

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	1	258
PROJECT FILE NO.		603739	

TITLE SHEET

PLAN AND PROFILE OF
ROUTE 1A (SOUTH STREET)
I-495 SB EXIT 38 ENTRANCE RAMP

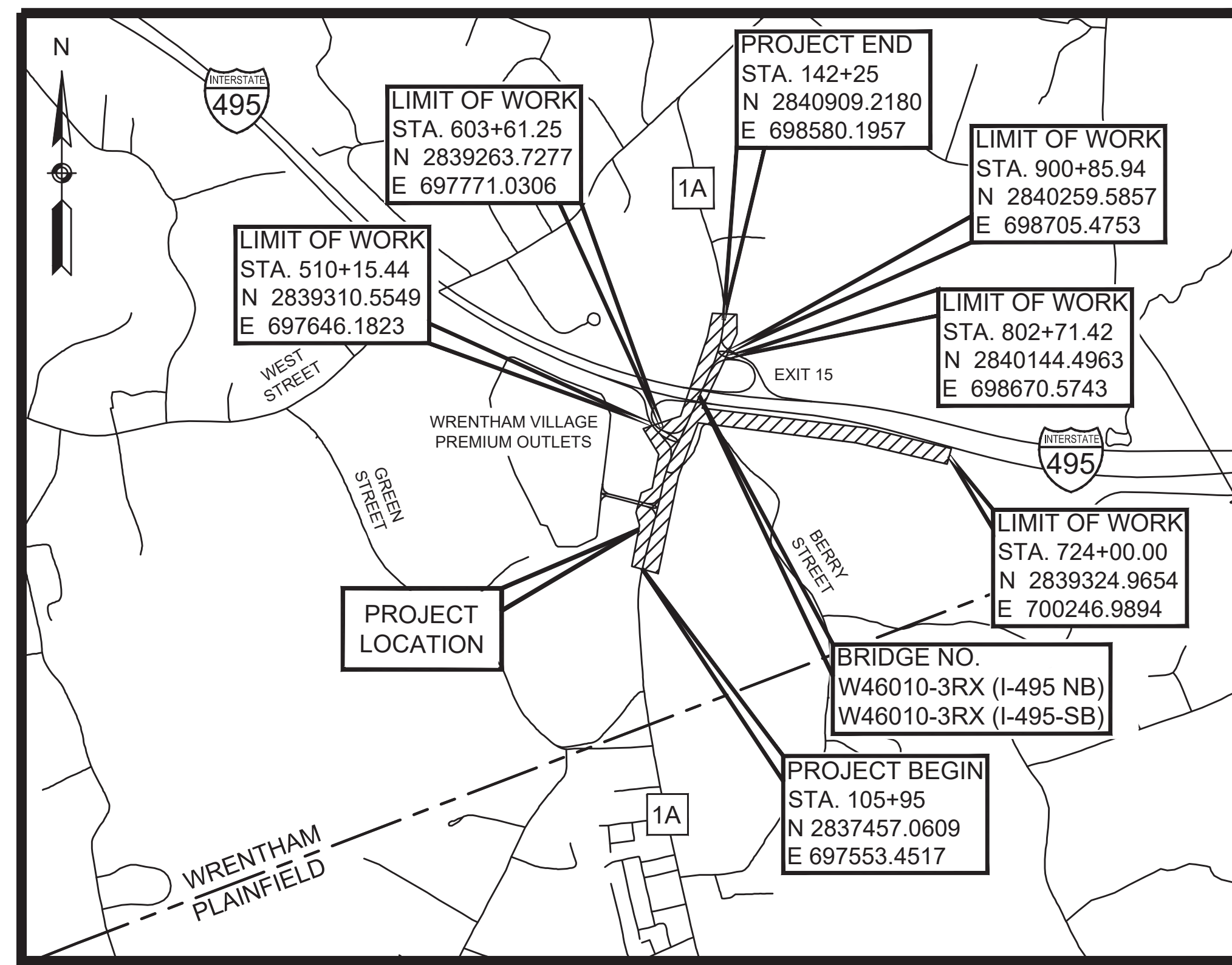
IN THE TOWN OF
WRENTHAM
NORFOLK COUNTY

FEDERAL AID PROJECT NO. HSI/STP/TAP-0035(058)

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, 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.

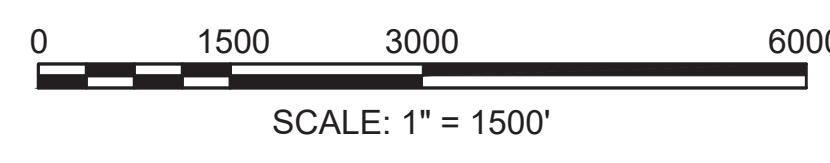
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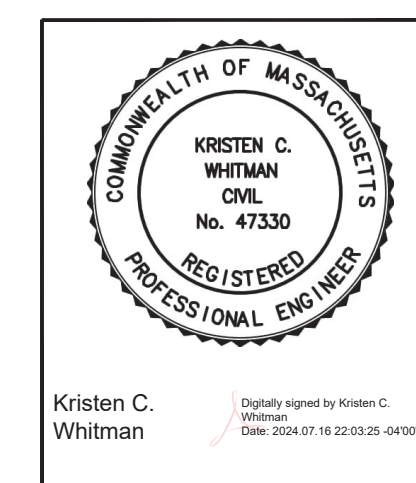


DESIGN DESIGNATION (ROUTE 1A)

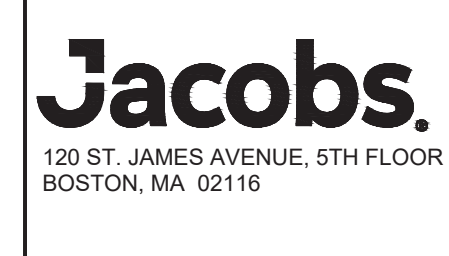
DESIGN SPEED	45 MPH
ADT (2020)	25,004
ADT (2040)	33,676
K	8%
D	51%
T (PEAK HOUR)	5%
T (AVERAGE DAY)	7%
DHV	2,857
DDHV	1,471
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL



LENGTH OF PROJECT (ROUTE 1A) = 3,630 FEET = 0.688 MILES
LENGTH OF PROJECT (I-495 SOUTHBOUND ENTRANCE RAMP) = 2,400 FEET = 0.455 MILES



DATE	DESCRIPTION	REV #



APPROVED
Carrie Lavallee, P.E.
DATE: 2024.07.18 09:24:28 -0400
CHIEF ENGINEER

07/18/2024
DATE

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	2	258
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GENERAL NOTES

GENERAL NOTES:

1. THE EXISTING BASE MAPPING IS BASED ON AERIAL AND TOPOGRAPHIC GROUND SURVEY PERFORMED BY GPI IN JUNE 2019. ADDITIONAL GROUND SURVEY WAS PERFORMED BY GPI IN NOVEMBER 2020 AND IN SEPTEMBER 2023.
2. HORIZONTAL COORDINATES REFER TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM MAINLAND ZONE REFERENCED IN US FEET TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83). ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NVDG 88).
3. RIGHT OF WAYS AND PROPERTY LINES SHOWN HEREON WERE COMPILED FROM ASSESSORS MAPS, RECORDED DEEDS AND PLANS, AND FIELD EVIDENCE.
4. ALL EXISTING STATE, COUNTY, CITY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
5. LIMITS OF BORDERING VEGETATED WETLANDS AND OTHER ENVIRONMENTAL RESOURCE AREAS WERE FIELD VERIFIED BY JACOBS IN APRIL 2020.
6. IT IS THE INTENT OF THE DESIGN TO PROVIDE A MINIMUM CONSTRUCTED SIDEWALK WIDTH FOR A PATH OF TRAVEL PAST ALL OBSTRUCTIONS OF 48". THE CONTRACTOR SHALL VERIFY THAT ALL POTENTIAL OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO SIGNS, MAILBOXES, UTILITY POLES, HYDRANTS, AND TRAFFIC SIGNAL EQUIPMENT ARE LOCATED AS TO PROVIDE THIS MINIMUM PATH OF TRAVEL CLEARANCE.
7. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
8. THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTORS PERFORMING WORK WITHIN AND AT THE PROJECT LIMITS.
9. THE CONTRACTOR MAY BE REQUIRED TO PERFORM ITEMS OF WORK OUT OF NORMAL SEQUENCE AND SCHEDULE, AS DIRECTED BY THE ENGINEER, IN ORDER TO MEET THE OVERALL PROJECT SCHEDULE.
10. THE CONTRACTOR SHALL BE REQUIRED TO PROCURE PROJECT RELATED ITEMS WITHOUT ADVERSELY IMPACTING THE PROJECT SCHEDULE; THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE APPROPRIATE SHOP DRAWINGS WITH SUFFICIENT LEAD TIME FOR PROCESSING IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
11. DAMAGE TO PRIVATE PROPERTIES BEYOND THE WORK LIMITS AS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED "IN-KIND" BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE.
12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED, BY THE CONTRACTOR, TO THEIR ORIGINAL CONDITION, AT THE CONTRACTOR'S SOLE EXPENSE.
13. LIMITS OF CLEARING AND GRUBBING ARE 1 FOOT BEYOND PROPOSED TOP OR TOE OF SLOPE UNLESS OTHERWISE INDICATED ON THE CONSTRUCTION PLANS.
14. GRANITE CURB: EXISTING CURB MARKED AS (R&R) SHALL BE RESET AS SHOWN IF, IN THE OPINION OF THE ENGINEER, IT IS IN GOOD CONDITION AND REUSABLE. OTHERWISE, IT SHALL BE DISCARDED BY THE CONTRACTOR AS PER DIRECTION OF THE ENGINEER.
15. ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM BORROW PLACED AND SEEDED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM, OR PAVEMENT SURFACE.
16. TREES AND SHRUBS WITHIN THE LIMITS OF WORK NOT SCHEDULED FOR REMOVAL AS INDICATED ON THE PLANS SHALL ONLY BE REMOVED UPON APPROVAL OF THE ENGINEER.
17. ALL EROSION CONTROLS MUST BE CHECKED, REPLACED OR REPAIRED AS NECESSARY, AND ANY SILTATION REMOVED, AFTER EACH RAIN EVENT.
18. ALL PEDESTRIAN CURB RAMPS SHALL CONFORM TO THE LATEST EDITION OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS AND WITH THE AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES, AS AMENDED, AND THE 2017 MASSDOT CONSTRUCTION STANDARD DETAILS, OR LATEST REVISION.
19. DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL PEDESTRIAN CURB RAMPS AND SHALL COMPLY WITH CONSTRUCTION STANDARD 107.65R. PAYMENT FOR DETECTABLE WARNING PANELS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PEDESTRIAN CURB RAMPS OR SIDEWALKS IN WHICH THEY ARE BEING INSTALLED.
20. ALL TRANSVERSE JOINTS, AND ALL LONGITUDINAL JOINTS BETWEEN NEW SURFACE PAVEMENT AND EXISTING SURFACE PAVEMENT TO REMAIN SHALL BE COATED WITH A HOT POURED RUBBERIZED ASPHALT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION NUMBER SS-S-1401.
21. SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS AND WORKZONE PROTECTION SHALL BE IN ACCORDANCE WITH CURRENT MASSDOT AND MUTCD REQUIREMENTS AND SPECIFICATIONS.
22. ALL CONSTRUCTION SIGNS IN PLACE BUT NOT PERTINENT TO THE ONGOING CONSTRUCTION PHASING SHALL BE COVERED OR "BAGGED".
23. THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICLE, BICYCLE, AND PEDESTRIAN TRAFFIC IN AREAS UNDER CONSTRUCTION.
24. ANY AND ALL TRAFFIC RELATED ITEMS REQUIRED TO MAINTAIN TRAFFIC FLOW THROUGH OR AROUND THE PROJECT AREA SHALL BE MAINTAINED IN A CONDITION ACCEPTABLE TO THE ENGINEER. FURTHER, THE CONTRACTOR SHALL REPLACE THOSE ITEMS AS REQUIRED BY THE SPECIFICATIONS OR AS DEEMED NECESSARY BY THE ENGINEER.
25. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS 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 CONSTRUCTABILITY 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.
26. SEE GEOTECHNICAL REPORT MARCH 1, 2024.

UTILITY NOTES:

1. THE LOCATIONS, SIZES, AND MATERIALS OF THE EXISTING UTILITIES AS SHOWN HEREON HAVE BEEN COMPILED FROM VISIBLE STRUCTURES, PAINT MARKS, AND PLANS FROM UTILITY COMPANIES, IF AVAILABLE. THE ACTUAL LOCATIONS OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE OWNER PRIOR TO ANY CONSTRUCTION. JACOBS AND ITS SUBCONSULTANTS, MASSDOT, AND THE TOWN OF WRENTHAM MAKE NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION HEREON.
2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233), AT LEAST 72 BUSINESS HOURS BEFORE ANY CONSTRUCTION BEGINS.
4. SHOULD AN EXISTING UTILITY BE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, THE LOCATION, SIZE AND TYPE SHALL BE ACCURATELY DETERMINED WITHOUT DELAY, BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
5. THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR THE ALTERATION AND/OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITY THROUGH THE MASSDOT HIGHWAY DIVISION UTILITY SECTION.
6. THE CONTRACTOR SHALL ADJUST ALL SEWER MANHOLES, GAS GATES, WATER VALVE GATE BOXES, WATER SERVICE BOXES, CURB STOPS, AND OTHER WATER APPURTENANCES WITHIN THE WORK LIMITS TO THE PROPOSED FINISH GRADE.
7. AT LOCATIONS WHERE PROPOSED DRAINAGE STRUCTURES APPEAR IN CLOSE PROXIMITY TO GAS LINES OR WATER LINES, THE CONTRACTOR SHALL EXCAVATE A TEST PIT PRIOR TO INSTALLING THE DRAINAGE STRUCTURE TO DETERMINE THE ACTUAL LOCATION AND DEPTH OF THE AFFECTED UTILITY. THE CONTRACTOR SHALL COORDINATE WITH AND NOTIFY THE UTILITY COMPANY OF THE TEST PIT EXCAVATION IN ADVANCE SO THAT A REPRESENTATIVE CAN OBSERVE THE EXCAVATION.
8. DAMAGE CAUSED BY THE CONTRACTOR'S ACTIONS TO EXISTING PRIVATE WATER OR SANITARY SEWER SERVICE LINES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

MARKING AND SIGNING NOTES:

1. ALL PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING MARKINGS AT THE LIMITS OF WORK.
2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE WET REFLECTIVE THERMOPLASTIC.
3. THE FINAL LOCATION OF PROPOSED TRAFFIC SIGNS AND SUPPORTS SHALL BE FIELD-CONFIRMED BY THE ENGINEER PRIOR TO INSTALLATION.

DRAINAGE NOTES:

1. ALL PROPOSED CATCH BASINS SHALL BE CONSTRUCTED WITH A 4' SUMP DEPTH.
2. IF AN EXISTING PIPE IS DAMAGED DURING INSTALLATION OF A NEW STRUCTURE, THE DAMAGED SECTION SHALL BE REPLACED WITH A NEW PIPE AND JOINED TO THE EXISTING PIPE WITH A WATERTIGHT CONNECTION. THE COSTS FOR ANY WORK ASSOCIATED REPLACING DAMAGED PIPES SHALL BE CONSIDERED INCIDENTAL TO THE PROPOSED STRUCTURE AND NO SEPARATE PAYMENT WILL BE MADE.
3. ALL PROPOSED DRAINAGE PIPES SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 0.4% UNLESS OTHERWISE NOTED.
4. CONNECTING PROPOSED PIPES TO EXISTING STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO THE PIPE ITEM AND NO SEPARATE PAYMENT SHALL BE MADE.
5. FOR CATCH BASINS LOCATED IN GRASSED AREAS, THE CONTRACTOR SHALL REMOVE THE EXISTING CEMENT CONCRETE APRON AND CONSTRUCT A NEW CEMENT CONCRETE APRON AROUND THE GRATE WHERE SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. THE NEW CEMENT CONCRETE APRON SHALL BE 4 INCHES THICK AND EXTEND 2 FEET IN EACH DIRECTION AROUND THE GRATE. THE WORK ASSOCIATED WITH REMOVAL OF EXISTING APRONS AND CONSTRUCTION OF NEW APRONS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

TRAFFIC CONTROL NOTES:

1. SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS AND WORKZONE PROTECTION SHALL BE IN ACCORDANCE WITH CURRENT MASSDOT AND MUTCD REQUIREMENTS AND SPECIFICATIONS.
2. ALL CONSTRUCTION SIGNS IN PLACE BUT NOT PERTINENT TO THE ONGOING CONSTRUCTION PHASING SHALL BE "BAGGED".
3. THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC IN AREAS UNDER CONSTRUCTION.
4. ANY AND ALL TRAFFIC RELATED ITEMS REQUIRED TO MAINTAIN TRAFFIC FLOW THROUGH OR AROUND THE PROJECT AREA SHALL BE MAINTAINED IN A CONDITION ACCEPTABLE TO THE ENGINEER. FURTHER, THE CONTRACTOR SHALL REPLACE THOSE ITEMS AS REQUIRED BY THE SPECIFICATIONS OR AS DEEMED NECESSARY BY THE ENGINEER.

GENERAL SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists various symbols for infrastructure like manholes, poles, and boundaries.

PAVEMENT MARKINGS SYMBOLS

Table with columns: EXISTING, PROPOSED, DESCRIPTION. Lists symbols for pavement markings such as stop lines, crosswalks, and yield markings.

LEGEND

Legend table listing symbols for benchmarks, utility poles, generators, and ground lights.

LINETYPE LEGEND

Linetype legend table listing line styles for proposed contours, state highway layouts, and city layouts.

TRAFFIC SYMBOLS

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

ABBREVIATIONS

Table with columns: GENERAL, listing abbreviations for terms like ABANDON, APPROXIMATE, ASPHALT CONCRETE, etc.

WRENTHAM, MA I-495 / ROUTE 1A RAMP

Summary table with columns: STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Values: MA, HSI/STP/TAP-0035(058), 3, 258.

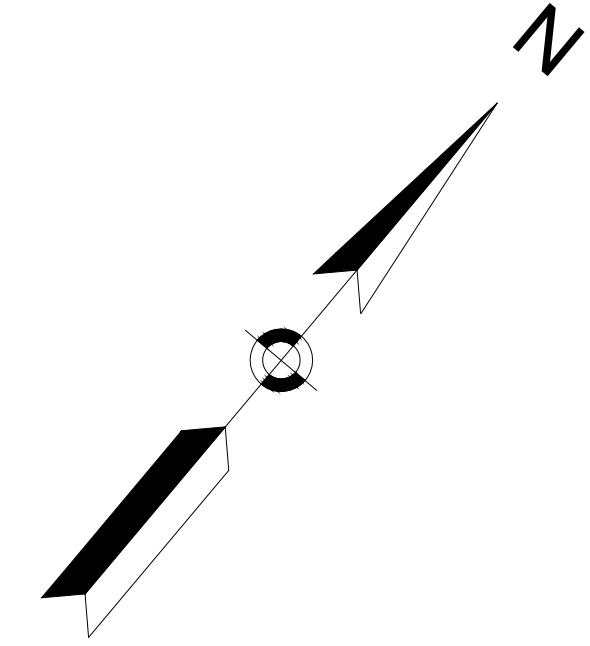
LEGEND & ABBREVIATIONS

Table with columns: GENERAL, listing abbreviations for property lines, probe numbers, points of curvature, etc.

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

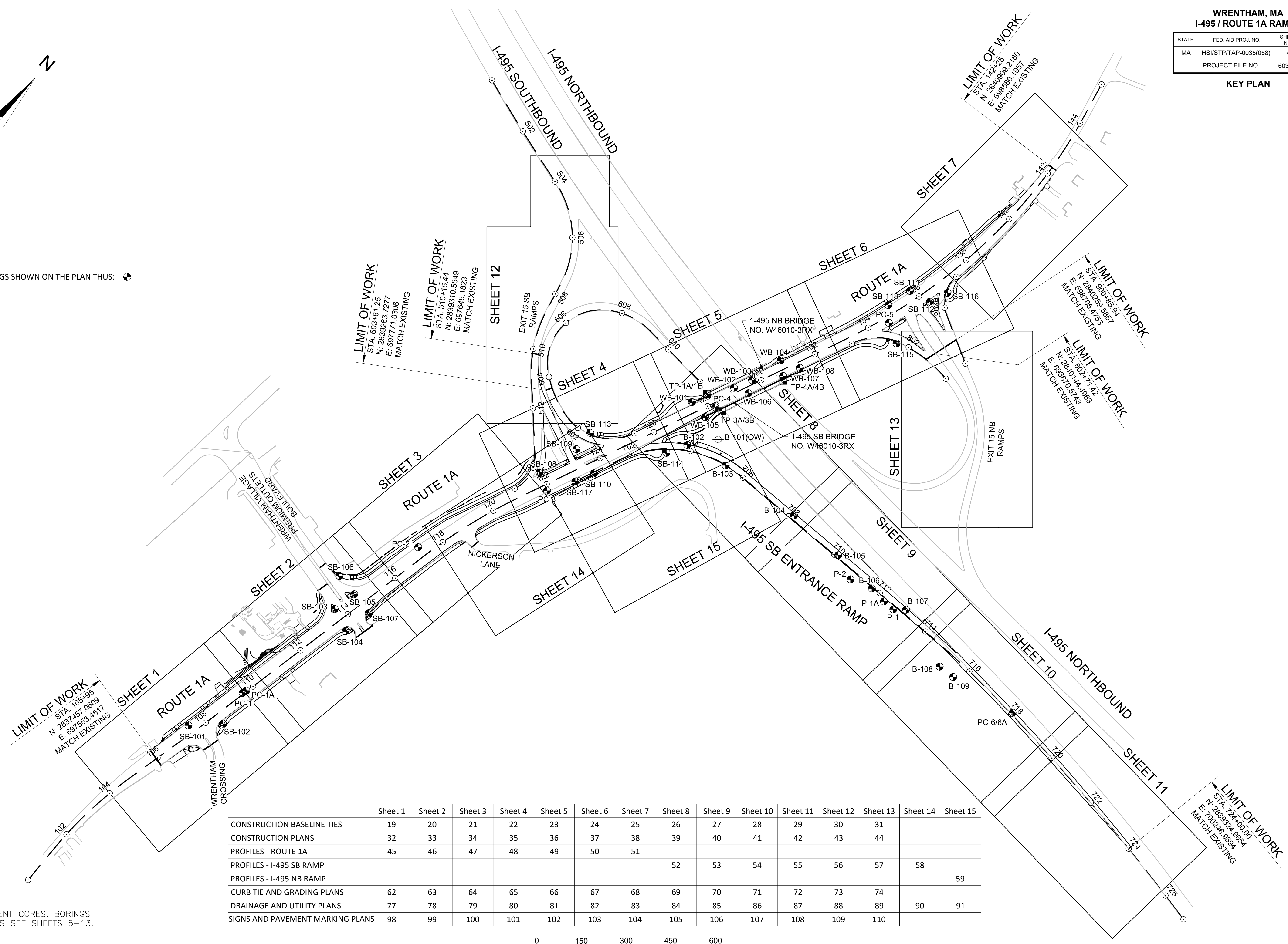
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	4	258
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KEY PLAN



BORING NOTE:

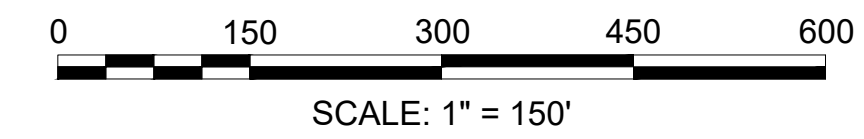
LOCATION OF BORINGS SHOWN ON THE PLAN THUS:



NOTE:

FOR PAVEMENT CORES, BORINGS AND PROBES SEE SHEETS 5-13.

	Sheet 1	Sheet 2	Sheet 3	Sheet 4	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	Sheet 10	Sheet 11	Sheet 12	Sheet 13	Sheet 14	Sheet 15
CONSTRUCTION BASELINE TIES	19	20	21	22	23	24	25	26	27	28	29	30	31		
CONSTRUCTION PLANS	32	33	34	35	36	37	38	39	40	41	42	43	44		
PROFILES - ROUTE 1A	45	46	47	48	49	50	51								
PROFILES - I-495 SB RAMP								52	53	54	55	56	57	58	
PROFILES - I-495 NB RAMP															59
CURB TIE AND GRADING PLANS	62	63	64	65	66	67	68	69	70	71	72	73	74		
DRAINAGE AND UTILITY PLANS	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
SIGNS AND PAVEMENT MARKING PLANS	98	99	100	101	102	103	104	105	106	107	108	109	110		



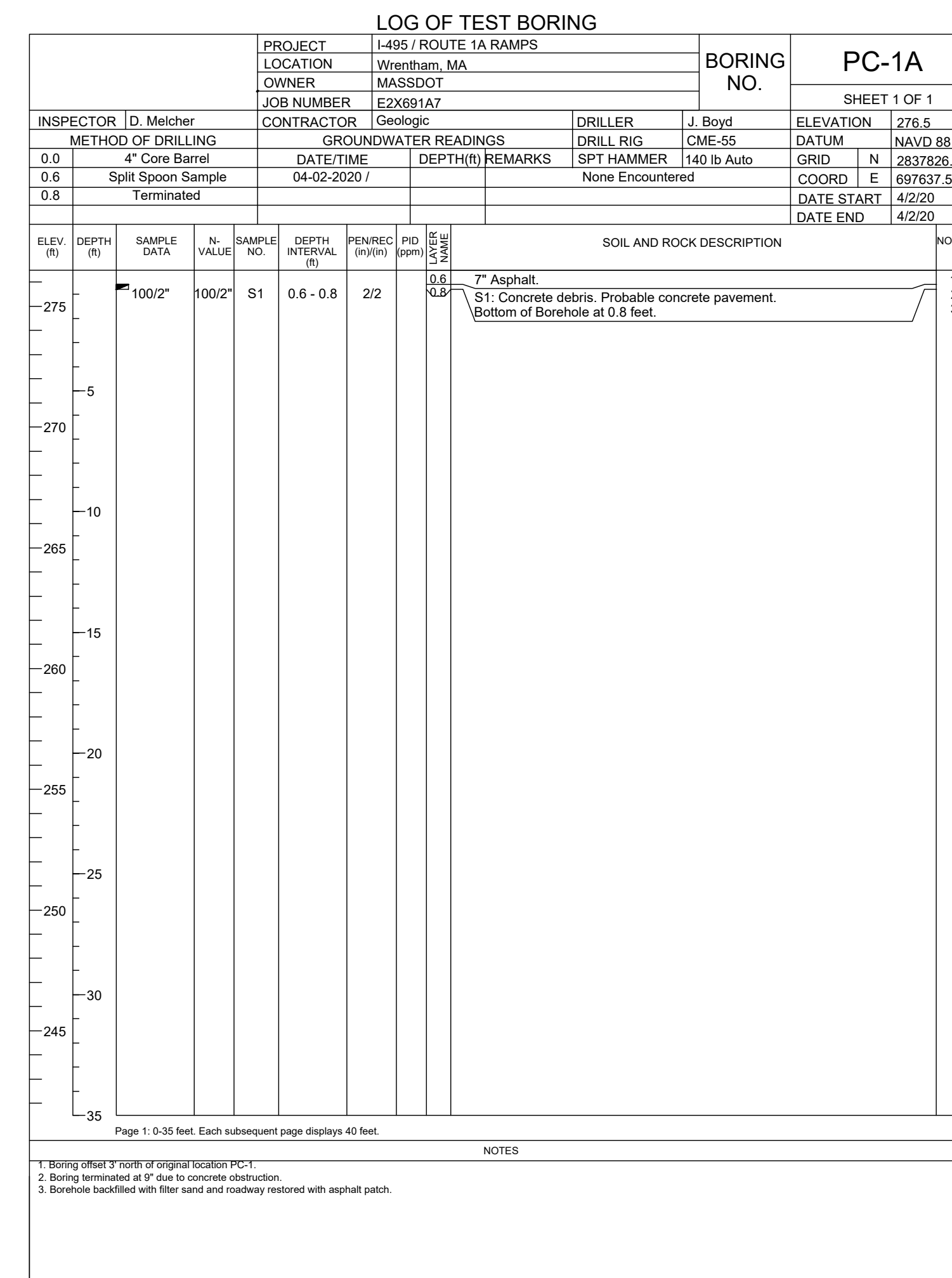
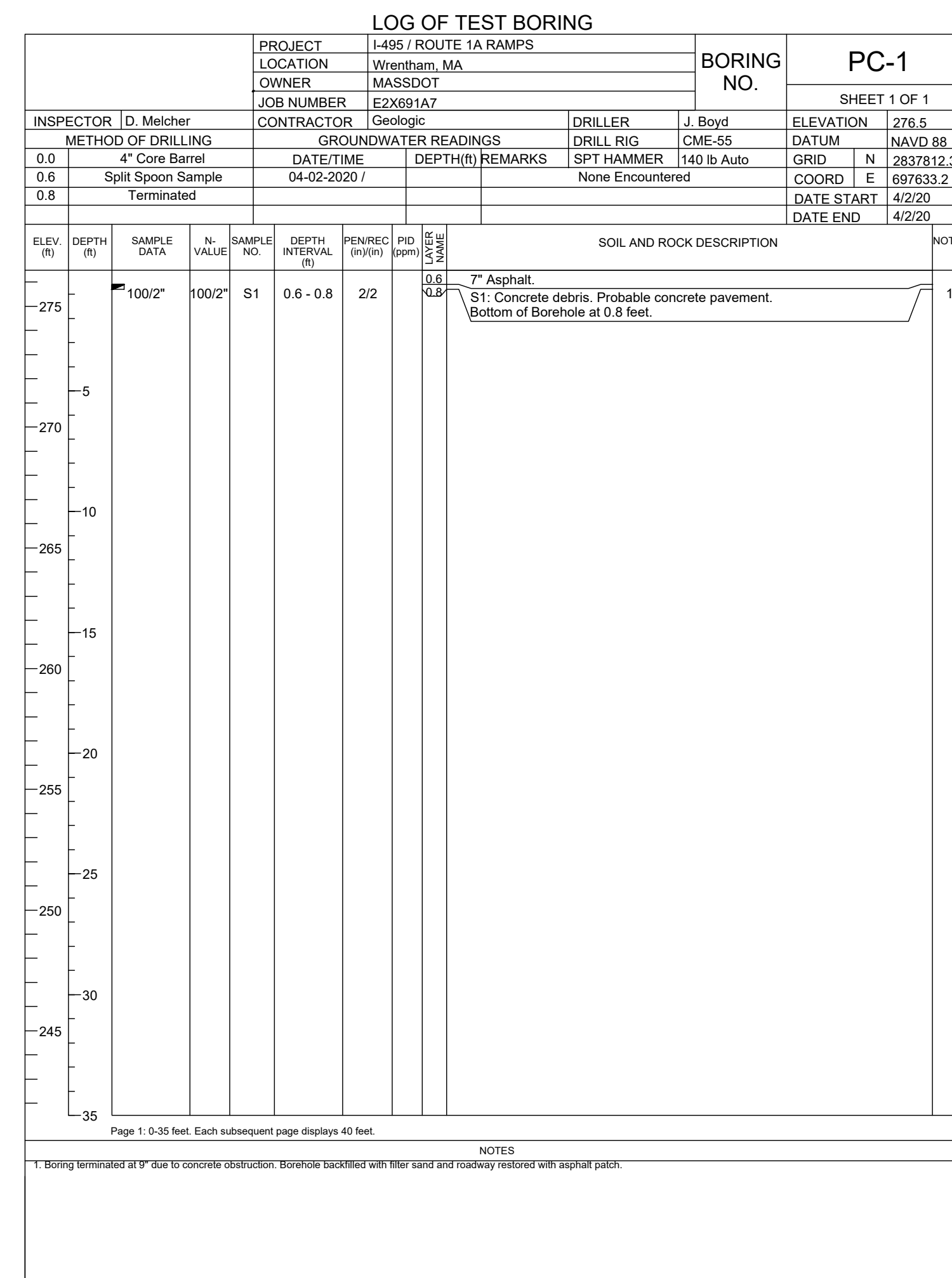
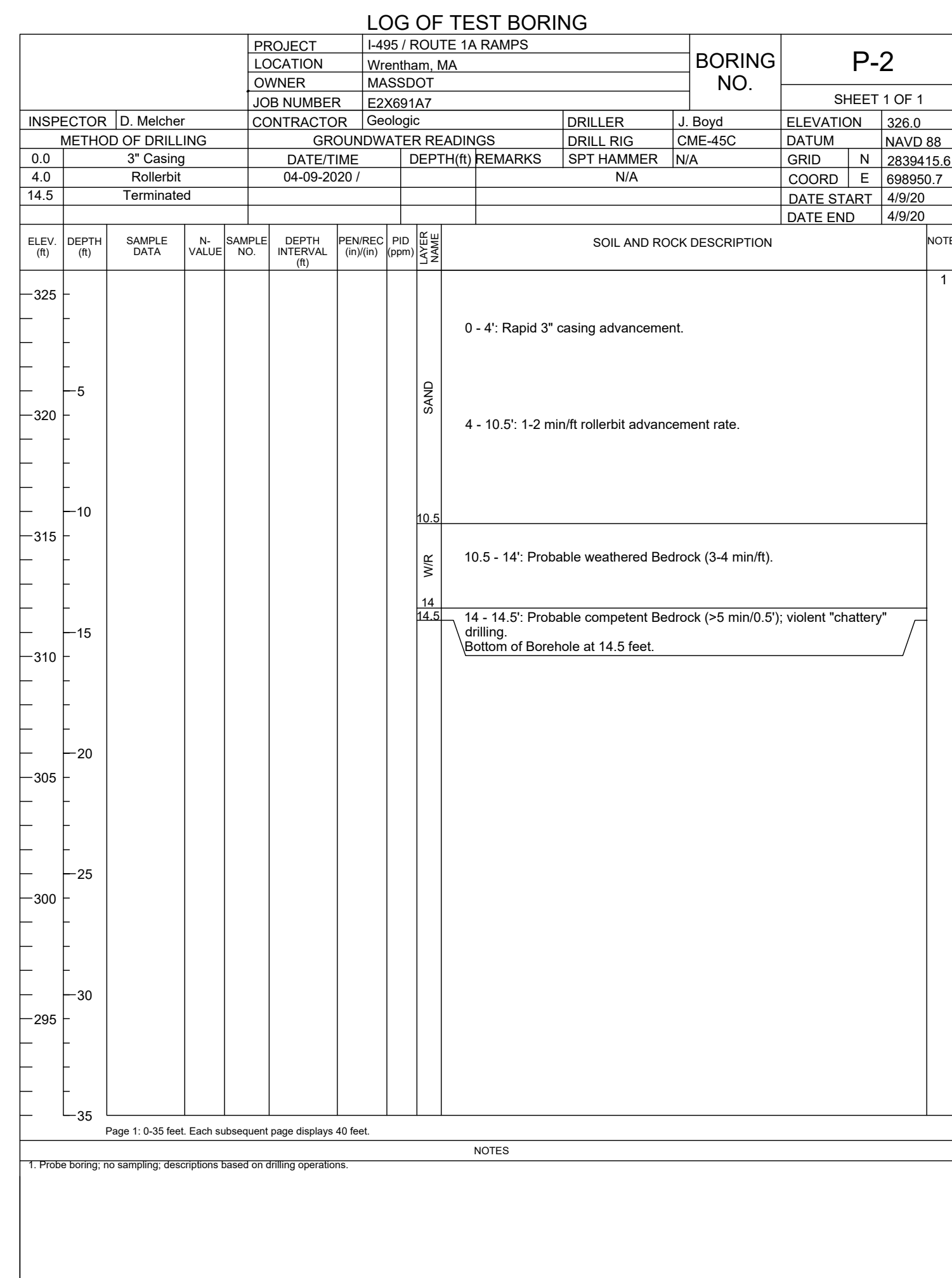
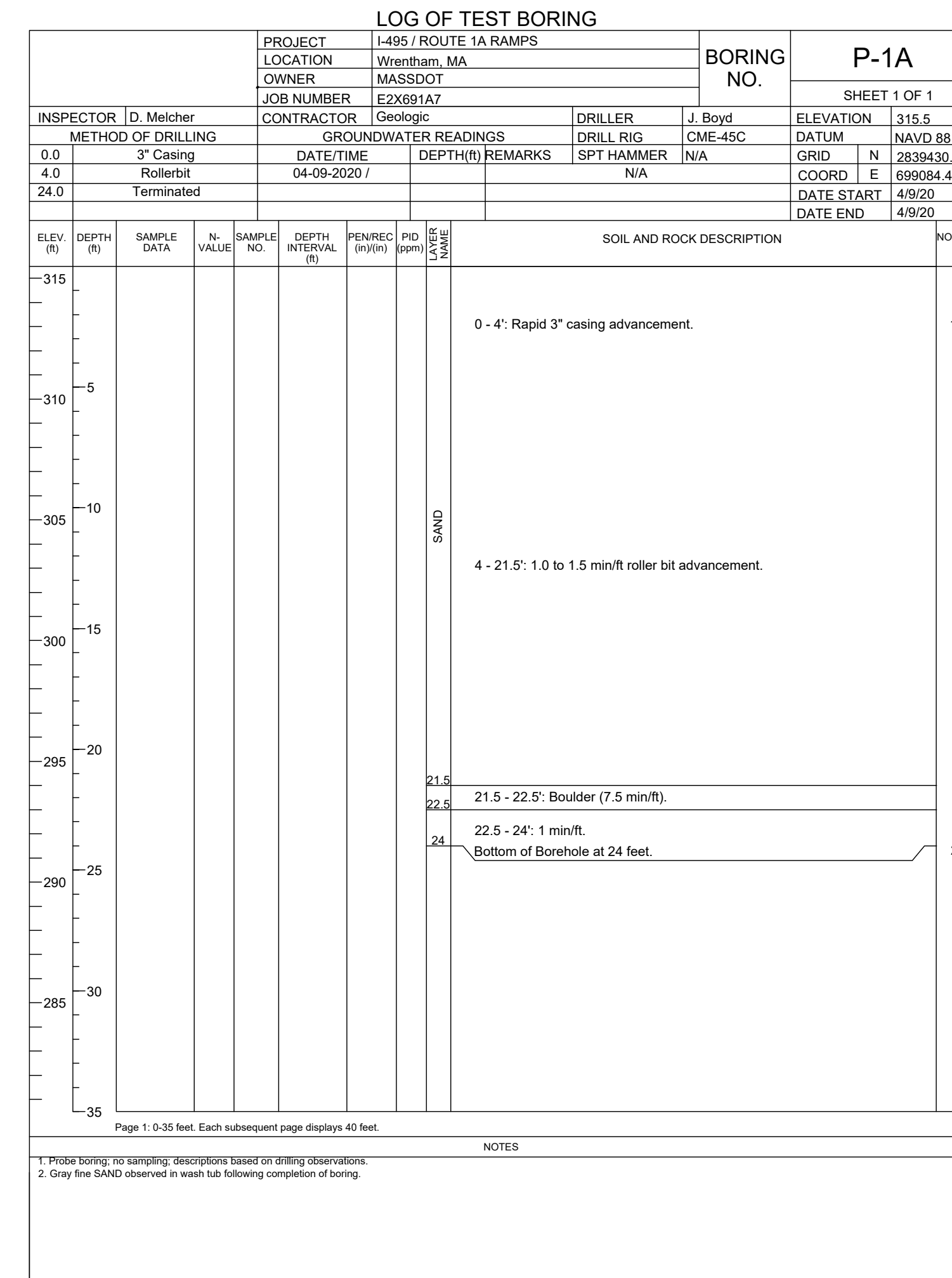
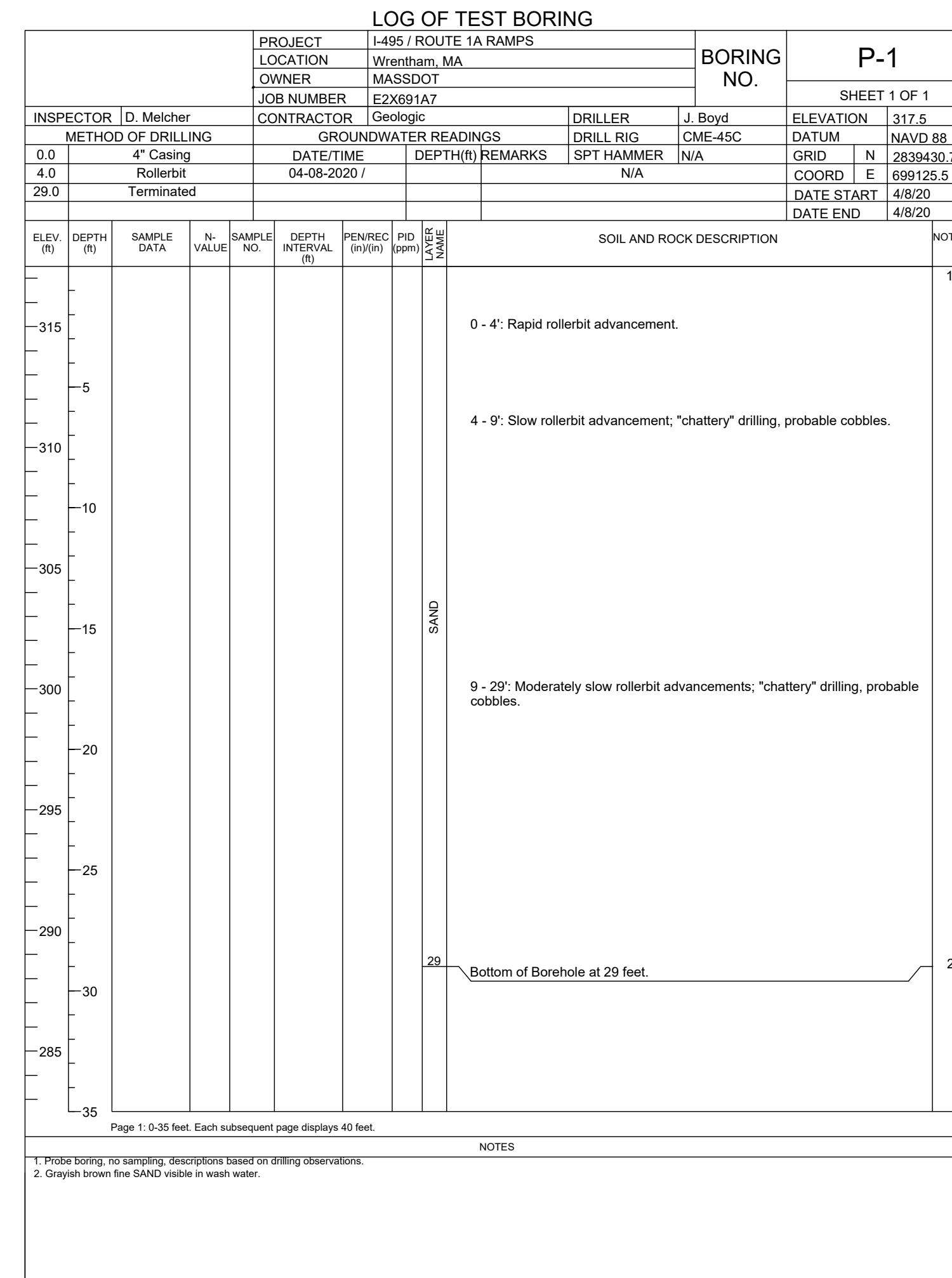
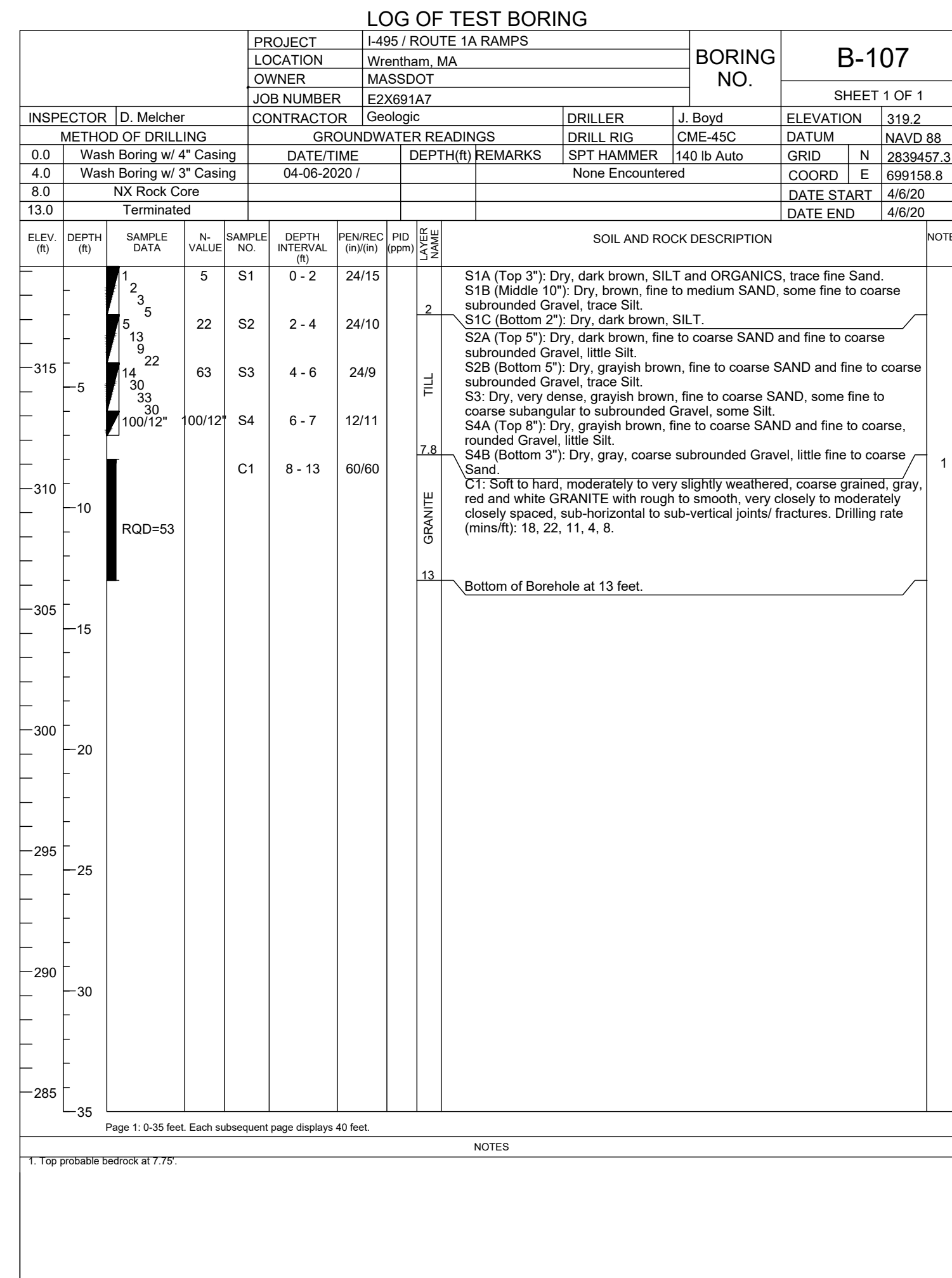
**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

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**BORING LOGS
SHEET 2 OF 9**

BORING NOTES:

REFER TO SHEET NO. 5 FOR BORING NOTES.



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

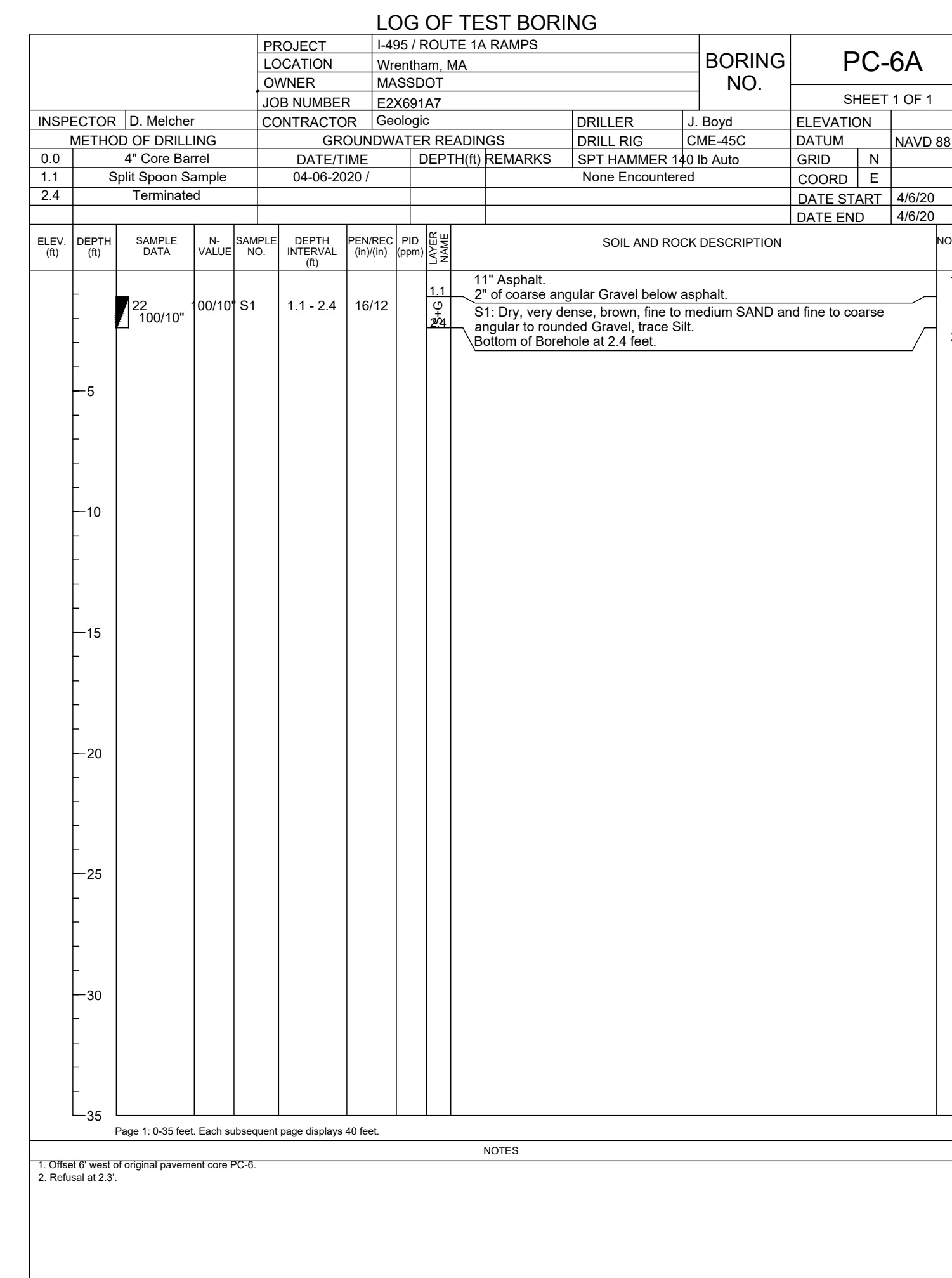
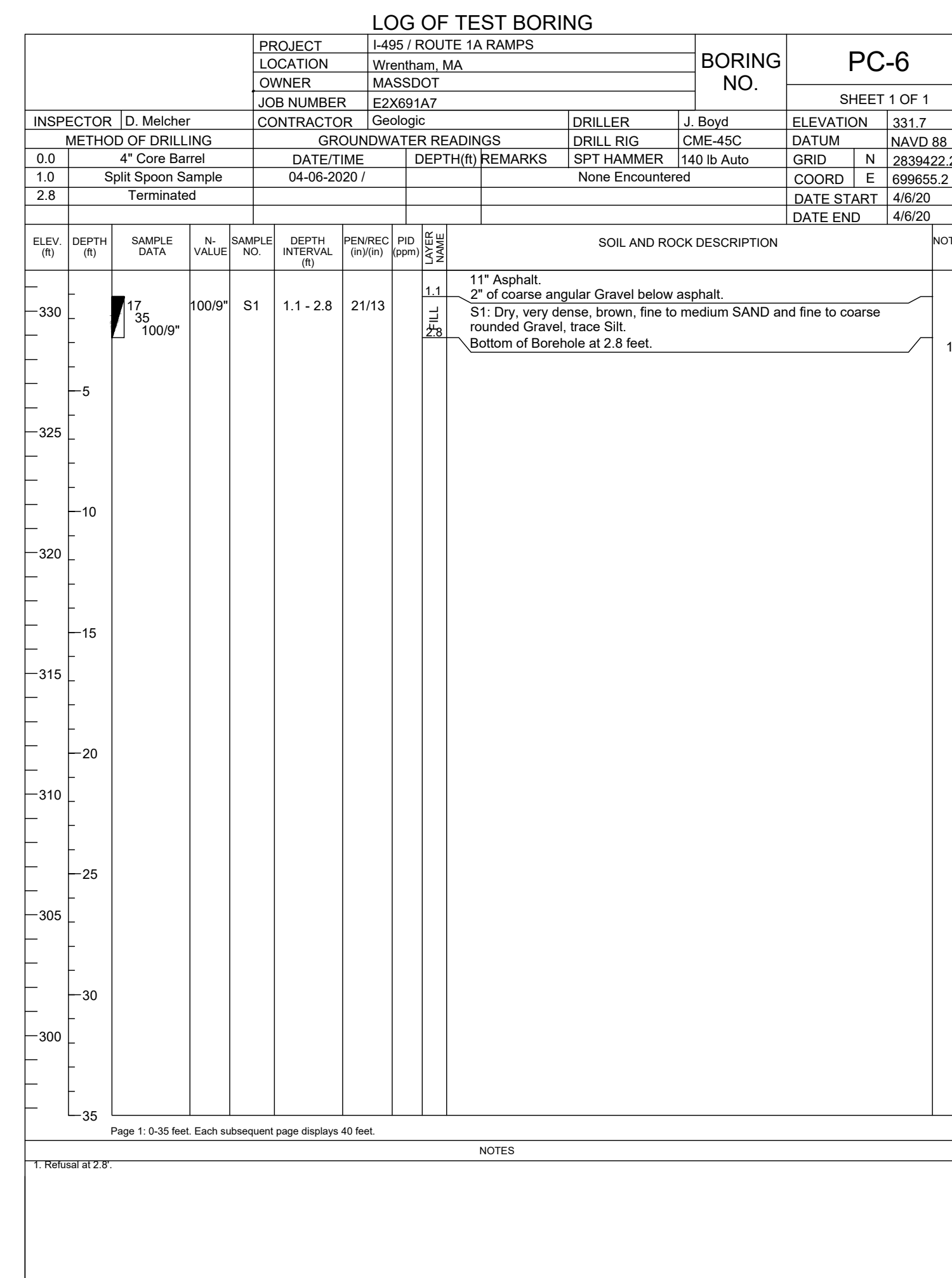
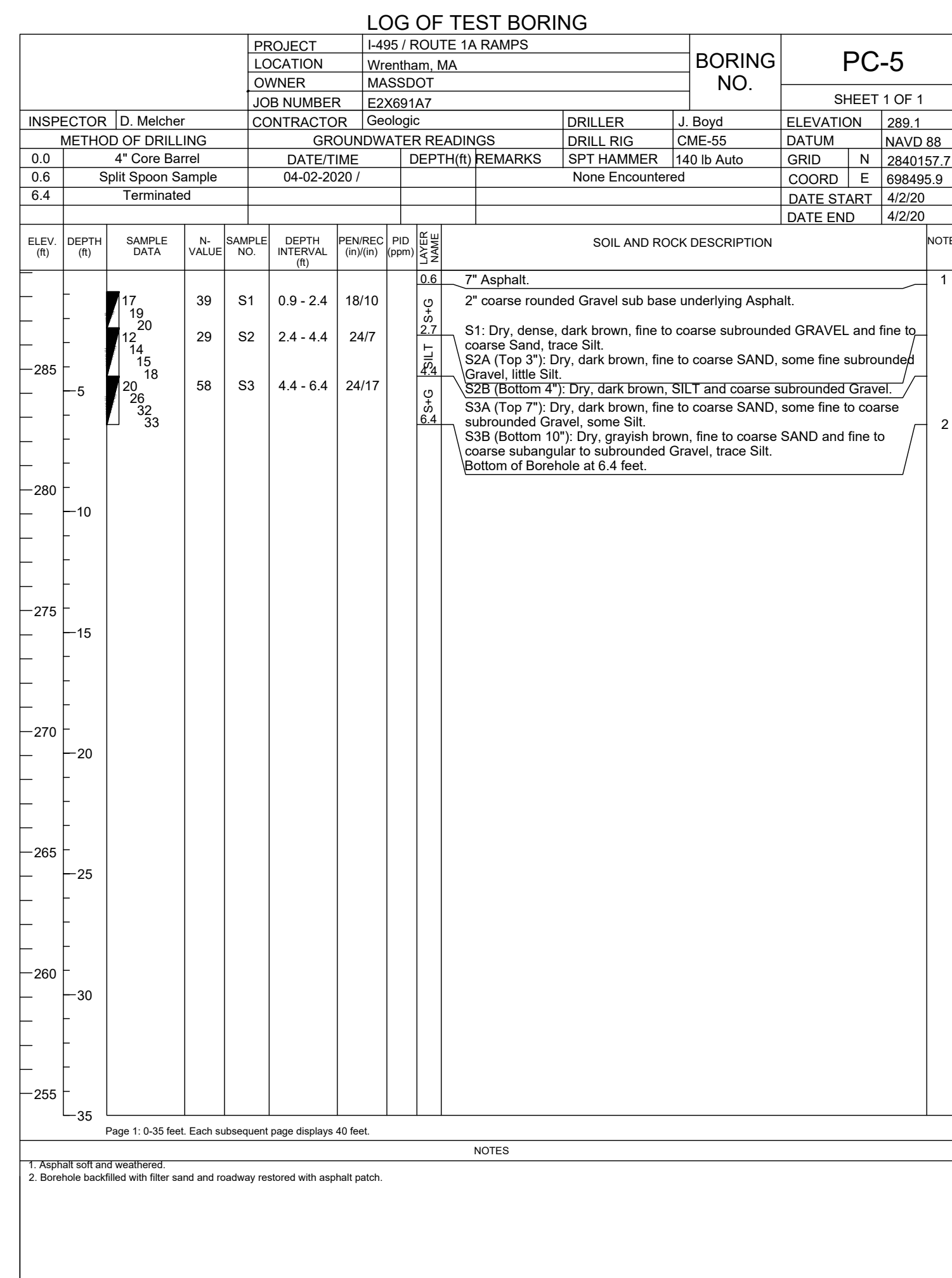
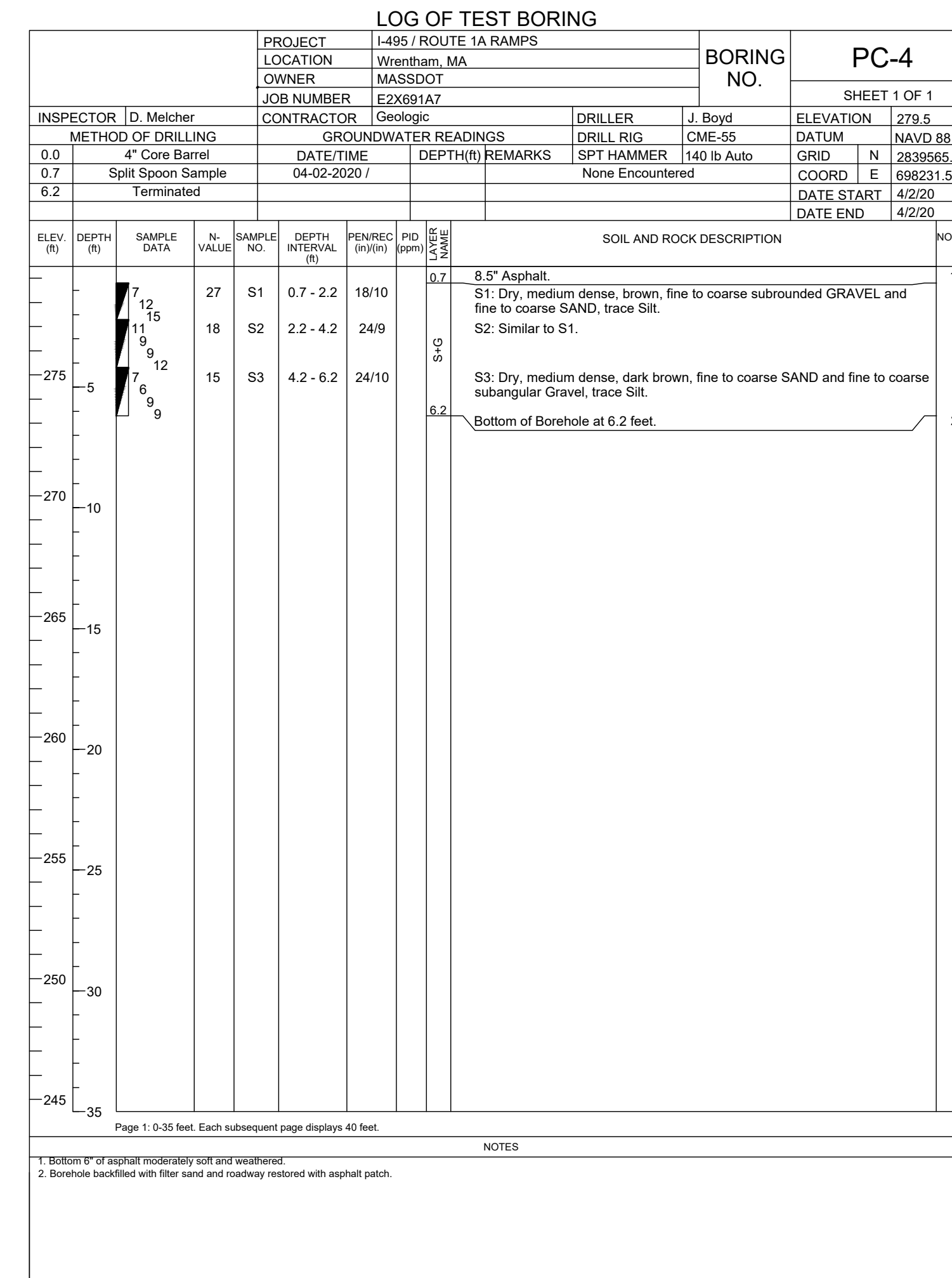
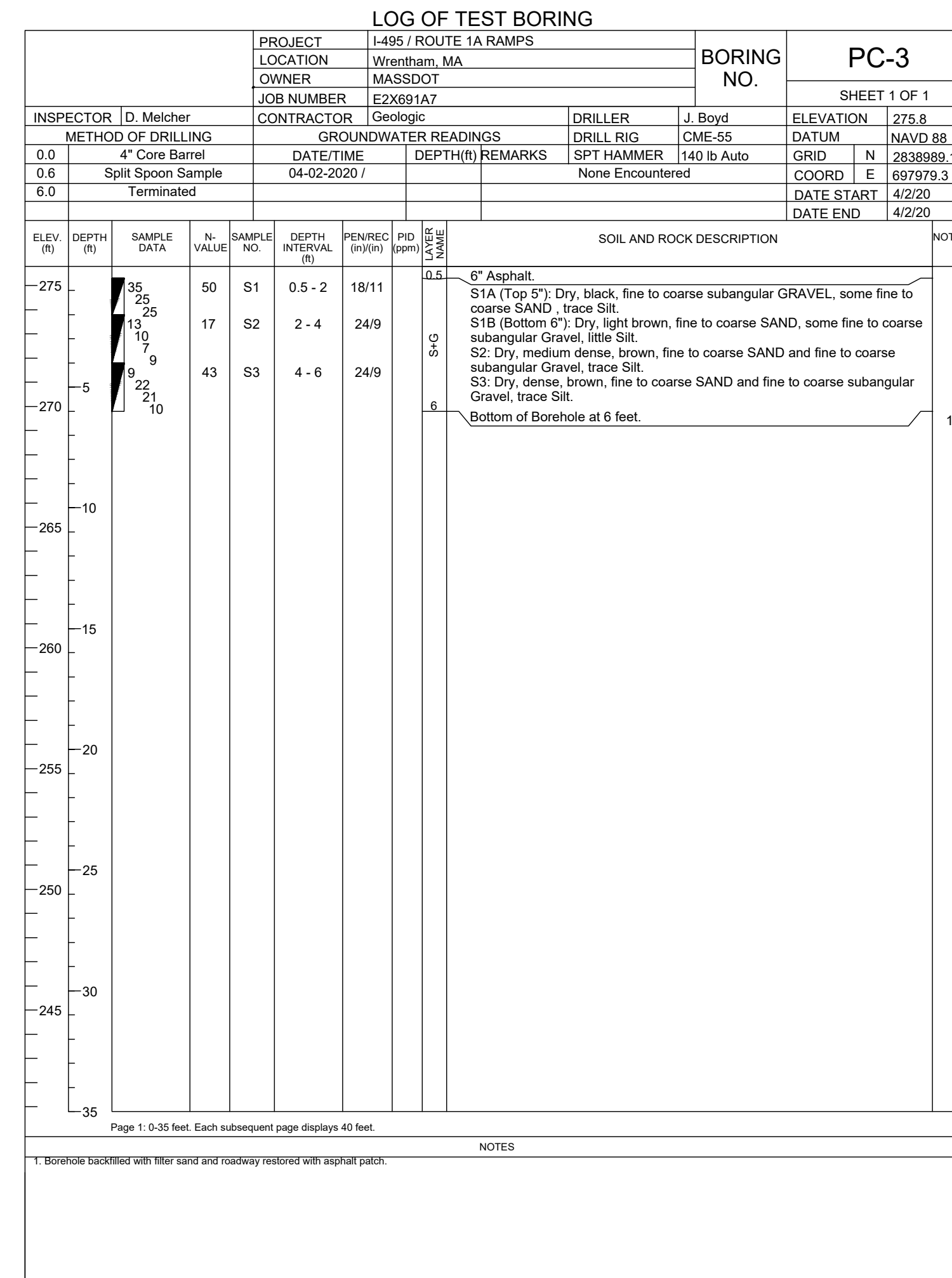
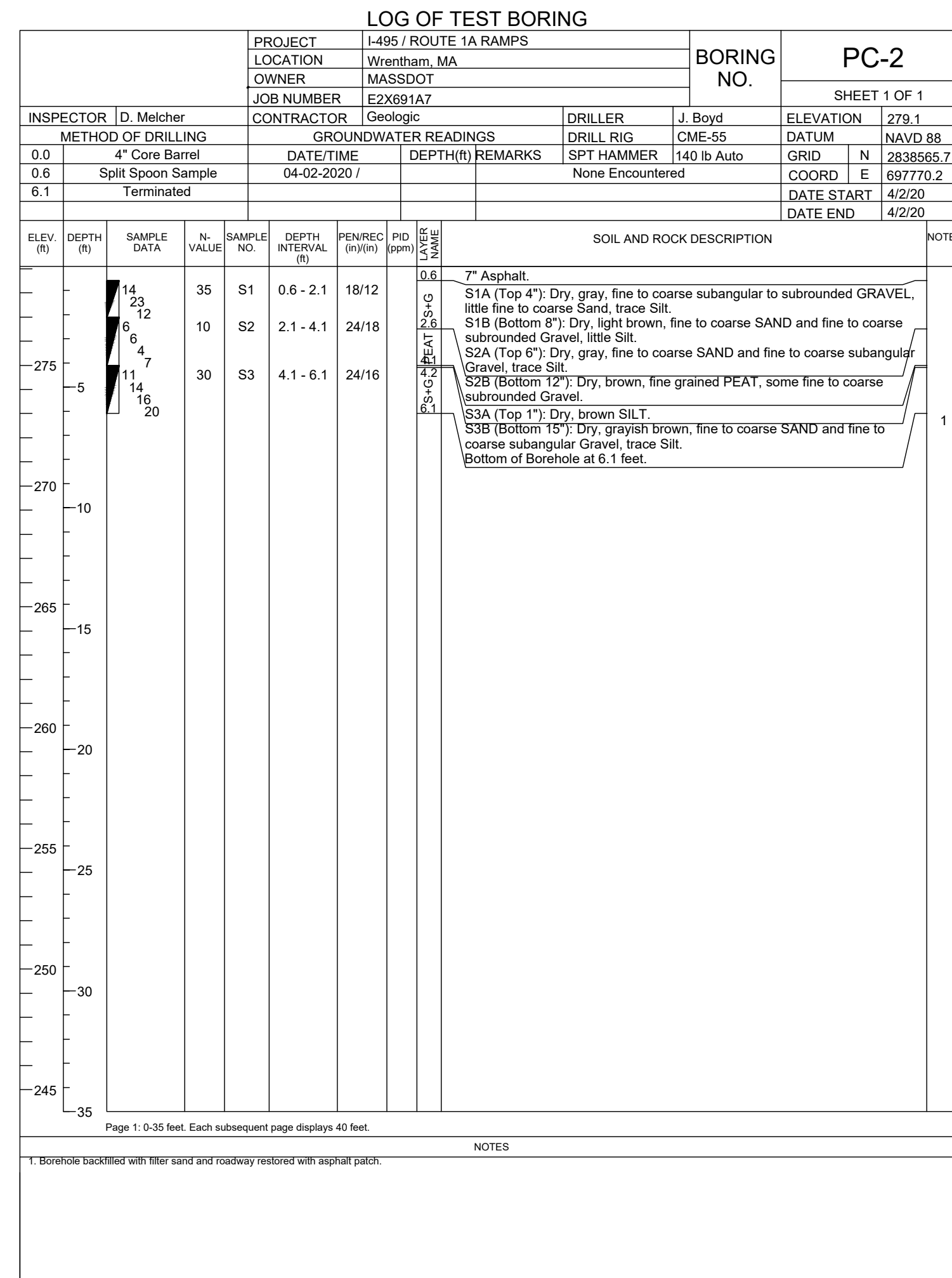
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**BORING LOGS
SHEET 3 OF 9**

BORING NOTES:

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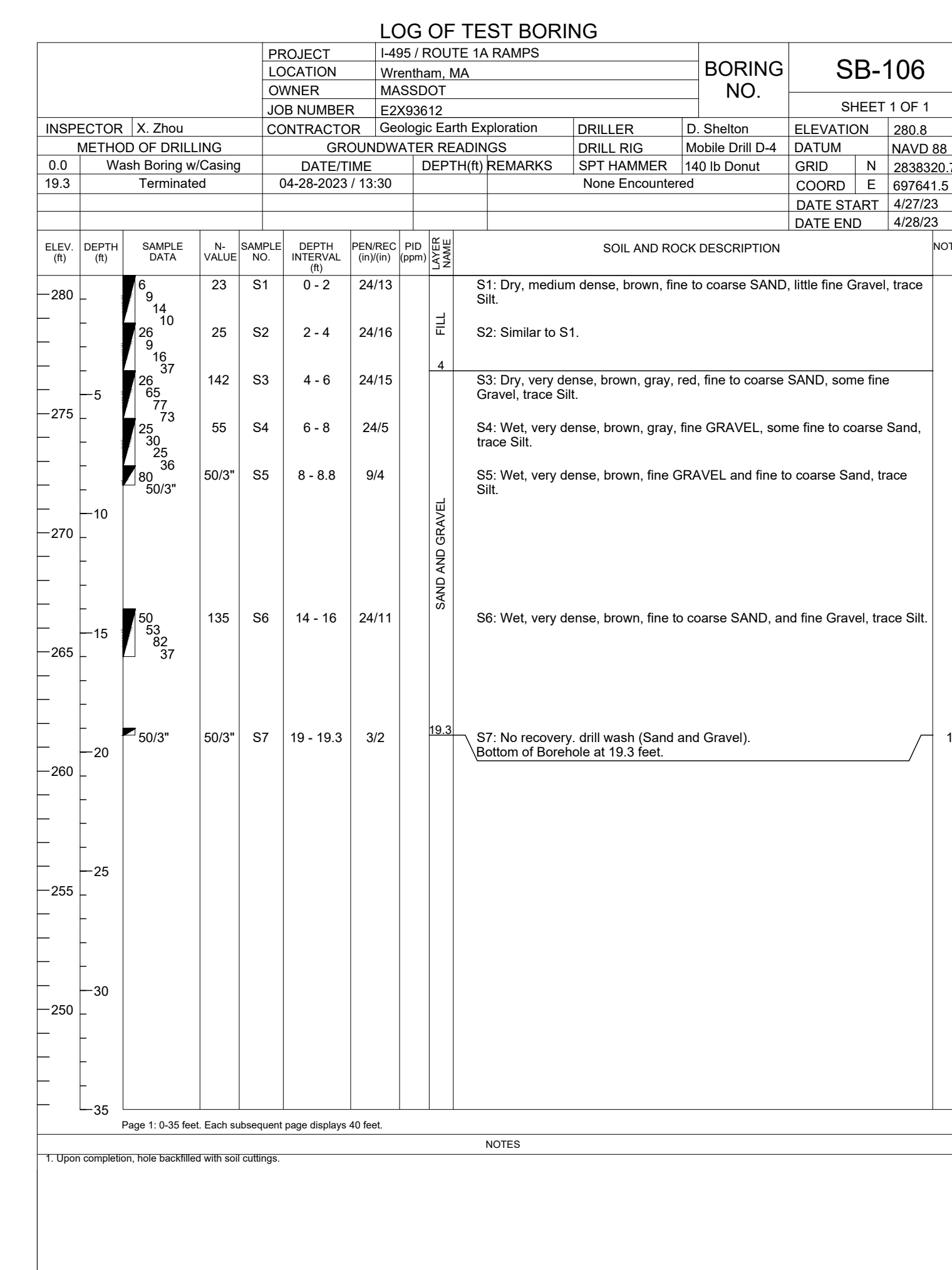
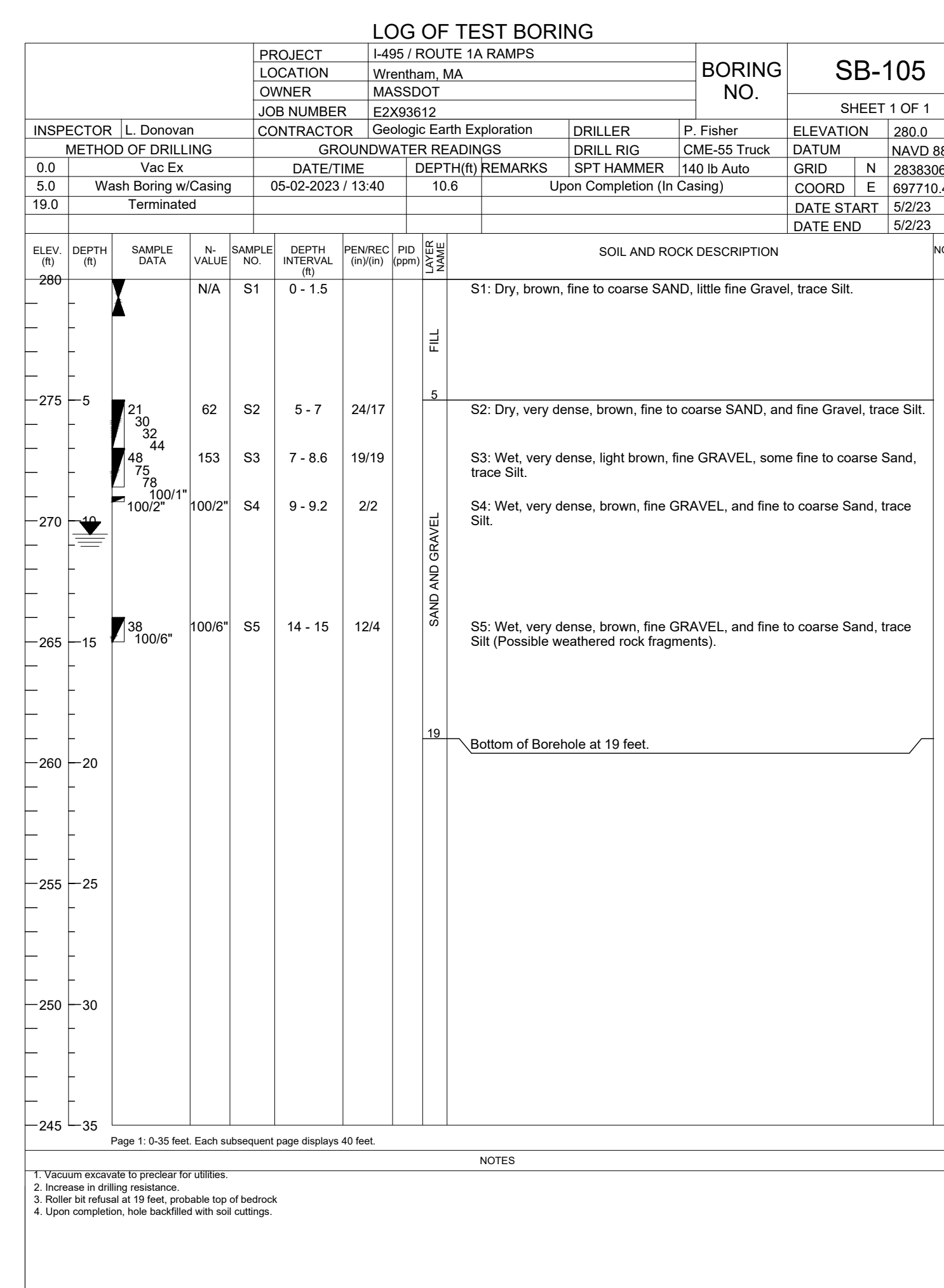
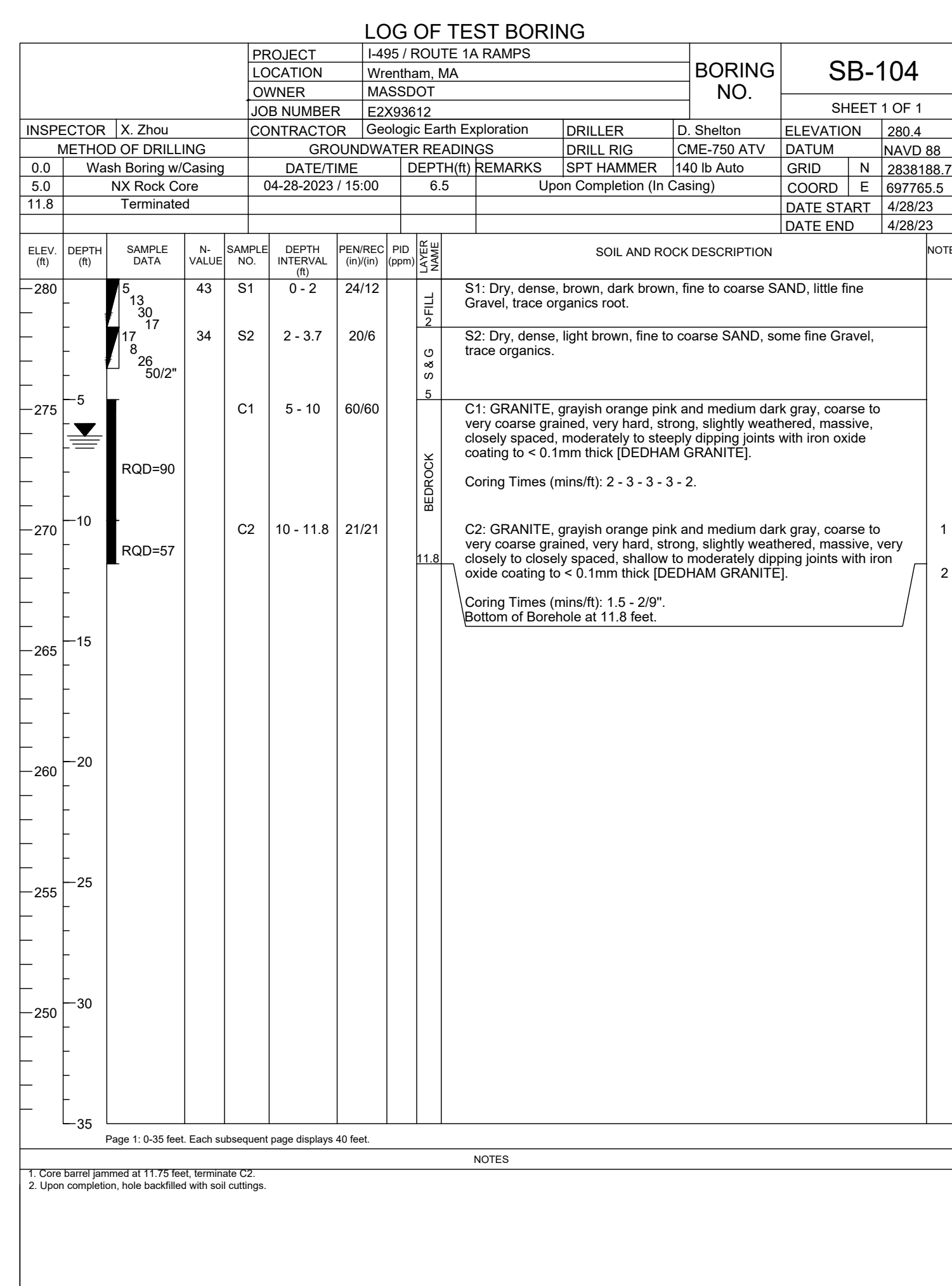
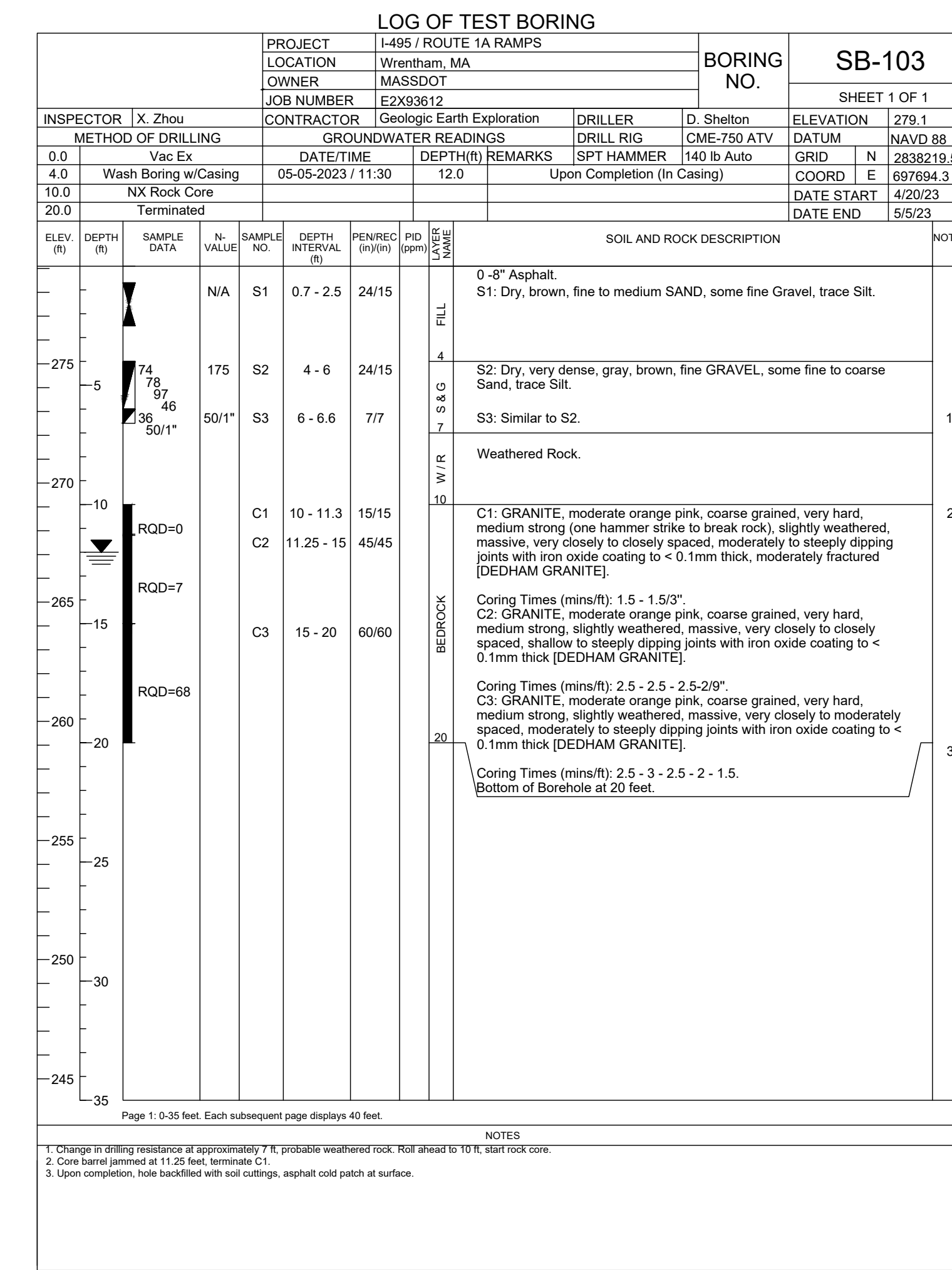
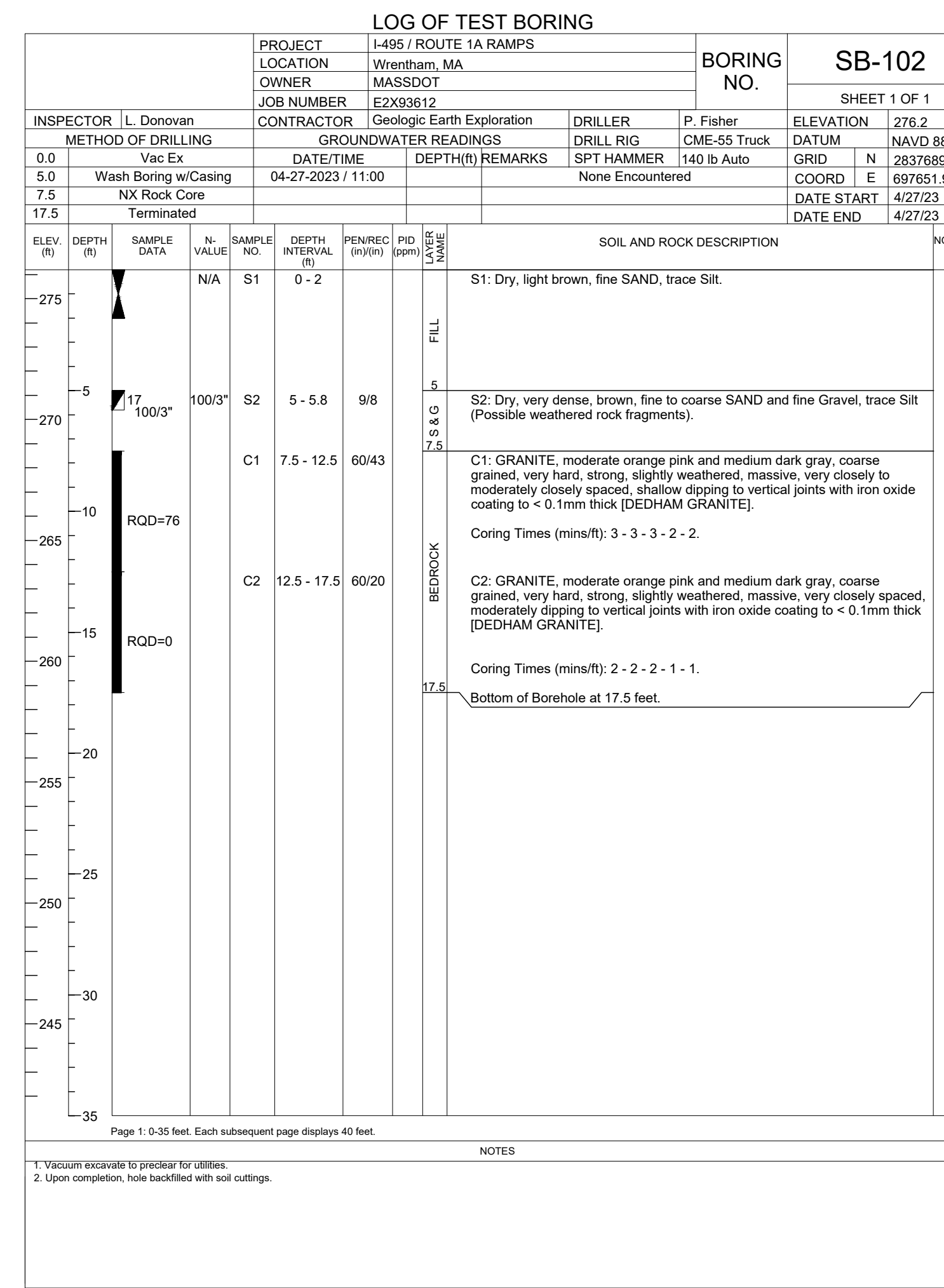
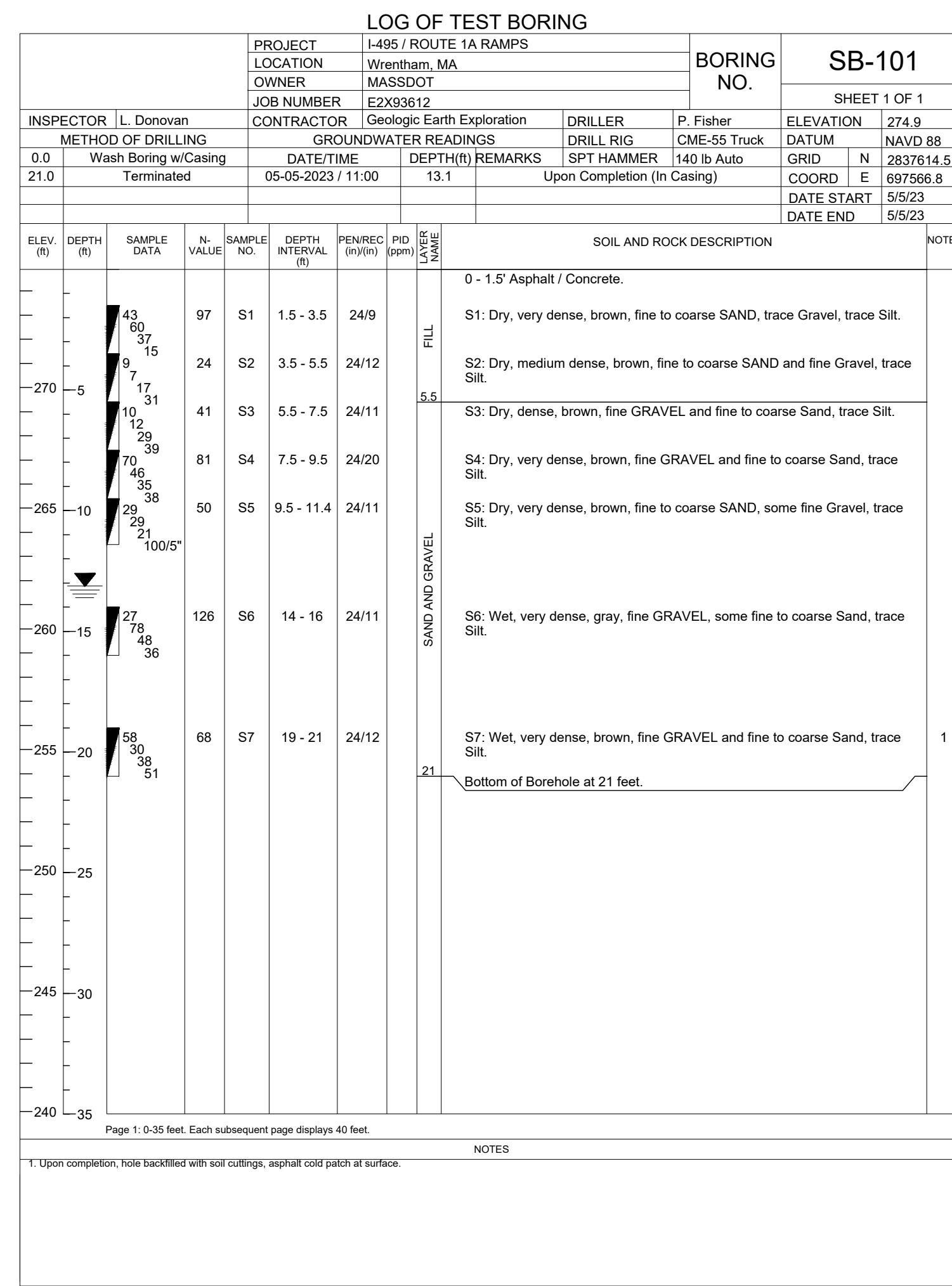


**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

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**BORING LOGS
SHEET 4 OF 9**

BORING NOTES:
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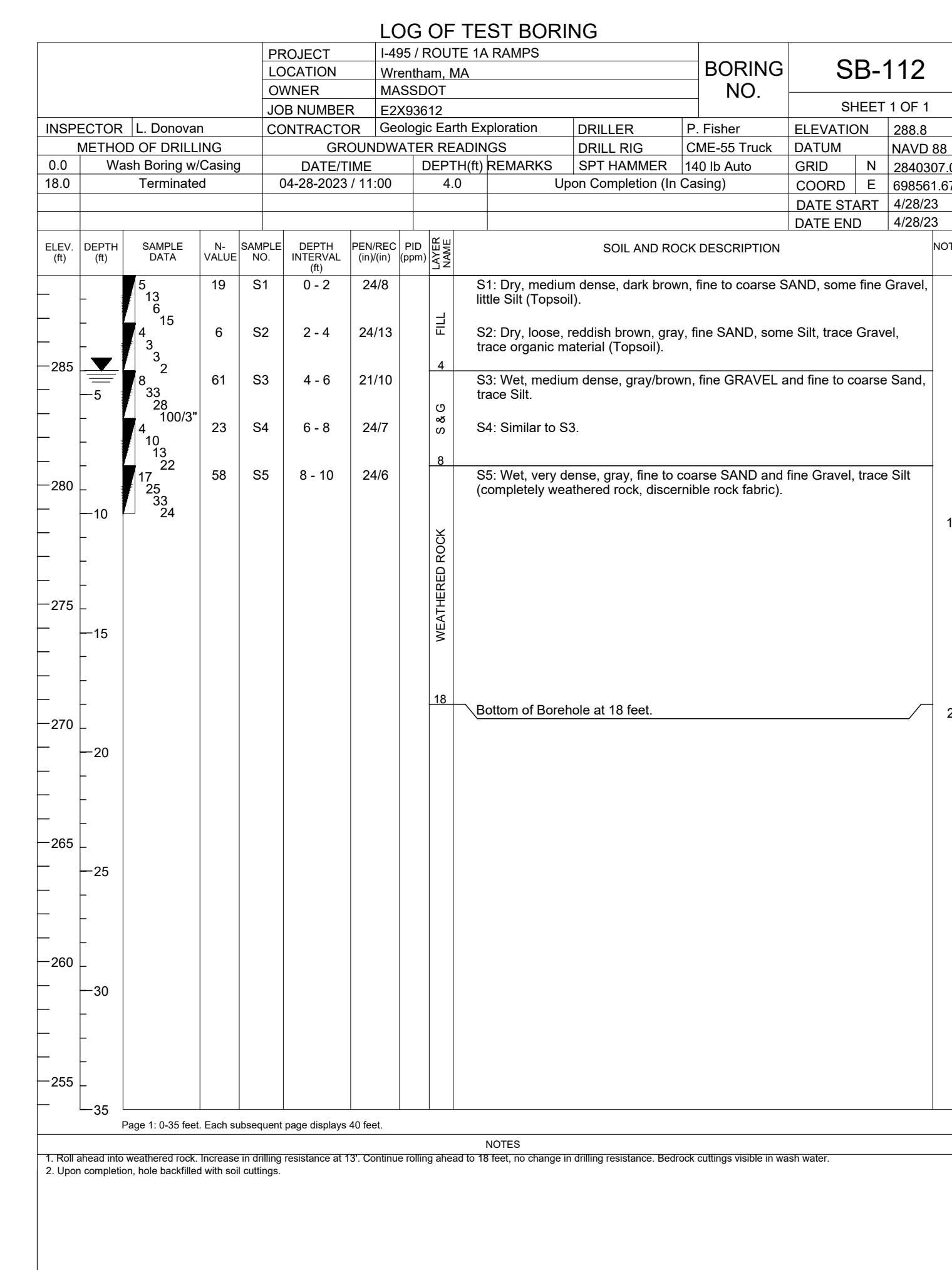
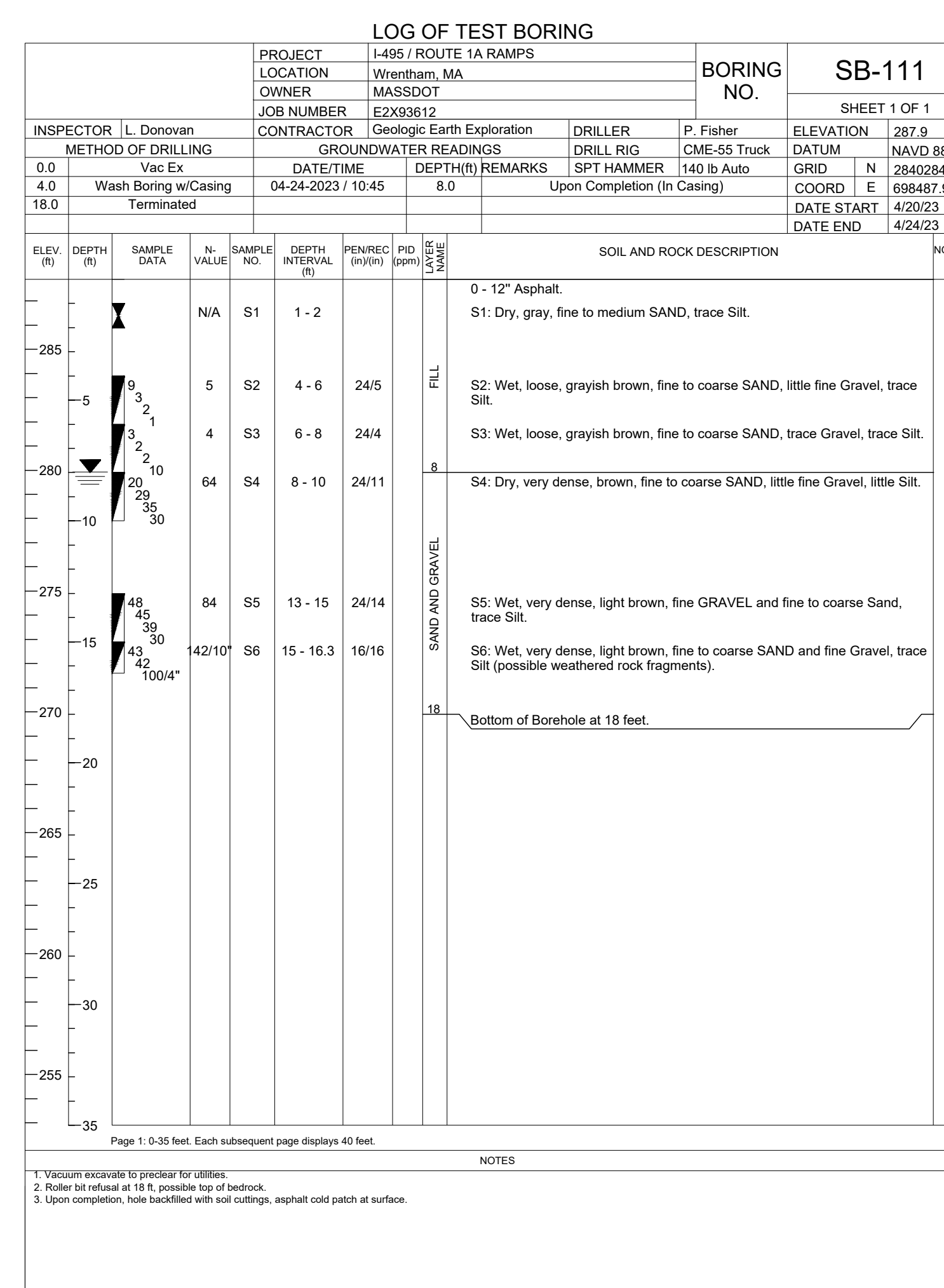
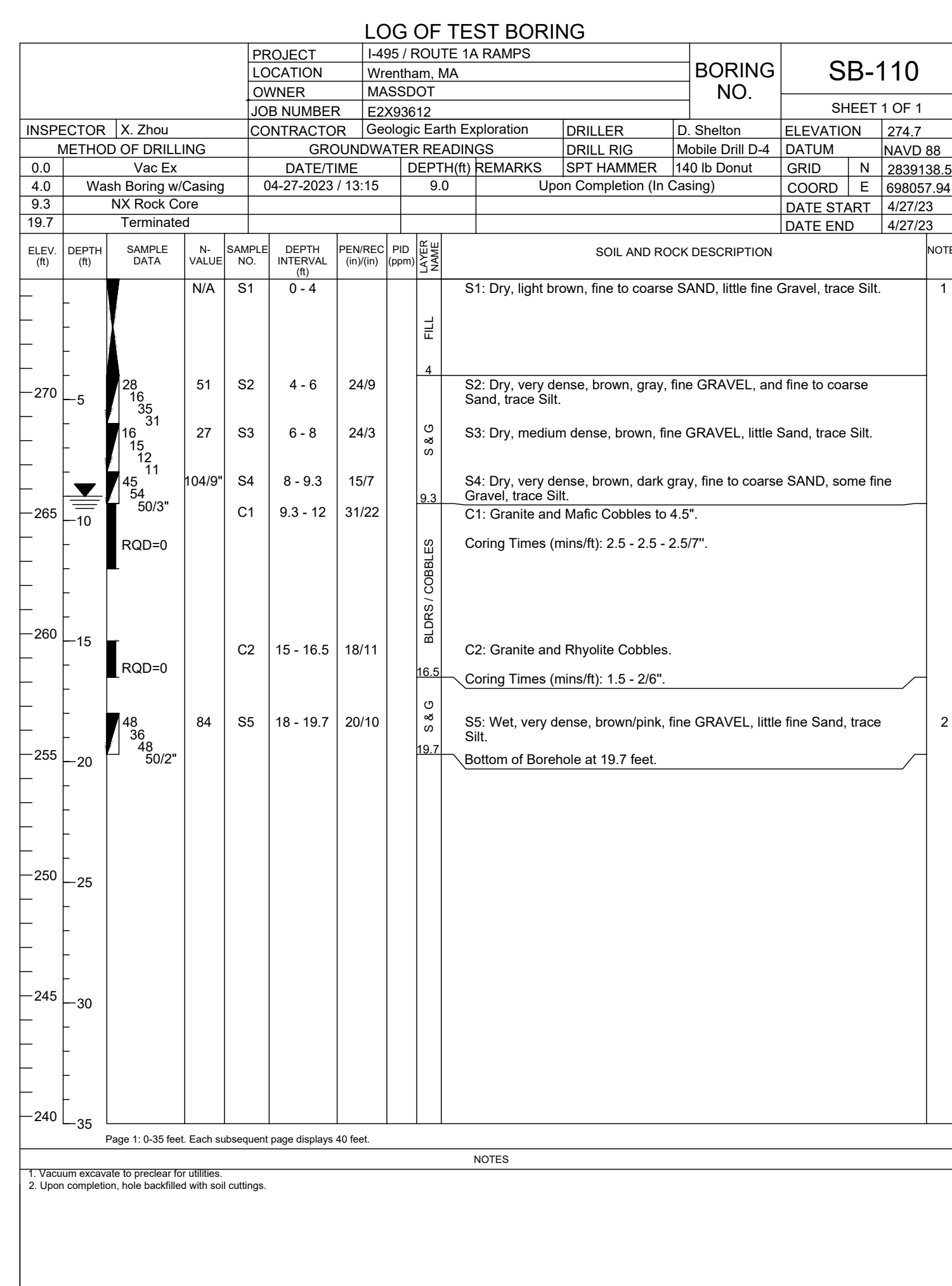
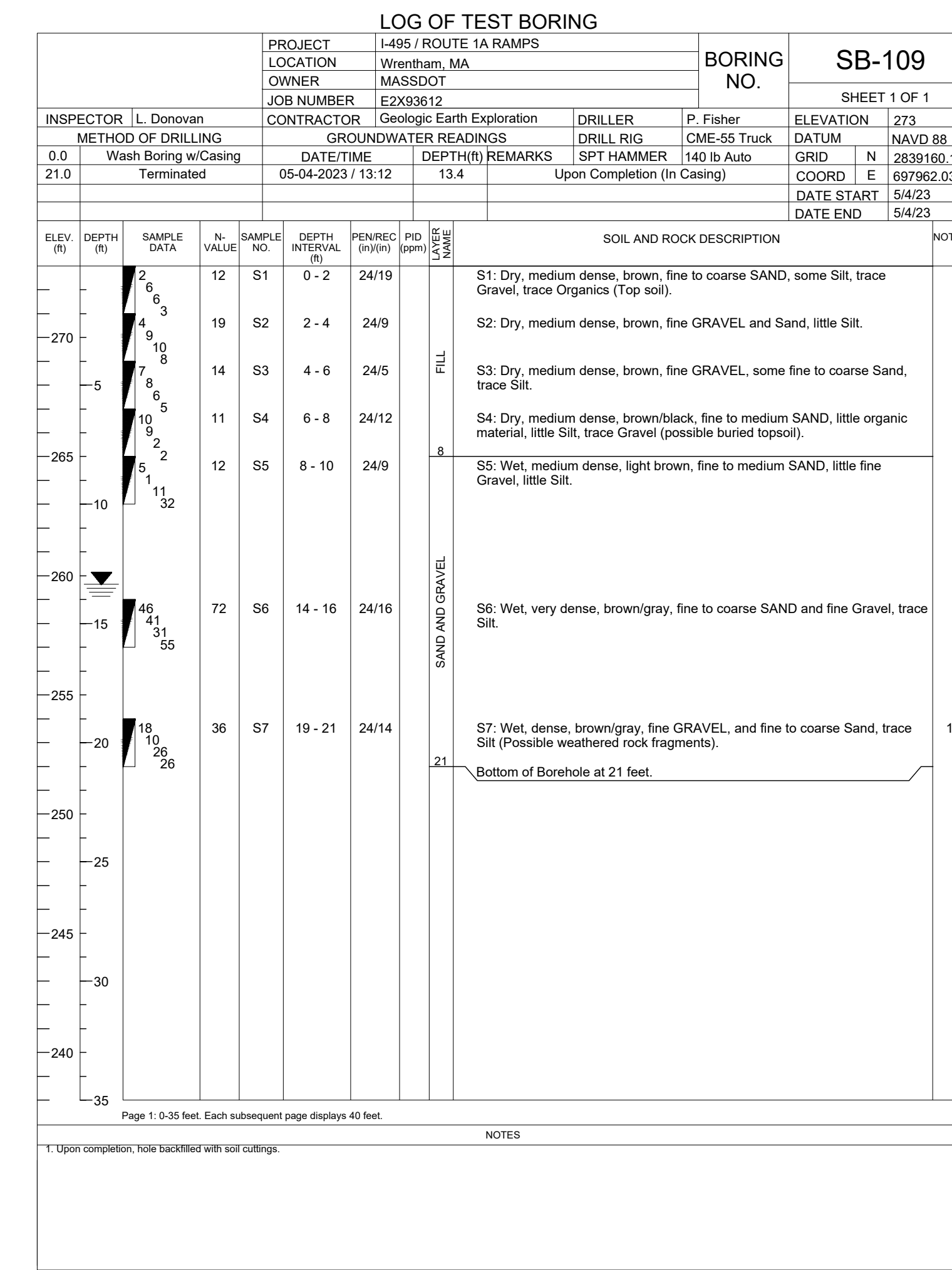
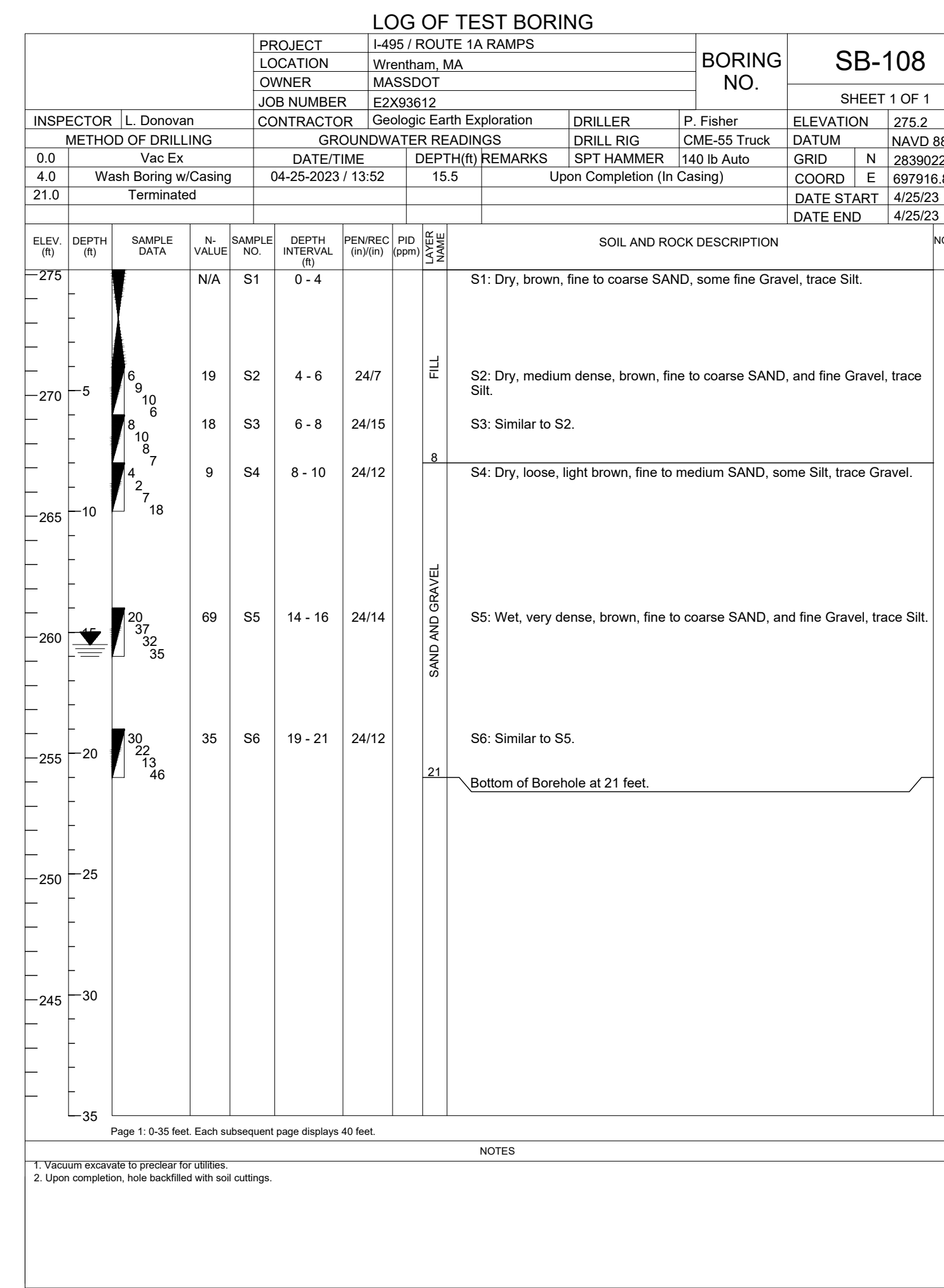
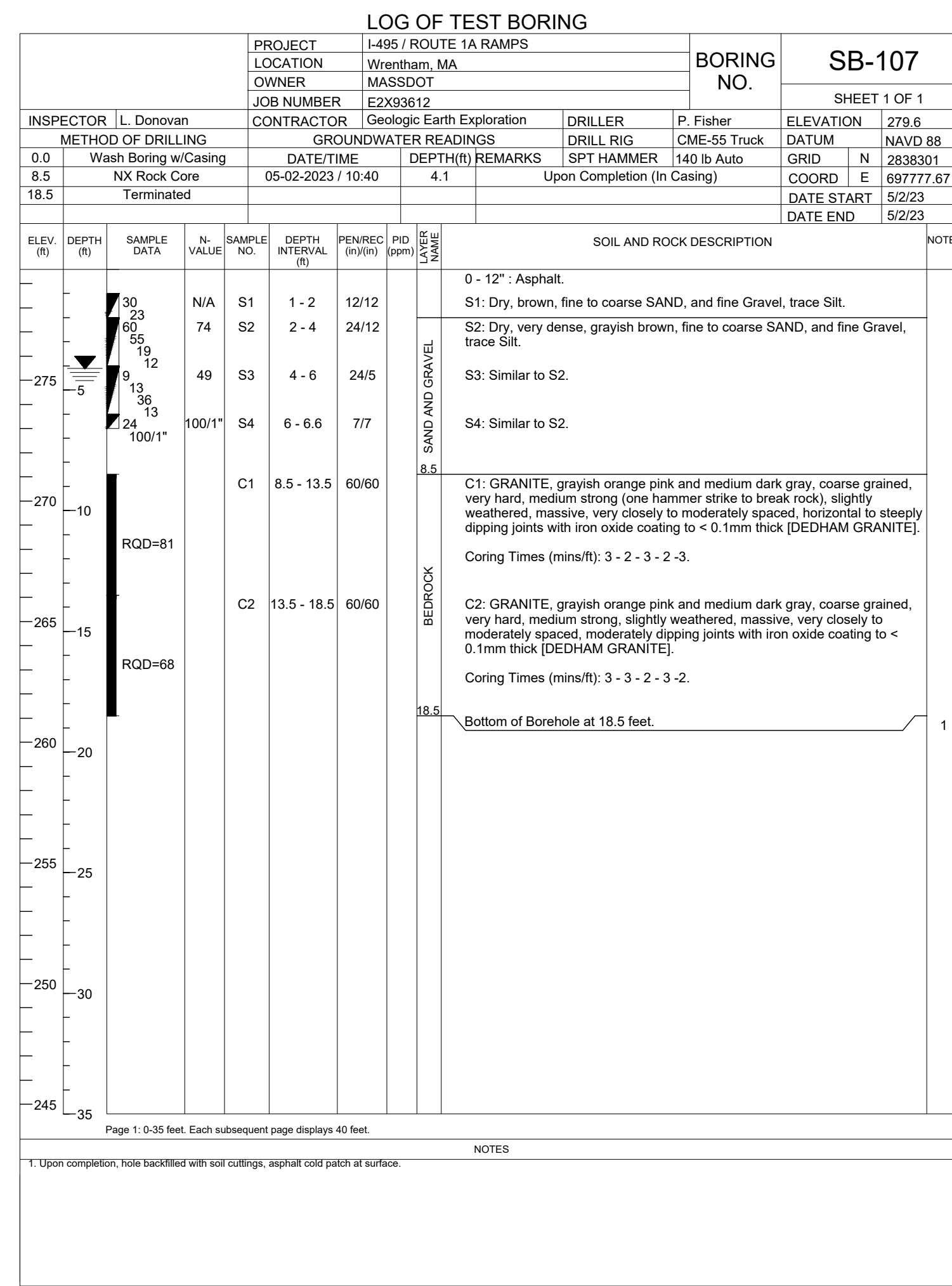
**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

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PROJECT FILE NO. 603739

**BORING LOGS
SHEET 5 OF 9**

BORING NOTES:
REFER TO SHEET NO. 5 FOR BORING NOTES.



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

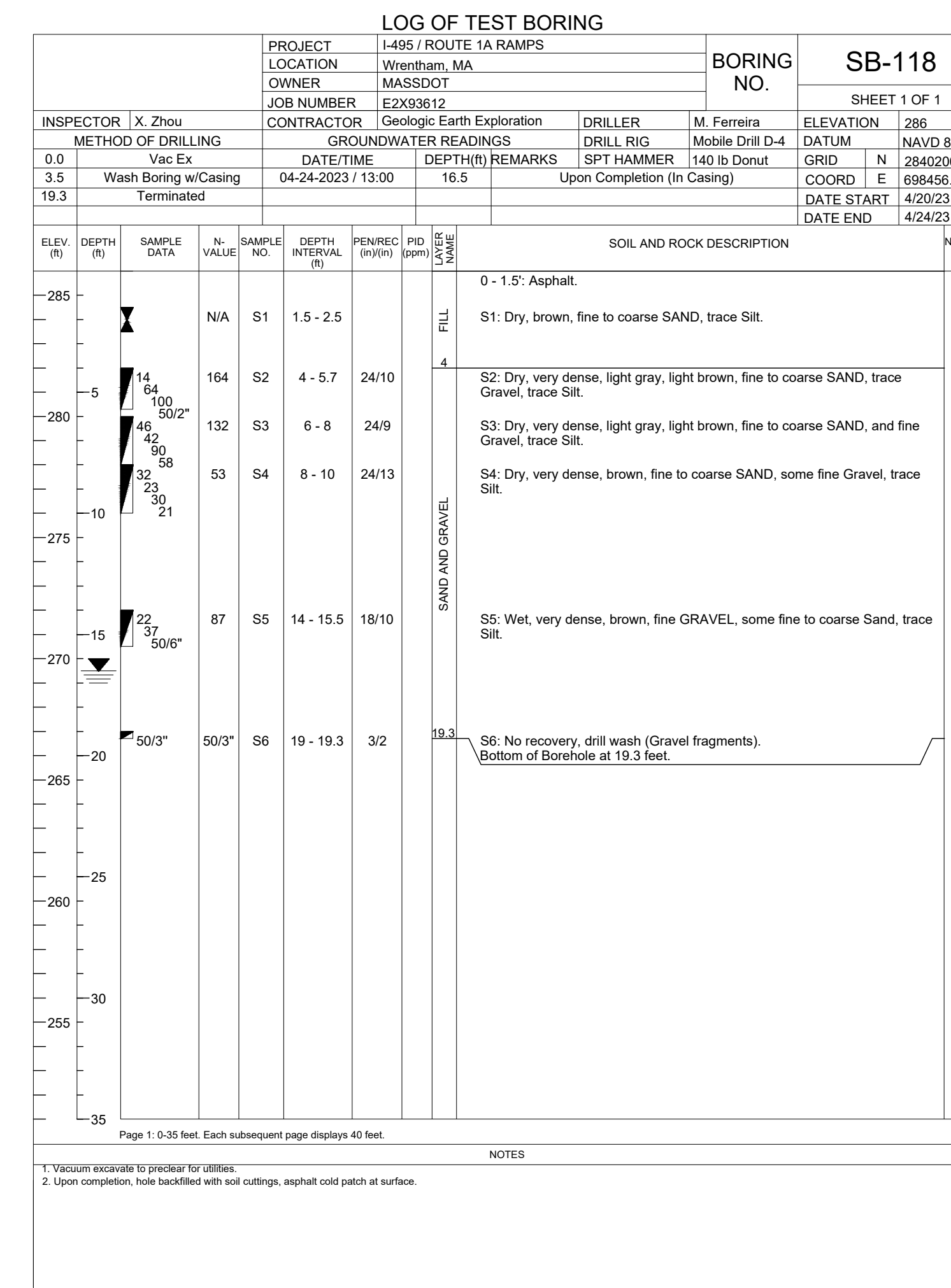
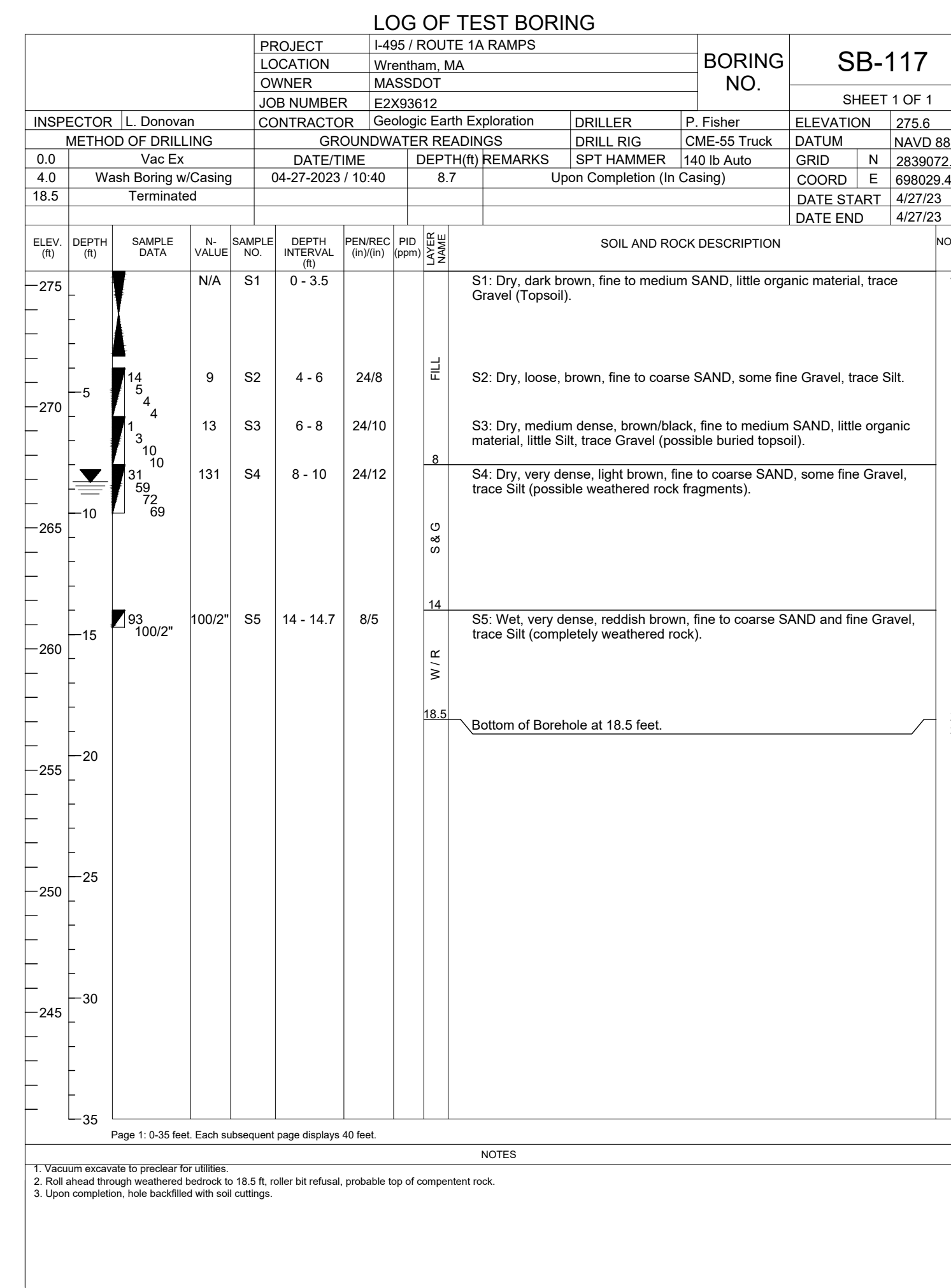
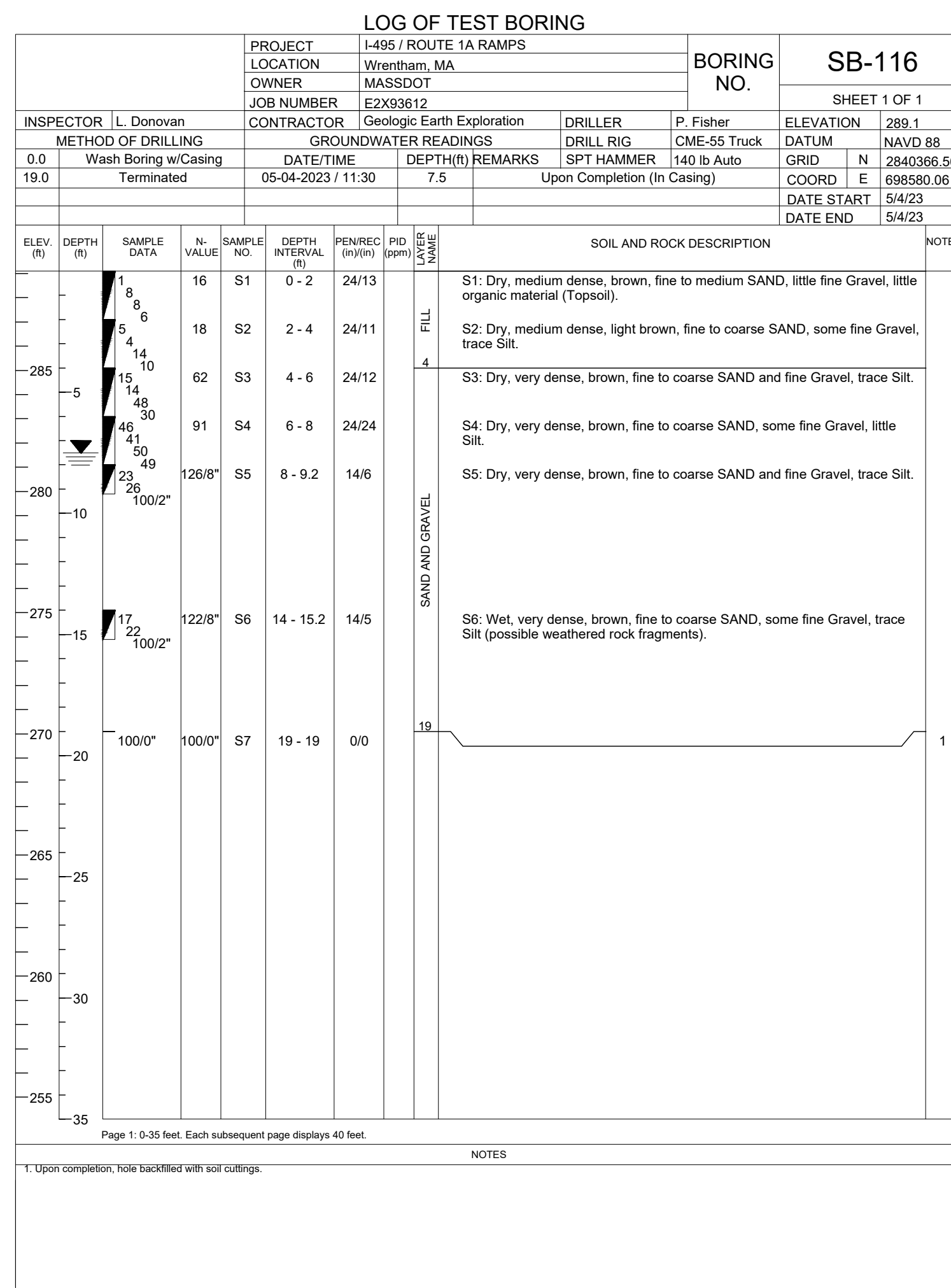
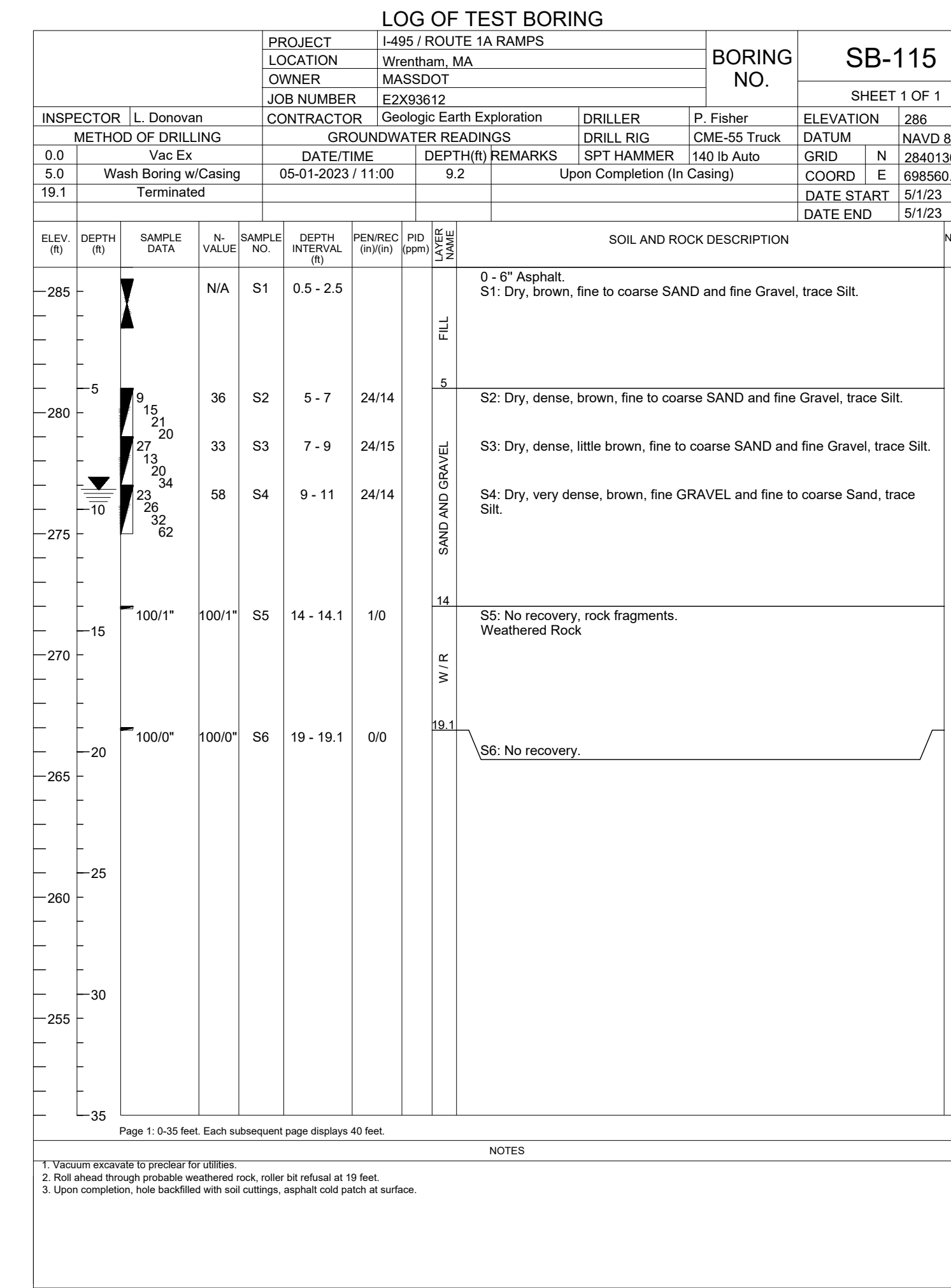
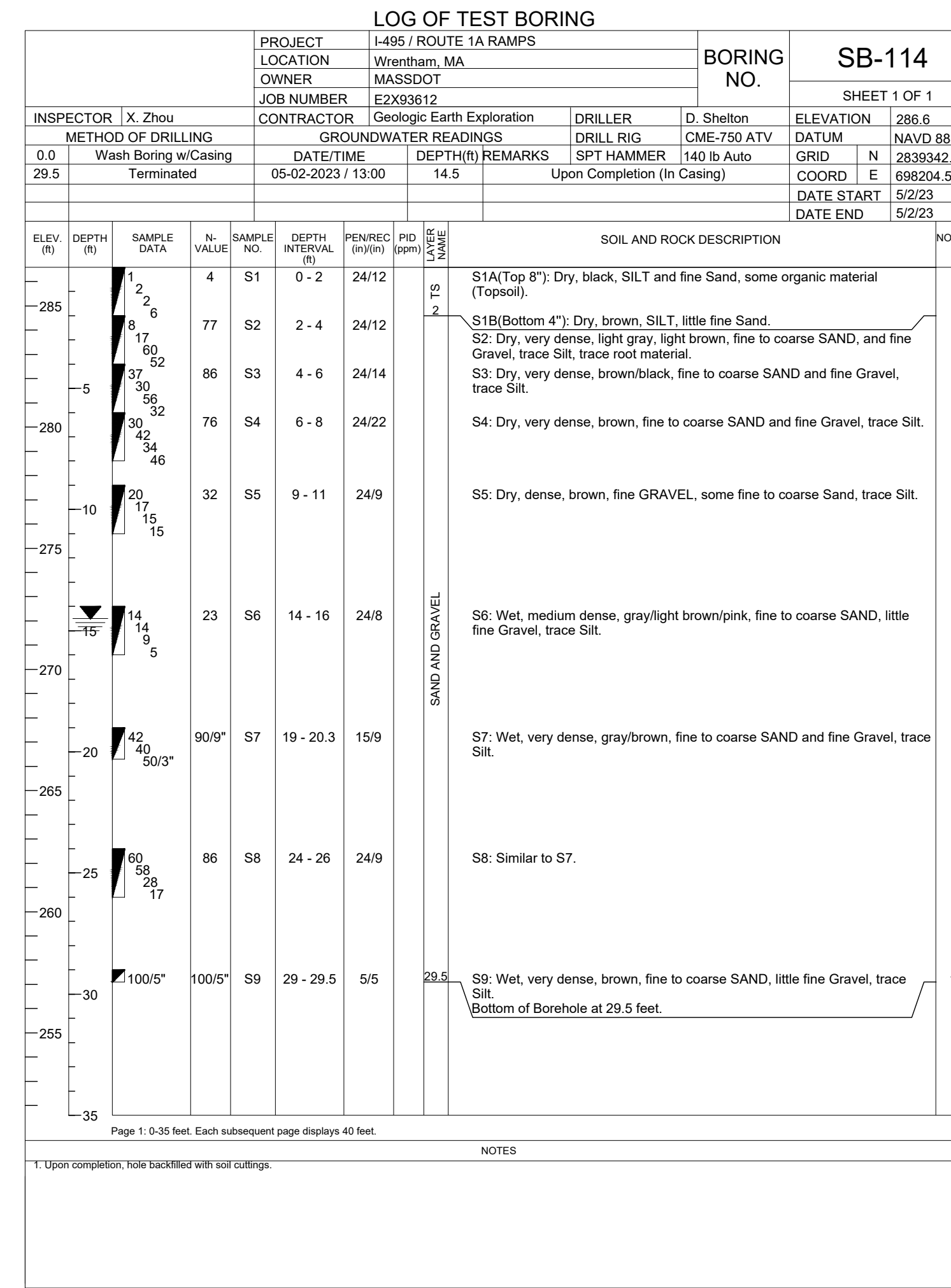
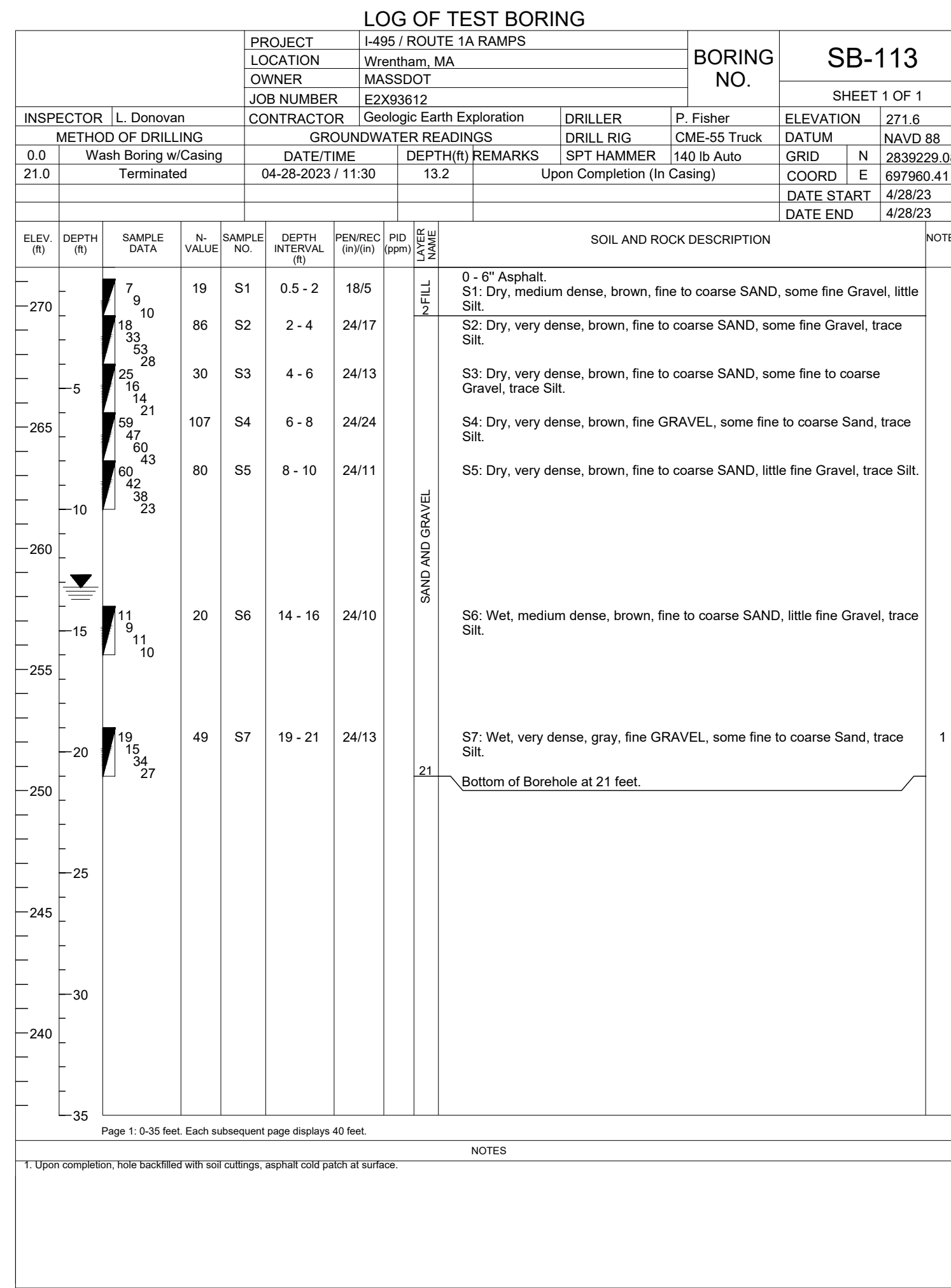
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	10	258
PROJECT FILE NO.		603739	

BORING LOGS
SHEET 6 OF 9

BORING NOTES:

REFER TO SHEET NO. 5 FOR BORING NOTES.

Plotted on 25-Jul-2024 5:22 PM
603739_HD06-13(BORING LOGS) REV/DWG



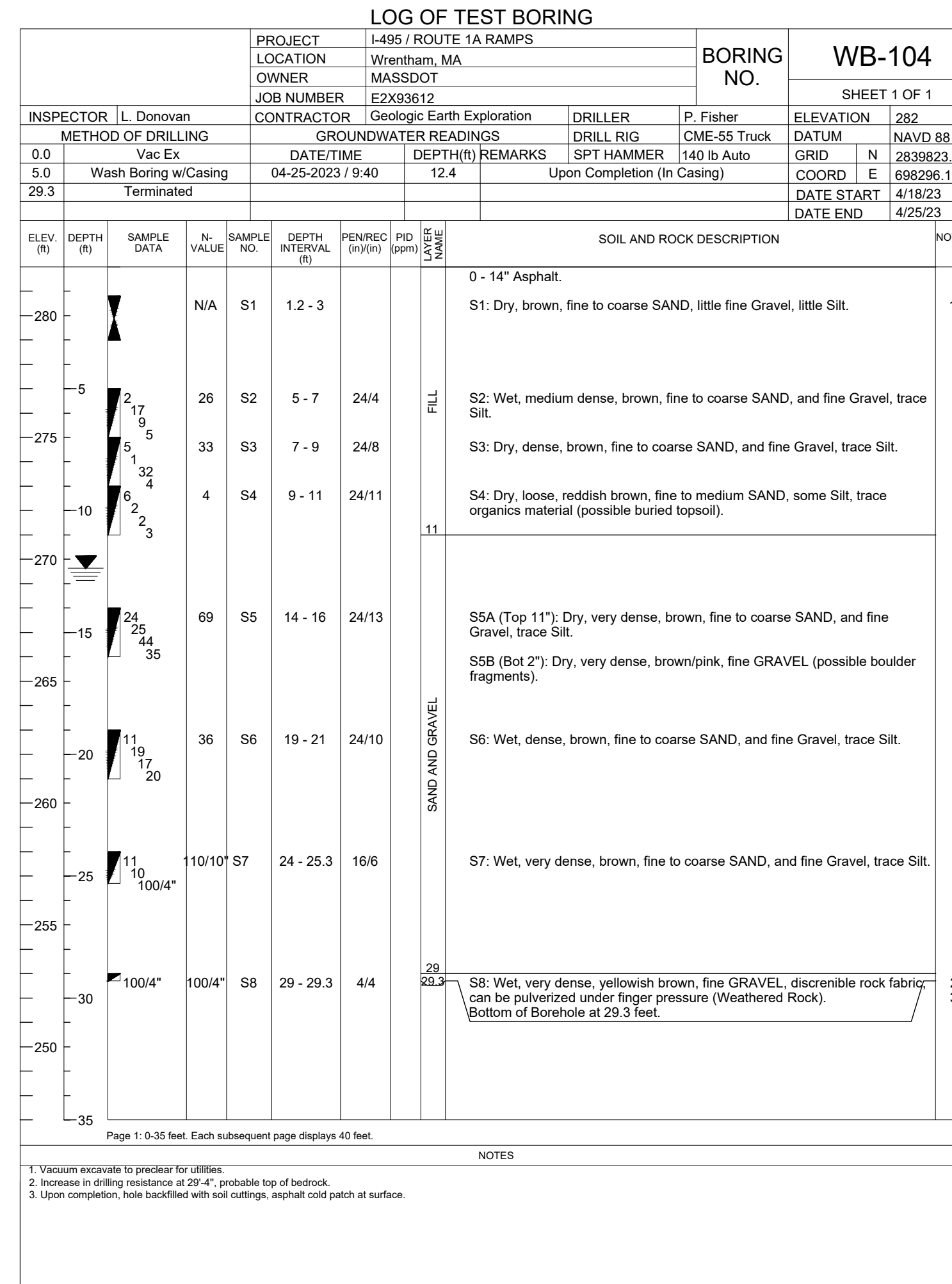
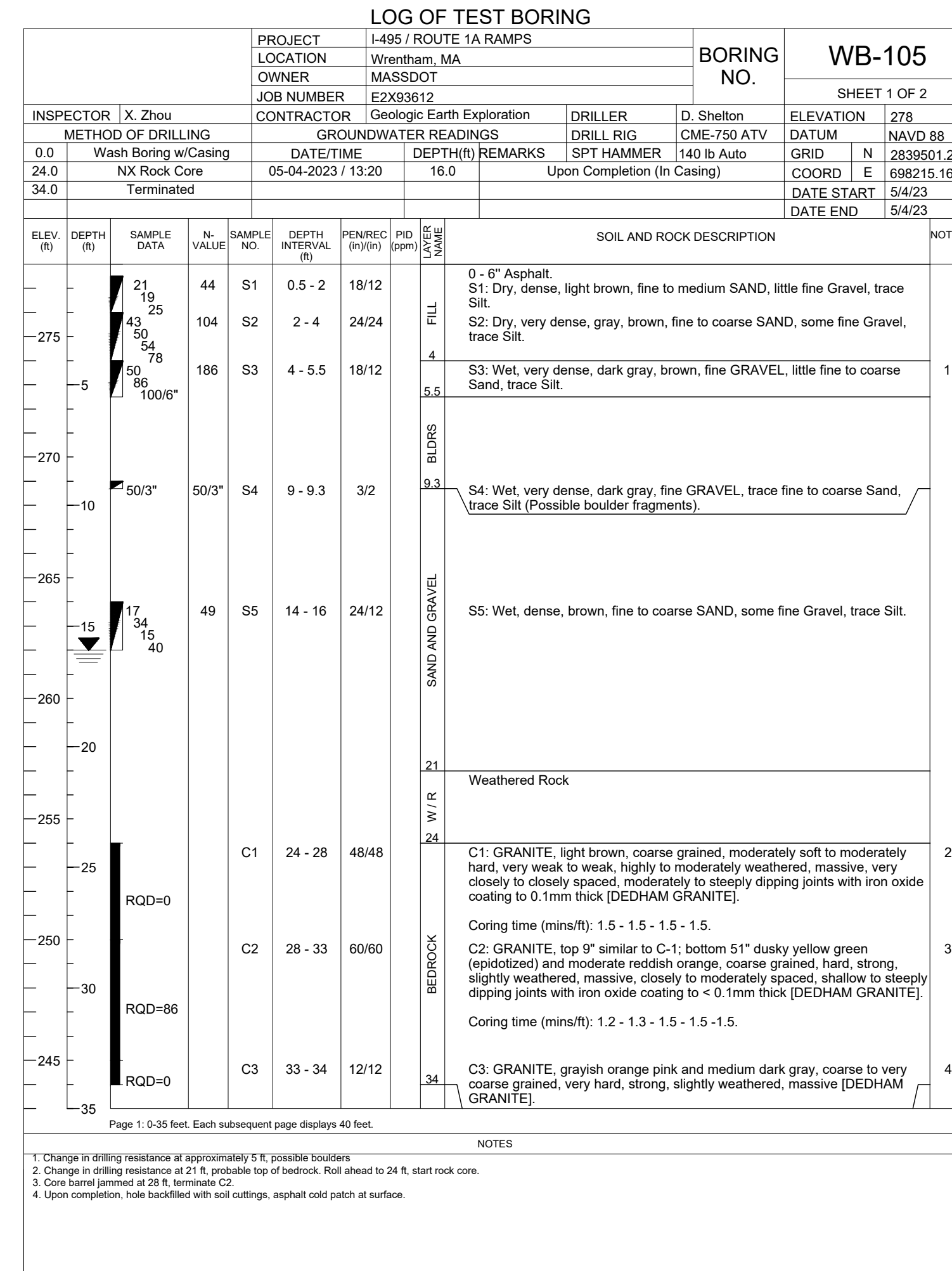
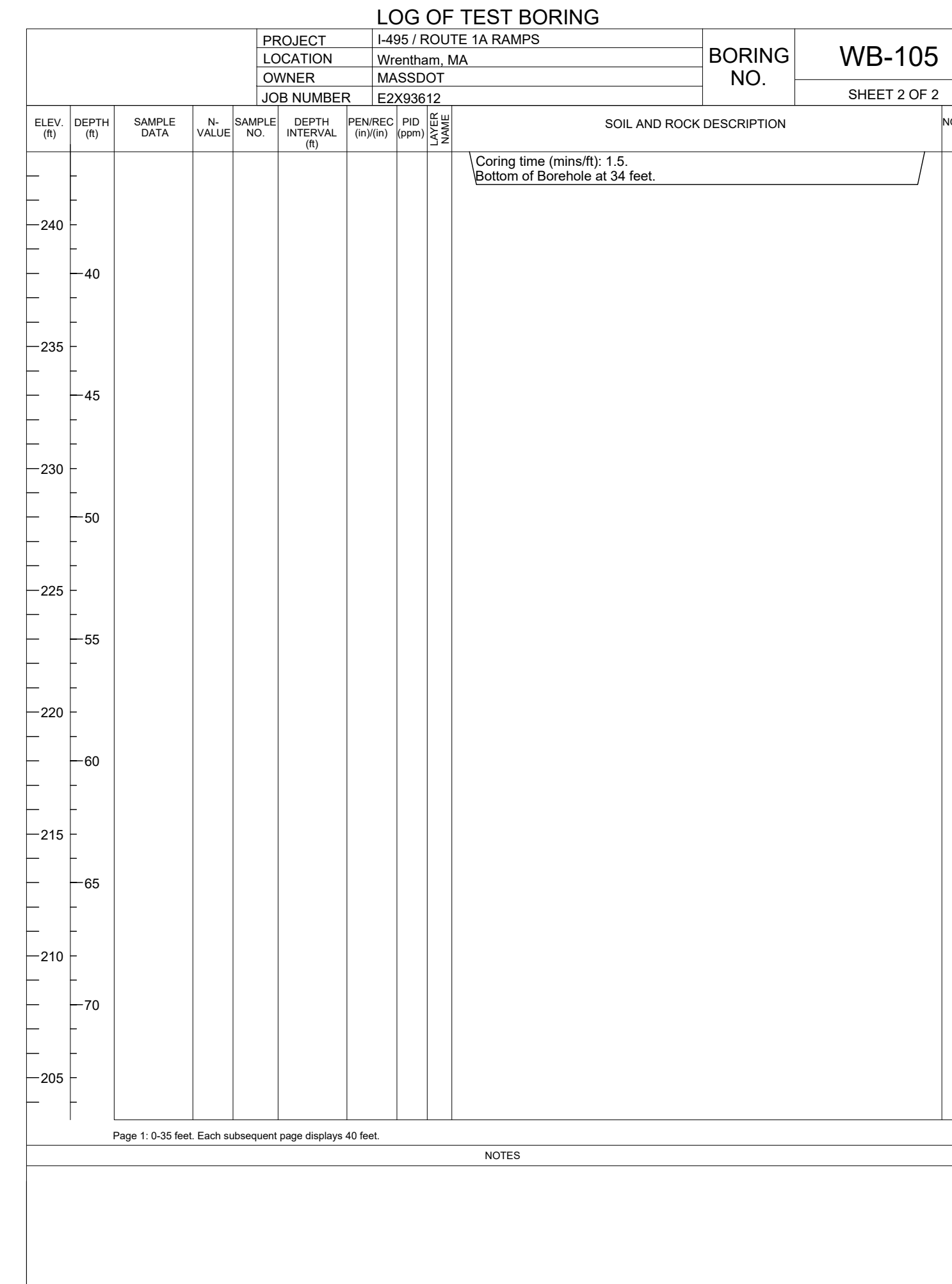
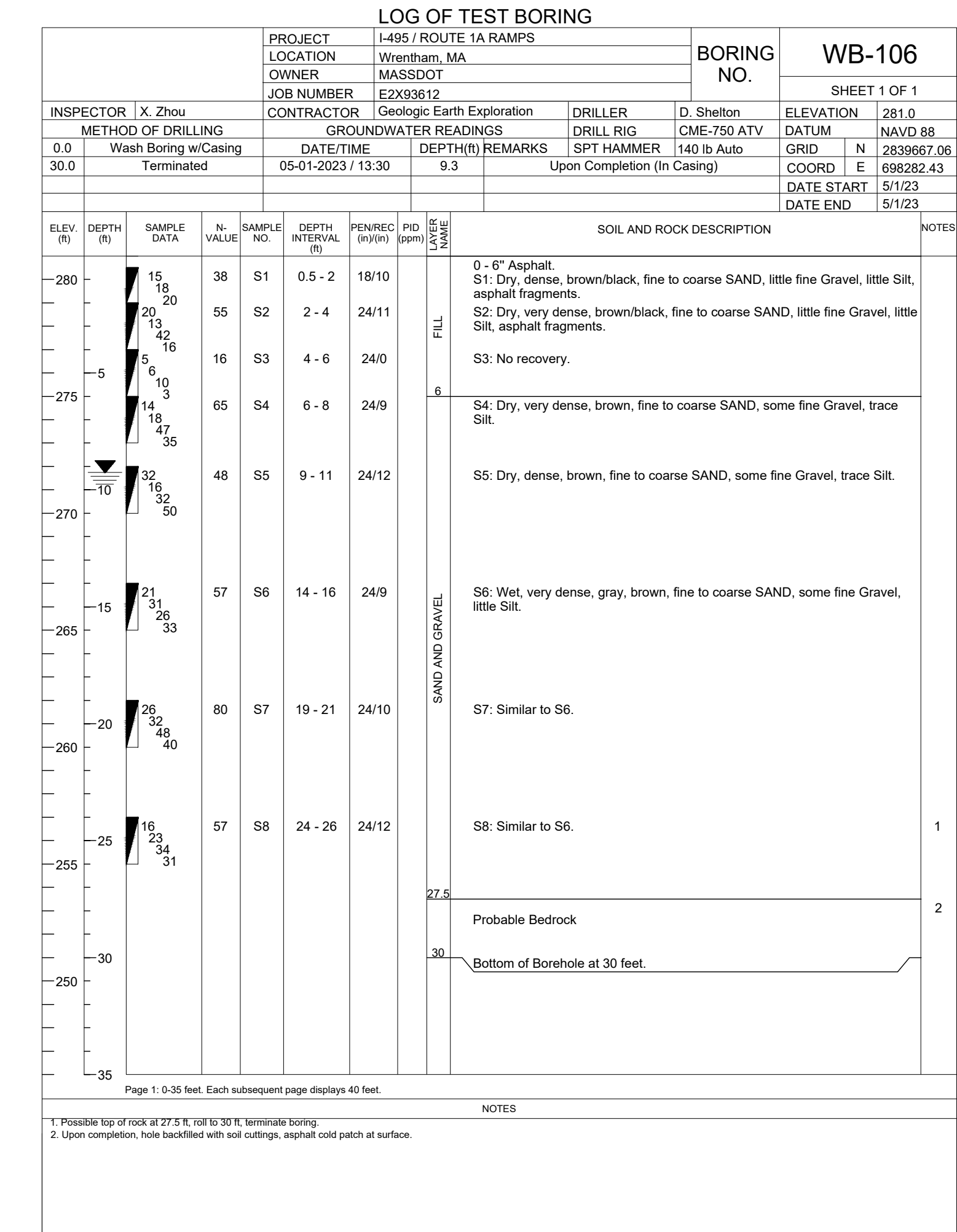
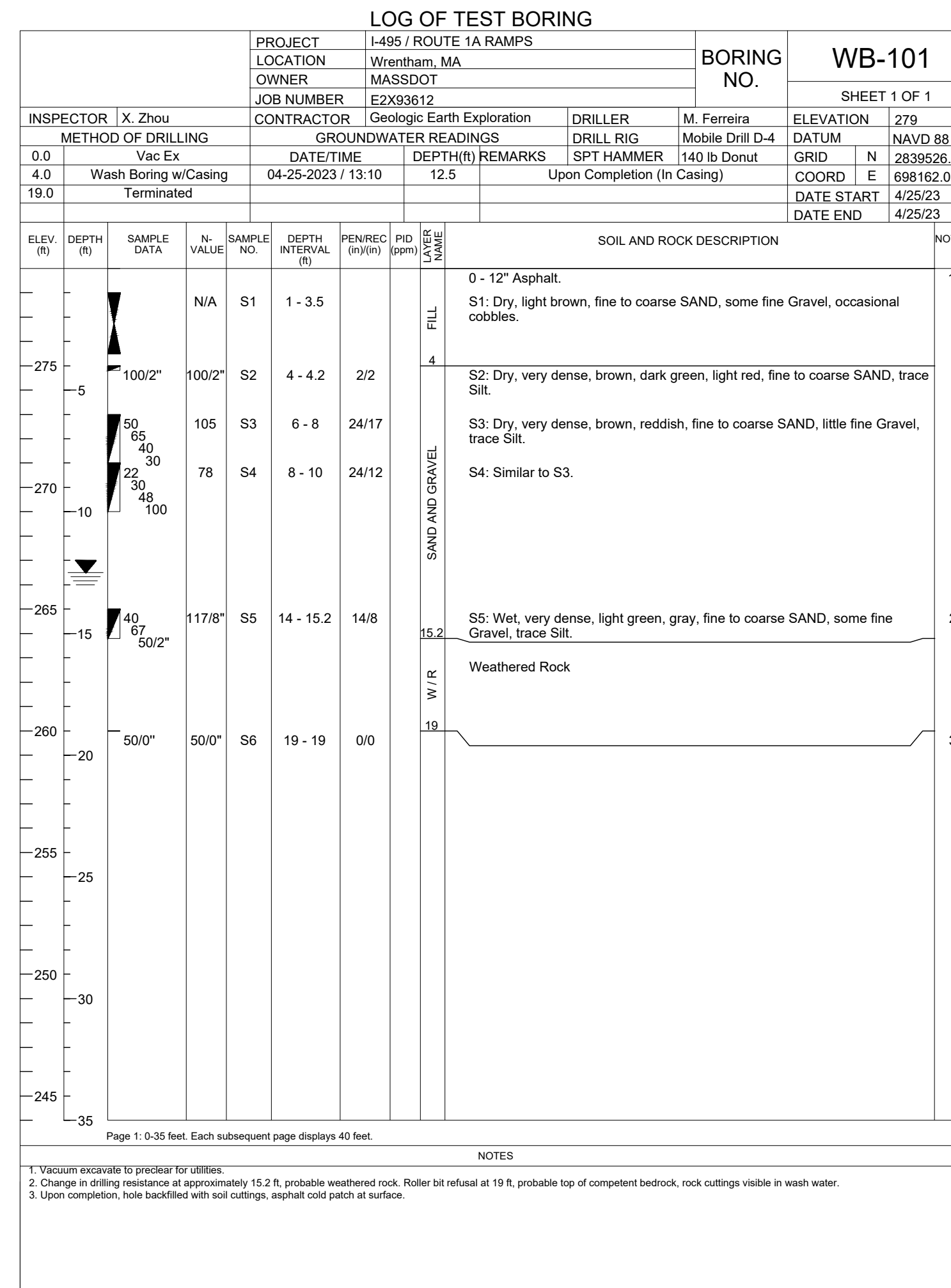
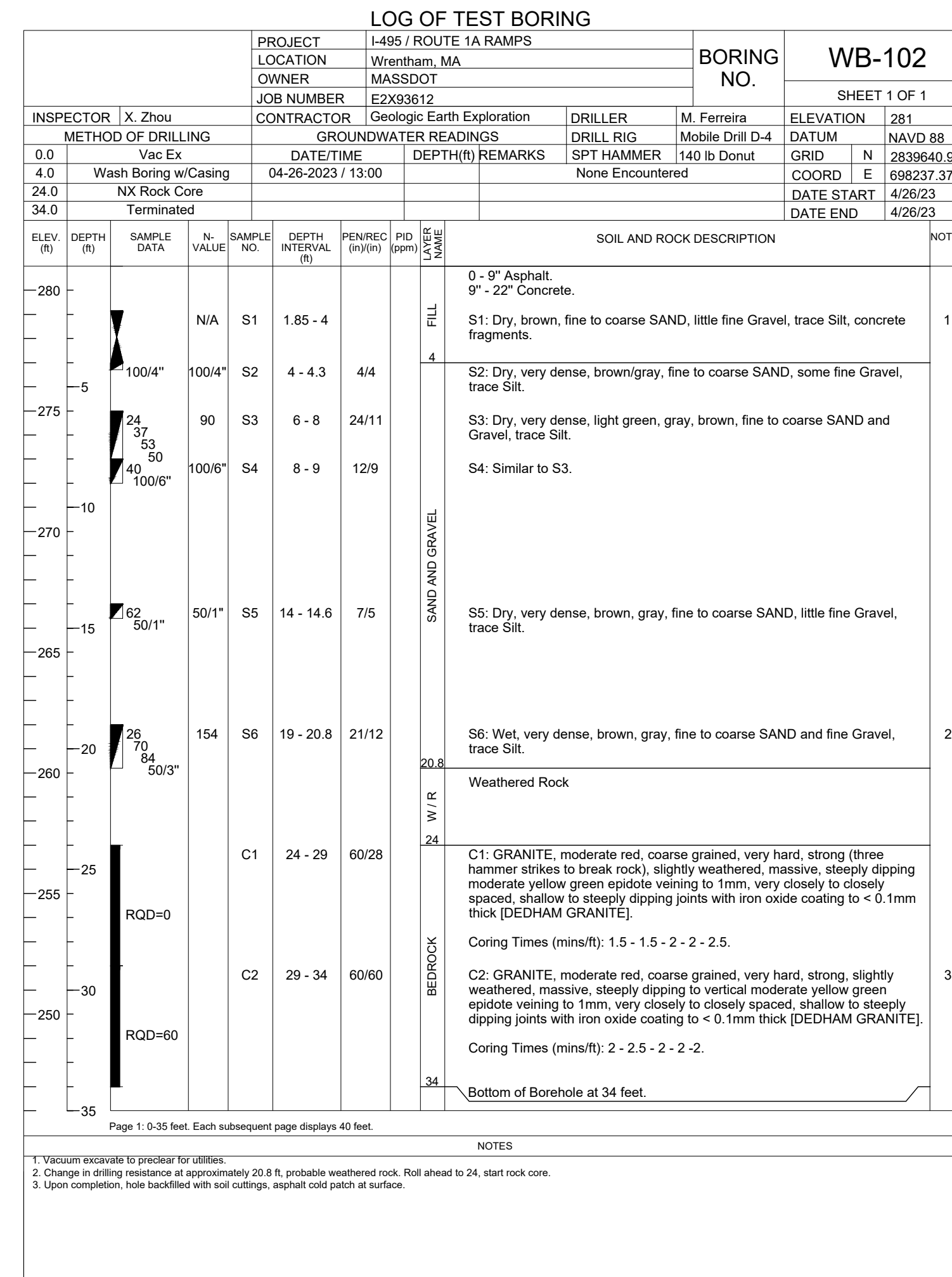
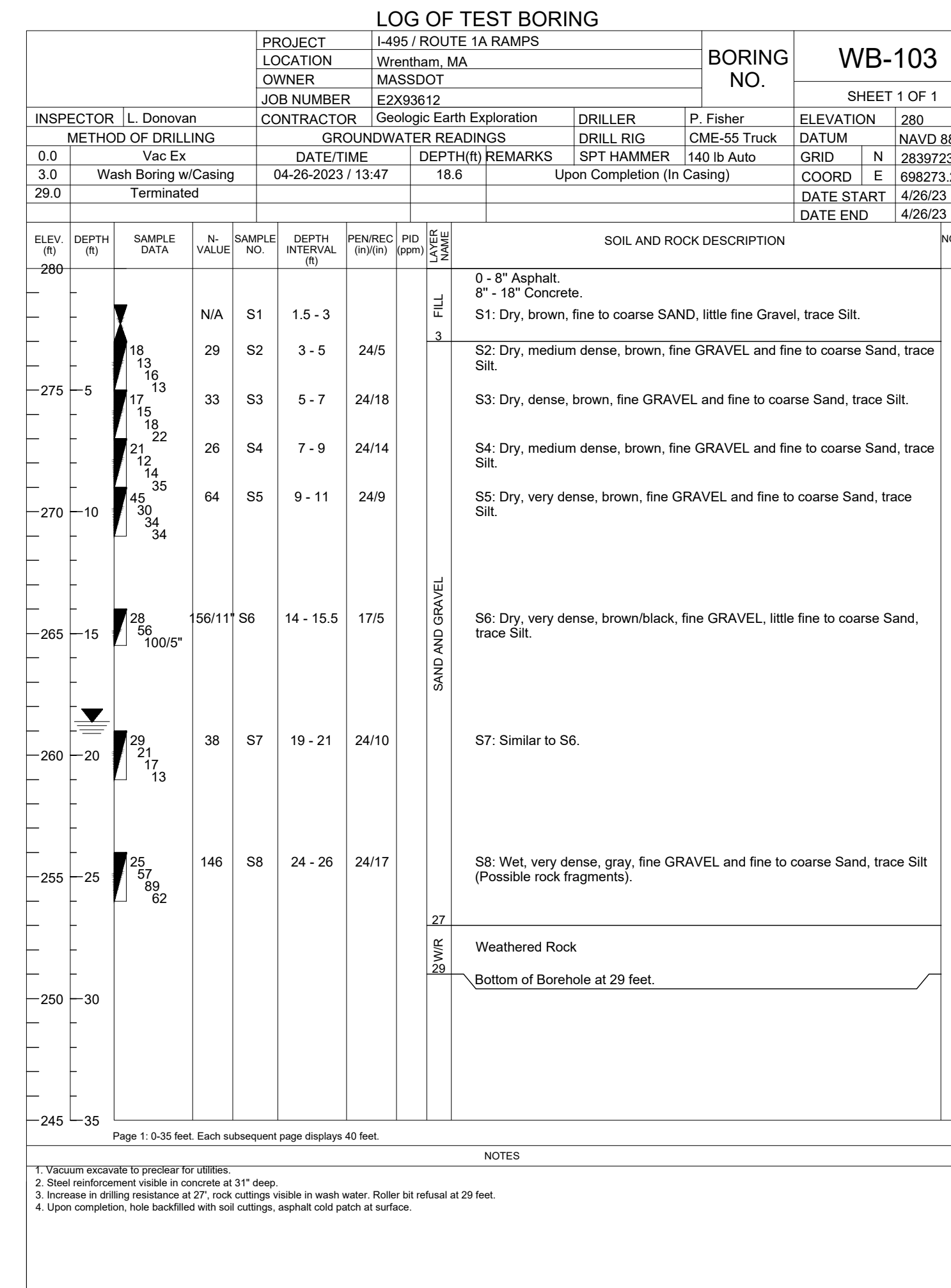
**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	11	258
PROJECT FILE NO.		603739	

**BORING LOGS
SHEET 7 OF 9**

BORING NOTES:

REFER TO SHEET NO. 5 FOR BORING NOTES.

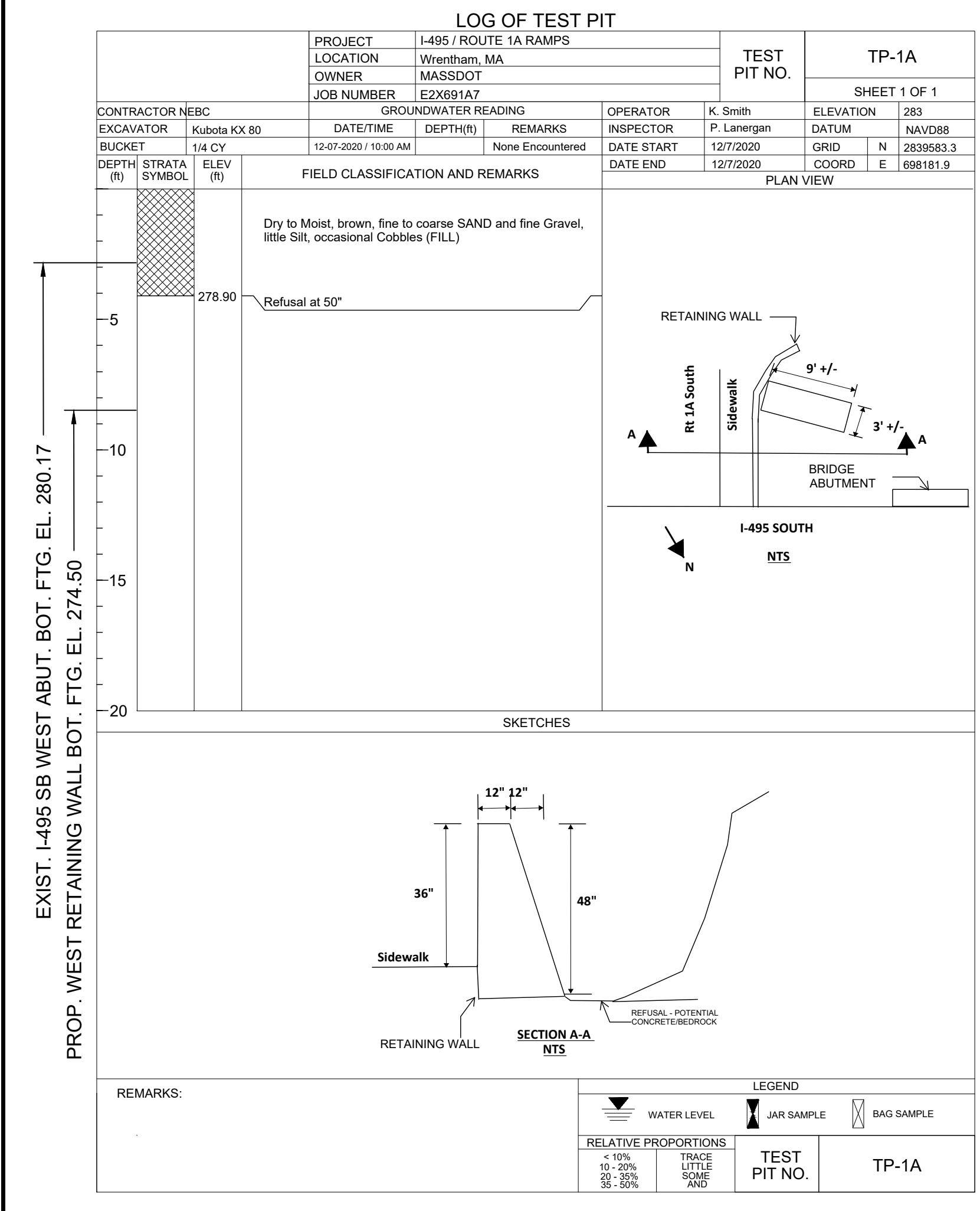
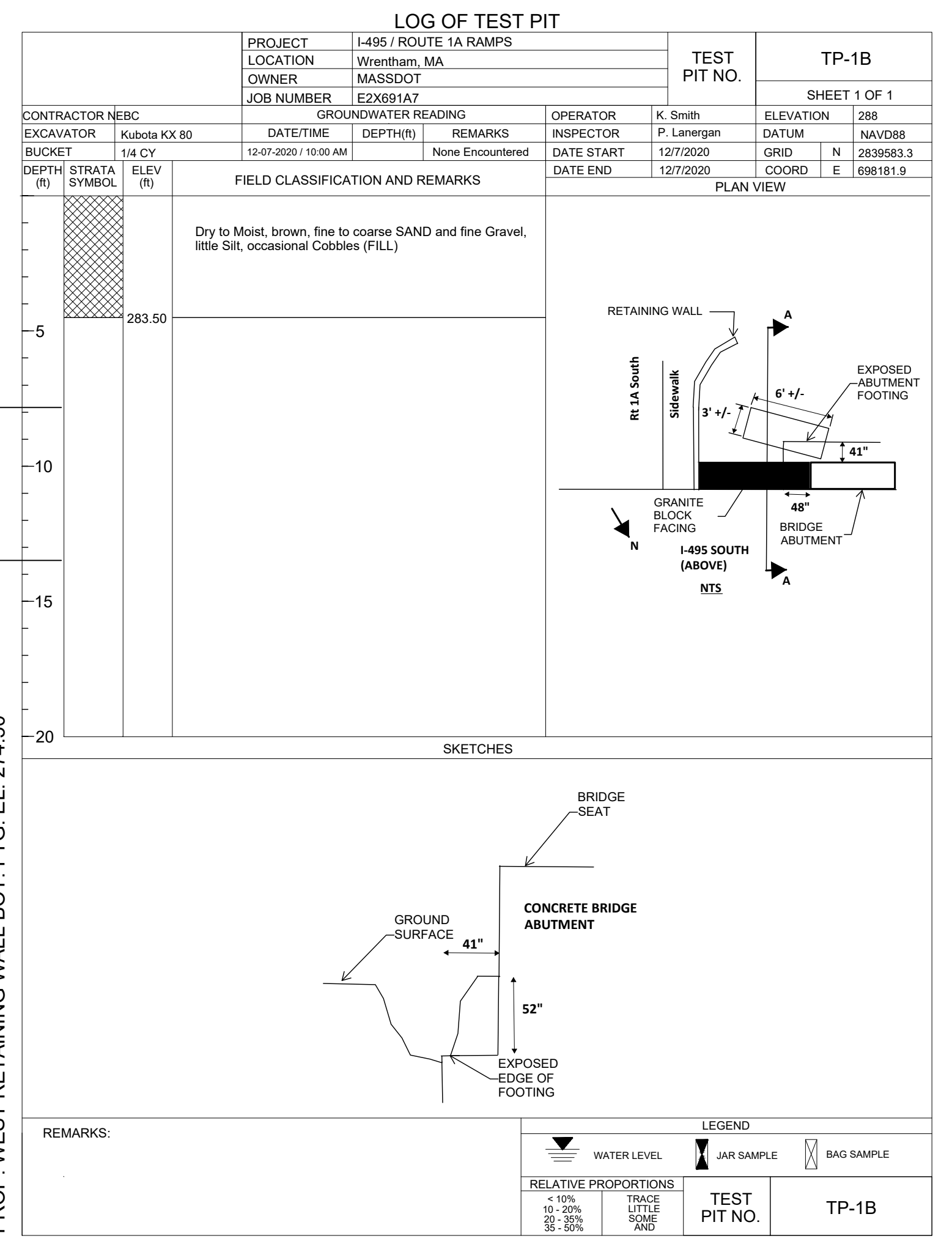
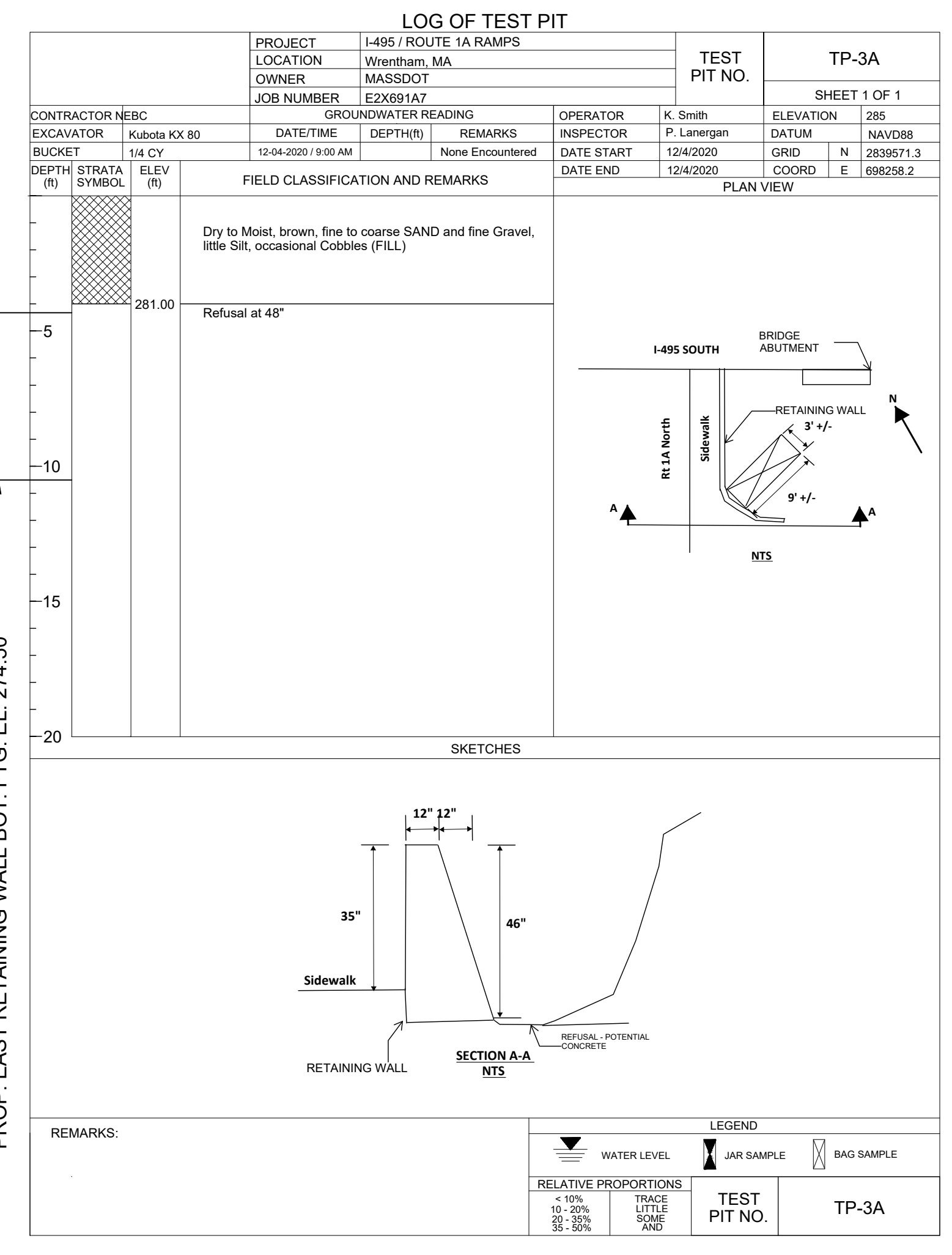
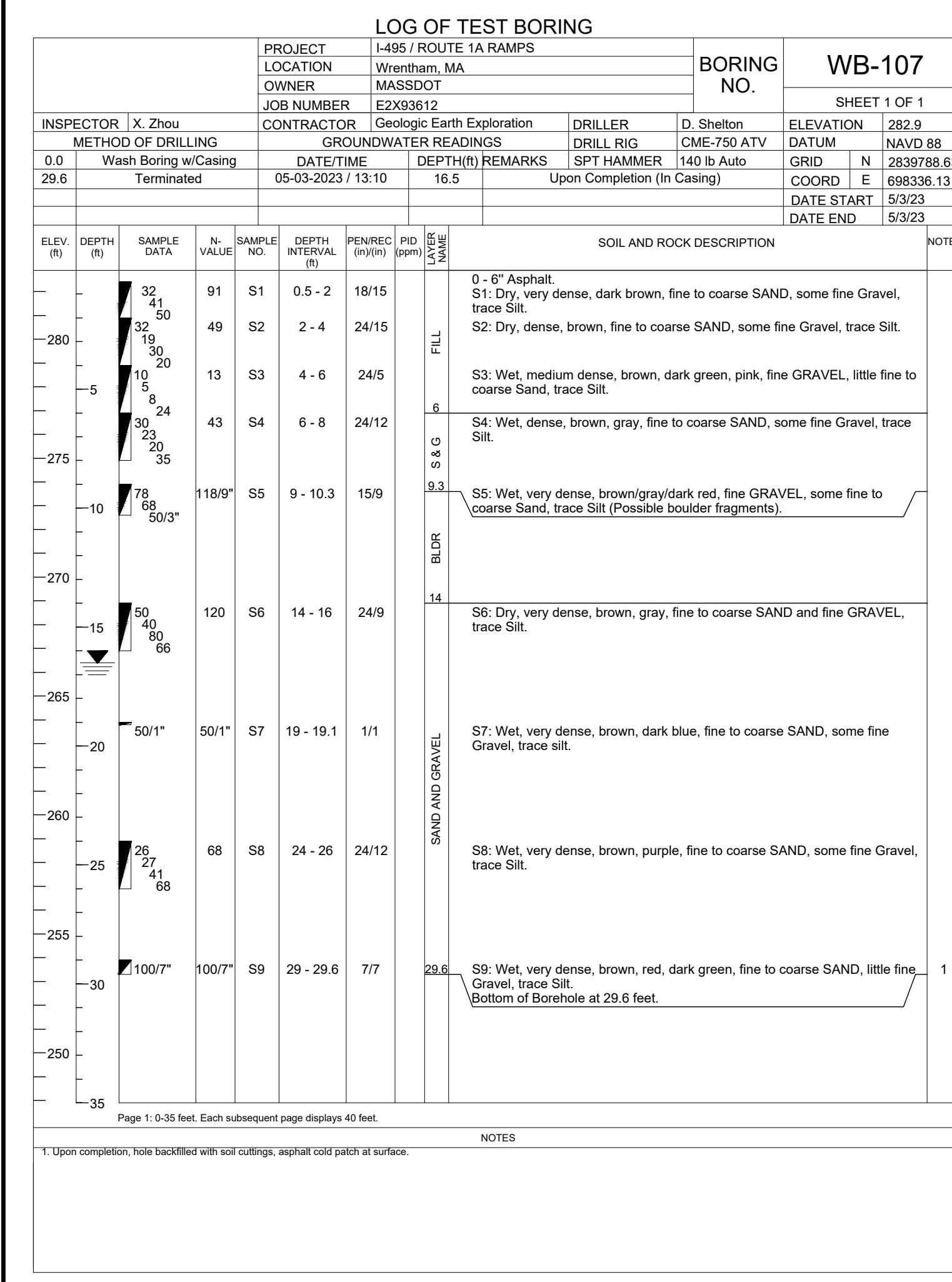
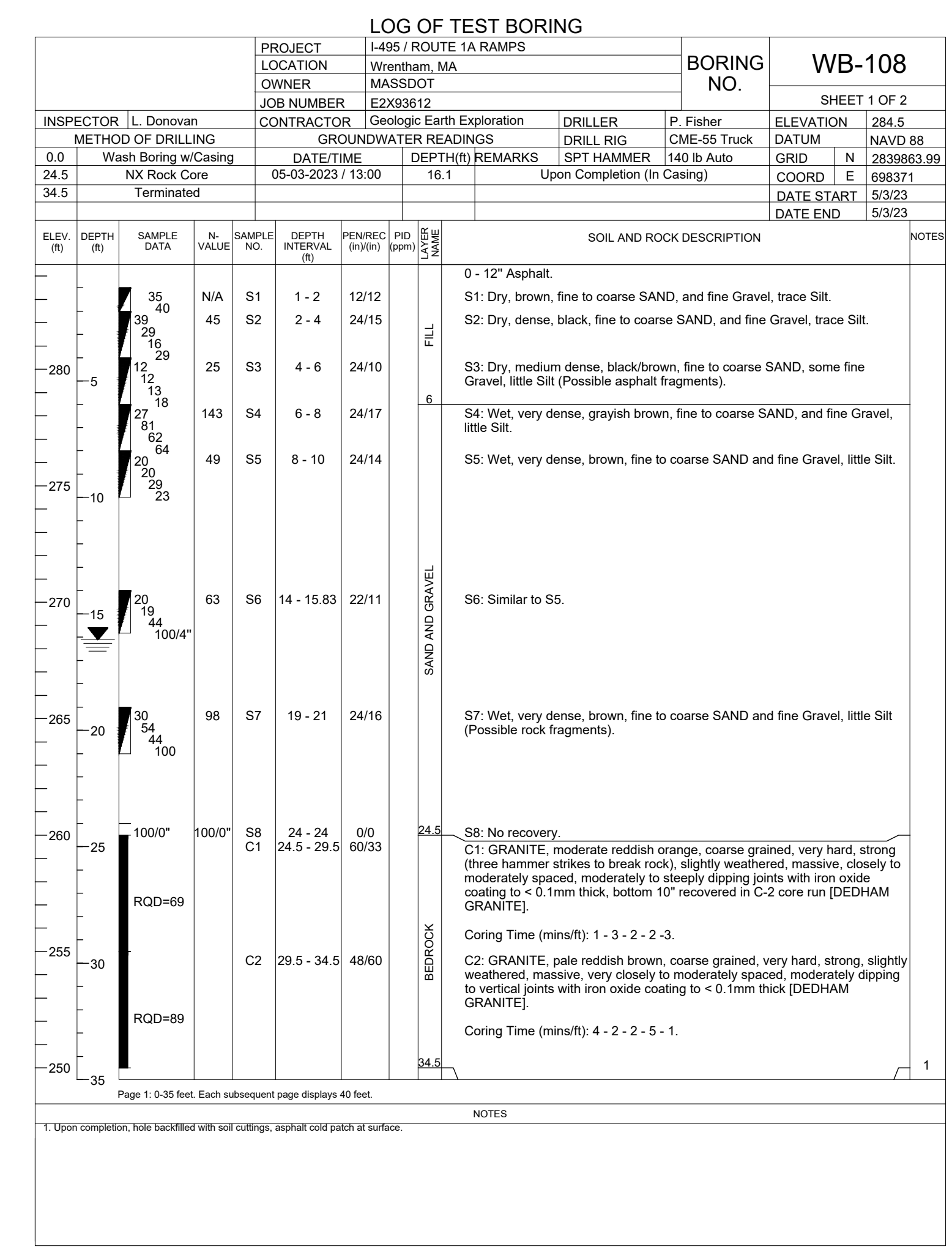
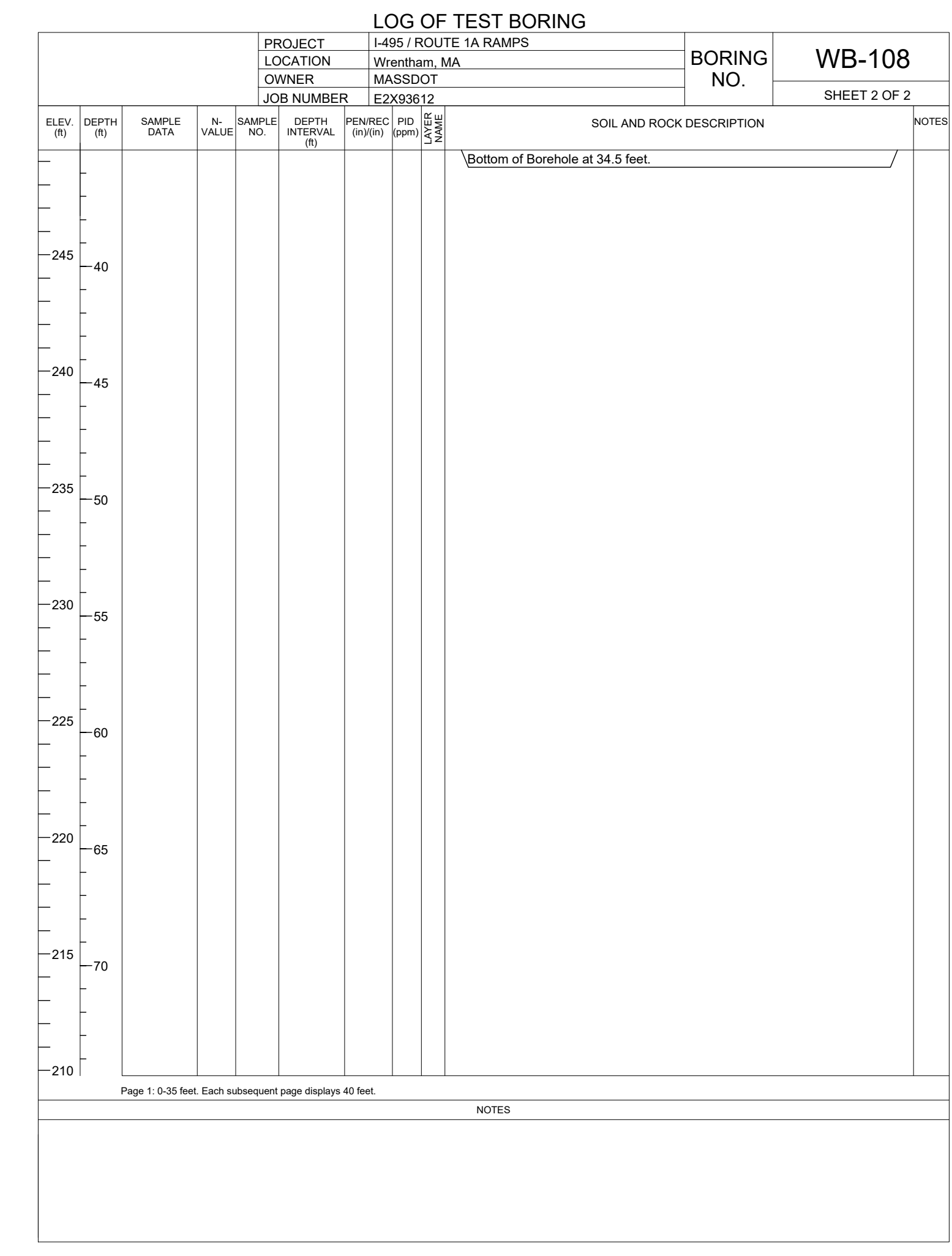


**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	12	258
PROJECT FILE NO.		603739	

**BORING LOGS
SHEET 8 OF 9**

BORING NOTES:
REFER TO SHEET NO. 5 FOR BORING NOTES.



WRENTHAM, MA I-495 / ROUTE 1A RAMP				
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
MA	HSI/STP/TAP-0035(058)	13	258	
PROJECT FILE NO.		603739		

**BORING LOGS
SHEET 9 OF 9**

BORING NOTES:
REFER TO SHEET NO. 5 FOR BORING NOTES.

LOG OF TEST PIT

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		TEST PIT NO. TP-3B	
SHEET 1 OF 1			
CONTRACTOR N.E.C. Kubota KX 80	DATE/TIME 12-04-2020 / 9:00 AM	OPERATOR K. Smith	ELEVATION 290
INSPECTOR P. Lanegan	DATUM NAVD88	GRID N 2839671.3 E 698258.2	
EXCAVATOR Kubota KX 80			
BUCKET 1/4 CY			
DATE/TIME 12-04-2020 / 1:00 PM			
REMARKS None Encountered			
DATE START 12/4/2020			
DATE END 12/4/2020			
FIELD CLASSIFICATION AND REMARKS Dry to Moist, brown, fine to coarse SAND and fine Gravel, little Silt, occasional Cobbles (FILL)			
PLAN VIEW			
SKETCHES			
LEGEND			
REMARKS			

LOG OF TEST PIT

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		TEST PIT NO. TP-4A	
SHEET 1 OF 1			
CONTRACTOR N.E.C. Kubota KX 80	DATE/TIME 12-04-2020 / 1:00 PM	OPERATOR K. Smith	ELEVATION 285
INSPECTOR P. Lanegan	DATUM NAVD88	GRID N 2839781.15 E 698349.5	
EXCAVATOR Kubota KX 80			
BUCKET 1/4 CY			
DATE/TIME 12-04-2020 / 1:00 PM			
REMARKS None Encountered			
DATE START 12/4/2020			
DATE END 12/4/2020			
FIELD CLASSIFICATION AND REMARKS Dry to Moist, brown, fine to coarse SAND and fine Gravel, little Silt, occasional Cobbles (FILL)			
PLAN VIEW			
SKETCHES			
LEGEND			
REMARKS			

LOG OF TEST PIT

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		TEST PIT NO. TP-4B	
SHEET 1 OF 1			
CONTRACTOR N.E.C. Kubota KX 80	DATE/TIME 12-04-2020 / 1:00 PM	OPERATOR K. Smith	ELEVATION 290
INSPECTOR P. Lanegan	DATUM NAVD88	GRID N 2839781.15 E 698349.5	
EXCAVATOR Kubota KX 80			
BUCKET 1/4 CY			
DATE/TIME 12-04-2020 / 1:00 PM			
REMARKS None Encountered			
DATE START 12/4/2020			
DATE END 12/4/2020			
FIELD CLASSIFICATION AND REMARKS Dry to Moist, brown, fine to coarse SAND and fine Gravel, little Silt, occasional Cobbles (FILL)			
PLAN VIEW			
SKETCHES			
LEGEND			
REMARKS			

LOG OF TEST BORING

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		BORING NO. B-108	
SHEET 1 OF 2			
INSPECTOR X. Zhou	CONTRACTOR Geologic Earth Exploration	DRILLER J. Mientkiewicz	ELEVATION 376.0
METHOD OF DRILLING Roller Bit	DATE/TIME 05-21-2024 / 11:00 AM	DRILL RIG Acker Soil Scout	DATUM NAVD 88
OWNER MASSDOT	DEPTH 36.0	REMARKS Upon Completion	GRID N 2839383.34 E 699368.12
JOB NUMBER E2X93612			
DATE START 5/17/24			
DATE END 5/21/24			
SOIL AND ROCK DESCRIPTION			
ELEV (ft)	DEPTH (ft)	SAMPLE NO.	DESCRIPTION
375	0-5	C-1	C-1: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, very closely to moderately spaced, moderately to steeply dipping joints with iron oxide staining and patchy epidote, moderately fractured to slightly fractured. RQD=53.5", Drilling rate (min/ft): 6.5 - 5.5 - 7.5 - 12 - 8 - 9/10" [Laboratory Testing Performed, Compressive Strength = 13166 psi]
370	5-9	C-2	C-2: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, very closely to moderately spaced, moderately dipping joints with iron oxide staining, moderately fractured. RQD=15.5", Drilling rate (min/ft): 10 - 13
365	9-12	C-3	C-3: GRANITE, pink/dark gray/green, medium grained, hard, strong, slightly weathered, massive, very closely spaced, horizontal mechanical breaks with fresh surfaces, extremely fractured. RQD=5", Drilling rate (min/ft): 11.5
360	12-14	C-4	C-4: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, closely spaced, moderately dipping joints with iron oxide staining, moderately fractured. RQD=5", Drilling rate (min/ft): 6.5 - 9
355	14-16	C-5	C-5: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, closely to moderately spaced, steeply dipping joints with iron oxide staining, minor moderately dipping epidote veining to 1 mm, moderately spaced, steeply dipping healed fractures with iron oxide staining. RQD=11.5", Drilling rate (min/ft): 12 - 14.5 - 30/14"
350	16-21	C-6	C-6: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, fresh, massive, 40mm DIORITE intrusion at 14.9 ft, moderately spaced, steeply dipping joints with fresh to iron oxide stained surfaces, moderately fractured. RQD=24", Drilling rate (min/ft): 11 - 15
345	21-25.9	C-7	C-7: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, minor widely spaced, steeply dipping joints with iron oxide staining, slightly fractured to sound. RQD=67", Drilling rate (min/ft): 7.5 - 4 - 4.5 - 3.5 - 3 [Laboratory Testing Performed, Compressive Strength = 13214 psi]
340	25.9-31	C-8	C-8: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, slightly weathered, massive, 25mm DIORITE intrusion at 22.2 ft, moderately to widely spaced joints with iron oxide staining, moderately spaced, steeply dipping to vertical healed fractures, moderately fractured to sound. RQD=58", Drilling rate (min/ft): 4 - 4 - 3.5 - 4 - 4/10"
335	31-36	C-9	C-9: GRANITE, pink/dark gray/green, coarse grained, very hard, strong, fresh, massive, 25mm DIORITE intrusion at 26.8 ft, very closely to widely spaced, moderately dipping joints with iron oxide staining, moderately fractured to sound. RQD=46", Drilling rate (min/ft): 2/2" - 4.5 - 7 - 3.5 - 3 - 5
330		C-10	C-10: GRANITE, black/tan/pink, coarse grained, moderately soft to very hard, weak to strong, moderately weathered to fresh, massive, minor steeply dipping epidote veining to 1mm, very closely to moderately spaced, shallow to steeply dipping joints with iron oxide staining, extremely to slightly fractured. RQD=32.5", Drilling Rate (min/ft): 2 - 2 - 5 - 4 - 5
Page 1: 0-35 feet. Each subsequent page displays 40 feet.			

LOG OF TEST BORING

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		BORING NO. B-108	
SHEET 2 OF 2			
ELEV (ft)	DEPTH (ft)	SAMPLE NO.	DESCRIPTION
340	36-41	C-11	C-11: GRANITE, light to dark gray/pink, coarse grained, very hard, strong, slightly weathered, massive, very closely to widely spaced, moderately to steeply dipping joints with iron oxide staining and partial epidote coating to 1mm thick, moderately fractured to sound. RQD=58", Drilling Rate (min/ft): 6 - 5 - 5 - 2 - 2 [Laboratory Testing Performed Compressive Strength = 10588 psi]
335	41-46	C-12	C-12: GRANITE, light to dark gray/pink, coarse grained, very hard, strong, slightly weathered, massive, minor very closely spaced, steeply dipping epidote veining to 1 mm, very closely to widely spaced, shallow to steeply dipping joints with iron oxide staining, moderately fractured to sound. RQD=52.5", Drilling Rate (min/ft): 2 - 5 - 2 - 3 - 3.5
330	46-51	C-13	C-13: GRANITE, light to dark gray/pink/green, coarse grained, very hard, strong, slightly weathered, massive, very closely to moderately spaced, steeply dipping epidote veining to 5mm, very closely to moderately spaced, shallow to steeply dipping joints with iron oxide staining and patchy epidote. RQD=50", Drilling Rate (min/ft): 3.5 - 4 - 5 - 5 - 4
325	51		Bottom of Borehole at 51 feet.
Page 1: 0-35 feet. Each subsequent page displays 40 feet.			

LOG OF TEST BORING

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		BORING NO. B-109	
SHEET 1 OF 2			
INSPECTOR X. Zhou / P. Lanegan	CONTRACTOR Geologic Earth Exploration	DRILLER J. Mientkiewicz	ELEVATION 376.0
METHOD OF DRILLING Roller Bit	DATE/TIME 05-21-2024 / 11:00 AM	DRILL RIG Acker Soil Scout	DATUM NAVD 88
OWNER MASSDOT	DEPTH 36.0	REMARKS None Encountered	GRID N 2839385.83 E 699425.91
JOB NUMBER E2X93612			
DATE START 5/15/24			
DATE END 5/21/24			
SOIL AND ROCK DESCRIPTION			
ELEV (ft)	DEPTH (ft)	SAMPLE NO.	DESCRIPTION
375	0-5	C-1	C-1: GRANITE, black/tan/gray, coarse grained, very hard, strong, slightly weathered, massive, closely to moderately spaced, moderately to steeply dipping joints with iron oxide staining, moderately to steeply dipping healed fractures with iron oxide staining, moderately to slightly fractured. RQD=56.5", Drilling Rate (min/ft): 3 - 3 - 3 - 3 - 3
370	5-10.5	C-2	C-2: GRANITE, black/tan/gray, coarse grained, very hard, strong, slightly weathered, massive, moderately spaced, moderately to steeply dipping joints with iron oxide staining, moderately to slightly fractured. RQD=54", Drilling Rate (min/ft): 3 - 3 - 3 - 4 - 5/6"
365	10.5-15.5	C-3	C-3: GRANITE, black/gray/tan, coarse grained, very hard, strong, slightly weathered, massive, minor steeply dipping epidote veining to 3mm, moderately spaced, steeply dipping joints with iron oxide staining, slightly fractured. RQD=57", Drilling Rate (min/ft): 13 - 15 - 6 - 11 - 14 [Laboratory Testing Performed, Compressive Strength = 13179 psi]
360	15.5-20.5	C-4	C-4: GRANITE, black/tan/gray, coarse grained, very hard, strong, slightly weathered, massive, closely to widely spaced, steeply dipping joints with iron oxide staining, moderately fractured to sound. RQD=48", Drilling Rate (min/ft): 15 - 10 - 13 - 5 - 8
355	20.5-25.5	C-5	C-5: GRANITE, black/gray/pink, coarse grained, very hard, strong, slightly weathered, massive, minor steeply dipping epidote veining to 1mm, very closely to moderately spaced, shallow to steeply dipping joints with iron oxide staining, moderately to slightly fractured. RQD=38", Drilling Rate (min/ft): 6 - 4 - 3 - 5 - 7.5
350	25.5-30.5	C-6	C-6: GRANITE, black/gray/pink, coarse grained, very hard, strong, slightly weathered, massive, minor steeply dipping epidote veining to 1mm, very closely to moderately spaced, moderately to steeply dipping joints with iron oxide staining, extremely to slightly fractured. RQD=52.5", Drilling Rate: 11 - 6 - 5 - 7 - 7 [Laboratory Testing Performed, Compressive Strength = 9452 psi]
345	30.5-31	C-7	C-7: GRANITE, black/gray/green, coarse grained, very hard, strong, slightly weathered, massive, very closely spaced epidote veining to 5mm, steeply dipping joints with iron oxide staining @ 30.6 ft. RQD=41"
340	31-36	C-8	C-8: GRANITE, black/gray/green, coarse grained, very hard, strong, slightly weathered, massive, very closely spaced, steeply dipping epidote veining to 1mm, very closely to moderately spaced, moderately to steeply dipping joints with iron oxide staining, extremely to moderately fractured. RQD=40"
Page 1: 0-35 feet. Each subsequent page displays 40 feet.			

LOG OF TEST BORING

PROJECT LOCATION I-495 / ROUTE 1A RAMP Wrentham, MA		BORING NO. B-109	
SHEET 2 OF 2			
ELEV (ft)	DEPTH (ft)	SAMPLE NO.	DESCRIPTION
340	36-41	C-9	C-9: GRANITE, black, gray, green, coarse grained, very hard, slightly weathered, massive, very closely to moderately spaced shallow to steeply dipping joints with iron oxide staining, extremely to slightly fractured. RQD=33", Drilling Rate (min/ft): 9 - 8 - 7 - 5.5 - 10
335	41-45.7	C-10	C-10: GRANITE, black, gray, green, coarse grained, very hard, strong, slightly weathered, massive, steeply dipping joints with iron oxide staining at 45.4 ft, sound. RQD=53", Drilling Rate (min/ft): 9 - 14 - 8 - 16 - 7.5/8"
330	45.7-50.7	C-11	C-11: GRANITE, black/gray/green, coarse grained, very hard, strong, slightly weathered, massive, moderately to widely spaced, steeply dipping joints with iron oxide staining, sound. RQD=60", Drilling Rate (min/ft): 3/4" - 10 - 9 - 6 - 9 - 14/8" [Laboratory Testing Performed, Compressive Strength = 13972 psi]
325	50.7		Bottom of Borehole at 50.7 feet.
Page 1: 0-35 feet. Each subsequent page displays 40 feet.			

GENERAL PAVEMENT NOTES

- ALL HMA, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT, HMA JOINT SEALANT, AND PAVEMENT MILLING SHALL BE IN ACCORDANCE WITH SUBSECTION 450 QUALITY ASSURANCE OF HMA AND SUBSECTION 455 SUPERPAVE HMA SPECIFICATIONS.

PAVEMENT NOTES

PROPOSED FULL DEPTH CONSTRUCTION
(I-495 SOUTHBOUND ENTRANCE RAMP)

- 2.00" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 3.75" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
- 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER
- 12" GRAVEL BORROW (TYPE b)

PROPOSED FULL DEPTH WIDENING CONSTRUCTION WITH EXISTING SUBBASE
(I-495 SOUTHBOUND ENTRANCE RAMP)

- 2.00" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 7.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) PLACED IN 2 COURSES OVER
- 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER EXISTING GRAVEL SUBBASE

PROPOSED FULL DEPTH WIDENING (4.0' AND GREATER)
(ROUTE 1A, I-495 SB EXIT RAMP, SIDE STREETS)

- 2.00" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 4.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
- 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER
- 12" GRAVEL BORROW (TYPE b)

PROPOSED FULL DEPTH WIDENING (LESS THAN 4.0')
(ROUTE 1A)

- 2.00" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 8" HIGH EARLY STRENGTH CEMENT CONCRETE OVER
- 12" GRAVEL BORROW (TYPE b)

PROPOSED RESURFACING

(ROUTE 1A, SIDE STREETS, AT LIMITS OF WORK TO MEET EXISTING PAVEMENT)

- 2.00" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT OVER
- VARIABLE DEPTH HMA LEVELING COURSE OVER
- ASPHALT EMULSION FOR TACK COAT OVER
- 2" (NOMINAL) PAVEMENT MICROMILLING

PROPOSED HMA DRIVEWAYS

- 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
- 2.0" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
- 8" GRAVEL BORROW (TYPE b)

PROPOSED HMA SIDE PATH AND SIDEWALK

- 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
- 2.0" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
- 8" GRAVEL BORROW (TYPE b)

PERMANENT TRENCH REPAIRS FOR DRAINAGE PIPES AND UTILITY TRENCHES - PRIOR TO MILLING

- 2.5" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.5" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 3" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
- 8" GRAVEL BORROW TYPE b, PLACED IN 2 LIFTS

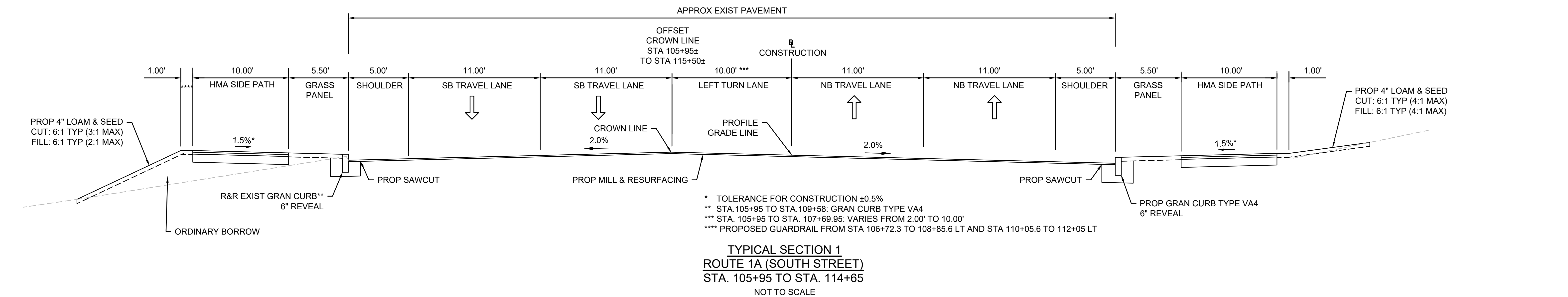
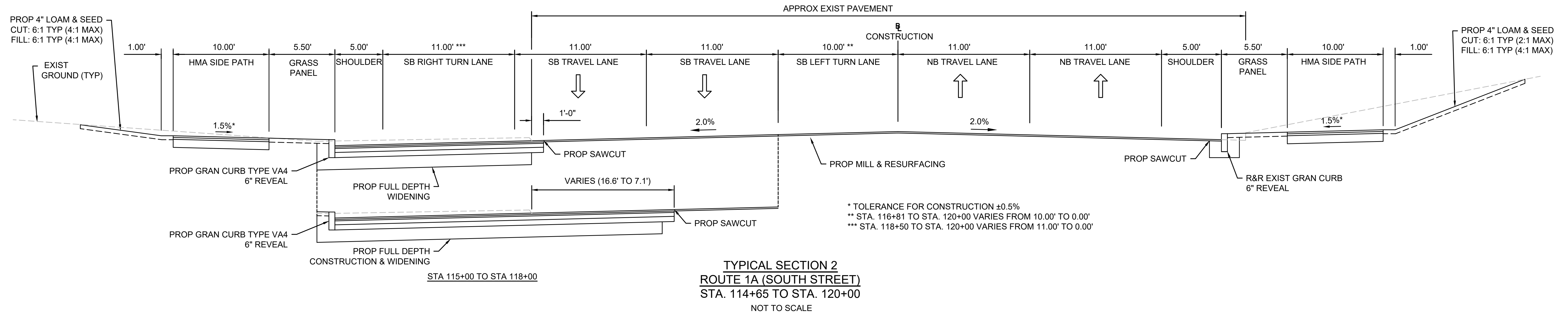
PERMANENT TRENCH REPAIRS FOR TRAFFIC SIGNAL CONDUIT - PRIOR TO MILLING

- 2.5" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 2.5" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER ASPHALT EMULSION FOR TACK COAT OVER
- 8" HIGH EARLY STRENGTH CEMENT CONCRETE OVER
- 8" GRAVEL BORROW TYPE b, PLACED IN 2 LIFTS

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	14	258
PROJECT FILE NO.		603739	

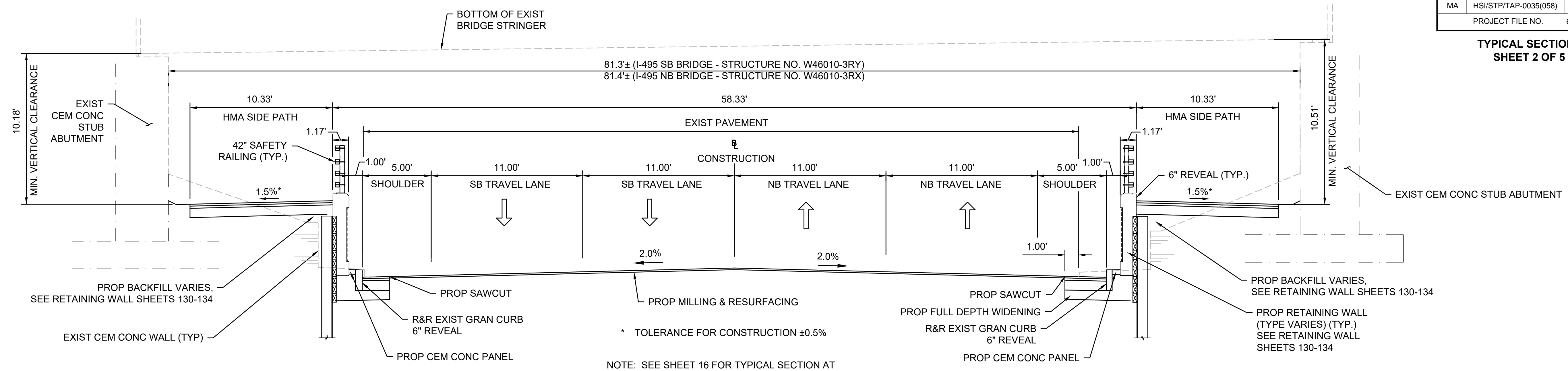
TYPICAL SECTIONS
SHEET 1 OF 5



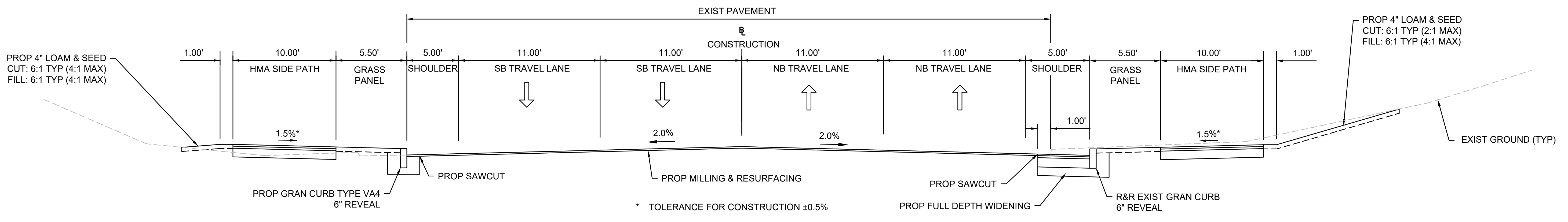
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	15	258
PROJECT FILE NO.		603739	

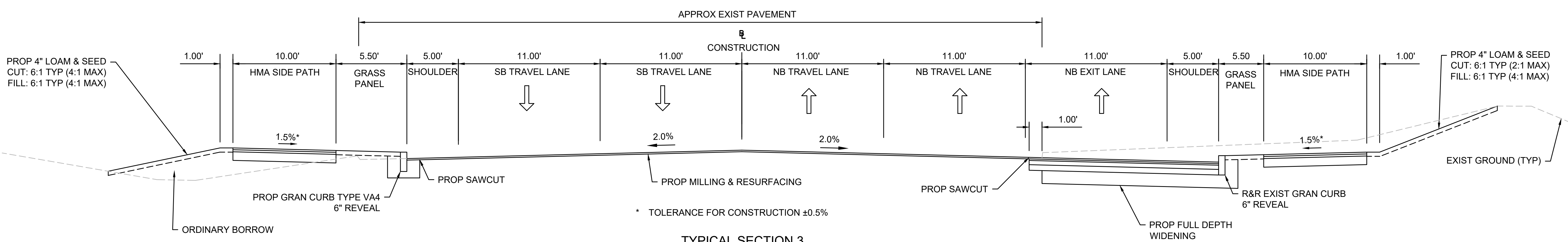
TYPICAL SECTIONS
SHEET 2 OF 5



TYPICAL SECTION 5
ROUTE 1A (SOUTH STREET)
STA. 127+50 TO STA. 131+50
NOT TO SCALE



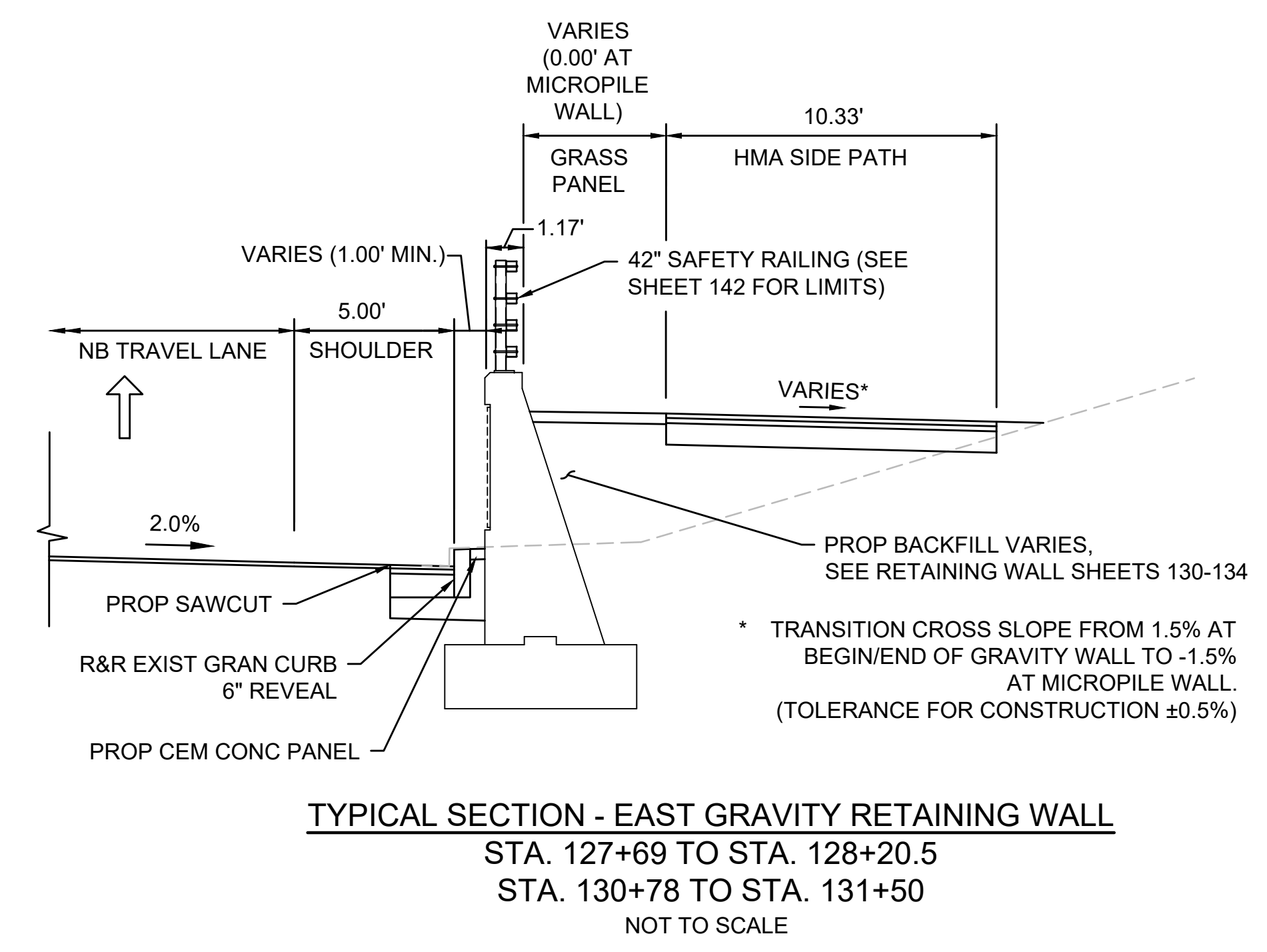
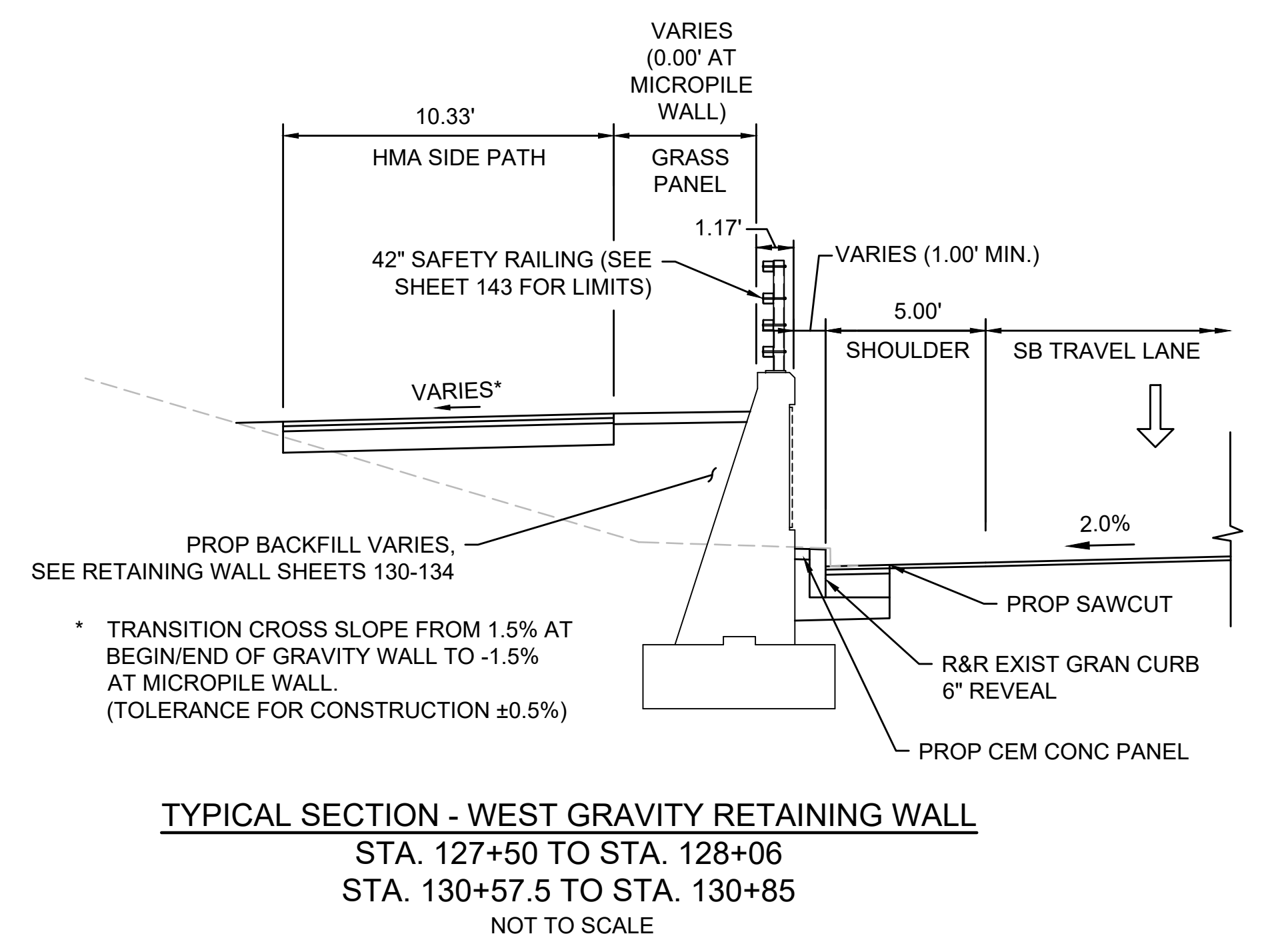
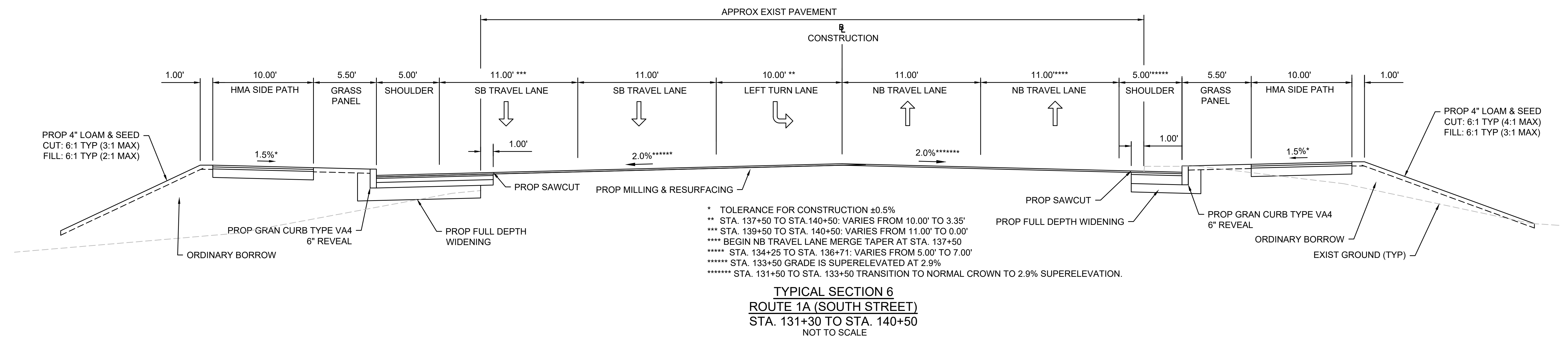
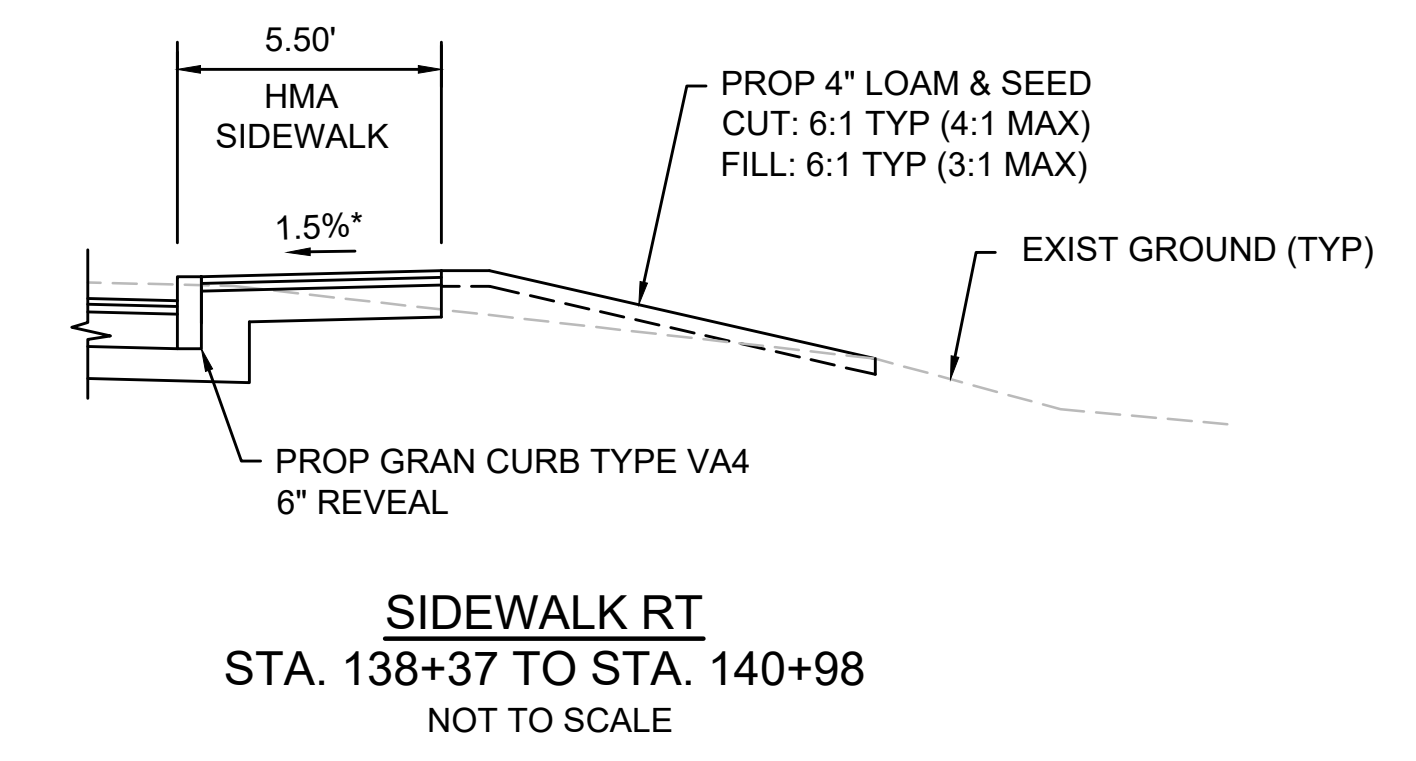
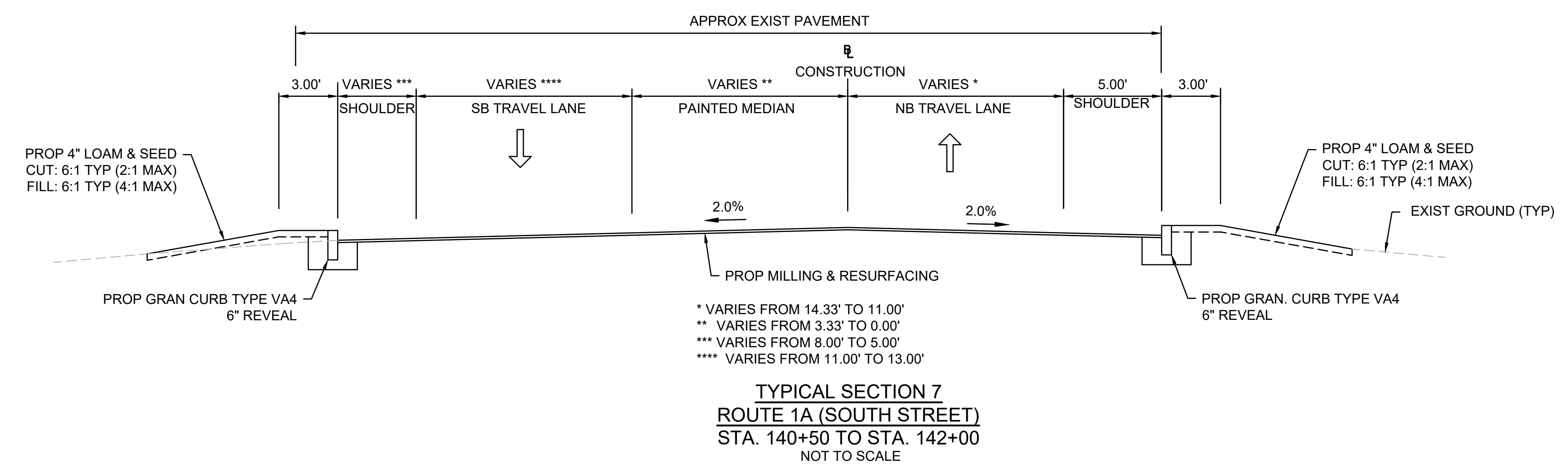
TYPICAL SECTION 4
ROUTE 1A (SOUTH STREET)
STA. 125+75.71 TO STA. 127+50
NOT TO SCALE



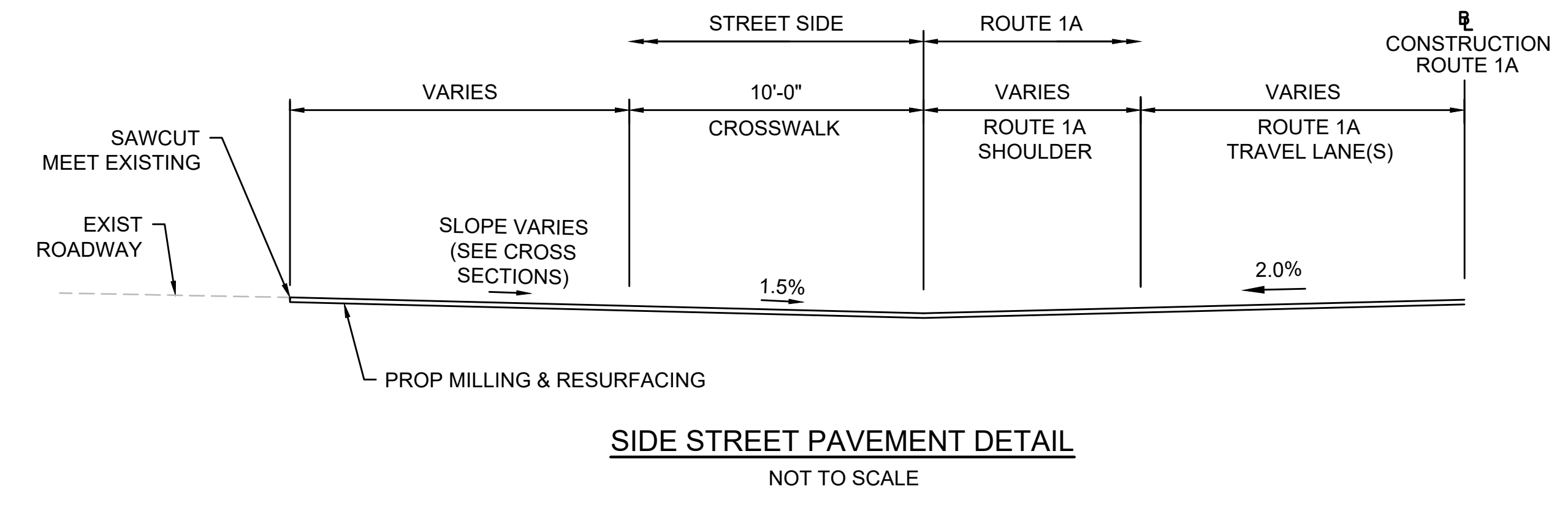
TYPICAL SECTION 3
ROUTE 1A (SOUTH STREET)
STA. 120+00 TO STA. 125+75.51
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	16	258
PROJECT FILE NO.		603739	

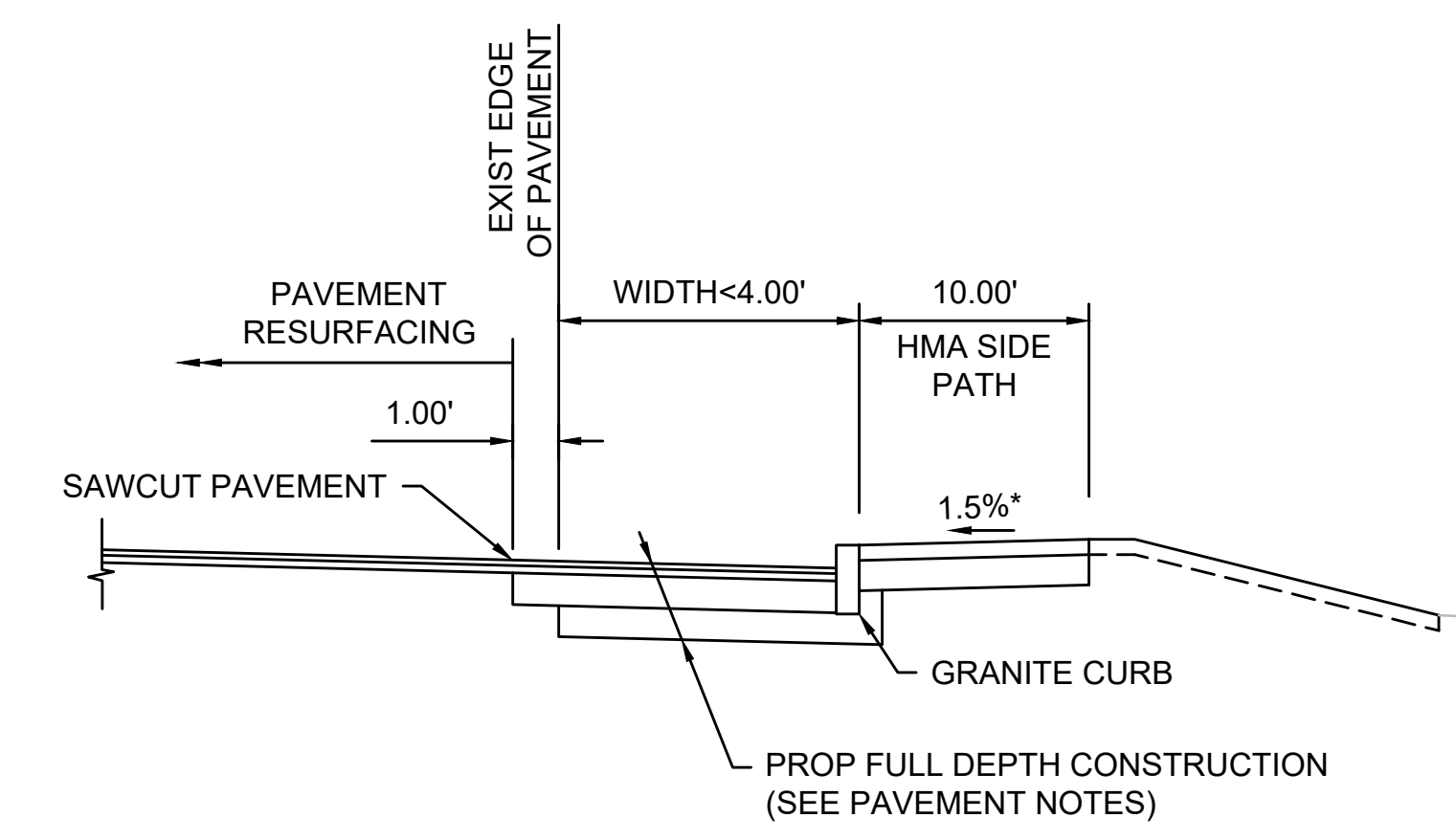
TYPICAL SECTIONS
SHEET 3 OF 5



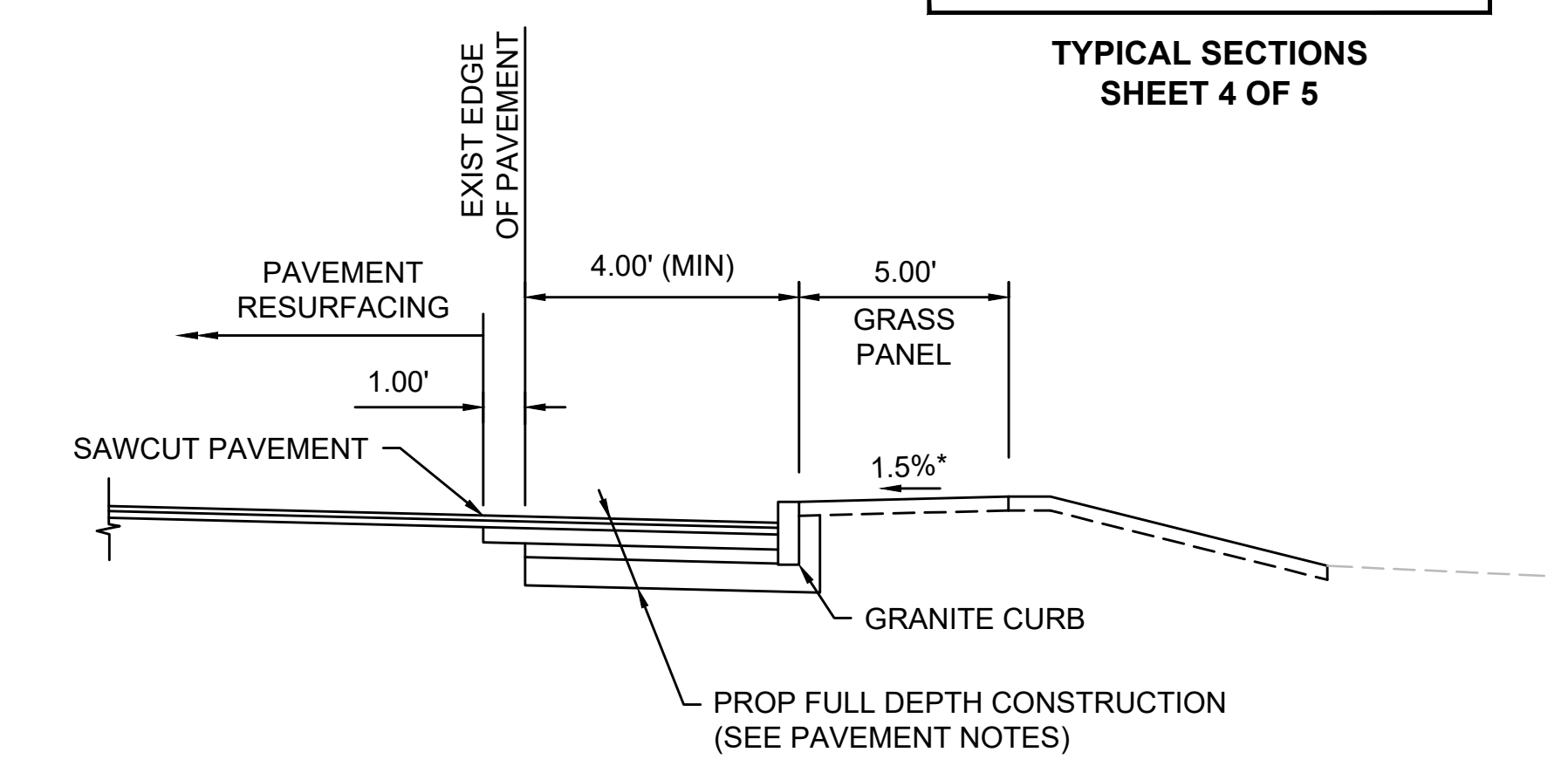
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	17	258
PROJECT FILE NO.		603739	



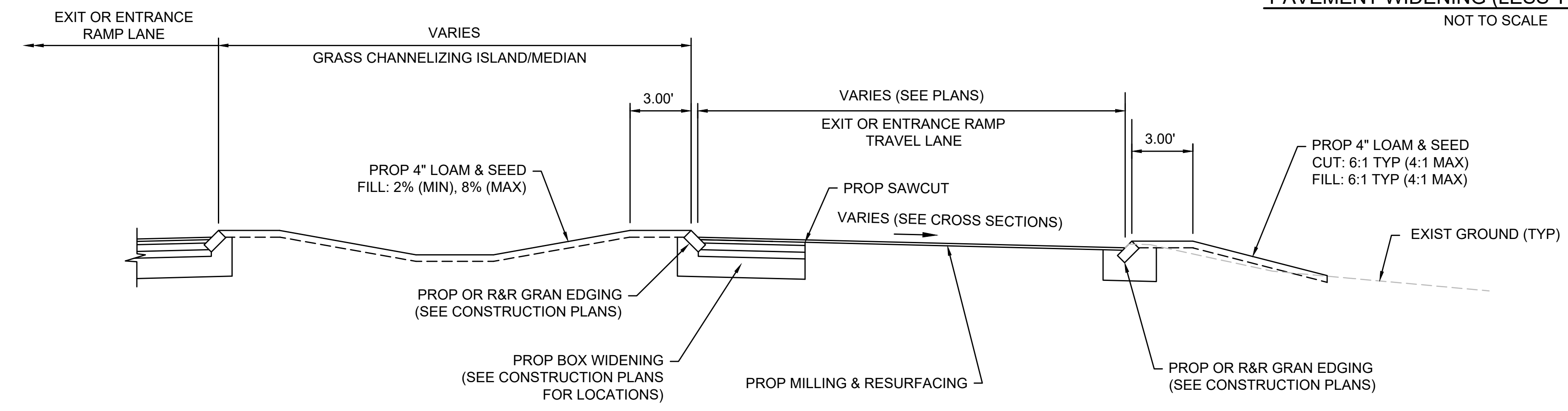
SIDE STREET PAVEMENT DETAIL
NOT TO SCALE



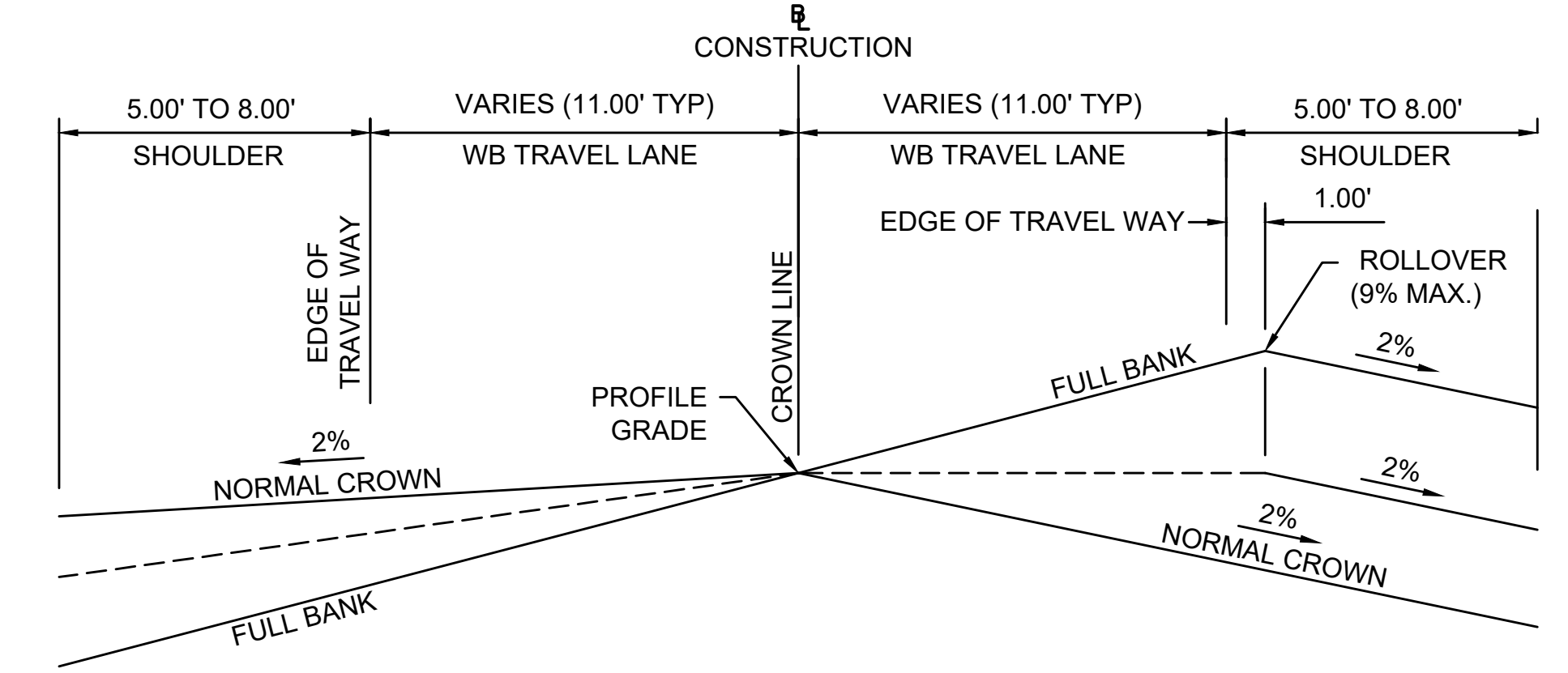
PAVEMENT WIDENING (LESS THAN 4.0') DETAIL
NOT TO SCALE



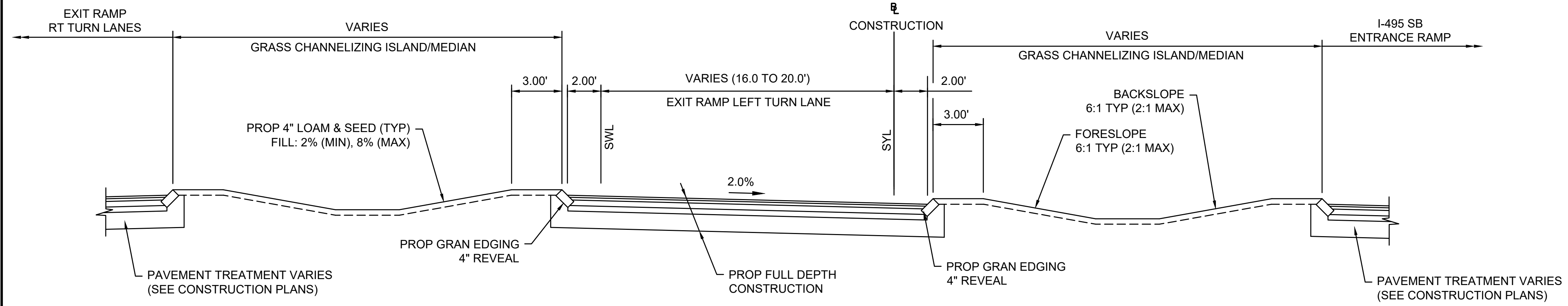
PAVEMENT WIDENING (4.0' AND GREATER) DETAIL
NOT TO SCALE



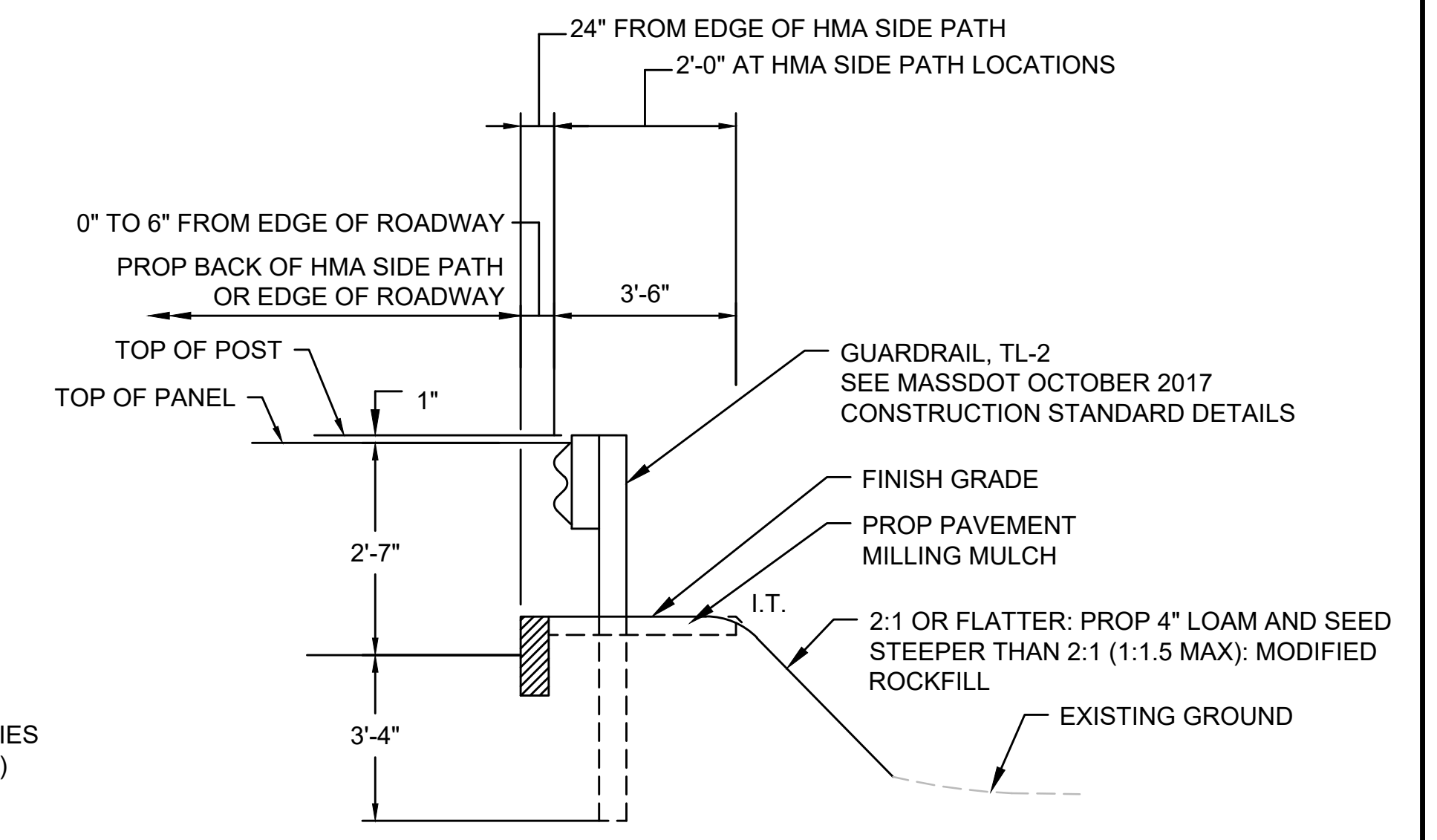
TYPICAL SECTION 9
I-495 NB & SB ENTRANCE & EXIT RAMPS
I-495 NB EXIT RAMP STA 900+85.94 TO STA 902+44.28
I-495 NB EXIT RAMP STA 1000+00.00 TO STA 1004+12.86
I-495 SB ENTRANCE RAMP STA 601+01.30 TO STA 603+61.00
I-495 NB ENTRANCE RAMP STA 801+00.00 TO STA 802+69.67
I-495 NB EXIT RAMP (CENTER) STA 1200+00.00 TO STA 1201+34.54
I-495 SB ENTRANCE RAMP STA 601+01.30 TO STA 603+61.00
I-495 SB EXIT RAMP STA 510+15.52 TO STA 514+19.96
NOT TO SCALE



METHOD OF BANKING
NOT TO SCALE

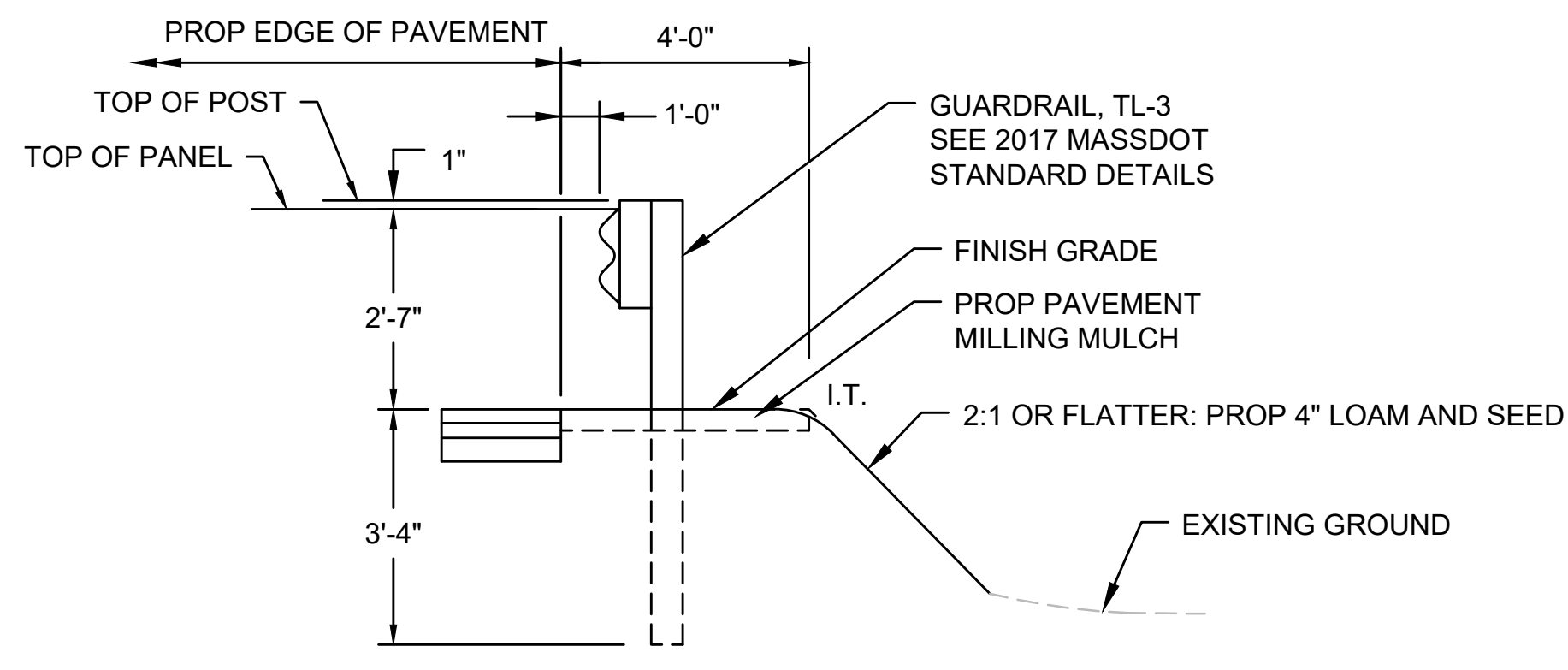


TYPICAL SECTION 8
I-495 SB EXIT RAMP LEFT TURN LANE
STA. 1000+32 TO STA. 1004+12.86
NOT TO SCALE

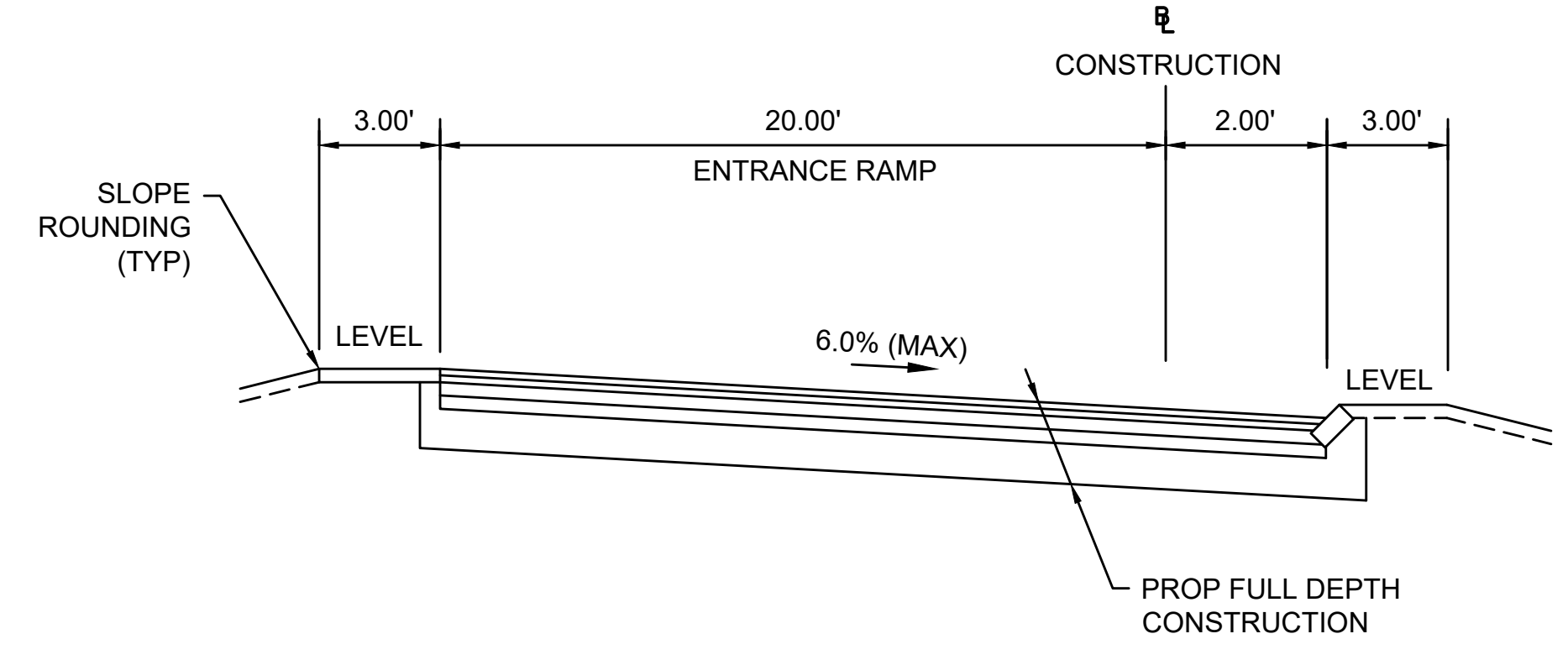


TYPICAL GUARDRAIL SECTION (ROUTE 1A)
NOT TO SCALE

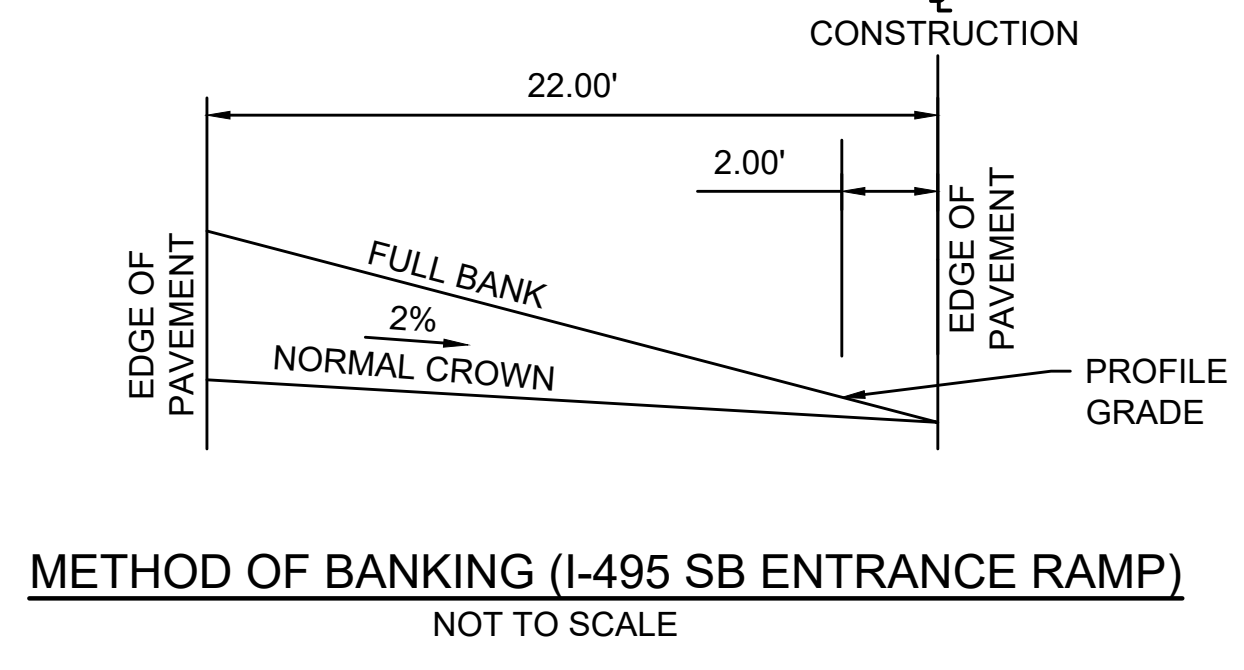
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	18	258
PROJECT FILE NO.		603739	



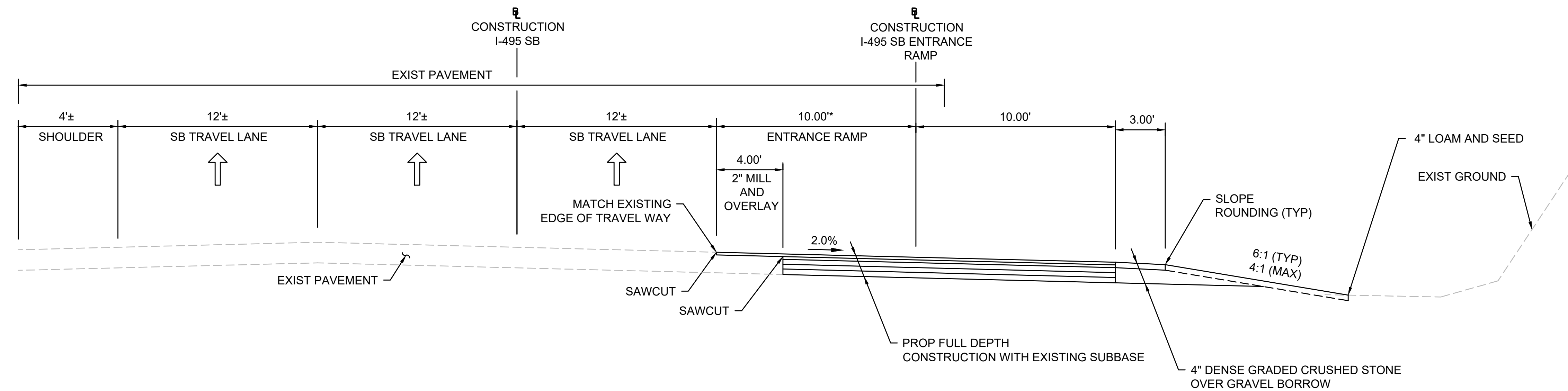
TYPICAL GUARDRAIL SECTION (I-495 SB ENTRANCE RAMP)
NOT TO SCALE



SUPERELEVATED SECTION (I-495 SB ENTRANCE RAMP)
STA. 702+60 TO STA. 724+00
NOT TO SCALE



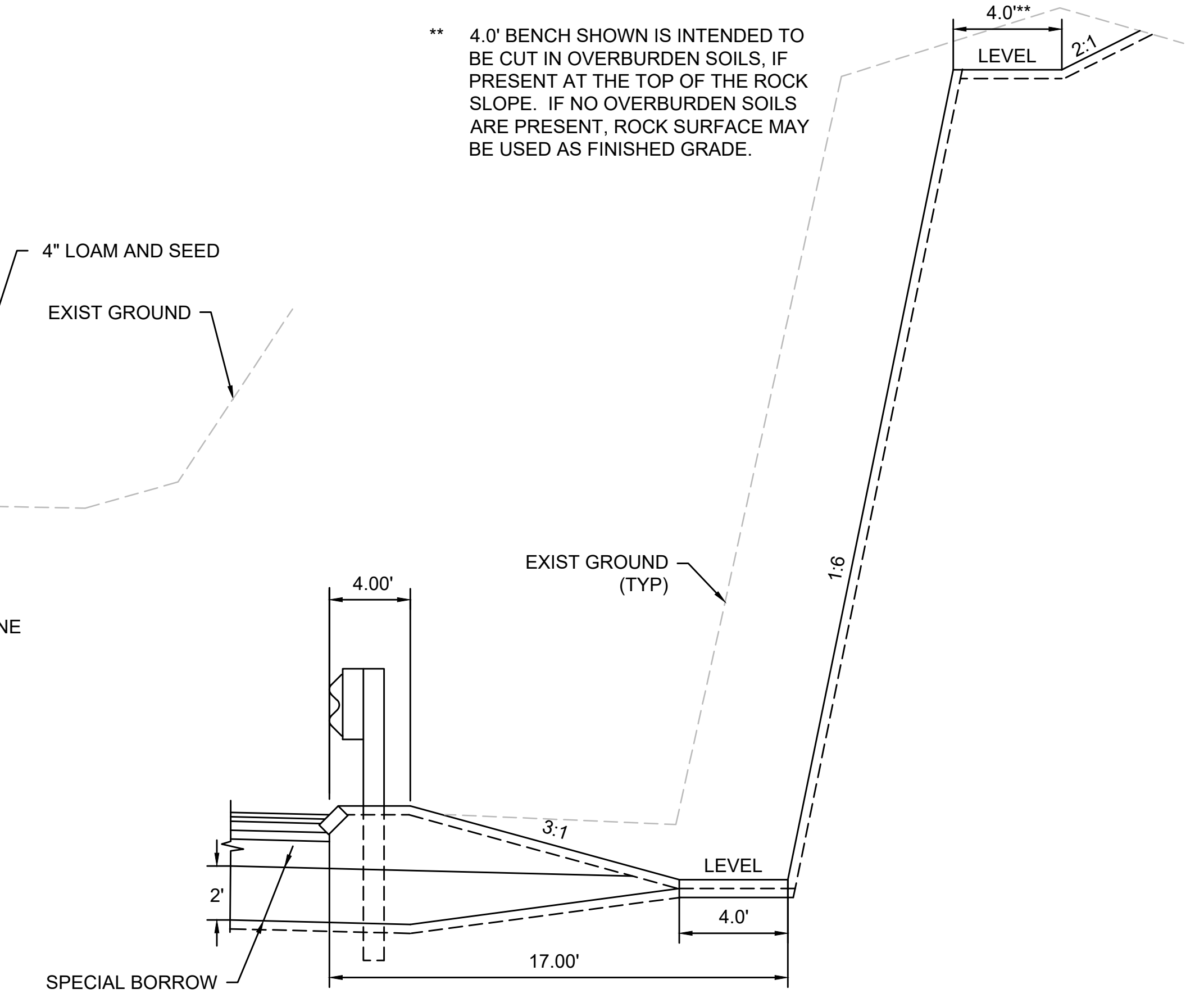
METHOD OF BANKING (I-495 SB ENTRANCE RAMP)
NOT TO SCALE



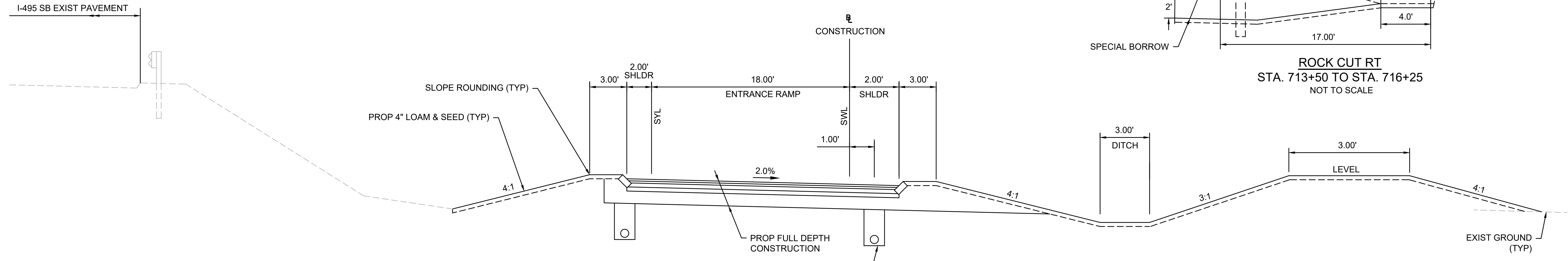
* STA 715+18.63 TO STA 718+99.01: VARIES FROM 18.00' TO 10.00'

I-495 SOUTHBOUND ENTRANCE RAMP
STA. 715+18.62 TO STA. 724+00
NOT TO SCALE

** 4.0' BENCH SHOWN IS INTENDED TO BE CUT IN OVERBURDEN SOILS, IF PRESENT AT THE TOP OF THE ROCK SLOPE. IF NO OVERBURDEN SOILS ARE PRESENT, ROCK SURFACE MAY BE USED AS FINISHED GRADE.

