

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

PLAN AND PROFILE OF RECONSTRUCTION OF ATLANTIC AVENUE AND RELATED WORK

IN THE CITY/TOWN OF
HULL
PLYMOUTH COUNTY

FEDERAL AID PROJECT NO.

HULL ATLANTIC AVENUE			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	43
PROJECT FILE NO.		601607	

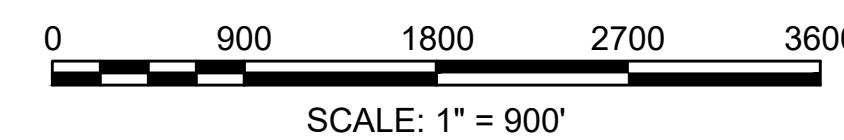
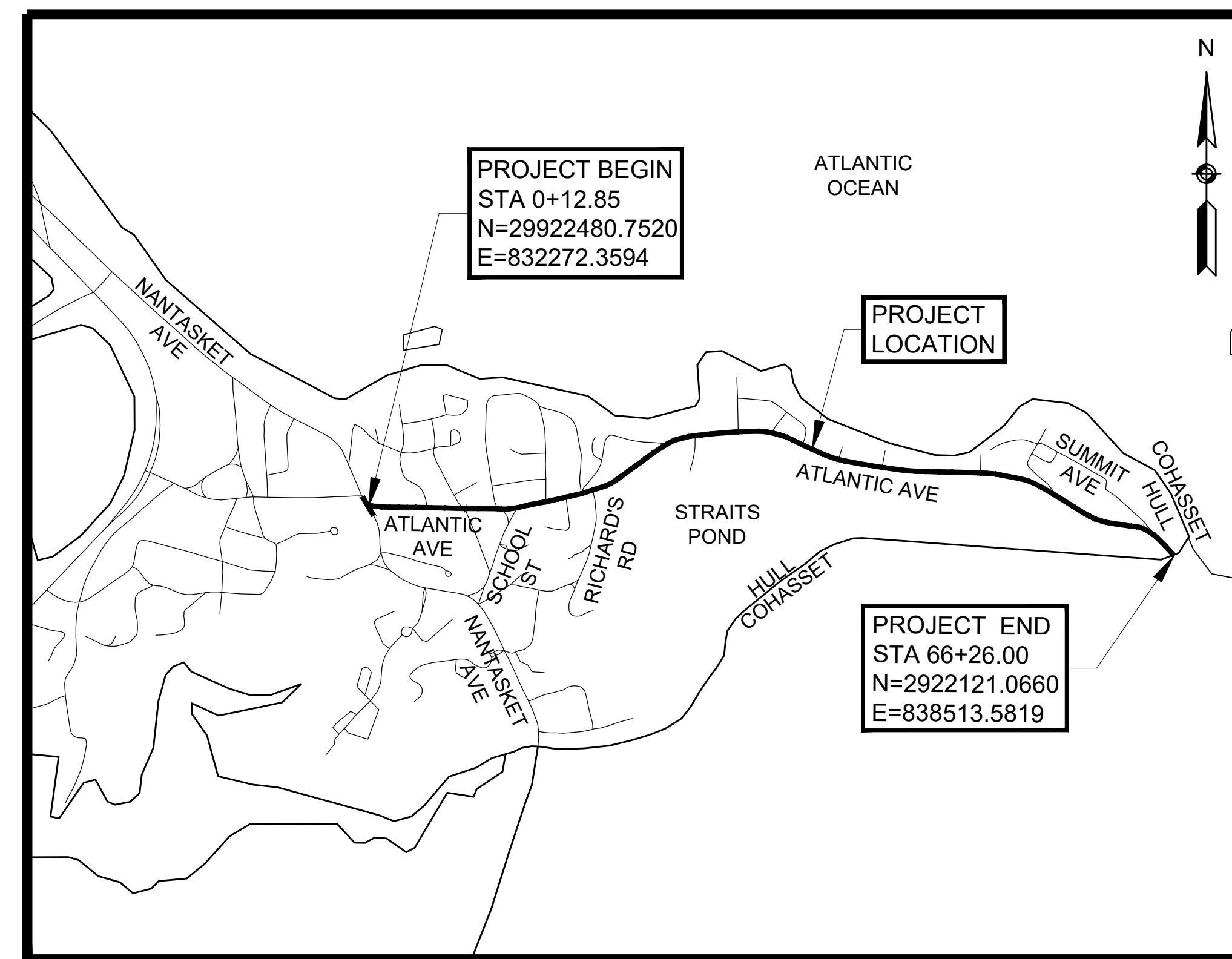
TITLE SHEET & INDEX

NOTICE OF INTENT
PERMITTING PLANS
SEPTEMBER 28, 2020

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 2020, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS, (AS RELATED TO TRAFFIC STANDARD DETAILS ONLY), THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

NOTICE OF INTENT PLANS

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LENGTH OF PROJECT = 6607.15 FEET = 1.251 MILES



141 Longwater Drive
Norwell, MA 02061
Main: (781) 982-5400 www.chacompanies.com

DATE	DESCRIPTION	REV #
9/28/2020	NOTICE OF INTENT FILING	-

GENERAL SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists symbols for utility poles, manholes, catch basins, and various boundaries.

TRAFFIC SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists symbols for traffic signals, detectors, cameras, and pedestrian buttons.

PAVEMENT MARKINGS SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists symbols for pavement arrows, stop lines, crosswalks, and various line styles.

ABBREVIATIONS

Table with columns: GENERAL, DESCRIPTION. Lists abbreviations for traffic volume, materials, and construction terms.

Table titled 'HULL ATLANTIC AVENUE' showing project statistics: STATE (MA), FED. AID PROJ. NO. (-), SHEET NO. (2), TOTAL SHEETS (43), PROJECT FILE NO. (601607).

LEGEND & ABBREVIATIONS

Table titled 'ABBREVIATIONS (cont.)' with columns: GENERAL, DESCRIPTION. Lists abbreviations for points of tangency, manholes, and various engineering terms.

GENERAL NOTES

- ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH MASSDOT AND THE TOWN OF HULL STANDARD DETAILS AND SPECIFICATIONS.
- SUBSURFACE OBSERVABLE INFORMATION SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA COMPANIES ON OR BETWEEN NOVEMBER AND DECEMBER 2009.
- PROPERTY LINE INFORMATION SHOWN HERE IS COMPILED FROM VARIOUS SOURCES AND DOES NOT REPRESENT A PROPERTY LINE RETRACEMENT SURVEY. ALL DEED REFERENCES ARE TO WORCESTER COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.
- TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON NAVD 88 VERTICAL DATUM. TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY.

IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
- LOCATIONS OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD AND DIG-SAFE FIELD MARKINGS. RIM AND INVERT INFORMATION HAS BEEN COMPILED AND FIELD VERIFIED WHERE POSSIBLE. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, CONTACT DIG-SAFE AT (1-800-344-7233) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTIBILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- THE CONTRACTOR WILL COORDINATE ALL PRIVATE CASTINGS AND POLES THAT ARE TO BE ADJUSTED, RESET OR RELOCATED WITH THE APPROPRIATE UTILITY PURVEYOR. THE RELOCATION, INSTALLATION OR REMOVAL OF PRIVATE UTILITIES SHALL BE ACCOMPLISHED BY THEIR OWNER. THE CONTRACTOR SHALL COOPERATE WITH THE PRIVATE UTILITY PURVEYORS AND ALLOW THEM ADEQUATE TIME TO COMPLETE THEIR WORK IN ADVANCE OF PERFORMING ANY PAVING OPERATIONS OR OTHER FINISH WORK.
- THE CONTRACTOR SHALL MAKE DETERMINATIONS OF SUBSURFACE CONDITIONS, INCLUDING THE LOCATION OF ROCK AND THE ACTUAL LOCATION OF UTILITIES OR OTHER FEATURES WHICH MAY AFFECT THE WORK.

- 6' LENGTH GRANITE TRANSITION CURBS SHALL BE INSTALLED WHERE PROPOSED GRANITE CURB ENDS AND HMA BERM OR NO EDGE TREATMENT BEGINS.
- THE CONTRACTOR SHALL CAUSE AS LITTLE INTERFERENCE AND INCONVENIENCE TO ADJUTERS AS POSSIBLE. THE CONTRACTOR SHALL MAINTAIN SAFE AND CONVENIENT ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
- THE FLOW OF TRAFFIC THROUGH CONSTRUCTION ZONES IN EXISTING PUBLIC WAYS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SPECIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
- ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- A MINIMUM OF 4" LOAM AND SEED SHALL BE PLACED AS NOTED ON THE PLANS AND ON DISTURBED AREAS.
- THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR THAT IS BASED ON HIS BEST KNOWLEDGE, INFORMATION, AND BELIEF, FORMULATED IN ACCORDANCE WITH COMMONLY ACCEPTED PROCEDURES CONSISTENT WITH APPLICABLE STANDARDS OF PRACTICE, AND AS SUCH IT CONSTITUTES NEITHER A GUARANTEE NOR WARRANTY, EITHER EXPRESS OR IMPLIED. THE CERTIFICATIONS SHOWN ARE NOT CERTIFICATIONS TO THE TITLE OF OWNERSHIP OF THE PROPERTIES SHOWN.
- PLAN REFERENCES:
PLYMOUTH COUNTY LAYOUT 1894, PLYMOUTH COUNTY LAYOUT 1904, PLYMOUTH COUNTY DECREE PLAN 1010, LAND COURT PLAN 2595G, PLAN BK 3 PAGE 197, PLAN BK 4 PAGE 979, PLAN BK N PAGE 59, PLAN BK 419 PAGE 189, PLAN BK 4 PAGE 388, PLAN BK 48 PAGE 912, PLAN BK 10 PAGE 112, PLAN BK 35 PAGE 728, PLAN BK 38 PAGE 1128, PLAN BK 15 PAGE 695, PLAN BK 3 PAGE 649, UNRECORDED PLAN ON FILE AT THE TOWN OF HULL CLERKS OFFICE.
- WETLAND FLAGS SHOWN HERE ON ARE BASED ON A FIELD DELINEATION BY CHA CONSULTING, INC. DURING OCTOBER 2009.
- FOR OTHER NOTES, REFER TO SPECIFIC PLANS AND DETAILS.

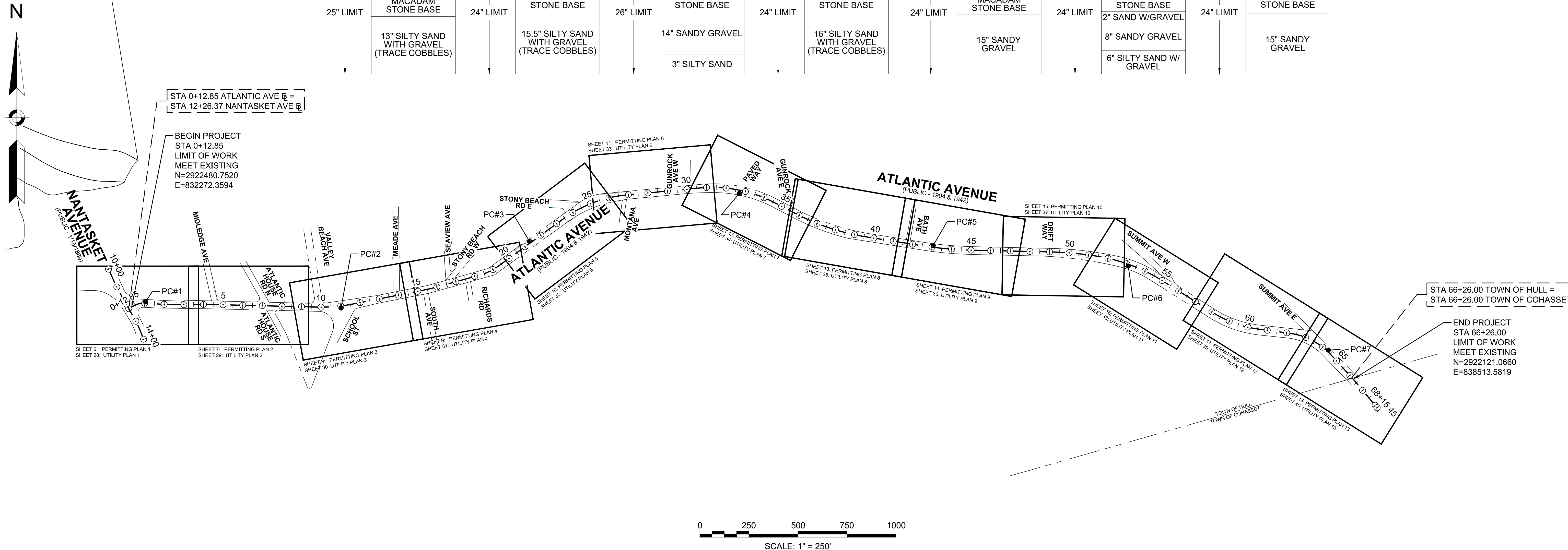
**HULL
ATLANTIC AVENUE**

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MA	-	3	43
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KEY PLAN & BORING LOCATIONS

PAVEMENT CORE LOGS

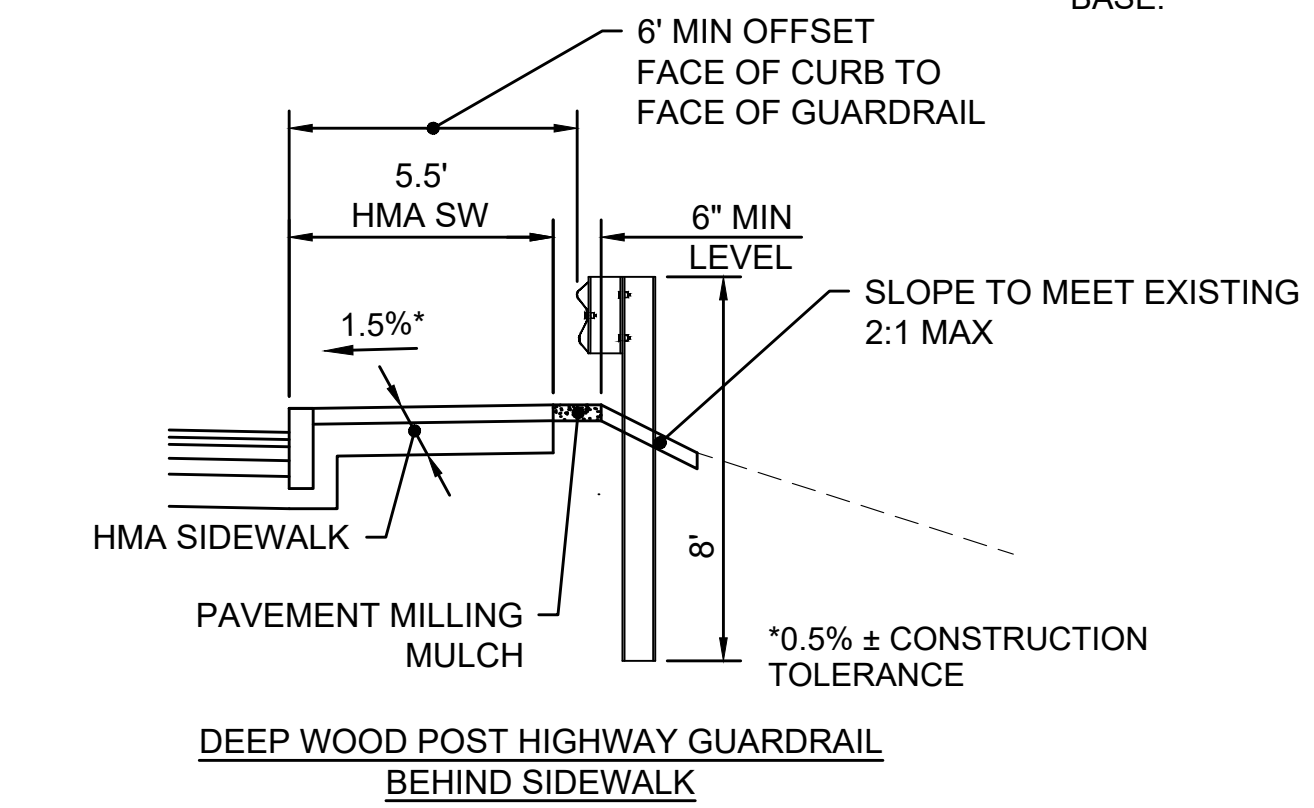
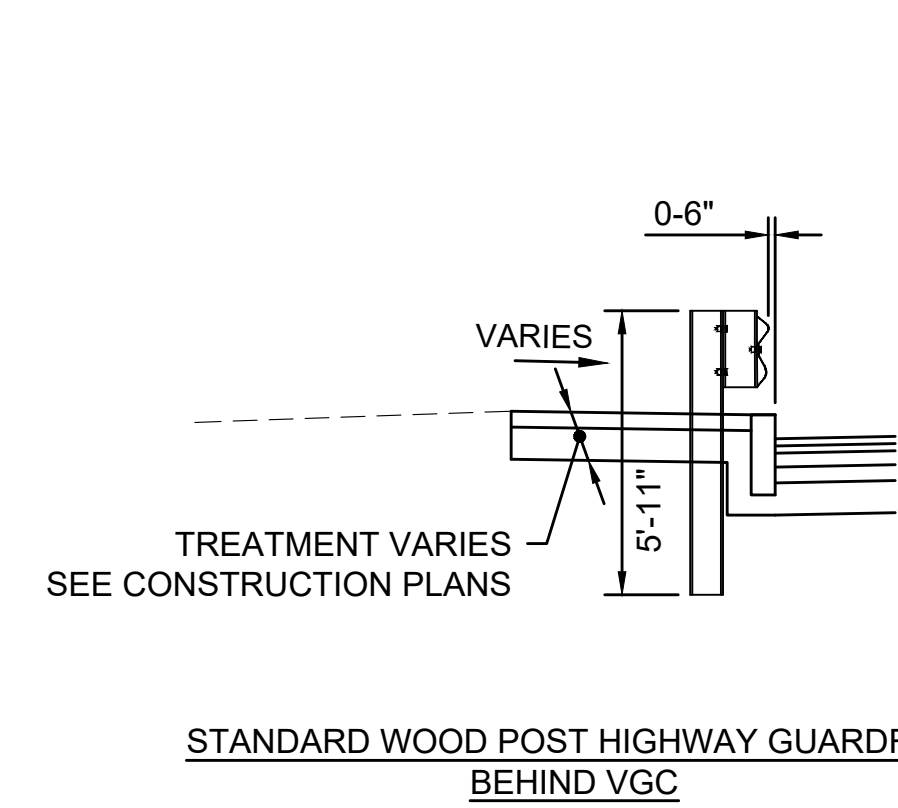
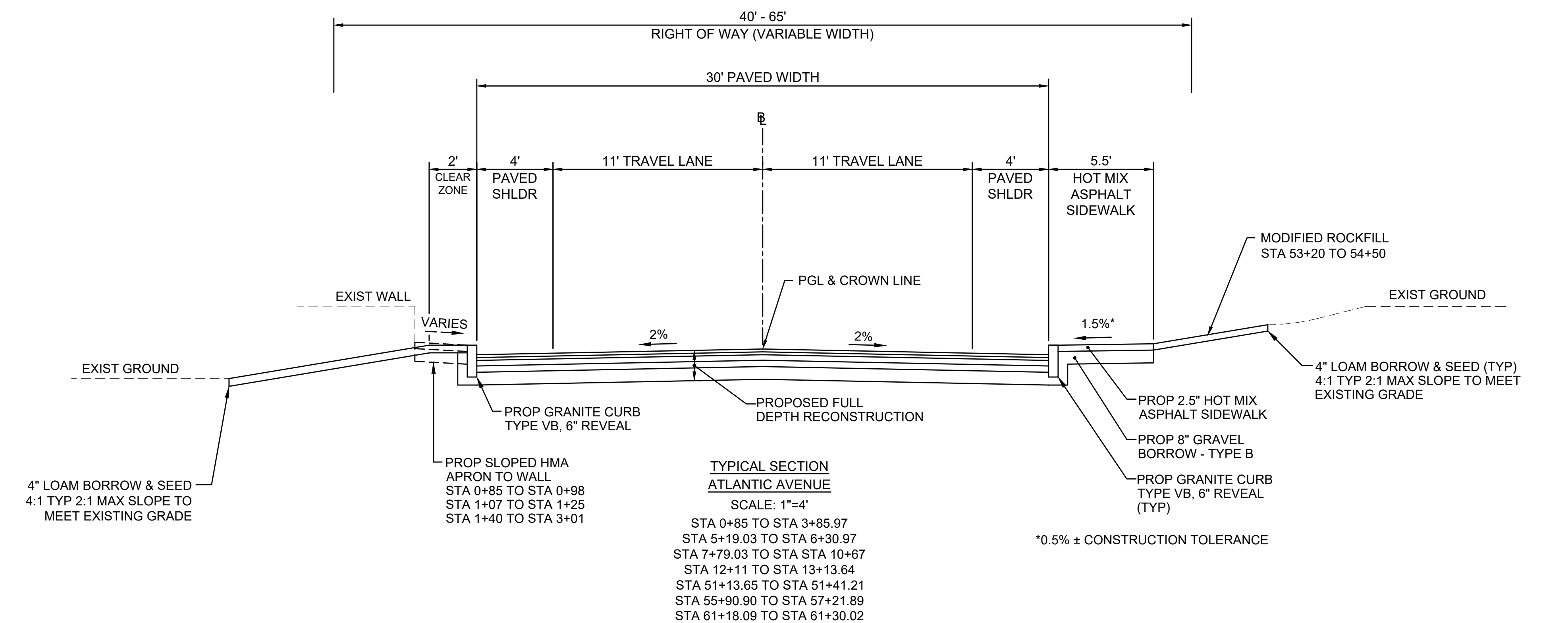
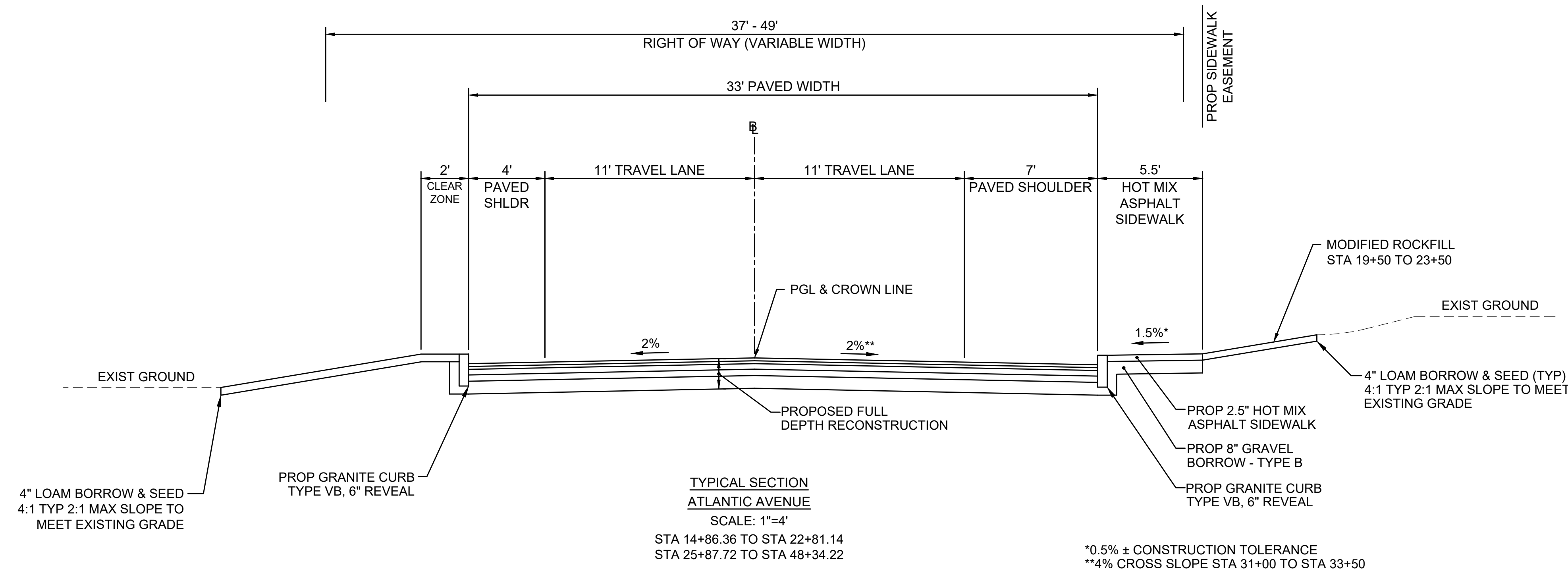
PAVEMENT CORE #1	PAVEMENT CORE #2	PAVEMENT CORE #3	PAVEMENT CORE #4	PAVEMENT CORE #5	PAVEMENT CORE #6	PAVEMENT CORE #7
25" LIMIT	24" LIMIT	26" LIMIT	24" LIMIT	24" LIMIT	24" LIMIT	24" LIMIT
7.5" H.M.A.	5.5" H.M.A.	5.25" H.M.A.	5.0" H.M.A.	4.5" H.M.A.	4.5" H.M.A.	4.0" H.M.A.
4.5" -1.5" MACADAM STONE BASE	3.0" -1.5" MACADAM STONE BASE	3.75" -1.5" MACADAM STONE BASE	3.0" -1.5" MACADAM STONE BASE	4.5" -1.5" MACADAM STONE BASE	3.5" -1.5" MACADAM STONE BASE	5.0" -1.5" MACADAM STONE BASE
13" SILTY SAND WITH GRAVEL (TRACE COBBLES)	15.5" SILTY SAND WITH GRAVEL (TRACE COBBLES)	14" SANDY GRAVEL	16" SILTY SAND WITH GRAVEL (TRACE COBBLES)	15" SANDY GRAVEL	2" SAND W/GRAVEL	15" SANDY GRAVEL
		3" SILTY SAND			8" SANDY GRAVEL	
					6" SILTY SAND W/ GRAVEL	



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TYPICAL SECTIONS - 1



PAVEMENT NOTES

PROPOSED RESURFACING MILLING & OVERLAY

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER 1.75" PAVEMENT MICROMILLING

ASPHALT EMULSION FOR TACK COAT @ 0.07 GAL/SY OVER EXISTING PAVEMENT OR MILLED SURFACE

NOTE: RESURFACING IS PROPOSED AT THE LIMITS OF FULL DEPTH RECONSTRUCTION. SEE SHEET 72 FOR DETAILS.

PROPOSED FULL DEPTH PAVEMENT RECONSTRUCTION

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT @ 0.05 GAL/SY OVER

INTERMEDIATE: 1.75" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT @ 0.05 GAL/SY OVER

BASE: 3.5" SUPERPAVE BASE COURSE 25.0 (SBC-25.0) OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER 8" GRAVEL BORROW - TYPE B

PROPOSED HOT MIX ASPHALT DRIVEWAY

SURFACE: 3.5" HOT MIX ASPHALT PLACED IN TWO LAYERS: 1.5" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER 2.0 SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED CEMENT CONCRETE SIDEWALK/WHEELCHAIR RAMP

SURFACE: 4" CEMENT CONCRETE
SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED HOT MIX ASPHALT SIDEWALK

SURFACE: 2.5" HOT MIX ASPHALT PAVEMENT PLACED IN TWO LAYERS: 1" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER 1.5" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW - TYPE B

REMOVED AND RESET BRICK WALK

SURFACE: EXISTING BRICK PAVERS HAND TIGHT JOINTS - SWEEP W/ 6:1 STONE DUST; DRY CEMENT MIX VIBRATED AND MISTED TACK COAT - 2% NEOPRENE OXIDIZED ASPHALT OVER 3/4" - 1" HOT MIX ASPHALT LEVELING BED 7% ASPHALT - 93% SAND OVER

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED PERMANENT HMA TRENCH PATCH

SURFACE: 1.75" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT @ 0.05 GAL/SY

INTERMEDIATE: 1.75" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER ASPHALT EMULSION FOR TACK COAT @ 0.05 GAL/SY

BASE: 3.50" SUPERPAVE BASE COURSE - 25.0 (SBC-25.0) OVER

SUBBASE: 12" GRAVEL BORROW - TYPE B COMPACTED 95% IN NOT TO EXCEED 6" LAYERS

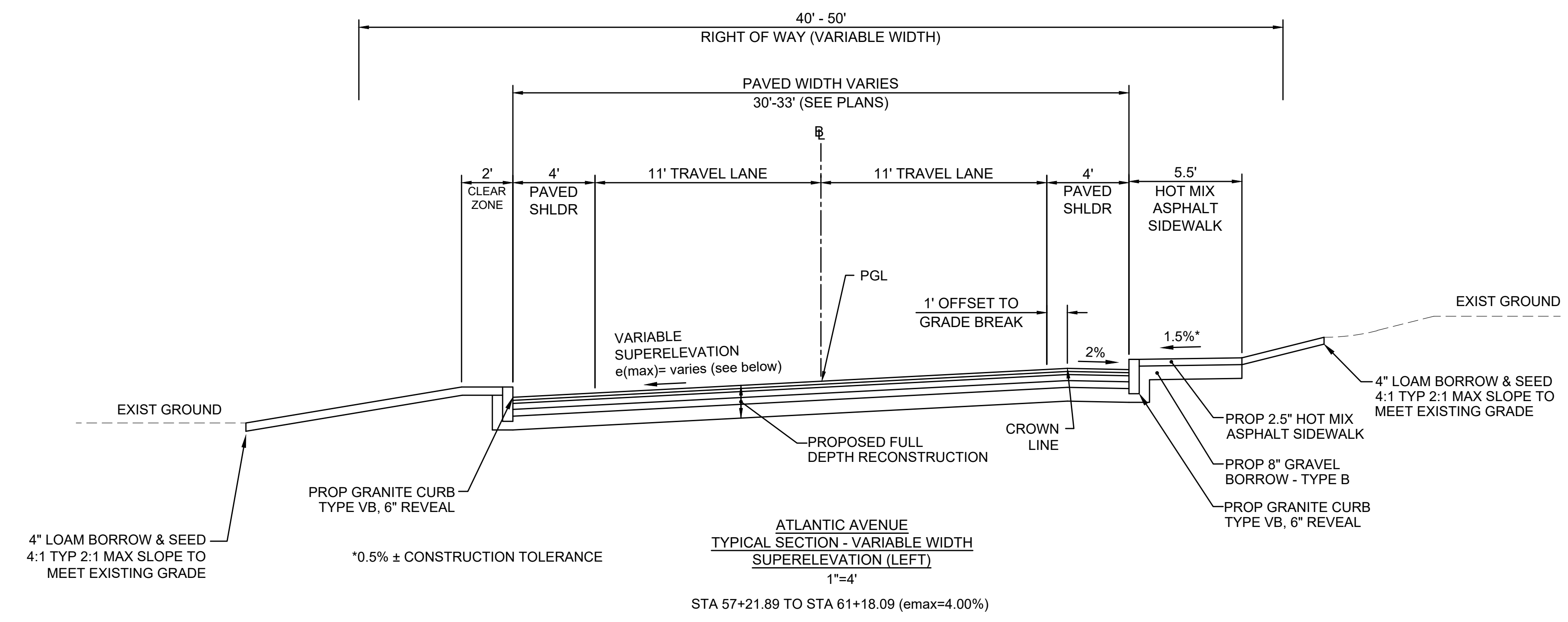
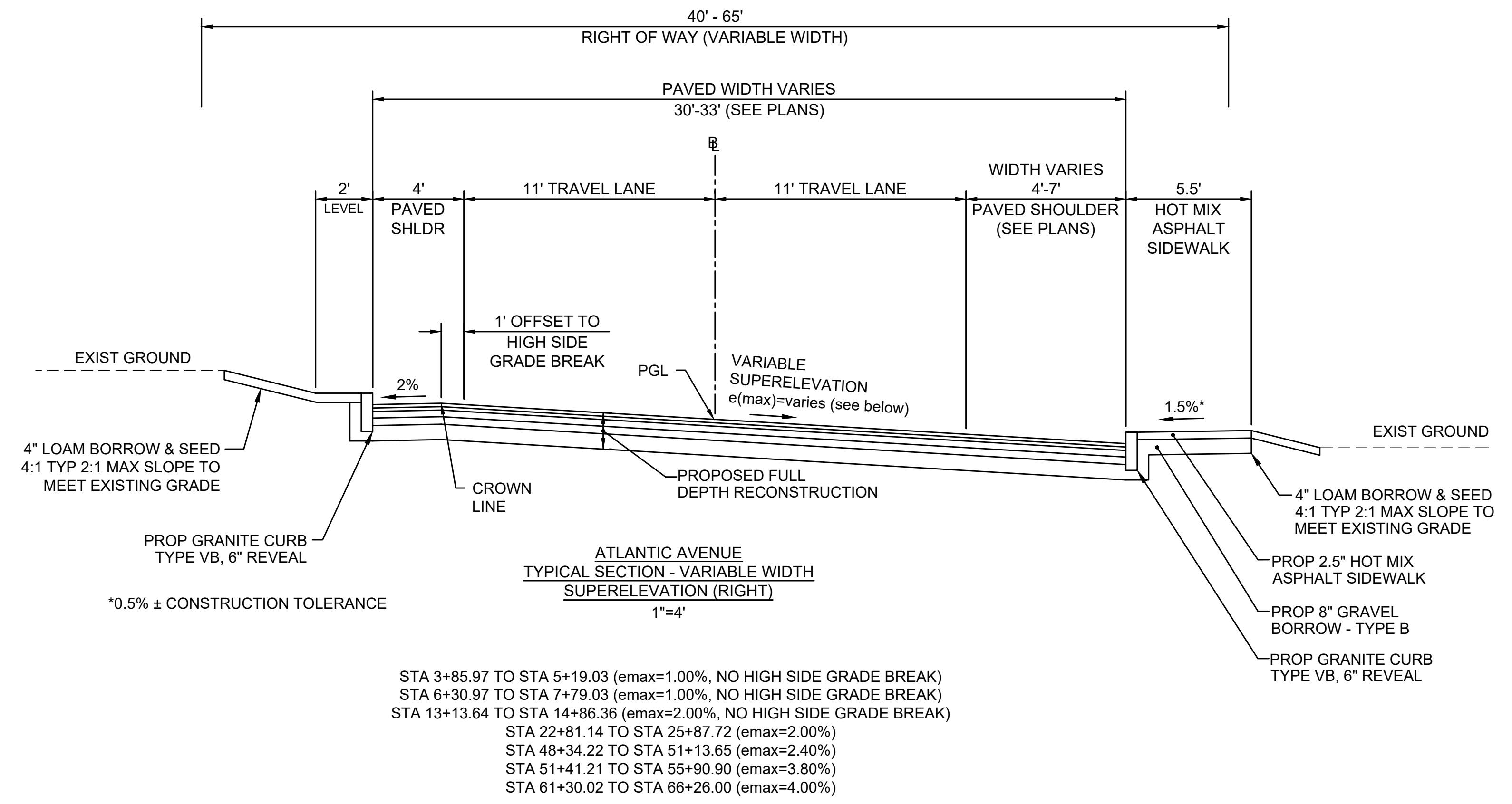
PROPOSED TEMPORARY HMA TRENCH PATCH

SURFACE: 2.5" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER

BASE: 12" GRAVEL BORROW - TYPE B COMPACTED 95% IN NOT TO EXCEED 6" LAYERS

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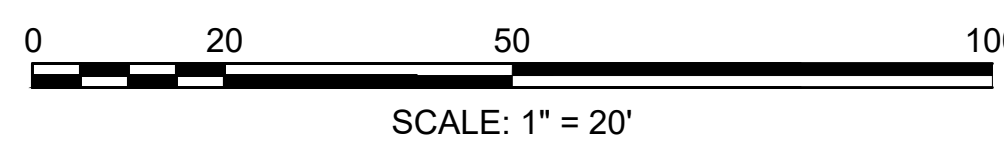
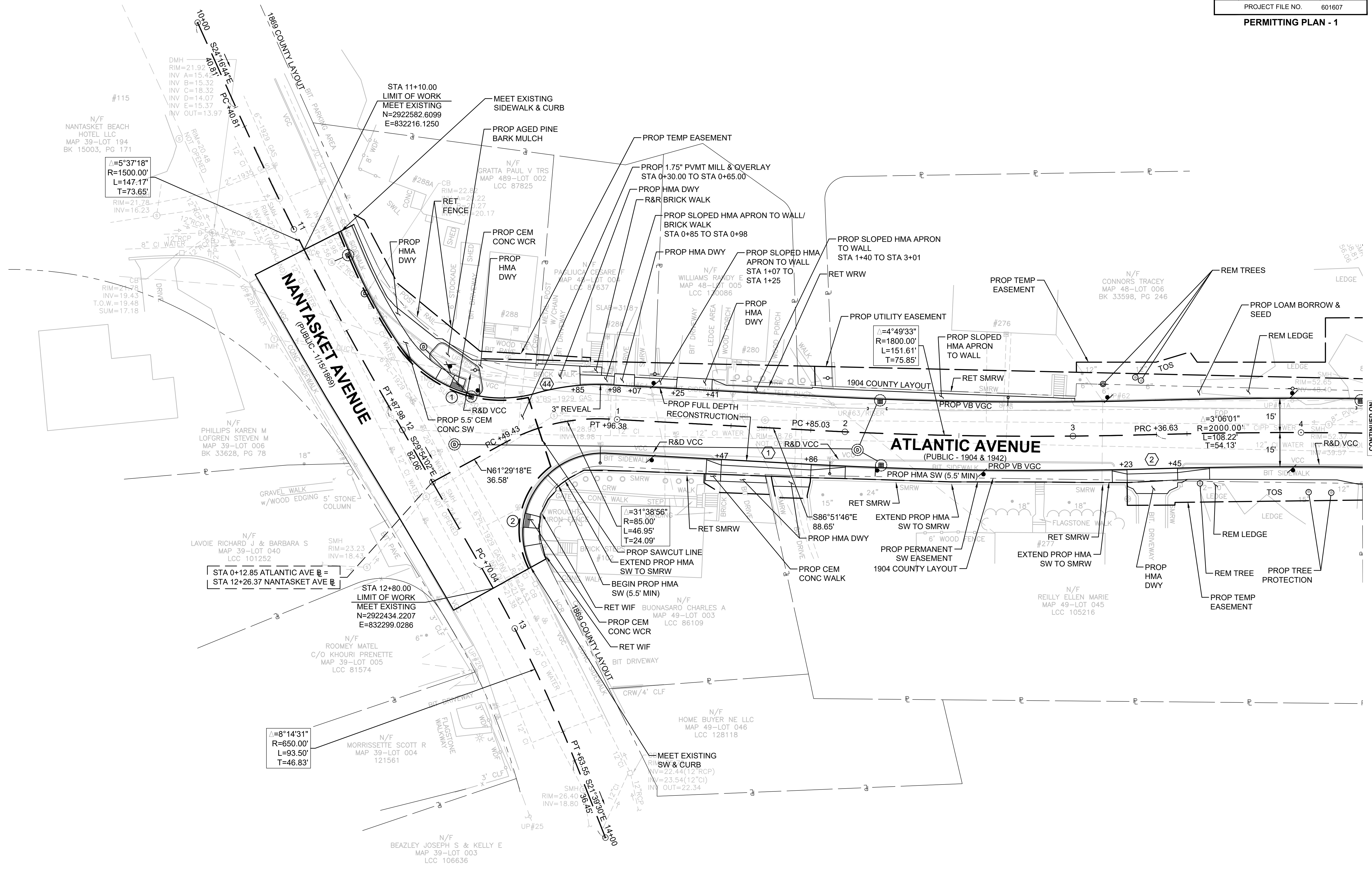
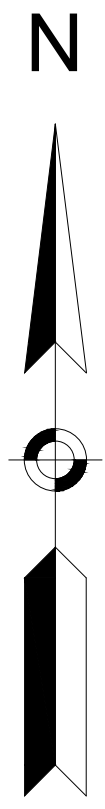
TYPICAL SECTIONS - 2



