

REFERENCE: U-2524D

PROJECT: 34820

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

STRUCTURE
SUBSURFACE INVESTIGATION

COUNTY GUILFORD
 PROJECT DESCRIPTION GREENSBORO - WESTERN LOOP
FROM OLD BATTLEGROUND RD TO LAWNDALE DR

SITE DESCRIPTION SOUND BARRIER WALL 7: FROM
-L- 456+30 RIGHT TO SPCY8- 1+13 RIGHT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-2524D	1	8

CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THE PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

- 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

B. WORLEY, PG

J. ELLIOTT, PE

J. BARE

C. ELLINGTON

B. SMITH, PG

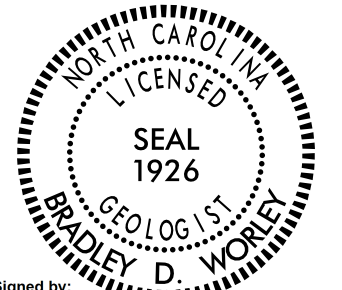
INVESTIGATED BY B. WORLEY, PG

DRAWN BY B. WORLEY, PG

CHECKED BY D. DEWEY, PE

Summit Design and Engineering Services, PLLC

DATE DECEMBER 2015



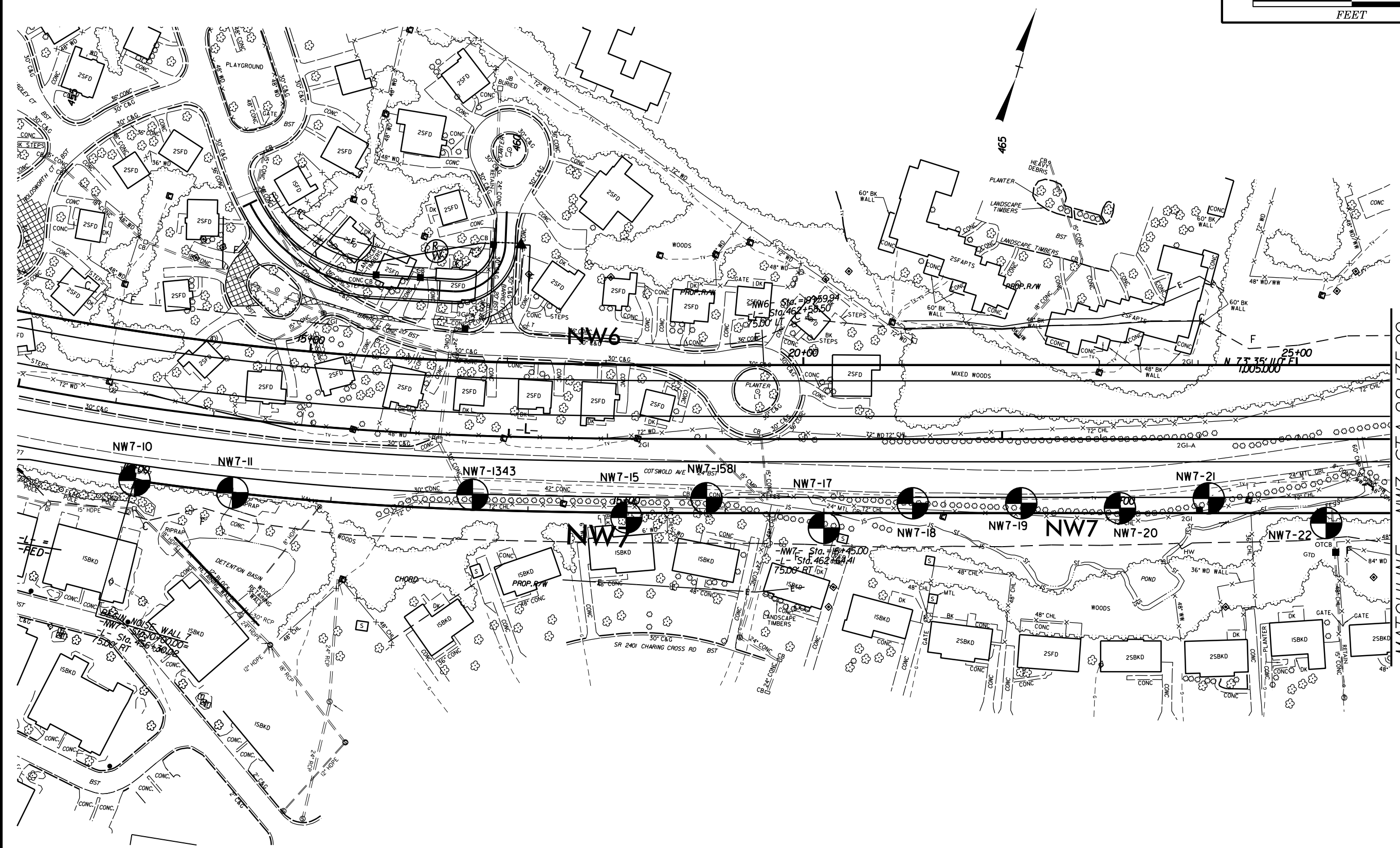
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Bradley D. Worley