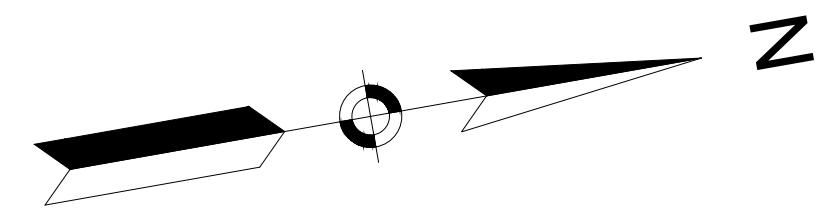


ROCK CUT RT
STA. 713+50 TO STA. 716+25
NOT TO SCALE



I-495 SOUTHBOUND ENTRANCE RAMP
STA. 702+20.65 TO STA. 715+18.62
NOT TO SCALE

PROP 8" PIPE SUBDRAIN (TYP)
SEE MASSDOT CONSTRUCTION
STANDARD E 209.1.0
REFER TO DRAINAGE AND UTILITY
PLANS FOR LIMITS OF SUBDRAIN



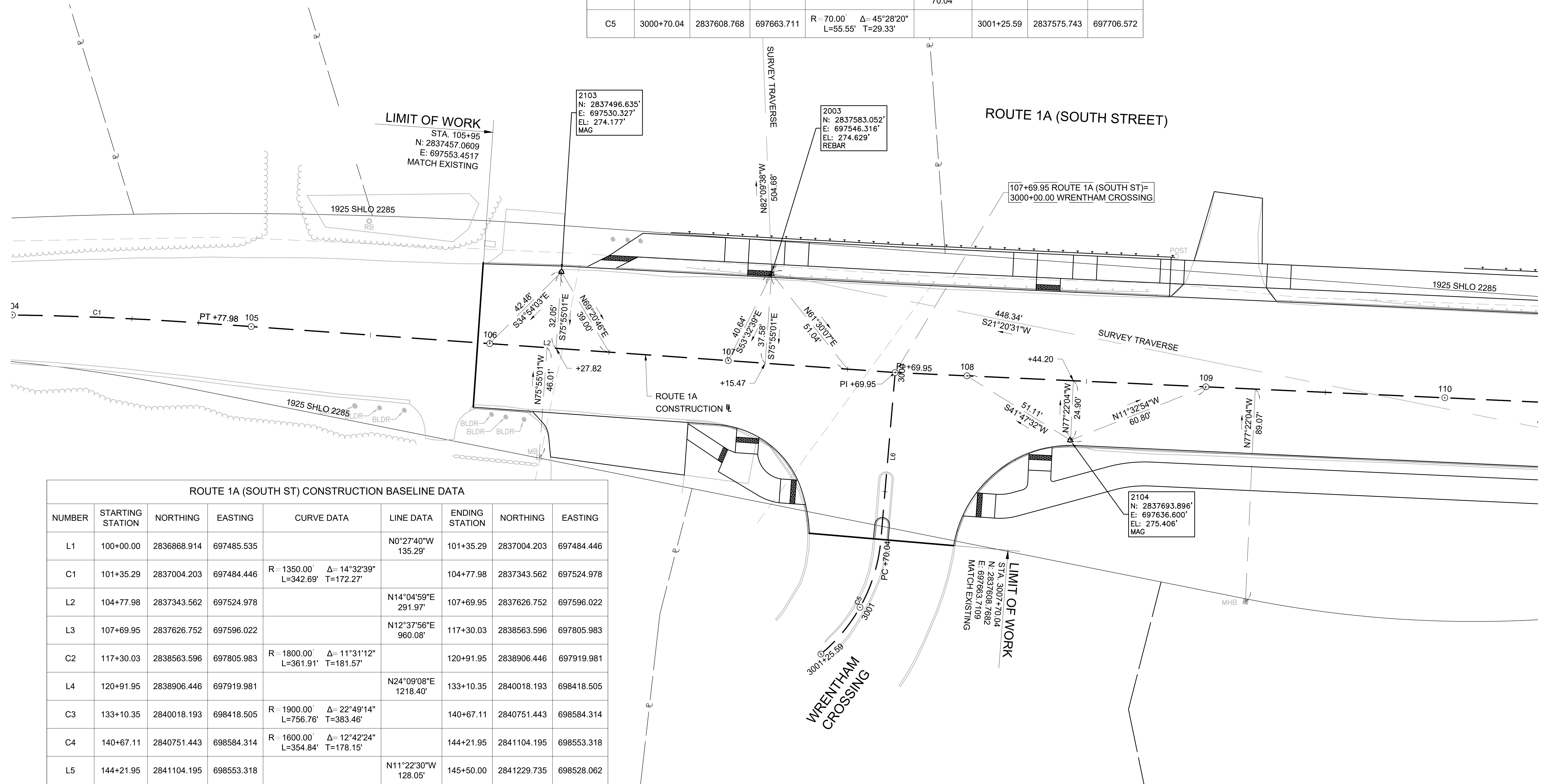
**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	19	258
PROJECT FILE NO.		603739	

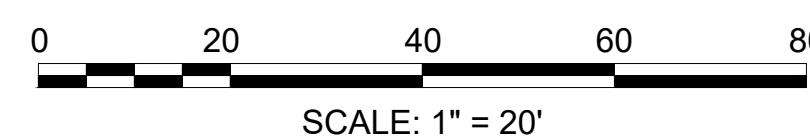
**CONSTRUCTION BASELINE TIES
SHEET 1 OF 13**

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
106+23.87	46.27' RT	2837471.9321	697612.7987
109+21.07	89.05' RT	2837754.7523	697715.9343

WRENTHAM CROSSING CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	3000+00.00	2837626.752	697596.022		S75°07'15"E 70.04'	3000+70.04	2837608.768	697663.711
C5	3000+70.04	2837608.768	697663.711	R=70.00' Δ=45°28'20" L=55.55' T=29.33'		3001+25.59	2837575.743	697706.572



ROUTE 1A (SOUTH ST) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	100+00.00	2836868.914	697485.535		N0°27'40"W 135.29'	101+35.29	2837004.203	697484.446
C1	101+35.29	2837004.203	697484.446	R=1350.00' Δ=14°32'39" L=342.69' T=172.27'		104+77.98	2837343.562	697524.978
L2	104+77.98	2837343.562	697524.978		N14°04'59"E 291.97'	107+69.95	2837626.752	697596.022
L3	107+69.95	2837626.752	697596.022		N12°37'56"E 960.08'	117+30.03	2838563.596	697805.983
C2	117+30.03	2838563.596	697805.983	R=1800.00' Δ=11°31'12" L=361.91' T=181.57'		120+91.95	2838906.446	697919.981
L4	120+91.95	2838906.446	697919.981		N24°09'08"E 1218.40'	133+10.35	2840018.193	698418.505
C3	133+10.35	2840018.193	698418.505	R=1900.00' Δ=22°49'14" L=756.76' T=383.46'		140+67.11	2840751.443	698584.314
C4	140+67.11	2840751.443	698584.314	R=1600.00' Δ=12°42'24" L=354.84' T=178.15'		144+21.95	2841104.195	698553.318
L5	144+21.95	2841104.195	698553.318		N11°22'30"W 128.05'	145+50.00	2841229.735	698528.062

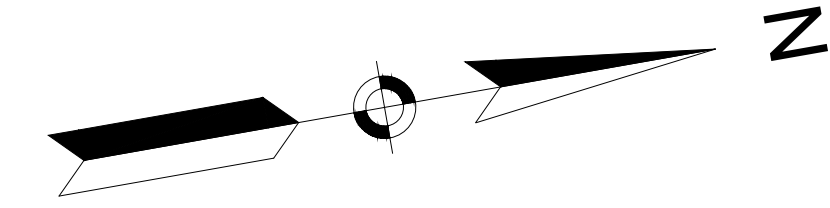


CONTINUED ON
SHEET NO. 20

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

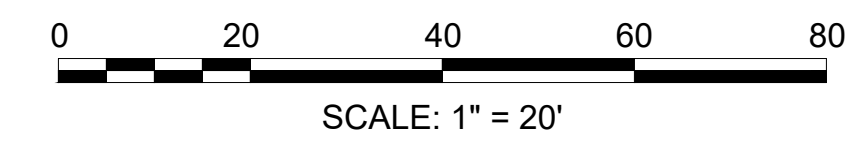
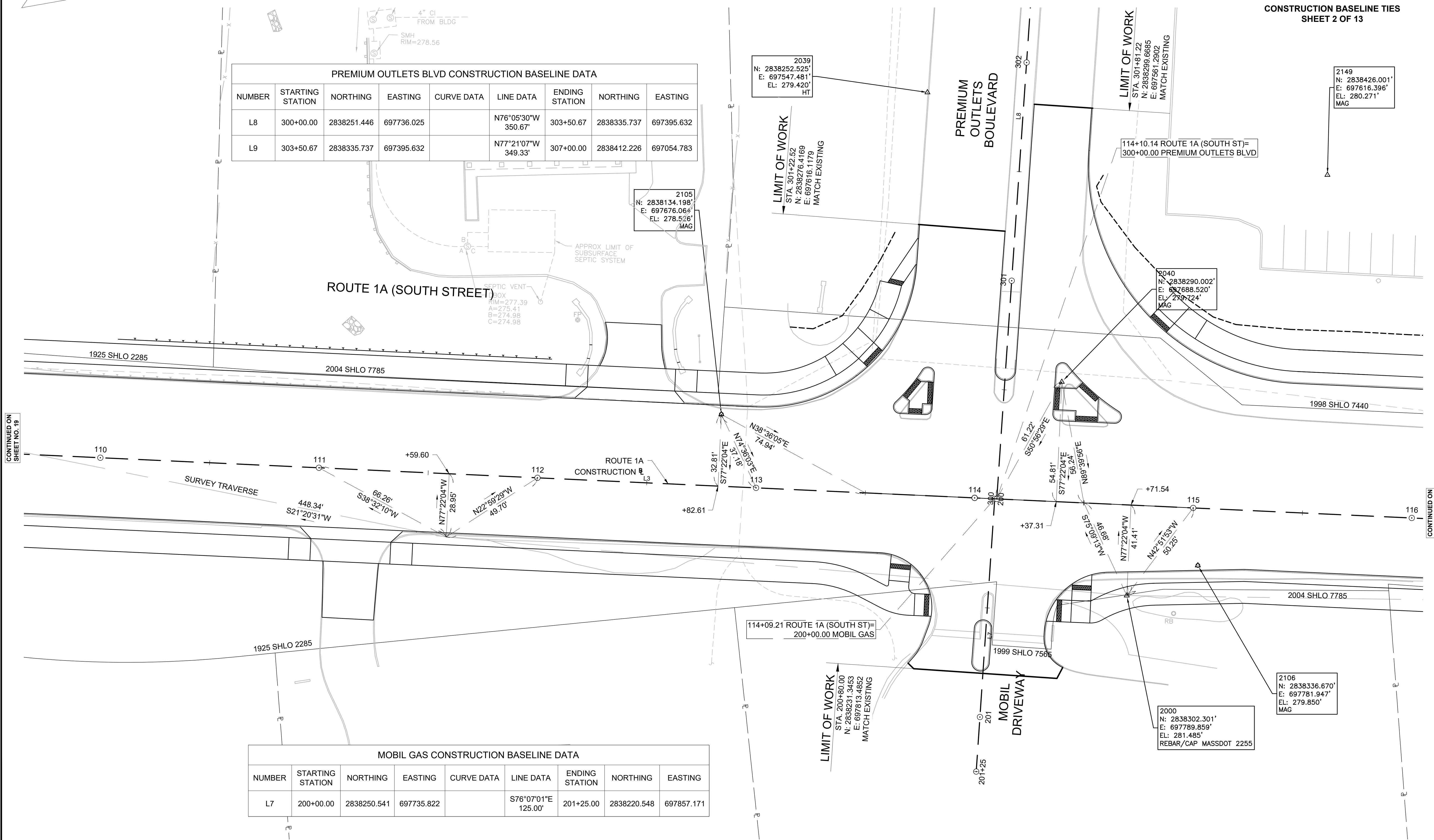
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	20	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 2 OF 13



NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	300+00.00	2838251.446	697736.025		N76°05'30"W 350.67'	303+50.67	2838335.737	697395.632
L9	303+50.67	2838335.737	697395.632		N77°21'07"W 349.33'	307+00.00	2838412.226	697054.783

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L7	200+00.00	2838250.541	697735.822		S76°07'01"E 125.00'	201+25.00	2838220.548	697857.171



CONTINUED ON SHEET NO. 19

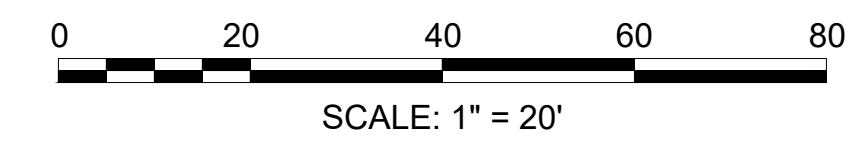
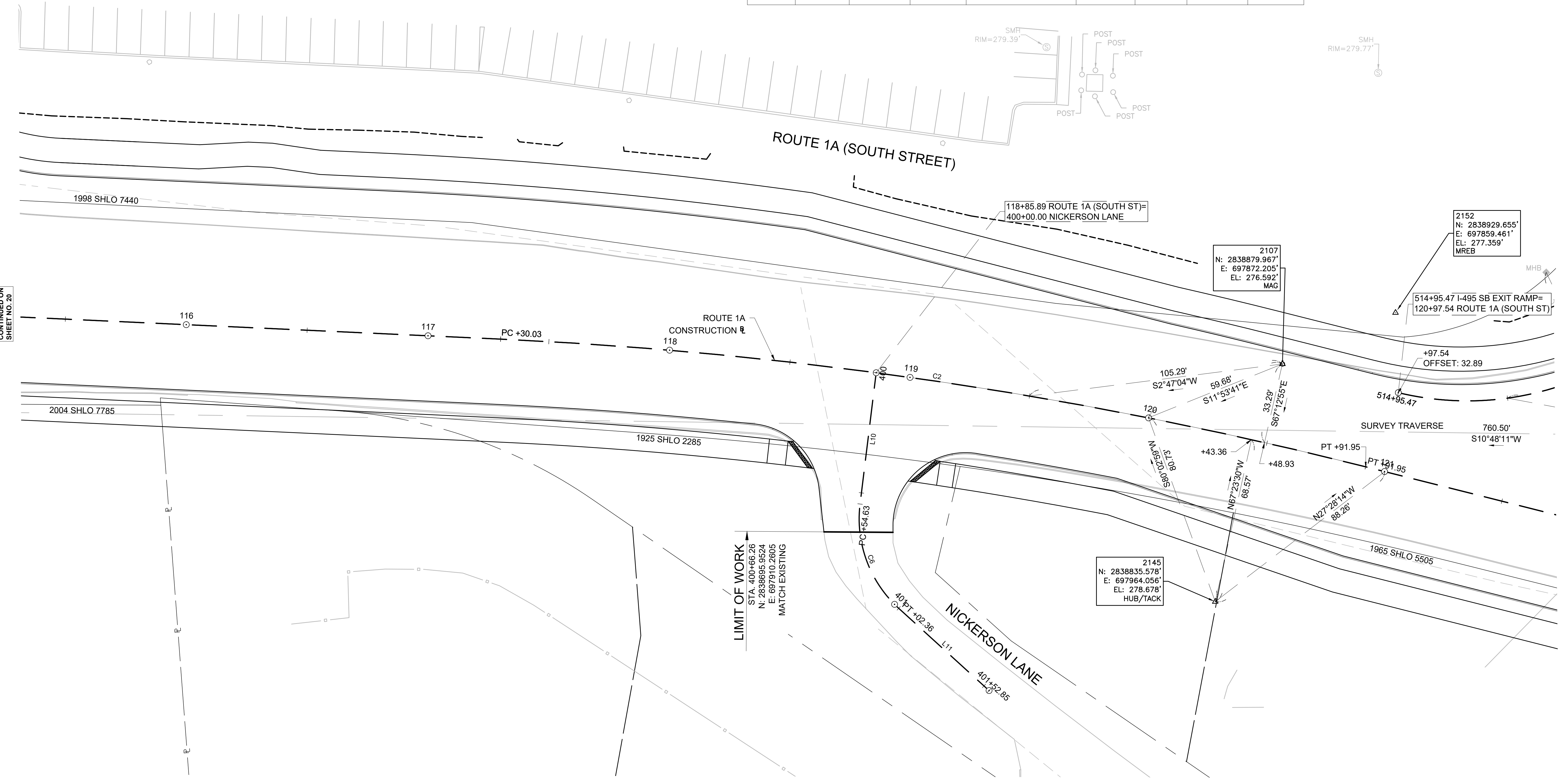
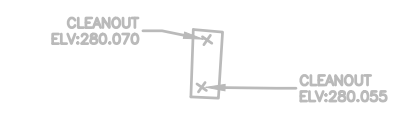
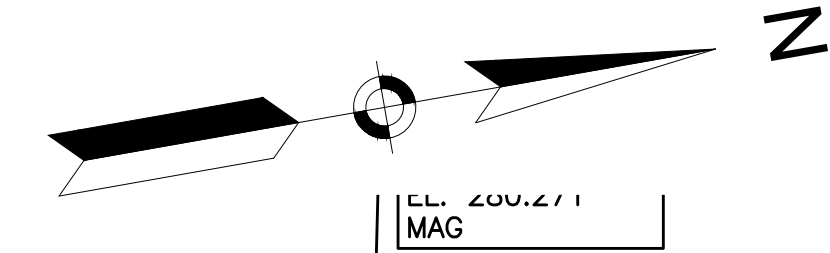
CONTINUED ON SHEET NO. 21

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	21	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 3 OF 13

NICKERSON LANE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	400+00.00	2838714.013	697846.603		S72°59'44"E 54.63'	400+54.63	2838698.035	697898.849
C6	400+54.63	2838698.035	697898.849	R=50.00' Δ=54°41'44" L=47.73' T=25.86'		401+02.36	2838706.283	697944.041
L11	401+02.36	2838706.283	697944.041		N52°18'32"E 50.48'	401+52.85	2838737.150	697983.991



CONTINUED ON SHEET NO. 20

CONTINUED ON SHEET NO. 22

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	22	258
PROJECT FILE NO. 603739			

I-495 SB ENTRANCE RAMP A CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C14	600+00.00	2839324.424	698080.011	R=182.00' Δ=80°11'31" L=254.73' T=153.24'		602+54.73	2839222.566	697868.853
C15	602+54.73	2839222.566	697868.853	R=360.00' Δ=25°05'52" L=157.69' T=80.13'		604+12.42	2839293.326	697729.334
C16	604+12.42	2839293.326	697729.334	R=180.00' Δ=101°22'45" L=318.49' T=219.84'		607+30.92	2839571.867	697729.974
C17	607+30.92	2839571.867	697729.974	R=230.00' Δ=44°40'33" L=179.34' T=94.51'		609+10.26	2839622.518	697897.308
L15	609+10.26	2839622.518	697897.308		S84°30'10"E 241.78'	611+52.04	2839599.356	698137.975

I-495 SB EXIT RAMP CONSTRUCTION BASELINE DATA

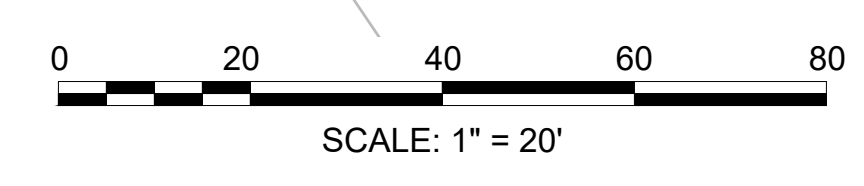
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C8	500+00.00	2839925.296	696952.792	R=8022.00' Δ=2°54'31" L=407.23' T=203.66'		504+07.23	2839798.904	697339.870
C7	500+00.00	2839925.296	696952.792	R=8022.00' Δ=2°54'31" L=407.23' T=203.66'		504+07.23	2839798.904	697339.870
C9	504+07.23	2839798.904	697339.870	R=330.00' Δ=61°19'17" L=353.19' T=195.63'		507+60.42	2839551.595	697568.161
L12	507+60.42	2839551.595	697568.161		S12°02'59"E 103.05'	508+63.47	2839450.812	697589.674
C10	508+63.47	2839450.812	697589.674	R=440.00' Δ=30°40'11" L=235.53' T=120.66'		510+99.00	2839244.166	697696.718
L13	510+99.00	2839244.166	697696.718		S42°43'10"E 255.37'	513+54.37	2839056.551	697869.962

I-495 SB EXIT RAMP LT TURN LANE CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	1000+00.00	2839115.163	698013.573		N65°50'52"W 262.75'	1002+62.75	2839222.670	697773.823
C13	1002+62.75	2839222.670	697773.823	R=239.00' Δ=31°21'43" L=130.82' T=67.09'		1003+93.57	2839305.426	697674.613
C12	1003+93.57	2839305.426	697674.613	R=419.00' Δ=22°26'11" L=164.08' T=83.10'		1005+57.65	2839455.196	697610.212

EXISTING BOUND LOCATIONS

STATION	OFFSET	NORTHING	EASTING
514+12.78	45.65' RT	2838993.9339	697854.0114
703+82.12	53.299' RT	2839345.7043	698274.7593



2001
N: 2839049.323'
E: 697932.401'
EL: 274.999'
REBAR/CAP MASSDOT 2254

2152
N: 2838929.655'
E: 697859.461'
EL: 277.359'
MREB

2143
N: 2839310.867'
E: 698069.724'
EL: 274.948'
MAG

2108
N: 2839017.915'
E: 697994.419'
EL: 275.374'
MAG

2029
N: 2839
E: 6983
EL: 282
MAG

CONTINUED ON
SHEET NO. 21

CONTINUED ON
SHEET NO. 30

CONTINUED ON
SHEET NO. 23

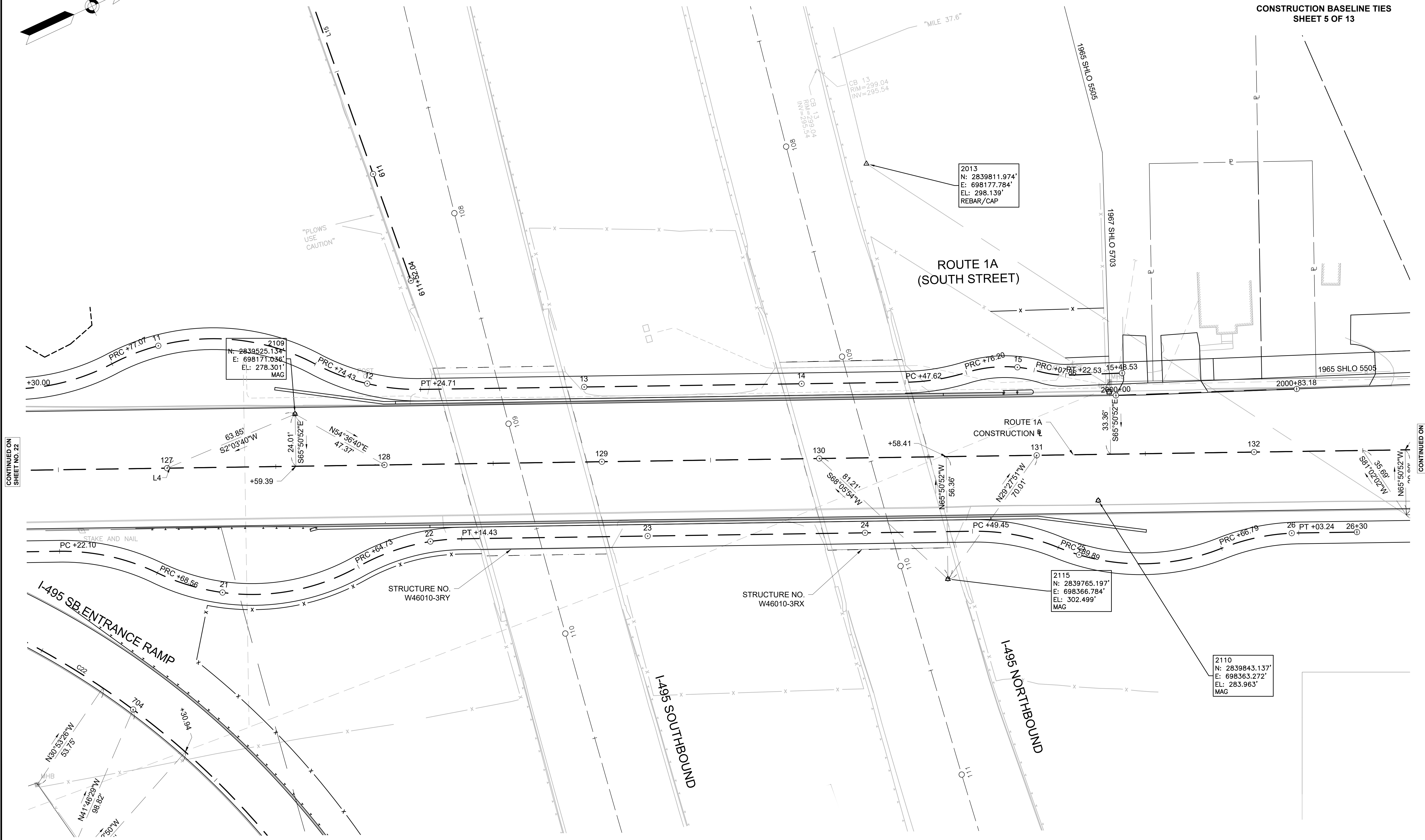
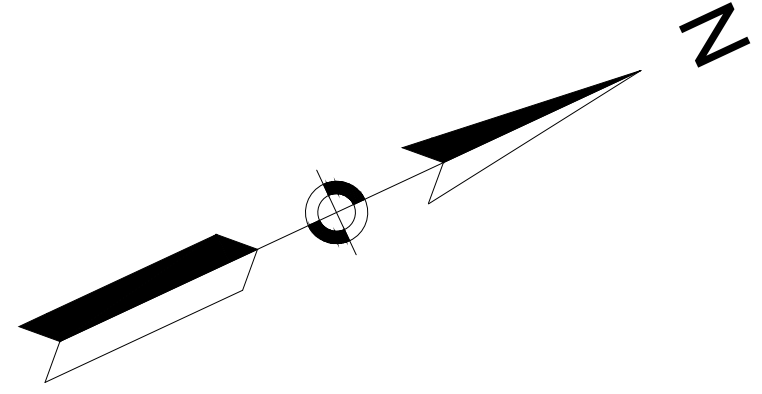
CONTINUED ON
SHEET NO. 26

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	23	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 5 OF 13

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
131+34.03	33.36' LT	2839870.9510	698315.9230



2013
N: 2839811.974'
E: 698177.784'
EL: 298.139'
REBAR/CAP

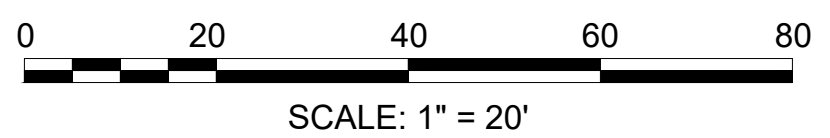
2115
N: 2839765.197'
E: 698366.784'
EL: 302.499'
MAG

2110
N: 2839843.137'
E: 698363.272'
EL: 283.963'
MAG

CONTINUED ON
SHEET NO. 22

CONTINUED ON
SHEET NO. 24

CONTINUED ON
SHEET NO. 26



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

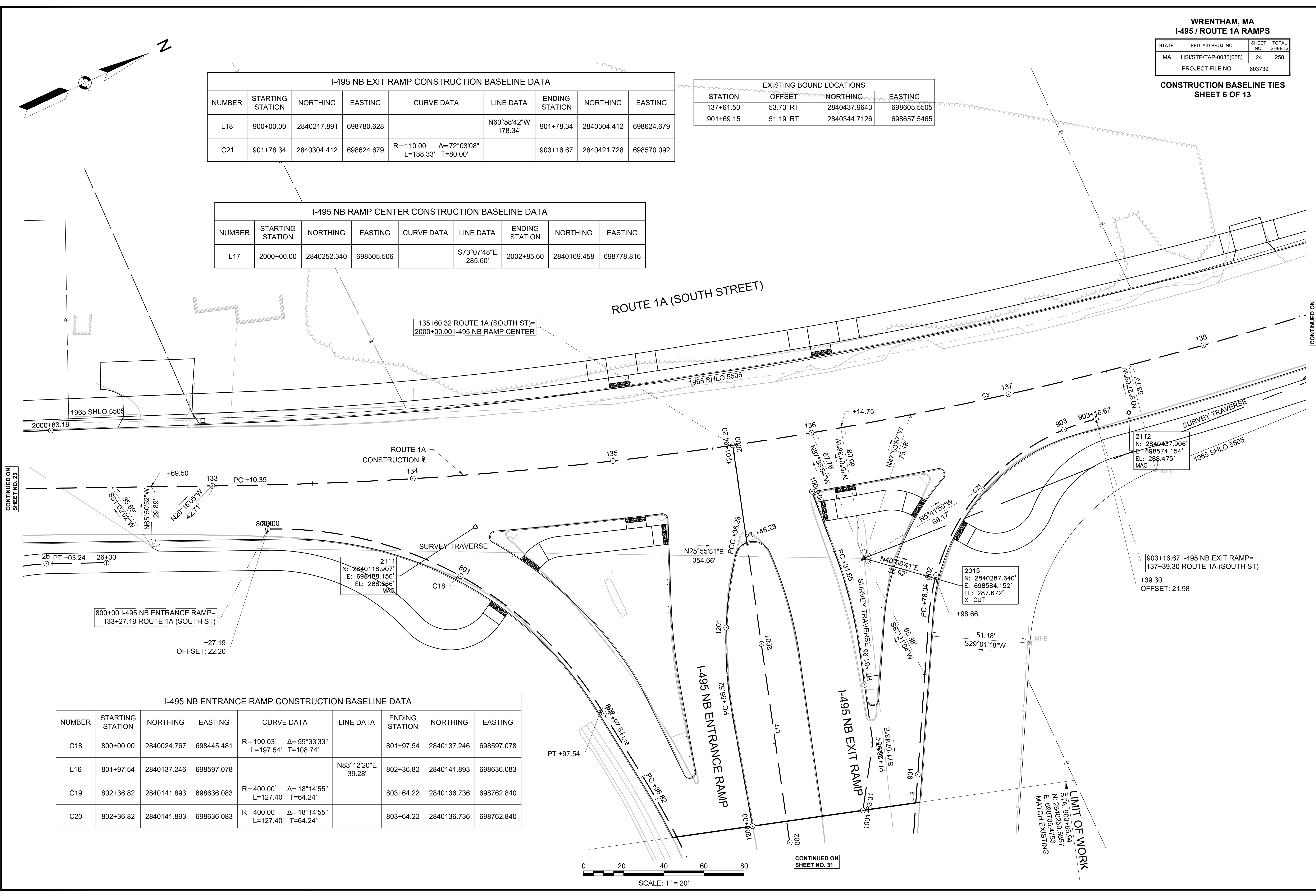
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	24	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 6 OF 13

I-495 NB EXIT RAMP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L18	900+00.00	2840217.891	698780.628		N60°58'42"W 178.34'	901+78.34	2840304.412	698624.679
C21	901+78.34	2840304.412	698624.679	R=110.00' Δ=72°03'08" L=138.33' T=80.00'		903+16.67	2840421.728	698570.092

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
137+61.50	53.73' RT	2840437.9643	698605.5505
901+69.15	51.19' RT	2840344.7126	698657.5465

I-495 NB RAMP CENTER CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L17	2000+00.00	2840252.340	698505.506		S73°07'48"E 285.60'	2002+85.60	2840169.458	698778.816



I-495 NB ENTRANCE RAMP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C18	800+00.00	2840024.767	698445.481	R=190.03' Δ=59°33'33" L=197.54' T=108.74'		801+97.54	2840137.246	698597.078
L16	801+97.54	2840137.246	698597.078		N83°12'20"E 39.28'	802+36.82	2840141.893	698636.083
C19	802+36.82	2840141.893	698636.083	R=400.00' Δ=18°14'55" L=127.40' T=64.24'		803+64.22	2840136.736	698762.840
C20	802+36.82	2840141.893	698636.083	R=400.00' Δ=18°14'55" L=127.40' T=64.24'		803+64.22	2840136.736	698762.840

CONTINUED ON
SHEET NO. 23

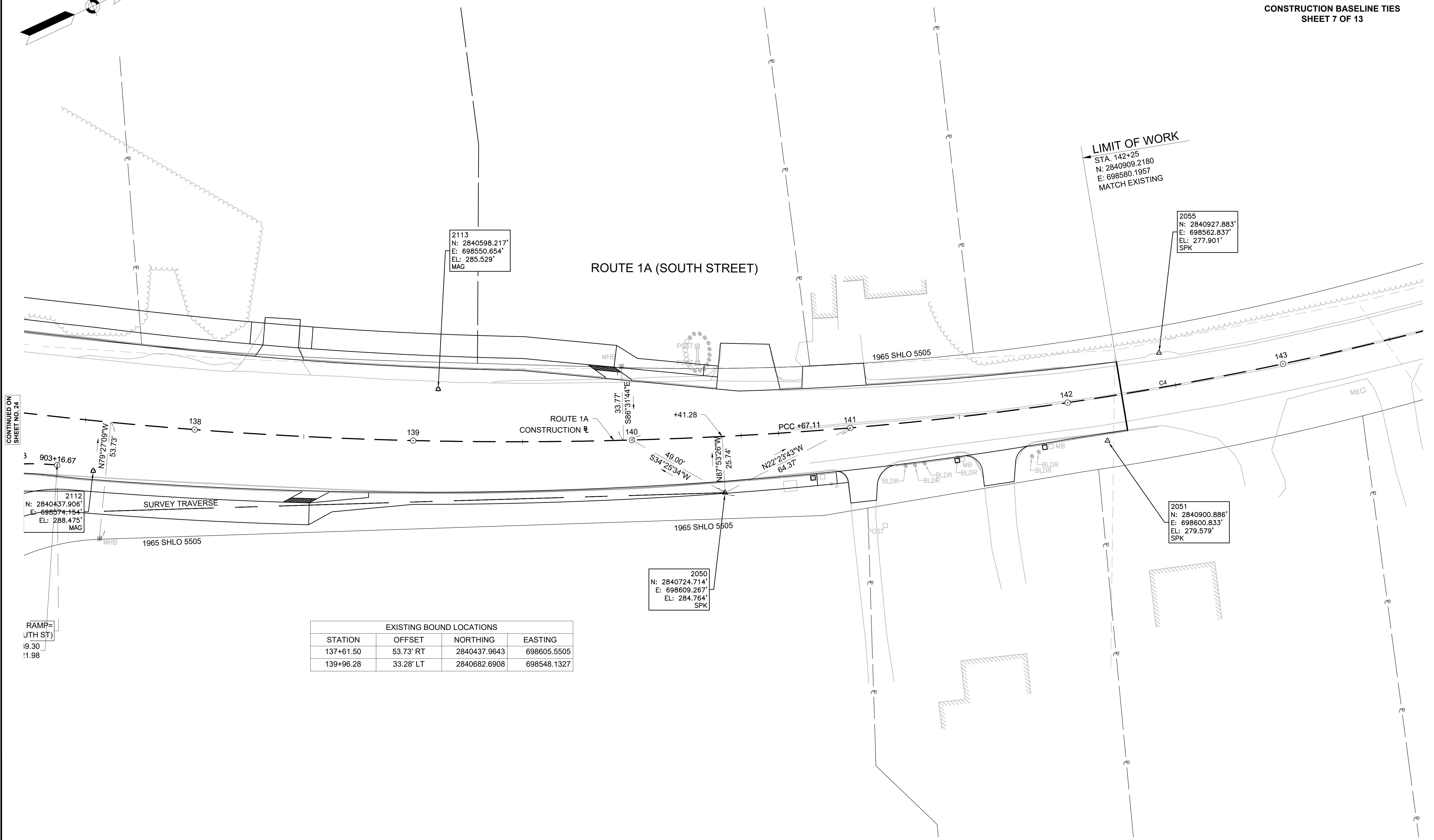
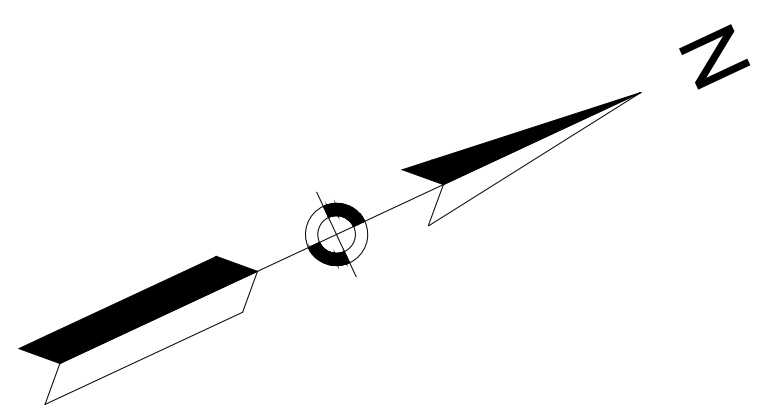
CONTINUED ON
SHEET NO. 25

CONTINUED ON
SHEET NO. 31

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	25	258
PROJECT FILE NO.		603739	

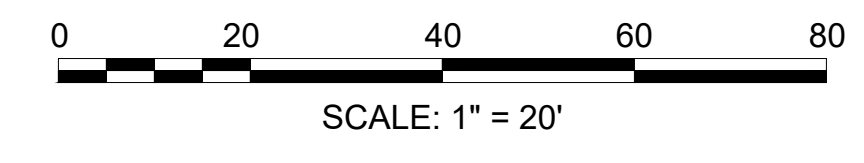
CONSTRUCTION BASELINE TIES
SHEET 7 OF 13



CONTINUED ON
SHEET NO. 24

RAMP=
JTH ST)
19.30
1.98

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
137+61.50	53.73' RT	2840437.9643	698605.5505
139+96.28	33.28' LT	2840682.6908	698548.1327



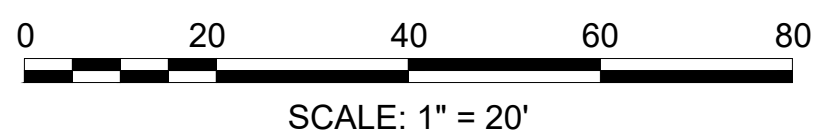
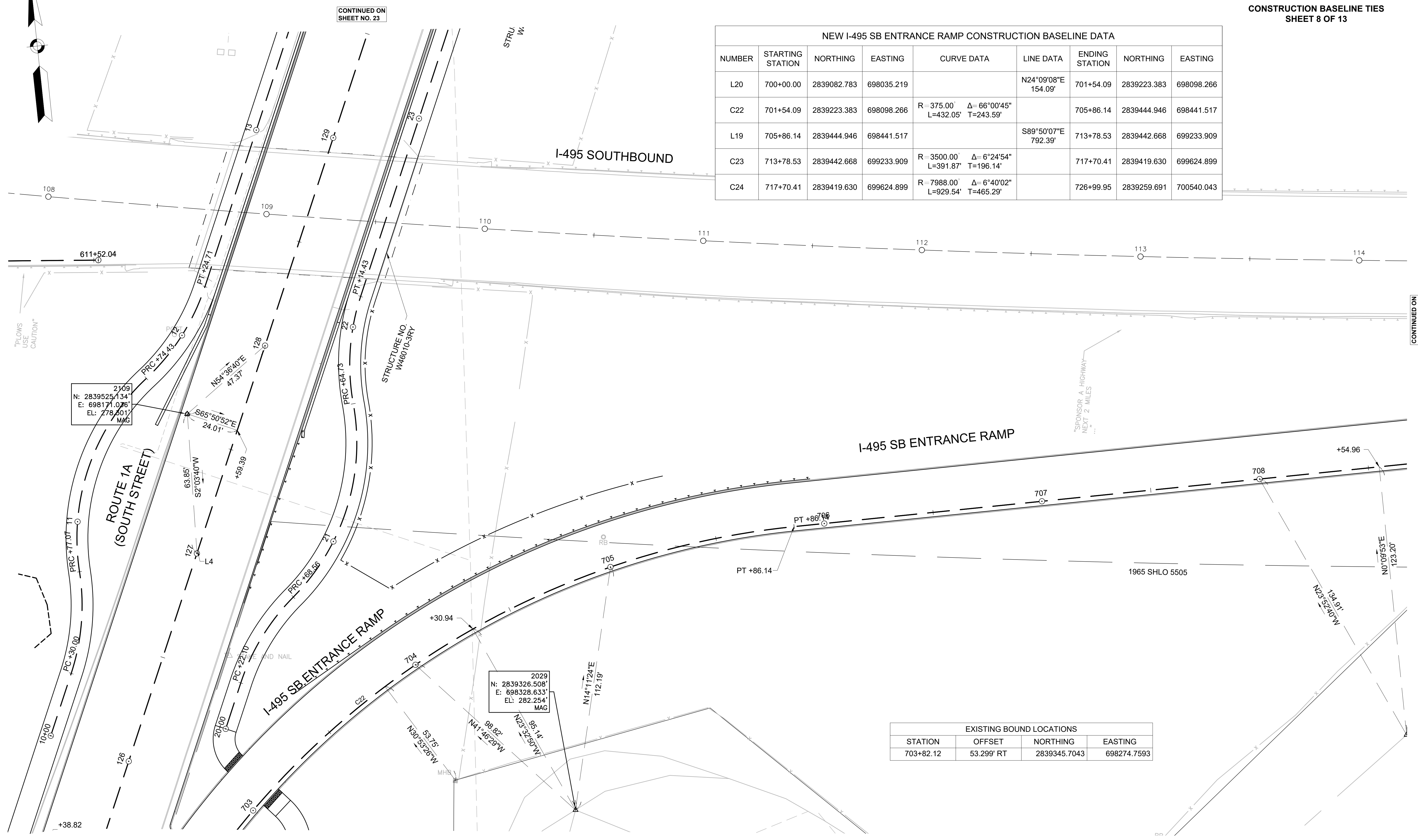
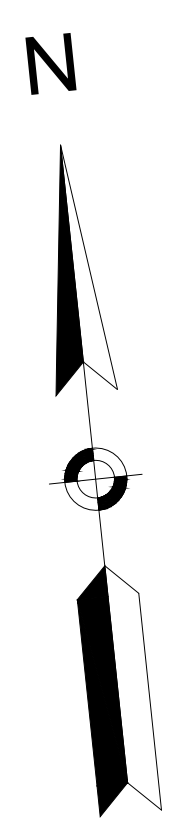
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	26	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 8 OF 13

NEW I-495 SB ENTRANCE RAMP CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L20	700+00.00	2839082.783	698035.219		N24°09'08"E 154.09'	701+54.09	2839223.383	698098.266
C22	701+54.09	2839223.383	698098.266	R = 375.00' Δ = 66°00'45" L = 432.05' T = 243.59'		705+86.14	2839444.946	698441.517
L19	705+86.14	2839444.946	698441.517		S89°50'07"E 792.39'	713+78.53	2839442.668	699233.909
C23	713+78.53	2839442.668	699233.909	R = 3500.00' Δ = 6°24'54" L = 391.87' T = 196.14'		717+70.41	2839419.630	699624.899
C24	717+70.41	2839419.630	699624.899	R = 7988.00' Δ = 6°40'02" L = 929.54' T = 465.29'		726+99.95	2839259.691	700540.043

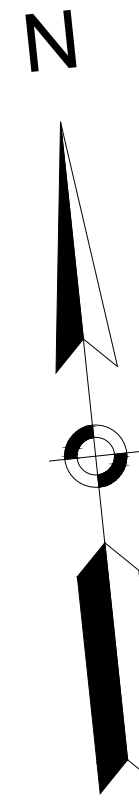
EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
703+82.12	53.299' RT	2839345.7043	698274.7593



CONTINUED ON
SHEET NO. 22

CONTINUED ON
SHEET NO. 23

CONTINUED ON
SHEET NO. 27



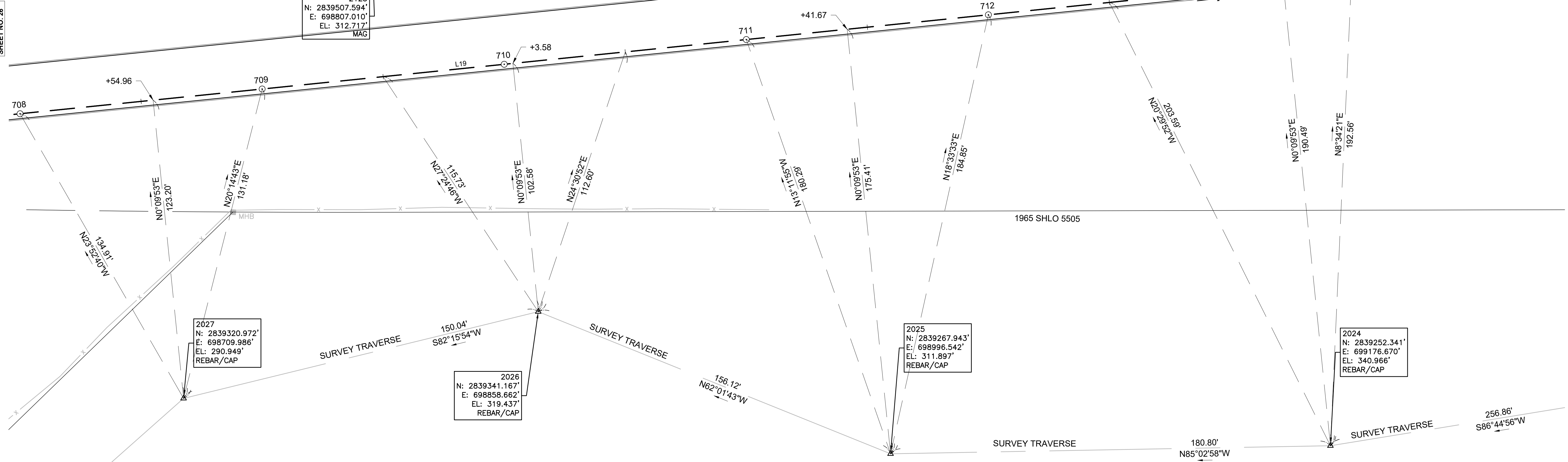
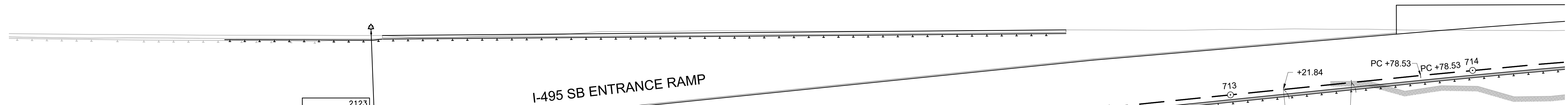
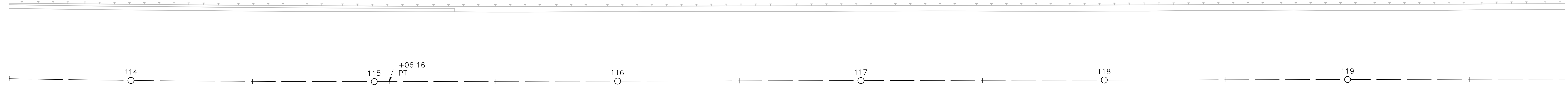
**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	27	258
PROJECT FILE NO.		603739	

**CONSTRUCTION BASELINE TIES
SHEET 9 OF 13**

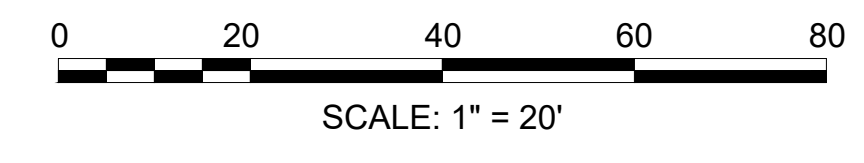
EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
708+82.92	49.07' RT	2839395.0214	698738.1564

I-495 SOUTHBOUND



CONTINUED ON
SHEET NO. 26

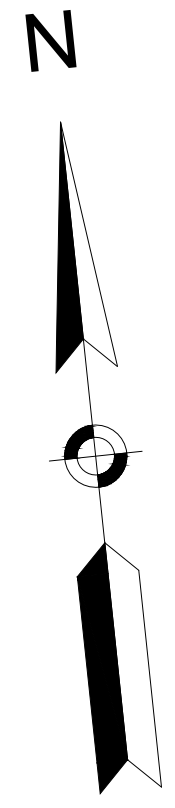
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SHEET NO. 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

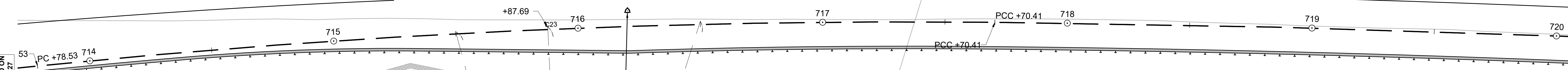
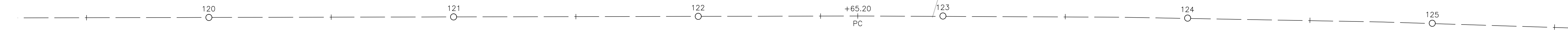
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	28	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 10 OF 13



I-495 SOUTHBOUND

I-495 SB ENTRANCE RAMP



2124
N: 2839440.036'
E: 699476.034'
EL: 327.777'
MAG

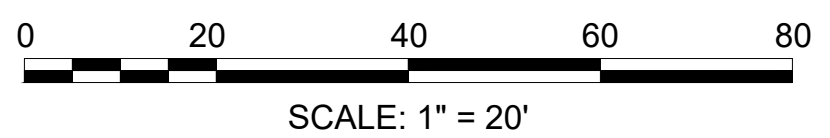
2021
N: 2839387.737'
E: 699577.089'
EL: 343.990'
DH

2063
N: 2839312.843'
ΔE: 699806.367'
EL: 363.930'
SPK

2023
N: 2839266.908'
E: 699433.121'
EL: 370.021'
REBAR/CAP

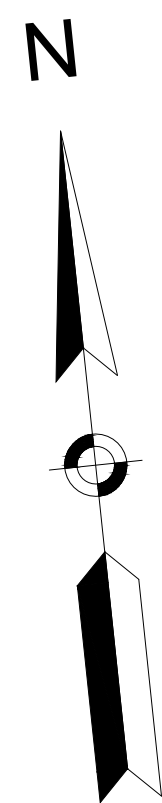
2022
N: 2839248.452'
E: 699542.088'
EL: 363.554'
REBAR/CAP

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
717+13.47	117.32' RT	2839310.4626	699557.3833



CONTINUED ON SHEET NO. 27

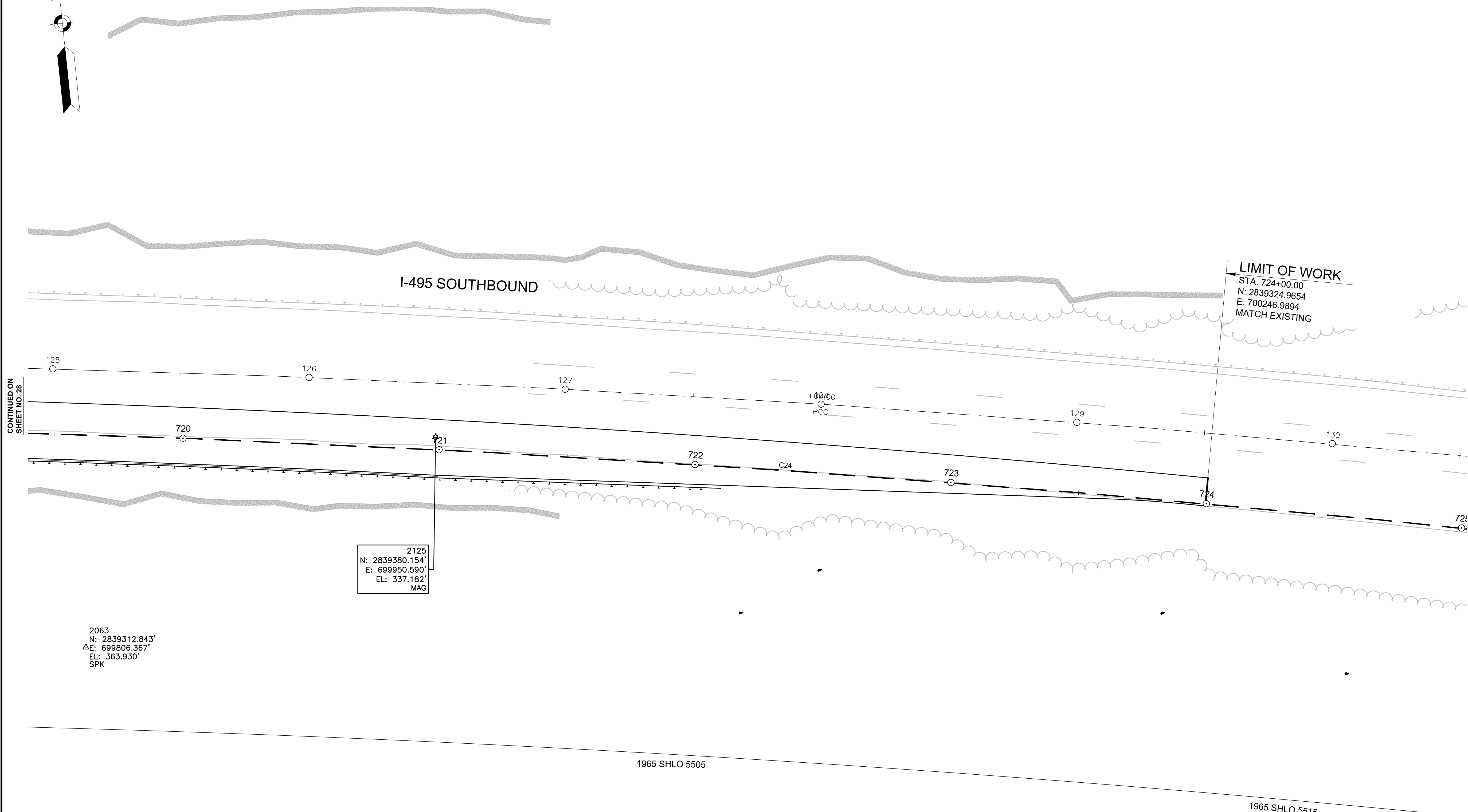
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WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	29	258
PROJECT FILE NO.		603739	

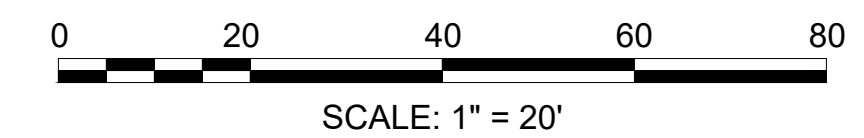
CONSTRUCTION BASELINE TIES
SHEET 11 OF 13



CONTINUED ON
SHEET NO. 28

2125
N: 2839380.154'
E: 699950.590'
EL: 337.182'
MAG

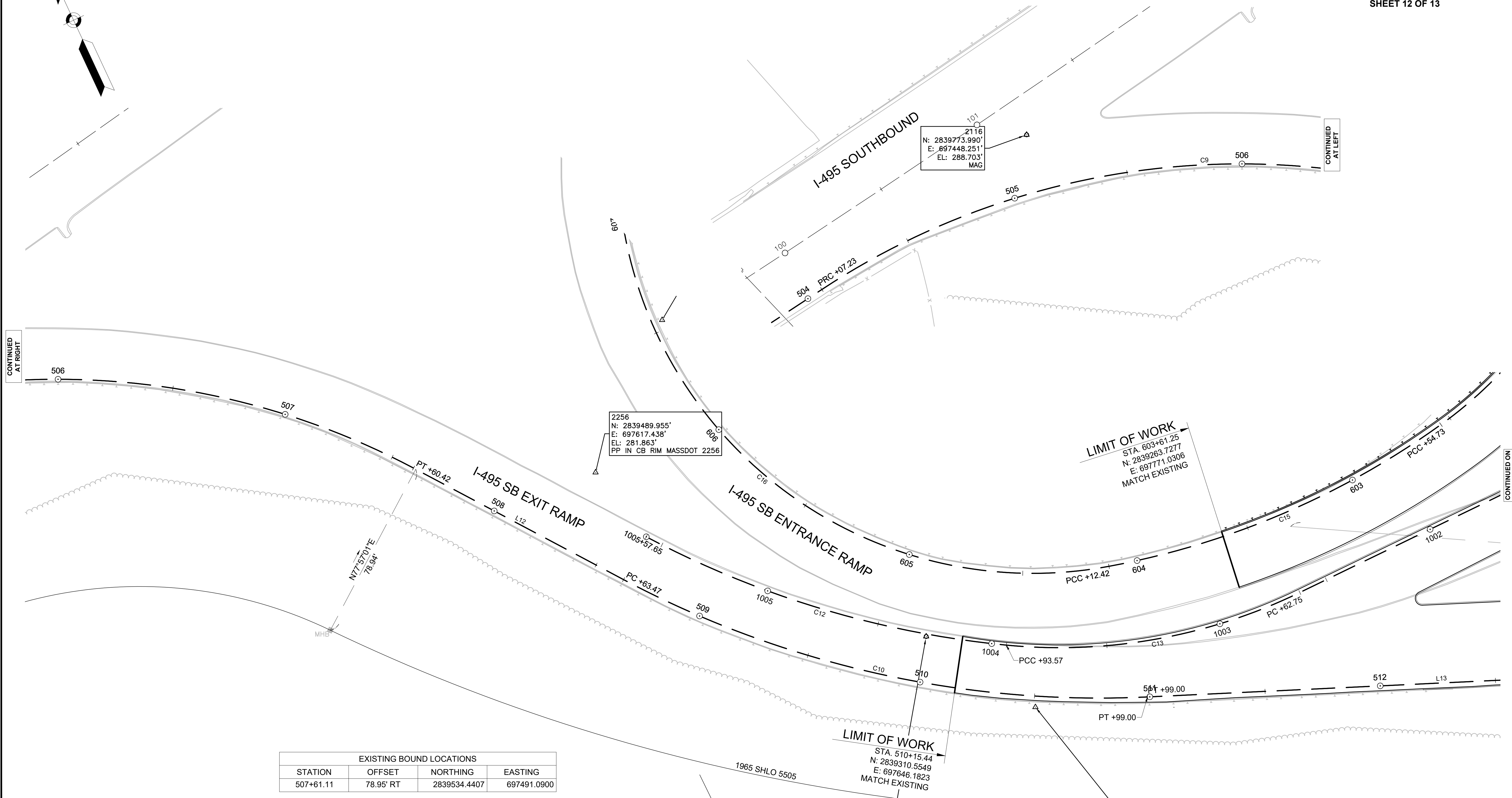
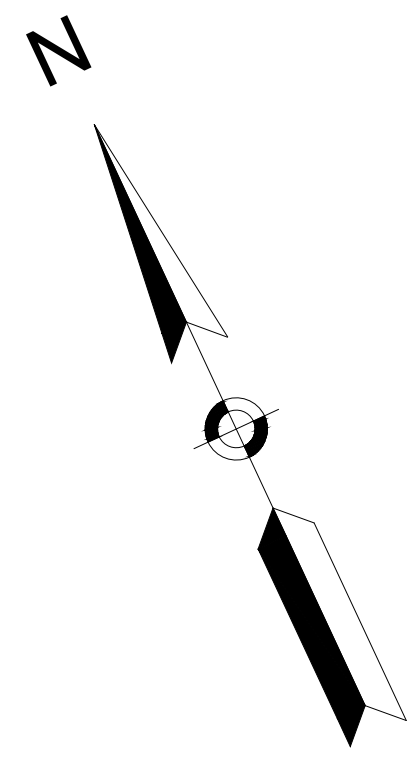
2063
N: 2839312.843'
ΔE: 699806.367'
EL: 363.930'
SPK



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	30	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 12 OF 13



2116
N: 2839773.990'
E: 697448.251'
EL: 288.703'
MAG

2256
N: 2839489.955'
E: 697617.438'
EL: 281.863'
PP IN CB RIM MASSDOT 2256

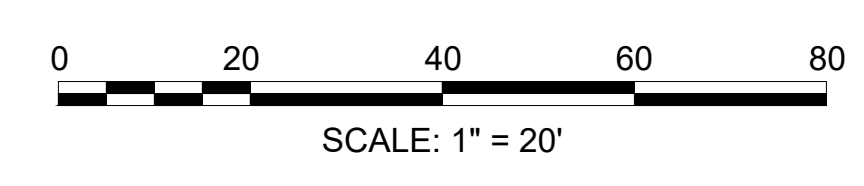
LIMIT OF WORK
STA. 603+61.25
N: 2839263.7277
E: 697771.0306
MATCH EXISTING

LIMIT OF WORK
STA. 510+15.44
N: 2839310.5549
E: 697646.1823
MATCH EXISTING

2153
N: 2839278.532'
E: 697662.102'
EL: 278.986'
MAG

2141
N: 2839334.496'
E: 697655.114'
EL: 278.115'
MAG

EXISTING BOUND LOCATIONS			
STATION	OFFSET	NORTHING	EASTING
507+61.11	78.95' RT	2839534.4407	697491.0900



CONTINUED AT RIGHT

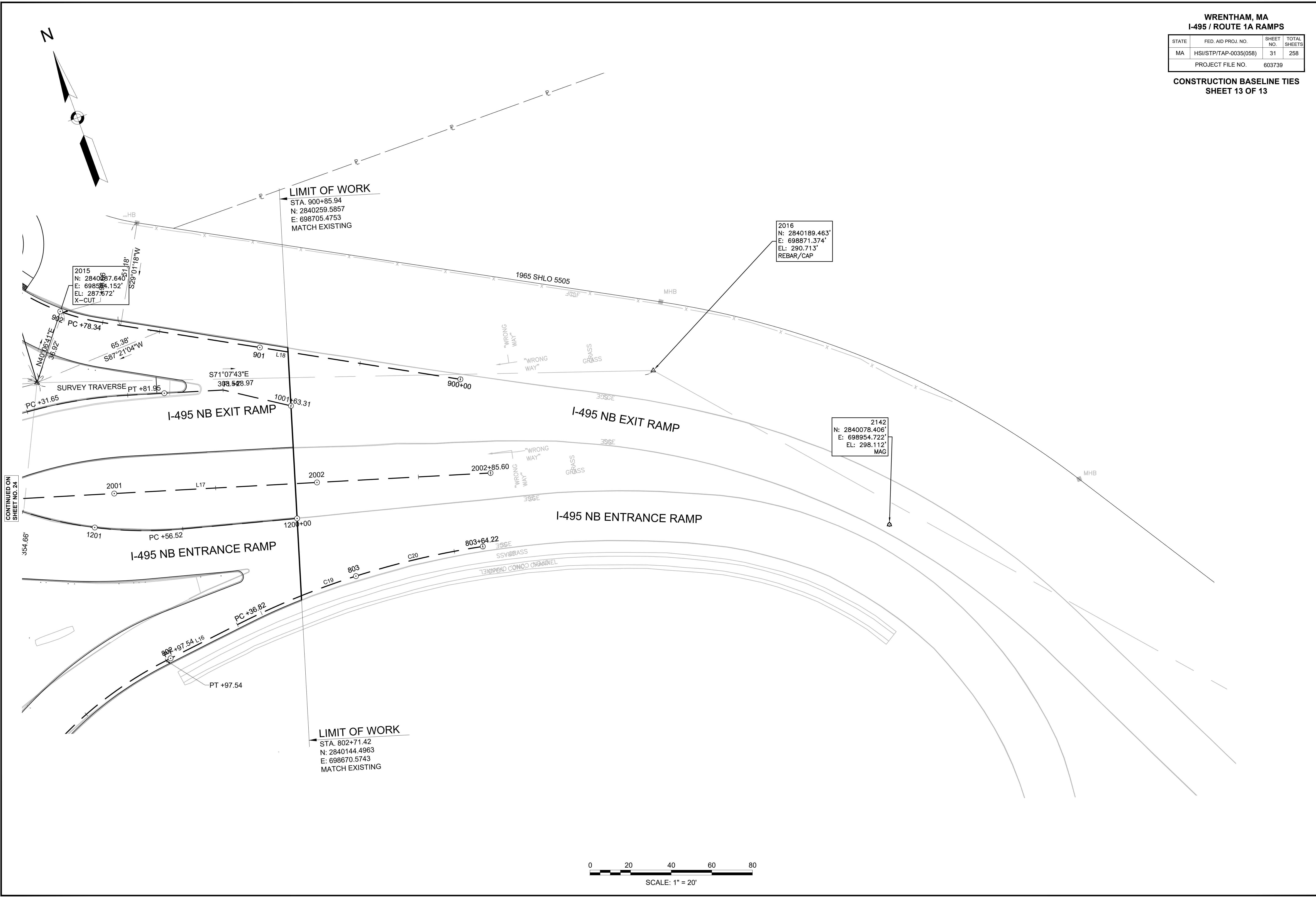
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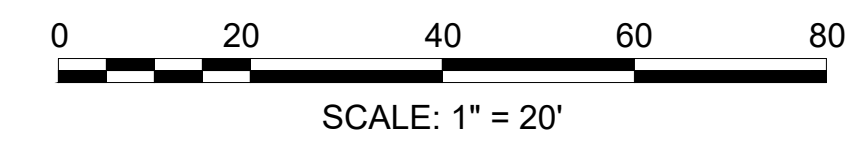
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

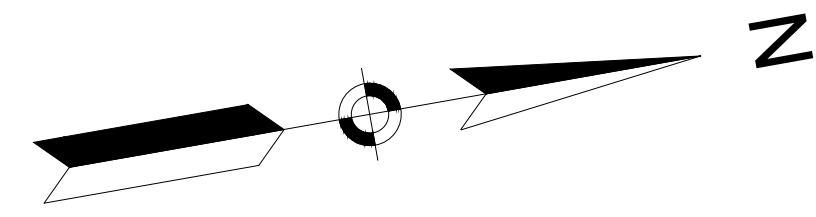
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	31	258
PROJECT FILE NO.		603739	

CONSTRUCTION BASELINE TIES
SHEET 13 OF 13



CONTINUED ON
SHEET NO. 24





HIGHWAY GUARD DETAILS

TRAILING ANCHORAGE: STA. 106+72.3 LT TO STA. 106+81.7 LT
GUARDRAIL, TL-2: STA. 106+81.7 LT TO STA. 108+56.7 LT (8' STEEL DEEP POSTS)
TANGENT END TREATMENT, TL-2: STA. 108+56.7 LT TO STA. 108+83.7 LT

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE DRAINAGE AND UTILITY PLANS

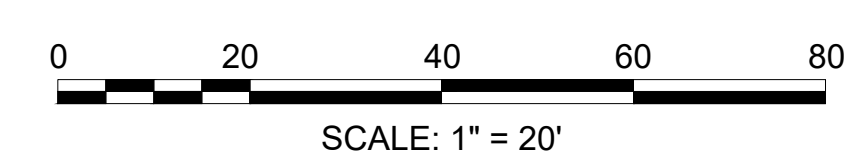
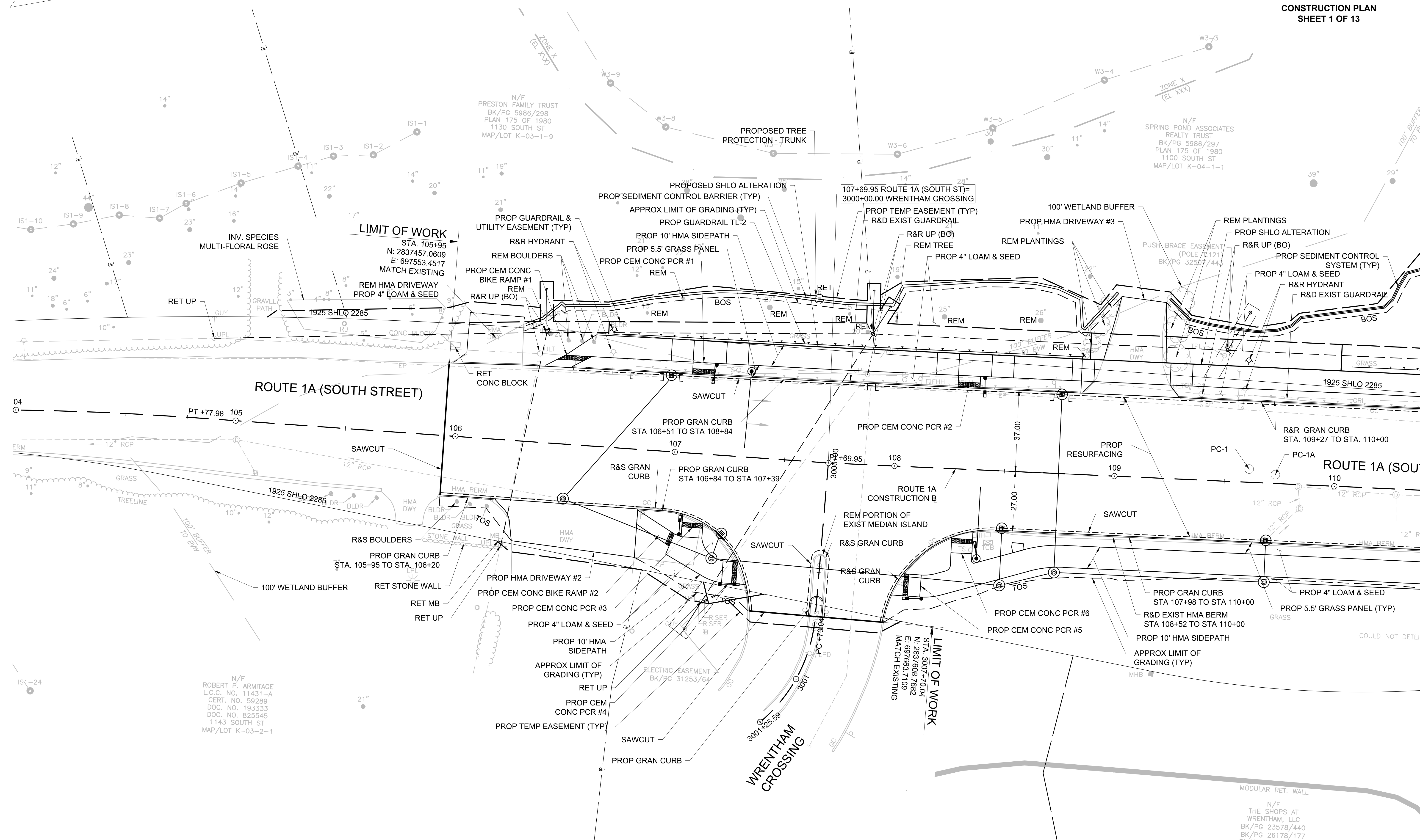
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	32	258
PROJECT FILE NO. 603739			

CONSTRUCTION PLAN
SHEET 1 OF 13



N/F
THE SHOPS AT
WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
PLAN 875 OF 1985
PLAN 301 OF 2001
1007 SOUTH ST
MAP/LOT K-04-3-12

FOR PROFILE, SEE SHEET NO. 45

603739_HD32-44(CONSTRUCTION PLANS).DWG
Printed on: 7-Apr-2024 11:15 PM
CONTINUED ON SHEET NO. 33

HIGHWAY GUARD DETAILS

TRAILING ANCHORAGE: STA 110+05.6 LT TO STA 110+15.0 LT
GUARDRAIL, TL-2: STA 110+15.0 LT TO STA 111+77.5 LT (8' STEEL DEEP POSTS)
TANGENT END TREATMENT, TL-2: STA 111+77.5 LT TO STA 112+04.5 LT

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE DRAINAGE AND UTILITY PLANS

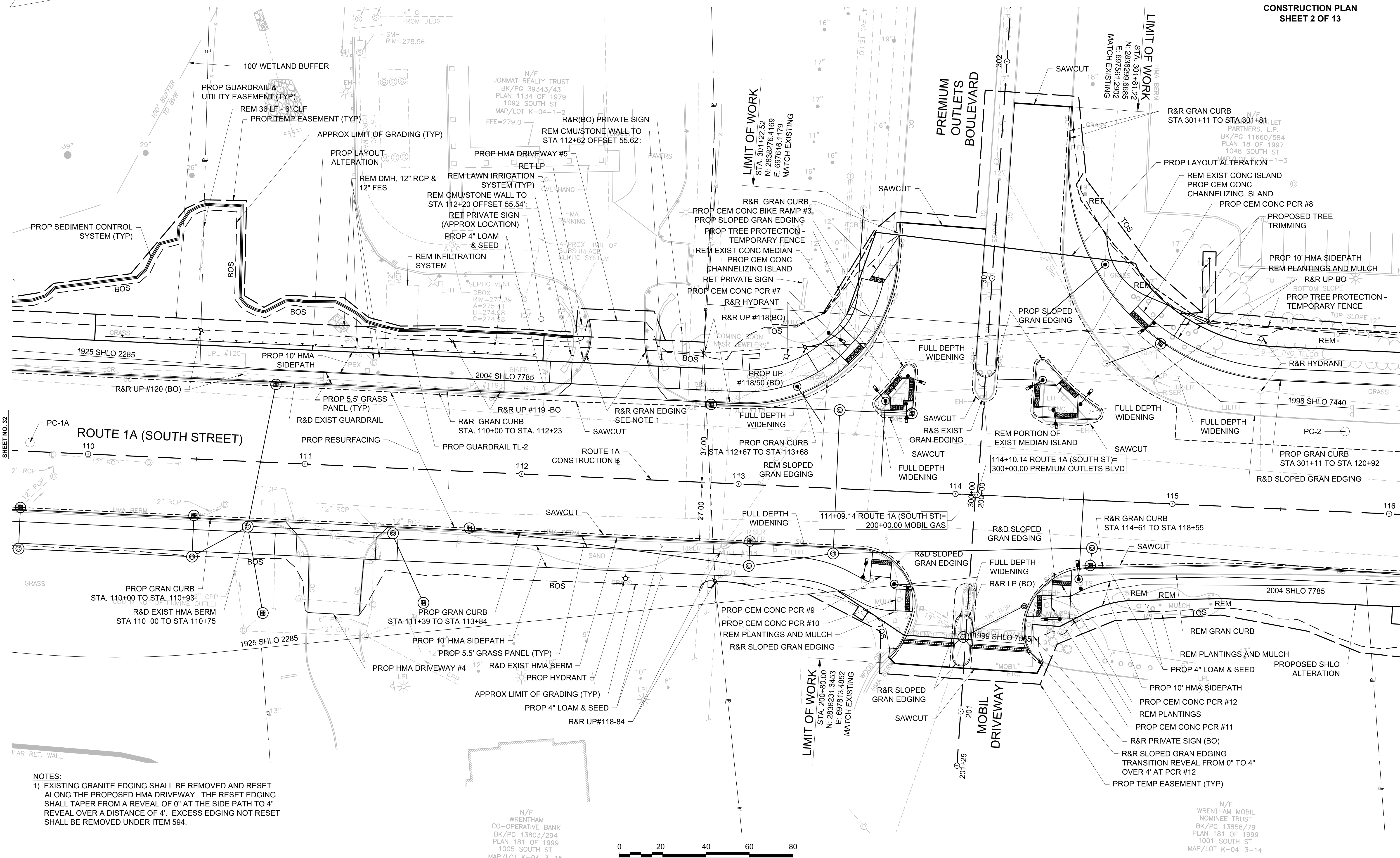
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	33	258
PROJECT FILE NO.		603739	

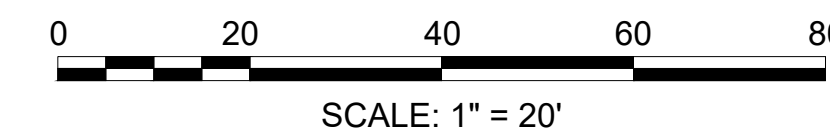
CONSTRUCTION PLAN
SHEET 2 OF 13



CONTINUED ON SHEET NO. 32

CONTINUED ON SHEET NO. 34

NOTES:
1) EXISTING GRANITE EDGING SHALL BE REMOVED AND RESET ALONG THE PROPOSED HMA DRIVEWAY. THE RESET EDGING SHALL TAPER FROM A REVEAL OF 0" AT THE SIDE PATH TO 4" REVEAL OVER A DISTANCE OF 4'. EXCESS EDGING NOT RESET SHALL BE REMOVED UNDER ITEM 594.



N/F
WRENTHAM MOBIL
NOMINEE TRUST
BK/PG 13858/79
PLAN 181 OF 1999
1001 SOUTH ST
MAP/LOT K-04-3-14

FOR PROFILE, SEE SHEET NO. 46

603739_HD32-44(CONSTRUCTION PLANS).DWG Ploited on 7-Apr-2024 11:17 PM

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

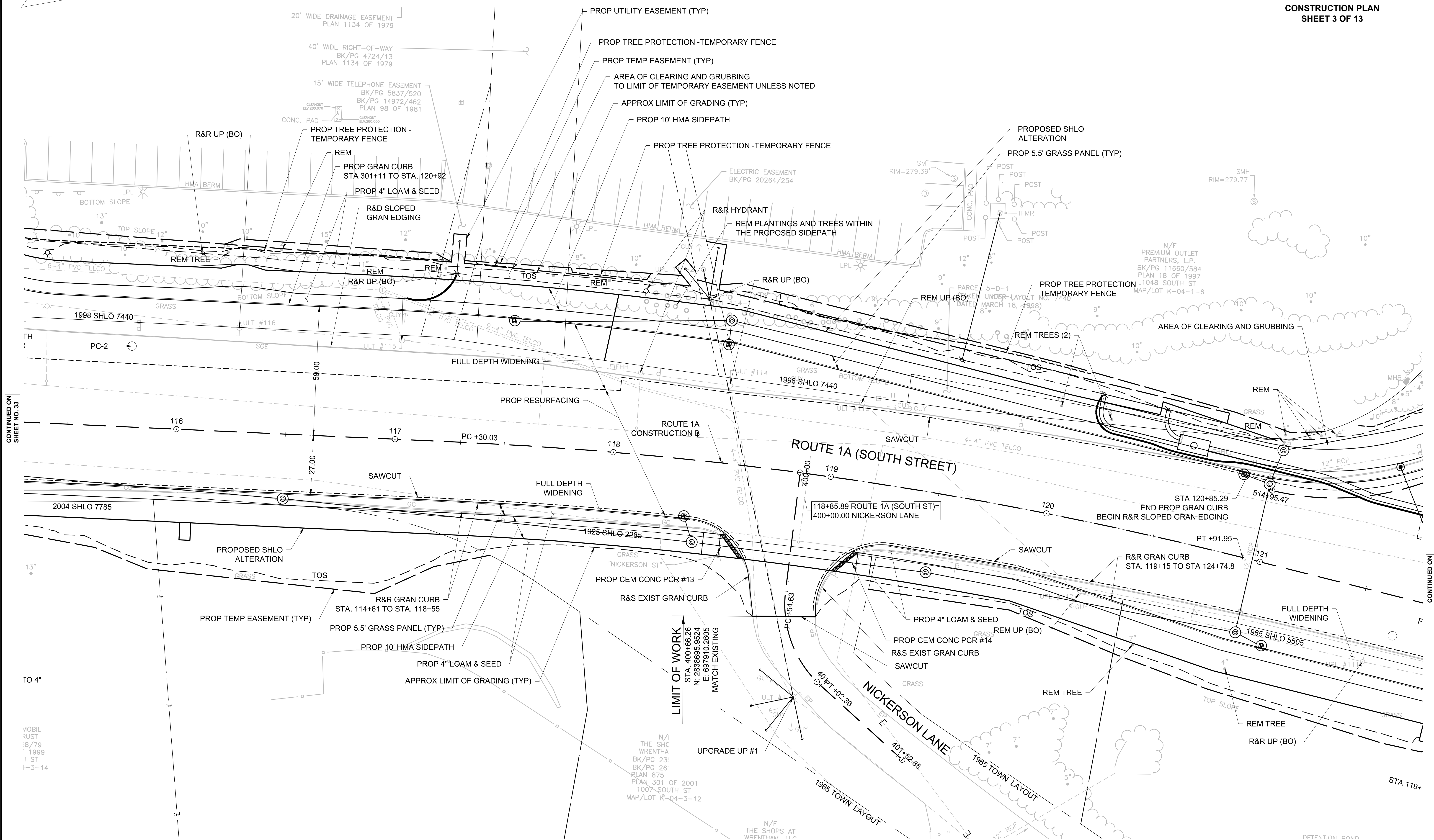
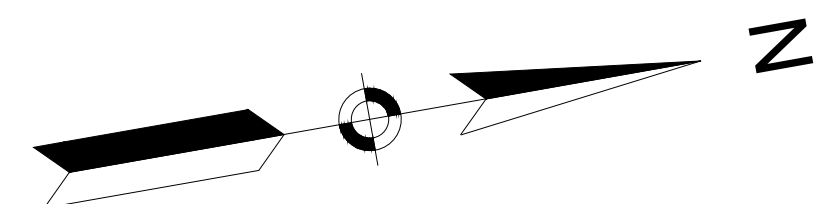
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

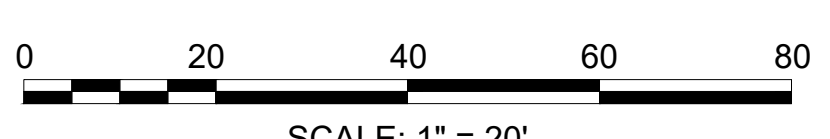
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	34	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 3 OF 13



CONTINUED ON SHEET NO. 33

CONTINUED ON SHEET NO. 35



FOR PROFILE, SEE SHEET NO. 47

603739_HD32-44(CONSTRUCTION PLANS)DWG Pinned on 7-Apr-2024 11:19 PM

HIGHWAY GUARD DETAILS

FLARED END TREATMENT, TL-3: STA 601+47.5 RT TO STA 601+74.5 RT
GUARDRAIL, TL-3: STA 601+74.5 RT TO STA 603+26.8 RT

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

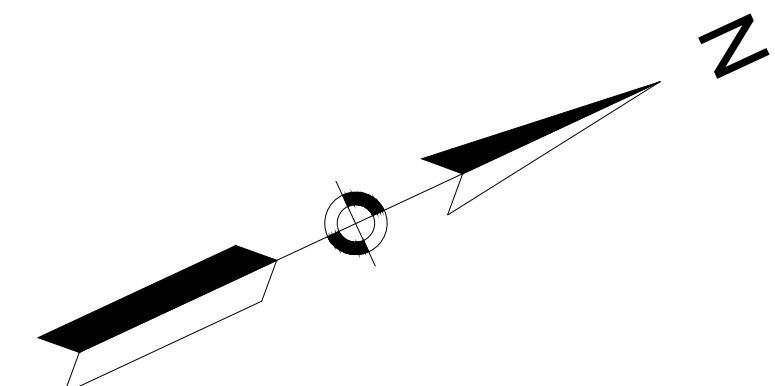
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

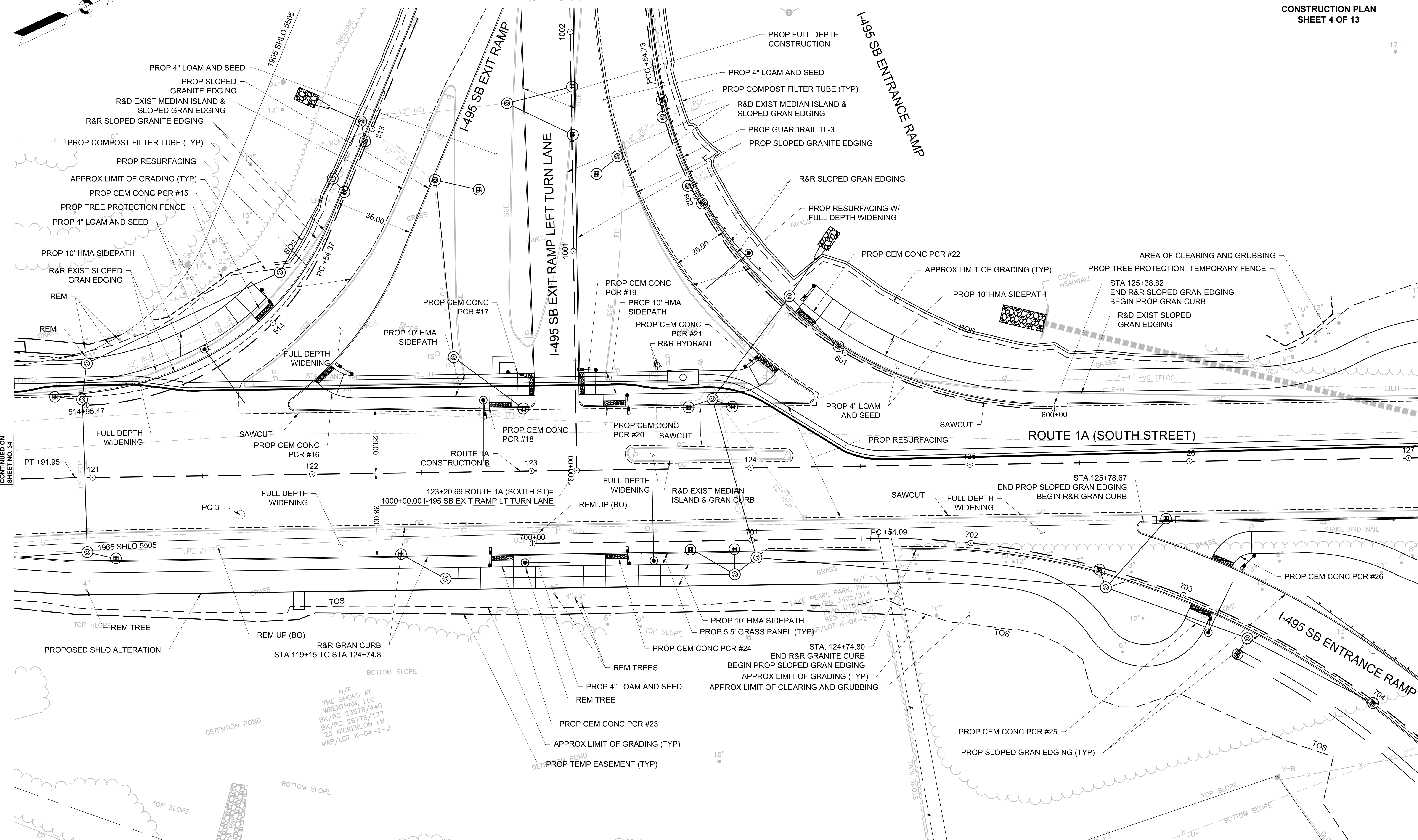
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	35	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 4 OF 13

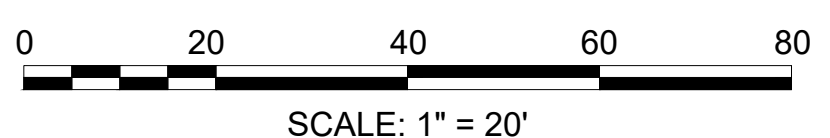


CONTINUED ON
SHEET NO. 43



CONTINUED ON
SHEET NO. 34

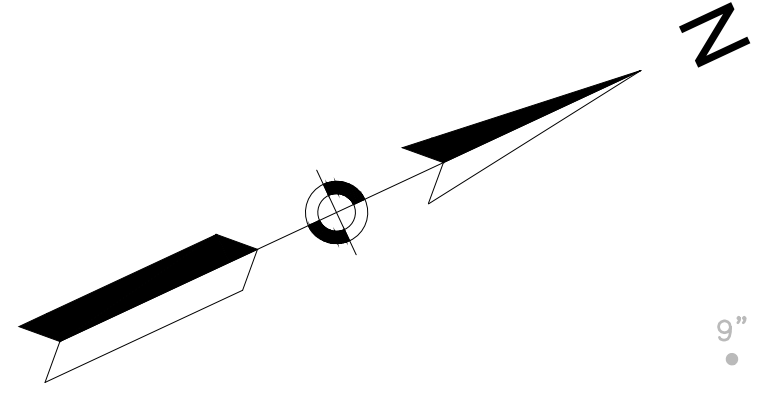
CONTINUED ON
SHEET NO. 36



CONTINUED ON
SHEET NO. 39

FOR PROFILES, SEE SHEETS NOS. 48, 52, 56, 57 & 58

603739_HD32-44(CONSTRUCTION PLANS)DWG Picked on 7-Apr-2024 11:22 PM



HIGHWAY GUARD DETAILS

TANGENT END TREATMENT, TL-2: STA 126+85.7 RT TO STA 127+12.7 RT
GUARDRAIL, TL-2: STA 127+12.7 RT TO STA 127+37.7 RT
TRANSITION TO BRIDGE RAIL: STA 127+37.7 RT TO STA 127+71.5 RT

PERMANENT IMPACT ATTENUATOR REDIRECTIVE, TL-2: STA 131+50.0 LT TO STA 131+63.0 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

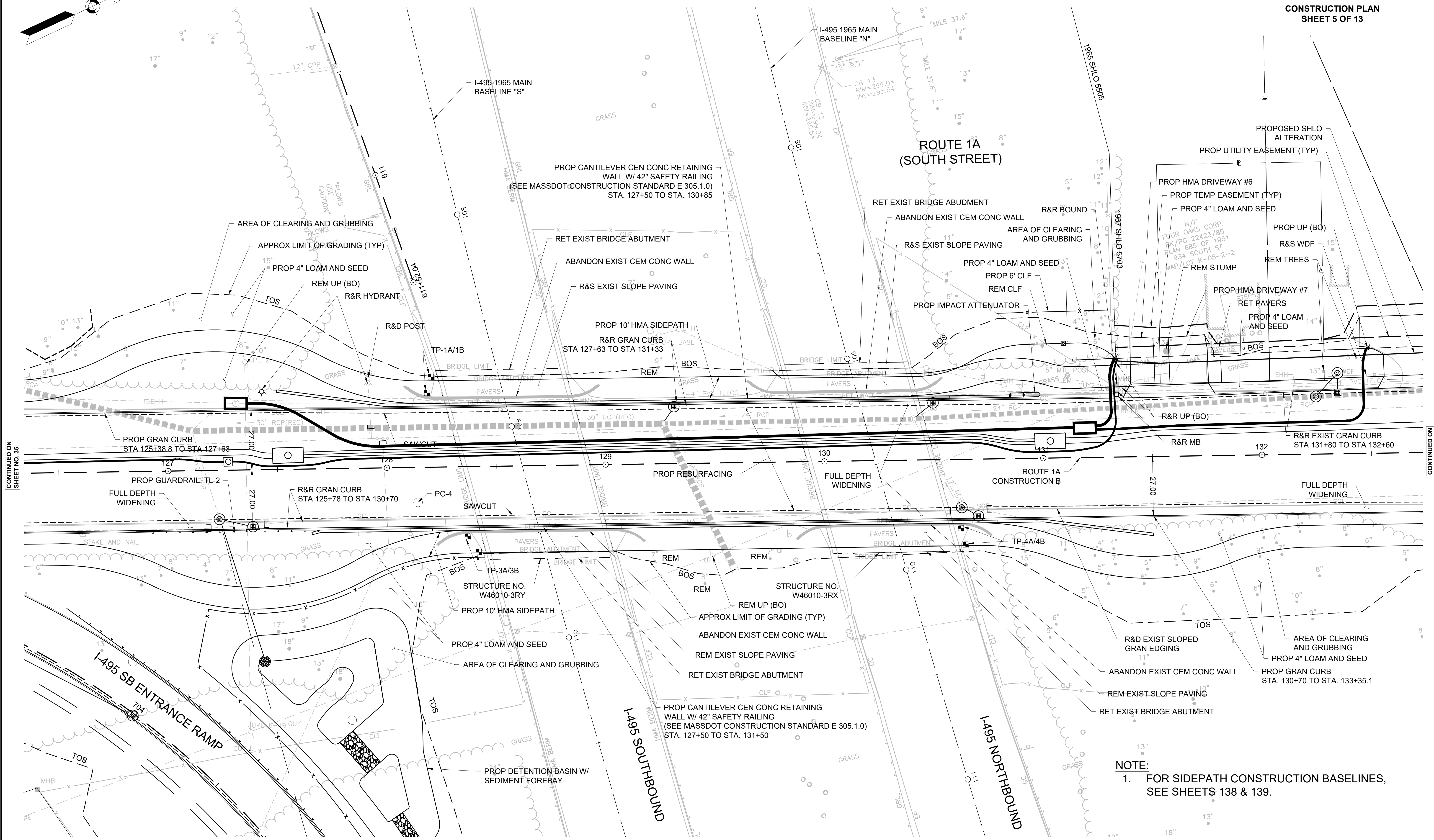
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	36	258
PROJECT FILE NO.		603739	

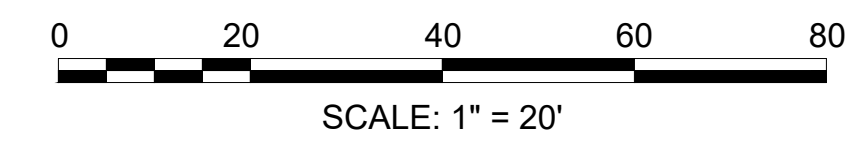
CONSTRUCTION PLAN
SHEET 5 OF 13



CONTINUED ON SHEET NO. 35

CONTINUED ON SHEET NO. 37

CONTINUED ON SHEET NO. 39



NOTE:
1. FOR SIDEPATH CONSTRUCTION BASELINES, SEE SHEETS 138 & 139.

FOR PROFILES, SEE SHEETS NOS. 49, 60 & 61

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

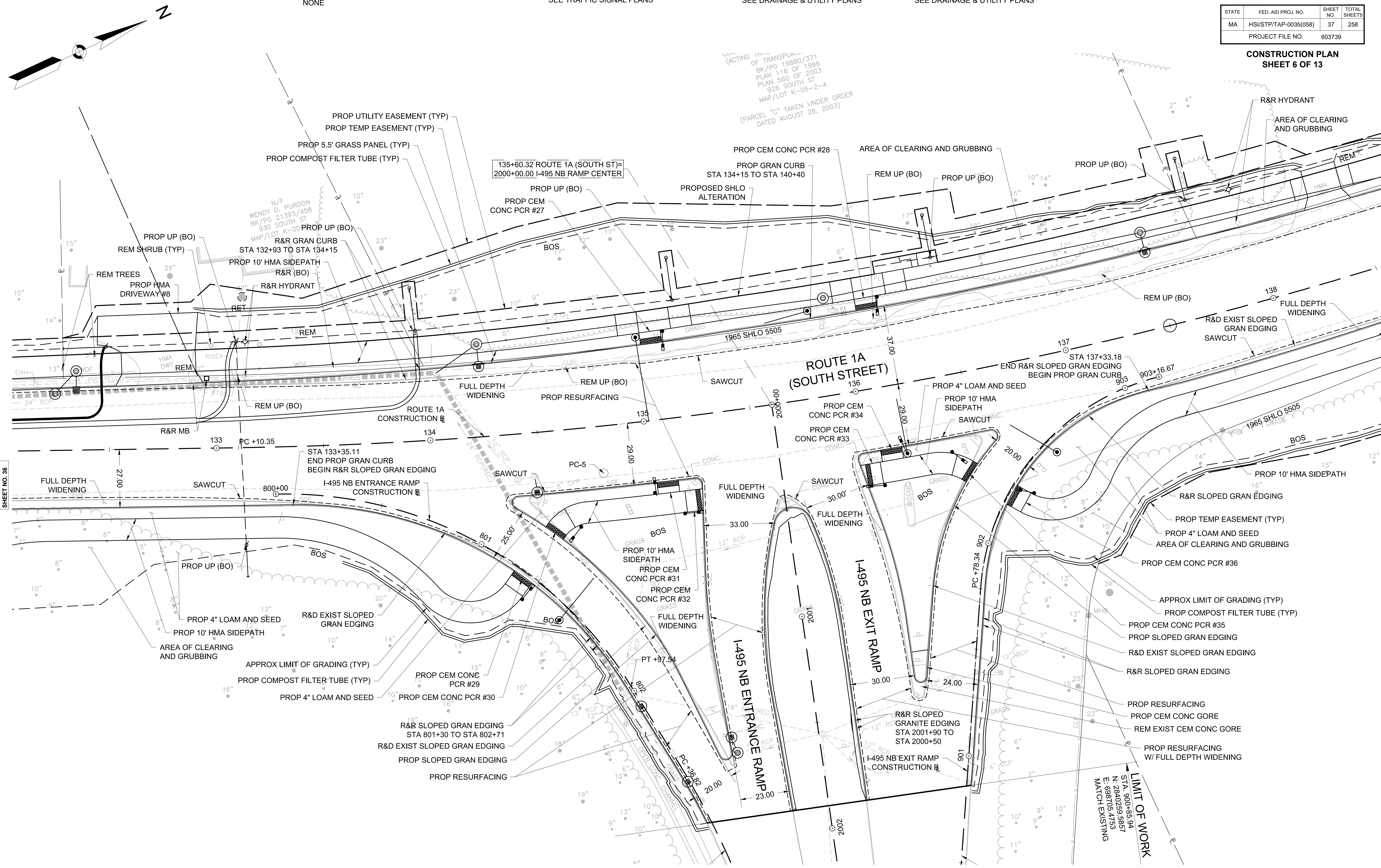
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	37	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 6 OF 13

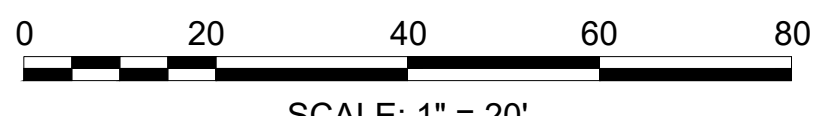


(ACTING IN THE
OF TRANSPORTATION
BK/PG 19880/371
BK/PG 116 OF 1996
PLAN 560 OF 2003
926 SOUTH ST
MAP/LOT K-05-2-4
(PARCEL "C" TAKEN UNDER ORDER
DATED AUGUST 28, 2003)

CONTINUED ON
SHEET NO. 36

CONTINUED ON
SHEET NO. 38

CONTINUED ON
SHEET NO. 44



FOR PROFILES, SEE SHEET NOS. 50 & 59

603739_HD32-44(CONSTRUCTION PLANS).DWG Ploited on 7-Apr-2024 11:25 PM

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

SEE TRAFFIC SIGNAL PLANS

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

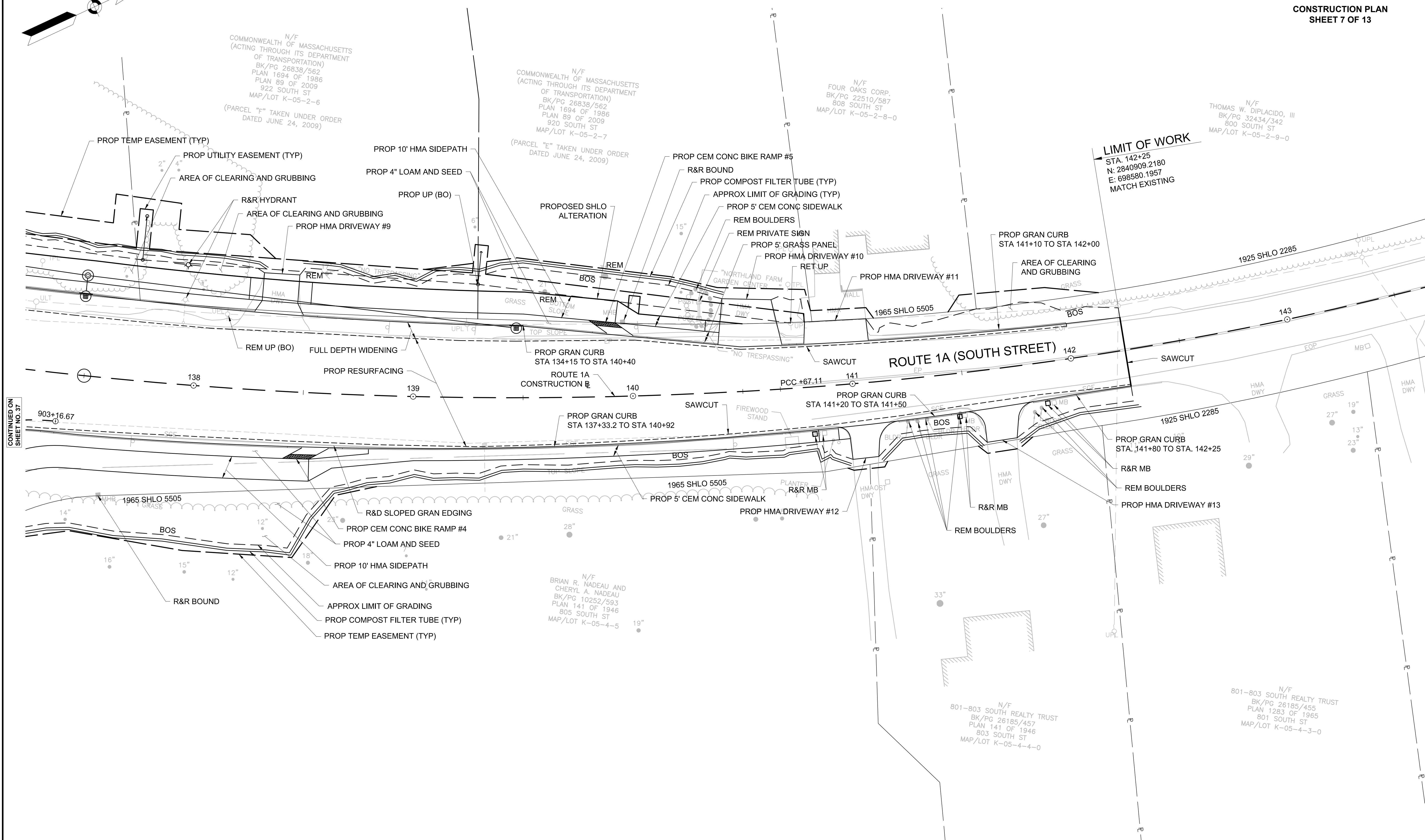
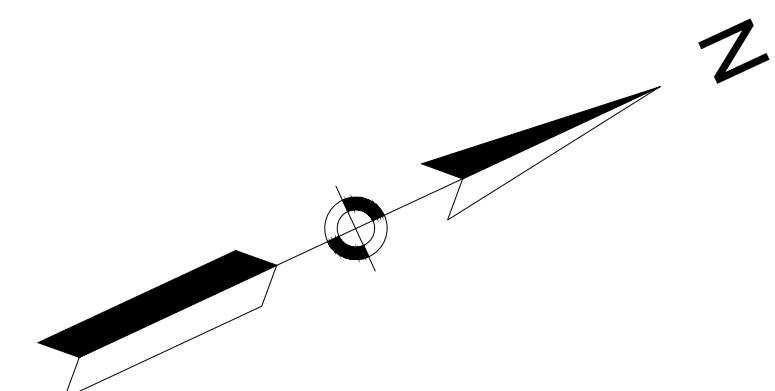
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

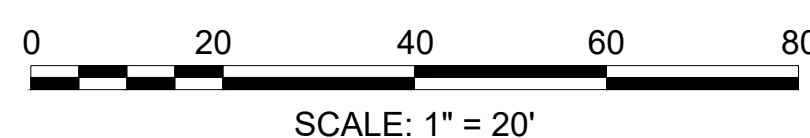
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	38	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 7 OF 13

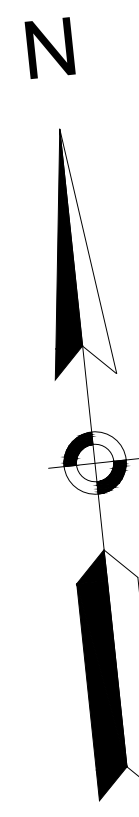


CONTINUED ON
SHEET NO. 37



FOR PROFILE, SEE SHEET NO. 51

603739_HD32-44(CONSTRUCTION PLANS).DWG Plotted on 7-Apr-2024 11:28 AM



HIGHWAY GUARD DETAILS

FLARED END TREATMENT, TL-3: STA 703+46.3 LT TO STA 703+73.3 LT
GUARDRAIL, TL-3: STA 703+73.3 LT TO STA 705+86.1 LT
TRAILING ANCHORAGE: STA 705+86.1 LT TO STA 705+95.5 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

SEE DRAINAGE & UTILITY PLANS

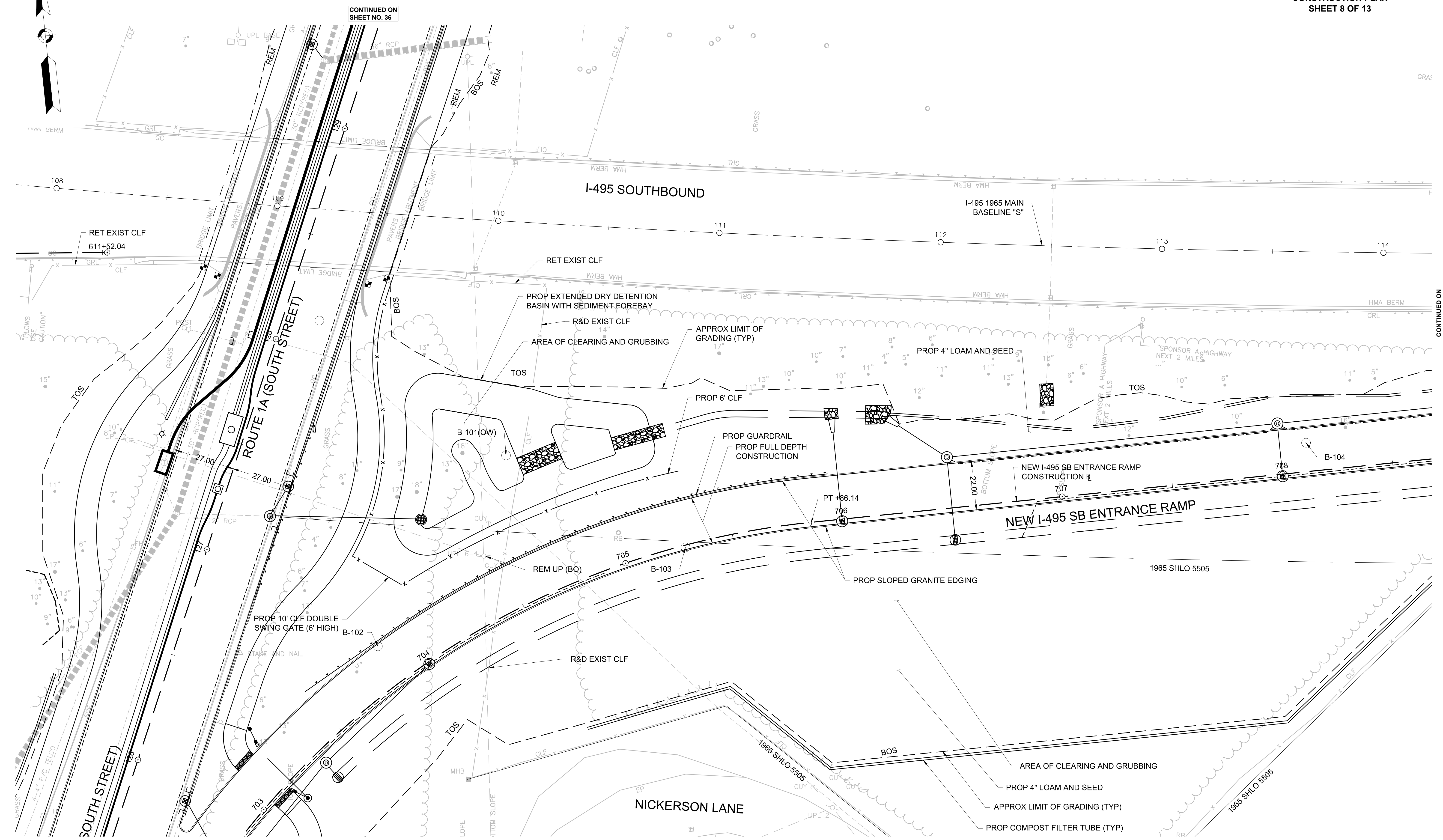
DRAINAGE DETAILS

SEE DRAINAGE & UTILITY PLANS

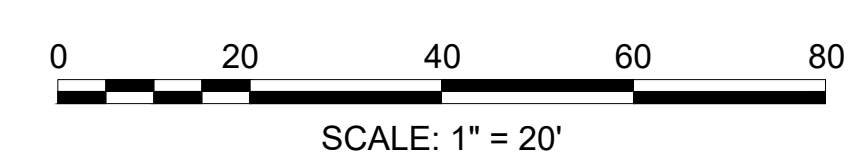
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	39	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 8 OF 13



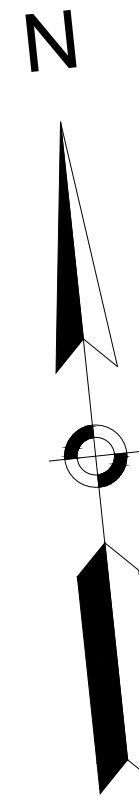
CONTINUED ON SHEET NO. 35



FOR PROFILES, SEE SHEET NOS. 52 & 53

CONTINUED ON SHEET NO. 40

603739_HD32-44(CONSTRUCTION PLANS).DWG Plotted on 7-Apr-2024 11:30 PM



HIGHWAY GUARD DETAILS
 TANGENT END TREATMENT, TL-3: STA 712+98.0 RT TO STA 713+25.0 RT
 GUARDRAIL, TL-3: STA 713+25.0 RT TO STA 722+00.0 RT
 TRANSITION TO NCHRP 350 GUARDRAIL: STA 114+39.6 RT TO 114+74.0 RT
 GUARDRAIL, TL-3: STA 114+74.0 RT TO STA 117+74.0 RT
 TRAILING ANCHORAGE: STA 117+74.0 RT TO STA 117+83.4 RT

TRAFFIC SIGNAL CONDUIT
 NONE

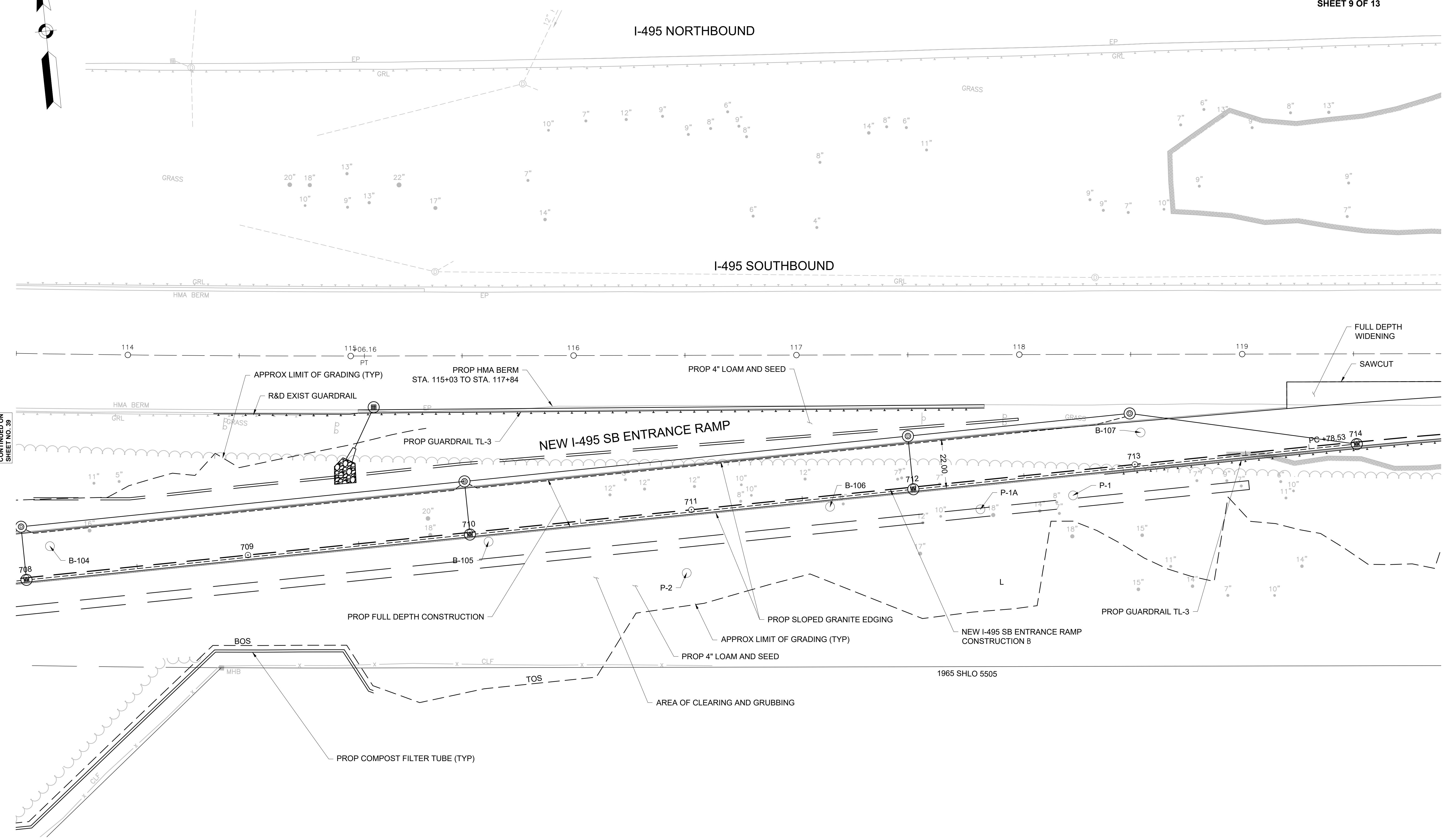
WATER SUPPLY ALTERATIONS
 NONE

DRAINAGE DETAILS
 SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

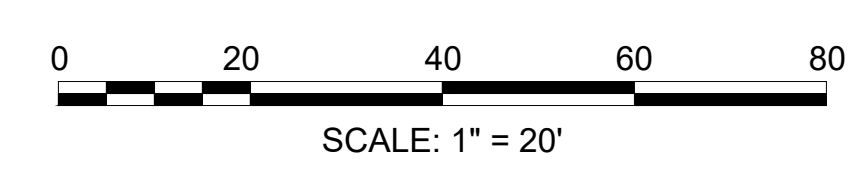
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	40	258
PROJECT FILE NO. 603739			

CONSTRUCTION PLAN
SHEET 9 OF 13

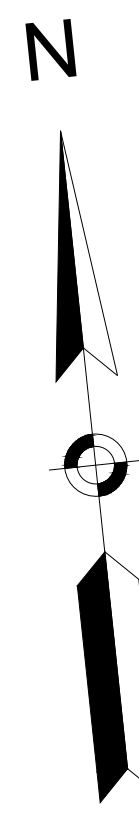


CONTINUED ON SHEET NO. 39

CONTINUED ON SHEET NO. 41



FOR PROFILES, SEE SHEET NOS. 53 & 54



HIGHWAY GUARD DETAILS
GUARDRAIL, TL-3: STA 713+25.0 RT TO STA 722+00.0 RT

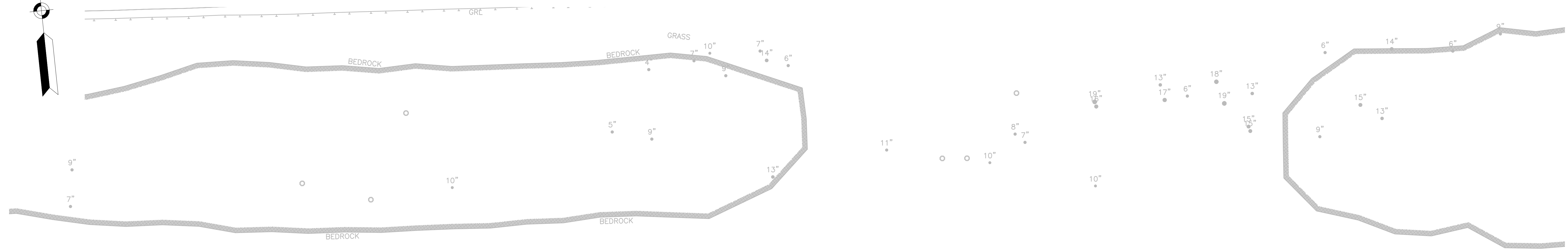
TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

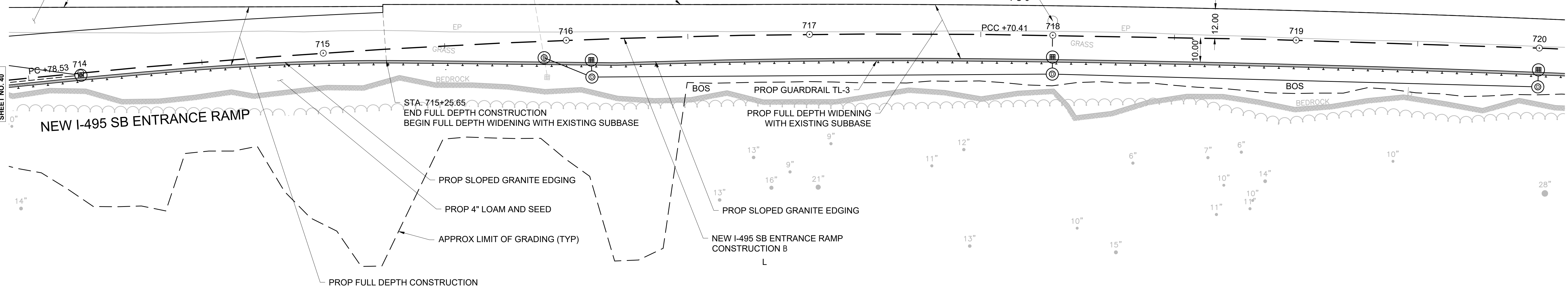
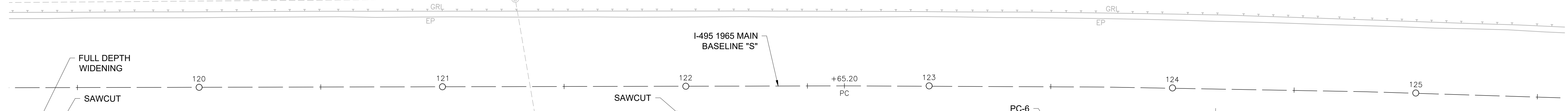
DRAINAGE DETAILS
SEE DRAINAGE & UTILITY PLANS

WRENTHAM, MA I-495 / ROUTE 1A RAMP			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	41	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 10 OF 13

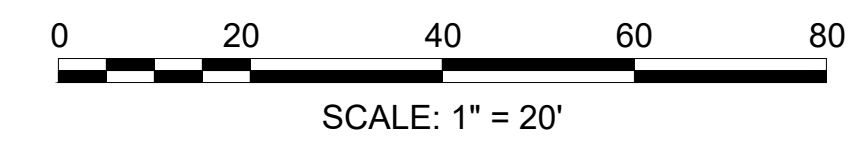


I-495 SOUTHBOUND



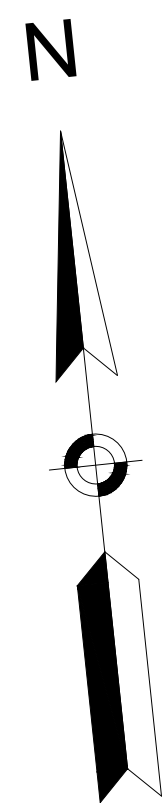
CONTINUED ON
SHEET NO. 40

CONTINUED ON
SHEET NO. 42



FOR PROFILES, SEE SHEET NOS. 54 & 55

603739_HD32-44(CONSTRUCTION PLANS).DWG Plotted on 25-Jul-2024 1:40 PM



HIGHWAY GUARD DETAILS
 GUARDRAIL, TL-3: STA 713+25.0 RT TO STA 722+00.0 RT
 TRAILING ANCHORAGE: STA 722+00.0 RT TO STA 722+09.4 RT

TRAFFIC SIGNAL CONDUIT
 NONE

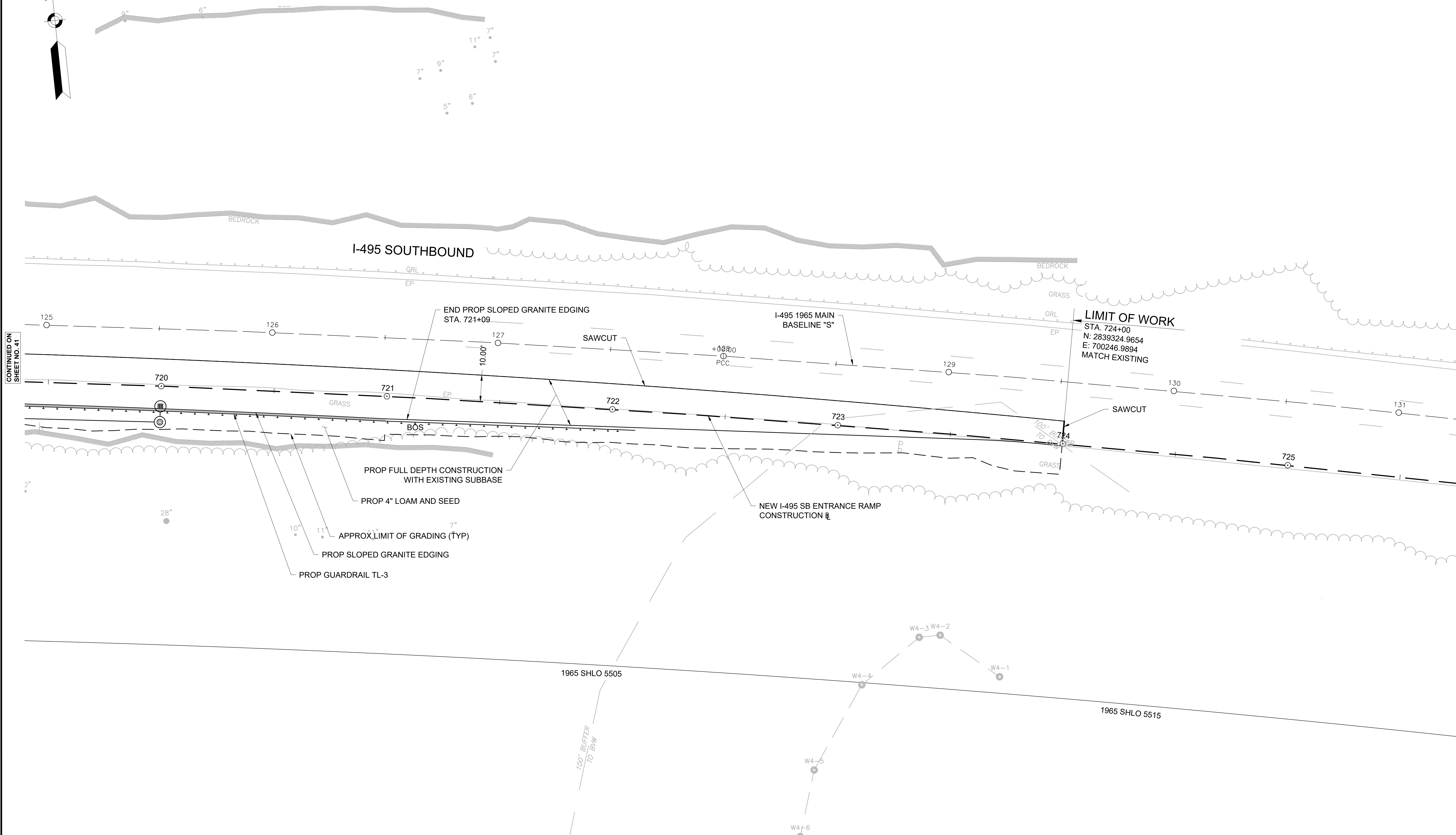
WATER SUPPLY ALTERATIONS
 NONE

DRAINAGE DETAILS
 SEE DRAINAGE & UTILITY PLANS

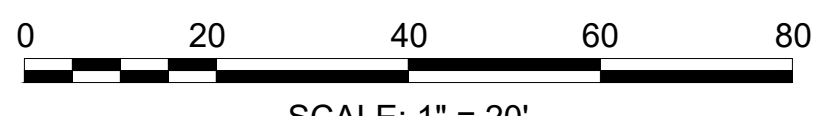
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	42	258
PROJECT FILE NO.		603739	

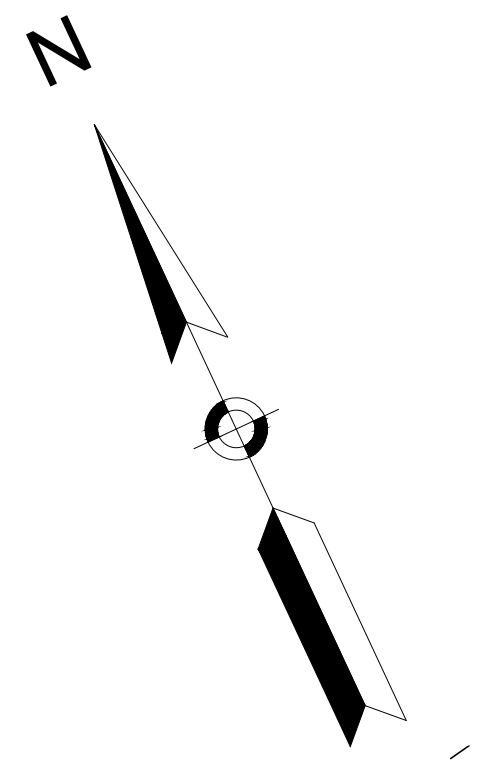
CONSTRUCTION PLAN
SHEET 11 OF 13



CONTINUED ON SHEET NO. 41



FOR PROFILE, SEE SHEET NO. 55



HIGHWAY GUARD DETAILS
 TRANSITION TO NCHRP 350 GUARDRAIL: STA 603+26.8 RT TO 603+61.2 RT

TRAFFIC SIGNAL CONDUIT
 NONE

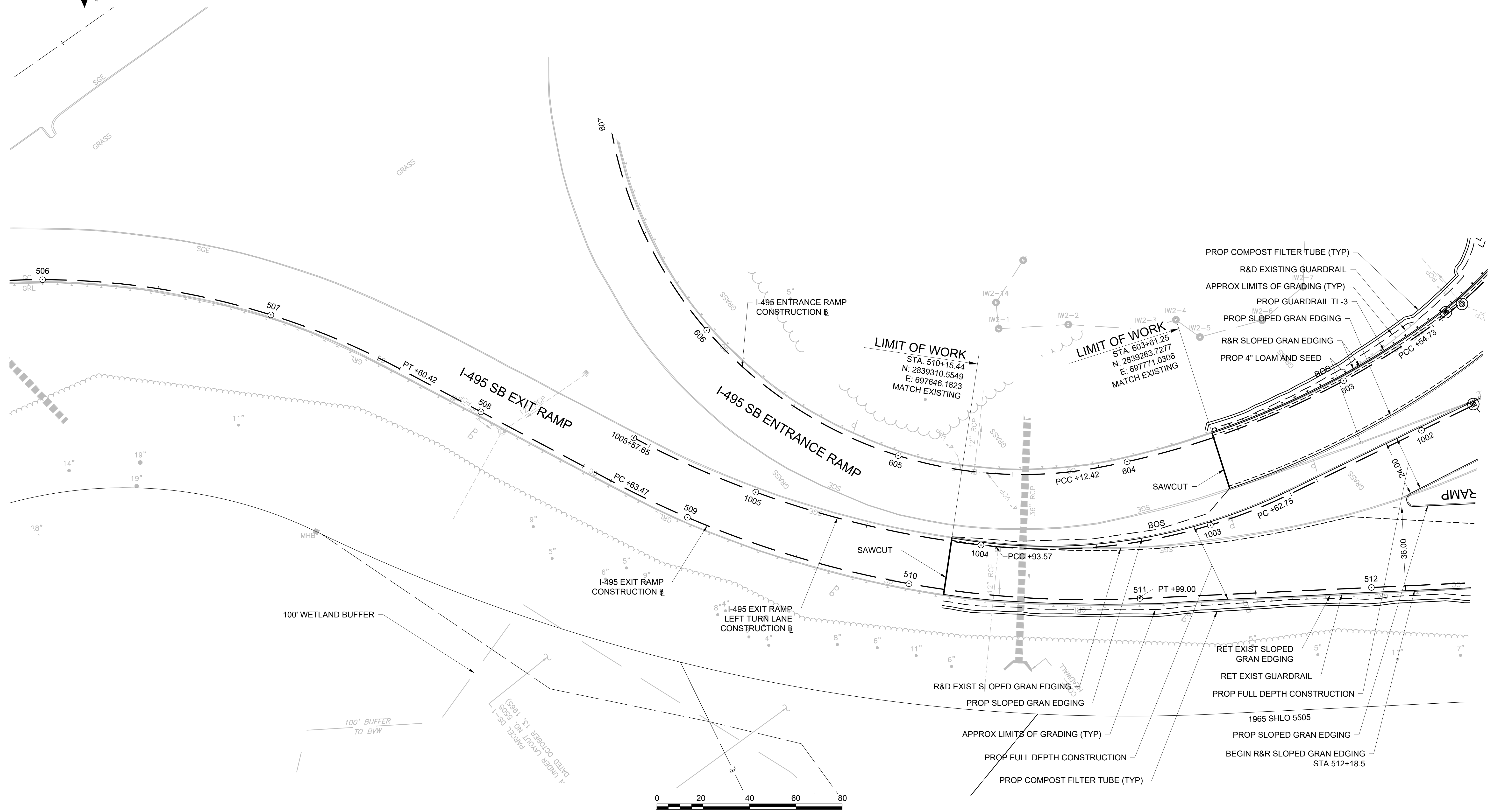
WATER SUPPLY ALTERATIONS
 NONE

DRAINAGE DETAILS
 NONE

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	43	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 12 OF 13



CONTINUED ON
 SHEET NO. 35

FOR PROFILE, SEE SHEET NOS. 56, 57 & 58

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

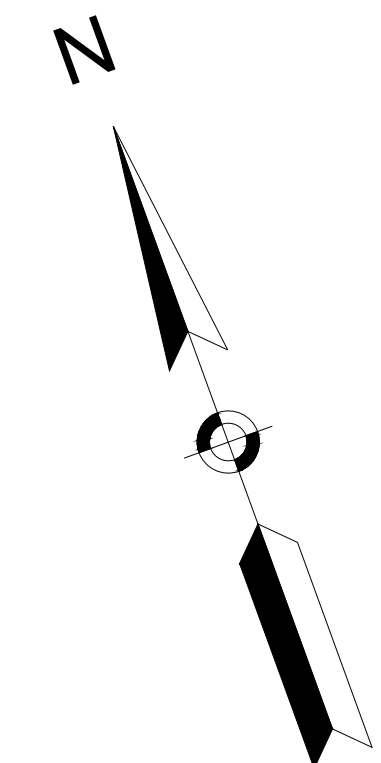
DRAINAGE DETAILS

SEE DRAINAGE AND UTILITY PLANS

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	44	258
PROJECT FILE NO.		603739	

CONSTRUCTION PLAN
SHEET 13 OF 13



LIMIT OF WORK
STA. 900+85.94
N: 2840259.5857
E: 698705.4753
MATCH EXISTING

N/F
GEORGE F. CAHILL TRUST
BK/PG 30773/320
807 SOUTH ST
MAP/LOT K-05-4-6

1965 SHLO 5505

I-495 NB EXIT RAMP
CONSTRUCTION

I-495 NB EXIT RAMP

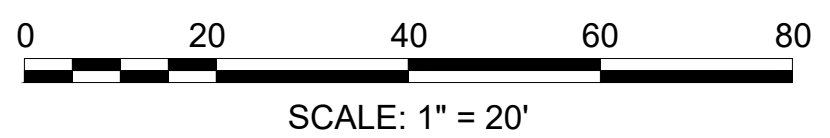
I-495 NB ENTRANCE RAMP

I-495 NB ENTRANCE RAMP

I-495 NB ENTRANCE RAMP
CONSTRUCTION

I-495 NB EXIT RAMP

LIMIT OF WORK
STA. 802+71.42
N: 2840144.4963
E: 698670.5743
MATCH EXISTING



FOR PROFILE, SEE SHEET NO. 59

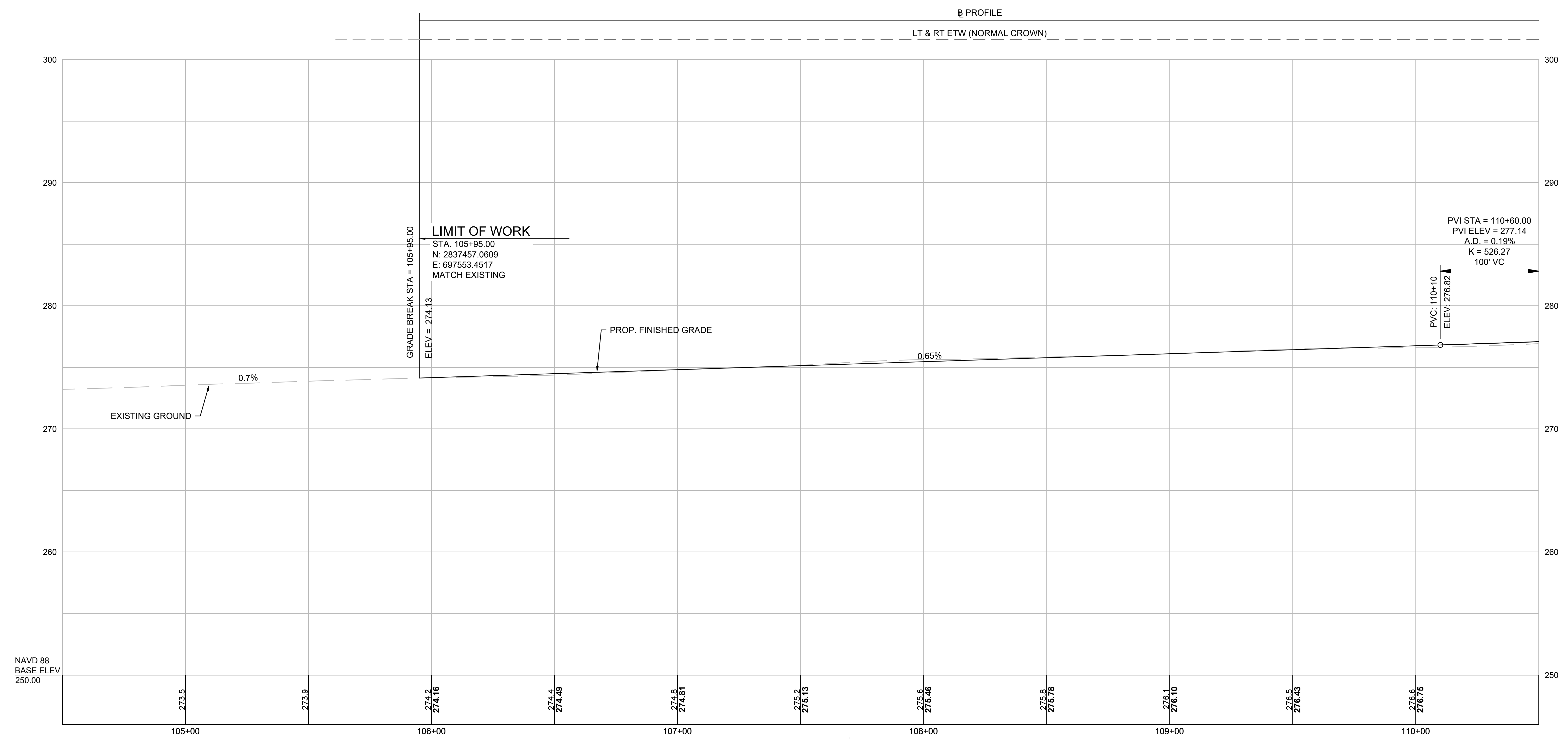
603739_HD32-44(CONSTRUCTION PLANS).DWG
Plotted on: 25-Jul-2024 1:40 PM

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

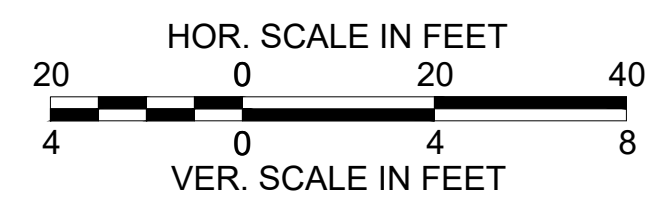
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	45	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 1 OF 17

ROUTE 1A (SOUTH ST)



STA 107+69.95 ROUTE 1A @ =
STA 3000+00.00 WRENTHAM CROSSING @



FOR CONSTRUCTION PLAN, SEE SHEET NO. 32

CONTINUED ON
SHEET NO. 46

603739_HD45-61(PROFILES).DWG Plotted on 23-Jul-2024 1:48 PM

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

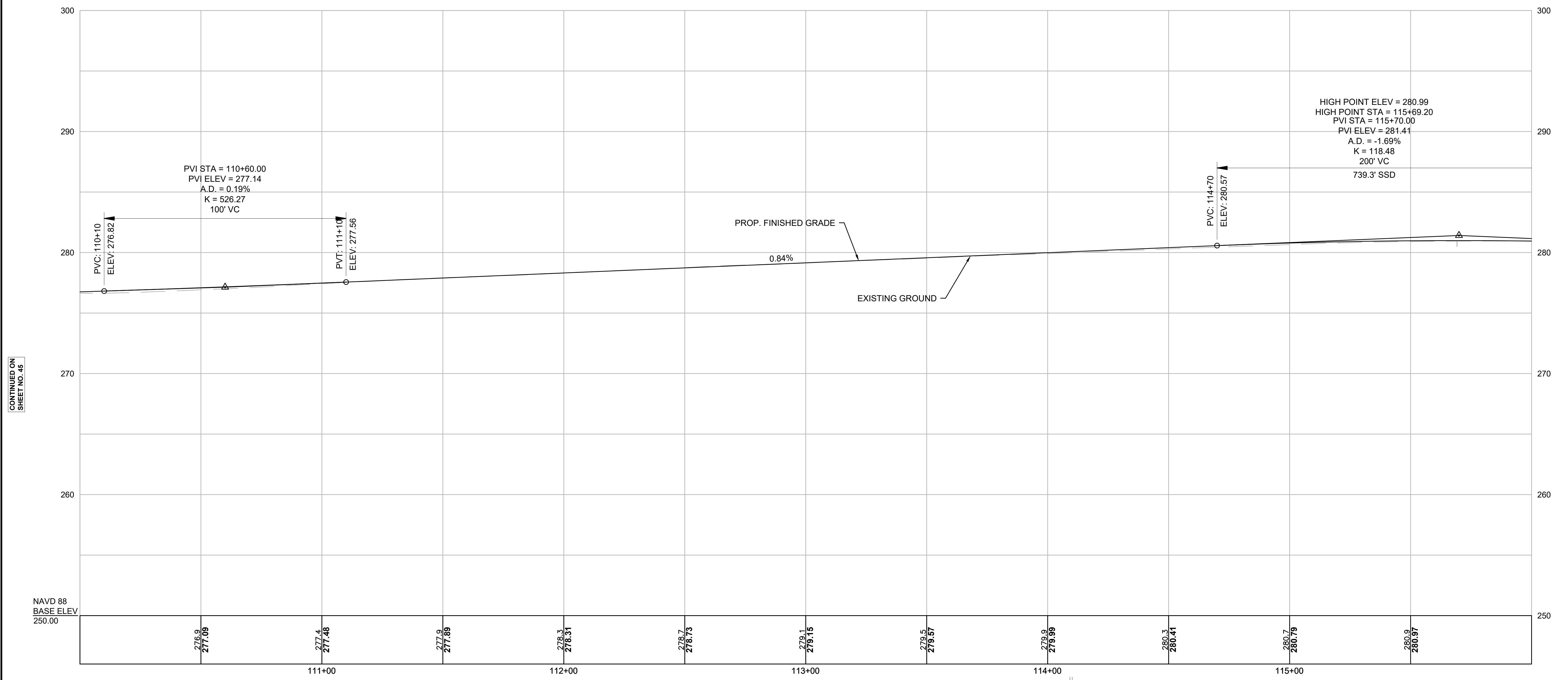
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	46	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 2 OF 17

ROUTE 1A (SOUTH ST)

PROFILE

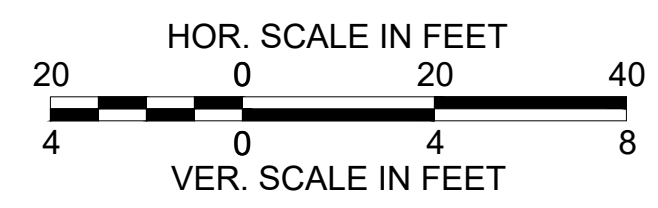
LT & RT ETW (NORMAL CROWN)



CONTINUED ON
SHEET NO. 45

CONTINUED ON
SHEET NO. 47

STA 114+09.21 ROUTE 1A = STA 114+10.14 ROUTE 1A =
STA 200+00.00 MOBIL GAS = STA 300+00.00 PREMIUM OUTLETS BLVD =



FOR CONSTRUCTION PLAN, SEE SHEET NO. 33

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

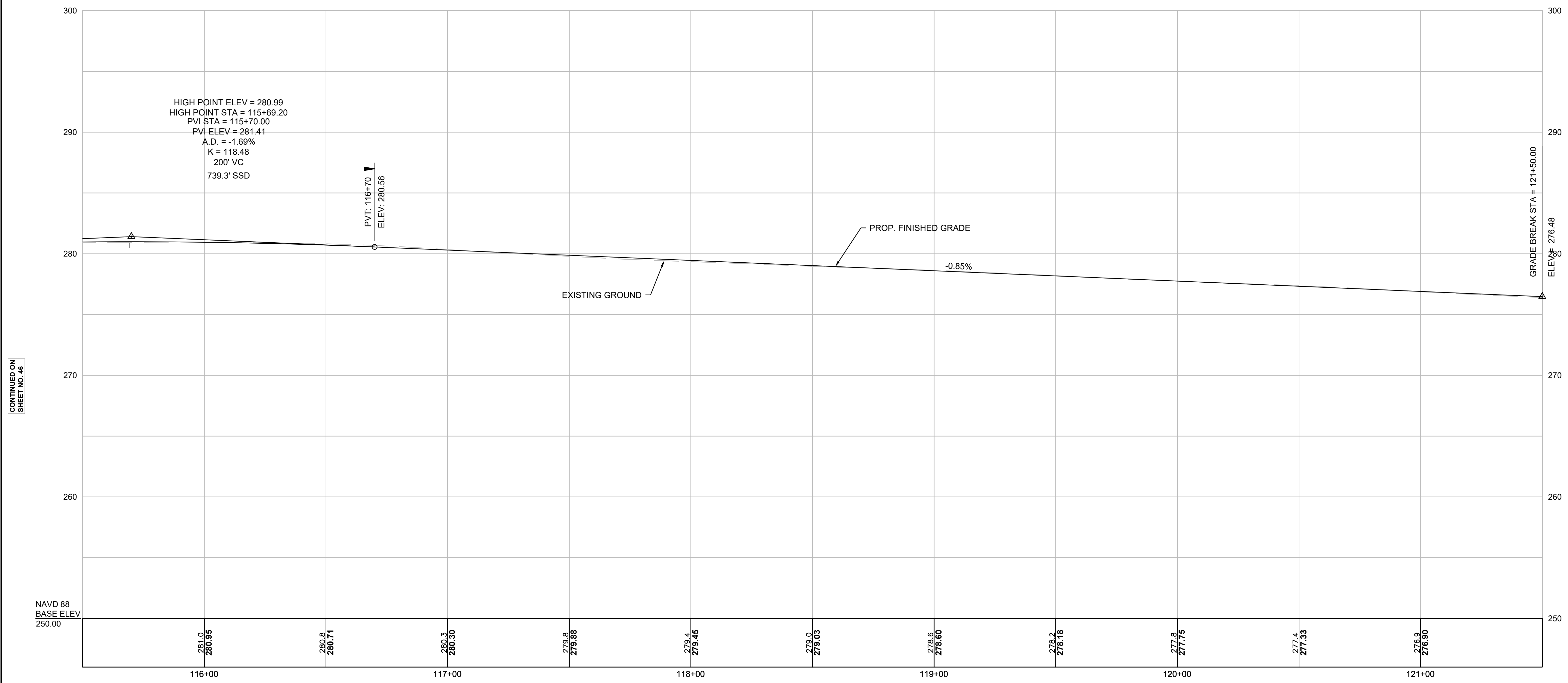
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	47	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 3 OF 17

ROUTE 1A (SOUTH ST)

PROFILE

LT & RT ETW (NORMAL CROWN)



HIGH POINT ELEV = 280.99
HIGH POINT STA = 115+69.20
PVI STA = 115+70.00
PVI ELEV = 281.41
A.D. = -1.69%
K = 118.48
200' VC
739.3' SSD

PVT: 116+70
ELEV: 280.56

PROP. FINISHED GRADE

-0.85%

EXISTING GROUND

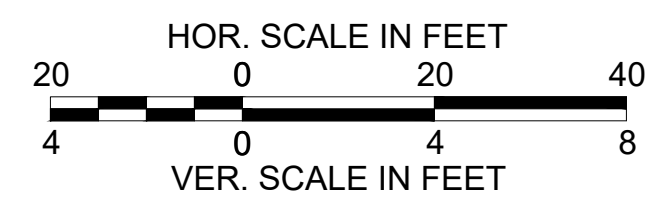
GRADE BREAK STA = 121+50.00
ELEV = 276.48

CONTINUED ON
SHEET NO. 46

CONTINUED ON
SHEET NO. 48

NAVD 88
BASE ELEV
250.00

STA 118+85.89 ROUTE 1A B =
STA 400+00.00 NICKERSON LANE B



FOR CONSTRUCTION PLAN, SEE SHEET NO. 34

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

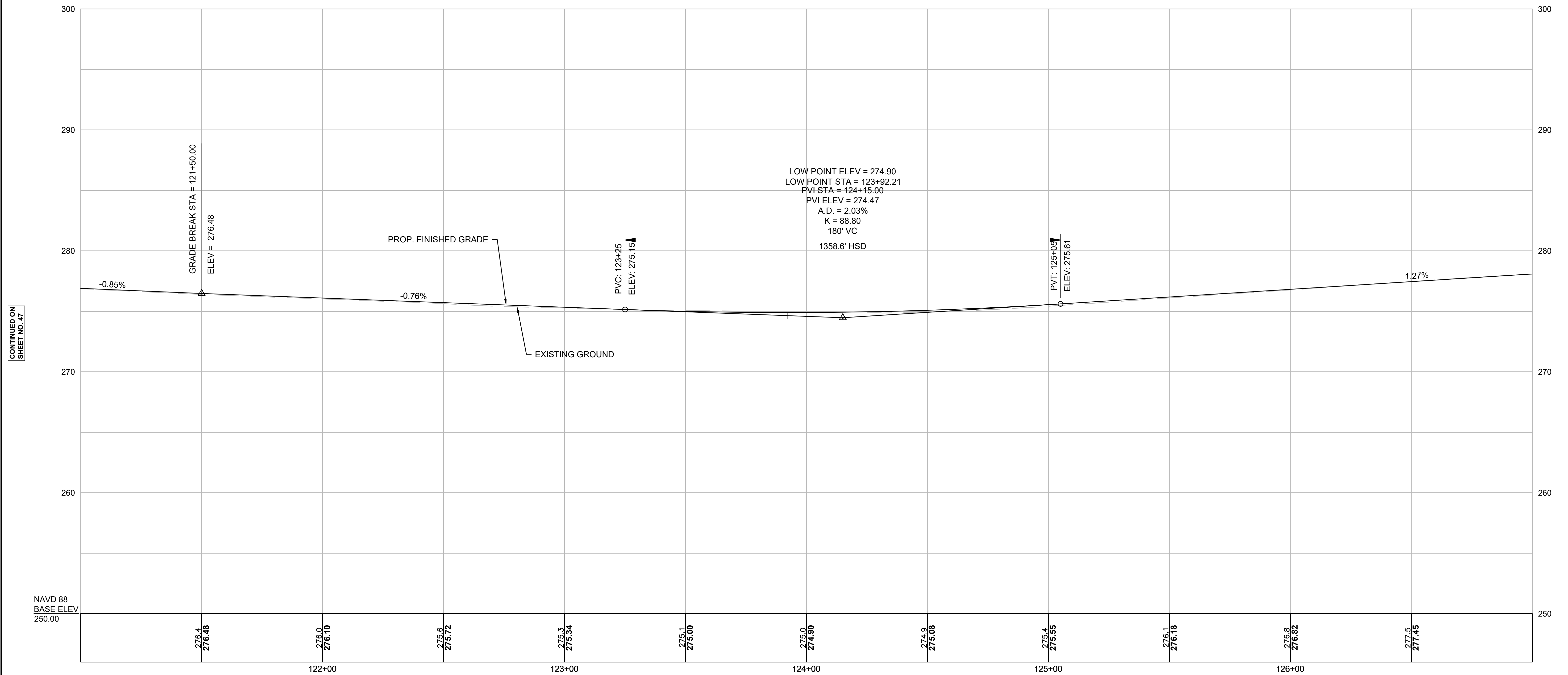
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	48	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 4 OF 17

ROUTE 1A (SOUTH ST)

PROFILE

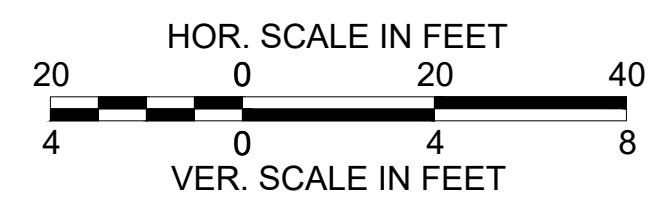
LT & RT ETW (NORMAL CROWN)



CONTINUED ON
SHEET NO. 47

CONTINUED ON
SHEET NO. 48

STA 123+20.69 ROUTE 1A B =
STA 1000+00.00 SB EXIT RAMP LT TURN LANE B



FOR CONSTRUCTION PLAN, SEE SHEET NO. 35

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	49	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 5 OF 17

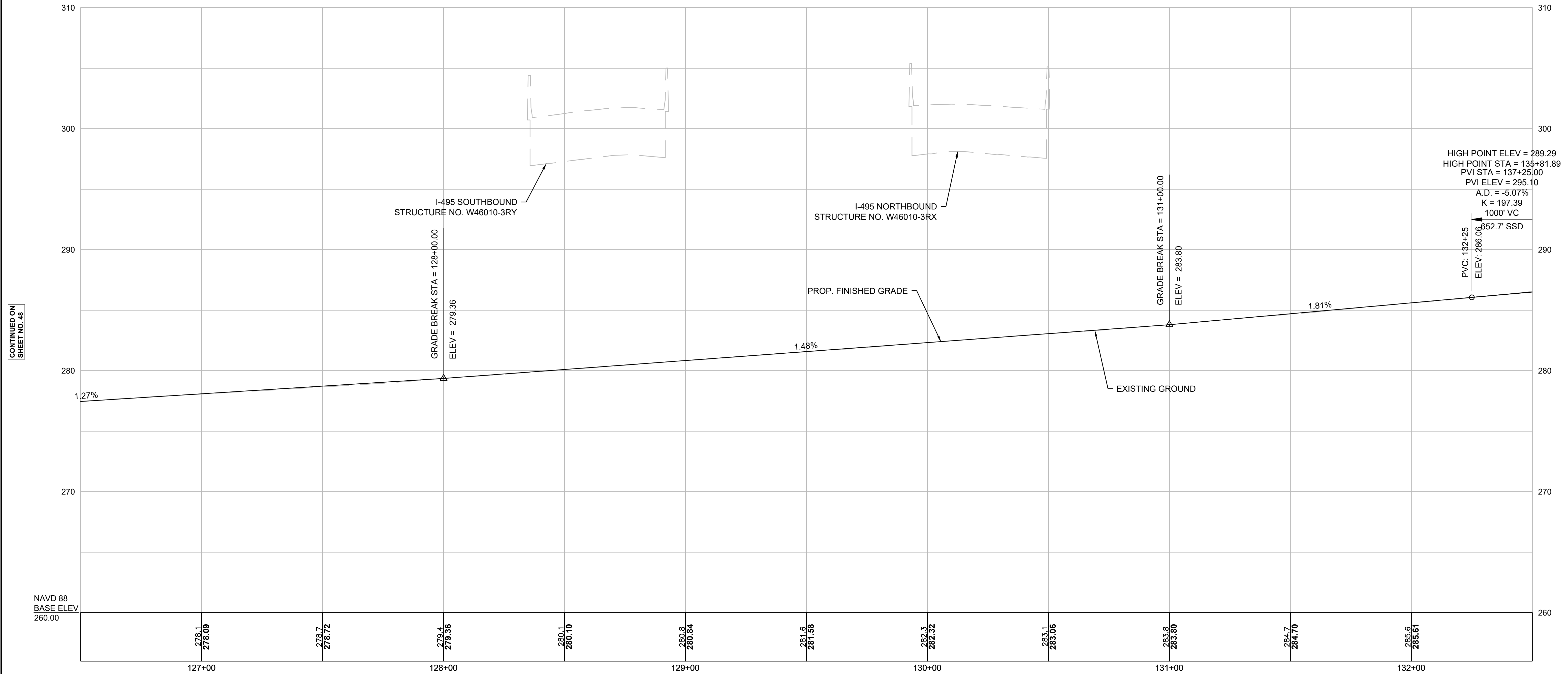
ROUTE 1A (SOUTH ST)

PROFILE

LT & RT ETW (NORMAL CROWN)

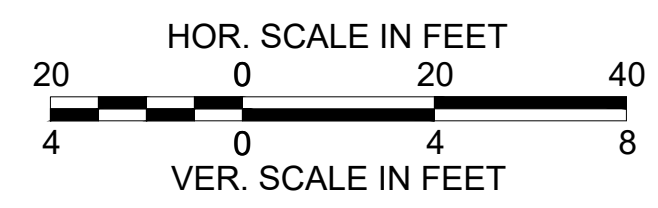
STA 131+00

G=0.54%



CONTINUED ON SHEET NO. 48

CONTINUED ON SHEET NO. 50



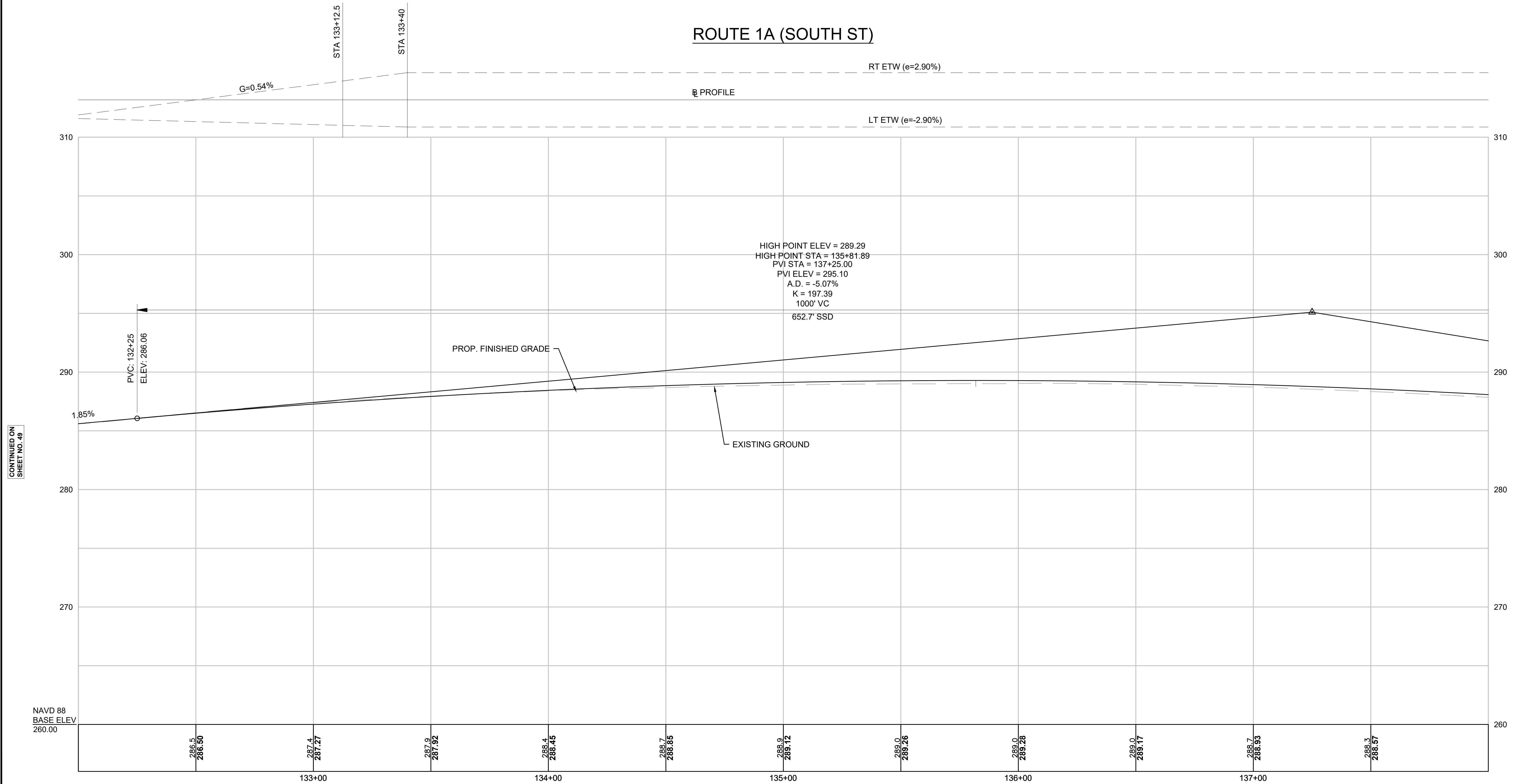
FOR CONSTRUCTION PLAN, SEE SHEET NO. 36

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	50	258
PROJECT FILE NO.		603739	

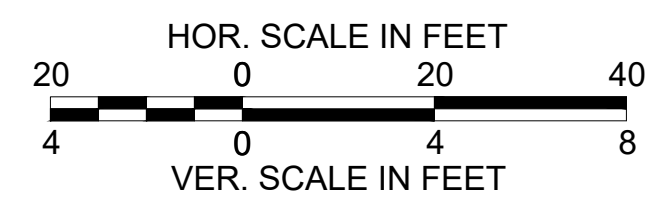
PROFILE
SHEET 6 OF 17

ROUTE 1A (SOUTH ST)



CONTINUED ON
SHEET NO. 49

CONTINUED ON
SHEET NO. 51



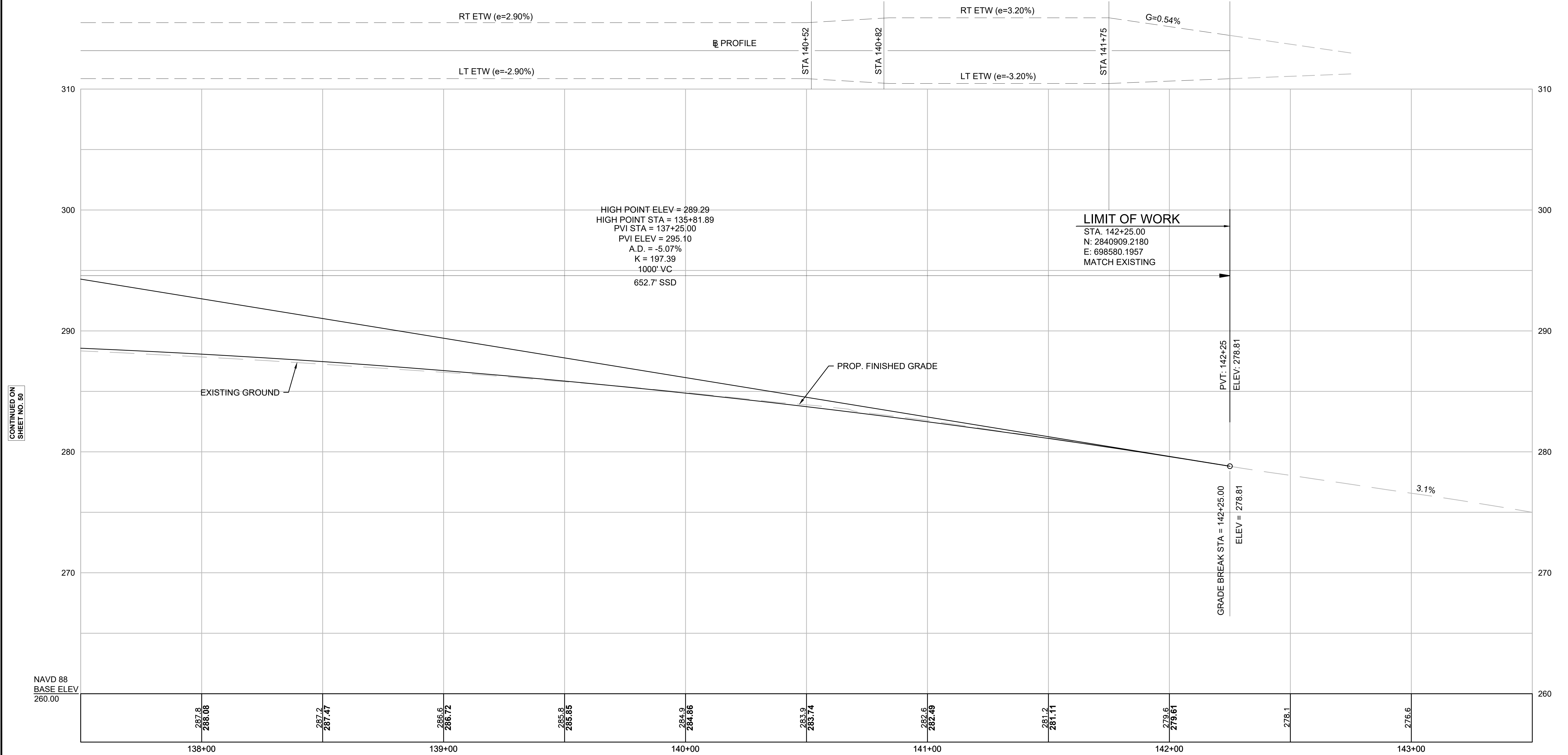
FOR CONSTRUCTION PLAN, SEE SHEET NO. 37

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	51	258
PROJECT FILE NO.		603739	

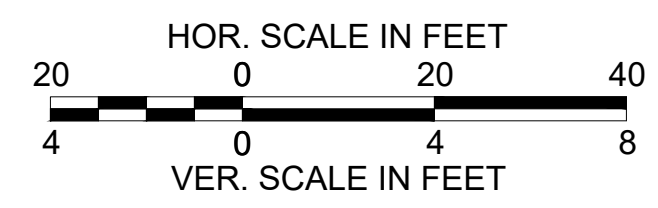
PROFILE
SHEET 7 OF 17

ROUTE 1A (SOUTH ST)



CONTINUED ON
SHEET NO. 50

NAVD 88
BASE ELEV
260.00



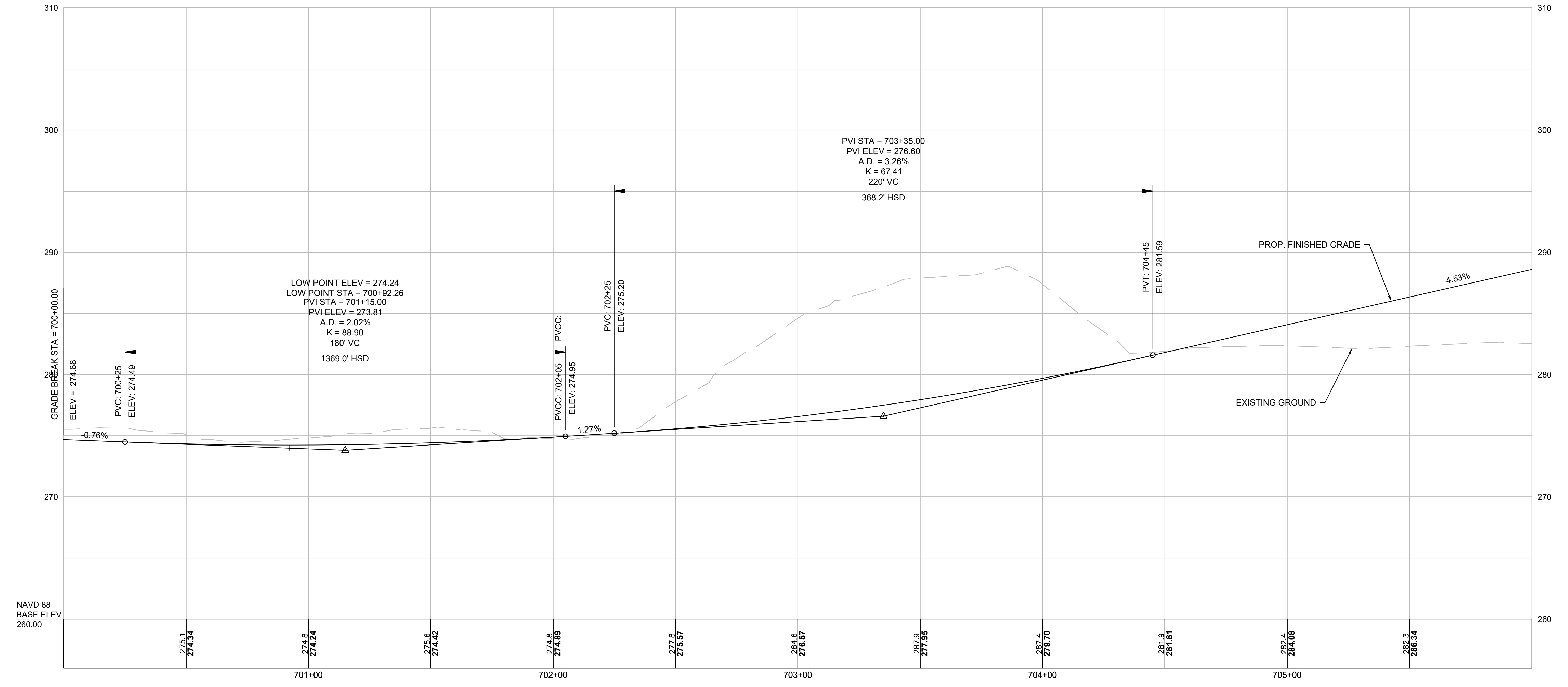
FOR CONSTRUCTION PLAN, SEE SHEET NO. 38

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

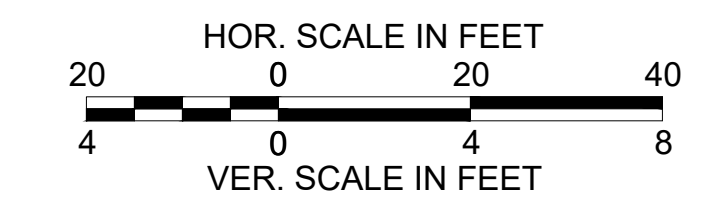
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	52	258
PROJECT FILE NO. 603739			

PROFILE
SHEET 8 OF 17

NEW I-495 SB ENTRANCE RAMP



CONTINUED ON
SHEET NO. 53



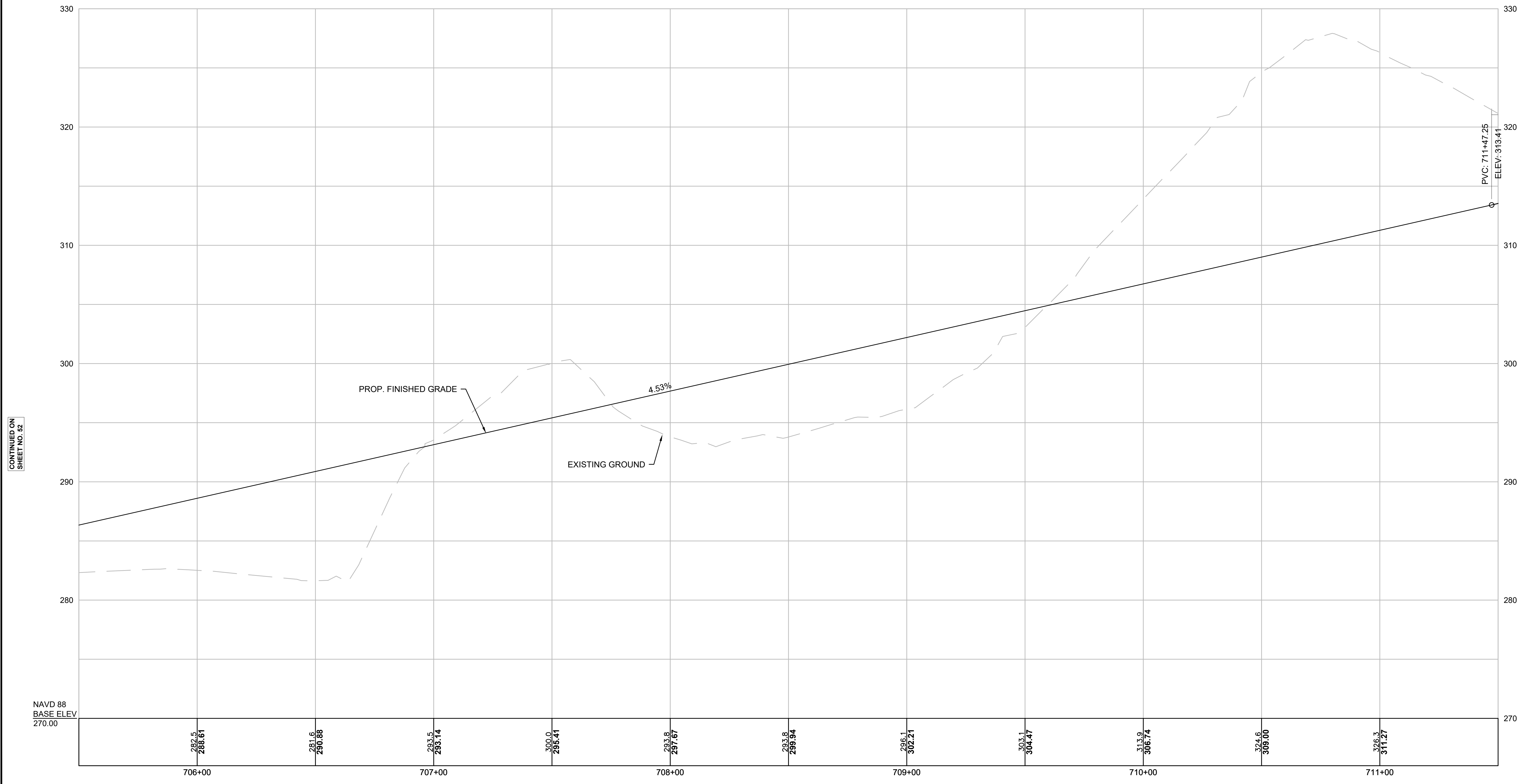
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 39

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	53	258
PROJECT FILE NO.		603739	

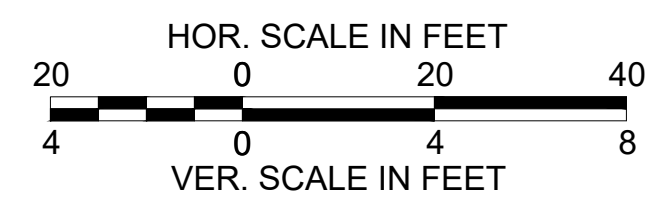
PROFILE
SHEET 9 OF 17

NEW I-495 SB ENTRANCE RAMP



CONTINUED ON
SHEET NO. 52

CONTINUED ON
SHEET NO. 54



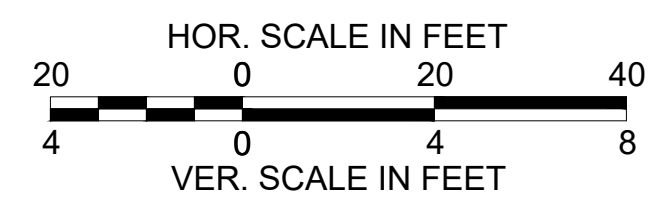
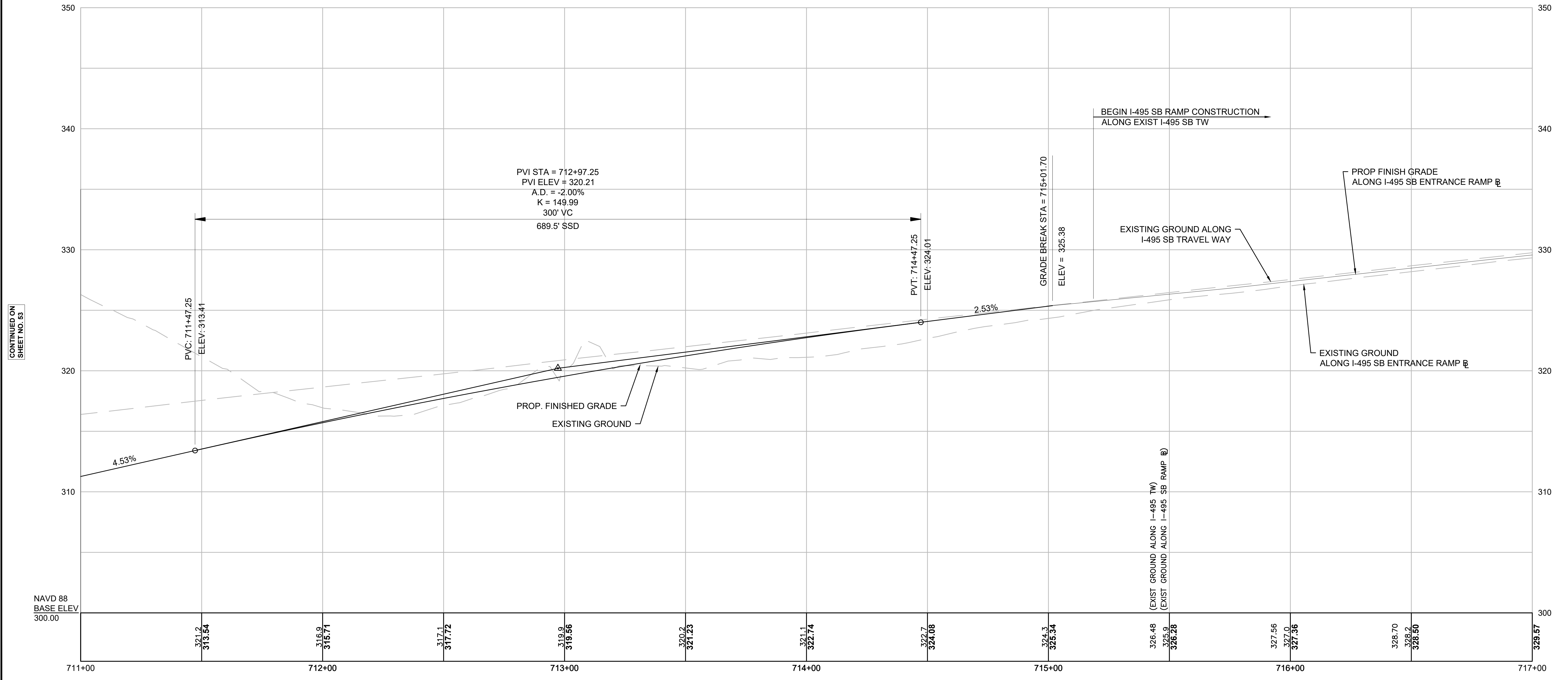
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 39 & 40

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	54	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 10 OF 17

NEW I-495 SB ENTRANCE RAMP



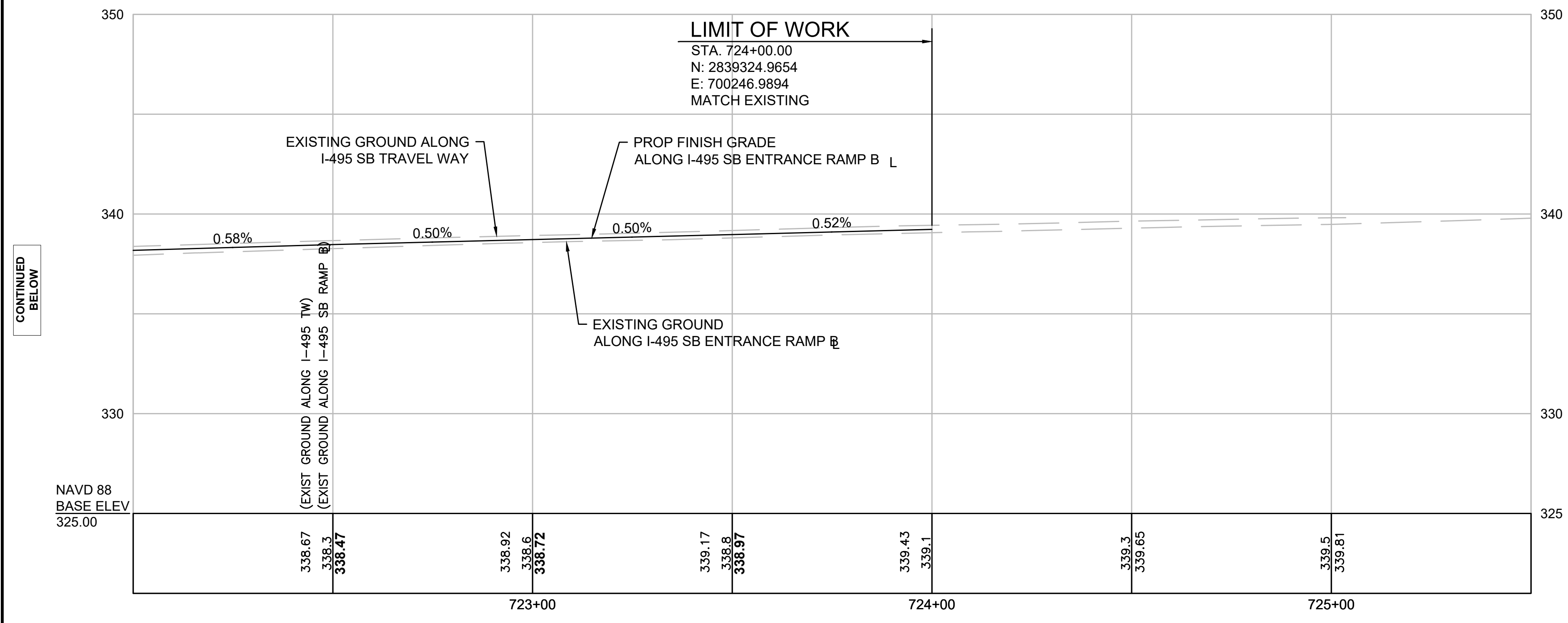
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 40 & 41

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

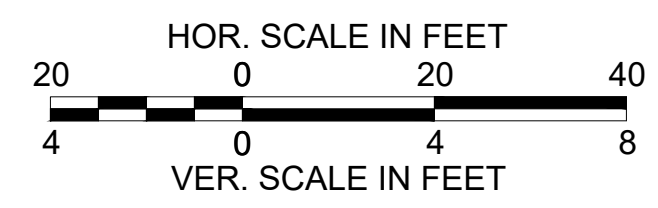
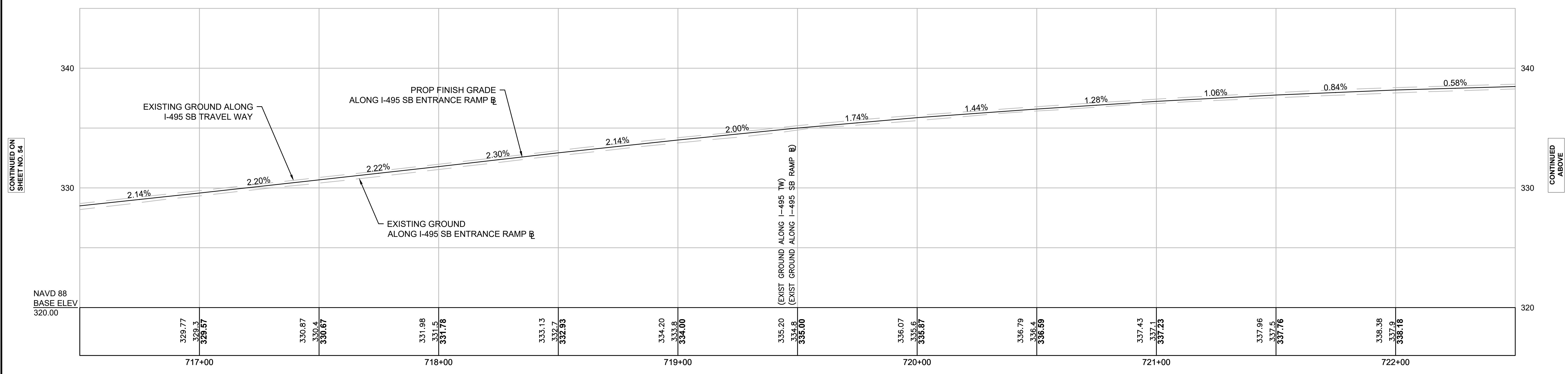
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	55	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 11 OF 17

NEW I-495 SB ENTRANCE RAMP



NEW I-495 SB ENTRANCE RAMP



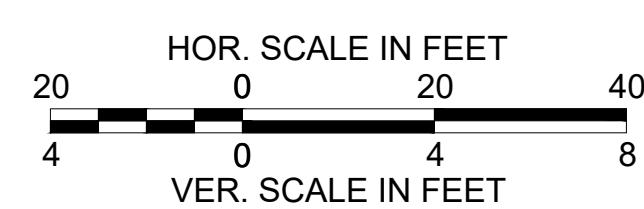
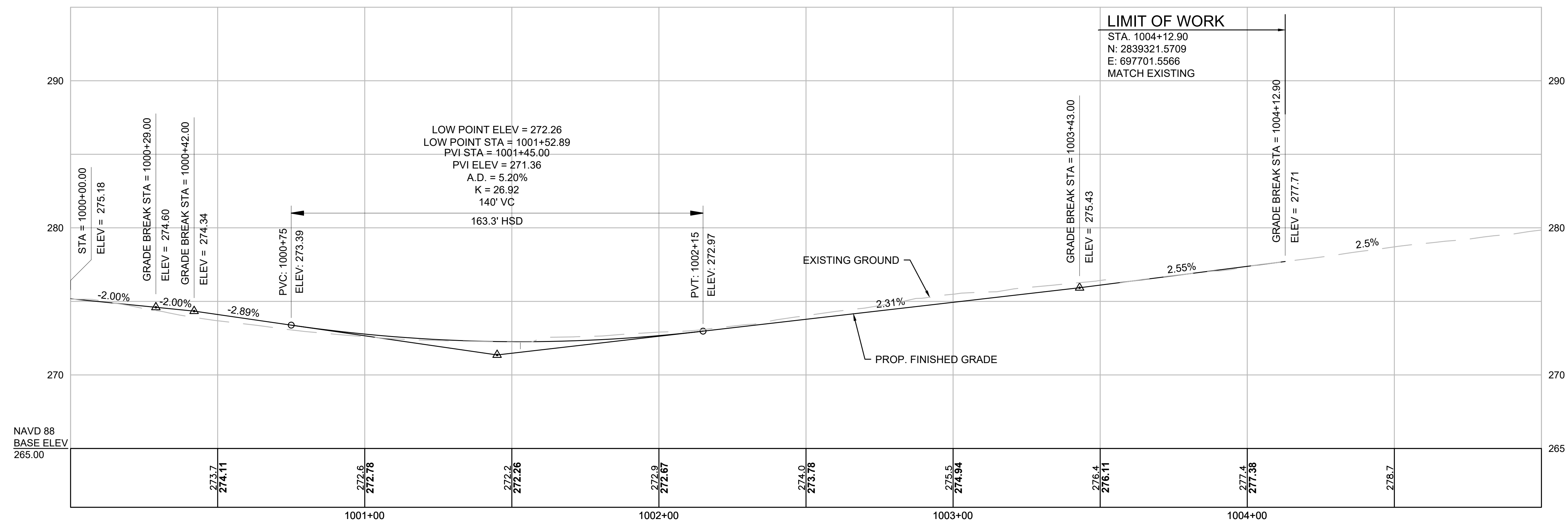
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 41 & 42

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	56	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 12 OF 17

I-495 SB EXIT RAMP LT TURN LANE



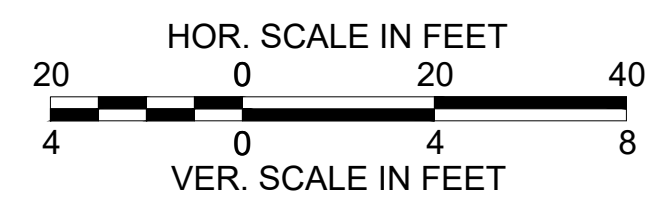
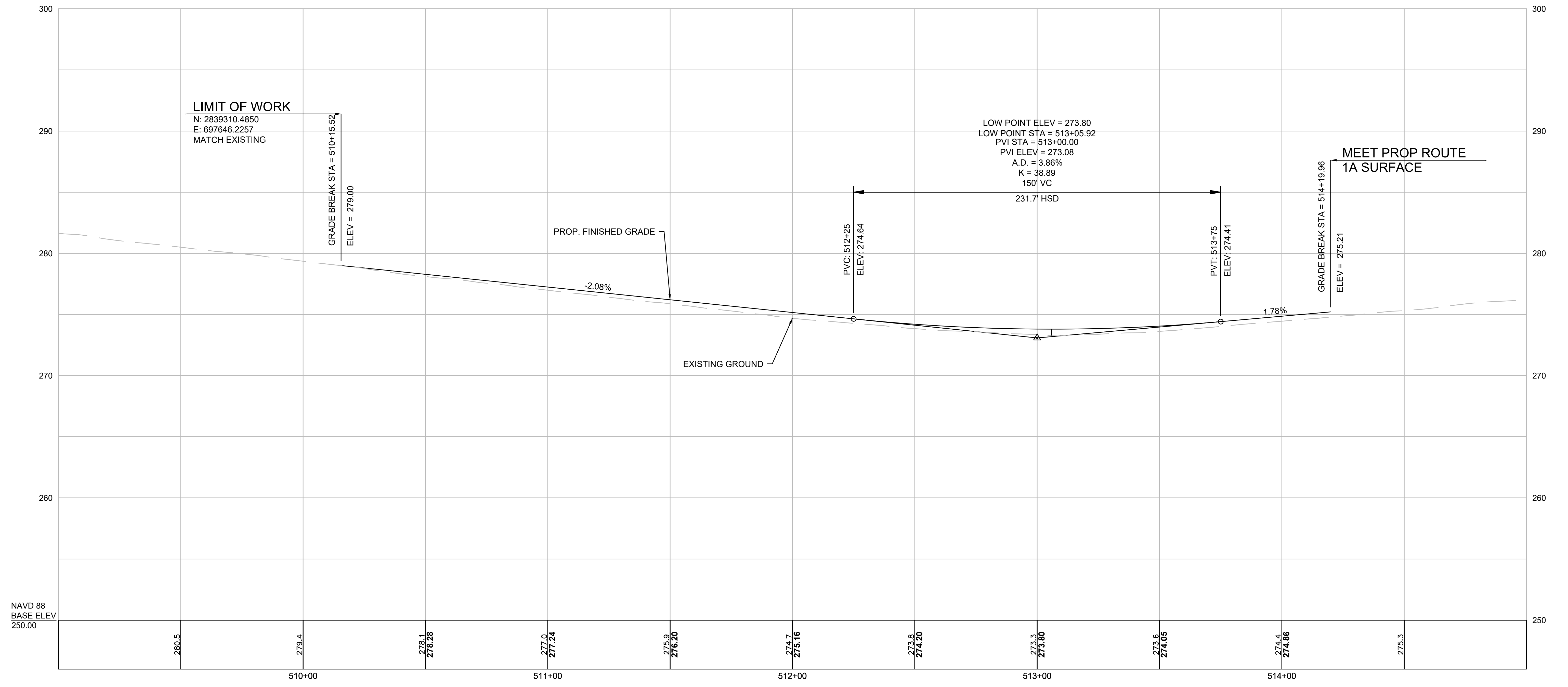
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 43

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	57	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 13 OF 17

I-495 SB EXIT RAMP



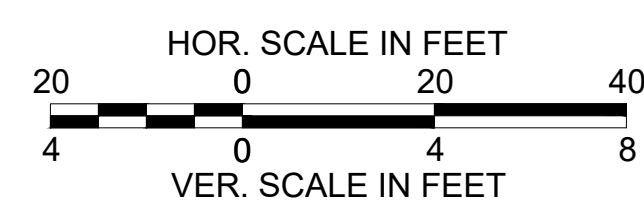
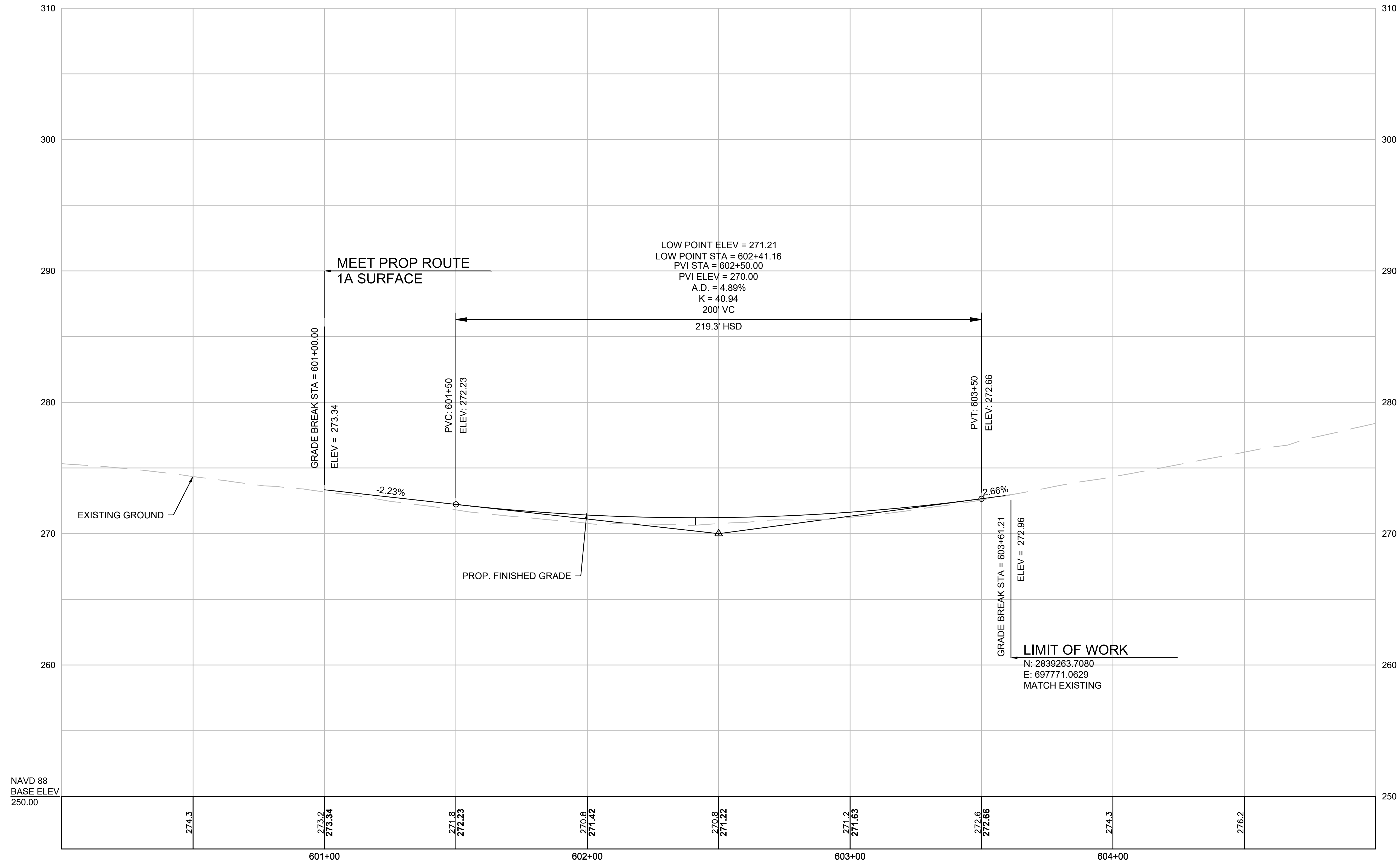
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 43

I-495 SB ENTRANCE RAMP A

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	58	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 14 OF 17



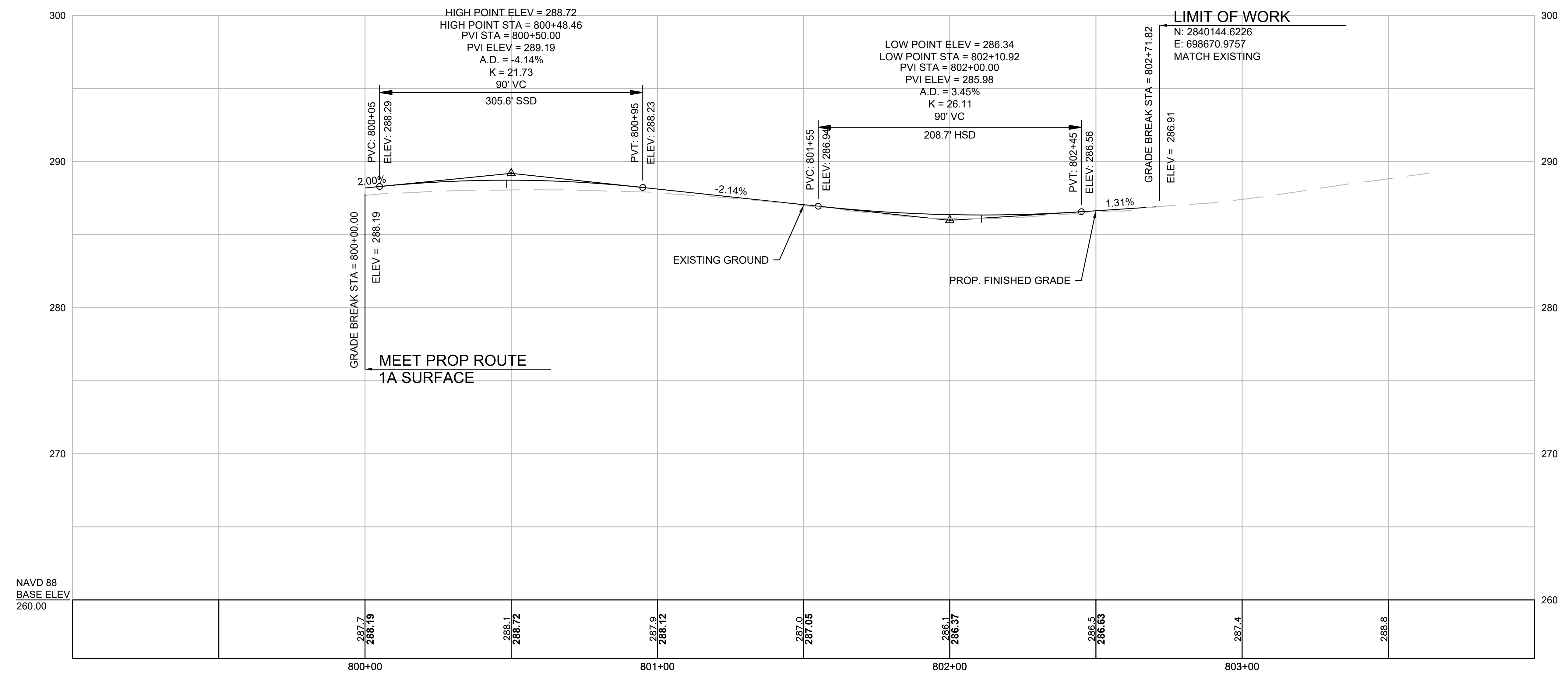
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 43

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

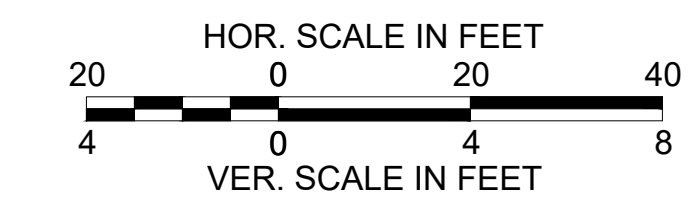
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	59	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 15 OF 17

I-495 NB ENTRANCE RAMP



NAVD 88
BASE ELEV
260.00



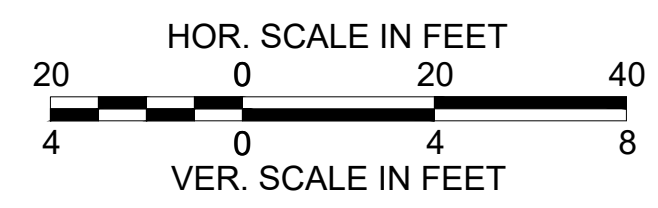
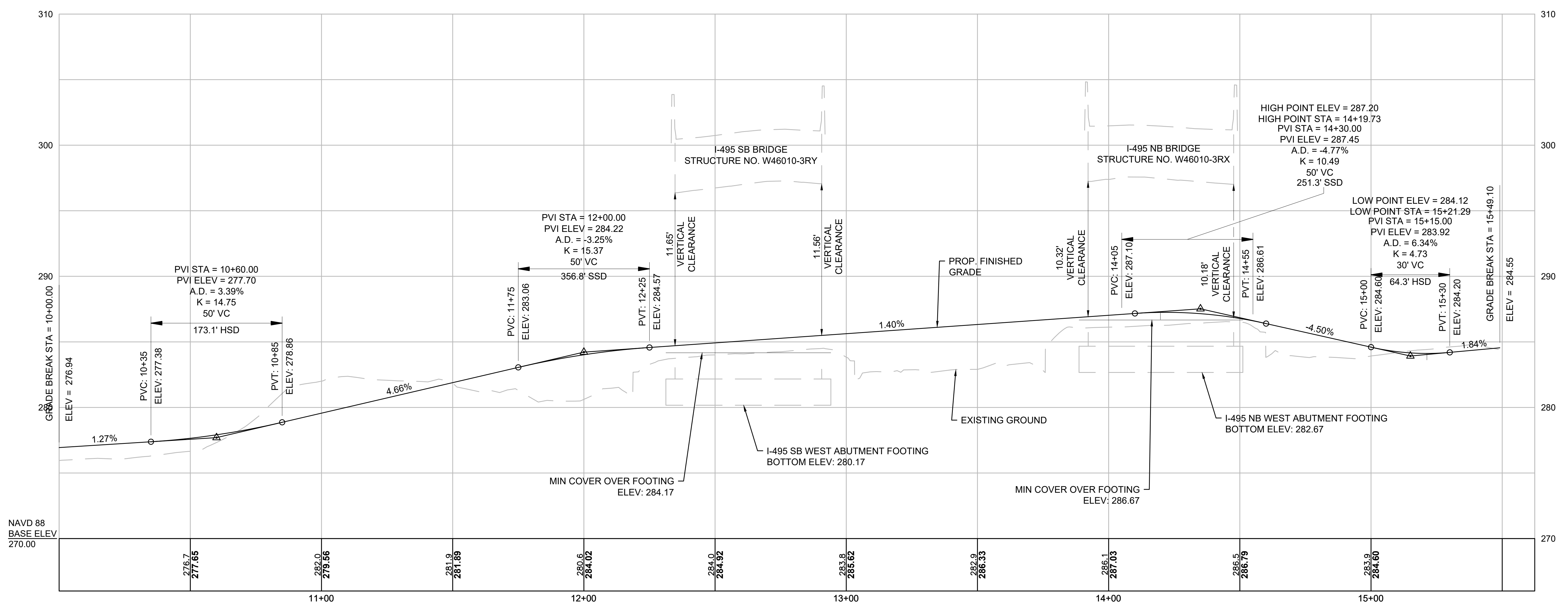
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 37 & 44

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	60	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 16 OF 17

SIDE PATH LT AT I-495 BRIDGES



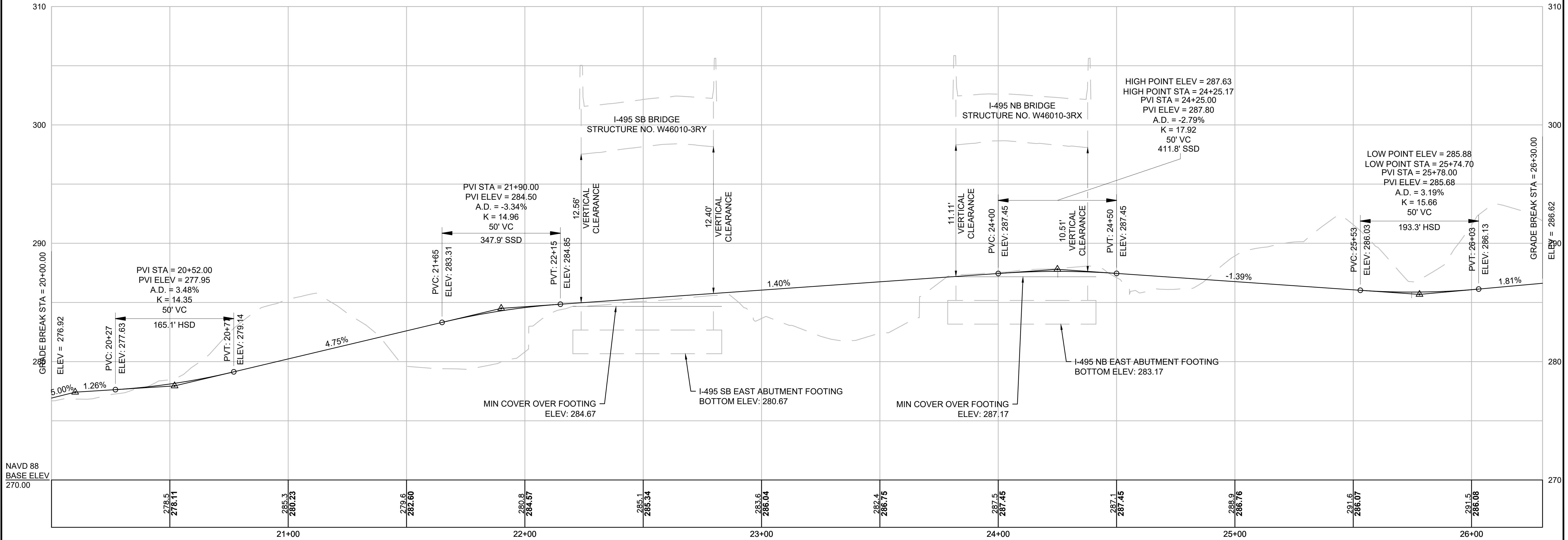
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 36

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

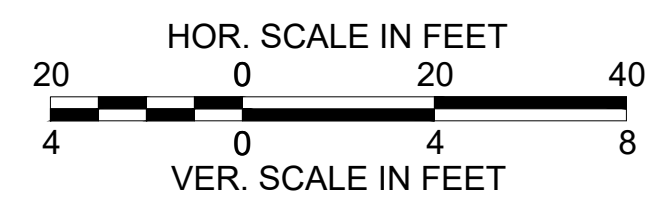
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	61	258
PROJECT FILE NO.		603739	