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	43
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PERMITTING PLAN - 1

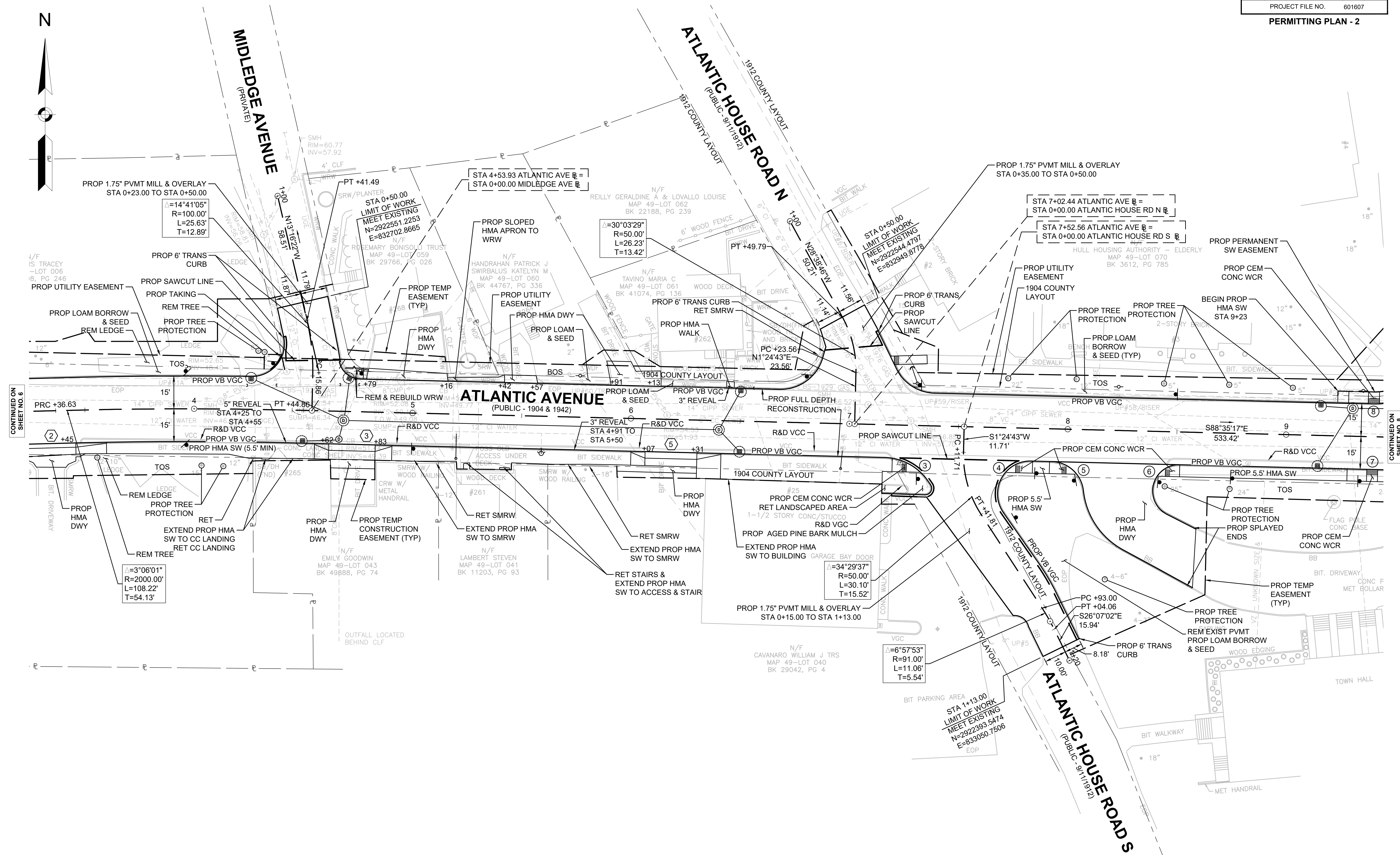
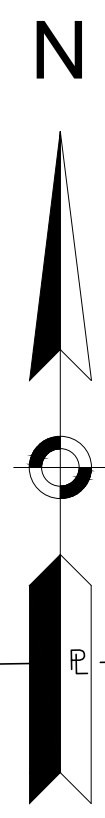


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SHEET NO. 7

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

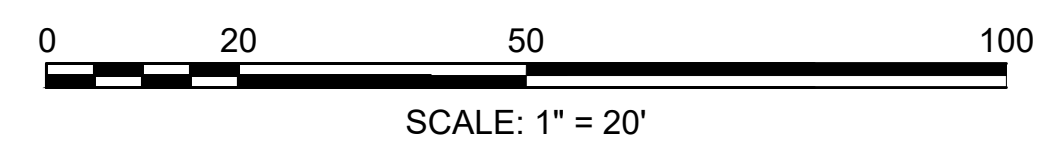
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PROJECT FILE NO. 601607
PERMITTING PLAN - 2



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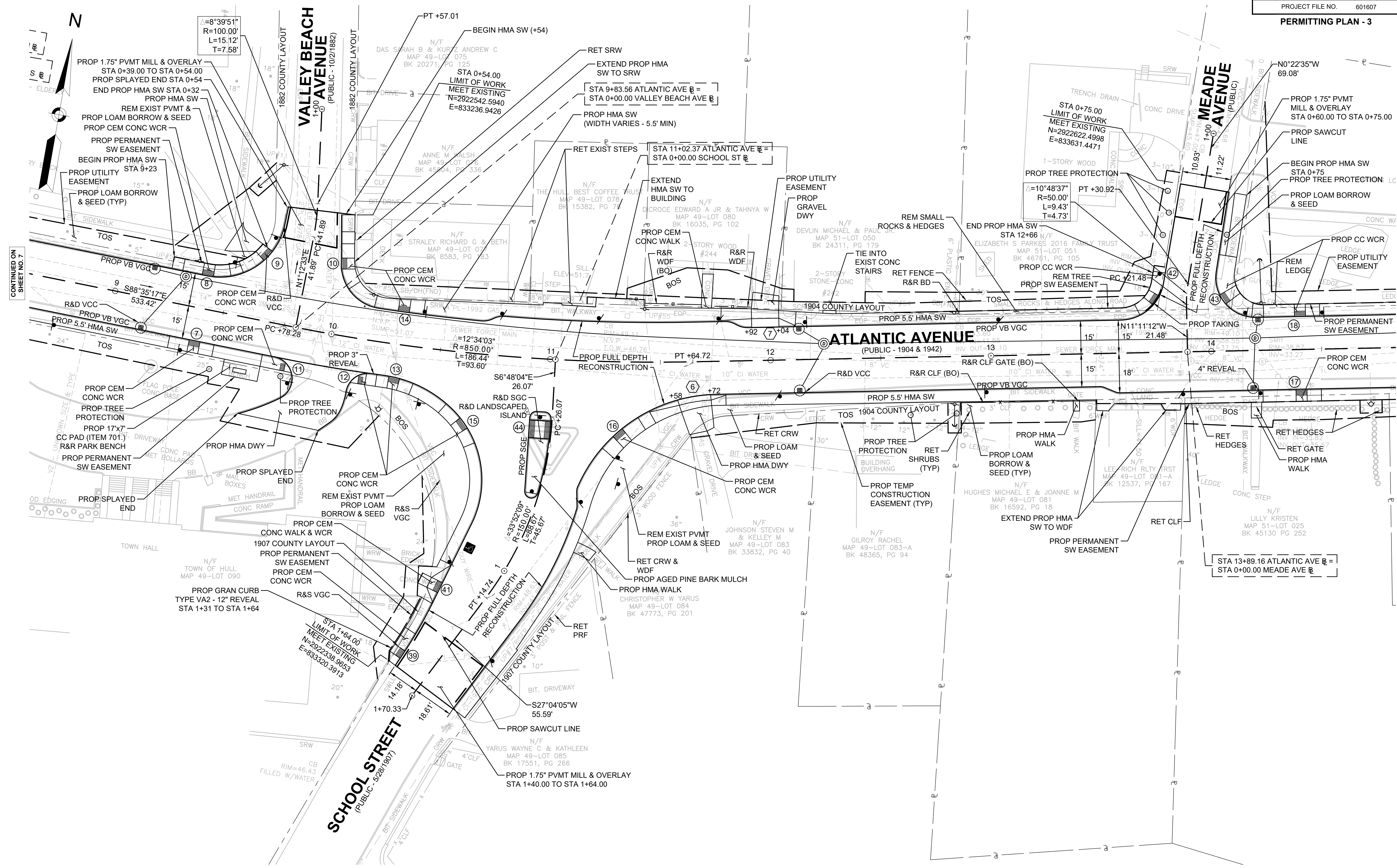
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**HULL
ATLANTIC AVENUE RECONSTRUCTION**

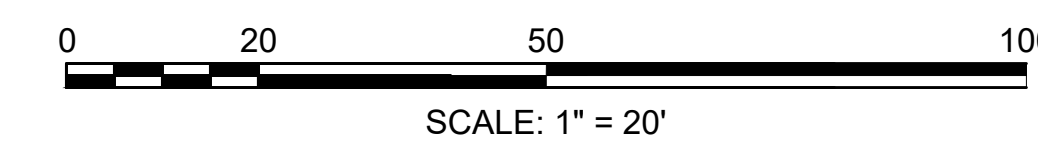
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PERMITTING PLAN - 3



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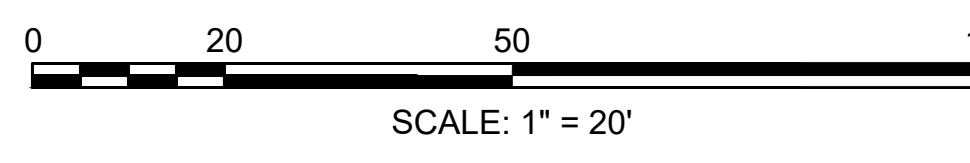
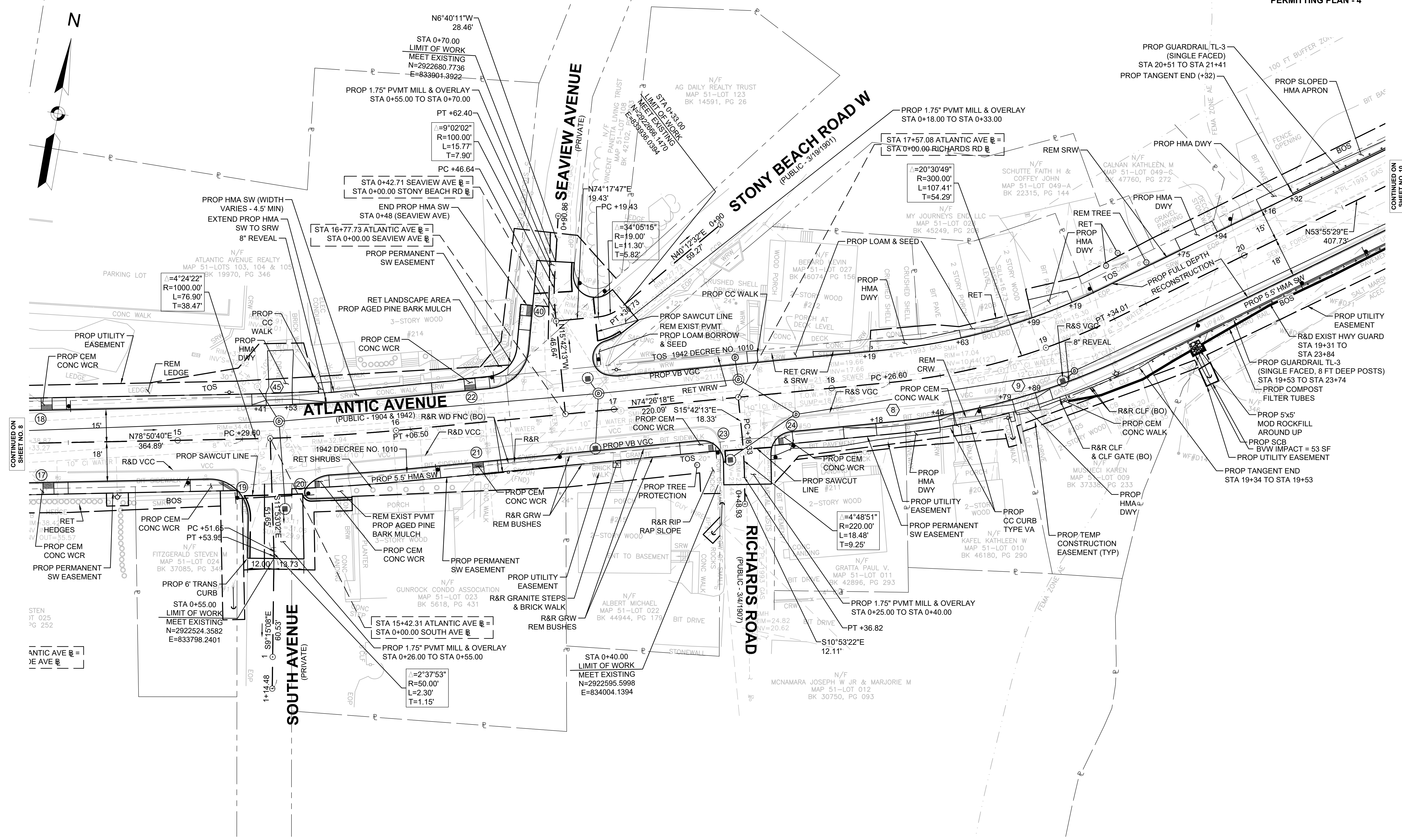
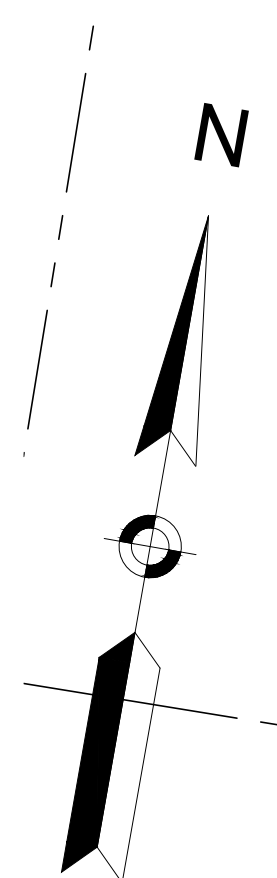
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**HULL
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PERMITTING PLAN - 4



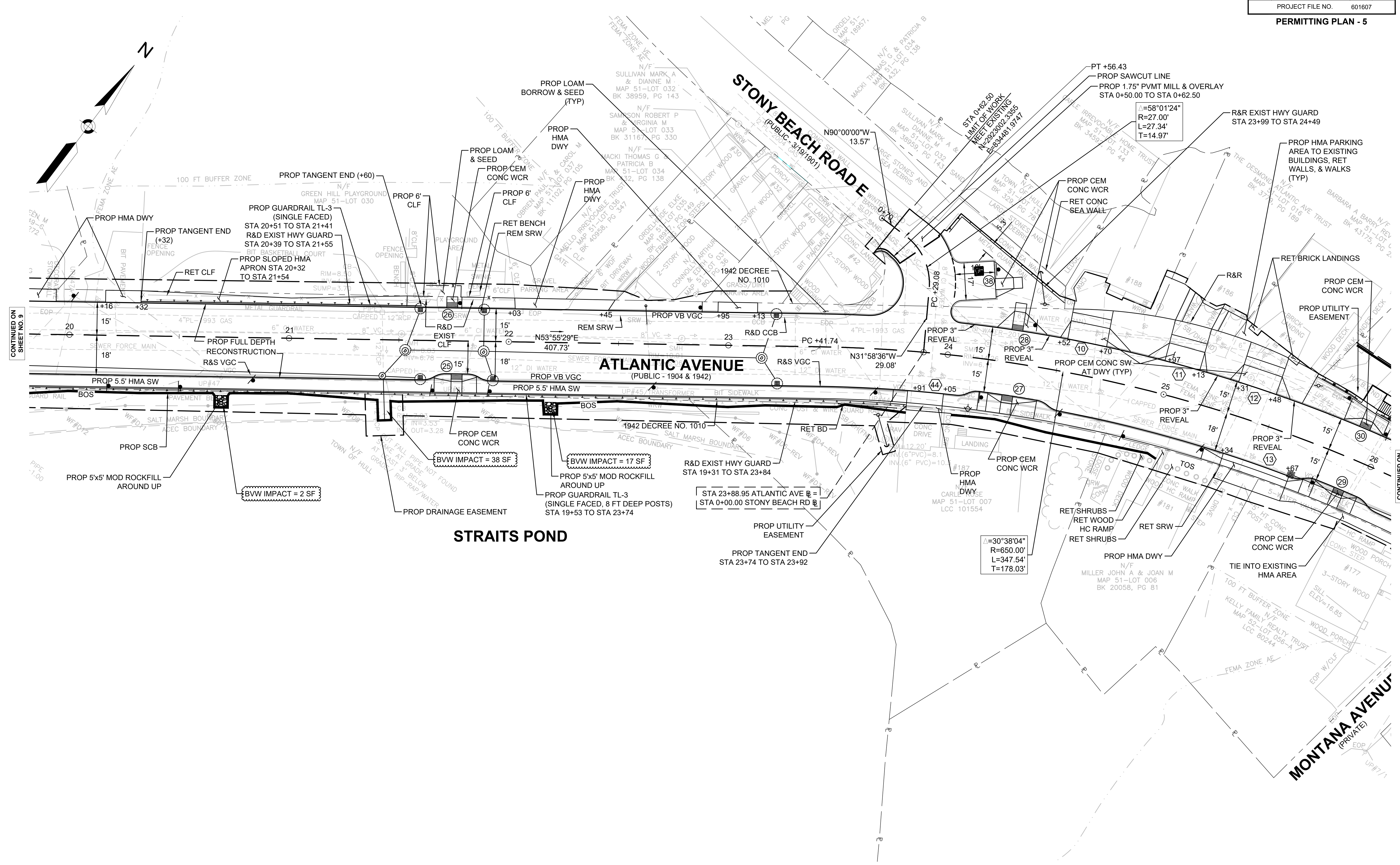
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**HULL
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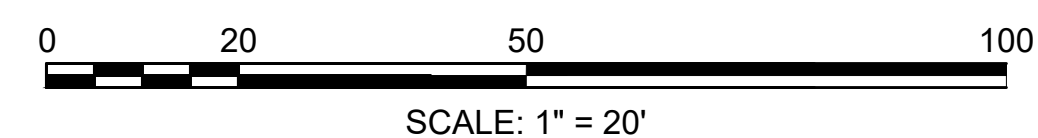
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PERMITTING PLAN - 5



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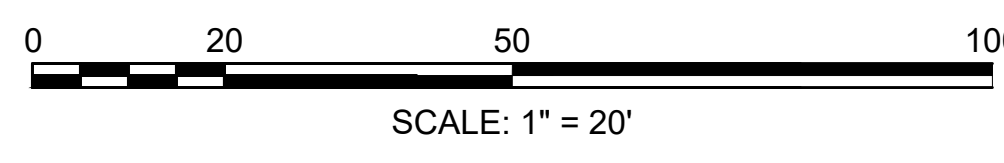
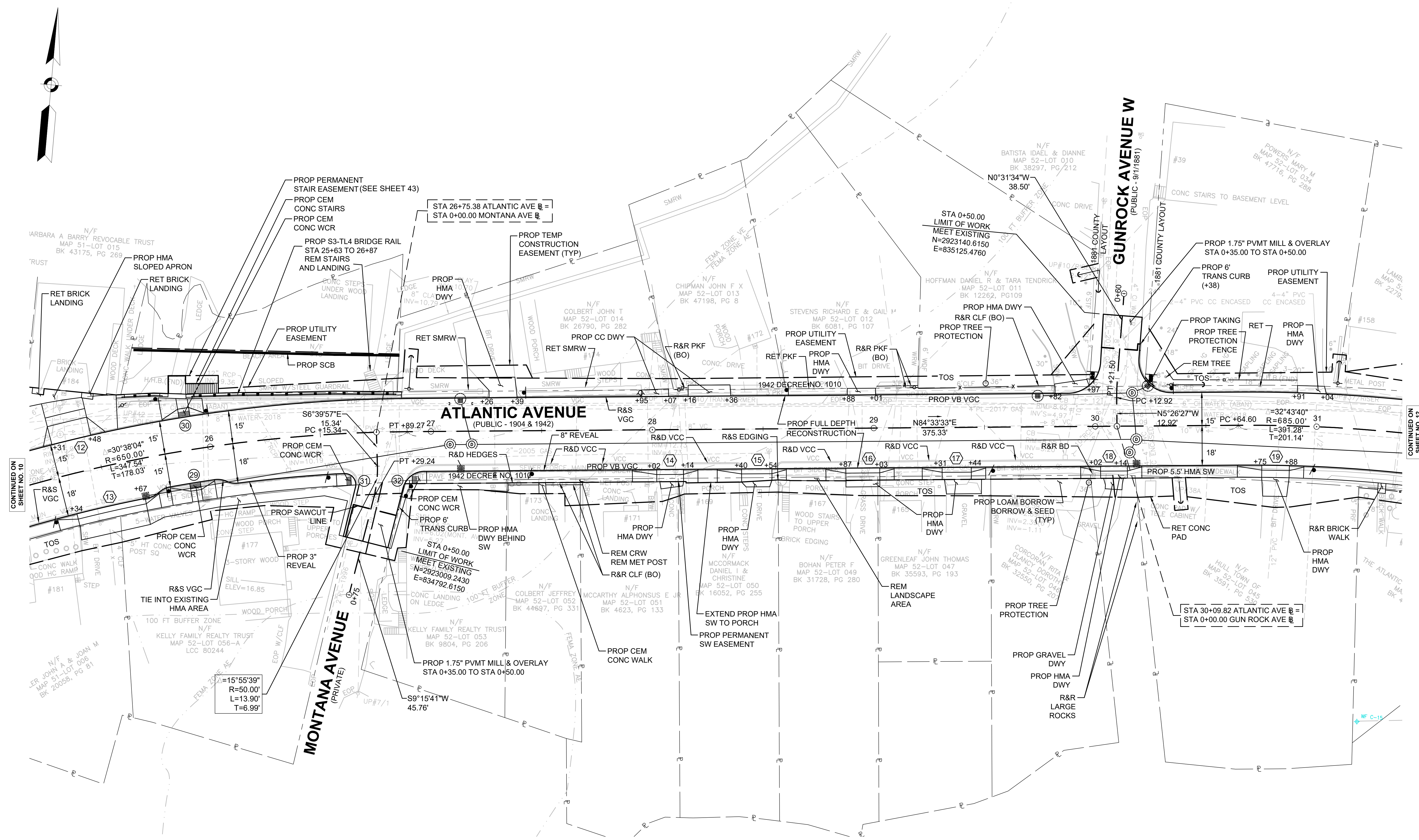
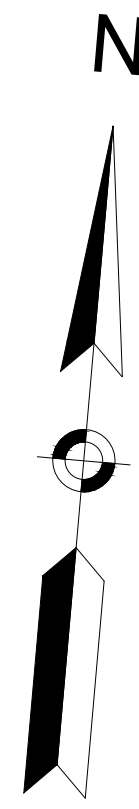
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PERMITTING PLAN - 6



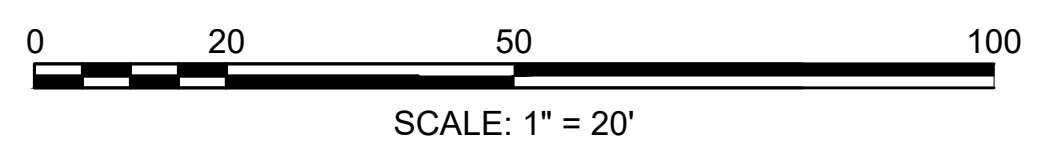
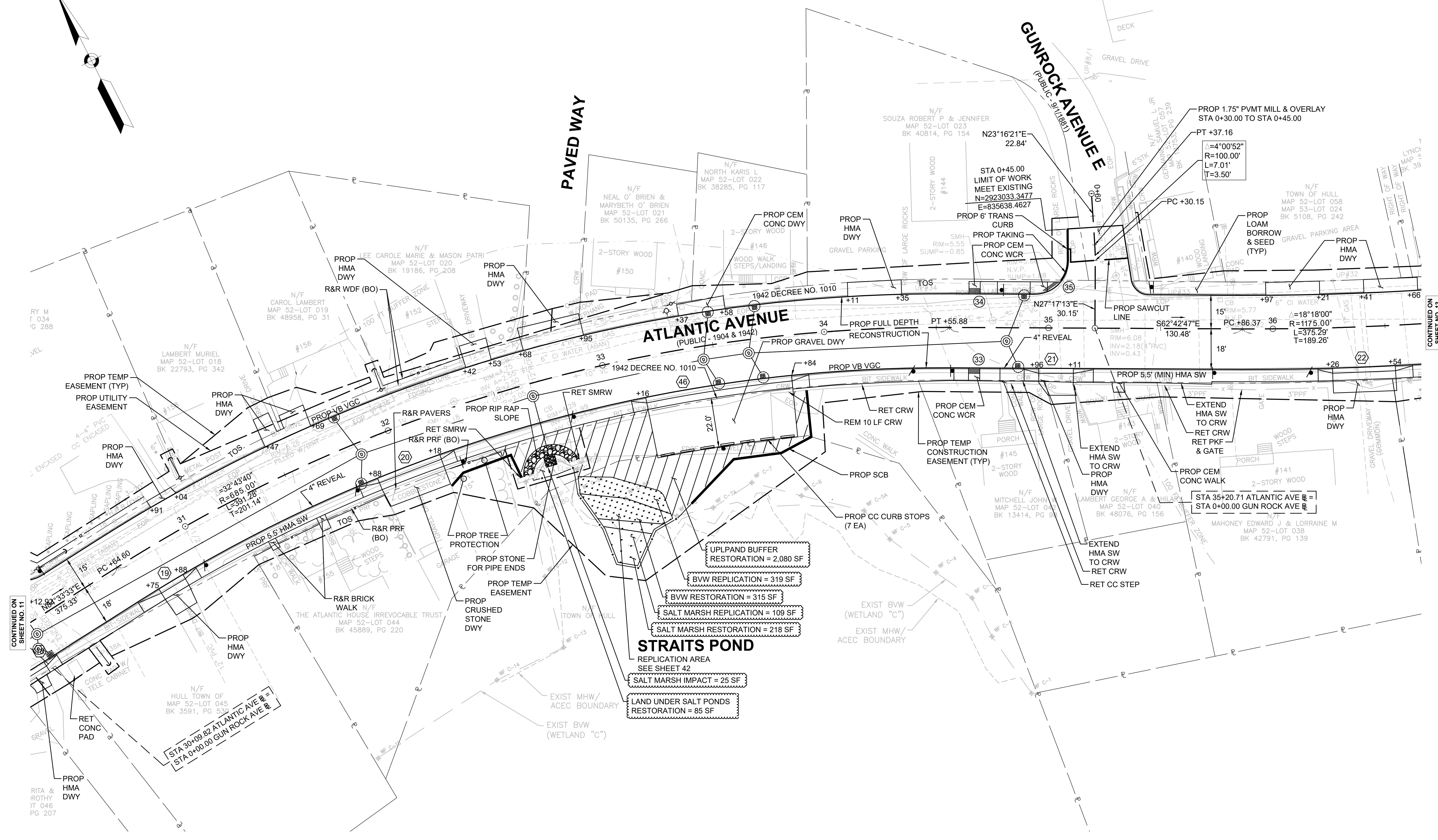
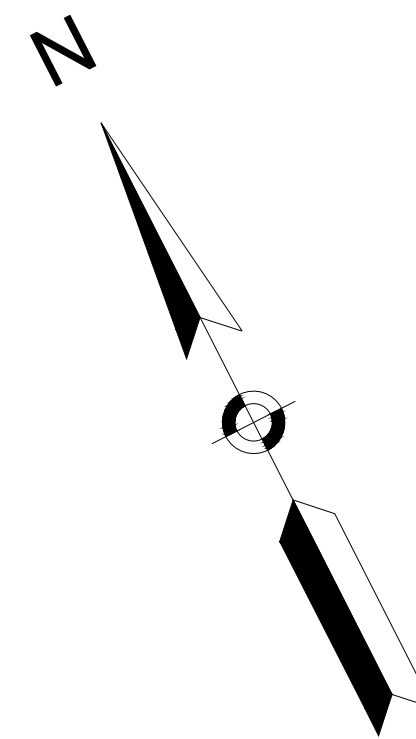
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SHEET NO. 12

**HULL
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MA	-	12	43
PROJECT FILE NO. 601607			

PERMITTING PLAN - 7



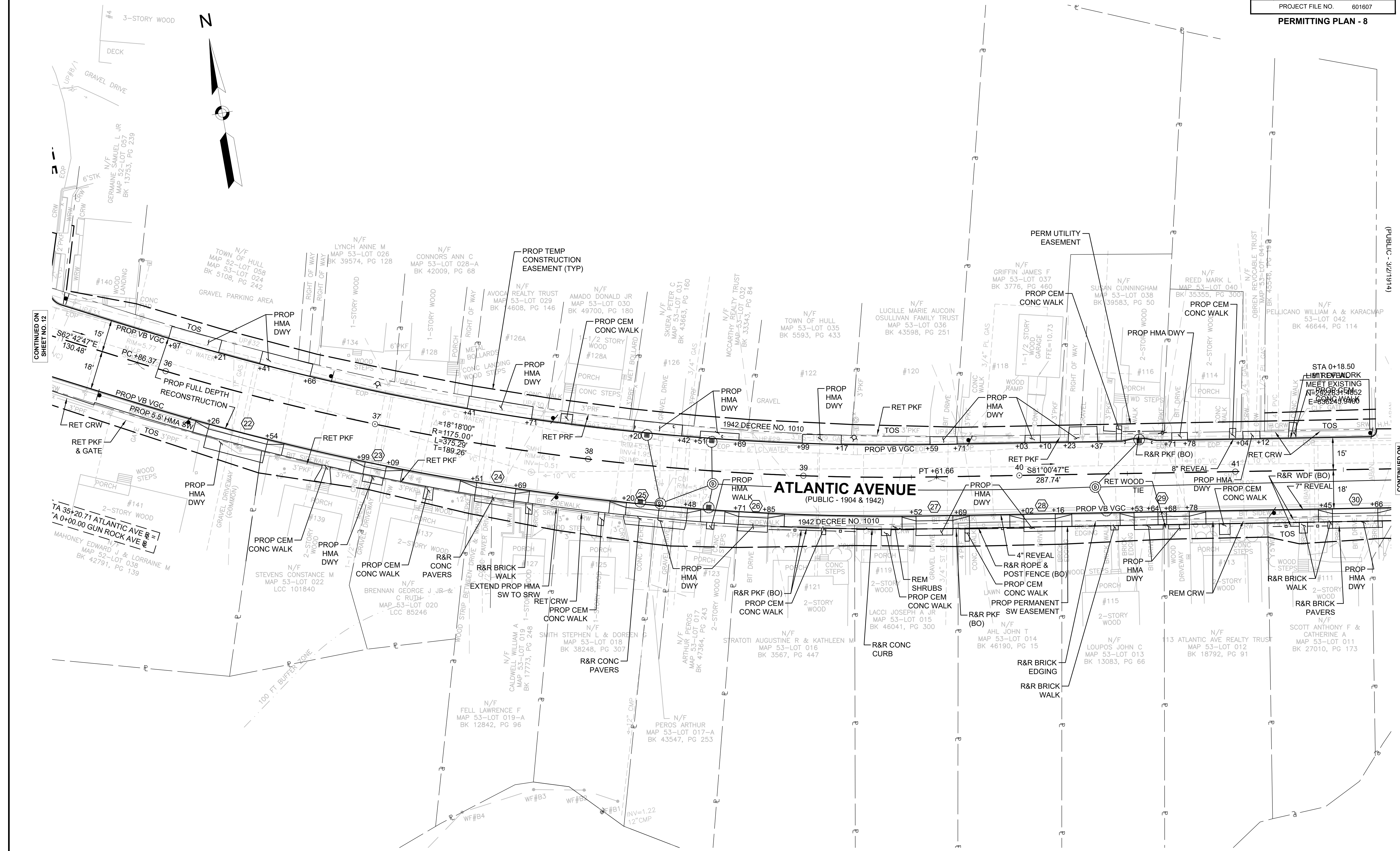
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SHEET NO. 13

**HULL
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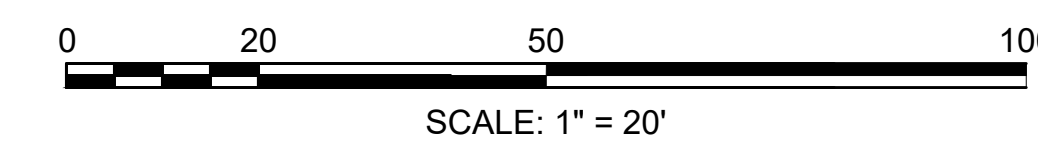
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PROJECT FILE NO.		601607	

PERMITTING PLAN - 8



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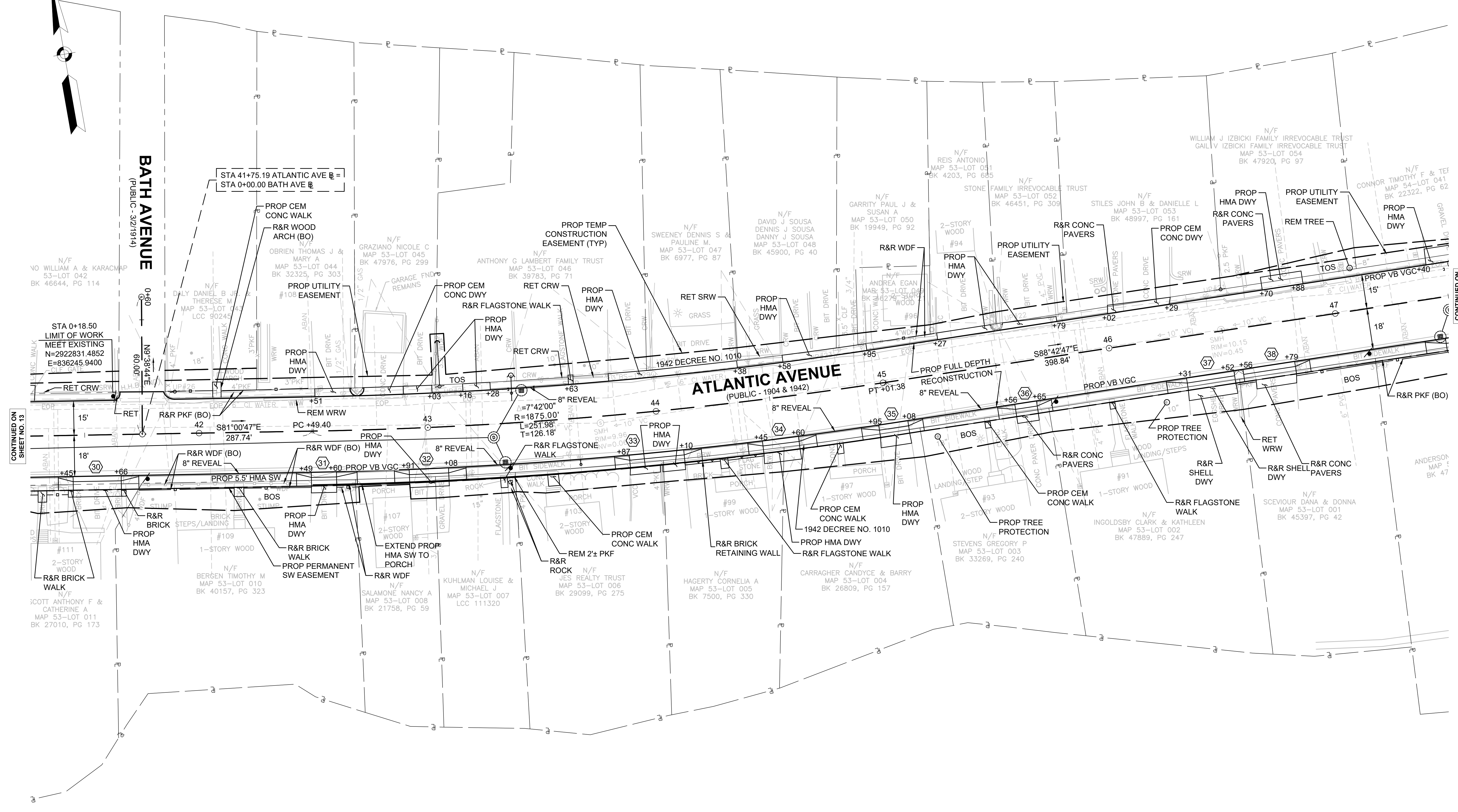
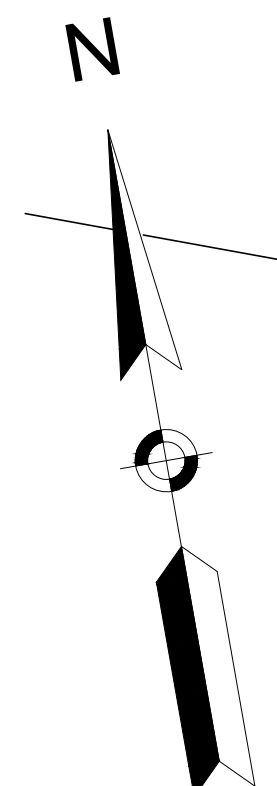
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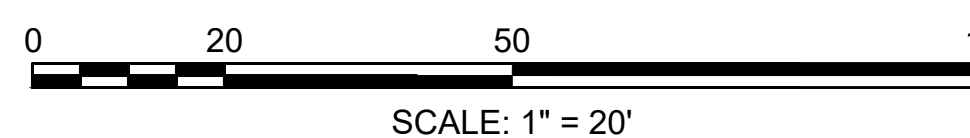
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PROJECT FILE NO. 601607
PERMITTING PLAN - 9



