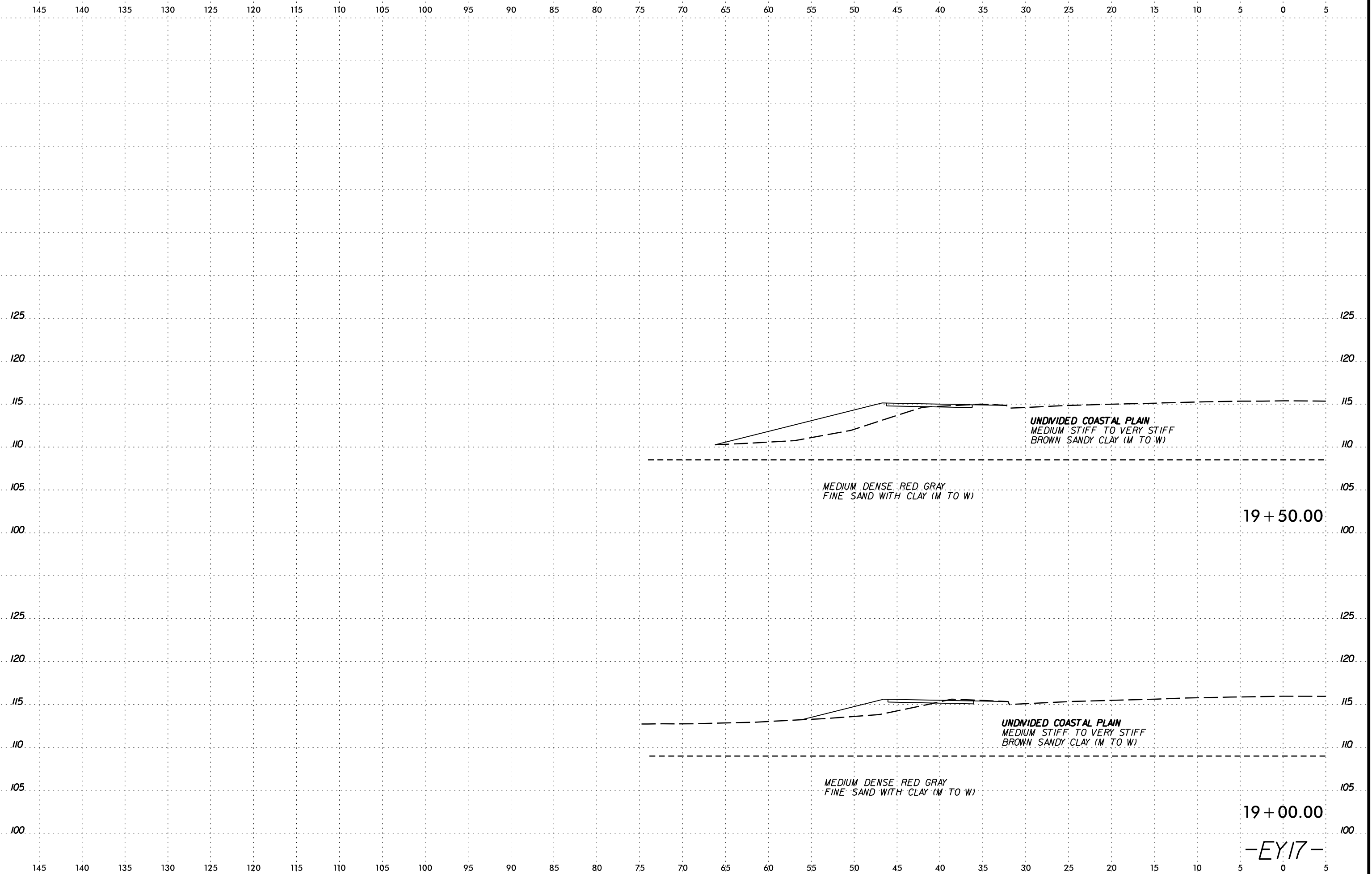
MEDIUM DENSE RED GRAY
 FINE SAND WITH CLAY (M TO W)

17 + 50.00

-EY17-

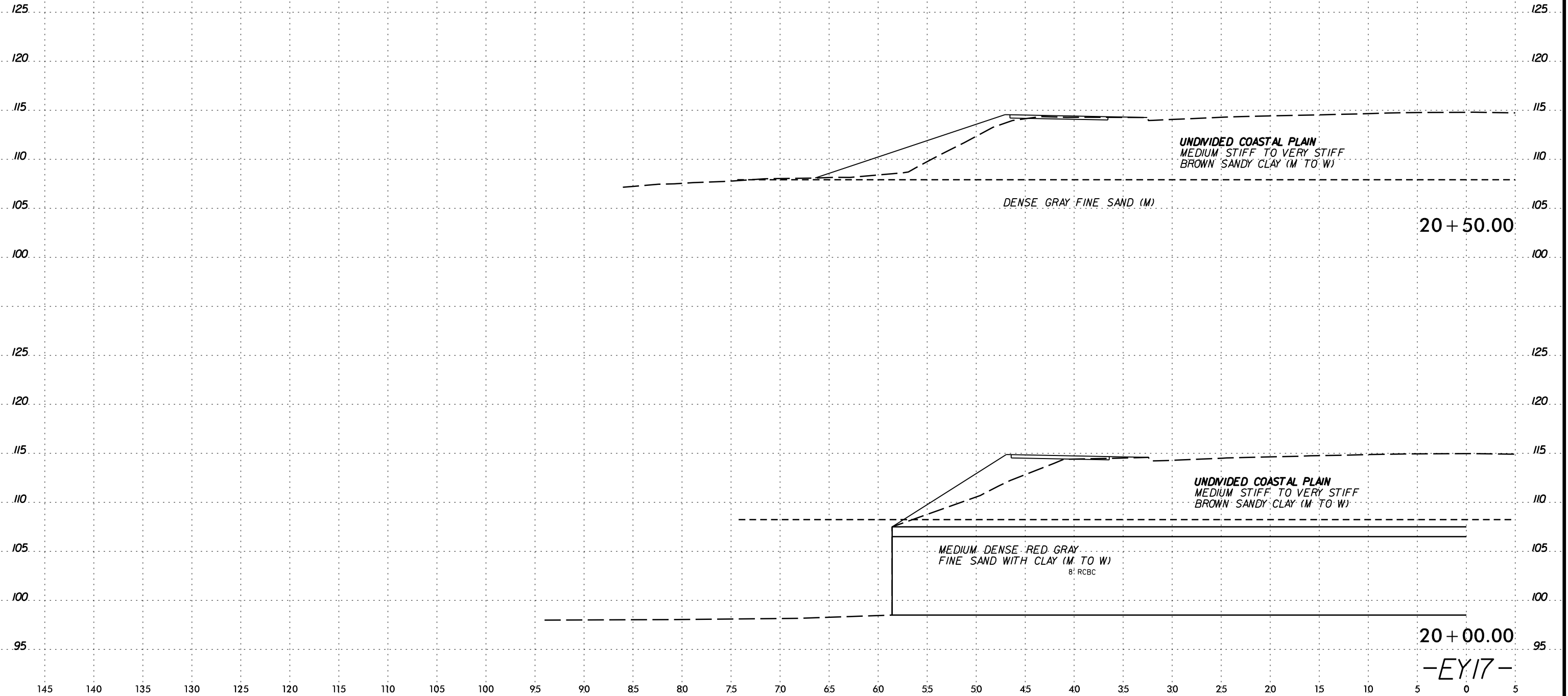
145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5

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SECTION
DATE
BY
CHECKED
APP. 1





145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5



UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
BROWN SANDY CLAY (M TO W)

DENSE GRAY FINE SAND (M)

20 + 50.00

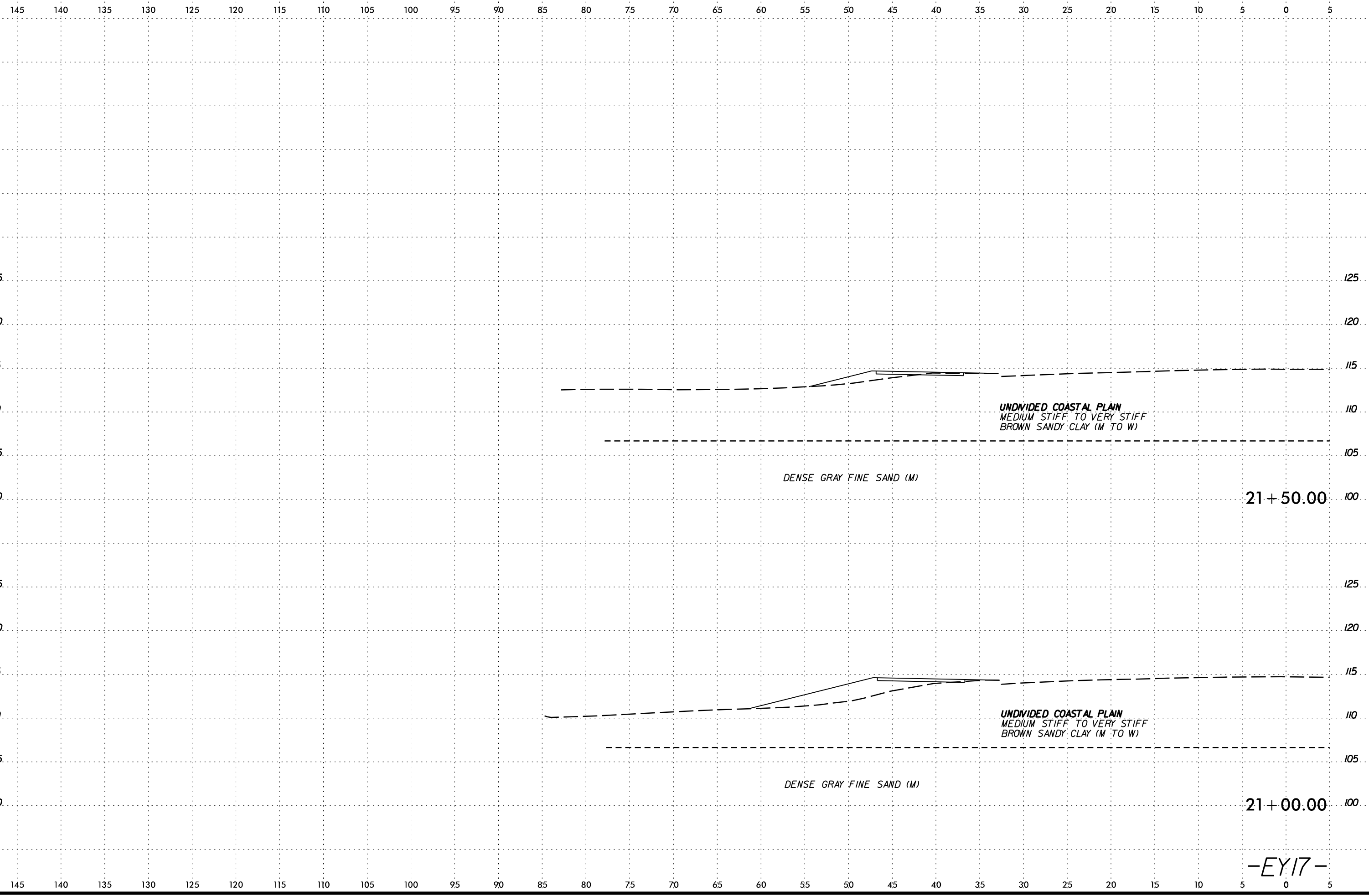
UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
BROWN SANDY CLAY (M TO W)

MEDIUM DENSE RED GRAY
FINE SAND WITH CLAY (M TO W)
8' RCBC

20 + 00.00

-EY17-

DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: AS SHOWN
PROJECT: U-5935
SHEET: 18 OF 18



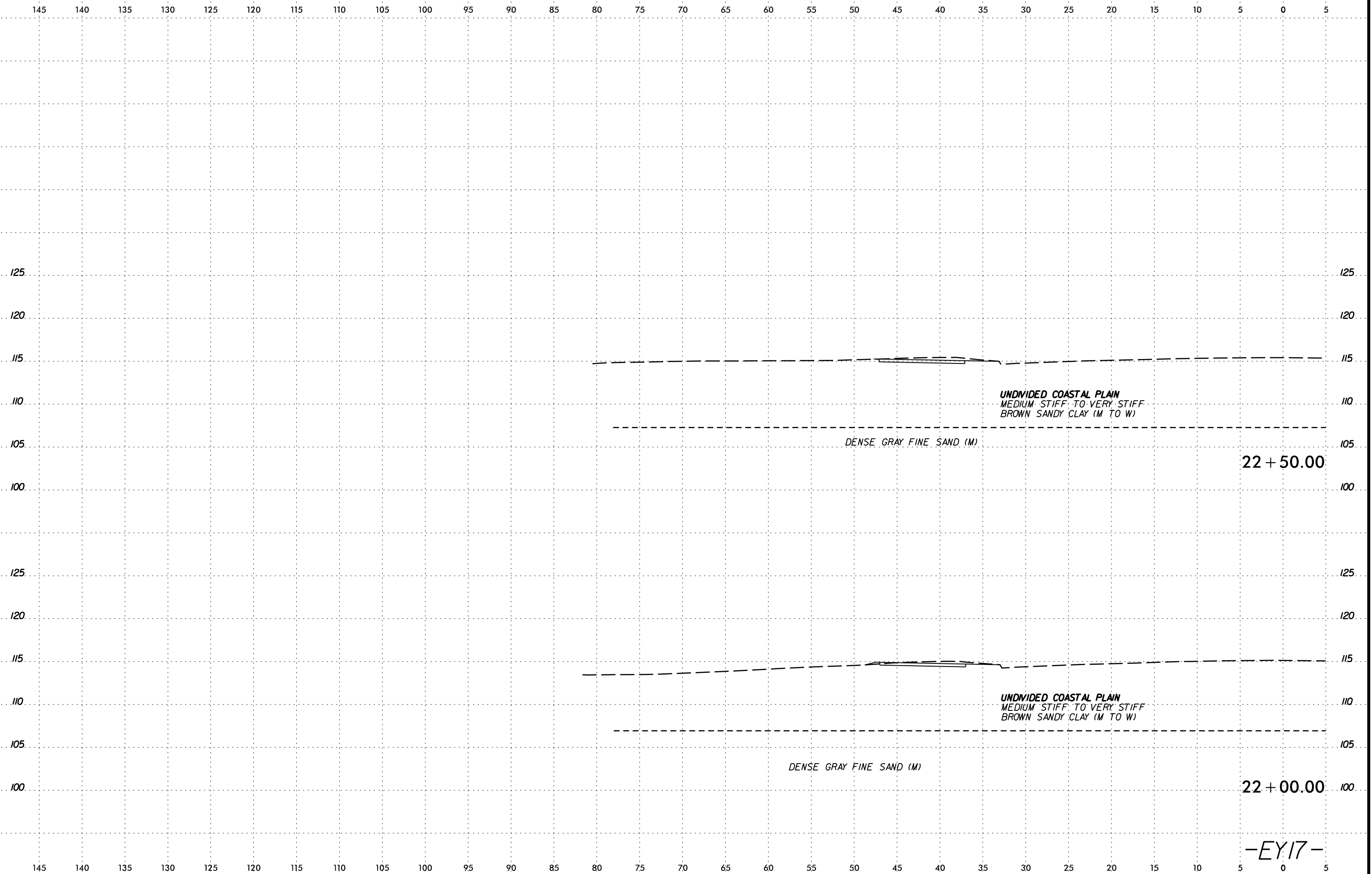
21+50.00

21+00.00

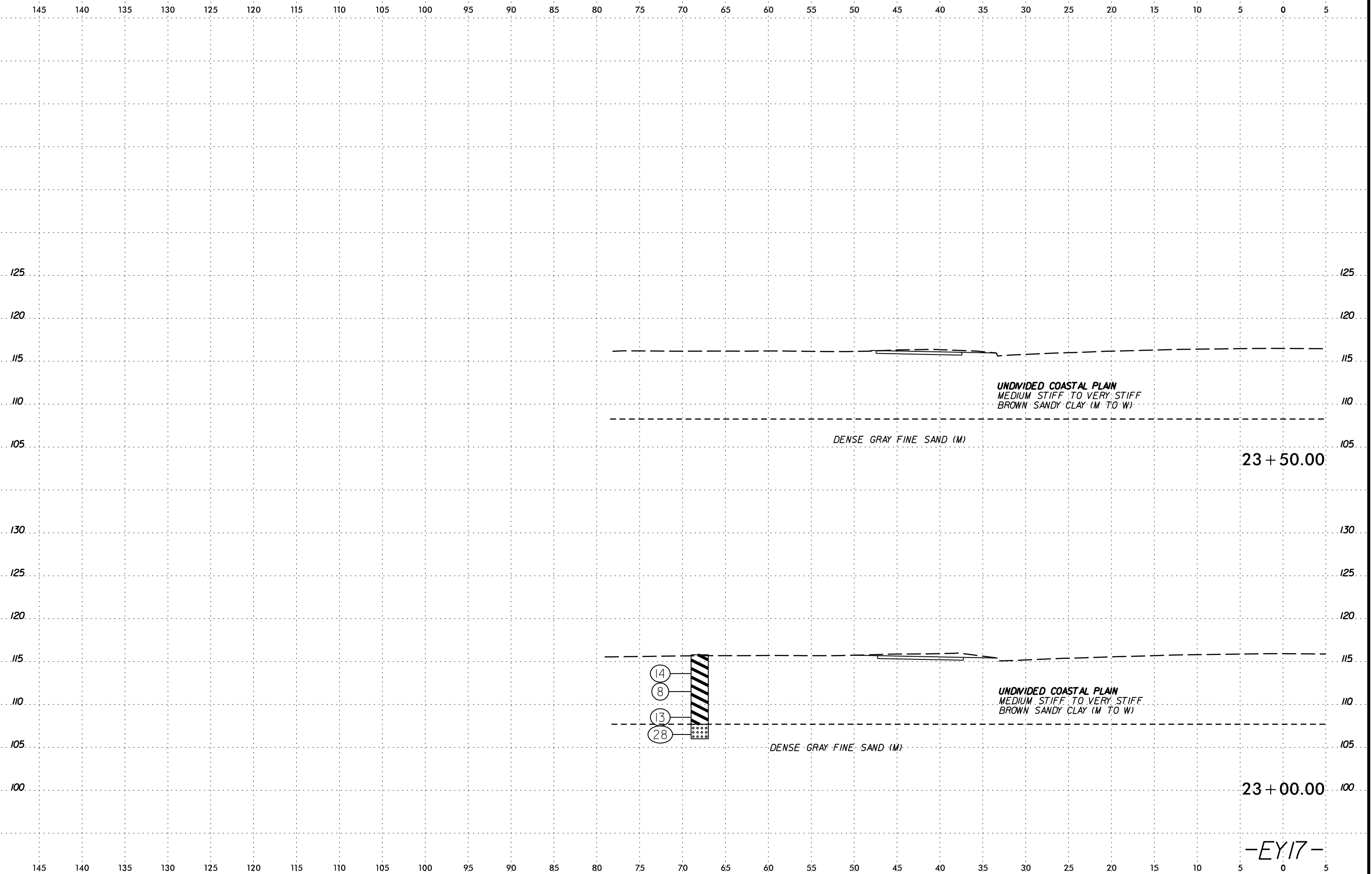
-EY17-

DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: [illegible]
PROJECT: [illegible]

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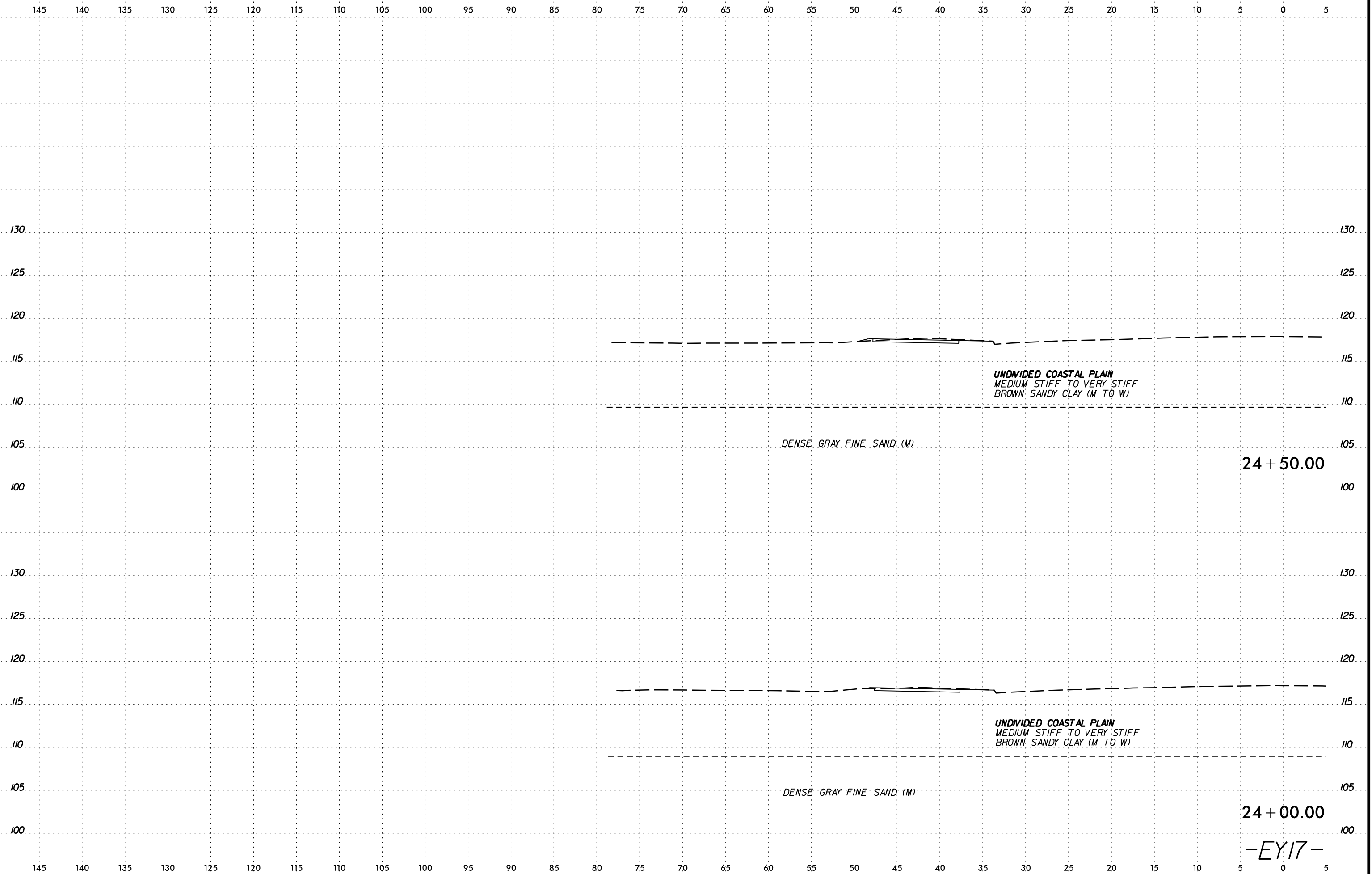