PROFILE
SHEET 17 OF 17

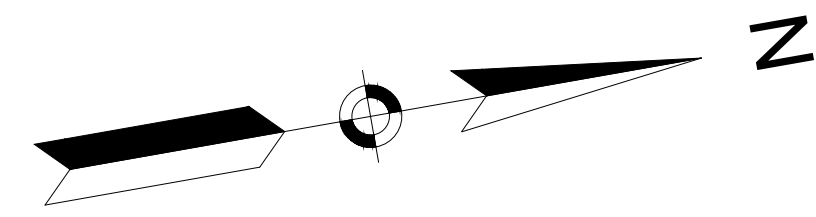
SIDE PATH RT AT I-495 BRIDGES



NAVD 88
BASE ELEV
270.00



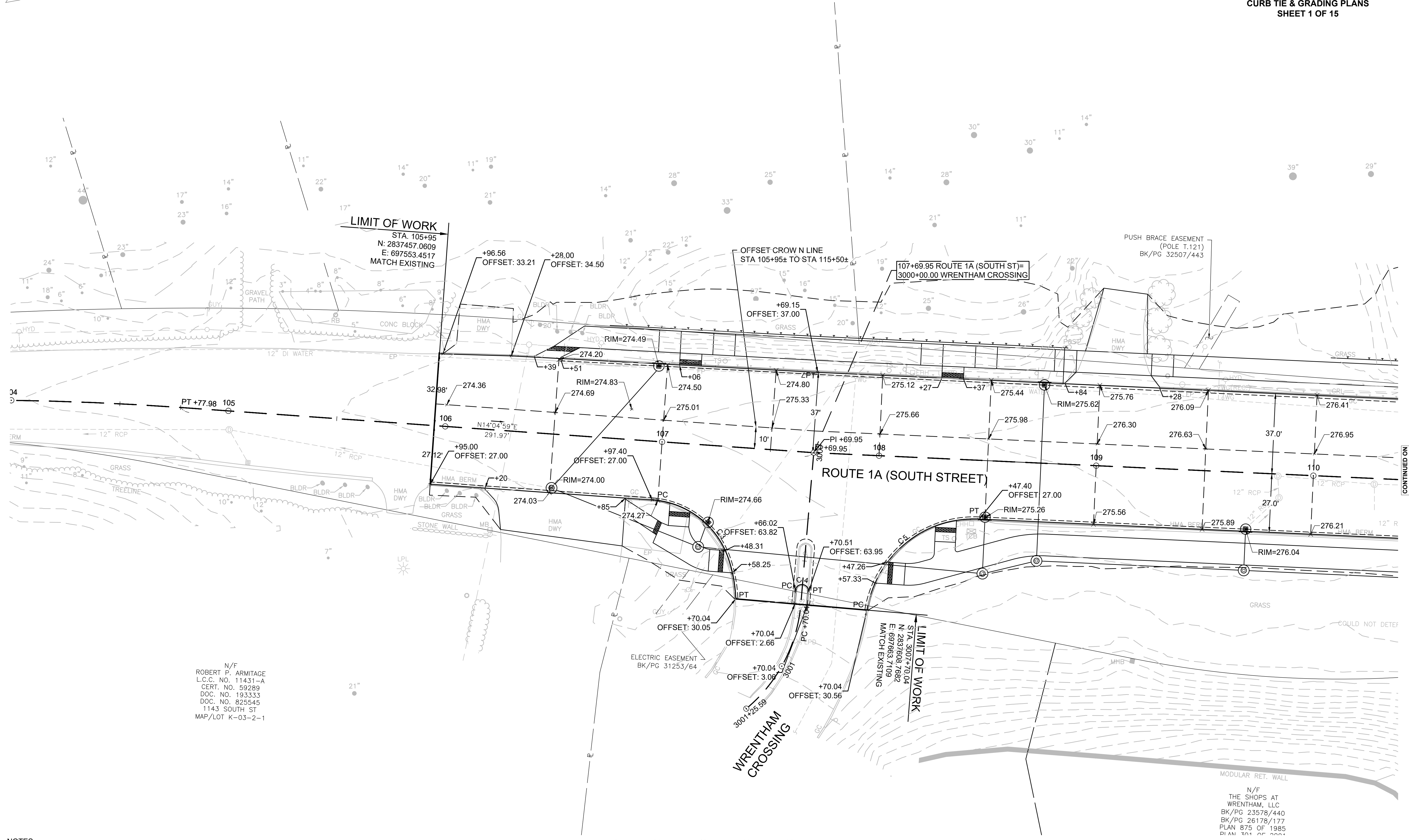
FOR CONSTRUCTION PLAN, SEE SHEET NOS. 35 & 36



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	62	258
PROJECT FILE NO.		603739	

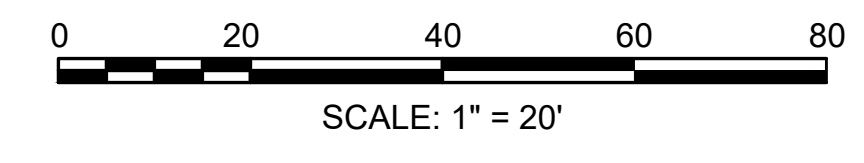
**CURB TIE & GRADING PLANS
SHEET 1 OF 15**



N/F
ROBERT P. ARMITAGE
L.C.C. NO. 11431-A
CERT. NO. 59289
DOC. NO. 193333
DOC. NO. 825545
1143 SOUTH ST
MAP/LOT K-03-2-1

NOTES:

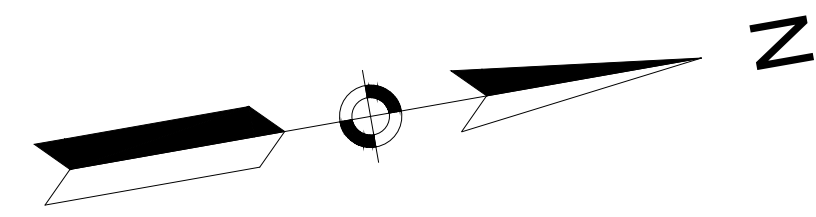
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



N/F
THE SHOPS AT
WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
PLAN 875 OF 1985
PLAN 301 OF 300

CONTINUED ON
SHEET NO. 63

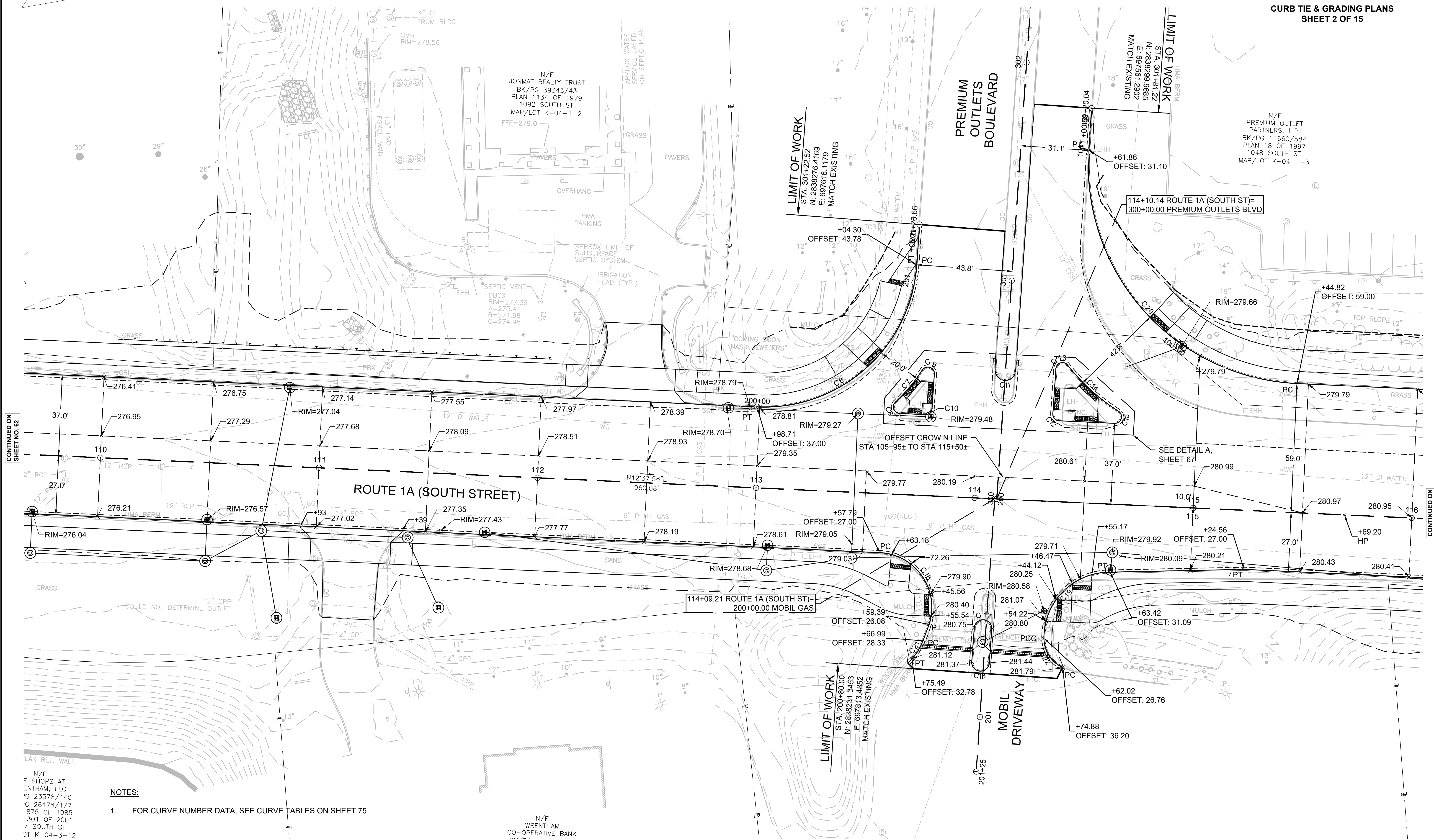
603739_HR0275(CURB TIE & GRADING PLANS).DWG Plotted on 23-Jul-2024 1:58 PM



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	63	258
PROJECT FILE NO.		603739	

**CURB TIE & GRADING PLANS
SHEET 2 OF 15**

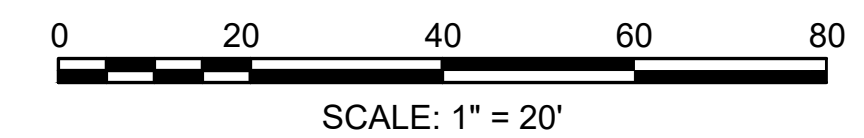


CONTINUED ON
SHEET NO. 62

CONTINUED ON
SHEET NO. 64

N/F
E SHOPS AT
ENTHAM, LLC
G 23578/440
G 26178/177
875 OF 1985
301 OF 2001
7 SOUTH ST
DT K-04-3-12

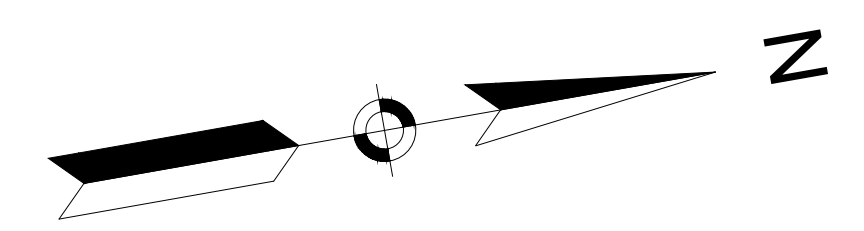
- NOTES:**
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	64	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 3 OF 15

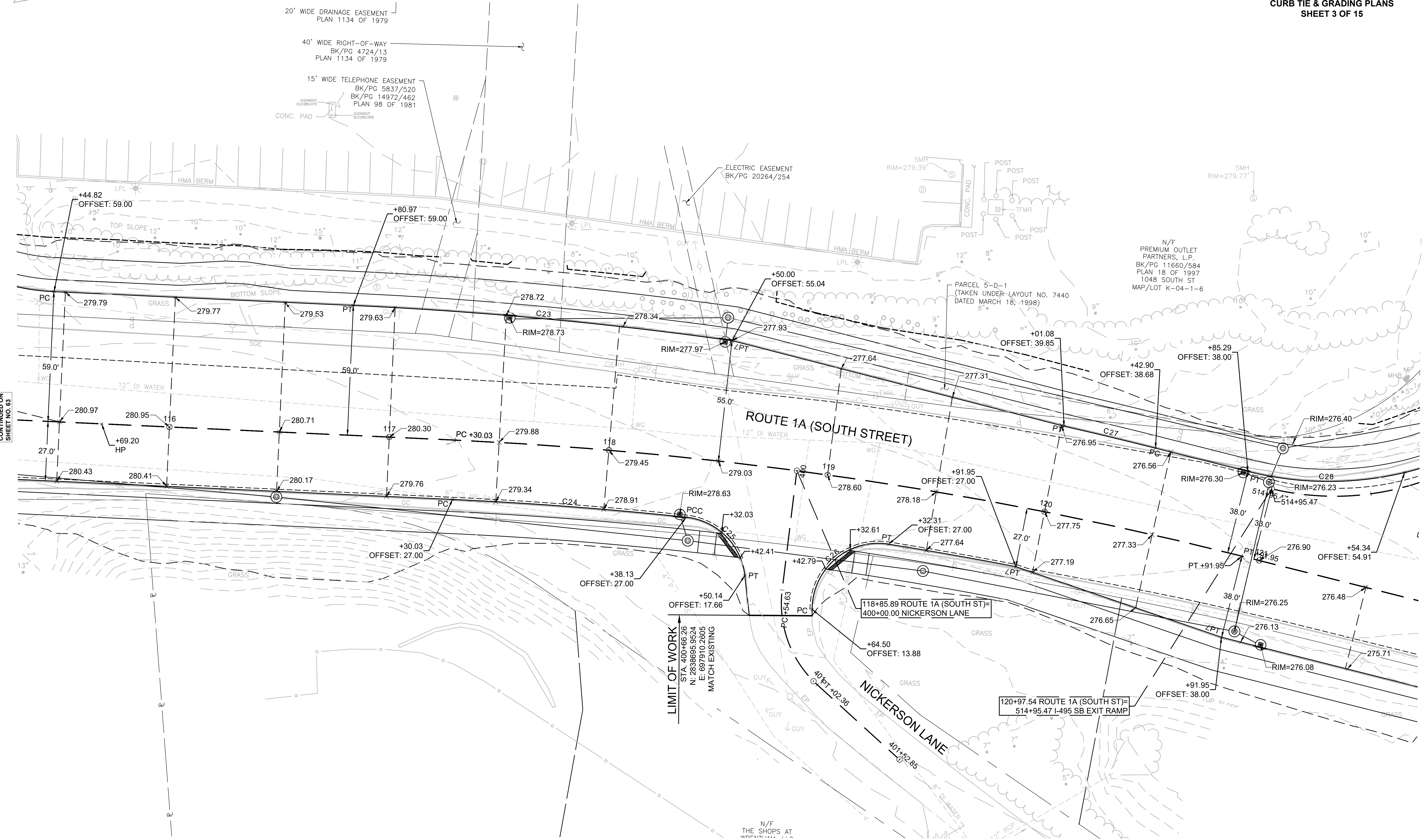


20' WIDE DRAINAGE EASEMENT
PLAN 1134 OF 1979

40' WIDE RIGHT-OF-WAY
BK/PG 4724/13
PLAN 1134 OF 1979

15' WIDE TELEPHONE EASEMENT
BK/PG 5837/520
BK/PG 14972/462
PLAN 98 OF 1981

ELECTRIC EASEMENT
BK/PG 20264/254



CONTINUED ON
SHEET NO. 63

CONTINUED ON
SHEET NO. 65

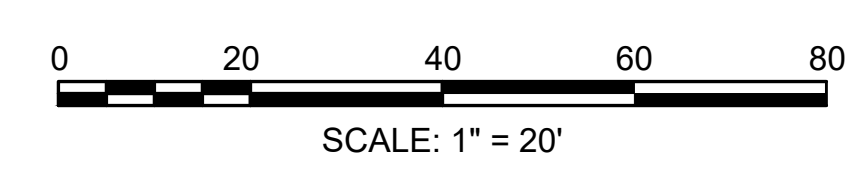
LIMIT OF WORK
STA. 400+66.26
N: 2838695.9524
E: 697910.2805
MATCH EXISTING

118+85.89 ROUTE 1A (SOUTH ST)=
400+00.00 NICKERSON LANE

120+97.54 ROUTE 1A (SOUTH ST)=
514+95.47 I-495 SB EXIT RAMP

NOTES:

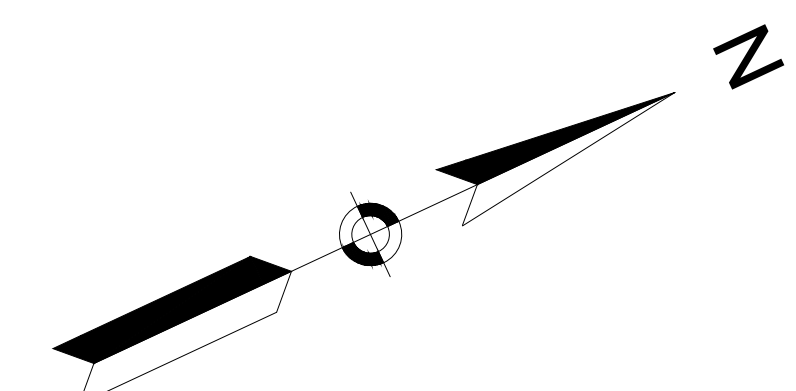
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



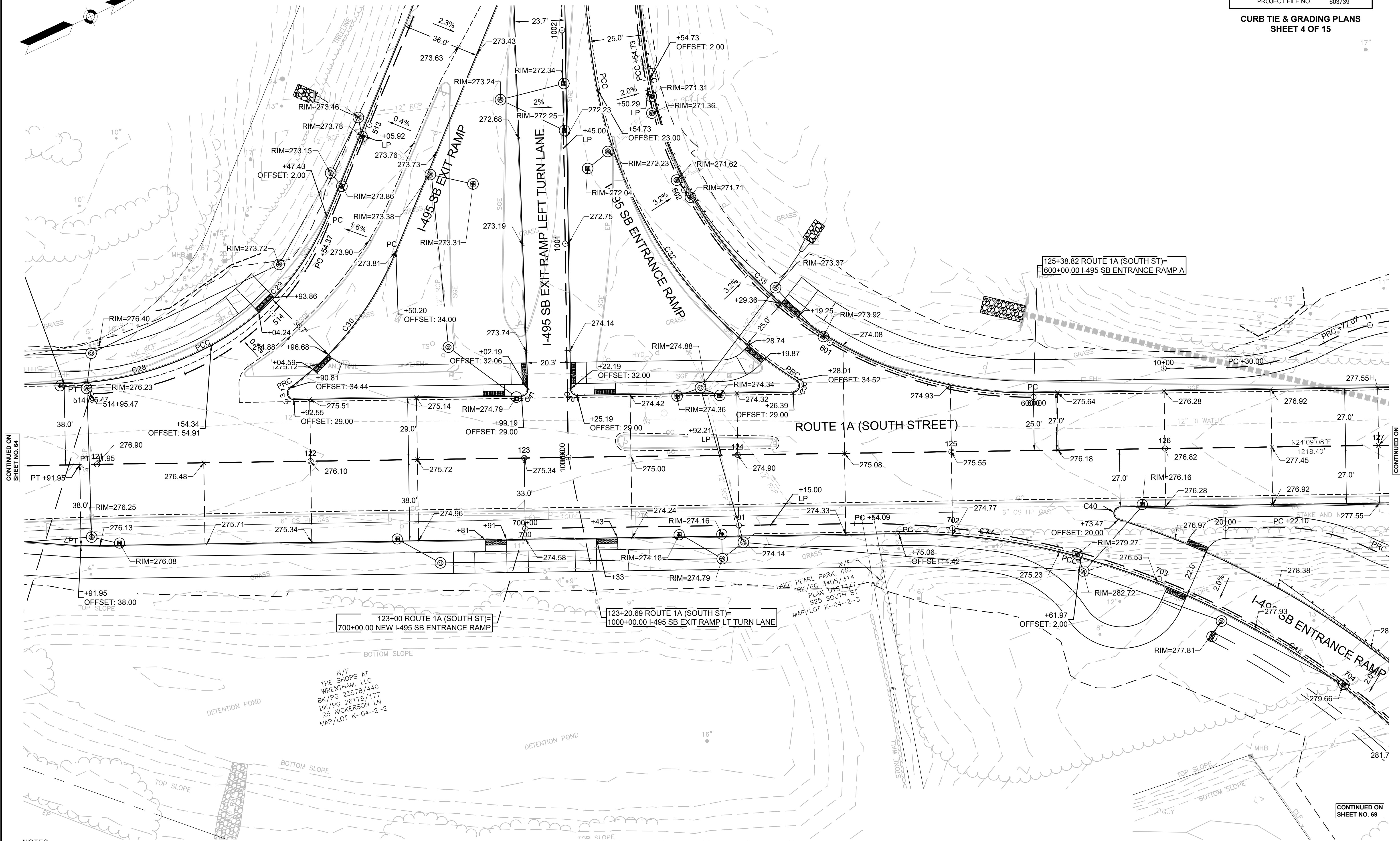
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	65	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 4 OF 15



CONTINUED ON
SHEET NO. 73



125+38.82 ROUTE 1A (SOUTH ST)=
600+00.00 I-495 SB ENTRANCE RAMP A

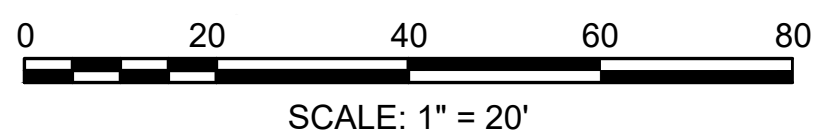
123+00 ROUTE 1A (SOUTH ST)=
700+00.00 NEW I-495 SB ENTRANCE RAMP

123+20.69 ROUTE 1A (SOUTH ST)=
1000+00.00 I-495 SB EXIT RAMP LT TURN LANE

N/F
THE SHOPS AT
WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
25 NICKERSON LN
MAP/LOT K-04-2-2

LAKE PEARL PARK, INC.
BK/PG 3405/314
PLAN 17873-7
925 SOUTH ST
MAP/LOT K-04-2-3

- NOTES:
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



CONTINUED ON
SHEET NO. 64

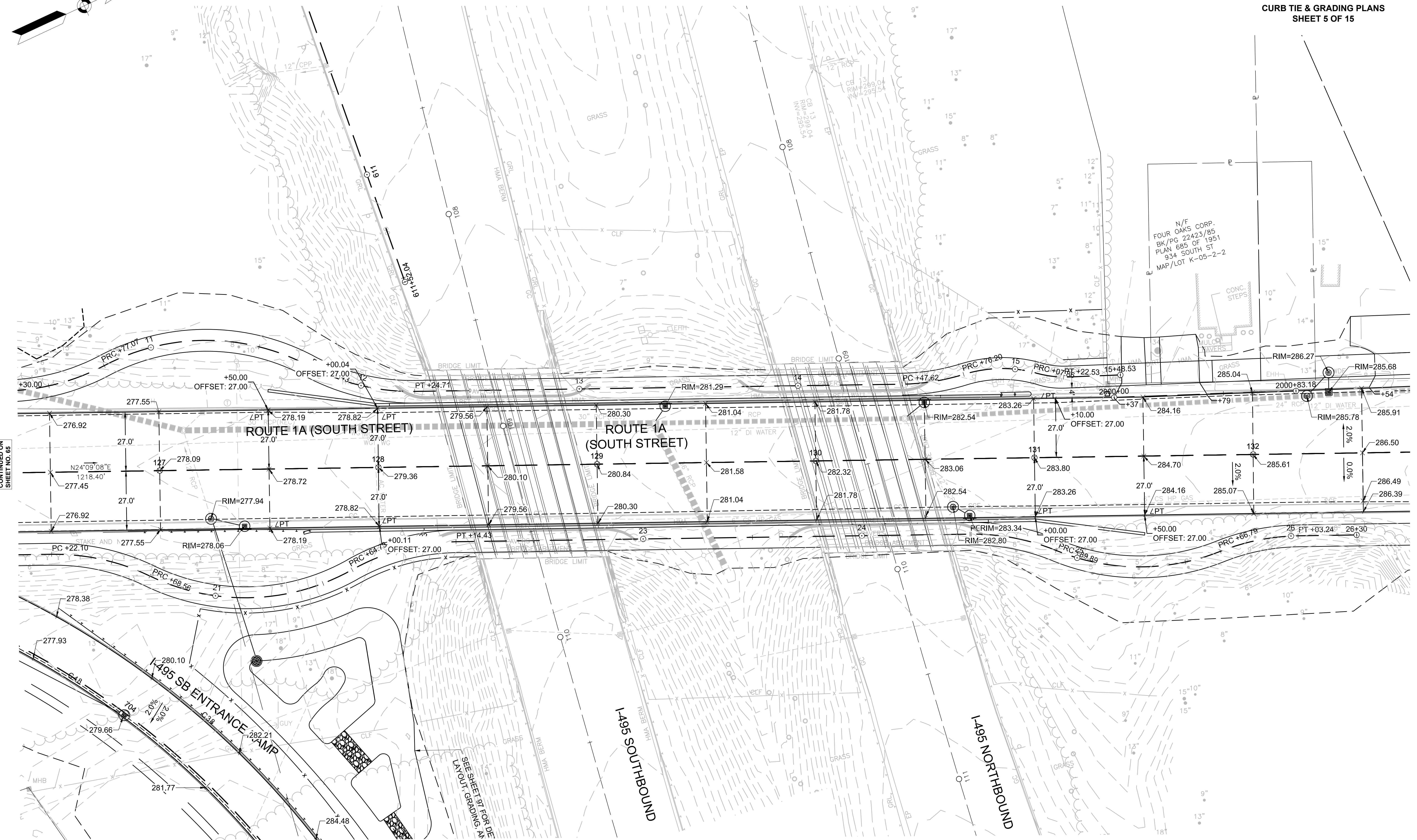
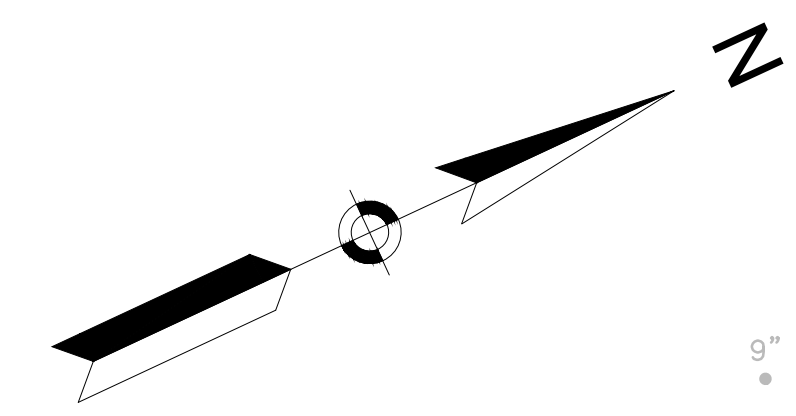
CONTINUED ON
SHEET NO. 66

CONTINUED ON
SHEET NO. 69

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	66	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 5 OF 15



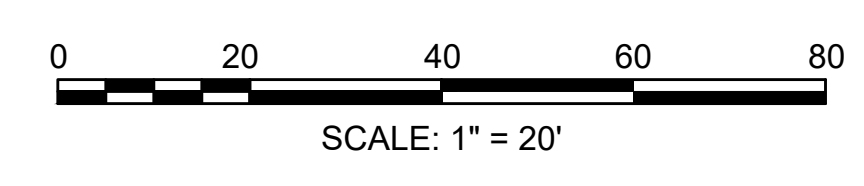
N/F
FOUR OAKS CORP.
BK/PG 22423/85
PLAN 685 OF 1951
934 SOUTH ST
MAP/LOT K-05-2-2

CONTINUED ON
SHEET NO. 65

CONTINUED ON
SHEET NO. 67

NOTES:

- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75

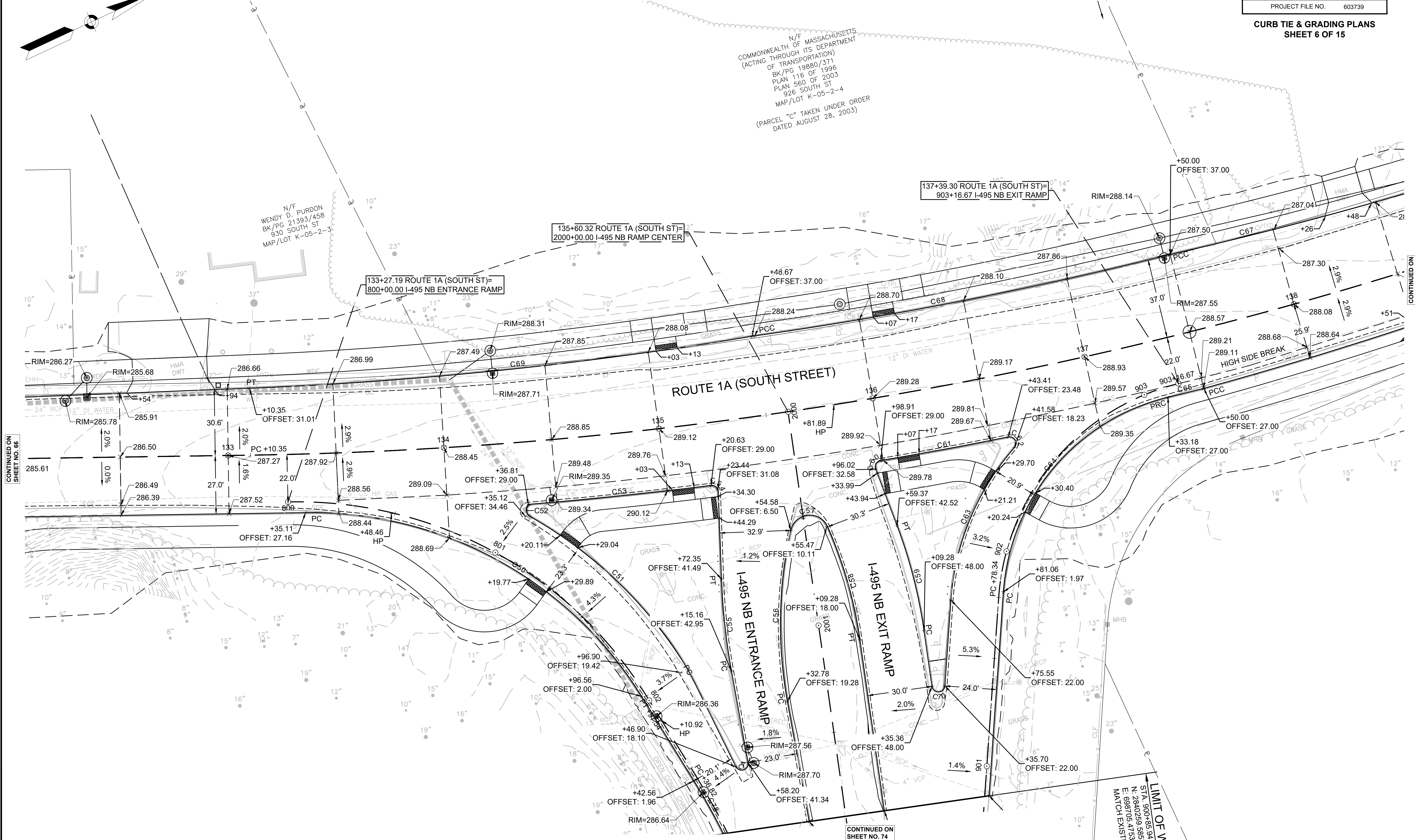
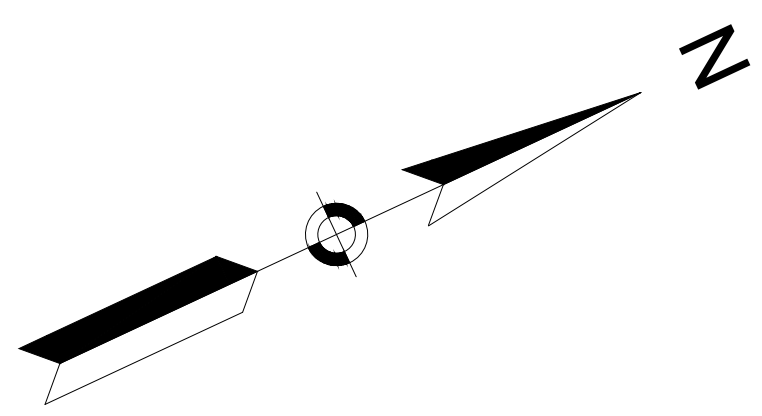


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	67	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 6 OF 15

N/F
COMMONWEALTH OF MASSACHUSETTS
(ACTING THROUGH ITS DEPARTMENT
OF TRANSPORTATION)
BK/PG 19880/371
PLAN 116 OF 1996
PLAN 560 OF 2003
926 SOUTH ST
MAP/LOT K-05-2-4
(PARCEL "C" TAKEN UNDER ORDER
DATED AUGUST 28, 2003)



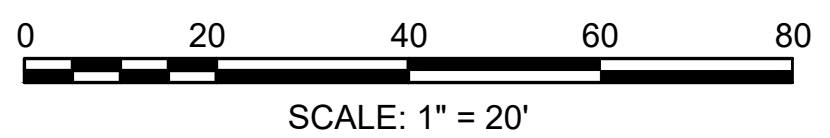
CONTINUED ON
SHEET NO. 66

CONTINUED ON
SHEET NO. 68

CONTINUED ON
SHEET NO. 74

LIMIT OF WORK
STA. 900+85.94
N: 2840289.5857
E: 698705.4753
MATCH EXISTING

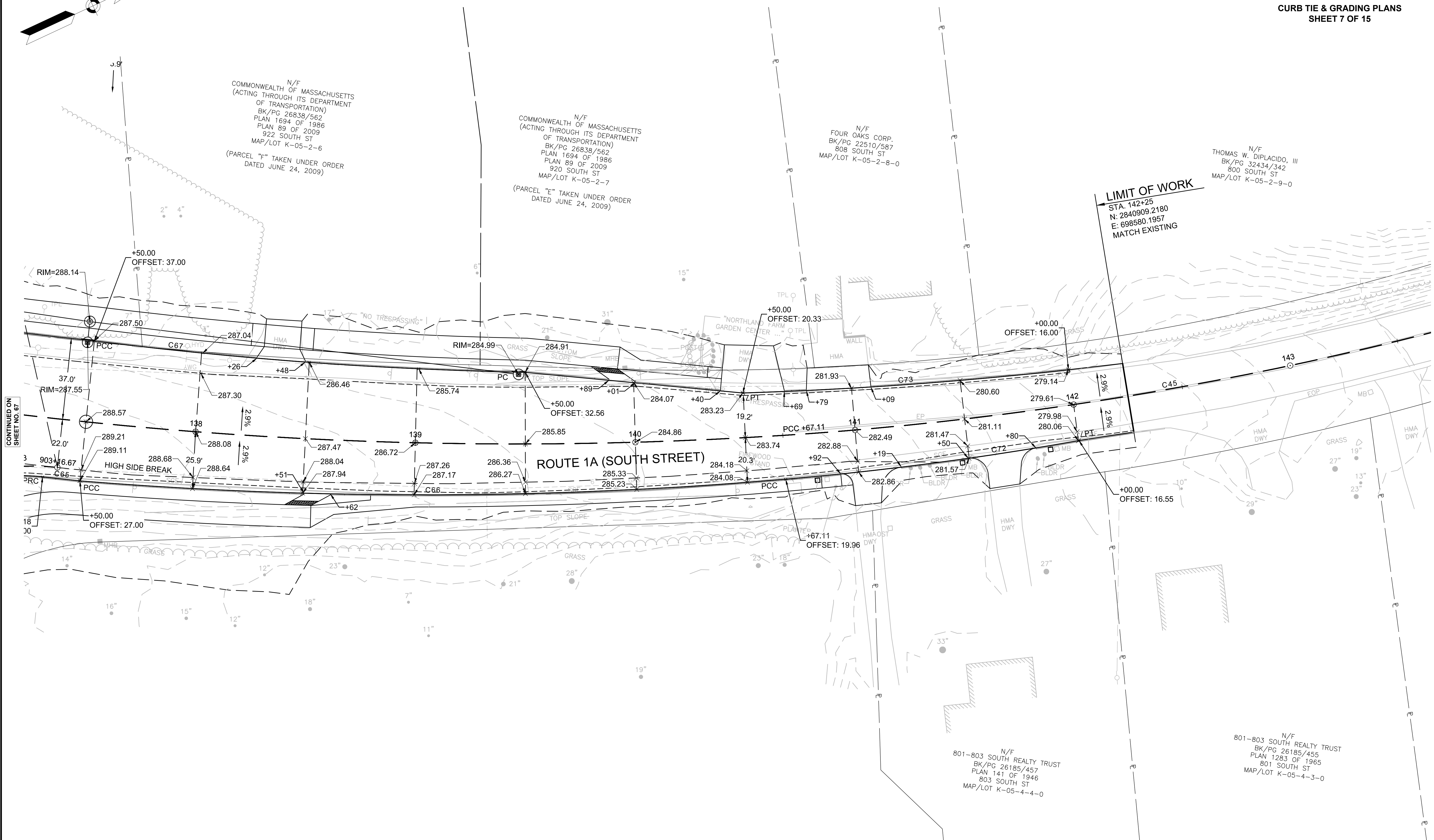
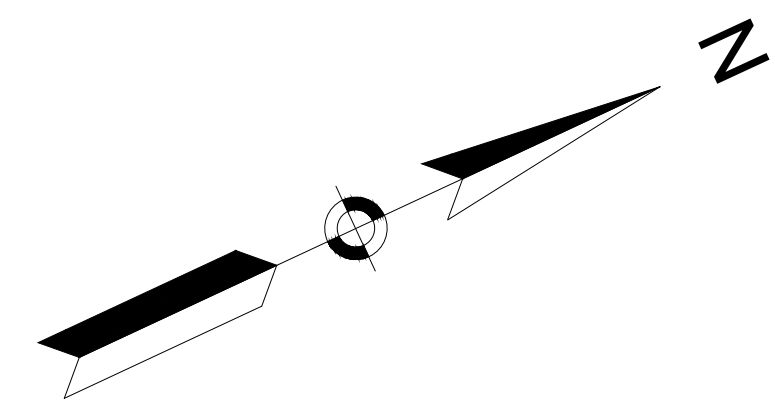
- NOTES:
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	68	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 7 OF 15

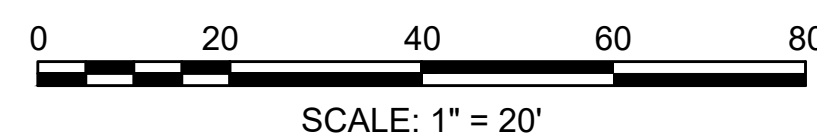


LIMIT OF WORK
 STA. 142+25
 N: 2840909.2180
 E: 698580.1957
 MATCH EXISTING

CONTINUED ON
SHEET NO. 67

NOTES:

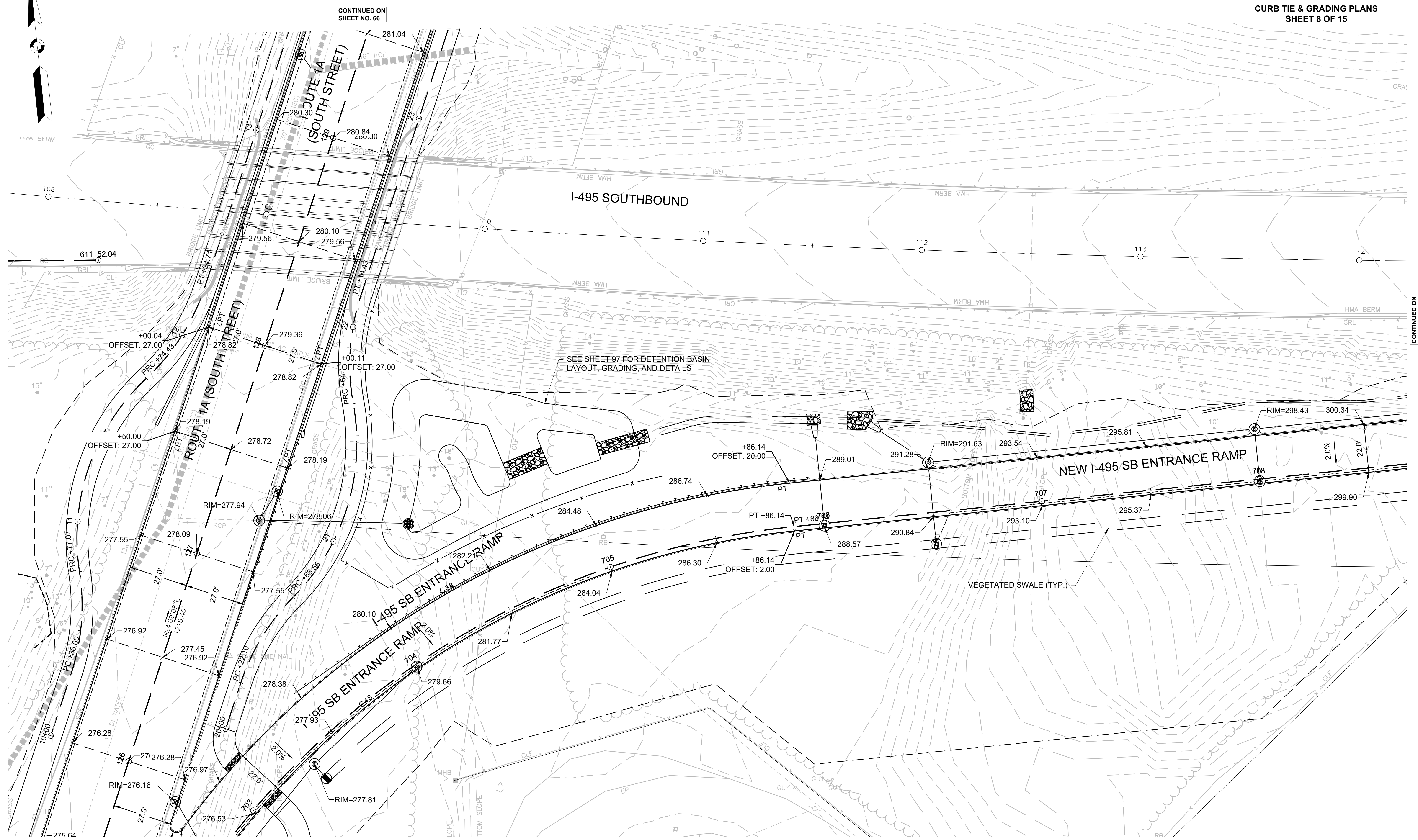
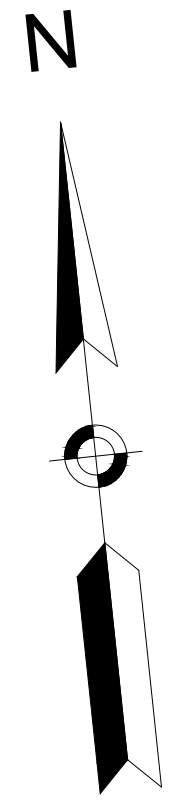
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	69	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 8 OF 15

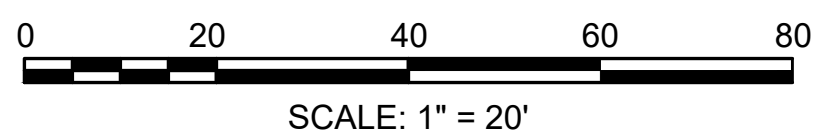


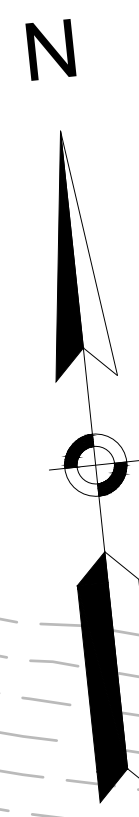
CONTINUED ON
SHEET NO. 66

CONTINUED ON
SHEET NO. 70

NOTES:
CONTINUED ON
SHEET NO. 65

- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75

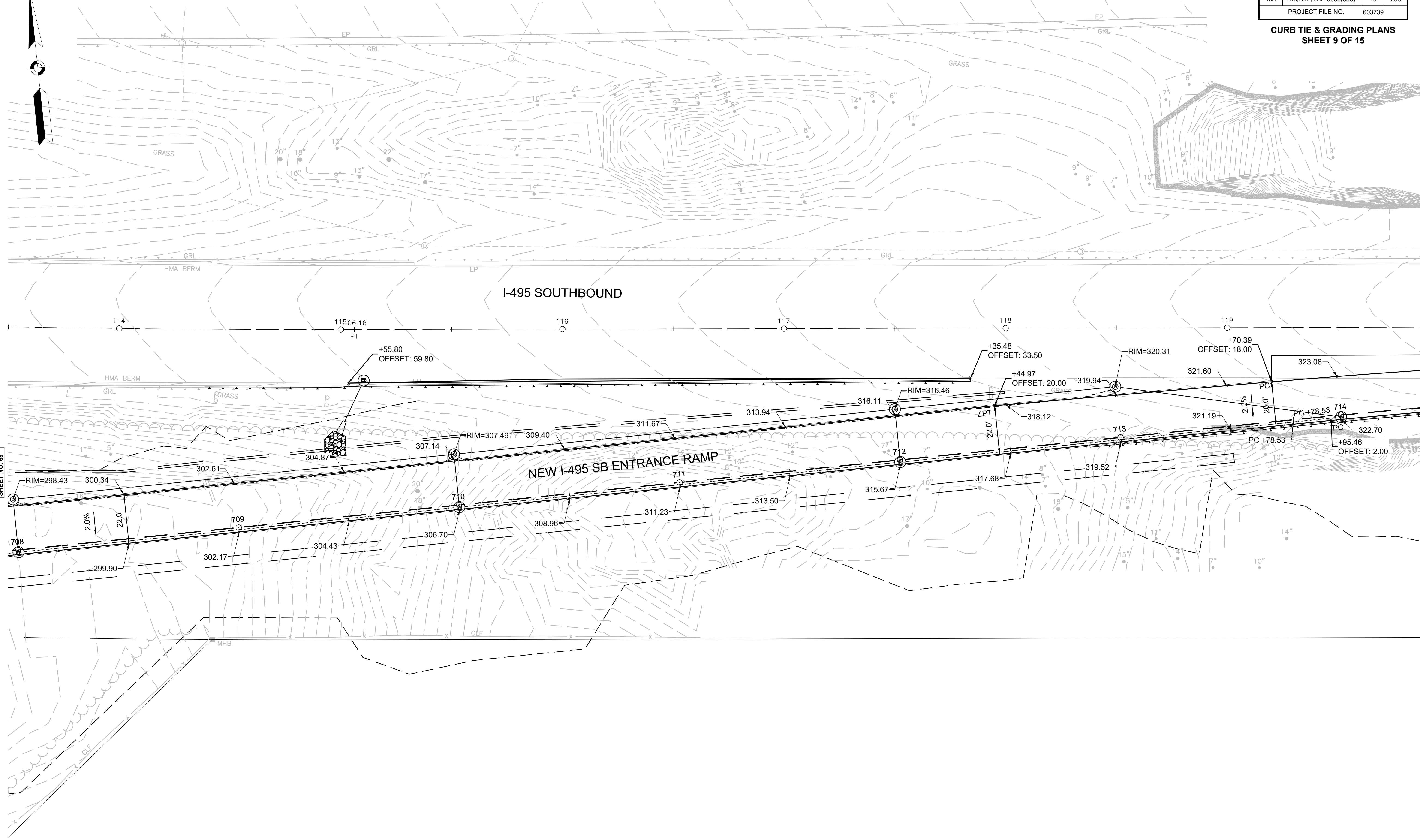




WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	70	258
PROJECT FILE NO.		603739	

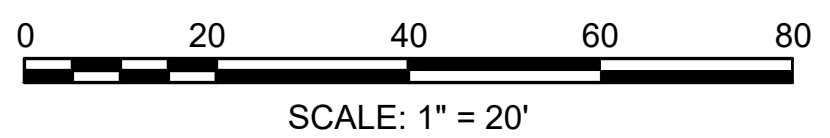
CURB TIE & GRADING PLANS
SHEET 9 OF 15

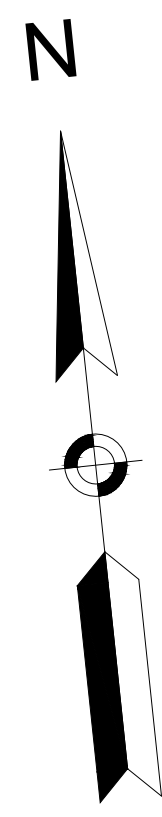


CONTINUED ON
SHEET NO. 69

CONTINUED ON
SHEET NO. 71

- NOTES:
- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75

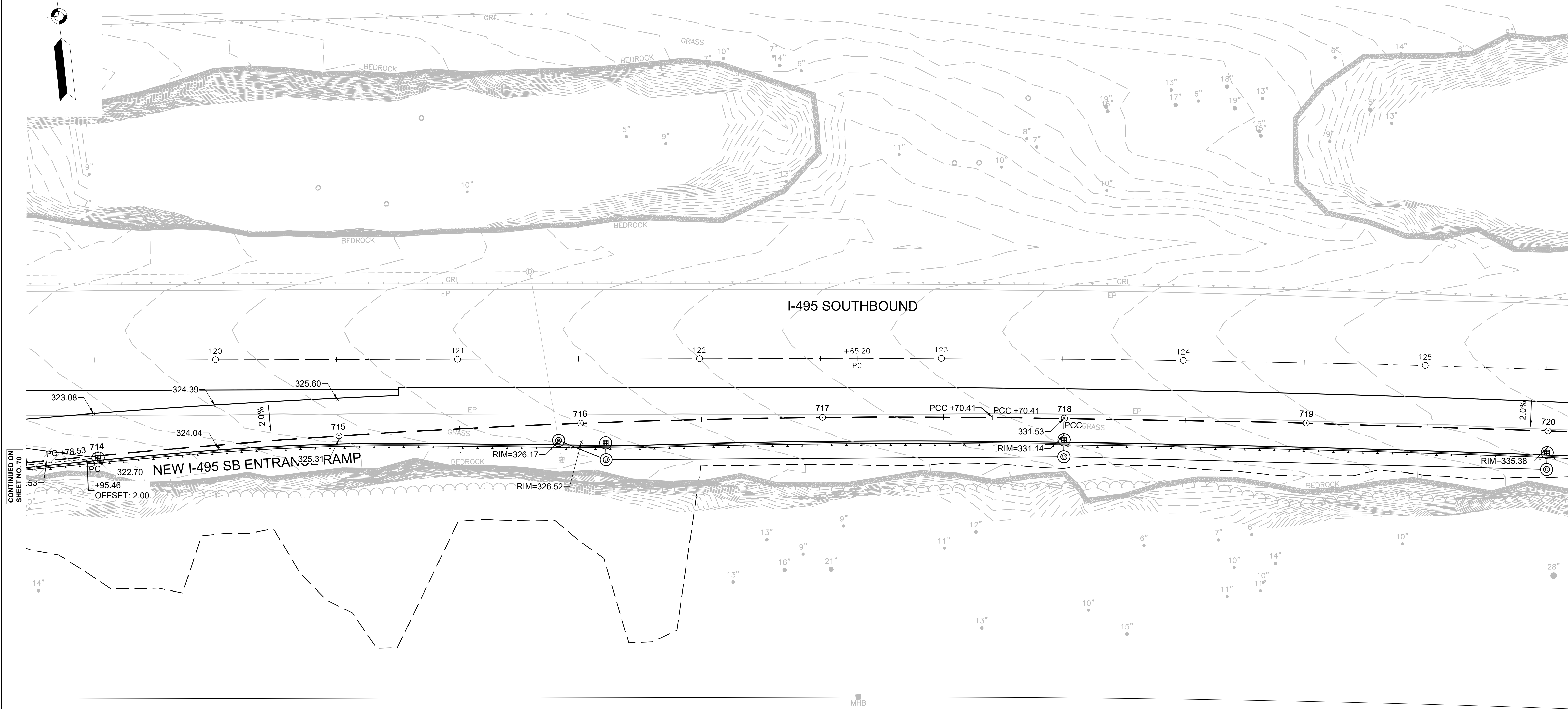




WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	71	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 10 OF 15

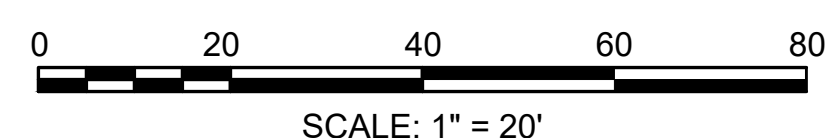


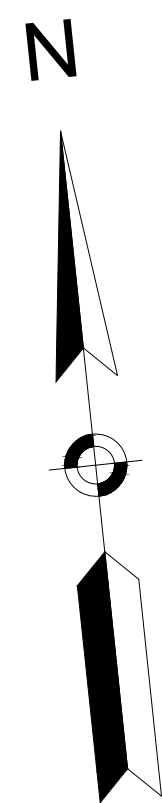
CONTINUED ON
SHEET NO. 70

CONTINUED ON
SHEET NO. 72

NOTES:

- 1. FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75

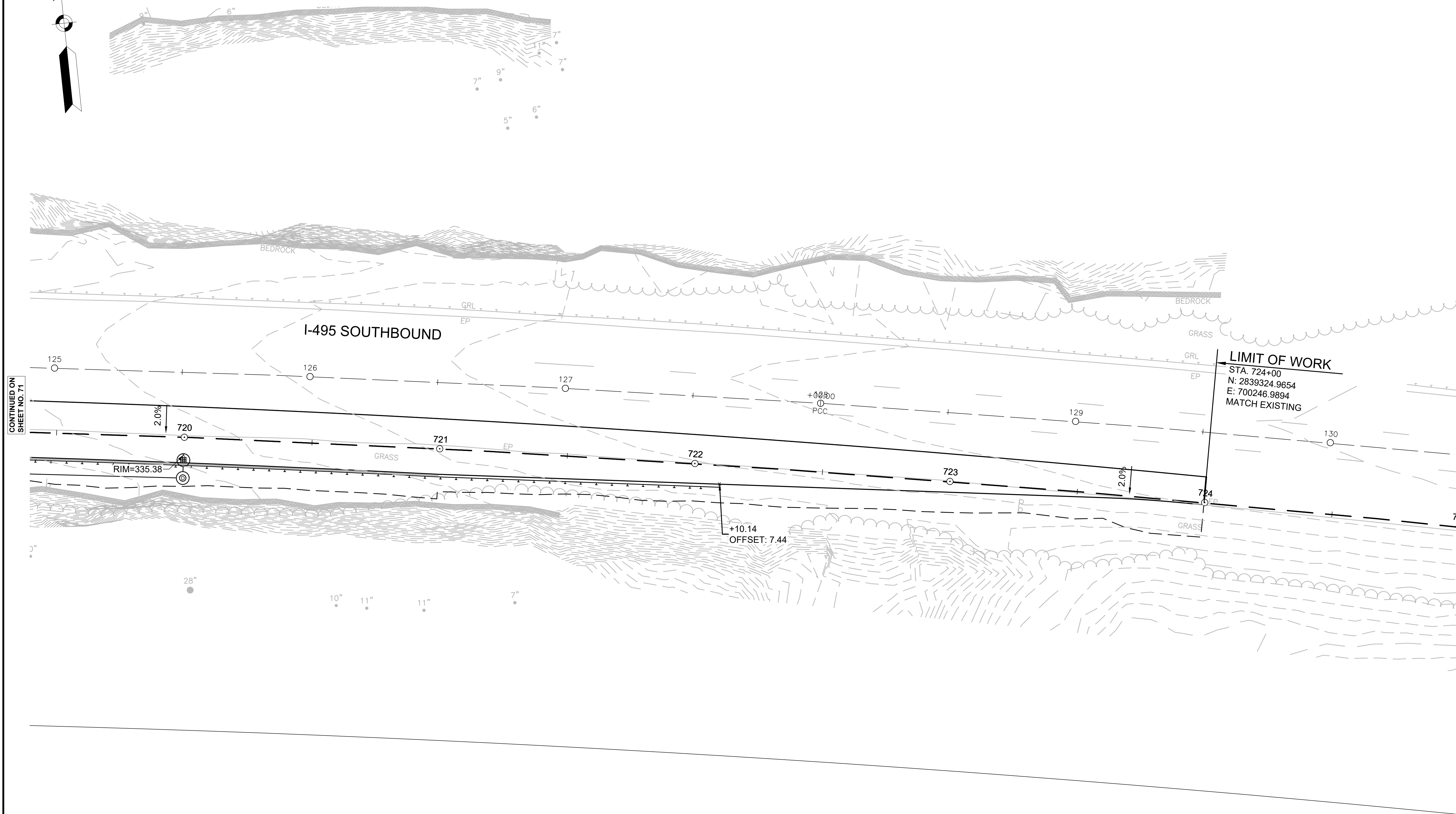




WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	72	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 11 OF 15



CONTINUED ON
SHEET NO. 71

NOTES:

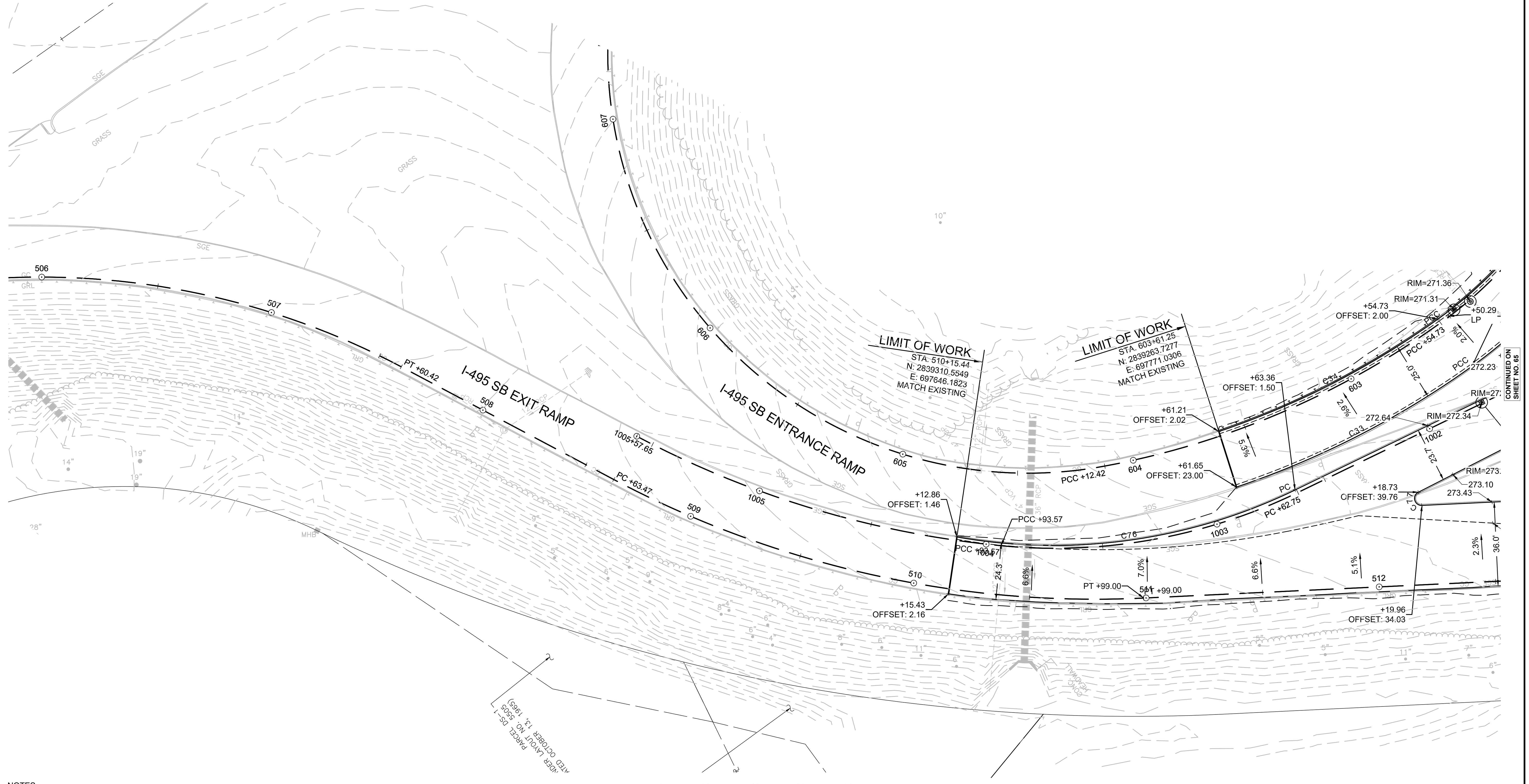
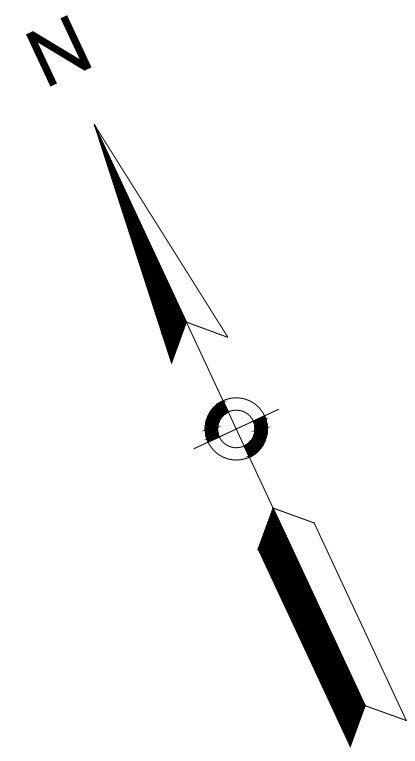
1. FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



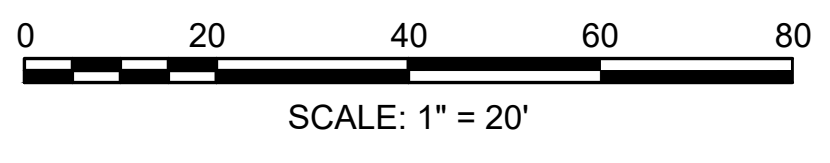
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	73	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 12 OF 15



NOTES:
1. FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



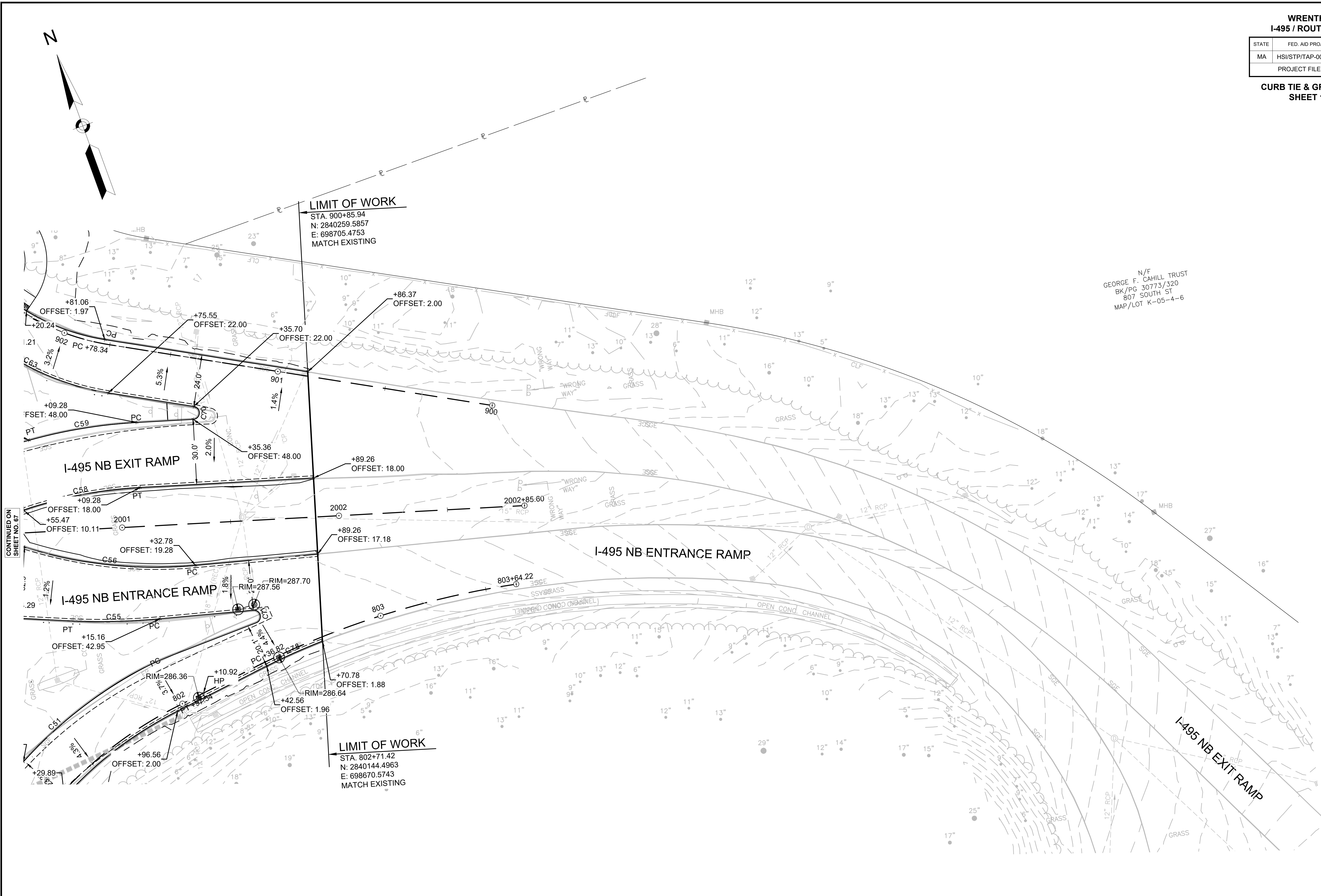
CONTINUED ON SHEET NO. 65

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	74	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 13 OF 15

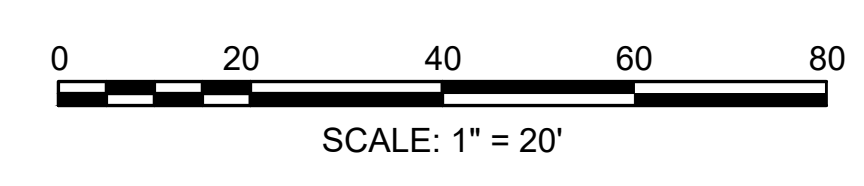
N/F
GEORGE F. CAHILL TRUST
BK/PG 30773/320
807 SOUTH ST
MAP/LOT K-05-4-6



CONTINUED ON
SHEET NO. 67

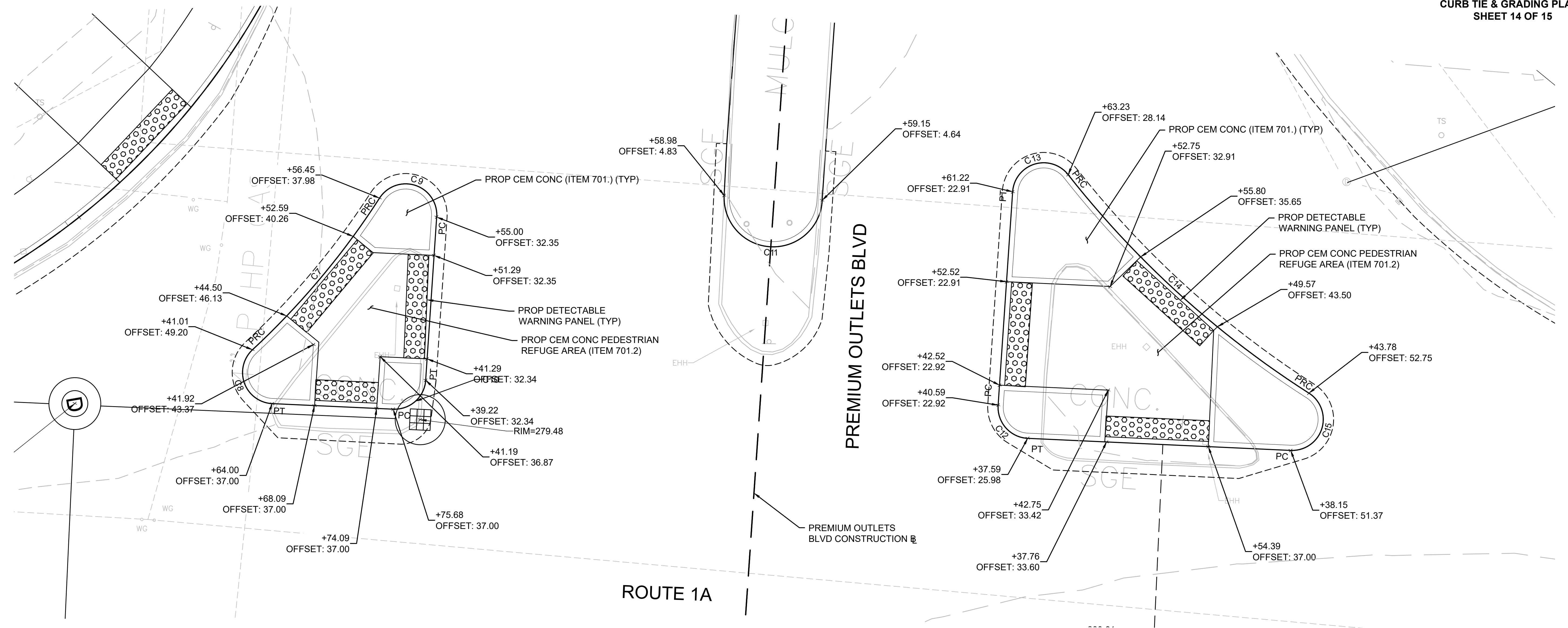
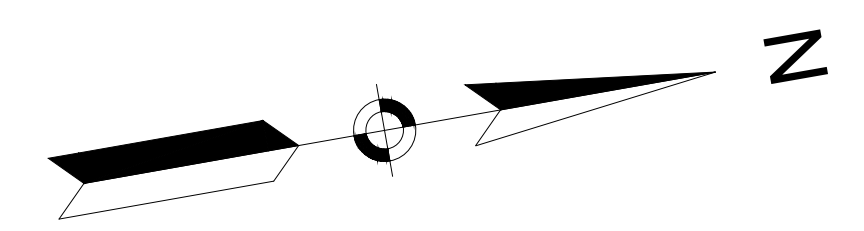
NOTES:

- FOR CURVE NUMBER DATA, SEE CURVE TABLES ON SHEET 75



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	75	258
PROJECT FILE NO.		603739	

CURB TIE & GRADING PLANS
SHEET 14 OF 15



ROUTE 1A

PREMIUM OUTLETS BLVD

DETAIL A
SCALE: 1" = 5'

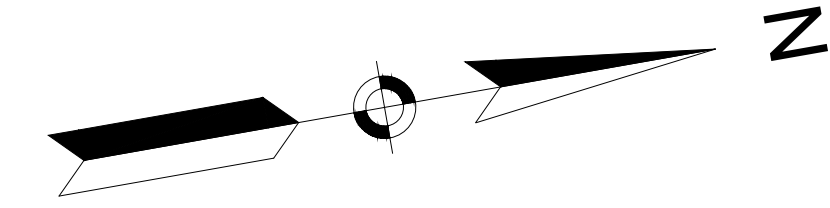
Curve Table			
Curve #	Delta	Radius	Length
C3	67°25'06"	40.00	47.07
C4	177°59'46"	3.06	9.50
C5	83°19'02"	50.00	72.71
C6	88°34'05"	70.00	108.21
C7	14°14'22"	77.00	19.14
C8	134°25'37"	3.00	7.04
C9	151°02'42"	3.00	7.91
C10	88°46'03"	3.00	4.65
C11	180°00'00"	4.73	14.87
C12	91°15'41"	3.00	4.78
C13	137°56'07"	3.00	7.22
C14	19°11'55"	94.05	31.51
C15	150°00'07"	3.00	7.85
C16	105°50'05"	24.99	46.17
C17	180°00'00"	4.00	12.57
C18	180°00'00"	4.00	12.57
C19	89°05'49"	30.00	46.65
C20	91°13'31"	100.00	159.22
C21	21°53'38"	25.26	9.65
C22	64°16'06"	15.00	16.83

Curve Table			
Curve #	Delta	Radius	Length
C23	5°21'23"	1849.00	172.86
C24	3°26'27"	1773.00	106.47
C25	77°26'31"	30.00	40.55
C26	99°06'17"	30.00	51.89
C27	1°20'00"	1838.00	42.77
C28	27°28'12"	150.00	71.92
C29	39°23'26"	120.00	82.50
C30	31°24'19"	148.00	81.12
C31	144°32'41"	3.00	7.57
C32	47°28'28"	205.00	169.86
C33	17°01'03"	383.00	113.76
C34	16°56'49"	358.00	105.89
C35	80°11'31"	180.00	251.93
C36	147°16'57"	3.00	7.71
C38	47°46'18"	395.00	329.34
C40	161°45'33"	3.00	8.47
C41	91°12'46"	3.00	4.78
C46	90°00'00"	3.00	4.71
C48	49°31'46"	373.00	322.44
C50	59°02'53"	180.00	185.50

Curve Table			
Curve #	Delta	Radius	Length
C51	27°47'55"	201.82	97.92
C52	96°18'55"	3.68	6.19
C53	2°31'40"	1929.00	85.10
C54	95°06'13"	3.00	4.98
C55	8°11'15"	300.00	42.87
C56	22°51'02"	200.00	79.76
C57	143°38'47"	9.00	22.56
C58	15°38'47"	200.00	54.62
C59	12°31'51"	230.00	50.30
C60	101°06'40"	3.00	5.29
C61	1°47'00"	1929.00	60.04
C62	142°31'49"	3.00	7.46
C63	37°10'32"	120.00	77.86
C64	72°22'50"	100.00	126.33
C65	0°30'26"	1927.00	17.06
C66	9°34'56"	1920.00	321.10
C67	6°04'56"	1850.00	196.39
C68	6°04'16"	1863.00	197.41
C69	7°15'05"	1850.00	234.13
C70	167°50'57"	3.00	8.79

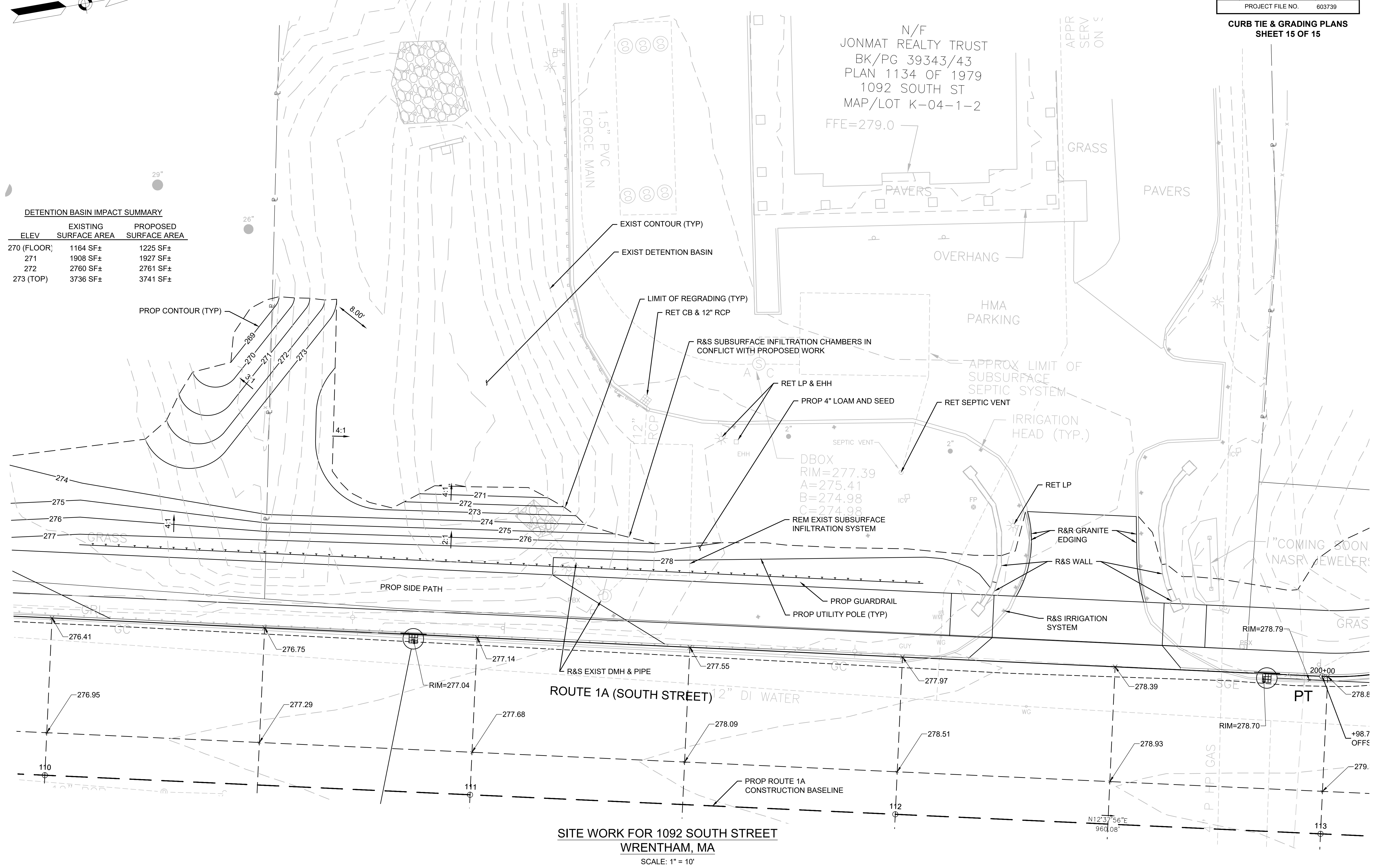
Curve Table			
Curve #	Delta	Radius	Length
C71	160°07'43"	3.00	8.38
C72	5°08'09"	1500.00	134.46
C73	4°35'44"	1850.00	148.38
C76	35°51'49"	237.59	148.71
C77	155°38'52"	3.00	8.15
C78	5°21'56"	300.00	28.09

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	76	258
PROJECT FILE NO.		603739	



DETENTION BASIN IMPACT SUMMARY

ELEV	EXISTING SURFACE AREA	PROPOSED SURFACE AREA
270 (FLOOR)	1164 SF±	1225 SF±
271	1908 SF±	1927 SF±
272	2760 SF±	2761 SF±
273 (TOP)	3736 SF±	3741 SF±



SITE WORK FOR 1092 SOUTH STREET
WRENTHAM, MA
SCALE: 1" = 10'

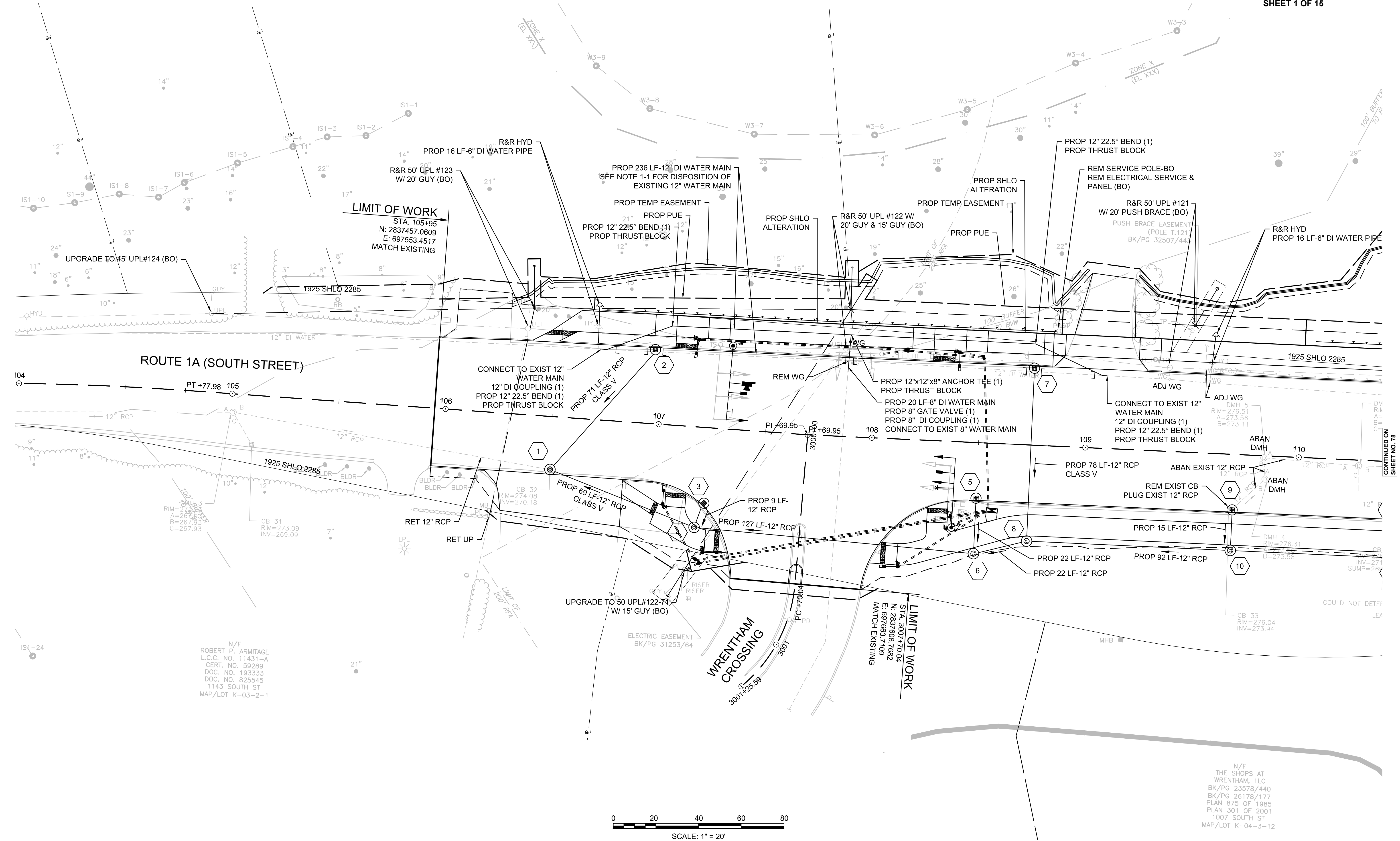
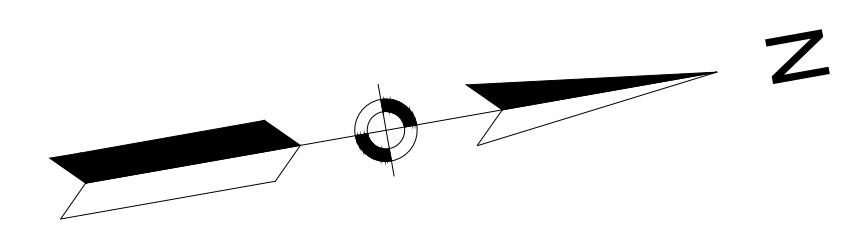
**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	77	258
PROJECT FILE NO.		603739	

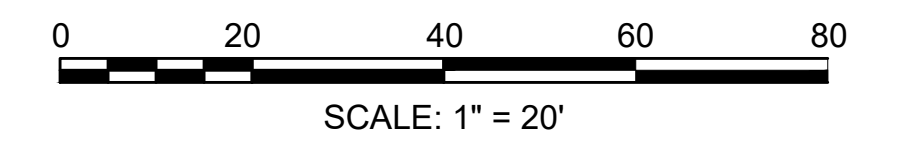
**DRAINAGE AND UTILITY PLANS
SHEET 1 OF 15**

NOTES:

1-1) THE EXISTING 12" DI WATER MAIN SHALL BE CAPPED AND ABANDONED WITH CONTROLLED DENSITY FILL. WHERE THE EXISTING WATER PIPE IS IN CONFLICT WITH PROPOSED DRAINAGE, THE WATER PIPE SHALL BE REMOVED FOR THE LIMIT OF THE CONFLICT AND CAPPED AT CUT ENDS.

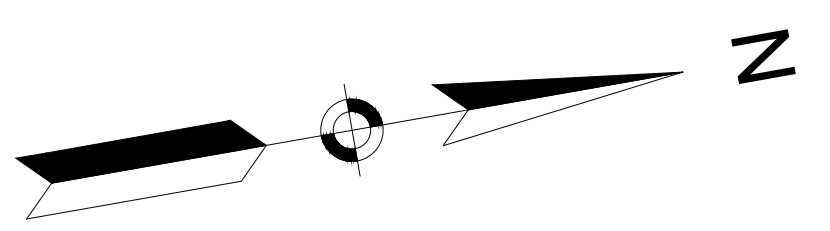


N/F
ROBERT P. ARMITAGE
L.C.C. NO. 11431-A
CERT. NO. 59289
DOC. NO. 193333
DOC. NO. 825545
1143 SOUTH ST
MAP/LOT K-03-2-1



N/F
THE SHOPS AT
WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
PLAN 875 OF 1985
PLAN 301 OF 2001
1007 SOUTH ST
MAP/LOT K-04-3-12

CONTINUED ON
SHEET NO. 78



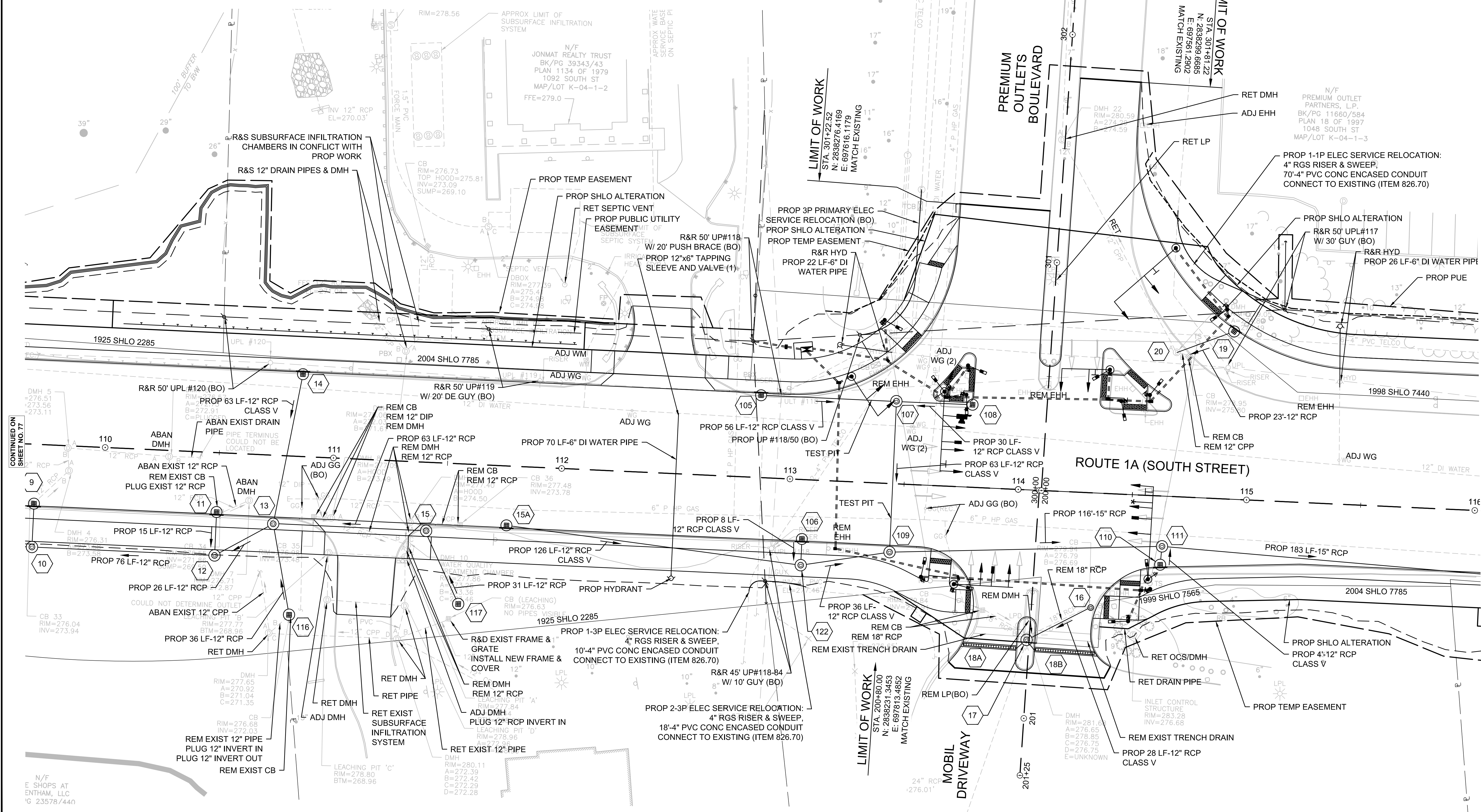
CONSTRUCTION NOTES

- 1) THE CONFIGURATION AND OUTLET OF THE EXISTING DRAINAGE SYSTEM UNDER ROUTE 1A FROM STA. 109+75 TO STA. 110+60 IS UNKNOWN.
- 2) EXISTING DRAINAGE FACILITIES LOCATED ON 1092 SOUTH STREET LABELED AS "R&S" SHALL BE STACKED ON THE SAME PROPERTY AT A LOCATION AS DIRECTED BY THE RESIDENT ENGINEER.

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

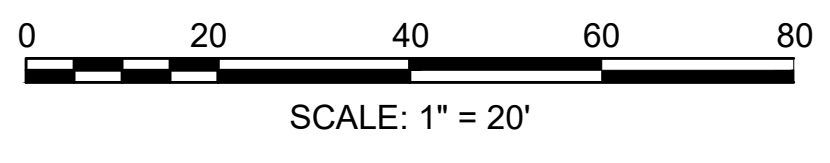
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	78	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 2 OF 15



CONTINUED ON SHEET NO. 77

CONTINUED ON SHEET NO. 79



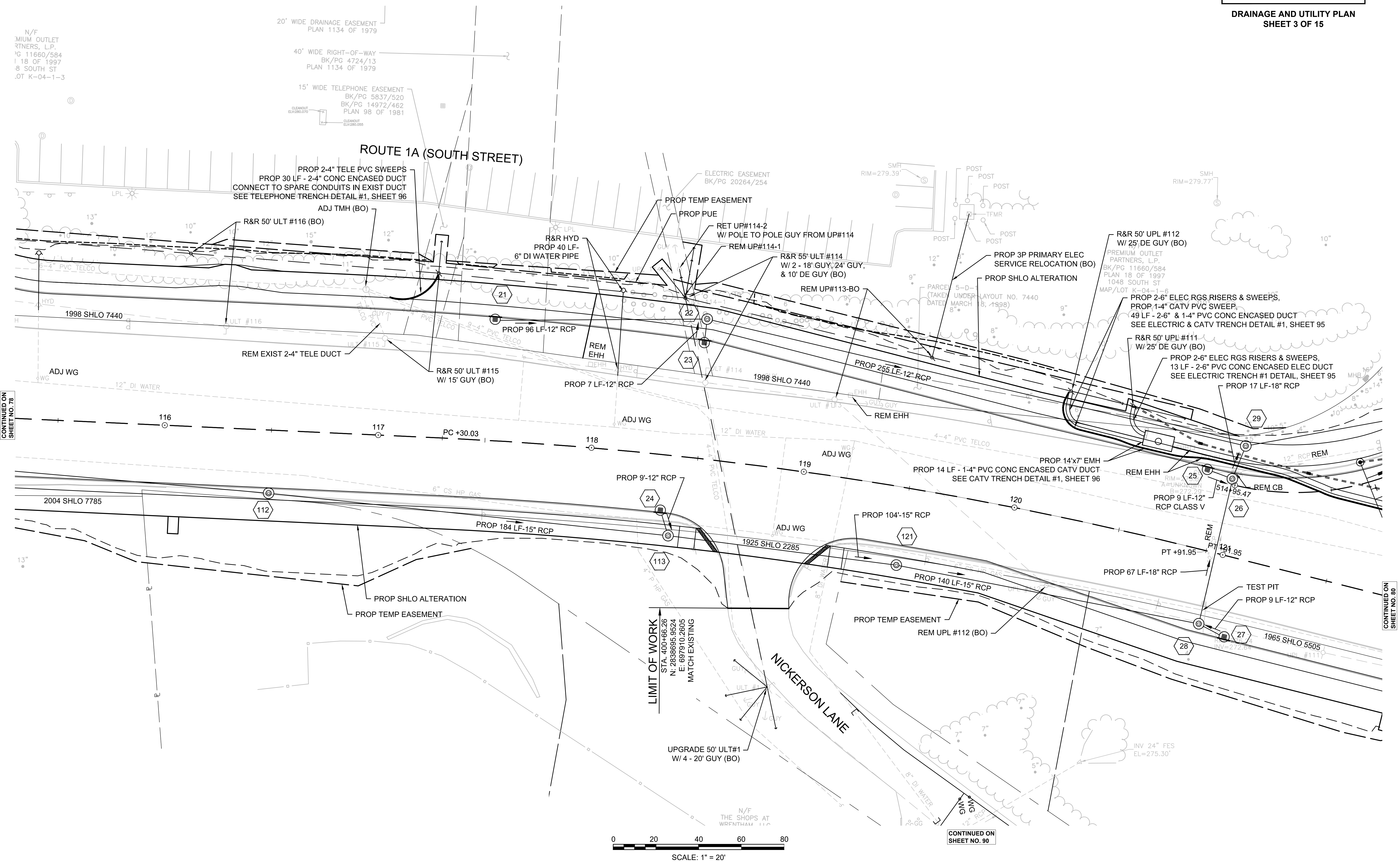
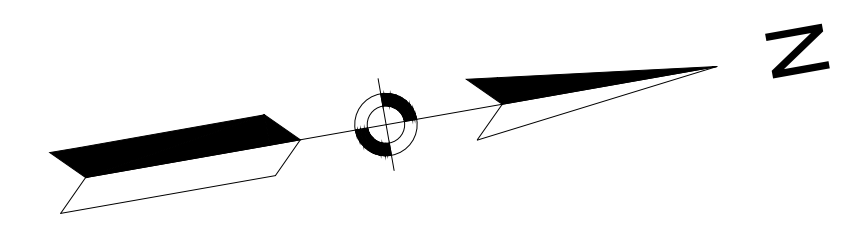
N/F
E SHOPS AT
ENTHAM, LLC
G 23578/440

603739_HD76-90(DRAINAGE-UTILITY PLANS).DWG Plotted on 3-Apr-2024 8:05 AM

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	79	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLAN
SHEET 3 OF 15



N/F
MIUM OUTLET
RTNERS, L.P.
11660/584
18 OF 1997
8 SOUTH ST
.OT K-04-1-3

20' WIDE DRAINAGE EASEMENT
PLAN 1134 OF 1979

40' WIDE RIGHT-OF-WAY
BK/PG 4724/13
PLAN 1134 OF 1979

15' WIDE TELEPHONE EASEMENT
BK/PG 5837/520
BK/PG 14972/462
PLAN 98 OF 1981

ROUTE 1A (SOUTH STREET)

PROP 2-4" TELE PVC SWEEPS
PROP 30 LF - 2-4" CONC ENCASED DUCT
CONNECT TO SPARE CONDUITS IN EXIST DUCT
SEE TELEPHONE TRENCH DETAIL #1, SHEET 96

ADJ TMH (BO)

R&R 50' ULT #116 (BO)

R&R HYD
PROP 40 LF -
6" DI WATER PIPE

PROP TEMP EASEMENT
PROP PUE
RET UP#114-2
W/ POLE TO POLE GUY FROM UP#114
REM UP#114-1

R&R 55' ULT #114
W/ 2 - 18' GUY, 24' GUY,
& 10' DE GUY (BO)

PROP 3P PRIMARY ELEC
SERVICE RELOCATION (BO)
PROP SHLO ALTERATION

R&R 50' UPL #112
W/ 25' DE GUY (BO)

PROP 2-6" ELEC RGS RISERS & SWEEPS,
PROP 1-4" CATV PVC SWEEP,
49 LF - 2-6" & 1-4" PVC CONC ENCASED DUCT
SEE ELECTRIC & CATV TRENCH DETAIL #1, SHEET 95

R&R 50' UPL #111
W/ 25' DE GUY (BO)

PROP 2-6" ELEC RGS RISERS & SWEEPS,
13 LF - 2-6" PVC CONC ENCASED ELEC DUCT
SEE ELECTRIC TRENCH #1 DETAIL, SHEET 95

PROP 17 LF-18" RCP

REM EXIST 2-4" TELE DUCT

R&R 50' ULT #115
W/ 15' GUY (BO)

PROP 7 LF-12" RCP

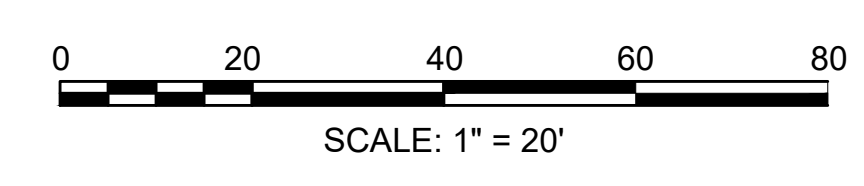
PROP 255 LF-12" RCP

CONTINUED ON
SHEET NO. 78

LIMIT OF WORK
STA. 400+66.26
N: 2838695.9524
E: 697910.2605
MATCH EXISTING

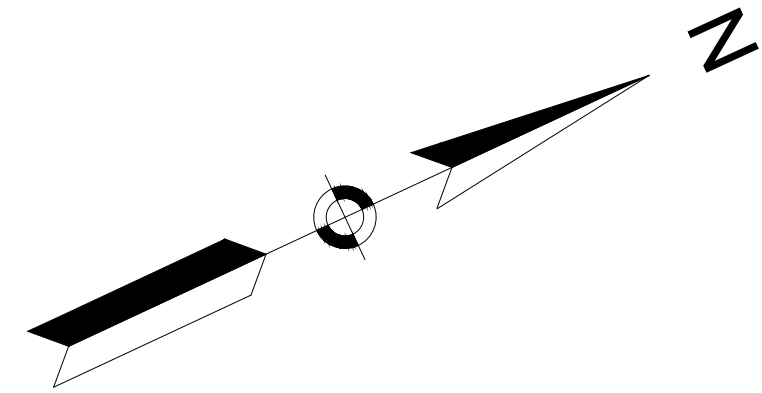
UPGRADE 50' ULT#1
W/ 4 - 20' GUY (BO)

NICKERSON LANE



CONTINUED ON
SHEET NO. 90

CONTINUED ON
SHEET NO. 80



CONTINUED ON SHEET NO. 89

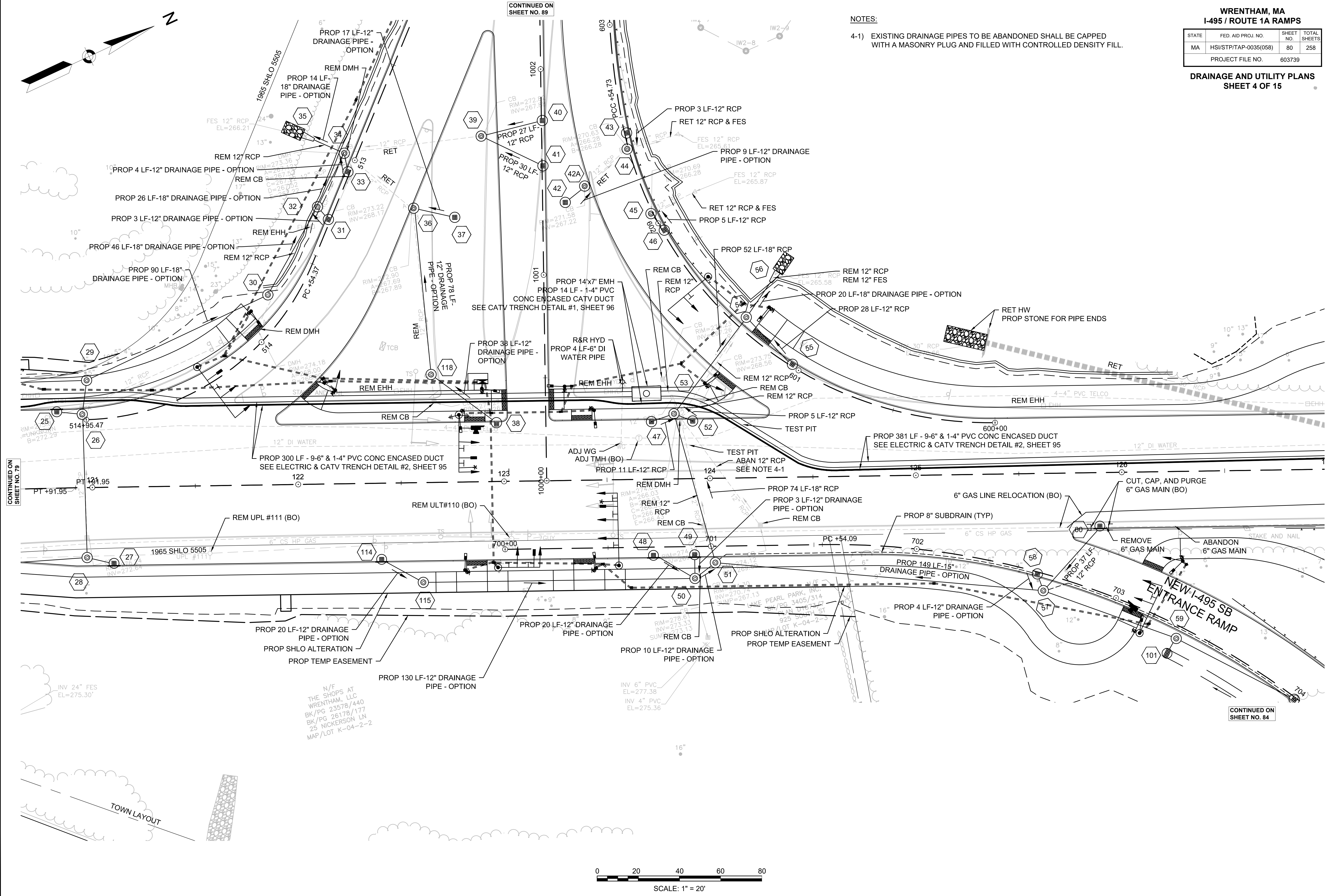
NOTES:

4-1) EXISTING DRAINAGE PIPES TO BE ABANDONED SHALL BE CAPPED WITH A MASONRY PLUG AND FILLED WITH CONTROLLED DENSITY FILL.

**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	80	258
PROJECT FILE NO.		603739	

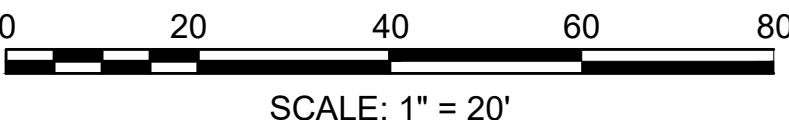
**DRAINAGE AND UTILITY PLANS
SHEET 4 OF 15**



CONTINUED ON SHEET NO. 79

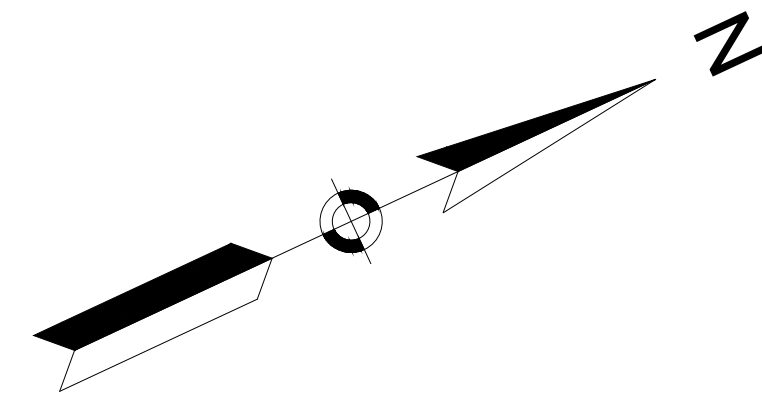
CONTINUED ON SHEET NO. 81

N/F
THE SHOPS AT
WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
25 NICKERSON LN
MAP/LOT K-04-2-2



CONTINUED ON SHEET NO. 84

603739_HD76-90(DRAINAGE-UTILITY PLANS).DWG Plotted on 2-Apr-2024 11:14 AM



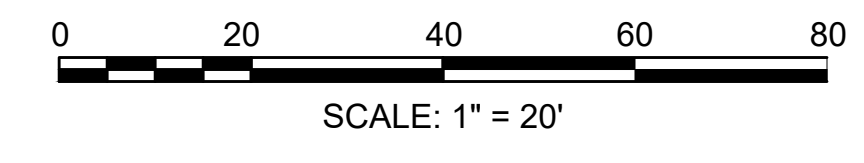
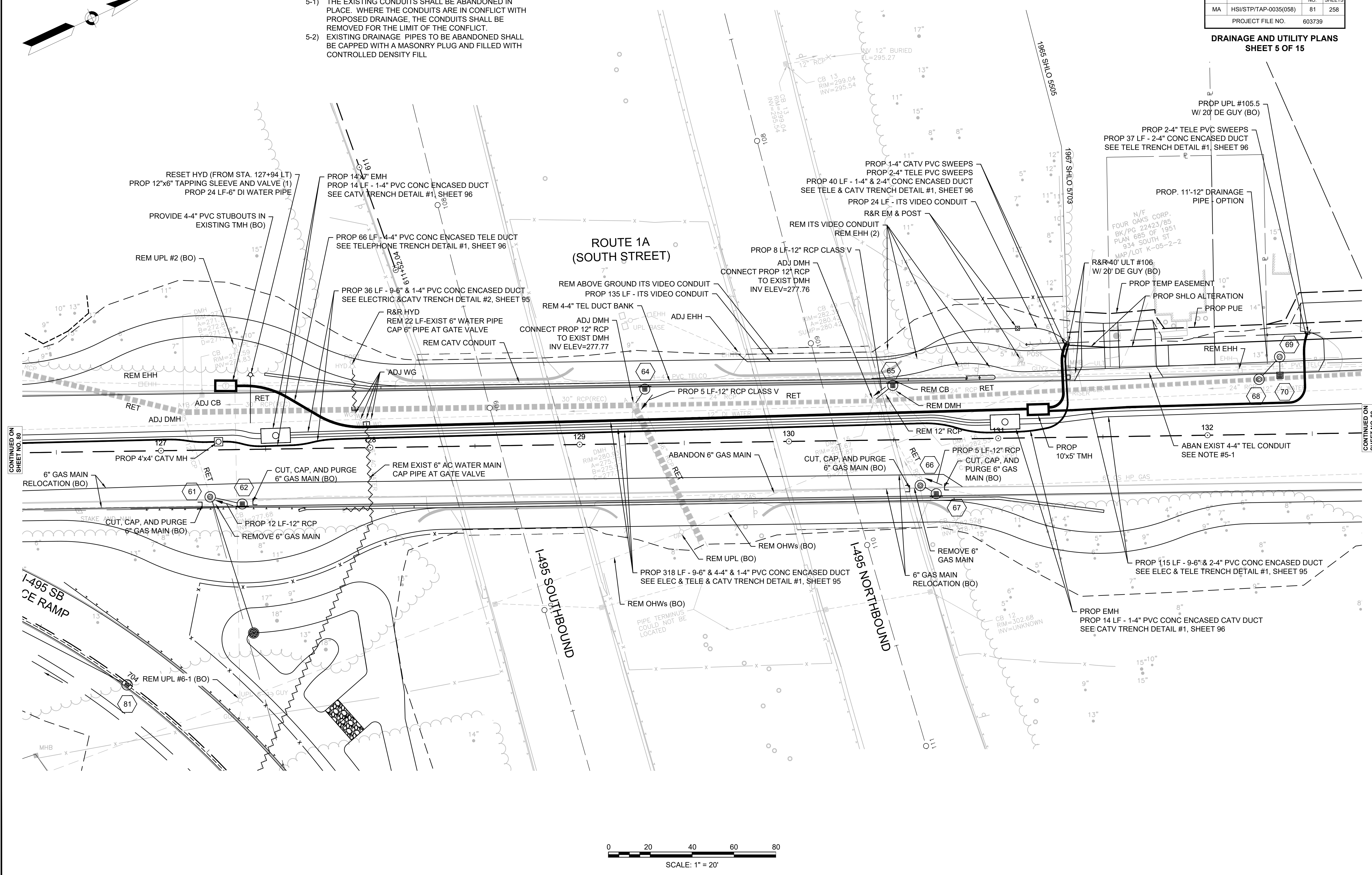
NOTES:

- 5-1) THE EXISTING CONDUITS SHALL BE ABANDONED IN PLACE. WHERE THE CONDUITS ARE IN CONFLICT WITH PROPOSED DRAINAGE, THE CONDUITS SHALL BE REMOVED FOR THE LIMIT OF THE CONFLICT.
- 5-2) EXISTING DRAINAGE PIPES TO BE ABANDONED SHALL BE CAPPED WITH A MASONRY PLUG AND FILLED WITH CONTROLLED DENSITY FILL

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	81	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 5 OF 15



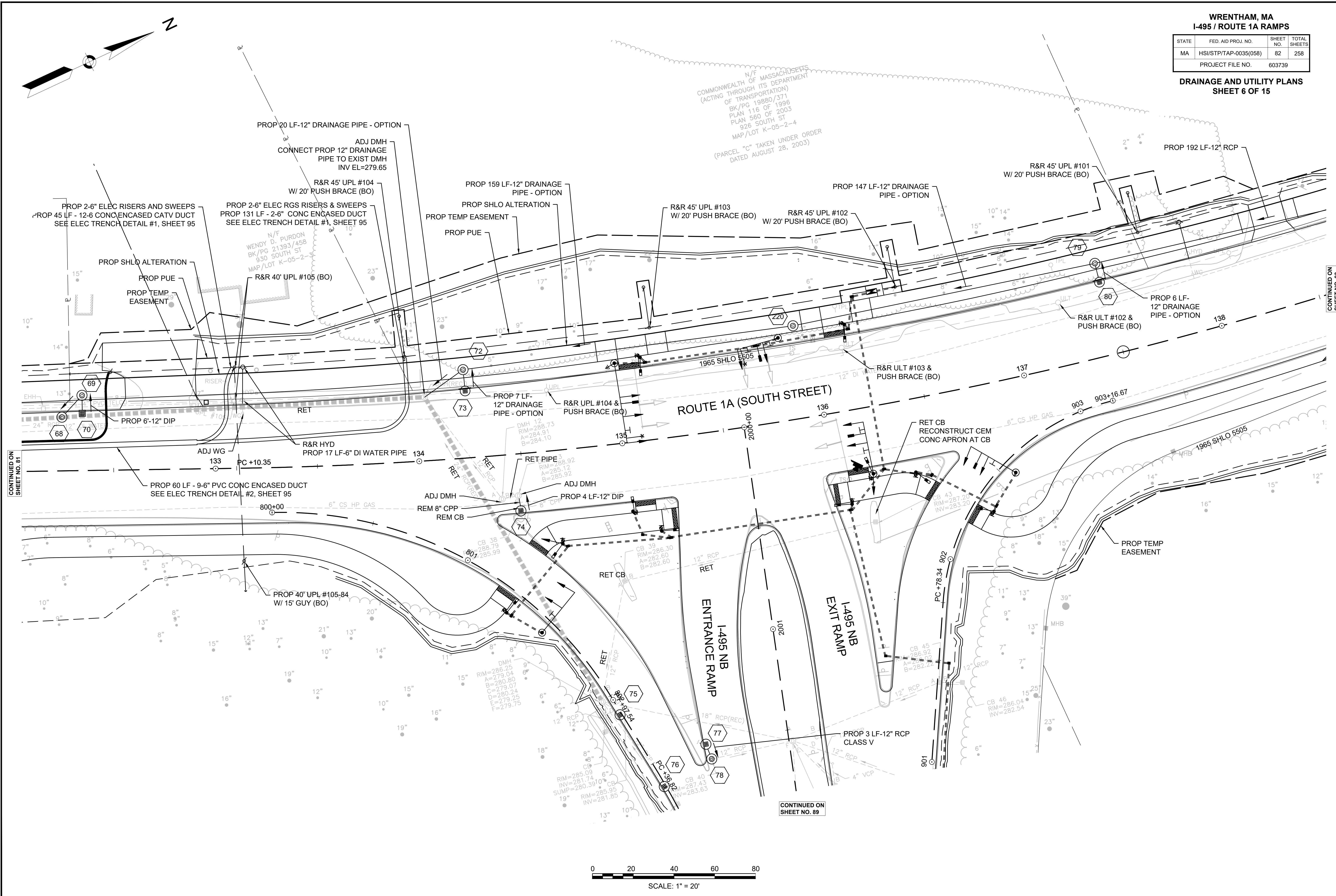
CONTINUED ON SHEET NO. 80

CONTINUED ON SHEET NO. 82

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	82	258
PROJECT FILE NO.		603739	

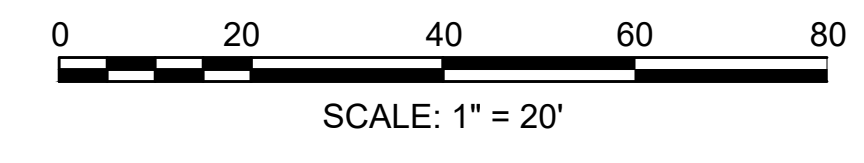
DRAINAGE AND UTILITY PLANS
SHEET 6 OF 15



CONTINUED ON
SHEET NO. 81

CONTINUED ON
SHEET NO. 83

CONTINUED ON
SHEET NO. 89



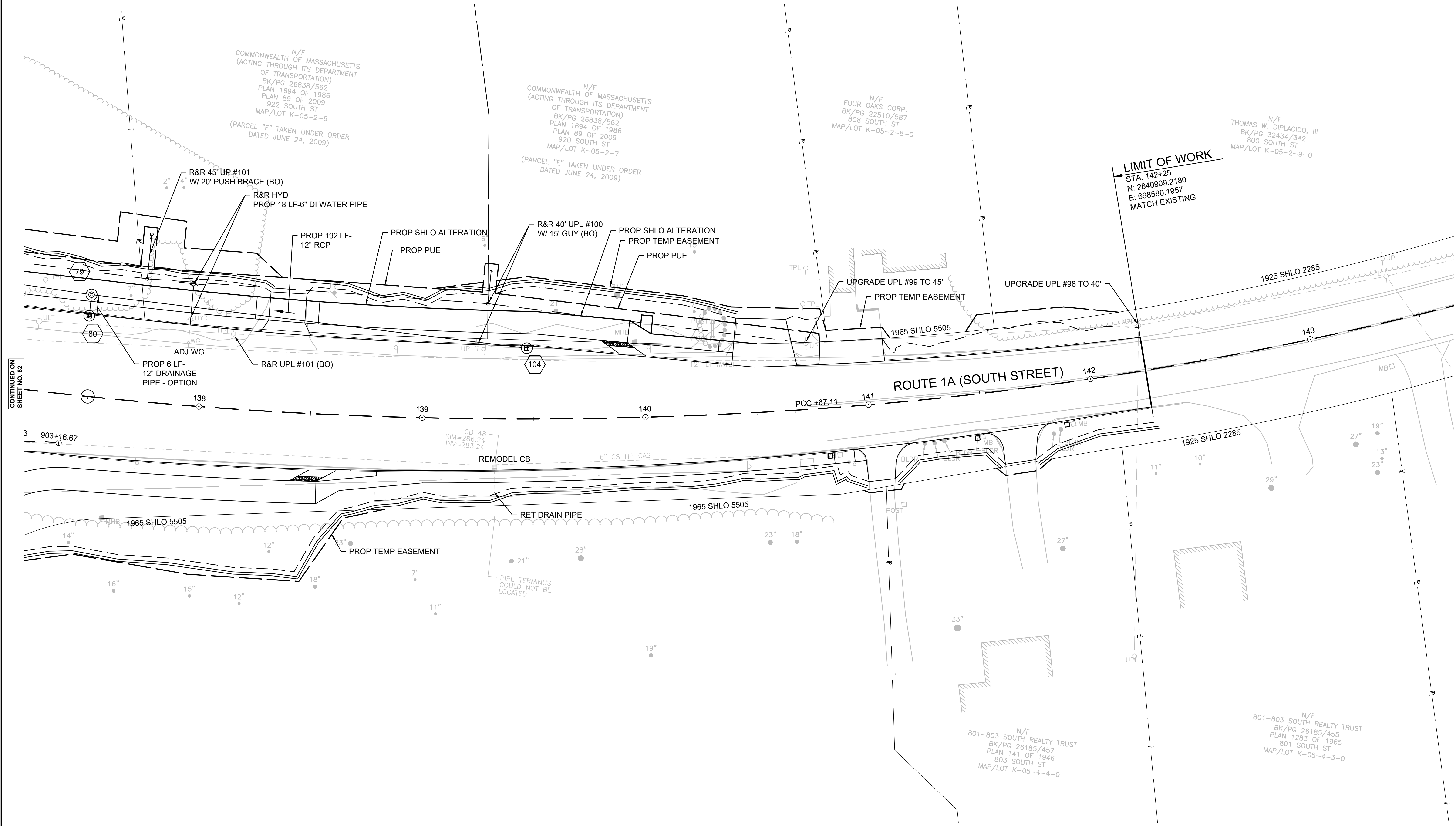
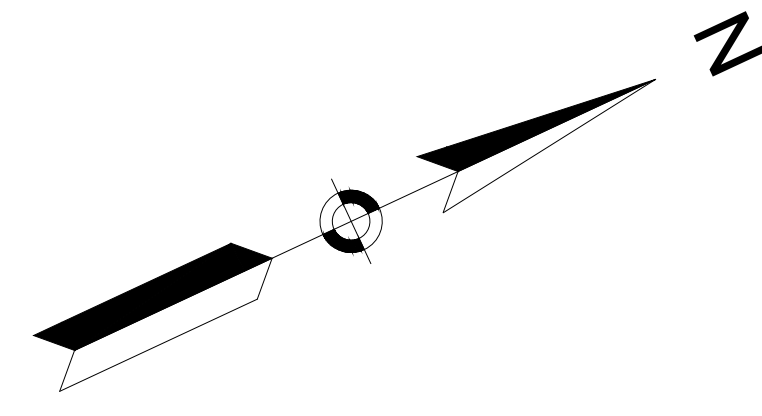
N/F
COMMONWEALTH OF MASSACHUSETTS
(ACTING THROUGH ITS DEPARTMENT
OF TRANSPORTATION)
BK/PG 19880/371
PLAN 116 OF 1996
PLAN 560 OF 2003
926 SOUTH ST
MAP/LOT K-05-2-4
(PARCEL "C" TAKEN UNDER ORDER
DATED AUGUST 28, 2003)

N/F
WENDY D. PURDON
BK/PG 21393/458
930 SOUTH ST
MAP/LOT K-05-2-3

**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

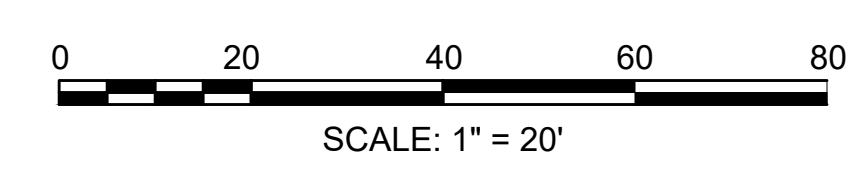
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	83	258
PROJECT FILE NO.		603739	

**DRAINAGE AND UTILITY PLANS
SHEET 7 OF 15**



LIMIT OF WORK
 STA. 142+25
 N: 2840909.2180
 E: 698580.1957
 MATCH EXISTING

CONTINUED ON
 SHEET NO. 82

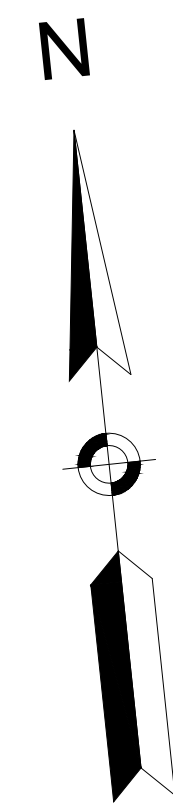


Plotted on 23-Jul-2024 9:25 PM 603739_HDT6-90(DRAINAGE-UTILITY PLANS).DWG

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

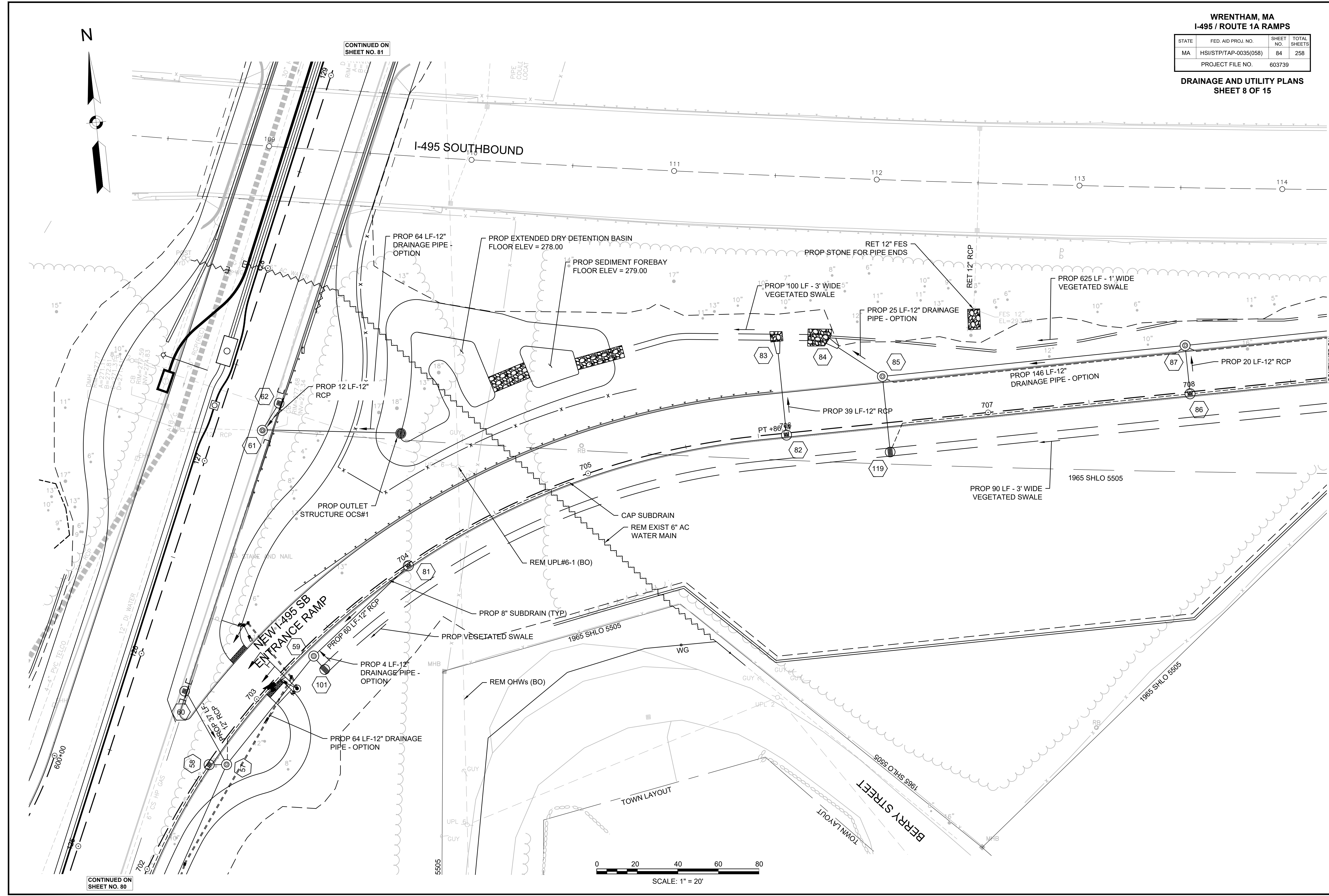
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	84	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 8 OF 15

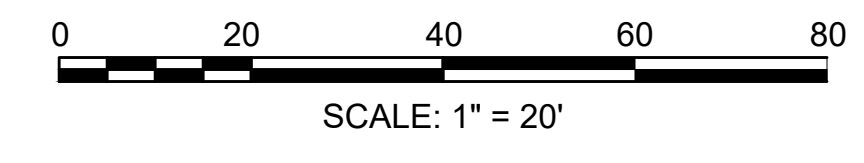


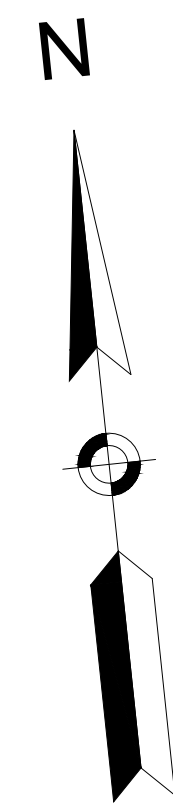
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SHEET NO. 81

CONTINUED ON
SHEET NO. 85



CONTINUED ON
SHEET NO. 80

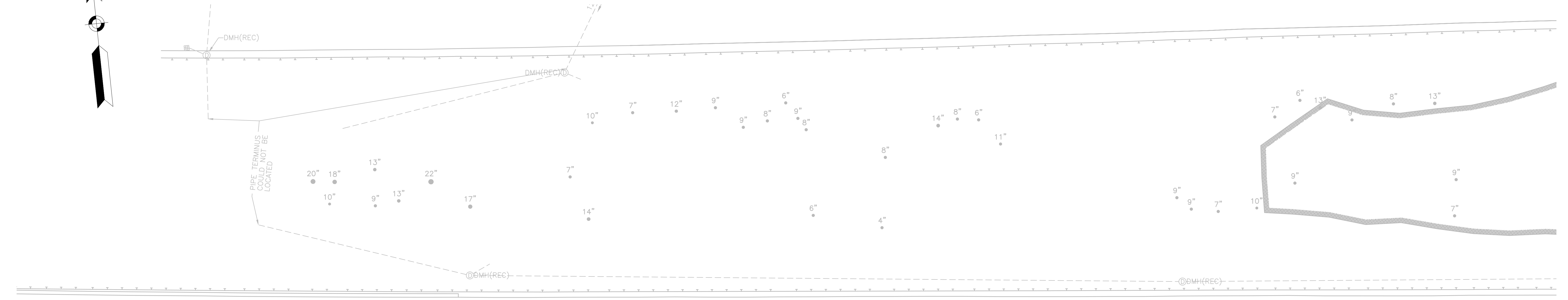




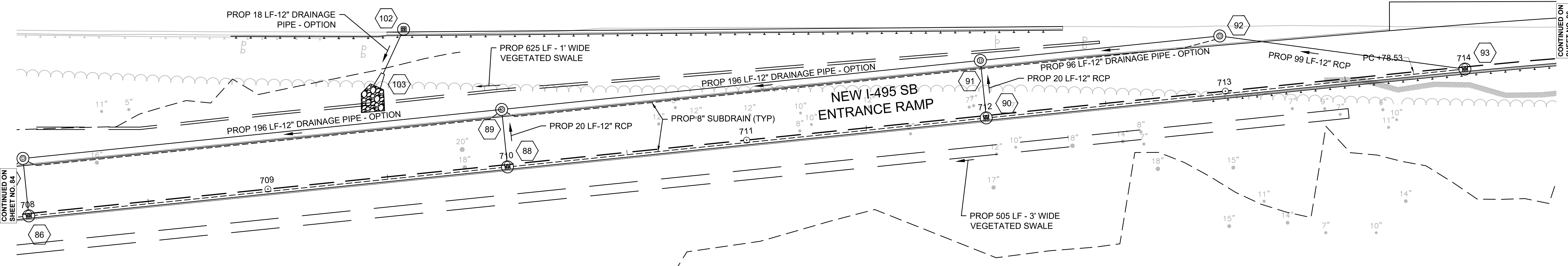
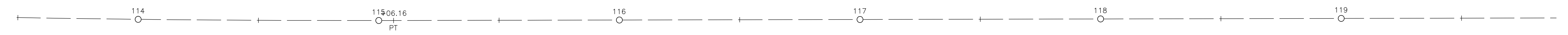
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	85	258
PROJECT FILE NO. 603739			

DRAINAGE AND UTILITY PLANS
SHEET 9 OF 15

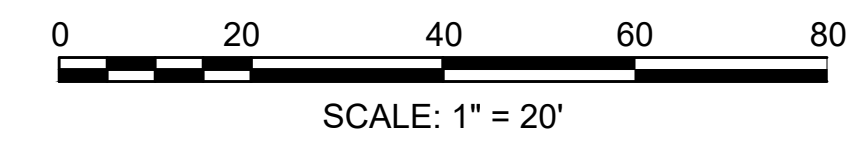


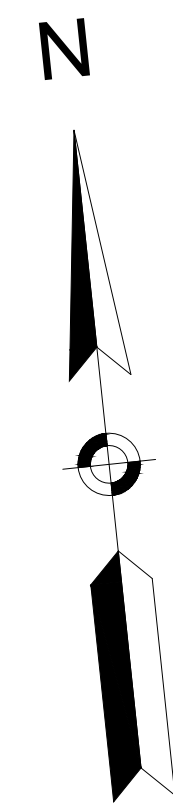
I-495 SOUTHBOUND



CONTINUED ON
SHEET NO. 84

CONTINUED ON
SHEET NO. 86

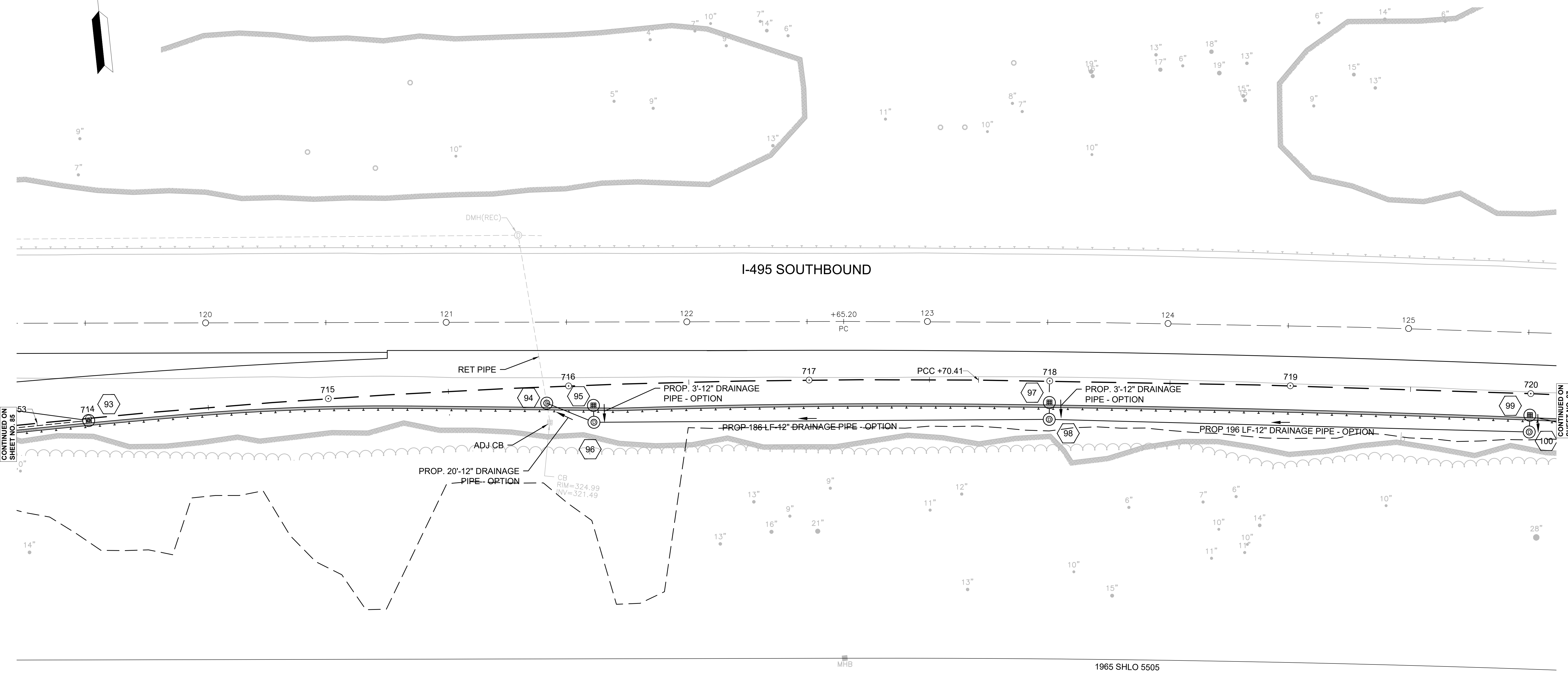




WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

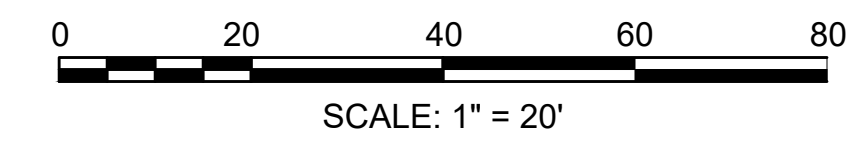
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	86	258
PROJECT FILE NO. 603739			

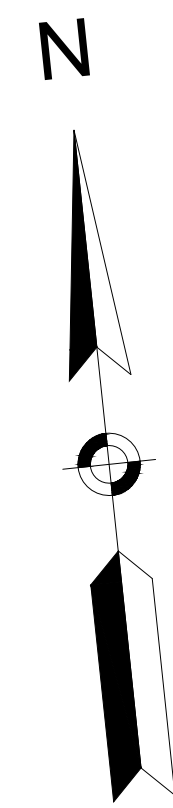
DRAINAGE AND UTILITY PLANS
SHEET 10 OF 15



CONTINUED ON
SHEET NO. 85

CONTINUED ON
SHEET NO. 87

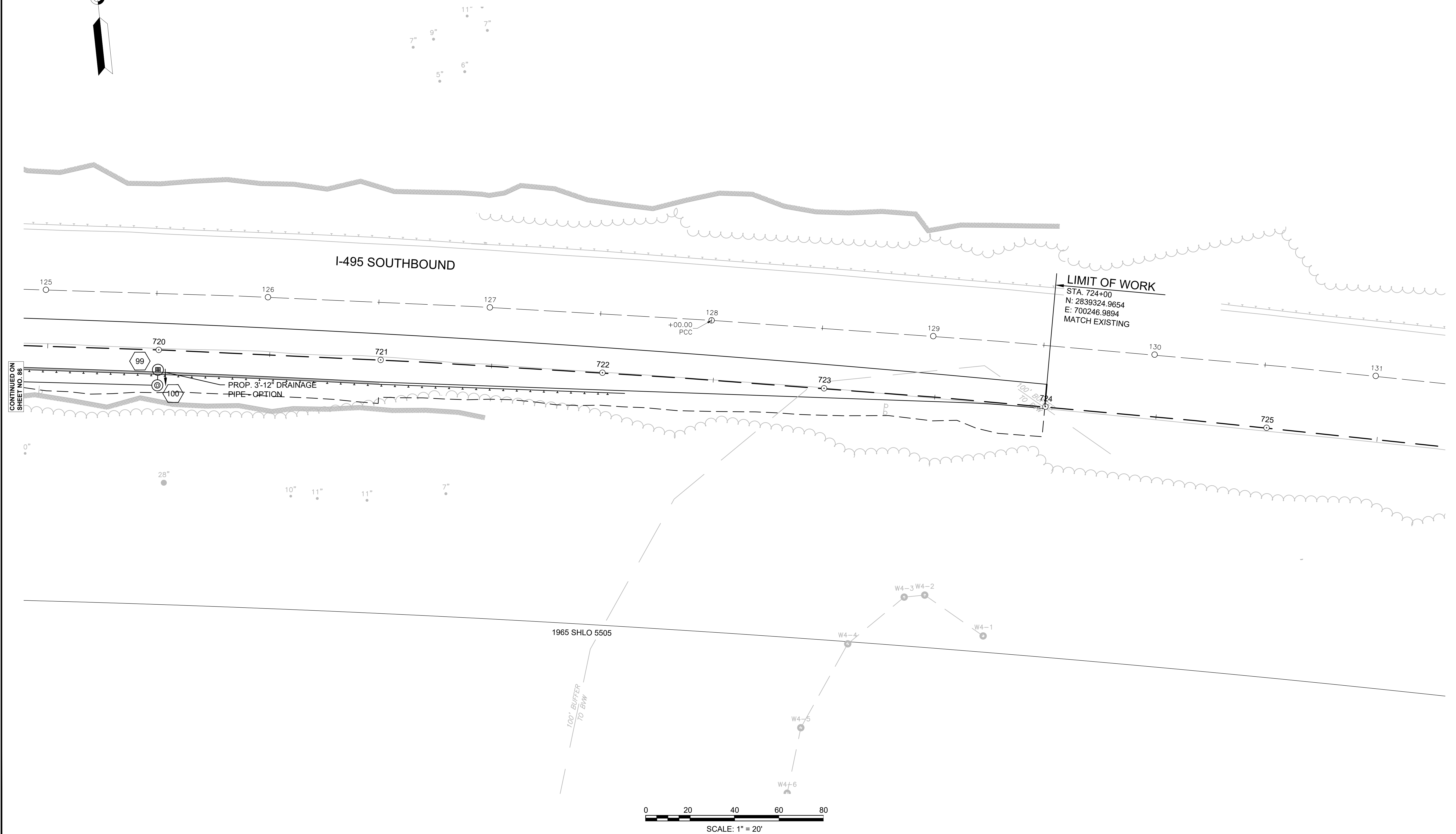




WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	87	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 11 OF 15

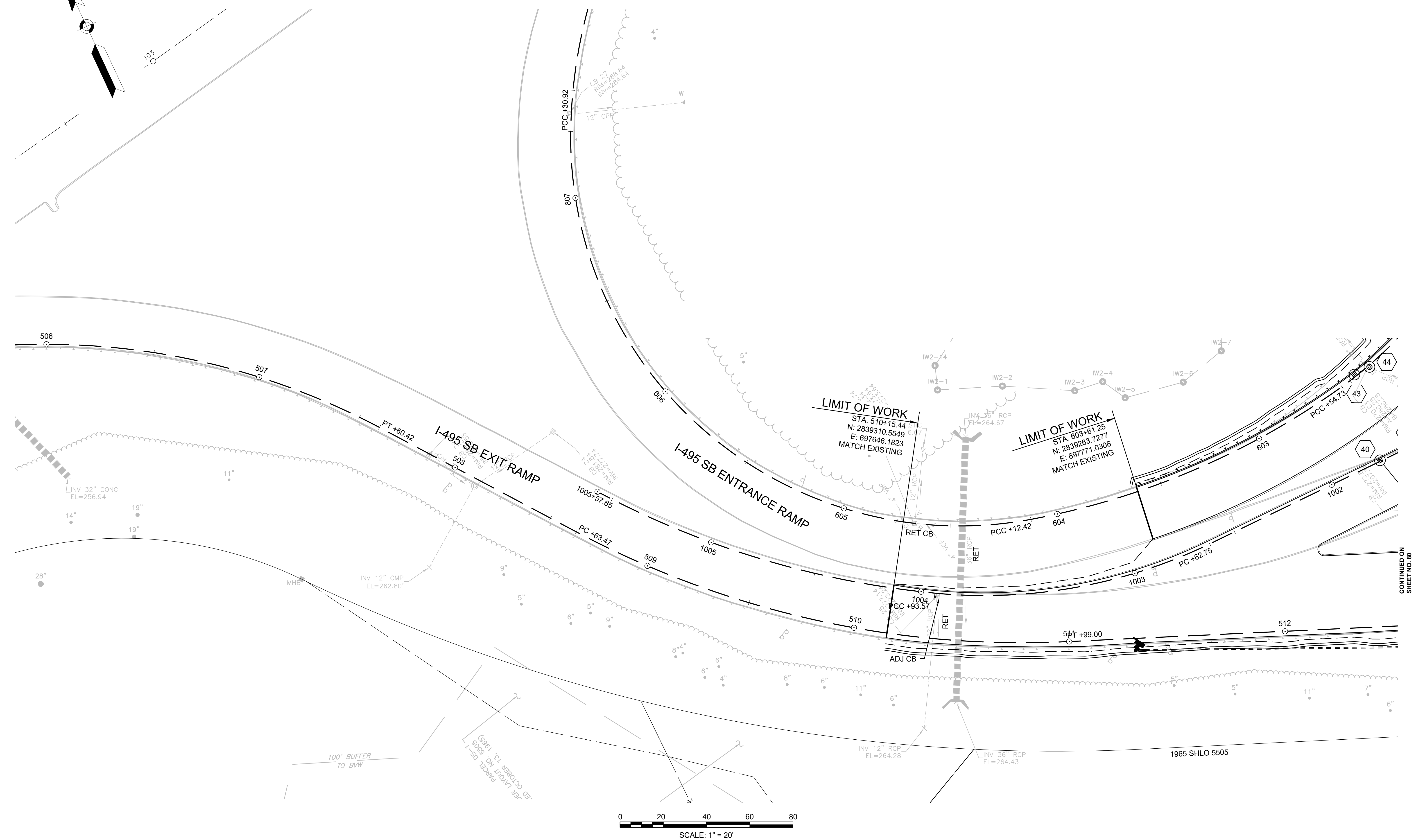
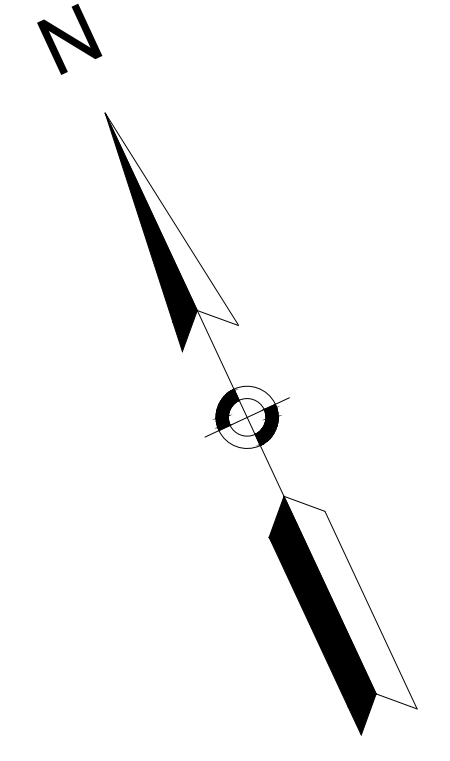


CONTINUED ON
SHEET NO. 86

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	88	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 12 OF 15



LIMIT OF WORK
 STA. 510+15.44
 N: 2839310.5549
 E: 697646.1823
 MATCH EXISTING

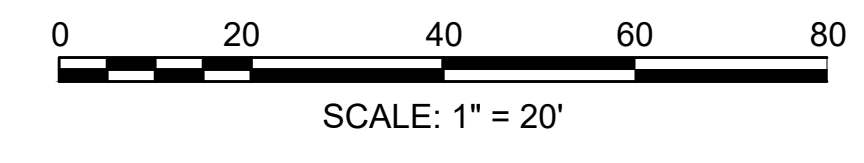
LIMIT OF WORK
 STA. 603+61.25
 N: 2839263.7277
 E: 697771.0306
 MATCH EXISTING

I-495 SB EXIT RAMP

I-495 SB ENTRANCE RAMP

100' BUFFER TO BVW

PROJECT DC-1
 JER LAYOUT NO. 5508
 ED OCTOBER 13, 1993

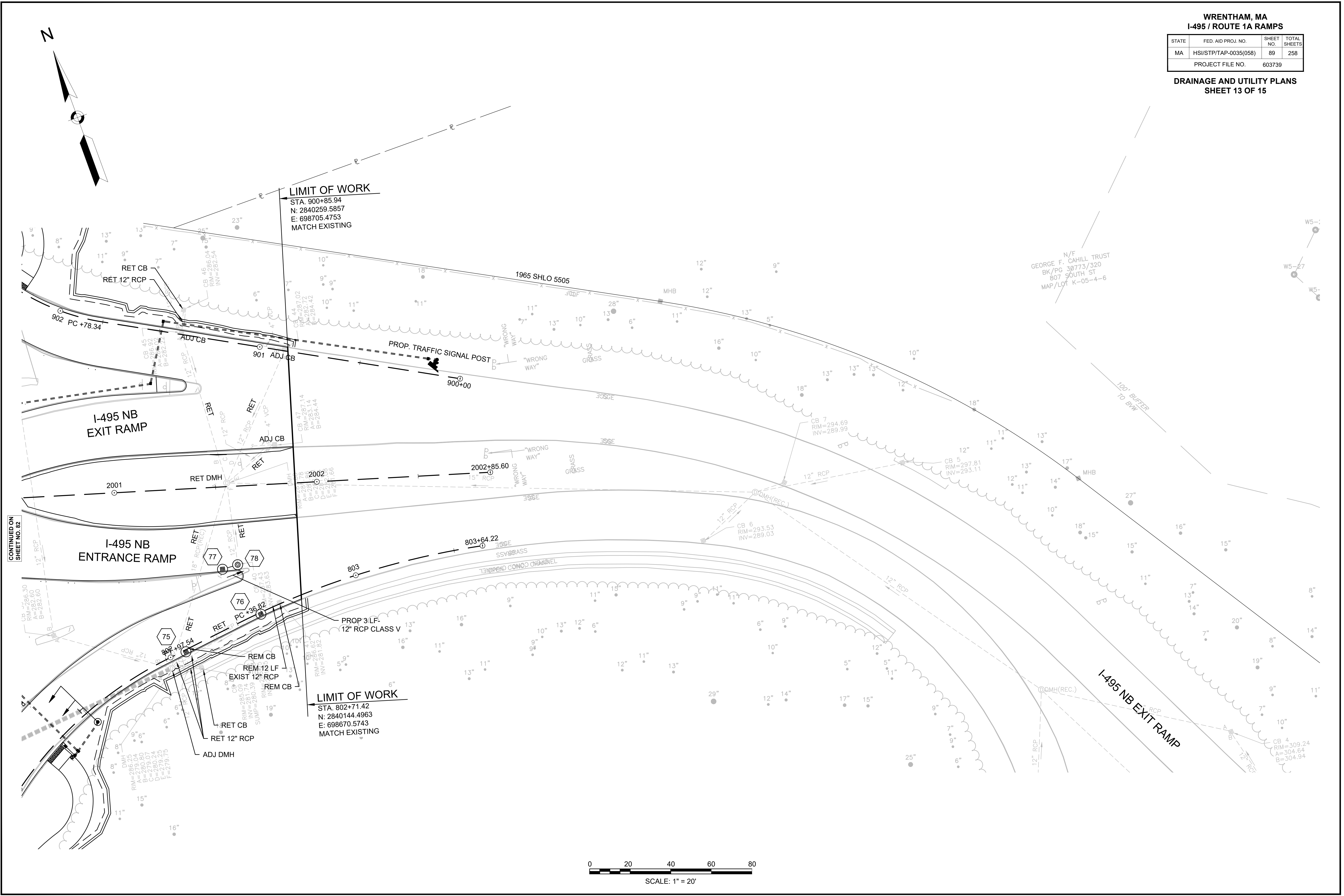


CONTINUED ON
SHEET NO. 80

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	89	258
PROJECT FILE NO.		603739	

DRAINAGE AND UTILITY PLANS
SHEET 13 OF 15

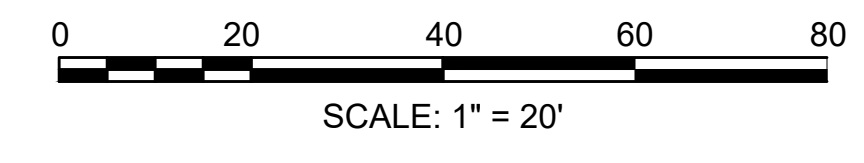


N/F
GEORGE F. CAHILL TRUST
BK/PG 30773/320
807 SOUTH ST
MAP/LOT K-05-4-6

LIMIT OF WORK
STA. 900+85.94
N: 2840259.5857
E: 698705.4753
MATCH EXISTING

LIMIT OF WORK
STA. 802+71.42
N: 2840144.4963
E: 698670.5743
MATCH EXISTING

CONTINUED ON
SHEET NO. 82

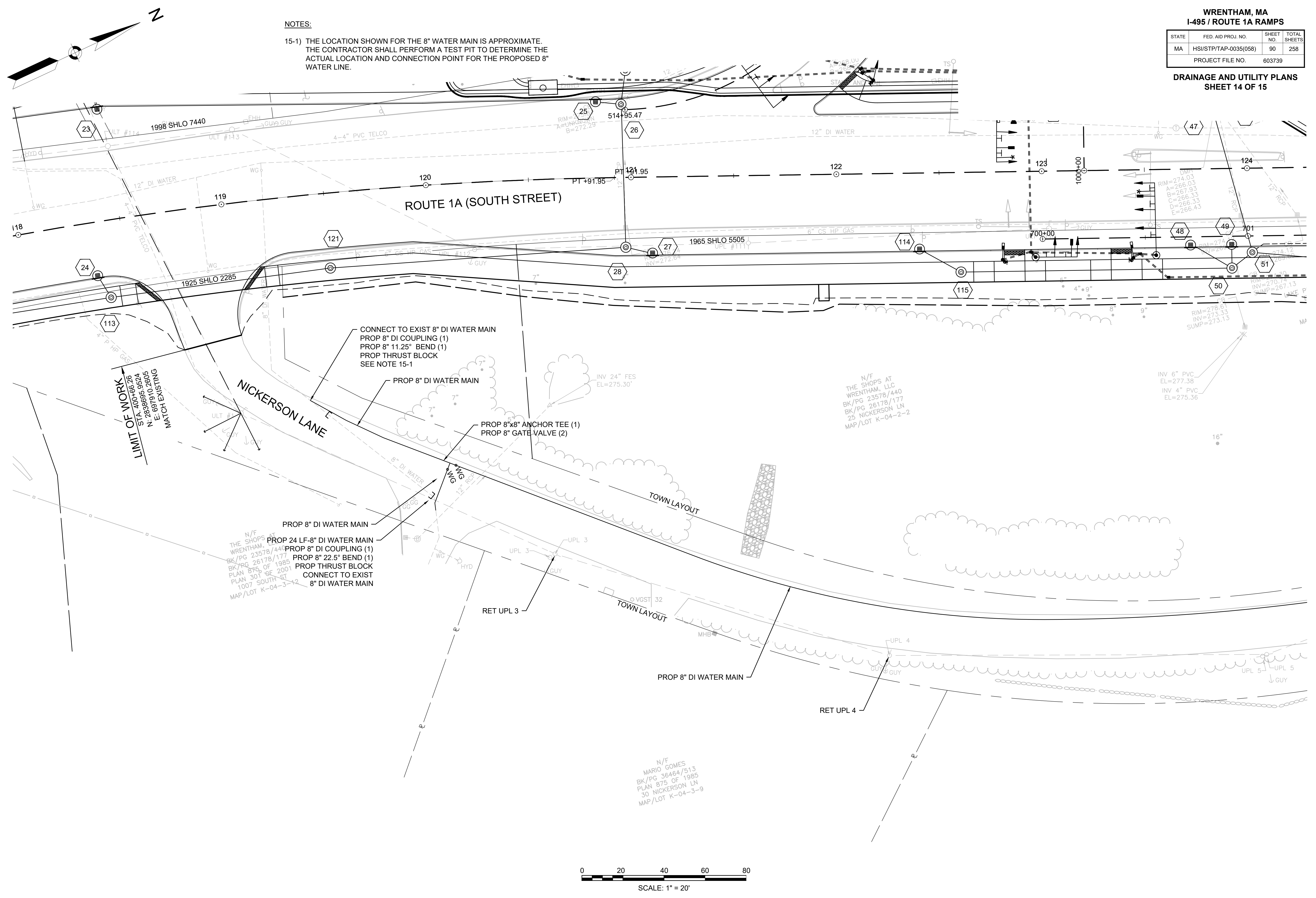


**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	90	258
PROJECT FILE NO.		603739	

**DRAINAGE AND UTILITY PLANS
SHEET 14 OF 15**

NOTES:
15-1) THE LOCATION SHOWN FOR THE 8" WATER MAIN IS APPROXIMATE. THE CONTRACTOR SHALL PERFORM A TEST PIT TO DETERMINE THE ACTUAL LOCATION AND CONNECTION POINT FOR THE PROPOSED 8" WATER LINE.



LIMIT OF WORK
STA. 400+66.26
N: 2638695.9564
E: 6917012609
MATCH EXISTING

N/F THE SHOPS AT WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
PLAN 875 OF 1985
PLAN 301 OF 2001
1007 SOUTH ST
MAP/LOT K-04-3-12

PROP 24 LF-8" DI WATER MAIN
PROP 8" DI COUPLING (1)
PROP 8" 22.5° BEND (1)
PROP THRUST BLOCK
CONNECT TO EXIST 8" DI WATER MAIN

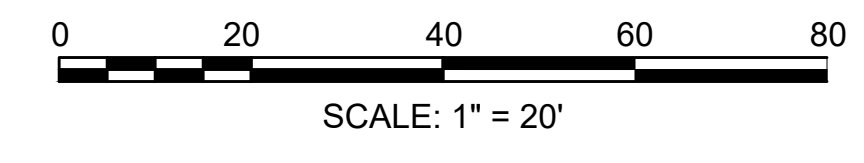
CONNECT TO EXIST 8" DI WATER MAIN
PROP 8" DI COUPLING (1)
PROP 8" 11.25° BEND (1)
PROP THRUST BLOCK
SEE NOTE 15-1

PROP 8" DI WATER MAIN

PROP 8"x8" ANCHOR TEE (1)
PROP 8" GATE VALVE (2)

N/F THE SHOPS AT WRENTHAM, LLC
BK/PG 23578/440
BK/PG 26178/177
25 NICKERSON LN
MAP/LOT K-04-2-2

N/F MARIO GOMES
BK/PG 36464/513
PLAN 875 OF 1985
30 NICKERSON LN
MAP/LOT K-04-3-9

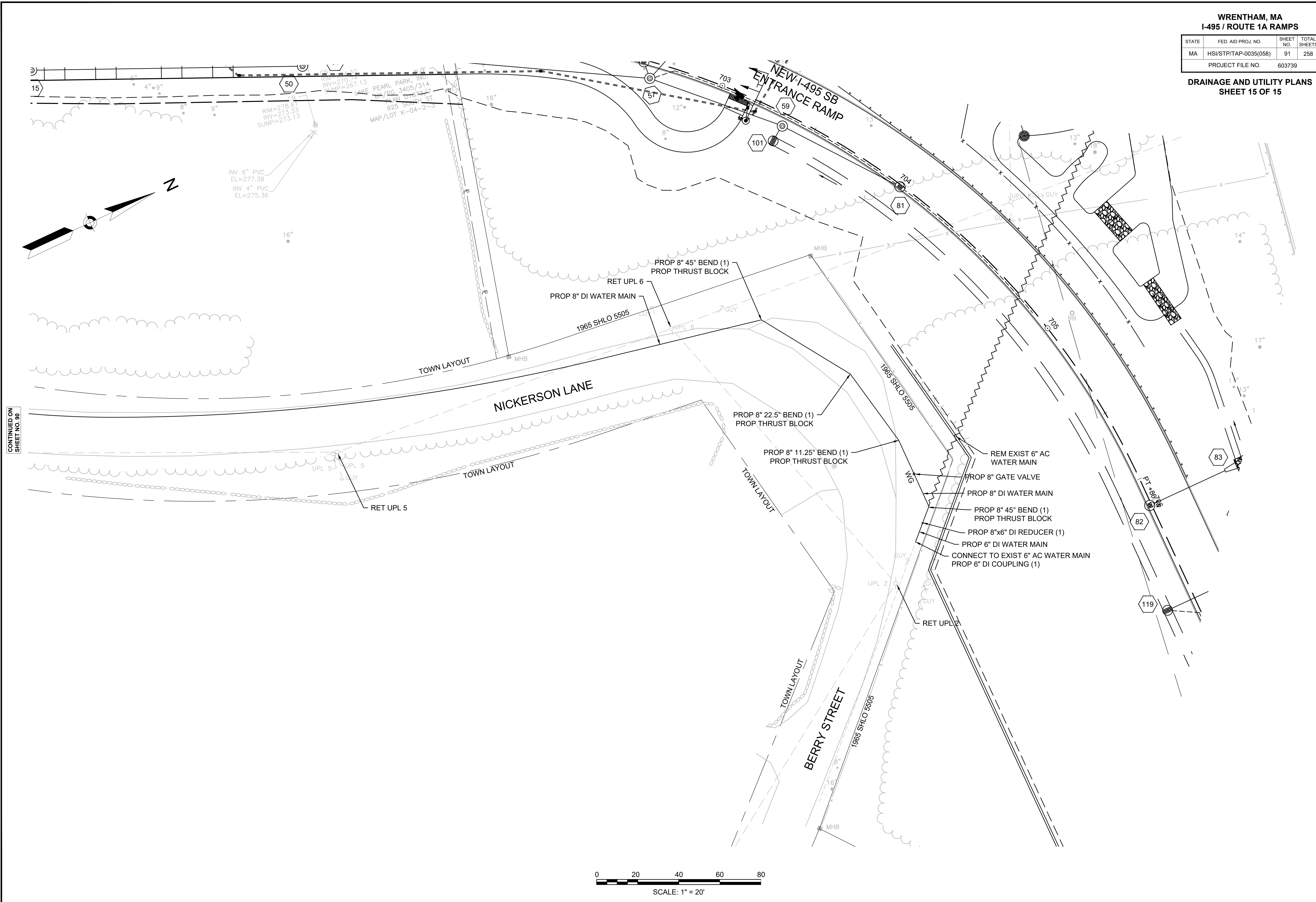


CONTINUED ON
SHEET NO. 91

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	91	258
PROJECT FILE NO.		603739	

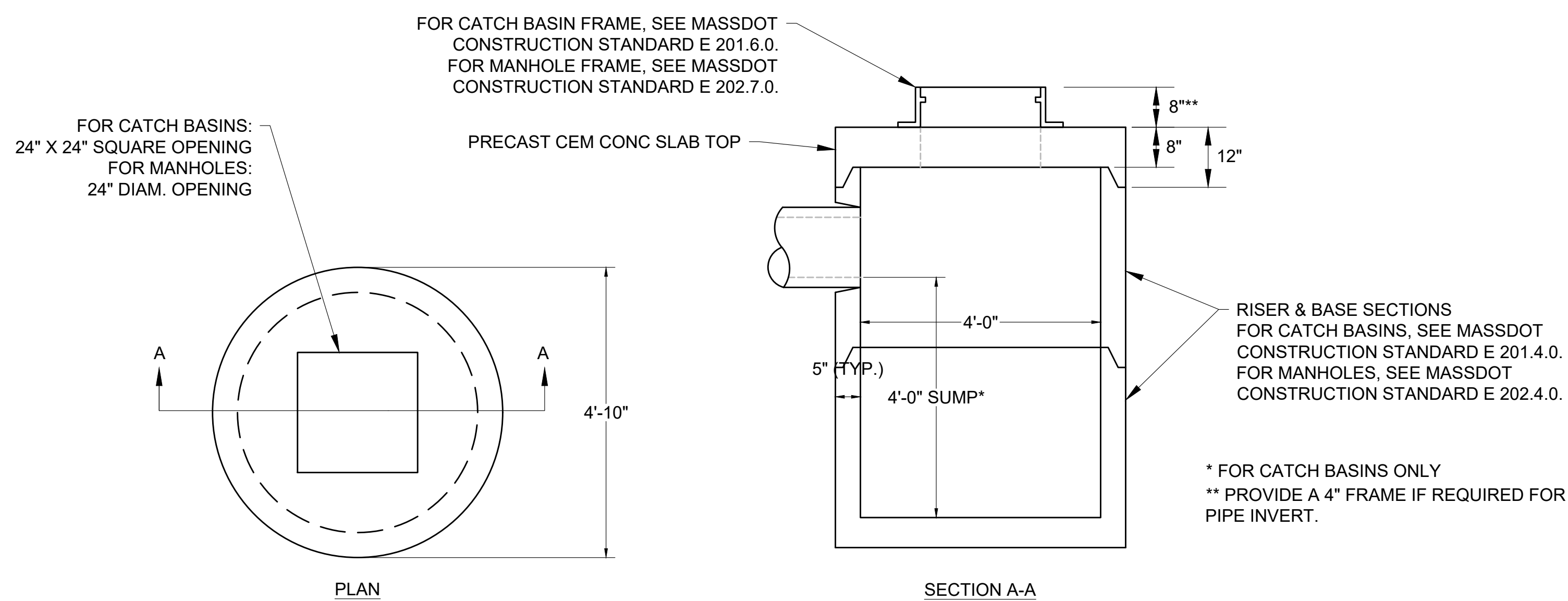
DRAINAGE AND UTILITY PLANS
SHEET 15 OF 15



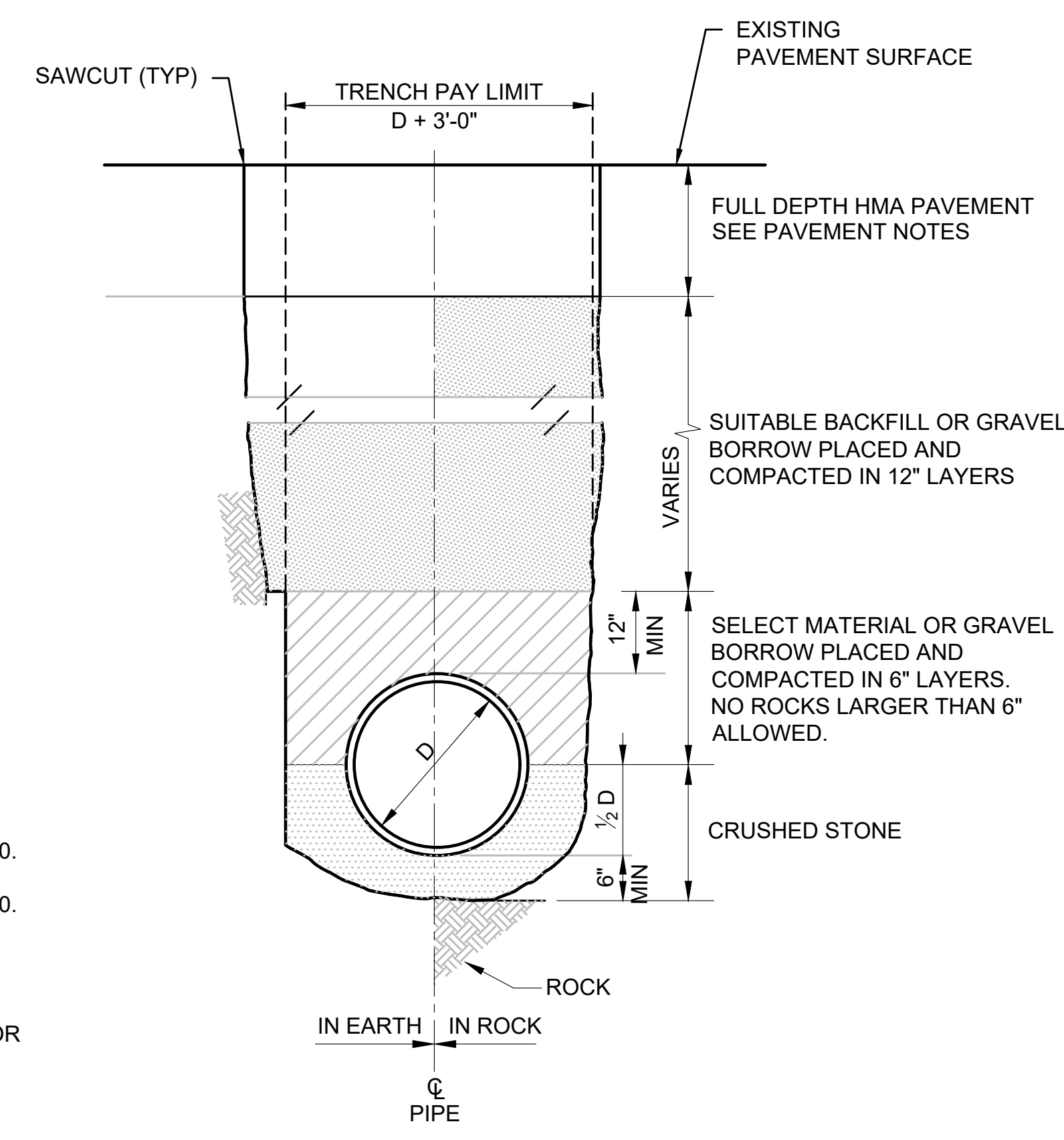
CONTINUED ON
SHEET NO. 90

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	93	258
PROJECT FILE NO.		603739	

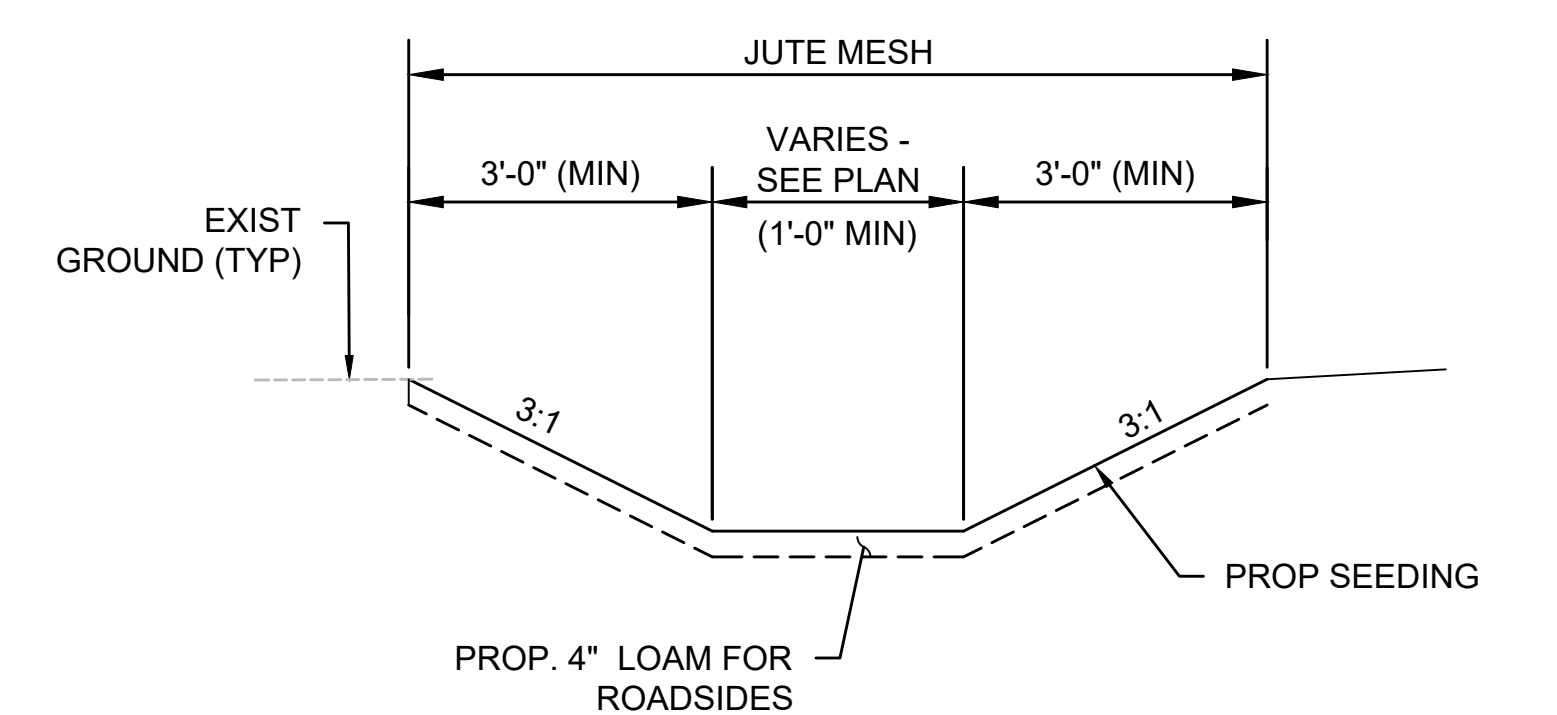
DRAINAGE DETAILS



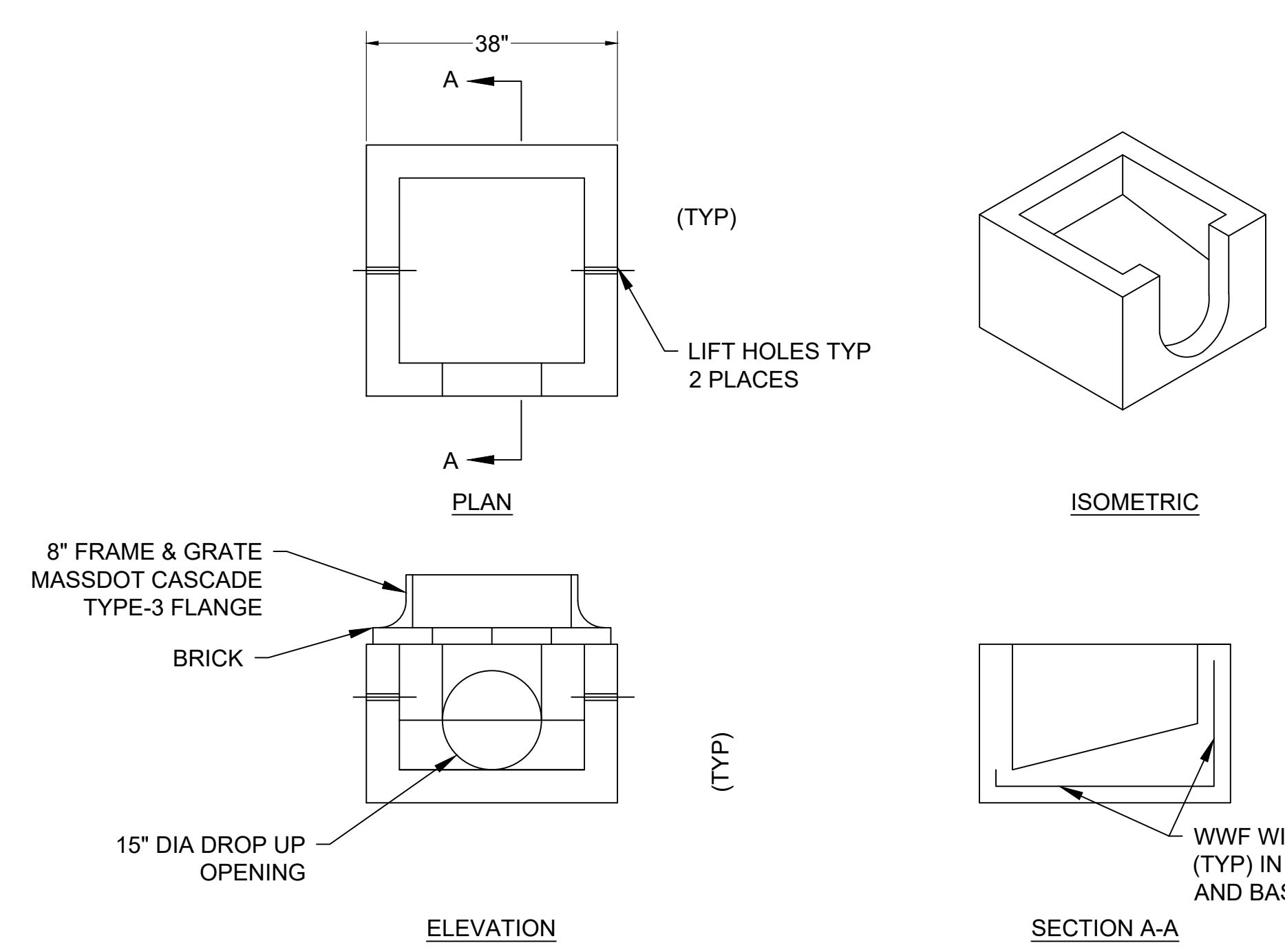
CATCH BASIN SLAB TOP
NOT TO SCALE



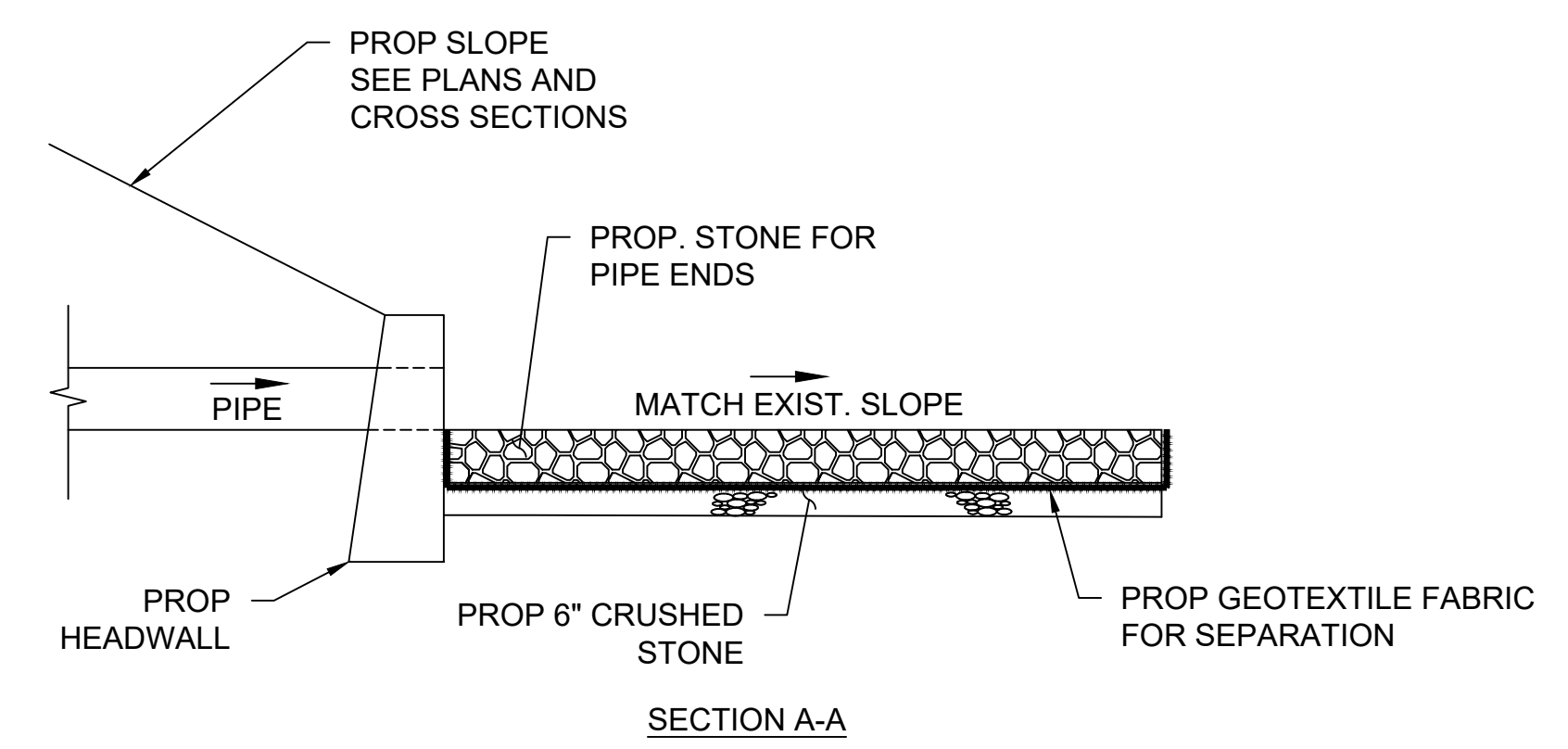
DRAINAGE PIPE TRENCH
NOT TO SCALE



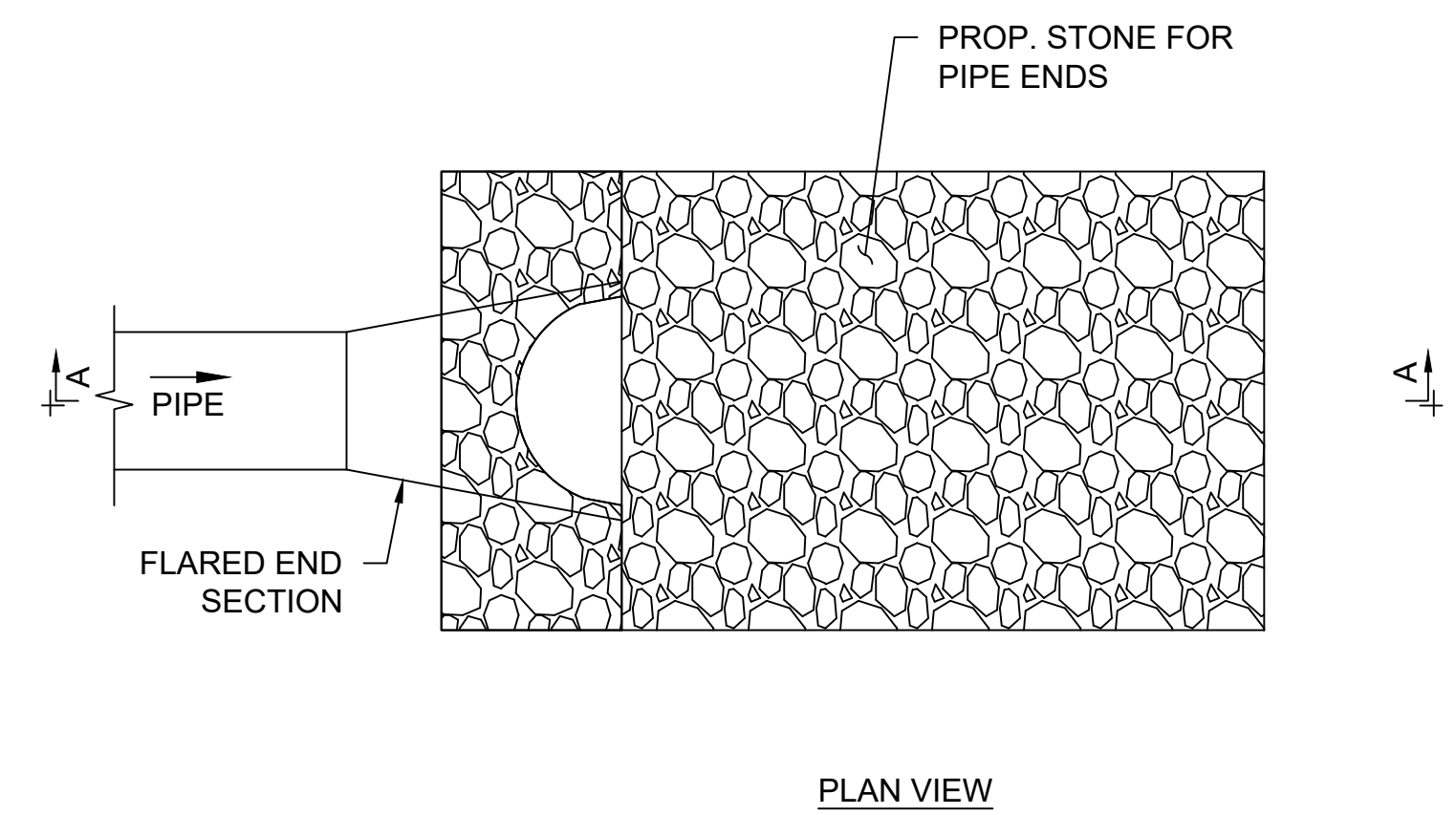
VEGETATED SWALE
NOT TO SCALE



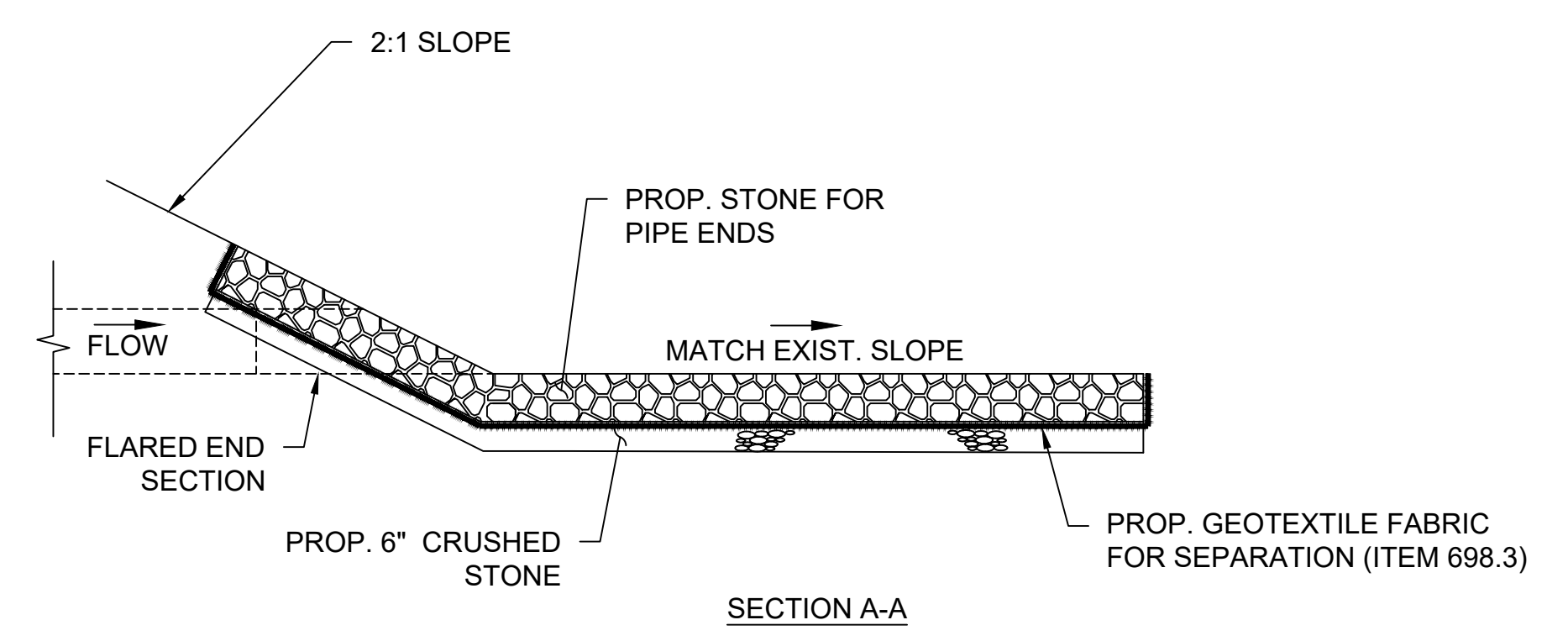
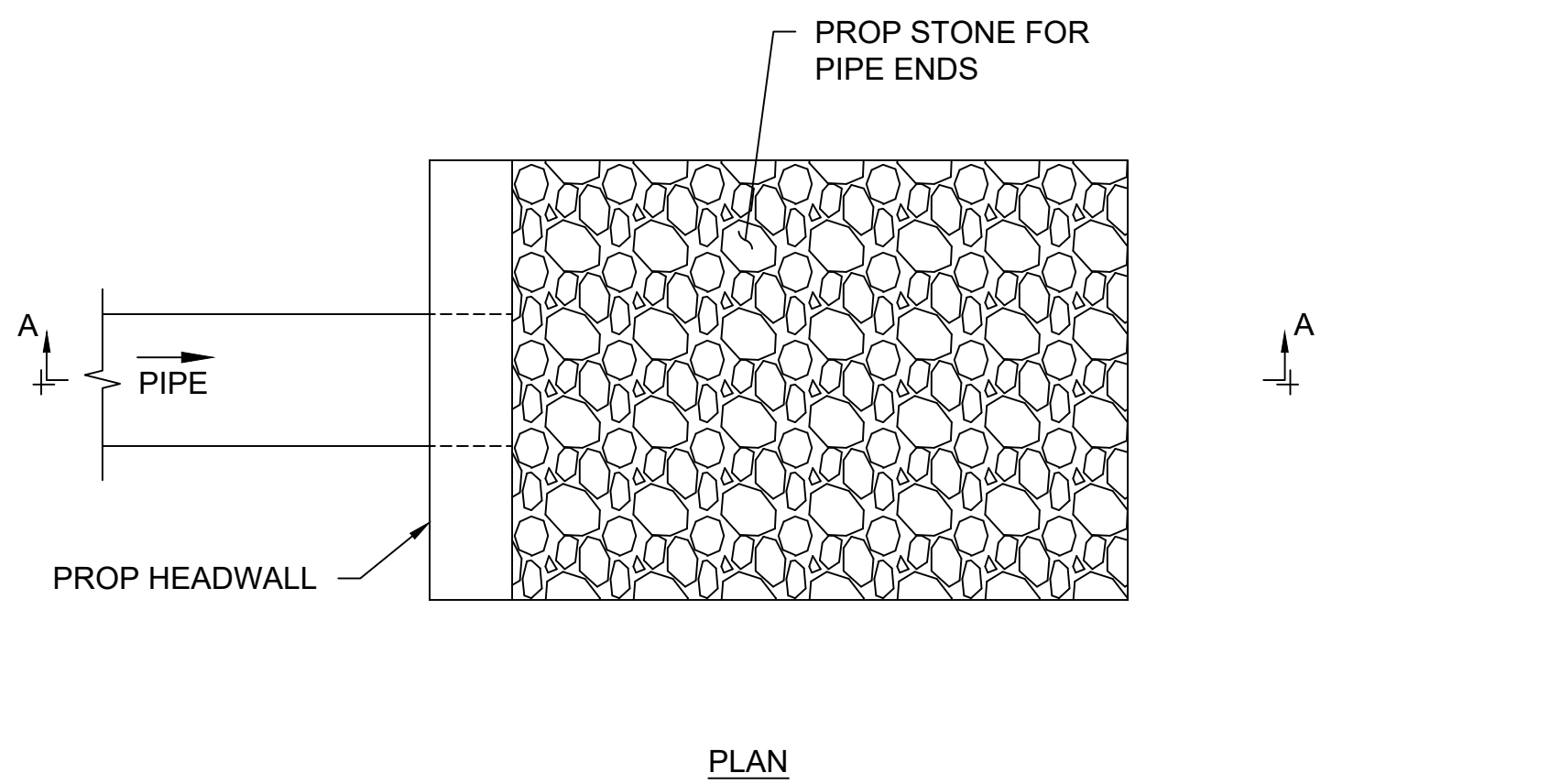
GUTTER INLET - SPECIAL
NOT TO SCALE



STONE FOR PIPE ENDS - HEADWALLS
NOT TO SCALE



STONE FOR PIPE ENDS - FLARED END SECTIONS
NOT TO SCALE



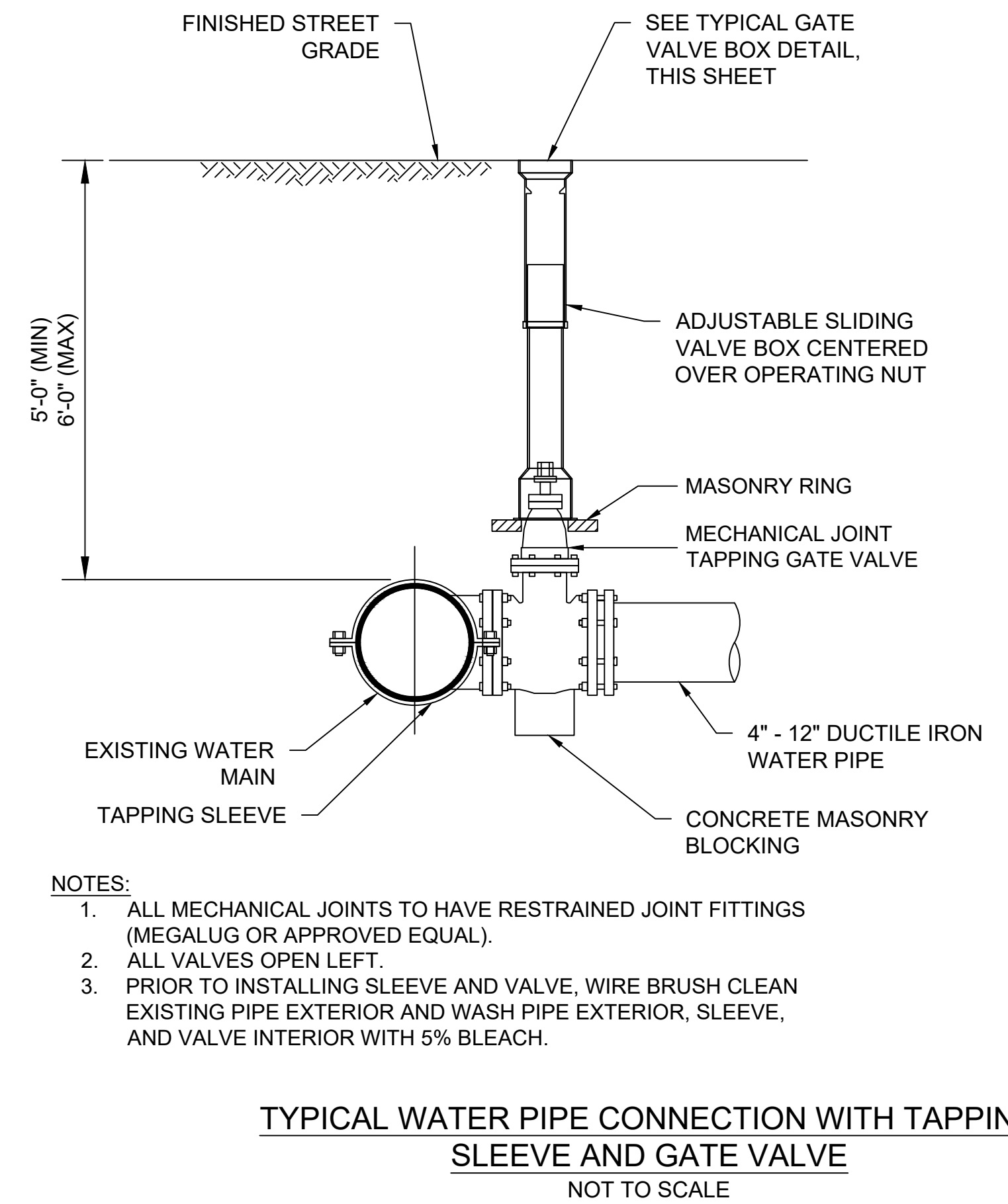
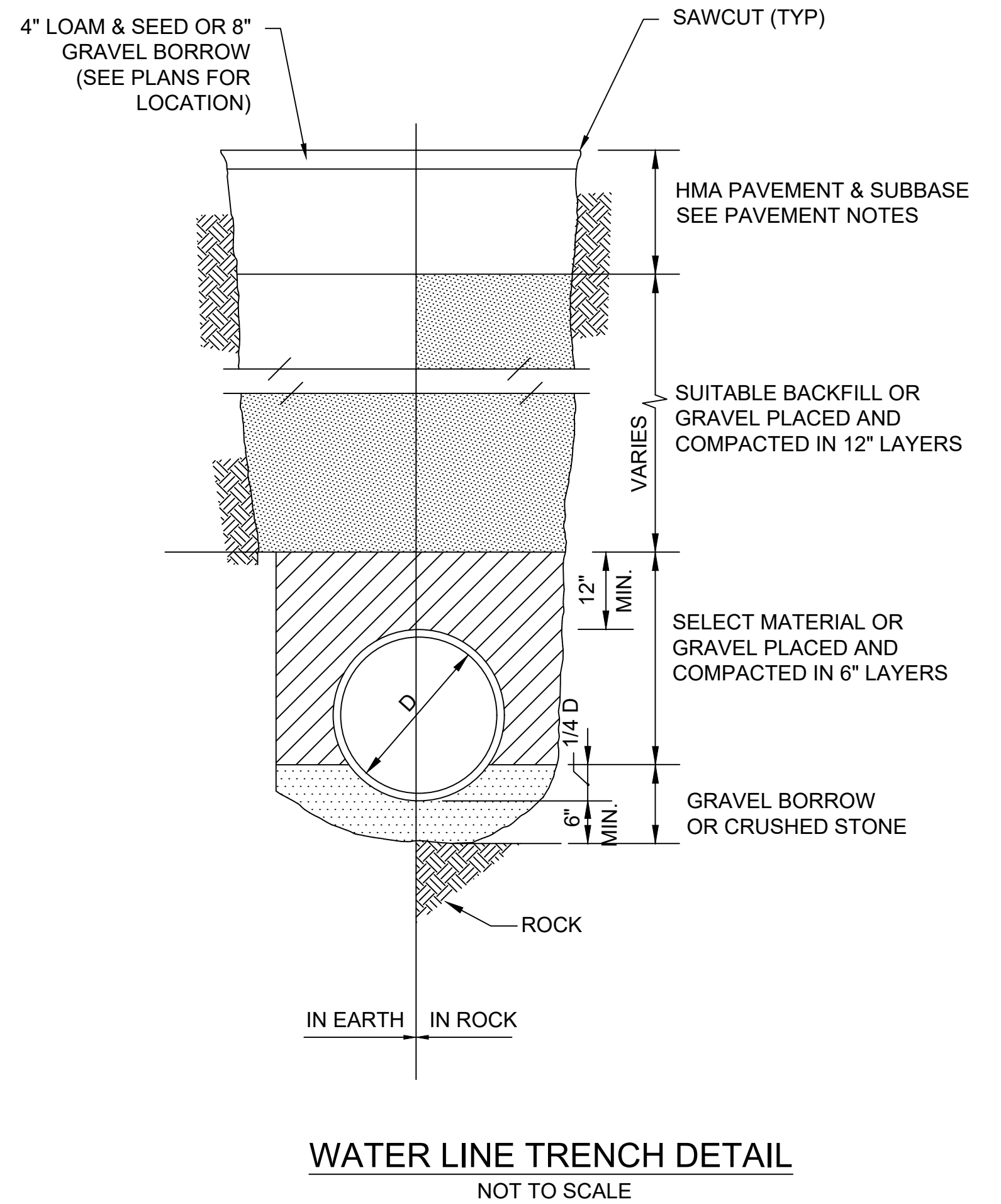
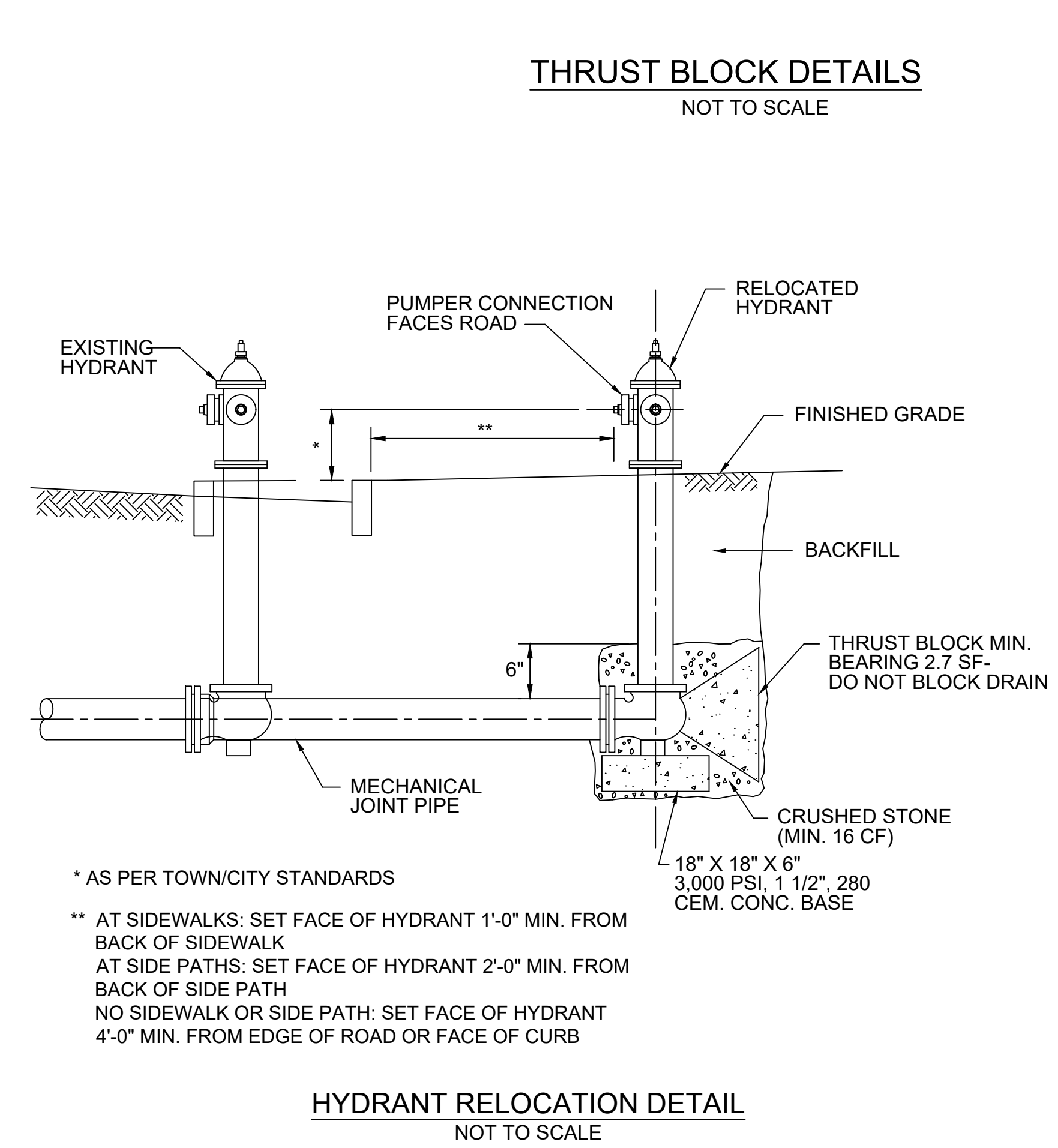
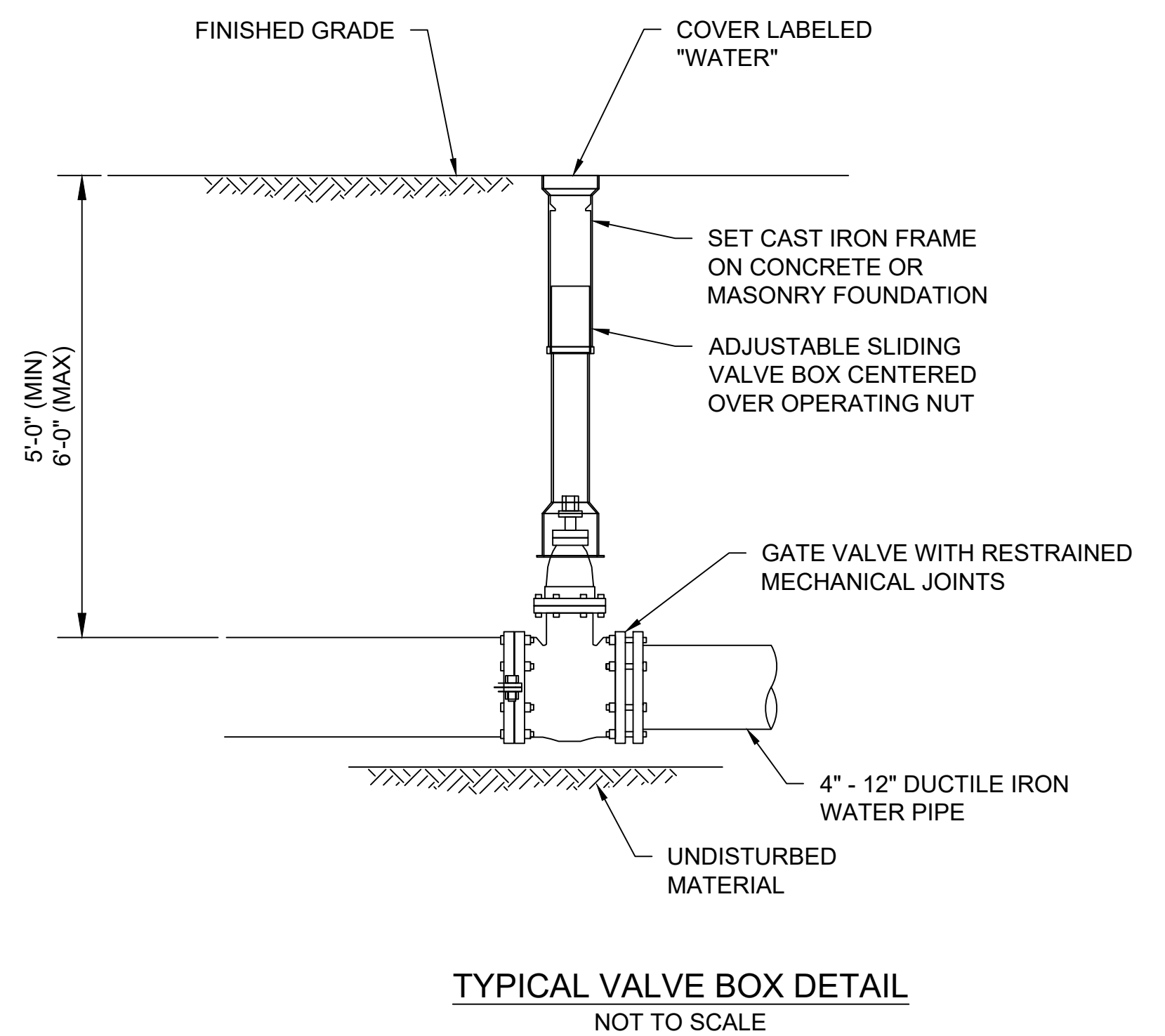
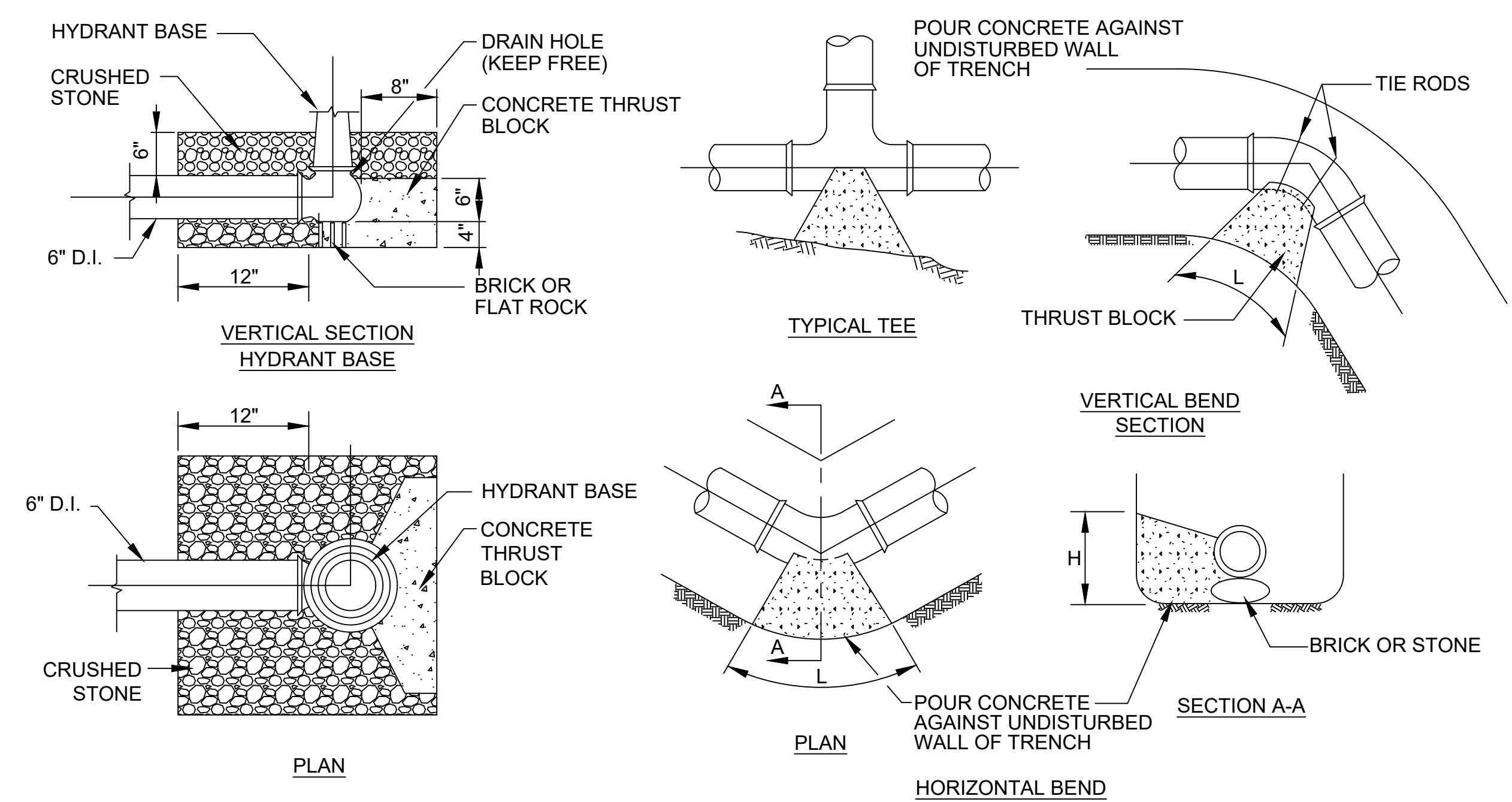
- NOTES:
- DESIGNED FOR AASHTO H25-44 LOADING.
 - CONCRETE STRENGTH $f_c=4,000$ PSI.
 - REINFORCING STEEL: ASTM A185 (wwf) $f_y=60,000$ PSI.
 - CURB INLETS ARE REQUIRED WHEN GUTTER INLETS ARE INSTALLED AGAINST CURBING.
 - FRAME AND GRATE TO PAID FOR UNDER ITEM 222.1 OR ITEM 222.3

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WATER SUPPLY DETAILS

NOMINAL DIAMETER OF FITTING	BEARING AREAS - SQUARE FEET				
	DEAD END	BRANCH OF TEE	90° BEND	45° BEND	BEND SMALLER THAN 45° LARGER THAN 10"
6"	2	2	3	2	2
8"	4	4	4	3	2
10"	6	6	8	4	2
12"	8	8	10	6	3
14"	12	12	16	9	4
16"	12	12	20	10	5

- THRUST BLOCK NOTES:**
- ALL BENDS, TEES, HYDRANTS AND DEAD ENDS SHALL BE BRACED WITH CONCRETE THRUST BLOCKS.
 - BEARING AREA IS AREA OF CONCRETE IN CONTACT WITH WALL OF TRENCH = H x L
 - HEIGHT (H) AND LENGTH (L) AS REQUIRED TO OBTAIN BEARING AREA IN TABLE.



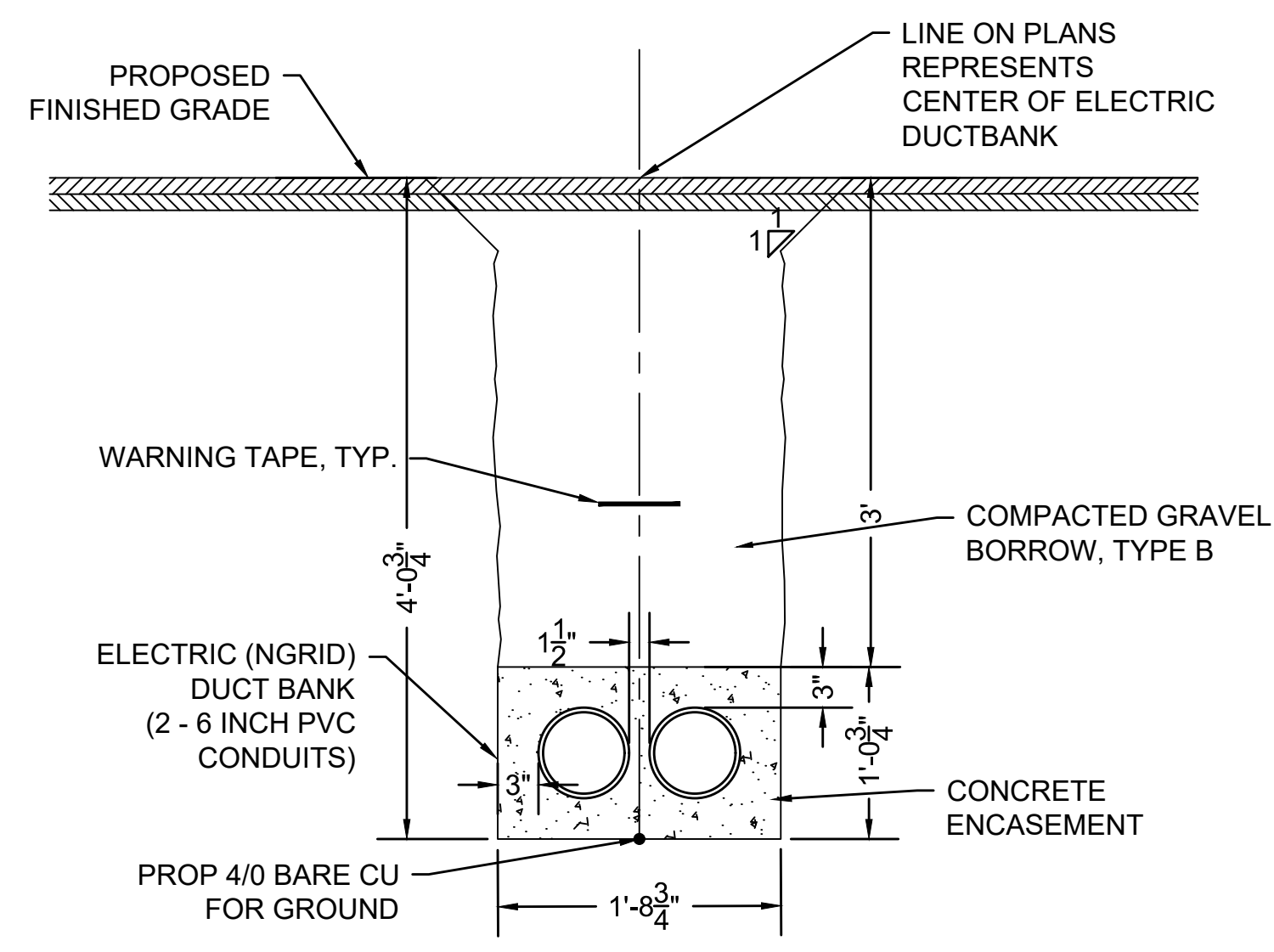
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	95	258
PROJECT FILE NO.		603739	

UTILITY DETAILS
SHEET 1 OF 2

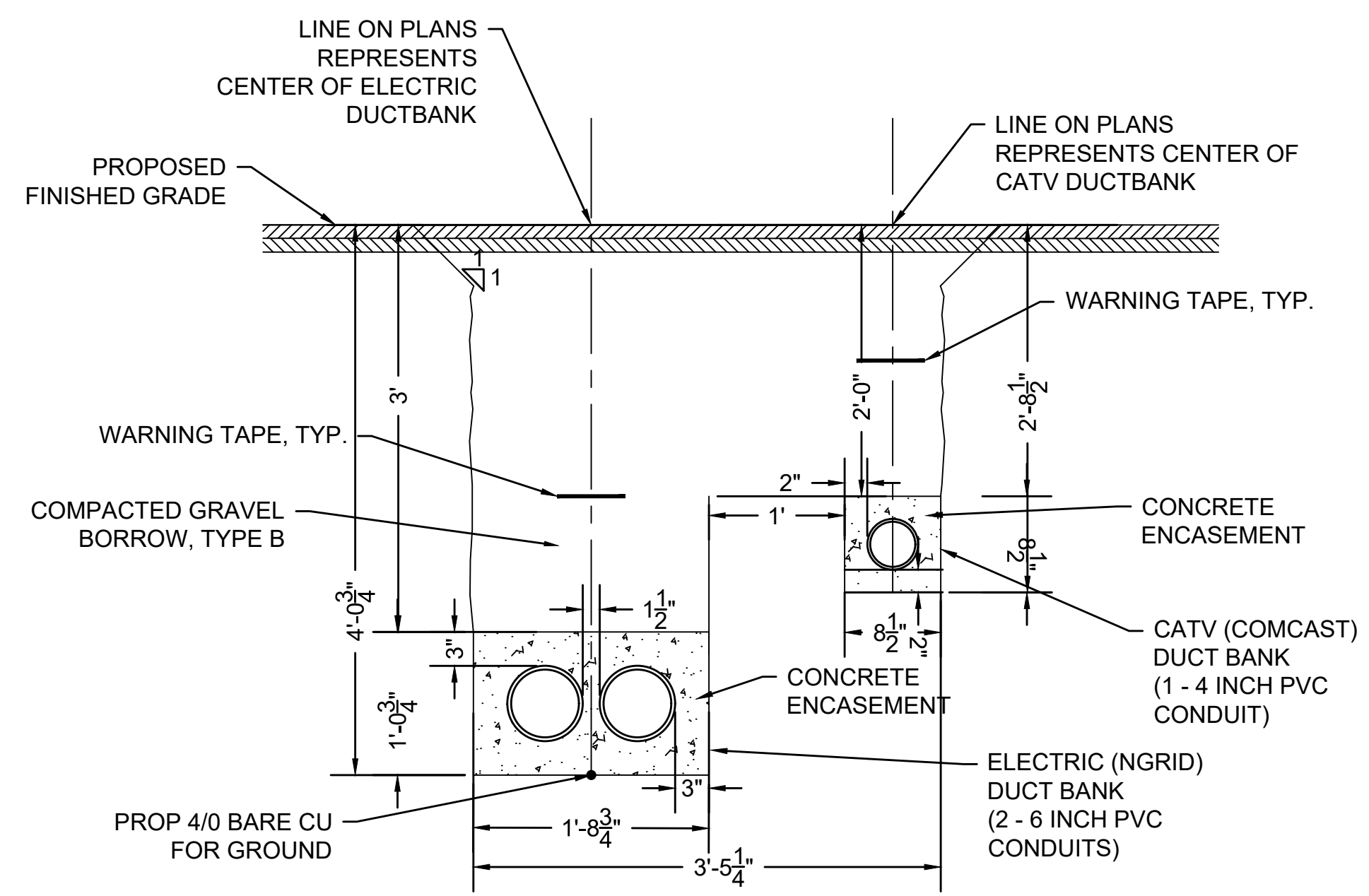
UTILITY TRENCH NOTES:

- ALL CONSTRUCTION OF DUCT BANKS INCLUDING TRENCH, EXCAVATION, AND BACKFILL SHALL CONFORM TO UTILITY DETAILS AND SPECIFICATIONS.
- FOR ALL DUCTS USE SCHEDULE 40 CONDUITS ENCASED IN 2,500 PSI, 3/8 INCH, 520 CEMENT CONCRETE CONCRETE. USE PLASTIC SPACERS TO MAINTAIN CONDUIT SPACING. SPACERS SHALL MEET UTILITY SPECIFICATIONS FOR DESIGN AND SPACING.
- ALL TRENCH EXCAVATION ACTIVITIES SHALL COMPLY WITH ALL APPROPRIATE OSHA STANDARDS.
- EACH DUCT BANK SHALL HAVE ASSOCIATED WARNING TAPE INSTALLED. ELECTRIC DUCT BANKS WILL HAVE 6 INCH, COLOR RED, DETECTABLE METALLIC WARNING TAPE PLACED 6 INCHES ABOVE CONCRETE ENCASEMENT. TELEPHONE AND CATV DUCT BANKS WILL HAVE 6 INCH, COLOR ORANGE, DETECTABLE METALLIC WARNING TAPE PLACED 12 INCHES ABOVE EACH CONCRETE ENCASEMENT.

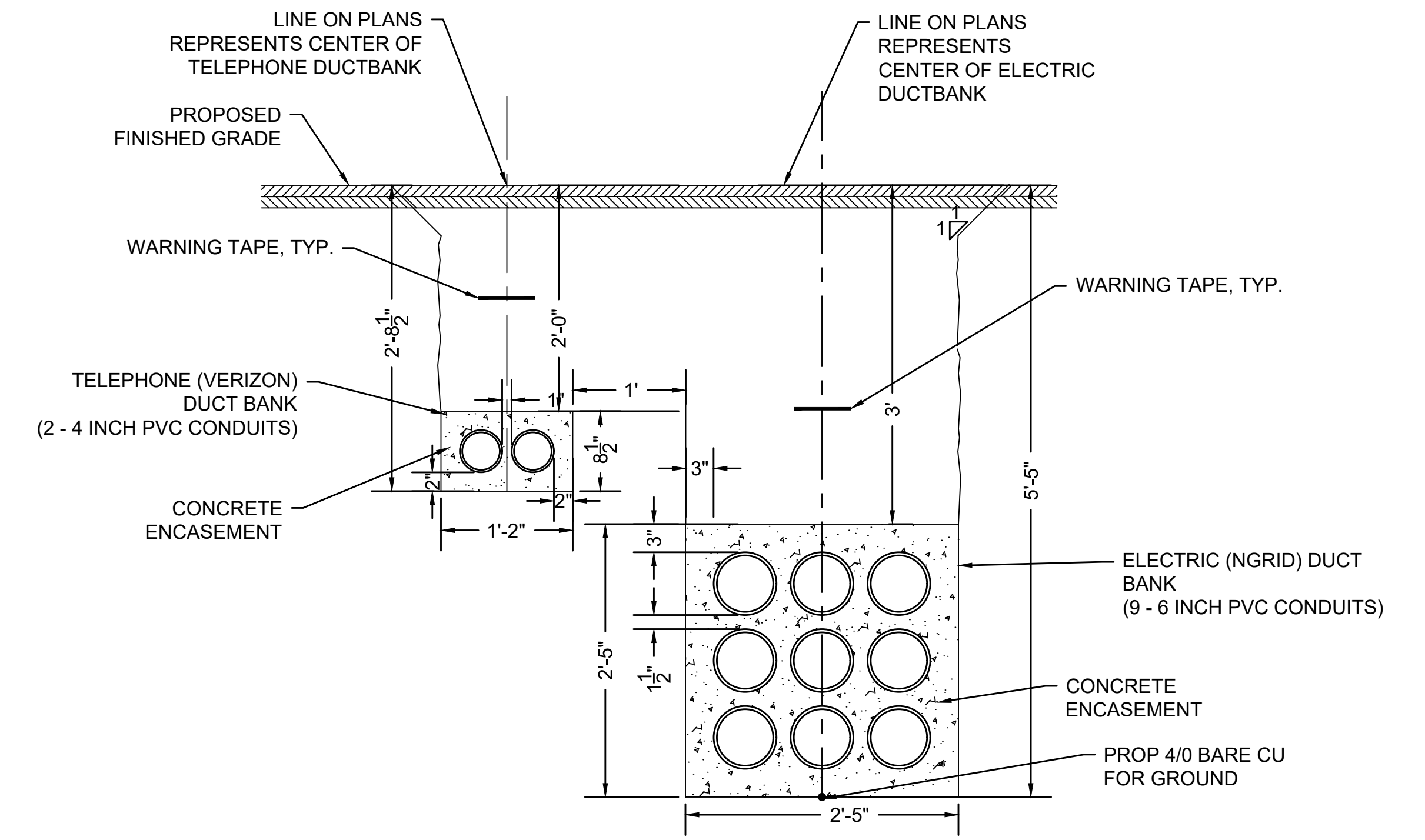
- A UTILITY COMPANY REPRESENTATIVE FROM NGRID SHALL BE PRESENT FOR ALL ELECTRICAL CONDUIT INSTALLED.
- A UTILITY COMPANY REPRESENTATIVE FROM VERIZON SHALL BE PRESENT FOR ALL TELEPHONE CONDUIT INSTALLED.
- A UTILITY COMPANY REPRESENTATIVE FROM COMCAST SHALL BE PRESENT FOR ALL CATV CONDUIT INSTALLED.
- A MINIMUM OF 12 INCHES OF SEPARATION IS REQUIRED FOR CROSSINGS WITH GAS, WATER, SEWER AND DRAINAGE.
- CONDUITS SHALL BE BLOWN CLEAN USING COMPRESSED AIR. RUN MANDREL THRU EACH CONDUIT TO CONFIRM VIABLE PATHWAY.
- WOVEN POLYESTER MULE TAPE WITH MINIMUM STRENGTH OF 2500 LB TENSILE STRENGTH TO BE INSTALLED WITHIN EACH CONDUIT.



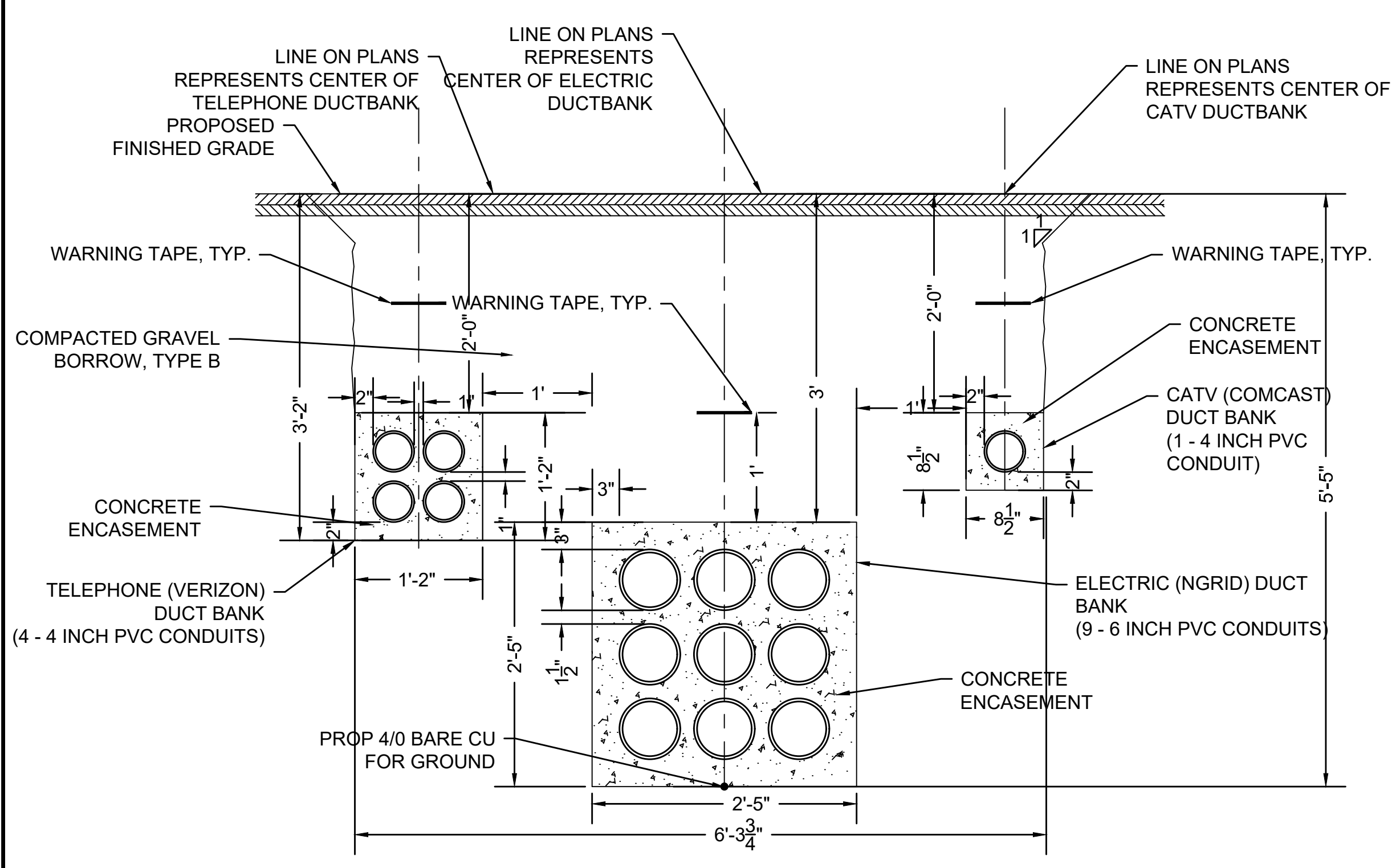
ELECTRIC TRENCH DETAIL #1
NOT TO SCALE



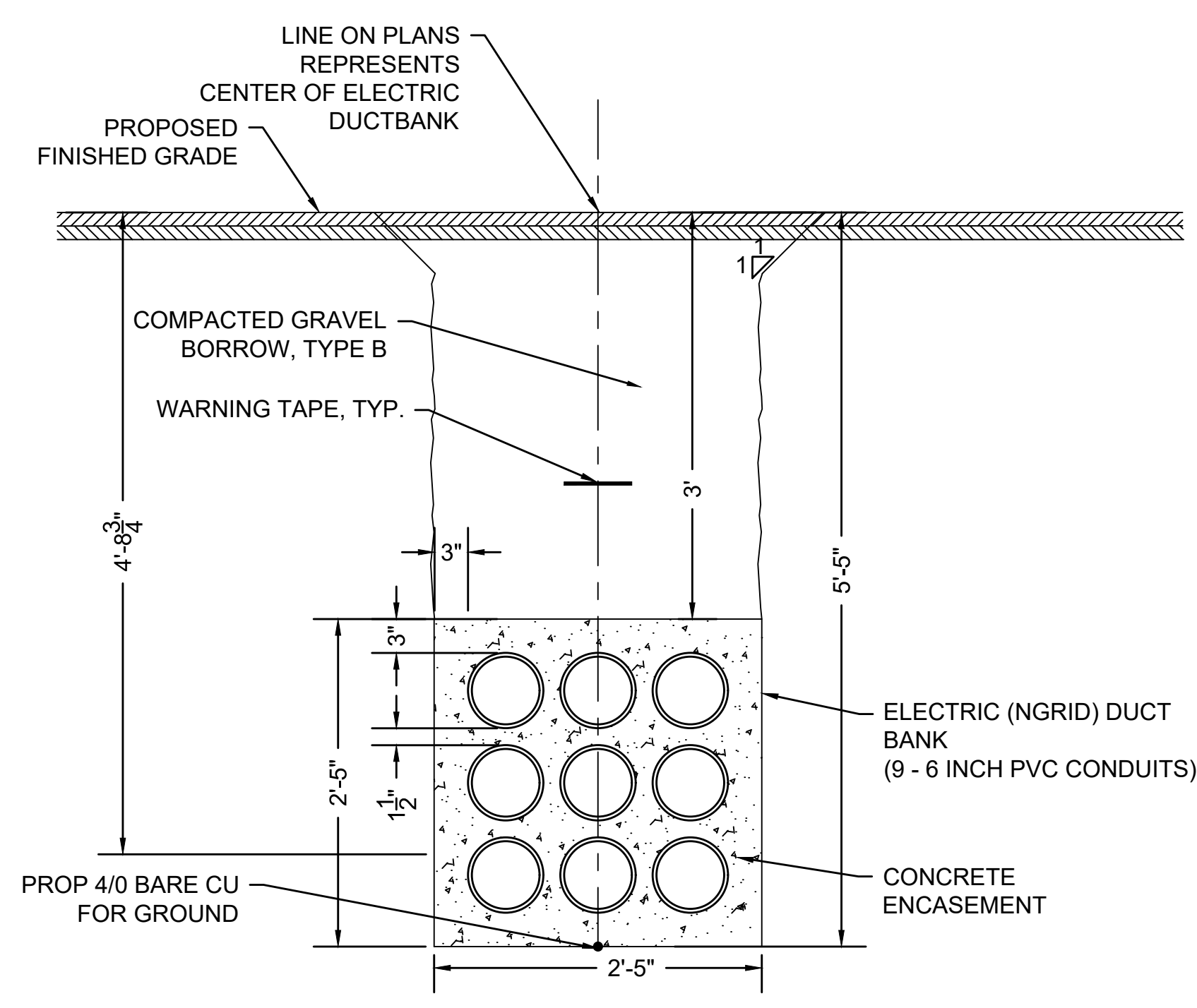
ELECTRIC & CATV TRENCH DETAIL #1
NOT TO SCALE



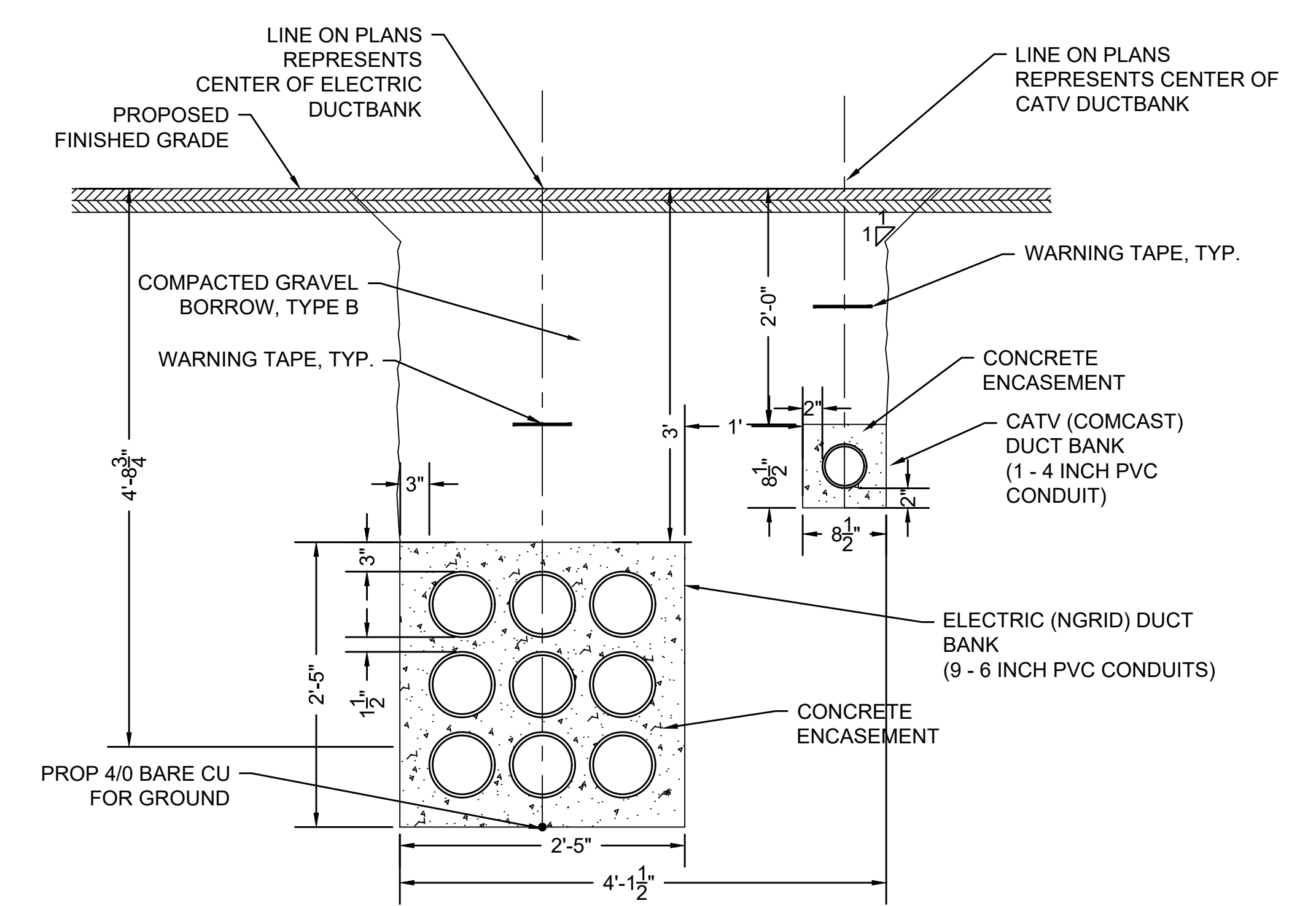
ELECTRIC & TELEPHONE TRENCH DETAIL #1
NOT TO SCALE



ELECTRIC & TELEPHONE & CATV TRENCH DETAIL #1
NOT TO SCALE



ELECTRIC TRENCH DETAIL #2
NOT TO SCALE



ELECTRIC & CATV TRENCH DETAIL #2
NOT TO SCALE

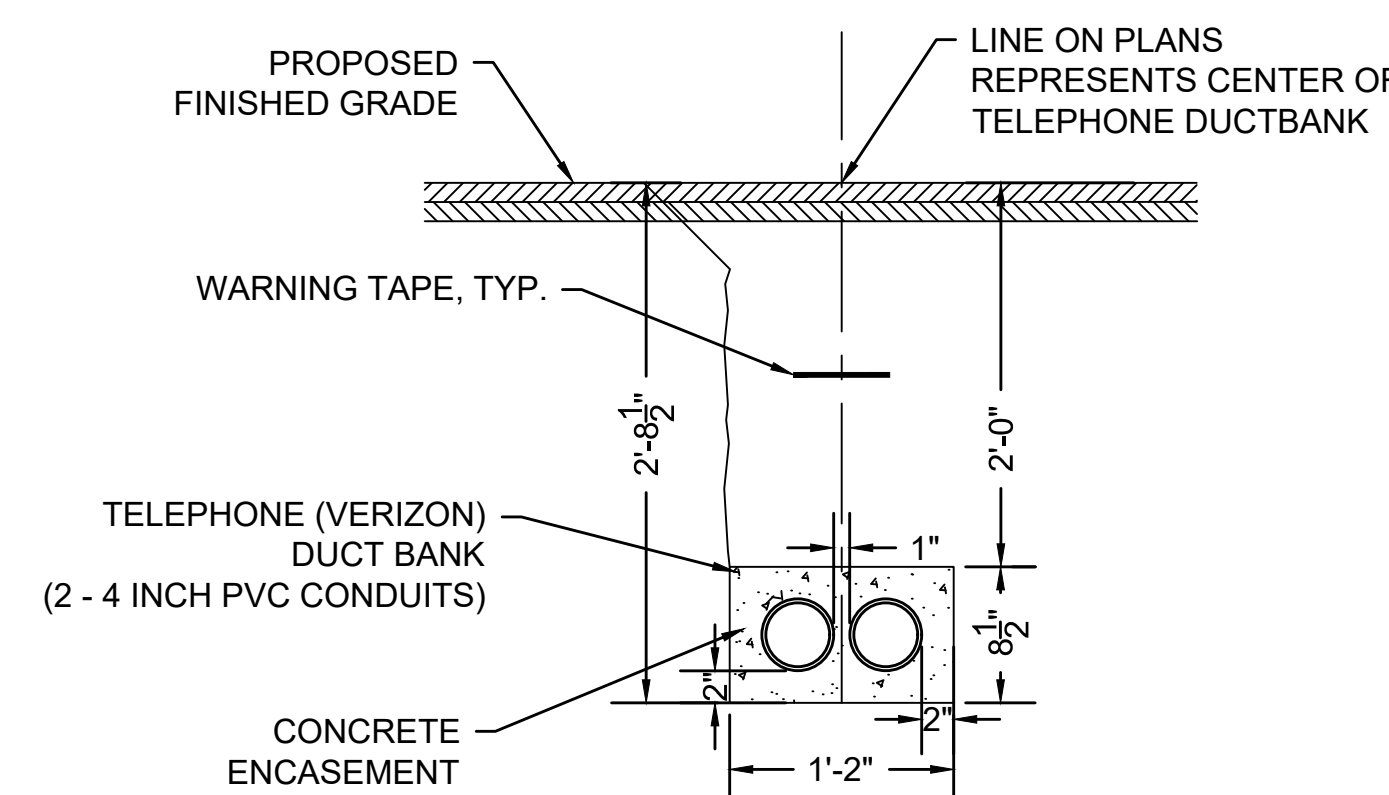
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	96	258
PROJECT FILE NO.		603739	

UTILITY DETAILS
SHEET 2 OF 2

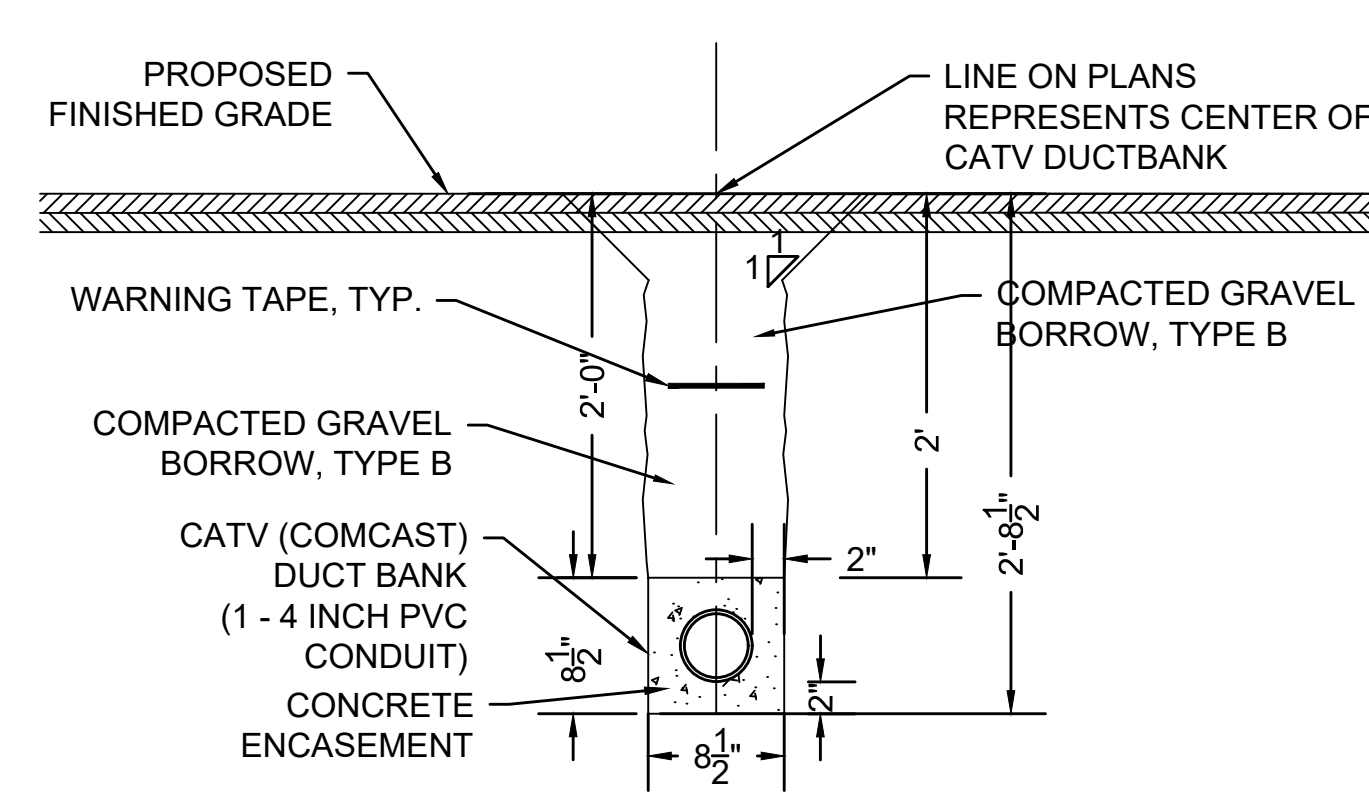
UTILITY TRENCH NOTES:

- ALL CONSTRUCTION OF DUCT BANKS INCLUDING TRENCH, EXCAVATION, AND BACKFILL SHALL CONFORM TO UTILITY DETAILS AND SPECIFICATIONS.
- FOR ALL DUCTS USE SCHEDULE 40 CONDUITS ENCASED IN 2,500 PSI, 3/8 INCH, 520 CEMENT CONCRETE CONCRETE. USE PLASTIC SPACERS TO MAINTAIN CONDUIT SPACING. SPACERS SHALL MEET UTILITY SPECIFICATIONS FOR DESIGN AND SPACING.
- ALL TRENCH EXCAVATION ACTIVITIES SHALL COMPLY WITH ALL APPROPRIATE OSHA STANDARDS.
- EACH DUCT BANK SHALL HAVE ASSOCIATED WARNING TAPE INSTALLED. ELECTRIC DUCT BANKS WILL HAVE 6 INCH, COLOR RED, DETECTABLE METALLIC WARNING TAPE PLACED 6 INCHES ABOVE CONCRETE ENCASEMENT. TELEPHONE AND CATV DUCT BANKS WILL HAVE 6 INCH, COLOR ORANGE, DETECTABLE METALLIC WARNING TAPE PLACED 12 INCHES ABOVE EACH CONCRETE ENCASEMENT.

