NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	136
PROJECT FILE NO.	606503		

TITLE SHEET & INDEX

606503%25%HD\TITLE SHEET.DWG 27-Jun-2013

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

CLIPPER CITY RAIL TRAIL - PHASE 2

IN THE CITY / TOWN OF

NEWBURYPORT / NEWBURY

ESSEX COUNTY

FEDERAL AID PROJECT NO. xx-xxxx(xxx)x

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED FEBRUARY 25, 2010, THE 2010 CONSTRUCTION STANDARD DETAILS, THE 1996 CONSTRUCTION AND TRAFFIC STANDARD DETAILS (AS RELATES TO TRAFFIC STANDARD DETAILS ONLY), THE 2003 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

INDEX

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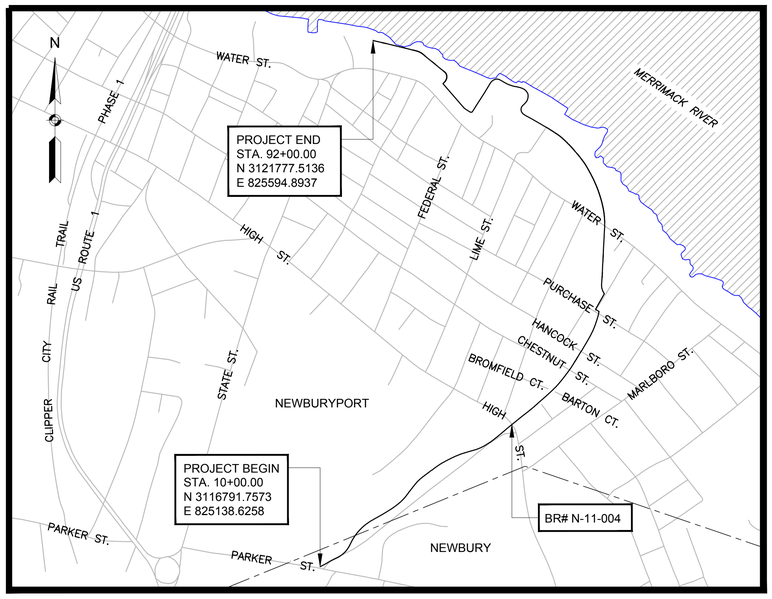

1,500 0 1,500 3,000

SCALE 1" = 1,500'

LENGTH OF PROJECT = 8,200.00 FEET = 1.553 MILES

DESIGN DESIGNATION (BIKE PATH)

DESIGN SPEED	18 MPH
ADT (YYYY)	N/A
ADT (YYYY)	N/A
K	N/A
D	N/A
T (PEAK HOUR)	N/A
T (AVERAGE DAY)	N/A
DHV	N/A
DDHV	N/A
FUNCTIONAL CLASSIFICATION	BIKE PATH

JUNE 28, 2013
25% SUBMISSION

DATE	DESCRIPTION	REV #
06-28-2013	25% DESIGN SUBMISSION	1

Stantec Consulting Services Inc.
141 Portland Street
Boston, MA U.S.A
02114-1702
Tel. 617.523.8103
Fax. 617.523.4333
www.stantec.com

MassDOT Massachusetts Department of Transportation Highway Division

RECOMMENDED FOR APPROVAL

CHIEF ENGINEER DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

APPROVED

HIGHWAY ADMINISTRATOR DATE

LEGEND

GENERAL SYMBOLS

EXISTING	PROPOSED	
JB OR BRJB	JB OR BRJB	JERSEY BARRIER ON BRIDGE OR JERSEY BARRIER
CB	CB	CATCH BASIN
CI	CI	CURB INLET
	BUOY	BUOY
	FPL	FLAG POLE
		GAS PUMP
DI	DI	DROP INLET
MB	MB	MAIL BOX
GR	GRAN POST	GRANITE POST
PLN	PLANTER	PLANTER
PST	POST	POST
TBH	TBH	TELEPHONE BOOTH
VLT	VLT	VAULT
VLV	VLV	VALVE
WELL	WELL	WELL
EHH	EHH	ELECTRIC MANHOLE (HANDHOLE)
FCGA		GATE POST
FL	FL	FLOW LINE
GG		GAS GATE
SP	SP	SOIL PROBE
MW	MW	MONITORING WELL
TB	TB	TEST BORE
HC	CONC. HDWL	CONCRETE HEADWALL
HH		HANDHOLE
HS	STONE DHWL	STONE HEADWALL
HYD	HYD	HYDRANT
LPL	LPL	LIGHT POLE
CO. BD.	CO. BD.	COUNTY BOUND
GPS		GPS POINT
CMH		CABLE MANHOLE
DMH	Ⓓ	DRAINAGE MANHOLE
EMH		ELECTRIC MANHOLE
GMH		GAS MANHOLE
MMH		MISC MANHOLE
OMH		OTHER MANHOLE
SMH	Ⓢ	SEWER MANHOLE
TMH		TELEPHONE MANHOLE
WMH		WATER MANHOLE
MHB	MHB	MHD BOUND
MON	MON	MONUMENT
SB	SB	STONE BOUND
TOWN OR CITY BD.	TOWN OR CITY BD.	TOWN OR CITY BOUND
	TSN	TRAVERSE OR TRIANGULATION STATION
TPL OR GUY	TPL OR GUY	TROLLEY POLE OR GUY POLE
TRNP		TRANS. POLE
UFB	UFB	UP W ITH FIREBOX
LPDL	LPDL	POLE WITH DOUBLE LIGHT
ULT	ULT	UP W ITH 1 LIGHT
UPL	UPL	UTILITY POLE
	BUSH	BUSH
	TREE	TREE
STUMP		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
FA	FA	FIRE ALARM BOX
PM	PM	PARKING METER
		ELECTRICAL GROUND
	GV	GATE VALVE
		RIP RAP
		OVERHEAD CABLE
		DIRECT BURIAL CABLE
		CURBING
185	185	CONTOURS
		DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		ELECTRIC DUCT " "
		GAS MAIN " "
		SEWER MAIN " "
		TELEPHONE DUCT " "
		WATER MAIN " "
		BALANCE STONE WALL
		CULVERT
		GUARD RAIL
		GUTTER LINE AT DRIVEWAYS
CLF		CHAIN LINK FENCE
		STOCKADE FENCE

GENERAL SYMBOLS (CONT.)

EXISTING	PROPOSED	
		HAY BALES/SILT FENCE
		RETAINING WALL
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLAN & OVERLAY
		BANK OF RIVER OR STREAM
WF-#		BORDER OF WETLAND
		100 FT WETLAND OR 200 FT RIVERFRONT BUFFER
DATE OF LAYOUT		STATE HIGHWAY LAYOUT
DATE OF LAYOUT		TOWN OR CITY LAYOUT
DATE OF LAYOUT		COUNTY LAYOUT
R.R. S/L		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
ℙ OR APPROX. ℙ		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SIGNAL SYMBOLS

EXISTING	PROPOSED	
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6'X 6' TYPICAL UNLESS OTHERWISE SPECIFIED)
		VIDEO SURVEILLANCE CAMERA
		MICROWAVE DETECTOR
		MAGNETOMETER (2 SHOWN)
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	OPTICOM CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD (TYPE AS NOTED OR AS SPECIFIED)
		PEDESTRIAN SIGNAL HEAD, OPTICALLY PROGRAMMED
		PEDESTRIAN SIGNAL POST AND BASE
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
20'	20'	STEEL OR ALUMINUM MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (TWO POSTS)
20'		SIGNAL AND LIGHTING MAST ARM (OPTICOM)
		EMERGENCY PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL & METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"X12" (AND AS NOTED)
		ELECTRIC HANDHOLE 12" X 24"
		TRAFFIC SIGNAL INTERCONNECT CONDUIT
		TRAFFIC SIGNAL CONDUIT (TYPE AS NOTED)

PAVEMENT MARKINGS AND SIGNING SYSBOLS

EXISTING	PROPOSED	
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE - 12"
	CW	CROSSWALK
	SWLL	SOLID WHITE LANE LINE
	BWLL	BROKEN WHITE LANE LINE (10' LINE, 30' SPACE TYP.)
	SWEL	SOLID WHITE EDGE LINE
	YGL	YELLOW GORE LINE - 12"
	DYCL	DOUBLE YELLOW CENTER LINE
	SWCHL	SOLID WHITE CHANNELIZATION LINE - 8"
	WGL	WHITE GORE LINE - 12"
	SYEL	SOLID YELLOW EDGE LINE
	BYCL	BROKEN YELLOW CENTER LINE (10' LINE, 30' SPACE TYP.) - 4"
	SYCL	SOLID YELLOW CENTER LINE
	DWLL	DOTTED WHITE LANE LINE - 4" (2' LINE, 4' SPACE)
		DIRECTION OF TRAFFIC FLOW

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCH MARK
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
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (OR EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (OR EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACHING BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAIL BOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

GENERAL (CONT.)

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
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 PERCENTAGE
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEELCHAIR RAMP
WG	WATER GATE
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 - PORTLAND ORANGE
FDW	FLASHING DON'T WALK - PORTLAND ORANGE
FYV	FLASHING AMBER VERTICAL ARROW
FR	FLASHING CIRCULAR RED
FW	FLASHING WALK - LUNAR WHITE
FY	FLASHING CIRCULAR AMBER
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FRV	FLASHING RED VERTICAL 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
OP	OPTICOM
PED	PEDESTRIAN
PTZ	PAN, TILE, ZOOM
R	STEADY CIRCULAR RED
RV	STEADY RED VERTICAL ARROW
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK - LUNAR WHITE
Y	STEADY CIRCULAR AMBER
YL	STEADY AMBER LEFT ARROW
YR	STEADY AMBER RIGHT ARROW
YV	STEADY AMBER VERTICAL ARROW

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	136
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LEGEND & ABBREVIATIONS

606503(25%)#DILEGEND & ABBREV).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	136
PROJECT FILE NO.	606503		

KEY PLAN & BORING LOCATIONS

27-Jun-2013

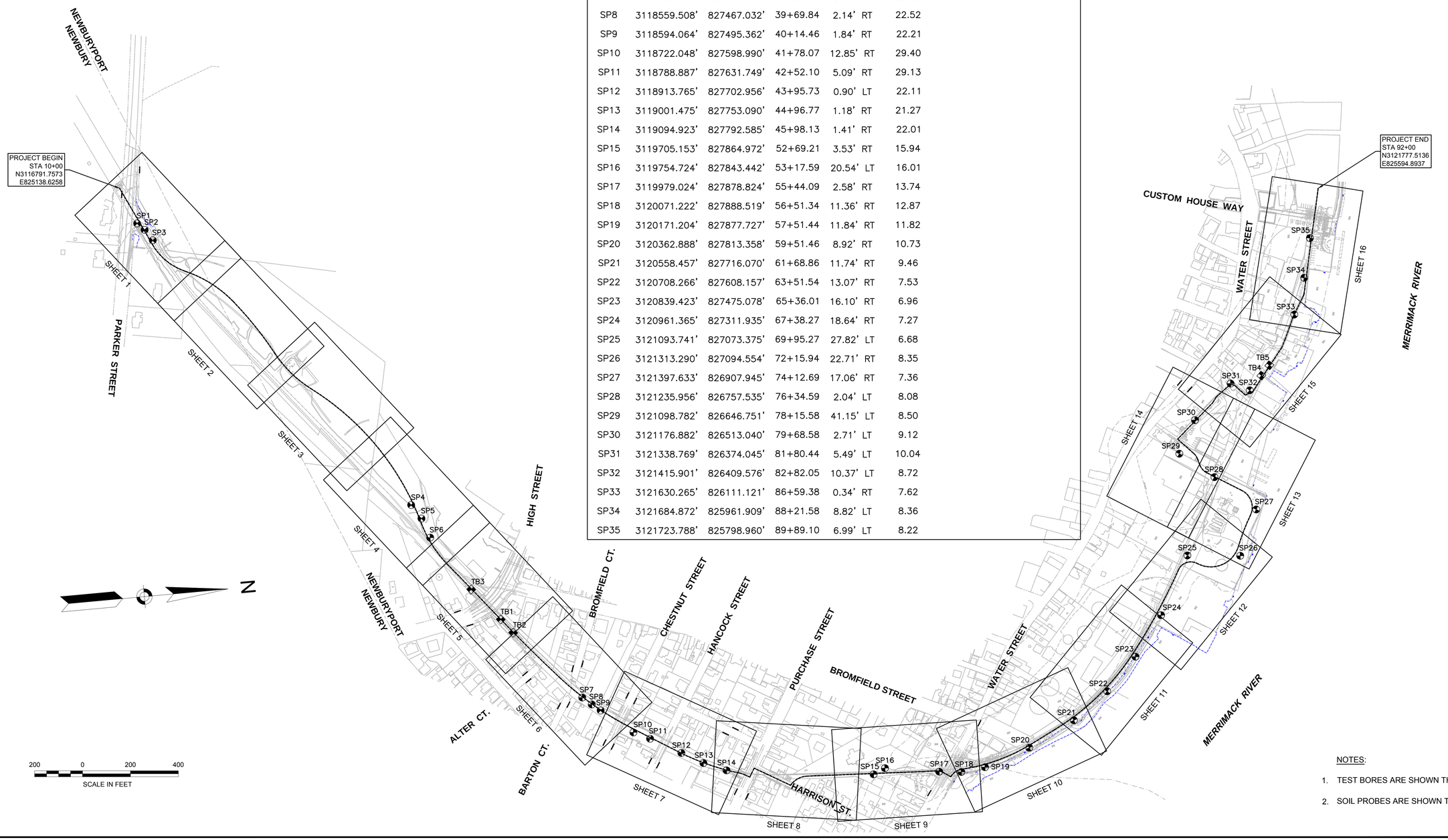
606503(25%)HD\KEY PLAN).DWG

BORING LOCATIONS (FEET)

BORING	NORTHING	EASTING	STATION	OFFSET	SURFACE ELEVATION	H.B.E.	ESTIMATED REQUIRED DEPTH	COMMENT
TB1	3118213.283'	827078.602'	34+49.13	0.06' RT	26.67			
TB2	3118259.917'	827138.358'	34+24.91	1.44' RT	25.59			
TB3	3118101.734'	826942.399'	32+73.07	2.12' RT	29.52			
TB4	3121470.215'	826352.530'	83+67.27	6.57 LT	8.34			
TB5	3121507.030'	826312.690'	84+21.37	2.56 LT	8.46			

BORING LOCATIONS (FEET)

BORING	NORTHING	EASTING	STATION	OFFSET	SURFACE ELEVATION	H.B.E.	ESTIMATED REQUIRED DEPTH	COMMENT
SP1	3116851.436'	825292.079'	11+64.28	11.00' RT	29.40			
SP2	3116880.131'	825321.686'	12+03.26	2.44' LT	30.15			
SP3	3116910.175'	825368.214'	12+58.14	9.93' LT	30.76			
SP4	3117884.253'	826568.137'	28+36.74	9.85' RT	28.67			
SP5	3117921.878'	826628.275'	29+05.65	7.34' LT	29.44			
SP6	3117950.663'	826710.919'	29+94.24	8.20' LT	28.59			
SP7	3118522.567'	827434.553'	39+20.74	2.55' RT	23.05			
SP8	3118559.508'	827467.032'	39+69.84	2.14' RT	22.52			
SP9	3118594.064'	827495.362'	40+14.46	1.84' RT	22.21			
SP10	3118722.048'	827598.990'	41+78.07	12.85' RT	29.40			
SP11	3118788.887'	827631.749'	42+52.10	5.09' RT	29.13			
SP12	3118913.765'	827702.956'	43+95.73	0.90' LT	22.11			
SP13	3119001.475'	827753.090'	44+96.77	1.18' RT	21.27			
SP14	3119094.923'	827792.585'	45+98.13	1.41' RT	22.01			
SP15	3119705.153'	827864.972'	52+69.21	3.53' RT	15.94			
SP16	3119754.724'	827843.442'	53+17.59	20.54' LT	16.01			
SP17	3119979.024'	827878.824'	55+44.09	2.58' RT	13.74			
SP18	3120071.222'	827888.519'	56+51.34	11.36' RT	12.87			
SP19	3120171.204'	827877.727'	57+51.44	11.84' RT	11.82			
SP20	3120362.888'	827813.358'	59+51.46	8.92' RT	10.73			
SP21	3120558.457'	827716.070'	61+68.86	11.74' RT	9.46			
SP22	3120708.266'	827608.157'	63+51.54	13.07' RT	7.53			
SP23	3120839.423'	827475.078'	65+36.01	16.10' RT	6.96			
SP24	3120961.365'	827311.935'	67+38.27	18.64' RT	7.27			
SP25	3121093.741'	827073.375'	69+95.27	27.82' LT	6.68			
SP26	3121313.290'	827094.554'	72+15.94	22.71' RT	8.35			
SP27	3121397.633'	826907.945'	74+12.69	17.06' RT	7.36			
SP28	3121235.956'	826757.535'	76+34.59	2.04' LT	8.08			
SP29	3121098.782'	826646.751'	78+15.58	41.15' LT	8.50			
SP30	3121176.882'	826513.040'	79+68.58	2.71' LT	9.12			
SP31	3121338.769'	826374.045'	81+80.44	5.49' LT	10.04			
SP32	3121415.901'	826409.576'	82+82.05	10.37' LT	8.72			
SP33	3121630.265'	826111.121'	86+59.38	0.34' RT	7.62			
SP34	3121684.872'	825961.909'	88+21.58	8.82' LT	8.36			
SP35	3121723.788'	825798.960'	89+89.10	6.99' LT	8.22			



NOTES:

1. TEST BORES ARE SHOWN THUS: TB
2. SOIL PROBES ARE SHOWN THUS: SP

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 1 OF 6

606503(25%)HD\BORING LOGS\.DWG 27-Jun-2013

BOREHOLE LOG TB-1

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/3/2012 to 10/3/2012 WATER LEVEL 12.7 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-1

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	25.0									
0	24.6	Dark brown, silty fine SAND, moist (SM)								
		Very dense, yellowish brown, silty fine to coarse SAND, with fine gravel, moist (SM)			SS	1	10	4 24 22 52	61	
	23.0									
5		Very dense, olive brown, fine to coarse SAND with gravel, little silt, moist (SM)			SS	2	7	60 23/3"	--	
	21.0									
	20.0	Very dense, yellowish brown, fine to medium SAND, little silt, moist (SM)			SS	3	14	14 25 33 23	58	
	18.0	-MARINE SAND-								
10										
	15.0	Medium dense, yellowish brown, fine to medium SAND, little silt, moist (SM)			SS	4	13	6 8 9 9	17	
	13.0			▽						
		Medium dense, yellowish brown, fine to medium SAND, little silt, wet (SM) with a layer of fine to coarse SAND, trace gravel from 14 to 14.5.			SS	5	12	3 5 8 9	13	
15	9.0	Boring terminated at 16.0 feet below the ground surface. No refusal.								
20										

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA; Supervisor: David Chapman (STANTEC)

BOREHOLE LOG TB-2

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/3/2012 to 10/3/2012 WATER LEVEL 12.8 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-2

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	25.0									
0	24.6	Dark brown, silty fine SAND, moist (SM)								
		Loose, yellowish-brown, fine to medium SAND, little fine gravel, little silt, moist (SM)			SS	1	15	3 4 6 6	10	
	23.0									
5		Dense, yellowish brown, fine to coarse SAND, little fine gravel, little silt, moist (SM)			SS	2	12	15 16 17 15	33	
	21.0									
	20.0	Very dense, yellowish brown, fine to medium SAND, some fine gravel, little silt, moist (SM)			SS	3	14	15 24 27 32	51	
	18.0	-MARINE SAND-								
10										
	15.0	Dense, yellowish brown, fine to medium SAND, some fine gravel, little silt, moist (SM)			SS	4	5	10 15 25 20	40	
	13.0			▽						
	10.5	Medium dense, yellowish brown, fine to medium SAND, little silt, wet (SM)			SS	5	24	7 11 12 14	23	
15	8.8									
	8.5	Olive, silty CLAY, wet (CH)								
		Boring terminated at 16.5 feet below the ground surface. No refusal.								
20										

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA; Supervisor: David Chapman (STANTEC)

BOREHOLE LOG TB-3

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR DATUM
PROJECT No. 210800843 EXPLORATION No. TB-3

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	30.0									
0		Medium dense, yellowish brown, fine to medium SAND, little silt, moist (SM)			SS	1	16	3 9 9 9	18	
	28.0									
		Medium dense, yellowish brown to dark gray, fine to medium SAND, little silt , moist (SM)			SS	2	13	7 6 9 24	15	
5	26.0									
	25.0	Dense, light yellowish brown, fine SAND, little silt moist (SM)			SS	3	17	14 14 29 35	43	
	23.0	-MARINE SAND-								
10										
	20.0	Dense, light yellowish brown, fine SAND, little silt moist (SM)			SS	4	18	10 19 29 29	48	
	18.0									
15	16.0									
	15.3	Light yellowish brown, fine SAND, little silt, moist (SM)			SS	5	4	33 100/7"	--	
		Sampler refusal at 14.7 feet below the ground surface.								
20										

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA; Supervisor: David Chapman (STANTEC)

BOREHOLE LOG TB-4

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6.5 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-4

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	8.0									
0		Very dense, grayish brown to brown, well-graded SAND with silt and gravel, moist (SW-SM)			SS	1	11	12 17 70 16	87	
	6.0									
		Dense, grayish brown to brown, well-graded SAND with silt and gravel, moist (SW-SM)			SS	2	12	18 22 14 9	41	
5	4.0	-FILL-								
	3.0									
	2.2	Very dark gray ORGANIC SILT, some wood fragments, wet (OL)			SS	3	3	16 50/3"	---	
		-ORGANIC SILT-		▽						
10	0.0									
	-2.0	Very loose, dark olive, silty fine SAND, wood and shells, wet (SM)			SS	4	8	1 1/12" 1	1	
	-4.0	-MARINE SAND-								
15		Medium dense, dark olive, silty fine SAND, some fine gravel, wet (SM)			SS	5	19	5 9 16 15	25	
	-8.0									
	-11.0	Medium dense, dark olive, silty fine SAND, wet (SM)						3 5		
20										

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA (0-26 ft), 4 inch casing (26 - 46 ft); Supervisor: David Chapman (STANTEC)

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane
Continued Next Page

BOREHOLE LOG TB-4

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6.5 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-4

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
20	-13.0	-MARINE SAND-			SS	6	19	8 8	13	
	-16.0	Medium dense, olive fine SAND, trace silt, wet (SP)			SS	7	24	WOH 3 8 15	11	
25	-18.0	-MARINE SAND-								
	-21.0	Very dense, yellowish brown, fine SAND, trace silt, wet (SP)			SS	8	12	69 37 38 36	95	
30	-23.0									
	-26.0	Dense, yellowish brown, fine to medium SAND, trace silt, wet (SP)			SS	9	10	26 18 26 23	44	
35	-28.0									
	-31.0	Very dense, yellowish brown, fine SAND, trace silt, wet (SP)						17 21		
40										

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA (0-26 ft), 4 inch casing (26 - 46 ft); Supervisor: David Chapman (STANTEC)

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane
Continued Next Page

BOREHOLE LOG TB-4

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6.5 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-4

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
40	-33.0	-MARINE SAND-			SS	10	14	25 39	46	
	-36.0	Very dense, yellowish brown, fine SAND, trace silt, wet (SP)			SS	11	11	24 39 38 48	77	
45	-38.0	Boring terminated at 46 feet below ground surface. No refusal.								
50										
55										
60										

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA (0-26 ft), 4 inch casing (26 - 46 ft); Supervisor: David Chapman (STANTEC)

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG TB-5

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6.5 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-5

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	8.0									
0		Very dense, light olive brown to light yellowish brown, fine to coarse SAND, little fine gravel, trace silt, moist (SW)			SS	1	13	20 23 43 39	70	
	6.0									
		Dense, light olive brown to light yellowish brown, fine to coarse SAND, little fine gravel, trace silt, moist (SW)			SS	2	4	25 30 17 20	47	
5	4.0	-FILL-								
	3.0									
	1.5	Very loose, mottled reddish brown and olive brown, silty fine SAND, moist (SM)			SS	3	21	1/12" 2 5	3	
	1.0	Grayish brown, silty fine SAND, wet (SM)		▽						
10										
	-2.0	Very loose, dark olive, silty fine SAND, wet (SM) Note: organic odor			SS	4	2	1 1/12" 2	1	
	-4.0	-MARINE SAND-								
15										
	-6.0	Dense, dark olive, silty fine SAND, wet (SM) Note: organic odor			SS	5	2	14 11 19 23	30	
	-8.0									
	-11.0	Medium dense, dark brown to grayish brown, silty fine SAND, wet (SM) Note: organic odor						5 7		
20	-12.0									

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA; Supervisor: David Chapman (STANTEC)

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane
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BOREHOLE LOG TB-5

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6.5 DATUM
PROJECT No. 210800843 EXPLORATION No. TB-5

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
20	-13.0	Medium dense, brown, ORGANIC SILT, with wood fragments, wet (OL)			SS	6	22	5 5 10	12	
	-15.0	-ORGANIC SILT-								
	-16.0	Loose, gray, fine to coarse SAND, some fine gravel, trace silt, wet (SW)			SS	7	8	3 2 8 21	10	
25	-18.0	-MARINE SAND-								
		Boring terminated at 28.0 feet below ground surface. No refusal.								
30										
35										
40										

Driller: NB Boring, Dietrich D-50 track mounted rig with autohammer, 3.25 inch HSA; Supervisor: David Chapman (STANTEC)

Undrained Shear Strength - tsf: 1 2 3 4 (W_P W W_L)
Water Content & Atterberg Limits
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 2 OF 6

606503(25%)HD\BORING LOGS\DWG 27-Jun-2013

BOREHOLE LOG SP-1

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-1 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	29.5	
0		0 to 66 inches Soil Horizon/Layer: A - C Yellowish brown, silt loam, 0% gravel, friable - firm
	24.0	
5		66 to 120 inches Soil Horizon/Layer: C Olive, silty clay, 0% gravel, firm
	19.5	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-2

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-2 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	30.0	
0		0 to 48 inches Soil Horizon/Layer: A - C Olive, silt loam, 0% gravel, friable - firm
	26.0	
5		48 to 120 inches Soil Horizon/Layer: C Olive, silty clay, 0% gravel, firm
	20.0	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-3

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-3 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	30.5	
0		0 to 24 inches Soil Horizon/Layer: A - B Brown, silt loam, 0% gravel, friable
	28.5	
		24 to 48 inches Soil Horizon/Layer: B Yellowish brown, silt loam, 0% gravel, firm
	26.5	
5		48 to 120 inches Soil Horizon/Layer: C Olive, clay loam, 0% gravel, firm
	20.5	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-4

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-4 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	29.0	
0		0 to 60 inches Soil Horizon/Layer: A - C Light yellowish brown, fine sand, 0% gravel, loose
	24.0	
5		60 to 120 inches Soil Horizon/Layer: C Yellowish brown, fine-medium sand, 1% gravel, loose
	19.0	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-5

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-5 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	29.5	
0	29.0	0 to 6 inches Soil Horizon/Layer: A Brown, loamy sand, 0% gravel, friable 6 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, fine sand, 1% gravel, loose
5		
10	19.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-6

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-6 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	28.5	
0	28.0	0 to 6 inches Soil Horizon/Layer: A Brown, loamy sand, 0% gravel, friable 6 to 114 inches Soil Horizon/Layer: B - C Light yellowish brown, fine sand, 1% gravel, loose
5		
10	19.0	Probe terminated at 9.5 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-7

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/3/2012 to 10/3/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-7 DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	23.0	
0	22.5	0 to 6 inches Soil Horizon/Layer: A Dark brown, sandy loam, 7% gravel, friable 6 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, fine - coarse sand, 5-10% gravel, loose
5		
10	13.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-8-GMW

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/3/2012 to 10/3/2012 WATER LEVEL NR
PROJECT No. 210800843 EXPLORATION No. SP-8-GMW DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	22.5	
0	22.0	0 to 6 inches Soil Horizon/Layer: A Dark brown, sandy loam, 0% gravel, friable 6 to 120 inches Soil Horizon/Layer: B - C Yellowish brown, fine - medium sand, 1% gravel, loose
5		
10	12.5	Probe terminated at 10.0 feet below the ground surface. No refusal. 1 inch diameter PVC well installed with screen from 5 to 10 feet below ground surface.
15		Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stanley)

STRATA PLOT; WATER LEVEL; SAMPLES: TYPE, NUMBER, RECOVERY, SPT blows / 6"; SPT N-Value; PID Reading (PPM)
Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P ✖ W ✖ W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 3 OF 6

606503(25%)HD\BORING LOGS\DWG 27-Jun-2013

BOREHOLE LOG — SP-9

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/3/2012 to 10/3/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-9 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	22.0	
	21.5	0 to 6 inches Soil Horizon/Layer: A Dark brown, sandy loam, 0% gravel, friable
		6 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, sand, 0% gravel, loose
10	12.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-10

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/3/2012 to 10/3/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-10 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	29.5	
	29.0	0 to 6 inches Soil Horizon/Layer: A Dark brown, sandy loam, 1% gravel, friable
		6 to 120 inches Soil Horizon/Layer: B - C Yellowish brown, fine - medium sand, 0% gravel, loose
10	19.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-11-GMW

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/3/2012 to 10/3/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-11-GMW DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	29.5	
	29.0	0 to 6 inches Soil Horizon/Layer: A Dark brown, loamy sand, 1% gravel, friable
		6 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, sand, 5% gravel, loose
10	19.5	Probe terminated at 10.0 feet below the ground surface. No refusal. 1 inch diameter PVC well installed with screen from 5 to 10 feet below ground surface.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-12

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/4/2012 to 10/4/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-12 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	22.0	
	21.0	0 to 12 inches Soil Horizon/Layer: A Brown, loamy sand, 1% gravel, friable
		12 to 84 inches Soil Horizon/Layer: B - C Light yellowish brown, fine - medium sand, 1% gravel, loose
	15.0	84 to 120 inches Soil Horizon/Layer: C Light yellowish brown, fine sand, 0% gravel, loose
10	12.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-13-GMW

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/4/2012 to 10/4/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-13-GMW DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	21.5	
	20.5	0 to 12inches Soil Horizon/Layer: A Dark brown, loamy sand, 1% gravel, friable
		12 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, fine - medium sand, 1% gravel, loose
10	11.5	Probe terminated at 10.0 feet below the ground surface. No refusal. 1 inch diameter PVC well installed with screen from 5 to 10 feet below ground surface.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-14

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/4/2012 to 10/4/2012 WATER LEVEL: NR
PROJECT No. 210800843 EXPLORATION No. SP-14 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	22.0	
	21.5	0 to 6 inches Soil Horizon/Layer: A Dark brown, loamy sand, 10% gravel, friable
	20.5	6 to 18 inches Soil Horizon/Layer: B Brown, loamy fine - coarse sand, 10% gravel, friable
		18 to 60 inches Soil Horizon/Layer: B - C Light yellowish brown, fine - coarse sand, 15% gravel
10	12.0	60 to 120 inches Soil Horizon/Layer: C Light yellowish brown, fine - medium sand, 2% gravel
15		Probe terminated at 10.0 feet below the ground surface. No refusal.

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-15

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/4/2012 to 10/4/2012 WATER LEVEL: 8.5
PROJECT No. 210800843 EXPLORATION No. SP-15 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	16.0	
	15.7	0 to 3 inches Soil Horizon/Layer: A Dark brown, sandy loam, 0% gravel, friable
	15.0	3 to 12 inches Soil Horizon/Layer: B Brown, loamy sand, 0% gravel, friable
		12 to 120 inches Soil Horizon/Layer: B - C Light yellowish brown, fine - medium sand, 1% gravel, loose
10	6.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG — SP-16

CLIENT: City of Newburyport, MA
LOCATION: Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE: 10/4/2012 to 10/4/2012 WATER LEVEL: 8.0
PROJECT No. 210800843 EXPLORATION No. SP-16 DATUM:

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
0	16.0	
		0 to 36 inches Soil Horizon/Layer: A - B Brown, loamy sand, 1% gravel, friable
	13.0	36 to 120 inches Soil Horizon/Layer: C Yellowish brown, fine - medium sand, 1% gravel, loose
10	6.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Shanley)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 4 OF 6

606503(25%)HD\BORING LOGS\DWG 27-Jun-2013

BOREHOLE LOG SP-17

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL 7.5
PROJECT No. 2108000843
EXPLORATION No. SP-17
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	13.5	
0		0 to 12 inches Soil Horizon/Layer: Fill Grey - brown, loamy sand, 5% gravel, firm Crushed gravel on surface. Driveway subbase under
	12.5	
		12 to 24 inches Soil Horizon/Layer: B Yellowish brown, loamy sand, 2% gravel, friable
	11.5	
5		24 to 120 inches Soil Horizon/Layer: B - C Yellowish brown, loamy sand to sand, 1% gravel, loose
	3.5	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-18

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL 9.0
PROJECT No. 2108000843
EXPLORATION No. SP-18
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	12.5	
0		0 to 96 inches Soil Horizon/Layer: Fill Yellowish brown, sand, 1% gravel, friable
	4.5	
		96 to 108 inches Soil Horizon/Layer: A - B Yellowish brown, sandy loam, 1% gravel, friable
	3.5	
5		108 to 120 inches Soil Horizon/Layer: C Olive brown, sand, 1% gravel, loose
	2.5	
10		Probe terminated at 10.0 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-19

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL NR
PROJECT No. 2108000843
EXPLORATION No. SP-19
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	12.0	
0	11.2	0 to 1 inches Soil Horizon/Layer: Fill Dark brown, loamy sand, 2% gravel, friable
	11.0	
		1 to 12 inches Soil Horizon/Layer: Fill Light yellowish brown, loamy sand, 25% gravel, friable
		12 to 83 inches Soil Horizon/Layer: Fill Olive brown, loamy sand, 15% gravel, friable
5	5.1	
		Probe terminated at 6.9 feet below the ground surface on auger refusal. Initial attempt refused at 6.1 feet below ground surface.
10		
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-20

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/2/2012 to 10/2/2012 WATER LEVEL 6.0
PROJECT No. 2108000843
EXPLORATION No. SP-20
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	10.0	
0		0 to 12 inches Soil Horizon/Layer: A Dark brown, sandy loam, 0% gravel, friable
	9.0	
		12 to 30 inches Soil Horizon/Layer: B Yellowish brown, sandy loam, 0% gravel, friable
	7.5	
5		30 to 72 inches Soil Horizon/Layer: C Yellowish brown, sand, 0% gravel, loose
	4.0	
		72 to 114 inches Soil Horizon/Layer: C Olive brown, sand, 10% gravel, loose
10	6.5	
		Probe terminated at 6.5 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-21

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/1/2012 to 10/1/2012 WATER LEVEL 8.3
PROJECT No. 2108000843
EXPLORATION No. SP-21
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	9.5	
0		0 to 12 inches Soil Horizon/Layer: A Yellowish brown, sandy loam, 5% gravel, friable
	8.5	
		12 to 30 inches Soil Horizon/Layer: B Yellowish brown, sandy loam, 15% gravel, friable
	7.0	
5		30 to 114 inches Soil Horizon/Layer: C Olive brown, sand, 10% gravel, loose
	0.0	
10		Probe terminated at 9.5 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-22

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/1/2012 to 10/1/2012 WATER LEVEL 6.0
PROJECT No. 2108000843
EXPLORATION No. SP-22
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	7.5	
0		0 to 30 inches Soil Horizon/Layer: A - B Yellowish brown, sandy loam, 2% gravel, friable
	5.0	
		30 to 114 inches Soil Horizon/Layer: C Olive brown, sand, 2% gravel, loose
5		
	-2.0	
10		Probe terminated at 9.5 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-23

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/1/2012 to 10/1/2012 WATER LEVEL 4.0
PROJECT No. 2108000843
EXPLORATION No. SP-23
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	7.0	
0		0 to 30 inches Soil Horizon/Layer: A - B Yellowish brown, sandy loam, 2% gravel, friable
	4.5	
		30 to 114 inches Soil Horizon/Layer: C Light olive brown, sand, 1% gravel, loose
5		
	-2.5	
10		Probe terminated at 9.5 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-24

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 10/1/2012 to 10/1/2012 WATER LEVEL 4.1
PROJECT No. 2108000843
EXPLORATION No. SP-24
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	7.5	
0		0 to 24 inches Soil Horizon/Layer: Fill Yellowish brown, loamy sand, 5% gravel, friable
	5.5	
		24 to 60 inches Soil Horizon/Layer: Fill Dark gray, silt loam, 0% gravel, friable - firm
5	2.5	
		60 to 114 inches Soil Horizon/Layer: Fill Dark olive, clay loam, 0% gravel, friable - firm
	-2.0	
10		Probe terminated at 9.5 feet below the ground surface. No refusal.
15		

SAMPLES: TYPE, NUMBER, RECOVERY (in.), SPT Blows / 6", SPT N-Value
STRATA PLOT, WATER LEVEL, PID Reading (PPM)

Undrained Shear Strength - tsf (1 2 3 4)
Water Content & Atterberg Limits W_P w W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 5 OF 6

27-Jun-2013

606503(25%)HD\BORING LOGS\DWG

BOREHOLE LOG SP-25

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-25
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 5.0 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	7.0	
0		0 to 60 inches Soil Horizon/Layer: Fill Yellowish brown, loamy sand, 2% gravel, friable
	2.0	60 to 120 inches Soil Horizon/Layer: Fill Yellowish brown, loamy sand, 5% gravel, friable
5		
	-3.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-26

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-26
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 3.5 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	8.5	
0		0 to 12 inches Soil Horizon/Layer: Fill Dark brown, loamy sand, 10% gravel, friable, coal ash in soil
	7.5	12 to 42 inches Soil Horizon/Layer: Fill Yellowish brown, loam, 20% gravel, 10% cobbles & stone, friable, coal ash and brick in soil
	5.0	42 to 120 inches Soil Horizon/Layer: Fill Olive brown, loam, 5-10% gravel, friable, coal ash and brick in soil
5		
	-1.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-27

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-27
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 4.0 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	7.5	
0		0 to 24 inches Soil Horizon/Layer: Fill Very dark gray, sandy loam, 20% gravel, coal ash in soil
	5.5	24 to 60 inches Soil Horizon/Layer: Fill Very dark gray, loam, 10% gravel, coal ash and wood in soil
5	2.5	60 to 120 inches Soil Horizon/Layer: A – C Olive brown, loam, 5% gravel
	-2.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-28

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-28
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 8.0 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	8.0	
0		0 to 12 inches Soil Horizon/Layer: Fill Dark brown, sandy loam, 10% gravel, friable, coal ash and wood in soil
	7.0	12 to 60 inches Soil Horizon/Layer: Fill Yellowish brown, loamy sand, 10% gravel, friable, coal ash and wood in soil
5	3.0	60 to 108 inches Soil Horizon/Layer: Fill Dark olive, loam, 20% gravel, friable, wood and brick in soil
	-1.0	Probe terminated at 9.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-29

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-29
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 6.5 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	8.5	
0		0 to 72 inches Soil Horizon/Layer: Fill Dark brown, loam, 10% gravel, friable
	2.5	72 to 80 inches Soil Horizon/Layer: Fill 90% gravel, 1 inch diameter semi-rounded to semi-angular
	1.8	80 to 120 inches Soil Horizon/Layer: A – C Very dark gray, 20% gravel, friable
5		
	-1.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-30

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-30
EXPLORATION DATE 10/1/2012 to 10/1/2012 — WATER LEVEL 5.0 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	9.5	
0		0 to 12 inches Soil Horizon/Layer: Fill Dark brown, sandy loam, 10% gravel, friable
	8.5	12 to 48 inches Soil Horizon/Layer: Fill Dark olive brown, loam, 10% gravel, friable
	5.5	48 to 84 inches Soil Horizon/Layer: Fill Dark olive, clay loam 5% gravel, friable - firm
5	2.5	84 to 96 inches Soil Horizon/Layer: Fill Dark olive, loam 10% gravel, friable
	1.5	96 to 114 inches Soil Horizon/Layer: Fill Dark olive, clay loam 5% gravel, friable - firm
	0.0	Probe terminated at 9.5 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-31

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-31
EXPLORATION DATE 10/4/2012 to 10/4/2012 — WATER LEVEL 8.2 — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	10.0	
0		
	9.8	0 to 2 inches Soil Horizon/Layer: Fill Dark brown, sandy loam, 10% gravel, friable
	9.0	2 to 12 inches Soil Horizon/Layer: Fill Brown, loamy sand, 10% gravel, friable
		12 to 84 inches Soil Horizon/Layer: Fill Brown to black, sand, 10% gravel, friable, coal ash, shells, glass and metal in soil
5	3.0	84 to 120 inches Soil Horizon/Layer: Fill Dark gray, loam to clay loam, 10% gravel, friable - firm, wood and shells in soil
	0.0	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

BOREHOLE LOG SP-32

CLIENT City of Newburyport, MA — PROJECT No. 210800843
LOCATION Clipper City Rail Trail – Phase II, Newburyport, Massachusetts — EXPLORATION No. SP-32
EXPLORATION DATE 10/4/2012 to 10/4/2012 — WATER LEVEL - — DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION
	8.5	
0		0 to 72 inches Soil Horizon/Layer: Fill Gray, loam, 10% gravel, shells in soil
	2.5	72 to 120 inches Soil Horizon/Layer: Fill Black, clay loam, 5% gravel, wood in soil and petroleum odor
5		
	-1.5	Probe terminated at 10.0 feet below the ground surface. No refusal.
10		
15		

Driller: NH Boring, Bietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman (Stantec)

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	136
PROJECT FILE NO.	606503		

BORING LOGS
SHEET 6 OF 6

606503(25%)HD(BORING LOGS).DWG 27-Jun-2013

BOREHOLE LOG SP-33

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/28/2012 to 9/28/2012 WATER LEVEL 6
PROJECT No. 210800843
EXPLORATION No. SP-33
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES: TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	7.5						In.			
	6.8	0 to 8 inches Soil Horizon/Layer: Fill light yellowish brown, loamy sand, 20% gravel, friable								
		8 to 48 inches Soil Horizon/Layer: Fill Very dark gray, loamy sand, 20% gravel, friable								
	3.5	48 to 120 inches Soil Horizon/Layer: Fill Very dark gray, silt loam, 20% gravel, firm								
5				▽						
10	-2.5	Probe terminated at 10.0 feet below the ground surface. No refusal. Gravel surfaced parking lot.								
15										

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L 1 4
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman
(Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-34

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/27/2012 to 9/27/2012 WATER LEVEL 7
PROJECT No. 210800843
EXPLORATION No. SP-34
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES: TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	10.0						In.			
		0 to 36 inches Soil Horizon/Layer: Fill Brown, sandy loam, 2% gravel, loose								
	7.0	36 to 60 inches Soil Horizon/Layer: Fill Brown, sandy loam, 2% gravel, loose								
5	5.0	60 to 120 inches Soil Horizon/Layer: Fill Olive gray, loamy sand, 2% gravel, loose		▽						
10	0.0	Probe terminated at 10.0 feet below the ground surface. No refusal.								
15										

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L 1 4
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman
(Stantec)

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

BOREHOLE LOG SP-35

CLIENT City of Newburyport, MA
LOCATION Clipper City Rail Trail - Phase II, Newburyport, Massachusetts
EXPLORATION DATE 9/27/2012 to 9/27/2012 WATER LEVEL 7
PROJECT No. 210800843
EXPLORATION No. SP-35
DATUM