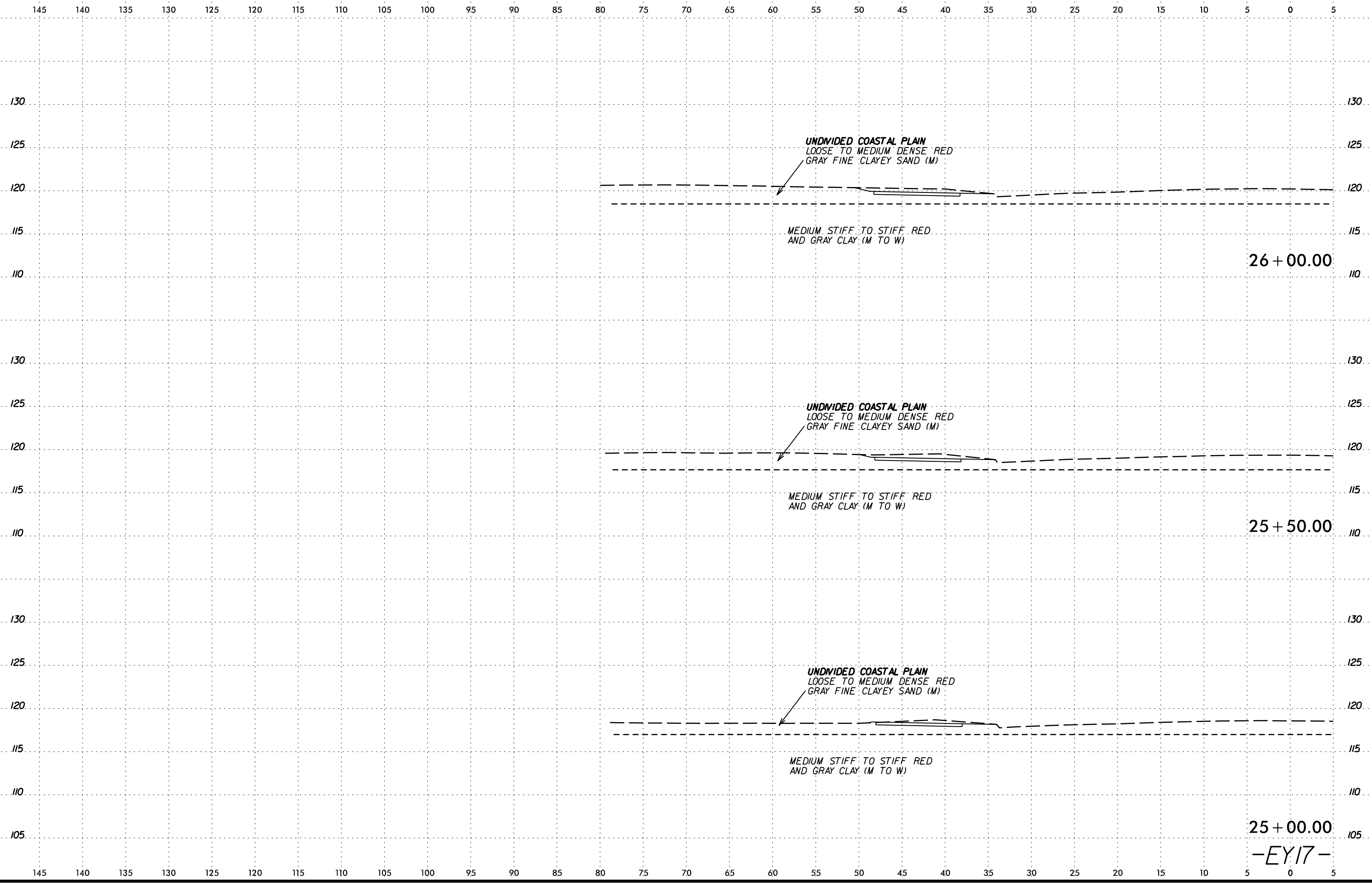
6/23/16
SOUTH
CONCRETE
PILINGS
ALONG
SHORELINE



-EY17-

6/23/16
SECTION
DATE
BY
CHECKED
APPROVED





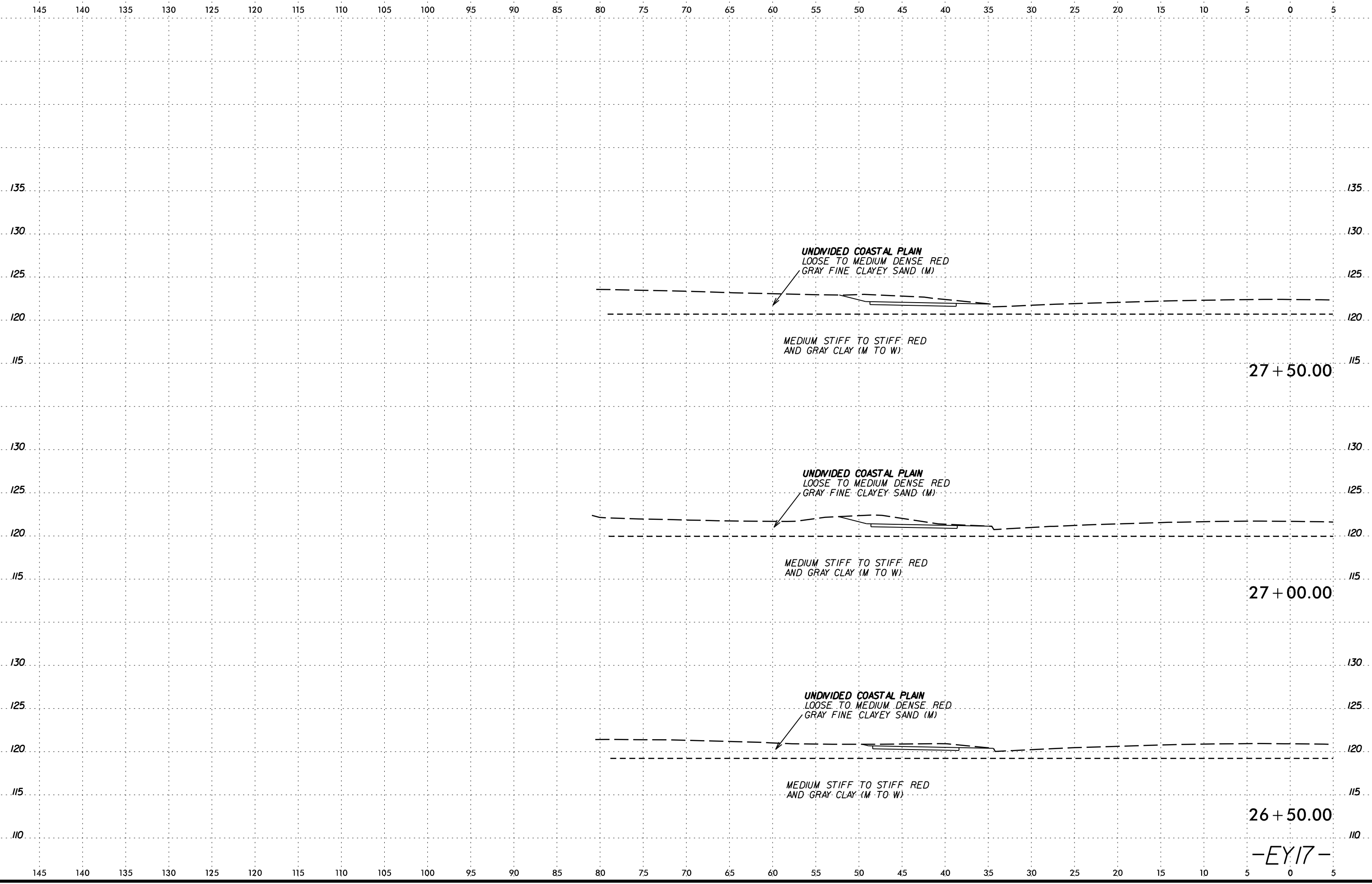
26 + 00.00

25 + 50.00

25 + 00.00

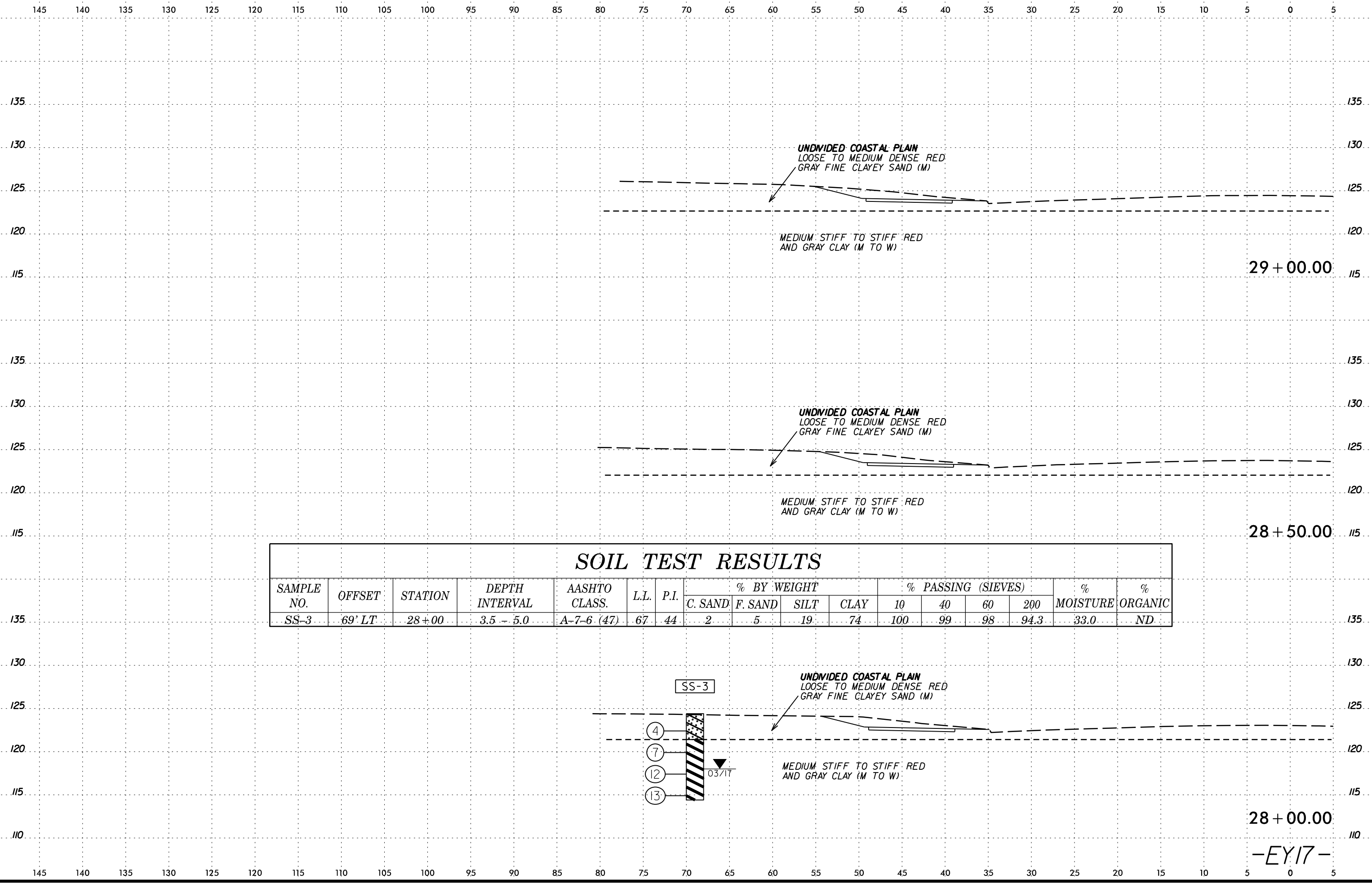
-EY17-

DATE: 6/23/16
BY: [illegible]
CHECKED: [illegible]
APPROVED: [illegible]



SYNOPSIS OF CONDITIONS
FOR THE
PROPOSED
CONSTRUCTION OF
THE
NEW
BRIDGE
OVER
THE
RIVER
AT
STATION
26+50.00
TO
27+50.00

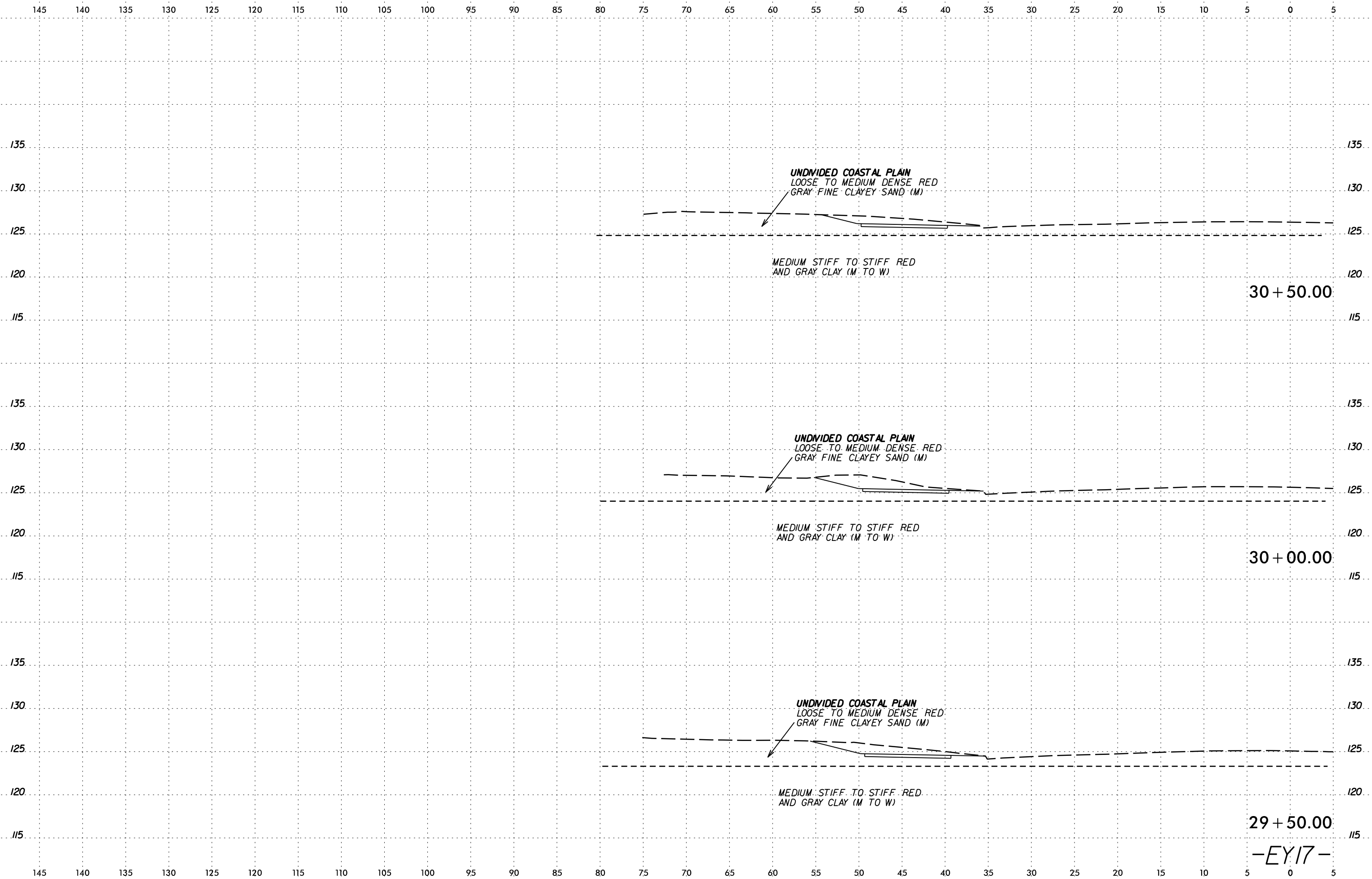
-EY17-



SOIL TEST RESULTS

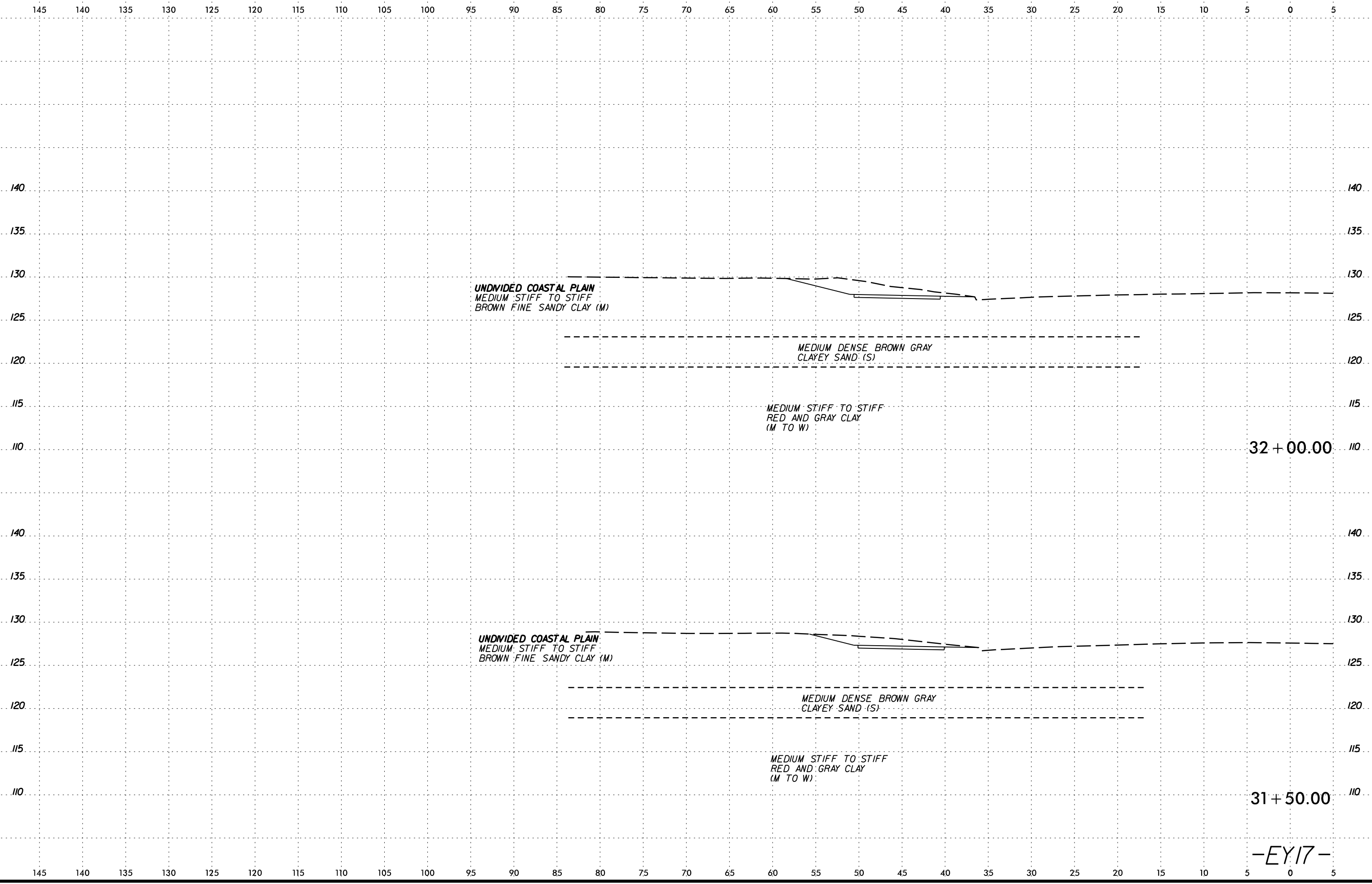
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)				% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	60	200		
SS-3	69' LT	28+00	3.5 - 5.0	A-7-6 (47)	67	44	2	5	19	74	100	99	98	94.3	33.0	ND