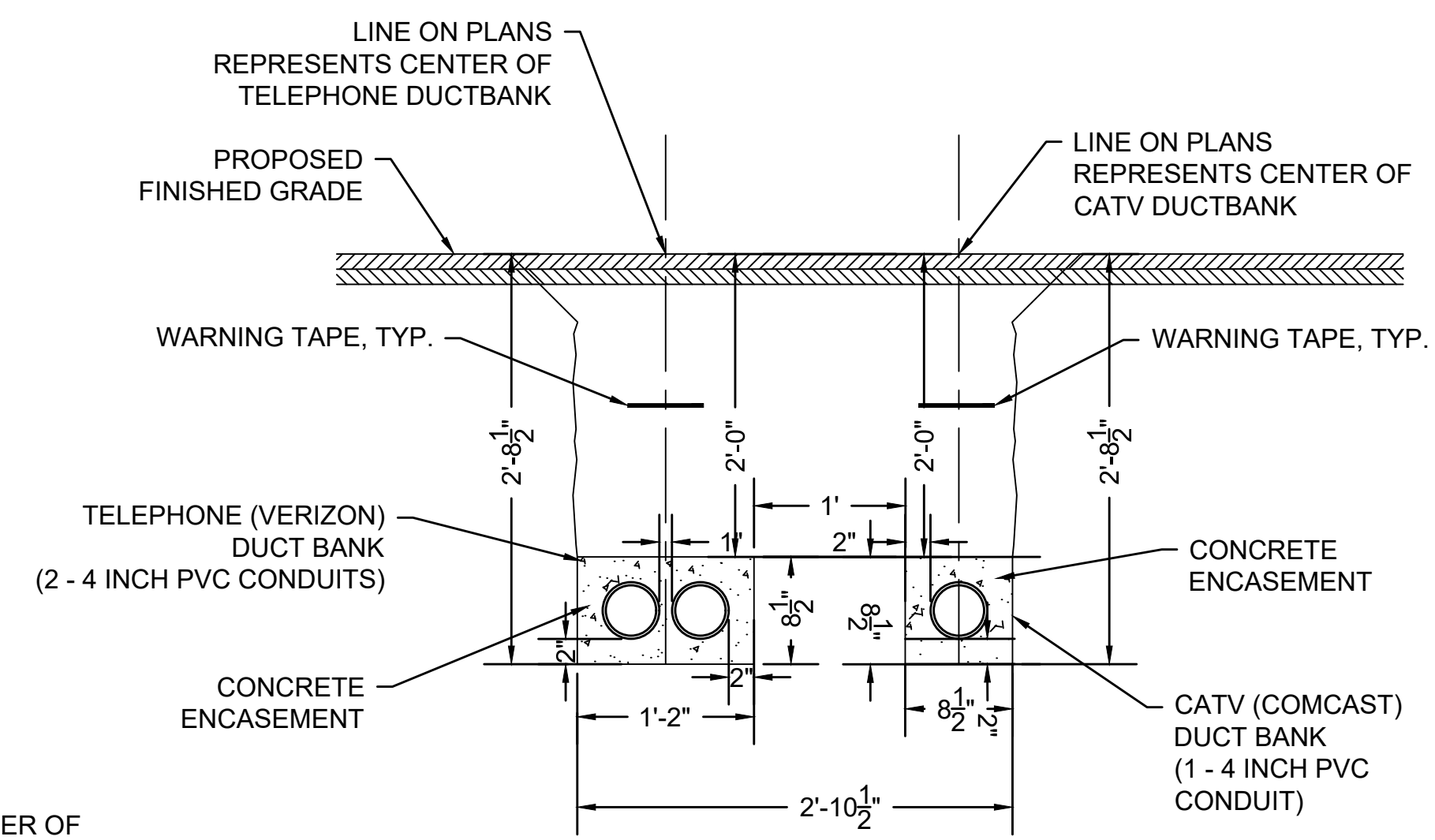
- A UTILITY COMPANY REPRESENTATIVE FROM NGRID SHALL BE PRESENT FOR ALL ELECTRICAL CONDUIT INSTALLED.
- A UTILITY COMPANY REPRESENTATIVE FROM VERIZON SHALL BE PRESENT FOR ALL TELEPHONE CONDUIT INSTALLED.
- A UTILITY COMPANY REPRESENTATIVE FROM COMCAST SHALL BE PRESENT FOR ALL CATV CONDUIT INSTALLED.
- A MINIMUM OF 12 INCHES OF SEPARATION IS REQUIRED FOR CROSSINGS WITH GAS, WATER, SEWER AND DRAINAGE.
- CONDUITS SHALL BE BLOWN CLEAN USING COMPRESSED AIR. RUN MANDREL THRU EACH CONDUIT TO CONFIRM VIABLE PATHWAY.
- WOVEN POLYESTER MULE TAPE WITH MINIMUM STRENGTH OF 2500 LB TENSILE STRENGTH TO BE INSTALLED WITHIN EACH CONDUIT.



TELEPHONE TRENCH DETAIL #1
NOT TO SCALE



CATV TRENCH DETAIL #1
NOT TO SCALE

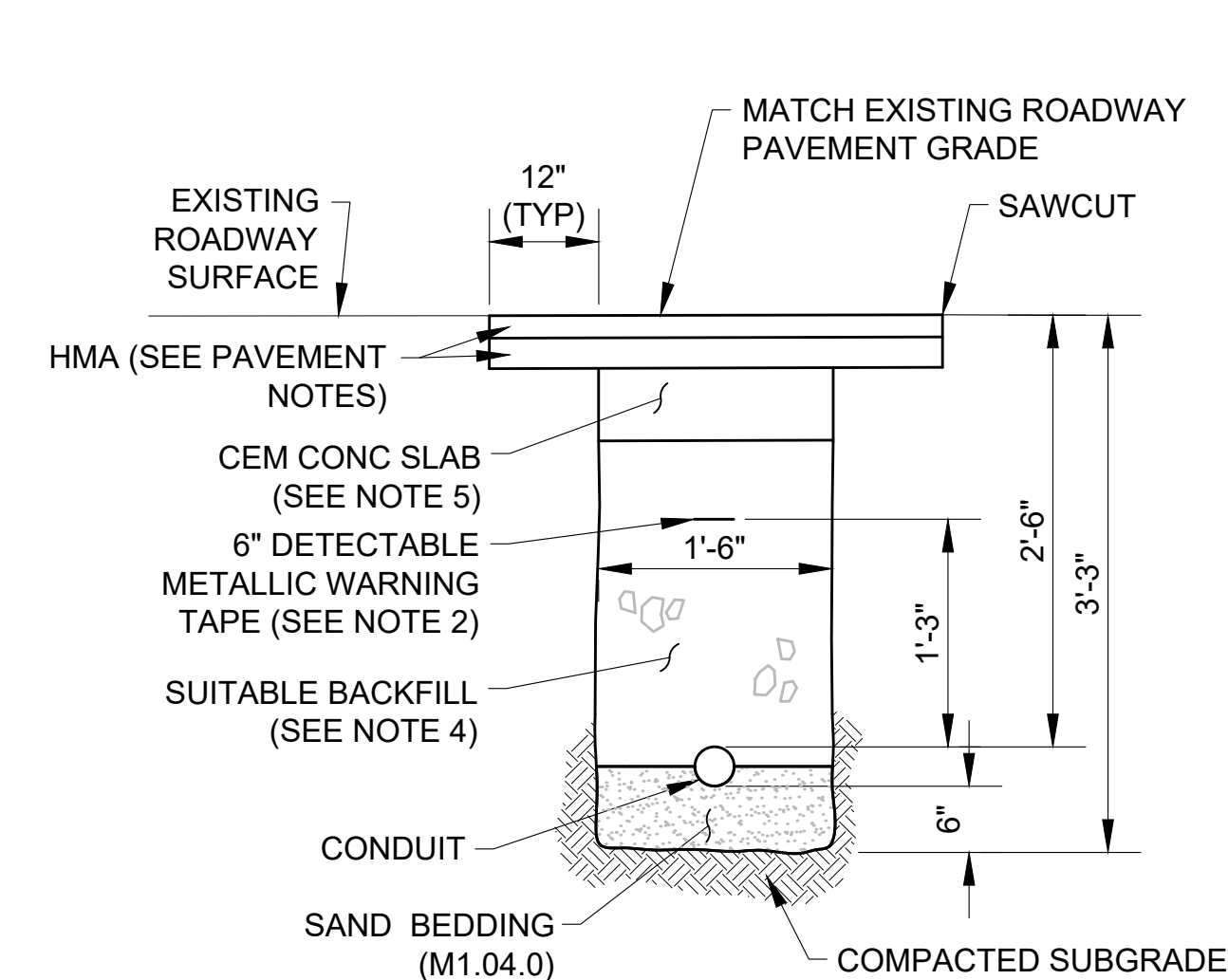


TELEPHONE & CATV TRENCH DETAIL #1
NOT TO SCALE

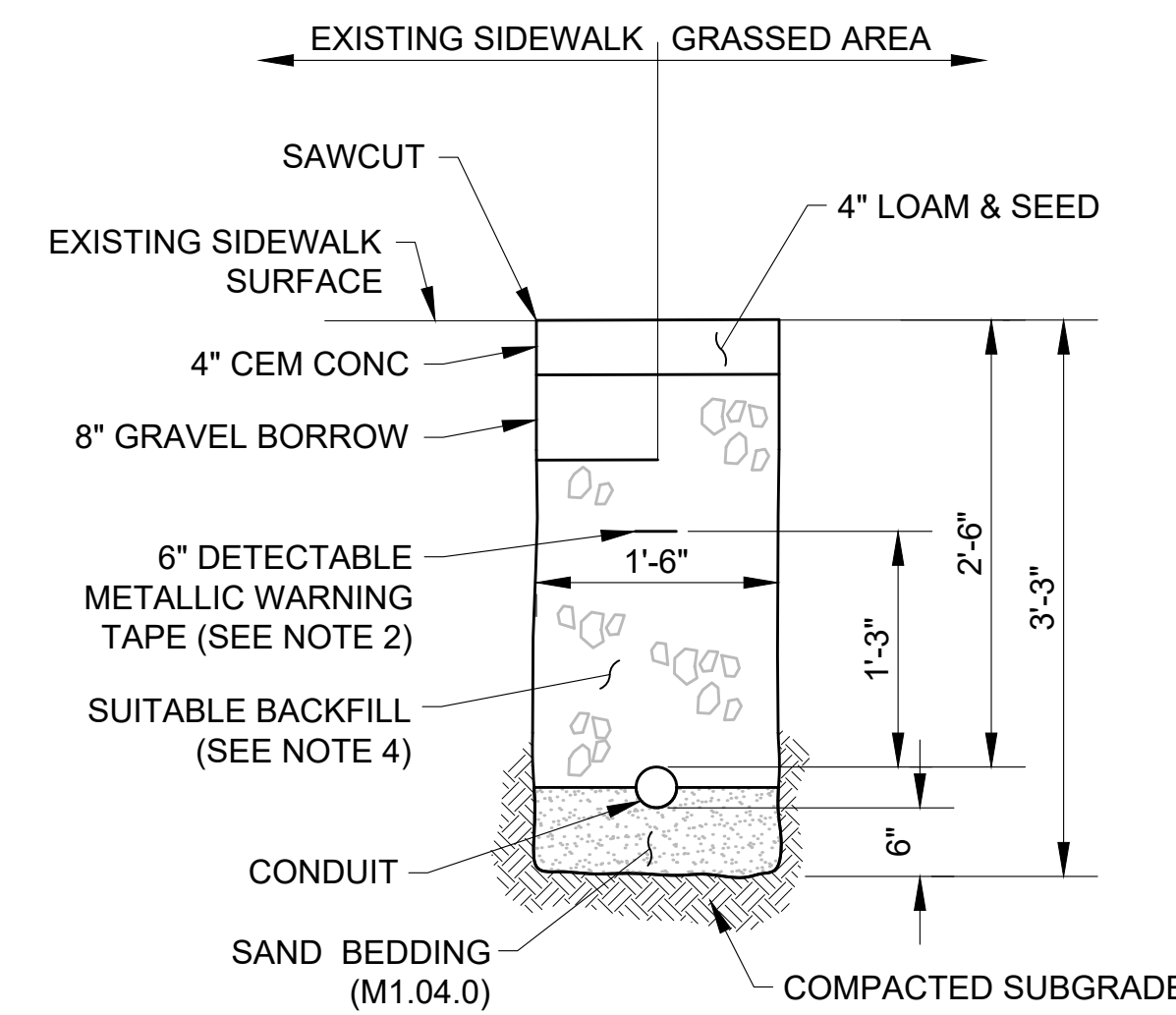
TRAFFIC SIGNAL CONDUIT NOTES:

- CONDUIT SHALL BE SCHEDULE 80 ELECTRICAL CONDUIT TYPE NM-PLASTIC (UL), WITH PULL ROPE, UNLESS OTHERWISE APPROVED BY MASSDOT.
- WARNING TAPE SHALL BE PER CURRENT APWA STANDARDS.
- EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE, BY THE ENGINEER SHALL BE USED FOR BACKFILL. BACKFILL SHALL BE PLACED IN LAYERS NO MORE THAN 6" IN DEPTH AND THOROUGHLY COMPACTED. MATERIAL FOR BACKFILL SHALL CONTAIN NO STONES LARGER THAN 3" IN GREATEST DIMENSION.

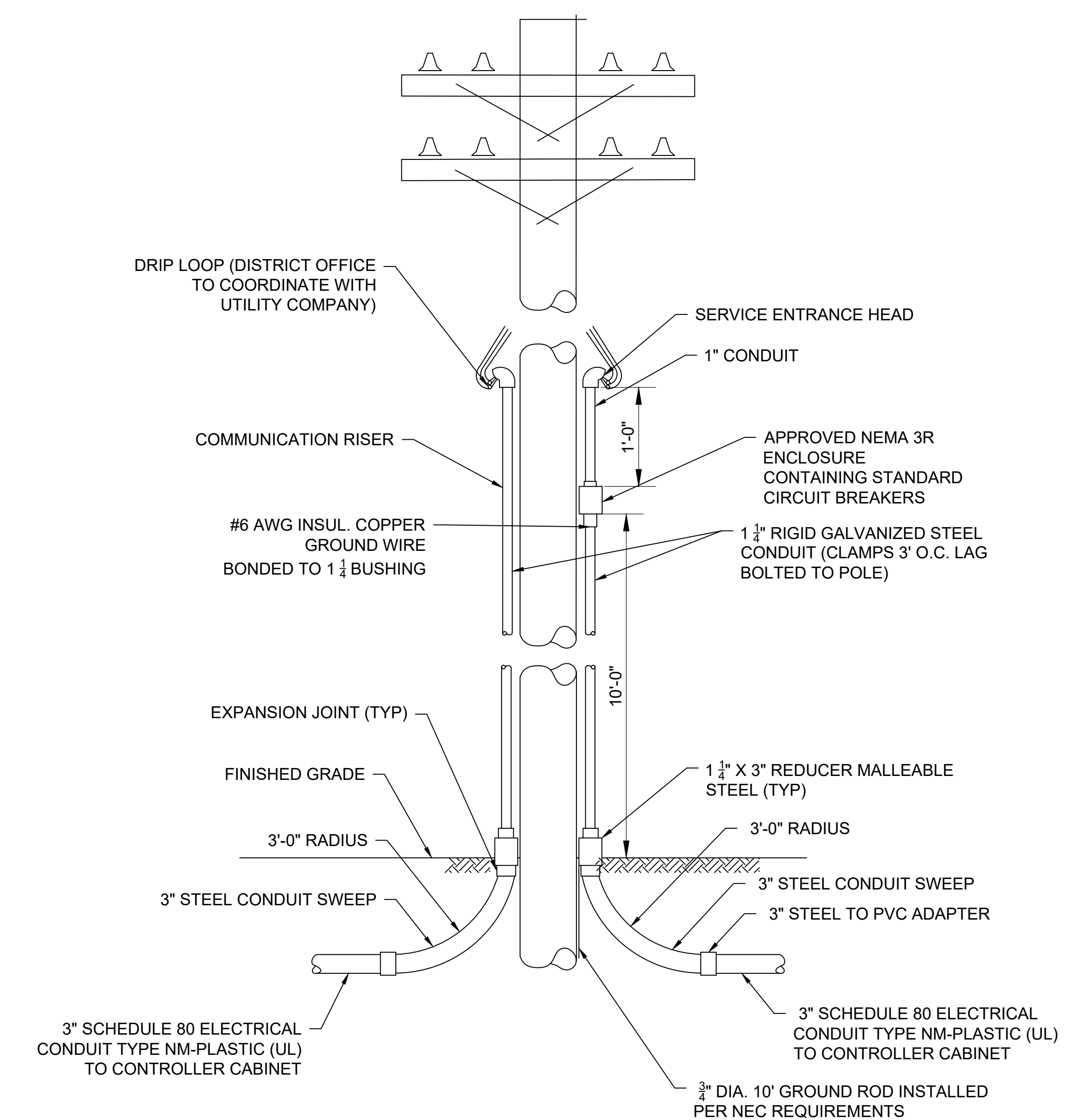
- IF THE EXISTING SOIL IS DETERMINED NOT SUITABLE FOR BACKFILL FOR ANY REASON BY THE ENGINEER, THE CONTRACTOR SHALL USE GRAVEL BORROW TYPE c.
- WHEN A TRENCH HAS BEEN CUT ACROSS A PAVED SURFACE, THE TRENCH SHALL BE BRIDGED WITH AN 8" CONCRETE SLAB. OVERHANG BEYOND LIMIT OF TRENCH 12" ON EACH SIDE. ADDITIONAL SAWCUT SHALL BE CONSIDERED INCIDENTAL TO ITEM 451 - HMA FOR PATCHING.
- WHEN 2 OR MORE CONDUITS ARE LOCATED IN THE SAME TRENCH, A MINIMUM SEPARATION OF 3" BETWEEN CONDUITS SHALL BE MAINTAINED.



TRAFFIC SIGNAL CONDUIT UNDER ROADWAY
NOT TO SCALE



TRAFFIC SIGNAL CONDUIT UNDER SIDEWALK OR GRASS
NOT TO SCALE



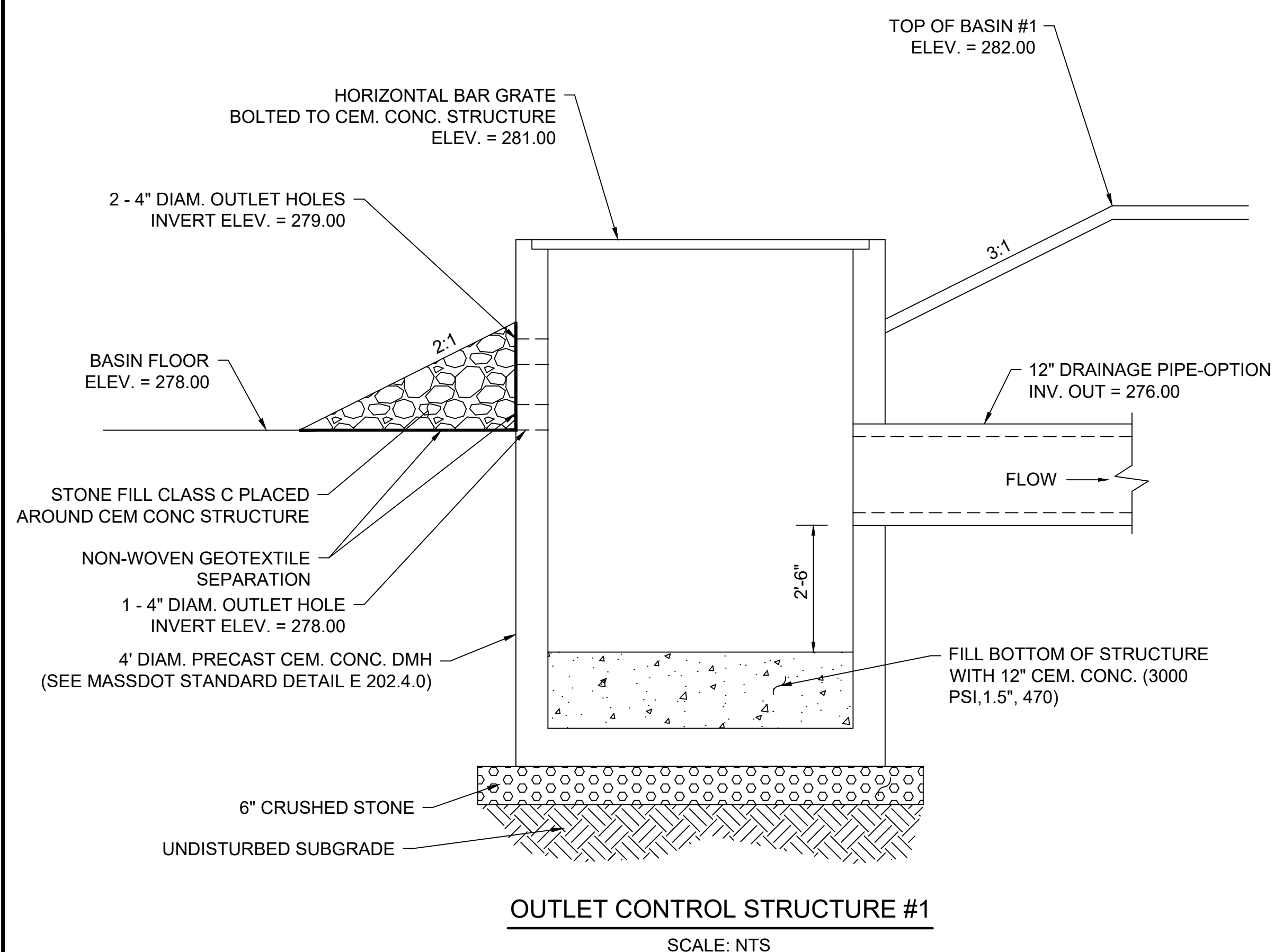
- NOTES:
1. SPECIFIC ATTACHMENT AND CONNECTION REQUIREMENTS MAY VARY. COORDINATION WITH THE LOCAL UTILITY COMPANY IS REQUIRED BY THE CONTRACTOR.

TRAFFIC SIGNAL SERVICE CONNECTION - OVERHEAD DETAIL
NOT TO SCALE

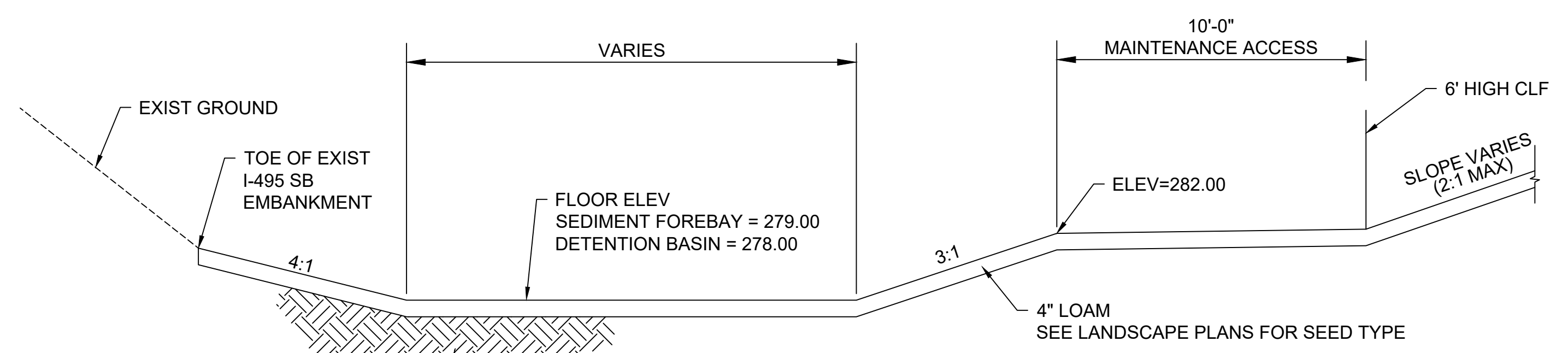
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	97	258
PROJECT FILE NO. 603739			

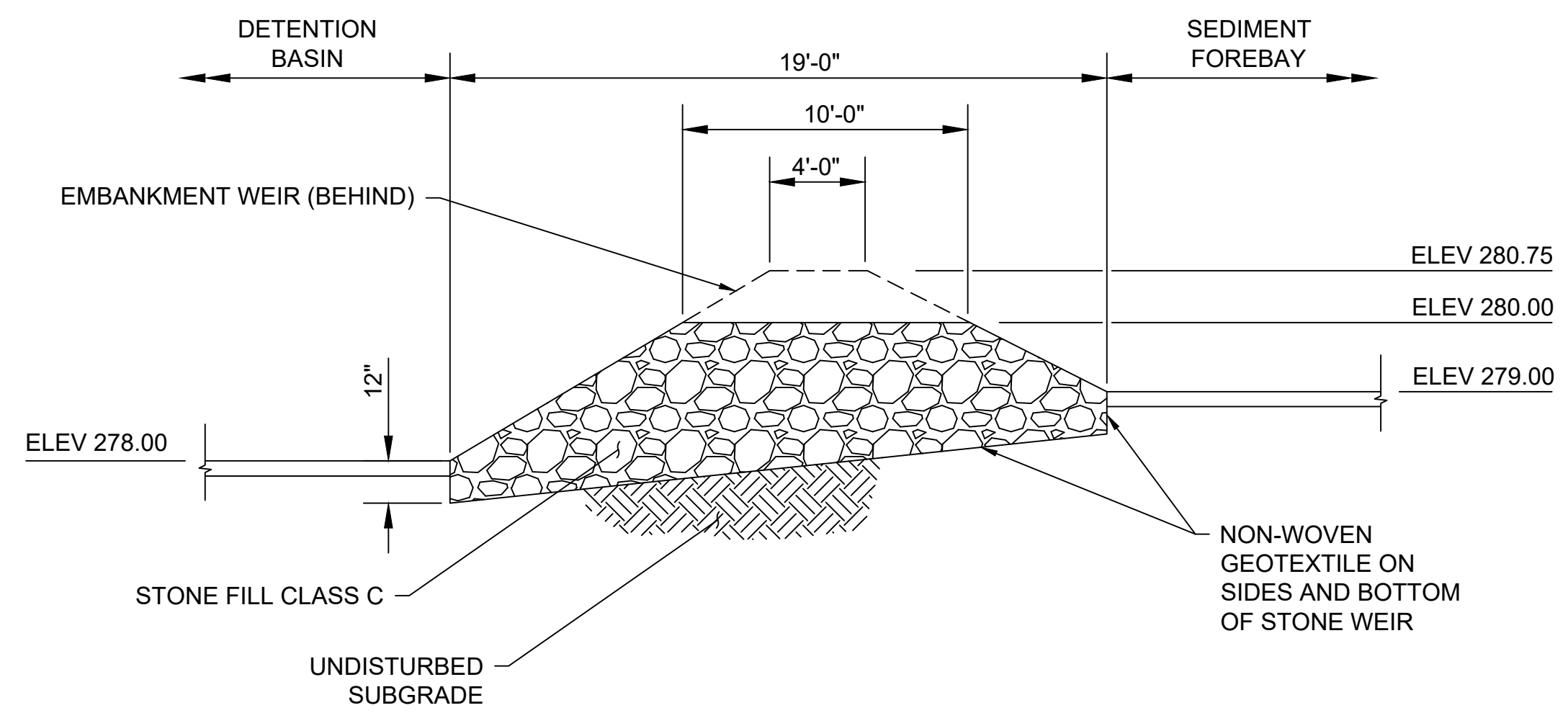
DETENTION BASIN DETAILS



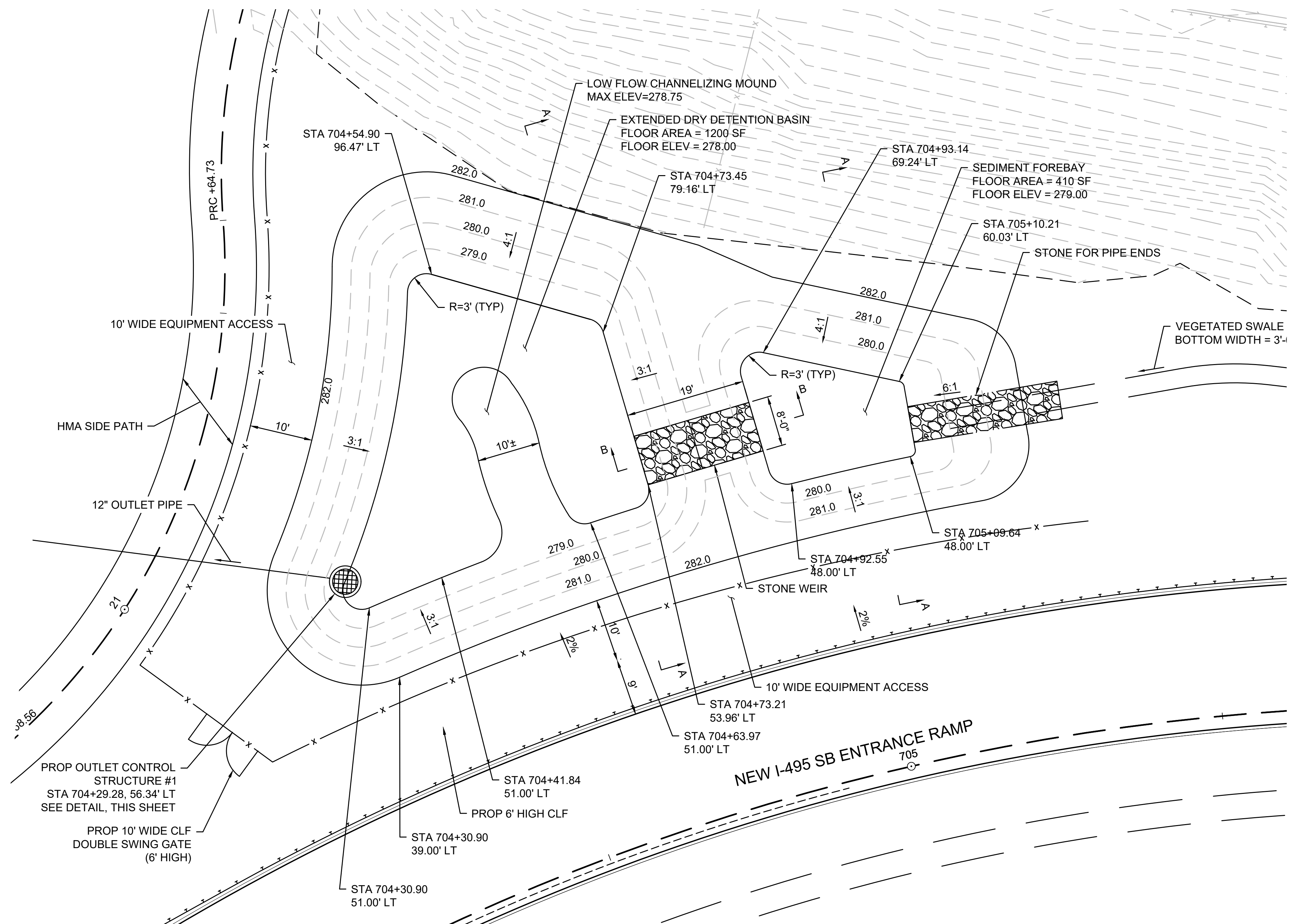
OUTLET CONTROL STRUCTURE #1
SCALE: NTS



SECTION A-A
SEDIMENT FOREBAY & DETENTION BASIN
SCALE: NTS



SECTION B-B
STONE WEIR
SCALE: NTS

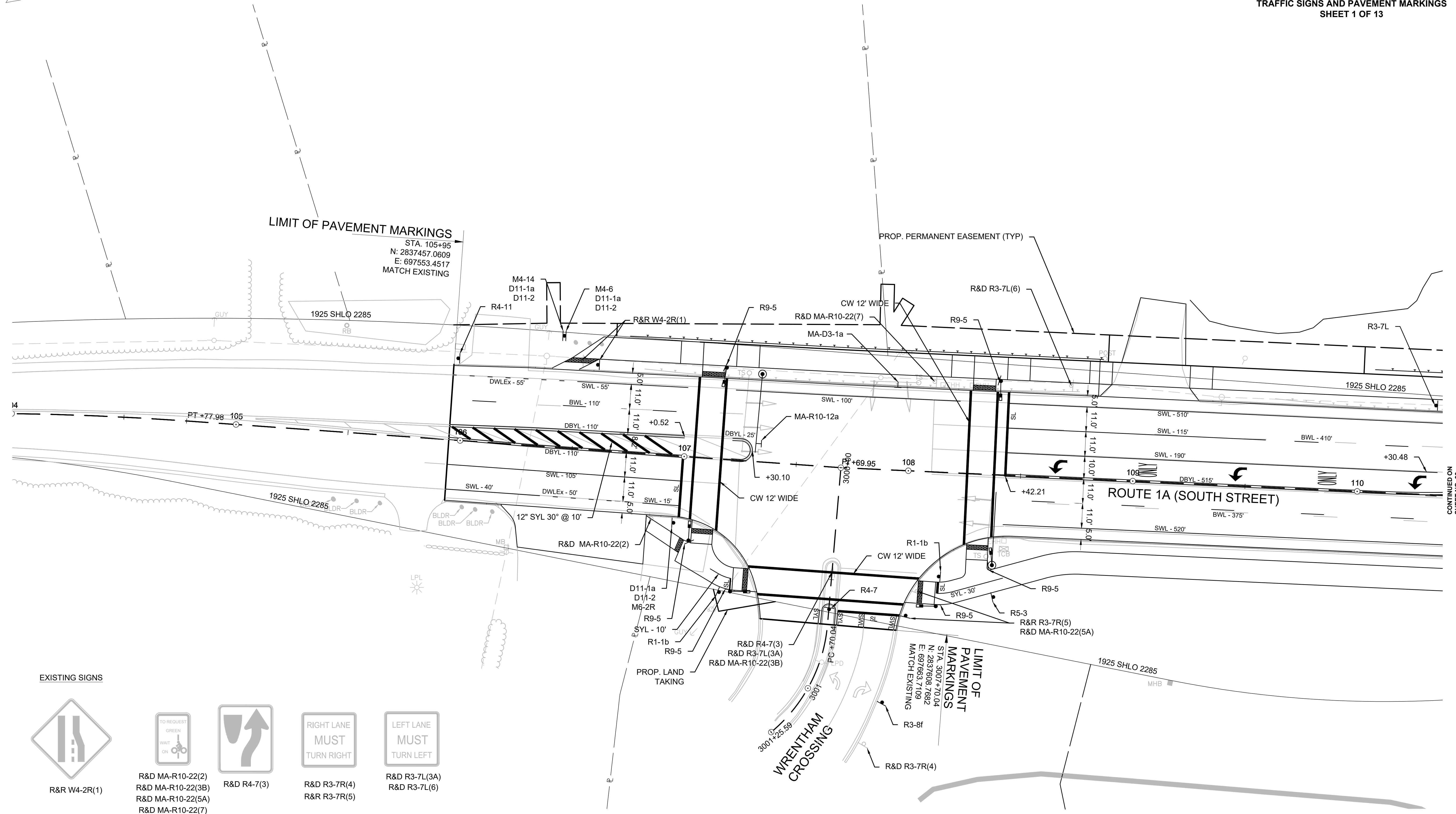
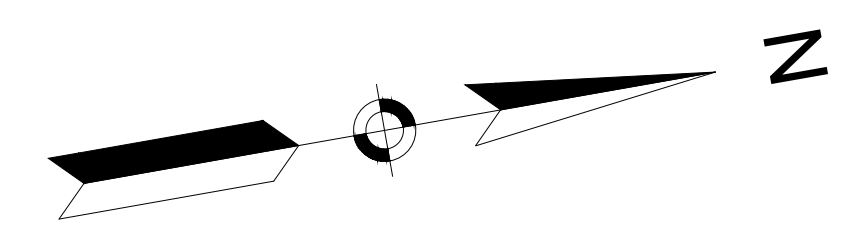


DETENTION BASIN & SEDIMENT FOREBAY
LAYOUT & GRADING PLAN
SCALE: 1"=10'

WRENTHAM, MA
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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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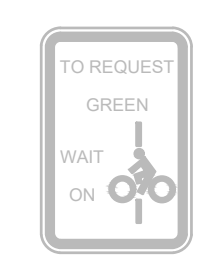
TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 1 OF 13



EXISTING SIGNS



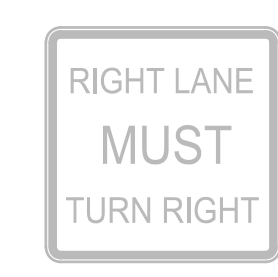
R&R W4-2R(1)



R&D MA-R10-22(2)
R&D MA-R10-22(3B)
R&D MA-R10-22(5A)
R&D MA-R10-22(7)



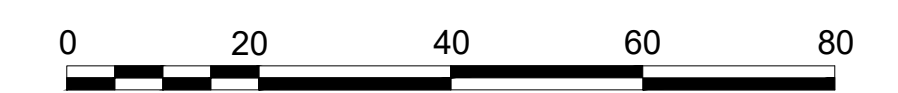
R&D R4-7(3)



R&D R3-7R(4)
R&R R3-7R(5)



R&D R3-7L(3A)
R&D R3-7L(6)



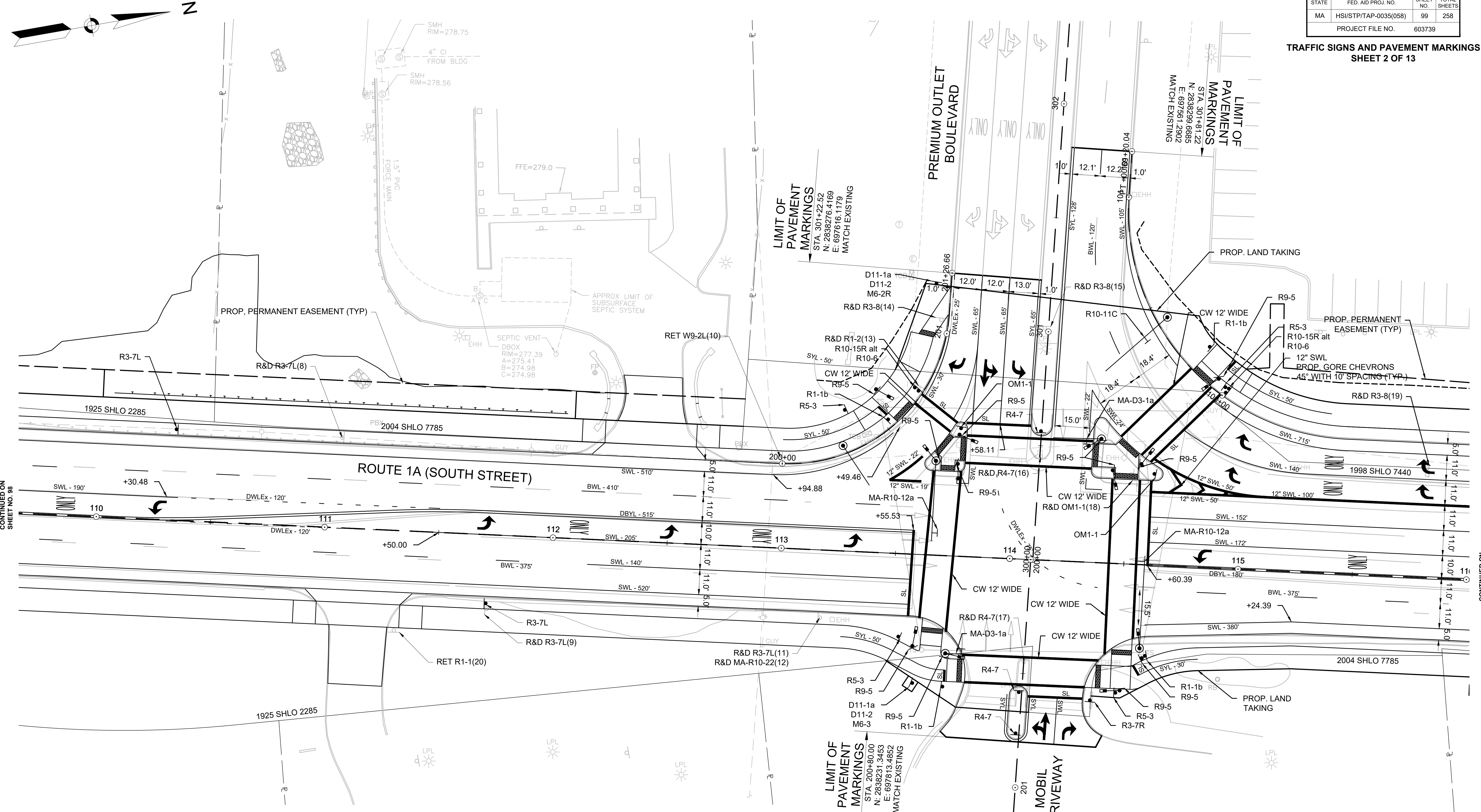
SCALE: 1" = 20'

CONTINUED ON
SHEET NO. 99

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

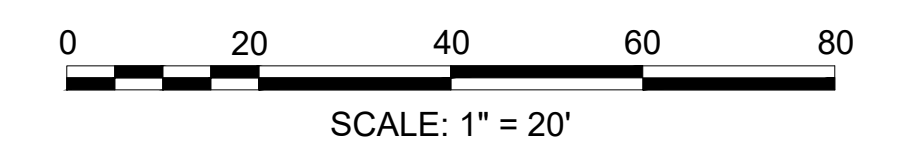
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	99	258
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TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 2 OF 13



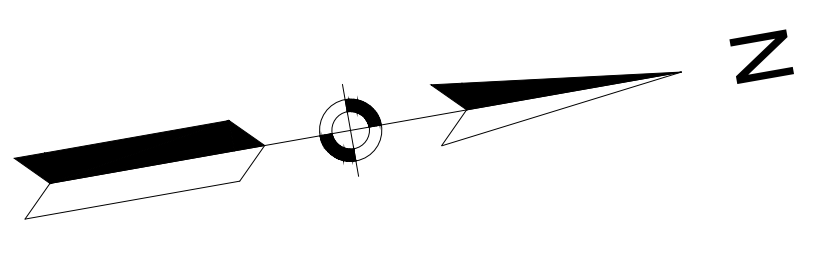
EXISTING SIGNS

R&D R3-7L(8) R&D R3-7L(9)	RET W9-2L(10)	R&D MA-R10-22(12)	R&D R1-2(13)	R&D R3-8(14) R&D R3-8(15)	R&D R4-7(16) R&D R4-7(17)	R&D OM1-1(18)	R&D R3-8(19)	RET R1-1(20)		



CONTINUED ON
SHEET NO. 98

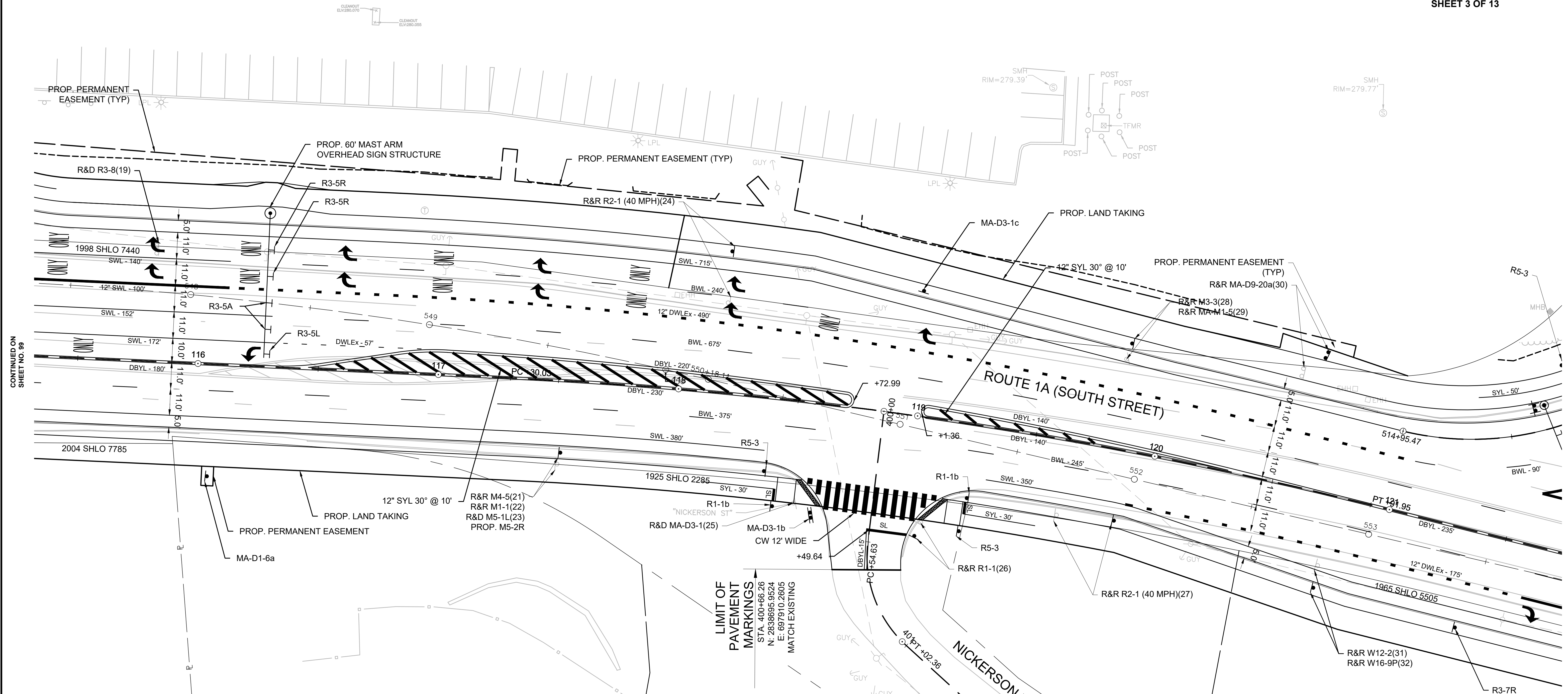
CONTINUED ON
SHEET NO. 100



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	100	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 3 OF 13

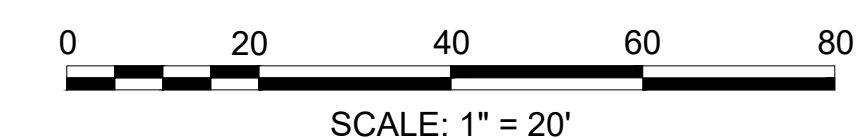


CONTINUED ON SHEET NO. 99

CONTINUED ON SHEET NO. 101

EXISTING SIGNS

	R&R M4-5(21)		NICKERSON ST		R&R M3-3 (28)	 R&R MA-D9-20a(30)		
	R&R M1-1(22)	R&R R2-1 (40MPH)(24)	R&D MA-D3-1(25)					
	R&D M5-1L(23)	R&R R2-1 (40MPH)(27)						
					R&R R1-1(26)			



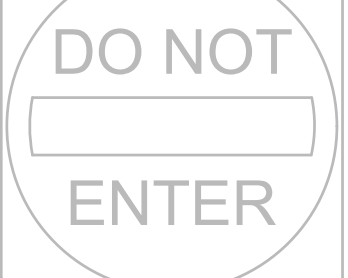



WRENTHAM, MA
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STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	101	258
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TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 4 OF 13

EXISTING SIGNS

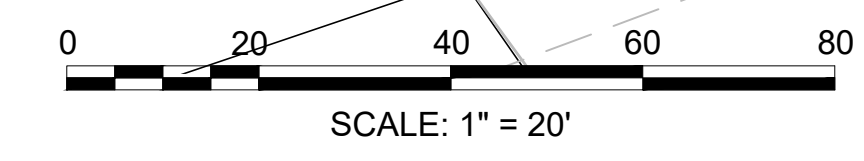
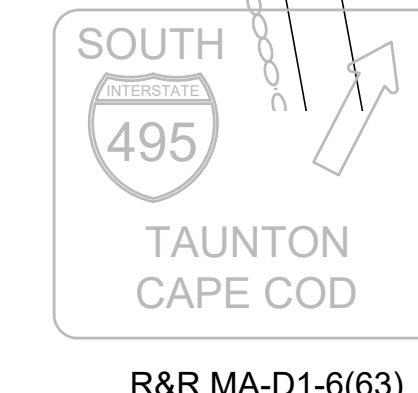
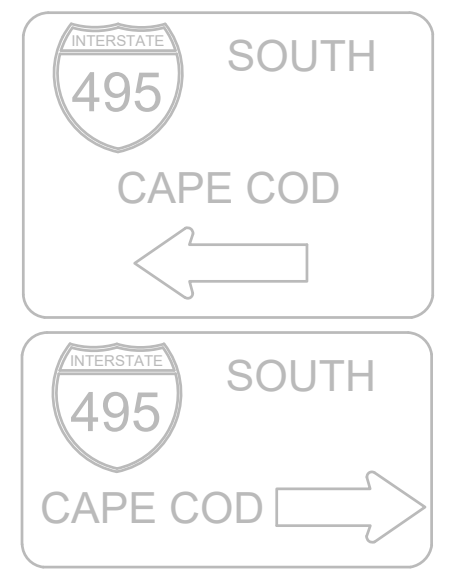
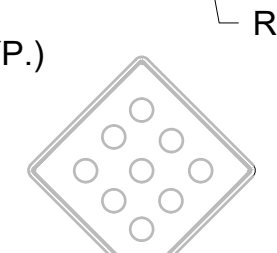
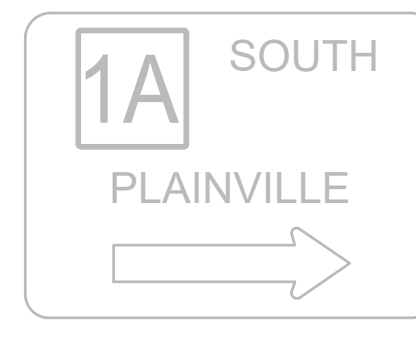
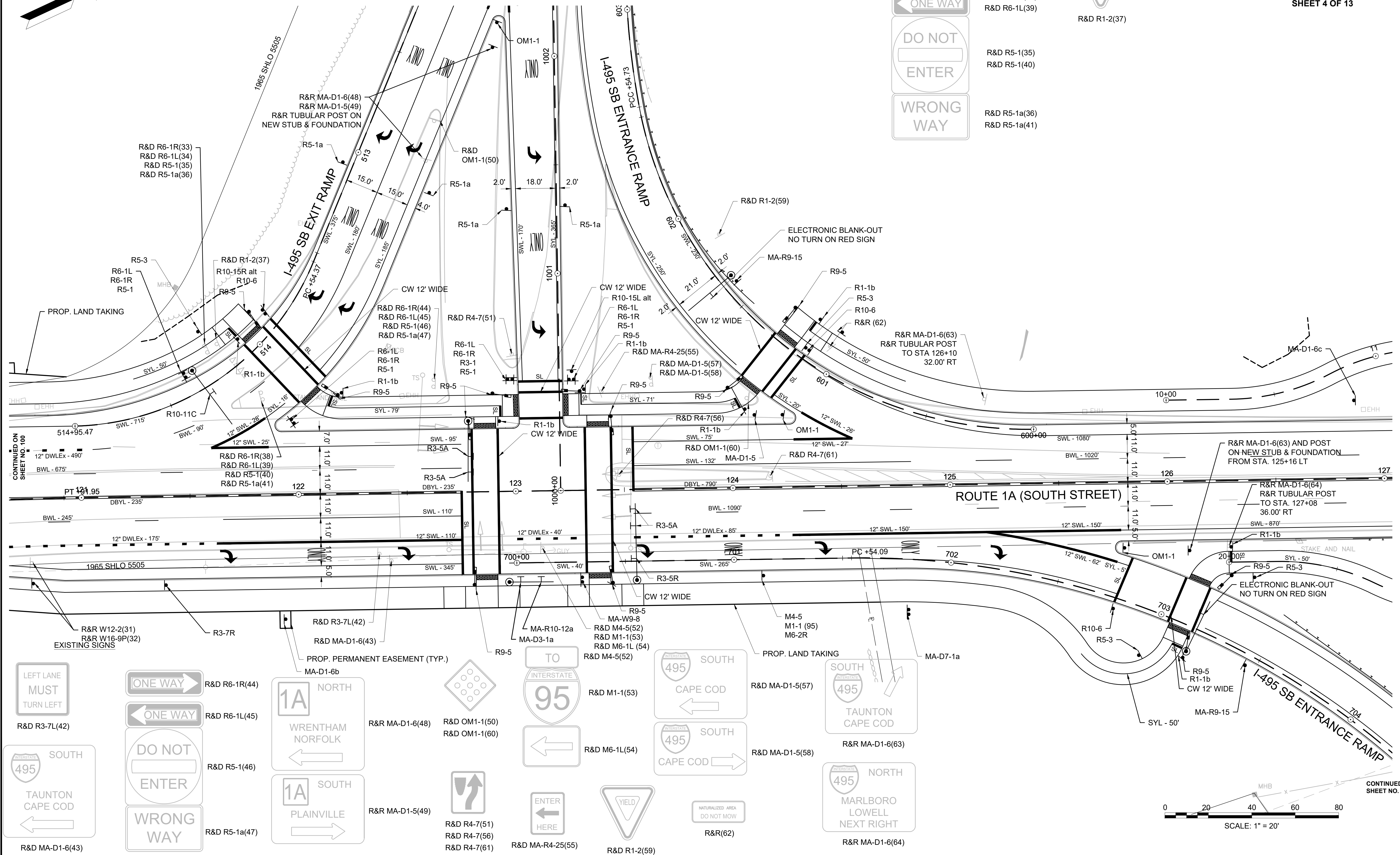
-  R&D R6-1R(33)
R&D R6-1R(38)
-  R&D R6-1L(34)
R&D R6-1L(39)
-  R&D R5-1(35)
R&D R5-1(40)
-  R&D R5-1a(36)
R&D R5-1a(41)



CONTINUED ON
SHEET NO. 109

CONTINUED ON
SHEET NO. 102

Plotted on 25-Jul-2024 2:39 PM 603739_HD94-10(SIGN & MARKING PLANS)DWG

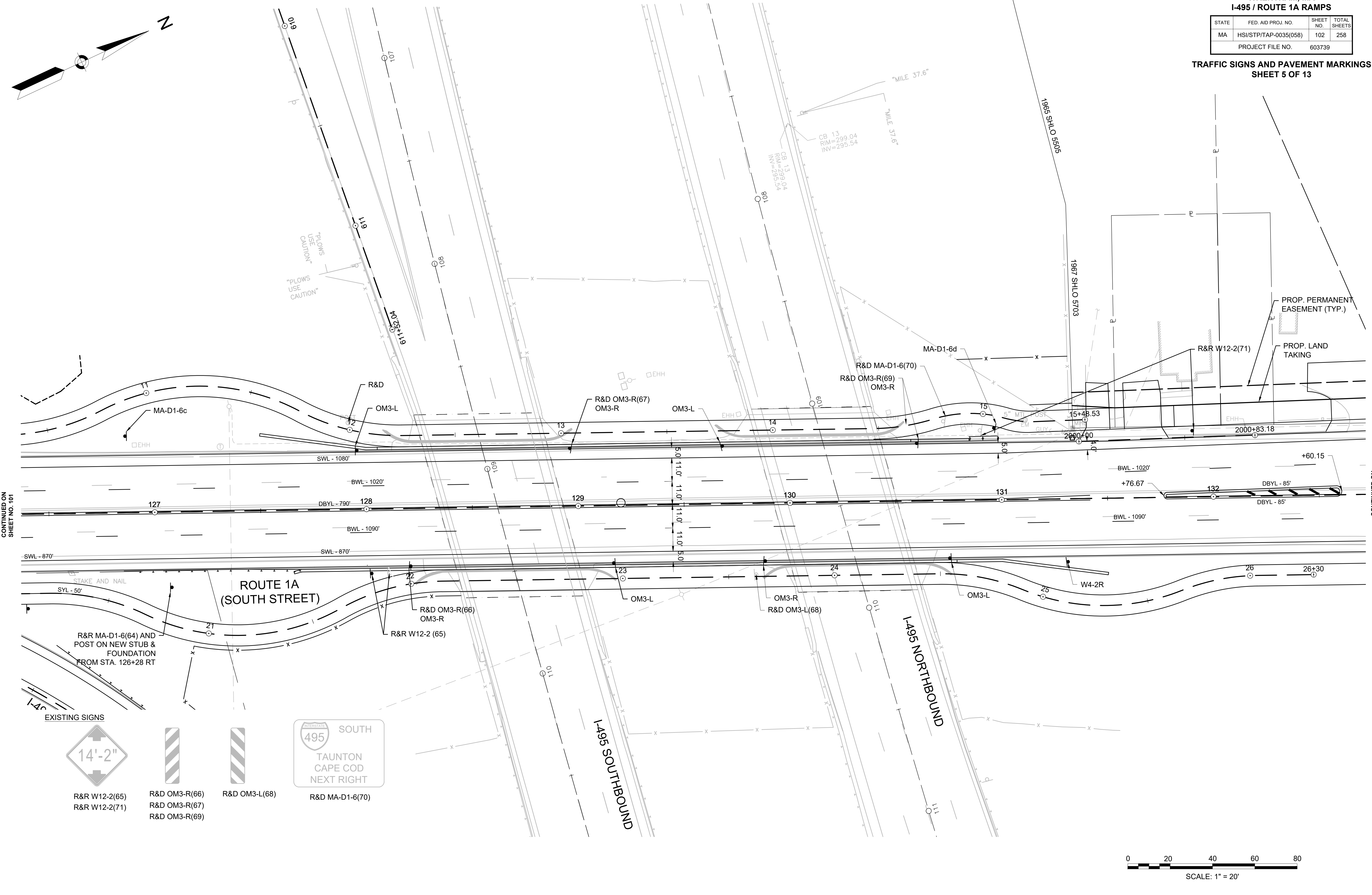


CONTINUED ON
SHEET NO. 105

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

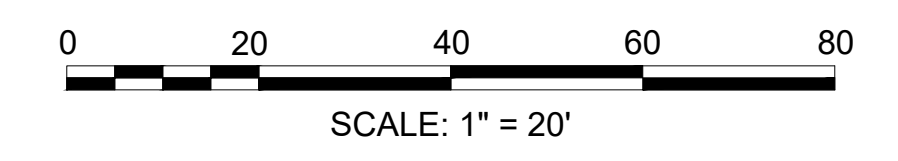
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	102	258
PROJECT FILE NO.		603739	

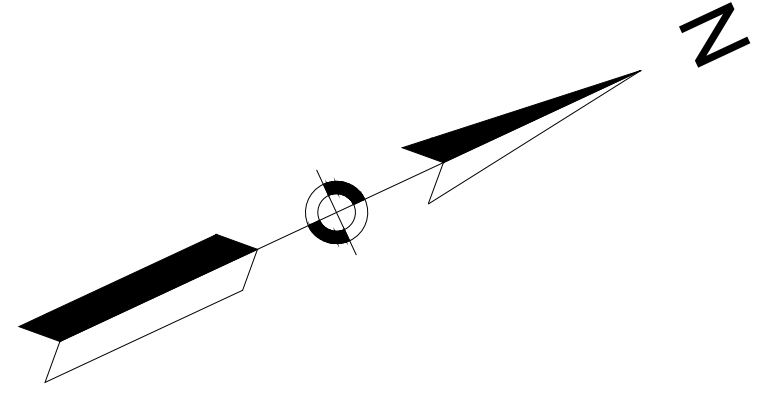
TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 5 OF 13



CONTINUED ON
SHEET NO. 101

CONTINUED ON
SHEET NO. 103

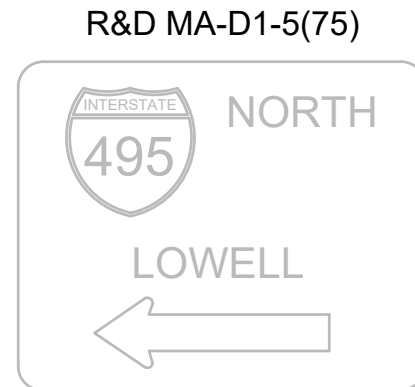




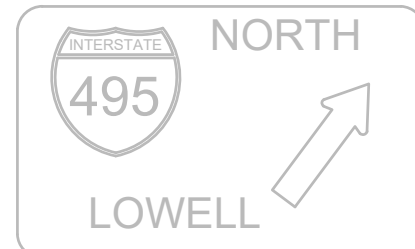
EXISTING SIGNS



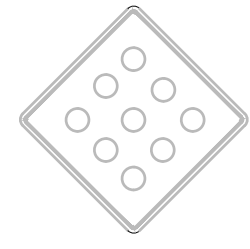
R&R MA-D1-6(72)



R&D MA-D1-5(75)



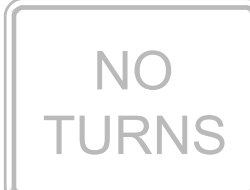
R&D MA-D1-5(74)



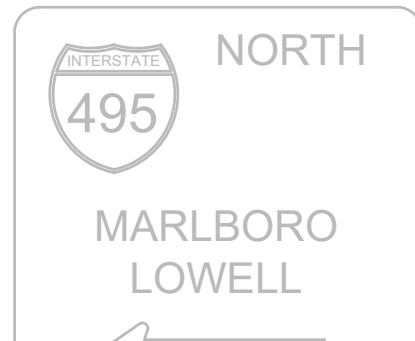
R&D OM1-1(73)
R&D OM1-1(81)



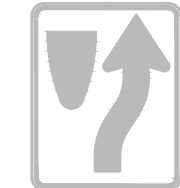
R&D MA-R4-25(76)



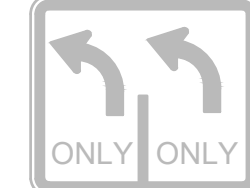
R&D R3-3(77)



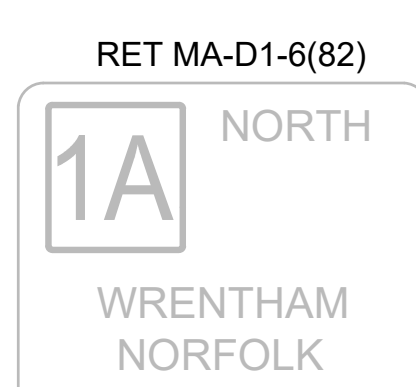
R&R MA-D1-6(78)



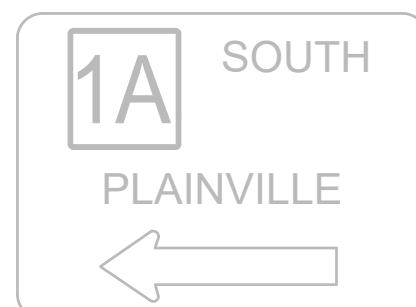
R&D R4-7(79)



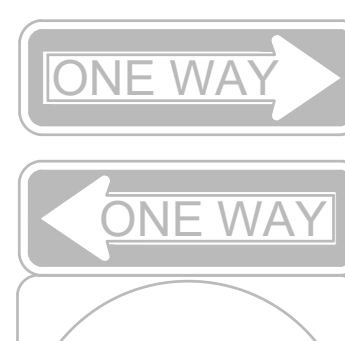
R&D R3-8(80)



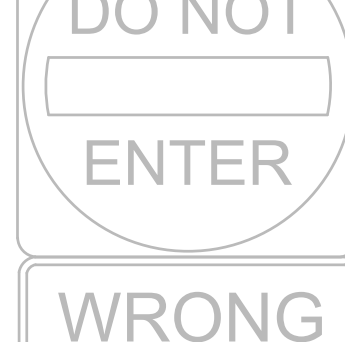
RET MA-D1-6(82)



RET MA-D1-6(83)



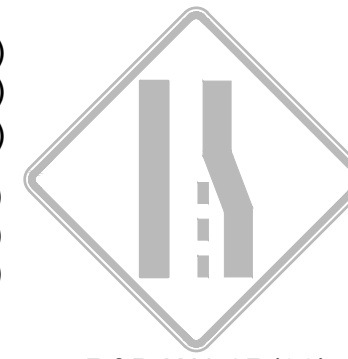
R&D R6-1R(84)
R&D R6-1R(88)
R&D R6-1R(92)



R&D R5-1(86)
R&D R5-1(90)
R&D R5-1(94)



R&D R5-1a(87)
R&D R5-1a(91)
R&D R5-1a(95)



R&D W4-2R(96)

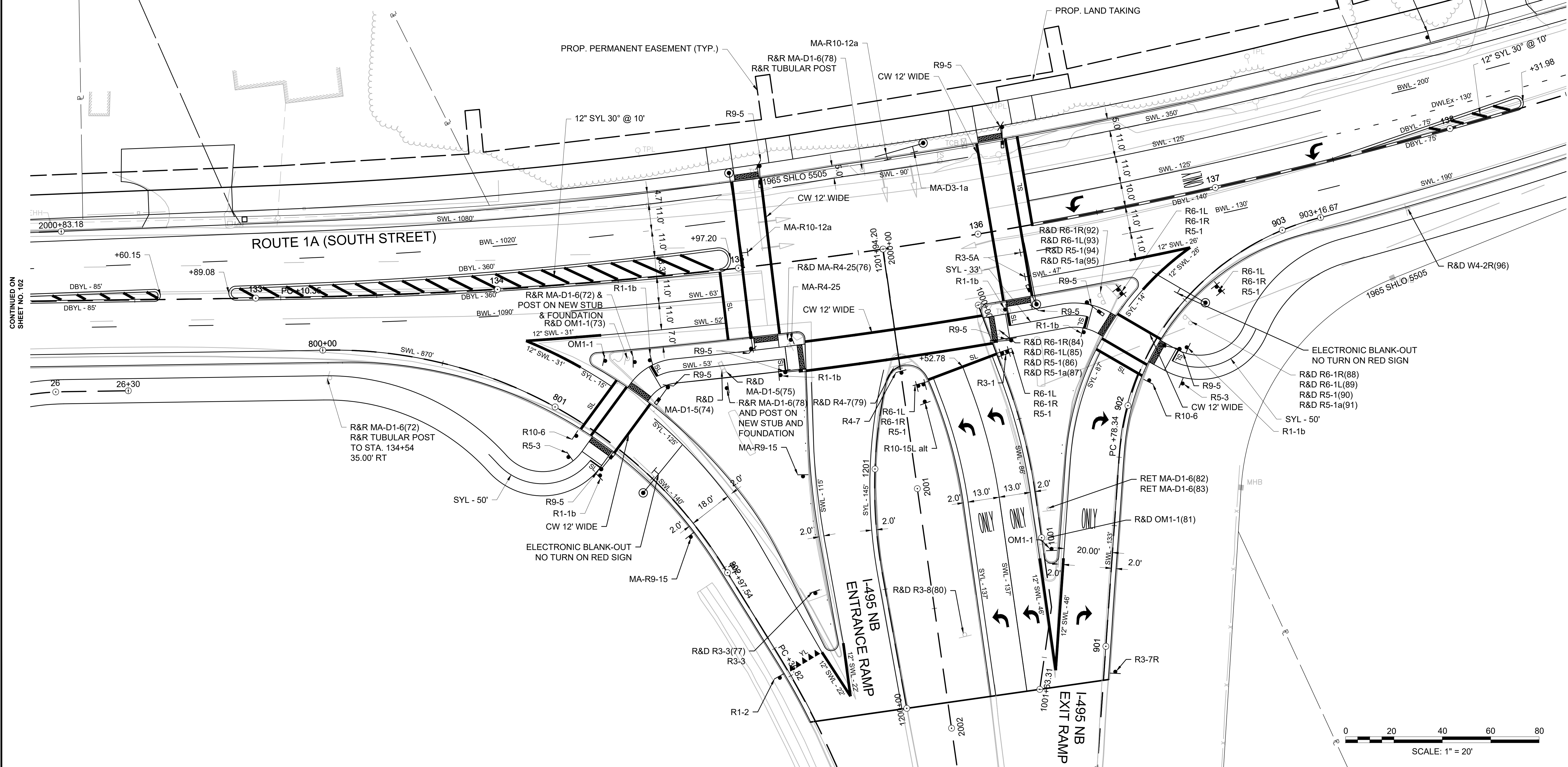


R&R (97)

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	103	258
PROJECT FILE NO.		603739	

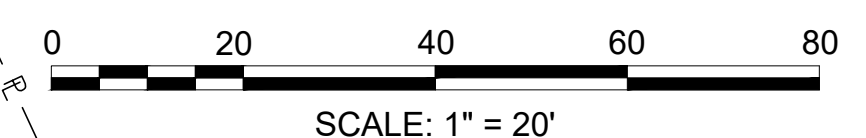
TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 6 OF 13



CONTINUED ON SHEET NO. 102

CONTINUED ON SHEET NO. 104

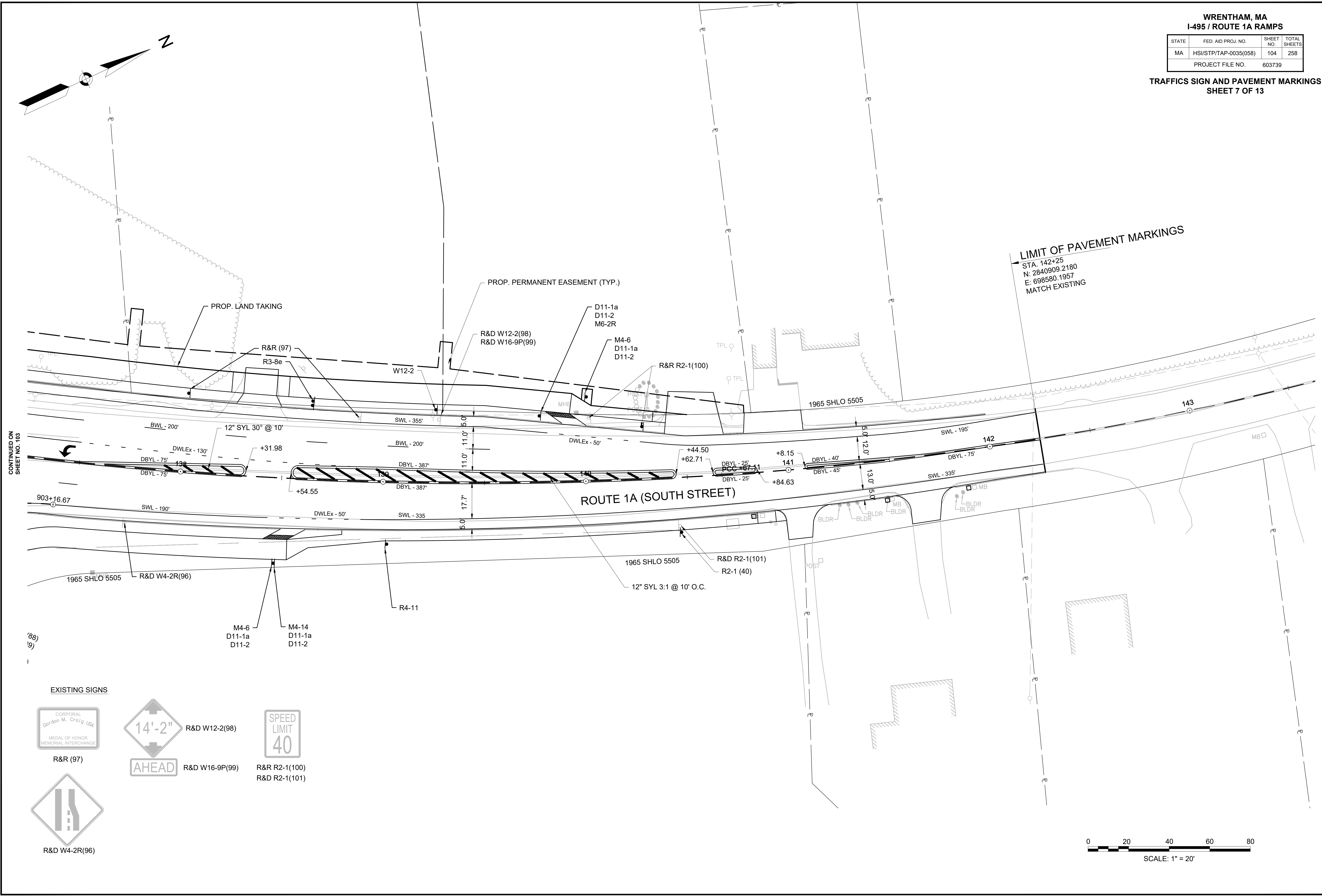
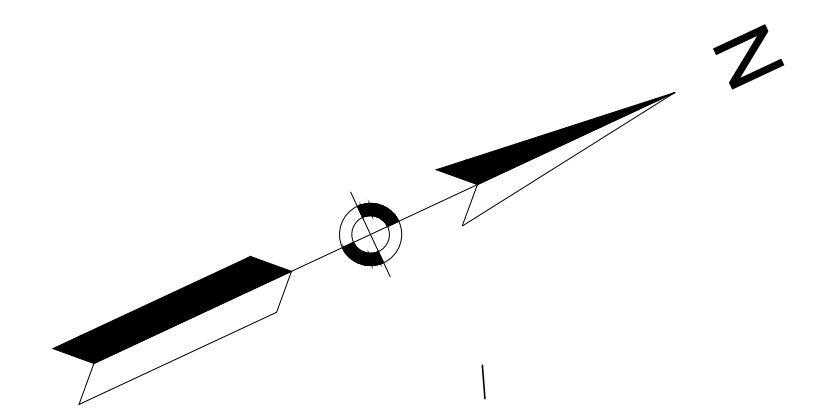
CONTINUED ON SHEET NO. 110



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	104	258
PROJECT FILE NO.		603739	

TRAFFICS SIGN AND PAVEMENT MARKINGS
SHEET 7 OF 13



LIMIT OF PAVEMENT MARKINGS
STA. 142+25
N: 2840909.2180
E: 698580.1957
MATCH EXISTING

CONTINUED ON
SHEET NO. 103

EXISTING SIGNS



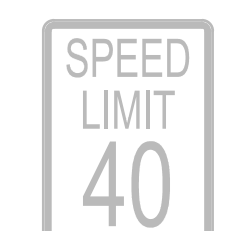
R&R (97)



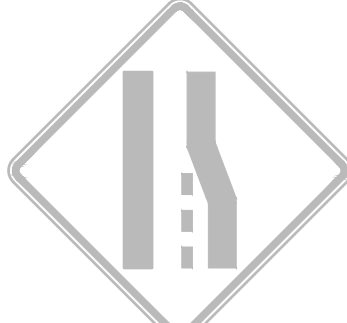
R&D W12-2(98)



R&D W16-9P(99)



R&R R2-1(100)
R&D R2-1(101)



R&D W4-2R(96)

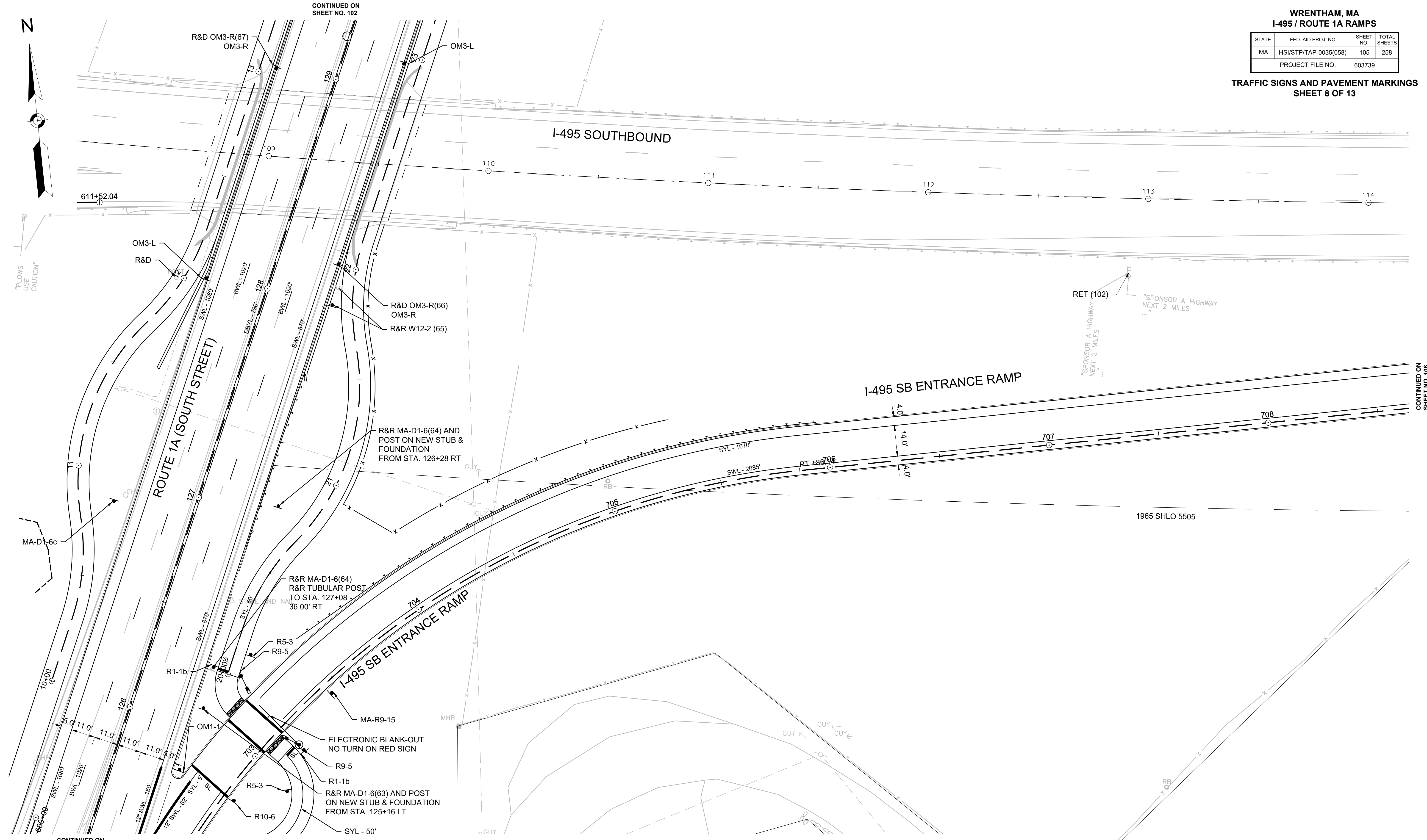
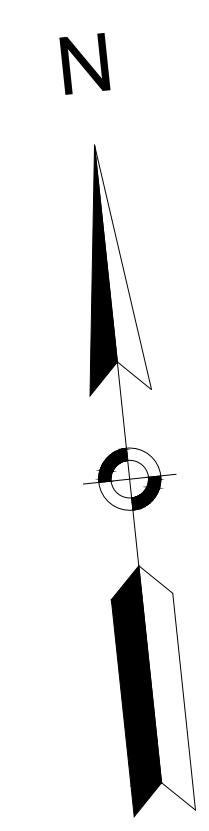


SCALE: 1" = 20'

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	105	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 8 OF 13



CONTINUED ON SHEET NO. 102

CONTINUED ON SHEET NO. 106

CONTINUED ON SHEET NO. 101

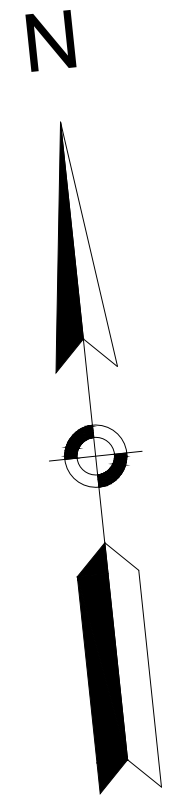
EXISTING SIGNS



RET (102)



SCALE: 1" = 20'

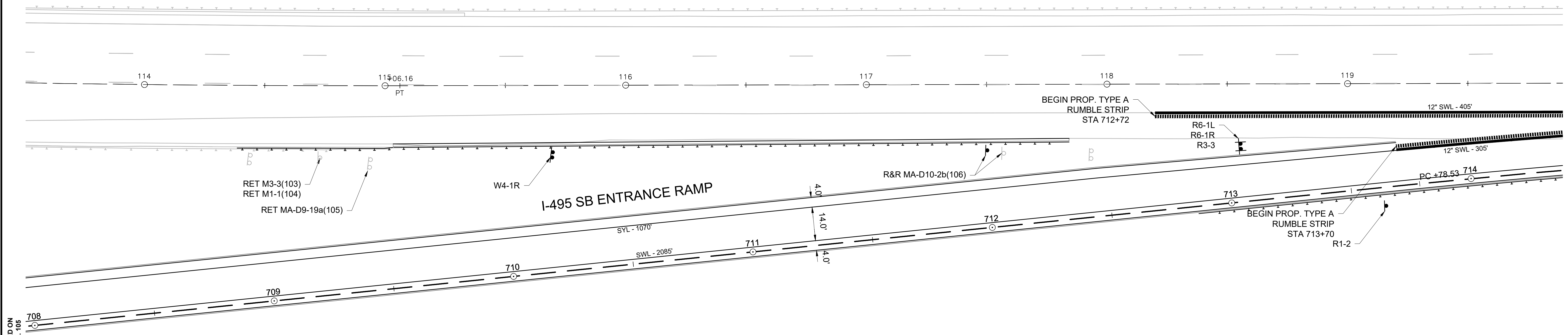


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	106	258
PROJECT FILE NO.		603739	

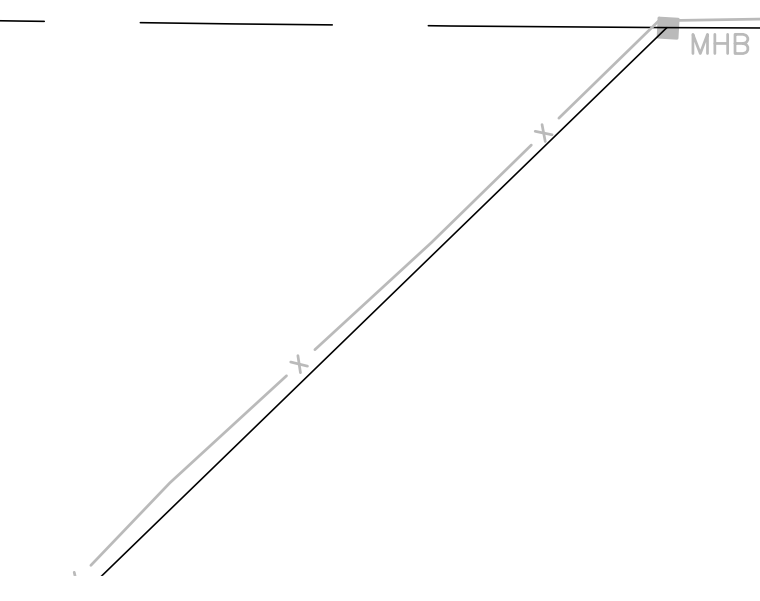
TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 9 OF 13

I-495 SOUTHBOUND



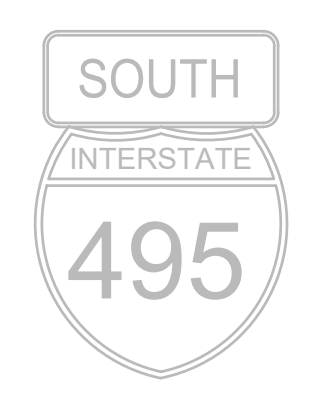
CONTINUED ON
SHEET NO. 105

CONTINUED ON
SHEET NO. 107



1965 SHLO 5505

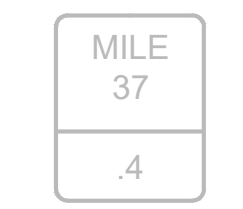
EXISTING SIGNS



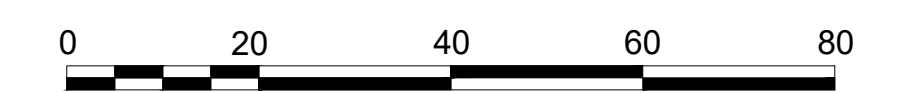
RET M3-3(103)
RET M1-1(104)



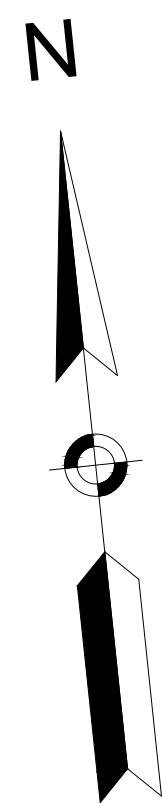
RET MA-D9-19a(105)



R&R MA-D10-2b(106)



SCALE: 1" = 20'

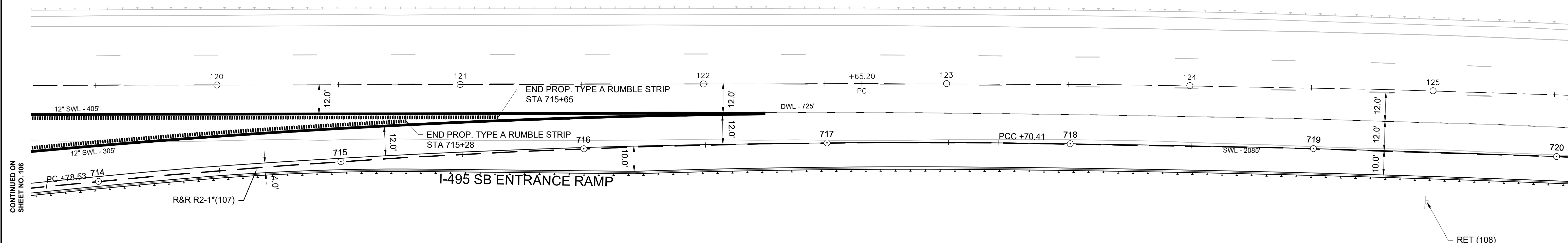


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	107	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 10 OF 13

I-495 SOUTHBOUND



CONTINUED ON
SHEET NO. 106

CONTINUED ON
SHEET NO. 108

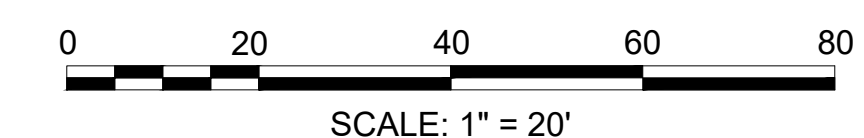
EXISTING SIGNS

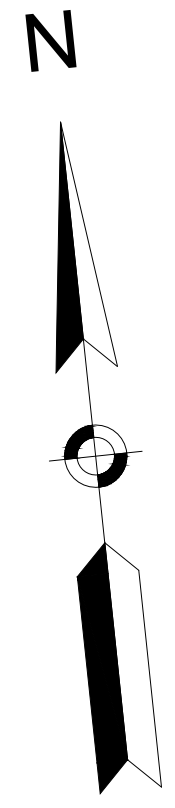


R&R R2-1(107)
* RESET TO I-495 SB
STA. 135+00 RT



RET (108)

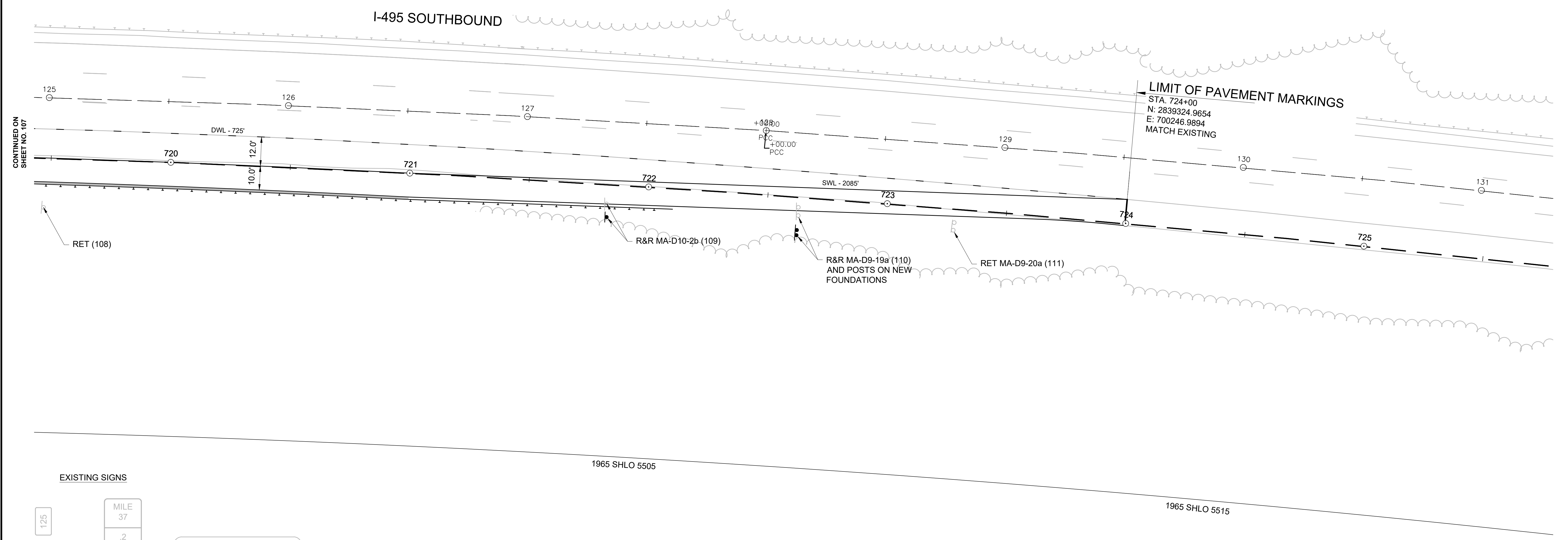




**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

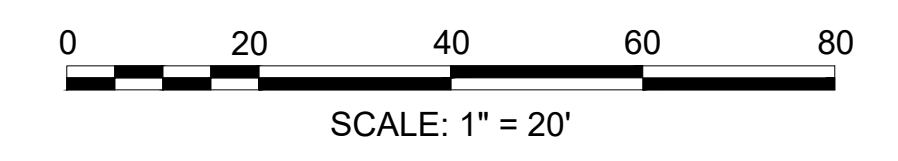
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	108	258
PROJECT FILE NO.		603739	

**TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 11 OF 13**



EXISTING SIGNS

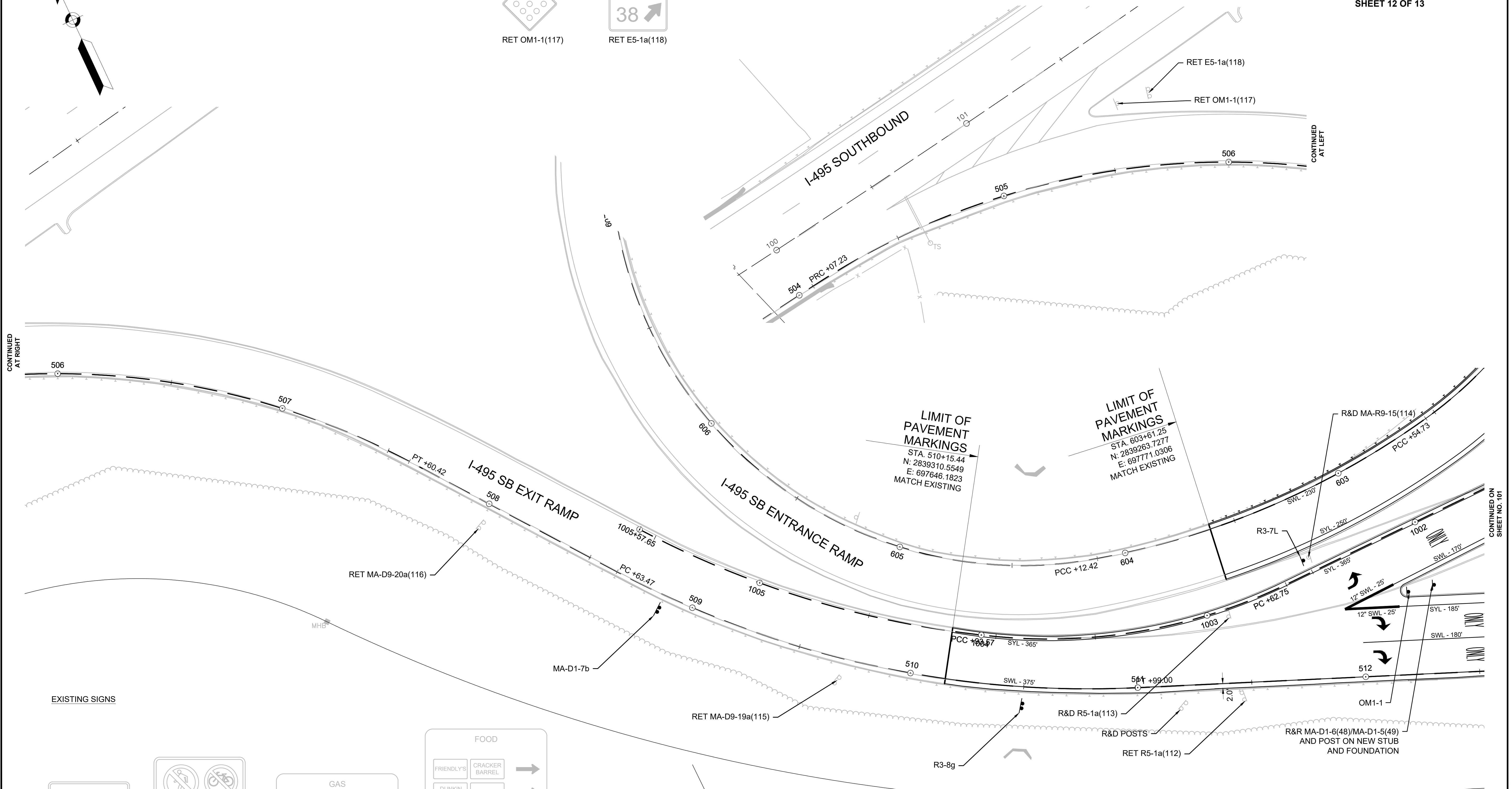
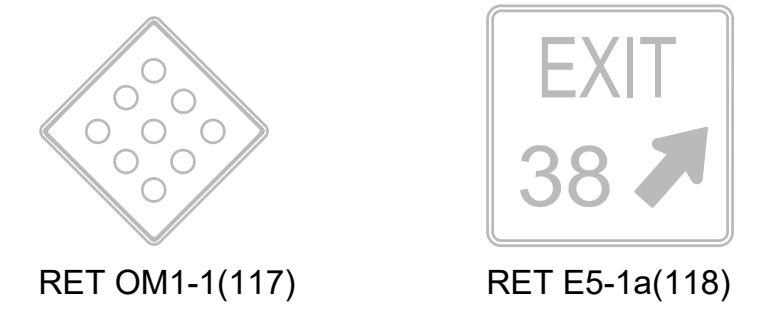
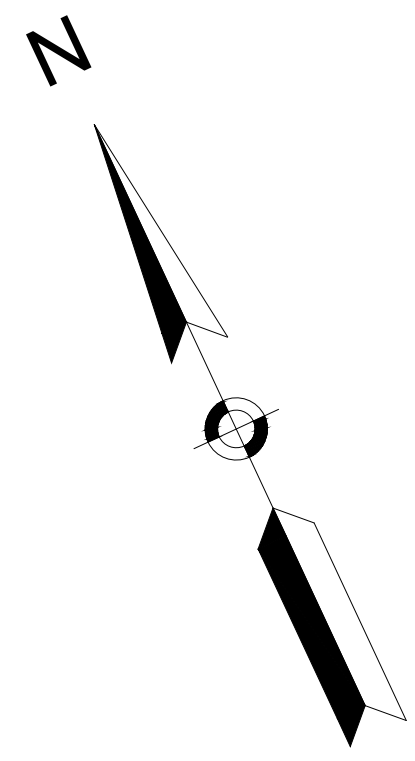
 RET (108)	 R&R MA-D10-2b(109)	 FOOD - EXIT 36B PANERA CHILI'S MCDONALD'S
 GAS - EXIT 36A INTERSTATE TRAVEL PLAZA GAS/DIESEL	 R&R MA-D9-19a(110)	 FOOD - EXIT 36A LUCIANO'S RESTAURANT RED ROOSTER BAR & GRILL EVVIVA TRATTORIA
	 RET MA-D9-20a(111)	



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	109	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 12 OF 13



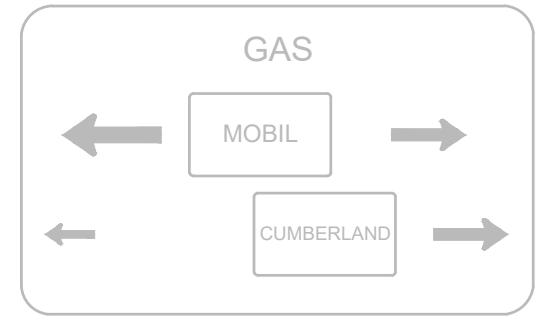
EXISTING SIGNS



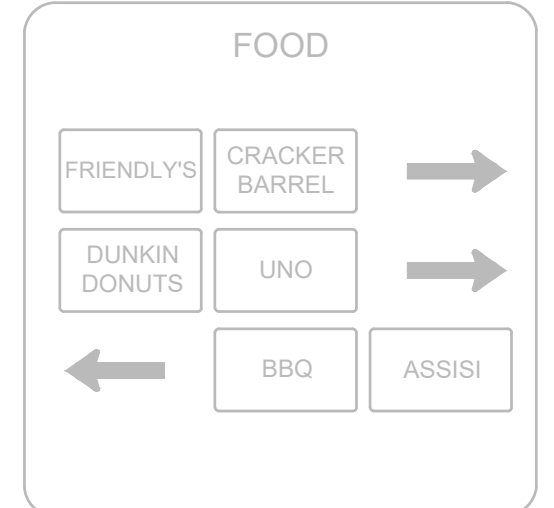
RET R5-1a(112)
R&D R5-1a(113)



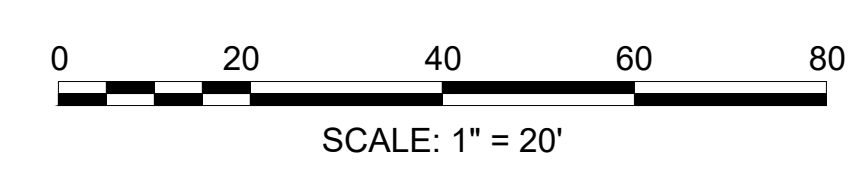
R&D MA-R9-15(114)



RET MA-D9-19a(115)



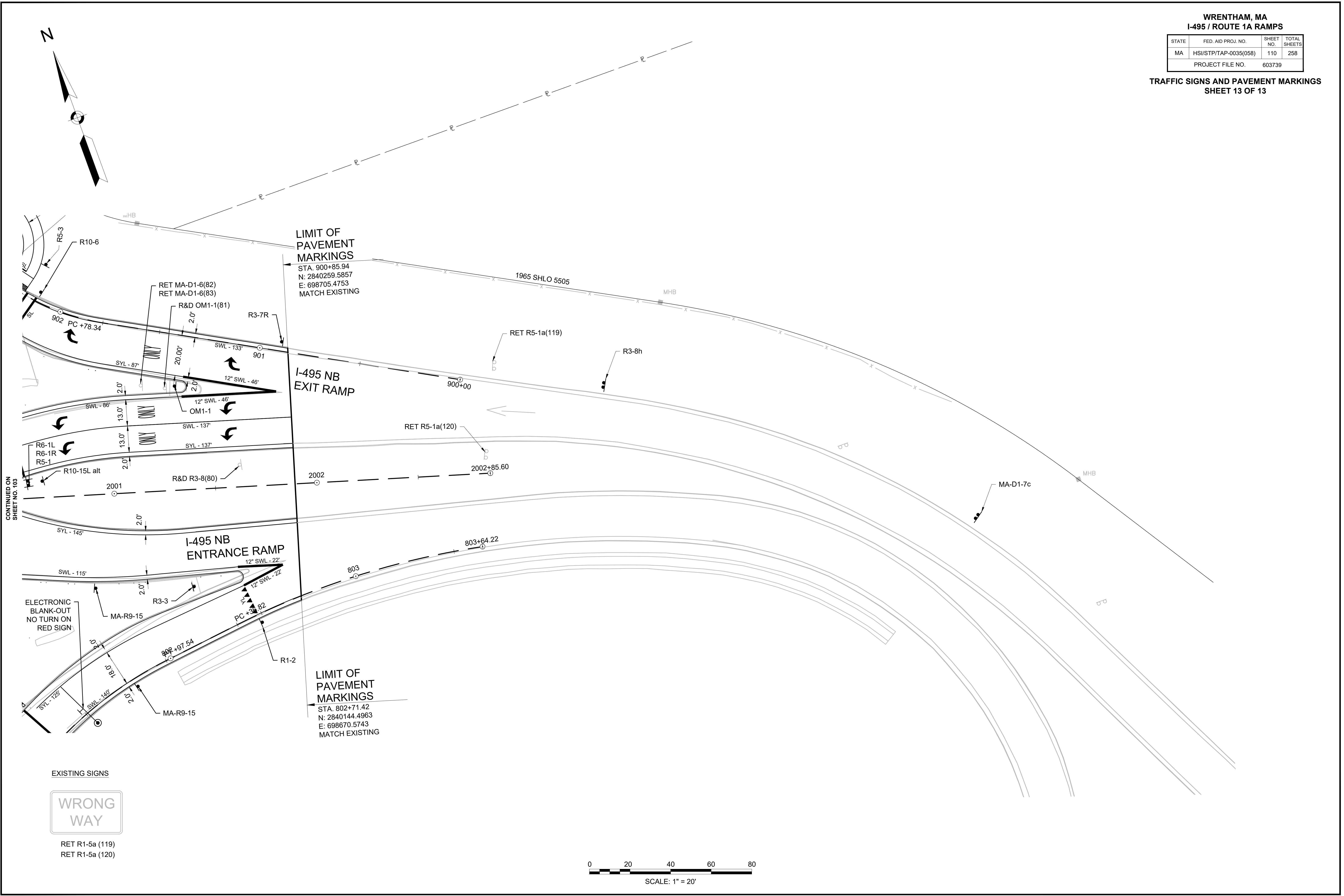
RET MA-D9-20a(116)



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	110	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNS AND PAVEMENT MARKINGS
SHEET 13 OF 13



603739_H094-110(SIGN & MARKING PLANS).DWG Plotted on 25-Jul-2024 2:40 PM

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
D11-1a	18	18		1	1	1	8	GREEN	WHITE	WHITE	P5 8 REQ'D	2.25	18.00
D11-2	18	18					8	GREEN	WHITE	WHITE	P5 0 REQ'D MOUNT 8 W/ D11-1a	2.25	18.00
M1-1 (95)	24	24					1	BLUE & RED	WHITE	WHITE	P5 0 REQ'D MOUNT 1 W/ M4-5	4.00	4.00
M4-5	24	12					1	BLUE	WHITE	WHITE	P5 1 REQ'D	2.00	2.00
M4-6	24	12					3	GREEN	WHITE	WHITE	P5 0 REQ'D MOUNT 3 W/ D11-1a	2.00	6.00
M4-14	24	12					2	GREEN	WHITE	WHITE	P5 0 REQ'D MOUNT 2 W/ D11-1a	2.00	4.00
M5-2R	21	15					1	BLUE	WHITE	WHITE	P5 0 REQ'D MOUNT 1 W/ M4-5	2.19	2.19
M6-2R_b	12	9					3	GREEN	WHITE	WHITE	P5 0 REQ'D MOUNT 3 W/ D11-1a	0.75	2.25
M6-2R	21	15					1	BLUE	WHITE	WHITE	P5 0 REQ'D MOUNT 1 W/ M4-5	2.19	2.19
M6-3	12	9					1	GREEN	WHITE	WHITE	P5 0 REQ'D MOUNT 1 W/ D11-1a	0.75	0.75
OM1-1	36	36					7	YELLOW	CLUSTER YELLOW	N/A	P5 7 REQ'D	9.00	63.00
OM3-L	12	36					4	YELLOW STRIPES	BLACK STRIPES	N/A	P5 4 REQ'D	3.00	12.00
OM3-R	12	36					4	YELLOW STRIPES	BLACK STRIPES	N/A	P5 4 REQ'D	3.00	12.00
R1-1b	18	18					22	RED	WHITE	WHITE	P5 22 REQ'D	2.25	49.50
R1-2	36X36X36						2	WHITE	RED	RED	P5 2 REQ'D	3.90	7.80
R2-1 (40 MPH)	24	30					1	WHITE	BLACK	BLACK	P5 1 REQ'D	5.00	5.00
R3-1	36	36					2	WHITE	RED/BLACK	BLACK	P5 0 REQ'D MOUNT 2 W/ R6-1L	9.00	18.00
R3-3	36	36					2	WHITE	BLACK	BLACK	P5 1 REQ'D MOUNT 1 W/ R6-1L	9.00	18.00
R3-5A	30	36					10	WHITE	BLACK	BLACK	P5 0 REQ'D MOUNT 10 ON MAST ARM	7.50	75.00
R3-5L	30	36					1	WHITE	BLACK	BLACK	P5 0 REQ'D MOUNT 1 ON MAST ARM	7.50	7.50

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	111	258
PROJECT FILE NO.		603739	

TRAFFIC SIGN SUMMARY (CONTINUED)

TRAFFIC SIGN SUMMARY
SHEET 1 OF 2

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	BACK-GROUND	LEGEND	BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.							
R3-5R	30	36		1	1	1	3	WHITE	BLACK	BLACK	P5 0 REQ'D MOUNT 3 ON MAST ARM	7.50	22.50
R3-7L	36	36					3	WHITE	BLACK	BLACK	P5 3 REQ'D	9.00	27.00
R3-7R	36	36					3	WHITE	BLACK	BLACK	P5 3 REQ'D	9.00	27.00
R3-8e	48	30					1	WHITE	BLACK	BLACK	P5 2 REQ'D	10.00	10.00
R3-8f	30	30					1	WHITE	BLACK	BLACK	P5 1 REQ'D	6.25	6.25
R3-8g	48	30					1	WHITE	BLACK	BLACK	P5 2 REQ'D	10.00	10.00
R3-8h	48	30					1	WHITE	BLACK	BLACK	P5 2 REQ'D	10.00	10.00
R4-7	24	30					5	WHITE	BLACK	BLACK	P5 5 REQ'D	5.00	25.00
R4-11	30	30					2	WHITE	BLACK	BLACK	P5 2 REQ'D	6.25	12.50
R5-1	36	36					8	WHITE	RED/WHITE	N/A	P5 0 REQ'D MOUNT 8 W/ R6-1L	9.00	72.00
R5-1a	36	24					4	RED	WHITE	WHITE	P5 4 REQ'D	6.00	24.00
R5-3	24	24					14	WHITE	BLACK	BLACK	P5 14 REQ'D	4.00	56.00
R6-1L	54	18					9	BLACK	WHITE/BLACK	WHITE	P5 18 REQ'D	6.75	60.75
R6-1R	54	18					9	BLACK	WHITE/BLACK	WHITE	P5 0 REQ'D MOUNT 9 W/ R6-1L	6.75	60.75
R9-5	12	18					40	WHITE	BLACK	BLACK	MOUNT 40 ON TRF SIGNAL POSTS	1.50	60.00
R10-6	24	36					7	WHITE	BLACK	BLACK	P5 4 REQ'D & MOUNT 3 W/ R10-15R alt	6.00	42.00
R10-11c	30	42					2	WHITE	BLACK	BLACK	P5 0 REQ'D & MOUNT 2 ON MAST ARM	8.75	17.50

TRAFFIC SIGN SUMMARY LEGEND

- ① SEE THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" BY FEDERAL HIGHWAY ADMINISTRATION (LATEST EDITIONS) FOR TEXT DIMENSIONS AND COLORS. SEE ALSO THE "MASSACHUSETTS MUTCD AMENDMENTS".
- ② SEE THE MASSDOT "STANDARD SIGNS" LATEST EDITION.

SIGN SUMMARY NOTES:

1. NUMERICAL LIMITS AND JUSTIFICATION FOR SPEED & ADVISORY EXIT SPEED SIGNS SHALL BE OBTAINED FROM THE SPEED ZONING UNIT OF THE TRAFFIC ENGINEERING SECTION, MASSDOT, BEFORE FABRICATION AND/OR ERECTION.
2. SEE THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND REVISIONS, MASSDOT MASSACHUSETTS AMENDMENTS TO THE 2009 MUTCD, 1990 MASSDOT HIGHWAY DIVISION STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, 2012 SUPPLEMENT TO THE 2004 STANDARD HIGHWAY SIGNS, AND MASSDOT STANDARD SIGN BOOK.
3. SIGNS LOCATED IN OR ADJACENT TO THE SIDEWALK SHALL BE MOUNTED SO THAT THE BOTTOM OF THE SIGN IS NO LESS THAN 7'-0" ABOVE THE SIDEWALK FINISHED GRADE.
4. RETROREFLECTIVE SHEETING FOR ALL GUIDE AND TRAFFIC SIGNS SHALL CONFORM TO MASSDOT STANDARD SPECIFICATION SECTION M9.30.0

TRAFFIC SIGN SUMMARY (CONTINUED)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R10-15L alt	30	36		1	1	1	2	FL. YELLOW/GREEN / WHITE	BLACK/ RED	BLACK	P5 2 REQ'D	7.50	15.00
R10-15R alt	30	36					3	FL. YELLOW/GREEN / WHITE	BLACK/ RED	BLACK	P5 6 REQ'D	7.50	22.50
W4-1R	48	48					1	YELLOW	BLACK	BLACK	P5 2 REQ'D	16.00	16.00
W4-2R	36	36					1	YELLOW	BLACK	BLACK	P5 1 REQ'D	9.00	9.00
*W12-2 (14' 2")	36	36					1	YELLOW	BLACK	BLACK	P5 1 REQ'D	9.00	9.00
MA-D1-5	54	54		2	2	2	1	GREEN	WHITE	WHITE	1 ⁽¹⁾	20.25	20.25 ⁽⁴⁾
MA-D1-6a	60	66					1	GREEN	WHITE	WHITE	1 ⁽¹⁾	27.50	27.50 ⁽⁴⁾
MA-D1-6b	60	66					1	GREEN	WHITE	WHITE	1 ⁽¹⁾	27.50	27.50 ⁽⁴⁾
MA-D1-6c	66	54					1	GREEN	WHITE	WHITE	1 ⁽¹⁾	24.75	24.75 ⁽⁴⁾
MA-D1-6d	60	66					1	GREEN	WHITE	WHITE	1 ⁽¹⁾	27.50	27.50 ⁽⁴⁾
MA-D1-7a	66	114					1	GREEN	WHITE	WHITE	1 ⁽²⁾	52.25	52.25 ⁽³⁾
MA-D1-7b	66	108					1	GREEN	WHITE	WHITE	1 ⁽²⁾	49.50	49.50 ⁽³⁾
MA-D1-7c	66	108					1	GREEN	WHITE	WHITE	1 ⁽²⁾	49.50	49.50 ⁽³⁾
MA-D3-1a	54	18					5	GREEN	WHITE	WHITE	P5 0 REQ'D 5 MOUNTED ON MAST ARM	6.75	33.75 ⁽⁵⁾
MA-D3-1b	54	12					2	GREEN	WHITE	WHITE	P5 2 REQ'D	4.50	9.00 ⁽⁵⁾
MA-D3-1c	42	12					1	GREEN	WHITE	WHITE	P5 1 REQ'D	3.50	3.50 ⁽⁵⁾

TRAFFIC SIGN SUMMARY LEGEND

- ① SEE THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND "STANDARD HIGHWAY SIGNS" BY FEDERAL HIGHWAY ADMINISTRATION (LATEST EDITIONS) FOR TEXT DIMENSIONS AND COLORS. SEE ALSO THE "MASSACHUSETTS MUTCD AMENDMENTS".
- ② SEE THE MASSDOT "STANDARD SIGNS" LATEST EDITION.

* CONFIRM VERTICAL CLEARANCE AFTER PAVING COMPLETE.

SIGN SUMMARY NOTES:

1. NUMERICAL LIMITS AND JUSTIFICATION FOR SPEED & ADVISORY EXIT SPEED SIGNS SHALL BE OBTAINED FROM THE SPEED ZONING UNIT OF THE TRAFFIC ENGINEERING SECTION, MASSDOT, BEFORE FABRICATION AND/OR ERECTION.
2. SEE THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND REVISIONS, MASSDOT MASSACHUSETTS AMENDMENTS TO THE 2009 MUTCD, 1990 MASSDOT HIGHWAY DIVISION STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, 2012 SUPPLEMENT TO THE 2004 STANDARD HIGHWAY SIGNS, AND MASSDOT STANDARD SIGN BOOK.
3. SIGNS LOCATED IN OR ADJACENT TO THE SIDEWALK SHALL BE MOUNTED SO THAT THE BOTTOM OF THE SIGN IS NO LESS THAN 7'-0" ABOVE THE SIDEWALK FINISHED GRADE.
4. RETROREFLECTIVE SHEETING FOR ALL GUIDE AND TRAFFIC SIGNS SHALL CONFORM TO MASSDOT STANDARD SPECIFICATION SECTION M9.30.0.
5. POSTS UNDER (1) TO BE PAID FOR UNDER ITEM 841.11
6. POSTS UNDER (2) TO BE PAID FOR UNDER ITEM 841.81
7. SIGNS UNDER (3) TO BE PAID FOR UNDER ITEM 829.01
8. SIGNS UNDER (4) TO BE PAID FOR UNDER ITEM 831.11
9. SIGNS UNDER (5) TO BE PAID FOR UNDER ITEM 874.

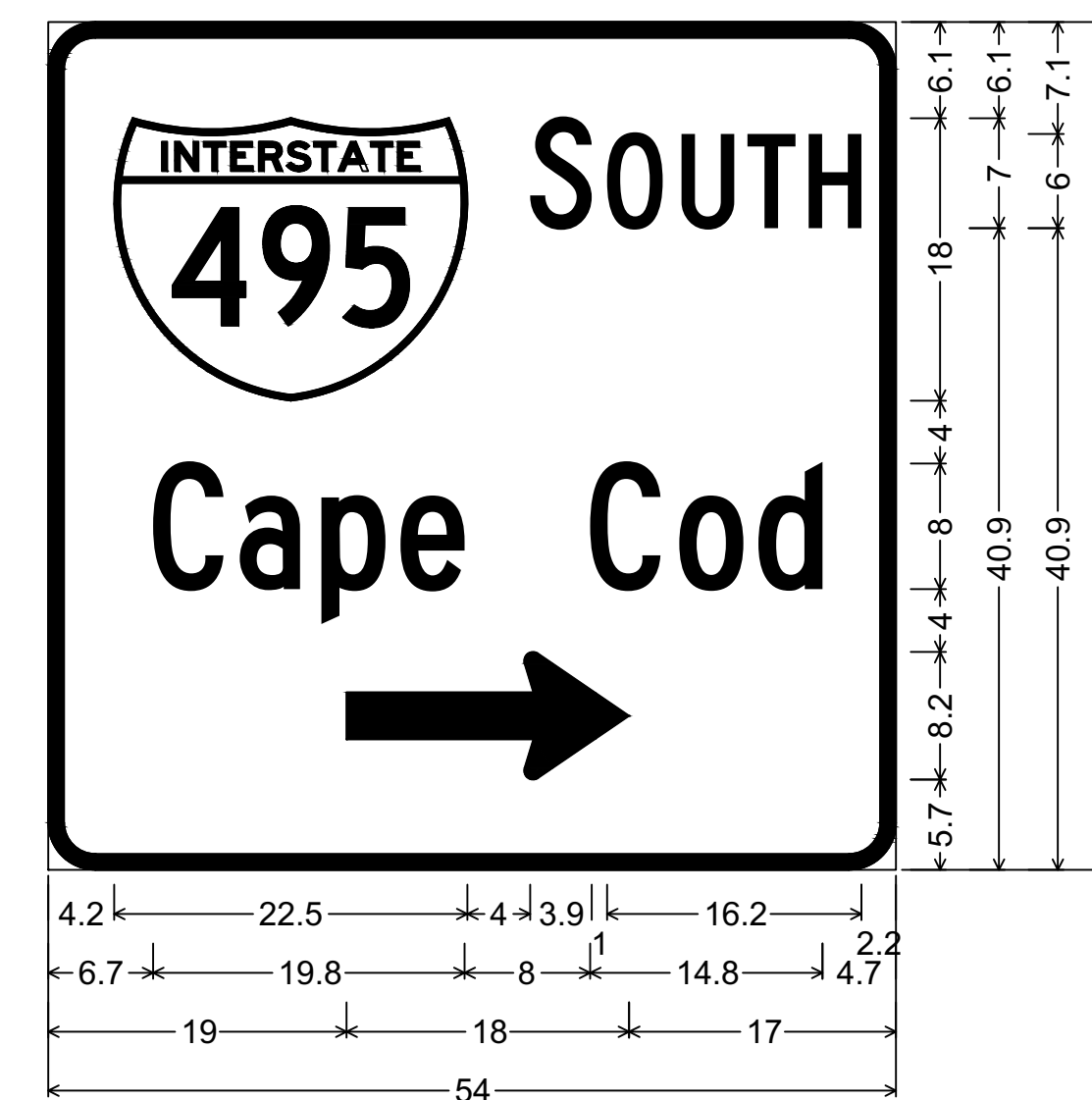
**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	112	258
PROJECT FILE NO.		603739	

TRAFFIC SIGN SUMMARY (CONTINUED)

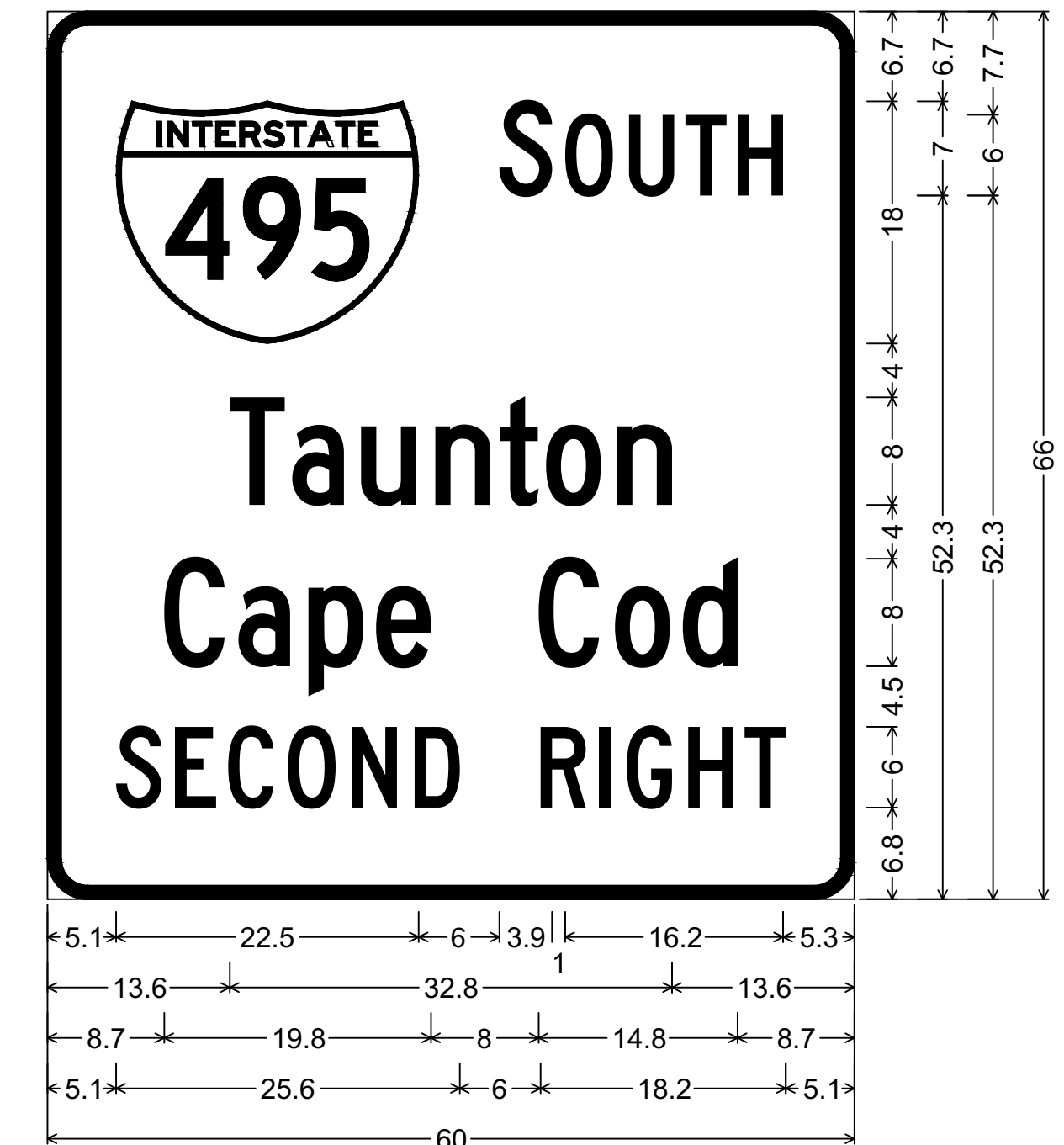
**TRAFFIC SIGN SUMMARY
SHEET 2 OF 2**

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
MA-R4-25	24	30		2	2	2	1	WHITE	BLACK	BLACK	P5 1 REQ'D	5.00	5.00
MA-R9-15	30	30					4	WHITE	BLACK/ RED	BLACK	P5 4 REQ'D	6.25	25.00
MA-R10-12a	30	36					6	WHITE	BLACK/ YELLOW	BLACK	MOUNT 6 ON MAST ARMS	7.50	45.00
MA-W9-8	36	48					1	YELLOW	BLACK	BLACK	P5 2 REQ'D	12.00	12.00



D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Cape Cod", C 2K;
Standard Arrow Custom 18.0" X 8.1" 0";

SIGN MA-D1-5
NOT TO SCALE



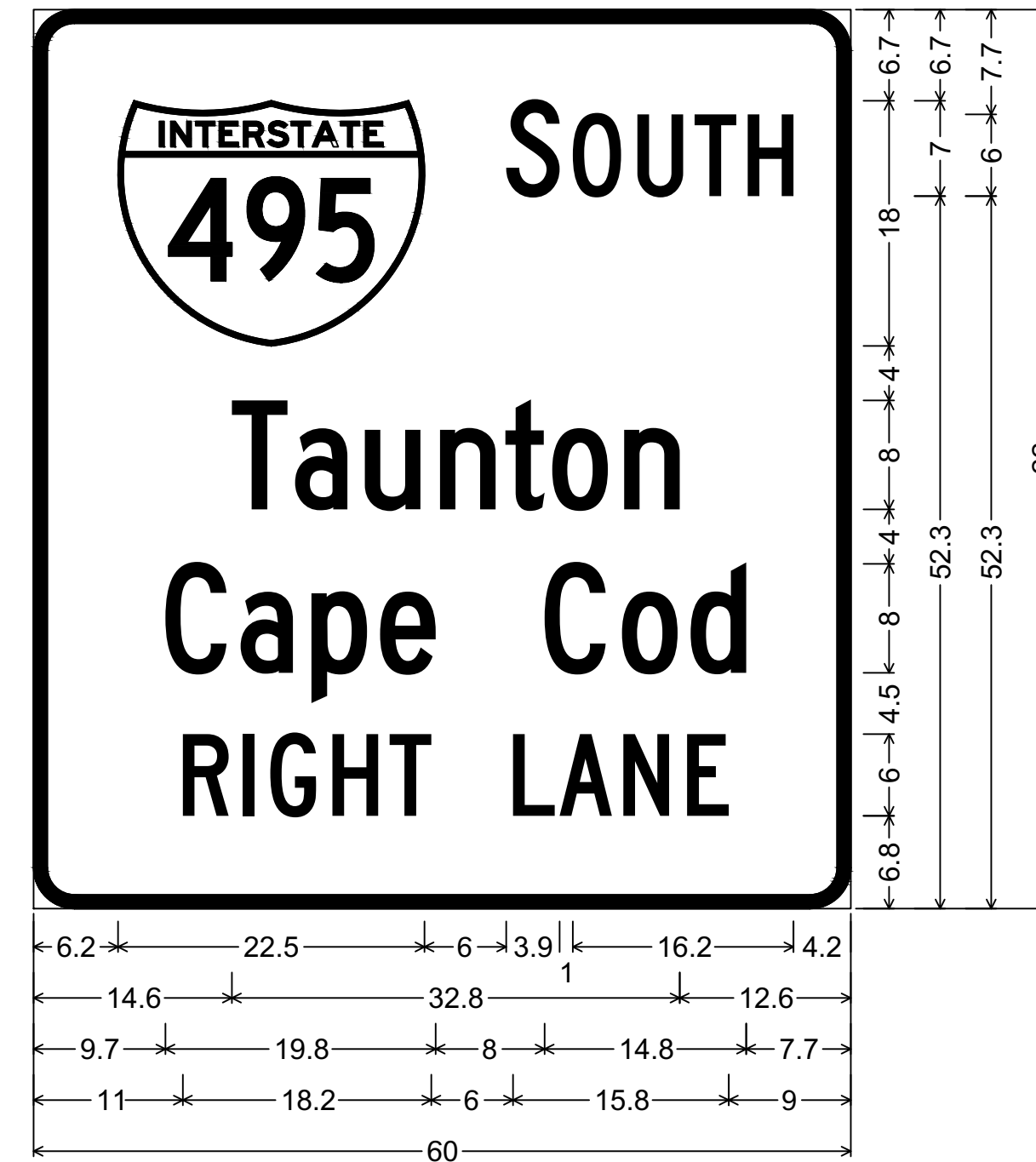
D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Taunton", C 2K; "Cape Cod", C 2K;
"SECOND RIGHT", C 2K;

SIGN MA-D1-6a
NOT TO SCALE

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

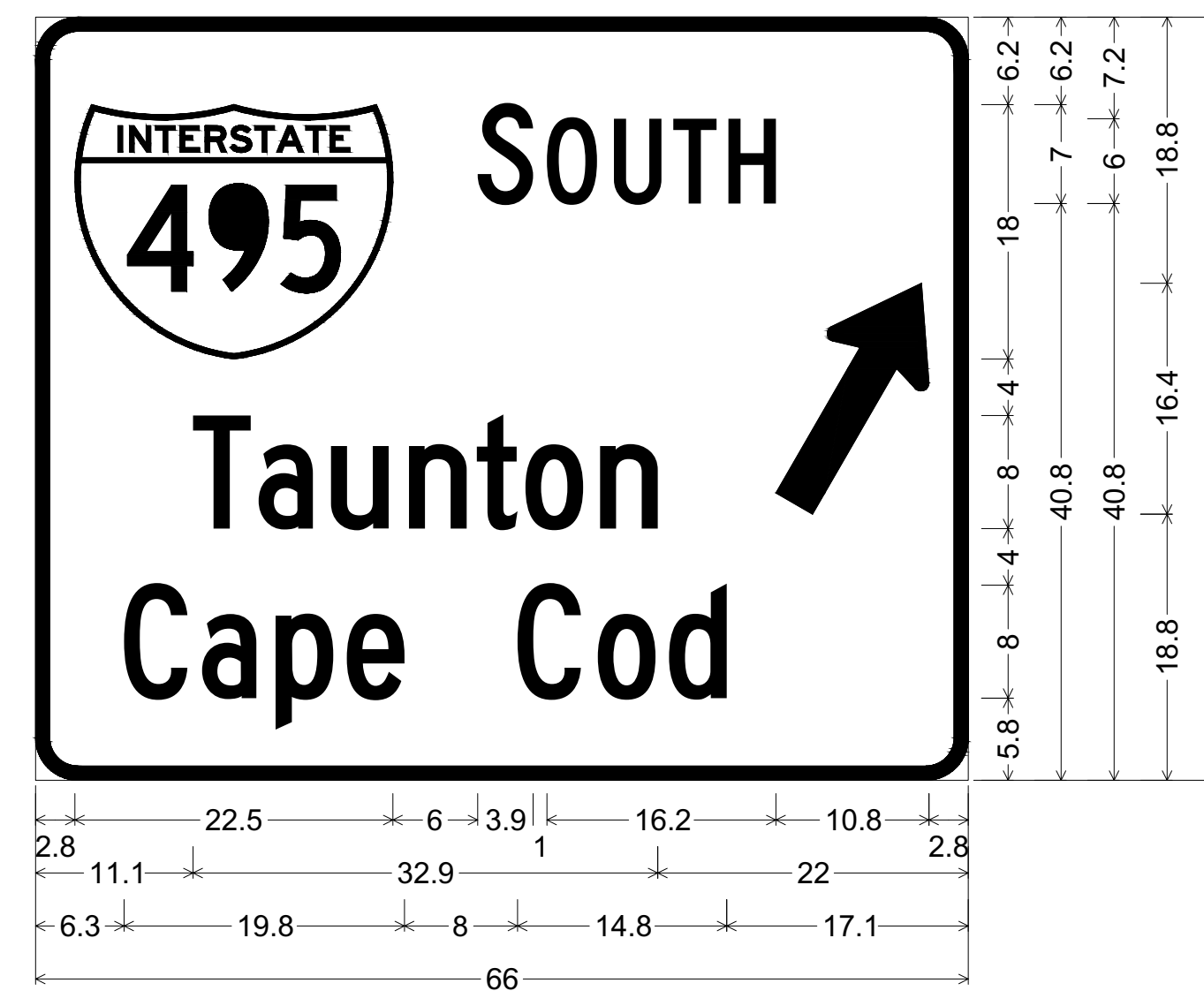
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	113	258
PROJECT FILE NO.		603739	

TRAFFIC SIGN DETAILS
SHEET 1 OF 2



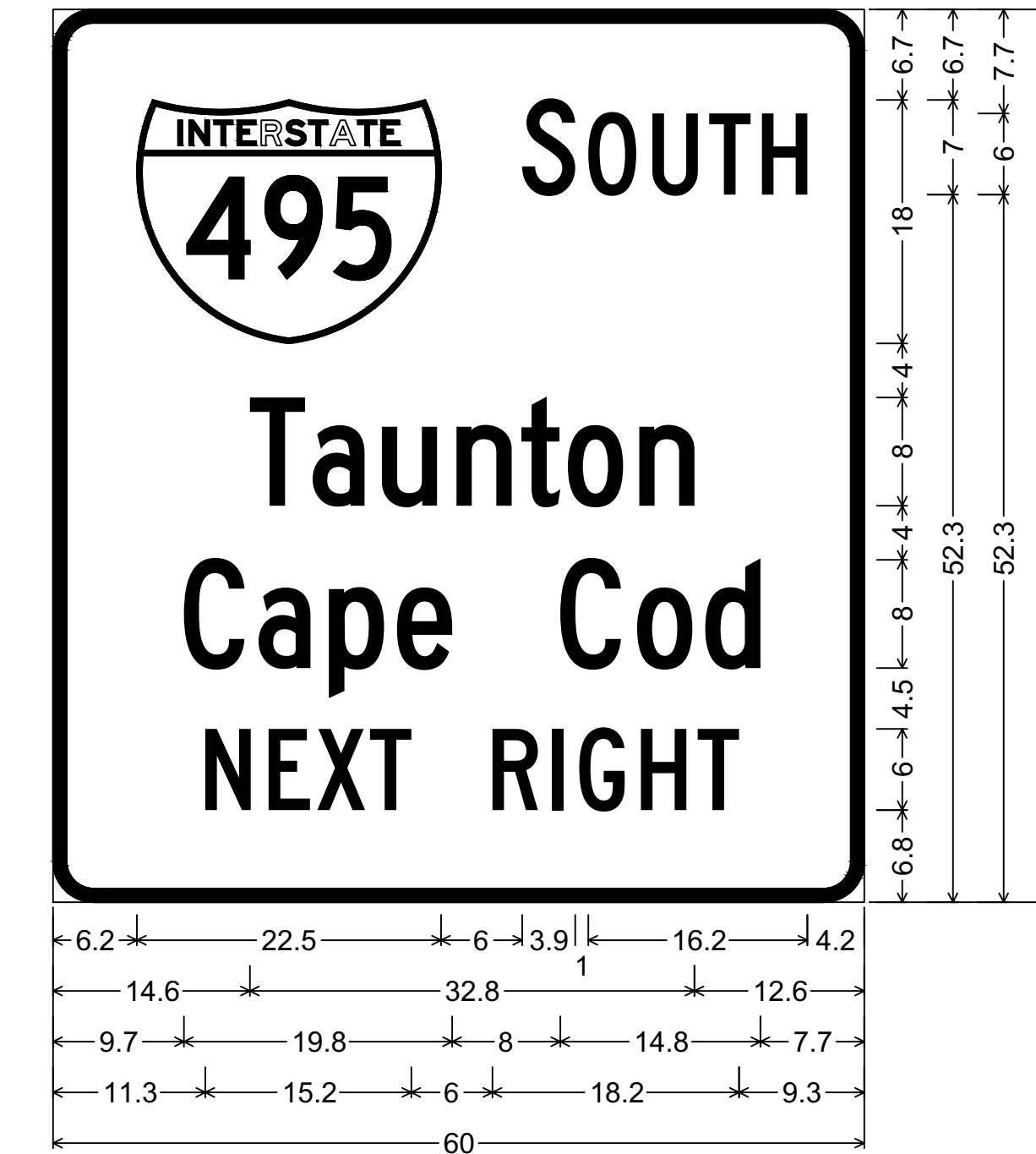
D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Taunton", C 2K; "Cape Cod", C 2K;
"RIGHT LANE", C 2K;

SIGN MA-D1-6b
NOT TO SCALE



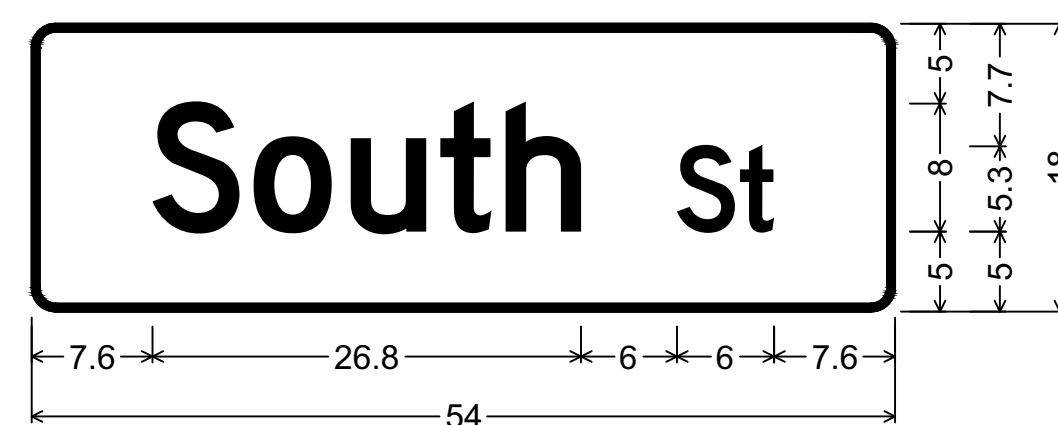
D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Taunton", C 2K; "Cape Cod", C 2K;
Standard Arrow Custom 18.0" X 8.1" 60";

SIGN MA-D1-6c
NOT TO SCALE



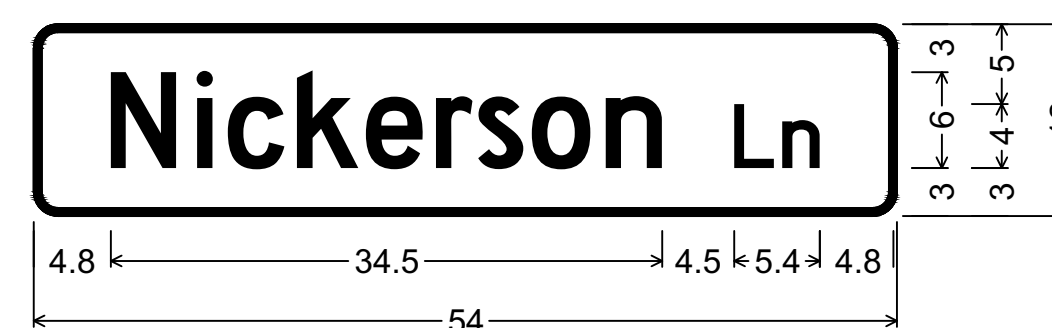
D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Taunton", C 2K; "Cape Cod", C 2K;
"NEXT RIGHT", C 2K;

SIGN MA-D1-6d
NOT TO SCALE



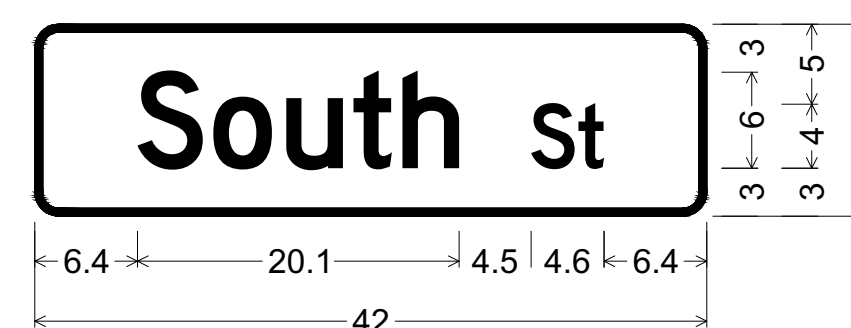
D3-1(1)_VARx8;
1.5" Radius, 0.5" Border, White on Green;
"South", D 2K; "St", D 2K;

SIGN MA-D3-1a
NOT TO SCALE



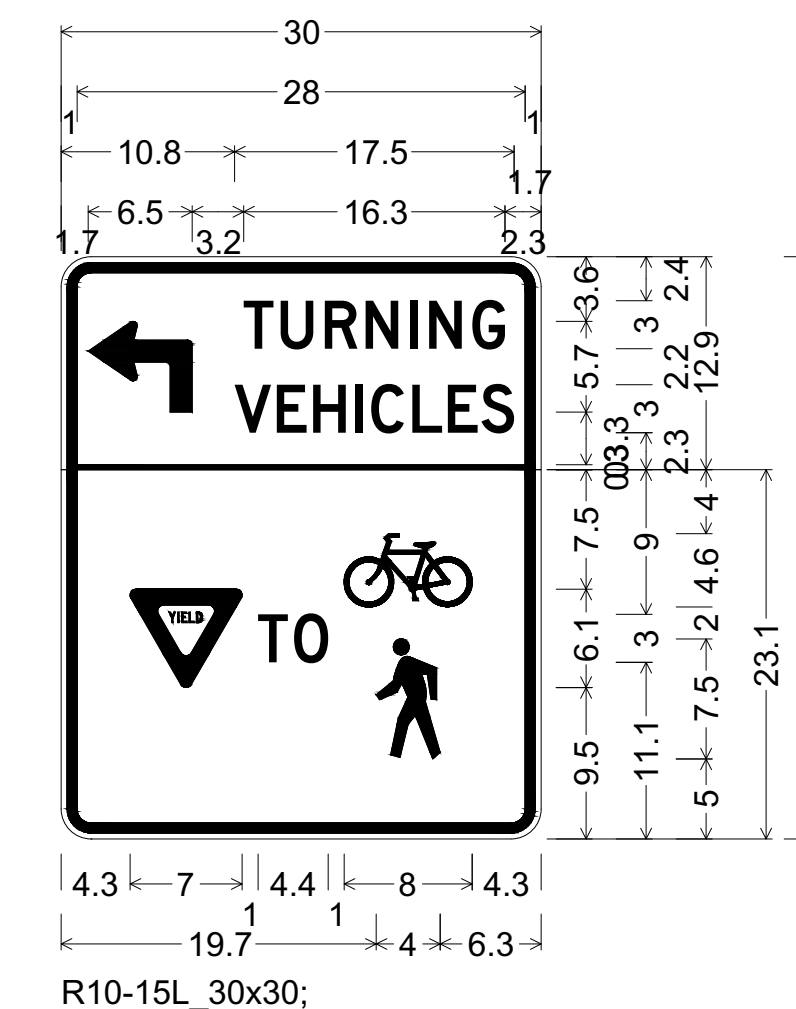
D3-1(1)_VARx8;
1.5" Radius, 0.5" Border, White on Green;
"Nickerson", D 2K; "Ln", D 2K;

SIGN MA-D3-1b
NOT TO SCALE



D3-1(1)_VARx8;
1.5" Radius, 0.5" Border, White on Green;
"South", D 2K; "St", D 2K;

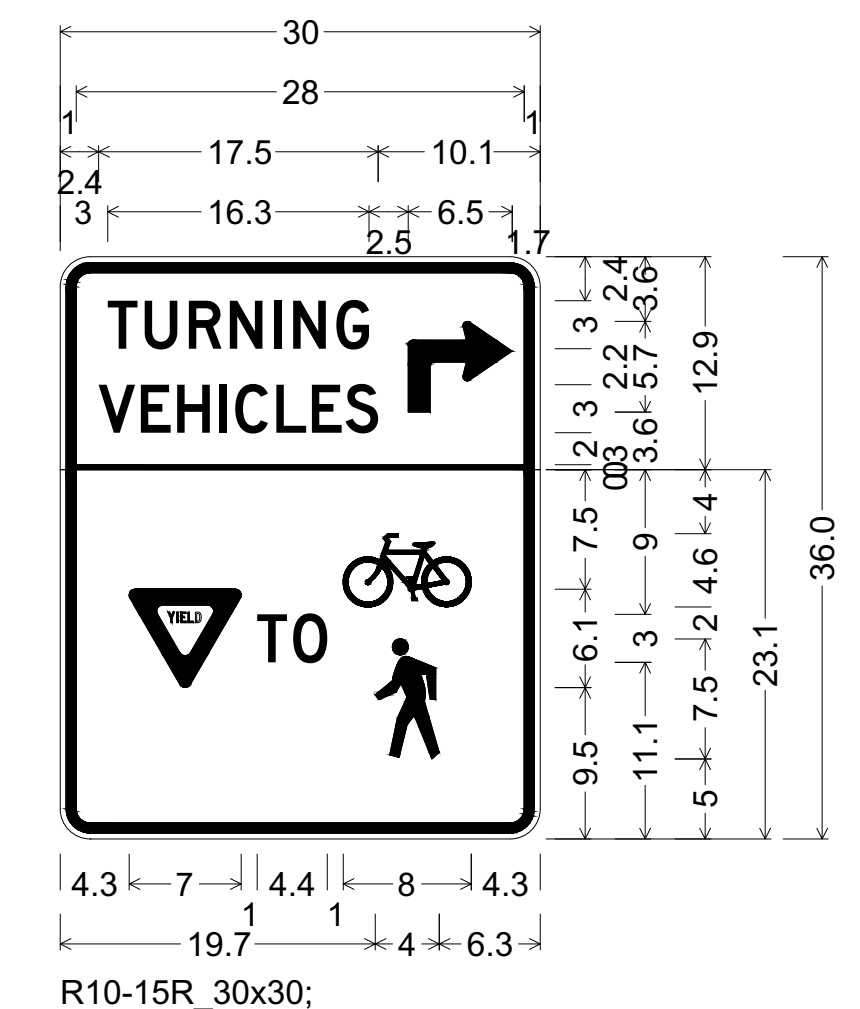
SIGN MA-D3-1c
NOT TO SCALE



R10-15L_30x30;
1.9" Radius, 0.6" Border, 0.4" Indent, Black on Fluorescent Yellow-Green;
90 Deg Advance Turn Arrow Custom 6.5" X 5.7";
"TURNING", D 2K specified length;
"VEHICLES", D 2K specified length;

1.9" Radius, 0.6" Border, 0.4" Indent, Black on White;
"TO", D 2K specified length;
Symbol RG025 White;

SIGN R10-15L alt
NOT TO SCALE

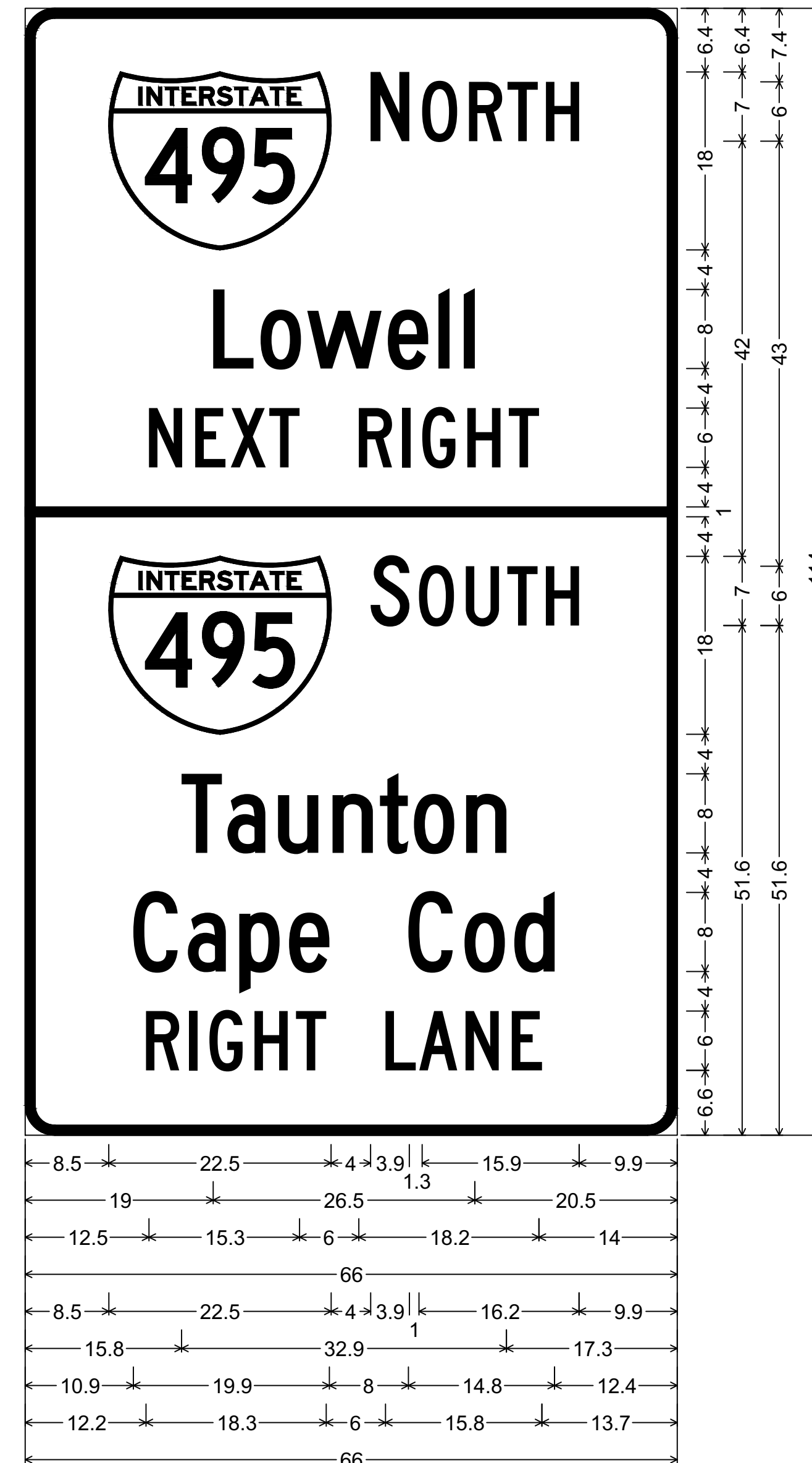


R10-15R_30x30;
1.9" Radius, 0.6" Border, 0.4" Indent, Black on Fluorescent Yellow-Green;
90 Deg Advance Turn Arrow Custom 6.5" X 5.7";
"TURNING", D 2K specified length;
"VEHICLES", D 2K specified length;

1.9" Radius, 0.6" Border, 0.4" Indent, Black on White;
"TO", D 2K specified length;
Symbol RG025 White;

SIGN R10-15R alt
NOT TO SCALE

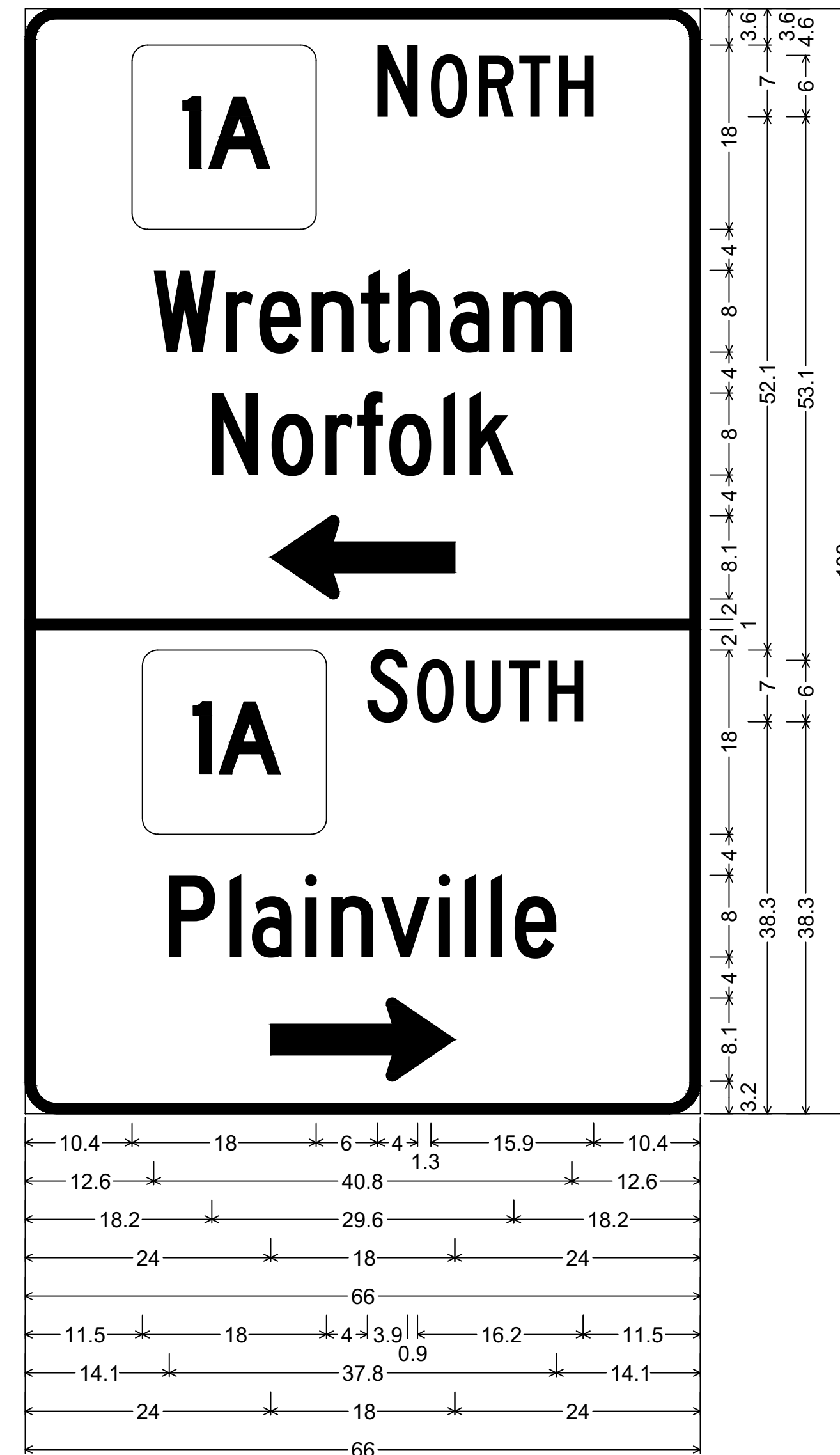
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	114	258
PROJECT FILE NO.		603739	



MA-D1-7a;

D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"NORTH", C 2K; "Lowell", C 2K; "NEXT RIGHT", C 2K;
"SOUTH", C 2K; "Taunton", C 2K; "Cape Cod", C 2K;
"RIGHT LANE", C 2K;

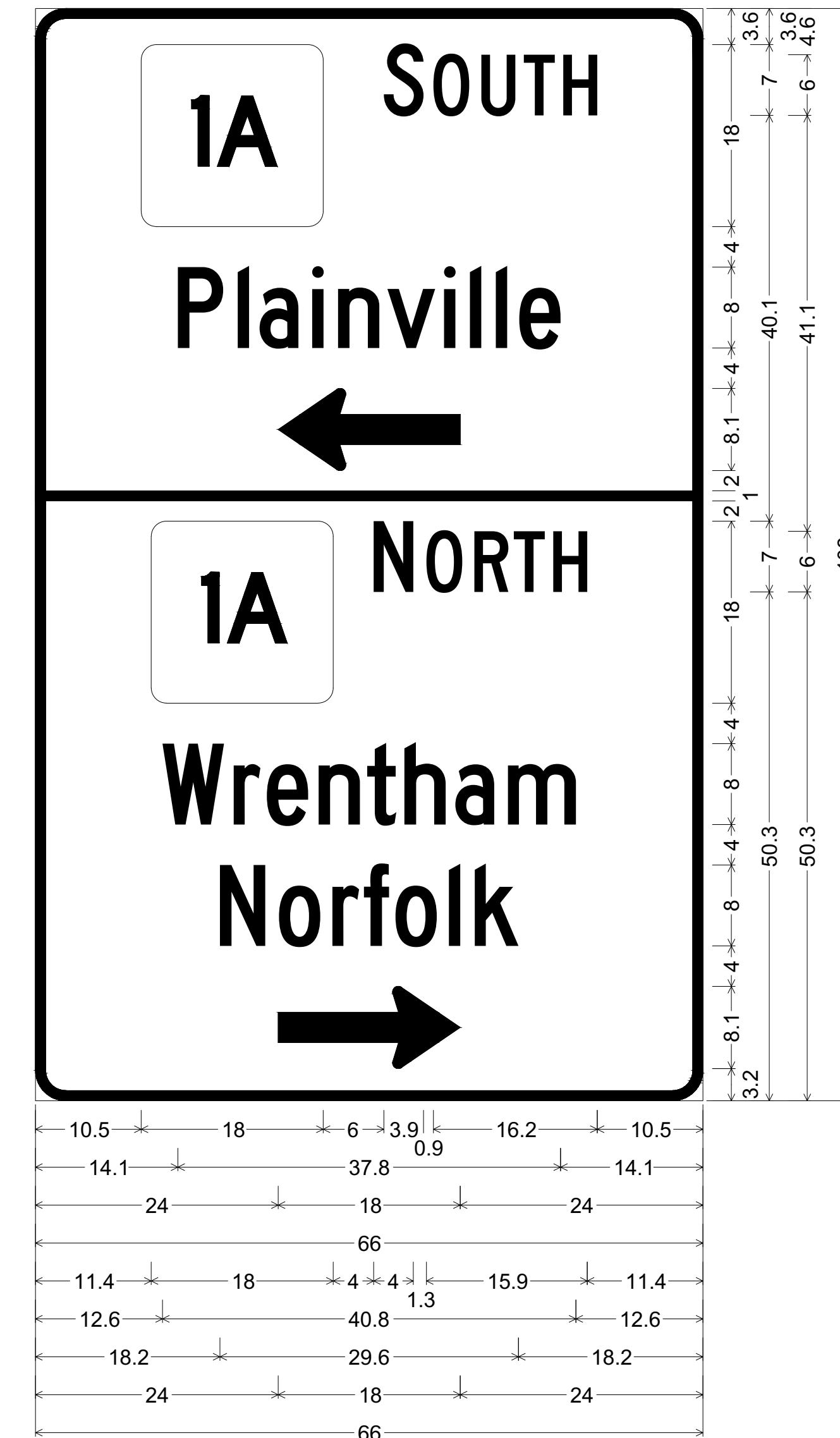
SIGN MA-D1-7a
NOT TO SCALE



MA-D1-7b;

D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"NORTH", C 2K; "Wrentham", C 2K; "Norfolk", C 2K;
Standard Arrow Custom 18.0" X 8.1" 180"; "SOUTH", C 2K;
"Plainville", C 2K; Standard Arrow Custom 18.0" X 8.1" 0°;

SIGN MA-D1-7b
NOT TO SCALE



MA-D1-7c;

D1-5_VARxVAR;
3.0" Radius, 1.0" Border, White on Green;
"SOUTH", C 2K; "Plainville", C 2K;
Standard Arrow Custom 18.0" X 8.1" 180"; "NORTH", C 2K;
"Wrentham", C 2K; "Norfolk", C 2K;
Standard Arrow Custom 18.0" X 8.1" 0°;

SIGN MA-D1-7c
NOT TO SCALE

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

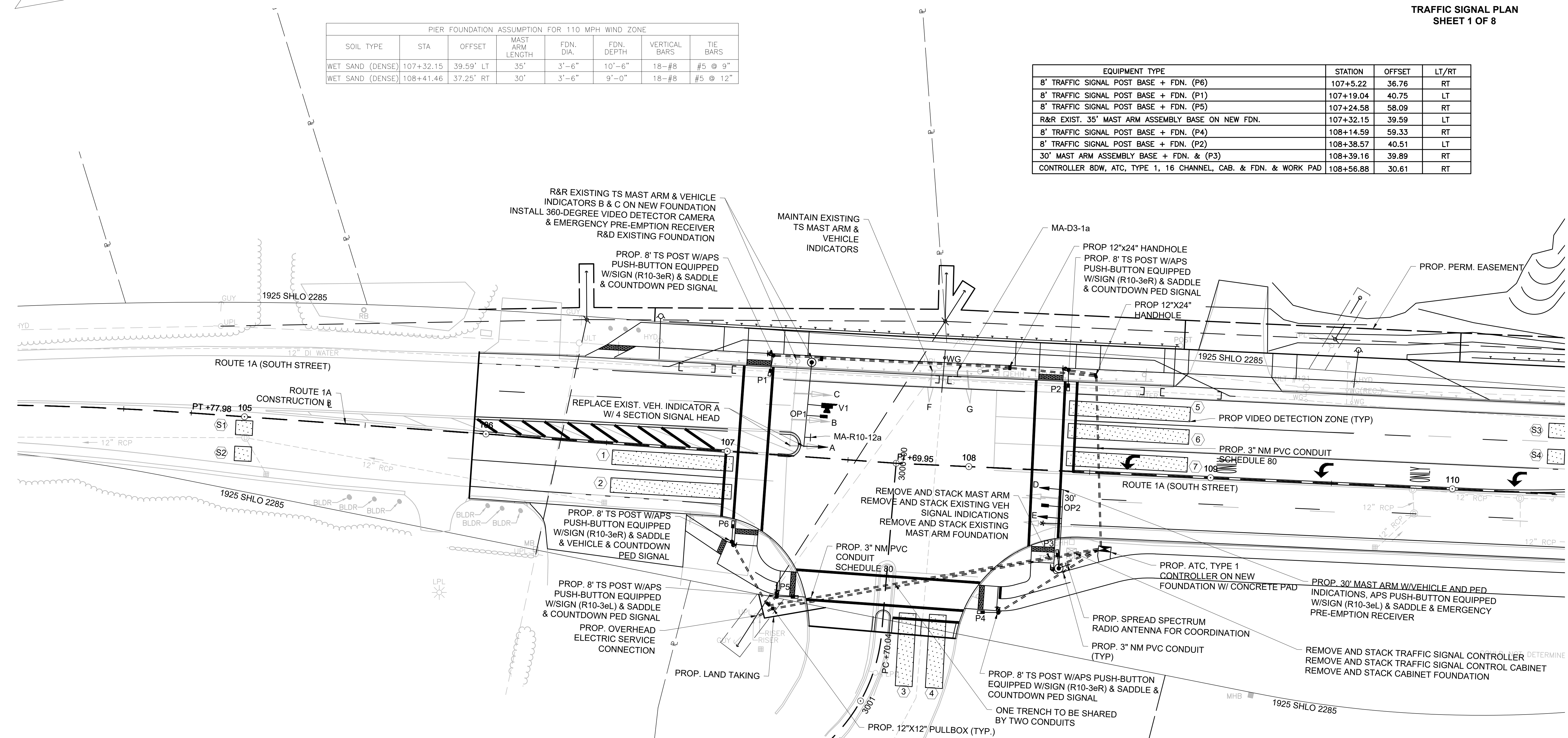
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	115	258
PROJECT FILE NO.		603739	

TRAFFIC SIGNAL PLAN
SHEET 1 OF 8

PIER FOUNDATION ASSUMPTION FOR 110 MPH WIND ZONE

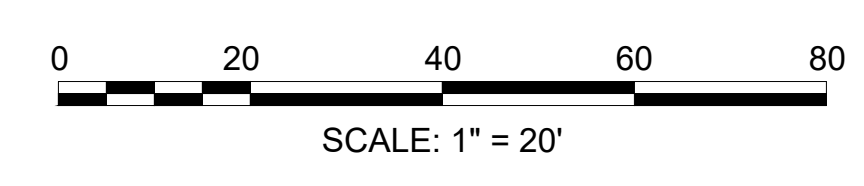
SOIL TYPE	STA	OFFSET	MAST ARM LENGTH	FDN. DIA.	FDN. DEPTH	VERTICAL BARS	TIE BARS
WET SAND (DENSE)	107+32.15	39.59' LT	35'	3'-6"	10'-6"	18-#8	#5 @ 9"
WET SAND (DENSE)	108+41.46	37.25' RT	30'	3'-6"	9'-0"	18-#8	#5 @ 12"

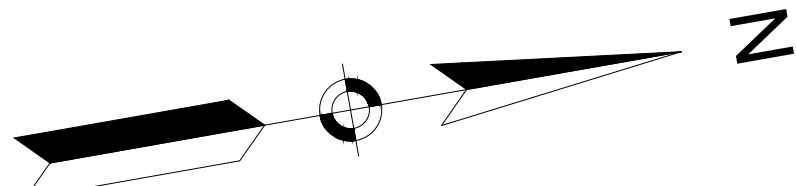
EQUIPMENT TYPE	STATION	OFFSET	LT/RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P6)	107+5.22	36.76	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P1)	107+19.04	40.75	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P5)	107+24.58	58.09	RT
R&R EXIST. 35' MAST ARM ASSEMBLY BASE ON NEW FDN.	107+32.15	39.59	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P4)	108+14.59	59.33	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P2)	108+38.57	40.51	LT
30' MAST ARM ASSEMBLY BASE + FDN. & (P3)	108+39.16	39.89	RT
CONTROLLER BDW, ATC, TYPE 1, 16 CHANNEL, CAB. & FDN. & WORK PAD	108+56.88	30.61	RT



GENERAL NOTES FOR ALL SIGNALIZED LOCATIONS:

- WORK ON THE TRAFFIC SIGNAL SYSTEM SHALL BE IN ACCORDANCE WITH THE TRAFFIC MANAGEMENT PLANS, STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND AS REQUIRED BY THE ENGINEER.
- PROPOSED CONTROLLER SHALL BE AN 8DW, TS-2, TYPE 1, KEYBOARD ENTRY, MENU-DRIVEN TYPE WITH INTERNAL COORDINATION CAPABILITIES AND 16 CHANNELS UNLESS OTHERWISE NOTED.
- POST-MOUNTED SIGNALS SHALL HAVE TWO FOOT MINIMUM CLEARANCE BETWEEN VERTICAL PROJECTION OF THE CURB LINE AND THE SIGNAL VISOR.
- ALL SIGNAL EQUIPMENT INCLUDED IN THIS PROJECT SHALL BE LISTED ON THE CURRENT MASSDOT'S APPROVED LIST AND IS SUBJECT TO APPROVAL OF THE ENGINEER.
- THE FINAL LOCATION OF PROPOSED PREEMPTION RECEIVERS AND CONFIRMATION STROBE LIGHT SHALL BE COORDINATED WITH THE WRENTHAM FIRE DEPARTMENT AND APPROVED BY MASSDOT.
- THE FINAL LOCATION OF SIGNAL EQUIPMENT MAY BE ADJUSTED IN THE FIELD AS NECESSARY WITH THE APPROVAL OF THE ENGINEER. SIGNAL EQUIPMENT SHALL ALLOW A MINIMUM 3'-3" CLEARANCE FOR PEDESTRIAN TRAVEL. SIGNAL FOUNDATIONS SHALL BE FLUSH TO THE SIDEWALK SURFACE TO ALLOW CLEARANCE FOR PEDESTRIAN TRAVEL. PUSH BUTTON EXTENDERS SHALL BE USED IF PUSH BUTTON IS NOT WITHIN 10" OF REACH.
- ALL TRAFFIC SIGNAL CONDUIT SHALL BE 3" SCHEDULE 80 TYPE NM PLASTIC (UL) UNLESS OTHERWISE NOTED.
- UTILIZE ONE TRENCH FOR MULTIPLE CONDUITS WHENEVER POSSIBLE.
- ALL METALLIC PULL BOXES SHALL BE BONDED. APPROVED POLYMER HANDHOLES MAY BE USED AS AN ALTERNATE.
- ALL PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN 10" OF THE WHEELCHAIR RAMP. NO ADDITIONAL PAYMENT WILL BE MADE FOR PUSH BUTTON EXTENSIONS.
- CONTRACTOR TO ENSURE THAT SPREAD SPECTRUM RADIO ANTENNAS ARE INSTALLED SUCH THAT LINE OF SITE IS OBTAINED.





**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

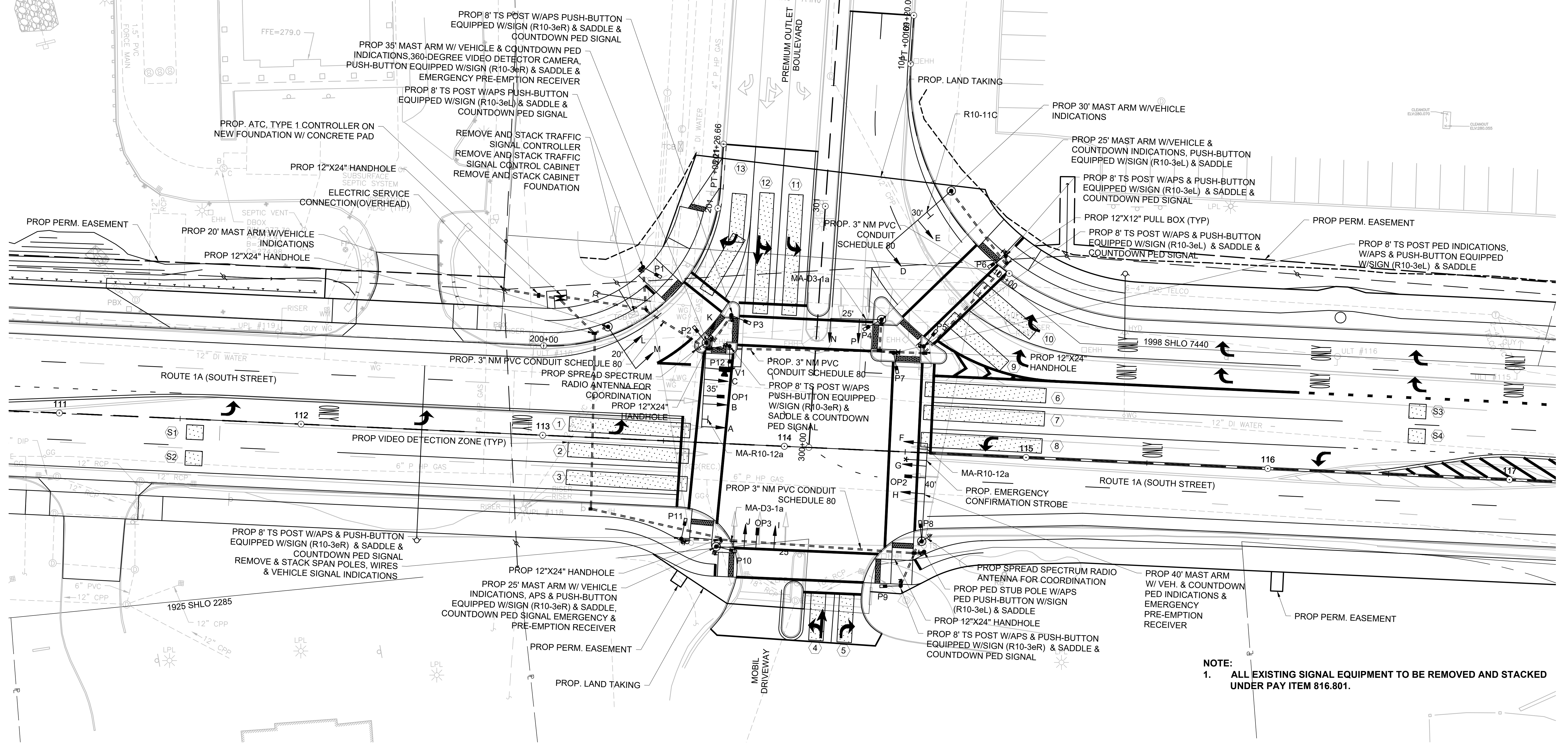
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	117	258
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**TRAFFIC SIGNAL PLAN
SHEET 3 OF 8**

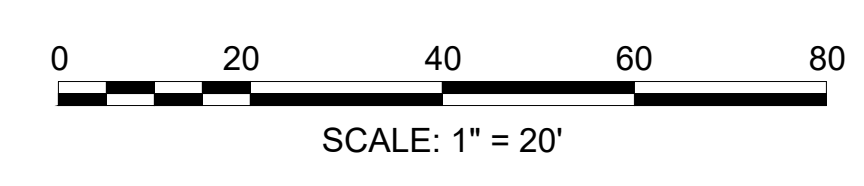
EQUIPMENT TYPE	STATION	OFFSET	LT/RT
CONTROLLER BDW, ATC, TYPE 1, 16 CHANNEL, CAB. & FDN. & WORK PAD	113+04.92	56.00	LT
20' MAST ARM ASSEMBLY BASE + FDN.	113+24.88	46.04	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P1)	113+38.22	76.36	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P11)	113+59.22	40.17	RT
35' MAST ARM ASSEMBLY BASE + FDN.	113+65.82	41.29	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P12)	113+75.48	40.31	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P3)	113+75.60	53.15	LT
25' MAST ARM ASSEMBLY BASE + FDN.	113+73.75	42.70	RT
25' MAST ARM ASSEMBLY BASE + FDN.	114+37.72	54.20	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P7)	114+43.30	40.70	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P9)	114+50.68	55.42	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P5)	114+55.66	43.95	LT
40' MAST ARM ASSEMBLY BASE + FDN.	114+58.52	36.63	RT
PED STUB POLE BASE + FDN. (P8)	114+59.68	40.94	RT
30' MAST ARM ASSEMBLY BASE + FDN.	114+64.06	108.70	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P6)	114+87.78	82.85	LT

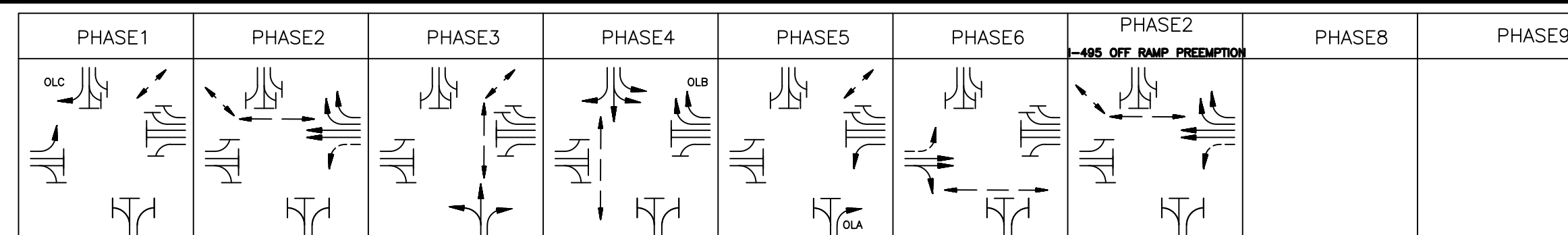
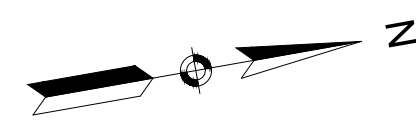
PIER FOUNDATION ASSUMPTION FOR 110 MPH WIND ZONE

SOIL TYPE	STA	OFFSET	MAST ARM LENGTH	FDN. DIA.	FDN. DEPTH	VERTICAL BARS	TIE BARS
WET SAND (DENSE)	113+24.88	46.04' LT	20'	3'-6"	8'-6"	18-#8	#5 @ 12"
WET SAND (DENSE)	113+65.82	41.29' LT	35'	3'-6"	10'-6"	18-#8	#5 @ 9"
WET SAND (DENSE)	113+73.75	42.70' RT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (DENSE)	114+37.72	54.20' LT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (DENSE)	114+58.52	36.63' RT	40'	3'-6"	10'-6"	18-#8	#5 @ 9"
WET SAND (DENSE)	114+64.06	108.70' LT	30'	3'-6"	9'-0"	18-#8	#5 @ 12"



NOTE:
1. ALL EXISTING SIGNAL EQUIPMENT TO BE REMOVED AND STACKED UNDER PAY ITEM 816.801.





SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

Table with columns for STREET, DIRECTION, HOUSINGS, and 27 signal phases (1-27). Rows include various streets like ROUTE 1A (SOUTH STREET), PREMIUM OUTLET BLVD, MOBIL DRIVEWAY, and PEDESTRIAN.

TIMING IN SECONDS

Timing table with columns for MINIMUM GREEN (INITIAL), PASSAGE TIME (VEHICLE), MAXIMUM 1, MAXIMUM 2, MAXIMUM 3, YELLOW CLEARANCE, RED CLEARANCE, WALK (W), *PEDESTRIAN CLEARANCE, RECALL, and MEMORY.

COORDINATION DATA

Coordination data table with columns for TIMING PLAN, CYCLE LENGTH, REF/OFFSET, and COORDINATION PHASE TIMING (SEC.).

COORDINATION NOTES:

CONTROLLER IS INTERCONNECTED WITH ADJACENT SIGNAL CONTROLLERS VIA SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG ROUTE 1A (SOUTH STREET). A MASTER CONTROLLER IS LOCATED AT ROUTE 1A (SOUTH STREET) AND I-495 NB RAMP.

GENERAL NOTES:

STANDARD NEMA CLEARANCES SHALL APPLY. MAXIMUM GREEN 1 & 2 SHALL ONLY BE IN EFFECT DURING FREE OPERATION. DURING FREE OPERATION, MAXIMUM GREEN 1 SHALL BE IN EFFECT ON WEEKDAYS FROM 7:00 AM TO 11:00 AM.

FIRE PREEMPTION SCHEDULE

Table with columns: APPROACH, PREEMPTION PHASE, NEXT PHASE CALLED, RECEIVER. Rows include SOUTHBOUND, NORTHBOUND, and EASTBOUND.

EMERGENCY VEHICLE PREEMPTION OPERATION:

- 1. EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION.

MAJOR ITEMS REQUIRED table with columns: PAY ITEM, QUANTITY, ITEM. Lists various equipment like CONTROLLER 8DW, VIDEO MONITOR, RADIO SYSTEM, etc.

WRENTHAM, MA I-495 / ROUTE 1A RAMPS table with columns: STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS.

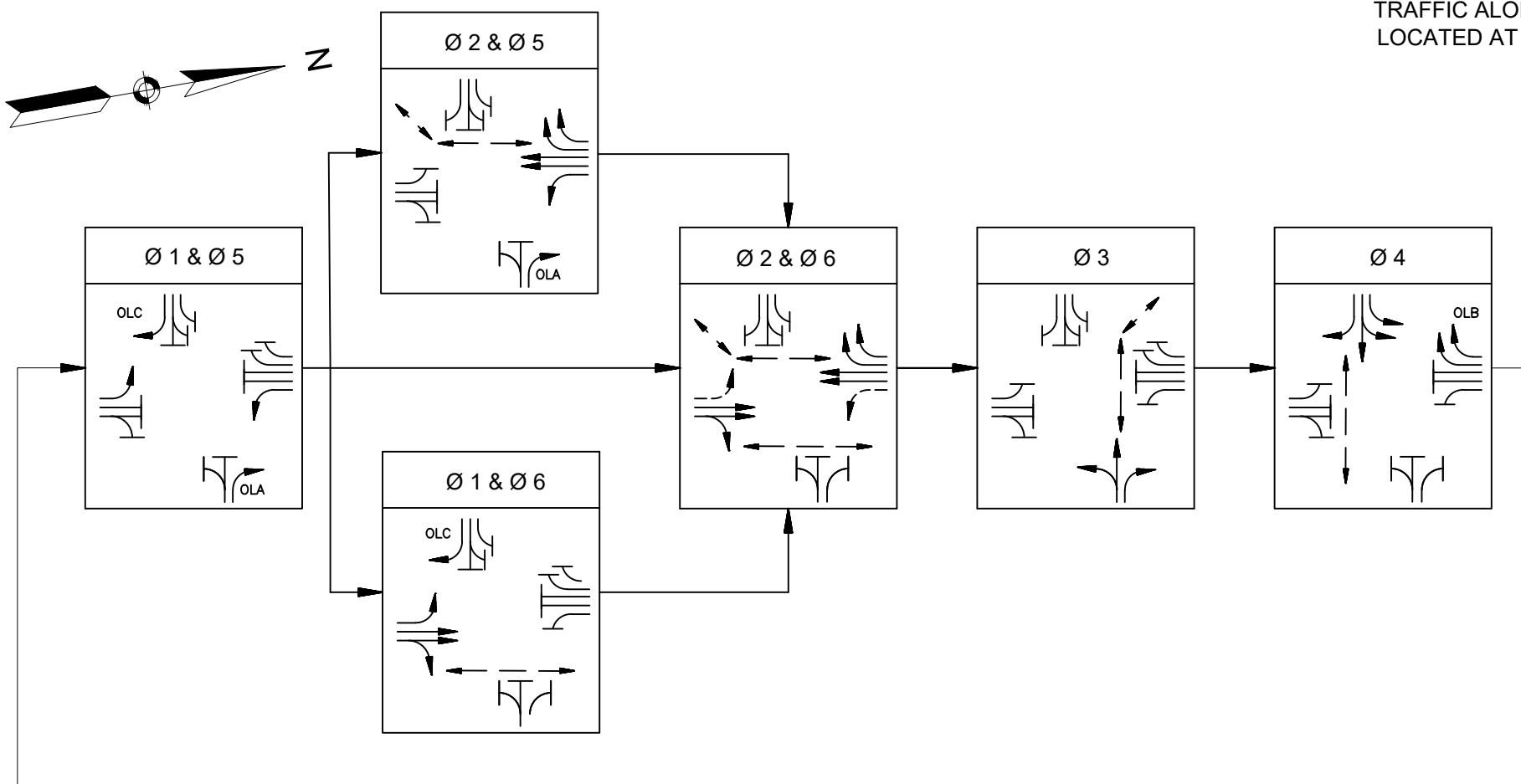
TRAFFIC SIGNAL DATA SHEET 4 OF 8

VIDEO DETECTOR DATA

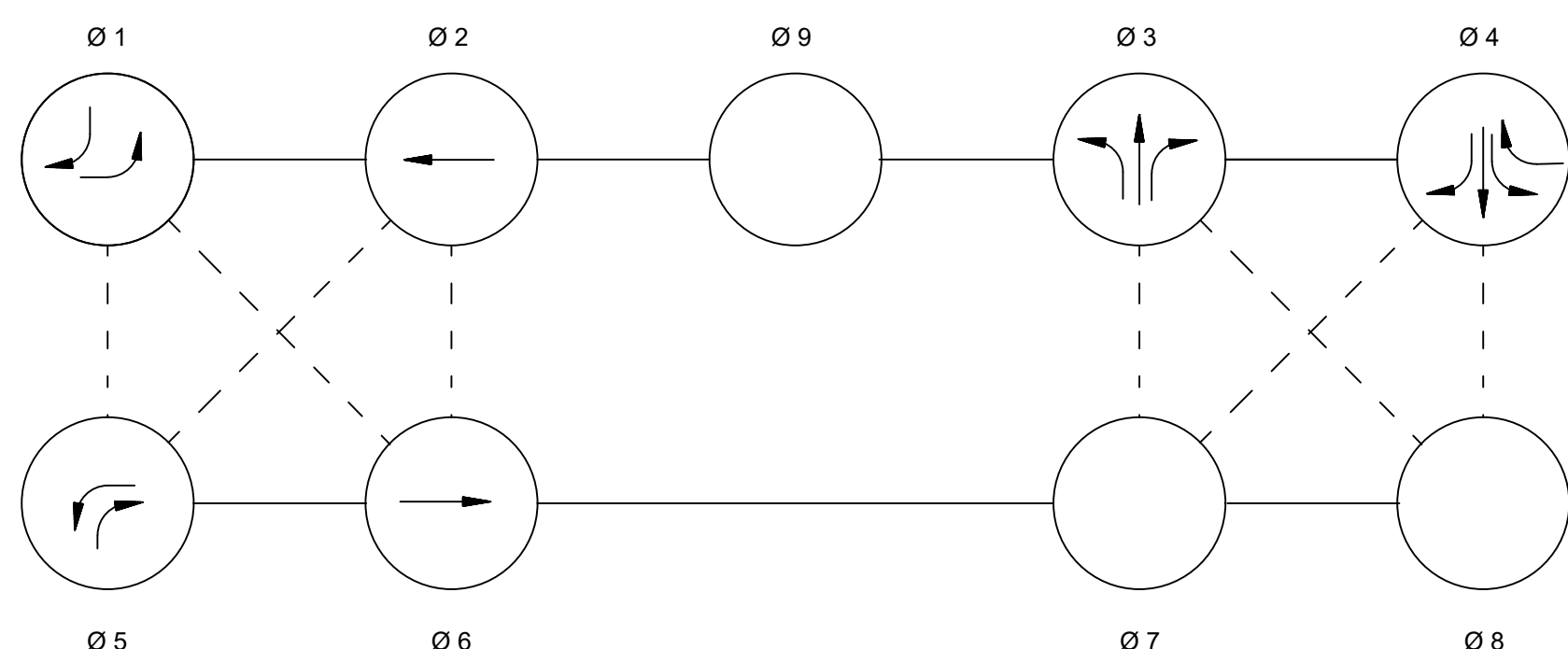
SEE PLAN SHEET - VIDEO DETECTION DATA, DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

Video detector data table with columns: DETECTOR NUMBER, Ø CALLED, Ø EXT., MODE A=PULSE B=PRESENCE, DELAY TIME, EXT. TIME.

PREFERENTIAL PHASING SEQUENCE

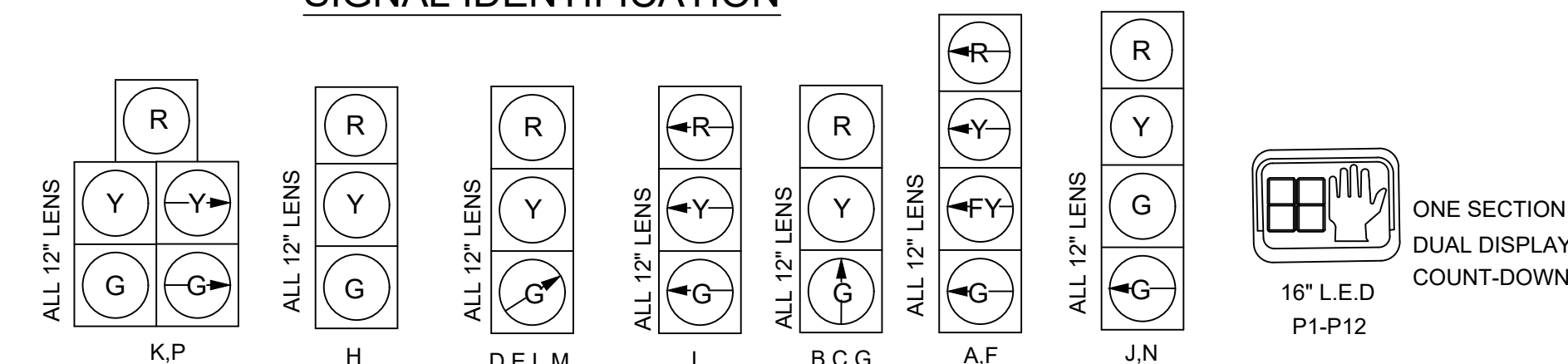


NEMA DUAL RING PHASING NOTES:



- 1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.

SIGNAL IDENTIFICATION



NOTES:

- 1. ALL SIGNALS SHALL HAVE CUT AWAY VISORS.

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

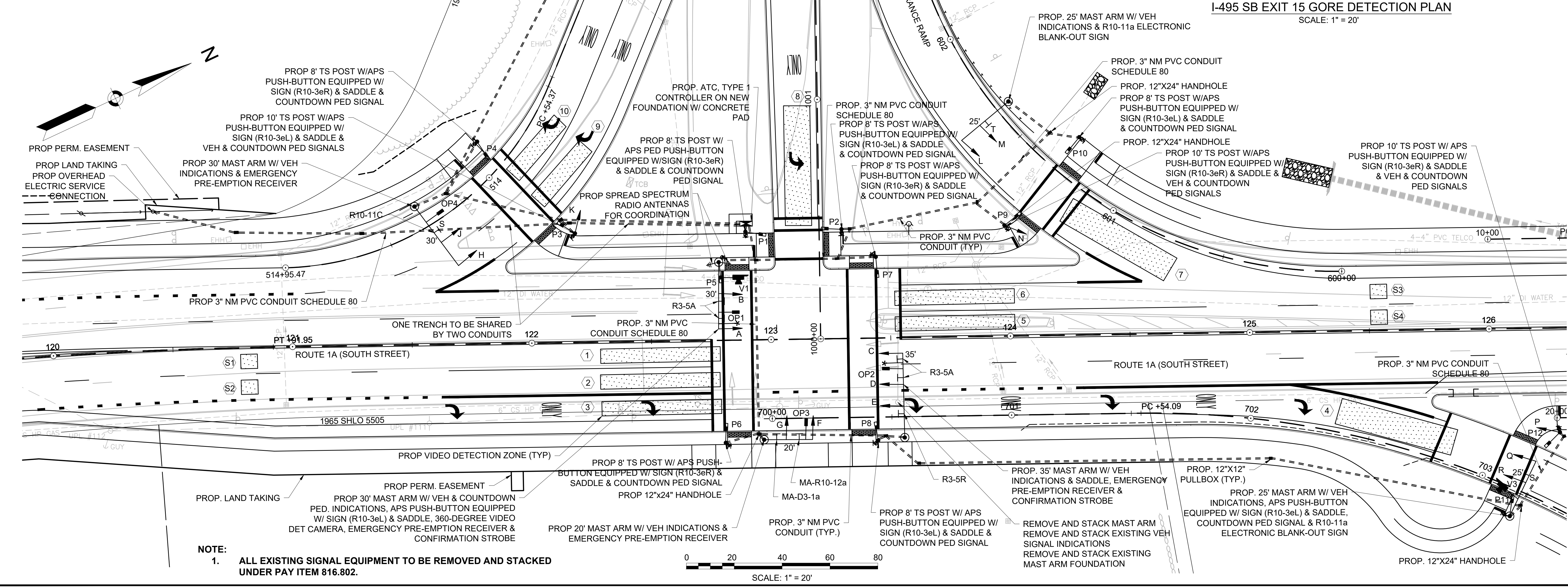
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	119	258
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TRAFFIC SIGNAL PLAN
SHEET 5 OF 8

PIER FOUNDATION ASSUMPTION FOR 110 MPH WIND ZONE

SOIL TYPE	STA	OFFSET	MAST ARM LENGTH	FDN. DIA.	FDN. DEPTH	VERTICAL BARS	TIE BARS
WET SAND (DENSE)	121+51.78	57.75' LT	30'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (DENSE)	122+78.51	32.16' LT	30'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (LOOSE)	122+96.49	41.75' RT	20'	3'-6"	9'-6"	18-#8	#5 @ 12"
WET SAND (DENSE)	123+55.22	41.70' RT	35'	3'-6"	10'-6"	18-#8	#5 @ 9"
WET SAND (DENSE)	124+00.55	97.94' LT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (DENSE)	126+07.53	78.25' RT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"

EQUIPMENT TYPE	STATION	OFFSET	LT/RT
30' MAST ARM ASSEMBLY BASE + FDN.	121+51.78	57.75	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P4)	121+75.71	85.60	RT
10' TRAFFIC SIGNAL POST BASE + FDN. (P3) & K	122+11.87	47.74	LT
16' TRAFFIC SIGNAL POST BASE + FDN. (V2)	122+79.61	315.11	LT
30' MAST ARM ASSEMBLY BASE + FDN.	122+78.51	32.16	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P6)	122+80.09	42.40	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P1)	122+89.40	45.07	LT
CONTROLLER BDW, ATC, TYPE 1, 16 CHANNEL, CAB. & FDN. & WORK PAD	122+90.54	47.52	LT
20' MAST ARM ASSEMBLY BASE + FDN.	122+96.49	41.75	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P2)	123+28.08	46.81	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P7)	123+43.78	34.50	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P8)	123+44.01	43.50	RT
35' MAST ARM ASSEMBLY BASE + FDN.	123+55.22	41.70	RT
10' TRAFFIC SIGNAL POST BASE + FDN. (P9)	123+98.21	46.25	LT
25' MAST ARM ASSEMBLY BASE + FDN.	124+00.55	97.94	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P10)	124+30.01	82.62	LT
25' MAST ARM ASSEMBLY BASE + FDN.	126+07.53	78.25	RT
10' TRAFFIC SIGNAL POST BASE + FDN. (P12)	126+28.97	43.58	RT



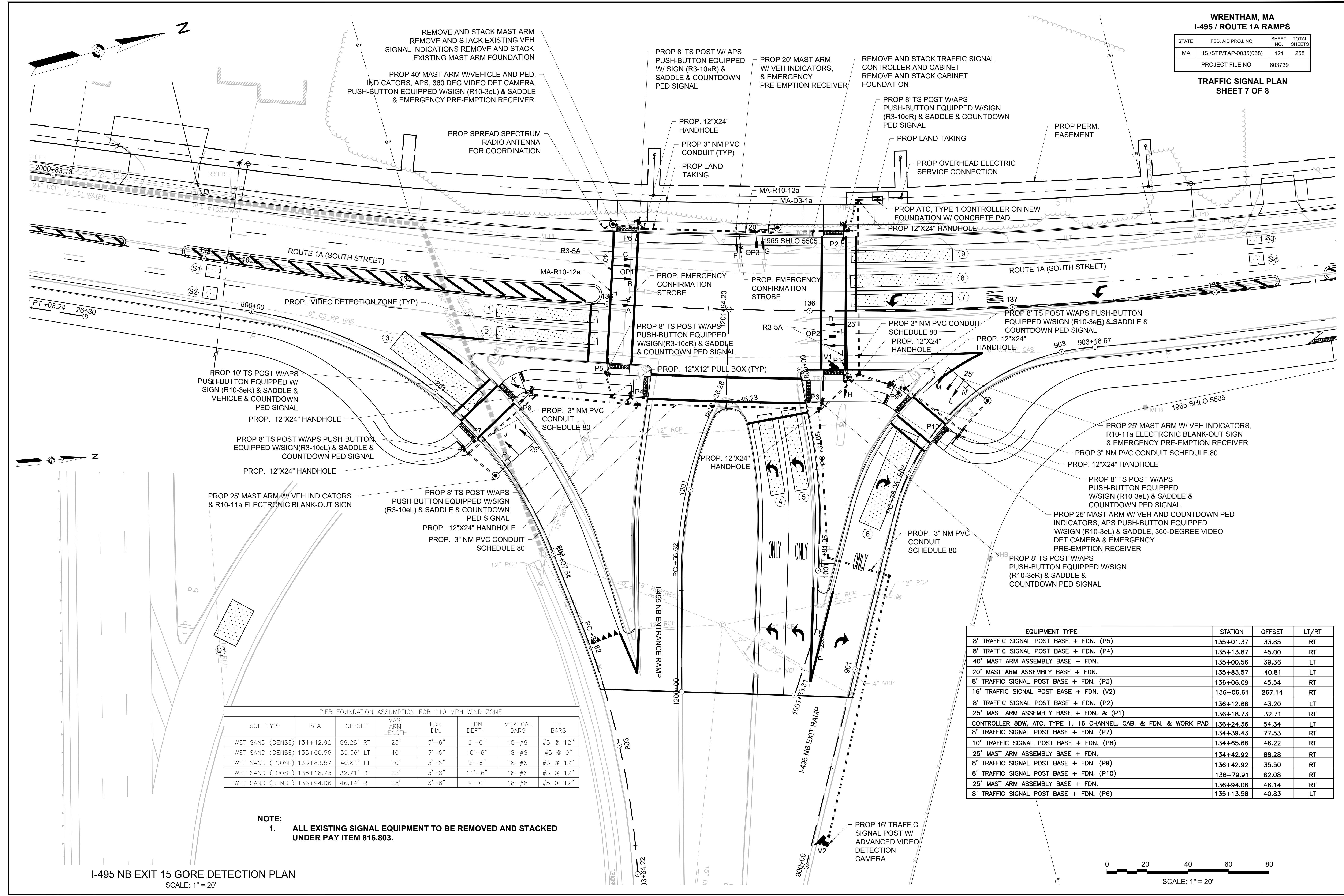
NOTE:
1. ALL EXISTING SIGNAL EQUIPMENT TO BE REMOVED AND STACKED UNDER PAY ITEM 816.802.

I-495 SB EXIT 15 GORE DETECTION PLAN
SCALE: 1" = 20'

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	121	258
PROJECT FILE NO.			603739

TRAFFIC SIGNAL PLAN
SHEET 7 OF 8



PIER FOUNDATION ASSUMPTION FOR 110 MPH WIND ZONE

SOIL TYPE	STA	OFFSET	MAST ARM LENGTH	FDN. DIA.	FDN. DEPTH	VERTICAL BARS	TIE BARS
WET SAND (DENSE)	134+42.92	88.28' RT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"
WET SAND (DENSE)	135+00.56	39.36' LT	40'	3'-6"	10'-6"	18-#8	#5 @ 9"
WET SAND (LOOSE)	135+83.57	40.81' LT	20'	3'-6"	9'-6"	18-#8	#5 @ 12"
WET SAND (LOOSE)	136+18.73	32.71' RT	25'	3'-6"	11'-6"	18-#8	#5 @ 12"
WET SAND (DENSE)	136+94.06	46.14' RT	25'	3'-6"	9'-0"	18-#8	#5 @ 12"

NOTE:
1. ALL EXISTING SIGNAL EQUIPMENT TO BE REMOVED AND STACKED UNDER PAY ITEM 816.803.

EQUIPMENT TYPE	STATION	OFFSET	LT/RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P5)	135+01.37	33.85	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P4)	135+13.87	45.00	RT
40' MAST ARM ASSEMBLY BASE + FDN.	135+00.56	39.36	LT
20' MAST ARM ASSEMBLY BASE + FDN.	135+83.57	40.81	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P3)	136+06.09	45.54	RT
16' TRAFFIC SIGNAL POST BASE + FDN. (V2)	136+06.61	267.14	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P2)	136+12.66	43.20	LT
25' MAST ARM ASSEMBLY BASE + FDN. & (P1)	136+18.73	32.71	RT
CONTROLLER BDW, ATC, TYPE 1, 16 CHANNEL, CAB. & FDN. & WORK PAD	136+24.36	54.34	LT
8' TRAFFIC SIGNAL POST BASE + FDN. (P7)	134+39.43	77.53	RT
10' TRAFFIC SIGNAL POST BASE + FDN. (P8)	134+65.66	46.22	RT
25' MAST ARM ASSEMBLY BASE + FDN.	134+42.92	88.28	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P9)	136+42.92	35.50	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P10)	136+79.91	62.08	RT
25' MAST ARM ASSEMBLY BASE + FDN.	136+94.06	46.14	RT
8' TRAFFIC SIGNAL POST BASE + FDN. (P6)	135+13.58	40.83	LT

I-495 NB EXIT 15 GORE DETECTION PLAN
SCALE: 1" = 20'



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

Table with 4 columns: STATE, FED. AID PROJ. NO., SHEET NO., TOTAL SHEETS. Values: MA, HSI/STP/TAP-0035(058), 122, 258.

TRAFFIC SIGNAL DATA
SHEET 8 OF 8

Table with 3 columns: PAY ITEM, QUANTITY, ITEM. Lists major items required such as CONTROLLER 8DW, ATC, TYPE 1, 16 CHANNEL, CAB. & FDN., REMOVE AND STACK EXISTING TRAFFIC SIGNALS, etc.

Plus all necessary duct, cable, labor, miscellaneous material and equipment to complete the installation.

VIDEO DETECTOR DATA

SEE PLAN SHEET - VIDEO DETECTION DATA, DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

Table with 6 columns: DETECTOR NUMBER, Ø CALLED, Ø EXT., MODE A=PULSE B=PRES., DELAY TIME, EXT. TIME. Lists detector data for various approaches.

- RAMP BACKUP PREEMPTION NOTES
1. I-495 NB RAMP SPILL BACK LOOP DETECTOR CALLS FOR RAMP PREEMPTION AFTER 10 SECONDS OF CONSTANT DETECTION ON QUEUE DETECTORS.
2. UPON ACTUATION OF THE RAMP BACKUP PREEMPTION, ALL GREEN INTERVALS EXCEPT THOSE FOR THE PREEMPTED PHASE SHALL TERMINATE, FOLLOWED BY THE APPROPRIATE CLEARANCE INTERVALS. RAMP PREEMPTION INTERVAL 10 TO FOLLOW.

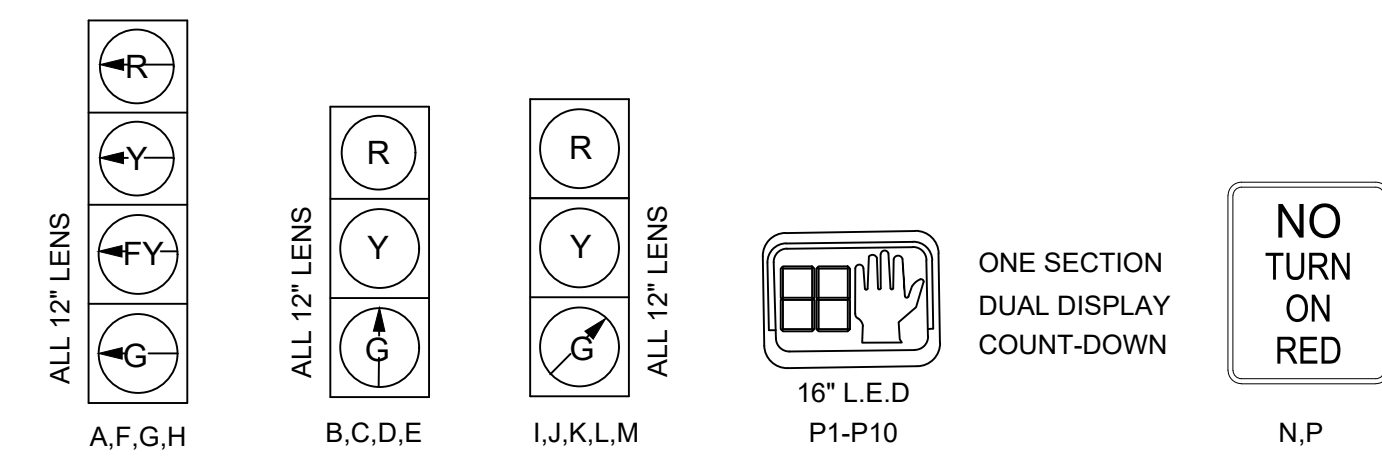
FIRE PREEMPTION SCHEDULE

Table with 4 columns: APPROACH, PREEMPTION PHASE, NEXT PHASE CALLED, RECEIVER. Lists fire preemption schedule for Southbound, Northbound, and Westbound approaches.

EMERGENCY VEHICLE PREEMPTION OPERATION:

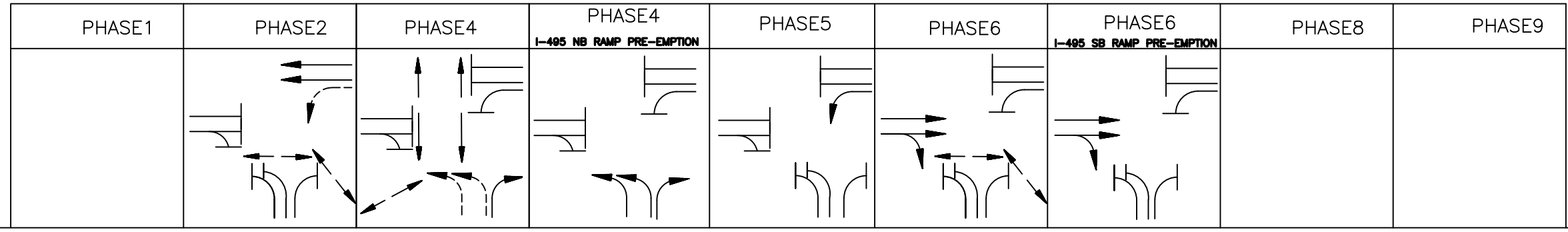
- 1. EMERGENCY VEHICLE PREEMPTION SHALL BE ACTUATED BY AN OPTICAL SIGNAL FROM AN OPTICAL EMITTER MOUNTED ON AN EMERGENCY VEHICLE AND RECEIVED BY AN OPTICAL DETECTOR LOCATED AT INTERSECTION. A SEPARATE RECEIVING DETECTOR IS REQUIRED FOR EACH DETECTED APPROACH.
2. PREEMPTION SIGNALS FROM MULTIPLE APPROACHES SHALL BE SERVICED ON A FIRST DETECTED FIRST SERVED BASIS IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR.

SIGNAL IDENTIFICATION



NOTES:

- 1. ALL SIGNALS SHALL HAVE CUT AWAY VISORS.
2. ALL SIGNALS SHALL HAVE 12" LED WITH 5" NON-LOUVERED BACK PLATES.
3. ALL SIGNALS SHALL HAVE 3" REFLECTORIZED YELLOW BORDERS.



SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (COORDINATED)

Table with columns for STREET, DIRECTION, HOUSINGS, and 27 signal phases (1-27) plus FLASH OPER. Lists signal timing for various streets and directions.

TIMING IN SECONDS

Table with columns for MINIMUM GREEN (INITIAL), PASSAGE TIME (VEHICLE), MAXIMUM 1, MAXIMUM 2, MAXIMUM 3, YELLOW CLEARANCE, RED CLEARANCE, WALK (W), *PEDESTRIAN CLEARANCE, RECALL, MEMORY. Lists timing parameters for the intersection.

COORDINATION DATA

Table with columns for TIMING PLAN, CYCLE LENGTH, REF/OFFSET, SEC., COORDINATION PHASE TIMING. Lists coordination data for different timing plans.

COORDINATION NOTES:

CONTROLLER IS INTERCONNECTED WITH ADJACENT SIGNAL CONTROLLERS VIA SPREAD SPECTRUM RADIO TO PROVIDE A PROGRESSIVE MOVEMENT OF TRAFFIC ALONG ROUTE 1A (SOUTH STREET). A MASTER CONTROLLER IS LOCATED AT ROUTE 1A (SOUTH STREET) AND I-495 NB RAMP.

INTERCONNECTED INTERSECTIONS INCLUDE:

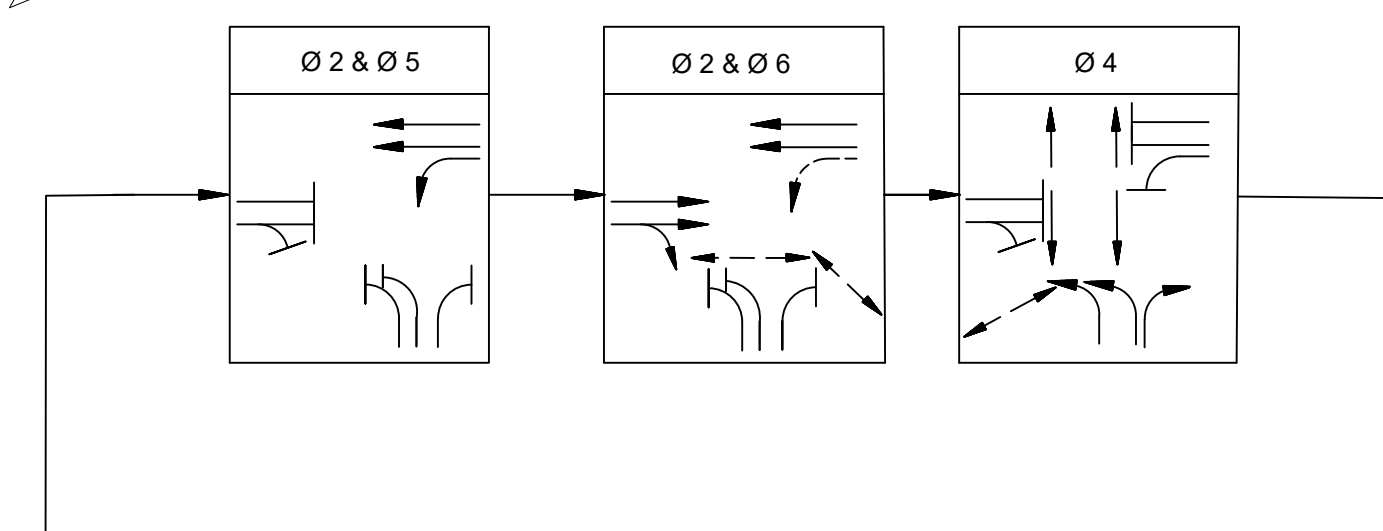
- 1. ROUTE 1A (SOUTH STREET) AND WRENTHAM CROSSING
2. ROUTE 1A (SOUTH STREET) AND OUTLETS BOULEVARD /MOBIL DRIVEWAY
3. ROUTE 1A (SOUTH STREET) AND I-495 SB RAMP
4. ROUTE 1A (SOUTH STREET) AND I-495 NB RAMP

GENERAL NOTES:

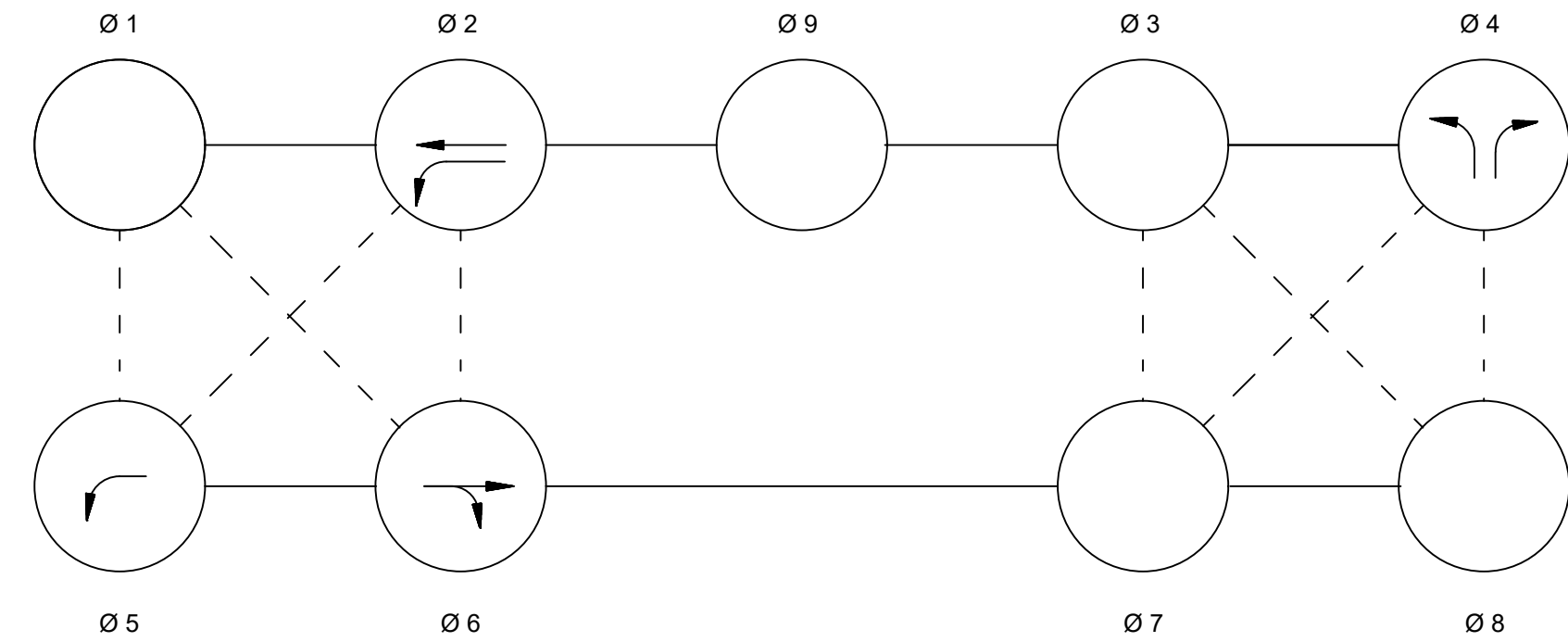
STANDARD NEMA CLEARANCES SHALL APPLY. MAXIMUM GREEN 1 & 2 SHALL ONLY BE IN EFFECT DURING FREE OPERATION. DURING FREE OPERATION, MAXIMUM GREEN 1 SHALL BE IN EFFECT ON WEEKDAYS FROM 7:00 AM TO 11:00 AM. DURING FREE OPERATION, MAXIMUM GREEN 2 SHALL BE IN EFFECT ON WEEKDAYS FROM 11:00AM TO 7:00PM. DURING FREE OPERATION, MAXIMUM GREEN 3 SHALL BE IN EFFECT ON SATURDAYS FROM 12:00AM TO 6:00PM AND SUNDAYS/HOLIDAYS FROM 12:00 PM TO 5:00PM.

- * PEDESTRIAN PHASE UPON PUSH-BUTTON ACTIVATION ONLY
** REFER TO RAMP PREEMPTION NOTES
*** SEE SIGNAL PLAN FOR RT 1A & I-495 NB RAMPS PREEMPTION TIMING
**** ELECTRONIC R10-11a BLANK OUT SIGNS (N & P) SHALL ONLY BE ILLUMINATED DURING PHASE 4 UPON PUSH-BUTTON ACTIVATION FOR THE PEDESTRIAN PHASE & WILL BE DARK DURING ALL OTHER TIMES.
***** FLASHING YELLOW ARROW FOR SIGNAL INDICATIONS F, G & H SHALL ONLY BE DISPLAYED DURING PHASE 4 UPON PUSH BUTTON ACTIVATION FOR THE PEDESTRIAN PHASE. SIGNAL INDICATIONS F, G & H SHALL DISPLAY GREEN LEFT ARROW DURING PHASE 4 WHEN PEDESTRIAN PHASE IS NOT ACTIVATED.

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



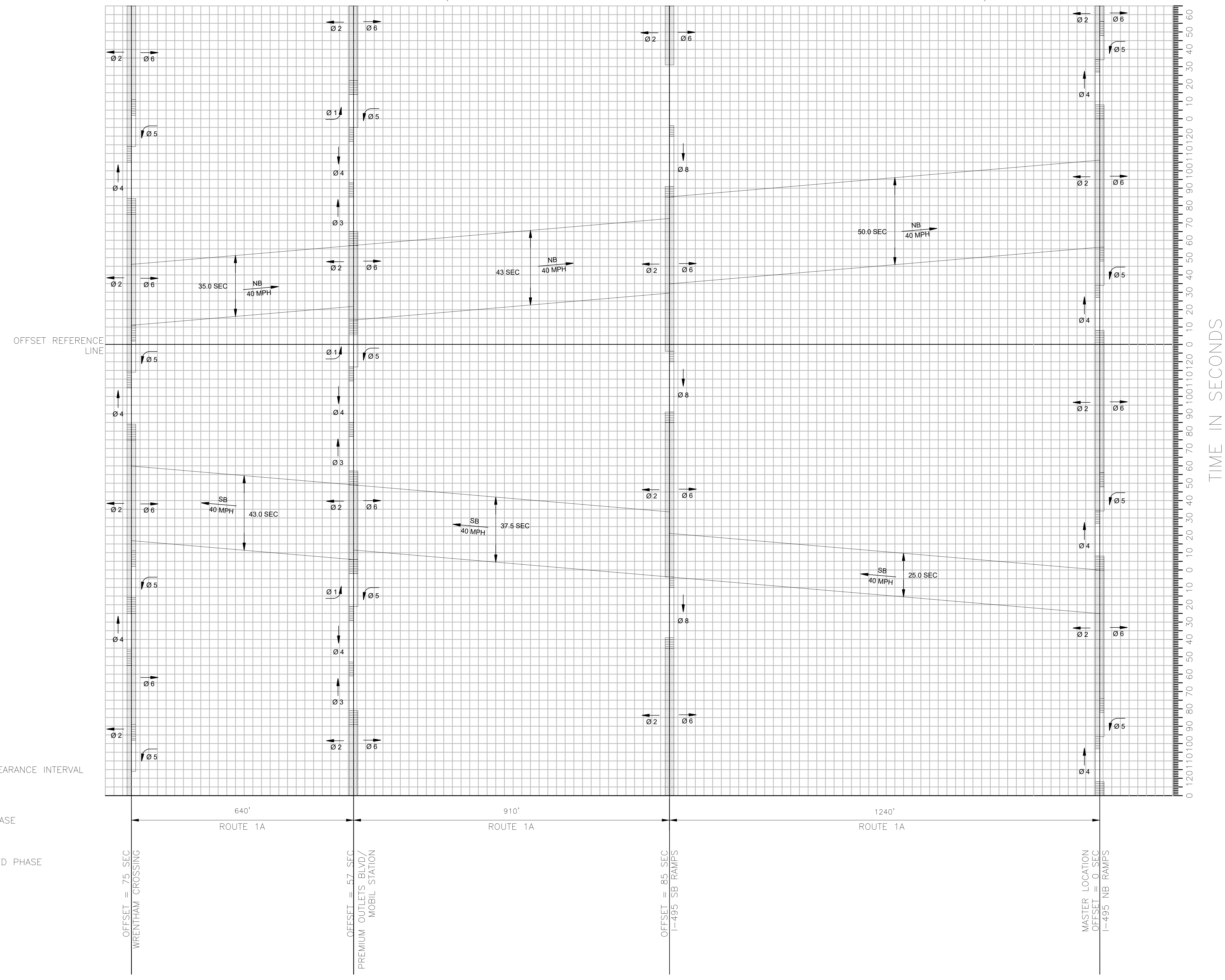
- 1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT SHALL NOT CHANGE DURING THE CHANGE INTERVAL(S) UNLESS OTHERWISE NOTED.

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	123	258
PROJECT FILE NO.		603739	

TIME SPACE DIAGRAM
SHEET 1 OF 3

ROUTE 1A
130 SECOND CYCLE (COORDINATION PLAN 1 WEEKDAY: 7:00 AM TO 11:00 AM)

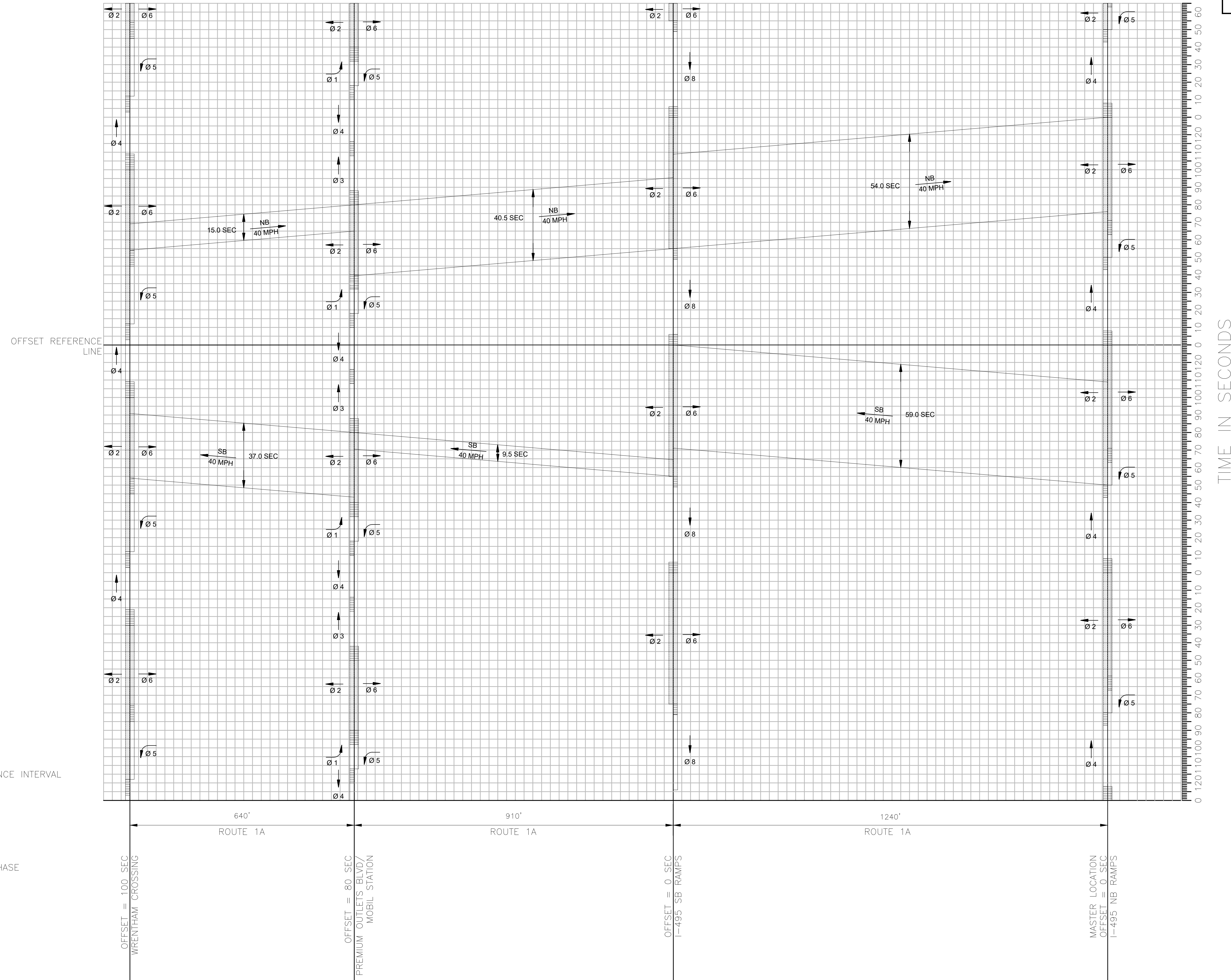


ROUTE 1A
130 SECOND CYCLE (COORDINATION PLAN 2 WEEKDAY: 11:00 AM TO 7:00 PM)

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	124	258
PROJECT FILE NO.		603739	

TIME SPACE DIAGRAM
SHEET 2 OF 3



TIME IN SECONDS

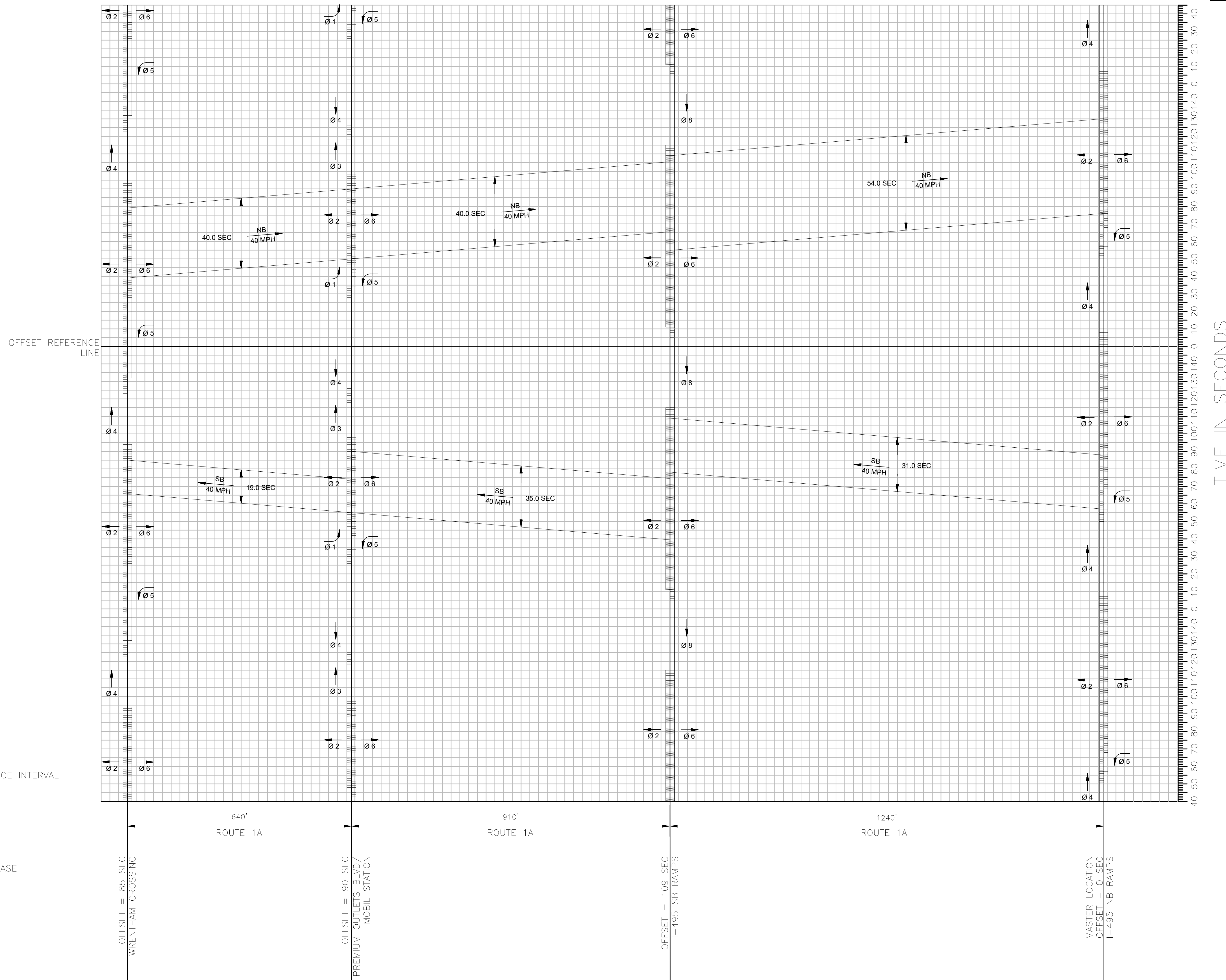
- LEGEND
- YELLOW/RED CLEARANCE INTERVAL
 - $\phi \times$ GREEN TIME FOR COORDINATED PHASE
 - $\phi \times$ GREEN TIME FOR NON-COORDINATED PHASE

ROUTE 1A
 150 SECOND CYCLE (COORDINATION PLAN 3 SAT: 10:00 AM TO 6:00 PM;
 SUN/HOLIDAYS: 12:00 PM TO 5:00 PM)

WRENTHAM, MA
 I-495 / ROUTE 1A RAMP

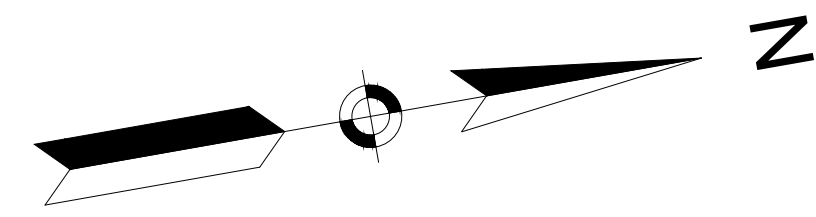
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	125	258
PROJECT FILE NO.		603739	

TIME SPACE DIAGRAM
 SHEET 3 OF 3



LEGEND

- YELLOW/RED CLEARANCE INTERVAL
- ϕx GREEN TIME FOR COORDINATED PHASE
- ϕx GREEN TIME FOR NON-COORDINATED PHASE



PLANT SCHEDULE

SYMBOL/ID	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
AS	1	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2-2.5 IN. CAL.	As Shown	
CV	3	Crataegus viridis 'Winter King'	Winter King Hawthorn	1.5-2 IN. CAL.	As Shown	
QA	1	Quercus alba	White Oak	2-2.5 IN. CAL.	As Shown	
QP	1	Quercus palustris	Pin Oak	2-2.5 IN. CAL.	As Shown	

LEGEND:

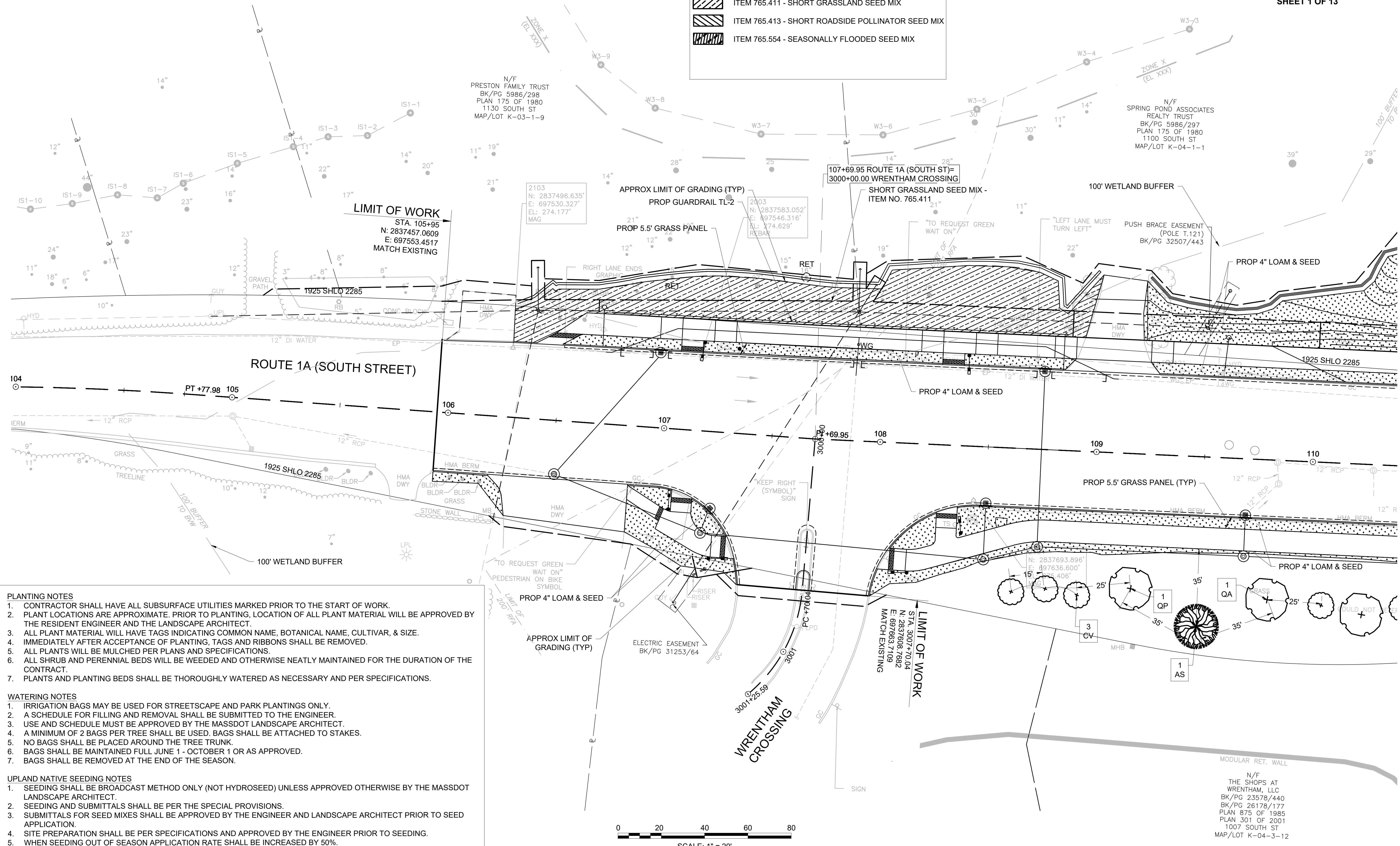
- PROPOSED TREE
- L&S LAWN BUFFER
- ITEM 765.411 - SHORT GRASSLAND SEED MIX
- ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
- ITEM 765.554 - SEASONALLY FLOODED SEED MIX

**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	126	258

PROJECT FILE NO. 603739

**LANDSCAPE PLAN
SHEET 1 OF 13**



PLANTING NOTES

- CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
- PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
- IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
- ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
- ALL SHRUB AND PERENNIAL BEDS WILL BE WEEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
- PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

WATERING NOTES

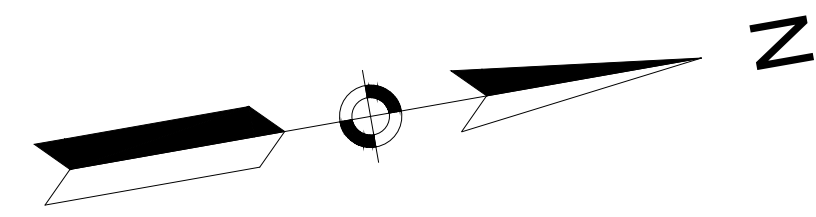
- IRRIGATION BAGS MAY BE USED FOR STREETScape AND PARK PLANTINGS ONLY.
- A SCHEDULE FOR FILLING AND REMOVAL SHALL BE SUBMITTED TO THE ENGINEER.
- USE AND SCHEDULE MUST BE APPROVED BY THE MASSDOT LANDSCAPE ARCHITECT.
- A MINIMUM OF 2 BAGS PER TREE SHALL BE USED. BAGS SHALL BE ATTACHED TO STAKES.
- NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
- BAGS SHALL BE MAINTAINED FULL JUNE 1 - OCTOBER 1 OR AS APPROVED.
- BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

UPLAND NATIVE SEEDING NOTES

- SEEDING SHALL BE BROADCAST METHOD ONLY (NOT HYDROSEED) UNLESS APPROVED OTHERWISE BY THE MASSDOT LANDSCAPE ARCHITECT.
- SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
- SUBMITTALS FOR SEED MIXES SHALL BE APPROVED BY THE ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO SEED APPLICATION.
- SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
- WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.