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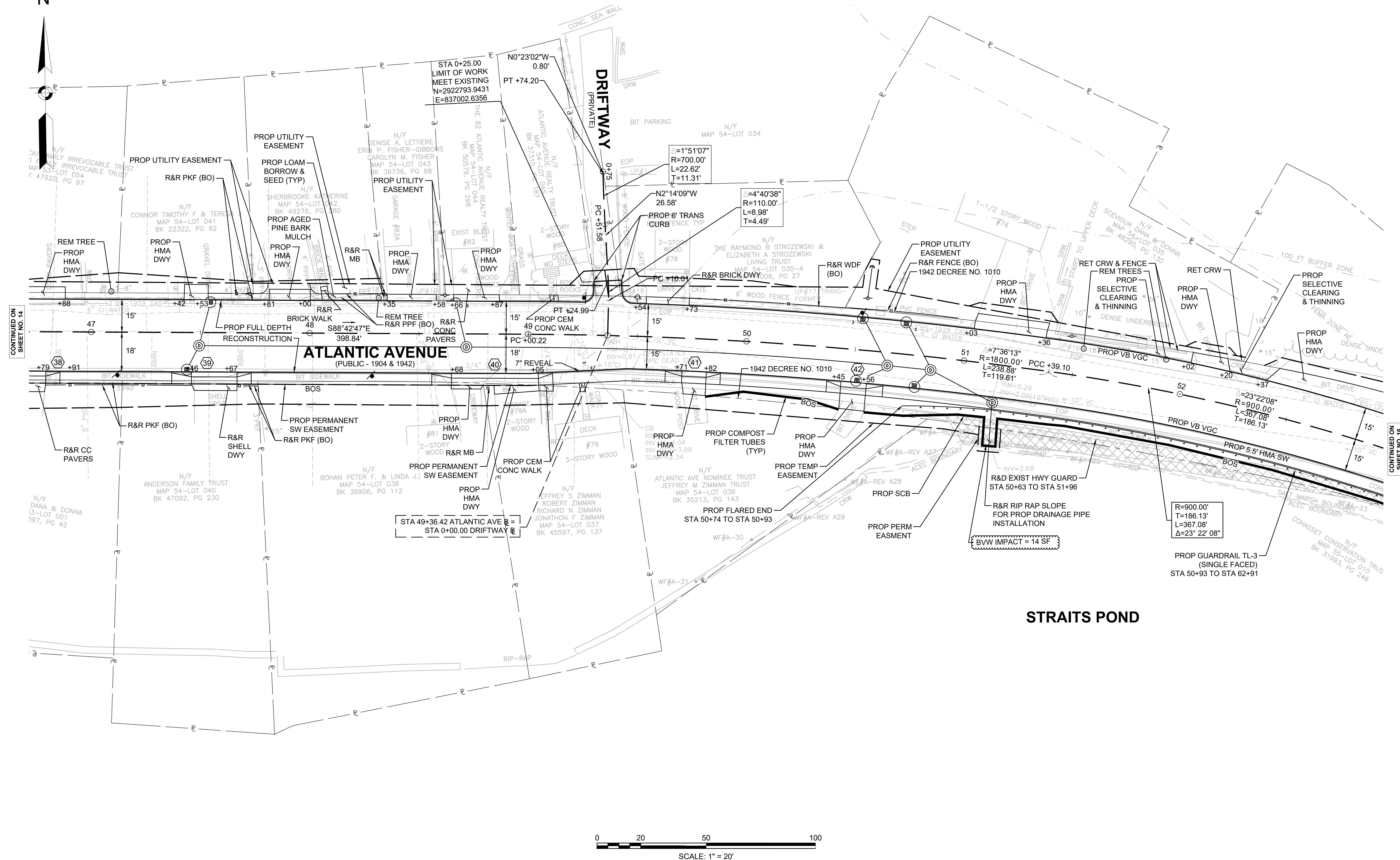
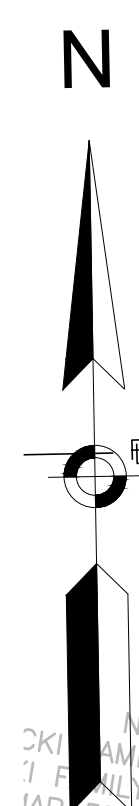
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**HULL
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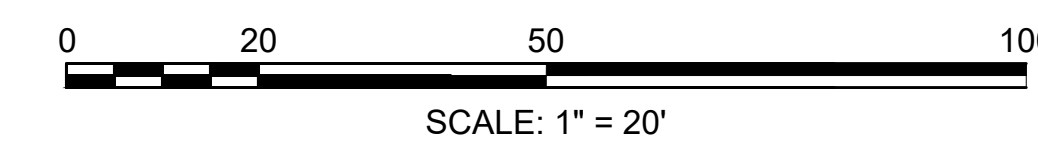
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PERMITTING PLAN - 10



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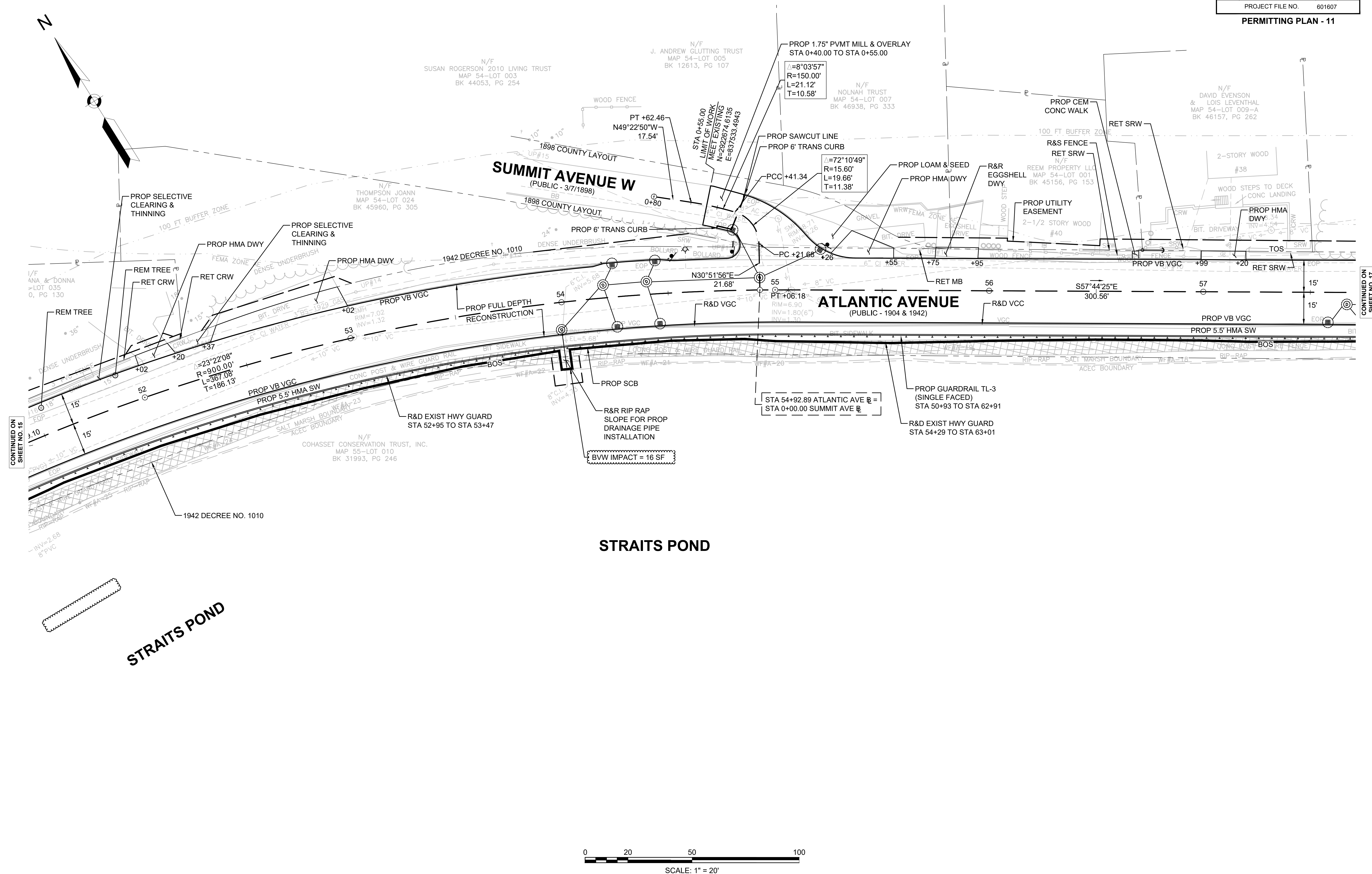
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**HULL
ATLANTIC AVENUE RECONSTRUCTION**

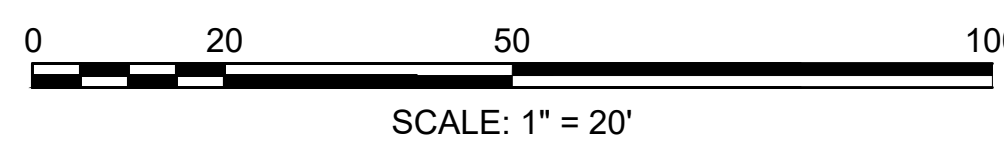
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	43

PROJECT FILE NO. 601607
PERMITTING PLAN - 11



CONTINUED ON SHEET NO. 15

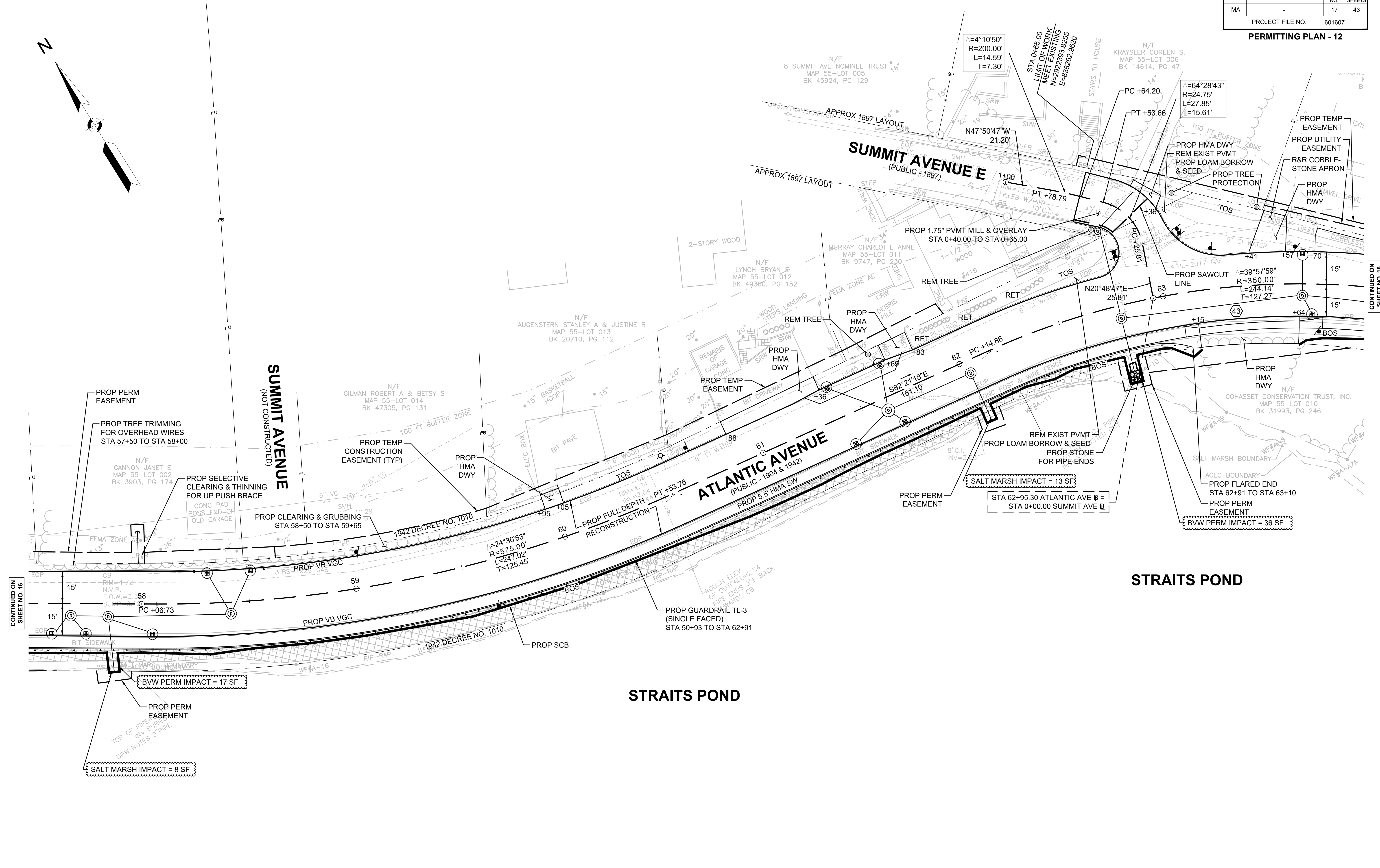
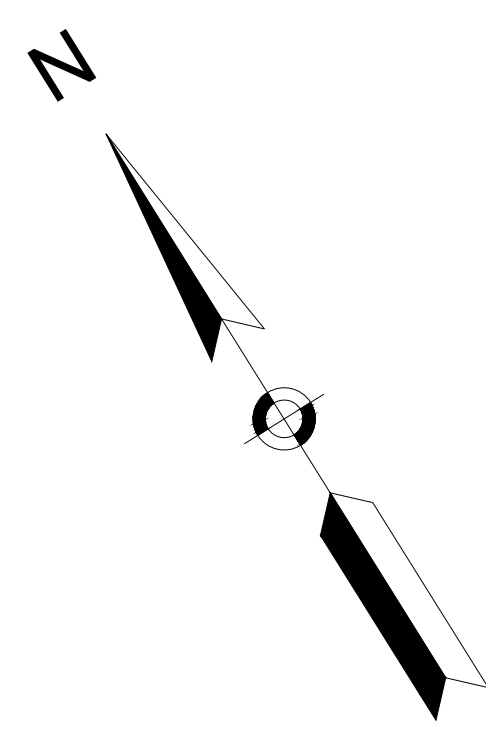
CONTINUED ON SHEET NO. 17



**HULL
ATLANTIC AVENUE RECONSTRUCTION**

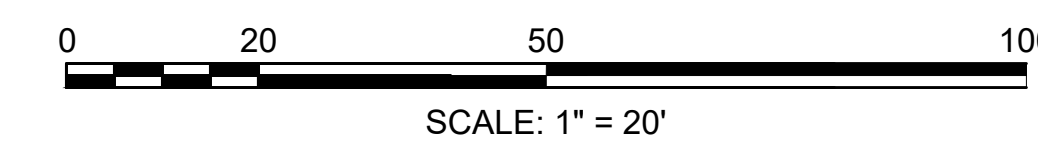
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	43
PROJECT FILE NO. 601607			

PERMITTING PLAN - 12



CONTINUED ON SHEET NO. 16

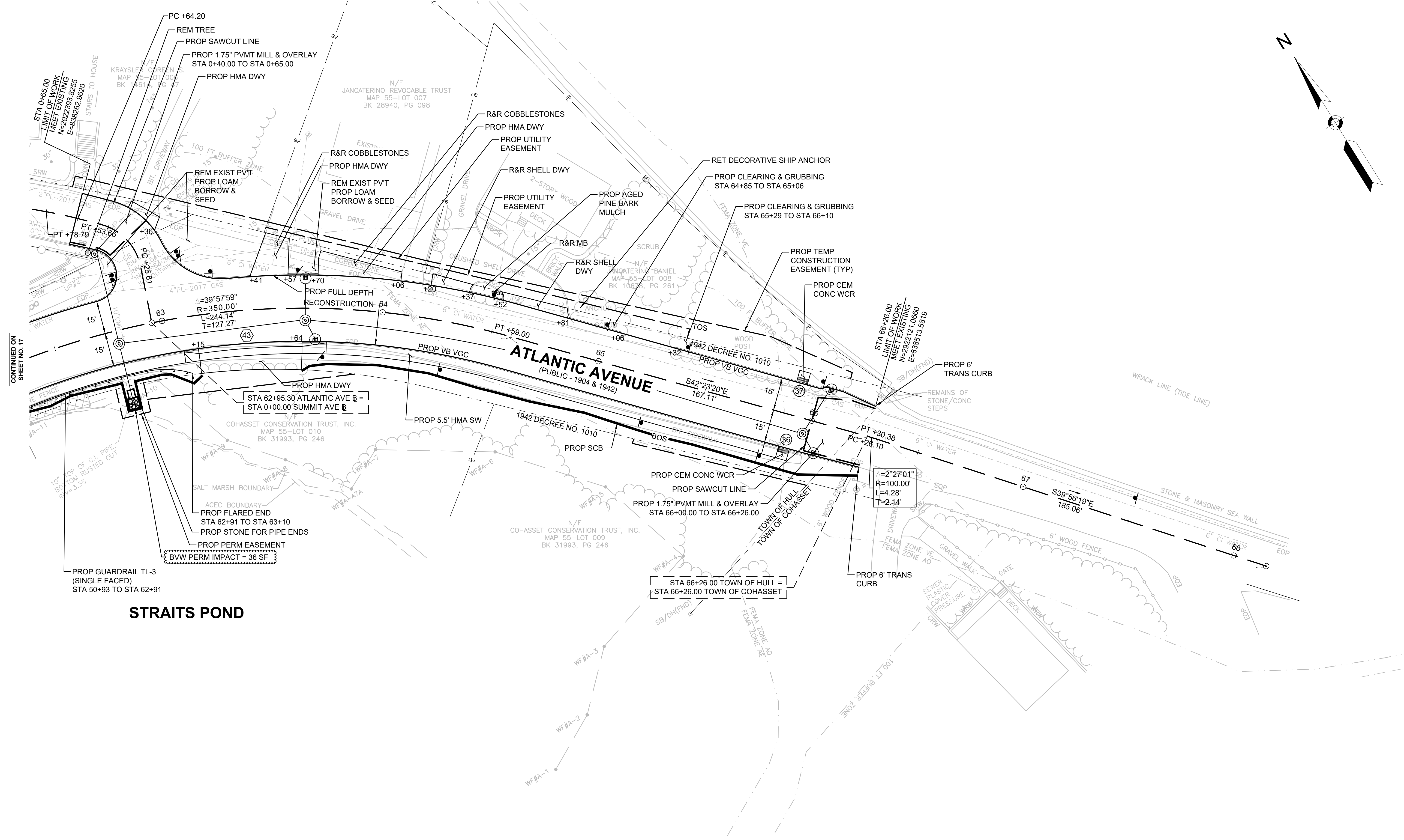
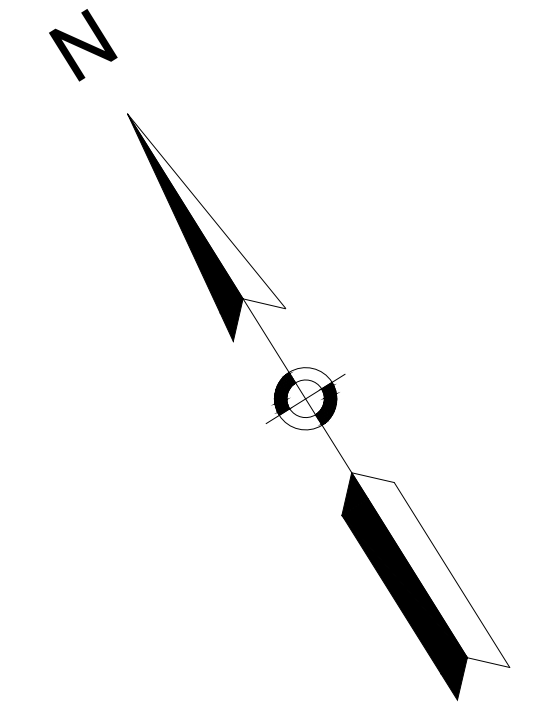
CONTINUED ON SHEET NO. 18



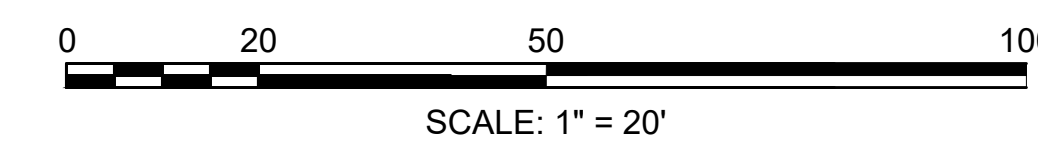
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	43

PROJECT FILE NO. 601607
PERMITTING PLAN - 13



CONTINUED ON
SHEET NO. 17

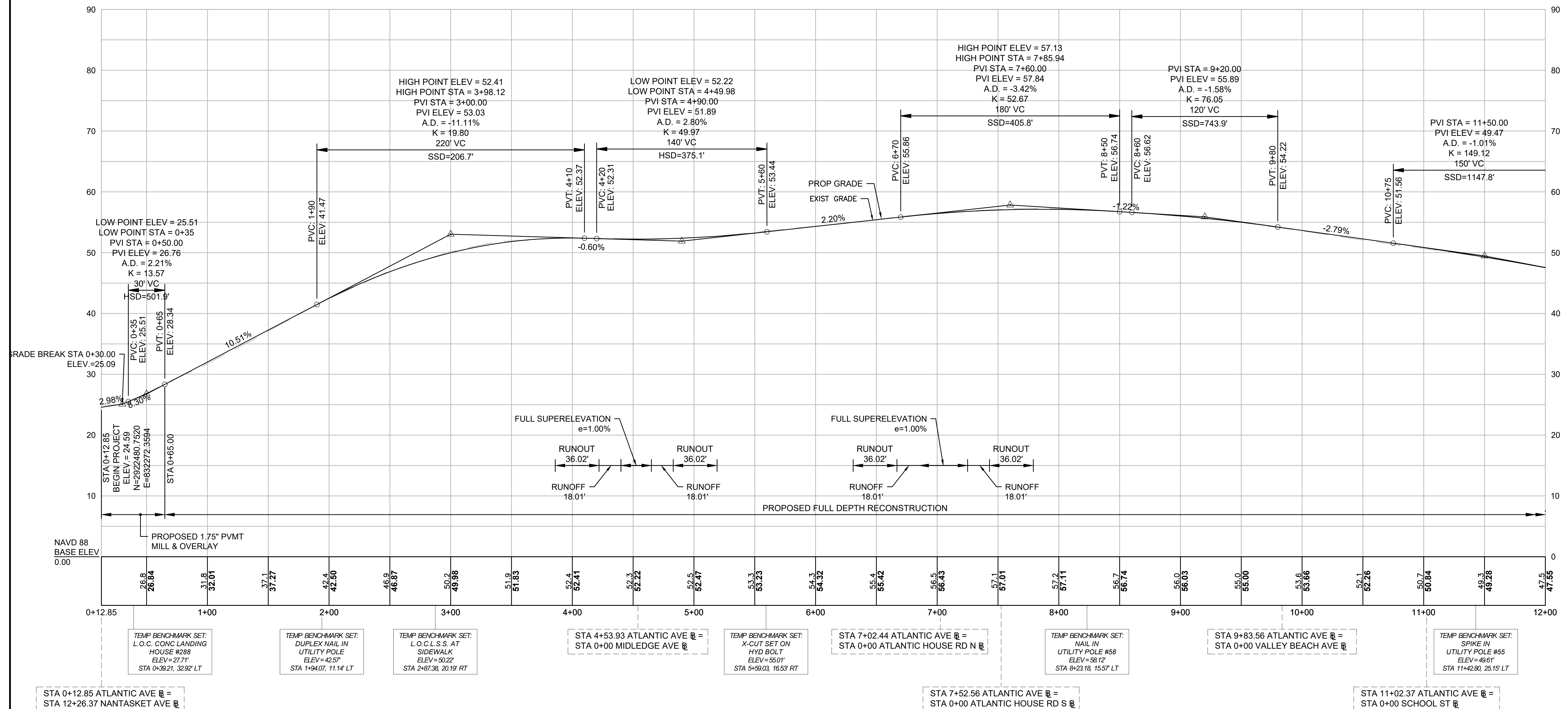


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

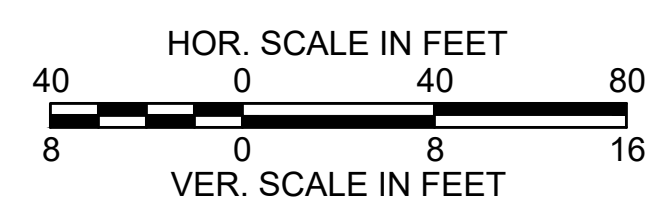
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 1**

ATLANTIC AVE



CONTINUED ON
SHEET NO. 20



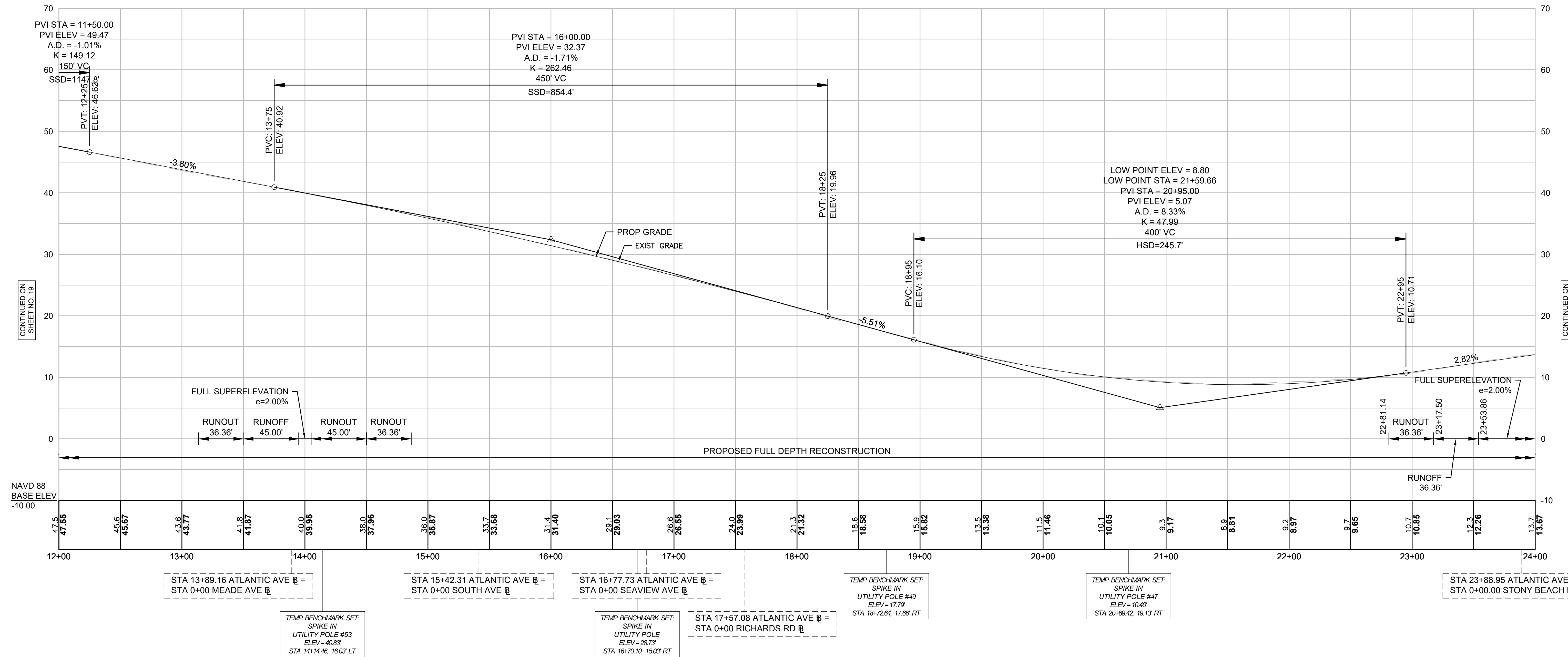
FOR CONSTRUCTION PLANS SEE SHEETS 6-8

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 2**

ATLANTIC AVE



CONTINUED ON
SHEET NO. 19

CONTINUED ON
SHEET NO. 21

STA 13+89.16 ATLANTIC AVE @ =
STA 0+00 MEADE AVE @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #53
ELEV = 40.83'
STA 14+14.48, 16.03' LT

STA 15+42.31 ATLANTIC AVE @ =
STA 0+00 SOUTH AVE @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE
ELEV = 28.73'
STA 16+70.10, 15.03' RT

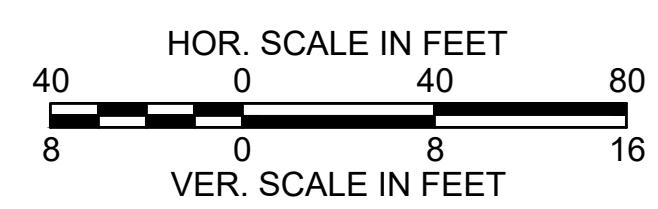
STA 16+77.73 ATLANTIC AVE @ =
STA 0+00 SEAVIEW AVE @

STA 17+57.08 ATLANTIC AVE @ =
STA 0+00 RICHARDS RD @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #49
ELEV = 17.79'
STA 18+72.64, 17.66' RT

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #47
ELEV = 10.47'
STA 20+69.42, 19.13' RT

STA 23+88.95 ATLANTIC AVE B =
STA 0+00.00 STONY BEACH RD E B



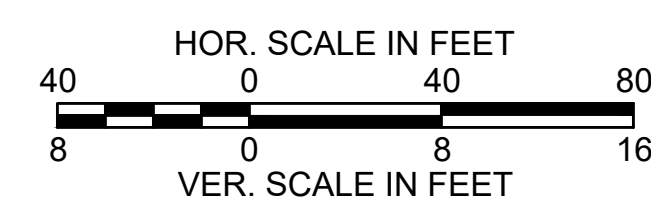
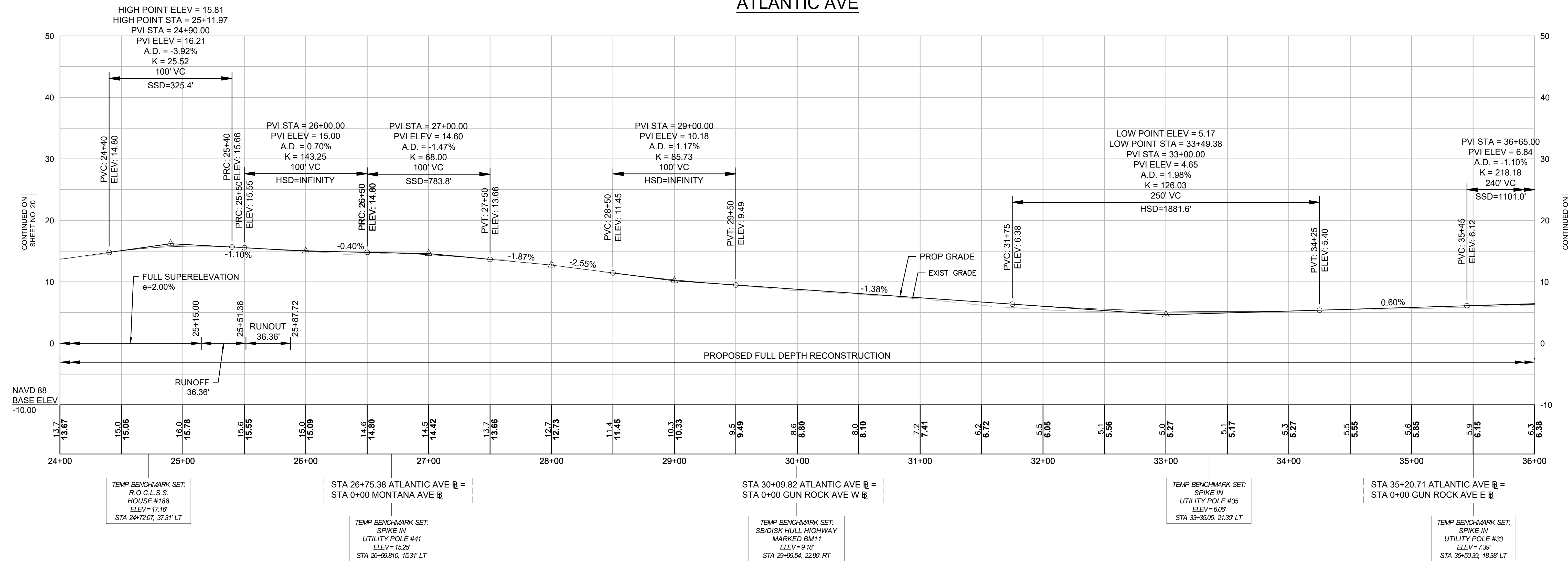
FOR CONSTRUCTION PLANS SEE SHEETS 8-10

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 3**

ATLANTIC AVE



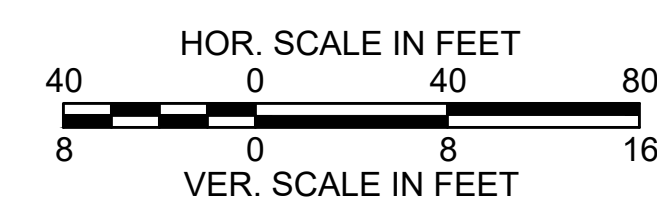
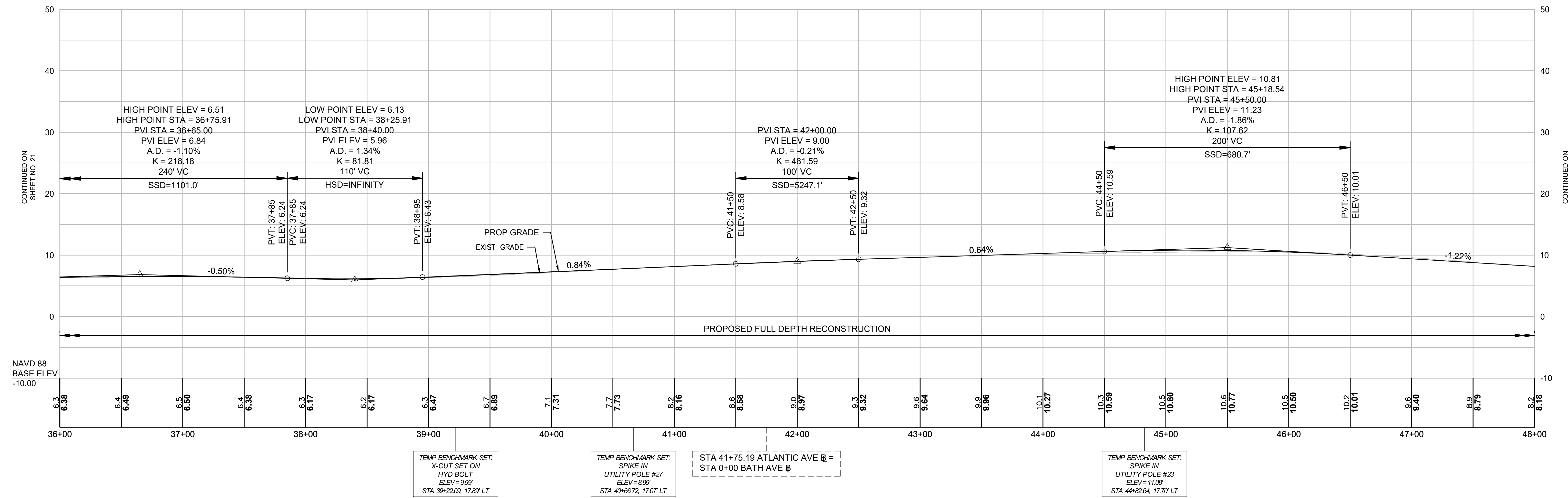
FOR CONSTRUCTION PLANS SEE SHEETS 10-12

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 4**

ATLANTIC AVE



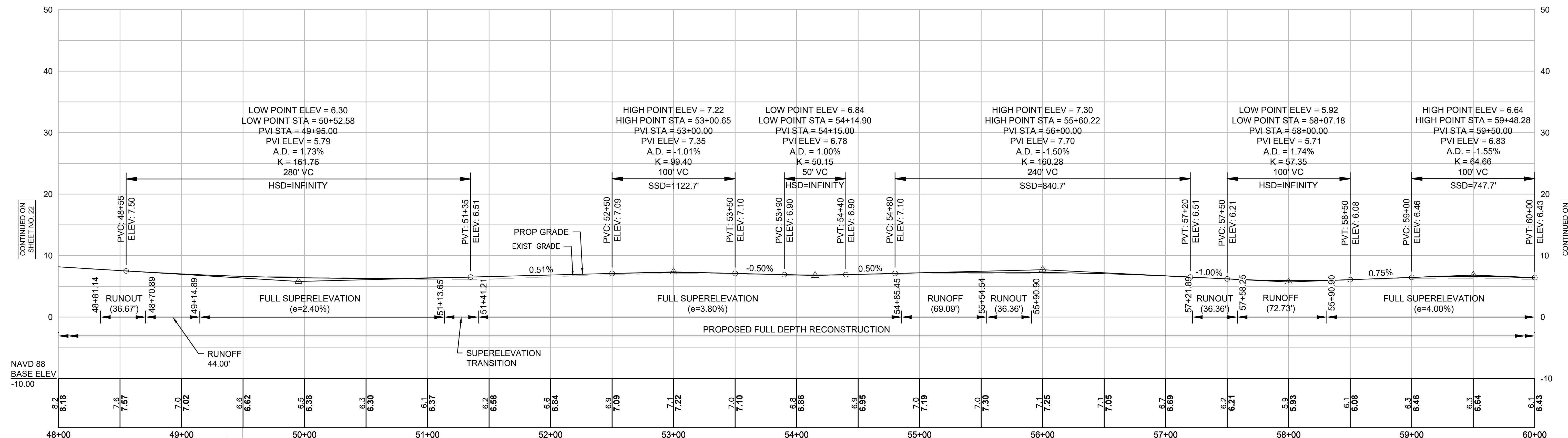
FOR CONSTRUCTION PLANS SEE SHEETS 12-14

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	43
PROJECT FILE NO. 601607			

**ATLANTIC AVENUE
PROFILE - 5**

ATLANTIC AVE



CONTINUED ON
SHEET NO. 22

CONTINUED ON
SHEET NO. 24

NAVD 88
BASE ELEV
-10.00

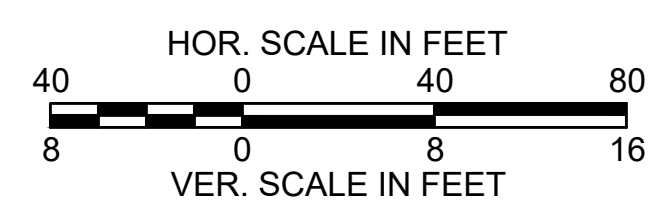
STA 49+36.42 ATLANTIC AVE @ =
STA 0+00 DRIFTWAY @

TEMP BENCHMARK SET:
X-CUT SET ON
HYD BOLT
ELEV=9.42'
STA 49+49.40, 15.99' LT

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #14
ELEV=9.02'
STA 53+07.04, 21.16' LT

STA 54+92.89 ATLANTIC AVE @ =
STA 0+00 SUMMIT AVE W @

TEMP BENCHMARK SET:
SPIKE IN
UTILITY POLE #10
ELEV=8.06'
STA 56+91.14, 16.66' LT



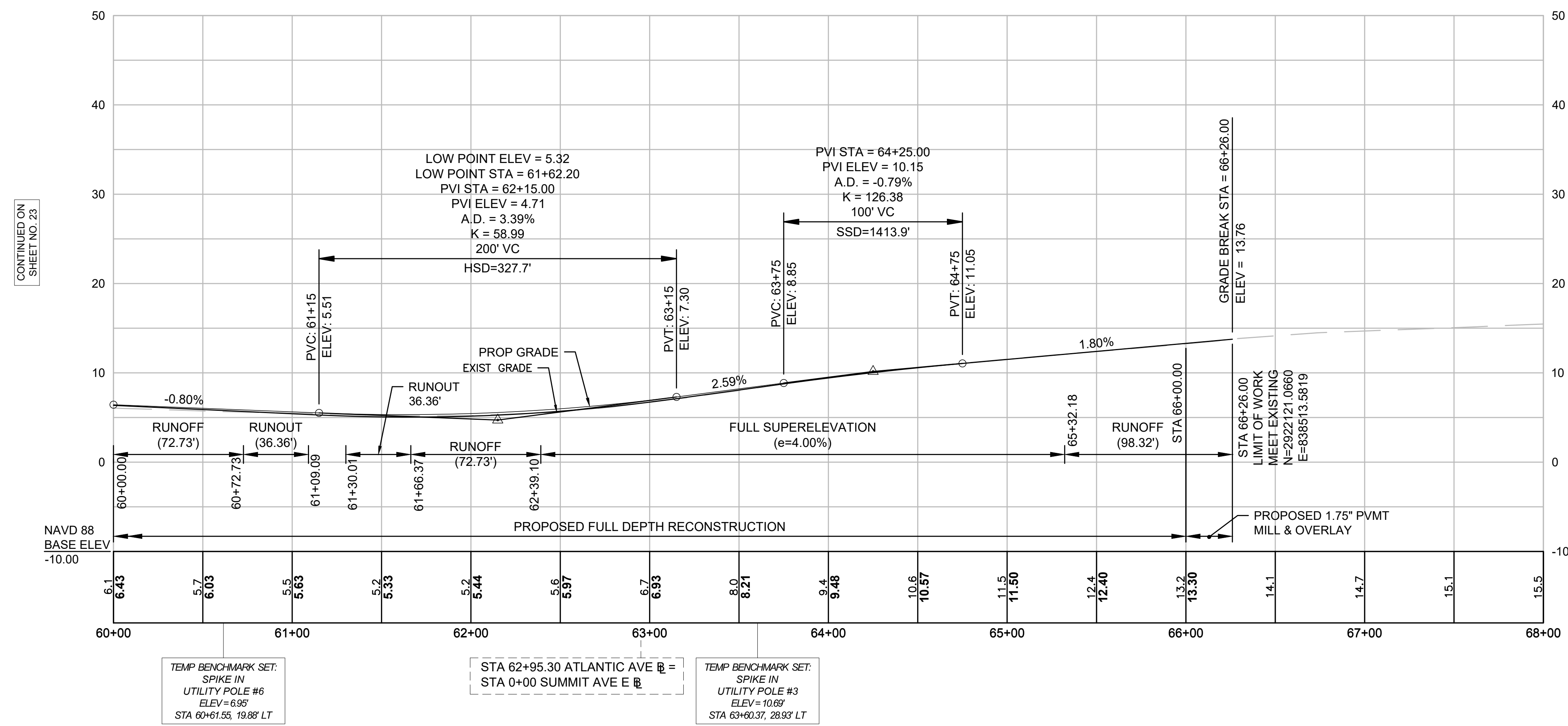
FOR CONSTRUCTION PLANS SEE SHEETS 14-16

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

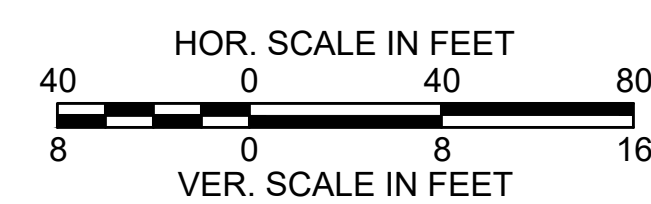
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	43