1/19/2016

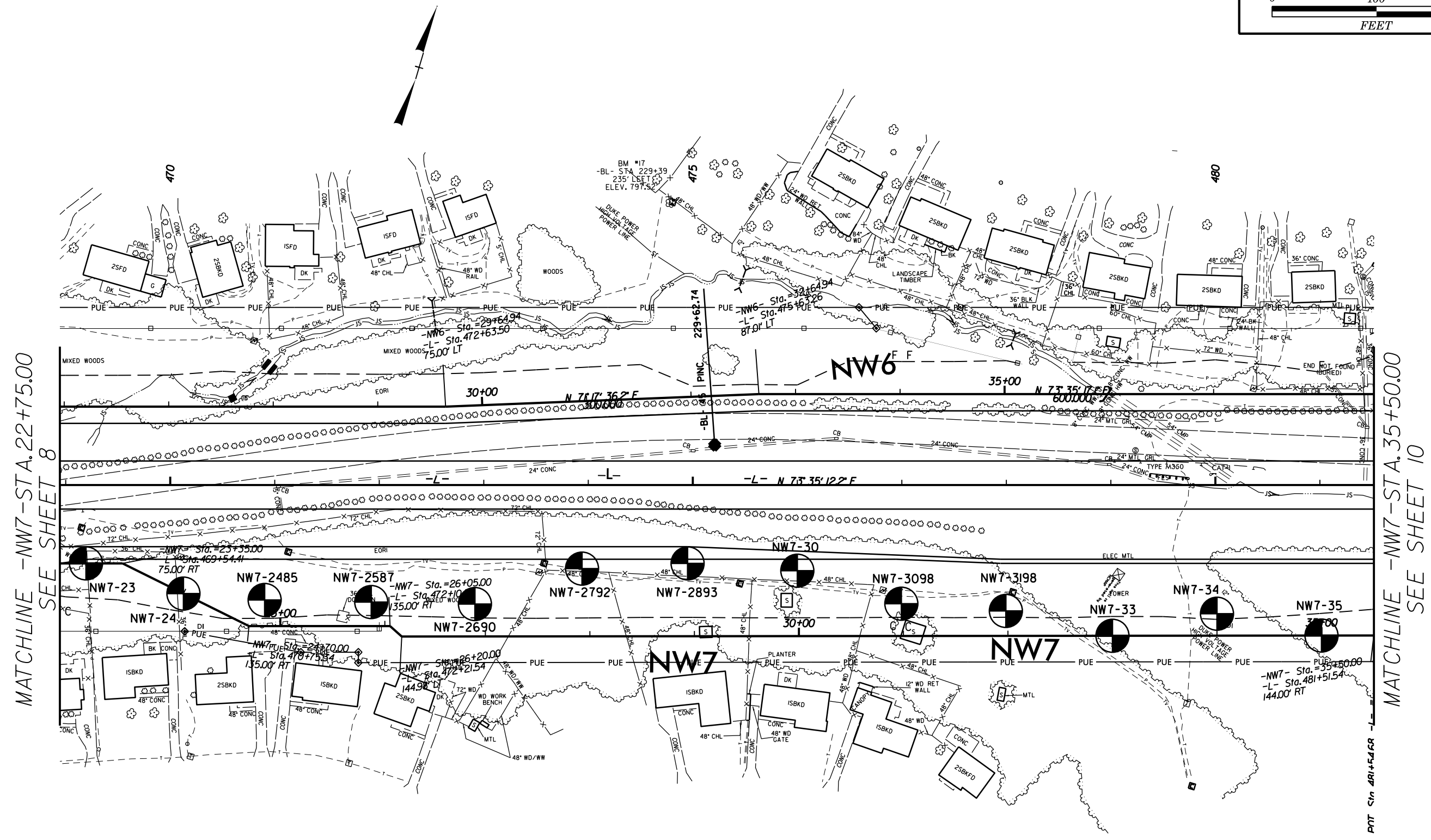
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