CONTINUED ON SHEET NO. 127



PLANT SCHEDULE

SYMBOL/ID	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
AG	2	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7-8 FT.	As Shown	
AR	1	Acer rubrum 'October Glory'	Red Maple	2-2.5 IN. CAL.	As Shown	

PLANTING NOTES

- CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
- PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
- IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
- ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
- ALL SHRUB AND PERENNIAL BEDS WILL BE WEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
- PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

WATERING NOTES

- IRRIGATION BAGS MAY BE USED FOR STREETScape AND PARK PLANTINGS ONLY.
- A SCHEDULE FOR FILLING AND REMOVAL SHALL BE SUBMITTED TO THE ENGINEER.
- USE AND SCHEDULE MUST BE APPROVED BY THE MASSDOT LANDSCAPE ARCHITECT.
- A MINIMUM OF 2 BAGS PER TREE SHALL BE USED. BAGS SHALL BE ATTACHED TO STAKES.
- NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
- BAGS SHALL BE MAINTAINED FULL JUNE 1 - OCTOBER 1 OR AS APPROVED.
- BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

UPLAND NATIVE SEEDING NOTES

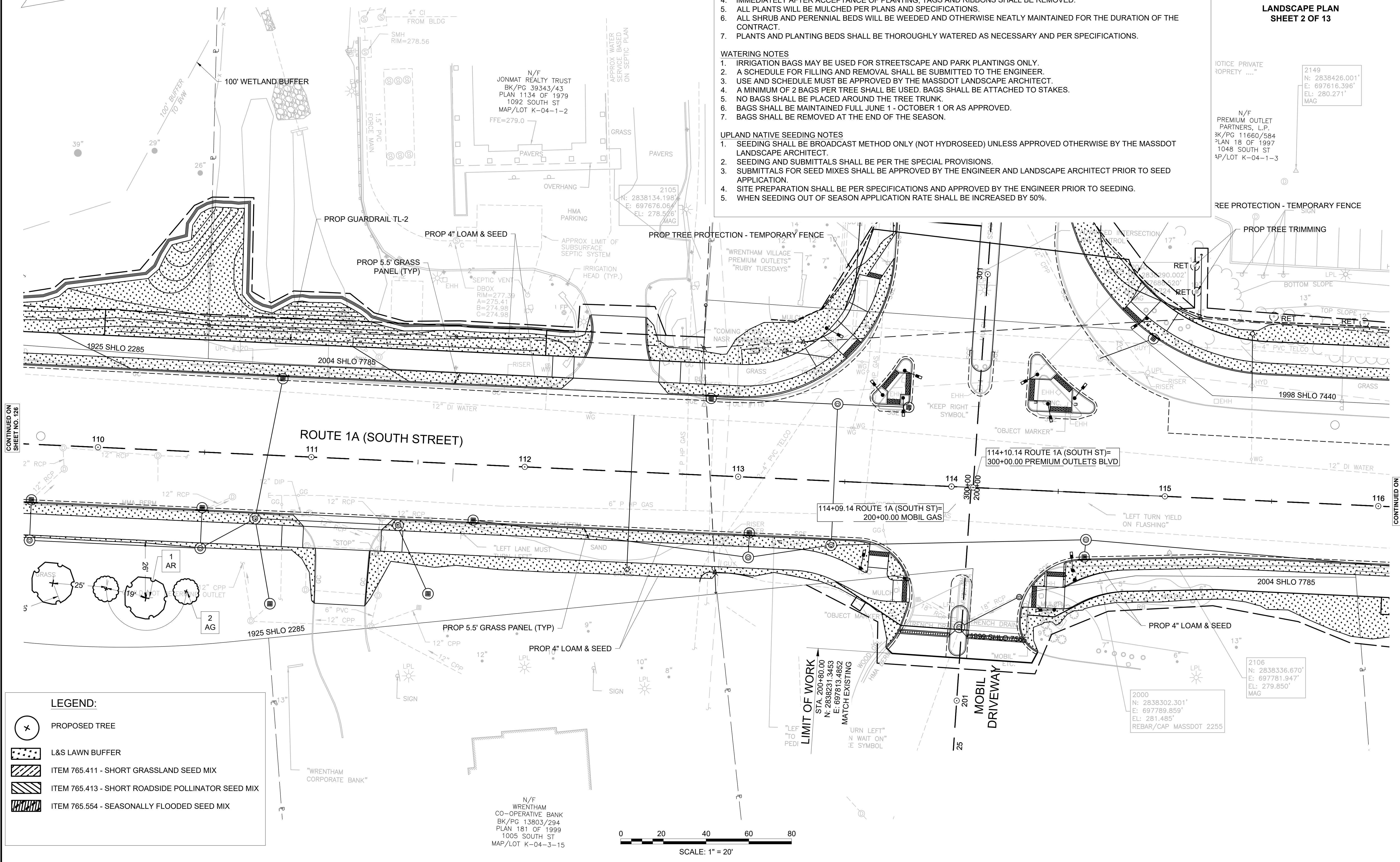
- SEEDING SHALL BE BROADCAST METHOD ONLY (NOT HYDROSEED) UNLESS APPROVED OTHERWISE BY THE MASSDOT LANDSCAPE ARCHITECT.
- SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
- SUBMITTALS FOR SEED MIXES SHALL BE APPROVED BY THE ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO SEED APPLICATION.
- SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
- WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.

**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	127	258

PROJECT FILE NO. 603739

**LANDSCAPE PLAN
SHEET 2 OF 13**



2149
N: 2838426.001'
E: 697616.396'
EL: 280.271'
MAG

N/F
PREMIUM OUTLET
PARTNERS, L.P.
3K/PG 11660/584
PLAN 18 OF 1997
1048 SOUTH ST
AP/LOT K-04-1-3

REE PROTECTION - TEMPORARY FENCE

PROP TREE TRIMMING

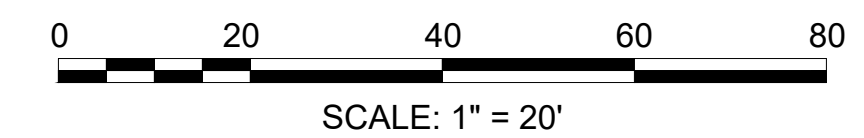
CONTINUED ON
SHEET NO. 126

CONTINUED ON
SHEET NO. 128

LEGEND:

- PROPOSED TREE
- L&S LAWN BUFFER
- ITEM 765.411 - SHORT GRASSLAND SEED MIX
- ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
- ITEM 765.554 - SEASONALLY FLOODED SEED MIX

N/F
WRENTHAM
CO-OPERATIVE BANK
BK/PG 13803/294
PLAN 181 OF 1999
1005 SOUTH ST
MAP/LOT K-04-3-15



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	128	258
PROJECT FILE NO.			603739

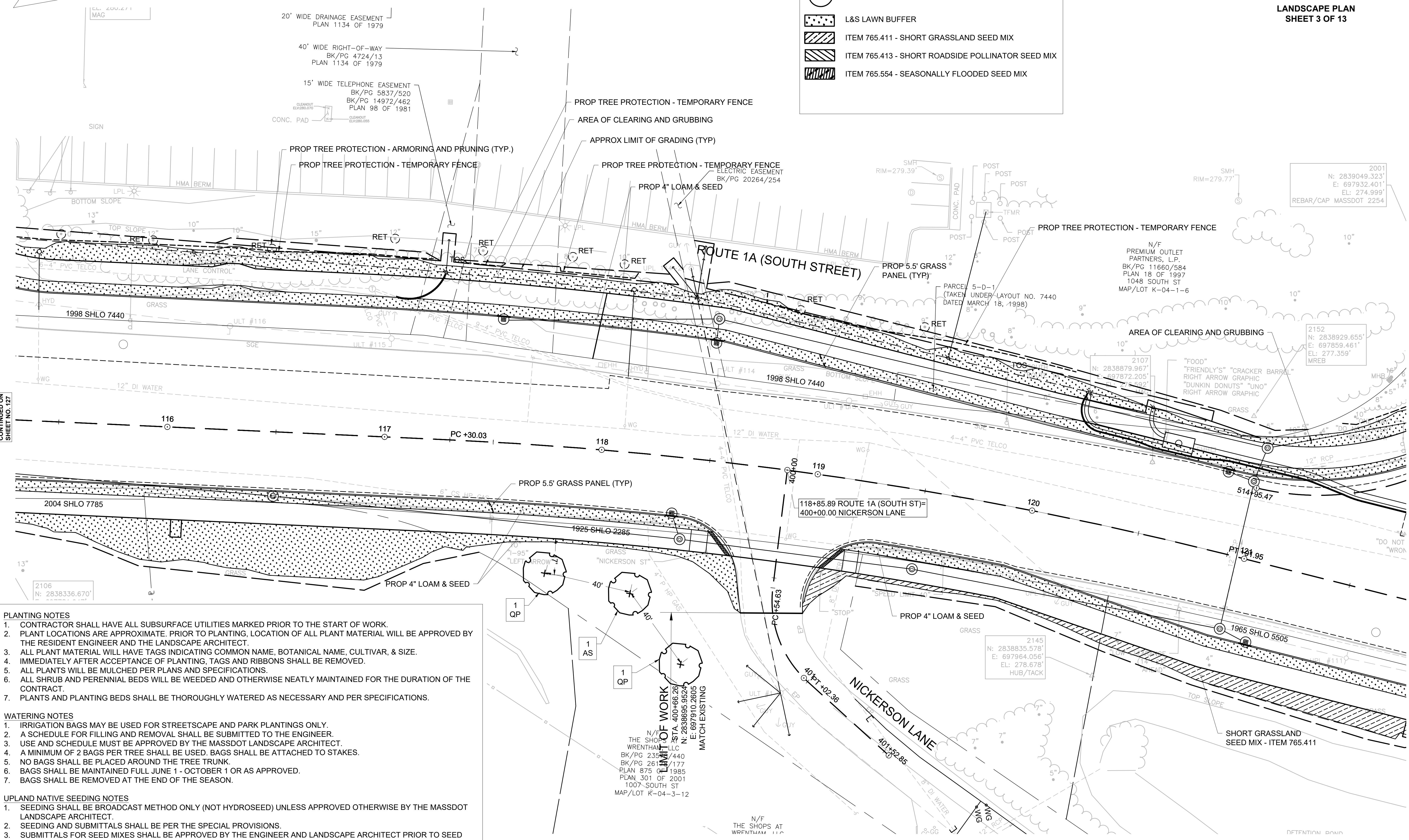
LANDSCAPE PLAN
SHEET 3 OF 13

PLANT SCHEDULE

SYMBOL/ID	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
AS	1	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2-2.5 IN. CAL.	As Shown	
QP	2	Quercus palustris	Pin Oak	2-2.5 IN. CAL.	As Shown	

LEGEND:

- PROPOSED TREE
- L&S LAWN BUFFER
- ITEM 765.411 - SHORT GRASSLAND SEED MIX
- ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
- ITEM 765.554 - SEASONALLY FLOODED SEED MIX



CONTINUED ON SHEET NO. 127

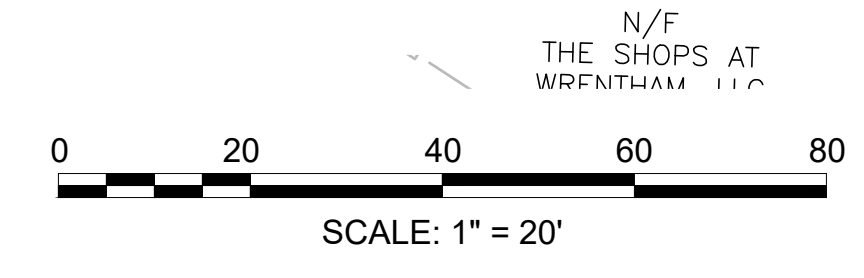
CONTINUED ON SHEET NO. 129

- PLANTING NOTES**
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 - PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

- WATERING NOTES**
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 - A SCHEDULE FOR FILLING AND REMOVAL SHALL BE SUBMITTED TO THE ENGINEER.
 - USE AND SCHEDULE MUST BE APPROVED BY THE MASSDOT LANDSCAPE ARCHITECT.
 - A MINIMUM OF 2 BAGS PER TREE SHALL BE USED. BAGS SHALL BE ATTACHED TO STAKES.
 - NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
 - BAGS SHALL BE MAINTAINED FULL JUNE 1 - OCTOBER 1 OR AS APPROVED.
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 - SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
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 - SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
 - WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.

N/F THE SHOPS AT WRENTHAM, LLC
BK/PG 235/440
BK/PG 261/177
PLAN 875 OF 1985
PLAN 301 OF 2001
1007 SOUTH ST
MAP/LOT K-04-3-12

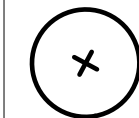






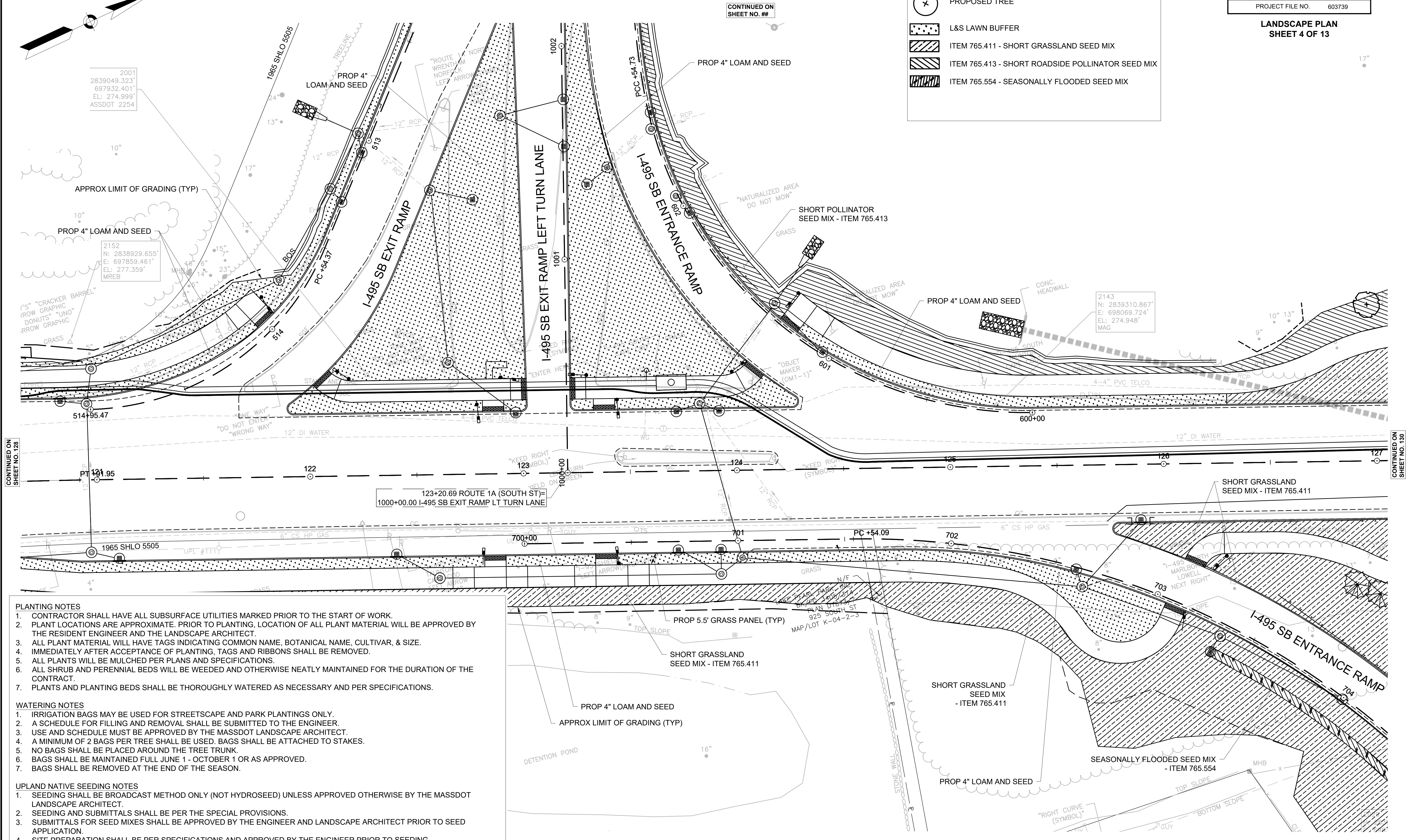
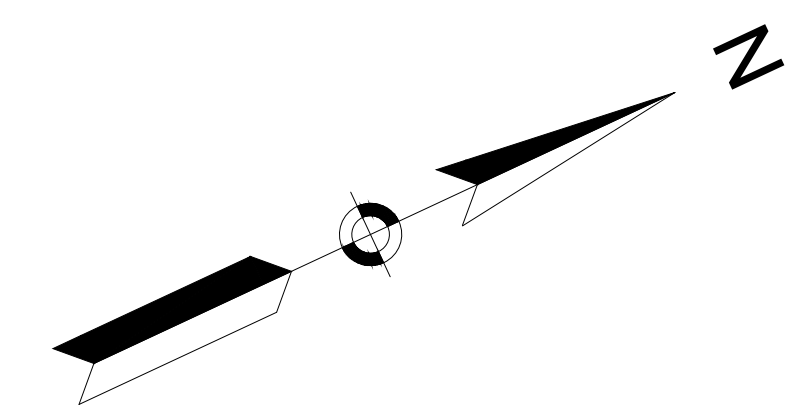
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	129	258
PROJECT FILE NO. 603739			

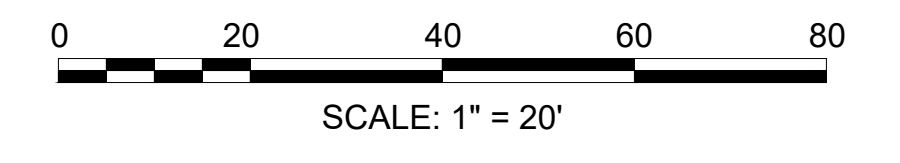
LANDSCAPE PLAN
SHEET 4 OF 13

LEGEND:

-  PROPOSED TREE
-  L&S LAWN BUFFER
-  ITEM 765.411 - SHORT GRASSLAND SEED MIX
-  ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
-  ITEM 765.554 - SEASONALLY FLOODED SEED MIX



- PLANTING NOTES**
- CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
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CONTINUED ON
SHEET NO. 128






CONTINUED ON
SHEET NO. 130

CONTINUED ON
SHEET NO. ##

PLANT SCHEDULE

SYMBOL/ID	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
AG	2	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7-8 FT.	As Shown	
CC	2	Cercis canadensis	Eastern Redbud	1.5-2 IN. CAL.	As Shown	
JV	4	Juniper virginiana 'Burkii'	Burkii Eastern Red Cedar	5-6 FT.	As Shown	

LEGEND:

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-  L&S LAWN BUFFER
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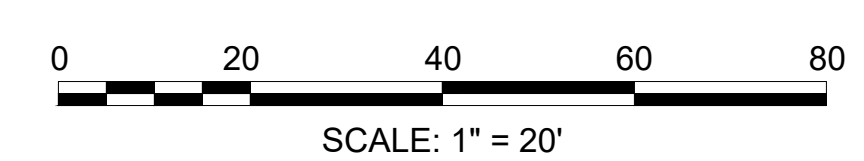
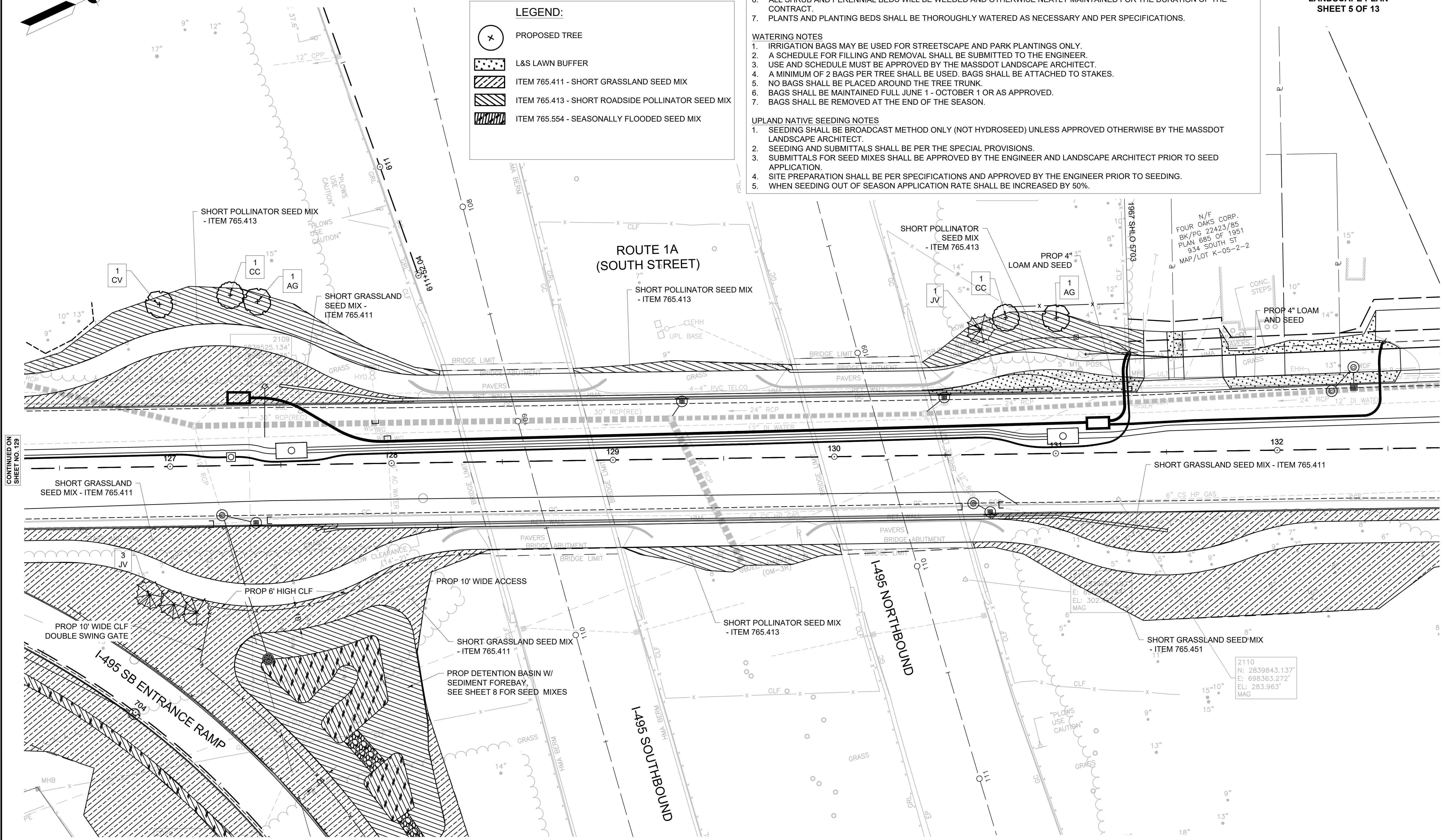
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WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	130	258

PROJECT FILE NO. 603739

LANDSCAPE PLAN
SHEET 5 OF 13








CONTINUED ON
SHEET NO. 129

CONTINUED ON
SHEET NO. 131

PLANT SCHEDULE

SYMBOL/ID	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES
AG	2	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7-8 FT.	As Shown	
CC	2	Cercis canadensis	Eastern Redbud	1.5-2 IN.CAL.	As Shown	
CV	2	Crataegus viridis 'Winter King'	Winter King Hawthorn	1.5-2 IN.CAL.	As Shown	

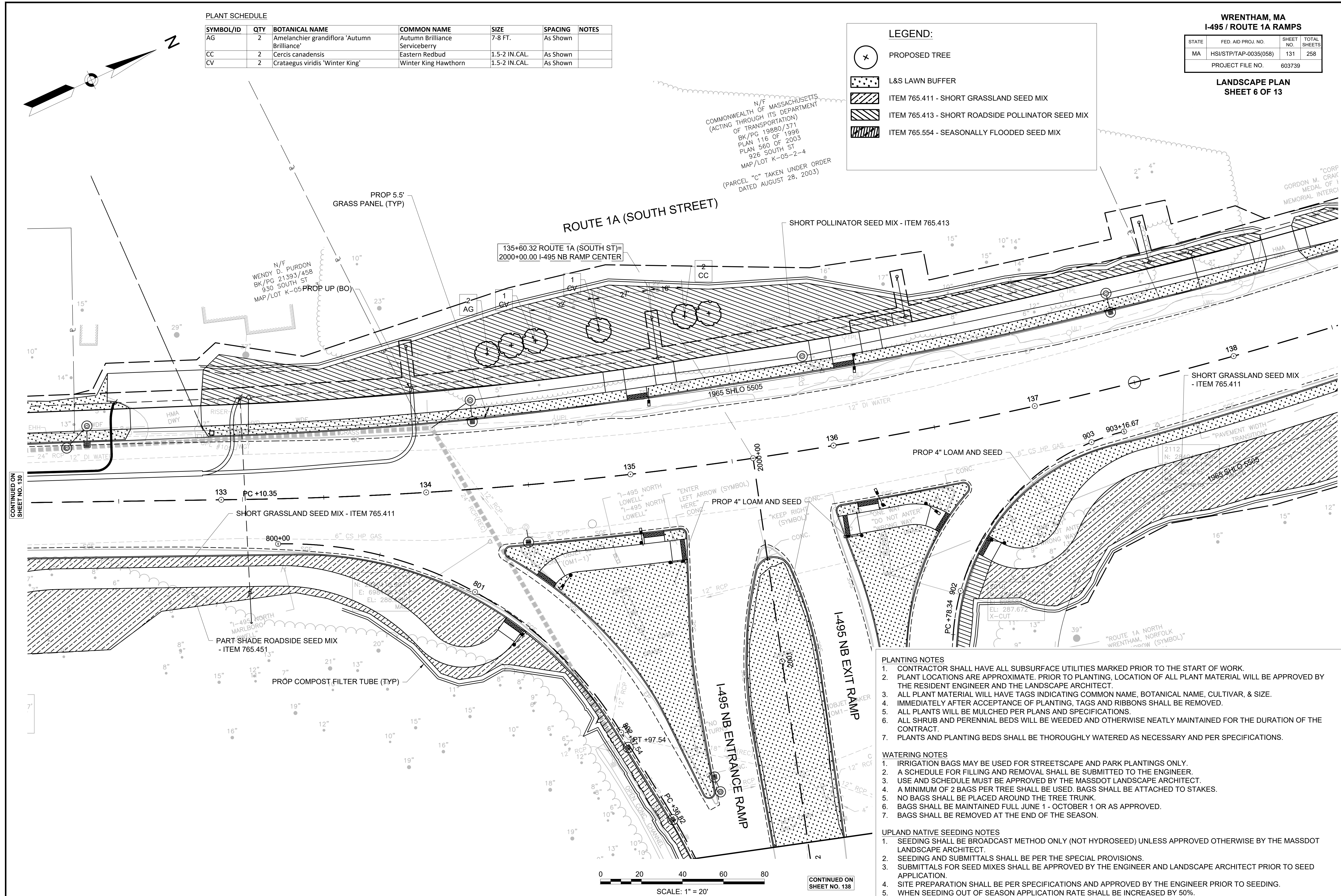
LEGEND:

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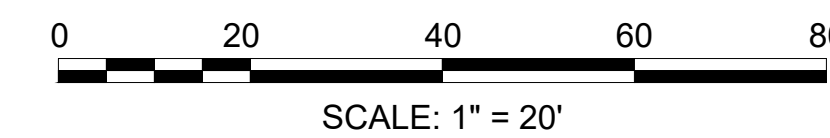
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	131	258
PROJECT FILE NO.		603739	

LANDSCAPE PLAN
SHEET 6 OF 13



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CONTINUED ON
SHEET NO. 138

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SHEET NO. 130






CONTINUED ON
SHEET NO. 132

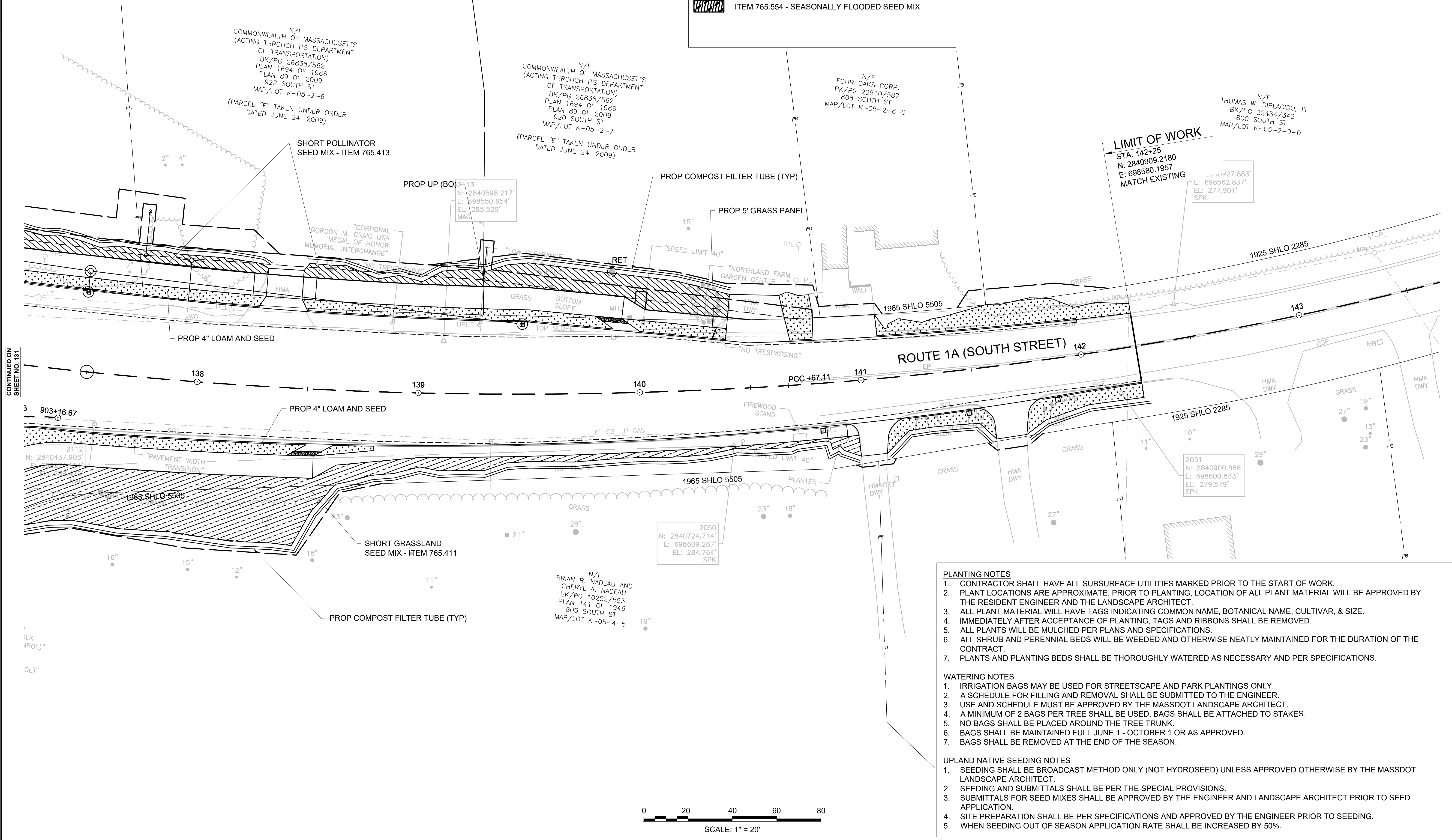
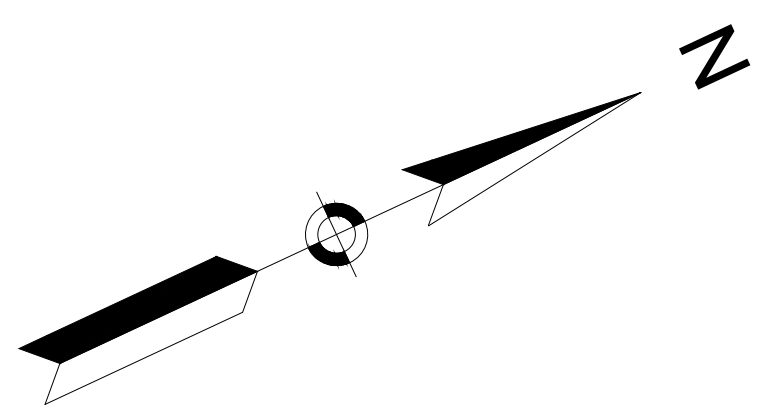
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	132	258
PROJECT FILE NO.		603739	

LANDSCAPE PLAN
SHEET 7 OF 13

LEGEND:

-  PROPOSED TREE
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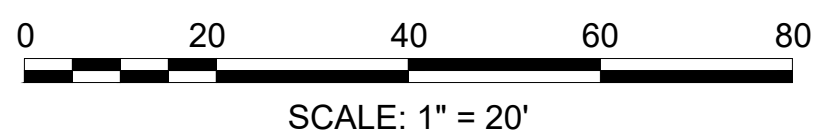


LIMIT OF WORK
STA. 142+25
N: 2840909.2180
E: 698580.1957
MATCH EXISTING

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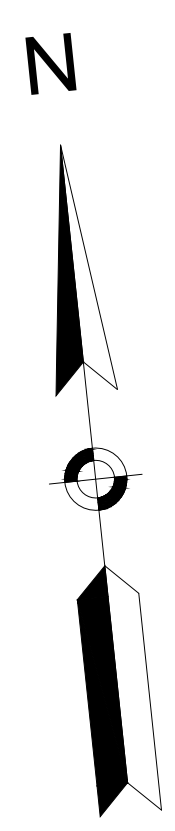
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SHEET NO. 131

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WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	133	258
PROJECT FILE NO.		603739	

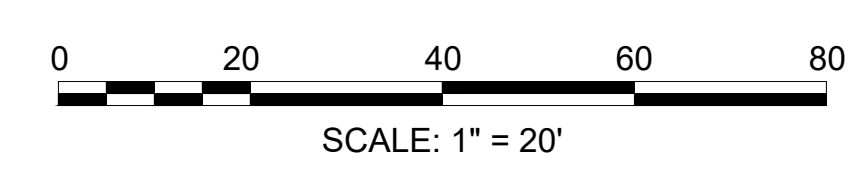
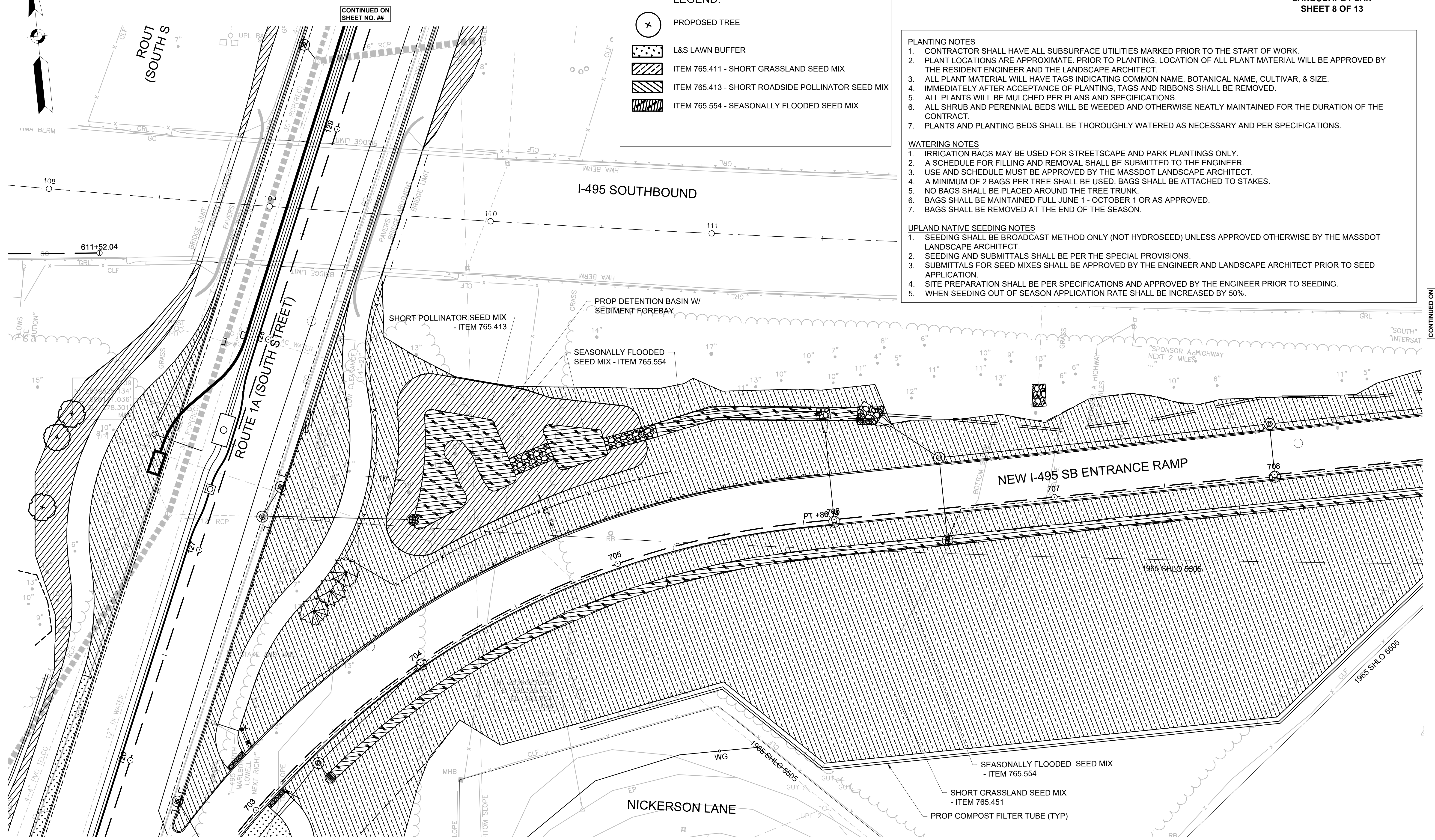
LANDSCAPE PLAN
SHEET 8 OF 13



LEGEND:

- PROPOSED TREE
- L&S LAWN BUFFER
- ITEM 765.411 - SHORT GRASSLAND SEED MIX
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CONTINUED ON
SHEET NO. 129

CONTINUED ON
SHEET NO. 134

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	134	258
PROJECT FILE NO.		603739	

LANDSCAPE PLAN
SHEET 9 OF 13

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WATERING NOTES

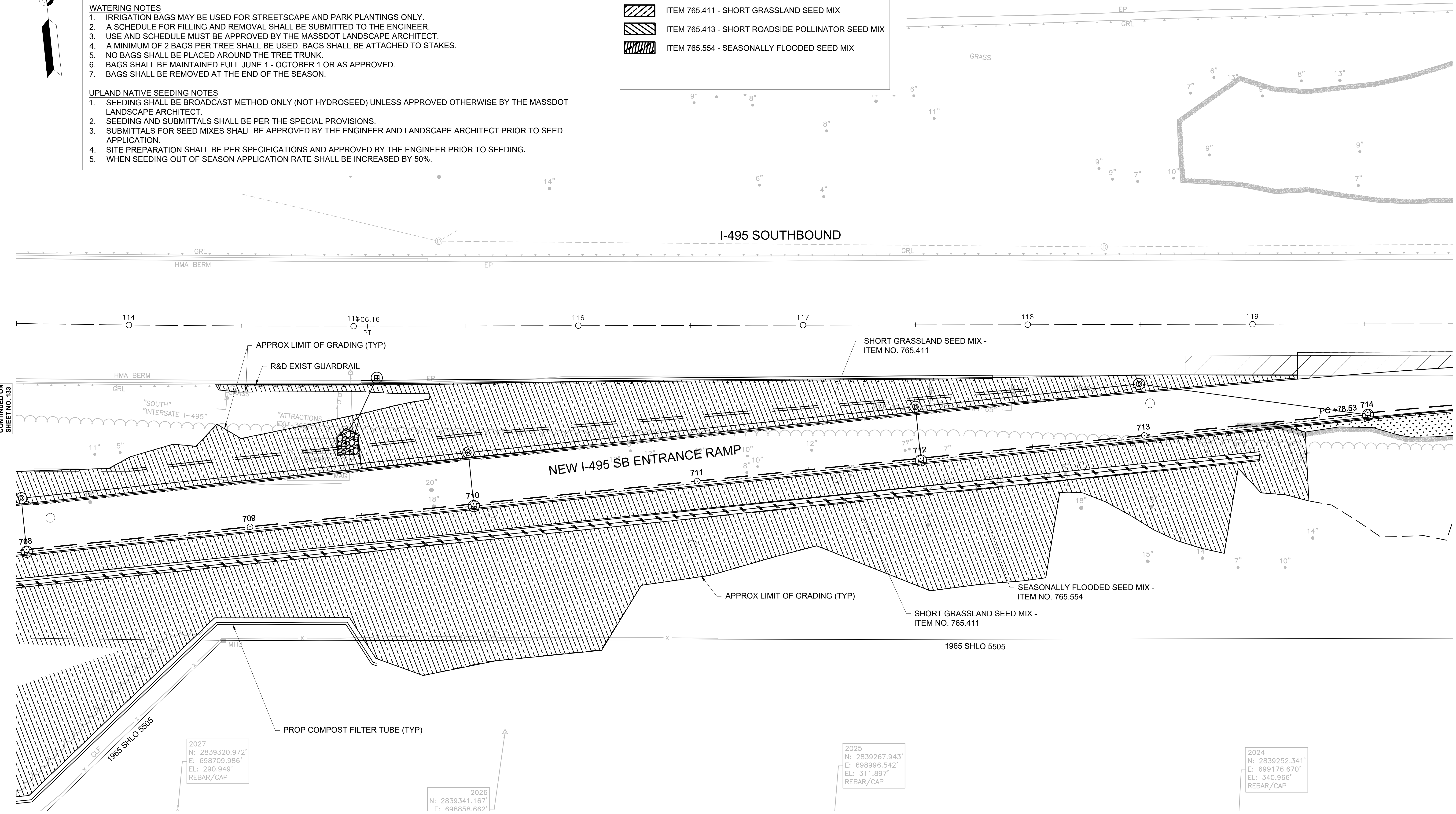
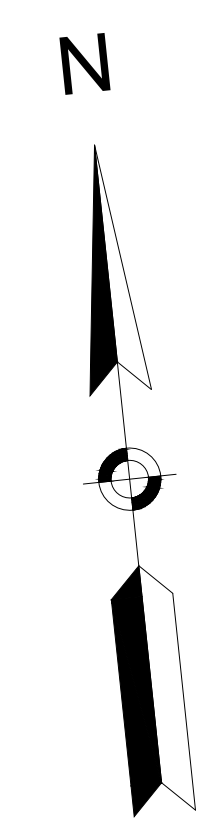
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CONTINUED ON SHEET NO. 133

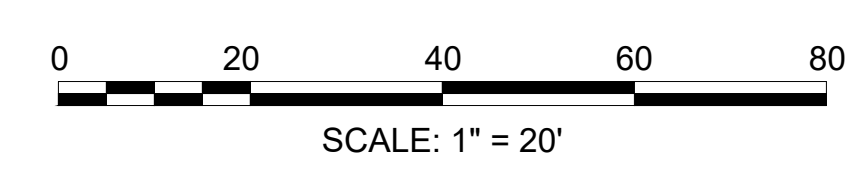
CONTINUED ON SHEET NO. 135

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EL: 290.949'
REBAR/CAP

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N: 2839341.167'
E: 698858.662'

2025
N: 2839267.943'
E: 698896.542'
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REBAR/CAP

2024
N: 2839252.341'
E: 699176.670'
EL: 340.966'
REBAR/CAP








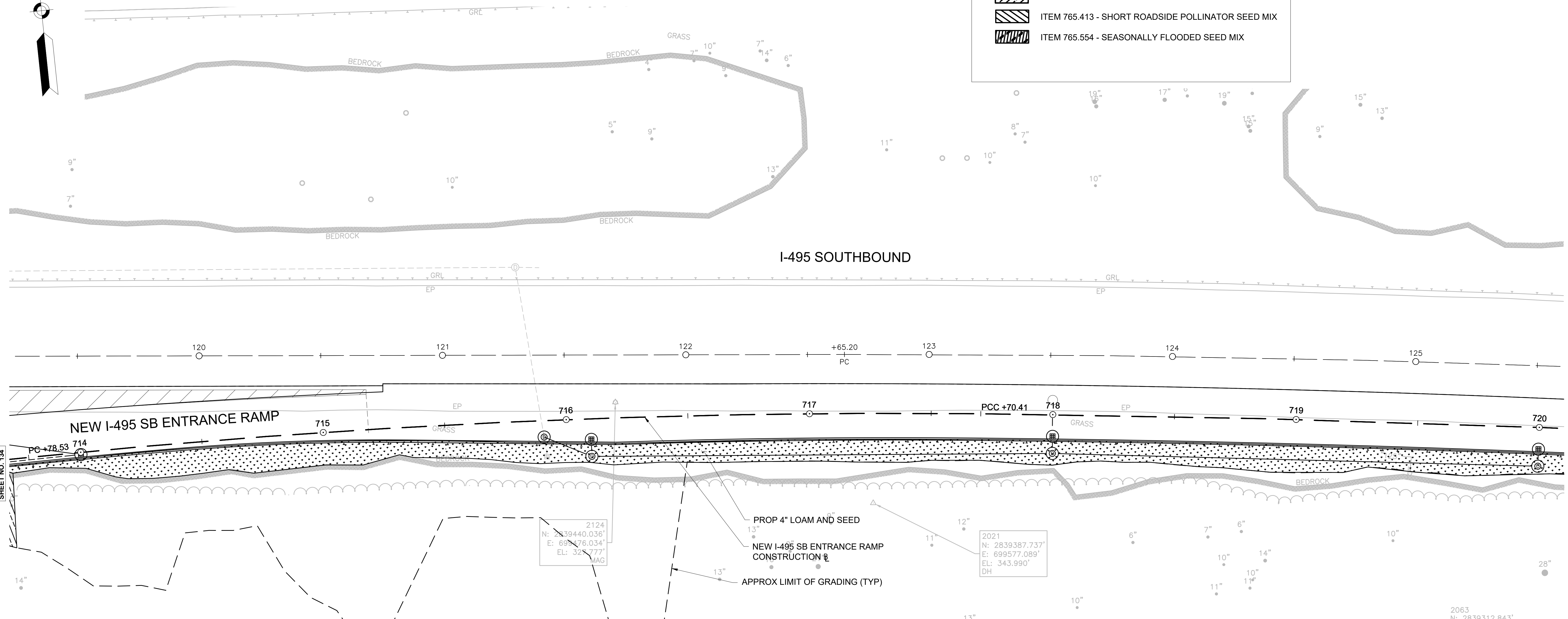
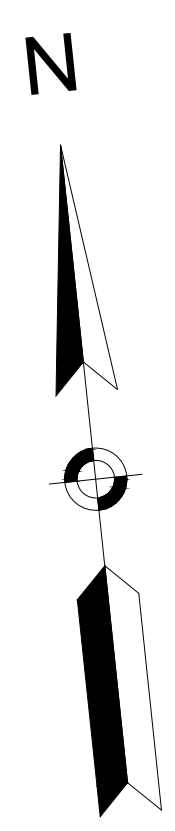
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	135	258
PROJECT FILE NO.		603739	

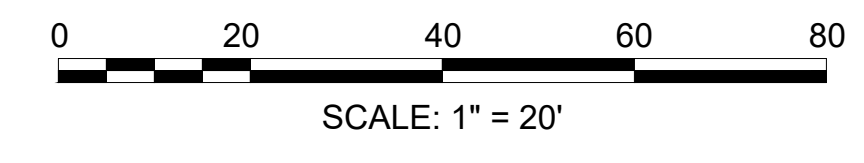
LANDSCAPE PLAN
SHEET 10 OF 13

LEGEND:

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- UPLAND NATIVE SEEDING NOTES**
- SEEDING SHALL BE BROADCAST METHOD ONLY (NOT HYDROSEED) UNLESS APPROVED OTHERWISE BY THE MASSDOT LANDSCAPE ARCHITECT.
 - SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
 - SUBMITTALS FOR SEED MIXES SHALL BE APPROVED BY THE ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO SEED APPLICATION.
 - SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
 - WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.



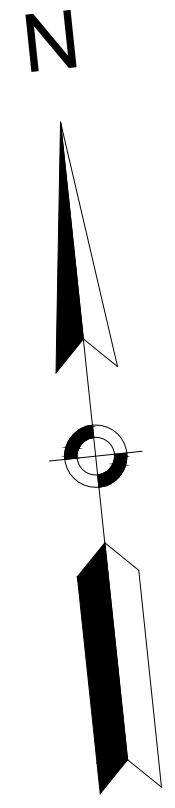
CONTINUED ON
SHEET NO. 136

603739_HD122-13(LANDSCAPE PLANS).DWG Plotted on: 25-Jul-2024 3:11 PM

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

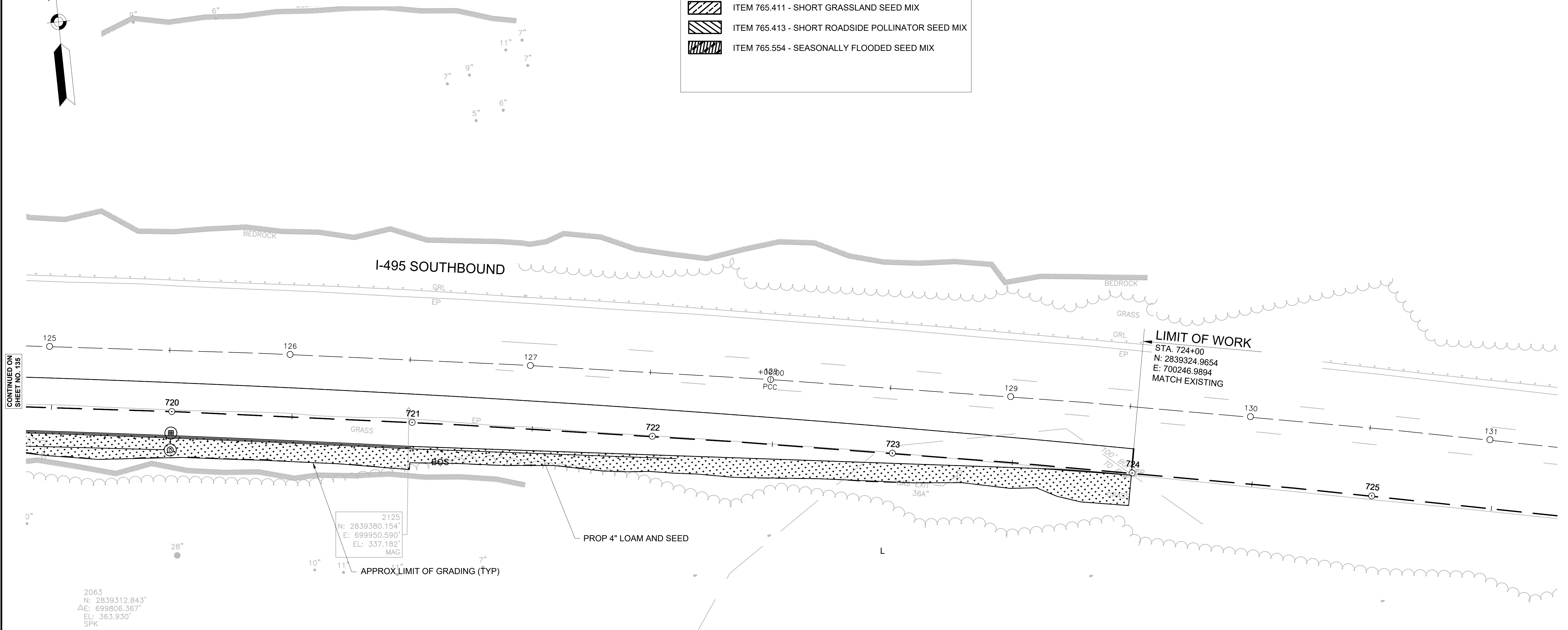
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	136	258
PROJECT FILE NO.		603739	

LANDSCAPE PLAN
SHEET 11 OF 13



LEGEND:

- PROPOSED TREE
- L&S LAWN BUFFER
- ITEM 765.411 - SHORT GRASSLAND SEED MIX
- ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
- ITEM 765.554 - SEASONALLY FLOODED SEED MIX



CONTINUED ON
SHEET NO. 135

LIMIT OF WORK
STA. 724+00
N: 2839324.9654
E: 700246.9894
MATCH EXISTING

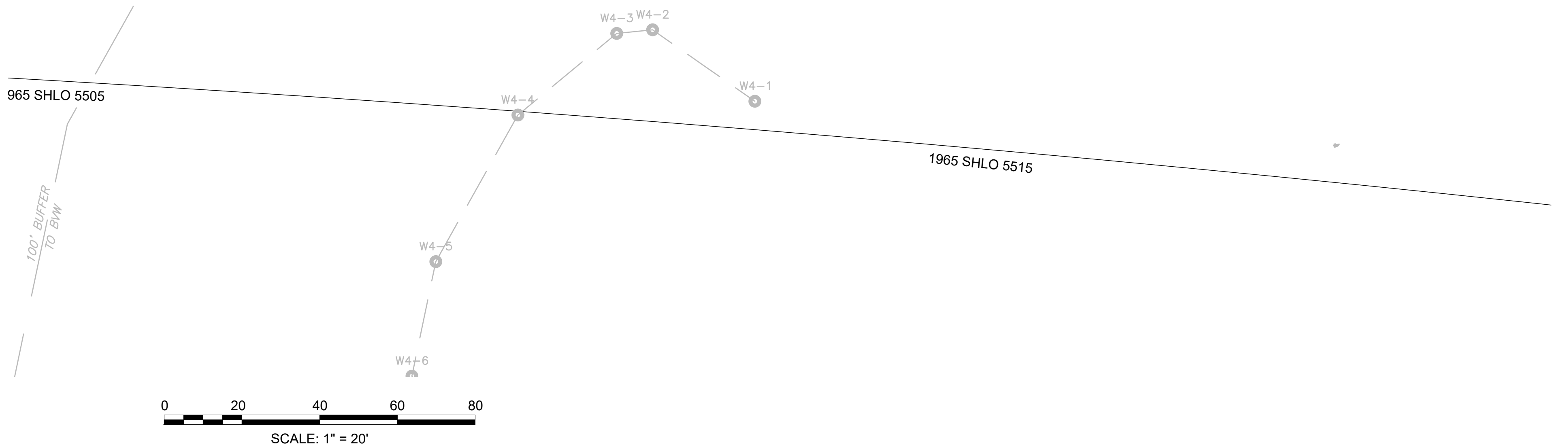
2125
N: 2839380.154'
E: 699950.590'
EL: 337.182'
MAG

2063
N: 2839312.843'
E: 699806.367'
EL: 363.930'
SPK

- PLANTING NOTES**
- CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
 - PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.
 - ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
 - IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
 - ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.
 - ALL SHRUB AND PERENNIAL BEDS WILL BE WEEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.
 - PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

- WATERING NOTES**
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 - NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
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 - BAGS SHALL BE REMOVED AT THE END OF THE SEASON.

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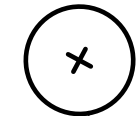






**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	137	258
PROJECT FILE NO.		603739	

**LANDSCAPE PLAN
SHEET 12 OF 13**

LEGEND:

-  PROPOSED TREE
-  L&S LAWN BUFFER
-  ITEM 765.411 - SHORT GRASSLAND SEED MIX
-  ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
-  ITEM 765.554 - SEASONALLY FLOODED SEED MIX

PLANTING NOTES

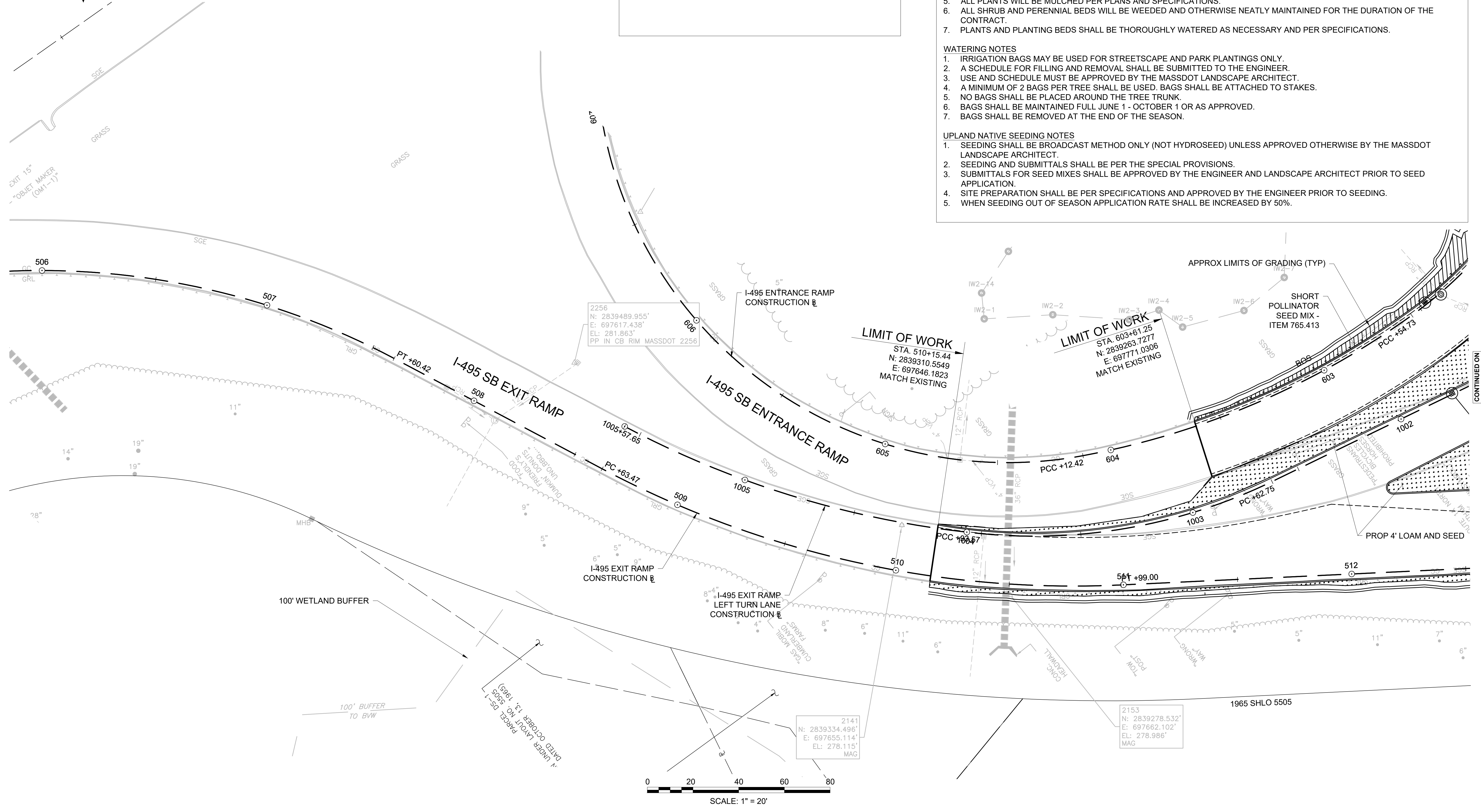
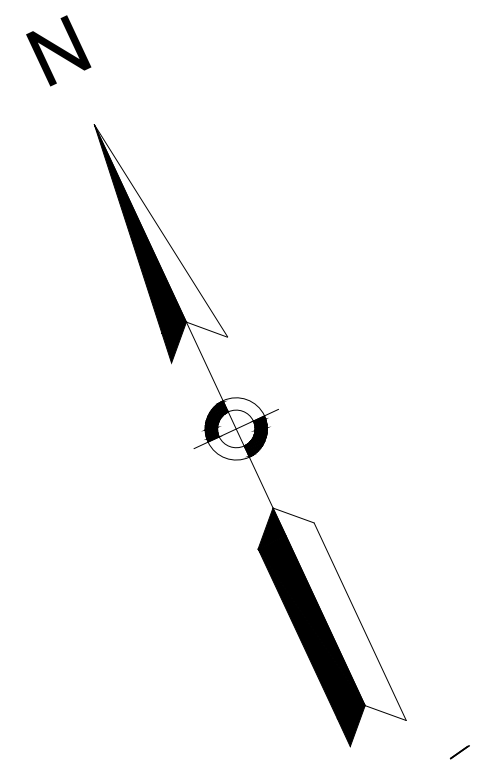
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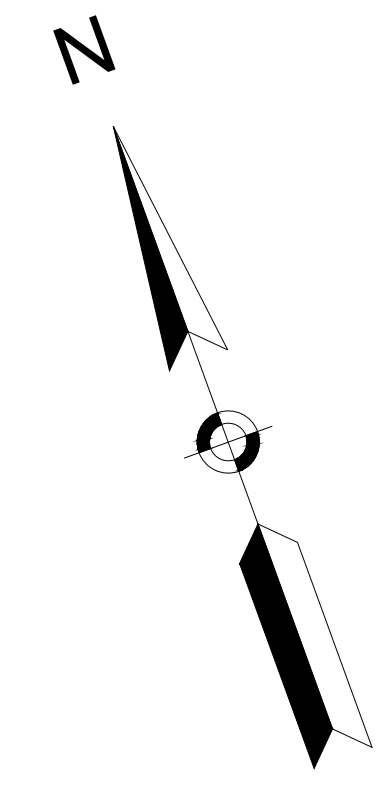


CONTINUED ON
SHEET NO. 12B

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	138	258
PROJECT FILE NO.		603739	

LANDSCAPE PLAN
SHEET 13 OF 13



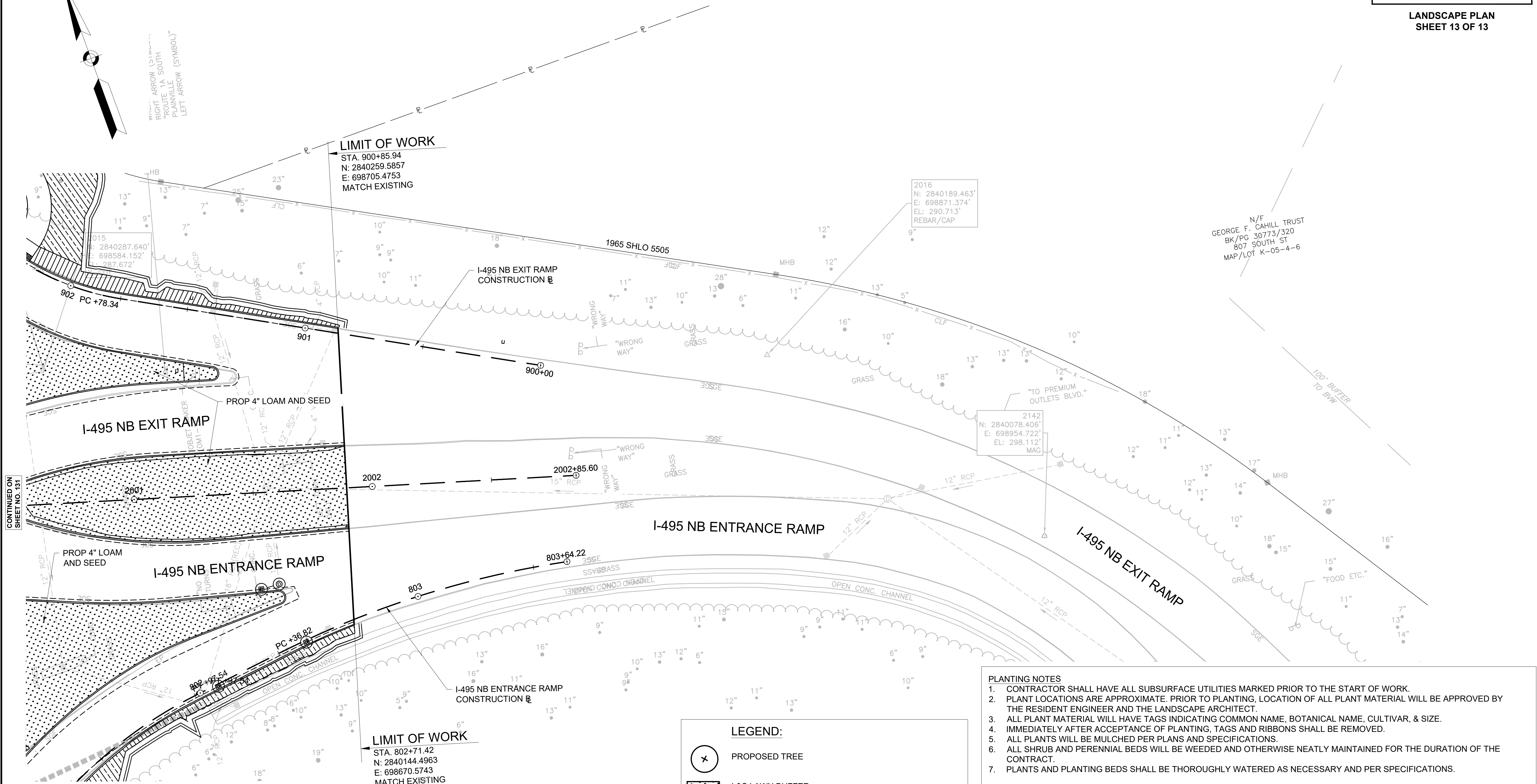
RIGHT ARROW (SYMBOL)
"ROUTE 1A SOUTH"
PLAINVILLE (SYMBOL)
LEFT ARROW (SYMBOL)

LIMIT OF WORK
STA. 900+85.94
N: 2840259.5857
E: 698705.4753
MATCH EXISTING

2016
N: 2840189.463'
E: 698871.374'
EL: 290.713'
REBAR/CAP

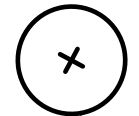

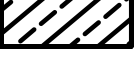


2142
N: 2840078.406'
E: 698954.722'
EL: 298.112'
MAG

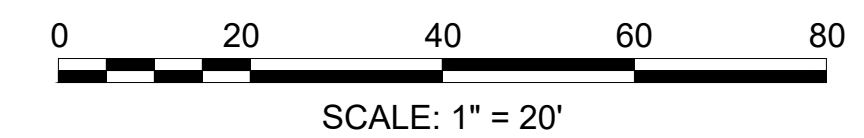
N/F
GEORGE F. CAHILL TRUST
BK/PG 30773/320
807 SOUTH ST
MAP/LOT K-05-4-6



CONTINUED ON
SHEET NO. 131

LEGEND:

-  PROPOSED TREE
-  L&S LAWN BUFFER
-  ITEM 765.411 - SHORT GRASSLAND SEED MIX
-  ITEM 765.413 - SHORT ROADSIDE POLLINATOR SEED MIX
-  ITEM 765.554 - SEASONALLY FLOODED SEED MIX



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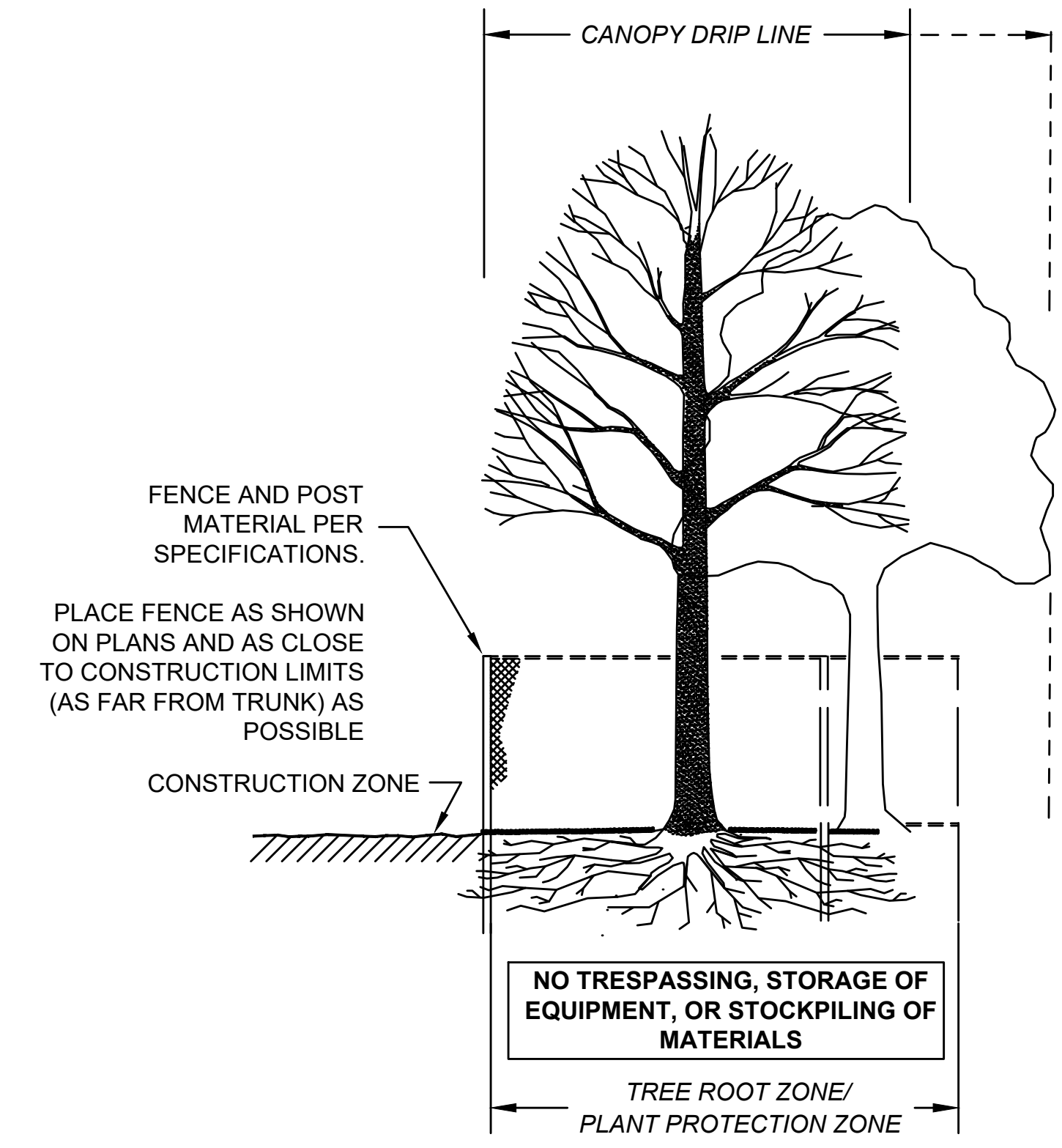
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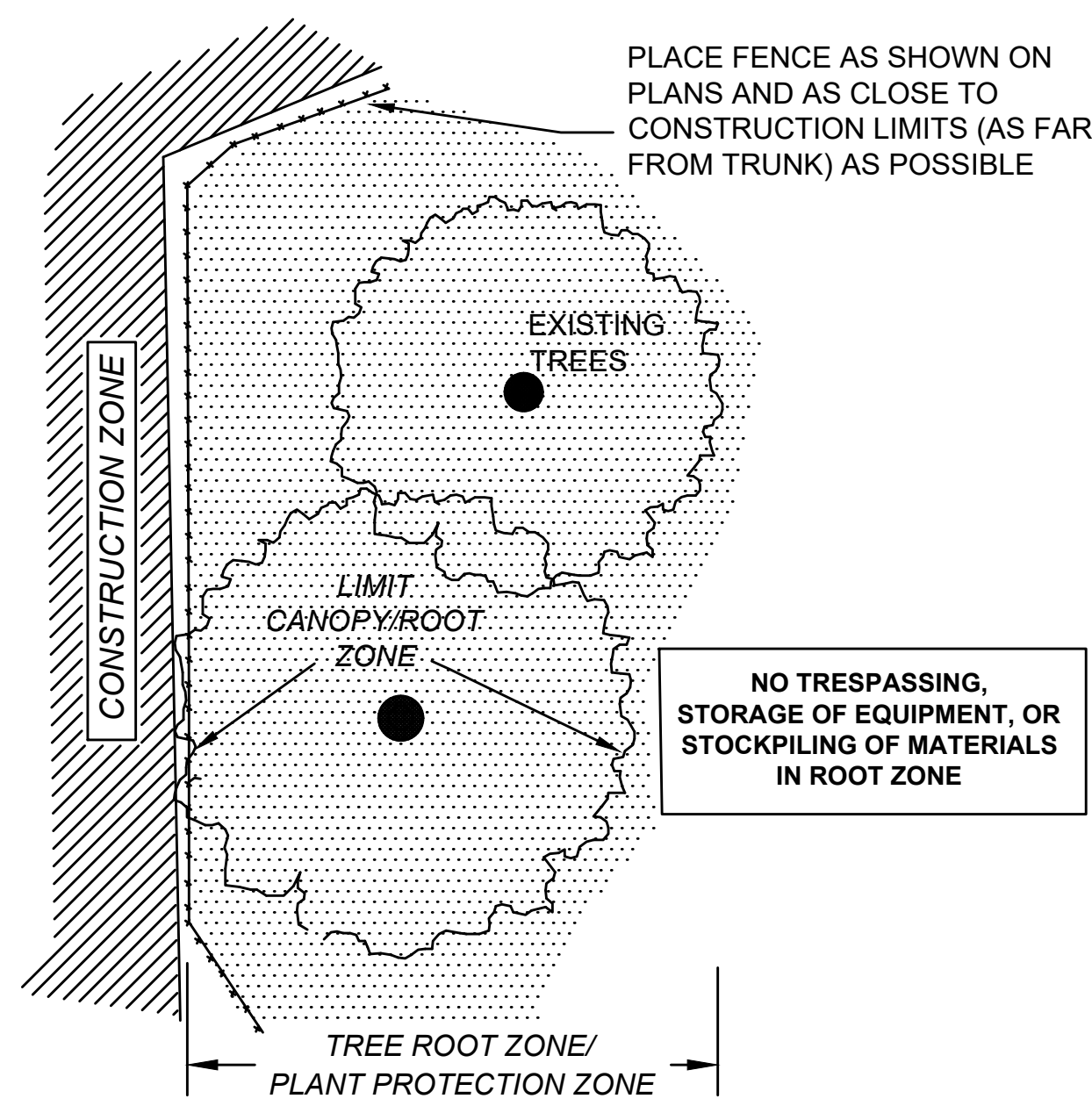
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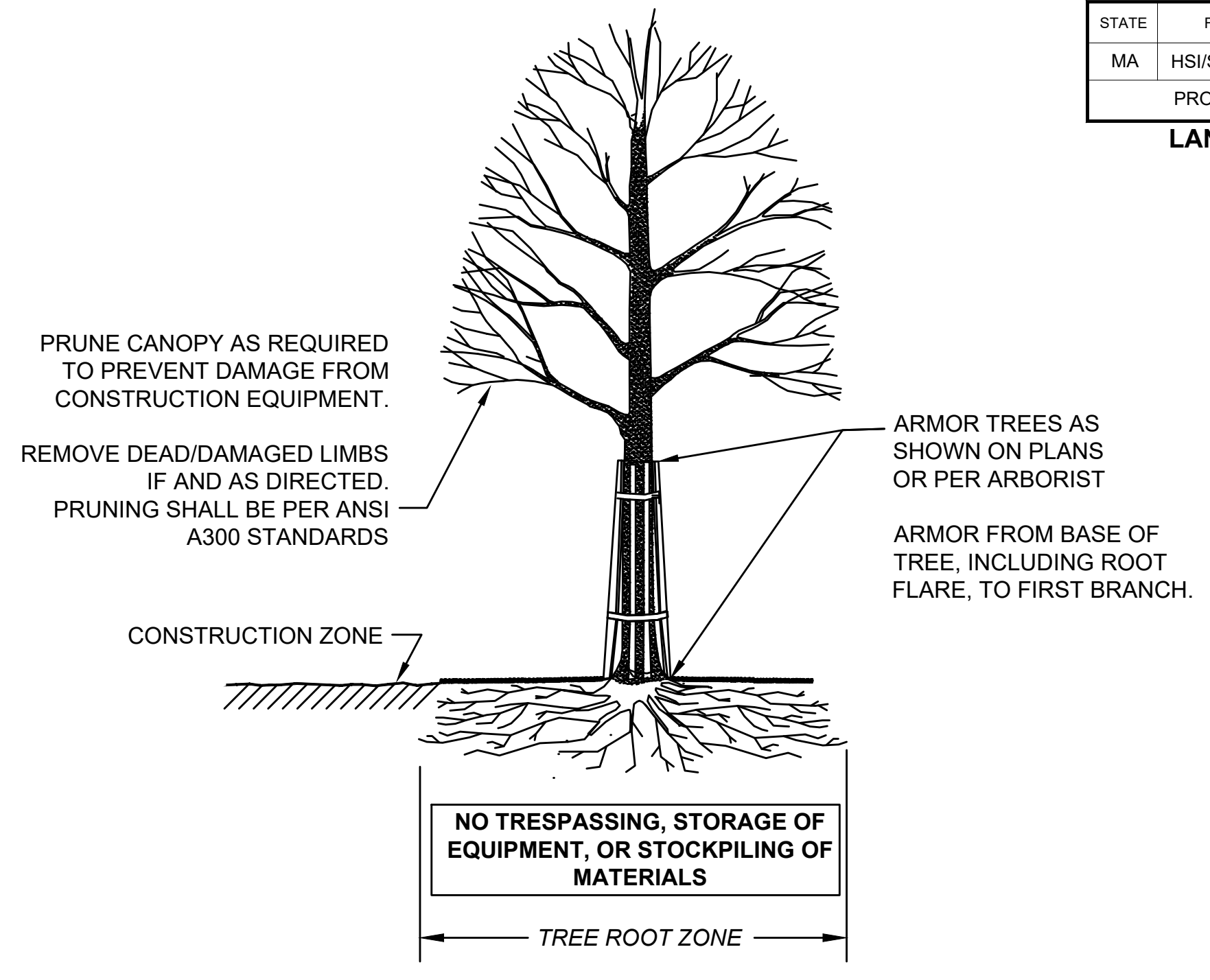
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	139	258
PROJECT FILE NO.		603739	



SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

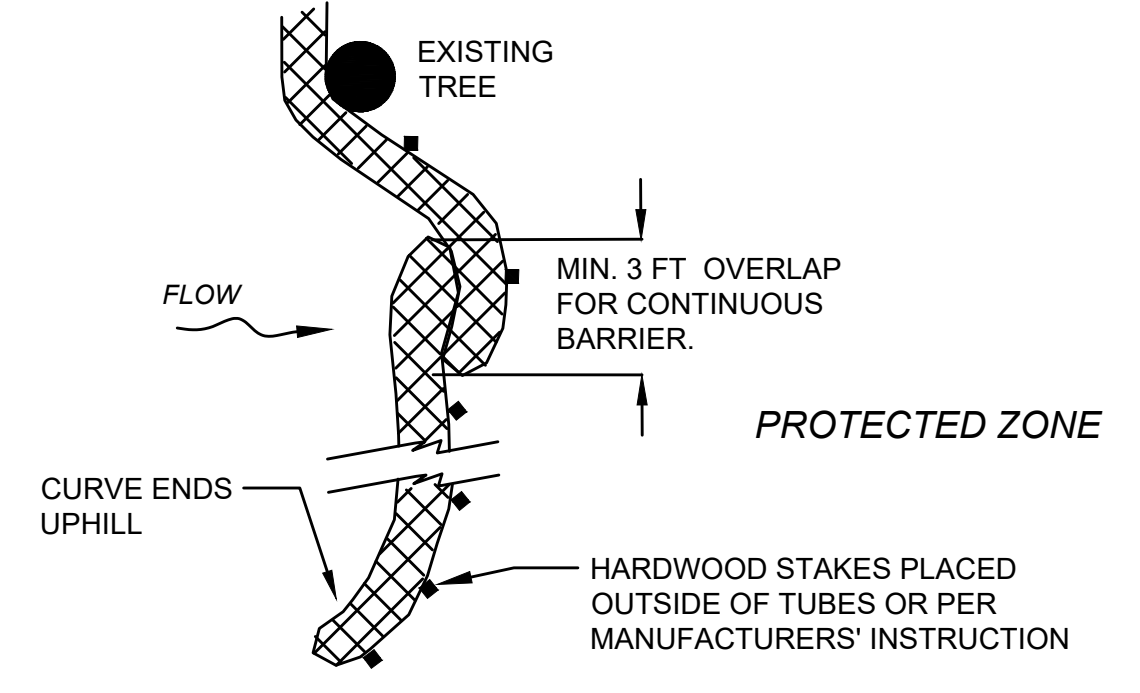


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

TREE PROTECTION - ROOT ZONE

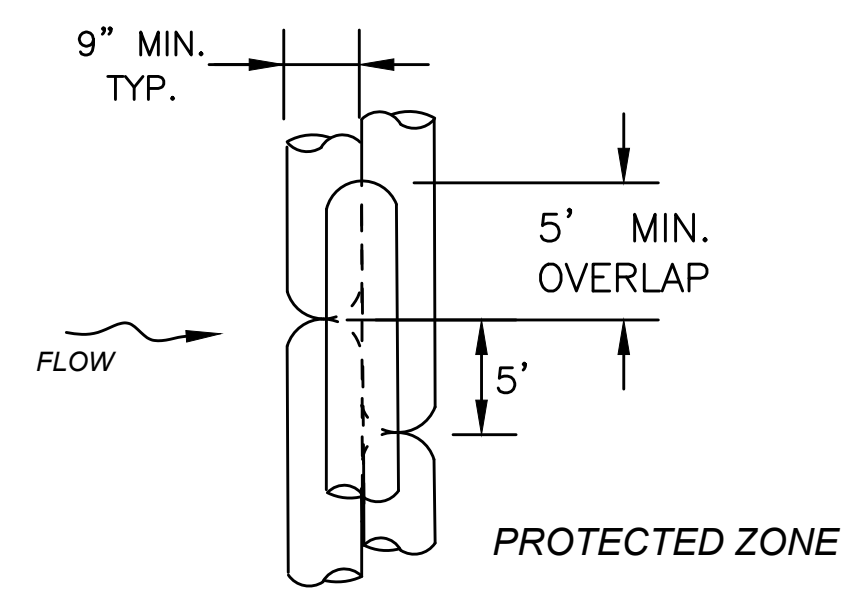
NOT TO SCALE



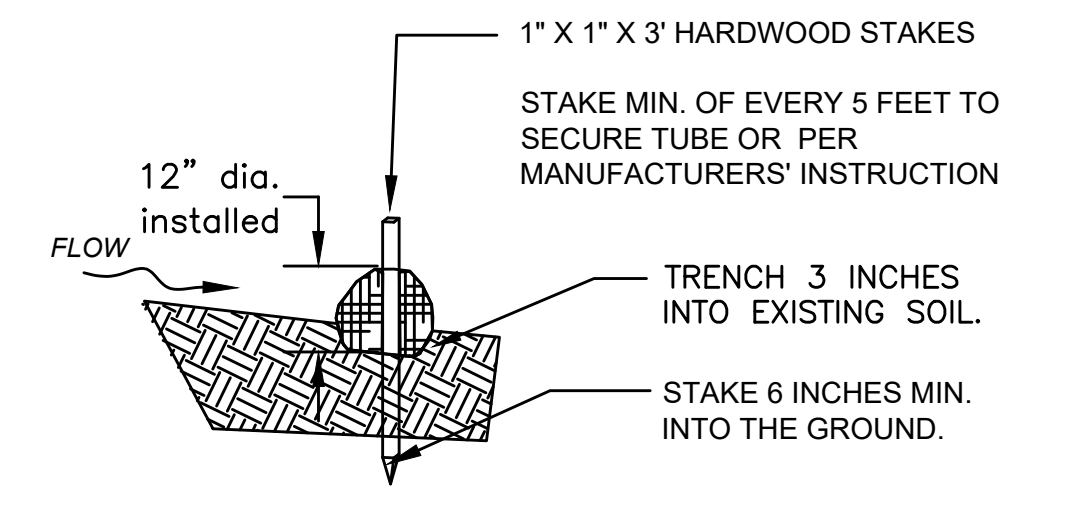
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW.
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLAN VIEW

WHERE SPECIFIED ON CONSTRUCTION PLANS OR AS REQUIRED



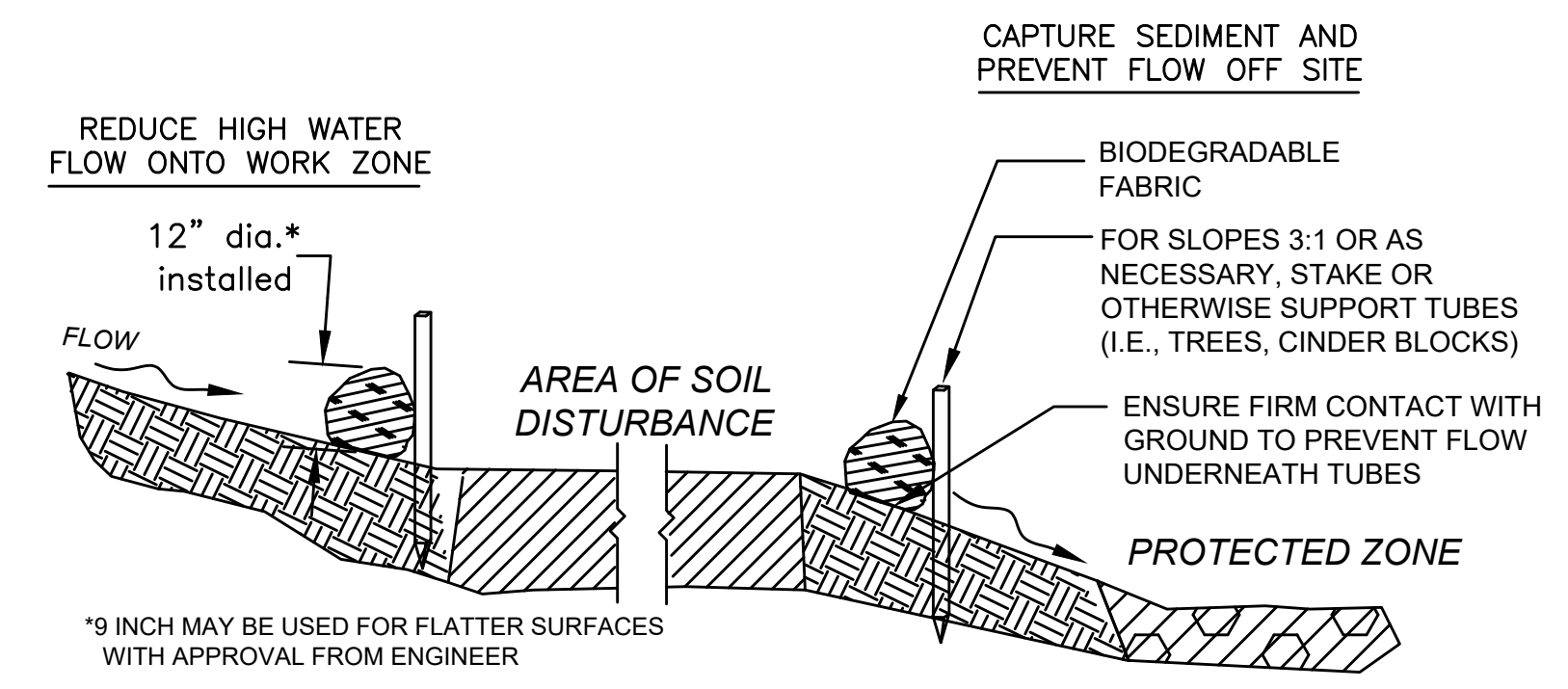
PLAN VIEW



SECTION

12 INCH STRAW WATTLE

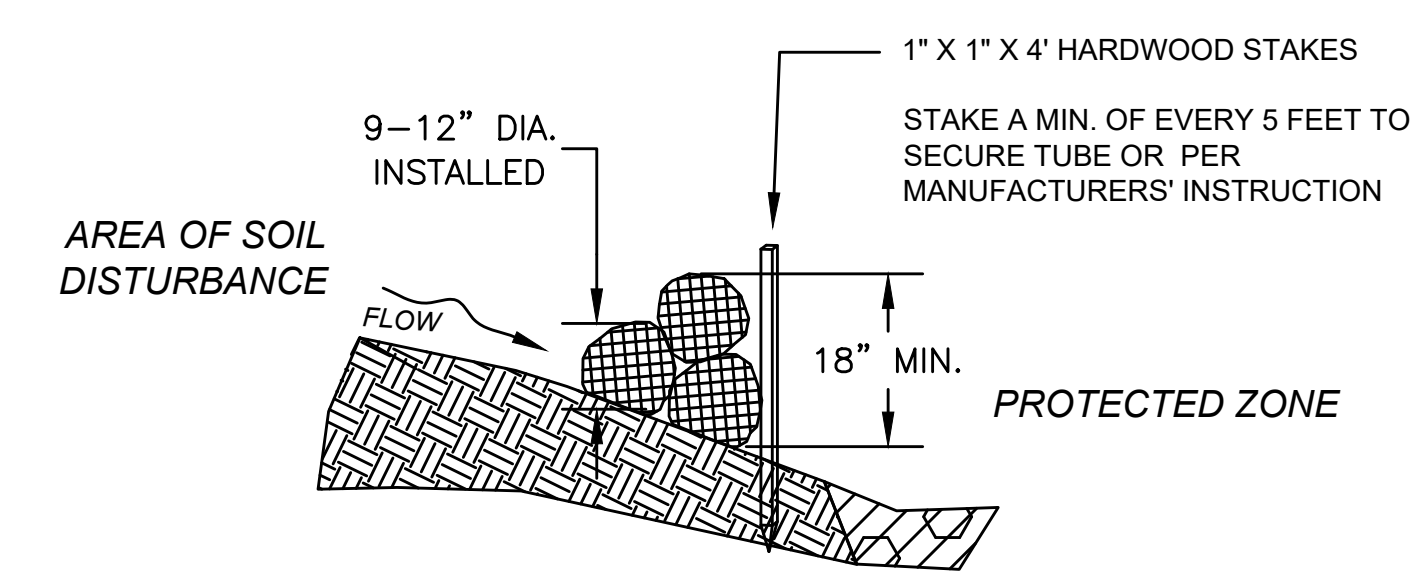
NOT TO SCALE



SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBE

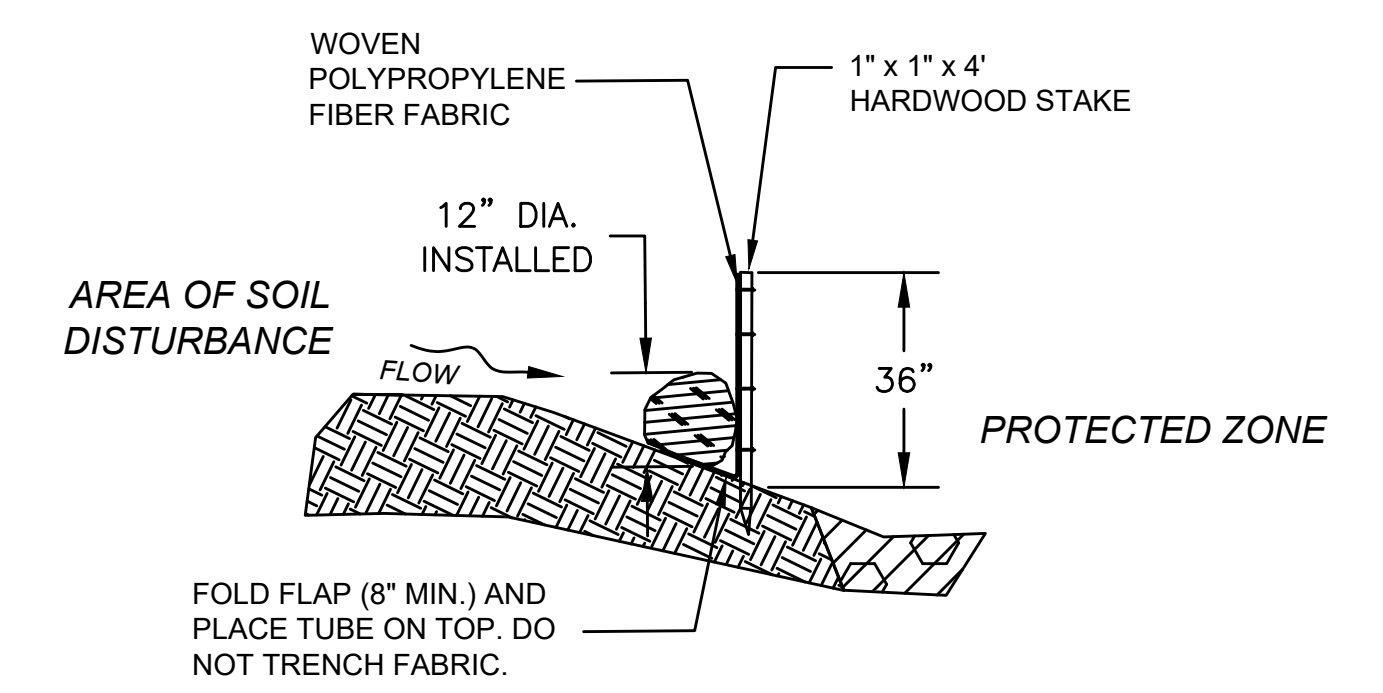
NOT TO SCALE



SECTION

COMPOST FILTER TUBES STACKED

NOT TO SCALE



SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE

MASTER PLANT SCHEDULE

SYMBOL/ID	QTY (TOTALS)	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTES	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet	Sheet
							1	2	3	4*	5	6	7*	8*	9*	10*	11*	12*
TREES																		
AG	6	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	7-8 FT.	As Shown			2			2	2						
AR	1	Acer rubrum 'October Glory'	Red Maple	2-2.5 IN. CAL.	As Shown			1										
AS	2	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2-2.5 IN. CAL.	As Shown		1		1									
CC	4	Cercis canadensis	Eastern Redbud	1.5-2 IN.CAL.	As Shown						2	2						
CV	5	Crataegus viridis 'Winter King'	Winter King Hawthorn	1.5-2 IN.CAL.	As Shown		3					2						
JV	4	Juniper virginiana 'Burkii'	Burkii Eastern Red Cedar	5-6 FT.	As Shown							4						
QA	1	Quercus alba	White Oak	2-2.5 IN. CAL.	As Shown		1											
QP	3	Quercus palustris	Pin Oak	2-2.5 IN. CAL.	As Shown		1		2									

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

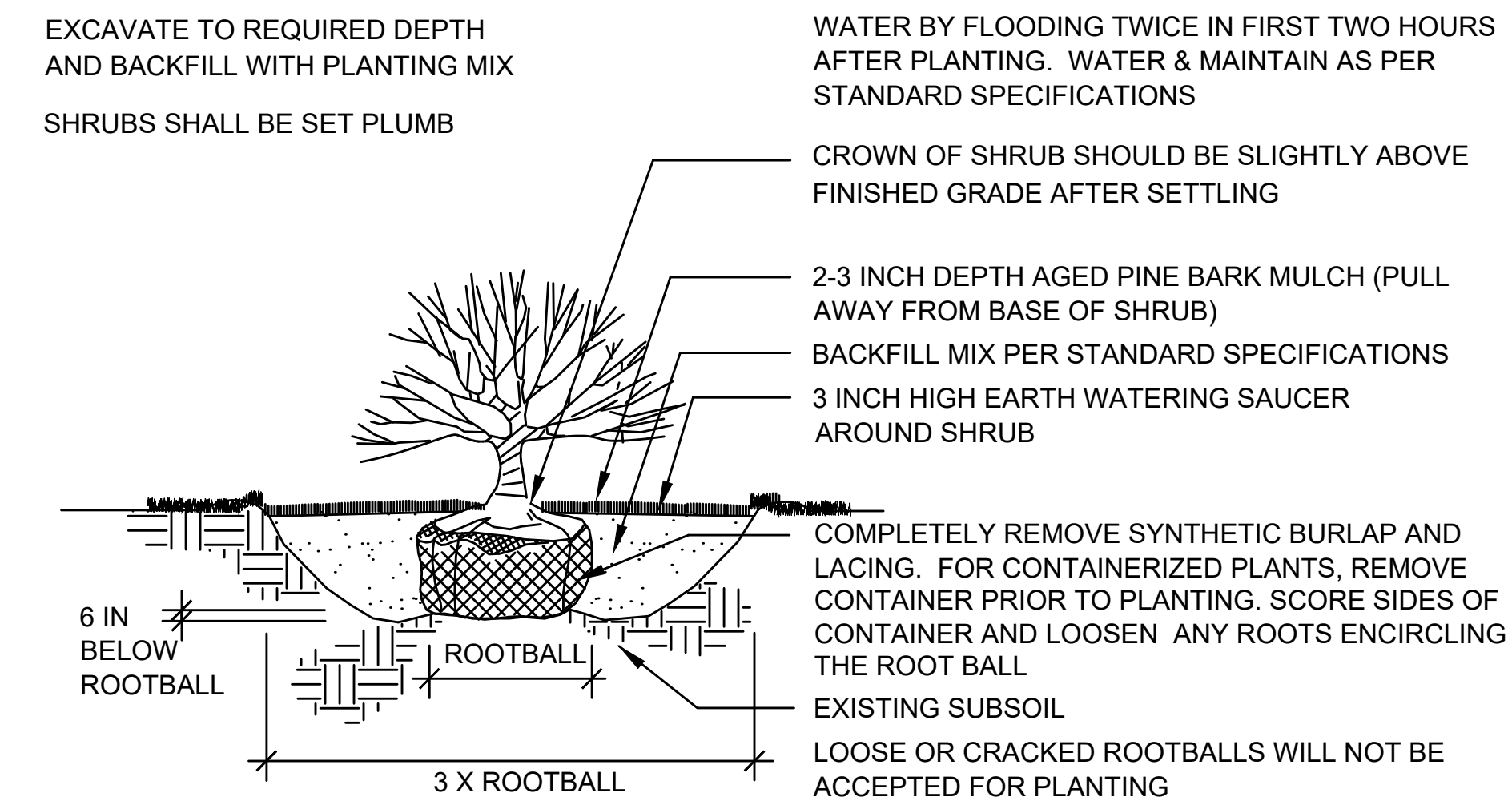
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	140	258
PROJECT FILE NO.		603739	

LANDSCAPE DETAILS
SHEET 2 OF 3

* THESE LANDSCAPE PLAN SHEETS ONLY HAVE SEED MIX PROPOSED

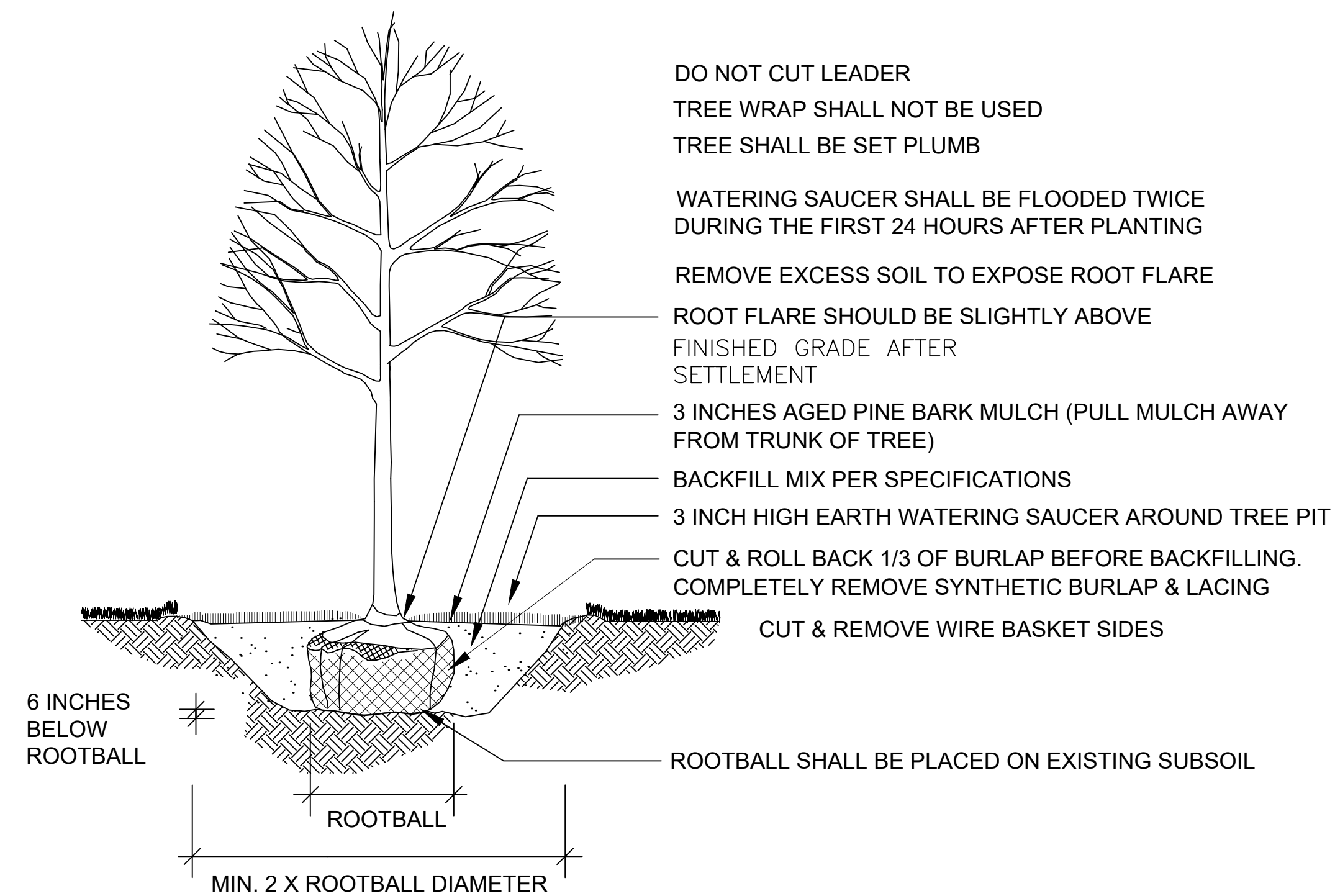
NATIVE SEED MIXES

ITEM 765.411	1.81 ac	Short Grassland Mix
ITEM 765.413	0.57 ac	Short Roadside Pollinator Meadow Mix
ITEM 765.554	0.13 ac	Wetland - Seasonally Flooded Mix



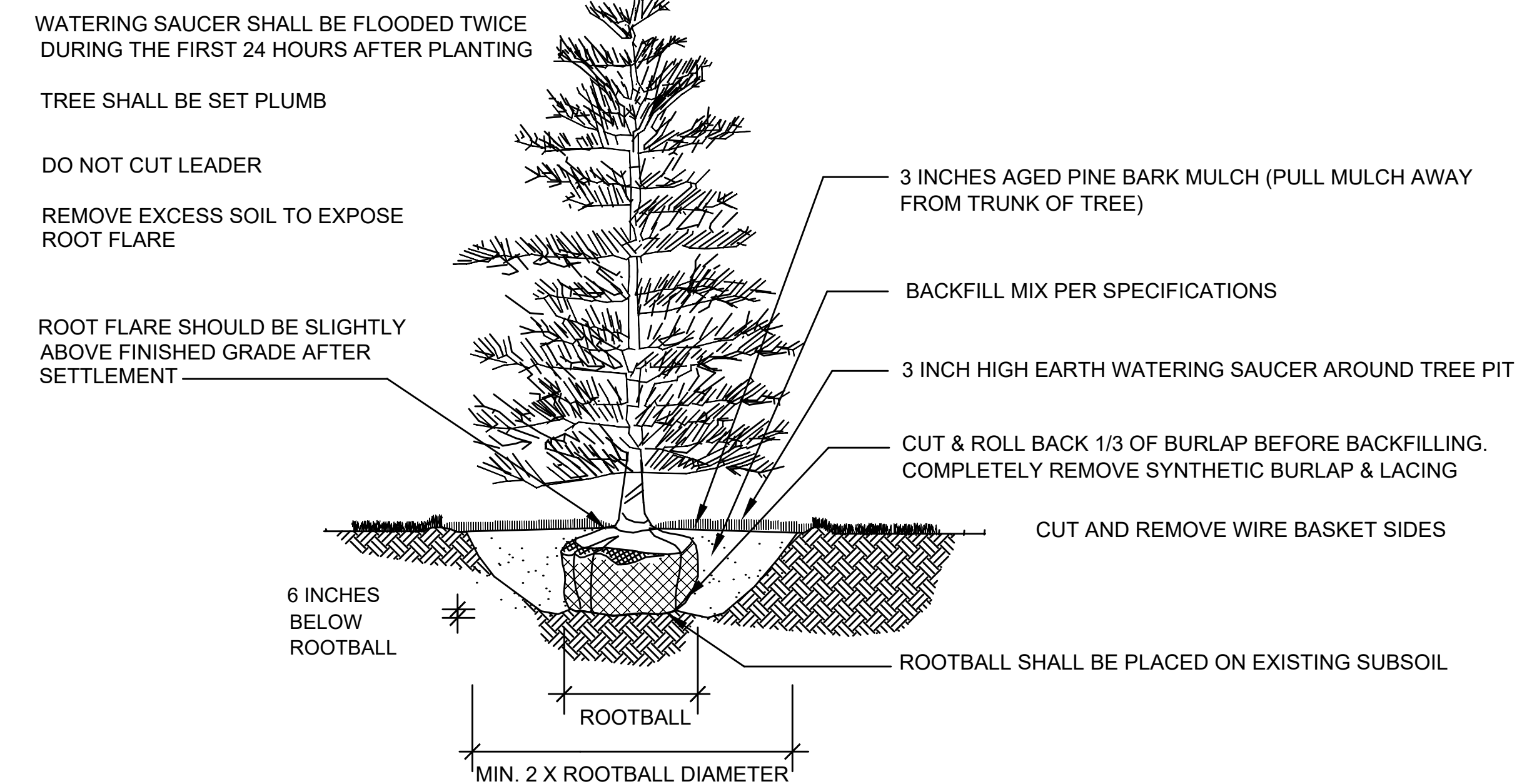
SHRUB PLANTING

NOT TO SCALE



DECIDUOUS TREE PLANTING

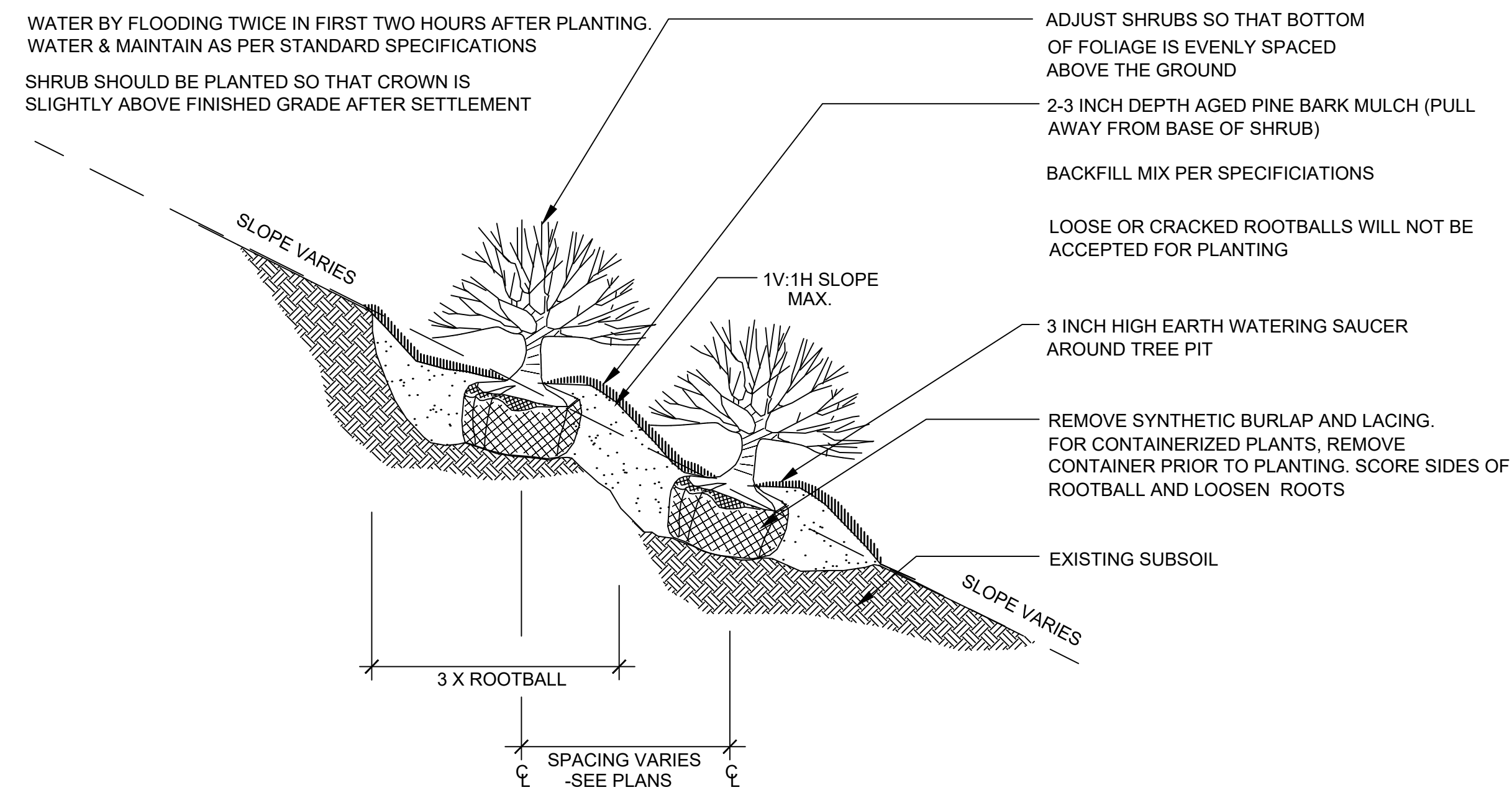
NOT TO SCALE



EVERGREEN TREE PLANTING

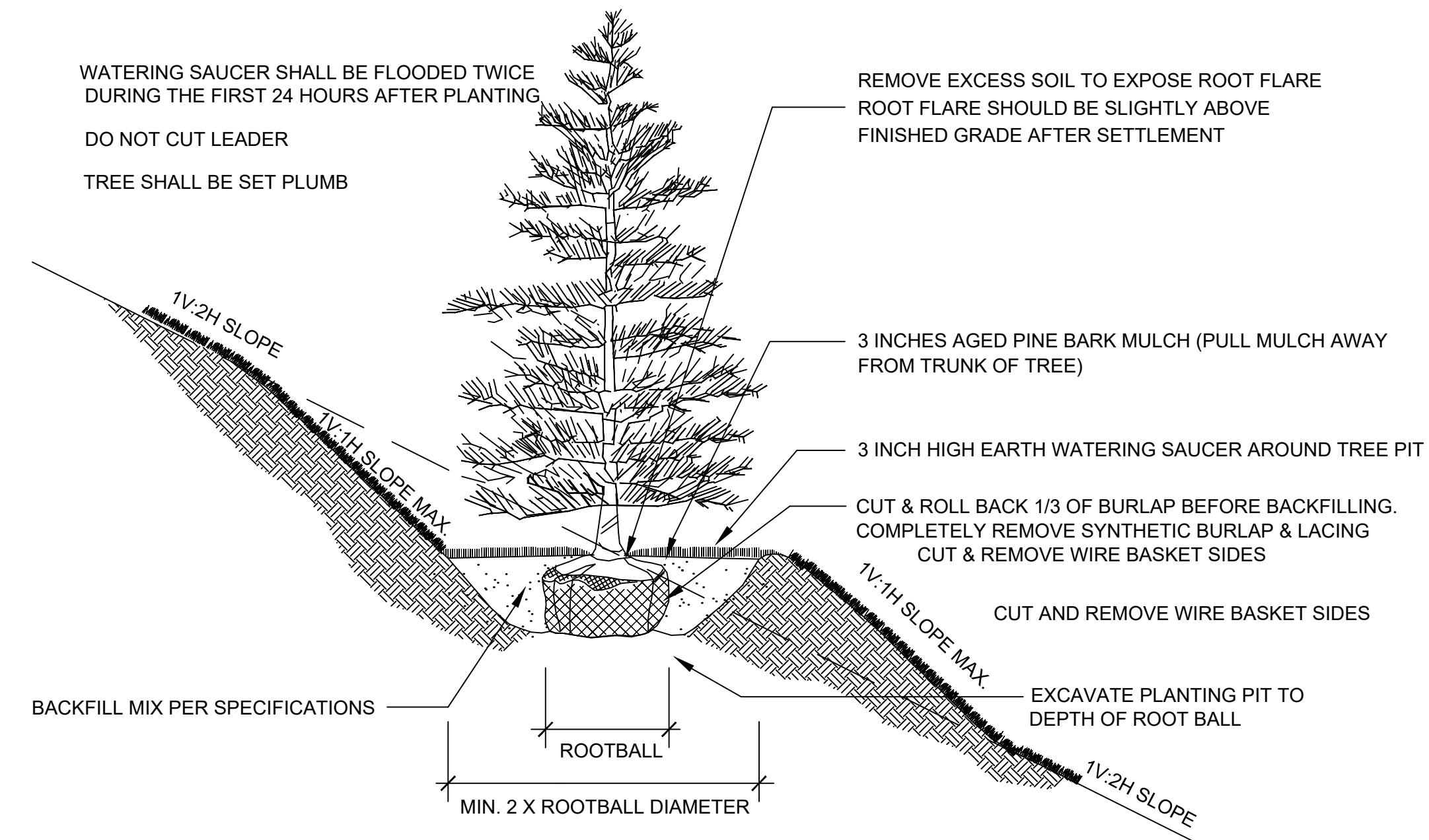
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	141	258
PROJECT FILE NO.		603739	



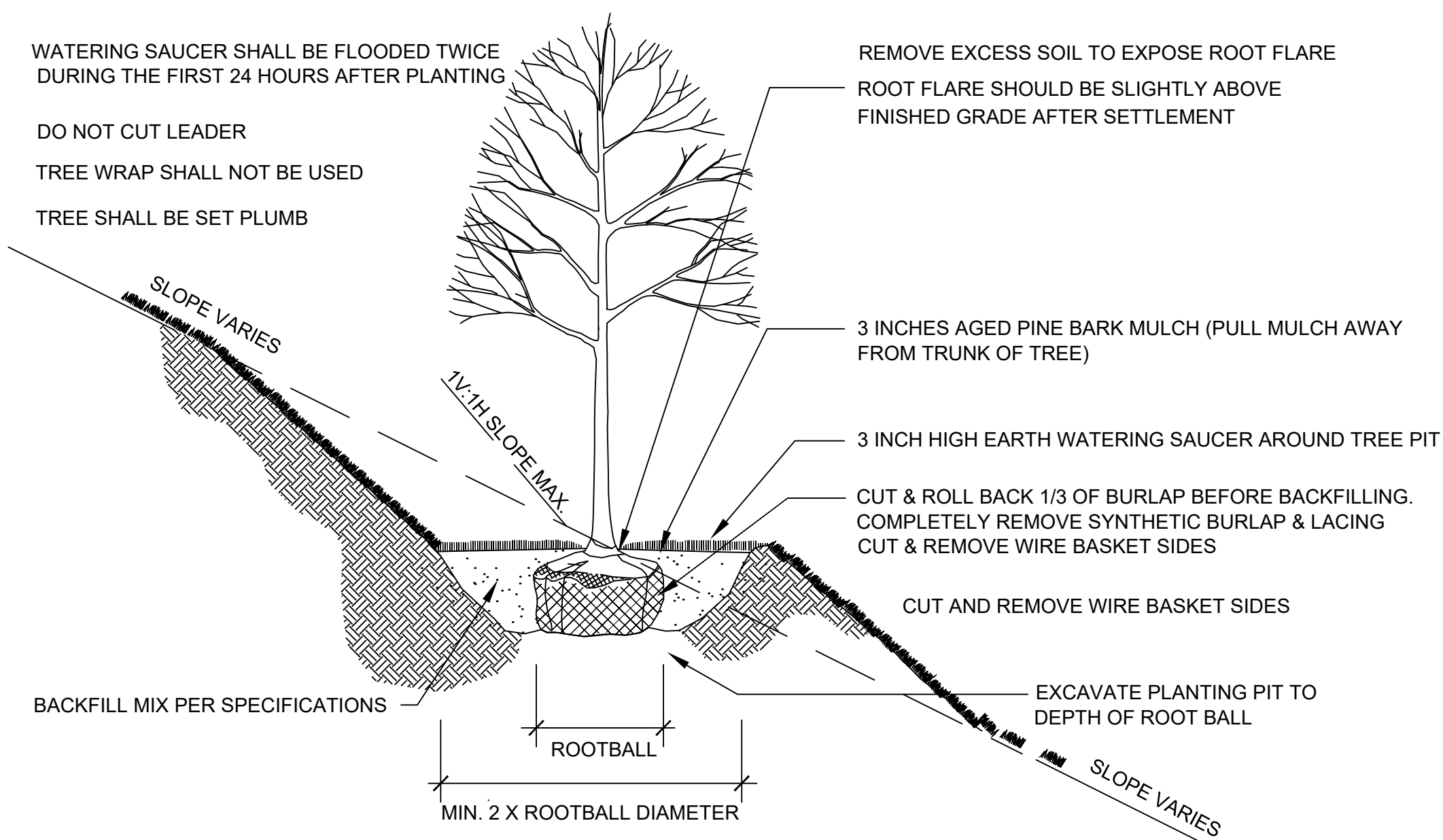
CONTAINERIZED SHRUB PLANTING (SLOPE) DETAIL

NOT TO SCALE



EVERGREEN TREE PLANTING (SLOPE)

NOT TO SCALE



DECIDUOUS TREE PLANTING (SLOPE)

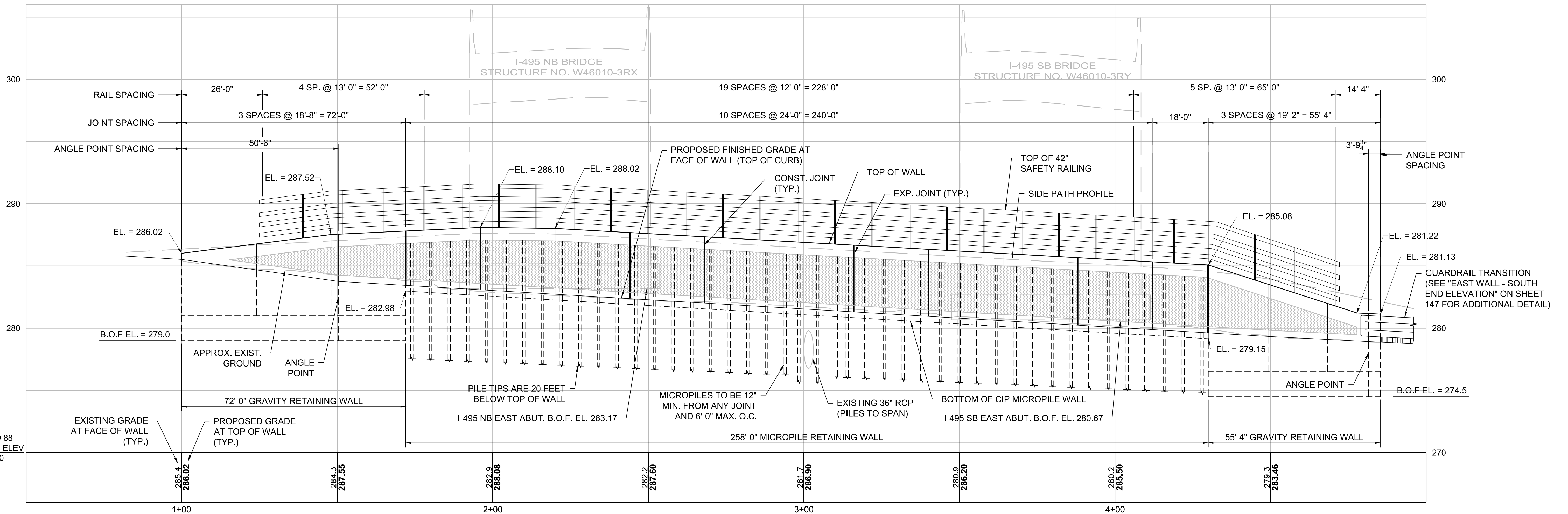
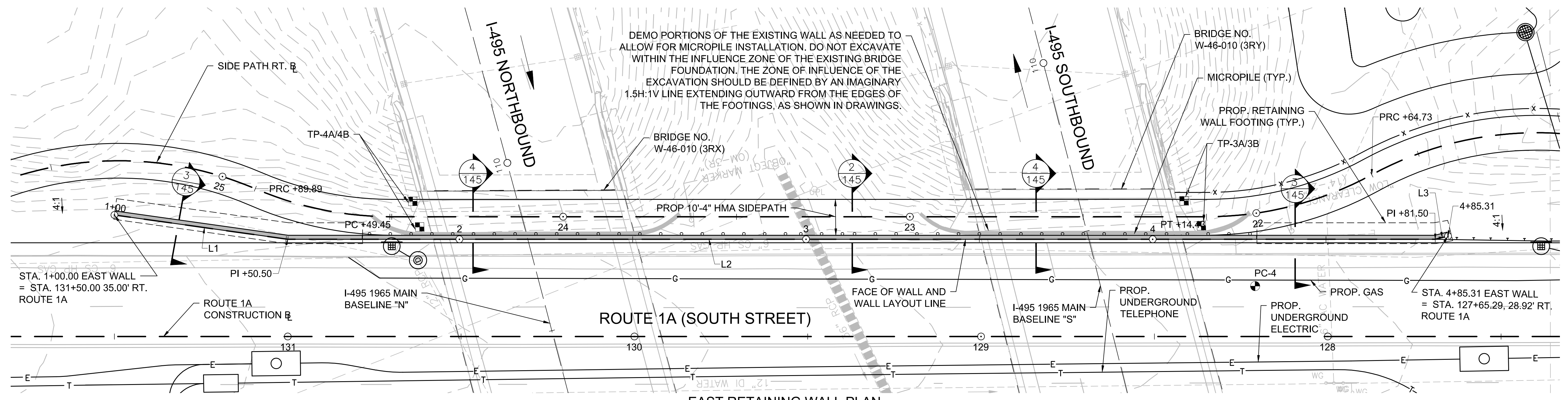
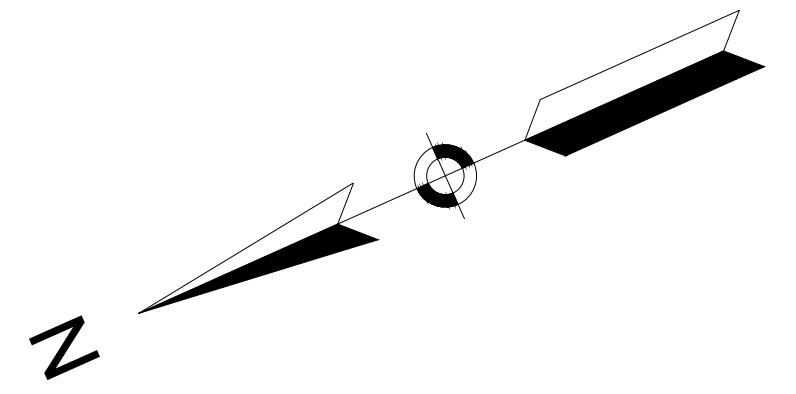
NOT TO SCALE

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

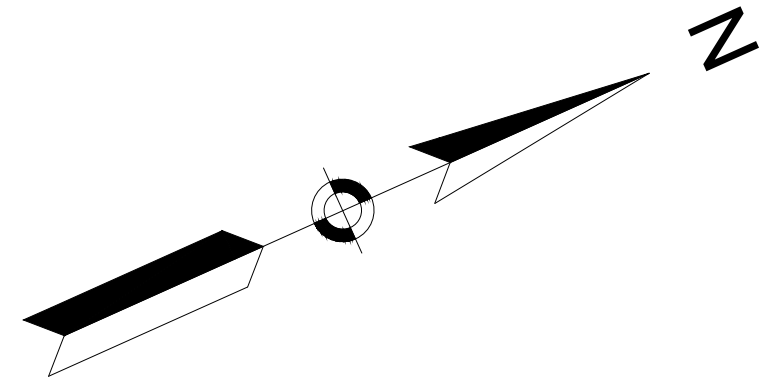
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	142	258
PROJECT FILE NO.		603739	

EAST RETAINING WALL
PLAN AND ELEVATION

EAST WALL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	1+00.00	2839857.555	698384.838		S32°07'39"W 50.50'	1+50.50	2839814.788	698357.982
L2	1+50.50	2839814.788	698357.982		S24°09'08"W 331.00'	4+81.50	2839512.763	698222.549
L3	4+81.50	2839512.763	698222.549		S10°06'57"W 3.81'	4+85.31	2839509.013	698221.880



EAST RETAINING WALL ELEVATION

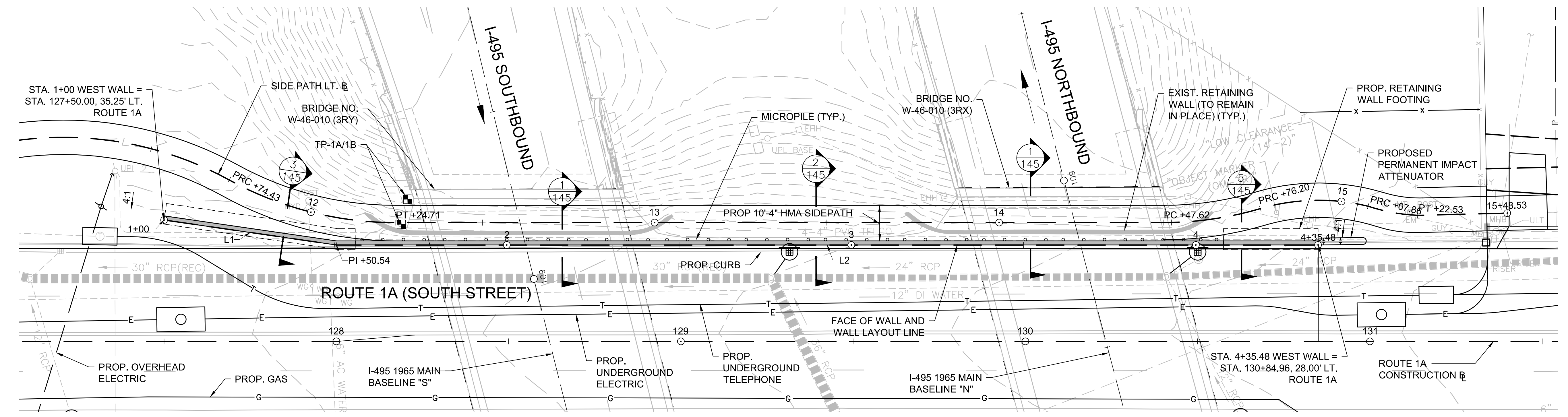


WEST WALL CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	1+00.00	2839521.317	698157.066		N32°24'00"E 50.54'	1+50.54	2839563.990	698184.147
L2	1+50.54	2839563.990	698184.147		N24°09'08"E 284.94'	4+35.48	2839823.985	698300.733

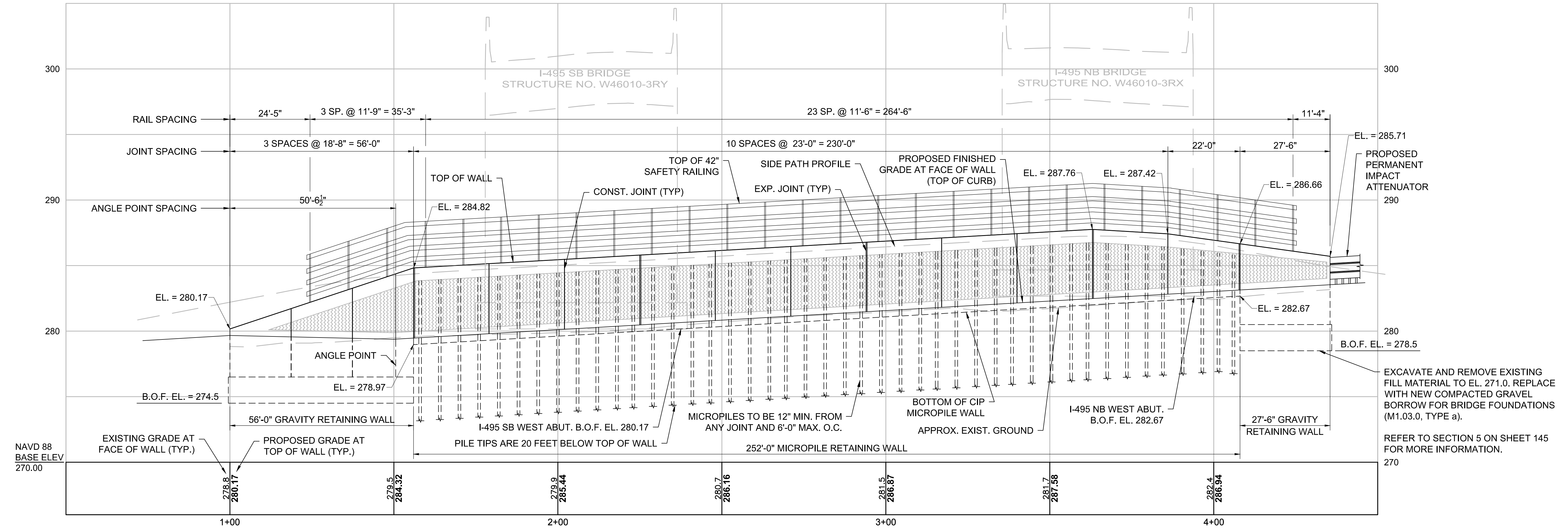
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	143	258
PROJECT FILE NO.		603739	

**WEST RETAINING WALL
PLAN AND ELEVATION**



WEST RETAINING WALL PLAN
SCALE: 1/8" = 1'-0"



WEST RETAINING WALL ELEVATION
SCALE: HORIZONTAL: 1/8" = 1'-0"
VERTICAL: 1/4" = 1'-0"

NAVD 88
BASE ELEV
270.00

EXCAVATE AND REMOVE EXISTING
FILL MATERIAL TO EL. 271.0. REPLACE
WITH NEW COMPACTED GRAVEL
BORROW FOR BRIDGE FOUNDATIONS
(M1.03.0, TYPE a).

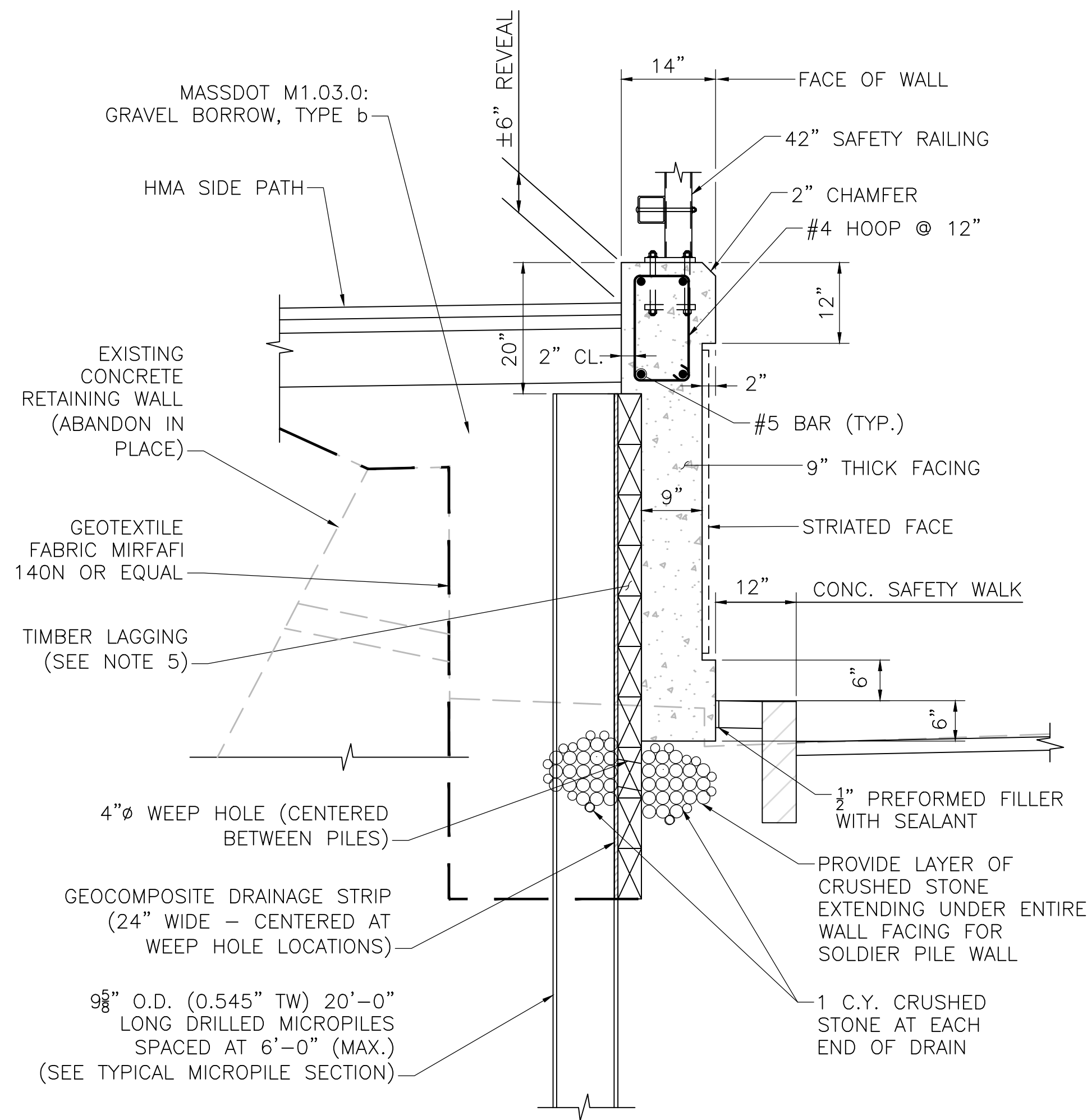
REFER TO SECTION 5 ON SHEET 145
FOR MORE INFORMATION.
270

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	144	258
PROJECT FILE NO.		603739	

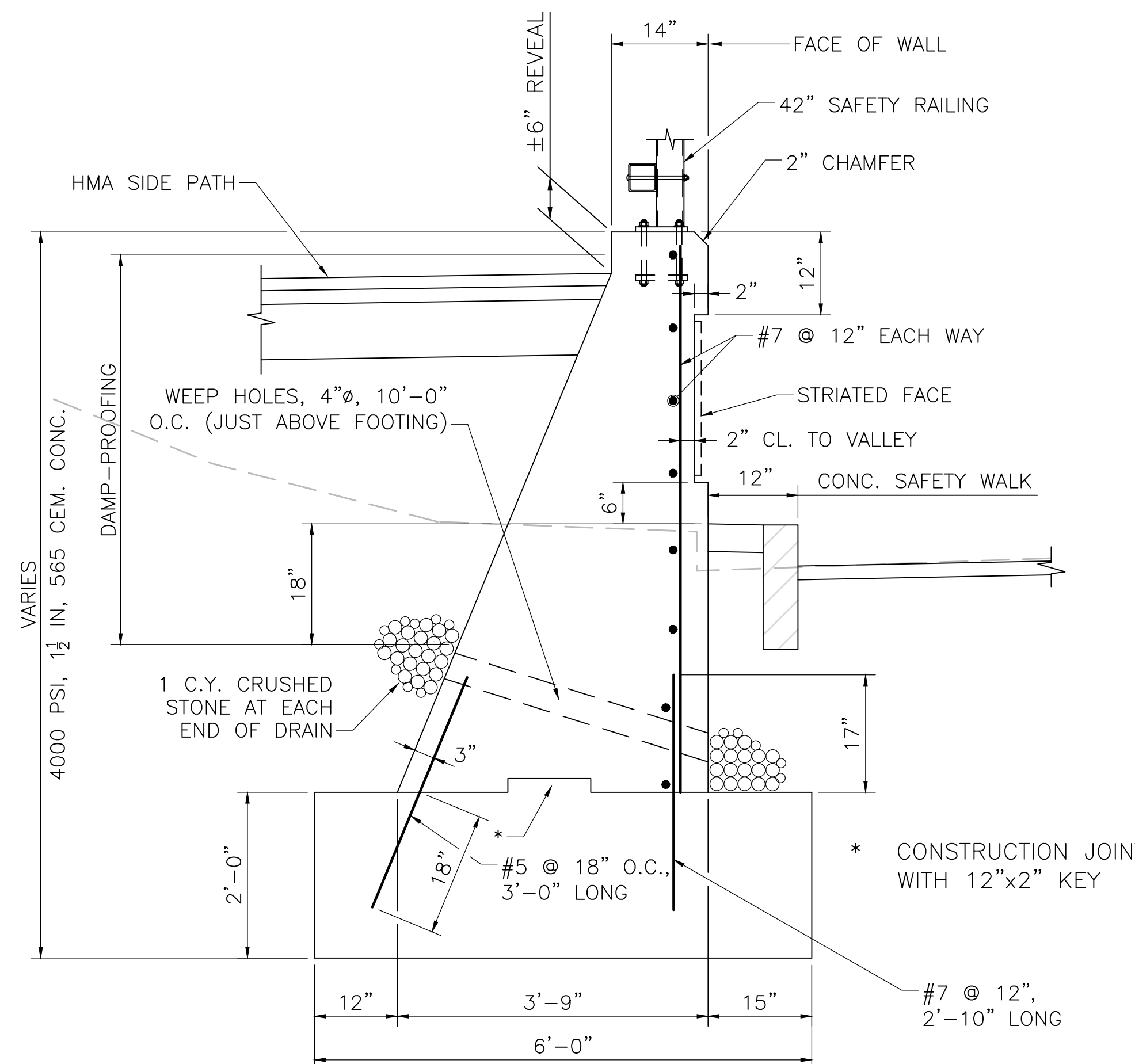
RETAINING WALL DETAILS
SHEET 1 OF 2

NOTES:

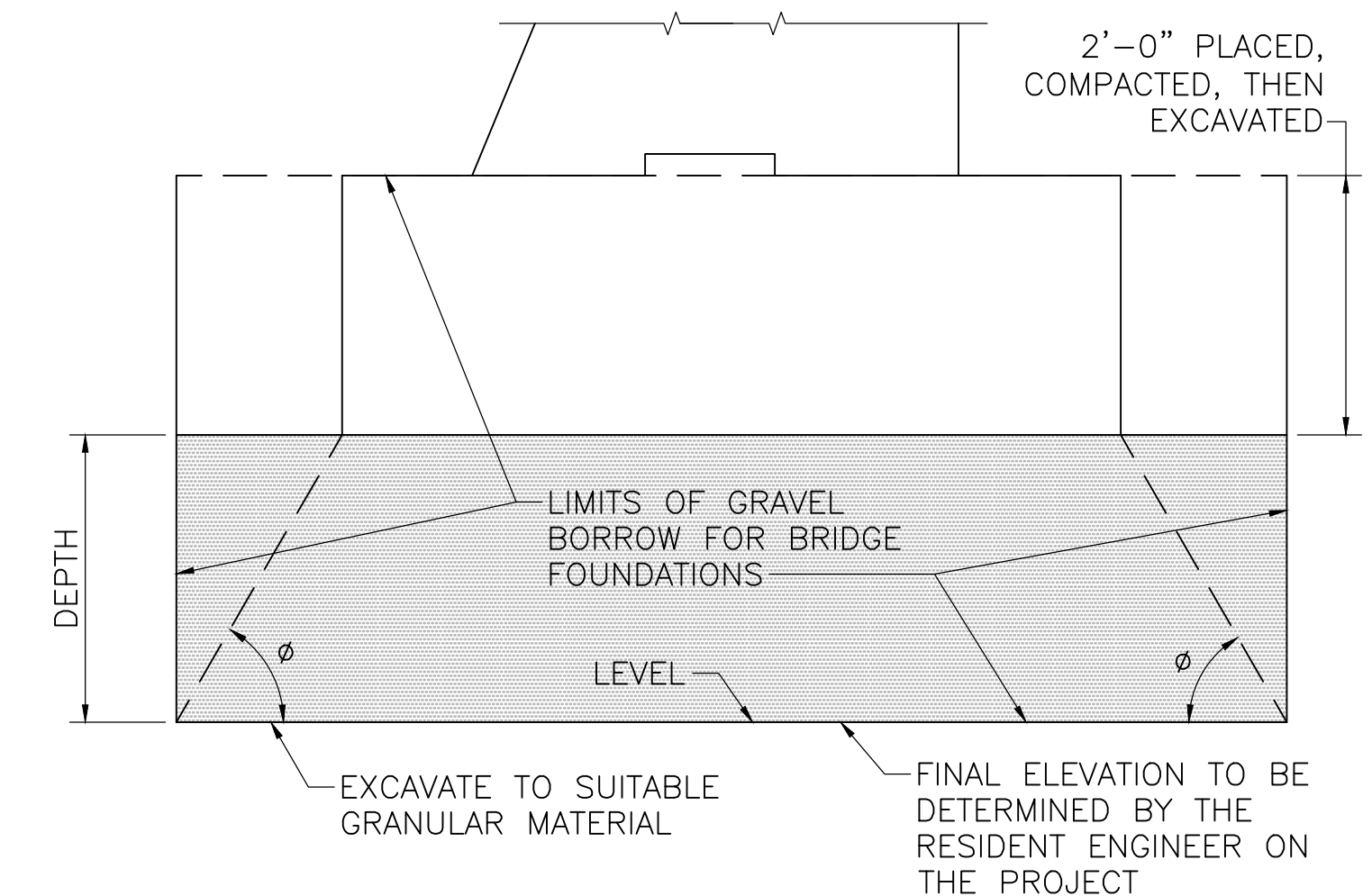
- RETAINING WALL CONCRETE SHALL BE 4000 PSI, 1½", 565 CEMENT CONCRETE.
- THE FACTORED BEARING PRESSURE = 2.61 KSF PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION.
- FACTORED BEARING RESISTANCE = 17.6 KSF. FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE AND A RESISTANCE FACTOR OF 0.45.
- 4"Ø WEEP HOLES 10'-0" O.C. (JUST ABOVE PROTECTIVE COURSE). PROVIDE 1 CUBIC YARD OF CRUSHED STONE AT EACH END OF WEEP HOLE.
- PROVIDE LAGGING AS NEEDED TO INSTALL SOLDIER PILE WALL AND FACING. ANY TIMBER LAGGING LEFT IN PLACE SHALL BE PRESSURE TREATED.
- LIMITS OF EXCAVATION AND BACKFILL SHOWN ON DETAILS SHOWN FOR DETERMINATION OF PAYMENT QUANTITIES ONLY.
- NO EXCAVATION SHALL BE PERMITTED WITHIN THE INFLUENCE ZONE OF THE EXISTING BRIDGE FOOTINGS. THE ZONE OF INFLUENCE IS DEFINED BY AN IMAGINARY 1.5H:1V LINE EXTENDING OUTWARD FROM THE EDGES OF THE FOOTINGS, AS SHOWN IN DRAWINGS.
- EXISTING RETAINING WALLS ARE TO REMAIN IN PLACE, EXCEPT FOR DEMOLITION STRICTLY NEEDED FOR INSTALLATION OF DRILLED MICROPILES AS SHOWN.



TYPICAL MICROPILE RETAINING WALL SECTION
SCALE: 3/4" = 1'-0"



TYPICAL GRAVITY RETAINING WALL SECTION
SCALE: 3/4" = 1'-0"

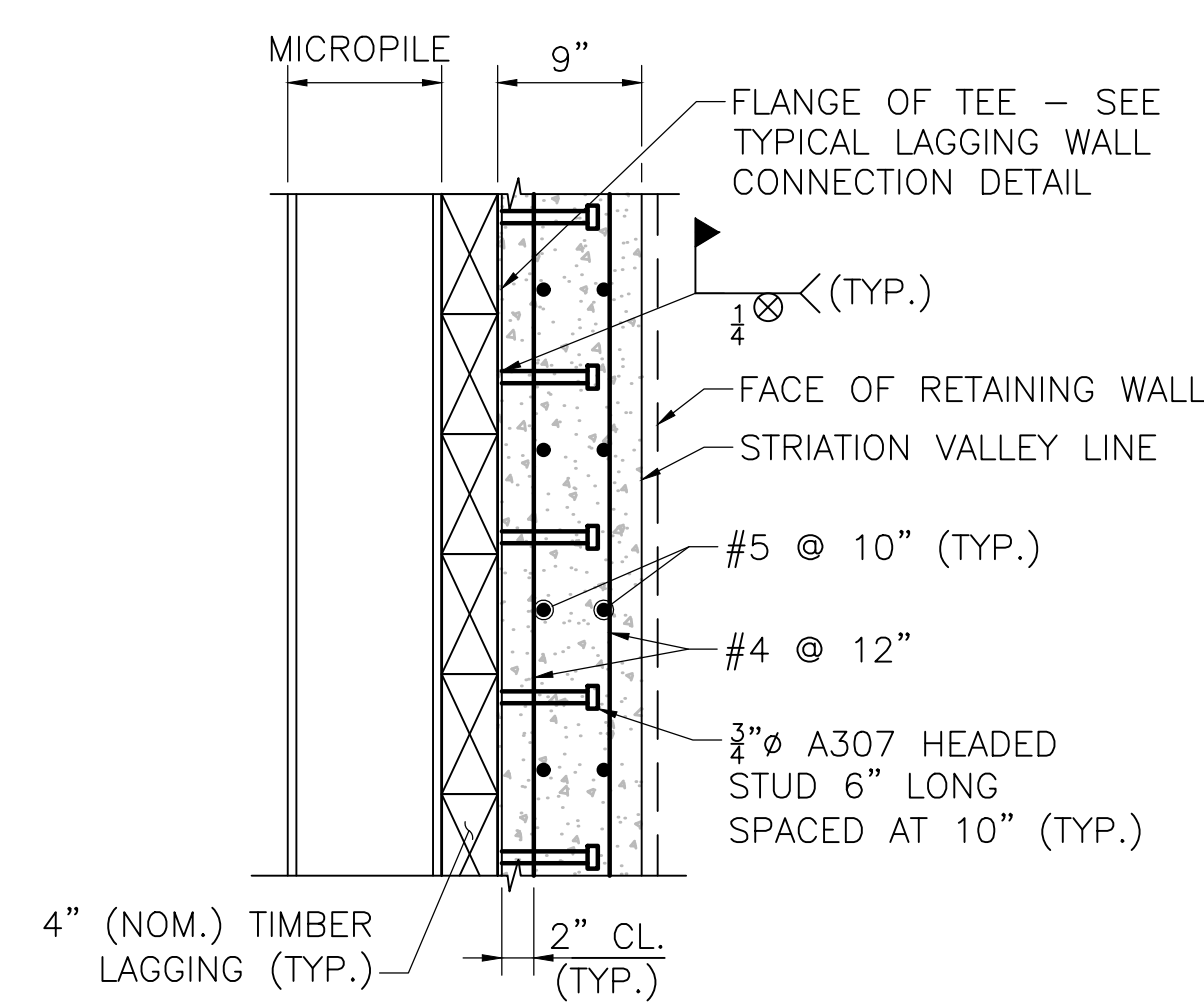


NOTES:

- Ø = 45° FOR DEPTH OF 5'-0" OR LESS.
Ø = 60° FOR DEPTH OVER 5'-0".
- SAME TREATMENT IS TO BE USED AT ENDS OF WALLS, PIERS, AND ABUTMENTS.

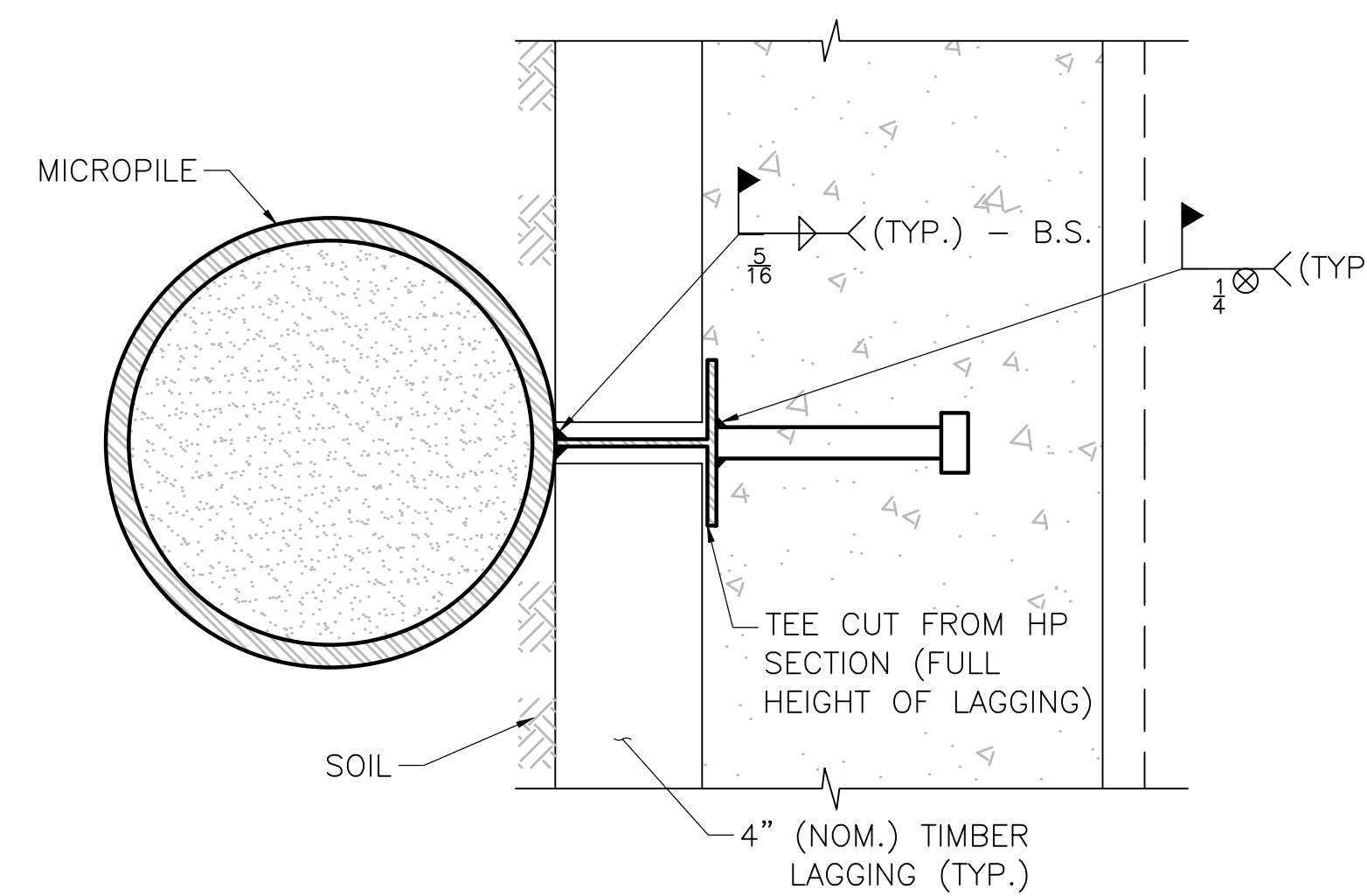
LIMITS OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS

SCALE: 3/4" = 1'-0"

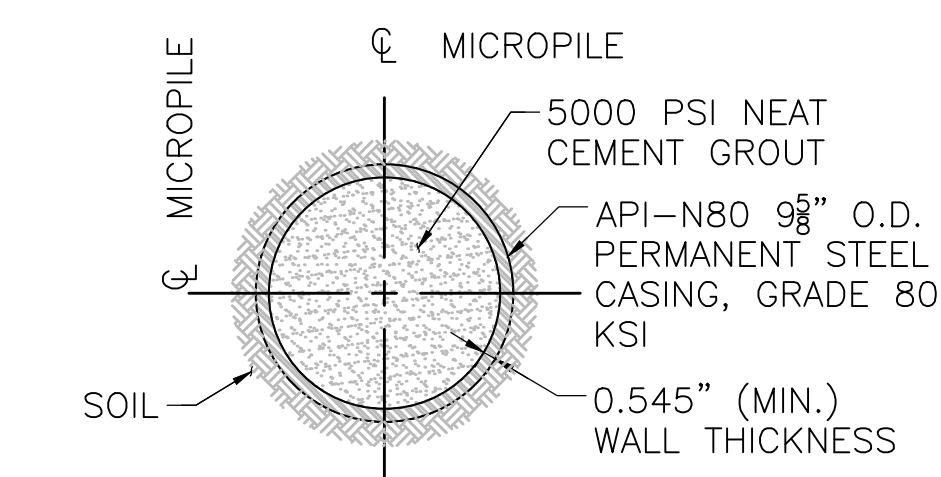


NOTE: VERTICAL FACING REBAR SHALL EXTEND TO THE TOP OF WALL.

TYPICAL MICROPILE WALL FACING DETAIL
SCALE: 1" = 1'-0"

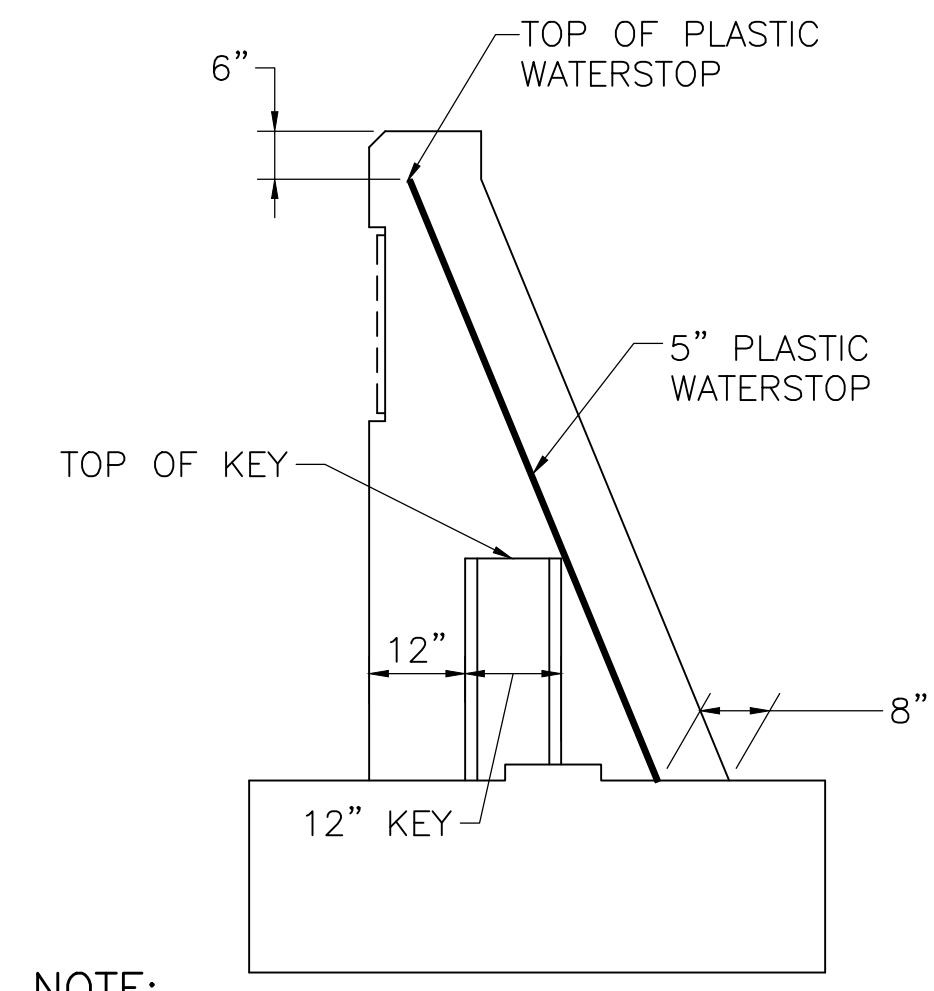


TYPICAL LAGGING WALL CONNECTION DETAIL
SCALE: 3" = 1'-0"



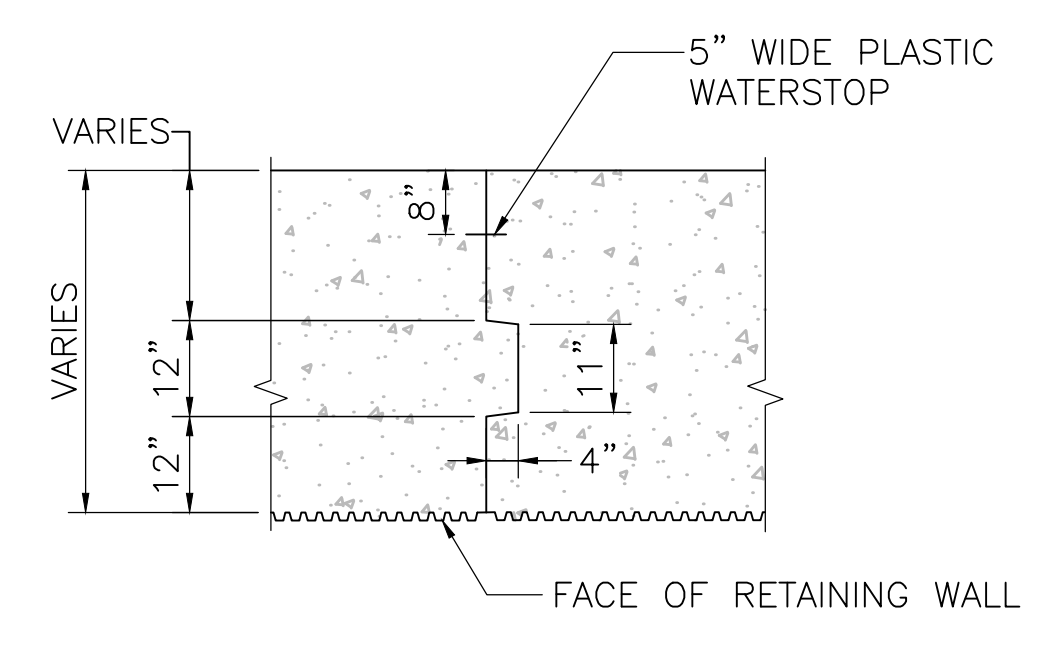
TYPICAL MICROPILE SECTION
SCALE: 1 1/2" = 1'-0"

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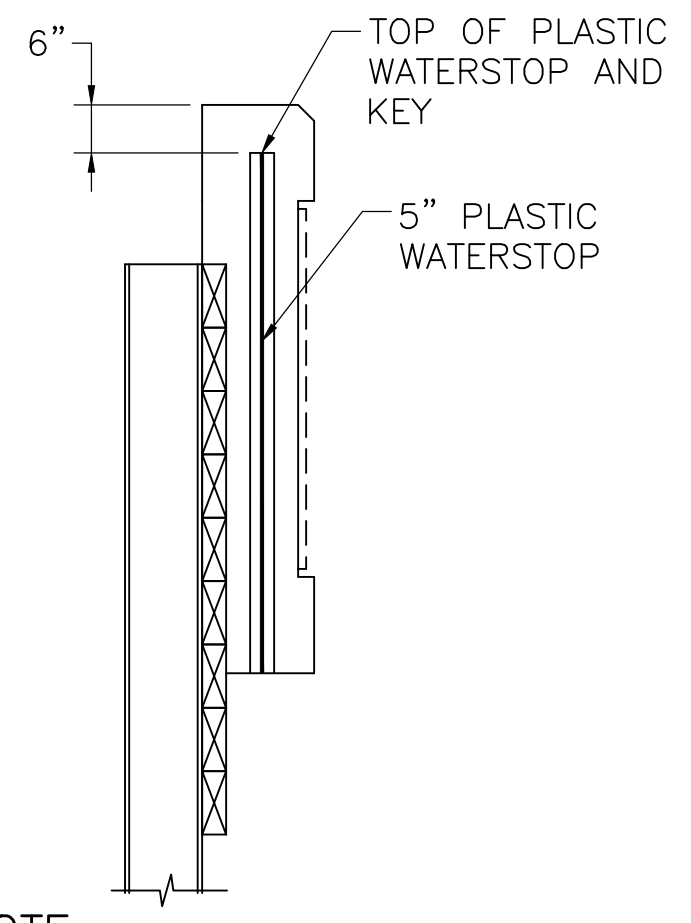
NOTE:
REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

VERTICAL SECTION
SCALE: 1/2" = 1'-0"



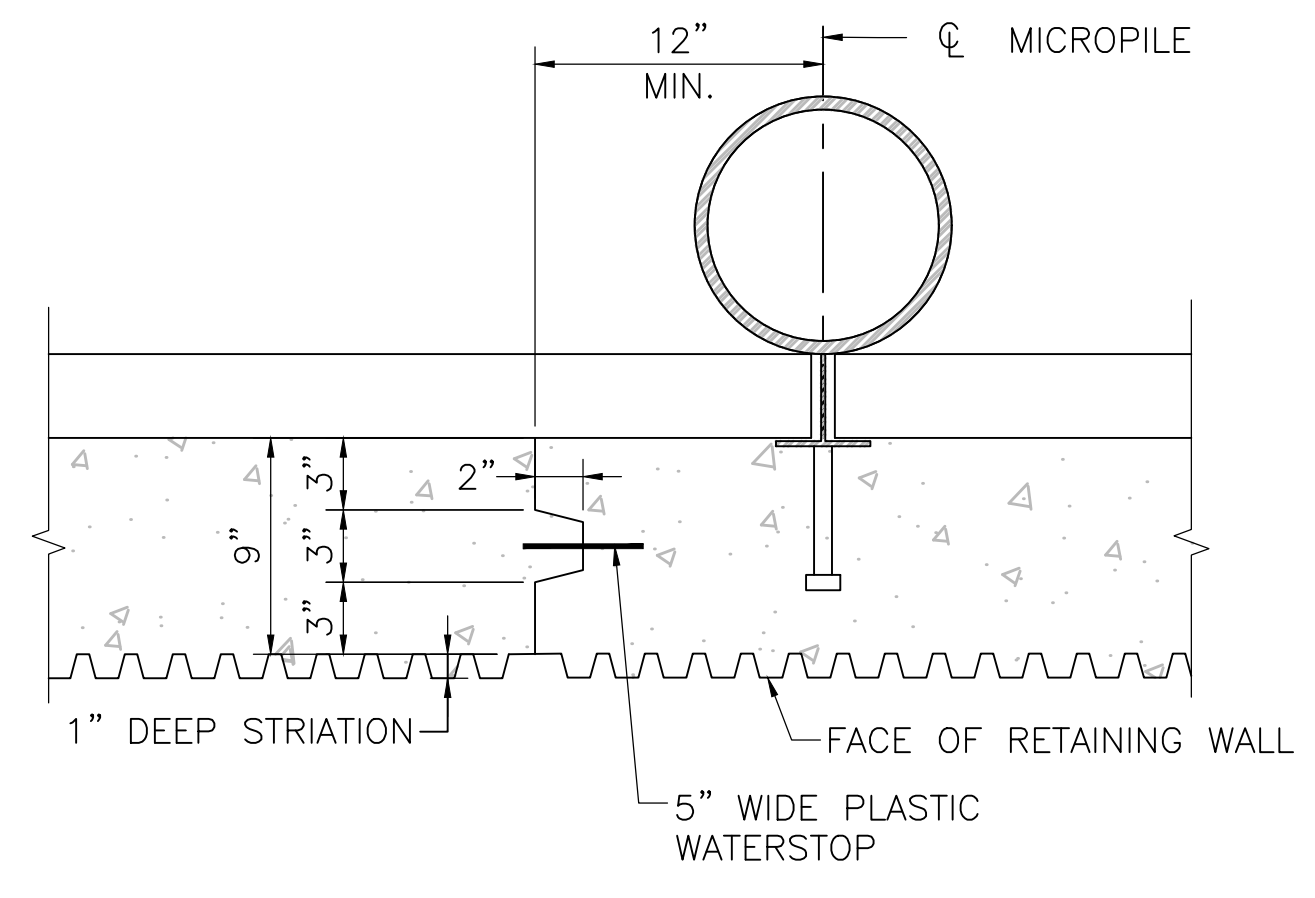
HORIZONTAL SECTION
SCALE: 1/2" = 1'-0"

CONSTRUCTION JOINT DETAILS AT GRAVITY WALL



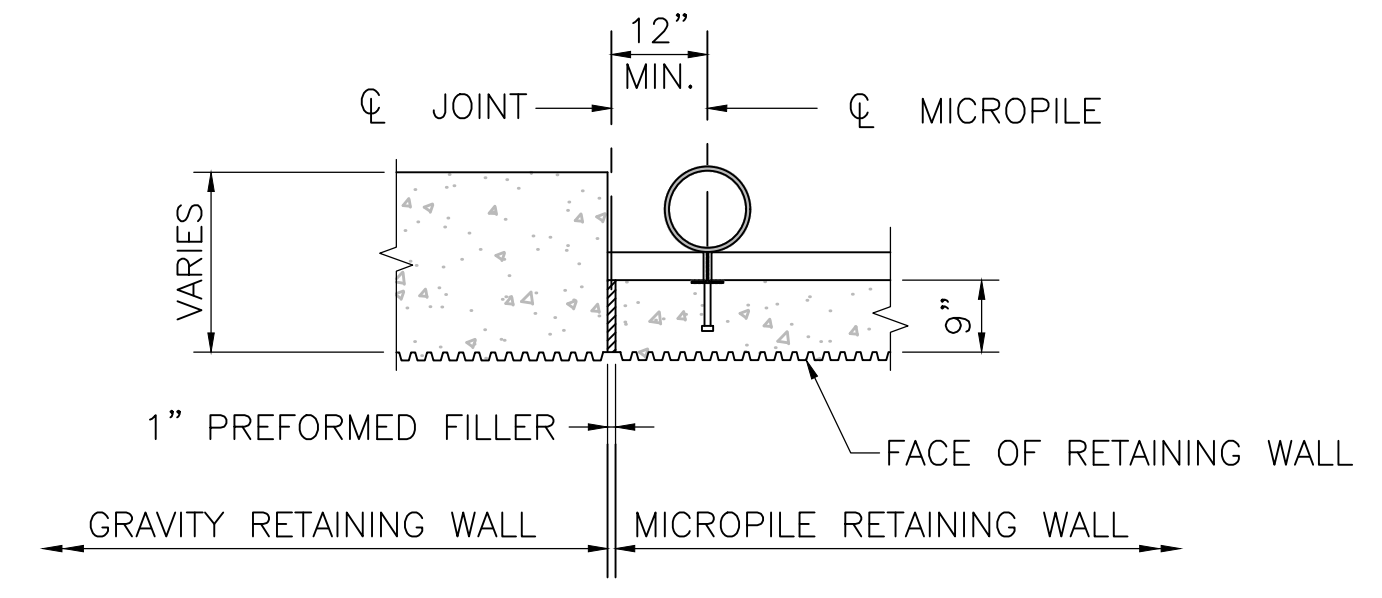
NOTE:
REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

VERTICAL SECTION
SCALE: 1/2" = 1'-0"

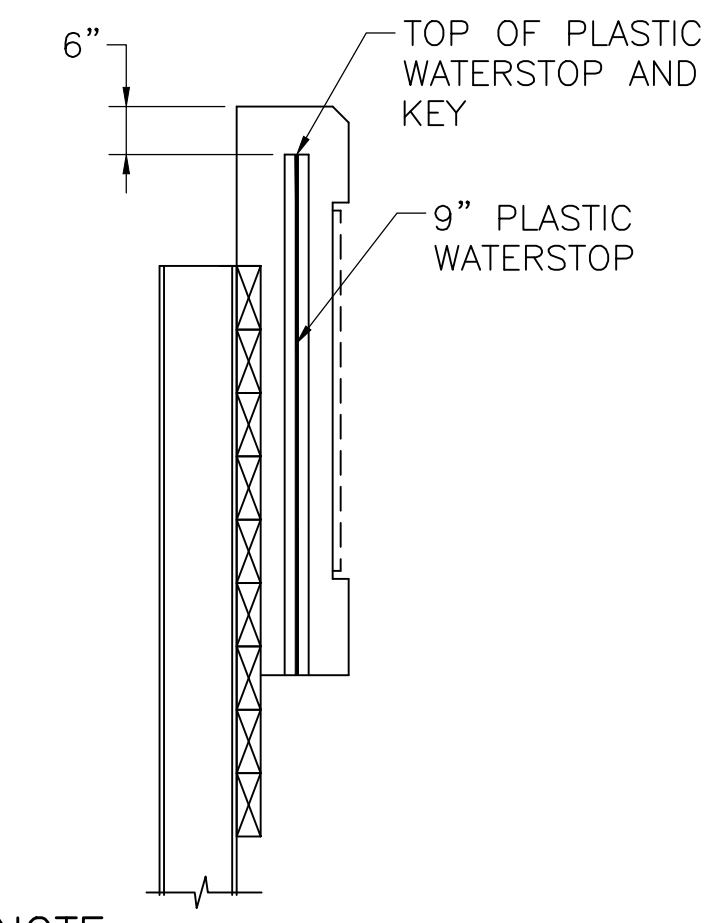


HORIZONTAL SECTION
SCALE: 1 1/2" = 1'-0"

CONSTRUCTION JOINT DETAILS AT MICROPILE WALL

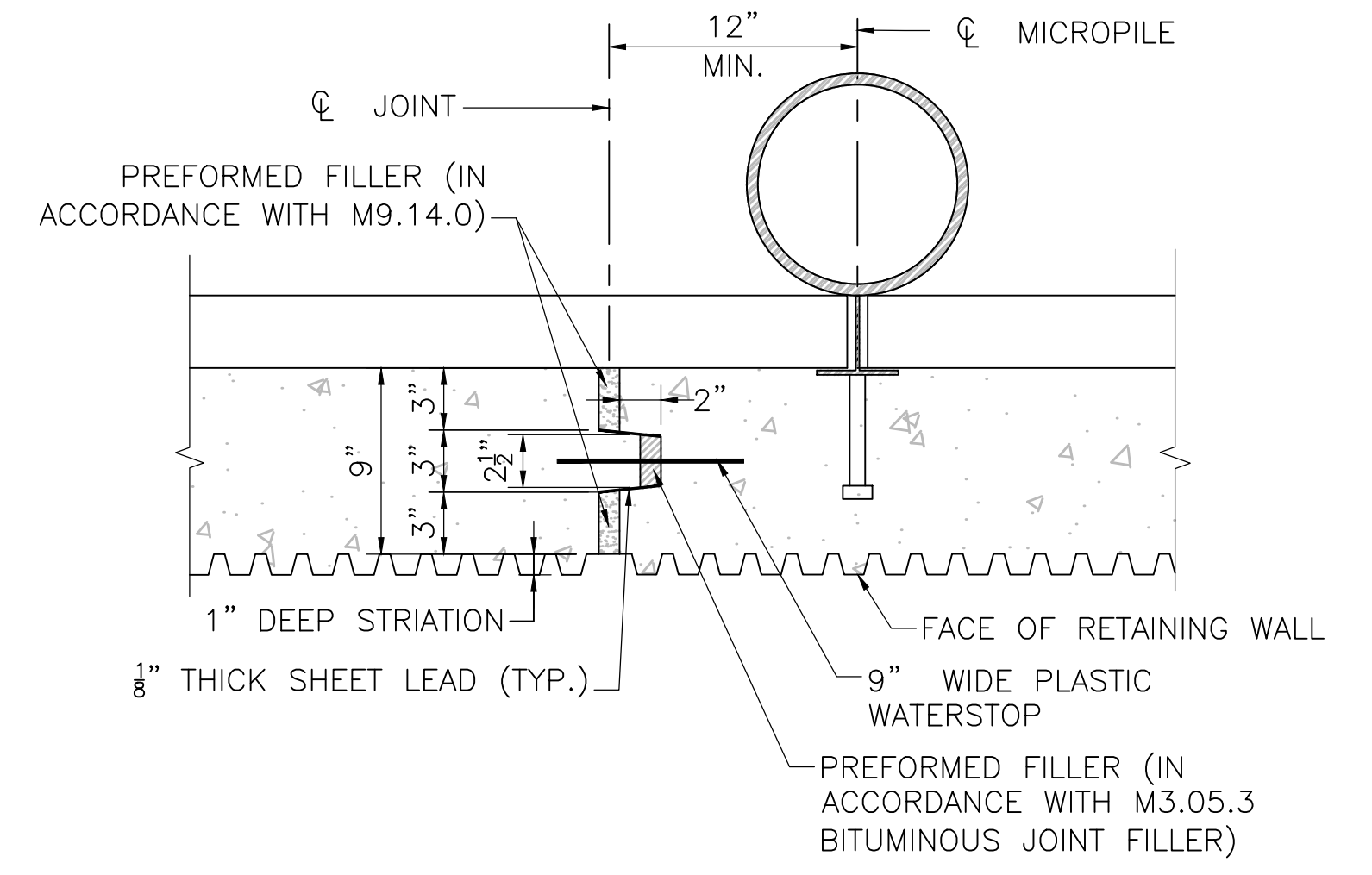


EXPANSION JOINT BETWEEN GRAVITY AND MICROPILE WALLS
SCALE: 1/2" = 1'-0"



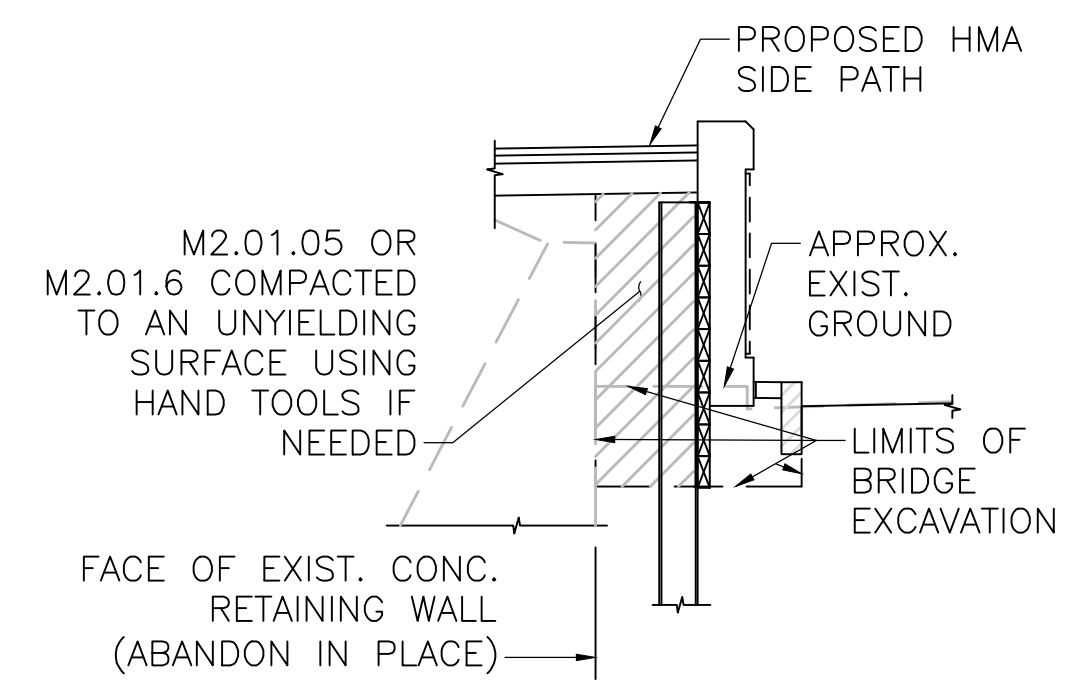
NOTE:
REINFORCEMENT SHALL TERMINATE 3" FROM EXPANSION JOINTS.

VERTICAL SECTION
SCALE: 1/2" = 1'-0"

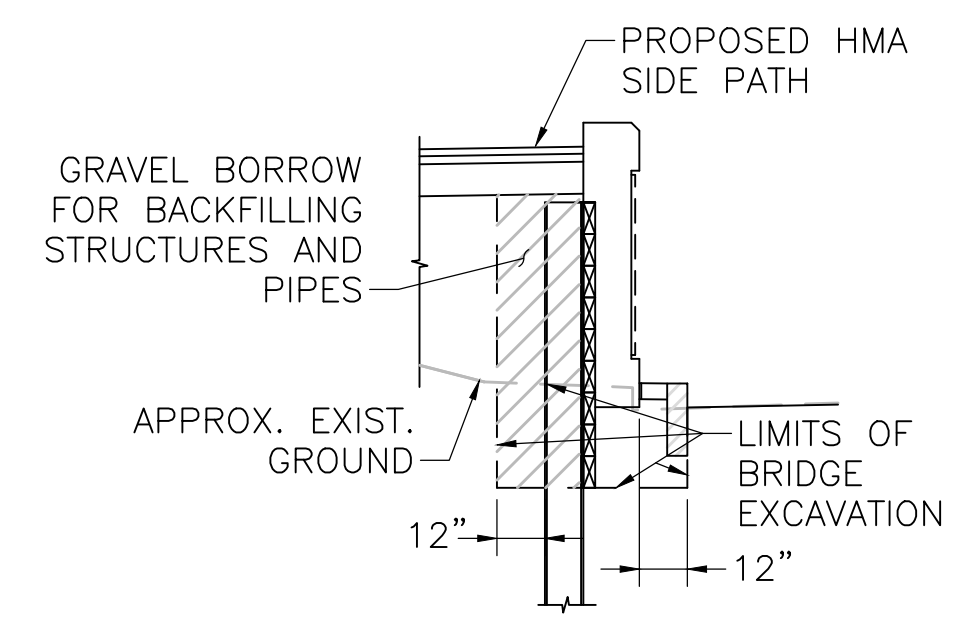


HORIZONTAL SECTION
SCALE: 1 1/2" = 1'-0"

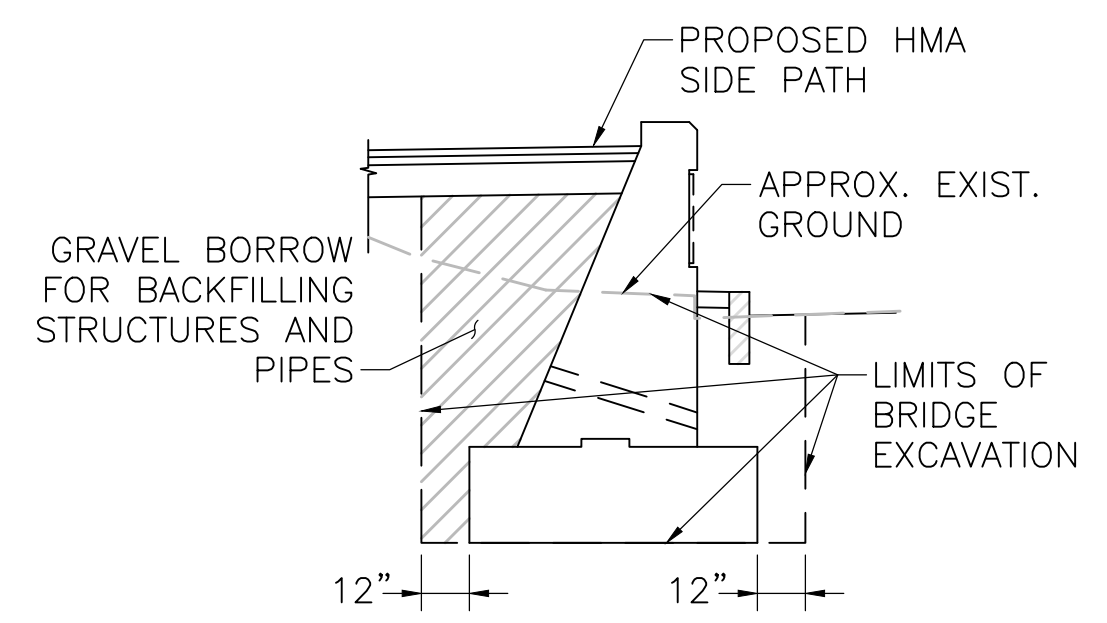
EXPANSION JOINT DETAILS AT MICROPILE WALL



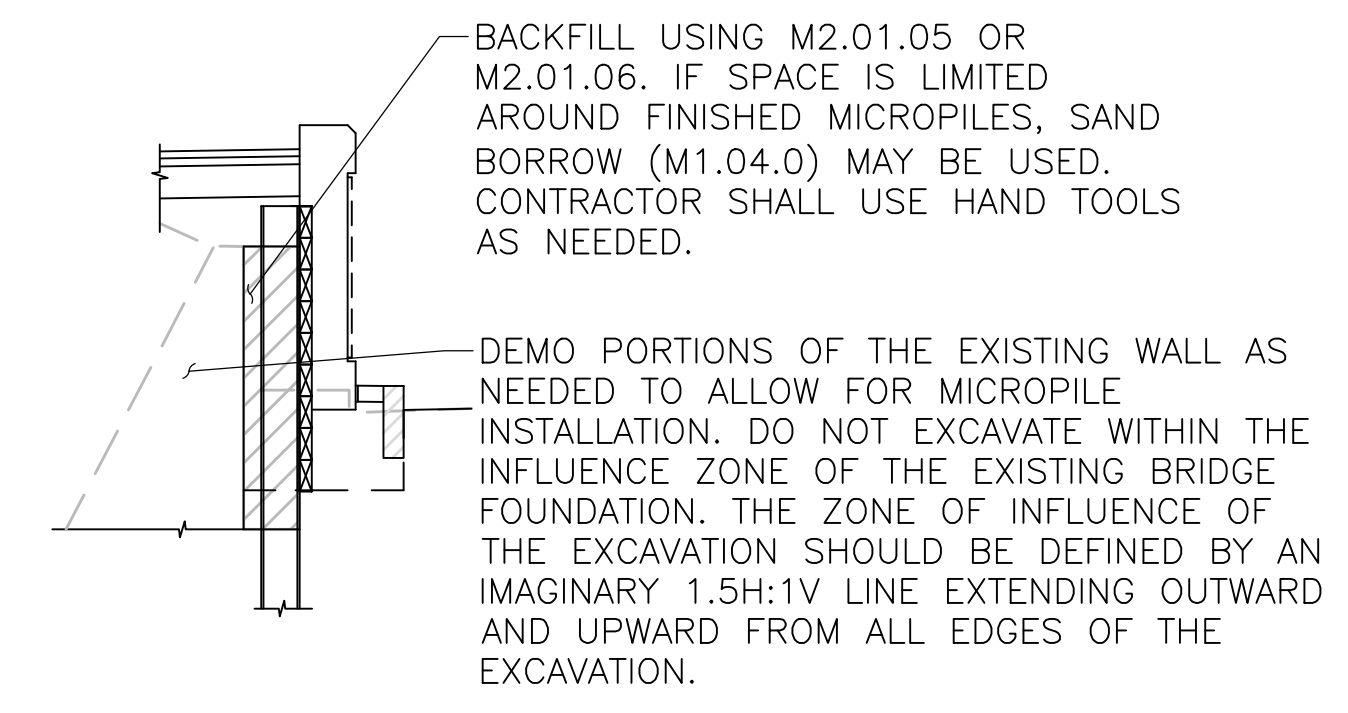
SECTION 1
SCALE: 1/4" = 1'-0" 143



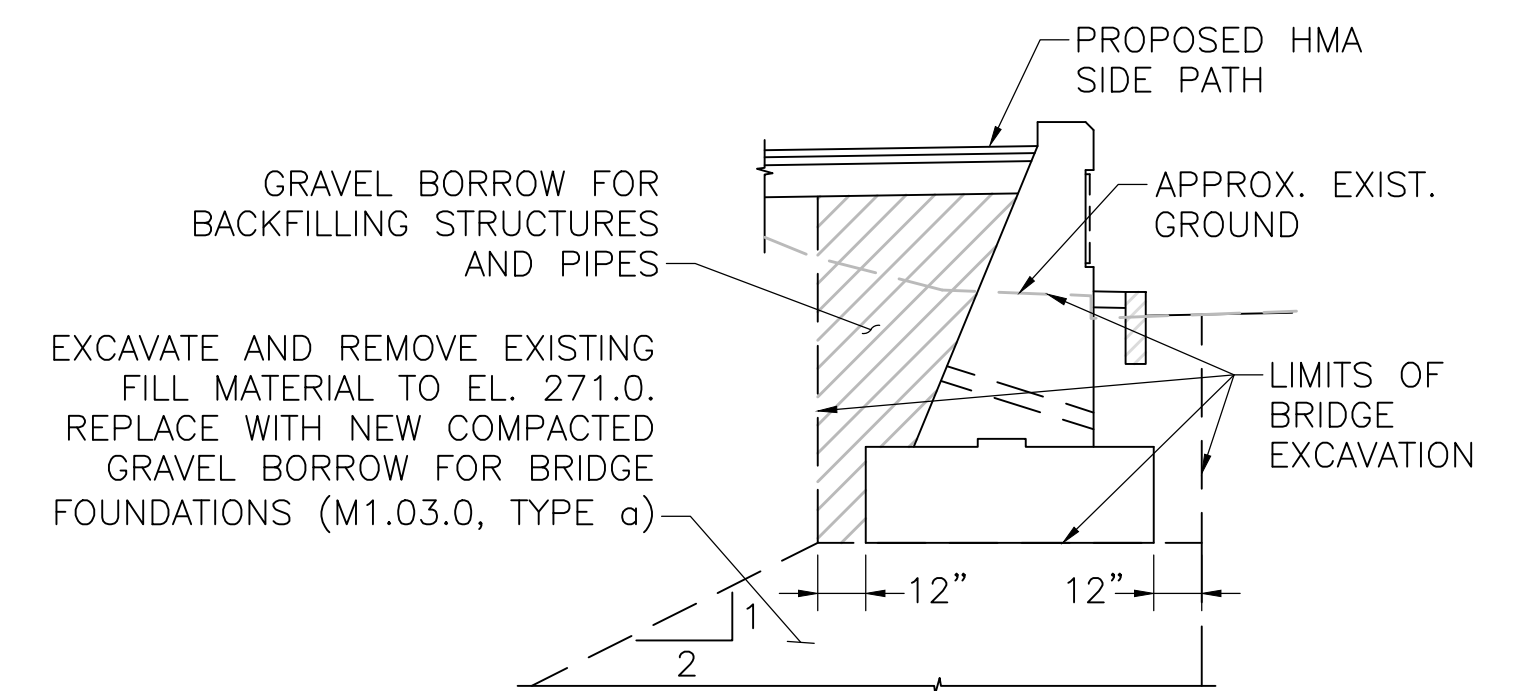
SECTION 2
SCALE: 1/4" = 1'-0" 142/143



SECTION 3
SCALE: 1/4" = 1'-0" 142/143



SECTION 4
SCALE: 1/4" = 1'-0" 142

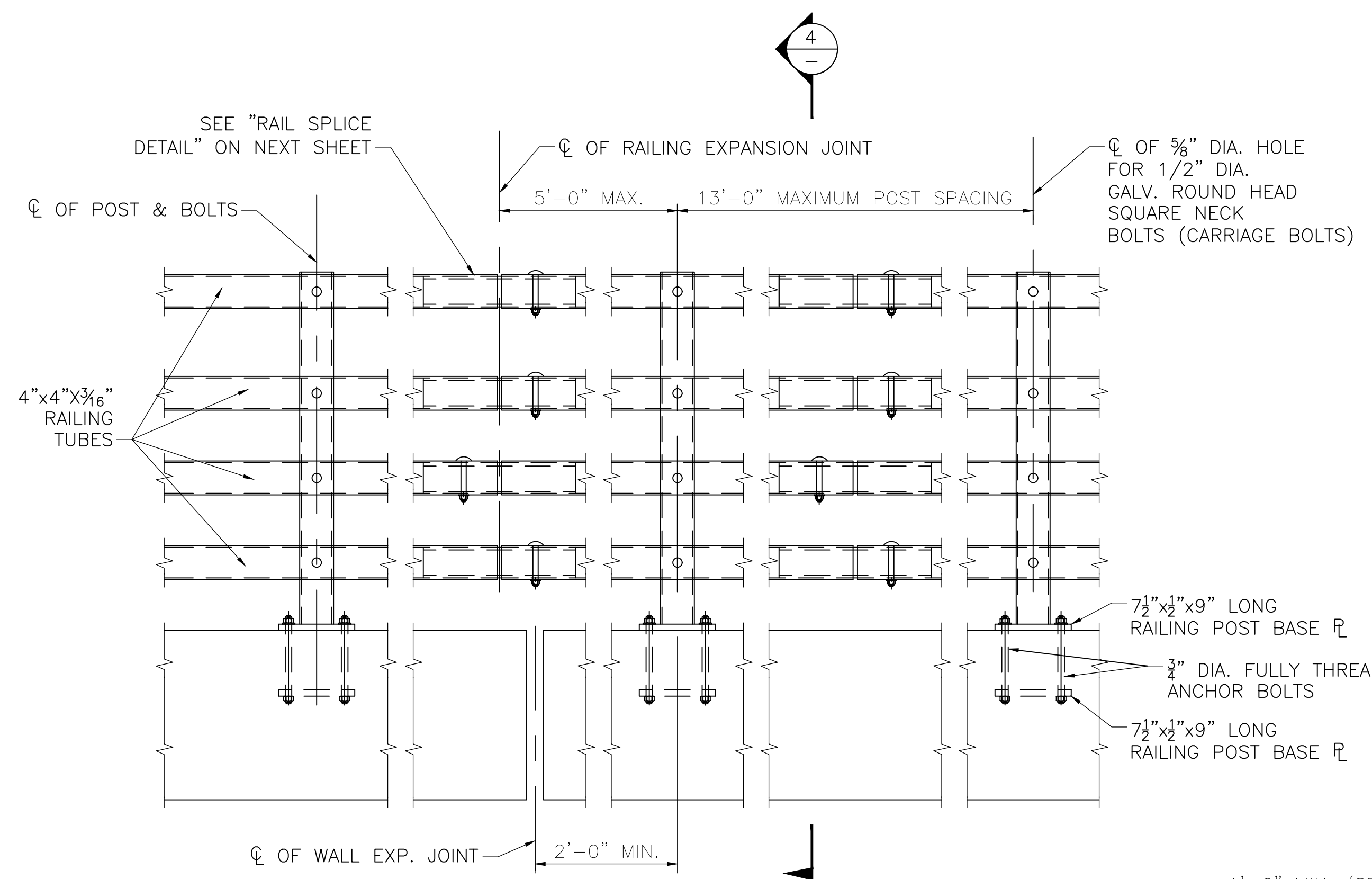


SECTION 5
SCALE: 1/4" = 1'-0" 142/143

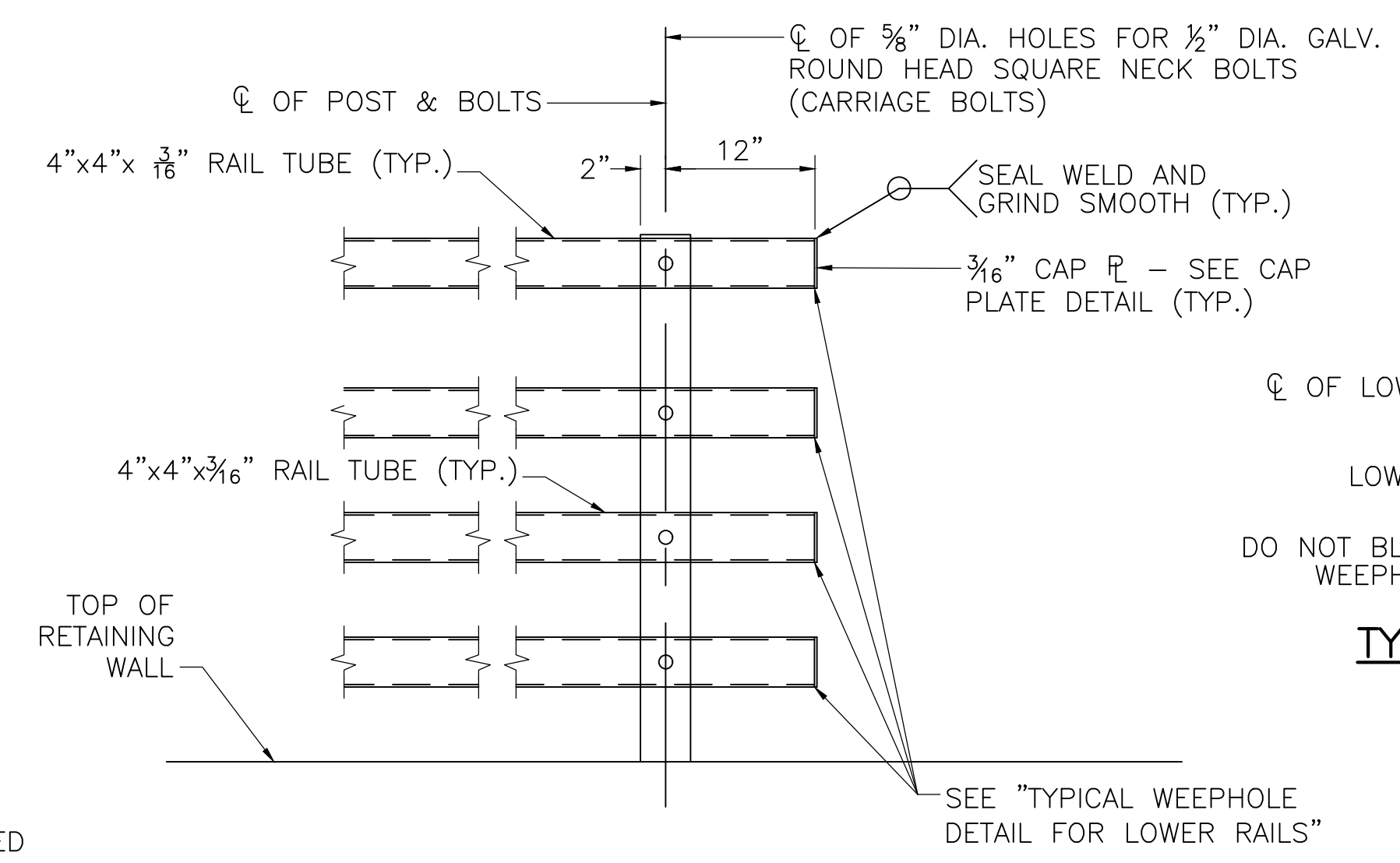
LIMITS OF BACKFILL AND EXCAVATION DETAILS

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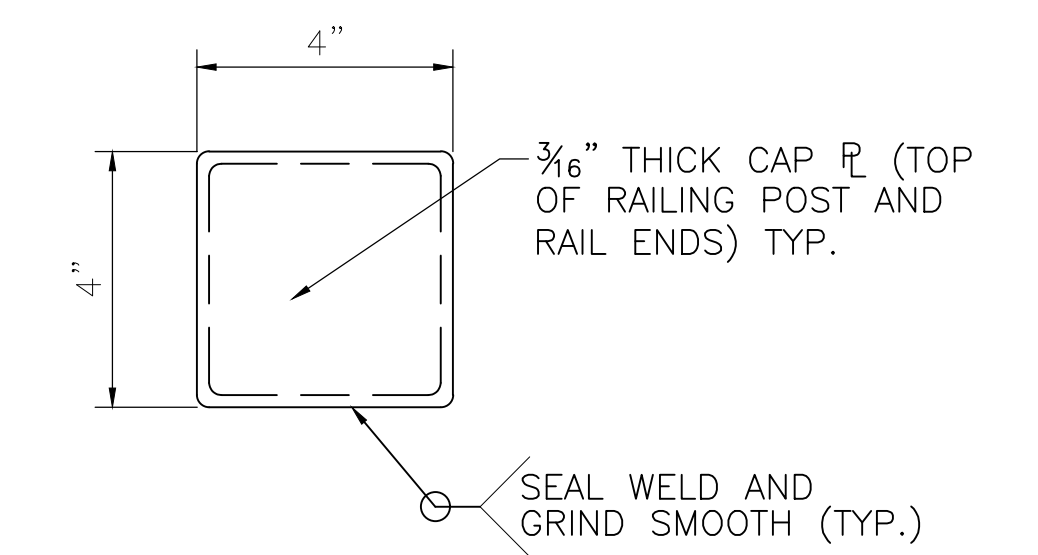
RAILING DETAILS



TYPICAL OUTSIDE ELEVATION
NOT TO SCALE

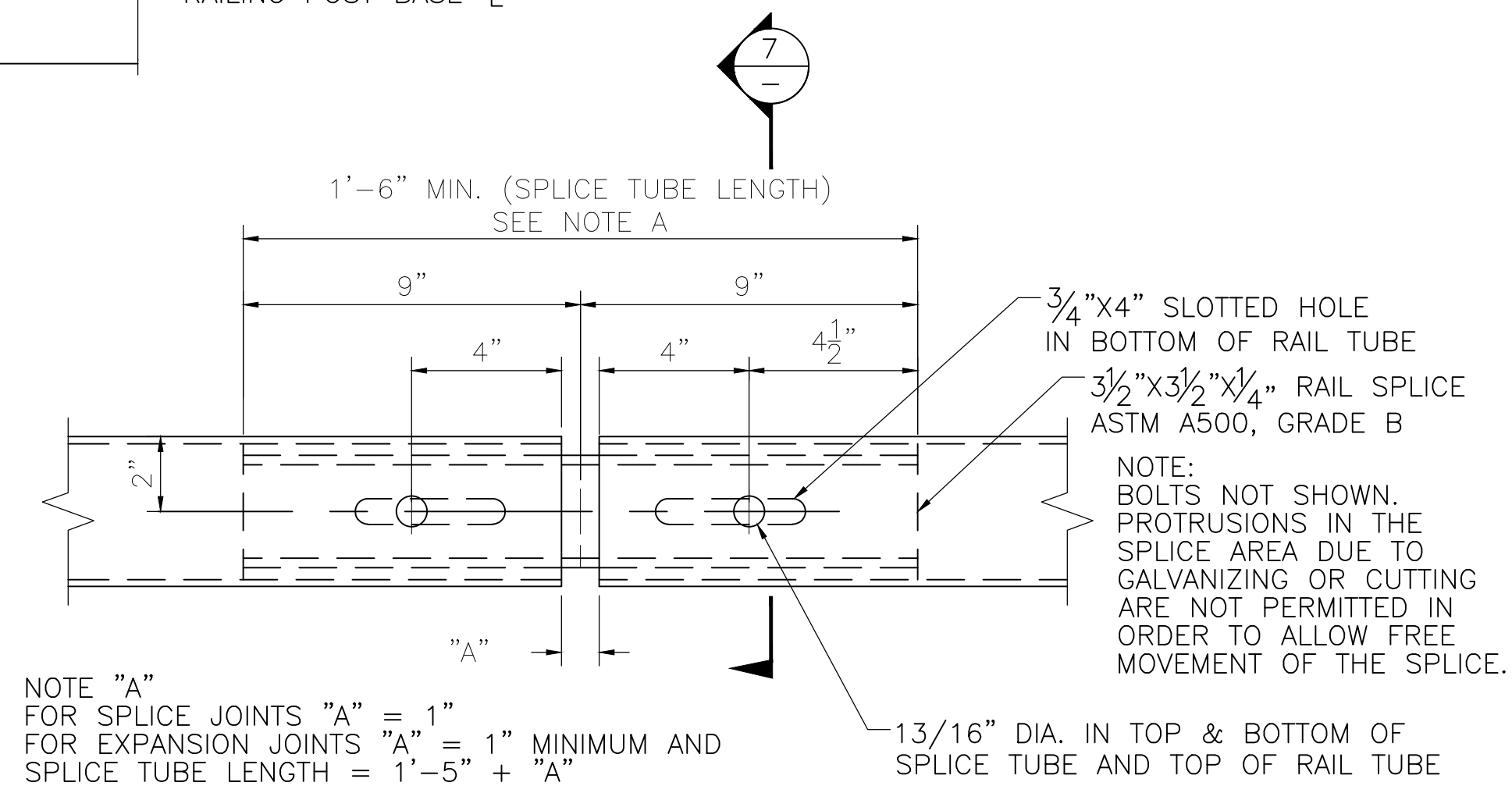


TYPICAL END ELEVATION FOR RAILING
NOT TO SCALE

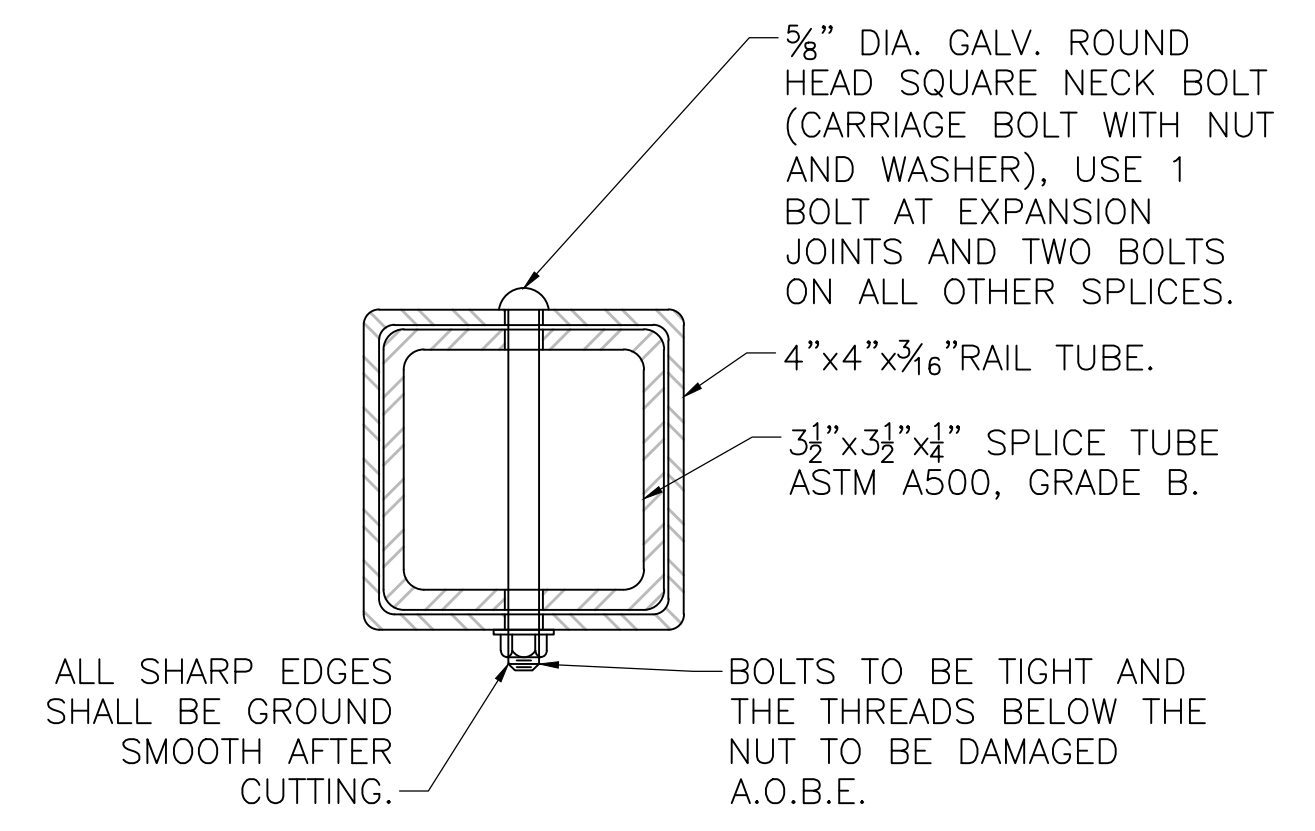


CAP PLATE DETAIL
NOT TO SCALE

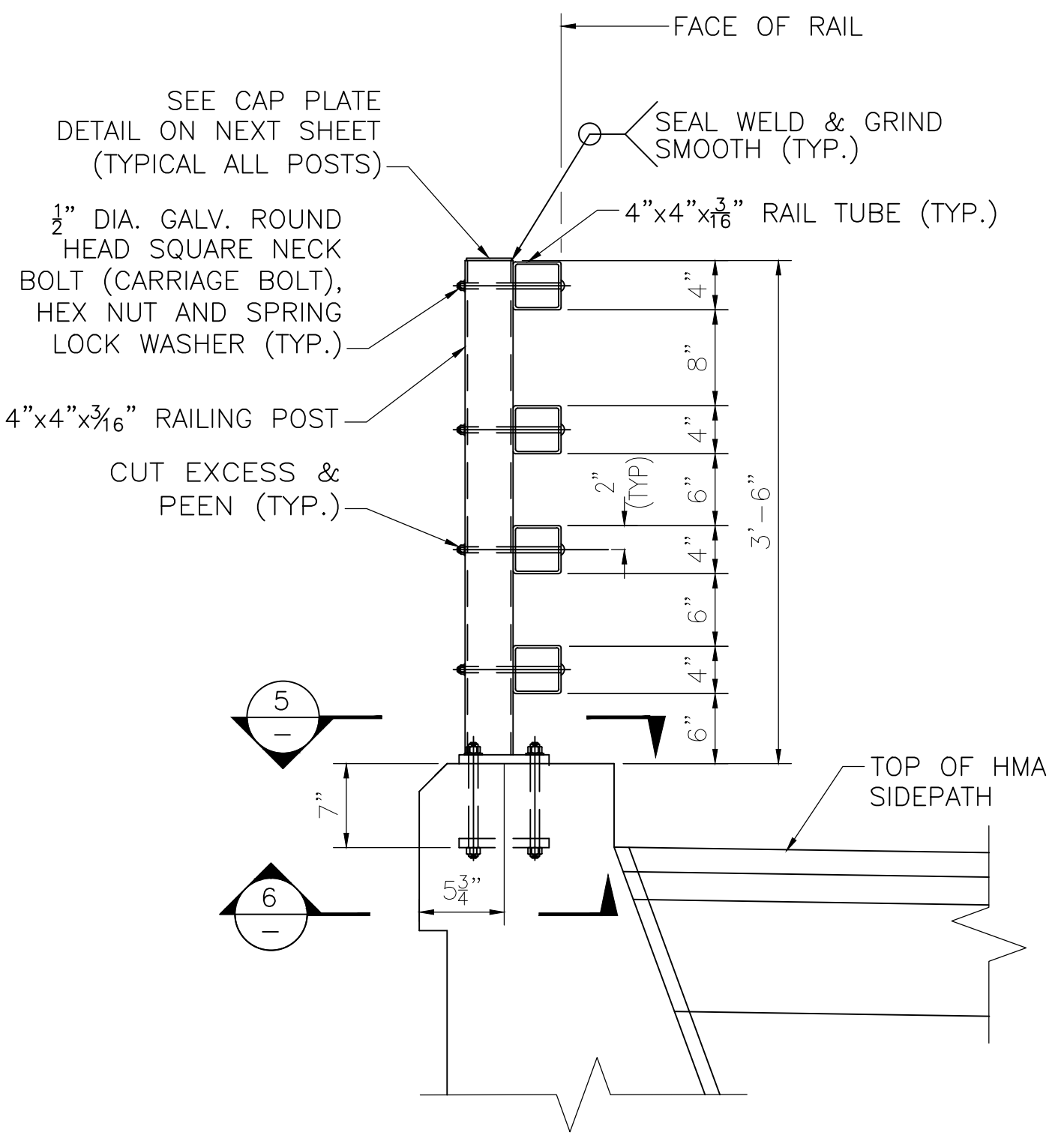
NOTE:
END CAPS FOR RAILING ARE TO BE USED ONLY WHERE THE RAIL TERMINATES AND AT THE TOPS OF ALL RAILING POSTS.



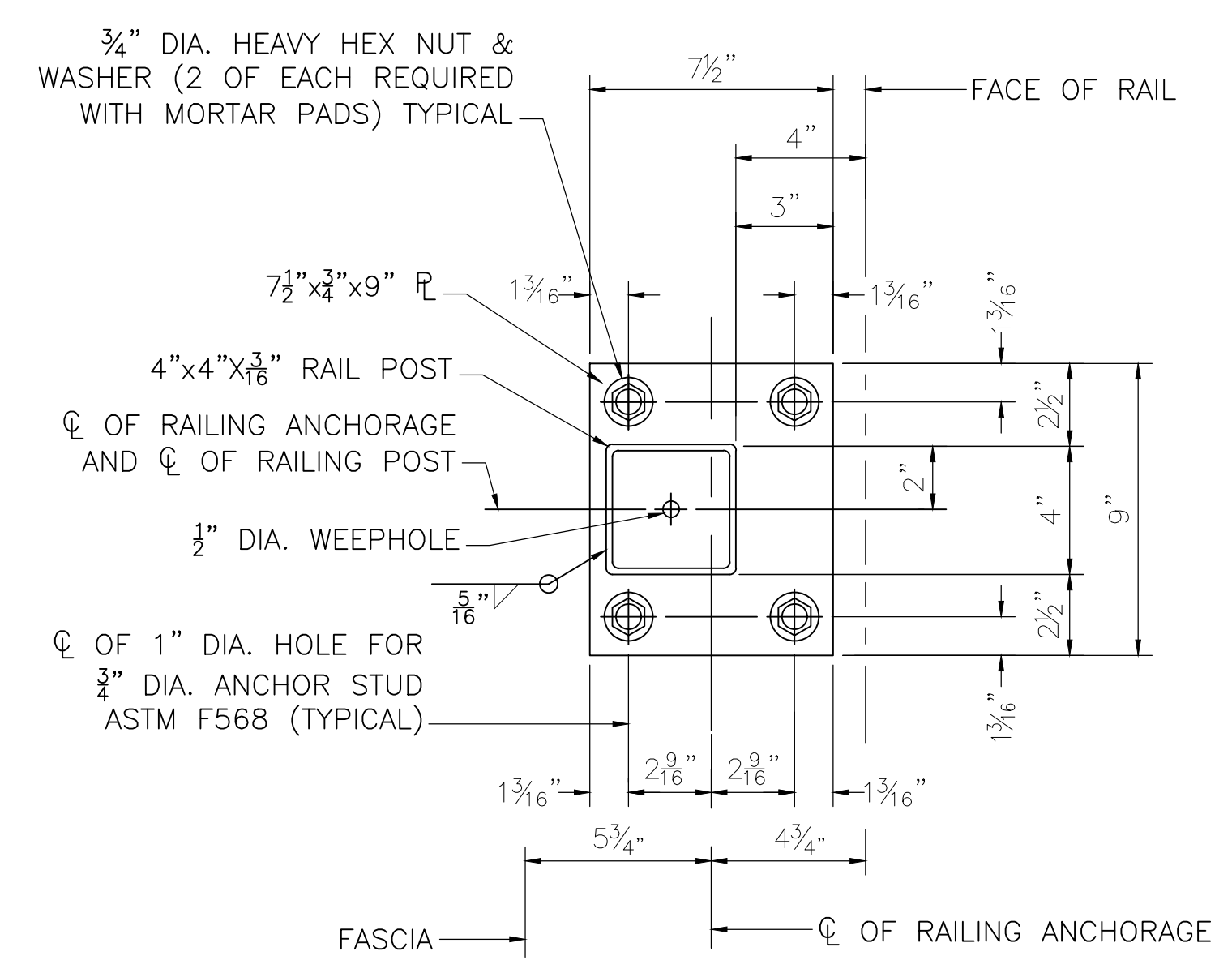
RAIL SPLICE DETAIL
NOT TO SCALE



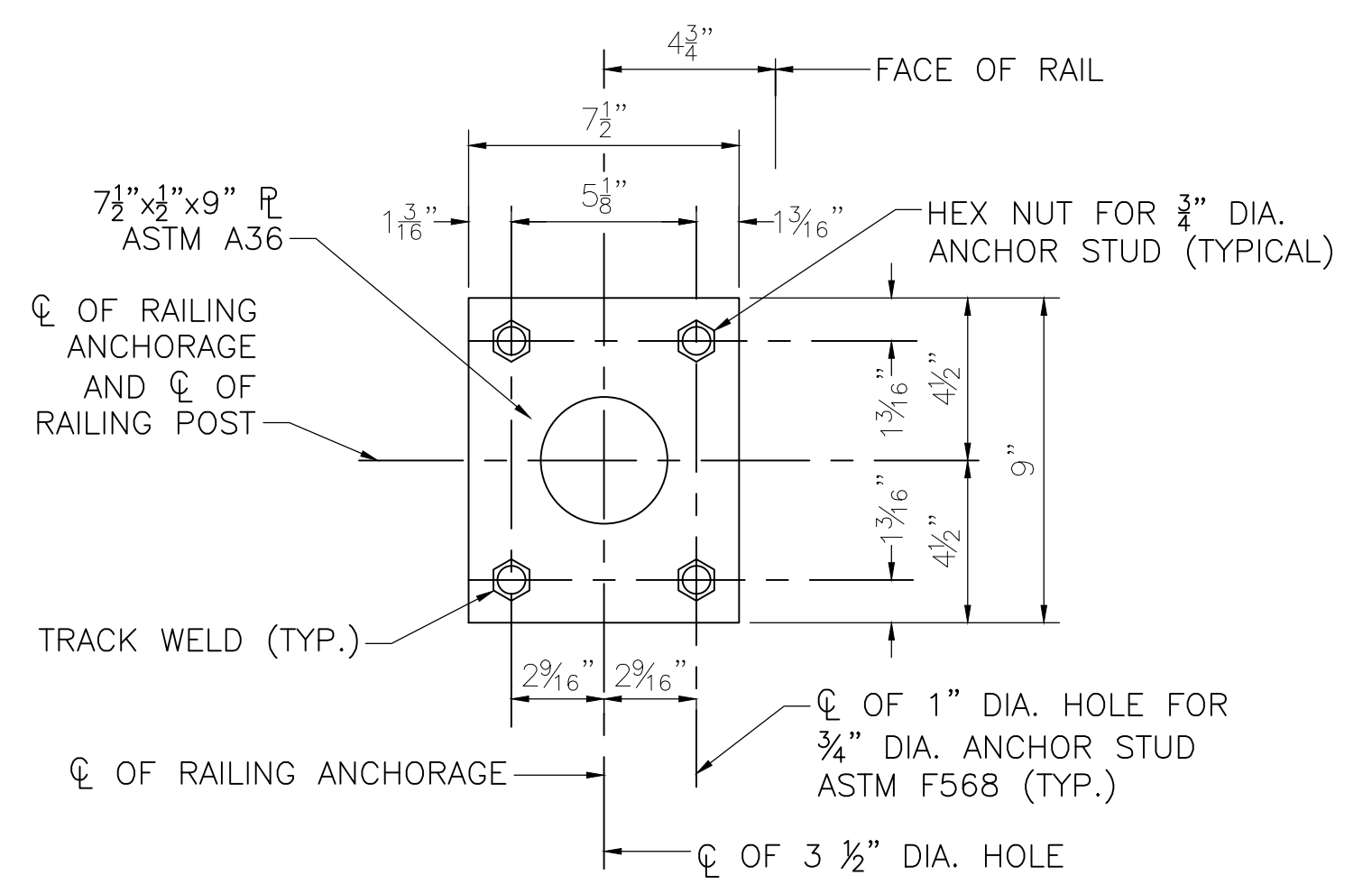
SECTION 7
NOT TO SCALE



SECTION 4
NOT TO SCALE



SECTION 5 RAILING POST BASE PLATE
NOT TO SCALE



SECTION 6 RAILING POST ANCHOR PLATE
NOT TO SCALE

NOTES:

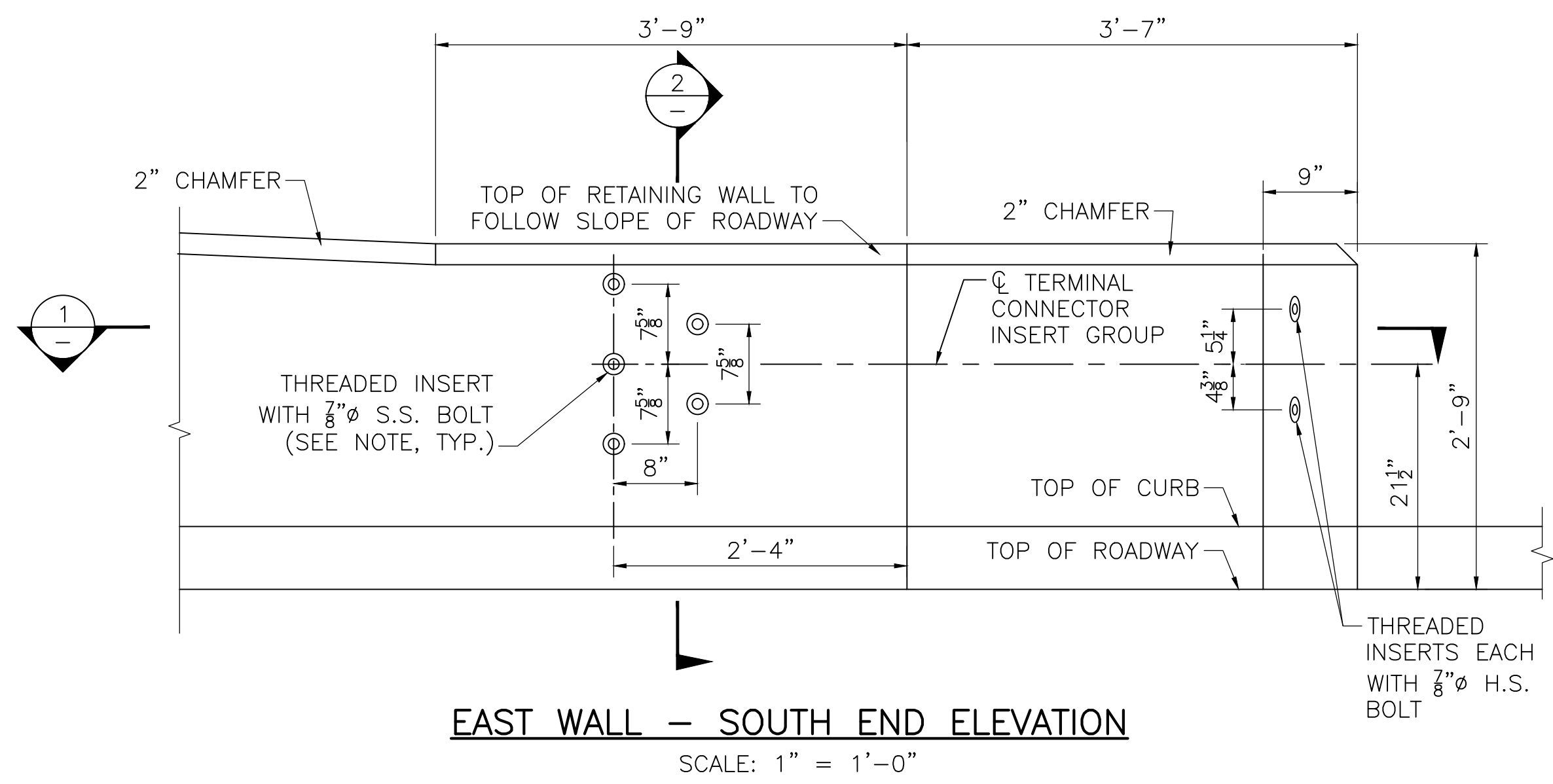
1. ALL RAILING IS TO BE FABRICATED AND ERECTED SO THAT THE RAILS ARE PARALLEL TO EACH OTHER AND TO THE GRADE. THE POSTS ARE TO BE TRULY VERTICAL.
2. WHEN THE RAILING IS TO BE PLACED ON A PREFORMED SURFACE, THE BASE PLATE MAY BE PARALLEL TO THE GRADE OR MAY BE PERPENDICULAR TO THE POST AND MADE LEVEL BY THE USE OF (1:1 RATIO CEMENT TO SAND) MORTAR.
3. TUBULAR STEEL RAILS, RAIL POSTS, NUTS AND WASHERS, CARRIAGE BOLTS, BASE PLATE ASSEMBLIES, ANCHOR STUDS, ANCHOR PLATES, ANY NECESSARY SHIMS AND MORTAR PADS TO BE PAID FOR UNDER THE RAILING ITEM 975.8.
4. AFTER THE ANCHOR STUD NUTS HAVE BEEN PLACED AND TIGHTENED TO THE SATISFACTION OF THE ENGINEER, THE STUDS SHALL BE CUT OFF 1" ABOVE THE NUT AND THE THREADS SHALL BE DAMAGED SO THE NUT SHALL NOT BACK OFF.
5. RAIL SHALL SPAN A MINIMUM OF 3 POSTS, EXCEPT AT THE END OF THE BRIDGE RAILING WHERE THE RAIL MAY SPAN A MINIMUM OF 2 POSTS.
6. PRIOR TO GALVANIZING, GRIND ALL SHARP EDGES TO A MINIMUM RADIUS OF 1/16".
7. CEMENT MORTAR PADS SHALL BE PAID FOR UNDER THE RAILING ITEM 975.8.

MATERIALS:

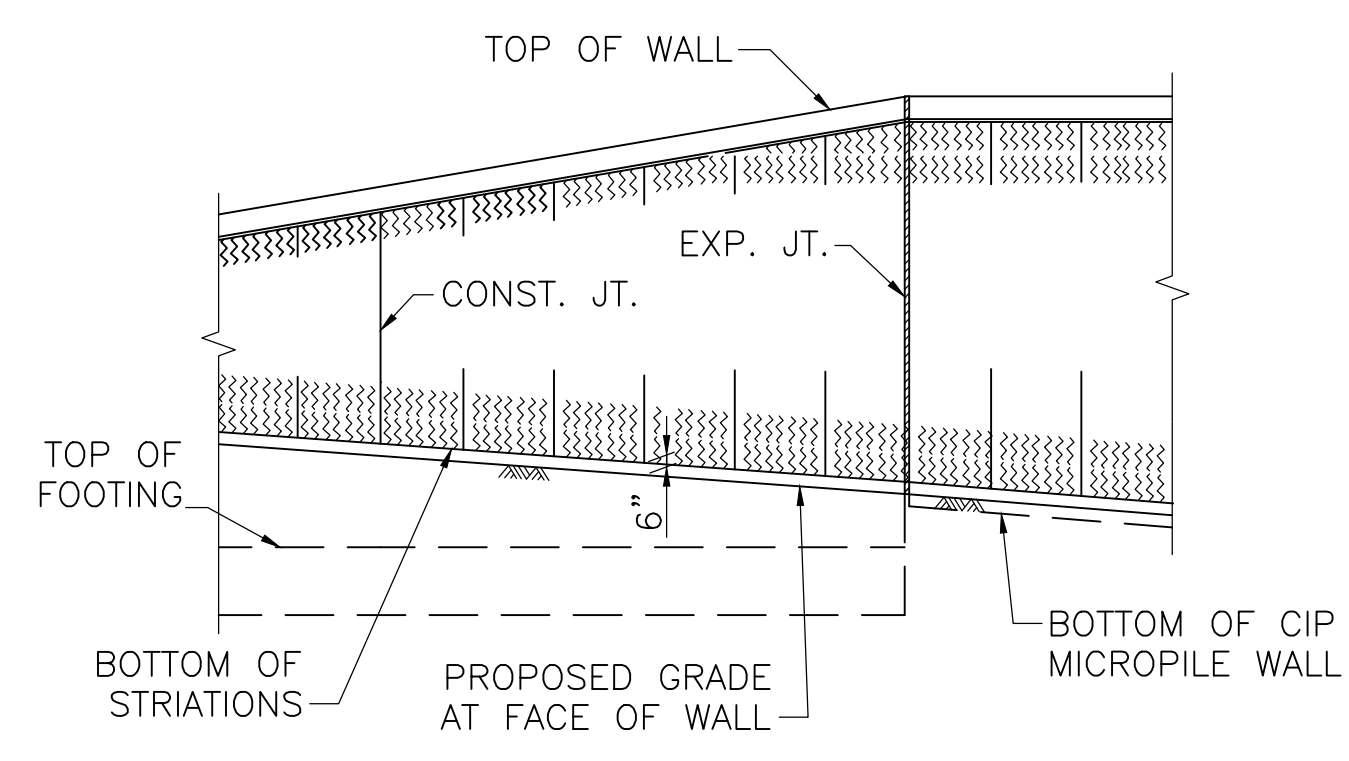
STRUCTURAL STEEL TUBING.....ASTM A 500 GRADE B GALVANIZED
POST AND BASE PLATE.....AASHTO M 270 GRADE 36 GALVANIZED
ANCHOR BOLTS.....ASTM A 449 GALVANIZED
NUTS, BOLTS, AND WASHER.....ASTM A 449 GALVANIZED

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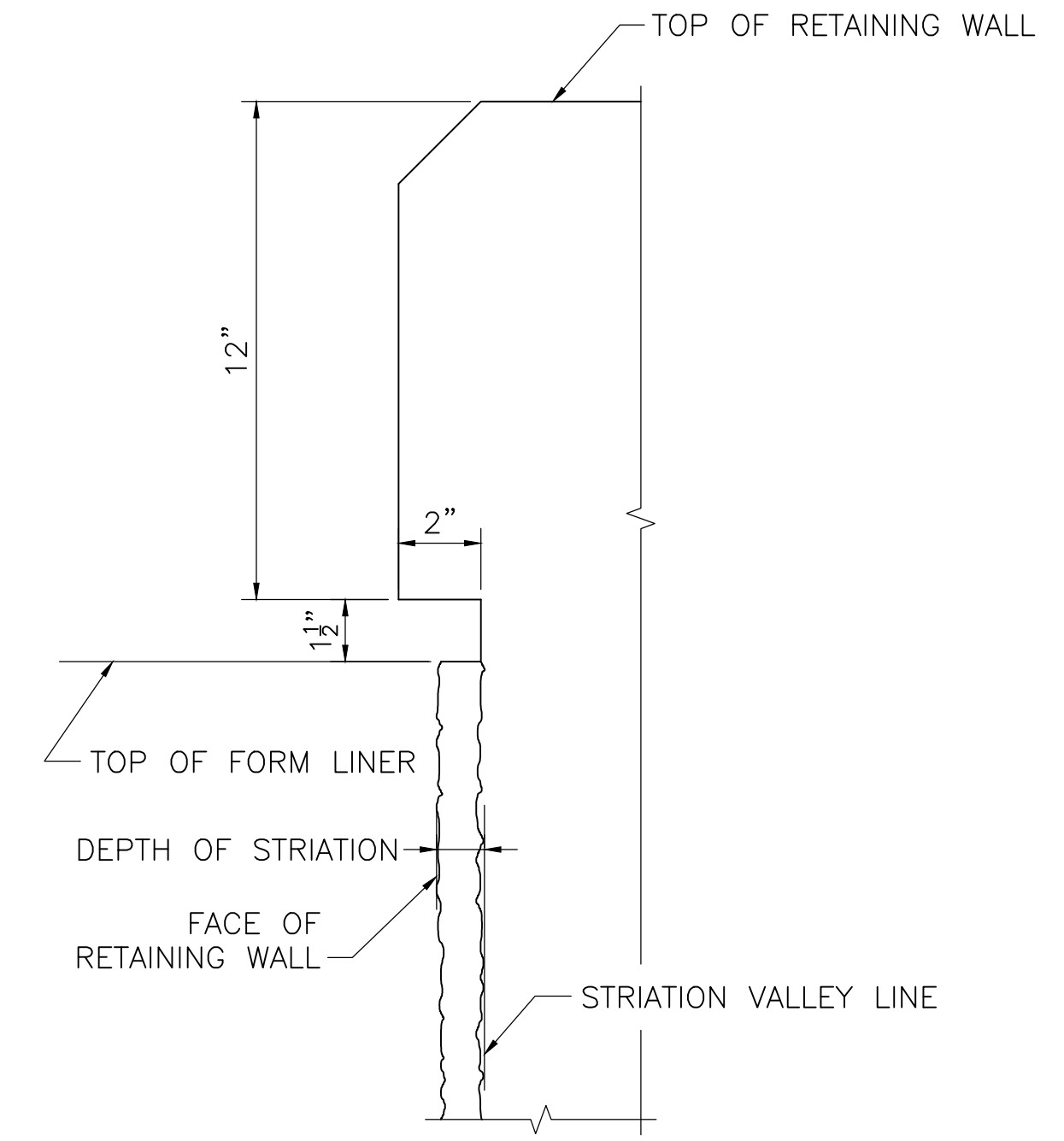
MISCELLANEOUS DETAILS



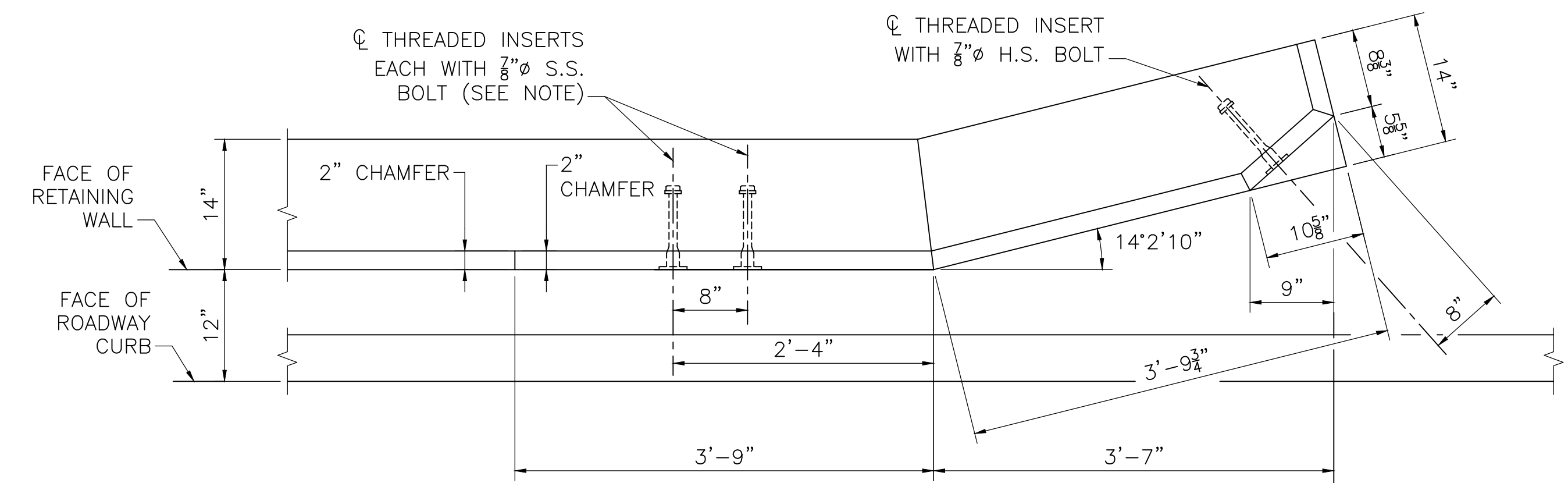
EAST WALL - SOUTH END ELEVATION
SCALE: 1" = 1'-0"



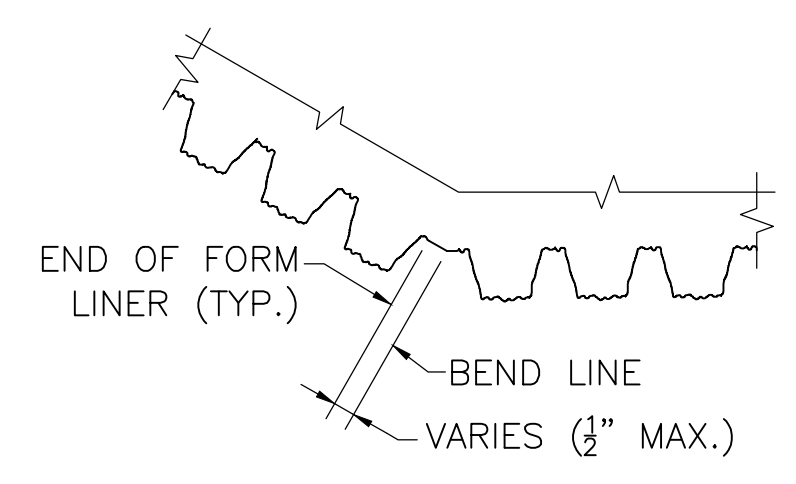
STRIATION PANEL ELEVATION
SCALE: 3/8" = 1'-0"



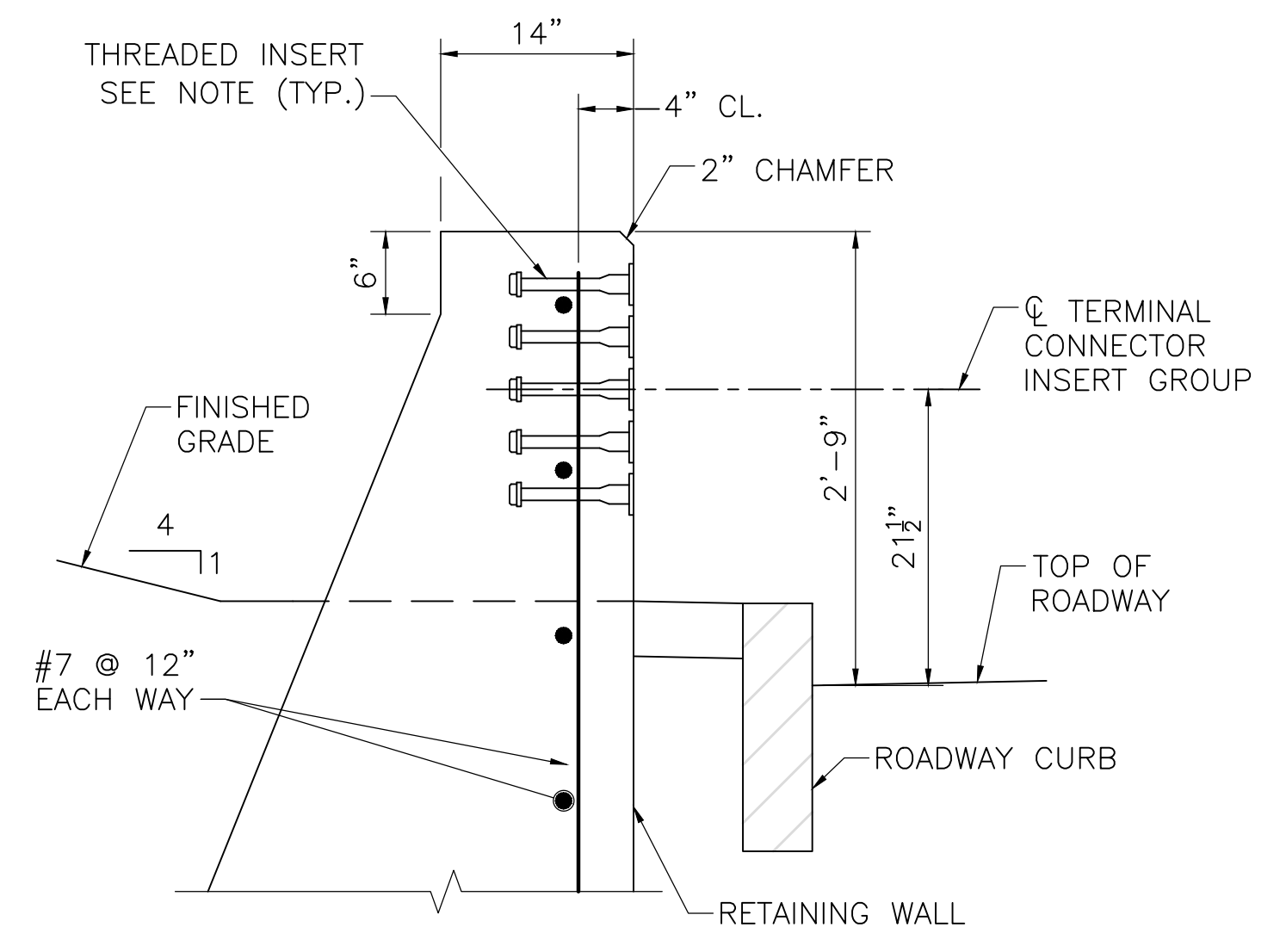
STRIATION DETAIL AT TOP OF WALL
SCALE: 3" = 1'-0"



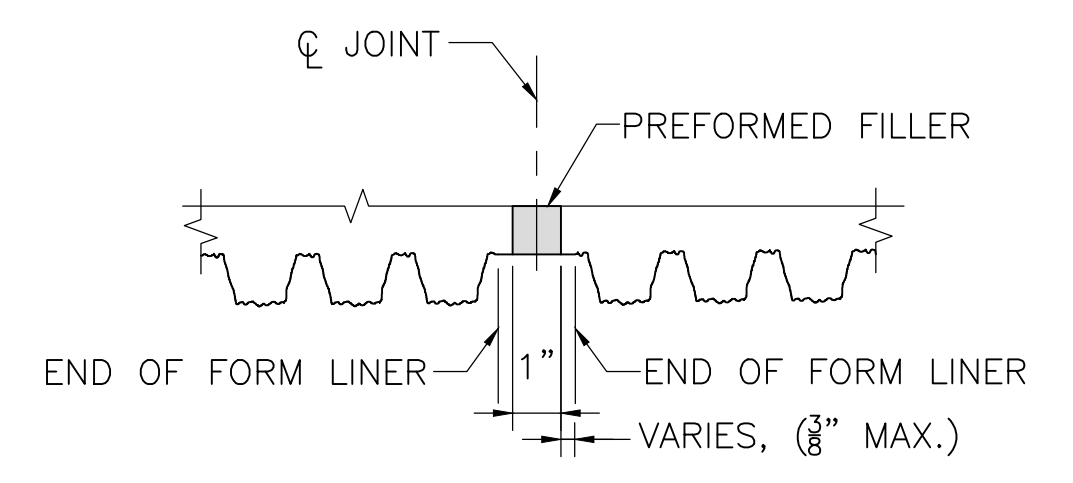
SECTION 1
SCALE: 1" = 1'-0"



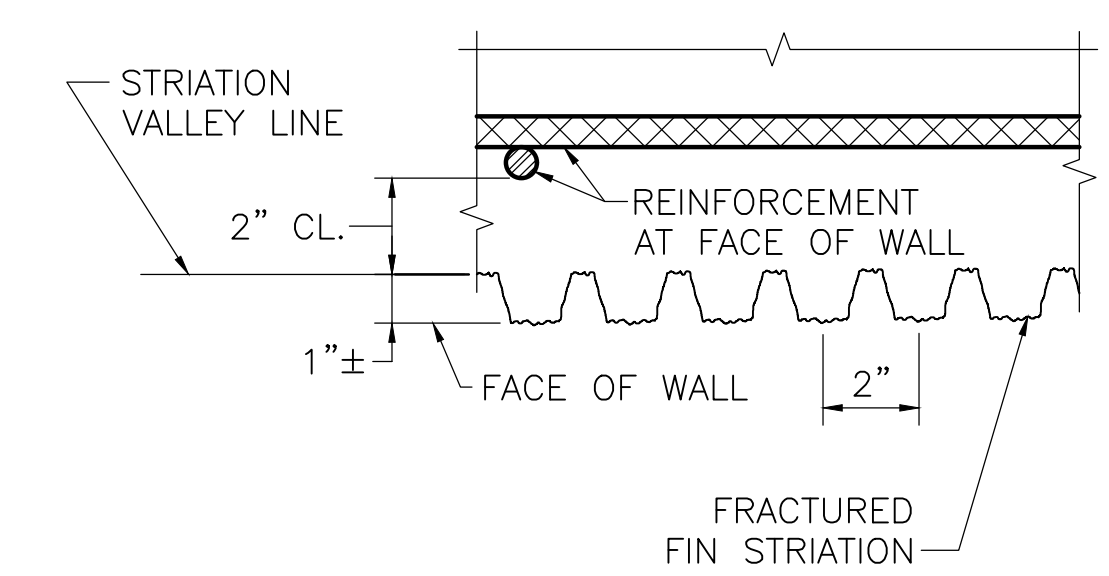
STRIATION DETAIL AT WALL CORNER
SCALE: 3" = 1'-0"



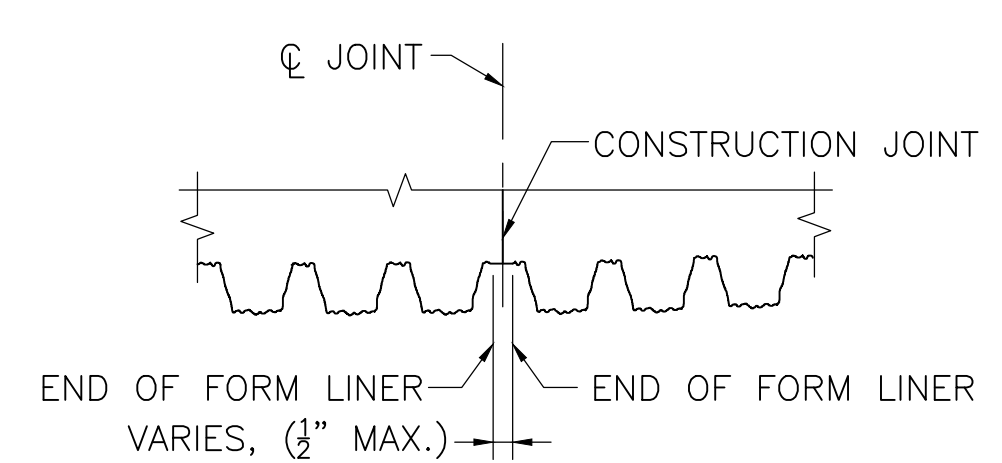
SECTION 2
SCALE: 1" = 1'-0"



STRIATION DETAIL AT EXPANSION JOINT
SCALE: 3" = 1'-0"



TYPICAL STRIATION DETAIL
SCALE: 3" = 1'-0"



STRIATION DETAIL AT CONSTRUCTION JOINT
SCALE: 3" = 1'-0"

NOTE:

THREADED INSERTS SHALL BE PREQUALIFIED BY THE MANUFACTURER AS BEING CAPABLE OF DEVELOPING A NOMINAL SHEAR RESISTANCE OF 20 KIPS PER 7/8" Ø S.S. BOLT. S.S. BOLTS SHALL BE 7/8" Ø x 1 1/2" LONG FULLY THREADED AISI TYPE 304N STAINLESS STEEL. INSERTS FOR 7/8" S.S. BOLTS SHALL BE GALVANIZED AND CAST INTO THE TRANSITION.