-EY17-



SCHEMATIC CROSS SECTION
DATE: 6/23/16
DRAWN BY: J. BARRON

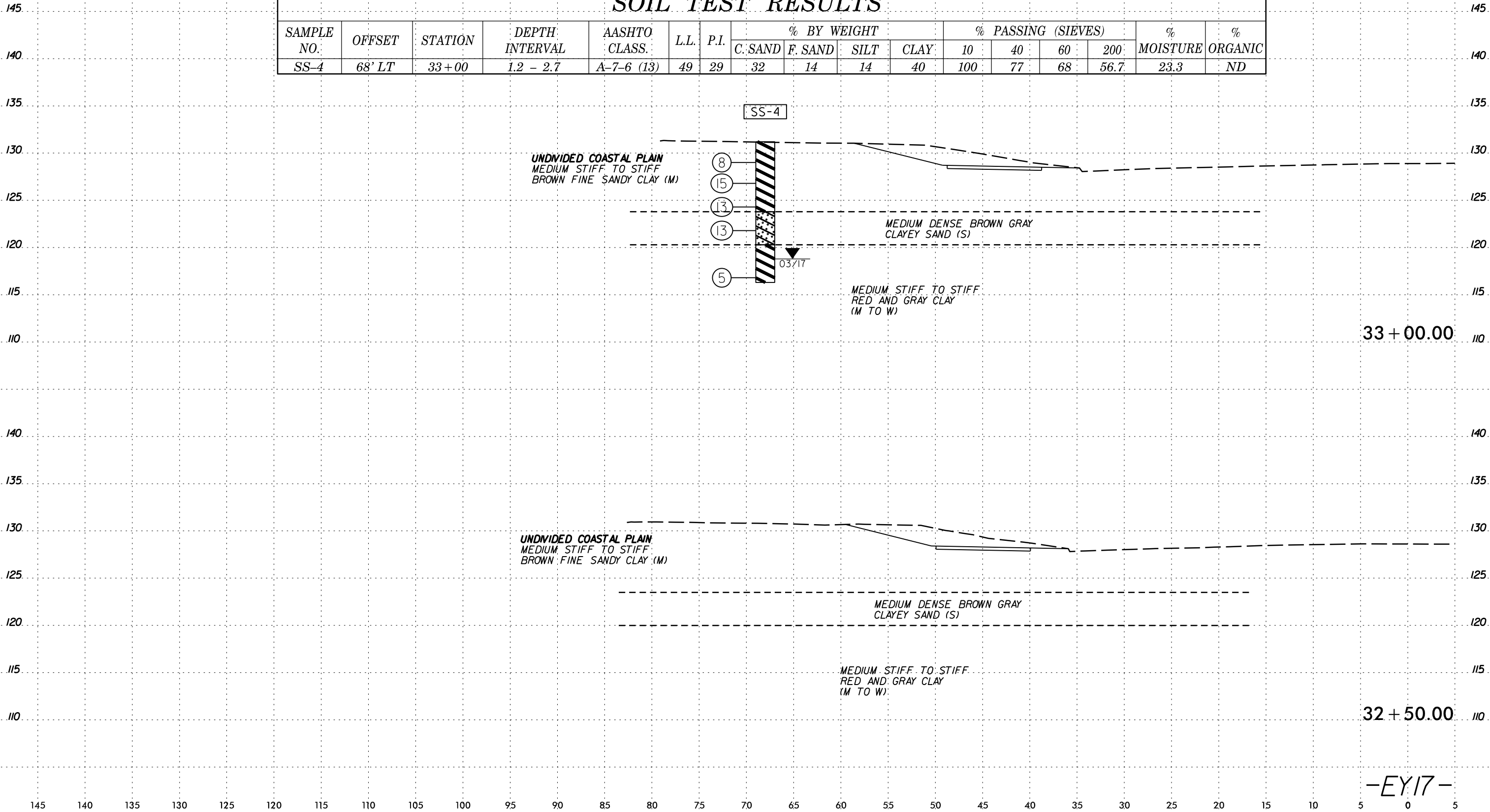
29 + 50.00
-EY17-



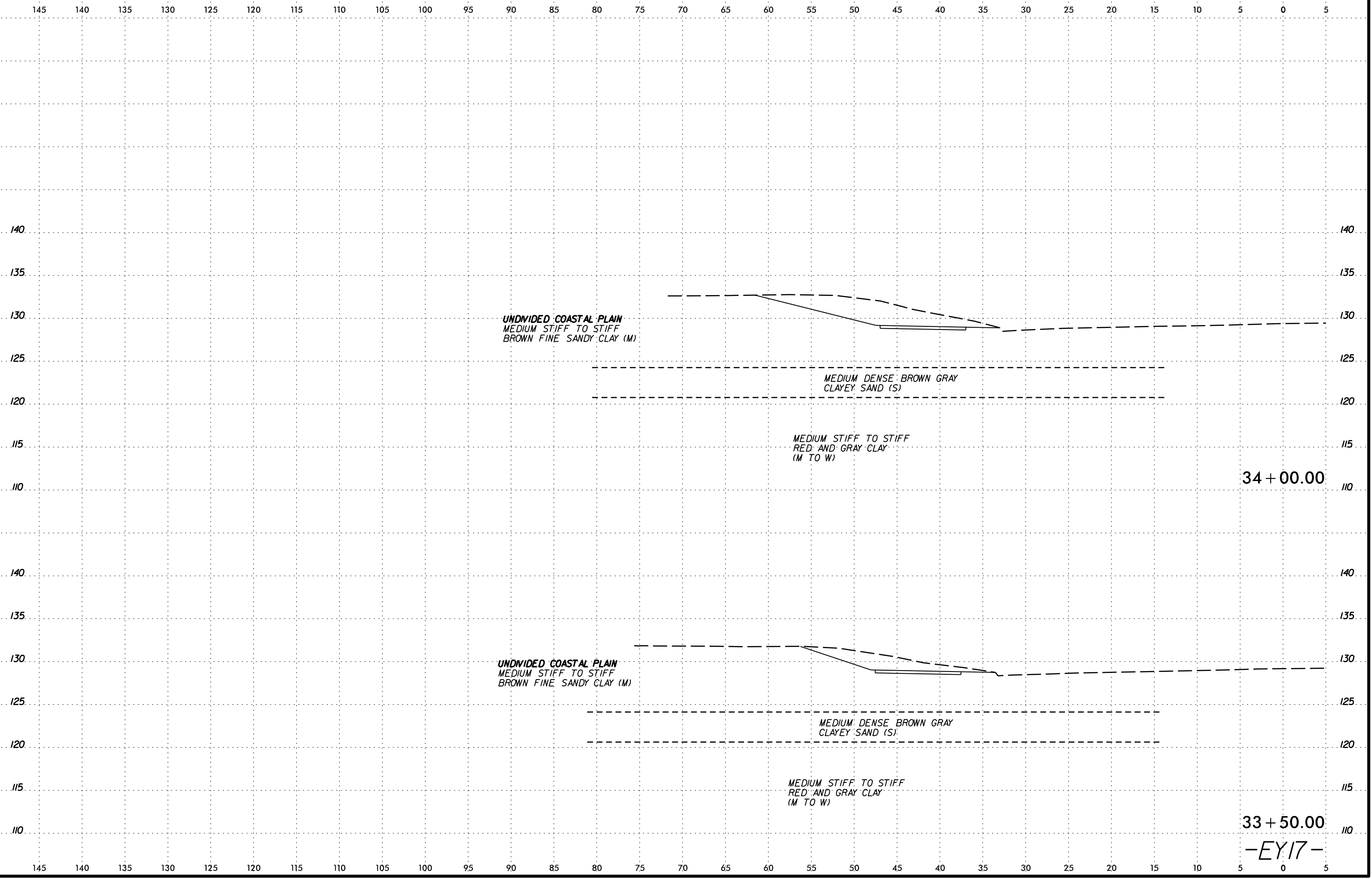
DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: 1" = 10'-0"

145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 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	60	200		
SS-4	68' LT	33+00	1.2 - 2.7	A-7-6 (13)	49	29	32	14	14	40	100	77	68	56.7	23.3	ND



SYTIME
CON
ARRANG



34 + 00.00

33 + 50.00

-EY17-

DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: AS SHOWN

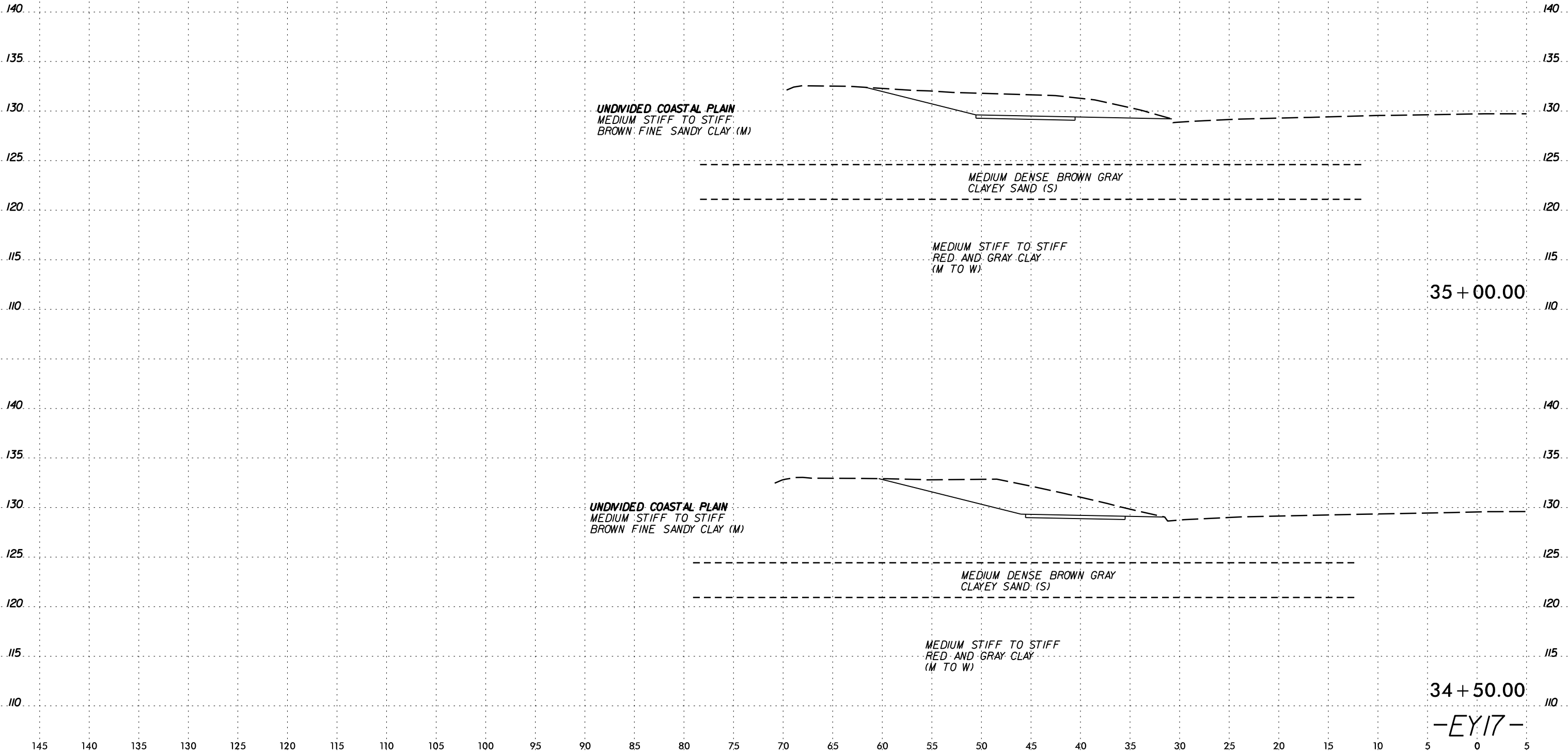
6/23/16



PROJ. REFERENCE NO. U-5935

SHEET NO. 30

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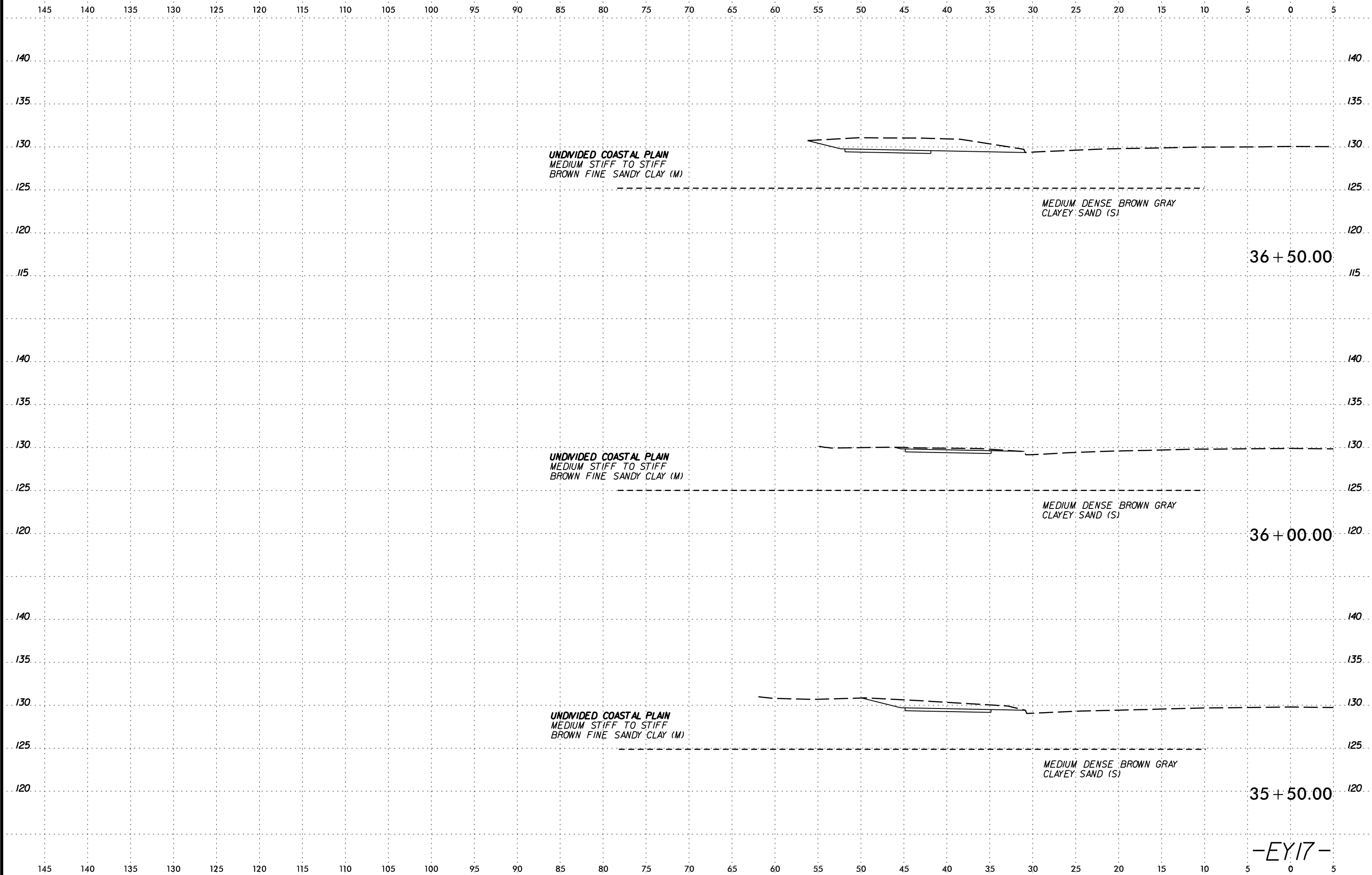
35 + 00.00

34 + 50.00

-EY17-

DATE: 6/23/16
DRAWN BY: [unreadable]
CHECKED BY: [unreadable]
SCALE: AS SHOWN
PROJECT: U-5935
SHEET: 30

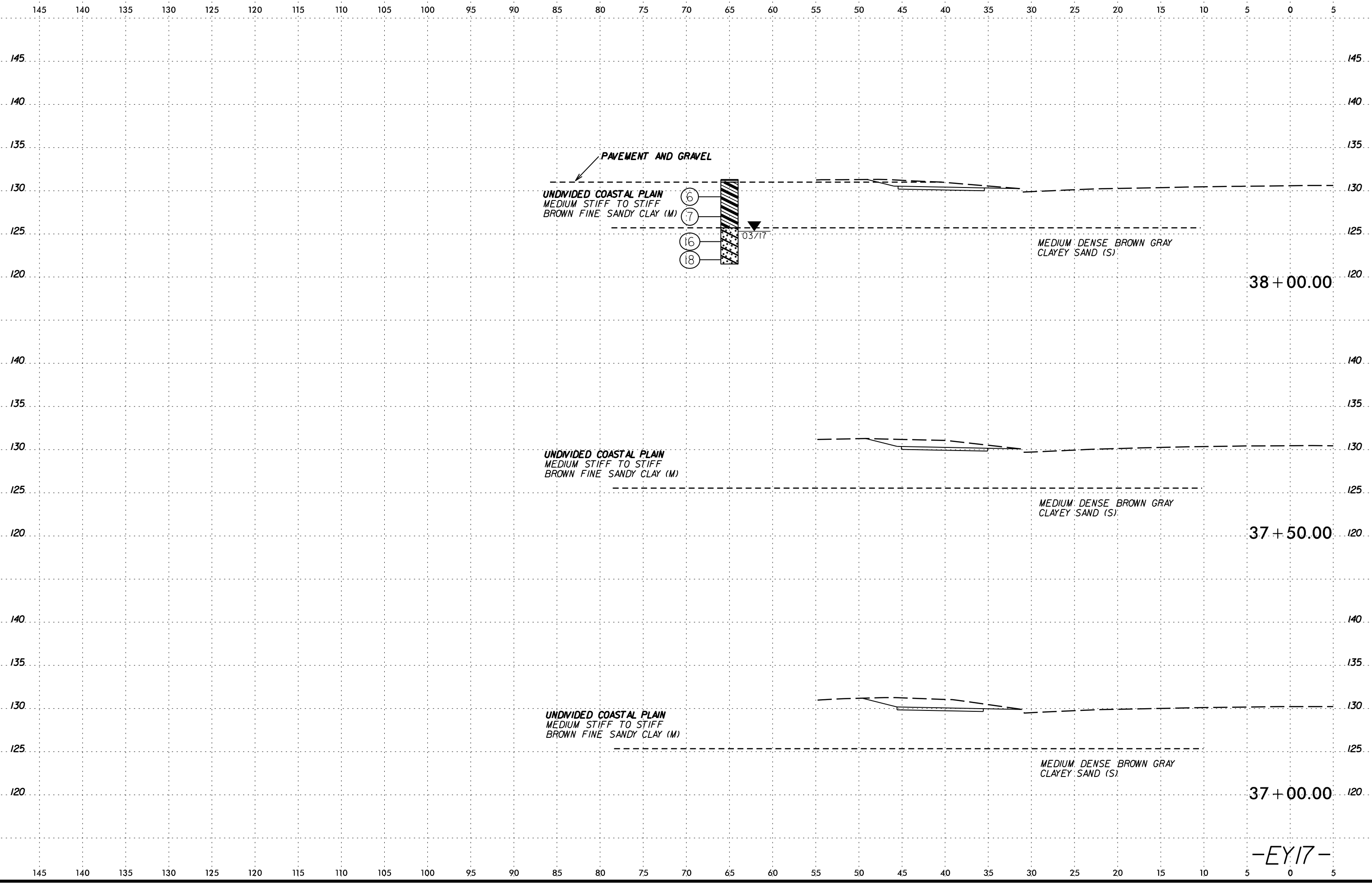
6/23/16



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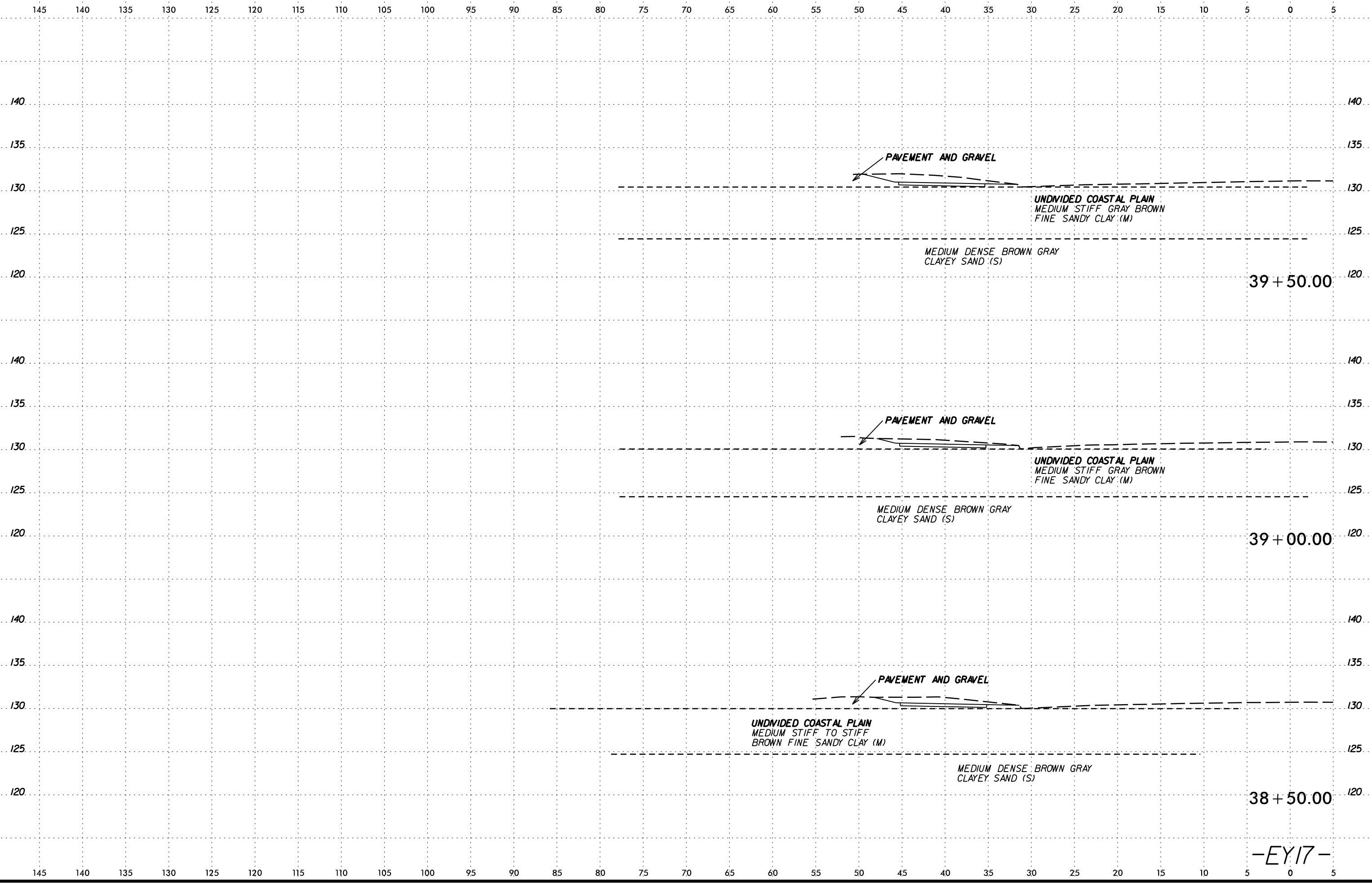
6/23/16



