MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN OF

ROUTE 110

IN THE TOWN/CITY OF

LOWELL, DRACUT, & METHUEN

MIDDLESEX & ESSEX COUNTY

FEDERAL AID PROJECT NO. NHP(NHS)-003S(784)X

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	1	190
PROJECT FILE NO.	608816		

TITLE SHEET & INDEX

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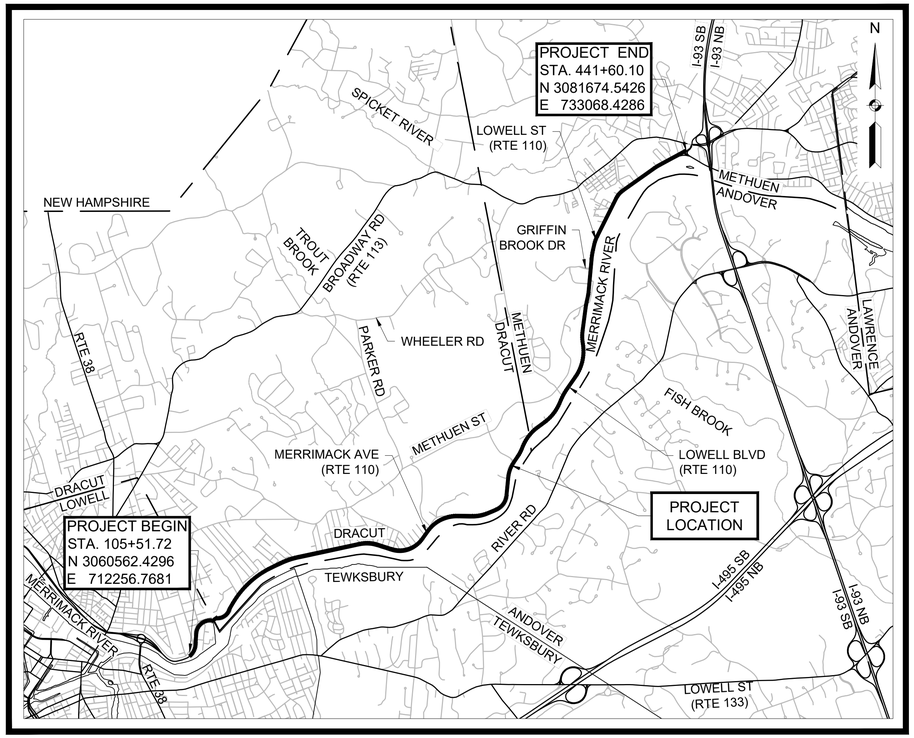

LOCUS MAP

0 3000 6000 9000 12000

SCALE: 1" = 3000'

LENGTH OF PROJECT = 34,302.30 FEET = 6.350 MILES

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.

DESIGN DESIGNATION (ROUTE 110 IN METHUEN)

DESIGN SPEED	45 MPH
ADT (2022)	16,774
ADT (2042)	19,478
K	8.8%
D	52%
T (PEAK HOUR)	1.8%
T (AVERAGE DAY)	7.3%
DHV	1,706
DDHV	893
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

DESIGN DESIGNATION (ROUTE 110 IN DRACUT)

DESIGN SPEED	45 MPH
ADT (2022)	13,312
ADT (2042)	15,458
K	9.2%
D	53%
T (PEAK HOUR)	1.7%
T (AVERAGE DAY)	4.0%
DHV	1,422
DDHV	751
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

DESIGN DESIGNATION (ROUTE 110 AT LOWELL CITY LINE)

DESIGN SPEED	45 MPH
ADT (2022)	16,721
ADT (2042)	19,416
K	9.3%
D	52%
T (PEAK HOUR)	1.4%
T (AVERAGE DAY)	2.6%
DHV	1,820
DDHV	948
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

COMMONWEALTH OF MASSACHUSETTS
RICHARD E. LATINI
CIVIL
No. 41033
REGISTERED PROFESSIONAL ENGINEER

Richard E. Latini Digitally signed by Richard E. Latini Date: 2024.08.27 09:12:10 -04'00'

HOWARD STEIN HUDSON
11 Beacon Street, Suite 1010
Boston, MA 02108
www.hshassoc.com

DATE	DESCRIPTION	REV #

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

Carrie Lavallee Digitally signed by Carrie Lavallee, P.E. Date: 2024.09.04 08:43:49 -04'00' 09/04/2024

CHIEF ENGINEER **DATE**

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GENERAL NOTES

1. MASSDOT SHALL RE-ESTABLISH SURVEY CONTROL PRIOR TO BEGINNING WORK ON THIS CONTRACT.
2. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ELECTRIC, TELEPHONE, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES AT NO ADDITIONAL COST TO THE OWNER. IF THE CONTRACTOR ADJUSTS UTILITY COVERS IT SHALL BE DEEMED PART OF THE WORK AND THERE WILL BE NO ADDITIONAL COMPENSATION.
3. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DAMAGED BY THE CONTRACTOR'S OPERATIONS, INCLUDING STAGING AREAS, SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
4. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INVESTIGATING AND CONFIRMING THAT ALL ITEMS TO BE REUSED ARE IN SERVICEABLE CONDITION. IF IT IS DEEMED THAT ANY ITEM IS NOT ABLE TO BE REUSED, THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING AND INCLUDE ESTIMATED COSTS TO INSTALL NEW.
6. TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD AND AS APPROVED OR DIRECTED BY RESIDENT ENGINEER.
7. THE CONTRACTOR SHALL ADJUST ALL EXISTING STRUCTURES WITHIN THE ACCESSIBLE SURFACE OF THE PROJECT LIMITS TO THE TOP MOST SURFACE OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.
8. THE CONTRACTOR SHALL PLACE SILT - SACKS AT ALL CATCH BASINS IN THE PROJECT LIMITS THROUGHOUT THE DURATION OF CONSTRUCTION.
9. DRAINAGE INLETS TO BE PROTECTED BY SILT SACK THROUGHOUT THE DURATION OF CONSTRUCTION.

SURVEY

1. THIS PLAN WAS PREPARED FROM A COMBINATION OF A MOBILE LIDAR DATA ACQUISITION AND AN ON-THE-GROUND FIELD SURVEY CONDUCTED BY WSP BETWEEN APRIL 28, 2022 TO JULY 14, 2022.
2. THE LOCATION OF THE UTILITIES AS SHOWN HEREON AND PROVIDED BY WSP ON THE PLAN ENTITLED TOPOGRAPHIC SURVEY OF MERRIMACK AVENUE LOWELL BOULEVARD (ROUTE 110), DATED APRIL 2021, UPDATED OCTOBER 2023 HAVE BEEN COMPILED FROM VISIBLE STRUCTURES AND INFORMATION OBTAINED FROM VARIOUS SOURCES. THE ACTUAL LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE OWNER PRIOR TO ANY CONSTRUCTION. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICES OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.
3. THE UNDERGROUND UTILITIES, AS SHOWN ON THE PLANS, HAVE BEEN COMPILED FROM RECORD PLANS, THE ACCURACY AND COMPLETENESS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE EXACT LOCATION, SIZE, TYPE, ETC. OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY THE WORK. AT LEAST 72 HOURS BEFORE DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT (888)344-7233. ALL TOWN OWNED UTILITY STRUCTURES WITHIN AREAS AFFECTED BY THE WORK SHALL BE ADJUSTED TO NEW LINE AND GRADE AS DIRECTED BY THE ENGINEER. ANY UTILITY POLES AND/OR GUY POLES WITHIN AREAS AFFECTED BY THE WORK SHALL BE REMOVED AND RESET BY THE RESPECTIVE UTILITY COMPANY. ALTERATIONS TO UTILITIES NOT OWNED BY THE TOWN SHALL BE MADE BY THE RESPECTIVE UTILITY OWNERS.
4. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE, NAD83(2011) EPOCH 2010.00 AS PROVIDED TO WSP BY MASSDOT ON APRIL 15, 2022. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88, GEOID 12B, AS PROVIDED TO WSP BY MASSDOT. ELEVATIONS AND ALL OTHER TRAVERSE PINTS DETERMINED BY DIFFERENTIAL LEVELING.
5. THE FOLLOWING BENCHMARK INFORMATION WAS SET BY ---.

   TRAVERSE POINTS PROVIDED BY MASSDOT AND HELD HORIZONTALLY IN MAIN TRAVERSE ADJUSTMENT:
   STA 2952 (DOT SSTA#2952)
   STA 2953 (DOT SSTA#2953)
   STA 2954 (DOT SSTA#2954)
   STA 2955 (DOT SSTA#2955)
   STA 2956 (DOT SSTA#2956)
   STA 2957 (DOT SSTA#2957)
   STA 2958 (DOT SSTA#2958)
   STA 2959 (DOT SSTA#2959)
   STA 2960 (DOT SSTA#2960)
   STA 2961 (DOT SSTA#2961)

   WSP HELD THE ELEVATIONS PROVIDED FOR STATIONS:
   SSTA# 2952 ELEV. = 68.92'
   SSTA# 2953 ELEV. = 65.18'
   SSTA# 2954 ELEV. = 61.06'
   SSTA# 2955 ELEV. = 61.68'
   SSTA# 2956 ELEV. = 59.67'
   SSTA# 2957 ELEV. = 60.53'
   SSTA# 2958 ELEV. = 57.93'
   SSTA# 2959 ELEV. = 57.65'
   SSTA# 2960 ELEV. = 51.17'
   SSTA# 2961 ELEV. = 53.35'
6. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.

TRAFFIC

1. TRAFFIC SIGNAL CONDUIT SHALL BE 3" SCHEDULE 80 VC UNLESS OTHERWISE NOTED.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE TRAFFIC SIGNAL OPERATIONS AND COMMUNICATIONS FOR THE DURATION OF CONSTRUCTION. ANY DAMAGED EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO MASSDOT.
3. CONTRACTOR SHALL HAVE A MASSDOT REPRESENTATIVE PRESENT DURING ALL TESTING OF TRAFFIC SIGNAL EQUIPMENT.
4. THE MINIMUM MOUNTING HEIGHT OF POST-MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.
5. EXISTING TRAFFIC SIGNS WITHIN THE THE TOWN LAYOUT ARE TO BE RETAINED UNLESS OTHERWISE NOTED.

LANDSCAPE

1. TREE PROTECTION SHALL BE INSTALLED AND APPROVED BY ENGINEER PRIOR TO ONSET OF CONSTRUCTION ACTIVITIES.

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GENERAL NOTES

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GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
	CBCI	CATCH BASIN CURB INLET
	GICI	GUTTER INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
C	C	CABLE MANHOLE
D	D	DRAINAGE MANHOLE
	D	DRAINAGE MANHOLE COVER/CHANGE IN TYPE
E	E	ELECTRIC MANHOLE
G	G	GAS MANHOLE
M	M	MISC MANHOLE
S	S	SEWER MANHOLE
T	T	TELEPHONE MANHOLE
W	W	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
		GATE VALVE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		FLEX POSTS
x	x	CHAIN LINK OR METAL FENCE
		RAILROAD TRACKS
		WOOD FENCE
CFT CFT	CFT CFT	SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT
	#	PROPOSED WHEELCHAIR RAMP NUMBER
	#	PROPOSED DRIVEWAY NUMBER

GENERAL SYMBOLS (CONT.)

EXISTING	PROPOSED	DESCRIPTION
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE
		PROPOSED PLANTING - SEE PLANTING SCHEDULE

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		VIDEO DETECTION ZONE
		VIDEO DETECTION CAMERA
		APS PEDESTRIAN PUSH BUTTON, SIGN, AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT
		SOLAR POWER FEEDBACK SIGN, POST AND FOUNDATION
		LOOP DETECTOR

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	YL	YIELD LINES (2' BASE, 3' HEIGHT, 3' CENTER-TO-CENTER SPACING
	CW	WHITE - CROSSWALK (12" LINES, 10' O.C.; 12" LONGITUDINAL LINE, 5' O.C.)
	SWL	6" SOLID WHITE LINE
	12" SWL	12" WIDE SOLID WHITE LINE
	SYL	6" SOLID YELLOW LINE
	12" SYL	12" WIDE SOLID YELLOW LINE
	BWL	6" BROKEN WHITE LINE
	DWL	6" DOTTED WHITE LINE (3' LINES, 9' GAPS)
	12" DWL	12" DOTTED WHITE LINE (3' LINES, 9' GAPS)
	DYL	6" DOTTED YELLOW LINE
	DWLEx	6" DOTTED WHITE LINE EXTENSION (2' LINES, 6' GAPS)
	DYLEx	6" DOTTED YELLOW LINE EXTENSION
	DDYLEx	6" DOTTED DOUBLE YELLOW LINE EXTENSION
	DBWL	2-6" DOUBLE WHITE LINE
	DBYL	2-6" DOUBLE YELLOW LINE (10" O.C.)
		HIGH FRICTION GREEN BICYCLE FACILITY SURFACE TREATMENT

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX	APPROXIMATE
AC PIPE	ASBESTOS-CEMENT PIPE
AC	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT	BITUMINOUS
BC	BOTTOM OF CURB
BD	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO	COUNTY
CONC	CONCRETE
CON'T	CONTINUED
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAINAGE MANHOLE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN	FOUNDATION
FES	FLARED END SECTION
FLDSTN	FIELDSTONE
FT	FEET
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GICI	GUTTER INLET WITH CURB INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
GV	GATE VALVE
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
IRF	IRON PIPE FOUND
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LOG	LIMIT OF GRADING
LP	LIGHT POLE
LSA	LANDSCAPE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PCR	PEDESTRIAN CURB RAMP
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE

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LEGEND & ABBREVIATION

ABBREVIATIONS (CON'T)

GENERAL

PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVCC	POINT OF COMPOUND VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATERWAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SGE	SLOPED GRANITE EDGING
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
VLF	VINYL FENCE
WDF	WOOD FENCE
WG	WATER GATE
WIF	WROUGHT IRON FENCE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR AMBER
FYL	FLASHING AMBER LEFT ARROW
FYR	FLASHING AMBER RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILE, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY CIRCULAR AMBER
YL	STEADY AMBER LEFT ARROW

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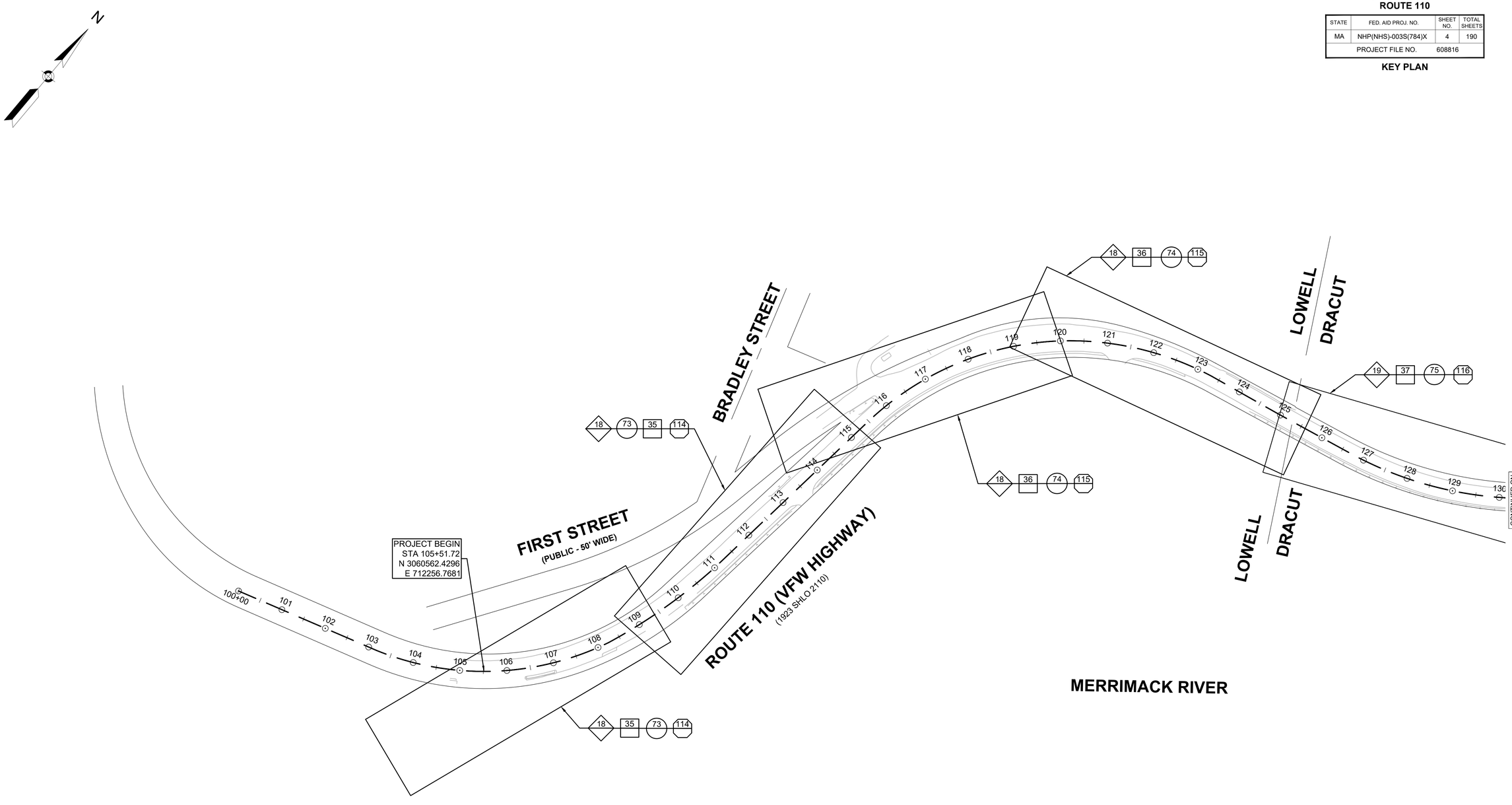

LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKINGS
- TRAFFIC SIGNAL PLANS
- CONSTRUCTION BASELINE TIE PLANS
- CURB TIE & GRADING PLANS

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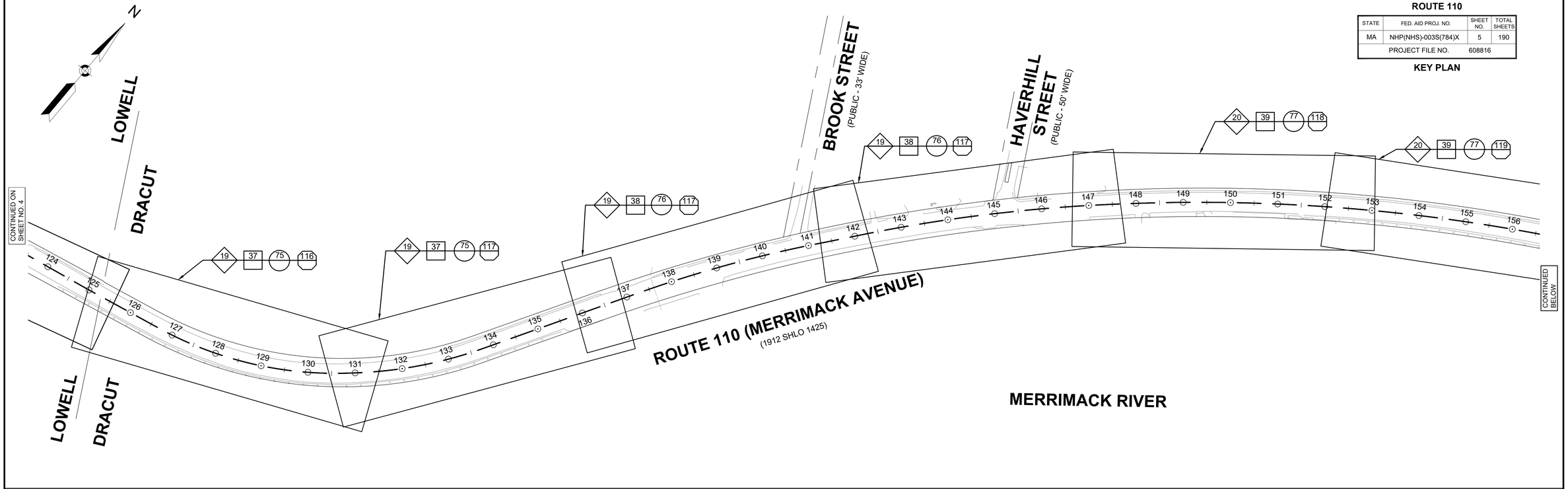
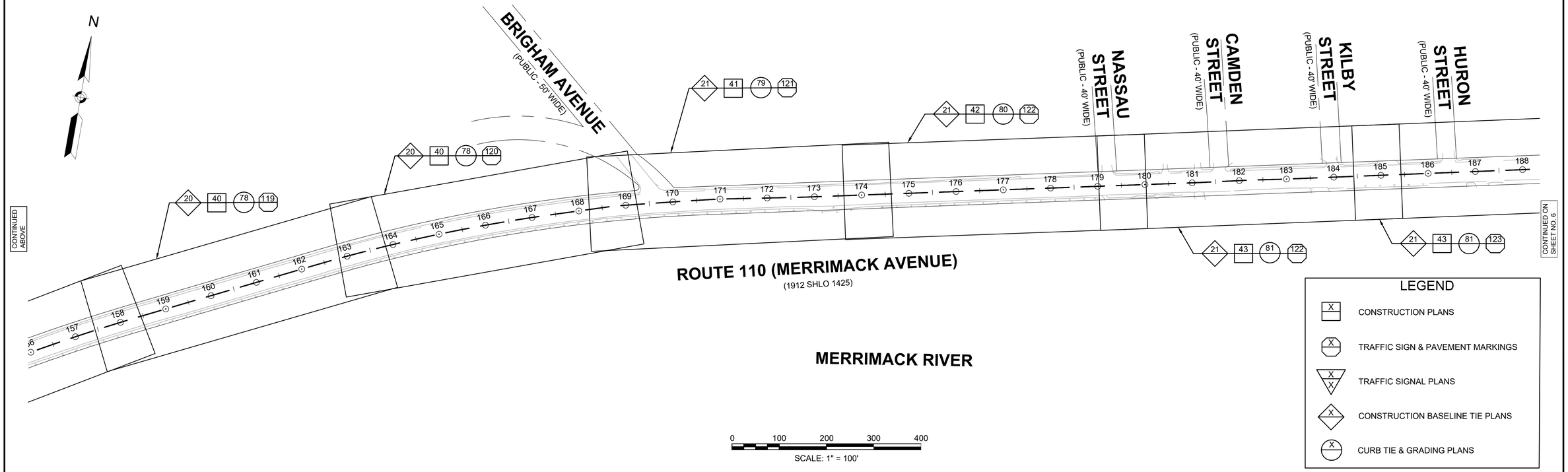
KEY PLAN





LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKINGS
- TRAFFIC SIGNAL PLANS
- CONSTRUCTION BASELINE TIE PLANS
- CURB TIE & GRADING PLANS

608816_HD(KEY PLAN).DWG Plotted on 9-Sep-2024 9:08 AM

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	6	190
PROJECT FILE NO.	608816		

KEY PLAN

N

PERCY STREET (PUBLIC - 40' WIDE)

PICKNEY STREET (PUBLIC - 40' WIDE)

YORK STREET (PUBLIC - 40' WIDE)

STUART AVENUE (PUBLIC - 40' WIDE)

HEMLOCK STREET (PUBLIC - 40' WIDE)

JACOB STREET (PUBLIC - 40' WIDE)

ALLAN STREET (PUBLIC - 40' WIDE)

GRANT STREET (PUBLIC - 40' WIDE)

LEAVITT STREET (PUBLIC - 40' WIDE)

MOUNT PLEASANT AVENUE (PUBLIC - 40' WIDE)

BELLVIEW AVENUE (PUBLIC - 40' WIDE)

CONTINUED ON SHEET NO. 5

CONTINUED BELOW

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

MERRIMACK RIVER

N

LITTLE MERRIMACK AVENUE (1912 SHLO 1425)

VARNUM AVENUE (PUBLIC - 40' WIDE)

FULLER AVENUE (PUBLIC - 40' WIDE)

DRAYCOTTE AVENUE (PUBLIC - 40' WIDE)

INTERVALE AVENUE (PUBLIC - 40' WIDE)

CONGRESS STREET (PUBLIC - 40' WIDE)

CONTINUED ABOVE

ROUTE 110 (MERRIMACK AVENUE)
(1935 ST HWY ALT 3163)

MERRIMACK RIVER

0 100 200 300 400
SCALE: 1" = 100'

LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKINGS
- TRAFFIC SIGNAL PLANS
- CONSTRUCTION BASELINE TIE PLANS
- CURB TIE & GRADING PLANS

CONTINUED ON SHEET NO. 7

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	7	190
PROJECT FILE NO.	608816		

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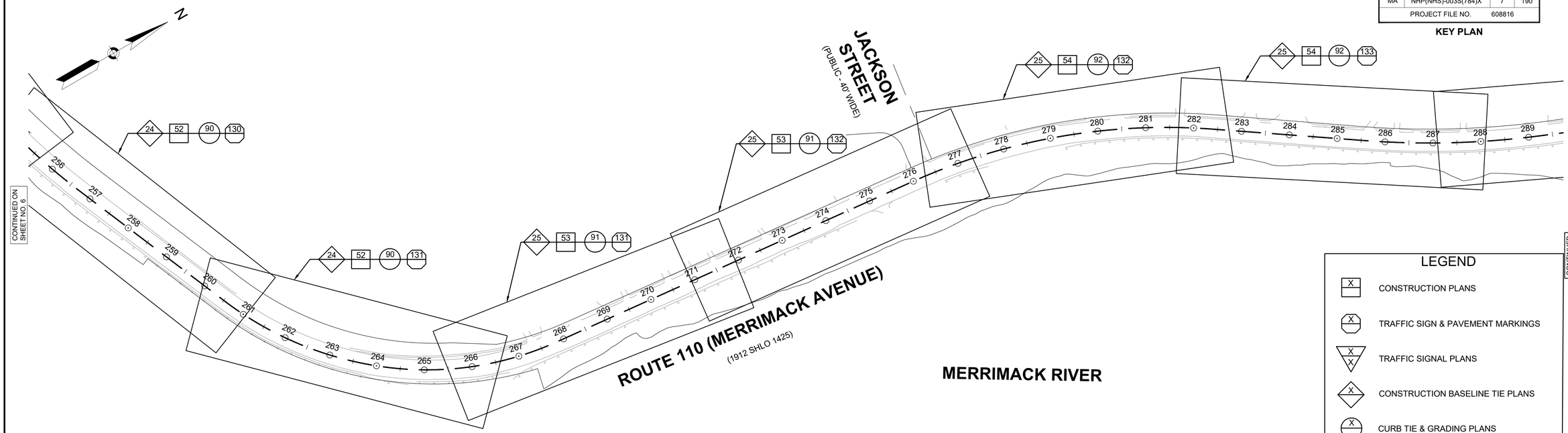
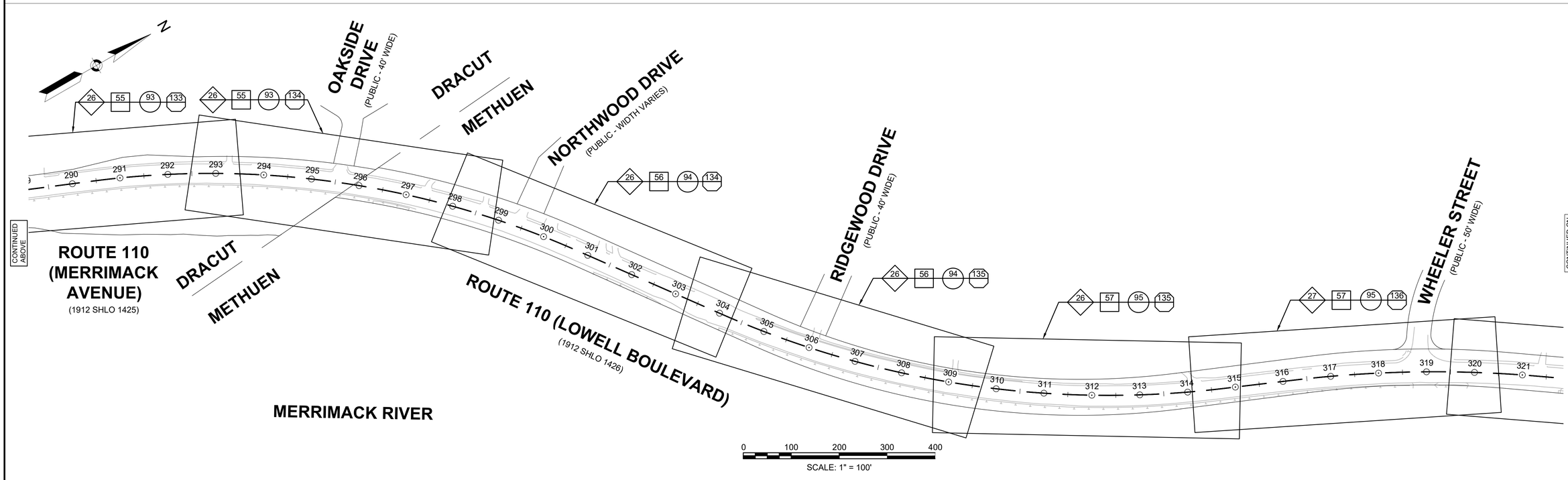


LEGEND

- CONSTRUCTION PLANS
- TRAFFIC SIGN & PAVEMENT MARKINGS
- TRAFFIC SIGNAL PLANS
- CONSTRUCTION BASELINE TIE PLANS
- CURB TIE & GRADING PLANS



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LOWELL, DRACUT, & METHUEN
ROUTE 110

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PROJECT FILE NO.	608816		

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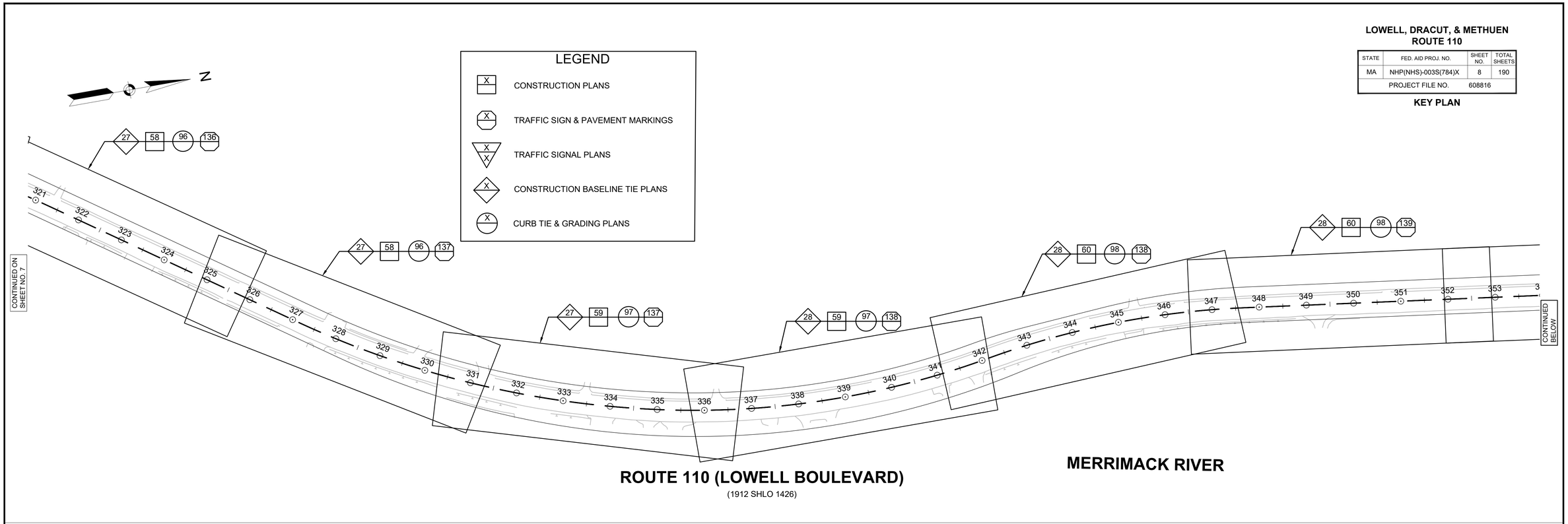

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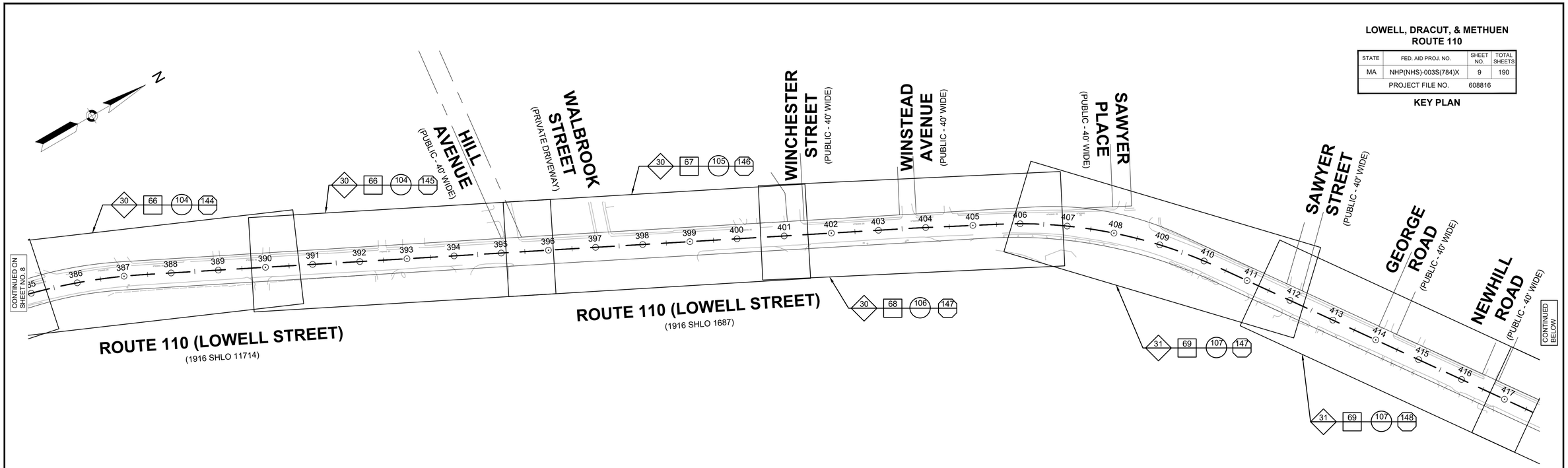
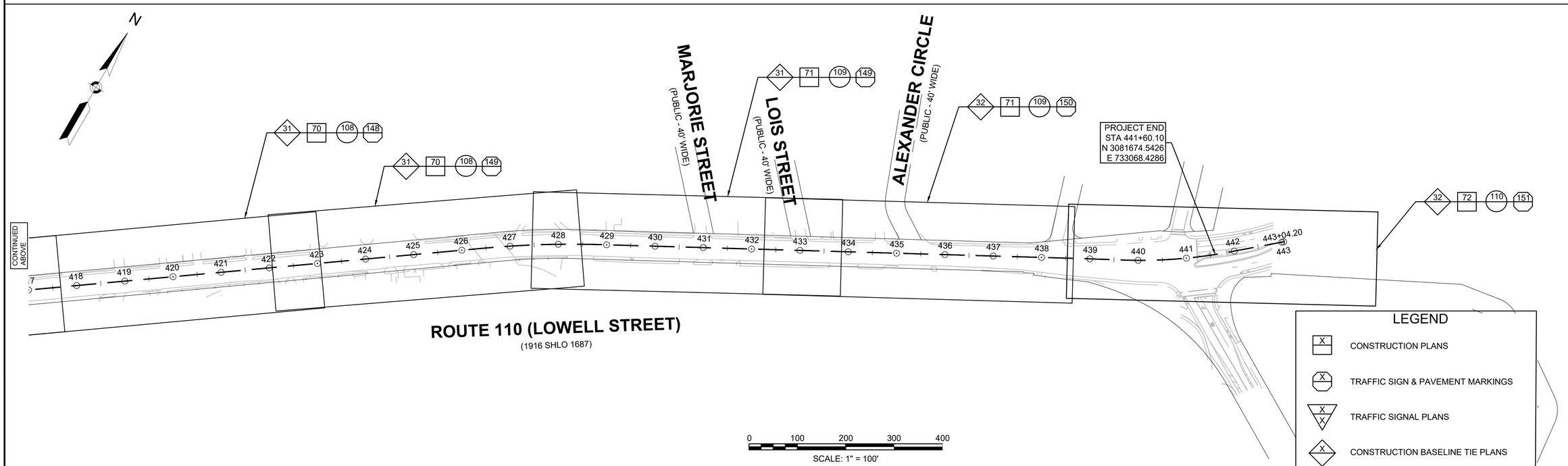
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	9	190
PROJECT FILE NO.	608816		

KEY PLAN





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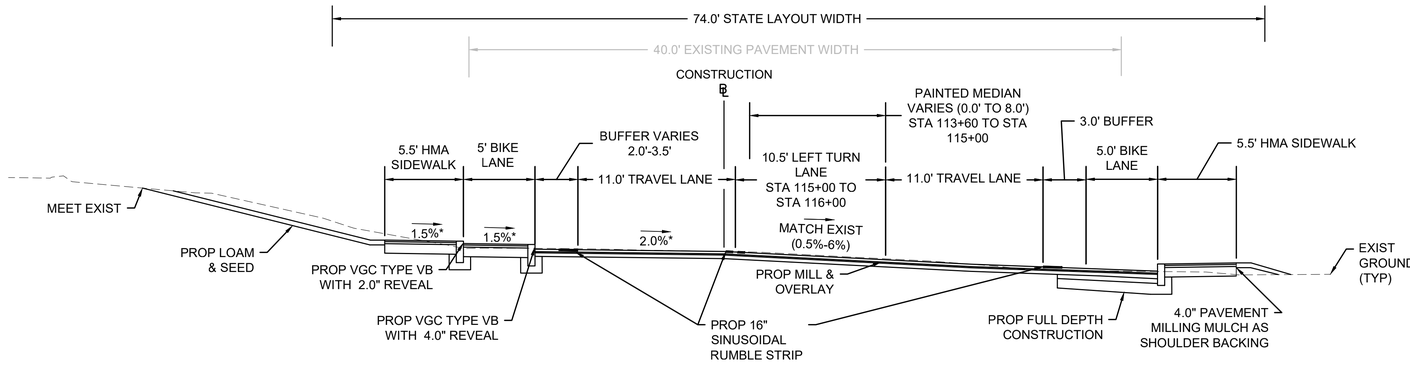
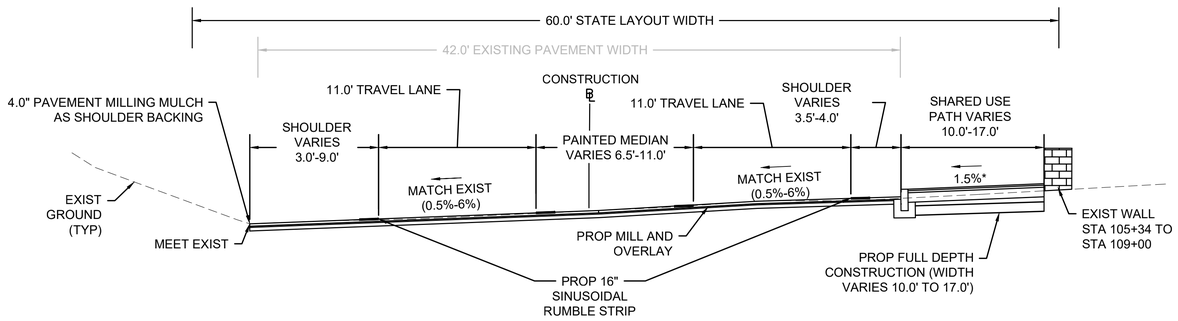


VFW HIGHWAY (ROUTE 110) WITH LEFT TURNING LANE AND RAISED BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 113+80 TO STA 116+00
NOT TO SCALE



VFW HIGHWAY (ROUTE 110) WITH MEDIAN BUFFER AND SHARED USE PATH

MILL & OVERLAY
STA 105+50 TO STA 112+69
NOT TO SCALE

PAVEMENT NOTES:

PAVEMENT MILL AND OVERLAY:

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE COURSE: 1" BINDER RICH INTERMEDIATE COURSE (BRIC) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

VARIABLE DEPTH MILLING: 3" TYPICAL PAVEMENT FINE MILLING

FULL DEPTH CONSTRUCTION:

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE COURSE: 1" BINDER RICH INTERMEDIATE COURSE (BRIC) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h)OVER

BASE COURSE: 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER

SUB-BASE: 4" DENSE GRADED CRUSHED STONE OVER

8" GRAVEL BORROW TYPE B**

FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE FOR BOX WIDENING:

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

INTERMEDIATE COURSE: 1" BINDER RICH INTERMEDIATE COURSE (BRIC) OVER ASPHALT EMULSION FOR TACK COAT (RS-1h) OVER

BASE COURSE: 6" HES CEMENT CONCRETE BASE OVER

SUB-BASE: 12" GRAVEL BORROW TYPE B**

HOT MIX ASPHALT SIDEWALKS

SURFACE COURSE: 1.25" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER ASPHALT EMULSION FOR TACK COAT OVER (RS-1h)

INTERMEDIATE COURSE: 1.75" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B**

CEMENT CONCRETE SIDEWALKS AND MEDIANS

SURFACE COURSE: 4" CEMENT CONCRETE SURFACE COURSE (AIR ENTRAINED, 4,000 PSI, $\frac{3}{4}$ INCH,610) OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B**

CEMENT CONCRETE PEDESTRIAN CURB RAMPS

SURFACE COURSE: 4" CEMENT CONCRETE (AIR ENTRAINED, 4,000 PSI, $\frac{3}{4}$ INCH, 610) OVER

SUB-BASE: 8" GRAVEL BORROW TYPE B**

HOT MIX ASPHALT RESIDENTIAL DRIVEWAYS

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) FOR TACK COAT OVER (RS-1h)

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

SUB-BASE: 8" GRAVEL BORROW TYPE B**

HOT MIX ASPHALT COMMERCIAL DRIVEWAYS

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER

INTERMEDIATE COURSE: 2.5" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) FOR TACK COAT OVER (RS-1h) (ADDITIONAL LIFT AS DIRECTED)

SUB-BASE: 8" GRAVEL BORROW TYPE B**

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	10	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS

PAVEMENT NOTES (CONT):

NOTES: TACK COAT SHALL BE SPRAY APPLIED DOUBLE OVERLAP FOR UNIFORM COVERAGE AT A RATE CONSISTENT WITH STANDARD SPECIFICATION 450.43G(2) (BASE AND INTERMEDIATE COURSES PRIOR TO PAVING OVERLAY.

PAVEMENT FINE MILLING SHALL BE USED TO ACHIEVE THE GRADES SHOWN ON THE PLANS OR TO MAINTAIN EXISTING CROSS SLOPE.

ALL HMA, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE OF HMA SPECIFICATION. THE ENGINEER SHALL IDENTIFY UNSOUND AREAS OF PAVEMENT TO BE PATCHED UNDER 451 HMA FOR PATCHING. HMA PATCHES SHALL COMPLY WITH MASSDOT STANDARD SPECIFICATION 450.43 C.

CONTRACTOR TO USE PAVEMENT MILLING MULCH (ITEM 402.13) AS SHOULDER BACKING.

* = TOLERANCE FOR CONSTRUCTION ± 0.5% ON SIDEWALK SLOPES, DRIVEWAY SLOPES, AND PEDESTRIAN CURB RAMPS.

** = EXISTING GRAVEL DETERMINED TO BE SUITABLE BY THE ENGINEER SHALL REMAIN.

PAVEMENT OVERLAY - LITTLE MERRIMACK AVENUE:

SURFACE COURSE: 2" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC-12.5-P) OVER ASPHALT EMULSION FOR TACK COAT

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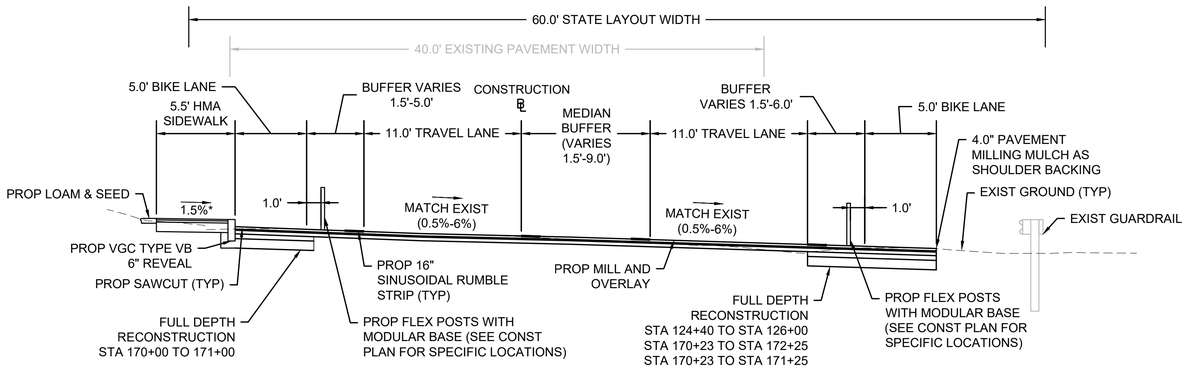
LOWELL, DRACUT, & METHUEN
ROUTE 110

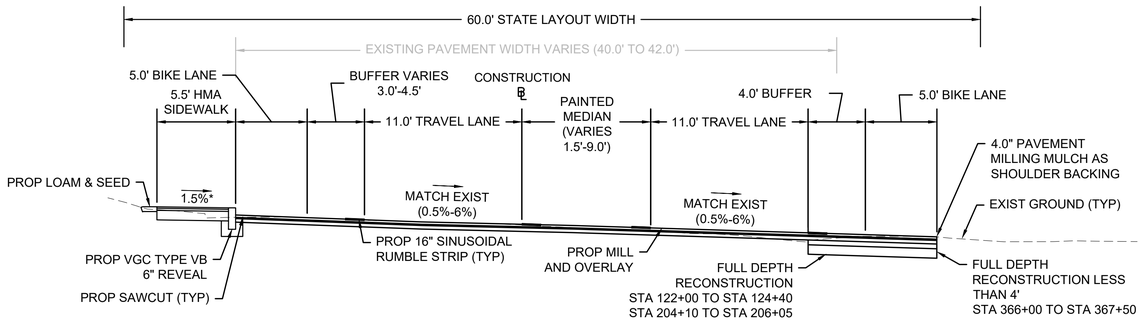
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	11	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS



MERRIMACK AVENUE (ROUTE 110) WITH MEDIAN BUFFER AND BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 124+40 TO STA 126+00
STA 170+23 TO STA 172+25
STA 196+50 TO STA 200+00
STA 317+00 TO STA 318+50
STA 324+20 TO STA 325+00
NOT TO SCALE

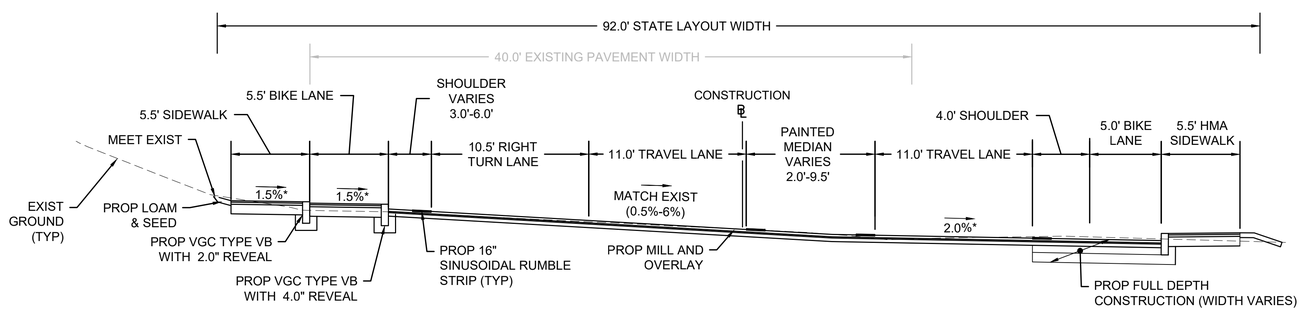


VFW HIGHWAY (ROUTE 110) WITH MEDIAN BUFFER AND BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 122+00 TO STA 124+40

MERRIMACK AVENUE (ROUTE 110) WITH MEDIAN BUFFER AND BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 145+95 TO STA 148+00
STA 204+10 TO STA 206+05
NOT TO SCALE



VFW HIGHWAY (ROUTE 110) WITH RIGHT TURNING LANE, MEDIAN BUFFER, AND BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 116+20 TO 121+00
NOT TO SCALE

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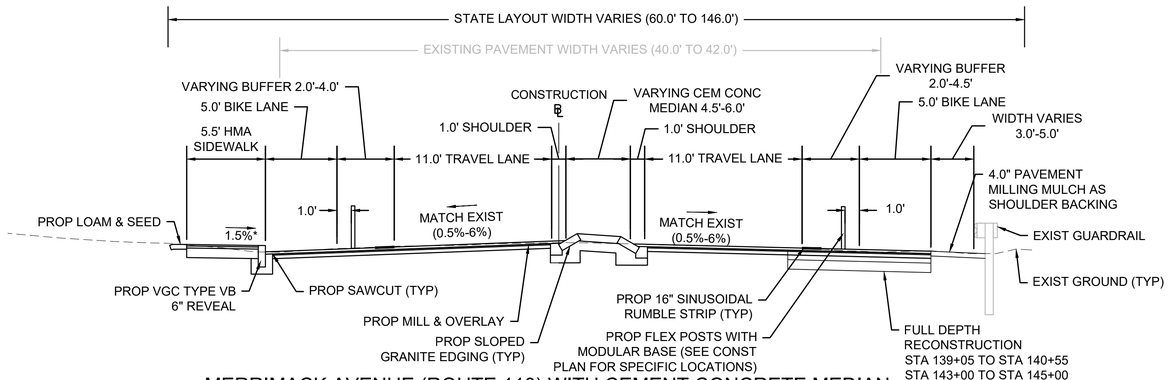
LOWELL, DRACUT, & METHUEN
ROUTE 110

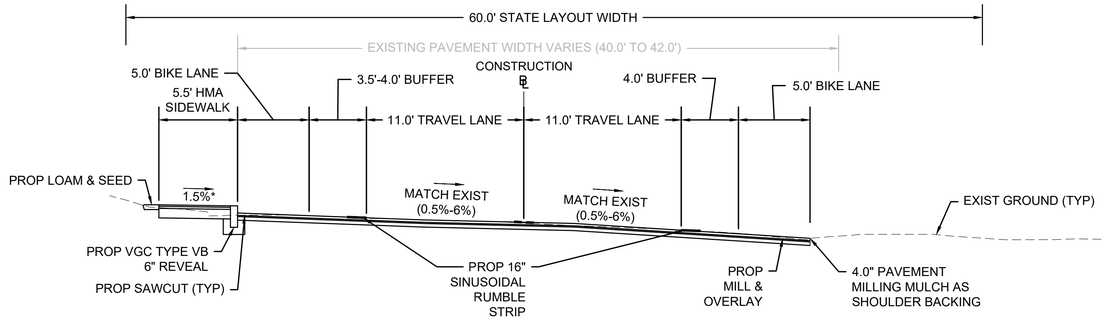
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	12	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS



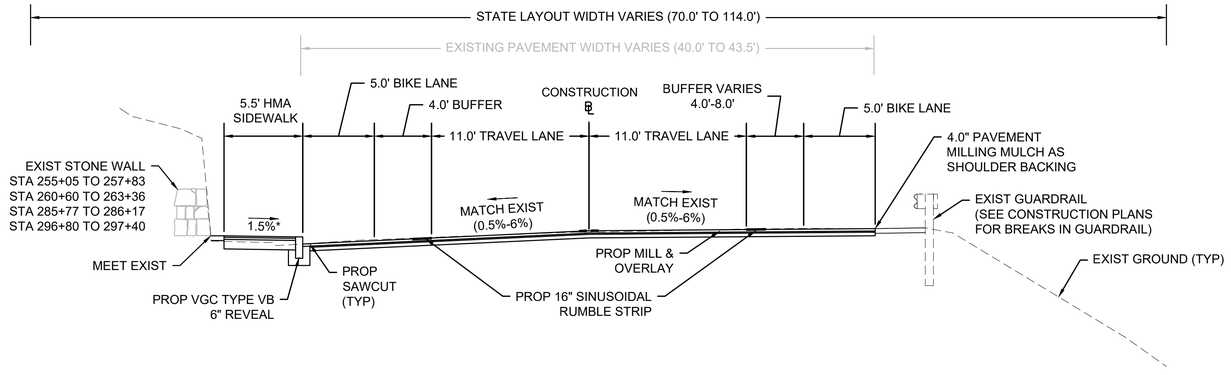
MERRIMACK AVENUE (ROUTE 110) WITH CEMENT CONCRETE MEDIAN & BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 141+15 TO STA 141+70
STA 169+80 TO STA 170+23
STA 181+95 TO STA 183+85
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY
STA 135+50 TO STA 137+00
STA 145+95 TO STA 149+15
STA 186+00 TO STA 193+20
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 126+00 TO STA 135+50
STA 249+50 TO STA 274+50
STA 284+50 TO STA 289+00

LOWELL BOULEVARD (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

STA 327+88 TO STA 337+25
STA 338+74 TO STA 341+83
NOT TO SCALE

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LOWELL, DRACUT, & METHUEN
ROUTE 110

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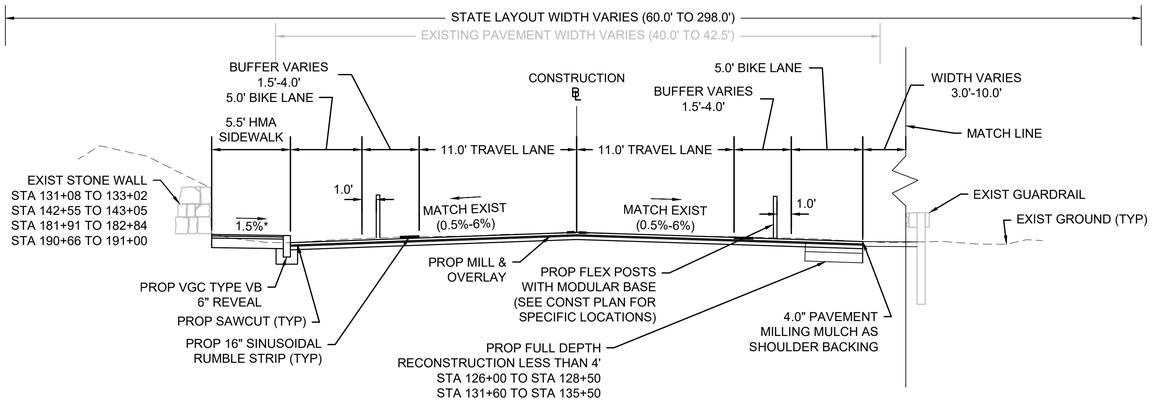
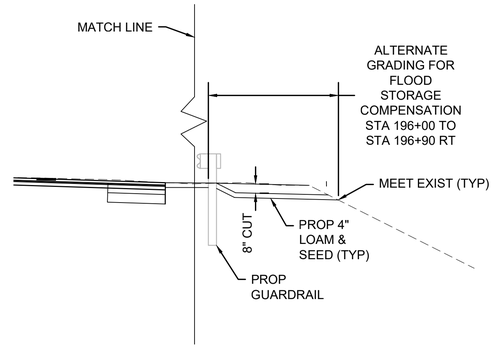
MA	NHP(NHS)-003S(784)X	13	190
PROJECT FILE NO.	608816		

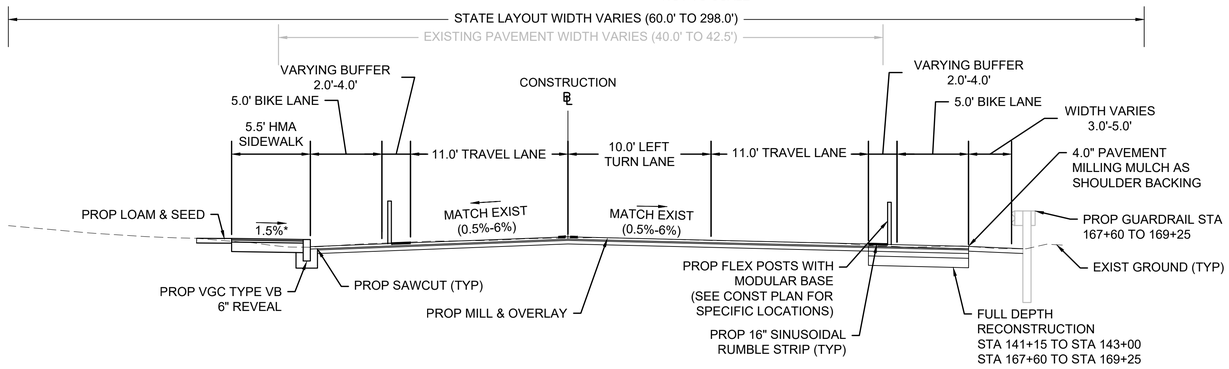
TYPICAL SECTIONS





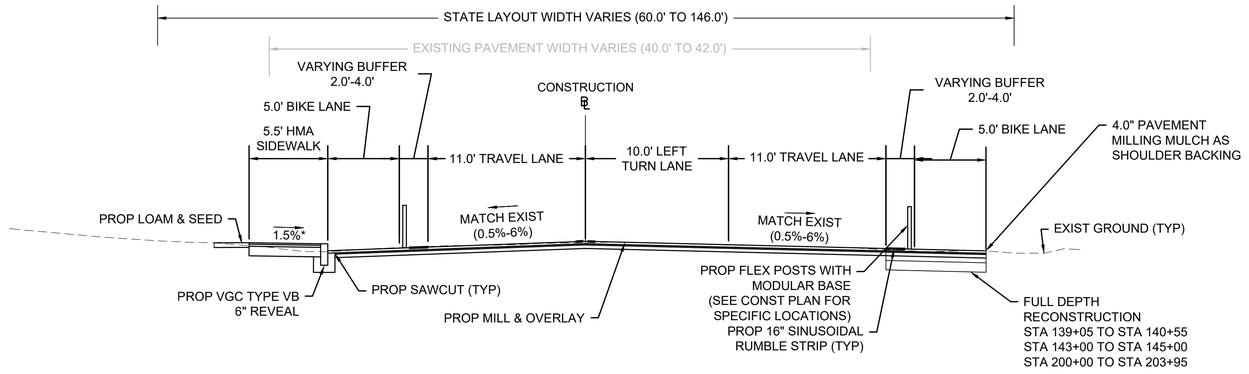
MERRIMACK AVENUE (ROUTE 110) WITH LEFT TURN LANE & BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 151+15 TO STA 182+40
STA 184+10 TO STA 186+00
STA 193+20 TO STA 197+15
STA 206+05 TO STA 223+00
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH LEFT TURNING LANE AND BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTTION
STA 141+15 TO STA 143+00
STA 167+60 TO STA 169+25
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH LEFT TURN LANE & BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 137+00 TO STA 139+05
STA 139+05 TO STA 140+55
STA 143+00 TO STA 145+00
STA 200+00 TO STA 203+95
NOT TO SCALE

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LOWELL, DRACUT, & METHUEN
ROUTE 110

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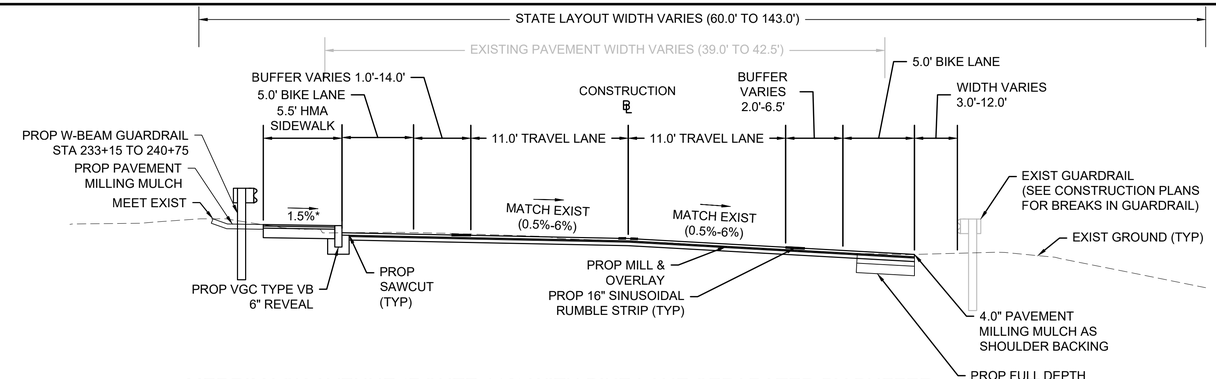
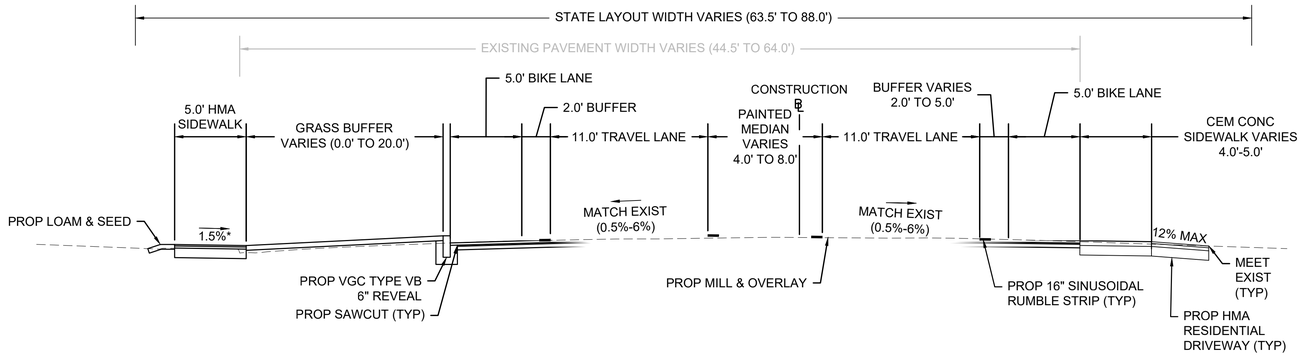


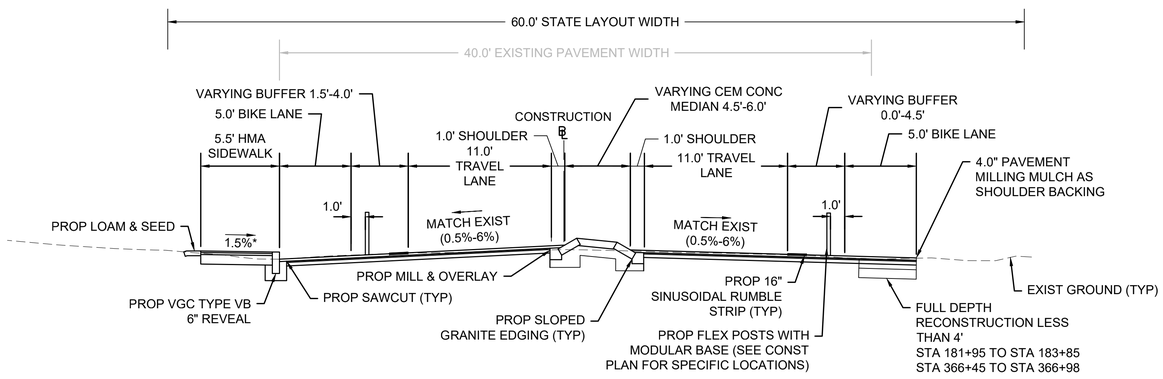
MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION LESS THAN 4'
STA 227+55 TO STA 296+50
STA 300+00 TO STA 317+00
STA 321+50 TO STA 333+50
STA 342+00 TO STA 348+90
STA 371+50 TO STA 393+00
STA 405+55 TO STA 408+05
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH SIDEWALK SEPARATED BY GRASS BUFFER & BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 226+58 TO STA 227+70
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH CEMENT CONCRETE MEDIAN AND BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION
STA 181+95 TO STA 183+85
STA 226+05 TO STA 226+55

LOWELL BOULEVARD (ROUTE 110) WITH CEMENT CONCRETE MEDIAN AND BIKE LANE SEPARATED BY BUFFER

STA 317+50 TO STA 318+00
STA 325+00 TO STA 325+50

LOWELL STREET (ROUTE 110) WITH CEMENT CONCRETE MEDIAN AND BIKE LANE SEPARATED BY BUFFER

STA 366+45 TO STA 366+98
STA 396+00 TO STA 397+00
NOT TO SCALE

608816_HD(TYPICAL).DWG Plotted on 9-Sep-2024 9:11 AM

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_HD(TYPICAL).dwg
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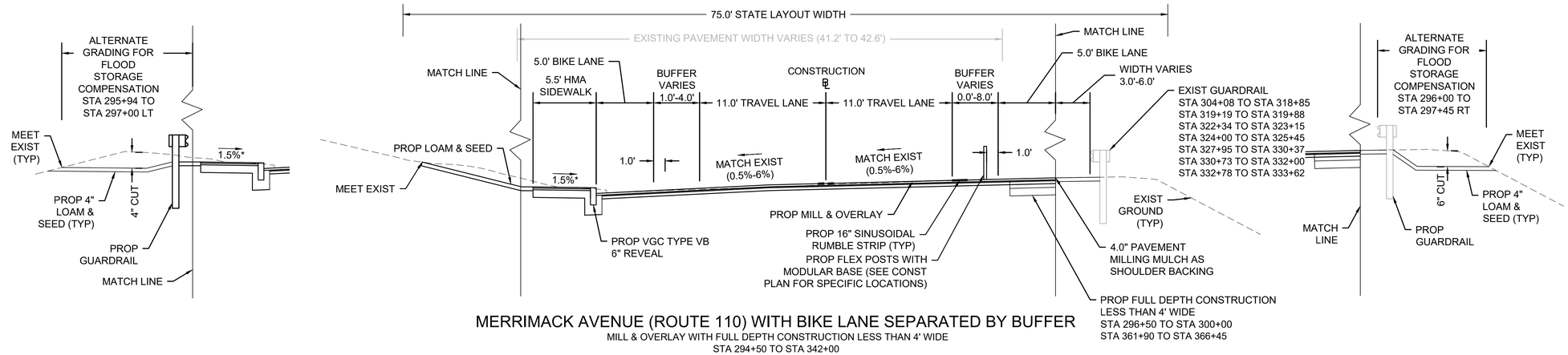
Printed by: Jocelyn Dewire

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	15	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS

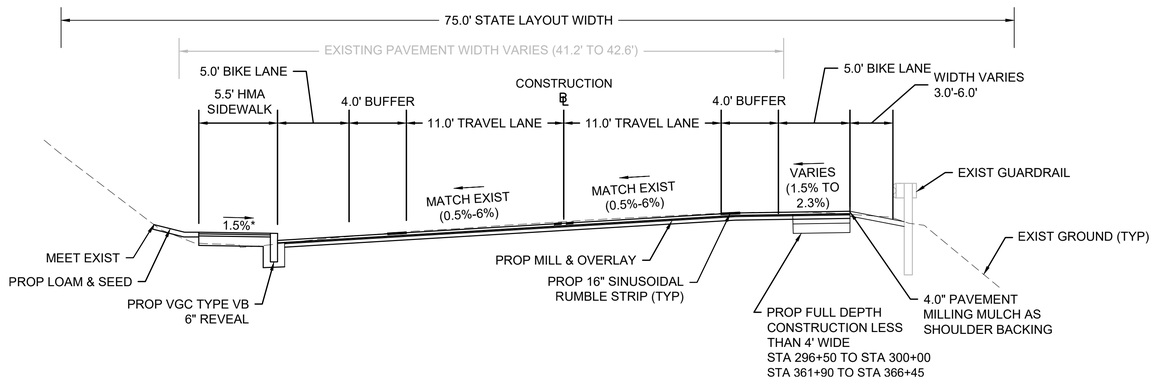


MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE
STA 294+50 TO STA 342+00

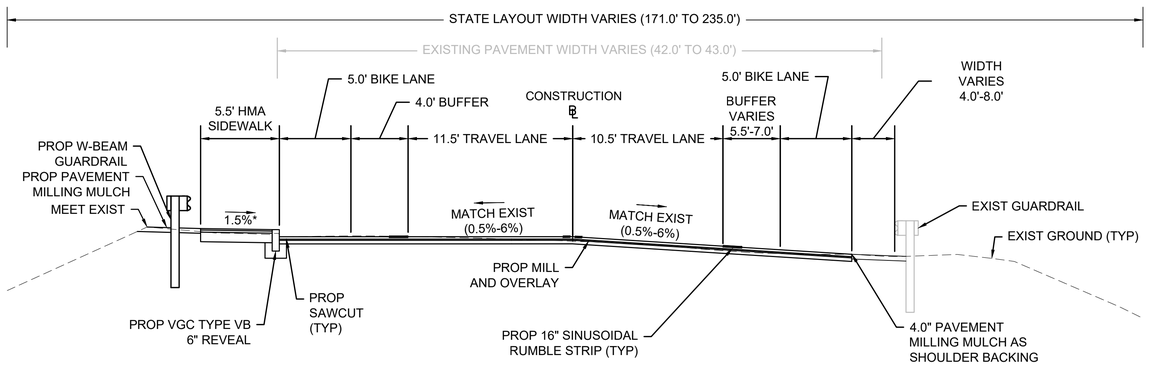
LOWELL STREET (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

STA 361+90 TO STA 366+45
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH CONSTRUCTION LESS THAN 4' WIDE
STA 260+00 TO STA 263+00
NOT TO SCALE



MERRIMACK AVENUE (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 233+13 TO STA 240+69
NOT TO SCALE

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_HD(TYPICAL).dwg
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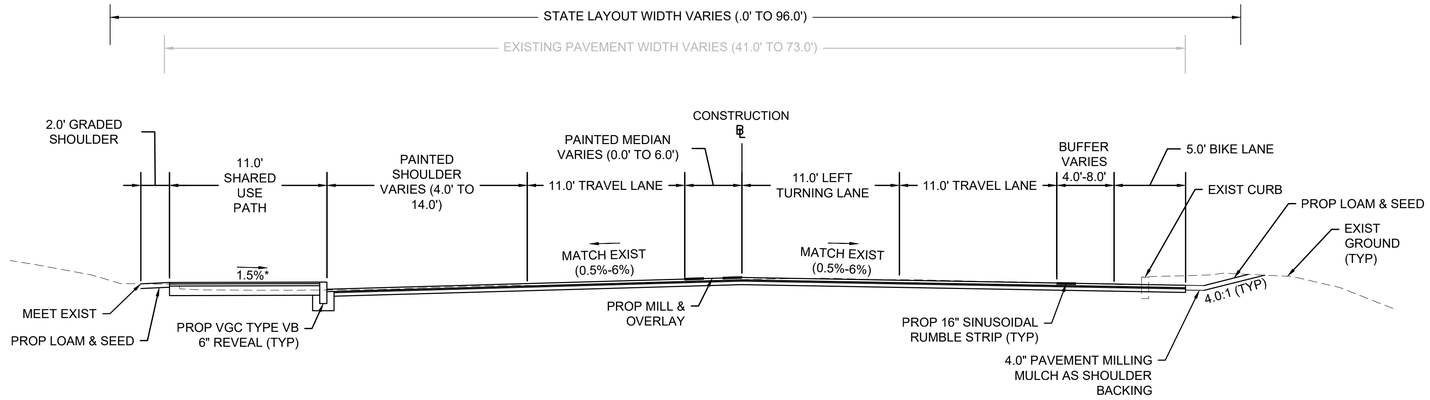
LOWELL, DRACUT, & METHUEN
ROUTE 110

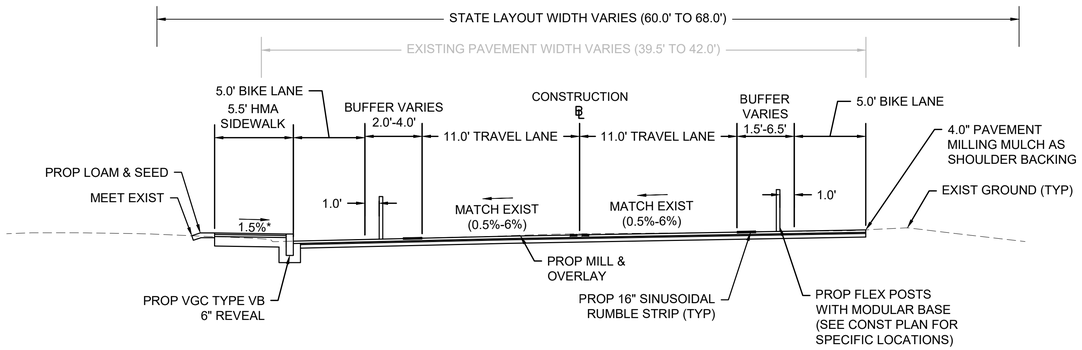
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	16	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS



MERRIMACK AVENUE (ROUTE 110) WITH LEFT TURN LANE, MEDIAN BUFFER, SHARED USE PATH & BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 370+50 TO STA 374+00
NOT TO SCALE

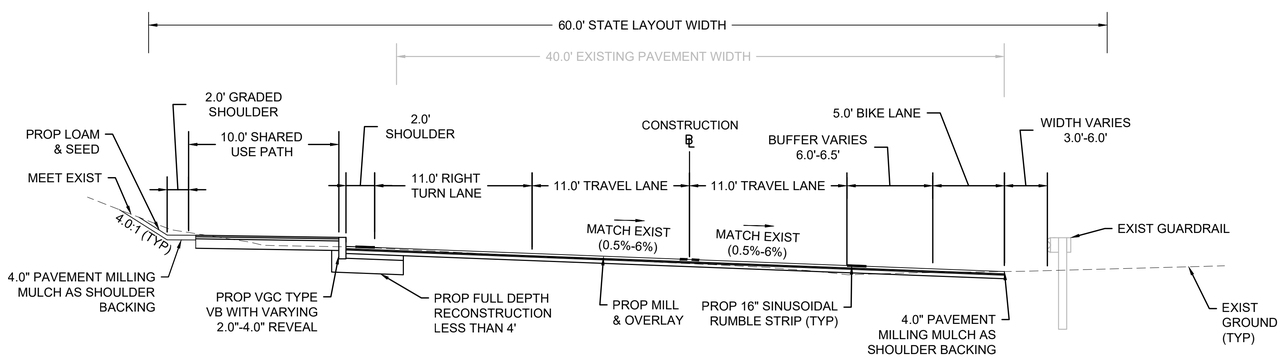


LOWELL BOULEVARD (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 348+90 TO STA 361+90

LOWELL STREET (ROUTE 110) WITH BIKE LANE SEPARATED BY BUFFER

STA 367+50 TO STA 370+50
STA 397+00 TO STA 405+55
STA 408+05 TO STA 425+00
NOT TO SCALE



LOWELL BOULEVARD (ROUTE 110) WITH RIGHT TURNING LANE, SHARED USE PATH, & BIKE LANES SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH RECONSTRUCTION LESS THAN 4'
STA 319+15 TO STA 321+50
NOT TO SCALE

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_HD(TYPICAL).dwg
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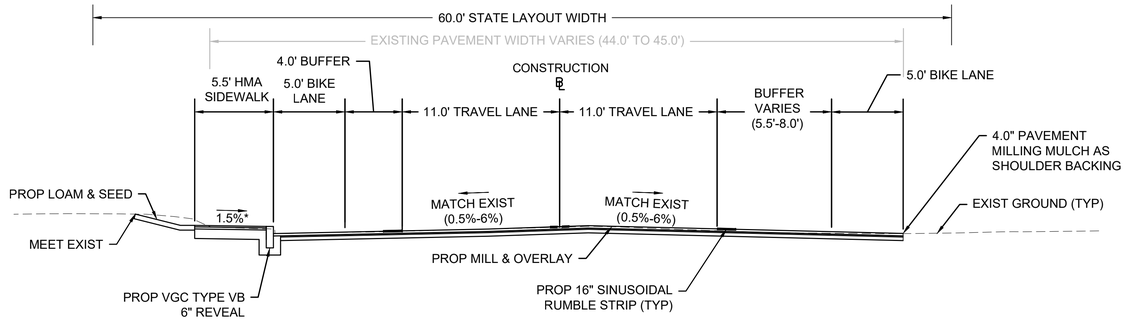
LOWELL, DRACUT, & METHUEN
ROUTE 110

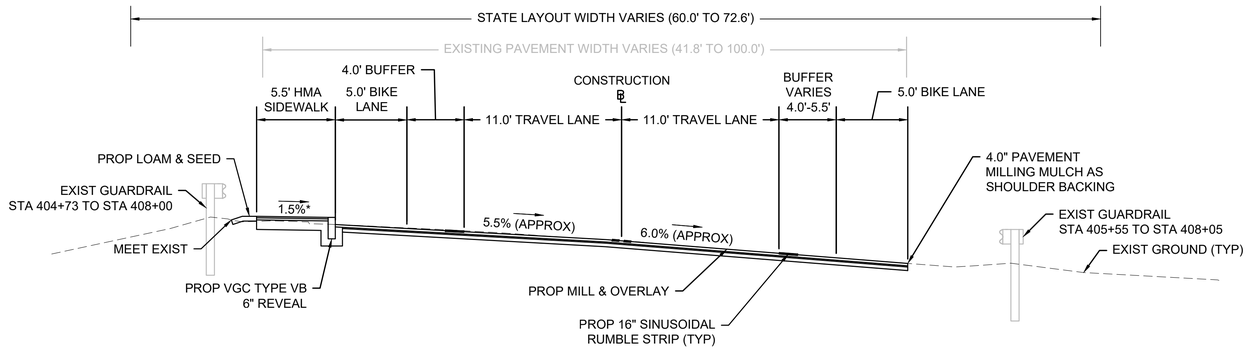
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	17	190
PROJECT FILE NO.	608816		

TYPICAL SECTIONS



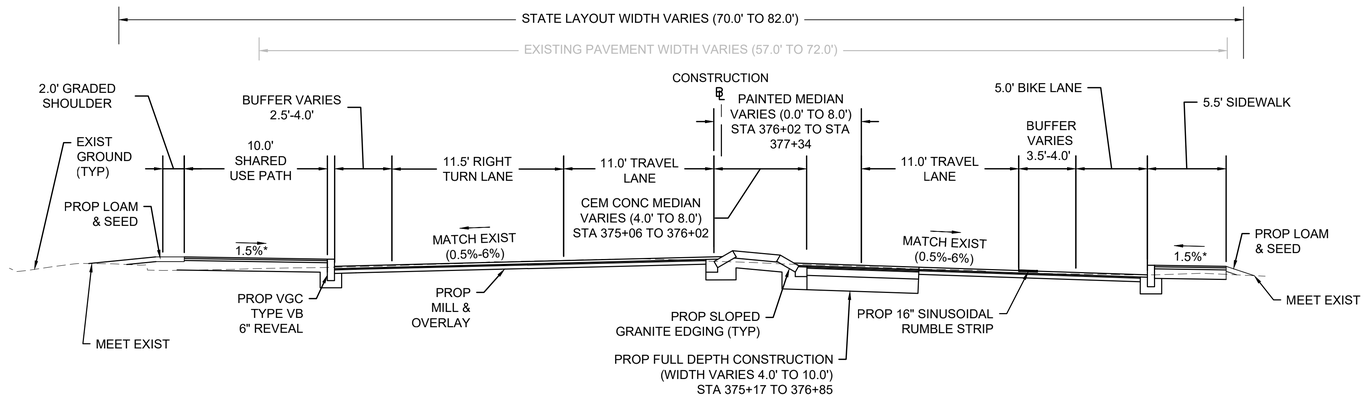
LOWELL STREET (ROUTE 110) WITH BIKE LANE SEPARATED BY VARYING BUFFER

MILL & OVERLAY
STA 425+00 TO STA 434+50
NOT TO SCALE



LOWELL STREET (ROUTE 110) WITH VARIABLE SHOULDER & BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY
STA 405+46 TO STA 408+57
NOT TO SCALE



LOWELL STREET (ROUTE 110) WITH RIGHT TURN LANE, CEMENT CONCRETE MEDIAN, SIDE PATH & BIKE LANE SEPARATED BY BUFFER

MILL & OVERLAY WITH FULL DEPTH RECONSTRUCTION
STA 375+06 TO STA 377+20
NOT TO SCALE

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_HD(TYPICAL).dwg
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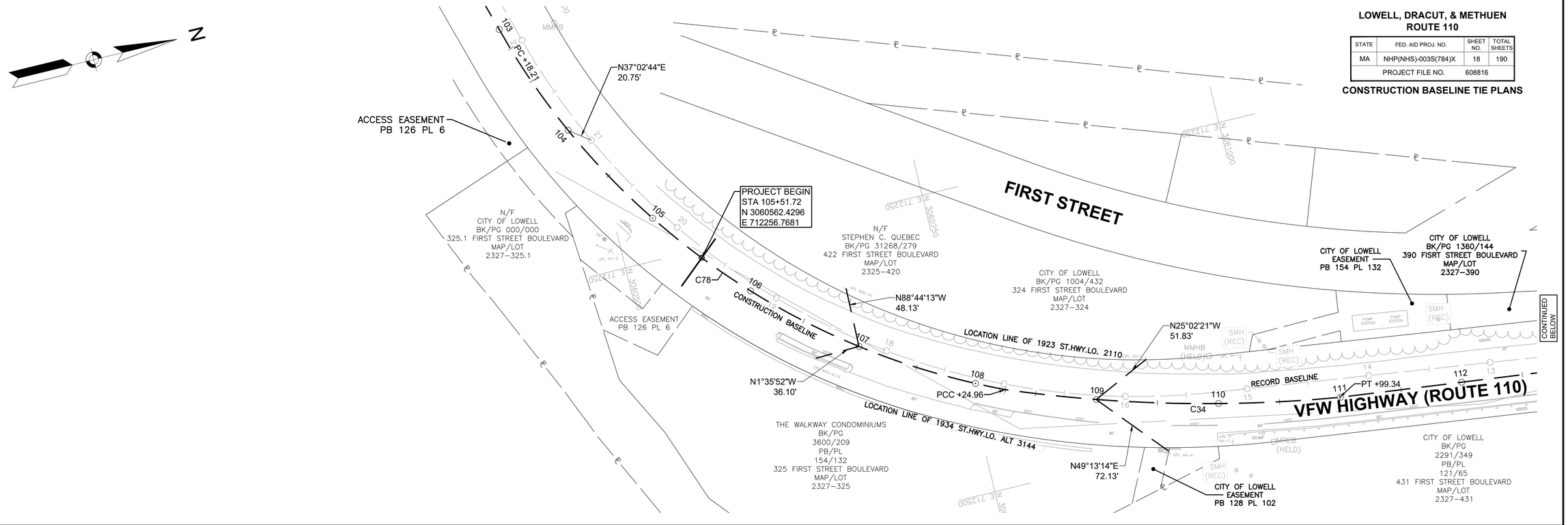
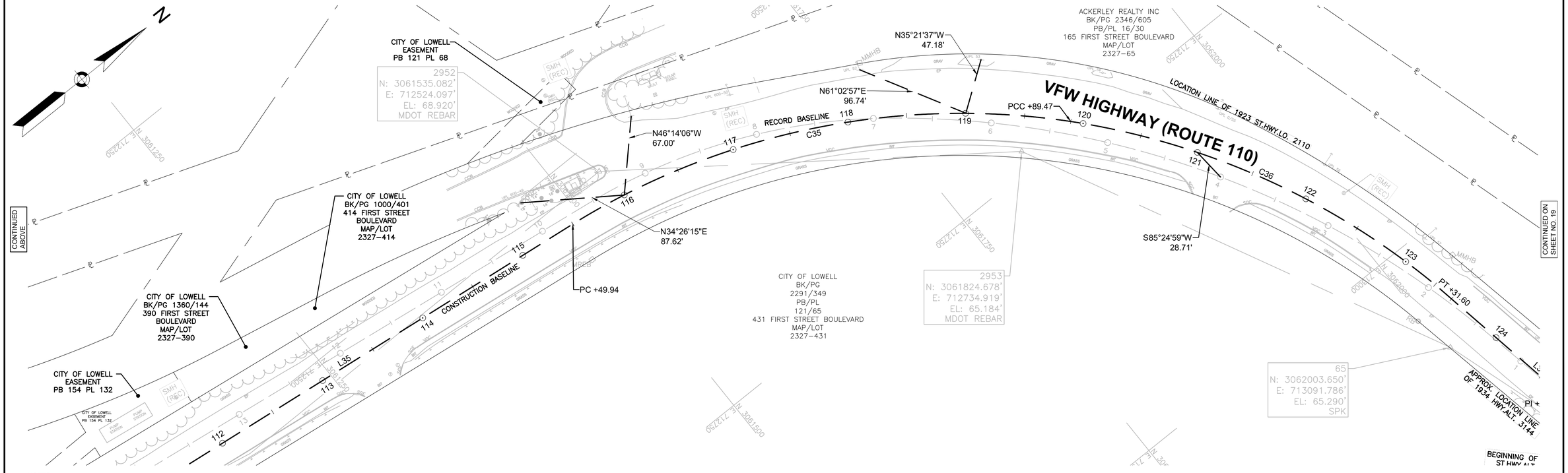
608816_HD(TYPICAL).DWG Plotted on 9-Sep-2024 9:11 AM

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	18	190
PROJECT FILE NO.	608816		

CONSTRUCTION BASELINE TIE PLANS





NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

608816_HD(BLT).DWG Plotted on 9-Sep-2024 9:11 AM

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Printed by: Jocelyn Dewire

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	19	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

N

BEGINNING OF 1923 ST.HWY.LO. 2110

END OF 1912 ST.HWY.LO. 1425

S65°57'33"W 70.96'

APPROX. LOCATION LINE OF 1923 ST.HWY.LO. 2110

APPROX. LOCATION LINE OF 1934 HWY.ALT. 3144

BEGINNING OF 1934 ST.HWY.ALT. 3144

END OF 1912 ST.HWY.LO. 1425

S73°49'35"E 34.74'

LOCATION LINE OF 1912 ST.HWY.LO. 1425

PC +68.87

LOCATION LINE OF 1912 ST.HWY.LO. 1425

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425)

PT +81.50

N22°35'38"W 27.41'

S74°04'37"W 99.41'

PC +94.58

LOCATION LINE OF 1912 ST.HWY.LO. 1425

N4°42'01"E 47.94'

PT +78.41

S51°00'20"W 60.36'

LOCATION LINE OF 1912 ST.HWY.LO. 1425

CONSTRUCTION BASELINE
RECORD BASELINE

PI +91.57

+21.60 PC

+01.93 PC

+01.93 PC

CONTINUED ON SHEET NO. 18

CONTINUED BELOW

LOWELL

DRACUT

MERRIMACK RIVER

MERRIMACK RIVER

N/F
ACKERLEY REALTY INC.
BK/PG
02346 0605
50 MERRIMACK AVENUE
MAP/LOT
74-0-15

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 1)
100 MERRIMACK AVENUE
MAP/LOT
74-16-1C

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 1)
100 MERRIMACK AVENUE
MAP/LOT
74-16-1C

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 2)
100 MERRIMACK AVENUE
MAP/LOT
74-16-2C

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 3)
100 MERRIMACK AVENUE
MAP/LOT
74-16-3C

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 4)
100 MERRIMACK AVENUE
MAP/LOT
74-16-4C

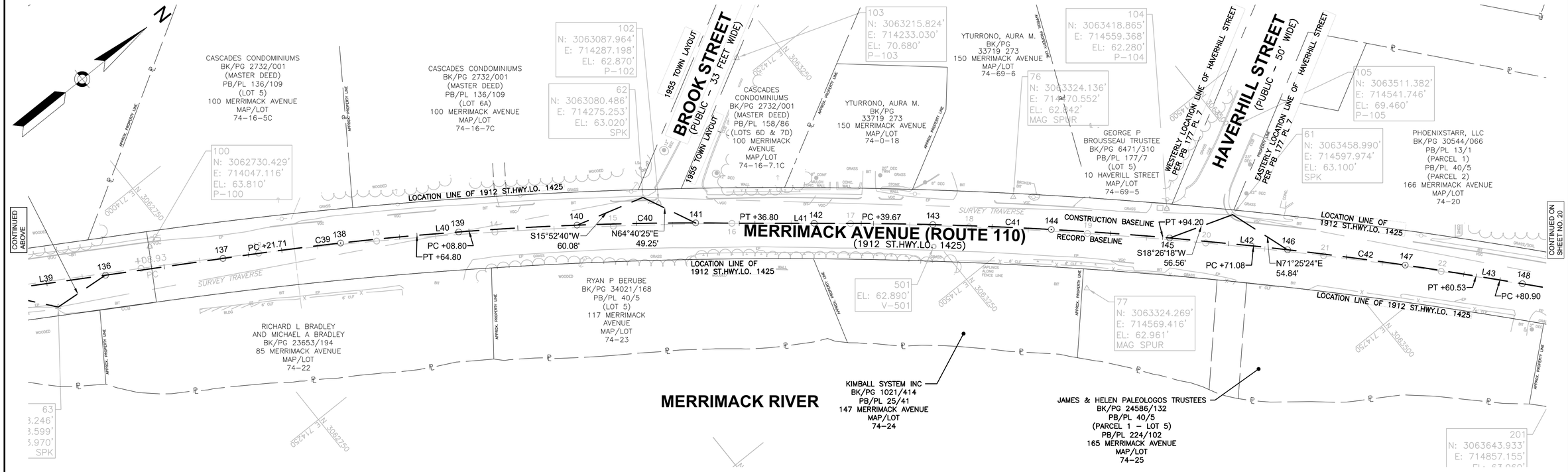
126
N: 3062085.653'
E: 713772.513'
EL: 66.850'
P-126

401
EL: 65.710'
V-1

63
N: 3062638.246'
E: 714038.599'
EL: 63.970'
SPK

64
N: 3062193.282'
E: 713686.197'
EL: 67.680'
SPK

200
N: 3062610.227'
E: 714014.227'
EL: 64.400'
P-200



CONTINUED ABOVE

CONTINUED ON SHEET NO. 20

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	20	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

608816_HD(BLT).DWG Plotted on 9-Sep-2024 9:12 AM

N

BENOIT BRIAN M. (TE) BK/PG 12706 0225 23 ELSMERE TR MAP/LOT 71-0-70

101 N: 3063669.418' E: 714835.742' EL: 63.930' P-101

MORGAN WILLIAM A. (JT) BK/PG 35104 294 33 ELSMERE TR MAP/LOT 71-0-71

SALDARRIAGA JOSHUA BK/PG 29788 0050 51 ELSMERE TR MAP/LOT 71-0-72

60 N: 3063881.370' E: 715093.884' EL: 65.040' SPK

SHEEHAN EDWARD V BK/PG 01180 0535 51 ELSMERE TR MAP/LOT 71-72-1

GAGNON DAVID M. (TE) BK/PG 18386 0231 15 SALISBURY STREET MAP/LOT 71-0-27

GRAHAM RICHARD M (JT) BK/PG 06862 0128 244 MERRIMACK AVENUE MAP/LOT 71-0-26

SHEEHAN JOSEPH A. BK/PG 01102 0101 248 MERRIMACK AVENUE MAP/LOT 71-0-25

402 EL: 66.570' V-2

SHEEHAN JOSEPH A JR (TE) BK/PG 02202 0685 258 MERRIMACK AVENUE MAP/LOT 71-0-24

59 N: 3064215.631' E: 715648.152' EL: 66.830' SPK

S40°13'01"W 101.88'

S38°32'28"E 23.94'

S34°26'35"W 49.15'

N86°23'10"E 61.47'

LOCATION LINE OF 1912 ST.HWY.LO. 1425

SURVEY TRAVERSE

CONTINUED ON SHEET NO. 19

PT +60.53 L43 PC +80.90

RECORD BASELINE

CONSTRUCTION BASELINE

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425)

PT +03.33

PT +42.07

CONTINUED BELOW

ST.HWY.LO. 1425

CARPENTER SCOTT A., TRUSTEE BK/PG 27503 0031 189 MERRIMACK AVENUE MAP/LOT 74-0-27

201 N: 3063643.933' E: 714857.155' EL: 63.960' P-201

MERRIMACK RIVER

A & S COMMERCIAL REALTY 2 LLC BK/PG 29143 0201 197 MERRIMACK AVENUE MAP/LOT 71-0-73

TOWN OF DRACUT BK/PG 17695 0203 241 MERRIMACK AVENUE MAP/LOT 71-0-74

SEWER EASEMENT 25 FEET WIDE PB M PL 730

SHEEHAN JOSEPH BK/PG 2202 0685 257 MERRIMACK AVENUE MAP/LOT 71-0-75

RIVERSIDE LANDING CONDOMINIUMS BK/PG 18113 0276 19326 0206 PB/PL 219 065 45 JOSEPH AVENUE MAP/LOT 71-23-84C

TOWN OF DRACUT BK/PG 21683 0108 290 MERRIMACK AVENUE MAP/LOT 71-23-85

58 N: 3064461.883' E: 716155.314' EL: 65.810' MAG

IDE MICHAEL (TE) BK/PG 28373 0292 310 MERRIMACK AVENUE MAP/LOT 71-0-22

TOWN OF DRACUT BK/PG 21683/108 PB/PL 211/118 (LOTS 1-6 AND 10-14) 326 MERRIMACK AVENUE MAP/LOT 71-21

108 N: 3064720.039' E: 716596.307' EL: 76.290' P-108

WESTERLY LOCATION LINE OF BRIGHAM AVENUE PER PB 211, PL 118

EASTERLY LOCATION LINE OF BRIGHAM AVENUE PER PB 211 PL 118

BRIGHAM AVENUE
(PUBLIC - WIDTH VARIES)

JOHN S BURNETT & LAURA ANN ROMANOWSKI BK/PG 33739/171 PB/PL 51/88 (LOTS 252, 253, 254 AND 255) 11 BRIGHAM AVENUE PARCEL ID 71_2

MARITIMES & NORTHEAST PIPELINES, LLC BK/PG 22639/090 400 MERRIMACK AVENUE MAP/LOT 71-1

57 N: 3064648.288' E: 716706.187' EL: 64.030' MAG

127 N: 3064446.230' E: 716131.570' EL: 65.580' P-127

CONTINUED ABOVE

S10°03'59"E 24.97'

S48°21'41"E 28.63'

PC +23.54 +23.12 PC

PT +50.38 L45 PC +74.51

C44 C45

S60°13'35"W 87.12'

PT +36.15 PT +93.33

N81°48'56"E 97.65'

BURGESS LEIGHANDRA BK/PG 33260 124 291 MERRIMACK AVENUE MAP/LOT 71-0-76

CHARLES J BURGESS AND CHERYL CLARK, TRUSTEES OF THE BURGESS FAMILY TRUST II BK/PG 33260/124 (PARCEL 1) 291 MERRIMACK AVENUE MAP/LOT 71_76

107 N: 3064634.065' E: 716658.249' EL: 64.160' P-107

CONTINUED ON SHEET NO. 21

MERRIMACK RIVER

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_HD(BLT).dwg
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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	21	190
PROJECT FILE NO.	608816		

CONSTRUCTION BASELINE TIE PLANS

608816_HD(BLT).DWG Plotted on 9-Sep-2024 9:12 AM

N

CONTINUED ON SHEET NO. 20

106
N: 3064720.335'
E: 717061.563'
EL: 63.420'
P-106

MARITIMES & NORTHEAST PIPELINES, LLC
BK/PG
22639 0090
400 MERRIMACK AVENUE
MAP/LOT
71-0-1

56
N: 3064782.605'
E: 717330.416'
EL: 63.410'
SPK

BEDARD TAMMIE L. (TE)
BK/PG
18334 0001
12 NASSAU STREET
MAP/LOT
72-0-93

WESTERLY LOCATION LINE OF NASSAU STREET PER PB 11 PL 20

NASSAU STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF NASSAU STREET PER PB 11 PL 20

JEREMI TEJEDA
BK/PG
3400 0196
11 NASSAU STREET
MAP/LOT
72-0-78

TURGEON BRIAN R. (TE)
BK/PG
28737 0260
448 MERRIMACK AVENUE
MAP/LOT
72-0-76

WESTERLY LOCATION LINE OF HAVERHILL STREET PER PB 177 PL 7

CAMDEN STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF HAVERHILL STREET PER PB 177 PL 7

LOCATION LINE OF 1912 ST.HWY.LO. 1425

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425)

CONSTRUCTION BASELINE
RECORD BASELINE

PT +93.33
PI +74.57
S30°46'53"W 32.21'
S85°16'25"E 81.46'
S44°37'36"W 43.26'
PC +05.63
PT +16.60
S82°22'38"E 67.38'
PT +19.41
PT +48.58
PT +97.71
PC +53.09

KIMBALL SYSTEM INC
BK/PG 788/118
415 MERRIMACK AVENUE
MAP/LOT
72-94

203
N: 3064695.902'
E: 717119.634'
EL: 63.360'
P-203

CHEA RAY (TE) BK/PG
LC201 0139
439 MERRIMACK AVENUE
MAP/LOT 72-0-95

403
EL: 62.050'
V-3

55
N: 3064830.707'
E: 717353.469'
EL: 62.050'
SPK

MASSE PHYLLIS A. (LE)
BK/PG
32407 0280
451 MERRIMACK AVENUE
MAP/LOT
72-0-96

MERRIMACK RIVER

CONTINUED BELOW

CONTINUED ABOVE

RIVERVIEW HILL, LLC
BK/PG
35381 282
462 MERRIMACK AVENUE
MAP/LOT
72-0-62

WESTERLY LOCATION LINE OF KILBY STREET PER PB 11 PL 116

KIBY STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF KILBY STREET PER PB 11 PL 116

FESTA DANIEL J.
BK/PG
18569 0002
474 MERRIMACK AVENUE
MAP/LOT
72-0-55

FERDINAND ROBERT M. (TE)
BK/PG
17234 0191
480 MERRIMACK AVENUE
MAP/LOT
72-0-54

SHANAHAN WILLIAM E. III (TE)
BK/PG
LC 208 0011
486 MERRIMACK AVENUE
MAP/LOT
72-0-53

WESTERLY LOCATION LINE OF HURON STREET PER PB 11 PL 116

HURON STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF HURON STREET PER PB 11 PL 116

APRAHAMIAN GEORGE
BK/PG
0C487 0011
11 HURON STREET
MAP/LOT
72-0-44

54
N: 3065002.800'
E: 718348.271'
EL: 60.150'
SPK

FEARON DENNIS D (TE)
BK/PG
03364 0221
500 MERRIMACK AVENUE
MAP/LOT
72-0-43

WESTERLY LOCATION LINE OF PERCY STREET PER PB 11 PL 116

PERCY STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF PERCY STREET PER PB 11 PL 116

SULLIVAN IVAN
BK/PG
01895 0405
512 MERRIMACK AVENUE
MAP/LOT
72-0-32

SURPRENANT CLAIRE F.
BK/PG
01544 0345
522 MERRIMACK AVENUE
MAP/LOT
72-0-31

CADORETTE KEVIN (JTRS)
BK/PG
30333 0271
524 MERRIMACK AVENUE
MAP/LOT
72-0-30

WESTERLY LOCATION LINE OF PINCKNEY STREET PER PB 11 PL 116

PINCKNEY STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF PINCKNEY STREET PER PB 11 PL 116

MOUSSEAU JEFFREY P. (JT)
BK/PG
27401 0088
9 PINCKNEY STREET
MAP/LOT
72-0-21

53
N: 3065118.384'
E: 718877.713'
EL: 58.610'
MMAC

548 MERRIMACK AVENUE, LLC
BK/PG
22109 0110
548 MERRIMACK AVENUE
MAP/LOT
72-20-1

WESTERLY LOCATION LINE OF YORK STREET PER PB 11 PL 116

YORK STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF YORK STREET PER PB 11 PL 116

MAKARUTSA DOMINIC
BK/PG
34067 218
552 MERRIMACK AVENUE
MAP/LOT
72-0-16

LOCATION LINE OF 1912 ST.HWY.LO. 1425

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425)

CONSTRUCTION BASELINE
RECORD BASELINE

PT +97.71
PC +53.09
S57°16'03"W 67.77'
S69°23'05"E 43.45'
S0°23'47"E 24.43'
S88°05'49"E 97.54'