PROJECT FILE NO. 601607
**ATLANTIC AVENUE
PROFILE - 6**

ATLANTIC AVE

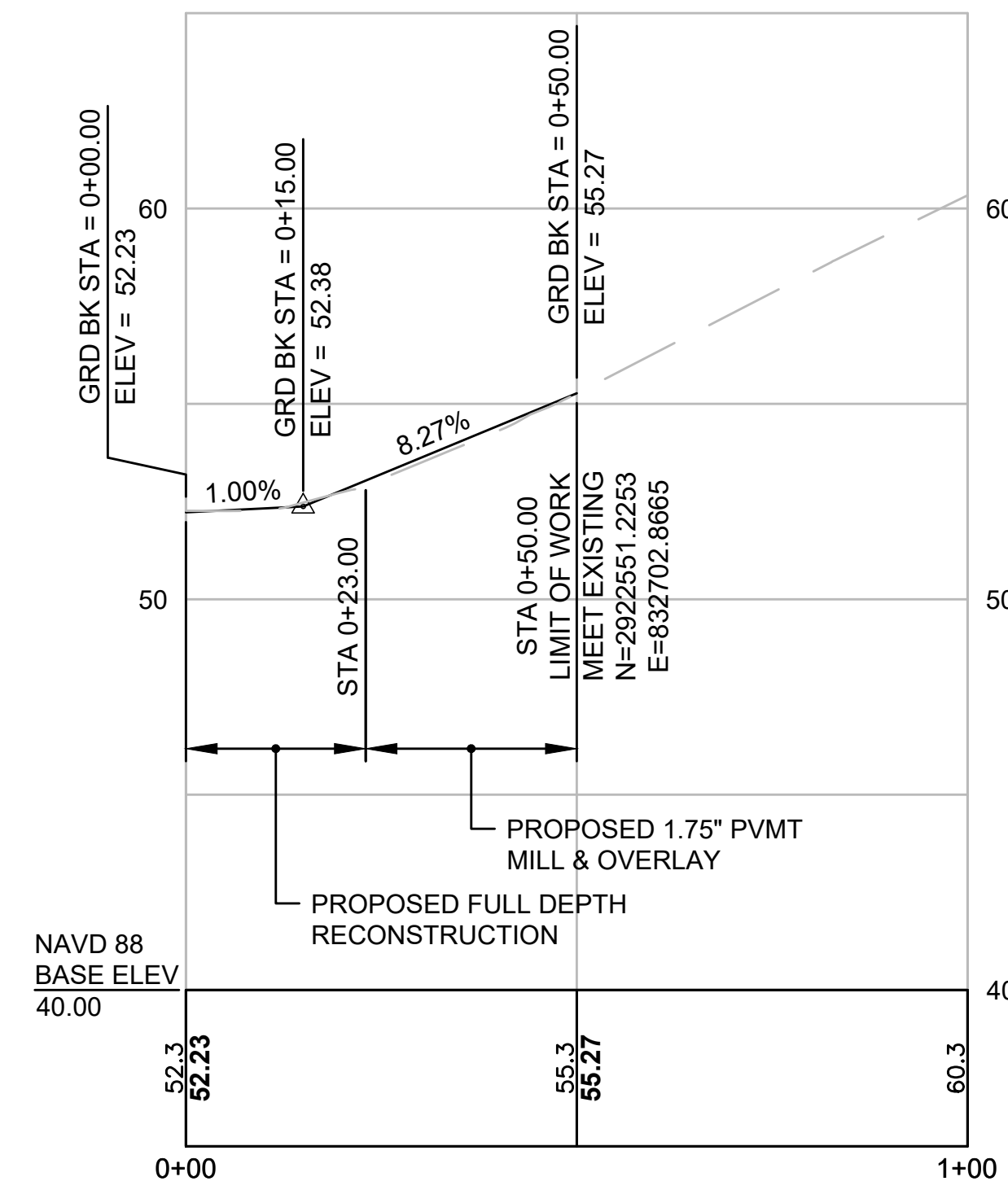


CONTINUED ON
SHEET NO. 23



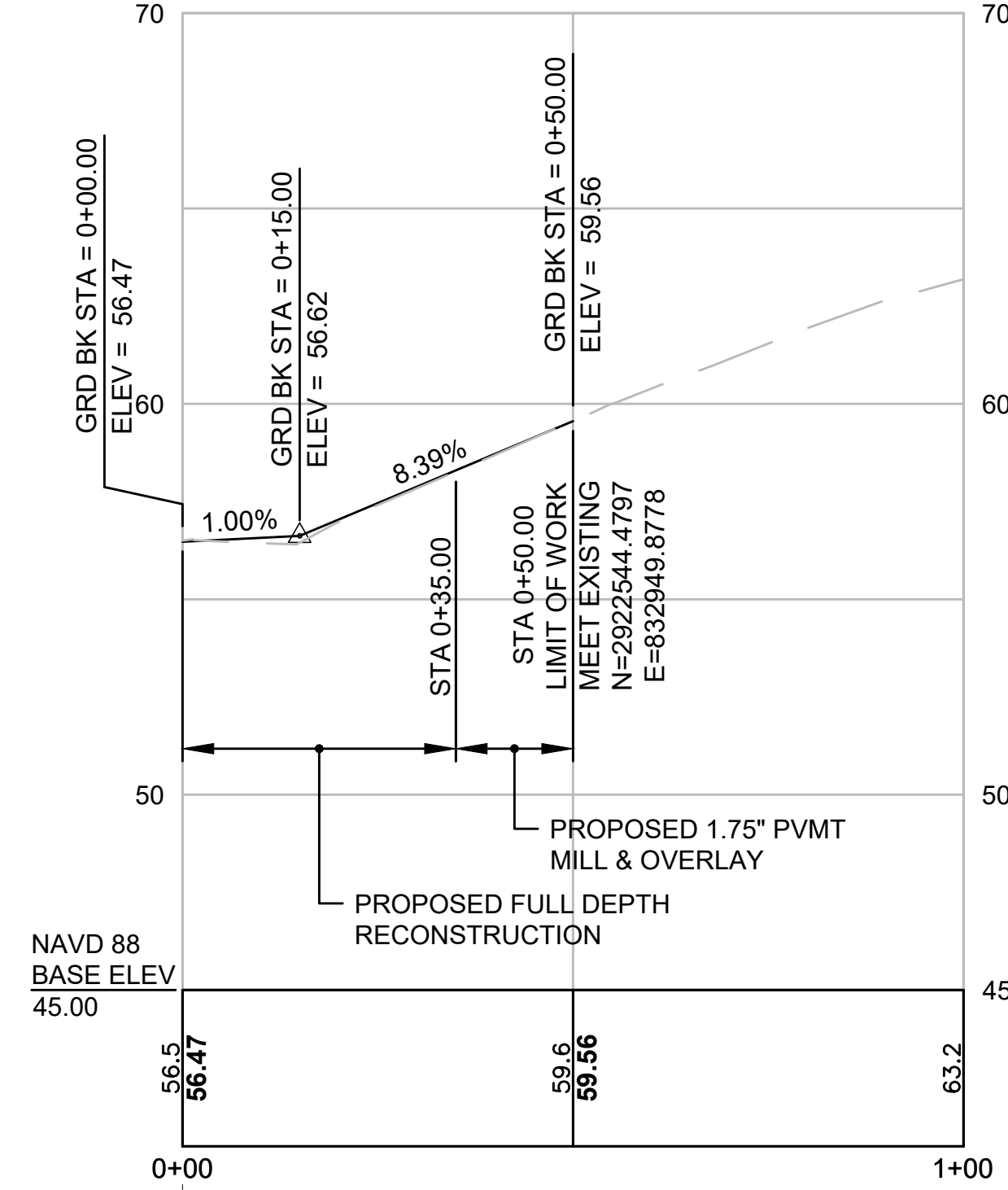
FOR CONSTRUCTION PLANS SEE SHEETS 16-18

MIDLEDGE AVE



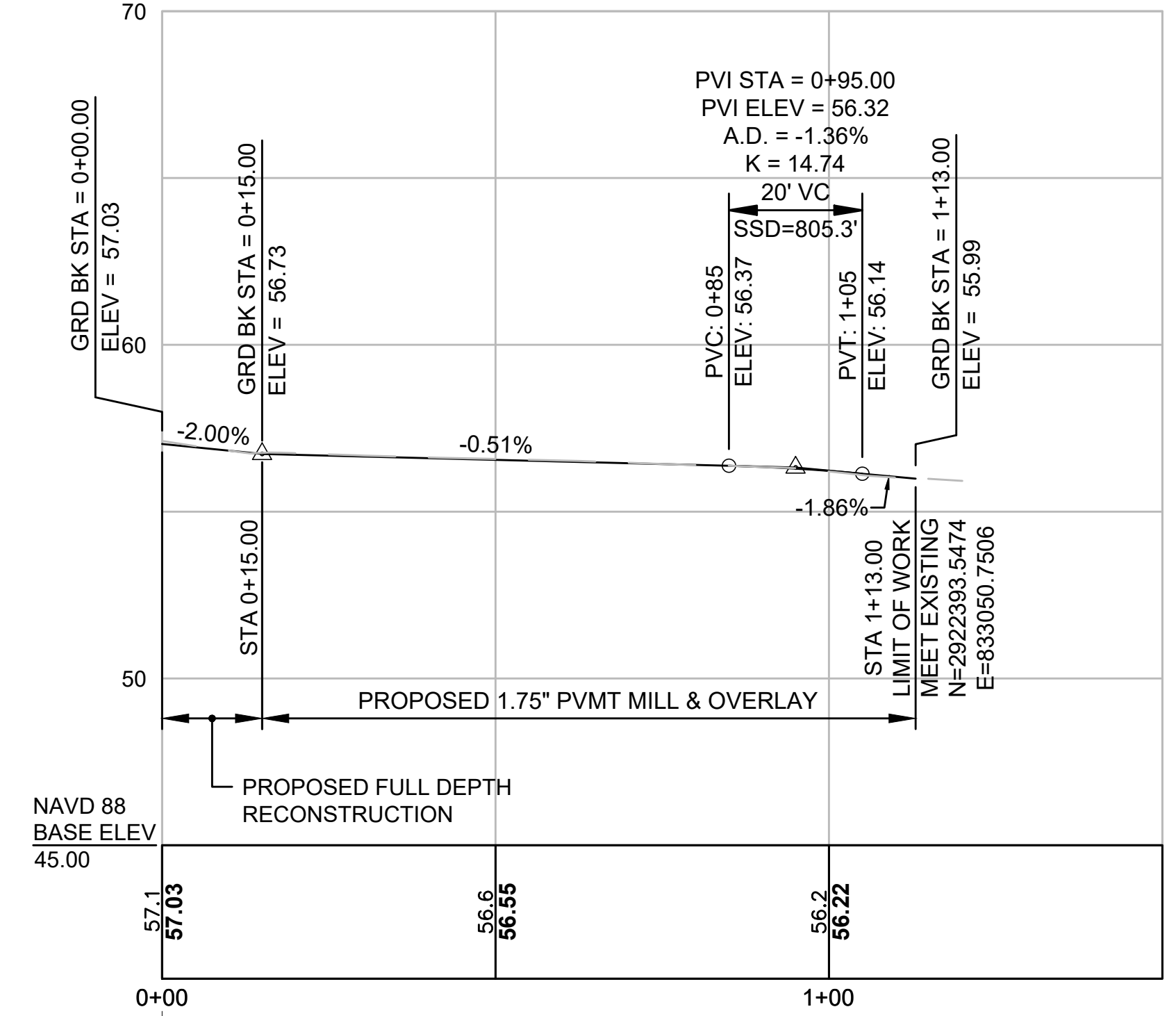
STA 4+53.93 ATLANTIC AVE @ =
STA 0+00 MIDDLEGE AVE @

ATLANIC HOUSE RD N



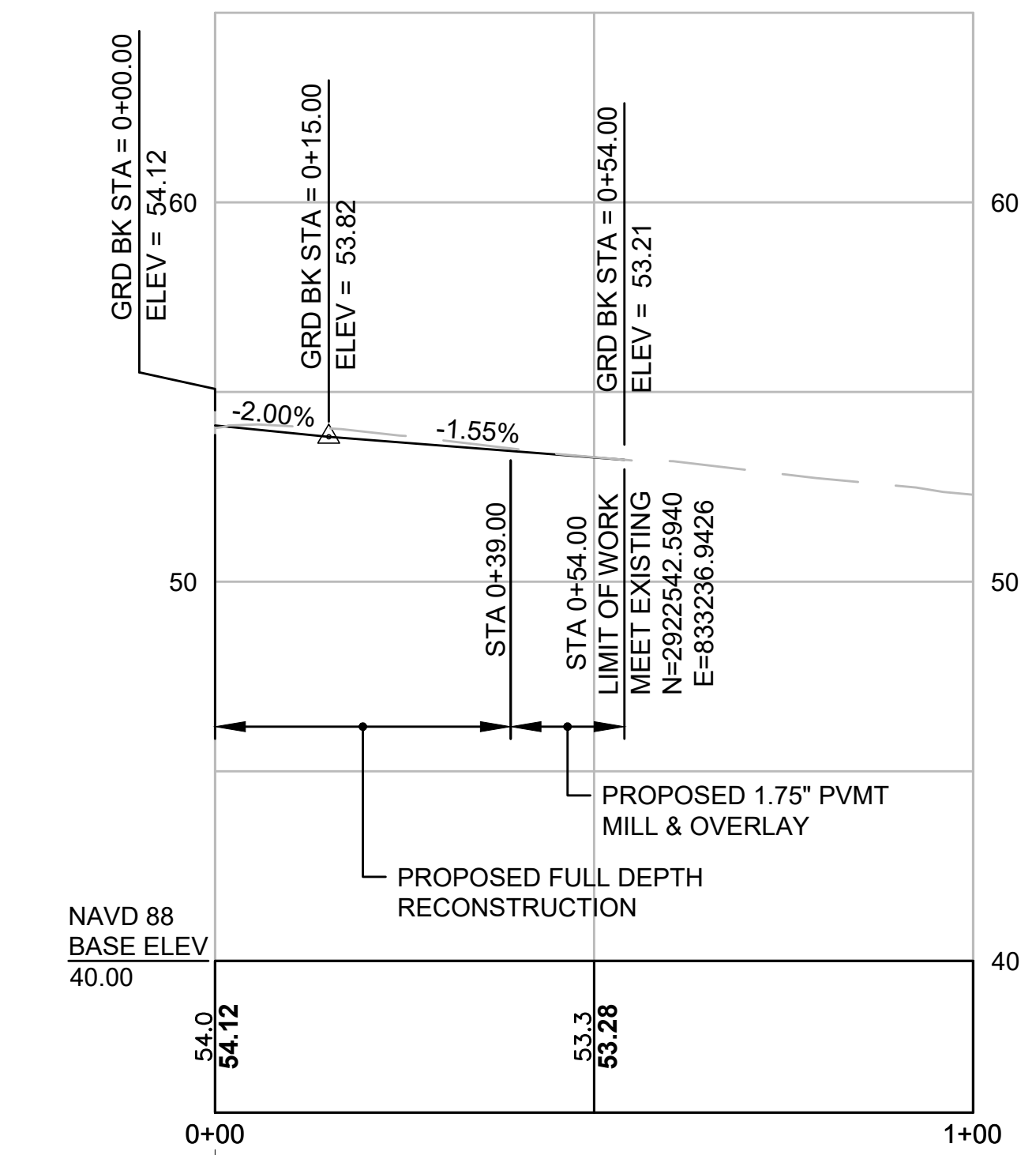
STA 7+02.44 ATLANTIC AVE @ =
STA 0+00 ATLANIC HOUSE RD N @

ATLANIC HOUSE RD S



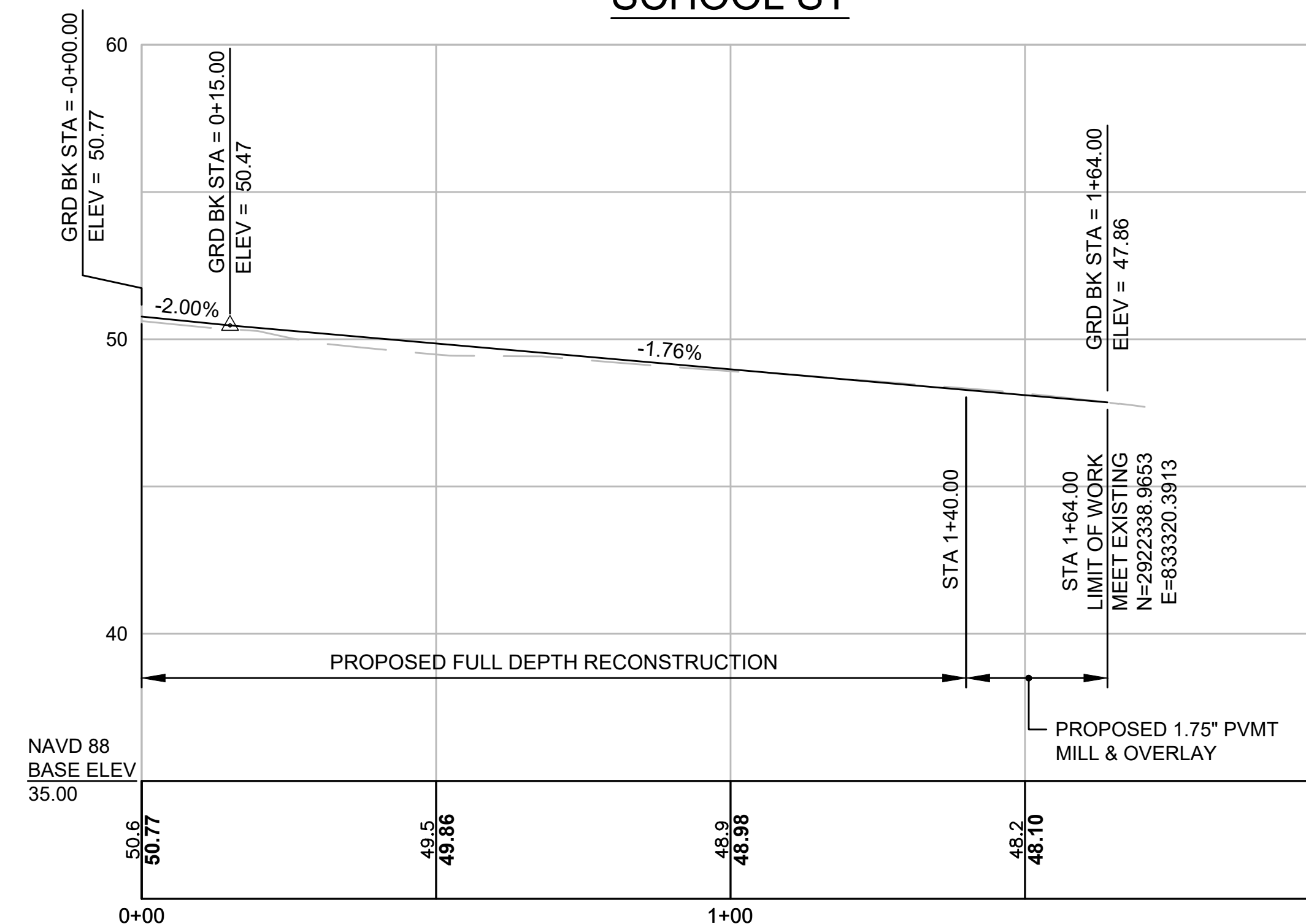
STA 7+52.56 ATLANTIC AVE @ =
STA 0+00 ATLANIC HOUSE RD S @

VALLEY BEACH AVE



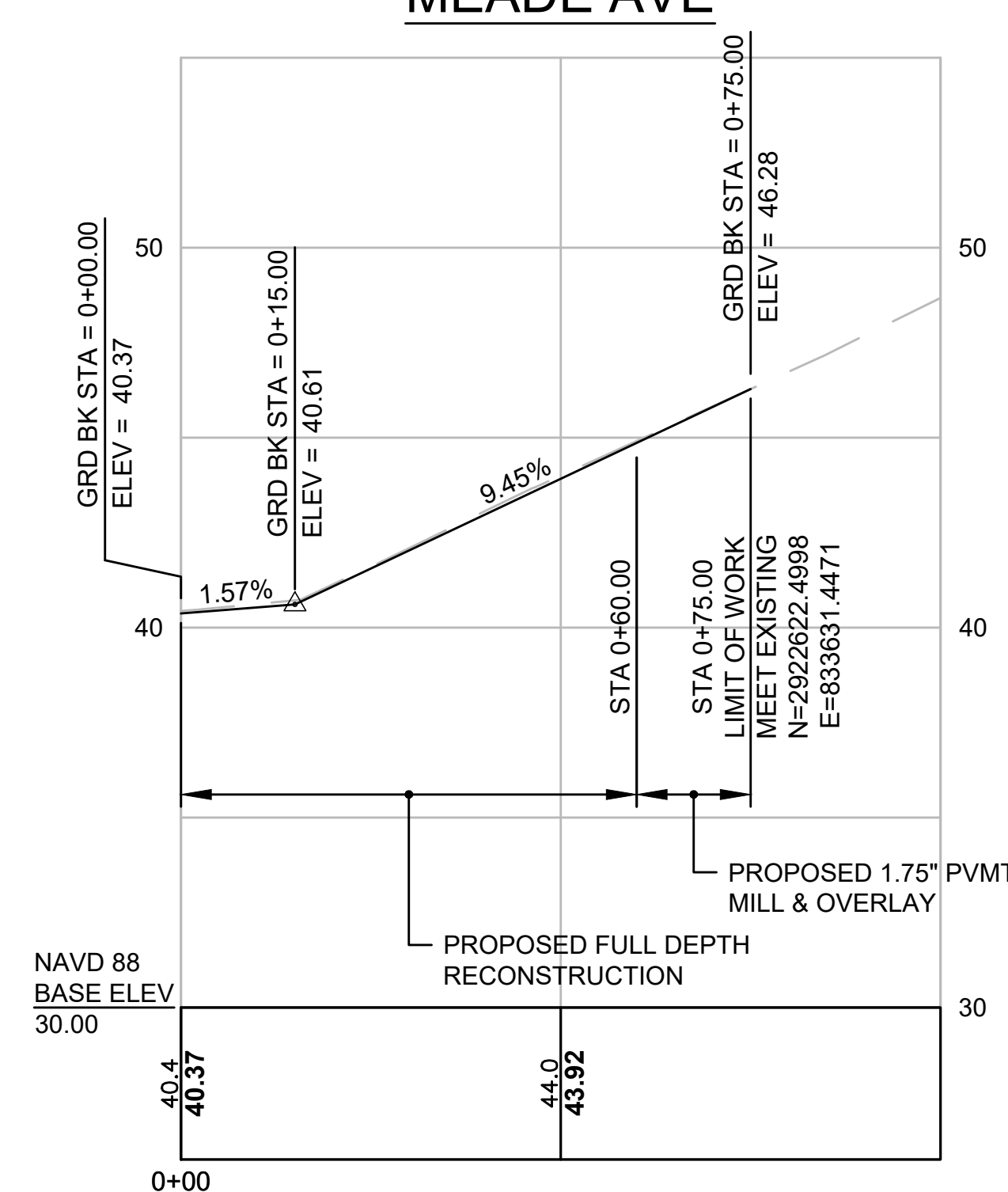
STA 9+83.56 ATLANTIC AVE @ =
STA 0+00 VALLEY BEACH AVE @

SCHOOL ST



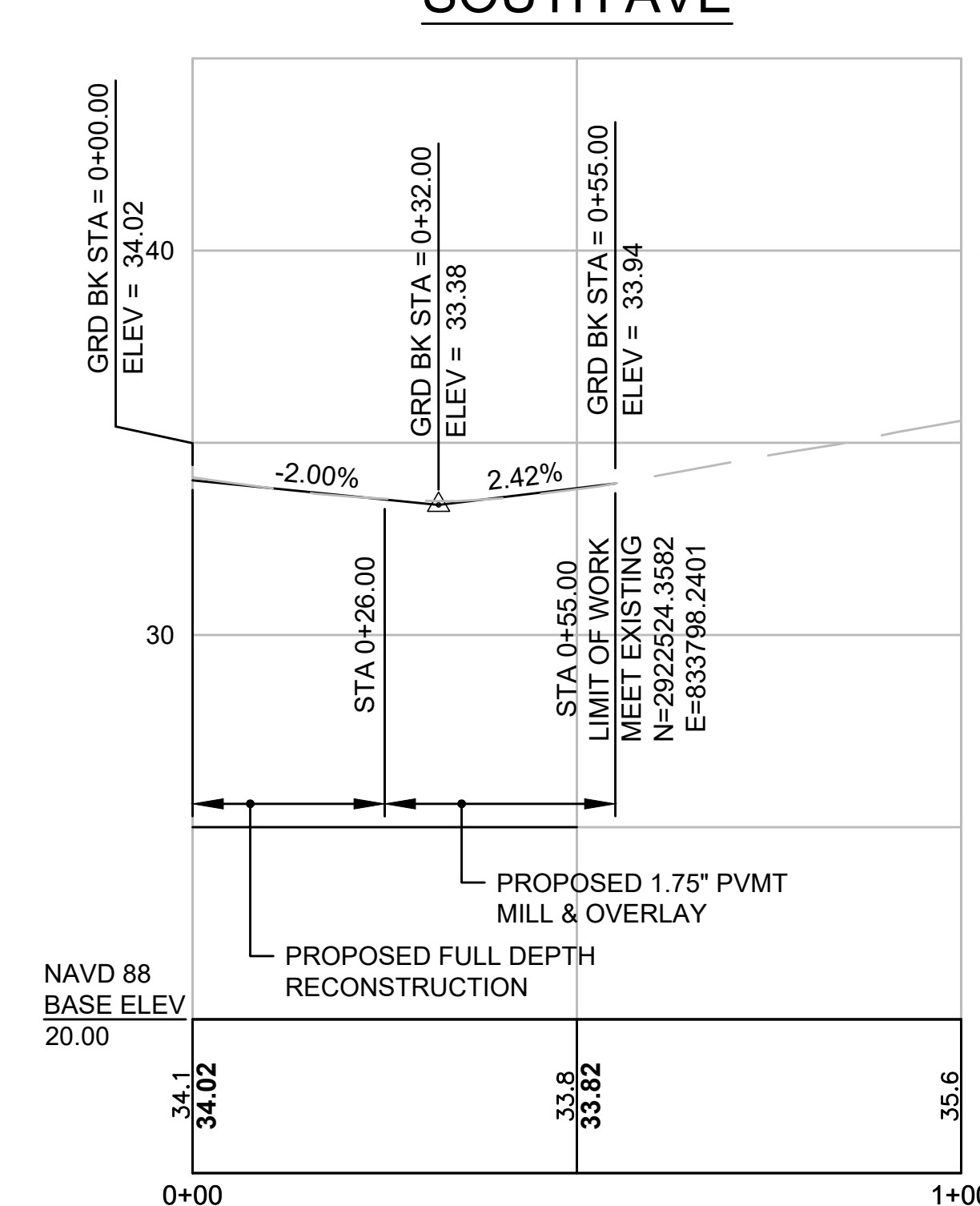
STA 11+02.37 ATLANTIC AVE @ =
STA 0+00 SCHOOL ST @

MEADE AVE



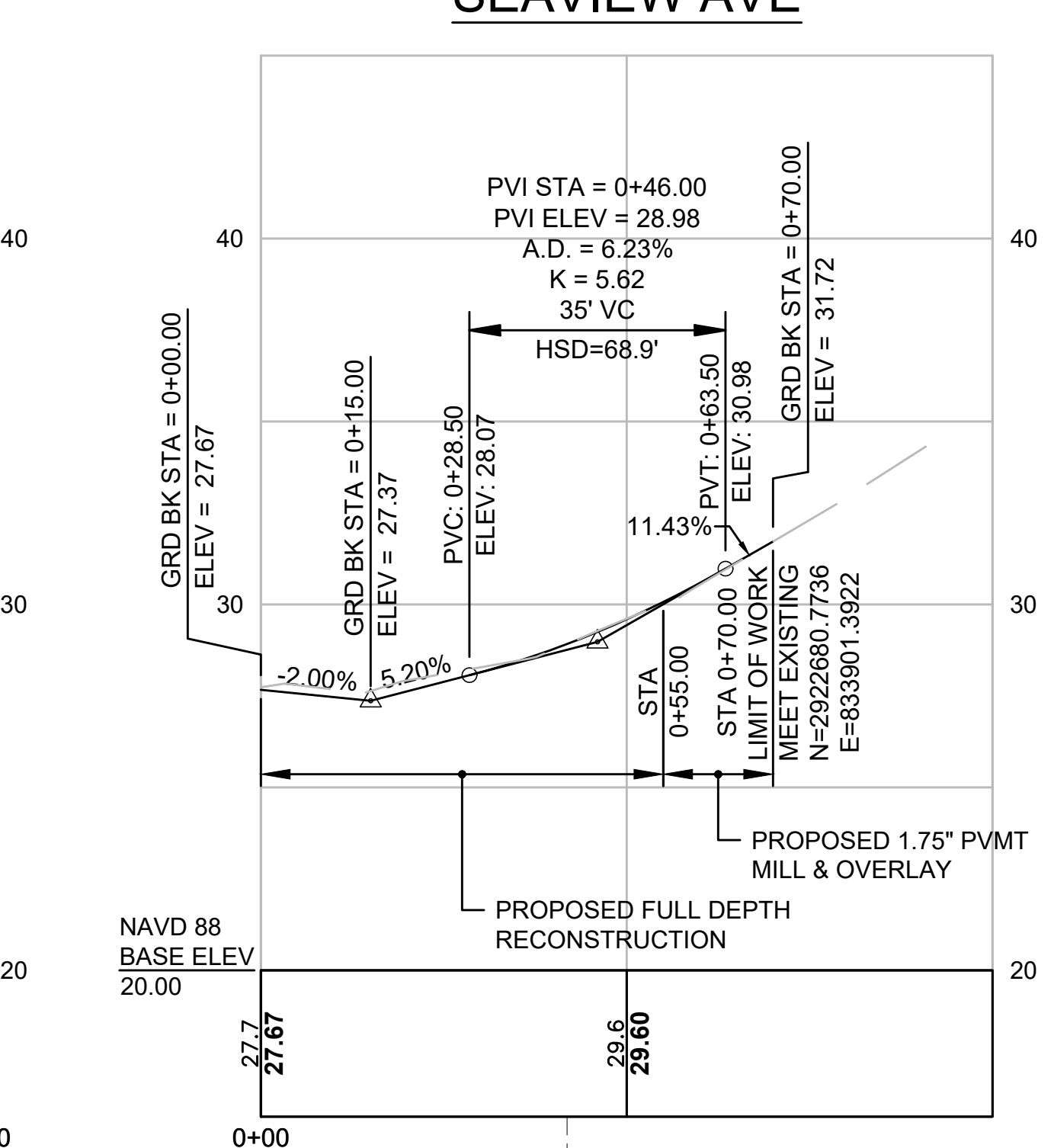
STA 13+89.16 ATLANTIC AVE @ =
STA 0+00 MEADE AVE @

SOUTH AVE



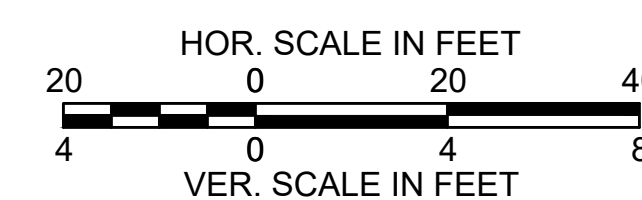
STA 15+42.31 ATLANTIC AVE @ =
STA 0+00 SOUTH AVE @

SEAVIEW AVE



STA 16+77.73 ATLANTIC AVE @ =
STA 0+00 SEAVIEW AVE @

STA 0+42.71 SEAVIEW AVE @ =
STA 0+00.00 STONY BEACH RD W @

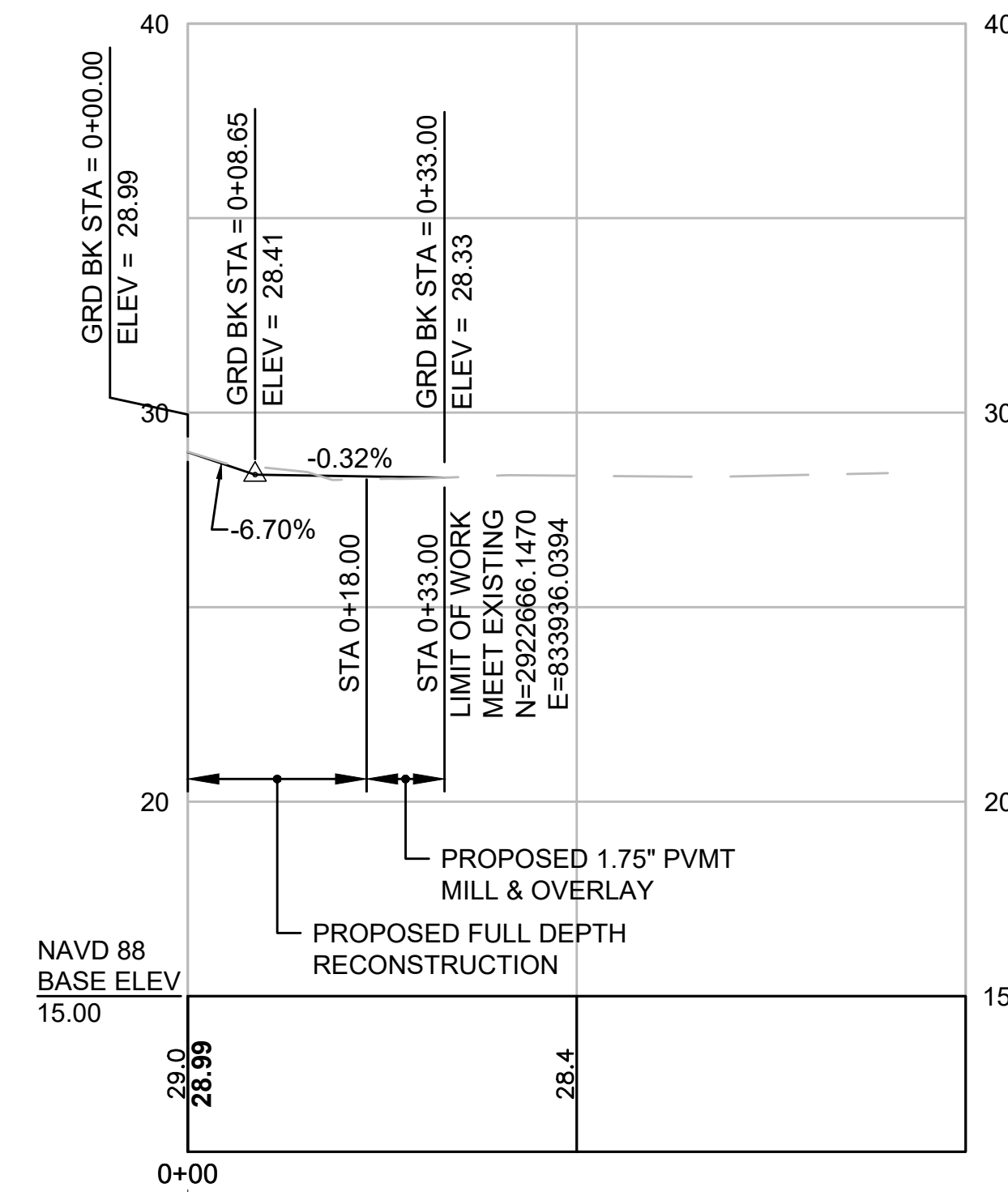


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	43
PROJECT FILE NO. 601607			

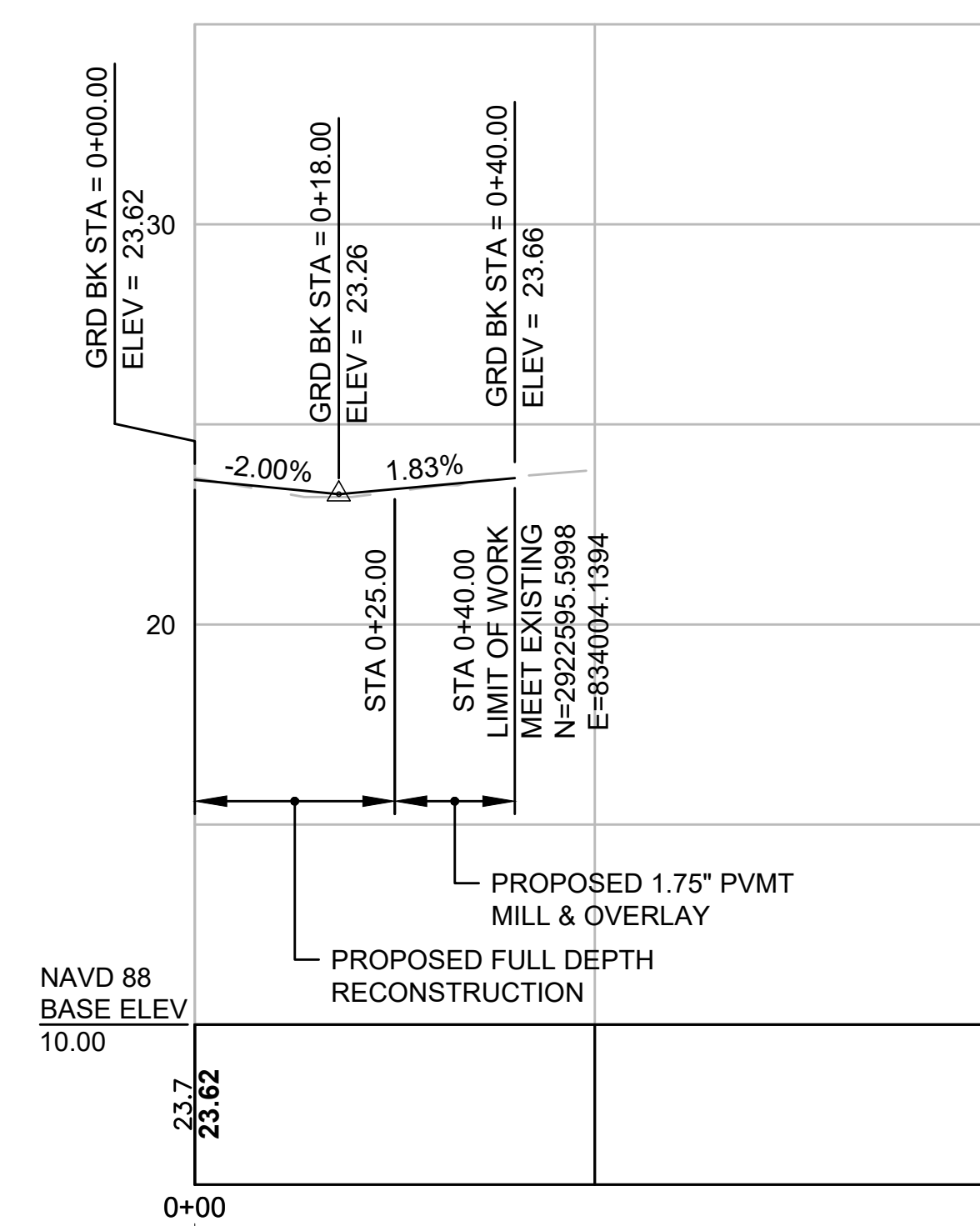
SIDE STREETS PROFILE - 8

STONY BEACH RD W



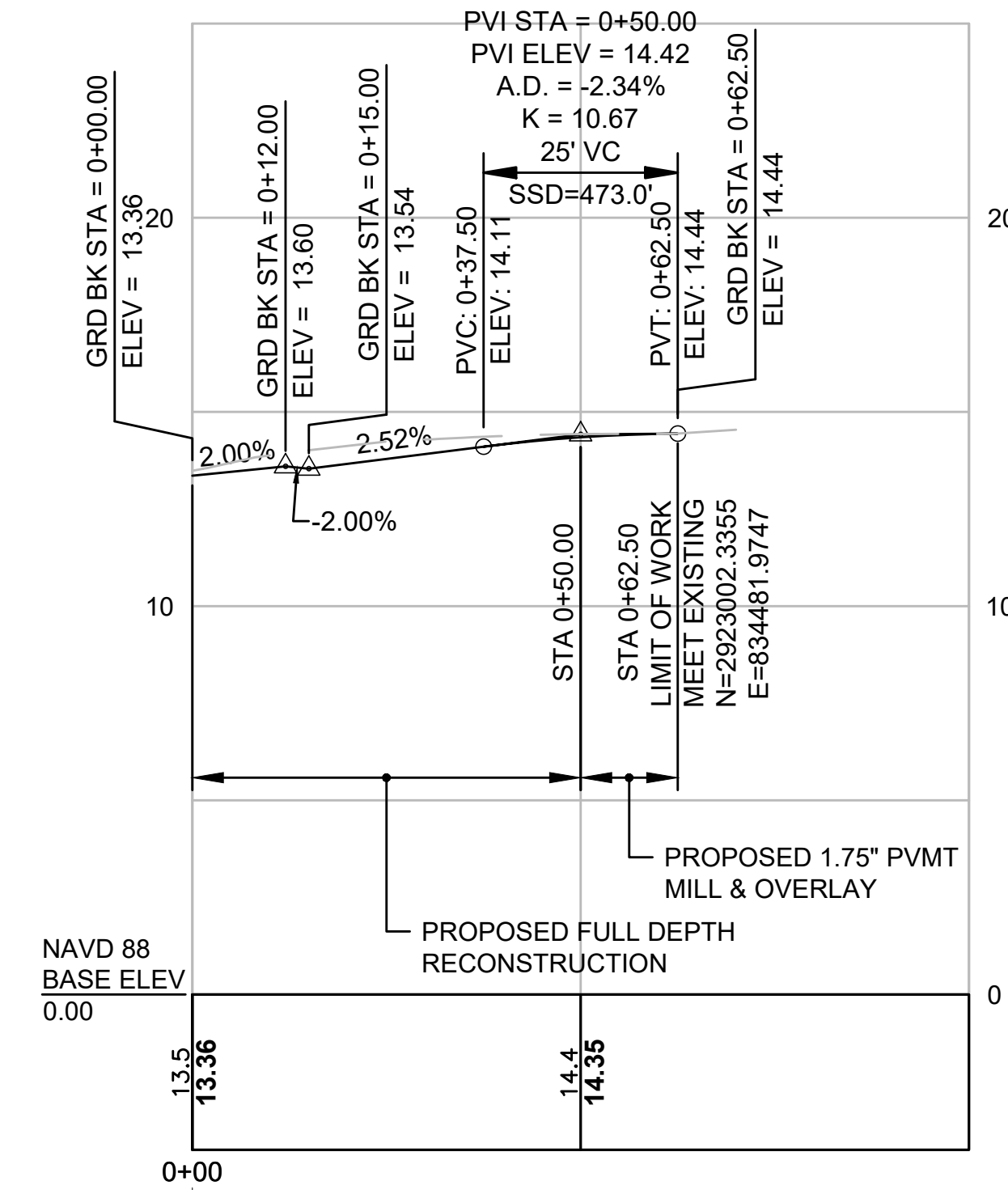
STA 0+00.00 STONY BEACH RD W @ =
STA 0+42.71 SEAVIEW AVE @