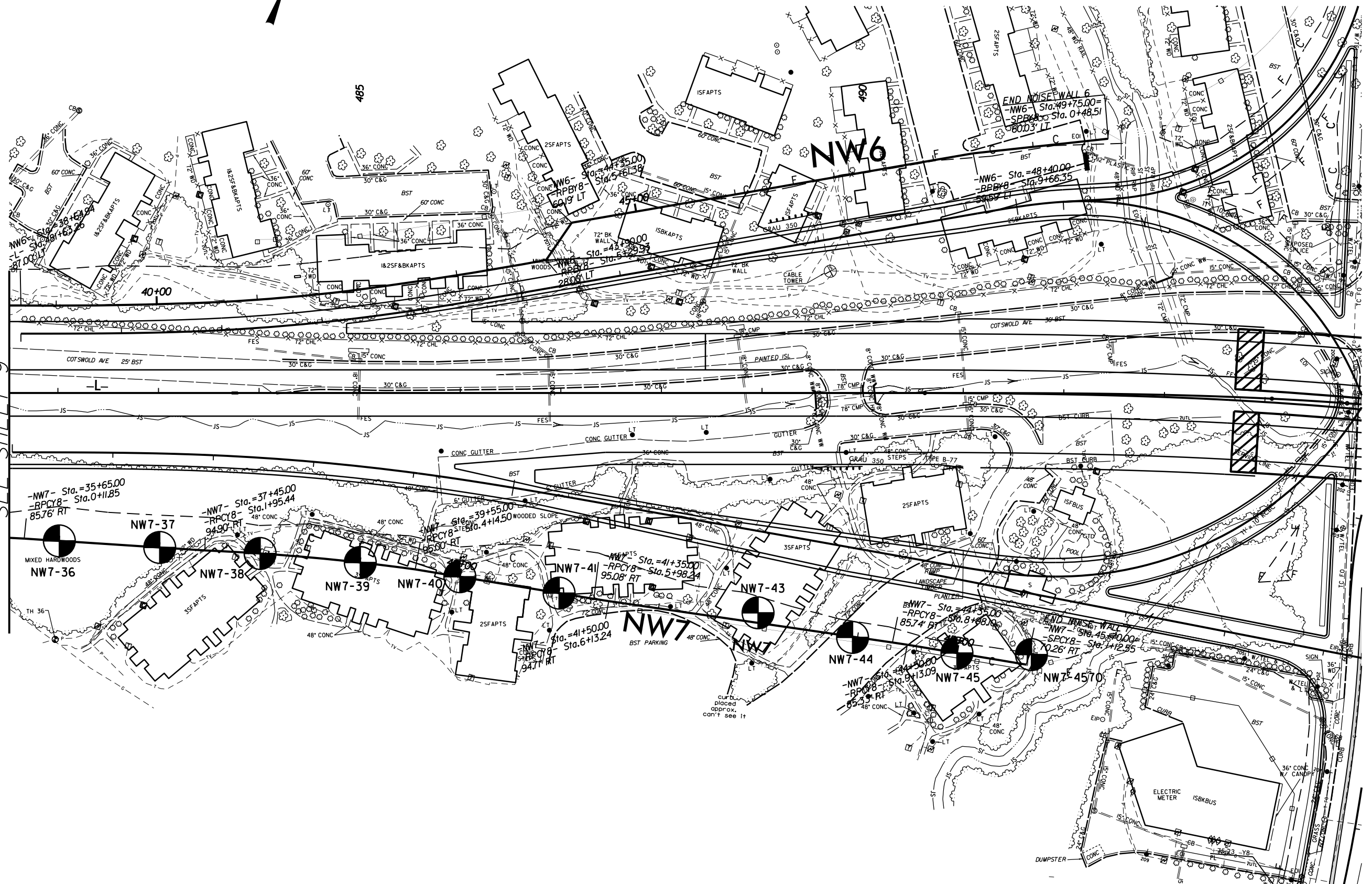
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MATCHLINE - NW7 - STA. 22+75.00
 SEE SHEET 9