TOWN OF DRACUT
BK/PG
1400 587
465 MERRIMACK AVENUE
MAP/LOT
72-0-97

TOWN OF DRACUT
BK/PG
1835 312
471 MERRIMACK AVENUE
MAP/LOT
72-0-98

MADDALENA DRACUT REALTY, LLC
BK/PG
33880 59
475 MERRIMACK AVENUE
MAP/LOT
72-0-99

MADDALENA DRACUT REALTY, LLC
BK/PG
226 186
485 MERRIMACK AVENUE
MAP/LOT
72-0-100

MADDALENA DRACUT REALTY, LLC
BK/PG
226 186
485 MERRIMACK AVENUE
MAP/LOT
72-0-101

JPB REALTY TRUST
BK/PG
25606 0188
487 MERRIMACK AVENUE
MAP/LOT
72-0-102

JALA REALTY LLC
BK/PG
34602 54
505 MERRIMACK AVENUE
MAP/LOT
72-0-103

TOWN OF DRACUT
BK/PG
0
509 MERRIMACK AVENUE
MAP/LOT
72-0-104

128
N: 3065031.011'
E: 718508.855'
EL: 59.540'
P-128

DMK REALTY, LLC
BK/PG
27415 0241
511 MERRIMACK AVENUE
MAP/LOT
72-105-1

TOWN OF DRACUT
BK/PG
16257 0058
531 MERRIMACK AVENUE
MAP/LOT
72-0-107

FLYNN JOSEPH J
BK/PG
02346 0608
525 MERRIMACK AVENUE
MAP/LOT
72-0-10

TOWN OF DRACUT
BK/PG
0
537 MARRIMACK AVENUE
MAP/LOT
72-0-108

TOWN OF DRACUT
BK/PG
0
541 MERRIMACK AVENUE
MAP/LOT
72-0-109

MERRIMACK RIVER

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160
SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	22	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

N

LAMBERT ROLAND W. BK/PG 10925 0229 570 MERRIMACK AVENUE MAP/LOT 72-15-1

SPRUCE BUILDING ASSOCIATES BK/PG 03276 0344 590 MERRIMACK AVENUE MAP/LOT 72-0-14

HEAVENLY INVESTMENTS V, LLC BK/PG 28445/219 PB/PL 113/80 592 MERRIMACK AVENUE MAP/LOT 72-13

IDE MICHAEL (TE) BK/PG 19474 0144 PB/PL 11/29 (LOT 1) 602 MERRIMACK AVENUE MAP/LOT 72-0-9

GHALY, LLC BK/PG 28327 0181 PB/PL 11/29 (LOTS 24-26 AND 42) 636 MERRIMACK AVENUE MAP/LOT 72-0-2

MALANTIC ALAN D. (TE) BK/PG 29895 0289 PB/PL 11/29 (LOTS 40, 41 AND 43) 648 MERRIMACK AVENUE MAP/LOT 72-0-1

TOWN OF DRACUT BK/PG 0 549 MERRIMACK AVENUE MAP/LOT 72-0-110

TOWN OF DRACUT BK/PG 0 675 MERRIMACK AVENUE MAP/LOT 73-0-63

MERRIMACK RIVER

BENCHMARK: DISK 171D MASS. D.P.W. DISK STAMPED "171D" EL=59.39'

MERRIMACK AVENUE (ROUTE 110) (1912 ST.HWY.LO. 1425)

LOCATION LINE OF 1912 ST.HWY.LO. 1425

RECORD BASELINE

CONSTRUCTION BASELINE

S82°01'51"E 78.22'

S37°22'49"W 34.55'

S73°47'07"W 78.70'

S36°59'17"E 39.85'

S49°32'34"E 62.02'

S78°24'21"W 48.80'

PC +79.53

PC +66.30

+15.47 PT

PT +70.14

C49

C50

STUART AVENUE (PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF STUART STREET PER PB 11 PL 29

HEMLOCK STREET (PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF HEMLOCK STREET PER PB 11 PL 29

JACOB STREET (PUBLIC – 40' WIDE)

WESTERLY LOCATION LINE OF JACOB STREET PER PB 11 PL 29

EASTERLY LOCATION LINE OF JACOB STREET PER PB 11 PL 29

ALLAN STREET (PUBLIC – 40' WIDE)

GRANT STREET (PUBLIC – 40' WIDE)

LEAVITT STREET (PUBLIC – 40' WIDE)

MOUNT PLEASANT AVENUE (PUBLIC – 40' WIDE)

109 N: 3065200.374' E: 719280.996' EL: 58.240' P-109

52 N: 3065227.612' E: 719387.300' EL: 58.430' SPK

111 N: 3065221.868' E: 719967.825' EL: 61.010' P-111

2954 N: 3065248.716' E: 719839.698' EL: 61.060' MDOT REBAR

112 N: 3065354.269' E: 719958.262' EL: 68.540' P-112

114 N: 3065335.230' E: 720108.195' EL: 70.950' P-114

113 N: 3065200.964' E: 720045.390' EL: 61.440' P-113

116 N: 3065250' E: 720335' EL: 73.510' P-116

204 N: 3065161.887' E: 719270.480' EL: 57.630' P-204

500 EL: 59.190' V-500

69 N: 3065142.543' E: 720043.895' EL: 59.404' SPK SPUR

2955 N: 3065157.536' E: 720203.023' EL: 61.683' MDOT REBAR

115 N: 3065128.500' E: 720274.879' EL: 61.450' P-115

68 N: 3065080.642' E: 720292.841' EL: 60.896' SPK SPUR

CONTINUED ON SHEET NO. 21

CONTINUED BELOW

JULIO MACIEIRA AND DONNA MACIEIRA BK/PG 26948/025 PB/PL 11/29 (LOTS 45, 46, 61, 62 AND A PORTION OF LOT 60) 670 MERRIMACK AVENUE MAP/LOT 73-54

DENISE M SANTORSOLA BK/PG 10412/074 PB/PL 11/29 (LOTS 44 AND 47) 656 MERRIMACK AVENUE MAP/LOT 73-55

LIM SOMTHOUK BK/PG 33726 276 PB/PL 11/29 (LOTS 63 AND 64) 680 MERRIMACK AVENUE MAP/LOT 73-0-46

LAMONTAGNE GEORGE T (JT) BK/PG 03732 0335 PB/PL 11/29 (LOTS 46, 61 AND 62 684 MERRIMACK AVENUE MAP/LOT 73-0-45

FATICANTI ROBERT L., TRUSTEES BK/PG 12184 0291 PB/PL 11/29 (LOTS 81, 82, 84 AND 85) 696 MERRIMACK AVENUE MAP/LOT 73-0-37

WILLOW B HOLDINGS, LLC BK/PG 36205 0211 PB/PL 11/29 (LOTS 83 AND 93) 718 MERRIMACK AVENUE MAP/LOT 73-0-35

VERAO BRENDA BK/PG 30047 0047 PB/PL 11/29 (LOTS 92, 94 AND 95) 714 MERRIMACK AVENUE MAP/LOT 73-35-1

KOUBA ALLAN BK/PG 33461 139 PB/PL 11/39 (LOTS 56-61) 744 MERRIMACK AVENUE MAP/LOT 73-0-34

MURILLO DIEGO BK/PG 35635 141 PB/PL 11/39 (LOTS 53,55-61) 14 MT PLEASANT AVENUE MAP/LOT 73-0-33

LAFERRIERE JAMES A & GLORIA D. (LE) BK/PG 26791 0140 PB/PL 11/39 (LOT 52) 756 MERRIMACK AVENUE MAP/LOT 73-0-23

LAFERRIERE JAMES A & GLORIA D. (LE) BK/PG 26791 0140 PB/PL 11/39 (LOT 51) 758 MERRIMACK AVENUE MAP/LOT 73-0-22

KOUBA ALLAN BK/PG 33461 139 PB/PL 11/39 (LOT 54) 744 MERRIMACK AVENUE MAP/LOT 73-34-1

BRADLEY JULIE M. (JT) BK/PG 31906 0233 743 MERRIMACK AVENUE MAP/LOT 73-0-74

110 N: 3065056.523' E: 720499.184' EL: 61.140' P-110

205 N: 3065022.001' E: 720490.988' EL: 61.230' P-205

49 N: 3064973.409' E: 720626.377' EL: 61.990' MAG

404 EL: 62.310' V-4

48 N: 3064893.557' E: 721061.589' EL: 64.120' SPK

BENCHMARK: WSP-M MAG NAIL IN UPL 8D EL=62.80'

N69°46'26"E 64.00'

N59°35'18"W 104.28'

N12°49'59"E 22.91'

N61°55'35"W 45.09'

CONTINUED ABOVE

CONTINUED ON SHEET NO. 23

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	23	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

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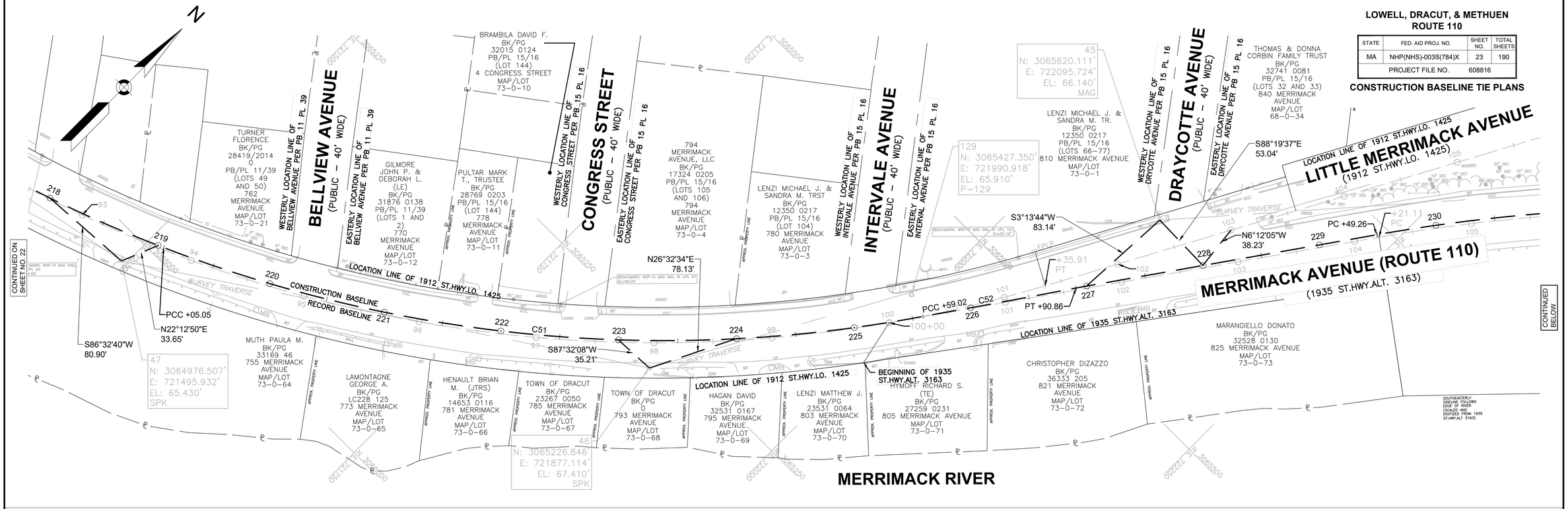

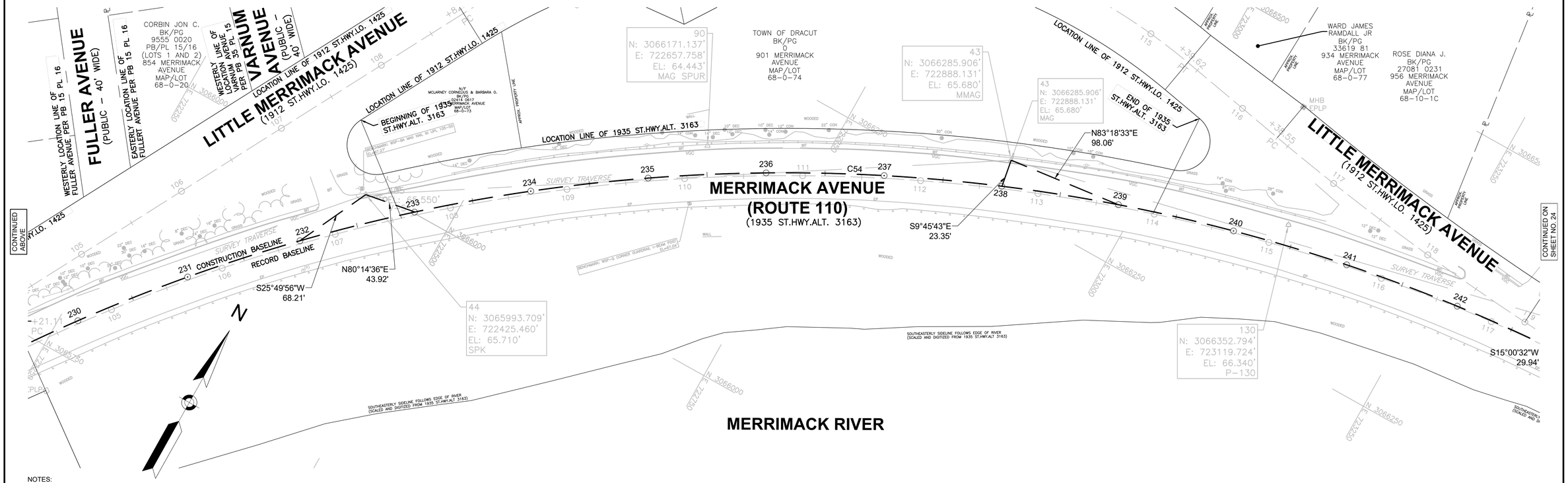

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	24	190
PROJECT FILE NO.	608816		

CONSTRUCTION BASELINE TIE PLANS

N

BK/PG
0 0
966–968
MERRIMACK AVENUE
MAP/LOT
69–10–2C

BRADLEY RICHARD L.
& DORIS A., TRS.
BK/PG
21727 0271
976 MERRIMACK
AVENUE
MAP/LOT
69–10–3

42
N: 3066399.941'
E: 723385.419'
EL: 67.580'
MMAG

41
N: 3066387.909'
E: 723933.754'
EL: 65.210'
SPK

406
EL: 65.360'
V–6

TOWN OF DRACUT
BK/PG
0
1093 MERRIMACK
AVENUE
MAP/LOT
69–0–13

LOCATION LINE OF 1912 ST.HWY.LO. 1425

S69°05'36"W
59.90'

S62°15'16"E
49.28'

N56°43'01"E
63.47'

PT +66.44

PT +28.18

PT +00.74

118+76.53

CONSTRUCTION BASELINE

RECORD BASELINE

S15°00'32"W
29.94'

S73°32'10"E
96.56'

PC +15.94

+47.23 PC

N65°20'00"W
50.60'

C55

L57

PC +45.98

CONTINUED ON SHEET NO. 23

CONTINUED BELOW

SURVEY TRAVERSE

SOUTHEASTERLY SIDELINE FOLLOWS ~~EDGE~~ OF RIVER (SCALED AND DIGITIZED FROM 1935 ST.HWY.ALT. 3163)

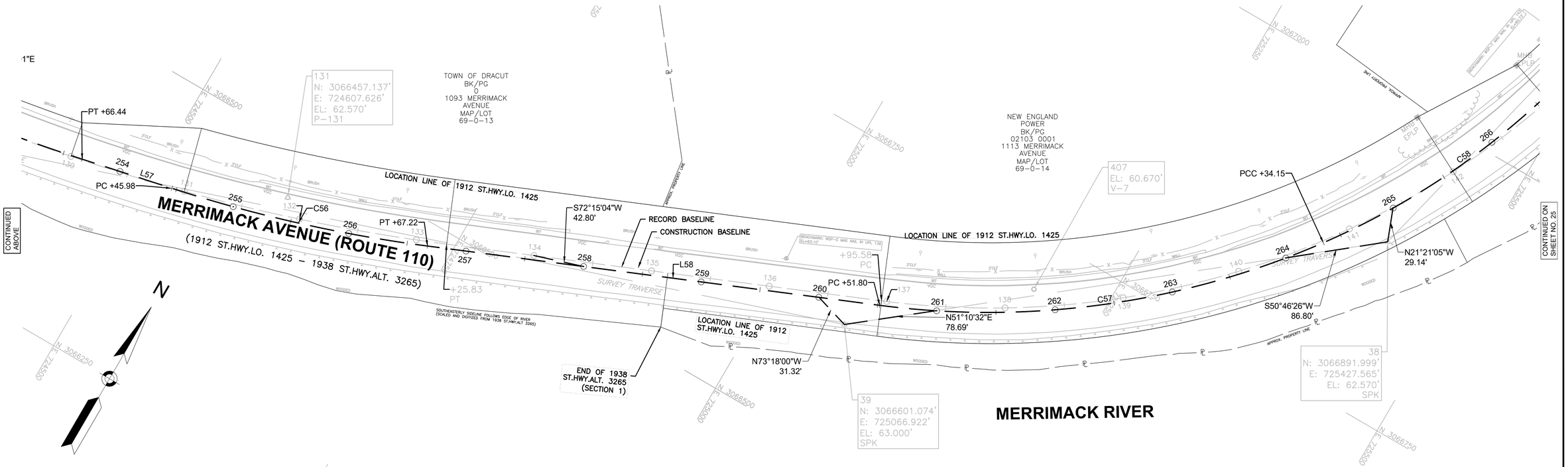
END OF 1935 ST.HWY.ALT. 3163

BEGINNING OF 1938 ST.HWY.ALT. 3265 (SECTION 1)

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425 – 1938 ST.HWY.ALT. 3265)

MERRIMACK RIVER

40
N: 3066350.196'
E: 724323.045'
EL: 63.690'
SPK



NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	25	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

NEWBEGIN FLOYD BK/PG 02080 0017 1156 MERRIMACK AVENUE MAP/LOT 69-0-8

FULL THROTTLE INVESTMENTS, LLC BK/PG 25340 0255 1166 MERRIMACK AVENUE MAP/LOT 69-0-7

KOLEK RONALD BK/PG 02524 0518 1176 MERRIMACK AVENUE MAP/LOT 69-0-6

VALERIO SERGIO BK/PG 29713 0250 1180 MERRIMACK AVENUE MAP/LOT 69-0-5

TOWLE GREGORY J. (TE) BK/PG 13644 0285 1184 MERRIMACK AVENUE MAP/LOT 69-0-4

DIAS LUIZ C., SR. BK/PG 33874 254 1188 MERRIMACK AVENUE MAP/LOT 69-0-3

ROMAN MARIO BK/PG 32248 0013 PB/PL 70/61 (LOT 12) 1192 MERRIMACK AVENUE MAP/LOT 69-0-2

CANO EDDY A. IND. BK/PG 21895 0019 PB/PL 70/61 (LOTS 10 AND 11) 1200 MERRIMACK AVENUE MAP/LOT 69-0-1

132
N: 3067625.400'
E: 725532.182'
EL: 57.750'
P-132

MISTRETTA WILLIAM J., JR., TRUSTEE BK/PG 30085 0172 PB/PL 70/61 (LOT 9) 1208 MERRIMACK AVENUE MAP/LOT 55-0-77

MISTRETTA WILLIAM J., JR., TRUSTEE BK/PG 30085 0169 PB/PL 70/61 (LOT 8) 1204 MERRIMACK AVENUE MAP/LOT 55-77-1

BURKE RALPH BK/PG 23579 0067 PB/PL 70/61 (LOT 7A) 1212 MERRIMACK AVENUE MAP/LOT 55-0-76

SAAVEDRA ALIS CHECOVICH IND. BK/PG 26274 0234 PB/PL 70/61 (LOT 6A) 1214 MERRIMACK AVENUE MAP/LOT 55-0-75

DESMARAIS GEORGE BK/PG 26467 0004 PB/PL 70/61 (LOT 5A) 1220 MERRIMACK AVENUE MAP/LOT 55-0-74

CAMERON ANN M. BK/PG 03365 0184 PB/PL 70/61 (LOTS 3A AND 4A) 1224 MERRIMACK AVENUE MAP/LOT 55-0-73

WESTERLY LOCATION LINE OF JACKSON STREET PER PB 70 PL 61

JACKSON STREET
(PUBLIC – 40' WIDE)

EASTERLY LOCATION LINE OF JACKSON STREET PER PB 70 PL 61

FPR REALTY TRUST BK/PG 1869 0384 PB/PL 70/61 (LOT 23) 26 JACKSON STREET MAP/LOT 55-0-67

STEPHEN M. BROX FAMILY LLC BK/PG 36326 0294 1226 MERRIMACK AVENUE MAP/LOT 55-0-66

CONTINUED ON SHEET NO. 24

LOCATION LINE OF 1912 ST.HWY.LO. 1425

CONSTRUCTION BASELINE

RECORD BASELINE

C58 266 267 268 PT +83.87 269 270 271 L59 272 273 274 275 PC +95.26 276 277 PT +47.75 PC

N63°04'15"W 24.95'

S20°04'44"W 93.91'

S17°02'27"E 61.07'

N34°16'10"E 49.91'

N22°54'46"E 59.43'

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425 – 1938 ST.HWY.ALT. 3265)

BEGINNING OF 1938 ST.HWY.ALT. 3265 (SECTION 2)

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER (SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

37
N: 3067390.489'
E: 725548.477'
EL: 58.200'
SPK

36
N: 3067857.906'
E: 725548.498'
EL: 57.680'
SPK

MERRIMACK RIVER

CONTINUED BELOW

STEPHEN M. BROX FAMILY LLC BK/PG 36326 0294 1226 MERRIMACK AVENUE MAP/LOT 55-0-66

SUNSET ROCK, LLC BK/PG 28273 0078 1228 MERRIMACK AVENUE MAP/LOT 55-0-65

SUNSET ROCK, LLC BK/PG 28273 0078 1256 MERRIMACK AVENUE MAP/LOT 55-0-64

SUNSET ROCK, LLC BK/PG 28273 0078 1258 MERRIMACK AVENUE MAP/LOT 55-64-1

408
EL: 57.250'
V-8

SUNSET ROCK, LLC BK/PG 28273 0078 1274 MERRIMACK AVENUE MAP/LOT 55-0-63

SUNSET ROCK, LLC BK/PG 28273 0078 1274 MERRIMACK AVENUE MAP/LOT 55-0-62

BROX INDUSTRIES INC BK/PG 5305 0093 1282 MERRIMACK AVENUE MAP/LOT 55-0-61

BROX INDUSTRIES INC. BK/PG 4940 0145 1286 MERRIMACK AVENUE MAP/LOT 55-0-59

STEPHEN M. BROX FAMILY, LLC BK/PG 36326 294 1471 METHUEN STREET MAP/LOT 55-0-35

BROX STEPHEN M., TRUSTEE BK/PG 26037 0239 1310 MERRIMACK AVENUE MAP/LOT 55-0-56

SUNSET ROCK, LLC BK/PG 26037 0237 1326 MERRIMACK AVENUE MAP/LOT 55-0-54

PEREIRA MARIO BK/PG 21870 0247 1336 MERRIMACK AVENUE MAP/LOT 55-0-53

CONTINUED ABOVE

LOCATION LINE OF 1912 ST.HWY.LO. 1425

CONSTRUCTION BASELINE

RECORD BASELINE

277 278 279 C59 280 281 282 PT +39.96 283 L60 284 285 PC +57.59 286 287 C60 288 289 PT +24.78 PC

N22°54'46"E 59.43'

S2°43'37"W 82.78'

N71°50'37"E 34.25'

MERRIMACK AVENUE (ROUTE 110)
(1912 ST.HWY.LO. 1425 – 1938 ST.HWY.ALT. 3265)

S35°33'40"W 84.68'

35
N: 3068373.333'
E: 725655.563'
EL: 57.660'
SPK

34
N: 3068780.417'
E: 725902.470'
EL: 57.900'
SPK

133
N: 3068975.887'
E: 726037.748'
EL: 58.000'
P-133

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER (SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

MERRIMACK RIVER

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160
SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	26	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

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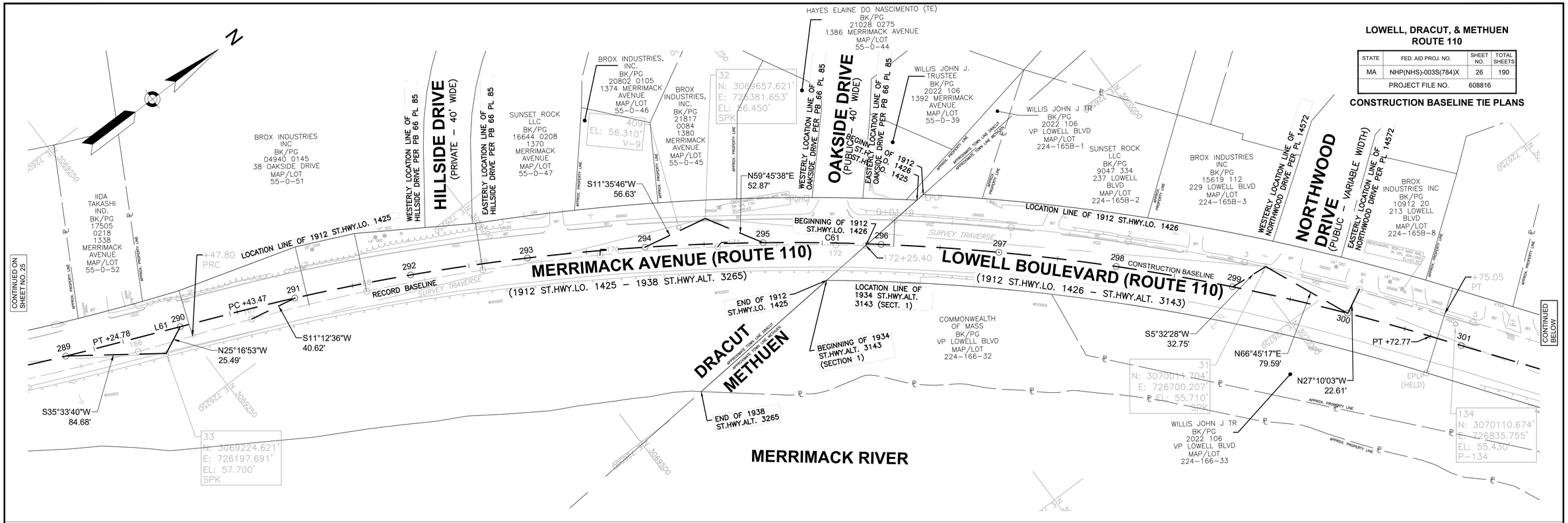

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	27	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

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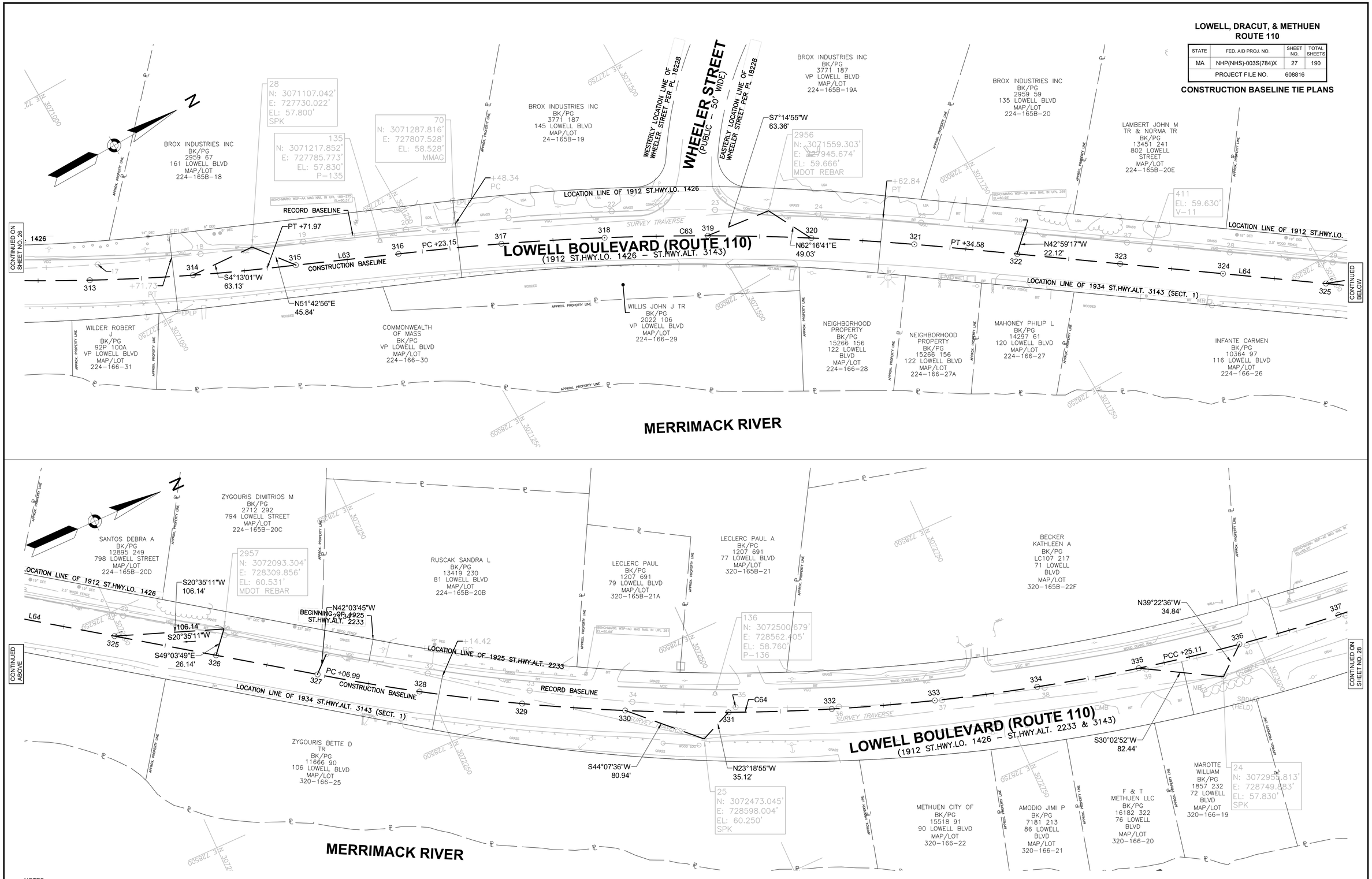


NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

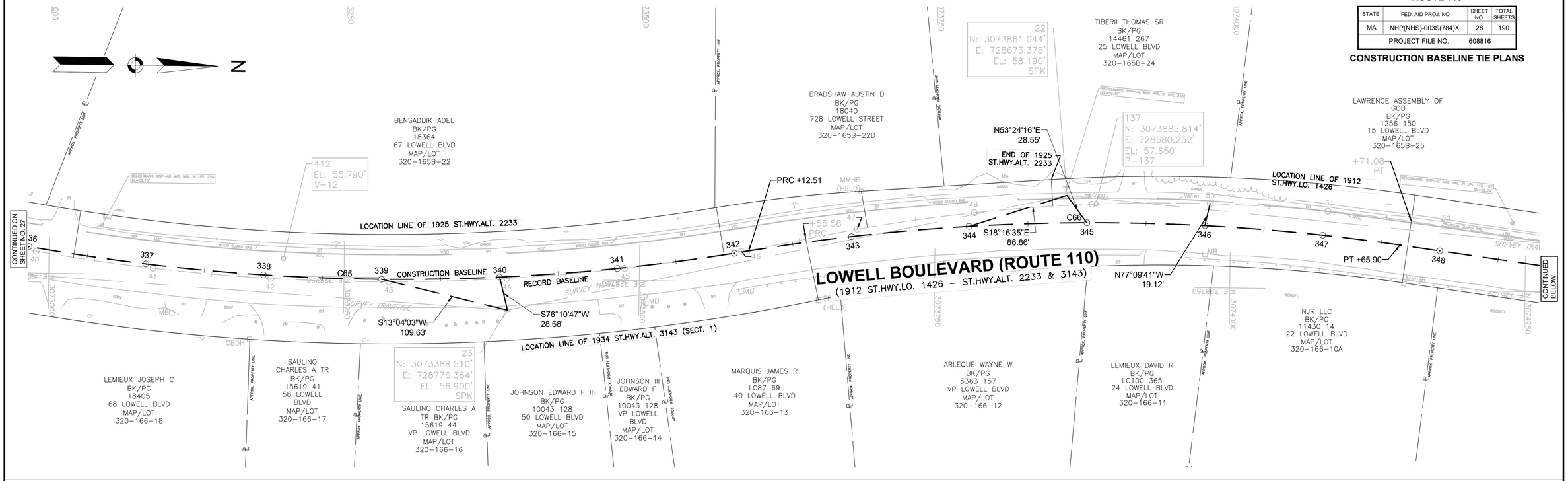
0 40 100 160

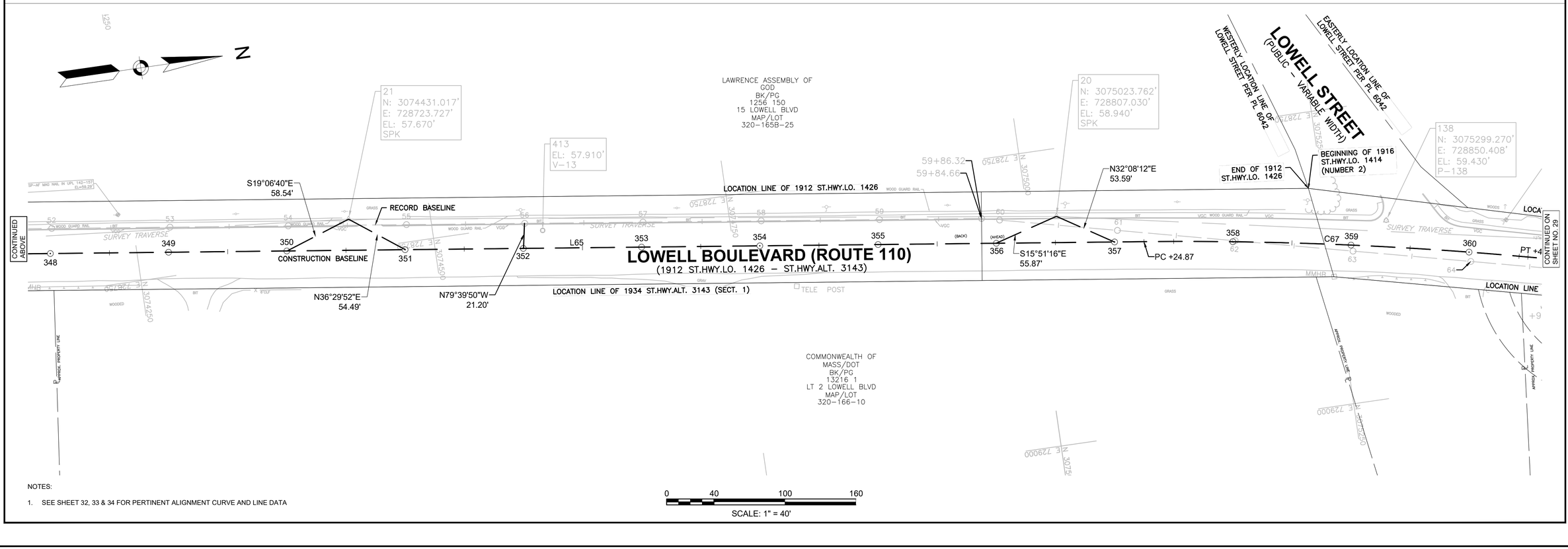
SCALE: 1" = 40'

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	28	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS





NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	29	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

LOWELL STREET (ROUTE 110)
(1916 ST.HWY.LO. 1714 – ST.HWY.ALT. 6673)

GRIFFIN BROOK DRIVE
(PRIVATE – VARIABLE WIDTH – PL 11377)

LOWELL STREET (ROUTE 110)
(1916 ST.HWY.LO. 1714 – ST.HWY.ALT. 6673)

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	30	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

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N

415
EL: 59.040'
V-15

HICKORY HILL GOLF COURSE INC
BK/PG 1084 336
200 NORTH LOWELL STREET
MAP/LOT
220-165A-10A

JOHNSTONE DAVID TR
BK/PG
15133 225
619 LOWELL STREET
MAP/LOT
318-165A-14

HICKORY HILL GOLF COURSE INC
BK/PG
3302 80
615 LOWELL STREET
MAP/LOT
318-165A-15

125
N: 3078797.712'
E: 729547.909'
EL: 54.530'
P-125

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
PL 303
200 NORTH LOWELL STREET
MAP/LOT
220-165A-10A

139
N: 3078599.244'
E: 729558.999'
EL: 57.510'
P-139

PANIAGUA YEFRY KENDRY
BK/PG
17055 333
611 LOWELL STREET
MAP/LOT
318-165A-16

DASILVA LORRANA CRISTINA
BK/PG
16713 4
609 LOWELL STREET
MAP/LOT
318-165A-17

JOSE L ARIAS &
MASSIEL PENA ARIAS
BK/PG 15496/128
PL 9030
(LOT B)
605 LOWELL STREET
MAP/LOT
318-165A-19

124
N: 3078759.596'
E: 729631.413'
EL: 58.630'
P-124

BENCHMARK: DISK 171K
MASS. D.P.W. DISK STAMPED "171K"
EL=58.65'

BENCHMARK: WSP-AM MAG NAIL IN UPL 192
EL=60.83'

BENCHMARK: WSP-AM MAG NAIL IN UPL 184
EL=56.19'

+97.34
PI

PT +45.15

PC +53.93

N30°55'36"E
82.21'

S35°51'10"E
32.94'

S70°05'20"W
45.70'

N1°14'35"E
74.12'

N81°33'08"W
10.99'

N21°11'17"W
35.53'

S45°24'58"W
80.69'

S45°52'01"W
85.18'

C74

L73

L74

LOCATION LINE OF 1916 ST.HWY.LO. 1714 (NUMBER 2)

RECORD BASELINE

CONSTRUCTION BASELINE

99+98.91

END OF 1916 ST.HWY.LO. 1714 (NUMBER 2)

END OF 1916 ST.HWY.LO.1714 (NUMBER 2)

WESTERLY LOCATION LINE OF HILL AVENUE PER PL 9592

EASTERLY LOCATION LINE OF HILL AVENUE PER PL 9592

HILL AVENUE
(PUBLIC – 40' WIDE)

CONTINUED ON SHEET NO. 29

CONTINUED BELOW

384 385 386 387 388 389 390 391 392 393 394 395 396

SURVEY TRAVERSE

LOWELL STREET (ROUTE 110)
(1916 ST.HWY.LO. 1714)

2958
N: 3077766.470'
E: 729183.673'
EL: 57.933'
MDOT REBAR

PHILLIPS ACADEMY
TRUSTEES OF
BK/PG
12785 85
620 LOWELL STREET
MAP/LOT
318-166-6

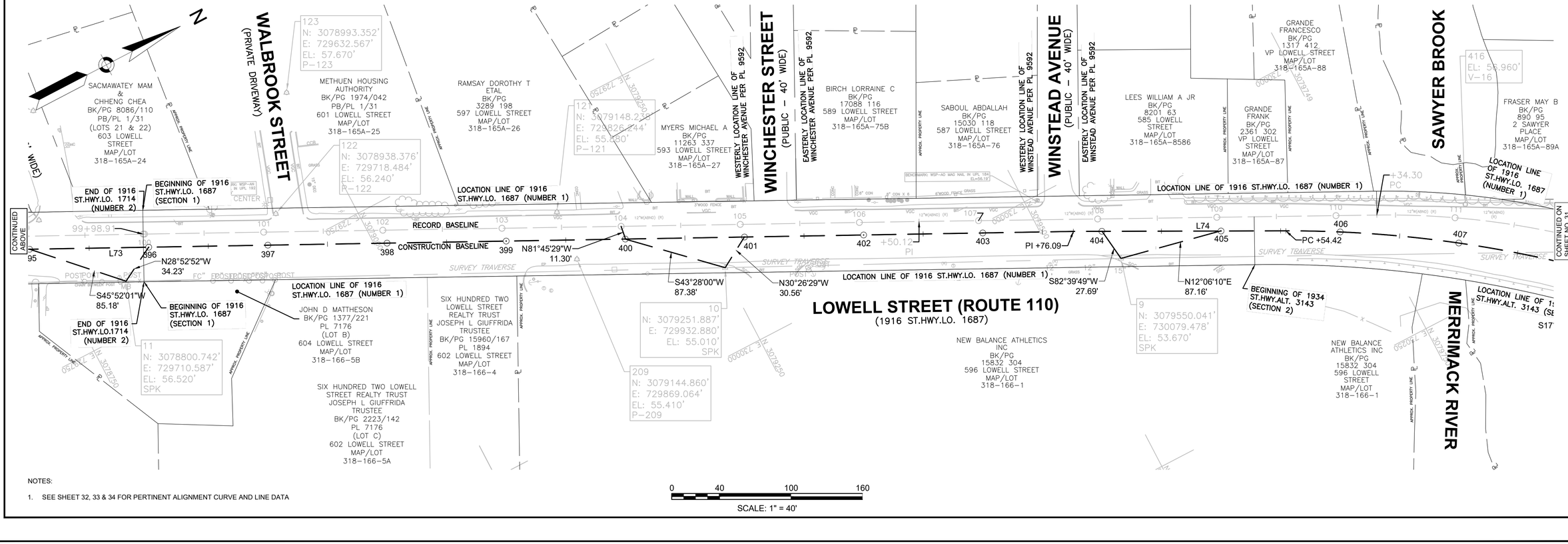
2959
N: 3078130.578'
E: 729379.708'
EL: 57.654'
MDOT REBAR

TRUSTEES OF PHILLIPS ACADEMY
BK/PG 12785/85
PL 12654
(PARCEL A)
620 LOWELL STREET
MAP/LOT
318-166-6

208
N: 3078609.368'
E: 729600.838'
EL: 57.190'
P-208

12
N: 3078439.979'
E: 729528.034'
EL: 57.950'
SPK

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318-166-5



SACMAWATEY MAM
&
CHHENG CHEA
BK/PG 8086/110
PB/PL 1/31
(LOTS 21 & 22)
603 LOWELL STREET
MAP/LOT
318-165A-24

123
N: 3078993.352'
E: 729632.567'
EL: 57.670'
P-123

METHUEN HOUSING AUTHORITY
BK/PG 1974/042
PB/PL 1/31
601 LOWELL STREET
MAP/LOT
318-165A-25

122
N: 3078938.376'
E: 729718.484'
EL: 56.240'
P-122

RAMSAY DOROTHY T
ETAL
BK/PG
3289 198
597 LOWELL STREET
MAP/LOT
318-165A-26

121
N: 3079148.223'
E: 729826.244'
EL: 55.280'
P-121

MYERS MICHAEL A
BK/PG
11263 337
593 LOWELL STREET
MAP/LOT
318-165A-27

BIRCH LORRAINE C
BK/PG
17088 116
589 LOWELL STREET
MAP/LOT
318-165A-75B

SABOUL ABDALLAH
BK/PG
15030 118
587 LOWELL STREET
MAP/LOT
318-165A-76

LEES WILLIAM A JR
BK/PG
8201 63
585 LOWELL STREET
MAP/LOT
318-165A-8586

GRANDE FRANCESCO
BK/PG
1317 412
VP LOWELL STREET
MAP/LOT
318-165A-88

GRANDE FRANK
BK/PG
2361 302
VP LOWELL STREET
MAP/LOT
318-165A-87

416
EL: 56.960'
V-16

FRASER MAY B
BK/PG
890 95
2 SAWYER PLACE
MAP/LOT
318-165A-89A

11
N: 3078800.742'
E: 729710.587'
EL: 56.520'
SPK

JOHN D MATTHESON
BK/PG 1377/221
PL 7176
(LOT B)
604 LOWELL STREET
MAP/LOT
318-166-5B

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 15960/167
PL 1894
602 LOWELL STREET
MAP/LOT
318-166-4

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 2223/142
PL 7176
(LOT C)
602 LOWELL STREET
MAP/LOT
318-166-5A

10
N: 3079251.887'
E: 729932.880'
EL: 55.010'
SPK

209
N: 3079144.860'
E: 729869.064'
EL: 55.410'
P-209

NEW BALANCE ATHLETICS INC
BK/PG
15832 304
596 LOWELL STREET
MAP/LOT
318-166-1

9
N: 3079550.041'
E: 730079.478'
EL: 53.670'
SPK

NEW BALANCE ATHLETICS INC
BK/PG
15832 304
596 LOWELL STREET
MAP/LOT
318-166-1

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160
SCALE: 1" = 40'

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	31	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

N

SAWYER PLACE (PUBLIC – 40' WIDE)
WESTERLY LOCATION LINE OF MWSTEAD AVENUE PER PL 1347
EASTERLY LOCATION LINE OF MWSTEAD AVENUE PER PL 1347
LOCATION LINE OF 1916 ST.HWY.LO. 1687 (NUMBER 1)
CONTINUED ON SHEET NO. 30

CALLAHAN STREET (STATUS UNKNOWN)

SAWYER STREET (PUBLIC – 40' WIDE)
WESTERLY LOCATION LINE OF SAWYER STREET PER PL 1108
EASTERLY LOCATION LINE OF SAWYER STREET PER PL 1108

GEORGE STREET (PUBLIC – 40' WIDE)
WESTERLY LOCATION LINE OF GEORGE STREET PER PL 590
EASTERLY LOCATION LINE OF GEORGE STREET PER PL 590

NEWHILL ROAD (PUBLIC – 40' WIDE)
WESTERLY LOCATION LINE OF NEWHILL ROAD PER PL 590
EASTERLY LOCATION LINE OF NEWHILL ROAD PER PL 590

MOFFETT STREET (PRIVATE – 40' WIDE)
WESTERLY LOCATION LINE OF MOFFETT STREET PER PL 5430
EASTERLY LOCATION LINE OF MOFFETT STREET PER PL 5430

LOWELL STREET (ROUTE 110)
(1916 ST.HWY.LO. 1687)

CONSTRUCTION BASELINE
RECORD BASELINE
LOCATION LINE OF 1916 ST.HWY.LO. 1687 (NUMBER 1)
LOCATION LINE OF 1934 ST.HWY.ALT. 3143 (SECT. 2)
CONTINUED BELOW

MERRIMACK RIVER

RIVERTON AVENUE (PRIVATE – 30' WIDE)
EASTERLY LOCATION LINE OF RIVERTON AVENUE PER PL 600
WESTERLY LOCATION LINE OF RIVERTON AVENUE PER PL 600

MARJORIE STREET (PUBLIC – 40' WIDE)
WESTERLY LOCATION LINE OF MARJORIE STREET PER BK 203 PL 600
EASTERLY LOCATION LINE OF MARJORIE STREET PER BK 203 PL 600

LOCATION LINE OF 1916 ST.HWY.LO. 1724 (NUMBER 3)
LOCATION LINE OF 1916 ST.HWY.LO. 1687 (SECT. 2)
CONTINUED ON SHEET NO. 32

NOTES:

1. SEE SHEET 32, 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

SCALE: 1" = 40'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	32	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

608816_HD(BLT).DWG Plotted on 9-Sep-2024 9:13 AM

N

MARJORIE STREET (PUBLIC – 40' WIDE)

WESTERLY LOCATION LINE OF MARJORIE STREET PER BK 203 PL 600

EASTERLY LOCATION LINE OF MARJORIE STREET PER BK 203 PL 600

LOIS STREET (PUBLIC – 40' WIDE)

WESTERLY LOCATION LINE OF LOIS STREET PER BK 203 PL 600

EASTERLY LOCATION LINE OF LOIS STREET PER BK 203 PL 600

ALEXANDER CIRCLE (PUBLIC – 40' WIDE)

WESTERLY LOCATION LINE OF ALEXANDER CIRCLE PER PL 4629

ESSTERLY LOCATION LINE OF ALEXANDER CIRCLE PER PL 4629

ALBERT STREET

141
N: 3081146.642'
E: 731990.594'
EL: 50.470'
P–141

N/F
MENCIA MARCOS A
BK/PG
3491 243
483 LOWELL STREET
MAP/LOT
418–164–34

N/F
HO LINH M
BK/PG
12660 33
481 LOWELL STREET
MAP/LOT
418–164–34B

N/F
JOHNSON EDWARD F III
BK/PG
5388 133
475 LOWELL STREET
MAP/LOT
418–164–46

N/F
VIEIRA DAMON J
BK/PG
13682 208
473 LOWELL STREET
MAP/LOT
418–164–56

N/F
BARROWS PATRICK E
BK/PG
12306 289
471 LOWELL STREET
MAP/LOT
418–164–57

N/F
GOMEZ SAUL E
BK/PG
16198 74
471 LOWELL STREET
MAP/LOT
418–164–58

2961
N: 3081456.253'
E: 732565.297'
EL: 53.350'
MDOT REBAR

142
N: 3081469.733'
E: 732598.774'
EL: 53.220'
P–142

N/F
MARSAN PAUL E & EDNA M RLE
BK/PG
6925 51
467 LOWELL STREET
MAP/LOT
418–164–1

N/F
ZHEN JASON WAN TR
BK/PG
16160 251
478 LOWELL STREET
MAP/LOT
418–162–12

N/F
SCOTT JOSEPH J
BK/PG
4372 234
476 LOWELL STREET
MAP/LOT
418–162–13

2960
N: 3081224.318'
E: 732247.907'
EL: 51.174'
MMAG

N/F
SHRIJI REALTY LLC
BK/PG
13309 260
466 LOWELL STREET
MAP/LOT
418–162–17

N/F
S Y K REALTY CO LLC
BK/PG
10198 281
462 LOWELL STREET
MAP/LOT
418–162–16

CONTINUED ON SHEET NO. 31

CONTINUED BELOW

LOWELL STREET (ROUTE 110)
(1916 ST.HWY.LO. 1687)

RECORD BASELINE

CONSTRUCTION BASELINE

LOCATION LINE OF 1916 ST.HWY.LO. 1687 (SECT. 2)

LOCATION LINE OF 1969 ST.HWY.ALT. 5794

+99.74 PI
N74°01'06"E
98.79'

428
429
PT +85.52

+28.25 PI

S76°27'46"W
106.79'

N34°52'54"W
27.65'

S45°57'38"W
96.19'

S44°12'25"E
27.07'

BENCHMARK: WSP-AU MAG NAIL IN UPL 150
BENCHMARK: WSP-AT MAG NAIL IN UPL 150

SURVEY TRAVERSE

BEGINNING OF 2013 ST.HWY.ALT. 8203 (SECTION 12)

END OF 2013 ST.HWY.ALT. 8203 (SECTION 12)

ACCESS

BEGINNING OF 1969 ST.HWY.ALT. 5794

BEGINNING OF 2013 ST.HWY.ALT. 8203 (SECTION 1)

END OF 2013 ST.HWY.ALT. 8203 (SECTION 1)

PI +87.23

PC +70.70

N58°59'34"W
35.03'

S1°19'16"W
38.79'

+98.20 PC
1+00

+57.50 PI

PT +88.26

BEGINNING OF 2013 ST.HWY.ALT. 8203 (SECTION 2)

END OF 1992 ST.HWY.ALT. 7045

END OF 2013 ST.HWY.ALT. 8203 (SECTION 2)

NO ACCESS

443+04.20

LOWELL (ROUTE 110) STREET
(1958 ST.HWY.LO. 4765)

PROJECT END
STA 441+60.10
N 3081716.5426
E 733068.4286

BEGINNING OF 2013 ST.HWY.ALT. 8203 (SECTION 3)

END OF 2013 ST.HWY.ALT. 8203 (SECTION 3)

END OF 1969 ST.HWY.ALT. 5794

LOCATION LINE OF 1969 ST.HWY.ALT. 5794

NOTES:

1. SEE SHEET 33 & 34 FOR PERTINENT ALIGNMENT CURVE AND LINE DATA

0 40 100 160

SCALE: 1" = 40'

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ROUTE 110 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L34	100+00.00	3060361.337	711747.867		N73°36'26"E 318.21'	103+18.21	3060451.141	712053.140
C78	103+18.21	3060451.141	712053.140	R=602.81' Δ=48°09'57" L=506.75' T=269.43'		108+24.96	3060778.045	712420.781
C34	108+24.96	3060778.045	712420.781	R=1173.45' Δ=13°23'50" L=274.38' T=137.82'		110+99.34	3061042.337	712492.141
L35	110+99.34	3061042.337	712492.141		N6°43'25"E 450.60'	115+49.94	3061489.834	712544.897
C35	115+49.94	3061489.834	712544.897	R=624.00' Δ=40°21'29" L=439.53' T=229.33'		119+89.47	3061872.980	712741.193
C36	119+89.47	3061872.980	712741.193	R=637.94' Δ=30°43'41" L=342.13' T=175.29'		123+31.60	3062026.843	713042.190
L36	123+31.60	3062026.843	713042.190		N79°47'59"E 159.97'	124+91.57	3062055.172	713199.631
L37	124+91.57	3062055.172	713199.631		N78°58'43"E 177.30'	126+68.87	3062089.067	713373.661
C37	126+68.87	3062089.067	713373.661	R=778.04' Δ=30°23'12" L=412.63' T=211.29'		130+81.50	3062269.212	713739.528
L38	130+81.50	3062269.212	713739.528		N48°35'31"E 13.08'	130+94.58	3062277.862	713749.336
C38	130+94.58	3062277.862	713749.336	R=907.00' Δ=17°55'48" L=283.83' T=143.09'		133+78.41	3062495.584	713929.624
L39	133+78.41	3062495.584	713929.624		N30°39'43"E 343.30'	137+21.71	3062790.888	714104.699
C39	137+21.71	3062790.888	714104.699	R=2693.00' Δ=3°02'40" L=143.09' T=71.56'		138+64.80	3062911.977	714180.905
L40	138+64.80	3062911.977	714180.905		N34°10'28"E 44.00'	139+08.80	3062948.376	714205.619
C40	139+08.80	3062948.376	714205.619	R=2594.55' Δ=5°02'06" L=228.00' T=114.07'		141+36.80	3063130.161	714343.112
L41	141+36.80	3063130.161	714343.112		N38°48'14"E 102.87'	142+39.67	3063210.328	714407.578
C41	142+39.67	3063210.328	714407.578	R=3393.00' Δ=4°17'53" L=254.53' T=127.33'		144+94.20	3063401.112	714575.976
L42	144+94.20	3063401.112	714575.976		N44°13'55"E 76.87'	145+71.08	3063456.193	714629.601
C42	145+71.08	3063456.193	714629.601	R=3393.00' Δ=3°11'57" L=189.46' T=94.75'		147+60.53	3063586.638	714766.968
L43	147+60.53	3063586.638	714766.968		N48°04'50"E 20.36'	147+80.90	3063600.240	714782.118
C43	147+80.90	3063600.240	714782.118	R=3905.18' Δ=15°34'10" L=1061.18' T=533.88'		158+42.07	3064193.883	715657.775
L44	158+42.07	3064193.883	715657.775		N63°38'59"E 381.47'	162+23.54	3064363.202	715999.610
C44	162+23.54	3064363.202	715999.610	R=3493.00' Δ=8°38'30" L=526.84' T=263.92'		167+50.38	3064560.622	716487.524
L45	167+50.38	3064560.622	716487.524		N72°08'53"E 124.12'	168+74.51	3064598.673	716605.669
C45	168+74.51	3064598.673	716605.669	R=12632.89' Δ=0°59'33" L=218.83' T=109.42'		170+93.33	3064651.152	716818.109
L46	170+93.33	3064651.152	716818.109		N78°42'08"E 181.23'	172+74.57	3064686.657	716995.830
C46	181+05.63	3064861.057	717808.388	R=1000.00' Δ=0°37'43" L=10.97' T=5.49'		181+16.60	3064863.419	717819.104
L49	181+16.60	3064863.419	717819.104		N77°15'27"E 102.81'	182+19.41	3064886.095	717919.382
C47	182+19.41	3064886.095	717919.382	R=961.65' Δ=1°44'16" L=29.17' T=14.58'		182+48.58	3064892.096	717947.923
L50	182+48.58	3064892.096	717947.923		N78°59'43"E 4.51'	182+53.09	3064892.958	717952.353

ROUTE 110 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C48	182+53.09	3064892.958	717952.353	R=1999.99' Δ=1°16'42" L=44.62' T=22.31'		182+97.71	3064901.962	717996.052
L51	182+97.71	3064901.962	717996.052		N77°43'02"E 1381.81'	196+79.53	3065195.926	719346.236
C49	196+79.53	3065195.926	719346.236	R=1493.57' Δ=30°19'46" L=790.62' T=404.81'		204+70.14	3065156.611	720126.665
L52	204+70.14	3065156.611	720126.665		S72°20'45"E 619.81'	210+89.95	3064968.642	720717.284
C50	210+89.95	3064968.642	720717.284	R=1113.98' Δ=41°55'23" L=815.10' T=426.76'		219+05.05	3065009.689	721513.263
C51	219+05.05	3065009.689	721513.263	R=1180.48' Δ=31°44'28" L=653.97' T=335.61'		225+59.02	3065421.096	722010.850
C52	225+59.02	3065421.096	722010.850	R=8060.49' Δ=0°56'14" L=131.84' T=65.92'		226+90.86	3065529.489	722085.908
C54	229+49.26	3065740.638	722234.858	R=1492.99' Δ=55°42'09" L=1451.47' T=788.87'		244+00.74	3066372.829	723478.368
C55	250+15.94	3066363.136	724093.497	R=1525.27' Δ=13°09'59" L=350.50' T=176.03'		253+66.44	3066397.753	724441.510
L57	253+66.44	3066397.753	724441.510		N77°44'11"E 79.54'	254+45.98	3066414.648	724519.236
C56	254+45.98	3066414.648	724519.236	R=1205.64' Δ=10°30'51" L=221.24' T=110.93'		256+67.22	3066481.159	724729.917
L58	256+67.22	3066481.159	724729.917		N67°13'20"E 384.57'	260+51.80	3066630.049	725084.498
C57	260+51.80	3066630.049	725084.498	R=707.00' Δ=30°59'10" L=382.35' T=195.98'		264+34.15	3066863.995	725381.035
C58	264+34.15	3066863.995	725381.035	R=657.00' Δ=30°29'54" L=349.72' T=179.11'		267+83.87	3067186.671	725504.815
L59	267+83.87	3067186.671	725504.815		N5°44'16"E 811.39'	275+95.26	3067994.001	725585.936
C59	275+95.26	3067994.001	725585.936	R=1292.91' Δ=28°34'13" L=644.70' T=329.20'		282+39.96	3068593.475	725804.400
L60	282+39.96	3068593.475	725804.400		N34°18'29"E 317.63'	285+57.59	3068855.840	725983.427
C60	285+57.59	3068855.840	725983.427	R=1790.07' Δ=11°45'11" L=367.20' T=184.25'		289+24.78	3069178.183	726157.946
L61	289+24.78	3069178.183	726157.946		N22°33'18"E 118.69'	290+43.47	3069287.791	726203.470
C61	290+43.47	3069287.791	726203.470	R=1892.26' Δ=31°09'58" L=1029.30' T=527.73'		300+72.77	3070087.416	726831.314
L62	300+72.77	3070087.416	726831.314		N53°43'16"E 331.72'	304+04.49	3070283.702	727098.732
C62	304+04.49	3070283.702	727098.732	R=2006.05' Δ=30°29'19" L=1067.48' T=546.70'		314+71.97	3071109.563	727755.104
L63	314+71.97	3071109.563	727755.104		N23°13'56"E 151.19'	316+23.15	3071248.490	727814.741
C63	316+23.15	3071248.490	727814.741	R=2494.20' Δ=11°44'54" L=511.42' T=256.61'		321+34.58	3071694.547	728063.079
L64	321+34.58	3071694.547	728063.079		N34°58'50"E 572.41'	327+06.99	3072163.549	728391.241
C64	327+06.99	3072163.549	728391.241	R=2007.07' Δ=23°21'17" L=818.12' T=414.82'		335+25.11	3072909.197	728713.901
C65	335+25.11	3072909.197	728713.901	R=1807.00' Δ=21°47'46" L=687.41' T=347.91'		342+12.51	3073592.394	728723.724
C66	342+12.51	3073592.394	728723.724	R=1793.00' Δ=17°41'01" L=553.39' T=278.91'		347+65.90	3074143.462	728711.869
L65	347+65.90	3074143.462	728711.869		N7°36'34"E 958.97'	357+24.87	3075093.983	728838.854
C67	357+24.87	3075093.983	728838.854	R=3193.00' Δ=5°41'58" L=317.61' T=158.94'		360+42.48	3075406.190	728896.488

NOTES:

1. SEE SHEETS 19 - 32 FOR BASELINE TIE PLANS.

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	33	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

608816_HDI(BLT).DWG Plotted on 9-Sep-2024 9:13 AM

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Last Saved by: JDEWIRE
Printed by: Jocelyn Dewire

ROUTE 110 CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L66	360+42.48	3075406.190	728896.488		N13°18'31"E 161.02'	362+03.50	3075562.888	728933.555
C68	362+03.50	3075562.888	728933.555	R=1507.81' Δ=7°25'35" L=195.44' T=97.86'		363+98.94	3075755.455	728966.110
L67	363+98.94	3075755.455	728966.110		N5°52'56"E 302.76'	367+01.70	3076056.621	728997.138
C69	367+01.70	3076056.621	728997.138	R=10606.52' Δ=2°22'52" L=440.80' T=220.43'		371+42.49	3076495.776	729034.772
L68	371+42.49	3076495.776	729034.772		N1°42'16"E 31.90'	371+74.40	3076527.664	729035.720
C70	371+74.40	3076527.664	729035.720	R=2834.12' Δ=3°04'58" L=152.49' T=76.26'		373+26.89	3076679.892	729044.353
L69	373+26.89	3076679.892	729044.353		N4°47'14"E 137.28'	374+64.17	3076816.696	729055.810
C71	374+64.17	3076816.696	729055.810	R=1000.00' Δ=2°20'13" L=40.79' T=20.40'		375+04.96	3076857.260	729060.042
L70	375+04.96	3076857.260	729060.042		N7°07'27"E 291.60'	377+96.56	3077146.608	729096.206
C72	377+96.56	3077146.608	729096.206	R=378.32' Δ=1°55'11" L=12.68' T=6.34'		378+09.23	3077159.210	729097.567
L71	378+09.23	3077159.210	729097.567		N5°12'16"E 85.20'	378+94.43	3077244.059	729105.295
C73	378+94.43	3077244.059	729105.295	R=1488.15' Δ=7°21'04" L=190.93' T=95.60'		380+85.36	3077432.571	729134.748
L72	380+85.36	3077432.571	729134.748		N12°33'20"E 368.57'	384+53.93	3077792.324	729214.868
C74	384+53.93	3077792.324	729214.868	R=1192.78' Δ=13°59'20" L=291.22' T=146.34'		387+45.15	3078066.075	729312.078
L73	387+45.15	3078066.075	729312.078		N26°32'40"E 1630.94'	403+76.09	3079525.095	730040.932
L74	403+76.09	3079525.095	730040.932		N27°22'24"E 178.33'	405+54.42	3079683.459	730122.926
C75	405+54.42	3079683.459	730122.926	R=998.72' Δ=27°22'52" L=477.28' T=243.29'		410+31.70	3080039.902	730433.477
L75	410+31.70	3080039.902	730433.477		N54°45'16"E 1613.47'	426+45.17	3080971.004	731751.177
C76	426+45.17	3080971.004	731751.177	R=1992.75' Δ=6°54'37" L=240.34' T=120.32'		428+85.52	3081097.543	731955.342
L76	428+85.52	3081097.543	731955.342		N61°39'54"E 1001.72'	438+87.23	3081572.986	732837.041
L77	438+87.23	3081572.986	732837.041		N62°00'23"E 83.47'	439+70.70	3081612.163	732910.742
C77	439+70.70	3081612.163	732910.742	R=984.99' Δ=12°39'18" L=217.56' T=109.22'		441+88.26	3081734.579	733090.054
L78	441+88.26	3081734.579	733090.054		N49°21'05"E 115.94'	443+04.20	3081810.105	733178.020

NOTES:

1. SEE SHEETS 19 - 32 FOR BASELINE TIE PLANS.

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	34	190
	PROJECT FILE NO. 608816		

CONSTRUCTION BASELINE TIE PLANS

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HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 112+84 TO 113+52 LT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 112+84 LT
GUARDRAIL TRAILING ANCHORAGE 113+52 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

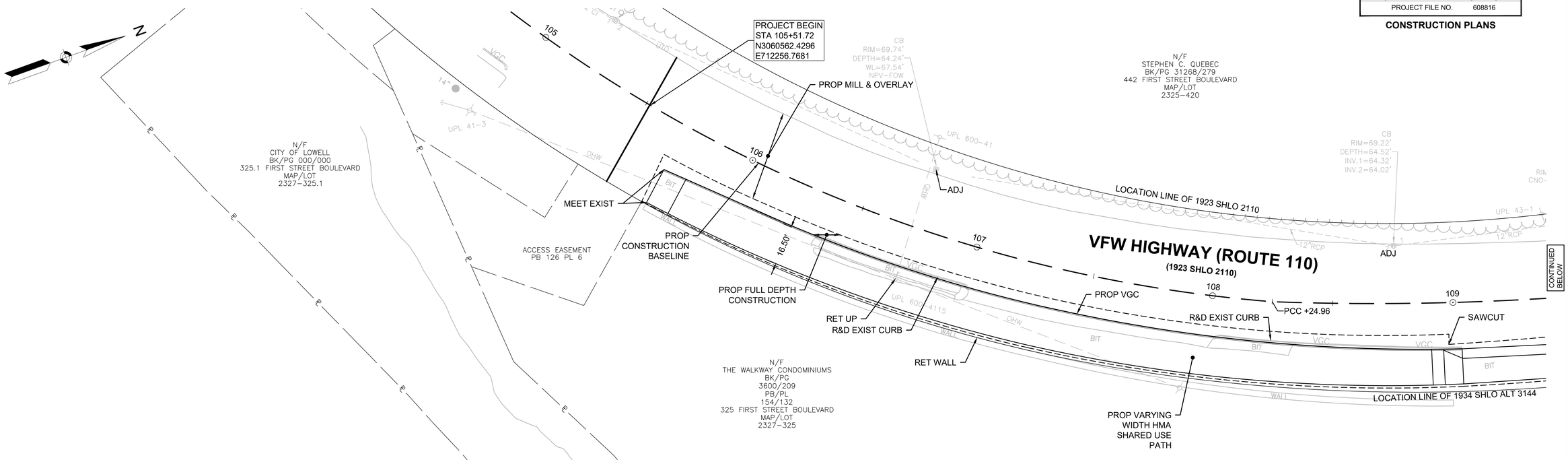
DRAINAGE DETAILS

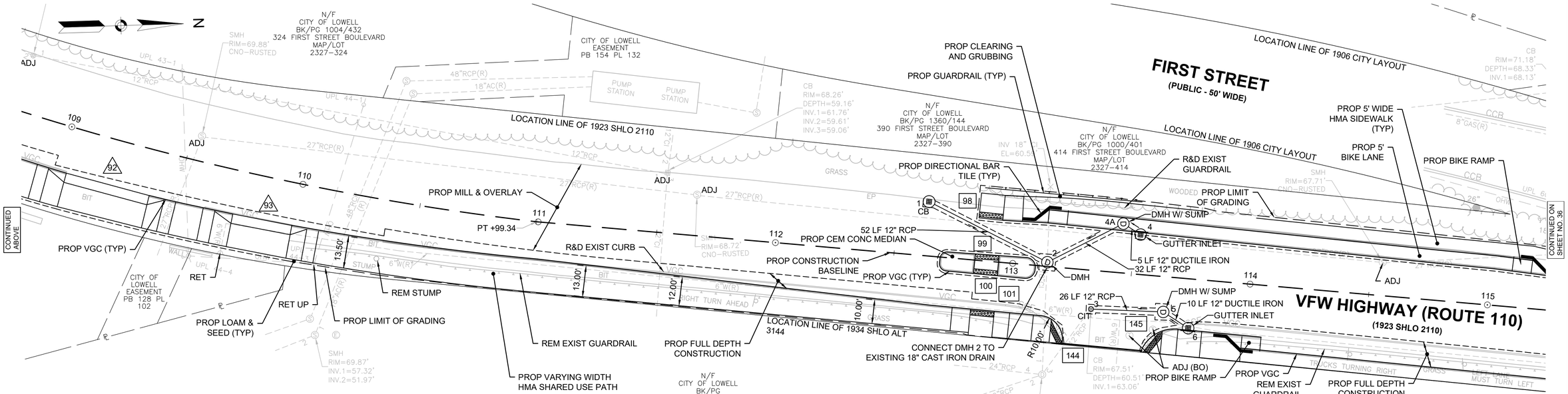
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	35	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





NOTE:

1. GUARDRAIL NOTE: FOR EXISTING GUARDRAIL NOT IDENTIFIED FOR REMOVAL OR REPLACEMENT: EXISTING BURIED END SECTIONS OR OTHER NON-COMPLIANT GUARDRAIL END TREATMENTS TO BE REPLACED WITH TANGENT END TREATMENT OR TRAILING ANCHORAGE. ADDITIONAL GUARDRAIL SECTIONS INCLUDED WITHIN THIS CONTRACT TO REPLACE EXISTING NON-COMPLIANT GUARDRAIL AT THE DIRECTION OF MASSDOT.
2. PRIOR TO INSTALLATION OF THE MAILBOX POSTS CONTRACTOR TO VERIFY THE EXISTING UTILITIES AT PROPOSED MAILBOX POST LOCATION AND REPORT ANY POTENTIAL CONFLICTS TO THE ENGINEER.
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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:25 PM

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HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 115+45 TO 115+32 LT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 115+32 LT
GUARDRAIL TRAILING ANCHORAGE 115+45 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

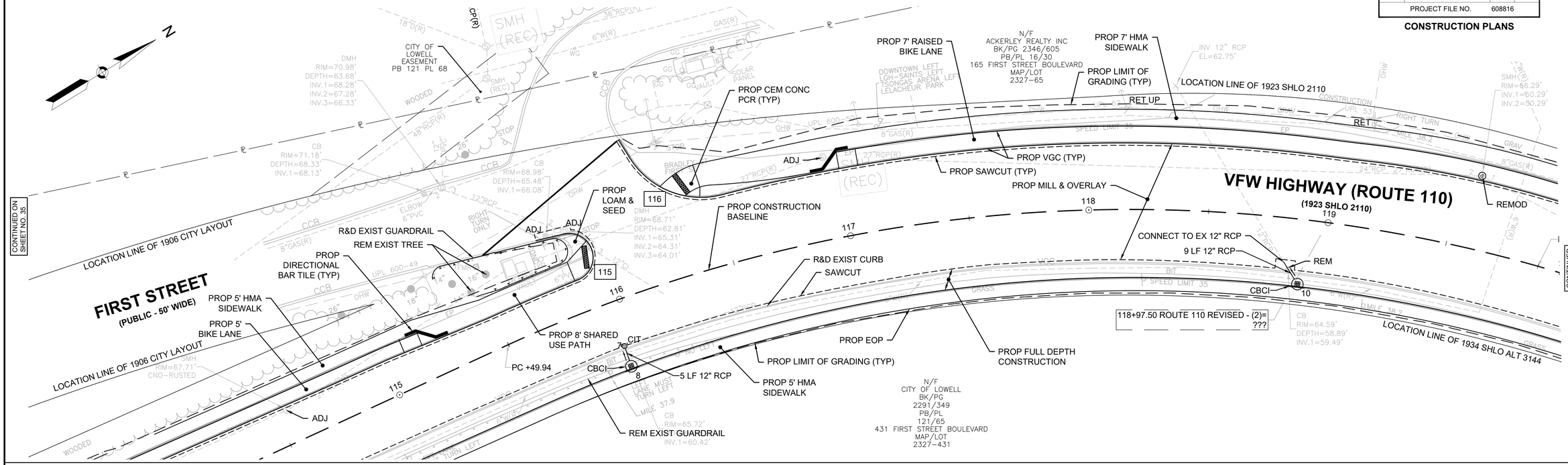
DRAINAGE DETAILS

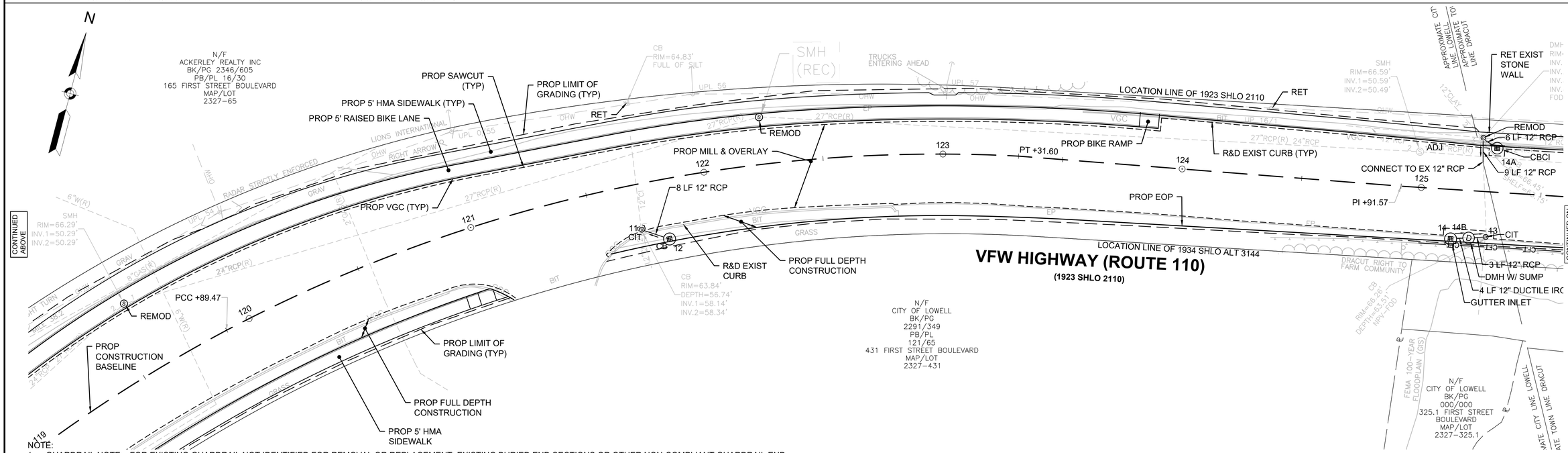
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	36	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





NOTE:

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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

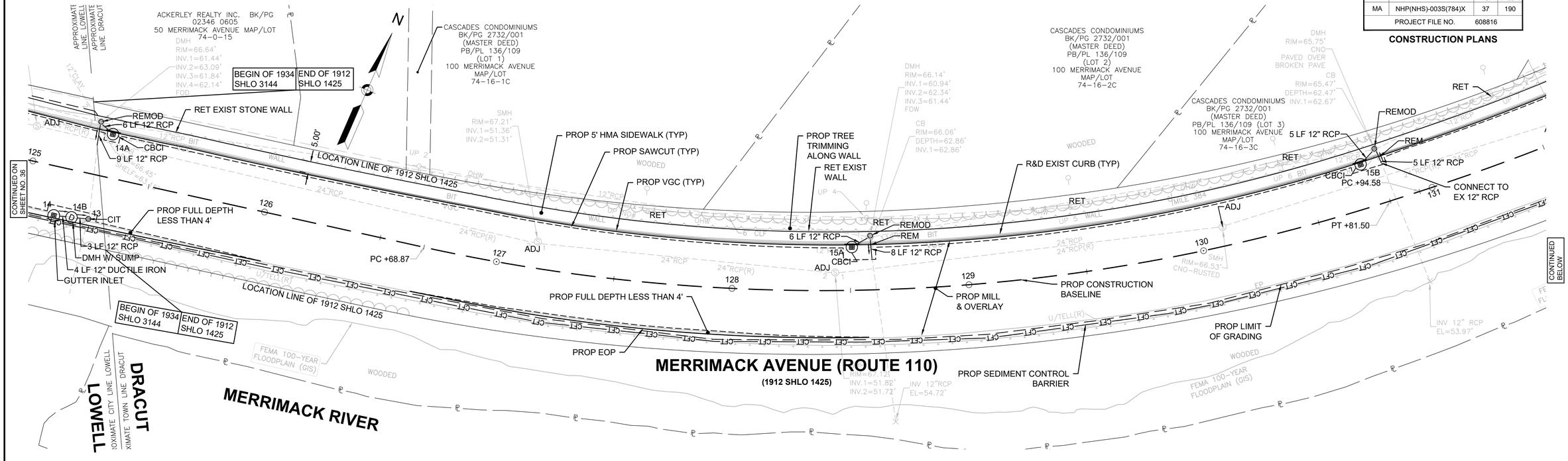
WATER SUPPLY ALTERATIONS
NONE

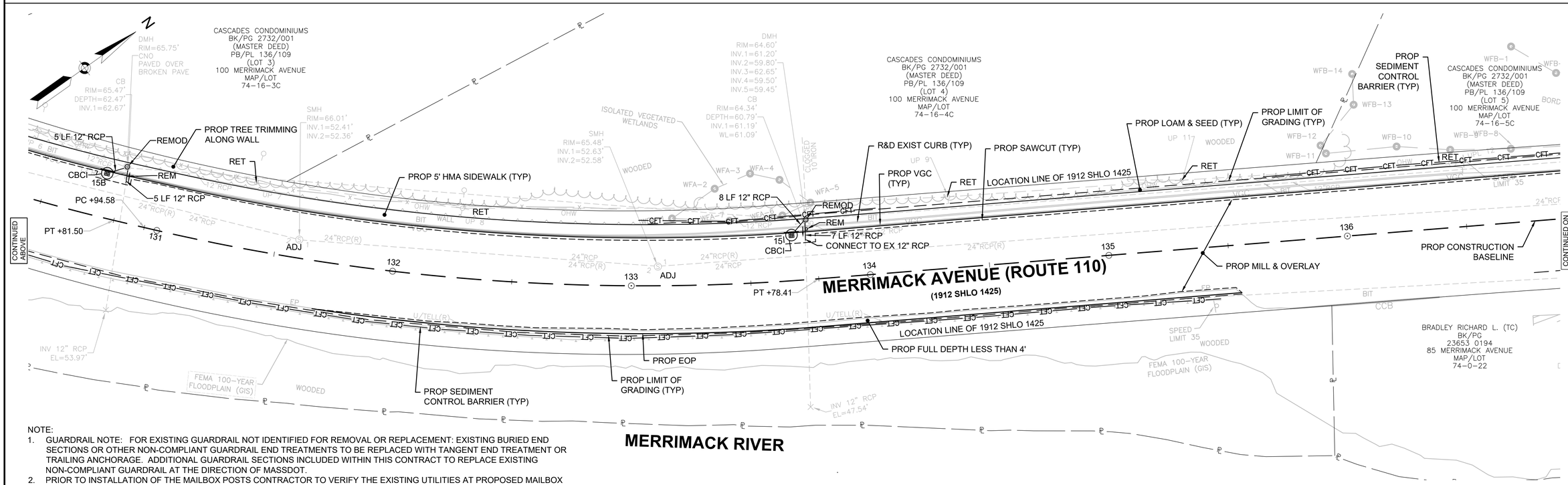
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	37	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





NOTE:
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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 141+34 TO 141+78 LT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 141+34 LT
GUARDRAIL TRAILING ANCHORAGE 141+78 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

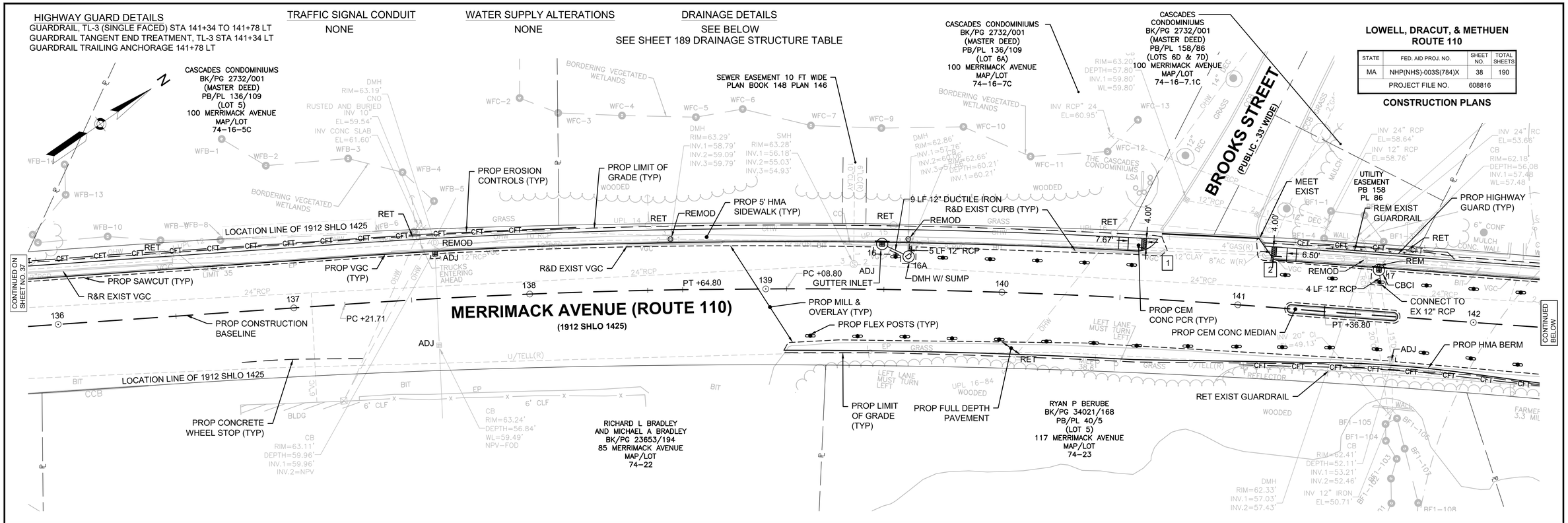
DRAINAGE DETAILS

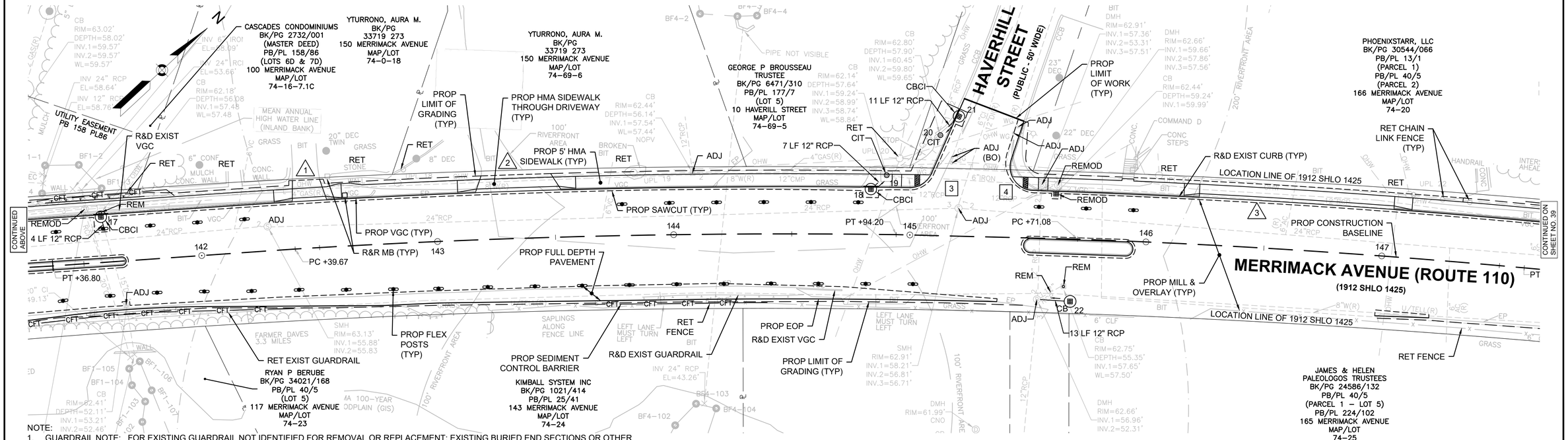
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	38	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	39	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS

PHOENIXSTARR, LLC
BK/PG 30544/066
PB/PL 13/1
(PARCEL 1)
PB/PL 40/5
(PARCEL 2)
166 MERRIMACK AVENUE
MAP/LOT
74–20

BENOIT BRIAN M. (TE)
BK/PG
12706 0225
23 ELSMERE TR
MAP/LOT
71–0–70

MORGAN WILLIAM A. (JT)
BK/PG
35104 294
33 ELSMERE TR
MAP/LOT 71–0–71

SALDARRIAGA JOSHUA
BK/PG
29788 0050
51 ELSMERE TR
MAP/LOT
71–0–72

PROP HMA SIDEWALK THROUGH DRIVEWAY (TYP)
PROP VGC (TYP)
PROP EROSION CONTROLS (TYP)
PROP 5' HMA SIDEWALK (TYP)
R&D EXIST CURB (TYP)
PROP LIMIT OF GRADING (TYP)
PERMANENT WETLAND IMPACT = 8 SF
PERMANENT WETLAND IMPACT = 165 SF
LOCATION LINE OF 1912 SHLO 1425
PROP SAWCUT (TYP)
PROP MILL & OVERLAY (TYP)
REMOD
PROP CONSTRUCTION BASELINE
PT +60.53
PC +80.90
GUTTER INLET
R&D CCB
PROP FULL DEPTH LESS THAN 4'
PROP SEDIMENT CONTROL BARRIER
PROP LIMIT OF GRADING (TYP)

MERRIMACK AVENUE (ROUTE 110)
(1912 SHLO 1425)

JAMES & HELEN PALEOLOGOS TRUSTEES
BK/PG 24586/132
PB/PL 40/5
(PARCEL 1 – LOT 5)
PB/PL 224/102
165 MERRIMACK AVENUE
MAP/LOT
74–25

CARPENTER SCOTT A., TRUSTEE
BK/PG
27503 0031
189 MERRIMACK AVENUE
MAP/LOT
74–0–27

A & S COMMERCIAL REALTY 2 LLC
BK/PG
29143 0201
197 MERRIMACK AVENUE
MAP/LOT
71–0–73

SALDARRIAGA JOSHUA
BK/PG
29788 0050
51 ELSMERE TR
MAP/LOT
71–0–72

SHEEHAN EDWARD V
BK/PG
01180 0535
51 ELSMERE TR
MAP/LOT
71–72–1

GAGNON DAVID M. (TE)
BK/PG
18386 0231
15 SALISBURY STREET
MAP/LOT
71–0–27

GRAHAM RICHARD M (JT)
BK/PG
06862 0128
244 MERRIMACK AVENUE
MAP/LOT
71–0–26

SHEEHAN JOSEPH A.
BK/PG
01102 0101
248 MERRIMACK AVENUE
MAP/LOT
71–0–25

SHEEHAN JOSEPH A JR (TE)
BK/PG
02202 0685
258 MERRIMACK AVENUE
MAP/LOT
71–0–24

R&D EXIST CURB (TYP)
PROP EROSION CONTROL (TYP)
PROP LIMIT OF GRADING (TYP)
PROP 5' HMA SIDEWALK (TYP)
PROP VGC (TYP)
3 LF 12" DUCTILE IRON
REM
GUTTER INLET
PROP SAWCUT (TYP)
PROP MILL & OVERLAY (TYP)
REMOD
PROP CONSTRUCTION BASELINE
PROP FULL DEPTH LESS THAN 4'
RET EXIST GUARDRAIL
PROP EOP
PROP LIMIT OF GRADING (TYP)
LOCATION LINE OF 1912 SHLO 1425

MERRIMACK AVENUE (ROUTE 110)
(1912 SHLO 1425)

A & S COMMERCIAL REALTY 2 LLC
BK/PG
29143 0201
197 MERRIMACK AVENUE
MAP/LOT
71–0–73

TOWN OF DRACUT
BK/PG
17695 0203
241 MERRIMACK AVENUE
MAP/LOT
71–0–74

SHEEHAN JOSEPH
BK/PG
2202 0685
257 MERRIMACK AVENUE
MAP/LOT
71–0–75

MERRIMACK RIVER

NOTE:
1. GUARDRAIL NOTE: FOR EXISTING GUARDRAIL NOT IDENTIFIED FOR REMOVAL OR REPLACEMENT: EXISTING BURIED END SECTIONS OR OTHER NON-COMPLIANT GUARDRAIL END TREATMENTS TO BE REPLACED WITH TANGENT END TREATMENT OR TRAILING ANCHORAGE. ADDITIONAL GUARDRAIL SECTIONS INCLUDED WITHIN THIS CONTRACT TO REPLACE EXISTING NON-COMPLIANT GUARDRAIL AT THE DIRECTION OF MASSDOT.
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SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:27 PM

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HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) 163+00 TO 164+00 LT, 166+74 TO 170+22 RT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 163+00 LT AND 166+74 RT
GUARDRAIL TRAILING ANCHORAGE STA 164+00 LT AND 170+22 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

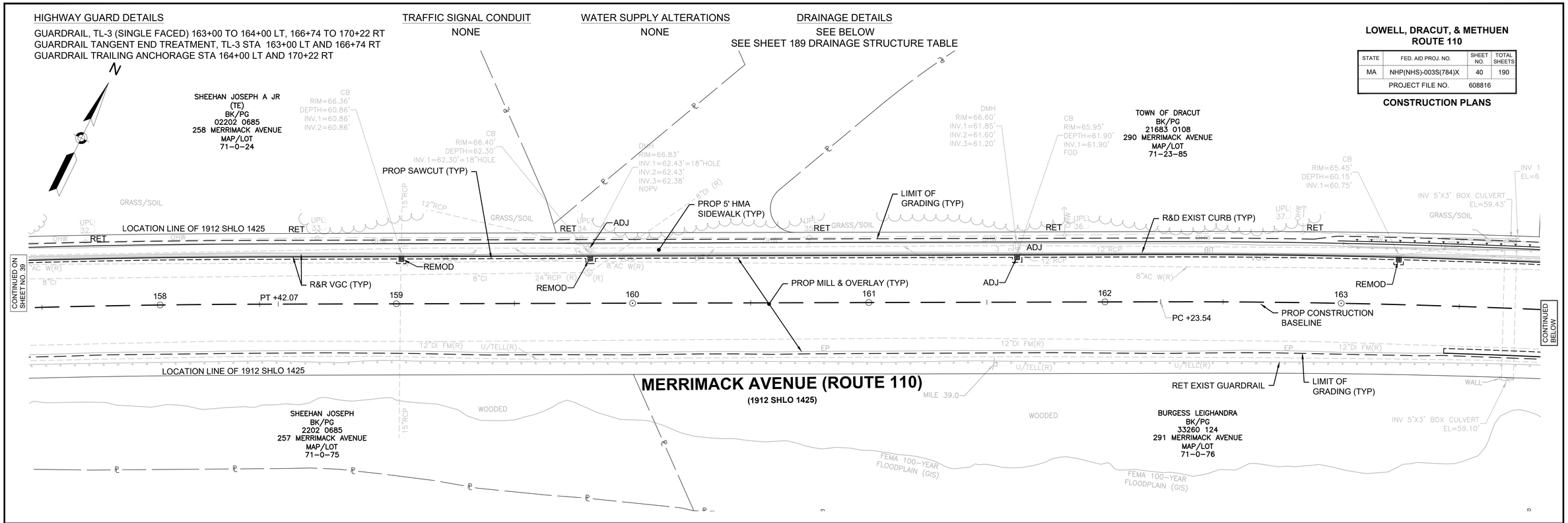
DRAINAGE DETAILS

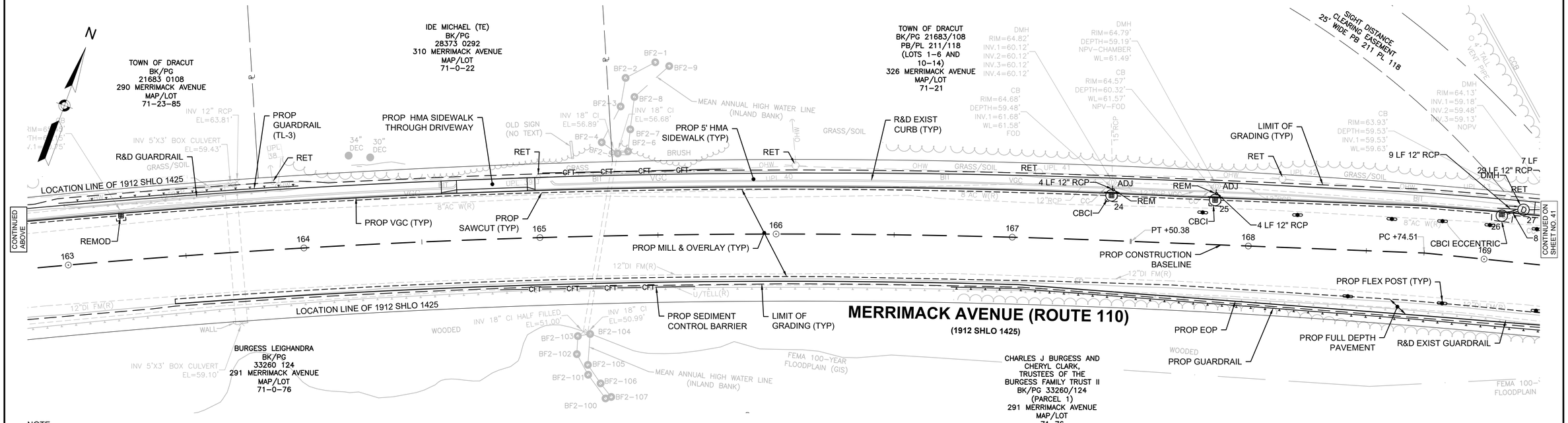
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	40	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS





NOTE:
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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:27 PM

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Last Saved by: MWGGIN
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 166+74 TO 170+25
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 166+74 RT
GUARDRAIL TRAILING ANCHORAGE STA 170+25 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

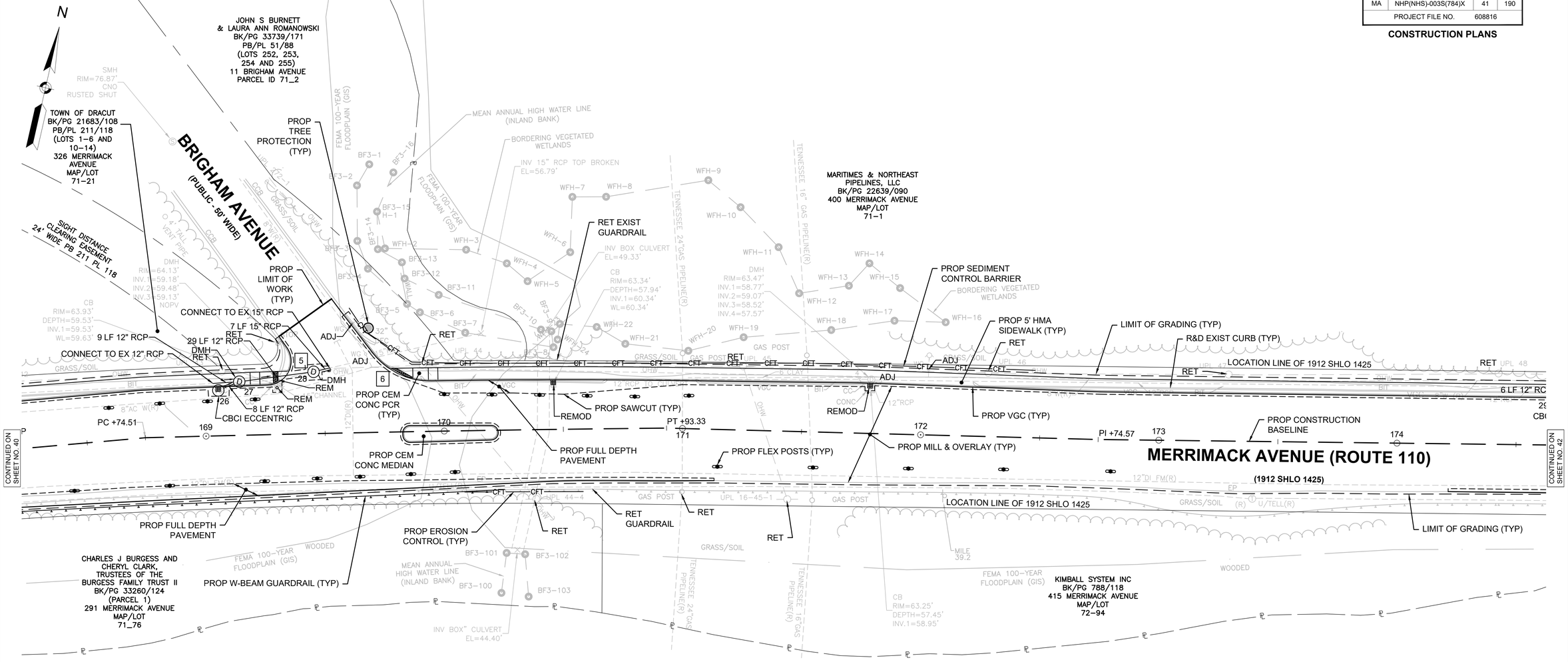
DRAINAGE DETAILS

SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	41	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS



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SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:27 PM
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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

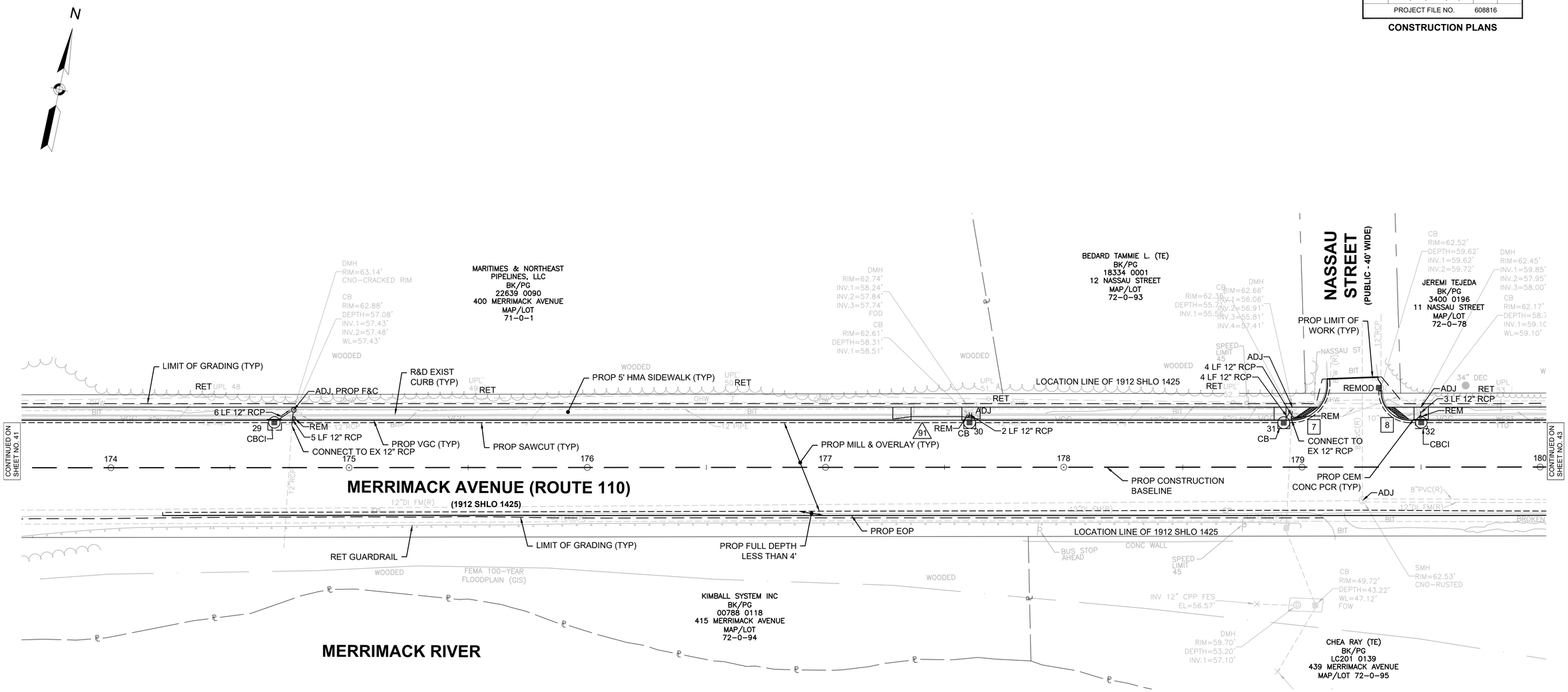
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	42	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