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES: TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	8.5						In.			
		0 to 36 inches Soil Horizon/Layer: Fill Brown, loamy sand, 5% gravel, glass and brick in soil								
	5.5	36 to 60 inches Soil Horizon/Layer: Fill Yellowish brown, loamy sand, 5% gravel								
5	3.5	60 to 108 inches Soil Horizon/Layer: Fill Olive brown, loamy sand, 5% gravel		▽						
	-0.5	108 to 120 inches Soil Horizon/Layer: Fill Dark olive brown, loamy sand, 5% gravel								
10	-1.5	Probe terminated at 10.0 feet below the ground surface. No refusal.								
15										

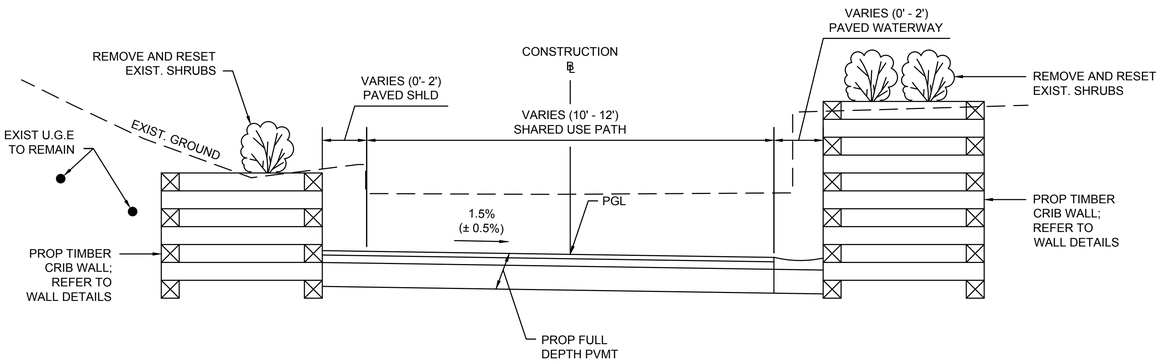
Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L 1 4
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: NH Boring, Dietrich D-50 track mounted rig, 3.25 inch HSA; Supervisor: David Chapman
(Stantec)

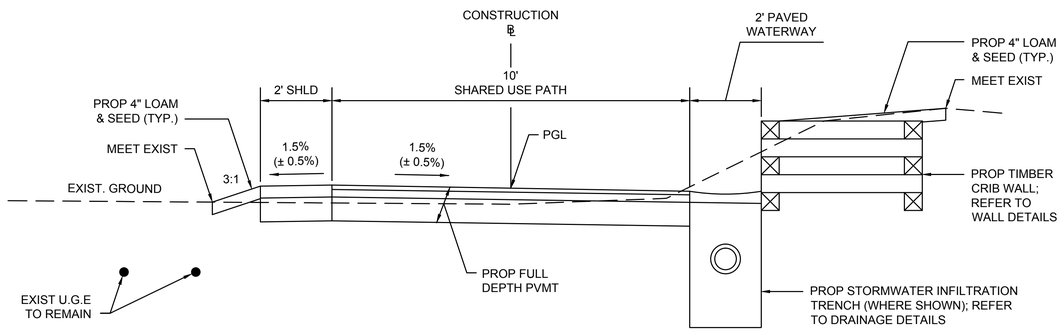
△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	136
PROJECT FILE NO.	606503		

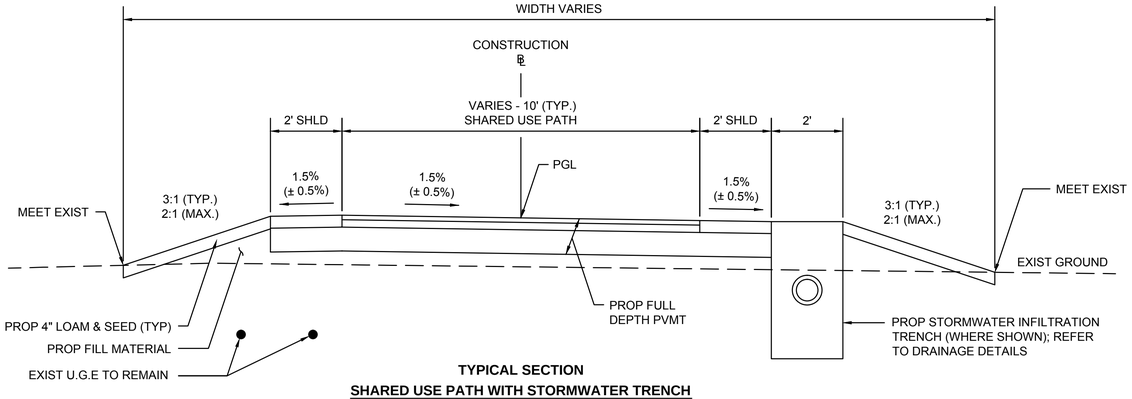
TYPICAL SECTIONS
SHEET 1 OF 7



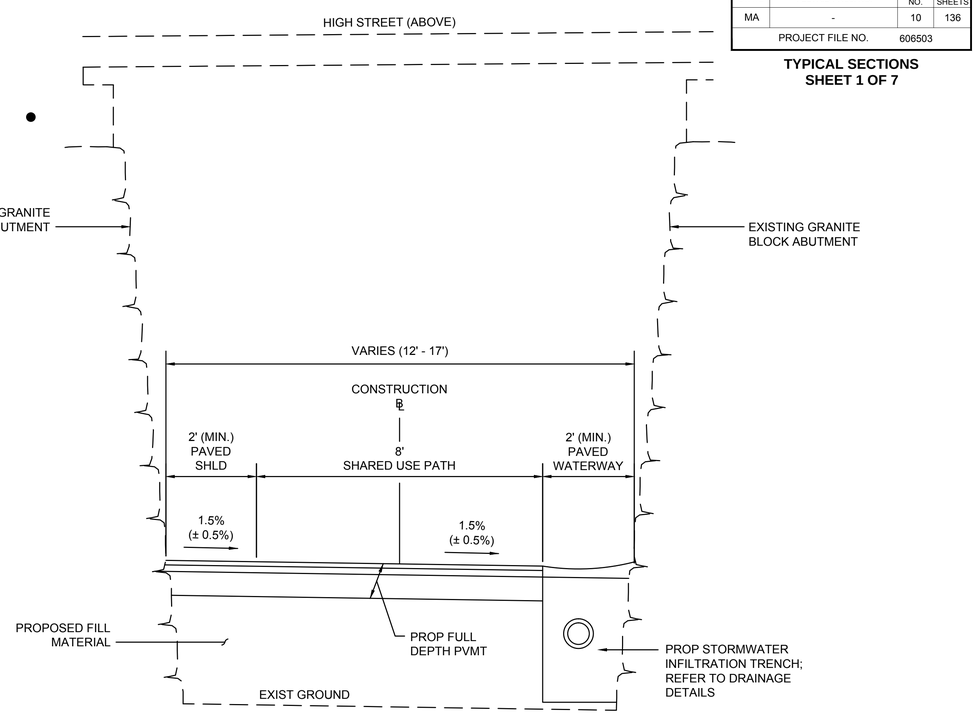
TYPICAL SECTION
SHARED USE PATH WITH TIMBER CRIB WALLS
STA. 32+70.38 - 33+15.66
SCALE: ½" = 1'-0"



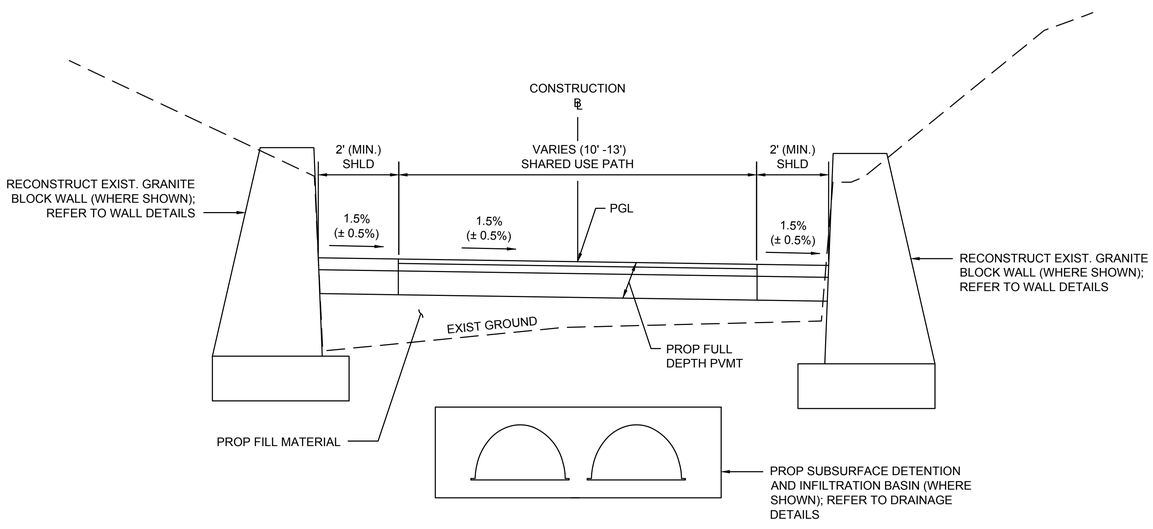
TYPICAL SECTION
SHARED USE PATH WITH TIMBER CRIB WALL
STA. 31+00 - 32+70.38
SCALE: ½" = 1'-0"



TYPICAL SECTION
SHARED USE PATH WITH STORMWATER TRENCH
STA. 11+44.66 - 31+00.00
STA. 55+90.01 - 57+67.60
STA. 59+15.64 - 75+10.05
SCALE: ½" = 1'-0"



TYPICAL SECTION
HIGH STREET UNDERPASS
STA. 33+20.50 - 34+09.59
SCALE: ½" = 1'-0"



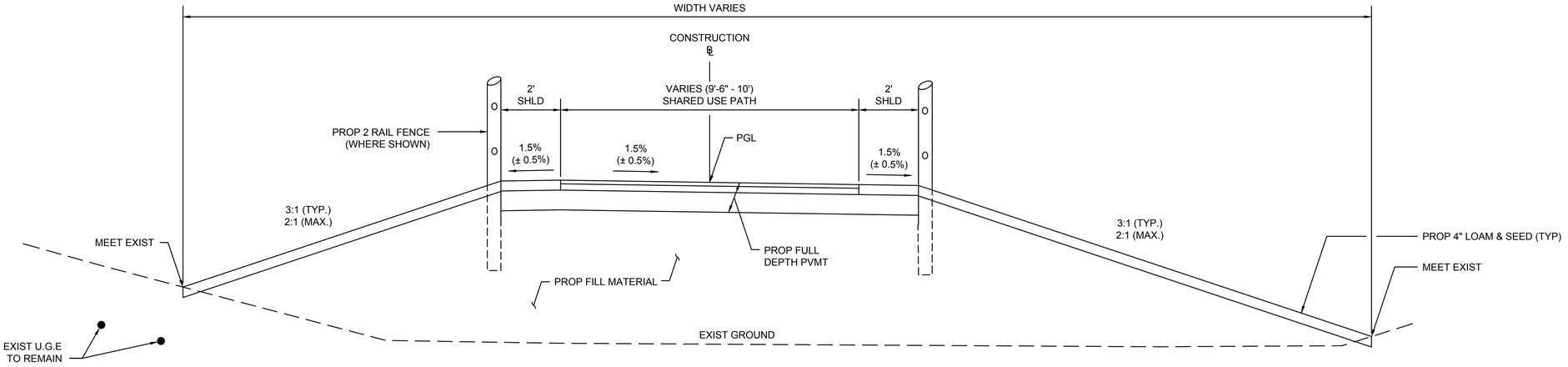
TYPICAL SECTION
SHARED USE PATH WITH GRANITE BLOCK WALLS
STA. 34+09.59 - 35+45.13
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

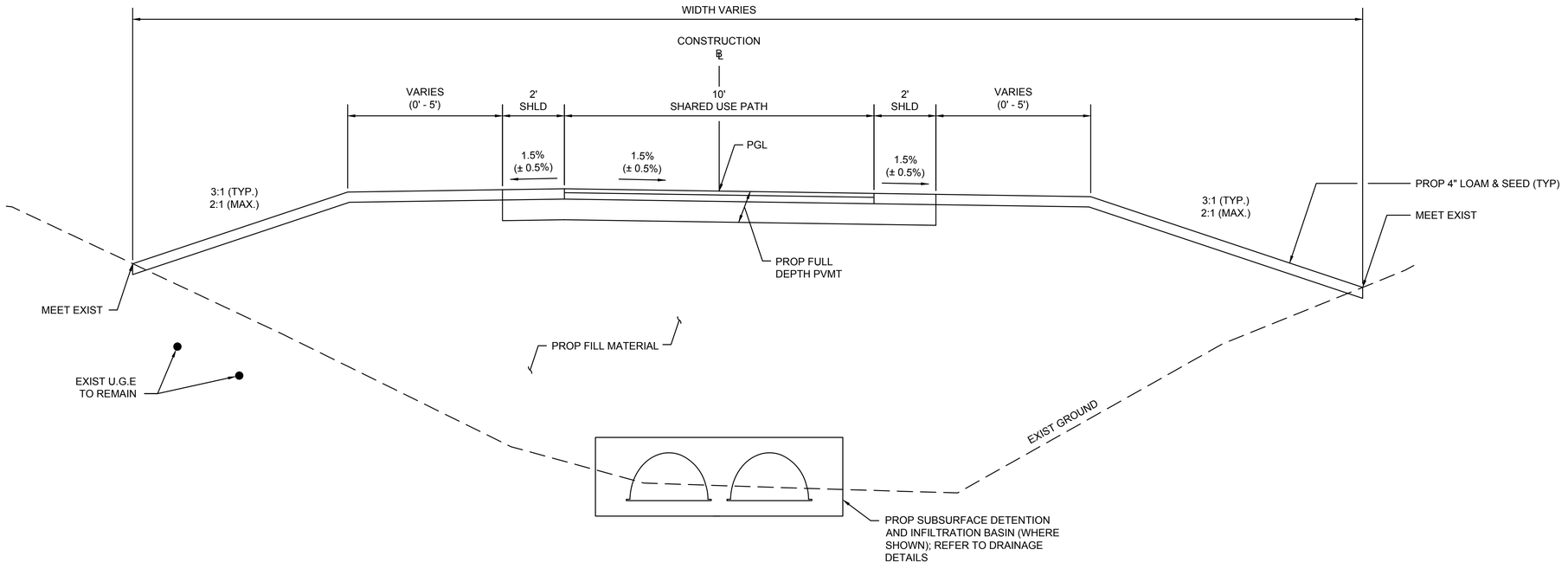
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 2 OF 7

606503\25%\HD\[TYPICAL SECTIONS].DWG 27-Jun-2013



TYPICAL SECTION
SHARED USE PATH AT FILL SECTION
STA. 40+25.00 - 40+91.06
STA. 41+25.18 - 42+97.64
STA. 43+31.61 - 45+90.07
STA. 46+50.93 - 46+76.16
SCALE: ½" = 1'-0"



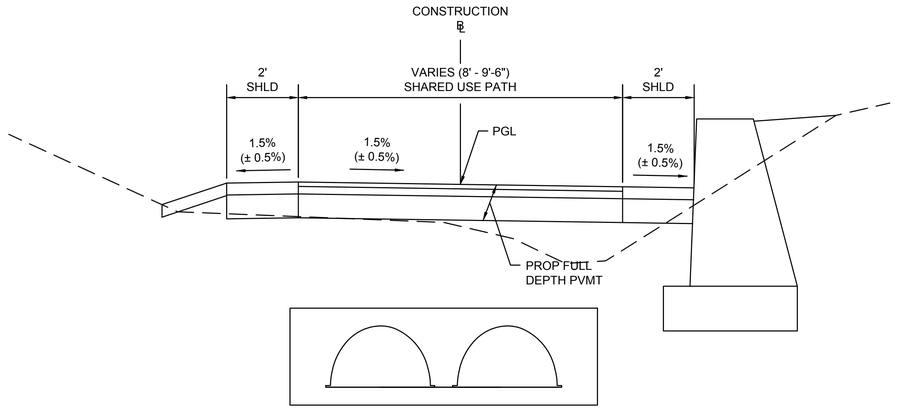
TYPICAL SECTION
SHARED USE PATH WITH WIDENED SHOULDERS
STA. 35+45.13 - 40+25.00
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

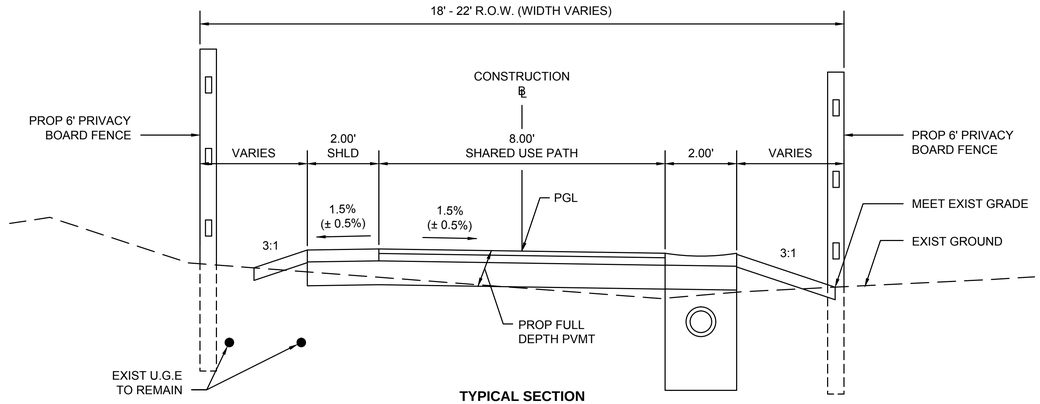
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 3 OF 7

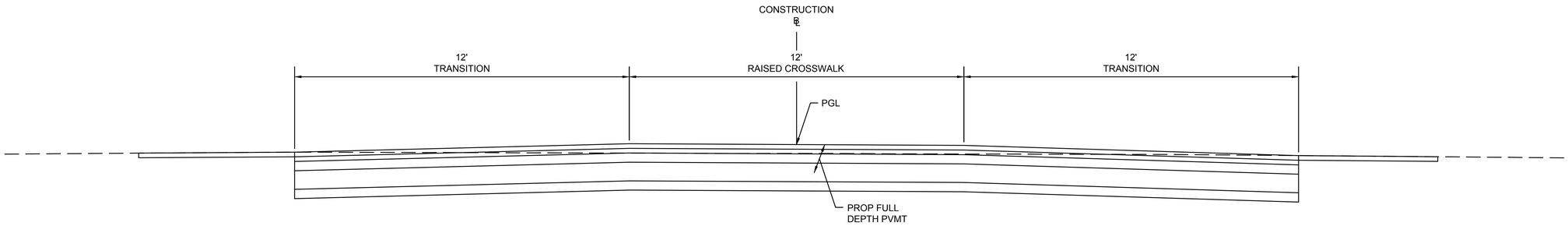
606503(25%)HD(TYPICAL SECTIONS).DWG 27-Jun-2013



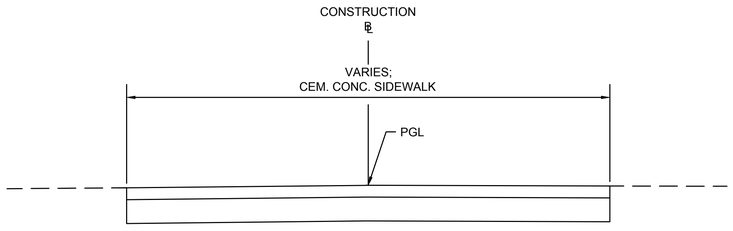
TYPICAL SECTION
SHARED USE PATH WITH STONE MASONRY WALL
STA. 45+90.07 - 46+50.93
SCALE: ½" = 1'-0"



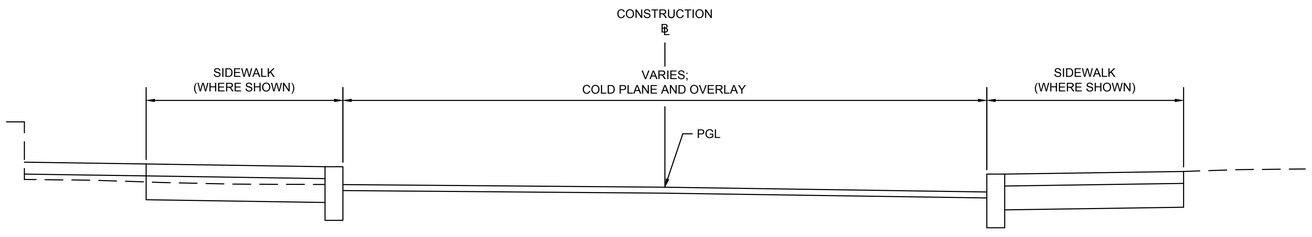
TYPICAL SECTION
SHARED USE PATH AT CONSTRAINED SECTION
STA. 49+24.66 - 50+00.00
SCALE: ½" = 1'-0"



TYPICAL SECTION
RAISED CROSSWALK
STA. 40+97.07 - 41+19.16
STA. 43+03.64 - 43+25.61
SCALE: ½" = 1'-0"



TYPICAL SECTION
CEMENT CONCRETE SIDEWALK
STA. 40+91.06 - 40+97.07
STA. 41+19.16 - 41+25.18
STA. 42+97.64 - 43+03.64
STA. 43+25.61 - 43+31.61
STA. 46+76.16 - 46+85.12
STA. 49+18.88 - 49+24.66
STA. 55+57.01 - 55+61.52
STA. 55+83.72 - 55+90.01
SCALE: ½" = 1'-0"



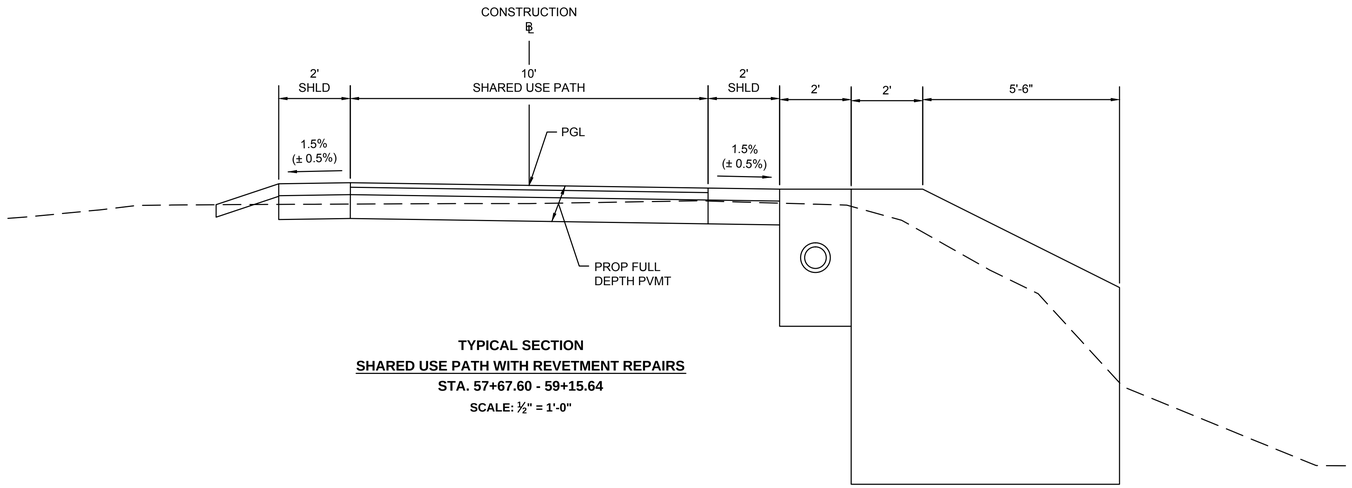
TYPICAL SECTION
COLD PLANE AND OVERLAY
STA. 46+85.12 - 49+18.88
STA. 55+61.52 - 55+83.72
STA. 78+68.19 - 78+87.87
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

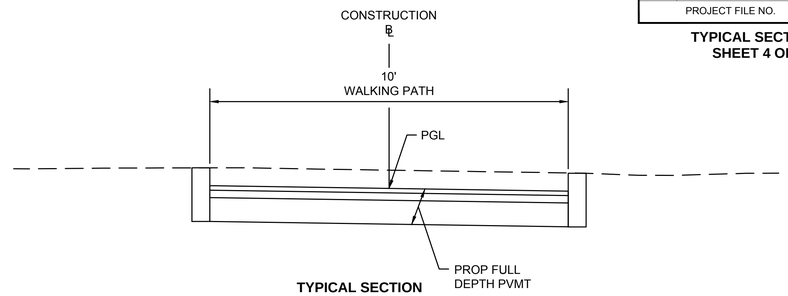
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 4 OF 7

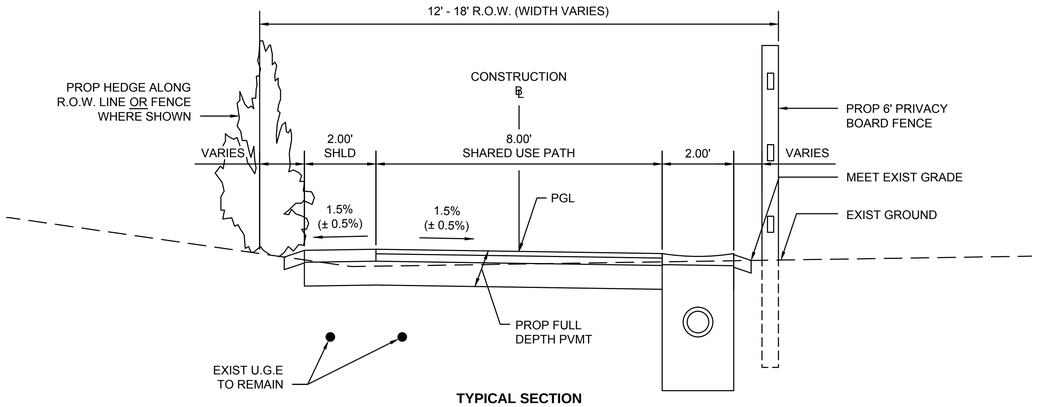
606503(25%)HD(TYPICAL SECTIONS).DWG 27-Jun-2013



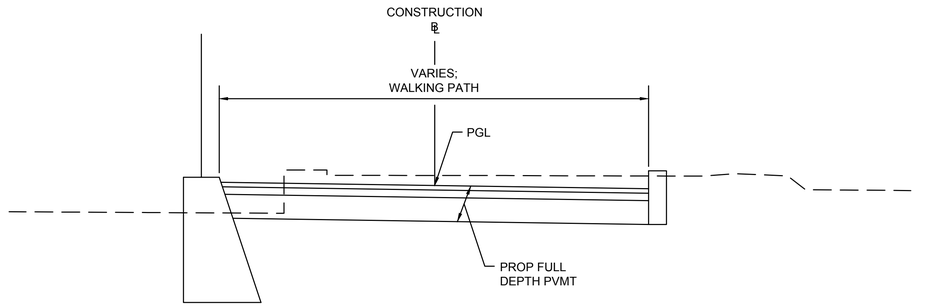
TYPICAL SECTION
SHARED USE PATH WITH REVETMENT REPAIRS
STA. 57+67.60 - 59+15.64
SCALE: ½" = 1'-0"



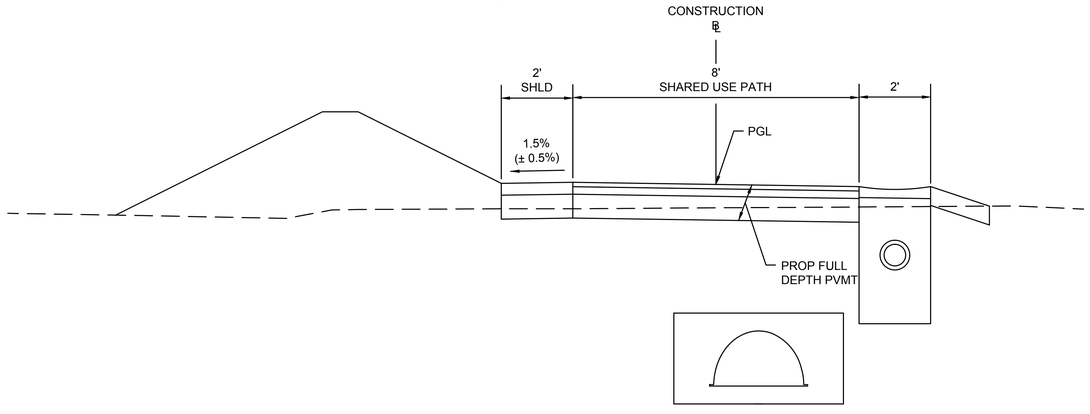
TYPICAL SECTION
WALKING PATH WITH GRANITE CURB
STA. 78+61.22 - 78+68.19
STA. 90+82.56 - 91+27.86
SCALE: ½" = 1'-0"



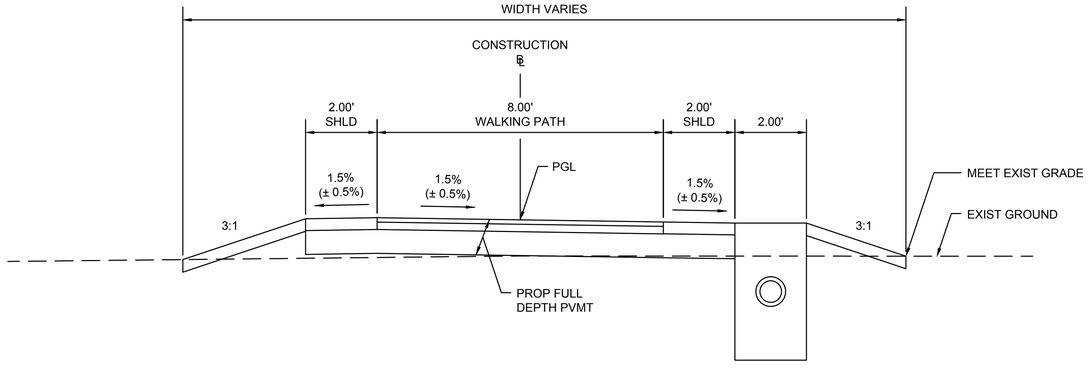
TYPICAL SECTION
SHARED USE PATH AT CONSTRAINED SECTION
STA. 54+00.00 - 55+57.01
SCALE: ½" = 1'-0"



TYPICAL SECTION
WALKING PATH WITH CONCRETE GRAVITY WALL
STA. 78+43.52 - 78+61.22
SCALE: ½" = 1'-0"



TYPICAL SECTION
SHARED USE PATH AT CONSTRAINED SECTION
STA. 50+00.00 - 54+00.00
SCALE: ½" = 1'-0"



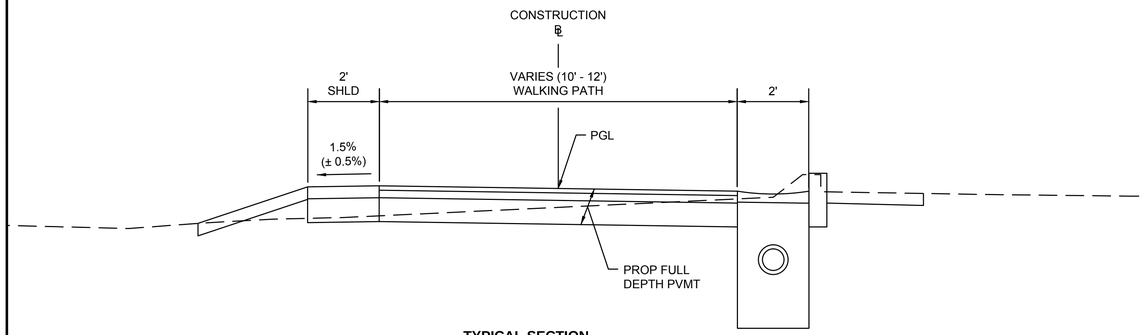
TYPICAL SECTION
WALKING PATH WITH STORMWATER TRENCH
STA. 76+10.05 - 78+43.52
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

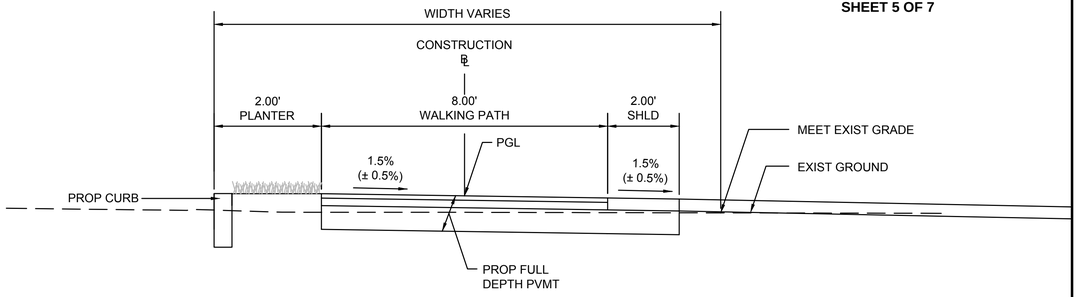
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 5 OF 7

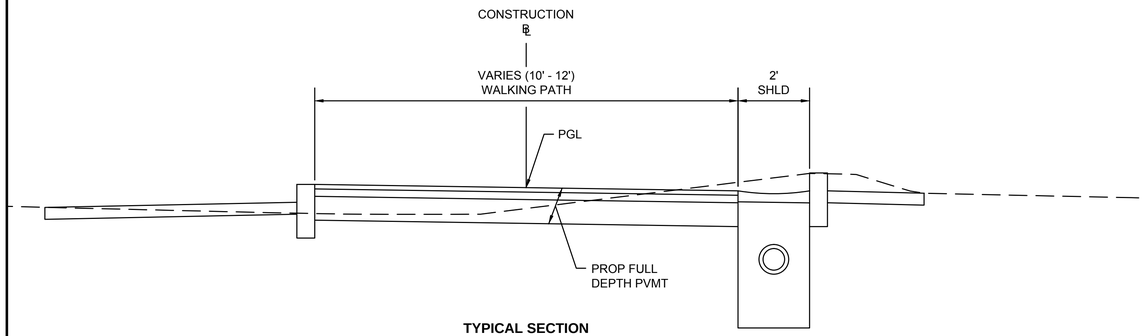
606503(25%)HD(TYPICAL SECTIONS).DWG 27-Jun-2013



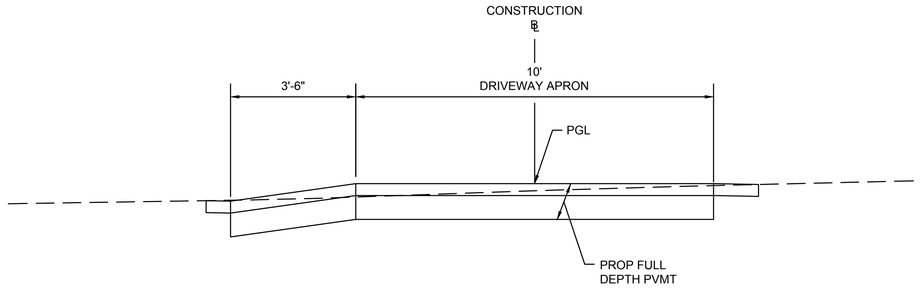
TYPICAL SECTION
WALKING PATH WITH RAISED CURB
STA. 81+25.89 - 81+68.34
SCALE: ½" = 1'-0"



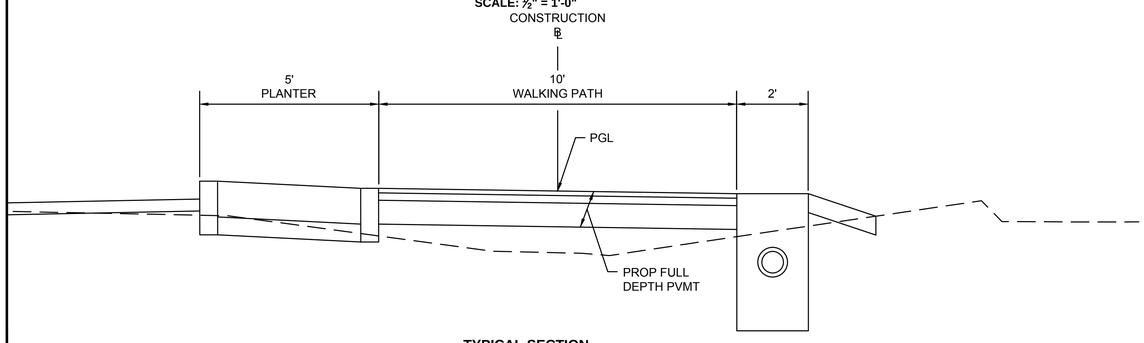
TYPICAL SECTION
WALKING PATH WITH GRASS STRIP
STA. 82+92.20 - 83+31.74
STA. 83+51.74 - 83+68.00
STA. 84+18.00 - 84+66.99
SCALE: ½" = 1'-0"



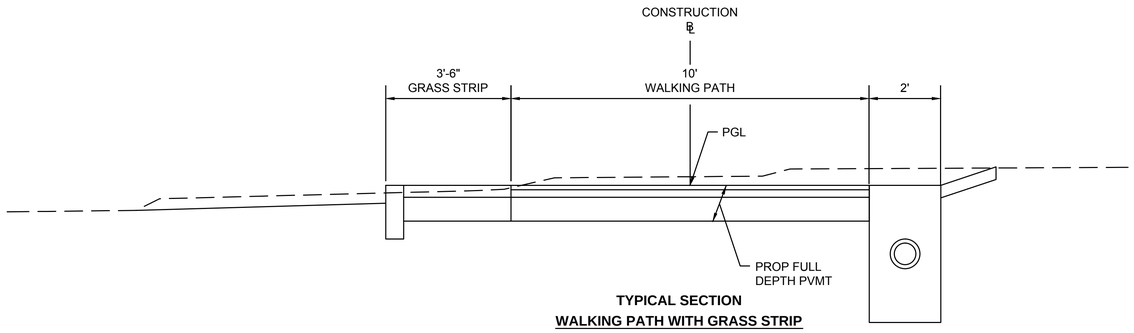
TYPICAL SECTION
WALKING PATH WITH RAISED CURB
STA. 81+02.35 - 81+25.89
SCALE: ½" = 1'-0"



TYPICAL SECTION
CONCRETE DRIVEWAY APRON
STA. 82+10.25 - 82+29.13
SCALE: ½" = 1'-0"



TYPICAL SECTION
WALKING PATH WITH PLANTER
STA. 79+00.36 - 81+02.35
SCALE: ½" = 1'-0"



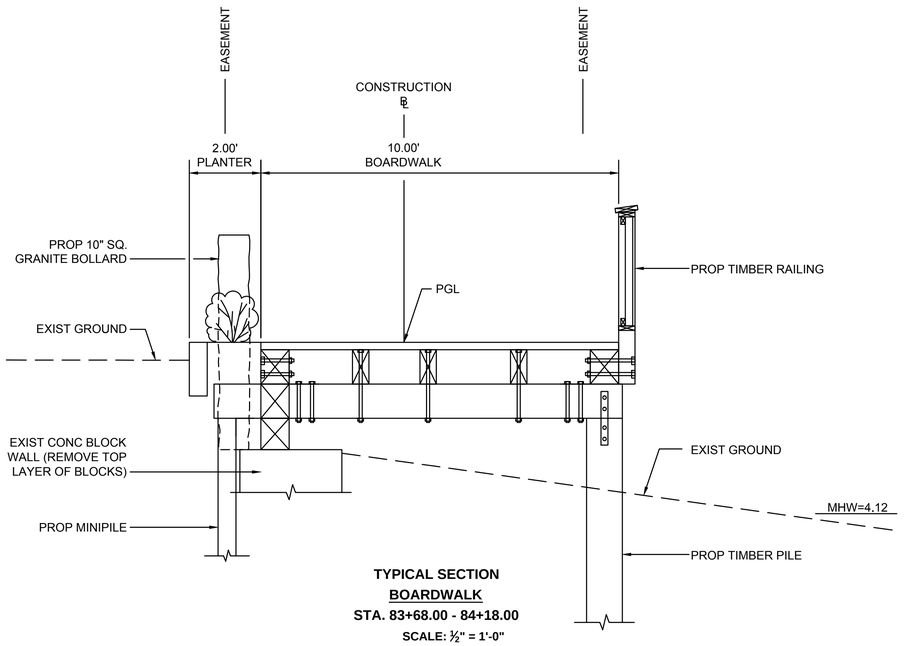
TYPICAL SECTION
WALKING PATH WITH GRASS STRIP
STA. 81+68.34 - 82+10.25
STA. 82+29.13 - 82+65.98
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

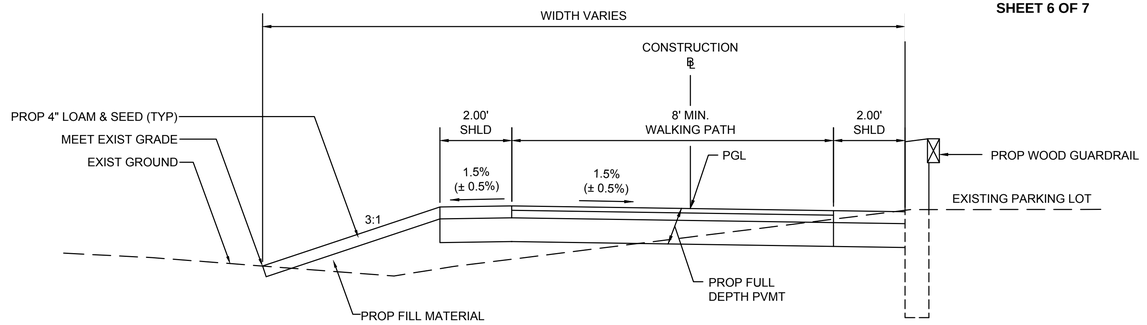
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 6 OF 7

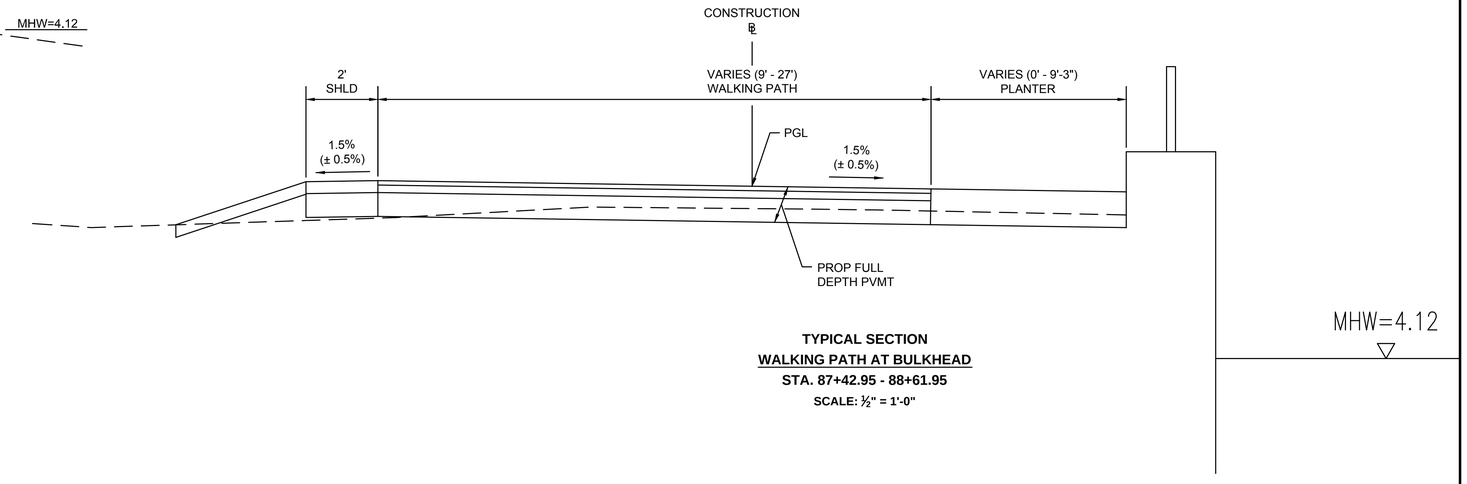
606503(25%)HD(TYPICAL SECTIONS).DWG 27-Jun-2013