-EY17-

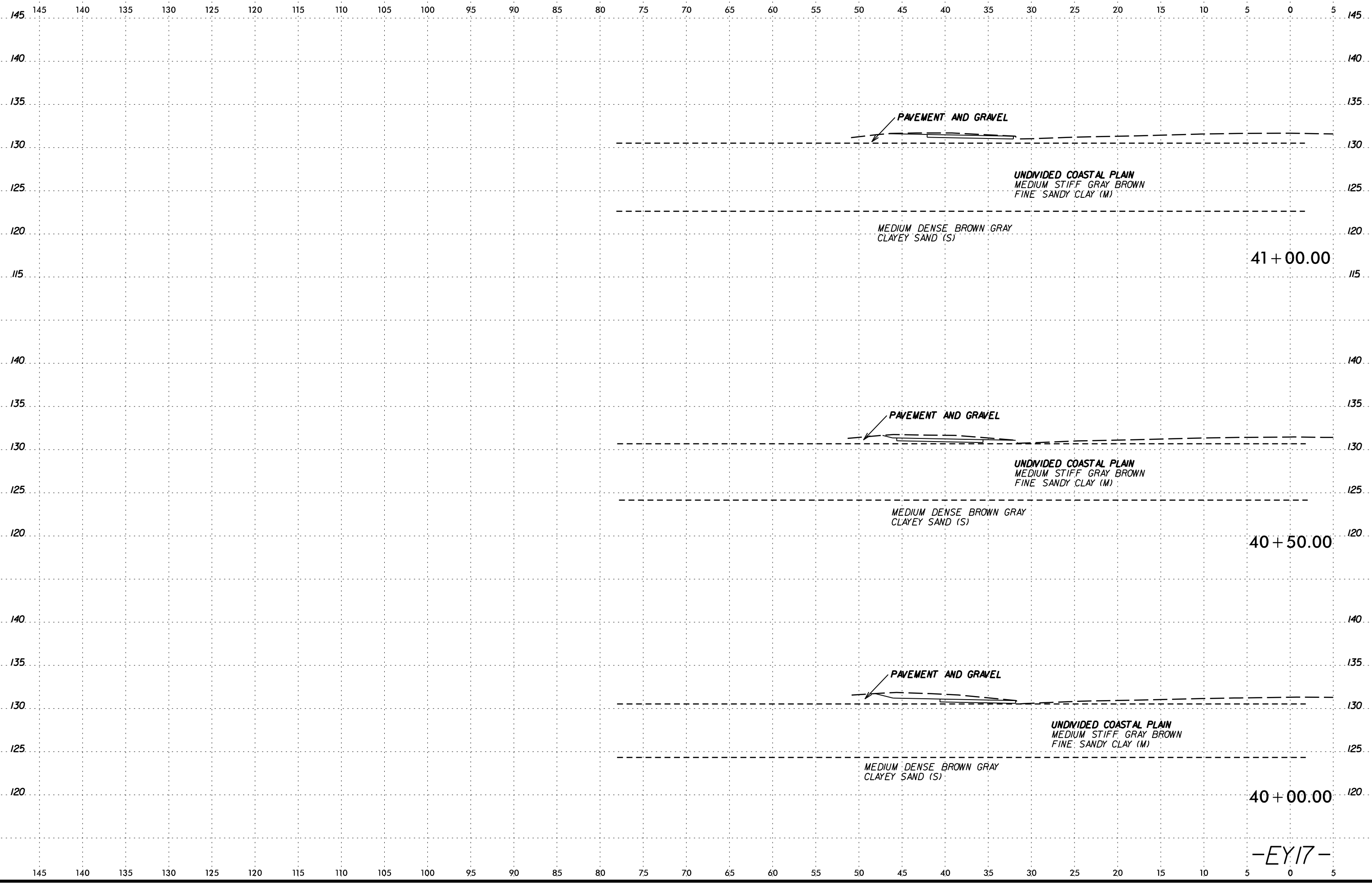
SYTIME
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6/23/16



SYTIME
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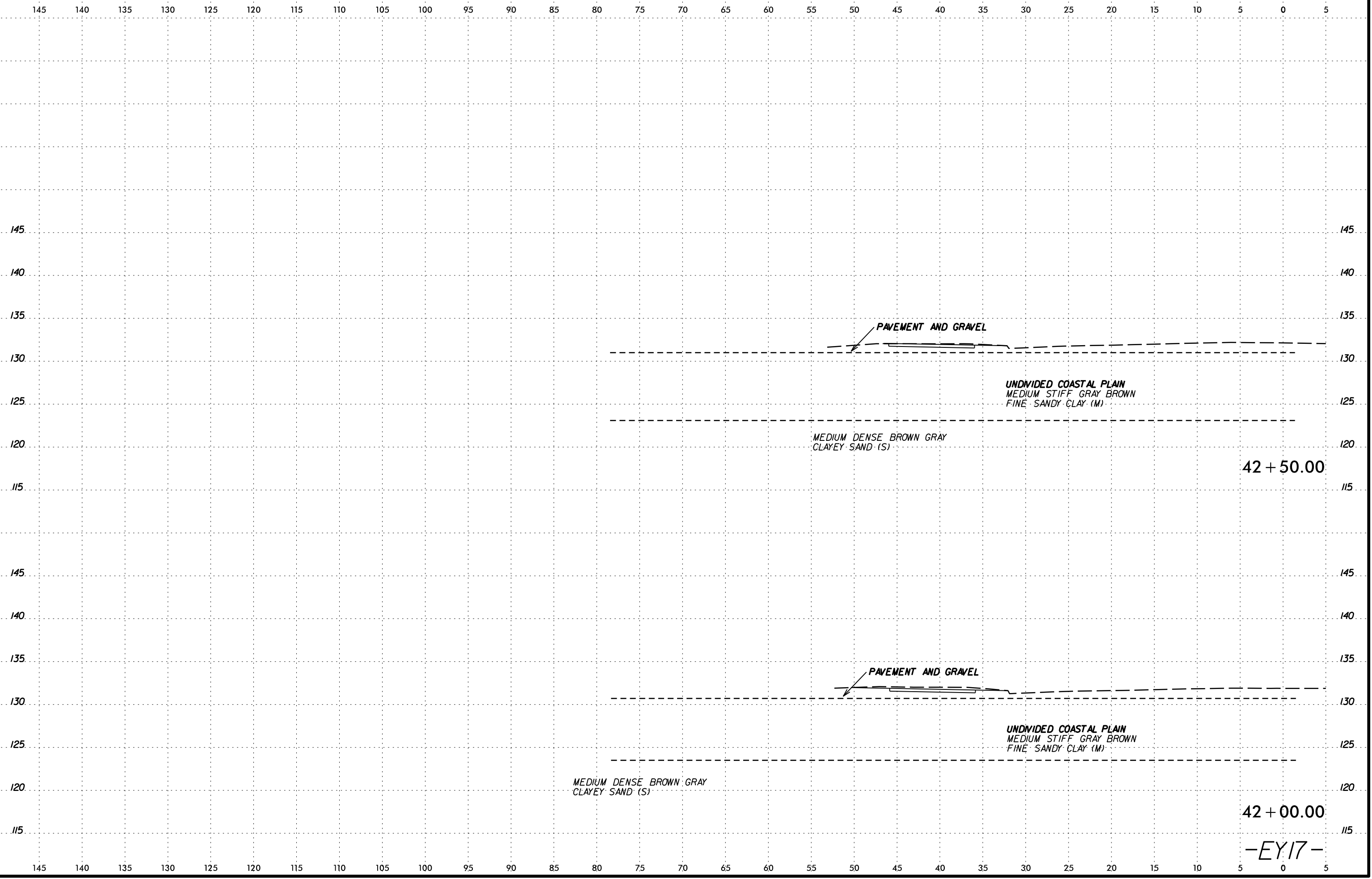
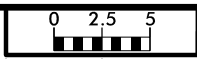
-EY17-



SYTIME
CON
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-EY17-

6/23/16



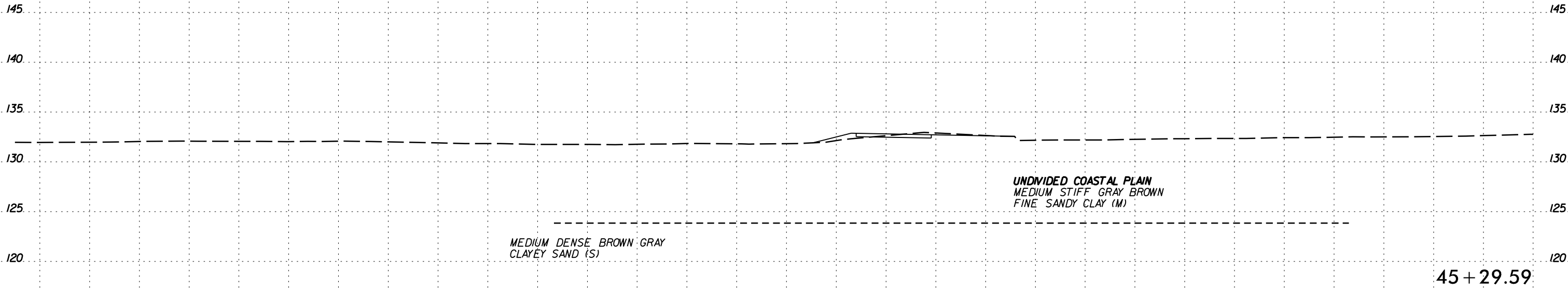
42 + 50.00

42 + 00.00

-EY17-

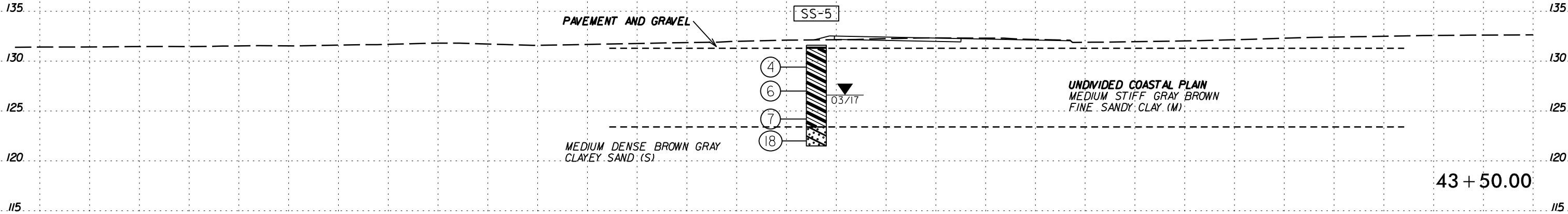
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145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5



SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)				%	%
							C. SAND	F. SAND	SILT	CLAY	10	40	60	200	MOISTURE	ORGANIC
SS-5	67' LT	43+00	3.6 - 5.1	A-6 (12)	40	26	21	25	19	35	100	90	79	59.3	19.7	ND



43 + 50.00

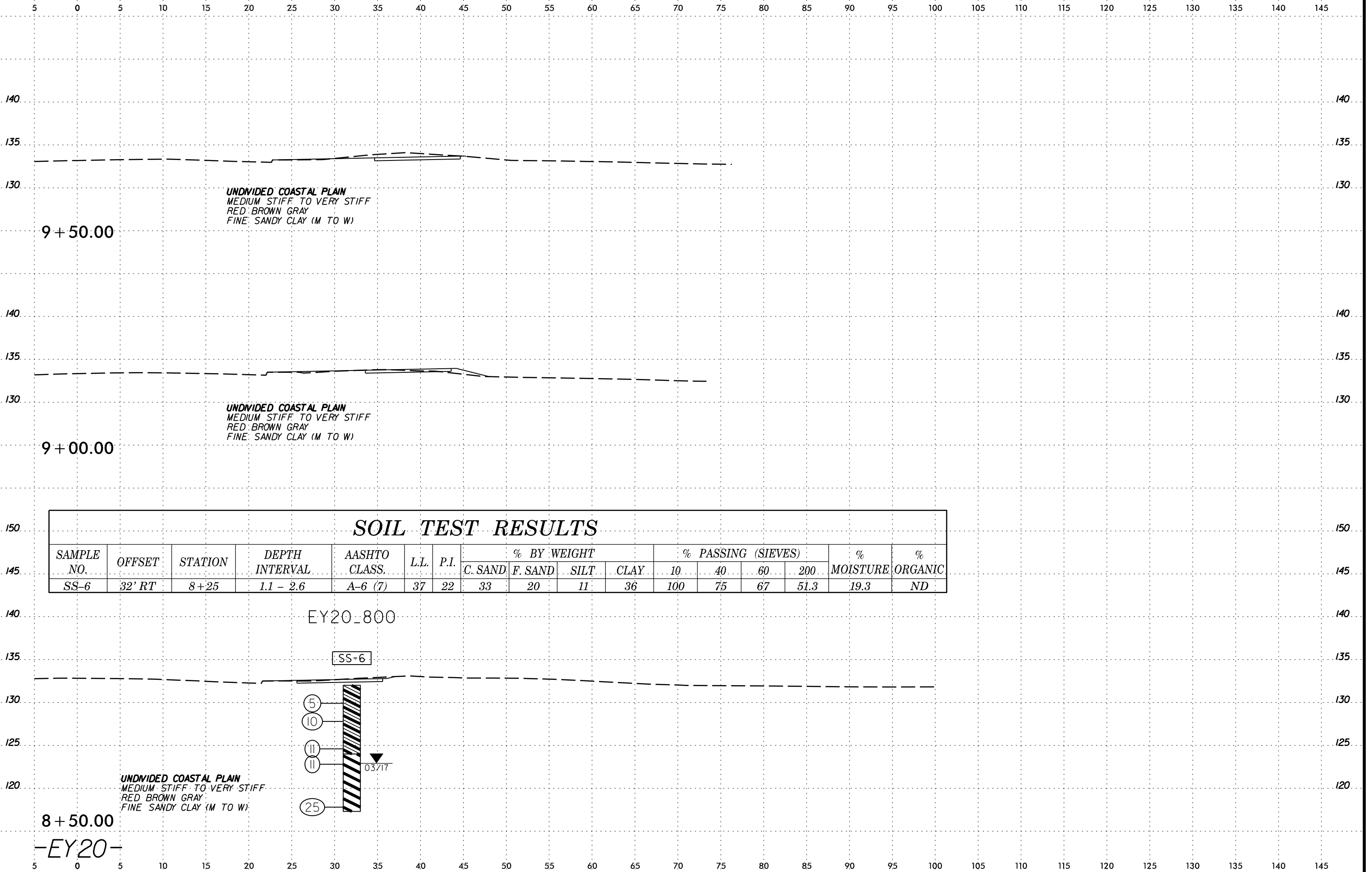
-EY17-

6/23/16



PROJ. REFERENCE NO.
U-5935

SHEET NO.
37



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	60	200		
SS-6	32' RT	8+25	1.1 - 2.6	A-6 (7)	37	22	33	20	11	36	100	75	67	51.3	19.3	ND

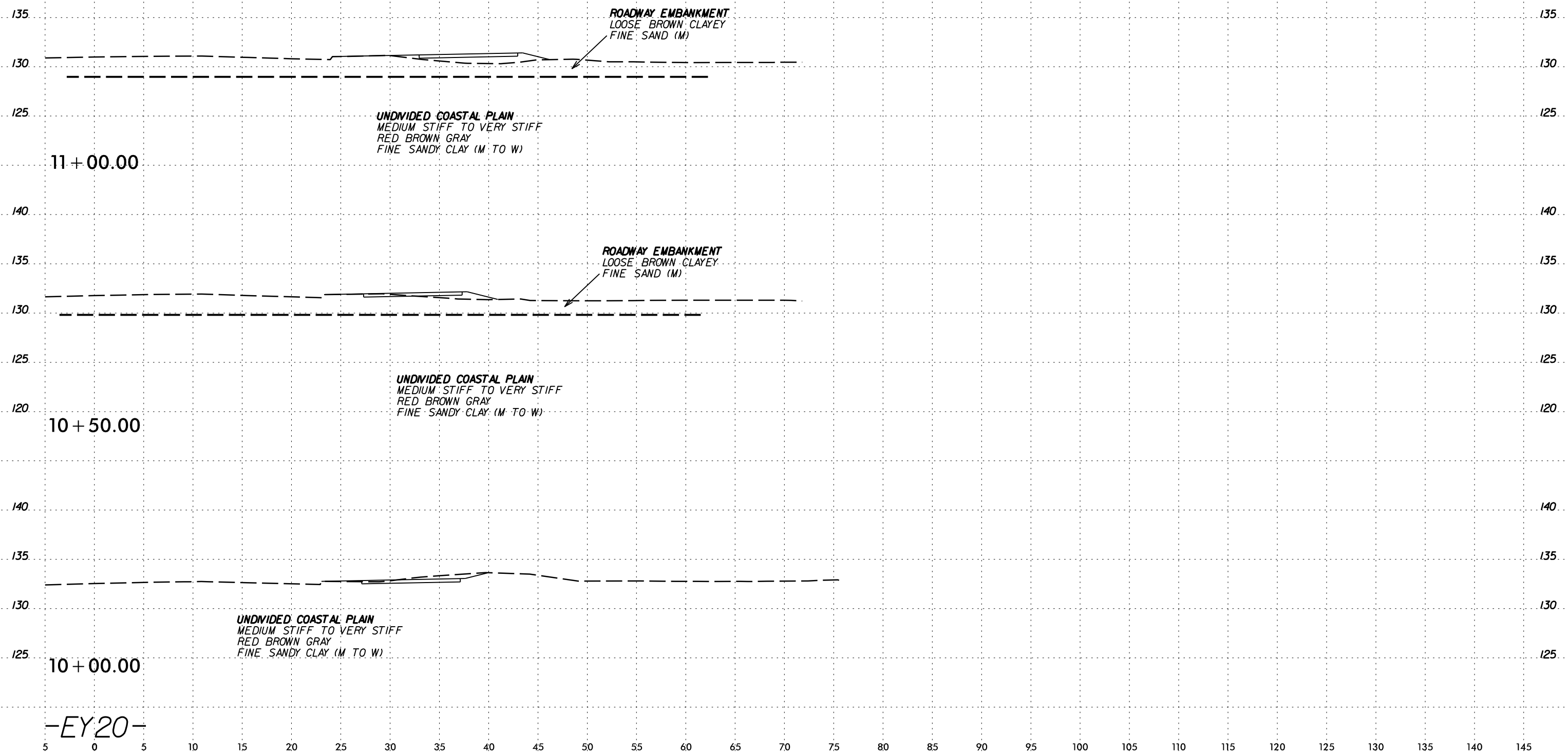
DATE: 6/23/16
DRAWN BY: J. J. BRYAN
CHECKED BY: J. J. BRYAN
SCALE: AS SHOWN

8 + 50.00

-EY20-

6/23/16

5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145



-EY20-

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5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145

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	60	200		
SS-7	58' RT	13+00	3.4 - 4.9	A-6 (6)	30	18	27	23	24	26	100	86	73	55.2	15.2	ND

EY20_1300

SS-7

ROADWAY EMBANKMENT
LOOSE BROWN CLAYEY
FINE SAND (M)