RICHARDS RD



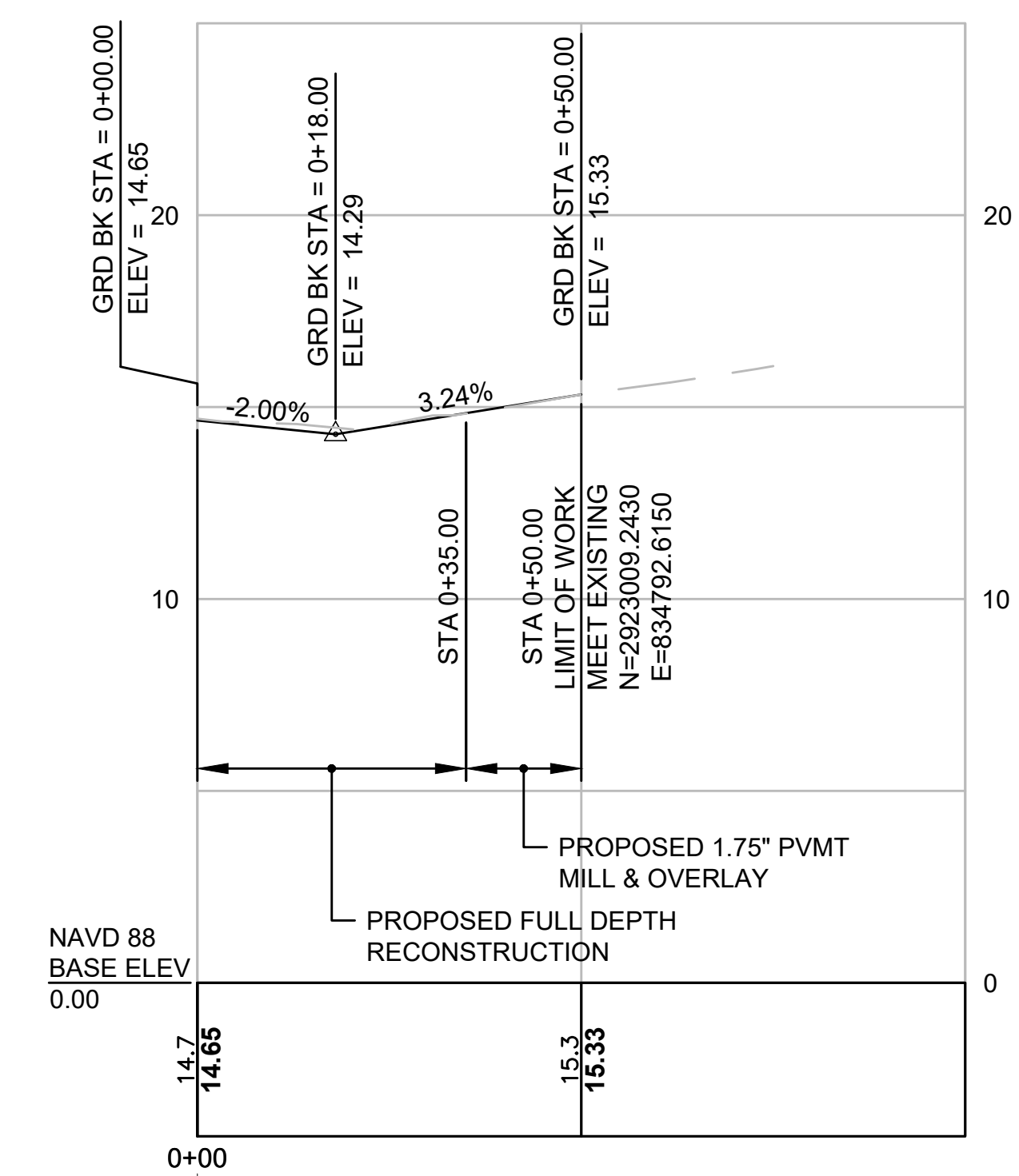
STA 17+57.08 ATLANTIC AVE @ =
STA 0+00 RICHARDS RD @

STONY BEACH RD E



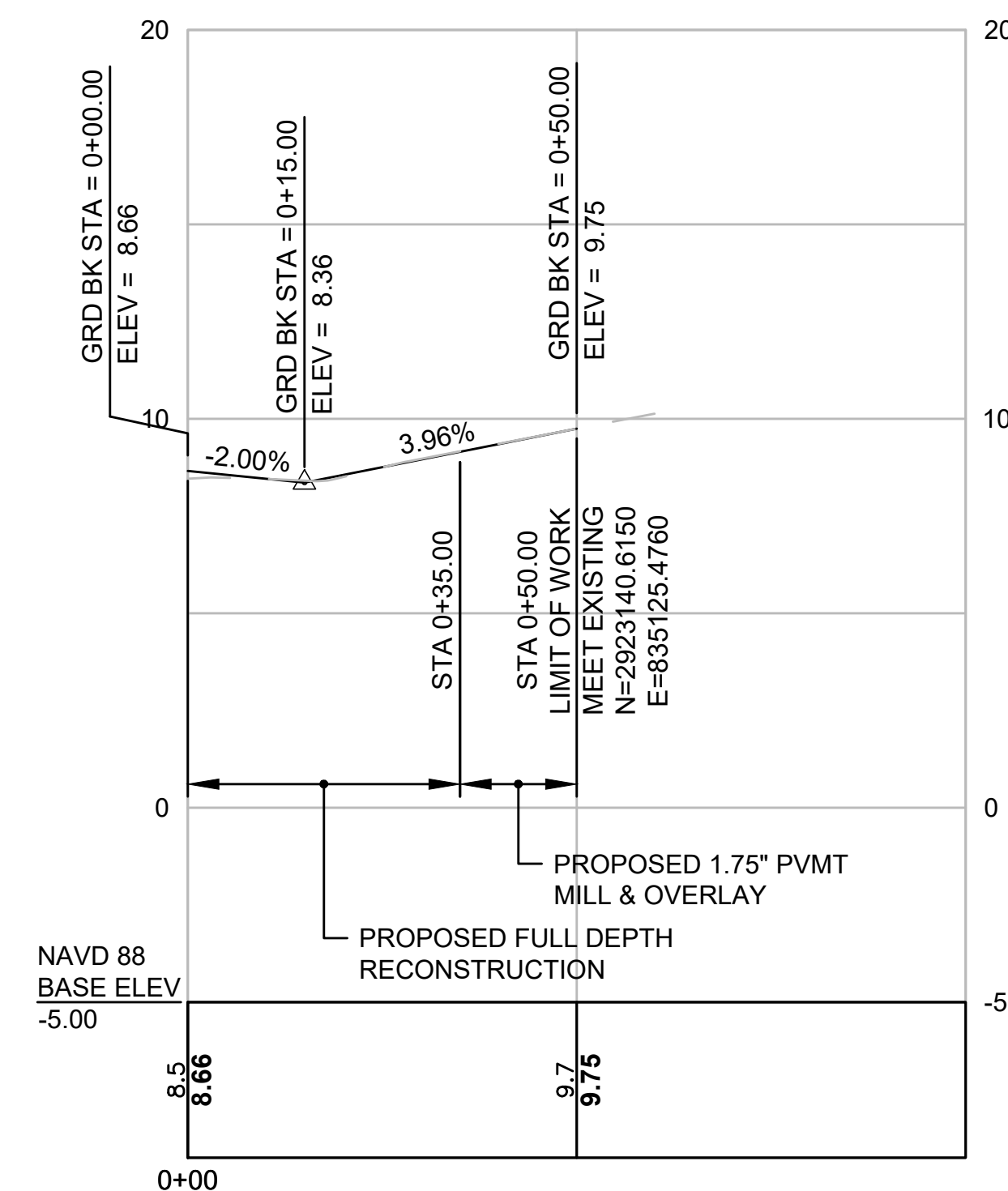
STA 23+88.95 ATLANTIC AVE @ =
STA 0+00.00 STONY BEACH RD E @

MONTANA AVE



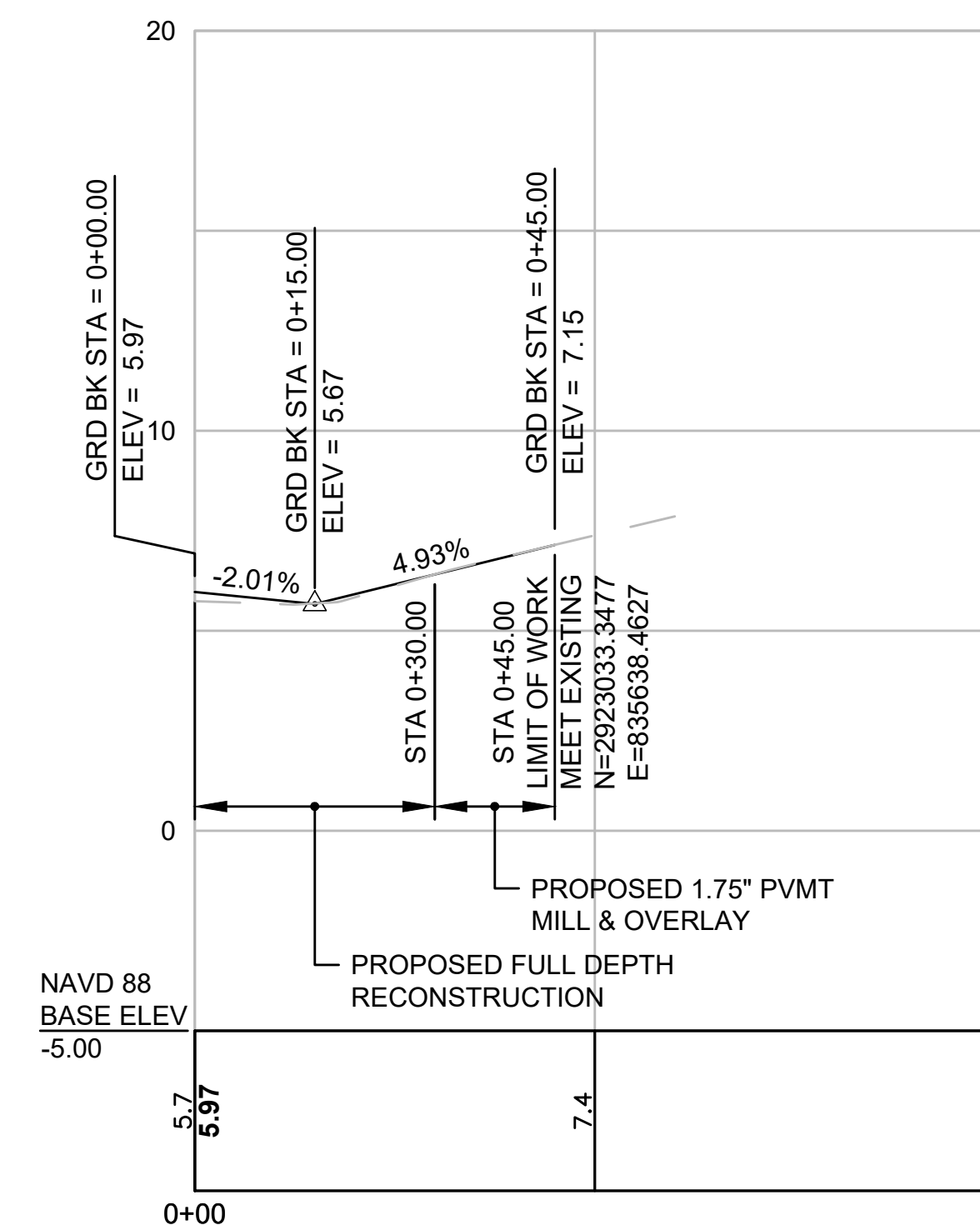
STA 26+75.38 ATLANTIC AVE @ =
STA 0+00 MONTANA AVE @

GUNROCK AVE W



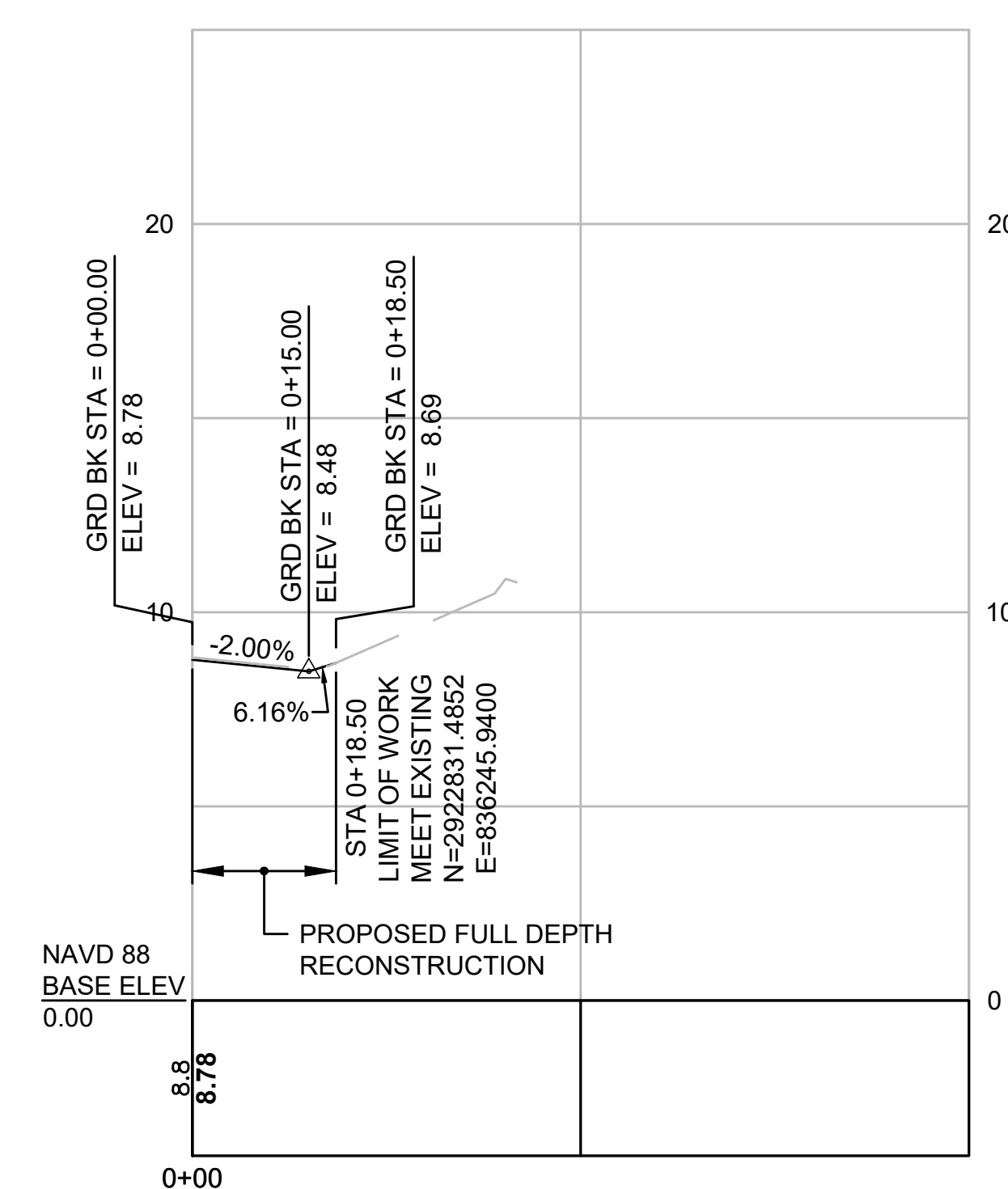
STA 30+09.82 ATLANTIC AVE @ =
STA 0+00 GUN ROCK AVE W @

GUNROCK AVE E



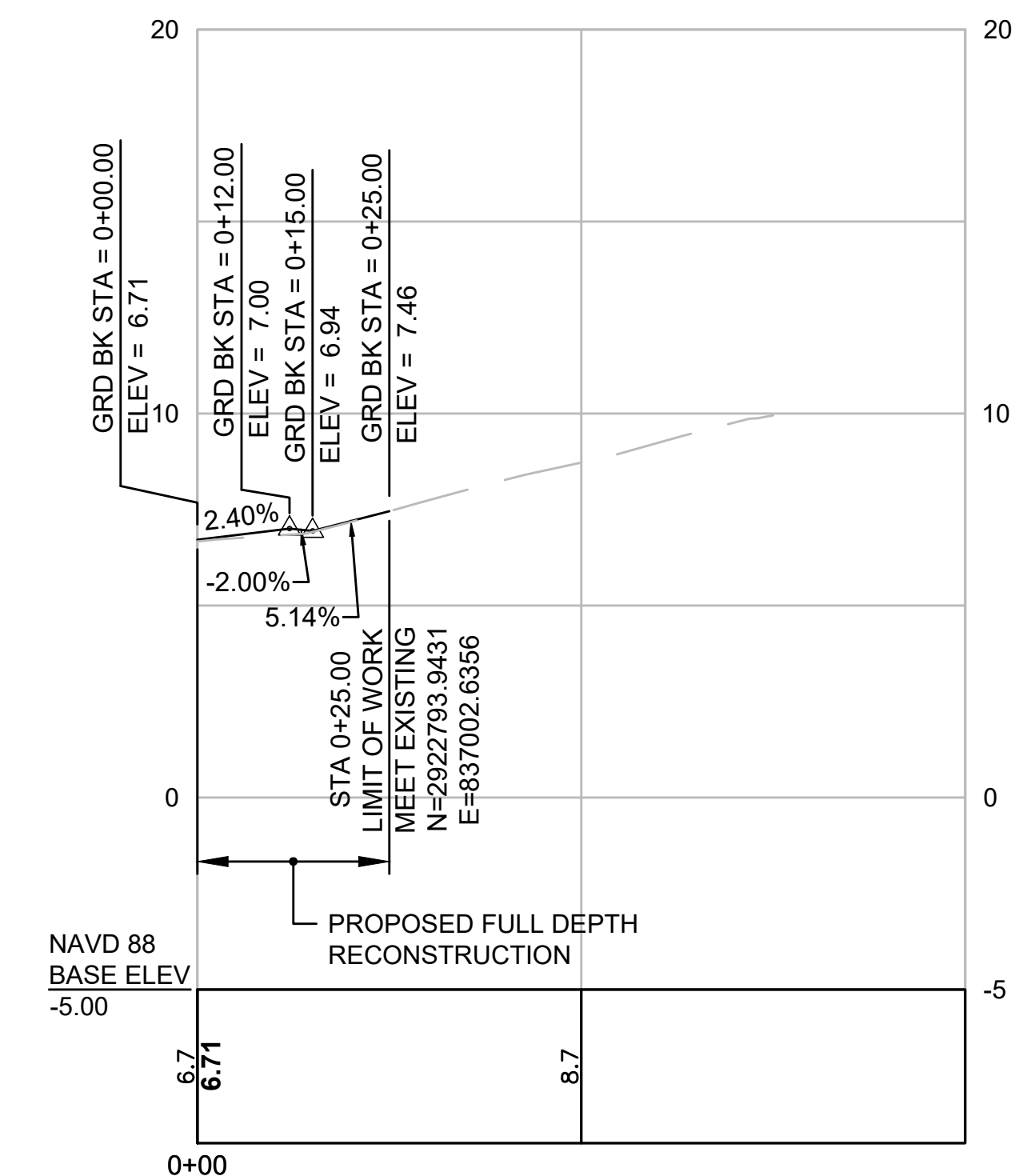
STA 35+20.71 ATLANTIC AVE @ =
STA 0+00 GUN ROCK AVE E @

BATH AVE

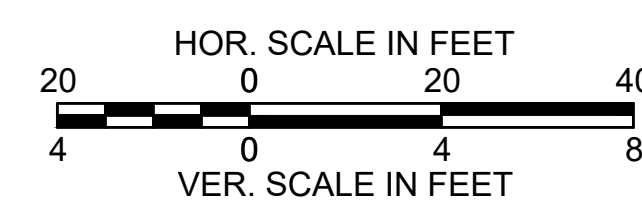


STA 41+75.19 ATLANTIC AVE @ =
STA 0+00 BATH AVE @

DRIFTWAY



STA 49+36.42 ATLANTIC AVE @ =
STA 0+00 DRIFTWAY @



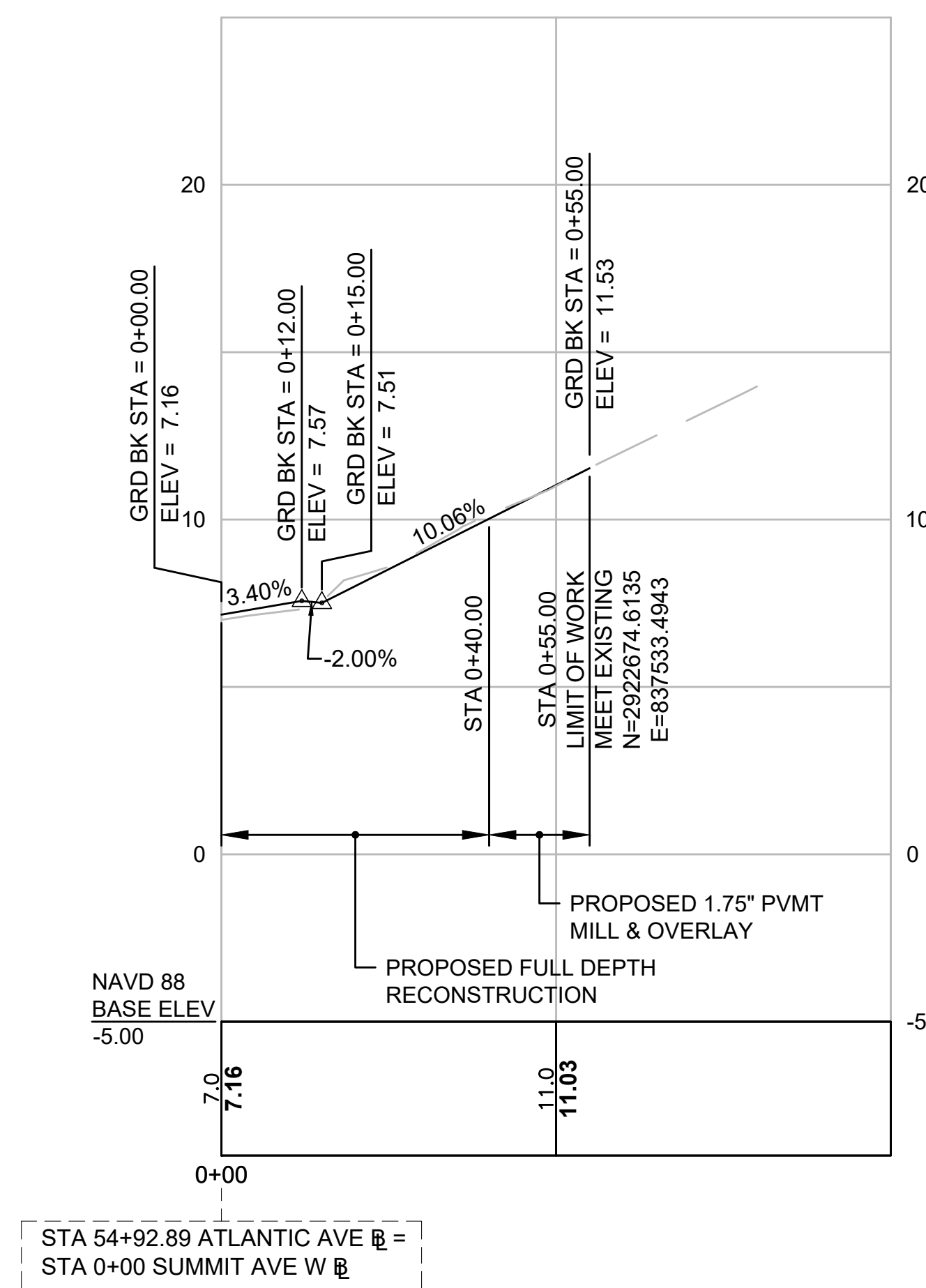
FOR CONSTRUCTION PLANS SEE SHEETS 9 -15

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

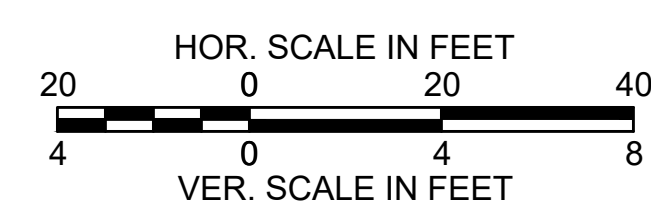
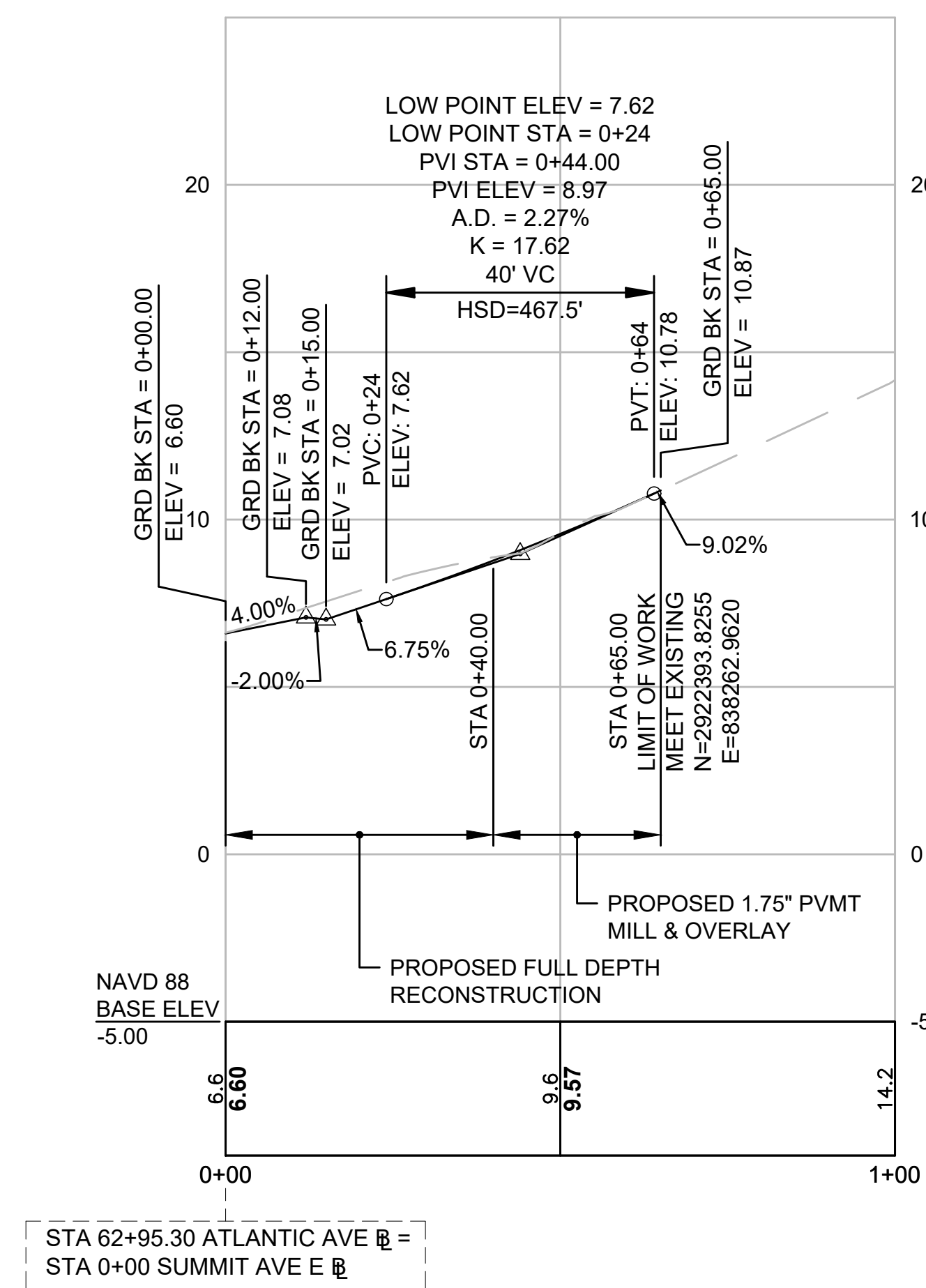
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	43
PROJECT FILE NO.		601607	

SIDE STREETS PROFILE - 9

SUMMIT AVE W



SUMMIT AVE E

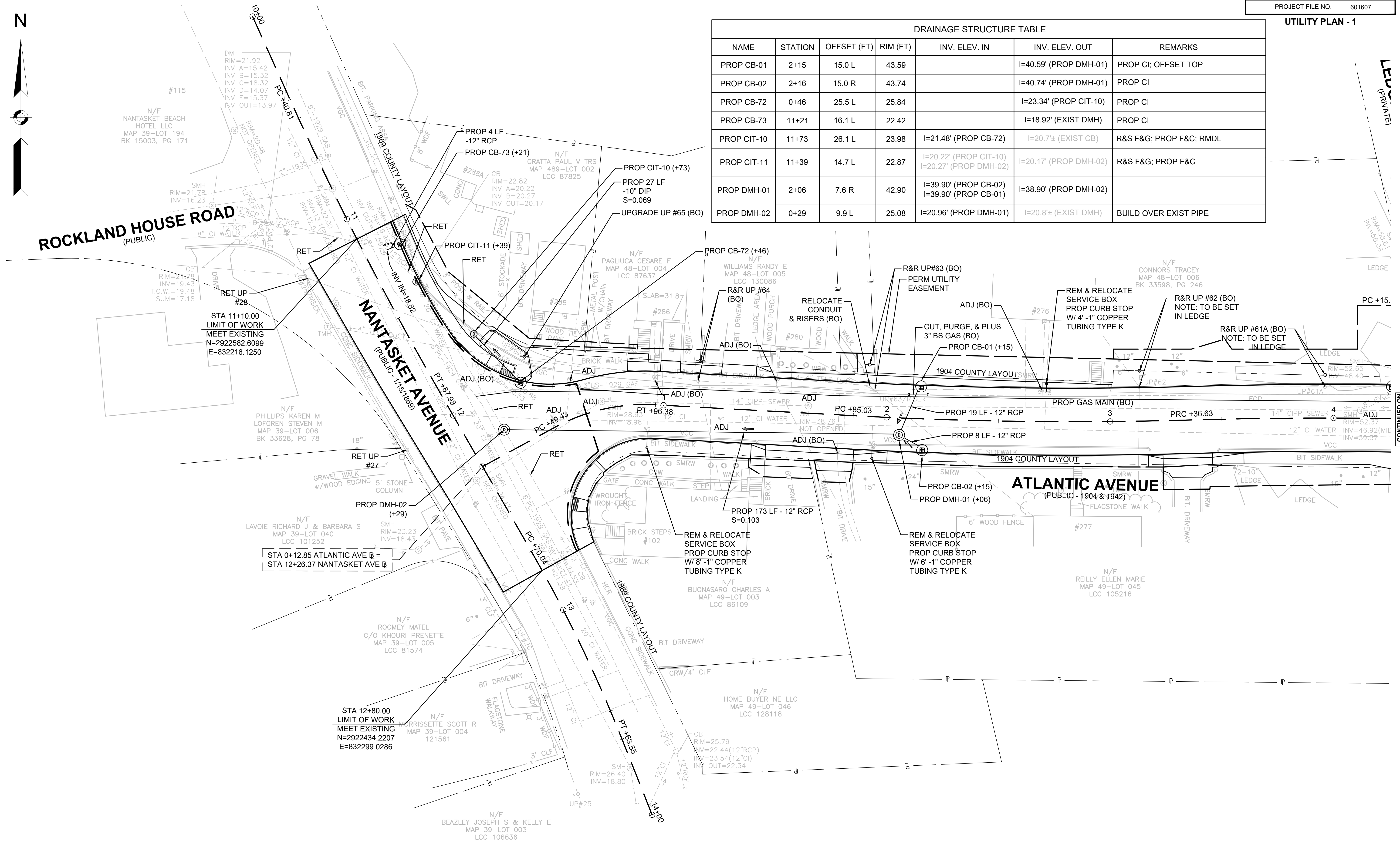
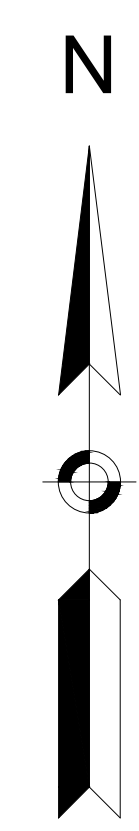


**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 1

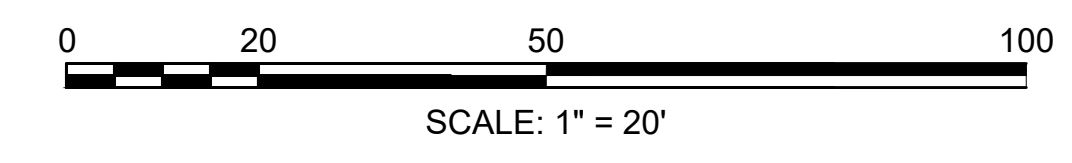
DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-01	2+15	15.0 L	43.59		I=40.59' (PROP DMH-01)	PROP CI; OFFSET TOP
PROP CB-02	2+16	15.0 R	43.74		I=40.74' (PROP DMH-01)	PROP CI
PROP CB-72	0+46	25.5 L	25.84		I=23.34' (PROP CIT-10)	PROP CI
PROP CB-73	11+21	16.1 L	22.42		I=18.92' (EXIST DMH)	PROP CI
PROP CIT-10	11+73	26.1 L	23.98	I=21.48' (PROP CB-72)	I=20.7'± (EXIST CB)	R&S F&G; PROP F&C; RMDL
PROP CIT-11	11+39	14.7 L	22.87	I=20.22' (PROP CIT-10) I=20.27' (PROP DMH-02)	I=20.17' (PROP DMH-02)	R&S F&G; PROP F&C
PROP DMH-01	2+06	7.6 R	42.90	I=39.90' (PROP CB-02) I=39.90' (PROP CB-01)	I=38.90' (PROP DMH-02)	
PROP DMH-02	0+29	9.9 L	25.08	I=20.96' (PROP DMH-01)	I=20.8'± (EXIST DMH)	BUILD OVER EXIST PIPE