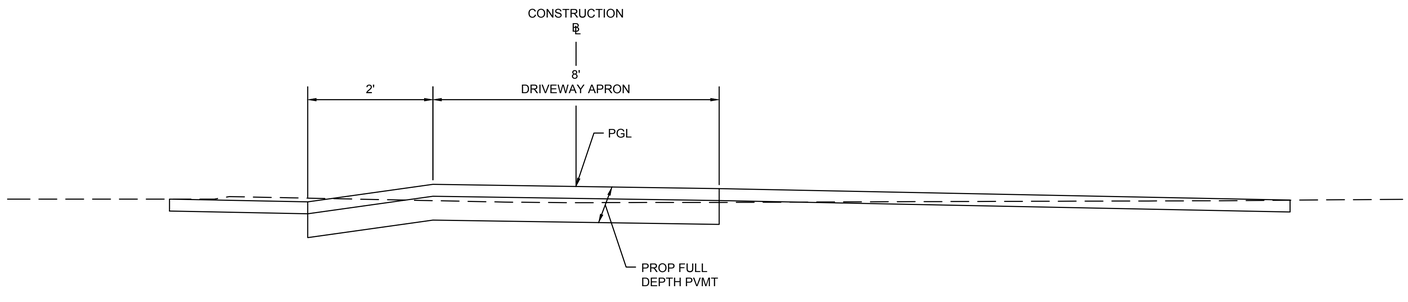
TYPICAL SECTION
BOARDWALK
STA. 83+68.00 - 84+18.00
SCALE: ½" = 1'-0"



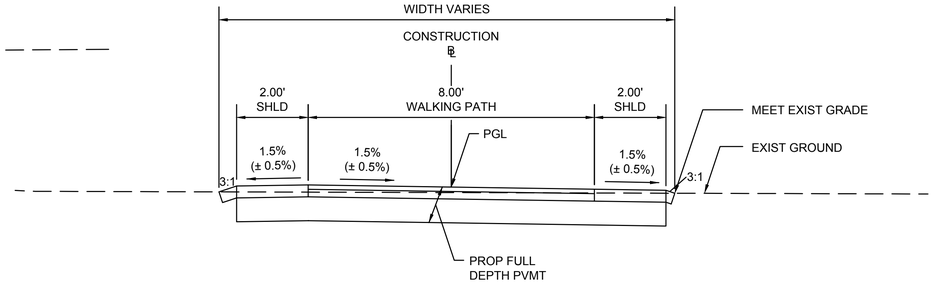
TYPICAL SECTION
WALKING PATH
STA. 88+61.95 - 90+22.06
SCALE: ½" = 1'-0"



TYPICAL SECTION
WALKING PATH AT BULKHEAD
STA. 87+42.95 - 88+61.95
SCALE: ½" = 1'-0"



TYPICAL SECTION
CONCRETE DRIVEWAY APRON
STA. 82+65.98 - 82+92.20
STA. 83+31.74 - 82+51.74
SCALE: ½" = 1'-0"



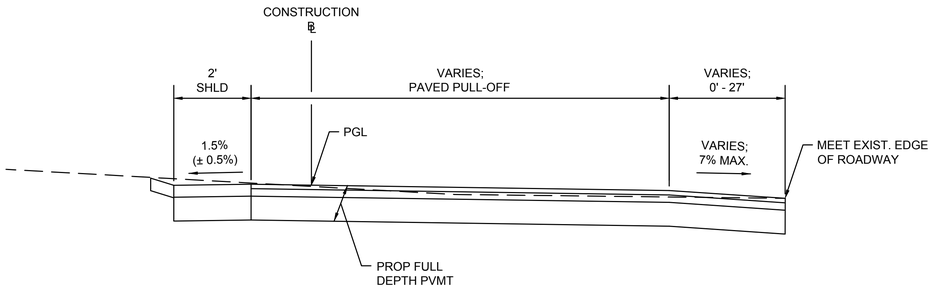
TYPICAL SECTION
WALKING PATH WITHIN PARKING AREA
STA. 84+66.99 - 87+42.95
SCALE: ½" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

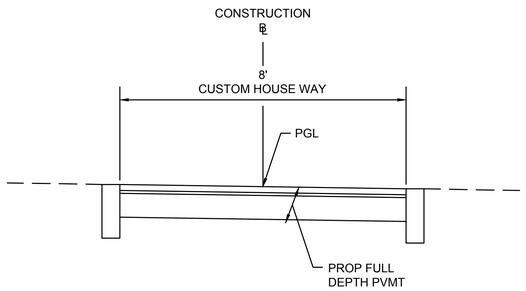
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	136
PROJECT FILE NO.	606503		

TYPICAL SECTIONS
SHEET 7 OF 7

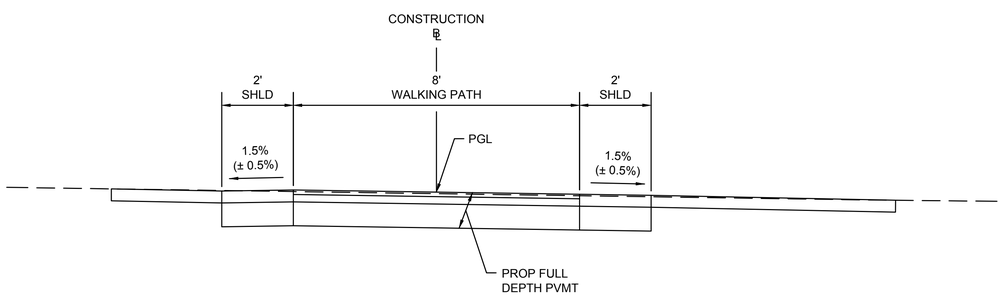
606503(25%)HD(TYPICAL SECTIONS).DWG 27-Jun-2013



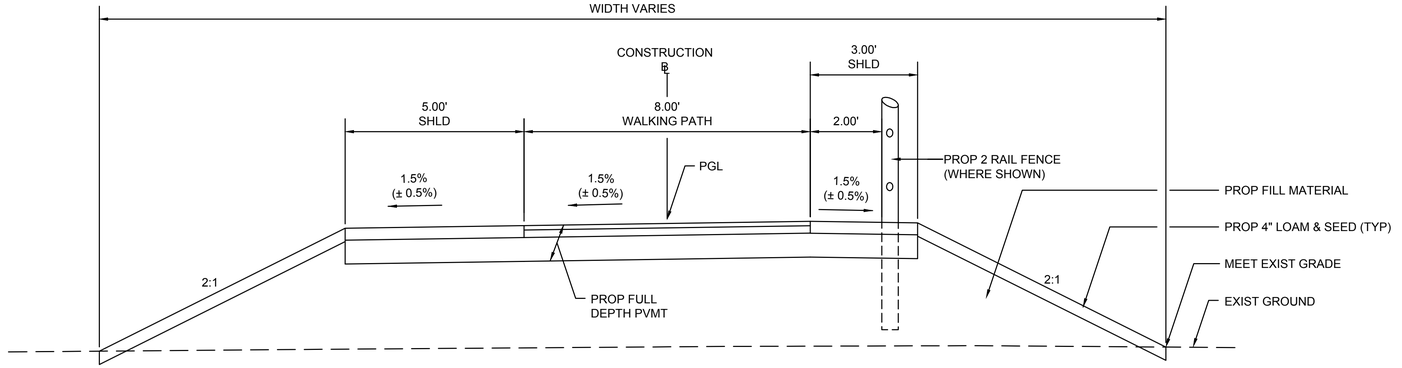
TYPICAL SECTION
PULL-OFF AREA
STA. 10+90.74 - 11+72.36
SCALE: ½" = 1'-0"



TYPICAL SECTION
WALKING PATH AT CUSTOM HOUSE WAY
STA. 90+68.44 - 90+82.56
SCALE: ½" = 1'-0"



TYPICAL SECTION
WALKING PATH AT LAWN AREA
STA. 90+22.06 - 90+68.44
SCALE: ½" = 1'-0"



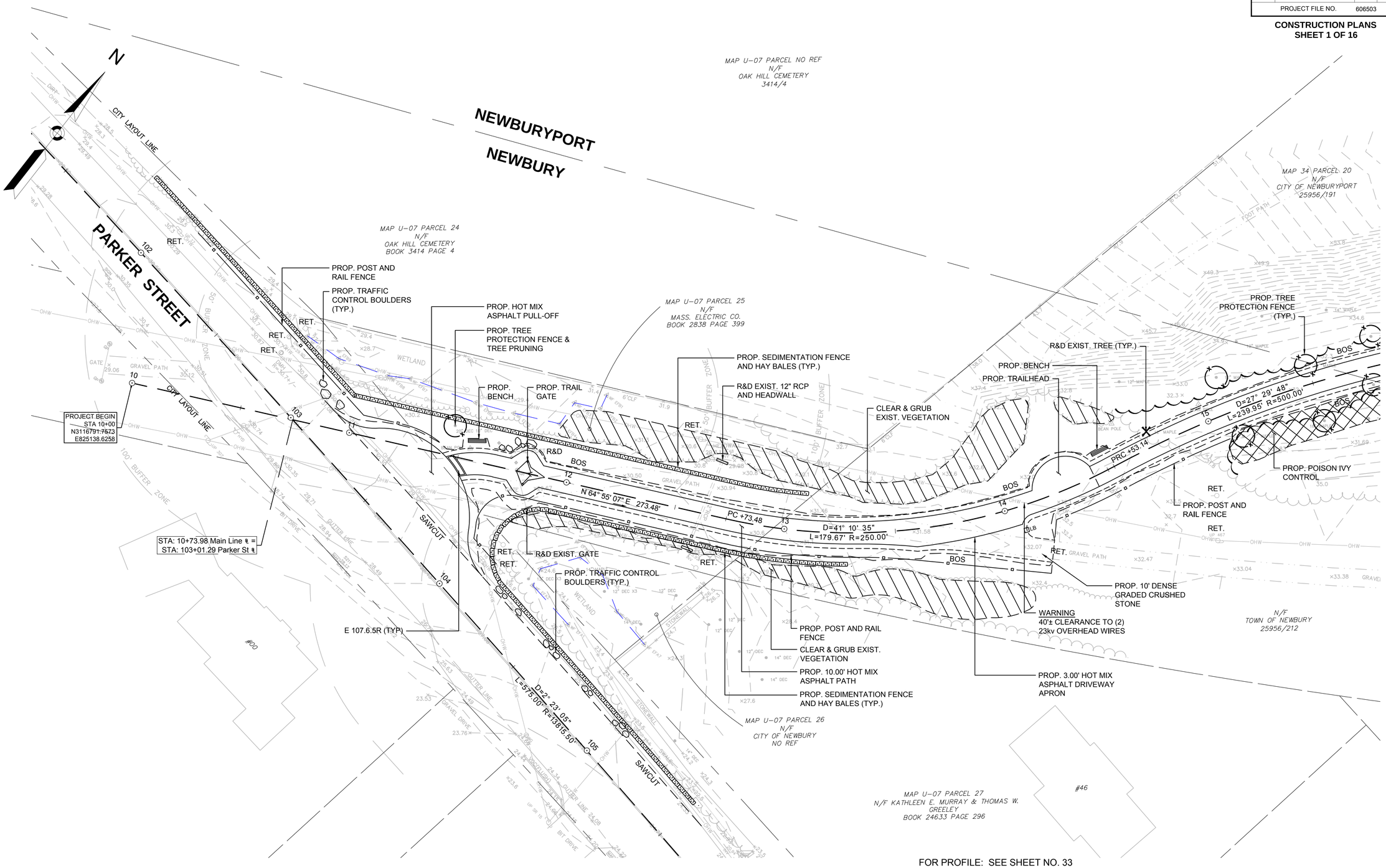
TYPICAL SECTION
HIGH STREET CONNECTION
STA. 200+05.01 - 203+09.62
SCALE: ½" = 1'-0"

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 1 OF 16



CONTINUED ON SHEET NO. 18

FOR PROFILE: SEE SHEET NO. 33

20 0 20 40
SCALE IN FEET

606503[25%]HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 2 OF 16

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

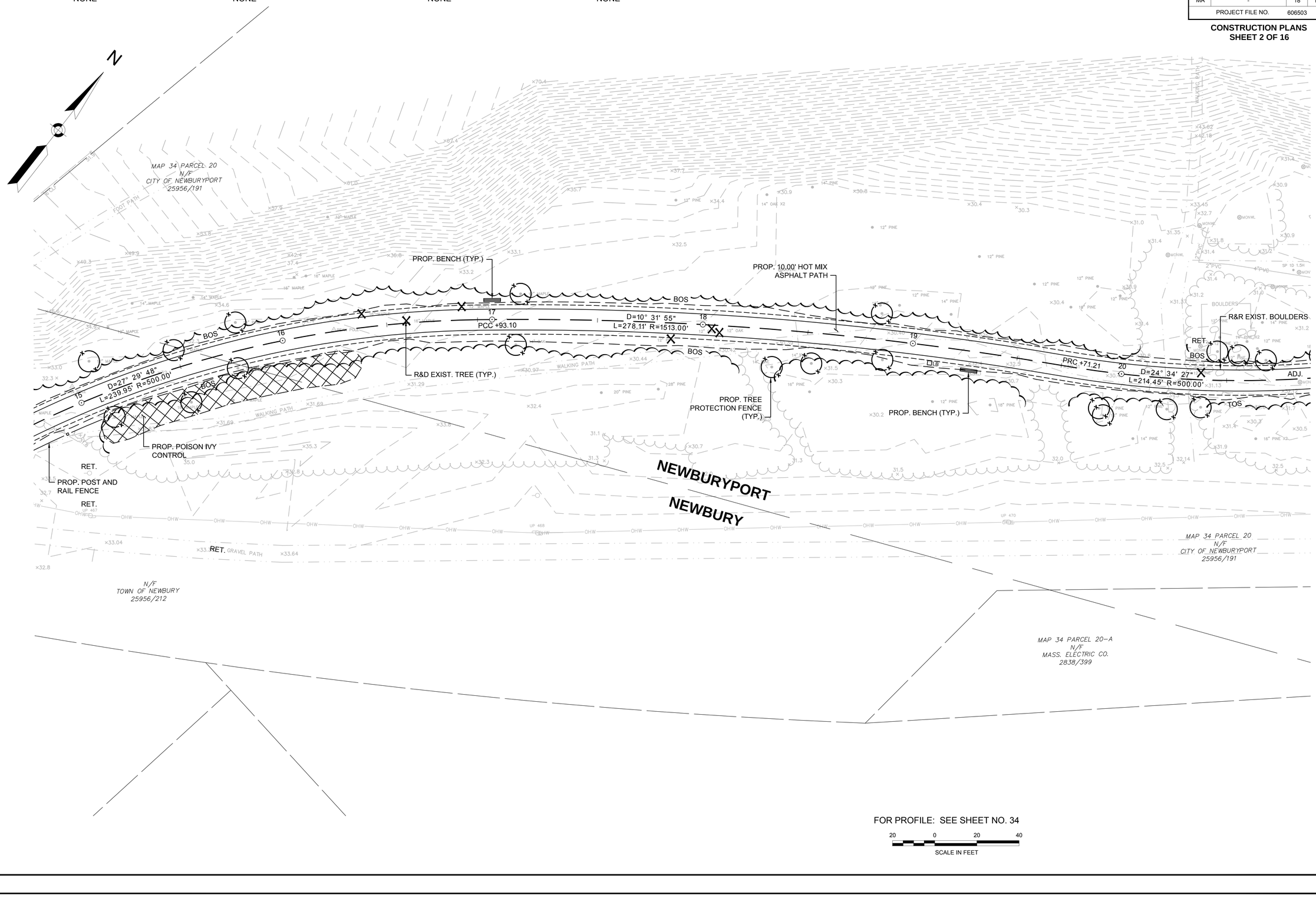
NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE



CONTINUED ON SHEET NO. 17

CONTINUED ON SHEET NO. 19

FOR PROFILE: SEE SHEET NO. 34

20 0 20 40
SCALE IN FEET

606503[25%HD]CONSTRUCTION PLANS].DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	136
PROJECT FILE NO.		606503	

CONSTRUCTION PLANS
SHEET 3 OF 16

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

CONTINUED ON SHEET NO. 18

CONTINUED ON SHEET NO. 20

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 6
N/F
CITY OF NEWBURYPORT
25956/191

CLEAR AND GRUB EXIST. VEGETATION

R&D EXIST. TREE (TYP.)

PROP. 10.00' HOT MIX ASPHALT PATH

R&R EXIST. BOULDERS

RET.

BOS

TOS

ADJ.

PRC +85.66

D=24° 34' 27"
L=214.45' R=500.00'

D=37° 27' 26"
L=738.08' R=1129.00'

PROP. BENCH (TYP.)

PROP. TREE PROTECTION FENCE (TYP.)

WALKING PATH

FOOT PATH

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 34 PARCEL 20-A
N/F
MASS. ELECTRIC CO.
2838/399

MAP 34 PARCEL 21
N/F
DANA DAVIS
28136/95

NEWBURYPORT

NEWBURY

FOR PROFILE: SEE SHEET NO. 35

20 0 20 40
SCALE IN FEET

606503[25%HD]CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	136
PROJECT FILE NO.		606503	

CONSTRUCTION PLANS
SHEET 4 OF 16

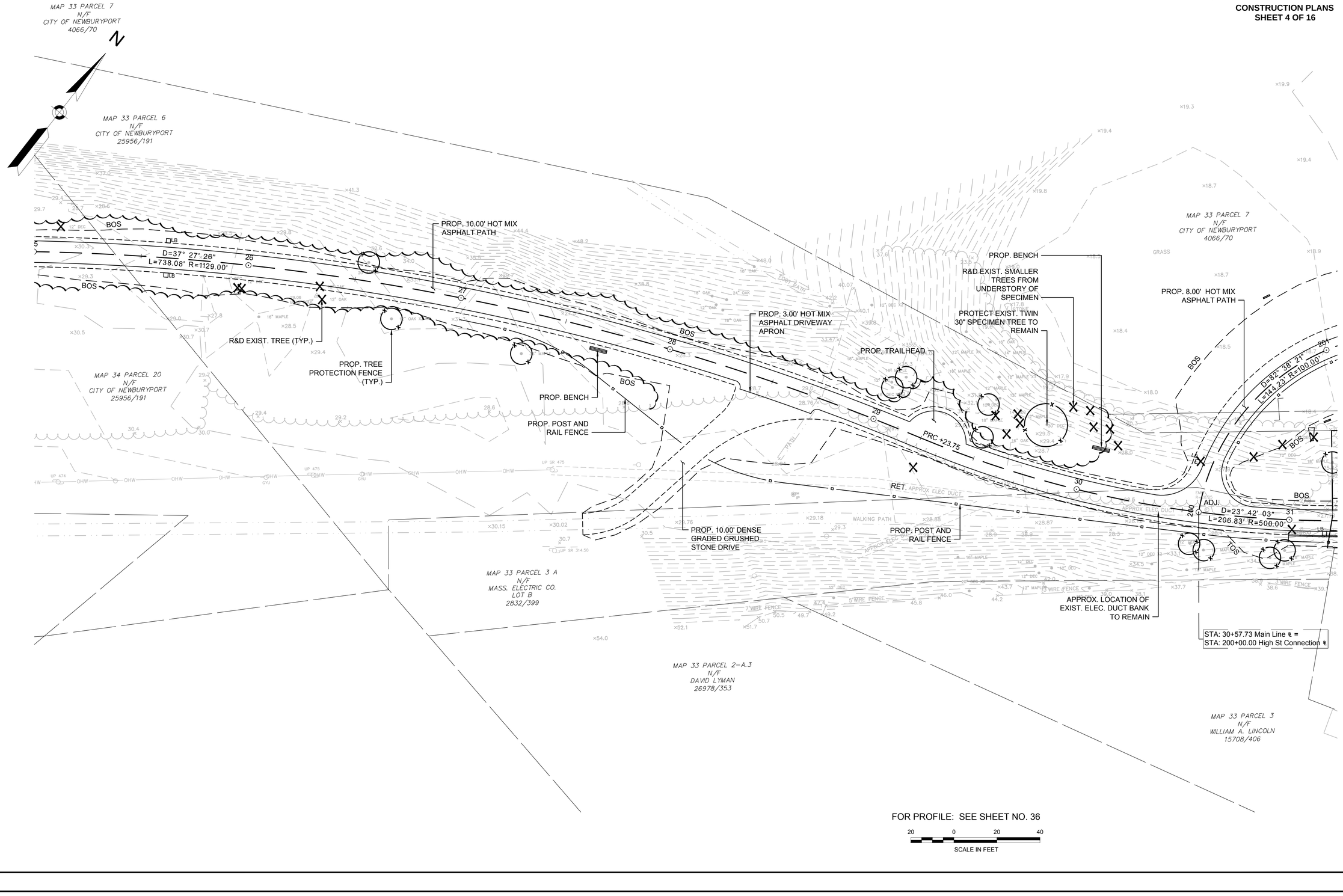
606503(25%HD)CONSTRUCTION PLANS).DWG 27-Jun-2013

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



CONTINUED ON SHEET NO. 19

CONTINUED ON SHEET NO. 21

FOR PROFILE: SEE SHEET NO. 36

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 5 OF 16

606503(25%HD)(CONSTRUCTION PLANS).DWG 27-Jun-2013

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

CONTINUED ON SHEET NO. 20

CONTINUED ON SHEET NO. 22

HIGH STREET

BROMFIELD STREET

(ROUTE 1A)

MARCH'S HILL

PROP. TREE PROTECTION FENCE (TYP.)

PROP. SAWCUT

PROP. GRANITE STAIRCASE

END +48.60

N 0° 43' 33" E 64.68'

EMST GRAN. CURB (RET)

R&D EXIST. CEMENT CONC. STEPS AND HANDRAILS

R&R EXIST. SIGN

PT +83.92

PROP. SAWCUT

PROP. POST AND RAIL FENCE

PROP. 8.00' HOT MIX ASPHALT PATH

PT +44.23

N 54° 16' 50" E 46.22'

D=53° 33' 18"
L=93.47' R=100.00'

D=82° 38' 21"
L=144.23' R=100.00'

PC +90.45

R&D

R&D BITUMINOUS BASKETBALL COURT

PROP. (TEMP.) RIGHT-OF-ENTRY

EXIST. (PERM.) RAIL TRAIL EASEMENT

PROP. 3" DENSE GRADED CRUSHED STONE DRIVE

REMOVE GRAFFITI FROM NORTHERN & SOUTHERN WING WALLS

PROP. TIMBER STEPS

MAP 33 PARCEL 5-A
N/F
NORBERT A. CAREY, JR.
30425/114

RAIL TRAIL EASEMENT BK 30425, PG 122

TEMP. R.O.E.

BRIDGE NO. N-11-004

PI +15.47

N 50° 57' 10" E 184.89'

N 51° 30' 56" E 100.00'

PC +15.47

D=3° 06' 34"
L=379.89' R=7000.00'

ADJ.
D=23° 42' 03"
L=206.83' R=500.00'

PT +30.57

R&D VERTICAL STEEL RAIL

R&R EXIST. STONE

APPROX. LOCATION OF EXIST. ELEC. DUCT BANK TO REMAIN

APPROX. LOCATION OF (2) EXIST. DIRECT BURY 23KV CABLES TO REMAIN

REMOVE AND REPLACE TIMBER CRIB WALLS (REFER TO WALL DETAILS)

R&R EXIST. PLANT MATERIALS NEAR CRIB WALLS AS REQUIRED

REMOVE GRAFFITI AND RECHINK ALL JOINTS AT NORTHERN & SOUTHERN BRIDGE ABUTMENTS (REFER TO WALL DETAILS)

R&D NGRID MARKER

R&R EXIST. CONC. POST

PROP. 10.00' HOT MIX ASPHALT PATH

PROP. POST AND RAIL FENCE

STA: 30+57.73 Main Line ℄ =
STA: 200+00.00 High St Connection ℄

APPROX. LOCATION OF (2) EXIST. DIRECT BURY 23KV CABLES TO REMAIN

RECONSTRUCT SELECT AREAS OF EXIST. GRANITE BLOCK WALLS (REFER TO WALL DETAILS)

R&D EXIST. TIMBER WALL AND CONCRETE FOOTINGS

REMOVE GRAFFITI FROM NORTHERN & SOUTHERN APPROACH WALLS

REMOVE AND REPLACE TIMBER CRIB WALL (REFER TO WALL DETAILS)

R&D VERTICAL STEEL RAIL

PROP. (TEMP.) RIGHT-OF-ENTRY

MAP 33 PARCEL 3
N/F
WILLIAM A. LINCOLN
15708/406

MAP 33 PARCEL 4
N/F
DANIEL O. POTVIN
23723/99

MAP 33 PARCEL 5
N/F
RUSSELL S. HUSSEY, TRUSTEE
19827/97

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 24 PARCEL 71
N/F
JANICE DESANTIS
6497/153

MAP 24– PARCEL 71–A
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24– PARCEL 71–B
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 72
N/F
DOUGLAS H. CROSSMAN
17510/320

MAP 24– PARCEL 71–C
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 69
N/F
JULIA M. HINES
25118/418

MAP 24 PARCEL 70
N/F
SCOTT TILEY
10717/12

#27 #29 #34 #36 #38 #40 #42 #75 #77–79 #81–83

CITY LAYOUT LINE

FOR PROFILE: SEE SHEET NO. 37

20 0 20 40
SCALE IN FEET

HIGHWAY GUARD DETAILS

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 6 OF 16

606503(25%HD)(CONSTRUCTION PLANS).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 21

CONTINUED ON SHEET NO. 23

BROMFIELD CT.

CHESTNUT STREET

ALTER CT.

BARTON CT.

CITY LAYOUT LINE

APPROX. LOCATION OF (2) EXIST. DIRECT BURY 23KV CABLES TO REMAIN

PROP. 72 INCH WOOD PRIVACY FENCE

R&R EXIST. BOULDERS

EXIST. HYDRANT TO REMAIN

STA: 38+59.10 Main Line ℄ =
STA: 301+27.81 Bromfield - Barton Ct ℄

PROP. BENCH

PROP. TREE PROTECTION FENCE (TYP.)

R&D 4' WOOD PICKET FENCE

R&D EXIST. TREE (TYP.) #4

PROP. 10.00' HOT MIX ASPHALT PATH

(4) PROP. GRANITE POSTS FOR VEHICLE CONTROL

R&D EXIST. STEEL GUARD RAIL

R&D VERTICAL STEEL RAIL

PROP. RAISED CROSSWALK

D=3° 06' 34"
L=379.89' R=7000.00'

D=16° 18' 14"
L=369.93' R=1300.00'

PCC +95.36

PT +469.00

END +75.00

S 69° 04' 25" E 165.00'

S 57° 48' 25" E 110.00'

S 58° 35' 13" E 250.00'

MAP 24 PARCEL 70 N/F SCOTT TILEY 10717/12

MAP 24– PARCEL 71–C N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 69 N/F JULIA M. HINES 25118/418

MAP 24– PARCEL 71–D N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 67 N/F SCOTT C. BASHORE 11213/349

MAP 24 PARCEL 60 N/F ALLEN R. FROST 11896/364

MAP 24 PARCEL 71–G N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 71–I N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 71–K N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 57 DONG S. BETH A. ANDERSON SONG-DONG TRUSTEE 16323/271

MAP 24 PARCEL 71–L N/F MASS. ELECTRIC CO. 2838/399

MAP 24– PARCEL 71–M N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 51 N/F DEBRA LACHANCE 26362/564

MAP 24– PARCEL 71–B N/F MASS. ELECTRIC CO. 2838/399

MAP 24– PARCEL 71–E N/F MASS. ELECTRIC CO. 2838/399

MAP 24– PARCEL 36 N/F CATHERINE T. COMPARONE – SEYLER 8329/470

MAP 24– PARCEL 37 N/F JILL FRANCES GRAY 25928/286

MAP 24 PARCEL 44 N/F JOHN H. GREENE 26131/95

MAP 24– PARCEL 71–H N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 45 N/F MARYLOU MANCHESKI 30798/336

MAP 24– PARCEL 71–J N/F MASS. ELECTRIC CO. 2838/399

MAP 24 PARCEL 50 N/F SEAMUS McCORMICK 29621/450

MAP 24 PARCEL 56–A N/F RICHARD COLBURN 8232/82

#75 #73 #2 #4 #3 #6 #8 #77–79 #5 #10 #1 #2 #3 #4 #6 #24 #12–14 #16–18 #20–22 #9 #11

1.5 STORY WOOD HOUSE

2 STORY WOOD HOUSE

WOOD GARAGE

WOOD SHED

GRAVEL DRIVE

FOR PROFILE: SEE SHEET NO. 38

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 7 OF 16

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

CHESTNUT STREET

HANCOCK STREET

LUNT STREET

CITY LAYOUT LINE

#12–14
#16–18
MAP 24– PARCEL 71–L N/F MASS. ELECTRIC CO. 2838/399
MAP 24– PARCEL 71–M N/F MASS. ELECTRIC CO. 2838/399
MAP 24 PARCEL 51 N/F DEBRA LACHANCE 26362/564
#20–22
#7
#9
#14
#16
#11
MAP 25 PARCEL 65 N/F LISA STEWART 26225/353
MAP 25 PARCEL 50 N/F PATRICIA BUCKLEY 22846/328
#22
#15
#17
MAP 25 PARCEL 40 N/F RICHARD HILL 26472/547
MAP 25 PARCEL 14 N/F AARON L COFFIN 26983/569
MAP 25 PARCEL 19 N/F ROBERT FOLEY 25637/385
#13
MAP 25 PARCEL 18 N/F ANTHONY LOWTHER 25513/365
#7–9
MAP 25 PARCEL 17 N/F GARY WELCH 6109/691
#3
MAP 25 PARCEL 16 N/F DANIEL CARLAT 29018/402
#54
MAP 25 PARCEL 14 N/F ROGER BLOCK 22874/266
MAP 24 PARCEL 50 N/F SEAMUS McCORMICK 29621/450
MAP 25 PARCEL 49 N/F JOSHUA PIKE 26135/150
MAP 25 PARCEL 66 N/F SYLVIA TATTERSALL 29757/306
#24
MAP 25 PARCEL 42 N/F ROBERT DOUGHTY 9471/518
MAP 25 PARCEL 13–A N/F CHRISTOPHER DAVIS 28856/245
#64
MAP 25 PARCEL 13–B N/F AMY O'SULLIVAN 30076/397
#5

PROP. RAISED CROSSWALK
PROP. COLD PLANE AND OVERLAY
PROP. 5.50' CEMENT CONC. SIDEWALK; R&R GRAN. CURB
PROP. 10.00' HOT MIX ASPHALT PATH
STA: 41+08.19 Main Line ℄ = STA: 401+24.23 Chestnut St ℄
STA: 43+14.65 Main Line ℄ = STA: 501+23.00 Hancock St ℄
PROP. POST AND RAIL FENCE
APPROX. LOCATION OF (2) EXIST. DIRECT BURY 23KV CABLES TO REMAIN
PROP. TREE PROTECTION FENCE (TYP.)
L=24.66' R=100.00' Δ=14° 07' 46"
PRC +54.35
D=15° 26' 57" L=269.64' R=1000.00'
PC +84.71
PT +65.28
E 197.6.5R (TYP.)
E 107.6.5R (TYP.)
N 32° 06' 08" E 219.43'
S 58° 35' 13" E 250.00'
S 58° 20' 21" E 250.00'
R&D CLF
R&D CLF AND GATE
R&D
R&R SIGN
R&D EXIST. TREE (TYP.)
R&D EXIST. RIP-RAP; PROP. CEMENTED STONE MASONRY RET. WALL (REFER TO WALL DETAILS)
PROP. (TEMP.) RIGHT-OF-ENTRY
TEMP. R.O.E.
N/F CITY OF NEWBURYPORT 259/191
BOS
RET.
ADJ.
CB
SHED
CONCRETE GARAGE
PARKING LOT
END +50.00

CONTINUED ON SHEET NO. 22
CONTINUED ON SHEET NO. 24

FOR PROFILE: SEE SHEET NO. 39

20 0 20 40
SCALE IN FEET

606503[25%HD]CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	136
PROJECT FILE NO.	606503		

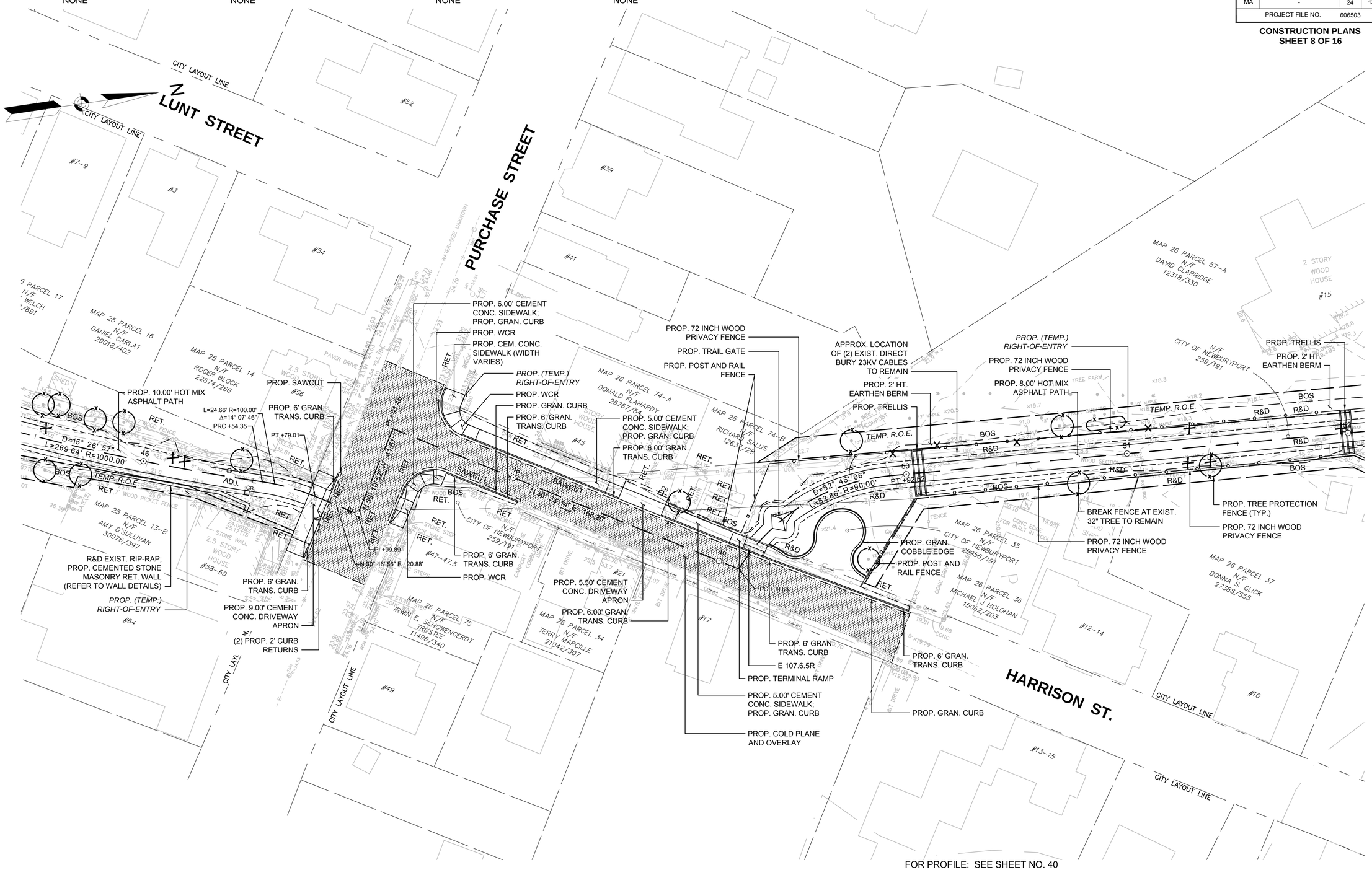
CONSTRUCTION PLANS
SHEET 8 OF 16

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



FOR PROFILE: SEE SHEET NO. 40

20 0 20 40
SCALE IN FEET

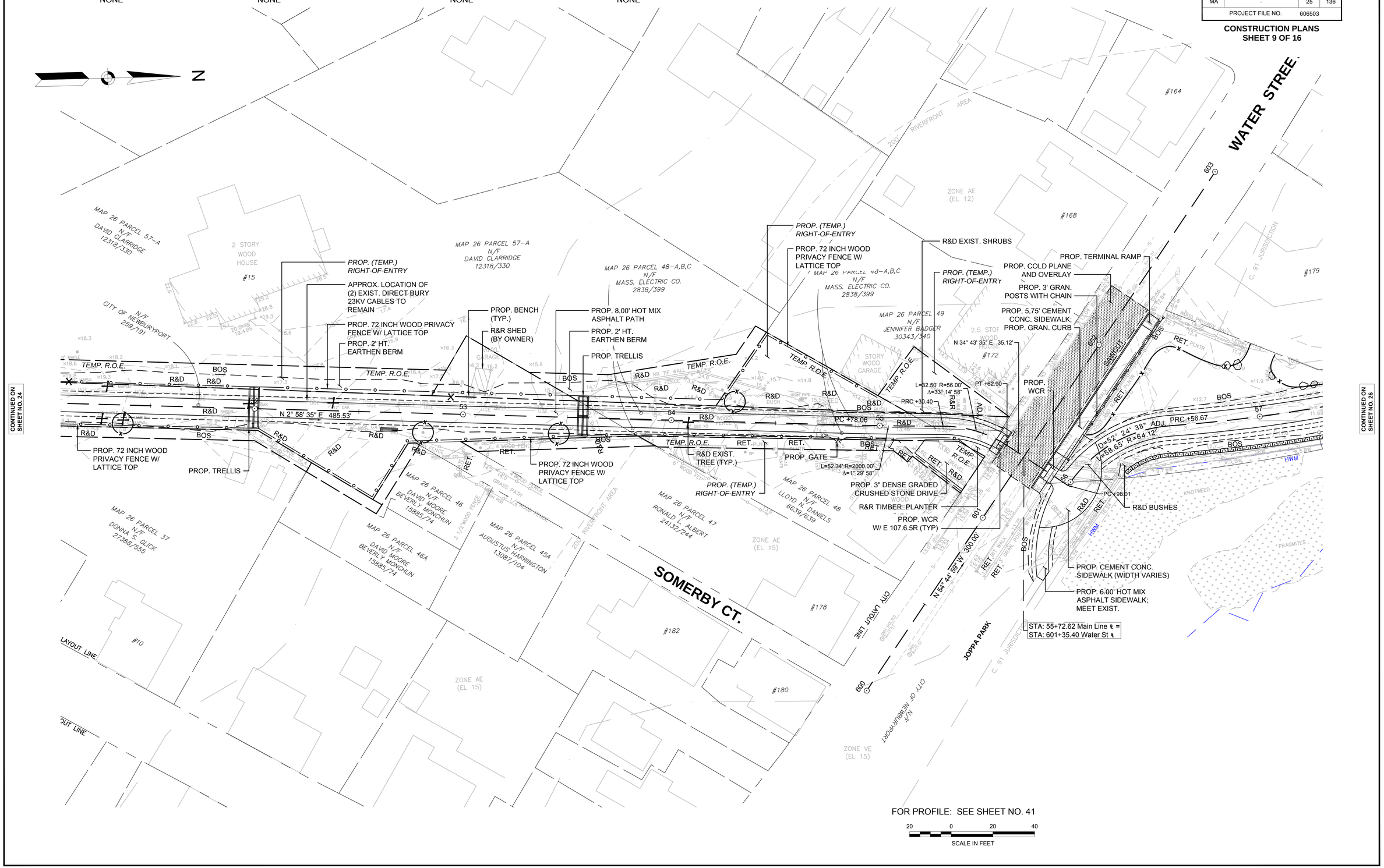
606503(25%)HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 9 OF 16

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE



CONTINUED ON SHEET NO. 24

CONTINUED ON SHEET NO. 26

FOR PROFILE: SEE SHEET NO. 41

20 0 20 40
SCALE IN FEET

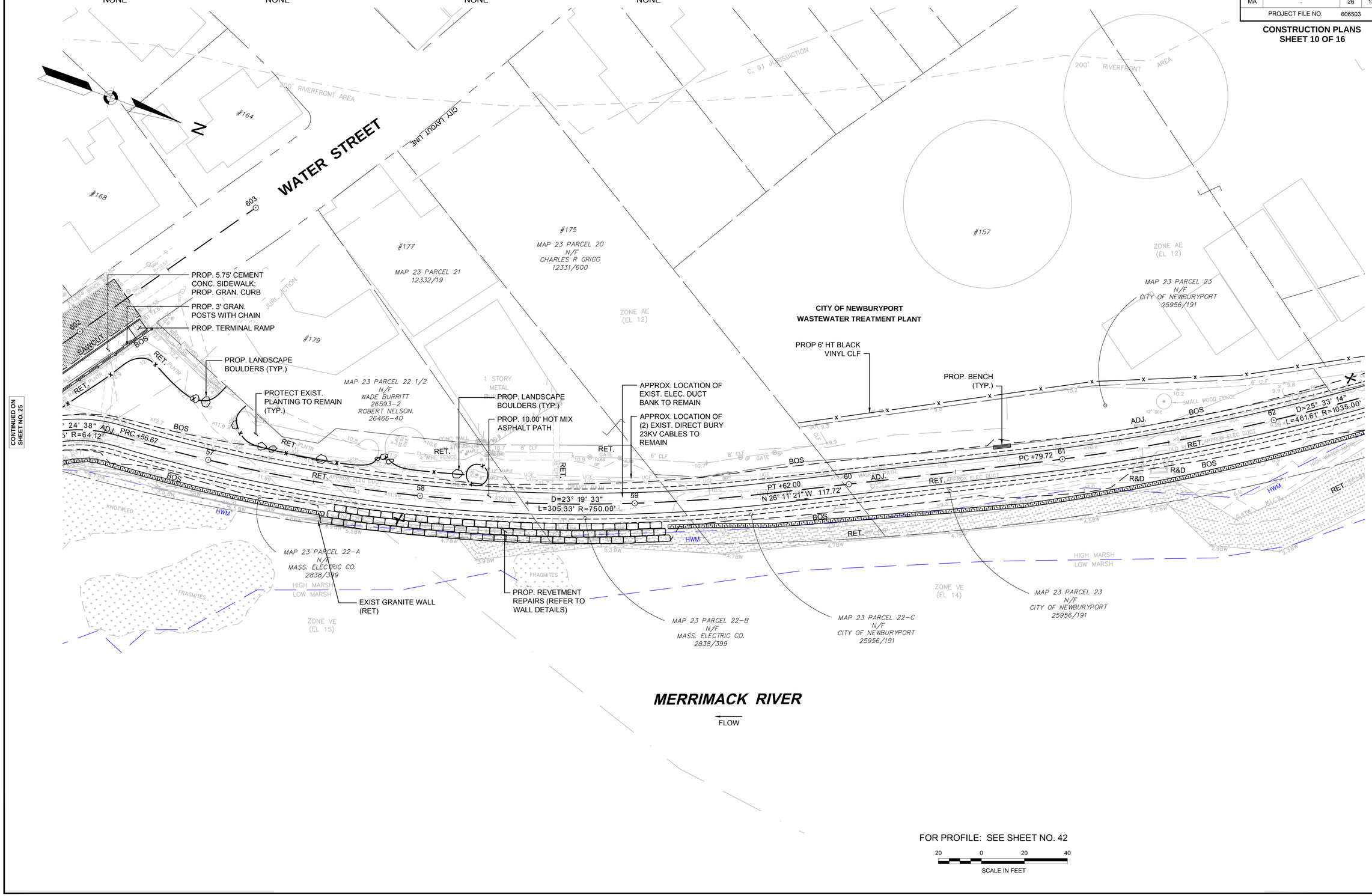
606503[25%]HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 10 OF 16