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
RED BROWN GRAY
FINE SANDY CLAY (M TO W)

ROADWAY EMBANKMENT
LOOSE BROWN CLAYEY
FINE SAND (M)

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
RED BROWN GRAY
FINE SANDY CLAY (M TO W)

ROADWAY EMBANKMENT
LOOSE BROWN CLAYEY
FINE SAND (M)

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
RED BROWN GRAY
FINE SANDY CLAY (M TO W)

13 + 00.00

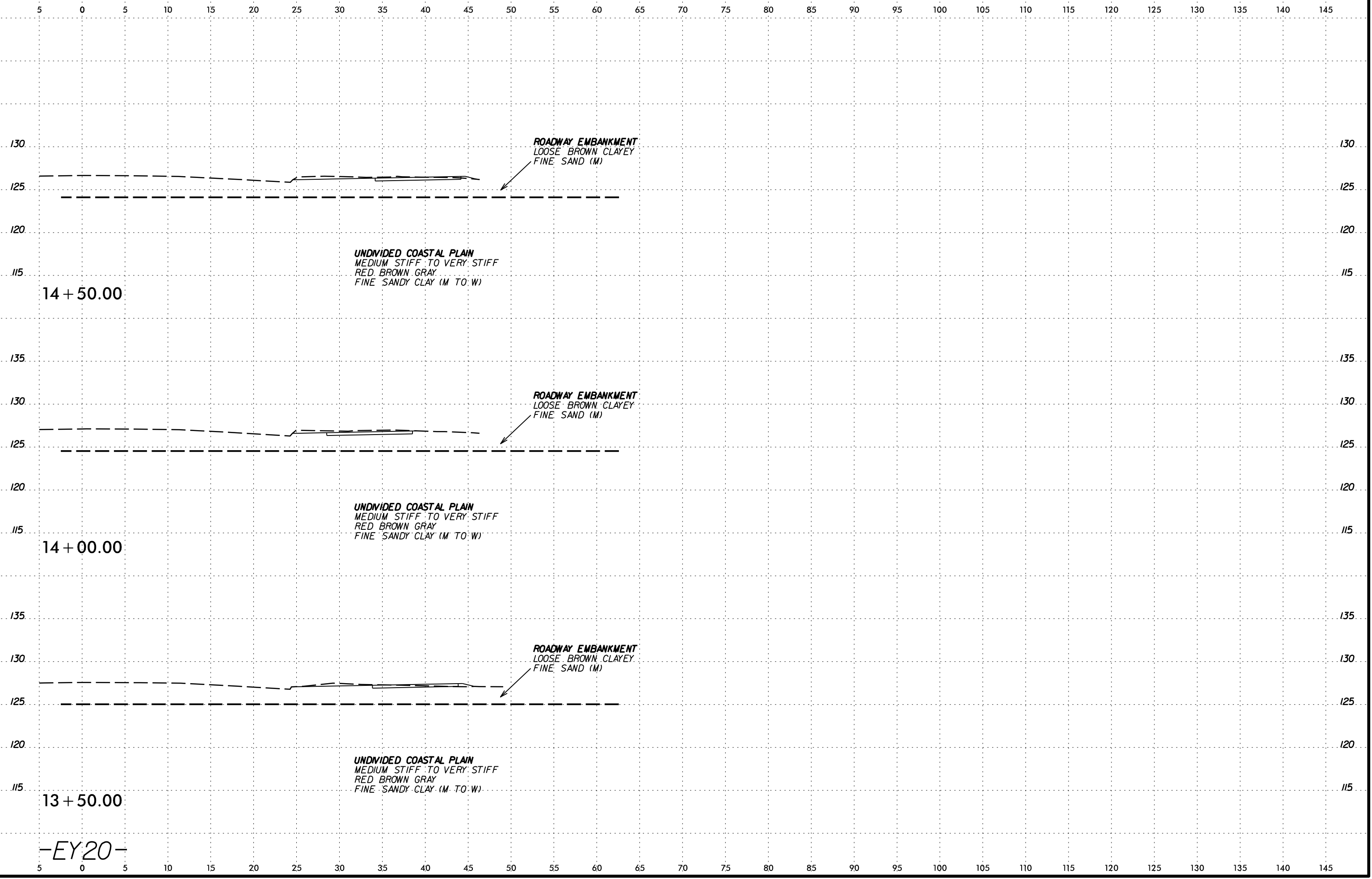
12 + 00.00

11 + 50.00

-EY20-

5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145

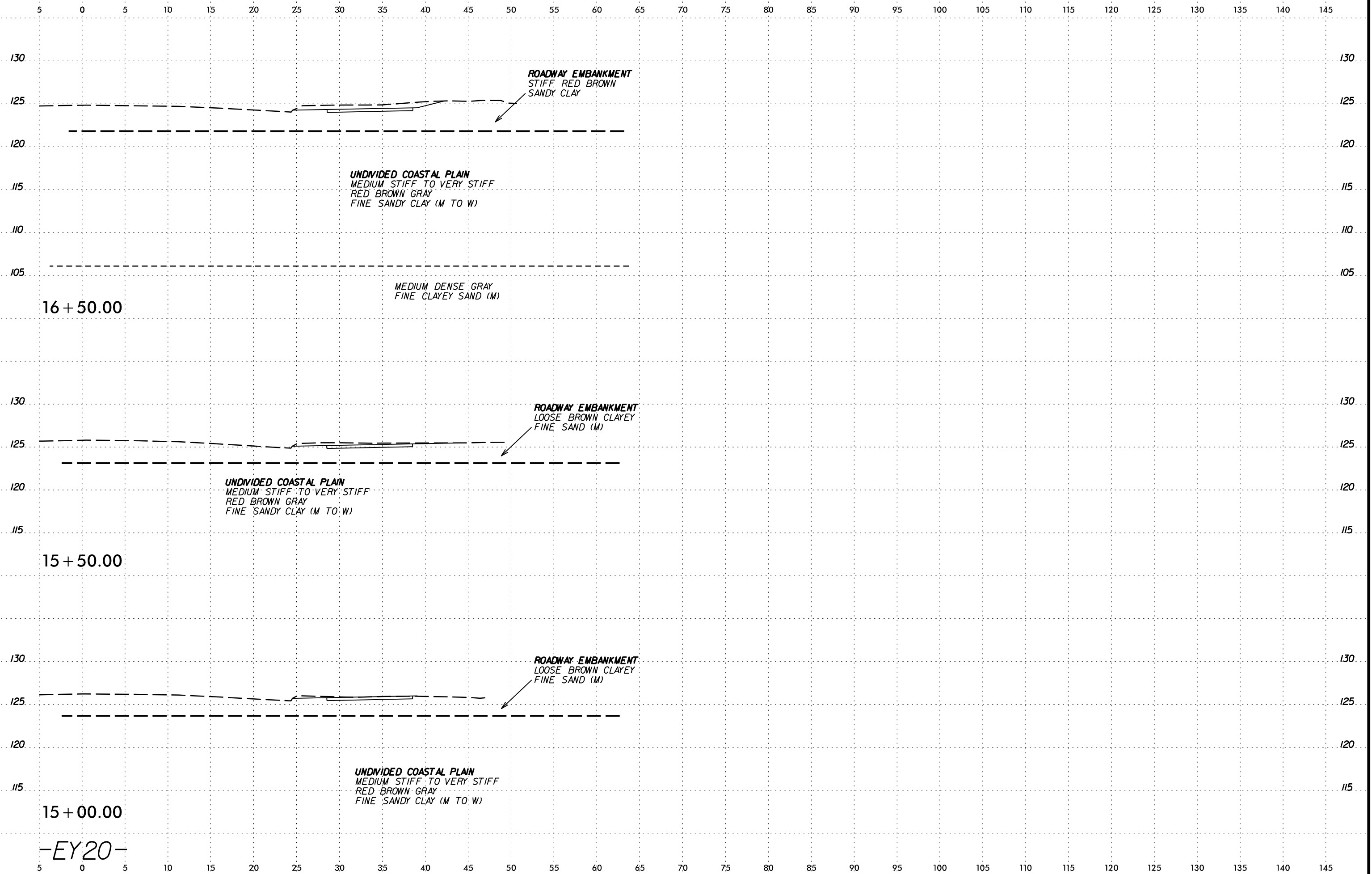
DATE PLOTTED: 6/23/16



13 + 50.00

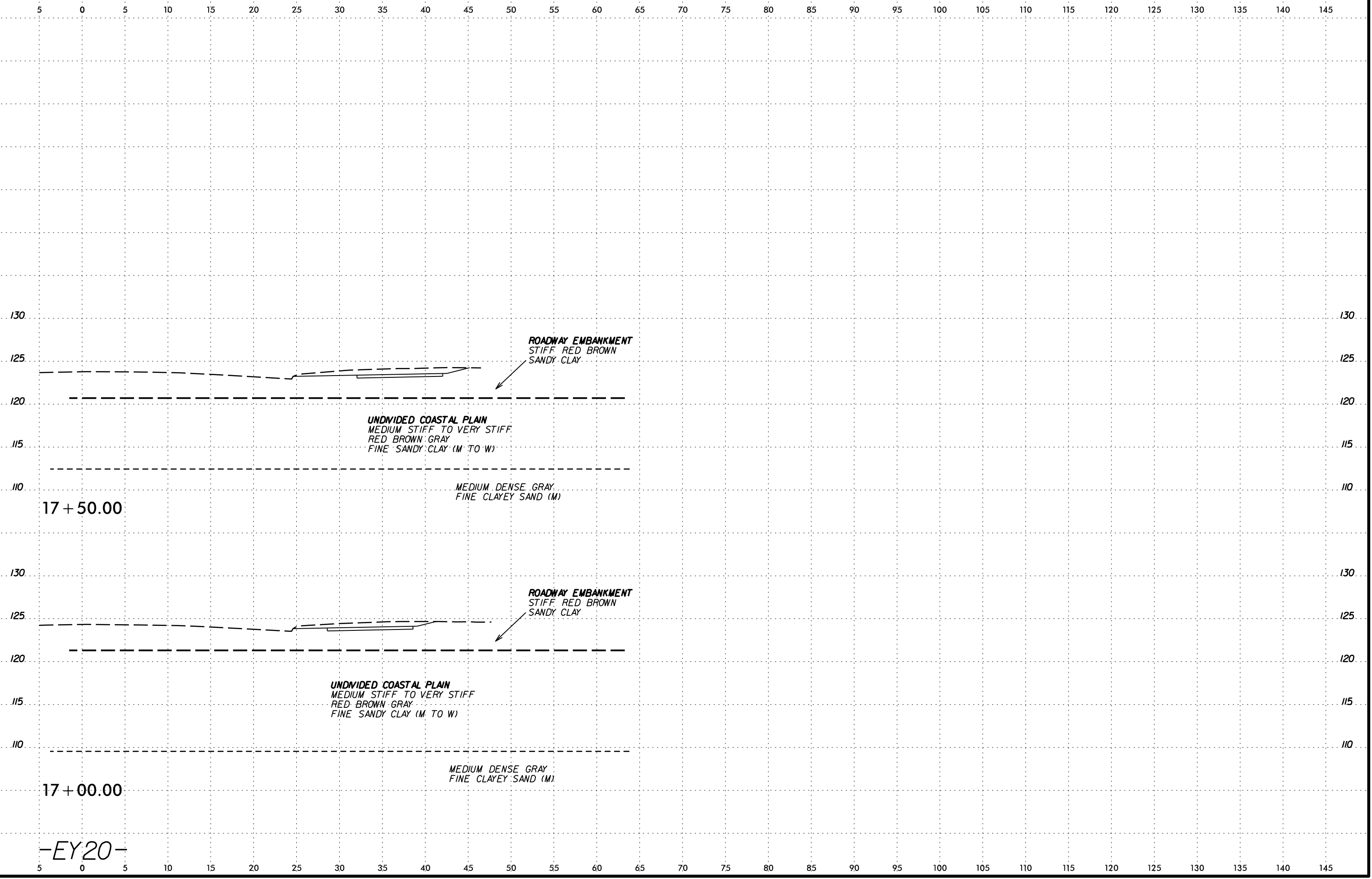
-EY 20-

DATE: 6/23/16
 DRAWN BY: [illegible]
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 PROJECT: U-5935



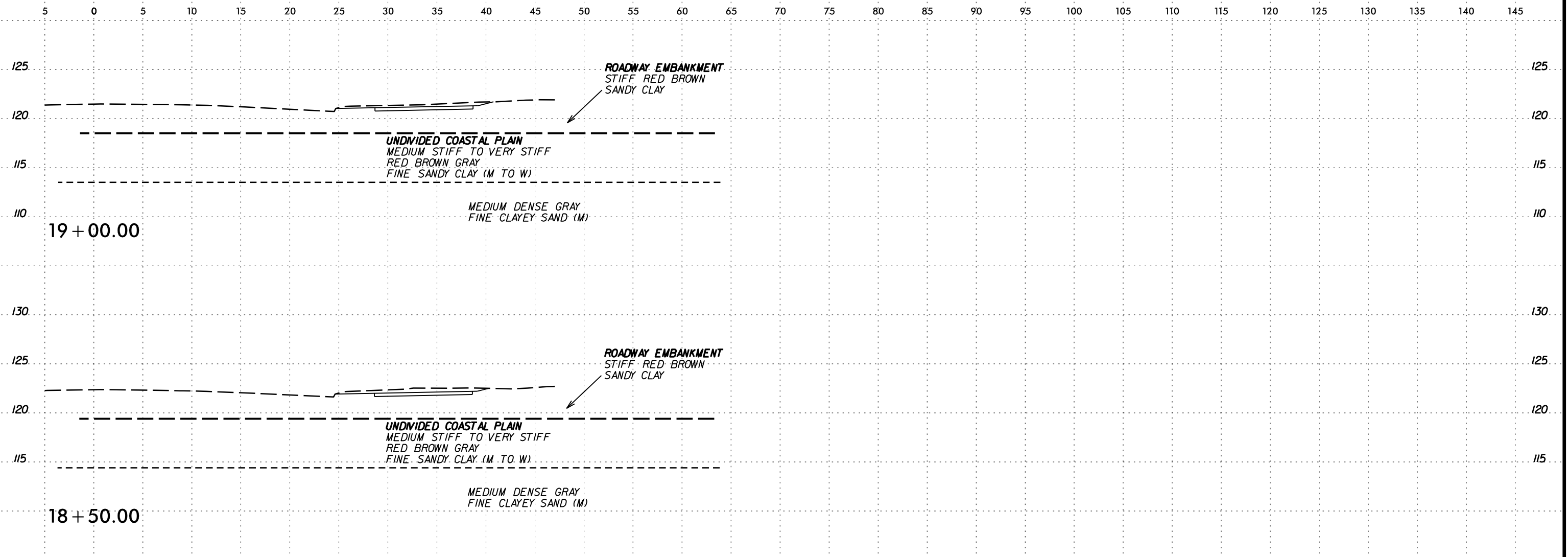
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-EY20-



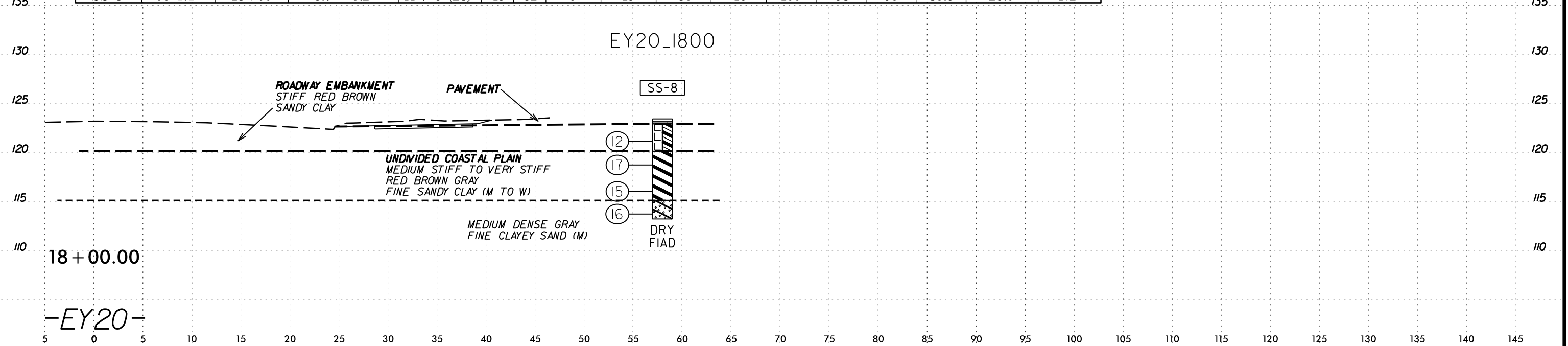
DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: AS SHOWN

6/23/16
 COUNTY OF SAN DIEGO
 PUBLIC WORKS DEPARTMENT
 PROJECT: EY20-1800

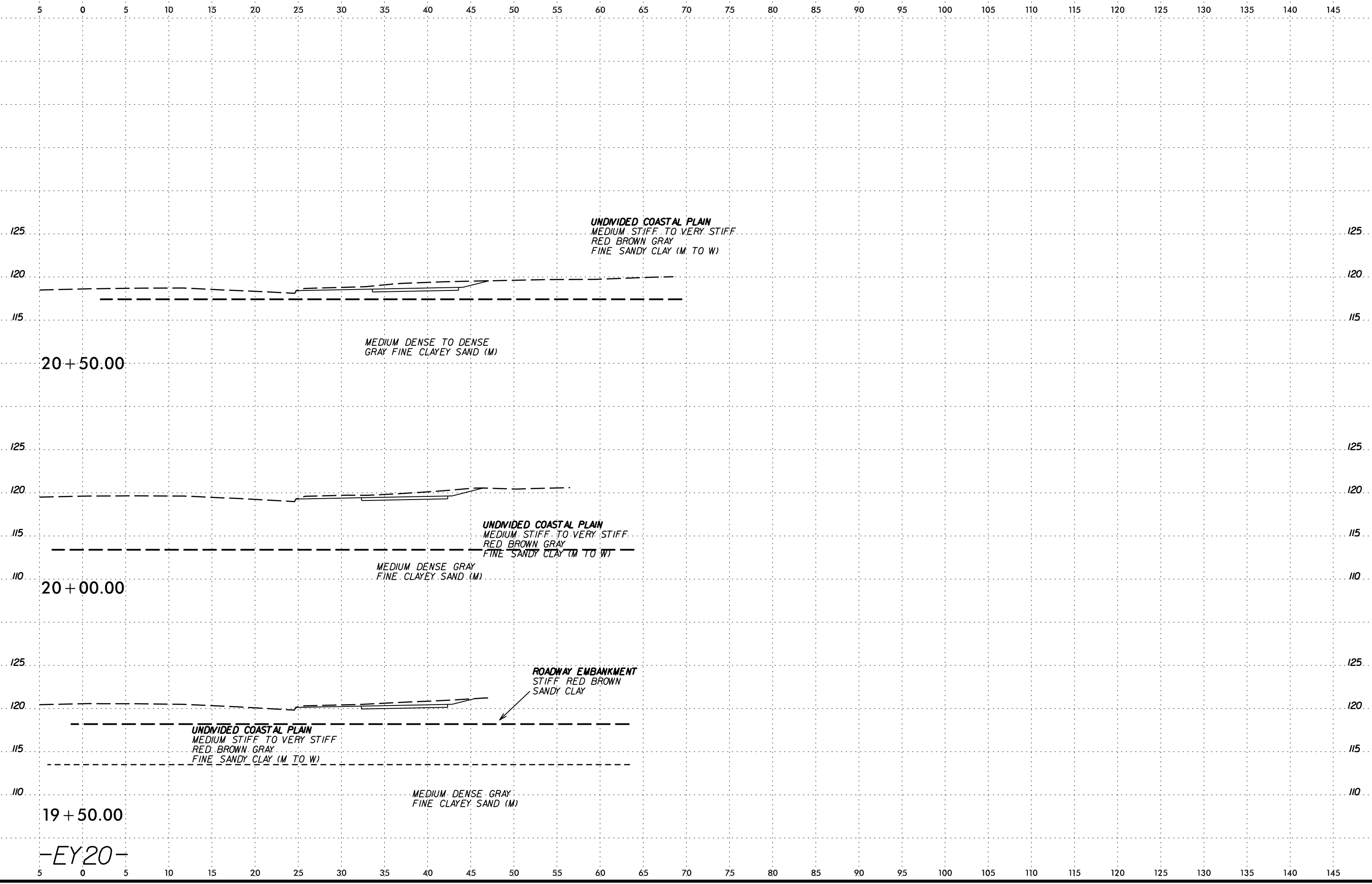


SOIL TEST RESULTS

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	60	200		
SS-8	58' RT	18+00	3.7 - 5.2	A-7-6 (28)	49	32	5	19	30	46	100	98	95	85.3	23.0	ND