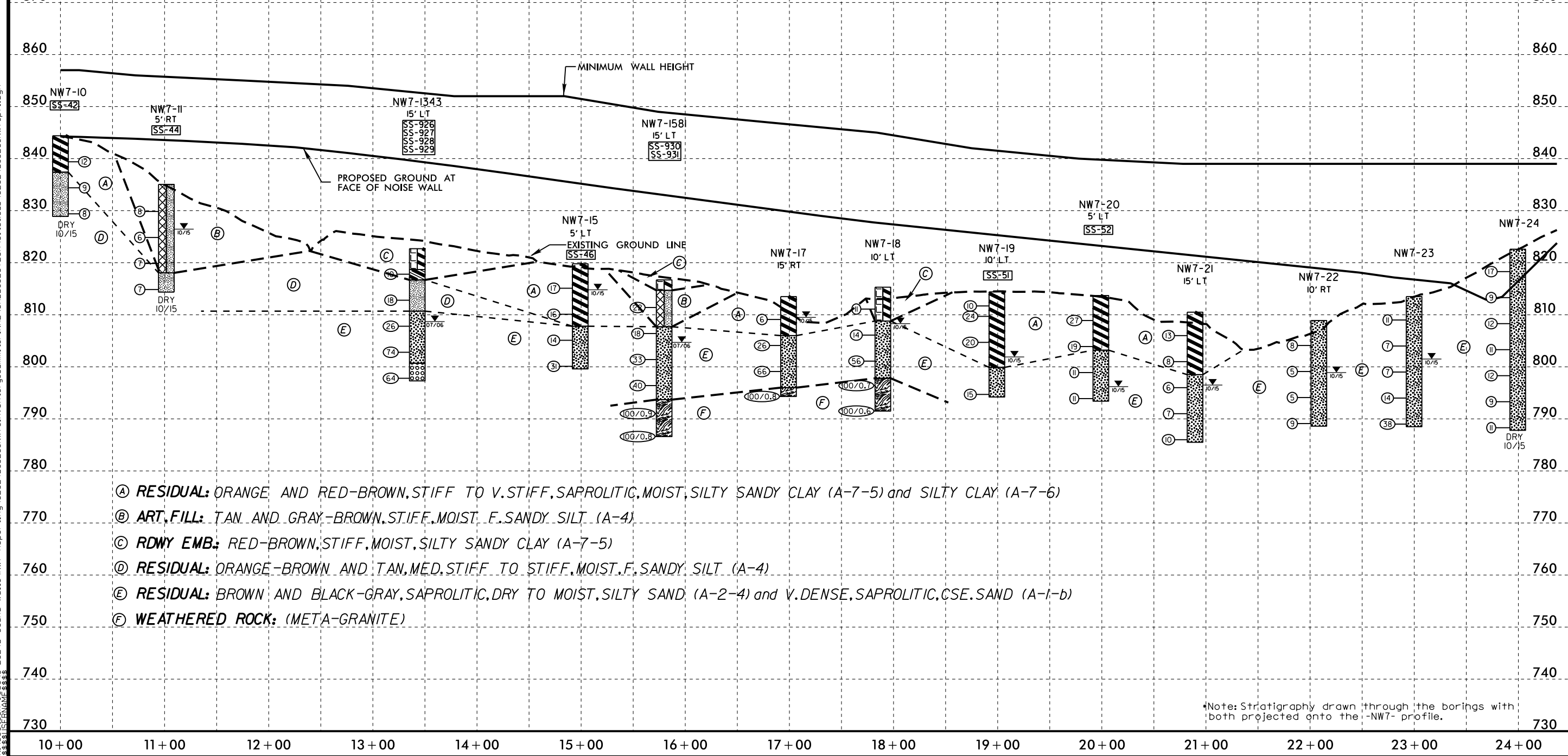
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SEE SHEET 9



SOUND BARRIER WALL 7 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-42	CL	10+00	4.0-5.5	A-7-5 (21)	62	22	5.8	19.4	20.5	54.3	100	97	79	36.6	NA
SS-44	5' RT	11+00	4.2-5.7	A-4 (1)	40	6	36.0	23.1	26.5	14.4	90	66	46	25.1	NA
SS-926	15' LT	13+43	3.9-5.4	A-6 (4)	32	14	28.0	23.4	16.1	32.5	95	78	50	N/A	N/A
SS-927	15' LT	13+43	8.9-10.4	A-4 (1)	25	9	29.9	25.6	18.1	26.4	95	76	48	N/A	N/A
SS-928	15' LT	13+43	13.9-15.4	A-2-4 (0)	34	NP	42.7	33.9	19.3	4.1	80	56	24	N/A	N/A
SS-929	15' LT	13+43	23.9-25.4	A-1-b (0)	30	NP	55.1	27.6	13.2	4.1	74	43	16	N/A	N/A
SS-46	5' RT	15+00	8.7-10.2	A-7-6 (14)	42	23	21.0	18.5	20.1	40.4	99	85	69	18.3	NA
SS-930	15' LT	15+81	4.3-5.8	A-4 (1)	26	10	32.5	30.5	14.6	22.4	95	76	40	N/A	N/A
SS-931	15' LT	15-81	9.3-10.8	A-2-4 (0)	38	9	40.9	29.5	15.4	14.2	83	61	29	N/A	N/A
SS-51	10' LT	19+00	3.7-5.2	A-7-6 (23)	62	35	15.5	15.2	16.5	52.8	97	87	67	23.2	N/A
SS-52	5' LT	20+00	8.8-10.3	A-7-6 (23)	59	32	15.1	14.7	15.4	54.8	92	83	71	22.7	N/A