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE



CONTINUED ON SHEET NO. 25

CONTINUED ON SHEET NO. 27

FOR PROFILE: SEE SHEET NO. 42

20 0 20 40
SCALE IN FEET

606503(25%)HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 11 OF 16

606503(25%HD)(CONSTRUCTION PLANS).DWG 27-Jun-2013

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

CONTINUED ON SHEET NO. 26

CONTINUED ON SHEET NO. 28

200' RIVERFRONT AREA

200' RIVERFRONT AREA

N

MAP 23 PARCEL 11
N/F
CITY OF NEWBURYPORT
6364/536

#157

CITY OF NEWBURYPORT
WASTEWATER TREATMENT PLANT

#157

ZONE AE
(EL 12)

ZONE AE
(EL 12)

MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191

PROP. GRAN.
INTERPRETIVE ELEMENTS

MAP 23 PARCEL 24
N/F
MASS. ELECTRIC CO.
2402/525

APPROX. LOCATION OF
EXIST. ELEC. DUCT
BANK TO REMAIN

APPROX. LOCATION OF
(2) EXIST. DIRECT BURY
23KV CABLES TO
REMAIN

MAP 20 PARCEL 8
N/F
CITY OF NEWBURYPORT
6364/536
PL BK 143/92

PROP. 6' HT. BLACK
VINYL CLF

PROP. 10.00' HOT MIX
ASPHALT PATH

PCC +41.33

NOTE: POLES HAVE
BEEN REMOVED)

R&R

PROP. 72 INCH CLF
BLACK VINYL COATED

ADJ.
BOS
RET.
R&D
62
D=25° 33' 14"
L=461.61' R=1035.00'
63
64
65
66
67
HWM
HIGH WATER MARK
RIP-RAP
HIGH MARSH
LOW MARSH
ZONE VE
(EL 14)
MAP 23 PARCEL 11
N/F
CITY OF NEWBURYPORT
6364/536
PL BK 143/92
MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191
(5) PROP. STACKED
GRAN. BLOCKS
TREE LINE
BRUSH
SMALL WOOD FENCE
OLD BRICK WALL
OHW
UTILITY POLE
GUY WALL
CB
DMH
UPLP
UPLP25
IN2
IN3
IN4
GAS GATE
GAS VALVE
GAS MARKER
WG PST
WG PST25
WG PST7.5
WG PST10
WG PST12.5
WG PST15
WG PST17.5
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WG PST605
WG PST607.5
WG PST610
WG PST612.5
WG PST615
WG PST617.5
WG PST620
WG PST622.5
WG PST625
WG PST627.5
WG PST630
WG PST632.5
WG PST635
WG PST637.5
WG PST640
WG PST642.5
WG PST645
WG PST647.5
WG PST650
WG PST652.5
WG PST655
WG PST657.5
WG PST660
WG PST662.5
WG PST665
WG PST667.5
WG PST670
WG PST672.5
WG PST675
WG PST677.5
WG PST680
WG PST682.5
WG PST685
WG PST687.5
WG PST690
WG PST692.5
WG PST695
WG PST697.5
WG PST700
WG PST702.5
WG PST705
WG PST707.5
WG PST710
WG PST712.5
WG PST715
WG PST717.5
WG PST720
WG PST722.5
WG PST725
WG PST727.5
WG PST730
WG PST732.5
WG PST735
WG PST737.5
WG PST740
WG PST742.5
WG PST745
WG PST747.5
WG PST750
WG PST752.5
WG PST755
WG PST757.5
WG PST760
WG PST762.5
WG PST765
WG PST767.5
WG PST770
WG PST772.5
WG PST775
WG PST777.5
WG PST780
WG PST782.5
WG PST785
WG PST787.5
WG PST790
WG PST792.5
WG PST795
WG PST797.5
WG PST800
WG PST802.5
WG PST805
WG PST807.5
WG PST810
WG PST812.5
WG PST815
WG PST817.5
WG PST820
WG PST822.5
WG PST825
WG PST827.5
WG PST830
WG PST832.5
WG PST835
WG PST837.5
WG PST840
WG PST842.5
WG PST845
WG PST847.5
WG PST850
WG PST852.5
WG PST855
WG PST857.5
WG PST860
WG PST862.5
WG PST865
WG PST867.5
WG PST870
WG PST872.5
WG PST875
WG PST877.5
WG PST880
WG PST882.5
WG PST885
WG PST887.5
WG PST890
WG PST892.5
WG PST895
WG PST897.5
WG PST900
WG PST902.5
WG PST905
WG PST907.5
WG PST910
WG PST912.5
WG PST915
WG PST917.5
WG PST920
WG PST922.5
WG PST925
WG PST927.5
WG PST930
WG PST932.5
WG PST935
WG PST937.5
WG PST940
WG PST942.5
WG PST945
WG PST947.5
WG PST950
WG PST952.5
WG PST955
WG PST957.5
WG PST960
WG PST962.5
WG PST965
WG PST967.5
WG PST970
WG PST972.5
WG PST975
WG PST977.5
WG PST980
WG PST982.5
WG PST985
WG PST987.5
WG PST990
WG PST992.5
WG PST995
WG PST997.5
WG PST1000

MERRIMACK RIVER

FLOW

FOR PROFILE: SEE SHEET NO. 43

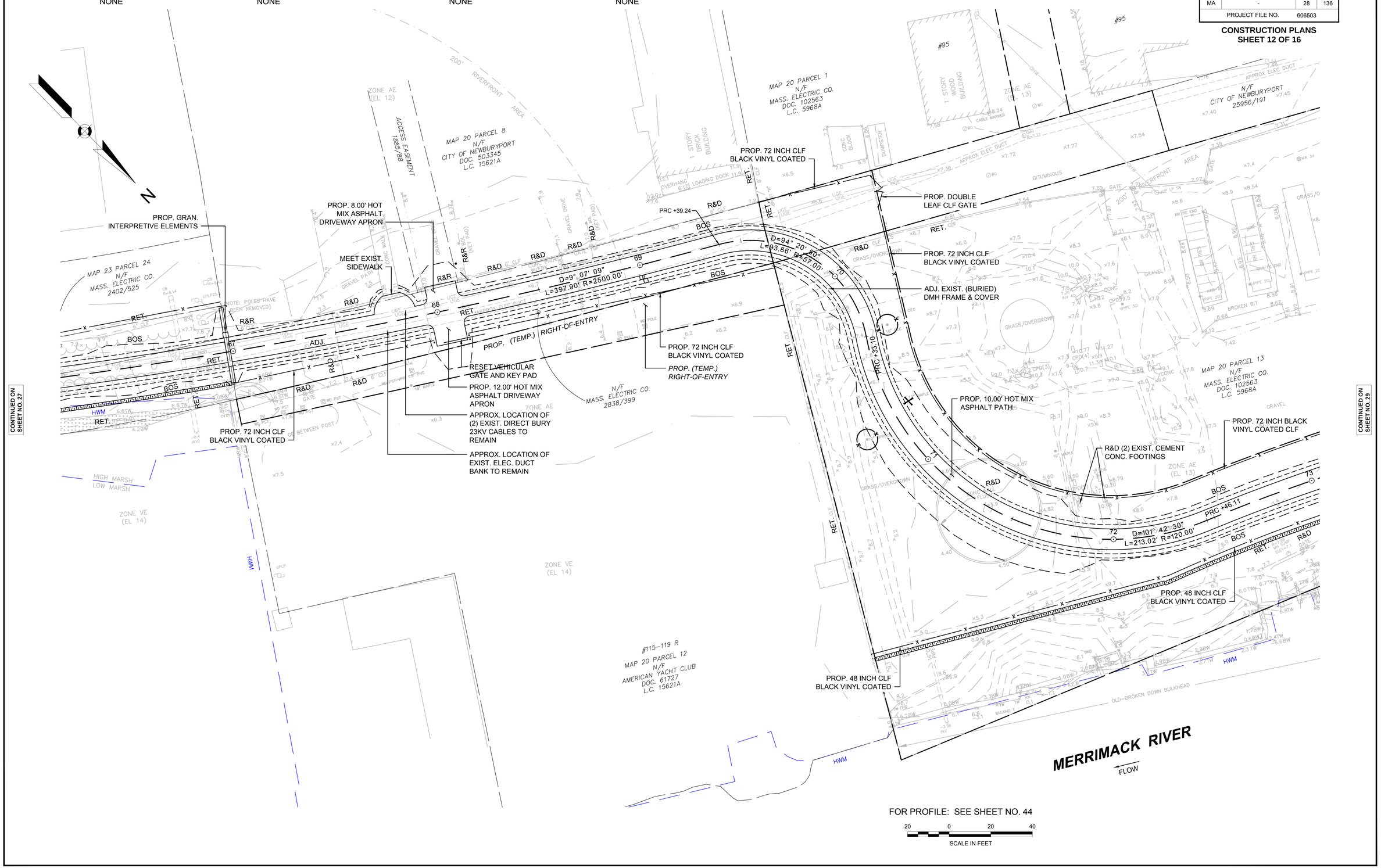
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	136
PROJECT FILE NO.		606503	

CONSTRUCTION PLANS
SHEET 12 OF 16

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE



FOR PROFILE: SEE SHEET NO. 44

20 0 20 40
SCALE IN FEET

CONTINUED ON SHEET NO. 27

CONTINUED ON SHEET NO. 29

606503(25%)HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	136
PROJECT FILE NO.	606503		

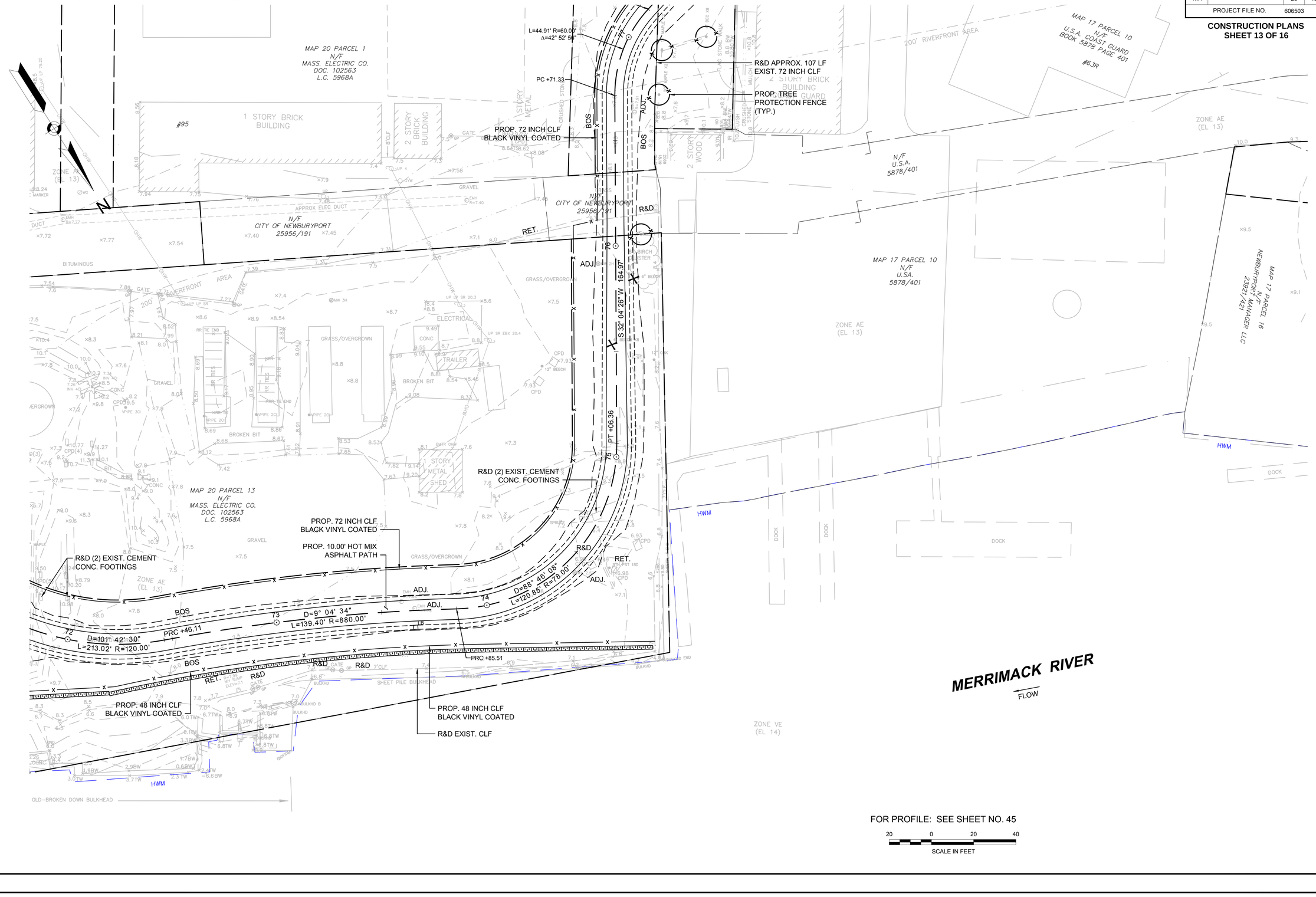
CONSTRUCTION PLANS
SHEET 13 OF 16

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE



CONTINUED ON SHEET NO. 28

CONTINUED ON SHEET NO. 30

FOR PROFILE: SEE SHEET NO. 45

20 0 20 40
SCALE IN FEET

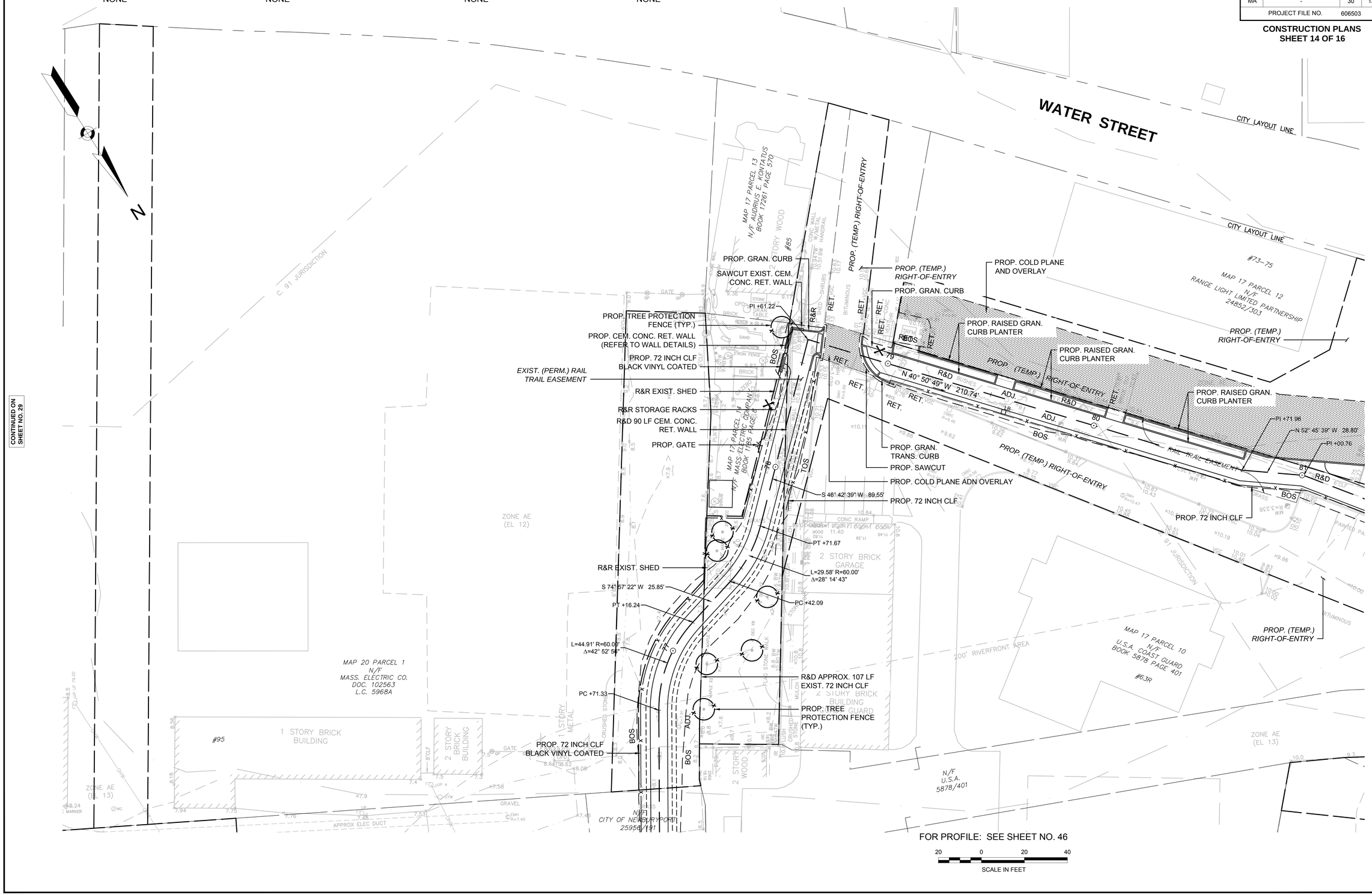
606503[25%H]\CONSTRUCTION PLANS\.DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	136
PROJECT FILE NO.		606503	

CONSTRUCTION PLANS
SHEET 14 OF 16

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE



CONTINUED ON SHEET NO. 29

CONTINUED ON SHEET NO. 31

FOR PROFILE: SEE SHEET NO. 46

20 0 20 40
SCALE IN FEET

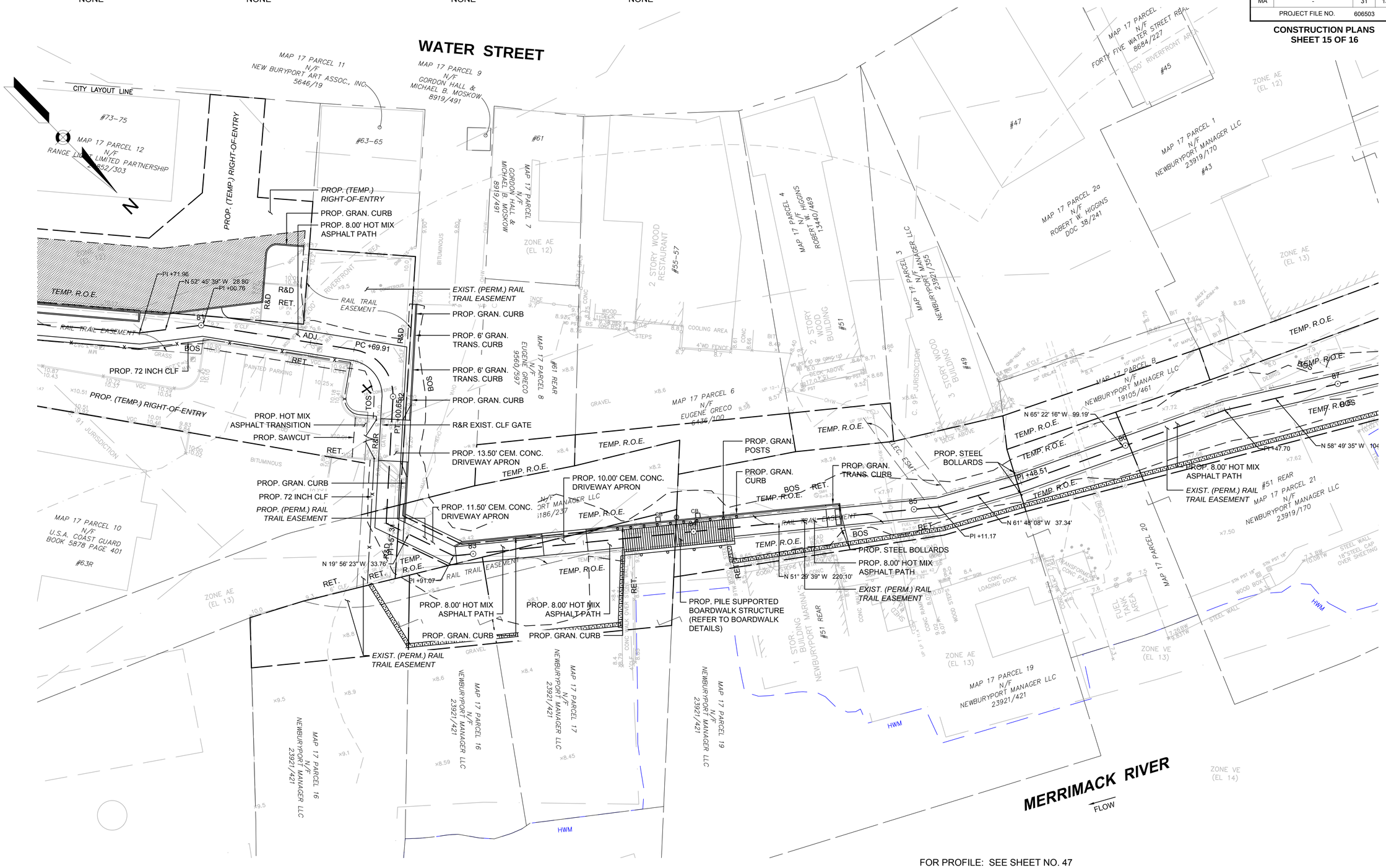
606503(25%)HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

HIGHWAY GUARD DETAILS	TRAFFIC SIGNAL CONDUIT	WATER SUPPLY ALTERATIONS	DRAINAGE DETAILS
NONE	NONE	NONE	NONE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	136
PROJECT FILE NO.		606503	

CONSTRUCTION PLANS
SHEET 15 OF 16



FOR PROFILE: SEE SHEET NO. 47

20 0 20 40
SCALE IN FEET

606503(25%)HD(CONSTRUCTION PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	136
PROJECT FILE NO.	606503		

CONSTRUCTION PLANS
SHEET 16 OF 16

606503(25%HD)(CONSTRUCTION PLANS).DWG 27-Jun-2013

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
NONE

CONTINUED ON SHEET NO. 31

#47

MAP 17 PARCEL 2
N/F
FORTY FIVE WATER STREET REALTY
8684/227

200' RIVERFRONT AREA

#45

MAP 17 PARCEL 2a
N/F
ROBERT W. HIGGINS
DOC 38/241

MAP 17 PARCEL 1
N/F
NEWBURYPORT MANAGER LLC
23919/170

#43

ZONE AE
(EL 12)

#35-41

#27
MAP 12 PARCEL 12
N/F
NEWBURYPORT MANAGER LLC
23919/170

#25

#19-23

#22
MAP 11 PARCEL 1-B
N/F
NEWBURYPORT WATERFRONT TRUST
10711/370

1-23
#23 REAR
MAP 11 PARCEL 1-F
N/F
N.R.A.
DOC. 145107

200' RIVERFRONT AREA

N

ZONE AE
(EL 13)

1 STORY WOOD
BUILDING
OLDIES
MARKETPLACE

#27 REAR
N/F
NEWBURYPORT MANAGER LLC
16186/245

MAP 12 PARCEL 10
N/F
N.R.A.
DOC 171181

CUSTOM HOUSE WAY

PROP. (TEMP.)
RIGHT-OF-ENTRY

PROP. 8.00' HOT MIX
ASPHALT PATH

PROP. GRAN. CURB

PROP. 72 INCH WOOD
PRIVACY FENCE

PROP. (TEMP.)
RIGHT-OF-ENTRY

PROP. 72 INCH WOOD
PRIVACY FENCE

PROP. (TEMP.)
RIGHT-OF-ENTRY

R&R STORAGE BOX
(BY OWNER)

PROP. BRICK
PAVEMENT

EXIST. PLANTING
TO REMAIN

PROP. GRAN.
CURB

MAP 11 PARCEL 1-D
N/F
N.R.A.
DOC. 145107

PROP. (TEMP.) RIGHT-OF-ENTRY

PROP. (TEMP.) RIGHT-OF-ENTRY

PROP. (TEMP.) RIGHT-OF-ENTRY

MAP 17 PARCEL 8
N/F
NEWBURYPORT MANAGER LLC
19105/461

R&D

BOS

RET.

ADJ.

N/F
N.R.A.
DOC. 124455

PROP. WCR

87

88

89

90

91

92

PROJECT END
STA 92+00
N3121777.5136
E825594.8937

PI +51.82

N 58° 49' 35" W 10.00'

N 77° 08' 53" W 448.19'

PROP. WCR

EXIST. (PERM.) RAIL
TRAIL EASEMENT

PROP. (TEMP.)
RIGHT-OF-ENTRY

PROP. BENCH (TYP.)

PROP. HOT MIX
ASPHALT PATH (WIDTH
VARIES)

PROP. 8.00' HOT MIX
ASPHALT PATH

PROP. WOOD GUARD
RAIL

PROP. (TEMP.)
RIGHT-OF-ENTRY

(2) STEEL DOLPHINS

R&R

PROP. GRAN. CURB

PROP. FLUSH GRAN.
CURB

PROP. (TEMP.)
RIGHT-OF-ENTRY

#51 REAR
MAP 17 PARCEL 21
N/F
NEWBURYPORT MANAGER LLC
23919/170

ZONE VE
(EL 13)

MAP 12 PARCEL 9
N/F
CITY OF NEWBURYPORT
9209/335

#27

1 STORY
HARBOR
MASTER

(9) STN POSTS 10" SQUARE
N/F
N.R.A.
DOC 142595

PETER J. MATTHEWS
BOARDWALK

HWM

DOCK

ZONE VE
(EL 14)

MERRIMACK RIVER

FLOW

FOR PROFILE: SEE SHEET NO. 48

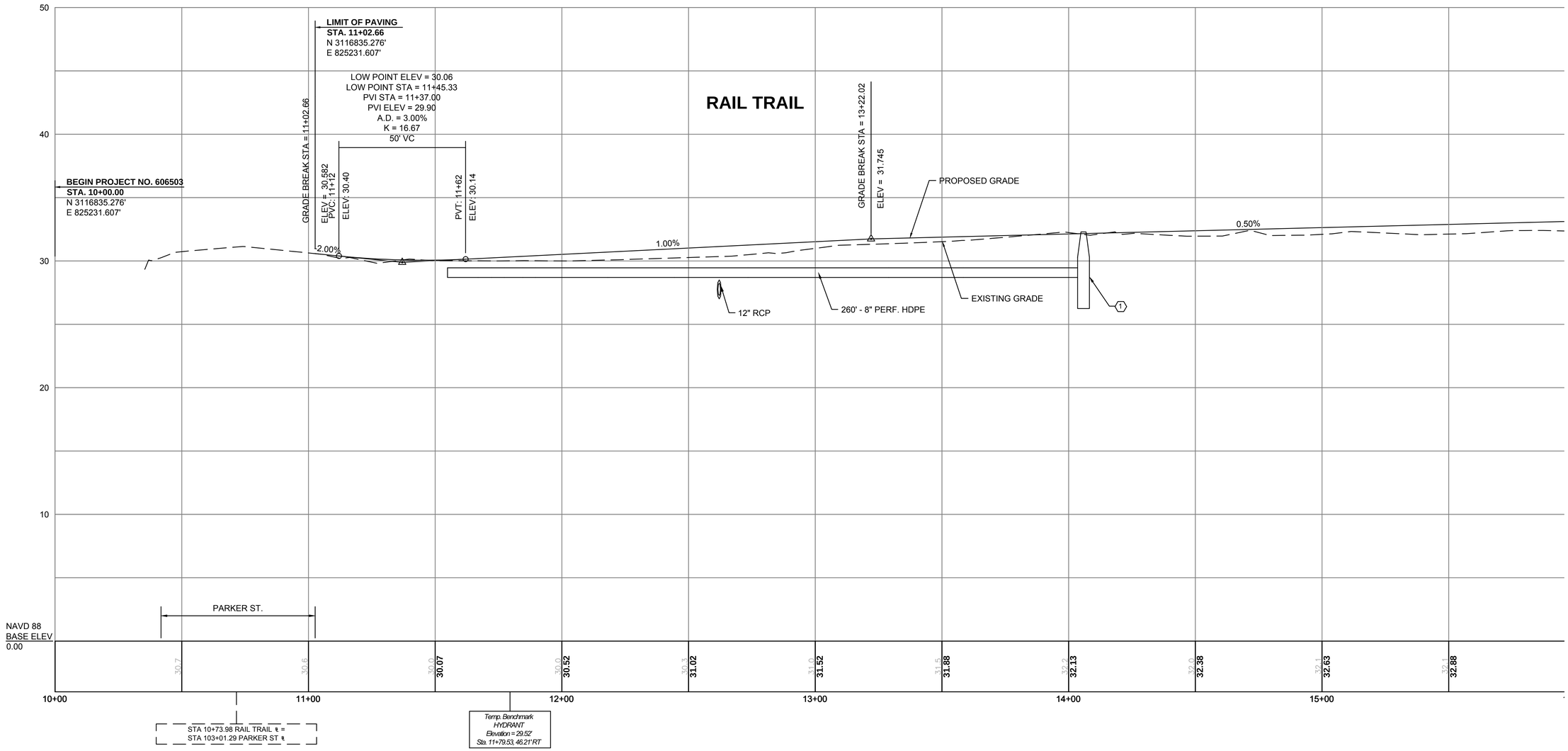
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 1 OF 16

606503[25%]HD(RAIL TRAIL PROFILE).DWG 27-Jun-2013



CONTINUED ON SHEET NO. 34

FOR CONSTRUCTION PLANS:
SEE SHEET NO. 17

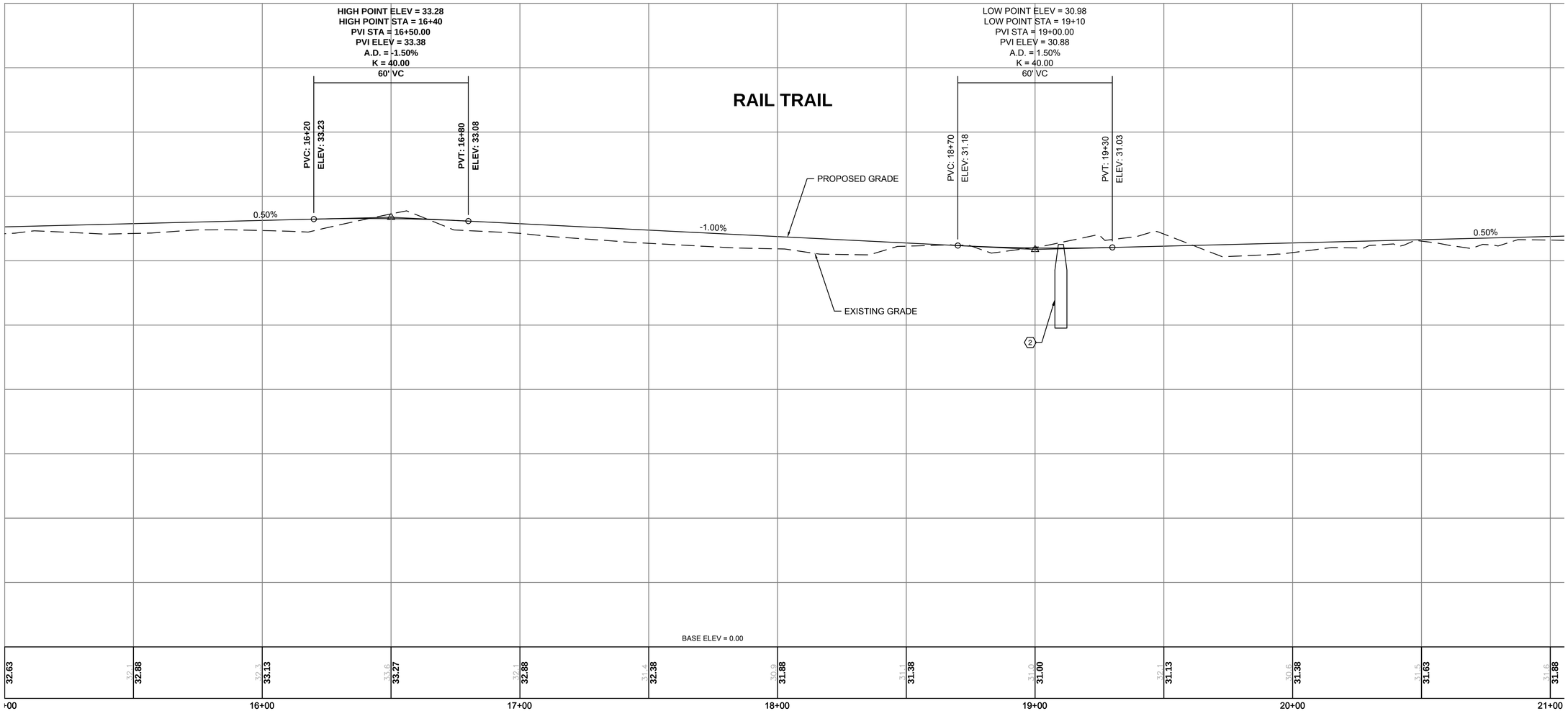
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 2 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013



CONTINUED ON SHEET NO. 33

CONTINUED ON SHEET NO. 35

FOR CONSTRUCTION PLANS:
SEE SHEET NO. 18

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

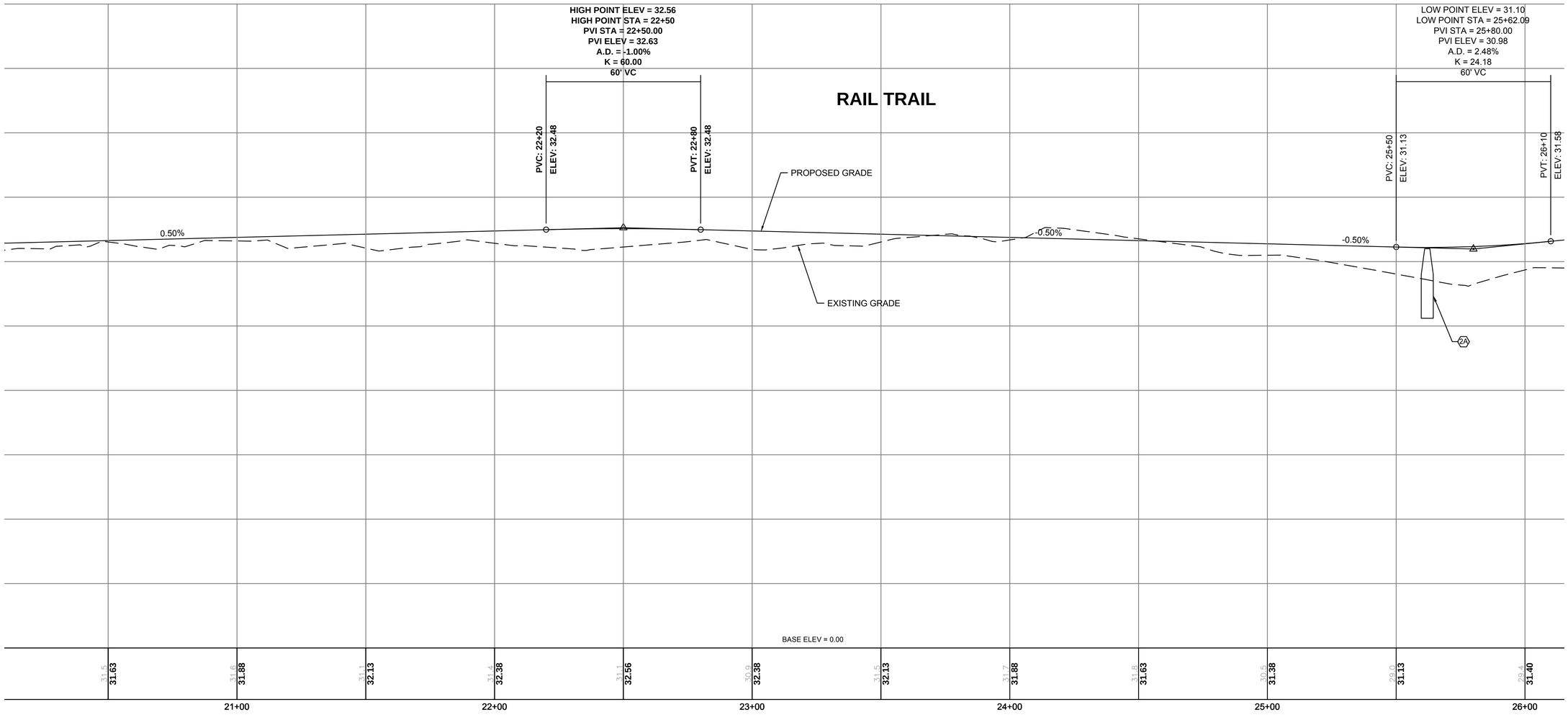
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 3 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 34

CONTINUED ON SHEET NO. 36



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 19

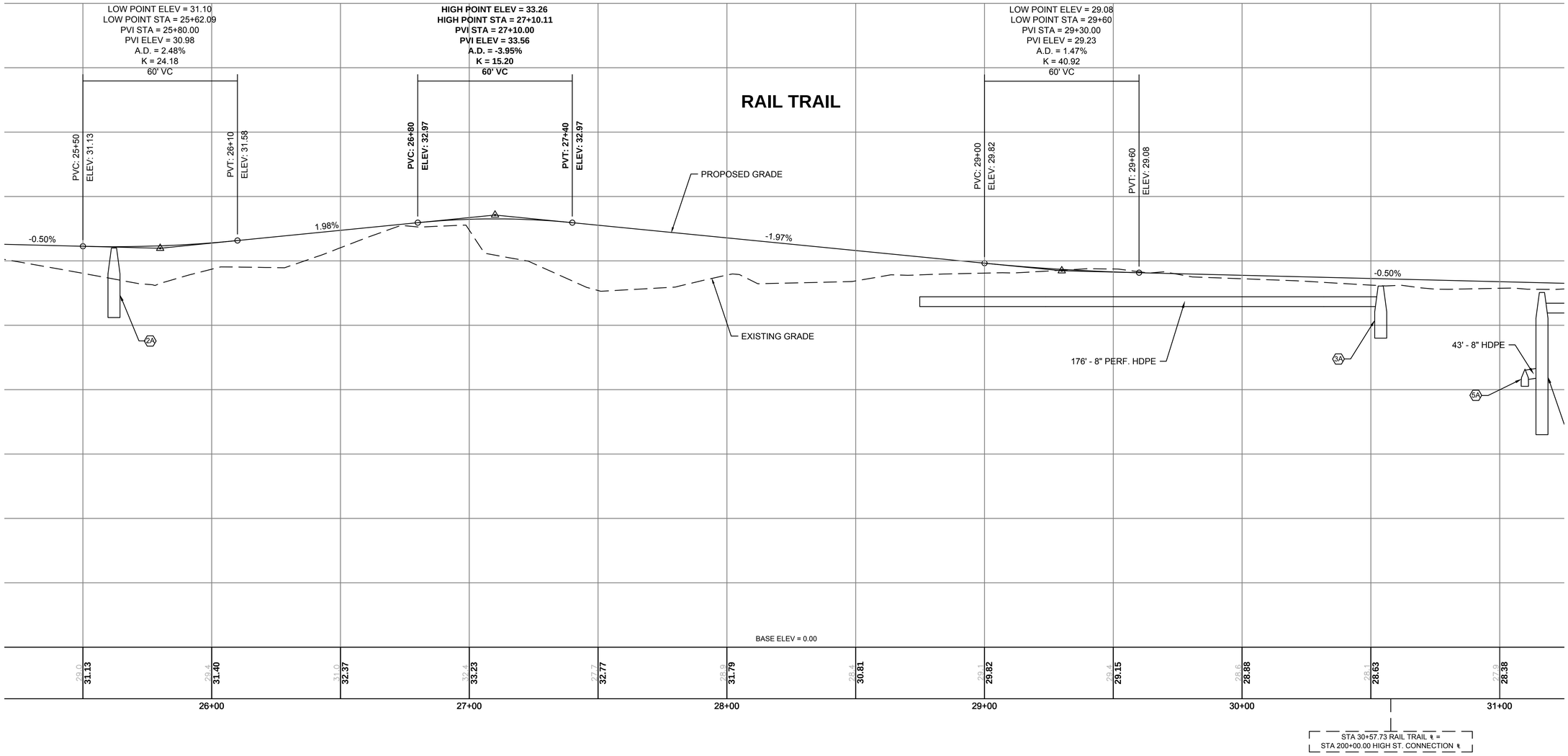
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 4 OF 16

606503[25%]HD(RAIL TRAIL PROFILE).DWG 27-Jun-2013



CONTINUED ON SHEET NO. 35

CONTINUED ON SHEET NO. 37

FOR CONSTRUCTION PLANS:
SEE SHEET NO. 20

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 5 OF 16

606503|25%|HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 36

CONTINUED ON SHEET NO. 38

LOW POINT ELEV = 28.08
LOW POINT STA = 31+68
PVI STA = 31+83.00
PVI ELEV = 27.97
A.D. = 2.00%
K = 30.00
60' VC

HIGH POINT ELEV = 28.95
HIGH POINT STA = 32+66
PVI STA = 32+60.00
PVI ELEV = 29.13
A.D. = -2.50%
K = 24.00
60' VC

LOW POINT ELEV = 27.46
LOW POINT STA = 34+38.96
PVI STA = 34+45.00
PVI ELEV = 27.28
A.D. = 2.50%
K = 23.96
60' VC

PVC: 31+53
ELEV: 28.12

PVT: 32+13
ELEV: 28.42

PVC: 32+30
ELEV: 28.67

PVT: 32+90
ELEV: 28.83

PVC: 34+15
ELEV: 27.58

PVT: 34+75
ELEV: 27.73

RAIL TRAIL

PROPOSED GRADE

-0.50%

1.50%

-1.00%

1.50%

43' - 8" HDPE

147' - 8" PERF. HDPE

PROP STORMWATER INFILTRATION SYSTEM

EXISTING GRADE

69' - 12" D.I.P.

12' - 12" D.I.P.

20' - 12" HDPE

17' - 12" HDPE

SUBSURFACE DETENTION SYSTEM

3A 5A 5 5A 6A 6B 6 9 7A

HIGH ST.