NOTES:

1. THE CONTRACTOR SHALL MAKE SURE THAT THE STRIATION FINS ARE PLUMB AND LINED UP VERTICALLY FROM PANEL TO PANEL FOR THE FULL HEIGHT OF THE WALL.
2. THE HORIZONTAL JOINT MAY BE OMITTED IF THE CONTRACTOR CAN DEMONSTRATE THAT THE FORM LINER PANELS CAN BE INSTALLED END TO END WITHOUT CREATING A VISIBLE SEAM IN THE FINAL CAST CONCRETE.

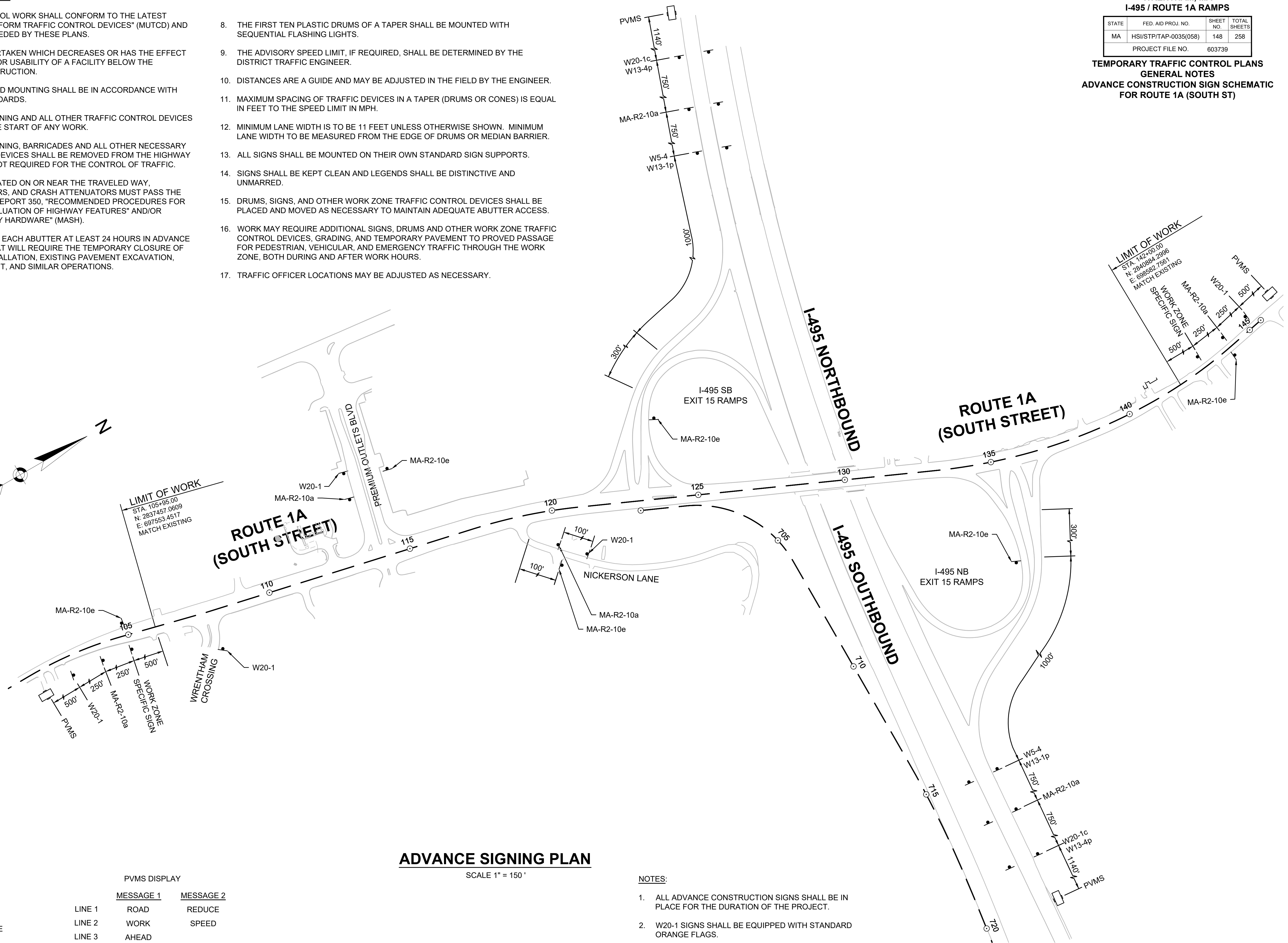
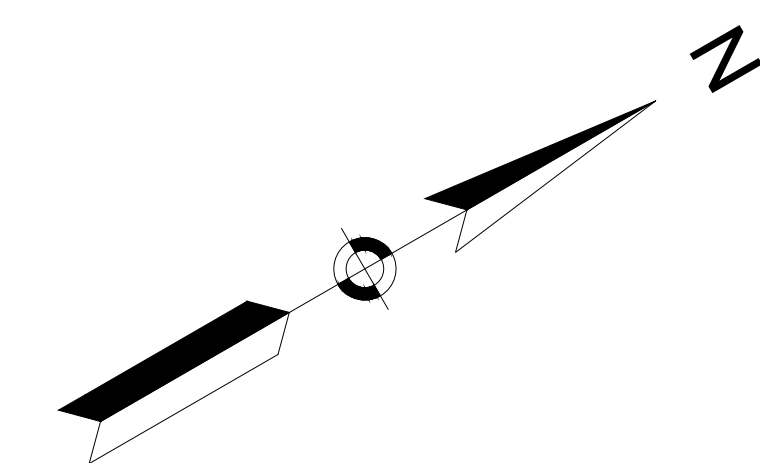
TRAFFIC MANAGEMENT GENERAL NOTES:

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- NO ALTERATION SHALL BE UNDERTAKEN WHICH DECREASES OR HAS THE EFFECT OF DECREASING ACCESSIBILITY OR USABILITY OF A FACILITY BELOW THE REQUIREMENTS FOR NEW CONSTRUCTION.
- ALL SIGN LEGENDS, BORDERS AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD AND MASSDOT STANDARDS.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR THE CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE FIRST TEN PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE DISTRICT TRAFFIC ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- SIGNS SHALL BE KEPT CLEAN AND LEGENDS SHALL BE DISTINCTIVE AND UNMARRED.
- DRUMS, SIGNS, AND OTHER WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS.
- WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER WORK ZONE TRAFFIC CONTROL DEVICES, GRADING, AND TEMPORARY PAVEMENT TO PROVED PASSAGE FOR PEDESTRIAN, VEHICULAR, AND EMERGENCY TRAFFIC THROUGH THE WORK ZONE, BOTH DURING AND AFTER WORK HOURS.
- TRAFFIC OFFICER LOCATIONS MAY BE ADJUSTED AS NECESSARY.

**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

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**TEMPORARY TRAFFIC CONTROL PLANS
GENERAL NOTES
ADVANCE CONSTRUCTION SIGN SCHEMATIC
FOR ROUTE 1A (SOUTH ST)**



SIGN DESIGNATION

- W20-1
- MA-R2-10a
- MA-R2-10e
- W5-4
- W13-1p
- W13-4p
- PVMS

LEGEND

- ROAD WORK AHEAD
- WORK ZONE SPEEDING FINES DOUBLED
- END ROAD WORK DOUBLE FINES END
- RAMP NARROWS
- XX M.P.H.
- ON RAMP

PORTABLE VARIABLE MESSAGE SIGN

PVMS DISPLAY

	MESSAGE 1	MESSAGE 2
LINE 1	ROAD	REDUCE
LINE 2	WORK	SPEED
LINE 3	AHEAD	

ADVANCE SIGNING PLAN

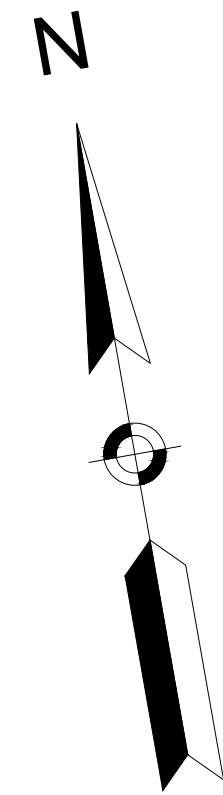
SCALE 1" = 150'

NOTES:

- ALL ADVANCE CONSTRUCTION SIGNS SHALL BE IN PLACE FOR THE DURATION OF THE PROJECT.
- W20-1 SIGNS SHALL BE EQUIPPED WITH STANDARD ORANGE FLAGS.

I-495 TRAFFIC MANAGEMENT NOTES:

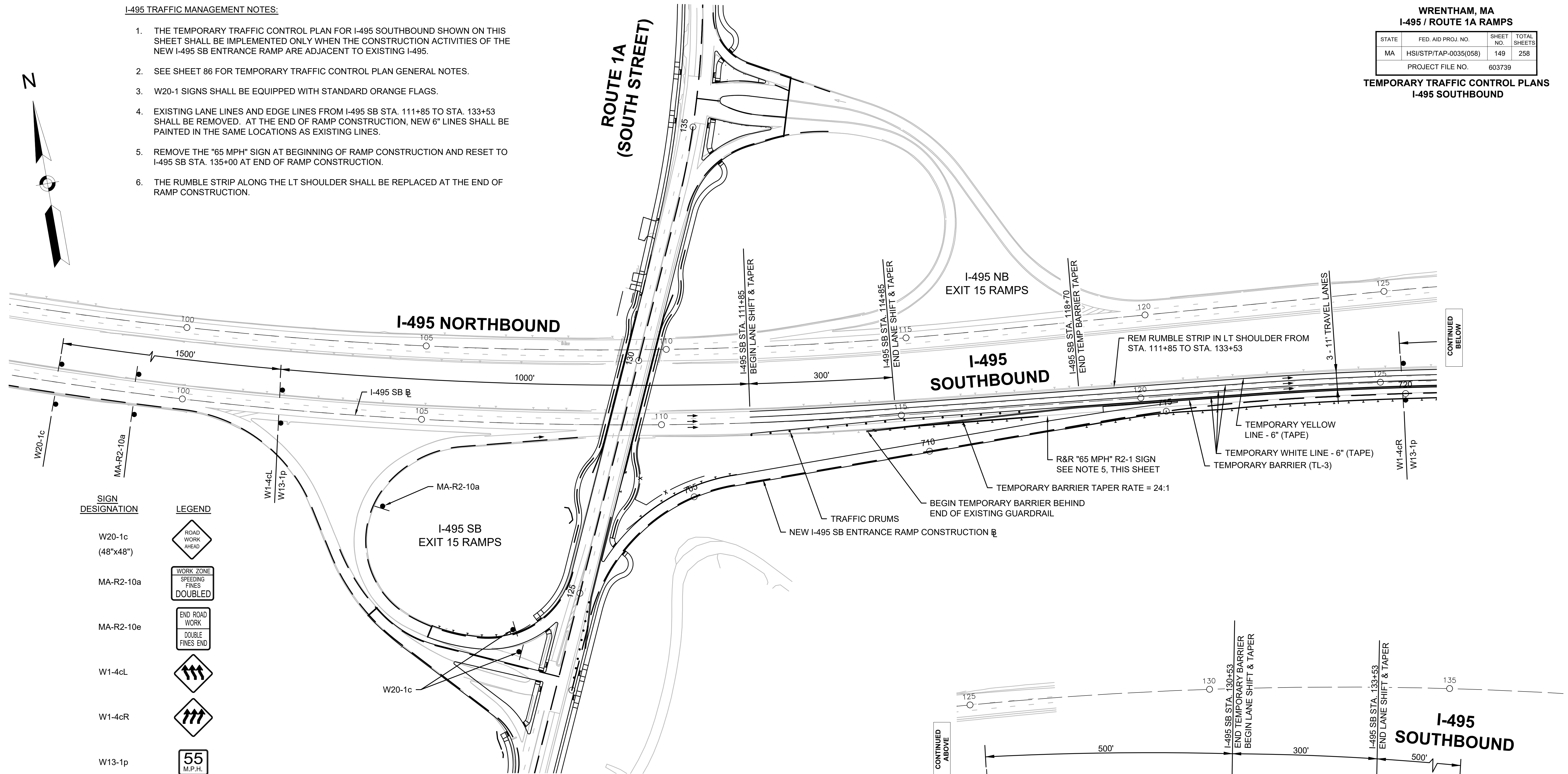
1. THE TEMPORARY TRAFFIC CONTROL PLAN FOR I-495 SOUTHBOUND SHOWN ON THIS SHEET SHALL BE IMPLEMENTED ONLY WHEN THE CONSTRUCTION ACTIVITIES OF THE NEW I-495 SB ENTRANCE RAMP ARE ADJACENT TO EXISTING I-495.
2. SEE SHEET 86 FOR TEMPORARY TRAFFIC CONTROL PLAN GENERAL NOTES.
3. W20-1 SIGNS SHALL BE EQUIPPED WITH STANDARD ORANGE FLAGS.
4. EXISTING LANE LINES AND EDGE LINES FROM I-495 SB STA. 111+85 TO STA. 133+53 SHALL BE REMOVED. AT THE END OF RAMP CONSTRUCTION, NEW 6" LINES SHALL BE PAINTED IN THE SAME LOCATIONS AS EXISTING LINES.
5. REMOVE THE "65 MPH" SIGN AT BEGINNING OF RAMP CONSTRUCTION AND RESET TO I-495 SB STA. 135+00 AT END OF RAMP CONSTRUCTION.
6. THE RUMBLE STRIP ALONG THE LT SHOULDER SHALL BE REPLACED AT THE END OF RAMP CONSTRUCTION.



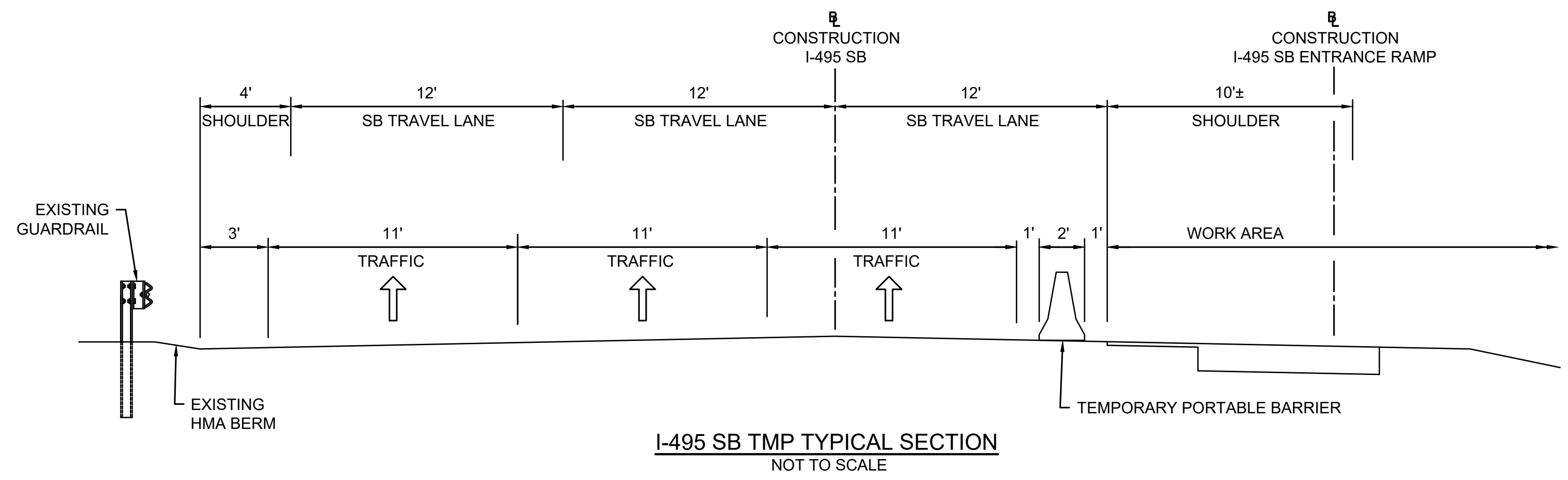
**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

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**TEMPORARY TRAFFIC CONTROL PLANS
I-495 SOUTHBOUND**



SIGN DESIGNATION	LEGEND
W20-1c (48"x48")	
MA-R2-10a	
MA-R2-10e	
W1-4cL	
W1-4cR	
W13-1p	



BUFFER SPACING	
SPEED (MPH)	DISTANCE (FEET)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- P/F POLICE/FLAGGER DETAIL
- ▨ TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN
- ➡ ARROW BOARD
- ▨ WORK ZONE
- ➡ DIRECTION OF TRAFFIC
- ⊘ IMPACT ATTENUATOR
- MEDIAN BARRIER
- ▨ MEDIAN BARRIER WITH WARNING LIGHTS
- 🚚 WORK VEHICLE
- ⊘ TRUCK MOUNTED ATTENUATOR
- ⬅️ TRAFFIC OR PEDESTRIAN SIGNAL
- SIGN

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI-LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

NUMBER OF LANES		NUMBER OF STUDIES	AVERAGE CAPACITY	
NORMAL (EXISTING)	OPEN (TO TRAFFIC)		VPH	VPHPL
3	1	7	1,170	1,170
2	1	8	1,340	1,340
5	2	8	2,740	1,370
4	2	4	2,960	1,480
3	2	9	2,980	1,490
4	3	4	4,560	1,520

Source: Dudek, C., *Notes on Work Zone Capacity and Level of Service*. Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

BY OBTAINING HOURLY TRAFFIC COUNTS FOR A PARTICULAR ROADWAY (WITH A MINIMUM OF A 48-HOUR AUTOMATIC TRAFFIC RECORDER (ATR) COUNT), THIS WILL HELP TO DETERMINE AT WHAT TIMES OF THE DAY OR NIGHT A CERTAIN NUMBER OF LANES MAY BE CLOSED.

GENERAL GUIDELINES (TR-GEN-1)
N.T.S.

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350	350	350
MOST OTHER ROADWAYS*	500	500	500
FREEWAYS AND EXPRESSWAYS*	1,000	1,500	2,640

- * ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.
- ** DISTANCES ARE SHOWN IN FEET (METERS). THE COLUMN HEADINGS A, B, AND C ARE THE DIMENSIONS SHOWN IN THE DETAIL/ TYPICAL SETUP FIGURES. THE A DIMENSION IS THE DISTANCE FROM THE TRANSITION OR POINT OF RESTRICTION TO THE FIRST SIGN. THE B DIMENSION IS THE DISTANCE BETWEEN THE FIRST AND SECOND SIGNS. THE C DIMENSION IS THE DISTANCE BETWEEN THE SECOND AND THIRD SIGNS. (THE "THIRD" SIGN IS THE FIRST ONE TYPICALLY ENCOUNTERED BY A DRIVER APPROACHING A TEMPORARY TRAFFIC CONTROL (TTC) ZONE.)

THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTCP SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20-1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY-TO-DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

MA-R2-10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

MA-R2-10a, MA-R2-10e, AND W20-1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

SPEED* (mph)	DISTANCE (ft)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

*POSTED SPEED, OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C-2 MUTCD LATEST EDITION

NOTES ON WORK ZONE DISTANCES (TR-GEN-2)
N.T.S.

CONVENTIONAL ROADWAY— A STREET OR HIGHWAY OTHER THAN A LOW-VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY— A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY— A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW-VOLUME ROAD— A FACILITY LYING OUTSIDE OF BUILT-UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH

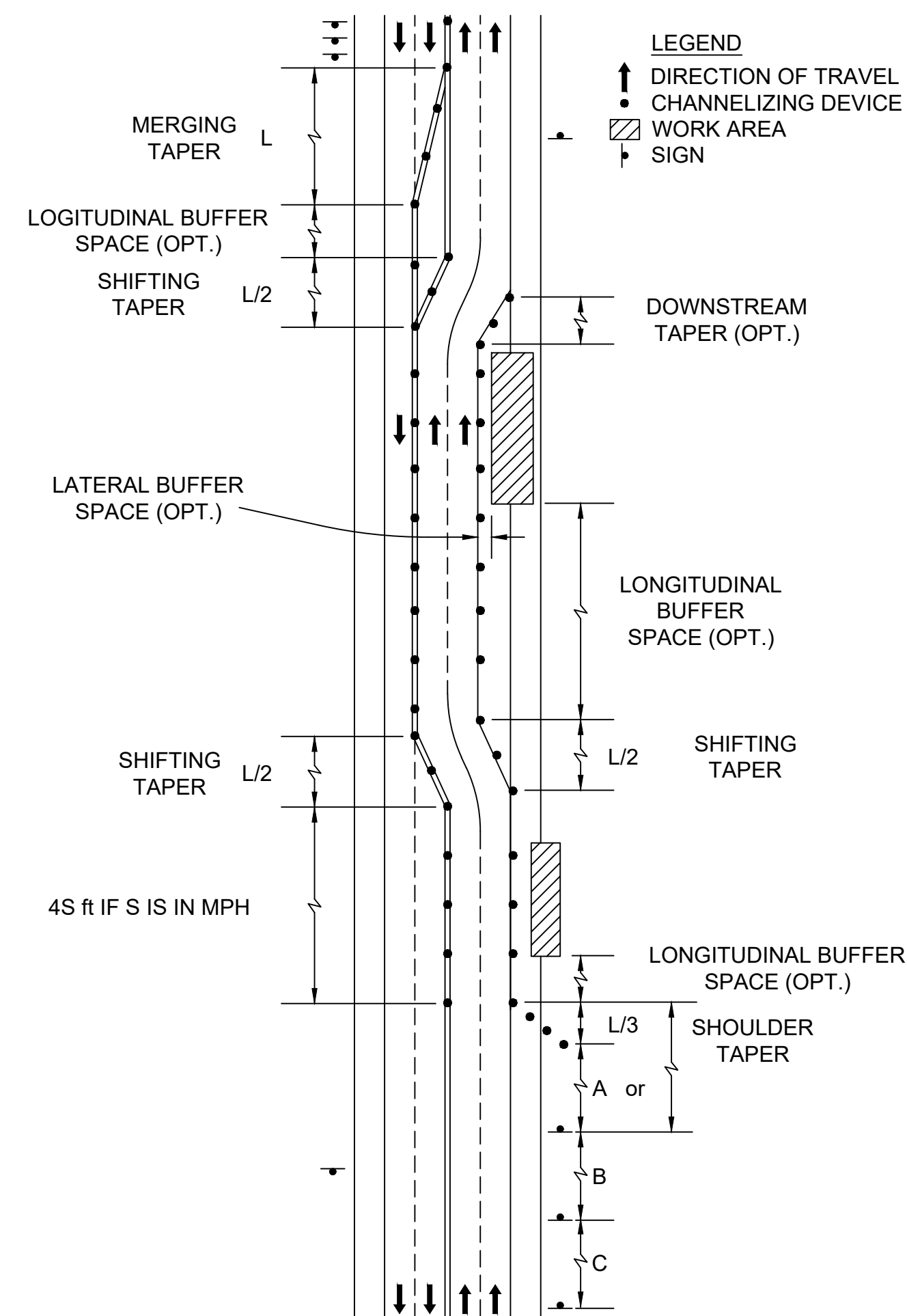
Source: Table 6C-4 MUTCD LATEST EDITION

NOTES ON WORK ZONE DISTANCES (TR-GEN-3)
N.T.S.

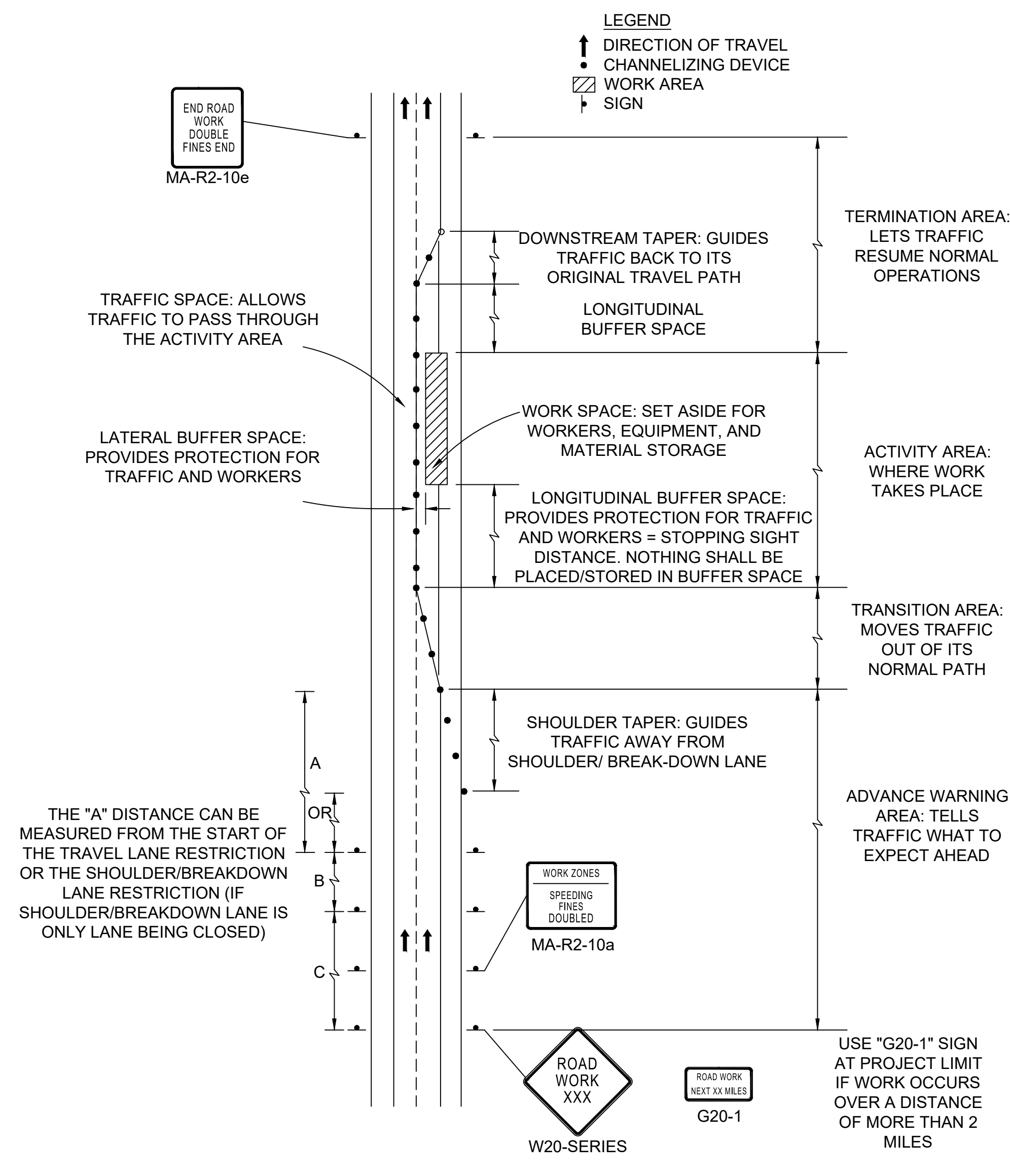
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	151	258
PROJECT FILE NO.		603739	

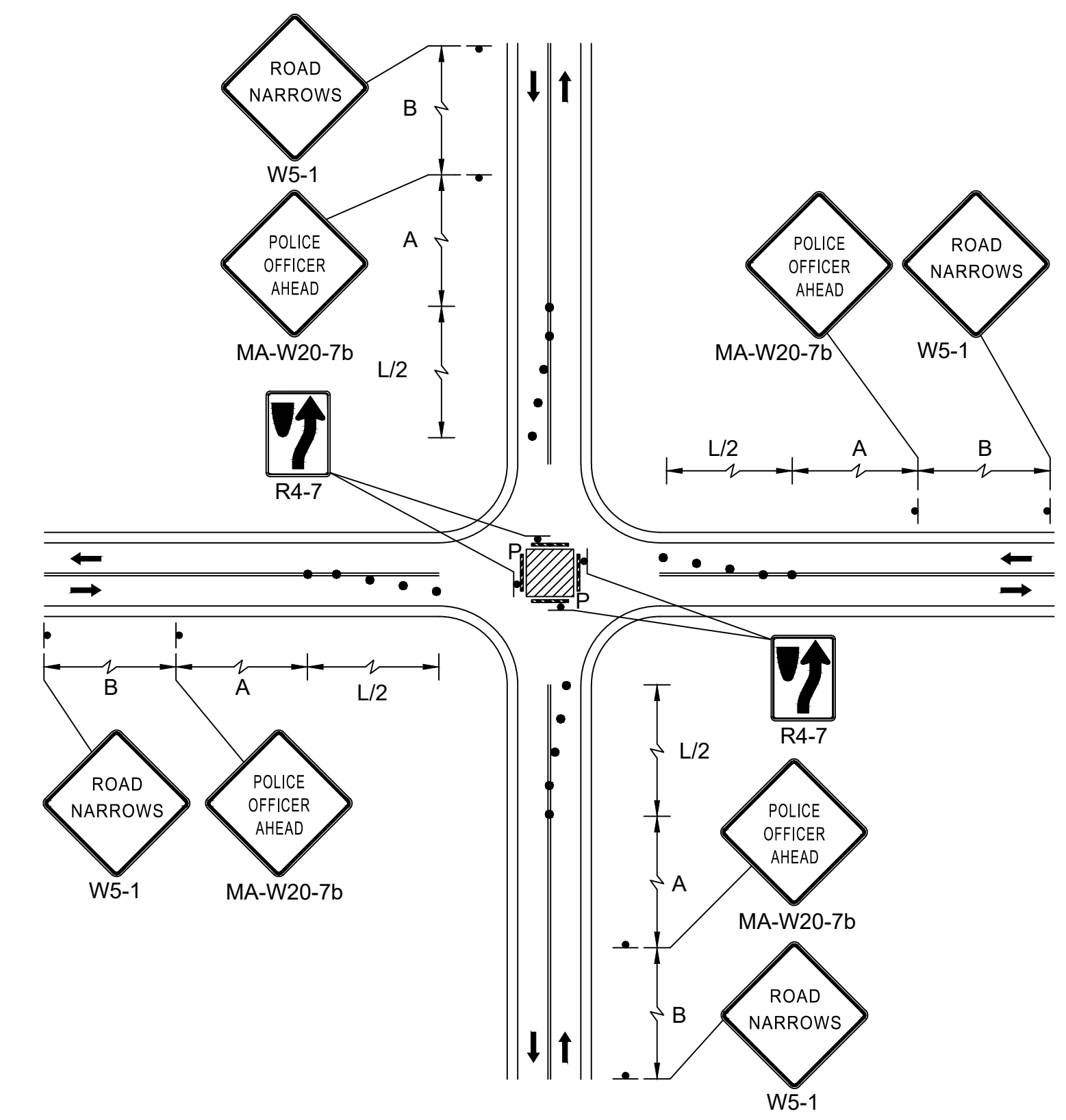
TEMPORARY TRAFFIC CONTROL PLANS



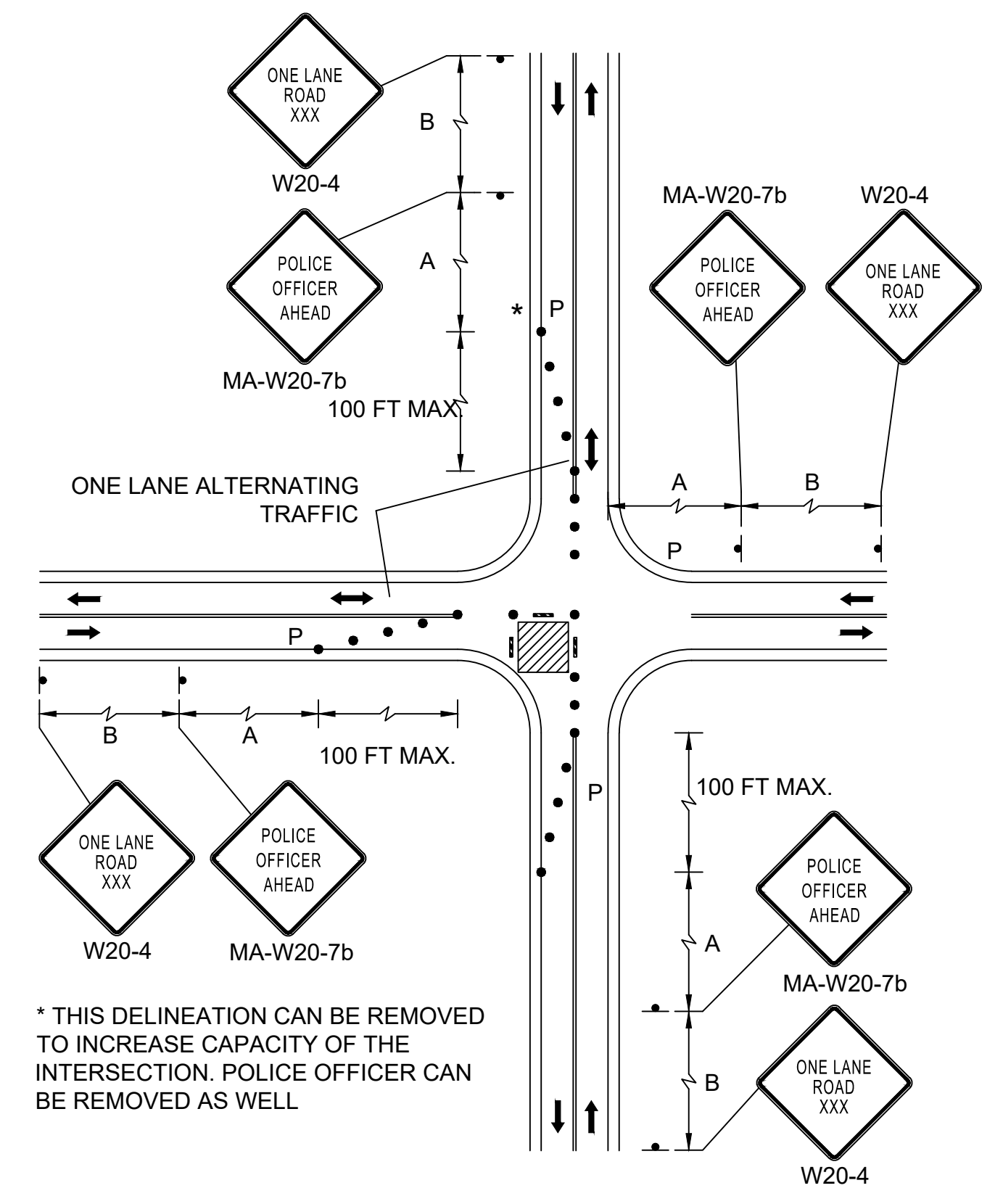
TYPES OF TAPERS AND BUFFER SPACES (TR-GEN-5)
N.T.S.



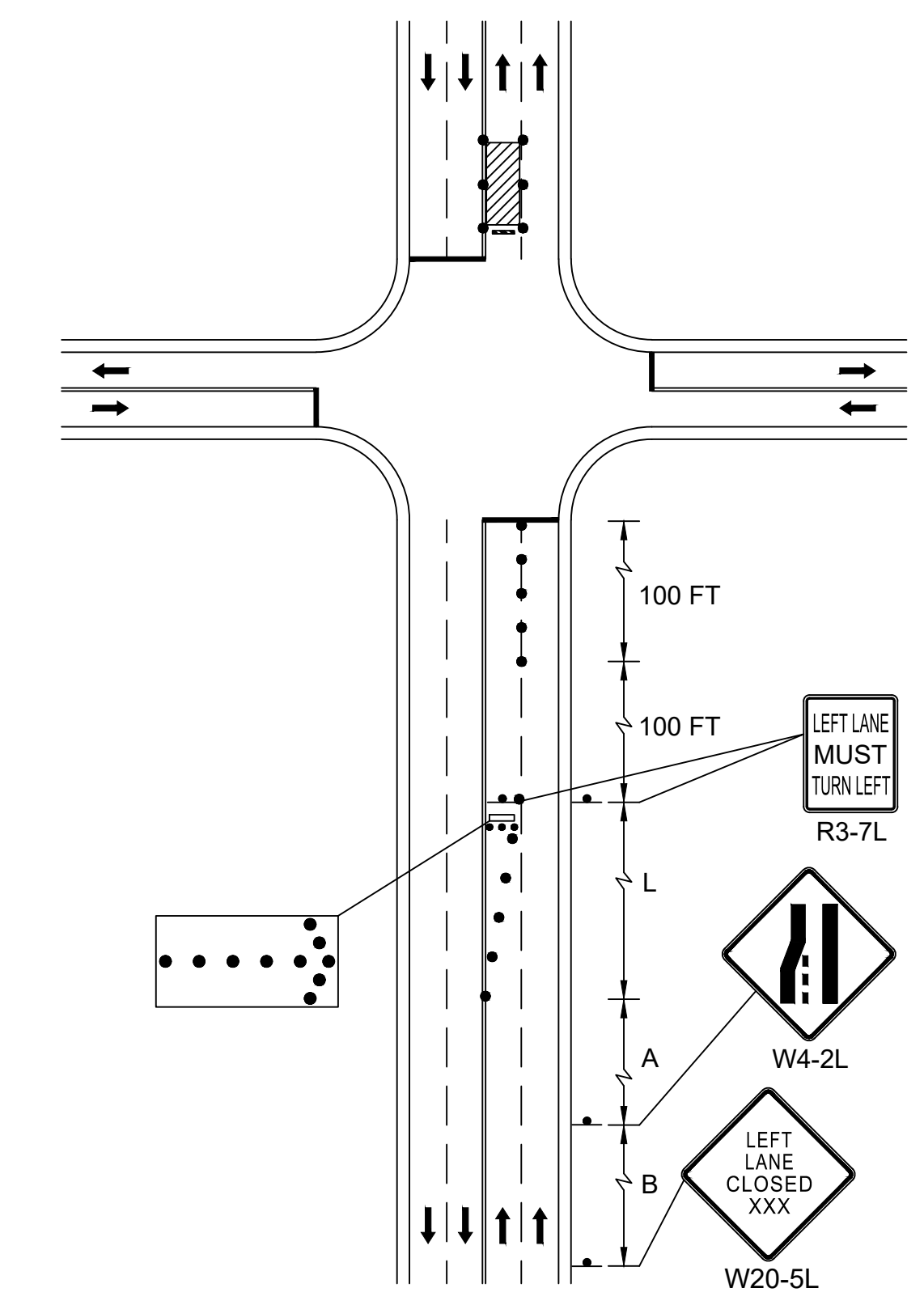
COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE (TR-GEN-5)
N.T.S.



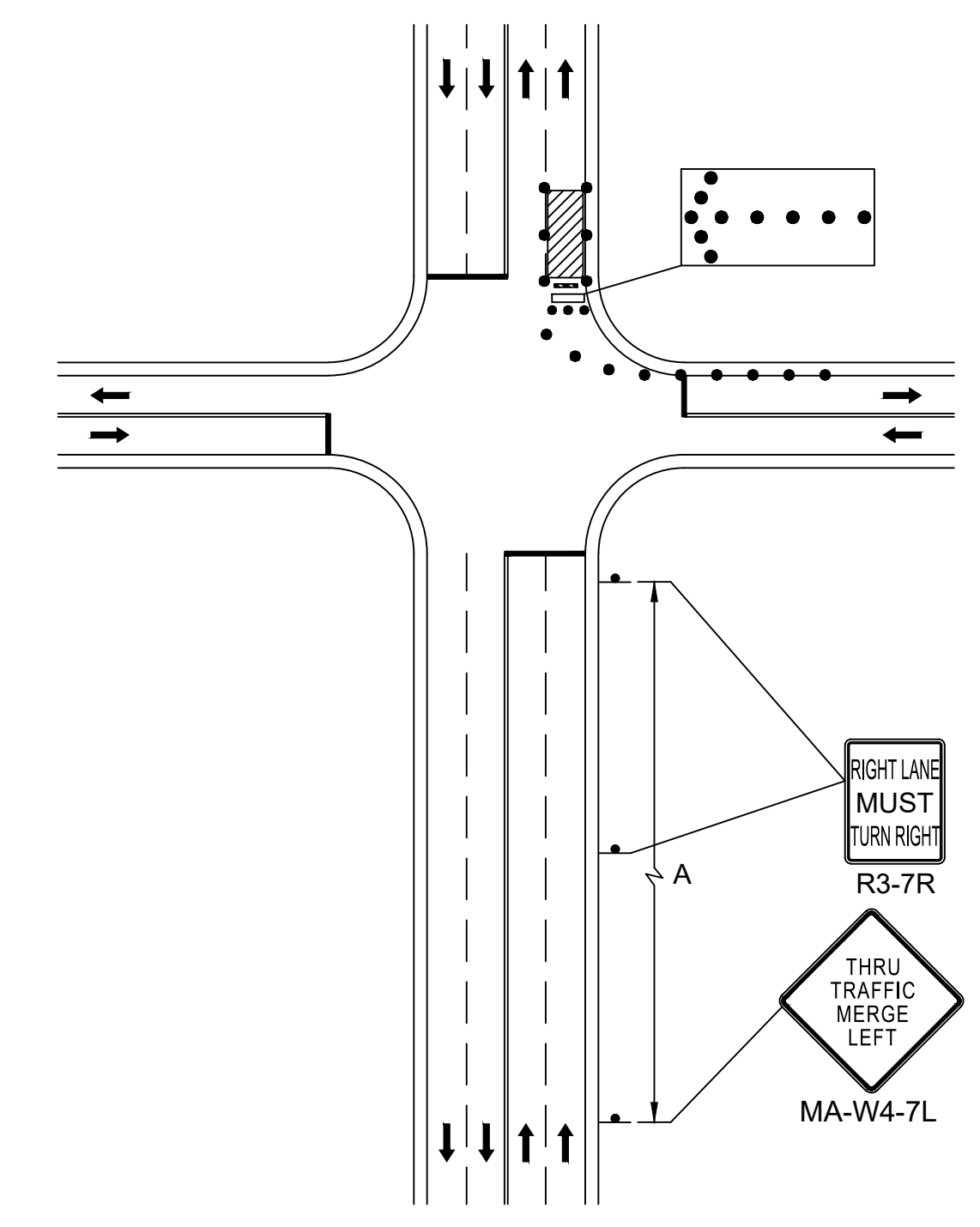
SINGLE LANE APPROACH CENTER CLOSURE (TR-INT-1)
N.T.S.



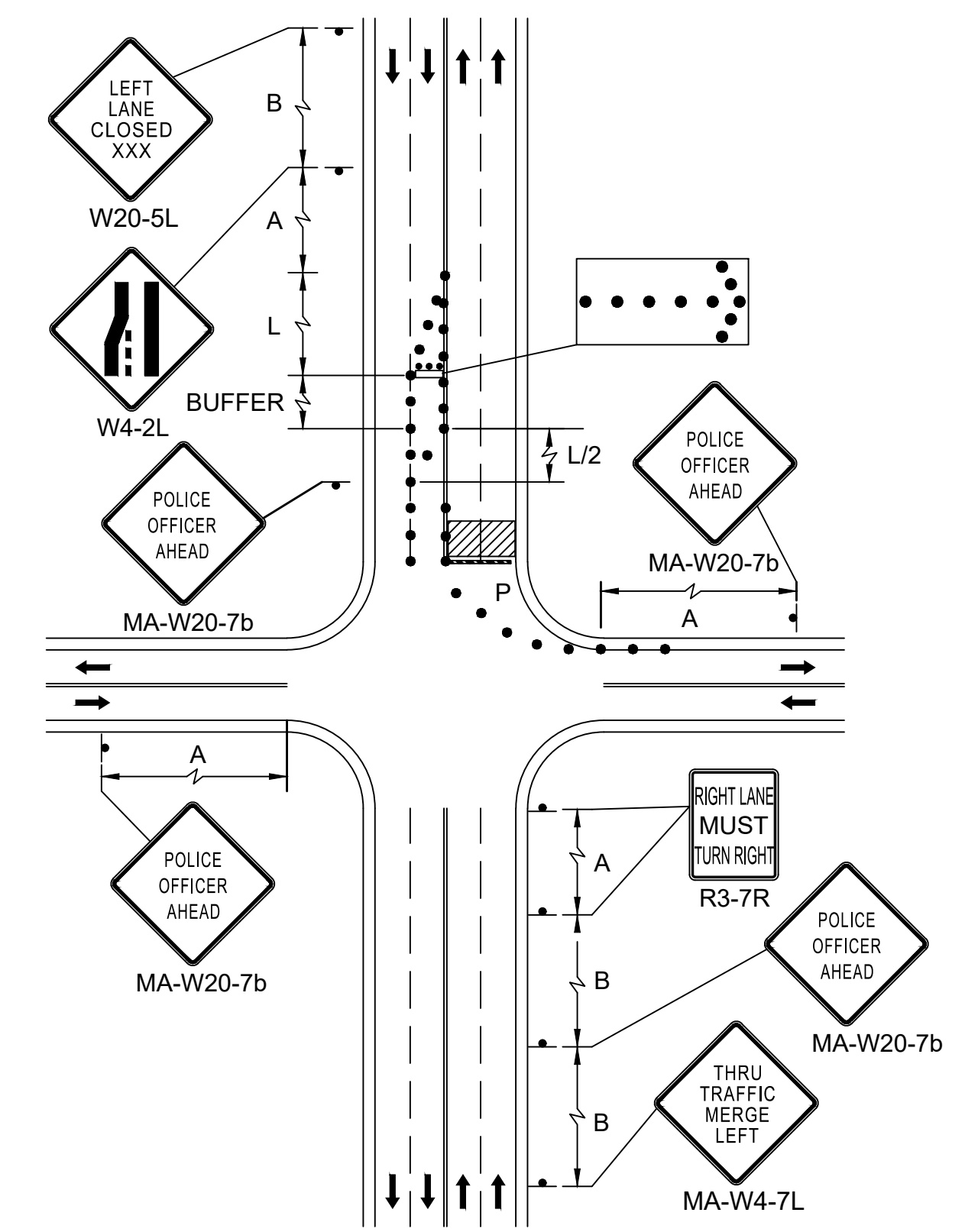
SINGLE LANE APPROACH ONE QUADRANT CLOSURE (TR-INT-2)
N.T.S.



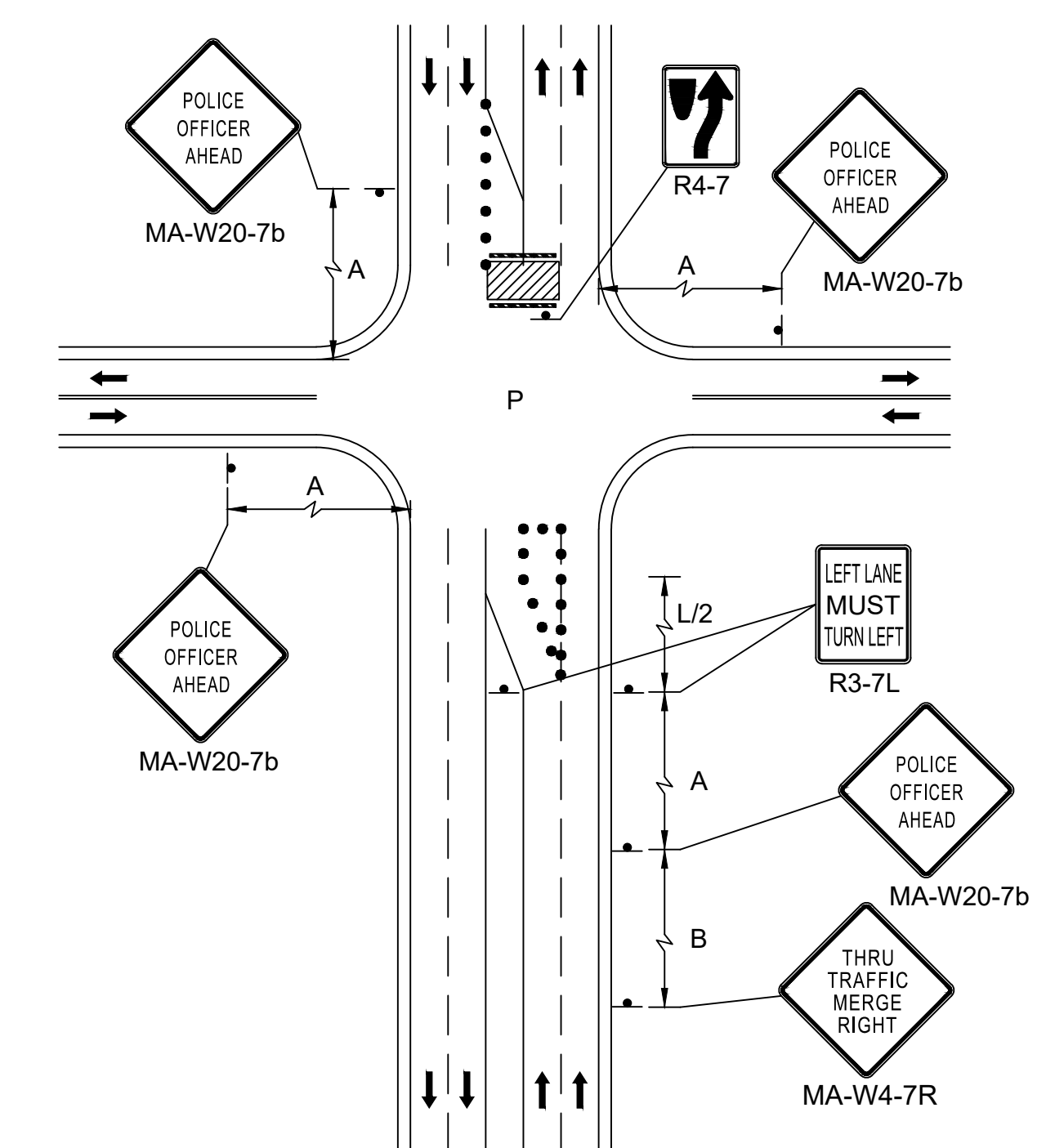
**DOUBLE LANE APPROACH FAR SIDE CLOSURE
INSIDE LANE (TR-INT-1)**
N.T.S.



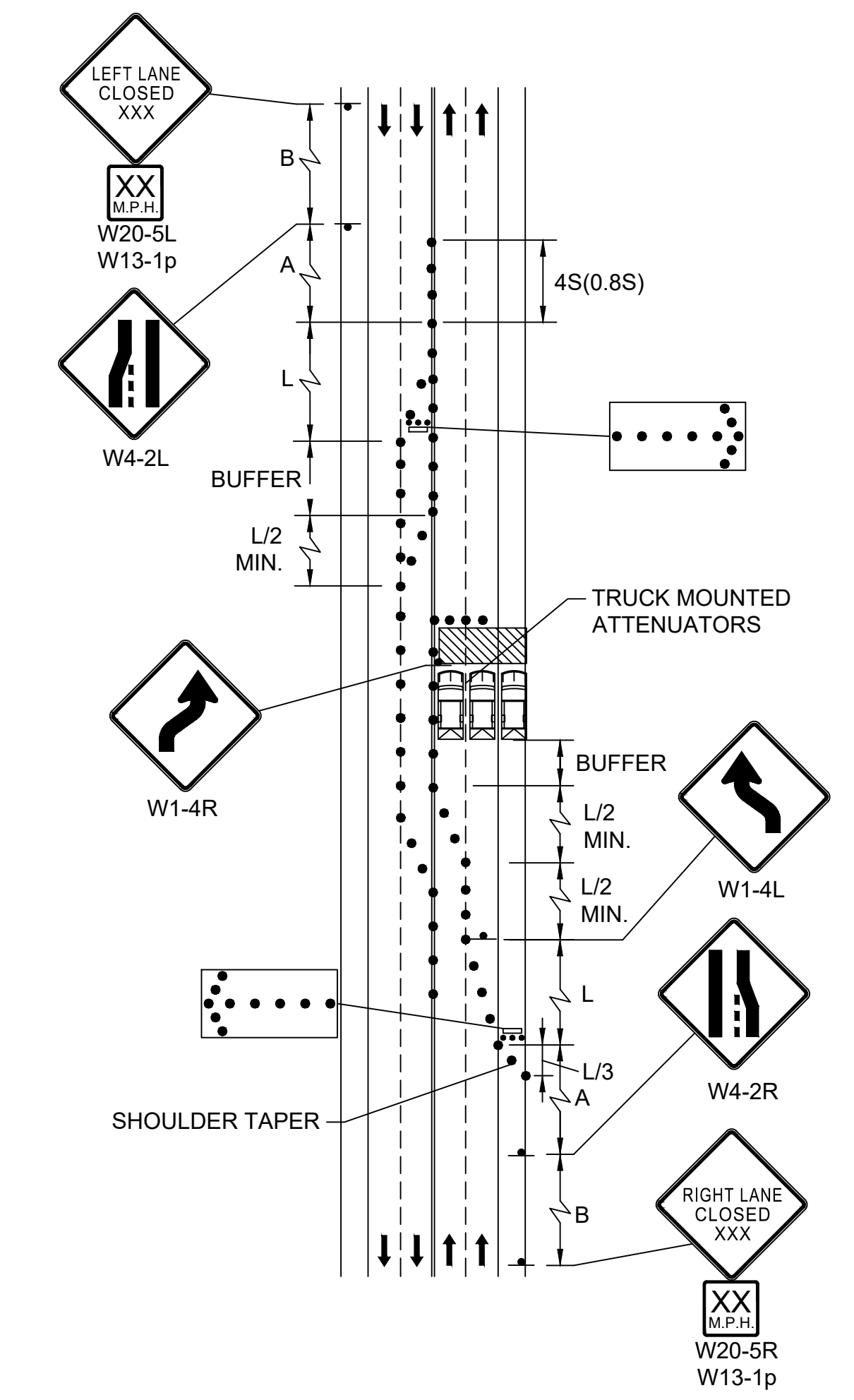
**DOUBLE LANE APPROACH FAR SIDE CLOSURE
RIGHT LANE (TR-INT-5)**
N.T.S.



DOUBLE LANE APPROACH HALF ROAD CLOSURE (TR-INT-5)
N.T.S.



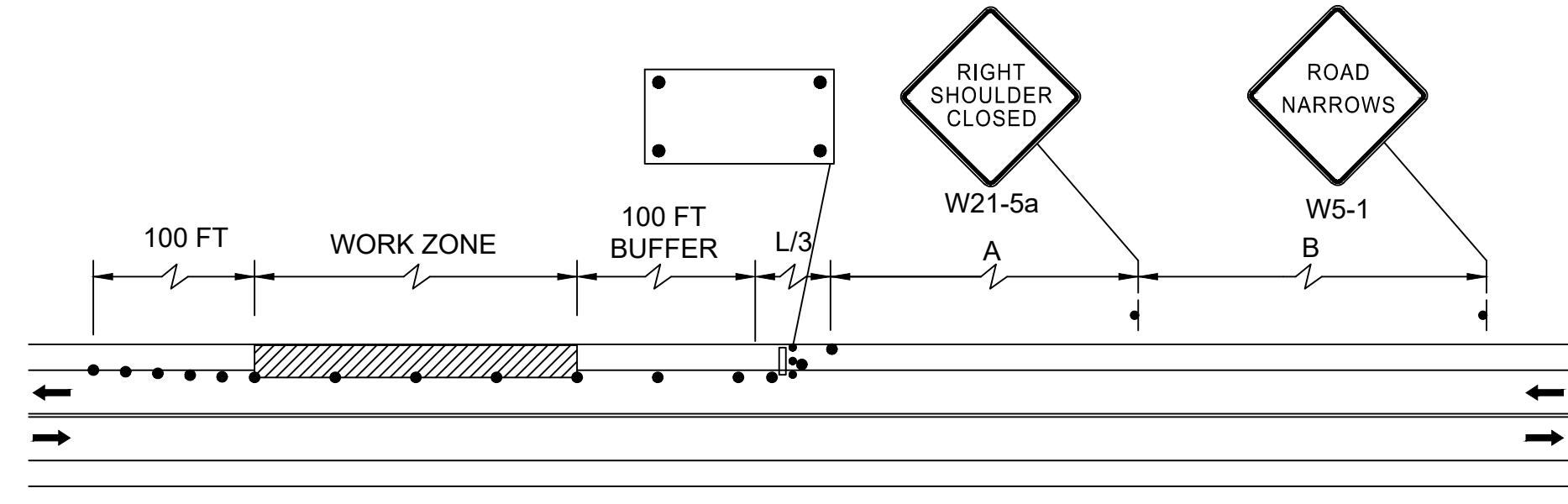
MULTI-LANE APPROACH MULTIPLE LANE CLOSURE (TR-INT-6)
N.T.S.



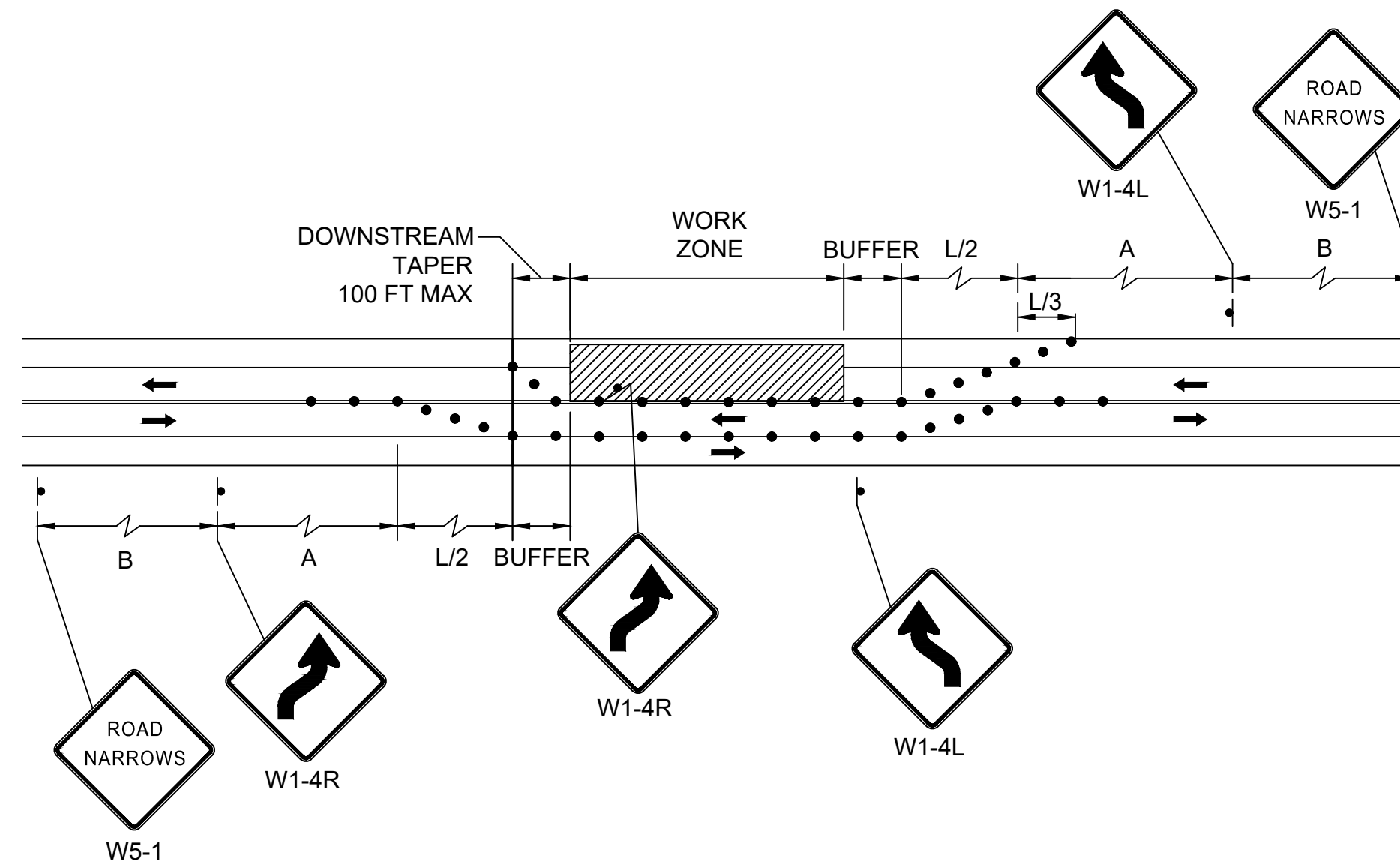
**MULTIPLE LANE ROAD HALF ROAD CLOSURE
(TR-MLR-3)**
N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	153	258
PROJECT FILE NO.		603739	

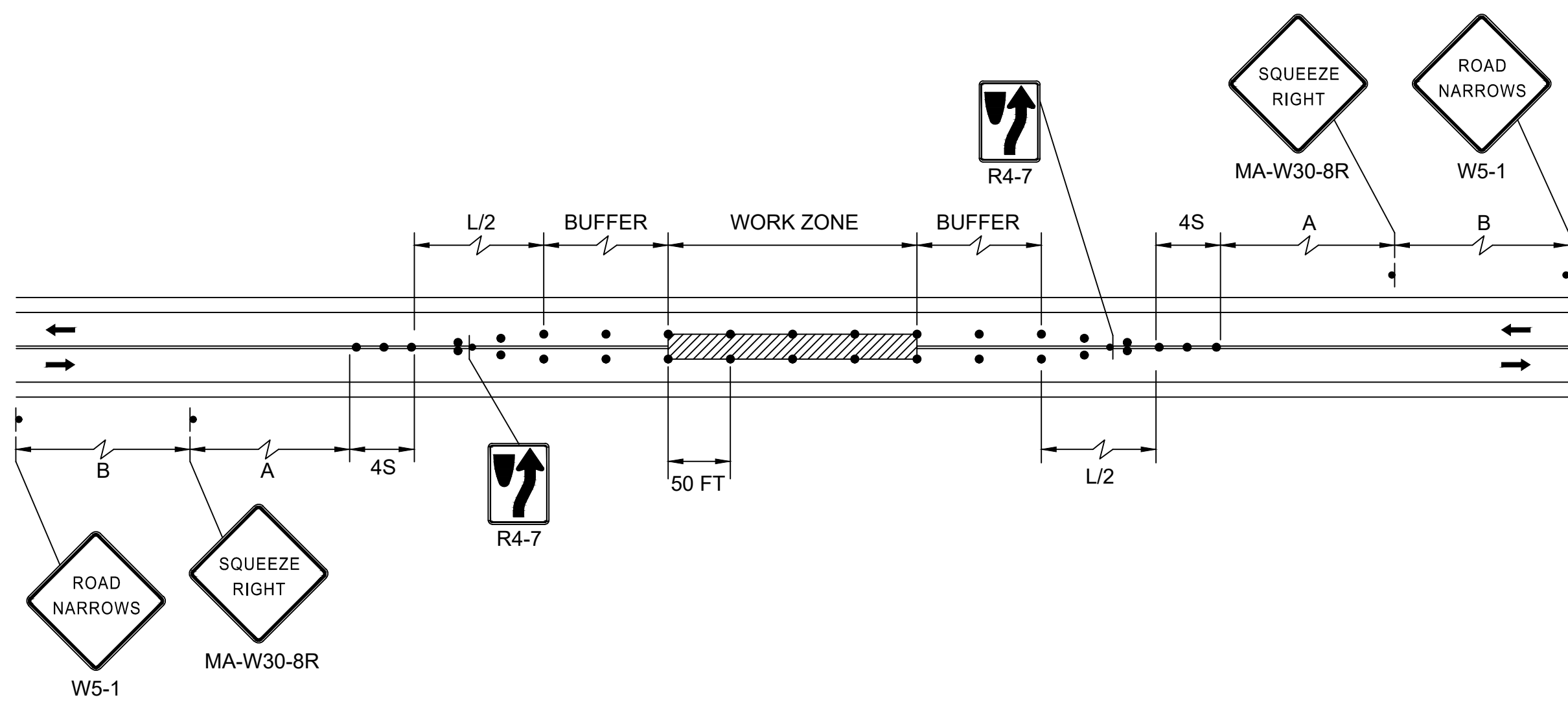
TEMPORARY TRAFFIC CONTROL PLANS



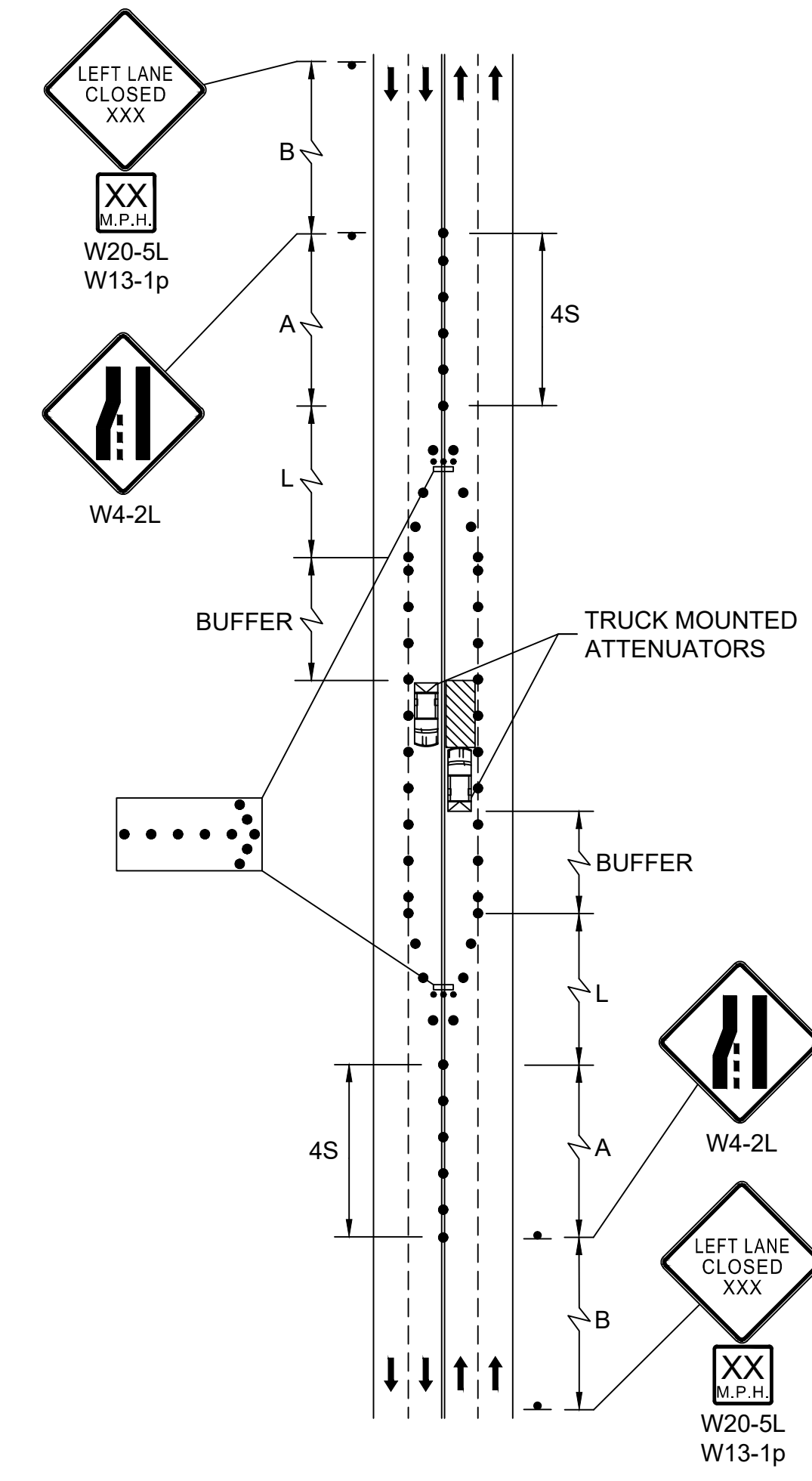
TWO LANE ROAD SHOULDER CLOSED (TR-TLR-1)
N.T.S.



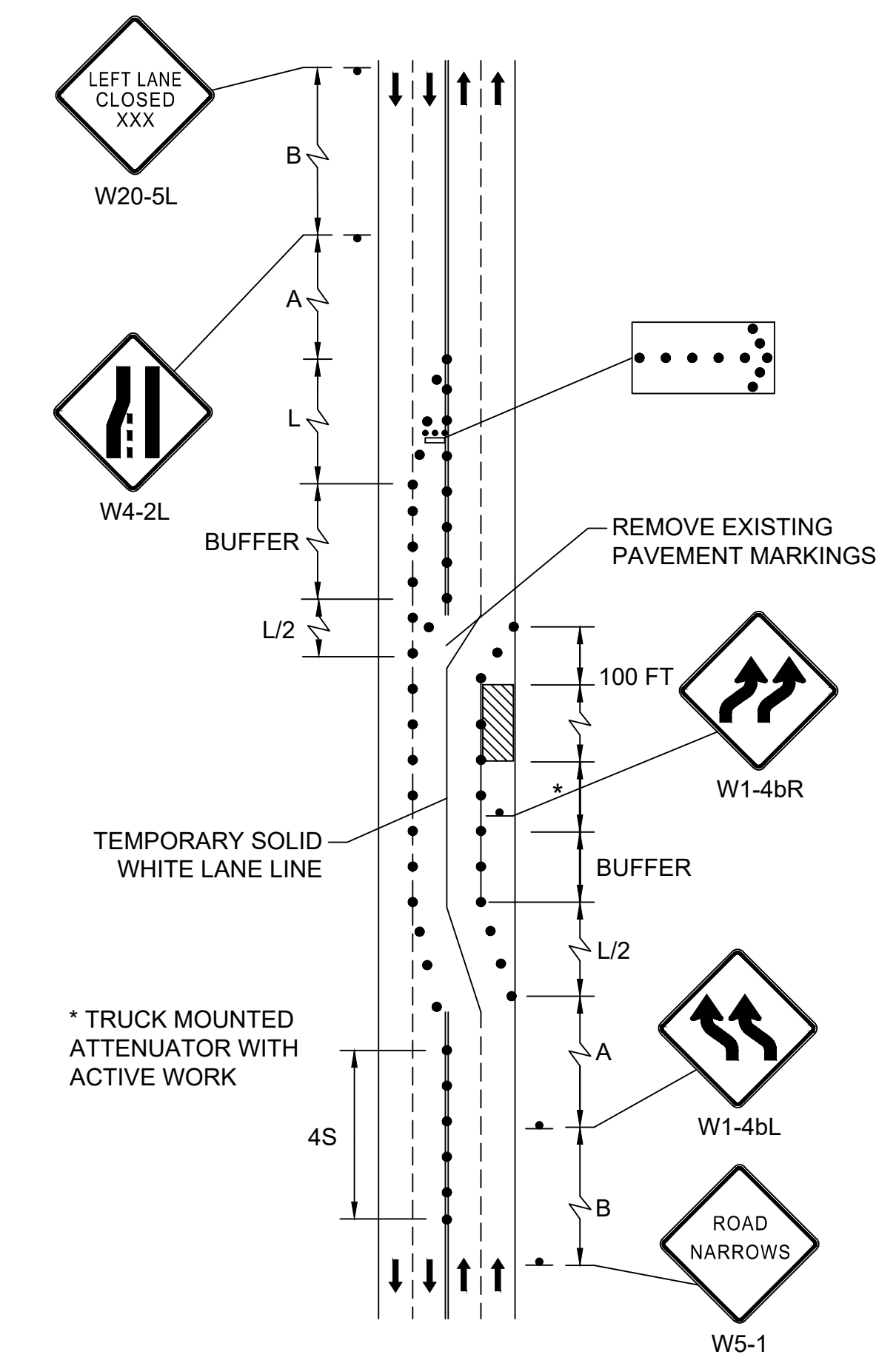
TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED (TR-TLR-2)
N.T.S.



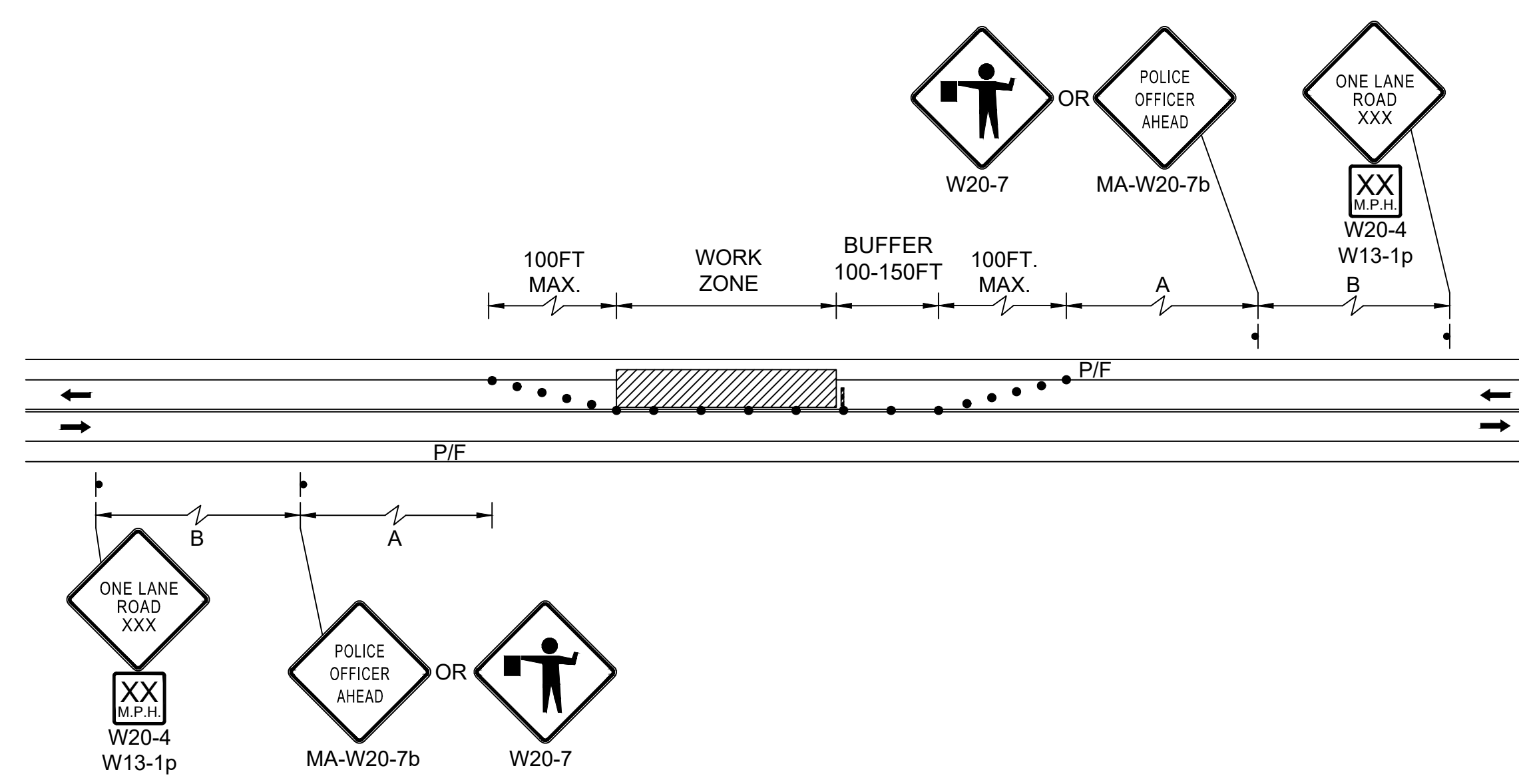
TWO LANE ROAD CENTER OF ROAD CLOSURE (TR-TLR-3)
N.T.S.



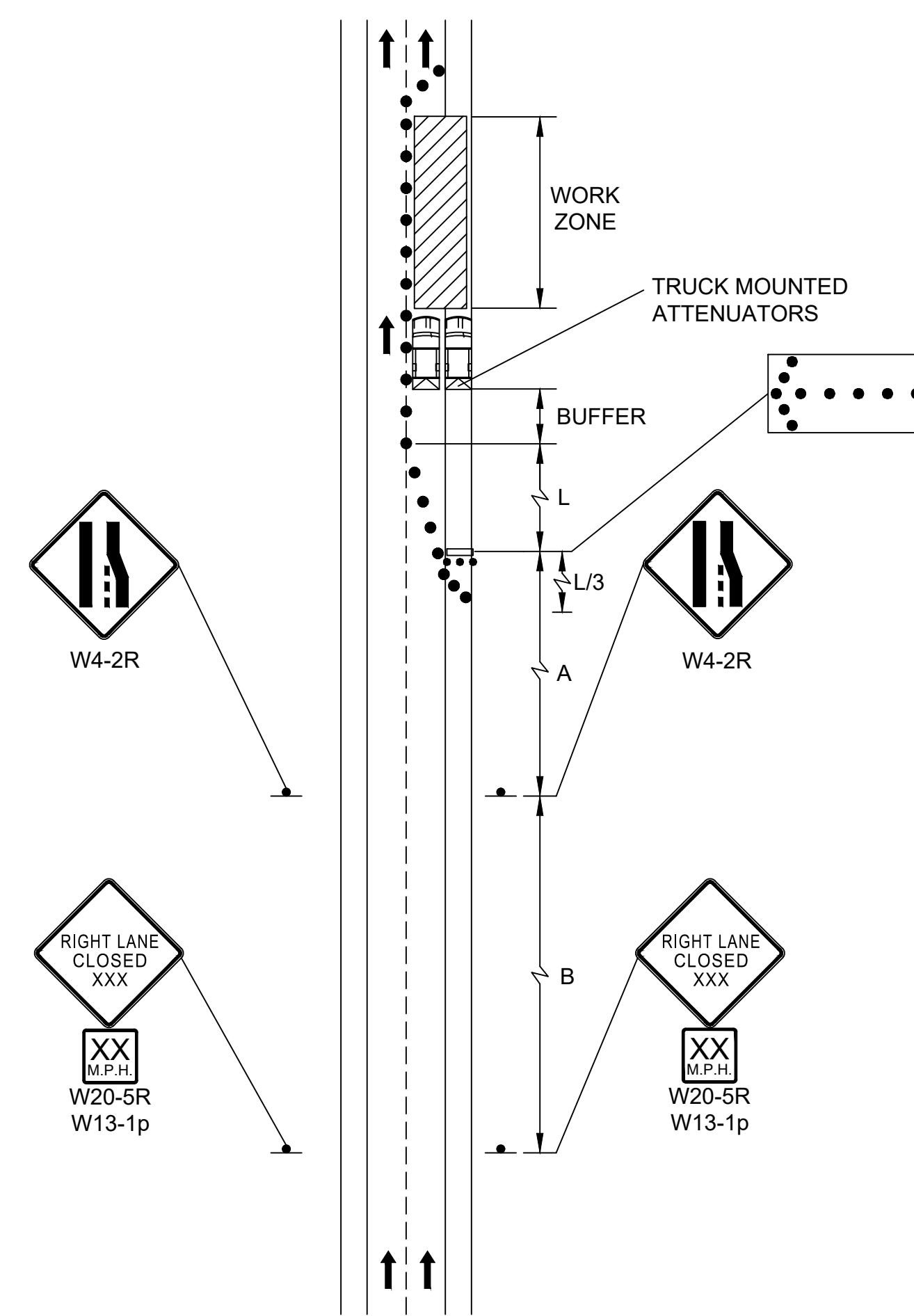
MULTIPLE LANE ROAD INTERIOR LANE CLOSURE (TR-MLR-1)
N.T.S.



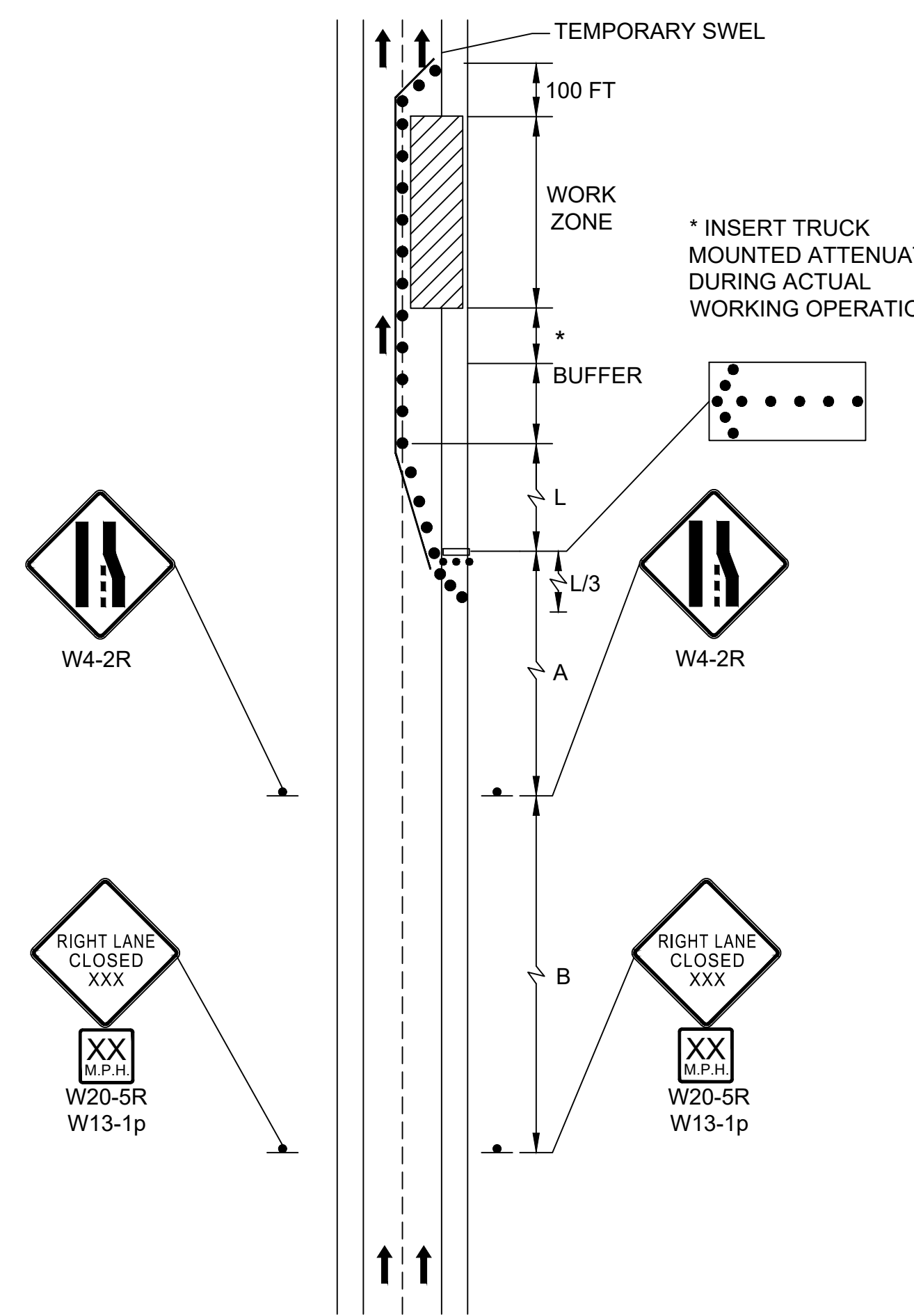
MULTIPLE LANE ROAD INTERIOR LANE CLOSURE W/ UNEVEN VOLUMES (TR-MLR-2)
N.T.S.



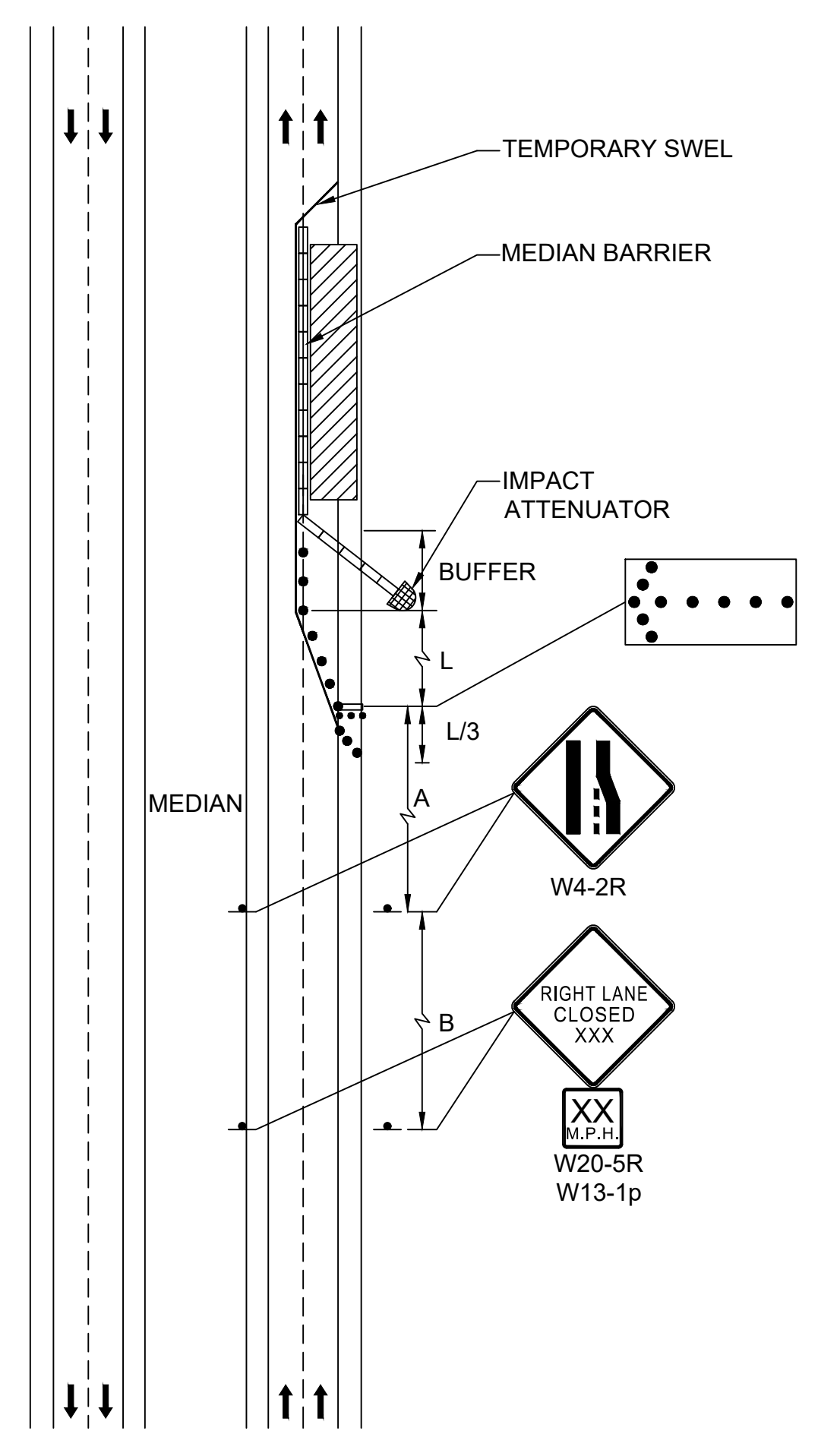
TWO LANE ROAD ONE LANE ALTERNATING TRAFFIC (TR-TLR-5)
N.T.S.



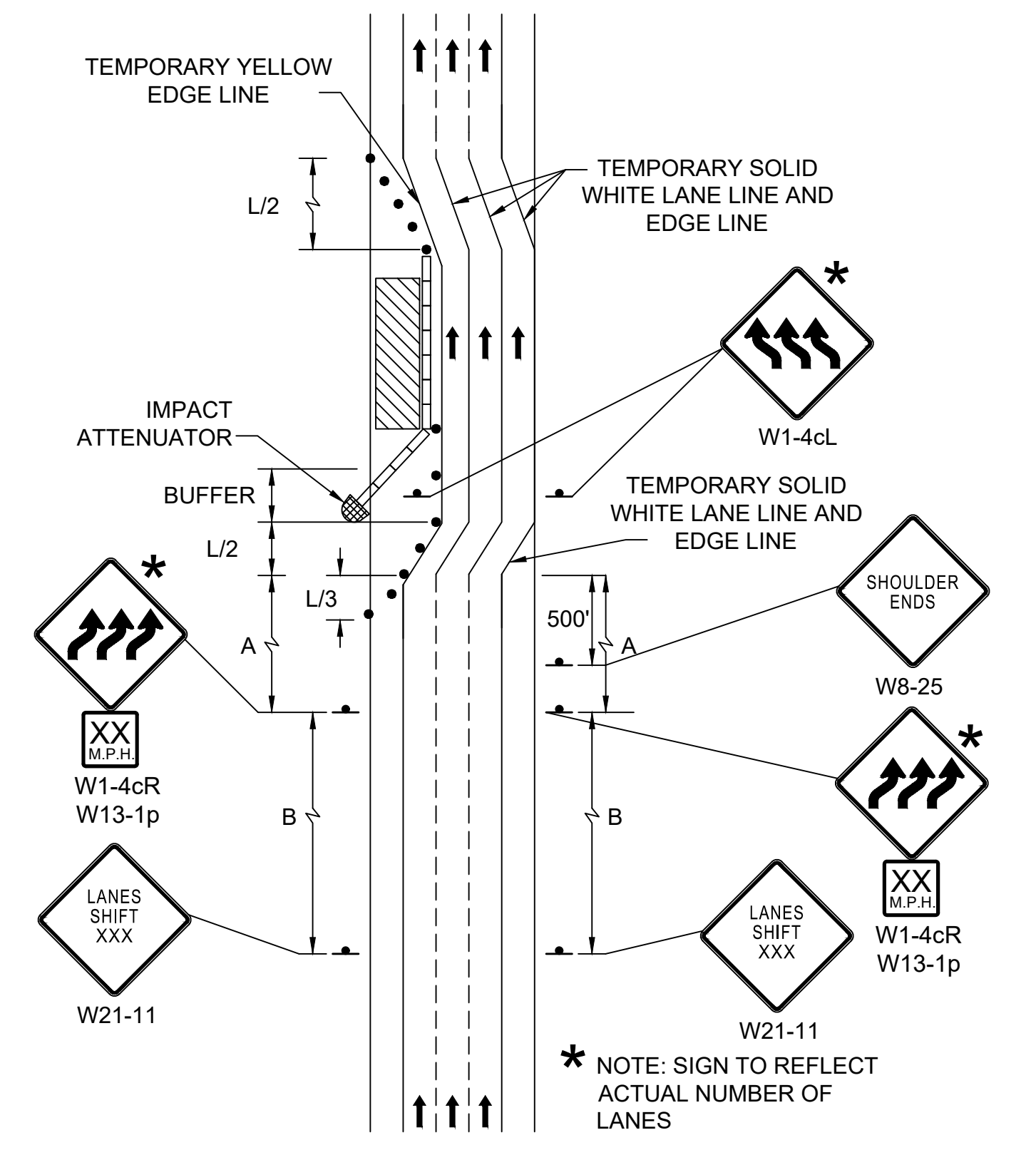
DIVIDED HIGHWAY/LANE CLOSURE (SHORT TERM) (TR-DIV-2)
N.T.S.



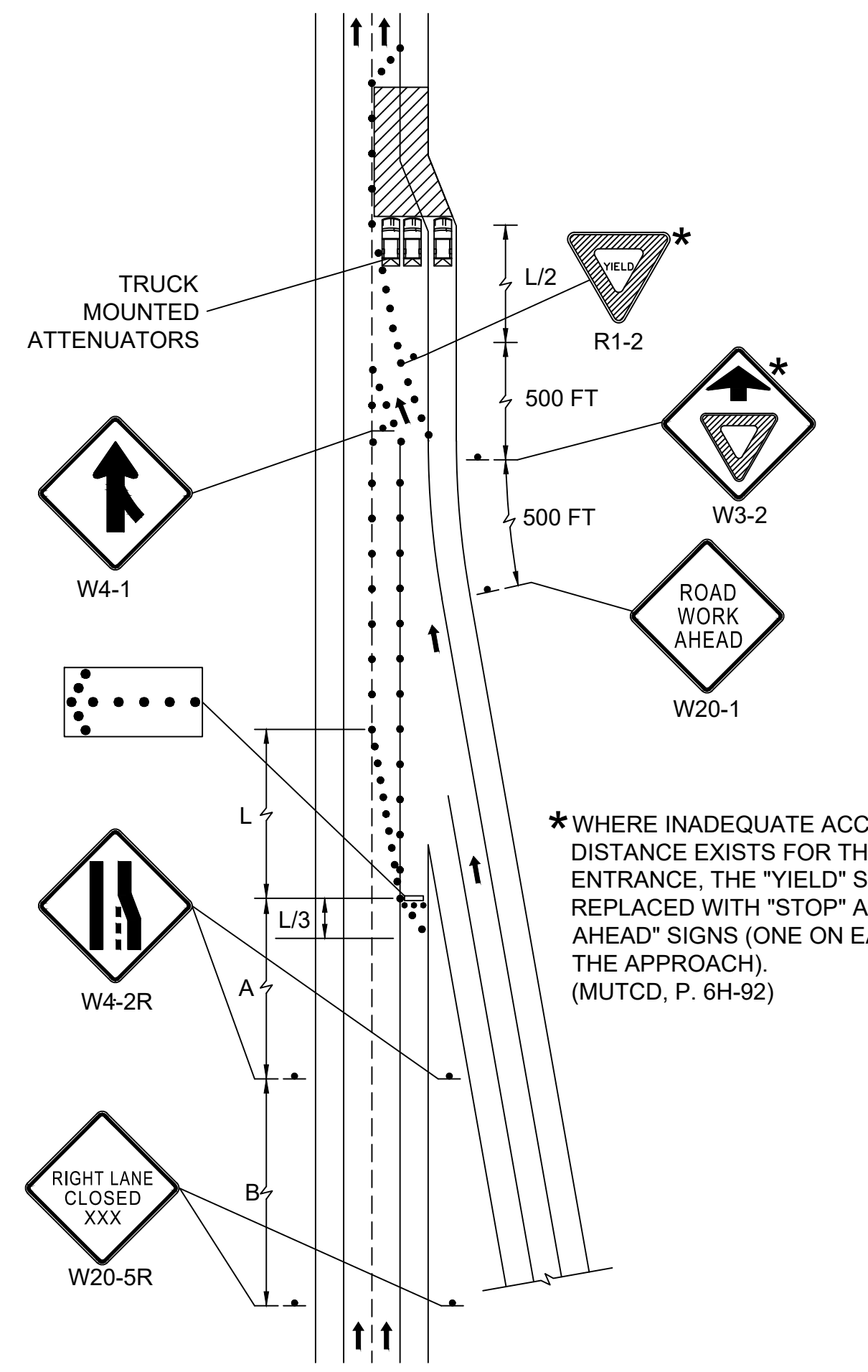
DIVIDED HIGHWAY STATIONARY LANE CLOSURE (LONG TERM AND INTERMEDIATE) (TR-DIV-3)
N.T.S.



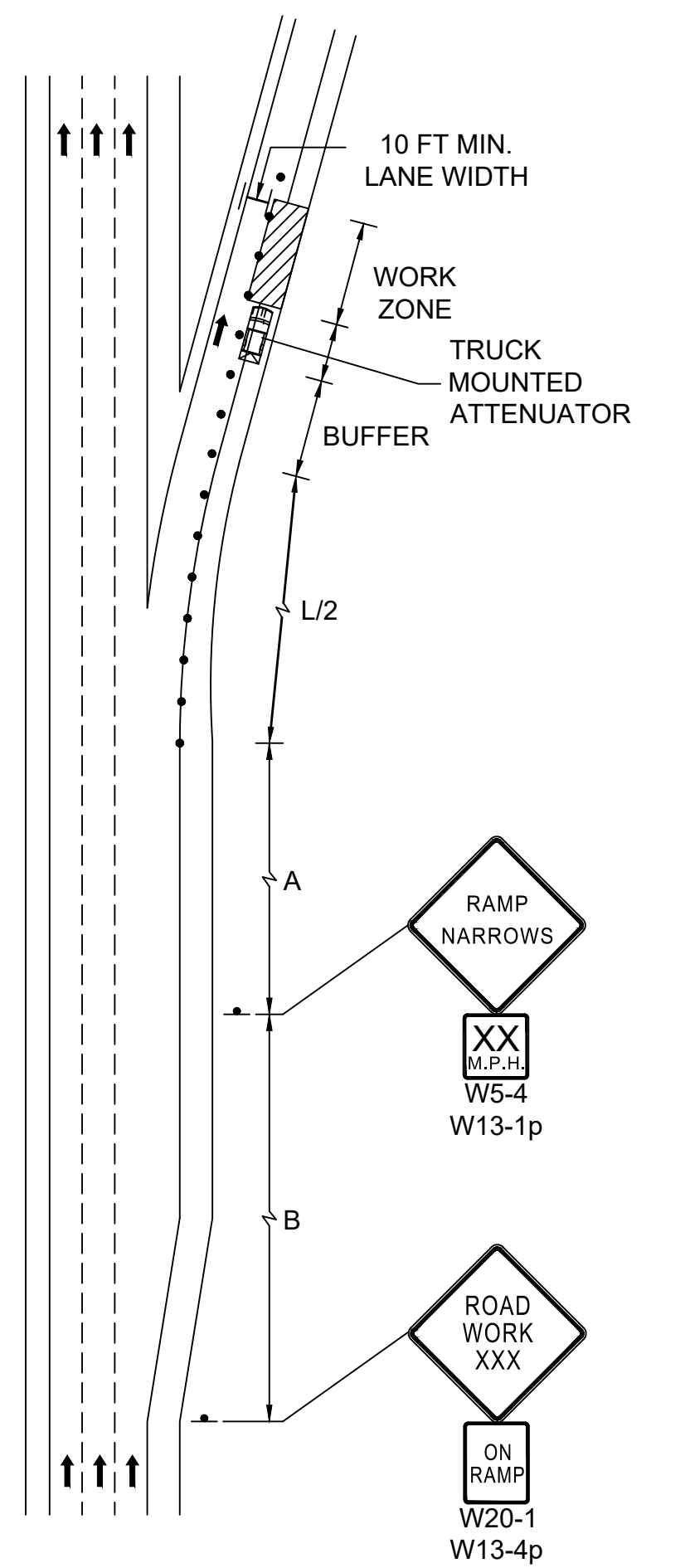
DIVIDED HIGHWAY ONE LANE CLOSED WITH BARRIER (TR-DIV-4)
N.T.S.



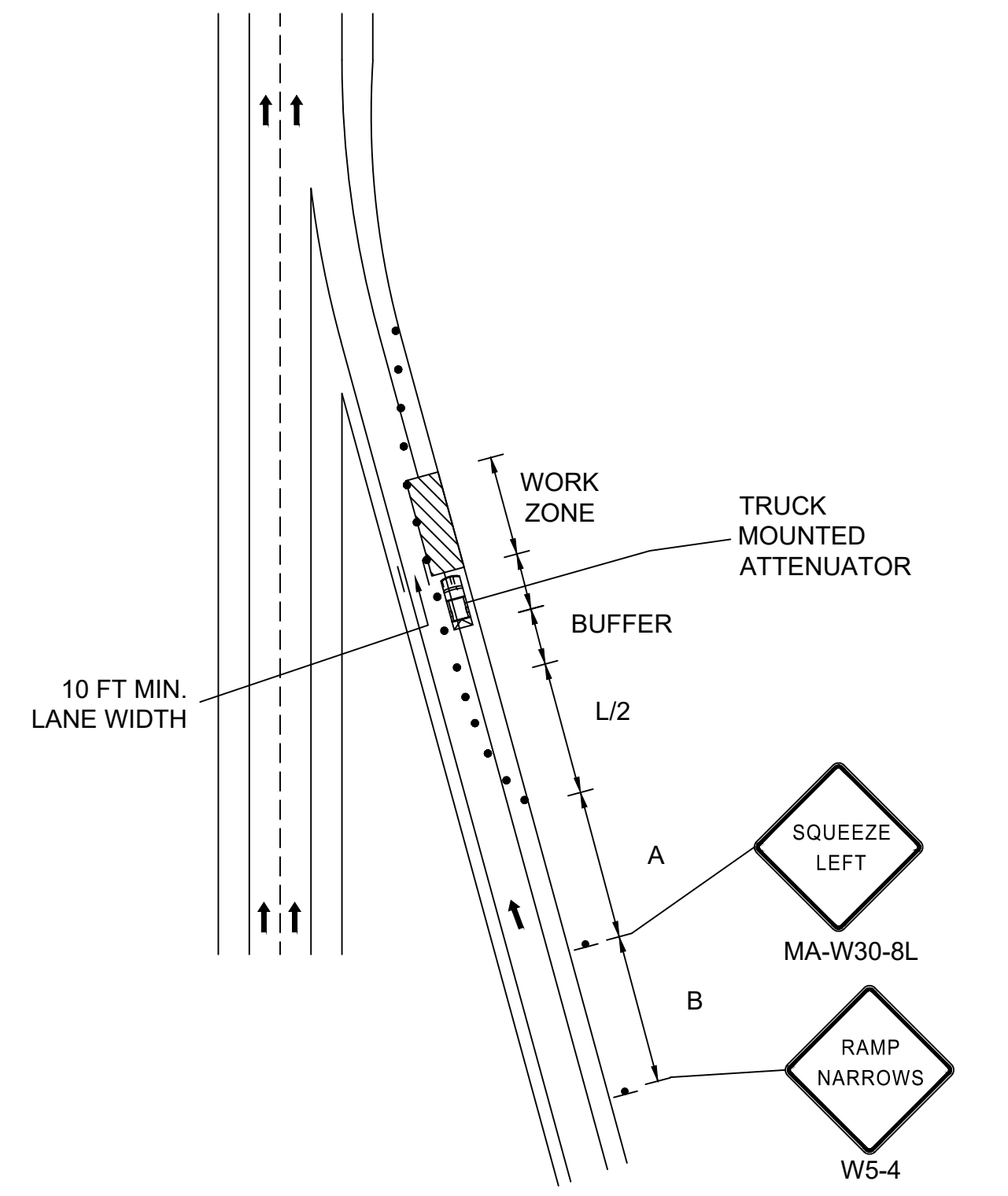
DIVIDED HIGHWAY MULTIPLE LANE SHIFT WITH BARRIER (TR-DIV-6)



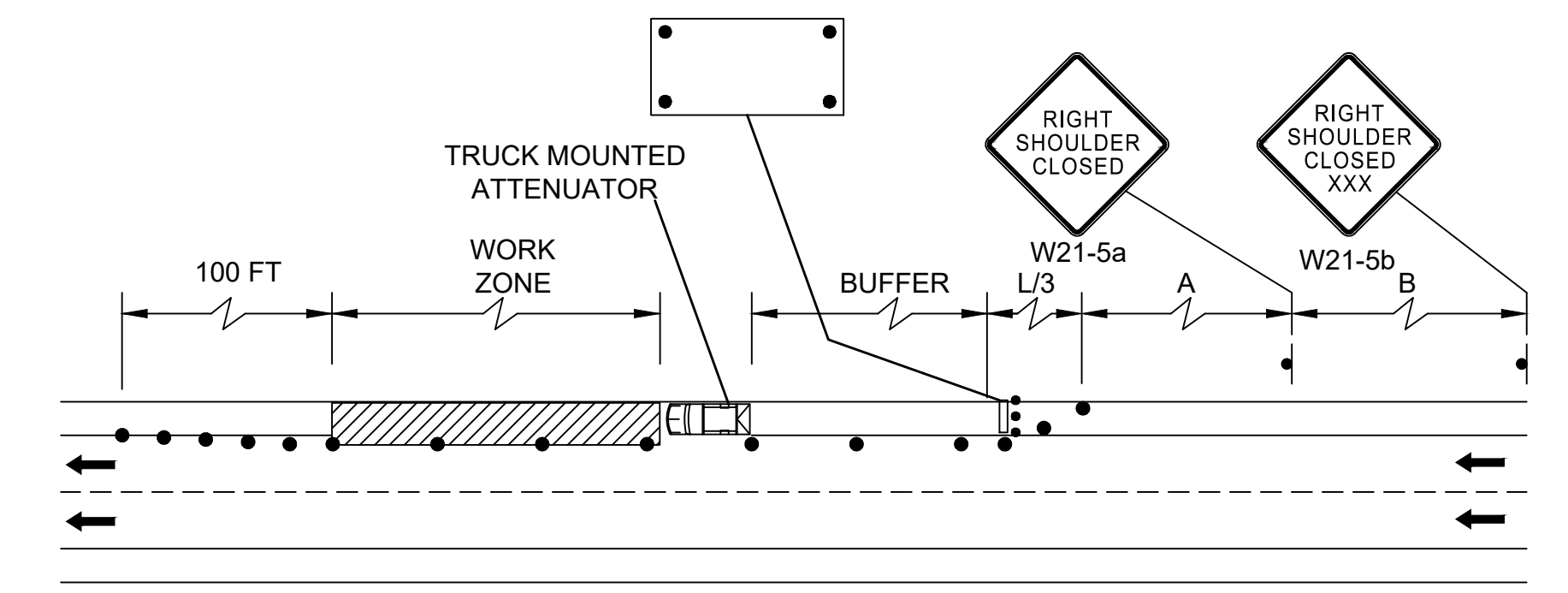
WORK BEYOND ENTRANCE RAMP (TR-R-4)
N.T.S.



PARTIAL EXIT RAMP CLOSURE (TR-R-5)
N.T.S.



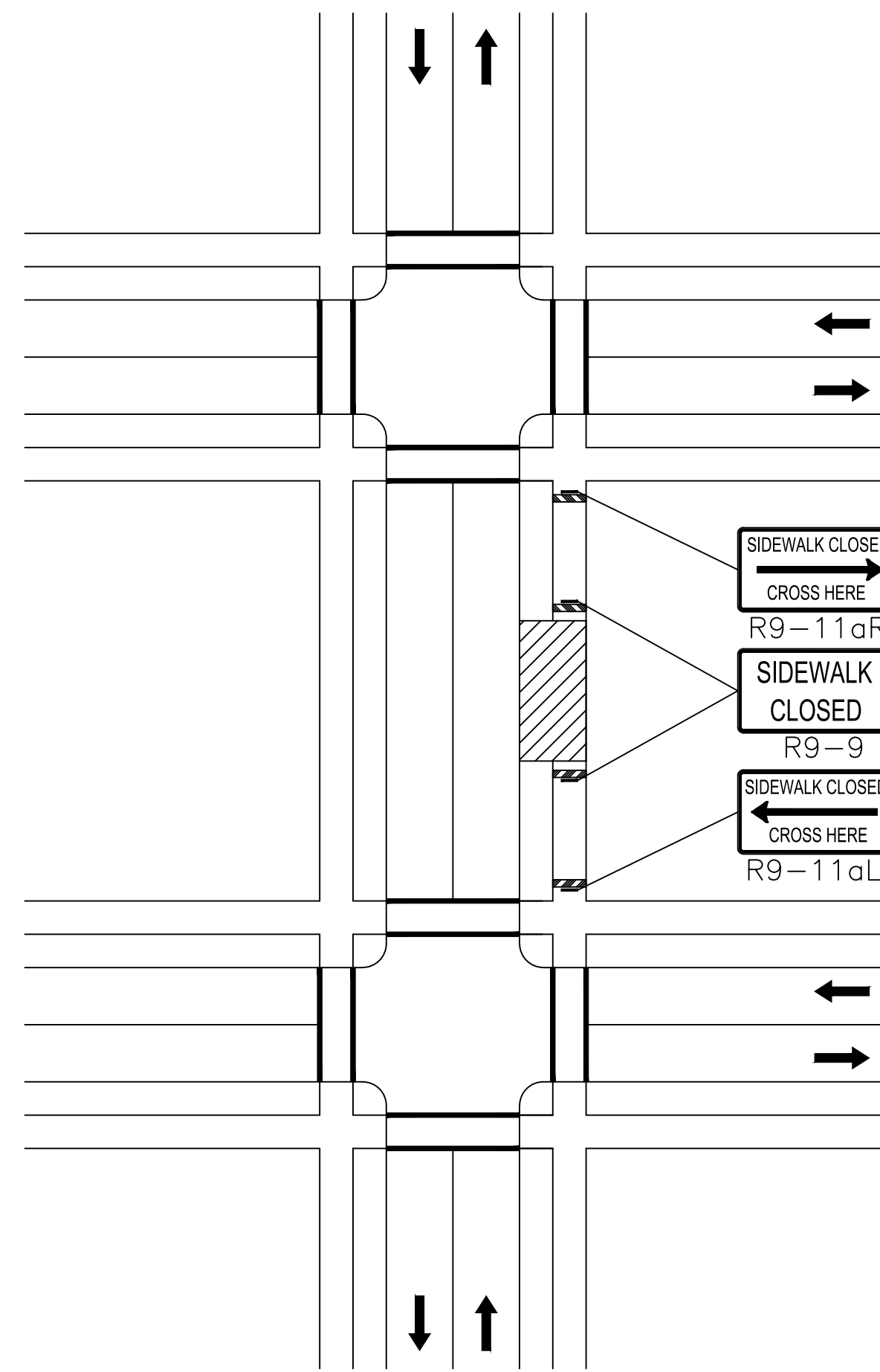
PARTIAL ENTRANCE RAMP CLOSURE (TR-R-6)
N.T.S.



DIVIDED HIGHWAY SHOULDER CLOSED (TR-DIV-9)
N.T.S.

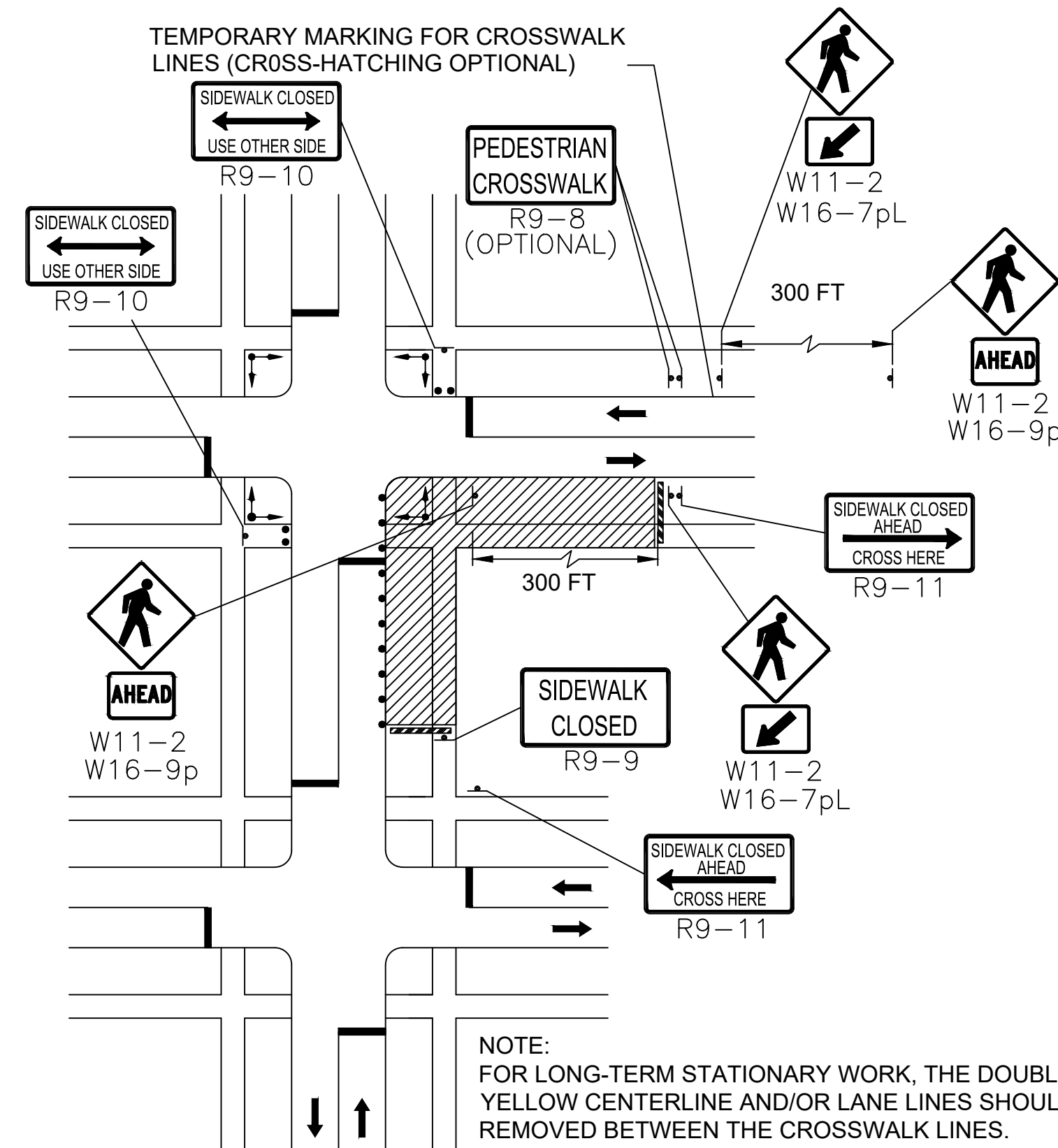
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	155	258
PROJECT FILE NO.		603739	

TEMPORARY TRAFFIC CONTROL PLANS
PEDESTRIAN PLANS



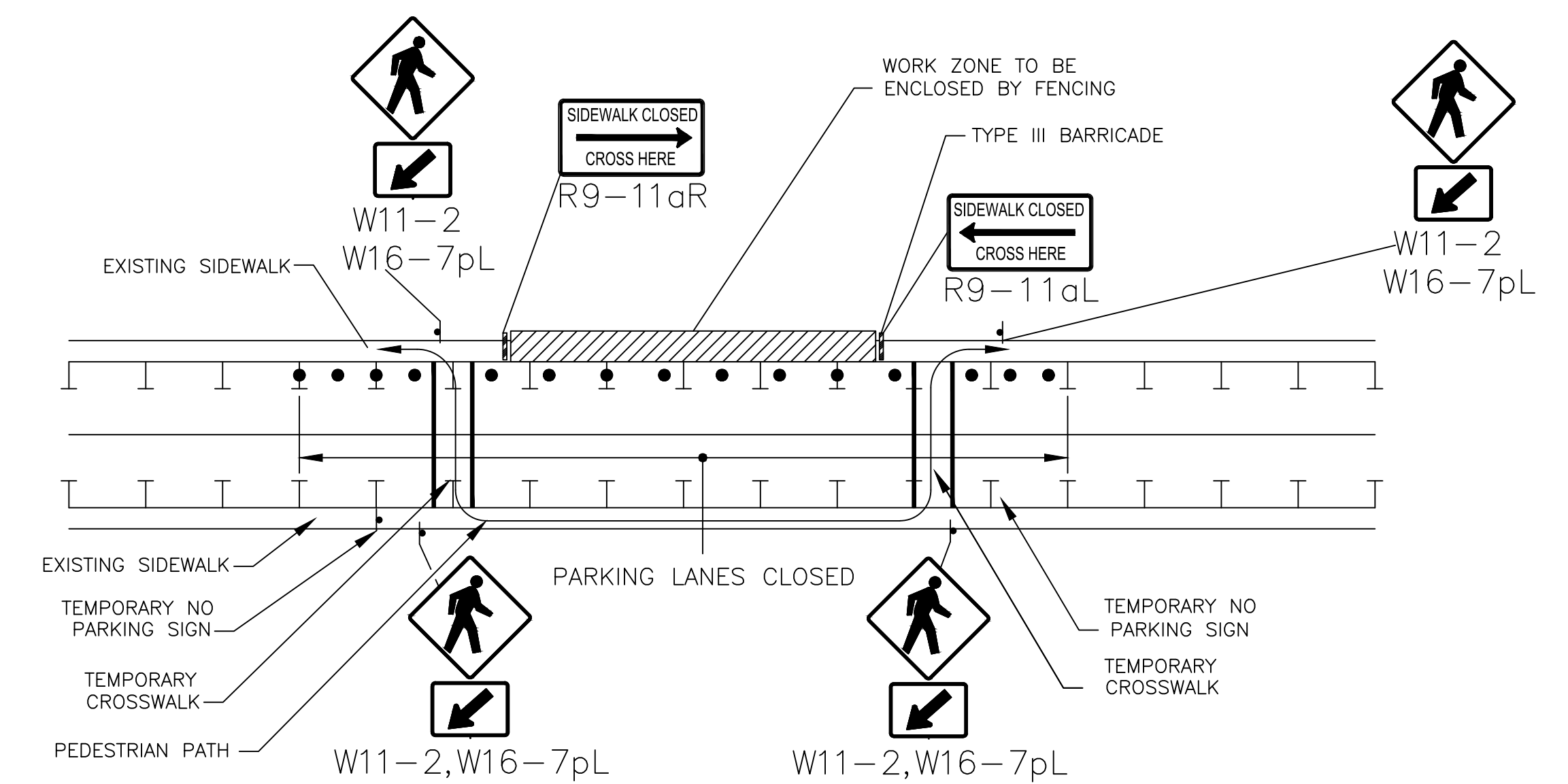
NOTE: IF A MINIMUM WIDTH OF 48" OF SOLID SMOOTH UNOBSTRUCTED SURFACE REMAINS ALONG THE WORK AREA THEN THE DETAIL CAN BE DISREGARDED. DELINEATION OF THE WORK AREA WILL STILL BE REQUIRED. ALL PEDESTRIAN DETOUR ROUTES SHALL BE ADA/MAAB COMPLIANT IN THEIR ENTIRETY.

SIDEWALK CLOSED WITHOUT DETOUR (PED-5)
N.T.S.



NOTE: FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.

PEDESTRIAN DETOUR (PED-6)
N.T.S.



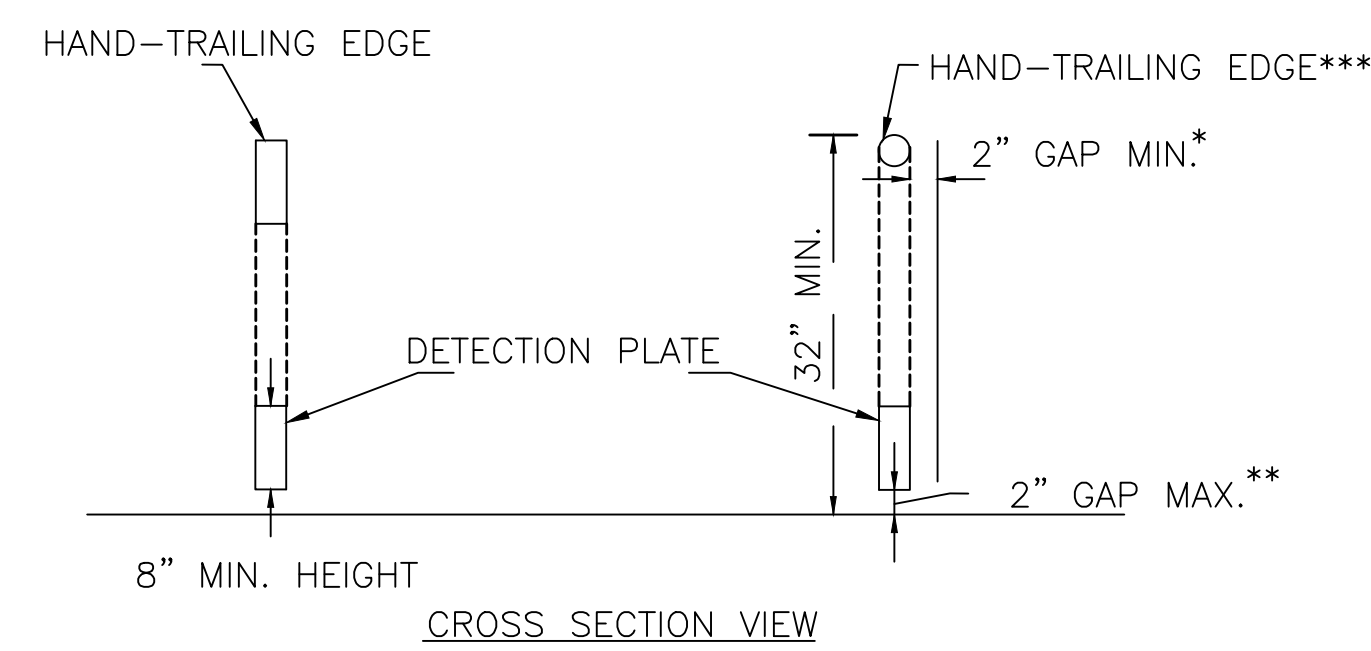
NOTES

- ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
- CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
- STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
- IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
- BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
- THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE. (FOR SHORT TERM SETUPS < 10 HOURS, THIS CONDITION MAY BE WAIVED. A NOTE WOULD NEED TO BE INCLUDED IN THE TCP THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)

PEDESTRIAN BYPASS (PED-7)
N.T.S.

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	156	258
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TEMPORARY TRAFFIC CONTROL PLANS
PEDESTRIAN DETAILS



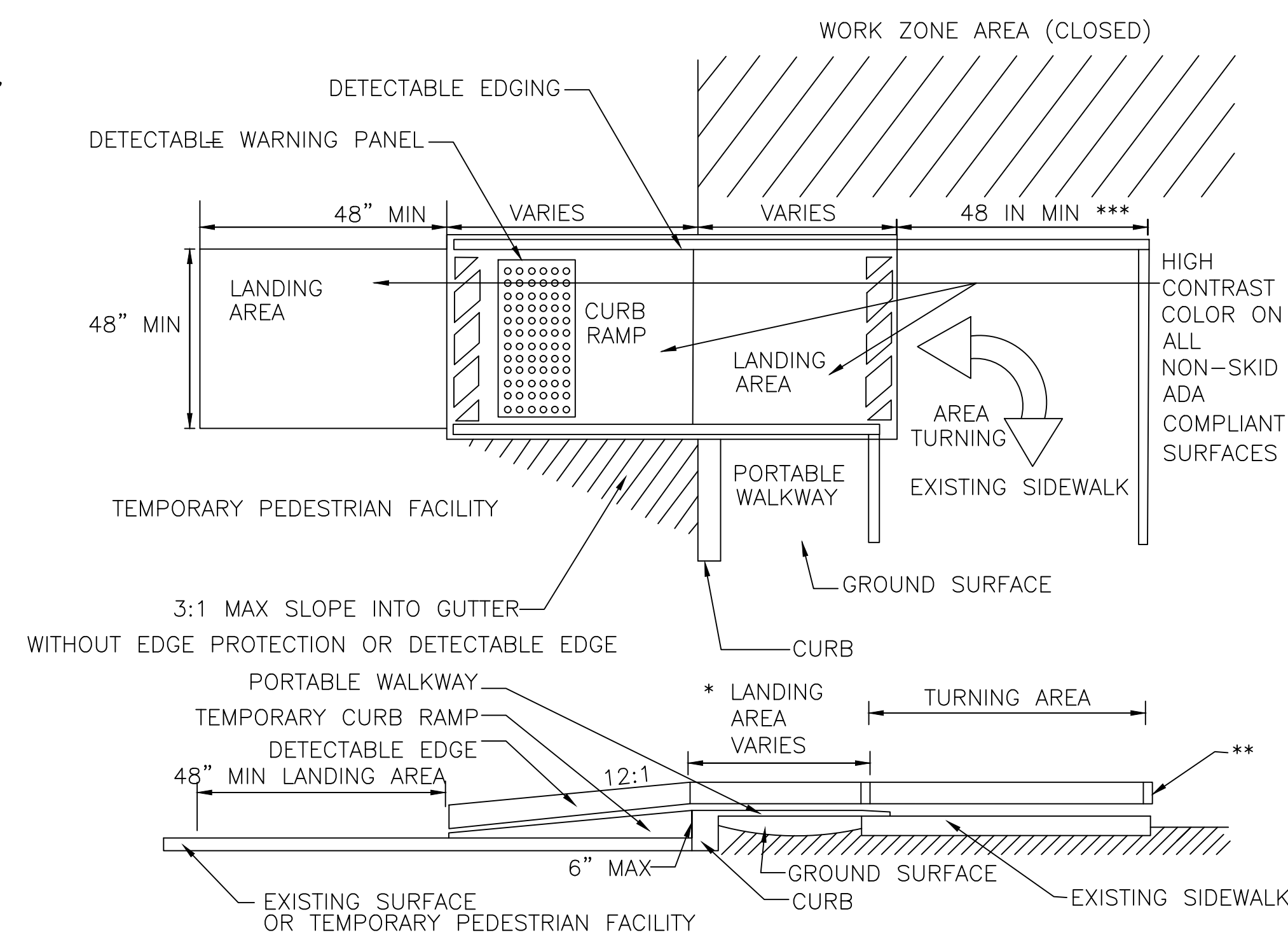
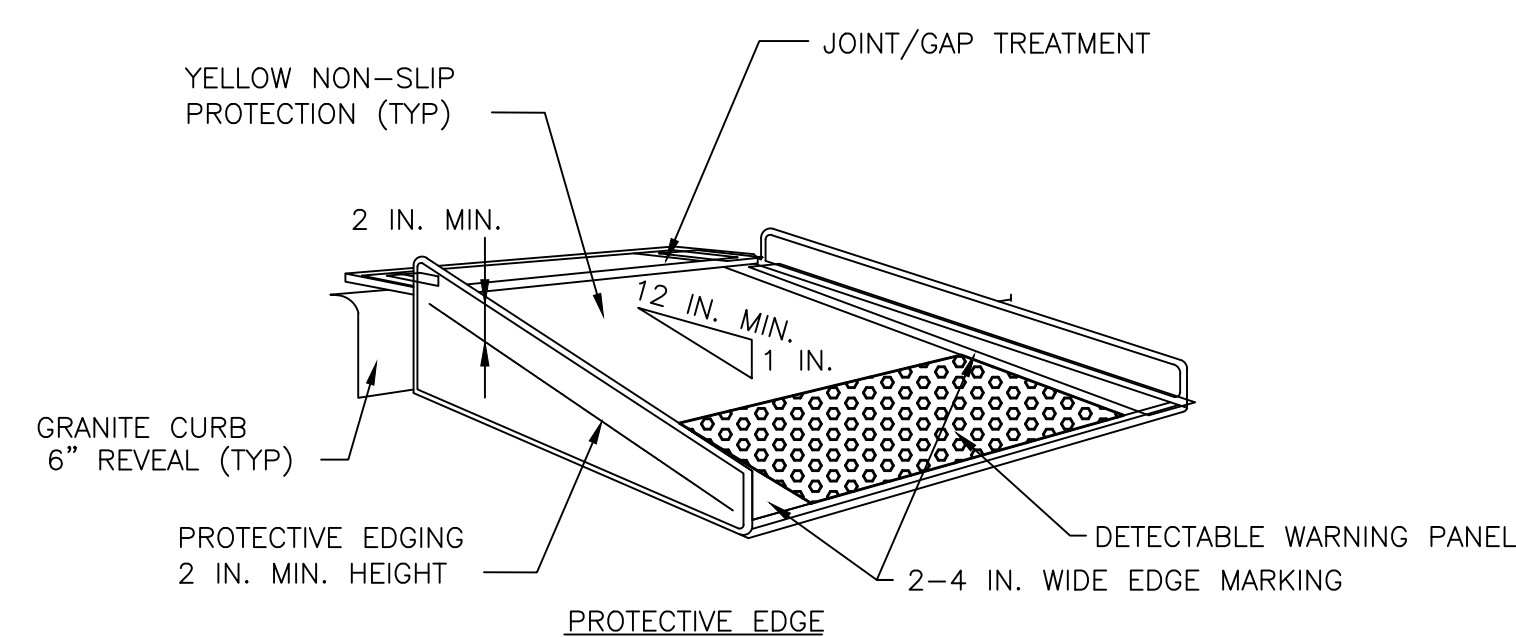
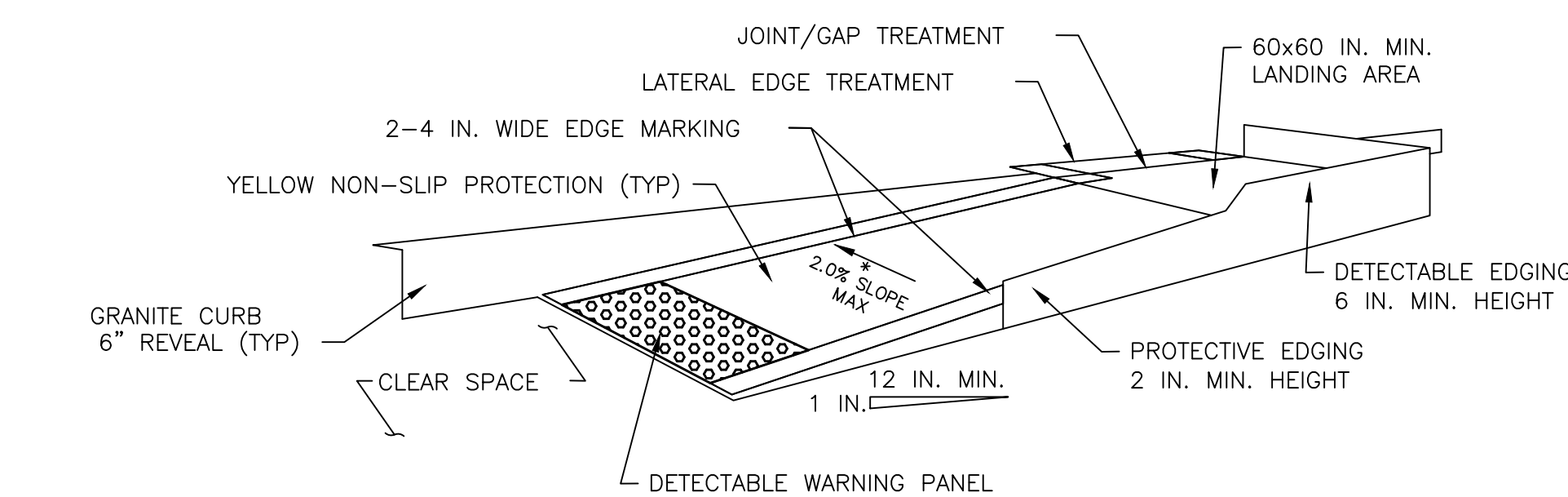
NOTES:

- * THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND-TRAILING EDGE AND ITS SUPPORT.
- ** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.
- ***THE HAND-TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.

PEDESTRIAN DETAILS (PED-4)
N.T.S.

NOTES:

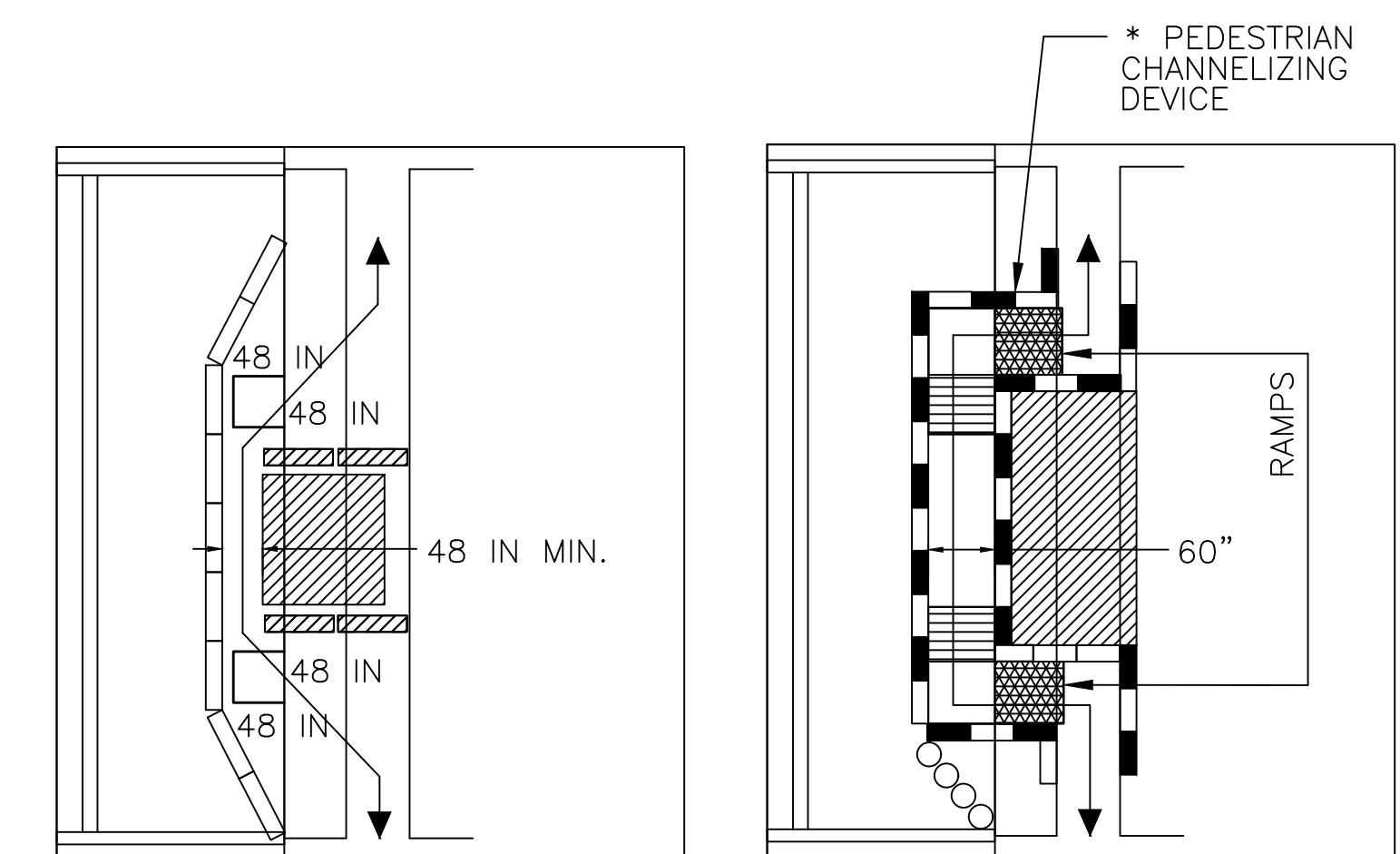
1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. THE CURB RAMP WALKWAY AND LANDING AREA SURFACE SHALL BE OF A SOLID CONTINUOUS CONTRASTING COLOR ABUTTING UP TO THE EXISTING SIDEWALK.
5. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
6. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.
10. IF A TEMPORARY PEDESTRIAN RAMP LEADS TO A CROSSWALK, THEN A DETECTABLE WARNING PAD MUST BE ADHERED TO THE BASE OF THE RAMP. IF IT LEADS TO A PROTECTED PEDESTRIAN BYPASS THAT DOES NOT CONFLICT WITH VEHICULAR TRAFFIC, THEN A PAD SHALL NOT BE INSTALLED ON THE RAMP.



* -LANDING AREA USED TO OVERLAP NON-ADA COMPLIANT SURFACES.

** -DETECTABLE EDGE REMOVED IF A CONTINUOUS SIDEWALK.

*** -60 IN. IF AN OBSTRUCTION IS AT BACK OF SIDEWALK.



- When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, temporary facilities shall be provided and they shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
- A pedestrian channelizing device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
- When used, temporary ramps shall comply with Americans with Disabilities Act (see Figures Ped-1 & Ped-2).
- The alternate pathway should have a smooth continuous hard surface for the entire length of the temporary pedestrian facility.
- The protective requirements of a TTC situation have priority in determining the need for temporary traffic barriers and their use in this situation should be based on engineering judgment.
- Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.

AUDIBLE DEVICES

For long term sidewalk closures (at a minimum overnight) a form of speech messaging for pedestrians with visual disabilities shall be provided. Audible information devices such as detectable barriers or barricades and other passive pedestrian activation (motion activated) devices should be considered for these cases. These audible devices can be mountable or stand alone.

PEDESTRIAN DETAILS (PED-3)
N.T.S.

CONSTRUCTION SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE		TEXT	DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
W20-1	36"	36"		1	1	1	7	FLUORESCENT ORANGE	BLACK	BLACK	9.00	63.00
W20-1c	48"	48"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	16.00	64.00
MA-R2-10a	48"	36"		2	2	2	8	FLUORESCENT ORANGE/WHITE	BLACK	BLACK	12.00	96.00
MA-R2-10e	36"	48"		2	2	2	10	FLUORESCENT ORANGE/WHITE	BLACK	BLACK	12.00	120.00
R3-7L	30"	30"		1	1	1	2	WHITE	BLACK	BLACK	6.25	12.50
R3-7R	30"	30"		1	1	1	2	WHITE	BLACK	BLACK	6.25	12.50
R4-7	24"	30"		1	1	1	4	WHITE	BLACK	BLACK	5.00	20.00
W1-4L	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W1-4R	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W1-4bL	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W1-4bR	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W1-4cL	48"	48"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	16.00	64.00
W1-4cR	48"	48"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	16.00	64.00
W4-2L	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W4-2R	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
MA-W4-7L	36"	36"		2	2	2	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
MA-W4-7R	36"	36"		2	2	2	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W5-1	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	157	258
PROJECT FILE NO. 603739			

TEMPORARY TRAFFIC CONTROL PLANS
CONSTRUCTION SIGN SUMMARY

CONSTRUCTION SIGN SUMMARY (CONTINUED)

IDENTIFICATION NUMBER	SIZE		TEXT	DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
W5-4	48"	48"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	16.00	32.00
W8-1	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W13-1p	24"	24"		1	1	1	6	FLUORESCENT ORANGE	BLACK	BLACK	4.00	24.00
W13-4p	36"	36"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W20-4	36"	36"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W20-5L	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-5R	36"	36"		1	1	1	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-7	36"	36"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W20-7b	36"	36"		2	2	2	4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W21-5a	36"	36"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W21-5b	36"	36"		1	1	1	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W30-8L	36"	36"		2	2	2	1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
MA-W30-8R	36"	36"		2	2	2	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
R9-9	24"	12"		1	1	1	4	WHITE	BLACK	BLACK	2.00	8.00
R9-10	24"	12"		1	1	1	4	WHITE	BLACK	BLACK	2.00	8.00

NOTES

- TRAFFIC MANAGEMENT SIGNS SHALL BE REUSED ACCORDING TO CONSTRUCTION SCHEDULE IN ORDER TO MINIMIZE THE TOTAL NUMBER OF SIGNS NEEDED.
- THE NUMBER OF TEMPORARY CONSTRUCTION SIGNS SHOWN ON THIS SHEET IS A MINIMUM AND MORE MAY BE REQUIRED DEPENDING ON CONSTRUCTION SEQUENCING.

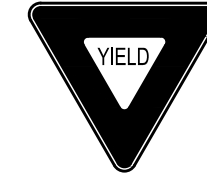
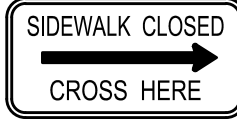
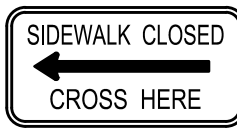
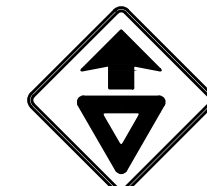




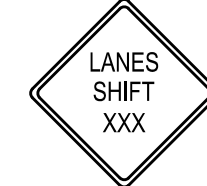

LEGEND

- SEE THE "MUTCD" AND "STANDARD HIGHWAY SIGNS" BY FEDERAL HIGHWAY ADMINISTRATION (LATEST EDITIONS) FOR TEXT DIMENSIONS AND COLORS. SEE ALSO THE "MASSACHUSETTS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- SEE THE "MASSDOT SIGN STANDARDS", LATEST EDITION.

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TEMPORARY TRAFFIC CONTROL PLANS
CONSTRUCTION SIGN SUMMARY

CONSTRUCTION SIGN SUMMARY (CONTINUED)

IDENTIFICATION NUMBER	SIZE		TEXT	DIMENSIONS (IN)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
R1-2	48"X48"X48"			①	①	①	1	WHITE	RED	RED	6.93	6.93
R9-11aR	24"	12"					1	WHITE	BLACK	BLACK	2.00	2.00
R9-11aL	24"	12"					1	WHITE	BLACK	BLACK	2.00	2.00
W3-2	48"	48"					1	FLUORESCENT ORANGE	BLACK	BLACK	16.00	16.00
W4-1R	48"	48"					1	FLUORESCENT ORANGE	BLACK	BLACK	16.00	16.00
W11-2	30"	30"					4	FLUORESCENT YELLOW/GREEN	BLACK	BLACK	6.25	25.00
W16-7pL	24"	12"					4	FLUORESCENT YELLOW/GREEN	BLACK	BLACK	2.00	8.00
W16-9p	24"	12"					2	FLUORESCENT YELLOW/GREEN	BLACK	BLACK	2.00	4.00
W21-11	36"	36"					4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W8-25	36"	36"					2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00

NOTES

1. TRAFFIC MANAGEMENT SIGNS SHALL BE REUSED ACCORDING TO CONSTRUCTION SCHEDULE IN ORDER TO MINIMIZE THE TOTAL NUMBER OF SIGNS NEEDED.
2. THE NUMBER OF TEMPORARY CONSTRUCTION SIGNS SHOWN ON THIS SHEET IS A MINIMUM AND MORE MAY BE REQUIRED DEPENDING ON CONSTRUCTION SEQUENCING.

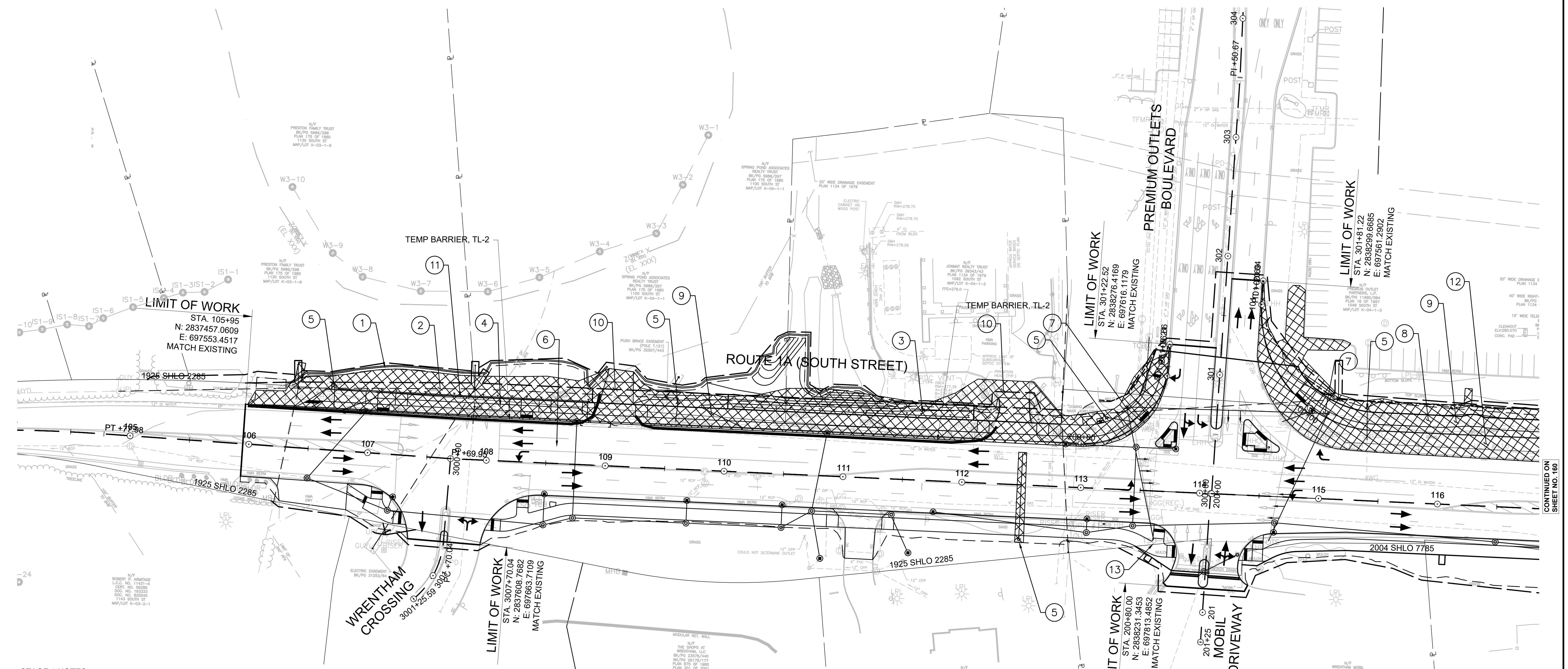
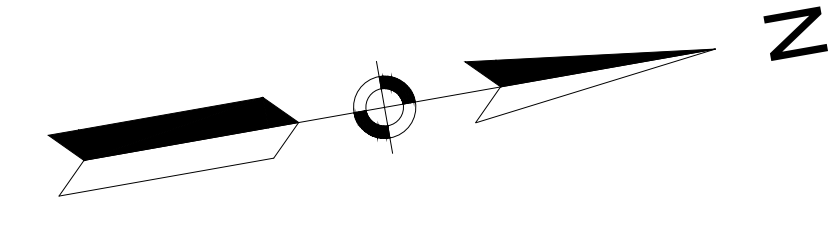
LEGEND

- ① SEE THE "MUTCD" AND "STANDARD HIGHWAY SIGNS" BY FEDERAL HIGHWAY ADMINISTRATION (LATEST EDITIONS) FOR TEXT DIMENSIONS AND COLORS. SEE ALSO THE "MASSACHUSETTS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- ② SEE THE "MASSDOT SIGN STANDARDS", LATEST EDITION.

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	159	258
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CONSTRUCTION STAGING PLAN
SHEET 1 OF 13



STAGE 1 NOTES

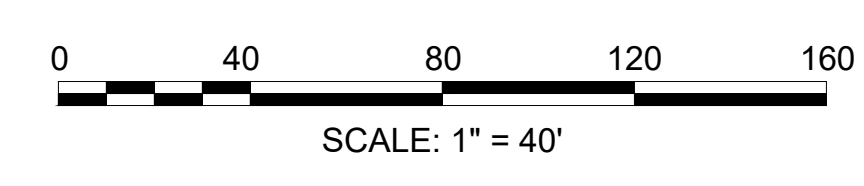
CONSTRUCTION ACTIVITIES:

- 1) INSTALL EROSION & SEDIMENT CONTROLS.
- 2) CONSTRUCT EMBANKMENT ALONG ROUTE 1A SB FROM STA 106+25 LT TO STA 113+00 LT.
- 3) RELOCATE UTILITY POLES AND OVER HEAD UTILITIES FROM STA 106+25 TO STA 118+50. WORK TO BE PERFORMED BY UTILITY COMPANY.
- 4) RELOCATE 12" WATER MAIN FROM STA 106+70 TO STA 109+00.
- 5) REMOVE AND RESET HYDRANTS AND INSTALL NEW HYDRANT AT STA 112+50 RT.
- 6) CONSTRUCT PROPOSED DRAINAGE STRUCTURES AND PIPES.
- 7) INSTALL PROPOSED SIGNAL CONTROLLER & CABINET, TEMPORARY TRAFFIC SIGNAL POLES AND SPAN WIRES AT THE ROUTE 1A / WRENTHAM PREMIUM OUTLETS BLVD INTERSECTION. INSTALL SPAN WIRES AND RESET EXISTING SIGNAL HEADS FOR ROUTE 1A NB & SB APPROACHES AND MOBIL DRIVEWAY WB APPROACH TO TEMPORARY POLE. REMOVE EXISTING CONTROL CABINET AND SIGNAL SPAN POLES IN CONFLICT WITH PROPOSED WORK
- 8) CONSTRUCT EMBANKMENT AND EXCAVATION FOR SIDE PATH ALONG ROUTE 1A SB FROM STA 114+75 LT TO STA 120+60 LT.
- 9) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A SB FROM STA 105+95 LT TO STA 113+60 LT AND FROM STA 114+75 TO STA 120+60.
- 10) RECONSTRUCT DRIVEWAYS AT STA 109+00 LT AND STA 112+25 LT.
- 11) INSTALL PROPOSED GUARDRAIL FROM STA 106+65 LT TO STA 112+10.
- 12) CONSTRUCT ROUTE 1A SB PAVEMENT WIDENING FROM STA 114+75 LT TO STA 120+60 LT.
- 13) MAINTAIN EXISTING SPAN POLES, SPAN WIRE AND VEHICLE SIGNAL INDICATIONS FOR PREMIUM OUTLETS BOULEVARD EB APPROACH.

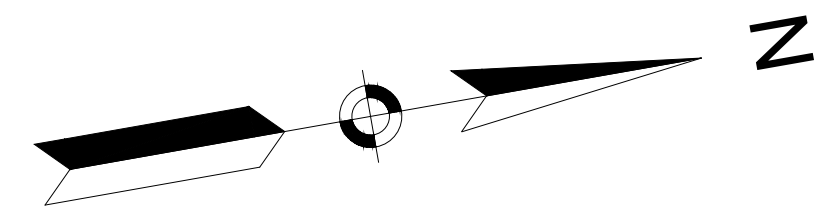
TRAFFIC CONTROL:

- ROUTE 1A SB:
STA 105+95 TO STA 113+00: MAINTAIN 2 LANES OF THROUGH TRAFFIC ON EXISTING PAVEMENT WITH LONG TERM CLOSURE OF RT SHOULDER USING TEMP BARRIER. DAILY SINGLE LANE CLOSURES FOR UTILITY RELOCATIONS, PROPOSED DRAINAGE WORK, AND PROPOSED CURBING. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:
DAILY SINGLE LANE CLOSURES FOR PROPOSED DRAINAGE WORK. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / WRENTHAM CROSSING INTERSECTION:
MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES.
- ROUTE 1A / PREMIUM OUTLETS BLVD:
MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES DURING UTILITY WORK. BEGIN USE OF TEMPORARY TRAFFIC SIGNAL WHEN UTILITY WORK IS COMPLETE.

STAGE 1



CONTINUED ON
SHEET NO. 160



STAGE 1 NOTES

CONSTRUCTION ACTIVITIES:

- 1) INSTALL EROSION AND SEDIMENT CONTROLS.
- 2) CONSTRUCT EMBANKMENT AND EXCAVATION ALONG ROUTE 1A SB FROM STA 114+75 LT TO STA 120+60 LT.
- 3) CONSTRUCT EMBANKMENT AND EXCAVATION ALONG ROUTE 1A NB FROM STA 118+95 RT TO STA 127+60 RT.
- 4) RELOCATE EXISTING UTILITY POLES AND OVERHEAD WIRES FROM STA 114+75 LT TO STA 118+50 LT AND FROM NICKERSON LANE TO STA 142+25.
- 5) REMOVE AND RESET EXISTING HYDRANTS.
- 6) RELOCATE EXISTING 6" GAS FROM STA 125+75 RT TO STA 130+80 RT.
- 7) RELOCATE EXISTING TELEPHONE DUCT BANK FROM STA 127+35 LT TO STA 131+35 LT.
- 8) CONSTRUCT PROPOSED DRAINAGE.
- 9) CONSTRUCT TEMPORARY TRAFFIC SIGNAL POLES AND SPAN WIRES FOR THE ROUTE 1A NB APPROACH AND I-495 SB EXIT RAMP LEFT TURN APPROACH. RESET EXISTING SIGNAL HEADS FOR ROUTE 1A NB AND I-495 SB EXIT RAMP LEFT TURN APPROACHES ON TEMPORARY SPAN WIRE.
- 10) CONSTRUCT ROUTE 1A SB PAVEMENT WIDENING FROM STA 114+75 LT TO STA 120+60 LT.
- 11) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A SB FROM STA 114+75 LT TO STA 120+60 LT.
- 12) CONSTRUCT ROUTE 1A NB PAVEMENT WIDENING FROM STA 118+95 RT TO STA 126+00 RT.
- 13) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 118+95 RT TO STA 127+60 RT.
- 14) CONSTRUCT PROP 8" WATER MAIN ALONG NICKERSON LANE FROM EXIST 8" WATER MAIN TO EXISTING 6" WATER MAIN ALONG BERRY ROAD. REMOVE EXISTING 6" WATER MAIN FROM BERRY ROAD TO WG AT ROUTE 1A STA 128+00 LT.
- 15) MAINTAIN EXISTING SIGNAL CONTROLLER AT INTERSECTION AND MAST ARM, VEHICLE SIGNAL INDICATIONS FOR THE ROUTE 1 SB APPROACH.
- 16) REMOVE EXISTING MAST ARMS IN CONFLICT WITH PROPOSED WORK.

TRAFFIC CONTROL:

ROUTE 1A SB:

STA 114+75 TO STA 121+00: LONG TERM CLOSURE OF RT SHOULDER. DAILY SINGLE LANE CLOSURES FOR ROADWAY WIDENING, UTILITY RELOCATIONS, AND PROPOSED DRAINAGE. MAINTAIN RIGHT TURN LANE INTO PREMIUM OUTLETS BLVD. MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS. UNDER I-495 OVERPASSES: DAILY LANE CLOSURES FOR TELEPHONE DUCT BANK RELOCATION, HYDRANT RELOCATION, AND EXISTING WATER MAIN REMOVAL. SHIFT TRAFFIC TO ROUTE 1A NB LEFT LANE. MAINTAIN 1 LANE OF THROUGH TRAFFIC. MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

ROUTE 1A NB:

STA 119+95 TO STA 126+00: LONG TERM CLOSURE OF RT SHOULDER. DAILY LANE CLOSURES FOR FULL DEPTH WIDENING. MAINTAIN 1 LANE OF TRAFFIC. MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS. UNDER I-495 OVERPASSES: DAILY LANE CLOSURES FOR GAS LINE RELOCATION AND EXISTING WATER MAIN REMOVAL. MAINTAIN 1 LANE OF THROUGH TRAFFIC. MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

ROUTE 1A / I-495 SB RAMPS INTERSECTION:

MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES DURING UTILITY WORK. BEGIN USE OF TEMPORARY TRAFFIC SIGNAL WHEN UTILITY WORK IS COMPLETE.

I-495 SB AND I-495 NB:

SHORT DURATION TRAFFIC STOPS OF ALL LANES FOR RELOCATING OVERHEAD WIRES.

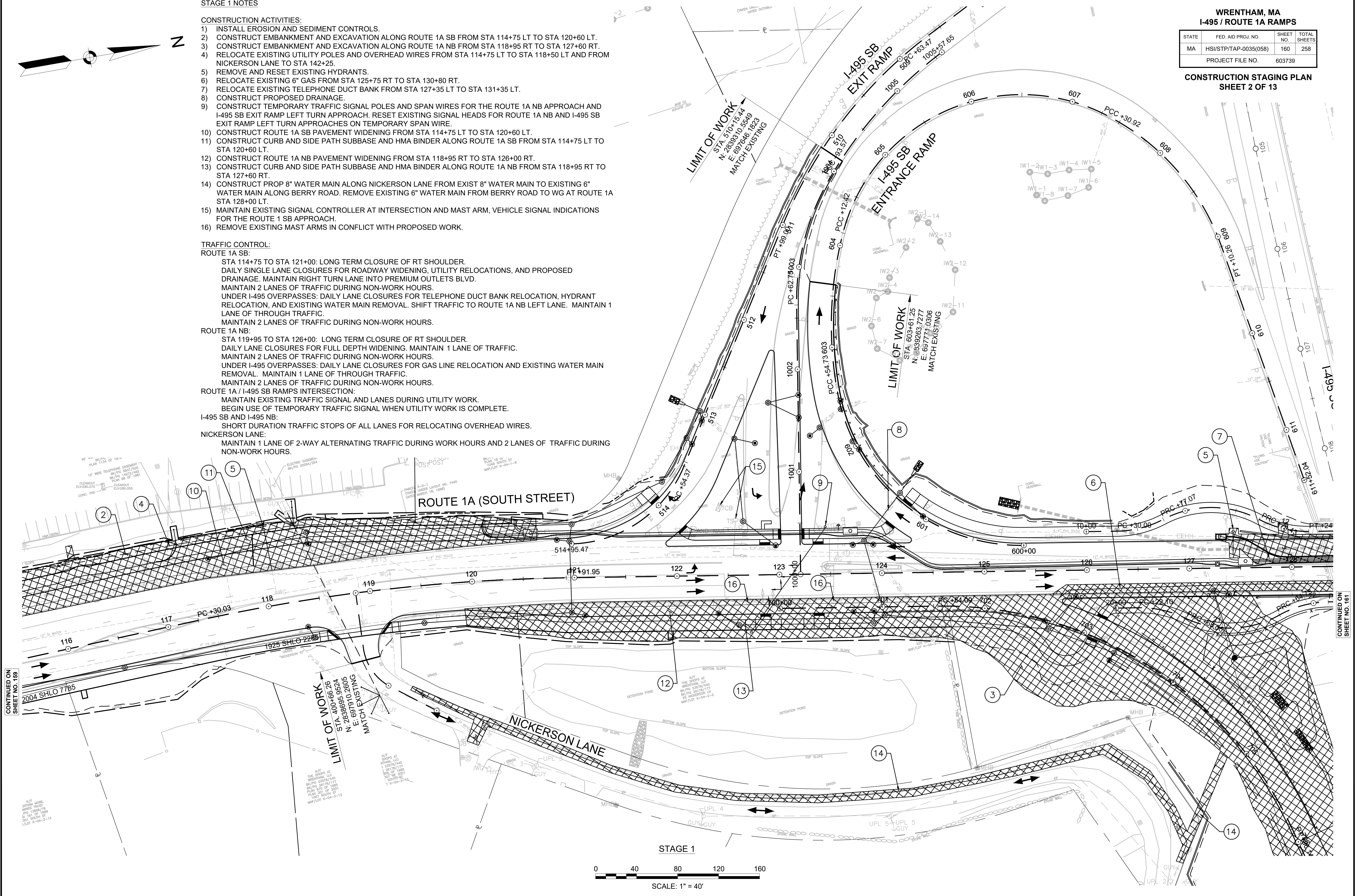
NICKERSON LANE:

MAINTAIN 1 LANE OF 2-WAY ALTERNATING TRAFFIC DURING WORK HOURS AND 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

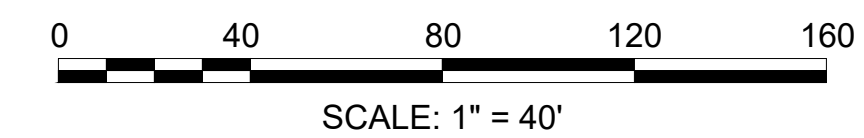
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	160	258
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CONSTRUCTION STAGING PLAN
SHEET 2 OF 13



STAGE 1



CONTINUED ON SHEET NO. 159

CONTINUED ON SHEET NO. 161

**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	161	258
PROJECT FILE NO.			603739

**CONSTRUCTION STAGING PLAN
SHEET 3 OF 13**

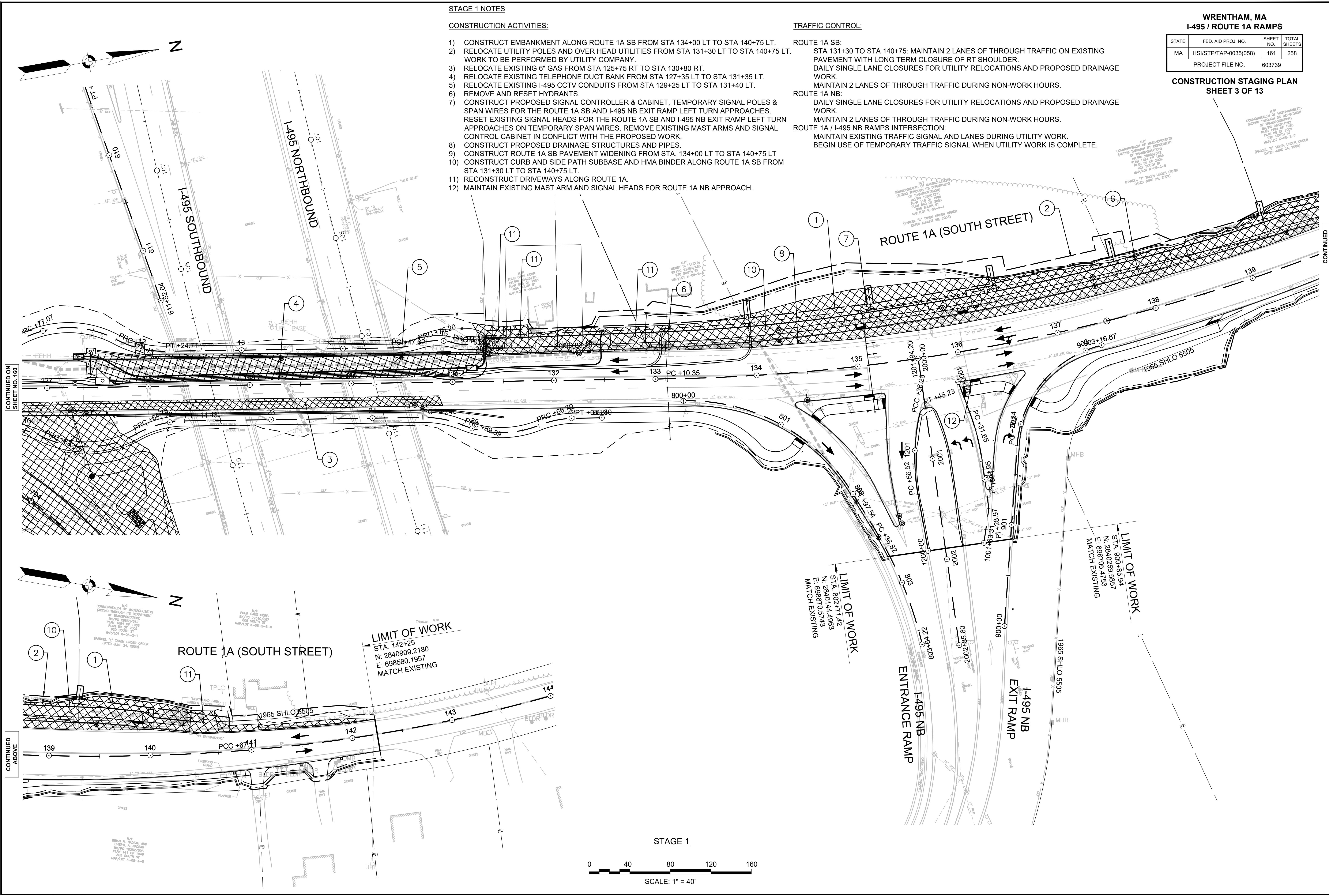
STAGE 1 NOTES

CONSTRUCTION ACTIVITIES:

- 1) CONSTRUCT EMBANKMENT ALONG ROUTE 1A SB FROM STA 134+00 LT TO STA 140+75 LT.
- 2) RELOCATE UTILITY POLES AND OVER HEAD UTILITIES FROM STA 131+30 LT TO STA 140+75 LT. WORK TO BE PERFORMED BY UTILITY COMPANY.
- 3) RELOCATE EXISTING 6" GAS FROM STA 125+75 RT TO STA 130+80 RT.
- 4) RELOCATE EXISTING TELEPHONE DUCT BANK FROM STA 127+35 LT TO STA 131+35 LT.
- 5) RELOCATE EXISTING I-495 CCTV CONDUITS FROM STA 129+25 LT TO STA 131+40 LT.
- 6) REMOVE AND RESET HYDRANTS.
- 7) CONSTRUCT PROPOSED SIGNAL CONTROLLER & CABINET, TEMPORARY SIGNAL POLES & SPAN WIRES FOR THE ROUTE 1A SB AND I-495 NB EXIT RAMP LEFT TURN APPROACHES. RESET EXISTING SIGNAL HEADS FOR THE ROUTE 1A SB AND I-495 NB EXIT RAMP LEFT TURN APPROACHES ON TEMPORARY SPAN WIRES. REMOVE EXISTING MAST ARMS AND SIGNAL CONTROL CABINET IN CONFLICT WITH THE PROPOSED WORK.
- 8) CONSTRUCT PROPOSED DRAINAGE STRUCTURES AND PIPES.
- 9) CONSTRUCT ROUTE 1A SB PAVEMENT WIDENING FROM STA. 134+00 LT TO STA 140+75 LT
- 10) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A SB FROM STA 131+30 LT TO STA 140+75 LT.
- 11) RECONSTRUCT DRIVEWAYS ALONG ROUTE 1A.
- 12) MAINTAIN EXISTING MAST ARM AND SIGNAL HEADS FOR ROUTE 1A NB APPROACH.

TRAFFIC CONTROL:

- ROUTE 1A SB:**
 STA 131+30 TO STA 140+75: MAINTAIN 2 LANES OF THROUGH TRAFFIC ON EXISTING PAVEMENT WITH LONG TERM CLOSURE OF RT SHOULDER. DAILY SINGLE LANE CLOSURES FOR UTILITY RELOCATIONS AND PROPOSED DRAINAGE WORK. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:**
 DAILY SINGLE LANE CLOSURES FOR UTILITY RELOCATIONS AND PROPOSED DRAINAGE WORK. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / I-495 NB RAMP INTERSECTION:**
 MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES DURING UTILITY WORK. BEGIN USE OF TEMPORARY TRAFFIC SIGNAL WHEN UTILITY WORK IS COMPLETE.

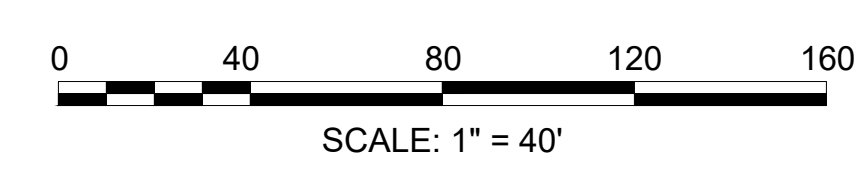


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SHEET NO. 160

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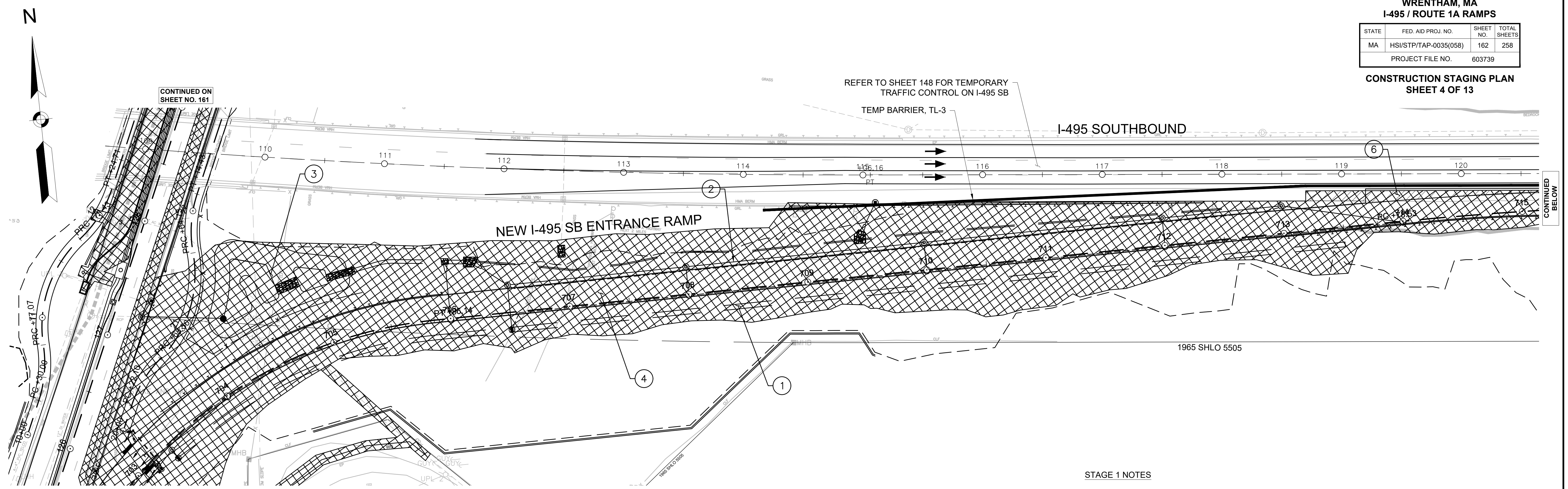
STAGE 1



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

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MA	HSI/STP/TAP-0035(058)	162	258
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CONSTRUCTION STAGING PLAN
SHEET 4 OF 13



CONTINUED ON
SHEET NO. 160

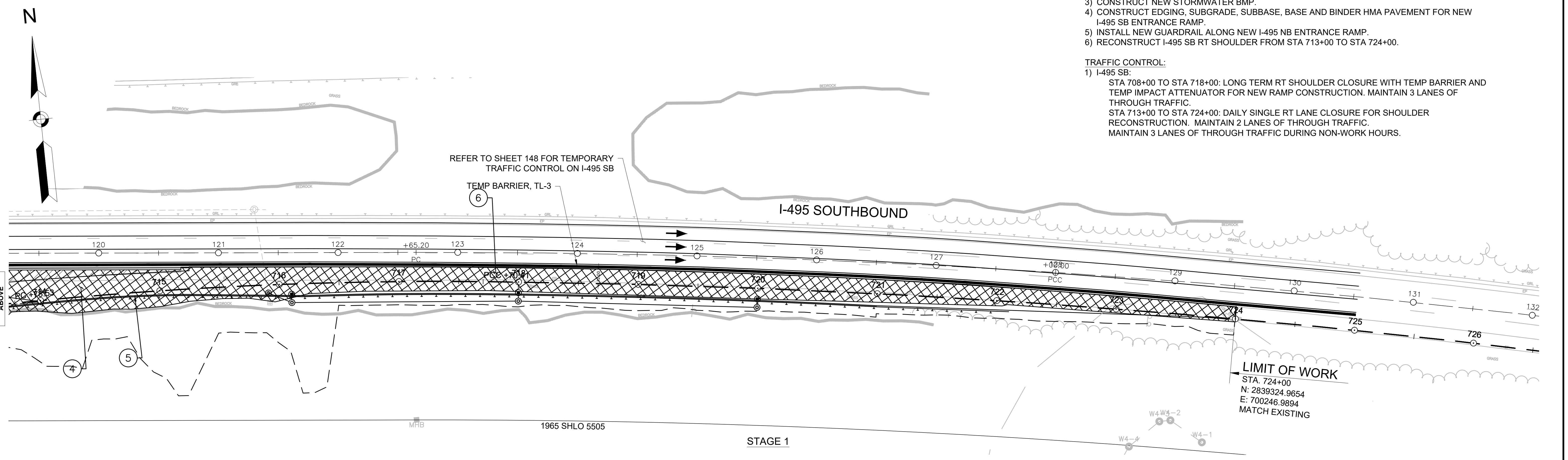
STAGE 1

STAGE 1 NOTES

- CONSTRUCTION ACTIVITIES:
- 1) CONSTRUCT EMBANKMENT AND EXCAVATION FOR NEW I-495 SB ENTRANCE RAMP.
 - 2) CONSTRUCT PROPOSED DRAINAGE SYSTEMS ALONG NEW I-495 SB ENTRANCE RAMP.
 - 3) CONSTRUCT NEW STORMWATER BMP.
 - 4) CONSTRUCT EDGING, SUBGRADE, SUBBASE, BASE AND BINDER HMA PAVEMENT FOR NEW I-495 SB ENTRANCE RAMP.
 - 5) INSTALL NEW GUARDRAIL ALONG NEW I-495 NB ENTRANCE RAMP.
 - 6) RECONSTRUCT I-495 SB RT SHOULDER FROM STA 713+00 TO STA 724+00.

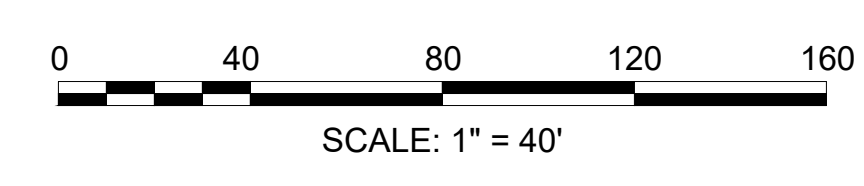
TRAFFIC CONTROL:

- 1) I-495 SB:
 - STA 708+00 TO STA 718+00: LONG TERM RT SHOULDER CLOSURE WITH TEMP BARRIER AND TEMP IMPACT ATTENUATOR FOR NEW RAMP CONSTRUCTION. MAINTAIN 3 LANES OF THROUGH TRAFFIC.
 - STA 713+00 TO STA 724+00: DAILY SINGLE RT LANE CLOSURE FOR SHOULDER RECONSTRUCTION. MAINTAIN 2 LANES OF THROUGH TRAFFIC.
 - MAINTAIN 3 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.



CONTINUED ABOVE

STAGE 1

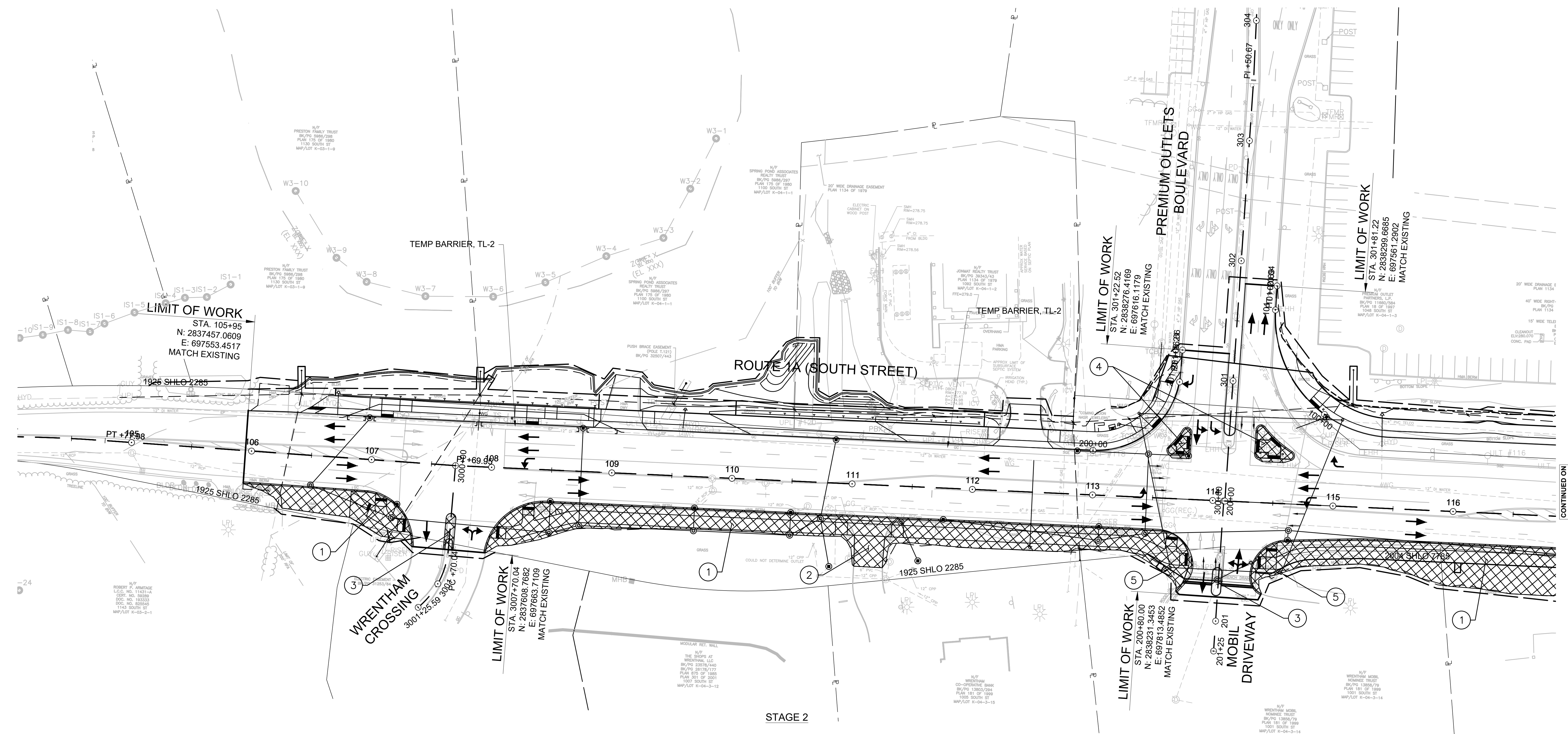


LIMIT OF WORK
STA. 724+00
N: 2839324.9654
E: 700246.9894
MATCH EXISTING

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	163	258
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CONSTRUCTION STAGING PLAN
SHEET 5 OF 13



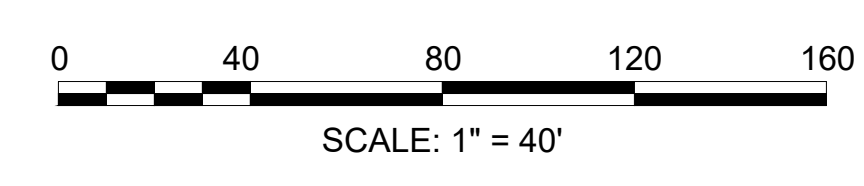
STAGE 2 NOTES

CONSTRUCTION ACTIVITIES:

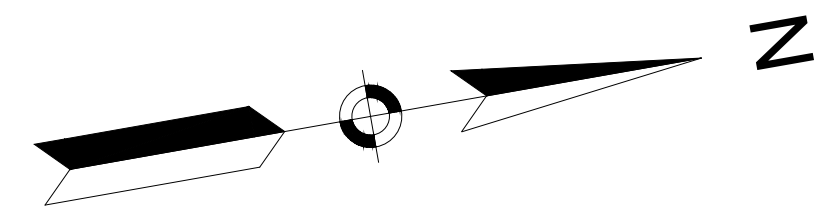
- 1) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 105+95 RT TO STA 107+35 RT, FROM STA 108+02 RT TO 113+90 RT, AND FROM STA 114+30 RT TO STA 118+65 RT.
- 2) RECONSTRUCT DRIVEWAYS AT STA 111+00 RT.
- 3) RECONSTRUCT MEDIAN ISLANDS AT STA 107+65 RT AND STA 114+08 RT.
- 4) RECONSTRUCT CHANNELIZING ISLANDS AT STA 113+65 LT AND STA 114+50 LT.
- 5) CONSTRUCT TEMPORARY TRAFFIC SIGNAL POLES AND SPAN WIRE FOR THE PREMIUM OUTLETS BOULEVARD EB APPROACH AND REMOVE AND RESET EXISTING SIGNAL HEADS ON TEMPORARY SPAN WIRE. REMOVE EXISTING SIGNAL SPAN POLES IN CONFLICT WITH PROPOSED WORK. RETAIN TEMPORARY TRAFFIC SIGNAL POLES AND SPAN WIRE CONSTRUCTED DURING STAGE 1 FOR THE ROUTE 1A NB AND SB AND MOBIL DRIVEWAY WB APPROACHES.

TRAFFIC CONTROL:

- ROUTE 1A SB:
MAINTAIN 2 LANES OF THROUGH TRAFFIC AT ALL TIMES.
- ROUTE 1A NB:
DAILY SINGLE LANE CLOSURES FOR PROPOSED CURBING.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / WRENTHAM CROSSING INTERSECTION:
MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES.
- ROUTE 1A / PREMIUM OUTLETS BLVD:
MAINTAIN TEMPORARY TRAFFIC SIGNAL AND EXISTING LANES.



CONTINUED ON
SHEET NO. 164



STAGE 2 NOTES

CONSTRUCTION ACTIVITIES:

- 1) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 114+30 RT TO STA 118+65 RT AND FROM STA 119+02 RT TO STA 119+95 RT.
- 2) RECONSTRUCT CHANNELIZING ISLANDS AT ROUTE 1A / I-495 SB RAMPS INTERSECTION.
- 3) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A SB FROM STA 124+15 LT TO STA 127+50 LT.
- 4) CONSTRUCT NEW RETAINING WALL, CURB, AND SIDE PATH FROM STA 127+50 LT TO STA 130+85 LT.
- 5) RETAIN TEMPORARY TRAFFIC SIGNAL POLES AND VEHICLE SIGNAL HEADS FOR I-495 SB OFF-RAMP LEFT-TURN APPROACH INSTALLED DURING STAGE 1.
- 6) MAINTAIN EXISTING SIGNAL CONTROLLER AT INTERSECTION AND EXISTING MAST ARM AND SIGNAL HEADS FOR ROUTE 1A SB APPROACH.
- 7) INSTALL PROPOSED SIGNAL HEADS FOR ROUTE 1A NB APPROACH ON TEMPORARY SPAN WIRE.

TRAFFIC CONTROL:

ROUTE 1A SB:

- DAILY SINGLE LANE CLOSURES FOR PROPOSED CURB.
- MAINTAIN SINGLE RIGHT TURN LANE INTO PREMIUM OUTLETS BLVD.
- UNDER I-495 OVERPASSES: LONG TERM CLOSURE OF RT SHOULDER FOR PROP RETAINING WALL AND SIDE PATH CONSTRUCTION.
- MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

ROUTE 1A NB:

- MAINTAIN 2 LANES OF TRAFFIC AT ALL TIMES.

ROUTE 1A / I-495 SB RAMPS INTERSECTION:

- MAINTAIN TEMPORARY TRAFFIC SIGNAL AND LANES ON ROUTE 1A APPROACHES.
- MAINTAIN SINGLE LANE OF TRAFFIC ON EXISTING PAVEMENT FOR EXIT RAMP RT TURN, EXIT RAMP LT TURN, AND ENTRANCE RAMP.

NEW I-495 SB ENTRANCE RAMP:

- FULLY OPEN TO TRAFFIC.

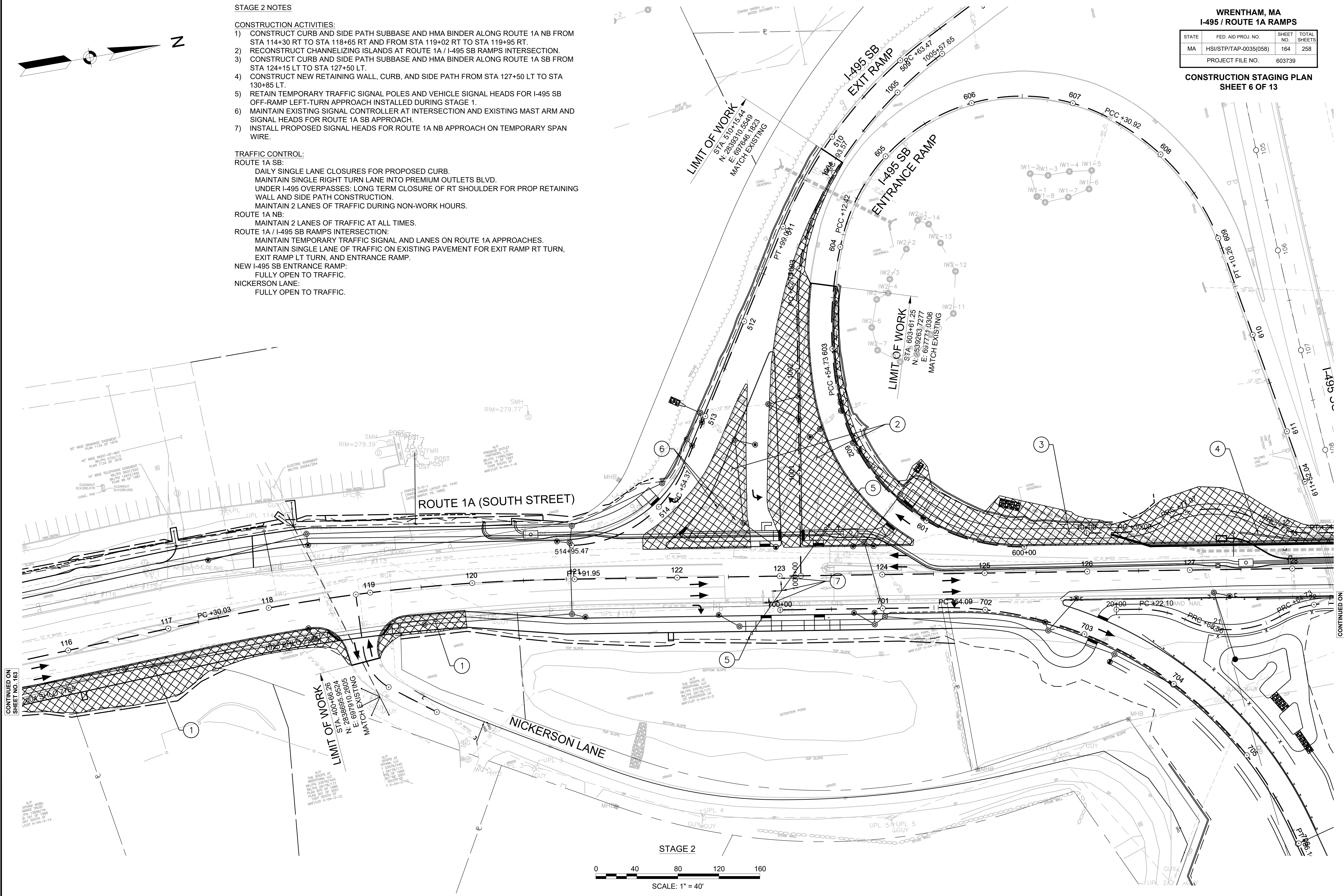
NICKERSON LANE:

- FULLY OPEN TO TRAFFIC.

WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

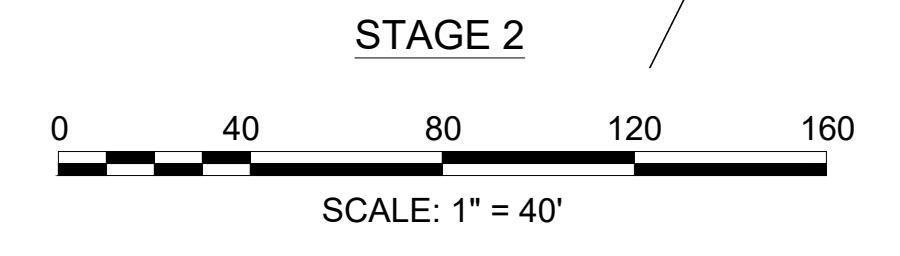
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	164	258
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CONSTRUCTION STAGING PLAN
SHEET 6 OF 13



CONTINUED ON SHEET NO. 163

CONTINUED ON SHEET NO. 165



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	165	258
PROJECT FILE NO.			603739

**CONSTRUCTION STAGING PLAN
SHEET 7 OF 13**

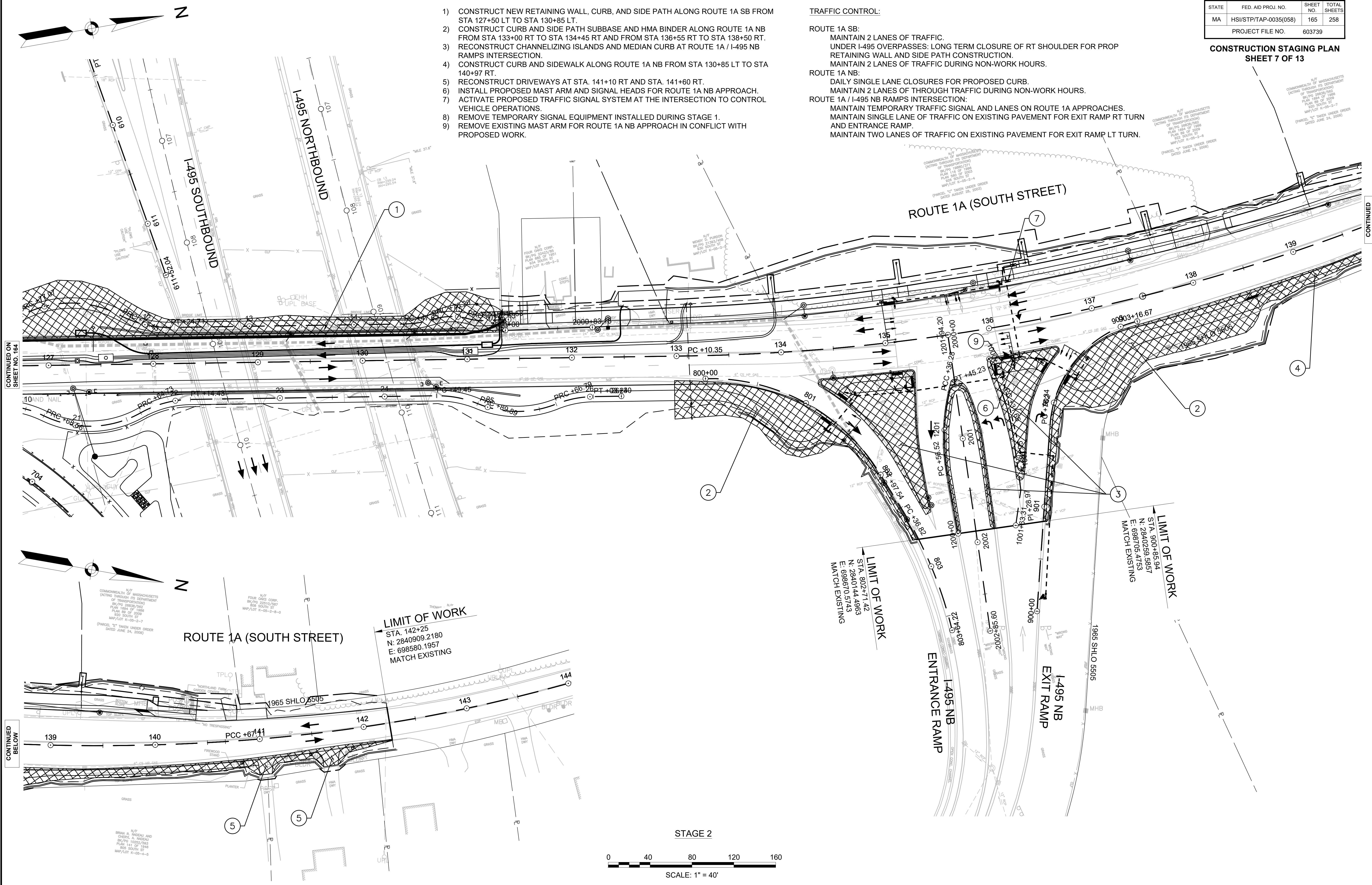
STAGE 2 NOTES

CONSTRUCTION ACTIVITIES:

- 1) CONSTRUCT NEW RETAINING WALL, CURB, AND SIDE PATH ALONG ROUTE 1A SB FROM STA 127+50 LT TO STA 130+85 LT.
- 2) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 133+00 RT TO STA 134+45 RT AND FROM STA 136+55 RT TO STA 138+50 RT.
- 3) RECONSTRUCT CHANNELIZING ISLANDS AND MEDIAN CURB AT ROUTE 1A / I-495 NB RAMPS INTERSECTION.
- 4) CONSTRUCT CURB AND SIDEWALK ALONG ROUTE 1A NB FROM STA 130+85 LT TO STA 140+97 RT.
- 5) RECONSTRUCT DRIVEWAYS AT STA. 141+10 RT AND STA. 141+60 RT.
- 6) INSTALL PROPOSED MAST ARM AND SIGNAL HEADS FOR ROUTE 1A NB APPROACH.
- 7) ACTIVATE PROPOSED TRAFFIC SIGNAL SYSTEM AT THE INTERSECTION TO CONTROL VEHICLE OPERATIONS.
- 8) REMOVE TEMPORARY SIGNAL EQUIPMENT INSTALLED DURING STAGE 1.
- 9) REMOVE EXISTING MAST ARM FOR ROUTE 1A NB APPROACH IN CONFLICT WITH PROPOSED WORK.

TRAFFIC CONTROL:

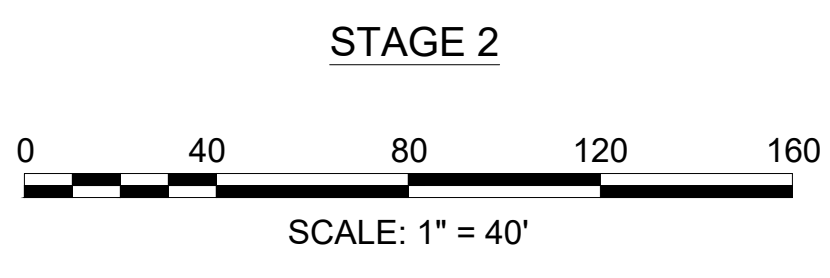
- ROUTE 1A SB:**
 MAINTAIN 2 LANES OF TRAFFIC.
 UNDER I-495 OVERPASSES: LONG TERM CLOSURE OF RT SHOULDER FOR PROP RETAINING WALL AND SIDE PATH CONSTRUCTION.
 MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:**
 DAILY SINGLE LANE CLOSURES FOR PROPOSED CURB.
 MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / I-495 NB RAMPS INTERSECTION:**
 MAINTAIN TEMPORARY TRAFFIC SIGNAL AND LANES ON ROUTE 1A APPROACHES.
 MAINTAIN SINGLE LANE OF TRAFFIC ON EXISTING PAVEMENT FOR EXIT RAMP RT TURN AND ENTRANCE RAMP.
 MAINTAIN TWO LANES OF TRAFFIC ON EXISTING PAVEMENT FOR EXIT RAMP LT TURN.



CONTINUED ON
SHEET NO. 164

CONTINUED
BELOW

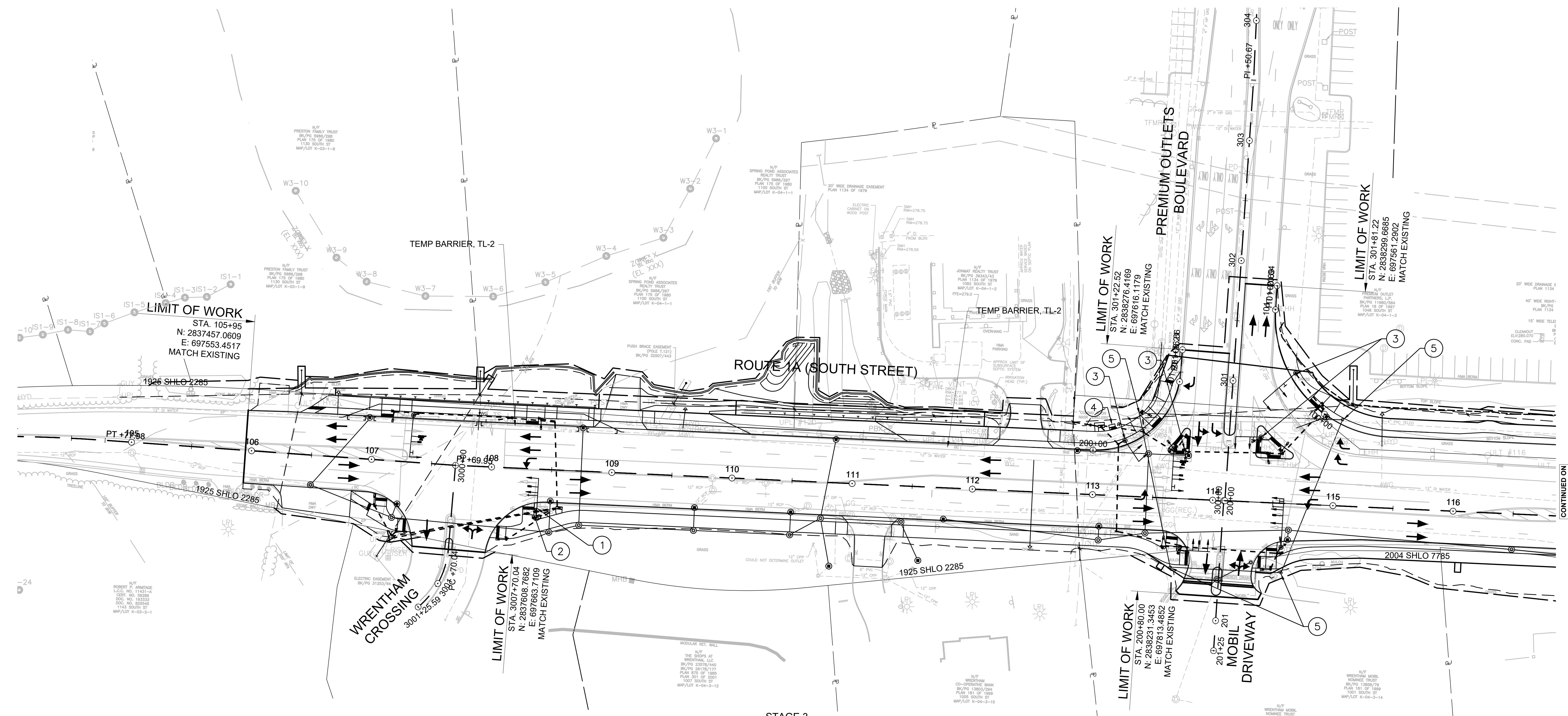
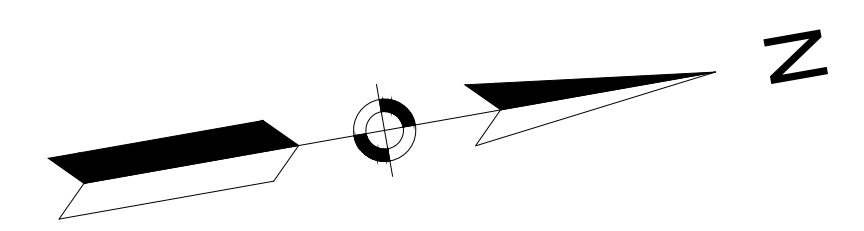
CONTINUED
BELOW



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	166	258
PROJECT FILE NO.		603739	

CONSTRUCTION STAGING PLAN
SHEET 8 OF 13



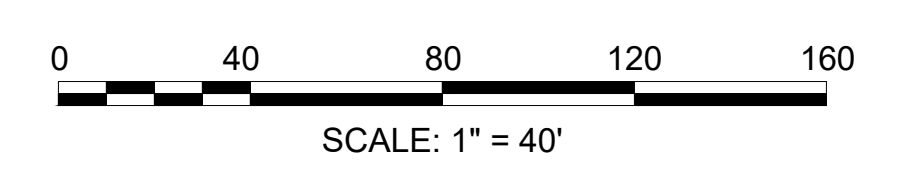
STAGE 3 NOTES

CONSTRUCTION ACTIVITIES:

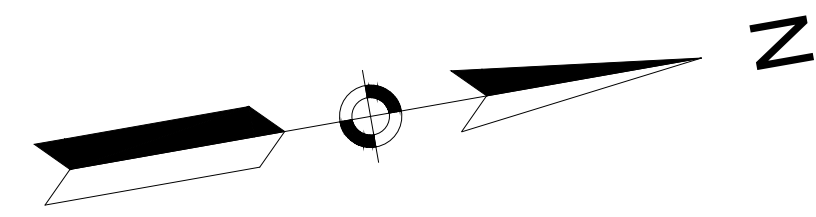
- 1) INSTALL NEW TRAFFIC SIGNAL MAST ARMS, CONDUIT, AND OTHER SIGNAL EQUIPMENT AT ROUTE 1A / WRENTHAM CROSSING INTERSECTION.
- 2) REMOVE EXISTING TRAFFIC SIGNAL AT ROUTE 1A / WRENTHAM CROSSING INTERSECTION AFTER PROPOSED SIGNAL SYSTEM IS FULLY OPERATIONAL.
- 3) INSTALL NEW TRAFFIC SIGNAL MAST ARMS, CONDUIT, AND OTHER SIGNAL EQUIPMENT AT ROUTE 1A / WRENTHAM PREMIUM OUTLETS BLVD INTERSECTION.
- 4) ACTIVATE PROPOSED TRAFFIC SIGNAL SYSTEM AT THE INTERSECTION TO CONTROL VEHICLE OPERATIONS.
- 5) REMOVE TEMPORARY TRAFFIC SIGNAL EQUIPMENT AT ROUTE 1A / WRENTHAM PREMIUM OUTLETS BLVD INTERSECTION AFTER PROPOSED SIGNAL SYSTEM IS FULLY OPERATIONAL.

TRAFFIC CONTROL:

- ROUTE 1A SB:
DAILY LANE OR SHOULDER CLOSURES TO INSTALL TRAFFIC EQUIPMENT. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:
DAILY LANE OR SHOULDER CLOSURES TO INSTALL TRAFFIC EQUIPMENT. MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS..
- ROUTE 1A / WRENTHAM CROSSING INTERSECTION:
MAINTAIN EXISTING TRAFFIC SIGNAL AND LANES UNTIL NEW TRAFFIC SIGNAL IS ACTIVATED.
- ROUTE 1A / PREMIUM OUTLETS BLVD:
MAINTAIN TEMPORARY TRAFFIC SIGNAL AND LANES UNTIL NEW TRAFFIC SIGNAL IS ACTIVATED.



CONTINUED ON
SHEET NO. 167



STAGE 3 NOTES

CONSTRUCTION ACTIVITIES:

- 1) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 120+60 LT TO STA 121+90 LT.
- 2) REMOVE EXISTING I-495 SB RAMP LEFT TURN APPROACH AND COMPLETE CONSTRUCTION OF CHANNLIZING ISLAND.
- 3) INSTALL NEW TRAFFIC SIGNAL CONTROL CABINET, MAST ARMS, CONDUIT, AND EQUIPMENT AT THE ROUTE 1A / I-495 SB RAMP INTERSECTION.
- 4) REMOVE TEMPORARY TRAFFIC SIGNAL AT THE ROUTE 1A / I-495 SB RAMP INTERSECTION AFTER PROPOSED SIGNAL SYSTEM IS FULLY OPERATIONAL.

TRAFFIC CONTROL:

ROUTE 1A SB:
DAILY SINGLE LANE CLOSURES FOR TRAFFIC SIGNAL INSTALLATION.
MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

ROUTE 1A NB:
DAILY SINGLE LANE CLOSURES FOR TRAFFIC SIGNAL INSTALLATION.
MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.

ROUTE 1A / I-495 SB RAMP INTERSECTION:
MAINTAIN TEMPORARY TRAFFIC SIGNAL AND LANES UNTIL NEW TRAFFIC SIGNAL IS ACTIVATED.

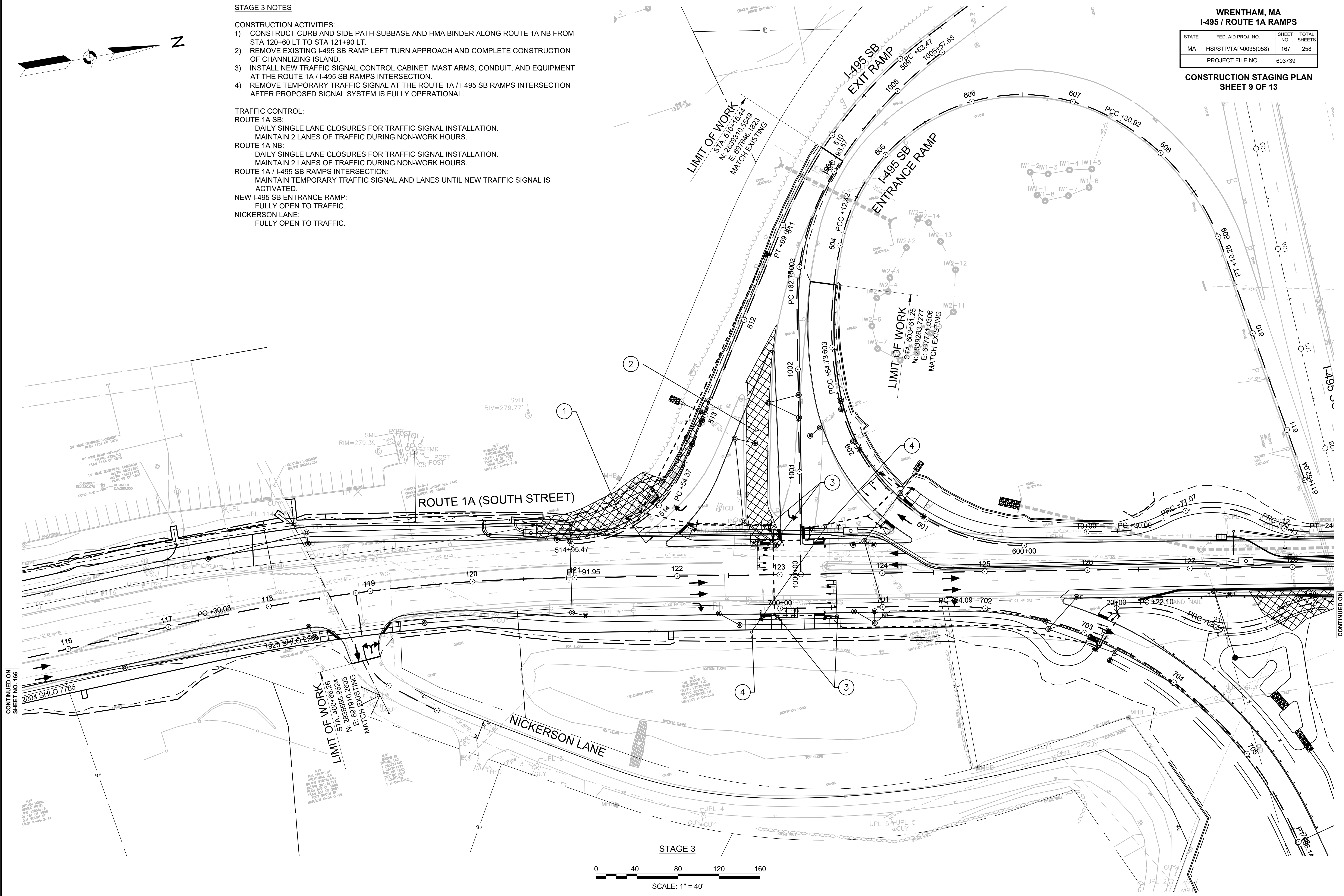
NEW I-495 SB ENTRANCE RAMP:
FULLY OPEN TO TRAFFIC.

NICKERSON LANE:
FULLY OPEN TO TRAFFIC.

**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	167	258
PROJECT FILE NO.			603739

**CONSTRUCTION STAGING PLAN
SHEET 9 OF 13**



CONTINUED ON
SHEET NO. 166

CONTINUED ON
SHEET NO. 168

STAGE 3 NOTES

CONSTRUCTION ACTIVITIES:

- 1) CONSTRUCT NEW RETAINING WALL, CURB, AND SIDE PATH ALONG ROUTE 1A NB FROM STA 127+65 RT TO STA 131+50 RT.
- 2) CONSTRUCT CURB AND SIDE PATH SUBBASE AND HMA BINDER ALONG ROUTE 1A NB FROM STA 131+50 RT TO STA 133+00 RT AND FROM STA 136+55 RT TO STA 138+50 RT.
- 3) REMOVE TEMPORARY TRAFFIC SIGNAL AT ROUTE 1A / I-495 NB RAMP INTERSECTION AFTER PROPOSED SIGNAL SYSTEM IS FULLY OPERATIONAL.

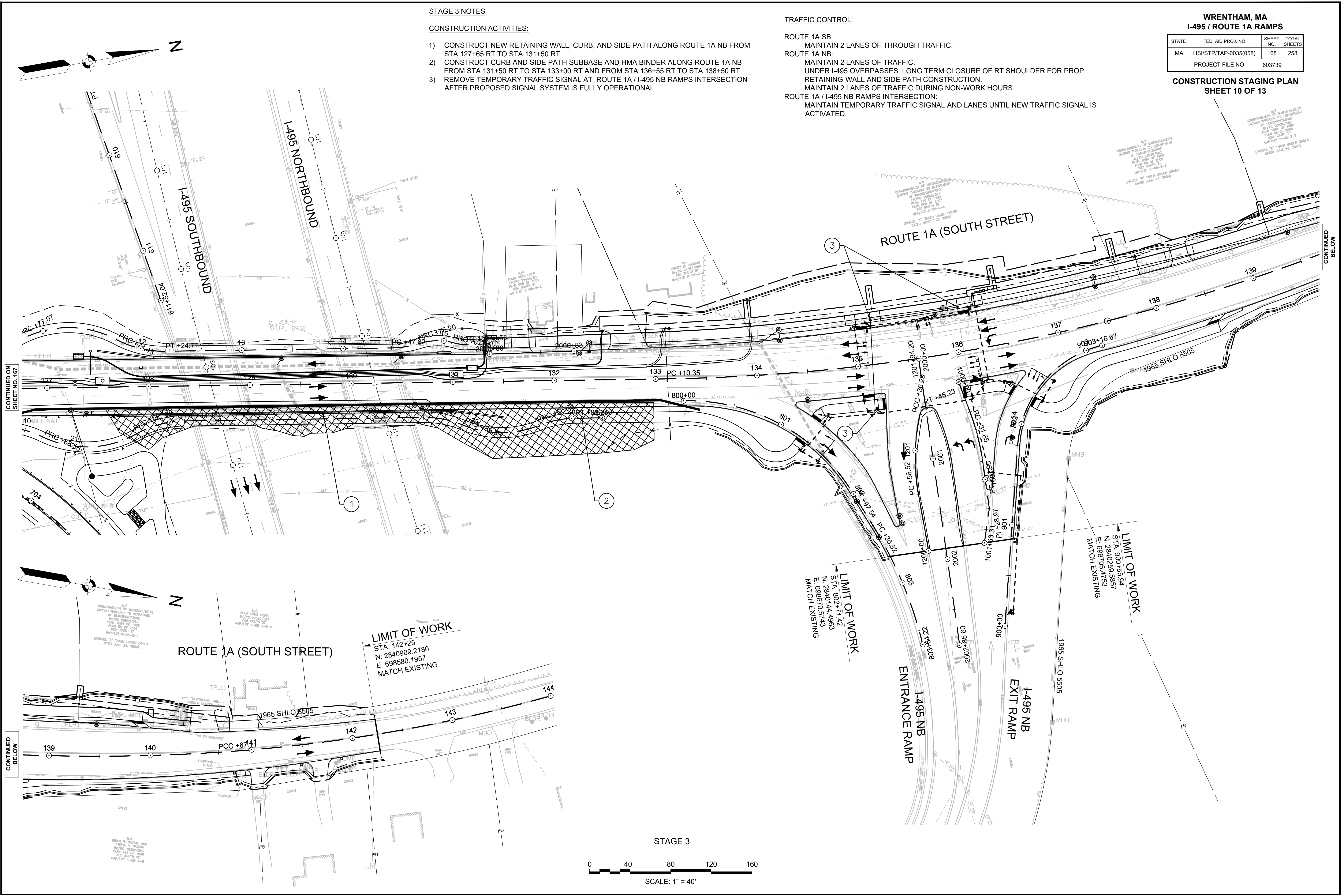
TRAFFIC CONTROL:

- ROUTE 1A SB:
MAINTAIN 2 LANES OF THROUGH TRAFFIC.
- ROUTE 1A NB:
MAINTAIN 2 LANES OF TRAFFIC.
UNDER I-495 OVERPASSES: LONG TERM CLOSURE OF RT SHOULDER FOR PROP
RETAINING WALL AND SIDE PATH CONSTRUCTION.
MAINTAIN 2 LANES OF TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / I-495 NB RAMP INTERSECTION:
MAINTAIN TEMPORARY TRAFFIC SIGNAL AND LANES UNTIL NEW TRAFFIC SIGNAL IS
ACTIVATED.

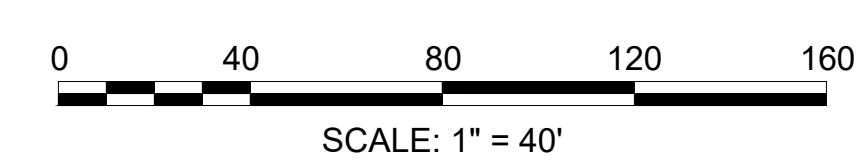
WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	168	258
PROJECT FILE NO.			603739

CONSTRUCTION STAGING PLAN
SHEET 10 OF 13



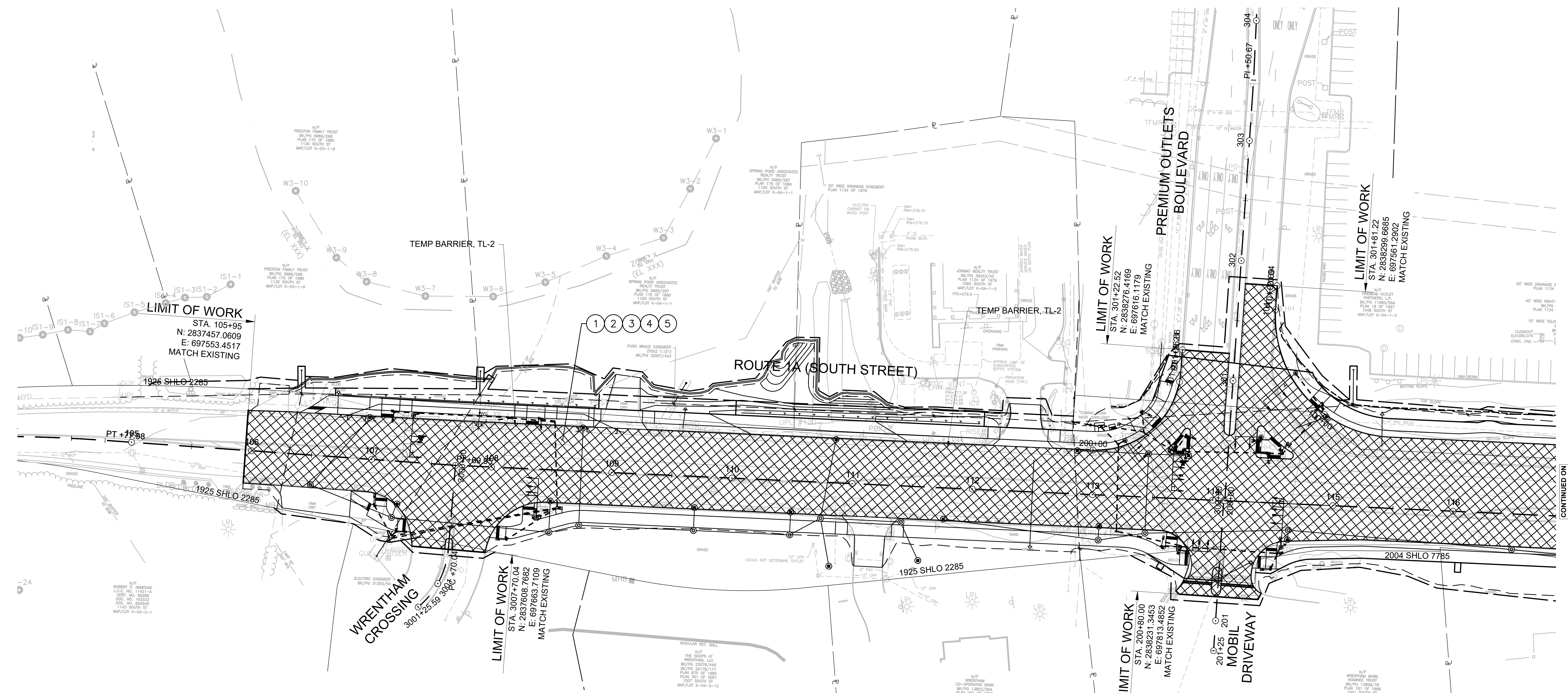
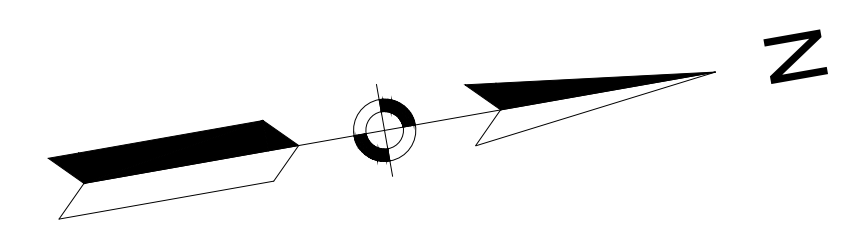
STAGE 3



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	169	258
PROJECT FILE NO.		603739	

**CONSTRUCTION STAGING PLAN
SHEET 11 OF 13**



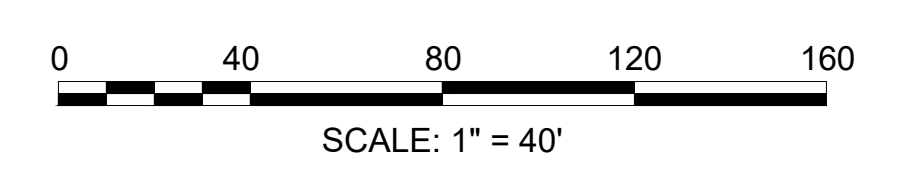
STAGE 4 NOTES

CONSTRUCTION ACTIVITIES:

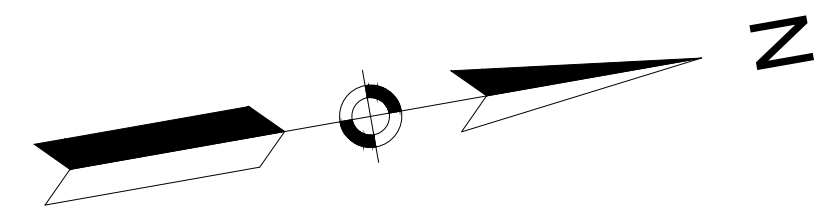
- 1) MILL EXISTING PAVEMENT AND ADJUST STRUCTURES.
- 2) COMPLETE CONSTRUCTION OF SIDE PATHS, DRIVEWAYS, CURB RAMPS, AND LANDSCAPING.
- 3) PLACE HMA SURFACE COURSE.
- 4) INSTALL PERMANENT SIGNS AND PAVEMENT MARKINGS.
- 5) REMOVE EROSION & SEDIMENT CONTROLS.
- 6) REMOVE CONSTRUCTION SIGNS.

TRAFFIC CONTROL:

- ROUTE 1A SB:**
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:**
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / WRENTHAM CROSSING INTERSECTION:**
MAINTAIN NEW TRAFFIC SIGNAL AND LANES.
- ROUTE 1A / PREMIUM OUTLETS BLVD:**
MAINTAIN NEW TRAFFIC SIGNAL AND LANES.



CONTINUED ON SHEET NO. 170



STAGE 4 NOTES

CONSTRUCTION ACTIVITIES:

- 1) MILL EXISTING PAVEMENT AND ADJUST STRUCTURES.
- 2) COMPLETE CONSTRUCTION OF SIDE PATHS, DRIVEWAYS, CURB RAMPS, AND LANDSCAPING.
- 3) PLACE HMA SURFACE COURSE.
- 4) INSTALL PERMANENT SIGNS AND PAVEMENT MARKINGS.
- 5) REMOVE EROSION & SEDIMENT CONTROLS.
- 6) REMOVE CONSTRUCTION SIGNS.

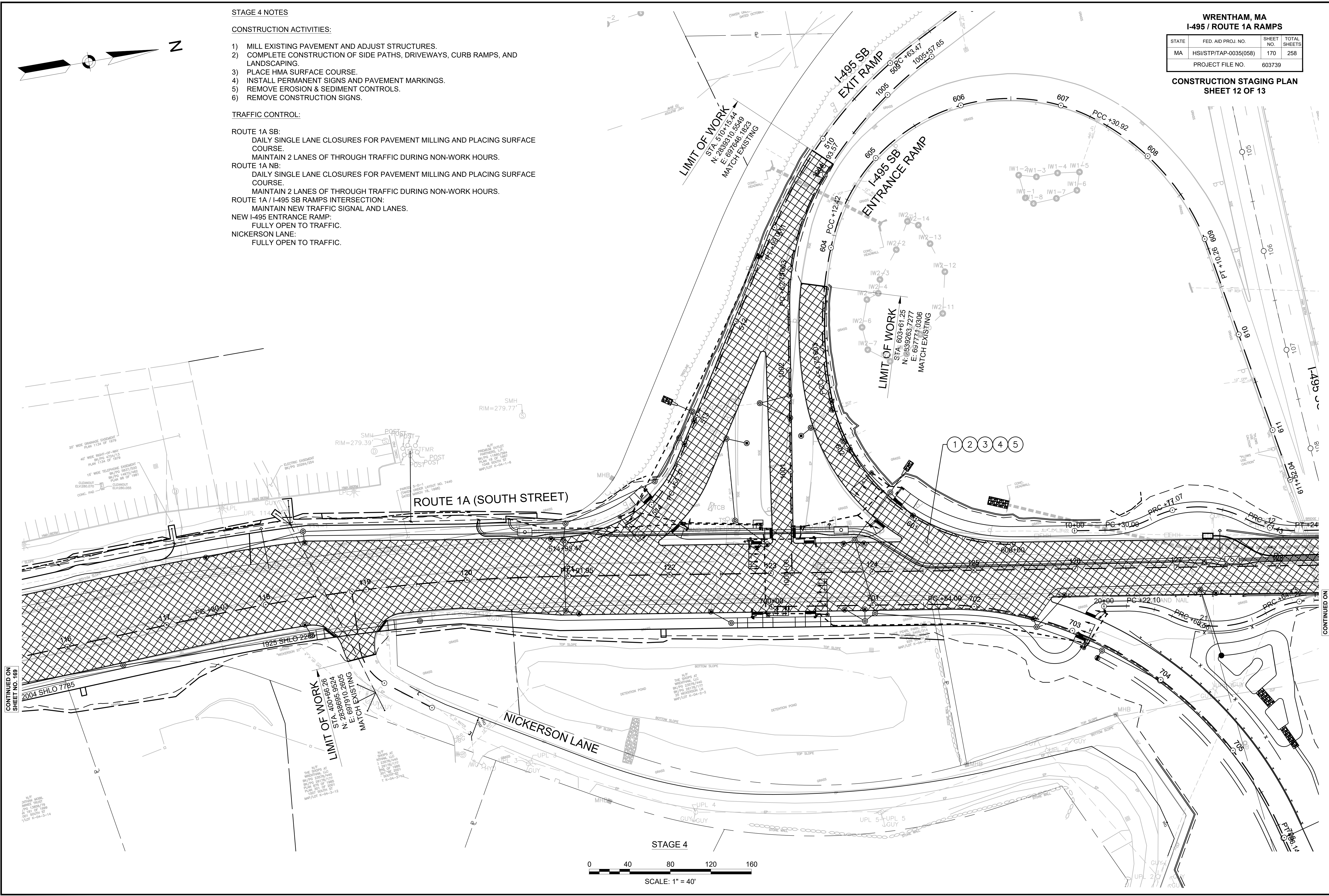
TRAFFIC CONTROL:

- ROUTE 1A SB:**
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:**
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / I-495 SB RAMPS INTERSECTION:**
MAINTAIN NEW TRAFFIC SIGNAL AND LANES.
- NEW I-495 ENTRANCE RAMP:**
FULLY OPEN TO TRAFFIC.
- NICKERSON LANE:**
FULLY OPEN TO TRAFFIC.