- (A) RESIDUAL: ORANGE AND RED-BROWN, STIFF TO V. STIFF, SAPROLITIC, MOIST, SILTY SANDY CLAY (A-7-5) and SILTY CLAY (A-7-6)
- (B) ART. FILL: TAN AND GRAY-BROWN, STIFF, MOIST, F. SANDY SILT (A-4)
- (C) RDWY EMB.: RED-BROWN, STIFF, MOIST, SILTY SANDY CLAY (A-7-5)
- (D) RESIDUAL: ORANGE-BROWN AND TAN, MED. STIFF TO STIFF, MOIST, F. SANDY SILT (A-4)
- (E) RESIDUAL: BROWN AND BLACK-GRAY, SAPROLITIC, DRY TO MOIST, SILTY SAND (A-2-4) and V. DENSE, SAPROLITIC, CSE. SAND (A-1-b)
- (F) WEATHERED ROCK: (META-GRANITE)

Note: Stratigraphy drawn through the borings with both projected onto the -NW7- profile.

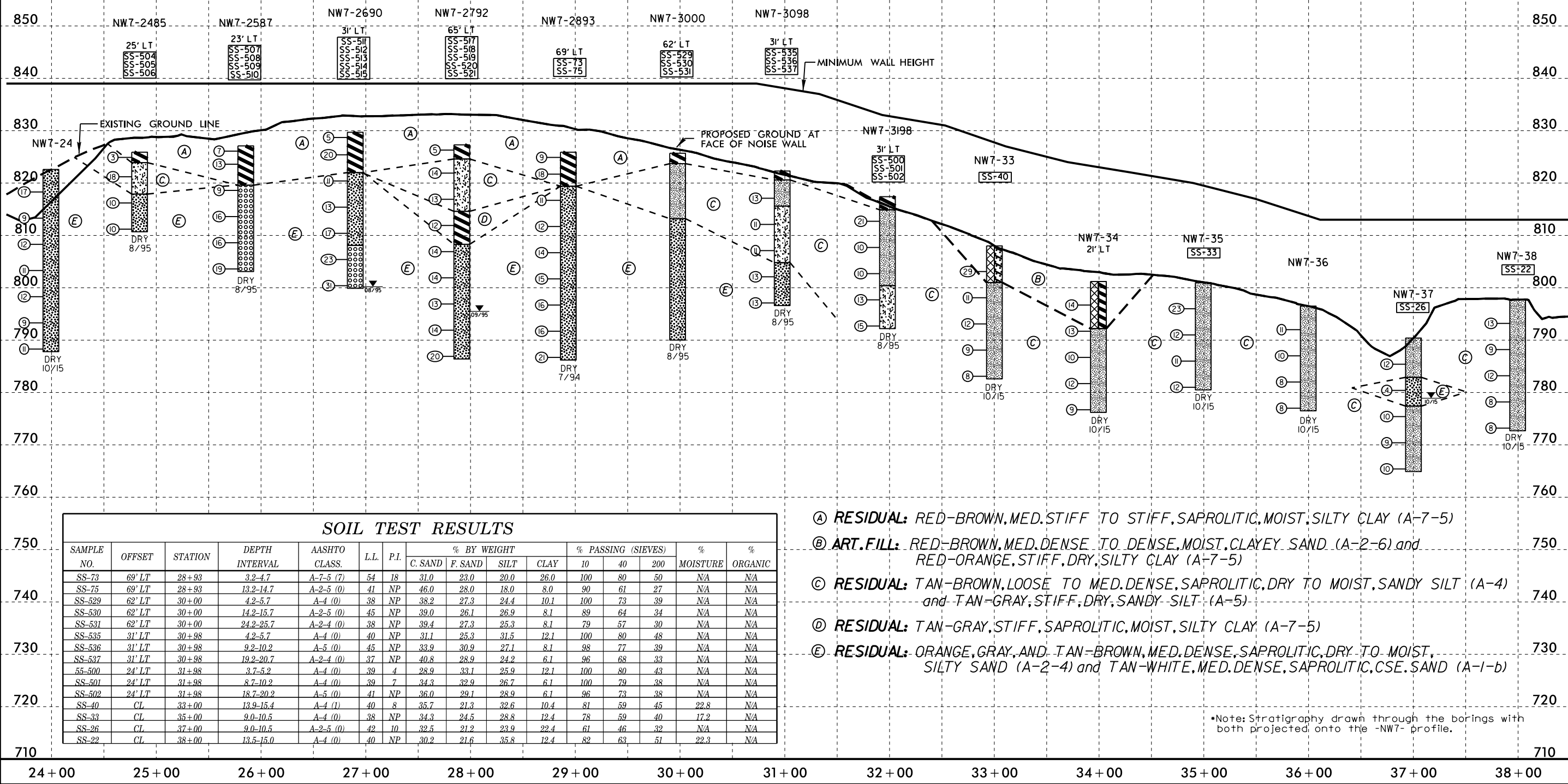
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PROJECT REFERENCE NO. U-2524D	SHEET NO. 7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOUND BARRIER WALL 7 PROFILE