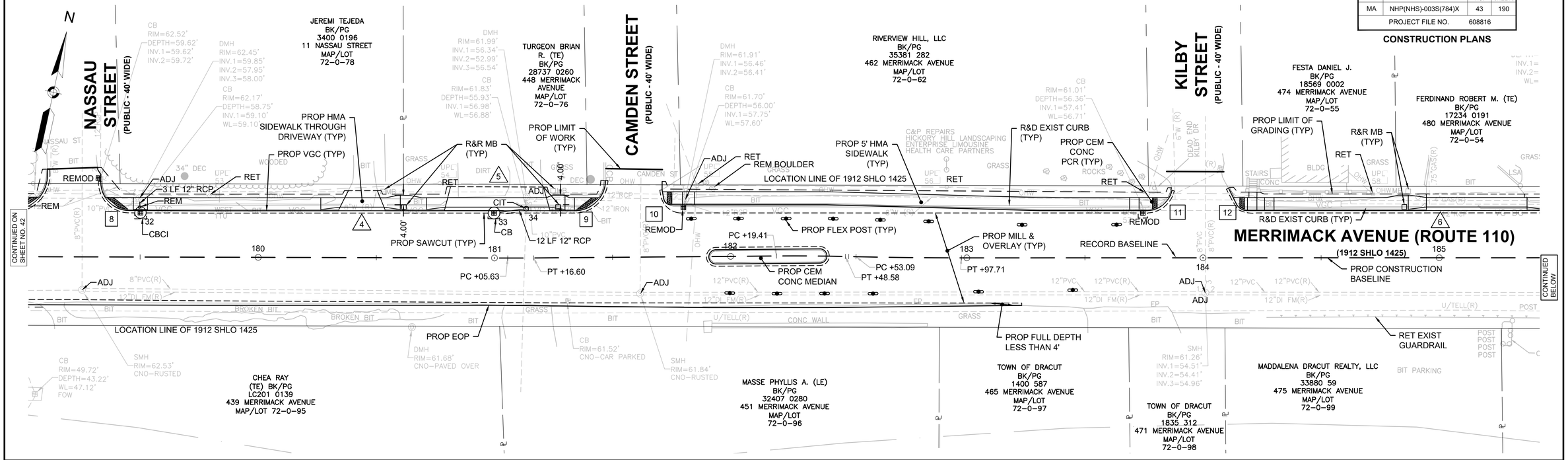
SEE BELOW

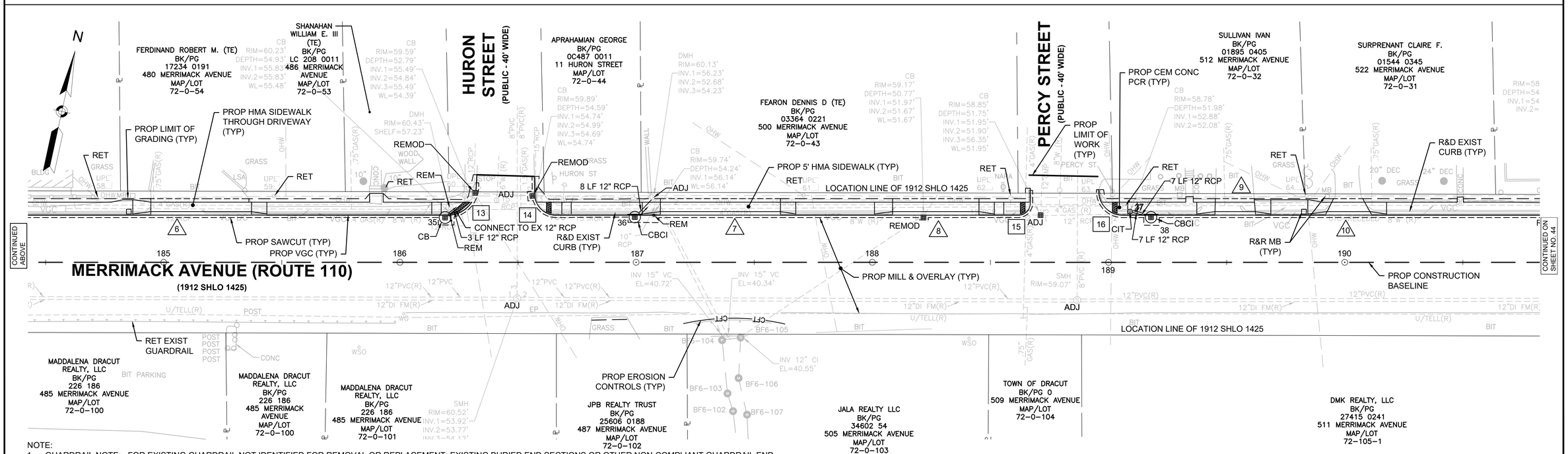
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	43	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:28 PM

9/9/2024 I:\2105\2105\2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HD(CONST-A).dwg
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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

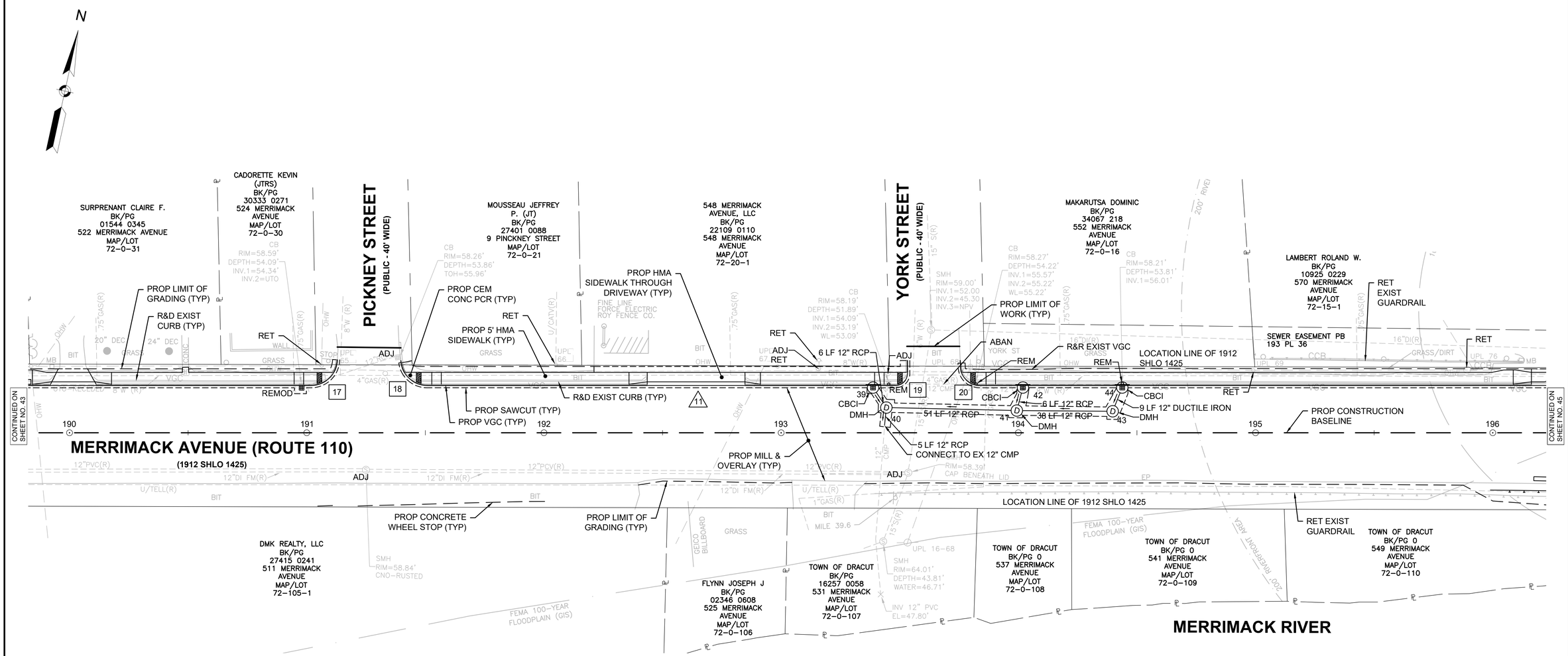
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	44	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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Last Saved by: MWIGGIN
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED)
STA 196+00 TO 199+25 RT
GUARDRAIL END TREATMENT, TL-3
STA 196+00 RT
GUARDRAIL TRAILING ANCHORAGE
STA 199+25 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	45	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS

N

LAMBERT ROLAND W.
BK/PG
10925 0229
570 MERRIMACK AVENUE
MAP/LOT
72-15-1

SPRUCE BUILDING ASSOCIATES
BK/PG
03276 0344
590 MERRIMACK AVENUE
MAP/LOT
72-0-14

HEAVENLY INVESTMENTS V, LLC
BK/PG 28445/219
PB/PL 113/80
592 MERRIMACK AVENUE
MAP/LOT
72-13

TROUT BROOK

100' RIVERFRONT AREA
FEMA 100-YEAR FLOODPLAIN (GIS)
MEAN ANNUAL HIGH WATER LINE (INLAND BANK)
WEIR INV=46.2'
TOP OF WEIR INV=47.1'
BOT. OF WEIR INV=40.5'
INV BOX CULVERT EL=38.70'
200' RIVERFRONT AREA
U/ELEC(R)
U/CATV(R)

RET EXIST GUARDRAIL
PROP SEDIMENT CONTROL BARRIER
LIMIT OF GRADING (TYP)
SEWER EASEMENT PB 193 PL 36
R&D EXIST CURB (TYP)
PROP LOAM & SEED (TYP)
LOCATION LINE OF 1912 SHLO 1425
PROP HMA SIDEWALK THROUGH DRIVEWAY (TYP)
20' WIDE EASEMENT PB/PL 113/80
R&D CEM CONC PCR
R&D BIT CONC; PROP LOAM & SEED
PROP VGC (TYP)
PROP SAWCUT (TYP)
PROP 5' HMA SIDEWALK (TYP)
PC +79.53
PROP MILL & OVERLAY (TYP)
17 LF 12" RCP
PROP CONSTRUCTION BASELINE
LEFT LANE MUST TURN LEFT

MERRIMACK AVENUE (ROUTE 110)
(1912 SHLO 1425)

PROP FULL DEPTH PAVEMENT
PROP FLOOD STORAGE COMPENSATION AREA, SEE TYPICALS
R&D EXIST GUARDRAIL (TYP)
PROP EOP
LIMIT OF GRADING (TYP)
PROP W-BEAM GUARDRAIL (TYP)
TOWN OF DRACUT
BK/PG 0
549 MERRIMACK AVENUE
MAP/LOT
72-0-110
PROP FLOOD STORAGE COMPENSATION AREA, SEE TYPICALS
BRIDGE NO. D-11-004
INV CENTER BOX CHANNEL 2'WIDE EL=40.11'
BORDERING VEGETATED WETLANDS
WETLAND FLAGS WBF 100 - 105 UNDERWATER
TOWN OF DRACUT
BK/PG 0
675 MERRIMACK AVENUE
MAP/LOT
73-0-63

MERRIMACK RIVER

CONTINUED ON SHEET NO. 44
CONTINUED ON SHEET NO. 46

NOTE:
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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:28 PM

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Last Saved by: MWIGGIN
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 204+84 TO 206+08 RT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 204+50 RT
GUARDRAIL TRAILING ANCHORAGE 206+08 RT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

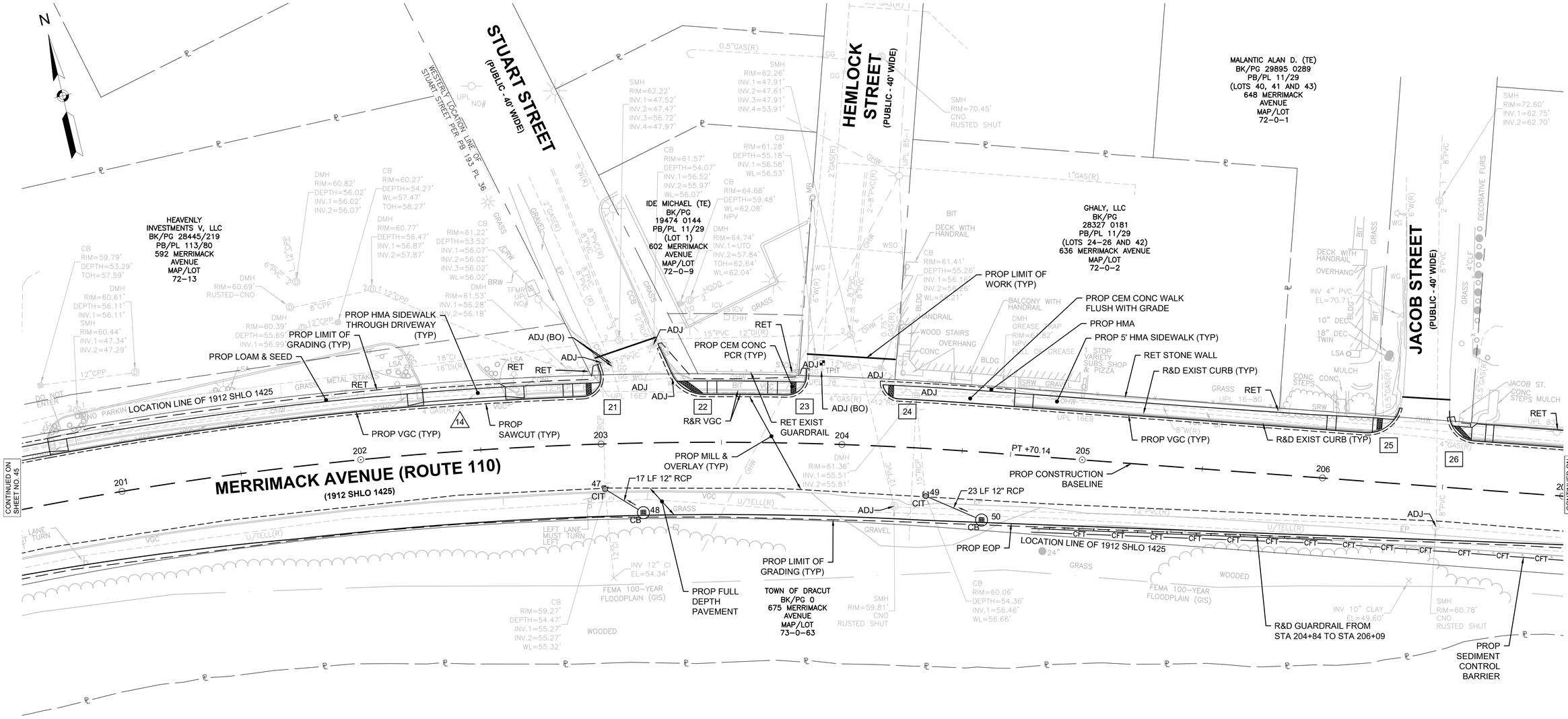
DRAINAGE DETAILS

SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	46	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



MERRIMACK RIVER

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Last Saved by: MWIGGIN
Printed by: Maighan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

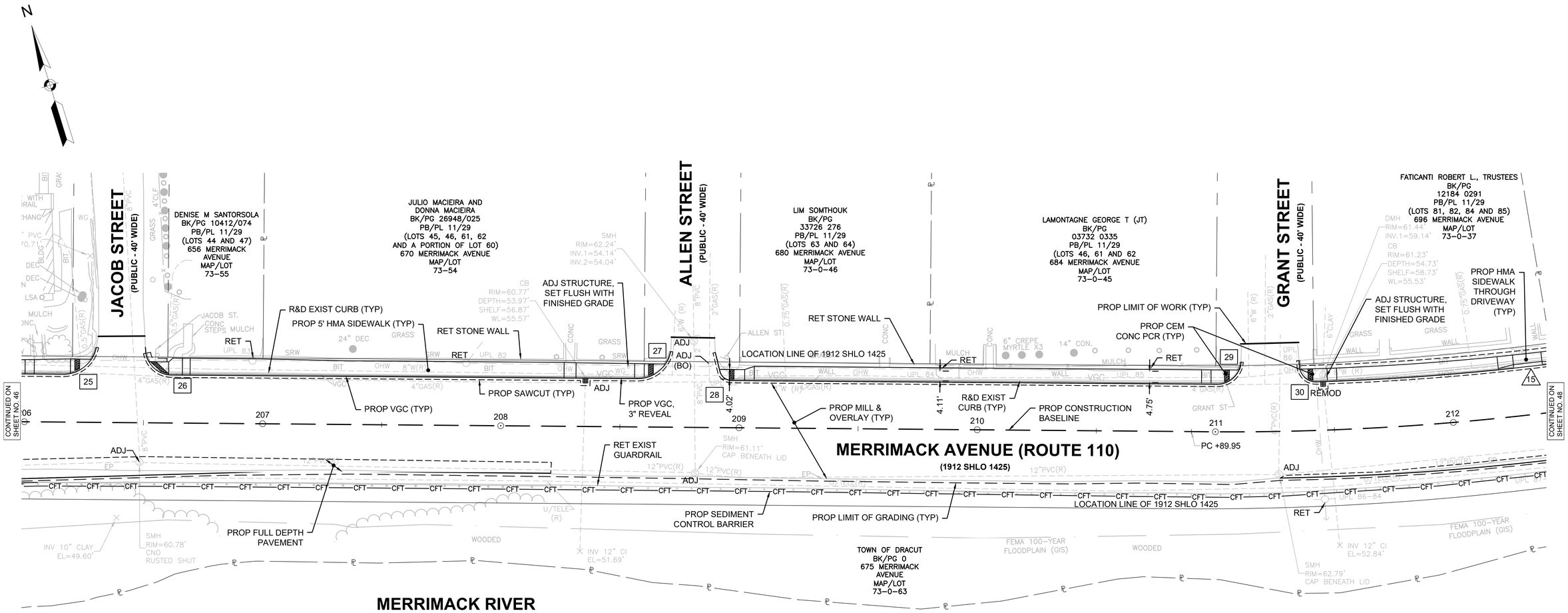
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	47	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

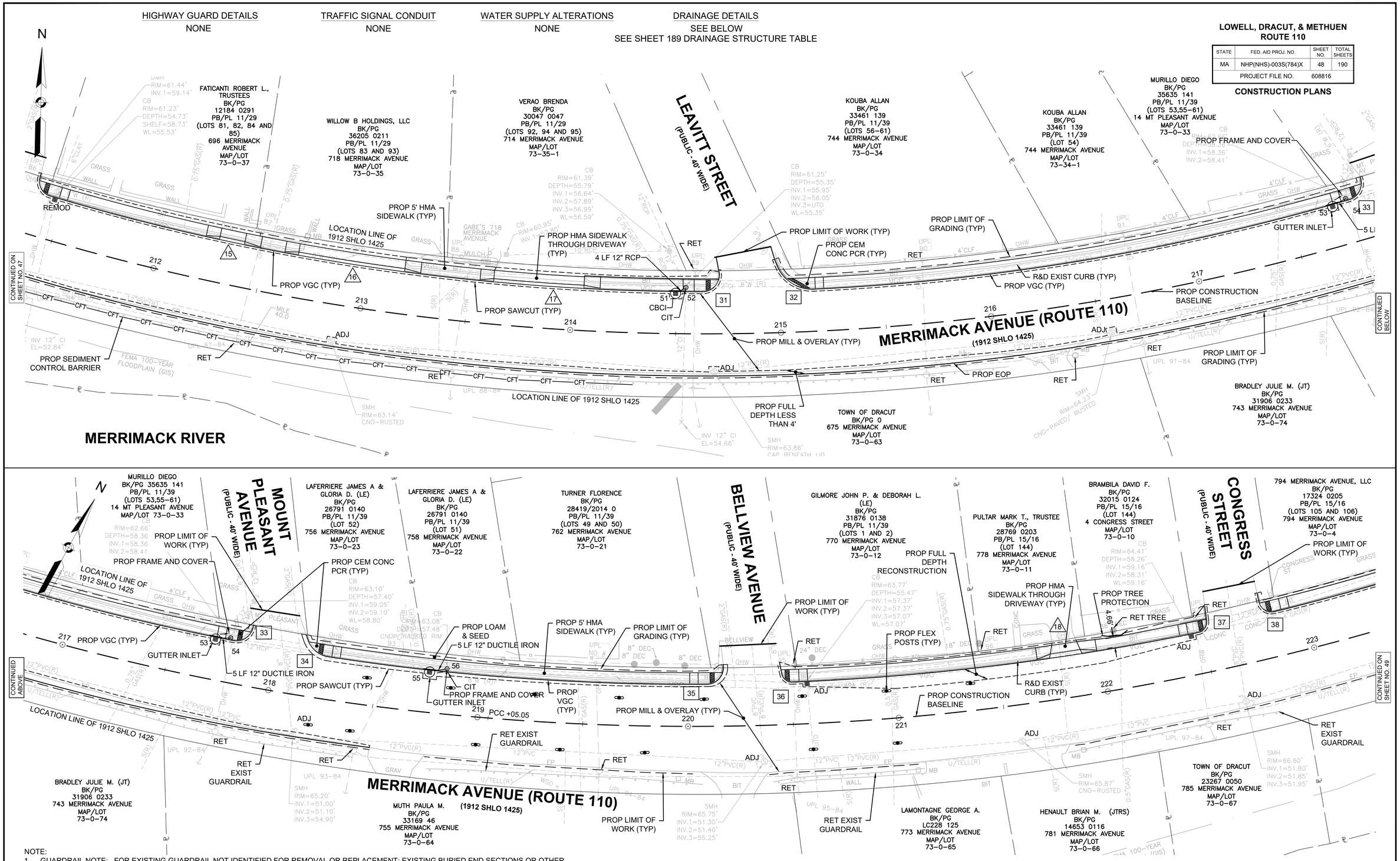
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	48	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-A).DWG Plotted on 9-Sep-2024 4:29 PM

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Last Saved by: MWIGGIN
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 227+69 TO 228+78 RT AND STA 233+20 TO 240+72 LT, STA 227+69 TO 228+78 RT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 233+20 LT AND 227+69 RT
GUARDRAIL TRAILING ANCHORAGE STA 228+78 RT AND 240+72 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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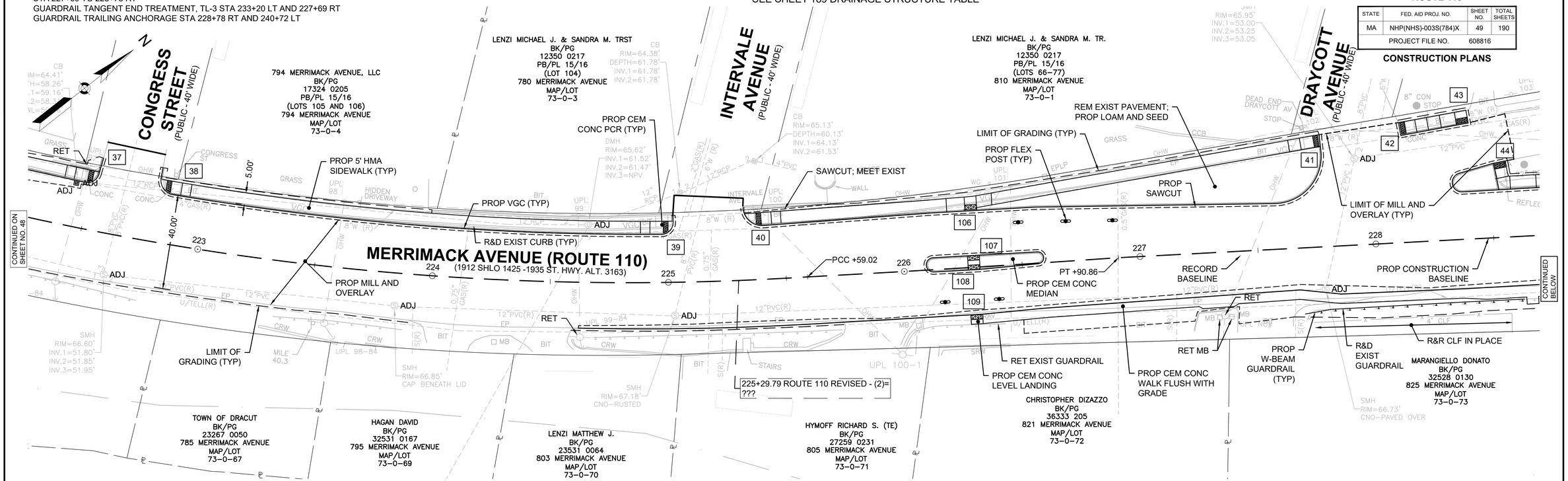
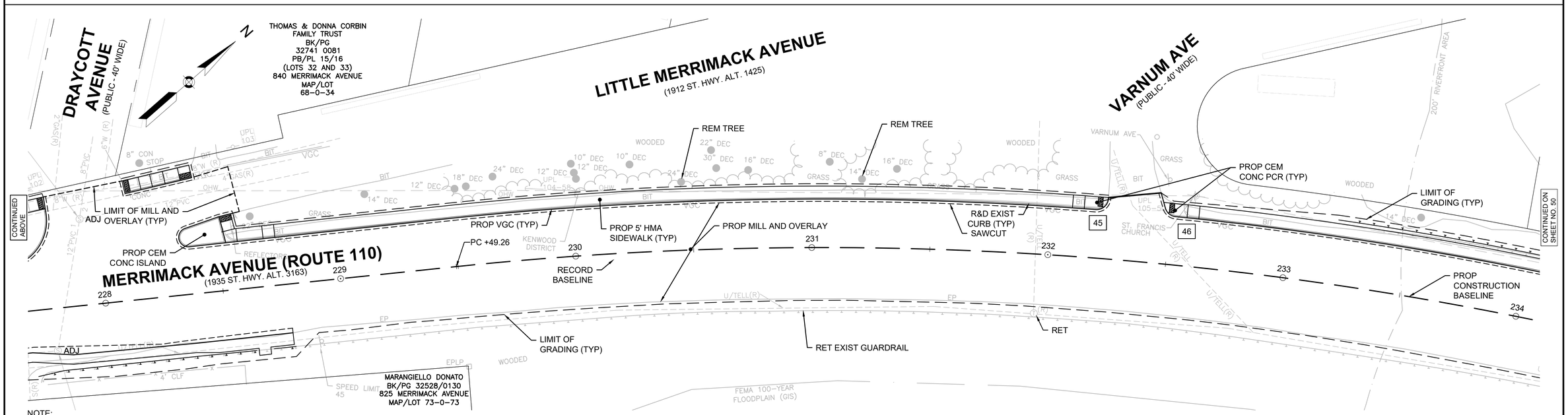
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS





NOTE:
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4. LITTLE MERRIMACK AVE (SHLO) TO BE OVERLAID WITH 2" SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5 - P)

0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-B).DWG Plotted on 9-Sep-2024 4:31 PM

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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 233+20 TO 240+72 LT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 233+20 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

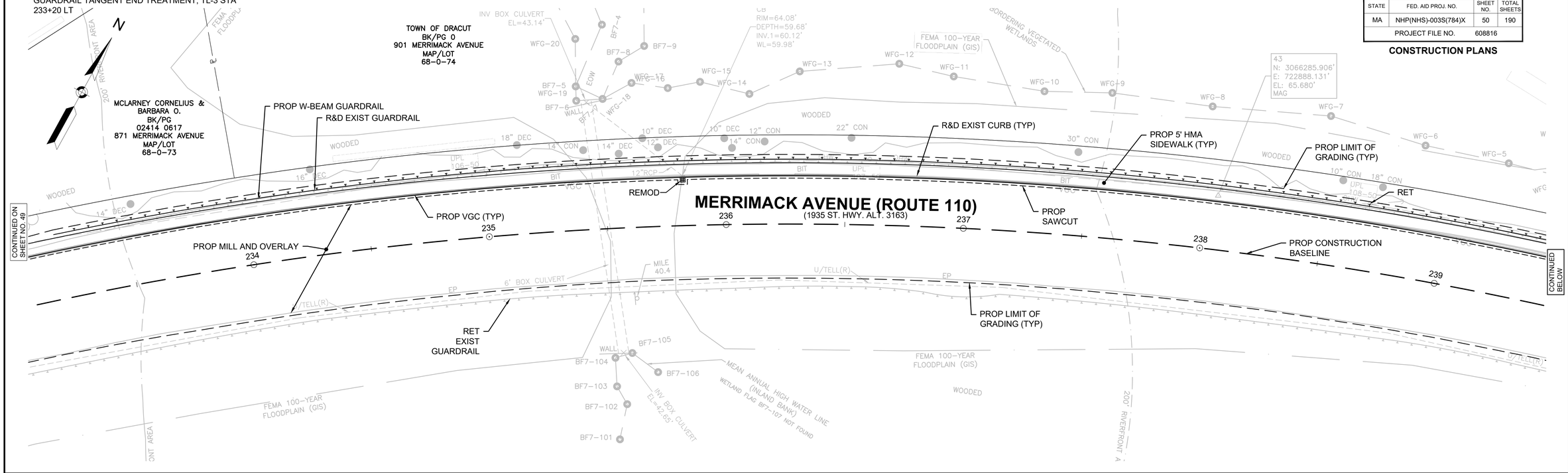
DRAINAGE DETAILS

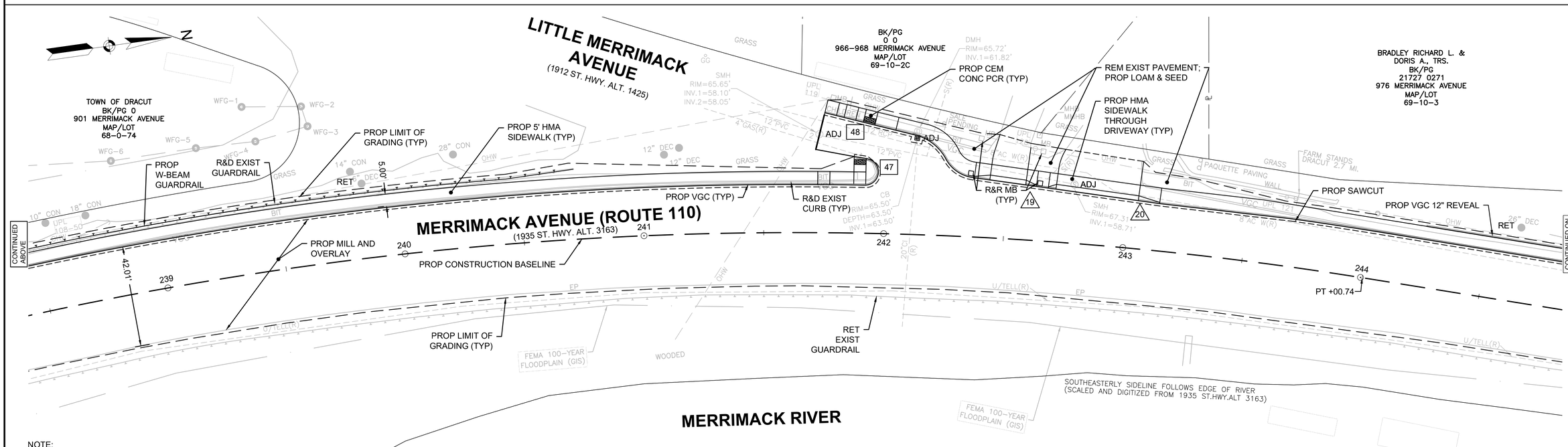
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	50	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-B).DWG Plotted on 9-Sep-2024 4:31 PM

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

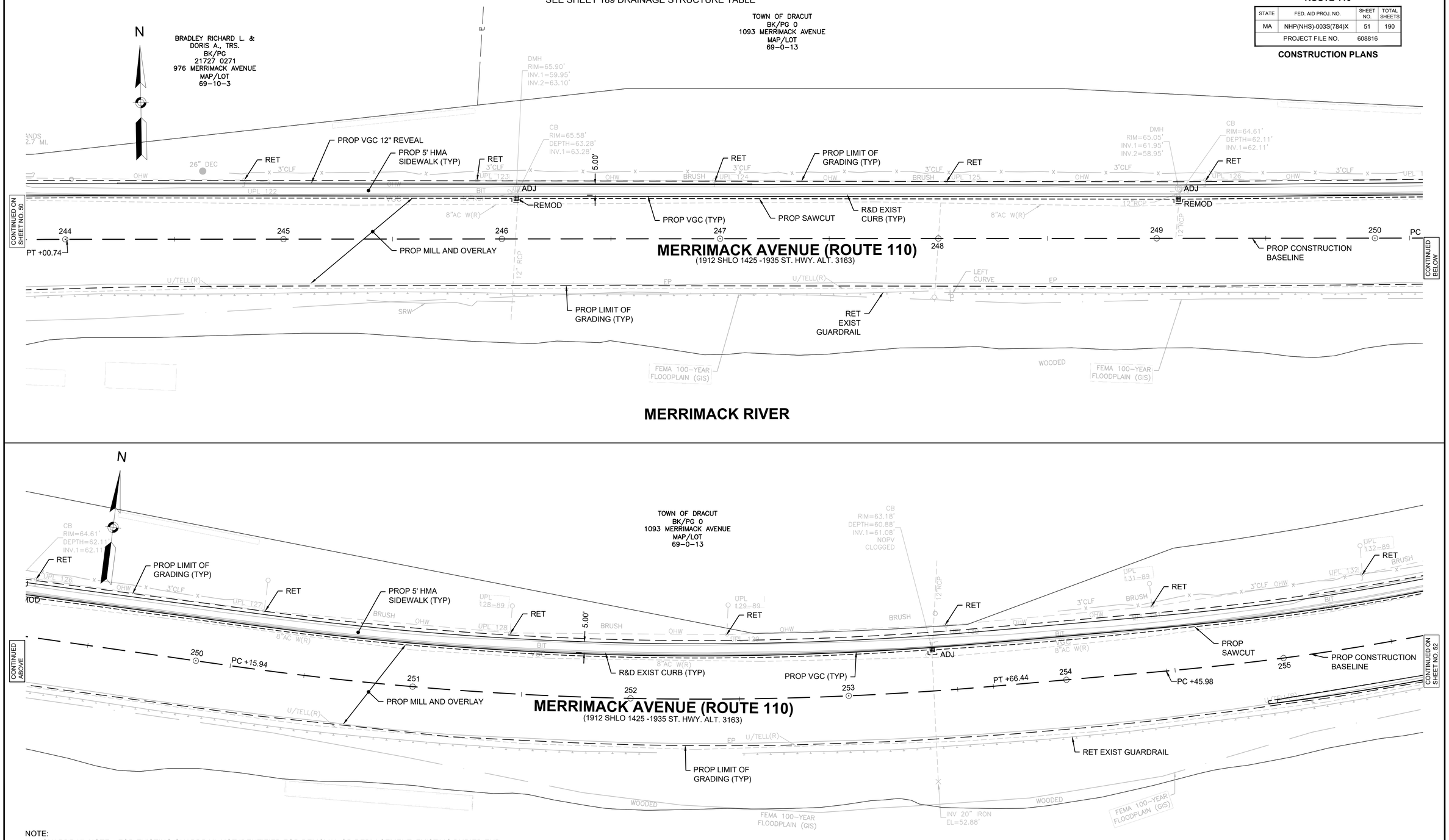
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	51	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-B).DWG Plotted on 9-Sep-2024 4:31 PM

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

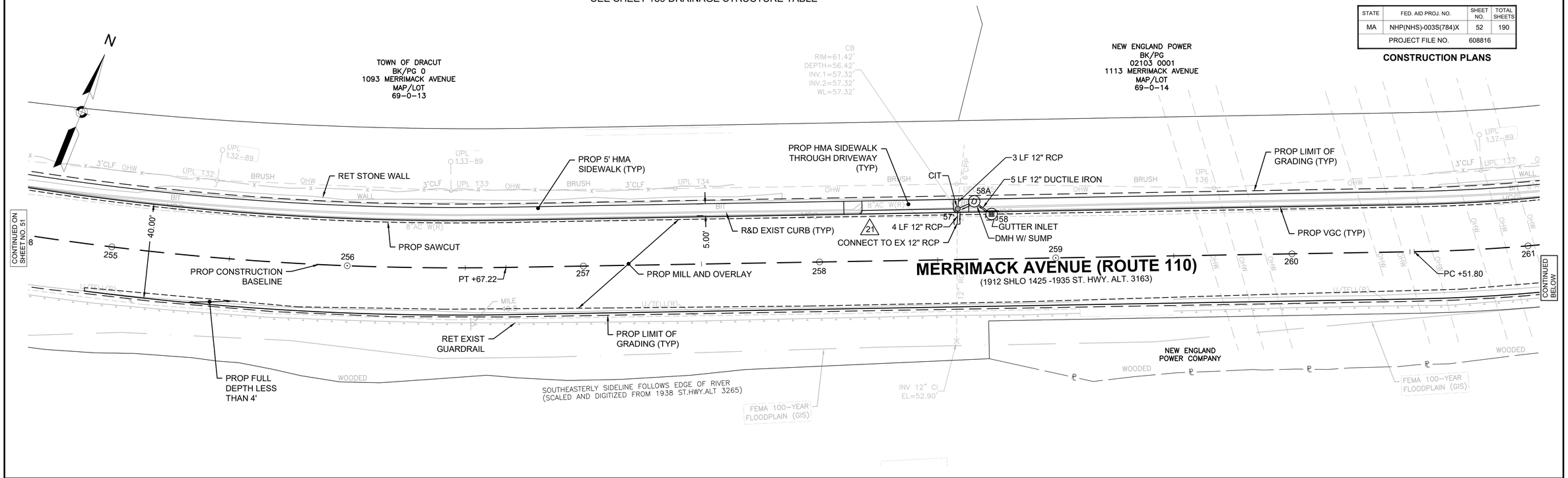
WATER SUPPLY ALTERATIONS
NONE

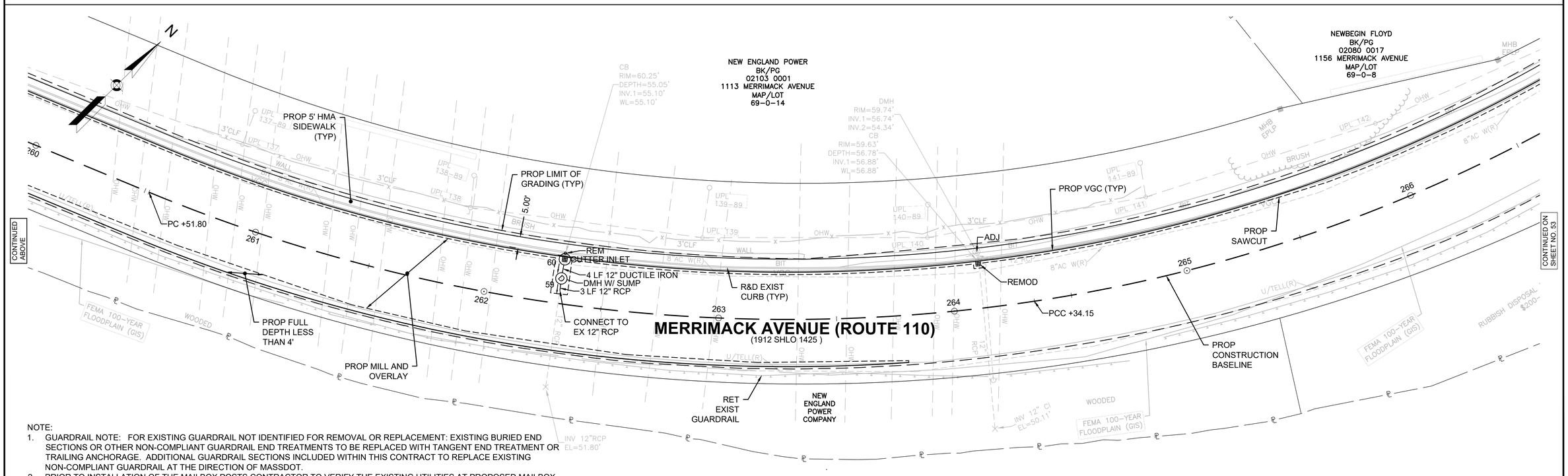
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	52	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

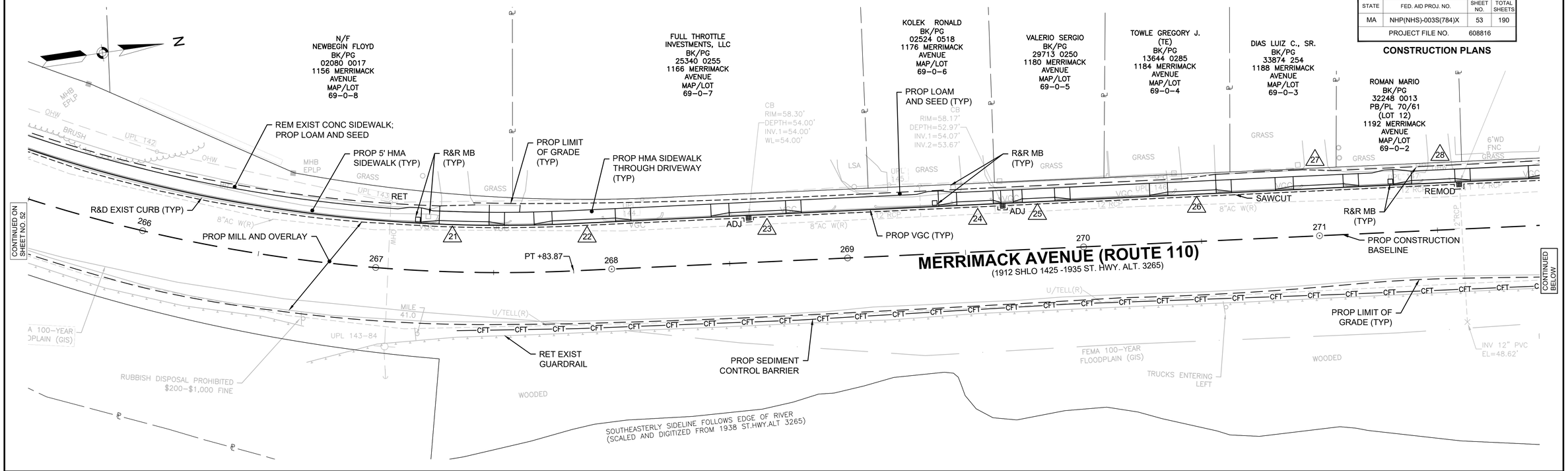
WATER SUPPLY ALTERATIONS
NONE

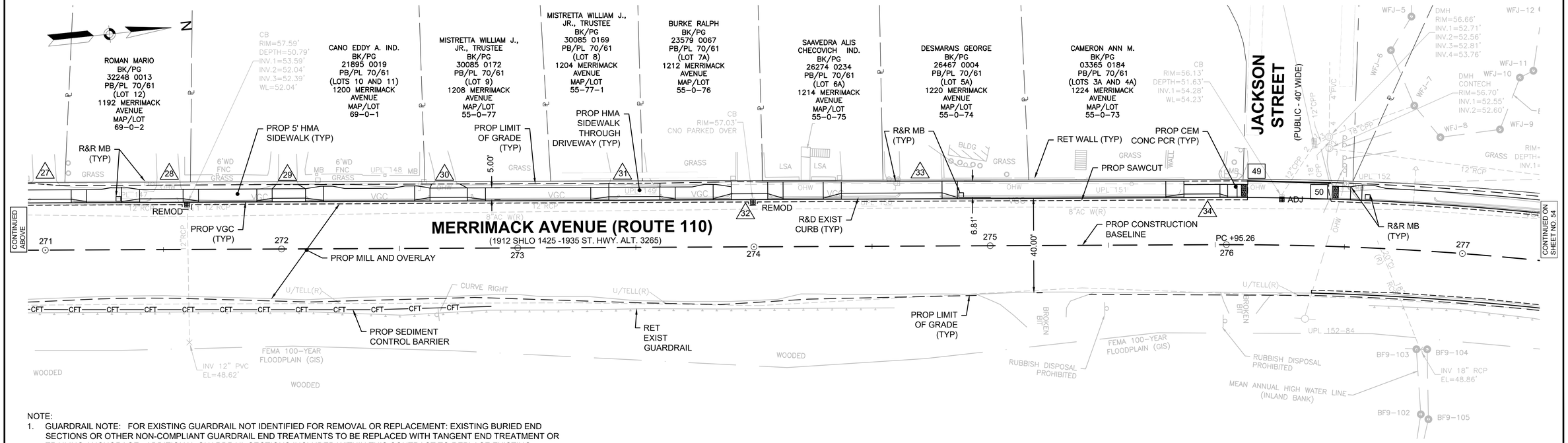
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	53	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS





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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

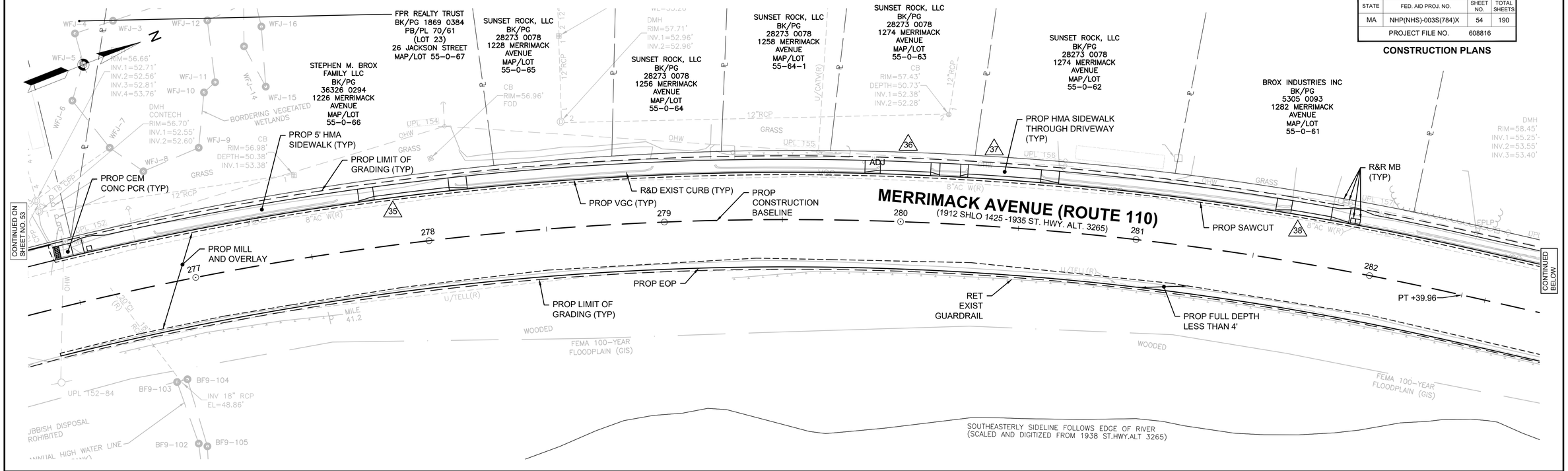
WATER SUPPLY ALTERATIONS
NONE

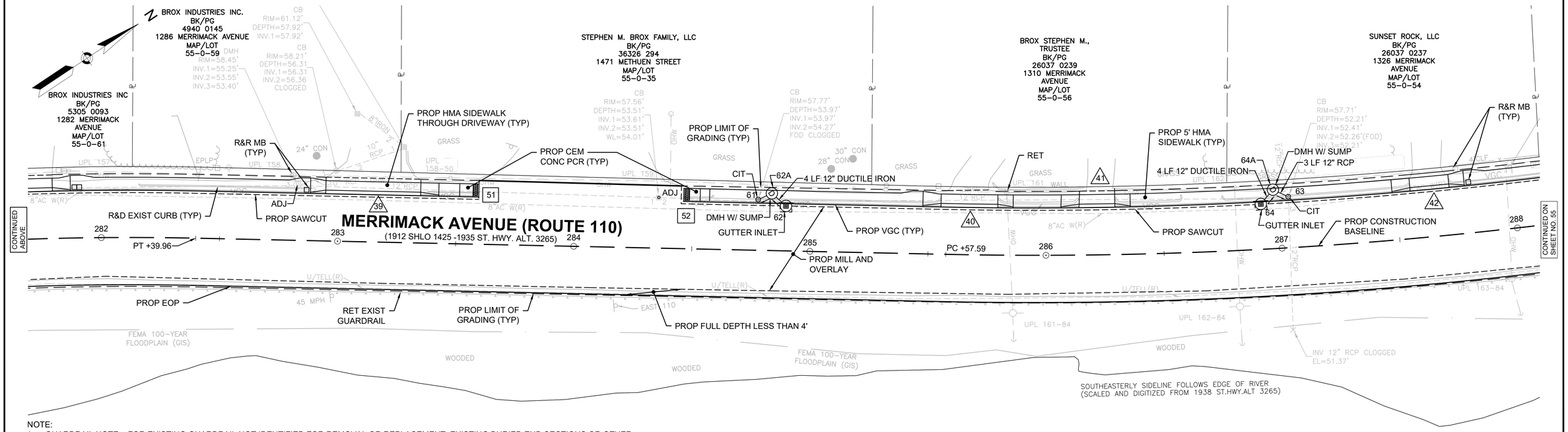
DRAINAGE DETAILS
BELOW

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	54	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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Last Saved by: BMYERS
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HIGHWAY GUARD DETAILS

GUARDRAIL, TL-3 (SINGLE FACED) STA 294+50 TO 295+41 LT AND STA 295+78 TO 297+28 LT
GUARDRAIL TANGENT END TREATMENT, TL-3 STA 294+50 LT AND 295+78 RT
GUARDRAIL TRAILING ANCHORAGE STA 295+41 RT AND 297+28 LT

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

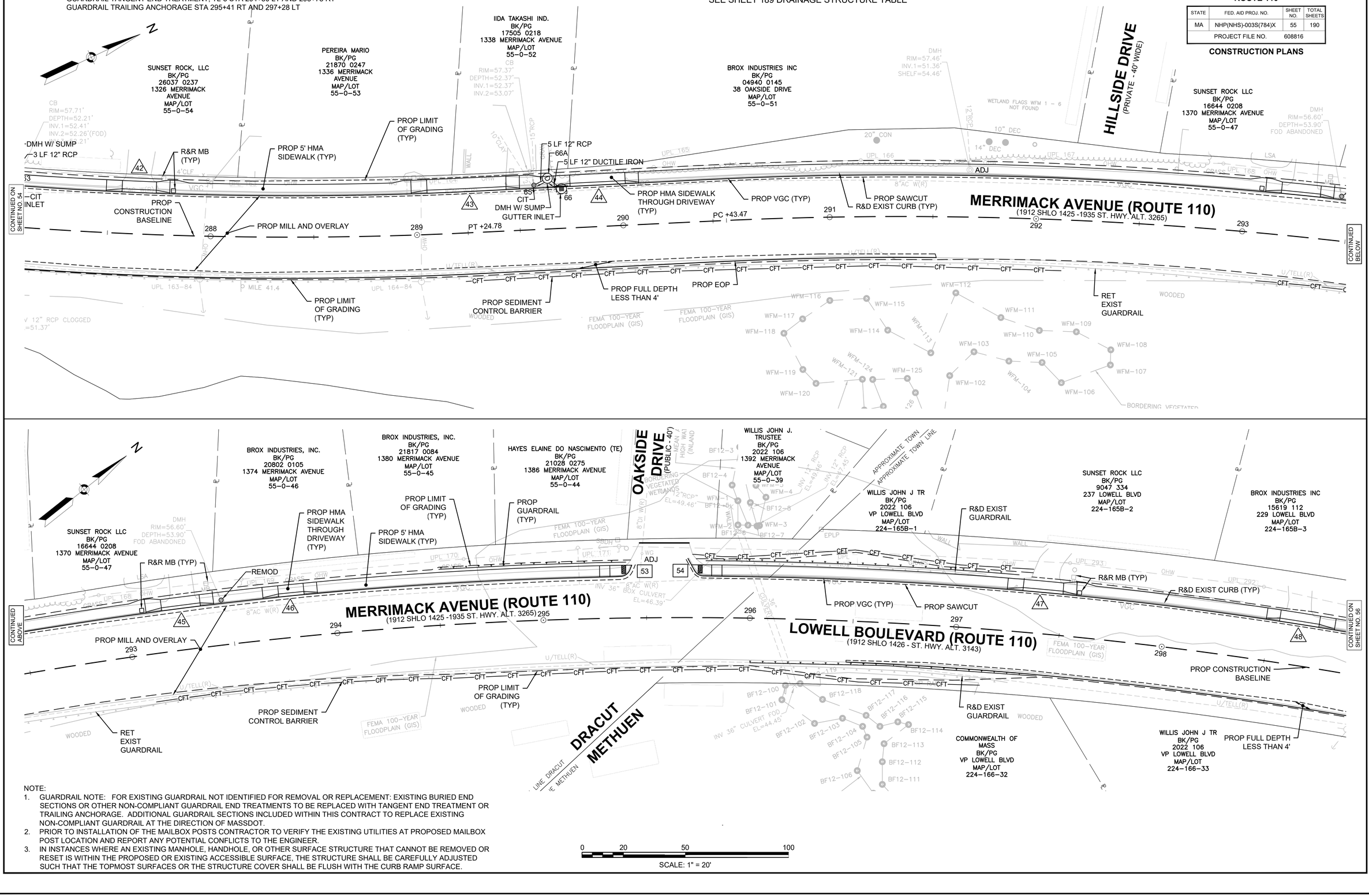
DRAINAGE DETAILS

SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	55	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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SCALE: 1" = 20'

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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

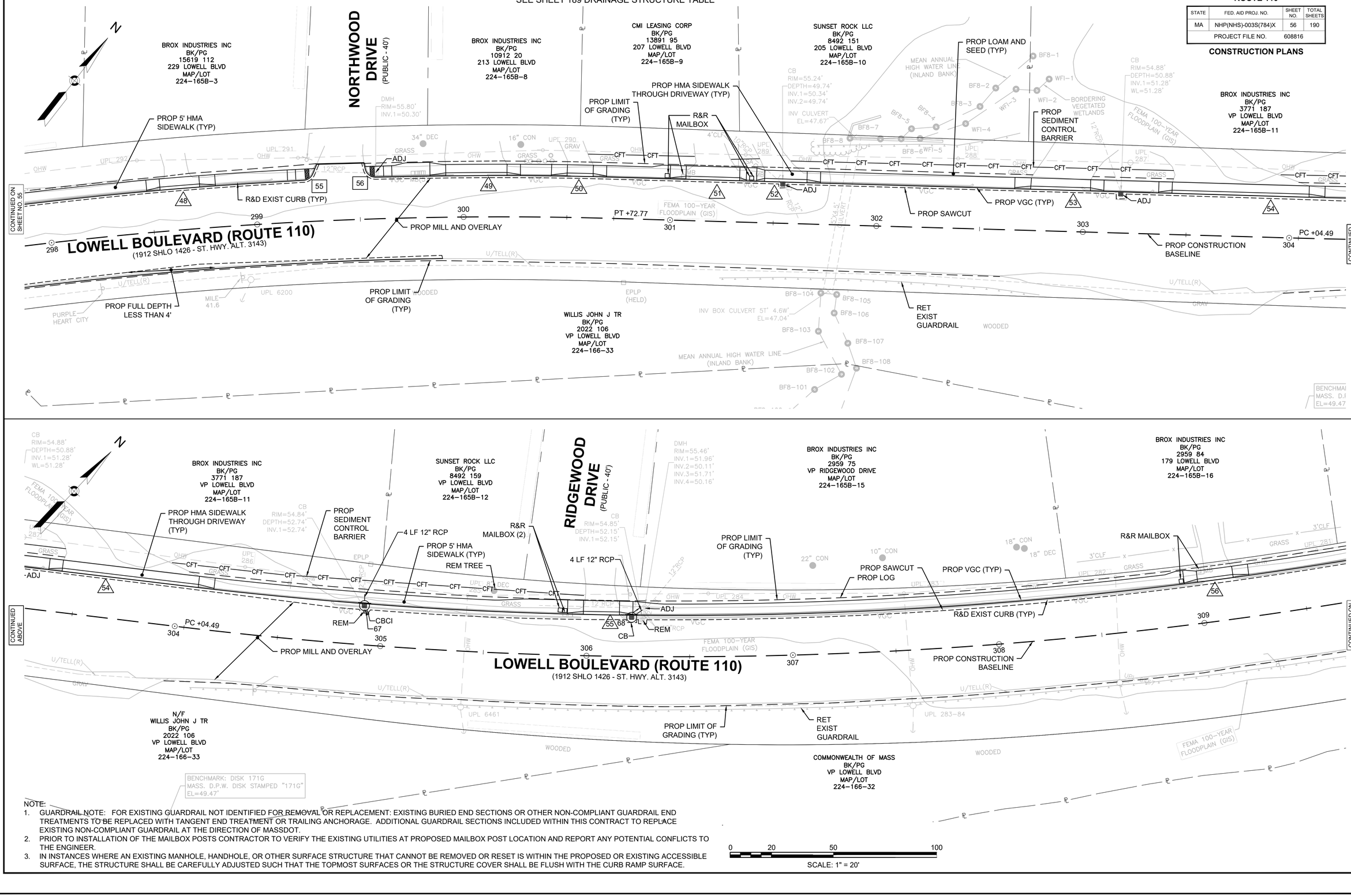
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	56	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

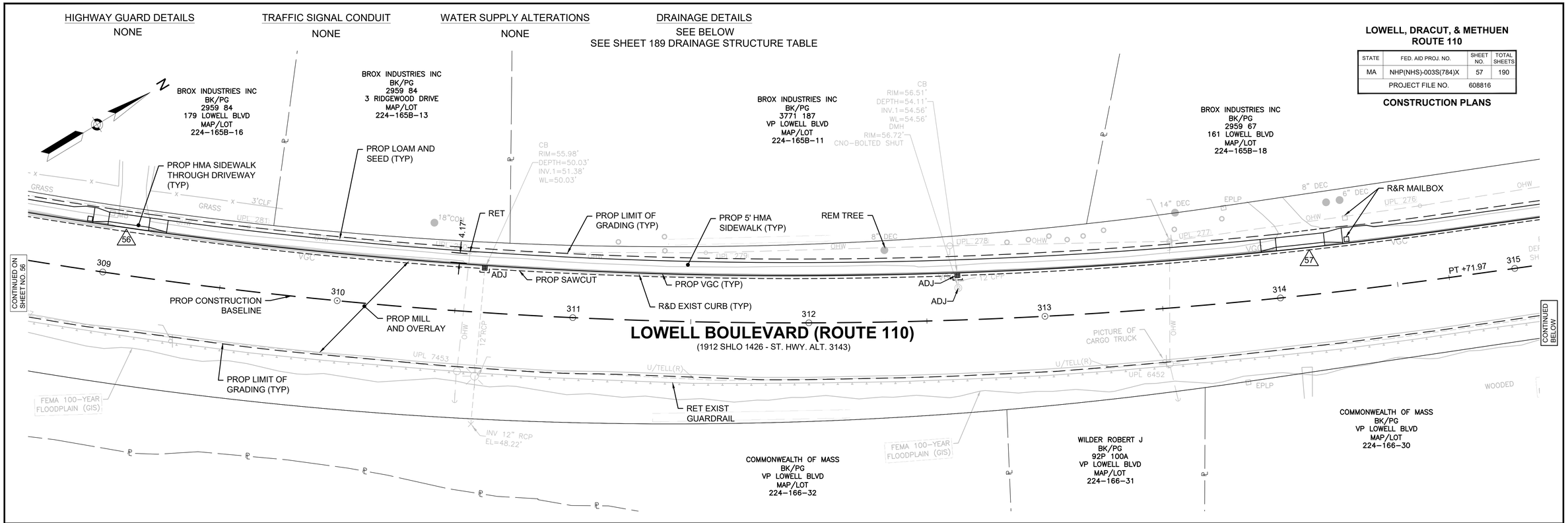
WATER SUPPLY ALTERATIONS
NONE

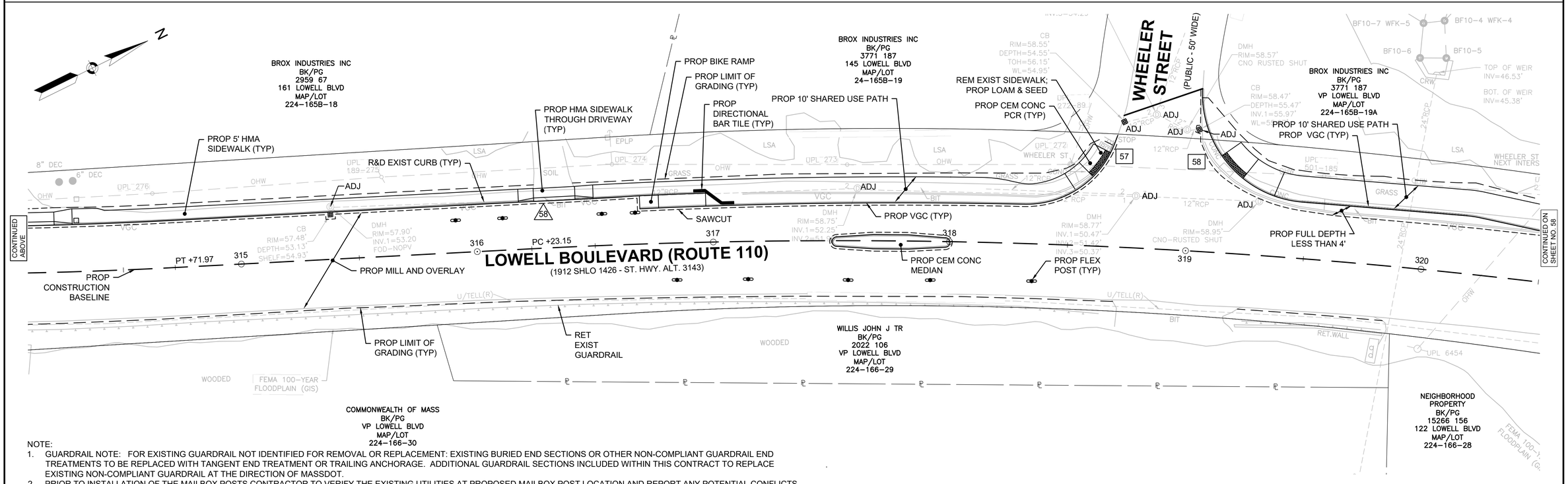
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	57	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





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SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

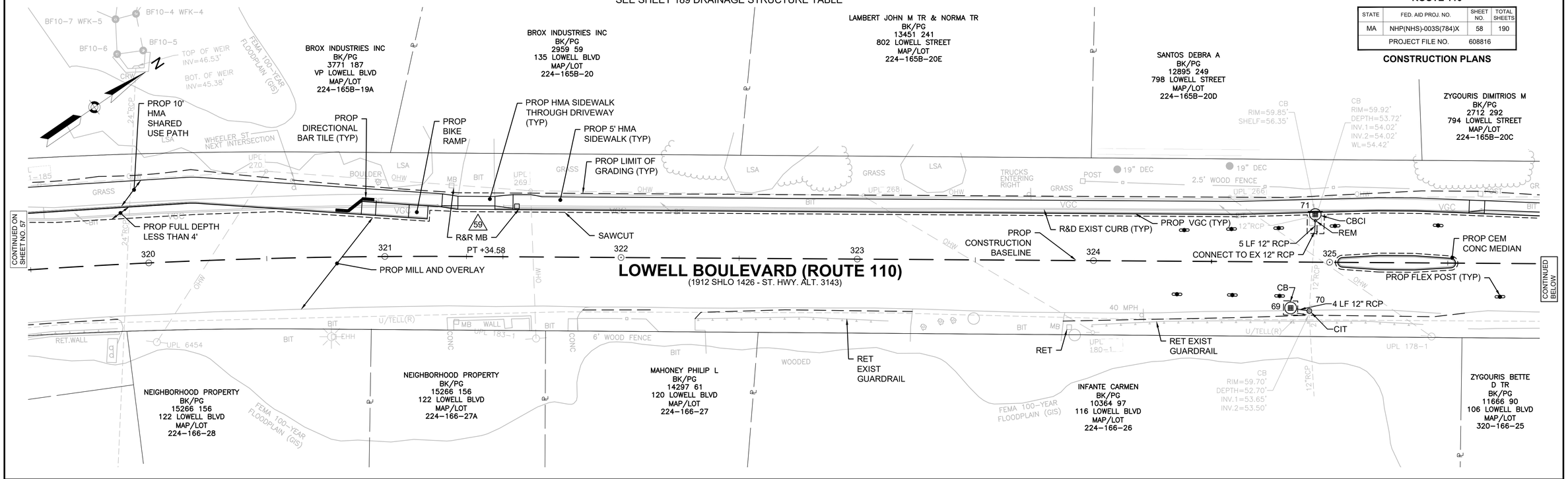
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	58	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

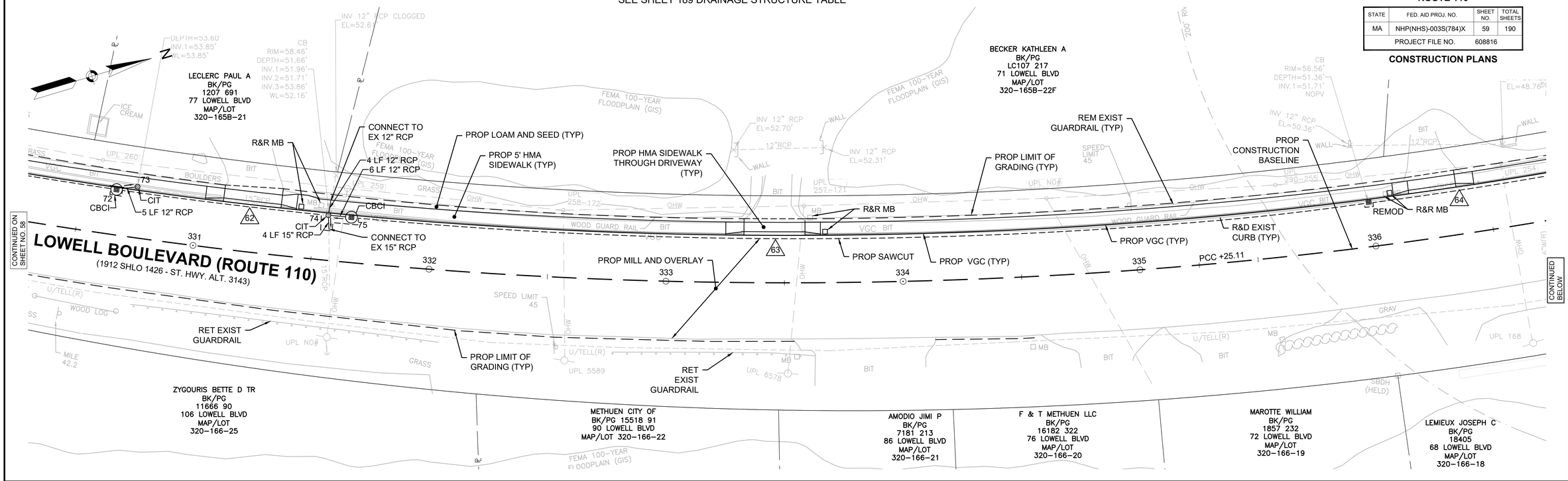
WATER SUPPLY ALTERATIONS
NONE

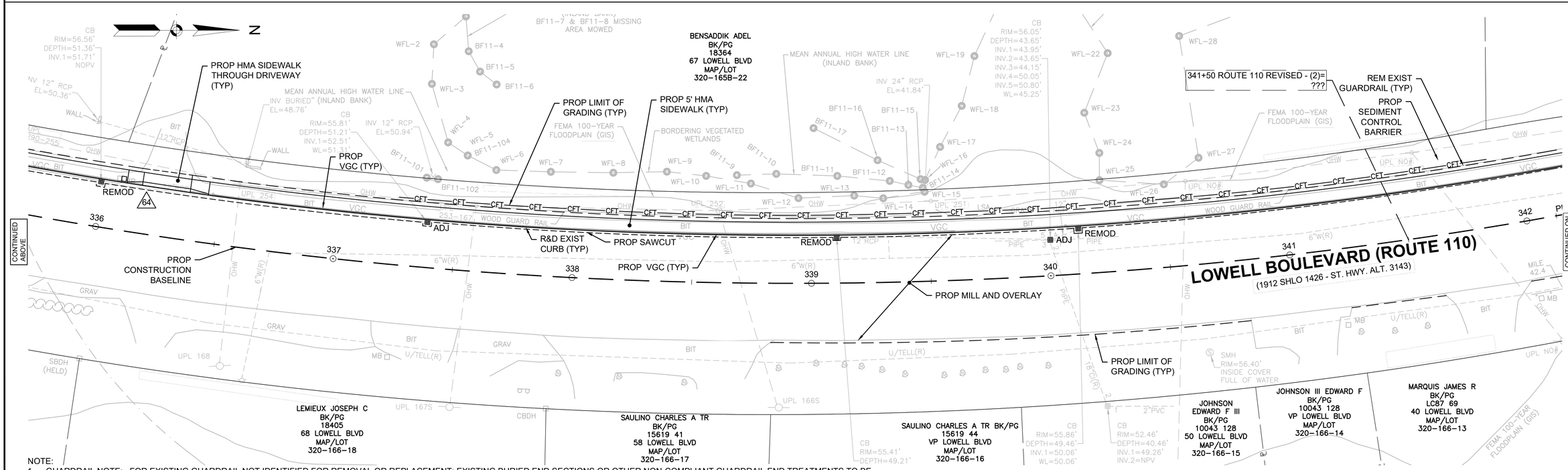
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	59	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS





NOTE:
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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-B).DWG Plotted on 9-Sep-2024 4:34 PM

9/9/2024 I:\2105\2105S.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HD(CONST-B).dwg
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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

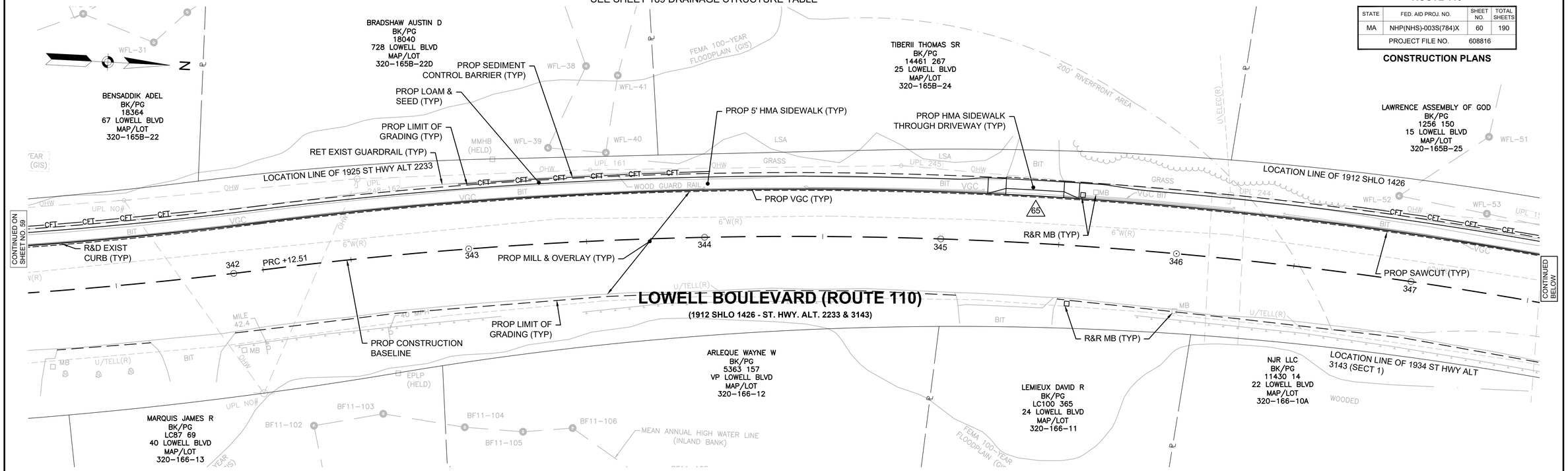
WATER SUPPLY ALTERATIONS
NONE

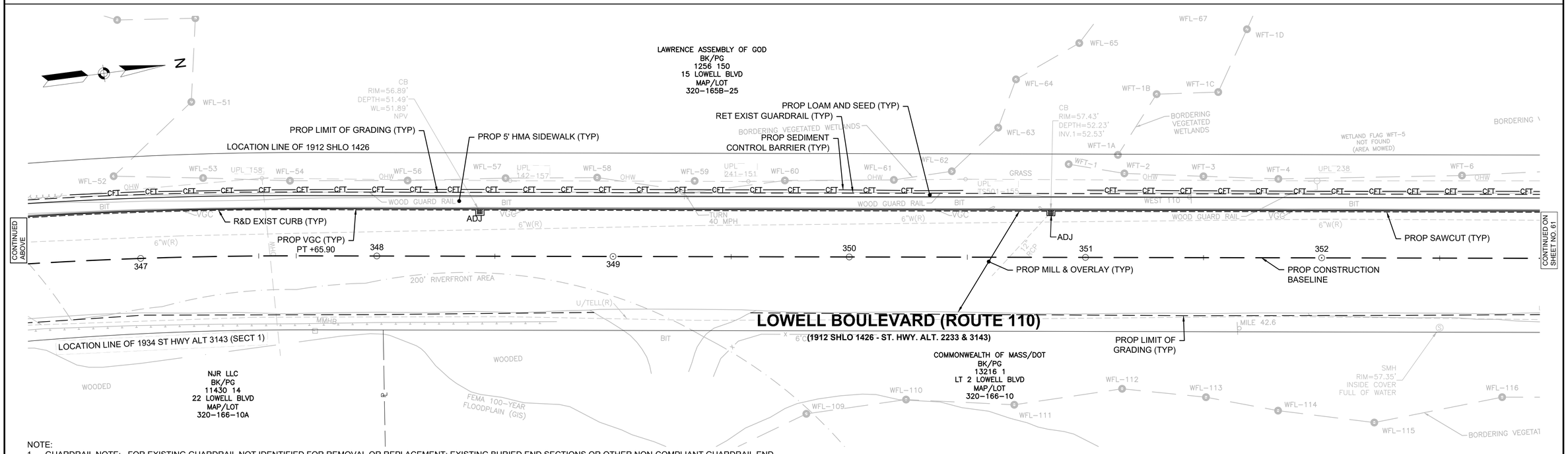
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	60	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS





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0 20 50 100
SCALE: 1" = 20'

608816_HDI(CONST-C).DWG Plotted on 9-Sep-2024 4:36 PM

9/9/2024 I:\2105\2105\2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HDI(CONST-C).dwg
Last Saved by: JDEWIRE
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

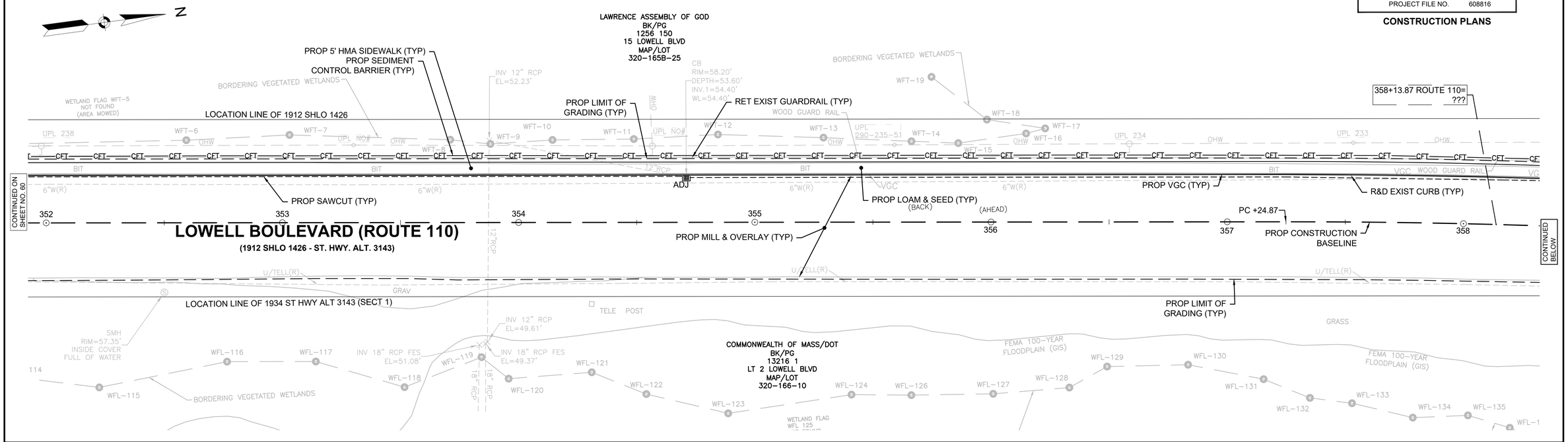
WATER SUPPLY ALTERATIONS
NONE

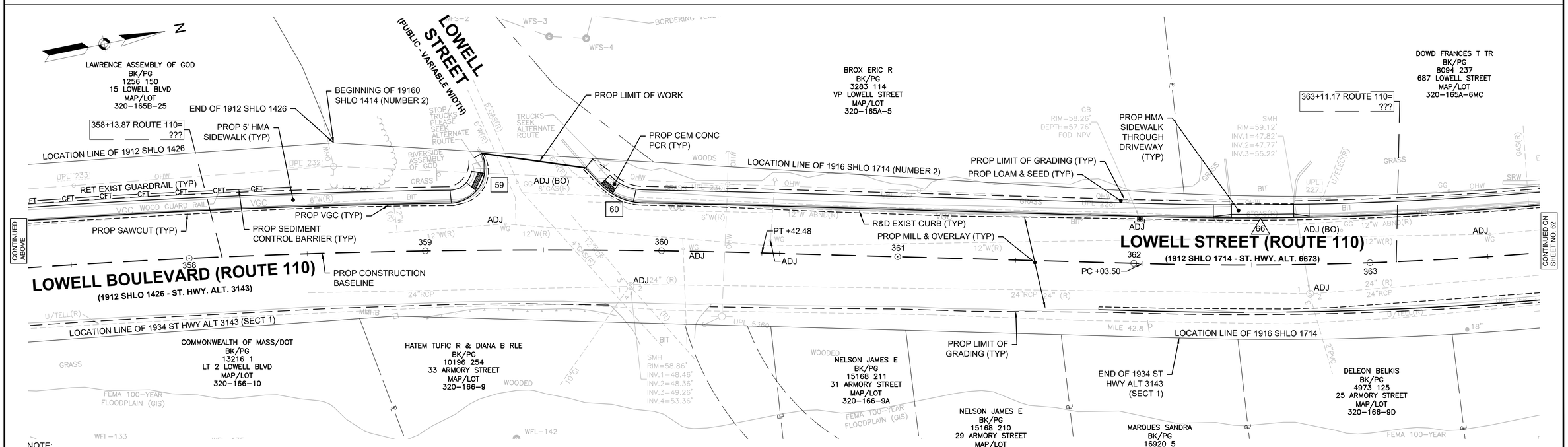
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	61	190
PROJECT FILE NO. 608816			

CONSTRUCTION PLANS





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Last Saved by: JDEWIRE
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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

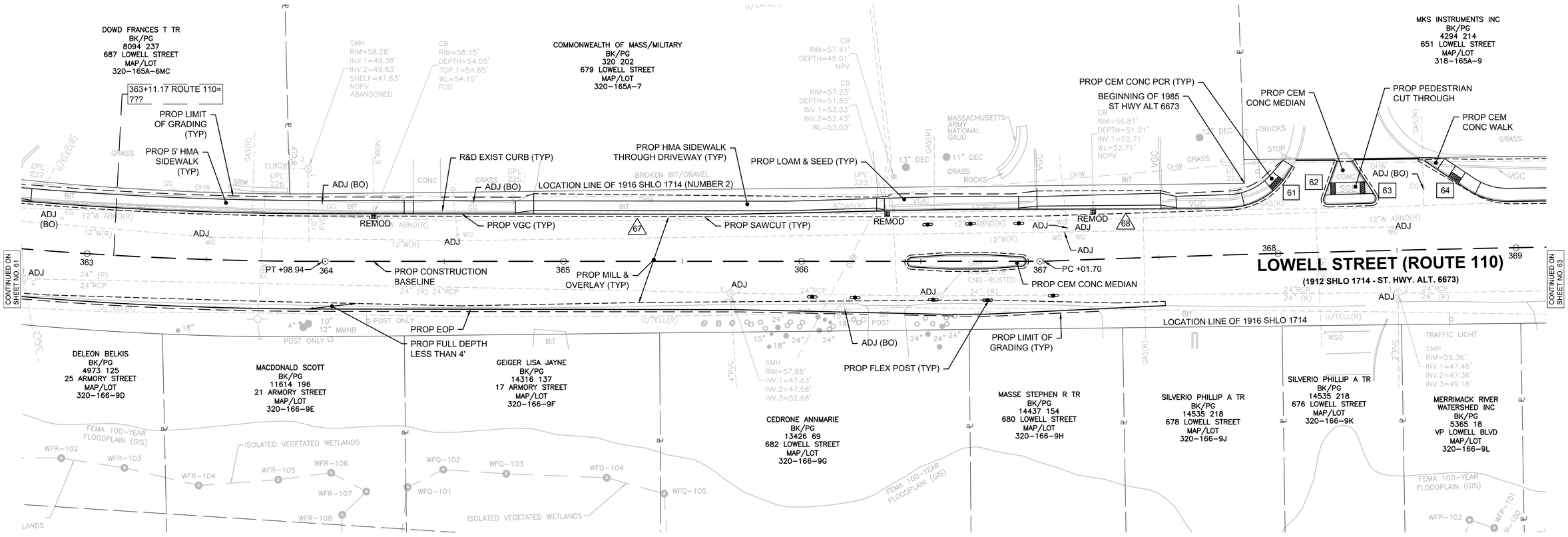
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	62	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-C).DWG Plotted on 9-Sep-2024 4:37 PM

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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

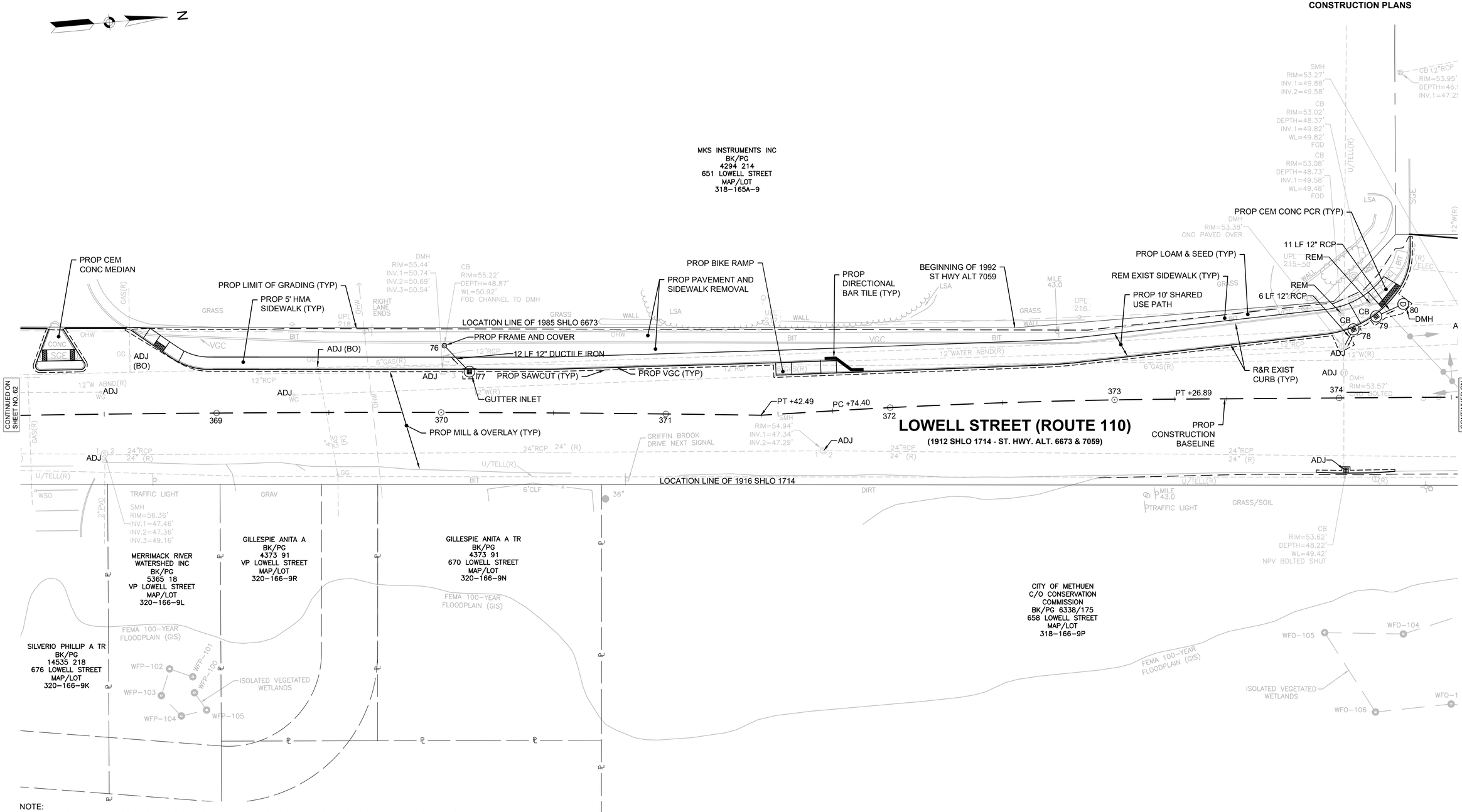
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	63	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS



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SCALE: 1" = 20'

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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	64	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS

608816_HDI(CONST-C).DWG Plotted on 9-Sep-2024 4:37 PM

N

GRIFFIN BROOK DRIVE
(PRIVATE - VARIABLE WIDTH)

PROP LIMIT OF WORK (TYP)
MATCH EXIST SIDEWALK (TYP)
11 LF 12" RCP
REM
PROP LOAM & SEED (TYP)
PROP CEM CONC PCR (TYP)
PROP PAVEMENT REMOVAL
REM EXIST SIDEWALK; PROP LOAM & SEED
CONNECT DMH 80 TO EX 12" RCP
11 LF 12" RCP
REM
REM
6 LF 12" RCP
LOCATION LINE OF 1992 SHLO 7059
PROP 10' HMA SHARED USE PATH
REM EXIST SIDEWALK; PROP LOAM & SEED
PROP LIMIT OF GRADING (TYP)
PROP DIRECTIONAL BAR TILE (TYP)
BEGINNING OF 1992 ST HWY ALT 7059
END OF 1985 ST HWY ALT 6673
RET EXIST GUARDRAIL (TYP)
PROP 5' HMA SIDEWALK (TYP)
LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)
CONNECT TO EX 12" RCP
CBCI
6 LF 12" RCP
REM
R&R EXIST CURB
PROP BIKE RAMP
PROP EOP
PROP MILL & OVERLAY (TYP)
PROP SAWCUT (TYP)
PROP PEDESTRIAN CUT THROUGH
PROP CEM CONC MEDIAN
PROP VGC (TYP)
PROP FULL DEPTH PAVEMENT
PROP CONSTRUCTION BASELINE
PROP SEDIMENT CONTROL BARRIER
RET EXIST GUARDRAIL (TYP)
REM EXIST SIDEWALK & CURB; PROP LOAM AND SEED
PROP 5' HMA SIDEWALK
PROP LIMIT OF GRADING (TYP)
376+51.96 ROUTE 110 REVISED - (2)= ???
LOCATION LINE OF 1916 SHLO 1714

PC +64.17
PT +04.96
PC +94.43
PT +09.23
PC +96.56

ONE GRIFFIN BROOK DRIVE LLC
BK/PG 13360/197
PL 13172
(LOT 7)
1 GRIFFIN BROOK
MAP/LOT
318–165A–9A

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
(PARCEL C)
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

MERRIMACK COLLEGE
BK/PG
16450 115
656 LOWELL STREET
MAP/LOT
318–166–9Q

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

CITY OF METHUEN
C/O CONSERVATION COMMISSION
BK/PG 6338/175
658 LOWELL STREET
MAP/LOT
318–166–9P

CONTINUED ON SHEET NO. 63

CONTINUED ON SHEET NO. 65

LOWELL STREET (ROUTE 110)
(1912 SHLO 1714 - ST. HWY. ALT. 6673 & 7059)

NOTE:
1. GUARDRAIL NOTE: FOR EXISTING GUARDRAIL NOT IDENTIFIED FOR REMOVAL OR REPLACEMENT: EXISTING BURIED END SECTIONS OR OTHER NON-COMPLIANT GUARDRAIL END TREATMENTS TO BE REPLACED WITH TANGENT END TREATMENT OR TRAILING ANCHORAGE. ADDITIONAL GUARDRAIL SECTIONS INCLUDED WITHIN THIS CONTRACT TO REPLACE EXISTING NON-COMPLIANT GUARDRAIL AT THE DIRECTION OF MASSDOT.
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0 20 50 100
SCALE: 1" = 20'

9/9/2024 I:\2105\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HDI(CONST-C).dwg
Last Saved by: JDEWIRE
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

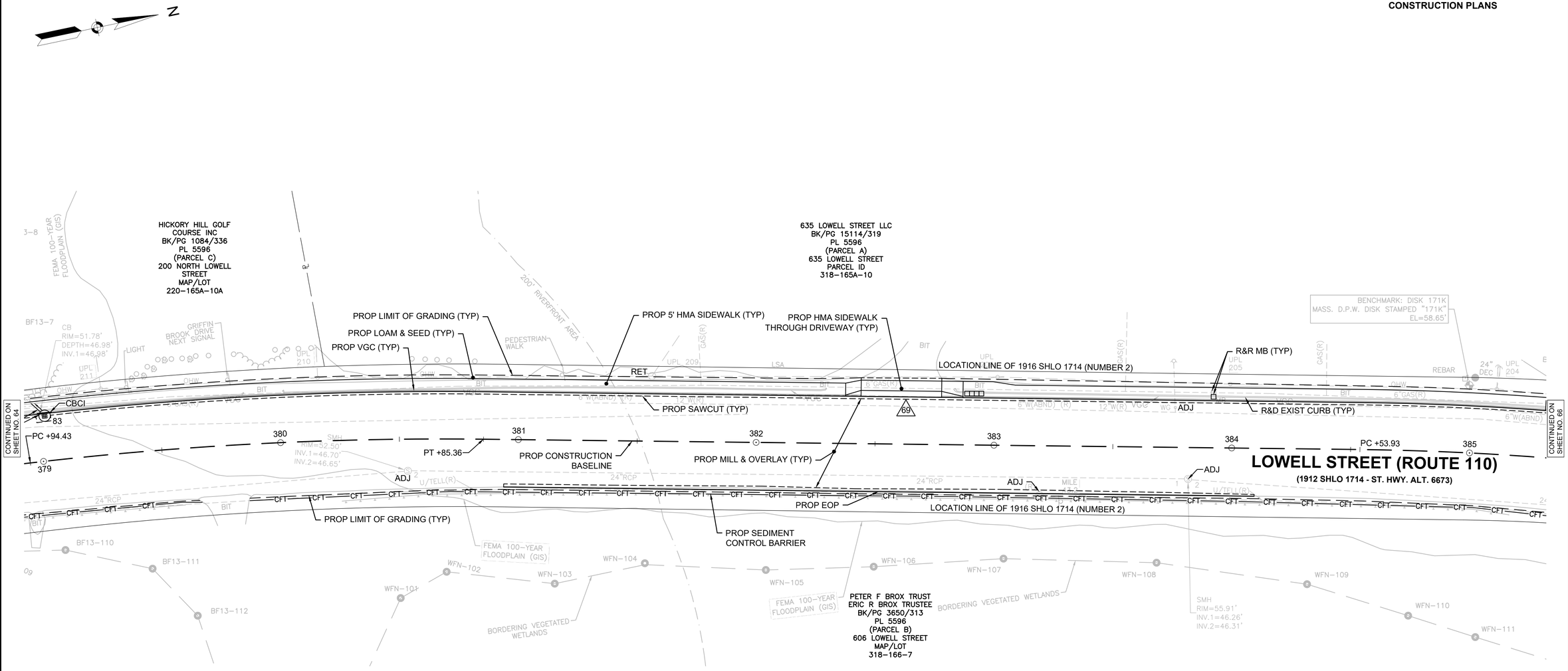
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	65	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS



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HIGHWAY GUARD DETAILS
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TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	66	190
PROJECT FILE NO.	608816		

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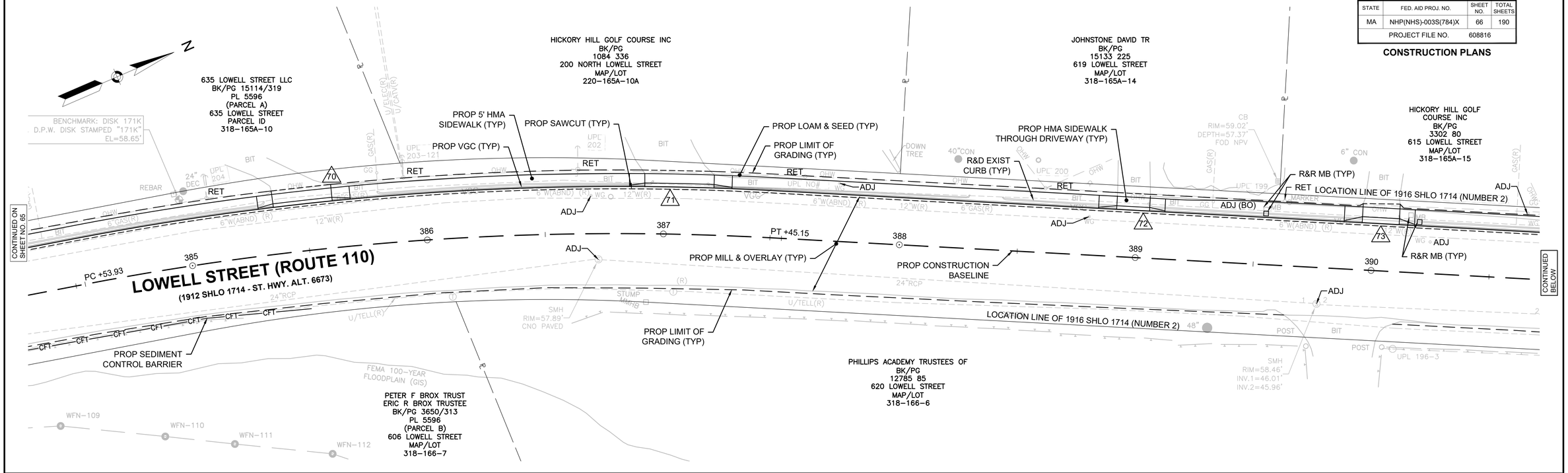

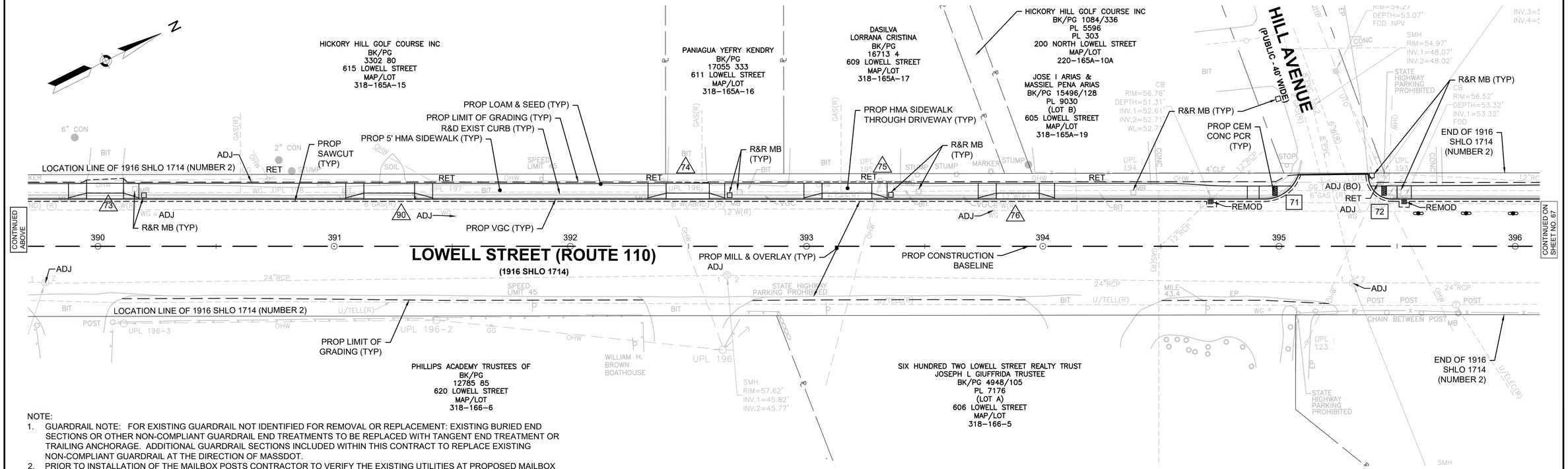

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WATER SUPPLY ALTERATIONS
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DRAINAGE DETAILS
SEE BELOW
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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	67	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS

SACMAWATEY MAM & CHHENG CHEA
BK/PG 8086/110
PB/PL 1/31
(LOTS 21 & 22)
603 LOWELL STREET
MAP/LOT
318–165A–24

METHUEN HOUSING AUTHORITY
BK/PG 1974/042
PB/PL 1/31
601 LOWELL STREET
MAP/LOT
318–165A–25

RAMSAY DOROTHY T ETAL
BK/PG
3289 198
597 LOWELL STREET
MAP/LOT
318–165A–26

MYERS MICHAEL A
BK/PG
11263 337
593 LOWELL STREET
MAP/LOT
318–165A–27

WALBROOK STREET
(PRIVATE DRIVEWAY)

WINCHESTER STREET
(PUBLIC - 40' WIDE)

END OF 1916 SHLO 1714 (NUMBER 2)
LOCATION LINE OF 1916 SHLO 1687 (SECT 1)
R&R MB (TYP)
PROP LIMIT OF WORK (TYP)
MEET EXIST SIDEWALK (TYP)
PROP CEM CONC PCR (TYP)
ADJ (BO)
MEET EXIST SIDEWALK (TYP)
R&D EXIST CURB (TYP)
PROP LOAM & SEED (TYP)
PROP LIMIT OF GRADING (TYP)
PROP 5' HMA SIDEWALK (TYP)
PROP HMA SIDEWALK THROUGH DRIVEWAY (TYP)
R&R MB (TYP)
PROP VGC (TYP)
R&D EXIST CURB
PROP LIMIT OF WORK
REMOD
ADJ
RET
PROP PED CUT THROUGH
PROP CONSTRUCTION BASELINE
PROP CEM CONC MEDIAN
PROP SAWCUT (TYP)
PROP MILL & OVERLAY (TYP)
PROP LIMIT OF GRADING (TYP)
PROP FLEX POSTS (TYP)
END OF 1916 SHLO 1714 (NUMBER 2)
BEGINNING OF 1916 SHLO 1687 (SECT 1)
LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

LOWELL STREET (ROUTE 110)
(1916 SHLO 1687)

396 397 398 399 400 401

110 111 112 113 73 74 77

CONTINUED ON SHEET NO. 66

CONTINUED ON SHEET NO. 68

JOHN D MATTHESON
BK/PG 1377/221
PL 7176
(LOT B)
604 LOWELL STREET
MAP/LOT
318–166–5B

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318–166–5

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 2223/142
PL 7176
(LOT C)
602 LOWELL STREET
MAP/LOT
318–166–5A

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 15960/167
PL 1894
602 LOWELL STREET
MAP/LOT
318–166–4

NEW BALANCE ATHLETICS INC
BK/PG 15832/304
PL 1894
596 LOWELL STREET
MAP/LOT
318–166–1

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HIGHWAY GUARD DETAILS
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TRAFFIC SIGNAL CONDUIT
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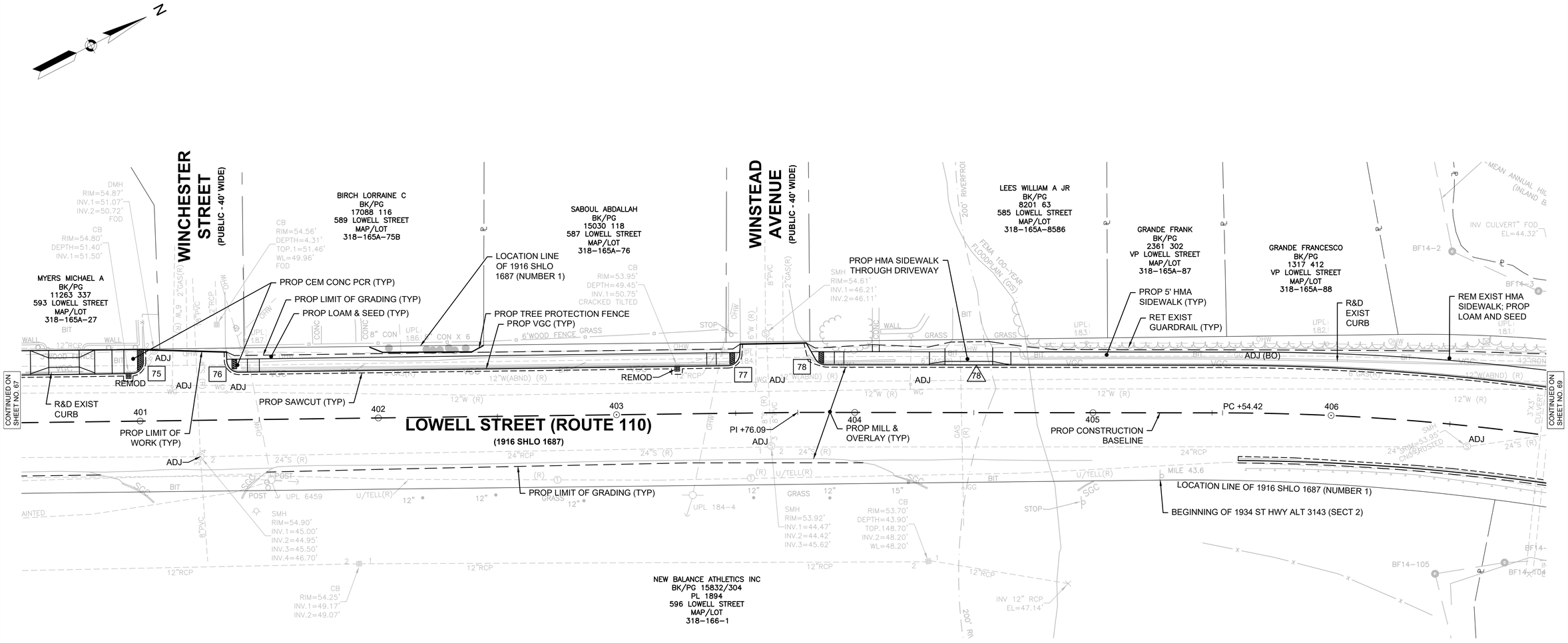
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	68	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