**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

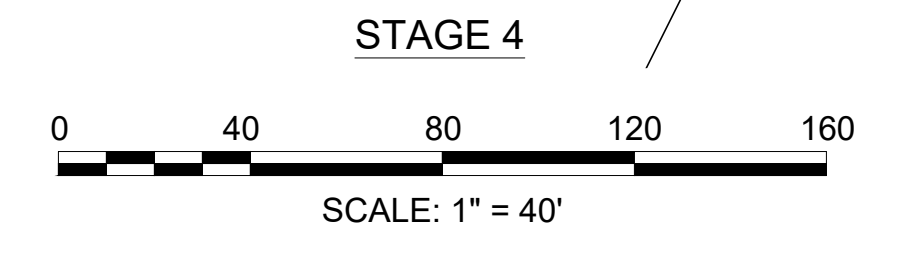
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	170	258
PROJECT FILE NO. 603739			

**CONSTRUCTION STAGING PLAN
SHEET 12 OF 13**



CONTINUED ON SHEET NO. 169

CONTINUED ON SHEET NO. 171



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	171	258
PROJECT FILE NO.			603739

**CONSTRUCTION STAGING PLAN
SHEET 13 OF 13**

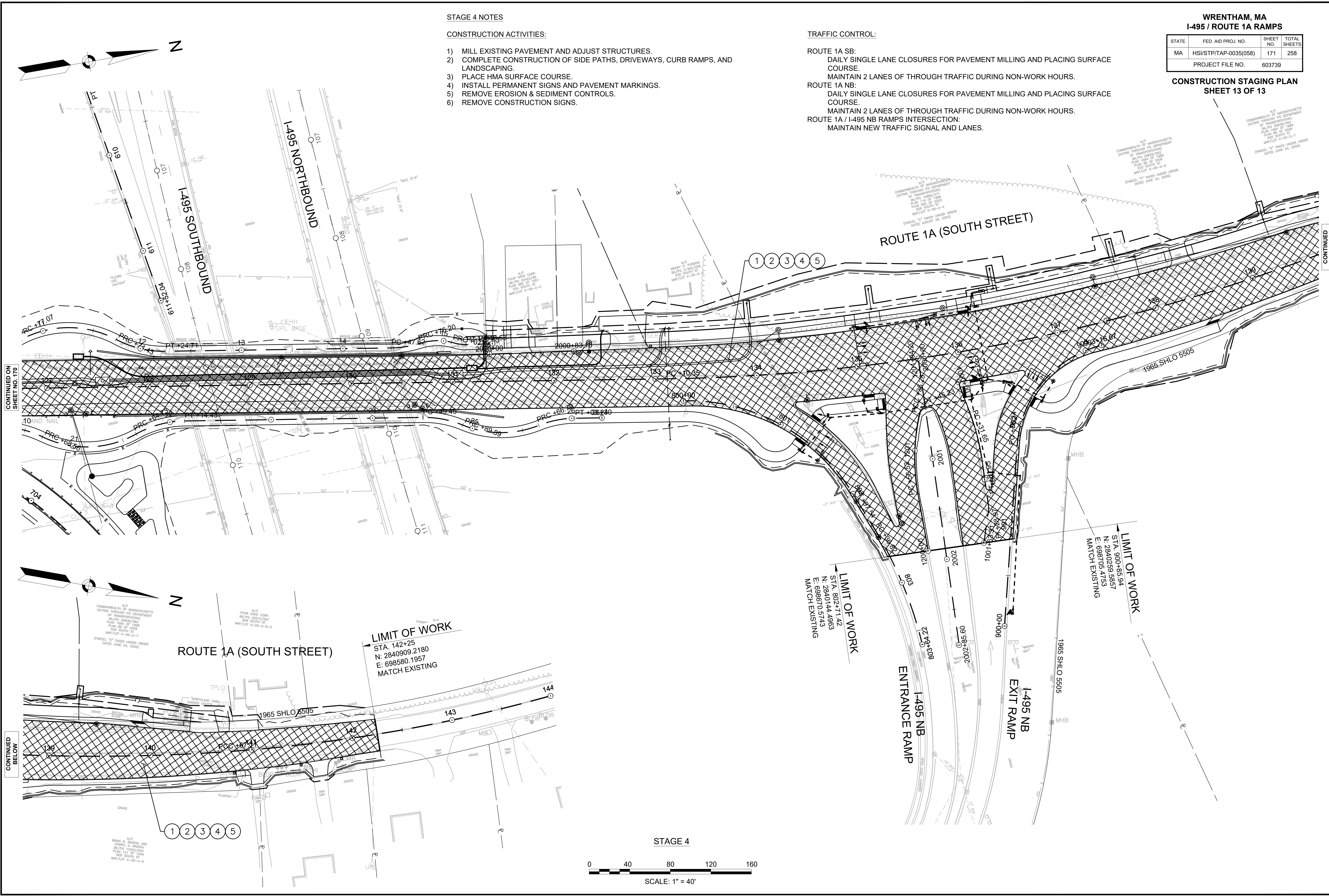
STAGE 4 NOTES

CONSTRUCTION ACTIVITIES:

- 1) MILL EXISTING PAVEMENT AND ADJUST STRUCTURES.
- 2) COMPLETE CONSTRUCTION OF SIDE PATHS, DRIVEWAYS, CURB RAMPS, AND LANDSCAPING.
- 3) PLACE HMA SURFACE COURSE.
- 4) INSTALL PERMANENT SIGNS AND PAVEMENT MARKINGS.
- 5) REMOVE EROSION & SEDIMENT CONTROLS.
- 6) REMOVE CONSTRUCTION SIGNS.

TRAFFIC CONTROL:

- ROUTE 1A SB:
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A NB:
DAILY SINGLE LANE CLOSURES FOR PAVEMENT MILLING AND PLACING SURFACE COURSE.
MAINTAIN 2 LANES OF THROUGH TRAFFIC DURING NON-WORK HOURS.
- ROUTE 1A / I-495 NB RAMP INTERSECTION:
MAINTAIN NEW TRAFFIC SIGNAL AND LANES.

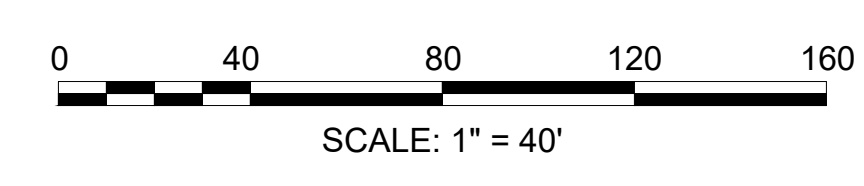


CONTINUED ON
SHEET NO. 170

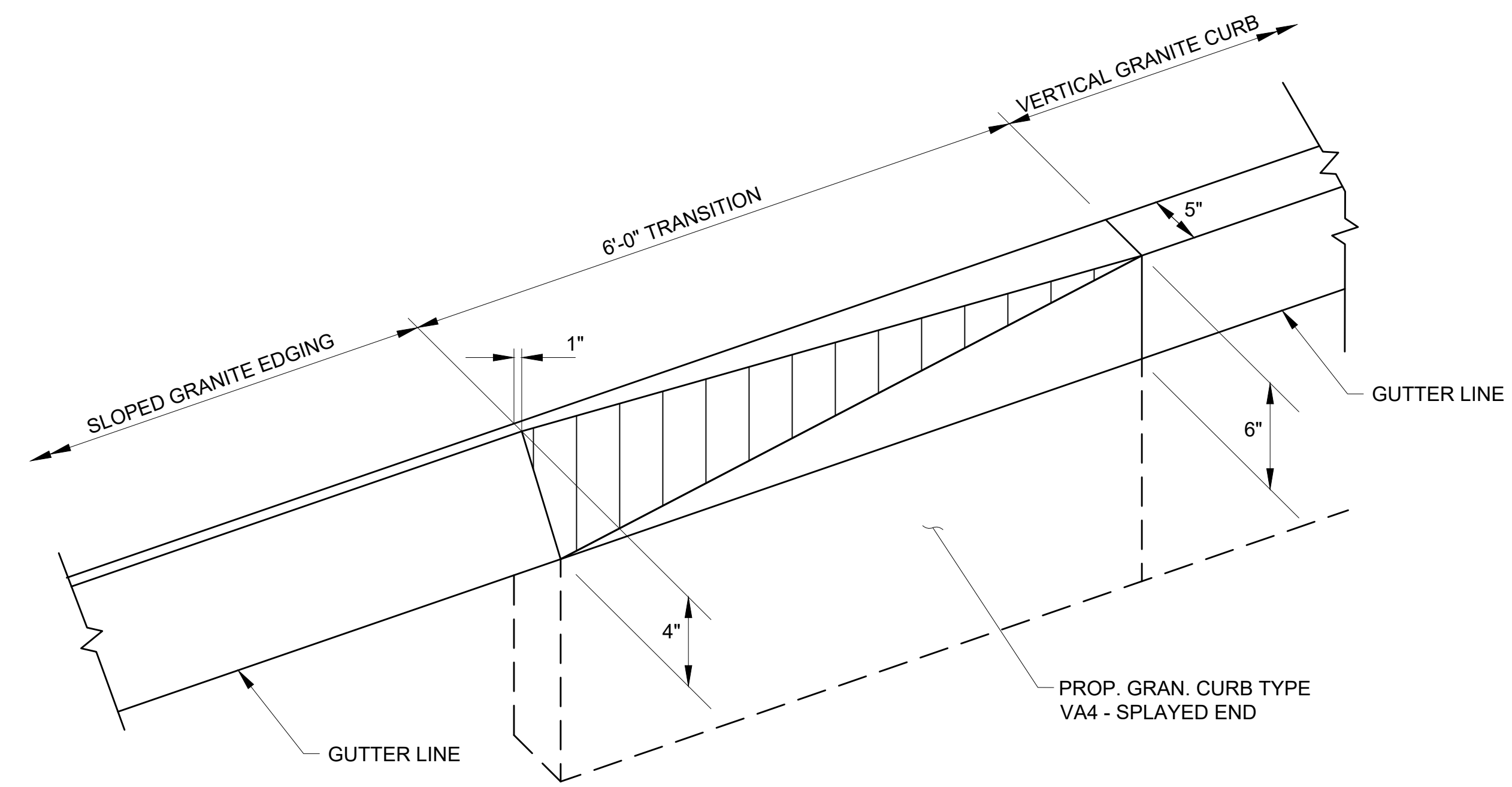
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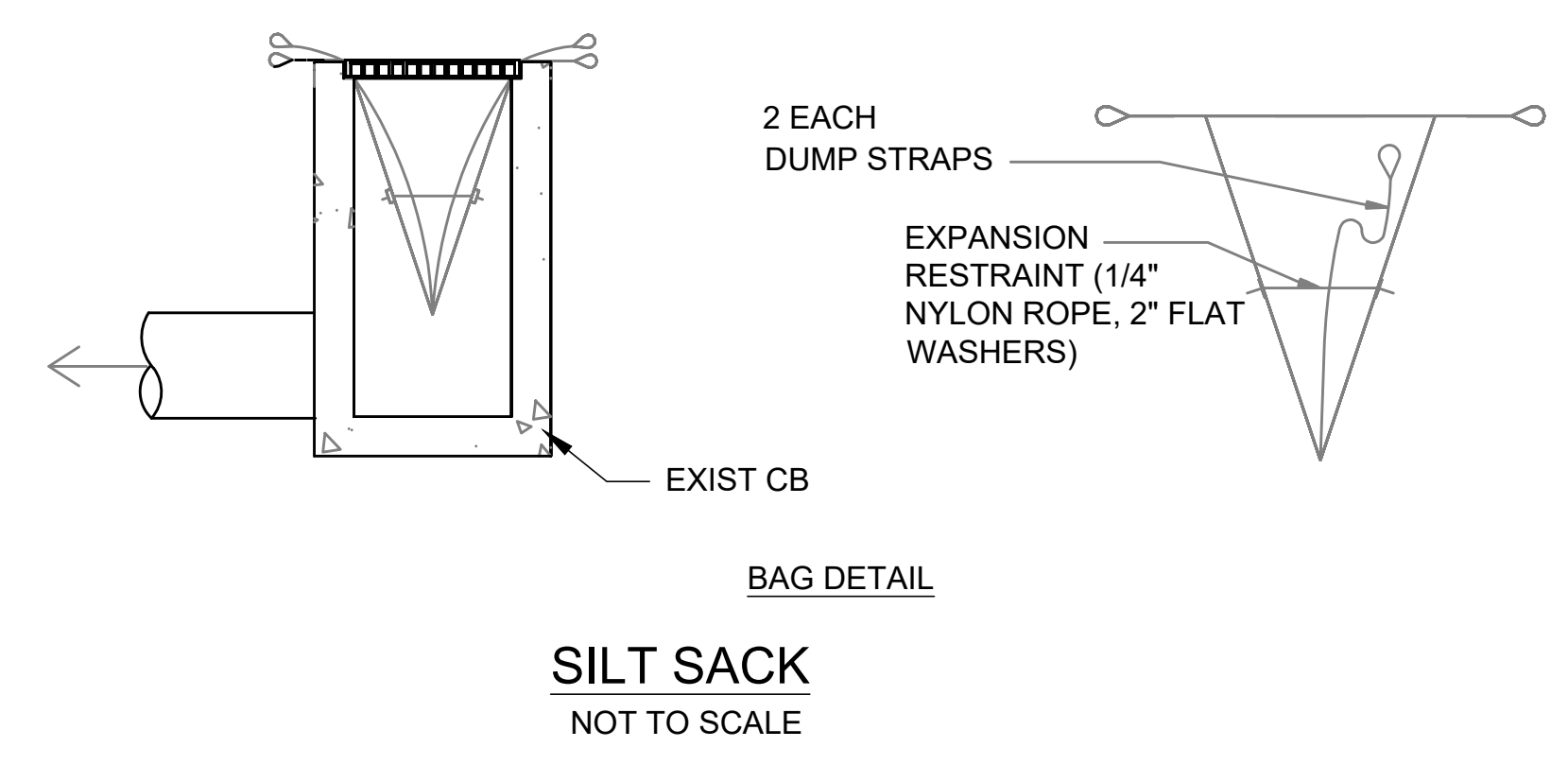
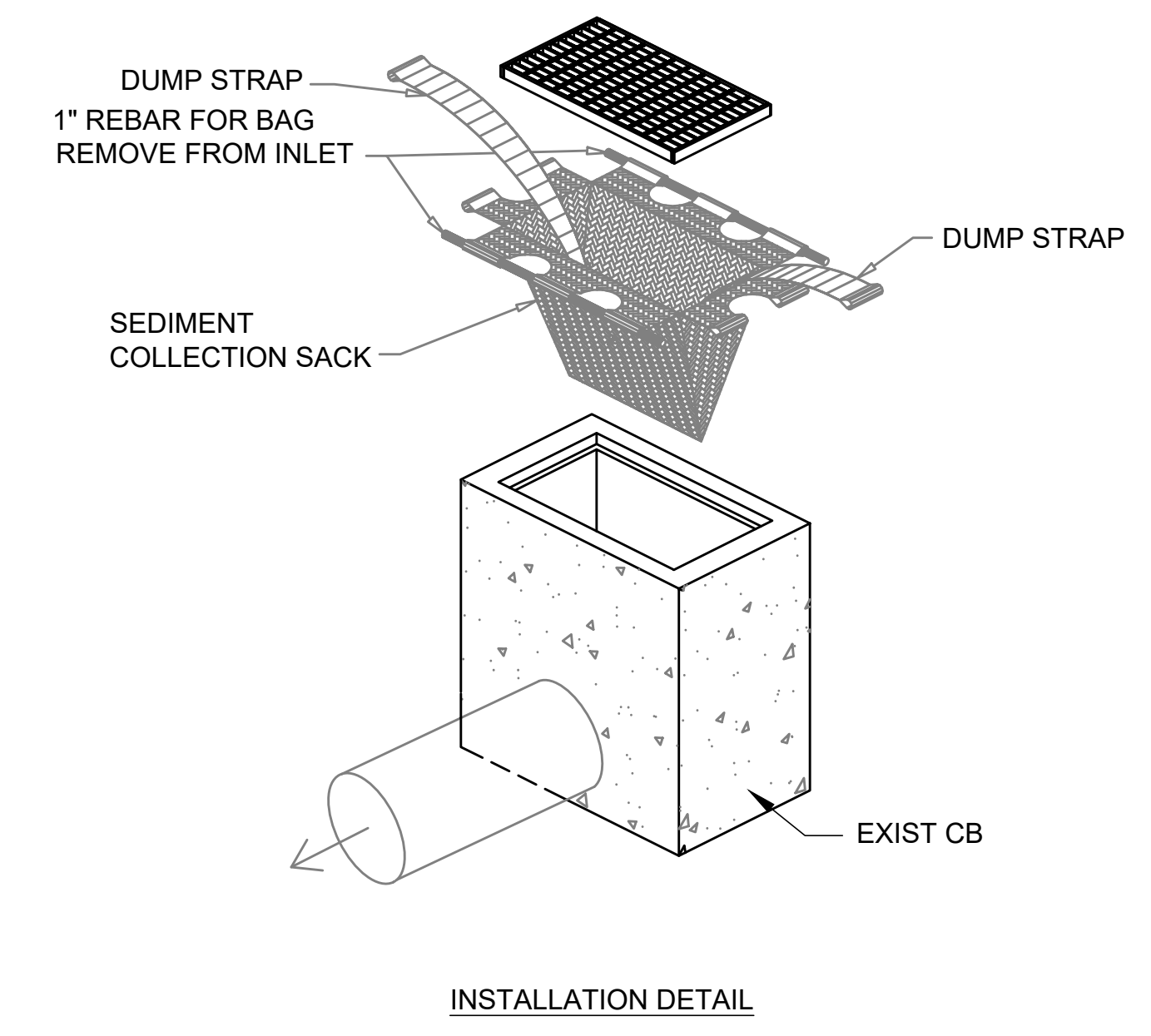
STAGE 4



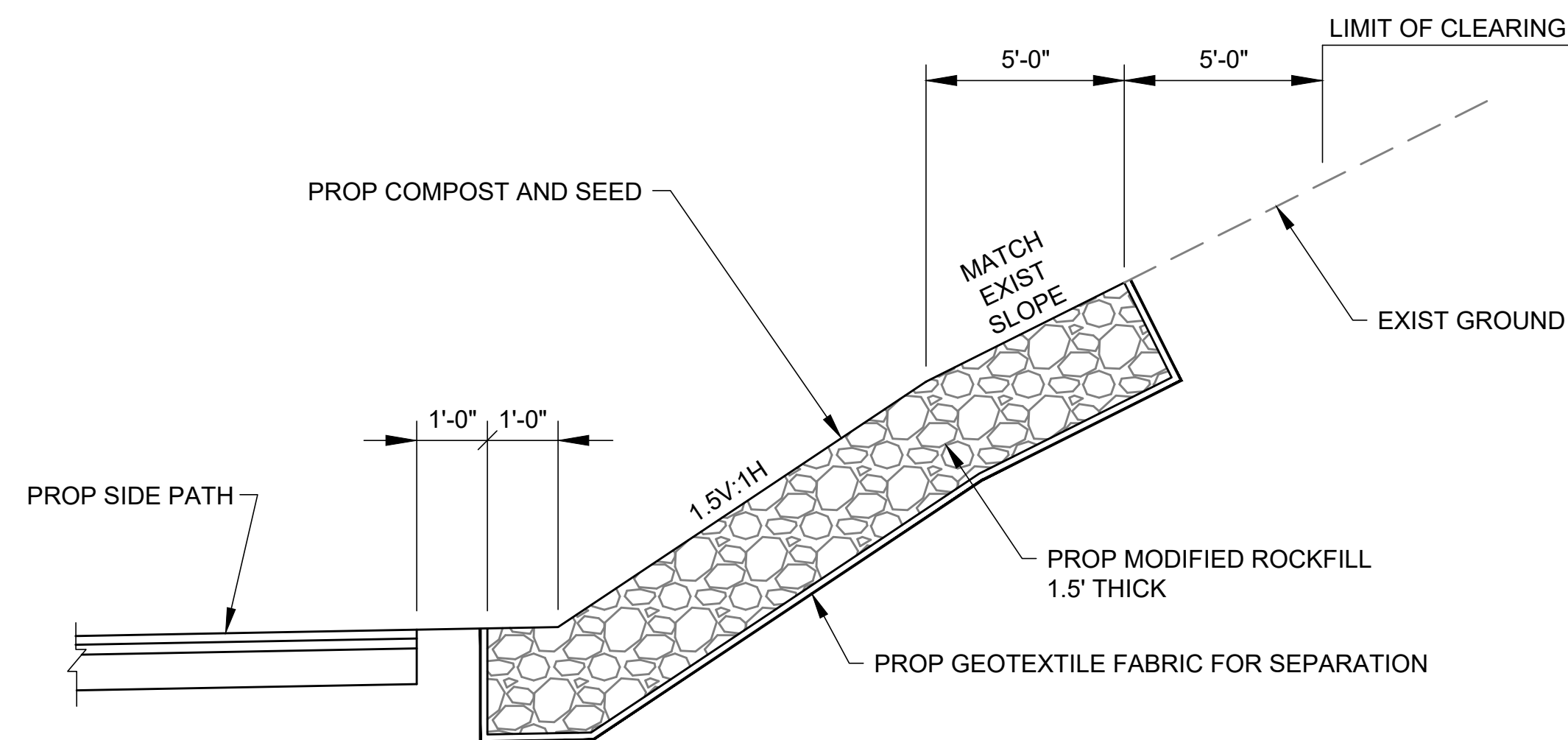
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	172	258
PROJECT FILE NO.		603739	



GRANITE CURB TYPE VA4 - SPLAYED END
NOT TO SCALE



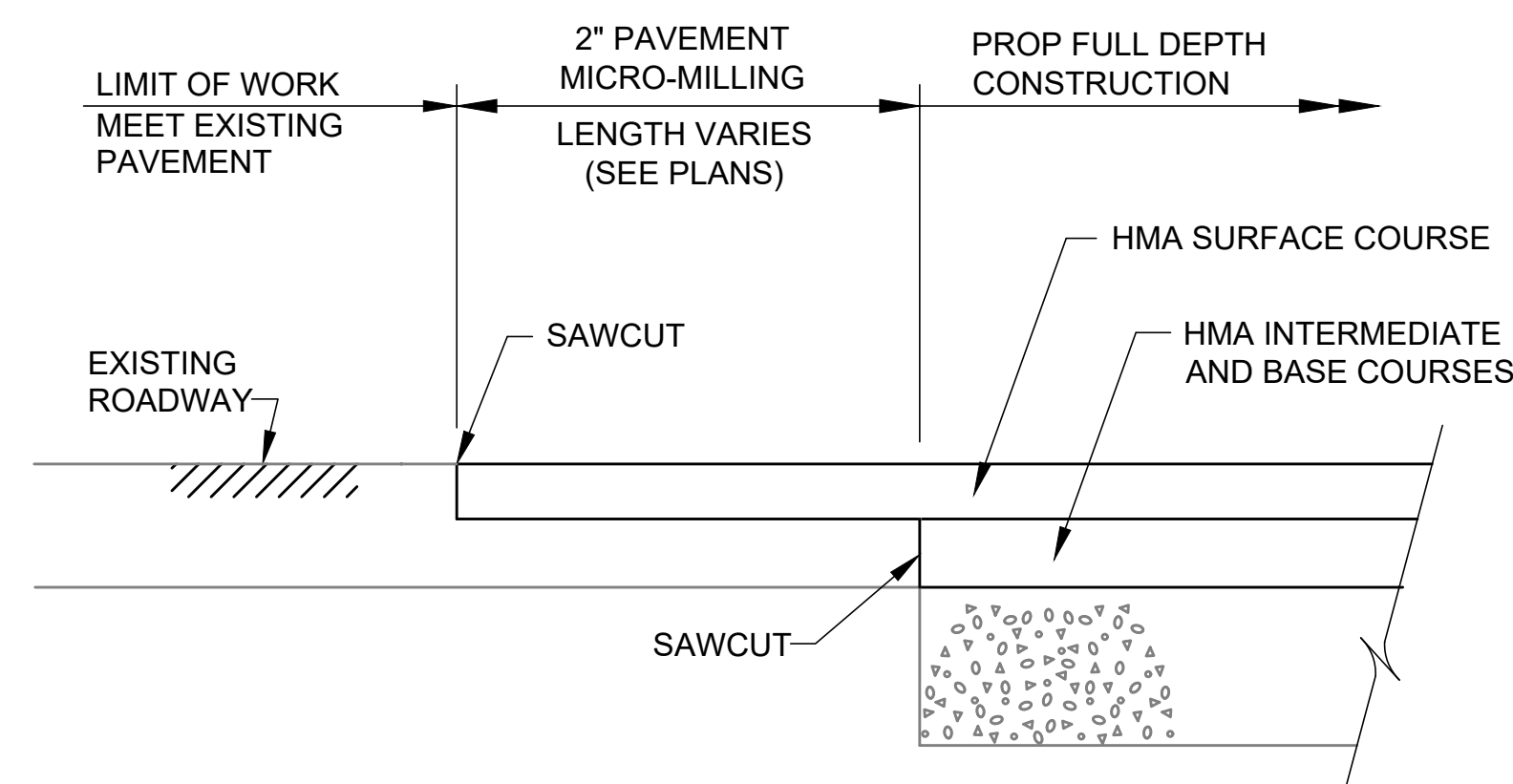
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	173	258
PROJECT FILE NO.		603739	



ROUTE 1A STA 131+50 RT TO STA 132+75 RT

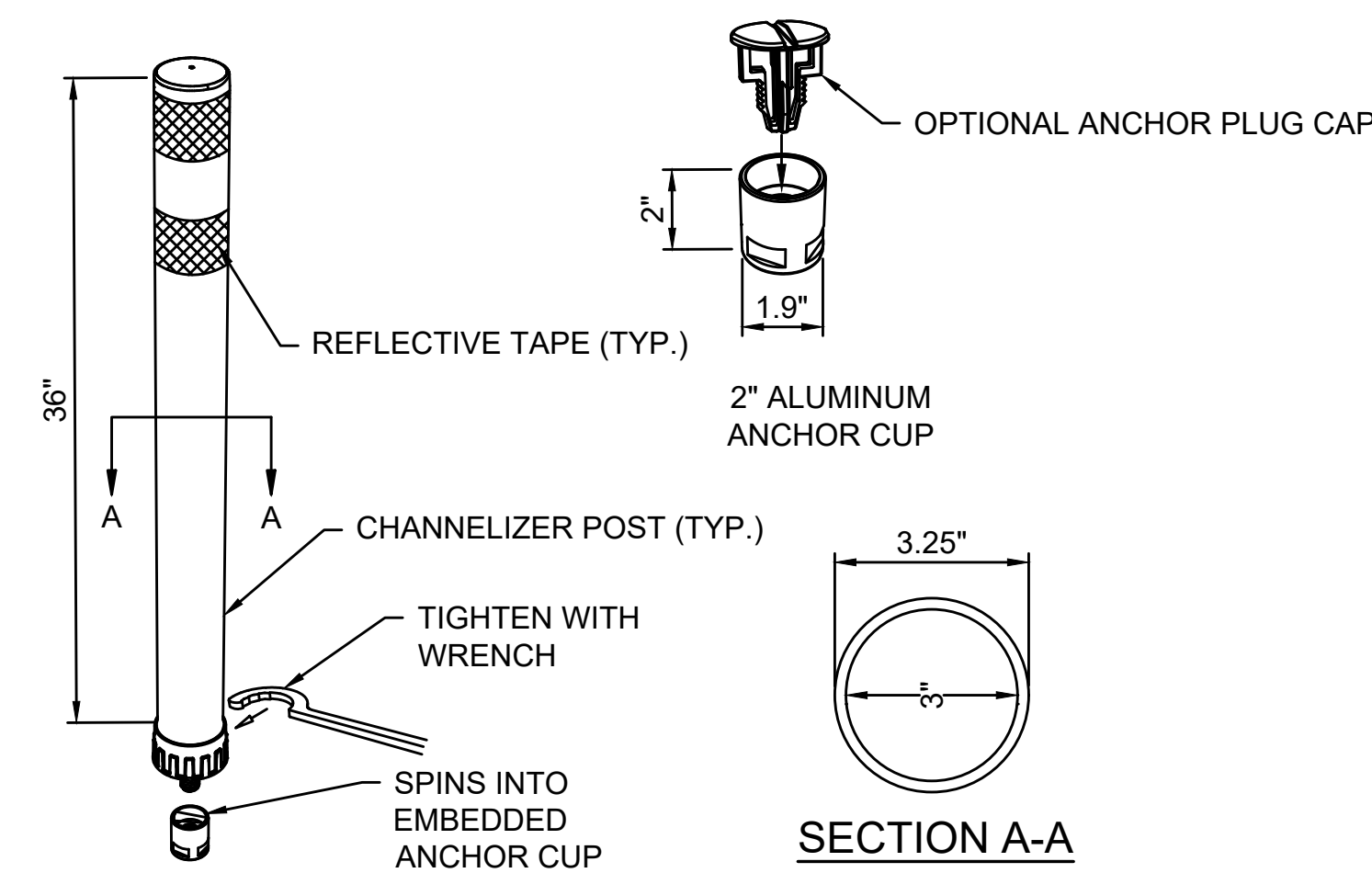
MODIFIED ROCKFILL SLOPE

NOT TO SCALE



PAVEMENT TRANSITION

NOT TO SCALE

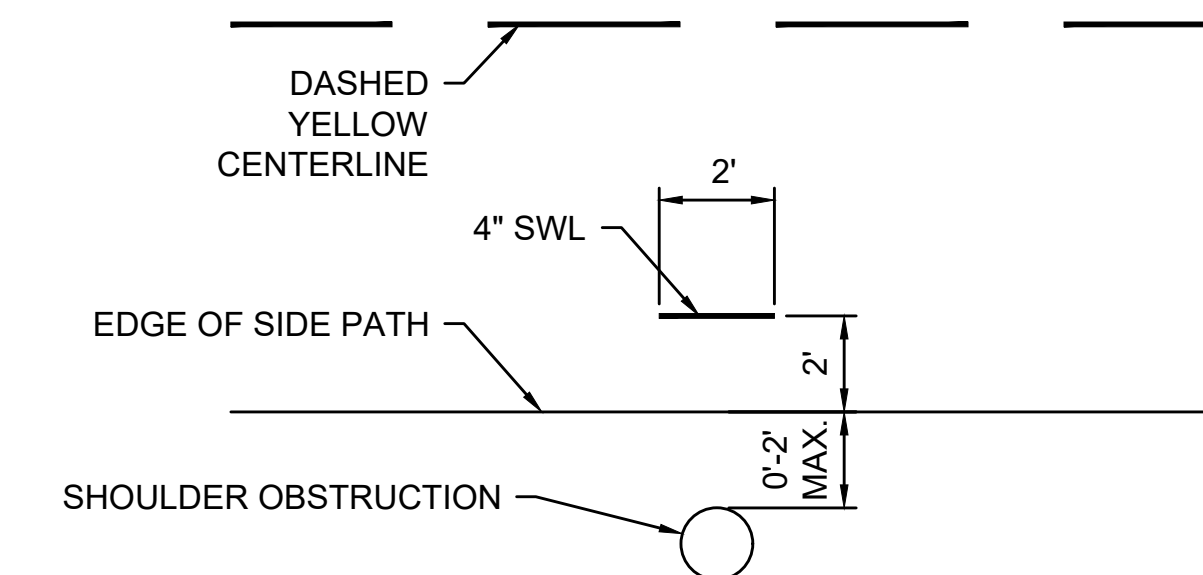


FLEXPOSTS NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
3. COLOR OF POST SHALL MATCH COLOR OF APPLICABLE PAVEMENT MARKING LINE PER MASSDOT SPECIFICATIONS.
4. INSTALLATION WILL BE LOCATED IN THE CENTER OF THE SIDEPATH, 1' BACK FROM THE EDGE OF THE BIKE RAMP.

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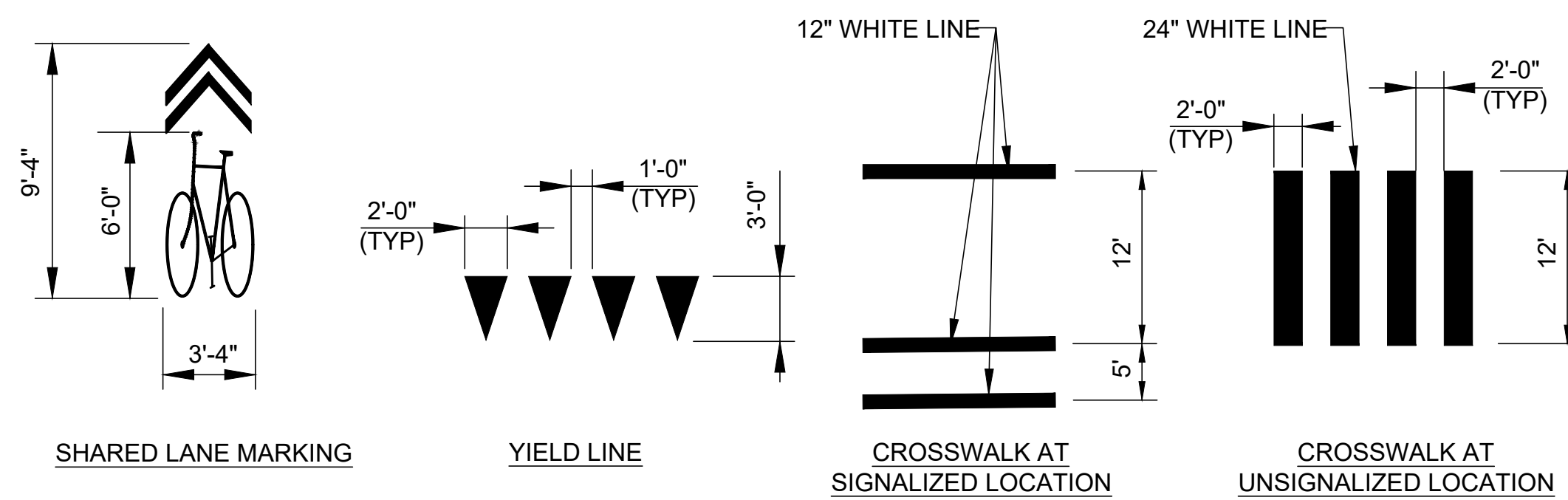
NOT TO SCALE



NOTE: THE SIDE PATH SHOULDER OBSTRUCTION MARKING SHALL BE APPLIED AT ANY OBSTRUCTION WHERE THERE IS LESS THAN 2' FROM EDGE OF SIDE PATH TO FACE OF THE OBSTRUCTION.

**SIDE PATH SHOULDER OBSTRUCTION
PAVEMENT MARKING DETAIL**

NOT TO SCALE



PAVEMENT MARKING DETAILS

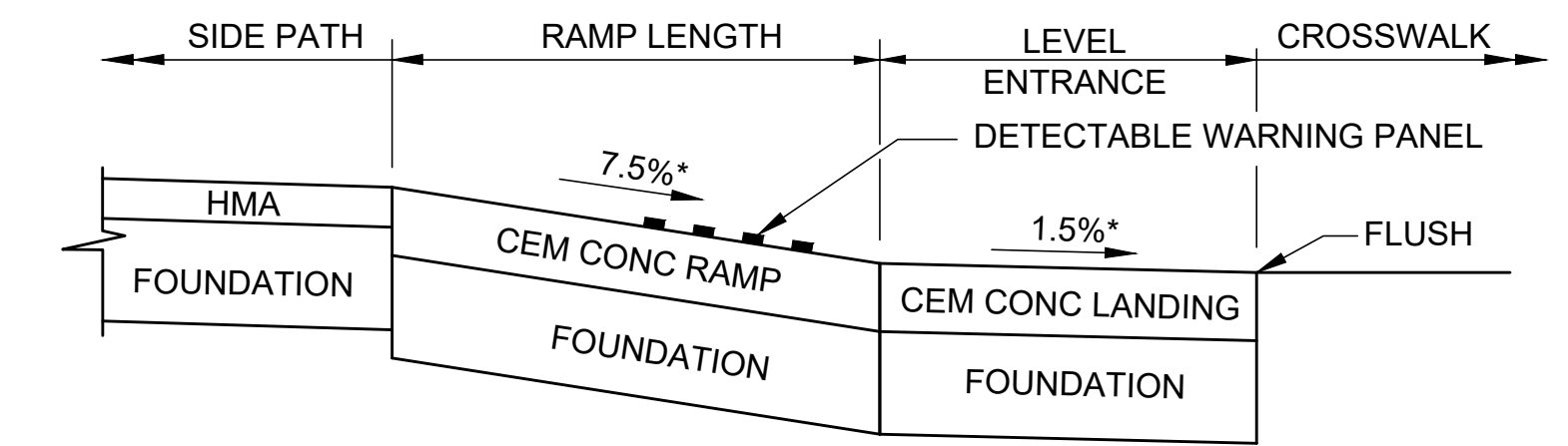
NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	174	258
PROJECT FILE NO.		603739	

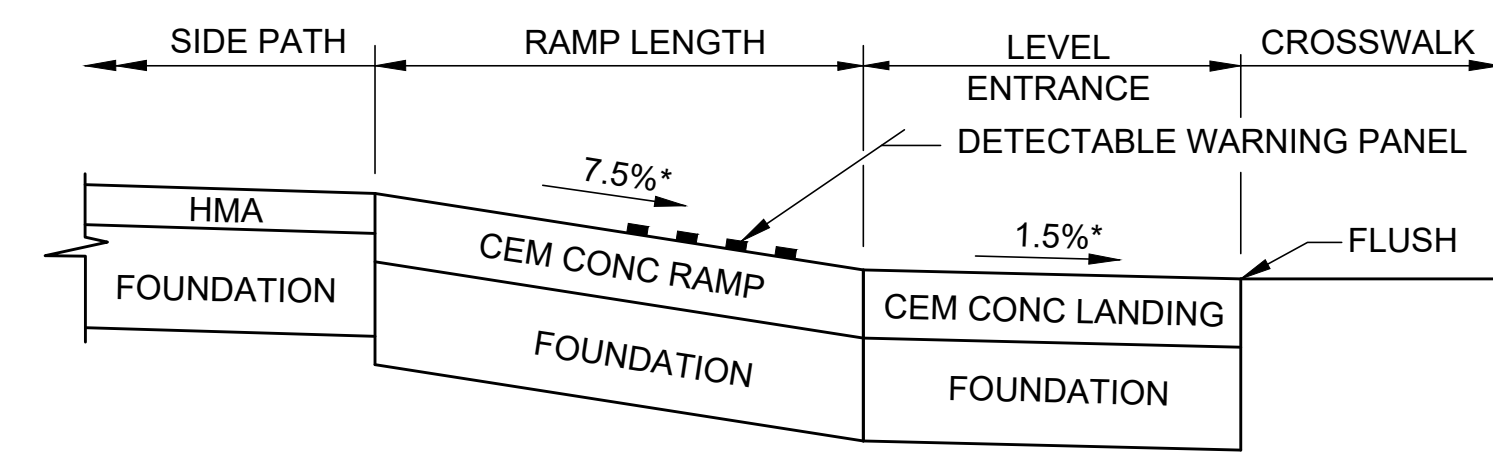
PEDESTRIAN CURB RAMP DETAILS
SHEET 1 OF 3

PEDESTRIAN CURB RAMP NOTES

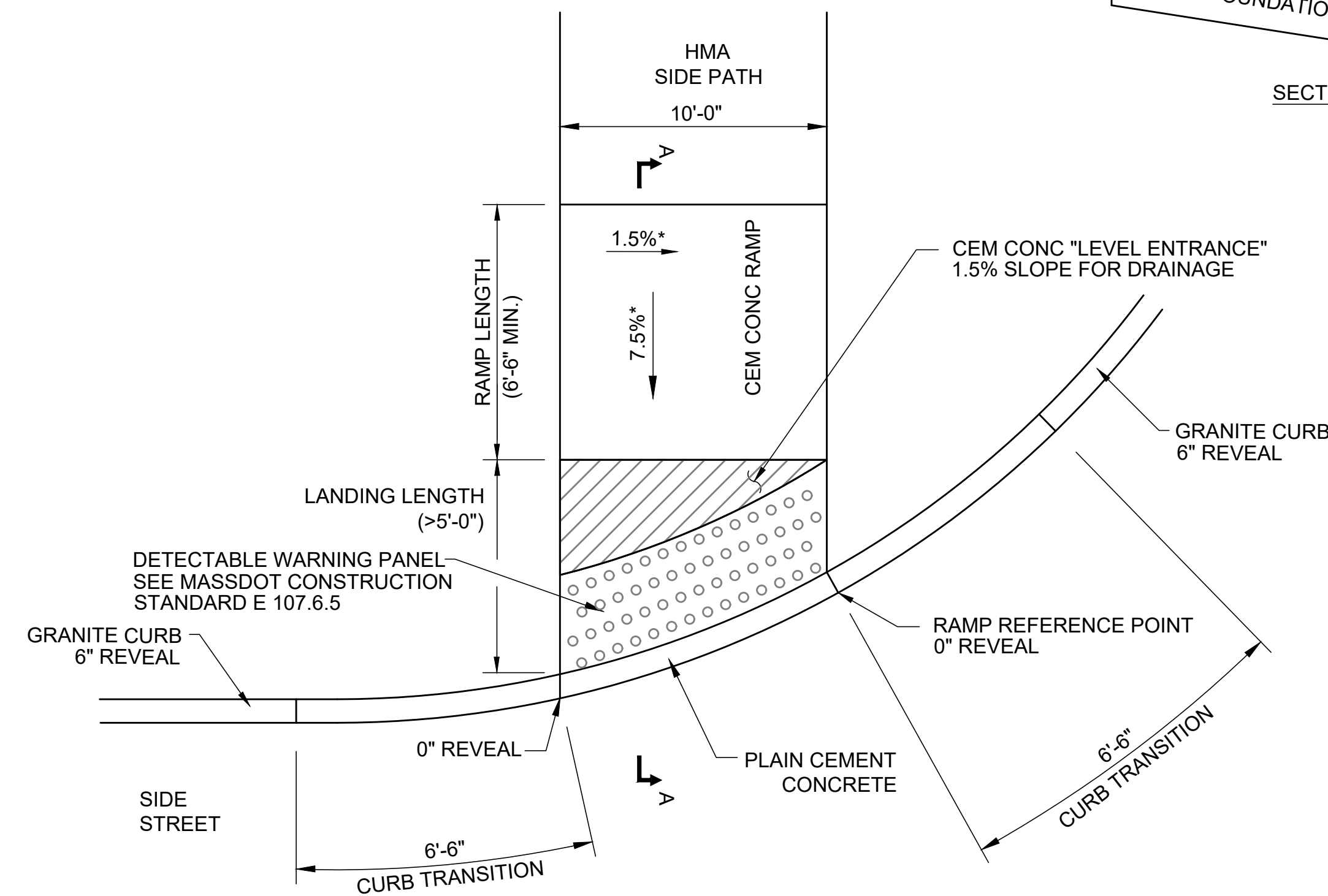
- SIDEWALK CROSS SLOPES WILL BE 1.5% (±0.5%), 1.5% PREFERRED. IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 2.0%.
- FIXED OBJECTS (UTILITY POLES, SIGNS, POSTS, MAILBOXES, ETC.) SHALL NOT BE LOCATED IN LEVEL LANDINGS, LEVEL ENTRANCES, AND RAMPS.
- THE PEDESTRIAN CURB RAMP SLOPES AND SIDE SLOPES (TRANSITIONS) SHALL BE 7.5% (±0.5%), 7.5% PREFERRED. THESE SLOPES MAY BE FLATTER WHEN WARRANTED BY SURROUNDING CONDITIONS.
- THE MAXIMUM SLOPE OF A RAMP SHALL NOT EXCEED 8.3%, EXCEPT WHEN THE RAMP LENGTH IS LIMITED TO 15 FEET. THE MAXIMUM LENGTH OF A RAMP SHALL BE 15 FEET, AT LOCATIONS WHERE THE ROADWAY PROFILE EXCEEDS 4%.
- IN NO CASE WHERE A STOP LINE IS WARRANTED SHALL A RAMP BE PLACED ON THE TRAFFIC APPROACH SIDE OF THE STOP LINE.
- IN NO CASE SHALL IS ANY PART OF THE PEDESTRIAN CURB RAMP, EXCLUDING CURB TRANSITIONS, TO BE LOCATED OUTSIDE THE CROSSWALK.
- THE ENTRANCE OF A PEDESTRIAN CURB RAMP SHALL BE FLUSH WITH THE ROADWAY.
- TESTING SURFACE: WHEN TESTING WITH A STRAIGHT EDGE PLACED PARALLEL TO THE LINE OF THE SLOPE THERE SHALL BE NO DEVIATION FROM A TRUE SURFACE IN EXCESS OF 1/4".
- ALL PEDESTRIAN CURB RAMP CONSTRUCTION SHALL CONFORM TO MASSDOT ENGINEERING DIRECTIVE E-12-005.
- DETECTABLE WARNING PANELS SHALL BE SET BACK FROM THE EDGE OF ROADWAY A DISTANCE OF 6".
- INSTALL CURVED DETECTABLE WARNING PANELS FOR PEDESTRIAN CURB RAMPS WHERE THE EDGE OF ROAD CORNER RADIUS IS LESS THAN 15.0'. STRAIGHT PANELS SHALL BE USED WHERE THE RADIUS IS 15' OR LARGER.
- LEVEL LANDING AND LEVEL ENTRANCE SLOPES SHALL BE 1.5% (±0.5%), 1.5% PREFERRED. IN NO CASE SHALL THE SLOPE EXCEED 2.0% IN ANY DIRECTION.
- DETECTABLE WARNING PANELS SHALL CONFORM TO THE DIMENSIONS SHOWN IN MASSDOT CONSTRUCTION STANDARD E 107.6.5. THE PANELS SHALL BE CONSIDERED SUBSIDIARY TO ITEM 701.2 - CEMENT CONCRETE PEDESTRIAN CURB RAMP.
- IN LOCATIONS WHERE AN EXISTING MANHOLE COVER, HANDHOLE COVER, OR OTHER SURFACE TYPE STRUCTURE THAT CANNOT BE REMOVED AND RESET IS WITHIN THE PROPOSED OR EXISTING PEDESTRIAN CURB RAMP, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED TO BE FLUSH WITH THE RAMP SURFACE.



SECTION B-B



SECTION A-A

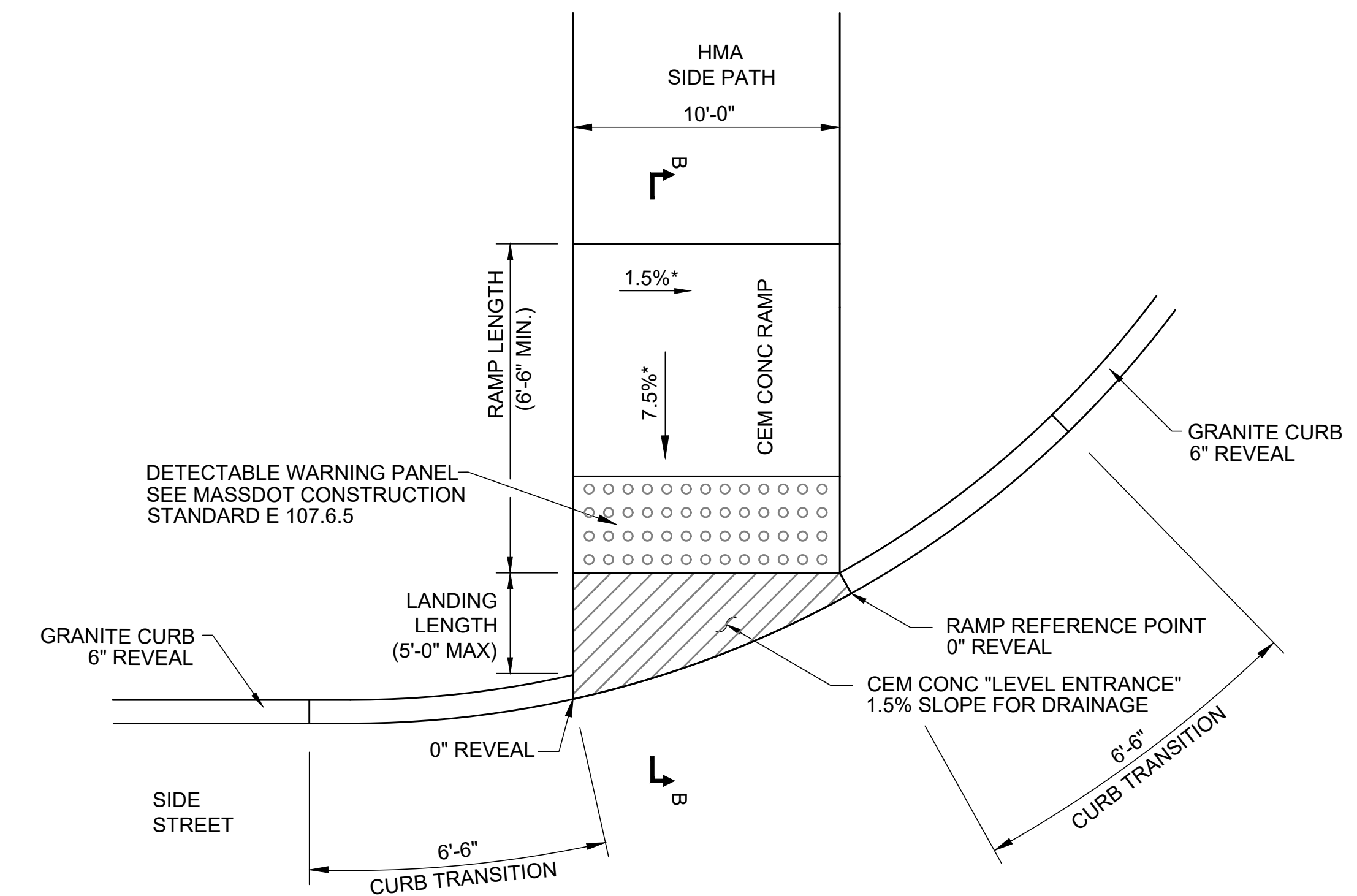


* TOLERANCE FOR CONSTRUCTION = +/- 0.5%

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL (TYPE C)

NOT TO SCALE

PCR #	STREET/BASELINE	RAMP REF. POINT		GUTTER SLOPE (DOWNGRADE)	RAMP LENGTH	LANDING LENGTH
		STATION	OFFSET			
13	ROUTE 1A	118+55.88	32.50' RT	0.85%	7.67'	11.03'
14	ROUTE 1A	119+15.46	32.50' RT	0.85%	6.50'	9.92'



* TOLERANCE FOR CONSTRUCTION = +/- 0.5%

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL (TYPE B)

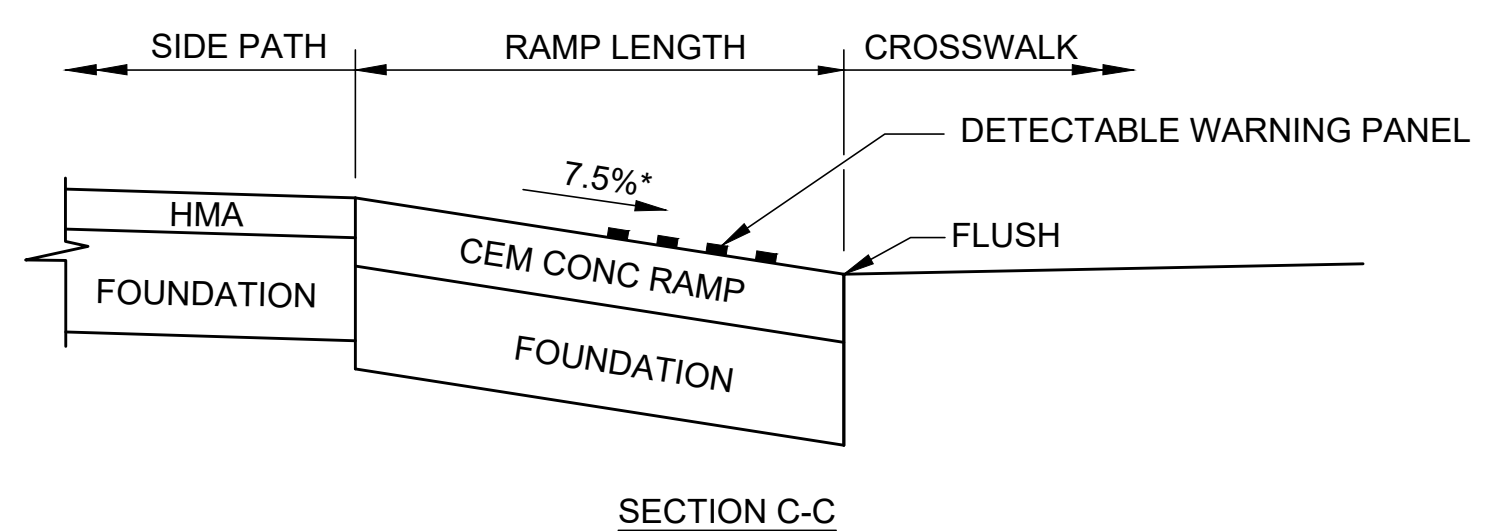
NOT TO SCALE

PCR #	STREET/BASELINE	RAMP REF. POINT		GUTTER SLOPE (DOWNGRADE)	RAMP LENGTH	LANDING LENGTH
		STATION	OFFSET			
3	ROUTE 1A	107+10.43	29.18' RT	0.65%	6.50'	3.30'
4	ROUTE 1A	107+34.80	52.79' RT	0.65%	6.50'	4.10'
5	ROUTE 1A	108+03.19	53.64' RT	0.65%	7.67'	5.00'
6	ROUTE 1A	108+32.13	29.39' RT	0.65%	6.50'	3.08'
9	ROUTE 1A	113+67.87	29.78' RT	0.84%	7.67'	3.66'
10	ROUTE 1A	113+84.82	51.92' RT	0.84%	6.50'	0.80'
11	ROUTE 1A	114+36.05	51.75' LT	0.84%	6.50'	4.25'
12	ROUTE 1A	114+49.77	34.97' RT	0.84%	7.00'	4.66'

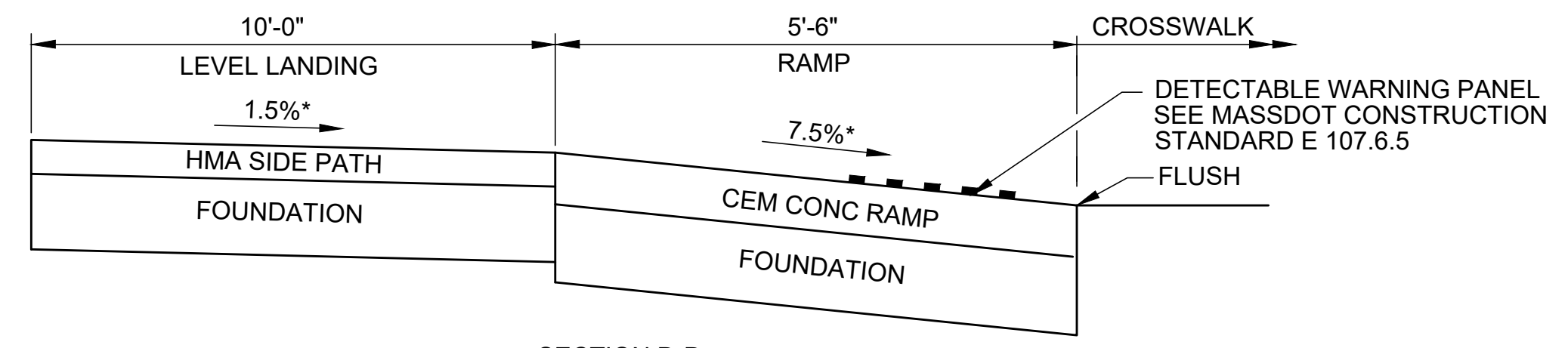
① INSTALL GRANITE CURB WITH 3" REVEAL BETWEEN PCR #11 AND PCR #12 (SEE MASSDOT CONSTRUCTION STANDARD E 107.6.3)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	175	258
PROJECT FILE NO.		603739	

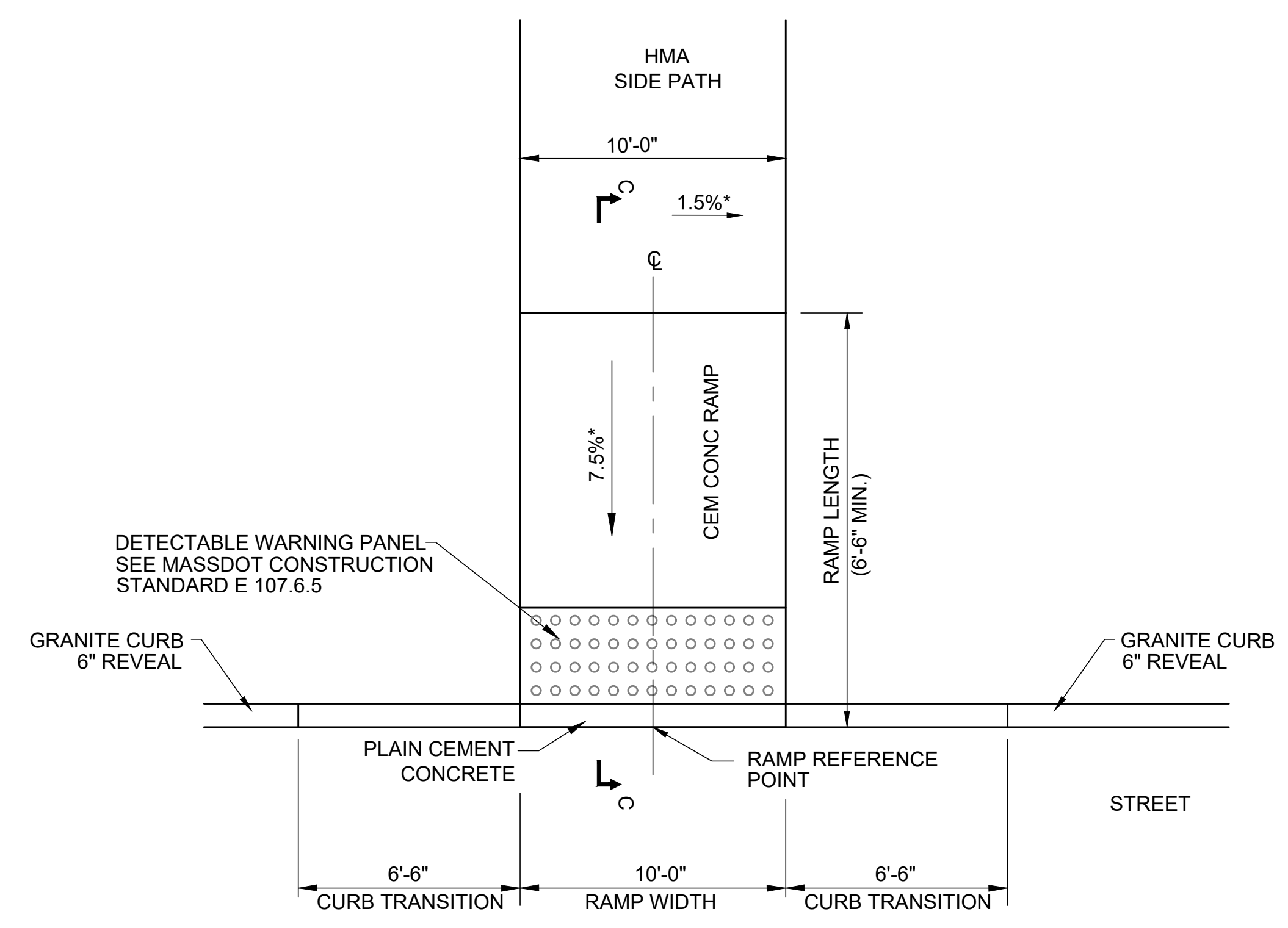
PEDESTRIAN CURB RAMP DETAILS
SHEET 2 OF 3



SECTION C-C



SECTION D-D

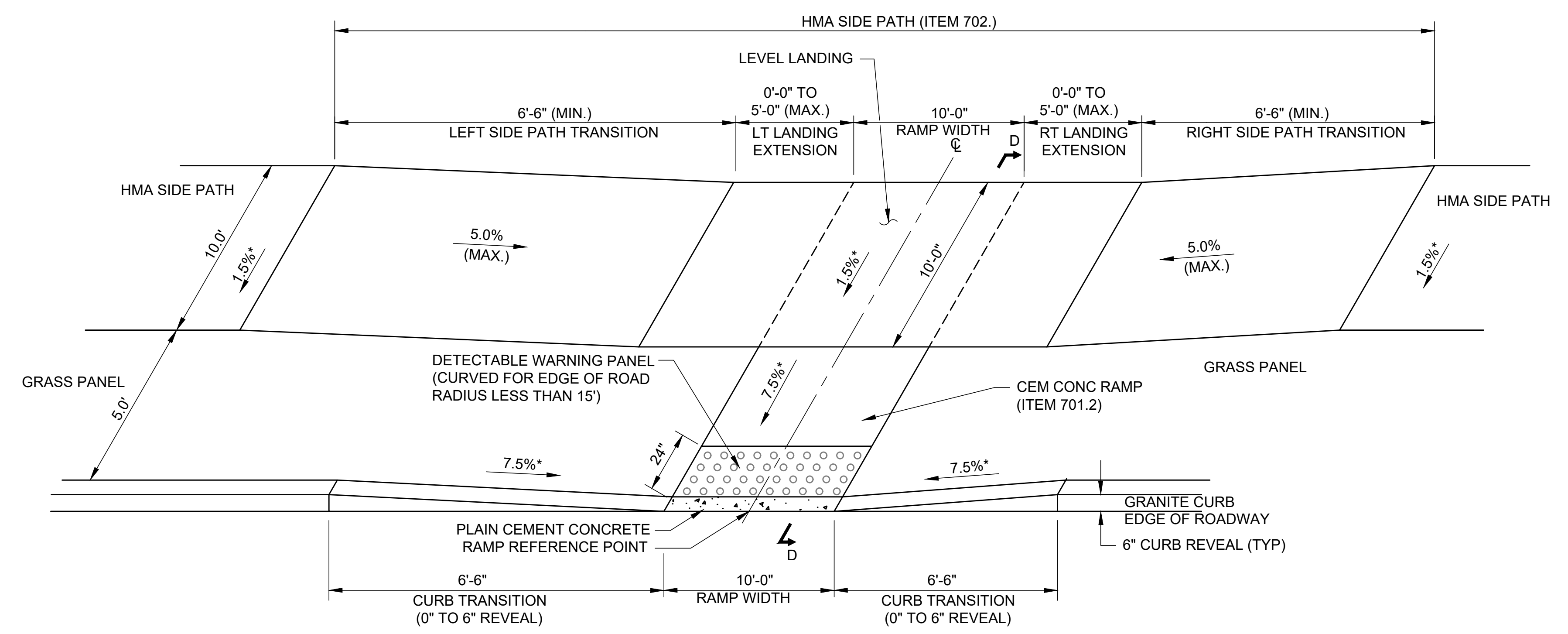


* TOLERANCE FOR CONSTRUCTION = +/- 0.5%

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL (TYPE A)
NOT TO SCALE

PCR #	STREET/BASELINE	RAMP REF. POINT		GUTTER SLOPE (DOWNGRADE)	RAMP LENGTH
		STATION	OFFSET		
16	I-495 SB EXIT RAMP RT TURN	514+00.63	32.03' LT	1.73%	7.50'
21	I-495 SB ENTRANCE RAMP A	601+24.30	23.00' LT	2.99%	7.50'
25	I-495 SB NEW ENTRANCE RAMP	703+10.00	2.00' RT	2.50%	7.50'
26	I-495 SB NEW ENTRANCE RAMP	703+10.40	20.00' LT	2.50%	7.50'
29	I-495 NB ENTRANCE RAMP	801+24.83	2.24' RT	1.46%	7.50'
30	I-495 NB ENTRANCE RAMP	801+24.61	21.22' LT	1.46%	7.50'
35	I-495 NB EXIT RAMP RT TURN	902+25.45	19.52' LT	1.88%	7.50'
36	I-495 NB EXIT RAMP RT TURN	902+25.32	1.62' RT	2.24%	7.50'

PEDESTRIAN CURB RAMP NOTES
SEE SHEET NO. 174 FOR PEDESTRIAN CURB RAMP NOTES.



* TOLERANCE FOR CONSTRUCTION = +/- 0.5%

PERPENDICULAR PEDESTRIAN CURB RAMP ALONG SIDE PATH WITH GRASS PANEL
NOT TO SCALE

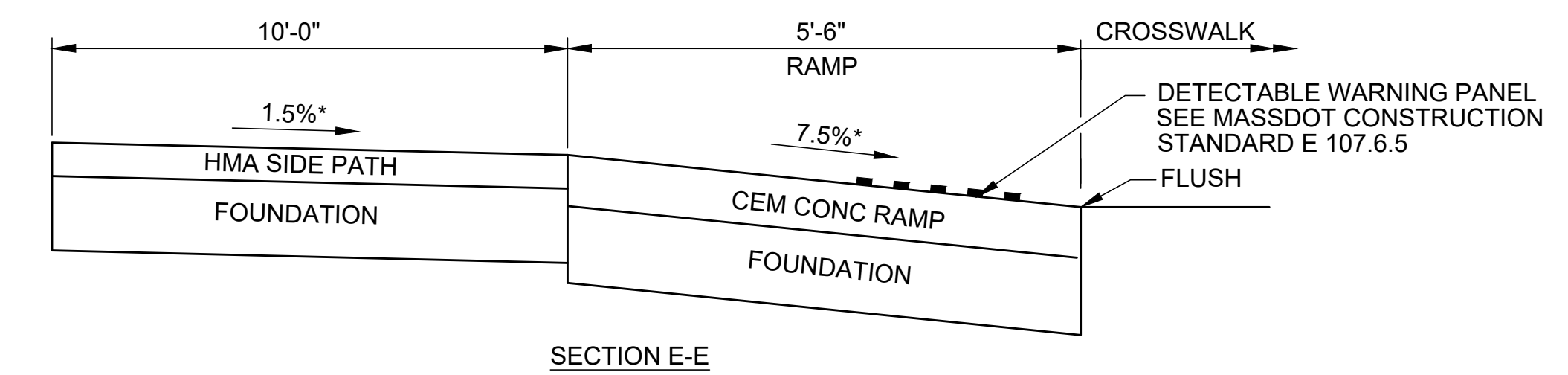
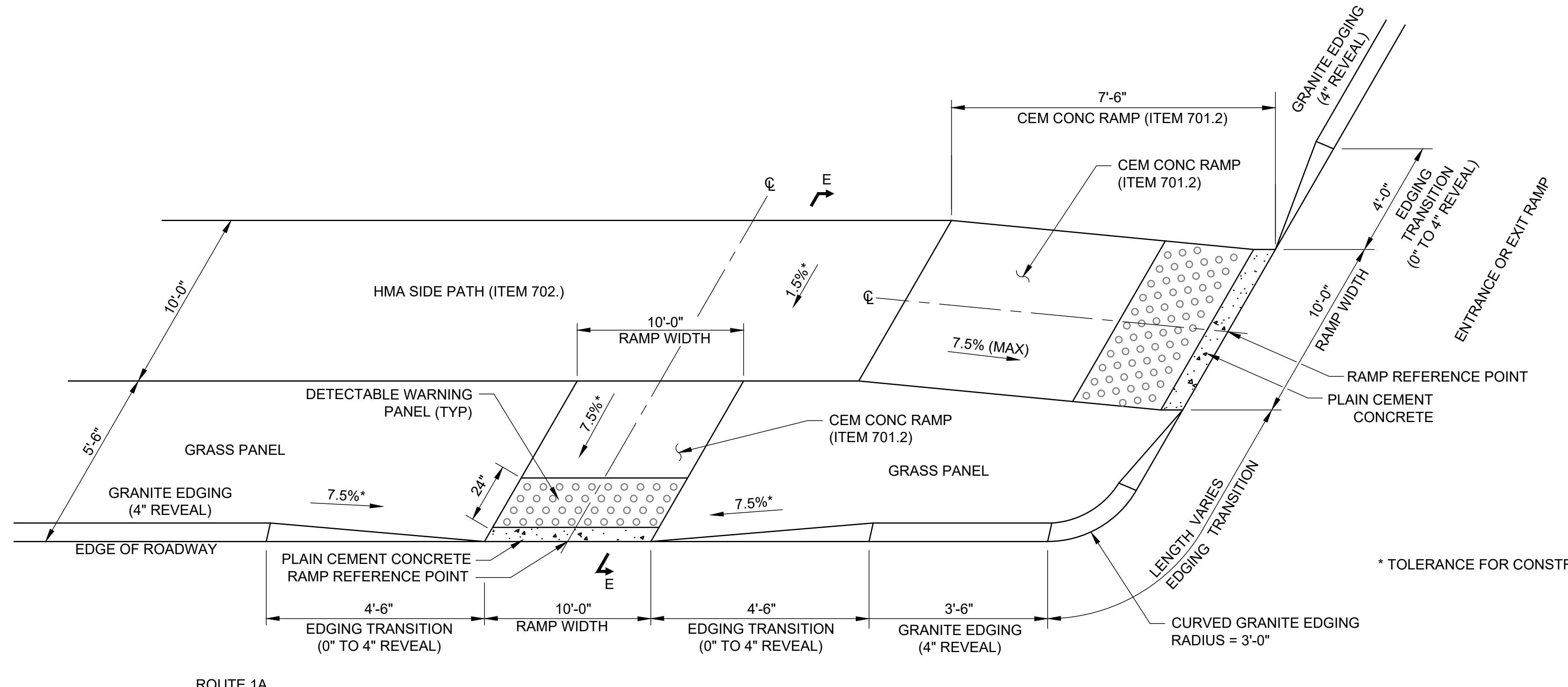
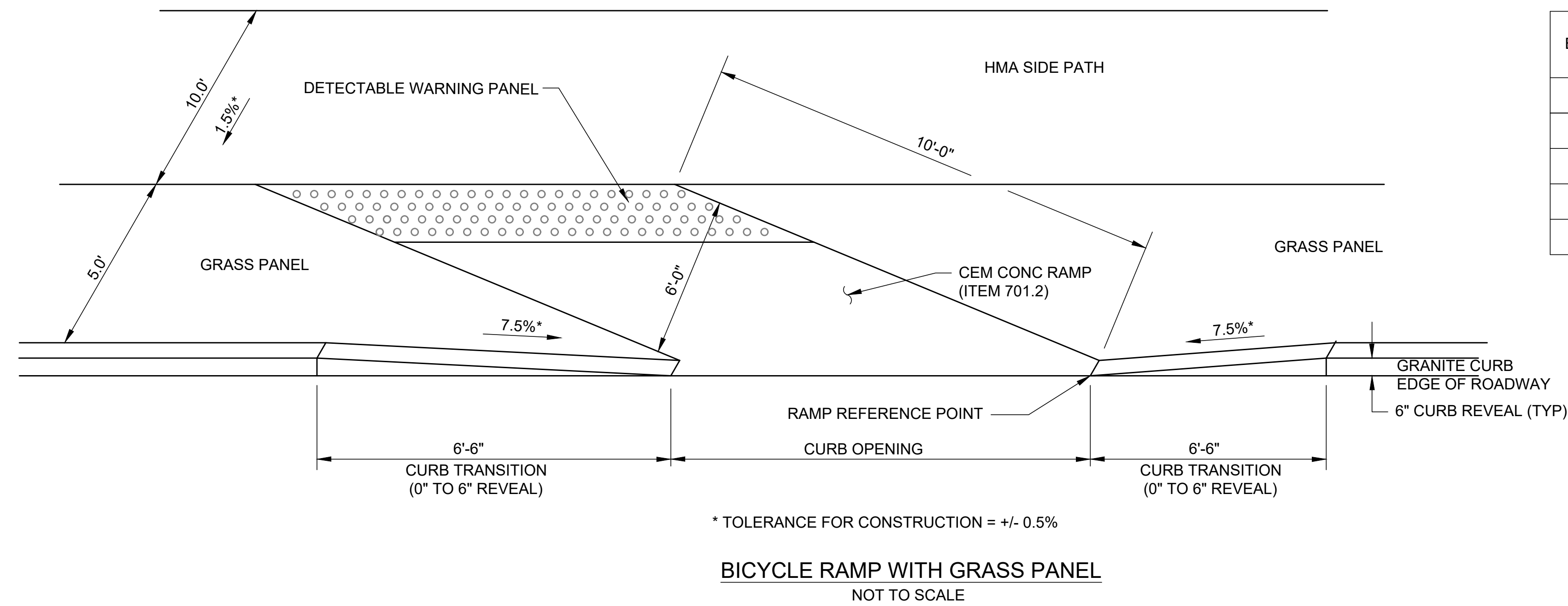
PCR #	STREET/BASELINE	RAMP REF. POINT		GUTTER SLOPE (DOWNGRADE)	LT LANDING EXTENSION	RT LANDING EXTENSION	SIDE PATH TRANSITION LENGTH	
		STATION	OFFSET				LEFT SIDE PATH TRANSITION	RIGHT SIDE PATH TRANSITION
1	ROUTE 1A	107+10.52	35.96' LT	0.65%	0'-0"	5'-0"	10'-0"	10'-0"
2	ROUTE 1A	108+32.21	37.00' LT	0.65%	0'-0"	5'-0"	10'-0"	10'-0"
7	ROUTE 1A	113+51.74	61.31' LT	0.84%	0'-0"	0'-0"	10'-0"	10'-0"
8	ROUTE 1A	114+80.07	82.79' LT	0.51%	0'-0"	0'-0"	N/A	10'-0"
15	I-495 SB EXIT RAMP RT TURN	513+99.05	4.67' RT	1.73%	0'-0"	0'-0"	10'-0"	N/A
22	I-495 SB ENTRANCE RAMP A	601+24.30	2.00' RT	2.29%	0'-0"	0'-0"	N/A	10'-0"
23	ROUTE 1A	122+86.18	38.00' RT	0.76%	0'-0"	5'-0"	10'-0"	10'-0"
24	ROUTE 1A	123+38.19	38.00' RT	0.72%	5'-0"	0'-0"	10'-0"	10'-0"
27	ROUTE 1A	135+07.83	35.76' LT	0.80%	0'-0"	5'-0"	10'-0"	10'-0"
28	ROUTE 1A	136+11.72	37.00' LT	0.10%	0'-0"	5'-0"	10'-0"	10'-0"

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	176	258
PROJECT FILE NO. 603739			

PEDESTRIAN CURB RAMP DETAILS
BICYCLE RAMP DETAILS
SHEET 3 OF 3

BR #	STREET/BASELINE	RAMP REF. POINT		CURB OPENING	RAMP LENGTH	ANGLE FROM CURBLINE
		STATION	OFFSET			
1	ROUTE 1A	106+38.71	34.7' LT	12.00' ①	10.00'	30.0°
2	ROUTE 1A	N/A	N/A	N/A	19.57'	22.5°
3	PREM. OUTLETS BLVD.	301+16.30	43.75' LT	12.00'	24.27'	30.0°
4	ROUTE 1A	138+62.43	24.5' RT	12.00'	10.00'	30.0°
5	ROUTE 1A	140+00.72	27.0' LT	12.00'	10.00'	30.0°

① INSTALL GRANITE CURB WITH 3" REVEAL BETWEEN DRIVEWAY #1 AND BICYCLE RAMP #1 (SEE MASSDOT CONSTRUCTION STANDARD E 107.6.3)



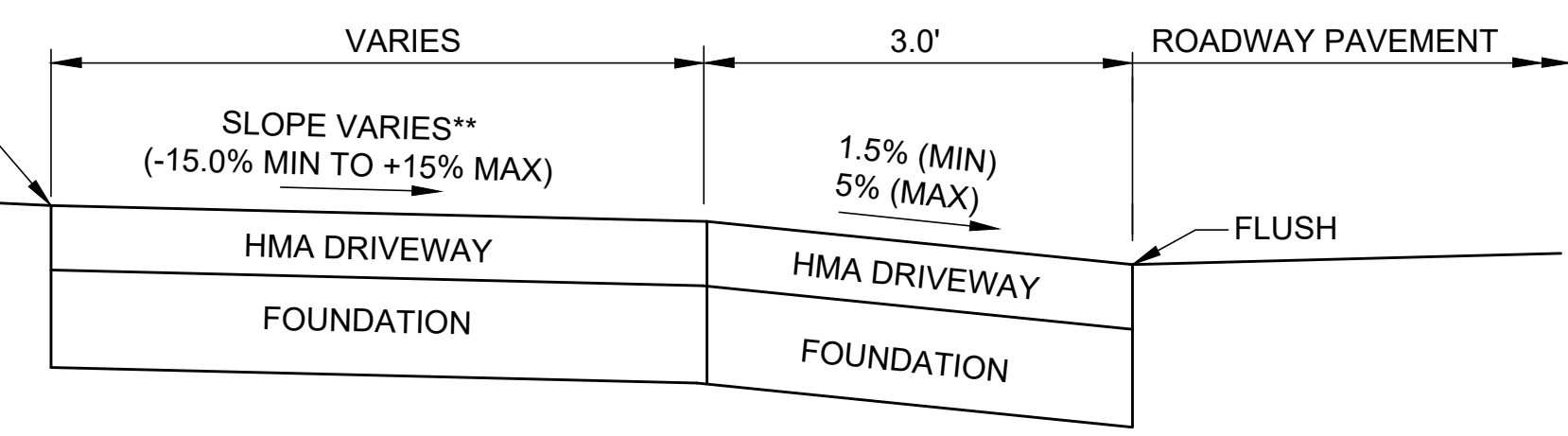
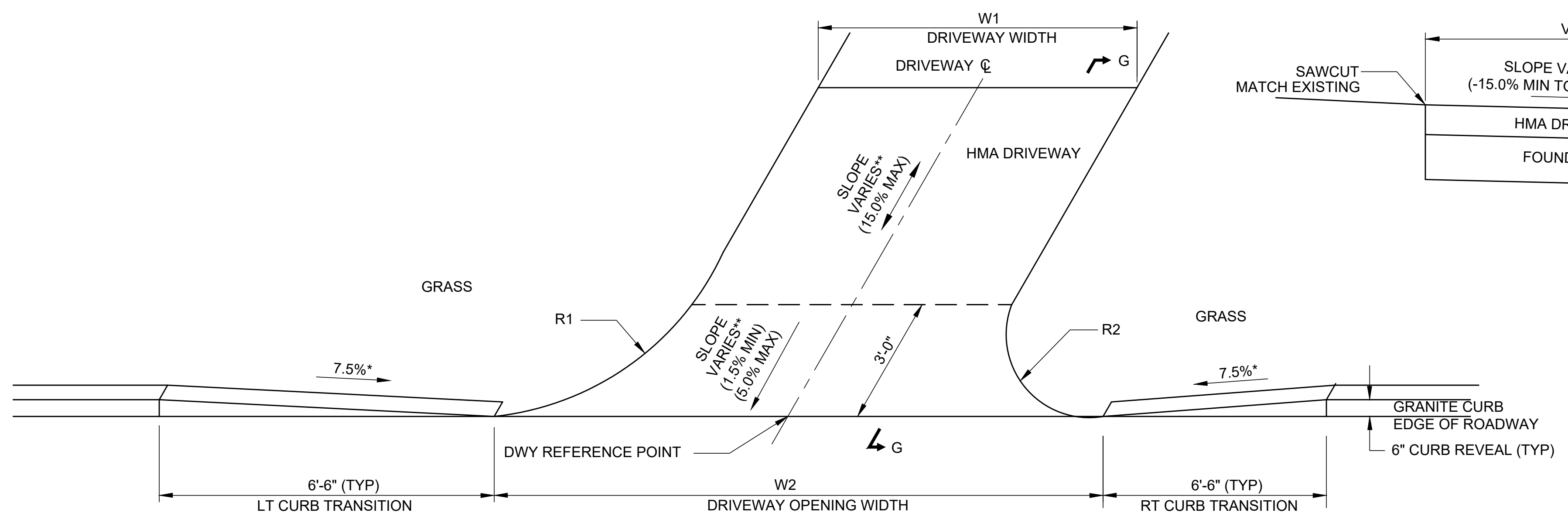
PCR #	STREET/BASELINE	RAMP REF. POINT		GUTTER SLOPE (DOWNGRADE)	RAMP LENGTH
		STATION	OFFSET		
17	I-495 SB EXIT RAMP LT TURN	1000+39.51	18.66' LT	2.29%	7.50'
18	ROUTE 1A	122+86.18	29.00' LT	0.76%	5.50'
19	I-495 SB EXIT RAMP LT TURN	1000+39.49	1.50' RT	2.29%	7.50'
20	ROUTE 1A	123+38.19	29.00' LT	0.76%	5.50'
31	ROUTE 1A	135+07.83	29.00' RT	0.80%	5.50'
32	I-495 NB RAMPS CENTER	2000+39.29	37.99' RT	2.74%	5.50'
33	I-495 NB RAMPS CENTER	2000+38.96	37.98' LT	1.63%	5.50'
34	ROUTE 1A	136+11.72	29.00' RT	0.10%	5.50'

PEDESTRIAN CURB RAMP NOTES
SEE SHEET NO. 174 FOR PEDESTRIAN CURB RAMP NOTES.

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	177	258
PROJECT FILE NO.		603739	

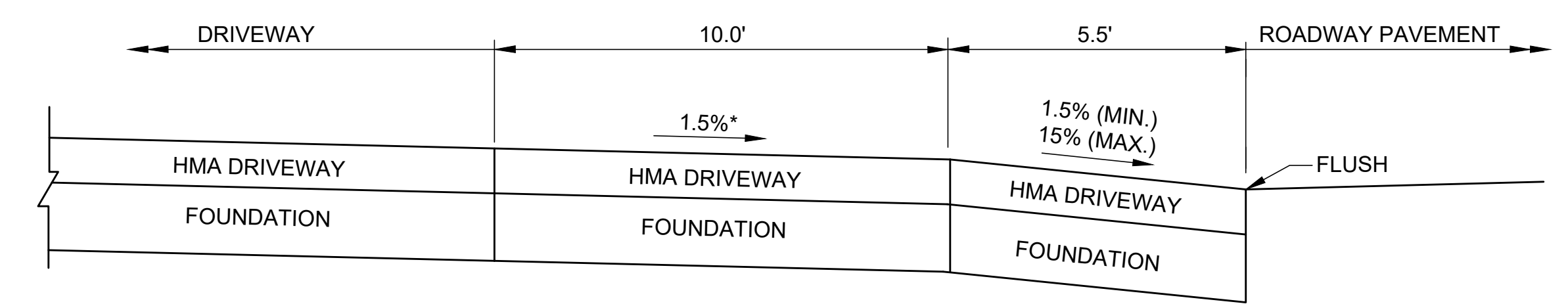
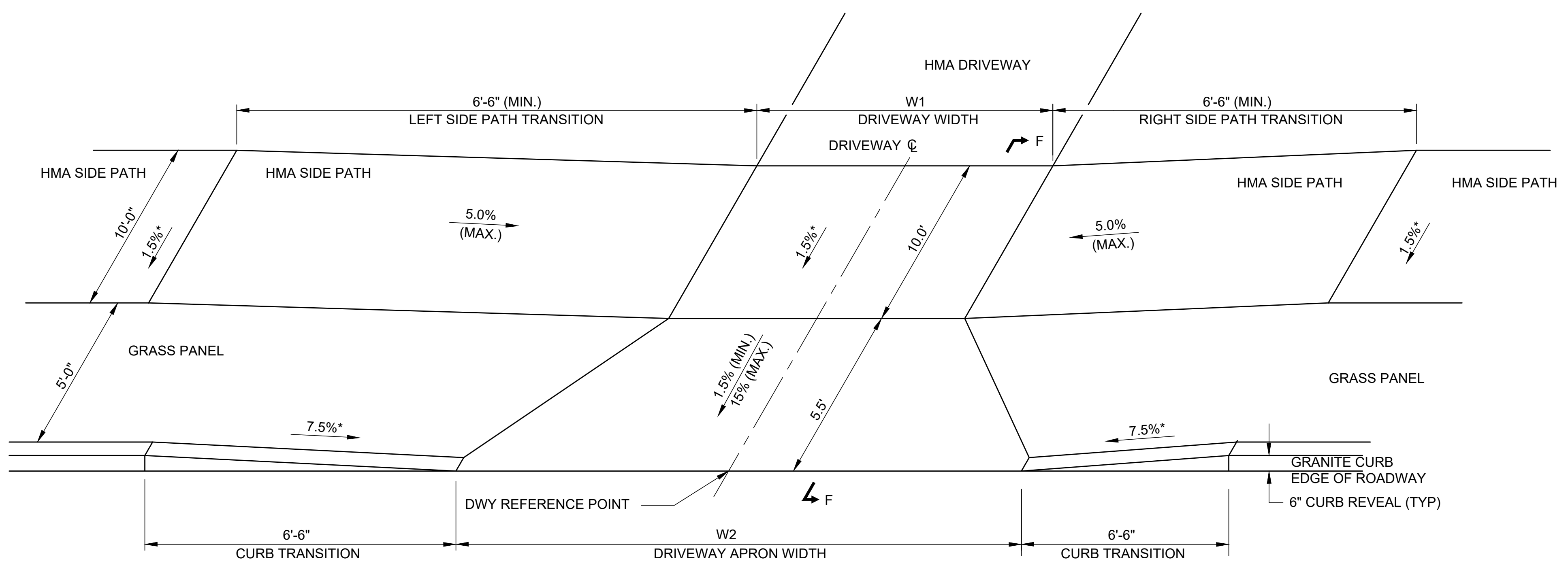
DRIVEWAY DETAILS



SECTION G-G

* TOLERANCE FOR CONSTRUCTION = +/- 0.5%
** SEE CROSS SECTIONS

SIDE PATH AT DRIVEWAYS
NOT TO SCALE



SECTION F-F

* TOLERANCE FOR CONSTRUCTION = +/- 0.5%

SIDE PATH AT DRIVEWAYS
NOT TO SCALE

DWY #	STREET/BASELINE	RAMP REF. POINT ¢ OF OPENING		LT RADIUS (R1)	RT RADIUS (R2)	WIDTH OF DRIVEWAY AT MATCH (W1)	WIDTH OF DRIVEWAY OPENING AT CURB (W2)	CURB TRANSITION	
		STATION	OFFSET					LEFT SIDE	RIGHT SIDE
1	ROUTE 1A	106+12.16	33.83' LT	0'	0'	25.14'	31.34'	N/A	3.25' ①
2	ROUTE 1A	106+52.68	27.00' RT	0'	0'	56.42'	64.76'	6.50'	6.50'
10	ROUTE 1A	140+54.35	20.24' LT	0'	0'	16.08'	22.01'	6.50'	3.25' ②
11	ROUTE 1A	140+94.07	19.26' LT	0'	0'	27.85'	29.34'	3.25' ②	6.50'
12	ROUTE 1A	141+05.64	19.06' RT	10.00'	5.00'	11.80'	27.76'	6.50'	6.50'
13	ROUTE 1A	141+65.00	17.53' RT	8.00'	8.00'	13.76'	31.19'	6.50'	6.50'

- ① INSTALL GRANITE CURB WITH 3" REVEAL BETWEEN DRIVEWAY #1 AND BICYCLE RAMP #1 (SEE MASSDOT CONSTRUCTION STANDARD E 107.6.3)
- ② INSTALL GRANITE CURB WITH 3" REVEAL BETWEEN DRIVEWAY #10 AND DRIVEWAY #11 (SEE MASSDOT CONSTRUCTION STANDARD E 107.6.3)

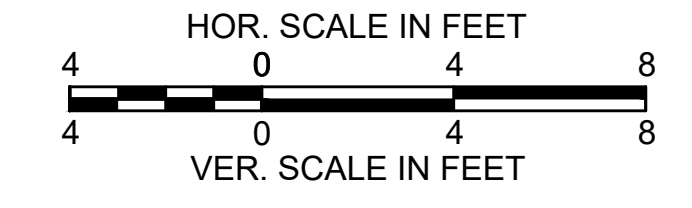
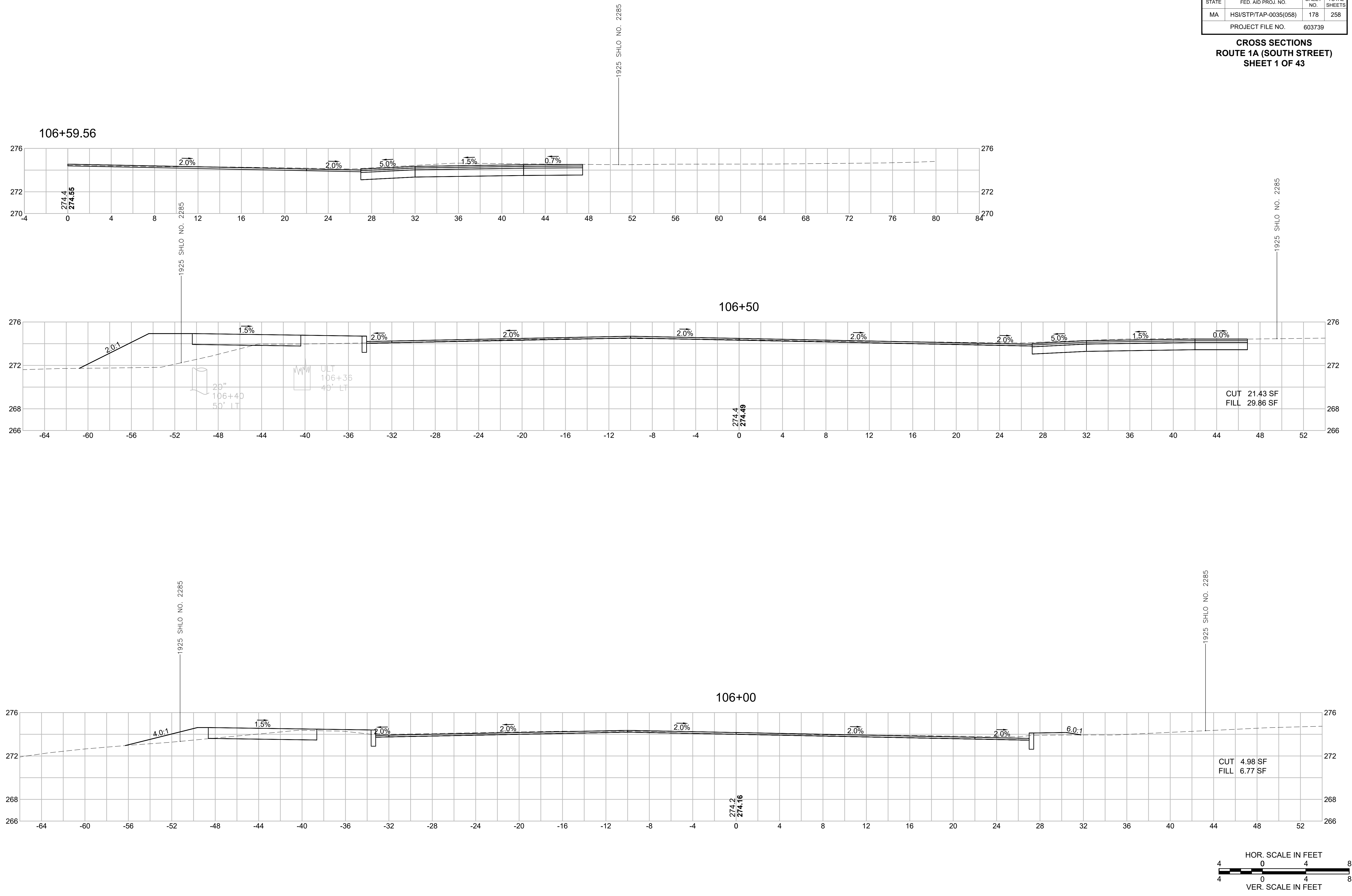
DWY #	STREET/BASELINE	RAMP REF. POINT ¢ OF OPENING		GUTTER SLOPE (DOWNGRADE)	WIDTH OF DRIVEWAY AT SIDE PATH (W1)	WIDTH OF DRIVEWAY APRON AT CURB (W2)	SIDE PATH TRANSITION	
		STATION	OFFSET				LEFT SIDE	RIGHT SIDE
3	ROUTE 1A	109+05.78	37.00' LT	0.65%	34.65'	43.45'	10.00'	10.00'
4	ROUTE 1A	111+16.11	27.00' RT	0.84%	36.56'	46.56'	10.00'	10.00'
5	ROUTE 1A	112+45.43	37.00' LT	0.84%	33.46'	43.21'	10.00'	10.00'
6	ROUTE 1A	131+46.10	26.90' LT	1.85%	11.22'	42.13' ③	10.00'	10.00'
7	ROUTE 1A	131+67.40	27.44" LT	1.85%	17.60'	42.13' ③	10.00'	10.00'
8	ROUTE 1A	132+77.09	30.18' LT	1.52%	28.05'	33.81'	10.00'	10.00'
9	ROUTE 1A	138+36.95	35.05' LT	1.33%	16.19'	22.01'	10.00'	10.00'

- ③ DWY # 6 AND DWY # 7 SHARE THE SAME APRON BETWEEN THE EDGE OF ROAD AND SIDE PATH.

WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	178	258
PROJECT FILE NO.		603739	

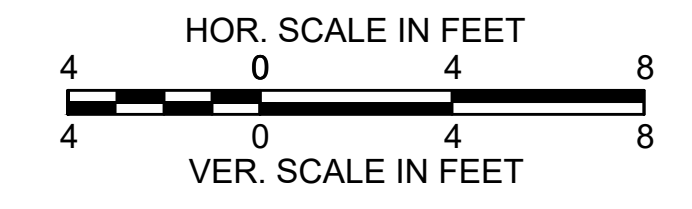
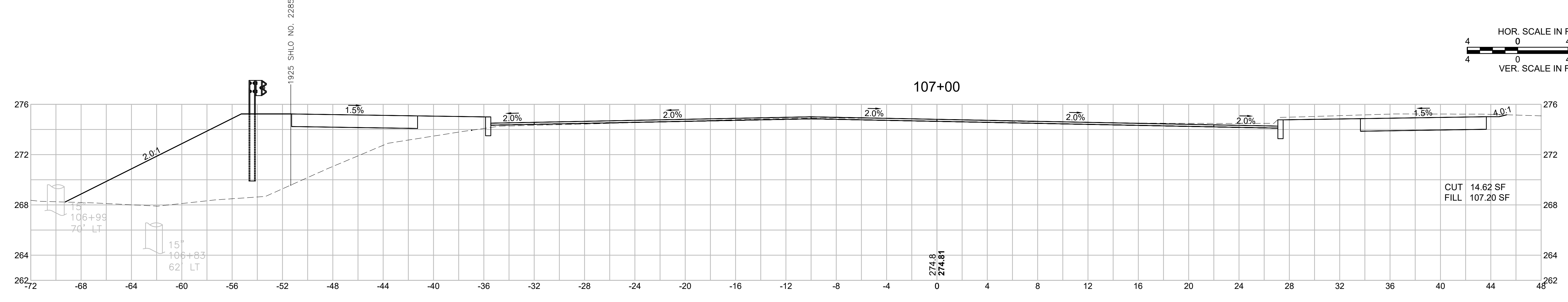
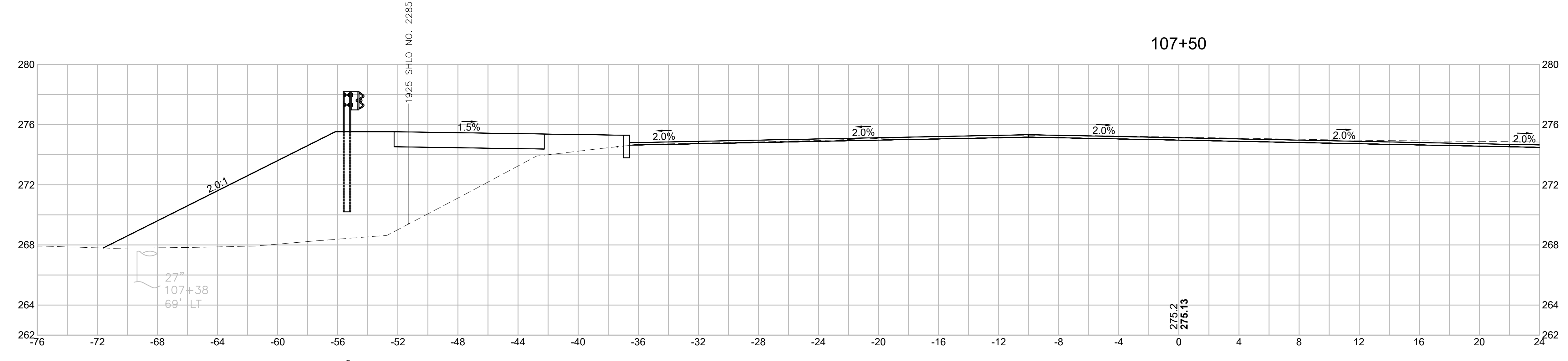
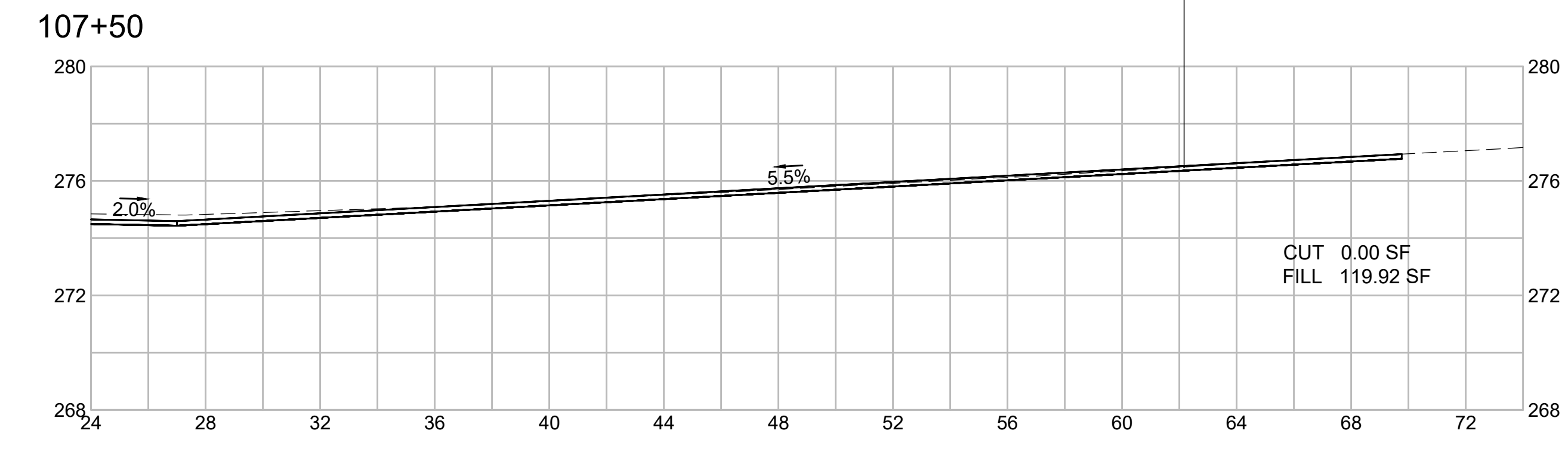
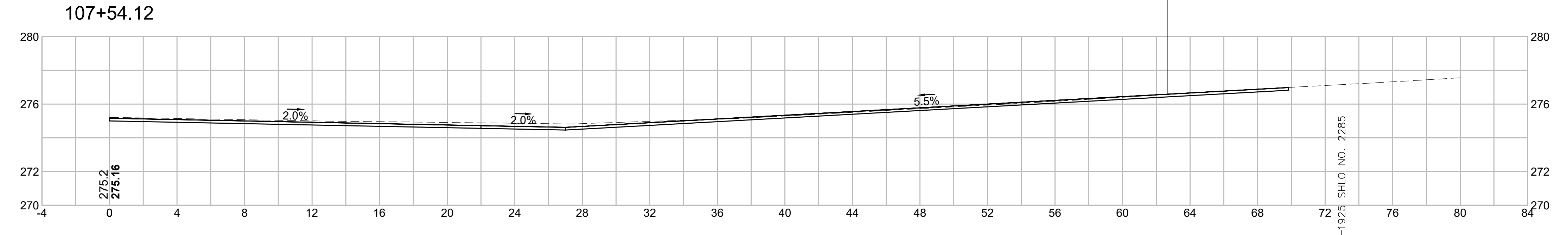
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 1 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	179	258
PROJECT FILE NO.		603739	

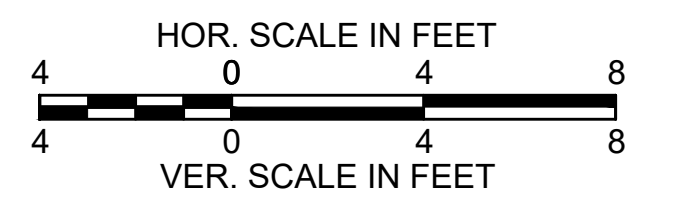
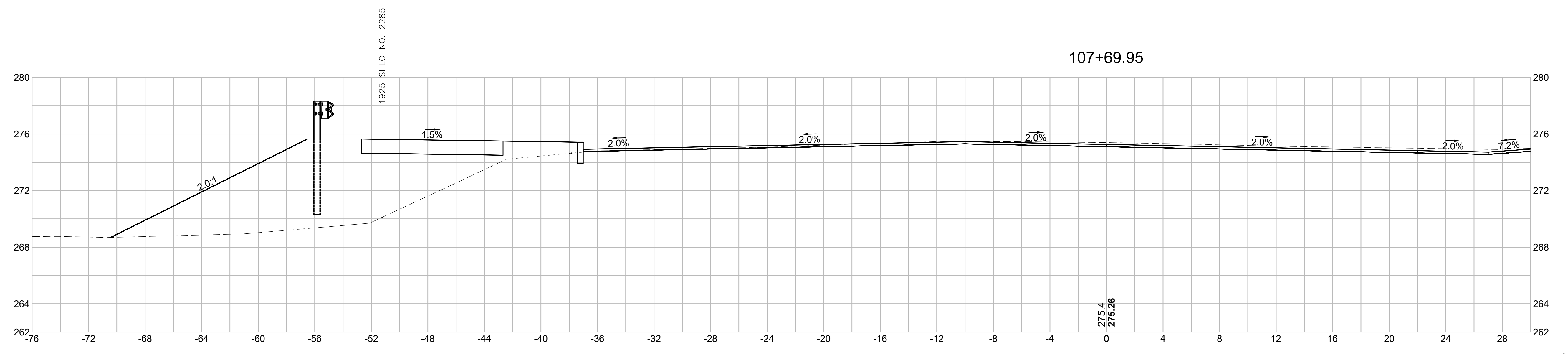
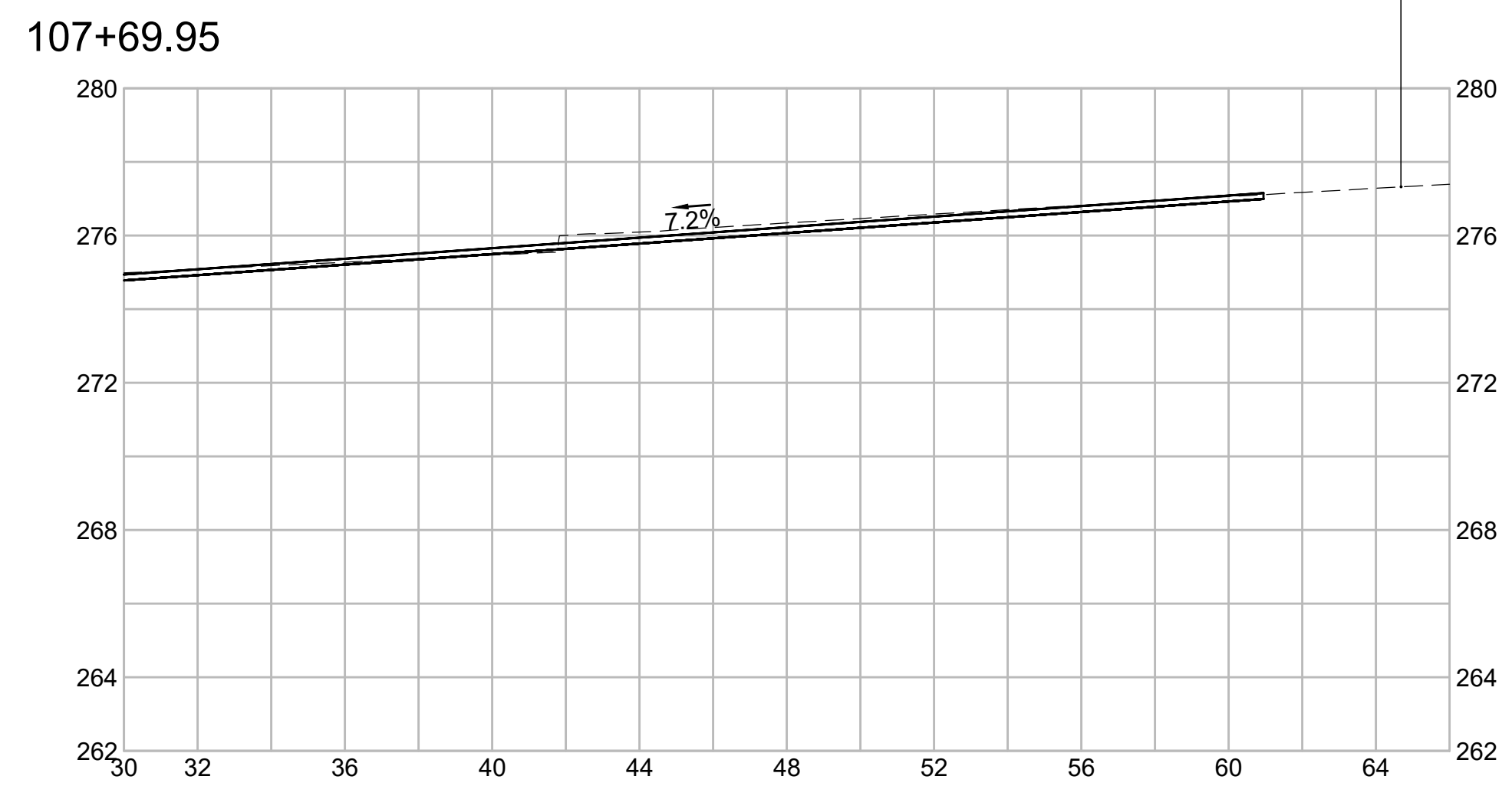
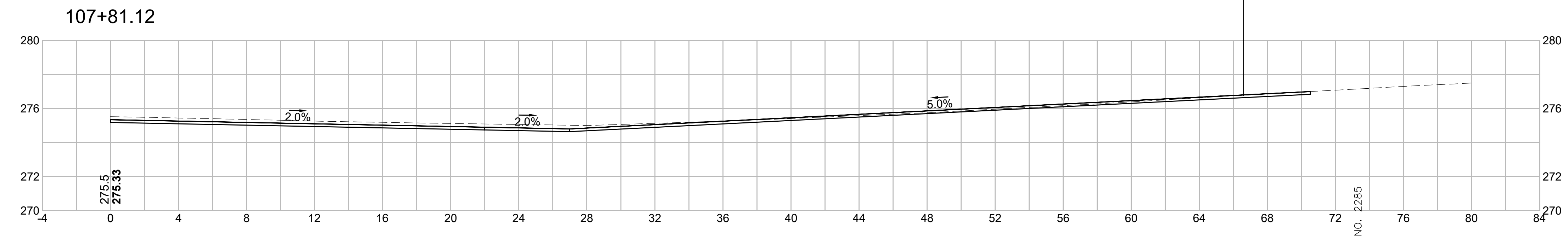
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 2 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	180	258
PROJECT FILE NO.		603739	

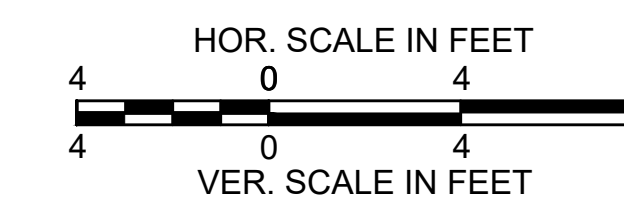
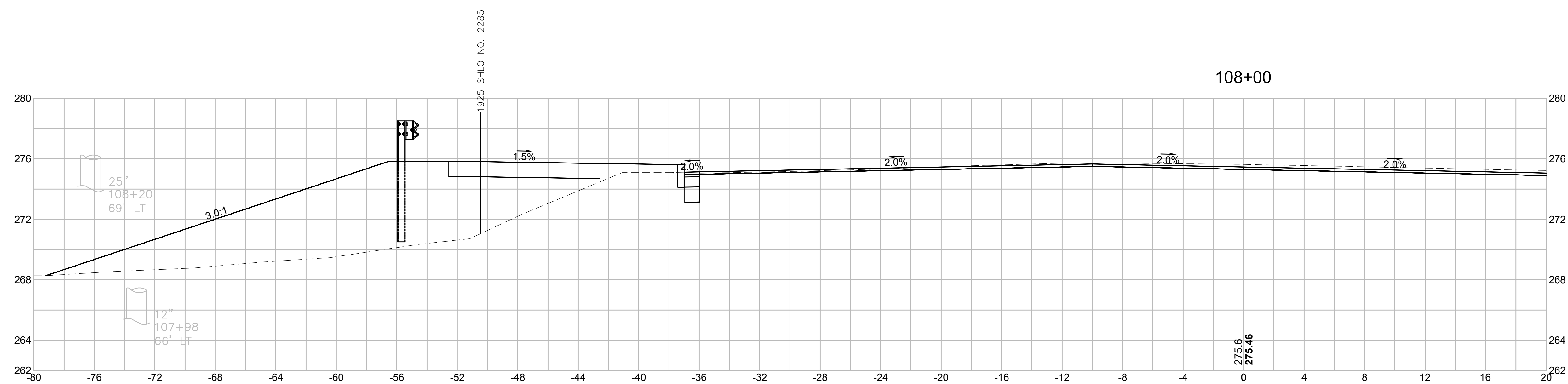
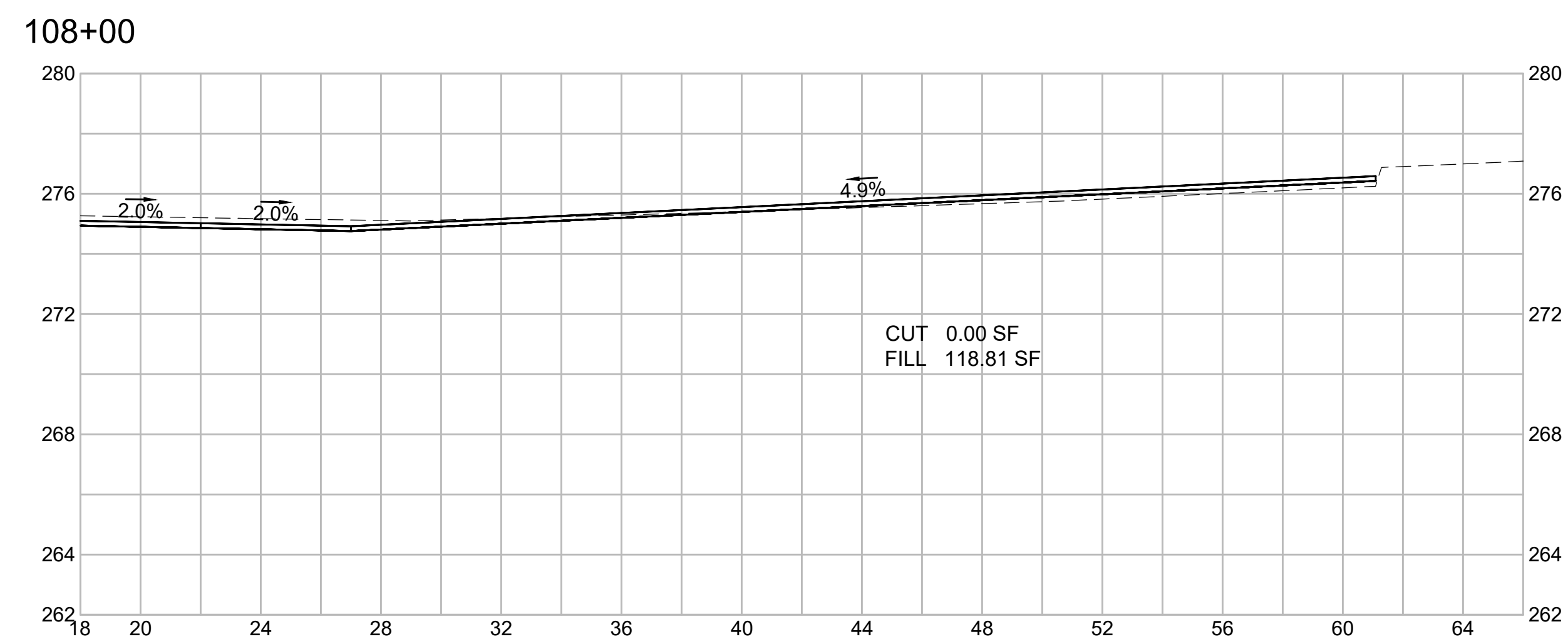
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 3 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	181	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 4 OF 43

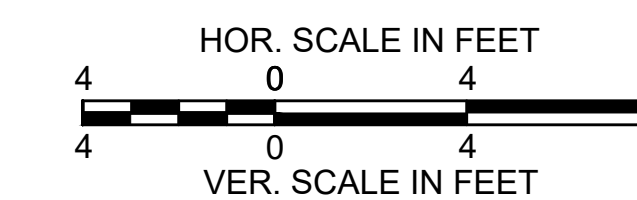
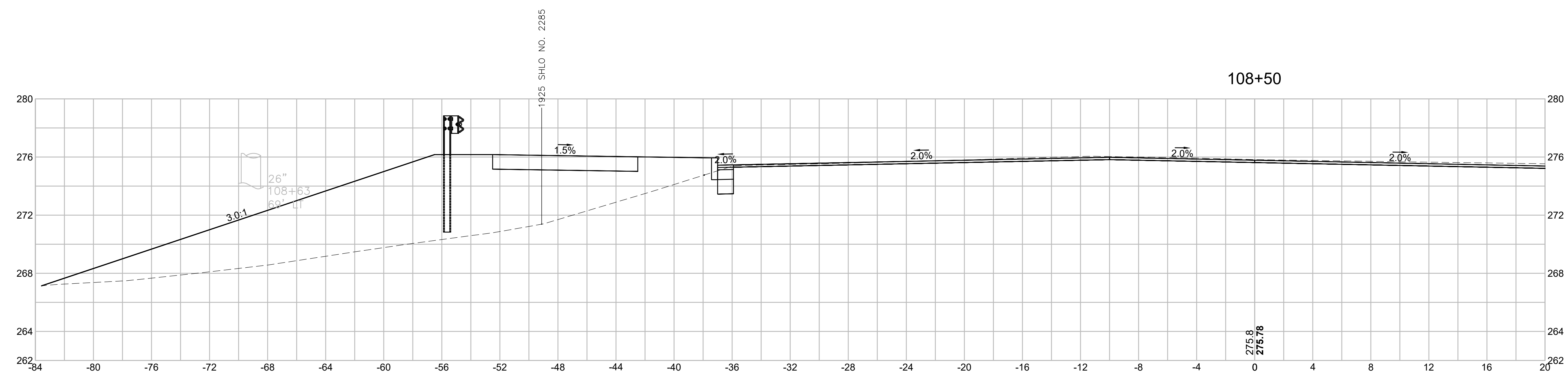
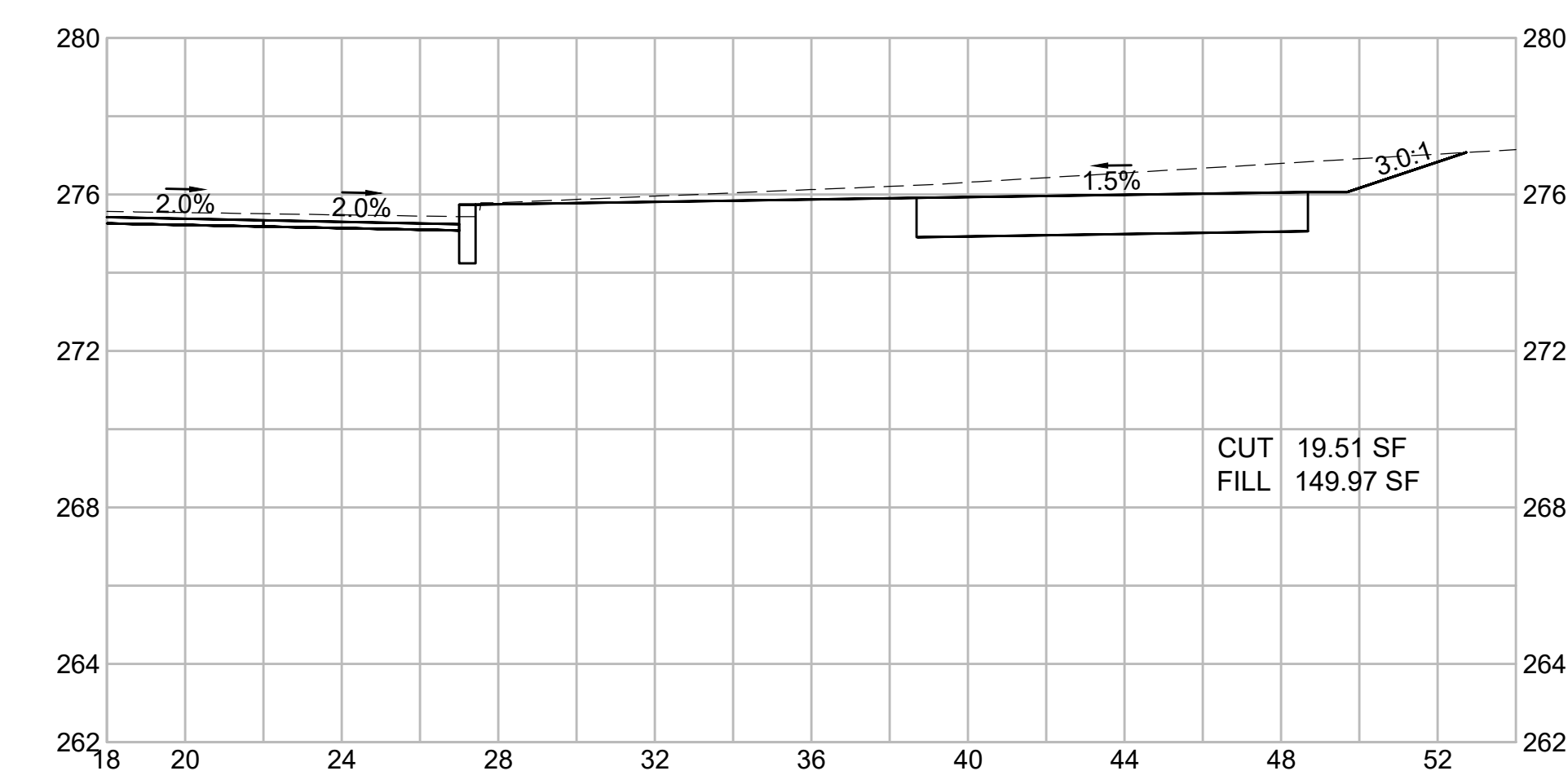


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	182	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 5 OF 43

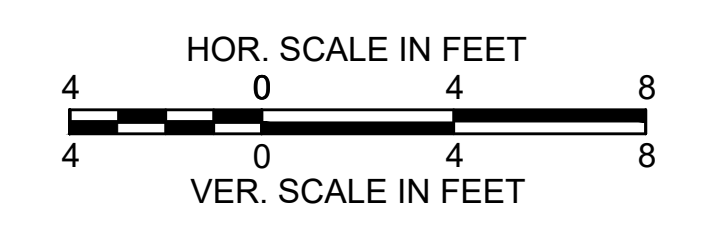
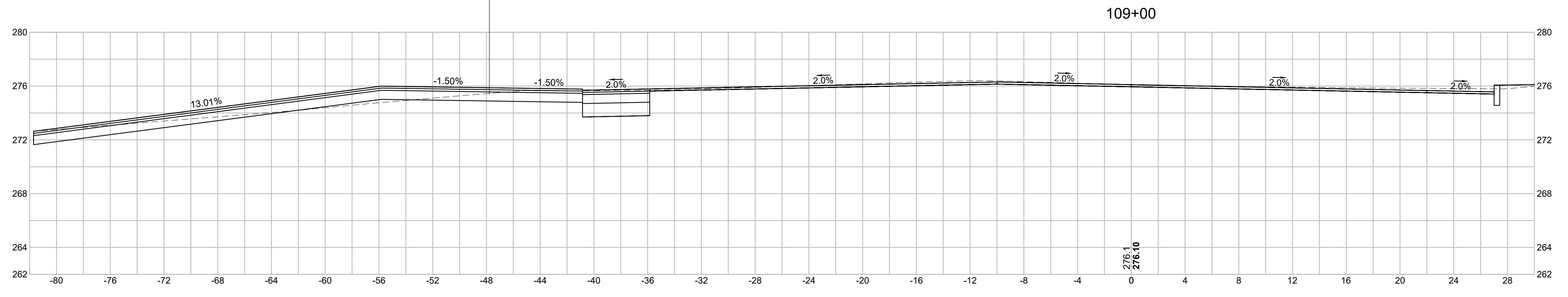
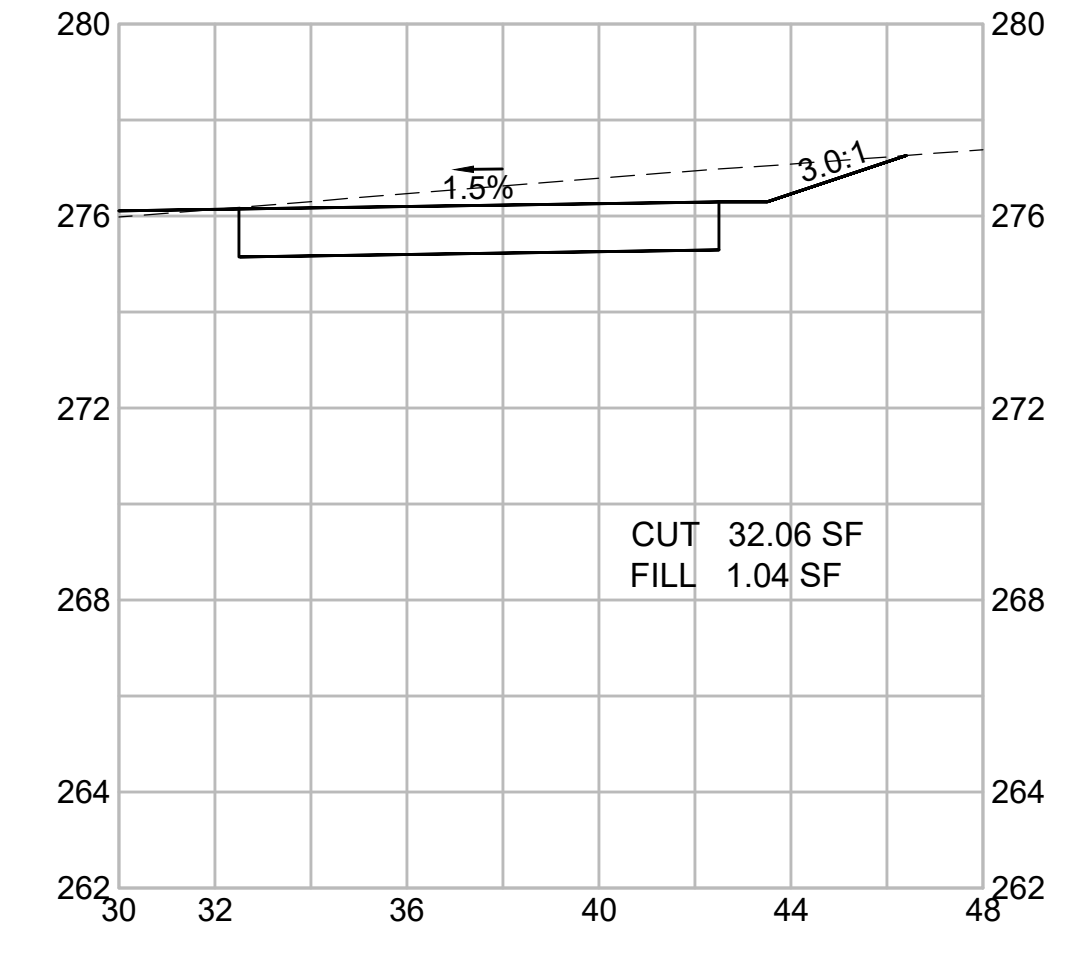
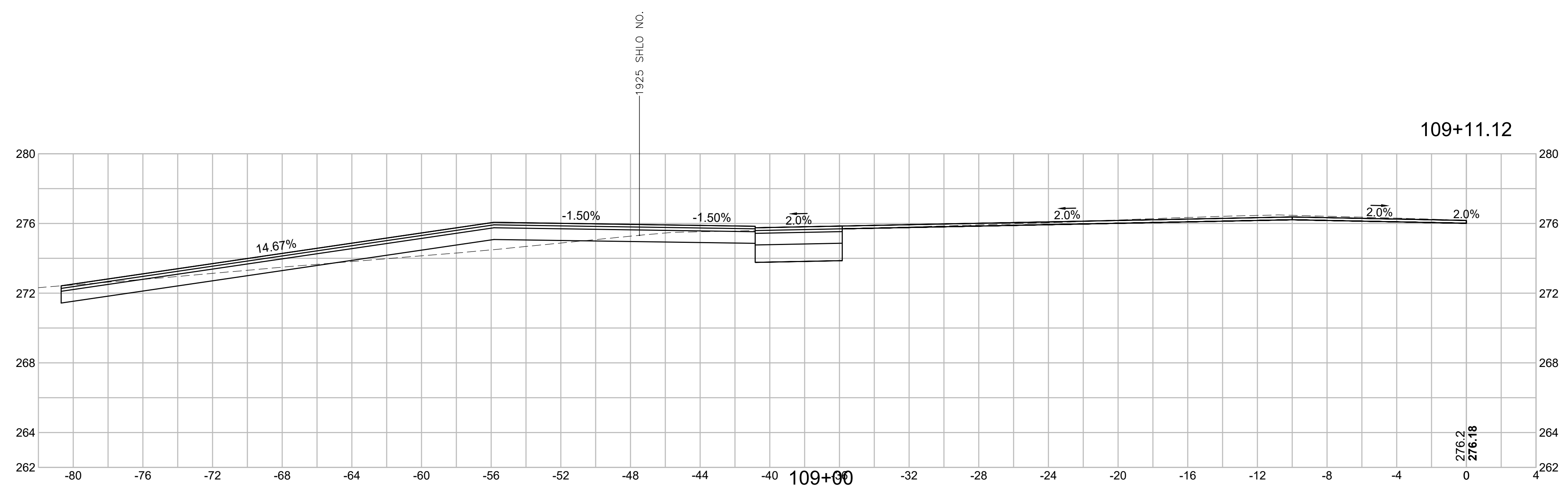
108+50



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	183	258
PROJECT FILE NO.		603739	

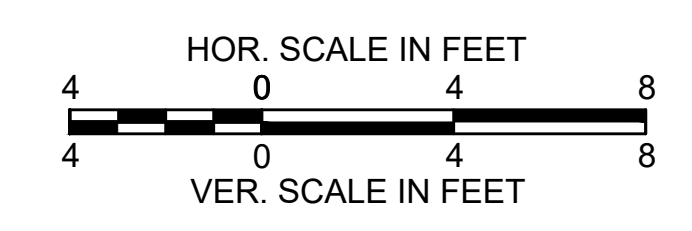
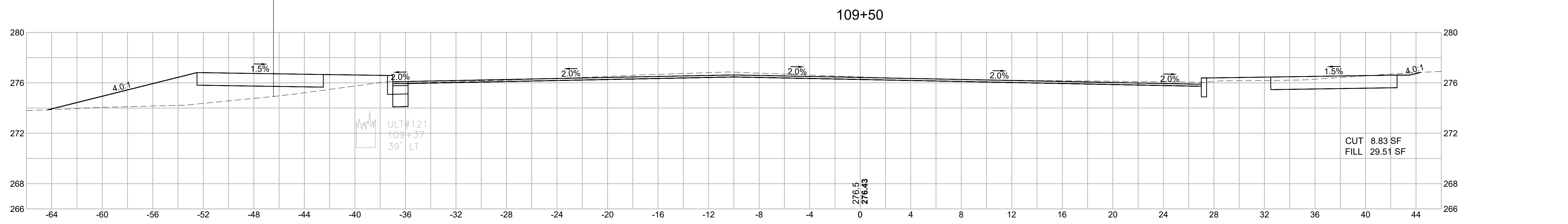
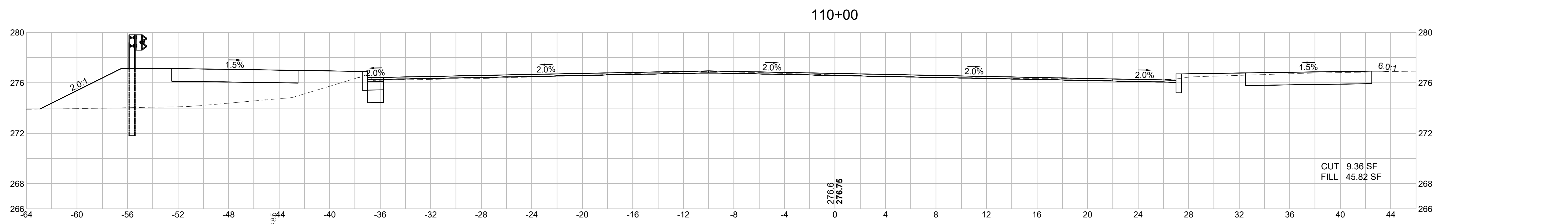
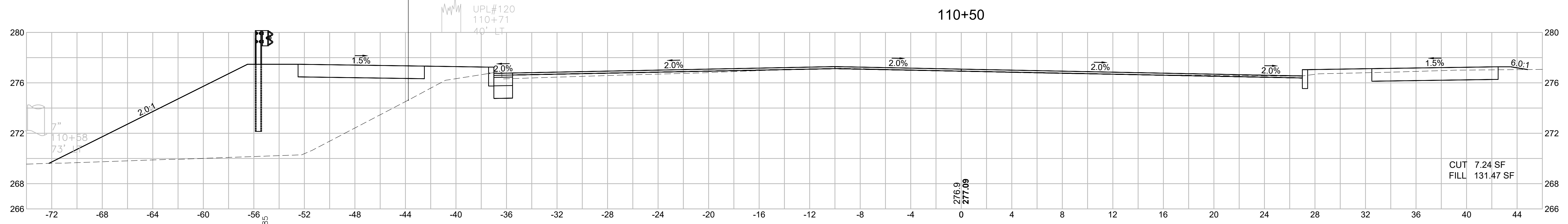
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 6 OF 43



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	184	258
PROJECT FILE NO.		603739	

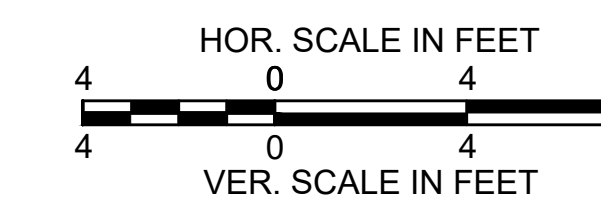
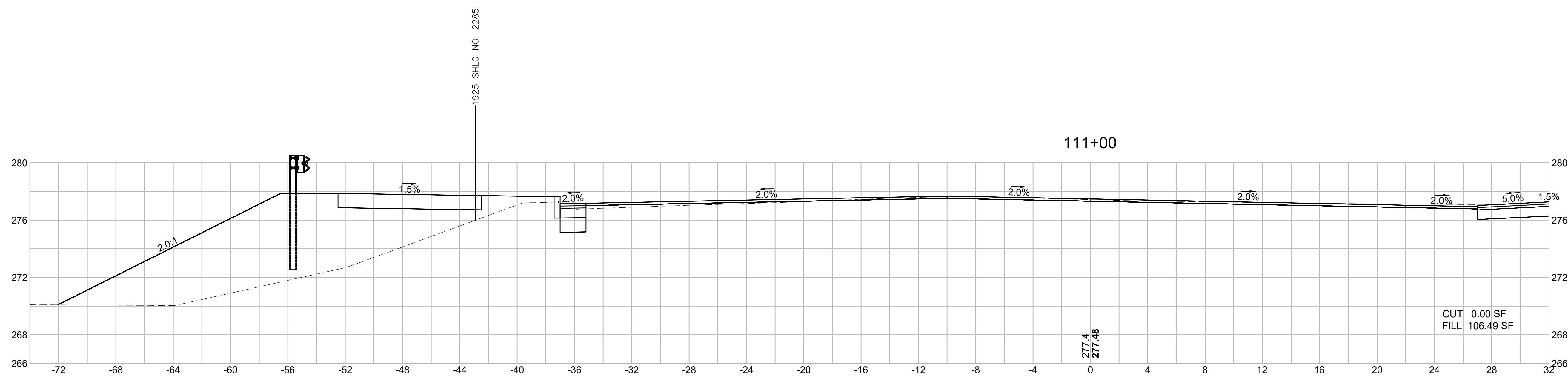
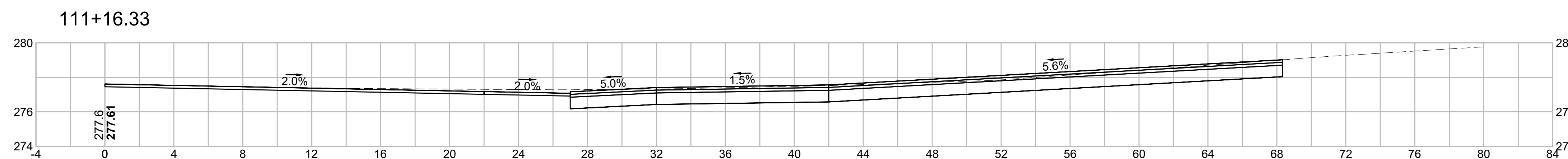
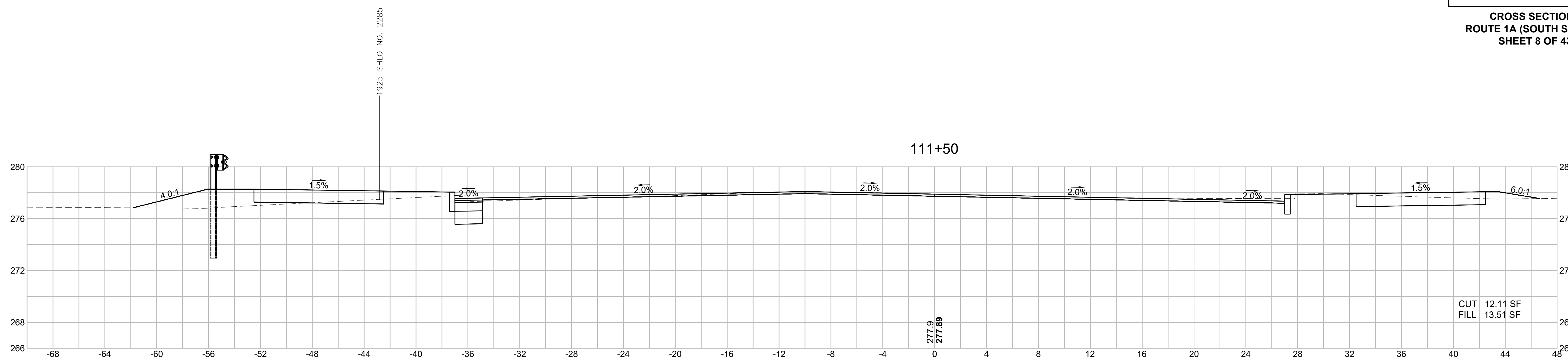
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 7 OF 43**



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	185	258
PROJECT FILE NO.		603739	

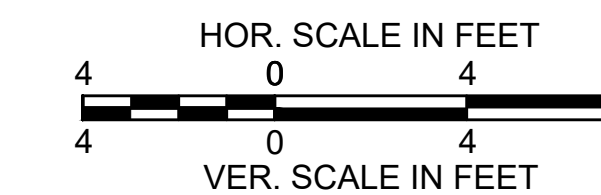
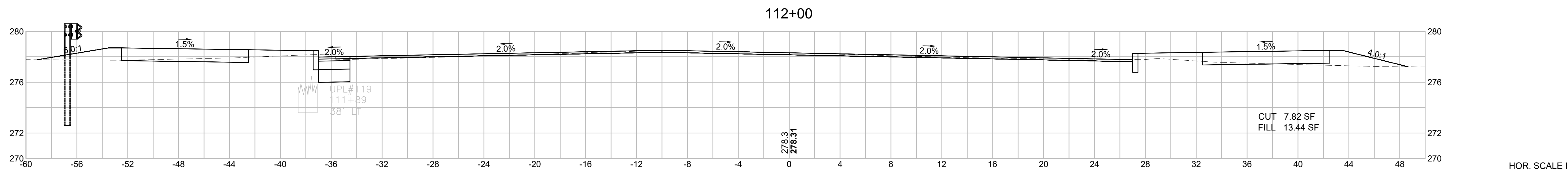
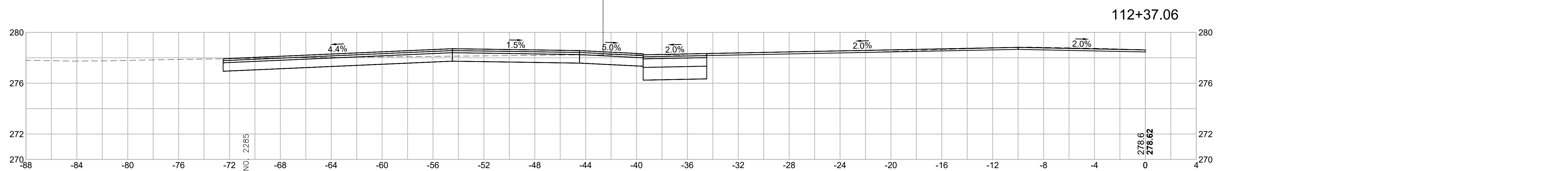
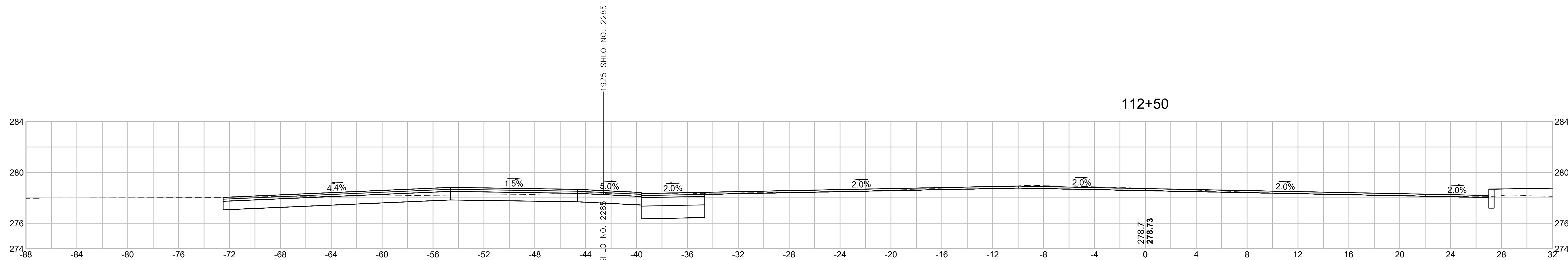
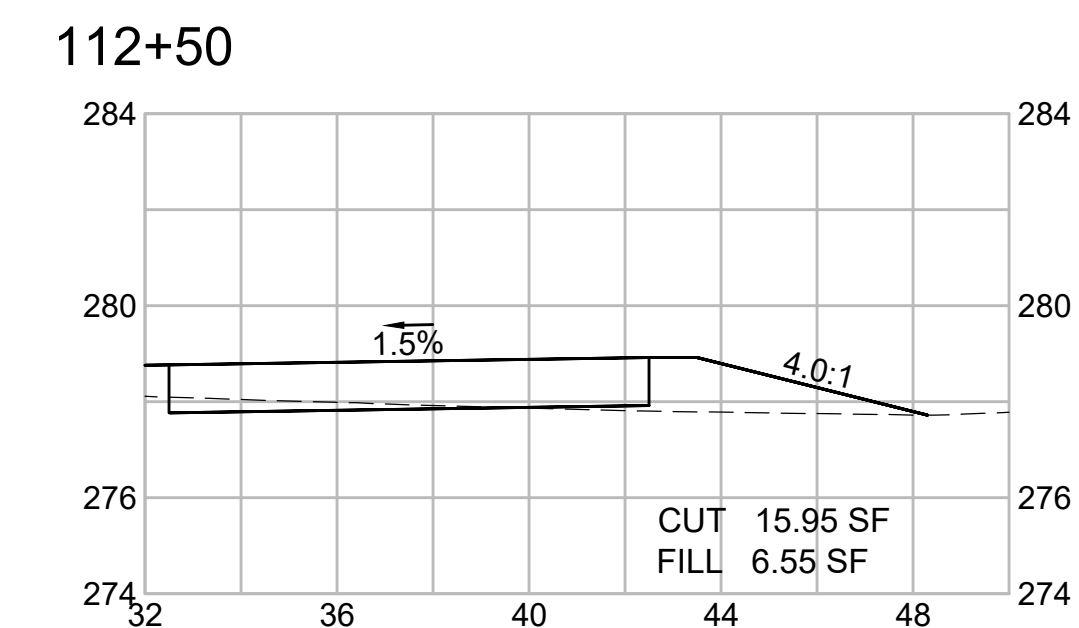
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 8 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	186	258
PROJECT FILE NO.		603739	

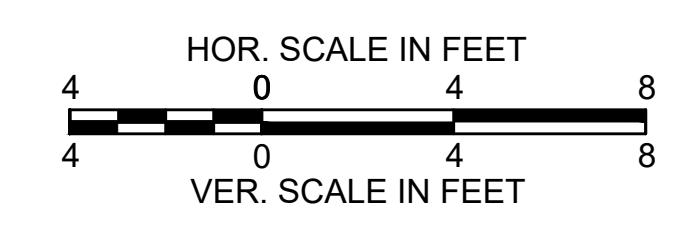
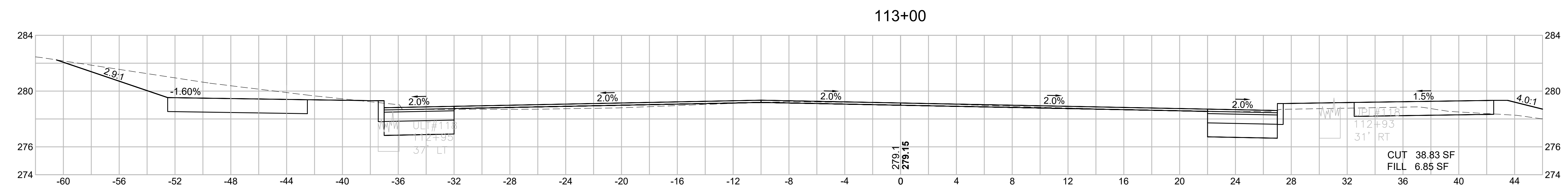
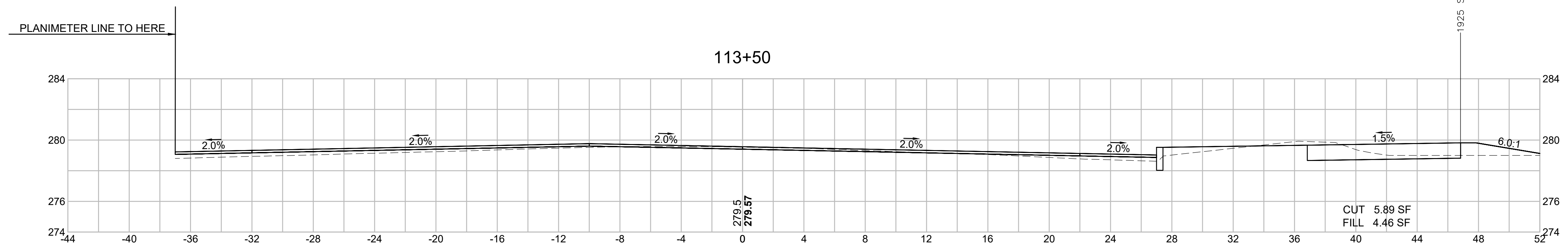
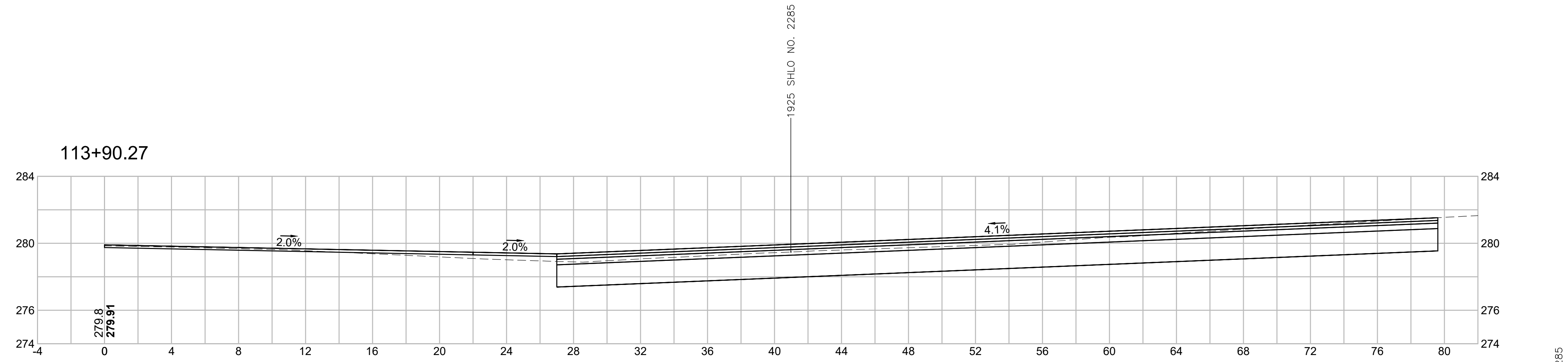
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 9 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	187	258
PROJECT FILE NO.		603739	

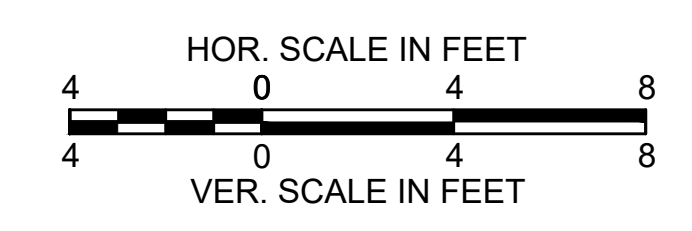
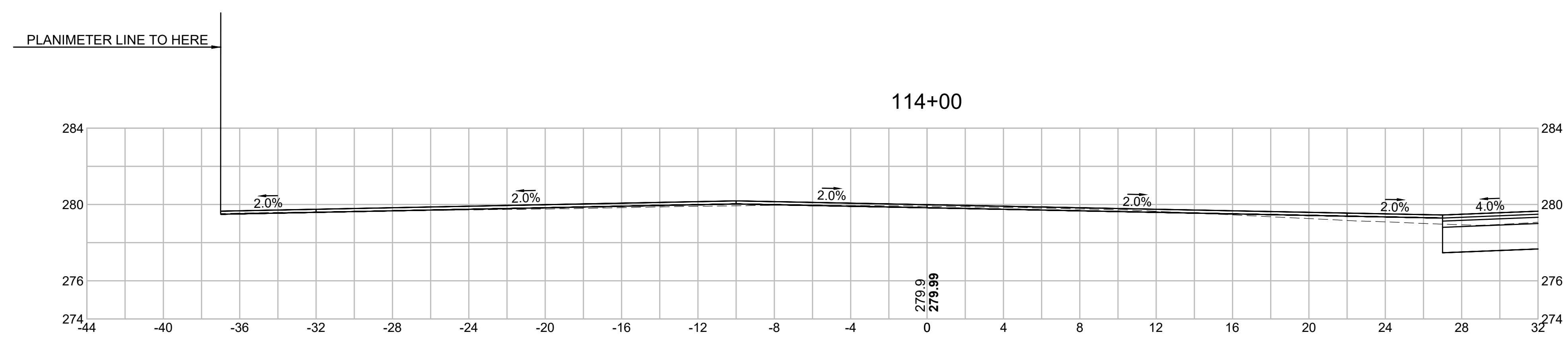
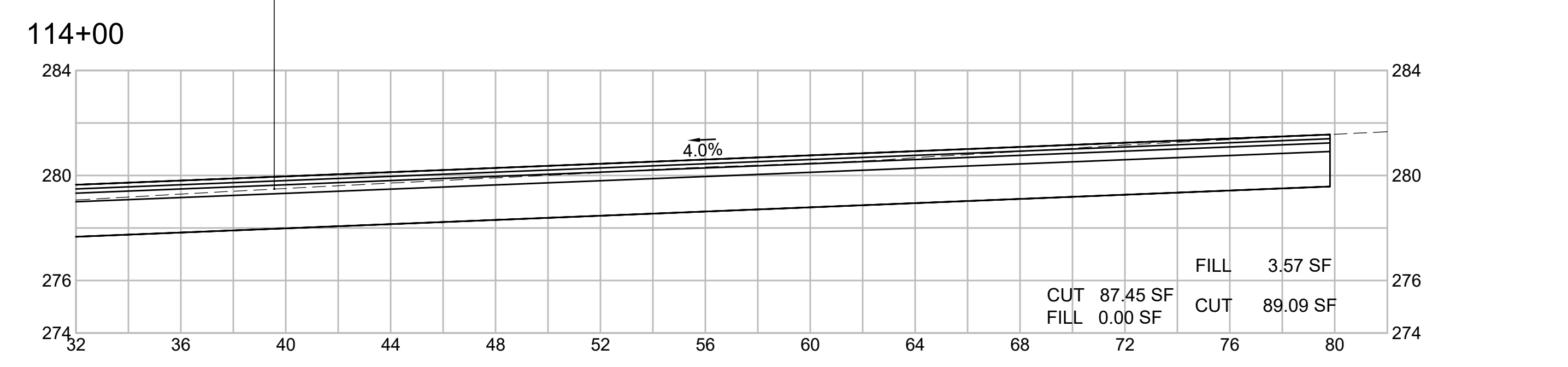
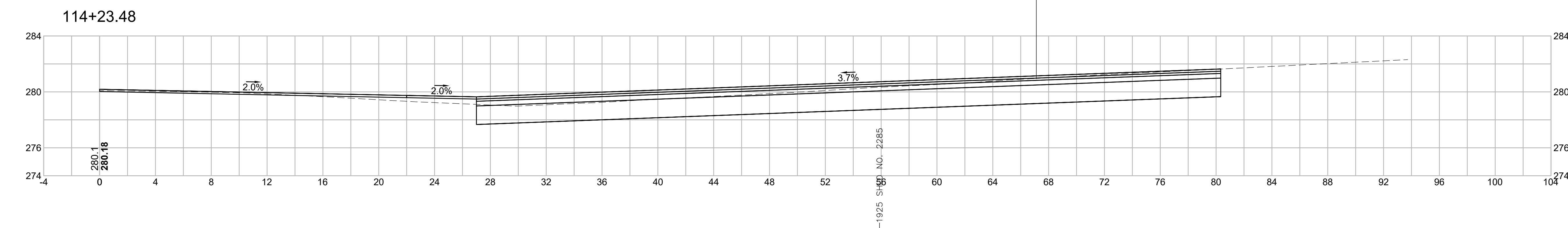
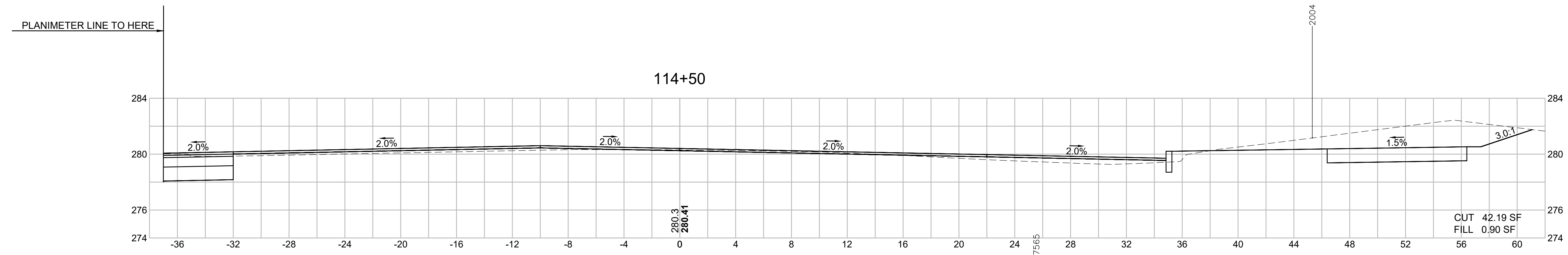
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 10 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	188	258
PROJECT FILE NO.		603739	

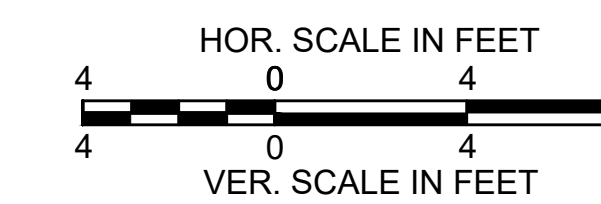
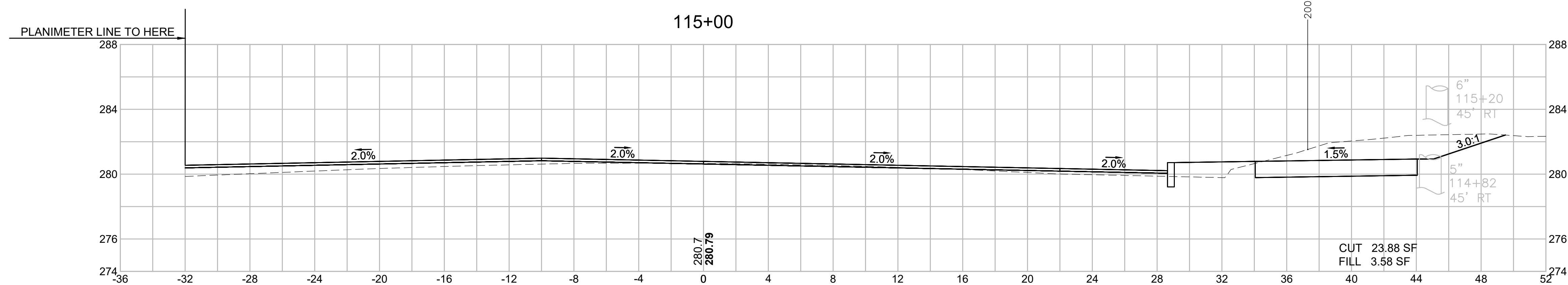
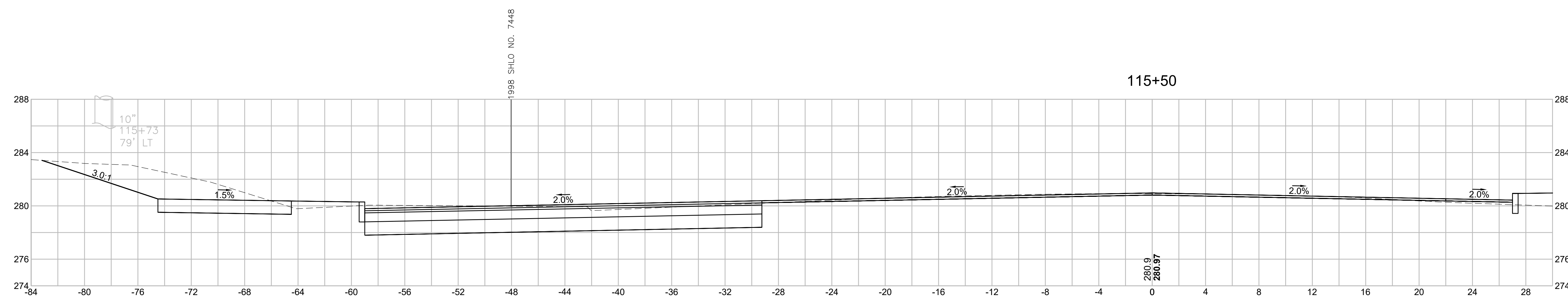
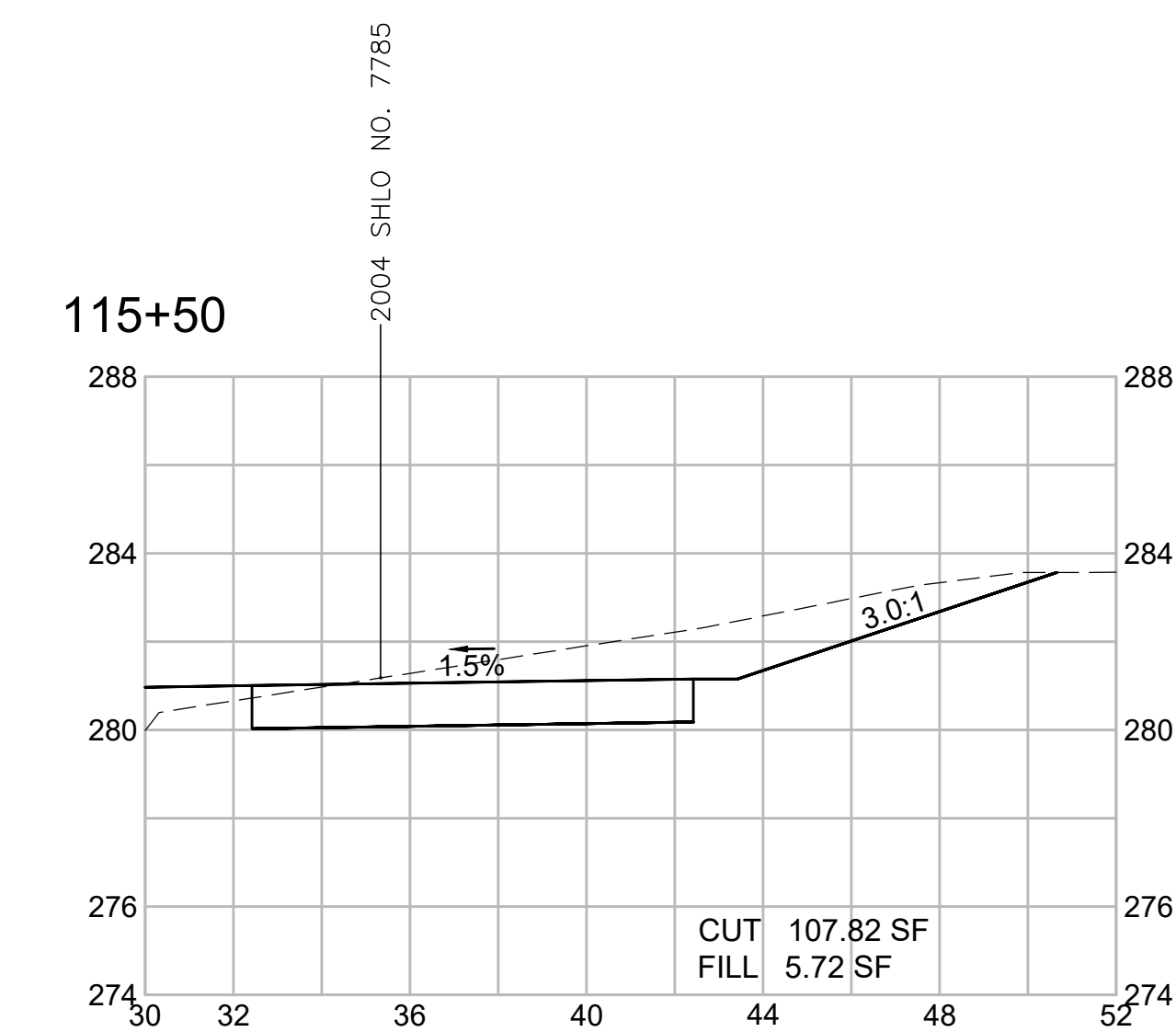
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 11 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	189	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 12 OF 43

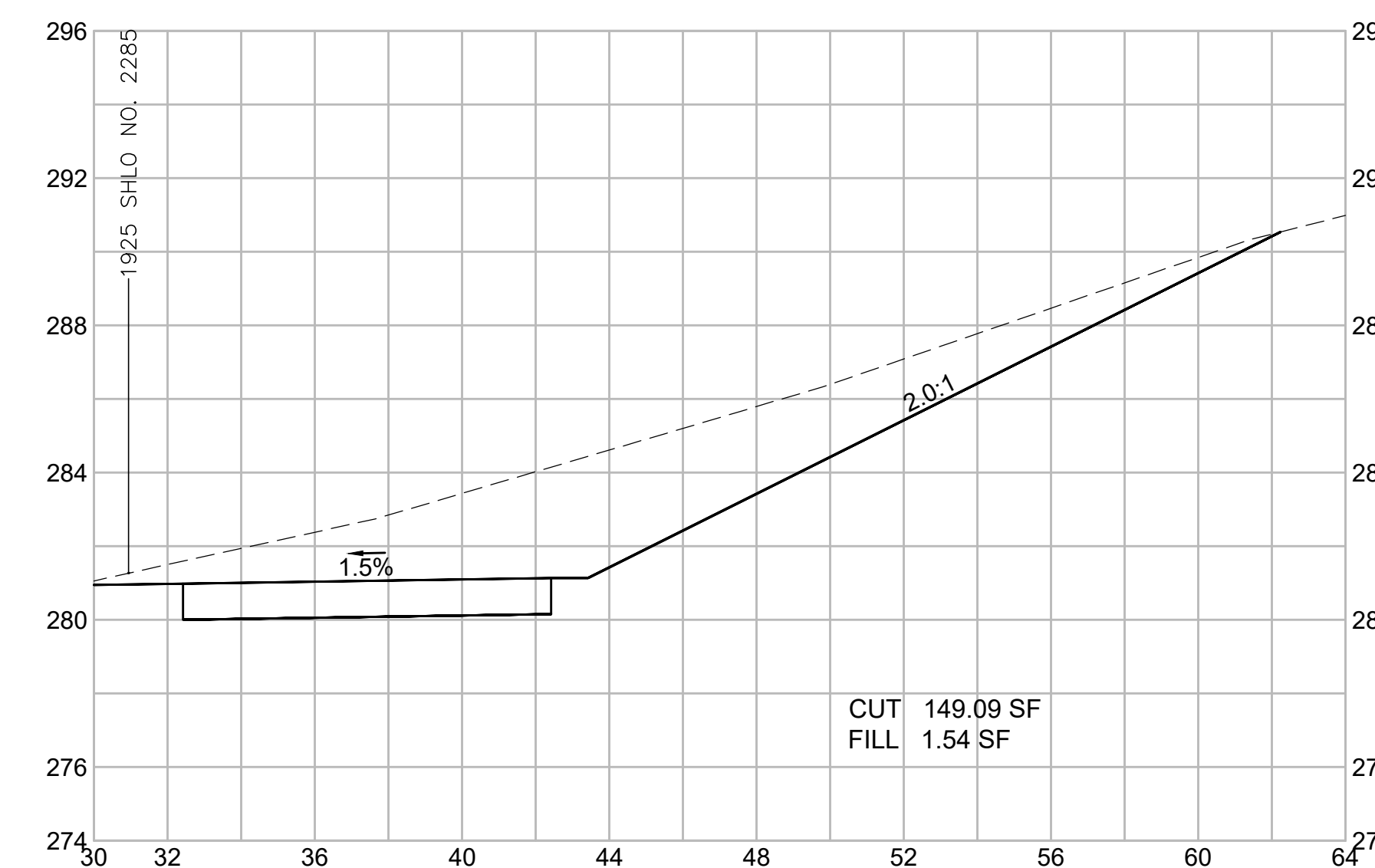


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

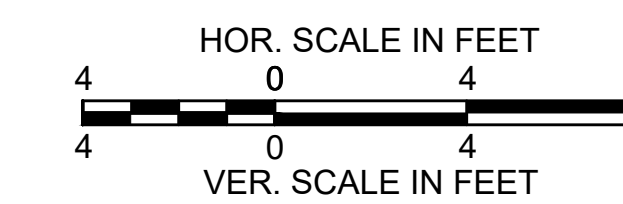
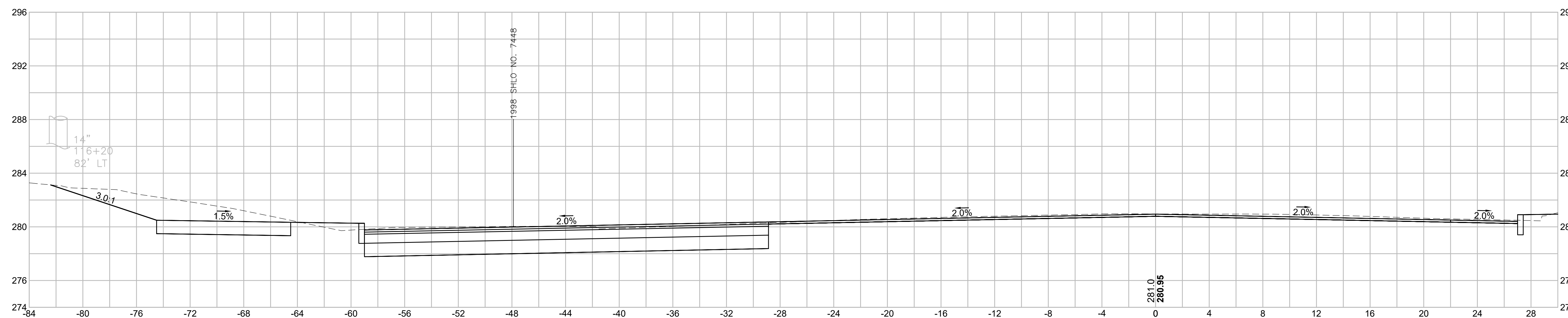
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	190	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 13 OF 43

116+00



116+00

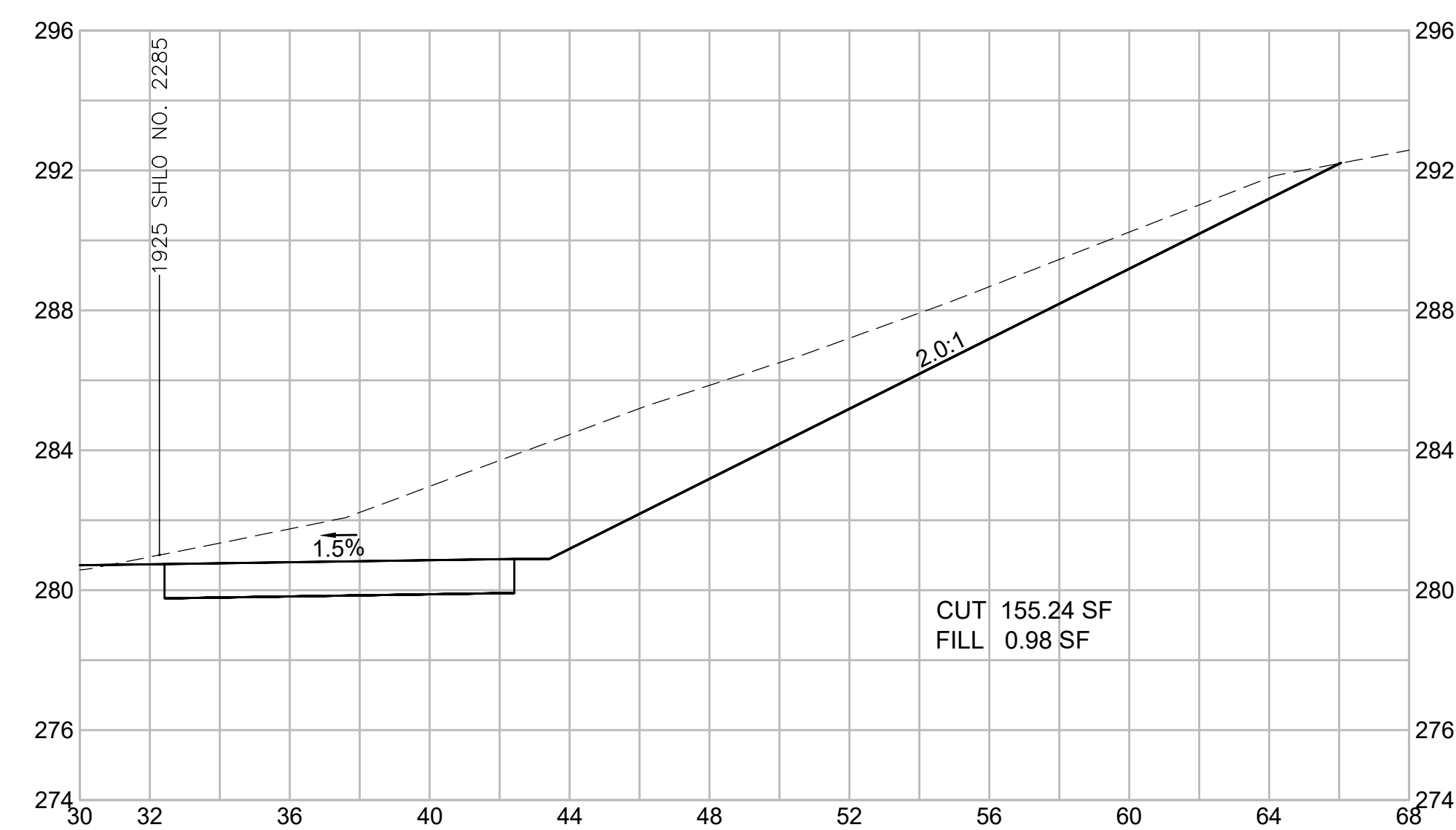


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

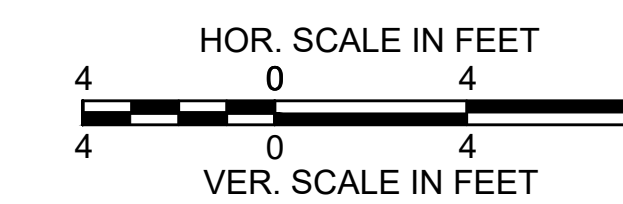
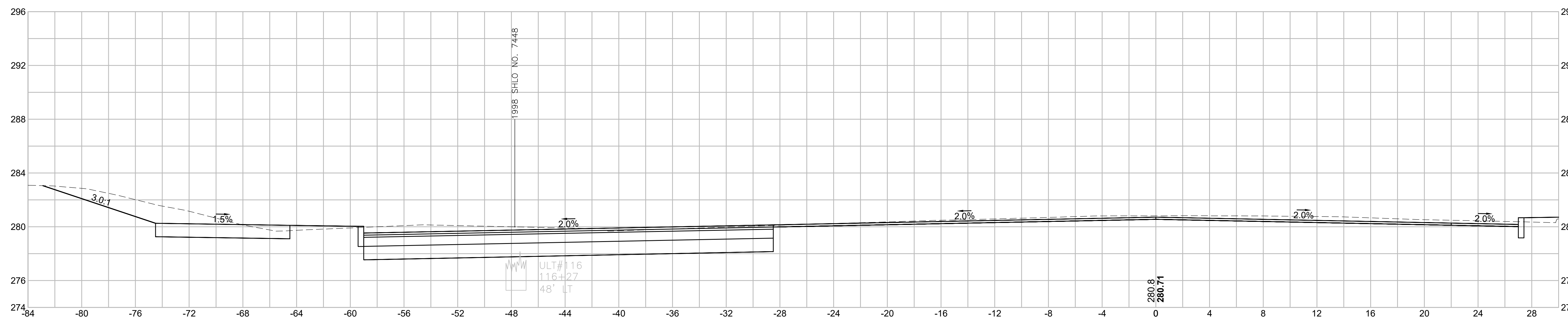
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	191	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 14 OF 43

116+50



116+50

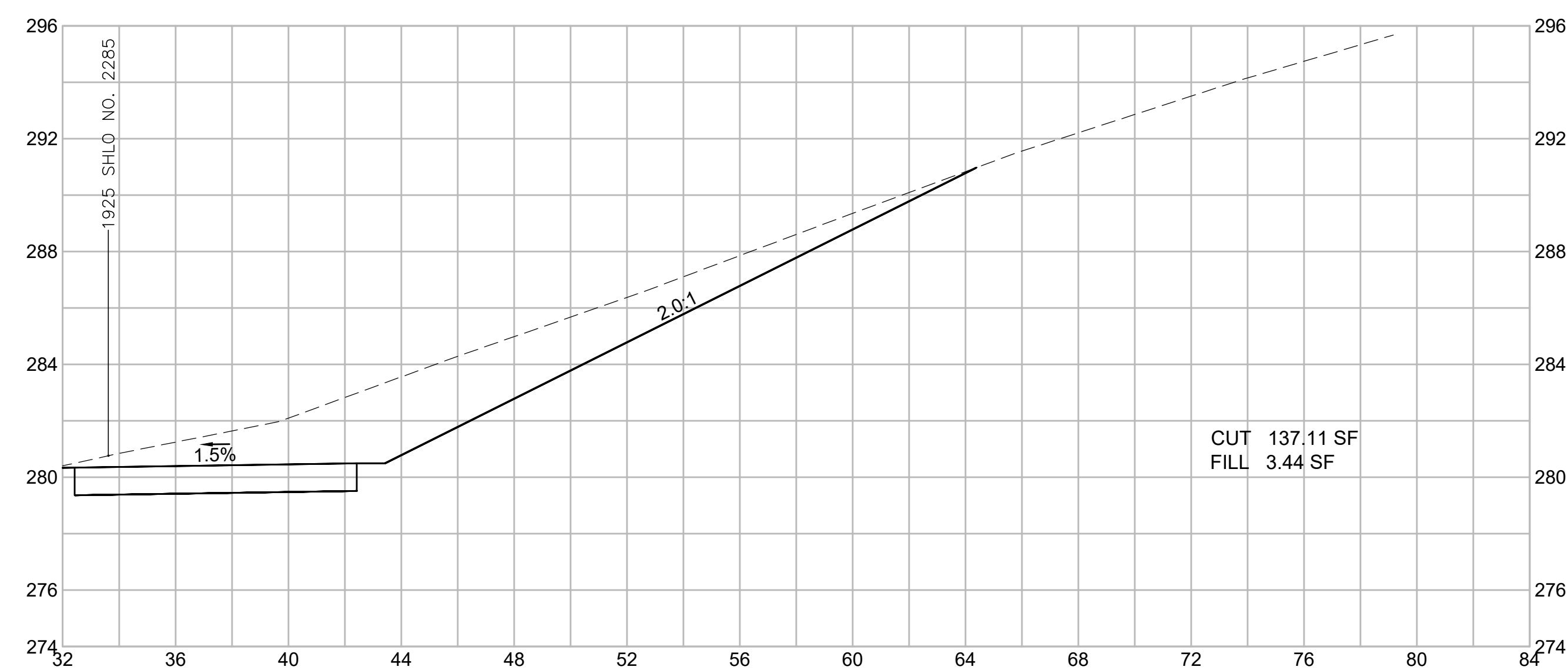


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

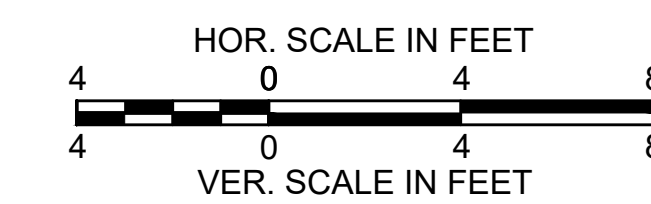
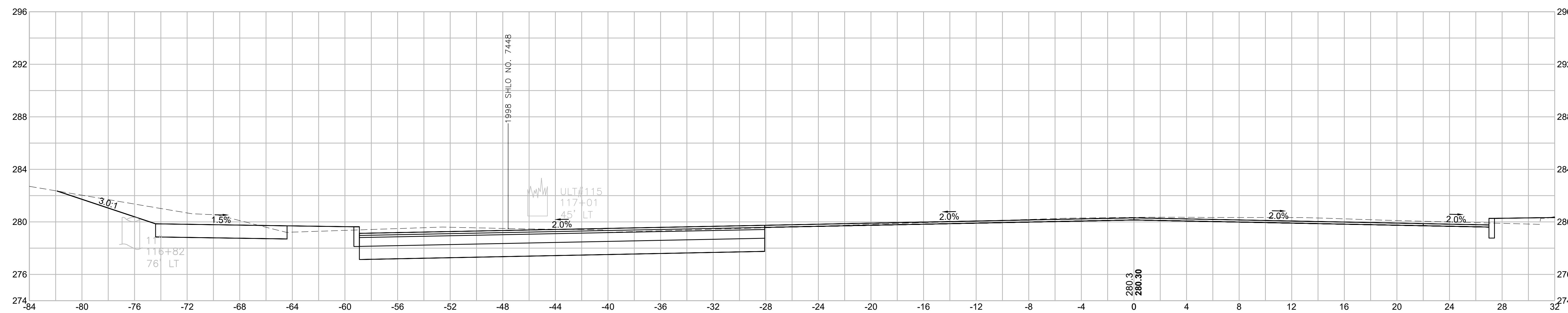
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	192	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 15 OF 43

117+00



117+00

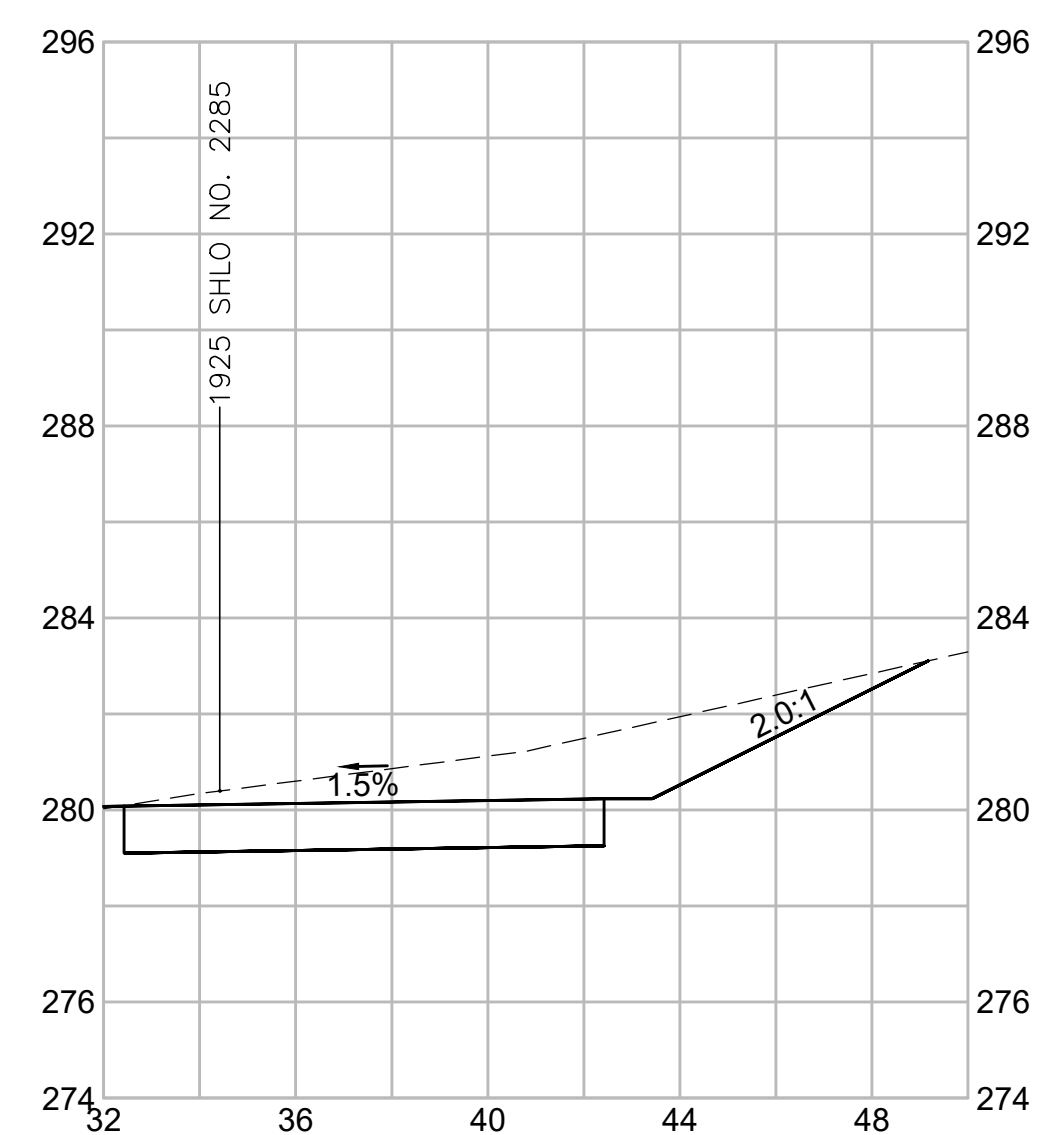


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

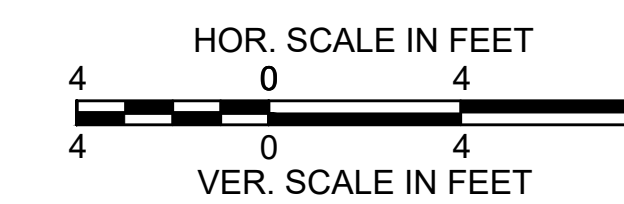
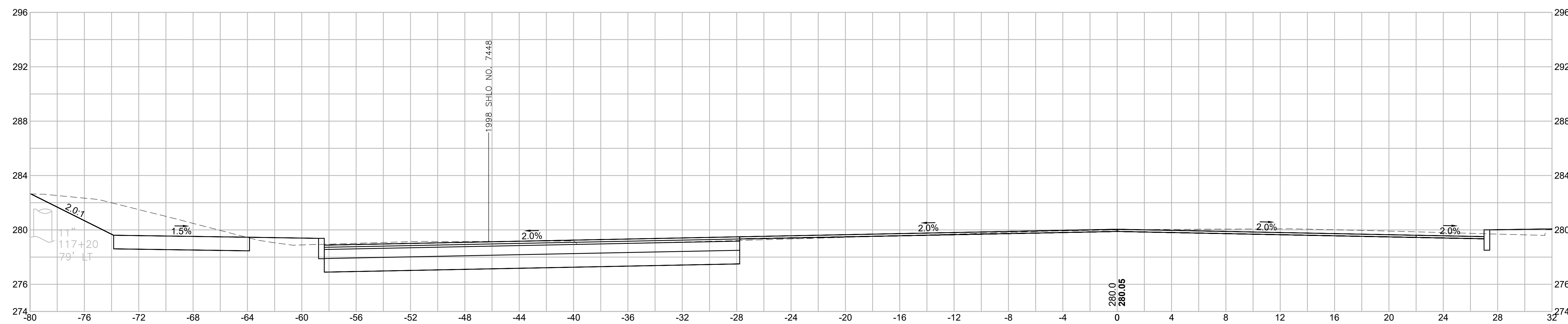
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	193	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 16 OF 43

117+30.03



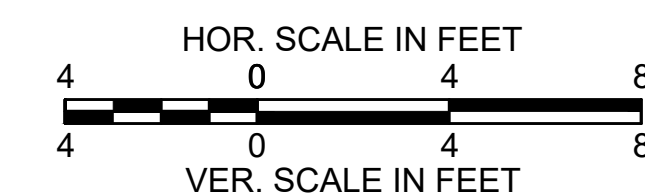
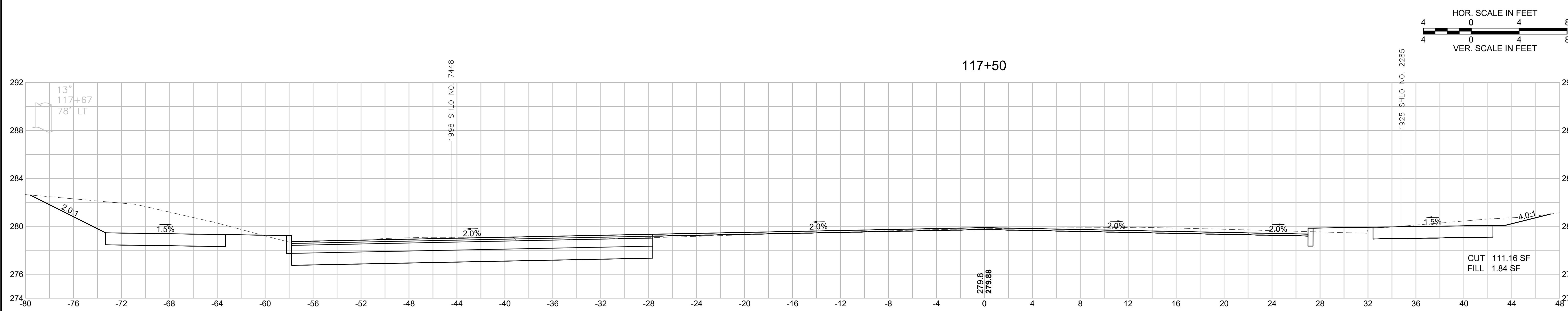
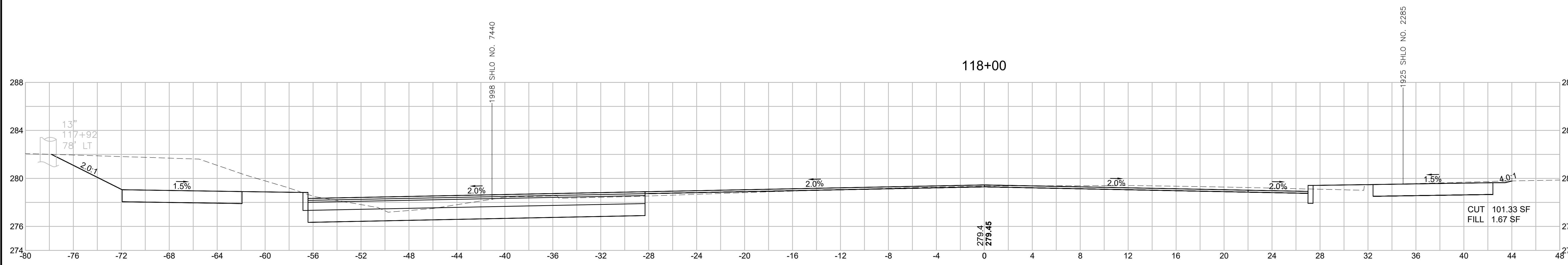
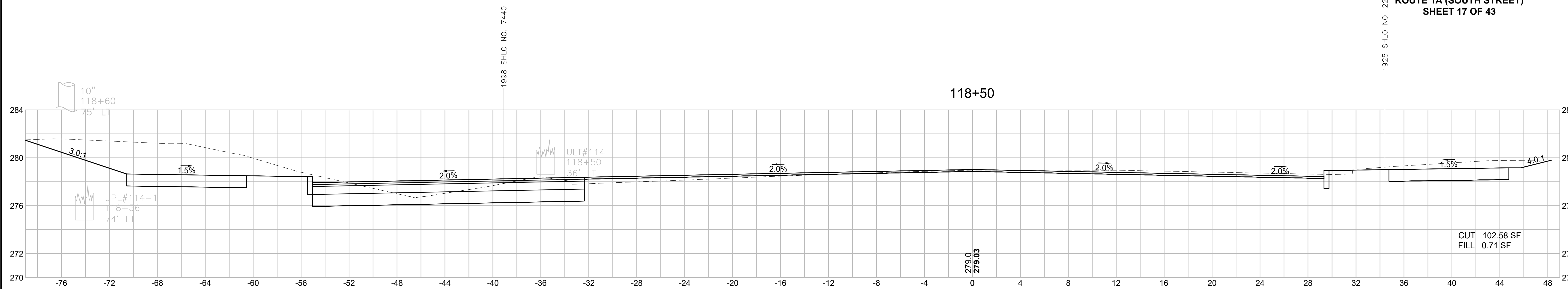
117+30.03



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	194	258
PROJECT FILE NO.		603739	

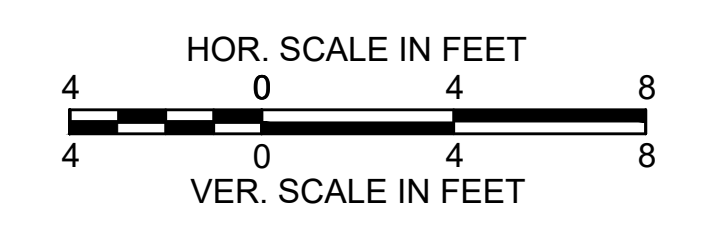
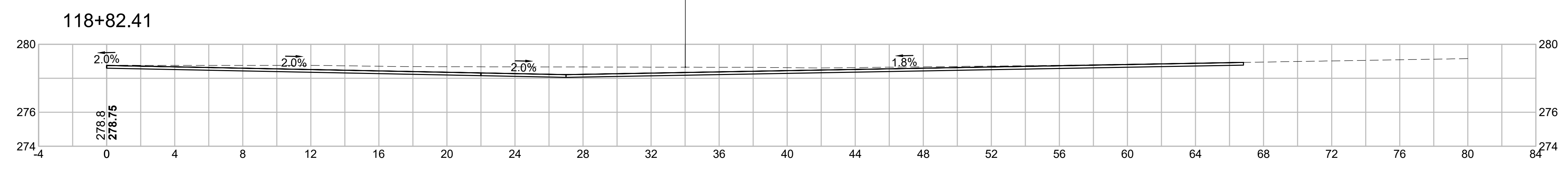
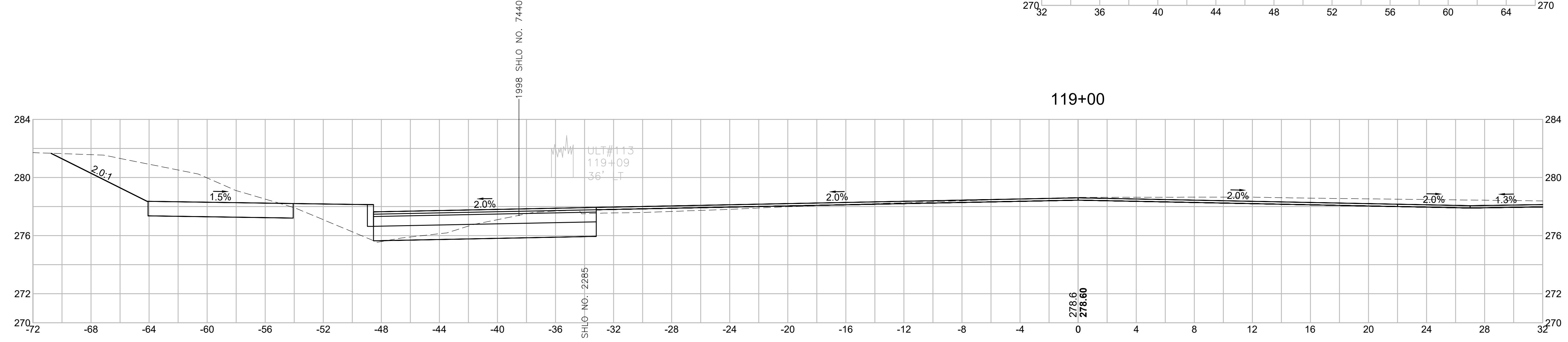
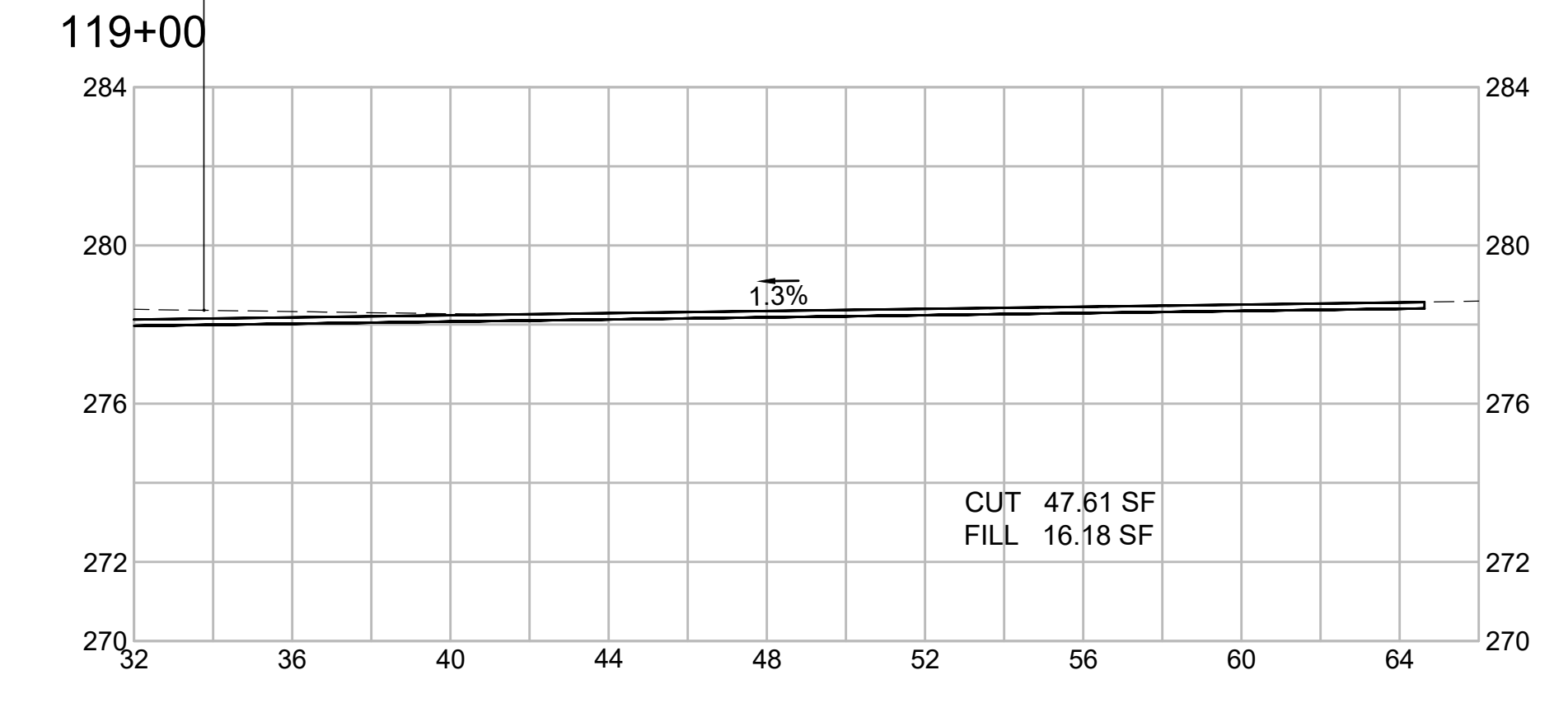
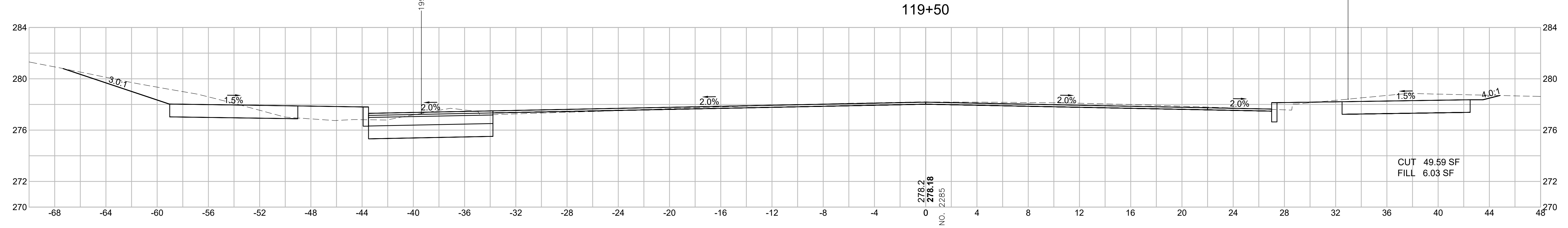
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 17 OF 43



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	195	258
PROJECT FILE NO.		603739	

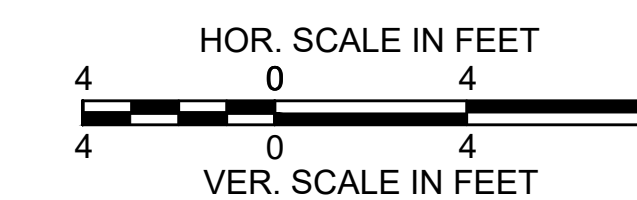
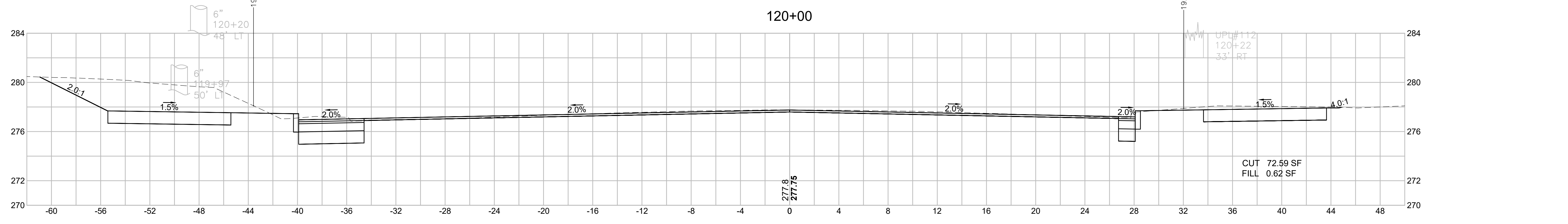
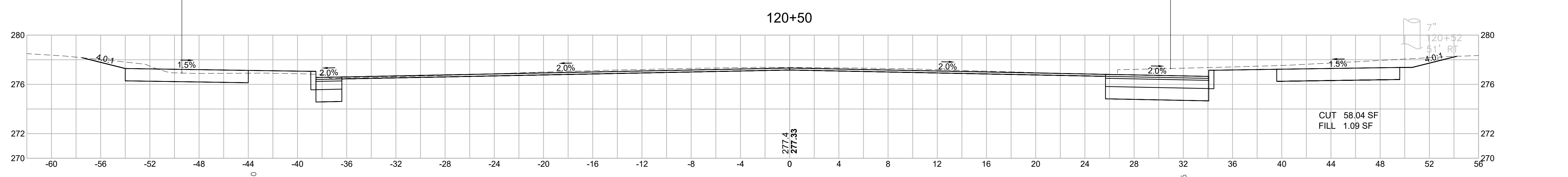
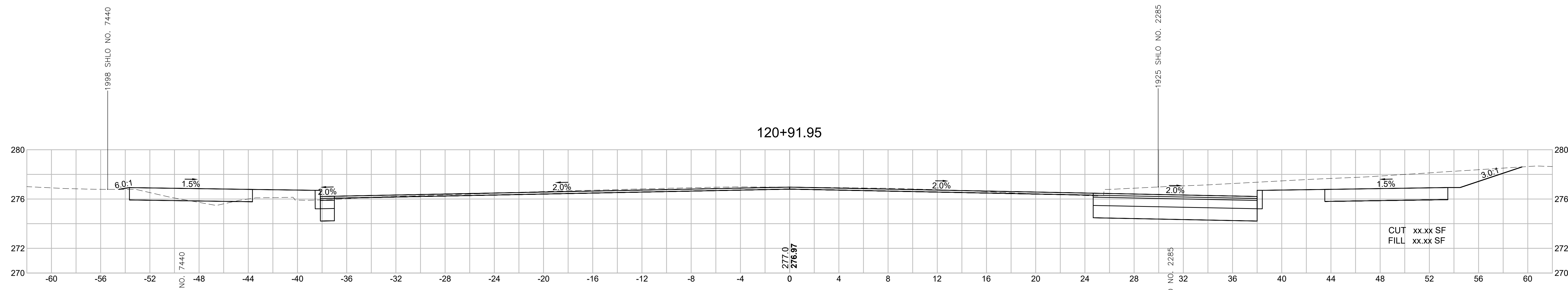
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 18 OF 43**



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	196	258
PROJECT FILE NO.		603739	

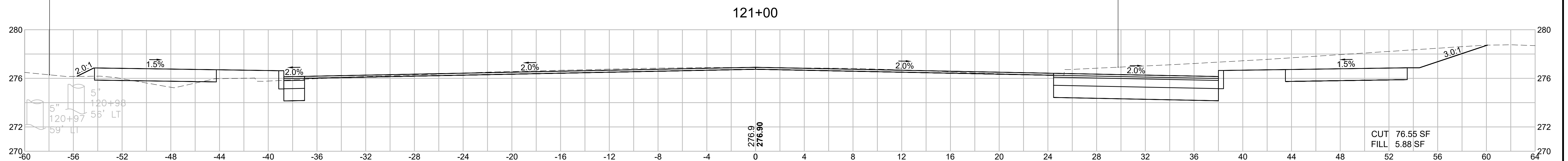
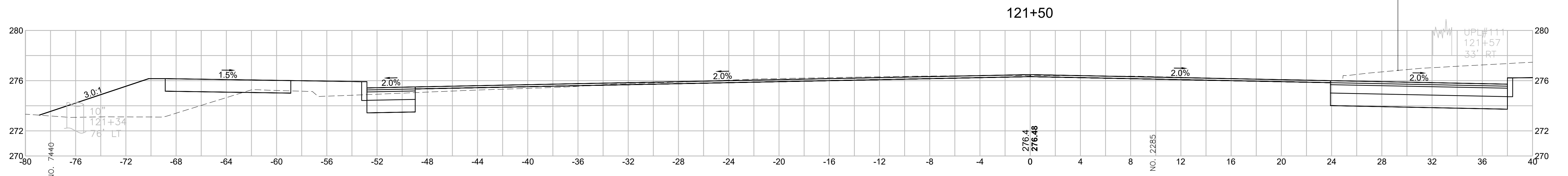
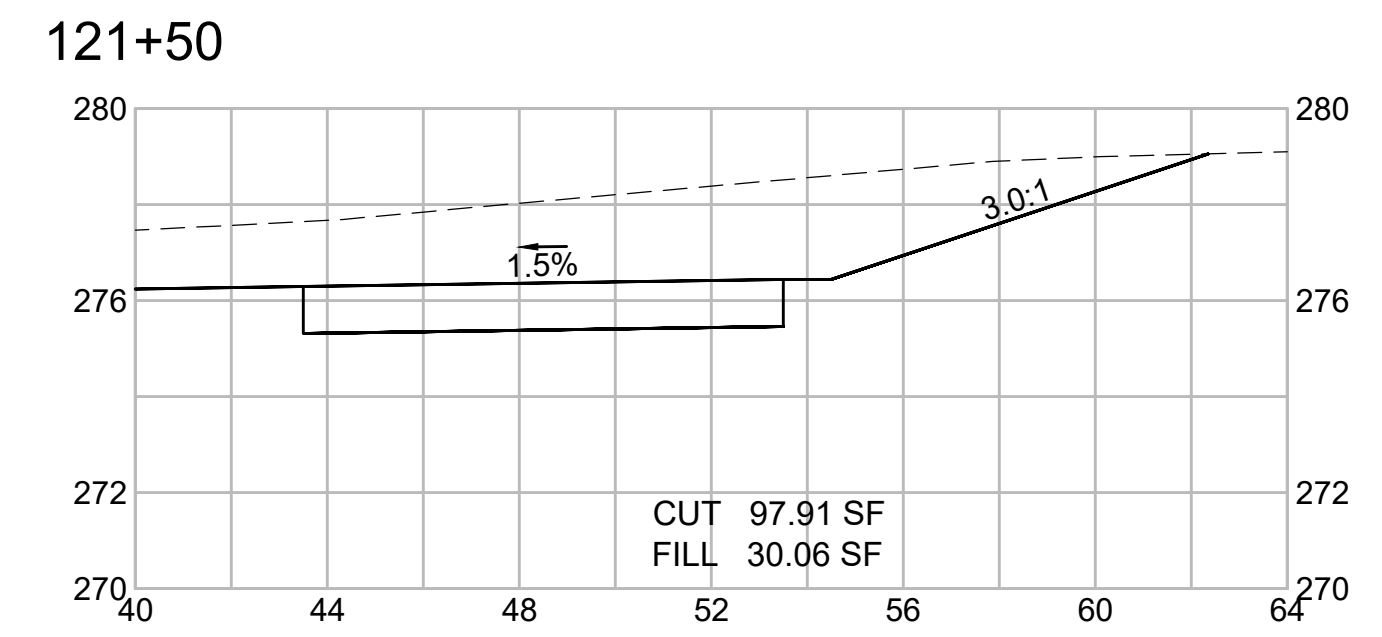
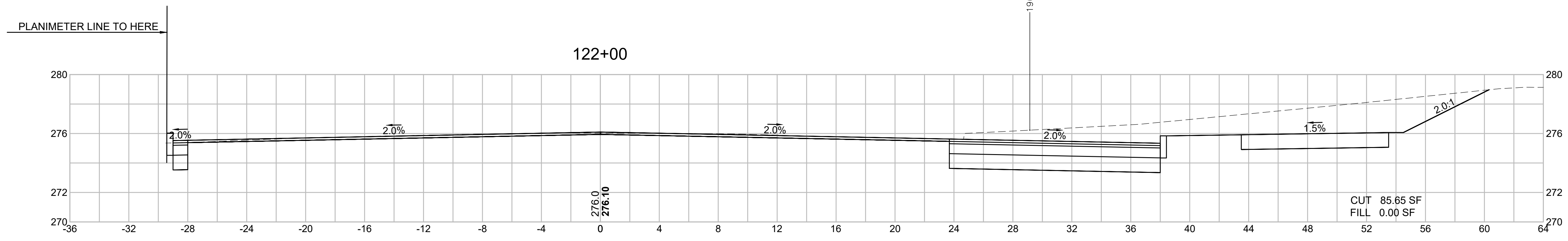
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 19 OF 43



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	197	258
PROJECT FILE NO.		603739	

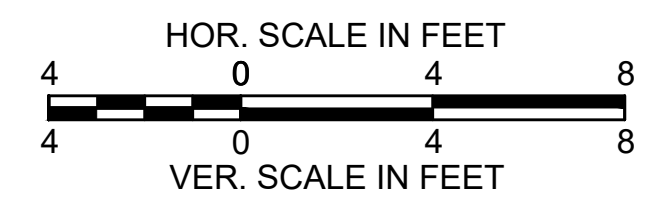
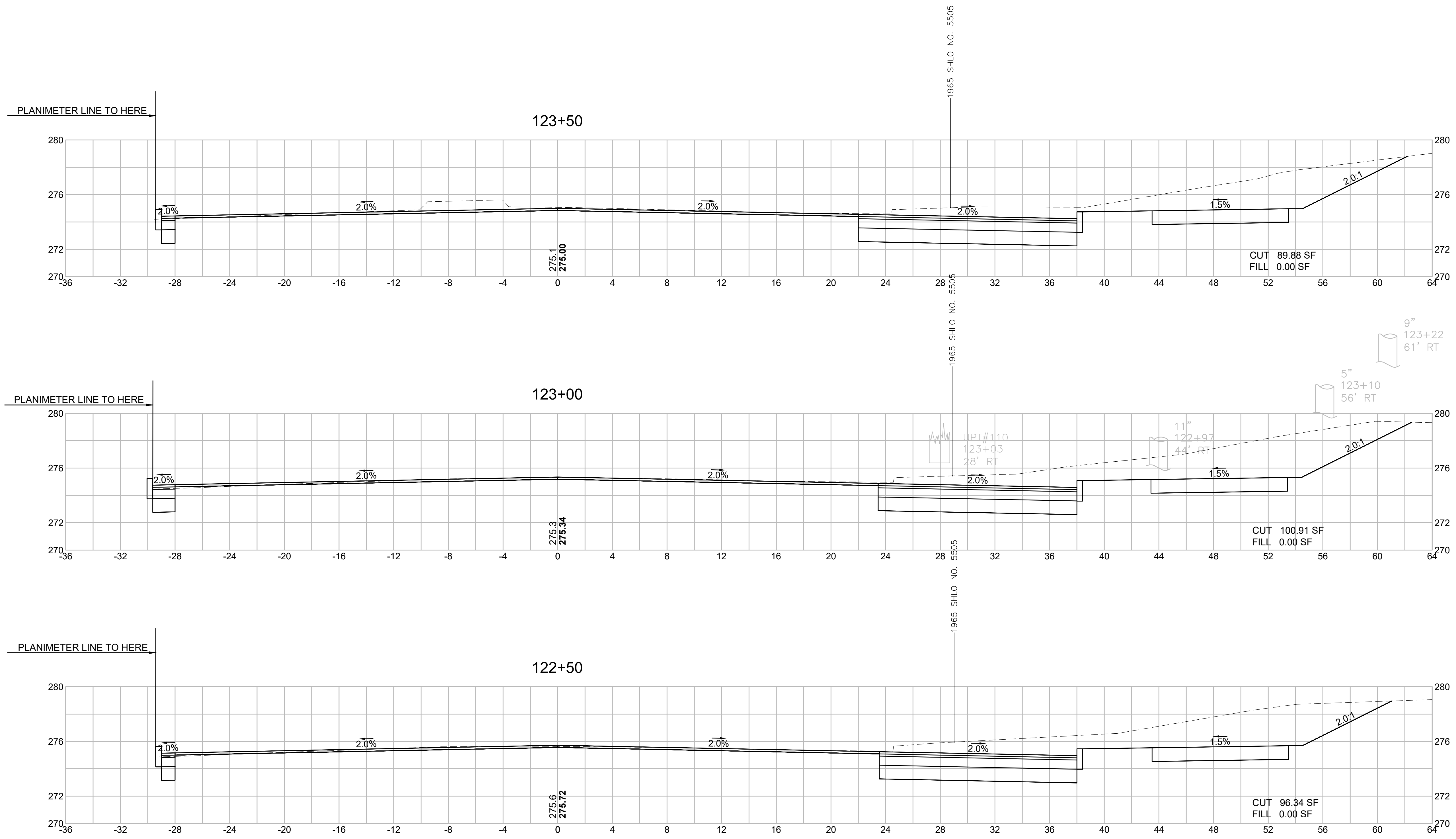
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 20 OF 43**



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	198	258
PROJECT FILE NO.		603739	

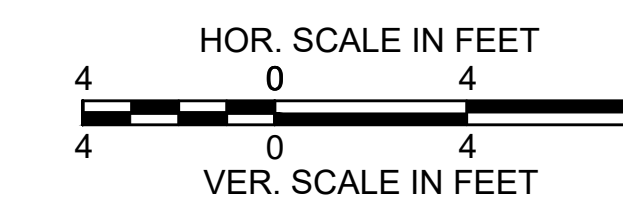
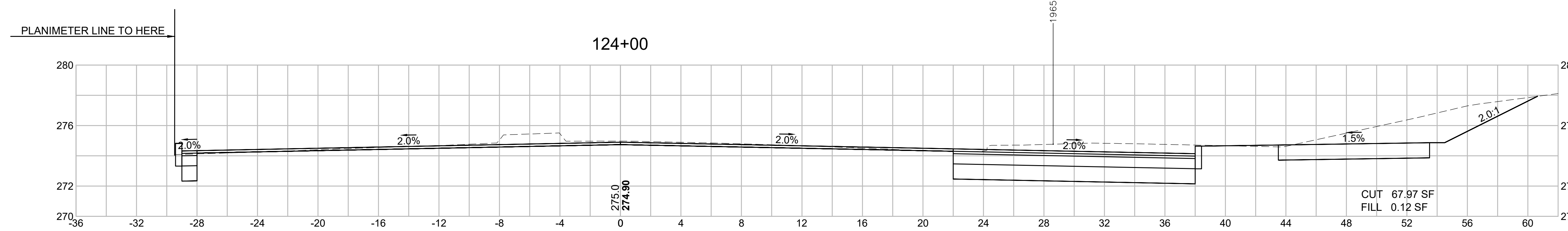
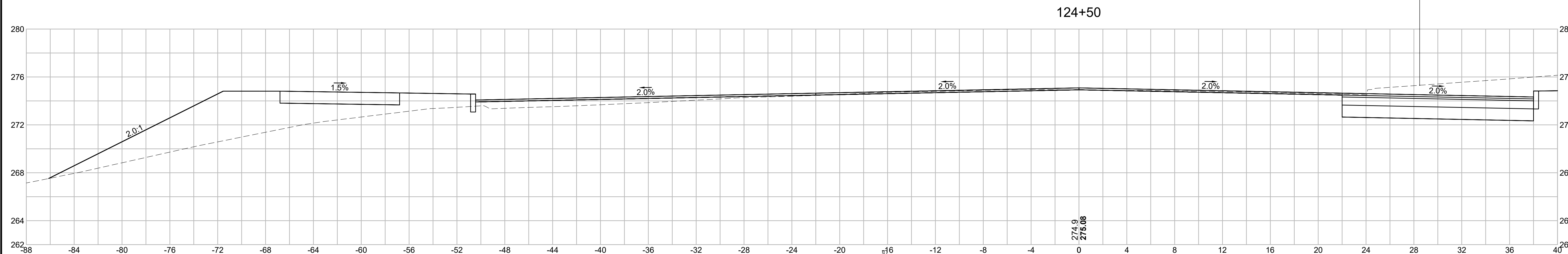
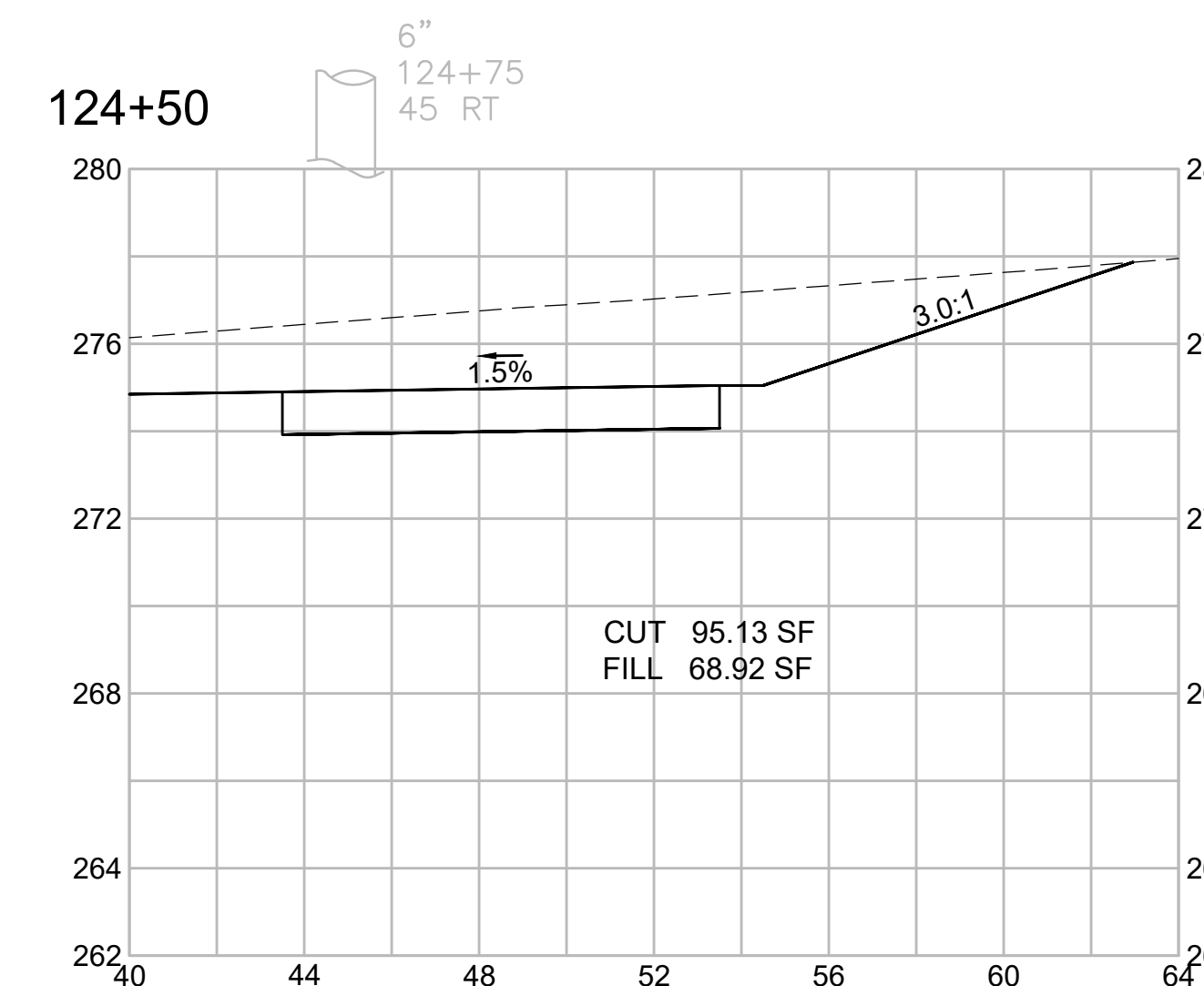
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 21 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	199	258
PROJECT FILE NO.		603739	

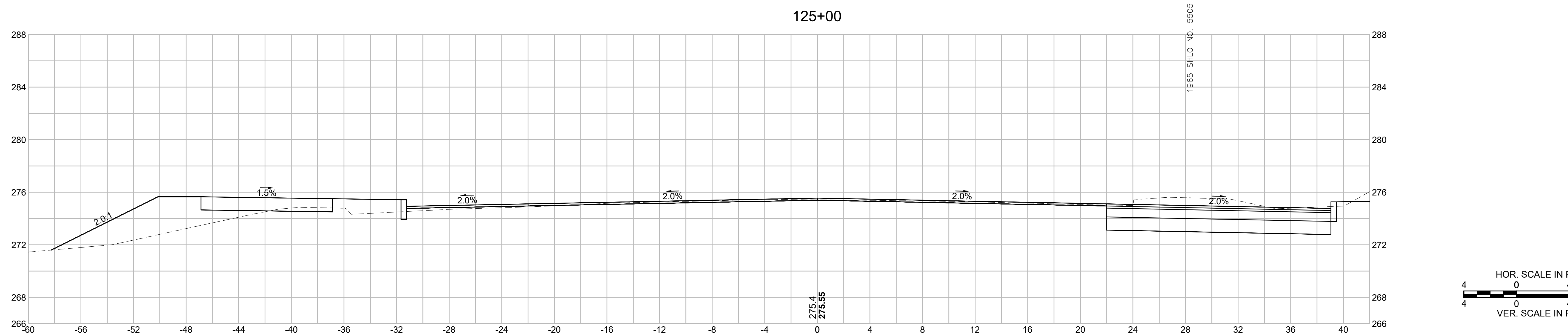
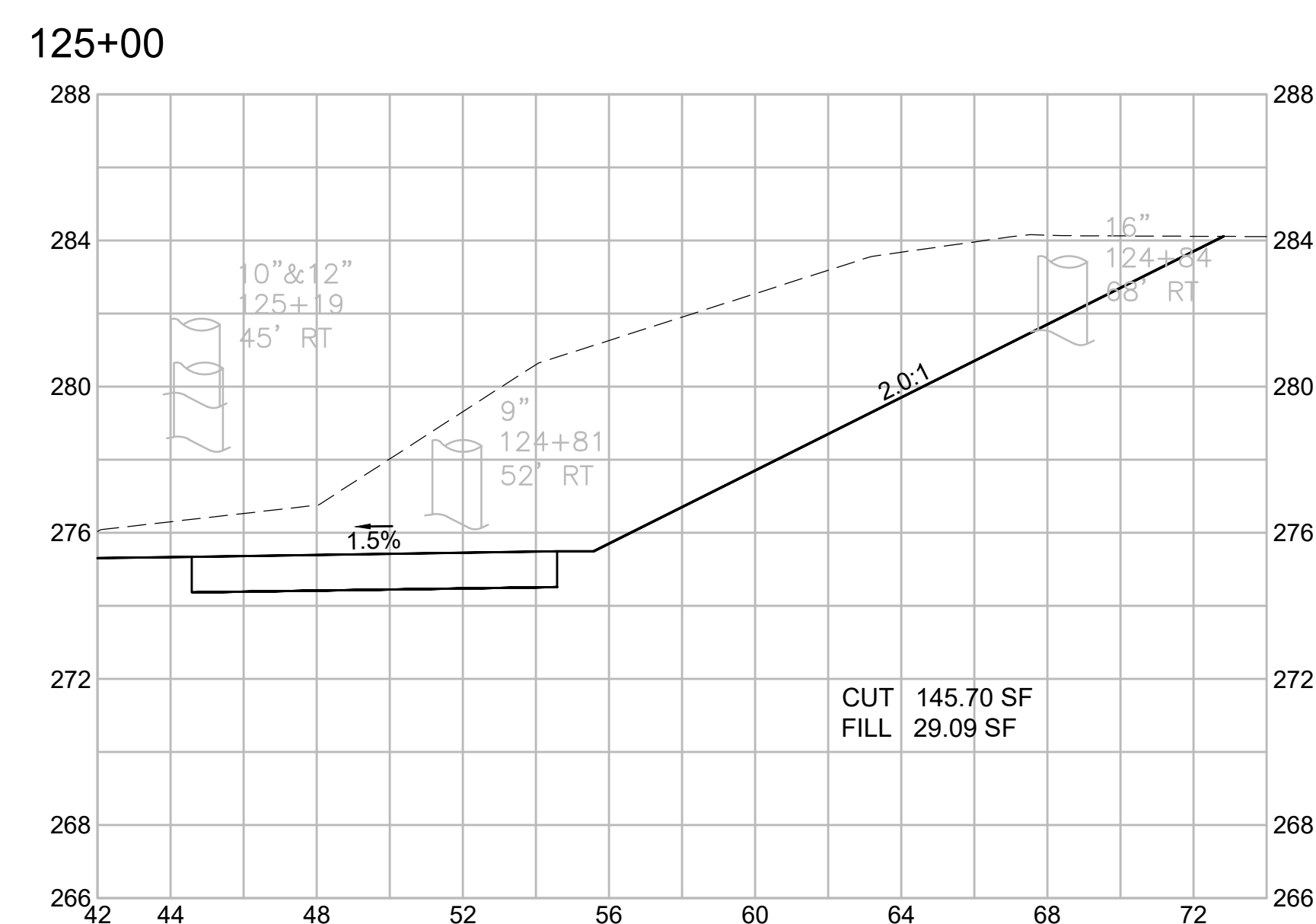
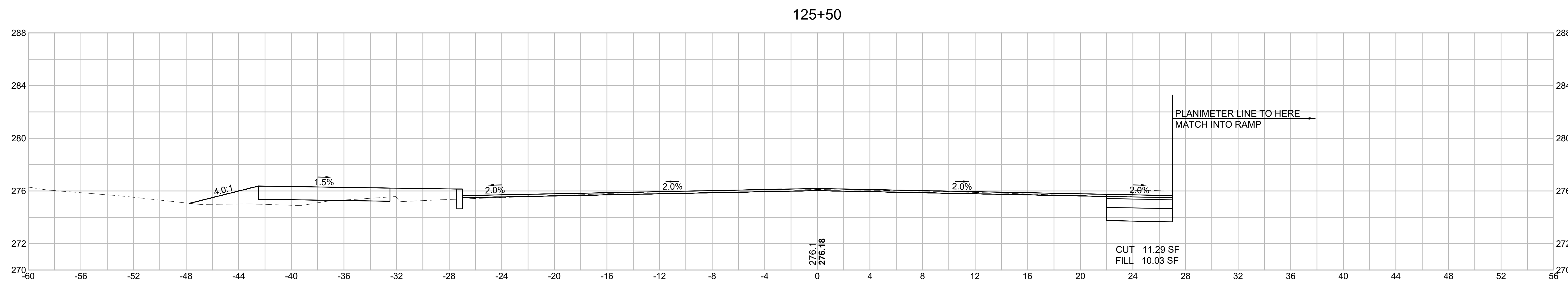
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 22 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	200	258
PROJECT FILE NO.		603739	

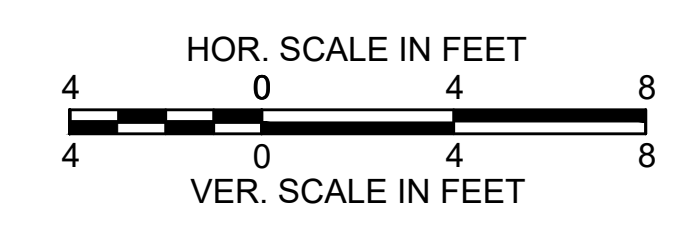
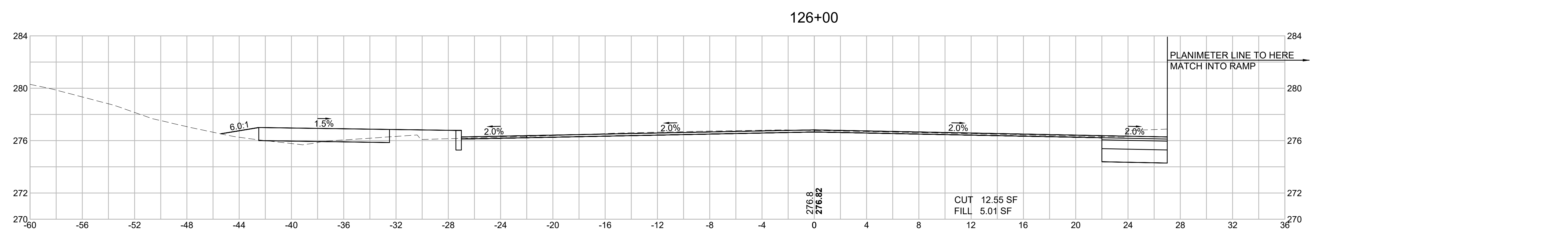
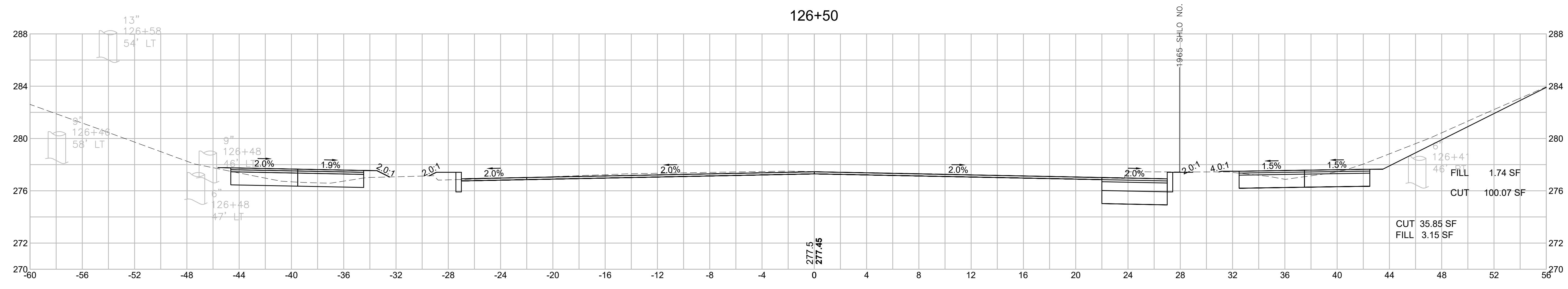
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 23 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	201	258
PROJECT FILE NO.		603739	

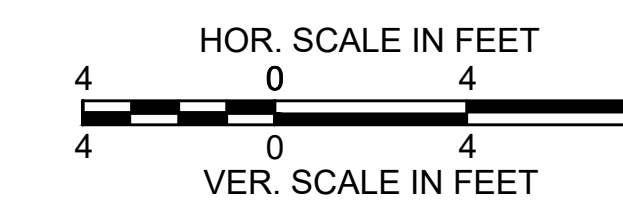
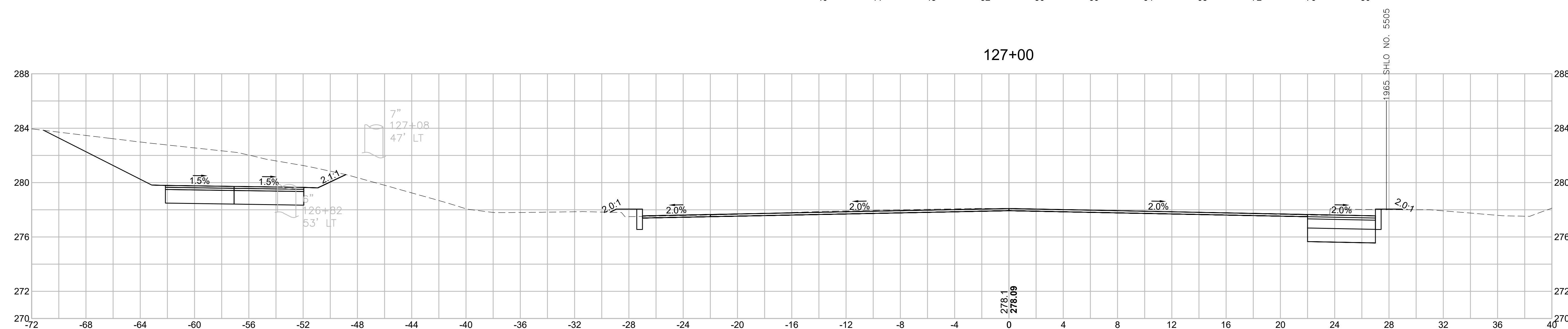
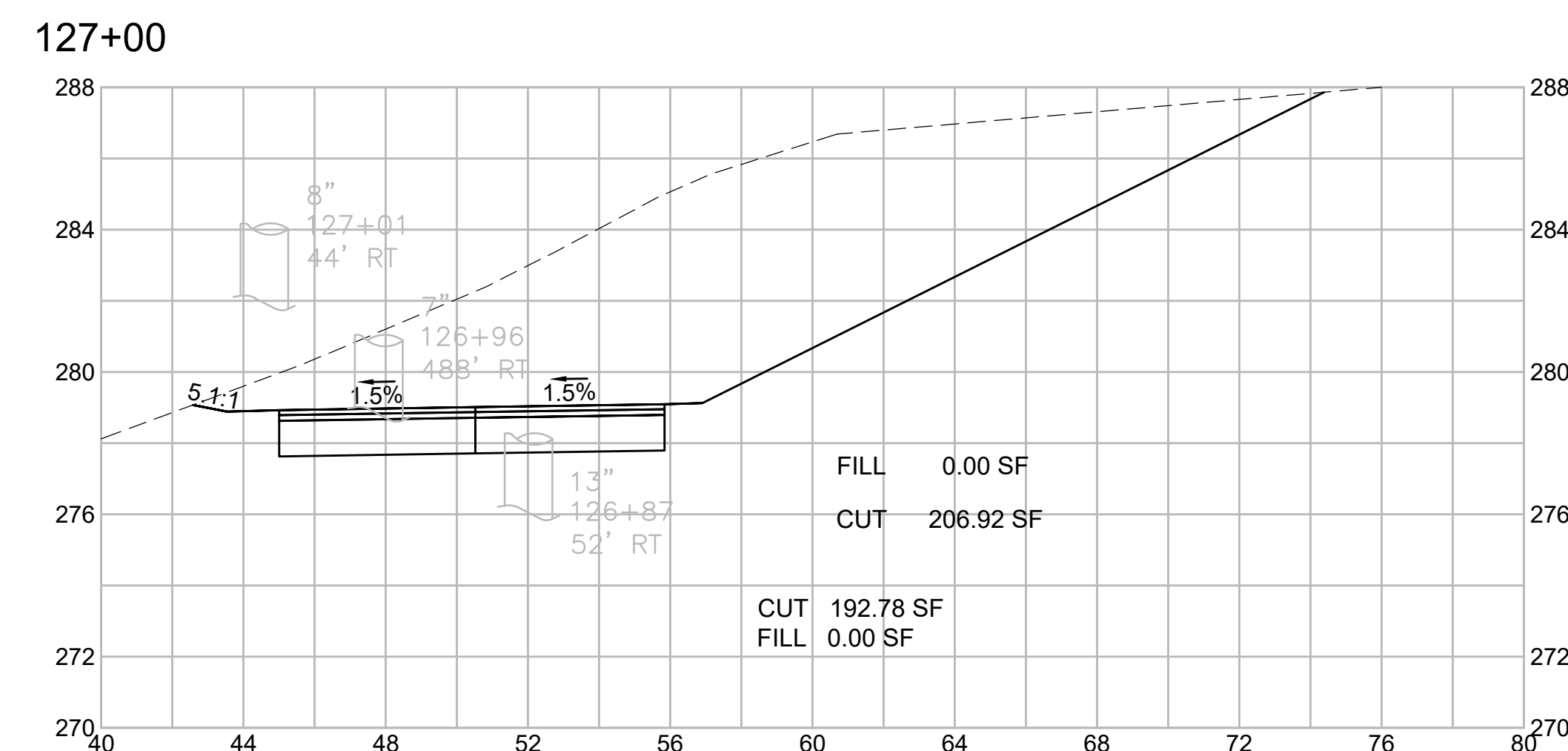
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 24 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	202	258
PROJECT FILE NO.		603739	

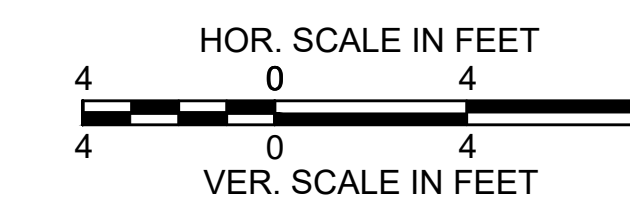
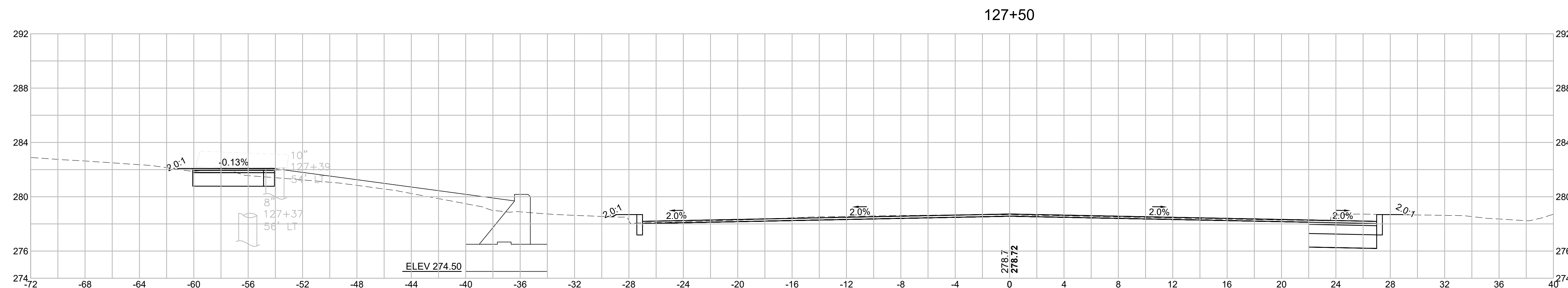
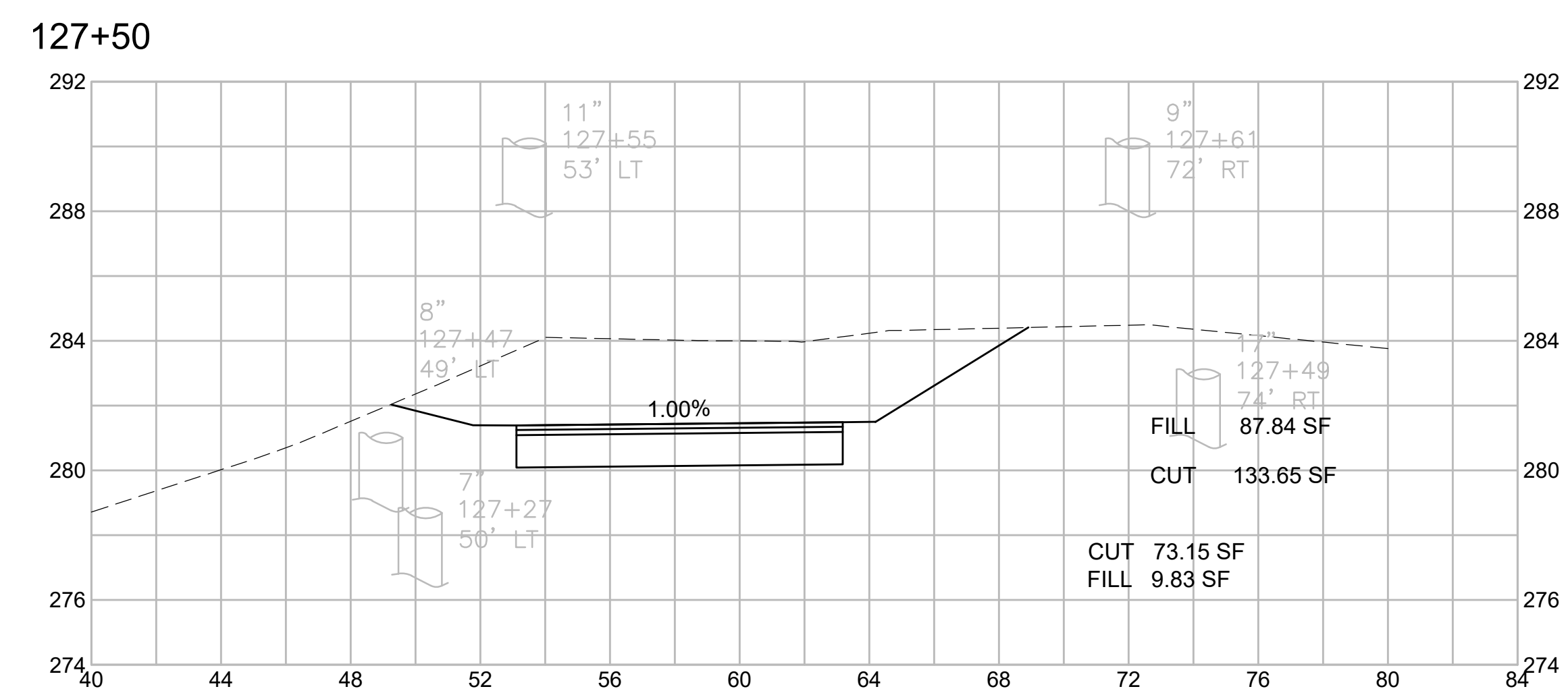
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 25 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	203	258
PROJECT FILE NO.		603739	