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-504	25' LT	24+85	0.0-1.5	A-7-6 (9)	45	18	22.2	20.0	19.4	38.4	96	80	58	N/A	N/A
SS-505	25' LT	24+85	3.7-5.2	A-5 (0)	42	NP	34.7	28.1	19.0	18.2	97	74	40	N/A	N/A
SS-506	25' LT	24+85	8.7-10.2	A-2-5 (0)	41	NP	41.8	30.7	21.4	6.1	81	58	26	N/A	N/A
SS-507	23' LT	25+87	0.0-1.5	A-7-5 (15)	54	21	17.8	15.8	18.0	48.5	100	88	69	N/A	N/A
SS-508	23' LT	25+87	2.5-4.0	A-7-5 (4)	51	13	29.1	26.7	22.0	22.2	97	77	47	N/A	N/A
SS-509	23' LT	25+87	7.5-9.0	A-1-b (0)	43	NP	48.9	25.5	21.6	4.0	77	48	23	N/A	N/A
SS-510	23' LT	25+87	17.5-19.0	A-1-b (0)	37	NP	50.3	23.8	19.8	6.1	73	45	22	N/A	N/A
SS-511	31' LT	26+90	0.0-1.5	A-7-6 (11)	42	18	19.8	16.0	17.8	46.5	100	86	67	N/A	N/A
SS-512	31' LT	26+90	3.3-4.8	A-7-5 (14)	56	21	17.8	22.6	29.3	30.3	100	87	64	N/A	N/A
SS-513	31' LT	26+90	8.3-9.8	A-2-5 (0)	44	NP	40.8	28.1	23.0	8.1	96	68	33	N/A	N/A
SS-514	31' LT	26+90	18.3-19.8	A-2-4 (0)	29	NP	40.4	33.5	22.0	4.0	77	58	24	N/A	N/A
SS-515	31' LT	26+90	23.3	A-1-b (0)	32	NP	44.2	28.9	22.8	4.0	73	49	23	N/A	N/A
SS-517	65' LT	27+92	0.0-1.5	A-7-6 (15)	49	25	18.4	17.0	18.2	46.5	97	84	65	N/A	N/A
SS-518	65' LT	27+92	4.4-5.9	A-5 (0)	42	NP	34.5	31.1	22.2	12.1	97	76	38	N/A	N/A
SS-519	65' LT	27+92	14.5-15.9	A-7-5 (5)	48	14	28.5	25.1	32.3	14.1	98	79	50	N/A	N/A
SS-520	65' LT	27+92	19.4-20.9	A-2-5 (0)	41	NP	38.6	29.5	23.8	8.1	89	66	31	N/A	N/A
SS-521	65' LT	27+92	24.4-25.9	A-4 (0)	38	NP	41.1	28.7	23.8	6.1	81	55	28	N/A	N/A