BASE ELEV = 0.00

28.1	**28.63**	27.9	**28.38**	27.7	**28.13**	27.8	**28.25**	28.7	**28.89**	30.4	**28.73**
43.0	**28.23**	43.1	**27.73**	42.7	**27.48**	26.7	**28.10**	25.8	**28.85**	24.8	**29.61**
	31+00		32+00		33+00		34+00		35+00		36+00

STA 30+57.73 RAIL TRAIL ℄ =
STA 200+00.00 HIGH ST. CONNECTION ℄

FOR CONSTRUCTION PLANS:
SEE SHEET NO. 21

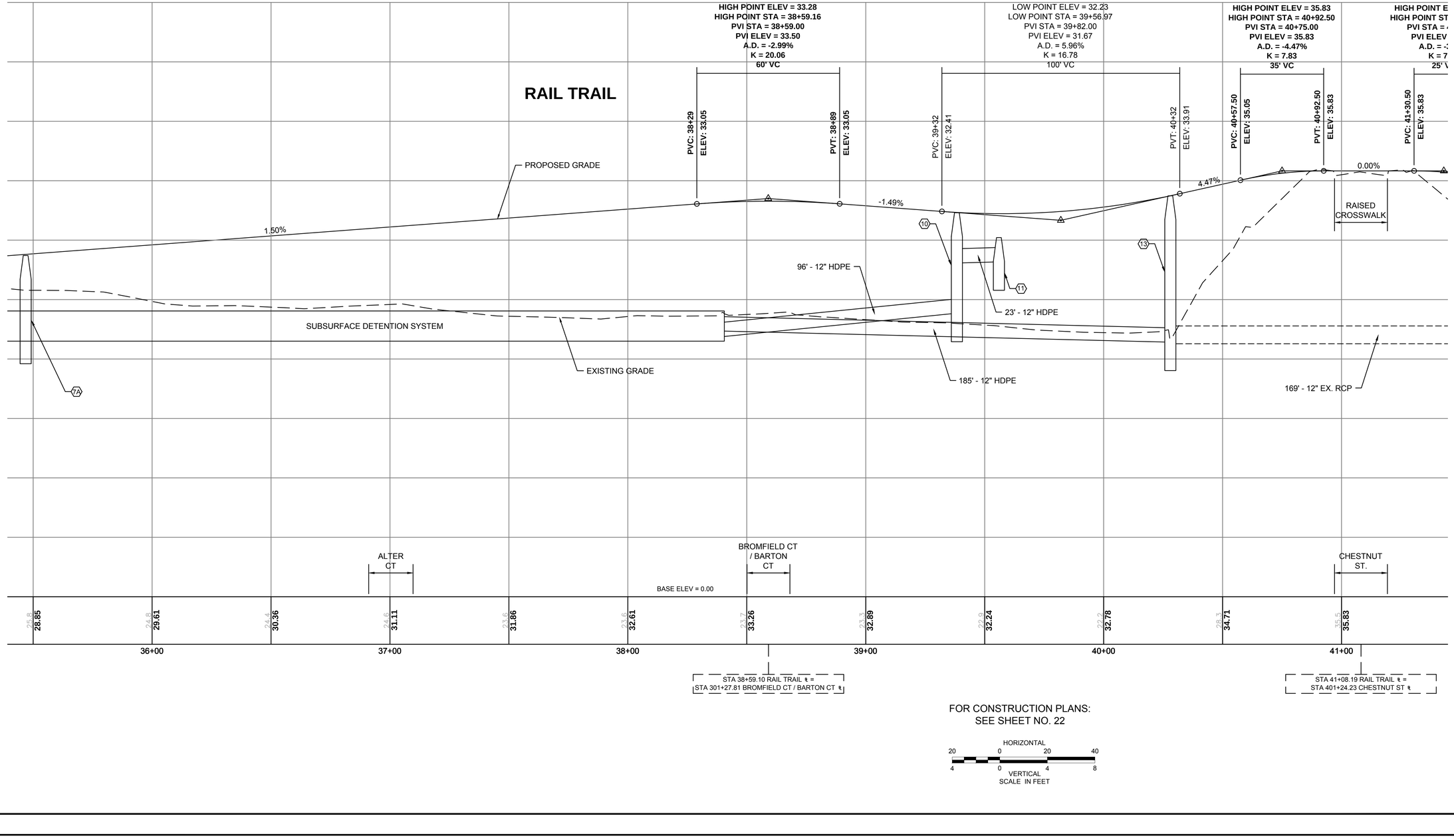
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 6 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 22

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

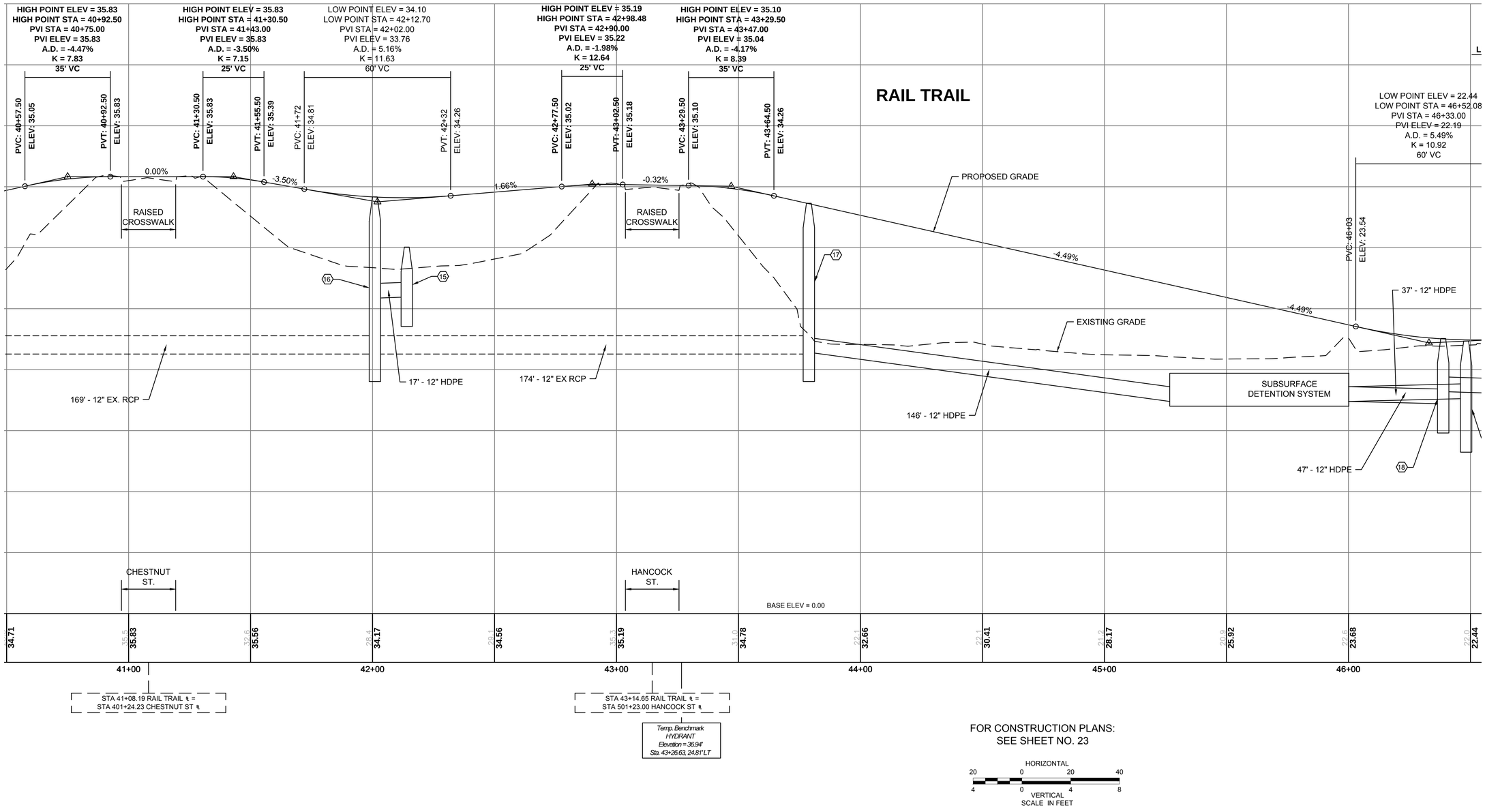
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 7 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 38

CONTINUED ON SHEET NO. 40



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 23

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	136
PROJECT FILE NO.	606503		

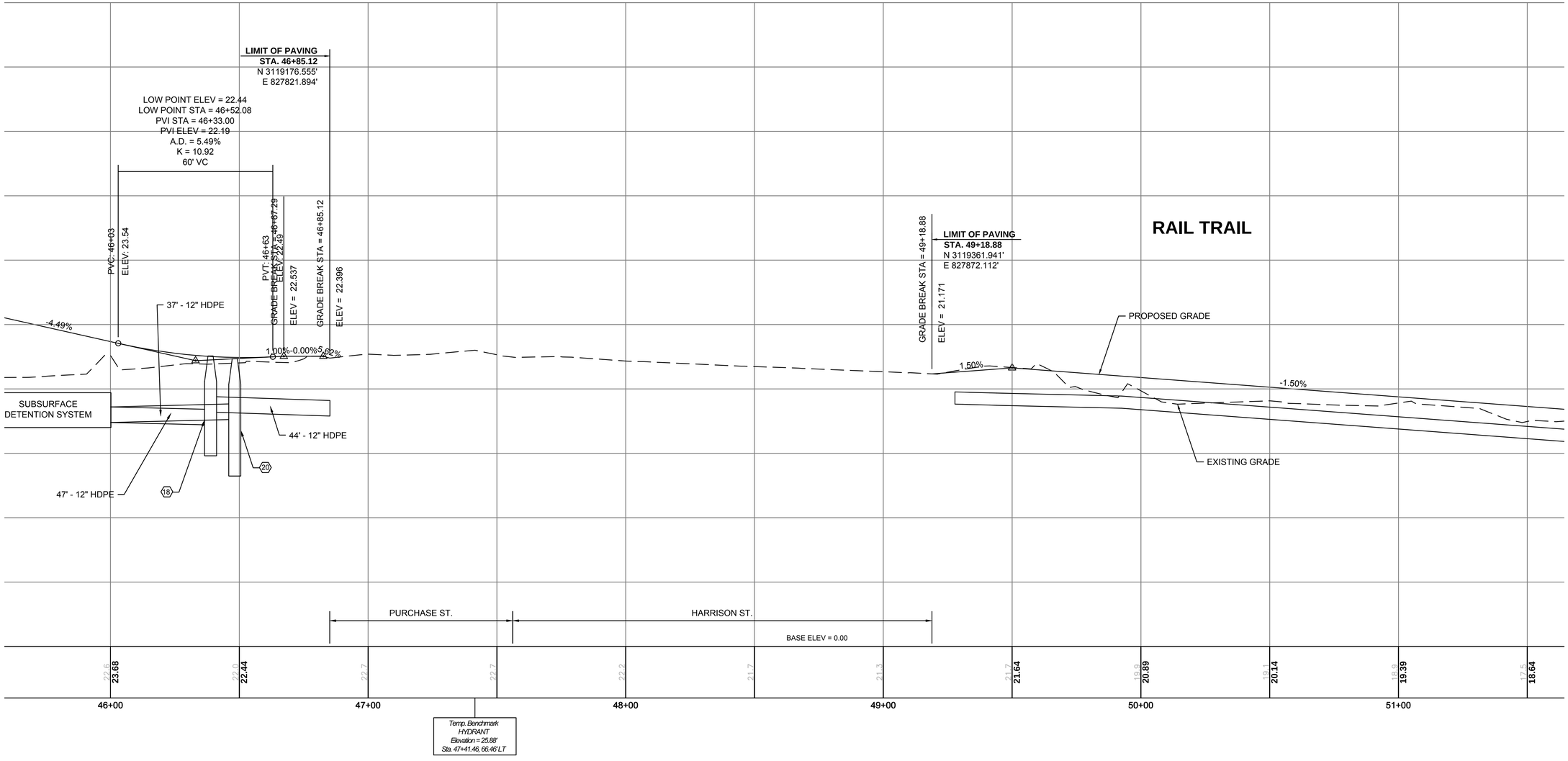
PROFILE
RAIL TRAIL
SHEET 8 OF 16

606503|25%|HD|RAIL TRAIL PROFILE).DWG 27-Jun-2013

RAIL TRAIL

CONTINUED ON SHEET NO. 39

CONTINUED ON SHEET NO. 41



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 24

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 9 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 40

CONTINUED ON SHEET NO. 42

RAIL TRAIL

LOW POINT ELEV = 14.14
LOW POINT STA = 54+70
PVI STA = 54+40.00
PVI ELEV = 14.29
A.D. = 1.00%
K = 60.01
60' VC

PVC: 54+10
ELEV: 14.74

PVT: 54+70
ELEV: 14.14

LIMIT OF PAVING
STA. 55+61.52
N 3119995.517'
E 827883.507'

LIMIT OF PAVING
STA. 55+83.62
N 3120013.774'
E 827896.141'

GRADE BREAK STA = 55+48.00
ELEV = 13.749

GRADE BREAK STA = 55+61.52
ELEV = 13.817

GRADE BREAK STA = 55+83.62
ELEV = 13.506

PROPOSED GRADE

-1.50%

541' - 10" PERF. HDPE

SUBSURFACE DETENTION SYSTEM

EXISTING GRADE

-0.50%

1.51%

1.50%

1.50%

-0.50%

30' - 12" HDPE

EX. 24" BRICK ARCH PIPE (RECORD)

WATER ST.

BASE ELEV = 0.00

51+00		52+00		53+00		54+00		55+00		56+00	
18.9	**19.39**	17.5	**18.64**	16.0	**17.89**	16.4	**17.14**	16.1	**16.39**	15.0	**15.64**	14.5	**14.89**	13.8	**14.27**	13.8	**13.99**	13.7	**13.78**	14.2	**13.53**	13.0	**13.30**

STA 55+72.62 RAIL TRAIL ℄ =
STA 601+35.40 WATER ST ℄

Temp. Benchmark
HYDRANT
Elevation = 15.12'
Sta. 55+60.36, 10.14' RT

FOR CONSTRUCTION PLANS:
SEE SHEET NO. 25

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

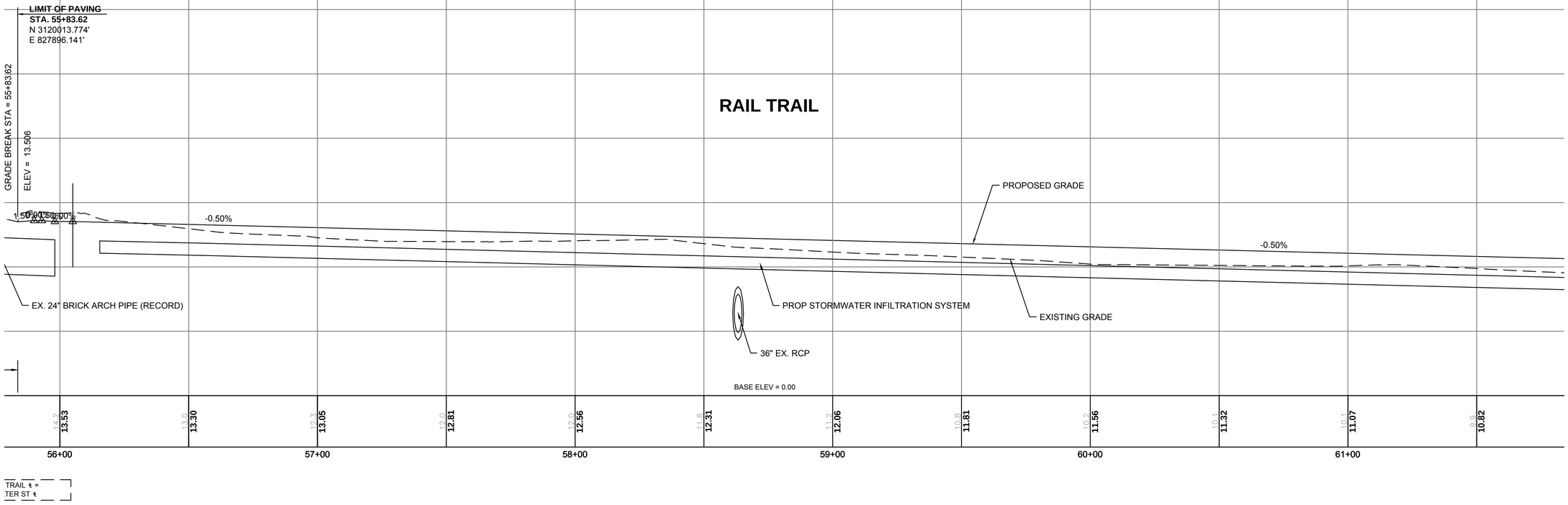
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 10 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 41

CONTINUED ON SHEET NO. 43



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 26

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

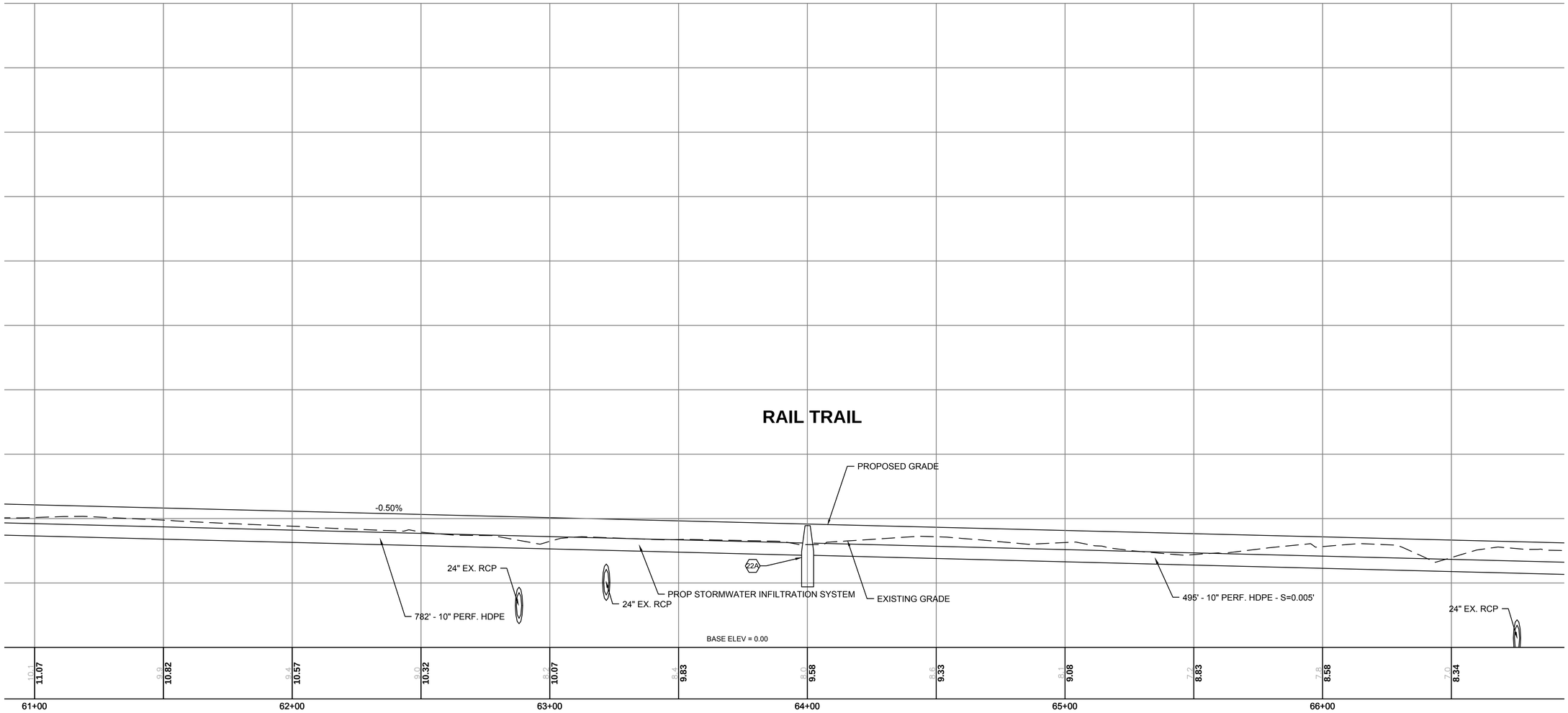
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 11 OF 16

606503[25%]HD(RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 42

CONTINUED ON SHEET NO. 44



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 27

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

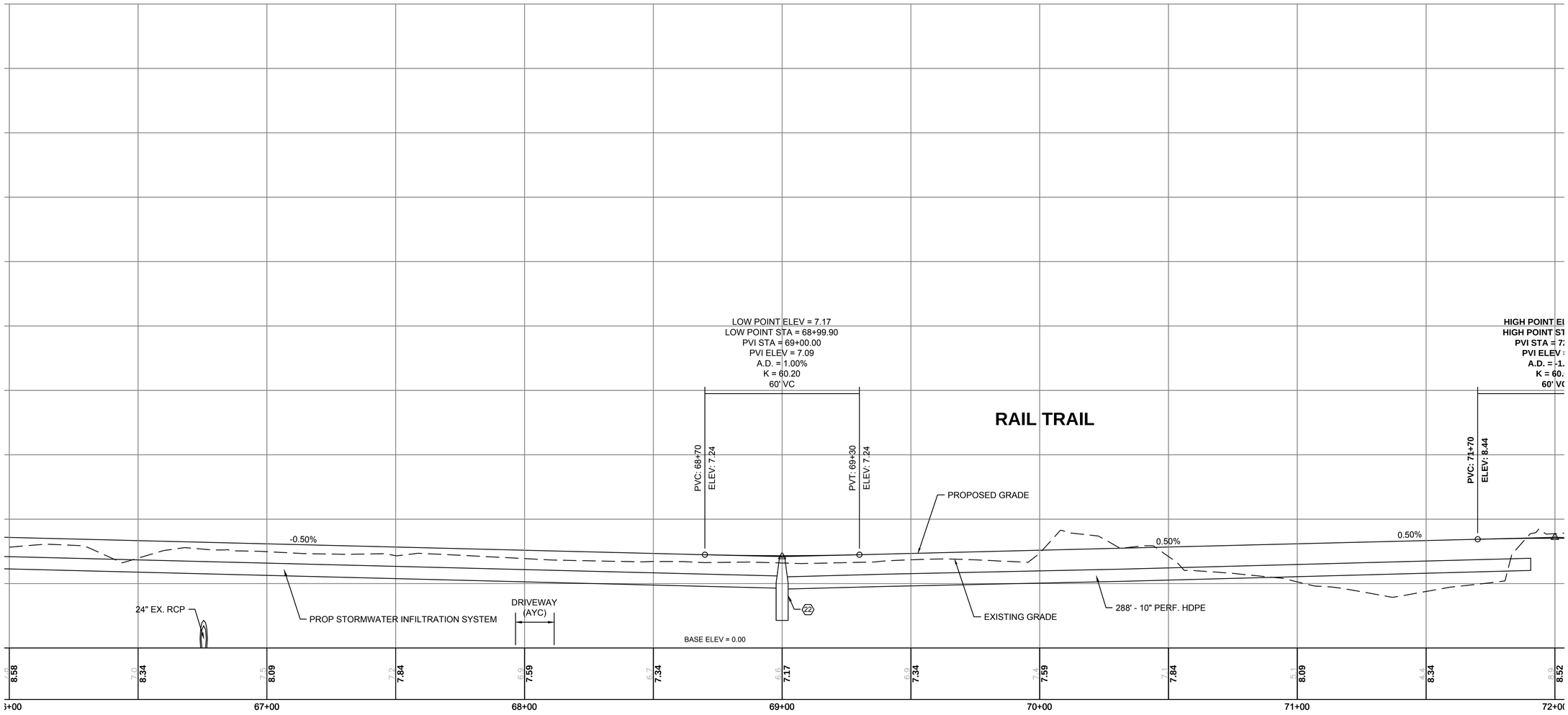
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 12 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 43

CONTINUED ON SHEET NO. 45



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 28

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

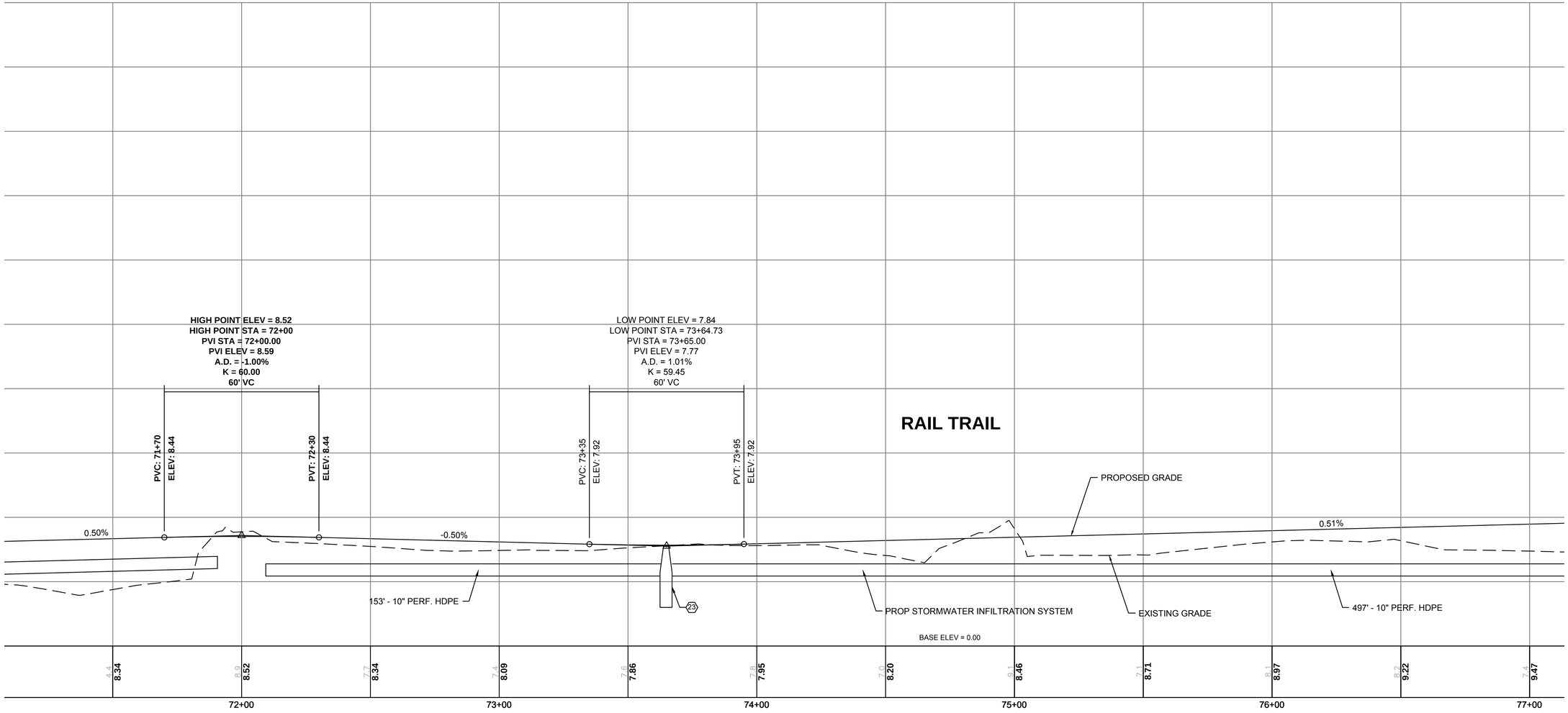
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 13 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 44

CONTINUED ON SHEET NO. 46



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 29

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

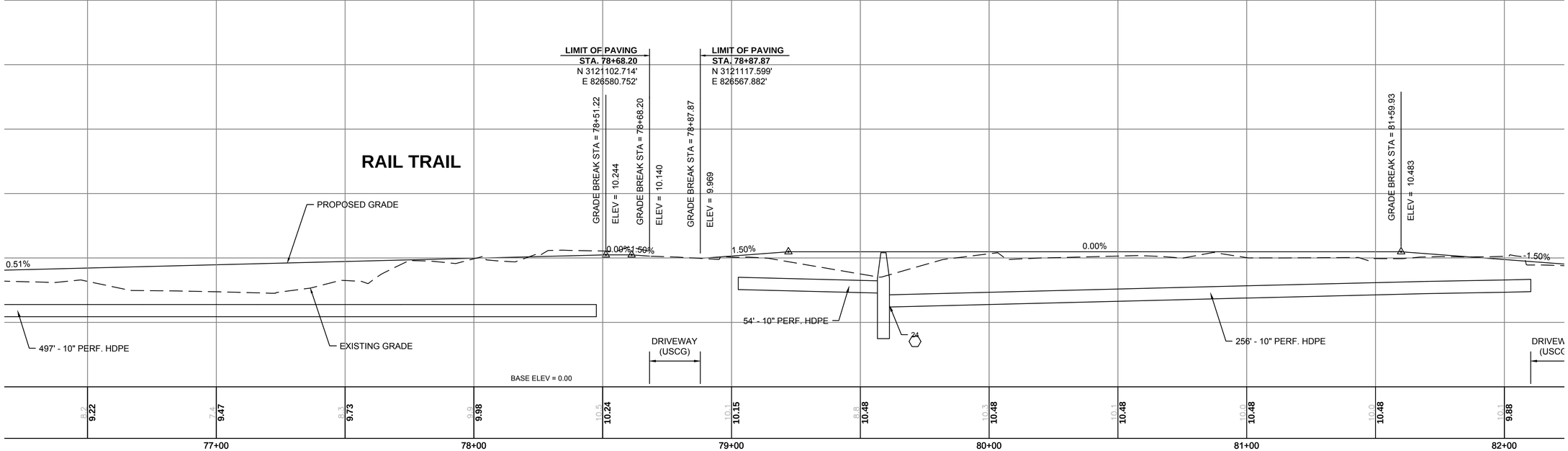
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 14 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 45

CONTINUED ON SHEET NO. 47



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 30

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

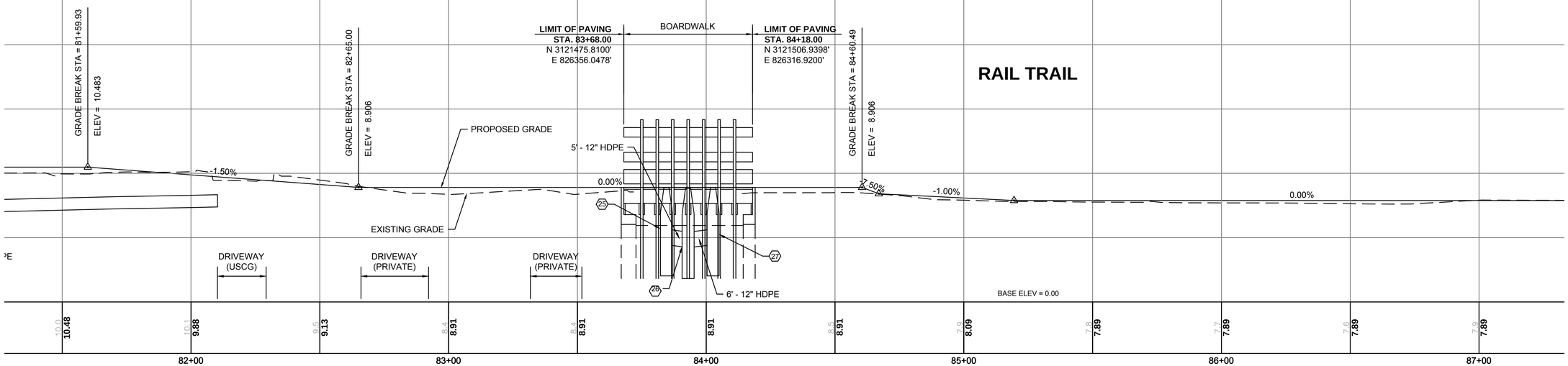
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 15 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 46

CONTINUED ON SHEET NO. 48



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 31

HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

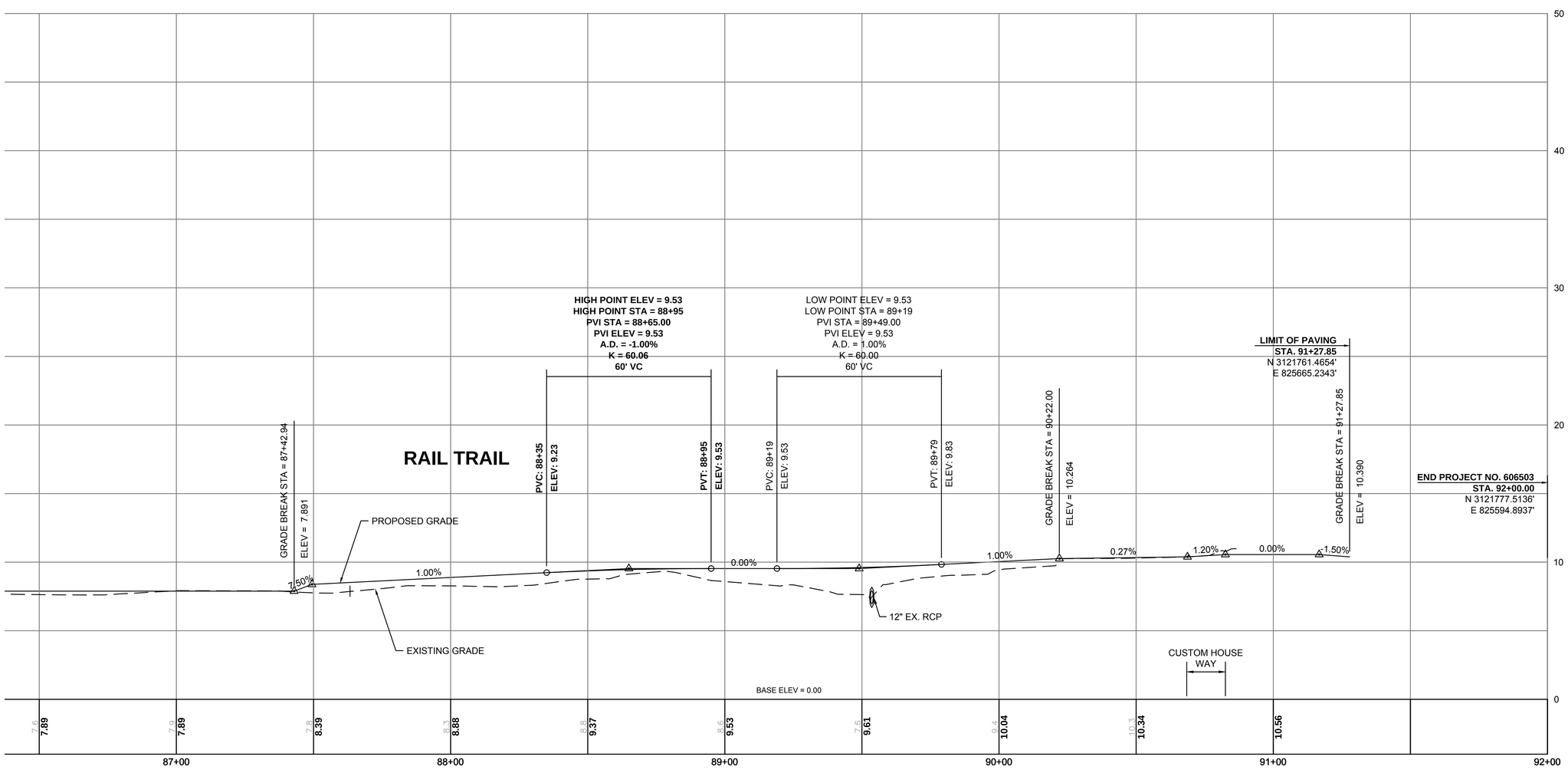
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	136
PROJECT FILE NO.	606503		

PROFILE
RAIL TRAIL
SHEET 16 OF 16

606503[25%]HD\RAIL TRAIL PROFILE).DWG 27-Jun-2013

CONTINUED ON SHEET NO. 47



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 32

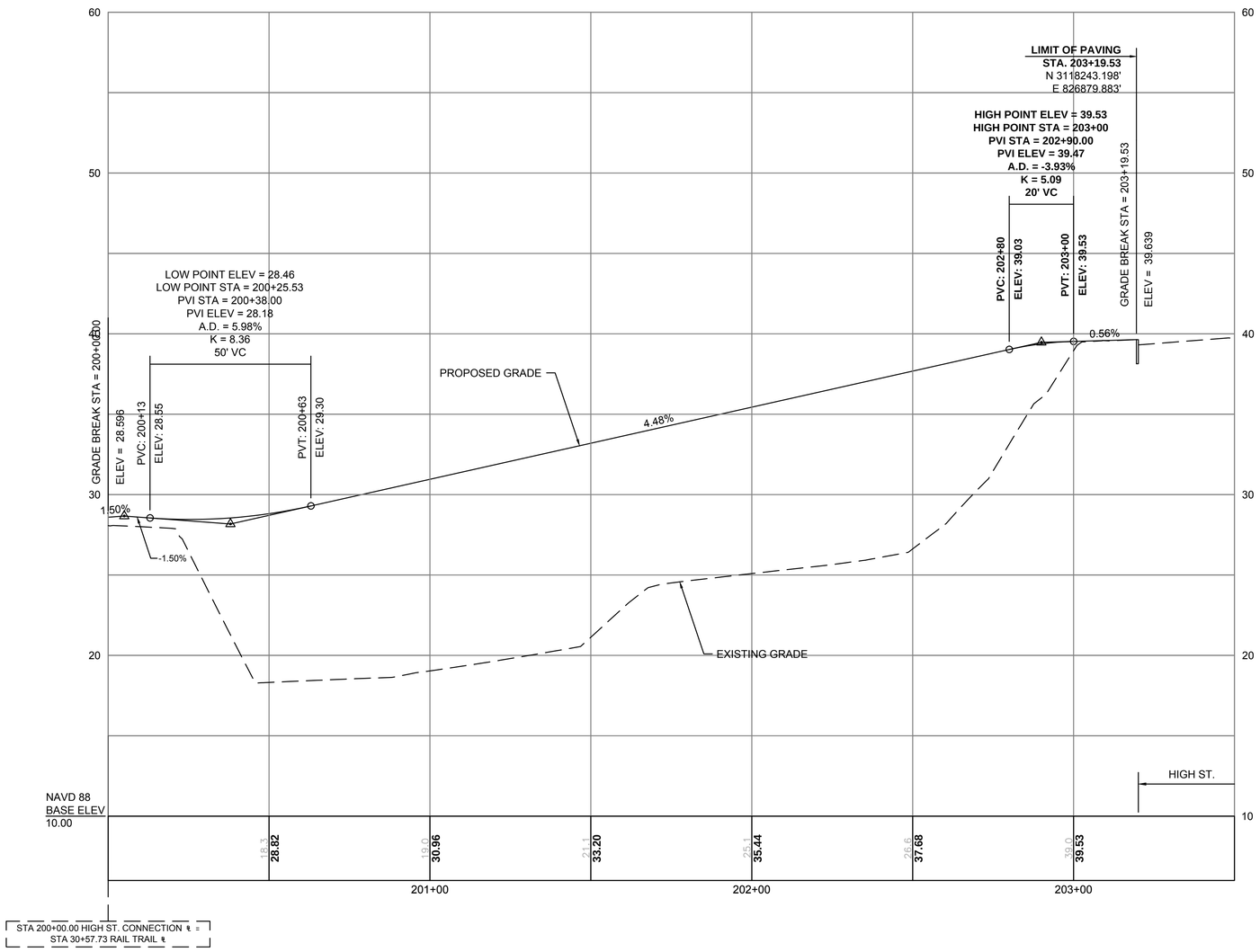
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	136
PROJECT FILE NO.	606503		

PROFILE
HIGH STREET CONNECTION

606503\[25%]HD\[MISC PROFILES].DWG 27-Jun-2013



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 21

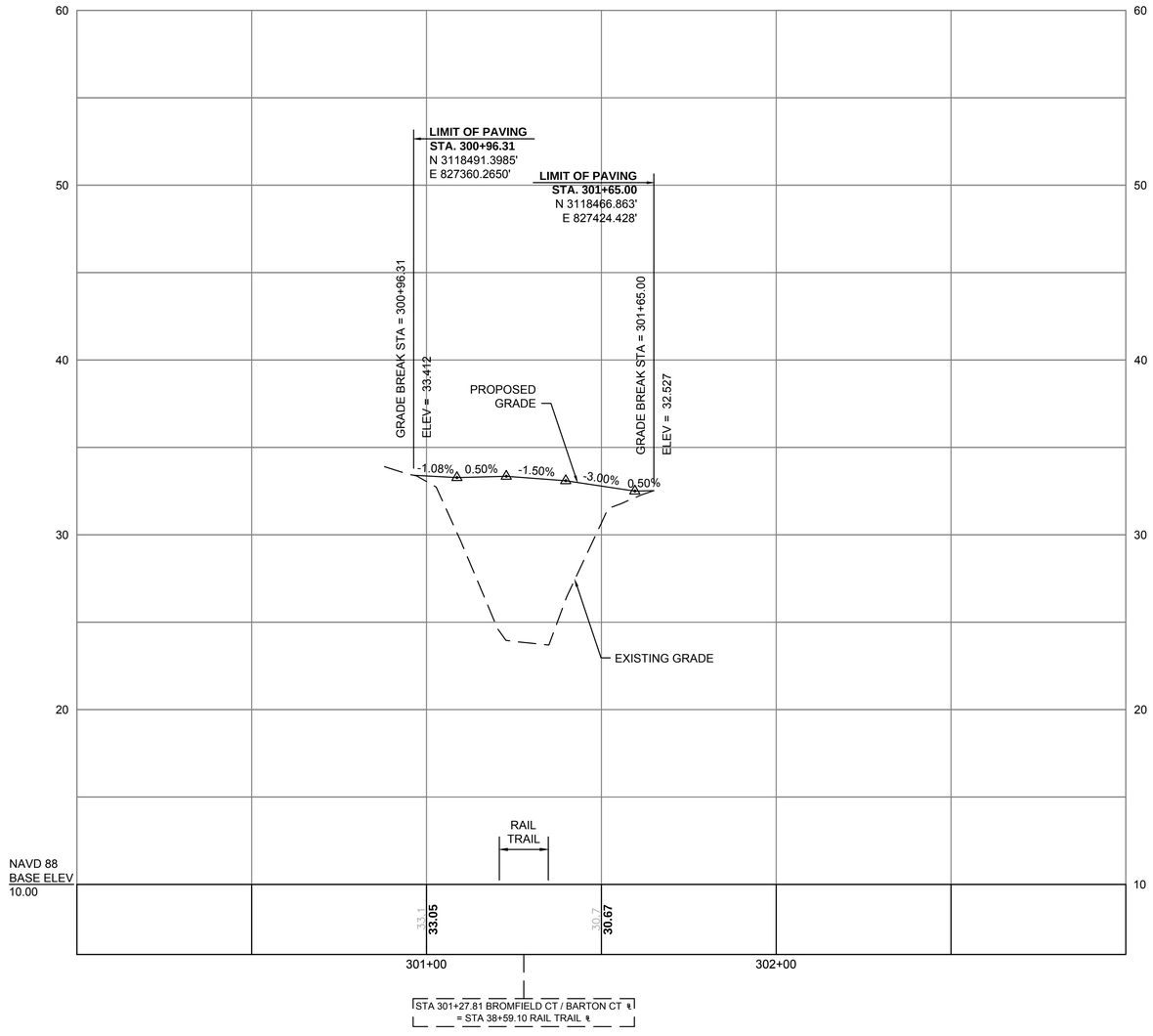
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	136
PROJECT FILE NO.	606503		

PROFILE
BROMFIELD CT. / BARTON CT.