NOTE:
1. GUARDRAIL NOTE: FOR EXISTING GUARDRAIL NOT IDENTIFIED FOR REMOVAL OR REPLACEMENT: EXISTING BURIED END SECTIONS OR OTHER NON-COMPLIANT GUARDRAIL END TREATMENTS TO BE REPLACED WITH TANGENT END TREATMENT OR TRAILING ANCHORAGE. ADDITIONAL GUARDRAIL SECTIONS INCLUDED WITHIN THIS CONTRACT TO REPLACE EXISTING NON-COMPLIANT GUARDRAIL AT THE DIRECTION OF MASSDOT.
2. PRIOR TO INSTALLATION OF THE MAILBOX POSTS CONTRACTOR TO VERIFY THE EXISTING UTILITIES AT PROPOSED MAILBOX POST LOCATION AND REPORT ANY POTENTIAL CONFLICTS TO THE ENGINEER.
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0 20 50 100
SCALE: 1" = 20'

608816_HD(CONST-C).DWG Plotted on 9-Sep-2024 4:38 PM

9/9/2024 I:\2105\2\2055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HD(CONST-C).dwg
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Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW, SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	69	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS

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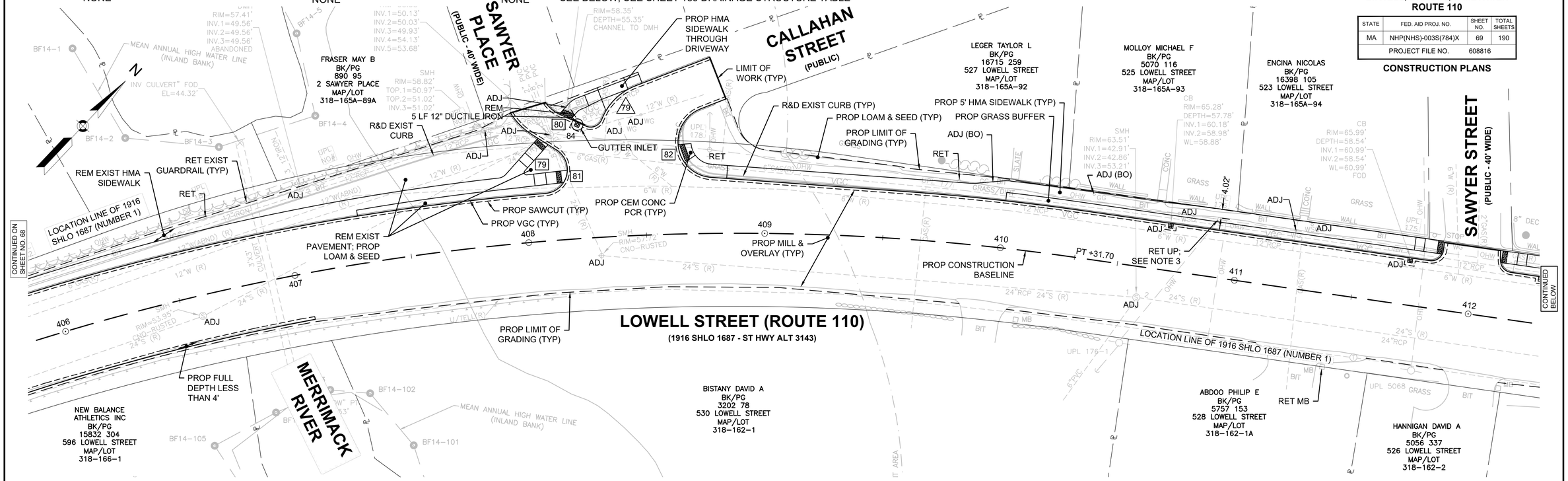

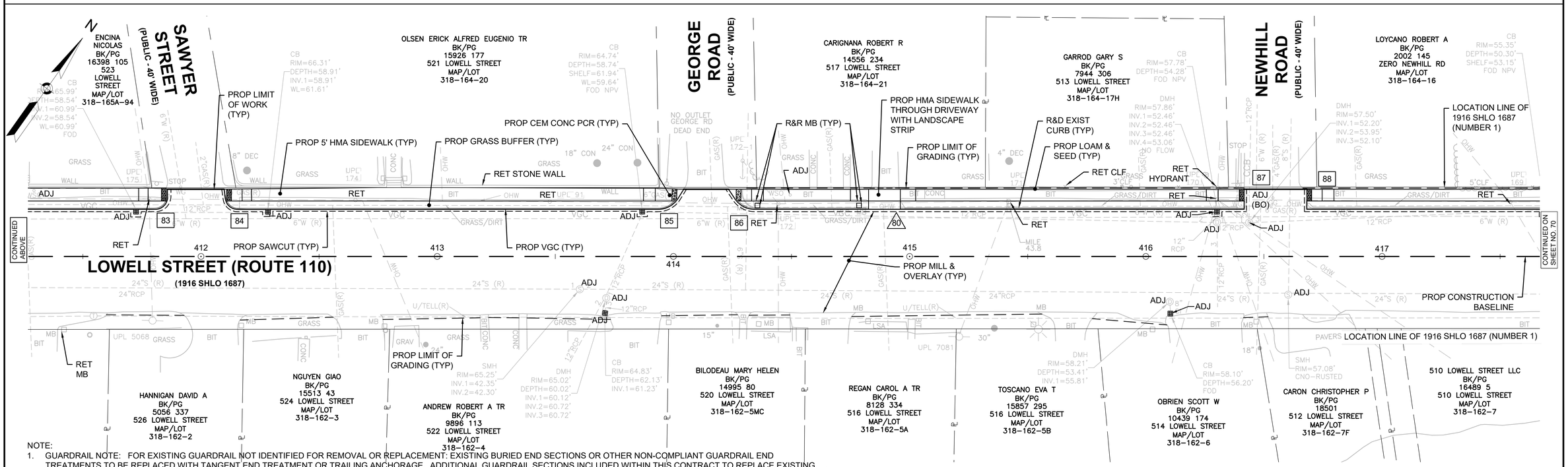

NOTE:
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0 20 50 100
SCALE: 1" = 20'

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Last Saved by: JDEWIRE
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	70	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS

608816_HDI(CONST-C).DWG Plotted on 9-Sep-2024 4:39 PM

LOYCANO ROBERT A
BK/PG
2002 145
ZERO NEWHILL RD
MAP/LOT
318–164–16

CARRASQUILLO ROSA
BK/PG
15641 295
505 LOWELL STREET
MAP/LOT
318–164–23

SENG VEASNA
BK/PG
14052 67
3 MOFFETT ST
MAP/LOT
318–164–25

DONAHUE PAMELA
BK/PG 6030 261
503 LOWELL STREET
MAP/LOT 418–164–26

NADEAU JOSEPH D
BK/PG
10053 138
501 LOWELL STREET
MAP/LOT
418–164–27

JASON A MUISE
BK/PG
9705 0167
PL/YR
987 1936
497–499 LOWELL STREET
MAP/LOT
316–164–29

LEITE MARCOS B
BK/PG
16865 138
489 LOWELL STREET
MAP/LOT
418–164–28

MOFFETT STREET
(PRIVATE - 40' WIDE)

PROP LIMIT OF WORK (TYP)
PROP LOAM & SEED (TYP)
PROP CEM CONC PCR (TYP)
PROP 5' HMA SIDEWALK (TYP)
PROP GRASS BUFFER (TYP)
R&D EXIST CURB (TYP)
PROP SAWCUT (TYP)
PROP HMA SIDEWALK THROUGH DRIVEWAY WITH LANDSCAPE STRIP (TYP)
PROP LIMIT OF GRADING (TYP)
R&R MB (TYP)
RET
PROP VGC (TYP)
R&D PLANTER
PROP MILL & OVERLAY (TYP)
PROP CEM CONC MEDIAN
PROP CONSTRUCTION BASELINE
PROP FLEX POSTS (TYP)
LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

LOWELL STREET (ROUTE 110)
(1916 SHLO 1687 - ST HWY ALT 3143)

CONTINUED ON SHEET NO. 69
CONTINUED BELOW

510 LOWELL STREET LLC
BK/PG
16489 5
510 LOWELL STREET
MAP/LOT
318–162–7

510 LOWELL STREET LLC
BK/PG
16489 5
VP LOWELL STREET
MAP/LOT
318–162–7C

BUDISH PETER F
BK/PG
LC116 321
508 LOWELL STREET
MAP/LOT
418–162–7A

LEBLANC TERENZI SHAWNETTE L TR
BK/PG
15197 269
500 LOWELL STREET
MAP/LOT
418–162–8D

SANTANA ELENA
BK/PG
16979 58
498 LOWELL STREET
MAP/LOT
418–162–8B

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M &
ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

LEITE MARCOS B
BK/PG
16865 138
489 LOWELL STREET
MAP/LOT
418–164–28

BHAKTA PRAFULCHANDRA TR
BK/PG
11847 333
487 LOWELL STREET
MAP/LOT
418–164–30

MILL POND

PROP SEDIMENT CONTROL BARRIER
RET EXIST GUARDRAIL (TYP)
END OF 1916 SHLO 1687 (SECT 1)
BEGINNING OF 1916 SHLO 1724 (SECT 3)
BRIDGE NO. M–17–011
MEAN ANNUAL HIGH WATER LINE (INLAND BANK)
END OF 1916 SHLO 1724 (SECT 3)
BEGINNING OF 1916 SHLO 1687 (SECT 2)
PROP LIMIT OF GRADING (TYP)
PROP HMA SIDEWALK THROUGH DRIVEWAY WITH LANDSCAPE STRIP (TYP)
PROP LOAM & SEED (TYP)
PROP 5' HMA SIDEWALK (TYP)
R&D EXIST CURB (TYP)
PROP SAWCUT (TYP)
PROP VGC (TYP)
R&R MB (TYP)
PROP MILL & OVERLAY (TYP)
PROP CONSTRUCTION BASELINE
LOCATION LINE OF 1916 SHLO 1687 (SECT 1)
END OF 1916 SHLO 1687 (SECT 1)
BEGINNING OF 1916 SHLO 1724 (SECT 3)

LOWELL STREET (ROUTE 110)
(1916 SHLO 1687)

MERRIMACK RIVER

GOMEZ ENDY
BK/PG
15544 167
485 LOWELL STREET
MAP/LOT
418–164–31

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M &
ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

PASS DANIEL
BK/PG
16113 89
490 LOWELL STREET
MAP/LOT
418–162–8F

GUNES OGUZ TR
BK/PG
11206 215
488 LOWELL STREET
MAP/LOT
418–162–8E

HOWELL ROBERT JASON
BK/PG
7036 59
488 LOWELL STREET
MAP/LOT
418–162–8A

CORBIN MARK
BK/PG
4383 262
486 LOWELL STREET
MAP/LOT
418–162–9

ZHEN JASON WAN TR
BK/PG
16160 251
478 LOWELL STREET
MAP/LOT
418–162–12

CONTINUED ABOVE
CONTINUED ON SHEET NO. 71

NOTE:
1. GUARDRAIL NOTE: FOR EXISTING GUARDRAIL NOT IDENTIFIED FOR REMOVAL OR REPLACEMENT: EXISTING BURIED END SECTIONS OR OTHER NON-COMPLIANT GUARDRAIL END TREATMENTS TO BE REPLACED WITH TANGENT END TREATMENT OR TRAILING ANCHORAGE. ADDITIONAL GUARDRAIL SECTIONS INCLUDED WITHIN THIS CONTRACT TO REPLACE EXISTING NON-COMPLIANT GUARDRAIL AT THE DIRECTION OF MASSDOT.
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SCALE: 1" = 20'

9/9/2024 I:\2105\2105\2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HDI(CONST-C).dwg
Last Saved by: JDEWIRE
Printed by: Meaghan Wiggin

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

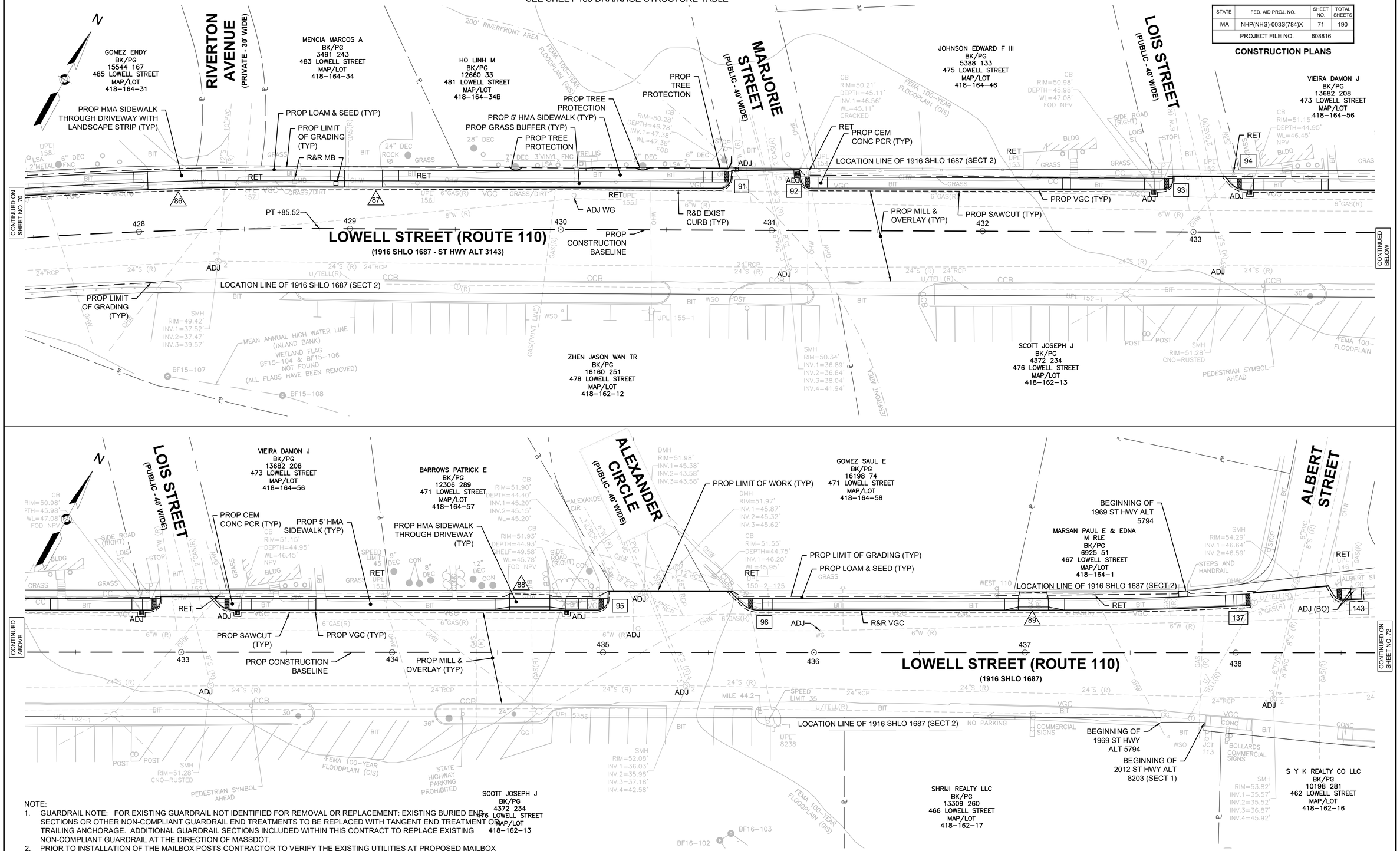
DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	71	190
	PROJECT FILE NO. 608816		

CONSTRUCTION PLANS

608816_HDI(CONST-C).DWG Plotted on 9-Sep-2024 4:39 PM



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HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

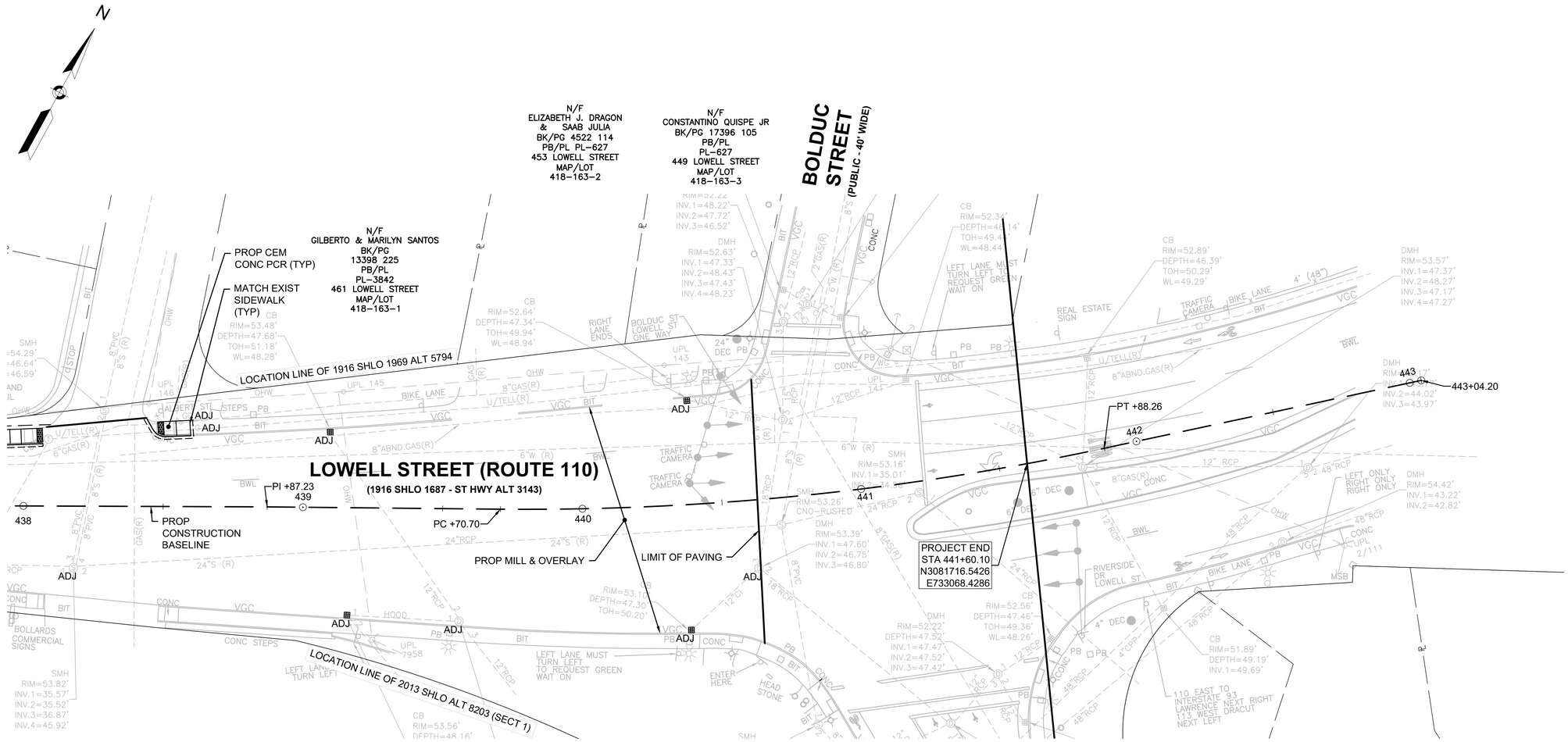
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE BELOW
SEE SHEET 189 DRAINAGE STRUCTURE TABLE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	72	190
PROJECT FILE NO.	608816		

CONSTRUCTION PLANS



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0 20 50 100
SCALE: 1" = 20'

608816_HDI(CONST-C).DWG Plotted on 9-Sep-2024 4:39 PM

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	73	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

608816_HD(CTG-A).DWG Plotted on 9-Sep-2024 10:14 AM

PROJECT BEGIN
STA 105+51.72
N3060562.4296
E712256.7681

N/F
CITY OF LOWELL
BK/PG 000/000
325.1 FIRST STREET BOULEVARD
MAP/LOT
2327-325.1

ACCESS EASEMENT
PB 126 PL 6

N/F
STEPHEN C. QUEBEC
BK/PG 31268/279
442 FIRST STREET BOULEVARD
MAP/LOT
2325-420

N/F
THE WALKWAY CONDOMINIUMS
BK/PG
3600/209
PB/PL
154/132
325 FIRST STREET BOULEVARD
MAP/LOT
2327-325

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

CONSTRUCTION BASELINE
RECORD BASELINE
LOCATION LINE OF 1923 SHLO 2110
LOCATION LINE OF 1934 SHLO ALT 3144

CONTINUED BELOW

CONTINUED ABOVE

N/F
CITY OF LOWELL
BK/PG 1004/432
324 FIRST STREET BOULEVARD
MAP/LOT
2327-324

CITY OF LOWELL
EASEMENT
PB 154 PL 132

CITY OF LOWELL
EASEMENT
PB 128 PL 102

N/F
CITY OF LOWELL
BK/PG
2291/349
PB/PL
121/65
431 FIRST STREET BOULEVARD
MAP/LOT
2327-431

CITY OF LOWELL
BK/PG 1360/144
390 FIRST STREET BOULEVARD
MAP/LOT
2327-390

CITY OF LOWELL
BK/PG 1000/401
414 FIRST STREET BOULEVARD
MAP/LOT 2327/414

FIRST STREET
(PUBLIC - 50' WIDE)

LOCATION LINE OF 1906 CITY LAYOUT

CONTINUED ON SHEET NO. 74

0 20 50 100
SCALE: 1" = 20'

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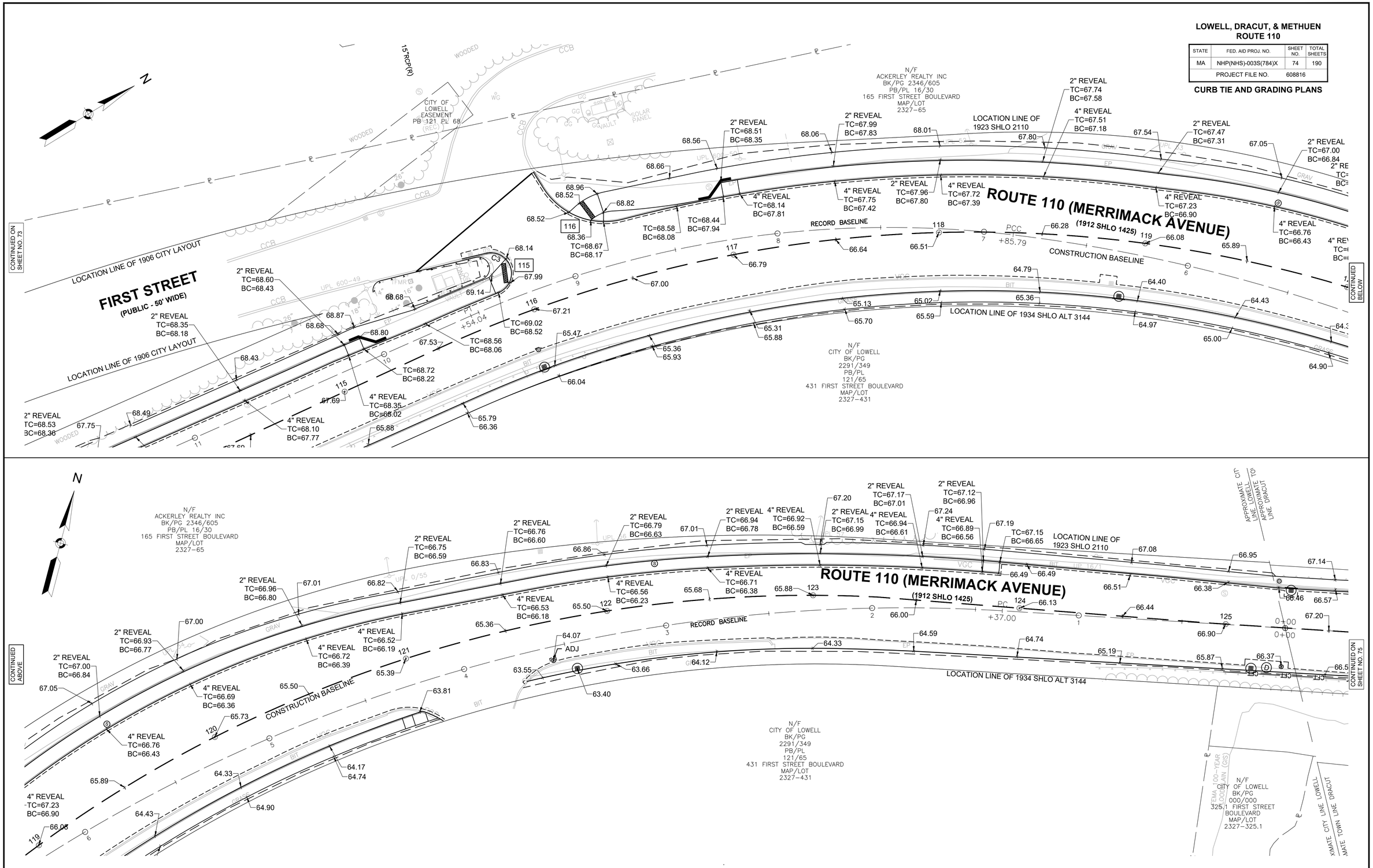
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	74	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS



608816_HD(CTG-A).DWG Plotted on 9-Sep-2024 10:15 AM

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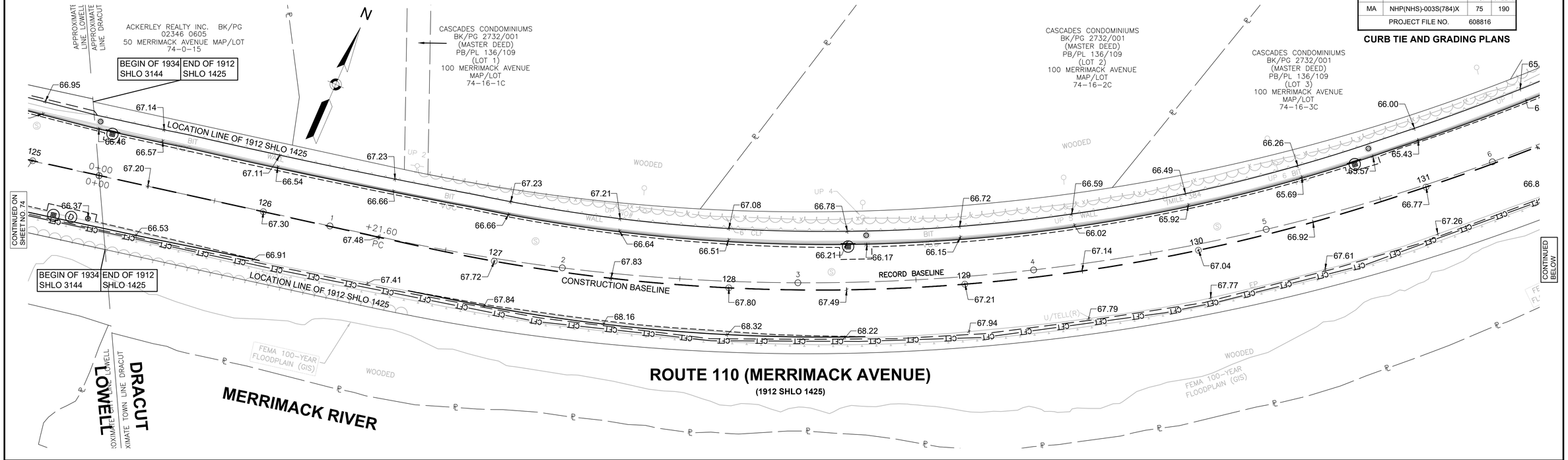
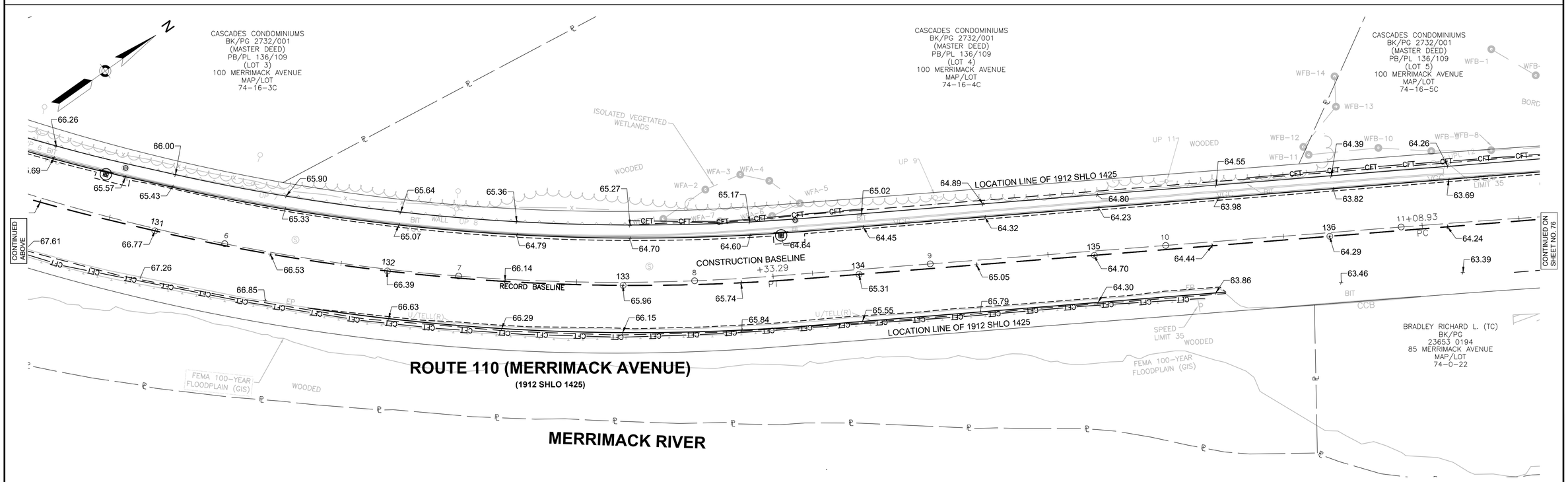
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	75	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS





608816_HD(CTG-A).DWG Plotted on 9-Sep-2024 10:15 AM

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	76	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 5)
100 MERRIMACK AVENUE
MAP/LOT
74-16-5C

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 136/109
(LOT 6A)
100 MERRIMACK AVENUE
MAP/LOT
74-16-7C

BROOKS STREET
(PUBLIC - 33' WIDE)

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 158/86
(LOTS 6D & 7D)
100 MERRIMACK AVENUE
MAP/LOT
74-16-7.1C

UTILITY EASEMENT
PB 158
PL 86

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

RICHARD L BRADLEY
AND MICHAEL A BRADLEY
BK/PG 23653/194
85 MERRIMACK AVENUE
MAP/LOT
74-22

RYAN P BERUBE
BK/PG 34021/168
PB/PL 40/5
(LOT 5)
117 MERRIMACK AVENUE
MAP/LOT
74-23

CONTINUED ON SHEET NO. 75

CONTINUED BELOW

CONTINUED ABOVE

CASCADES CONDOMINIUMS
BK/PG 2732/001
(MASTER DEED)
PB/PL 158/86
(LOTS 6D & 7D)
100 MERRIMACK AVENUE
MAP/LOT
74-16-7.1C

YTURRONO, AURA M.
BK/PG
33719 273
150 MERRIMACK AVENUE
MAP/LOT
74-0-18

YTURRONO, AURA M.
BK/PG
33719 273
150 MERRIMACK AVENUE
MAP/LOT
74-69-6

GEORGE P BROUSSEAU
TRUSTEE
BK/PG 6471/310
PB/PL 177/7
(LOT 5)
10 HAVERILL STREET
MAP/LOT
74-69-5

HAVERHILL STREET
(PUBLIC - 50' WIDE)

PHOENIXSTARR, LLC
BK/PG 30544/066
PB/PL 13/1
(PARCEL 1)
PB/PL 40/5
(PARCEL 2)
166 MERRIMACK AVENUE
MAP/LOT
74-20

UTILITY EASEMENT
PB 158 PL86

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

100' RIVERFRONT AREA

FEMA 100-YEAR FLOODPLAIN (GIS)

KIMBALL SYSTEM INC
BK/PG 1021/414
PB/PL 25/41
143 MERRIMACK AVENUE
MAP/LOT
74-24

RYAN P BERUBE
BK/PG 34021/168
PB/PL 40/5
(LOT 5)
117 MERRIMACK AVENUE
MAP/LOT
74-23

JAMES & HELEN
PALEOLOGOS TRUSTEES
BK/PG 24586/132
PB/PL 40/5
(PARCEL 1 - LOT 5)
PB/PL 224/102
165 MERRIMACK AVENUE
MAP/LOT
74-25

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

SCALE: 1" = 20'

608816_HDI(CTG-A).DWG Plotted on 9-Sep-2024 10:16 AM

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	77	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

PHOENIXSTARR, LLC
BK/PG 30544/066
PB/PL 13/1
(PARCEL 1)
PB/PL 40/5
(PARCEL 2)
166 MERRIMACK AVENUE
MAP/LOT
74-20

BENOIT BRIAN M. (TE)
BK/PG
12706 0225
23 ELSMERE TR
MAP/LOT
71-0-70

MORGAN WILLIAM A. (JT)
BK/PG
35104 294
33 ELSMERE TR
MAP/LOT 71-0-71

SALDARRIAGA JOSHUA
BK/PG
29788 0050
51 ELSMERE TR
MAP/LOT
71-0-72

CONTINUED ON SHEET NO.78

CONSTRUCTION BASELINE

RECORD BASELINE

LOCATION LINE OF 1912 SHLO 1425

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

JAMES & HELEN
PALEOLOGOS TRUSTEES
BK/PG 24586/132
PB/PL 40/5
(PARCEL 1 - LOT 5)
PB/PL 224/102
165 MERRIMACK AVENUE
MAP/LOT
74-25

CARPENTER SCOTT A., TRUSTEE
BK/PG
27503 0031
189 MERRIMACK AVENUE
MAP/LOT
74-0-27

A & S COMMERCIAL
REALTY 2 LLC
BK/PG
29143 0201
197 MERRIMACK AVENUE
MAP/LOT
71-0-73

CONTINUED BELOW

SALDARRIAGA JOSHUA
BK/PG
29788 0050
51 ELSMERE TR
MAP/LOT
71-0-72

SHEEHAN EDWARD V
BK/PG
01180 0535
51 ELSMERE TR
MAP/LOT
71-72-1

GAGNON DAVID M. (TE)
BK/PG
18386 0231
15 SALISBURY STREET
MAP/LOT
71-0-27

GRAHAM RICHARD M (JT)
BK/PG
06862 0128
244 MERRIMACK AVENUE
MAP/LOT
71-0-26

SHEEHAN JOSEPH A.
BK/PG
01102 0101
248 MERRIMACK AVENUE
MAP/LOT
71-0-25

SHEEHAN JOSEPH A JR (TE)
BK/PG
02202 0685
258 MERRIMACK AVENUE
MAP/LOT
71-0-24

CONTINUED ABOVE

CONSTRUCTION BASELINE

RECORD BASELINE

LOCATION LINE OF 1912 SHLO 1425

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

A & S COMMERCIAL
REALTY 2 LLC
BK/PG
29143 0201
197 MERRIMACK AVENUE
MAP/LOT
71-0-73

TOWN OF DRACUT
BK/PG
17695 0203
241 MERRIMACK AVENUE
MAP/LOT
71-0-74

SHEEHAN JOSEPH
BK/PG
2202 0685
257 MERRIMACK AVENUE
MAP/LOT
71-0-75

MERRIMACK RIVER

CONTINUED ON SHEET NO.78

SCALE: 1" = 20'

608816_HD(CTG-A).DWG Plotted on 9-Sep-2024 10:16 AM

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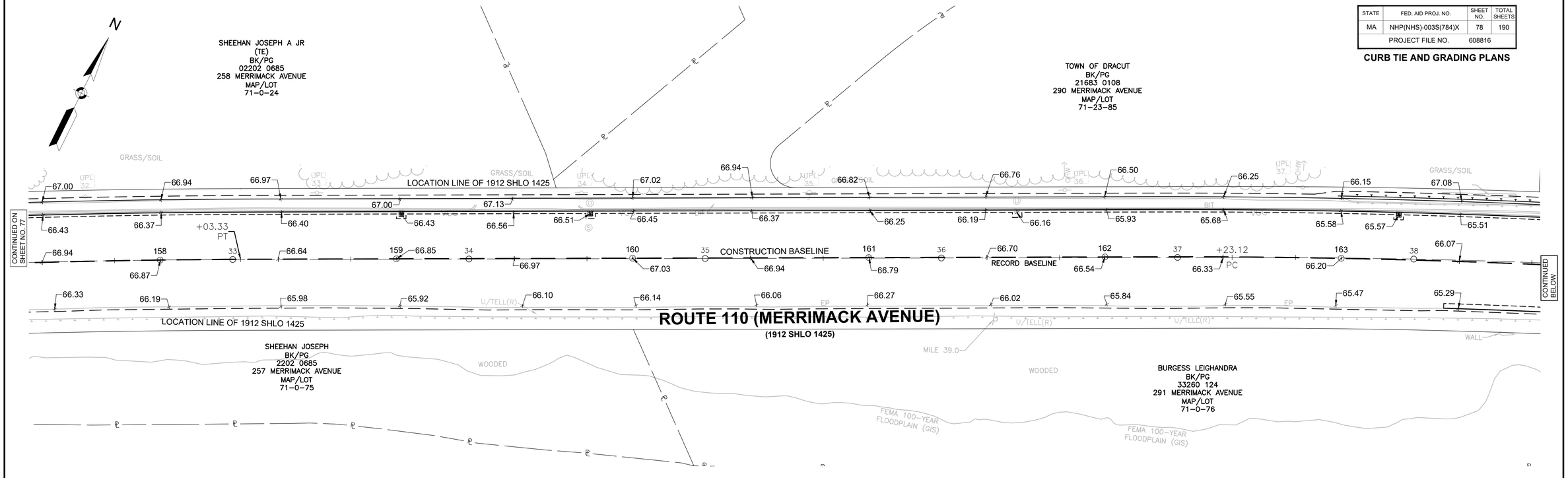
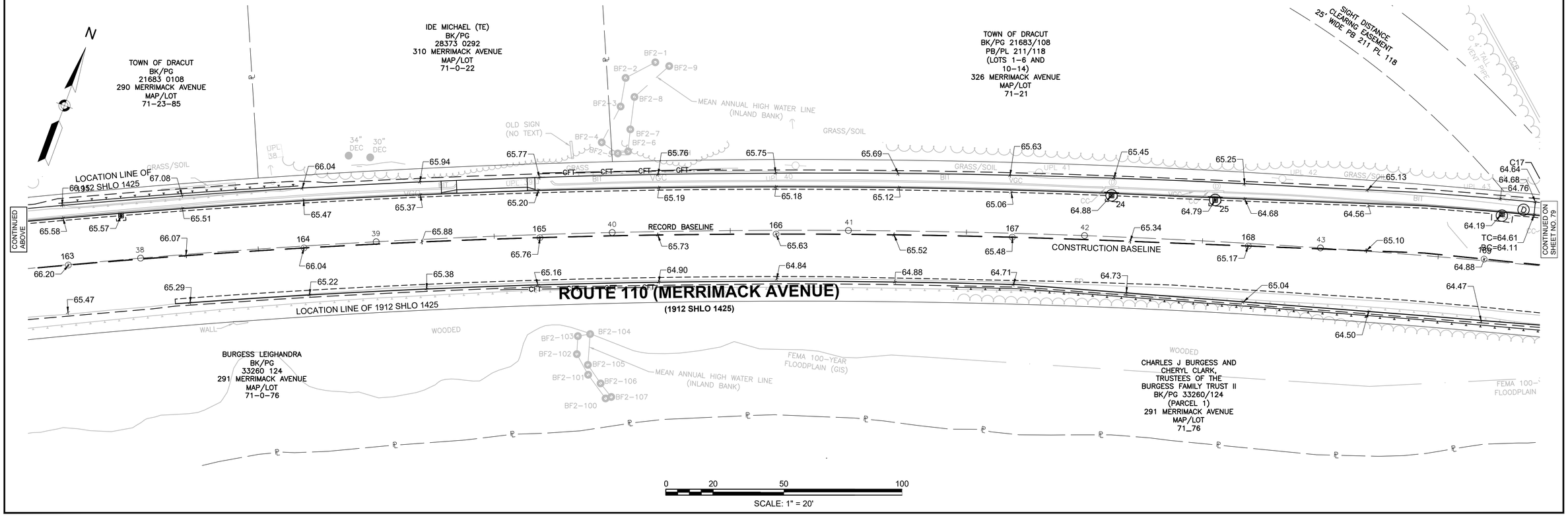
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	78	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS





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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	79	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

ROUTE 110 (MERRIMACK AVENUE)

(1912 SHLO 1425)

N

BRIGHAM AVENUE
(PUBLIC - 50' WIDE)

JOHN S BURNETT
& LAURA ANN ROMANOWSKI
BK/PG 33739/171
PB/PL 51/88
(LOTS 252, 253,
254 AND 255)
11 BRIGHAM AVENUE
PARCEL ID 71_2

TOWN OF DRACUT
BK/PG 21683/108
PB/PL 211/118
(LOTS 1-6 AND
10-14)
326 MERRIMACK AVENUE
MAP/LOT
71-21

SIGHT DISTANCE
CLEARING EASEMENT
24' WIDE PB 211 PL 118

MARITIMES & NORTHEAST
PIPELINES, LLC
BK/PG 22639/090
400 MERRIMACK AVENUE
MAP/LOT
71-1

CHARLES J BURGESS AND
CHERYL CLARK,
TRUSTEES OF THE
BURGESS FAMILY TRUST II
BK/PG 33260/124
(PARCEL 1)
291 MERRIMACK AVENUE
MAP/LOT
71_76

KIMBALL SYSTEM INC
BK/PG 788/118
415 MERRIMACK AVENUE
MAP/LOT
72-94

MERRIMACK RIVER

LOCATION LINE OF 1912 SHLO 1425

RECORD BASELINE

CONSTRUCTION BASELINE

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

BORDERING VEGETATED WETLANDS

FEMA 100-YEAR FLOODPLAIN (GIS)

CONTINUED ON SHEET NO. 78

CONTINUED ON SHEET NO. 80

0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	80	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

MARITIMES & NORTHEAST PIPELINES, LLC
BK/PG
22639 0090
400 MERRIMACK AVENUE
MAP/LOT
71-0-1

BEDARD TAMMIE L. (TE)
BK/PG
18334 0001
12 NASSAU STREET
MAP/LOT
72-0-93

NASSAU STREET
(PUBLIC - 40' WIDE)

JEREMI TEJEDA
BK/PG
3400 0196
11 NASSAU STREET
MAP/LOT
72-0-78

WOODED
WOODED
WOODED
WOODED
SPEED LIMIT 45
NASSAU ST
BIT
VCC
BIT
VCC
BIT
VCC
BIT
VCC
BIT
VCC
WCT
BIT
14" DEC
W

63.78 63.64 63.55 63.55 63.58 63.62 63.50 62.96 62.90 63.18 63.16 63.02 62.95 62.38 62.68 62.28 62.29 62.29 62.33 62.81 62.90 62.92
63.21 63.07 62.95 62.98 62.98 63.01 63.05 62.93 62.77 62.73 62.61 62.59 TC=62.98 BC=62.48 62.40 TC=62.90 BC=62.40 62.32 C23 TC: 62.76 BC: 62.26 C26 TC: 62.83 BC: 62.33 62.26 C25 C24 62.35

CONTINUED ON SHEET NO. 79

174 49 175 50 176 51 177 52 178 53 179 54 180
63.84 63.74 63.66 63.58 63.55 63.57 63.49 RECORD BASELINE 63.32 63.22 63.18 63.11 63.02 62.90
CONSTRUCTION BASELINE

CONTINUED ON SHEET NO. 81

63.11 63.08 62.88 62.88 63.07 63.16 62.89 62.90 62.86 62.85 62.19 62.16
62.71

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

LOCATION LINE OF 1912 SHLO 1425
LOCATION LINE OF 1912 SHLO 1425
BUS STOP AHEAD
CONC WALL
SPEED LIMIT 45
BIT
BIT
BROKEN

WOODED
FEMA 100-YEAR FLOODPLAIN (GIS)
WOODED

KIMBALL SYSTEM INC
BK/PG
00788 0118
415 MERRIMACK AVENUE
MAP/LOT
72-0-94

CHEA RAY (TE)
BK/PG
LC201 0139
439 MERRIMACK AVENUE
MAP/LOT 72-0-95

MERRIMACK RIVER

0 20 50 100
SCALE: 1" = 20'

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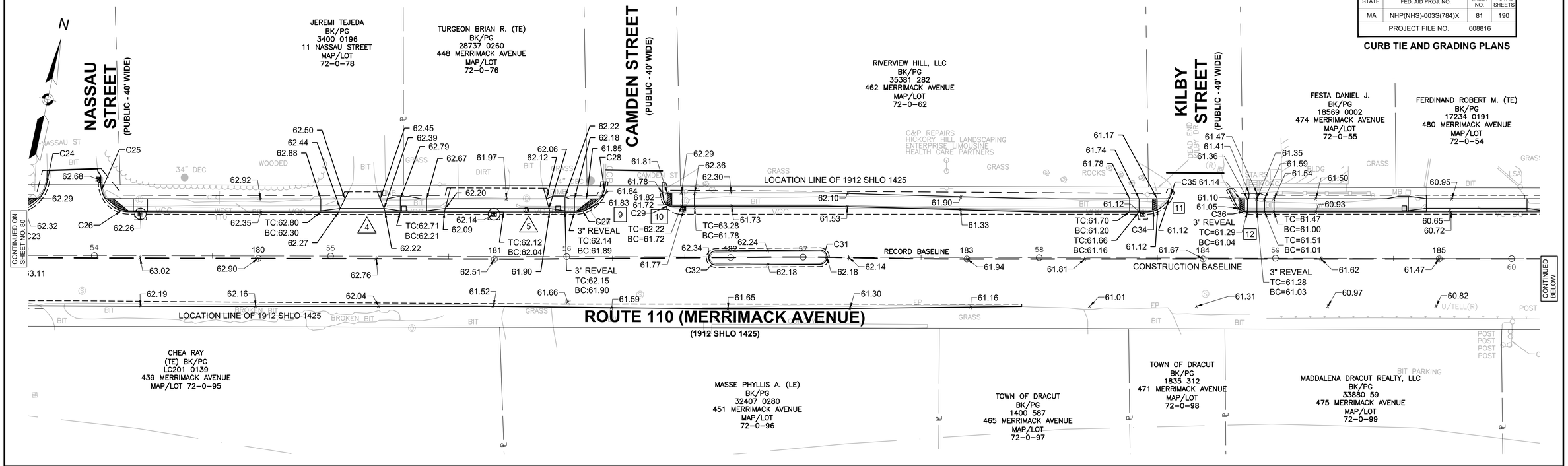
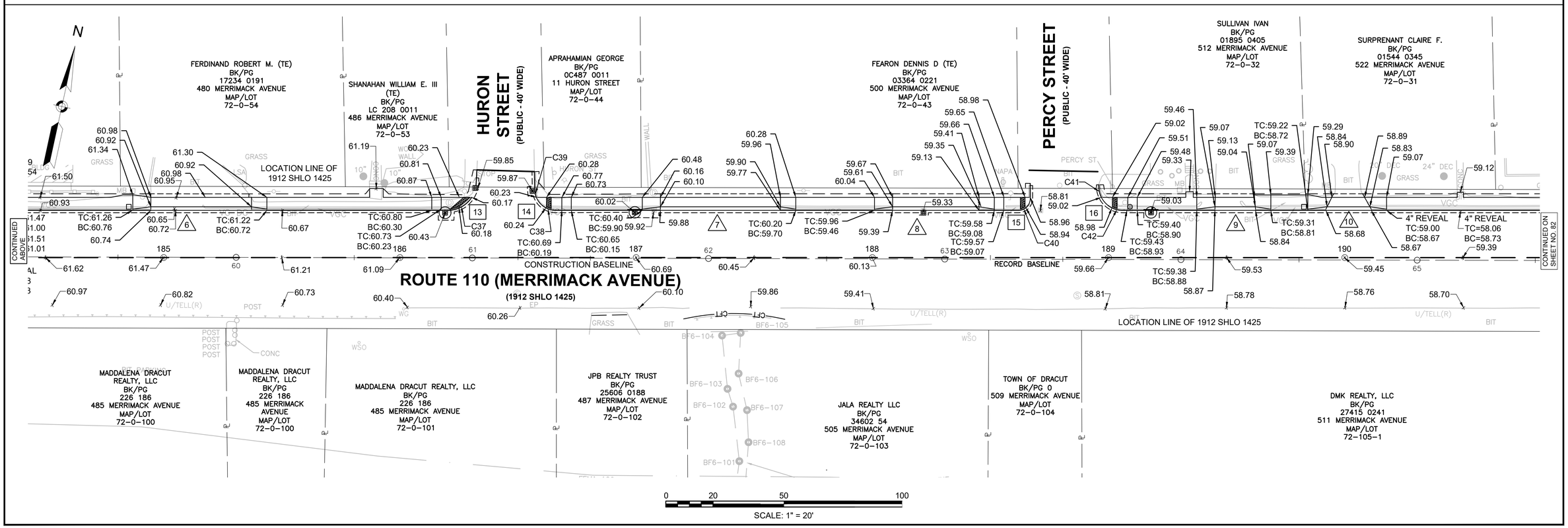
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	81	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS





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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	82	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

608816_HD(CTG-A).DWG Plotted on 9-Sep-2024 10:18 AM

N

SURPRENANT CLAIRE F.
BK/PG
01544 0345
522 MERRIMACK AVENUE
MAP/LOT
72-0-31

CADORETTE KEVIN (JTRS)
BK/PG
30333 0271
524 MERRIMACK AVENUE
MAP/LOT
72-0-30

PICKNEY STREET
(PUBLIC - 40' WIDE)

MOUSSEAU JEFFREY P. (JT)
BK/PG
27401 0088
9 PINCKNEY STREET
MAP/LOT
72-0-21

548 MERRIMACK AVENUE, LLC
BK/PG
22109 0110
548 MERRIMACK AVENUE
MAP/LOT
72-20-1

YORK STREET
(PUBLIC - 40' WIDE)

MAKARUTSA DOMINIC
BK/PG
34067 218
552 MERRIMACK AVENUE
MAP/LOT
72-0-16

LAMBERT ROLAND W.
BK/PG
10925 0229
570 MERRIMACK AVENUE
MAP/LOT
72-15-1

SEWER EASEMENT PB 193 PL 36

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

CONTINUED ON SHEET NO. 81

CONTINUED ON SHEET NO. 83

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

DMK REALTY, LLC
BK/PG
27415 0241
511 MERRIMACK AVENUE
MAP/LOT
72-105-1

FLYNN JOSEPH J
BK/PG
02346 0608
525 MERRIMACK AVENUE
MAP/LOT
72-0-106

TOWN OF DRACUT
BK/PG
16257 0058
531 MERRIMACK AVENUE
MAP/LOT
72-0-107

TOWN OF DRACUT
BK/PG 0
537 MERRIMACK AVENUE
MAP/LOT
72-0-108

TOWN OF DRACUT
BK/PG 0
541 MERRIMACK AVENUE
MAP/LOT
72-0-109

TOWN OF DRACUT
BK/PG 0
549 MERRIMACK AVENUE
MAP/LOT
72-0-110

MERRIMACK RIVER

FEMA 100-YEAR FLOODPLAIN (GIS)

200' RIVERFRONT AREA

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	83	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

LAMBERT ROLAND W.
BK/PG
10925 0229
570 MERRIMACK AVENUE
MAP/LOT
72-15-1

SPRUCE BUILDING ASSOCIATES
BK/PG
03276 0344
590 MERRIMACK AVENUE
MAP/LOT
72-0-14

HEAVENLY INVESTMENTS V, LLC
BK/PG 28445/219
PB/PL 113/80
592 MERRIMACK AVENUE
MAP/LOT
72-13

TOWN OF DRACUT
BK/PG 0
549 MERRIMACK AVENUE
MAP/LOT
72-0-110

TOWN OF DRACUT
BK/PG 0
675 MERRIMACK AVENUE
MAP/LOT
73-0-63

TROUT BROOK

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

100' RIVERFRONT AREA

FEMA 100-YEAR FLOODPLAIN (GIS)

200' RIVERFRONT AREA

20' WIDE EASEMENT PB/PL 113/80

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

BRIDGE NO. D-11-004

BORDERING VEGETATED WETLANDS
WETLAND FLAGS WBF 100 - 105 UNDERWATER

MERRIMACK RIVER

CONTINUED ON SHEET NO. 82

CONTINUED ON SHEET NO. 84

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	84	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

STUART STREET
(PUBLIC - 40' WIDE)

HEMLOCK STREET
(PUBLIC - 40' WIDE)

JACOB STREET
(PUBLIC - 40' WIDE)

WESTERLY LOCATION LINE OF STUART STREET PER PB 153 PL 36

HEAVENLY INVESTMENTS V, LLC
BK/PG 28445/219
PB/PL 113/80
592 MERRIMACK AVENUE
MAP/LOT
72-13

IDE MICHAEL (TE)
BK/PG
19474 0144
PB/PL 11/29
(LOT 1)
602 MERRIMACK AVENUE
MAP/LOT
72-0-9

GHALY, LLC
BK/PG
28327 0181
PB/PL 11/29
(LOTS 24-26 AND 42)
636 MERRIMACK AVENUE
MAP/LOT
72-0-2

MALANTIC ALAN D. (TE)
BK/PG 29895 0289
PB/PL 11/29
(LOTS 40, 41 AND 43)
648 MERRIMACK AVENUE
MAP/LOT
72-0-1

LOCATION LINE OF 1912 SHLO 1425

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

CONSTRUCTION BASELINE
RECORD BASELINE

TOWN OF DRACUT
BK/PG 0
675 MERRIMACK AVENUE
MAP/LOT
73-0-63

FEMA 100-YEAR FLOODPLAIN (GIS)

WOODED

MERRIMACK RIVER

CONTINUED ON SHEET NO. 83
CONTINUED ON SHEET NO. 85

0 20 50 100
SCALE: 1" = 20'

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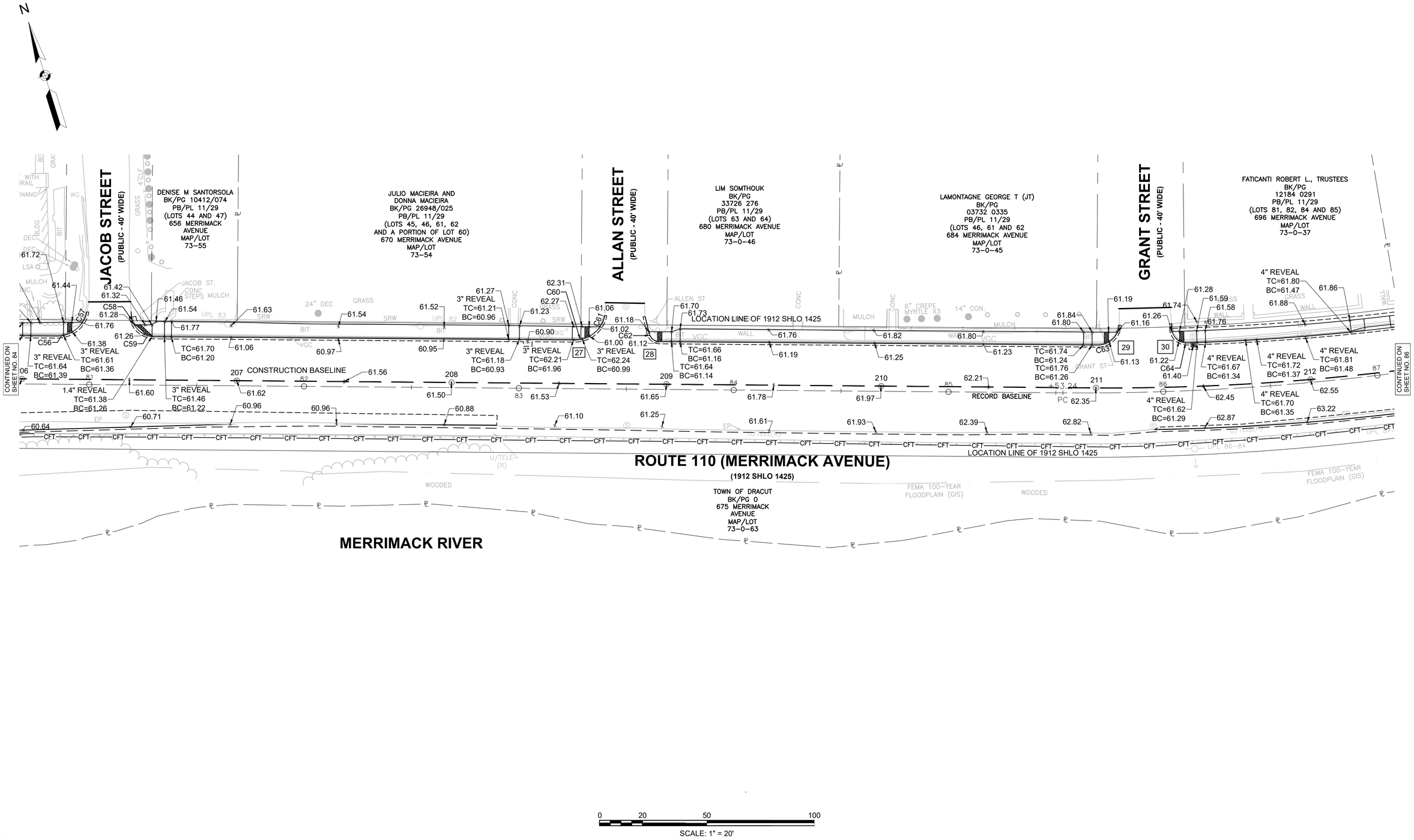
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	85	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS



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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	86	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

FATICANTI ROBERT L., TRUSTEES
BK/PG
12184 0291
PB/PL 11/29
(LOTS 81, 82, 84 AND 85)
696 MERRIMACK AVENUE
MAP/LOT
73-0-37

WILLOW B HOLDINGS, LLC
BK/PG
36205 0211
PB/PL 11/29
(LOTS 83 AND 93)
718 MERRIMACK AVENUE
MAP/LOT
73-0-35

VERAO BRENDA
BK/PG
30047 0047
PB/PL 11/29
(LOTS 92, 94 AND 95)
714 MERRIMACK AVENUE
MAP/LOT
73-0-1

LEAVITT STREET
(PUBLIC - 40' WIDE)

KOUBA ALLAN
BK/PG
33461 139
PB/PL 11/39
(LOTS 56-61)
744 MERRIMACK AVENUE
MAP/LOT
73-0-34

KOUBA ALLAN
BK/PG
33461 139
PB/PL 11/39
(LOT 54)
744 MERRIMACK AVENUE
MAP/LOT
73-0-1

MURILLO DIEGO
BK/PG
35635 141
PB/PL 11/39
(LOTS 53,55-61)
14 MT PLEASANT AVENUE
MAP/LOT
73-0-33

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

TOWN OF DRACUT
BK/PG 0
675 MERRIMACK AVENUE
MAP/LOT
73-0-63

BRADLEY JULIE M. (JT)
BK/PG
31906 0233
743 MERRIMACK AVENUE
MAP/LOT
73-0-74

MERRIMACK RIVER

FEMA 100-YEAR FLOODPLAIN (GIS)

CONTINUED ON SHEET NO. 85

CONTINUED BELOW

MURILLO DIEGO
BK/PG 35635 141
PB/PL 11/39
(LOTS 53,55-61)
14 MT PLEASANT AVENUE
MAP/LOT
73-0-33

MOUNT PLEASANT AVENUE
(PUBLIC - 40' WIDE)

LAFERRIERE JAMES A & GLORIA D. (LE)
BK/PG
26791 0140
PB/PL 11/39
(LOT 52)
756 MERRIMACK AVENUE
MAP/LOT
73-0-23

LAFERRIERE JAMES A & GLORIA D. (LE)
BK/PG
26791 0140
PB/PL 11/39
(LOT 51)
758 MERRIMACK AVENUE
MAP/LOT
73-0-22

TURNER FLORENCE
BK/PG
28419/2014 0
PB/PL 11/39
(LOTS 49 AND 50)
762 MERRIMACK AVENUE
MAP/LOT
73-0-21

BELLVIEW AVENUE
(PUBLIC - 40' WIDE)

GILMORE JOHN P. & DEBORAH L. (LE)
BK/PG
31876 0138
PB/PL 11/39
(LOTS 1 AND 2)
770 MERRIMACK AVENUE
MAP/LOT
73-0-12

PULTAR MARK T., TRUSTEE
BK/PG
28769 0203
PB/PL 15/16
(LOT 144)
778 MERRIMACK AVENUE
MAP/LOT
73-0-11

BRAMBILA DAVID F.
BK/PG
32015 0124
PB/PL 15/16
(LOT 144)
4 CONGRESS STREET
MAP/LOT
73-0-10

CONGRESS STREET
(PUBLIC - 40' WIDE)

794 MERRIMACK AVENUE, LLC
BK/PG
17324 0205
PB/PL 15/16
(LOTS 105 AND 106)
794 MERRIMACK AVENUE
MAP/LOT
73-0-4

LOCATION LINE OF 1912 SHLO 1425

CONSTRUCTION BASELINE

RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

BRADLEY JULIE M. (JT)
BK/PG
31906 0233
743 MERRIMACK AVENUE
MAP/LOT
73-0-74

MUTH PAULA M.
BK/PG
33169 46
755 MERRIMACK AVENUE
MAP/LOT
73-0-64

LAMONTAGNE GEORGE A.
BK/PG
LC228 125
773 MERRIMACK AVENUE
MAP/LOT
73-0-65

HENAULT BRIAN M. (JTRS)
BK/PG
14653 0116
781 MERRIMACK AVENUE
MAP/LOT
73-0-66

TOWN OF DRACUT
BK/PG
23267 0050
785 MERRIMACK AVENUE
MAP/LOT
73-0-67

FEMA 100-YEAR FLOODPLAIN (GIS)

CONTINUED ABOVE

CONTINUED ON SHEET NO. 87

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	87	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

CONGRESS STREET (PUBLIC - 40' WIDE)

794 MERRIMACK AVENUE, LLC
BK/PG
17324 0205
PB/PL 15/16
(LOTS 105 AND 106)
794 MERRIMACK AVENUE
MAP/LOT
73-0-4

LENZI MICHAEL J. & SANDRA M. TRST
BK/PG
12350 0217
PB/PL 15/16
(LOT 104)
780 MERRIMACK AVENUE
MAP/LOT
73-0-3

INTERVALE AVENUE (PUBLIC - 40' WIDE)

LENZI MICHAEL J. & SANDRA M. TR.
BK/PG
12350 0217
PB/PL 15/16
(LOTS 66-77)
810 MERRIMACK AVENUE
MAP/LOT
73-0-1

CONTINUED ON SHEET NO. 86

CONTINUED BELOW

RECORD BASELINE

CONSTRUCTION BASELINE

PCC +59.02

PT +90.86

100+00

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3163)

TOWN OF DRACUT
BK/PG
23267 0050
785 MERRIMACK AVENUE
MAP/LOT
73-0-67

HAGAN DAVID
BK/PG
32531 0167
795 MERRIMACK AVENUE
MAP/LOT
73-0-69

LENZI MATTHEW J.
BK/PG
23531 0064
803 MERRIMACK AVENUE
MAP/LOT
73-0-70

HYMOFF RICHARD S. (TE)
BK/PG
27259 0231
805 MERRIMACK AVENUE
MAP/LOT
73-0-71

CHRISTOPHER DIZAZZO
BK/PG
36333 205
821 MERRIMACK AVENUE
MAP/LOT
73-0-72

MARANGIELLO DONATO
BK/PG
32528 0130
825 MERRIMACK AVENUE
MAP/LOT
73-0-73

THOMAS & DONNA CORBIN
FAMILY TRUST
BK/PG
32741 0081
PB/PL 15/16
(LOTS 32 AND 33)
840 MERRIMACK AVENUE
MAP/LOT
68-0-34

DRAYCOTTE AVENUE (PUBLIC - 40' WIDE)

LITTLE MERRIMACK AVENUE
(1912 ST. HWY. ALT. 1425)

VARNUM AVENUE

ROUTE 110 (MERRIMACK AVENUE)
(1935 ST. HWY. ALT. 3163)

CONTINUED ABOVE

CONTINUED ON SHEET NO. 88

MARANGIELLO DONATO
BK/PG
32528 0130
825 MERRIMACK AVENUE
MAP/LOT
73-0-73

FEMA 100-YEAR FLOODPLAIN (GIS)

200' RIVERFRONT AREA

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	88	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

N

MCLARNEY CORNELIUS & BARBARA O.
BK/PG 02414 0617
871 MERRIMACK AVENUE
MAP/LOT 68-0-73

TOWN OF DRACUT
BK/PG 0
901 MERRIMACK AVENUE
MAP/LOT 68-0-74

ROUTE 110 (MERRIMACK AVENUE)
(1935 ST. HWY. ALT. 3163)

RECORD BASELINE

CONSTRUCTION BASELINE

CONTINUED ON SHEET NO. 87

CONTINUED BELOW

FEMA 100-YEAR FLOODPLAIN (GIS)

200' RIVERFRONT AREA

100' RIVERFRONT AREA

WOODED

BRADLEY RICHARD L. & DORIS A., TRS.
BK/PG 21727 0271
976 MERRIMACK AVENUE
MAP/LOT 69-10-3

BK/PG 0 0
966-968 MERRIMACK AVENUE
MAP/LOT 69-10-2C

TOWN OF DRACUT
BK/PG 0
901 MERRIMACK AVENUE
MAP/LOT 68-0-74

LITTLE MERRIMACK AVENUE
(1912 ST. HWY. ALT. 1425)

CONTINUED ABOVE

CONSTRUCTION BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1935 ST. HWY. ALT. 3163)

RECORD BASELINE

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)
WETLAND FLAG BF7-107 NOT FOUND

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER
(SCALED AND DIGITIZED FROM 1935 ST.HWY.ALT 3163)

MERRIMACK RIVER

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	89	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

N

BRADLEY RICHARD L. & DORIS A., TRS.
BK/PG
21727 0271
976 MERRIMACK AVENUE
MAP/LOT
69-10-3

TOWN OF DRACUT
BK/PG 0
1093 MERRIMACK AVENUE
MAP/LOT
69-0-13

DMH
RIM=65.90'
INV.1=59.95'
INV.2=63.10'

CB
RIM=65.58'
DEPTH=63.28'
INV.1=63.28'

DMH
RIM=65.05'
INV.1=61.95'
INV.2=58.95'

CB
RIM=64.61'
DEPTH=62.11'
INV.1=62.11'

12" REVEAL TC=68.43 BC=67.43
12" REVEAL TC=68.41 BC=67.14
12" REVEAL TC=67.69 BC=66.69
12" REVEAL TC=67.37 BC=66.37
12" REVEAL TC=67.27 BC=66.27
12" REVEAL TC=67.15 BC=66.15

26" DEC
3'CLF
BRUSH
8"AC W(R)
12" RCP CI(R)
12" RCP CO(R)
12" RCP 12" CI(R)
SRW
EP
U/TELL(R)
FEMA 100-YEAR FLOODPLAIN (GIS)
WOODED

67.82 67.25 66.86 66.51 66.12 65.80 65.83 65.70 65.58 65.34 65.91 65.23 65.80 65.01 65.57 64.83 65.40 65.12 64.98 64.80 64.55 64.41 64.41
67.22 66.95 66.74 66.52 66.44 66.37 66.23 66.10 65.89 65.76 65.50 65.36 65.29 67.23
65.69 65.76 65.65 65.37 65.21 65.31 65.36 65.33 65.20 65.05 65.17 65.17 65.20

CONTINUED ON SHEET NO. 88

CONTINUED BELOW

28.18 PT
244
248+76.53
PT +00.74
245
121
122
246
123
247
124
248
125
249
126
250
PC

CONSTRUCTION BASELINE
RECORD BASELINE

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3163)

MERRIMACK RIVER

N

TOWN OF DRACUT
BK/PG 0
1093 MERRIMACK AVENUE
MAP/LOT
69-0-13

CB
RIM=64.61'
DEPTH=62.11'
INV.1=62.11'

CB
RIM=63.18'
DEPTH=60.88'
INV.1=61.08'
NOPV
CLOGGED

12" RCP

65.12 64.98 64.80 64.55 64.41 64.78 64.56 64.35 64.14 64.02 63.88 63.68 63.65 63.46 63.30 63.06 62.73 62.49 62.89 63.08 63.30
65.36 65.29 65.17 65.20 65.07 64.79 64.72 64.37 64.09 63.91 63.81 63.54 63.53 63.53
64.21 63.99 63.79 63.57 63.45 63.31 63.18 63.11

CONTINUED ABOVE

CONTINUED ON SHEET NO. 90

126 250 PC 7.23 PC +15.94 127 251 64.88 128 64.67 252 64.39 129 64.20 253 64.11 CONSTRUCTION BASELINE 130 63.95 PT +66.44 RECORD BASELINE 131 254 63.74 PC +45.98 255 63.43 63.61 13

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3163)

MERRIMACK RIVER

INV 20" IRON
EL=52.88'

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	90	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

TOWN OF DRACUT
BK/PG 0
1093 MERRIMACK AVENUE
MAP/LOT
69-0-13

NEW ENGLAND POWER
BK/PG
02103 0001
1113 MERRIMACK AVENUE
MAP/LOT
69-0-14

CB
RIM=61.42'
DEPTH=56.42'
INV.1=57.32'
INV.2=57.32'
WL=57.32'

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3163)

RECORD BASELINE
CONSTRUCTION BASELINE
PT +67.22
PC +51.80
PC +95.58
PT
+25.83

CONTINUED ON SHEET NO. 89

CONTINUED BELOW

NEW ENGLAND POWER COMPANY

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER
(SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

FEMA 100-YEAR FLOODPLAIN (GIS)

INV 12" CI
EL=52.90'

INV 12"RCP
EL=51.80'

NEWBEGIN FLOYD
BK/PG
02080 0017
1156 MERRIMACK AVENUE
MAP/LOT
69-0-8

CB
RIM=60.25'
DEPTH=55.05'
INV.1=55.10'
WL=55.10'

DMH
RIM=59.74'
INV.1=56.74'
INV.2=54.34'

CB
RIM=59.63'
DEPTH=56.78'
INV.1=56.88'
WL=56.88'

PCC +34.15

CONTINUED ABOVE

CONTINUED ON SHEET NO. 91

INV 12" CI
EL=50.11'

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	91	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

ROUTE 110 (MERRIMACK AVENUE)

(1912 SHLO 1425 -1935 ST. HWY. ALT. 3265)

CONSTRUCTION BASELINE

RECORD BASELINE

PT +83.87

+62.83 PT

PC +95.26

+47.75 PC

N/F
NEWBEGIN FLOYD
BK/PG
02080 0017
1156 MERRIMACK AVENUE
MAP/LOT
69-0-8

FULL THROTTLE INVESTMENTS, LLC
BK/PG
25340 0255
1166 MERRIMACK AVENUE
MAP/LOT
69-0-7

KOLEK RONALD
BK/PG
02524 0518
1176 MERRIMACK AVENUE
MAP/LOT
69-0-6

VALERIO SERGIO
BK/PG
29713 0250
1180 MERRIMACK AVENUE
MAP/LOT
69-0-5

TOWLE GREGORY J. (TE)
BK/PG
13644 0285
1184 MERRIMACK AVENUE
MAP/LOT
69-0-4

DIAS LUIZ C., SR.
BK/PG
33874 254
1188 MERRIMACK AVENUE
MAP/LOT
69-0-3

ROMAN MARIO
BK/PG
32248 0013
PB/PL 70/61
(LOT 12)
1192 MERRIMACK AVENUE
MAP/LOT
69-0-2

ROMAN MARIO
BK/PG
32248 0013
PB/PL 70/61
(LOT 12)
1192 MERRIMACK AVENUE
MAP/LOT
69-0-2

CANO EDDY A. IND.
BK/PG
21895 0019
PB/PL 70/61
(LOTS 10 AND 11)
1200 MERRIMACK AVENUE
MAP/LOT
69-0-1

MISTRETTA WILLIAM J., JR., TRUSTEE
BK/PG
30085 0172
PB/PL 70/61
(LOT 9)
1208 MERRIMACK AVENUE
MAP/LOT
55-0-77

MISTRETTA WILLIAM J., JR., TRUSTEE
BK/PG
30085 0169
PB/PL 70/61
(LOT 8)
1204 MERRIMACK AVENUE
MAP/LOT
55-77-1

BURKE RALPH
BK/PG
23579 0067
PB/PL 70/61
(LOT 7A)
1212 MERRIMACK AVENUE
MAP/LOT
55-0-76

SAAVEDRA ALIS CHECOVICH IND.
BK/PG
26274 0234
PB/PL 70/61
(LOT 6A)
1214 MERRIMACK AVENUE
MAP/LOT
55-0-75

DESMARAIS GEORGE
BK/PG
26467 0004
PB/PL 70/61
(LOT 5A)
1220 MERRIMACK AVENUE
MAP/LOT
55-0-74

CAMERON ANN M.
BK/PG
03365 0184
PB/PL 70/61
(LOTS 3A AND 4A)
1224 MERRIMACK AVENUE
MAP/LOT
55-0-73

200' RIVERFRONT AREA

JACKSON STREET
(PUBLIC - 40' WIDE)

CB RIM=58.30' DEPTH=54.00' INV.1=54.00' WL=54.00'

CB RIM=58.17' DEPTH=52.97' INV.1=54.07' INV.2=53.67'

CB RIM=57.59' DEPTH=50.79' INV.1=53.59' INV.2=52.04' INV.3=52.39' WL=52.04'

CB RIM=57.03' CNO PARKED OVER

CB RIM=56.13' DEPTH=51.63' INV.1=54.28' WL=54.23'

DMH RIM=56.66' INV.1=52.71' INV.2=52.56' INV.3=52.81' INV.4=53.76'

DMH CONTECH RIM=56.70' INV.1=52.55' INV.2=52.60'

INV 12" PVC EL=48.62'

INV 18" RCP EL=48.86'

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

FEMA 100-YEAR FLOODPLAIN (GIS)

WOODED

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER (SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

UPL 143-84

UPL 152-84

3" REVEAL
TC=56.91
BC=56.66

TC=57.20
BC=56.70

TC=57.29
BC=56.79

CONTINUED ON SHEET NO. 90

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 92

0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	92	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

FPR REALTY TRUST
BK/PG 1869 0384
PB/PL 70/61
(LOT 23)
26 JACKSON STREET
MAP/LOT 55-0-67

STEPHEN M. BROX FAMILY LLC
BK/PG 36326 0294
1226 MERRIMACK AVENUE
MAP/LOT 55-0-66

SUNSET ROCK, LLC
BK/PG 28273 0078
1228 MERRIMACK AVENUE
MAP/LOT 55-0-65

SUNSET ROCK, LLC
BK/PG 28273 0078
1256 MERRIMACK AVENUE
MAP/LOT 55-0-64

SUNSET ROCK, LLC
BK/PG 28273 0078
1258 MERRIMACK AVENUE
MAP/LOT 55-64-1

SUNSET ROCK, LLC
BK/PG 28273 0078
1274 MERRIMACK AVENUE
MAP/LOT 55-0-63

SUNSET ROCK, LLC
BK/PG 28273 0078
1274 MERRIMACK AVENUE
MAP/LOT 55-0-62

BROX INDUSTRIES INC
BK/PG 5305 0093
1282 MERRIMACK AVENUE
MAP/LOT 55-0-61

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3265)

CONSTRUCTION BASELINE
RECORD BASELINE

CONTINUED ON SHEET NO. 91
CONTINUED BELOW

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER
(SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

BROX INDUSTRIES INC.
BK/PG 4940 0145
1286 MERRIMACK AVENUE
MAP/LOT 55-0-59

BROX INDUSTRIES INC
BK/PG 5305 0093
1282 MERRIMACK AVENUE
MAP/LOT 55-0-61

STEPHEN M. BROX FAMILY, LLC
BK/PG 36326 294
1471 METHUEN STREET
MAP/LOT 55-0-35

BROX STEPHEN M., TRUSTEE
BK/PG 26037 0239
1310 MERRIMACK AVENUE
MAP/LOT 55-0-56

SUNSET ROCK, LLC
BK/PG 26037 0237
1326 MERRIMACK AVENUE
MAP/LOT 55-0-54

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER
(SCALED AND DIGITIZED FROM 1938 ST.HWY.ALT 3265)

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	93	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

SUNSET ROCK, LLC
BK/PG
26037 0237
1326 MERRIMACK AVENUE
MAP/LOT
55-0-54

PEREIRA MARIO
BK/PG
21870 0247
1336 MERRIMACK AVENUE
MAP/LOT
55-0-53

IIDA TAKASHI IND.
BK/PG
17505 0218
1338 MERRIMACK AVENUE
MAP/LOT
55-0-52

BROX INDUSTRIES INC
BK/PG
04940 0145
38 OAKSIDE DRIVE
MAP/LOT
55-0-51

SUNSET ROCK LLC
BK/PG
16644 0208
1370 MERRIMACK AVENUE
MAP/LOT
55-0-47

HILLSIDE DRIVE
(PRIVATE - 40' WIDE)

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3265)

CONSTRUCTION BASELINE

RECORD BASELINE

PT +24.78

PC +43.47

PRC +47.80

CONTINUED ON SHEET NO. 92

CONTINUED BELOW

BROX INDUSTRIES, INC.
BK/PG
20802 0105
1374 MERRIMACK AVENUE
MAP/LOT
55-0-46

BROX INDUSTRIES, INC.
BK/PG
21817 0084
1380 MERRIMACK AVENUE
MAP/LOT
55-0-45

HAYES ELAINE DO NASCIMENTO (TE)
BK/PG
21028 0275
1386 MERRIMACK AVENUE
MAP/LOT
55-0-44

OAKSIDE DRIVE
(PUBLIC - 40')

WILLIS JOHN J. TRUSTEE
BK/PG
2022 106
1392 MERRIMACK AVENUE
MAP/LOT
55-0-39

WILLIS JOHN J TR
BK/PG
2022 106
VP LOWELL BLVD
MAP/LOT
224-165B-1

SUNSET ROCK LLC
BK/PG
9047 334
237 LOWELL BLVD
MAP/LOT
224-165B-2

BROX INDUSTRIES INC
BK/PG
15619 112
229 LOWELL BLVD
MAP/LOT
224-165B-3

SUNSET ROCK LLC
BK/PG
16644 0208
1370 MERRIMACK AVENUE
MAP/LOT
55-0-47

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425 -1935 ST. HWY. ALT. 3265)

ROUTE 110 (LOWELL BOULEVARD)
297 (1912 SHLO 1426 - ST. HWY. ALT. 3143)

CONSTRUCTION BASELINE

RECORD BASELINE

172+25.40

0+01.19

DRACUT

METHUEN

APPROXIMATE TOWN LINE DRACUT

APPROXIMATE TOWN LINE METHUEN

COMMONWEALTH OF MASS
BK/PG
VP LOWELL BLVD
MAP/LOT
224-166-32

WILLIS JOHN J TR
BK/PG
2022 106
VP LOWELL BLVD
MAP/LOT
224-166-33

CONTINUED ABOVE

CONTINUED ON SHEET NO. 94

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	94	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

608816_HD(CTG-B).DWG Plotted on 9-Sep-2024 10:24 AM

BROX INDUSTRIES INC
BK/PG
15619 112
229 LOWELL BLVD
MAP/LOT
224-165B-3

NORTHWOOD DRIVE (PUBLIC - 40')

BROX INDUSTRIES INC
BK/PG
10912 20
213 LOWELL BLVD
MAP/LOT
224-165B-8

CMI LEASING CORP
BK/PG
13891 95
207 LOWELL BLVD
MAP/LOT
224-165B-9

SUNSET ROCK LLC
BK/PG
8492 151
205 LOWELL BLVD
MAP/LOT
224-165B-10

BROX INDUSTRIES INC
BK/PG
3771 187
VP LOWELL BLVD
MAP/LOT
224-165B-11

CONTINUED ON SHEET NO. 93

CONSTRUCTION BASELINE

PT +72.77

PC +04.49

RECORD BASELINE

ROUTE 110 (LOWELL BOULEVARD)
(1912 SHLO 1426 - ST. HWY. ALT. 3143)

CONTINUED BELOW

WILLIS JOHN J TR
BK/PG
2022 106
VP LOWELL BLVD
MAP/LOT
224-166-33

CONTINUED ABOVE

BROX INDUSTRIES INC
BK/PG
2959 75
VP RIDGEWOOD DRIVE
MAP/LOT
224-165B-15

BROX INDUSTRIES INC
BK/PG
2959 84
179 LOWELL BLVD
MAP/LOT
224-165B-16

RIDGEWOOD DRIVE (PUBLIC - 40')

+86.70 PC

N/F
WILLIS JOHN J TR
BK/PG
2022 106
VP LOWELL BLVD
MAP/LOT
224-166-33

COMMONWEALTH OF MASS
BK/PG
VP LOWELL BLVD
MAP/LOT
224-166-32

BENCHMARK: DISK 171G
MASS. D.P.W. DISK STAMPED "171G"
EL=49.47'

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	95	190
PROJECT FILE NO. 608816			

CURB TIE AND GRADING PLANS

608816_HD(CTG-B).DWG Plotted on 9-Sep-2024 10:25 AM

BROX INDUSTRIES INC
BK/PG
2959 84
179 LOWELL BLVD
MAP/LOT
224–165B–16

BROX INDUSTRIES INC
BK/PG
2959 84
3 RIDGEWOOD DRIVE
MAP/LOT
224–165B–13

BROX INDUSTRIES INC
BK/PG
3771 187
VP LOWELL BLVD
MAP/LOT
224–165B–11

BROX INDUSTRIES INC
BK/PG
2959 67
161 LOWELL BLVD
MAP/LOT
224–165B–18

CONTINUED ON SHEET NO. 94

CONTINUED BELOW

RECORD BASELINE

CONSTRUCTION BASELINE

ROUTE 110 (LOWELL BOULEVARD)
(1912 SHLO 1426 - ST. HWY. ALT. 3143)

FEMA 100–YEAR FLOODPLAIN (GIS)

COMMONWEALTH OF MASS
BK/PG
VP LOWELL BLVD
MAP/LOT
224–166–32

WILDER ROBERT J
BK/PG
92P 100A
VP LOWELL BLVD
MAP/LOT
224–166–31

COMMONWEALTH OF MASS
BK/PG
VP LOWELL BLVD
MAP/LOT
224–166–30

BROX INDUSTRIES INC
BK/PG
3771 187
145 LOWELL BLVD
MAP/LOT
24–165B–19

WHEELER STREET (PUBLIC - 50' WIDE)

BROX INDUSTRIES INC
BK/PG
3771 187
VP LOWELL BLVD
MAP/LOT
224–165B–19A

WILLIS JOHN J TR
BK/PG
2022 106
VP LOWELL BLVD
MAP/LOT
224–166–29

NEIGHBORHOOD PROPERTY
BK/PG
15266 156
122 LOWELL BLVD
MAP/LOT
224–166–28

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	96	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

ROUTE 110 (LOWELL BOULEVARD)

(1912 SHLO 1426 - ST. HWY. ALT. 3143)

CONSTRUCTION BASELINE

RECORD BASELINE

PC +06.99

+62.84 PT

PT +34.58

+14.42 PC

BROX INDUSTRIES INC
BK/PG
3771 187
VP LOWELL BLVD
MAP/LOT
224–165B–19A

BROX INDUSTRIES INC
BK/PG
2959 59
135 LOWELL BLVD
MAP/LOT
224–165B–20

LAMBERT JOHN M TR & NORMA TR
BK/PG
13451 241
802 LOWELL STREET
MAP/LOT
224–165B–20E

SANTOS DEBRA A
BK/PG
12895 249
798 LOWELL STREET
MAP/LOT
224–165B–20D

ZYGOURIS DIMITRIOS M
BK/PG
2712 292
794 LOWELL STREET
MAP/LOT
224–165B–20C

NEIGHBORHOOD PROPERTY
BK/PG
15266 156
122 LOWELL BLVD
MAP/LOT
224–166–28

NEIGHBORHOOD PROPERTY
BK/PG
15266 156
122 LOWELL BLVD
MAP/LOT
224–166–27A

MAHONEY PHILIP L
BK/PG
14297 61
120 LOWELL BLVD
MAP/LOT
224–166–27

INFANTE CARMEN
BK/PG
10364 97
116 LOWELL BLVD
MAP/LOT
224–166–26

ZYGOURIS BETTE D TR
BK/PG
11666 90
106 LOWELL BLVD
MAP/LOT
320–166–25

RUSCAK SANDRA L
BK/PG
13419 230
81 LOWELL BLVD
MAP/LOT
224–165B–20B

LECLERC PAUL
BK/PG
1207 691
79 LOWELL BLVD
MAP/LOT
320–165B–21A

LECLERC PAUL A
BK/PG
1207 691
77 LOWELL BLVD
MAP/LOT
320–165B–21

CONTINUED ON SHEET NO. 95

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 97

0 20 50 100

SCALE: 1" = 20'

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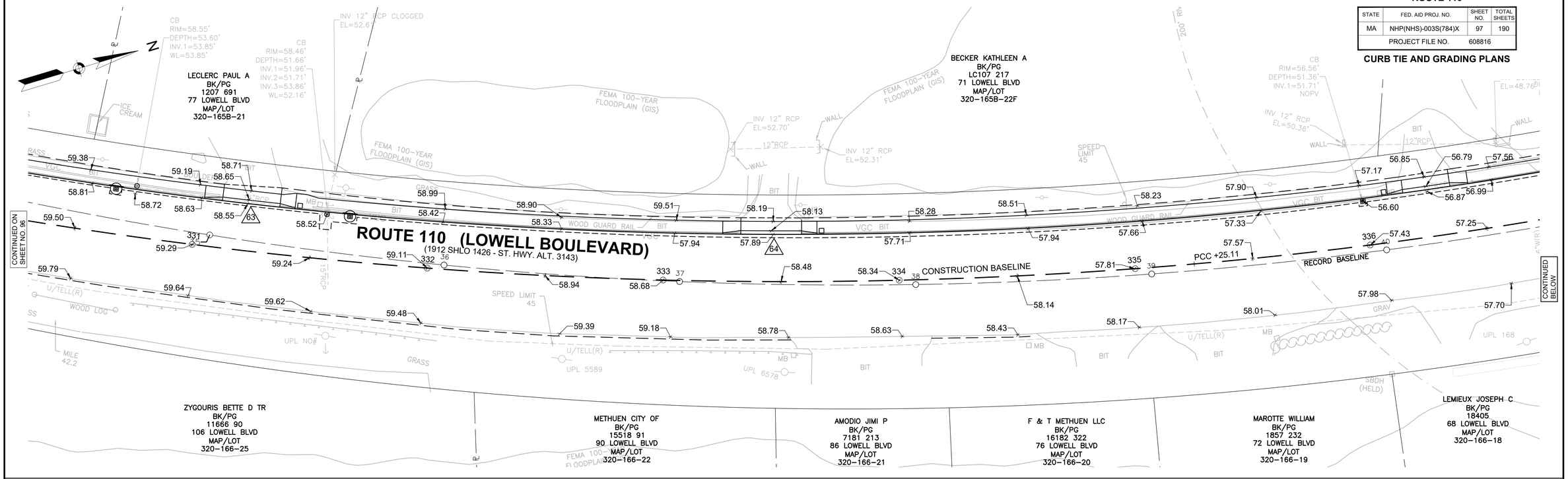
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	97	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS



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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	98	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

BRADSHAW AUSTIN D
BK/PG
18040
728 LOWELL STREET
MAP/LOT
320-165B-22D

BENSADDIK ADEL
BK/PG
18364
67 LOWELL BLVD
MAP/LOT
320-165B-22

TIBERII THOMAS SR
BK/PG
14461 267
25 LOWELL BLVD
MAP/LOT
320-165B-24

LAWRENCE ASSEMBLY OF GOD
BK/PG
1256 150
15 LOWELL BLVD
MAP/LOT
320-165B-25

MARQUIS JAMES R
BK/PG
LC87 69
40 LOWELL BLVD
MAP/LOT
320-166-13

ARLEQUE WAYNE W
BK/PG
5363 157
VP LOWELL BLVD
MAP/LOT
320-166-12

LEMIEUX DAVID R
BK/PG
LC100 365
24 LOWELL BLVD
MAP/LOT
320-166-11

NJR LLC
BK/PG
11430 14
22 LOWELL BLVD
MAP/LOT
320-166-10A

LOCATION LINE OF 1925 ST HWY ALT 2233
LOCATION LINE OF 1912 SHLO 1426
LOCATION LINE OF 1934 ST HWY ALT 3143 (SECT 1)
RECORD BASELINE
CONSTRUCTION BASELINE
PRC +12.51
PRC
+59.58
100' RIVERFRONT AREA
200' RIVERFRONT AREA
FEMA 100-YEAR FLOODPLAIN (GIS)
MEAN ANNUAL HIGH WATER LINE (INLAND BANK)
MMHB (HELD)
EPLP (HELD)
WOOD GUARD RAIL
CONTINUED ON SHEET NO. 97
CONTINUED BELOW

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1426 - ST. HWY. ALT. 2233 & 3143)

LAWRENCE ASSEMBLY OF GOD
BK/PG
1256 150
15 LOWELL BLVD
MAP/LOT
320-165B-25

NJR LLC
BK/PG
11430 14
22 LOWELL BLVD
MAP/LOT
320-166-10A

COMMONWEALTH OF MASS/DOT
BK/PG
13216 1
LT 2 LOWELL BLVD
MAP/LOT
320-166-10

LOCATION LINE OF 1912 SHLO 1426
PT +71.08
PT
PT +65.90
CONSTRUCTION BASELINE
RECORD BASELINE
200' RIVERFRONT AREA
BORDERING VEGETATED WETLANDS
WETLAND FLAG WFT-5 NOT FOUND (AREA MOWED)
WOOD GUARD RAIL
TURN 40 MPH
MILE 42.6
FEMA 100-YEAR FLOODPLAIN (GIS)
CONTINUED ABOVE
CONTINUED ON SHEET NO. 99

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1426 - ST. HWY. ALT. 2233 & 3143)

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	99	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

608816_HDi(CTG-C).DWG Plotted on 9-Sep-2024 10:28 AM

N

LAWRENCE ASSEMBLY OF GOD
BK/PG
1256 150
15 LOWELL BLVD
MAP/LOT
320-165B-25

BORDERING VEGETATED WETLANDS

WETLAND FLAG WFT-5 NOT FOUND (AREA MOWED)

LOCATION LINE OF 1912 SHLO 1426

WOOD GUARD RAIL

CONTINUED ON SHEET NO. 98

RECORD BASELINE

CONSTRUCTION BASELINE

CONTINUED BELOW

LOCATION LINE OF 1934 ST HWY ALT 3143 (SECT 1)

ROUTE 110 (LOWELL BOULEVARD)
(1912 SHLO 1426 - ST. HWY. ALT. 3143)

TELE POST

FEMA 100-YEAR FLOODPLAIN (GIS)

COMMONWEALTH OF MASS/DOT
BK/PG
13216 1
LT 2 LOWELL BLVD
MAP/LOT
320-166-10

BORDERING VEGETATED WETLANDS

WETLAND FLAG WFL 125

N

LAWRENCE ASSEMBLY OF GOD
BK/PG
1256 150
15 LOWELL BLVD
MAP/LOT
320-165B-25

LOWELL STREET
(PUBLIC - VARIABLE WIDTH)

STOP/ TRUCKS PLEASE SEEK ALTERNATE ROUTE

TRUCKS SEEK ALTERNATE ROUTE

BROX ERIC R
BK/PG
3283 114
VP LOWELL STREET
MAP/LOT
320-165A-5

DOWD FRANCES T TR
BK/PG
8094 237
687 LOWELL STREET
MAP/LOT
320-165A-6MC

LOCATION LINE OF 1912 SHLO 1426

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

CONTINUED ABOVE

CONSTRUCTION BASELINE

RECORD BASELINE

CONTINUED ON SHEET NO. 100

ROUTE 110 (LOWELL STREET)
(1912 SHLO 1426 - ST. HWY. ALT. 3143)

LOCATION LINE OF 1934 ST HWY ALT 3143 (SECT 1)

LOCATION LINE OF 1916 SHLO 1714

COMMONWEALTH OF MASS/DOT
BK/PG
13216 1
LT 2 LOWELL BLVD
MAP/LOT
320-166-10

HATEM TUFIC R & DIANA B RLE
BK/PG
10198 254
33 ARMORY STREET
MAP/LOT
320-166-9

NELSON JAMES E
BK/PG
15168 211
31 ARMORY STREET
MAP/LOT
320-166-9A

NELSON JAMES E
BK/PG
15168 210
29 ARMORY STREET
MAP/LOT
320-166-9B

MARQUES SANDRA
BK/PG
16920 5
27 ARMORY STREET
MAP/LOT
320-166-9C

DELEON BELKIS
BK/PG
4973 125
25 ARMORY STREET
MAP/LOT
320-166-9D

FEMA 100-YEAR FLOODPLAIN (GIS)

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	100	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

DOWD FRANCES T TR
BK/PG
8094 237
687 LOWELL STREET
MAP/LOT
320-165A-6MC

COMMONWEALTH OF MASS/MILITARY
BK/PG
320 202
679 LOWELL STREET
MAP/LOT
320-165A-7

MKS INSTRUMENTS INC
BK/PG
4294 214
651 LOWELL STREET
MAP/LOT
318-165A-9

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

RECORD BASELINE

CONSTRUCTION BASELINE

LOCATION LINE OF 1916 SHLO 1714

ROUTE 110 (LOWELL STREET)
(1912 SHLO 1714 - ST. HWY. ALT. 6673)

CONTINUED ON SHEET NO. 99

CONTINUED ON SHEET NO. 101

DELEON BELKIS
BK/PG
4973 125
25 ARMORY STREET
MAP/LOT
320-166-9D

MACDONALD SCOTT
BK/PG
11614 196
21 ARMORY STREET
MAP/LOT
320-166-9E

GEIGER LISA JAYNE
BK/PG
14316 137
17 ARMORY STREET
MAP/LOT
320-166-9F

CEDRONE ANNMARIE
BK/PG
13426 69
682 LOWELL STREET
MAP/LOT
320-166-9G

MASSE STEPHEN R TR
BK/PG
14437 154
680 LOWELL STREET
MAP/LOT
320-166-9H

SILVERIO PHILLIP A TR
BK/PG
14535 218
678 LOWELL STREET
MAP/LOT
320-166-9J

SILVERIO PHILLIP A TR
BK/PG
14535 218
676 LOWELL STREET
MAP/LOT
320-166-9K

MERRIMACK RIVER WATERSHED INC
BK/PG
5365 18
VP LOWELL BLVD
MAP/LOT
320-166-9L

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	101	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

ROUTE 110 (LOWELL STREET)

(1912 SHLO 1714 - ST. HWY. ALT. 6673 & 7059)

MKS INSTRUMENTS INC
BK/PG
4294 214
651 LOWELL STREET
MAP/LOT
318–165A–9

LOCATION LINE OF 1985 SHLO 6673

CONSTRUCTION BASELINE

RECORD BASELINE

LOCATION LINE OF 1916 SHLO 1714

CONTINUED ON SHEET NO. 100

CONTINUED ON SHEET NO. 102

SILVERIO PHILLIP A TR
BK/PG
14535 218
676 LOWELL STREET
MAP/LOT
320–166–9K

MERRIMACK RIVER WATERSHED INC
BK/PG
5365 18
VP LOWELL BLVD
MAP/LOT
320–166–9L

GILLESPIE ANITA A
BK/PG
4373 91
VP LOWELL STREET
MAP/LOT
320–166–9R

GILLESPIE ANITA A TR
BK/PG
4373 91
670 LOWELL STREET
MAP/LOT
320–166–9N

CITY OF METHUEN
C/O CONSERVATION COMMISSION
BK/PG 6338/175
658 LOWELL STREET
MAP/LOT
318–166–9P

FEMA 100–YEAR FLOODPLAIN (GIS)

ISOLATED VEGETATED WETLANDS

WFP–100 WFP–101 WFP–102 WFP–103 WFP–104 WFP–105

WFO–104 WFO–105 WFO–106 WFO–1

0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	102	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

GRIFFIN BROOK DRIVE
(PRIVATE - VARIABLE WIDTH)

ROUTE 110 (LOWELL STREET)
(1912 SHLO 1714 - ST. HWY. ALT. 6673 & 7059)

LOCATION LINE OF 1992 SHLO 7059

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

LOCATION LINE OF 1916 SHLO 1714

RECORD BASELINE

CONSTRUCTION BASELINE

PC +64.17

PT +04.96

PI +36.74

PC +96.56

PT +09.23

PC +94.43

ONE GRIFFIN BROOK DRIVE LLC
BK/PG 13360/197
PL 13172
(LOT 7)
1 GRIFFIN BROOK
MAP/LOT
318–165A–9A

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
(PARCEL C)
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

MERRIMACK COLLEGE
BK/PG
16450 115
656 LOWELL STREET
MAP/LOT
318–166–9Q

CITY OF METHUEN
C/O CONSERVATION COMMISSION
BK/PG 6338/175
658 LOWELL STREET
MAP/LOT
318–166–9P

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

200' RIVERFRONT AREA

100' RIVERFRONT AREA

FEMA 100-YEAR FLOODPLAIN (GIS)

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

CONTINUED ON SHEET NO. 101

CONTINUED ON SHEET NO. 103

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	103	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

N

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
(PARCEL C)
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

635 LOWELL STREET LLC
BK/PG 15114/319
PL 5596
(PARCEL A)
635 LOWELL STREET
PARCEL ID
318–165A–10

BENCHMARK: DISK 171K
MASS. D.P.W. DISK STAMPED "171K"
EL=58.65'

FEMA 100–YEAR FLOODPLAIN (GIS)
200' RIVERFRONT AREA
GRIFFIN BROOK DRIVE NEXT SIGNAL
PEDESTRIAN WALK
UPL 209
REBAR
24" DEC

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)
RECORD BASELINE
CONSTRUCTION BASELINE
PC +53.93
PT +85.36
PI +31.68

CONTINUED ON SHEET NO. 102
CONTINUED ON SHEET NO. 104

ROUTE 110 (LOWELL STREET)
(1912 SHLO 1714 - ST. HWY. ALT. 6673)

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

BORDERING VEGETATED WETLANDS

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	104	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

635 LOWELL STREET LLC
BK/PG 15114/319
PL 5596
(PARCEL A)
635 LOWELL STREET
PARCEL ID
318–165A–10

HICKORY HILL GOLF COURSE INC
BK/PG
1084 336
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

JOHNSTONE DAVID TR
BK/PG
15133 225
619 LOWELL STREET
MAP/LOT
318–165A–14

HICKORY HILL GOLF
COURSE INC
BK/PG
3302 80
615 LOWELL STREET
MAP/LOT
318–165A–15

BENCHMARK: DISK 171K
D.P.W. DISK STAMPED "171K"
EL=58.65'

CONTINUED ON SHEET NO. 103

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

RECORD BASELINE

CONSTRUCTION BASELINE

PT +45.15

PC +53.93

+97.34 PI

ROUTE 110 (LOWELL STREET)
(1912 SHLO 1714 - ST. HWY. ALT. 6673)

CONTINUED BELOW

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

FEMA 100–YEAR FLOODPLAIN (GIS)

WFN–109 WFN–110 WFN–111 WFN–112

PHILLIPS ACADEMY TRUSTEES OF
BK/PG
12785 85
620 LOWELL STREET
MAP/LOT
318–166–6

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
PL 303
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

JOSE I ARIAS &
MASSIEL PENA ARIAS
BK/PG 15496/128
PL 9030
(LOT B)
605 LOWELL STREET
MAP/LOT
318–165A–19

DASILVA
LORRANA CRISTINA
BK/PG
16713 4
609 LOWELL STREET
MAP/LOT
318–165A–17

PANIAGUA YEFRY KENDRY
BK/PG
17055 333
611 LOWELL STREET
MAP/LOT
318–165A–16

HICKORY HILL GOLF COURSE INC
BK/PG
3302 80
615 LOWELL STREET
MAP/LOT
318–165A–15

HILL AVENUE
(PUBLIC - 40' WIDE)