18+00.00
-EY20-



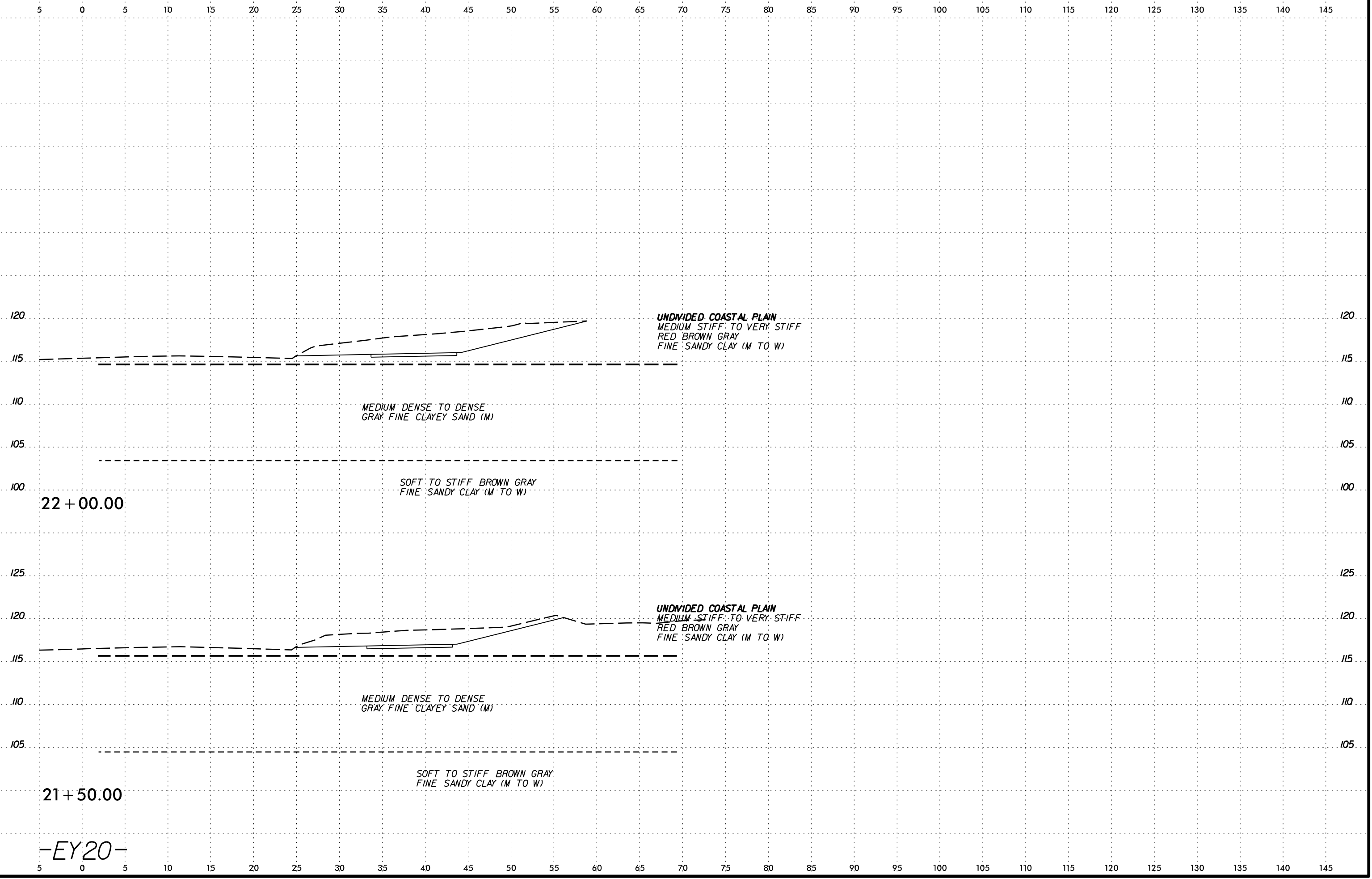
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BY
CHECKED
APPROVED

20+50.00

20+00.00

19+50.00

-EY 20-



DATE: 6/23/16
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CHECKED BY: [illegible]
SCALE: 1"=20'

22 + 00.00

21 + 50.00

-EY 20-

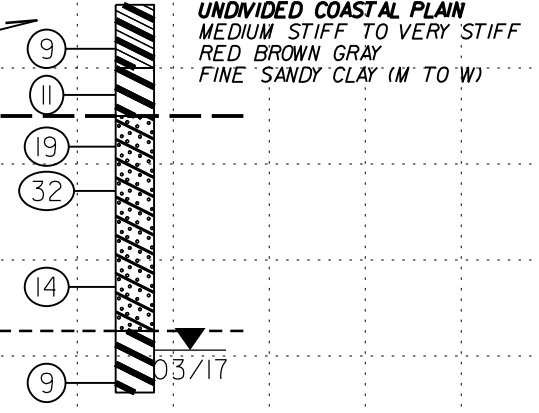
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SOIL TEST RESULTS

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	60	200		
SS-9	63' RT	23+00	3.7 - 5.2	A-7-6 (55)	76	47	1	0	21	78	100	100	99	99.1	37.1	ND
S-1	63' RT	23+00	0.0 - 3.0	A-6 (3)	28	16	33	26	17	24	100	81	67	45.9	15.4	ND

EY20_2300

SS-9
S-1



UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
RED BROWN GRAY
FINE SANDY CLAY (M TO W)

MEDIUM DENSE TO DENSE
GRAY FINE CLAYEY SAND (M)

SOFT TO STIFF BROWN GRAY
FINE SANDY CLAY (M TO W)

03/17

23 + 00.00

UNDIVIDED COASTAL PLAIN
MEDIUM STIFF TO VERY STIFF
RED BROWN GRAY
FINE SANDY CLAY (M TO W)

MEDIUM DENSE TO DENSE
GRAY FINE CLAYEY SAND (M)

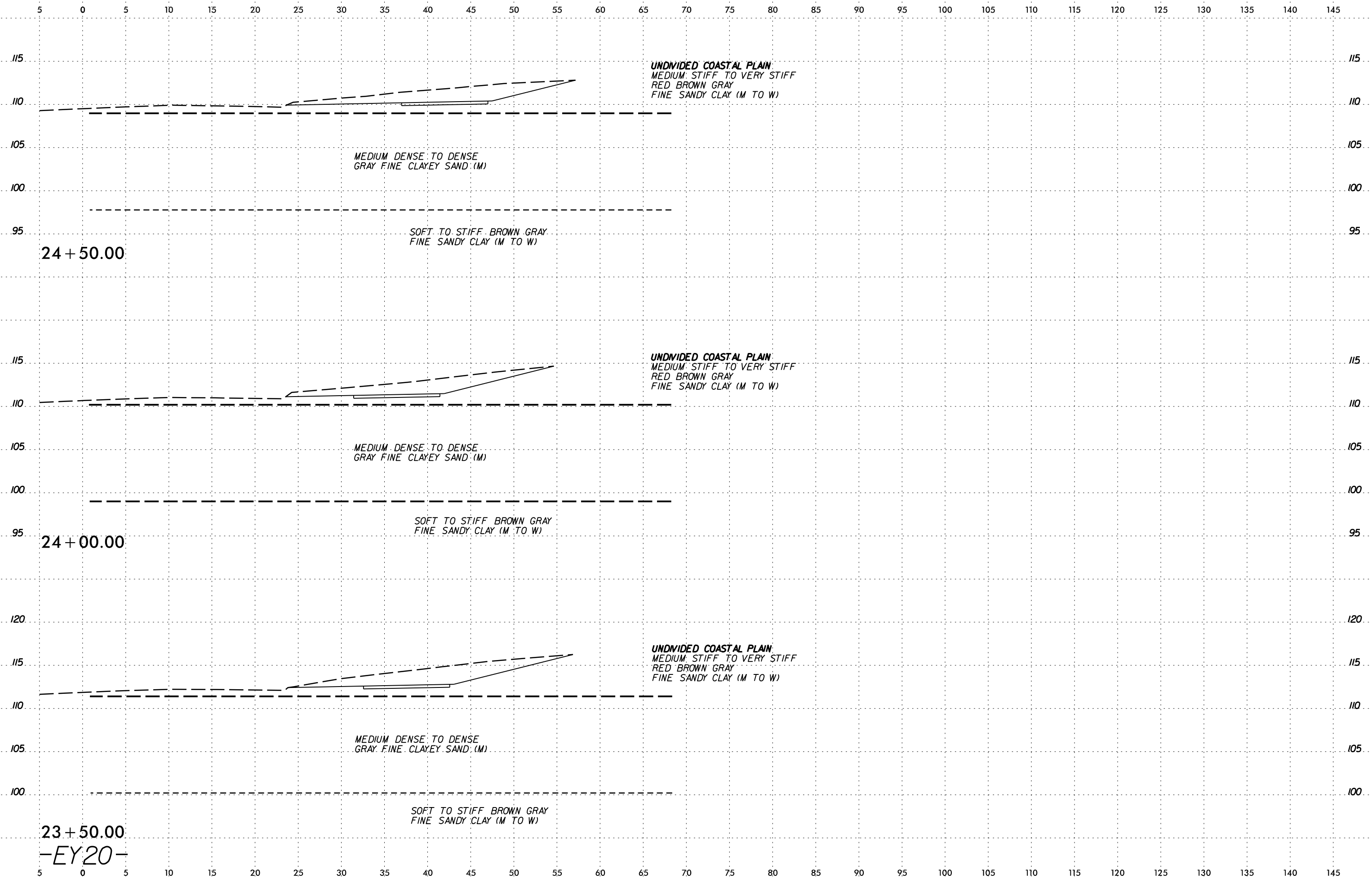
SOFT TO STIFF BROWN GRAY
FINE SANDY CLAY (M TO W)

22 + 50.00

-EY20-

5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145

SYSTEMS
 DESIGN
 CONSULTING
 INC.
 1111
 JEFFERSON
 AVENUE
 SUITE 100
 DENVER, CO 80202
 (303) 733-8800
 WWW.SDCON.COM



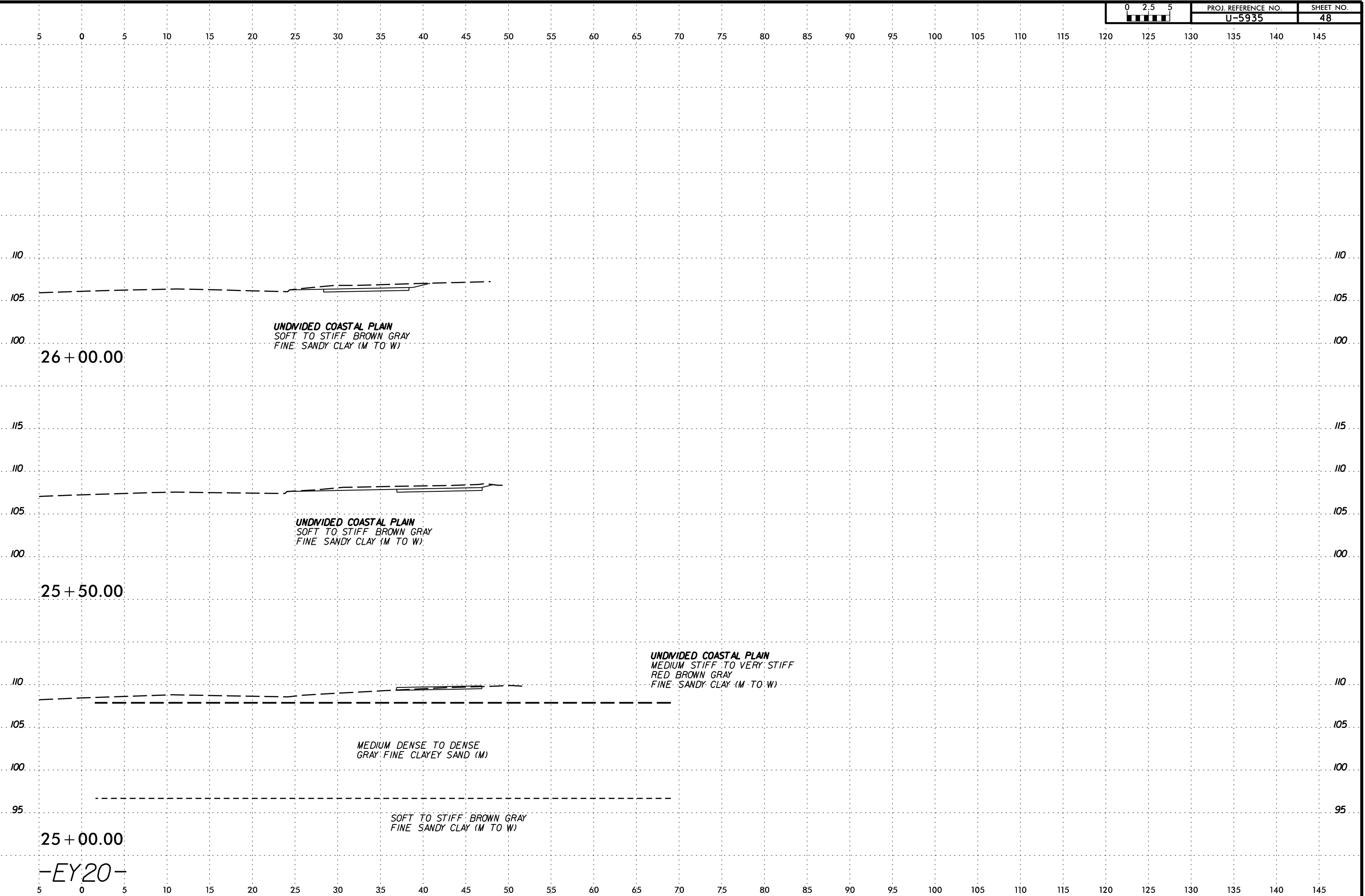
24 + 50.00

24 + 00.00

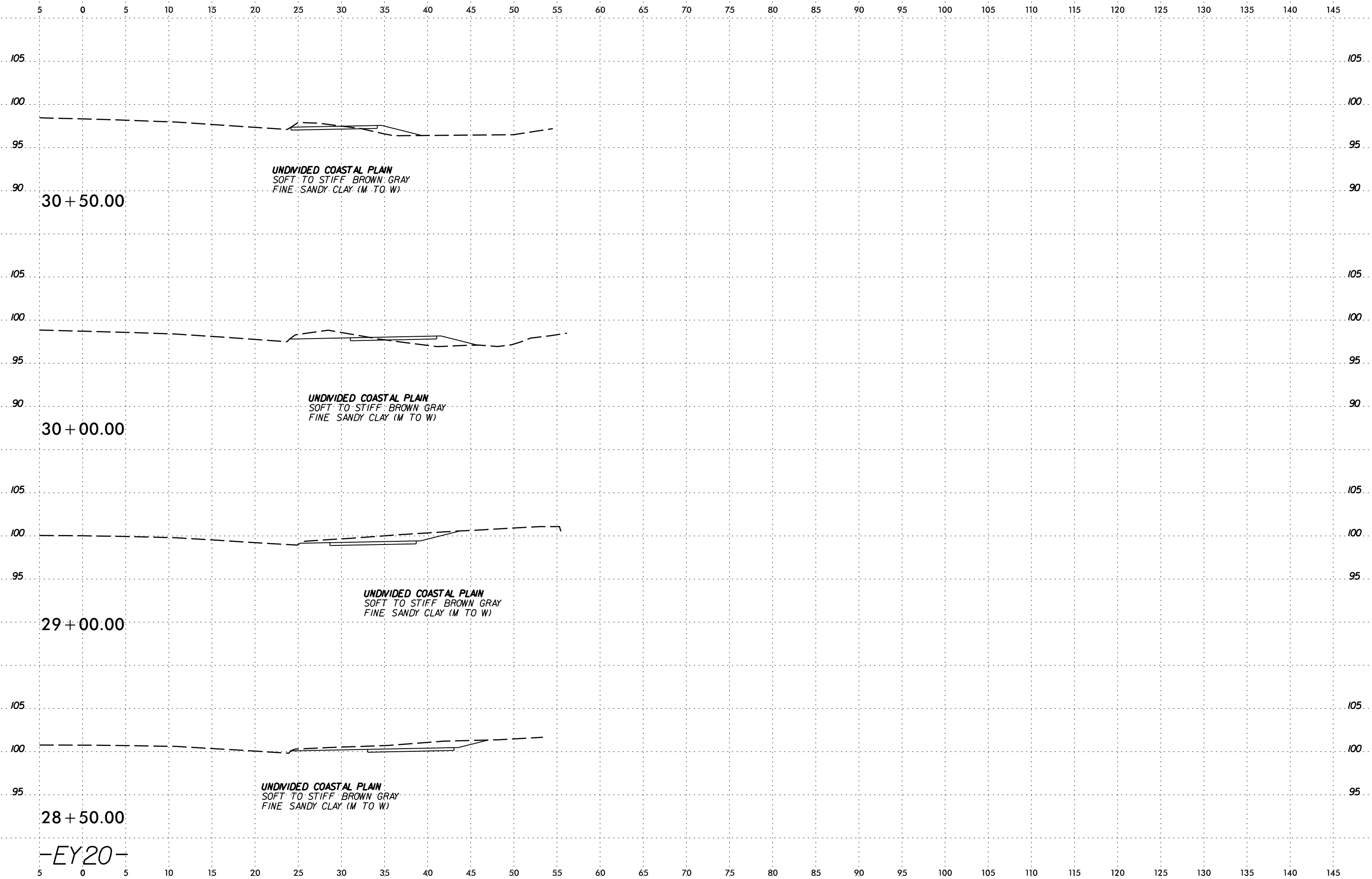
23 + 50.00

-EY 20-

DATE PLOTTED: 6/23/16 10:58 AM



SYNTHESIS CONSULTING INCORPORATED
1500 W. UNIVERSITY AVENUE
SUITE 100
ANN ARBOR MI 48106
TEL 734 769 0900
WWW.SYNTHESISCONSULTING.COM