STA 11+10.00
LIMIT OF WORK
MEET EXISTING
N=2922582.6099
E=832216.1250

STA 0+12.85 ATLANTIC AVE =
STA 12+26.37 NANTASKET AVE

STA 12+80.00
LIMIT OF WORK
MEET EXISTING
N=2922434.2207
E=832299.0286



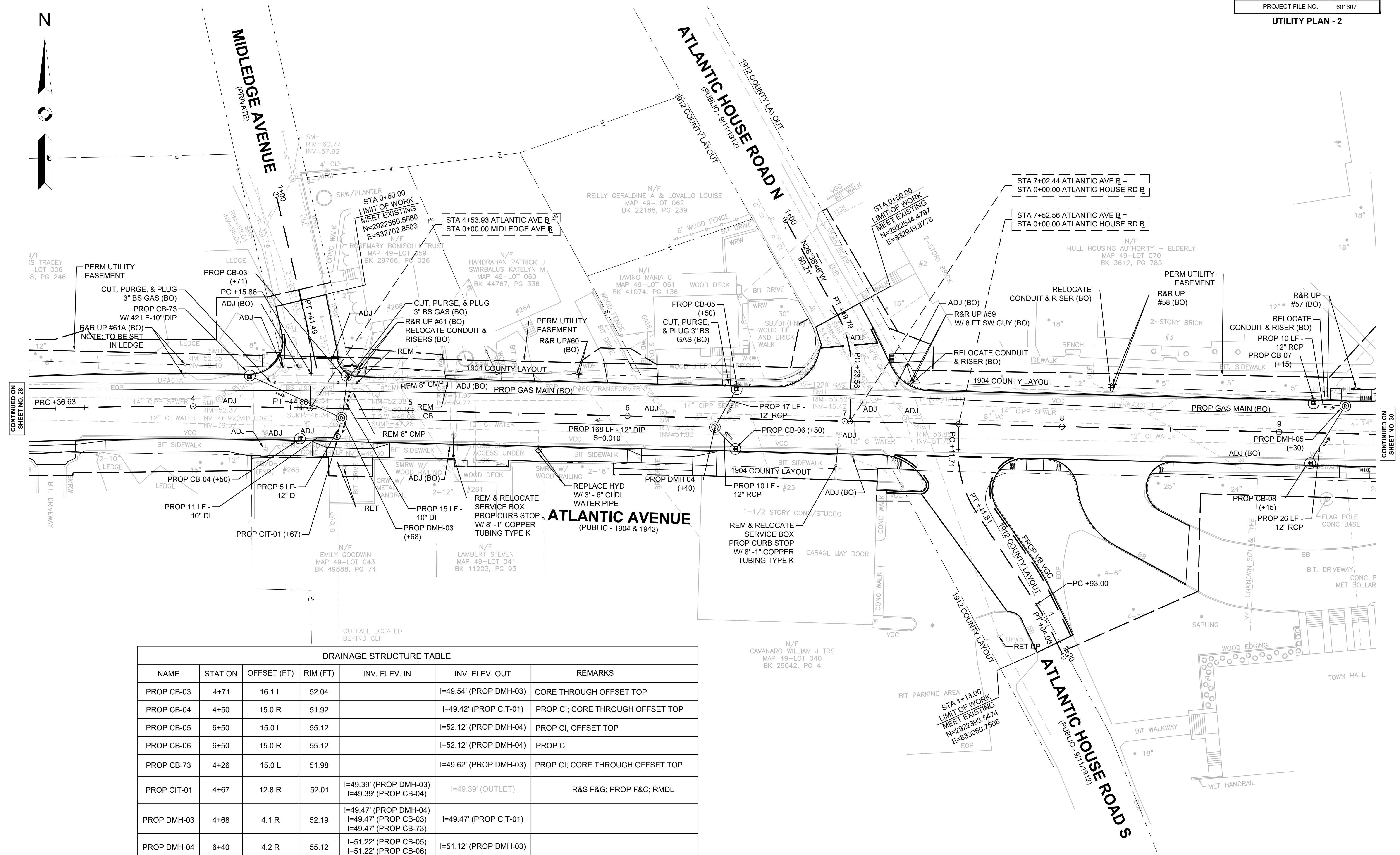
FOR PROFILE SEE SHEET 19

CONTINUED ON
SHEET NO. 29

HULL
ATLANTIC AVENUE RECONSTRUCTION

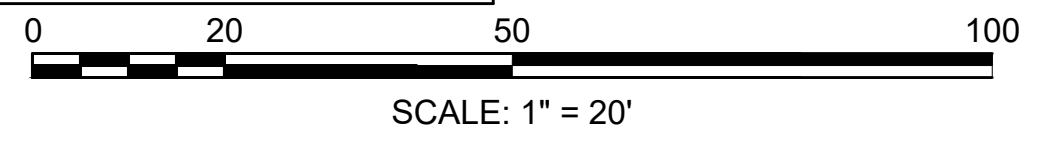
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 2



DRAINAGE STRUCTURE TABLE

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-03	4+71	16.1 L	52.04		I=49.54' (PROP DMH-03)	CORE THROUGH OFFSET TOP
PROP CB-04	4+50	15.0 R	51.92		I=49.42' (PROP CIT-01)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-05	6+50	15.0 L	55.12		I=52.12' (PROP DMH-04)	PROP CI; OFFSET TOP
PROP CB-06	6+50	15.0 R	55.12		I=52.12' (PROP DMH-04)	PROP CI
PROP CB-73	4+26	15.0 L	51.98		I=49.62' (PROP DMH-03)	PROP CI; CORE THROUGH OFFSET TOP
PROP CIT-01	4+67	12.8 R	52.01	I=49.39' (PROP DMH-03) I=49.39' (PROP CB-04)	I=49.39' (OUTLET)	R&S F&G; PROP F&C; RMDL
PROP DMH-03	4+68	4.1 R	52.19	I=49.47' (PROP DMH-04) I=49.47' (PROP CB-03) I=49.47' (PROP CB-73)	I=49.47' (PROP CIT-01)	
PROP DMH-04	6+40	4.2 R	55.12	I=51.22' (PROP CB-05) I=51.22' (PROP CB-06)	I=51.12' (PROP DMH-03)	



FOR PROFILE SEE SHEET 19 & 25

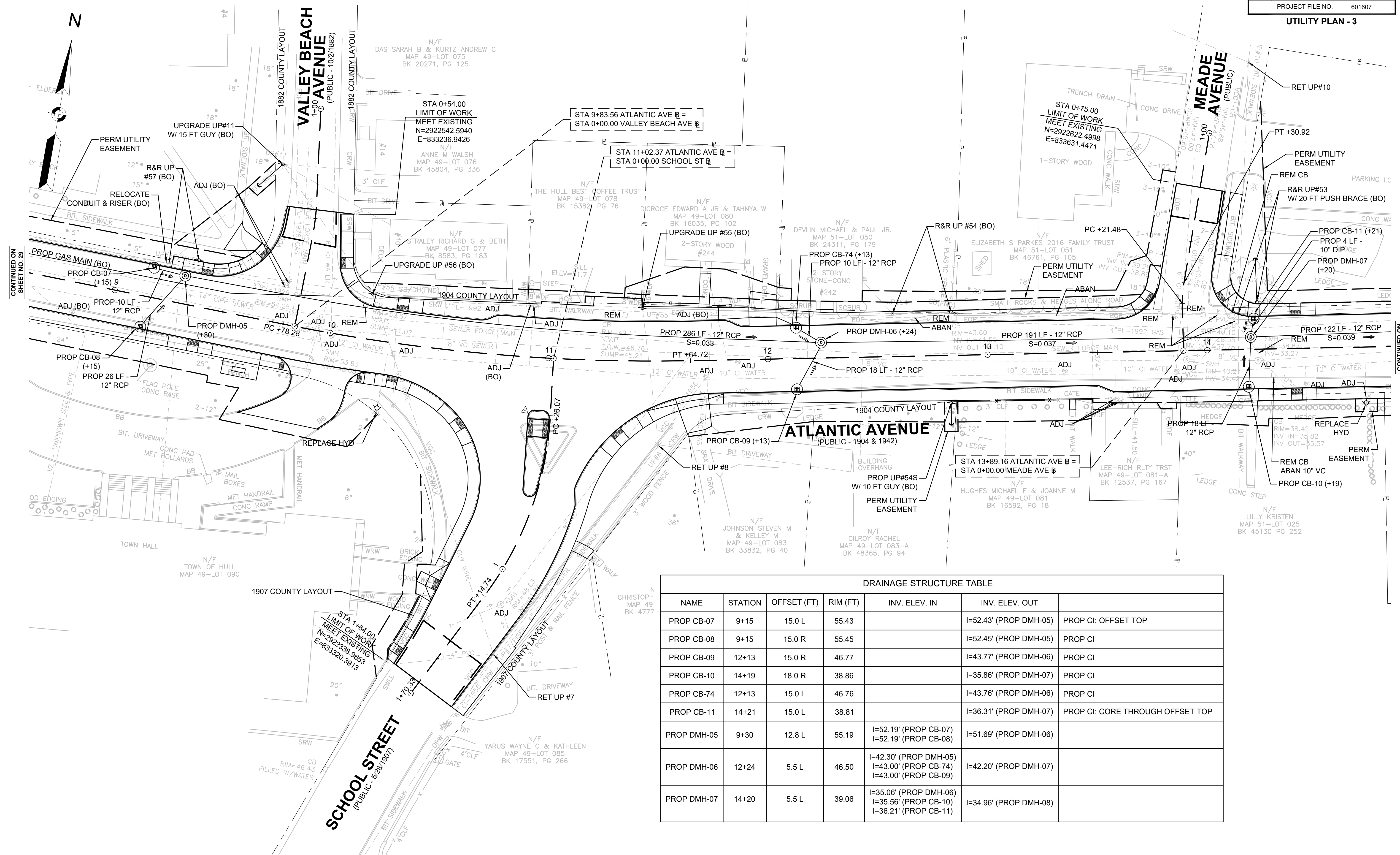
CONTINUED ON
SHEET NO. 28

CONTINUED ON
SHEET NO. 30

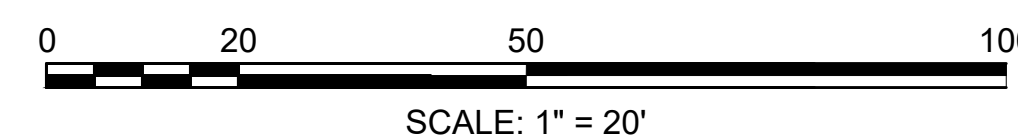
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 3



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	
PROP CB-07	9+15	15.0 L	55.43		I=52.43' (PROP DMH-05)	PROP CI, OFFSET TOP
PROP CB-08	9+15	15.0 R	55.45		I=52.45' (PROP DMH-05)	PROP CI
PROP CB-09	12+13	15.0 R	46.77		I=43.77' (PROP DMH-06)	PROP CI
PROP CB-10	14+19	18.0 R	38.86		I=35.86' (PROP DMH-07)	PROP CI
PROP CB-74	12+13	15.0 L	46.76		I=43.76' (PROP DMH-06)	PROP CI
PROP CB-11	14+21	15.0 L	38.81		I=36.31' (PROP DMH-07)	PROP CI, CORE THROUGH OFFSET TOP
PROP DMH-05	9+30	12.8 L	55.19	I=52.19' (PROP CB-07) I=52.19' (PROP CB-08)	I=51.69' (PROP DMH-06)	
PROP DMH-06	12+24	5.5 L	46.50	I=42.30' (PROP DMH-05) I=43.00' (PROP CB-74) I=43.00' (PROP CB-09)	I=42.20' (PROP DMH-07)	
PROP DMH-07	14+20	5.5 L	39.06	I=35.06' (PROP DMH-06) I=35.56' (PROP CB-10) I=36.21' (PROP CB-11)	I=34.96' (PROP DMH-08)	



FOR PROFILE SEE SHEETS 19-20 & 25

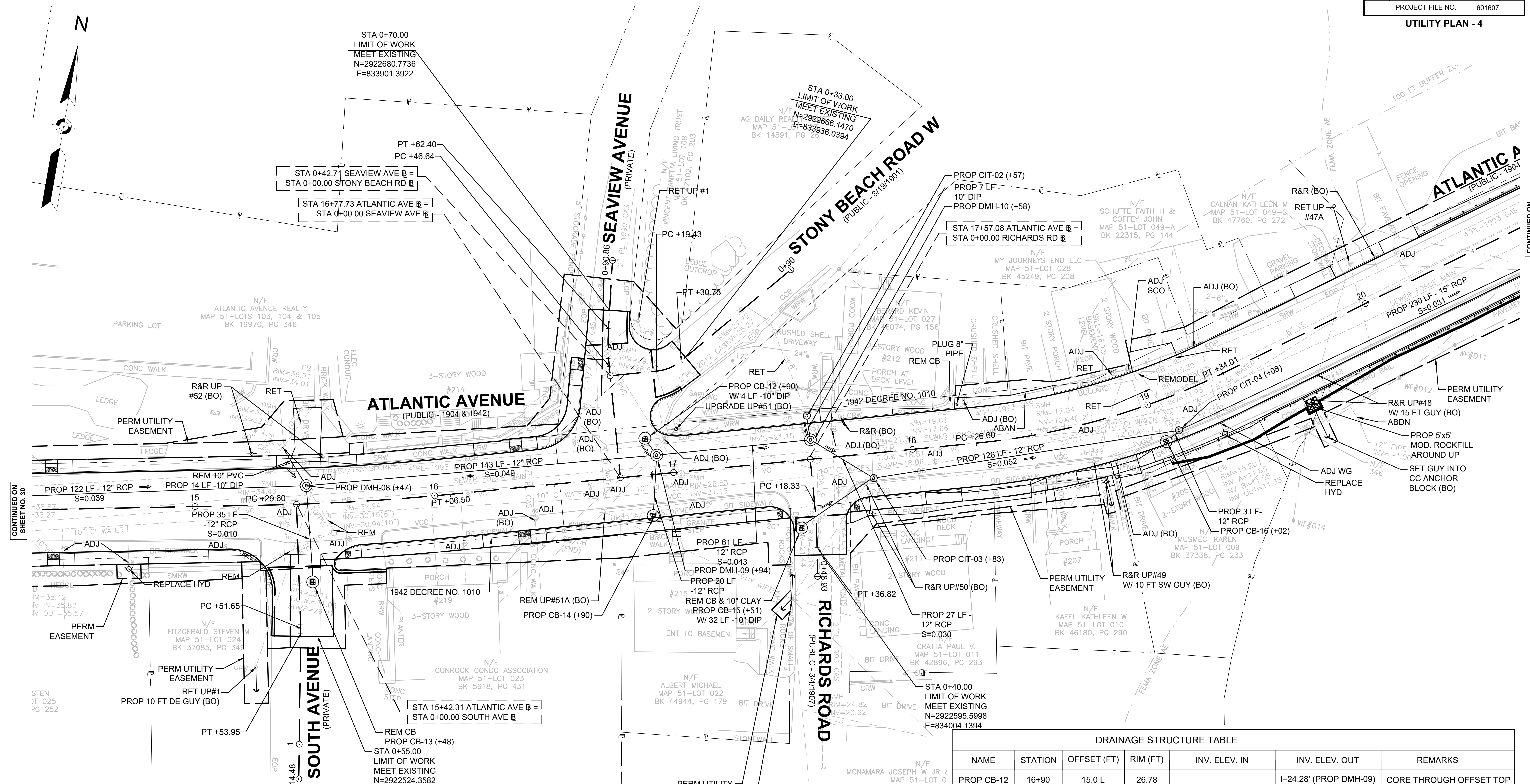
CONTINUED ON SHEET NO. 29

CONTINUED ON SHEET NO. 31

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 4

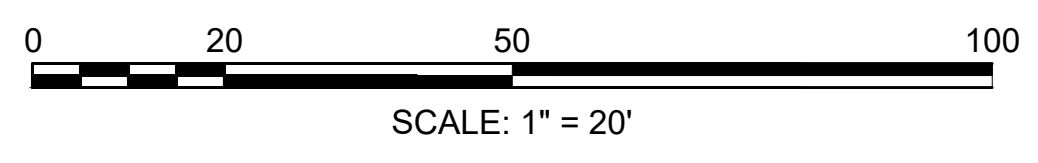


CONTINUED ON
SHEET NO. 30

CONTINUED ON
SHEET NO. 32

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-08	15+47	7.6 L	33.68	I=31.18' (EXIST DMH) I=29.39' (PROP CB-13) I=29.29' (PROP DMH-07)	I=29.19' (PROP DMH-09)	
PROP DMH-09	16+94	7.9 L	26.71	I=22.14' (PROP DMH-08) I=23.21' (PROP CB-14) I=24.00' (PROP CB-12)	I=22.04' (PROP DMH-10)	
PROP DMH-10	17+58	8.0 L	23.41	I=20.66' (PROP CIT-02) I=19.41' (PROP DMH-09)	I=19.31' (PROP CIT-03)	

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-12	16+90	15.0 L	26.78		I=24.28' (PROP DMH-09)	CORE THROUGH OFFSET TOP
PROP CB-13	15+48	32.5 R	33.24		I=29.74' (PROP DMH-08)	
PROP CB-14	16+90	18.0 R	26.72		I=23.72' (PROP DMH-09)	PROP CI
PROP CB-15	17+51	27.9 R	23.50		I=21.00' (PROP CIT-03)	PROP CI; OFFSET TOP
PROP CB-16	19+02	18.0 R	15.38		I=11.88' (PROP CIT-04)	PROP CI
PROP CIT-02	17+57	18.2 L	23.67	I=21.15' (EXIST CB)	I=21.05' (PROP DMH-10)	R&S F&G; PROP F&C
PROP CIT-03	17+83	10.4 R	22.05	I=18.51' (PROP DMH-10) I=18.51' (PROP CB-15) I=11.55' (EXIST CB)	I=18.41' (PROP CIT-04)	R&S F&G; PROP F&C
PROP CIT-04	19+08	14.5 R	15.09		I=11.45' (PROP CIT-03) I=11.85' (PROP CB-16) I=11.55' (EXIST CB)	R&S F&G; PROP F&C

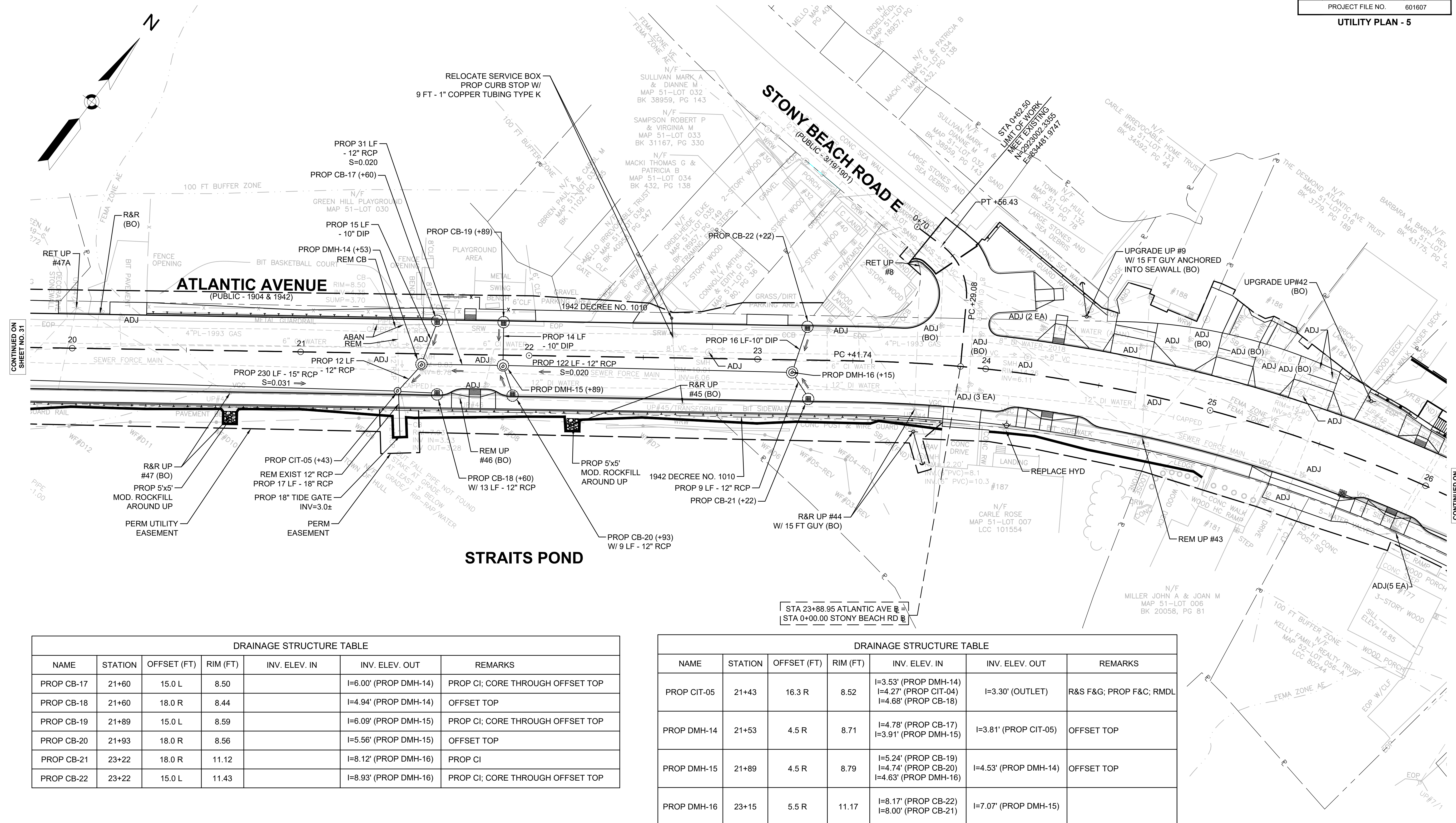


FOR PROFILE SEE SHEET 20 & 25-26

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

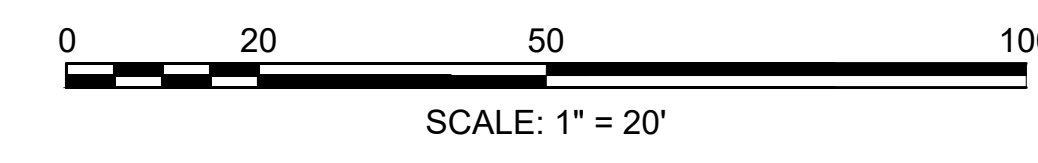
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 5



NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-17	21+60	15.0 L	8.50	I=6.00' (PROP DMH-14)	I=6.00' (PROP DMH-14)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-18	21+60	18.0 R	8.44	I=4.94' (PROP DMH-14)	I=4.94' (PROP DMH-14)	OFFSET TOP
PROP CB-19	21+89	15.0 L	8.59	I=6.09' (PROP DMH-15)	I=6.09' (PROP DMH-15)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-20	21+93	18.0 R	8.56	I=5.56' (PROP DMH-15)	I=5.56' (PROP DMH-15)	OFFSET TOP
PROP CB-21	23+22	18.0 R	11.12	I=8.12' (PROP DMH-16)	I=8.12' (PROP DMH-16)	PROP CI
PROP CB-22	23+22	15.0 L	11.43	I=8.93' (PROP DMH-16)	I=8.93' (PROP DMH-16)	PROP CI; CORE THROUGH OFFSET TOP

NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CIT-05	21+43	16.3 R	8.52	I=3.53' (PROP DMH-14) I=4.27' (PROP CIT-04) I=4.68' (PROP CB-18)	I=3.30' (OUTLET)	R&S F&G; PROP F&C; RMDL
PROP DMH-14	21+53	4.5 R	8.71	I=4.78' (PROP CB-17) I=3.91' (PROP DMH-15)	I=3.81' (PROP CIT-05)	OFFSET TOP
PROP DMH-15	21+89	4.5 R	8.79	I=5.24' (PROP CB-19) I=4.74' (PROP CB-20) I=4.63' (PROP DMH-16)	I=4.53' (PROP DMH-14)	OFFSET TOP
PROP DMH-16	23+15	5.5 R	11.17	I=8.17' (PROP CB-22) I=8.00' (PROP CB-21)	I=7.07' (PROP DMH-15)	



FOR PROFILE SEE SHEETS 20-21 & 26

CONTINUED ON
SHEET NO. 31

CONTINUED ON
SHEET NO. 33

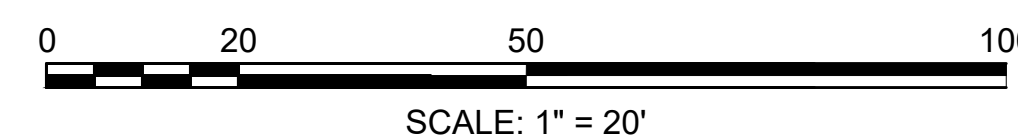
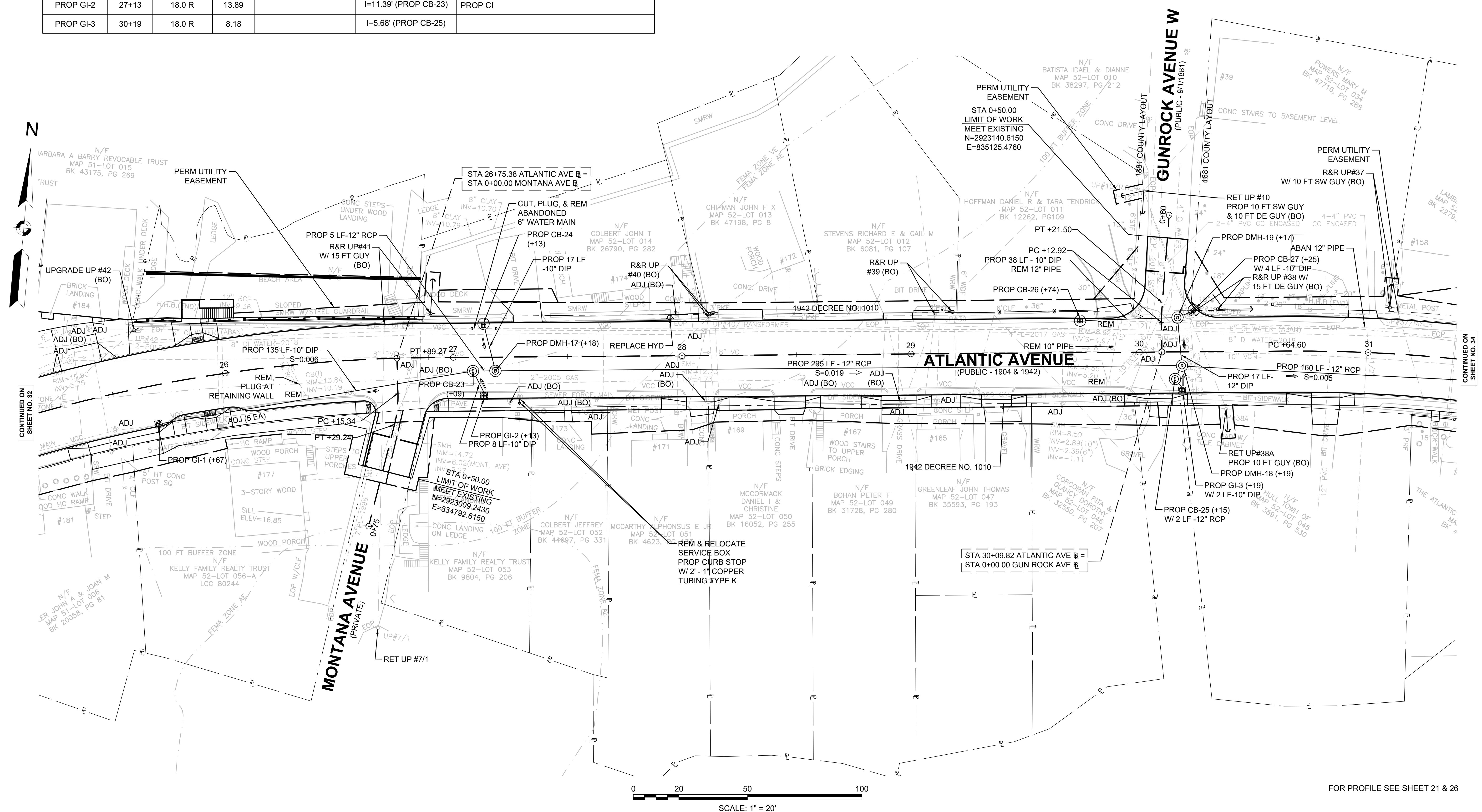
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 6

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-23	27+09	6.0 R	14.19	I=11.19' (PROP GI-1) I=11.23' (PROP GI-2)	I=11.09' (PROP DMH-17)	WITH F&C
PROP CB-24	27+13	15.0 L	13.97		I=11.47' (PROP DMH-17)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-25	30+15	12.0 R	8.34	I=5.60' (PROP GI-3)	I=5.34' (PROP DMH-18)	WITH F&C
PROP CB-26	29+74	15.0 L	8.85		I=6.35' (PROP DMH-19)	PROP CI
PROP CB-27	30+25	18.9 L	8.47		I=5.97' (PROP DMH-19)	
PROP GI-1	25+67	18.0 R	15.02		I=12.52' (PROP CB-23)	
PROP GI-2	27+13	18.0 R	13.89		I=11.39' (PROP CB-23)	PROP CI
PROP GI-3	30+19	18.0 R	8.18		I=5.68' (PROP CB-25)	

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-17	27+18	6.0 R	14.06	I=10.99' (PROP CB-23) I=11.05' (PROP CB-24)	I=10.06' (PROP DMH-18)	
PROP DMH-18	30+19	6.0 R	8.42	I=4.42' (PROP DMH-17) I=5.26' (PROP DMH-19) I=5.00' (PROP CB-25)	I=3.56' (PROP DMH-20)	
PROP DMH-19	30+17	15.0 L	8.26	I=5.53' (PROP CB-26) I=5.63' (PROP CB-27)	I=5.43' (PROP DMH-18)	



FOR PROFILE SEE SHEET 21 & 26

CONTINUED ON SHEET NO. 32

CONTINUED ON SHEET NO. 34

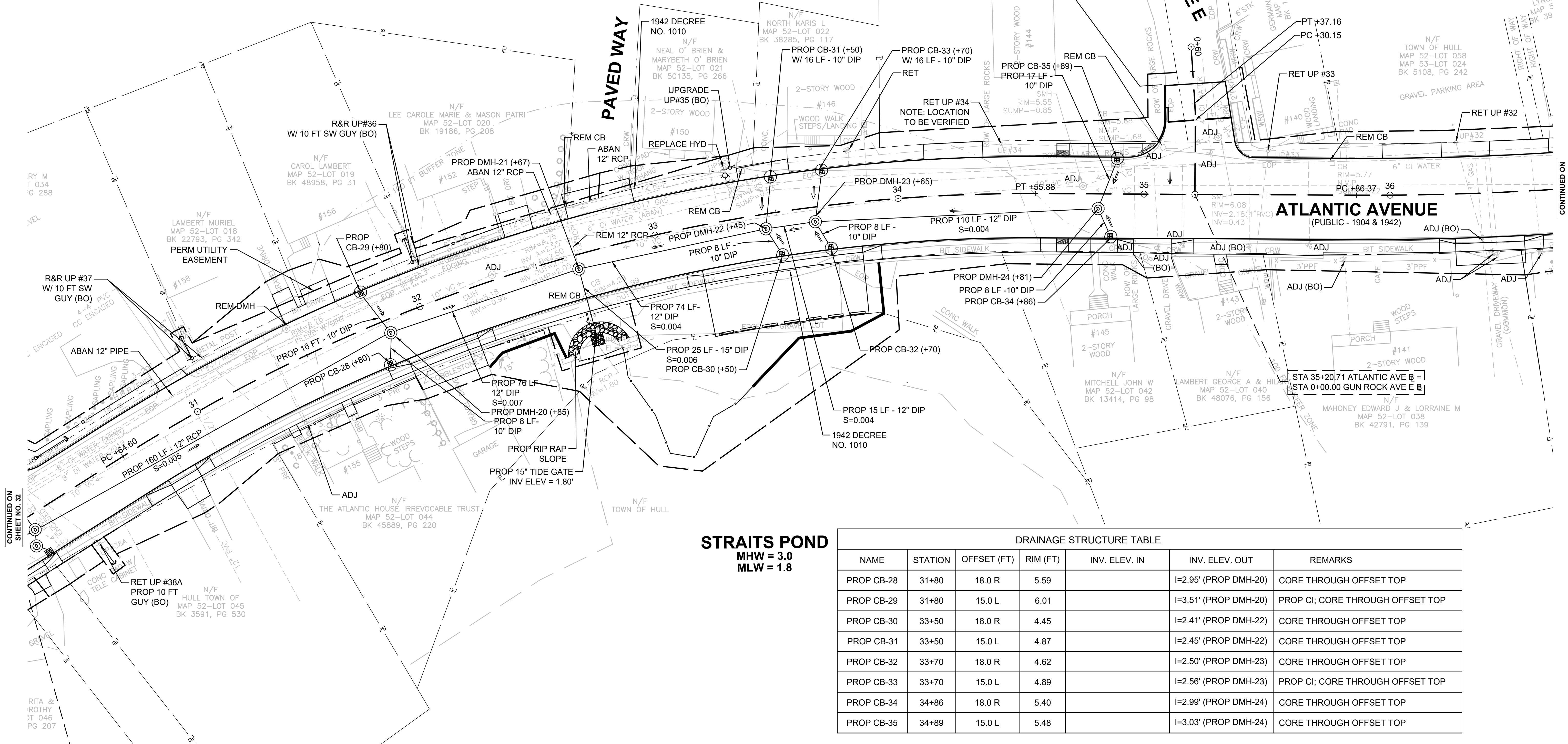
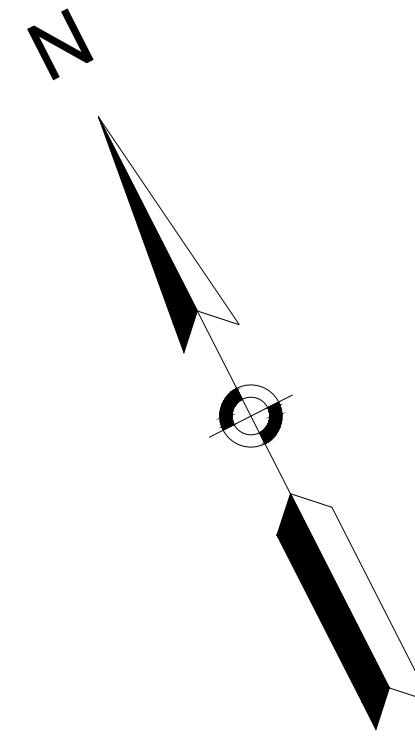
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	43

PROJECT FILE NO. 601607

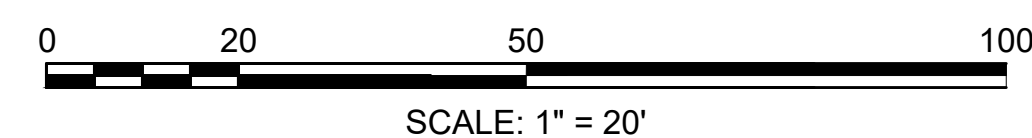
UTILITY PLAN - 7

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-20	31+85	5.5 R	6.03	I=2.85' (PROP CB-28) I=2.85' (PROP CB-29) I=2.69' (PROP DMH-18)	I=2.59' (PROP DMH-21)	
PROP DMH-21	32+67	5.8 R	5.22	I=2.03' (PROP DMH-20) I=2.03' (PROP DMH-22)	I=1.95' (OUTLET)	
PROP DMH-22	33+45	6.0 R	5.05	I=2.37' (PROP CB-30) I=2.37' (PROP CB-31) I=2.37' (PROP DMH-23)	I=2.32' (PROP DMH-21)	
PROP DMH-23	33+65	6.0 R	5.07	I=2.48' (PROP CB-32) I=2.48' (PROP CB-33) I=2.48' (PROP DMH-24)	I=2.43' (PROP DMH-22)	
PROP DMH-24	34+81	6.0 R	5.61	I=2.95' (PROP CB-34) I=2.95' (PROP CB-35)	I=2.90' (PROP DMH-23)	



STRAITS POND
MHW = 3.0
MLW = 1.8

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-28	31+80	18.0 R	5.59		I=2.95' (PROP DMH-20)	CORE THROUGH OFFSET TOP
PROP CB-29	31+80	15.0 L	6.01		I=3.51' (PROP DMH-20)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-30	33+50	18.0 R	4.45		I=2.41' (PROP DMH-22)	CORE THROUGH OFFSET TOP
PROP CB-31	33+50	15.0 L	4.87		I=2.45' (PROP DMH-22)	CORE THROUGH OFFSET TOP
PROP CB-32	33+70	18.0 R	4.62		I=2.50' (PROP DMH-23)	CORE THROUGH OFFSET TOP
PROP CB-33	33+70	15.0 L	4.89		I=2.56' (PROP DMH-23)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-34	34+86	18.0 R	5.40		I=2.99' (PROP DMH-24)	CORE THROUGH OFFSET TOP
PROP CB-35	34+89	15.0 L	5.48		I=3.03' (PROP DMH-24)	CORE THROUGH OFFSET TOP



FOR PROFILE SEE SHEETS 21-22 & 26

CONTINUED ON
SHEET NO. 32

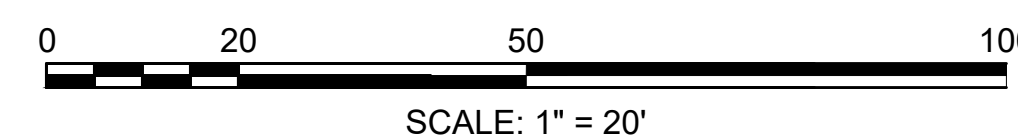
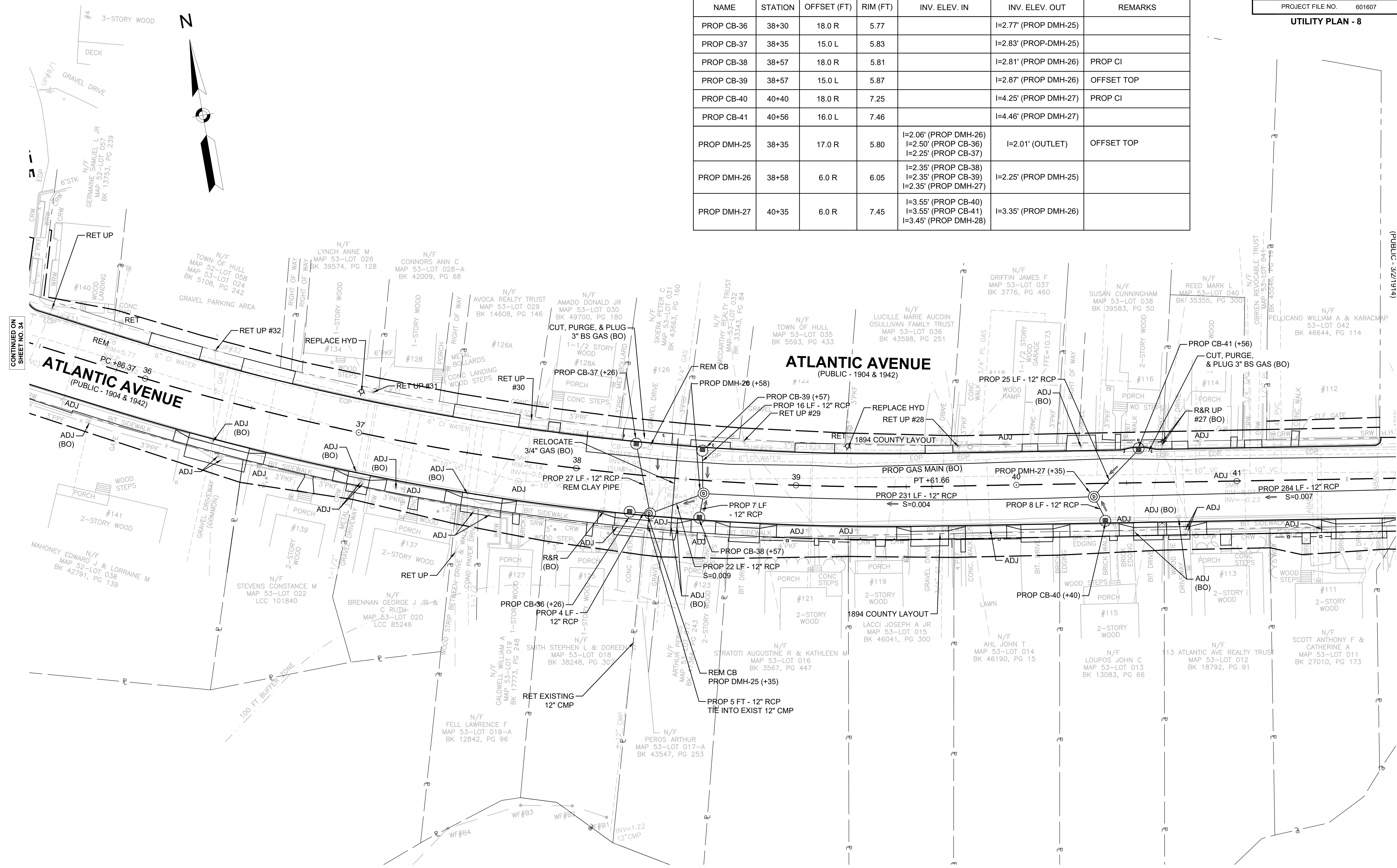
CONTINUED ON
SHEET NO. 35