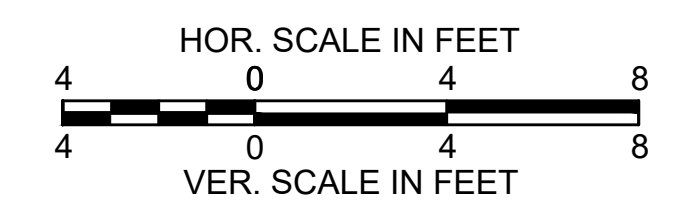
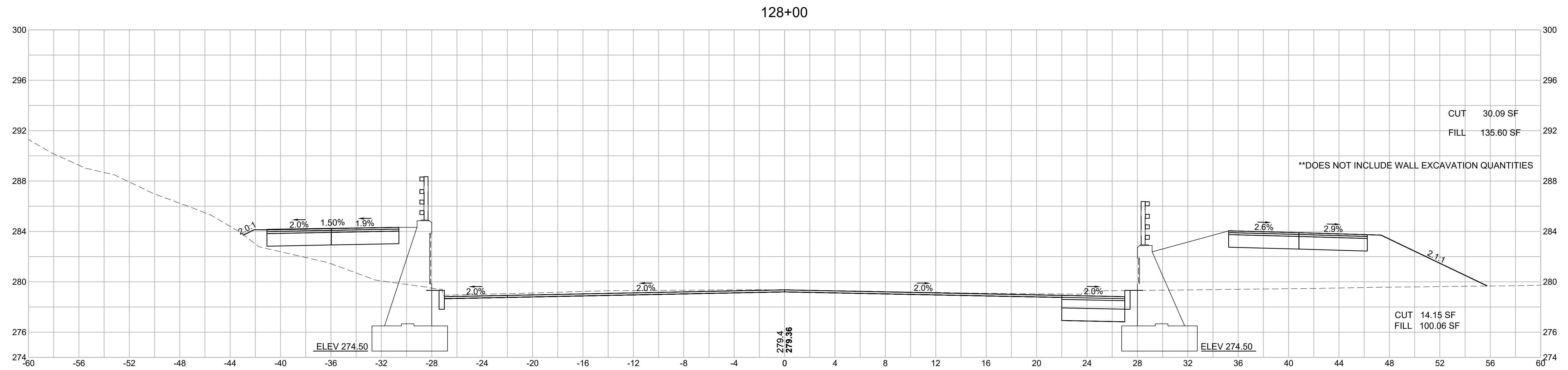
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 26 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	204	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 27 OF 43

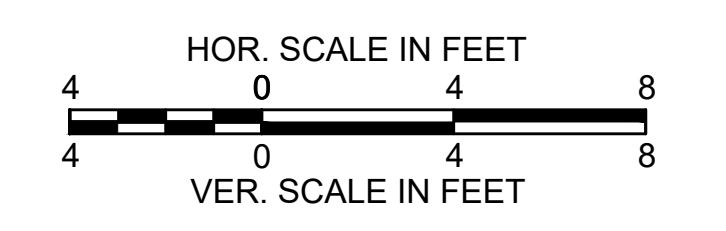
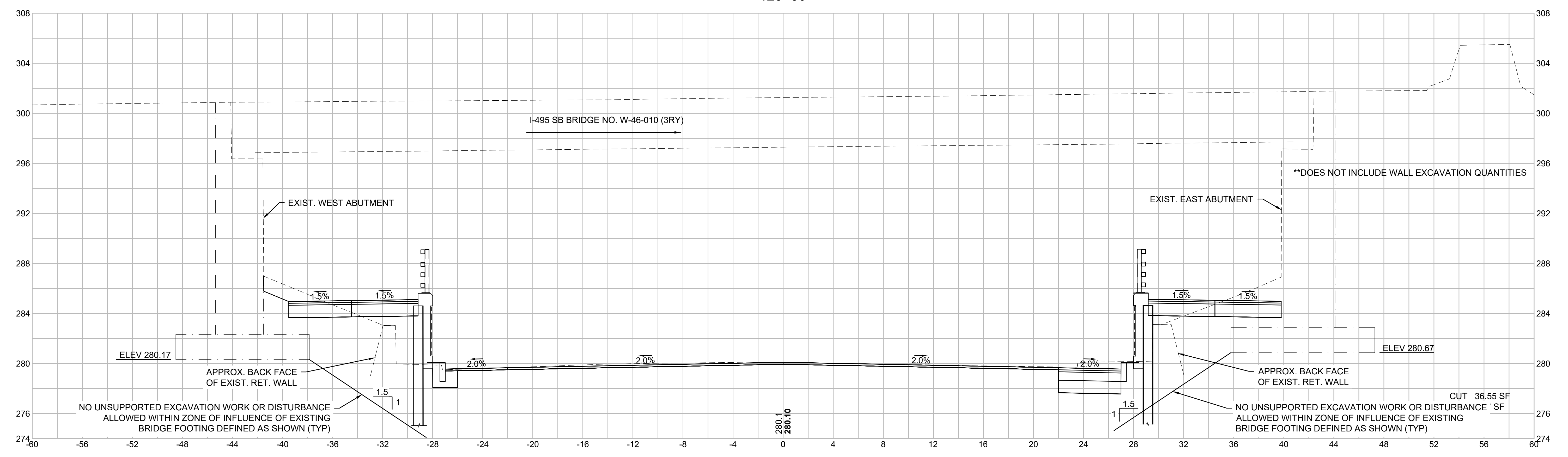


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	205	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 28 OF 43

128+50

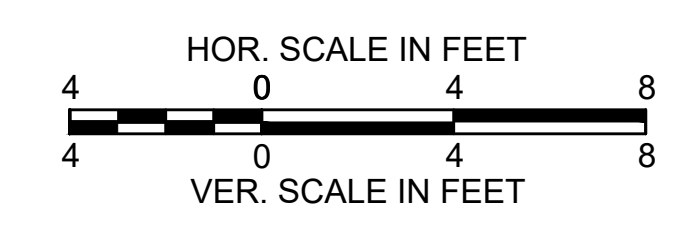


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	206	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 29 OF 43

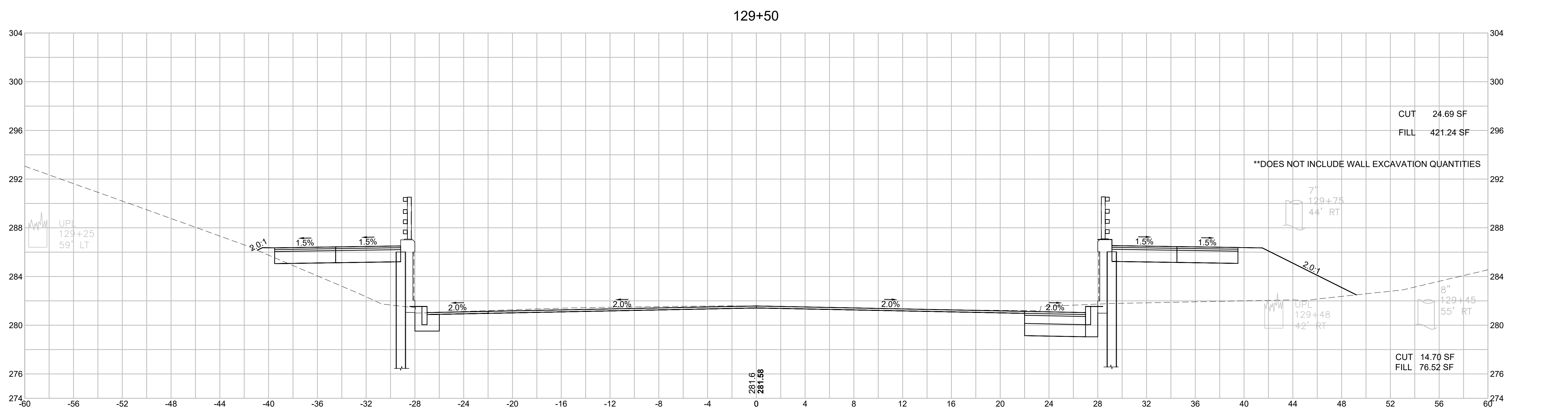
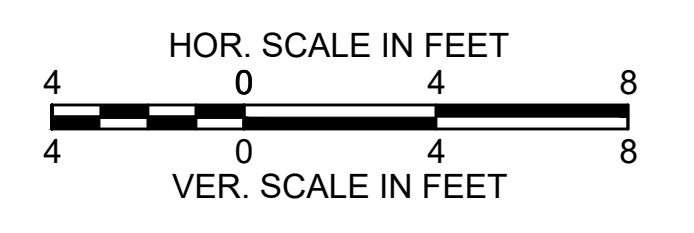
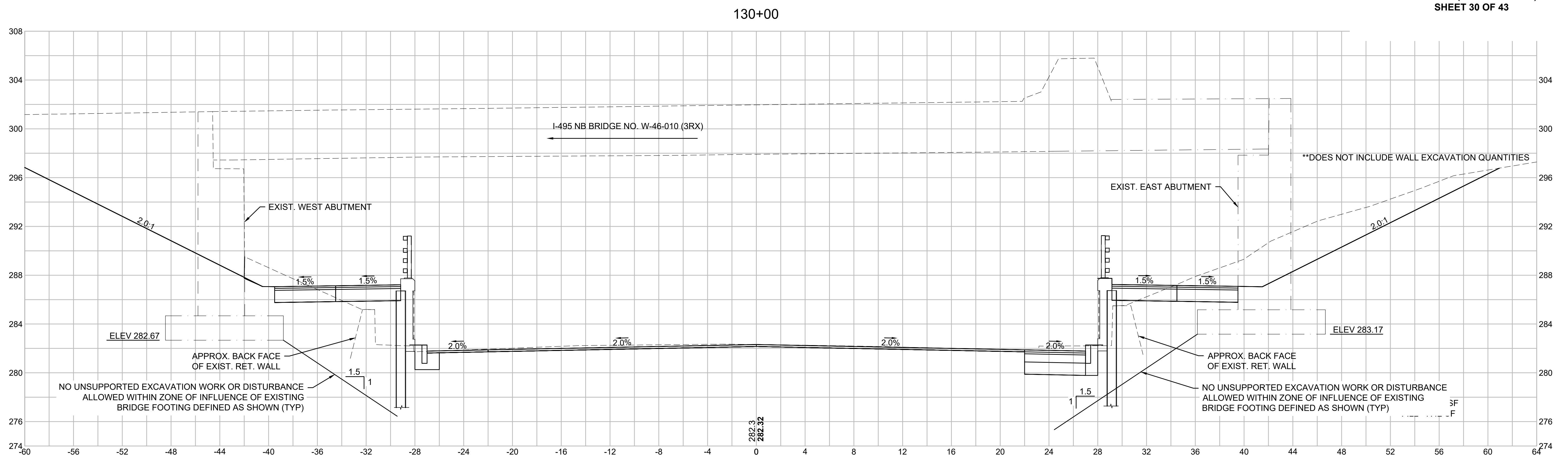
129+00



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	207	258
PROJECT FILE NO.		603739	

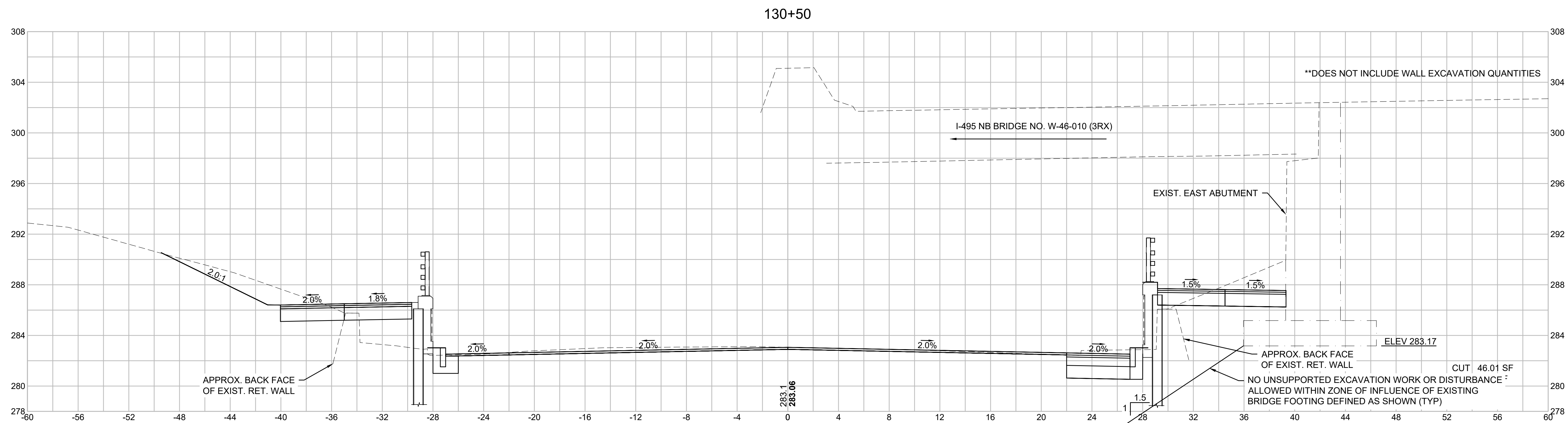
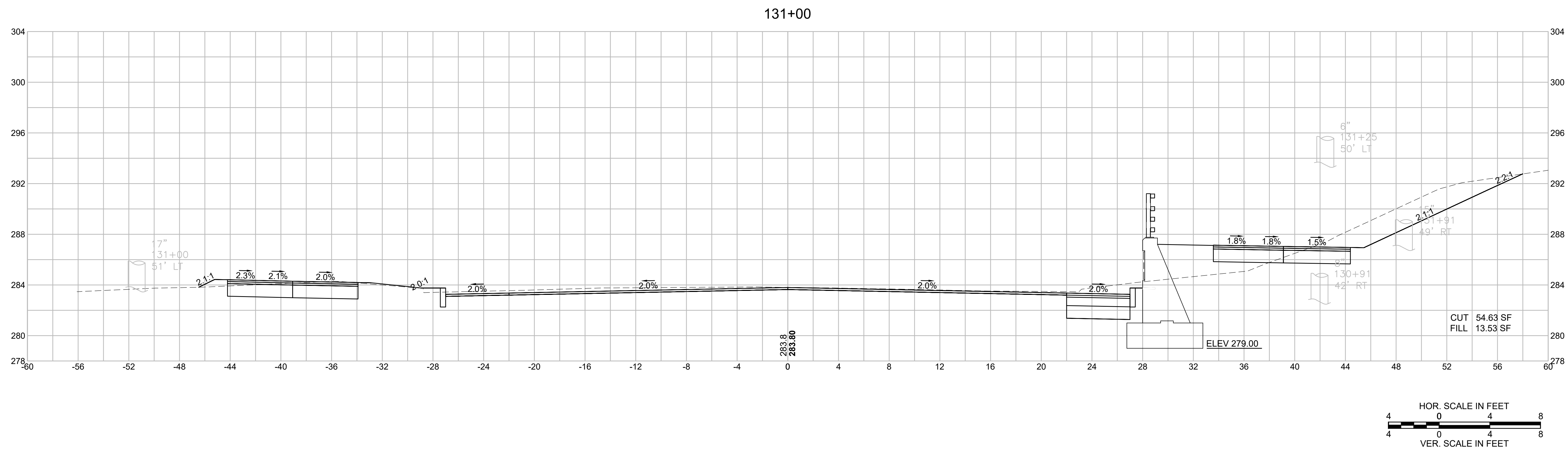
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 30 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	208	258
PROJECT FILE NO.		603739	

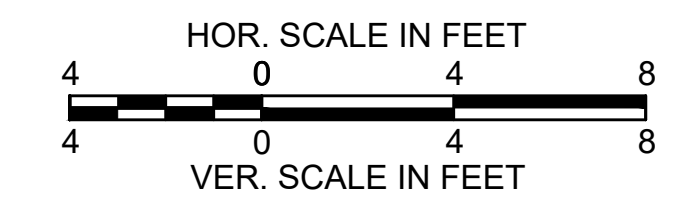
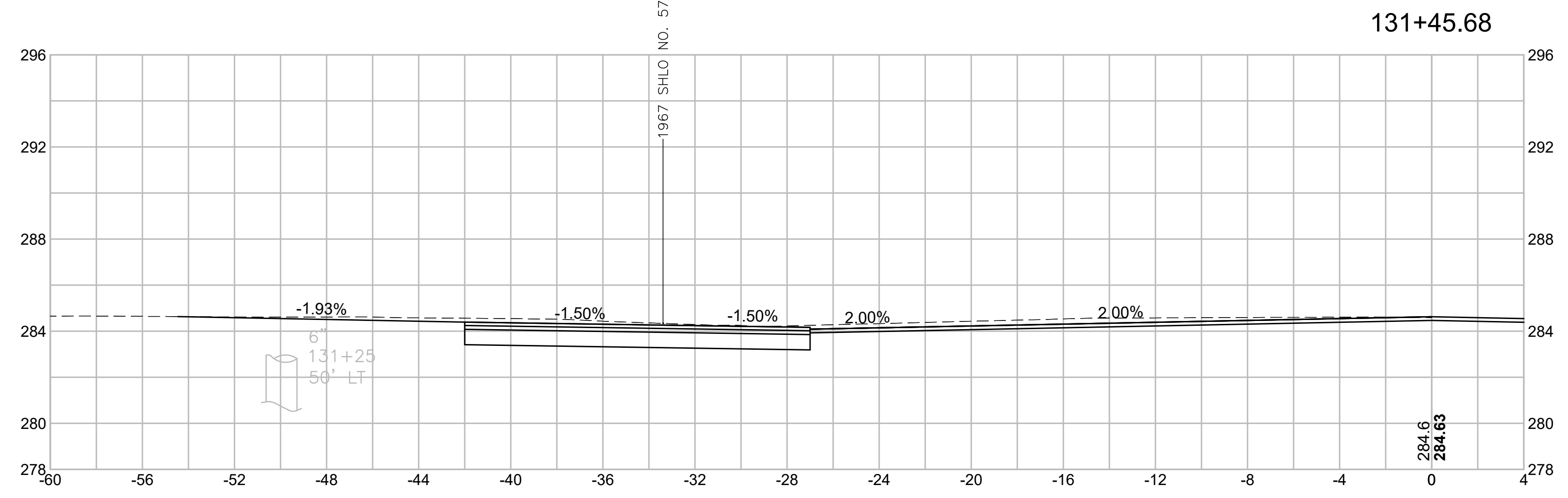
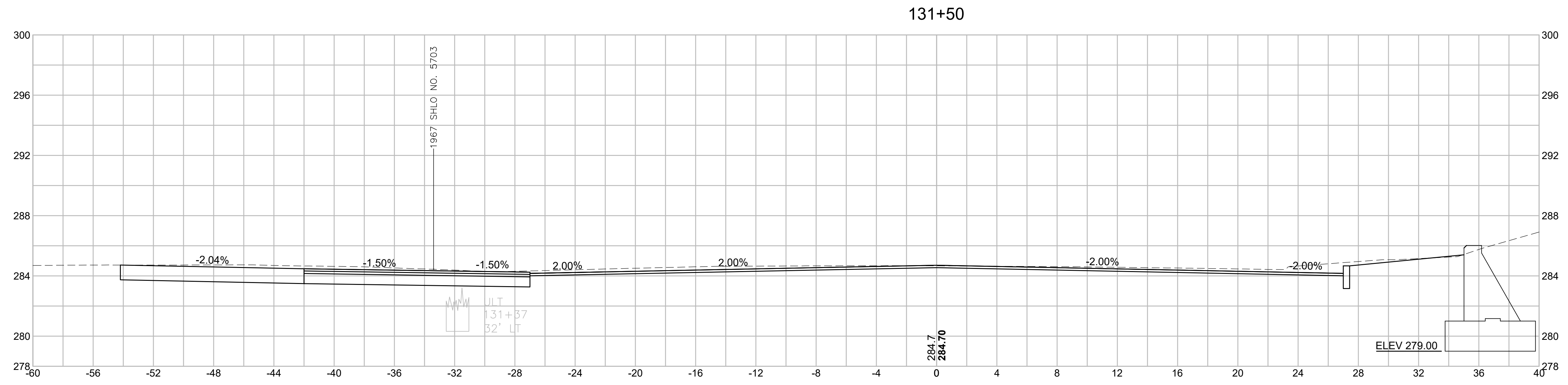
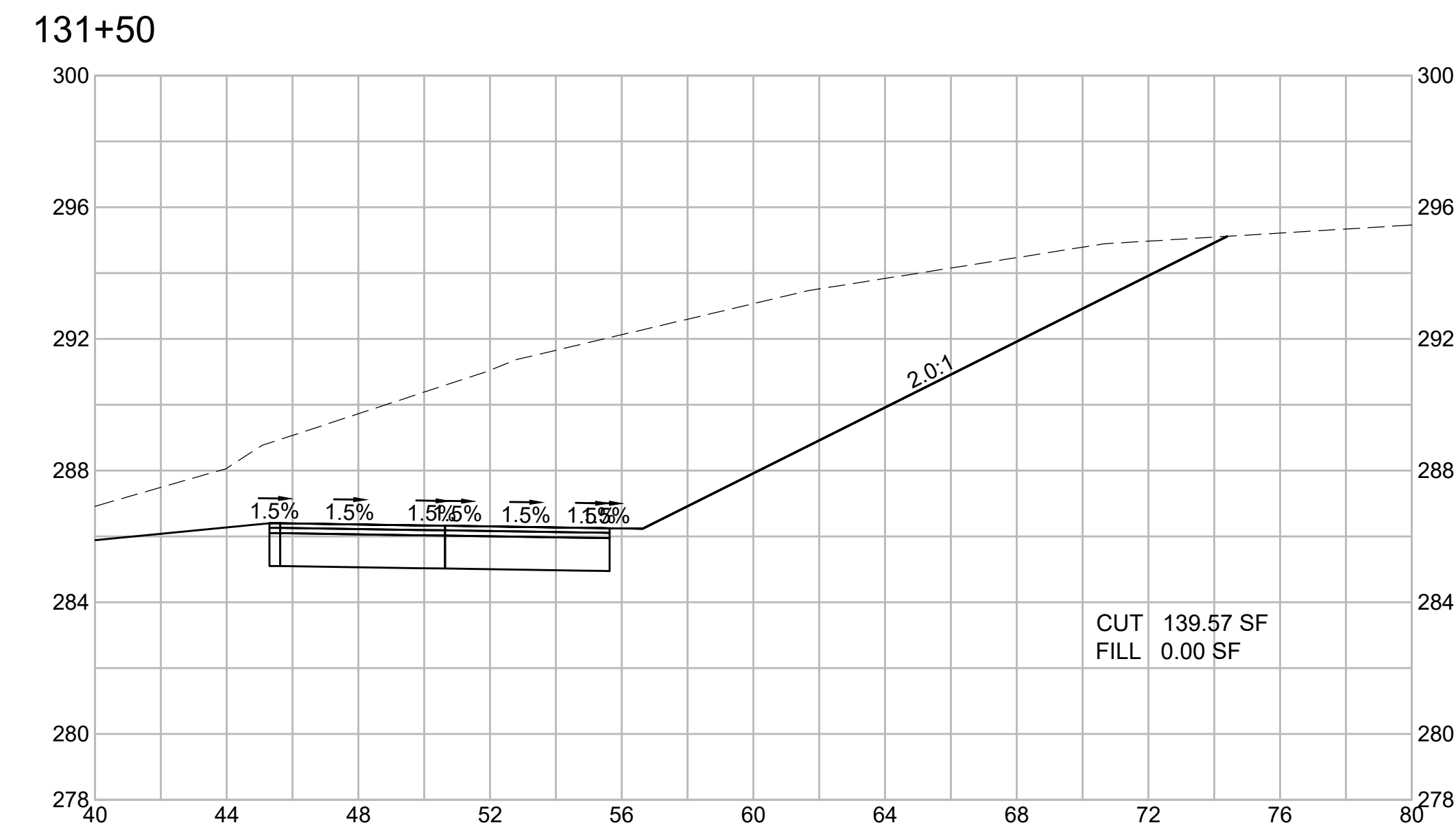
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 31 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	209	258
PROJECT FILE NO.		603739	

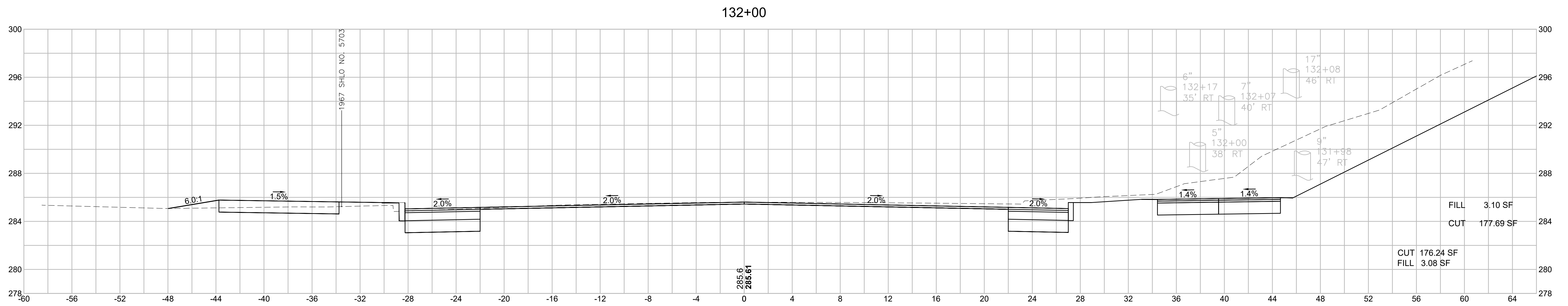
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 32 OF 43



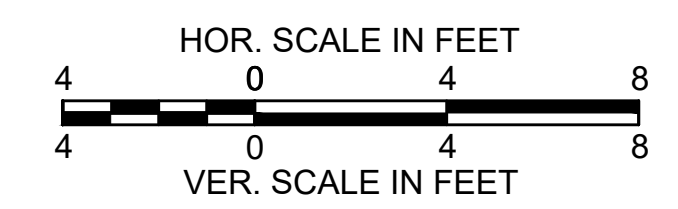
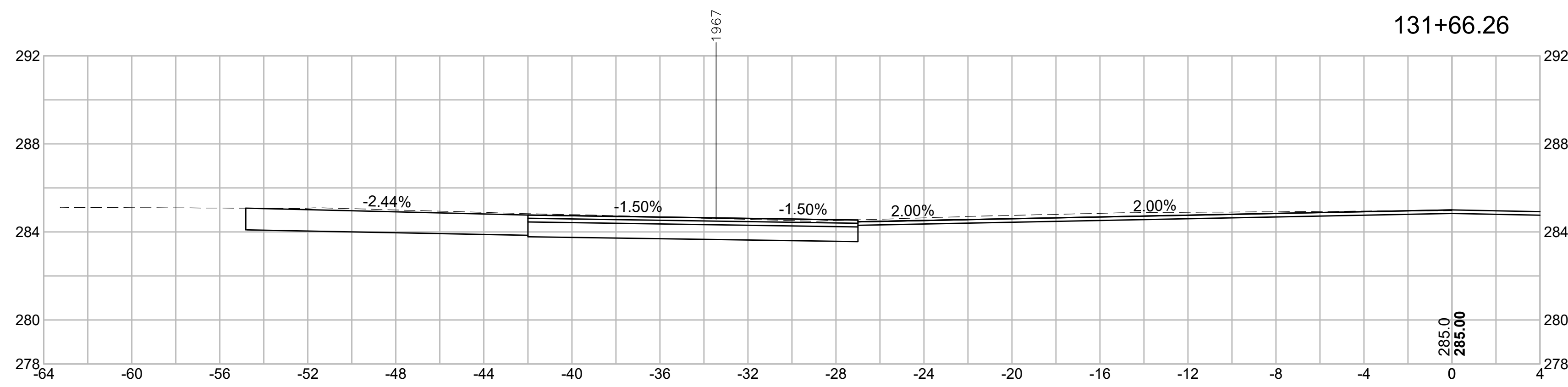
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	210	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 33 OF 43



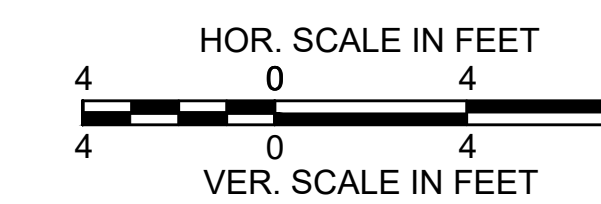
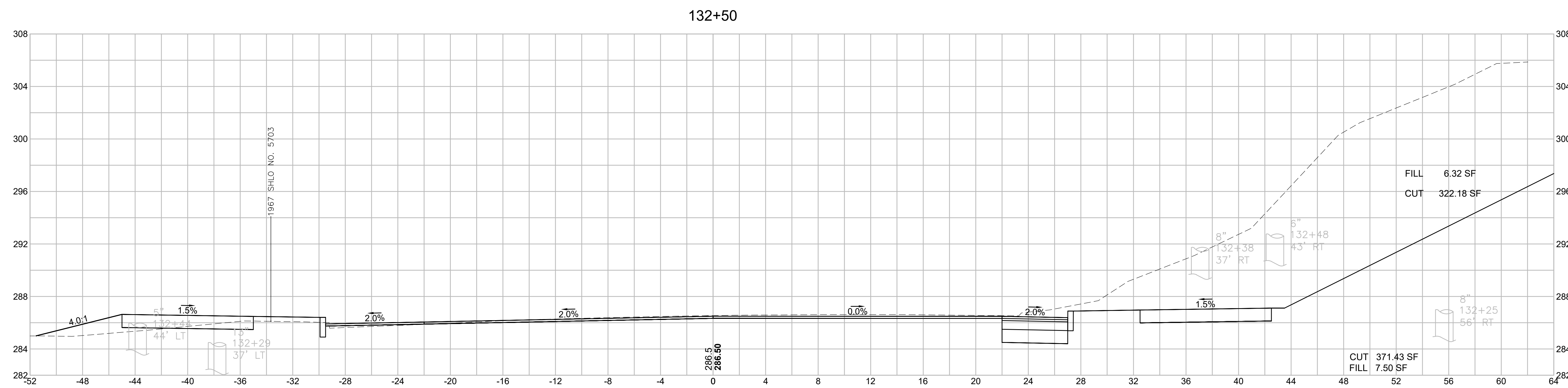
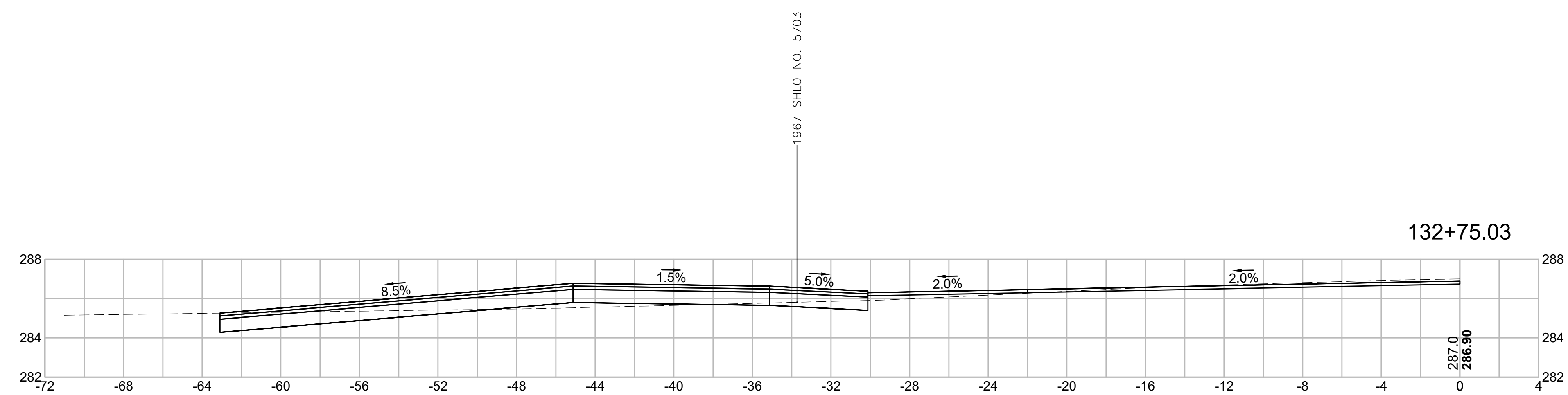
FILL 3.10 SF
CUT 177.69 SF
CUT 176.24 SF
FILL 3.08 SF



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	211	258
PROJECT FILE NO.		603739	

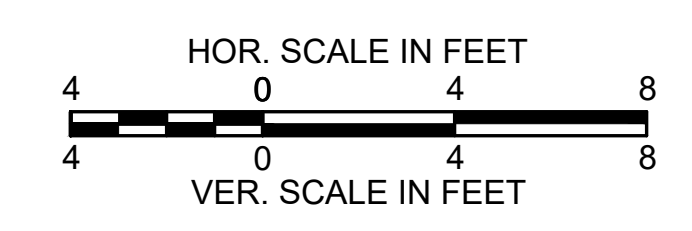
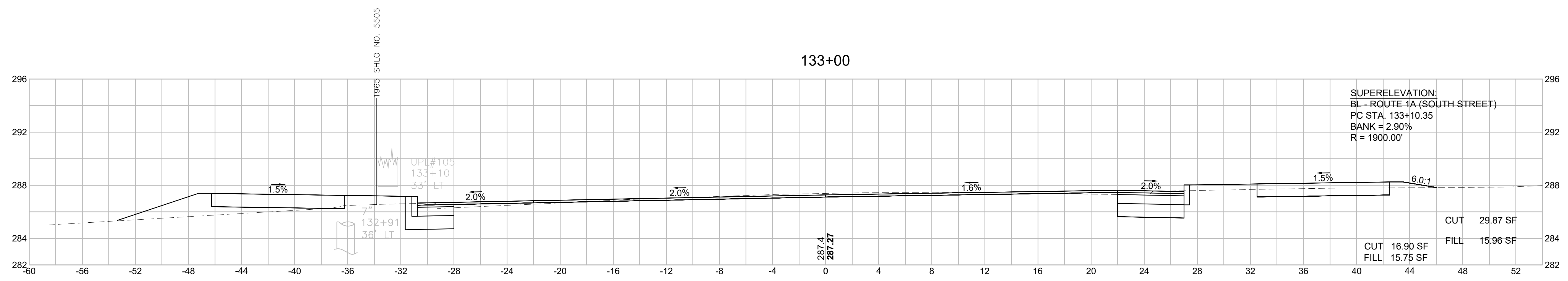
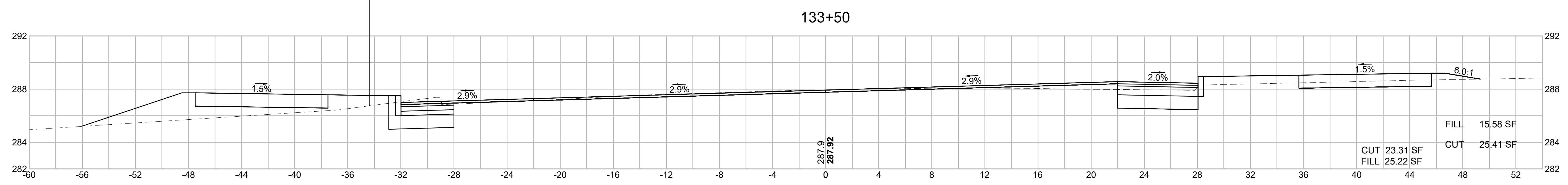
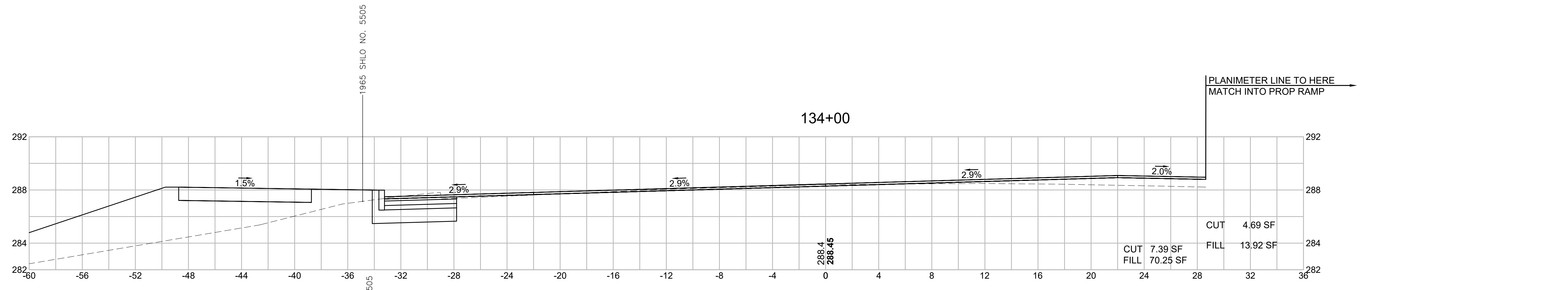
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 34 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	212	258
PROJECT FILE NO.		603739	

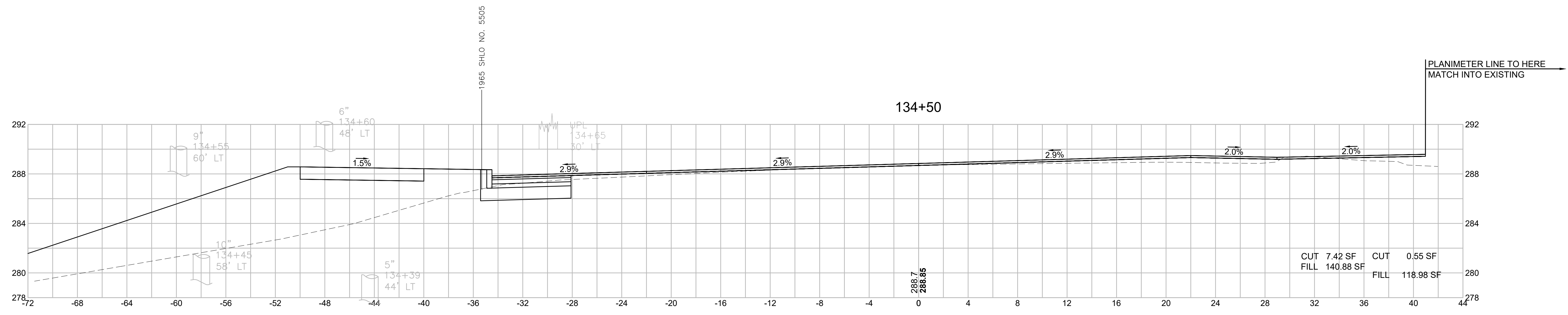
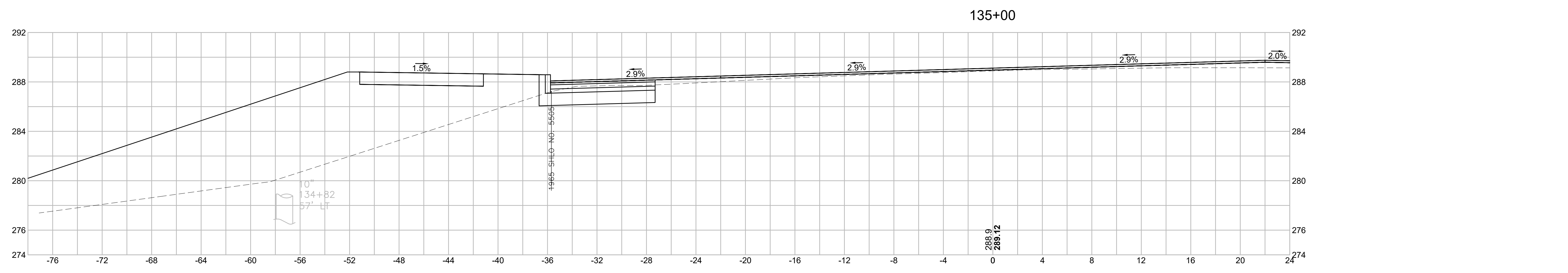
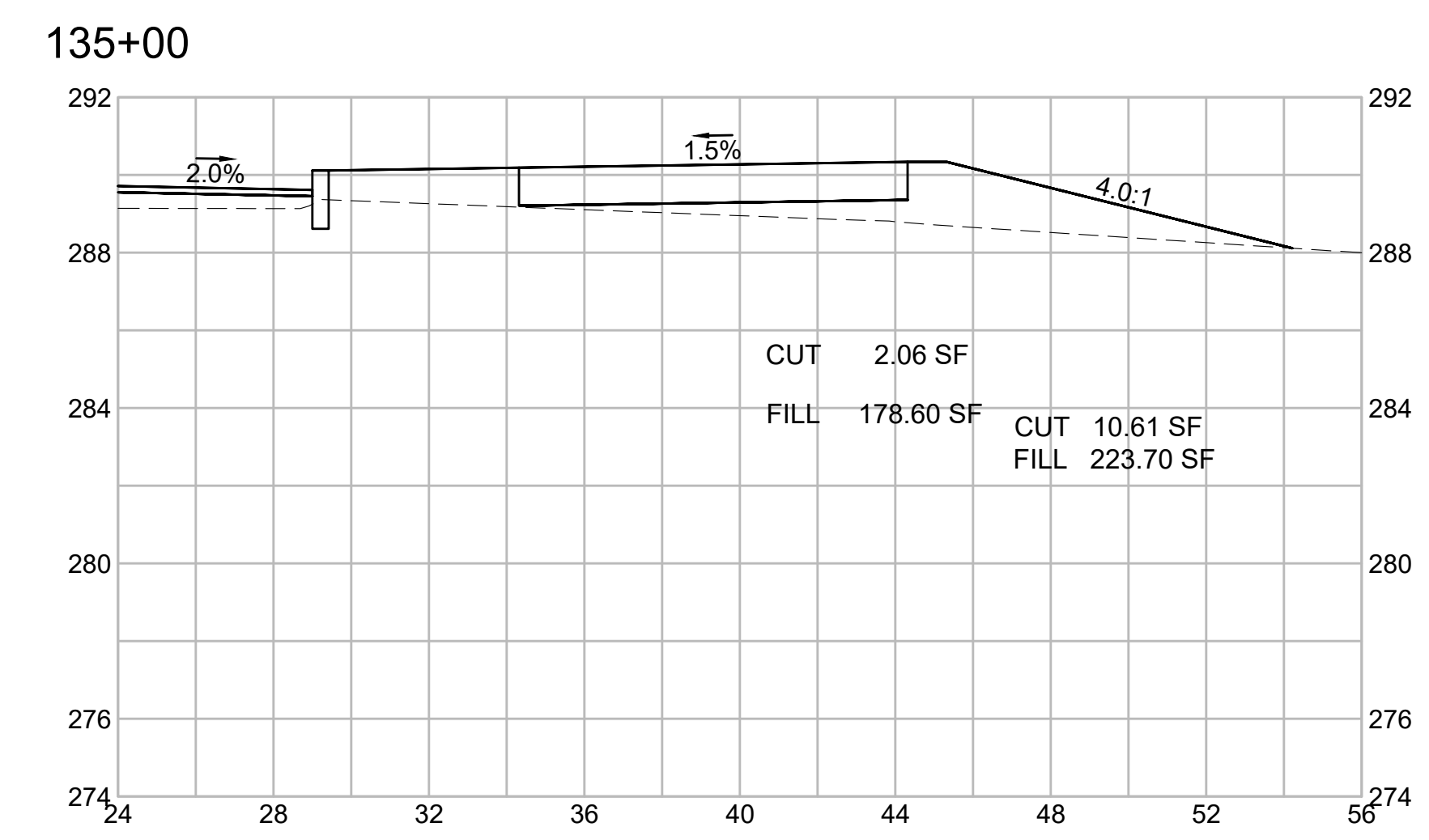
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 35 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

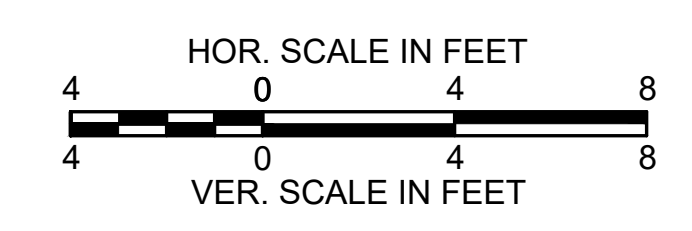
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	213	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 36 OF 43



CUT 7.42 SF
FILL 140.88 SF

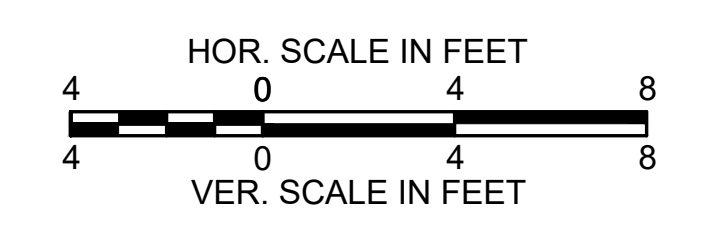
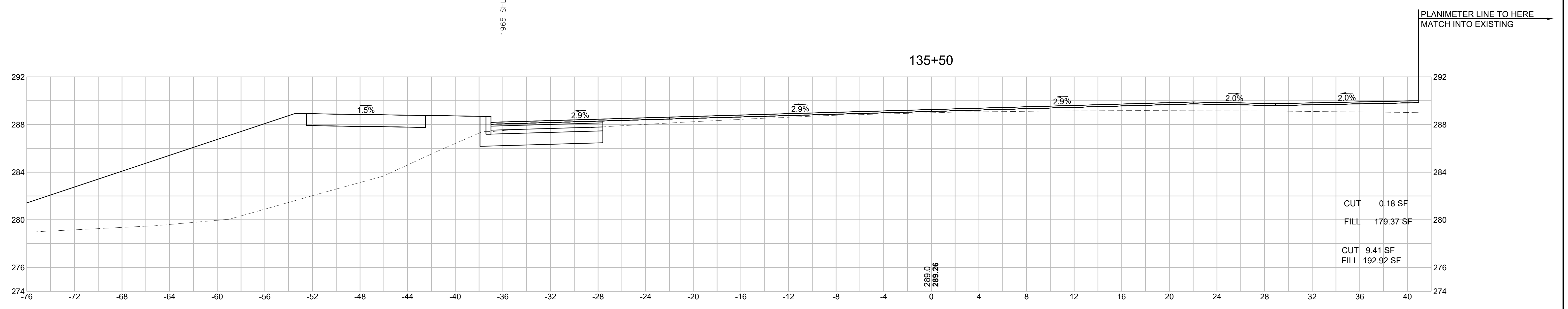
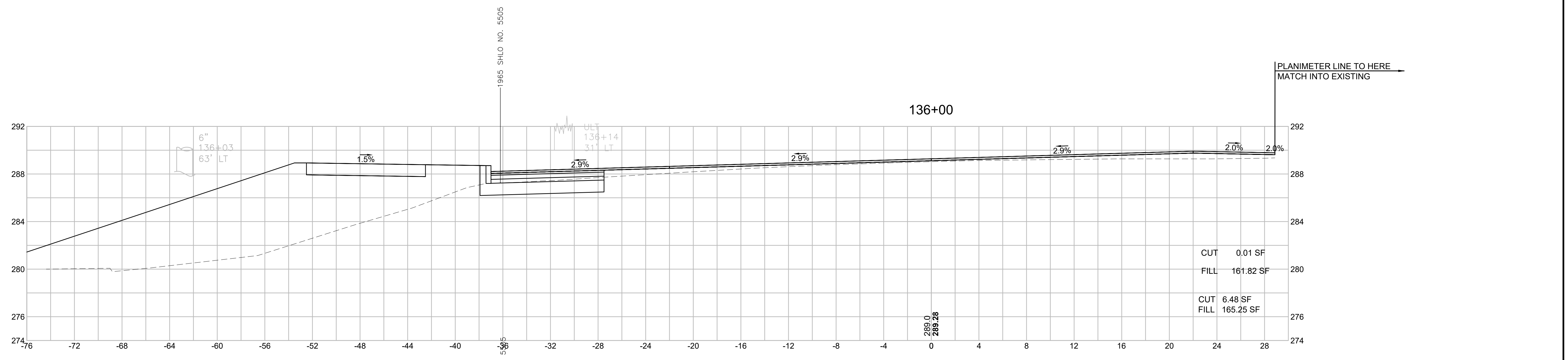
CUT 0.55 SF
FILL 118.98 SF



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	214	258
PROJECT FILE NO.		603739	

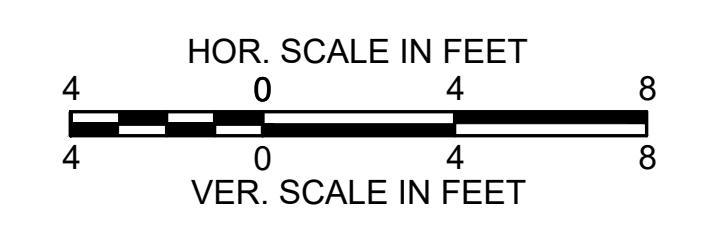
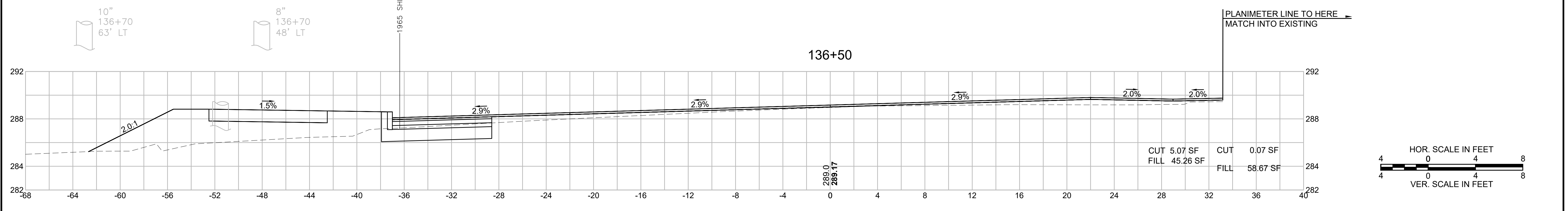
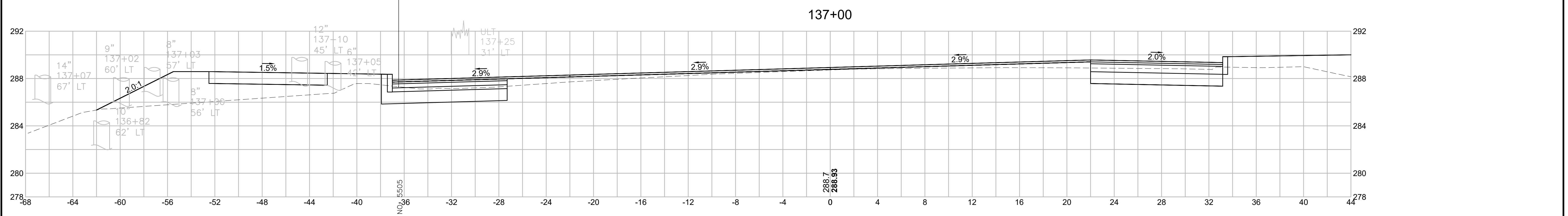
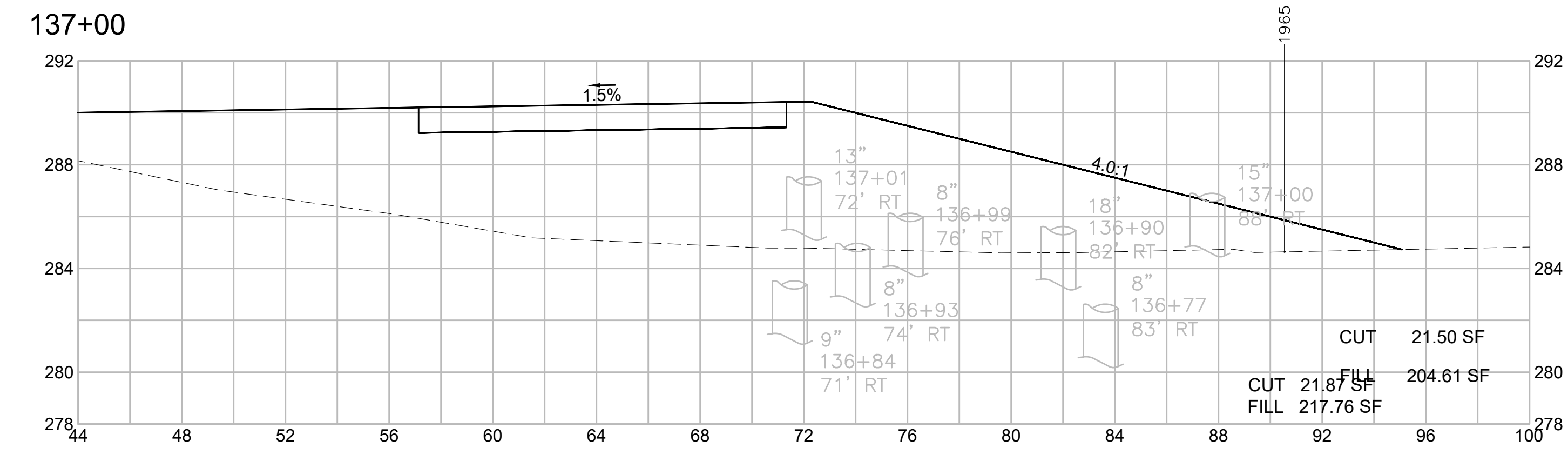
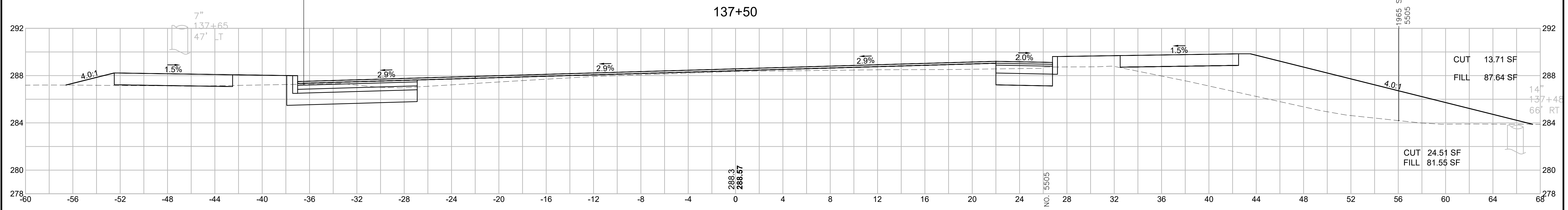
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 37 OF 43**



**WRENTHAM, MA
I-495 / ROUTE 1A RAMP**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	215	258
PROJECT FILE NO.		603739	

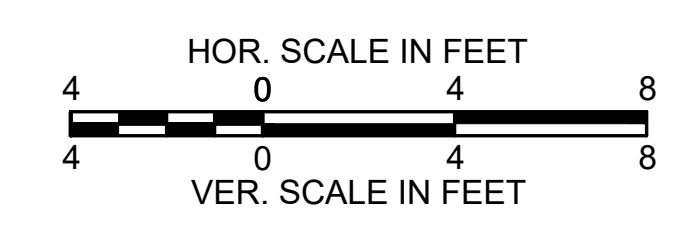
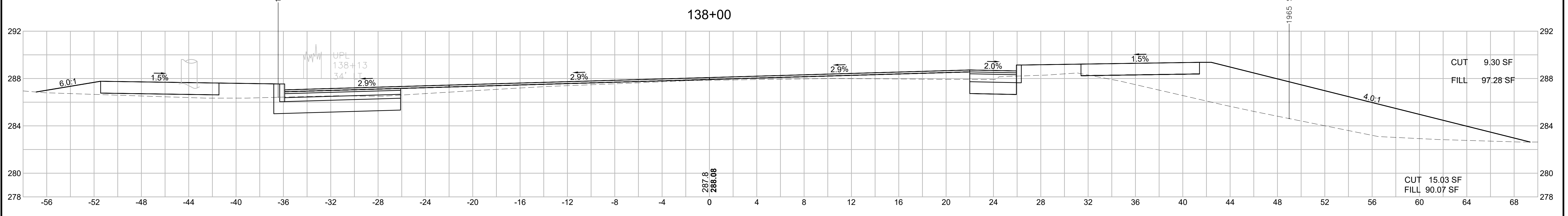
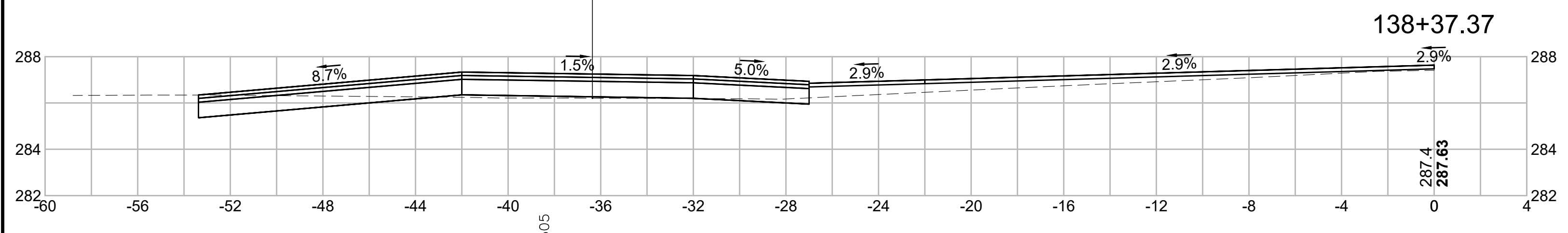
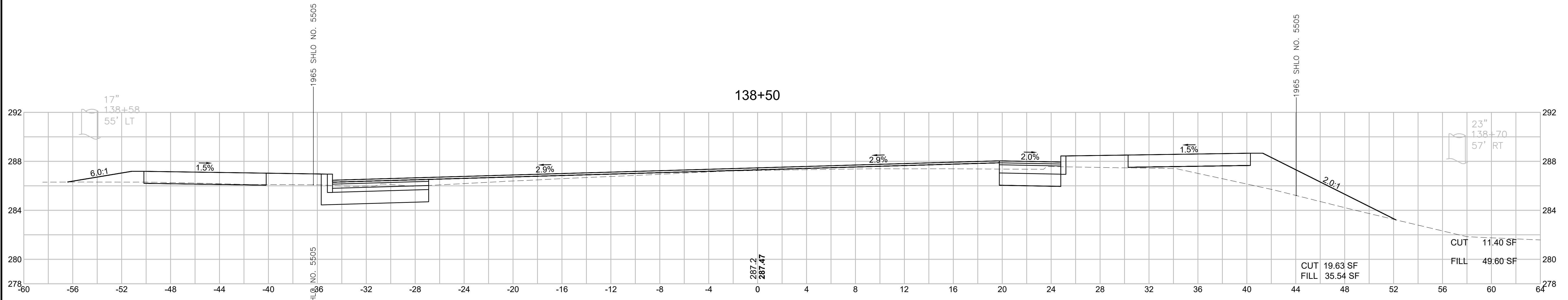
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 38 OF 43**



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	216	258
PROJECT FILE NO.		603739	

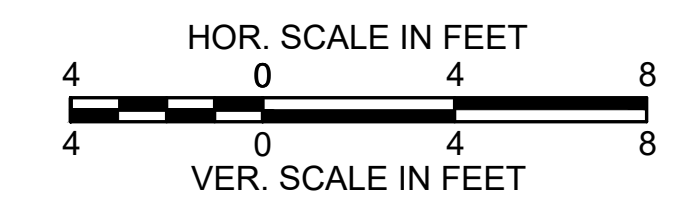
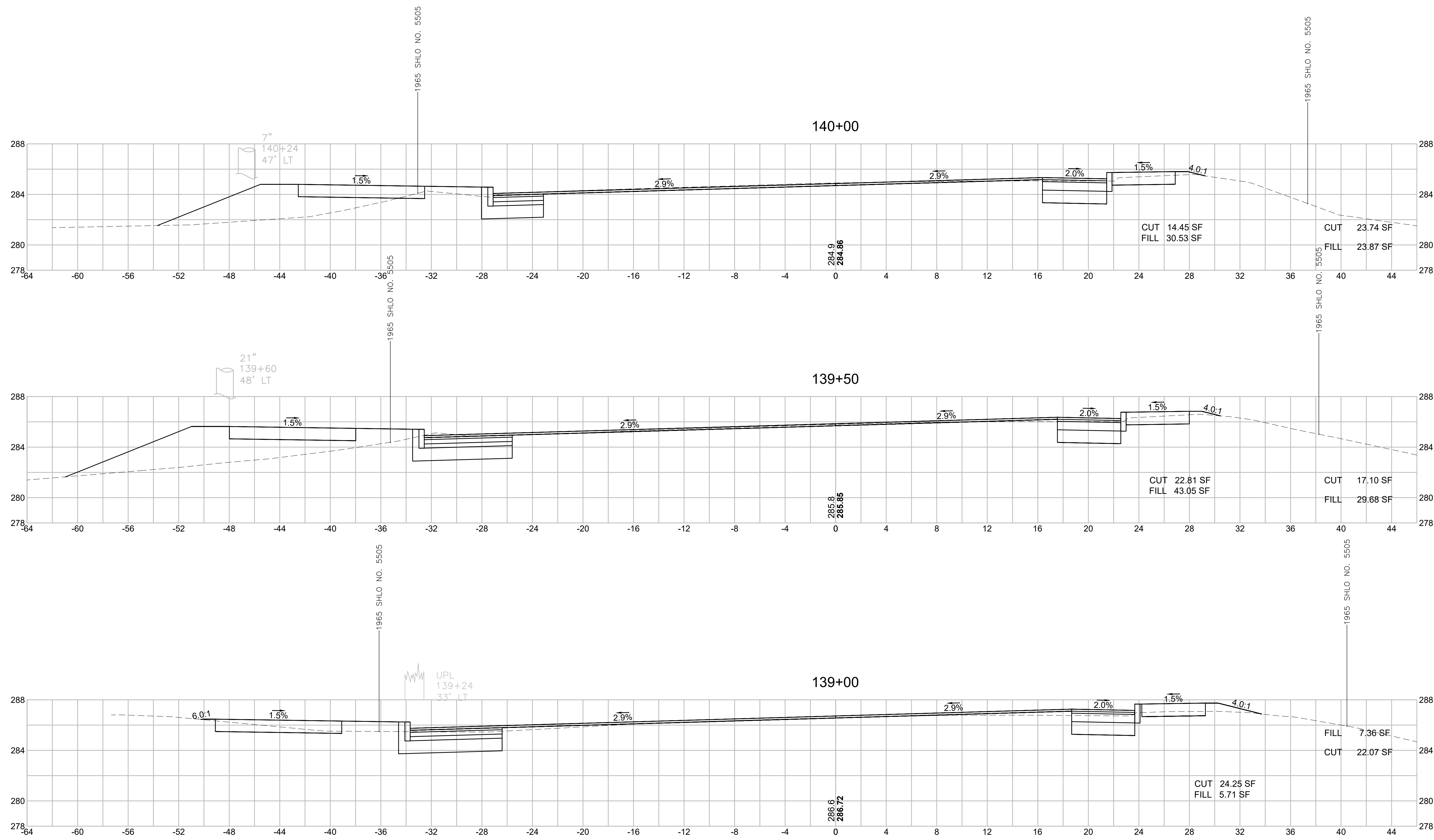
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 39 OF 43**



**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	217	258
PROJECT FILE NO.		603739	

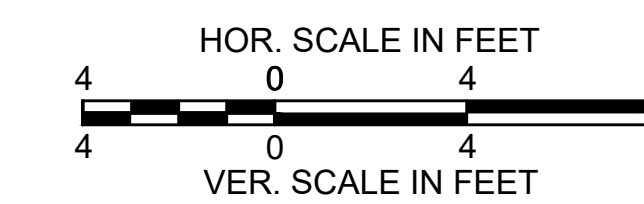
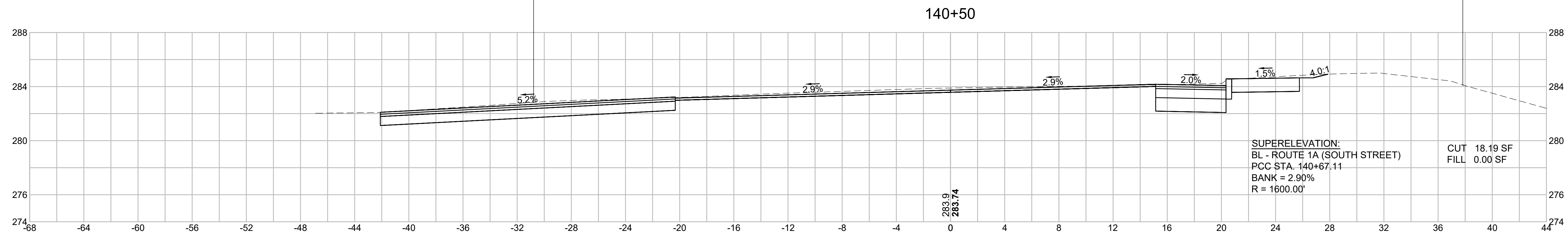
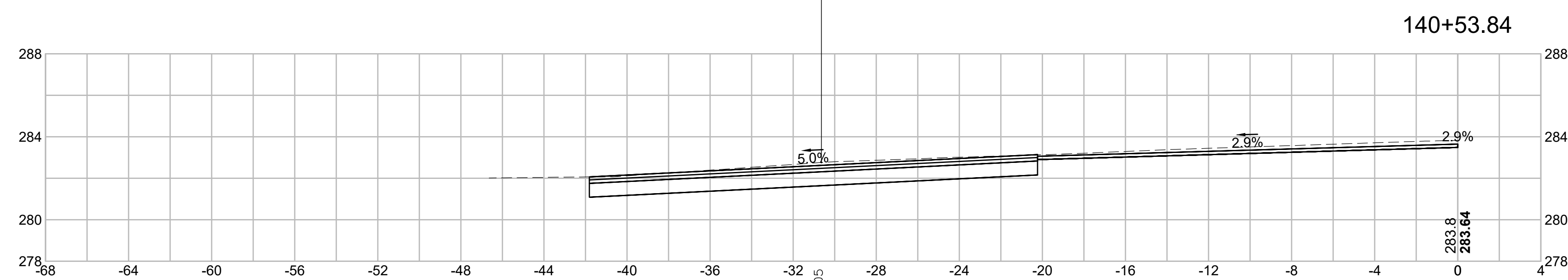
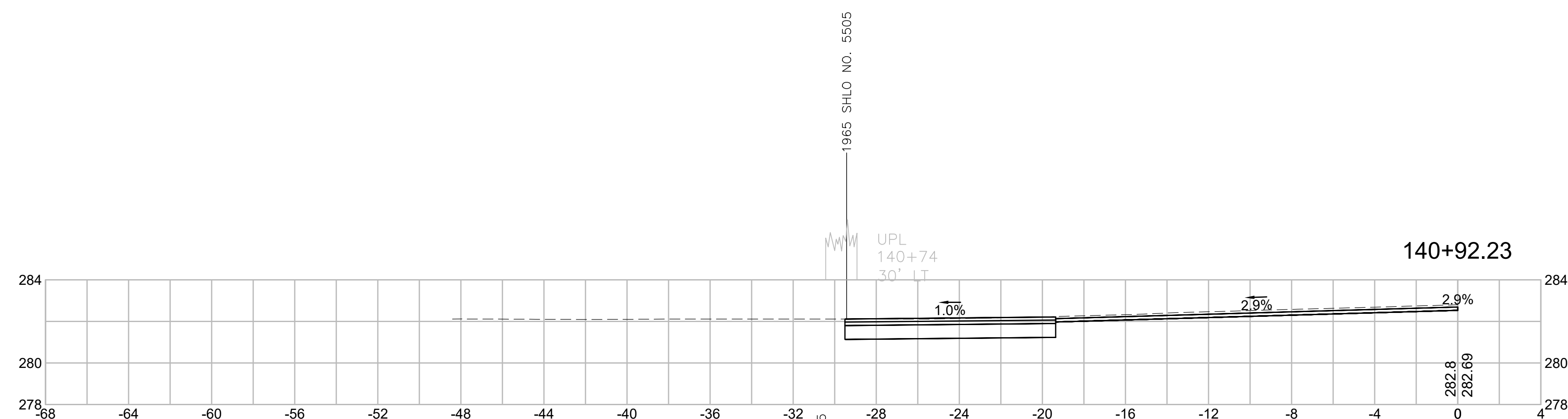
**CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 40 OF 43**



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	218	258
PROJECT FILE NO.		603739	

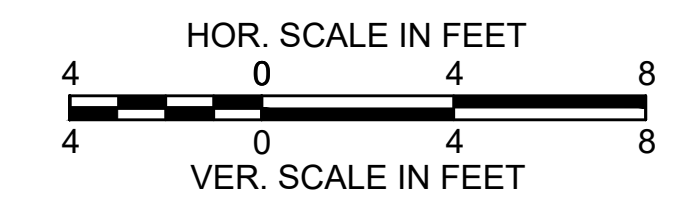
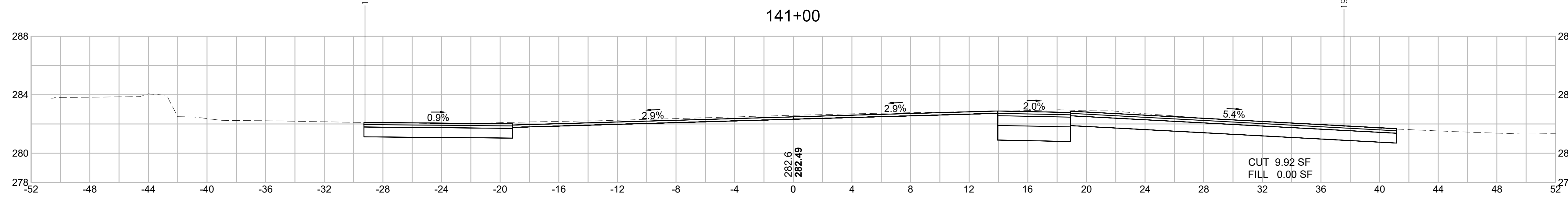
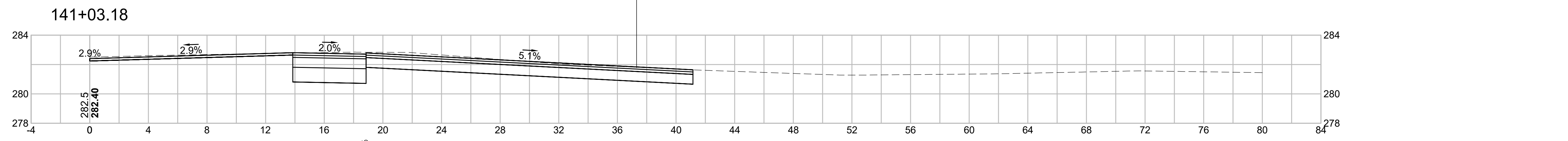
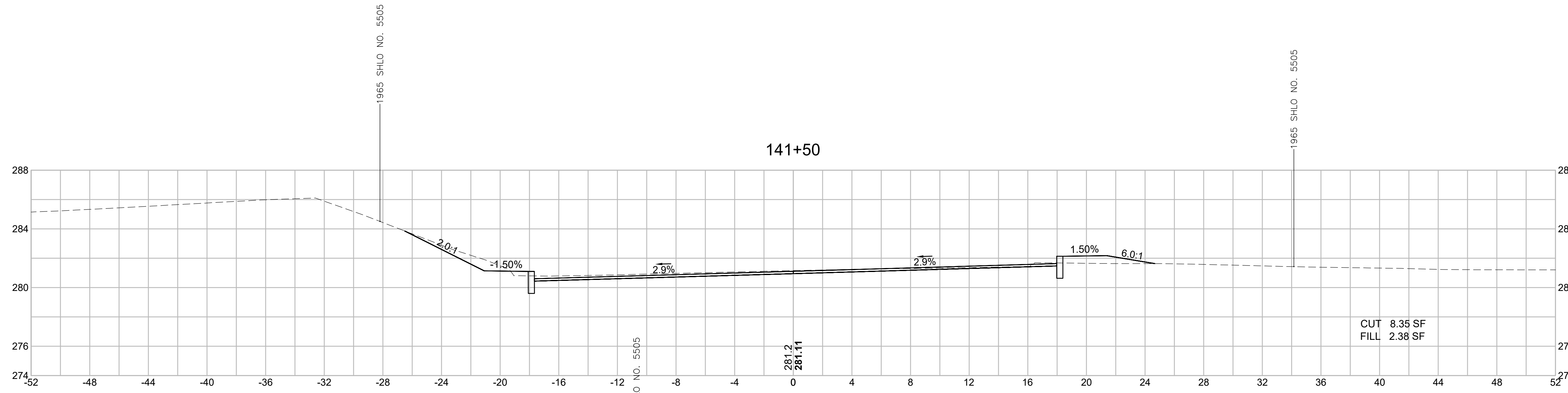
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 41 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	219	258
PROJECT FILE NO.		603739	

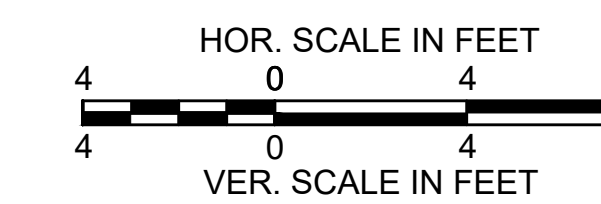
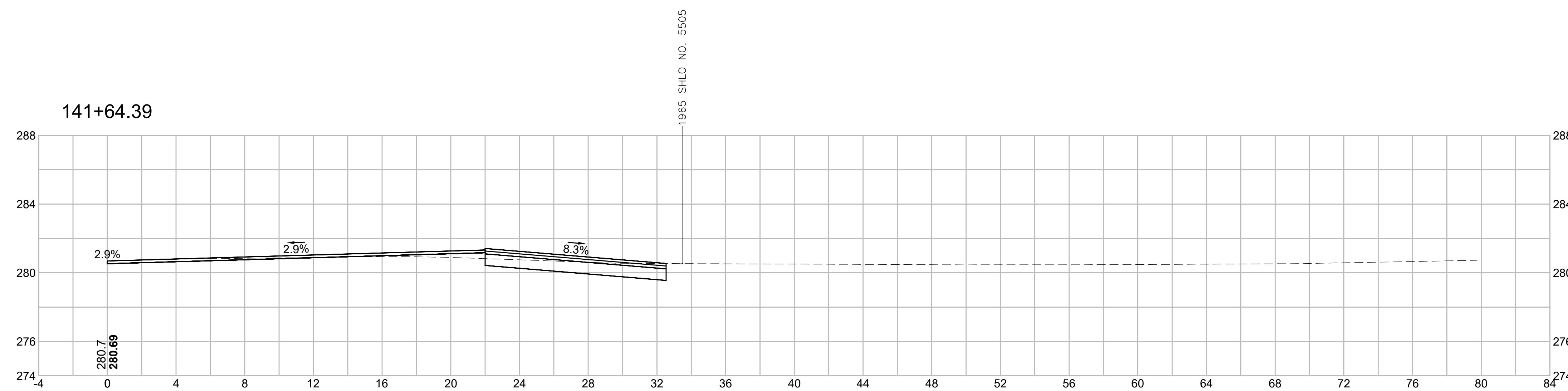
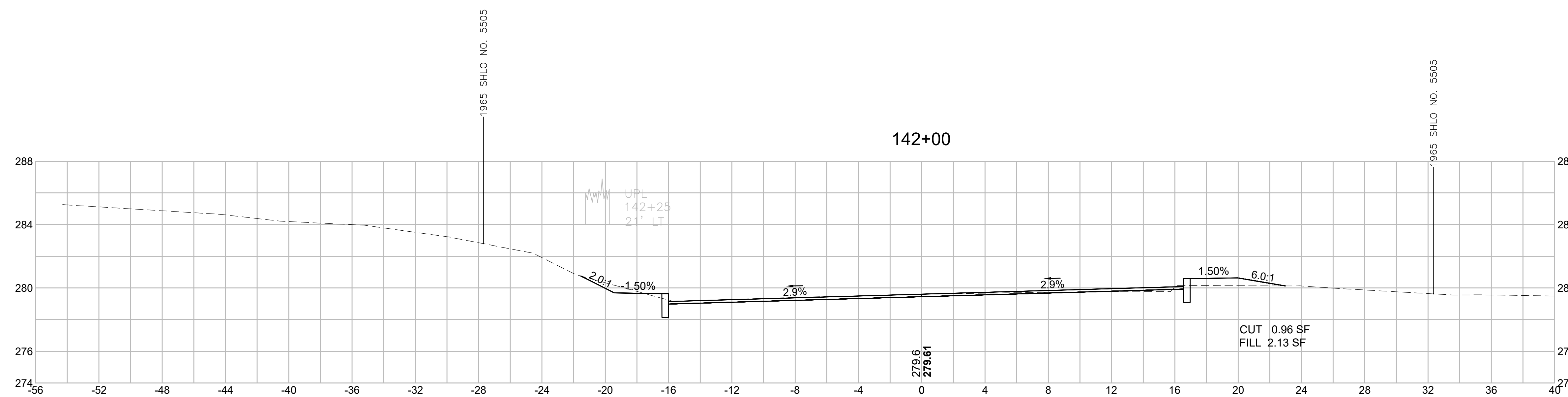
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 42 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	220	258
PROJECT FILE NO.		603739	

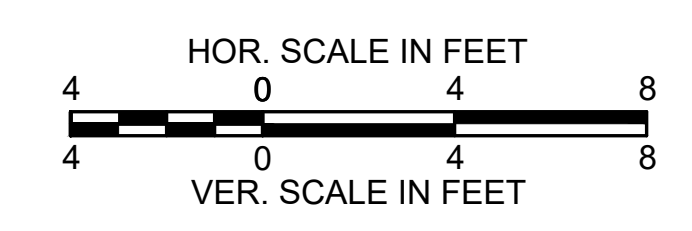
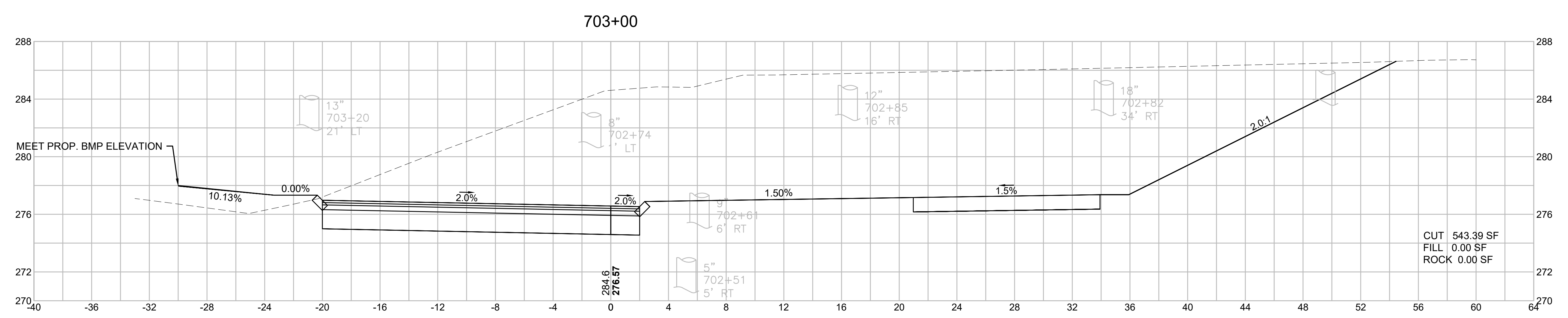
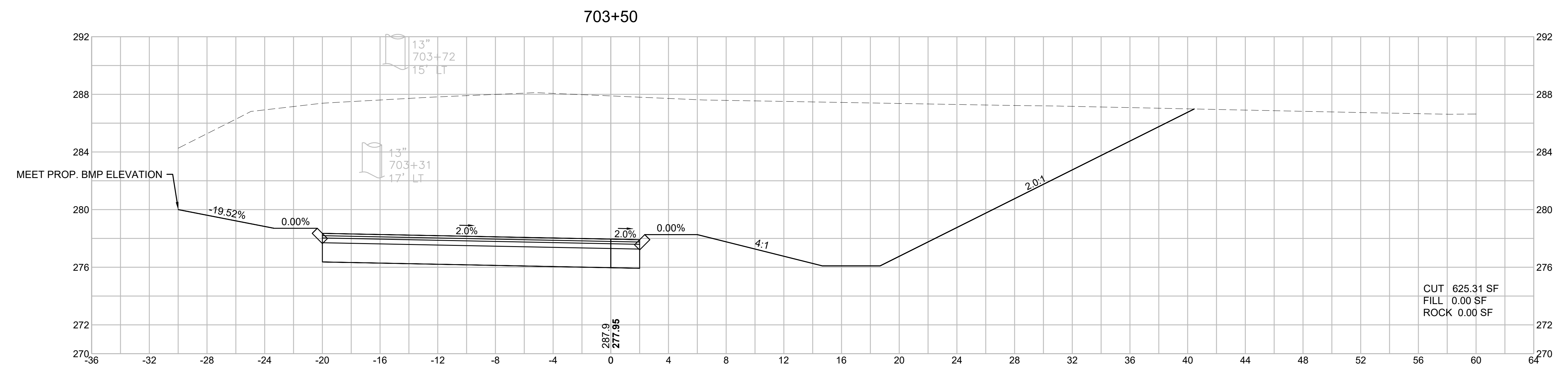
CROSS SECTIONS
ROUTE 1A (SOUTH STREET)
SHEET 43 OF 43



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	221	258
PROJECT FILE NO.		603739	

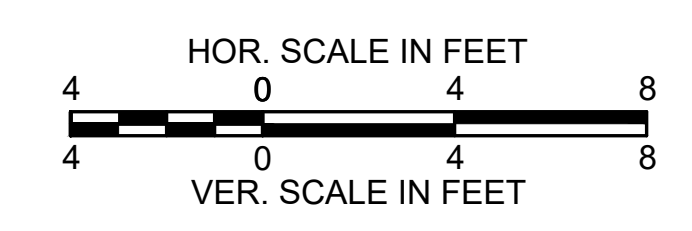
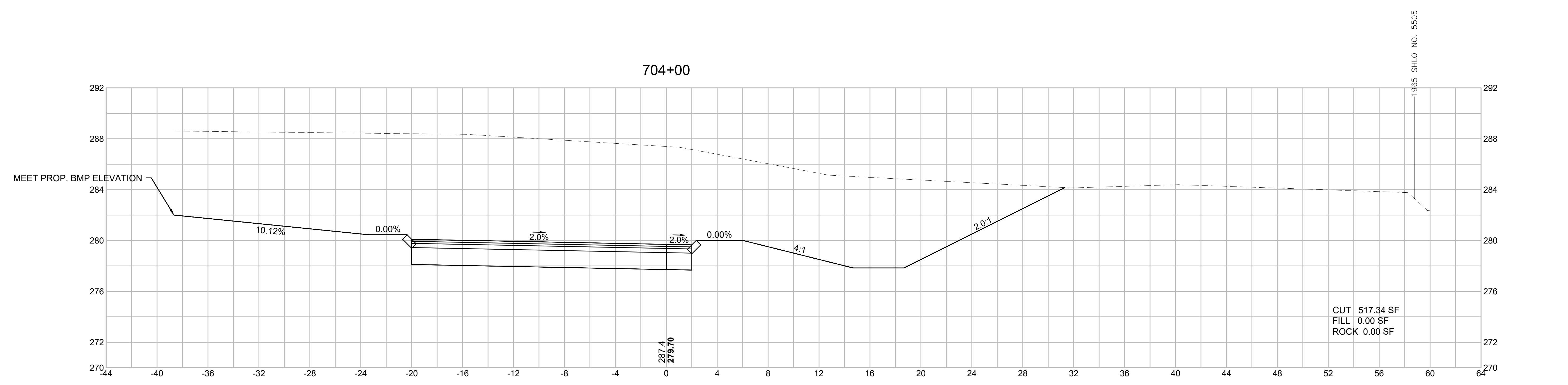
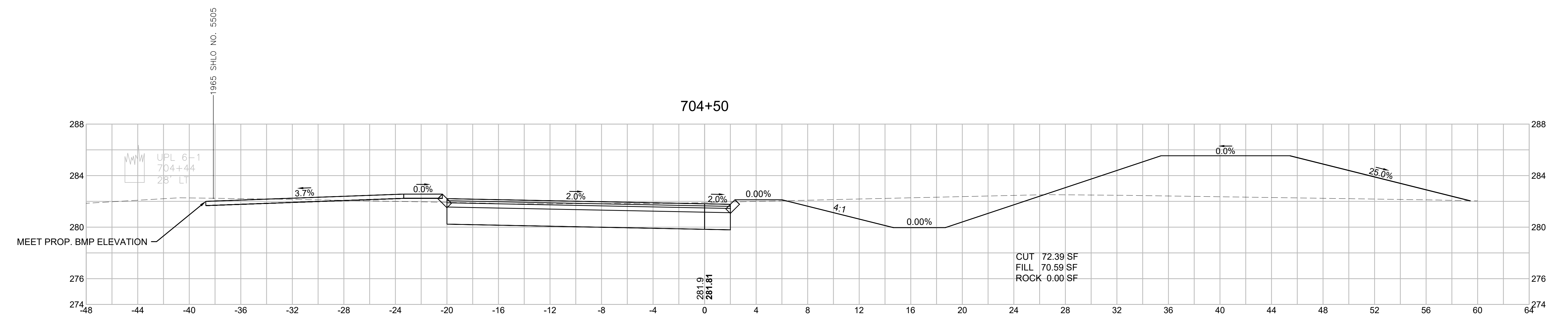
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 1 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	222	258
PROJECT FILE NO.		603739	

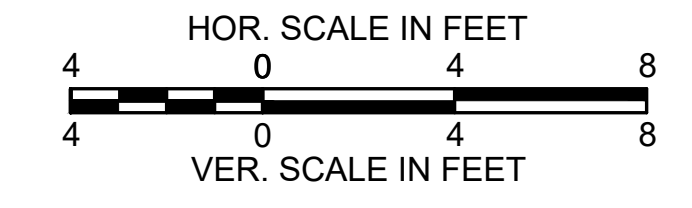
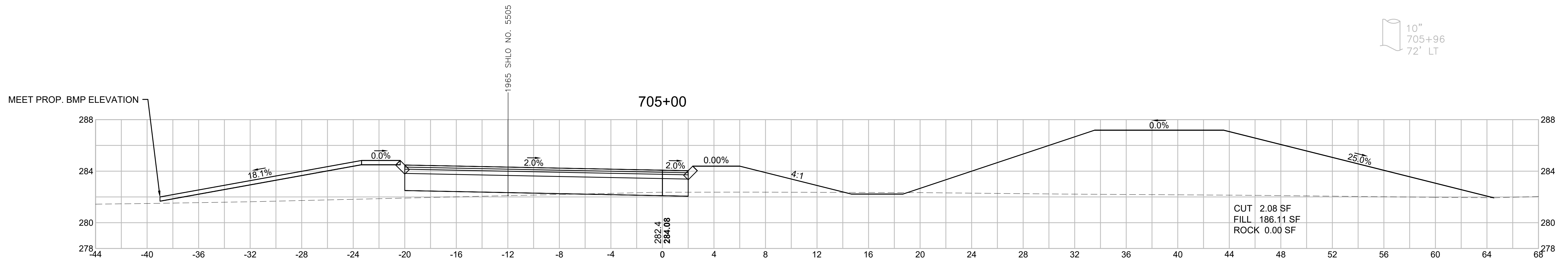
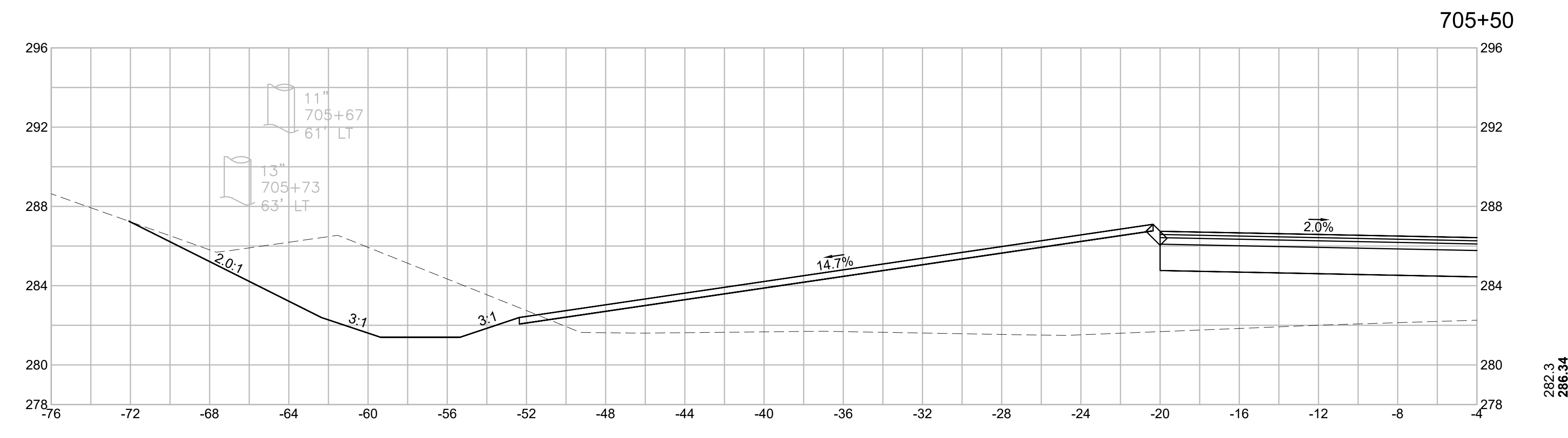
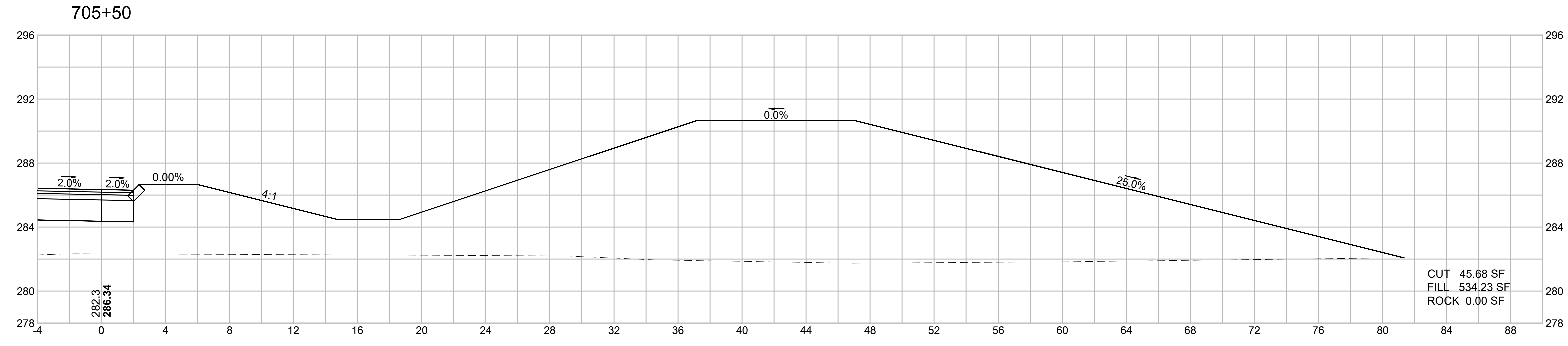
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 2 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	223	258
PROJECT FILE NO.		603739	

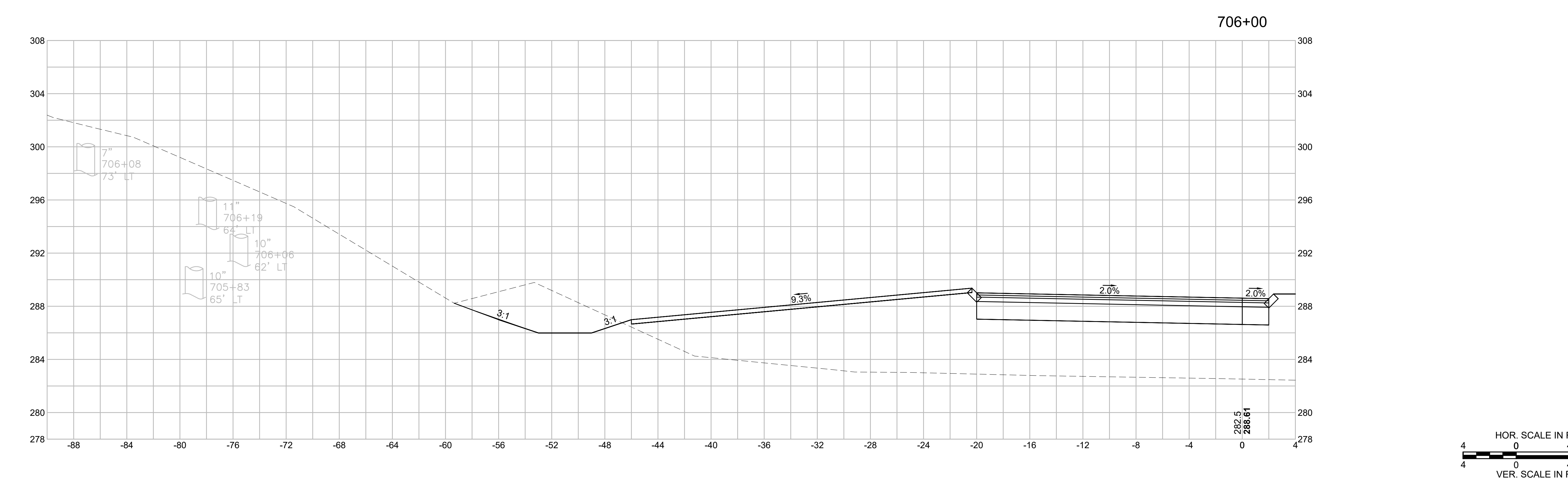
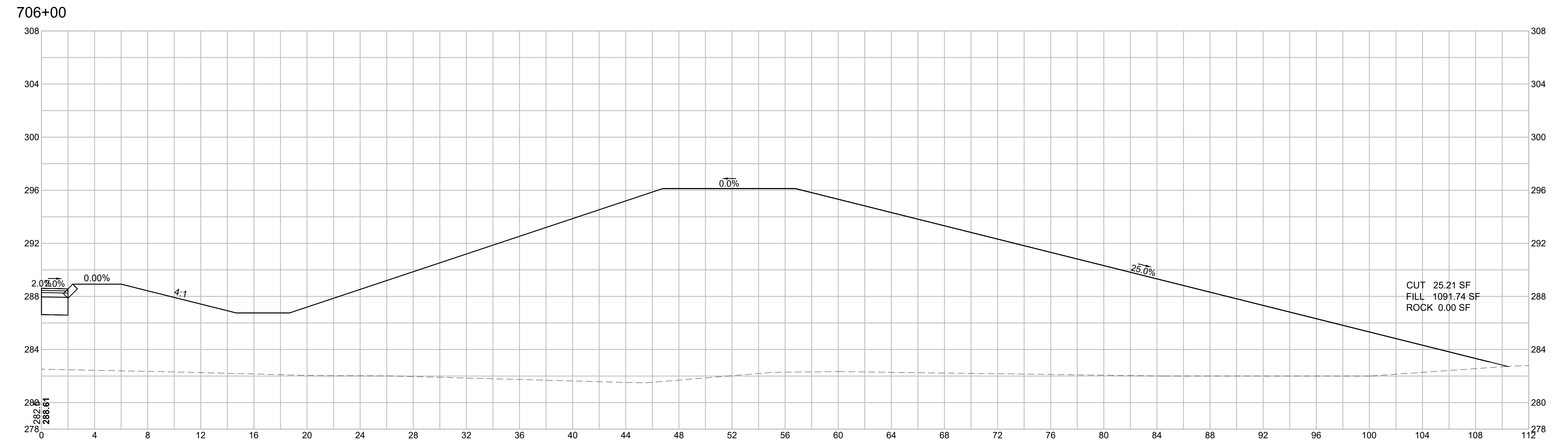
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 3 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	224	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 4 OF 28

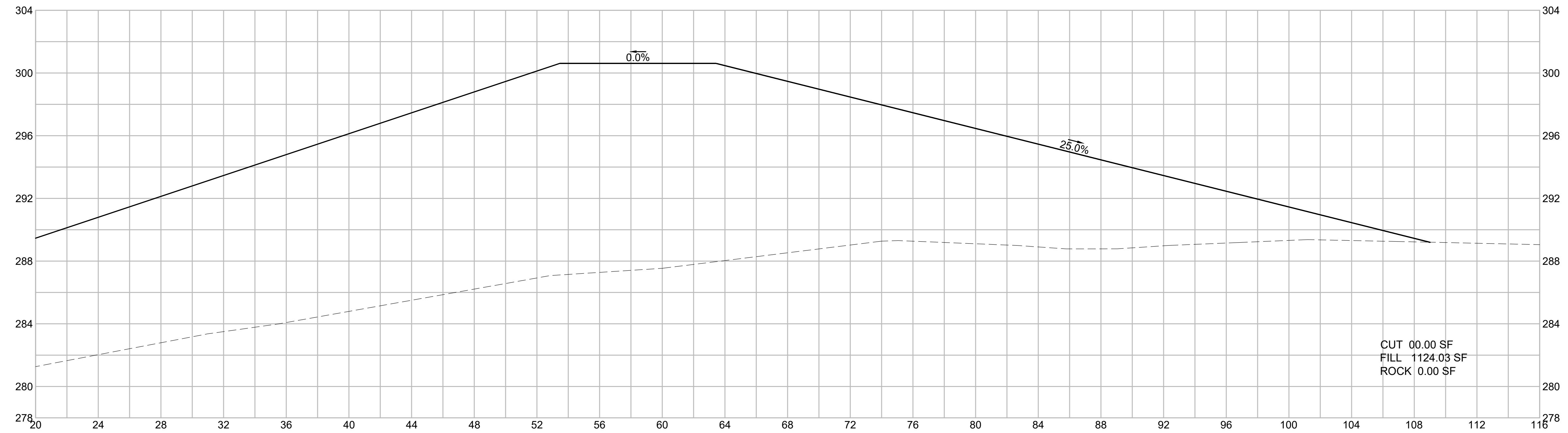


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

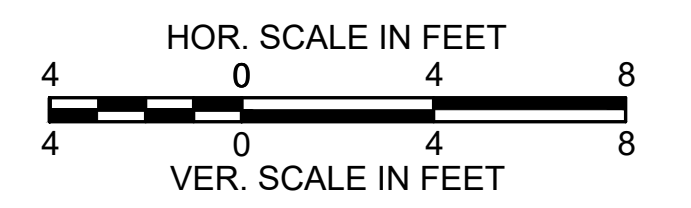
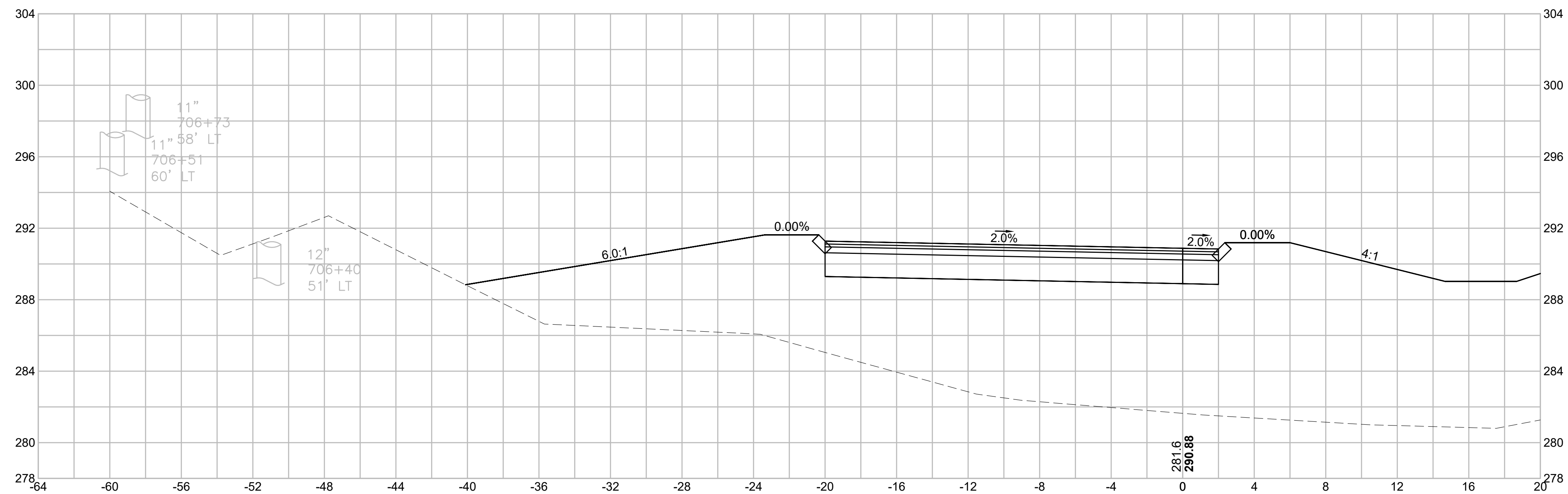
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	225	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 5 OF 28

706+50



706+50

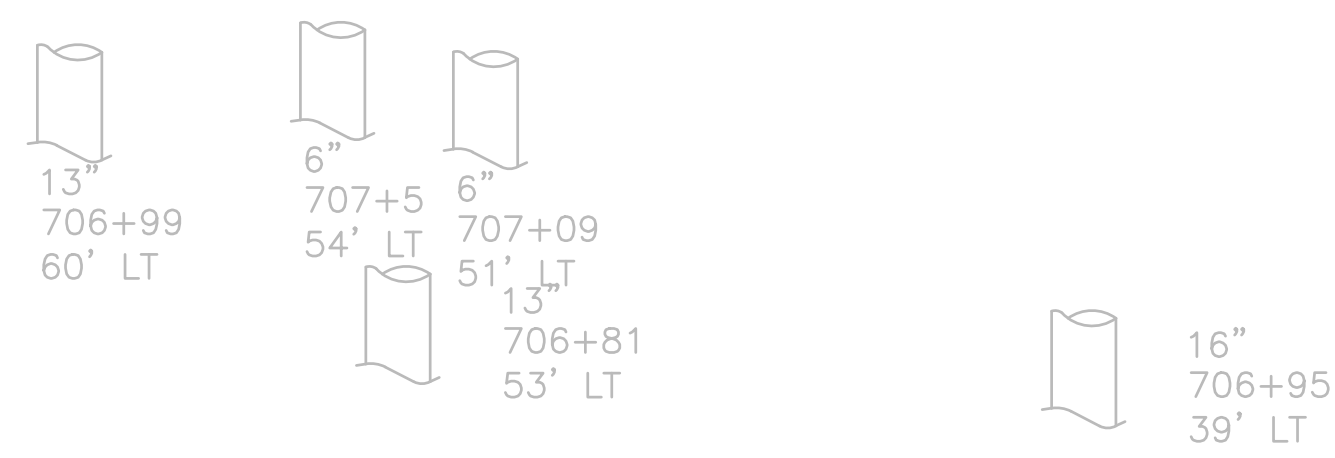
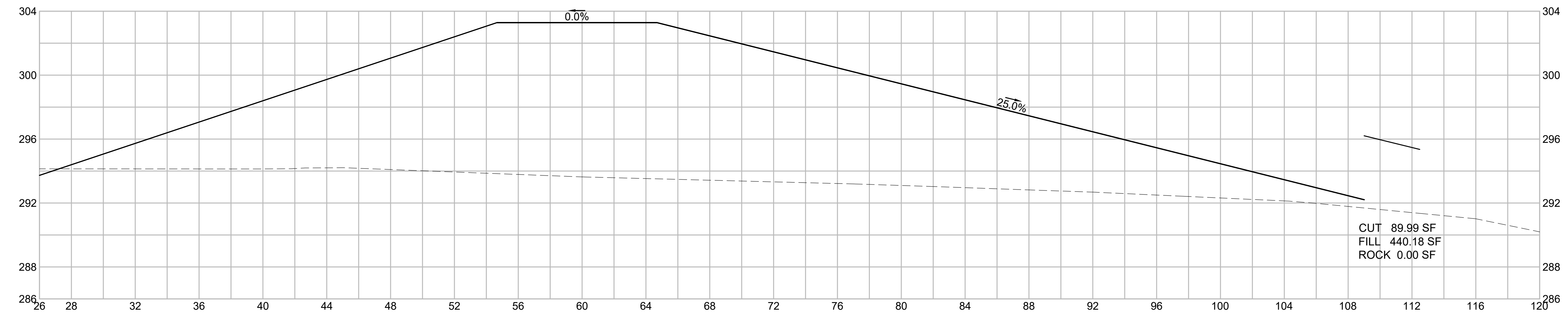


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

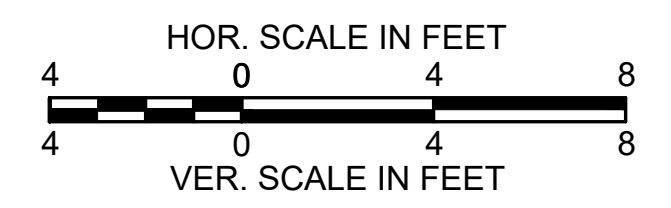
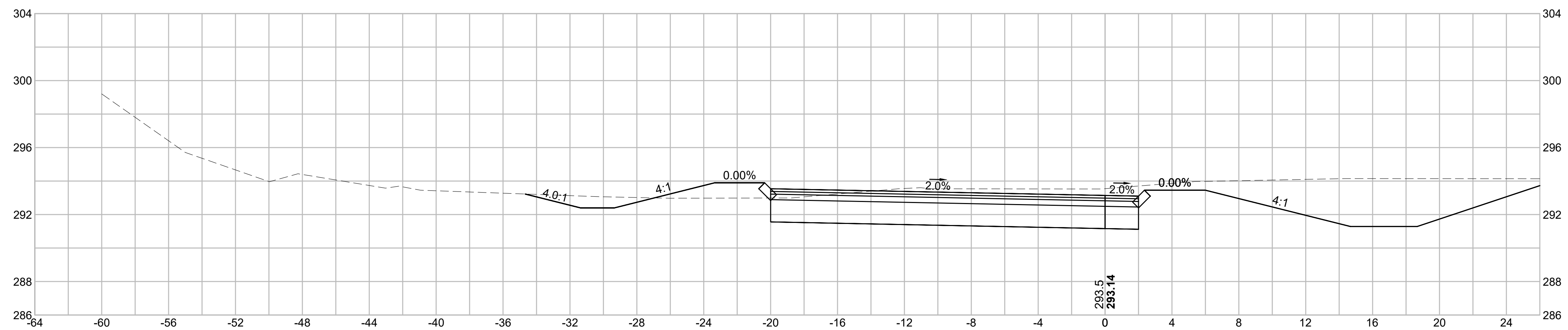
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	226	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 6 OF 28

707+00



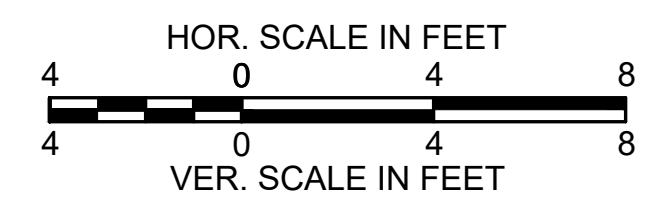
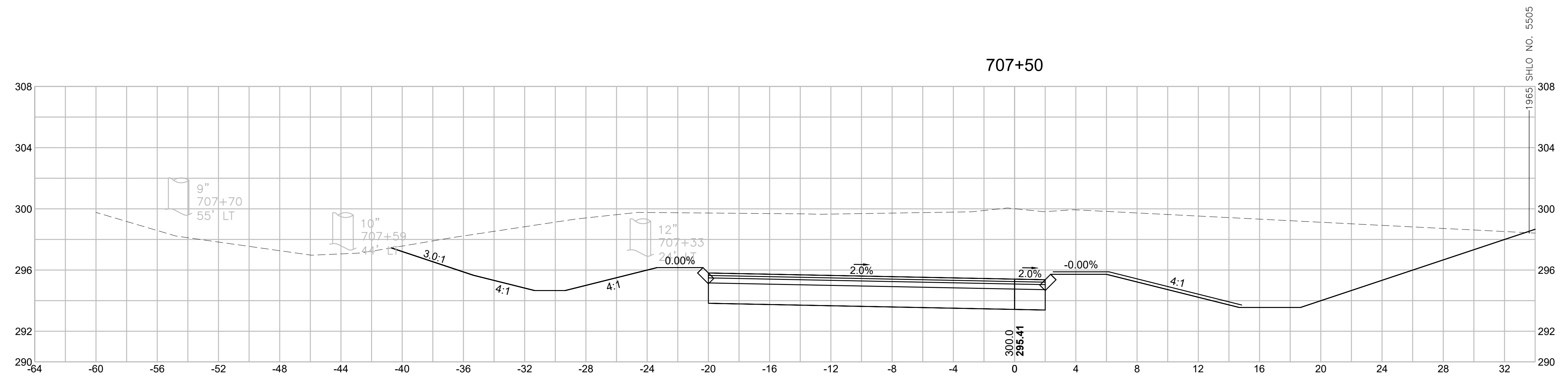
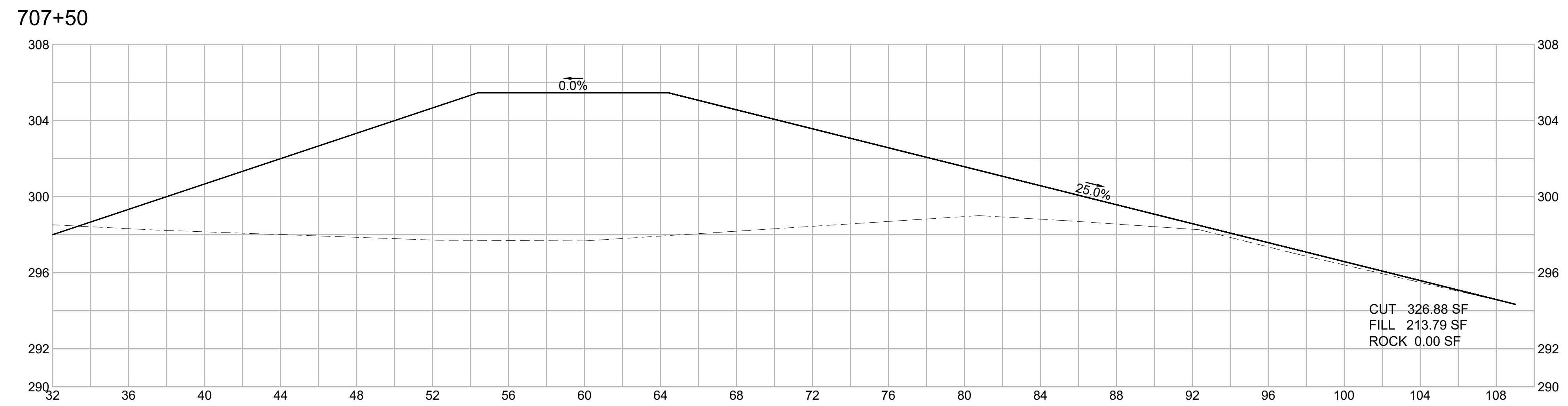
707+00



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	227	258
PROJECT FILE NO.		603739	

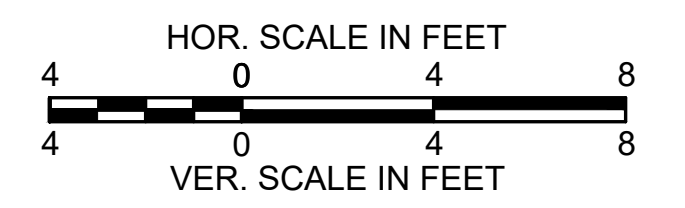
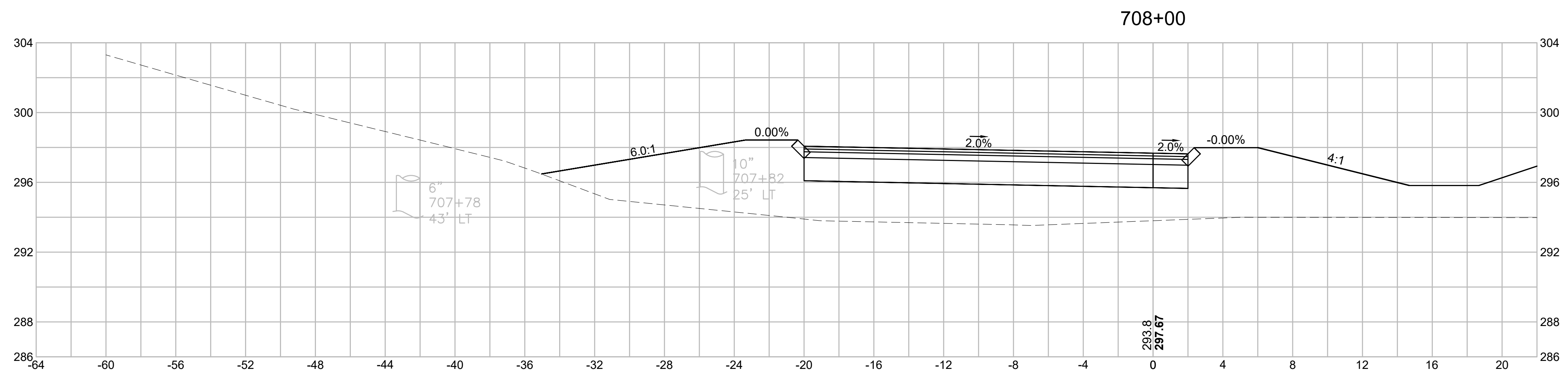
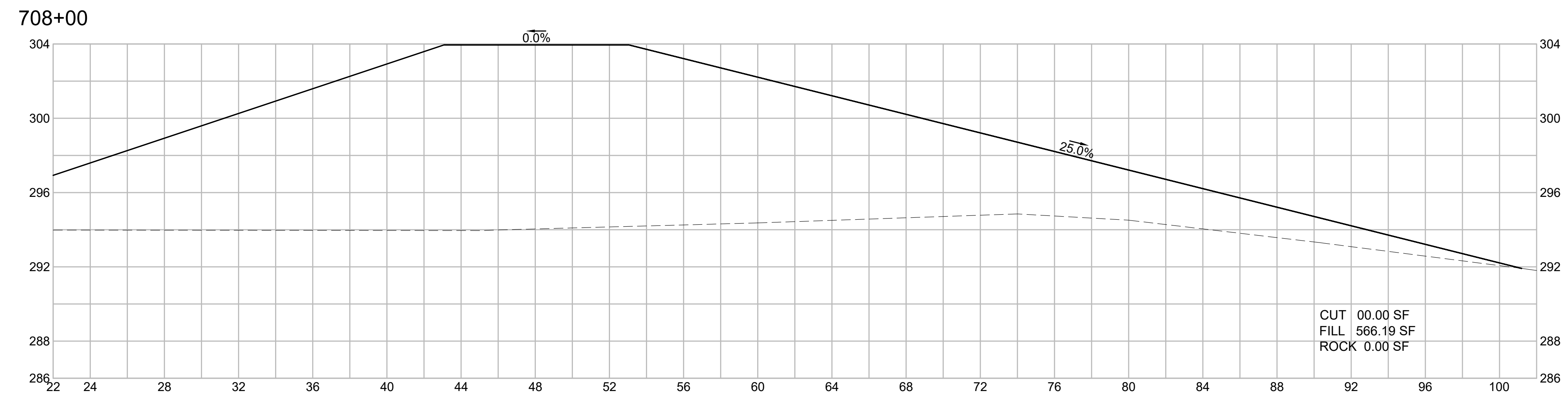
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 7 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	228	258
PROJECT FILE NO.		603739	

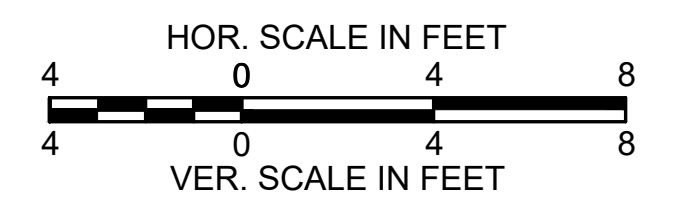
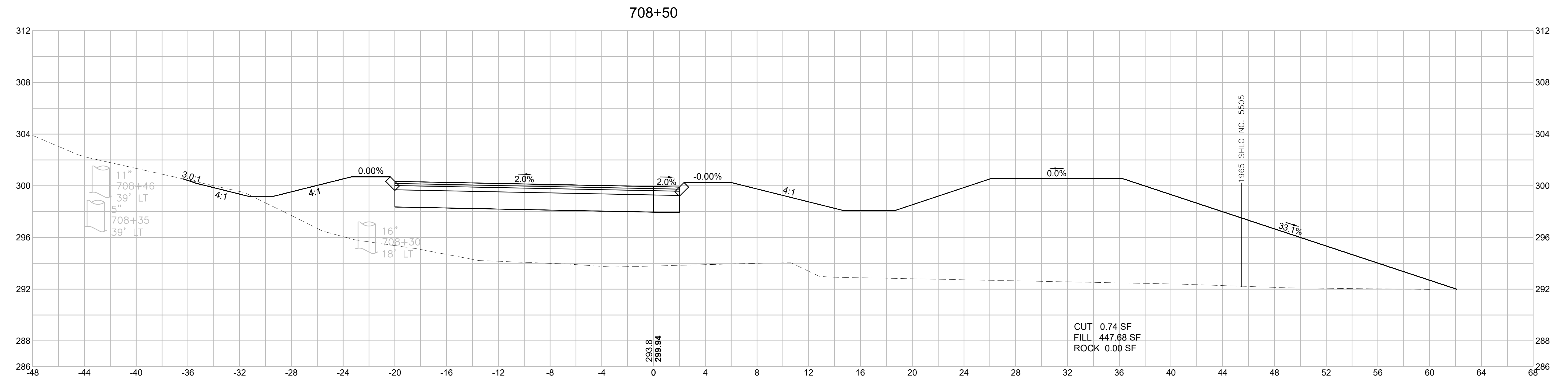
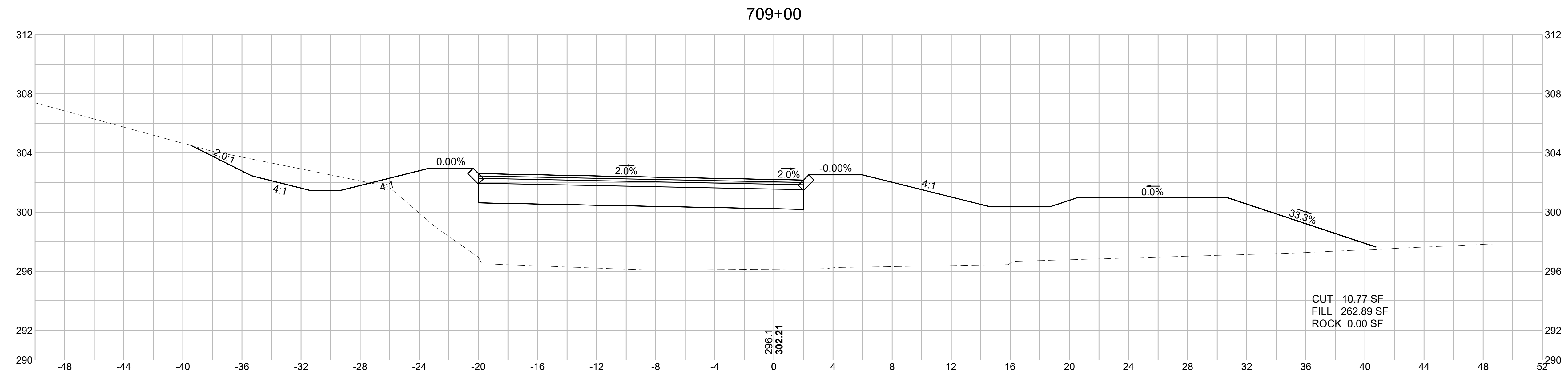
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 8 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	229	258
PROJECT FILE NO.		603739	

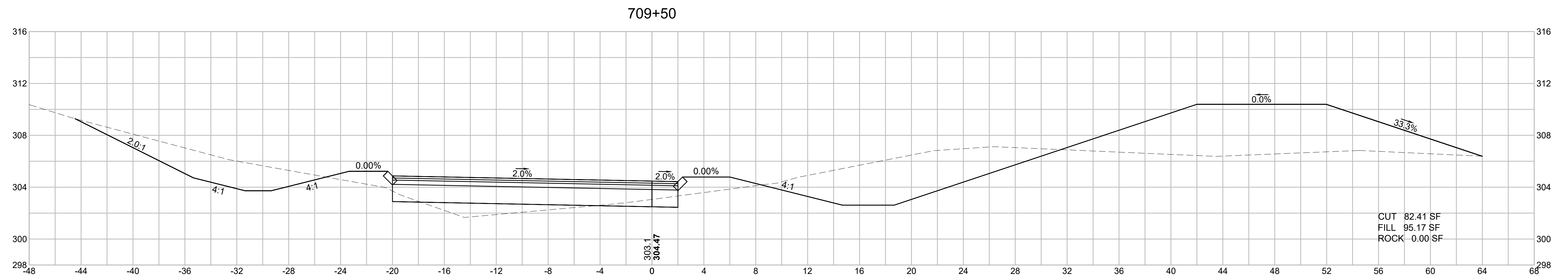
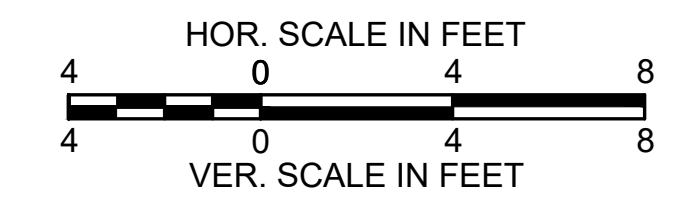
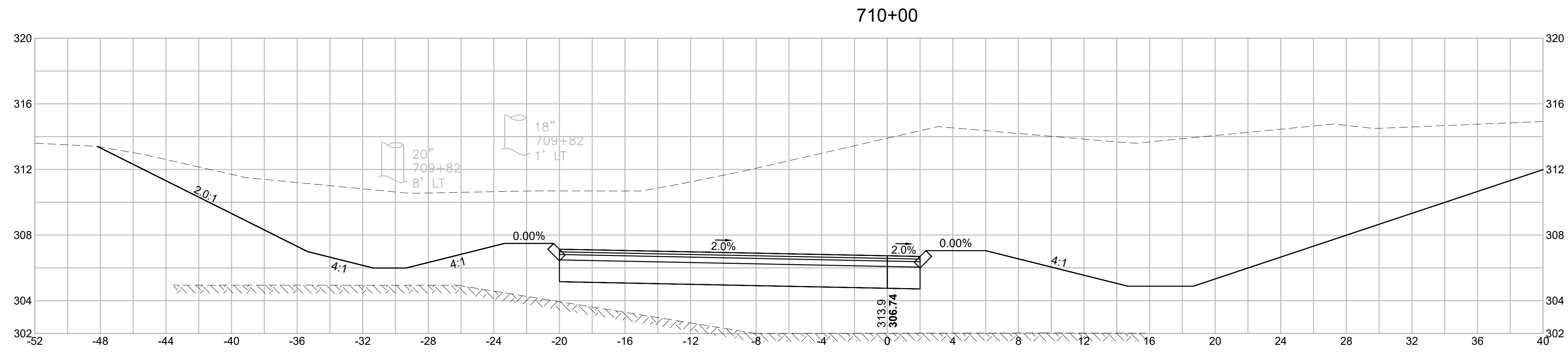
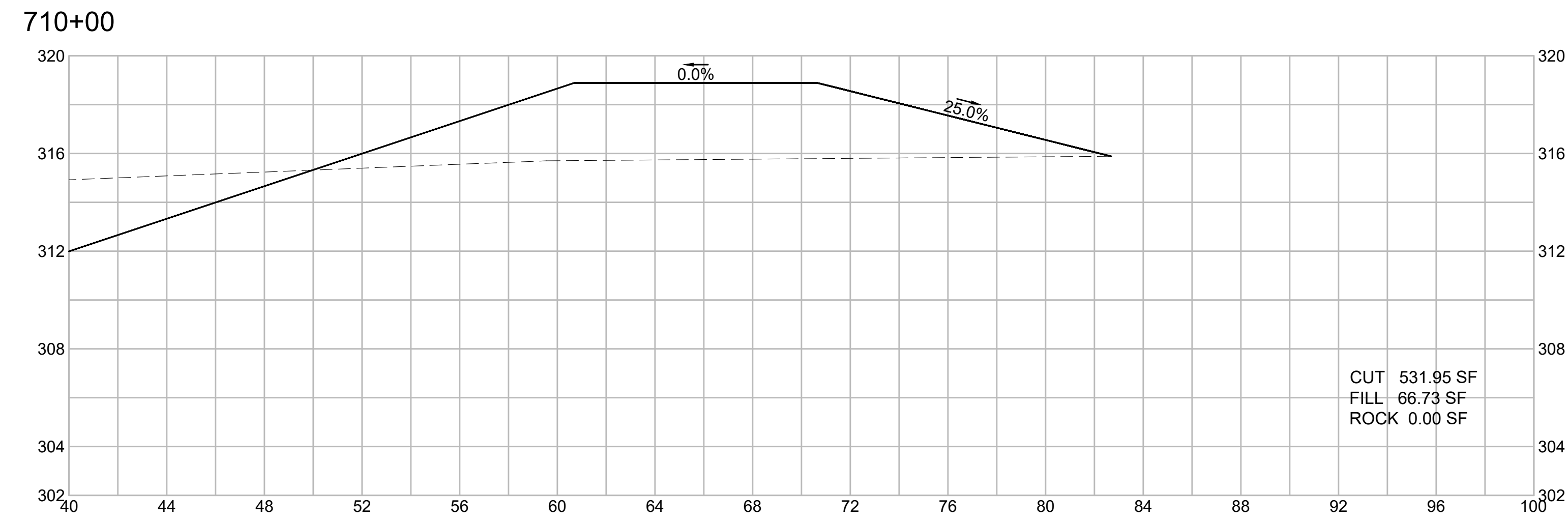
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 9 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	230	258
PROJECT FILE NO.		603739	

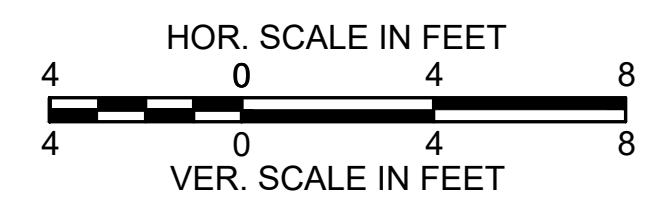
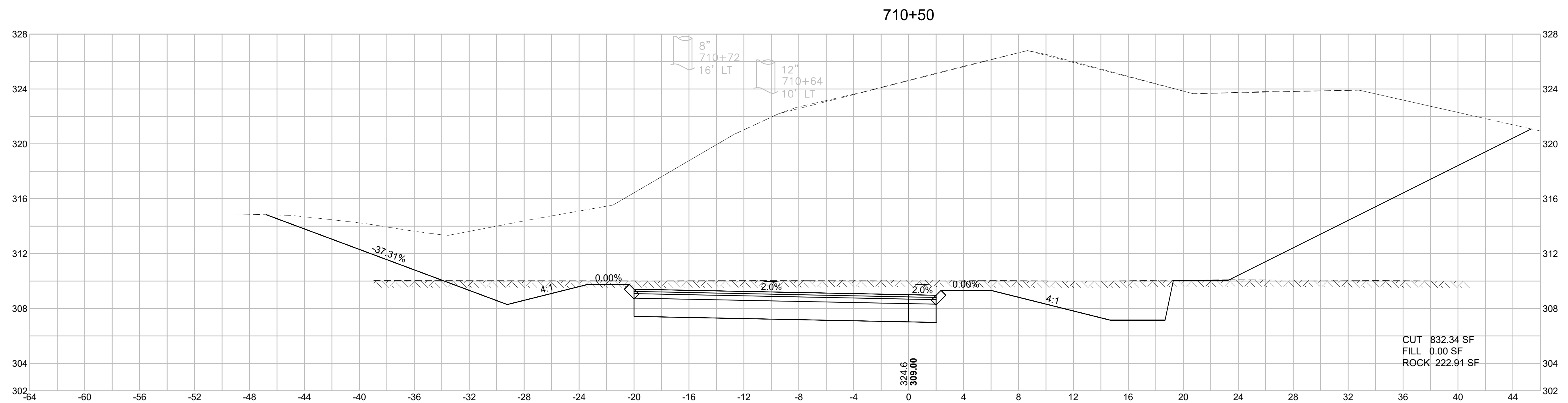
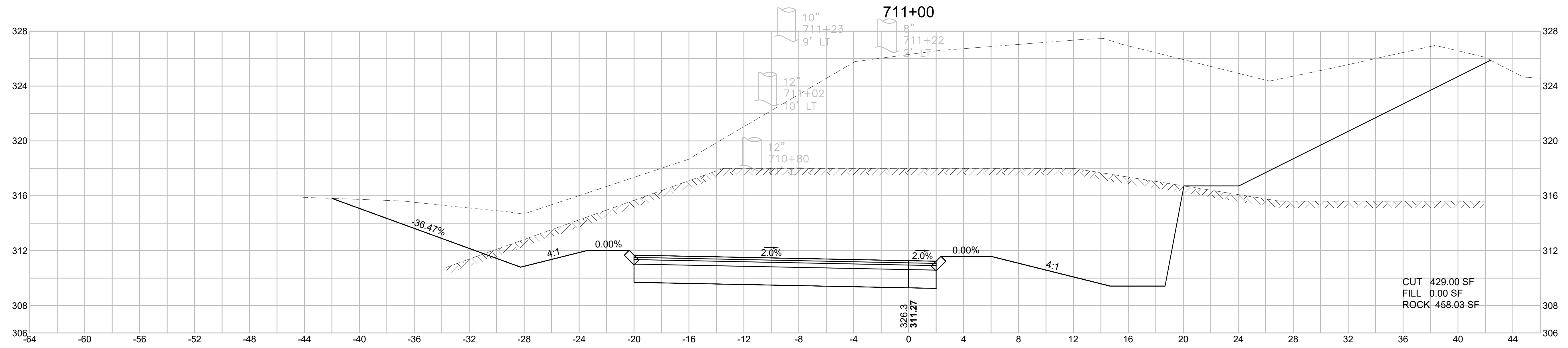
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 10 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	231	258
PROJECT FILE NO.		603739	

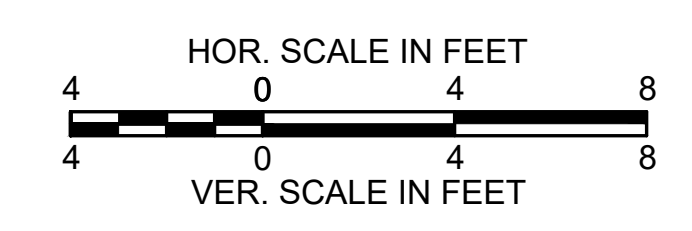
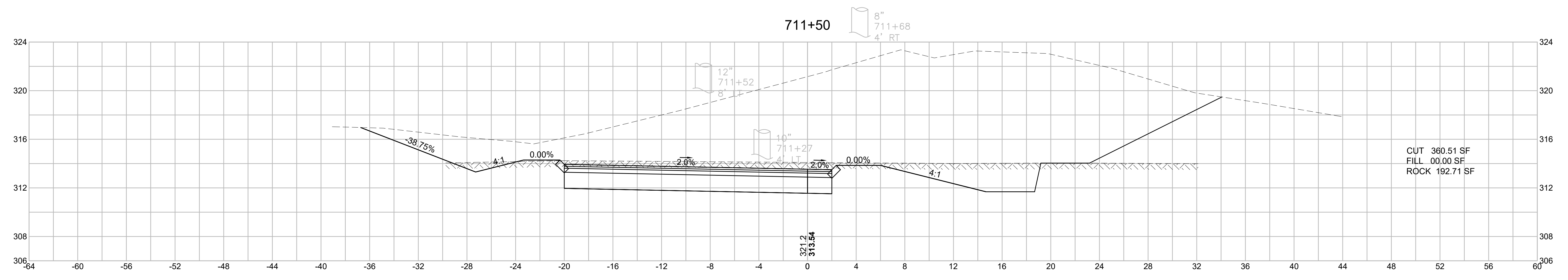
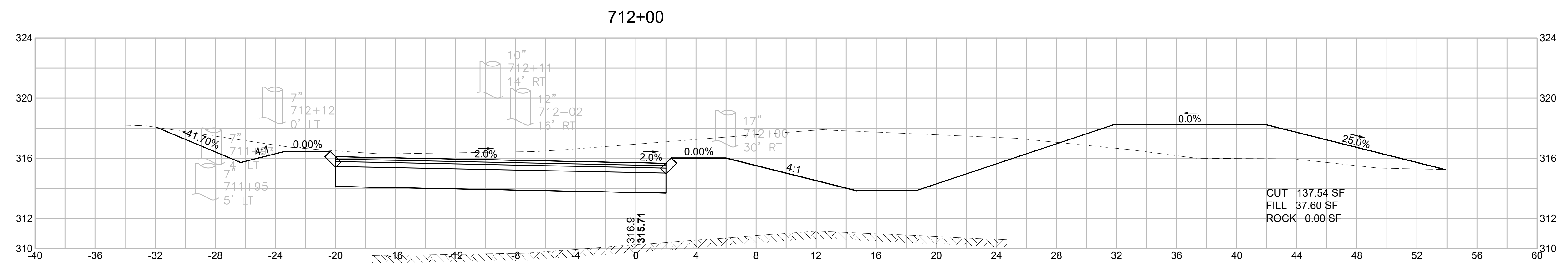
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 11 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	232	258
PROJECT FILE NO.		603739	

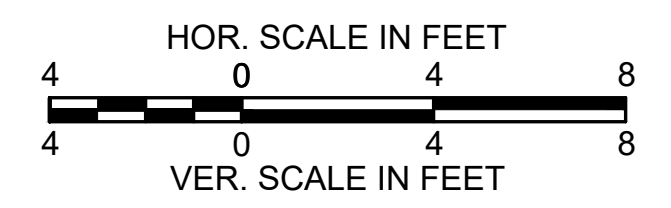
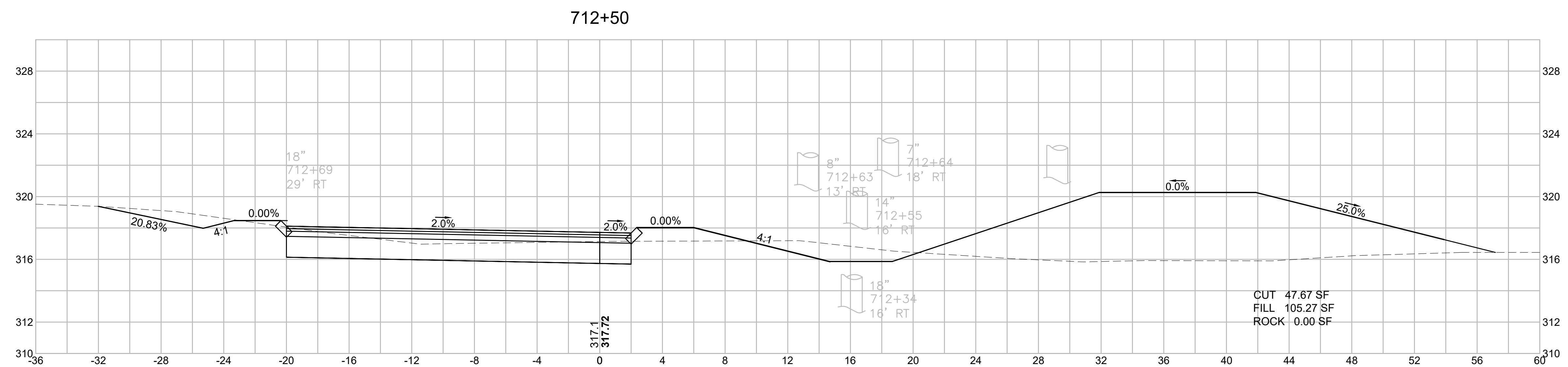
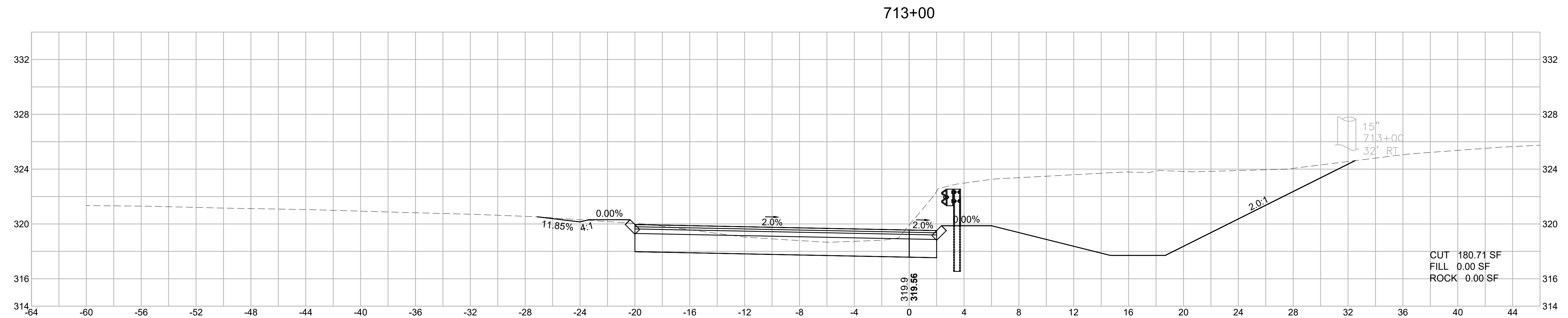
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 12 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	233	258
PROJECT FILE NO.		603739	

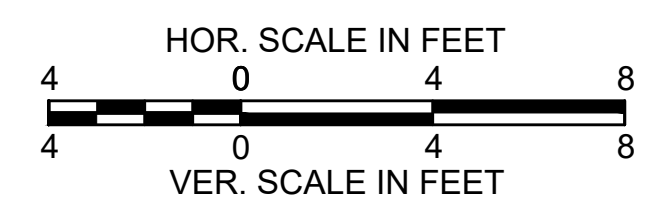
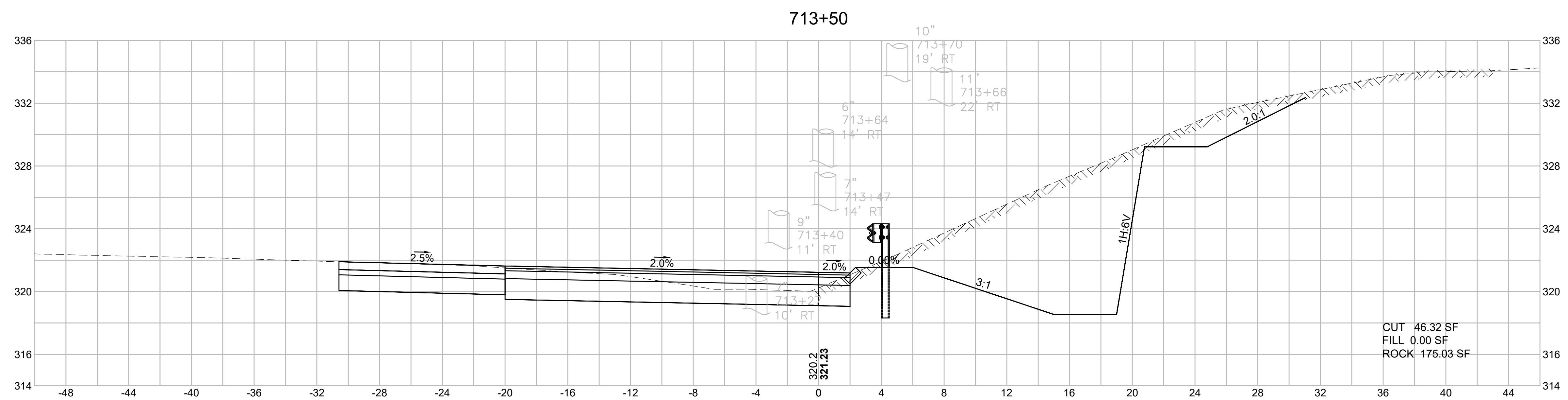
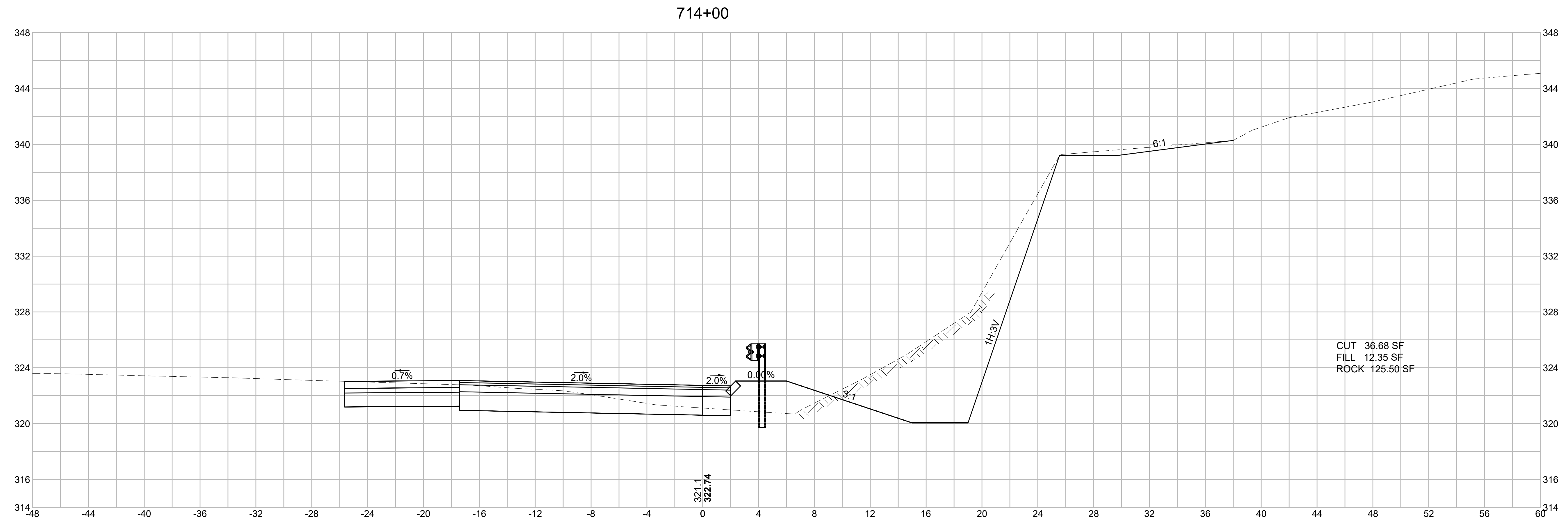
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 13 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	234	258
PROJECT FILE NO.		603739	

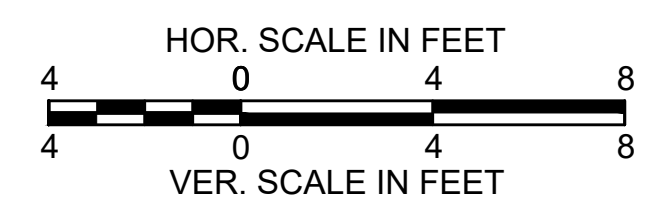
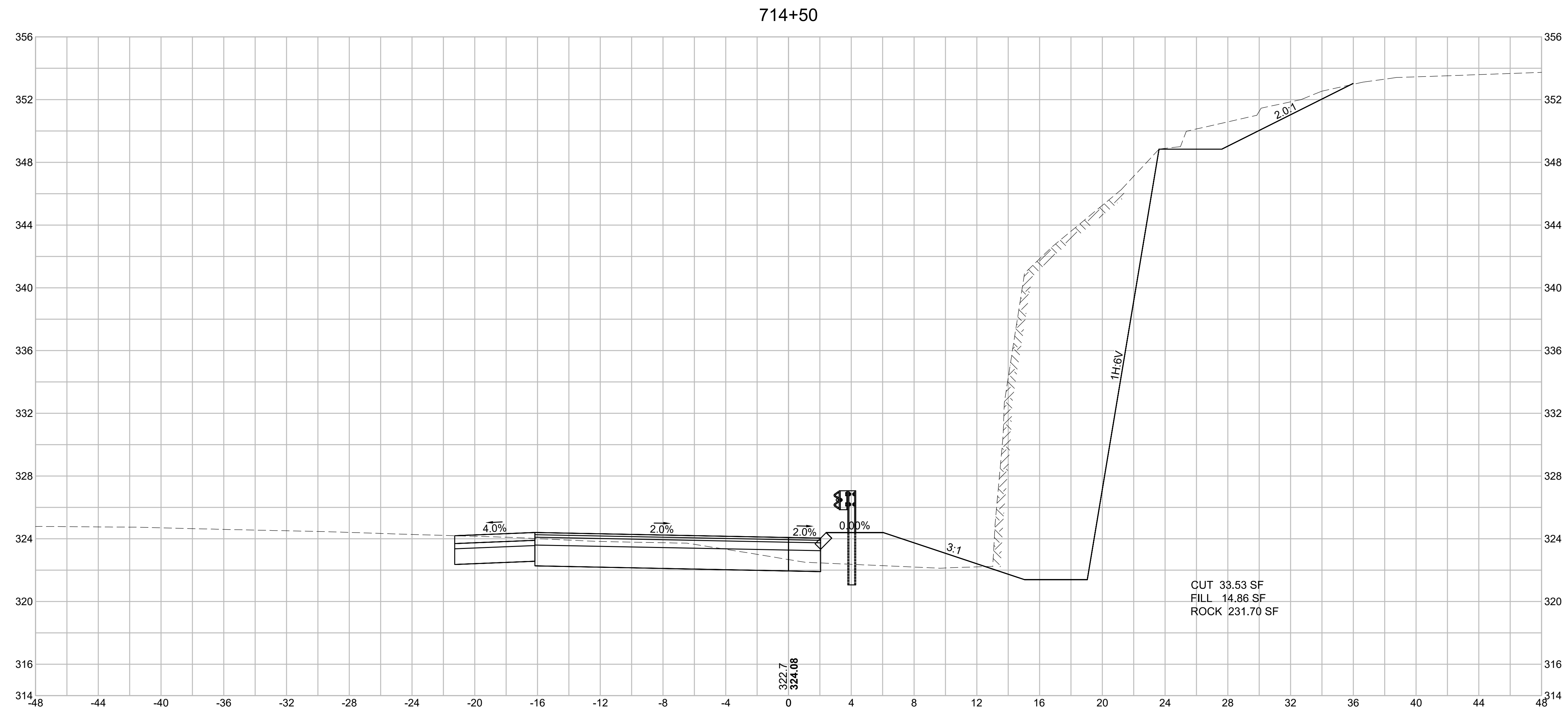
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 14 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	235	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 15 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	236	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 16 OF 28

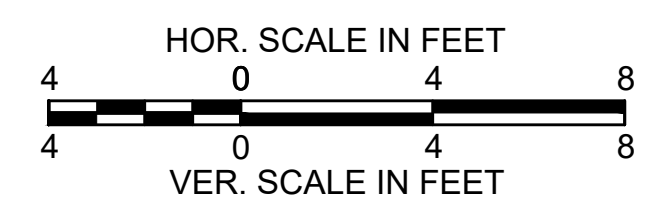
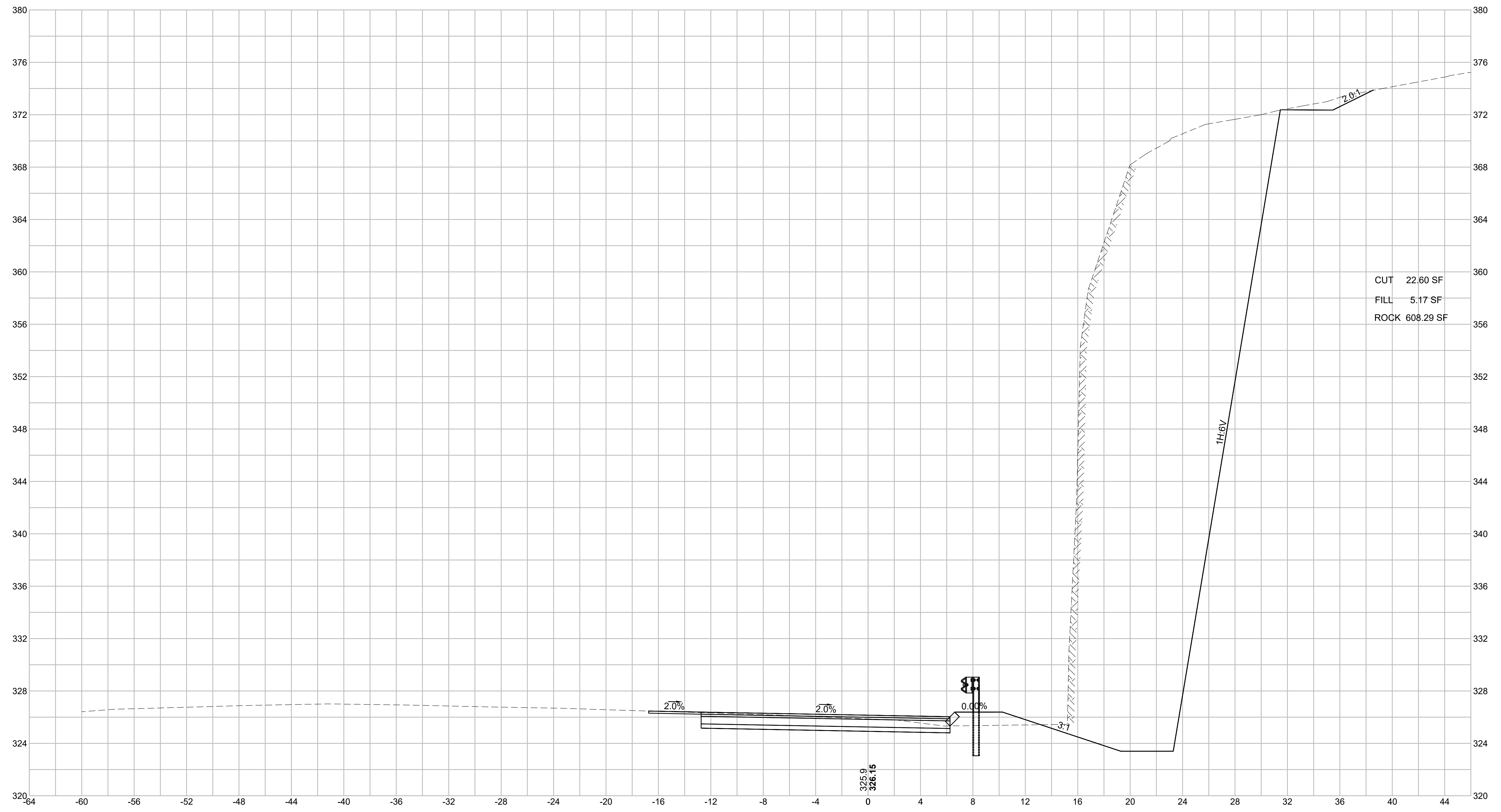


WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	237	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 17 OF 28

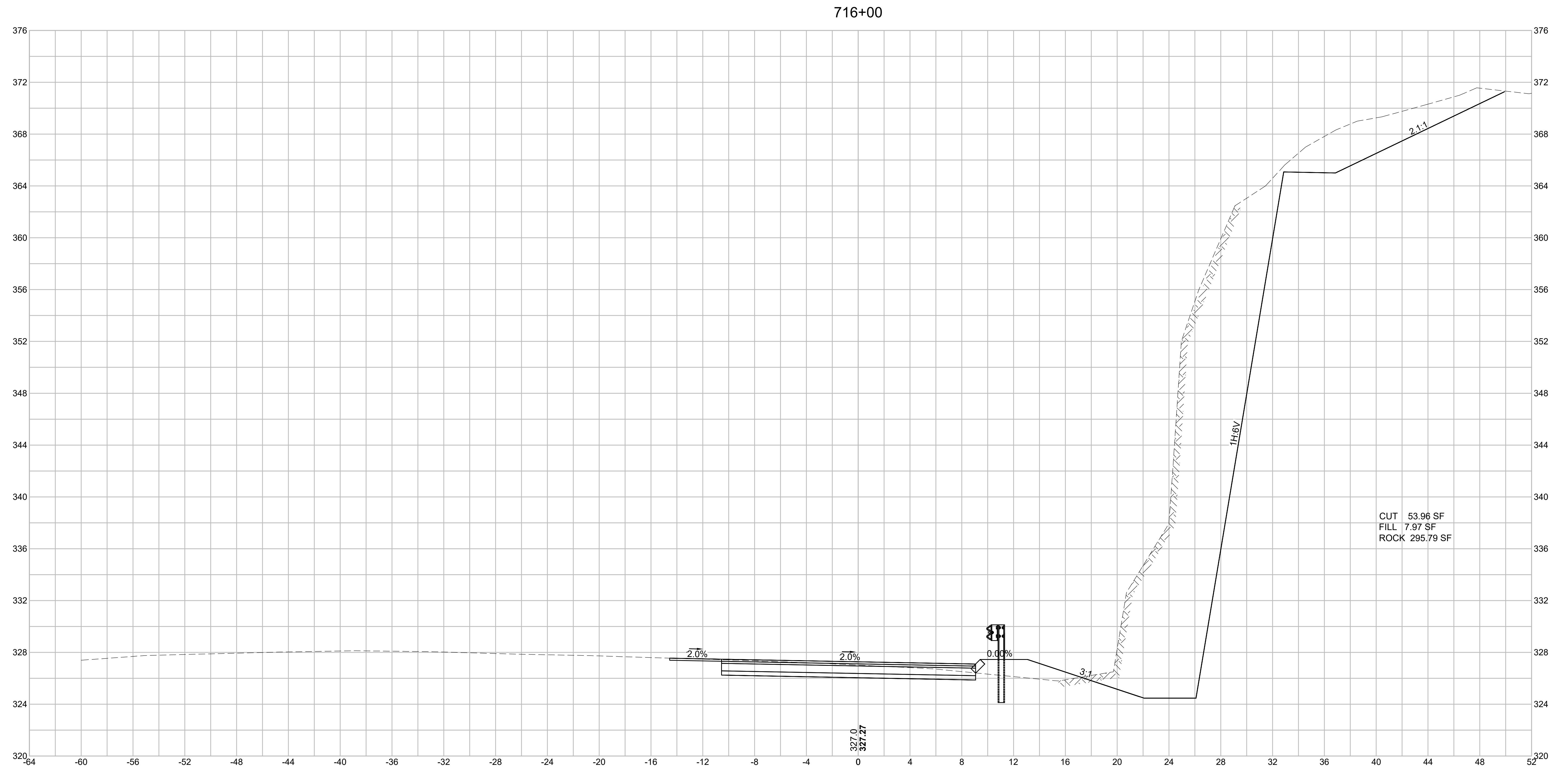
715+50



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	238	258
PROJECT FILE NO.		603739	

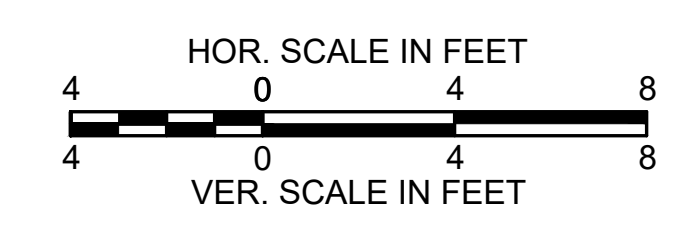
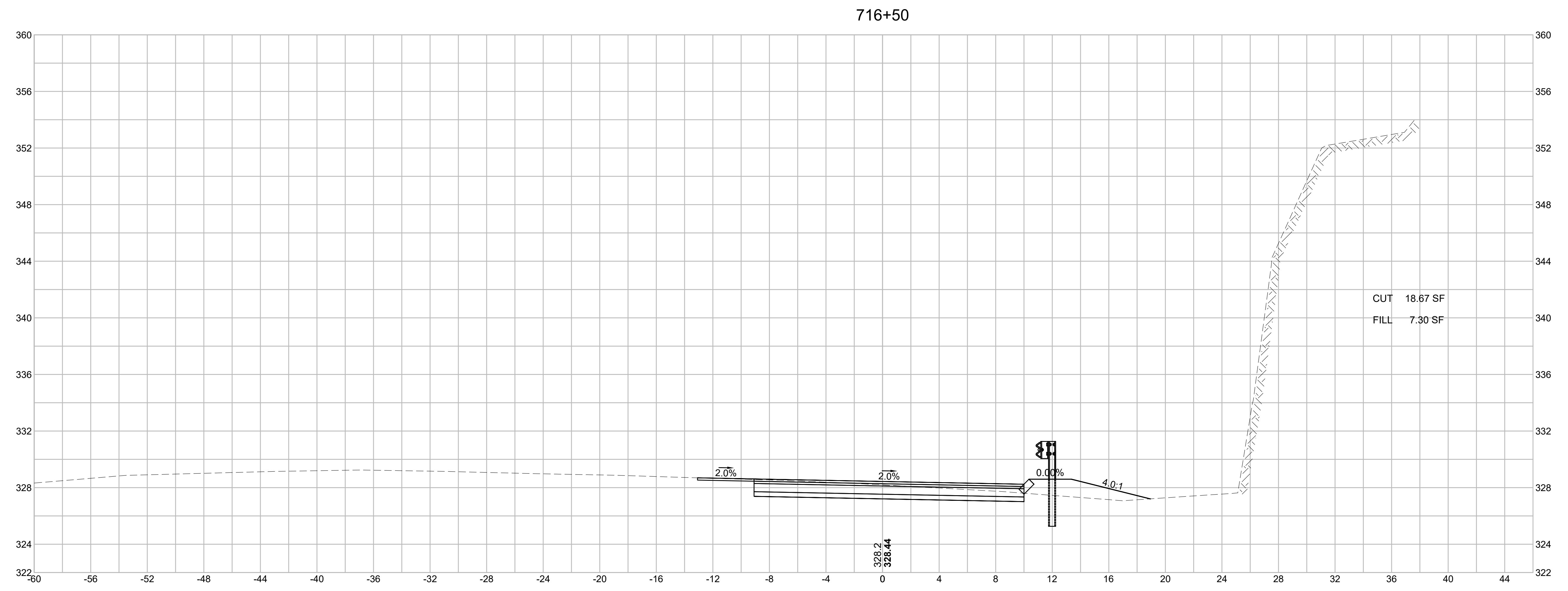
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 18 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	239	258
PROJECT FILE NO.		603739	

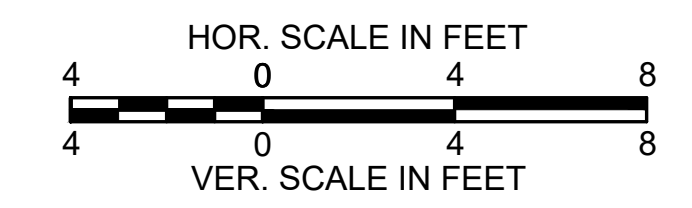
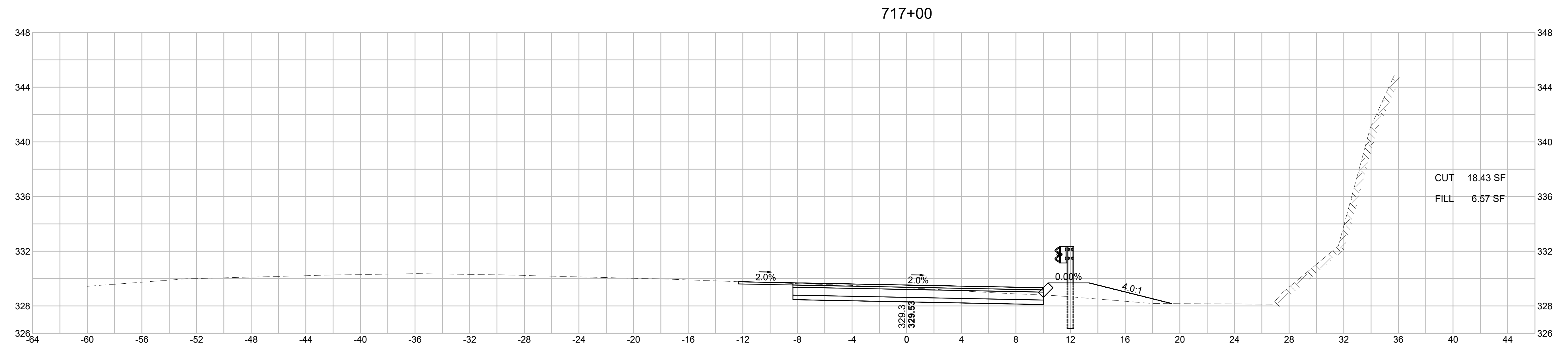
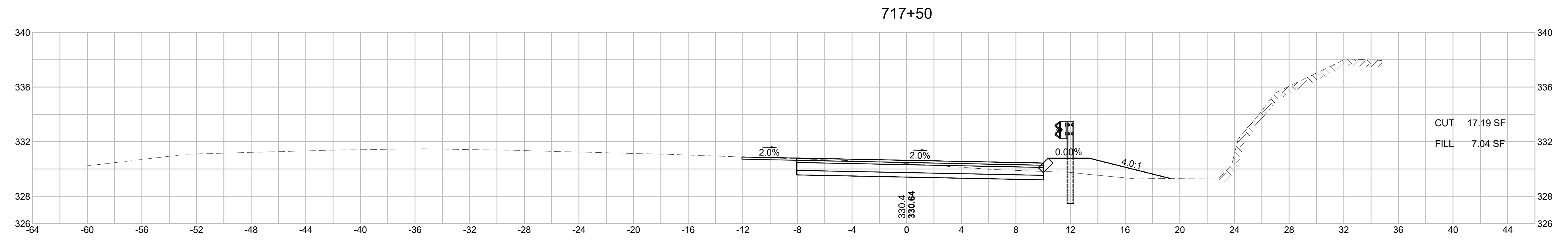
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 19 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	240	258
PROJECT FILE NO.		603739	

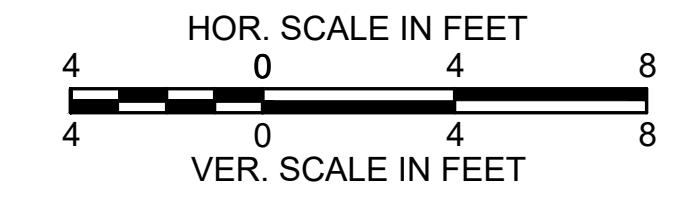
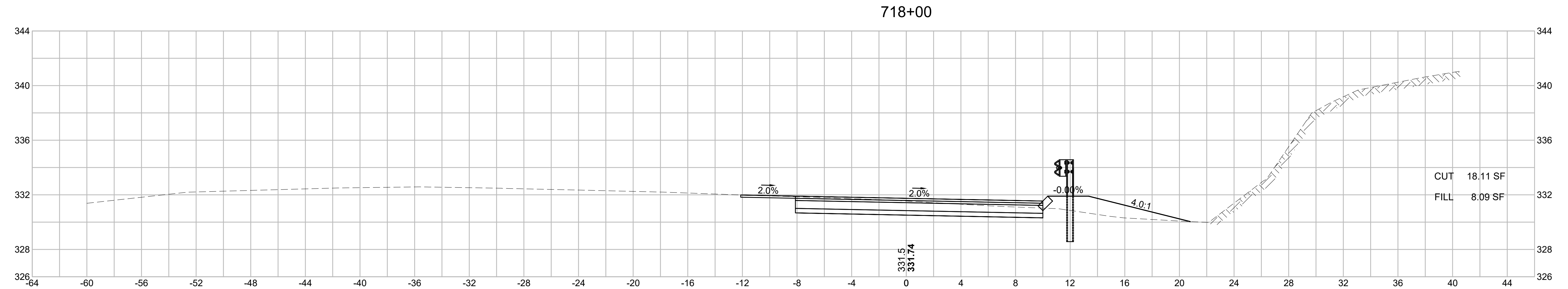
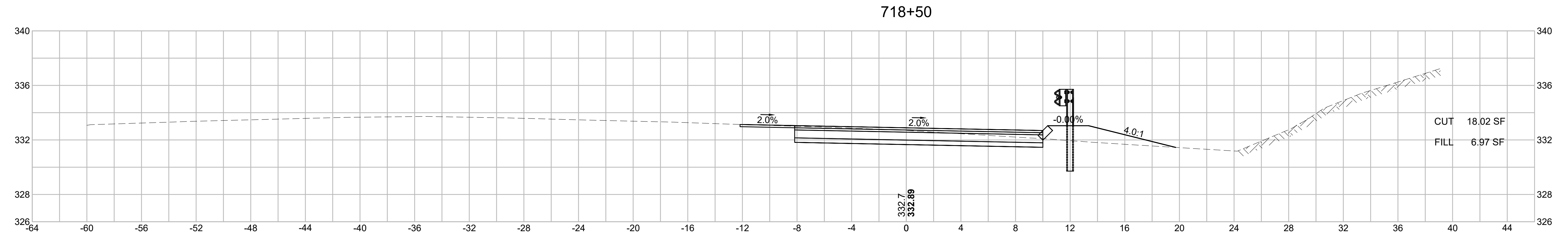
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 20 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	241	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 21 OF 28

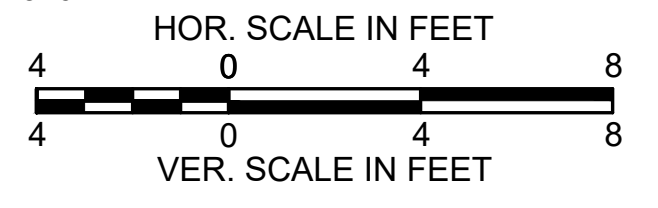
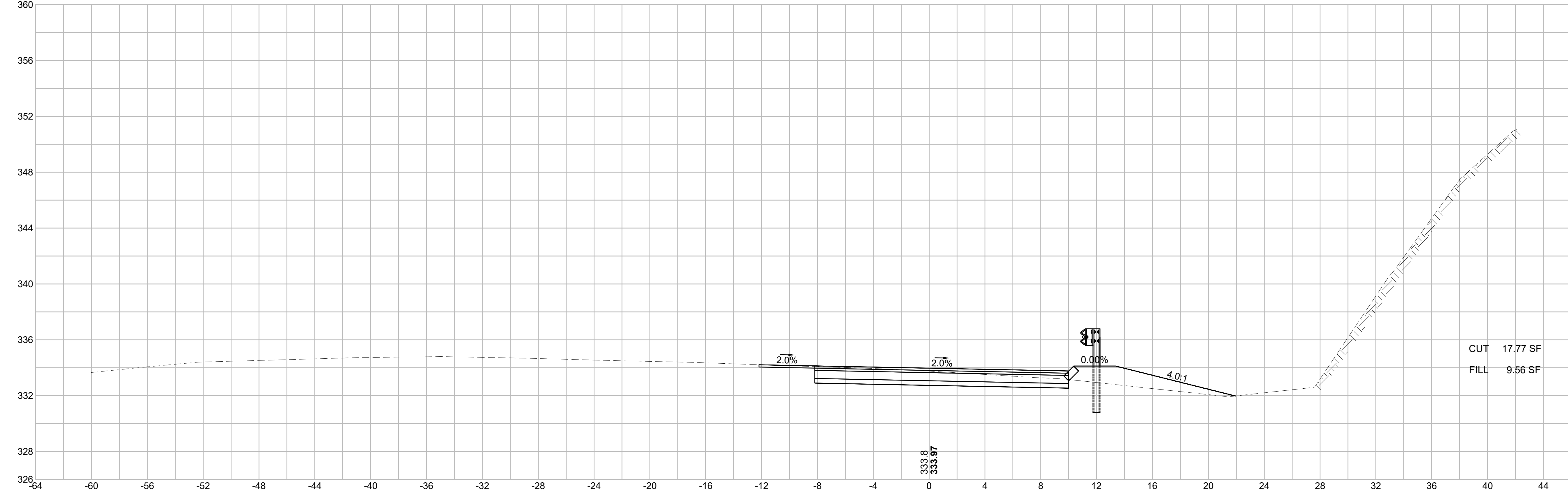
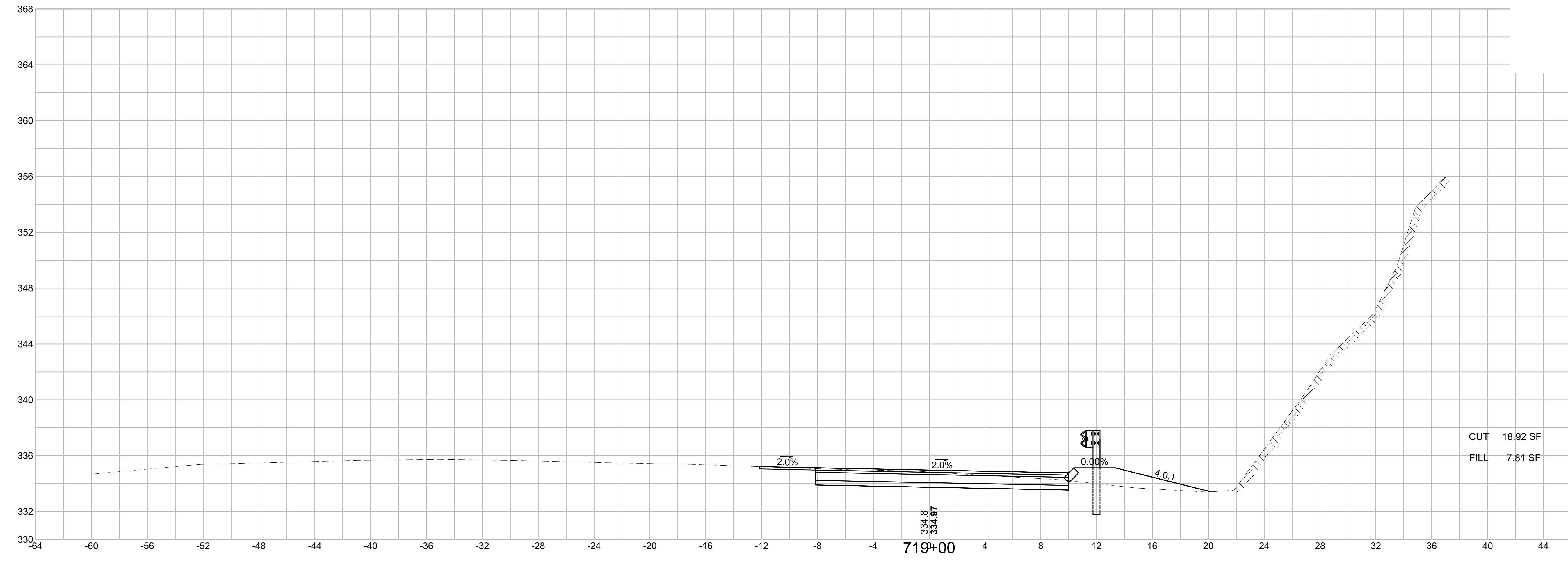


**WRENTHAM, MA
I-495 / ROUTE 1A RAMPS**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	242	258
PROJECT FILE NO.		603739	

**CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 22 OF 28**

719+50



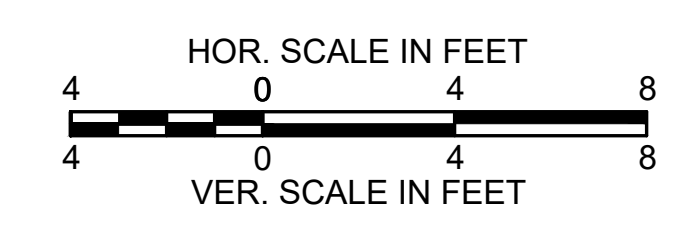
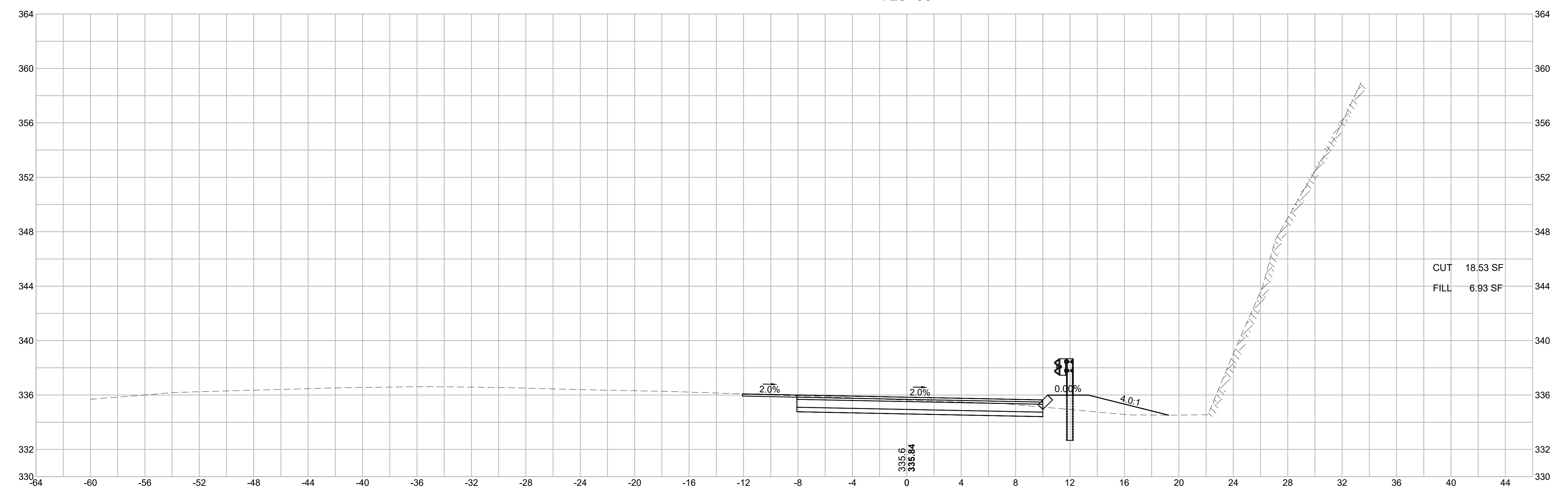
WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	243	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 23 OF 28

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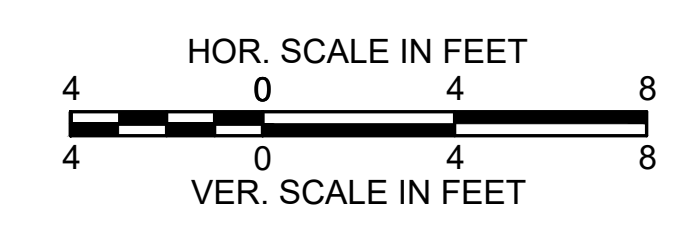
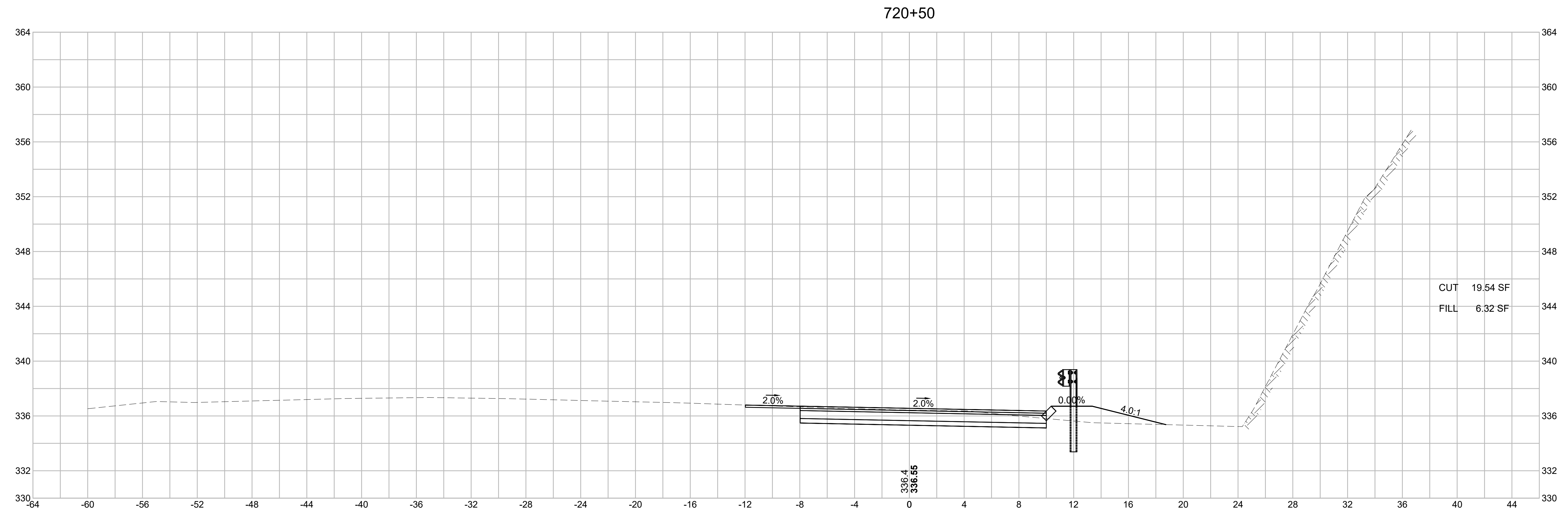
720+00



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	244	258
PROJECT FILE NO.		603739	

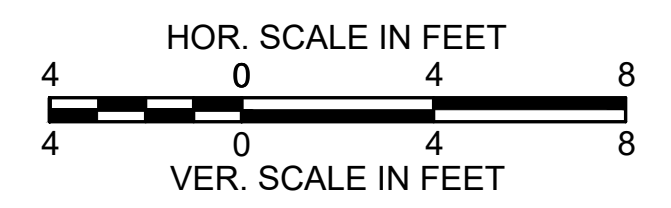
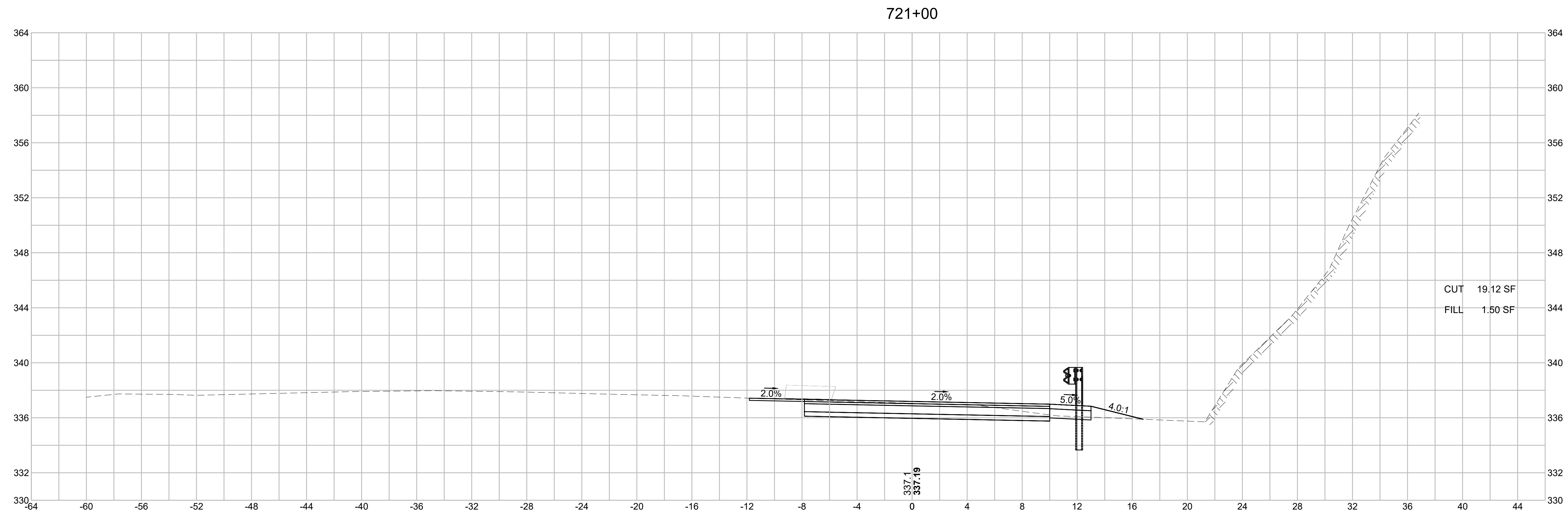
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 24 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	245	258
PROJECT FILE NO.		603739	

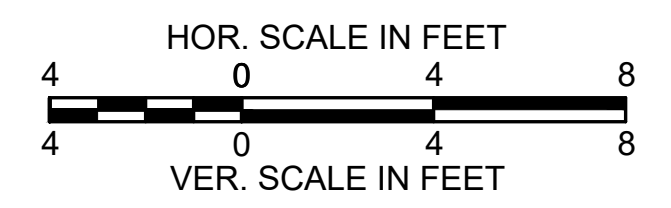
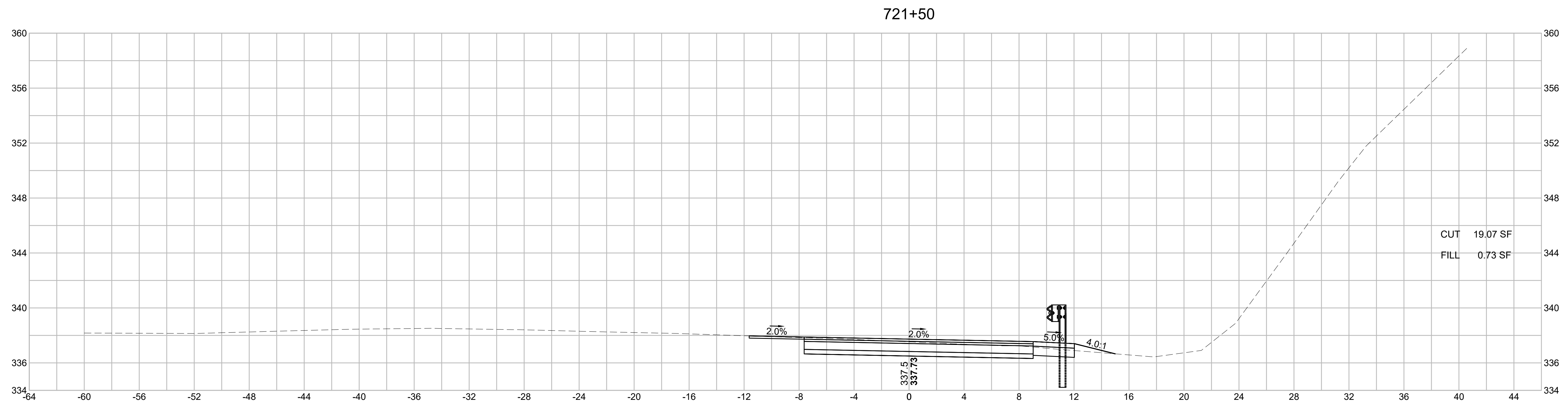
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 25 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	246	258
PROJECT FILE NO.		603739	

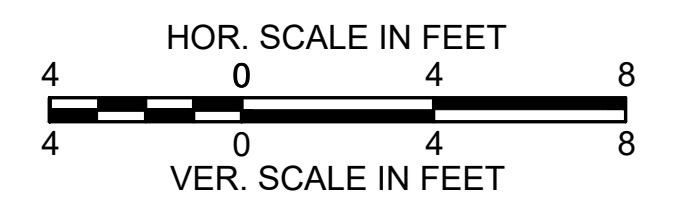
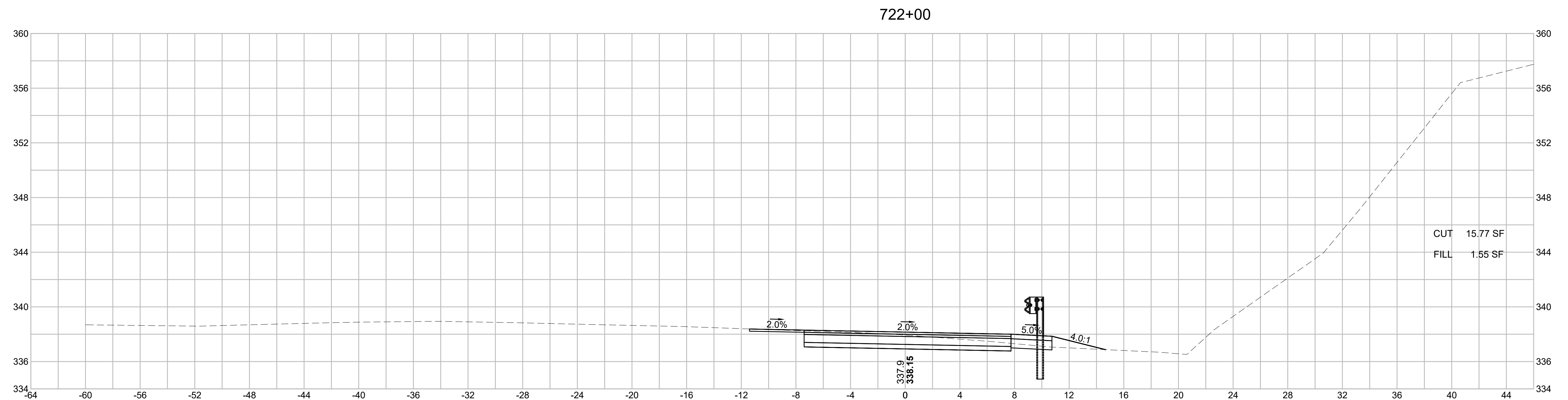
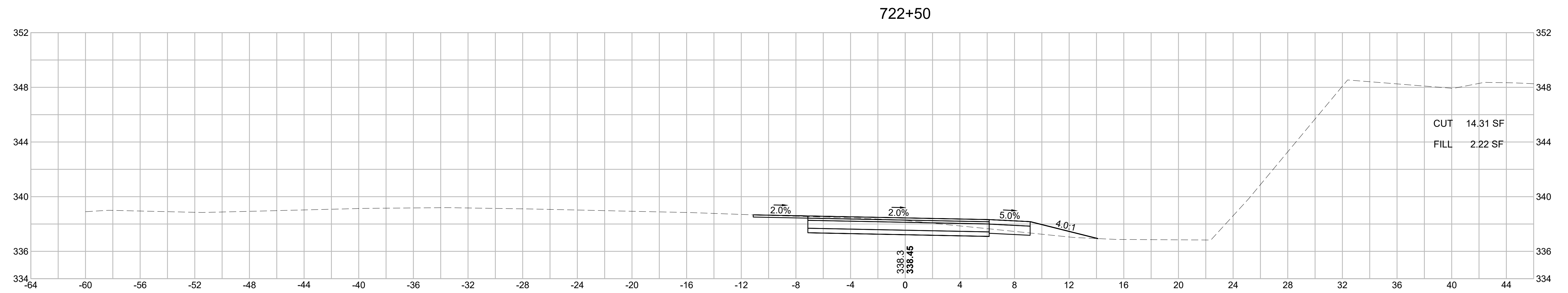
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 26 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	247	258
PROJECT FILE NO.		603739	

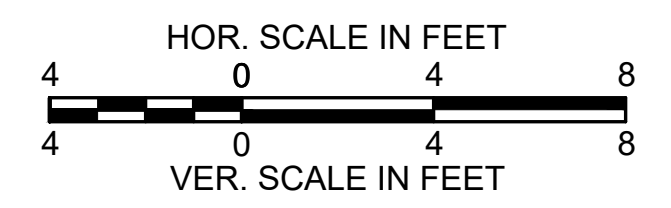
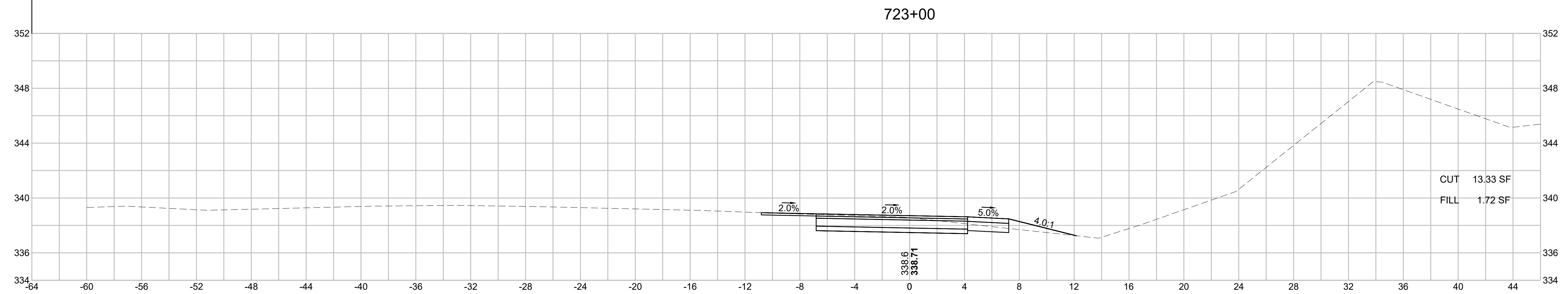
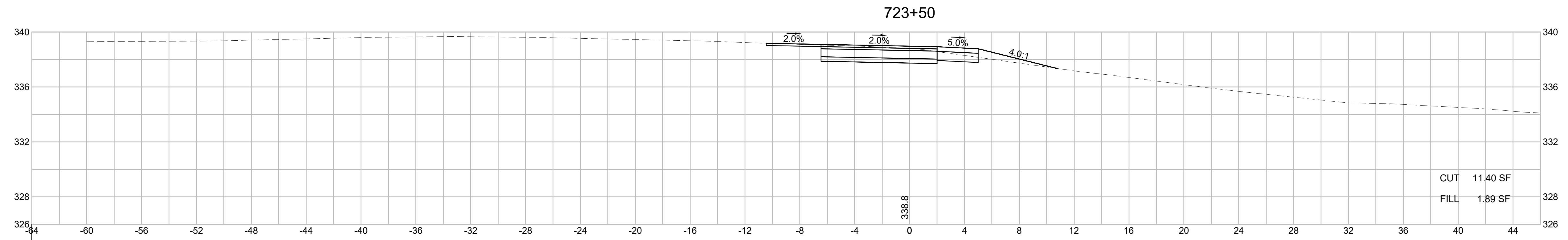
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 27 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	248	258
PROJECT FILE NO. 603739			

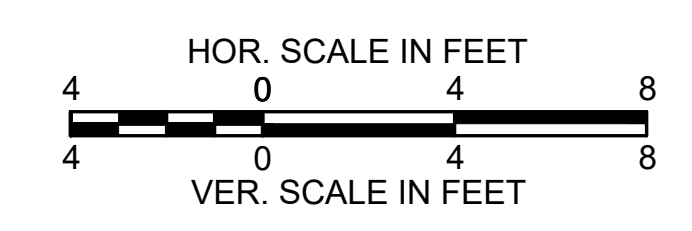
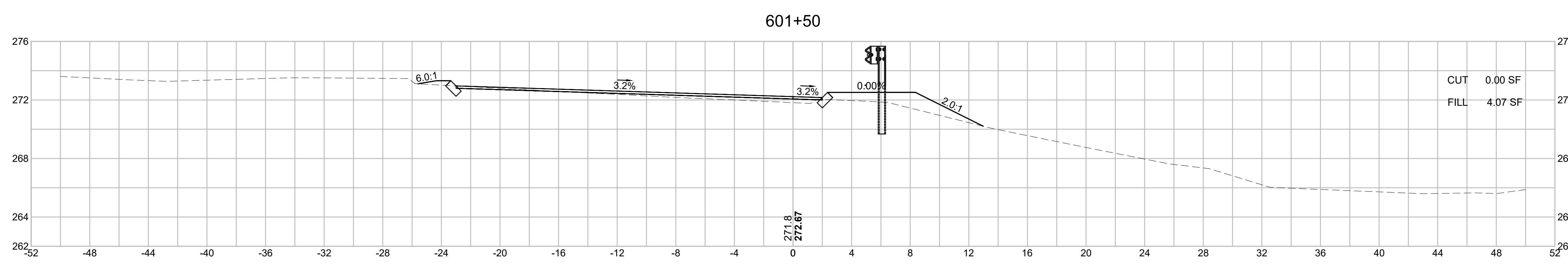
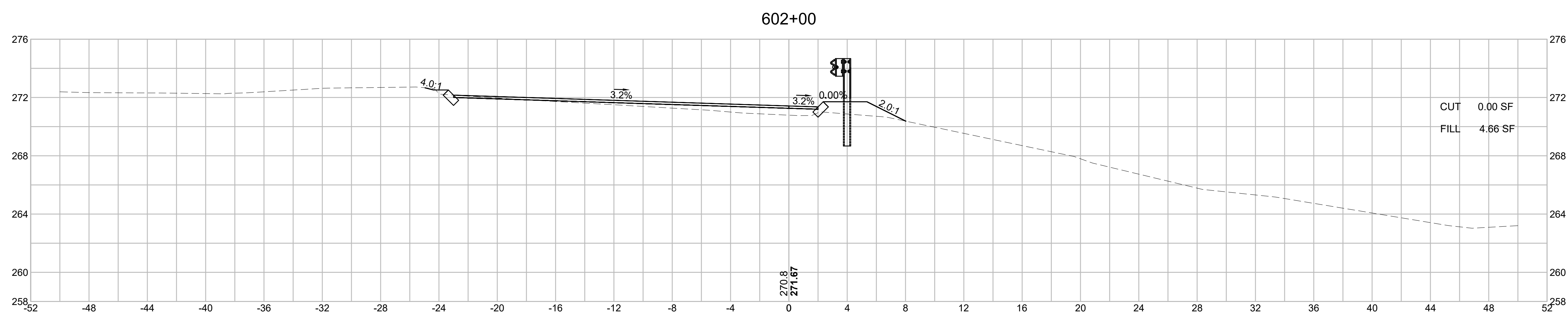
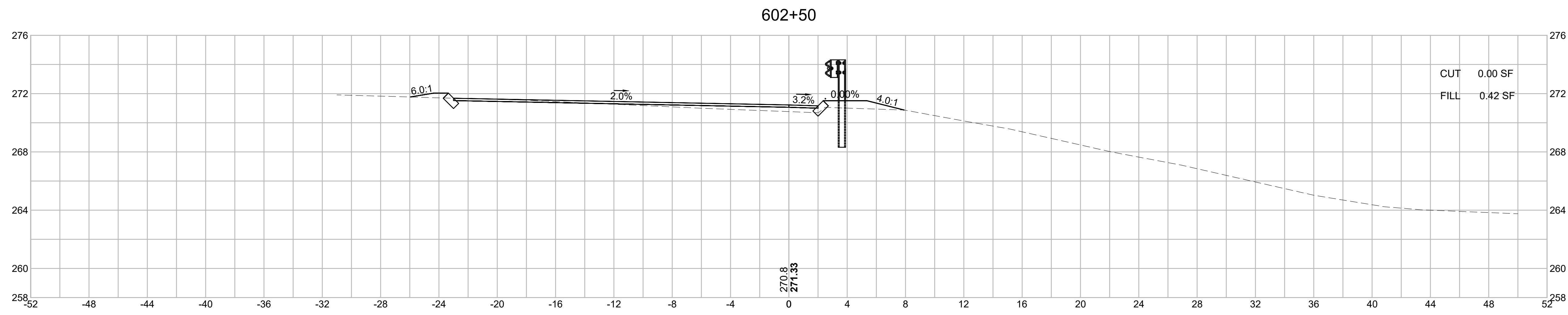
CROSS SECTIONS
I-495 SB ENTRANCE RAMP
SHEET 28 OF 28



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	249	258
PROJECT FILE NO.		603739	

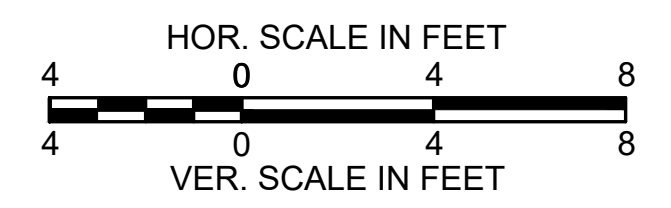
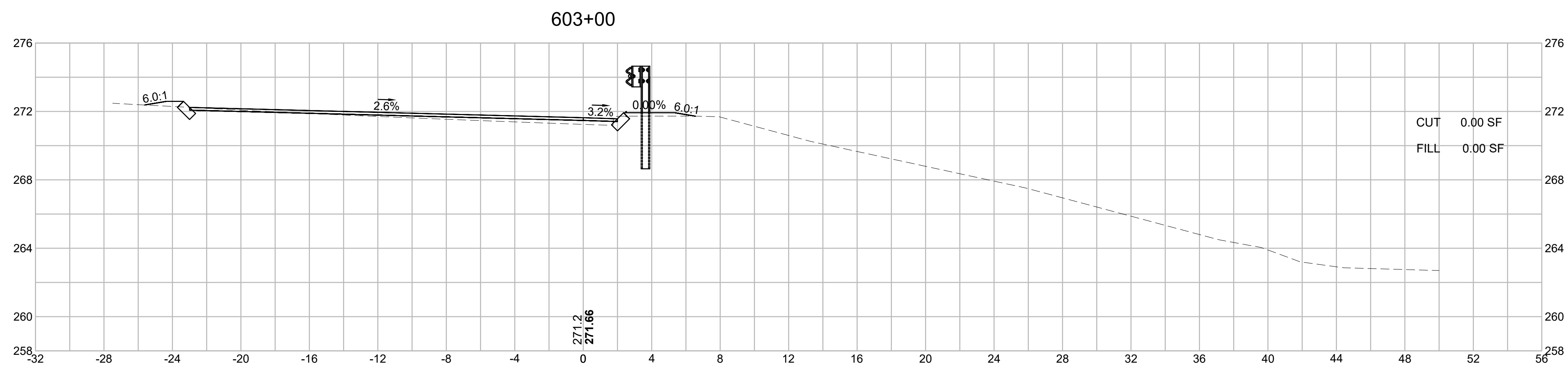
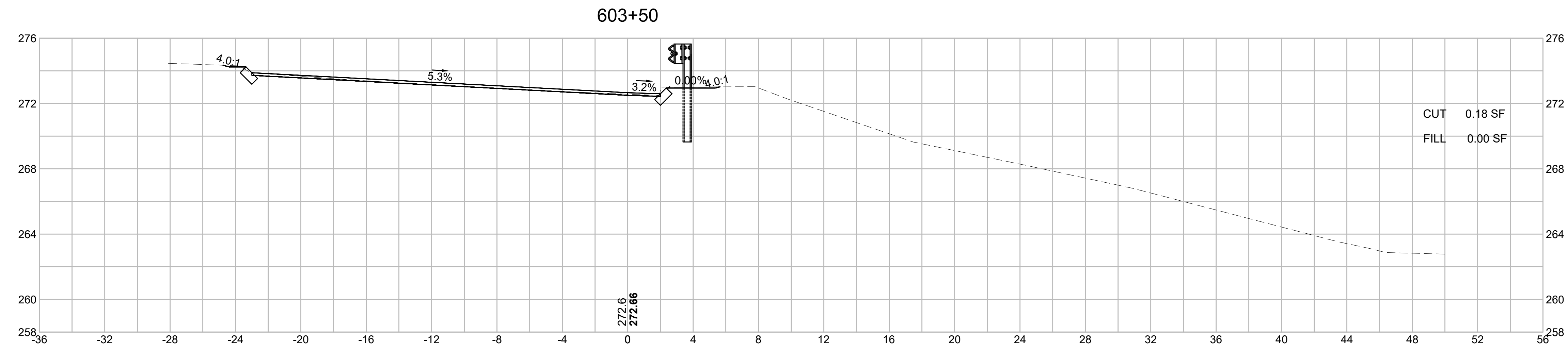
CROSS SECTIONS
I-495 SB RAMPS
SHEET 1 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	250	258
PROJECT FILE NO.		603739	

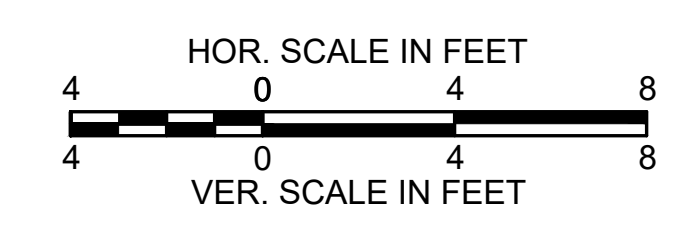
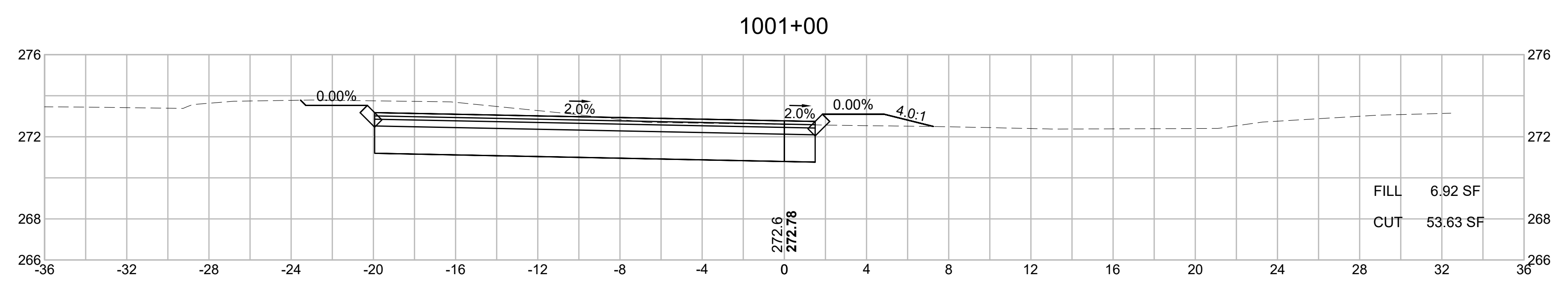
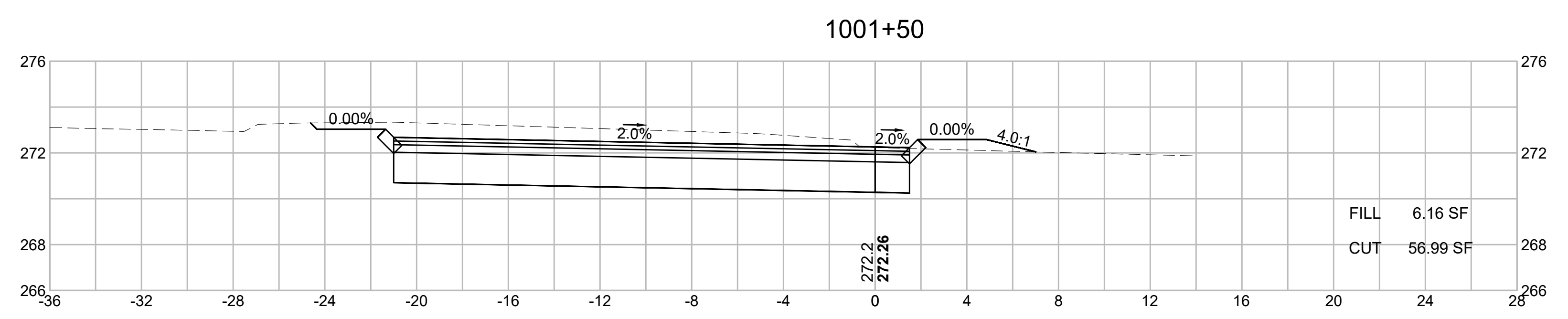
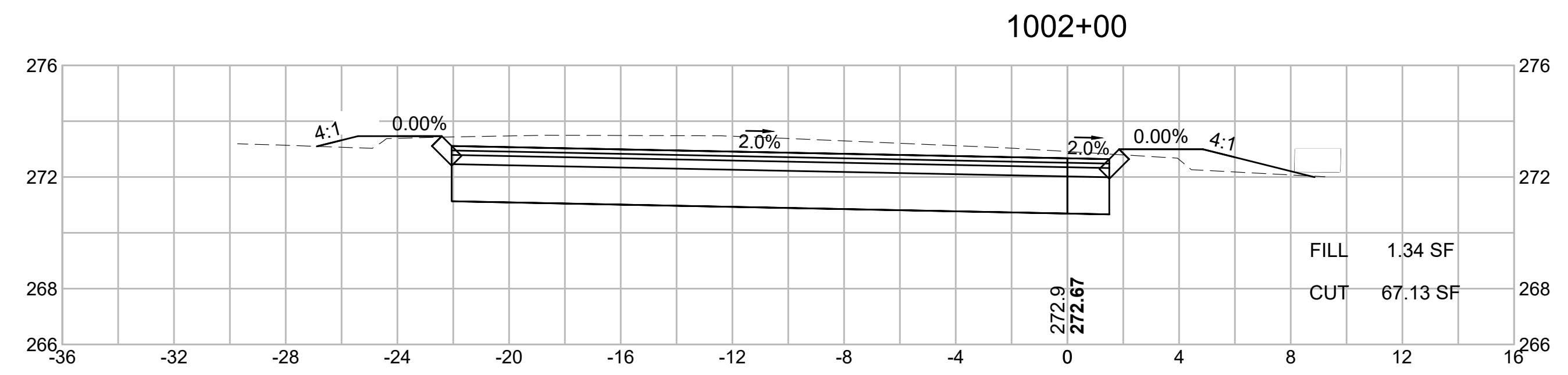
CROSS SECTIONS
I-495 SB RAMPS
SHEET 2 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	251	258
PROJECT FILE NO.		603739	

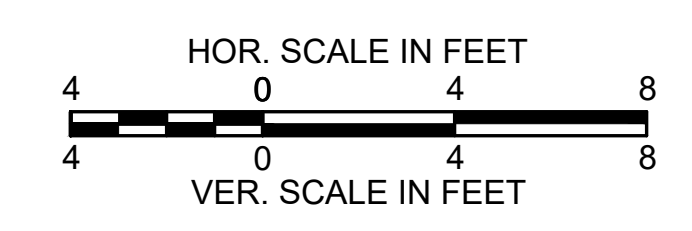
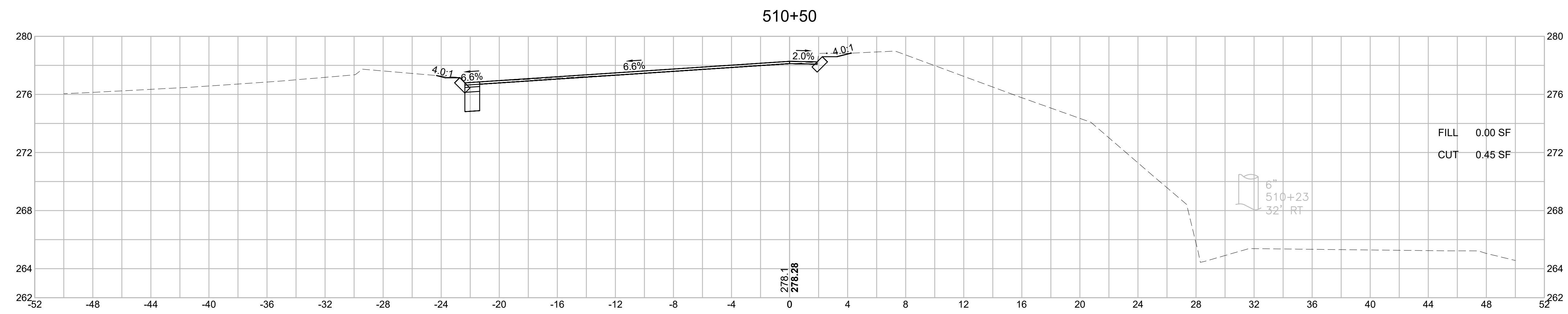
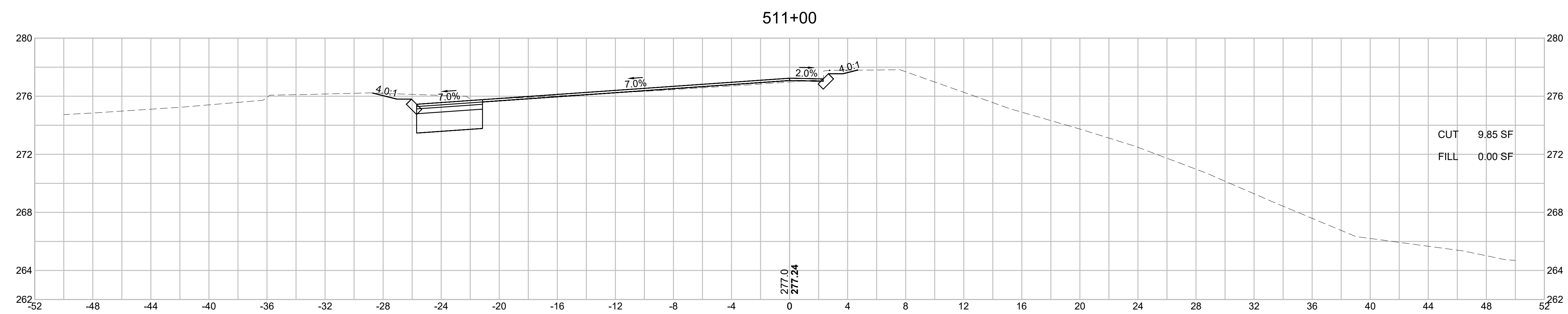
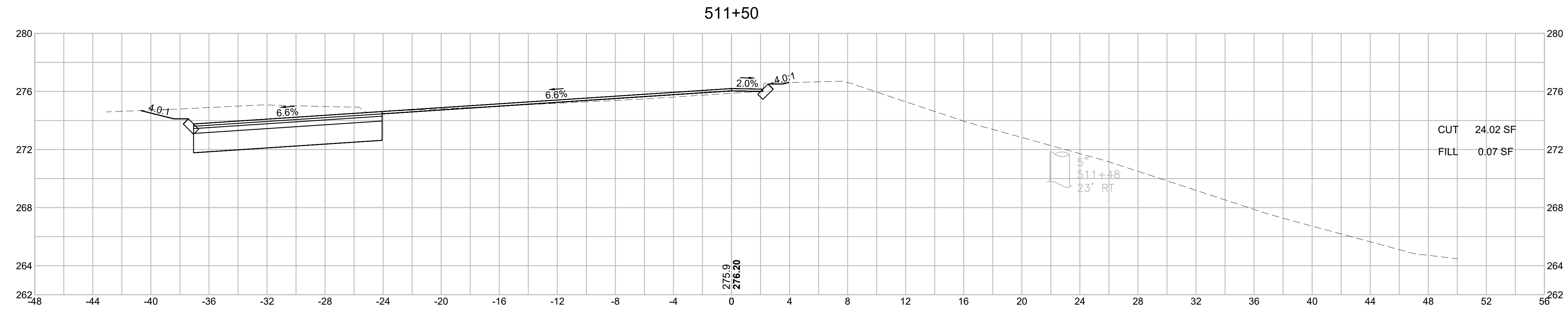
CROSS SECTIONS
I-495 SB RAMPS
SHEET 3 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	252	258
PROJECT FILE NO.		603739	

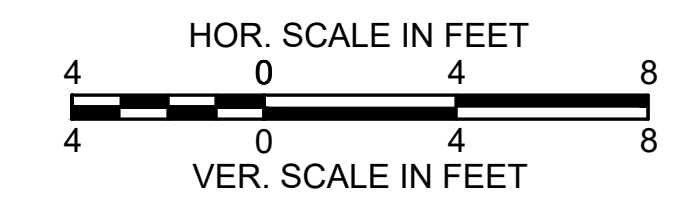
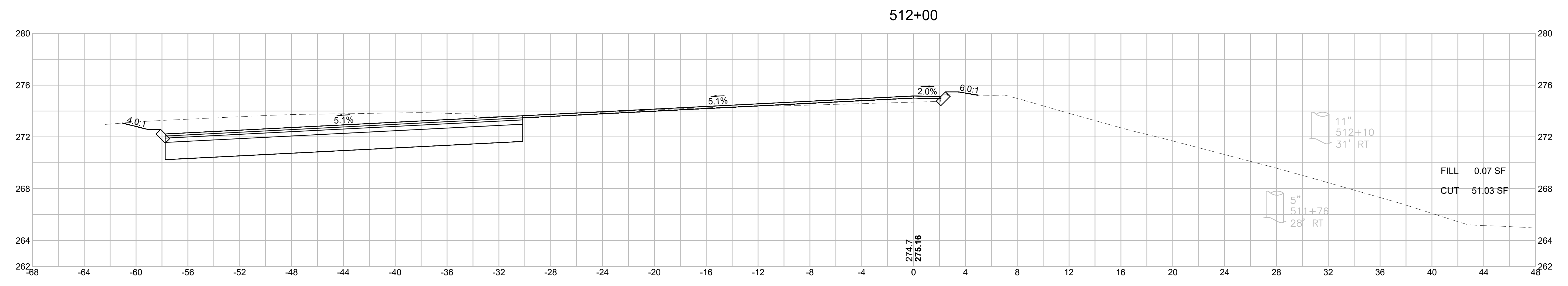
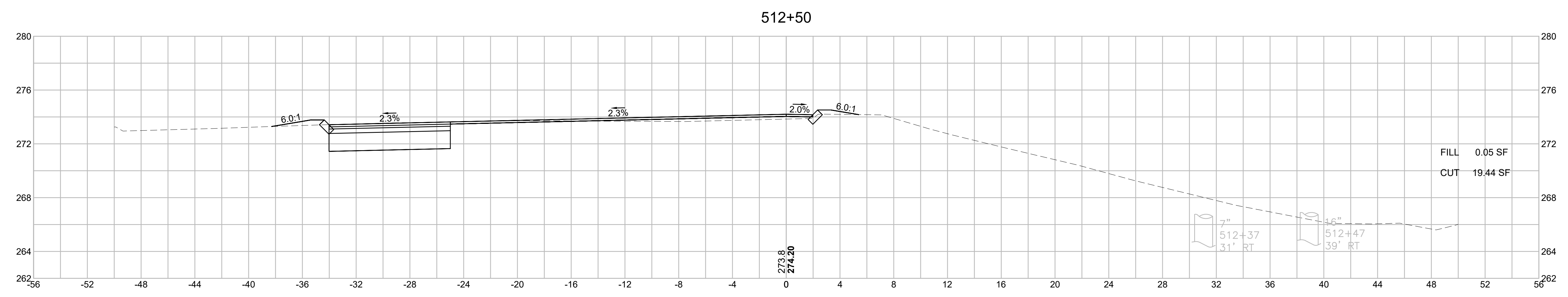
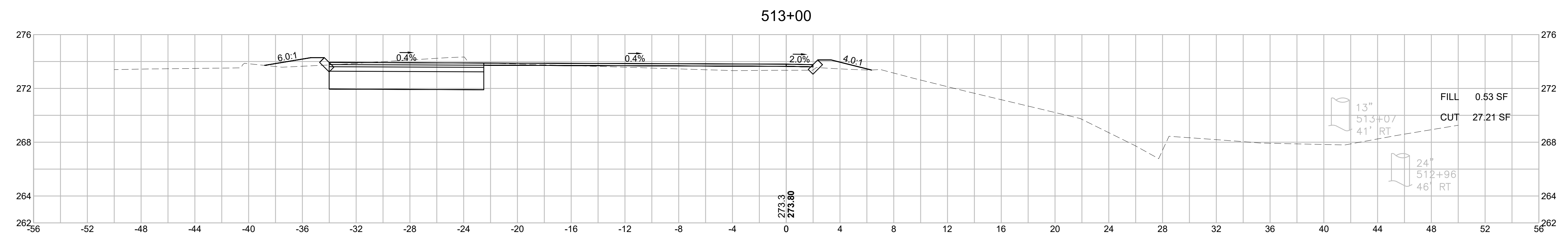
CROSS SECTIONS
I-495 SB RAMPS
SHEET 4 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	253	258
PROJECT FILE NO.		603739	

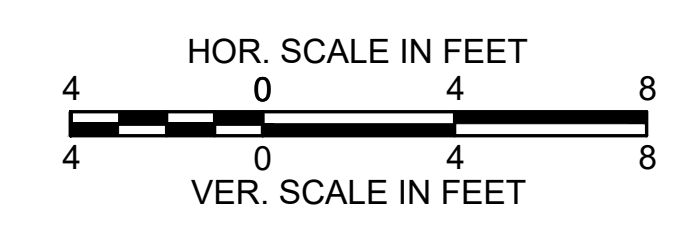
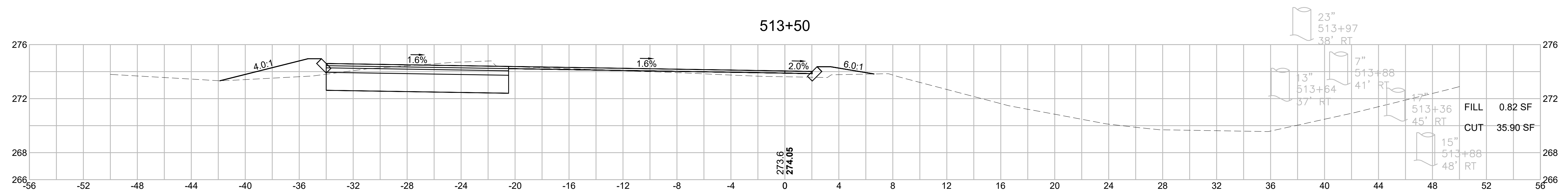
CROSS SECTIONS
I-495 SB RAMPS
SHEET 5 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	254	258
PROJECT FILE NO.		603739	

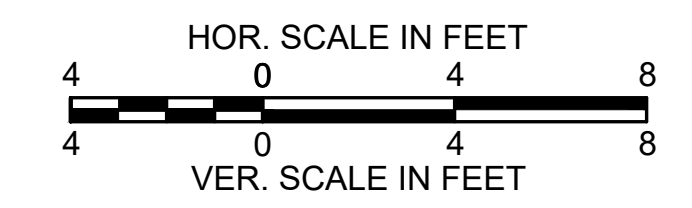
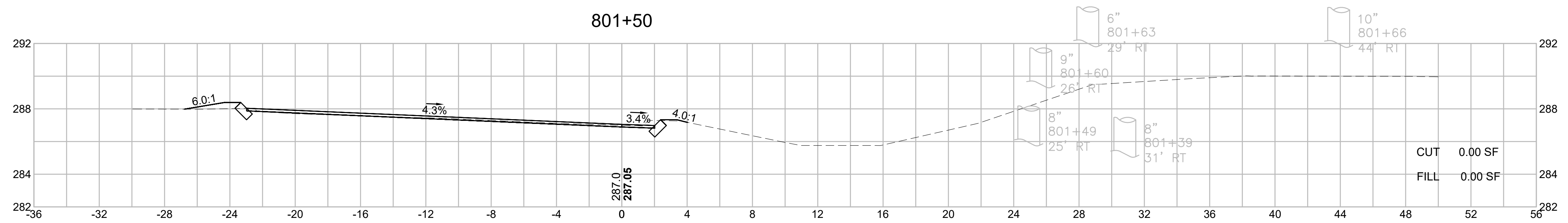
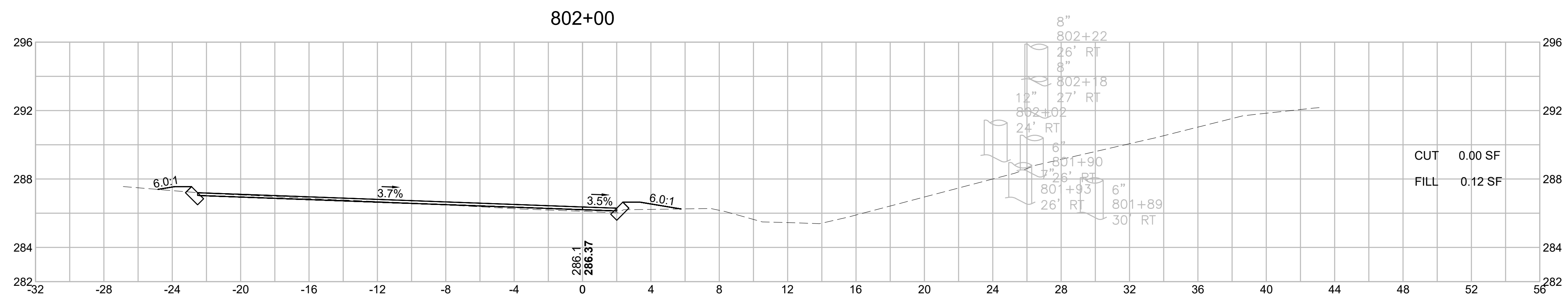
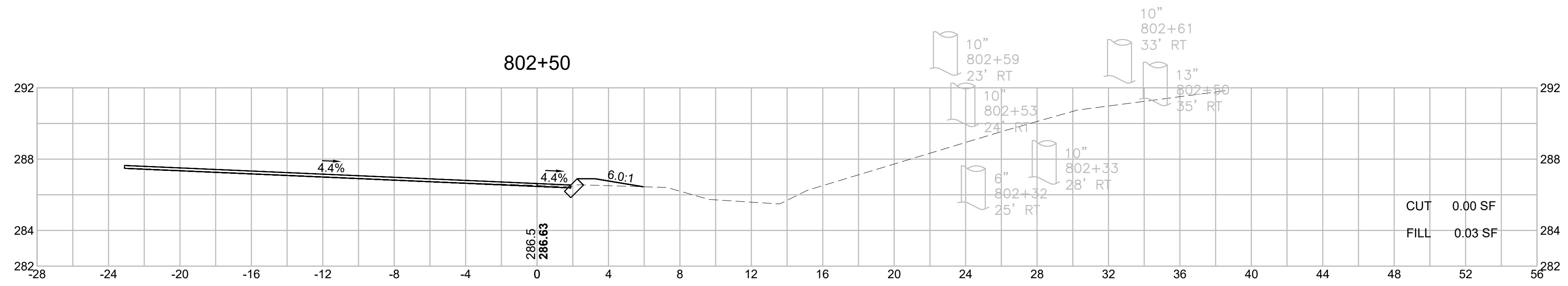
CROSS SECTIONS
I-495 SB RAMPS
SHEET 6 OF 6



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	255	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 NB RAMPS
SHEET 1 OF 4

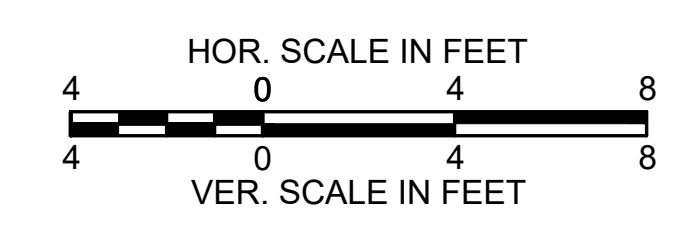
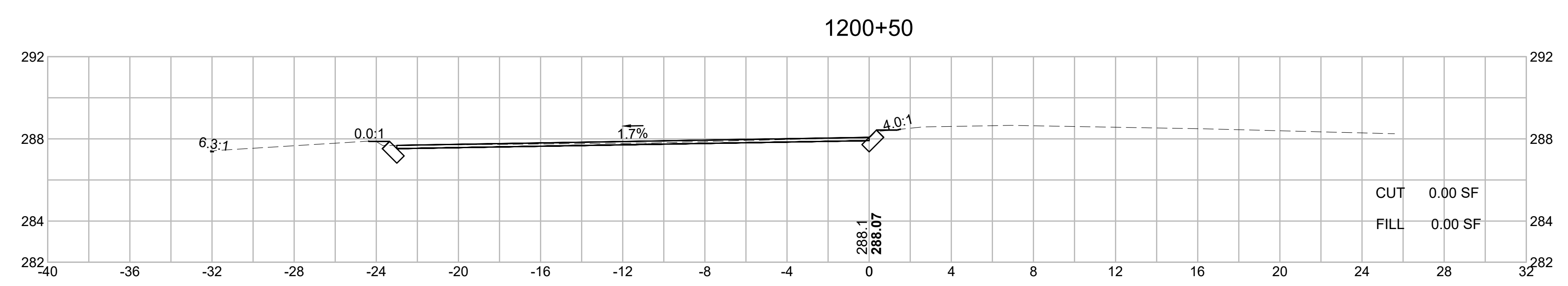
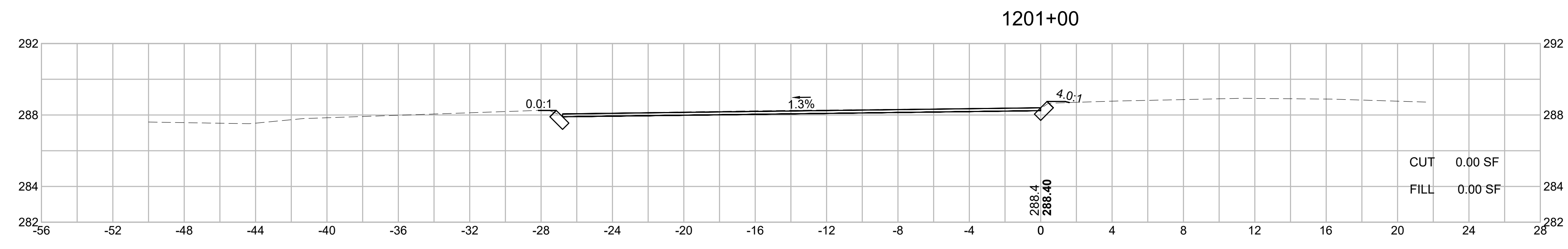


WRENTHAM, MA
I-495 / ROUTE 1A RAMP

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	256	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 NB RAMP
SHEET 2 OF 4

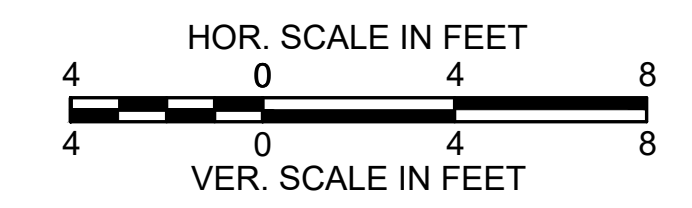
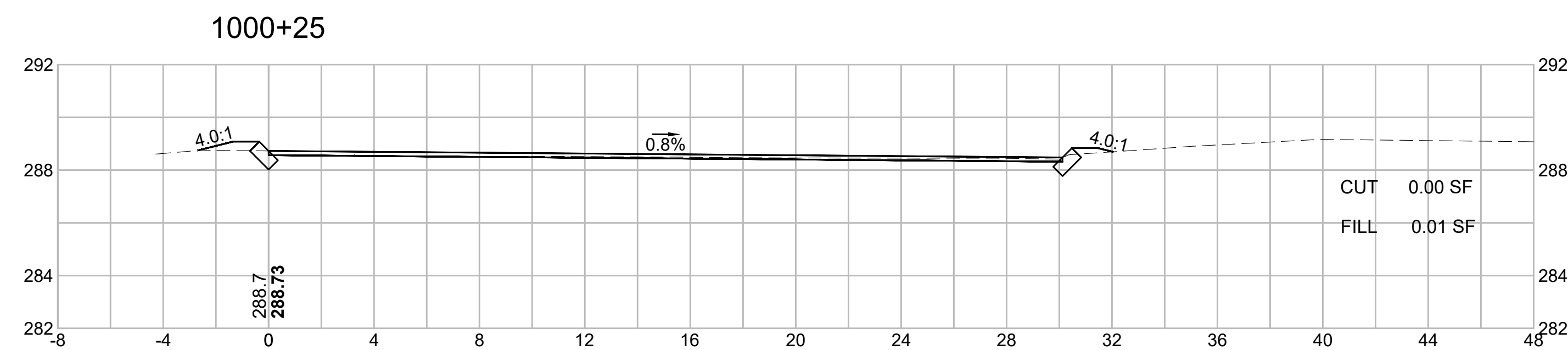
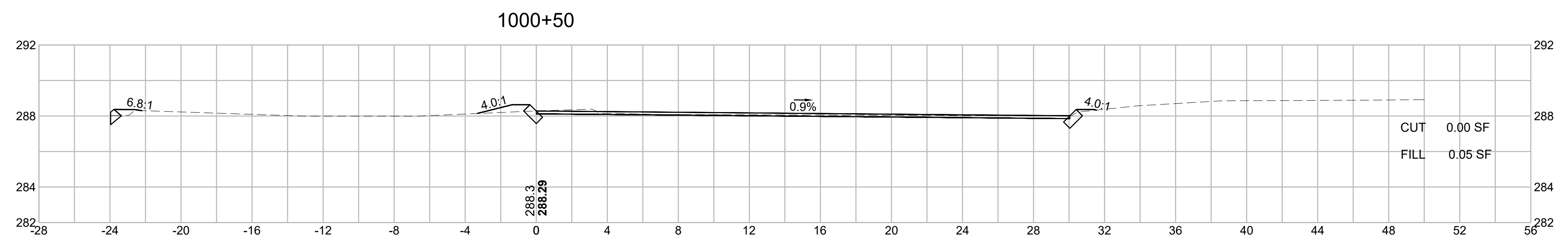
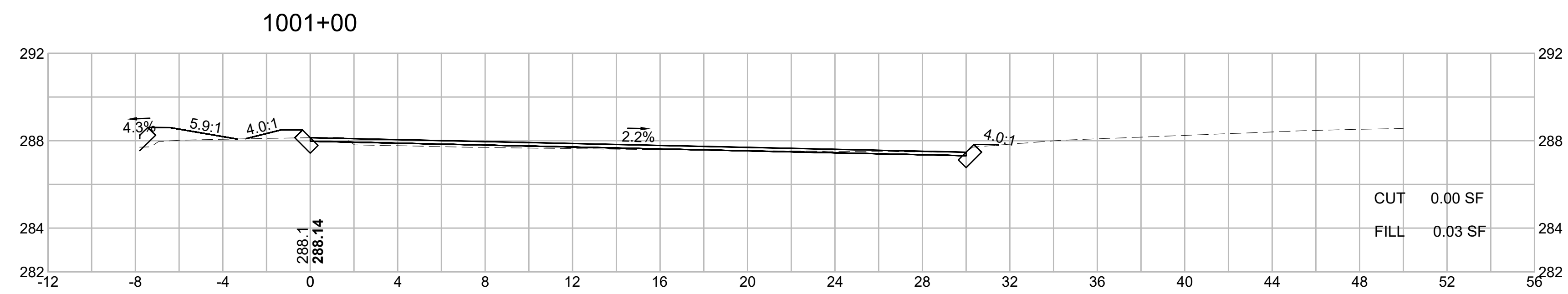
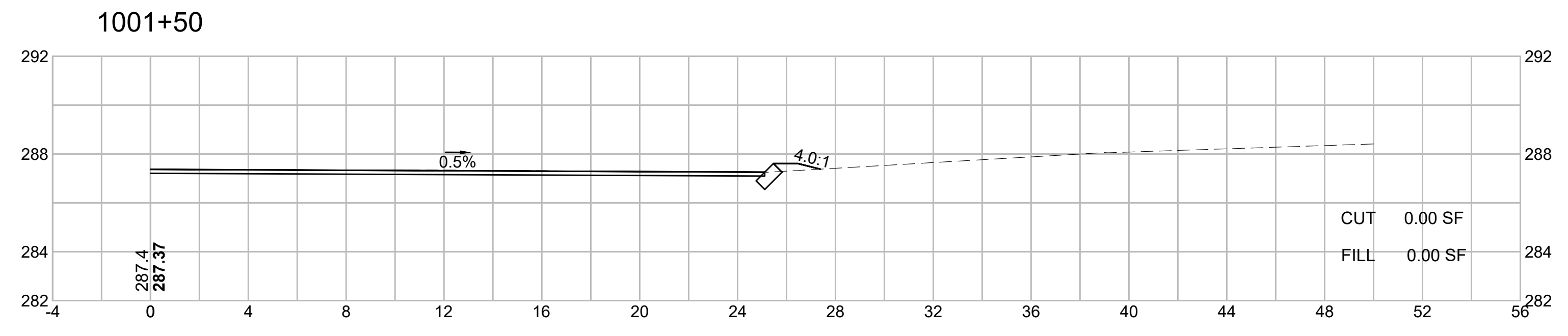
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WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	257	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 NB RAMPS
SHEET 3 OF 4



WRENTHAM, MA
I-495 / ROUTE 1A RAMPS

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	HSI/STP/TAP-0035(058)	258	258
PROJECT FILE NO.		603739	

CROSS SECTIONS
I-495 NB RAMPS
SHEET 4 OF 4