END OF 1916 SHLO 1714 (NUMBER 2)

CONTINUED ABOVE

LOCATION LINE OF 1916 SHLO 1714 (NUMBER 2)

RECORD BASELINE

CONSTRUCTION BASELINE

ROUTE 110 (LOWELL STREET)
(1916 SHLO 1714)

CONTINUED ON SHEET NO. 105

PHILLIPS ACADEMY TRUSTEES OF
BK/PG
12785 85
620 LOWELL STREET
MAP/LOT
318–166–6

WILLIAM H. BROWN BOATHOUSE

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318–166–5

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	105	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

ROUTE 110 (LOWELL STREET)

(1916 SHLO 1687)

SCALE: 1" = 20'

SACMAWATEY MAM & CHHENG CHEA
BK/PG 8086/110
PB/PL 1/31
(LOTS 21 & 22)
603 LOWELL STREET
MAP/LOT
318–165A–24

METHUEN HOUSING AUTHORITY
BK/PG 1974/042
PB/PL 1/31
601 LOWELL STREET
MAP/LOT
318–165A–25

RAMSAY DOROTHY T ETAL
BK/PG
3289 198
597 LOWELL STREET
MAP/LOT
318–165A–26

MYERS MICHAEL A
BK/PG
11263 337
593 LOWELL STREET
MAP/LOT
318–165A–27

JOHN D MATTHESON
BK/PG 1377/221
PL 7176
(LOT B)
604 LOWELL STREET
MAP/LOT
318–166–5B

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318–166–5

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 2223/142
PL 7176
(LOT C)
602 LOWELL STREET
MAP/LOT
318–166–5A

SIX HUNDRED TWO LOWELL
STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 15960/167
PL 1894
602 LOWELL STREET
MAP/LOT
318–166–4

NEW BALANCE ATHLETICS INC
BK/PG 15832/304
PL 1894
596 LOWELL STREET
MAP/LOT
318–166–1

WALBROOK STREET
(PRIVATE DRIVEWAY)

WINCHESTER STREET
(PUBLIC - 40' WIDE)

END OF 1916 SHLO 1714 (NUMBER 2)

LOCATION LINE OF 1916 SHLO 1687 (SECT 1)

BEGINNING OF 1916 SHLO 1687 (SECT 1)

END OF 1916 SHLO 1714 (NUMBER 2)

LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

CONSTRUCTION BASELINE

RECORD BASELINE

99+98.91

CONTINUED ON SHEET NO. 104

CONTINUED ON SHEET NO. 106

STATE HIGHWAY PARKING PROHIBITED

CHAIN BETWEEN POST MB

JAY GEE'S ICE CREAM

PLANTER

48" DEC

GRASS

608816_HDI(CTG-C).DWG Plotted on 9-Sep-2024 10:29 AM

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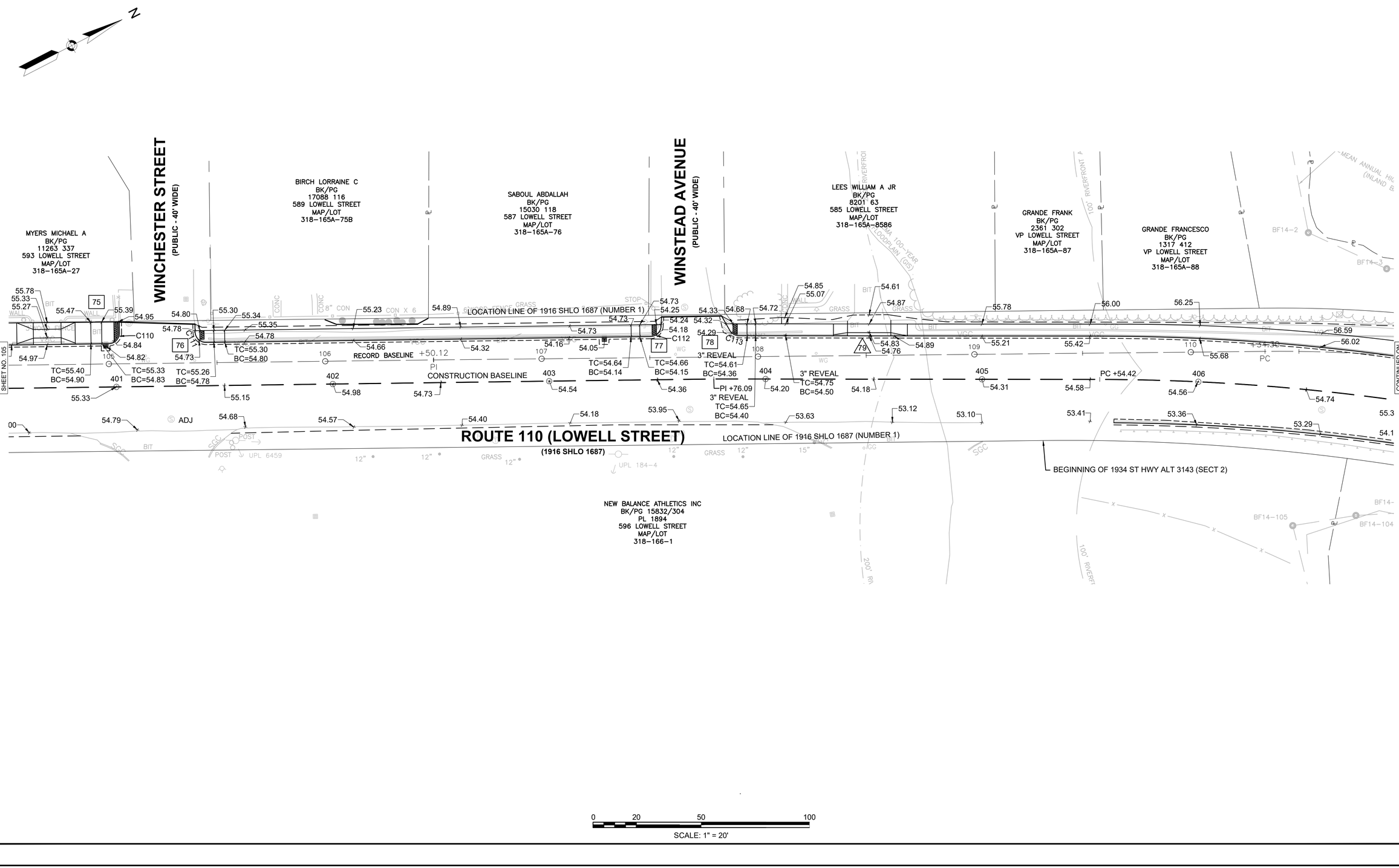
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	106	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS



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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	107	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

608816_HDI(CTG-C).DWG Plotted on 9-Sep-2024 10:30 AM

FRASER MAY B
BK/PG
890 95
2 SAWYER PLACE
MAP/LOT
318-165A-89A

SAWYER PLACE
(PUBLIC - 40' WIDE)

CALLAHAN STREET
(PUBLIC)

LEGER TAYLOR L
BK/PG
16715 259
527 LOWELL STREET
MAP/LOT
318-165A-92

MOLLOY MICHAEL F
BK/PG
5070 116
525 LOWELL STREET
MAP/LOT
318-165A-93

ENCINA NICOLAS
BK/PG
16398 105
523 LOWELL STREET
MAP/LOT
318-165A-94

SAWYER STREET
(PUBLIC - 40' WIDE)

CONTINUED ON SHEET NO. 106

LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

RECORD BASELINE

CONSTRUCTION BASELINE

4" REVEAL TC=61.38 BC=61.05

4" REVEAL TC=61.94 BC=61.61

4" REVEAL TC=63.23 BC=62.90

+86.16 PT

4" REVEAL TC=64.43 BC=64.10

PT +31.70

4" REVEAL TC=65.41 BC=65.08

4" REVEAL TC=65.61 BC=65.28

4" REVEAL TC=66.15 BC=65.82

4" REVEAL TC=66.36 BC66.03

4" REVEAL TC=66.83 BC=66.50

4" REVEAL TC=66.48 BC=66.15

+412.63 PT

CONTINUED BELOW

ROUTE 110 (LOWELL STREET)

(1916 SHLO 1687 - ST HWY ALT 3143)

NEW BALANCE ATHLETICS INC
BK/PG
15832 304
596 LOWELL STREET
MAP/LOT
318-166-1

MERRIMACK RIVER

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)

BISTANY DAVID A
BK/PG
3202 78
530 LOWELL STREET
MAP/LOT
318-162-1

ABDOO PHILIP E
BK/PG
5757 153
528 LOWELL STREET
MAP/LOT
318-162-1A

HANNIGAN DAVID A
BK/PG
5056 337
526 LOWELL STREET
MAP/LOT
318-162-2

CONTINUED ABOVE

ENCINA NICOLAS
BK/PG
16398 105
523 LOWELL STREET
MAP/LOT
318-165A-94

SAWYER STREET
(PUBLIC - 40' WIDE)

OLSEN ERICK ALFRED EUGENIO TR
BK/PG
15926 177
521 LOWELL STREET
MAP/LOT
318-164-20

GEORGE ROAD
(PUBLIC - 40' WIDE)

NO OUTLET GEORGE RD DEAD END

CARIGNANA ROBERT R
BK/PG
14556 234
517 LOWELL STREET
MAP/LOT
318-164-21

GARROD GARY S
BK/PG
7944 306
513 LOWELL STREET
MAP/LOT
318-164-17H

NEWHILL ROAD
(PUBLIC - 40' WIDE)

LOYCANO ROBERT A
BK/PG
2002 145
ZERO NEWHILL RD
MAP/LOT
318-164-16

LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

RECORD BASELINE

CONSTRUCTION BASELINE

4" REVEAL TC=66.83 BC=66.50

4" REVEAL TC=66.48 BC=66.15

TC=66.87 BC=66.37

TC=65.21 BC=64.71

TC=64.30 BC=63.80

TC=58.28 BC=57.78

TC=57.39 BC=56.89

ROUTE 110 (LOWELL STREET)

(1916 SHLO 1687)

HANNIGAN DAVID A
BK/PG
5056 337
526 LOWELL STREET
MAP/LOT
318-162-2

NGUYEN GIAO
BK/PG
15513 43
524 LOWELL STREET
MAP/LOT
318-162-3

ANDREW ROBERT A TR
BK/PG
9896 113
522 LOWELL STREET
MAP/LOT
318-162-4

BILODEAU MARY HELEN
BK/PG
14995 80
520 LOWELL STREET
MAP/LOT
318-162-5MC

REGAN CAROL A TR
BK/PG
8128 334
516 LOWELL STREET
MAP/LOT
318-162-5A

TOSCANO EVA T
BK/PG
15857 295
516 LOWELL STREET
MAP/LOT
318-162-5B

OBRIEN SCOTT W
BK/PG
10439 174
514 LOWELL STREET
MAP/LOT
318-162-6

CARON CHRISTOPHER P
BK/PG
18501
512 LOWELL STREET
MAP/LOT
318-162-7F

510 LOWELL STREET LLC
BK/PG
16489 5
510 LOWELL STREET
MAP/LOT
318-162-7

0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	108	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

LOYCANO ROBERT A
BK/PG
2002 145
ZERO NEWHILL RD
MAP/LOT
318–164–16

CARRASQUILLO ROSA
BK/PG
15641 295
505 LOWELL STREET
MAP/LOT
318–164–23

MOFFETT STREET
(PRIVATE - 40' WIDE)

SENG VEASNA
BK/PG
14052 67
3 MOFFETT ST
MAP/LOT
318–164–25

DONAHUE PAMELA
BK/PG 6030 261
503 LOWELL STREET
MAP/LOT 418–164–26

NADEAU JOSEPH D
BK/PG
10053 138
501 LOWELL STREET
MAP/LOT
418–164–27

JASON A MUISE
BK/PG
9705 0167
PL/YR
987 1936
497–499 LOWELL STREET
MAP/LOT
316–164–29

LEITE MARCOS B
BK/PG
16865 138
489 LOWELL STREET
MAP/LOT
418–164–28

LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

CONSTRUCTION BASELINE

RECORD BASELINE

PC +45.17

PI +23.35

TC=54.82
BC=54.32

4" REVEAL
TC=51.59
BC=51.26

4" REVEAL
TC=51.85
BC=51.52

4" REVEAL
TC=51.70
BC=51.37

CONTINUED ON SHEET NO. 107

CONTINUED BELOW

ROUTE 110 (LOWELL STREET)
(1916 SHLO 1687 - ST HWY ALT 3143)

510 LOWELL STREET LLC
BK/PG
16489 5
510 LOWELL STREET
MAP/LOT
318–162–7

510 LOWELL STREET LLC
BK/PG
16489 5
VP LOWELL STREET
MAP/LOT
318–162–7C

BUDISH PETER F
BK/PG
LC116 321
508 LOWELL STREET
MAP/LOT
418–162–7A

LEBLANC TERENZI SHAWNETTE L TR
BK/PG
15197 269
500 LOWELL STREET
MAP/LOT
418–162–8D

SANTANA ELENA
BK/PG
16979 58
498 LOWELL STREET
MAP/LOT
418–162–8B

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M &
ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

FEMA 100–YEAR FLOODPLAIN (GIS)

6' WOOD FENCE

BOBCAT 4 HIRE

PAVERS

LEITE MARCOS B
BK/PG
16865 138
489 LOWELL STREET
MAP/LOT
418–164–28

BHAKTA PRAFULCHANDRA TR
BK/PG
11847 333
487 LOWELL STREET
MAP/LOT
418–164–30

MILL POND

GOMEZ ENDY
BK/PG
15544 167
485 LOWELL STREET
MAP/LOT
418–164–31

BRIDGE NO. M–17–011

MEAN ANNUAL HIGH WATER LINE
DEMAND RANGE

END OF 1916 SHLO 1687 (SECT 1)

BEGINNING OF 1916 SHLO 1724 (SECT 3)

END OF 1916 SHLO 1724 (SECT 3)

BEGINNING OF 1916 SHLO 1687 (SECT 2)

LOCATION LINE OF 1916 SHLO 1687 (NUMBER 1)

LOCATION LINE OF 1916 SHLO 1687 (SECT 1)

CONTINUED ABOVE

CONTINUED ON SHEET NO. 109

ROUTE 110 (LOWELL STREET)
(1916 SHLO 1687)

MERRIMACK RIVER

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M &
ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

PASS DANIEL
BK/PG
16113 89
490 LOWELL STREET
MAP/LOT
418–162–8F

GUNES OGUZ TR
BK/PG
11206 215
488 LOWELL STREET
MAP/LOT
418–162–8E

HOWELL ROBERT JASON
BK/PG
7036 59
488 LOWELL STREET
MAP/LOT
418–162–8A

CORBIN MARK
BK/PG
4383 262
486 LOWELL STREET
MAP/LOT
418–162–9

ZHEN JASON WAN TR
BK/PG
16160 251
478 LOWELL STREET
MAP/LOT
418–162–12

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	109	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

608816_HDi(CTG-C).DWG Plotted on 9-Sep-2024 10:31 AM

GOMEZ ENDY
BK/PG
15544 167
485 LOWELL STREET
MAP/LOT
418-164-31

RIVERTON AVENUE
(PRIVATE - 30' WIDE)

MENCIA MARCOS A
BK/PG
3491 243
483 LOWELL STREET
MAP/LOT
418-164-34

HO LINH M
BK/PG
12660 33
481 LOWELL STREET
MAP/LOT
418-164-34B

200' RIVERFRONT AREA

FEMA 100-YEAR FLOODPLAIN (GIS)

MARJORIE STREET
(PUBLIC - 40' WIDE)

JOHNSON EDWARD F III
BK/PG
5388 133
475 LOWELL STREET
MAP/LOT
418-164-46

LOIS STREET
(PUBLIC - 40' WIDE)

VIEIRA DAMON J
BK/PG
13682 208
473 LOWELL STREET
MAP/LOT
418-164-56

CONTINUED ON SHEET NO. 108

LOCATION LINE OF 1916 SHLO 1687 (SECT 2)

CONSTRUCTION BASELINE

PT +85.52

RECORD BASELINE

+99.74 PI

+28.25 PI

3" REVEAL TC=51.33 BC=51.08

3" REVEAL TC=51.35 BC=51.10

3" REVEAL TC=51.36 BC=51.11

3" REVEAL TC=51.58 BC=51.33

3" REVEAL TC=51.60 BC=51.36

3" REVEAL TC=51.71 BC=51.46

3" REVEAL TC=51.95 BC=51.45

C126 TC=50.95 BC=50.45

C127 TC=51.02 BC=50.52

C128 TC=51.36 BC=51.11

C129 TC=51.58 BC=51.33

C131 TC=53.10 BC=52.60

C132 TC=54.54 BC=54.04

C130 TC=52.54 BC=52.04

C133 TC=52.52 BC=52.02

ROUTE 110 (LOWELL STREET)
(1916 SHLO 1687 - ST HWY ALT 3143)

ZHEN JASON WAN TR
BK/PG
16160 251
478 LOWELL STREET
MAP/LOT
418-162-12

SCOTT JOSEPH J
BK/PG
4372 234
476 LOWELL STREET
MAP/LOT
418-162-13

MEAN ANNUAL HIGH WATER LINE (INLAND BANK)
WETLAND FLAG BF15-104 & BF15-106 NOT FOUND (ALL FLAGS HAVE BEEN REMOVED)
BF15-107
BF15-108

PEDESTRIAN SYMBOL AHEAD

CONTINUED BELOW

VIEIRA DAMON J
BK/PG
13682 208
473 LOWELL STREET
MAP/LOT
418-164-56

BARROWS PATRICK E
BK/PG
12306 289
471 LOWELL STREET
MAP/LOT
418-164-57

ALEXANDER CIRCLE
(PUBLIC - 40' WIDE)

GOMEZ SAUL E
BK/PG
16198 74
471 LOWELL STREET
MAP/LOT
418-164-58

MARSAN PAUL E & EDNA M RLE
BK/PG
6925 51
467 LOWELL STREET
MAP/LOT
418-164-1

ALBERT STREET

CONTINUED ABOVE

LOCATION LINE OF 1916 SHLO 1687 (SECT 2)

BEGINNING OF ST HWY ALT 5794

LOCATION LINE OF 1969 ST HWY ALT 5794

RECORD BASELINE

CONSTRUCTION BASELINE

ROUTE 110 (LOWELL STREET)
(1916 SHLO 1687)

BEGINNING OF 1969 ST HWY ALT 5794

BEGINNING OF 2012 ST HWY ALT 8203 (SECT 1)

SCOTT JOSEPH J
BK/PG
4372 234
476 LOWELL STREET
MAP/LOT
418-162-13

SHRIJI REALTY LLC
BK/PG
13309 260
466 LOWELL STREET
MAP/LOT
418-162-17

S Y K REALTY CO LLC
BK/PG
10198 281
462 LOWELL STREET
MAP/LOT
418-162-16

FEMA 100-YEAR FLOODPLAIN (GIS)

PEDESTRIAN SYMBOL AHEAD

BF16-102
BF16-103

0 20 50 100
SCALE: 1" = 20'

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HIGHWAY GUARD DETAILS

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

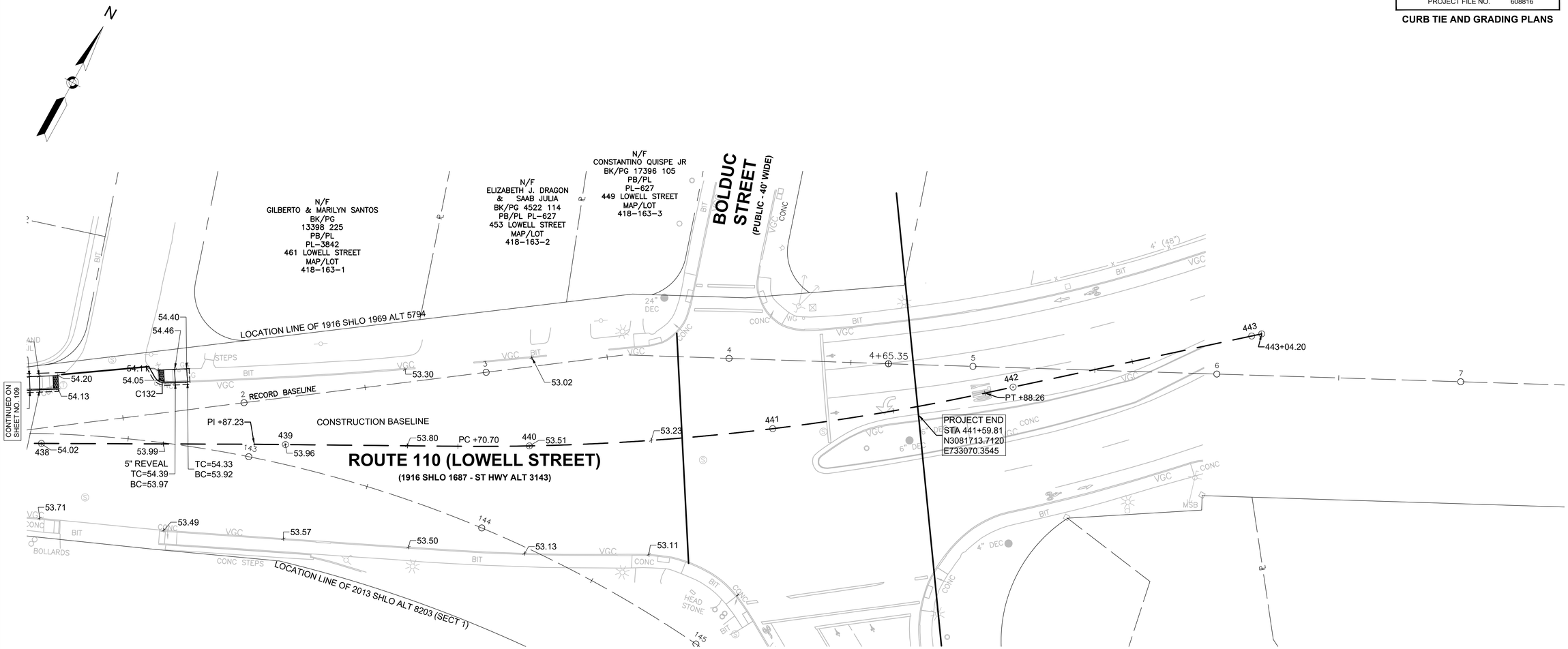
DRAINAGE DETAILS

NONE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	110	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS



0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	111	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

Curve Table			
Curve #	Delta	Radius	Length
C1	88°38'56"	3.00	4.64
C2	91°46'13"	4.00	6.41
C3	165°35'01"	10.00	28.90
C6	37°49'51"	10.00	6.60
C7	50°45'04"	2.00	1.77
C8	180°00'00"	1.75	5.50
C9	180°00'00"	1.75	5.50
C10	90°00'00"	3.00	4.71
C11	37°47'31"	10.00	6.60
C12	43°12'57"	10.00	7.54
C13	37°49'48"	10.00	6.60
C14	180°00'00"	3.00	9.42
C15	180°00'00"	3.00	9.42
C16	87°36'38"	3.00	4.59
C17	37°56'58"	10.00	6.62
C18	60°12'38"	10.00	10.51
C19	18°02'23"	30.00	9.45
C20	21°16'00"	30.00	11.14
C21	92°09'28"	3.00	4.83
C22	90°08'31"	3.00	4.72

Curve Table			
Curve #	Delta	Radius	Length
C23	22°06'30"	14.73	5.68
C24	41°23'45"	15.00	10.84
C25	31°18'09"	12.00	6.56
C26	34°14'08"	12.00	7.17
C27	32°49'23"	13.00	7.45
C28	34°14'35"	13.00	7.77
C29	36°52'12"	3.00	1.93
C31	180°00'00"	3.00	9.42
C32	180°00'00"	3.00	9.42
C34	35°50'59"	11.00	6.88
C35	12°52'44"	11.00	2.47
C36	42°35'07"	5.00	3.72
C37	57°12'10"	12.00	11.98
C38	40°00'38"	9.00	6.28
C39	21°53'34"	9.00	3.44
C40	56°09'52"	5.00	4.90
C41	26°44'37"	10.00	4.67
C42	37°49'23"	10.00	6.60
C43	35°48'51"	11.00	6.88
C44	26°08'06"	11.00	5.02

Curve Table			
Curve #	Delta	Radius	Length
C45	22°40'55"	11.00	4.35
C46	35°54'41"	11.00	6.89
C47	56°02'02"	5.00	4.89
C48	15°41'13"	8.00	2.19
C49	42°35'24"	8.00	5.95
C50	42°42'46"	8.00	5.96
C51	34°58'29"	8.00	4.88
C52	64°56'56"	15.00	17.00
C53	42°49'09"	8.00	5.98
C54	16°07'09"	8.00	2.25
C55	77°37'24"	7.00	9.48
C56	30°31'25"	14.00	7.46
C57	26°06'52"	14.00	6.38
C58	19°51'45"	11.00	3.81
C59	35°52'15"	11.00	6.89
C60	31°32'41"	14.00	7.71
C62	75°46'54"	5.00	6.61
C63	86°06'49"	10.00	15.03
C64	46°16'39"	7.00	5.65
C65	42°56'37"	8.00	6.00

Curve Table			
Curve #	Delta	Radius	Length
C66	34°39'16"	8.00	4.84
C67	24°37'49"	18.00	7.74
C68	27°50'00"	18.00	8.74
C69	42°57'10"	8.00	6.00
C70	39°38'57"	8.00	5.54
C71	34°06'07"	12.00	7.14
C72	96°30'48"	8.00	13.48
C73	81°01'41"	5.00	7.07
C74	86°05'36"	5.00	7.51
C75	50°30'24"	6.00	5.29

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Curve Table			
Curve #	Delta	Radius	Length
C76	86°05'36"	5.00	7.51
C77	50°30'24"	6.00	5.29
C78	56°07'23"	5.00	4.90
C79	23°32'48"	10.00	4.11
C81	178°07'47"	3.00	9.33
C82	180°00'00"	3.00	9.42
C83	92°15'37"	20.00	32.20
C84	166°57'41"	4.00	11.66
C85	90°26'25"	5.00	7.89
C86	68°52'47"	5.00	6.01
C87	143°24'05"	5.00	12.51
C88	4°29'44"	100.00	7.85
C89	66°07'06"	5.00	5.77
C90	60°16'29"	5.00	5.26
C91	63°53'41"	5.00	5.58
C92	77°15'00"	5.00	6.74
C93	70°16'55"	40.00	49.07
C94	87°53'24"	46.00	70.56
C96	7°27'34"	39.00	5.08
C97	86°18'31"	2.00	3.01

Curve Table			
Curve #	Delta	Radius	Length
C98	87°43'28"	2.00	3.07
C100	172°37'05"	2.00	6.03
C101	164°21'44"	2.01	5.77

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	112	190
PROJECT FILE NO.	608816		

CURB TIE AND GRADING PLANS

608816_HD(CTG-B).DWG Plotted on 9-Sep-2024 10:34 AM

9/9/2024 I:\2105\2105\2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_HD(CTG-B).dwg
Last Saved by: SMEURER
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	113	190
	PROJECT FILE NO. 608816		

CURB TIE AND GRADING PLANS

Curve Table			
Curve #	Delta	Radius	Length
C99	47°08'00"	46.03	37.86
C100	26°01'12"	30.00	13.62
C105	3°32'03"	125.00	7.71
C106	50°42'13"	15.00	13.27
C107	63°15'23"	10.00	11.04
C108	97°42'38"	3.00	5.12
C109	81°54'25"	5.00	7.15
C110	90°00'00"	5.00	7.85
C111	90°00'00"	5.00	7.85
C112	86°03'12"	5.00	7.51
C113	60°11'19"	5.00	5.25
C114	143°24'43"	10.00	25.03
C115	25°31'29"	30.00	13.36
C116	31°02'38"	15.00	8.13
C117	92°54'22"	5.00	8.11
C118	47°49'01"	25.00	20.86
C119	154°25'01"	15.00	40.43
C120	90°00'00"	5.00	7.85
C121	82°01'14"	5.00	7.16
C122	58°19'41"	10.00	10.18

Curve Table			
Curve #	Delta	Radius	Length
C123	56°34'41"	10.00	9.87
C124	84°27'47"	10.00	14.74
C125	81°42'16"	10.00	14.26
C126	85°29'14"	5.00	7.46
C127	80°18'32"	5.00	7.01
C129	48°47'41"	10.00	8.52
C130	87°37'33"	5.00	7.65
C131	44°31'59"	10.00	7.77
C132	62°44'05"	5.00	5.47
C133	36°59'15"	30.00	19.37
C134	47°29'40"	47.00	38.96
C135	172°57'20"	2.00	6.04
C136	175°56'41"	2.00	6.14
C137	180°00'00"	3.00	9.42
C138	180°00'00"	3.00	9.42
C140	113°22'05"	15.00	29.68
C141	45°43'16"	25.00	19.95
C142	56°12'29"	30.00	29.43
C145	34°37'22"	30.00	18.13

608816_HD(CTG-C).DWG Plotted on 9-Sep-2024 10:36 AM

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Last Saved by: SMEURER
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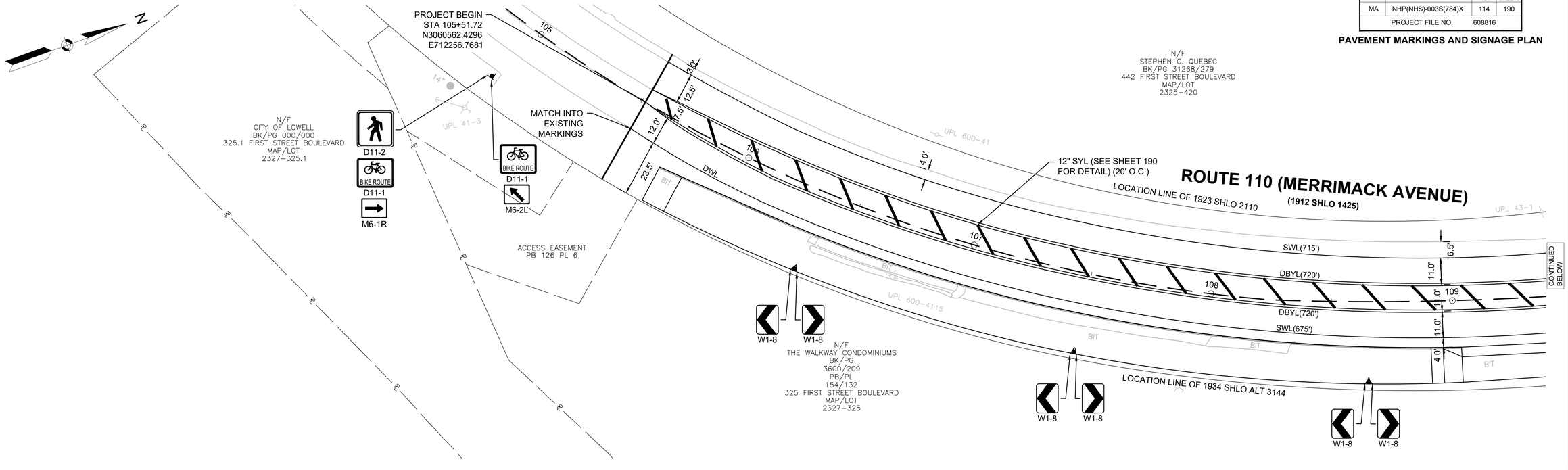
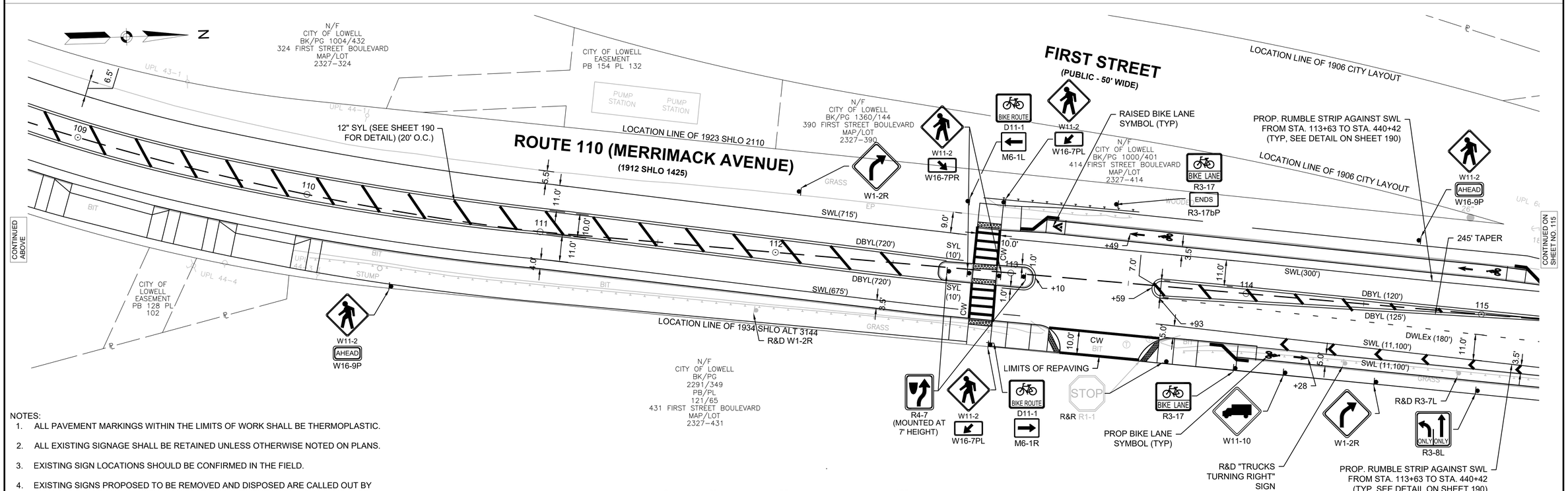
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	114	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:55 AM
9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-A).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	115	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

CONTINUED ON SHEET NO. 114

BRADLEY STREET (PUBLIC - 50' WIDE)

FIRST STREET (PUBLIC - 50' WIDE)

ROUTE 110 (MERRIMACK AVENUE) (1912 SHLO 1425)

LOCATION LINE OF 1906 CITY LAYOUT

LOCATION LINE OF 1923 SHLO 2110

LOCATION LINE OF 1934 SHLO ALT 3144

CITY OF LOWELL EASEMENT PB 121 PL 68

LIMITS OF REPAVING

PROP BIKE LANE SYMBOL (TYP)

R&D GUIDE SIGN

R&R "RIGHT TURN ONLY" SIGN

R&R R3-1

R&D R3-7L

R&R RET.

N/F ACKERLEY REALTY INC BK/PG 2346/605 PB/PL 16/30 165 FIRST STREET BOULEVARD MAP/LOT 2327–65

N/F CITY OF LOWELL BK/PG 2291/349 PB/PL 121/65 431 FIRST STREET BOULEVARD MAP/LOT 2327–431

R&R EXISTING R2-1 TO PROP. 15' TRAFFIC SIGNAL POST WITH SPEED FEEDBACK SIGN W13-20aP, SOLAR POWER UNIT, AND FOUNDATION (SEE DETAIL ON SHEET 190)

R&D "CONSTRUCTION" SIGN

RET. "ADOPT A HIGHWAY" SIGN

12" SYL (SEE SHEET 190 FOR DETAIL) (20' O.C.)

R&R EXISTING R2-1 TO PROP. 15' POST WITH SPEED FEEDBACK SIGN W13-20aP, SOLAR POWER UNIT, AND FOUNDATION (SEE DETAIL ON SHEET 190)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

CONTINUED BELOW

CONTINUED ABOVE

R&D "TRUCKS ENTERING AHEAD" SIGN

RAISED BIKE LANE SYMBOL (TYP)

HIGH FRICTION GREEN BICYCLE FACILITY SURFACE TREATMENT (TYP)

RET. "ROTARY CLUB LENZI'S TAVERN TUESDAY 12:15" SIGN

RET. MA-I-2a "LOWELL" AND "DRACUT"

RET. "LIONS INTERNATIONAL" SIGN

R&D W1-8

248' TAPER

R&D "RADAR STRICTLY ENFORCED" SIGN

R3-8R

RET. "DRACUT IS A RIGHT TO FARM COMMUNITY" SIGN

12" SWL (SEE SHEET 190 FOR DETAIL)

NOTES:

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3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:56 AM

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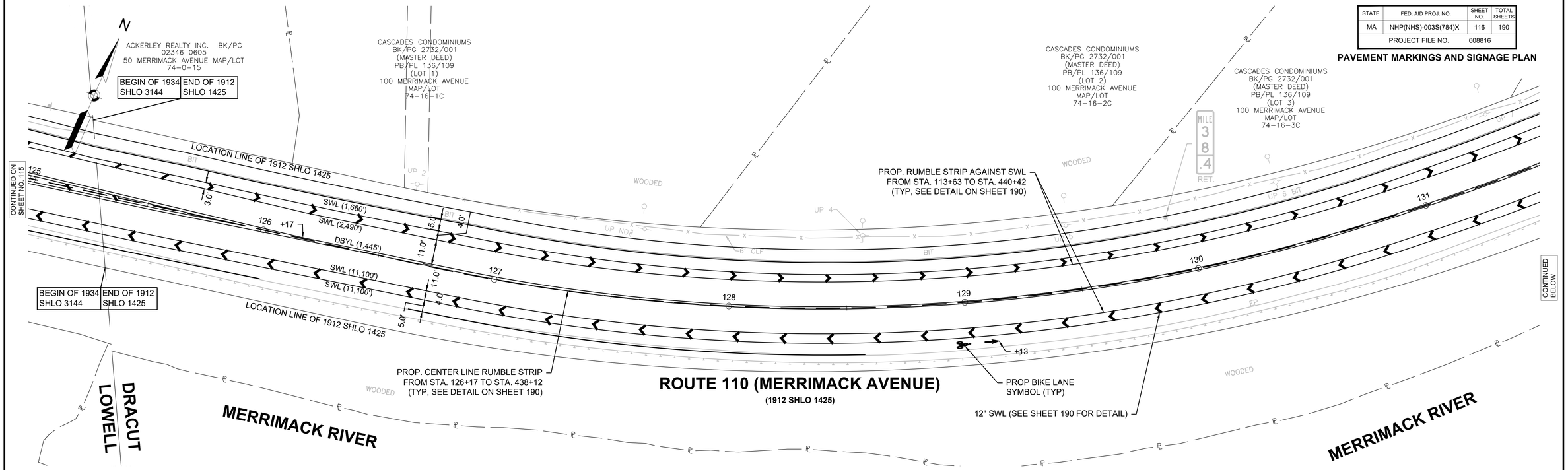
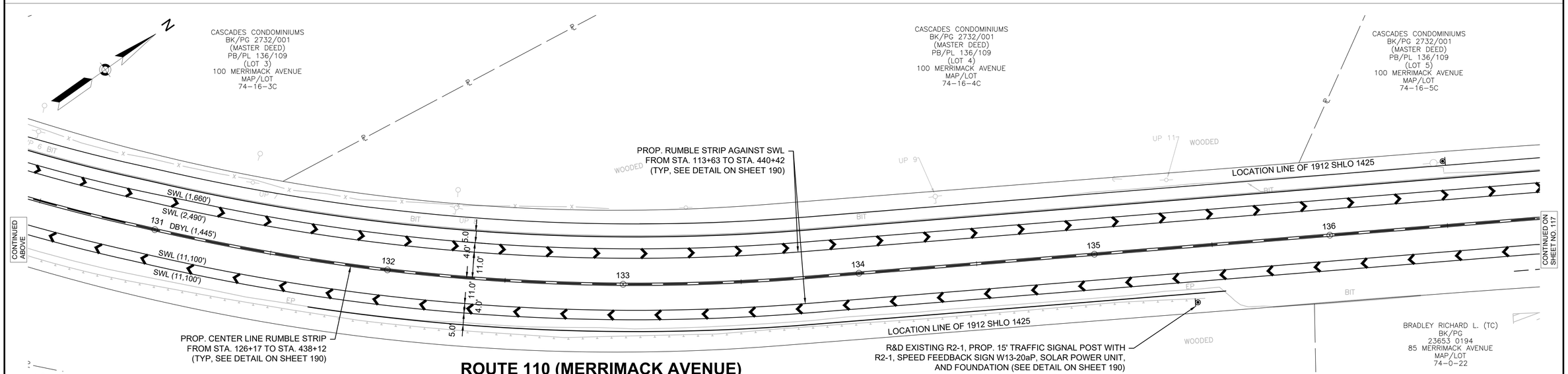
Last Saved by: EENTEADO
Printed by: Maeghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	116	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:56 AM

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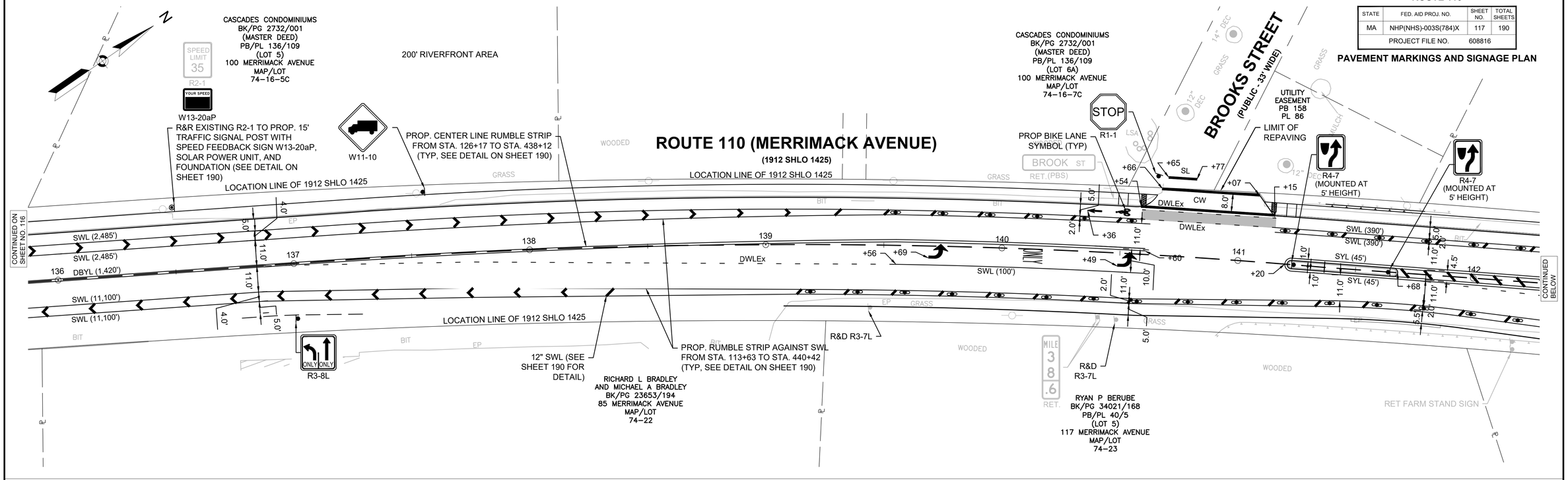
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	117	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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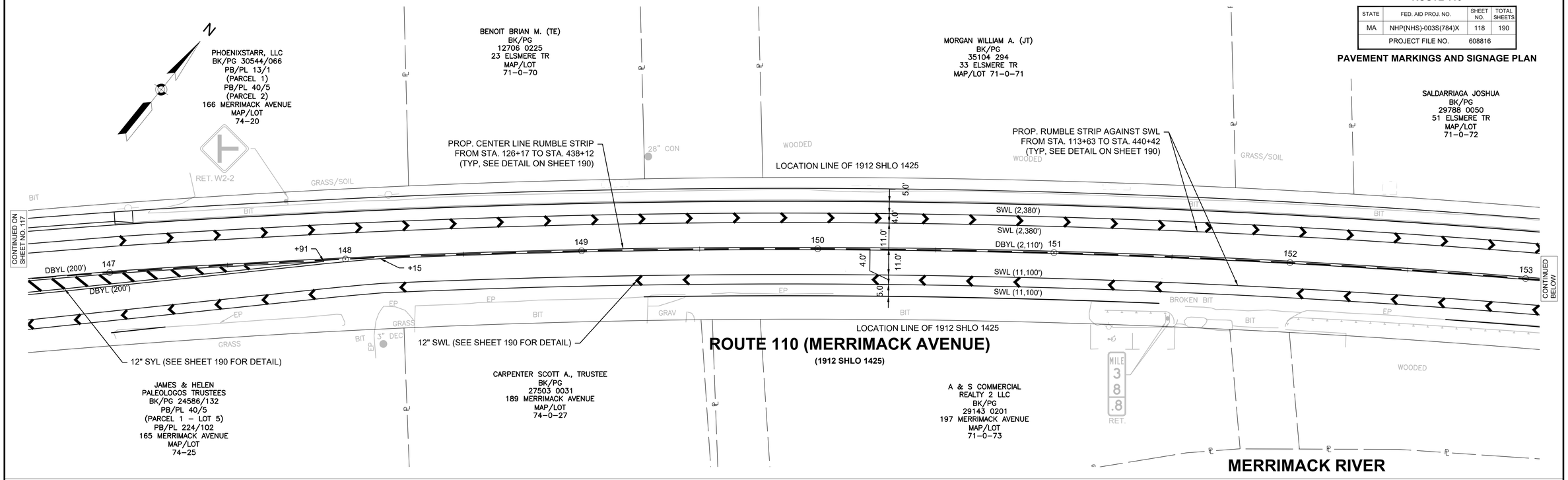
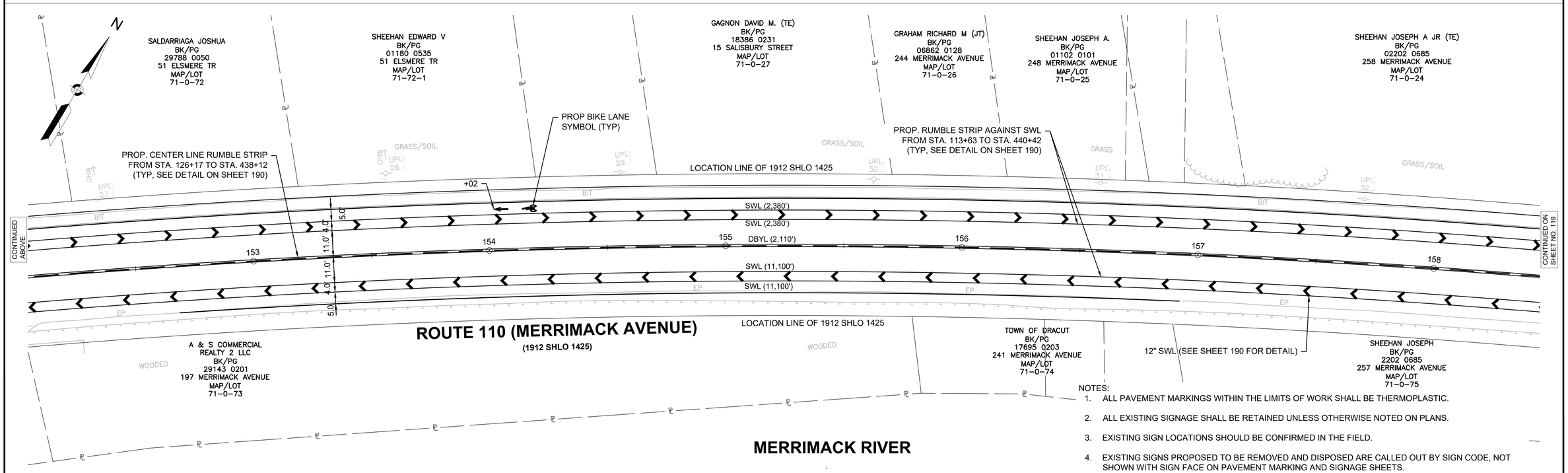
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	118	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:57 AM

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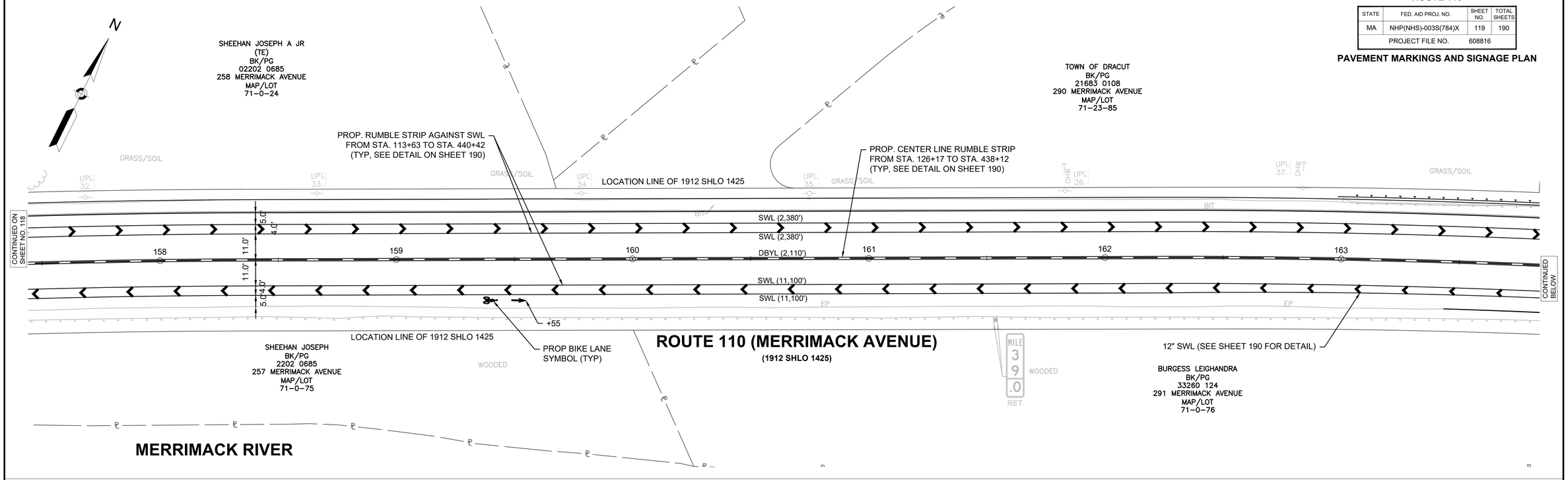
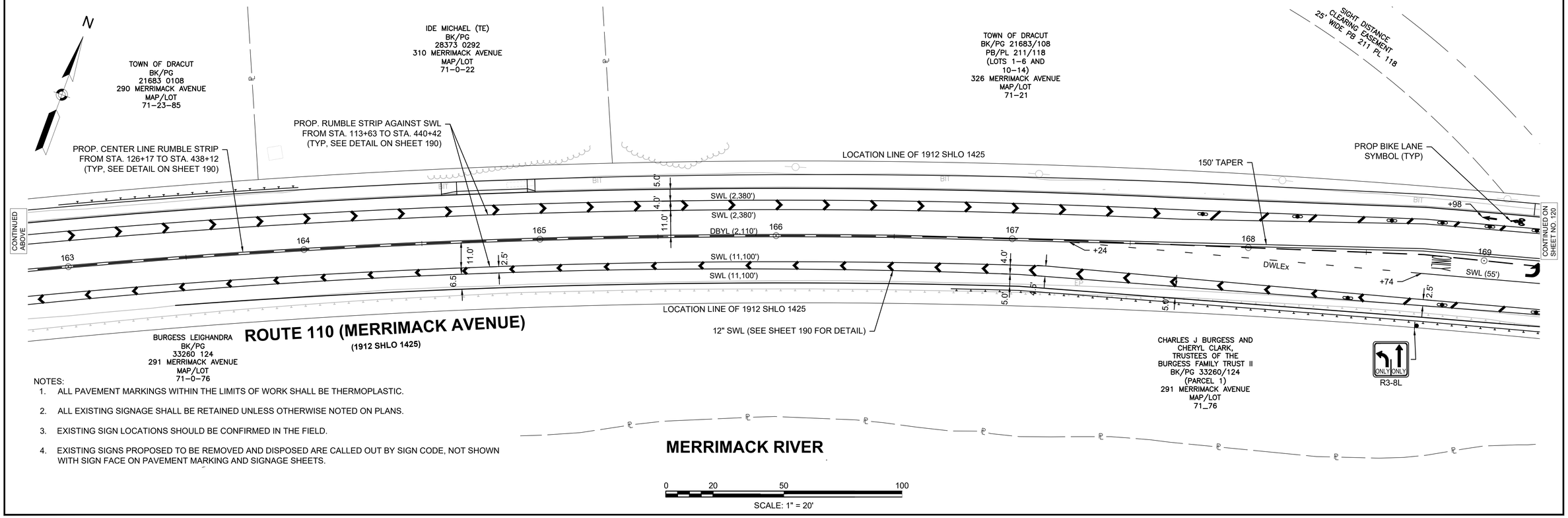
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	119	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:57 AM

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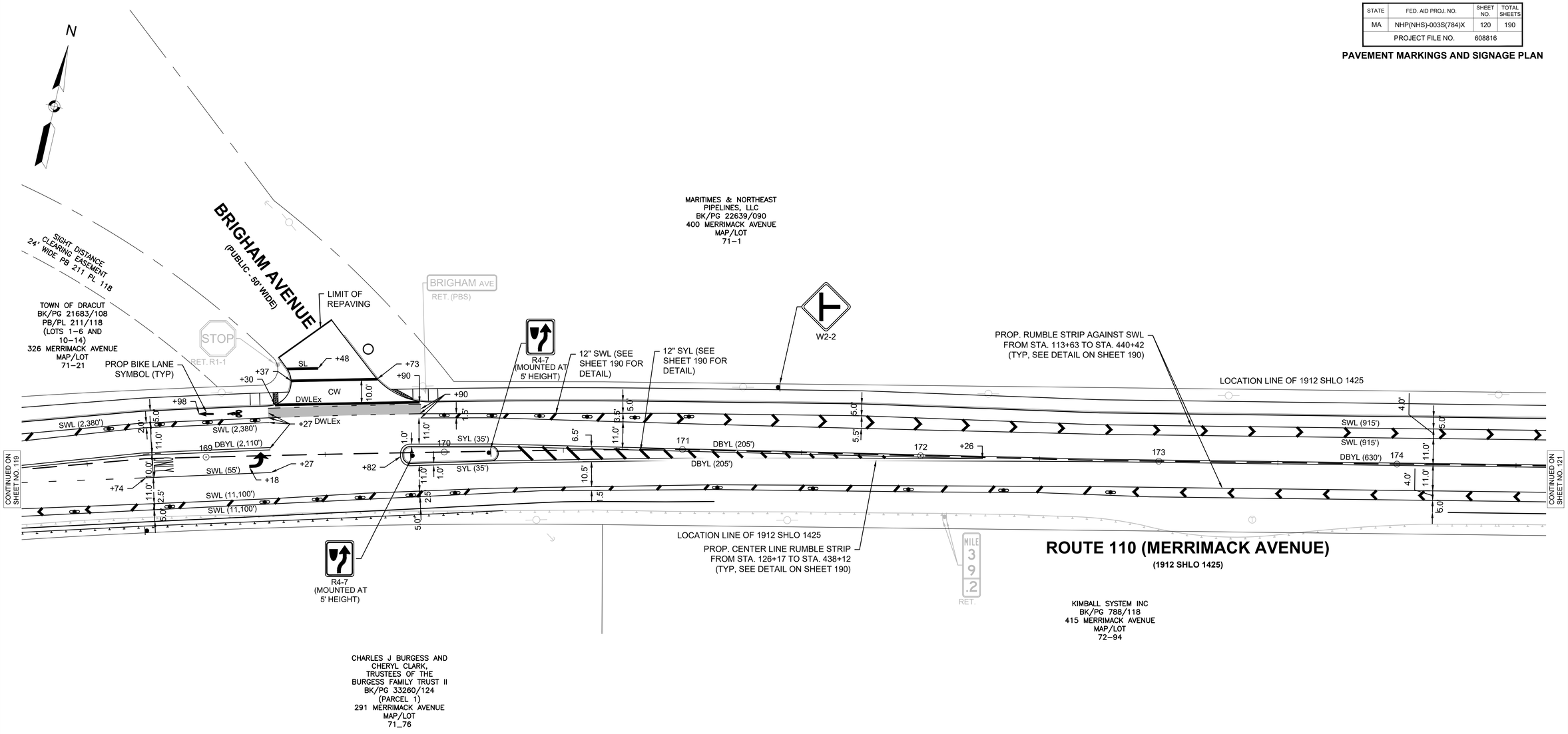
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	120	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:58 AM
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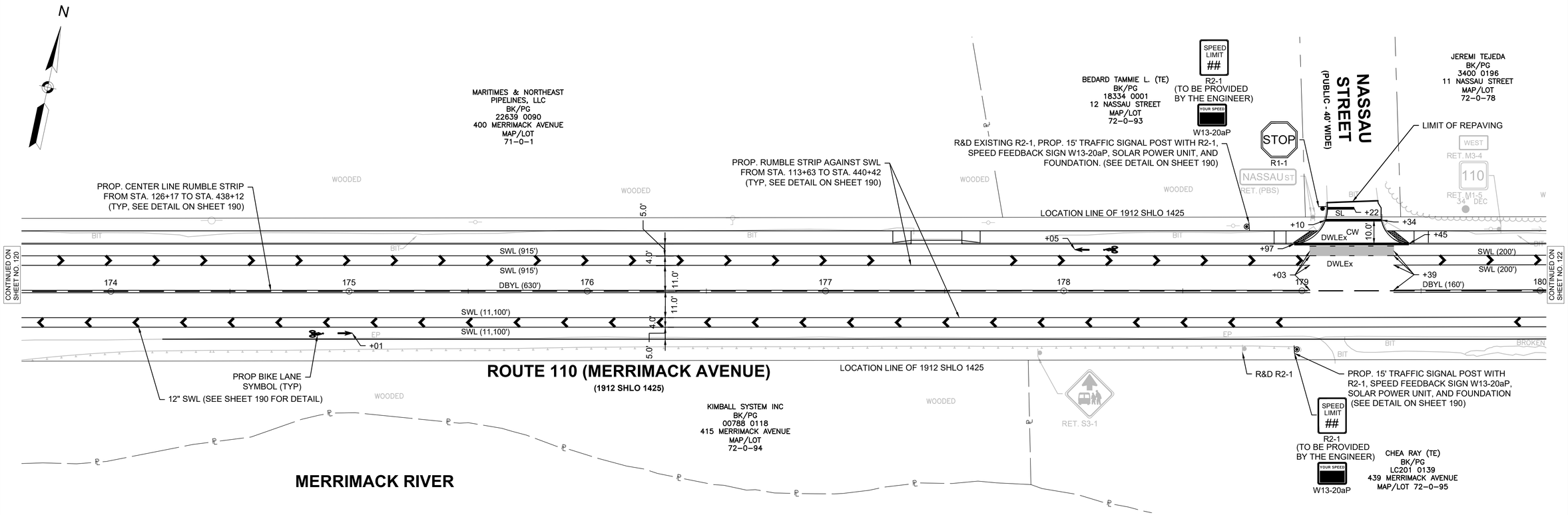
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	121	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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0 20 50 100
SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:58 AM

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Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	122	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

N

NASSAU STREET (PUBLIC - 40' WIDE)

JEREMI TEJEDA
BK/PG
3400 0196
11 NASSAU STREET
MAP/LOT
72-0-78

TURGEON BRIAN R. (TE)
BK/PG
28737 0260
448 MERRIMACK AVENUE
MAP/LOT
72-0-76

CAMDEN STREET (PUBLIC - 40' WIDE)

RIVERVIEW HILL, LLC
BK/PG
35381 282
462 MERRIMACK AVENUE
MAP/LOT
72-0-62

KILBY STREET (PUBLIC - 40' WIDE)

FESTA DANIEL J.
BK/PG
18569 0002
474 MERRIMACK AVENUE
MAP/LOT
72-0-55

FERDINAND ROBERT M. (TE)
BK/PG
17234 0191
480 MERRIMACK AVENUE
MAP/LOT
72-0-54

LIMIT OF REPAVING

PROP BIKE LANE SYMBOL (TYP)

R4-7 (MOUNTED AT 5' HEIGHT)

12" SYL (SEE SHEET 190 FOR DETAIL)

LOCATION LINE OF 1912 SHLO 1425

CONTINUED ON SHEET NO. 121

CONTINUED BELOW

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

CHEA RAY
(TE) BK/PG
LC201 0139
439 MERRIMACK AVENUE
MAP/LOT 72-0-95

MASSE PHYLLIS A. (LE)
BK/PG
32407 0280
451 MERRIMACK AVENUE
MAP/LOT
72-0-96

TOWN OF DRACUT
BK/PG
1400 587
465 MERRIMACK AVENUE
MAP/LOT
72-0-97

TOWN OF DRACUT
BK/PG
1835 312
471 MERRIMACK AVENUE
MAP/LOT
72-0-98

MADDALENA DRACUT REALTY, LLC
BK/PG
33880 59
475 MERRIMACK AVENUE
MAP/LOT
72-0-99

N

FERDINAND ROBERT M. (TE)
BK/PG
17234 0191
480 MERRIMACK AVENUE
MAP/LOT
72-0-54

SHANAHAN WILLIAM E. III (TE)
BK/PG
LC 208 0011
486 MERRIMACK AVENUE
MAP/LOT
72-0-53

APRAHAMIAN GEORGE
BK/PG
0C487 0011
11 HURON STREET
MAP/LOT
72-0-44

HURON STREET (PUBLIC - 40' WIDE)

FEARON DENNIS D (TE)
BK/PG
03364 0221
500 MERRIMACK AVENUE
MAP/LOT
72-0-43

PERCY STREET (PUBLIC - 40' WIDE)

SULLIVAN IVAN
BK/PG
01895 0405
512 MERRIMACK AVENUE
MAP/LOT
72-0-32

SURPRENANT CLAIRE F.
BK/PG
01544 0345
522 MERRIMACK AVENUE
MAP/LOT
72-0-31

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

LIMIT OF REPAVING

LOCATION LINE OF 1912 SHLO 1425

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP BIKE LANE SYMBOL (TYP)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

CONTINUED ABOVE

CONTINUED ON SHEET NO. 123

ROUTE 110 (MERRIMACK AVENUE)
(1912 SHLO 1425)

MADDALENA DRACUT REALTY, LLC
BK/PG
226 186
485 MERRIMACK AVENUE
MAP/LOT
72-0-100

MADDALENA DRACUT REALTY, LLC
BK/PG
226 186
485 MERRIMACK AVENUE
MAP/LOT
72-0-100

MADDALENA DRACUT REALTY, LLC
BK/PG
226 186
485 MERRIMACK AVENUE
MAP/LOT
72-0-101

JPB REALTY TRUST
BK/PG
25606 0188
487 MERRIMACK AVENUE
MAP/LOT
72-0-102

JALA REALTY LLC
BK/PG
34602 54
505 MERRIMACK AVENUE
MAP/LOT
72-0-103

TOWN OF DRACUT
BK/PG 0
509 MERRIMACK AVENUE
MAP/LOT
72-0-104

DMK REALTY, LLC
BK/PG
27415 0241
511 MERRIMACK AVENUE
MAP/LOT
72-105-1

NOTES:
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0 20 50 100
SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:58 AM

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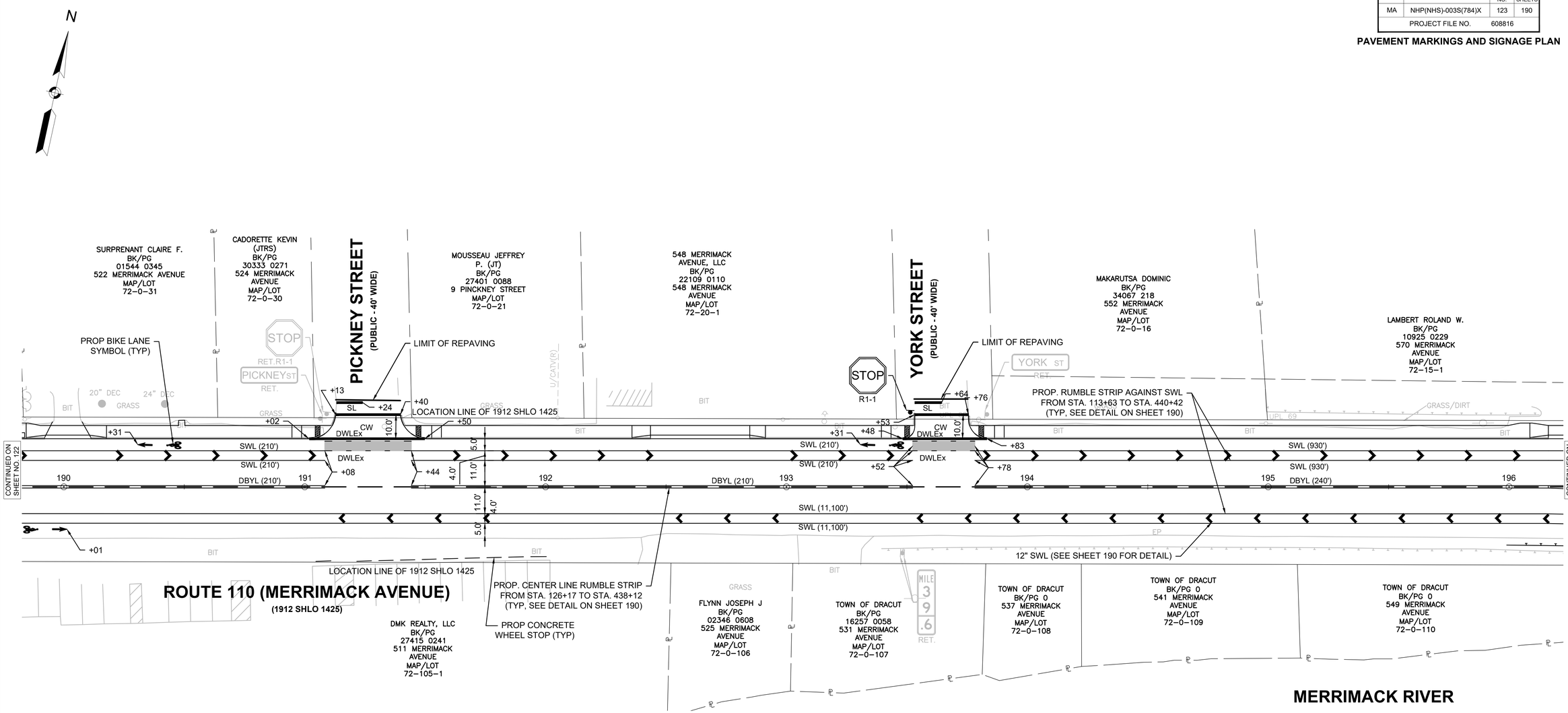
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	123	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100

SCALE: 1" = 20'

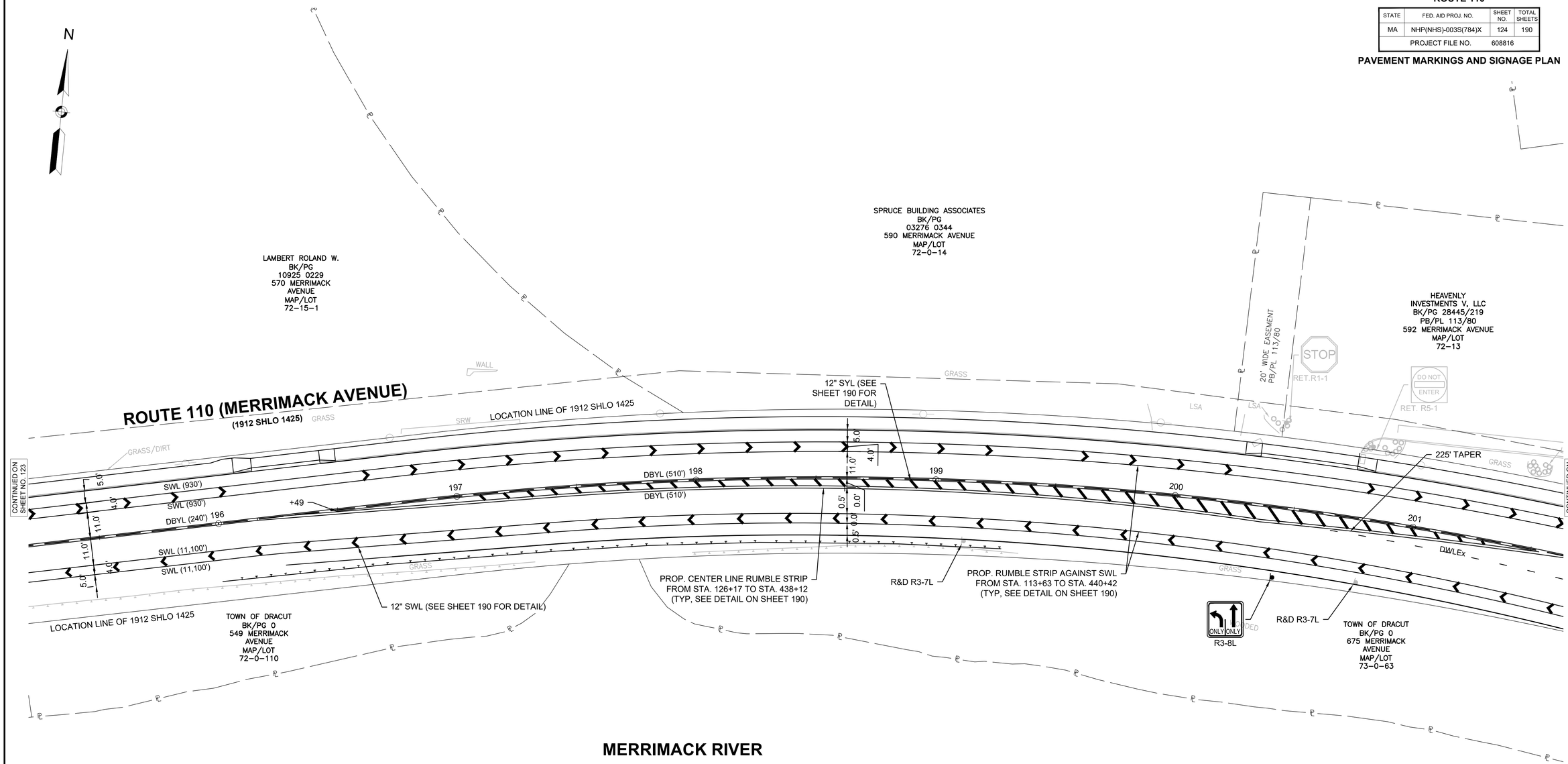
608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:59 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-A).dwg
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	124	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:59 AM

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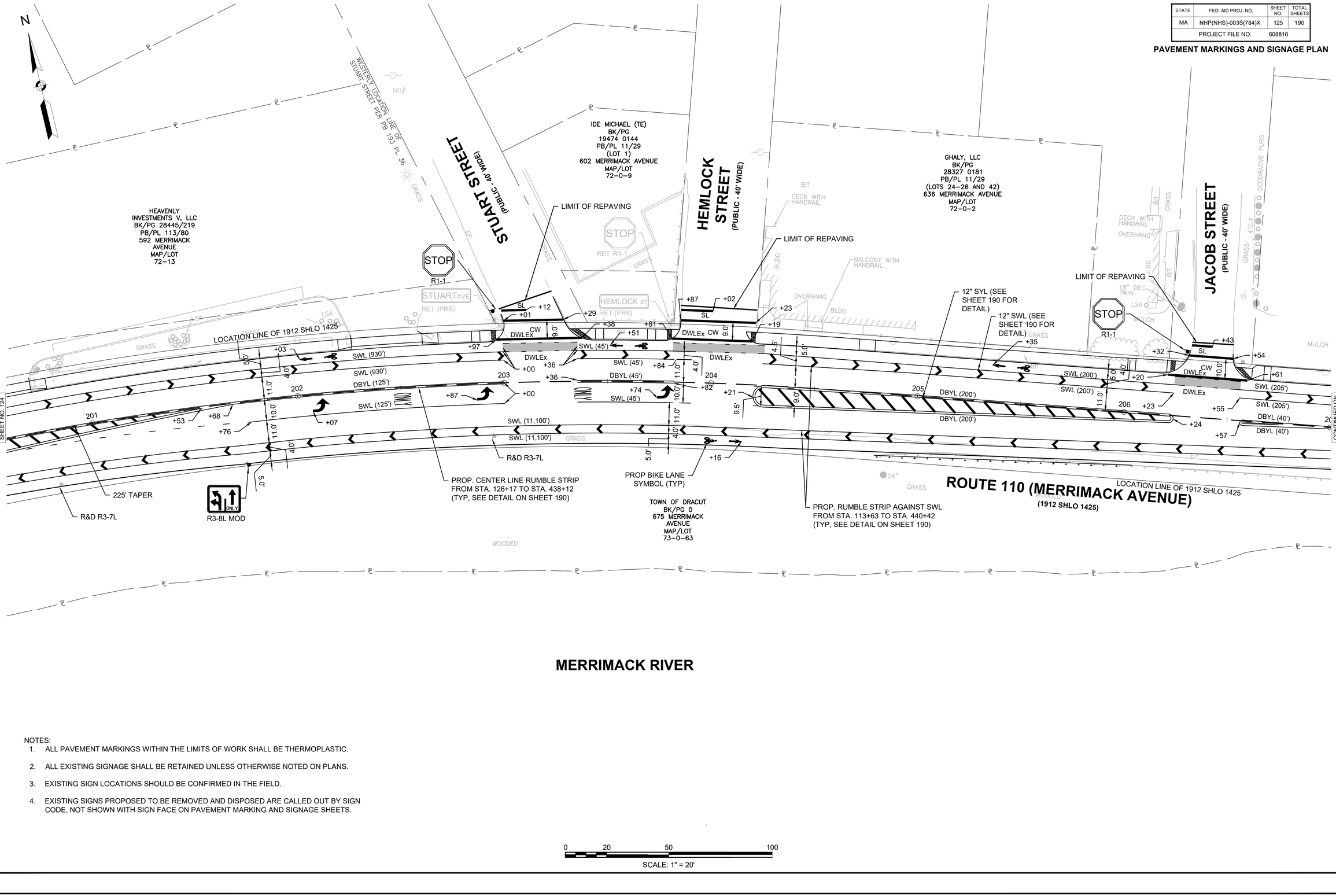
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	125	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 10:59 AM

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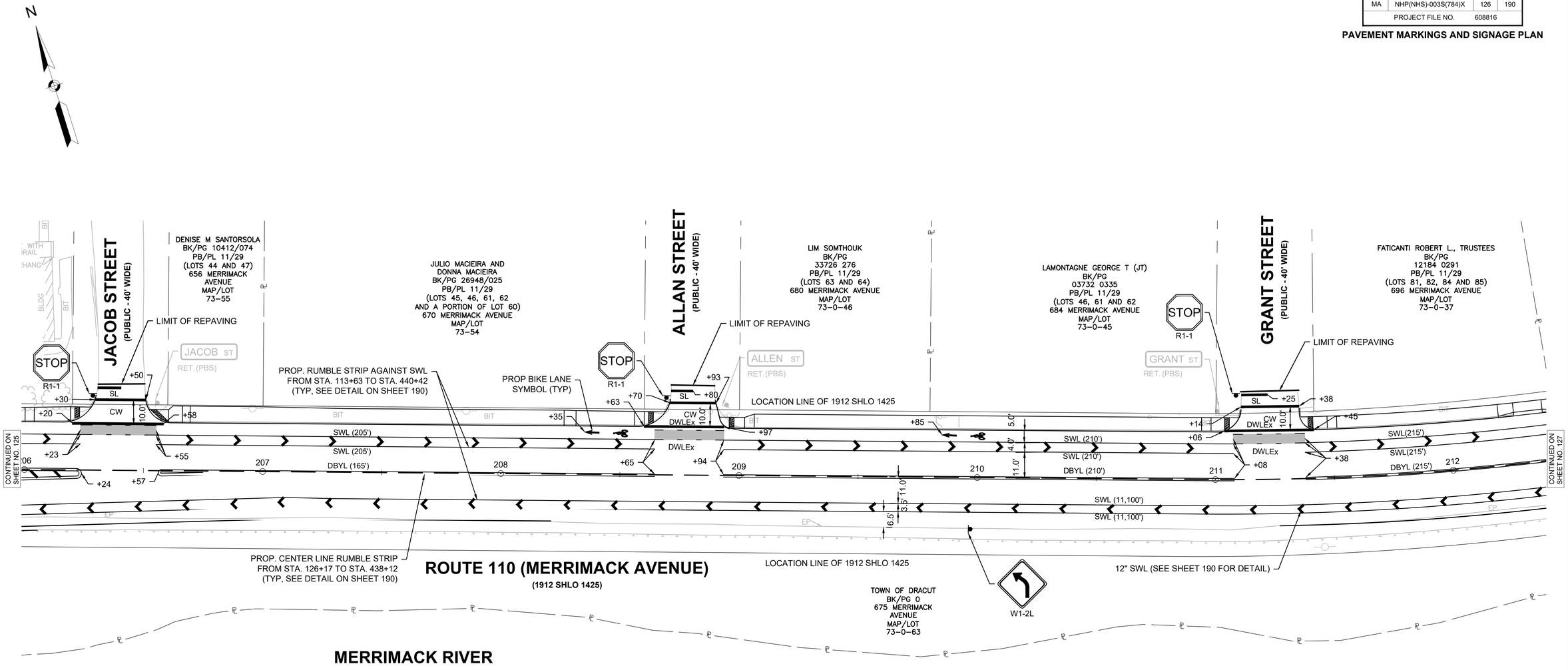
Last Saved by: EENTEAD/O
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	126	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 11:00 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-A).dwg
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	127	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

N

FATICANTI ROBERT L., TRUSTEES
BK/PG
12184 0291
PB/PL 11/29
(LOTS 81, 82, 84 AND 85)
696 MERRIMACK AVENUE
MAP/LOT
73-0-37

WILLOW B HOLDINGS, LLC
BK/PG
36205 0211
PB/PL 11/29
(LOTS 83 AND 93)
718 MERRIMACK AVENUE
MAP/LOT
73-0-35

VERAO BRENDA
BK/PG
30047 0047
PB/PL 11/29
(LOTS 92, 94 AND 95)
714 MERRIMACK AVENUE
MAP/LOT
73-35-1

KOUBA ALLAN
BK/PG
33461 139
PB/PL 11/39
(LOTS 56-61)
744 MERRIMACK AVENUE
MAP/LOT
73-0-34

KOUBA ALLAN
BK/PG
33461 139
PB/PL 11/39
(LOT 54)
744 MERRIMACK AVENUE
MAP/LOT
73-34-1

MURILLO DIEGO
BK/PG
35635 141
PB/PL 11/39
(LOTS 53,55-61)
14 MT PLEASANT AVENUE
MAP/LOT
73-0-33

LEAVITT STREET
(PUBLIC - 40' WIDE)

LEAVITT ST
RET. (PBS)

LIMIT OF REPAVING

PROP BIKE LANE
SYMBOL (TYP)

STOP
R1-1

LOCATION LINE OF 1912 SHLO 1425

CONTINUED ON SHEET NO. 126

CONTINUED BELOW

MILE 40.0 RET.

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP. RUMBLE STRIP AGAINST SWL
FROM STA. 113+63 TO STA. 440+42
(TYP, SEE DETAIL ON SHEET 190)

PROP. CENTER LINE RUMBLE STRIP
FROM STA. 126+17 TO STA. 438+12
(TYP, SEE DETAIL ON SHEET 190)

BRADLEY JULIE M. (JT)
BK/PG
31906 0233
743 MERRIMACK AVENUE
MAP/LOT
73-0-74

ROUTE 110 (MERRIMACK AVENUE)

(1912 SHLO 1425)

TOWN OF DRACUT
BK/PG 0
675 MERRIMACK AVENUE
MAP/LOT
73-0-63

MERRIMACK RIVER

MURILLO DIEGO
BK/PG 35635 141
PB/PL 11/39
(LOTS 53,55-61)
14 MT PLEASANT AVENUE
MAP/LOT
73-0-33

MOUNT PLEASANT AVENUE
(PUBLIC - 40' WIDE)

MT PLEASANT AVE
RET.(PBS)

LAFERRIERE JAMES A & GLORIA D. (LE)
BK/PG
26791 0140
PB/PL 11/39
(LOT 52)
756 MERRIMACK AVENUE
MAP/LOT
73-0-23

LAFERRIERE JAMES A & GLORIA D. (LE)
BK/PG
26791 0140
PB/PL 11/39
(LOT 51)
758 MERRIMACK AVENUE
MAP/LOT
73-0-22

TURNER FLORENCE
BK/PG
28419/2014 0
PB/PL 11/39
(LOTS 49 AND 50)
762 MERRIMACK AVENUE
MAP/LOT
73-0-21

BELLVIEW AVENUE
(PUBLIC - 40' WIDE)

BELLVIEW AVE
RET.(PBS)

GILMORE JOHN P. & DEBORAH L.
(LE)
BK/PG
31876 0138
PB/PL 11/39
(LOTS 1 AND 2)
770 MERRIMACK AVENUE
MAP/LOT
73-0-12

PULTAR MARK T., TRUSTEE
BK/PG
28769 0203
PB/PL 15/16
(LOT 144)
778 MERRIMACK AVENUE
MAP/LOT
73-0-11

BRAMBILA DAVID F.
BK/PG
32015 0124
PB/PL 15/16
(LOT 144)
4 CONGRESS STREET
MAP/LOT
73-0-10

CONGRESS STREET
(PUBLIC - 40' WIDE)

CONGRESS ST
RET.(PBS)

794 MERRIMACK AVENUE, LLC
BK/PG
17324 0205
PB/PL 15/16
(LOTS 105 AND 106)
794 MERRIMACK AVENUE
MAP/LOT
73-0-4

CONTINUED ABOVE

CONTINUED ON SHEET NO. 128

PROP BIKE LANE
SYMBOL (TYP)

PROP. RUMBLE STRIP AGAINST SWL
FROM STA. 113+63 TO STA. 440+42
(TYP, SEE DETAIL ON SHEET 190)

PROP. CENTER LINE RUMBLE STRIP
FROM STA. 126+17 TO STA. 438+12
(TYP, SEE DETAIL ON SHEET 190)

12" SWL (SEE SHEET 190 FOR DETAIL)

BRADLEY JULIE M. (JT)
BK/PG
31906 0233
743 MERRIMACK AVENUE
MAP/LOT
73-0-74

MUTH PAULA M.
BK/PG
33169 46
755 MERRIMACK AVENUE
MAP/LOT
73-0-64

LAMONTAGNE GEORGE A.
BK/PG
LC228 125
773 MERRIMACK AVENUE
MAP/LOT
73-0-65

HENAULT BRIAN M. (JTRS)
BK/PG
14653 0116
781 MERRIMACK AVENUE
MAP/LOT
73-0-66

TOWN OF DRACUT
BK/PG
23267 0050
785 MERRIMACK AVENUE
MAP/LOT
73-0-67

ROUTE 110 (MERRIMACK AVENUE)

(1912 SHLO 1425)

NOTES:

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3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

SCALE: 1" = 20'

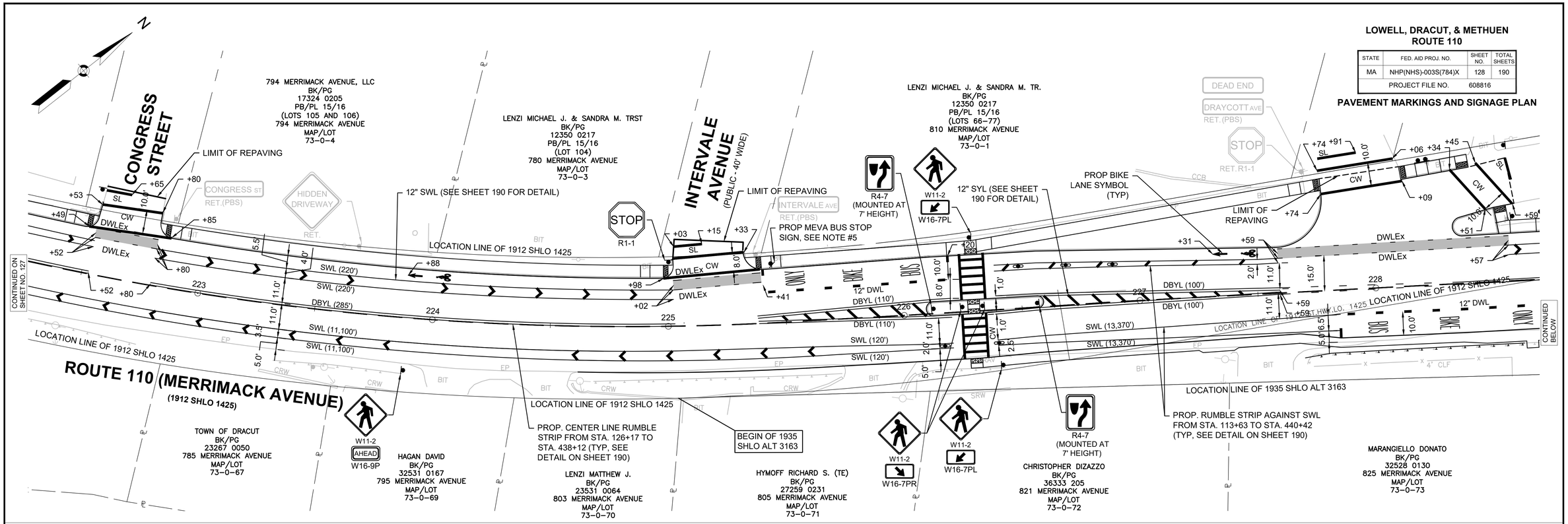
608816_TR(PM&S-A).DWG Plotted on 9-Sep-2024 11:00 AM

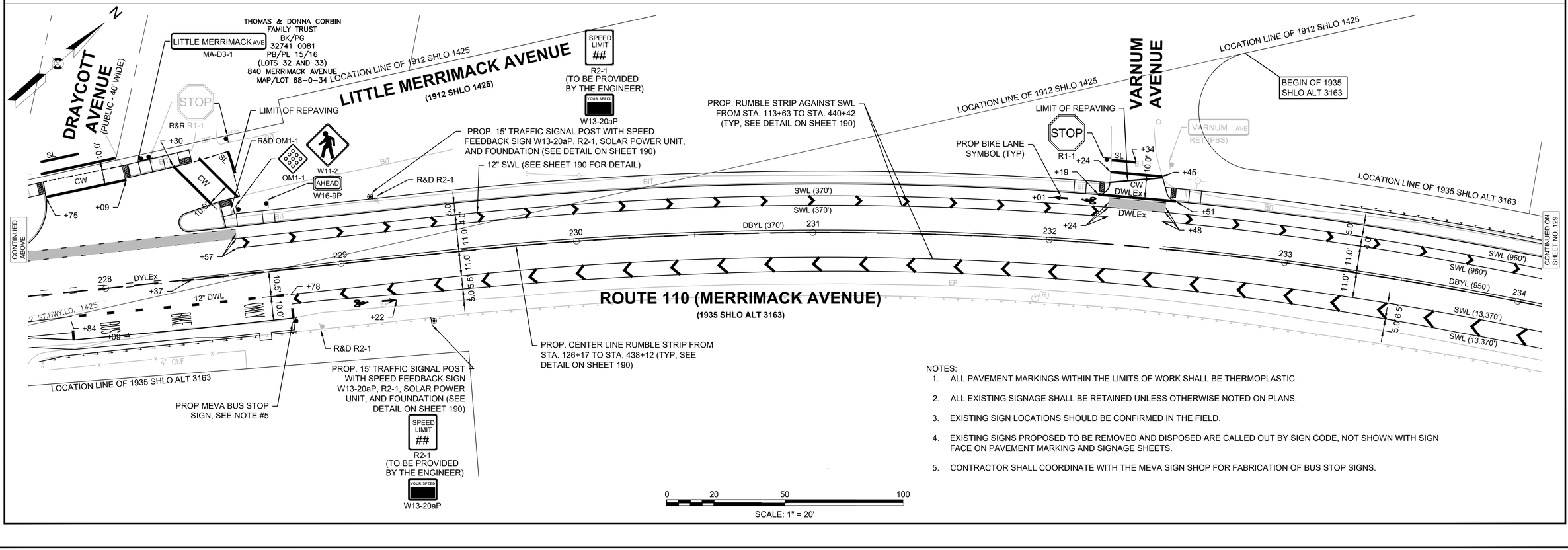
9/9/2024 I:\2105\2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-A).dwg
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	128	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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5. CONTRACTOR SHALL COORDINATE WITH THE MEVA SIGN SHOP FOR FABRICATION OF BUS STOP SIGNS.

0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:02 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	129	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:02 AM

N

TOWN OF DRACUT
BK/PG 0
901 MERRIMACK AVENUE
MAP/LOT
68-0-74

MCLARNEY CORNELIUS & BARBARA O.
BK/PG
02414 0617
871 MERRIMACK AVENUE
MAP/LOT
68-0-73

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

LOCATION LINE OF 1935 SHLO ALT 3163

CONTINUED ON SHEET NO. 128

BIT

234 235 236 237 238 239

EP

11.0' 6.0' 5.0' 4.0' 5.0'

SWL (960') SWL (960') DBYL (950') SWL (13,370') SWL (13,370')

CONTINUED BELOW

MILE 4.0 RET.

ROUTE 110 (MERRIMACK AVENUE)
(1935 SHLO ALT 3163)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

+50

N

LOCATION LINE OF 1912 SHLO 1425

END OF 1935 SHLO ALT 3163

TOWN OF DRACUT
BK/PG 0
901 MERRIMACK AVENUE
MAP/LOT
68-0-74

LOCATION LINE OF 1912 ST.HWY.LO. 1425

LITTLE MERRIMACK AVENUE
(1912 SHLO ALT 1425)

LIMIT OF REPAVING

STOP R1-1 OM1-1

PROP BIKE LANE SYMBOL (TYP)

CHILDREN RET.

+82 +88 +98 +85 +94 +04 +97 +36 +60 +53 +00

50' CW 10.0'

DWLEx DWLEx

CMB MB MB MB

N/F
BK/PG
0 0
966-968 MERRIMACK AVENUE
MAP/LOT
69-10-2C

MERRIMACK AVE RET.