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 8

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-36	38+30	18.0 R	5.77		I=2.77' (PROP DMH-25)	
PROP CB-37	38+35	15.0 L	5.83		I=2.83' (PROP DMH-25)	
PROP CB-38	38+57	18.0 R	5.81		I=2.81' (PROP DMH-26)	PROP CI
PROP CB-39	38+57	15.0 L	5.87		I=2.87' (PROP DMH-26)	OFFSET TOP
PROP CB-40	40+40	18.0 R	7.25		I=4.25' (PROP DMH-27)	PROP CI
PROP CB-41	40+56	16.0 L	7.46		I=4.46' (PROP DMH-27)	
PROP DMH-25	38+35	17.0 R	5.80	I=2.06' (PROP DMH-26) I=2.50' (PROP CB-36) I=2.25' (PROP CB-37)	I=2.01' (OUTLET)	OFFSET TOP
PROP DMH-26	38+58	6.0 R	6.05	I=2.35' (PROP CB-38) I=2.35' (PROP CB-39) I=2.35' (PROP DMH-27)	I=2.25' (PROP DMH-25)	
PROP DMH-27	40+35	6.0 R	7.45	I=3.55' (PROP CB-40) I=3.55' (PROP CB-41) I=3.45' (PROP DMH-28)	I=3.35' (PROP DMH-26)	



FOR PROFILE SEE SHEET 22

CONTINUED ON SHEET NO. 34

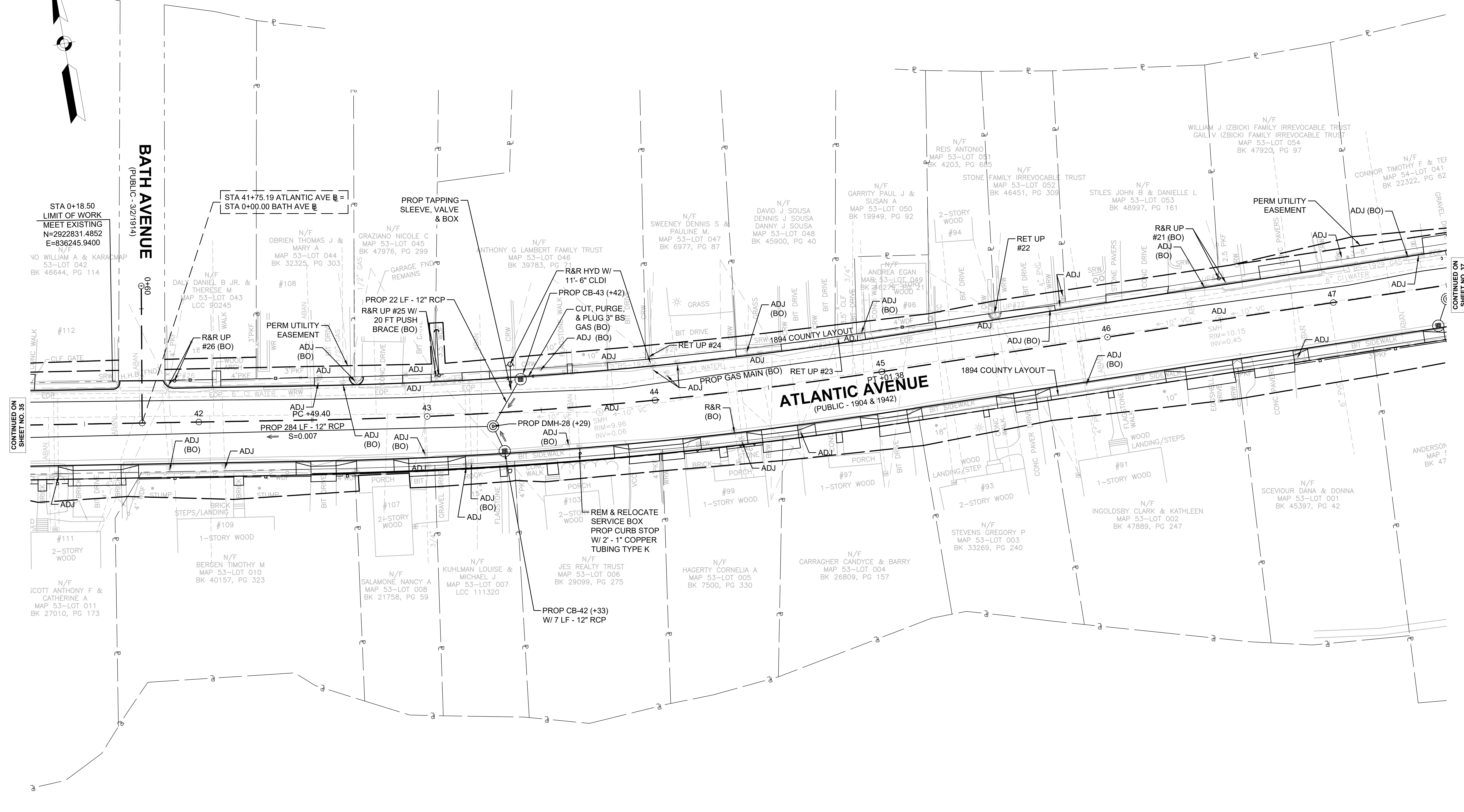
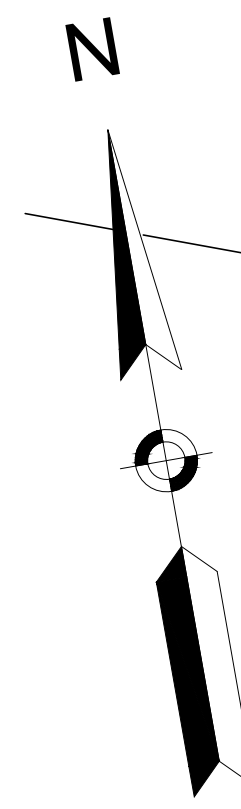
CONTINUED ON SHEET NO. 36

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	43
PROJECT FILE NO. 601607			

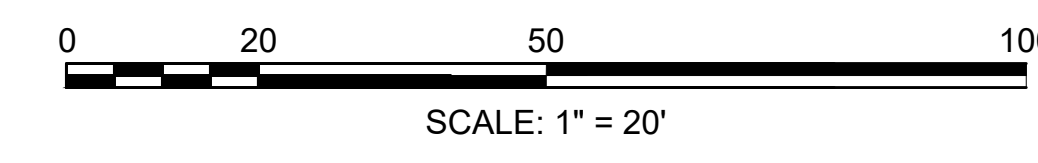
UTILITY PLAN - 9

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-42	43+33	18.0 R	9.49		I=6.49' (PROP DMH-28)	PROP CI
PROP CB-43	43+42	15.0 L	9.61		I=6.61' (PROP DMH-28)	
PROP DMH-28	43+29	6.0 R	9.70	I=5.67' (PROP CB-42) I=5.67' (PROP CB-43)	I=5.57' (PROP DMH-27)	



CONTINUED ON
SHEET NO. 35

CONTINUED ON
SHEET NO. 37

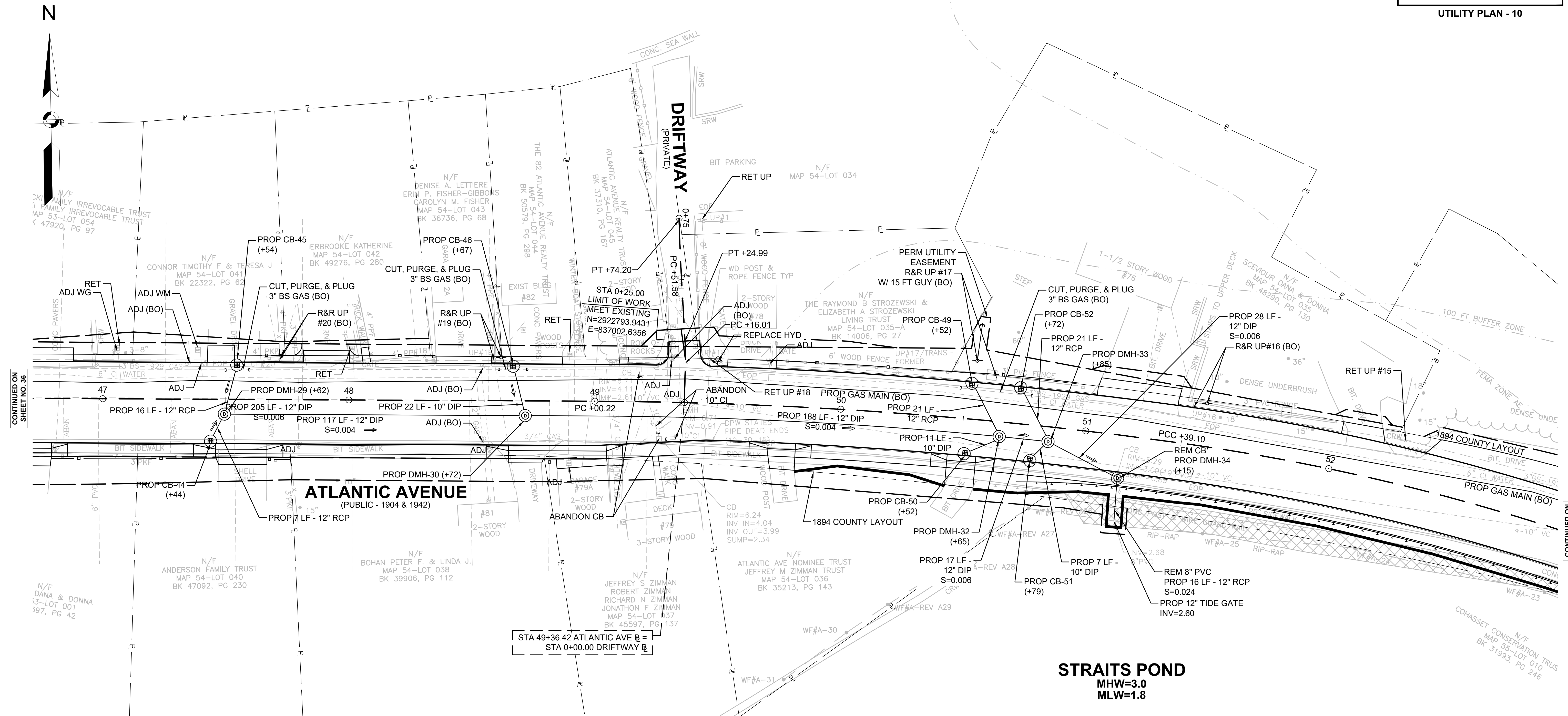


FOR PROFILE SEE SHEETS 22-23 & 26

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

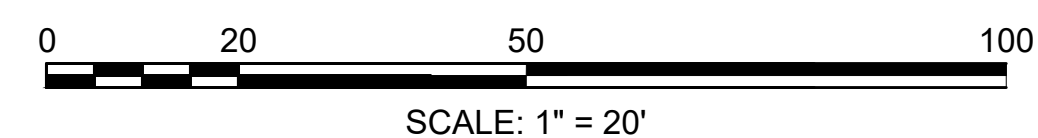
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 10



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-44	47+44	18.0 R	8.56		I=5.56' (PROP DMH-29)	
PROP CB-45	47+54	15.0 L	8.44		I=5.44' (PROP DMH-29)	
PROP CB-46	48+67	15.0 L	7.28		I=4.53' (PROP DMH-30)	PROP CI, CORE THROUGH OFFSET TOP
PROP CB-49	50+52	15.0 L	6.53		I=3.53' (PROP DMH-32)	PROP CI, OFFSET TOP
PROP CB-50	50+52	15.0 R	5.94		I=3.44' (PROP DMH-32)	CORE THROUGH OFFSET TOP
PROP CB-51	50+79	15.0 R	5.96		I=3.46' (PROP DMH-33)	PROP CI, CORE THROUGH OFFSET TOP
PROP CB-52	50+72	15.0 L	6.54		I=3.54' (PROP DMH-33)	PROP CI, OFFSET TOP

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-29	47+49	6.0 R	8.68	I=5.21' (PROP CB-44) I=5.12' (PROP CB-45)	I=4.50' (PROP DMH-30)	
PROP DMH-30	48+72	10.0 R	7.07	I=4.28' (PROP DMH-29) I=4.28' (PROP CB-46)	I=4.23' (PROP DMH-32)	
PROP DMH-32	50+65	6.0 R	6.16	I=3.40' (PROP DMH-30) I=3.40' (PROP CB-49) I=3.40' (PROP CB-50)	I=3.35' (PROP DMH-33)	
PROP DMH-33	50+85	6.0 R	6.19	I=3.25' (PROP DMH-32) I=3.25' (PROP CB-51) I=3.25' (PROP CB-52)	I=3.20' (PROP DMH-34)	
PROP DMH-34	51+15	17.5 R	6.58	I=3.03' (PROP DMH-33)	I=2.98' (OULET)	



FOR PROFILE SEE SHEET 23 & 26

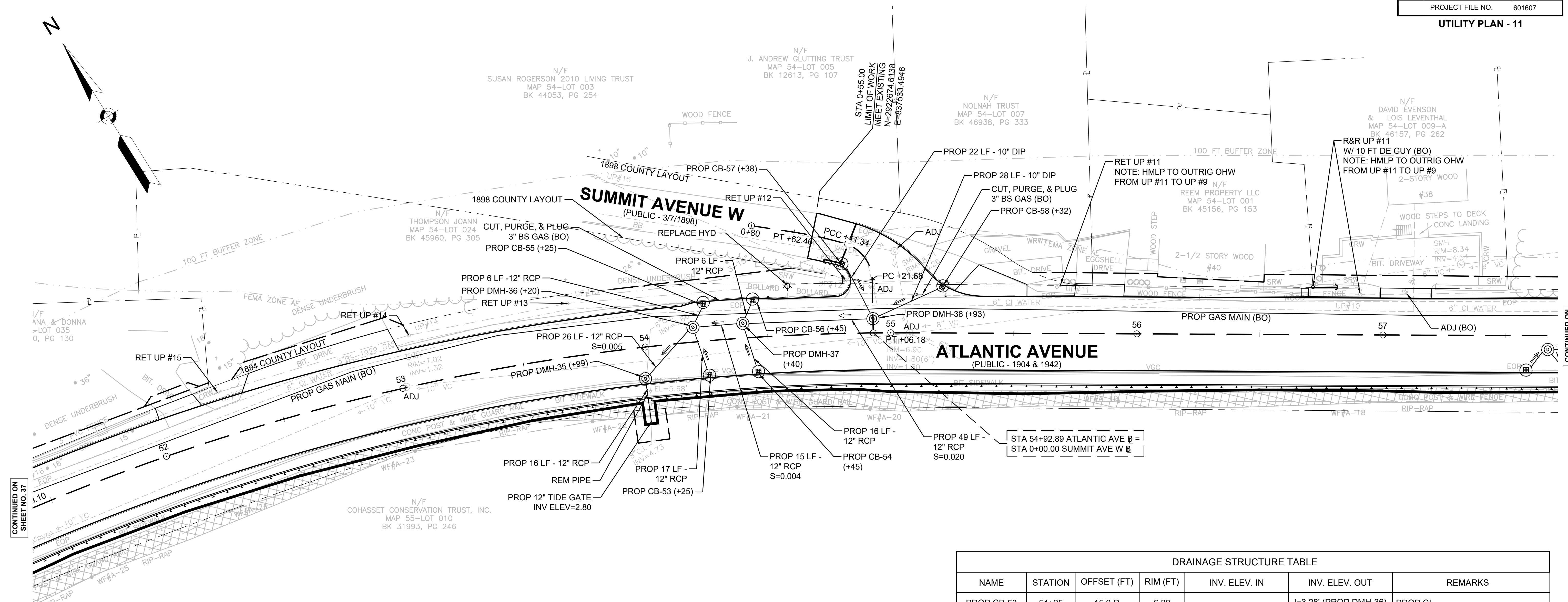
CONTINUED ON SHEET NO. 36

CONTINUED ON SHEET NO. 38

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	43
PROJECT FILE NO. 601607			

UTILITY PLAN - 11



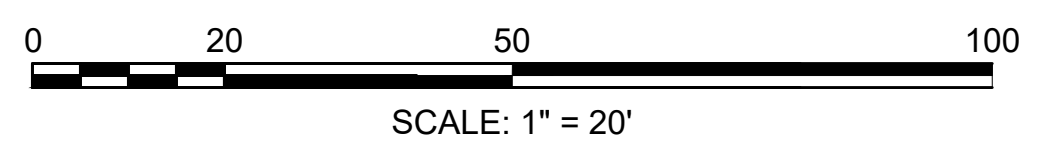
CONTINUED ON SHEET NO. 37

CONTINUED ON SHEET NO. 39

STRAITS POND
MHW=3.0
MLW=1.8

STRAITS POND
MHW=3.0
MLW=1.8

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-53	54+25	15.0 R	6.28		I=3.28' (PROP DMH-36)	PROP CI
PROP CB-54	54+45	15.0 R	6.37		I=3.37' (PROP DMH-37)	PROP CI
PROP CB-55	54+25	16.0 L	7.23		I=4.23' (PROP DMH-36)	PROP CI; OFFSET TOP
PROP CB-56	54+45	16.0 L	7.31		I=4.31' (PROP DMH-37)	PROP CI; OFFSET TOP
PROP CB-57	0+38	9.0 L	9.61		I=7.11' (PROP DMH-38)	PROP CI
PROP CB-58	55+21	19.5 L	7.76		I=5.26' (PROP DMH-38)	PROP OFFSET TOP
PROP DMH-35	53+99	12.6 R	6.39	I=2.95' (PROP DMH-36)	I=2.95' (OUTLET)	
PROP DMH-36	54+20	6.0 L	7.08	I=3.18' (PROP DMH-37) I=3.18' (PROP CB-53) I=3.58' (PROP CB-55)	I=3.08' (PROP DMH-35)	
PROP DMH-37	54+40	6.0 L	7.14	I=3.39' (PROP DMH-38) I=3.31' (PROP CB-54) I=3.64' (PROP CB-56)	I=3.24' (PROP DMH-36)	
PROP DMH-38	54+93	6.0 L	7.37	I=4.37' (PROP CB-57) I=4.37' (PROP CB-58)	I=4.27' (PROP DMH-37)	



FOR PROFILE SEE SHEETS 23-24 & 27

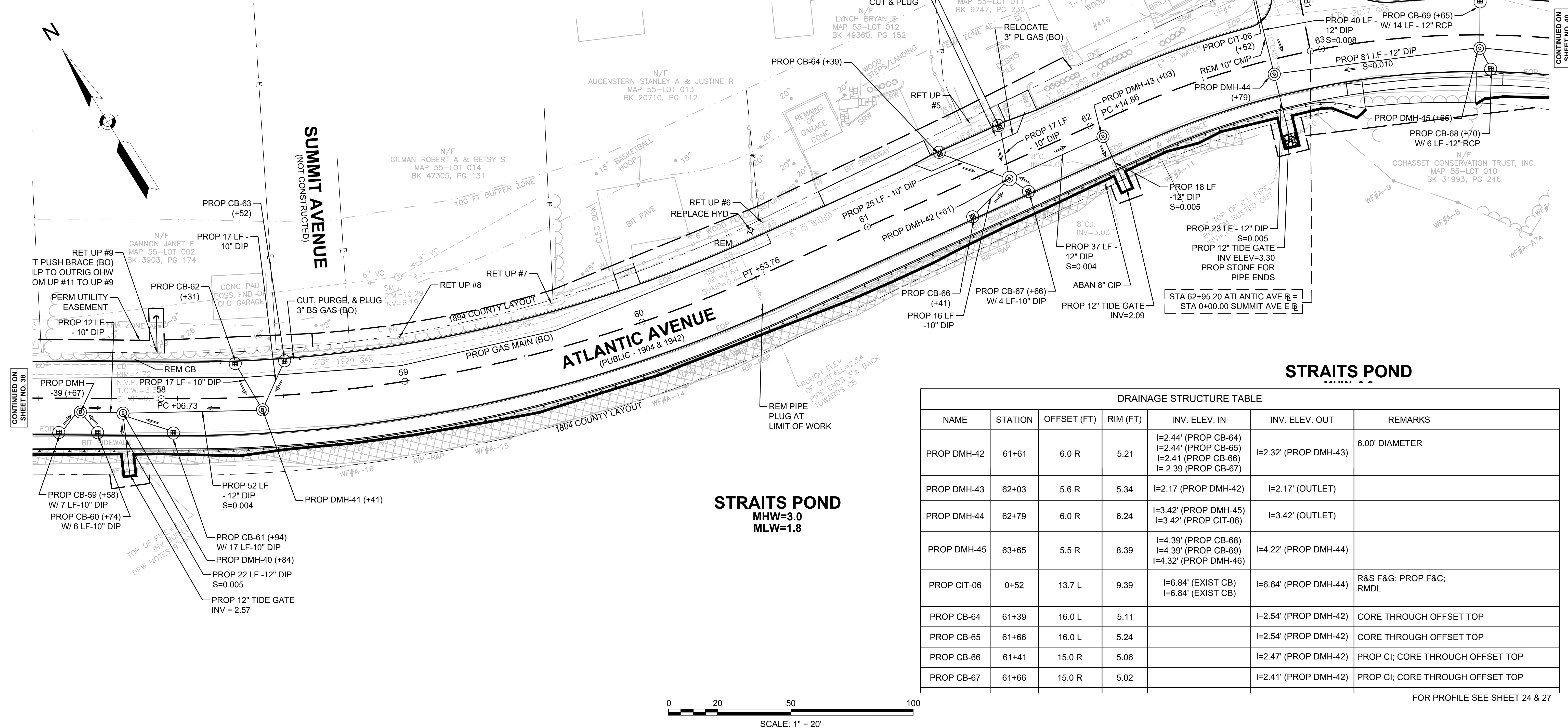
**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	43

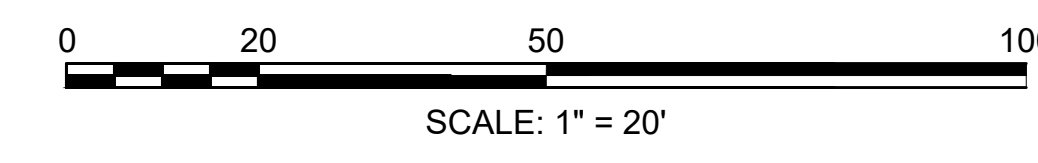
PROJECT FILE NO. 601607

UTILITY PLAN - 12

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-59	57+58	15.0 R	6.07		I=3.57' (PROP DMH-39)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-60	57+74	15.0 R	6.05		I=3.55' (PROP DMH-39)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-61	57+94	15.0 R	6.14		I=3.14' (PROP DMH-40)	PROP CI
PROP CB-62	58+31	15.0 L	5.37		I=3.04' (PROP DMH-41)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-63	58+52	15.0 L	5.50		I=3.08' (PROP DMH-41)	PROP CI; CORE THROUGH OFFSET TOP
PROP DMH-39	57+67	5.5 R	6.07	I=3.53' (PROP CB-59) I=3.50' (PROP CB-60)	I=3.50' (PROP DMH-40)	
PROP DMH-40	57+84	6.0 R	6.08	I=3.00' (PROP CB-61) I=3.00' (PROP DMH-39) I=2.76' (PROP DMH-41)	I=2.68' (OUTLET)	
PROP DMH-41	58+46	6.0 R	6.30	I=2.97' (PROP CB-62) I=2.97' (PROP CB-63)	I=2.97' (PROP DMH-40)	



DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP DMH-42	61+61	6.0 R	5.21	I=2.44' (PROP CB-64) I=2.44' (PROP CB-65) I=2.41' (PROP CB-66) I=2.39' (PROP CB-67)	I=2.32' (PROP DMH-43)	6.00' DIAMETER
PROP DMH-43	62+03	5.6 R	5.34	I=2.17' (PROP DMH-42)	I=2.17' (OUTLET)	
PROP DMH-44	62+79	6.0 R	6.24	I=3.42' (PROP DMH-45) I=3.42' (PROP CIT-06)	I=3.42' (OUTLET)	
PROP DMH-45	63+65	5.5 R	8.39	I=4.39' (PROP CB-68) I=4.39' (PROP CB-69) I=4.32' (PROP DMH-46)	I=4.22' (PROP DMH-44)	
PROP CIT-06	0+52	13.7 L	9.39	I=6.84' (EXIST CB) I=6.84' (EXIST CB)	I=6.64' (PROP DMH-44)	R&S F&G; PROP F&C; RMDL
PROP CB-64	61+39	16.0 L	5.11		I=2.54' (PROP DMH-42)	CORE THROUGH OFFSET TOP
PROP CB-65	61+66	16.0 L	5.24		I=2.54' (PROP DMH-42)	CORE THROUGH OFFSET TOP
PROP CB-66	61+41	15.0 R	5.06		I=2.47' (PROP DMH-42)	PROP CI; CORE THROUGH OFFSET TOP
PROP CB-67	61+66	15.0 R	5.02		I=2.41' (PROP DMH-42)	PROP CI; CORE THROUGH OFFSET TOP

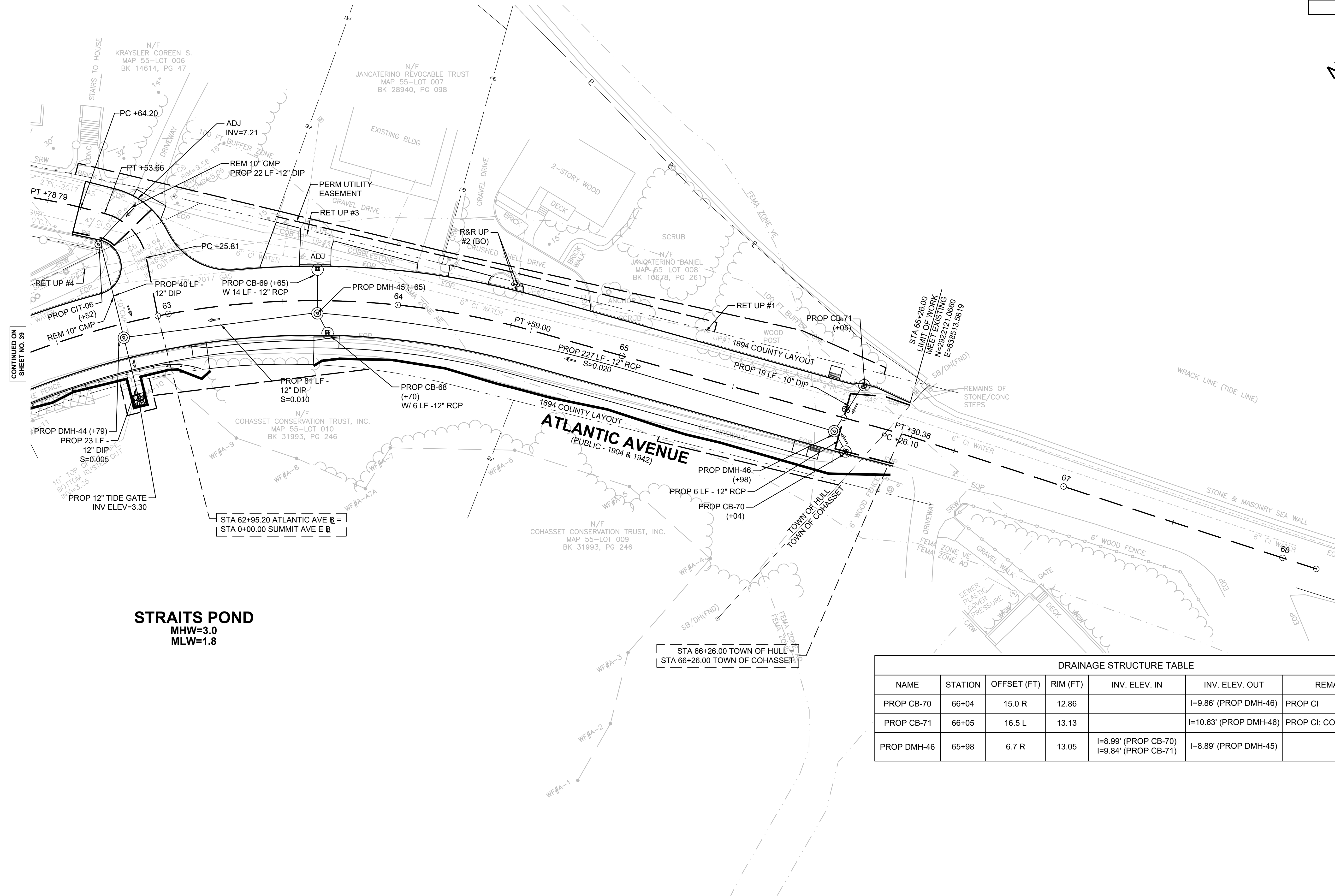
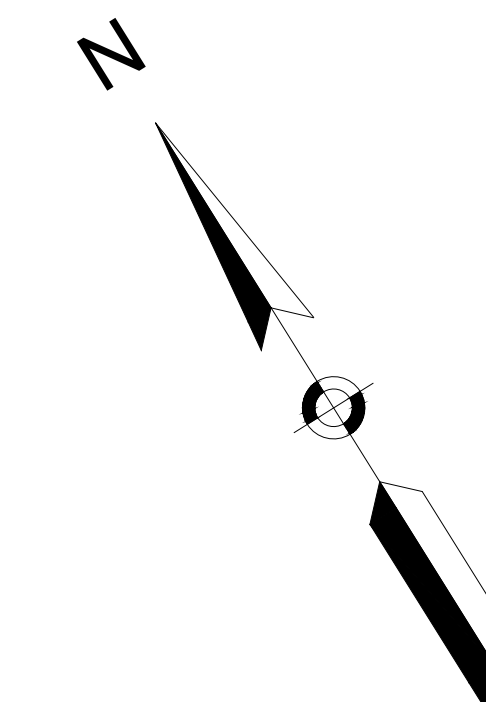


FOR PROFILE SEE SHEET 24 & 27

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	43
PROJECT FILE NO.		601607	

UTILITY PLAN - 13

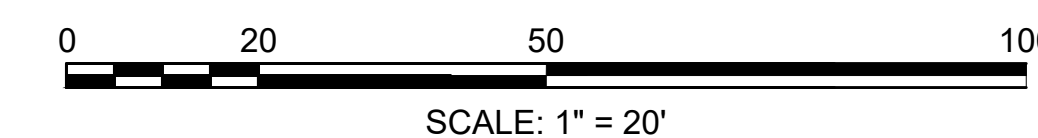


STRAITS POND
MHW=3.0
MLW=1.8

STA 62+95.20 ATLANTIC AVE @
STA 0+00.00 SUMMIT AVE @

STA 66+26.00 TOWN OF HULL @
STA 66+26.00 TOWN OF COHASSET @

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET (FT)	RIM (FT)	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
PROP CB-70	66+04	15.0 R	12.86		I=9.86' (PROP DMH-46)	PROP CI
PROP CB-71	66+05	16.5 L	13.13		I=10.63' (PROP DMH-46)	PROP CI; CORE THROUGH OFFSET TOP
PROP DMH-46	65+98	6.7 R	13.05	I=8.99' (PROP CB-70) I=9.84' (PROP CB-71)	I=8.89' (PROP DMH-45)	



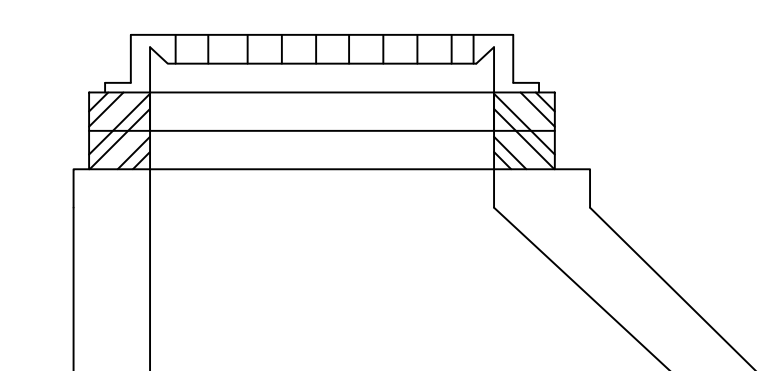
FOR PROFILE SEE SHEET 24 & 27

**HULL
ATLANTIC AVENUE RECONSTRUCTION**

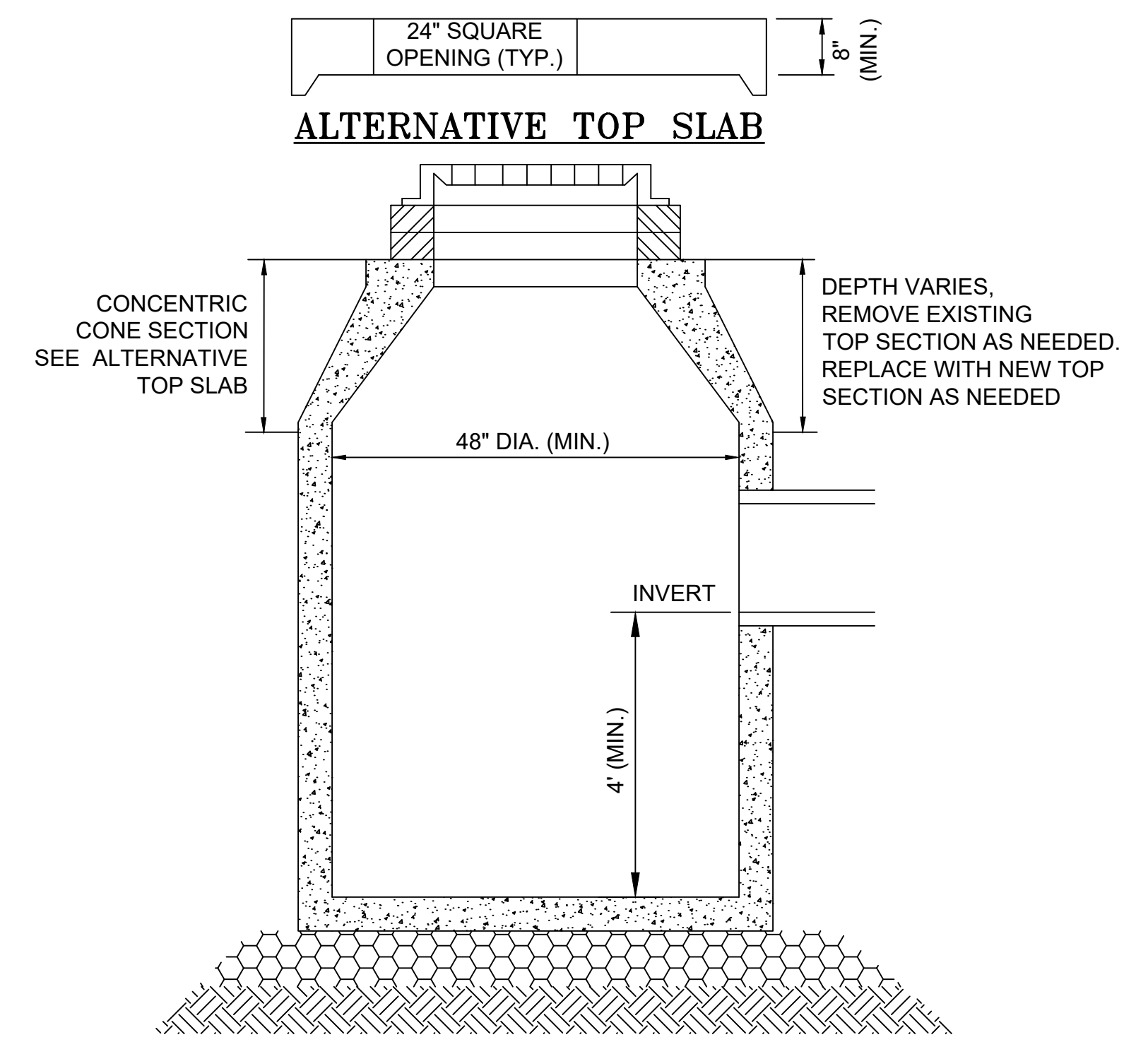
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	43
PROJECT FILE NO.		601607	

CONSTRUCTION DETAILS

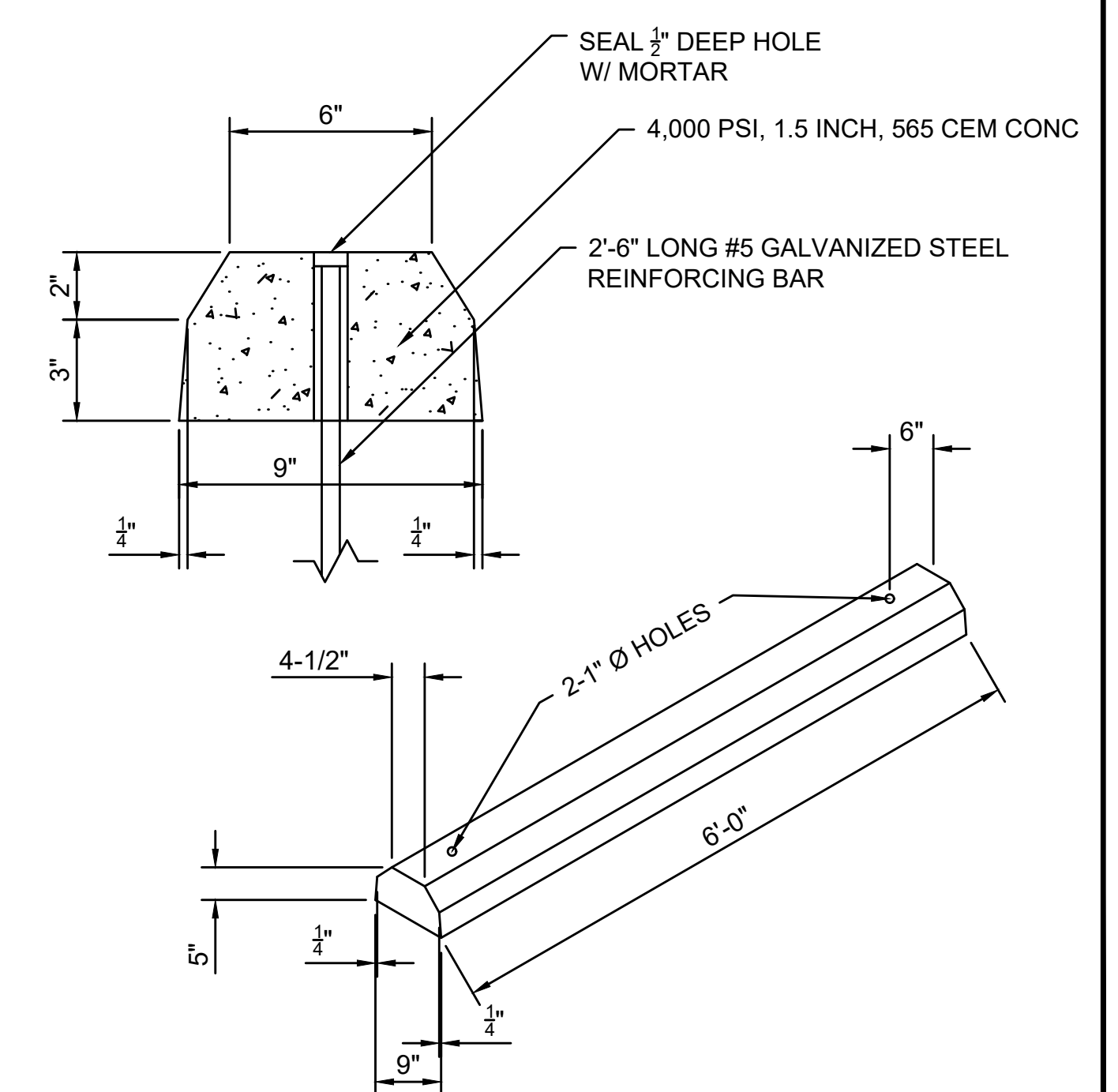
NOTES:
1. BASED ON ACTUAL, FIELD CONDITIONS; THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF TOP SECTION SHOULD BE USED