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-73	69' LT	28+93	3.2-4.7	A-7-5 (7)	54	18	31.0	23.0	20.0	26.0	100	80	50	N/A	N/A
SS-75	69' LT	28+93	13.2-14.7	A-2-5 (0)	41	NP	46.0	28.0	18.0	8.0	90	61	27	N/A	N/A
SS-529	62' LT	30+00	4.2-5.7	A-4 (0)	38	NP	38.2	27.3	24.4	10.1	100	73	39	N/A	N/A
SS-530	62' LT	30+00	14.2-15.7	A-2-5 (0)	45	NP	39.0	26.1	26.9	8.1	89	64	34	N/A	N/A
SS-531	62' LT	30+00	24.2-25.7	A-2-4 (0)	38	NP	39.4	27.3	25.3	8.1	79	57	30	N/A	N/A
SS-535	31' LT	30+98	4.2-5.7	A-4 (0)	40	NP	31.1	25.3	31.5	12.1	100	80	48	N/A	N/A
SS-536	31' LT	30+98	9.2-10.2	A-5 (0)	45	NP	33.9	30.9	27.1	8.1	98	77	39	N/A	N/A
SS-537	31' LT	30+98	19.2-20.7	A-2-4 (0)	37	NP	40.8	28.9	24.2	6.1	96	68	33	N/A	N/A
SS-500	24' LT	31+98	3.7-5.2	A-4 (0)	39	4	28.9	33.1	25.9	12.1	100	80	43	N/A	N/A
SS-501	24' LT	31+98	8.7-10.2	A-4 (0)	39	7	34.3	32.9	26.7	6.1	100	79	38	N/A	N/A
SS-502	24' LT	31+98	18.7-20.2	A-5 (0)	41	NP	36.0	29.1	28.9	6.1	96	73	38	N/A	N/A
SS-40	CL	33+00	13.9-15.4	A-4 (1)	40	8	35.7	21.3	32.6	10.4	81	59	45	22.8	N/A
SS-33	CL	35+00	9.0-10.5	A-4 (0)	38	NP	34.3	24.5	28.8	12.4	78	59	40	17.2	N/A
SS-26	CL	37+00	9.0-10.5	A-2-5 (0)	42	10	32.5	21.2	23.9	22.4	61	46	32	N/A	N/A
SS-22	CL	38+00	13.5-15.0	A-4 (0)	40	NP	30.2	21.6	35.8	12.4	82	63	51	22.3	N/A

- Ⓐ RESIDUAL: RED-BROWN, MED. STIFF TO STIFF, SAPROLITIC, MOIST, SILTY CLAY (A-7-5)
- Ⓑ ART. FILL: RED-BROWN, MED. DENSE TO DENSE, MOIST, CLAYEY SAND (A-2-6) and RED-ORANGE, STIFF, DRY, SILTY CLAY (A-7-5)
- Ⓒ RESIDUAL: TAN-BROWN, LOOSE TO MED. DENSE, SAPROLITIC, DRY TO MOIST, SANDY SILT (A-4) and TAN-GRAY, STIFF, DRY, SANDY SILT (A-5)
- Ⓓ RESIDUAL: TAN-GRAY, STIFF, SAPROLITIC, MOIST, SILTY CLAY (A-7-5)
- Ⓔ RESIDUAL: ORANGE, GRAY, AND TAN-BROWN, MED. DENSE, SAPROLITIC, DRY TO MOIST, SILTY SAND (A-2-4) and TAN-WHITE, MED. DENSE, SAPROLITIC, CSE. SAND (A-1-b)

*Note: Stratigraphy drawn through the borings with both projected onto the -NW7- profile.