RET PAQUETTE PAVING SIGN

BRADLEY RICHARD L. & DORIS A., TRS.
BK/PG
21727 0271
976 MERRIMACK AVENUE
MAP/LOT
69-10-3

W2-2

WALL

CONTINUED ABOVE

SWL (960') SWL (960') DBYL (950')

239 240 241 242 243 244

11.0' 11.0' 5.0' 4.0' 5.0' 5.5'

SWL (3,350') SWL (3,350') DBYL (3,335') SWL (13,370') SWL (13,370')

CONTINUED ON SHEET NO. 130

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

ROUTE 110 (MERRIMACK AVENUE)
(1935 SHLO ALT 3163)

W1-2L

LOCATION LINE OF 1912 ST.HWY.LO. 1425

LOCATION LINE OF 1912 SHLO 1425

LOCATION LINE OF 1938 SHLO ALT 3265

END OF 1935 SHLO ALT 3163	BEGIN OF 1938 SHLO ALT 3265

LOCATION LINE OF 1935 SHLO ALT 3163 FOLLOWS RIVER EDGE

SOUTHEASTERLY SIDELINE FOLLOWS EDGE OF RIVER (SCALED AND DIGITIZED FROM 1935 ST.HWY.ALT 3163)

MERRIMACK RIVER

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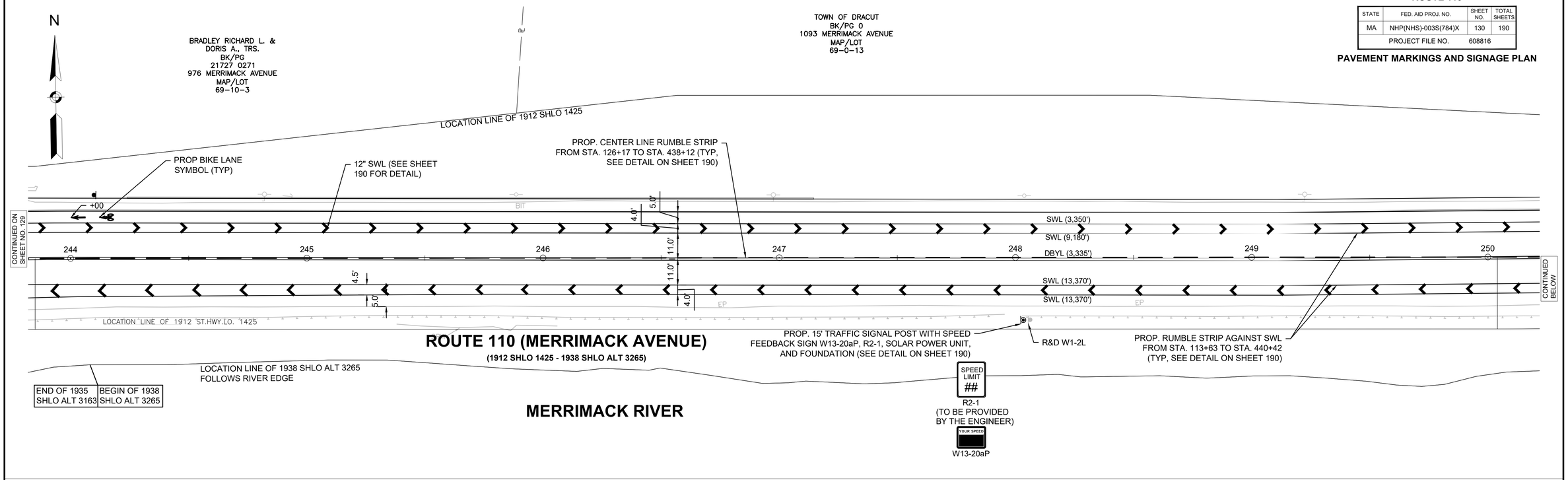
0 20 50 100
SCALE: 1" = 20'

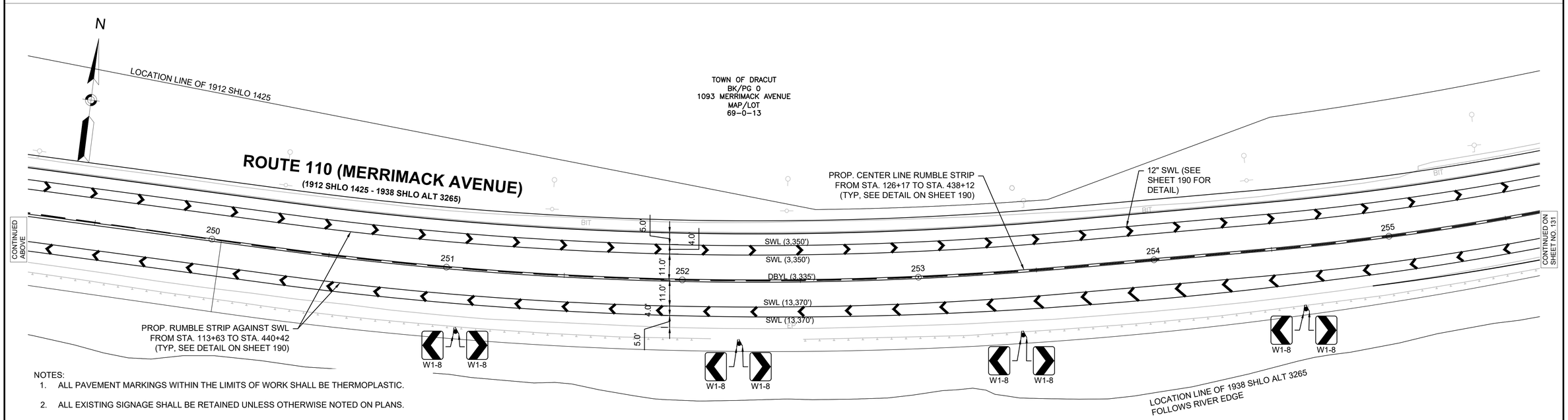
9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	130	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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SCALE: 1" = 20'

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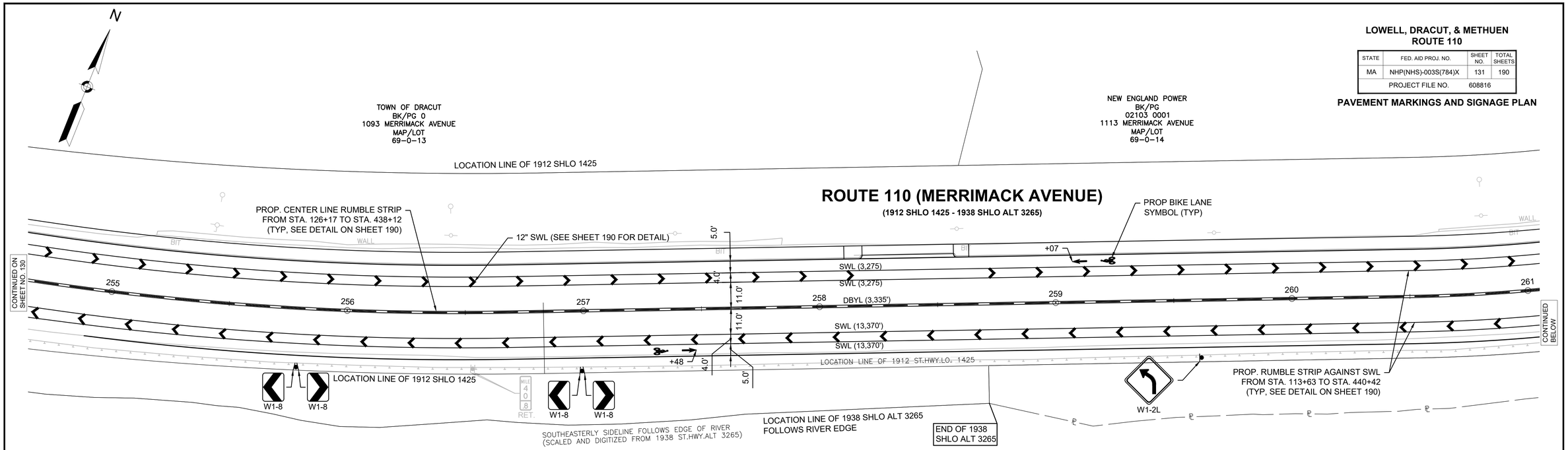
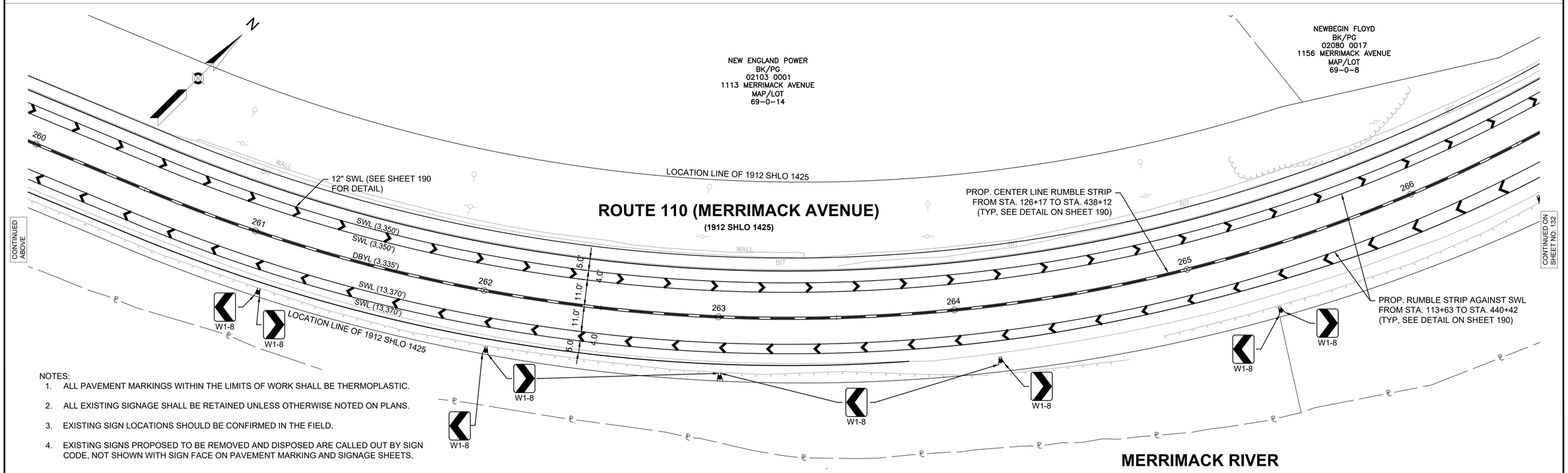
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	131	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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SCALE: 1" = 20'

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ROUTE 110

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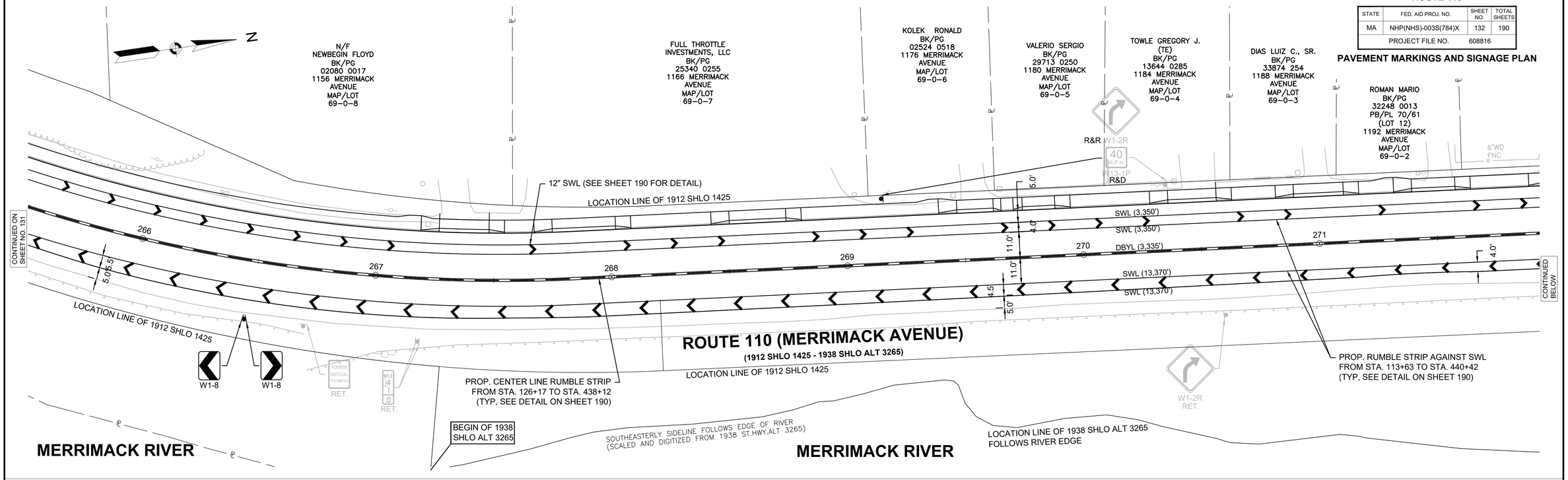
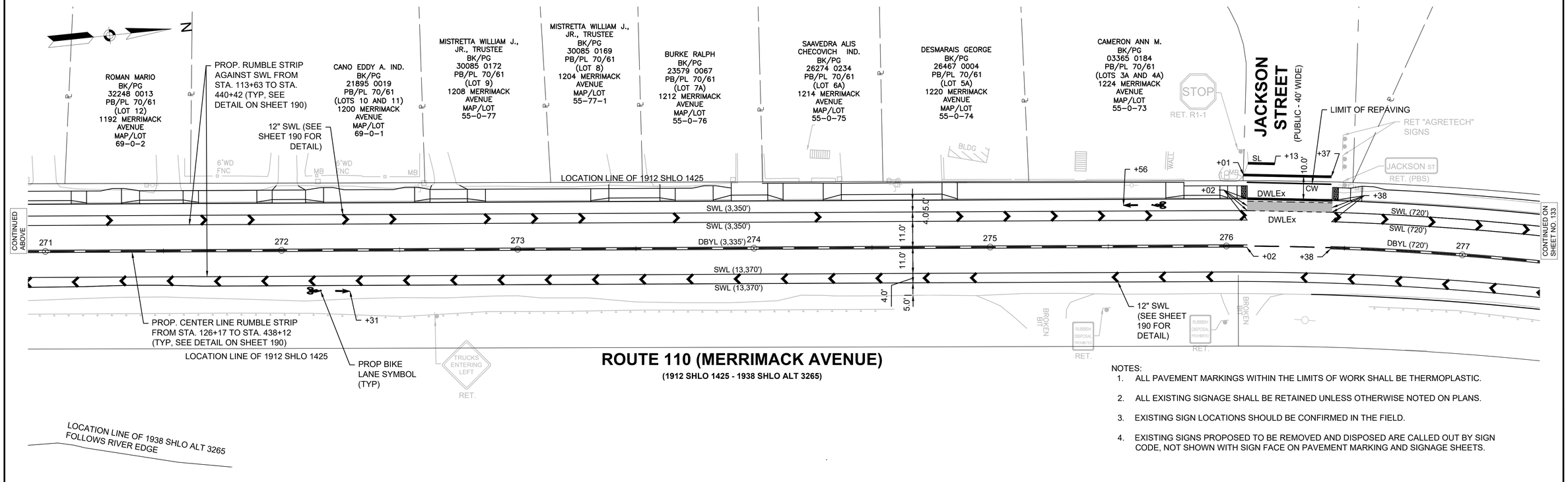
MA	NHP(NHS)-003S(784)X	132	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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0 20 50 100
SCALE: 1" = 20'

608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:03 AM

9/9/2024 I:\21055\21055.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
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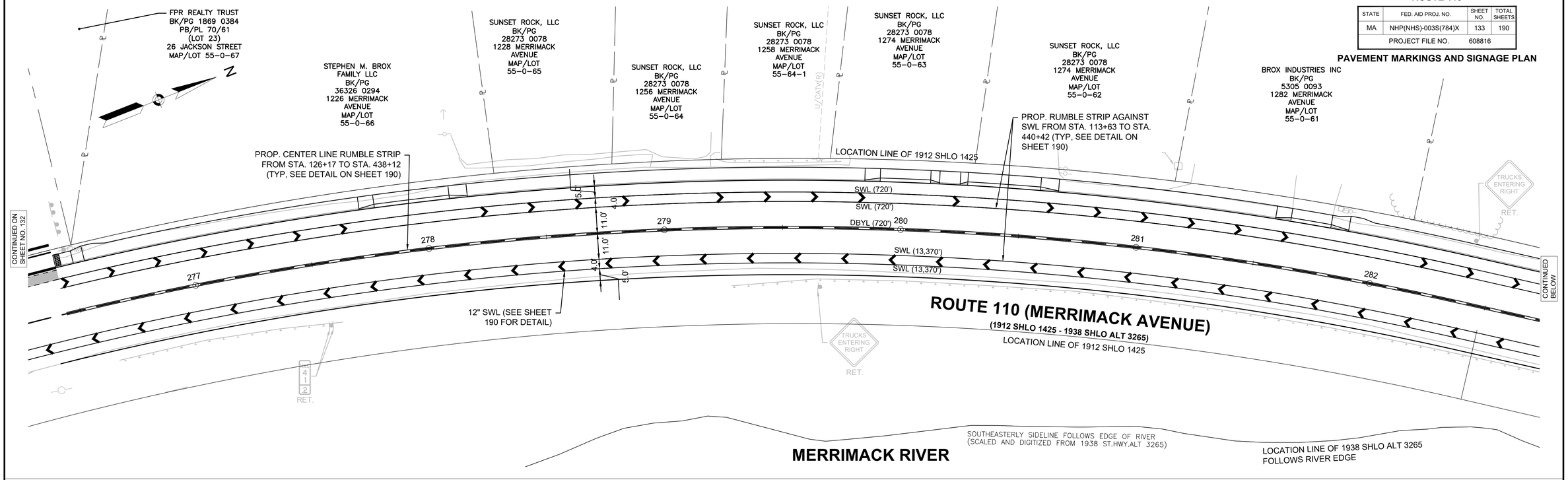
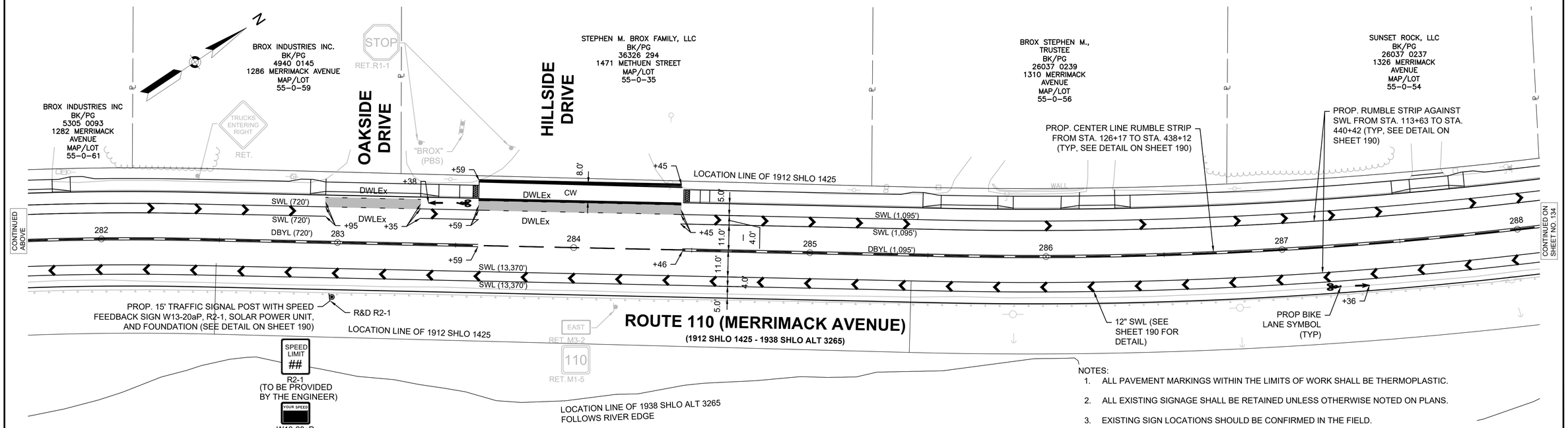
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	133	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





NOTES:
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2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100
SCALE: 1" = 20'

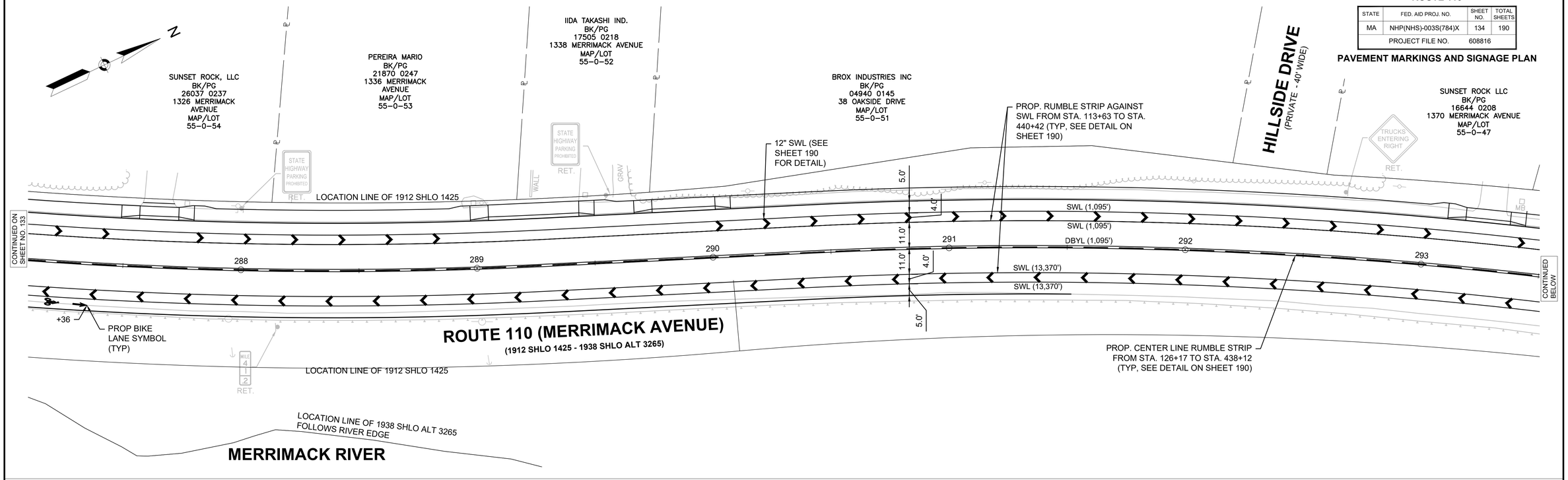
608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:03 AM

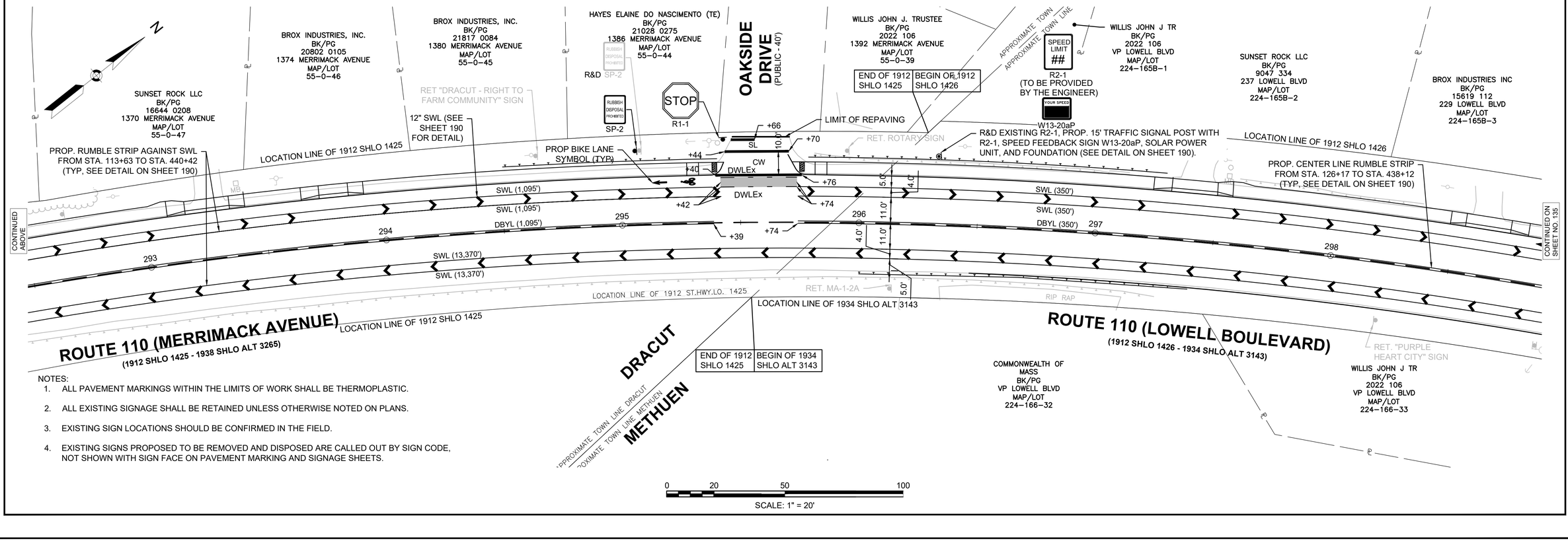
9/9/2024 I:\2105\2-2105.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	134	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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SCALE: 1" = 20'

608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:03 AM

9/9/2024 I:\21055\21055.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
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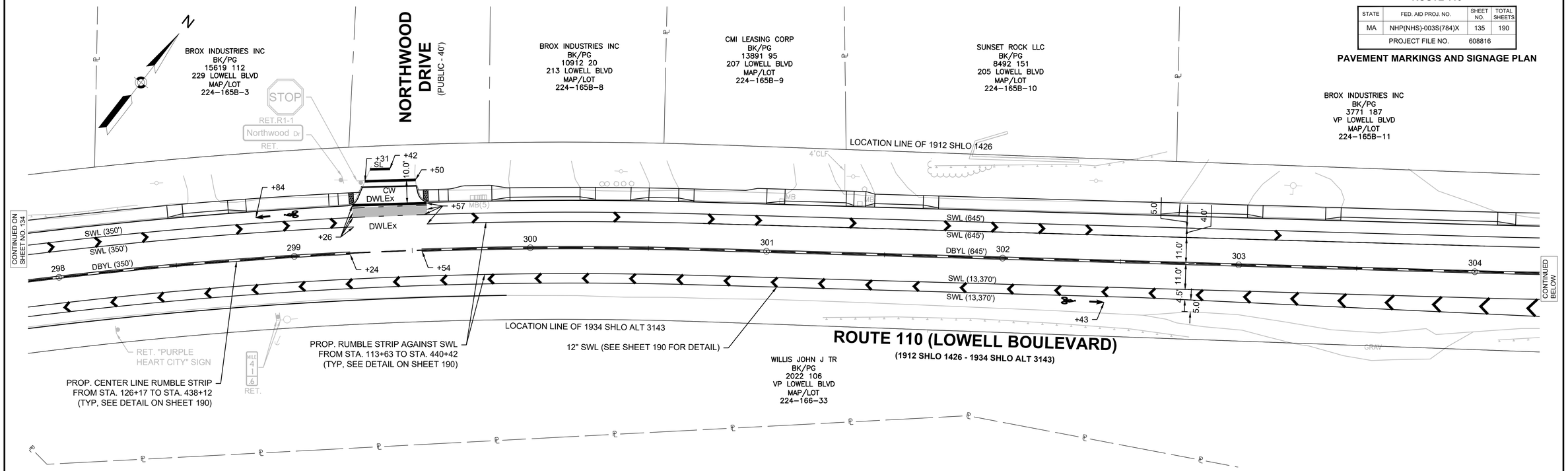
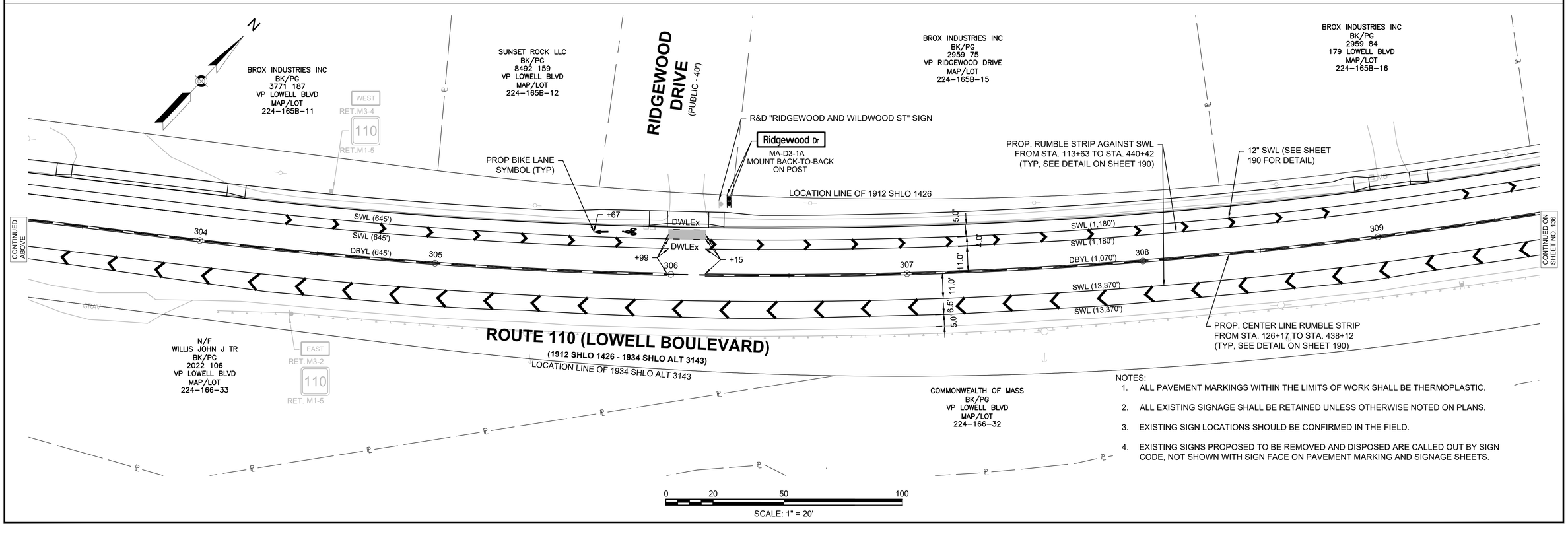
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	135	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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SCALE: 1" = 20'

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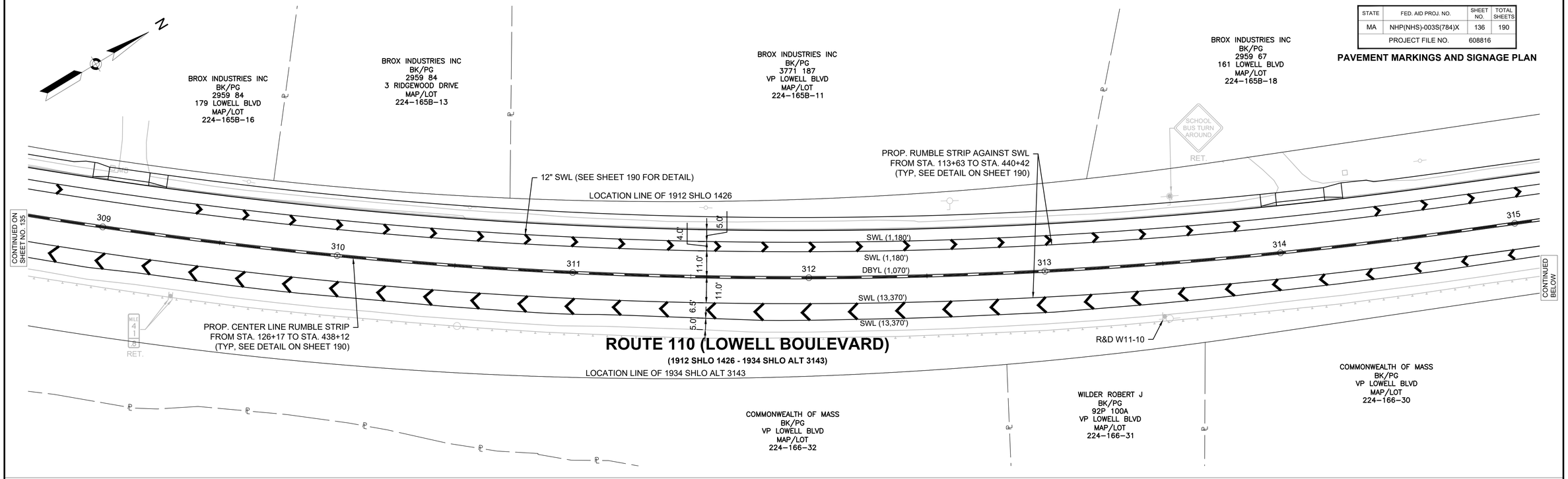
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	136	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



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608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:04 AM

9/9/2024 I:\2105\2105.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	137	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

ROUTE 110 (LOWELL BOULEVARD)
(1912 SHLO 1426 - 1934 SHLO ALT 3143)

TRAFFIC ENTERING WHEN FLASHING
W2-10

BROX INDUSTRIES INC
BK/PG
3771 187
VP LOWELL BLVD
MAP/LOT
224–165B–19A

BROX INDUSTRIES INC
BK/PG
2959 59
135 LOWELL BLVD
MAP/LOT
224–165B–20

LAMBERT JOHN M TR & NORMA TR
BK/PG
13451 241
802 LOWELL STREET
MAP/LOT
224–165B–20E

SANTOS DEBRA A
BK/PG
12895 249
798 LOWELL STREET
MAP/LOT
224–165B–20D

ZYGOURIS DIMITRIOS M
BK/PG
2712 292
794 LOWELL STREET
MAP/LOT
224–165B–20C

R&R "WHEELER STREET NEXT INTERSECTION" SIGN
R&R "NO ENGINE BRAKE BY CITY ORDINANCE" SIGN

PROP BEACON ENHANCED FLASHING WARNING SIGN (SEE DETAIL ON SHEET 190)

YIELD TO PEDS
R9-6

ONLY ONLY
R3-8R

250' TAPER

RAISED BIKE LANE SYMBOL (TYP)

BIKE ROUTE
D11-1

HIGH FRICTION GREEN BICYCLE FACILITY SURFACE TREATMENT (TYP)

R&D "TRUCKS ENTERING RIGHT" SIGN

LOCATION LINE OF 1912 SHLO 1426

CONTINUED ON SHEET NO. 136

SWL (105')
SWL (65')
DWL
+98
+22
+28
+83
320
321
322
323
324
325
DBYL (320')
DBYL (50')
SWL (625')
SWL (13,370')
2.0'
4.0'
1.0'
6.0'
5.0'
11.0'
5.5'

PROP BIKE LANE SYMBOL (TYP)

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

R&D R2-1

LOCATION LINE OF 1934 SHLO ALT 3143

CONTINUED BELOW

NEIGHBORHOOD PROPERTY
BK/PG
15266 156
122 LOWELL BLVD
MAP/LOT
224–166–28

NEIGHBORHOOD PROPERTY
BK/PG
15266 156
122 LOWELL BLVD
MAP/LOT
224–166–27A

MAHONEY PHILIP L
BK/PG
14297 61
120 LOWELL BLVD
MAP/LOT
224–166–27

INFANTE CARMEN
BK/PG
10364 97
116 LOWELL BLVD
MAP/LOT
224–166–26

ZYGOURIS BETTE D TR
BK/PG
11666 90
106 LOWELL BLVD
MAP/LOT
320–166–25

BOULDER
MB
BIT
WALL
EHH
POST
2.5' WOOD FENCE
6' WOOD FENCE

CONTINUED ABOVE

SANTOS DEBRA A
BK/PG
12895 249
798 LOWELL STREET
MAP/LOT
224–165B–20D

ZYGOURIS DIMITRIOS M
BK/PG
2712 292
794 LOWELL STREET
MAP/LOT
224–165B–20C

RUSCAK SANDRA L
BK/PG
13419 230
81 LOWELL BLVD
MAP/LOT
224–165B–20B

LECLERC PAUL
BK/PG
1207 691
79 LOWELL BLVD
MAP/LOT
320–165B–21A

LECLERC PAUL A
BK/PG
1207 691
77 LOWELL BLVD
MAP/LOT
320–165B–21

BEGIN OF 1925 SHLO ALT 2233

LOCATION LINE OF 1912 SHLO 1426
LOCATION LINE OF 1925 SHLO ALT 2233
LOCATION LINE OF 1912 SHLO 1426
LOCATION LINE OF 1934 SHLO ALT 3143

325
326
327
328
329
330
331
DBYL (50')
DBYL (3,295')
SWL (3,355')
SWL (13,370')
5.0'
4.0'
11.0'
4.5'

R4-7
(MOUNTED AT 5' HEIGHT)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

RETAIN "ADDITIONAL PARKING IN BACK" SIGN
PROP. 15' TRAFFIC SIGNAL POST WITH SPEED FEEDBACK SIGN W13-20aP, R2-1, SOLAR POWER UNIT, AND FOUNDATION (SEE DETAIL ON SHEET 190)

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP BIKE LANE SYMBOL (TYP)

+25

SPEED LIMIT ##
R2-1
(TO BE PROVIDED BY THE ENGINEER)

YOUR SPEED
W13-20aP

0 20 50 100
SCALE: 1" = 20'

NOTES:
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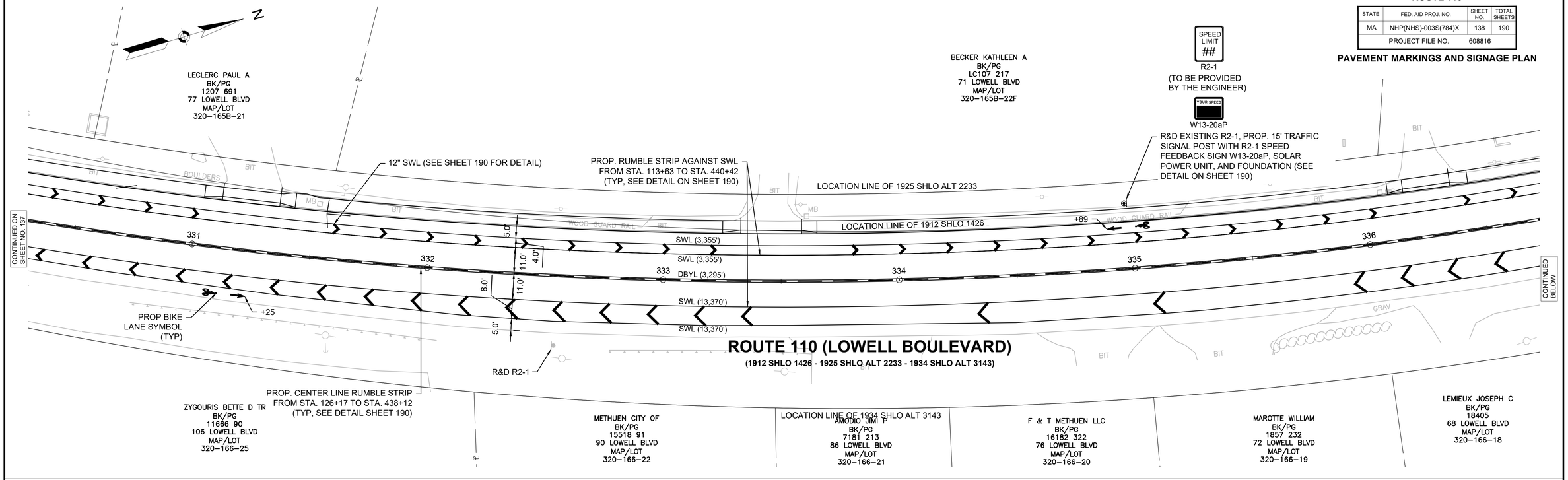
608816_TR(PM&S-B).DWG Plotted on 9-Sep-2024 11:04 AM

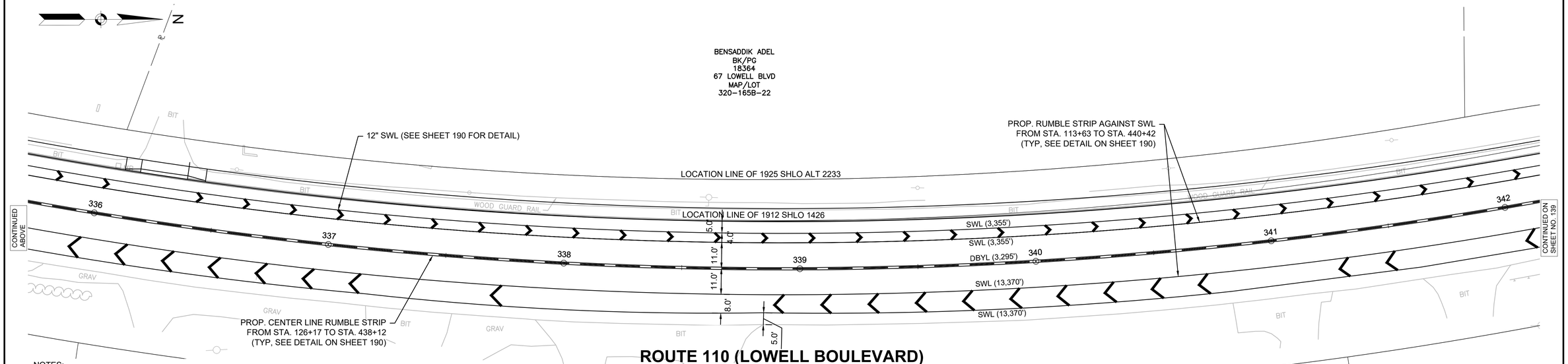
9/9/2024 I:\21055\21055.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-B).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	138	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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0 20 50 100

SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

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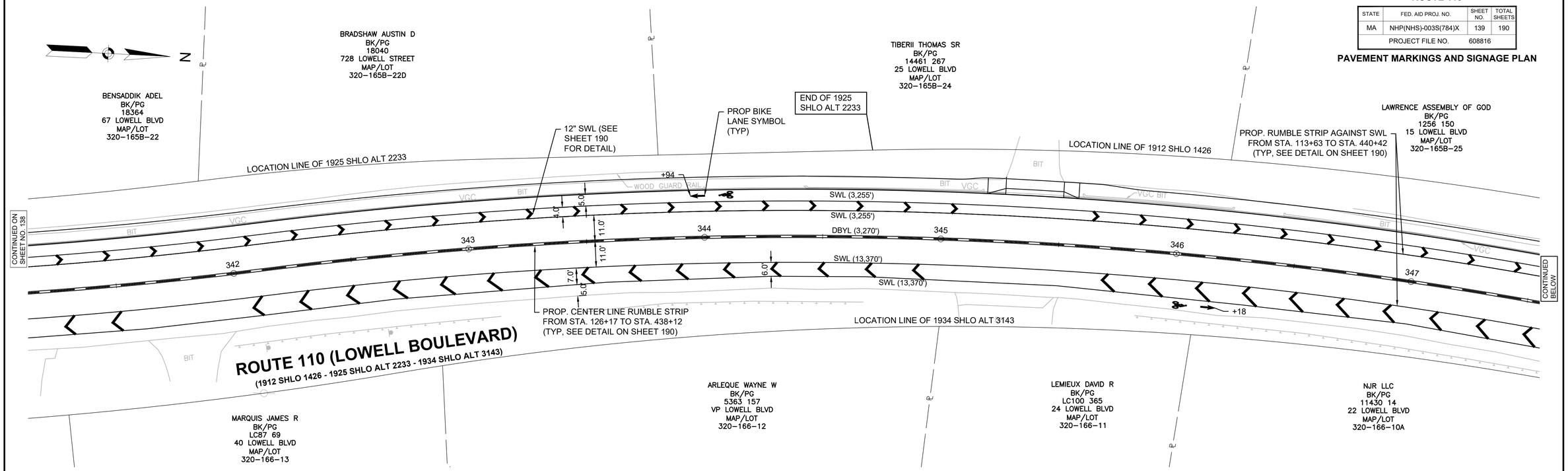
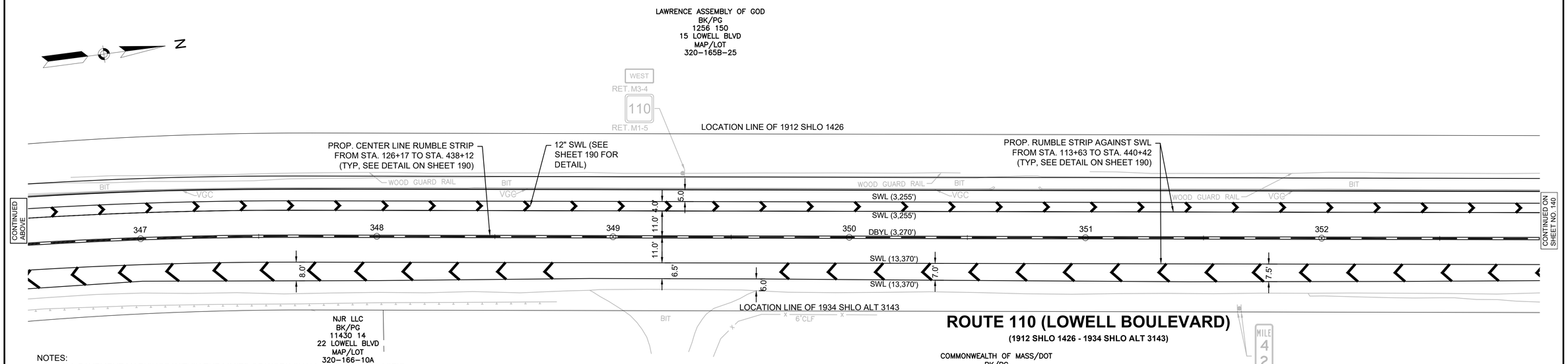
MA	NHP(NHS)-003S(784)X	139	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:05 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
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LOWELL, DRACUT, & METHUEN
ROUTE 110

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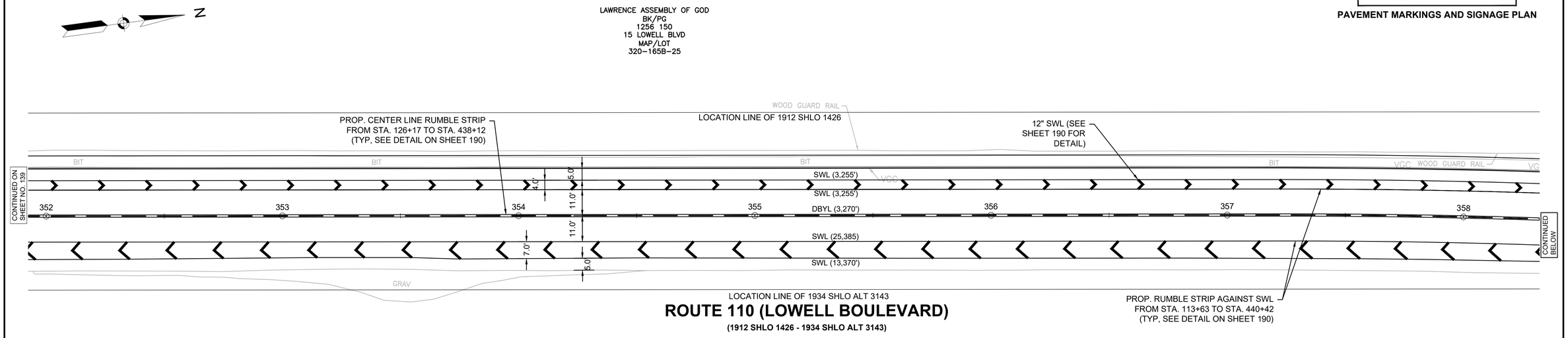
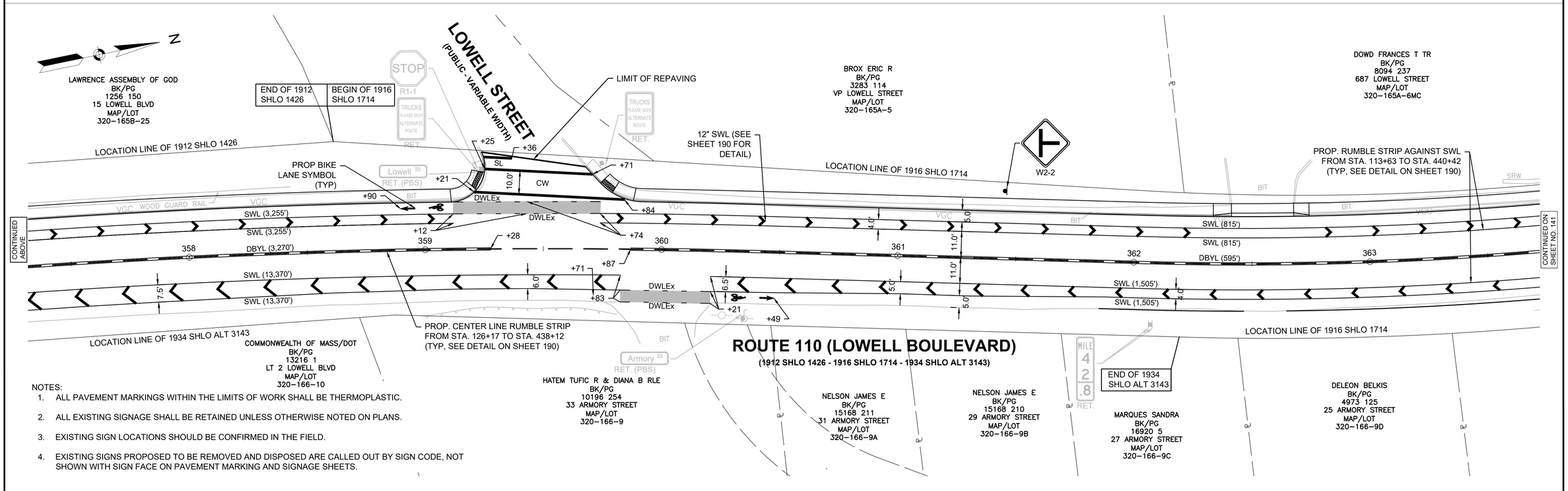
MA	NHP(NHS)-003S(784)X	140	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





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LOWELL, DRACUT, & METHUEN
ROUTE 110

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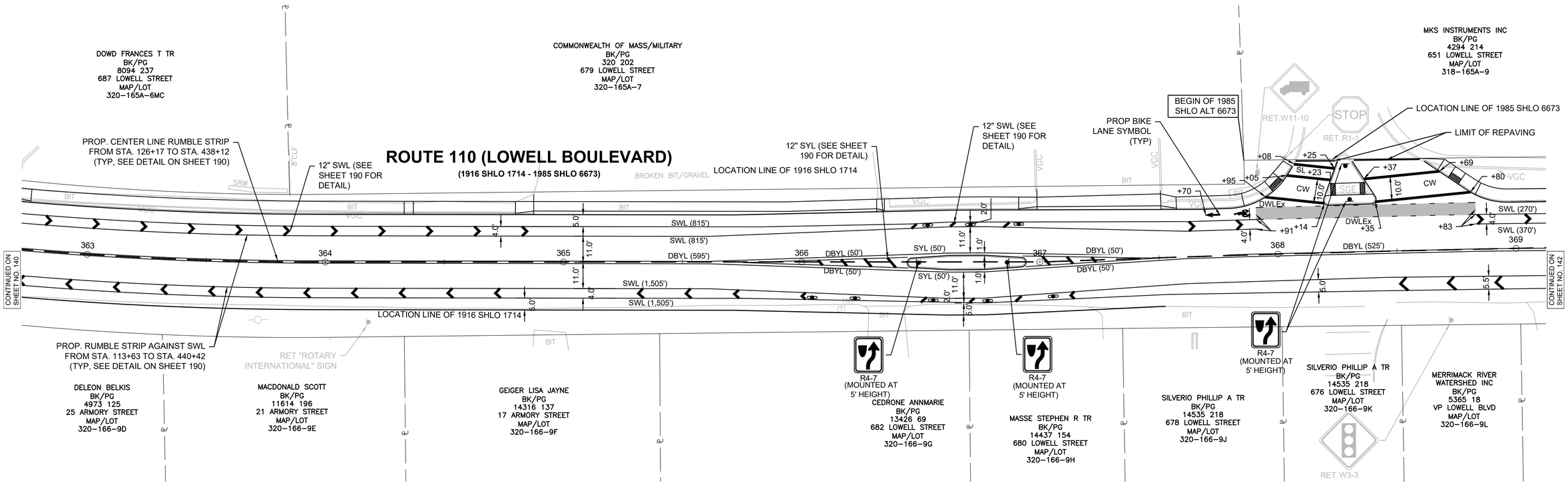
PAVEMENT MARKINGS AND SIGNAGE PLAN



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0 20 50 100

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LOWELL, DRACUT, & METHUEN
ROUTE 110

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MA	NHP(NHS)-003S(784)X	142	190
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PAVEMENT MARKINGS AND SIGNAGE PLAN

N

MKS INSTRUMENTS INC
BK/PG
4294 214
651 LOWELL STREET
MAP/LOT
318–165A–9

ROUTE 110 (LOWELL BOULEVARD)

(1916 SHLO 1714 - 1985 SHLO 6673 - 1992 SHLO ALT 7059)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

R&D W9-1

LOCATION LINE OF 1985 SHLO 6673

BIKE LANE
R3-17

HIGH FRICTION GREEN BICYCLE FACILITY SURFACE TREATMENT (TYP)

BEGIN OF 1992 SHLO ALT 7059

MILE 4 3 .0 RET.

LOCATION LINE OF 1992 SHLO ALT 7059

12" SYL (SEE SHEET 190 FOR DETAIL)
12" SWL (SEE SHEET 190 FOR DETAIL) (10' O.C.)

+37 +68 +76 +76 +40 +20 +28 +25 +14 +04 +93 +71 +98 +98 +85 +19

CW

SWL (270')
SWL (540')
SWL (1,505')
SWL (1,505')
SWL (115')
DBYL (525')
DBYL (115')
DBYL (115')
DWLEx

369 370 371 372 373 374

+49

R20.0'

5.0' 4.5' 11.0' 11.0' 5.5' 5.0' 8.0' 6.5' 11.0' 11.0' 11.0' 4.0' 5.5' 14.0'

CONTINUED ON SHEET NO. 141

CONTINUED ON SHEET NO. 143

LOCATION LINE OF 1916 SHLO 1714

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

GRIFFIN BROOK DRIVE NEXT SIGNAL
RET.

12" SWL (SEE SHEET 190 FOR DETAIL)

R3-8L

PROP BIKE LANE SYMBOL (TYP)

RET. W3-3

SILVERIO PHILLIP A TR
BK/PG
14535 218
676 LOWELL STREET
MAP/LOT
320–166–9K

MERRIMACK RIVER WATERSHED INC
BK/PG
5365 18
VP LOWELL BLVD
MAP/LOT
320–166–9L

GILLESPIE ANITA A
BK/PG
4373 91
VP LOWELL STREET
MAP/LOT
320–166–9R

GILLESPIE ANITA A TR
BK/PG
4373 91
670 LOWELL STREET
MAP/LOT
320–166–9N

CITY OF METHUEN
C/O CONSERVATION COMMISSION
BK/PG 6338/175
658 LOWELL STREET
MAP/LOT
318–166–9P

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	143	190
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PAVEMENT MARKINGS AND SIGNAGE PLAN

608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:07 AM

N

GRIFFIN BROOK DRIVE
(PRIVATE - VARIABLE WIDTH)

LIMIT OF REPAVING

ONE GRIFFIN BROOK DRIVE LLC
BK/PG 13360/197
PL 13172
(LOT 7)
1 GRIFFIN BROOK
MAP/LOT
318–165A–9A

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
(PARCEL C)
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

12" SWL (SEE SHEET 190 FOR DETAIL) (TYP) (10' O.C. AT 45°)

12" SYL (SEE SHEET 190 FOR DETAIL) (TYP) (10' O.C. AT 45°)

RET.R4-7

RET.R3-7R

YIELD TO PEDS
R9-6

END OF 1992 SHLO ALT 7059

ONLY ONLY
R3-8R

BIKE ROUTE
D11-1

HIGH FRICTION GREEN BICYCLE FACILITY SURFACE TREATMENT (TYP)

END OF 1985 SHLO ALT 6673

RAISED BIKE LANE SYMBOL (TYP)

LOCATION LINE OF 1992 SHLO ALT 7059

LOCATION LINE OF 1985 SHLO ALT 6673

LOCATION LINE OF 1916 SHLO 1714

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

+08 +14 +15 +28 +31 SL +97 +10 +38 +42 +28 +99 +27 +23 +37 +43 +18 +52 +60 +65

14.0' CW 10.0' CW 10.0' CW

24" SL 24" SL

SWL (540') DBYL (115') DBYL (115') SWL (115') SWL (1,505') SWL (1,505')

SWL (75') +75 SYL (60') +43 +42 SYL (60') +38 +42

DWLEx DWLEx DBYL (135') DBYL (135')

375 376 377 378 379

SWL (1,750') SWL (1,960') DBYL (1,750') SWL (2,120') SWL (2,120')

4.5' 11.0' 11.0' 11.0' 6.0' 4.0' 11.5' 1.5' 11.0' 2.0' 11.0' 4.0' 6.5' 5.0' 4.0' 3.5' 5.0' 4.0' 11.0' 5.0' 4.0' 5.0'

5'CLF WALL

CONTINUED ON SHEET NO. 142

CONTINUED ON SHEET NO. 144

R4-7
(MOUNTED AT 7' HEIGHT)

PROP BIKE LANE SYMBOL (TYP)

BIKE LANE
R3-17

R4-7
(MOUNTED AT 7' HEIGHT)

12" SYL (SEE SHEET 190 FOR DETAIL)

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

ROUTE 110 (LOWELL BOULEVARD)

(1916 SHLO 1714 - 1985 SHLO 6673 - 1992 SHLO ALT 7059)

CITY OF METHUEN
C/O CONSERVATION COMMISSION
BK/PG 6338/175
658 LOWELL STREET
MAP/LOT
318–166–9P

MERRIMACK COLLEGE
BK/PG
16450 115
656 LOWELL STREET
MAP/LOT
318–166–9Q

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100

SCALE: 1" = 20'

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
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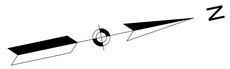
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	144	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
(PARCEL C)
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

635 LOWELL STREET LLC
BK/PG 15114/319
PL 5596
(PARCEL A)
635 LOWELL STREET
PARCEL ID
318–165A–10

GRIFFIN BROOK DRIVE
NEXT SIGNAL
RET.

RET.W3-3

LOCATION LINE OF 1916 SHLO 1714

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

CONTINUED ON SHEET NO. 143

CONTINUED ON SHEET NO. 145

379 380 381 382 383 384 385

4.0' 5.0' 11.0' 11.0' 4.0' 5.0'

SWL (1,750')
SWL (1,960')
DBYL (1,750')
SWL (2,120')
SWL (2,120')

BIT VGC

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

LOCATION LINE OF 1916 SHLO 1714

ROUTE 110 (LOWELL BOULEVARD)

(1916 SHLO 1714)

MILE 4.3.2
RET.

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

NOTES:
1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100
SCALE: 1" = 20'

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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	145	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

635 LOWELL STREET LLC
BK/PG 15114/319
PL 5596
(PARCEL A)
635 LOWELL STREET
PARCEL ID
318–165A–10

HICKORY HILL GOLF COURSE INC
BK/PG
1084 336
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

JOHNSTONE DAVID TR
BK/PG
15133 225
619 LOWELL STREET
MAP/LOT
318–165A–14

HICKORY HILL GOLF
COURSE INC
BK/PG
3302 80
615 LOWELL STREET
MAP/LOT
318–165A–15

PROP. RUMBLE STRIP AGAINST SWL
FROM STA. 113+63 TO STA. 440+42
(TYP, SEE DETAIL ON SHEET 190)

12" SWL (SEE
SHEET 190 FOR
DETAIL)

LOCATION LINE OF 1916 SHLO 1714

CONTINUED ON
SHEET NO. 144

385 386 387 388 389 390

SWL (1,750')
SWL (1,960')
DBYL (1,750')
SWL (2,120')
SWL (2,120')

5.0' 4.0' 11.0' 11.0' 4.0' 6.5' 5.5'

CONTINUED
BELOW

PROP. CENTER LINE RUMBLE STRIP
FROM STA. 126+17 TO STA. 438+12
(TYP, SEE DETAIL ON SHEET 190)

ROUTE 110 (LOWELL BOULEVARD)
(1916 SHLO 1714)

PETER F BROX TRUST
ERIC R BROX TRUSTEE
BK/PG 3650/313
PL 5596
(PARCEL B)
606 LOWELL STREET
MAP/LOT
318–166–7

PHILLIPS ACADEMY TRUSTEES OF
BK/PG
12785 85
620 LOWELL STREET
MAP/LOT
318–166–6

PROP BIKE
LANE SYMBOL
(TYP)

+67

HICKORY HILL GOLF COURSE INC
BK/PG
3302 80
615 LOWELL STREET
MAP/LOT
318–165A–15

PANIAGUA YEFRY KENDRY
BK/PG
17055 333
611 LOWELL STREET
MAP/LOT
318–165A–16

DASILVA
LORRANA CRISTINA
BK/PG
16713 4
609 LOWELL STREET
MAP/LOT
318–165A–17

HICKORY HILL GOLF COURSE INC
BK/PG 1084/336
PL 5596
PL 303
200 NORTH LOWELL STREET
MAP/LOT
220–165A–10A

JOSE I ARIAS &
MASSIEL PENA ARIAS
BK/PG 15496/128
PL 9030
(LOT B)
605 LOWELL STREET
MAP/LOT
318–165A–19

SPEED LIMIT ##
R2-1
(TO BE PROVIDED BY THE ENGINEER)
YOUR SPEED
W13-20aP

PROP. 15' TRAFFIC SIGNAL POST WITH SPEED FEEDBACK SIGN W13-20aP, R2-1, SOLAR POWER UNIT, AND FOUNDATION (SEE DETAIL ON SHEET 190)

R&D EXISTING R2-1

LOCATION LINE OF 1916 SHLO 1714

PROP. RUMBLE STRIP AGAINST SWL
FROM STA. 113+63 TO STA. 440+42
(TYP, SEE DETAIL ON SHEET 190)

12" SWL (SEE
SHEET 190 FOR
DETAIL)

CONTINUED ABOVE

390 391 392 393 394 395 396

SWL (1,750')
SWL (1,960')
DBYL (1,750')
SWL (6,490')
SWL (6,490')

5.0' 4.0' 11.0' 11.0' 4.0' 6.0'

+67

LOCATION LINE OF 1916 SHLO 1714

R&D EXISTING R2-1

PROP. 15' TRAFFIC SIGNAL POST WITH SPEED FEEDBACK SIGN W13-20aP, R2-1, SOLAR POWER UNIT, AND FOUNDATION (SEE DETAIL ON SHEET 190)

SPEED LIMIT ##
R2-1
(TO BE PROVIDED BY THE ENGINEER)
YOUR SPEED
W13-20aP

PHILLIPS ACADEMY TRUSTEES OF
BK/PG
12785 85
620 LOWELL STREET
MAP/LOT
318–166–6

PROP. CENTER LINE RUMBLE STRIP
FROM STA. 126+17 TO STA. 438+12
(TYP, SEE DETAIL ON SHEET 190)

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318–166–5

HILL AVENUE
(PUBLIC - 40' WIDE)

LIMIT OF REPAVING

R&D EXISTING "HILL AVE" SIGN
NO OUTLET

Hill Ave
MA-D3-1C
MOUNT BACK-TO-BACK
ON EXISTING POST

STOP
RET. R1-1

PROP BIKE
LANE SYMBOL
(TYP)

SL +16 +38
+02
+94 +48
+74
DWLEx CW 10.0'
DWLEx
+95 +42
+95 +42

SWL (160')
SWL (160')
DBYL (50')

CHAIN BETWEEN POST

MILE 43.4
RET.

W11-2
AHEAD
W16-9P

STATE HIGHWAY PARKING PROHIBITED
RET.

0 20 50 100
SCALE: 1" = 20'

NOTES:
1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

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Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	146	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

SACMAWATEY MAM &
CHHENG CHEA
BK/PG 8086/110
PB/PL 1/31
(LOTS 21 & 22)
603 LOWELL STREET
MAP/LOT
318–165A–24

METHUEN HOUSING AUTHORITY
BK/PG 1974/042
PB/PL 1/31
601 LOWELL STREET
MAP/LOT
318–165A–25

RAMSAY DOROTHY T ETAL
BK/PG
3289 198
597 LOWELL STREET
MAP/LOT
318–165A–26

MYERS MICHAEL A
BK/PG
11263 337
593 LOWELL STREET
MAP/LOT
318–165A–27

WALBROOK STREET
(PRIVATE DRIVEWAY)

WINCHESTER STREET
(PUBLIC - 40' WIDE)

HILL AVE
NO OUTLET

STATE HIGHWAY PARKING PROHIBITED
RET.

END OF 1916 SHLO 1714	BEGIN OF 1916 SHLO 1687

LOCATION LINE OF 1916 SHLO 1714

LOCATION LINE OF 1916 SHLO 1687

12" SYL (SEE SHEET 190 FOR DETAIL)

12" SWL (SEE SHEET 190 FOR DETAIL) (TYP)

W11-2
W16-7PR

W11-2
W16-7PL

STOP
RET. R1-1

LIMIT OF REPAVING

Walbrook St
MA-D3-1D
MOUNT BACK-TO-BACK

W11-2
AHEAD
W16-9P

CW DWLEx

DWLEx

SWL (160')
SWL (160')
SWL (360')
SWL (365')
SWL (4,350')
SWL (4,350')
SWL (2,120')
SWL (2,120')

DBYL (50')
DBYL (60')
DBYL (60')
SYL (15')
SYL(15')
DBYL (20')
DBYL (20')
DBYL (340')

396 397 398 399 400 401

+38 +44 +48 +42 +82 +01 +04 +05 +29 +35 +48 +42 +97 +78 +00 +97 +02 +01 +37 +40 +42 +38 +38 +01

5.0 2.0 1.0 11.0 1.5 5.0 4.0 11.0 11.0 4.0 5.0 10.0 8.0 15.5

CONTINUED ON SHEET NO. 145

CONTINUED ON SHEET NO. 147

PROP BIKE LANE SYMBOL (TYP)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

R4-7
(MOUNTED AT 4' HEIGHT)

W11-2
W16-7PL

R4-7
(MOUNTED AT 4' HEIGHT)

JOHN D MATTHESON
BK/PG 1377/221
PL 7176
(LOT B)
604 LOWELL STREET
MAP/LOT
318–166–5B

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 4948/105
PL 7176
(LOT A)
606 LOWELL STREET
MAP/LOT
318–166–5

SIX HUNDRED TWO LOWELL STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 2223/142
PL 7176
(LOT C)
602 LOWELL STREET
MAP/LOT
318–166–5A

SIX HUNDRED TWO LOWELL
STREET REALTY TRUST
JOSEPH L GIUFFRIDA TRUSTEE
BK/PG 15960/167
PL 1894
602 LOWELL STREET
MAP/LOT
318–166–4

NEW BALANCE ATHLETICS INC
BK/PG 15832/304
PL 1894
596 LOWELL STREET
MAP/LOT
318–166–1

ROUTE 110 (LOWELL BOULEVARD)
(1916 SHLO 1714 & 1687)

NOTES:
1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100
SCALE: 1" = 20'

608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:08 AM

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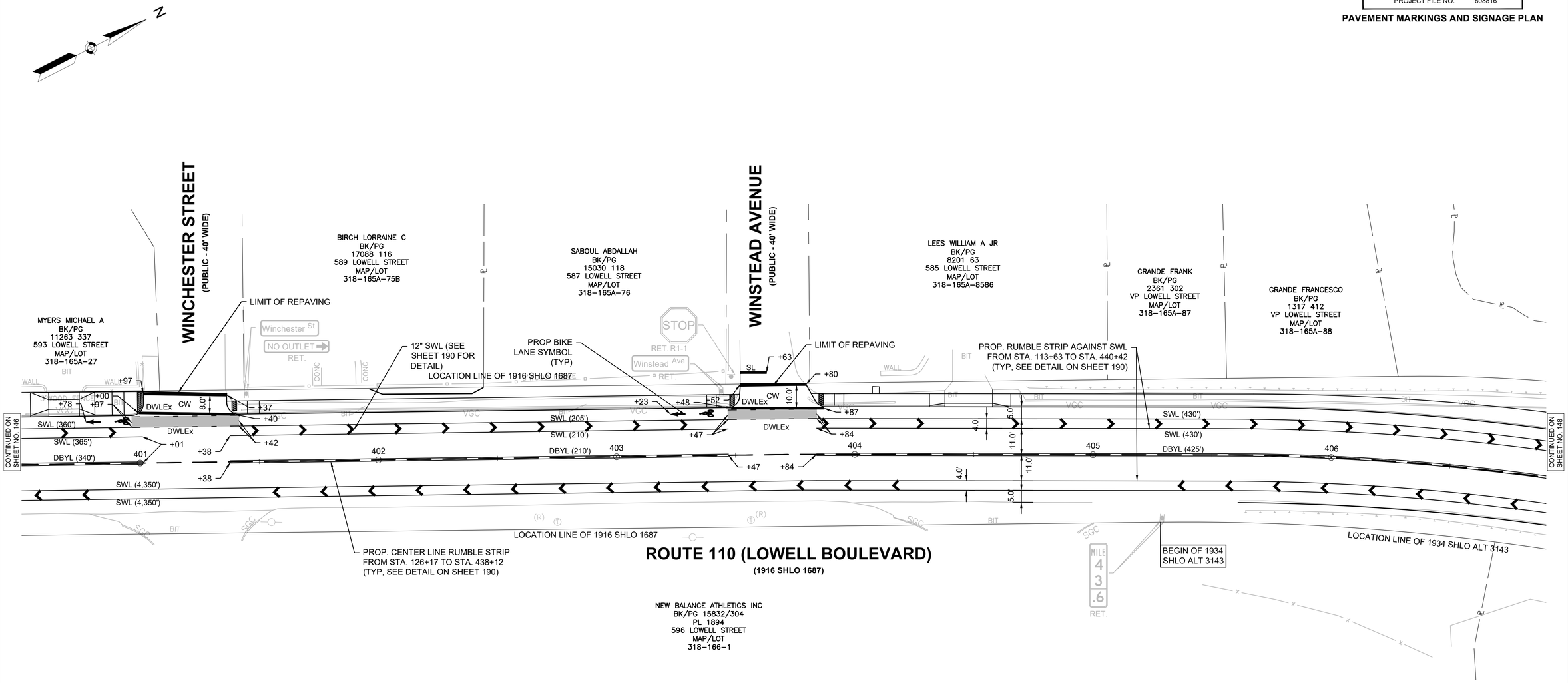
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	147	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



ROUTE 110 (LOWELL BOULEVARD)

(1916 SHLO 1687)

NEW BALANCE ATHLETICS INC
BK/PG 15832/304
PL 1894
596 LOWELL STREET
MAP/LOT
318–166–1

NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
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4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100

SCALE: 1" = 20'

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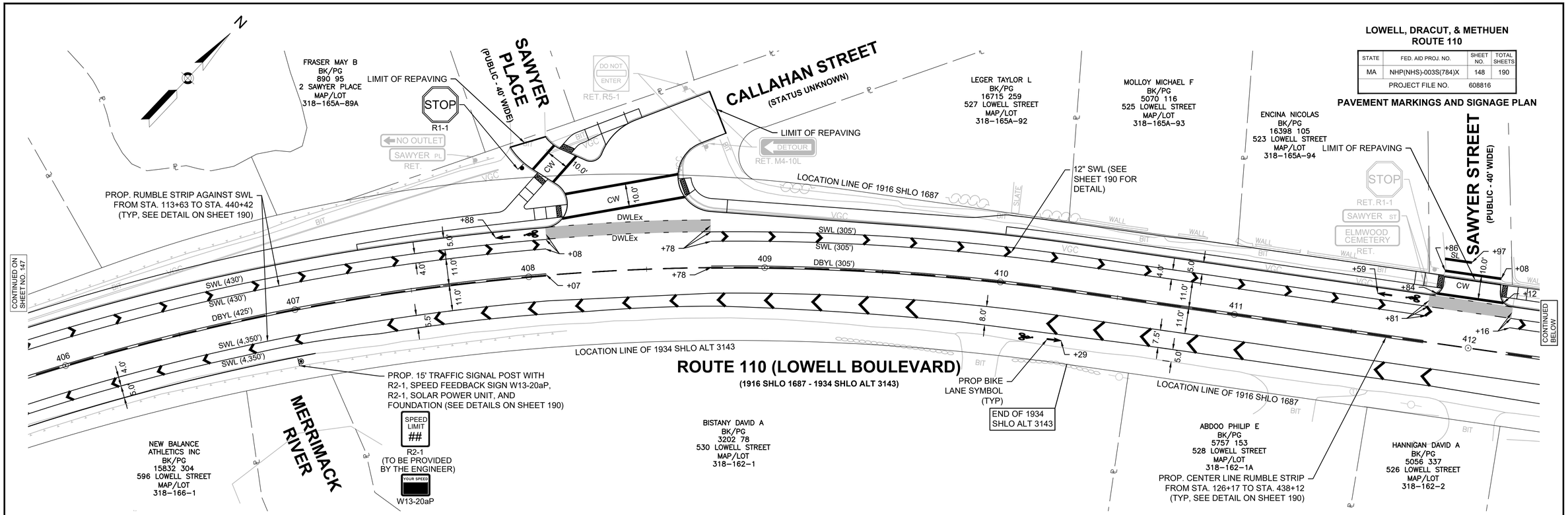
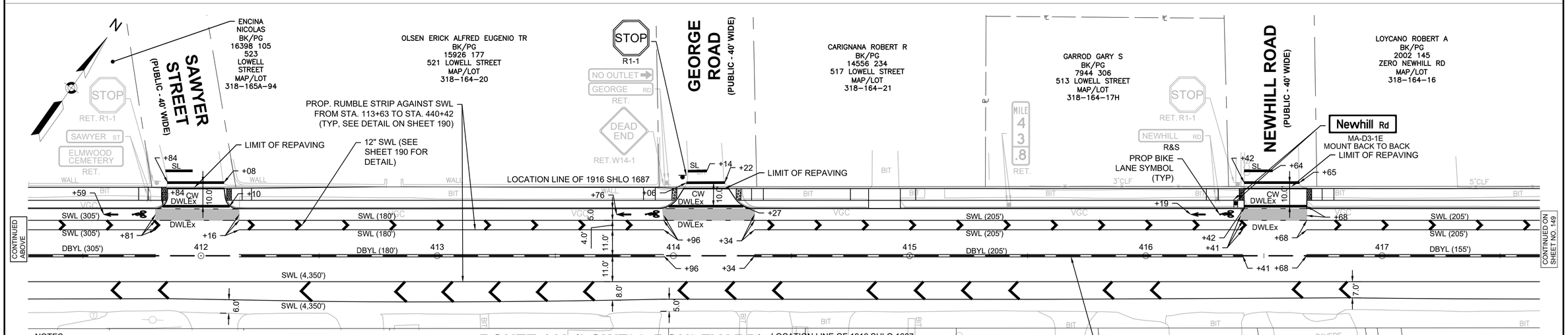
Last Saved by: EENTEADO
Printed by: Maeghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	148	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





NOTES:
1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
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0 20 50 100
SCALE: 1" = 20'

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9/9/2024 I:\2105\2105.06 - dt4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
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LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	149	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN

LOYCANO ROBERT A
BK/PG
2002 145
ZERO NEWHILL RD
MAP/LOT
318–164–16

CARRASQUILLO ROSA
BK/PG
15641 295
505 LOWELL STREET
MAP/LOT
318–164–23

LIMIT OF REPAVING

MOFFETT ST
RET.
STOP
RET. R1-1

MOFFETT STREET
(PRIVATE - 40' WIDE)

SENG VEASNA
BK/PG
14052 67
3 MOFFETT ST
MAP/LOT
318–164–25

DONAHUE PAMELA
BK/PG 6030 261
503 LOWELL STREET
MAP/LOT 418–164–26

NADEAU JOSEPH D
BK/PG
10053 138
501 LOWELL STREET
MAP/LOT
418–164–27

JASON A MUISE
BK/PG
9705 0167
PL/YR
987 1936
497–499 LOWELL STREET
MAP/LOT
316–164–29

LEITE MARCOS B
BK/PG
16865 138
489 LOWELL STREET
MAP/LOT
418–164–28

12" SWL (SEE SHEET 190 FOR DETAIL)

PROP BIKE LANE SYMBOL (TYP)

12" SYL (SEE SHEET 190 FOR DETAIL)

PROP. RUMBLE STRIP AGAINST SWL FROM STA. 113+63 TO STA. 440+42 (TYP, SEE DETAIL ON SHEET 190)

LOCATION LINE OF 1916 SHLO 1687

CONTINUED ON SHEET NO. 148

CONTINUED BELOW

SWL (205')
SWL (205')
DBYL (155')
DBYL (50')
DBYL (50')
SWL (4,350')
SWL (4,350')
SYL (45')
SYL (45')
DBYL (90')
DBYL (90')
SWL (1,165')
SWL (1,165')
DBYL (1,055')
SWL (4,350')

417 418 419 420 421 422 423

+02 +08 +11 +48 +71 +72 +76 +82 DWLEx DWLEx CW

5.0' 4.0' 11.0' 11.0' 7.5' 5.0' 3.0' 5.0' 8.0' 2.0' 11.0' 1.0' 11.0' 1.0' 2.0' 4.0' 5.0' 11.0' 11.0' 6.5' 6.5'

5'CLF 5'CLF 5'CLF BIT VGC 6' WODD FENCE PAVERS

510 LOWELL STREET LLC
BK/PG
16489 5
510 LOWELL STREET
MAP/LOT
318–162–7

BUDISH PETER F
BK/PG
LC116 321
508 LOWELL STREET
MAP/LOT
418–162–7A

R4-7
(MOUNTED AT 5' HEIGHT)

R4-7
(MOUNTED AT 5' HEIGHT)

LEBLANC TERENZI SHAWNETTE L TR
BK/PG
15197 269
500 LOWELL STREET
MAP/LOT
418–162–8D

SANTANA ELENA
BK/PG
16979 58
498 LOWELL STREET
MAP/LOT
418–162–8B

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M & ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

PROP. CENTER LINE RUMBLE STRIP FROM STA. 126+17 TO STA. 438+12 (TYP, SEE DETAIL ON SHEET 190)

BHAKTA PRAFULCHANDRA TR
BK/PG
11847 333
487 LOWELL STREET
MAP/LOT
418–164–30

GOMEZ ENDY
BK/PG
15544 167
485 LOWELL STREET
MAP/LOT
418–164–31

END OF 1916 SHLO 1687	BEGIN OF 1916 SHLO 1724

END OF 1916 SHLO 1724	BEGIN OF 1916 SHLO 1687

ROUTE 110 (LOWELL BOULEVARD)
(1916 SHLO 1687)

PROP BIKE LANE SYMBOL (TYP)

LOCATION LINE OF 1916 SHLO 1687
LOCATION LINE OF 1916 SHLO 1724

2' METAL FNC
BIT WALL
CONC
CRW
APPROX. BRIDGE DECK END

CONTINUED ABOVE

CONTINUED ON SHEET NO. 150

SWL (1,165')
SWL (1,165')
DBYL (1,005')
SWL (4,350')
SWL (4,350')

423 424 425 426 427 428

4.0' 5.0' 11.0' 11.0' 6.5' 5.5' 7.5'

+30

ROUTE 110 (LOWELL BOULEVARD)
(1916 SHLO 1687 & 1724)

END OF 1916 SHLO 1687	BEGIN OF 1916 SHLO 1724

END OF 1916 SHLO 1724	BEGIN OF 1916 SHLO 1687

MILE 44.0

STATE HIGHWAY PARKING PROHIBITED RET.

FOOTE AMY
BK/PG
11967 141
496 LOWELL STREET
MAP/LOT
418–162–8C

HOULIHAN DENNIS M & ELAINE RLE
BK/PG
13766 271
492 LOWELL STREET
MAP/LOT
418–162–8

PASS DANIEL
BK/PG
16113 89
490 LOWELL STREET
MAP/LOT
418–162–8F

GUNES OGUZ TR
BK/PG
11206 215
488 LOWELL STREET
MAP/LOT
418–162–8E

HOWELL ROBERT JASON
BK/PG
7036 59
488 LOWELL STREET
MAP/LOT
418–162–8A

CORBIN MARK
BK/PG
4383 262
486 LOWELL STREET
MAP/LOT
418–162–9

ZHEN JASON WAN TR
BK/PG
16160 251
478 LOWELL STREET
MAP/LOT
418–162–12

NOTES:
1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100
SCALE: 1" = 20'

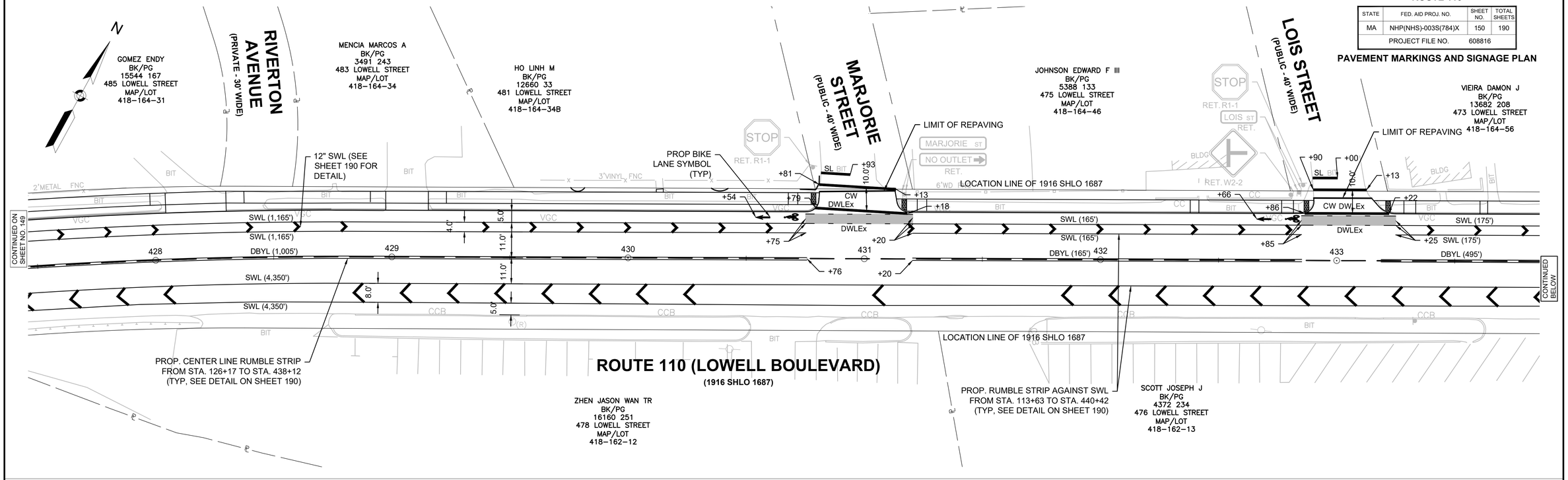
608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:09 AM

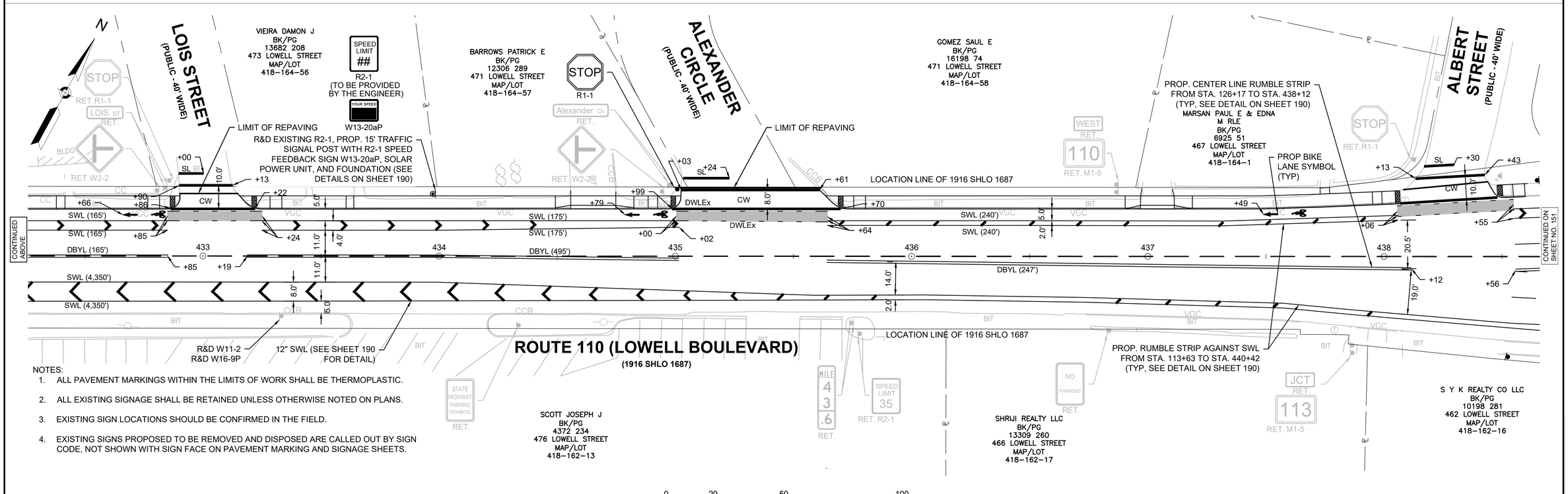
9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	150	190
	PROJECT FILE NO. 608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN





NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

SCALE: 1" = 20'

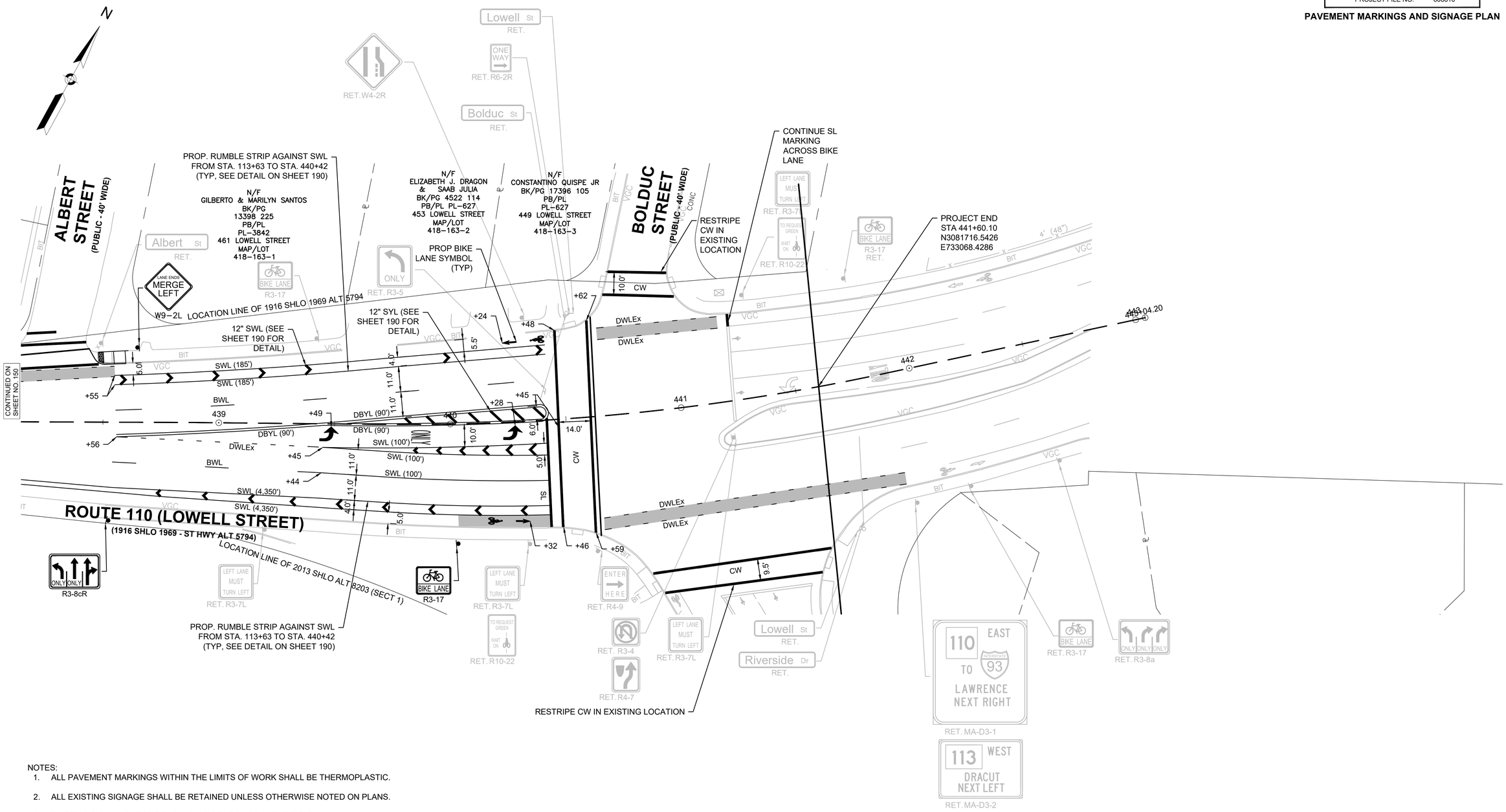
608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:09 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	151	190
PROJECT FILE NO.	608816		

PAVEMENT MARKINGS AND SIGNAGE PLAN



NOTES:

1. ALL PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE THERMOPLASTIC.
2. ALL EXISTING SIGNAGE SHALL BE RETAINED UNLESS OTHERWISE NOTED ON PLANS.
3. EXISTING SIGN LOCATIONS SHOULD BE CONFIRMED IN THE FIELD.
4. EXISTING SIGNS PROPOSED TO BE REMOVED AND DISPOSED ARE CALLED OUT BY SIGN CODE, NOT SHOWN WITH SIGN FACE ON PAVEMENT MARKING AND SIGNAGE SHEETS.

0 20 50 100

SCALE: 1" = 20'

608816_TR(PM&S-C).DWG Plotted on 9-Sep-2024 11:10 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(PM&S-C).dwg
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Printed by: Meaghan Wiggin

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
D11-1	24"	18"	BIKE ROUTE	MUTCD STANDARD DETAIL			7	GREEN	WHITE	WHITE	P5 (7)	3.00	21.00
D11-2	18"	18"					1	GREEN	WHITE	WHITE	P5 (1)	2.25	2.25
MA-D3-1	64"	12"	Little Merrimack Ave	SEE DETAIL			1	GREEN	WHITE	WHITE	MOUNT ON 2-P5 (1)	5.33	5.33
MA-D3-1A	50"	12"	Ridgewood Dr	SEE DETAIL			2	GREEN	WHITE	WHITE	MOUNT BACK TO BACK ON 2-P5 (1)	4.17	8.34
MA-D3-1C	32"	12"	Hill Ave	SEE DETAIL			2	GREEN	WHITE	WHITE	MOUNT BACK TO BACK ON P5 (1)	2.67	5.34
MA-D3-1D	48"	12"	Walbrook St	SEE DETAIL			2	GREEN	WHITE	WHITE	MOUNT BACK TO BACK ON P5 (1)	4.00	8.00
MA-D3-1E	42"	12"	Newhill Rd	SEE DETAIL			2	GREEN	WHITE	WHITE	MOUNT BACK TO BACK ON P5 (1)	3.50	7.00
M6-1L	12"	9"		MUTCD STANDARD DETAIL			1	GREEN	WHITE	WHITE	MOUNT WITH D11-1 (1)	0.75	0.75
M6-1R	12"	9"					2	GREEN	WHITE	WHITE	MOUNT WITH D11-1 (2)	0.75	1.50
M6-2L	12"	9"					1	GREEN	WHITE	WHITE	MOUNT WITH D11-2 (1)	0.75	0.75
OM1-1	24"	24"					1	YELLOW	YELLOW	YELLOW	P5 (1)	4.00	4.00
R1-1	30"	30"	STOP				23	RED	WHITE	WHITE	P5 (23)	6.25	143.75
R2-1	24"	30"	SPEED LIMIT ##				14	WHITE	BLACK	BLACK	MOUNTED ON SOLAR FEEDBACK SIGN POST (14)	5.00	70.00
R3-8cR	48"	30"	ONLY ONLY				1	WHITE	BLACK	BLACK	P5 (1)	10.00	10.00
R3-8L	30"	30"	ONLY ONLY				6	WHITE	BLACK	BLACK	P5 (7)	6.25	37.50
R3-8L MOD	36"	30"	ONLY				1	WHITE	BLACK	BLACK	P5 (1)	7.50	7.50
R3-8R	30"	30"	ONLY ONLY				3	WHITE	BLACK	BLACK	P5 (2)	6.25	18.75
R3-17	24"	18"	BIKE LANE				7	WHITE	BLACK	BLACK	P5 (7)	3.00	21.00
R3-17bP	24"	8"	ENDS				2	WHITE	BLACK	BLACK	MOUNT W/ R3-17 (2)	3.00	6.00

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	152	190
PROJECT FILE NO.	608816		

TRAFFIC SIGN SUMMARY
ROUTE 110 (LOWELL STREET) AT
GRIFFIN BROOK DRIVE

TRAFFIC SIGN SUMMARY CONTINUED

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACK-GROUND	COLOR LEGEND	COLOR BORDER	POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
R4-7	24"	30"		MUTCD STANDARD DETAIL			25	WHITE	BLACK	BLACK	P5 (25)	5.00	125.00
R9-6	12"	18"	YIELD TO PEDS				2	WHITE	BLACK	BLACK	P5 (2)	1.50	3.00
SP-2	18"	24"	RUBBISH DISPOSAL PROHIBITED $200-$1000 FINE	SEE DETAIL			1	WHITE	BLACK	BLACK	P5 (1)	3.00	3.00
W1-2L	30"	30"		MUTCD STANDARD DETAIL			4	YELLOW	BLACK	BLACK	P5 (4)	6.25	25.00
W1-2R	30"	30"					2	YELLOW	BLACK	BLACK	P5 (2)	6.25	12.50
W1-8	18"	24"					44	YELLOW	BLACK	BLACK	MOUNT TWO SIGNS BACK-TO-BACK ON P5 (22)	3.00	132.00
W2-2	30"	30"					3	YELLOW	BLACK	BLACK	P5 (3)	6.25	18.75
W2-10	36"	36"	TRAFFIC ENTERING WHEN FLASHING	SEE NOTE 3			1	YELLOW	BLACK	BLACK	FLASHING WARNING BEACON ASSEMBLY (2) (SEE DETAIL ON SHEET 190)	9.00	9.00
W9-2L	36"	36"	LANE ENDS MERGE LEFT	MUTCD STANDARD DETAIL			1	YELLOW	BLACK	BLACK	P5 (1)	9.00	9.00
W11-2	30"	30"					17	FLUORESCENT YELLOW GREEN	BLACK	BLACK	P5 (17)	6.25	106.25
W11-10	30"	30"					3	YELLOW	BLACK	BLACK	P5 (3)	6.25	18.75
W13-20aP	24"	18"	YOUR SPEED				17	YELLOW	DISPLAY SCREEN; BLACK	BLACK	SOLAR FEEDBACK 15' SIGNAL POST (12), W/R2-1 (4) (SEE DETAIL ON SHEET 190)	3.00	51.00
W16-7PL	24"	12"					6	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-2 (6)	2.00	12.00
W16-7PR	24"	12"					6	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-2 (6)	2.00	12.00
W16-9P	24"	12"	AHEAD				6	FLUORESCENT YELLOW GREEN	BLACK	BLACK	MOUNT W/ W11-2 (6)	2.00	12.00

NOTES:
1. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AMENDMENTS FOR LATEST SPECIFICATIONS ON TEXT, DIMENSIONS, AND COLOR. RETROREFLECTIVE SHEETING FOR ALL GUIDE AND TRAFFIC SIGNS SHALL CONFORM TO SUBSECTION M9.30.0 OF THE MASSDOT STANDARD SPECIFICATIONS.
2. SEE MASSDOT STANDARD SIGNS FOR SPECIFICATION ON TEXT, DIMENSIONS, AND COLOR.
3. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 11TH EDITION (2023) FOR LATEST SPECIFICATIONS ON TEXT, DIMENSIONS, AND COLOR
4. MA-D3 STREET NAME SIGNS ARE PAID FOR PER EACH. SQUARE FOOTAGE HAS BEEN INDICATED ON THE SIGN SUMMARY BUT IS NOT THE UNIT OF PAYMENT FOR STREET NAME SIGNS.

608816_TRISIGN SUM).DWG Plotted on 9-Sep-2024 11:10 AM
I:\21055\21055.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TRISIGN SUM).dwg
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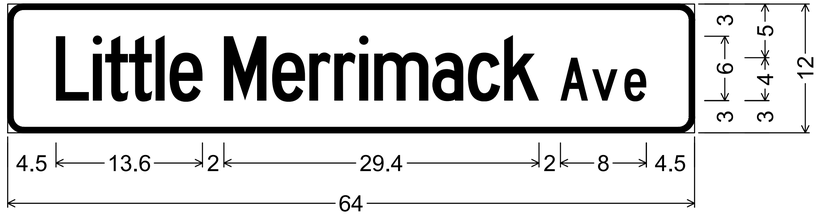
Printed by: Maeghan Wiggin

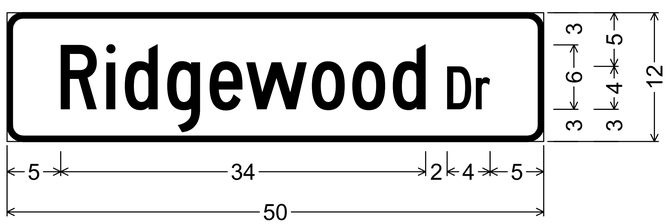
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	153	190
	PROJECT FILE NO. 608816		

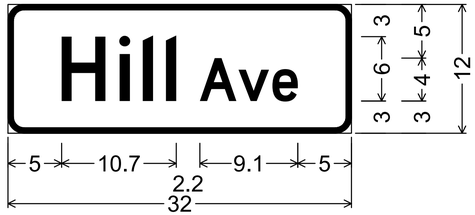
TRAFFIC SIGN SUMMARY
ROUTE 110 (LOWELL STREET) AT GRIFFIN BROOK DRIVE



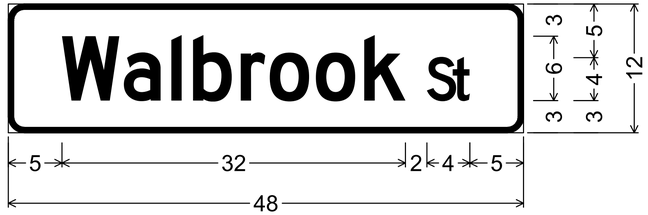
MA-D3-1;
1.5" Radius, 0.5" Border, White on, Green;
"Little Merrimack", C 2K specified length;
"Ave", C 2K specified length;



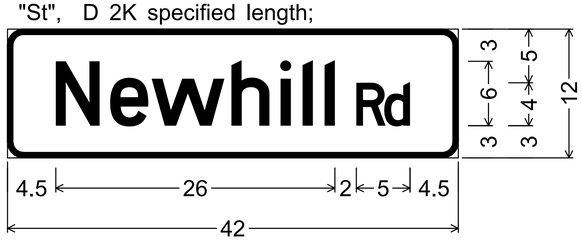
MA-D3-1A;
1.5" Radius, 0.5" Border, White on, Green;
"Ridgewood", C 2K specified length;
"Dr", C 2K specified length;



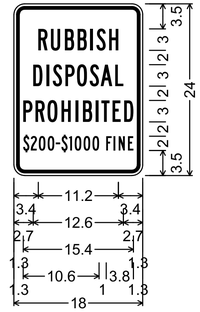
MA-D3-1C;
1.5" Radius, 0.5" Border, White on, Green;
"Hill", D 2K; "Ave", D 2K;



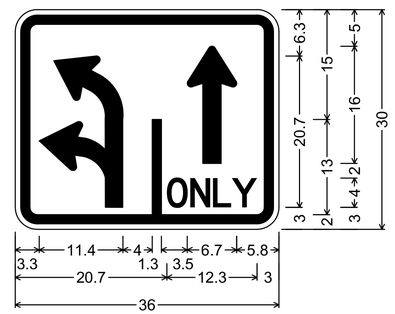
MA-D3-1D;
1.5" Radius, 0.5" Border, White on, Green;
"Walbrook", D 2K specified length;
"St", D 2K specified length;



MA-D3-1E;
1.5" Radius, 0.5" Border, White on, Green;
"Newhill", D 2K specified length;
"Rd", D 2K specified length;



SP-2_18x24;
1.5" Radius, 0.4" Border, 0.4" Indent, Black on, White;
"RUBBISH", B 2K;
"DISPOSAL", B 2K;
"PROHIBITED", B 2K;
"$200-$1000 FINE", B 2K;



R3-8L MOD;
3.0" Radius, 1.3" Border, 0.8" Indent, Black on, White;
Double Right Turn;
Arrow Custom - 16.0" 90';
"ONLY", D 2K specified length;

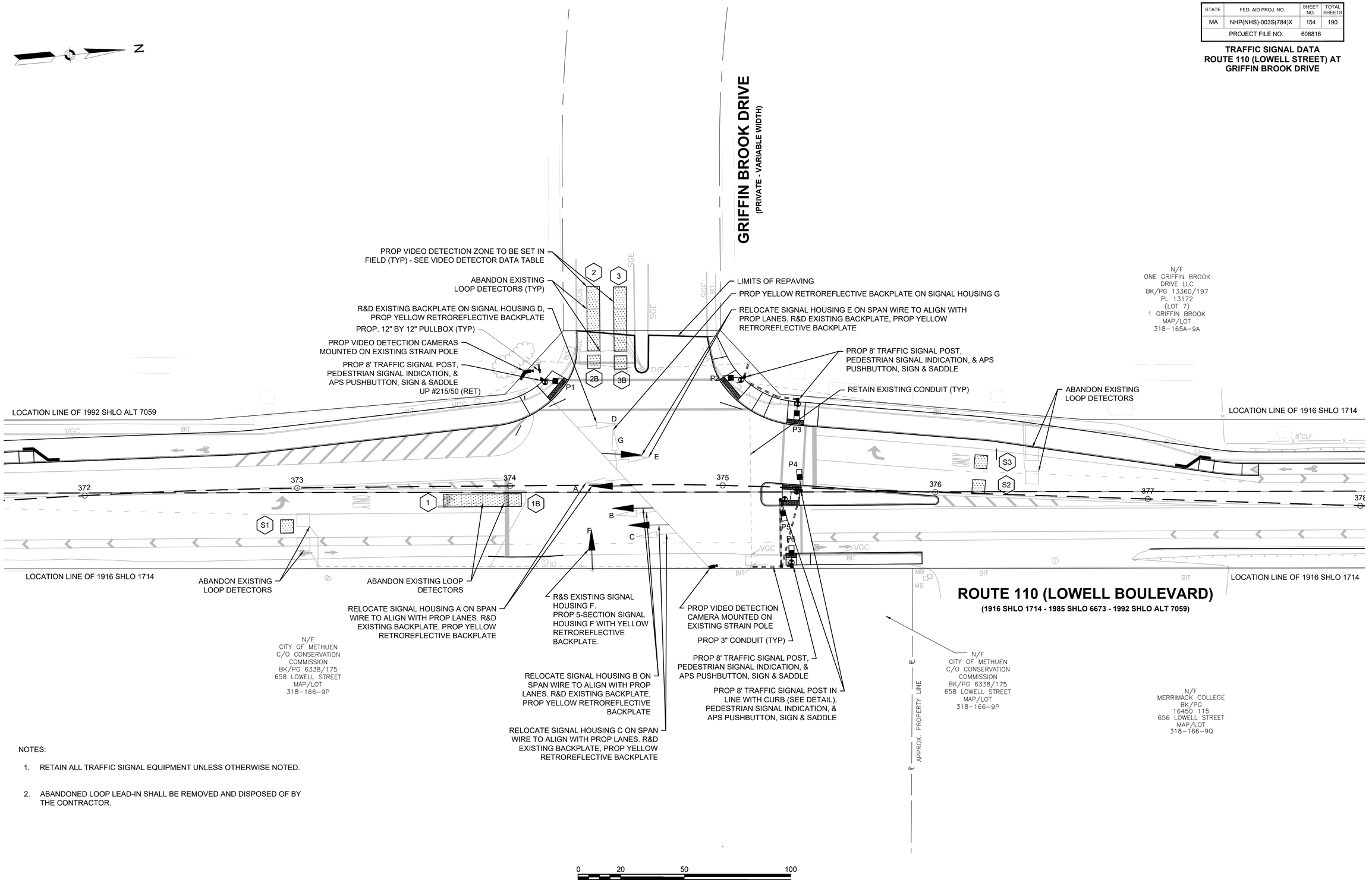
608816_TR(SIGN SUM).DWG Plotted on 9-Sep-2024 11:10 AM

9/9/2024 I:\21055\21055.06 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet 0\wg\608816_TR(SIGN SUM).dwg
Last Saved by: EENTEADO
Printed by: Meaghan Wiggin

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	154	190
	PROJECT FILE NO. 608816		

TRAFFIC SIGNAL DATA
ROUTE 110 (LOWELL STREET) AT GRIFFIN BROOK DRIVE

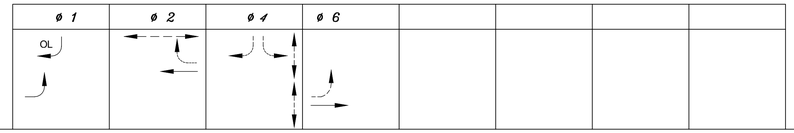


NOTES:

1. RETAIN ALL TRAFFIC SIGNAL EQUIPMENT UNLESS OTHERWISE NOTED.
2. ABANDONED LOOP LEAD-IN SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

608816_TR(SP).DWG Plotted on 9-Sep-2024 11:11 AM
9/9/2024 I:\21055\21055.08 - d4 dracut_methuen rte 110\project drawing data\plan sheet files\plan sheet dwg\608816_TR(SP).dwg
Last Saved by: EENTEADO
Printed by: Maighan Wiggin

APPROX. NORTH



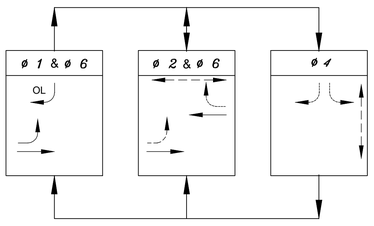
SEQUENCE AND TIMING FOR FULLY ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	FLASH OPR
LOWELL ST (RTE. 110)	NBL	A	GL	YL	RL	RL	RL	RL	RL	RL	RL	FYL	YL	RL													FY
LOWELL ST (RTE. 110)	NB	B,C	G	Y	R	R	R	R	R	R	R	G	Y	R													FY
LOWELL ST (RTE. 110)	SB	D,E	R	R	R	G	Y	R	R	R	R	R	R	R													FY
GRIFFIN BROOK DRIVE	EB	G	R	R	R	R	R	R	G	Y	R	R	R	R													FR
GRIFFIN BROOK DRIVE	EB	F	GR/R	YR	R	R	R	R	G	Y	R	R	R	R													FR
PEDS GRIFFIN BROOK DRIVE	NB, SB	P1–P2	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW	DW	DW													
PEDS ROUTE 110	EB, WB	P3–P4	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW													
PEDS ROUTE 110	EB, WB	P5–P6	DW	DW	DW	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW													
TIMING IN SECONDS																											
MINIMUM GREEN (INITIAL)			5			12			8			12															EMERGENCY ONLY
PASSAGE TIME (VECHICLE)			3			5			4			5															
MAXIMUM 1			7			34			24			34															
MAXIMUM 2			12			39			24			39															
YELLOW CLEARANCE				4			4.5			3.5			4.5														
RED CLEARANCE					1.5			1.5			3			1.5													
WALK (W)						7			7																		
PEDESTRIAN CLEARANCE						24			17																		
RECALL			OFF			SOFT			OFF			SOFT															
MEMORY			LOCKING			LOCKING			NON LOCKING			LOCKING															

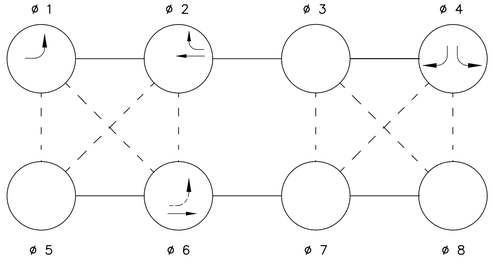
SEQUENCE AND TIMING NOTES:

1. PHASES Ø3, Ø5, Ø7, AND Ø8 NOT USED.
2. MAXIMUM 2 OPERATES BETWEEN 3:00 P.M. AND 6:00 P.M.
3. MAXIMUM 1 OPERATES AT ALL OTHER TIMES.
4. IF MOVEMENT CONTINUES IN NEXT PHASE, IT SHALL NOT CLEAR THROUGH RED.
5. PEDESTRIAN CLEARANCE SHALL NOT EXTEND THROUGH YELLOW CLEARANCE.
6. PEDESTRIAN PHASES SHALL BE SUBJECT TO PUSHBUTTON ACTUATION.

PREFERENTIAL PHASING SEQUENCE



NEMA DUAL RING PHASING NOTES:



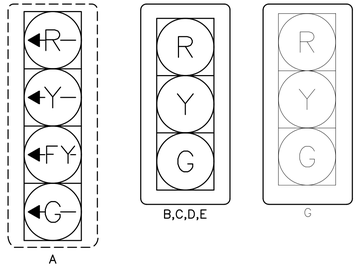
1. PHASES ASSOCIATED BY A SOLID LINE SHALL NOT OPERATE CONCURRENTLY.
2. PHASES ASSOCIATED BY A DASHED LINE MAY OPERATE CONCURRENTLY.
3. THROUGH MOVEMENTS MAY INCLUDE RIGHT TURNS.
4. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS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

	MAJOR ITEMS REQUIRED	
PAY ITEM	QUANTITY	ITEM
816.01	6	COUNTDOWN PEDESTRIAN SIGNAL INDICATIONS
	1	12" – 5 SECTION LED VEHICLE SIGNAL INDICATION
	7	8' TRAFFIC SIGNAL POSTS, BASE, AND FOUNDATION
	6	APS PUSHBUSTTON, SIGN, AND SADDLE
	4	RELOCATE EXISTING SIGNAL INDICATIONS ON SPANWIRE
	1	2–CHANNEL DETECTOR AMPLIFIER CARD
	7	YELLOW RETROREFLECTIVE SIGNAL INDICATION BACKPLATE
	1	VIDEO DETECTION SYSTEM
	1,060'	TRAFFIC SIGNAL CABLE
		WIRING MODIFICATIONS
		CONTROLLER SETTINGS MODIFICATIONS
804.3	125'	3" PVC TRAFFIC SIGNAL CONDUIT
811.31	2	PULL BOX 12" BY 12" – SD2.031
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.