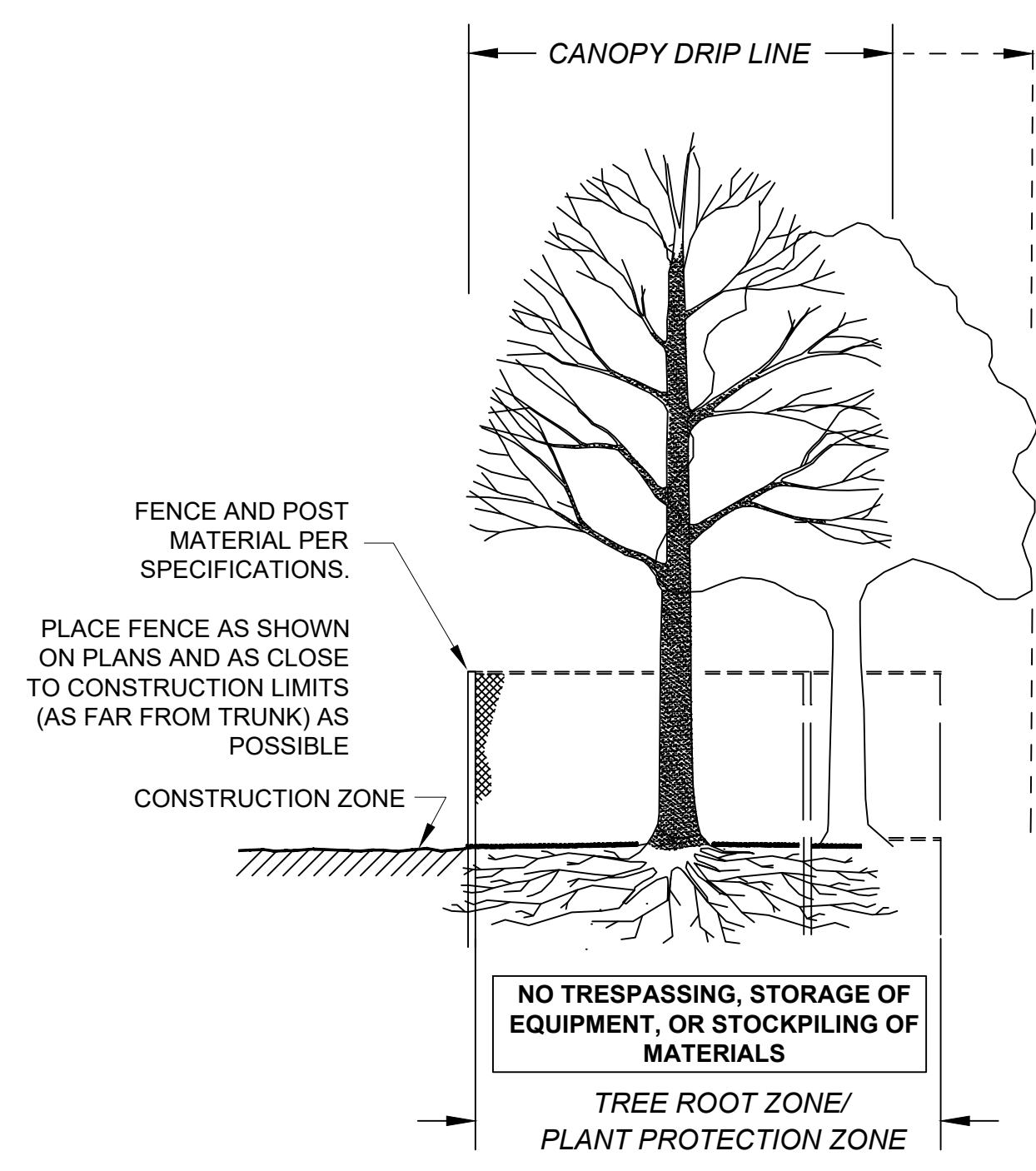
ALTERNATIVE ECCENTRIC CONE SECTION



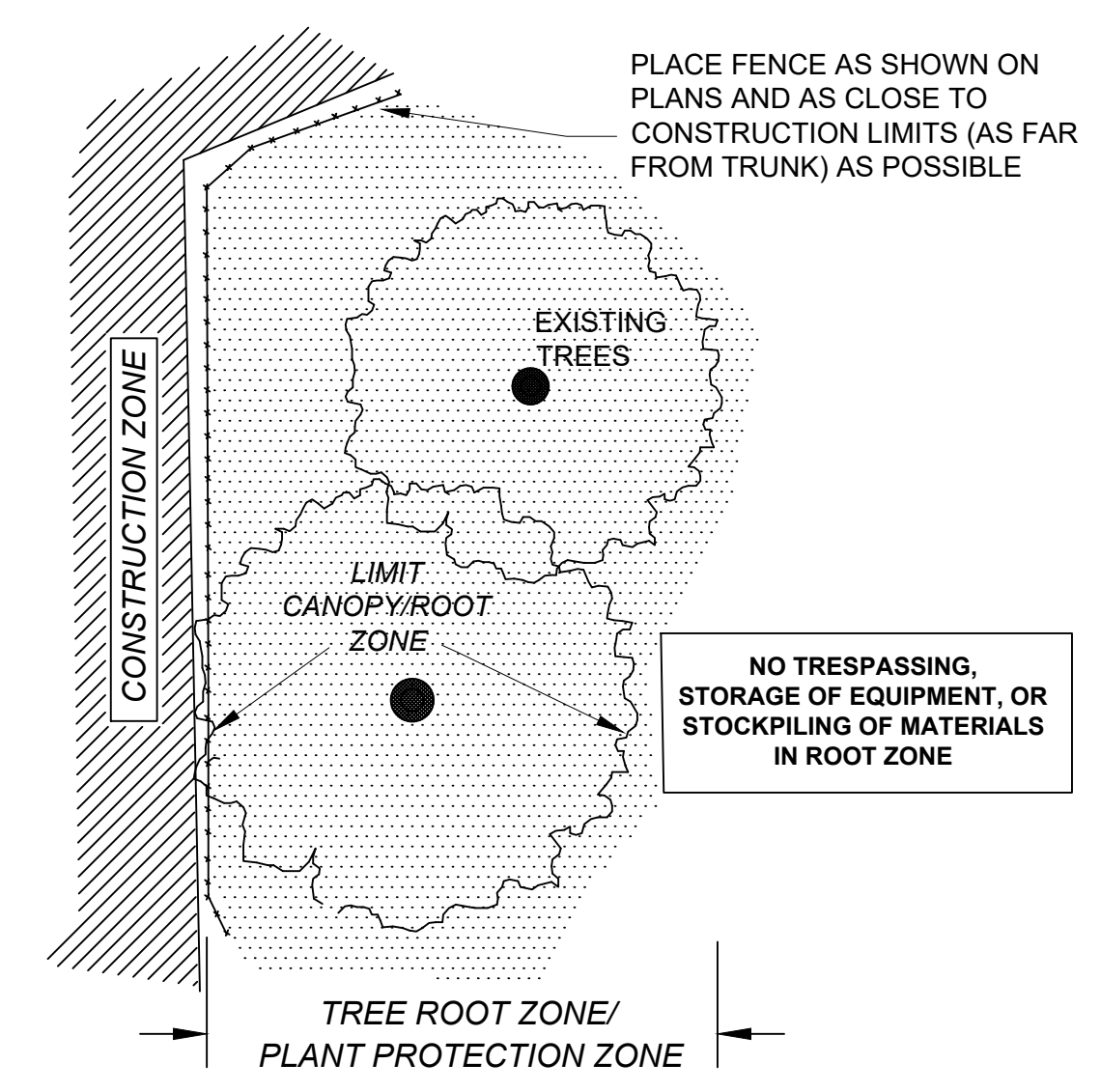
CATCH BASIN DETAIL
NOT TO SCALE



PRECAST CONCRETE WHEEL STOP
NOT TO SCALE

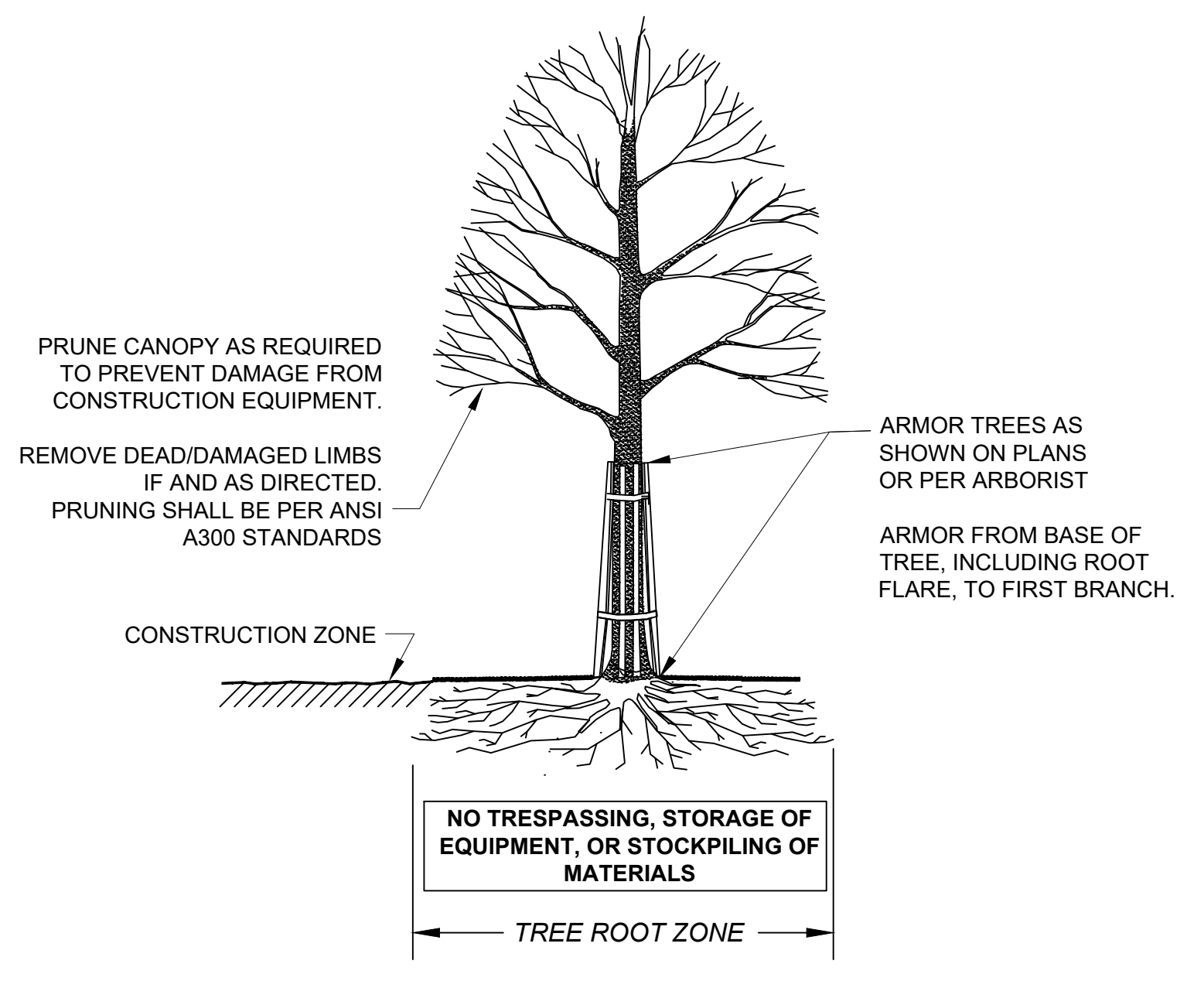


SECTION - FENCE PROTECTION OF ROOT ZONE

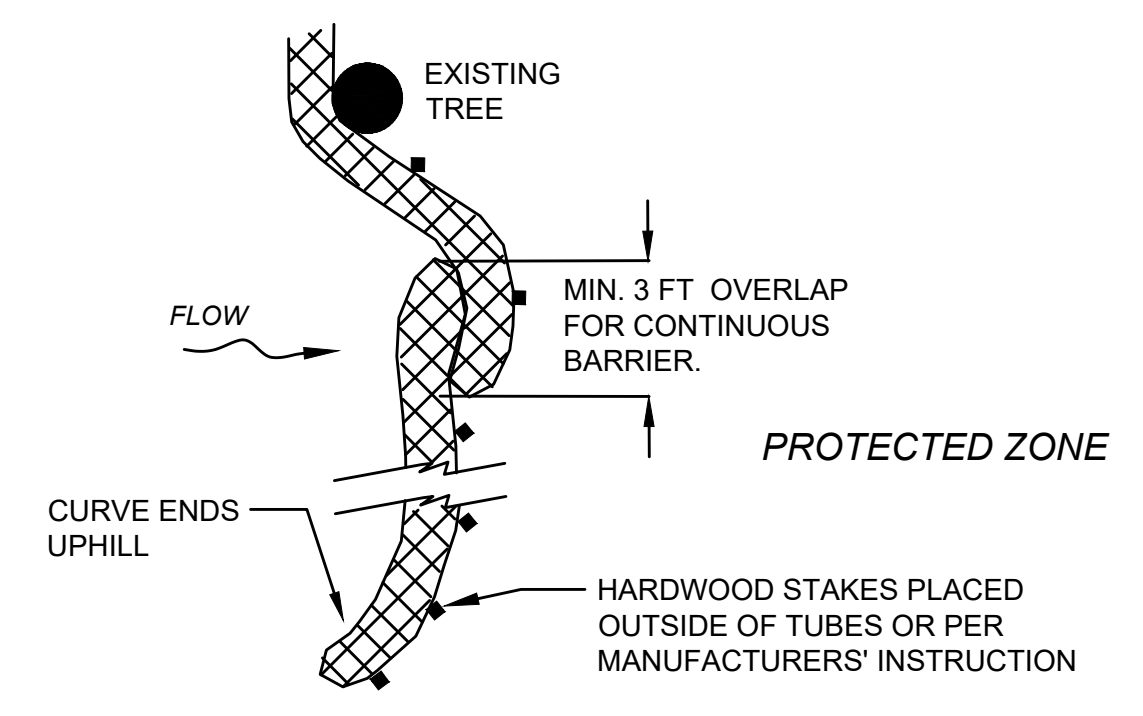


PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - EXISTING TREE(S)
NOT TO SCALE

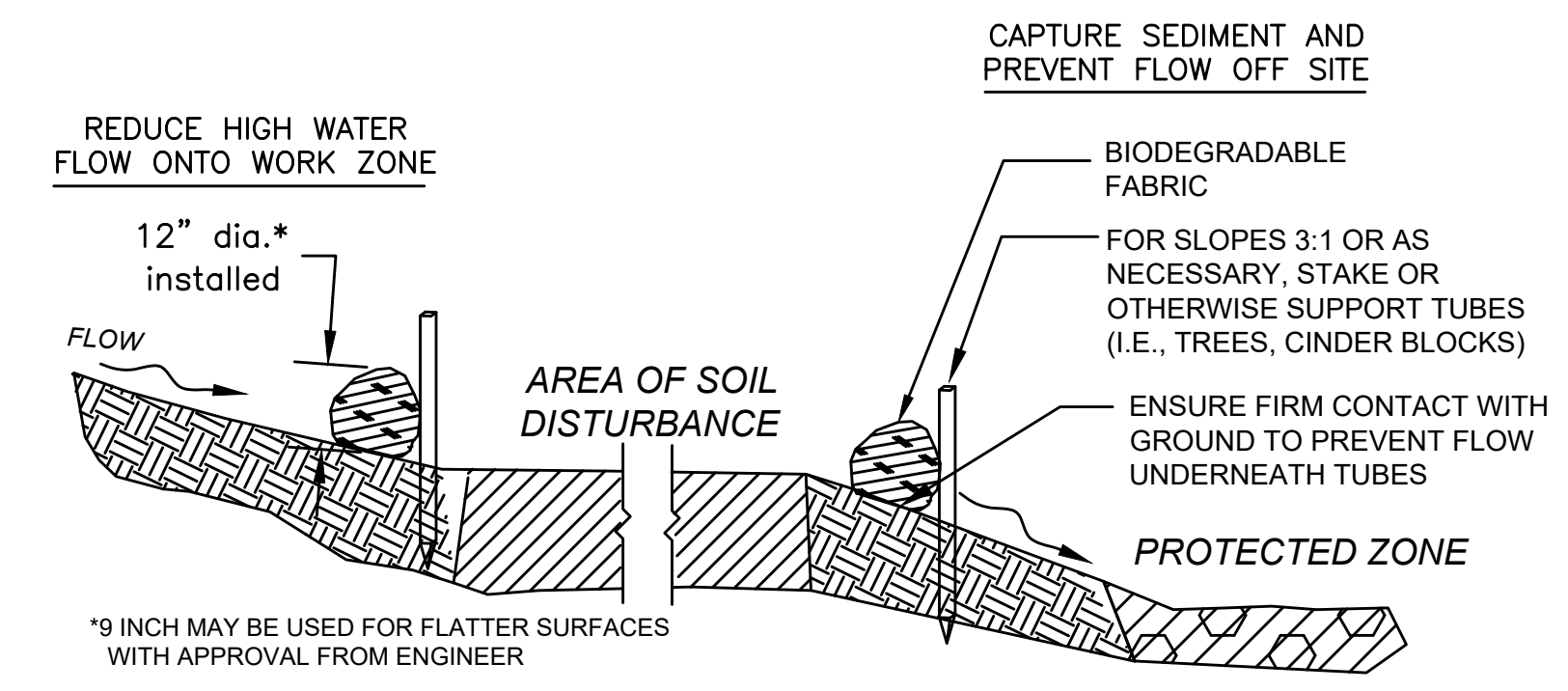


SECTION - TRUNK ARMORING & PRUNING



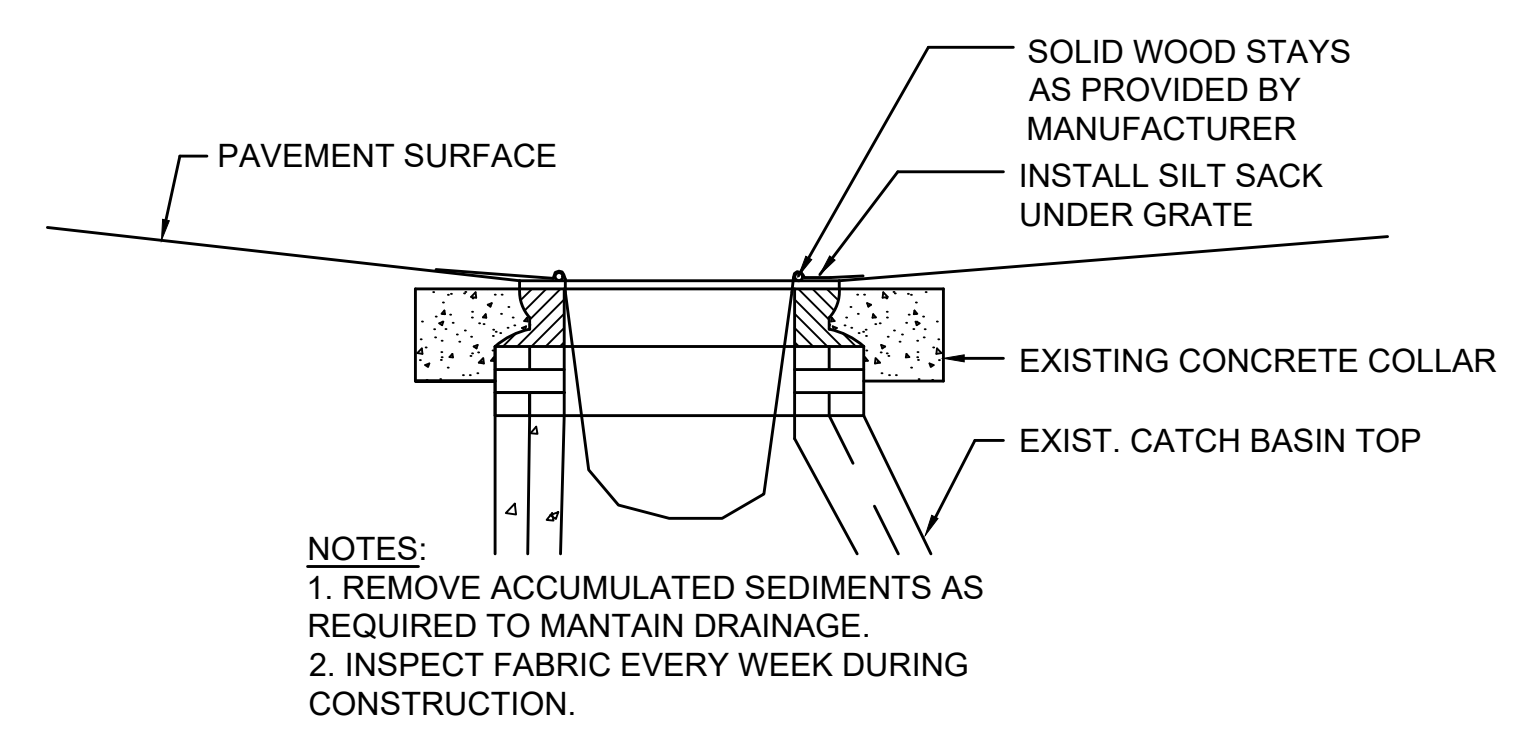
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW



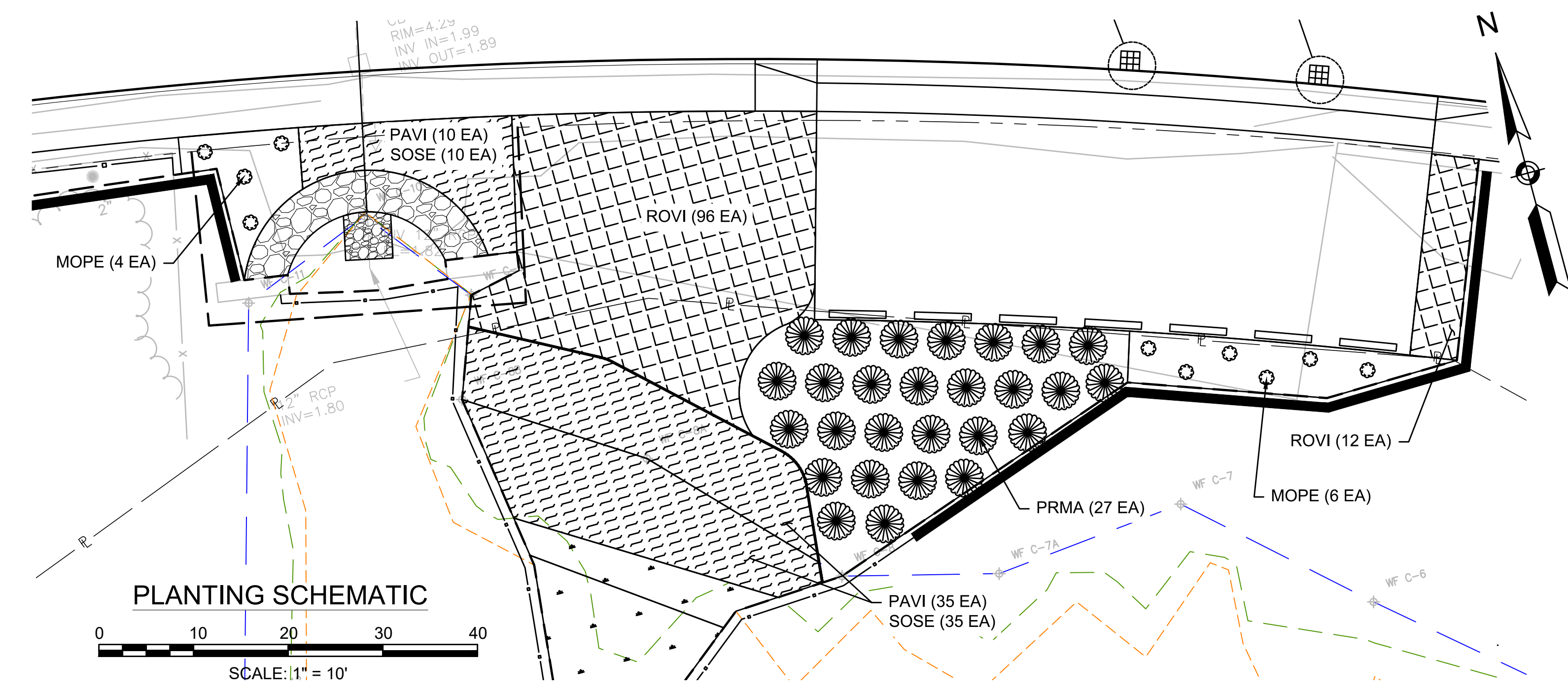
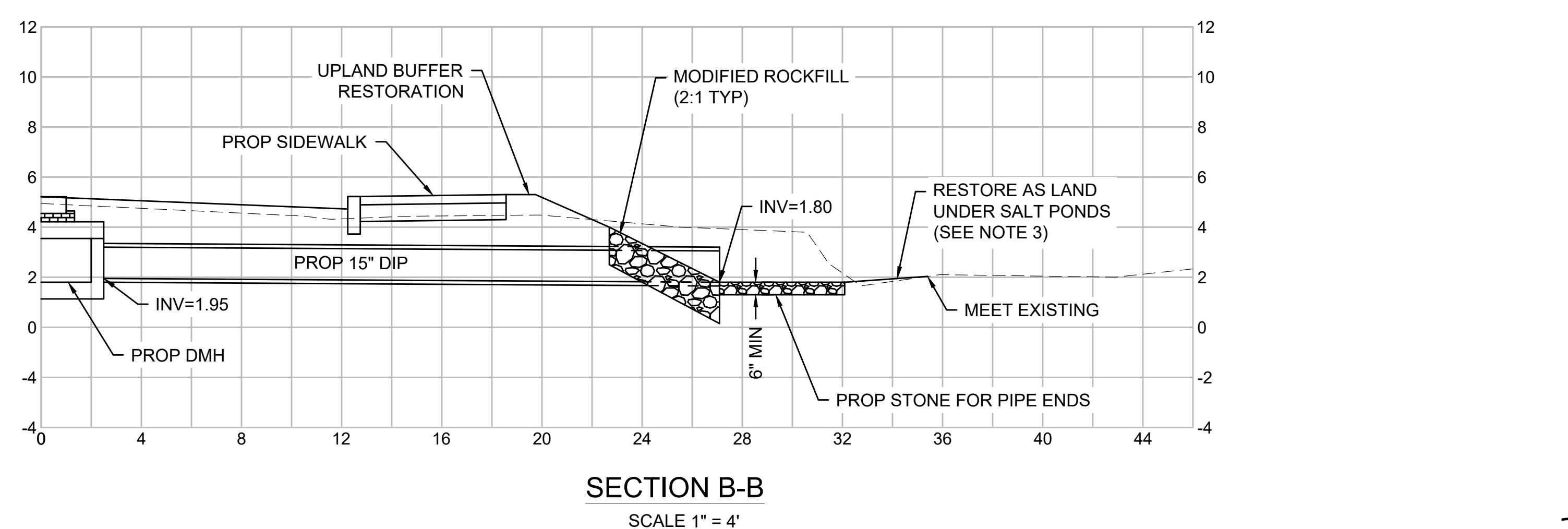
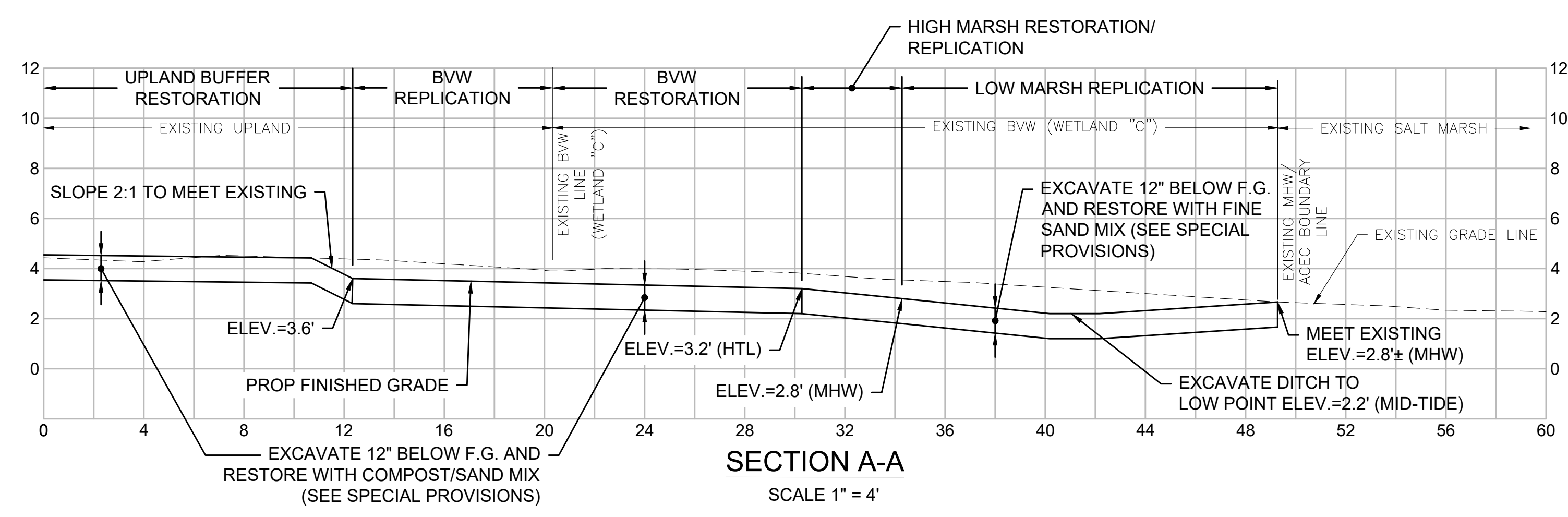
SECTION

SEDIMENT CONTROL BARRIER - COMPOST FILTER TUBE
NOT TO SCALE



NOTES:
1. REMOVE ACCUMULATED SEDIMENTS AS REQUIRED TO MAINTAIN DRAINAGE.
2. INSPECT FABRIC EVERY WEEK DURING CONSTRUCTION.

SILT SACK
NOT TO SCALE



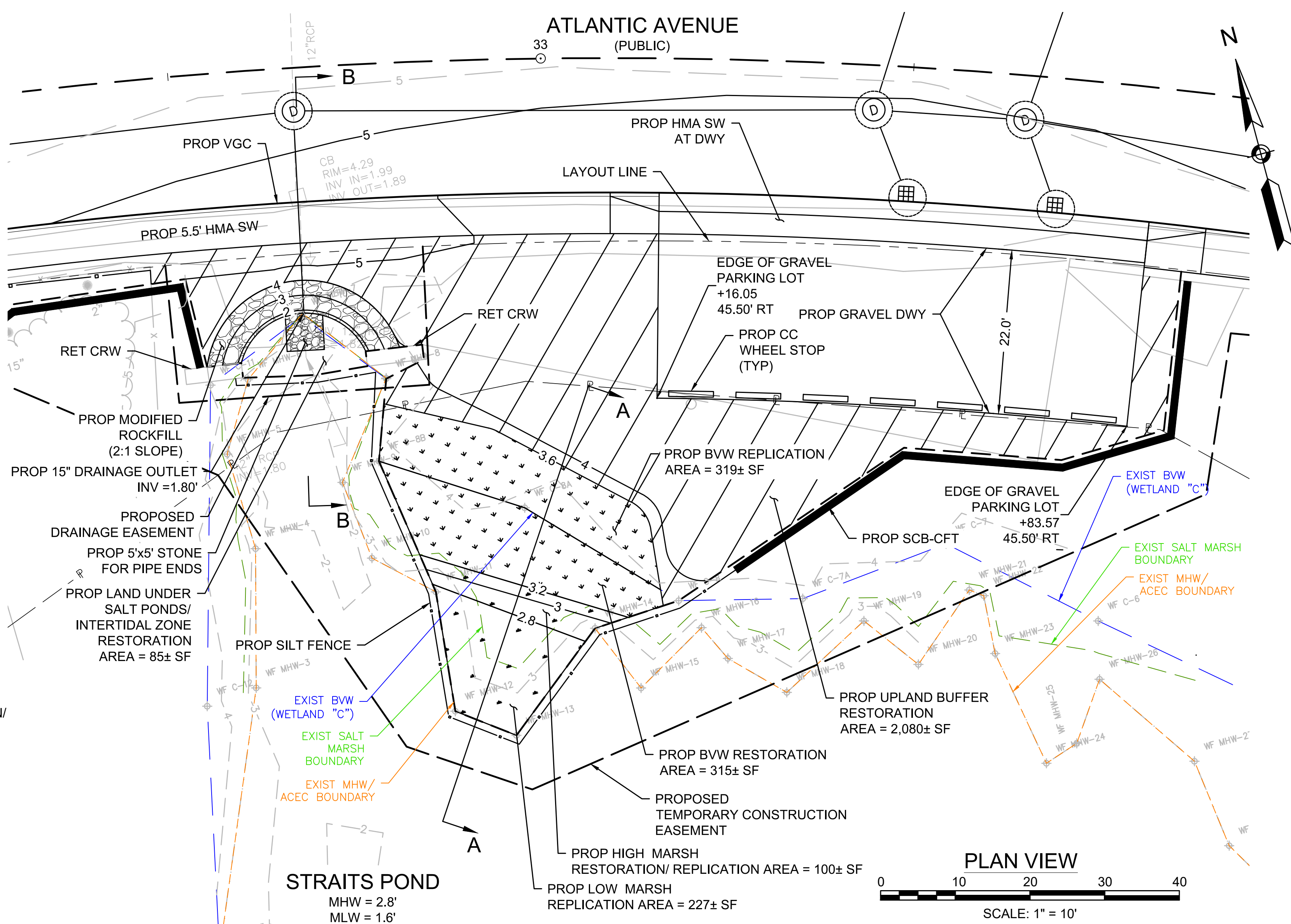
PLANT LIST TABLE							
SYMBOL	QUANTITY	COMMON NAME	BOTANICAL NAME	SIZE	SPACING	TARGET ELEV.	PLANTING AREA
SALT MARSH PLANTS							
SPAL	250	SMOOTH CORDGRASS	<i>Spartina alterniflora</i>	2" PEAT POT	12" O.C.	2.2' - 2.8'	227 SF
SPPA	35	SALTMEADOW CORDGRASS	<i>Spartina patens</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	100 SF
DISP	35	SEASHORE SALTGRASS	<i>Distichlis spicata</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	100 SF
JUGE	35	SALTMEADOW RUSH	<i>Juncus gerardii</i>	2" PEAT POT	12" O.C.	2.8' - 3.2'	100 SF
IVFR*	15	HIGH-TIDE BUSH/ MARSH ELDER	<i>Iva frutescens</i>	12-18"; #1 C.G.	5' O.C.	2.8' - 3.2'	25 LF
BORDERING VEGETATED WETLAND PLANTS							
PAVI	35	SWITCHGRASS	<i>Panicum virgatum</i>	#1 C.G.	3' O.C.	3.2' - 3.6'	634 SF
SOSE	35	SEASIDE GOLDENROD	<i>Solidago sempervirens</i>	#1 C.G.	3' O.C.	3.2' - 3.6'	634 SF
UPLAND BUFFER PLANTS							
MOPE	10	NORTHERN BAYBERRY	<i>Morella pensylvanica</i>	12-18"; #1 C.G.	5' O.C.	3.6'+	250 SF
ROVI	108	VIRGINIA ROSE	<i>Rosa virginia</i>	12-18"; #1 C.G.	3' O.C.	3.6'+	980 SF
PRMA**	27	BEACH PLUM	<i>Prunus maritima</i>	3-6"; #3 C.G.	5' O.C.	3.6'+	675 SF
PAVI	10	SWITCHGRASS	<i>Panicum virgatum</i>	#1 C.G.	3' O.C.	3.6'+	180 SF
SOSE	10	SEASIDE GOLDENROD	<i>Solidago sempervirens</i>	#1 C.G.	3' O.C.	3.6'+	180 SF
Seed	2 lbs	N.E. COASTAL SALT TOLERANT GRASS MIX	VARIOUS SPECIES	1 lb / 1,250 SF	-	3.6'+	2,080 SF

* INDIVIDUALS SHOULD BE PLANTED ALONG THE SALT MARSH REPLICATION AREA RACK LINE AT 2.8' - 3.2' ELEV.
 ** BEACH PLUM SHALL NOT BE SURROUNDED BY SWITCHGRASS

- GENERAL NOTES:**
- CONTRACTOR SHALL PROVIDE INVASIVE PLANT CONTROL WITHIN AREA OF RESTORATION/ REPLICATION.
 - SEE PLANTING SCHEMATIC FOR LOCATION OF UPLAND & BVW INDIVIDUAL PLANTS. LOCATION OF SALT MARSH INDIVIDUAL PLANTS SHALL BE DETERMINED IN THE FIELD BY THE WETLAND SPECIALIST AND MASSDOT. ALL POT/ CONTAINER PLANTS SHALL BE PLANTED IN STAGGERED ROWS/ GRID PATTERN.
 - LAND UNDER SALT POND RESTORATION SHALL CONSIST OF TYPE A SAND BORROW (M1.04.0) UP TO THE PROPOSED FINISHED GRADE.
 - SALT MARSH, BVW, AND UPLAND BUFFER SHALL HAVE 12 INCHES COARSE SAND/ BORROW MATERIAL INSTALLED BELOW THE PROPOSED FINISHED GRADE.
 - CRITICAL ELEVATIONS ARE AS FOLLOWS:
 - BVW BOUNDARY = 3.6'±
 - SALT MARSH BOUNDARY/ HIGH TIDE LINE (TYP) = 3.2'
 - ACEC BOUNDARY/ MEAN HIGH WATER (TYP) = 2.8'
 - MID-TIDE = 2.2'
 - MEAN LOW WATER = 1.6'

LEGEND

- X — PROP CONTOUR
- - - - - EXIST CONTOUR
- [Symbol: Dotted pattern] PROP SALT MARSH RESTORATION/ REPLICATION AREA
- [Symbol: Downward arrows] PROP BVW RESTORATION/ REPLICATION AREA
- [Symbol: Diagonal lines] PROP UPLAND BUFFER RESTORATION AREA



- STAIR NOTES:**
1. ALL REBAR IN STAIRS SHALL HAVE 4" CLEAR COVER.
 2. THE EXTENTS OF LEDGE IS UNKNOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LIMITS OF LEDGE AND ADJUST THE BOTTOM OF STAIR ELEVATION ACCORDINGLY.
 3. THE BOTTOM OF STAIRS SHALL BE 48" MINIMUM BELOW LOWEST ADJACENT GRADE IN AREAS WITHOUT LEDGE. THIS MAY BE REDUCED TO 6" MINIMUM BELOW GRADE IN AREAS WHERE THE STAIRS BEAR ON SOUND, LEVEL LEDGE THAT EXTENDS 48" MINIMUM BELOW GRADE.
 4. LEDGE USED AS A BEARING SURFACE FOR THE STAIRS SHALL BE LEVELED AND STEPPED. THE STAIRS SHALL BE DOWELED TO THE LEDGE WITH 4'-0" LONG #5 BARS @ 12" ON CENTER EACH DIRECTION. BARS SHALL HAVE A 2'-0" EMBEDMENT INTO THE LEDGE AND SHALL BE GROUTED WITH HIGH STRENGTH NON-SHRINK GROUT.