606503\[25%]HD\[MISC PROFILES].DWG 27-Jun-2013



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 22

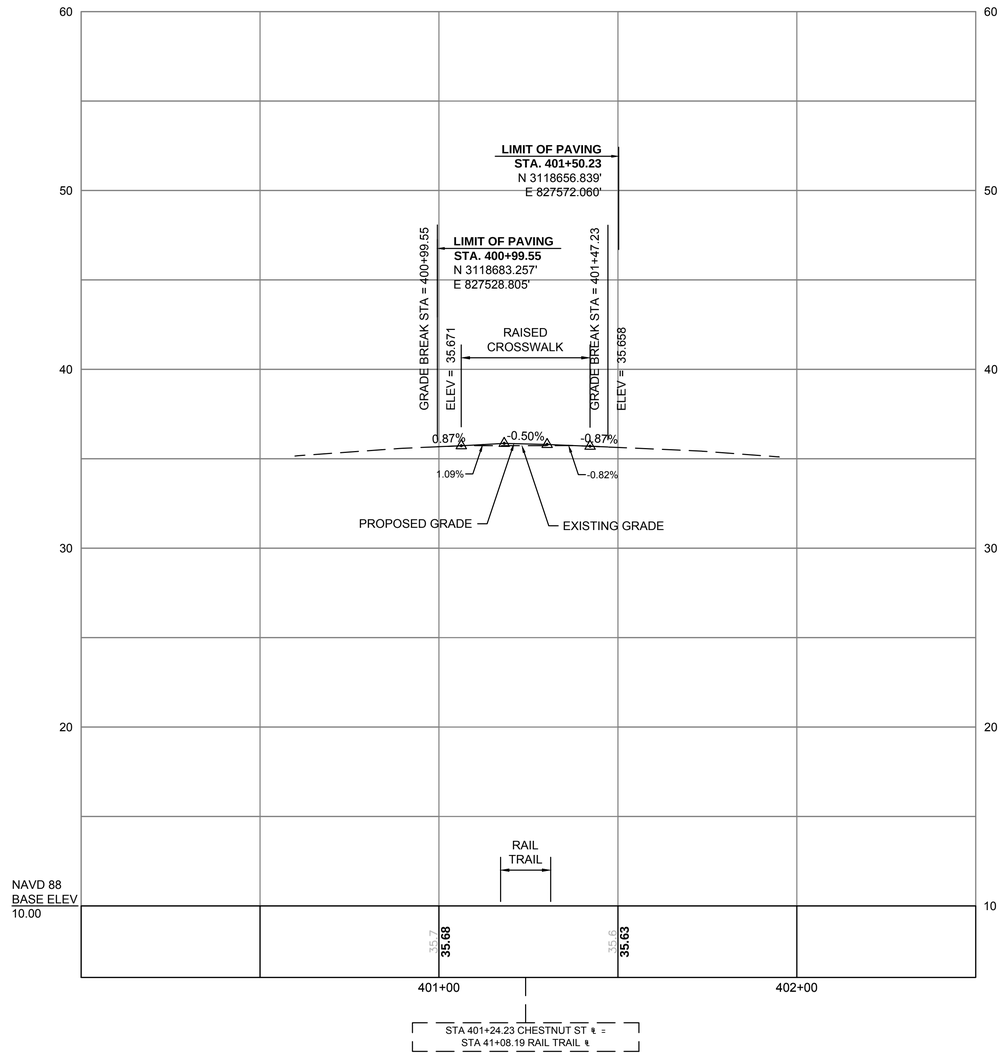
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	51	136
PROJECT FILE NO.	606503		

PROFILE
CHESTNUT ST.

606503\25%\HD\MISC PROFILES\.DWG 27-Jun-2013



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 23

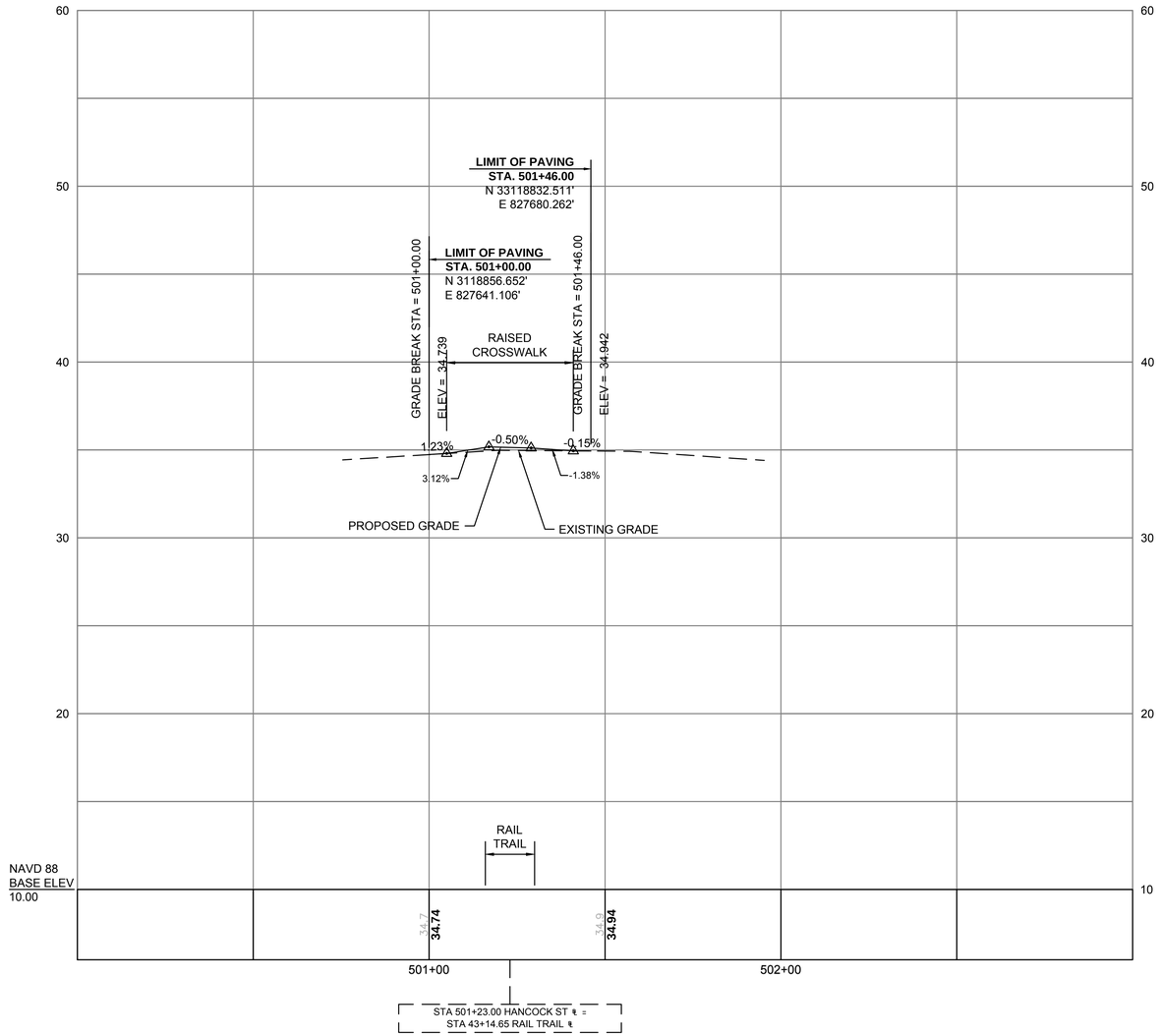
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	52	136
PROJECT FILE NO.	606503		

PROFILE
HANCOCK ST.

606503\25%\HD\MISC PROFILES\.DWG 27-Jun-2013



FOR CONSTRUCTION PLANS:
SEE SHEET NO. 23

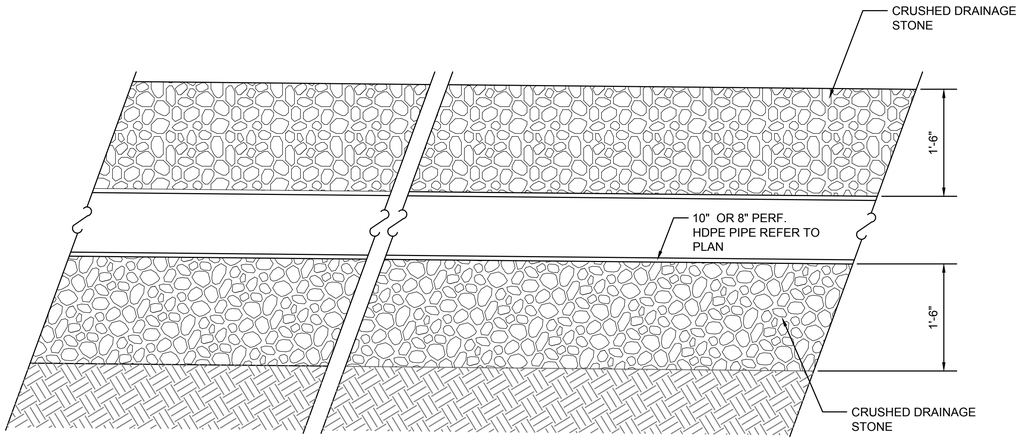
HORIZONTAL
20 0 20 40
4 0 4 8
VERTICAL
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

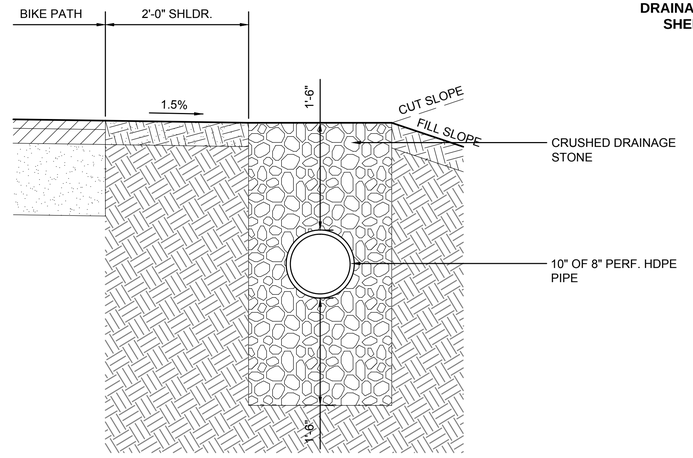
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	53	136
PROJECT FILE NO.	606503		

DRAINAGE DETAILS
SHEET 1 OF 3

606503[25%]HD\DRAINAGE DETAILS\.DWG 27-Jun-2013

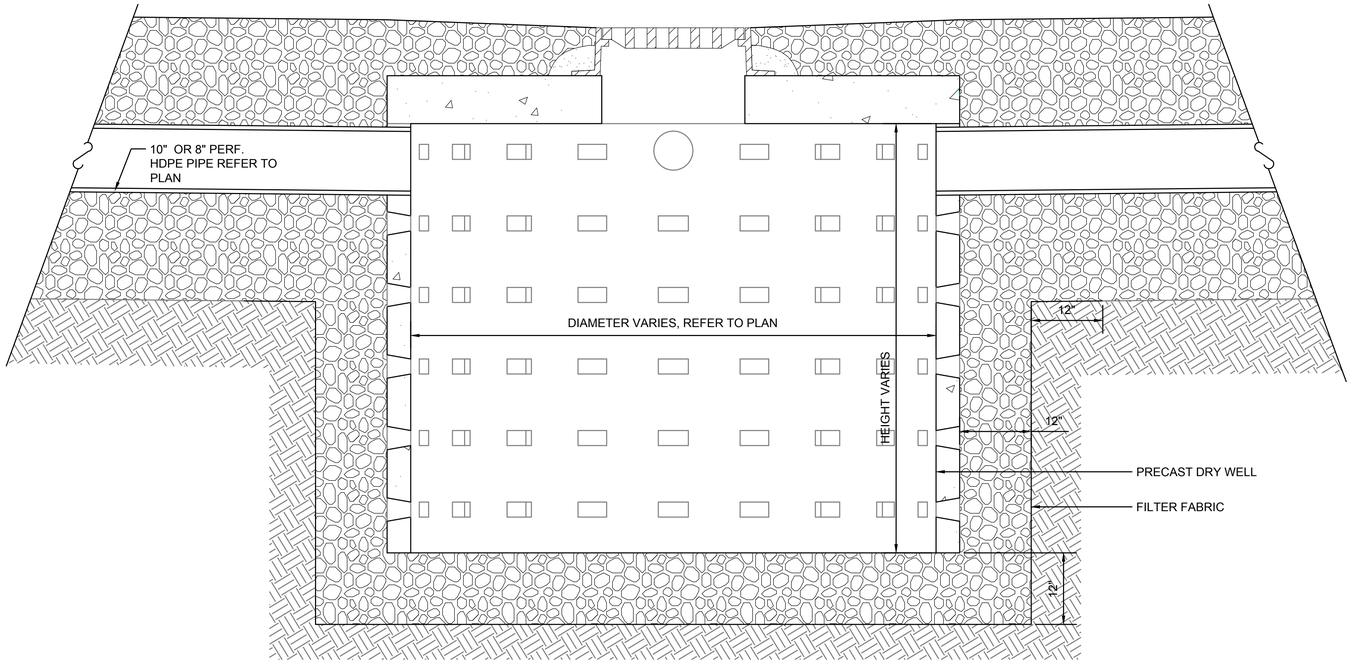


1 STORMWATER TRENCH
NOT TO SCALE



2 STORMWATER TRENCH - CROSS SECTION
NOTES:

1. ALL PRECAST COMPONENTS SHALL BE DESIGNED FOR HS-20 LOADING.
2. CONCRETE SHALL BE COMPRESSIVE STRENGTH 4000 PSI, TYPE || CEMENT.
3. FRAMES AND GRATES SHALL BE HEAVY DUTY AND DESIGNED FOR HS-20 LOADING.
4. PROVIDE "V" KNOCKOUTS FOR PIPES WITH 1" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
5. STANDARD CATCH BASIN FRAME SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURCE MINIMUM, 5 BRICK COURCE MAXIMUM)



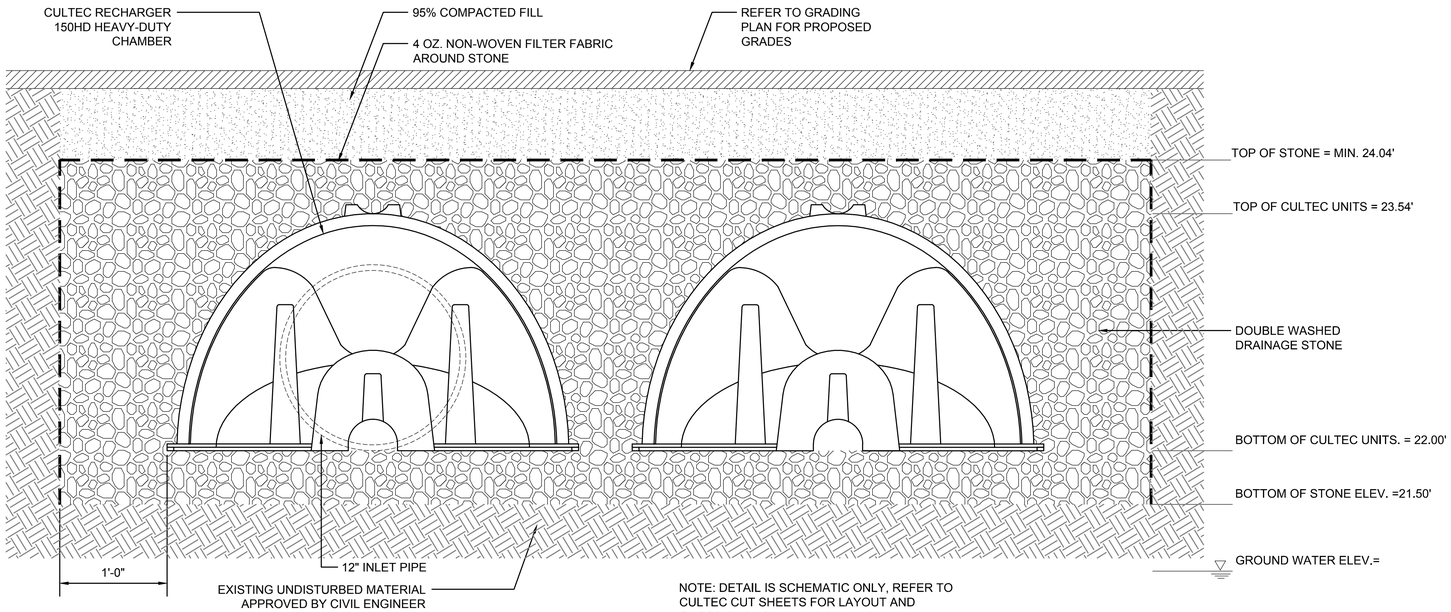
3 STORMWATER TRENCH WITH LEACHING BASIN
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

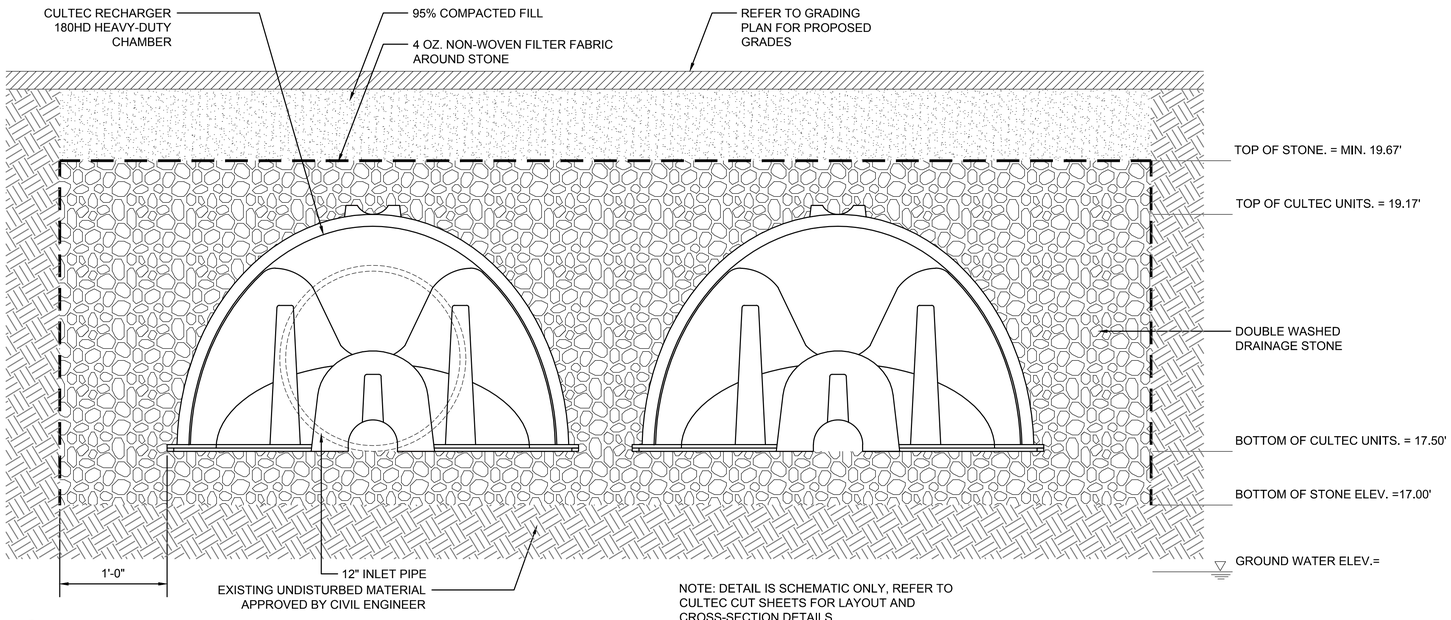
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	54	136
PROJECT FILE NO.	606503		

DRAINAGE DETAILS
SHEET 2 OF 3

606503\[25%]HD\DRAINAGE DETAILS\ DWG 27-Jun-2013



1 SUBSURFACE DETENTION AND INFILTRATION BASIN 1
NOT TO SCALE



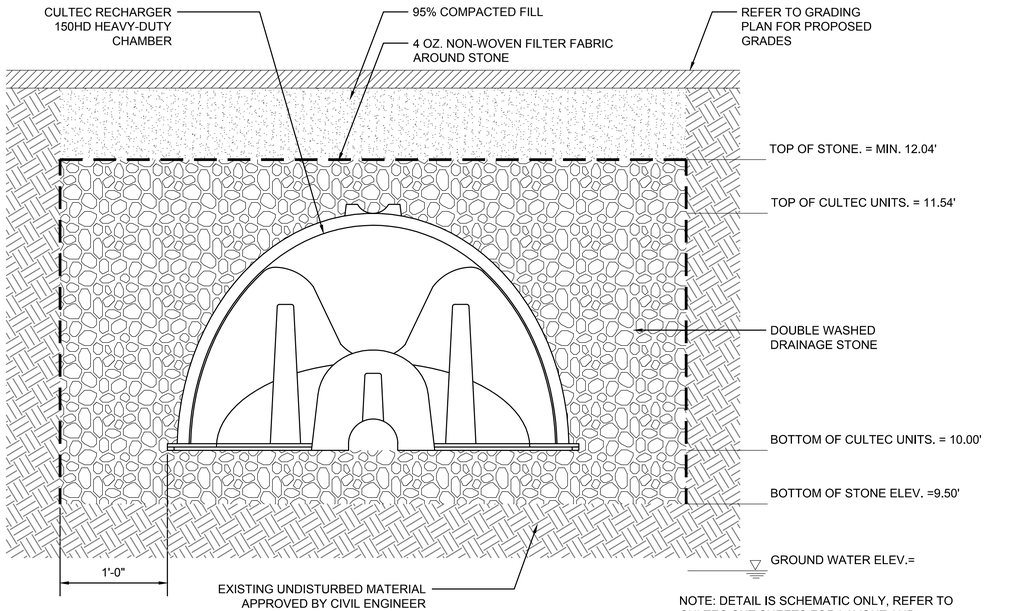
2 SUBSURFACE DETENTION AND INFILTRATION BASIN 2
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	136
PROJECT FILE NO.		606503	

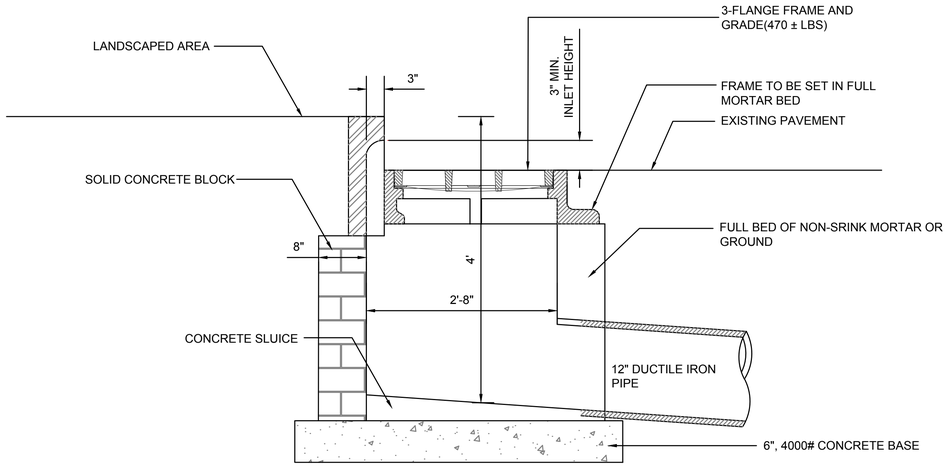
DRAINAGE DETAILS
SHEET 3 OF 3

606503(25%)HD\DRAINAGE DETAILS).DWG 27-Jun-2013



NOTE: DETAIL IS SCHEMATIC ONLY, REFER TO CULTEC CUT SHEETS FOR LAYOUT AND CROSS-SECTION DETAILS.

1 SUBSURFACE DETENTION AND INFILTRATION BASIN 3
NOT TO SCALE



NOTES:
1) INLET SET IN NON-SHRINK MORTAR OR GROUT WITH TRANSITION CURB SECTION AT EACH END

2) FRAMES AND GRATE SHALL BE SET IN FULL BED OF MORTAR. ADJUST TO GRADE WITH CLAY BRICKS AND MORTAR AS REQUIRED.

3) CONSTRUCTION MATERIAL FOR STRUCTURE TO CONSIST OF SOLID CONCRETE BLOCK SET IN MORTAR OR PRECAST CONCRETE DESIGNED FOR H-20 LOADING.

4) PROVIDE OPENINGS FOR PIPES WITH 2" CLEARANCE TO OUTSIDE OF PIPE (IF PRECAST).

5) MORTAR ALL PIPE CONNECTIONS/JOINTS

2 SHALLOW CATCH BASIN
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	56	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 1 OF 16

606503[25%]TR\SIGN & PVMT MRKG\.DWG 27-Jun-2013

N

NEWBURYPORT

NEWBURY

CITY LAYOUT LINE

PARKER STREET

MAP U-07 PARCEL NO REF
N/F
OAK HILL CEMETERY
3414/4

MAP U-07 PARCEL 24
N/F
OAK HILL CEMETERY
BOOK 3414 PAGE 4

MAP U-07 PARCEL 25
N/F
MASS. ELECTRIC CO.
BOOK 2838 PAGE 399

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

PARKER ST.
STOP
D3-1
R1-1
(FRONT)
NO MOTOR VEHICLES
R5-3
(BACK)

PROJECT BEGIN
STA 10+00
N3116791.7573
E825138.6258

PROP. STOP LINE

BOS

N 64° 55' 07" E 273.48'

PC +73.48

D=41° 10' 35"
L=179.67' R=250.00'

PRC +53.14

D=27° 29' 48"
L=239.95' R=500.00'

BOS

BOS

BOS

N/F
TOWN OF NEWBURY
25956/212

MAP U-07 PARCEL 26
N/F
CITY OF NEWBURY
NO REF

MAP U-07 PARCEL 27
N/F KATHLEEN E. MURRAY & THOMAS W. GREELEY
BOOK 24633 PAGE 296

#00

#46

100' BUFFER ZONE

50' BUFFER ZONE

WETLAND

GRAVEL PATH

FOOT PATH

STONEWALL

GUTTER LINE

BIT DRIVE

GRAVEL DRIVE

20 0 20 40
SCALE IN FEET

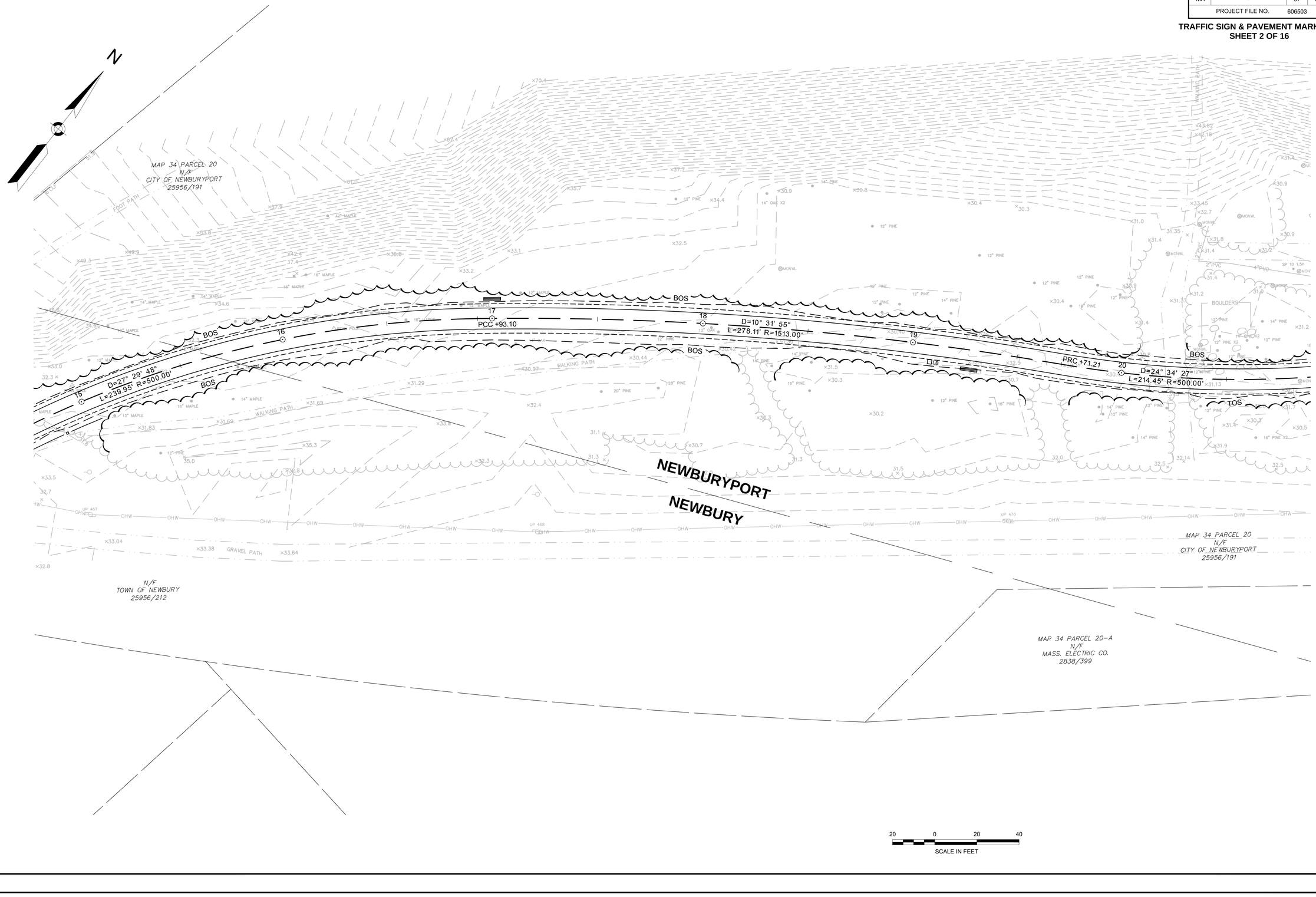
CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 2 OF 16

606503[25%]TR\SIGN & PVMT MRKG\.DWG 27-Jun-2013



CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

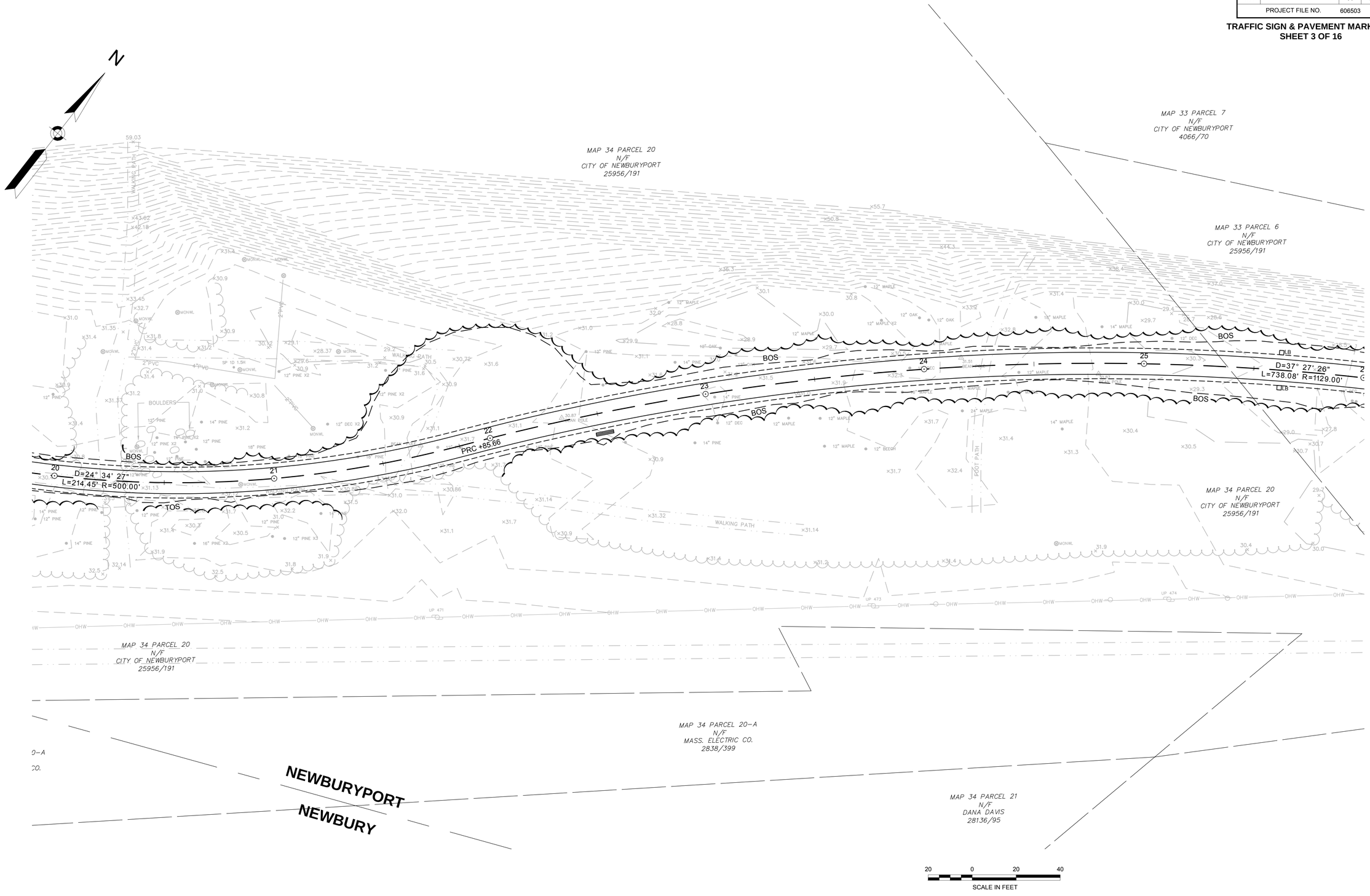
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	58	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 3 OF 16

606503(25%)TR\SIGN & PVMT MRKG\.DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

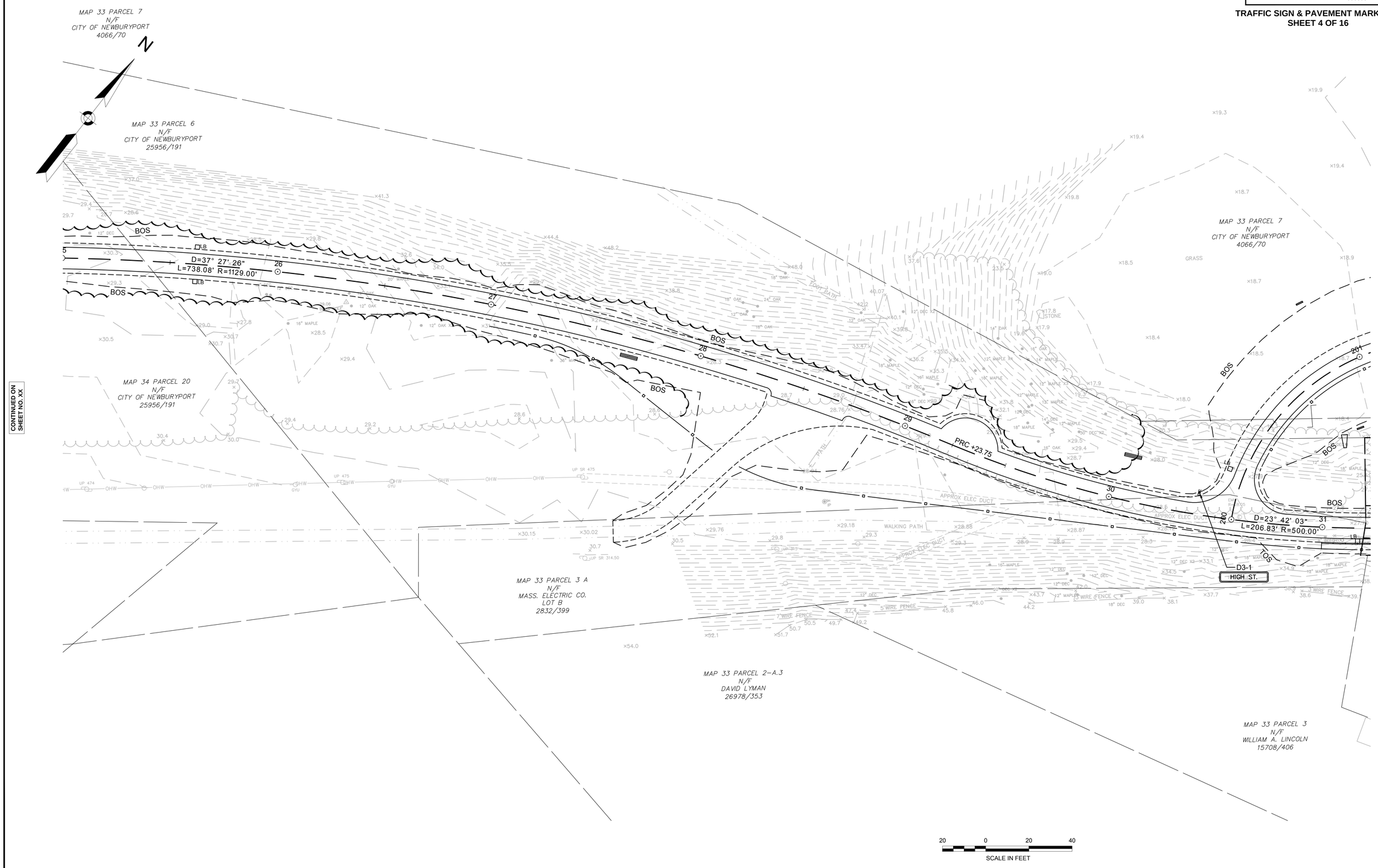
CONTINUED ON SHEET NO. XX



NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	59	136
PROJECT FILE NO.		606503	

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 4 OF 16

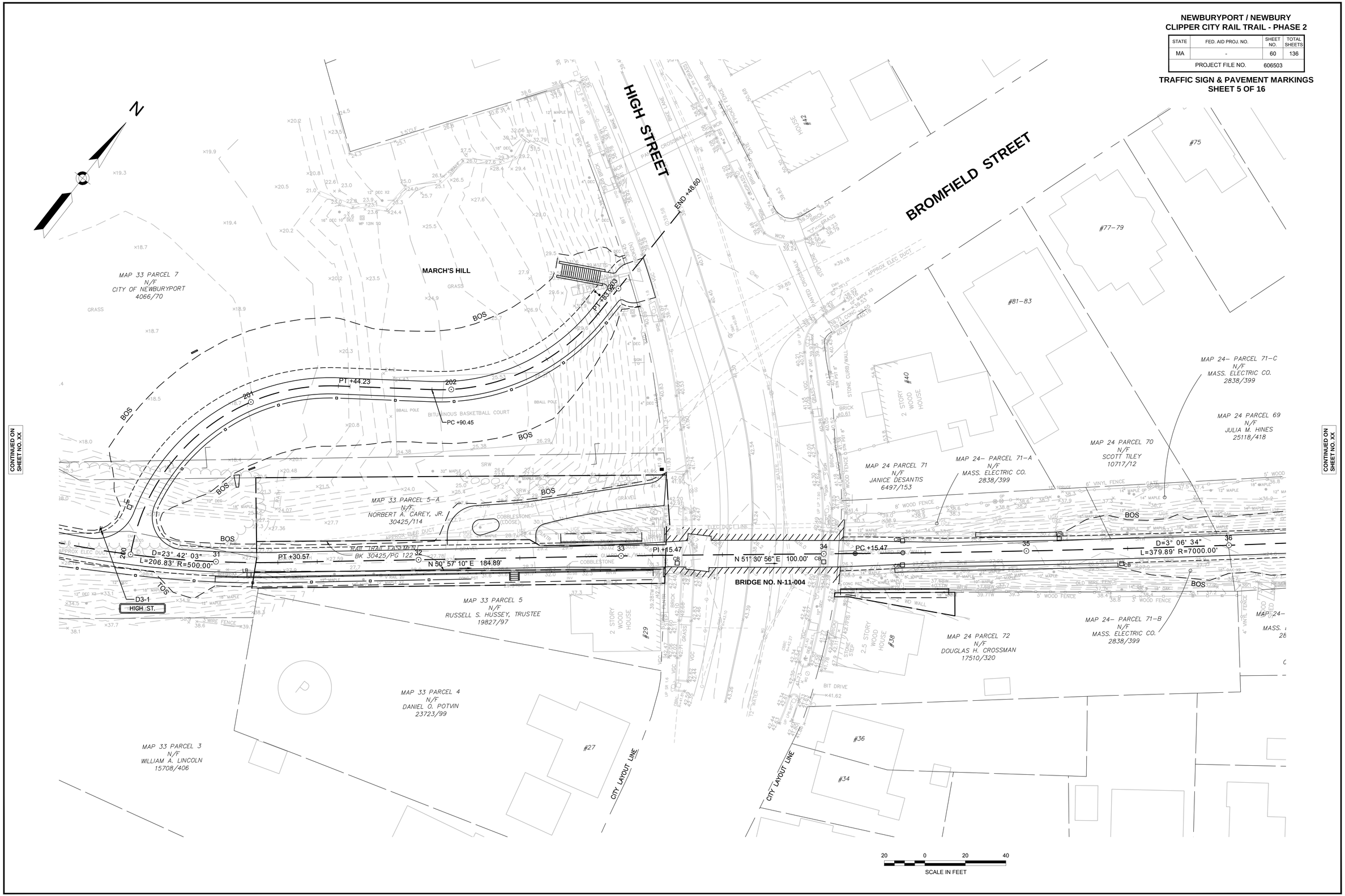


606503[25%]TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	60	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 5 OF 16

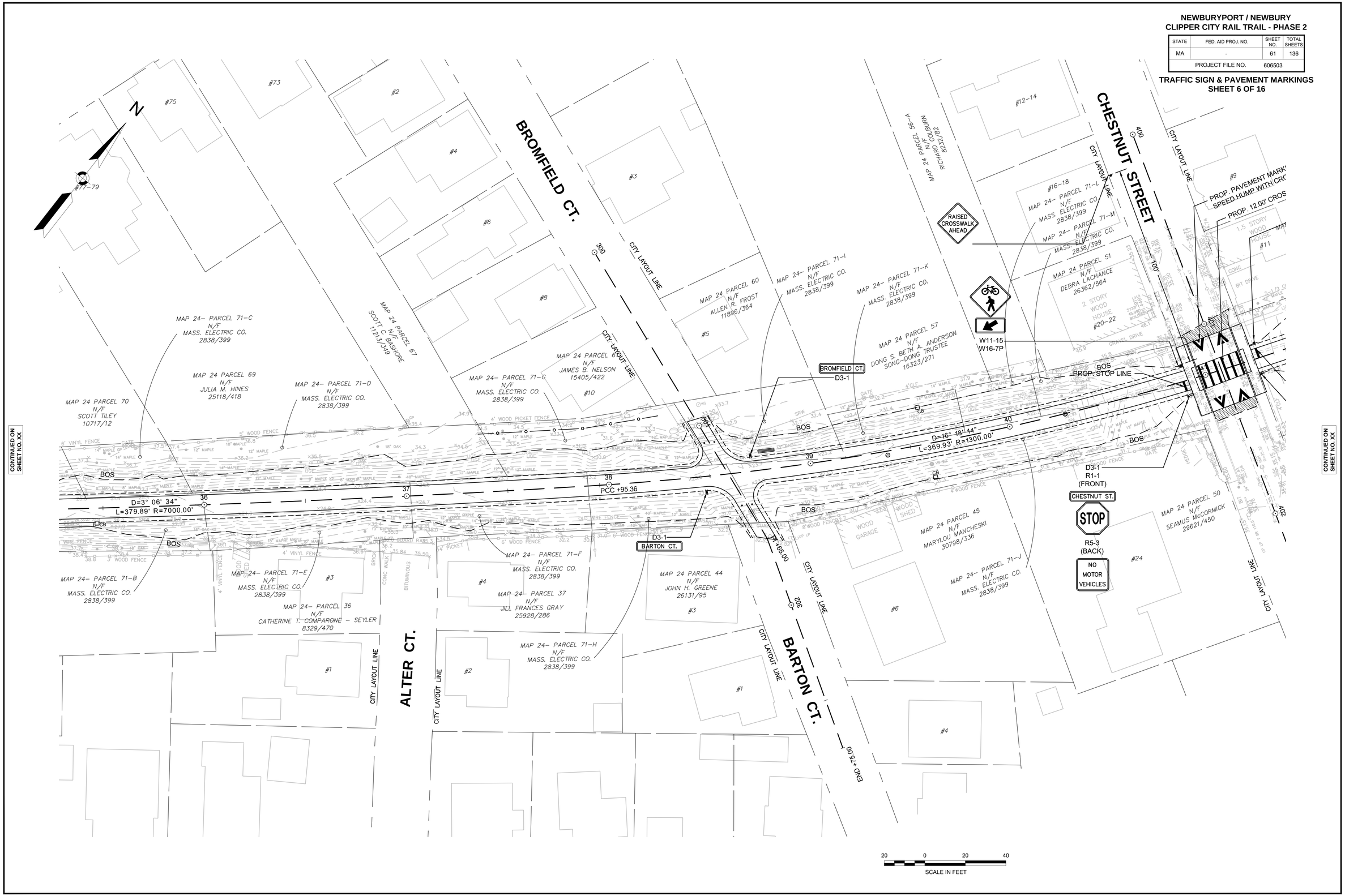


606503(25%)TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	61	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 6 OF 16