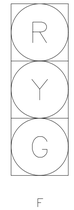
VIDEO DETECTOR DATA

DETECTOR NUMBER	DETECTION ZONE SIZE	ø CALLED	ø EXT.	MODE PULSE PRESENCE	DELAY
1	6' x 30'	1	1	PRESENCE	---
2	6' x 30'	4	4	PRESENCE	5 SECONDS
3	6' x 30'	4	4	PRESENCE	---
1B	6' x 6'	1	1	PRESENCE	---
2B	6' x 6'	4	4	PRESENCE	---
3B	6' x 6'	4	4	PRESENCE	---
S1	6' x 6'	6	6	PULSE	---
S2	6' x 6'	2	2	PULSE	---
S3	6' x 6'	2	2	PULSE	5 SECONDS

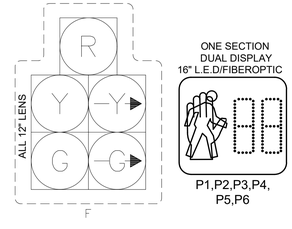
EXISTING SIGNAL INDICATIONS TO REMAIN



EXISTING SIGNAL INDICATIONS TO BE REMOVED



PROPOSED SIGNAL INDICATIONS



NOTES:

1. ALL SIGNAL HEADS ARE FIXED-MOUNTED
2. FURNISH AND INSTALL YELLOW RETROREFLECTIVE BACKPLATES ON EXISTING SIGNAL INDICATIONS A, B, C, D, E, F, AND G. CONTRACTOR RESPONSIBLE FOR REMOVAL AND DISPOSAL OF EXISTING BACKPLATES ON INDICATIONS B, C, D, AND E.

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	155	190
PROJECT FILE NO.	608816		

TRAFFIC SIGNAL DATA
ROUTE 110 (LOWELL STREET) AT GRIFFIN BROOK DRIVE

608816_TR(SS).DWG Plotted on 9-Sep-2024 11:11 AM

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Last Saved by: EENTEADO
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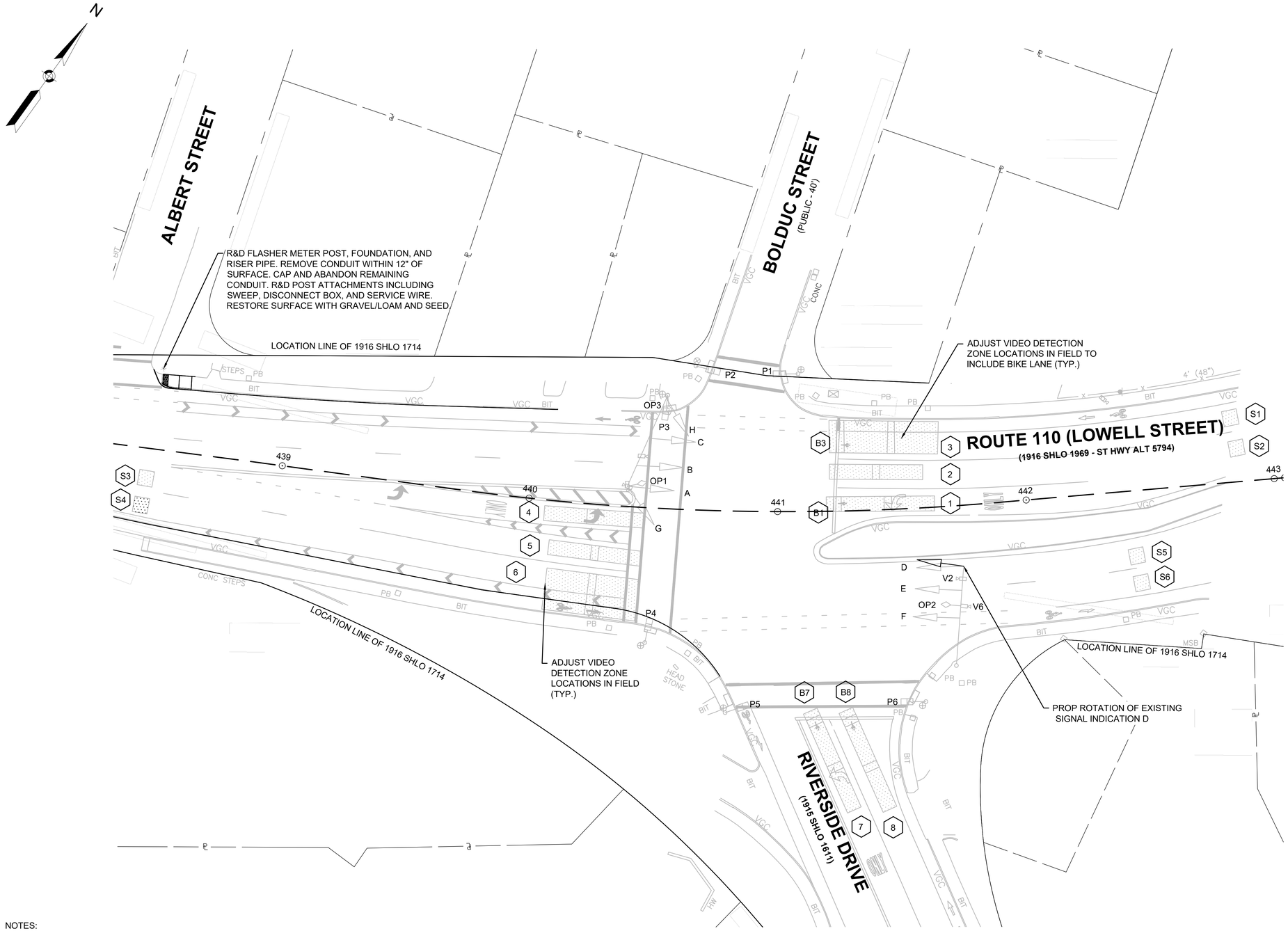
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	156	190
PROJECT FILE NO.	608816		

TRAFFIC SIGNAL DATA
ROUTE 110 (LOWELL STREET) AT RIVERSIDE DRIVE



NOTES:

1. RETAIN ALL TRAFFIC SIGNAL EQUIPMENT UNLESS OTHERWISE NOTED.

0 20 50 100
SCALE: 1" = 20'

608816_TR(SP).DWG Plotted on 9-Sep-2024 11:12 AM

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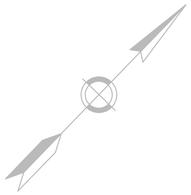
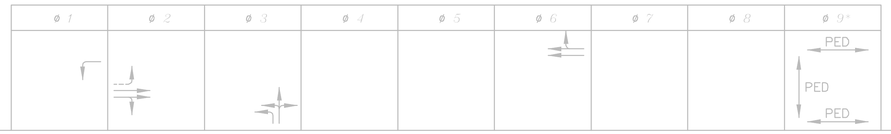
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	157	190
	PROJECT FILE NO. 608816		

TRAFFIC SIGNAL DATA
ROUTE 110 (LOWELL STREET) AT RIVERSIDE DRIVE





SEQUENCE AND TIMING FOR FULLY-ACTUATED CONTROL (COORDINATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	22	23	24	FLASH OPER.
ROUTE 110	WB	A	GL	YL	RL	RL	RL	RL	RL	RL	RL							RL	RL	RL							RL	RL	RL	FRL
ROUTE 110	WB	B,C	R	R	R	R	R	R	R	R	R							G	Y	R							R	R	R	FY
ROUTE 110	EB	D,E,F	R	R	R	G	Y	R	R	R	R							R	R	R							R	R	R	FY
RIVERSIDE DRIVE	NB	G,H	R	R	R	R	R	R	G	Y	R							R	R	R							R	R	R	FR
PEDESTRIAN	N-S	P1, P2	DW	DW	DW	DW	DW	DW	DW	DW	DW							DW	DW	DW							W	FDW	DW	OFF
PEDESTRIAN	E-W	P3, P4	DW	DW	DW	DW	DW	DW	DW	DW	DW							DW	DW	DW							W	FDW	DW	OFF
TIMING IN SECONDS																														
MINIMUM GREEN (INITIAL)			10			10			5									10												EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			2			2			2									2												
MAXIMUM 1			10			68			17									79												
MAXIMUM 2			10			68			17									79												
YELLOW CLEARANCE				3.5			4			3.5									4											
RED CLEARANCE					2			1.5			3.5									1.5										
WALK (W)																											7			
PEDESTRIAN CLEARANCE																												22	3	
RECALL			OFF			SOFT			OFF									SOFT									OFF			
MEMORY			NON-LOCKING			NON-LOCKING			NON-LOCKING									NON-LOCKING									NON-LOCKING			

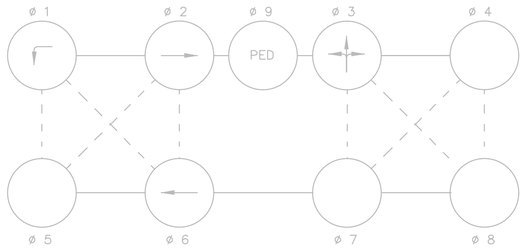
* PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
UNUSED NON-COORDINATED PHASE TIME SHALL BE APPLIED TO PHASES 2 & 6.

COORDINATION DATA
(ALL ENTRIES IN SECONDS)

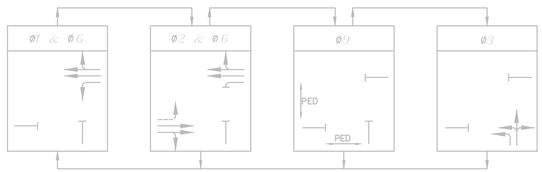
CYCLE/SPLIT	TIME PERIOD	OFFSET	CYCLE LENGTH
CYCLE 1/1	AM PEAK MON-FRI 7:00 AM-9:00 AM	70	140
CYCLE 2/2	PM PEAK MON-FRI 4:00 PM-8:00 PM	84	140
CYCLE 3/3	SAT-SUN 9:00 AM-8:00 PM	76	120
MAX 1	FREE ALL OTHER TIMES	-	85

SPLIT	ø1	ø2	ø3	ø4	ø5	ø6	ø7	ø8	ø9
SPLIT 1	16	68	24			84			32
SPLIT 2	18	55	35			73			32
SPLIT 3	16	42	30			58			32

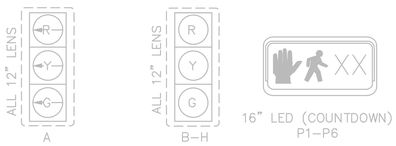
NEMA DUAL RING PHASING NOTES:



PROPOSED SIGNAL PHASING



	MAJOR ITEMS REQUIRED	
PAY ITEM	QUANTITY	ITEM
816.02		ADJUST VIDEO DETECTION ZONES
		WIRING MODIFICATIONS
	1	ADJUST SIGNAL HOUSING
	1	R&D EXISTING METER POST, FOUNDATION, AND RISER
		Plus all necessary duct, cable, labor, miscellaneous
		material and equipment to complete the installation.



NOTES:

1. ALL SIGNAL HEADS SHALL HAVE TUNNEL VISORS, 5 IN. LOUVERED BACK PLATES WITH 3 IN. RETROREFLECTIVE BORDER.
2. ALL SIGNAL LENS SHALL BE 12 IN. DIA.
3. ALL RED, YELLOW, AND GREEN SIGNALS SHALL BE LED TYPE.

SIGNAL HEAD DATA
NOT TO SCALE

DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED ø RED. TIME IN SEC.

DETECTOR NUMBER	CAMERA NUMBER	CHANNEL NUMBER	DETECTION ZONE	ø CALLED	ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	V1	2	2@6'X20'	1	1&6	B	-	-
2	V1	2	2@6'X20'	6	6	B	-	-
3	V1	4	2@13'X20'	6	6	B	-	-
B1	V1	1	1@6'X6'	1	1&6	B	-	-
B3	V1	3	1@6'X6'	6	6	B	-	-
4	V2	2	2@6'X20'	2	2	B	-	-
5	V2	2	2@6'X20'	2	2	B	-	-
6	V2	4	2@16'X20'	2	2	B	-	-
B4	V2	1	1@6'X6'	2	2	B	-	-
B6	V2	3	1@6'X6'	2	2	B	-	-
7	V3	2	2@6'X20'	3	3	B	-	-
8	V3	4	2@6'X20'	3	3	B	-	-
B7	V3	1	1@6'X6'	3	3	B	-	-
B8	V3	3	1@6'X6'	3	3	B	-	-
S3	V4	1	1@6'X6'	SYSTEM	-	A	-	-
S4	V4	2	1@6'X6'	SYSTEM	-	A	-	-
S1	V5	1	1@6'X6'	SYSTEM	-	A	-	-
S2	V5	2	1@6'X6'	SYSTEM	-	A	-	-
S5	V6	1	1@6'X6'	SYSTEM	-	A	-	-
S6	V6	2	1@6'X6'	SYSTEM	-	A	-	-

EMERGENCY PRE-EMPTION DATA

APPROACH	DETECTOR	PHASE	TIME (SEC)
ROUTE 110 WB	OP1	ø1 & ø6	MIN. 10 MAX. 120
ROUTE 110 EB	OP2	ø2	MIN. 10 MAX. 120
RIVERSIDE DRIVE NB	OP3	ø3	MIN. 10 MAX. 120

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.
3. IN RESPONSE TO A PREEMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL TIME THE CLEARANCE INTERVALS OF THE ACTIVE PHASE (IF DIFFERENT TO THAT TO BE SERVICED) AND ADVANCE TO AND/OR HOLD IN EMERGENCY VEHICLE PREEMPTION PHASE UNTIL PREEMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME CLEARANCES AND SIMILARLY SERVICE OTHER EMERGENCY VEHICLE PREEMPTION SEQUENCES IN THE ORDER RECEIVED (IF RECEIVED) OTHERWISE, RESUME NORMAL PREFERENTIAL PHASE SEQUENCE.
4. PREEMPTION MINIMUM GREENS SHALL BE 10 SECONDS.
5. NORMAL CLEARANCES SHALL BE PROVIDED ON PHASES THAT ARE TERMINATED BY PREEMPTION DEMAND.
6. ACTUAL TIMING FOR PREEMPTION SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FIRE DEPARTMENT AND SHALL BE APPROVED BY MASSDOT PRIOR TO OPERATION.

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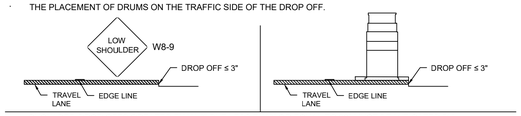
NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS INCLUDING MASSDOT REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD AND MASSDOT REVISIONS.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. 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 CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS 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, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
7. THE FIRST TEN REFLECTORIZED PLASTIC DRUMS OF A MERGING TAPER SHALL BE MOUNTED WITH SEQUENTIAL FLASHING LIGHTS.
8. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
9. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
10. 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.
11. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
12. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL NOT COVERED IN THE PLAN SET SHALL REFER TO MASSDOT "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS".
13. REFER TO SHEETS 163-179 FOR PROPOSED WORKZONE STAGING SEQUENCING PLANS. WORKZONES SHOWN SHALL BE BROKEN INTO MANAGEABLE STAGES FOR PROGRESSION OF WORK TO LIMIT THE DISRUPTION TO TRAFFIC WHILE MAINTAINING ACCESS TO ALL ABUTTERS. IF THE CONTRACTOR WISHES TO DEVIATE FROM THE PROPOSED SEQUENCING SHOWN HEREIN, THE CONTRACTOR SHALL SUBMIT THEIR INTENDED PROGRESSION OF WORK AND HAVE APPROVAL FROM THE ENGINEER PRIOR TO THE START CONSTRUCTION.
14. CONTRACTOR SHALL REMOVE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED TEMPORARY MARKINGS AND SHALL BAG OR REMOVE SIGNAGE THAT CONFLICTS WITH CONSTRUCTION PERIOD TRAFFIC PATTERNS.
15. IN GENERAL, NO WORK SHALL BE PERFORMED WITHIN THE TRAVELED WAY DURING PEAK PERIODS OF 7:00-9:00 AM AND 3:00-6:00 PM. CONTRACTOR SHALL REMOVE TEMPORARY TRAFFIC CONTROLS WHEN WORK IS NOT BEING PREFORMED AND SHALL ENSURE THAT THE AREA IS SAFE FOR VEHICULAR TRAVEL. IF LANE CLOSURES ARE TO BE USED FOR AN EXTENDED DURATION THROUGHOUT CONSTRUCTION, THE CONTRACTOR SHALL AT ALL TIMES SEEK APPROVAL FROM THE MASSDOT RESIDENT ENGINEER.
16. ADA COMPLIANT ACCESS INCLUDING PEDESTRIAN GUIDANCE SYSTEMS TO BE MAINTAINED AT ALL TIMES AT WORKZONES. PEDESTRIAN DETOURS OR BYPASSES SHALL INCLUDE ADA COMPLIANT ROUTE WITH PROPER BARRICADES, RAILING, RAMPS AND SIGNAGE, ETC.

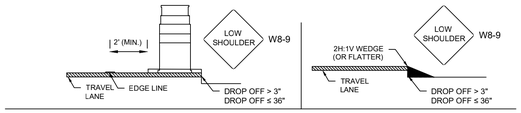
THIS GUIDANCE IS ADOPTED FROM THE ROADSIDE DESIGN GUIDE, 4TH EDITION.

PAVEMENT DROP-OFFS MAY OCCUR DURING PAVING, EXCAVATION, AND OTHER CONSTRUCTION ACTIVITIES. DROP-OFFS CREATE HAZARDS FOR VEHICLES IF NOT PROPERLY MITIGATED. THE FOLLOWING APPLIES FOR ALL ROADS WITH SPEED LIMITS GREATER THAN 30 MPH; FOR ROADS WITH SPEEDS OF 30 MPH OR LESS, TREATMENTS FOR PAVEMENT EDGE DROP-OFFS SHALL BE AT THE DISCRETION OF THE ENGINEER. DROP-OFFS BETWEEN ADJACENT, OPEN TRAVEL LANES SHALL NOT EXCEED 2", AND ANY DROP-OFF IN EXCESS OF 3" SHALL NOT BE LEFT UNATTENDED WITHOUT ONE OF THESE MITIGATION MEASURES APPLIED.

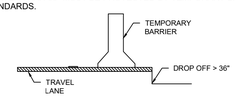
- SHOULDER DROP-OFFS 3" OR LESS ADJACENT TO A SHOULDER OR ACTIVE LANE SHOULD BE MITIGATED BY:
- A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT; OR
- THE PLACEMENT OF DRUMS ON THE TRAFFIC SIDE OF THE DROP OFF.



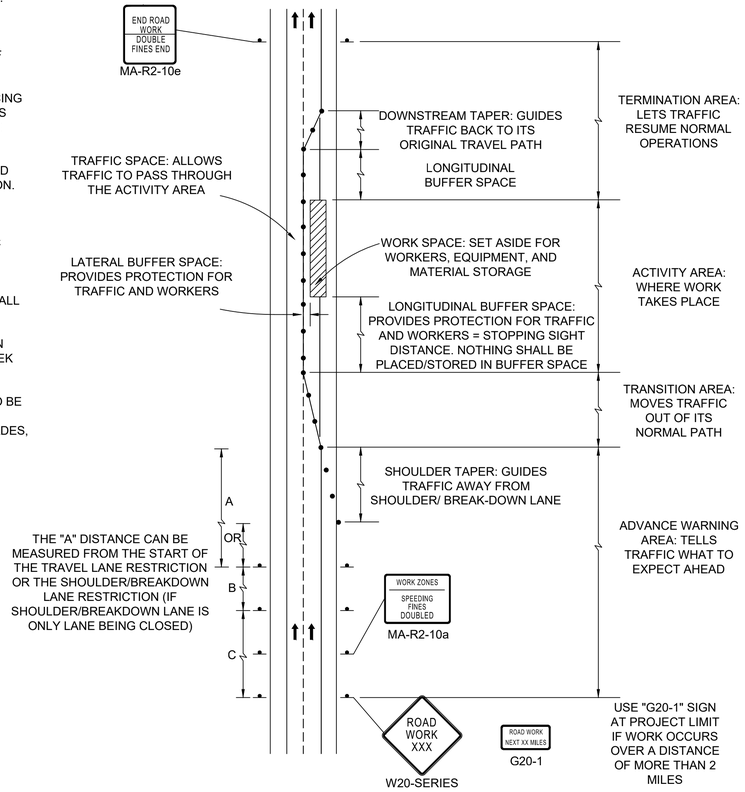
- SHOULDER DROP-OFFS GREATER THAN 3" BUT LESS THAN OR EQUAL TO 36" MUST BE MITIGATED BY:
- A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT AND THE PLACEMENT OF DRUMS ON THE TRAFFIC SIDE OF THE DROP-OFF, OFFSET AT LEAST 2' FROM THE TRAVEL LANE; OR
- A W8-9 (LOW SHOULDER) SIGN IN ADVANCE OF AND AT REGULAR INTERVALS THROUGHOUT THE TREATMENT AND THE PLACEMENT OF A TEMPORARY WEDGE OF MATERIAL ALONG THE FACE OF THE DROP-OFF. THE WEDGE SHOULD CONSIST OF STABLE MATERIAL PLACED ON A 2H:1V OR FLATTER SLOPE.



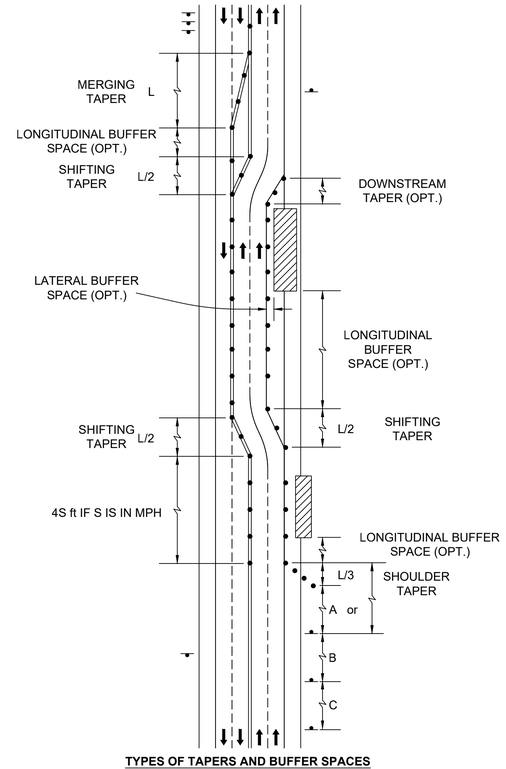
- SHOULDER DROP-OFFS GREATER THAN 36" MUST BE PROTECTED BY TEMPORARY BARRIER DESIGNED TO MASSDOT STANDARDS.



SHORT-TERM PAVEMENT EDGE DROP-OFFS (FIGURE GEN-8)
NOTE TO SCALE



COMPONENT PARTS OF A TEMPORARY TRAFFIC CONTROL (TTC) ZONE (FIGURE GEN-4)
NOT TO SCALE



TYPES OF TAPERS AND BUFFER SPACES (FIGURE GEN-5)
NOT TO SCALE

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS STANDARD DETAILS

SUGGESTED ADVANCE WARNING SIGN MINIMUM SPACING

ROAD TYPE	DISTANCE			
	A	B	C	D
URBAN (30 MPH OR LESS)	100 FEET	100 FEET	100 FEET	100 FEET
URBAN (35 MPH OR GREATER)	350 FEET	350 FEET	350 FEET	350 FEET
RURAL	500 FEET	500 FEET	500 FEET	500 FEET
EXPRESSWAY/FREEWAY	1,000 FEET	1,500 FEET	2,640 FEET	500 FEET

BASED ON: TABLE 6C-1 MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM
DOWNSTREAM TAPER	50 FEET MINIMUM, 100 FEET MAXIMUM

NOTE: USE TABLE 6C-4 SHOWN BELOW TO CALCULATE L
SOURCE: TABLE 6C-3 2009 MUTCD

BUFFER SPACE TABLE

POSTED SPEED (MPH)	LENGTH (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

SOURCE: TABLE 6C-2 2009 MUTCD

FORMULAS FOR DETERMINING TAPER LENGTHS

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

SOURCE: TABLE 6C-4 2009 MUTCD

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

WORKZONE DISTANCES

LEGEND:

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

608816_TR(TTCP DETAILS).DWG Plotted on 9-Sep-2024 9:17 AM

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	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
STANDARD DETAILS

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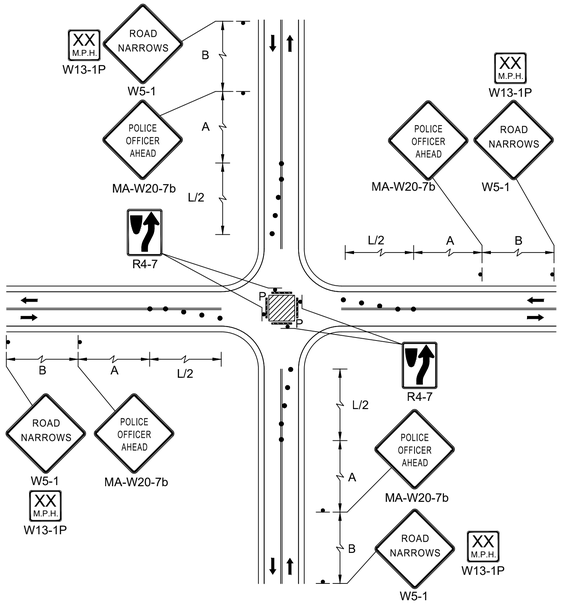
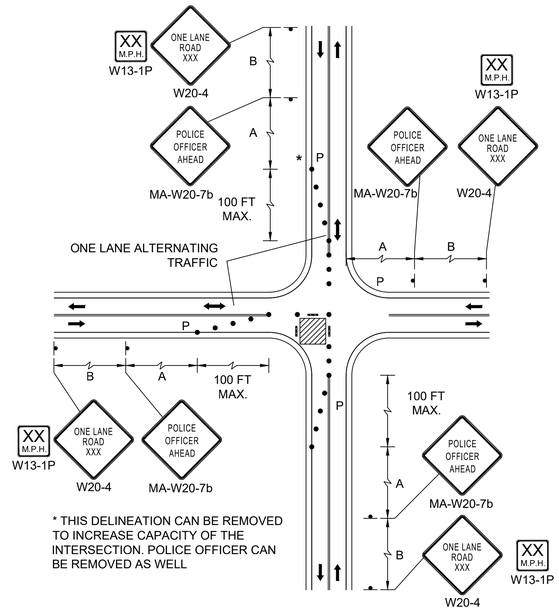
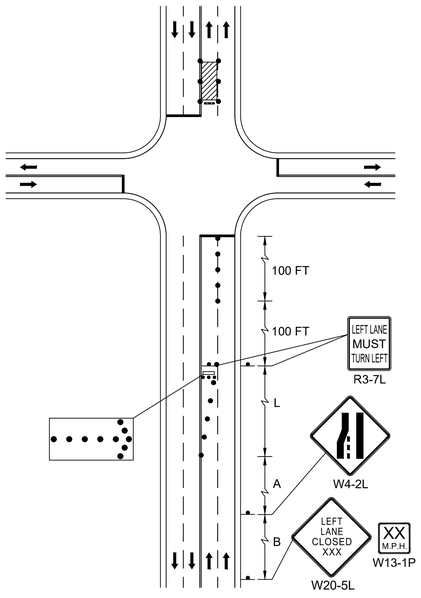


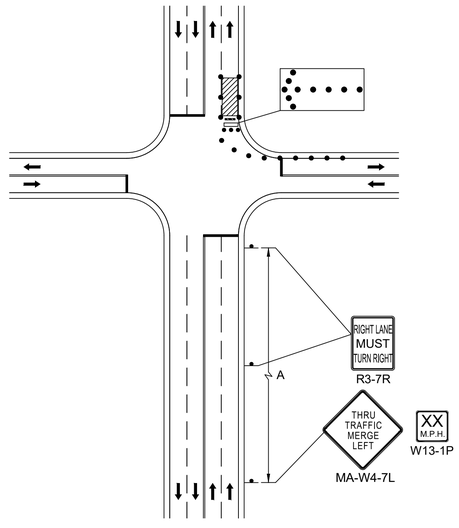
SINGLE LANE APPROACH CENTER CLOSURE
(FIGURE INT-1)
NOT TO SCALE



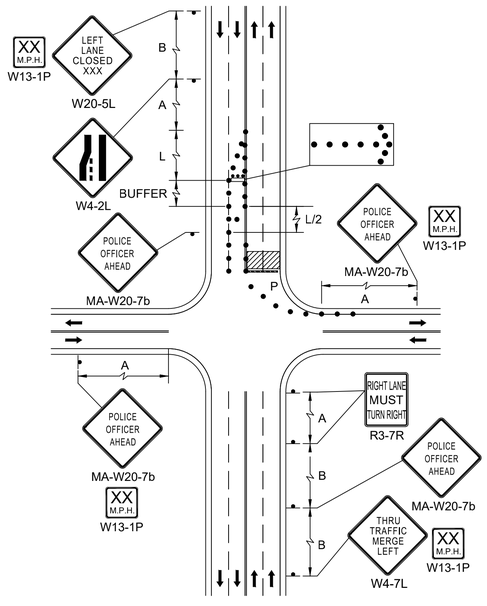
SINGLE LANE APPROACH ONE QUADRANT CLOSURE
(FIGURE INT-2)
NOT TO SCALE



DOUBLE LANE APPROACH FAR SIDE CLOSURE INSIDE LANE
(FIGURE INT-3)
NOT TO SCALE



DOUBLE LANE APPROACH FAR SIDE CLOSURE RIGHT LANE
(FIGURE INT-4)
NOT TO SCALE



DOUBLE LANE APPROACH HALF ROAD CLOSURE
(FIGURE INT-5)
NOT TO SCALE

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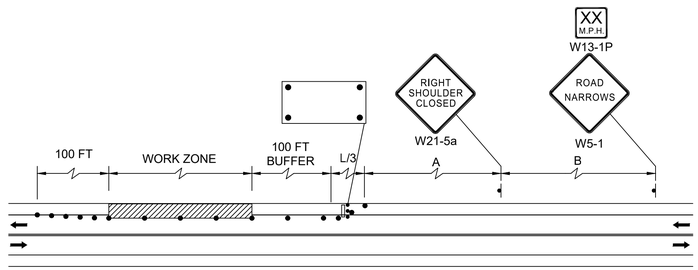
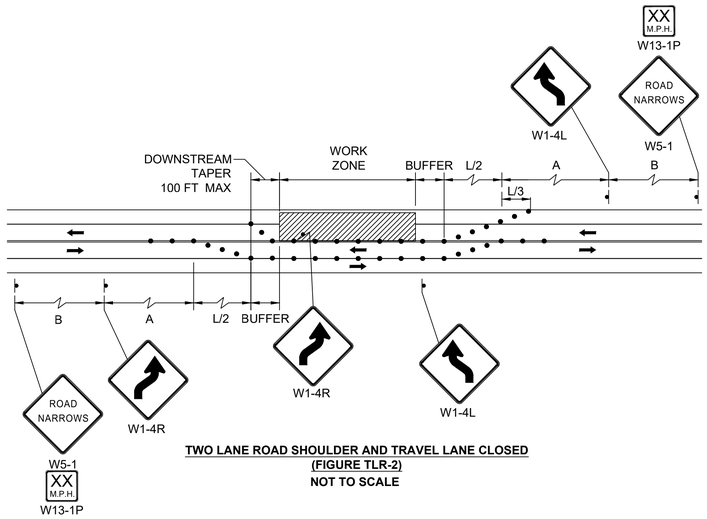
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	160	190
	PROJECT FILE NO. 608816		

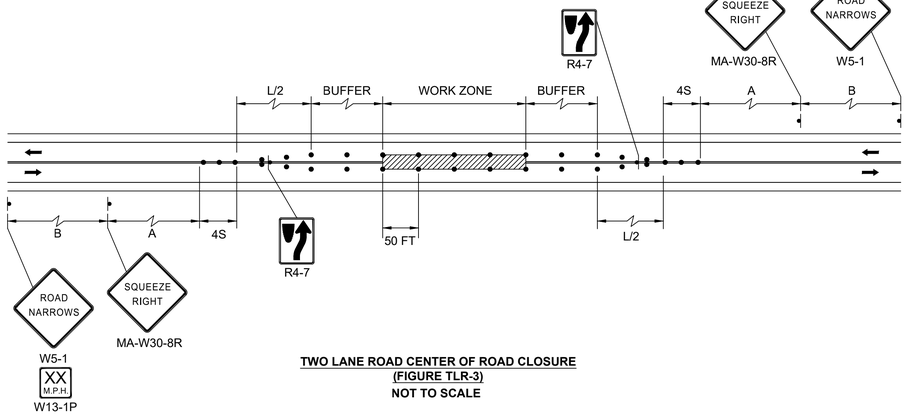
TEMPORARY TRAFFIC CONTROL PLANS
STANDARD DETAILS



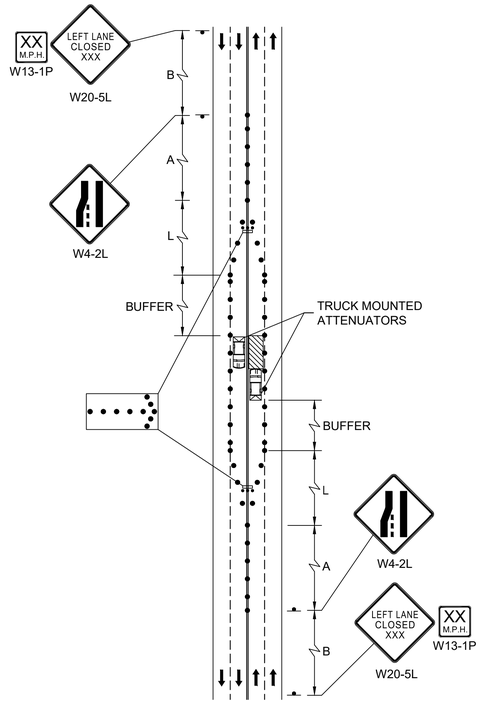
TWO LANE ROAD SHOULDER CLOSED
(FIGURE TLR-1)
NOT TO SCALE



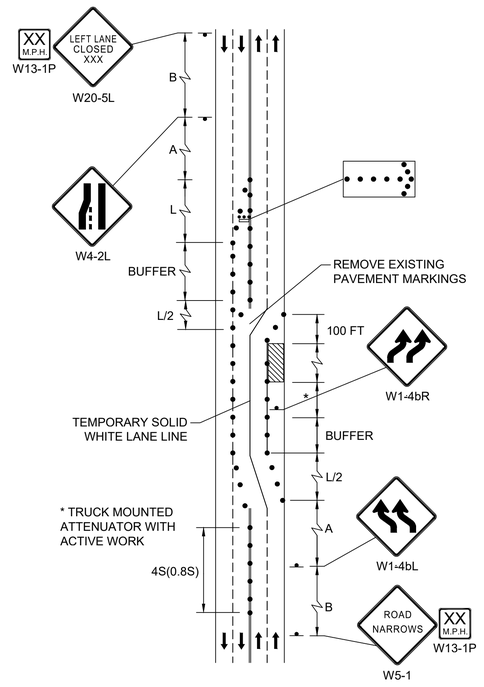
TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED
(FIGURE TLR-2)
NOT TO SCALE



TWO LANE ROAD CENTER OF ROAD CLOSURE
(FIGURE TLR-3)
NOT TO SCALE



MULTIPLE LANE ROAD INTERIOR LANE CLOSURE
(FIGURE MLR-1)
NOT TO SCALE



MULTIPLE LANE ROAD INTERIOR LANE CLOSURE W/ UNEVEN VOLUMES
(FIGURE MLR-2)
NOT TO SCALE

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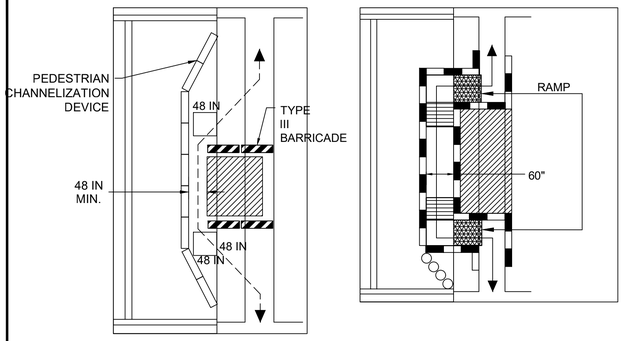
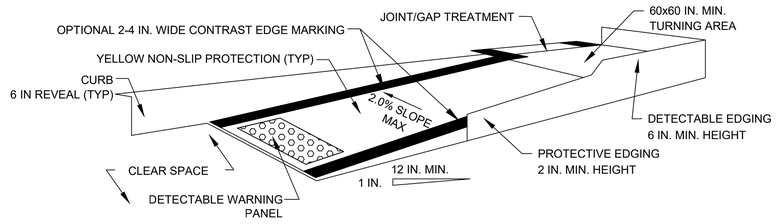


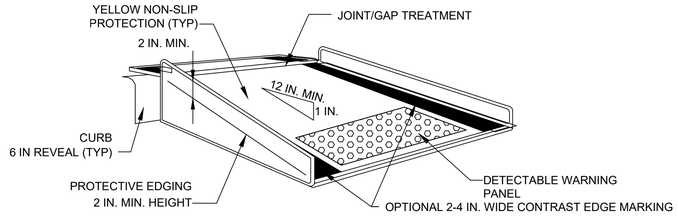
NOTES:
1. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, TEMPORARY FACILITIES SHALL BE PROVIDED AND THEY SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
2. A PEDESTRIAN CHANNELIZATION DEVICE THAT IS DETECTABLE BY A PERSON WITH A VISUAL DISABILITY TRAVELING WITH THE AID OF A LONG CANE SHALL BE PLACED ALONG THE FULL LENGTH OF THE TEMPORARY PEDESTRIAN ROUTE.
3. WHEN USED, TEMPORARY RAMPS SHALL COMPLY WITH AMERICANS WITH DISABILITIES ACT.
4. THE ALTERNATE PATHWAY SHOULD HAVE A SMOOTH CONTINUOUS HARD SURFACE FOR THE ENTIRE LENGTH OF THE TEMPORARY PEDESTRIAN FACILITY.
5. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THE SIDEWALK EXCEEDS 200 FEET THEN A 5 FOOT BY 5 FOOT PASSING ZONE SHALL BE PROVIDED NEAR THE MID-POINT OF THE CLOSURE.
6. THE PROTECTIVE REQUIREMENTS OF A TTC WORK ZONE MAY HAVE AN IMPACT IN DETERMINING THE NEED FOR TEMPORARY TRAFFIC BARRIERS AND THEIR USE IN PROVIDING PEDESTRIAN DELINEATION SHOULD BE BASED ON ENGINEERING JUDGMENT.
7. ON-DEMAND PEDESTRIAN ASSISTANCE PERSONNEL TO ASSIST WITH NAVIGATION AROUND THE CLOSURE/WORK AREA MAY BE CONSIDERED AS AN OPTION IN PLACE OF PROVIDING ADA/AAB DEVICES FOR WORK FOR CLOSURES LASTING 4 HOURS OR LESS.
8. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN; VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE. THESE DETAILS ARE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DETERMINED BY THE ENGINEER.

PEDESTRIAN DETAILS
(FIGURE PED-3)

NOT TO SCALE



TEMPORARY CURB RAMP-PARALLEL TO CURB

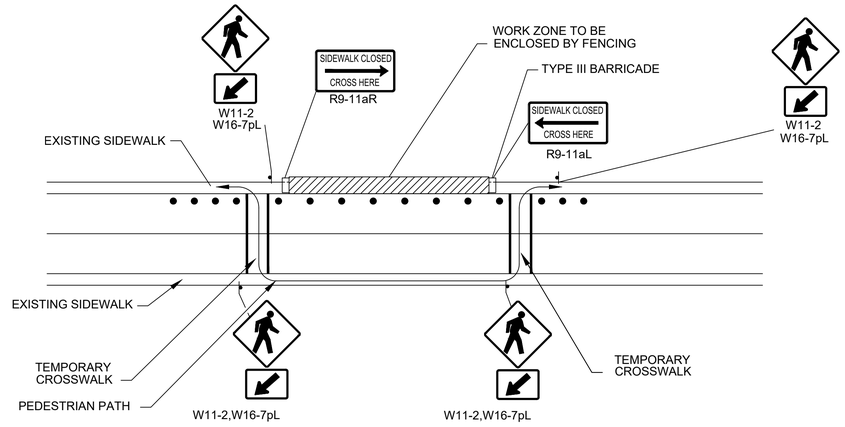


TEMPORARY CURB RAMP-PERPENDICULAR TO CURB

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. PROTECTABLE 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.

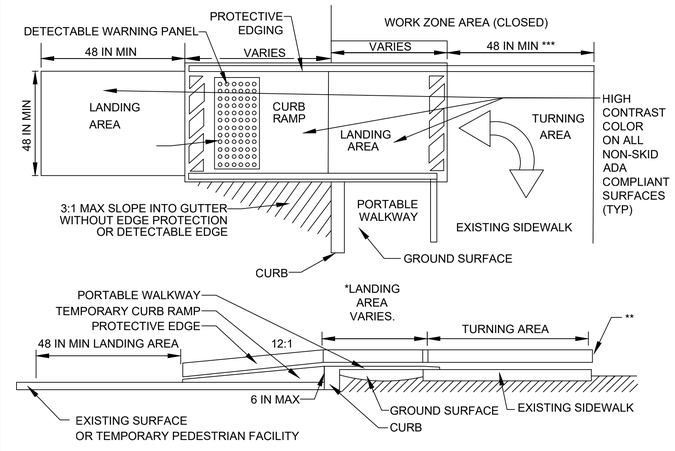
PEDESTRIAN DETAILS
(FIGURE PED-1)

NOT TO SCALE



NOTES
1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS DETAIL, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMPS WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. 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 TTCP THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)

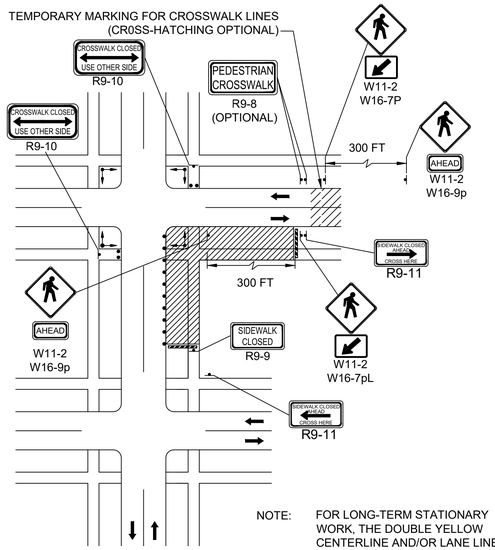
PEDESTRIAN BYPASS
(FIGURE PED-7)
NOT TO SCALE



TEMPORARY CURB 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.

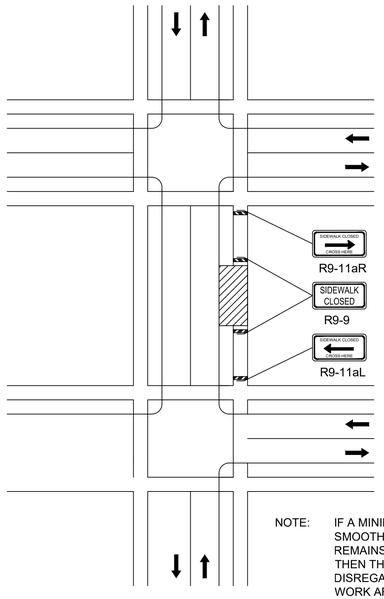
PEDESTRIAN DETAILS
(FIGURE PED-2)



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

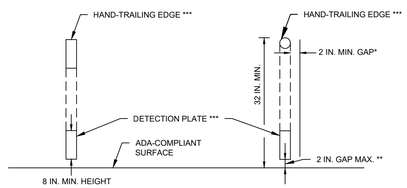
PEDESTRIAN DETOUR
(FIGURE PED-6)

NOT TO SCALE



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 BE REQUIRED. ALL PEDESTRIAN DETOUR ROUTES SHALL BE ADA/MAAB COMPLIANT IN THEIR ENTIRETY.

SIDEWALK CLOSED WITH DETOUR
(FIGURE PED-5)
NOT TO SCALE



CROSS SECTION VIEW

PEDESTRIAN CHANNELIZING DEVICE

* **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
(FIGURE PED-4)

NOT TO SCALE

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TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (IN) WIDTH	SIZE OF SIGN (IN) HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND	COLOR BORDER	UNIT AREA (S.F.)	AREA IN SQUARE FEET
M4-9bL	30	24	DETOUR	①	1	FLUORESCENT ORANGE	BLACK	BLACK	5.00	5.00
M4-9bR	30	24	DETOUR	①	1	FLUORESCENT ORANGE	BLACK	BLACK	5.00	5.00
MA-R2-10a	48	36	WORK ZONE / SPEEDING FINES / DOUBLED	4D 4D 4D 6D	2	FLUORESCENT ORANGE WHITE	BLACK	BLACK	12.00	24.00
MA-R2-10e	36	48	END ROAD WORK / DOUBLE FINE ENDS	5C	2	FLUORESCENT ORANGE WHITE	BLACK	BLACK	12.00	24.00
R3-7L	30	30	LEFT LANE MUST TURN LEFT	①	2	WHITE	BLACK	BLACK	6.25	12.50
R3-7R	30	30	RIGHT LANE MUST TURN RIGHT		2	WHITE	BLACK	BLACK	6.25	12.50
R4-7	24	30			4	WHITE	BLACK	BLACK	5.00	20.00
R9-9	24	12	SIDEWALK CLOSED		2	WHITE	BLACK	BLACK	2.00	4.00
R9-10	24	12	CROSSWALK CLOSED / USE OTHER SIDE		2	WHITE	BLACK	BLACK	2.00	4.00
R9-11	24	12	SIDEWALK CLOSED AHEAD / CROSS HERE		1	WHITE	BLACK	BLACK	2.00	2.00
R9-11aL	24	12	SIDEWALK CLOSED / CROSS HERE		1	WHITE	BLACK	BLACK	2.00	2.00
R9-11aR	24	12	SIDEWALK CLOSED / CROSS HERE		1	WHITE	BLACK	BLACK	2.00	2.00
W1-4L	36	36			2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W1-4R	36	36			2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W1-4bL	36	36			1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W1-4bR	36	36			1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W4-2L	36	36			2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W4-7L	36	36	THRU TRAFFIC MERGE LEFT		1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W5-1	36	36	ROAD NARROWS		4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W8-1	36	36	BUMP		2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN (IN) WIDTH	SIZE OF SIGN (IN) HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND	COLOR BORDER	UNIT AREA (S.F.)	AREA IN SQUARE FEET
W8-3	36	36	PAVEMENT ENDS	①	2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W8-8	36	36	ROUGH ROAD		2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
W11-2	36	36			4	FLUORESCENT YELLOW GREEN	BLACK	BLACK	9.00	36.00
W13-1p	18	18	35 M.P.H.		4	FLUORESCENT ORANGE	BLACK	BLACK	2.25	9.00
W16-7pL	24	12			4	FLUORESCENT YELLOW GREEN	BLACK	BLACK	2.00	8.00
W16-9P	24	12	AHEAD		2	FLUORESCENT YELLOW-GREEN	BLACK	BLACK	2.00	4.00
W20-1	36	36	ROAD WORK AHEAD		4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-4	36	36	ONE LANE ROAD XXX		4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W20-5L	36	36	LEFT LANE CLOSED XXX		2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W20-7B	36	36	POLICE OFFICER AHEAD		4	FLUORESCENT ORANGE	BLACK	BLACK	9.00	36.00
W21-5A	36	36	RIGHT SHOULDER CLOSED		1	FLUORESCENT ORANGE	BLACK	BLACK	9.00	9.00
W21-11	36	36	LANE SHIFT AHEAD		2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00
MA-W30-8R	36	36	SQUEEZE RIGHT		2	FLUORESCENT ORANGE	BLACK	BLACK	9.00	18.00

NOTES:
1. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND AMENDMENTS FOR LATEST SPECIFICATIONS ON TEXT, DIMENSIONS, AND COLOR. RETROREFLECTIVE SHEETING FOR ALL GUIDE AND TRAFFIC SIGNS SHALL CONFORM TO SUBSECTION M9.30.0 OF THE MASSDOT STANDARD SPECIFICATIONS.
2. SEE MASSDOT STANDARD SIGNS FOR SPECIFICATION ON TEXT, DIMENSIONS, AND COLOR.
3. SEE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES 11TH EDITION (2023) FOR LATEST SPECIFICATIONS ON TEXT, DIMENSIONS, AND COLOR

LOWELL, DRACUT, & METHUEN
ROUTE 110

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	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
STANDARD DETAILS

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ROUTE 110

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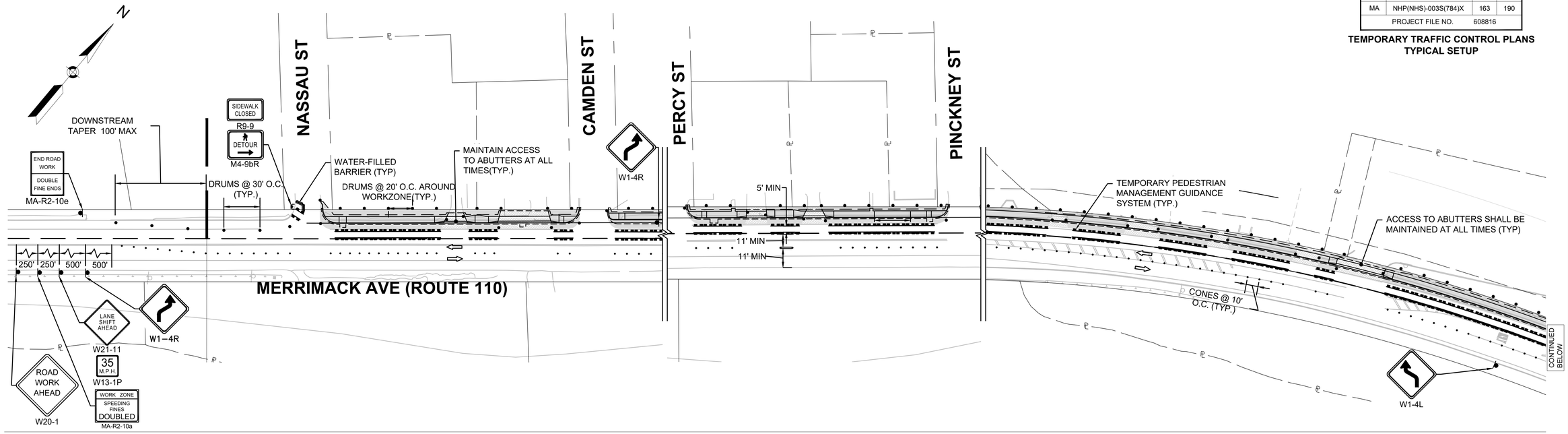
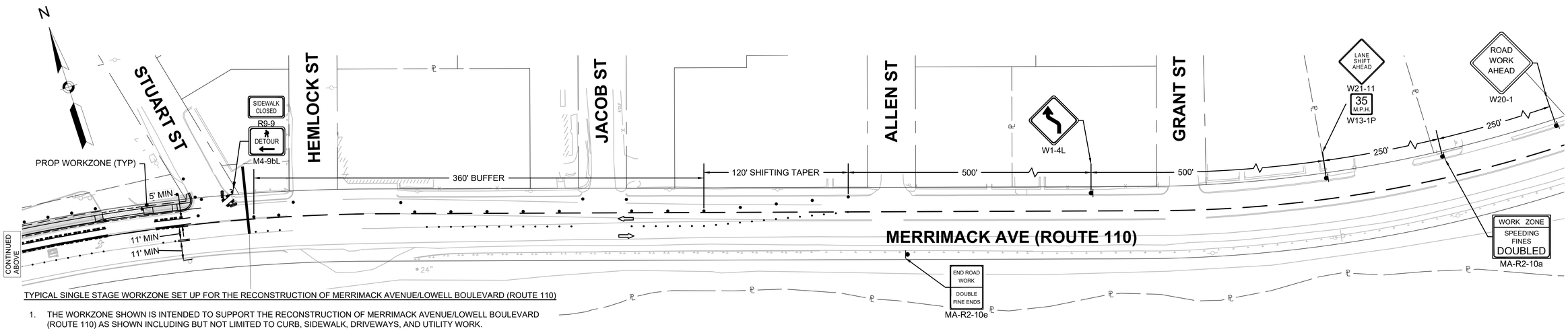
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
TYPICAL SETUP





TYPICAL SINGLE STAGE WORKZONE SET UP FOR THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110)

1. THE WORKZONE SHOWN IS INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
2. ADDITIONAL WORK MAY BE PERFORMED DURING EACH PHASE THROUGH THE USE OF MASSDOT STANDARD TEMPORARY TRAFFIC CONTROL DETAIL WITH PRIOR APPROVAL FROM THE ENGINEER.
3. IN ORDER TO COMPLETE THE PROPOSED WORK DURING EACH STAGE, LANE CLOSURES MAY BE NECESSARY. REFER TO SHEETS 159 & 160 FOR CLOSURE DETAILS WHICH MAY BE UTILIZED.
4. AREAS WHERE PEDESTRIAN ACCESS IS CURRENTLY PROVIDED SHALL BE MAINTAINED OR PEDESTRIAN DETOURS PROVIDED THROUGHOUT CONSTRUCTION WITH PROPER ADA ACCESSIBILITY. REFER TO SHEET 161 FOR DETAILS THAT MAY BE UTILIZED.
5. CONTRACTOR SHALL REMOVE ANY EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED TEMPORARY MARKINGS AND SHALL BAG OR REMOVE SIGNAGE AND SIGNAL EQUIPMENT THAT MAY CONFLICT WITH EXISTING TRAFFIC PATTERNS.
6. UPON COMPLETION OF EACH STAGE OF WORK THE EDGE OF THE ROADWAY SHALL BE RE-GRADED AS NECESSARY TO SUPPORT VEHICULAR TRAFFIC.
7. POLICE OFFICER DETAIL SHALL BE PROVIDED WHEN NECESSARY, WITH THE OFFICER DETERMINING THE EXACT LOCATION.
8. SEE SHEETS 35 - 72 FOR CONSTRUCTION PLANS. SEE SHEETS 164 - 179 FOR THE TEMPORARY TRAFFIC CONTROL PLANS.
9. REFER TO SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 40 100 160
SCALE: 1" = 40'

WORK ZONE
TRAFFIC FLOW ARROW

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LOWELL, DRACUT, & METHUEN
ROUTE 110

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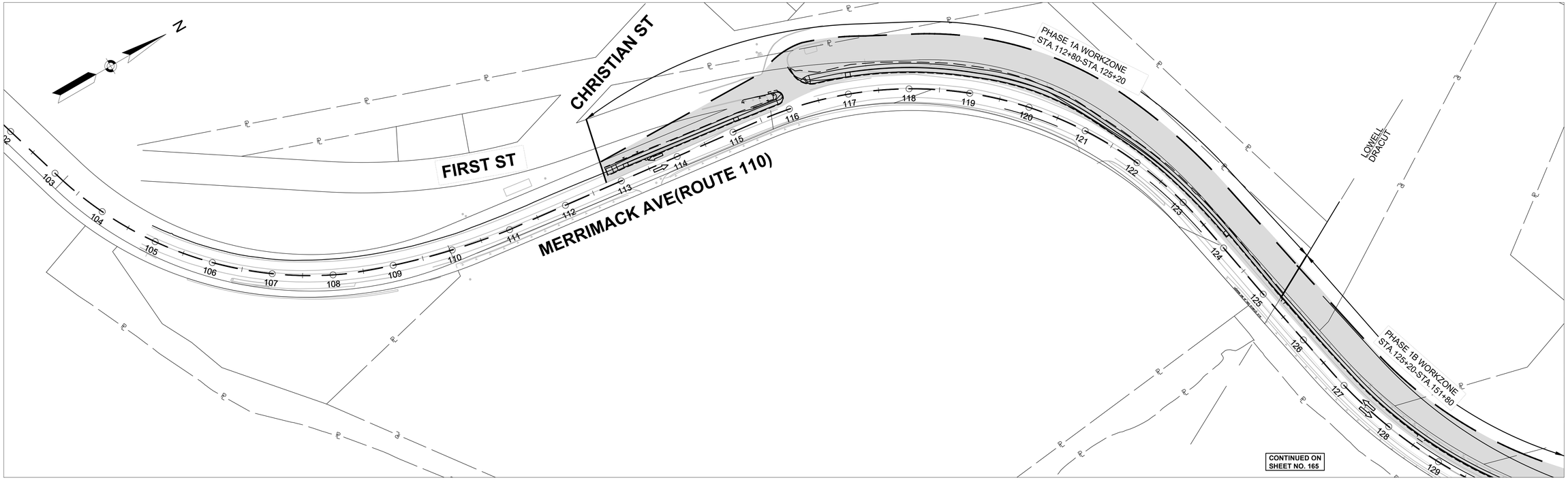
MA	NHP(NHS)-003S(784)X	164	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1



STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
2. THE WORKZONE SHALL BE STAGED AS SHOWN TO LIMIT DISRUPTIONS TO EXISTING TRAFFIC FLOW AND MAINTAIN TWO-WAY TRAFFIC AND ABUTTER ACCESS AS BEST AS PRACTICAL.
3. SEE SHEETS 35 - 72 FOR CONSTRUCTION PLANS. SEE SHEETS 164 - 181 FOR THE TEMPORARY TRAFFIC CONTROL STAGING PLANS. SEE SHEET 163 FOR TYPICAL SETUP. SEE SHEETS 158 - 161 FOR ADDITIONAL STANDARD SETUPS THAT MAY BE USED.
4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

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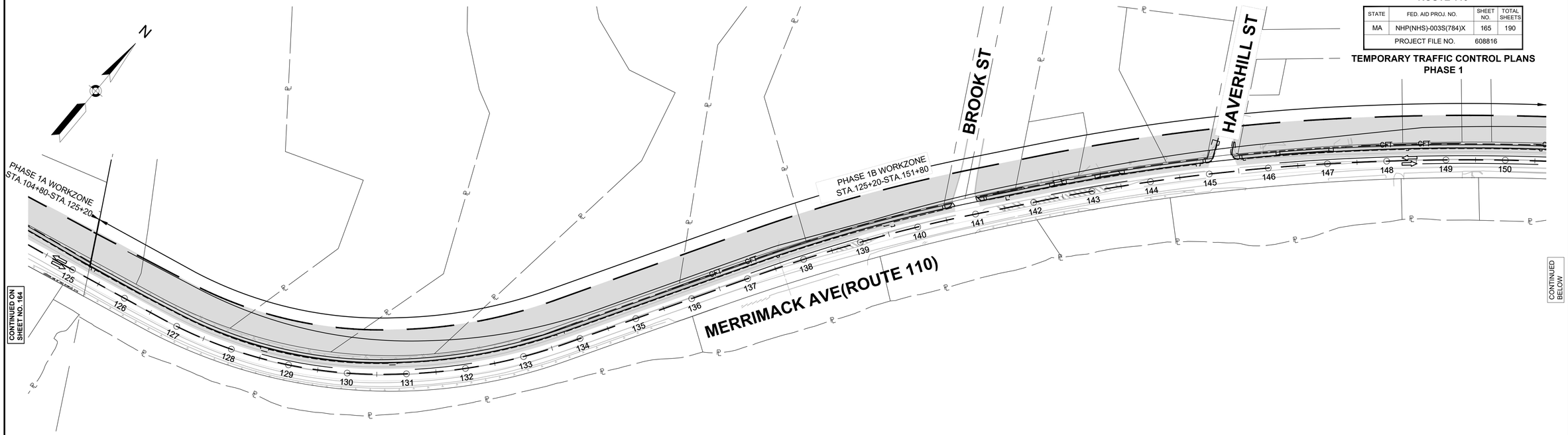
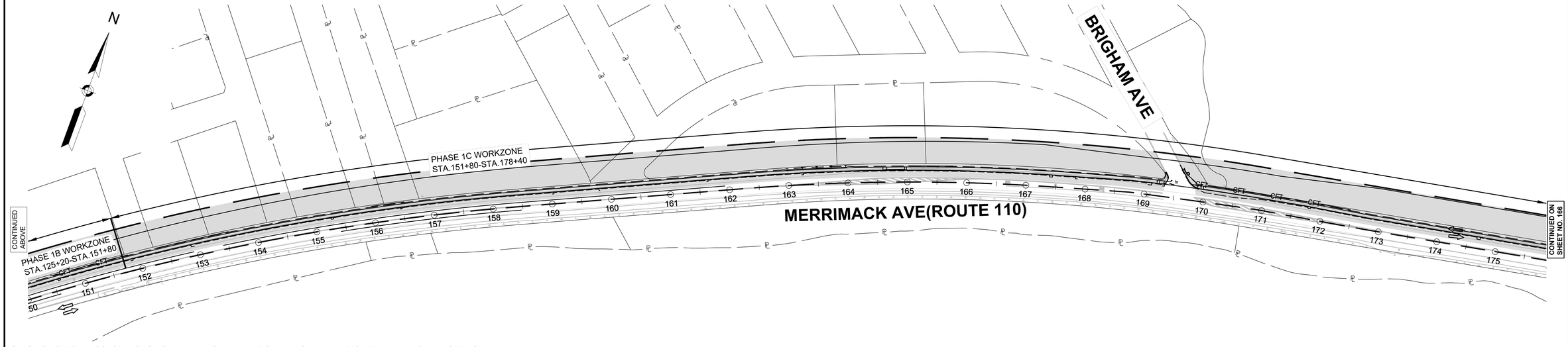
MA	NHP(NHS)-003S(784)X	165	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
2. THE WORKZONE SHALL BE STAGED AS SHOWN TO LIMIT DISRUPTIONS TO EXISTING TRAFFIC FLOW AND MAINTAIN TWO-WAY TRAFFIC AND ABUTTER ACCESS AS BEST AS PRACTICAL.
3. SEE SHEETS 35 - 72 FOR CONSTRUCTION PLANS. SEE SHEETS 164 - 181 FOR THE TEMPORARY TRAFFIC CONTROL STAGING PLANS. SEE SHEET 163 FOR TYPICAL SETUP. SEE SHEETS 158 - 161 FOR ADDITIONAL STANDARD SETUPS THAT MAY BE USED.
4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

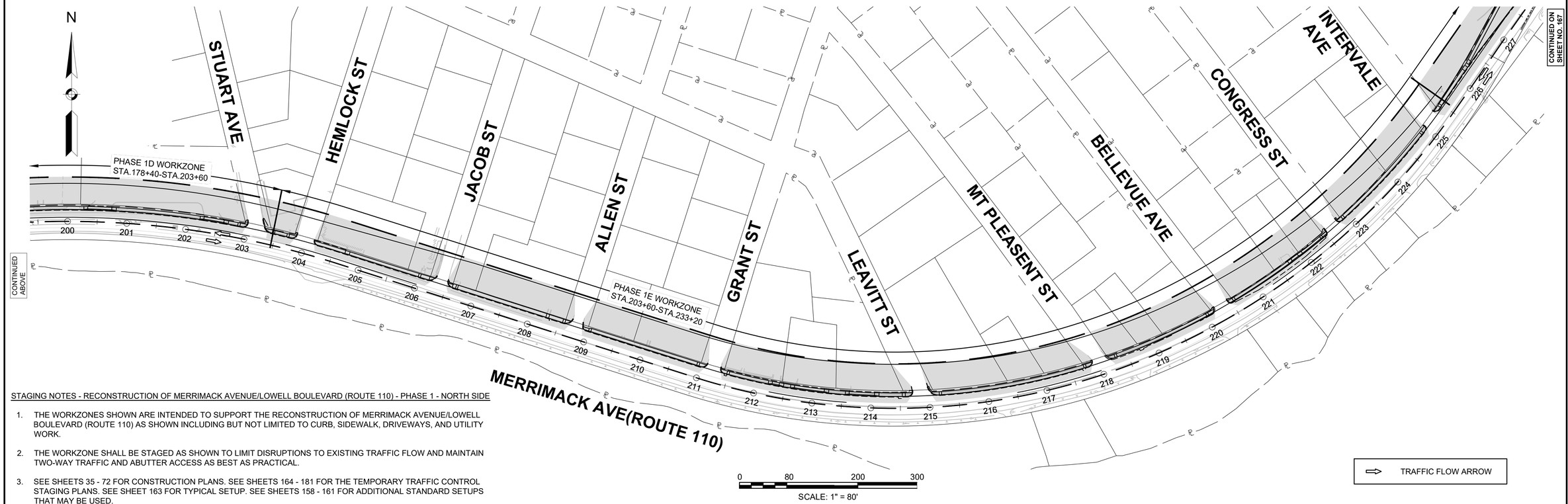
608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:19 AM

9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_TR(TTCP-1).dwg
Last Saved by: JMURPHY
Printed by: Jocelyn Downie

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	166	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1



STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

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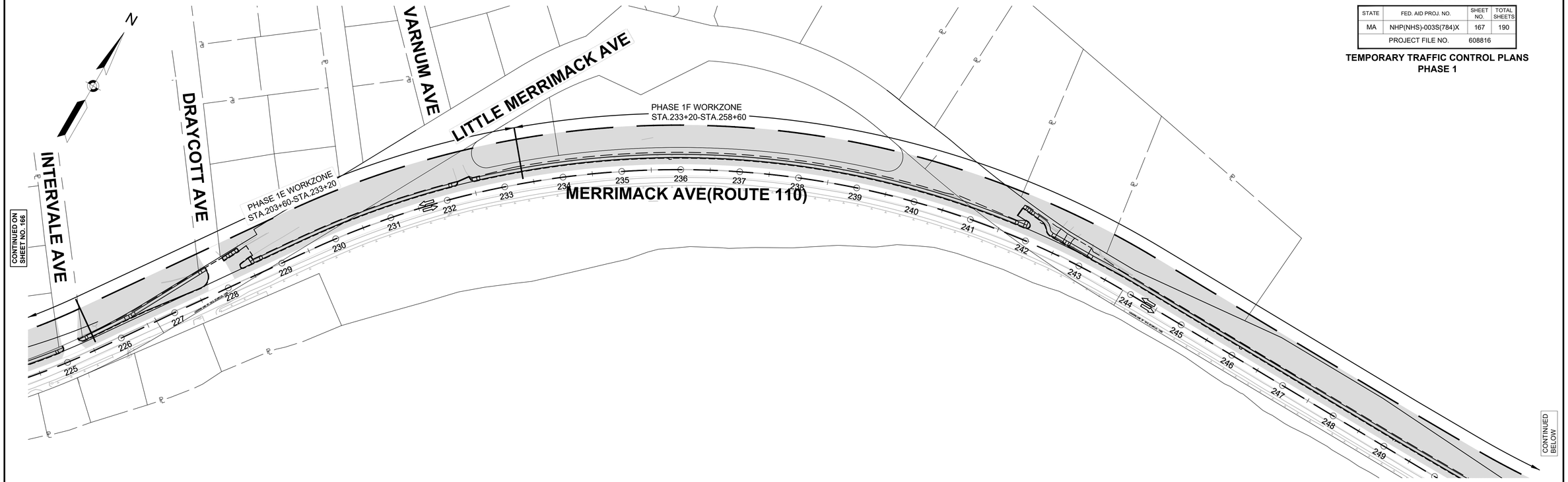
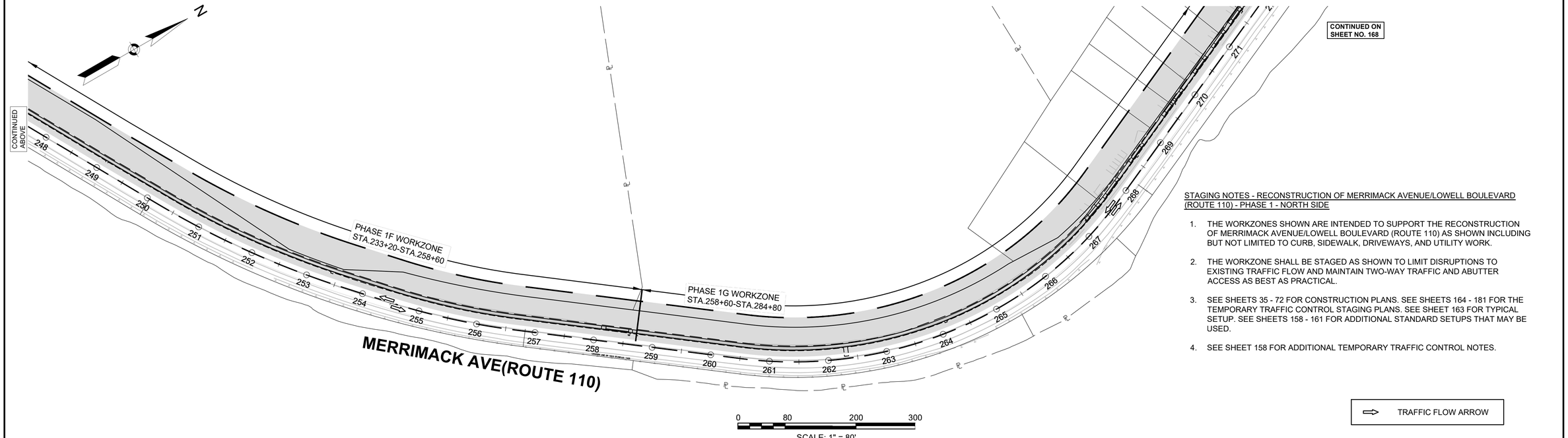
Last Saved by: JMURPHY
Printed by: Jocelyn Dewire

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	167	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

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⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:20 AM

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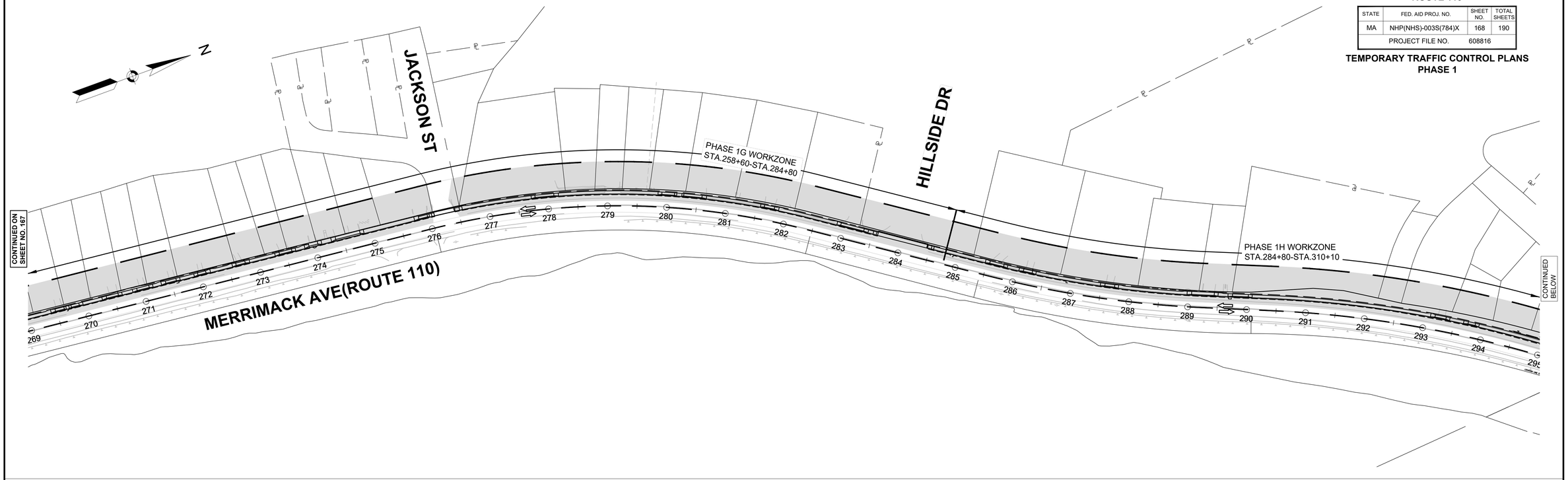
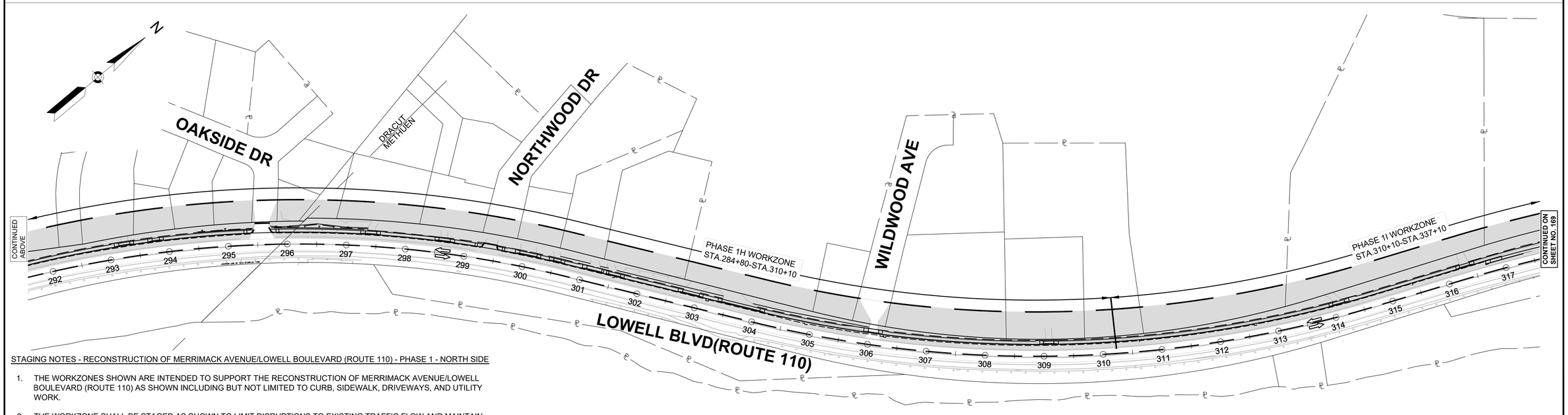
Printed by: Jocelyn Dewire

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	168	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

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4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:21 AM

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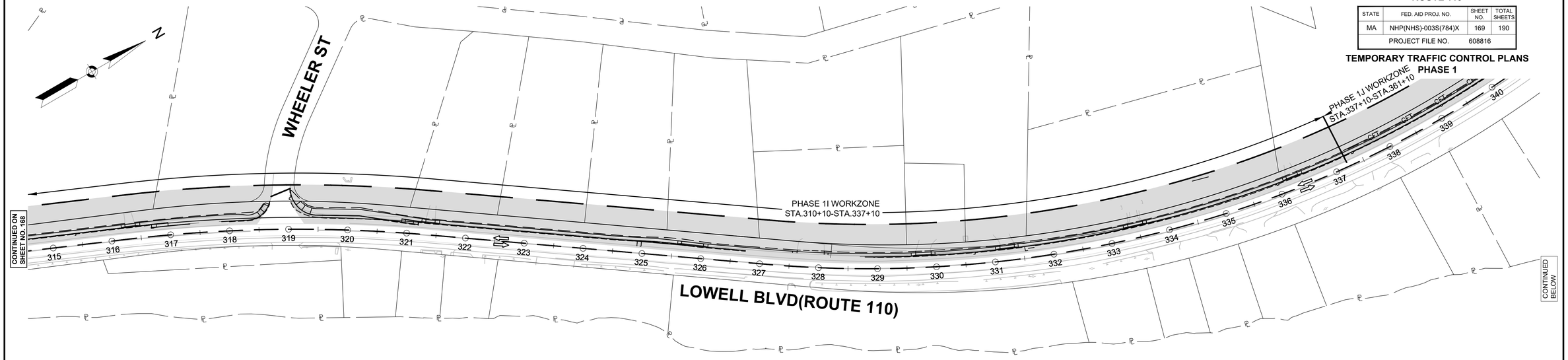
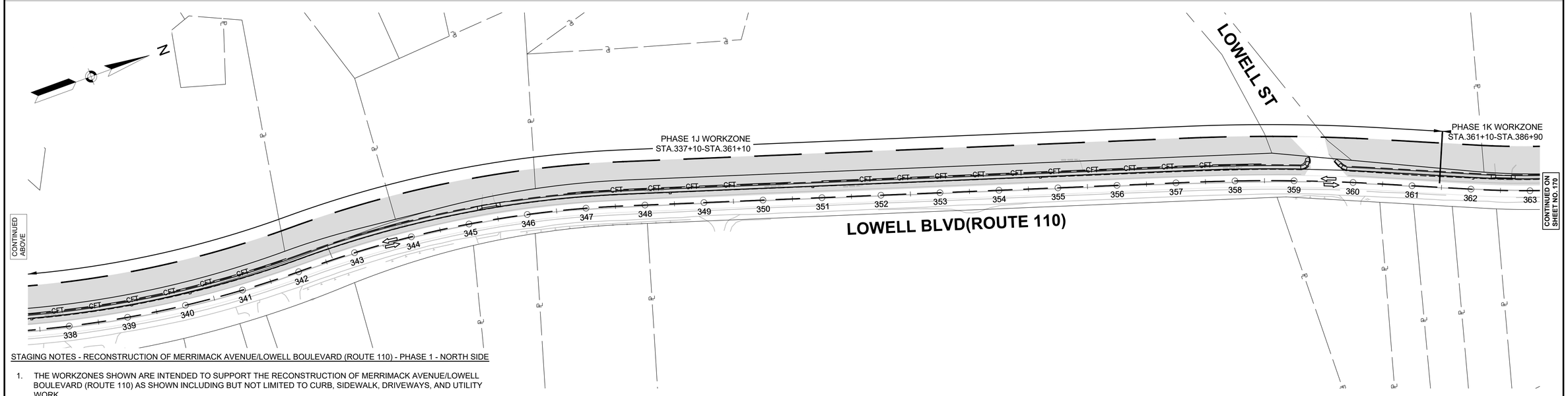
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	169	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:22 AM

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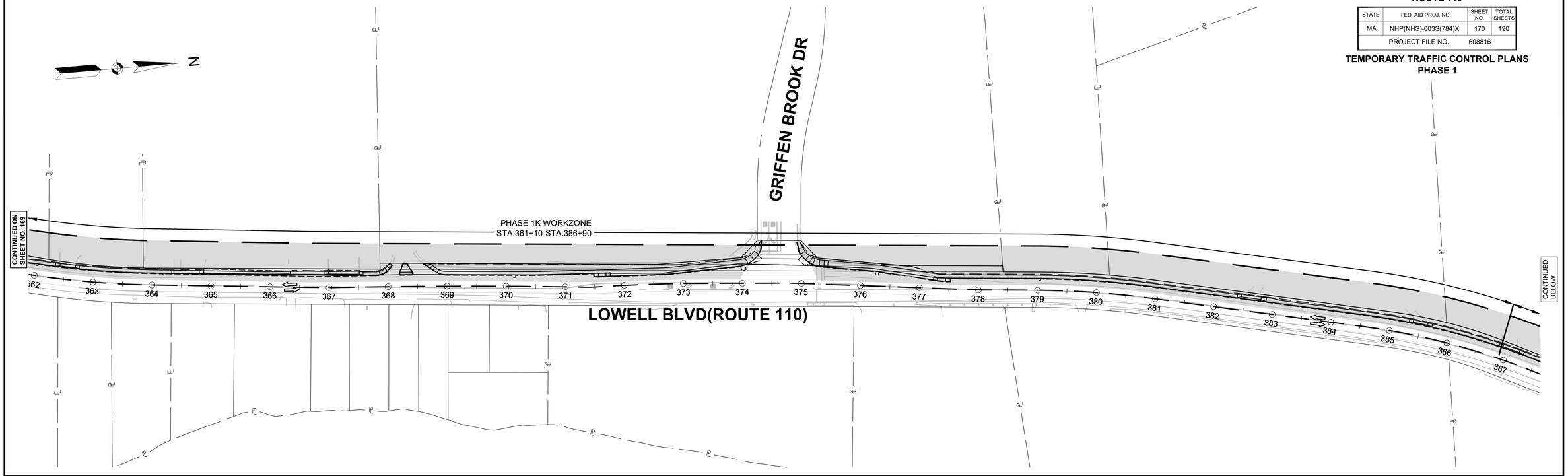
Printed by: Jocelyn Devine

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	170	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1



STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 - NORTH SIDE

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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:23 AM

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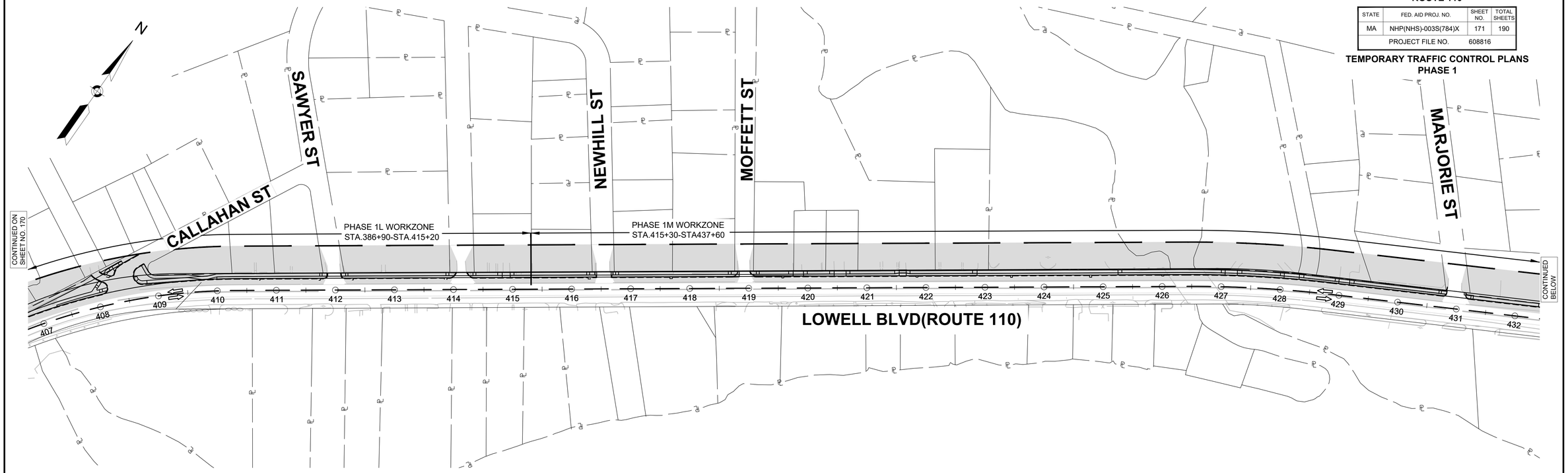
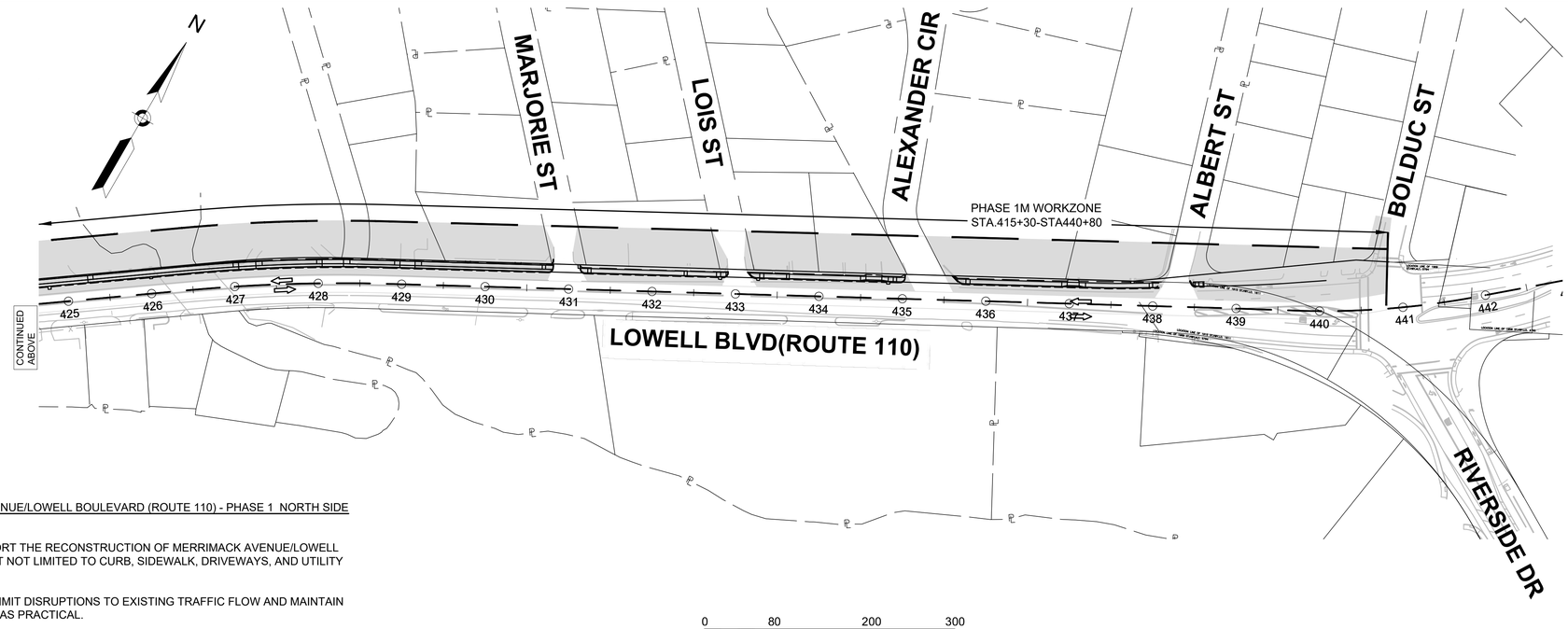
Printed by: Jocelyn Dewire

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	171	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 1





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 1 NORTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-1).DWG Plotted on 9-Sep-2024 9:24 AM

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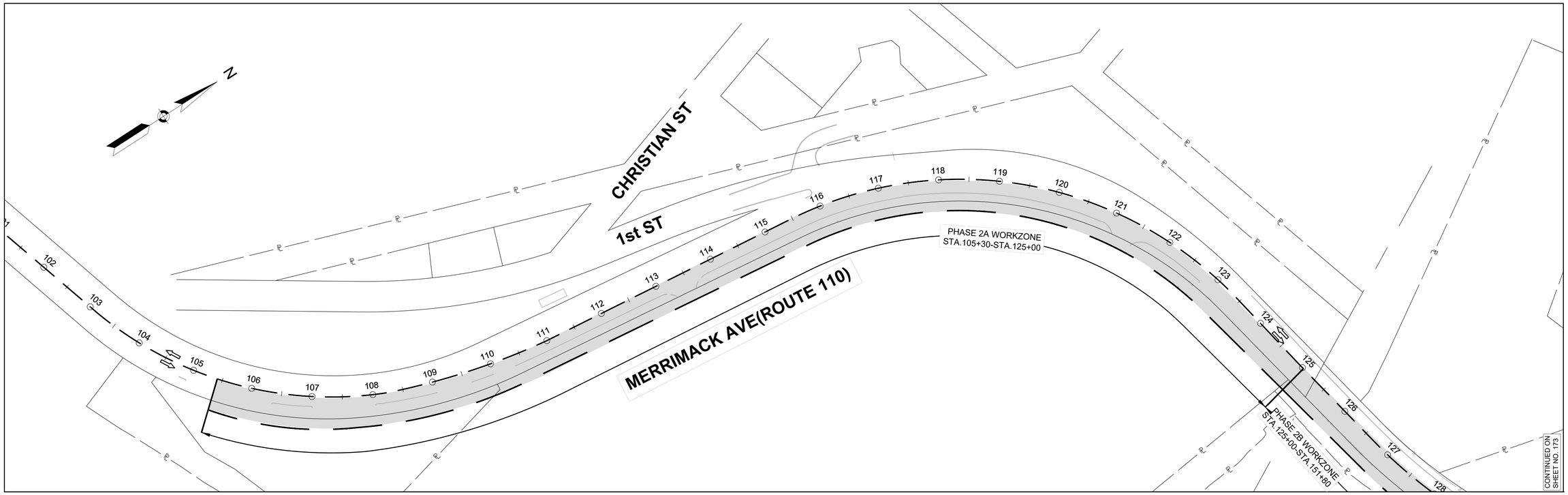
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	172	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2



STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:25 AM

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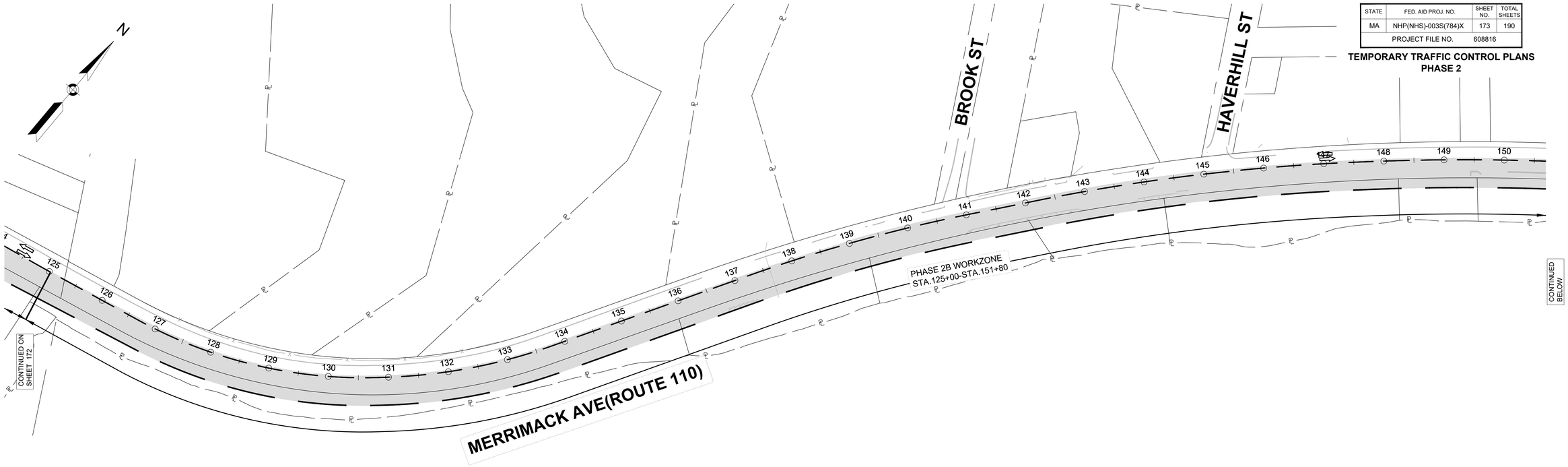
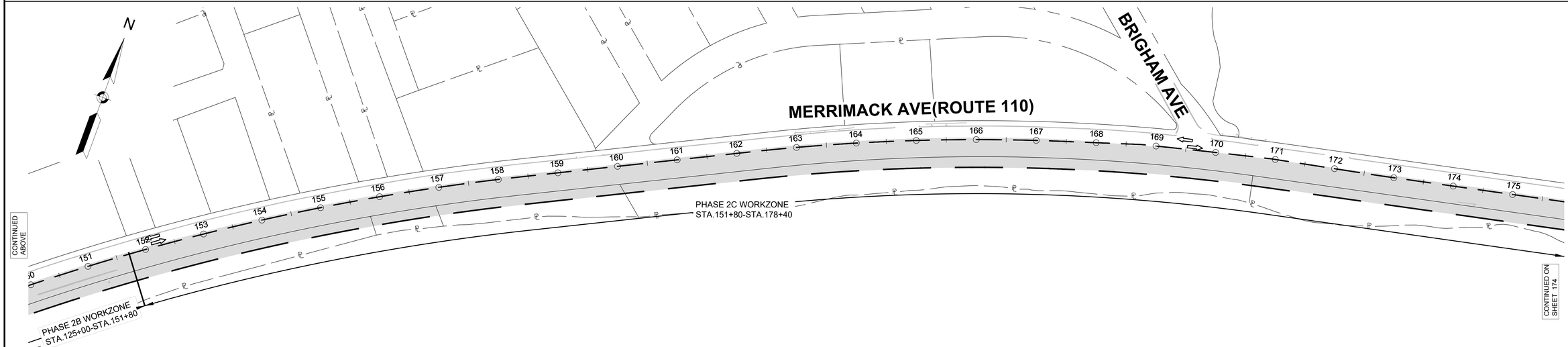
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	173	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:26 AM

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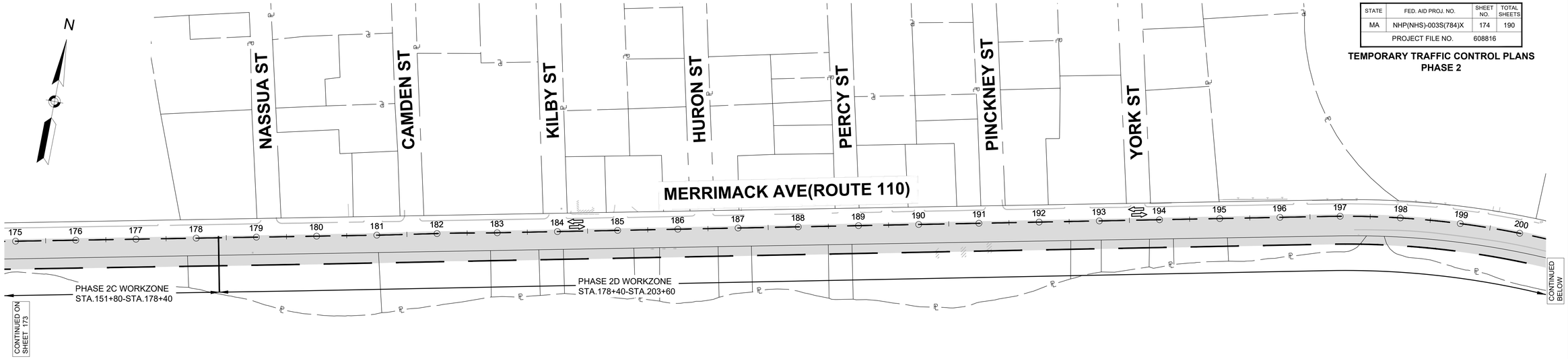
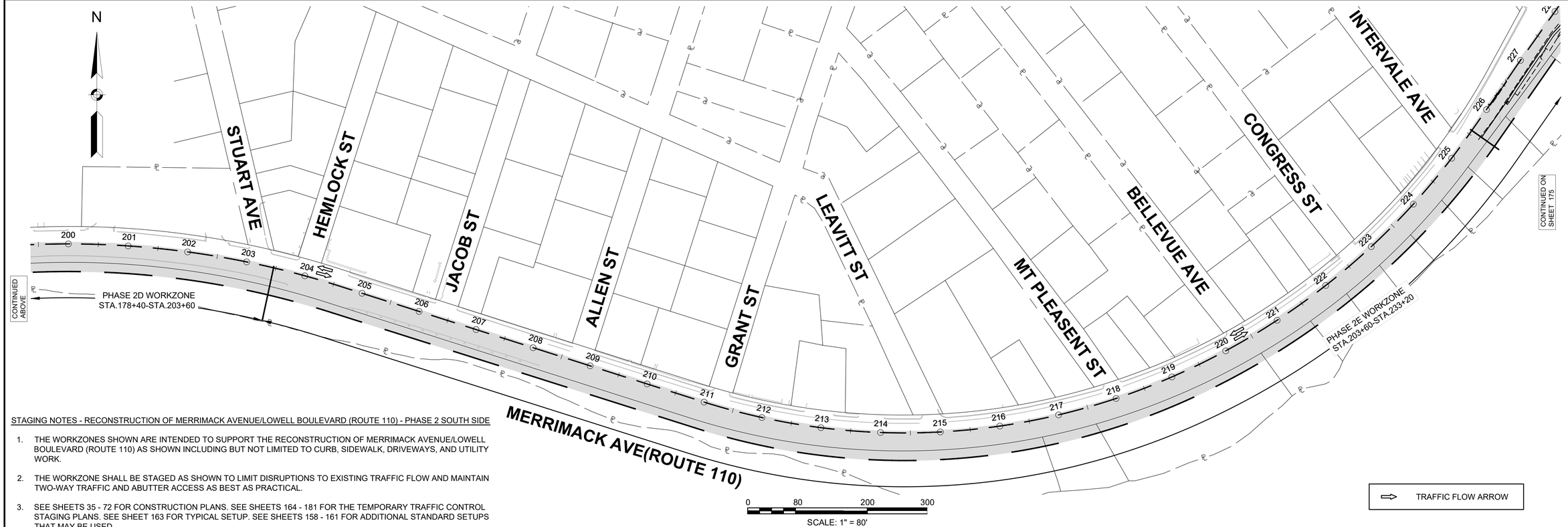
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	174	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

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608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:27 AM

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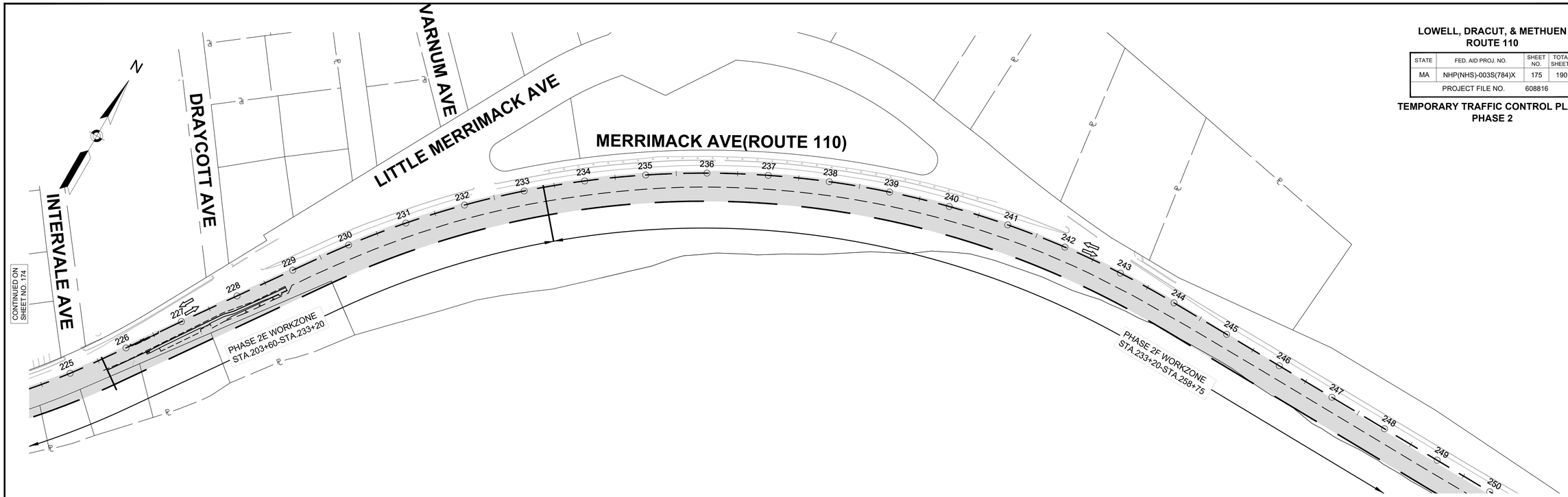
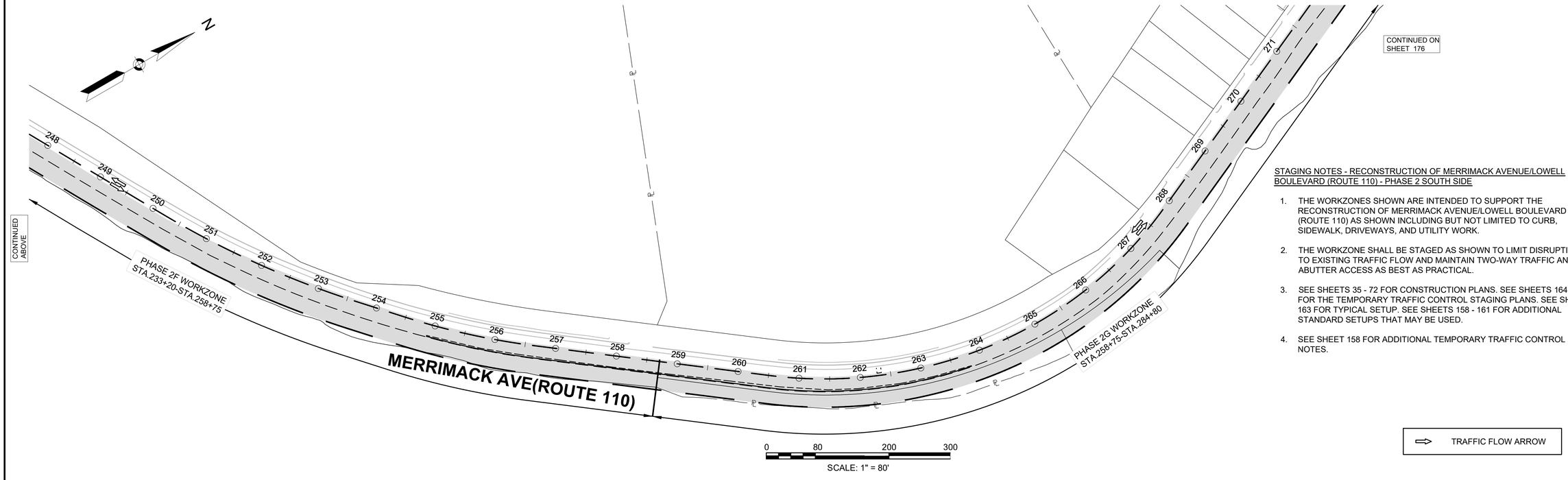
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	175	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

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⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:27 AM

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Last Saved by: JMURPHY
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LOWELL, DRACUT, & METHUEN
ROUTE 110