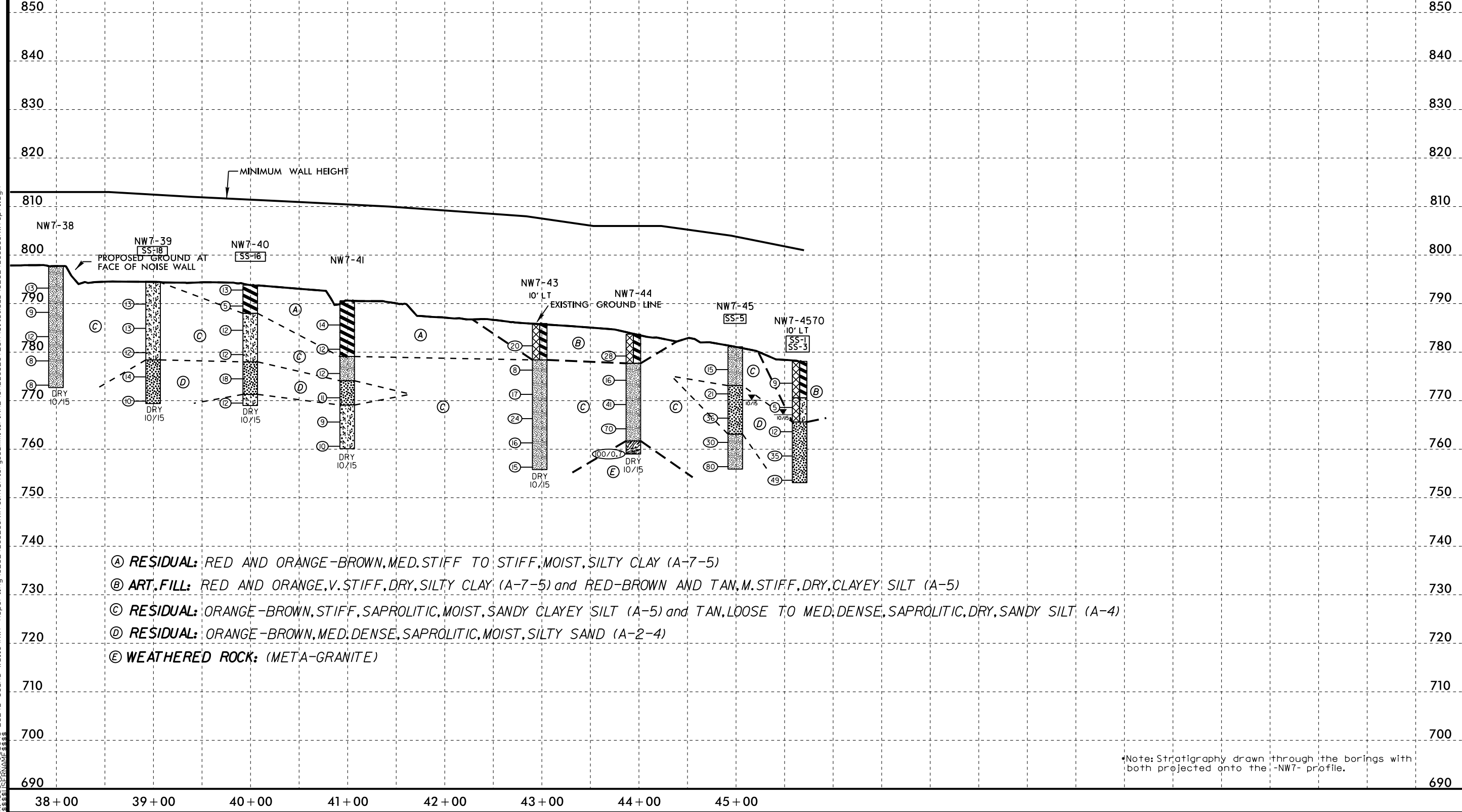
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SOUND BARRIER WALL 7 PROFILE

PROJECT REFERENCE NO. U-2524D	SHEET NO. 8
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SOIL TEST RESULTS															
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	LL	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C. SAND	F. SAND	SILT	CLAY	10	40	200		
SS-18	CL	39+00	13.6-15.1	A-5 (0)	44	NP	33.0	25.8	30.8	10.4	96	74	40	20.5	NA
SS-16	CL	40+00	8.3-9.8	A-5 (0)	42	NP	30.4	22.8	32.4	14.4	88	68	49	22.3	NA
SS-5	CL	45+00	8.7-10.2	A-2-4 (0)	35	NP	25.9	48.6	19.3	6.2	100	88	29	NA	NA
SS-1	10' LT	45+70	3.5-5.0	A-7-6 (16)	56	24	14.2	20.6	20.8	44.4	91	83	67	25.2	NA
SS-3	10' LT	45+70	13.5-15.0	A-2-4 (0)	28	NP	33.1	34.1	25.6	7.2	97	76	31	NA	NA



- Ⓐ **RESIDUAL:** RED AND ORANGE-BROWN, MED. STIFF TO STIFF, MOIST, SILTY CLAY (A-7-5)
- Ⓑ **ART. FILL:** RED AND ORANGE, V. STIFF, DRY, SILTY CLAY (A-7-5) and RED-BROWN AND TAN, M. STIFF, DRY, CLAYEY SILT (A-5)
- Ⓒ **RESIDUAL:** ORANGE-BROWN, STIFF, SAPROLITIC, MOIST, SANDY CLAYEY SILT (A-5) and TAN, LOOSE TO MED. DENSE, SAPROLITIC, DRY, SANDY SILT (A-4)
- Ⓓ **RESIDUAL:** ORANGE-BROWN, MED. DENSE, SAPROLITIC, MOIST, SILTY SAND (A-2-4)
- Ⓔ **WEATHERED ROCK:** (META-GRANITE)

Note: Stratigraphy drawn through the borings with both projected onto the -NW7- profile.