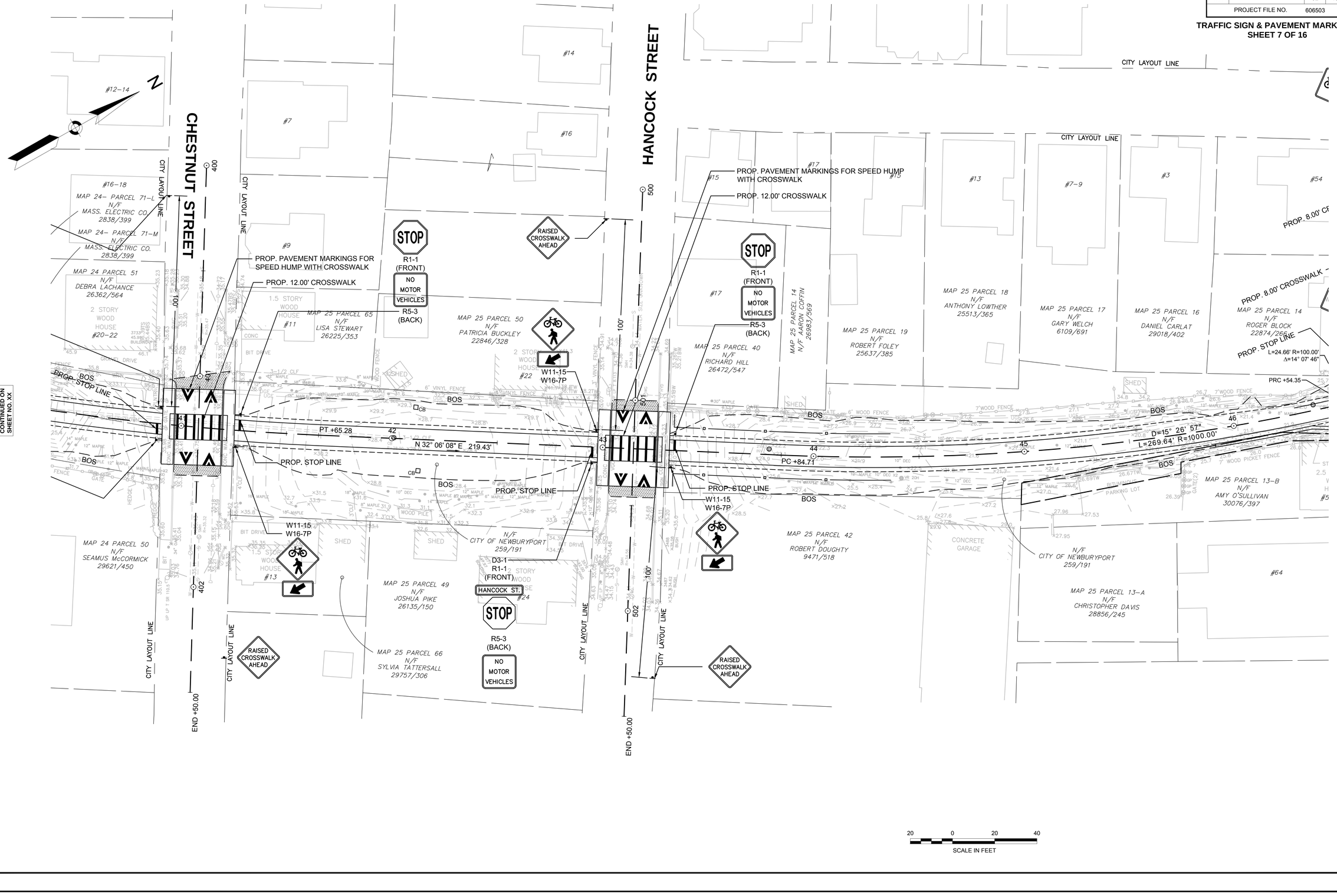
606503(25%)TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	62	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 7 OF 16

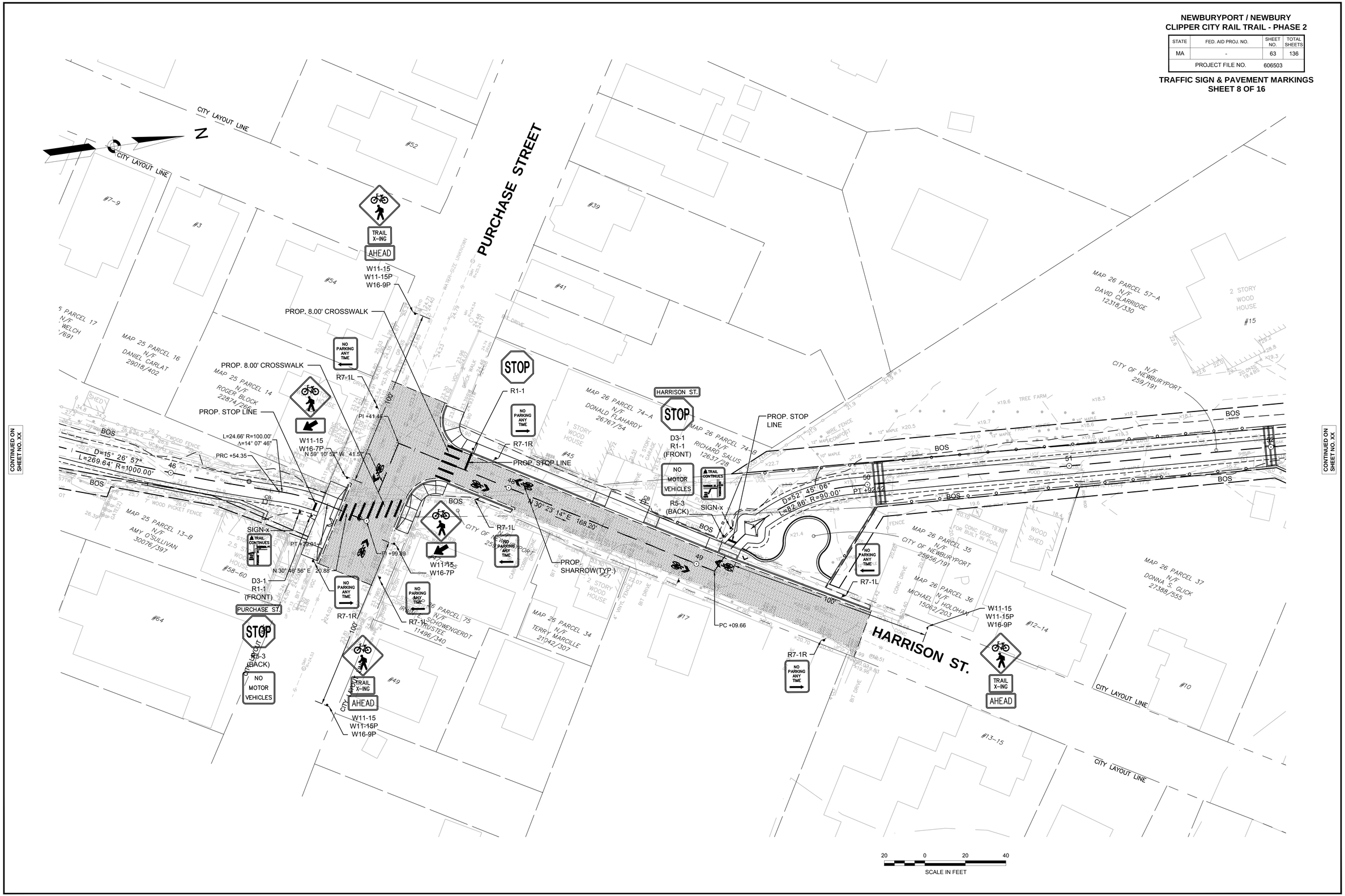
606503[25%]TR\SIGN & PVMT MRKG\.DWG 27-Jun-2013



NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	63	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 8 OF 16



CONTINUED ON SHEET NO. XX

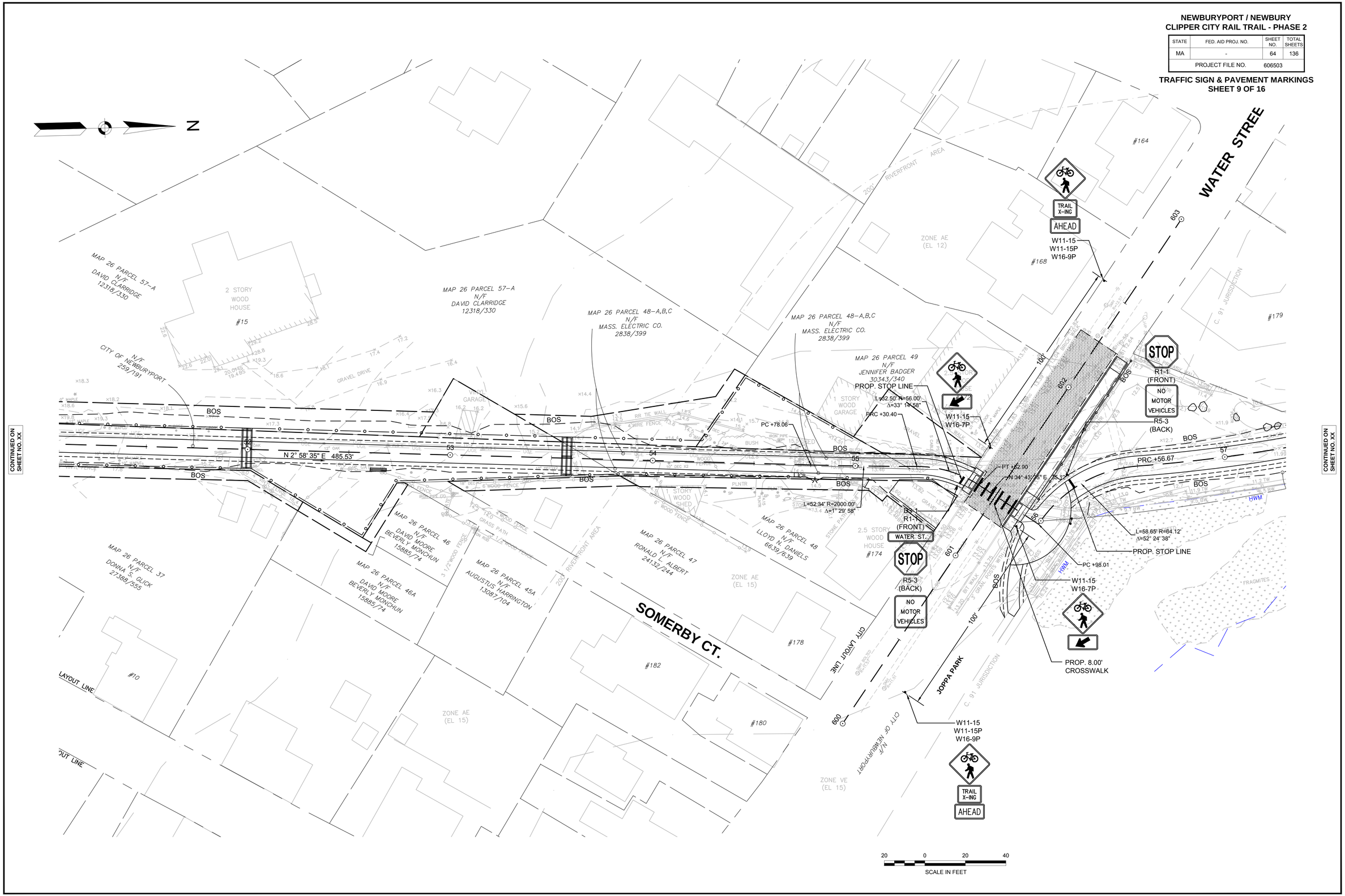
CONTINUED ON SHEET NO. XX

606503(25%)TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	64	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 9 OF 16



CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

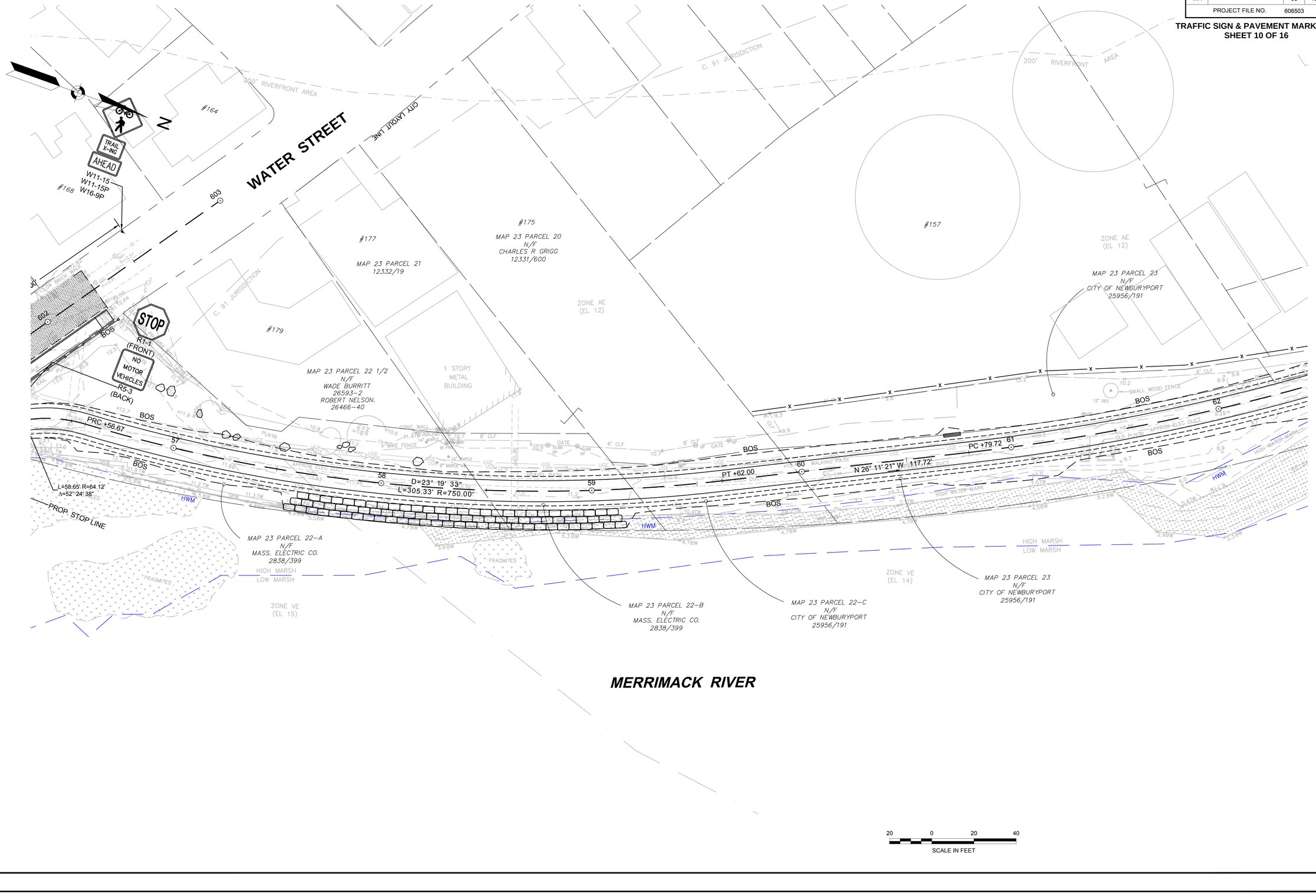
606503[25%]TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	65	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 10 OF 16

606503[25%]TR\SIGN & PVMT MRK(G).DWG 27-Jun-2013



STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	66	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 11 OF 16

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	67	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 12 OF 16

606503[25%]TR\SIGN & PVMT MRK(G).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

N

MAP 23 PARCEL 24
N/F
MASS. ELECTRIC CO.
2402/525

(NOTE: POLES HAVE BEEN REMOVED)

ZONE AE
(EL 12)

200' RIVERFRONT AREA

ACCESS EASEMENT
1885/88

MAP 20 PARCEL 8
N/F
CITY OF NEWBURYPORT
DOC. 503345
L.C. 15621A

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

1 STORY BRICK BUILDING

1 STORY WOOD BUILDING

#95

ZONE AE
(EL 13)

N/F
CITY OF NEWBURYPORT
25956/191

APPROX ELEC DUCT

BITUMINOUS

GRAVEL PATH

CONC WALK

GRAVEL DRIVE

GATE

OVERHANG

CONC BLOCK

DUMPSTER

CABLE MARKER

GRASS/OVERGROWN

GRAVEL

BROKEN BIT

L=93.86' R=57.00'
Δ=94° 20' 50"

PRC +39.24

BOS

68

69

67

L=397.90' R=2500.00'
Δ=9° 07' 09"

N/F
MASS. ELECTRIC CO.
2838/399

ZONE AE
(EL 13)

STORAGE BETWEEN POST

HWM

HIGH MARSH

LOW MARSH

ZONE VE
(EL 14)

PRC +33.10

D=101° 42' 30"
L=213.02' R=120.00'

71

72

73

PRC +46.11

MAP 20 PARCEL 13
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#115–119 R
MAP 20 PARCEL 12
N/F
AMERICAN YACHT CLUB
DOC. 61727
L.C. 15621A

OLD–BROKEN DOWN BULKHEAD

MERRIMACK RIVER

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	68	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 13 OF 16

606503(25%)TR(SIGN & PVMT MRK(G).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

L=44.91' R=60.00'
Δ=42° 52' 56"
PC +71.33
BOS
PT +06.36
S 32° 04' 26" W 164.97'
75
76
PATH NARROWS
W5-4a
BOS
PRC +46.11
73
D=9° 04' 34"
L=139.40' R=880.00'
72
74
D=88° 46' 08"
L=120.85' R=78.00'
PRC +85.51
BOS
MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A
MAP 20 PARCEL 13
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A
#95
1 STORY BRICK BUILDING
2 STORY BRICK BUILDING
1 STORY METAL
2 STORY WOOD
2 STORY BRICK BUILDING COAST GUARD
N/F
CITY OF NEWBURYPORT
25956/191
N/F
U.S.A.
5878/401
MAP 17 PARCEL 10
N/F
U.S.A. COAST GUARD
BOOK 5878 PAGE 401
#63R
MAP 17 PARCEL 10
N/F
U.S.A.
5878/401
MAP 17 PARCEL 16
NEWBURYPORT MANAGER LLC
23921/421
200' RIVERFRONT AREA
ZONE AE
(EL 13)
ZONE VE
(EL 14)
GRAVEL
GRASS/OVERGROWN
BITUMINOUS
BROKEN BIT
CONC
ELECTRICAL
TRAILER
SHEET PILE BULKHEAD
OLD-BROKEN DOWN BULKHEAD
DOCK
HWM
MERRIMACK RIVER

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	69	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 14 OF 16

606503[25%]TR(SIGN & PVMT MRKG).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

N

WATER STREET

CITY LAYOUT LINE

CITY LAYOUT LINE

#73-75

MAP 17 PARCEL 12
N/F
RANGE LIGHT LIMITED PARTNERSHIP
24852/303

MAP 17 PARCEL 13
N/F AUDRIUS E. KONTAUS
BOOK 17261 PAGE 570

#85

2 STORY WOOD

PROP. STOP LINE

PI +61.22

R1-1

STOP

PROP. STOP LINE

BOS

R1-1

STOP

PROP. STOP LINE

PROP. 8.00' CROSSWALK

N 40° 50' 49" W 210.74'

BOS

RAIL TRAIL EASEMENT

N 32° 45' 39" W 28.80'

PI +71.90

BOS

PI +00.76

S 46° 42' 39" W 89.55'

PT +71.67

L=29.58' R=60.00'
Δ=28° 14' 43"

PC +42.09

S 74° 57' 22" W 25.85'

PT +16.24

L=44.91' R=60.00'
Δ=42° 52' 56"

PC +71.33

BOS

BOS

BOS

MAP 17 PARCEL 14
N/F MASS ELECTRIC COMPANY
BOOK 1185 PAGE 8

ZONE AE
(EL 12)

PAINTED PARKING

CONC RAMP

2 STORY BRICK
GARAGE

2 STORY BRICK
BUILDING
COAST GUARD

FLAG STONE WALK

MULCH

CRUSHED STONE

MAP 17 PARCEL 10
N/F
U.S.A. COAST GUARD
BOOK 5878 PAGE 401

#63R

200' RIVERFRONT AREA

ZONE AE
(EL 13)

N/F
U.S.A.
5878/401

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#95

1 STORY BRICK
BUILDING

2 STORY
BRICK
BUILDING

1 STORY
METAL

2 STORY
WOOD

CRUSHED STONE

GRAVEL

APPROX ELEC DUCT

N/F
CITY OF NEWBURYPORT
25956/191

C. 91 JURISDICTION

BITUMINOUS

RAIL TRAIL EASEMENT

GRASS

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	70	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 15 OF 16

606503[25%]TR(SIGN & PVMT MRK(G).DWG 27-Jun-2013

WATER STREET

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

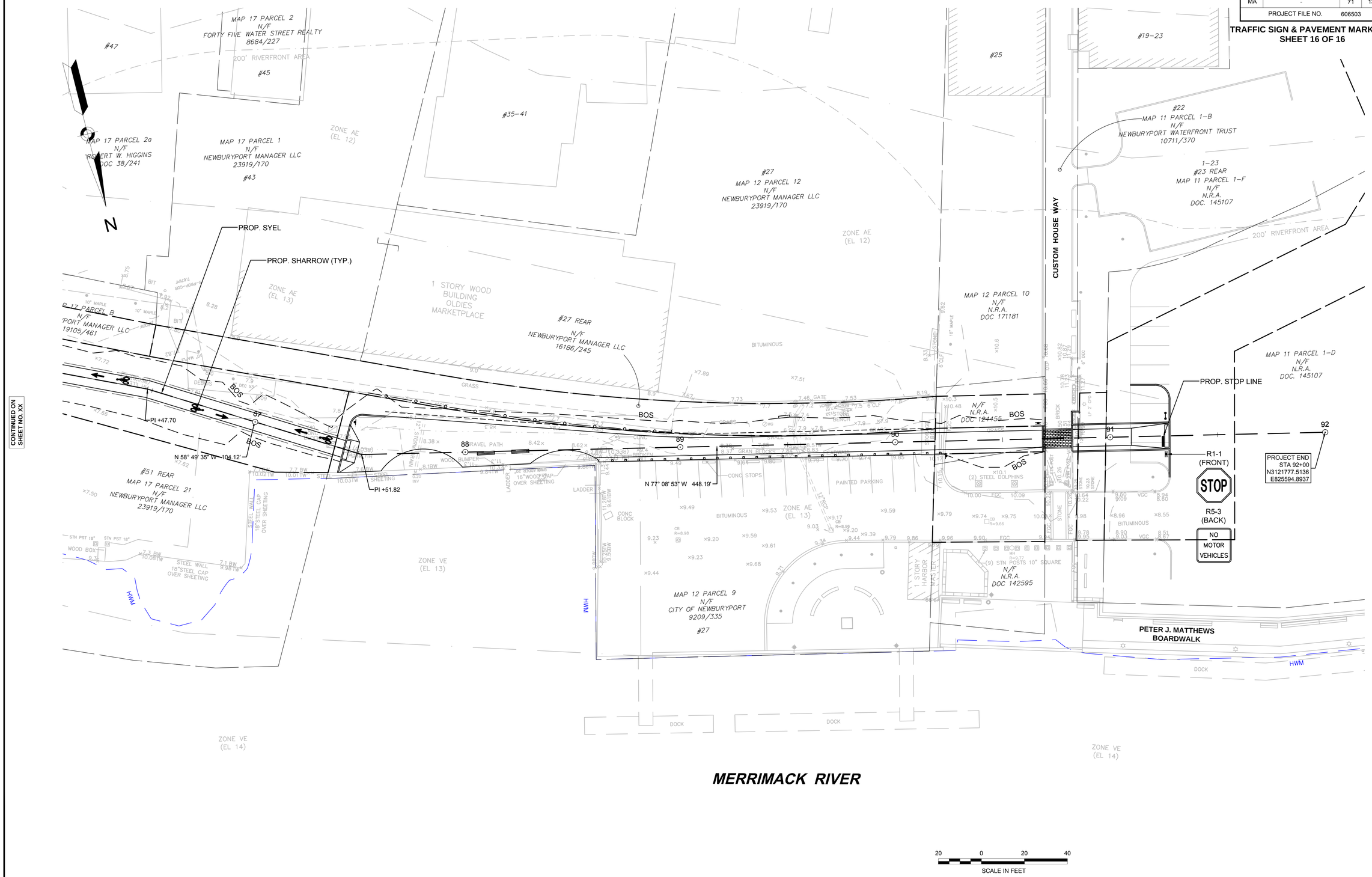
MERRIMACK RIVER

SCALE IN FEET
20 0 20 40

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

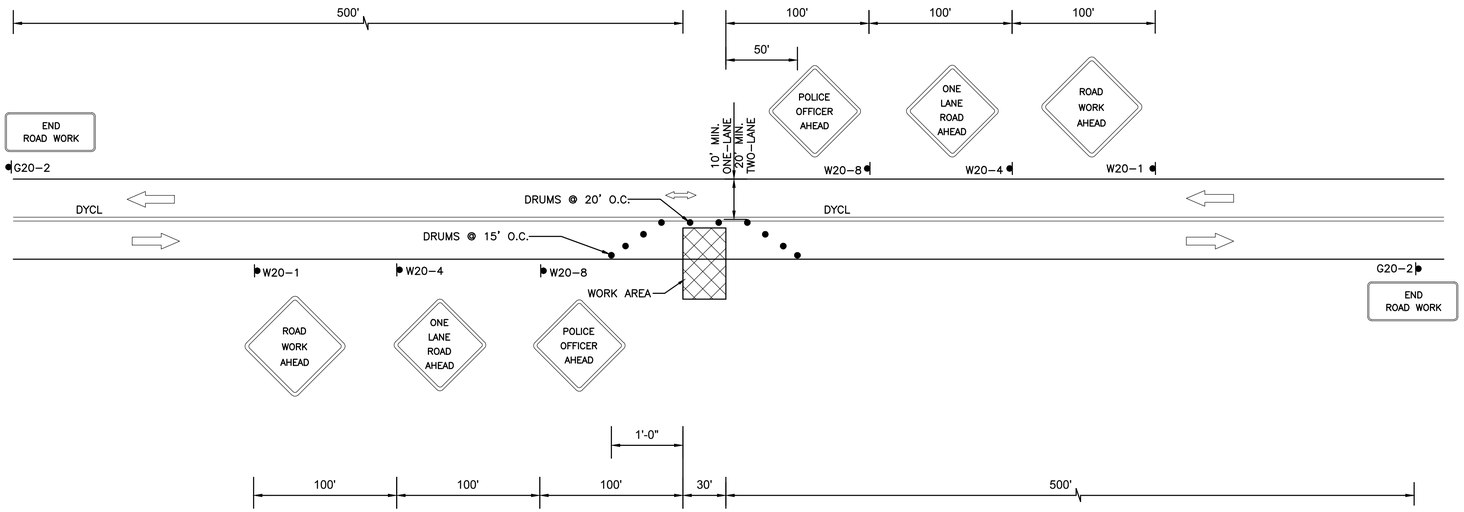
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	71	136
PROJECT FILE NO.	606503		

TRAFFIC SIGN & PAVEMENT MARKINGS
SHEET 16 OF 16



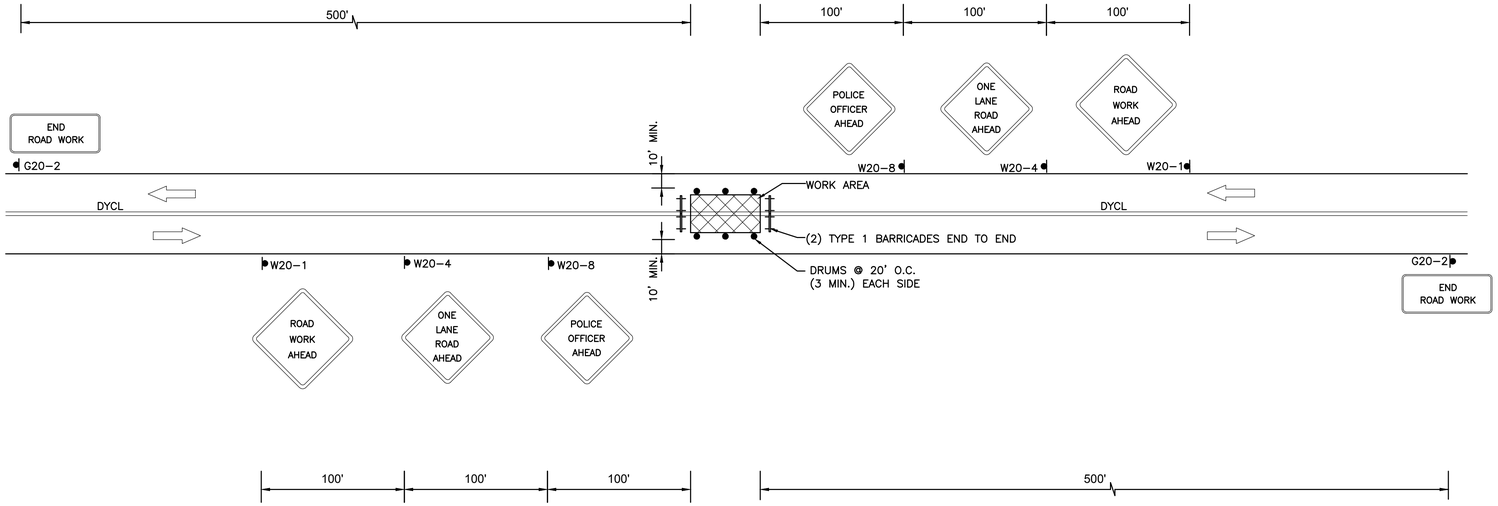
CONTINUED ON SHEET NO. XX

606503[25%]TR(SIGN & PVMT MRKG).DWG 27-Jun-2013



TRAFFIC MANAGEMENT FOR PARTIAL OR FULL LANE CLOSURE

NTS



TRAFFIC MANAGEMENT FOR CENTER WORK AREA

NTS

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	72	136
PROJECT FILE NO.	606503		

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 1 OF 2

NOTES

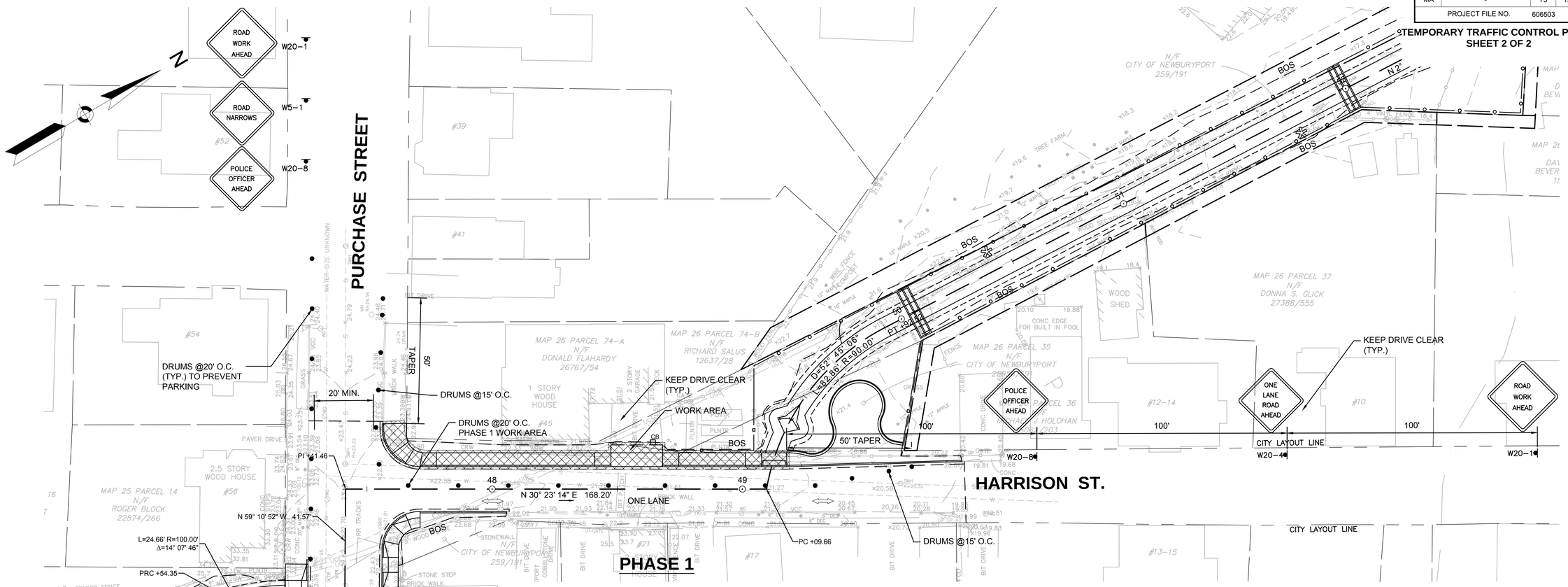
1. THE TRAFFIC MANAGEMENT PLANS PRESENT SUGGESTED CONSTRUCTION STAGING WITH PERTINENT TRAFFIC CONTROLS. THE CONTRACTOR MAY SUBMIT ALTERNATE STAGING AND TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER IN WRITING.
2. ALL DISTANCES MAY BE ADJUSTED TO FIT FIELD CONDITIONS, AS DIRECTED BY THE ENGINEER. HOWEVER, MINIMUM DISTANCES, WHERE INDICATED, SHOULD BE MAINTAINED.
3. CHANNELIZATION WILL BE ACCOMPLISHED THROUGH THE USE OF REFLECTORIZED PLASTIC DRUMS. FOR THE FIRST THREE DRUMS, ATTACH FLASHER TYPE "A".
4. PLASTIC DRUMS WITH ANY FORM OF LIGHTING DEVICE MOUNTED ON THEM MUST PASS THE CRITERIA AS SET FORTH IN NCHRP 350 "RECOMMEND PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES." IF THEY DO NOT MEET THE CRITERIA THEY MUST BE REMOVED FROM THE PROJECT.
5. ALL CONSTRUCTION SIGNS SHALL BE BLACK LEGEND ON A REFLECTIVE ORANGE BACKGROUND. WARNING AND REGULATORY SIGNS SHALL BE MUTCD STANDARD COLORS. ALL CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND MASSDOT STANDARDS. ALL CONSTRUCTION SIGNS SHALL BE ATTACHED TO THEIR OWN INDEPENDENT SUPPORTS.
6. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED ON ADVANCE WARNING SIGNS AS DIRECTED BY THE ENGINEER. FLAGS SHALL BE A MINIMUM OF 16" X 16".
7. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE REMOVED IMMEDIATELY WHEN NO LONGER NEEDED.
8. THE CONTRACTOR MUST MAINTAIN ACCESS AND EGRESS AT ALL TIMES TO ALL PROPERTIES ABUTTING THE WORK ZONE.
9. FOR CONSTRUCTION OPERATIONS OF LONG DURATION (MORE THAN 3 DAYS). EXISTING CENTERLINE MARKINGS SHALL BE REMOVED AND A TEMPORARY CENTERLINE STRIPED IN A PROPER LOCATION.
10. ADVANCE WARNING SIGNS NO LONGER APPLICABLE, WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS, SHALL EITHER BE COVERED OR REMOVED AS SOON AS POSSIBLE. NO SIGN SHALL BE VISIBLE TO TRAFFIC THAT MAY CONFLICT WITH ACTUAL ROADWAY CONDITIONS.
11. PAVEMENT MARKINGS NO LONGER APPLICABLE, WHICH MAY CREATE CONFUSION, SHALL BE REMOVED. TEMPORARY PAVEMENT MARKINGS SHALL BE USED AS NECESSARY TO PROPERLY DELINEATE THE ROADWAY AND SHALL BE IN PLACE BEFORE WORK IS COMPLETED EACH DAY.
12. AT THE END OF EACH WORKDAY, NO TRAFFIC CONTROL DEVICES SHALL REMAIN IN THE ROADWAY, AND ALL ROADWAYS SHALL BE OPEN FOR TWO-WAY TRAFFIC BY FILLING EXCAVATIONS TO GRADE OR USING STEEL PLATES.
13. THE CONTRACTOR SHALL NOT PERFORM ANY WORK IN THE ROADWAY AREA THAT WILL DISRUPT TRAVEL BETWEEN THE HOURS OF 6:00AM TO 9:00AM AND 3:00PM TO 6:00PM.
14. SIGNS W20-8 (POLICE OFFICER AHEAD) OR W20-7A (FLAGGER AHEAD) SHALL BE COVERED OR REMOVED DURING NON-CONSTRUCTION HOURS OR WHEN POLICE OFFICERS OR FLAGGERS ARE NOT PRESENT TO DIRECT TRAFFIC.
15. SIGNS R9-10 SHALL BE RESET FOR EACH PHASE OF THE WORK.

606503(25%)TR(TMP).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	73	136
PROJECT FILE NO.	606503		

TEMPORARY TRAFFIC CONTROL PLANS
SHEET 2 OF 2



606503[25%]TR(TMP2).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	74	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 1 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

N

NEWBURYPORT

NEWBURY

PARKER STREET

CITY LAYOUT LINE

MAP U-07 PARCEL NO REF
N/F
OAK HILL CEMETERY
3414/4

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP U-07 PARCEL 24
N/F
OAK HILL CEMETERY
BOOK 3414 PAGE 4

EXIST. DMH TO REMAIN
(TYP.)

MAP U-07 PARCEL 25
N/F
MASS. ELECTRIC CO.
BOOK 2838 PAGE 399

INSTALL NEW 12" RCP
CULVERT

PROJECT BEGIN
STA 10+00
N3116791.7573
E825138.6258

BOS

PC +73.48

PRC +53.14

EXPOSE CULVERT OUTLET ,
PROPOSED RIP-RAP APRON

FLAT PIPE
8" PERFORATED HDPE
INV = 28.75'

N/F
TOWN OF NEWBURY
25956/212

MAP U-07 PARCEL 26
N/F
CITY OF NEWBURY
NO REF

MAP U-07 PARCEL 27
N/F KATHLEEN E. MURRAY & THOMAS W.
GREELEY
BOOK 24633 PAGE 296

#00

#46

WETLAND

100' BUFFER ZONE

50' BUFFER ZONE

DRAINAGE INVERT ELEVATIONS				
NO.	TYPE	STATION	INV. ELEV.(IN)	INV. ELEV.(OUT)
1	LB	14+05.85, 11.00 RT	28.75	

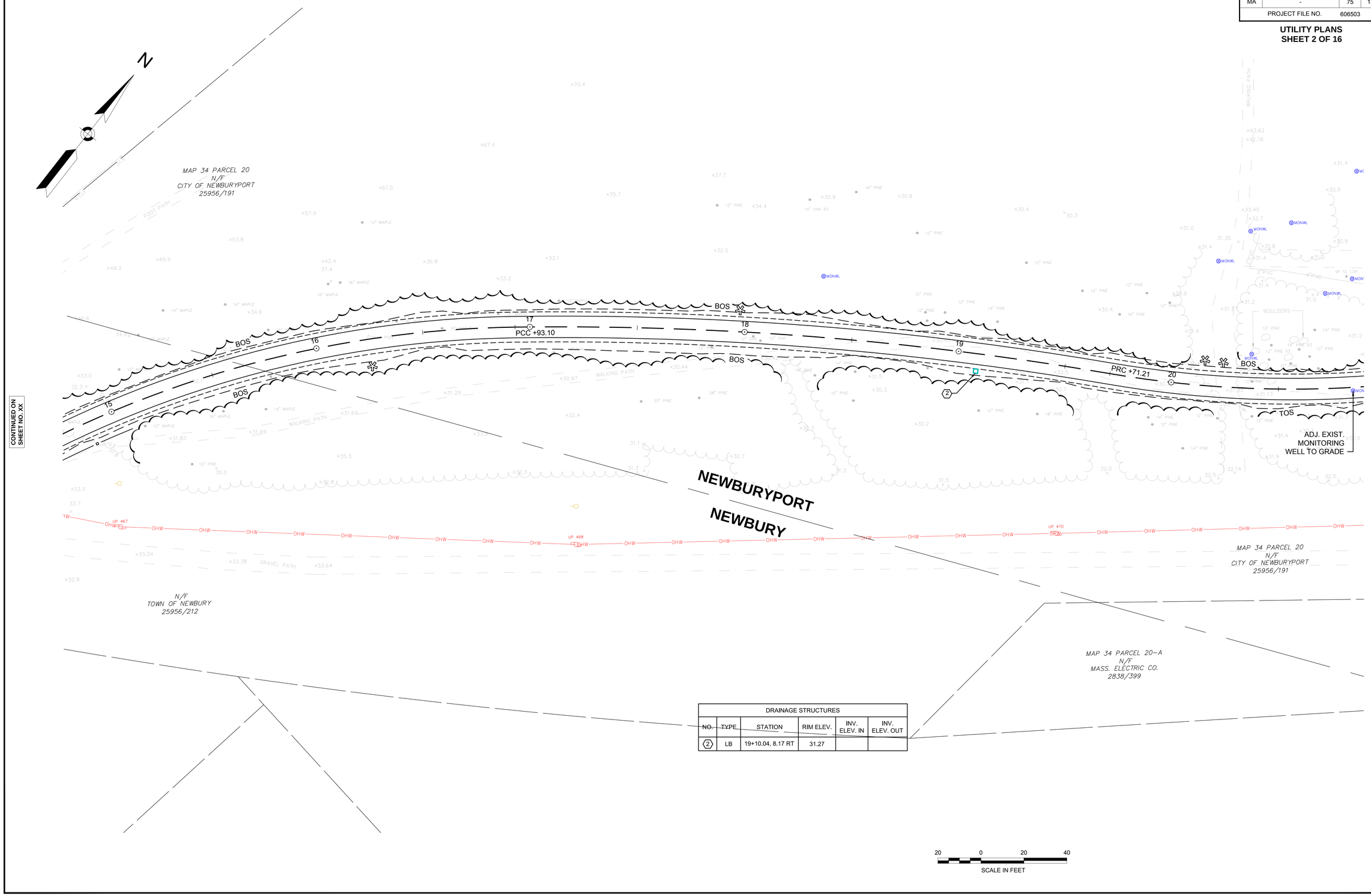
20 0 20 40
SCALE IN FEET

CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	75	136
PROJECT FILE NO.		606503	

UTILITY PLANS
SHEET 2 OF 16



DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
2	LB	19+10.04, 8.17 RT	31.27		

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

606503(25%)HD(UTILITY PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	76	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 3 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
2A	LB	25+62.07, 7.00 RT	31.00	28.10	
2B	LB	25+62.07, 6.97 LT	31.15		28.10

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 6
N/F
CITY OF NEWBURYPORT
25956/191

BOS
PRC +85.66
TOS
ADJ. EXIST. MONITORING WELL TO GRADE
10' - 10" HDPE
FLAT INV.=28.10'
WALKING PATH
BOULDERS
MONWL
OHW
UP 471
UP 473
UP 474

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 34 PARCEL 20-A
N/F
MASS. ELECTRIC CO.
2838/399

MAP 34 PARCEL 21
N/F
DANA DAVIS
28136/95

NEWBURYPORT
NEWBURY

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	77	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 4 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 6
N/F
CITY OF NEWBURYPORT
25956/191

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

MAP 33 PARCEL 3 A
N/F
MASS. ELECTRIC CO.
LOT B
2832/399

MAP 33 PARCEL 2-A.3
N/F
DAVID LYMAN
26978/353

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 3
N/F
WILLIAM A. LINCOLN
15708/406

BOS

10' - 10" HDPE
FLAT INV.=28.10'

INV=26.50

PRC +23.75

191' - 8"

64' - 12" RCP

43' - 8" HDPE

8" PERFORATED HDPE
(FLAT INFILTRATION TRENCH)

APPROX. LOCATION OF
EXIST. ELEC. DUCT
BANK TO REMAIN

APPROX. LOCATION OF
(2) EXIST. DIRECT BURY
23KV CABLES TO
REMAIN

ADJ. EMH FRAME AND
COVER TO PROP.
GRADE

FOOT PATH

WALKING PATH

APPROX. ELEC. DUCT

UP SR 474

UP SR 475

UP SR 314.50

UP 315

OHW

GYU

DRAINAGE INVERT ELEVATIONS

NO.	TYPE	STATION	INV. ELEV.(IN)	INV. ELEV.(OUT)
3	HW	200+82.22, 29.30 RT		20.00
4	HW	200+88.19, 34.72 LT	18.50	

DRAINAGE STRUCTURES

NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
3A	LB	200+20.76, 6.92 LT	28.05	26.50	

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	78	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 5 OF 16

27-Jun-2013

606503(25%)HD\UTILITY PLANS\.DWG

DRAINAGE INVERT ELEVATIONS				
NO.	TYPE	STATION	INV. ELEV.(IN)	INV. ELEV.(OUT)
3	HW	200+82.22, 29.30 RT		20.00
4	HW	200+88.19, 34.72 LT	18.50	

DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
5A	LB	200+20.76, 6.92 LT	28.05	26.50	
5	LB	31+16.41, 7.00 RT	27.55	26.00	21.01
5A	FES	31+09.78, 37.10 LT	21.60	20.80	
6	Special DMH	34+15.47, 0.00 T	27.57	23.57	23.47
6A	SHALLOW CB	33+27.62, 4.94 RT	28.37		24.87
6B	SHALLOW CB	33+99.98, 4.97 RT	27.65	24.25	24.15
7	CB	34+38.75, 4.84 RT	27.38		23.38
7A	CB	35+46.85, 6.44 RT	28.71		22.10
8	CB	34+39.04, 5.08 LT	27.53		23.53
8A	CB	35+16.30, 4.66 LT	28.42		22.10
9	DMH	34+39.00, 0.10 LT	~~27.46~~	~~23.35~~ 23.51 23.36	22.38

N

HIGH STREET

BROMFIELD STREET

MARCH'S HILL

END +48.60

PT +83.03

BOS

64' - 12" RCP

PT +44.23

PC +30.45

BOS

BOS

PROP. ELEC. DISTRIBUTION CABINET

BURIED ELEC. CONDUIT

PROP. RISER IN EXIST. ELEC. UTILITY POLE

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 5-A
N/F
NORBERT A. CAREY, JR.
30425/114

INV=26.00

BOS

43 - 8" HDPE

PT +30.57

RAIL TRAIL EASEMENT
BK 30425/PG 122

PI +15.47

PC +15.47

149' - 8" PERF. HDPE (LAID FLAT)

MAP 33 PARCEL 5
N/F
RUSSELL S. HUSSEY, TRUSTEE
19827/97

69' - 12" D.I.P.