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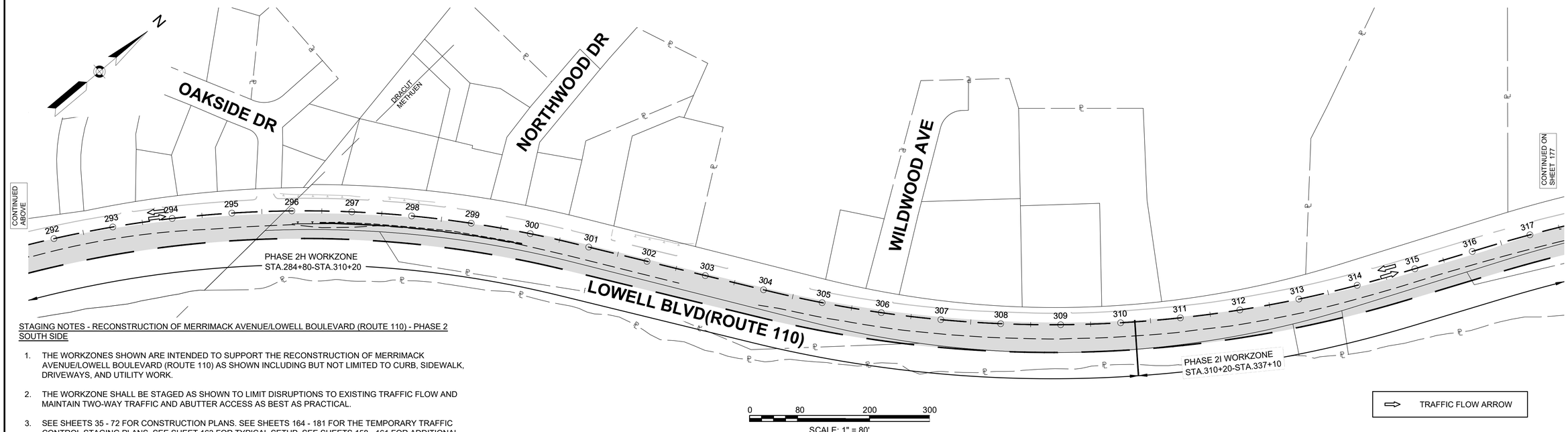
MA	NHP(NHS)-003S(784)X	176	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2



STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
2. THE WORKZONE SHALL BE STAGED AS SHOWN TO LIMIT DISRUPTIONS TO EXISTING TRAFFIC FLOW AND MAINTAIN TWO-WAY TRAFFIC AND ABUTTER ACCESS AS BEST AS PRACTICAL.
3. SEE SHEETS 35 - 72 FOR CONSTRUCTION PLANS. SEE SHEETS 164 - 181 FOR THE TEMPORARY TRAFFIC CONTROL STAGING PLANS. SEE SHEET 163 FOR TYPICAL SETUP. SEE SHEETS 158 - 161 FOR ADDITIONAL STANDARD SETUPS THAT MAY BE USED.
4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:28 AM

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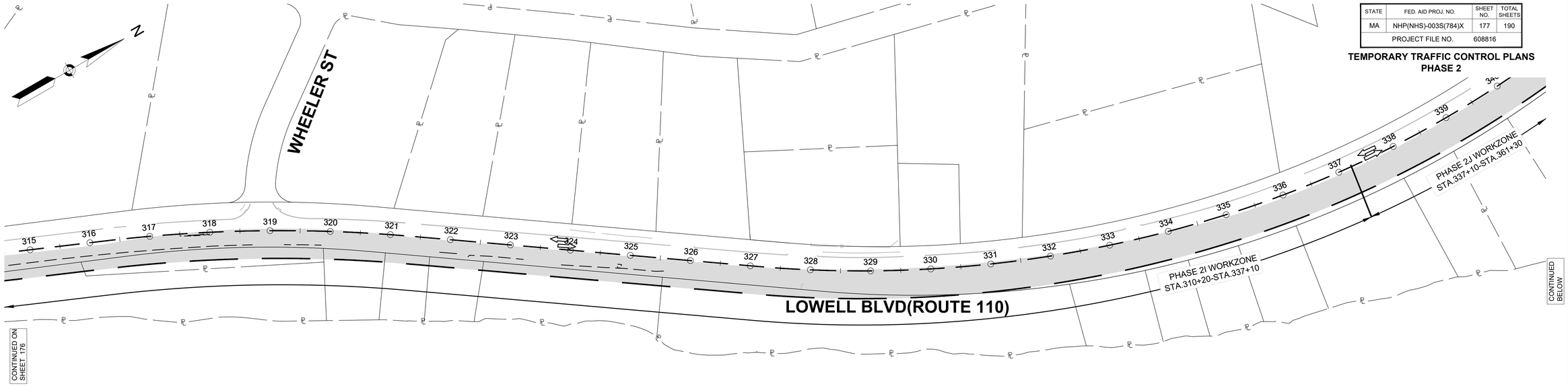
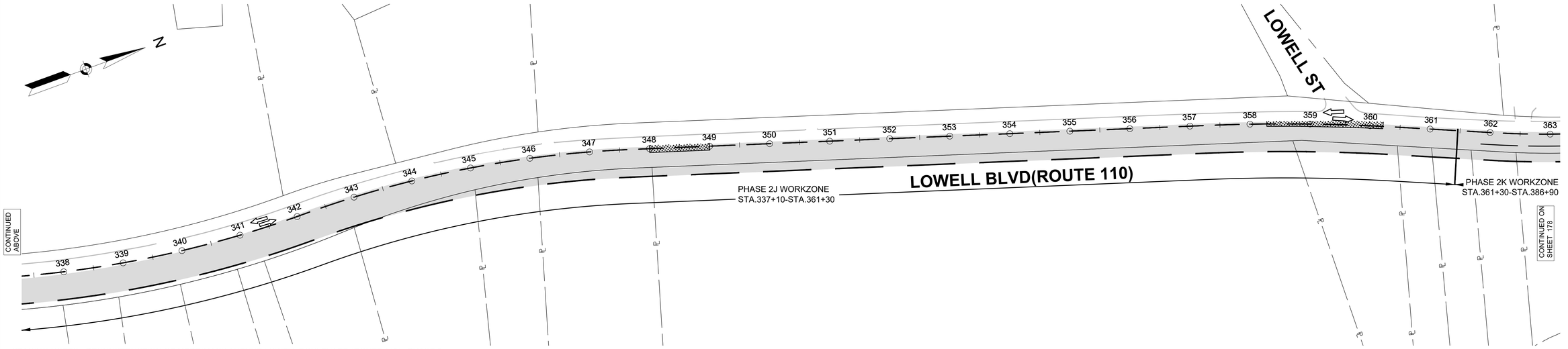
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	177	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
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4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:29 AM

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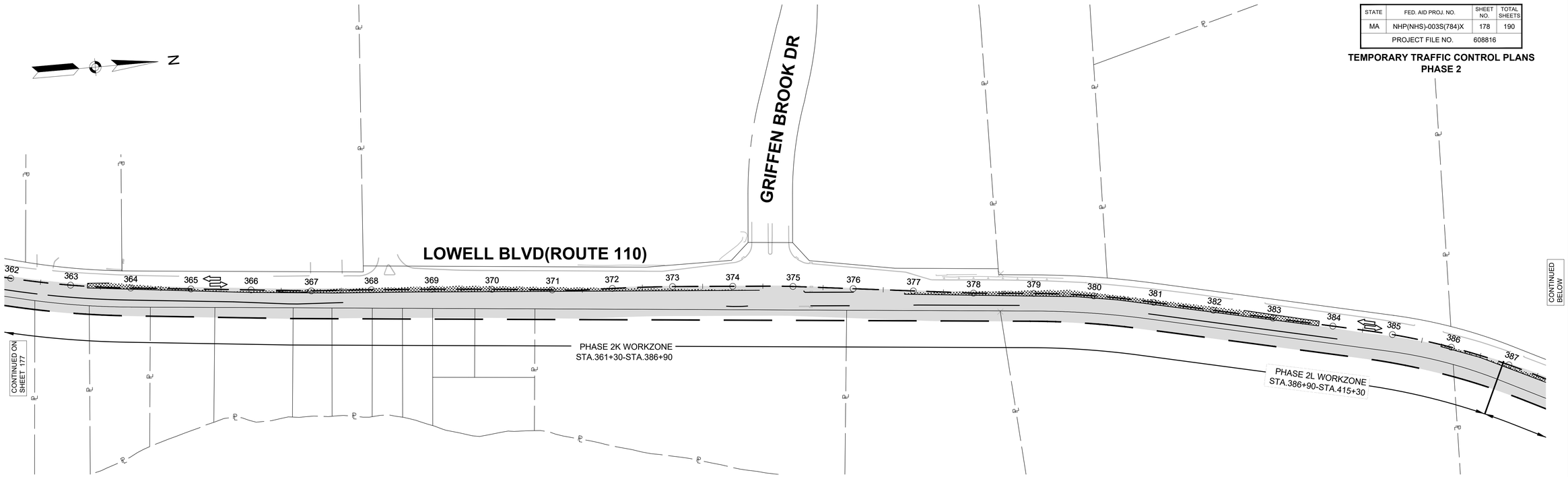
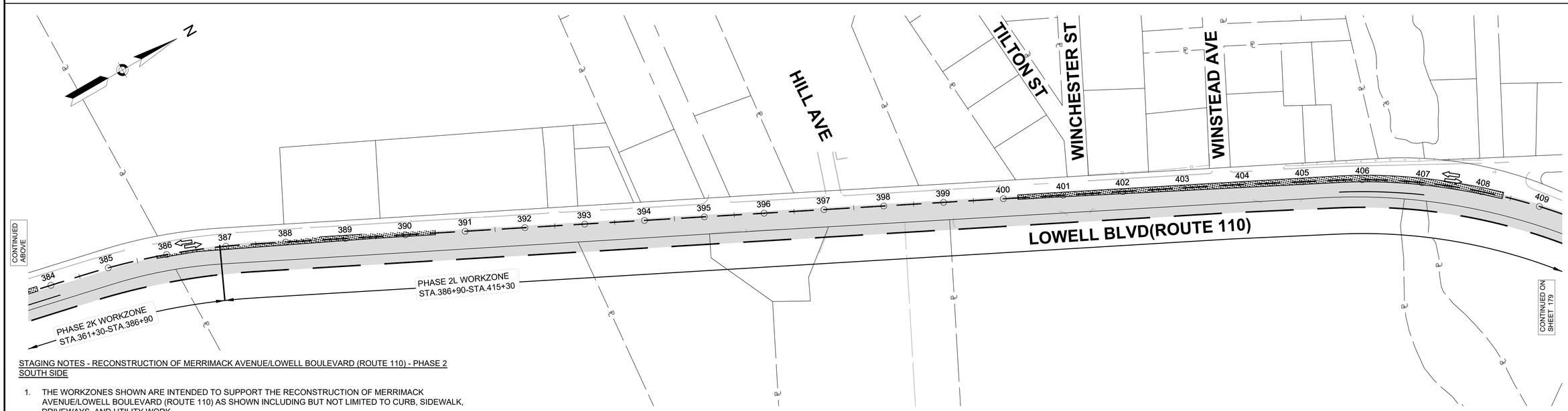
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	178	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:30 AM

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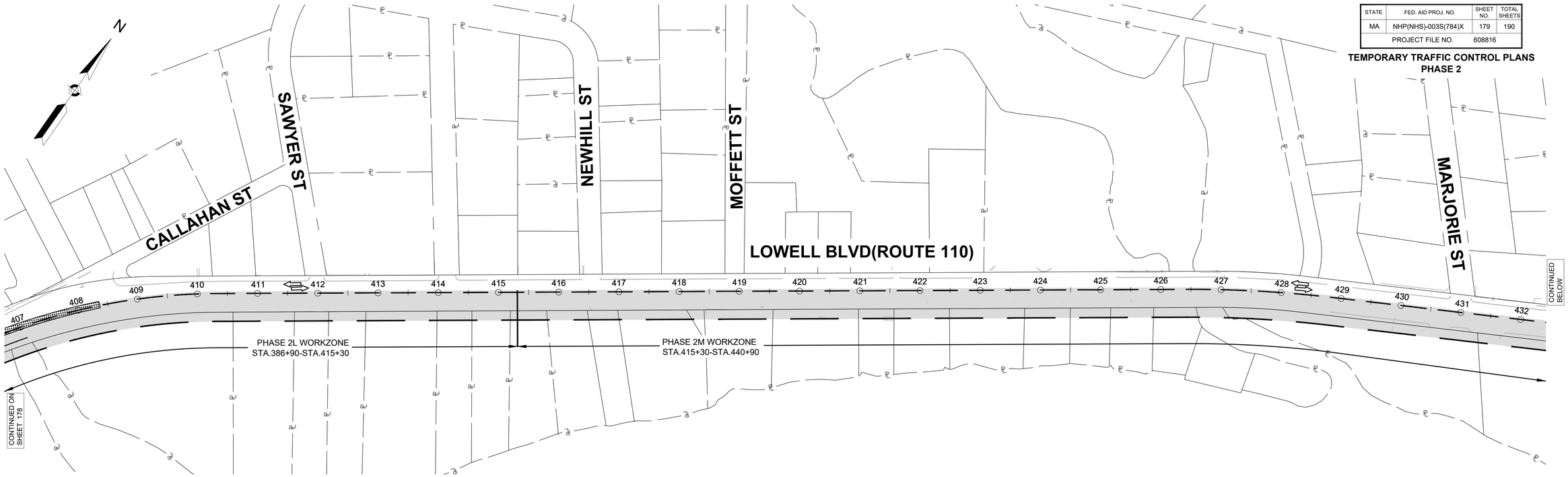
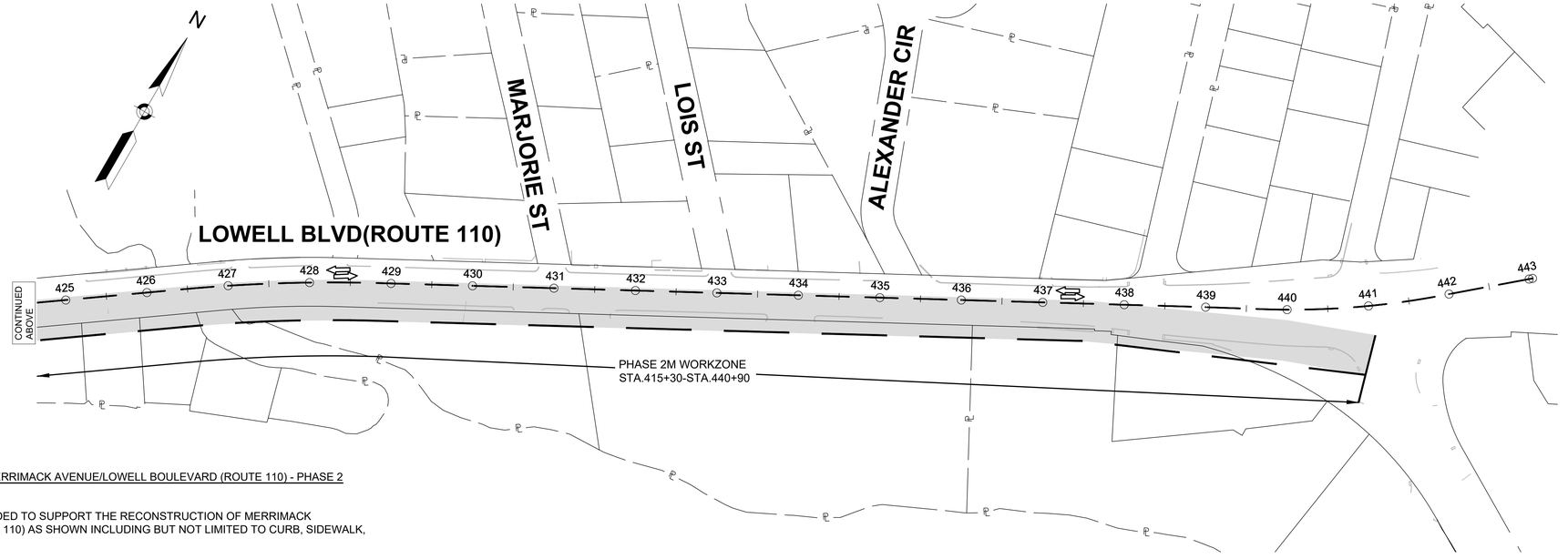
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	179	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 2





STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 2 SOUTH SIDE

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB, SIDEWALK, DRIVEWAYS, AND UTILITY WORK.
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0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-2).DWG Plotted on 9-Sep-2024 9:30 AM

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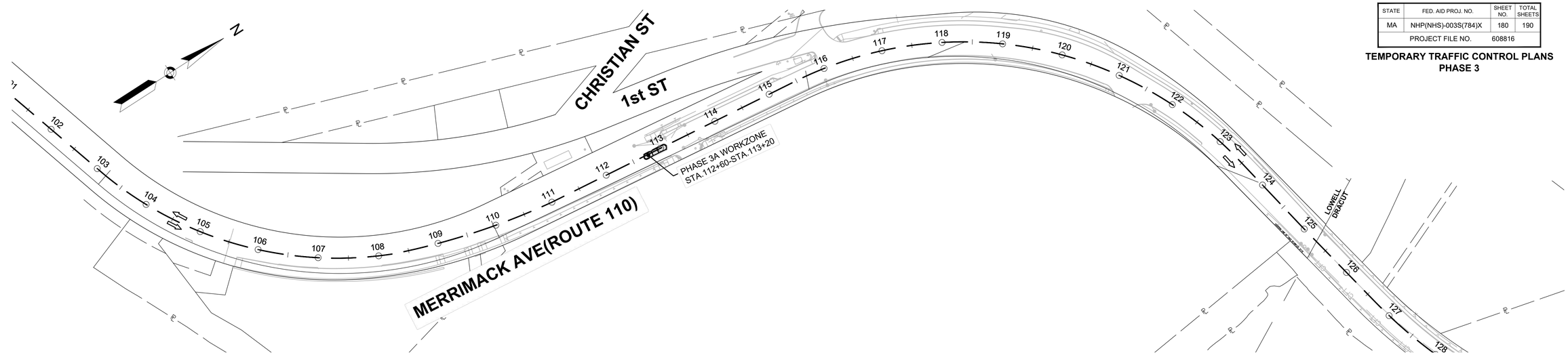
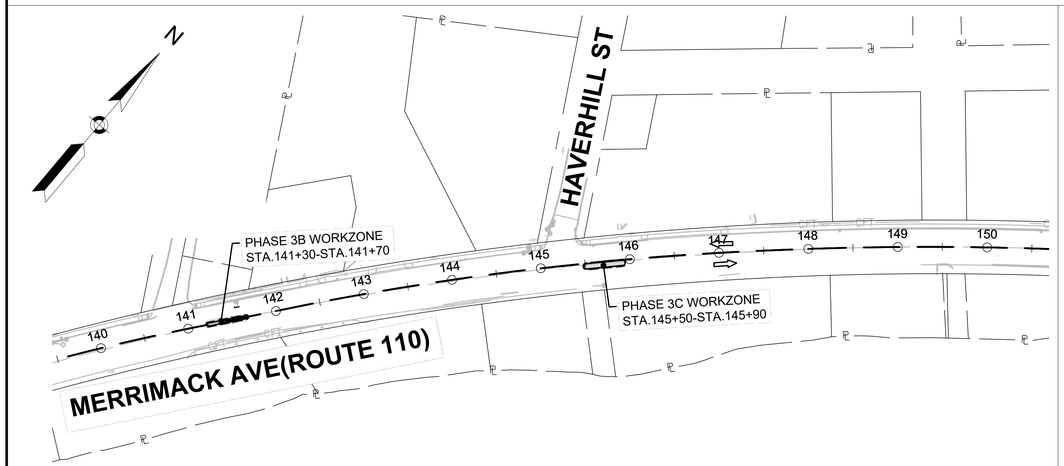
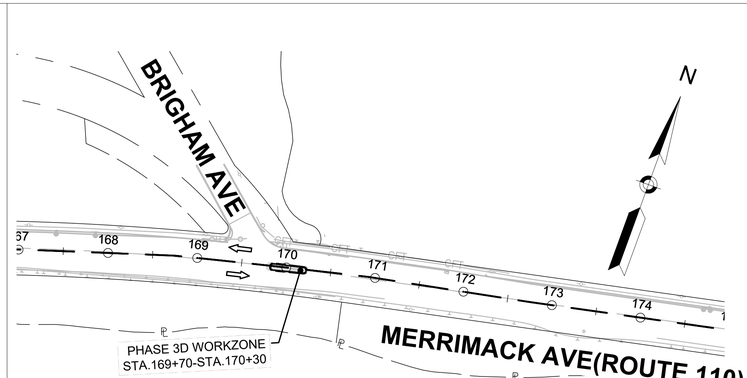
LOWELL, DRACUT, & METHUEN
ROUTE 110

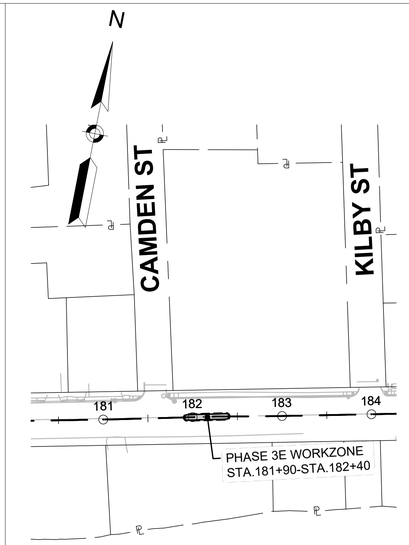
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	180	190
	PROJECT FILE NO. 608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 3









STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 3 MEDIAN ISLANDS

1. THE WORKZONES SHOWN ARE INTENDED TO SUPPORT THE RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) AS SHOWN INCLUDING BUT NOT LIMITED TO CURB AND UTILITY WORK.
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4. SEE SHEET 158 FOR ADDITIONAL TEMPORARY TRAFFIC CONTROL NOTES.

0 80 200 300
SCALE: 1" = 80'

⇨ TRAFFIC FLOW ARROW

608816_TR(TTCP-3).DWG Plotted on 9-Sep-2024 9:34 AM
9/9/2024 L:\21055\21055.06 - D4 Dracut_Methuen Rte 110\Project Drawing Data\Plan Sheet Files\Plan Sheet DWG\608816_TR(TTCP-3).dwg
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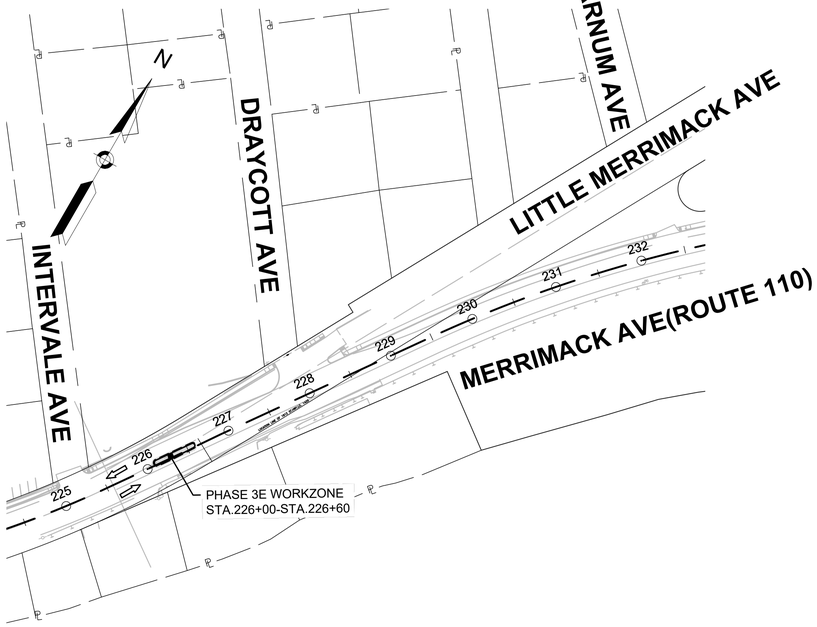
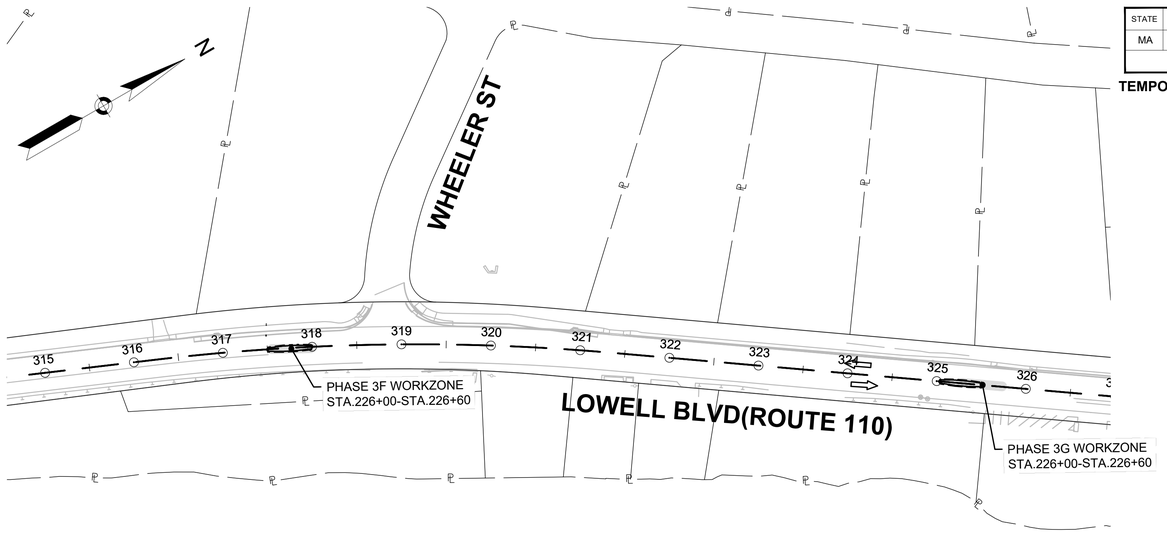
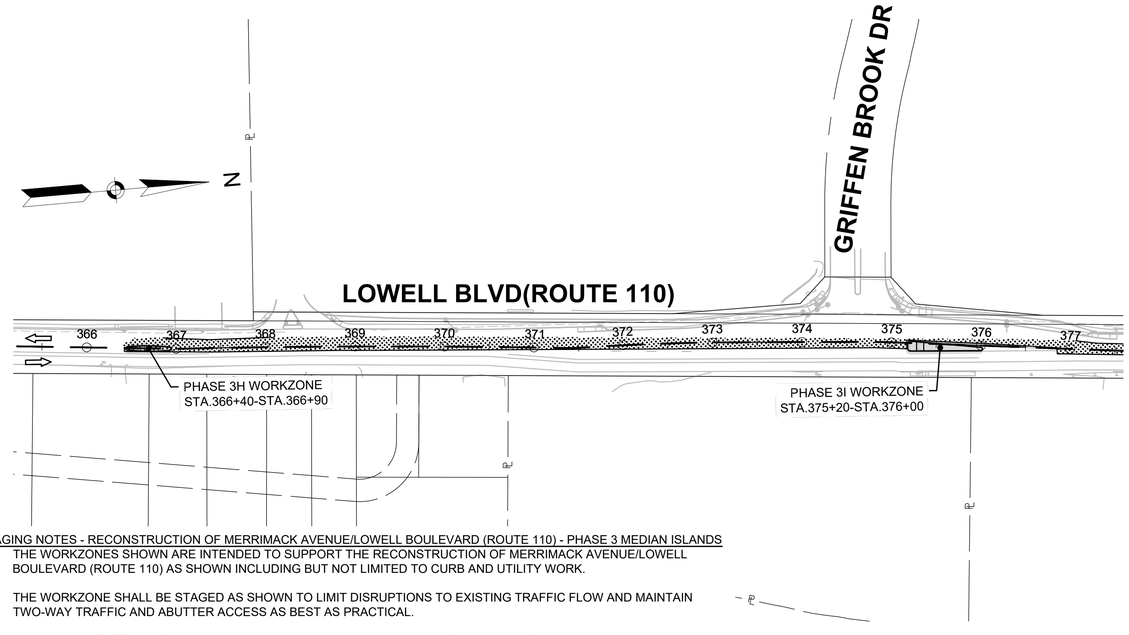


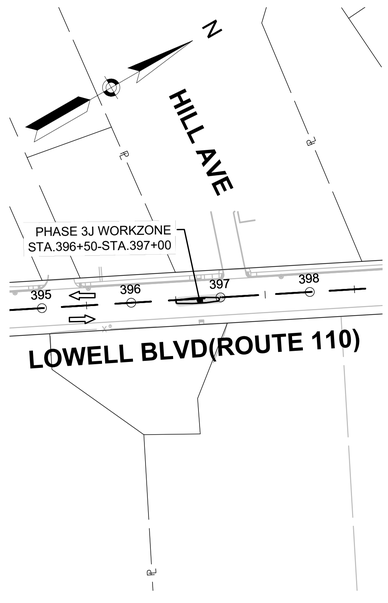


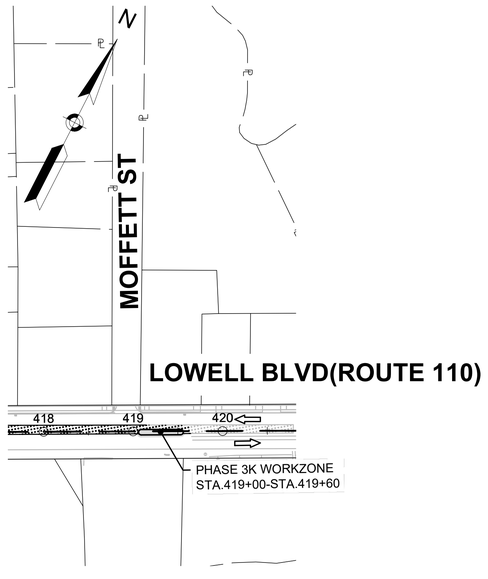
LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	181	190
PROJECT FILE NO.	608816		

TEMPORARY TRAFFIC CONTROL PLANS
PHASE 3







STAGING NOTES - RECONSTRUCTION OF MERRIMACK AVENUE/LOWELL BOULEVARD (ROUTE 110) - PHASE 3 MEDIAN ISLANDS

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0 80 200 300
SCALE: 1" = 80'

TRAFFIC FLOW ARROW

608816_TR(TTCP-3).DWG Plotted on 9-Sep-2024 9:37 AM

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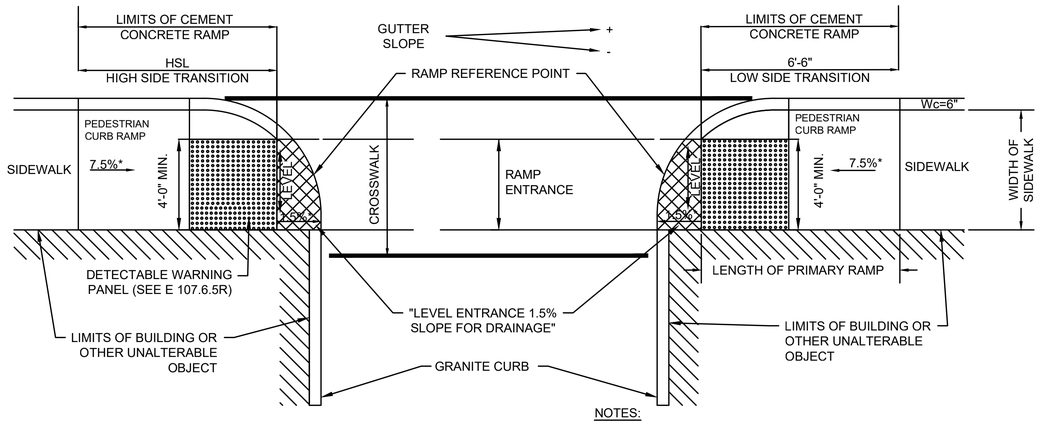


LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:
DETECTABLE WARNING PANELS IN THE CITY OF LOWELL SHALL BE CAST IRON

DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE).

ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET

FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL
NOT TO SCALE

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL

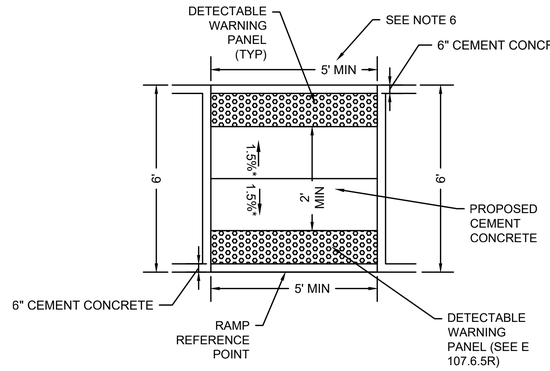
PCR #	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
	STREET	STATION	OFFSET					HIGH SIDE	LOW SIDE	
1	ROUTE 110	140+60	16.5' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.41%
2	ROUTE 110	141+06	16.1' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.53%
3	ROUTE 110	145+04	17.4' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.44%
4	ROUTE 110	145+41	18.5' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.28%
5	ROUTE 110	169+34	19.1' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.27%
6	ROUTE 110	169+81	19.1' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.40%
7	ROUTE 110	179+00	18.9' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.31%
8	ROUTE 110	179+43	18.0' LT	-	5'-0"	4'-0"	6'-0"	-	6'-6"	-0.19%
9	ROUTE 110	181+44	18.0' LT	-	5'-0"	4'-0"	4'-0"	5'-0"*	-	-0.33%
10	ROUTE 110	181+77	18.6' LT	-	5'-0"	4'-6"	4'-0"	-	6'-6"	0.24%
11	ROUTE 110	183+78	18.6' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.20%
12	ROUTE 110	184+21	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	3'-3"*	0.46%
13	ROUTE 110	186+21	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.59%
14	ROUTE 110	186+65	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.69%
15	ROUTE 110	188+61	18.0' LT	-	5'-0"	4'-0"	4'-0"	9'-0"	-	-1.24%
16	ROUTE 110	189+05	18.3' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.15%
17	ROUTE 110	191+04	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.23%
18	ROUTE 110	191+50	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.23%
19	ROUTE 110	193+47	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"*	-	-0.35%
20	ROUTE 110	193+84	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.11%
21	ROUTE 110	202+97	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.40%
22	ROUTE 110	203+42	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.67%
116	ROUTE 110	116+44	18.0' LT	-	9'-6"	10'-0"	4'-0"	-	7'-8"	-1.10%

*3" REVEAL REQUIRED

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	182	190
PROJECT FILE NO.	608816		

PCR & DRIVEWAY DETAILS

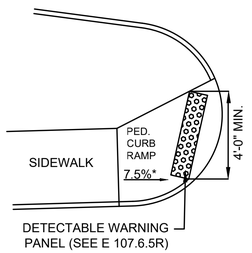


MEDIAN PEDESTRIAN REFUGE AREA
NOT TO SCALE

NOTES:
1. DETECTABLE WARNING PANELS IN THE CITY OF LOWELL SHALL BE CAST IRON
2. DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE).
3. ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET
4. FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.
5. ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.
6. WIDTH OF ENTRY SHOULD BE THE SAME AS THE CROSSWALK IF A SHARED USE PATH IS CROSSING THE MEDIAN

MEDIAN PEDESTRIAN REFUGE AREA

PCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
62	56.32	ROUTE 110	368+15	22.2' LT	-	5'-0"	5'-0"	-	-	-	-1.39%
63	56.19	ROUTE 110	368+33	22.2' LT	-	5'-0"	5'-0"	-	-	-	2.09%
69	53.24	ROUTE 110	375+25	3.0' LT	-	5'-0"	5'-0"	-	-	-	0.16%
70	53.61	ROUTE 110	375+26	22.3' LT	-	5'-0"	5'-0"	-	-	-	-0.42%
99	68.45	ROUTE 110	112+88	1.0' LT	-	10'-0"	10'-0"	-	-	-	-0.45%
100	69.49	ROUTE 110	112+88	2.0' RT	-	10'-0"	10'-0"	-	-	-	-0.57%
107	66.88	ROUTE 110	226+29	3.57' LT	-	5'-0"	5'-0"	-	-	-	0.12%
108	66.97	ROUTE 110	226+29	0.75' LT	-	5'-0"	5'-0"	-	-	-	0.22%
111	56.61	ROUTE 110	296+77	0.0' LT	-	5'-0"	5'-0"	-	-	-	-0.47%
112	56.49	ROUTE 110	296+77	4.3' RT	-	5'-0"	5'-0"	-	-	-	-0.36%



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FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL

PCR #	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
	STREET	STATION	OFFSET					HIGH SIDE	LOW SIDE	
115	ROUTE 110	115+90	18.0' LT	-	8'-0"	8'-0"	4'-0"	7'-8"	-	-0.62%

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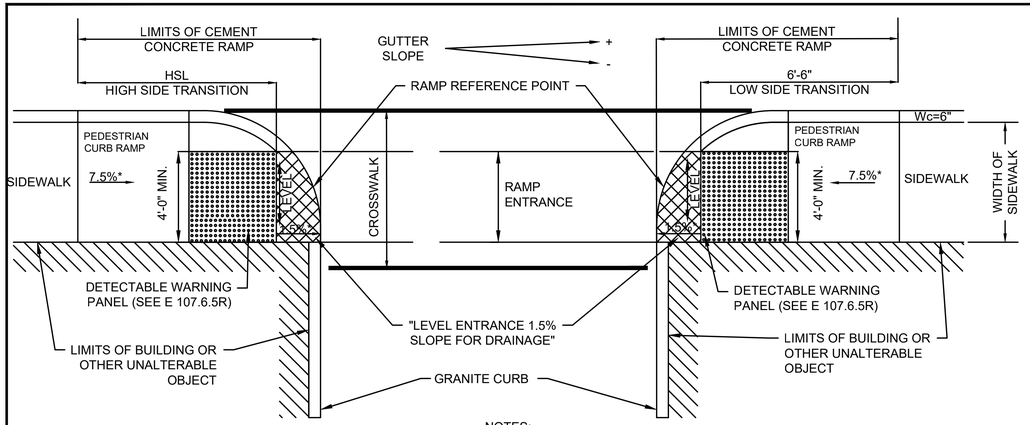
608816_HD(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM



LEGEND:

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
* = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:
DETECTABLE WARNING PANELS IN THE CITY OF LOWELL SHALL BE CAST IRON

DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE).

ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET

FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL
NOT TO SCALE

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL

PCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					HIGH SIDE	LOW SIDE	
23	61.82	ROUTE 110	203+79	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.02%
24	61.46	ROUTE 110	204+20	22.8' LT	-	5'-0"	4'-0"	4'-0"	-	-	0.36%
25	61.61	ROUTE 110	206+21	18.0' LT	-	5'-0"	4'-0"	4'-0"	3'-10"***	-	-0.23%
26	61.41	ROUTE 110	206+62	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	3'-3"****	0.42%
27	61.11	ROUTE 110	208+64	18.0' LT	-	5'-0"	4'-0"	4'-0"	3'-10"***	-	0.35%
28	61.32	ROUTE 110	209+02	17.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.30%
29	61.45	ROUTE 110	211+07	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.09%
30	61.46	ROUTE 110	211+41	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	8'-0"*****	-0.08%
31	61.75	ROUTE 110	214+64	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.08%
32	62.01	ROUTE 110	215+14	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.25%
33	62.83	ROUTE 110	217+79	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.44%
34	63.34	ROUTE 110	218+22	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.60%
35	64.07	ROUTE 110	220+07	17.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.28%
36	64.17	ROUTE 110	220+50	17.3' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	-0.32%
37	64.63	ROUTE 110	222+43	16.2' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	-0.06%
38	64.79	ROUTE 110	222+83	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.59%
39	65.54	ROUTE 110	224+92	18.0' LT	-	5'-0"	4'-0"	4'-0"	7'-8"	-	0.28%
40	65.89	ROUTE 110	225+38	18.0' LT	-	5'-0"	4'-0"	4'-0"	-	6'-6"	0.21%
41	65.62	ROUTE 110	227+69	40.0' LT	-	5'-0"	5'-0"	-	7'-8"	-	-0.84%
42	65.63	ROUTE 110	228+14	43.3' LT	-	5'-0"	5'-0"	-	-	6'-6"	-0.56%
44	66.06	ROUTE 110	228+50	22.8' LT	-	5'-0"	5'-0"	5.0'	11'-0"***	6'-6"	-5.68%

**3" REVEAL REQUIRED
***1.4" REVEAL REQUIRED
****4" REVEAL REQUIRED

PEDESTRIAN CURB RAMP FOR ONE CONTINUOUS DIRECTION OF TRAVEL (E107.6.0)

PCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					HIGH SIDE	LOW SIDE	
45	65.32	ROUTE 110	232+14	17.5' LT	-	5'-0"	5'-0"	4'-0"	7'-8"	-	-0.40%
46	65.41	ROUTE 110	232+50	18.0' LT	-	5'-0"	5'-0"	4'-0"	-	7'-8"	0.08%
47	66.04	ROUTE 110	241+90	22.0' LT	-	5'-0"	5'-0"	5'-0"	5'-1"**	-	-6.87%
49	56.68	ROUTE 110	276+06	18.0' LT	-	5'-0"	5'-0"	-	4'-4"**	-	-0.78%
50	56.64	ROUTE 110	276+40	18.0' LT	-	5'-0"	5'-0"	-	-	7'-2"	0.56%
51	58.18	ROUTE 110	283+51	18.0' LT	-	5'-0"	5'-0"	-	7'-8"**	-	0.39%
52	57.80	ROUTE 110	284+47	18.0' LT	-	5'-0"	5'-0"	4'-0"	-	6.5'	0.59%
53	55.92	ROUTE 110	295+33	18.0' LT	-	5'-0"	4'-0"	-	7.76'	-	-0.63%
54	55.57	ROUTE 110	295+75	18.0' LT	-	5'-0"	4'-0"	-	-	6'-6"	-0.58%
55	55.75	ROUTE 110	299+26	19.0' LT	-	5'-0"	4'-0"	-	6'-6"	-	0.00%
56	56.01	ROUTE 110	299+51	19.1' LT	-	5'-0"	4'-0"	-	-	6'-6"	0.22%
71	56.62	ROUTE 110	394+93	18.6' LT	-	5'-0"	4'-0"	-	7'-8"*****	-	-0.32%
72	56.64	ROUTE 110	395+42	18.6' LT	-	5'-0"	4'-0"	-	-	6'-6"**	-0.15%
75	54.98	ROUTE 110	400+97	23.0' LT	-	10'-0"	5'-0"	-	7'-8"	-	-0.31%
76	54.83	ROUTE 110	401+38	18.0' LT	-	5'-0"	4'-0"	-	-	6'-6"	-0.14%
77	54.23	ROUTE 110	403+42	18.0' LT	-	5'-0"	4'-0"	-	7'-8"	-	0.33%
78	54.18	ROUTE 110	403+85	18.0' LT	-	5'-0"	4'-0"	-	-	6'-6"**	0.55%
79	58.70	ROUTE 110	408+03	32.6' LT	-	5'-0"	5'-0"	-	7'-8"	-	0.58%
80	58.56	ROUTE 110	408+20	50.0' LT	-	5'-0"	5'-0"	-	11'-5"	-	-1.28%
81	59.19	ROUTE 110	408+10	21.0' LT	-	5'-0"	5'-0"	-	-	6'-6"	2.66%
83	66.49	ROUTE 110	411+79	21.3' LT	-	5'-0"	5'-6"	-	7'-8"*****	-	0.40%
84	66.45	ROUTE 110	412+14	20.8' LT	-	5'-0"	5'-0"	-	-	6'-6"	0.34%
85	64.73	ROUTE 110	413+94	21.0' LT	-	5'-0"	4'-0"	-	9'-2"	-	-1.75%
86	64.26	ROUTE 110	414+28	20.8' LT	-	5'-0"	4'-0"	-	-	6'-6"	-2.75%
87	57.40	ROUTE 110	416+35	21.1' LT	-	5'-0"	4'-0"	-	11'-0"	-	-2.39%
88	57.22	ROUTE 110	416+71	21.1' LT	-	5'-0"	5'-0"	-	-	6'-6"	-1.61%
89	54.51	ROUTE 110	418+73	21.0' LT	-	5'-0"	4'-0"	-	9'-0"	-	-1.34%
90	54.29	ROUTE 110	419+04	21.0' LT	-	5'-0"	5'-0"	-	-	6'-5"	-0.74%
91	50.44	ROUTE 110	430+74	20.7' LT	-	5'-0"	5'-0"	-	7'-8"	-	0.20%
92	50.33	ROUTE 110	431+19	18.0' LT	-	5'-0"	4'-0"	-	-	6'-6"	0.29%
93	51.21	ROUTE 110	432+83	18.0' LT	-	5'-0"	4'-0"	-	6'-6"**	-	0.27%
94	51.32	ROUTE 110	433+22	18.0' LT	-	5'-0"	4'-0"	-	-	7'-8"**	0.44%
95	51.91	ROUTE 110	434+93	18.0' LT	-	5'-0"	4'-0"	-	7'-8"	-	0.17%
96	52.38	ROUTE 110	435+72	19.0' LT	-	5'-0"	4'-0"	-	-	6'-6"	0.68%
137	54.17	ROUTE 110	438+02	20.0' LT	-	5'-0"	5'-0"	4'-0"	7'-8"	-	0.58%
143	54.30	ROUTE 110	438+51	22.7' LT	-	5'-0"	5'-0"	-	-	6'-6"****	0.11%
144	67.33	ROUTE 110	113+60	26.4' RT	-	5'-0"	9'-2"	10'-0"	6'-6"	-	-1.38%
145	68.23	ROUTE 110	113+23	26.3' RT	-	5'-0"	9'-2"	10'-0"	-	6'-6"	-1.20%

**3" REVEAL REQUIRED ****4" REVEAL REQUIRED
***5" REVEAL REQUIRED

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	183	190
PROJECT FILE NO. 608816			

PCR & DRIVEWAY DETAILS

608816_HD(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM

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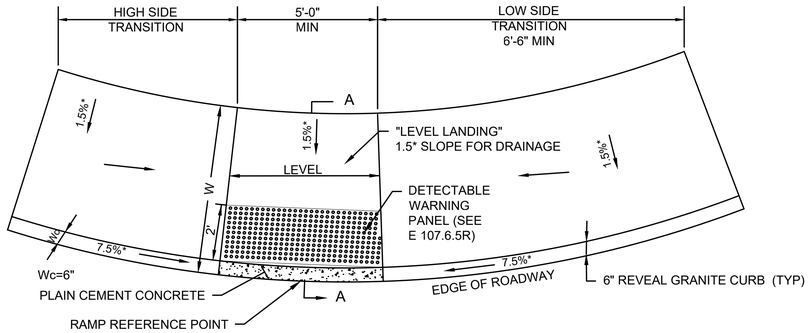
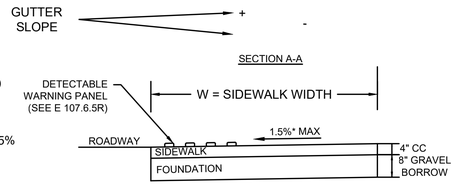




LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0)
W = SIDEWALK WIDTH
Wc = WIDTH OF CURB (6" TYP)
CC = CEMENT CONCRETE
* = TOLERANCE FOR CONSTRUCTION ±0.5%

USEABLE SIDEWALK WIDTH PER AAB = W-WC

NOTES:
DETECTABLE WARNING PANELS IN THE CITY OF LOWELL SHALL BE CAST IRON

DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE).

ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET

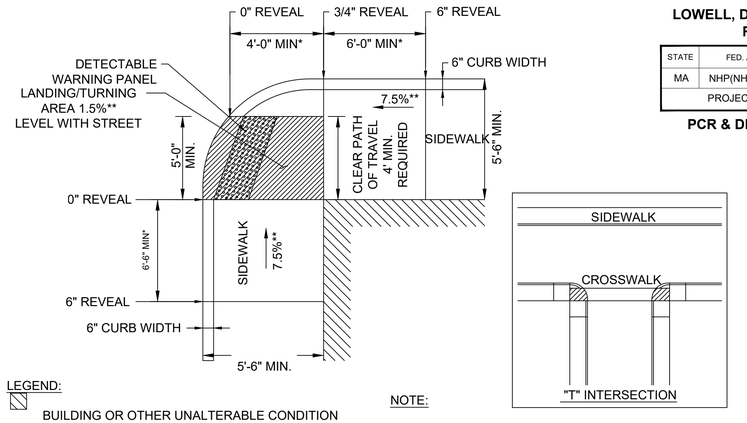
FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.

PEDESTRIAN CURB RAMPS ON NARROW CURVED SIDEWALK WITH DETECTABLE WARNING PANEL
NOT TO SCALE

PEDESTRIAN CURB RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (E107.2.1)											
PCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					HIGH SIDE	LOW SIDE	
43	65.64	ROUTE 110	228+36	46.6' LT	-	5.0'	5.0'	5.0'	6'-6"	-	0.93%
48	65.64	ROUTE 110	241+93	43.0' LT	-	5.0'	5.0'	5.0'	9'-0"	3'-3" **	0.73%
57	58.86	ROUTE 110	318+57	28.0' LT	-	8.0'	10.0'	-	7'-8"	-	0.20%
58	58.89	ROUTE 110	319+07	35.5' LT	-	10'-3"	12'-6"	-	-	12'-3"	0.89%
59	59.33	ROUTE 110	359+16	24.5' LT	-	5'-0"	5'-0"	5'-0"	7'-8"	-	0.44%
60	59.52	ROUTE 110	359+72	22.9' LT	-	5'-0"	5'-0"	5'-0"	7'-8"	-	-0.12%
61	56.58	ROUTE 110	367+94	25.8' LT	-	5'-0"	5'-0"	5'-0"	11'-0"	7'-1"	0.55%
64	56.04	ROUTE 110	368+66	27.0' LT	-	5'-0"	5'-0"	5'-0"	5'-6"	8'-4"	0.75%
66	53.27	ROUTE 110	374+18	47.6' LT	-	9'-3"	12'-3"	-	9'-8"	-	0.48%
67	52.80	ROUTE 110	375+00	43.0' LT	-	9'-4"	12'-6"	-	7'-8"	6'-6"	-0.03%
68	52.62	ROUTE 110	375+25	28.1' LT	-	10'-6"	8'-0"	-	7'-8"	6'-6"	-0.30%
82	60.37	ROUTE 110	408+66	29.8' LT	-	5'-0"	5'-0"	5'-0"	15'-0"****	-	4.78%
97	53.17	ROUTE 110	375+32	30.9' RT	-	5'-0"	5'-0"	-	-	6'-6"	0.06%
98	68.08	ROUTE 110	112+88	2.4' LT	-	5'-0"	10'-0"	-	-	8'-2"	-0.67%
101	68.54	ROUTE 110	112+90	18.7' RT	-	5'-0"	10'-0"	-	7'-8"	6'-6"	-1.03%
106	65.90	ROUTE 110	226+29	26.5' LT	-	5'-0"	5'-0"	-	7'-8"	6'-6"	0.52%
109	67.35	ROUTE 110	226+28	22.0' RT	-	5'-0"	5'-0"	-	-	-	0.44%
110	56.46	ROUTE 110	396+77	21.0' LT	-	5'-0"	5'-0"	-	7'-8"	3'-10" **	-0.58%
113	56.00	ROUTE 110	396+77	25.3' RT	-	5'-0"	5'-0"	-	-	-	-0.16%

**3" REVEAL REQUIRED
***4.8" REVEAL REQUIRED
****4" REVEAL REQUIRED



LEGEND:

BUILDING OR OTHER UNALTERABLE CONDITION

* =TRANSITION LENGTH SHOWN IS MINIMUM (E 107.9.0R)
** =TOLERANCE FOR CONSTRUCTION ± 0.5%

NOTE:

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS

"T" INTERSECTION PEDESTRIAN CURB RAMP (E 107.6.4)
NOT TO SCALE

"T" INTERSECTION PEDESTRIAN CURB RAMP (E107.6.4)											
PCR #	ROADWAY ELEV. AT RAMP ℄	RAMP REFERENCE POINT			LENGTH OF PRIMARY RAMP	WIDTH OF SIDEWALK	WIDTH OF RAMP ENTRANCE	DEPTH OF LEVEL LANDING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET					LEFT SIDE	RIGHT SIDE	
73	56.15	ROUTE 110	396+99	19.4' LT	-	4'-10"	5'-0"	4'-0"	7'-8" ***	4'-0" ****	1.04%
74	56.05	ROUTE 110	397+29	18.6' LT	-	4'-0"	5'-0"	4'-0"	4'-0" **	6'-6" ***	-0.67%

*TRANSITIONS NONCOMPLIANT DUE TO LIMITED RIGHT-OF-WAY
**3" REVEAL REQUIRED
***1" REVEAL REQUIRED
****2" REVEAL REQUIRED

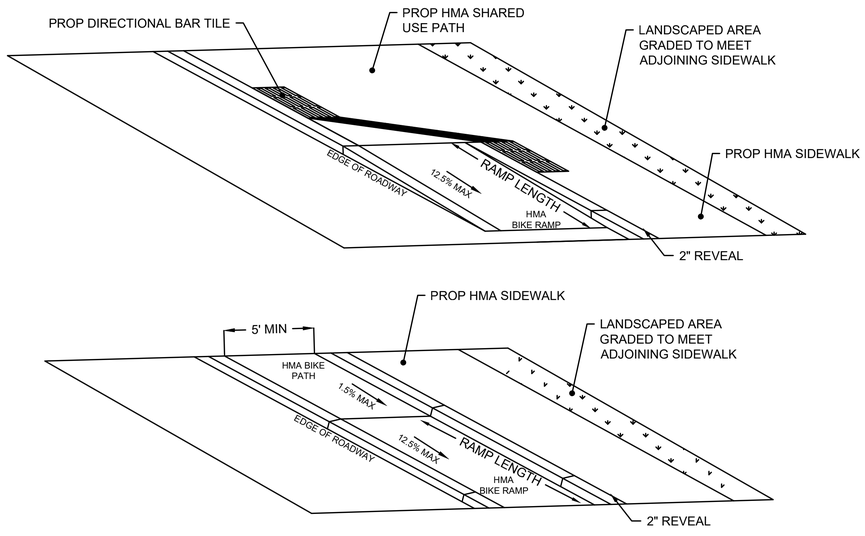
NOTES:
DETECTABLE WARNING PANELS IN THE CITY OF LOWELL SHALL BE CAST IRON

DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE).

ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES SHOULD BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET

FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.



BIKE RAMP
NOT TO SCALE

BIKE RAMP SCHEDULE			
RAMP REFERENCE POINT			RAMP LENGTH
STREET	STATION	OFFSET	
ROUTE 110	113+40	18.9' LT	8.00'
ROUTE 110	115+17	14.8' LT	8.00'
ROUTE 110	117+00	28.4' LT	8.00'
ROUTE 110	123+87	16.6' LT	8.00'
ROUTE 110	316+71	15.5' LT	20.00'
ROUTE 110	321+15	16.6' LT	6.50'
ROUTE 110	371+52	17.9' LT	7.00'
ROUTE 110	377+50	13.2' LT	7.00'

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	184	190
PROJECT FILE NO.	608816		

PCR & DRIVEWAY DETAILS

608816_HD(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM

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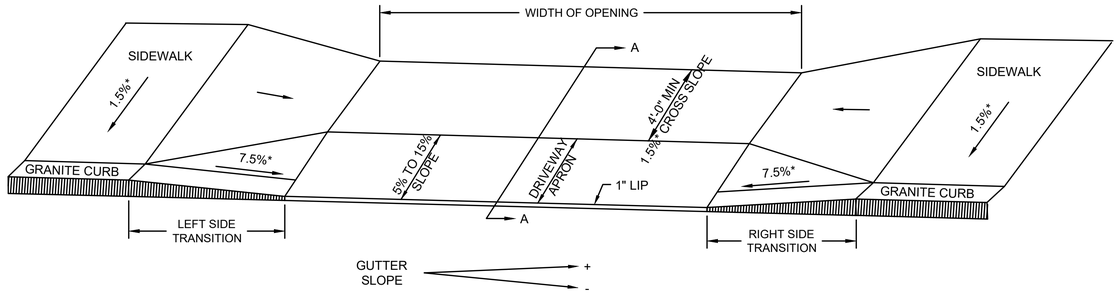

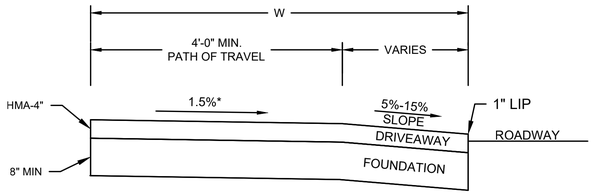

SECTION A-A (DRIVEWAY)

LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E107.7.0)
NOT TO SCALE

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E 107.7.0)

DRIVEWAY #	DRIVEWAY REFERENCE POINT			TRANSITION		WIDTH OF SIDEWALK	WIDTH OF PED TRAVEL PATH	WIDTH OF DRIVEWAY APRON	WIDTH OF OPENING	GUTTER SLOPE
	STREET	STATION	OFFSET	LEFT	RIGHT					
1	ROUTE 110	142+43	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	14'-6"	-0.22%
2	ROUTE 110	143+32	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	35'-10"	-0.13%
3	ROUTE 110	146+60	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	82'-6"	0.26%
4	ROUTE 110	180+44	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	19'-6"	-0.25%
5	ROUTE 110	181+01	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	19'-6"	-0.57%
6	ROUTE 110	185+06	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	23'-0"	-0.25%
7	ROUTE 110	187+36	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	50'-10"	-0.13%
8	ROUTE 110	188+28	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	36'-6"	-0.64%
9	ROUTE 110	189+54	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	17'-2"	-0.43%
10	ROUTE 110	190+02	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	19'-2"	-0.22%
11	ROUTE 110	192+64	20.0' LT	7'-8"	6'-6"***	5'-0"	4'-0"	1'-6"	41'-2"	-0.03%
12	ROUTE 110	196+31	20.0' LT	7'-8"	6'-6"	5'-0"	4'-0"	1'-6"	28'-7"	-0.28%
13	ROUTE 110	200+55	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	40'-6"	0.64%
14	ROUTE 110	202+47	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	34'-2"	0.68%
15	ROUTE 110	212+36	20.0' LT	6'-6"***	7'-8"	5'-0"	4'-0"	1'-6"	12'-1"	0.35%
16	ROUTE 110	212+95	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	48'-10"	0.28%
17	ROUTE 110	213+85	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	43'-0"	0.30%
18	ROUTE 110	221+81	20.0' LT	6'-6"	7'-8"	5'-0"	4'-0"	1'-6"	14'-5"	0.13%

**3" REVEAL REQUIRED
***4" REVEAL REQUIRED

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E 107.7.0)

DRIVEWAY #	ROADWAY ELEV. AT DRIVEWAY ℄	DRIVEWAY REFERENCE POINT			WIDTH OF SIDEWALK	WIDTH OF PED TRAVEL PATH	WIDTH OF OPENING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET				LEFT SIDE	RIGHT SIDE	
19	66.62	ROUTE 110	242+52	20.0' LT	5'-0"	4'-6"	15'-1"	6'-6"	4'-6" **	1.93%
20	67.28	ROUTE 110	242+89	20.0' LT	5'-0"	4'-6"	34'-8"	3'-3" **	9'-0"	1.16%
21	61.65	ROUTE 110	267+28	20.0' LT	5'-0"	4'-0"	36'-8"	7'-8"	6'-6"	-0.53%
22	58.78	ROUTE 110	267+89	20.0' LT	5'-0"	4'-0"	15'-0"	7'-8"	6'-6"	-0.12%
23	58.56	ROUTE 110	268+57	20.0' LT	5'-0"	4'-0"	25'-4"	7'-8"	6'-6"	-0.58%
24	58.22	ROUTE 110	269+49	20.0' LT	5'-0"	4'-0"	24'-0"	7'-8"	6'-6"	-0.14%
25	58.19	ROUTE 110	269+76	20.0' LT	5'-0"	4'-0"	15'-6"	7'-8"	6'-6"	-0.35%
26	58.18	ROUTE 110	270+42	20.0' LT	5'-0"	4'-0"	13'-10"	7'-8"	6'-6"	-0.13%
27	57.90	ROUTE 110	270+97	20.0' LT	5'-0"	4'-0"	16'-7"	7'-8"	6'-6"	-0.50%
28	57.73	ROUTE 110	271+45	20.0' LT	5'-0"	4'-0"	17'-1"	7'-8"	6'-6"	-0.23%
29	57.55	ROUTE 110	271+97	20.0' LT	5'-0"	4'-0"	13'-6"	7'-8"	6'-6"	-0.19%
30	57.66	ROUTE 110	272+64	20.0' LT	5'-0"	4'-0"	14'-1"	6'-6"	7'-8"	0.58%
31	57.38	ROUTE 110	273+43	20.0' LT	5'-0"	4'-0"	15'-10"	6'-6"	7'-8"	0.11%
32	57.17	ROUTE 110	273+92	20.0' LT	5'-0"	4'-0"	21'-7"	7'-8"	6'-6"	-0.39%
33	57.04	ROUTE 110	274+52	20.0' LT	5'-0"	4'-0"	15'-5"	7'-8"	6'-6"	-0.32%
34	57.06	ROUTE 110	275+84	20.0' LT	5'-0"	4'-0"	42'-7"	7'-8"	6'-6"	-0.06%
35	56.97	ROUTE 110	277+90	20.0' LT	5'-0"	4'-0"	15'-2"	7'-8"	3'-3" **	-0.22%
36	57.16	ROUTE 110	279+96	20.0' LT	5'-0"	4'-0"	32'-1"	6'-6"	7'-8"	0.30%
37	57.44	ROUTE 110	280+38	20.0' LT	5'-0"	4'-0"	21'-5"	6'-6"	3'-10" **	0.57%
38	57.65	ROUTE 110	281+67	20.0' LT	5'-0"	4'-0"	31'-0"	3'-3"	7'-8"	0.40%
39	57.90	ROUTE 110	283+11	20.0' LT	5'-0"	4'-0"	17'-2"	6'-6"	7'-8"	0.06%
40	58.16	ROUTE 110	285+63	20.0' LT	5'-0"	4'-0"	40'-2"	6'-6"	7'-8"	0.30%
41	58.06	ROUTE 110	286+18	20.0' LT	5'-0"	4'-0"	24'-0"	7'-8"	6'-6"	-0.11%
42	57.97	ROUTE 110	287+60	20.0' LT	5'-0"	4'-0"	15'-1"	7'-8"	6'-6"	-0.12%
43	57.75	ROUTE 110	289+21	20.0' LT	5'-0"	4'-0"	16'-6"	7'-8"	6'-6"	-0.17%
44	57.57	ROUTE 110	289+84	20.0' LT	5'-0"	4'-0"	38'-4"	7'-8"	6'-6"	-0.12%
45	57.58	ROUTE 110	293+22	20.0' LT	5'-0"	4'-0"	26'-8"	7'-8"	6'-6"	-0.09%
46	56.41	ROUTE 110	293+76	20.0' LT	5'-0"	4'-0"	18'-11"	7'-8"	6'-6"	-0.39%
47	56.27	ROUTE 110	297+37	20.0' LT	5'-0"	4'-0"	12'-4"	7'-8"	6'-6"	-0.03%

**3" REVEAL REQUIRED

LOWELL, DRACUT, & METHUEN
ROUTE 110

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	185	190
PROJECT FILE NO. 608816			

PCR & DRIVEWAY DETAILS

608816_HD(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM

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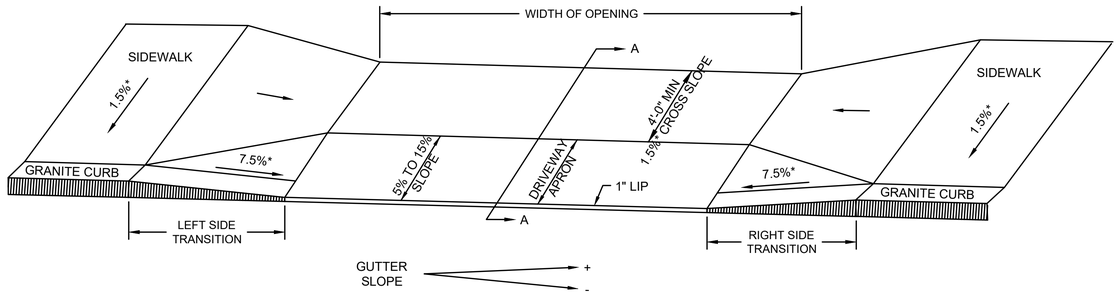

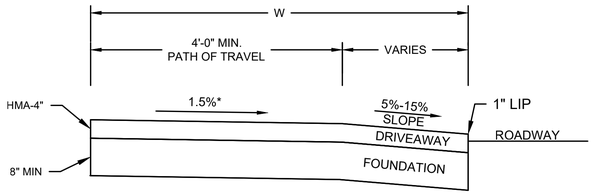

SECTION A-A (DRIVEWAY)

LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E107.7.0)
NOT TO SCALE

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E 107.7.0)

DRIVEWAY #	ROADWAY ELEV. AT DRIVEWAY ℄	DRIVEWAY REFERENCE POINT			WIDTH OF SIDEWALK	WIDTH OF PED TRAVEL PATH	WIDTH OF OPENING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET				HIGH SIDE	LOW SIDE	
48	55.60	ROUTE 110	298+62	20.0' LT	5'-0"	4'-0"	19'-5"	7'-8"	6'-6"	-0.06%
49	55.60	ROUTE 110	300+05	20.0' LT	5'-0"	4'-0"	19'-4"	7'-8"	6'-6"	0.05%
50	55.44	ROUTE 110	300+54	20.0' LT	5'-0"	4'-0"	29'-8"	7'-8"	6'-6"	-0.13%
51	55.48	ROUTE 110	301+19	20.0' LT	5'-0"	4'-0"	12'-7"	7'-8"	6'-6"	-0.15%
52	55.35	ROUTE 110	301+52	20.0' LT	5'-0"	4'-0"	23'-10"	7'-8"	3'-3" **	-0.30%
53	55.22	ROUTE 110	302+87	20.0' LT	5'-0"	4'-0"	17'-8"	3'-10" **	6'-6"	-0.17%
54	55.16	ROUTE 110	303+71	20.0' LT	5'-0"	4'-0"	28'-10"	7'-8"	6'-6"	-0.47%
55	55.11	ROUTE 110	306+04	20.0' LT	5'-0"	4'-0"	66'-5"	7'-8"	6'-6"	0.23%
56	55.16	ROUTE 110	309+06	20.0' LT	5'-0"	4'-0"	17'-6"	7'-8"	6'-6"	-0.22%
57	55.76	ROUTE 110	314+06	20.0' LT	5'-0"	4'-0"	13'-8"	7'-8"	6'-6"	0.27%
58	57.20	ROUTE 110	316+29	20.0' LT	5'-0"	4'-0"	20'-6"	7'-8"	6'-6"	0.38%
59	58.02	ROUTE 110	321+35	20.0' LT	5'-0"	4'-0"	17'-6"	7'-8"	6'-6"	0.55%
60	59.48	ROUTE 110	321+82	20.0' LT	5'-0"	4'-0"	15'-8"	7'-8"	6'-6"	0.23%

**3" REVEAL REQUIRED

SIDEWALK THROUGH DRIVEWAYS WITHOUT CURB RETURNS (E 107.7.0)

DRIVEWAY #	ROADWAY ELEV. AT DRIVEWAY ℄	DRIVEWAY REFERENCE POINT			WIDTH OF SIDEWALK	WIDTH OF PED TRAVEL PATH	WIDTH OF OPENING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET				LEFT SIDE	RIGHT SIDE	
61	59.96	ROUTE 110	329+75	20.0' LT	5'-0"	4'-0"	46'-1"	7'-8"	6'-6"	-0.24%
62	59.09	ROUTE 110	331+18	20.0' LT	5'-0"	4'-0"	26'-2"	7'-8"	6'-6"	-0.17%
63	58.55	ROUTE 110	333+41	20.0' LT	5'-0"	4'-0"	24'-5"	7'-8"	6'-6"	-0.33%
64	57.86	ROUTE 110	336+21	20.0' LT	5'-0"	4'-0"	25'-9"	7'-8"	6'-6"	-0.27%
65	56.87	ROUTE 110	345+32	20.0' LT	5'-0"	4'-0"	23'-1"	6'-6"	7'-8"	0.25%
66	57.71	ROUTE 110	362+49	20.0' LT	5'-0"	4'-0"	24'-6"	7'-8"	6'-6"	-0.07%
67	58.38	ROUTE 110	365+53	20.0' LT	5'-0"	4'-0"	26'-4"	7'-8"	6'-6"	-0.06%
68	57.77	ROUTE 110	367+20	20.0' LT	5'-0"	4'-0"	144'-4"	7'-8"	6'-6"	-0.45%
69	56.96	ROUTE 110	382+55	20.0' LT	5'-0"	4'-3"	49'-2"	7'-8"	6'-6"	-0.31%
70	55.55	ROUTE 110	385+44	20.0' LT	5'-0"	4'-0"	33'-10"	6'-6"	11'-0"	1.10%
71	58.96	ROUTE 110	387+02	20.0' LT	5'-0"	4'-0"	25'-2"	6'-6"	7'-8"	0.70%
72	59.59	ROUTE 110	388+93	20.0' LT	5'-0"	4'-0"	29'-4"	6'-6"	7'-8"	0.08%
73	59.33	ROUTE 110	389+98	20.0' LT	5'-0"	4'-2"	13'-11"	7'-8"	6'-6"	-0.61%
74	58.63	ROUTE 110	392+45	20.0' LT	5'-0"	4'-2"	18'-3"	7'-8"	6'-6"	-0.43%
75	57.70	ROUTE 110	393+13	20.0' LT	5'-0"	4'-2"	18'-3"	7'-8"	6'-6"	-0.50%
76	57.52	ROUTE 110	393+85	20.0' LT	5'-0"	4'-0"	21'-1"	7'-8"	6'-6"	-0.28%
77	57.35	ROUTE 110	400+17	20.0' LT	5'-0"	7'-11"	18'-2"	7'-8"	6'-6"	-0.46%
78	55.21	ROUTE 110	404+43	20.0' LT	5'-0"	4'-0"	42'-3"	7'-8"	6'-6"	-0.36%
79	54.76	ROUTE 110	408+36	20.0' LT	5'-0"	4'-3"	20'-0"	6'-6"	7'-8"	0.80%
80	-	ROUTE 110	414+87	20.0' LT	5'-0"	5'-0"	12'-0"	6'-6"	7'-8"	0.95%
92	71.35	ROUTE 110	109+20	20.6' RT	14'-6"	10'-3"	36'-0"	7'-8"	6'-6"	0.15%
93	71.22	ROUTE 110	109+86	20.6' RT	13'-6"	10'-0"	25'-2"	7'-8"	6'-6"	-0.73%

**3" REVEAL REQUIRED

608816_HDi(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM

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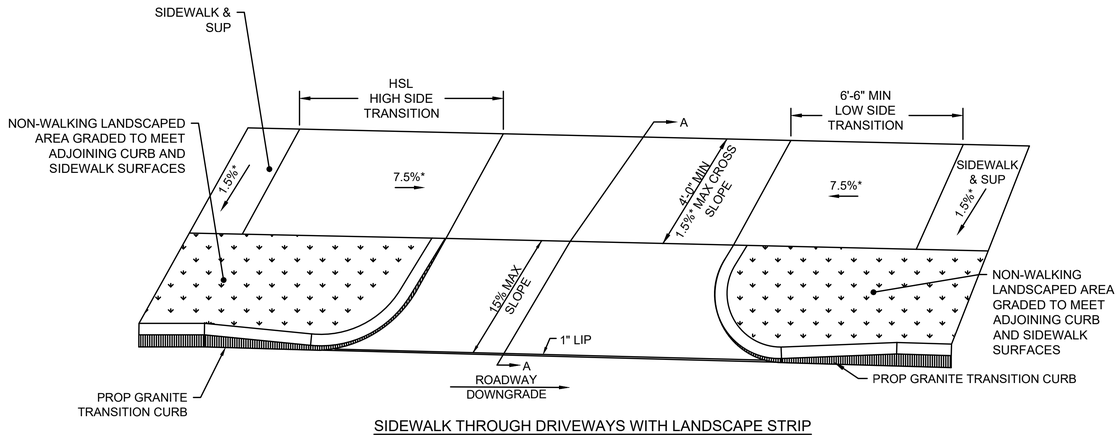
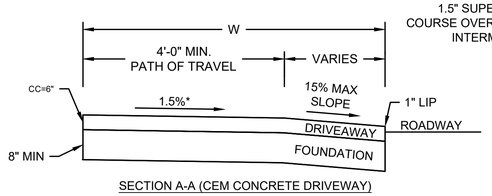
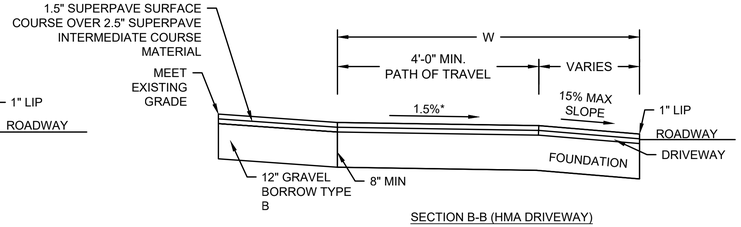


SIDEWALK THROUGH DRIVEWAYS WITH LANDSCAPE STRIP
NOT TO SCALE



SECTION A-A (CEM CONCRETE DRIVEWAY)



SECTION B-B (HMA DRIVEWAY)

LEGEND:

HSL = HIGH SIDE TRANSITION (SEE E 107.9.0R)
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

NOTES:
* CONSTRUCTION TOLERANCE ±0.5%

SIDEWALK THROUGH DRIVEWAYS WITH LANDSCAPE STRIP

DRIVEWAY #	ROADWAY ELEV. AT DRIVEWAY ℄	DRIVEWAY REFERENCE POINT			WIDTH OF SIDEWALK	WIDTH OF PED TRAVEL PATH	WIDTH OF OPENING	TRANSITION		GUTTER SLOPE
		STREET	STATION	OFFSET				LEFT SIDE	RIGHT SIDE	
81	62.04	ROUTE 110	419+82	20.0' LT	5'-0"	5'-0"	13'-5"	14'-0"	6'-6"	-3.30%
82	53.11	ROUTE 110	420+53	20.0' LT	5'-0"	5'-0"	17'-5"	7'-8"	6'-6"	-0.98%
83	52.43	ROUTE 110	421+59	20.0' LT	5'-0"	5'-0"	20'-3"	7'-8"	6'-6"	-0.65%
84	51.71	ROUTE 110	424+04	20.0' LT	5'-0"	5'-0"	11'-10"	7'-8"	6'-6"	-0.56%
85	50.57	ROUTE 110	427+15	20.0' LT	5'-0"	5'-0"	20'-6"	7'-8"	6'-6"	-0.61%
86	49.57	ROUTE 110	428+16	20.0' LT	5'-0"	5'-0"	20'-9"	6'-6"	7'-8"	0.36%
87	49.93	ROUTE 110	429+05	20.0' LT	5'-0"	5'-0"	25'-8"	6'-6"	7'-8"	0.22%
88	50.25	ROUTE 110	434+64	20.0' LT	5'-0"	5'-0"	18'-1"	6'-6"	7'-8"	0.23%
89	51.93	ROUTE 110	437+08	21.6' LT	5'-0"	4'-0"	19'-1"	6'-6"	7'-8"	0.69%
90	58.20	ROUTE 110	391+22	20.0' LT	5'-0"	5'-0"	21'-6"	7'-8"	7'-8"	-0.31%
91	62.77	ROUTE 110	177+46	20.0' LT	5'-0"	5'-0"	21'-4"	7'-8"	7'-8"	-0.27%

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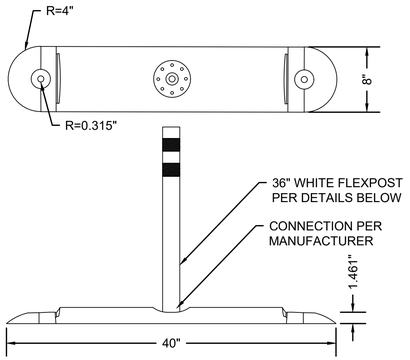
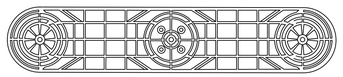
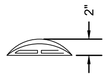




MANUFACTURING INFORMATION

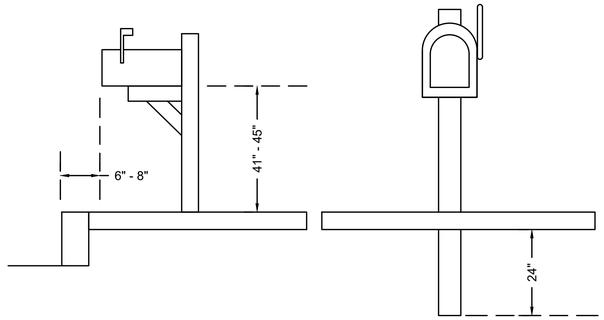


1. INJECTION MOLDED
2. UV STABILIZED HDPE
3. COLOR: WHITE

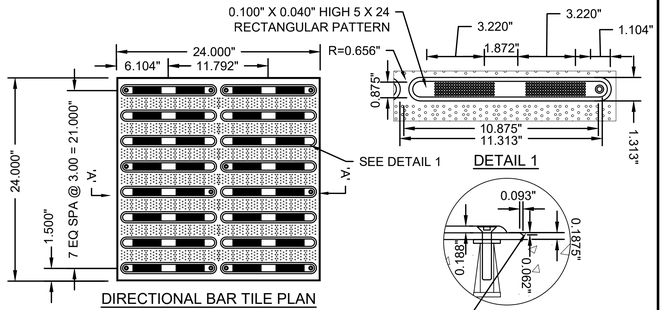
INTENDED USE

1. CRASHWORTHINESS TESTED TO 2009 M.A.S.H. STANDARDS
2. MODULAR CURB APPLIED TO ROADWAY USING ADHESIVE

TRAFFIC SEPARATOR CURB (MODULAR BASE) (A720)
NOT TO SCALE



MAILBOX PLACEMENT AND OFFSET
NOT TO SCALE



DIRECTIONAL BAR TILE
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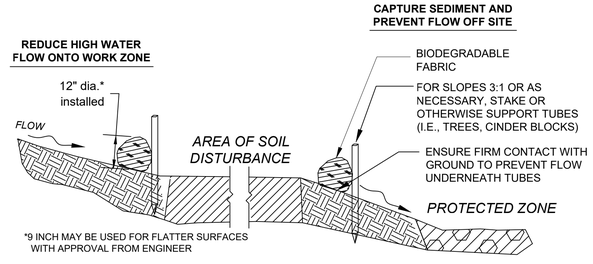
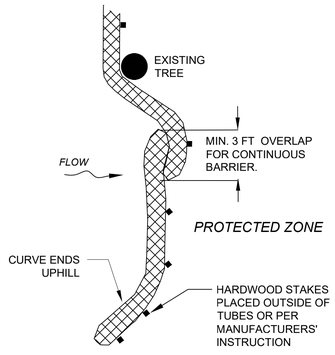


SECTION

SEDIMENT BARRIER - COMPOST FILTER TUBES
NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

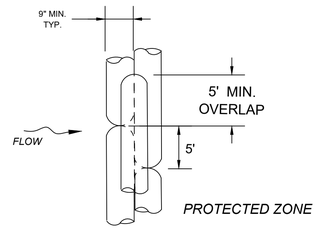
PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

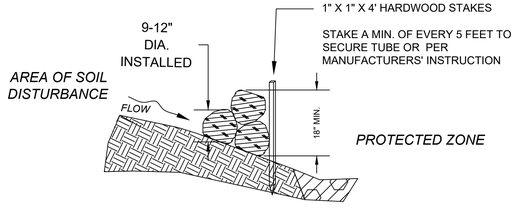
PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

COMPOST FILTER TUBE
NOT TO SCALE

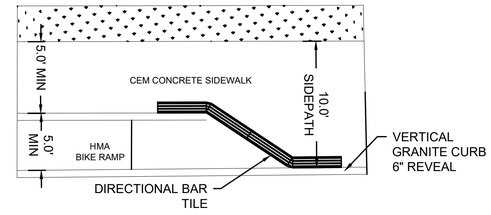


PLAN VIEW

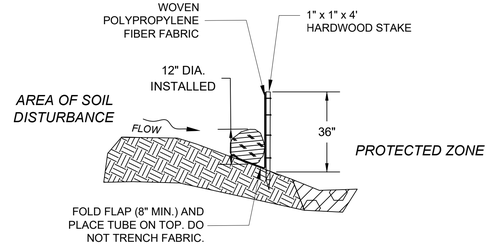


SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)
NOT TO SCALE



DIRECTIONAL BAR TILE PLAN VIEW
NOT TO SCALE



SECTION

COMPOST FILTER TUBE & SILT FENCE
NOT TO SCALE

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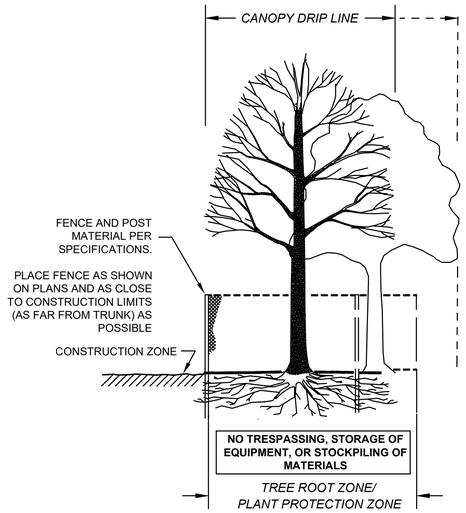
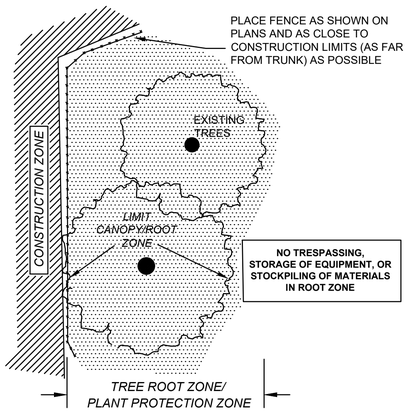


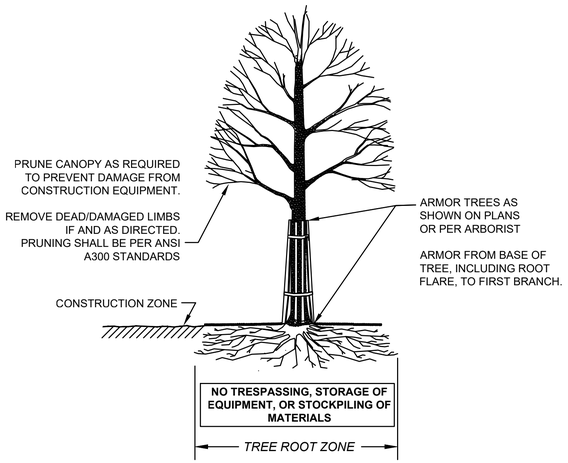
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION DETAILS

NOT TO SCALE



SECTION - TRUNK ARMORING & PRUNING

DRAINAGE STRUCTURE TABLE						
NAME/TYPE	STATION	OFFSET	RIM	INV. IN	INV. OUT	REMARKS
1	112+62.75	22.8 LT	68.09		63.09(2)	CB
2	113+13.91	12.3 LT	68.15	62.50(1) 62.25(4A) 60.00(EX)	59.90(EX)	DMH
3	113+34.40	16.2 RT	67.69	63.10(5)	63.06 (EX)	CIT
4	113+52.42	16.7 LT	67.91		65.41	GUTTER INLET
4A	113+44.69	20.4 LT	68.25	65.30(4)	63.00(2)	DMH W/ SUMP
5	113+64.55	14.8 RT	67.60	64.00(6)	63.90(3)	DMH W/ SUMP
6	113+75.71	20.65 RT	67.05		64.55(5)	GUTTER INLET
7	115+95.19	19.1 RT	65.87	60.60(8)	EX	CIT
8	115+94.87	27.9 RT	65.50		61.00(7)	CBCI
10	118+90.30	27.0 RT	64.50		59.60(EX)	CBCI
11	121+69.85	18.9 RT	64.10	58.20(12)	EX	CIT
12	121+80.82	25.0 RT	63.40		58.40(11)	CB
13	125+28.09	18.8 RT	66.37	61.20(14)	EX	CIT
14	125+13.59	20.5 RT	66.09		63.59(14B)	GUTTER INLET
14A	125+30.55	18.3 LT	66.55		62.00(EX)	CBCI
14B	125+21.10	19.6 RT	66.20	63.40(14)	61.50(13)	DMH W/ SUMP
15	133+68.29	19.1 LT	64.63		60.00(EX)	CBCI
15B	130+74.16	18.5 LT	65.69		61.00(EX)	CBCI
15A	128+50.85	18.3 LT	66.40		62.00(EX)	CBCI
16	139+49	19.2 LT	62.77		60.27(16A)	GUTTER INLET
16A	139+60.24	14.1 LT	63.11	60.00(16)	58.10(EX)	DMH W/ SUMP
17	141+58.55	19.3 LT	62.50		57.50(EX)	CBCI
18	144+83.29	19.1 LT	62.32		58.90(19)	CBCI
19	144+89.90	25.1 LT	63.13	58.80(18)	EX	CIT
20	145+11.89	42.6 LT	62.82	61.00(21)	EX	CIT
21	145+18.03	46.9 LT	64.10		59.90(20)	CBCI
22	145+68.52	26.4 RT	62.61		57.70(EX)	CB
23	152+90.85	19.2 LT	65.28		62.78(EX)	GUTTER INLET
24	167+41.30	19.1 LT	64.87		60.25(EX)	CBCI
25	167+85.20	18.9 LT	64.79		60.29(EX)	CBCI
26	169+05.59	19.1 LT	64.22		59.75(27)	CBCI ECCENTRIC
27	169+14.47	22.5 LT	64.75	59.60(EX) 59.40(26)	59.30(28)	DMH
28	169+45.70	25.9 LT	64.40	59.00(27)	58.90(EX)	DMH
29	174+68.63	19.0 LT	62.95		58.50(EX)	CBCI
30	177+60.45	18.9 LT	62.77		58.35(EX)	CBCI
31	178+92.35	18.7 LT	62.40		57.40(EX)	CB
32	179+50.09	18.8 LT	62.26		58.25(EX)	CBCI
33	180+99.79	19.0 LT	62.14		57.20(34)	CB
34	181+13.56	20.9 LT	62.05	57.00(33)	EX	CIT
35	186+19.11	19.0 LT	60.42		56.00(EX)	CB
36	186+99.43	19.1 LT	60.01		55.50(EX)	CBCI
37	189+09.08	21.5 LT	59.50	52.90(38)	EX	CIT
38	189+17.97	19.1 LT	59.02		53.40(37)	CBCI
39	193+38.75	19.1 LT	58.21		53.50(40)	CBCI
40	193+44.35	10.6 LT	58.86	53.00(39) 54.05(41)	52.70(EX)	DMH
41	193+99.36	9.4 LT	58.89	54.35(42) 54.30(43)	54.25(40)	DMH
42	194+01.91	19.1 LT	58.25		54.45(41)	CBCI
43	194+39.76	9.1 LT	58.84	54.60(44)	54.50(41)	DMH

DRAINAGE STRUCTURE TABLE						
NAME/TYPE	STATION	OFFSET	RIM	INV. IN	INV. OUT	REMARKS
44	194+43.80	19.1 LT	58.39		54.65(43)	CBCI
45	199+78.46	18.3 RT	57.67	53.00(46)	EX	CIT
46	199+96.51	24.7 RT	58.56		54.00(45)	CB
47	203+01.09	18.8 RT	59.43	55.25(48)	EX	CIT
48	203+17	28.9 RT	59.83		55.50(47)	CB
49	204+36.06	19.7 RT	60.04	56.50(50)	EX	CIT
50	204+60.20	28.1 RT	60.17		56.70(49)	CB
51	214+49.78	19.1 LT	61.98		56.30(52)	CBCI
52	214+54.72	21.9 LT	62.40	56.00(51)	EX	CIT
53	217+70.64	19.2 LT	63.02		60.52(54)	GUTTER INLET
54	217+77.75	21.2 LT	63.40	60.25(53)	EX	PROP FRAME AND COVER
55	218+75.19	19.2 LT	63.54		61.04(56)	GUTTER INLET
56	218+83.33	20.9 LT	64.08		60.75(55)	PROP FRAME AND COVER
57	258+58.87	21.5 LT	61.65	57.40(58A)	57.32(EX) 57.32(EX)	CIT
58	258+73.16	19.1 LT	61.50		59.00(58A)	GUTTER INLET
58A	258+65.94	24.6 LT	62.12	58.80(58)	57.50(57)	DMH W/ SUMP
59	262+31.69	10.7 LT	61.14	57.75(60)	54.70(EX)	DMH W/ SUMP
60	262+32.05	18.9 LT	60.48		57.98(59)	GUTTER INLET
61	284+77.68	21.5 LT	58.33	54.00(62A)	EX	CIT
62	284+89.50	19.0 LT	57.79		55.29(62A)	GUTTER INLET
62A	284+83.41	24.2 LT	58.35	55.00(62)	54.20(61)	DMH W/ SUMP
63	287+03.89	21.6 LT	58.30	53.80(64A)	EX	CIT
64	286+92.01	19.2 LT	57.85		55.35(64A)	GUTTER INLET
64A	286+97.53	24.9 LT	58.40	55.15(64)	53.90(63)	DMH W/ SUMP
65	289+57.65	21.6 LT	57.40	53.00(66A)	EX	CIT
66A	289+64.34	24.6 LT	57.52	54.95(66)	53.20(65)	DMH W/ SUMP
66	289+70.96	19.2 LT	57.58		55.08(66A)	GUTTER INLET
67	304+90.90	19.0 LT	55.32		52.50(EX)	CBCI
68	306+21.68	19.0 LT	55.38		50.88(EX)	CB
69	324+83.61	19.5 RT	59.95		54.95(70)	CB
70	324+91.54	20.7 RT	59.96	54.75(69)	EX	CIT
71	324+93.79	20.3 LT	59.95		56.00(EX)	CBCI
72	330+64.76	19.1 LT	58.74		54.15(73)	CBCI
73	330+73.41	21.5 LT	59.22	53.95(72)	EX	CIT
74	331+55.58	19.0 LT	58.52	54.00(75)	52.00(EX) 51.70(EX)	CIT
75	331+65.43	19.1 LT	58.53		54.50(74)	CBCI
76	370+01.35	29.7 LT	56.00	52.75(77)	EX	PROP FRAME AND COVER
77	370+12.54	18.2 LT	55.42		52.92(76)	GUTTER INLET
78	374+06.60	30.5 LT	53.33		49.25(EX)	CB
79	374+16.76	36.2 LT	53.19		49.85(80)	CB
80	374+28.84	41.7 LT	54.39	49.70(79)	EX	DMH
81	375+10.46	35.4 LT	52.68		48.80(EX)	CB
82	376+27.99	23.8 LT	52.43		45.90(EX)	CBCI
83	379+02.56	19.1 LT	51.84		46.90(EX)	CBCI
84	408+23.77	48.2 LT	59.95		57.45(EX)	GUTTER INLET

608816_HDi(CONST DET).DWG Plotted on 9-Sep-2024 9:37 AM

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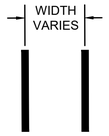

TWIN TRAVERSE
PEDESTRIAN CROSSWALK
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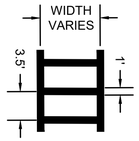

HIGH VISIBILITY
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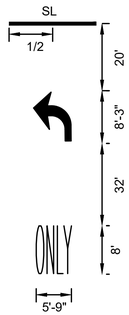

TURN LANE PAVEMENT MARKING
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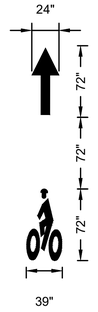

BIKE LANE SYMBOL
PAVEMENT MARKING
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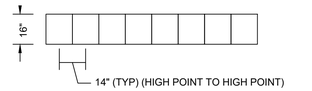

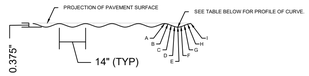

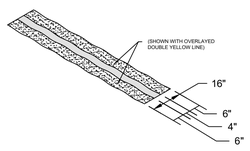

TYPE C
CONTINUOUS SINUSOIDAL
RUMBLE STRIP
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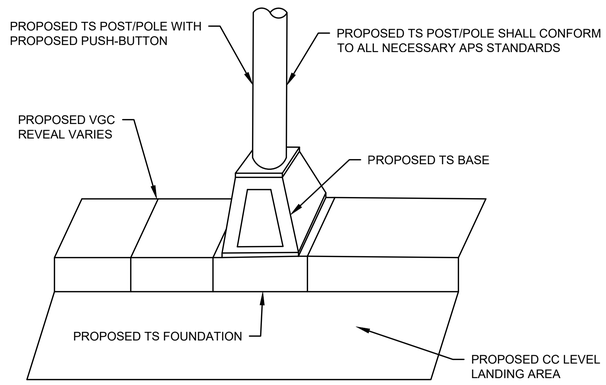
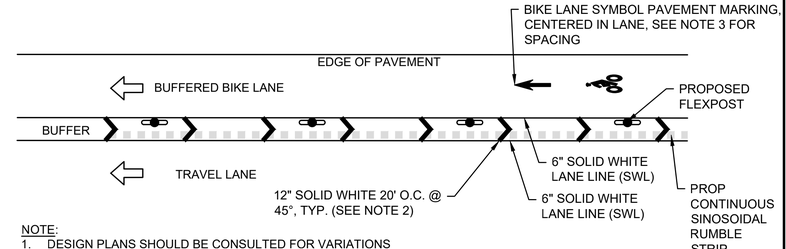


TS POST IN-LINE WITH CURB
NOT TO SCALE

LOWELL, DRACUT, & METHUEN
ROUTE 110

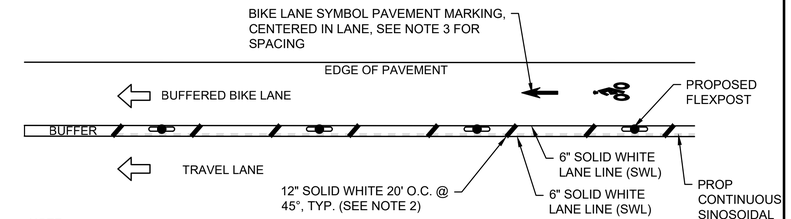
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NHP(NHS)-003S(784)X	190	190
PROJECT FILE NO.	608816		

TRAFFIC DETAILS



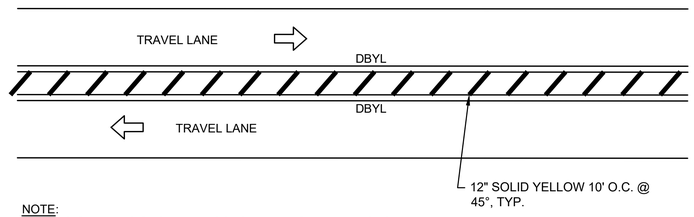
NOTE:
1. DESIGN PLANS SHOULD BE CONSULTED FOR VARIATIONS
2. 12" SWL SHALL BE CHEVRON WHERE BUFFER IS 3' OR WIDER IN WIDTH, AND ANGLED WHERE BUFFER IS LESS THAN 3' IN WIDTH. CONSULT DESIGN PLANS.
3. BIKE LANE SYMBOL SPACING IS TYPICALLY AT 1500' BUT DESIGN PLANS SHOULD BE CONSULTED FOR PLACEMENT.

TYPICAL FLEXPOST BUFFERED BIKE LANE 3' OR MORE IN WIDTH
(UNLESS OTHERWISE NOTED ON PLANS)
NOT TO SCALE



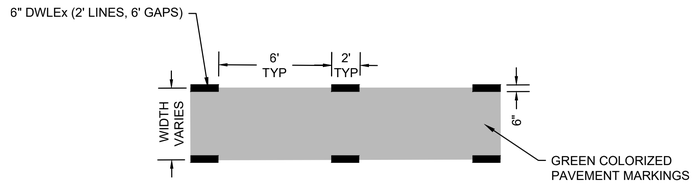
NOTE:
1. DESIGN PLANS SHOULD BE CONSULTED FOR VARIATIONS
2. 12" SWL SHALL BE CHEVRON WHERE BUFFER IS GREATER THAN 3' IN WIDTH, AND ANGLED WHERE BUFFER IS LESS THAN 3' IN WIDTH. CONSULT DESIGN PLANS.
3. BIKE LANE SYMBOL SPACING IS TYPICALLY AT 1500' BUT DESIGN PLANS SHOULD BE CONSULTED FOR PLACEMENT.

TYPICAL FLEXPOST BUFFERED BIKE LANE WITH 2' BUFFER
(UNLESS OTHERWISE NOTED ON PLANS)
NOT TO SCALE



NOTE:
1. DESIGN PLANS SHOULD BE CONSULTED FOR VARIATIONS
2. DESIGN PLANS CALL OUT WHERE 12" SYL SHALL BE SPACED 20' O.C.

TYPICAL 12" SYL
(UNLESS OTHERWISE NOTED ON PLANS)
NOT TO SCALE



BIKE LANE CROSSING
(UNLESS OTHERWISE NOTED ON PLANS)
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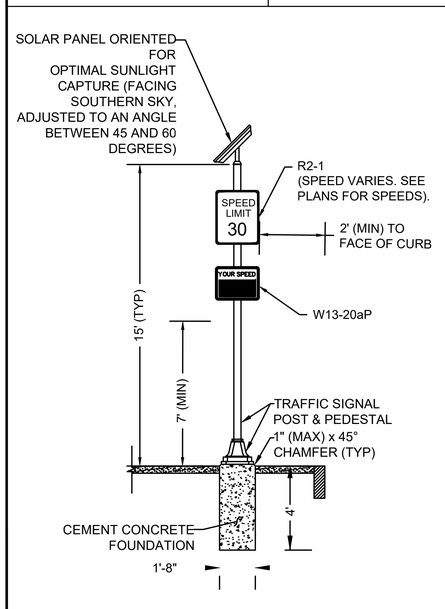

SOLAR POWERED DRIVER FEEDBACK SIGN DETAIL
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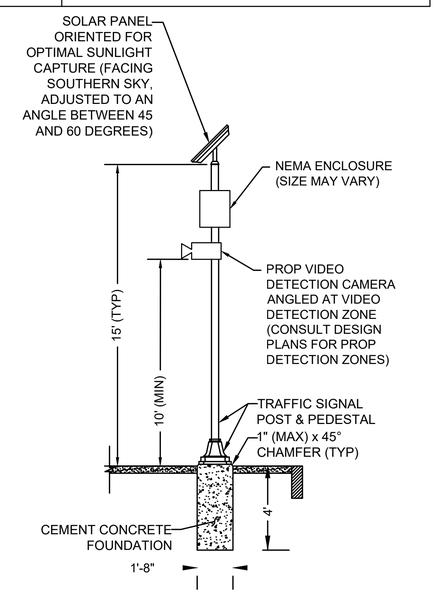

BEACON ENHANCED FLASHING WARNING SIGN VIDEO DETECTION ASSEMBLY
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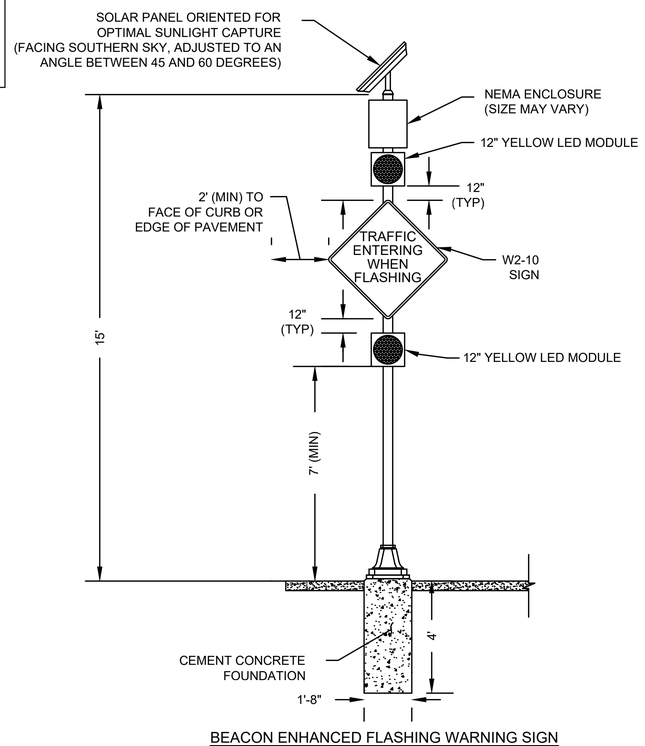

BEACON ENHANCED FLASHING WARNING SIGN
NOT TO SCALE

BEACON ENHANCED FLASHING WARNING SIGN - SOLAR POWERED

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