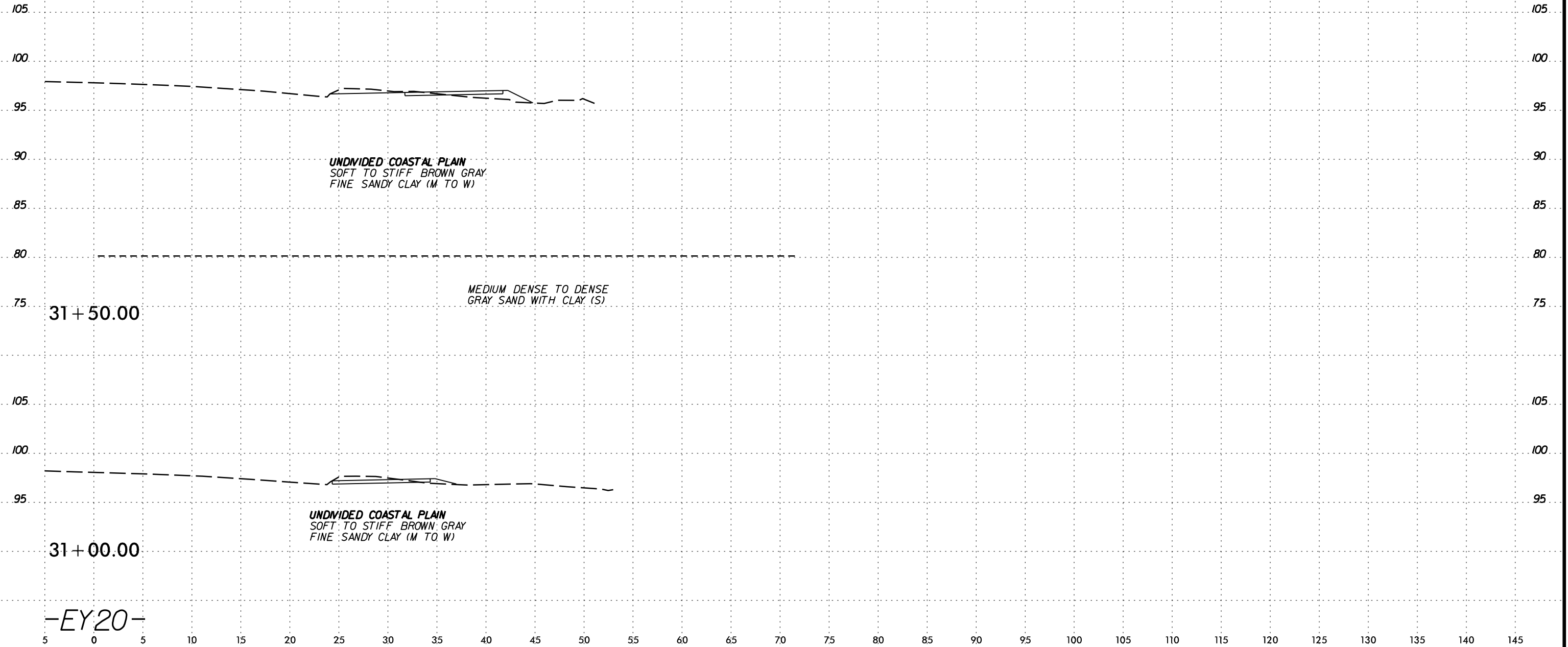


DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: AS SHOWN

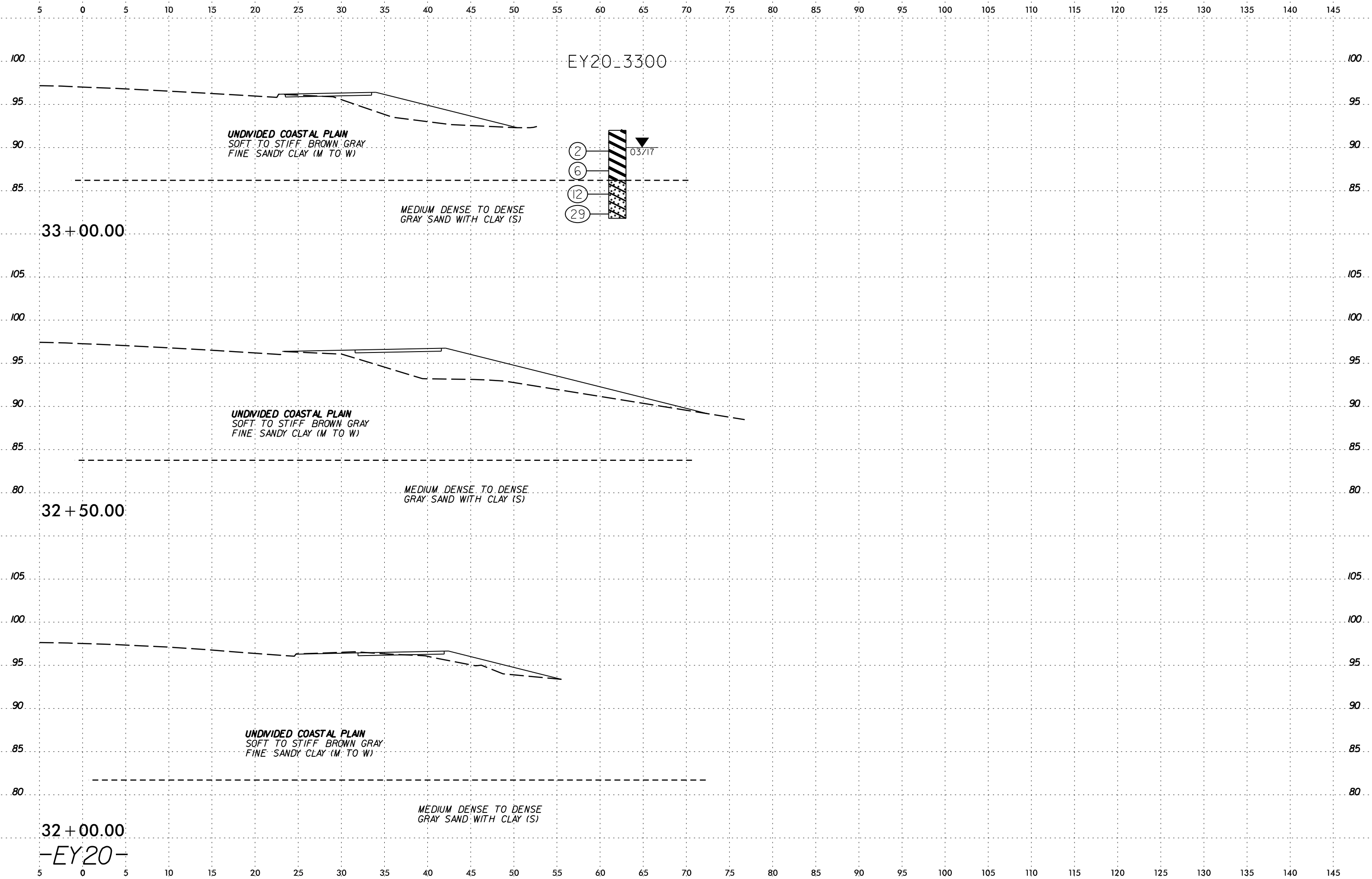
-EY 20-



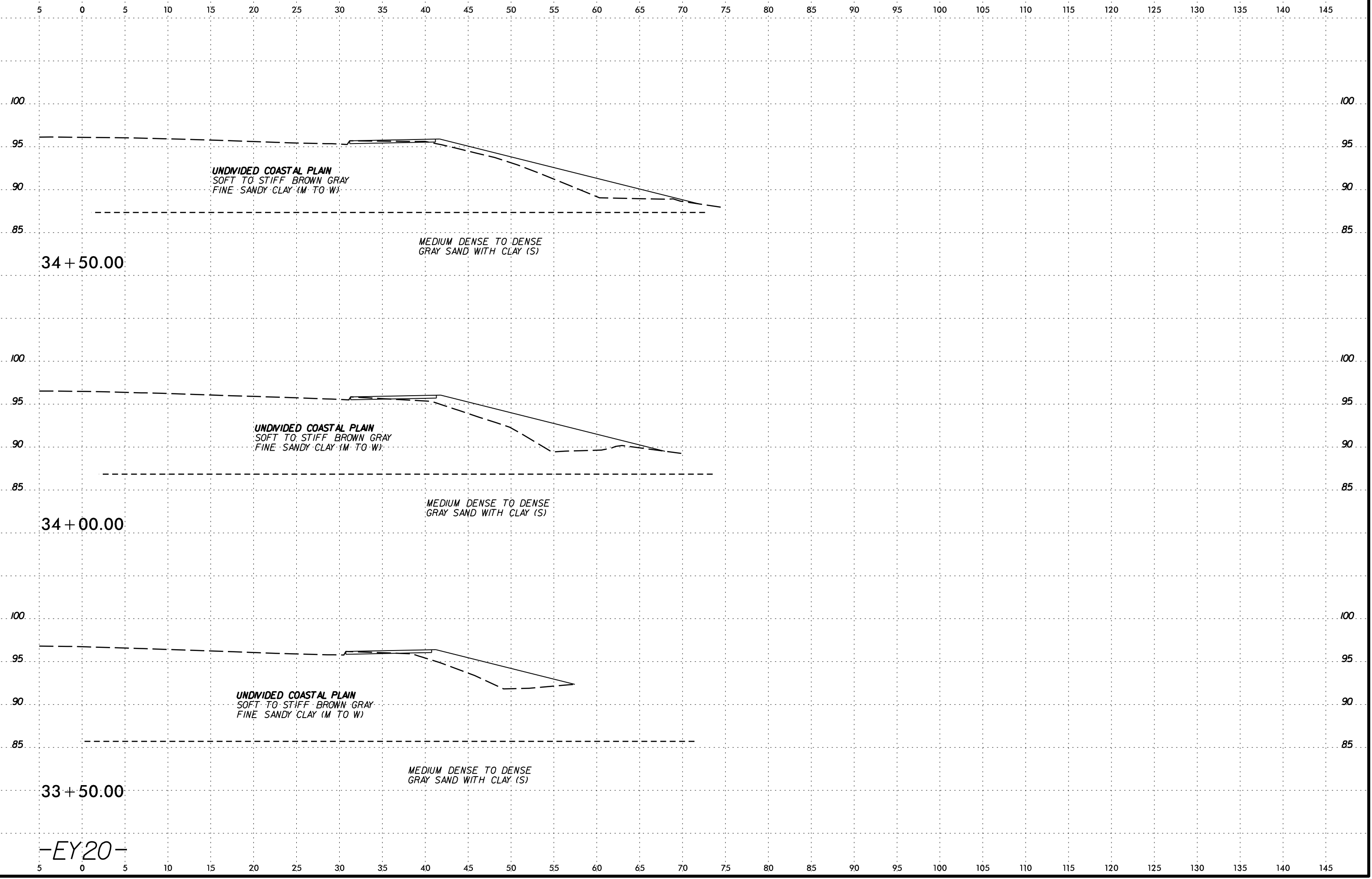
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DATE: 6/23/16
DRAWN BY: [illegible]
CHECKED BY: [illegible]
SCALE: [illegible]

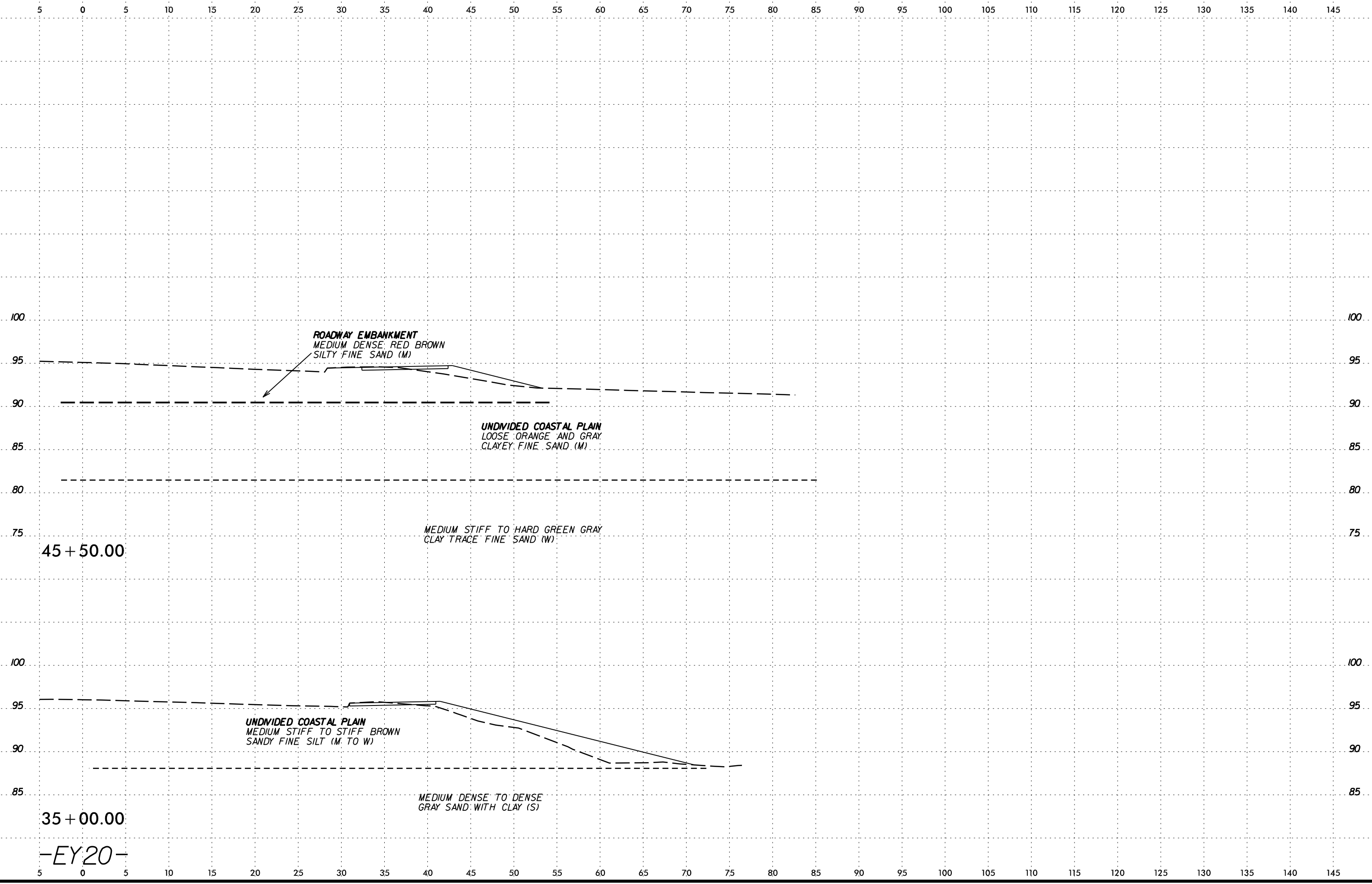


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DATE: 6/23/16
DRAWN BY: J. J. BRYAN
CHECKED BY: J. J. BRYAN
SCALE: AS SHOWN

-EY20-



ROADWAY EMBANKMENT
 MEDIUM DENSE RED BROWN
 SILTY FINE SAND (M)

UNDIVIDED COASTAL PLAIN
 LOOSE ORANGE AND GRAY
 CLAYEY FINE SAND (M)

MEDIUM STIFF TO HARD GREEN GRAY
 CLAY TRACE FINE SAND (W)

UNDIVIDED COASTAL PLAIN
 MEDIUM STIFF TO STIFF BROWN
 SANDY FINE SILT (M TO W)

MEDIUM DENSE TO DENSE
 GRAY SAND WITH CLAY (S)

45 + 50.00

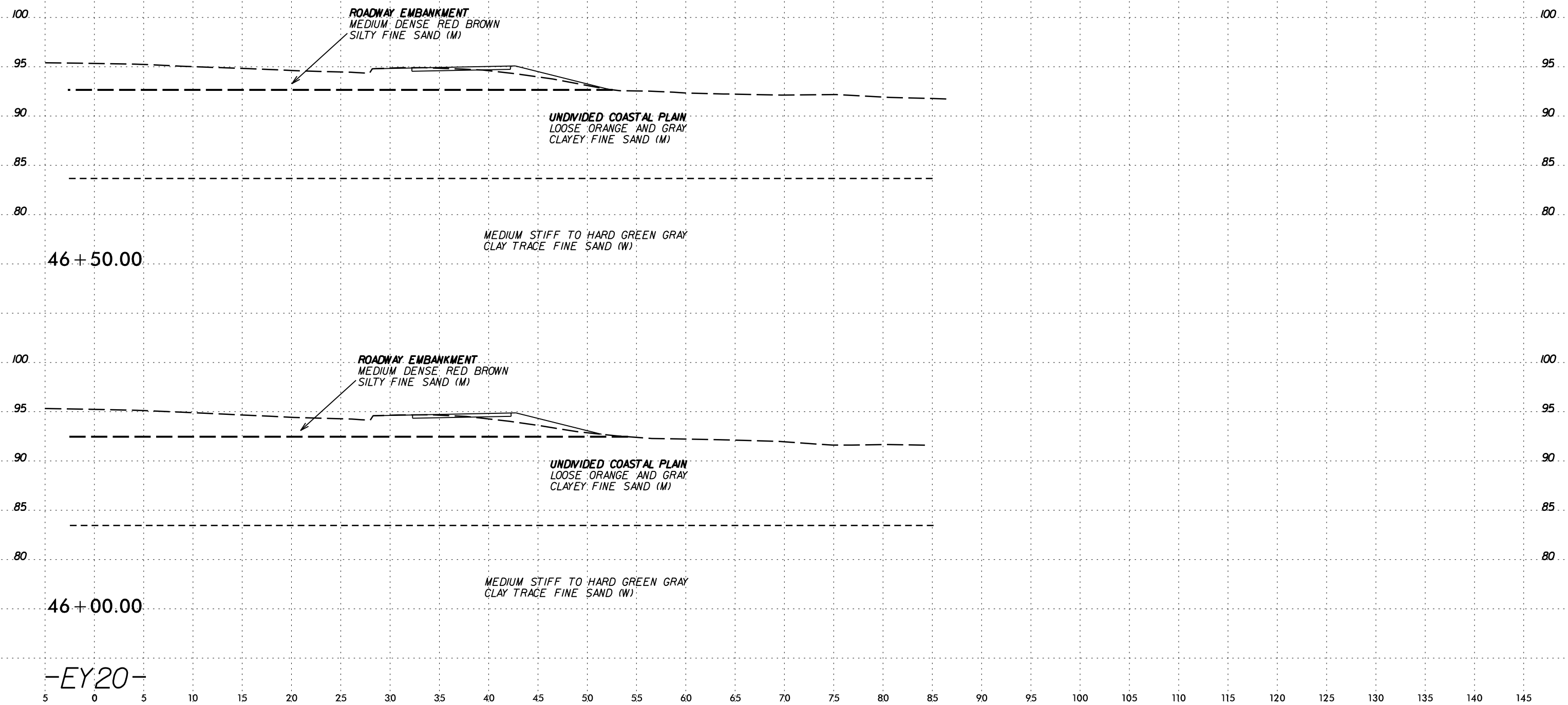
35 + 00.00

-EY 20-

DATE: 6/23/16
 DRAWN BY: [illegible]
 CHECKED BY: [illegible]
 APPROVED BY: [illegible]

6/23/16

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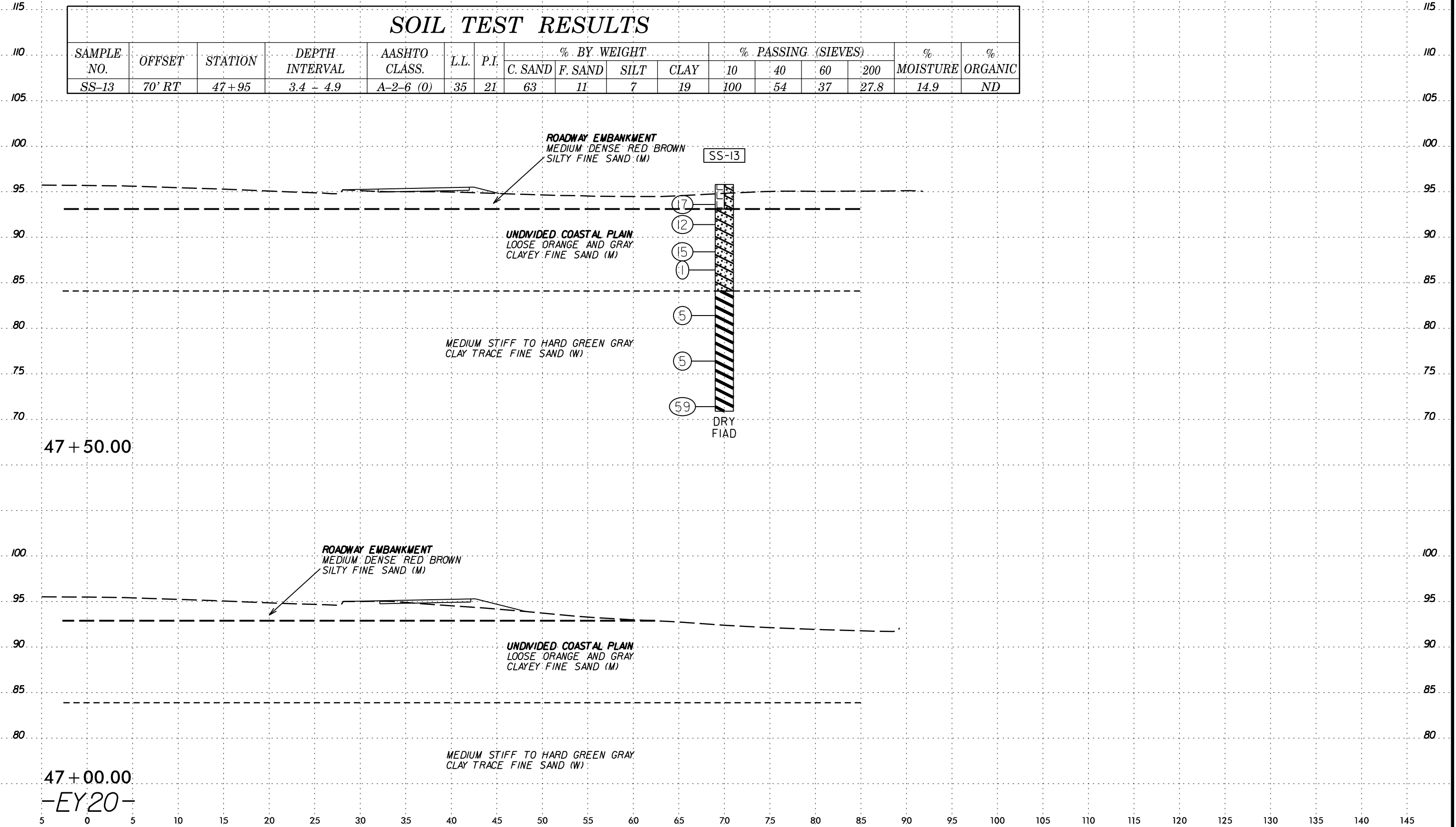
-EY20-

DATE: 6/23/16
DRAWN BY: J. BRYAN
CHECKED BY: J. BRYAN
SCALE: AS SHOWN
SHEET NO.: 55
PROJECT NO.: U-5935

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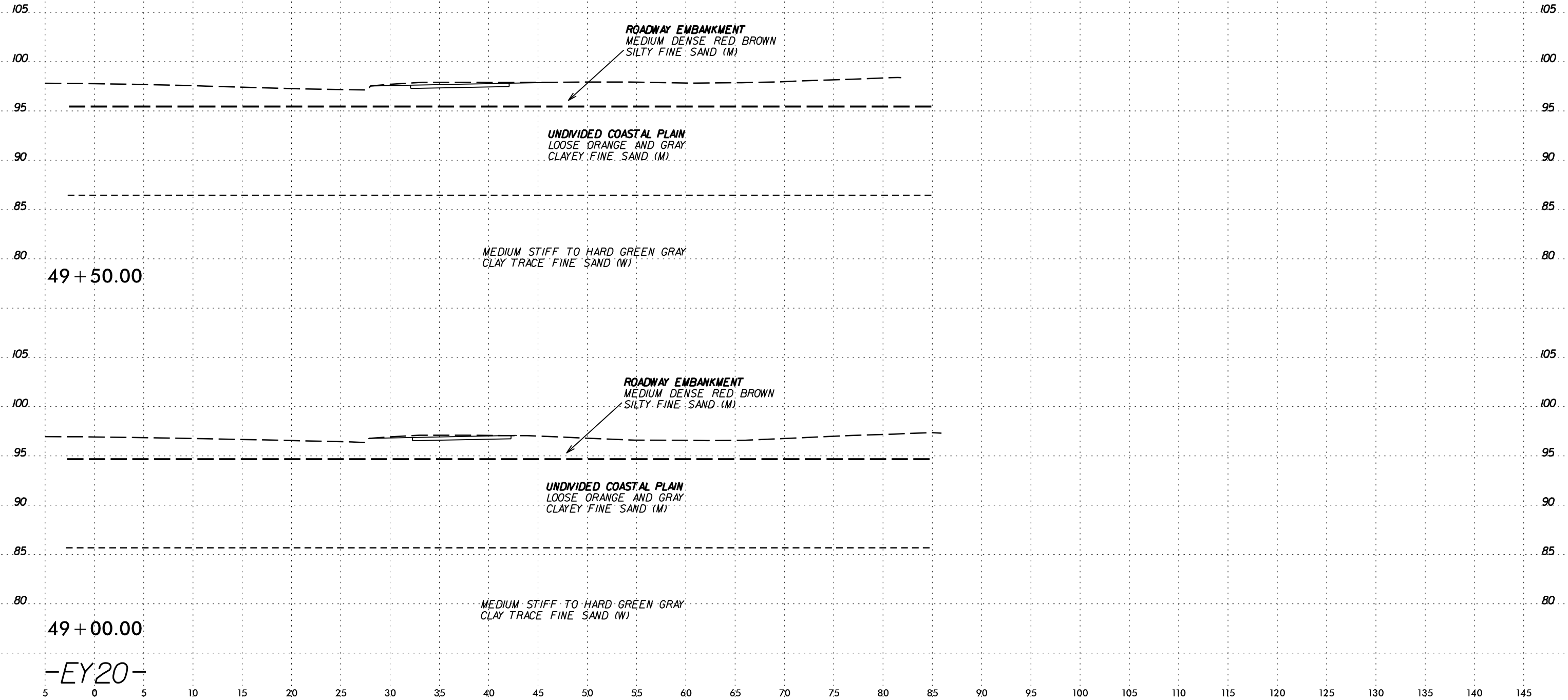
SOIL TEST RESULTS

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	60	200		
SS-13	70' RT	47+95	3.4 - 4.9	A-2-6 (0)	35	21	63	11	7	19	100	54	37	27.8	14.9	ND



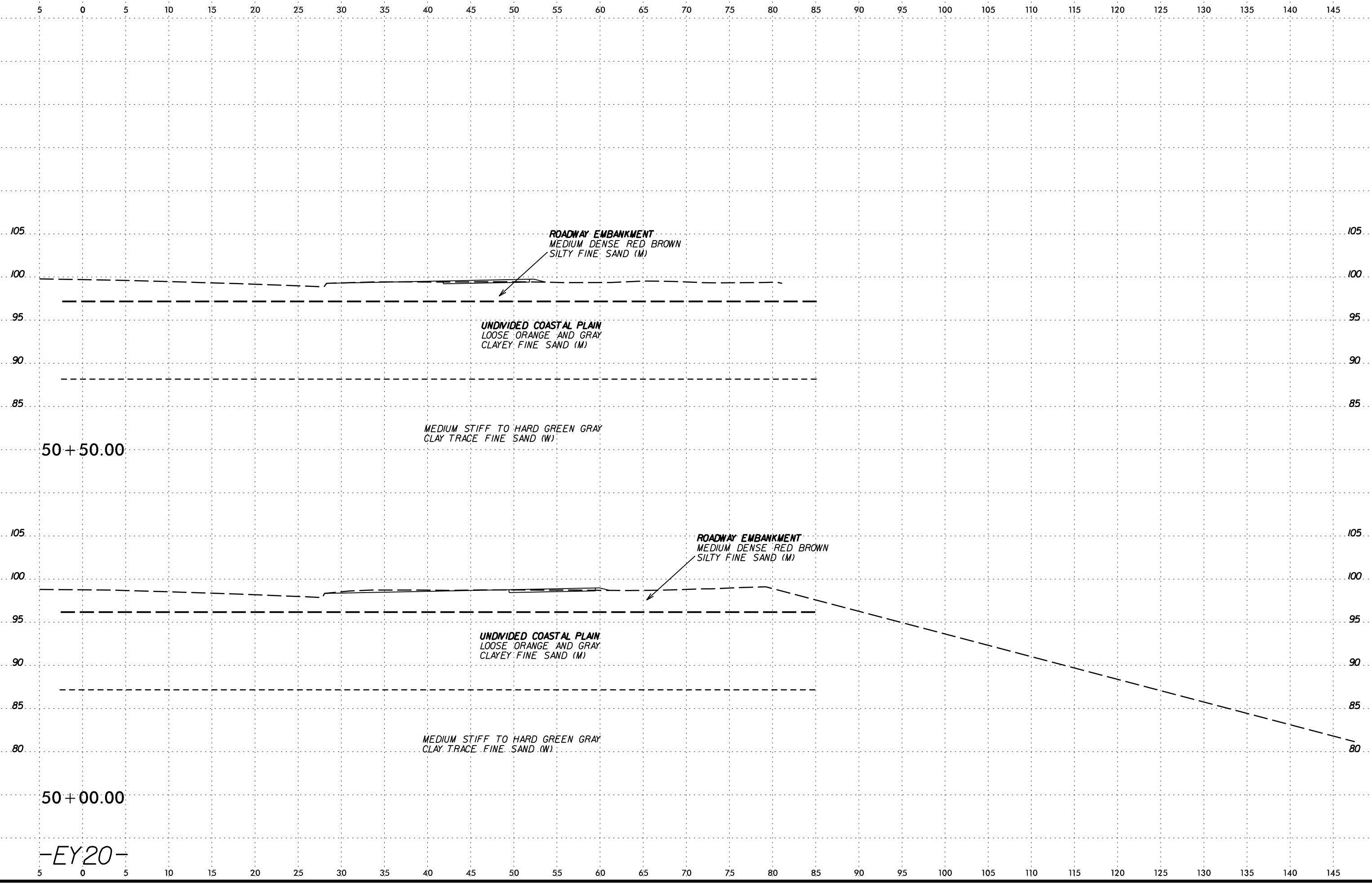
6/23/16

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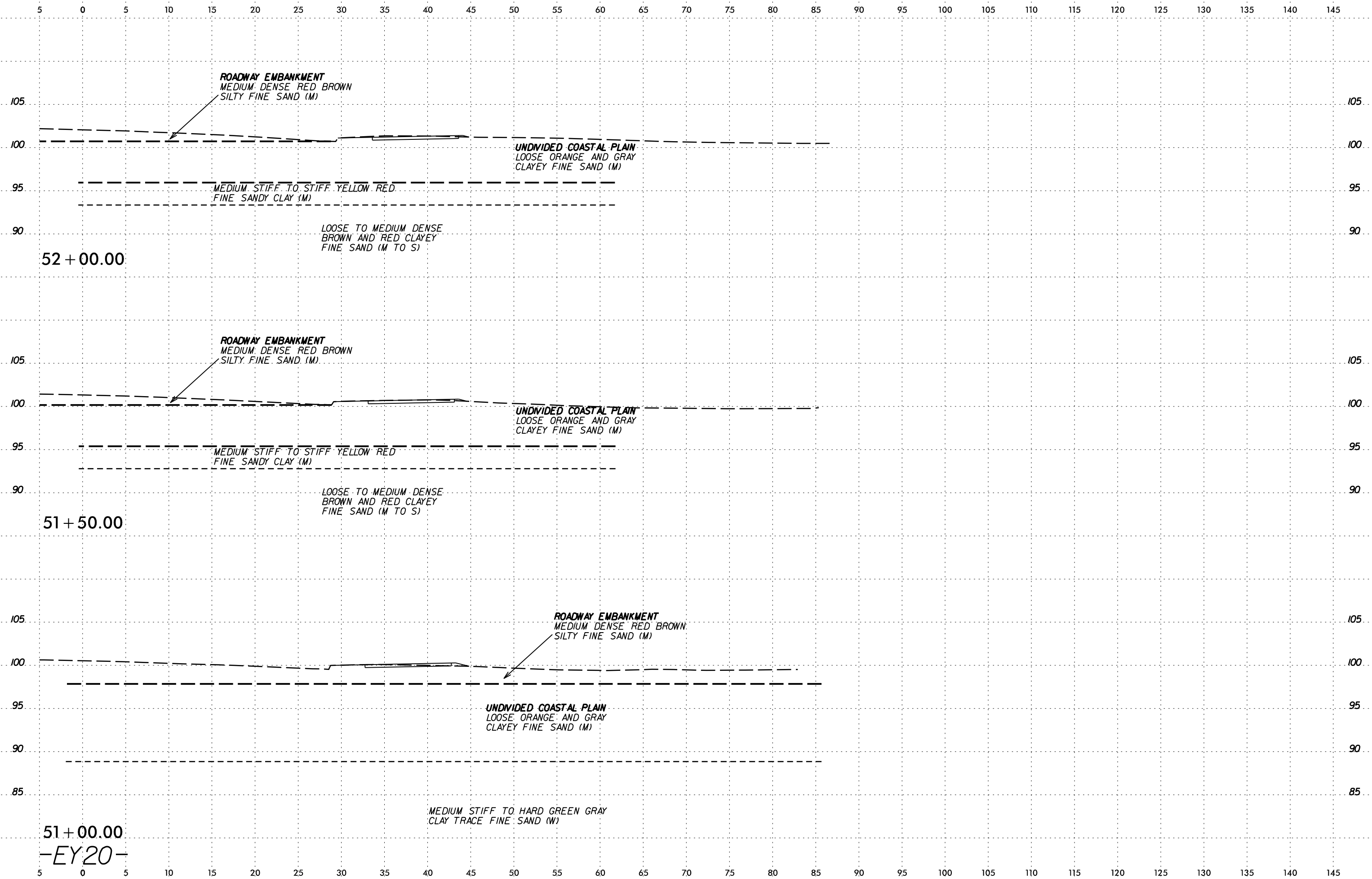


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 CHECKED BY: [illegible]
 PROJECT: U-5935
 SHEET: 57

6/23/16

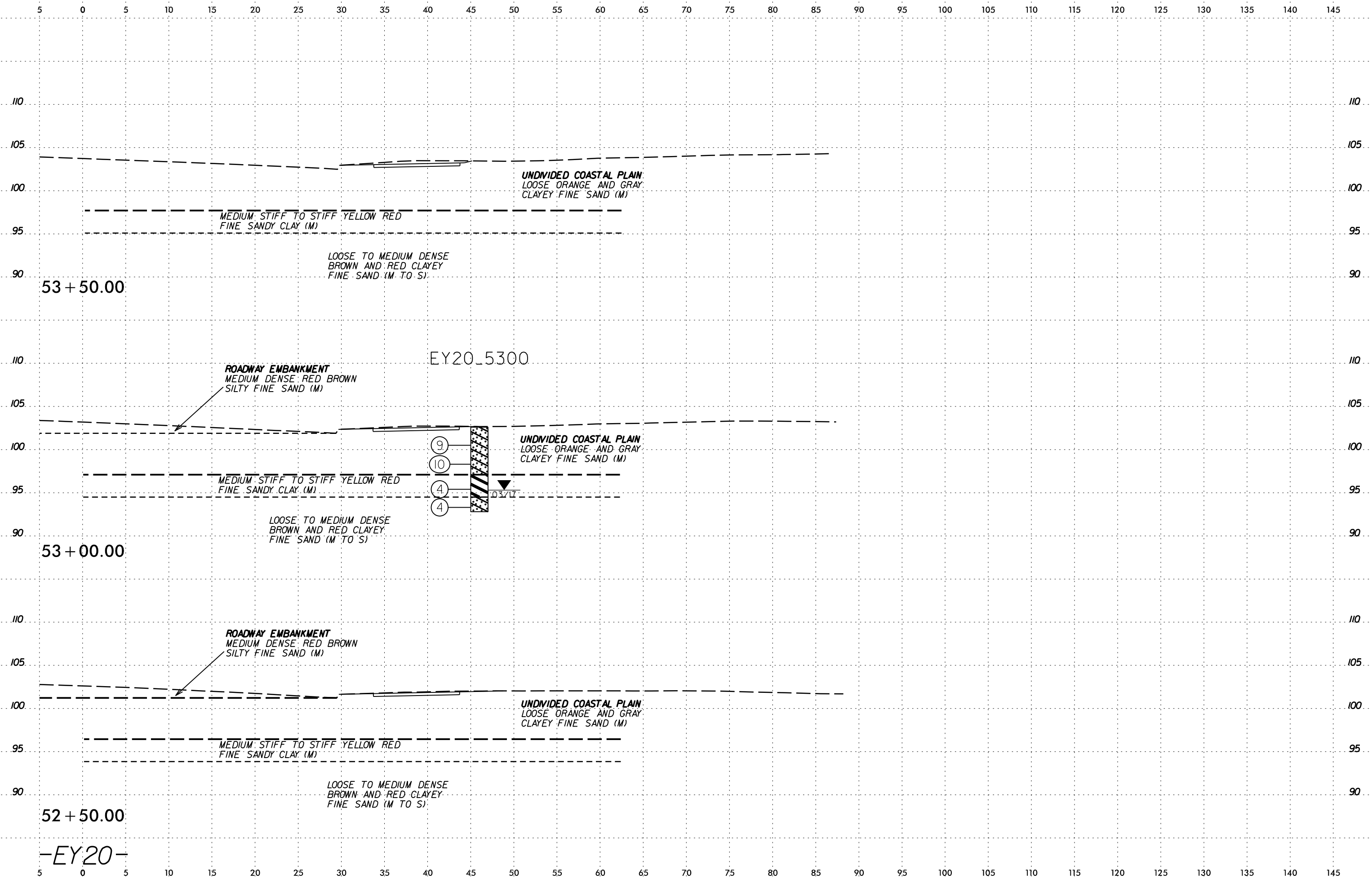


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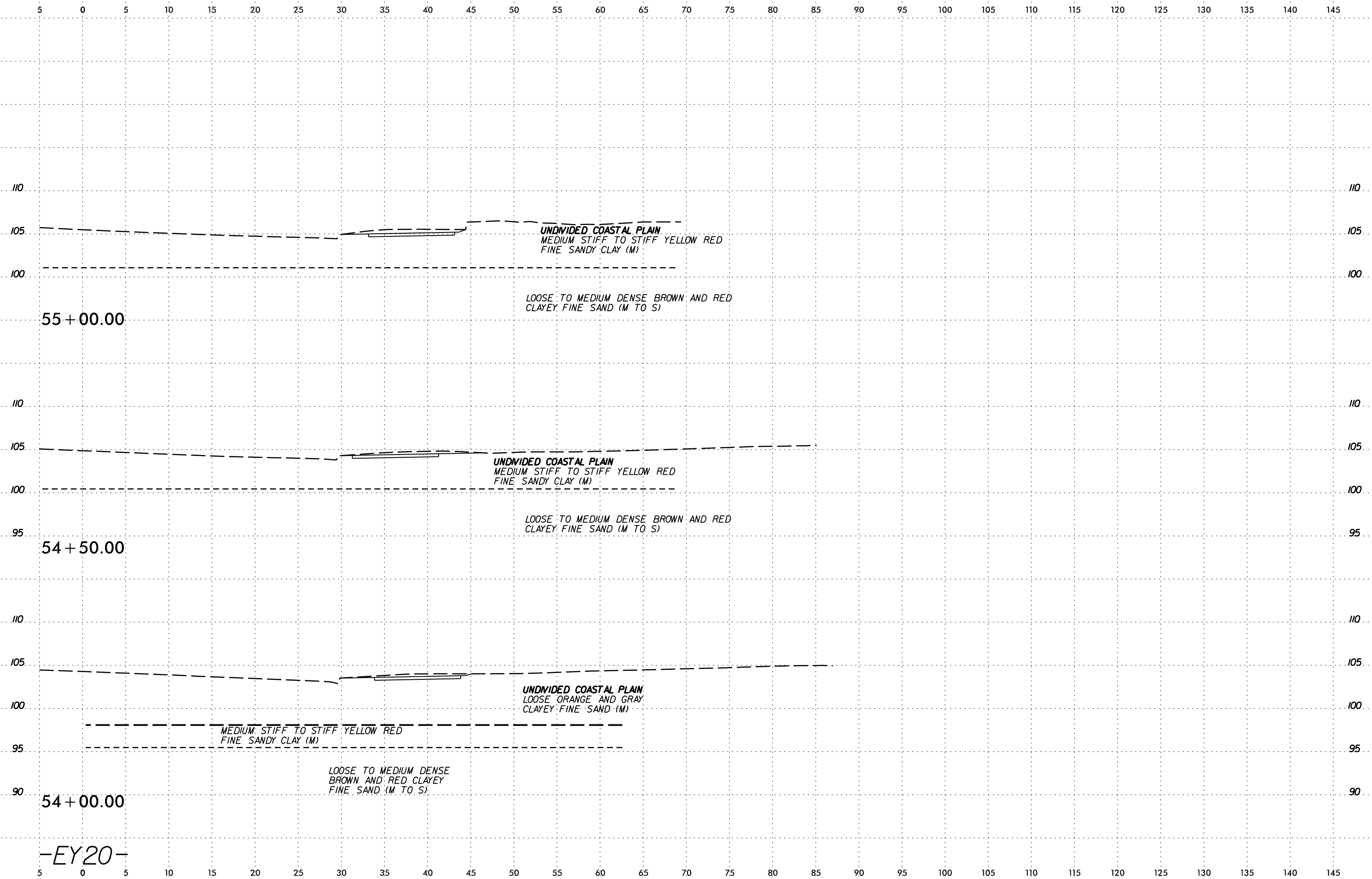


SCHEMATIC CONSTRUCTION

51+00.00
-EY 20-



DATE: 6/23/16
DRAWN BY: J. BRYAN
CHECKED BY: J. BRYAN
SCALE: AS SHOWN



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6/23/16
 COUNTY OF SAN DIEGO
 PUBLIC WORKS
 DIVISION
 1500 LA JOLLA VILLAGE DRIVE
 SAN DIEGO, CA 92161

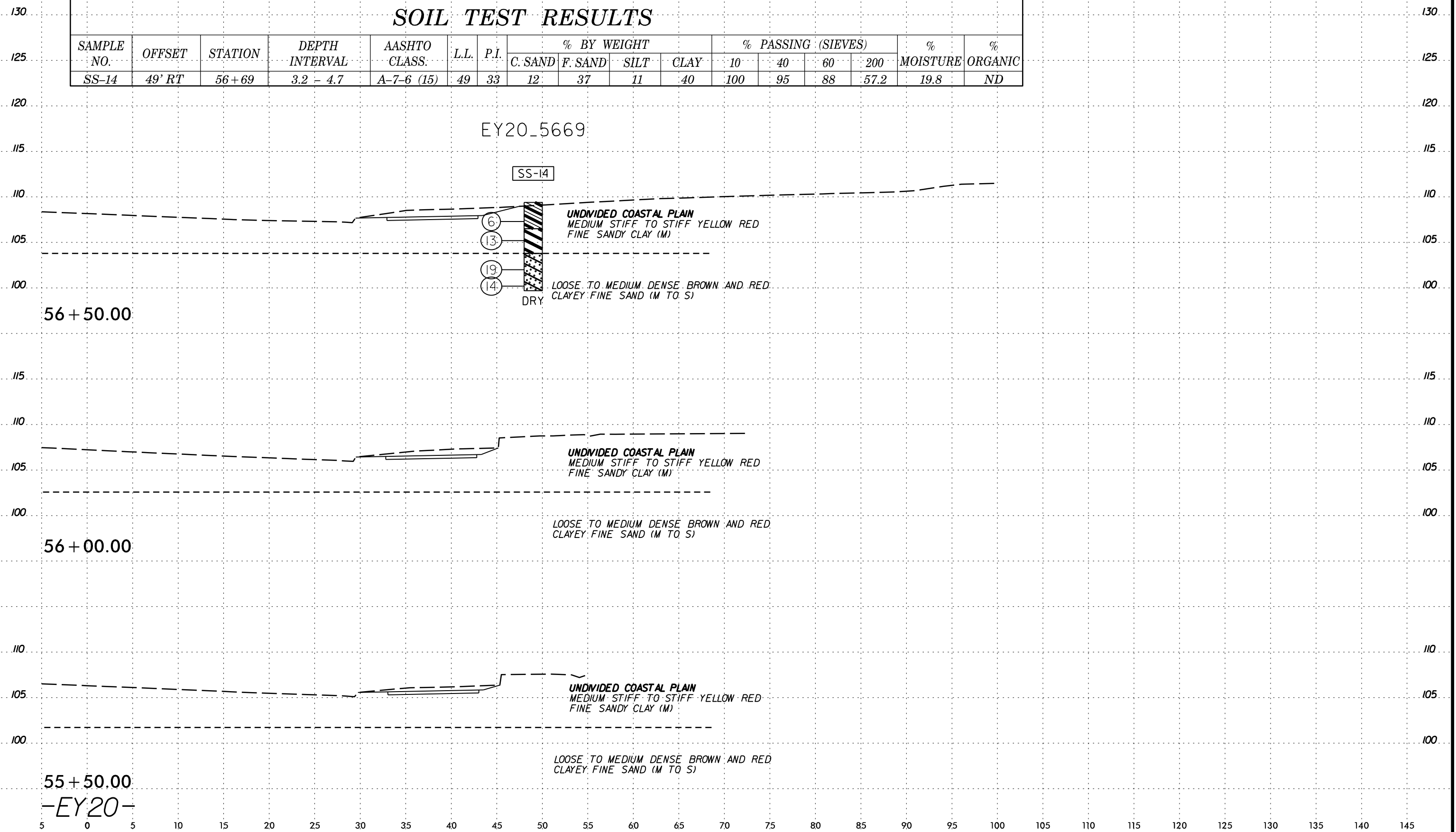
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SOIL TEST RESULTS

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	60	200		
SS-14	49' RT	56+69	3.2 - 4.7	A-7-6 (15)	49	33	12	37	11	40	100	95	88	57.2	19.8	ND

EY20_5669

SS-14



56 + 50.00

56 + 00.00

55 + 50.00
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