12' - 12" D.I.P.

20' - 12" HDPE

1' - 12" HDPE

CONNECT TO SUB. SURFACE DET. SYSTEM

BOS

INV=22.00

INV=22.00

INV=22.00

BOS

17' - 12" HDPE

1' - 12" HDPE

TREATMENT SYSTEM, STORMCEPTOR OR APPROVED EQUAL

MAP 24 PARCEL 71
N/F
JANICE DESANTIS
6497/153

MAP 24- PARCEL 71-A
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 70
N/F
SCOTT TILEY
10717/12

MAP 24- PARCEL 71-B
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 72
N/F
DOUGLAS H. CROSSMAN
17510/320

MAP 24- PARCEL 71-C
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 69
N/F
JULIA M. HINES
25118/418

MAP 33 PARCEL 4
N/F
DANIEL O. POTVIN
23723/99

MAP 33 PARCEL 3
N/F
WILLIAM A. LINCOLN
15708/406

CITY LAYOUT LINE

CITY LAYOUT LINE

#42 #75 #77-79 #81-83 #40 #29 #27 #36 #34 #38

APPROX. LOCATION OF EXIST. ELEC. DUCT BANK TO REMAIN

APPROX. LOCATION OF (2) EXIST. DIRECT BURY 23KV CABLES TO REMAIN

ADJ. EMH FRAME AND COVER TO PROP. GRADE

TION OF
C. DUCT
REMAIN

TION OF
T BURY
BLES TO
REMAIN

CONTINUED ON SHEET NO. XX

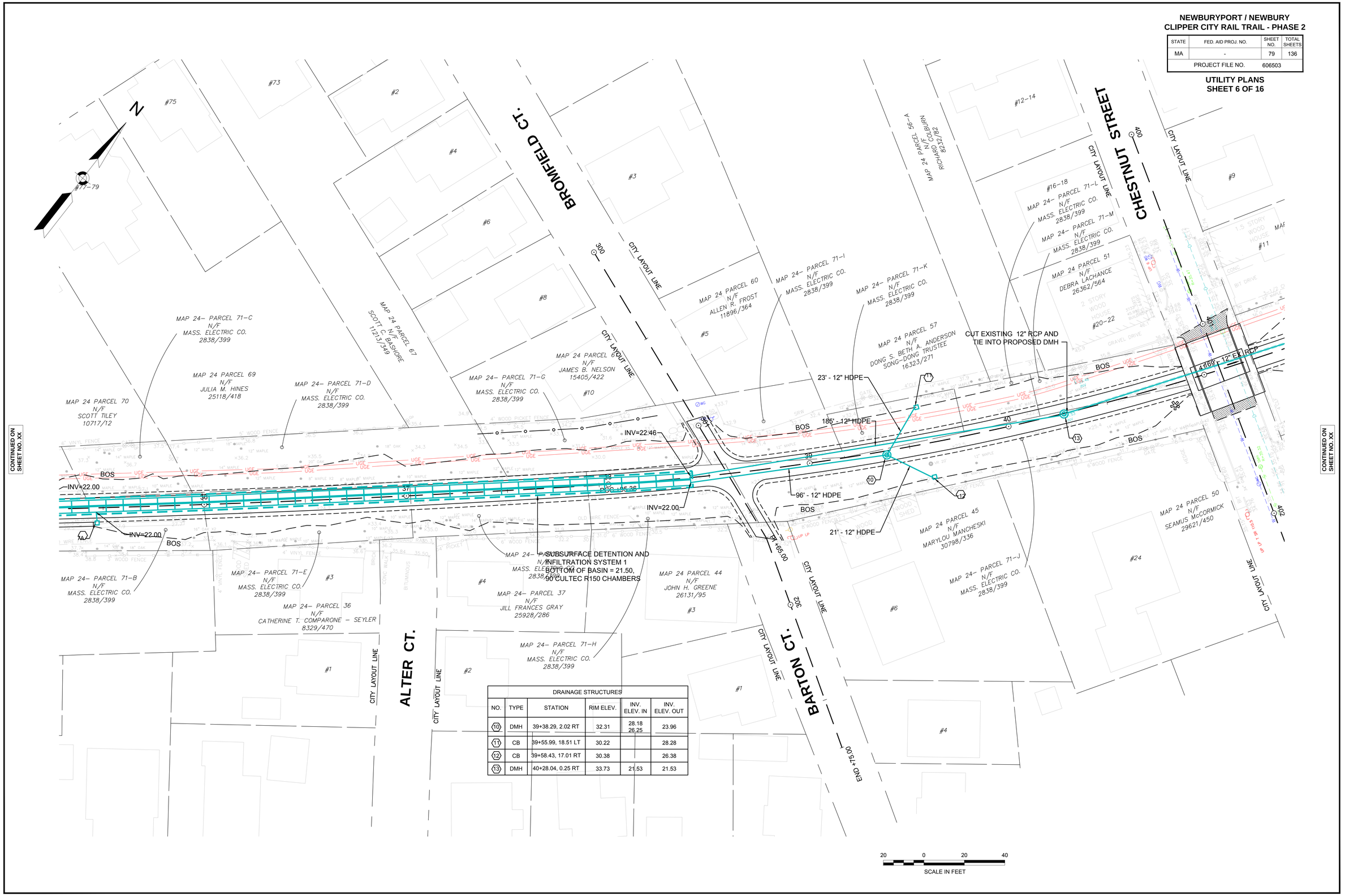
CONTINUED ON SHEET NO. XX

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	79	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 6 OF 16



DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
10	DMH	39+38.29, 2.02 RT	32.31	28.18 26.25	23.96
11	CB	39+55.99, 18.51 LT	30.22		28.28
12	CB	39+58.43, 17.01 RT	30.38		26.38
13	DMH	40+28.04, 0.25 RT	33.73	21.53	21.53

606503(25%)HD(UTILITY PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	80	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 7 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
14	CB	42+11.78, 15.16 LT	31.43		27.42
15	CB	42+14.02, 14.89 RT	30.05		26.05
16	OCS	42+00.95, 0.29 LT	34.17	27.33 25.97 21.53	21.53
17	DMH	43+78.83, 2.58 LT	33.65	21.53	21.53
18	DMH	46+38.84, 2.63 LT	22.56	17.31	18.31

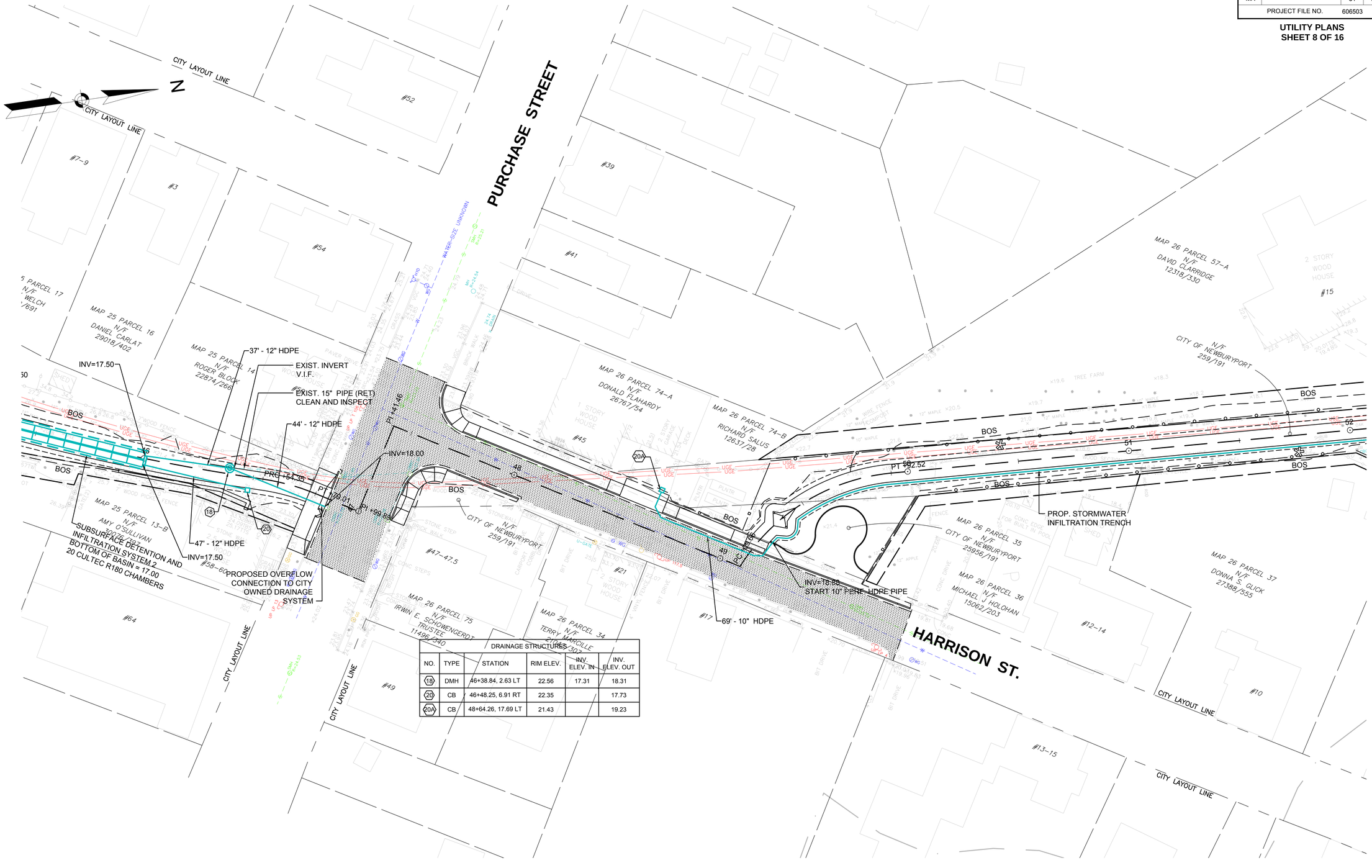
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	81	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 8 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013



DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
18	DMH	46+38.84, 2.63 LT	22.56	17.31	18.31
20	CB	46+48.25, 6.91 RT	22.35		17.73
20A	CB	48+64.26, 17.69 LT	21.43		19.23

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	82	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 9 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

N

WATER STREET

MAP 26 PARCEL 57-A
N/F
DAVID CLARRIDGE
12318/330

2 STORY WOOD HOUSE
#15

MAP 26 PARCEL 57-A
N/F
DAVID CLARRIDGE
12318/330

MAP 26 PARCEL 48-A,B,C
N/F
MASS. ELECTRIC CO.
2838/399

MAP 26 PARCEL 48-A,B,C
N/F
MASS. ELECTRIC CO.
2838/399

MAP 26 PARCEL 49
N/F
JENNIFER BADGER
30343/340

2.5 STORY WOOD HOUSE
#172

#164

#168

#179

ZONE AE
(EL 12)

200' RIVERFRONT AREA

C. 91 JURISDICTION

N/F
CITY OF NEWBURYPORT
259/191

BOS

52

53

54

55

541' - 10" PERF. HDPE

SUBSURFACE DETENTION AND
INFILTRATION SYSTEM 3
BOTTOM OF BASIN = 9.50
32 CULTEC R150 CHAMBERS

EXIST. DRAIN INLET (RET)

PC +78.06

PRC +30.40

PROP. STORMWATER
INFILTRATION TRENCH

PRC +56.67

57

603

602

601

600

PCT +56.90

PCT +98.01

CONNECT TO EXISTING 24"
ARCH PIPE SYSTEM
(CONTRACTOR TO FIELD
VERIFY INVERTS)

INV=10.95

EX. 24" BRICK ARCH PIPE (RECORD)

MAP 26 PARCEL 46
N/F
DAVID MOORE
BEVERLY MONCHUN
15885/74

MAP 26 PARCEL 46A
N/F
DAVID MOORE
BEVERLY MONCHUN
15885/74

MAP 26 PARCEL 45A
N/F
AUGUSTUS HARRINGTON
13087/104

MAP 26 PARCEL 47
N/F
RONALD L. ALBERT
24132/244

MAP 26 PARCEL 48
N/F
LLOYD N. DANIELS
6639/639

MAP 26 PARCEL 37
N/F
DONNA S. GLICK
27388/555

#174

#178

#182

#180

#10

ZONE AE
(EL 15)

ZONE VE
(EL 15)

CITY LAYOUT LINE

LAYOUT LINE

OUT LINE

CITY OF NEWBURYPORT
N/F

C. 91 JURISDICTION

DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
21	CB	54+70.00, 5.09 RT	14.08	11.40	10.35

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	83	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 10 OF 16

606503(25%)HD(UTILITY PLANS).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

N

WATER STREET

#164

#168

#177

#175

MAP 23 PARCEL 20
N/F
CHARLES R GRIGG
12331/600

MAP 23 PARCEL 21
12332/19

#179

#157

MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191

MAP 23 PARCEL 22 1/2
N/F
WADE BURRITT
26593-2
ROBERT NELSON.
26466-40

MAP 23 PARCEL 22-A
N/F
MASS. ELECTRIC CO.
2838/399

MAP 23 PARCEL 22-B
N/F
MASS. ELECTRIC CO.
2838/399

MAP 23 PARCEL 22-C
N/F
CITY OF NEWBURYPORT
25956/191

MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191

200' RIVERFRONT AREA

C. 91 JURISDICTION

CITY LAYOUT LINE

ZONE AE
(EL 12)

ZONE VE
(EL 15)

ZONE VE
(EL 14)

HIGH MARSH
LOW MARSH

1 STORY
METAL
BUILDING

PROP. STORMWATER
INFILTRATION TRENCH

PROP. 10.00' HOT MIX
ASPHALT PATH

APPROX. LOCATION OF
EXIST. ELEC. DUCT
BANK TO REMAIN

APPROX. LOCATION OF
(2) EXIST. DIRECT BURY
23KV CABLES TO
REMAIN

EXIST. 36" CPP DRAIN
TO REMAIN

1283' - 10" PERF. HDPE

PROP. STORMWATER
INFILTRATION TRENCH

PRC +56.67

PT +62.00

PC +79.72

BOS

603

604

57

58

59

60

61

62

10.95

BRICK ARCH PIPE (RECORD)

SMALL WOOD FENCE

MERRIMACK RIVER

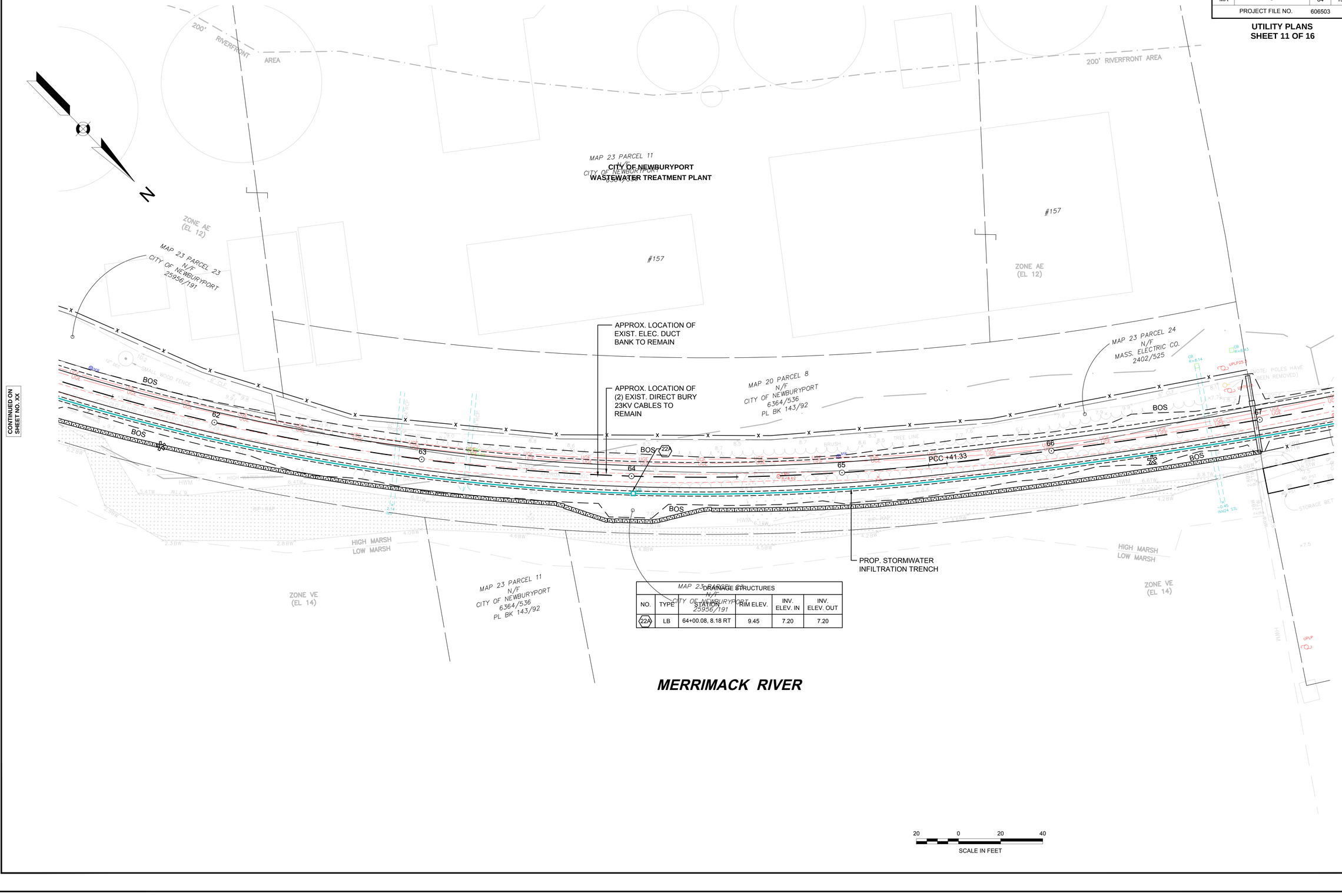
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	84	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 11 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013



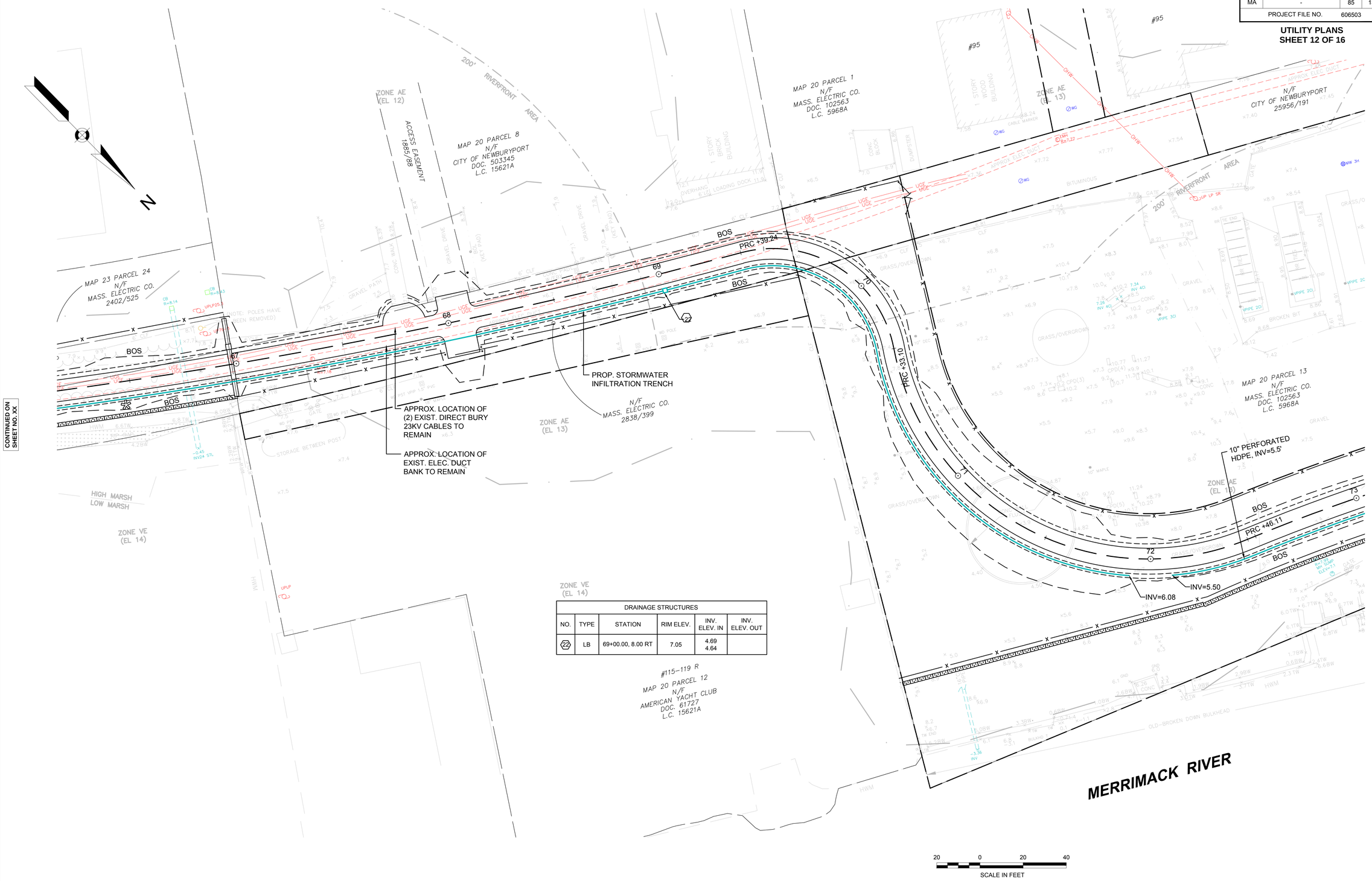
DRAINAGE STRUCTURES

NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
22A	LB	64+00.08, 8.18 RT	9.45	7.20	7.20

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	85	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 12 OF 16



DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
22	LB	69+00.00, 8.00 RT	7.05	4.69 4.64	

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

606503(25%)HD(UTILITY PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	86	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 13 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#95

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

1 STORY METAL

MAP 20 PARCEL 13
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

N/F
CITY OF NEWBURYPORT
25956/191

200' RIVERFRONT AREA

MAP 17 PARCEL 10
N/F
U.S.A. COAST GUARD
BOOK 5878 PAGE 401
#63R

2 STORY BRICK BUILDING
COAST GUARD

N/F
U.S.A.
5878/401

MAP 17 PARCEL 10
N/F
U.S.A.
5878/401

MAP 17 PARCEL 16
NEWBURYPORT MANAGER LLC
23921/421

1 STORY METAL SHED

2 STORY WOOD

TRAILER

ZONE AE
(EL 13)

ZONE VE
(EL 14)

BOS

PC 71.33

PT +06.36

PRC +46.11

PRC +85.51

10" PERFORATED HDPE PIPE, LAID FLAT AT INV=5.5'

PROP. STORMWATER INFILTRATION TRENCH

ADJ. EXIST. MONITORING WELL TO MEET PROP. GRADE

ADJ. (2) EXIST. EMH FRAME & COVER TO MEET PROP. GRADE

10" PERFORATED HDPE, INV=5.5'

INV=6.08

INV=5.50

MERRIMACK RIVER

DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
23	LB	73+64.77, 8.00 RT	7.74	5.50 5.50	

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

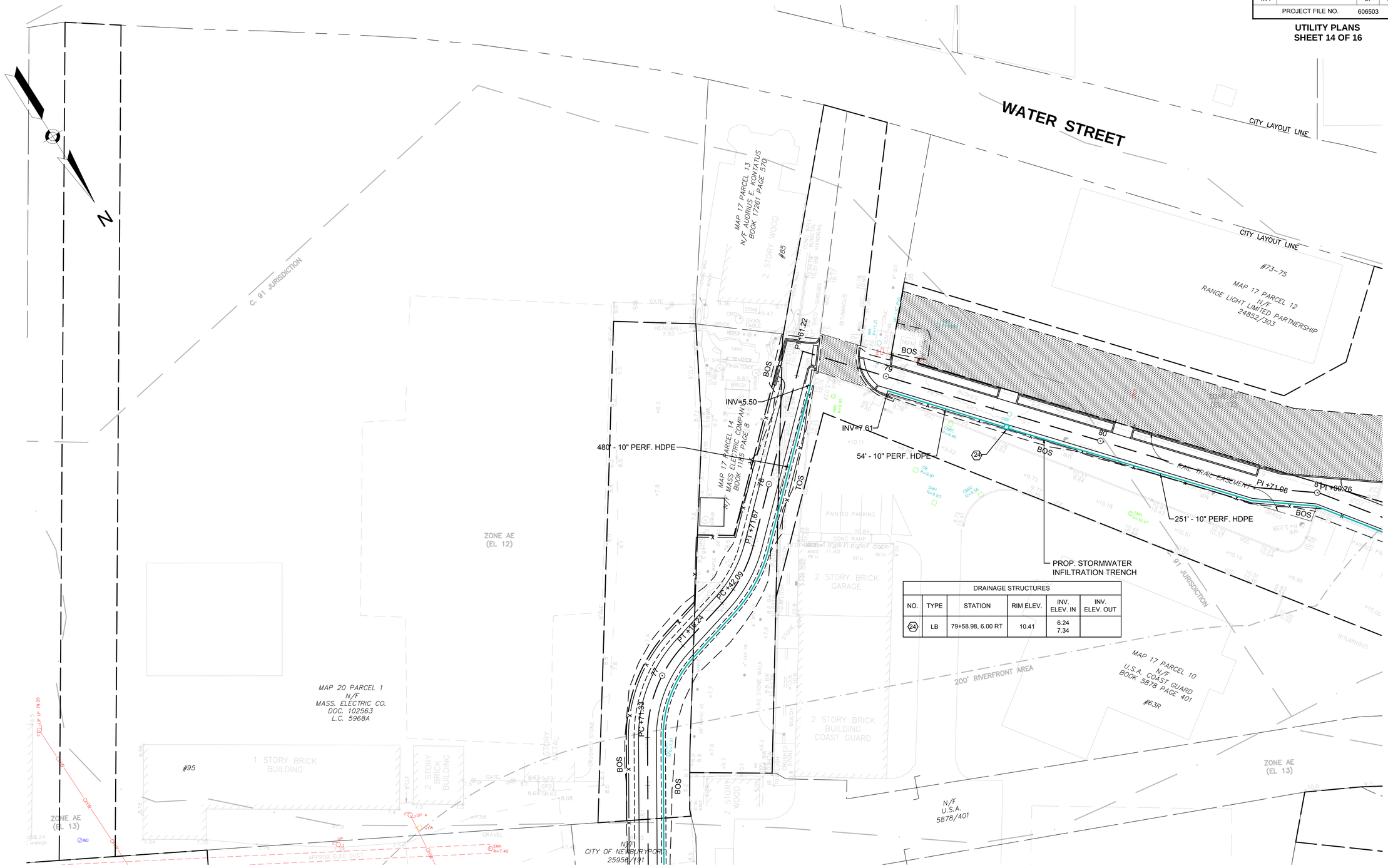
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	87	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 14 OF 16

606503(25%)HD\UTILITY PLANS\.DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX



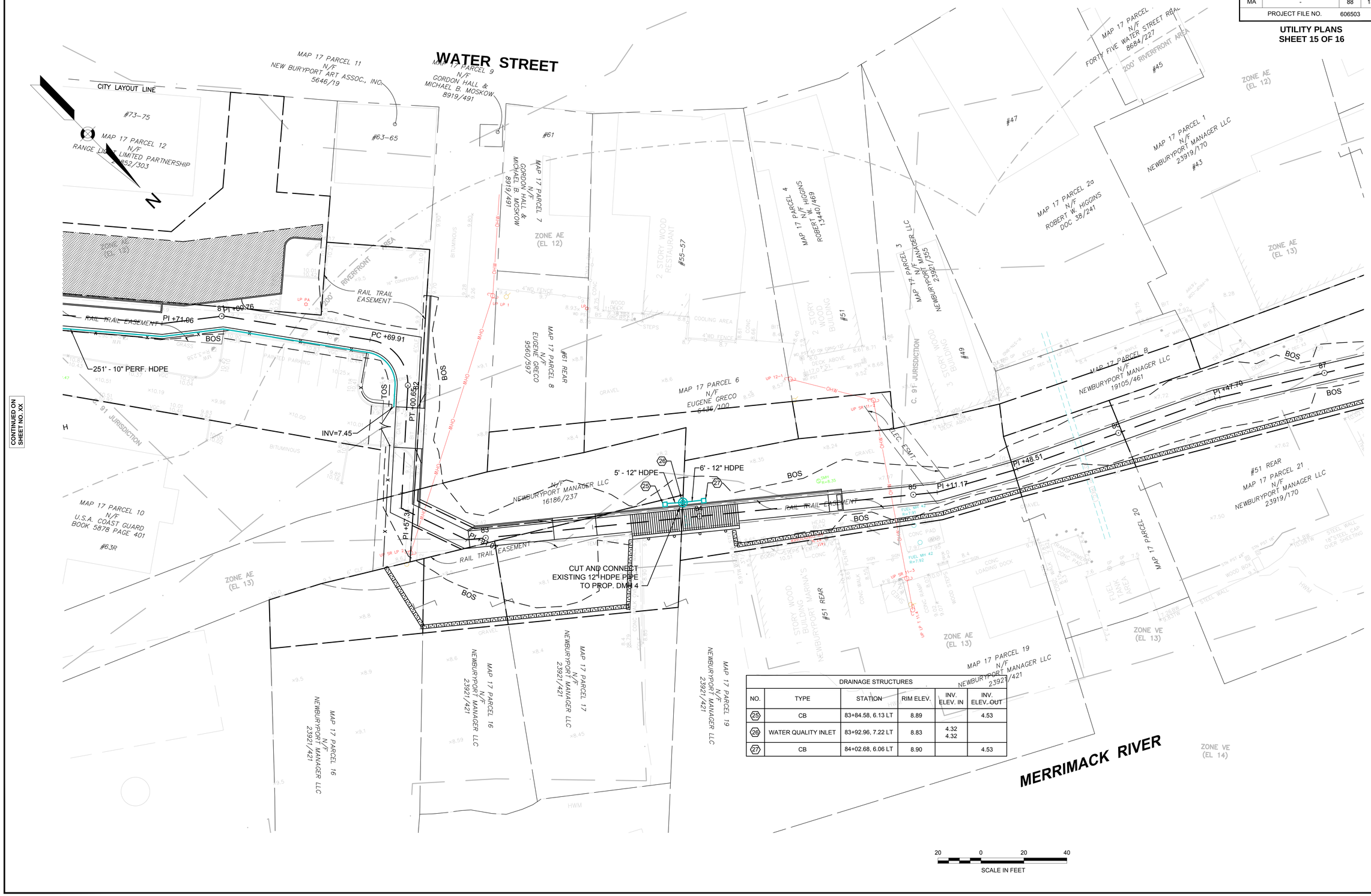
DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
24	LB	79+58.98, 6.00 RT	10.41	6.24 7.34	

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	88	136
PROJECT FILE NO.		606503	

UTILITY PLANS
SHEET 15 OF 16



DRAINAGE STRUCTURES					
NO.	TYPE	STATION	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT
25	CB	83+84.58, 6.13 LT	8.89		4.53
26	WATER QUALITY INLET	83+92.96, 7.22 LT	8.83	4.32 4.32	
27	CB	84+02.68, 6.06 LT	8.90		4.53

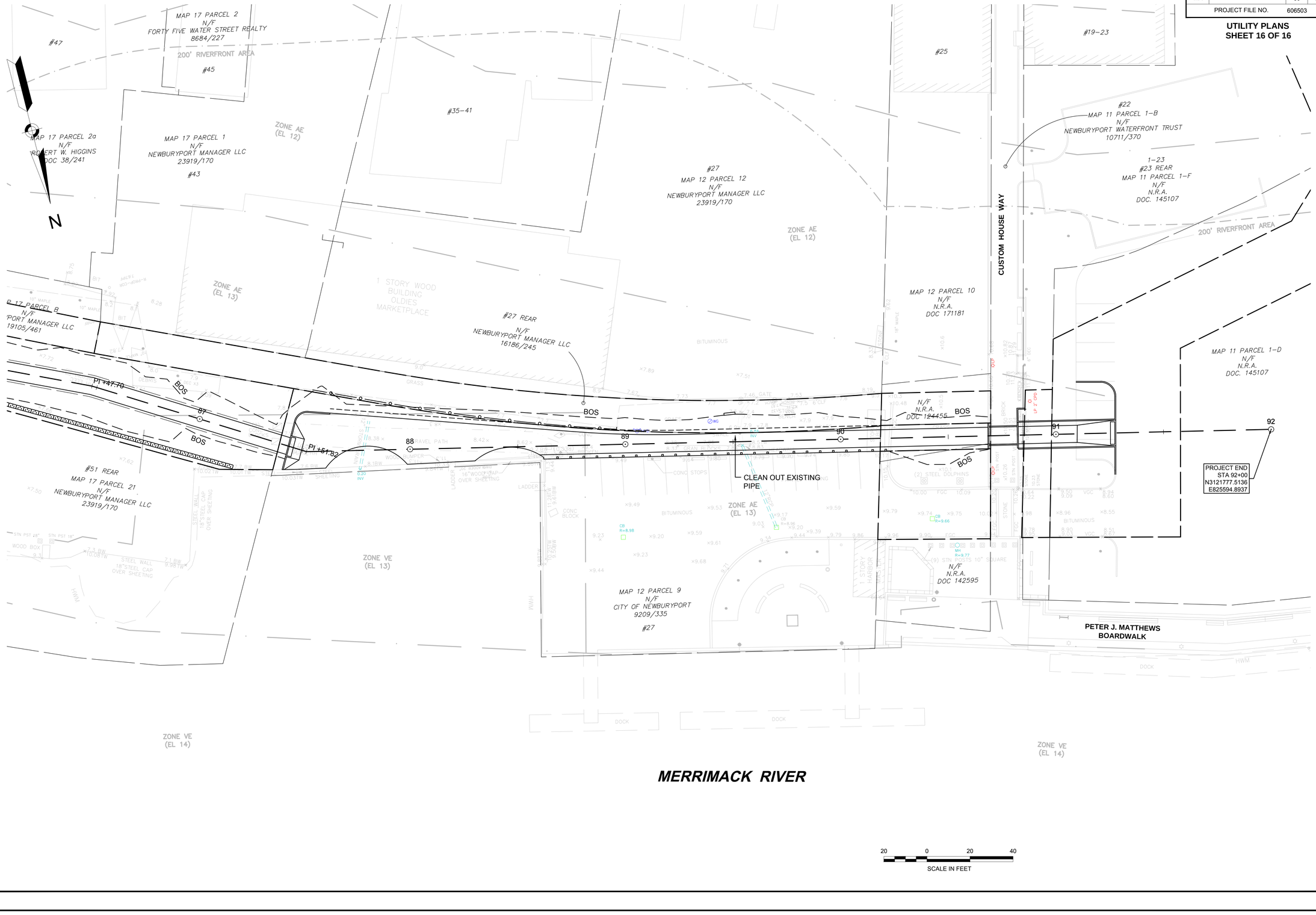
606503(25%)HD(UTILITY PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	89	136
PROJECT FILE NO.	606503		

UTILITY PLANS
SHEET 16 OF 16

606503(25%)H(UTILITY PLANS).DWG 27-Jun-2013



NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	90	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 1 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

N

NEWBURYPORT
NEWBURY

CITY LAYOUT LINE

PARKER STREET

MAP U-07 PARCEL NO REF
N/F
OAK HILL CEMETERY
3414/4

MAP U-07 PARCEL 24
N/F
OAK HILL CEMETERY
BOOK 3414 PAGE 4

MAP U-07 PARCEL 25
N/F
MASS. ELECTRIC CO.
BOOK 2838 PAGE 399

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

SEED MIX - TYPE A
STA 11+00 TO 15+00

PROP. SEED MIX - TYPE C

20' SELECTIVE CLEARING

PROJECT BEGIN
STA 10+00
N3116791.7573
E825138.6258

CITY LAYOUT LINE

100' BUFFER ZONE

50' BUFFER ZONE

WETLAND

GRAVEL PATH

FOOT PATH

BIT DRIVE

GUTTER LINE

STONEWALL

GRAVEL DRIVE

BOS

PC +73.48

N 64° 55' 07" E 273.48'

D=41° 10' 35"
L=179.67' R=250.00'

PRC +53.14

D=27° 29' 48"
L=239.95' R=500.00'

#00

#46

MAP U-07 PARCEL 26
N/F
CITY OF NEWBURY
NO REF

MAP U-07 PARCEL 27
N/F KATHLEEN E. MURRAY & THOMAS W. GREELEY
BOOK 24633 PAGE 296

N/F
TOWN OF NEWBURY
25956/212

CONTINUED ON SHEET NO. XX

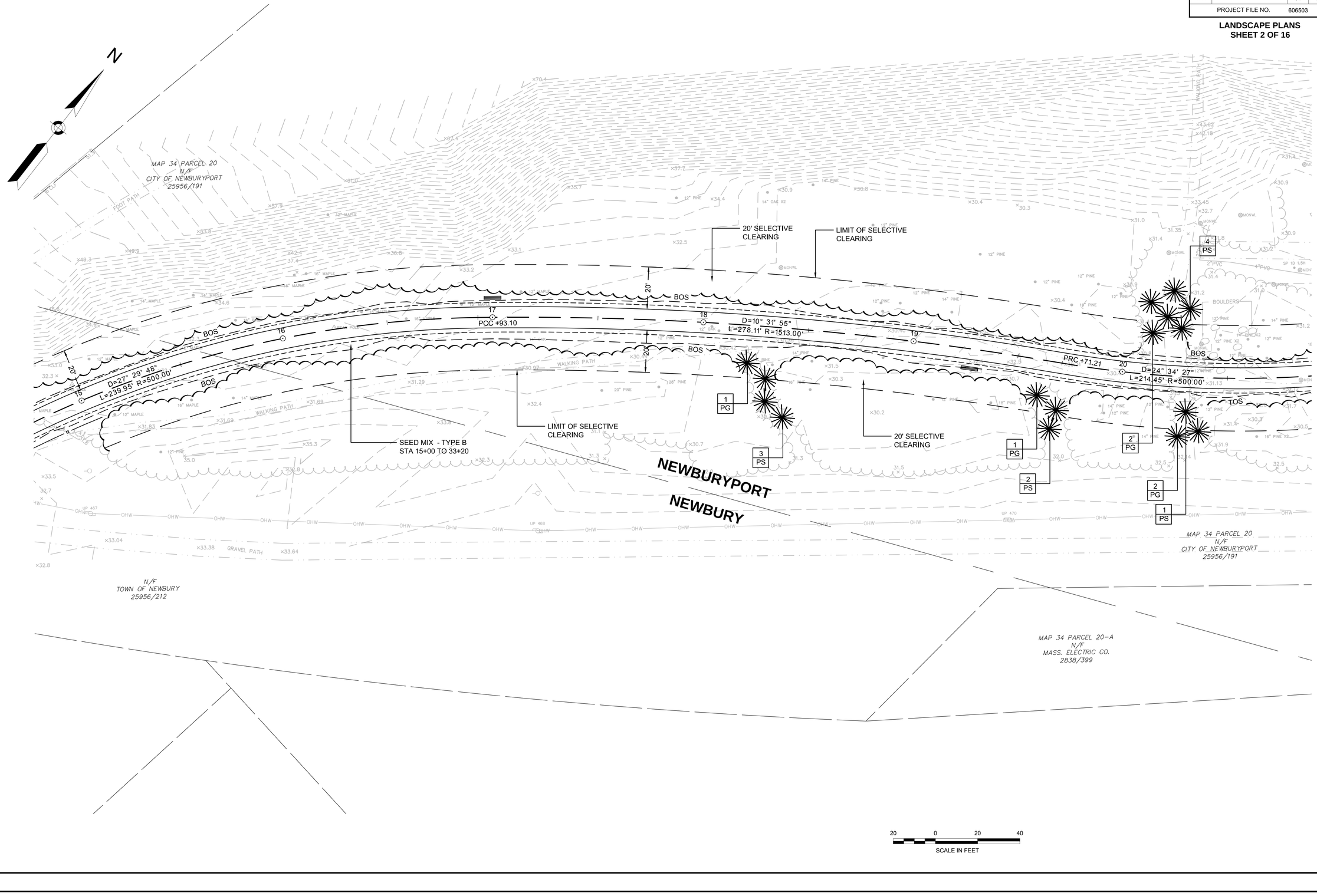
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	91	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 2 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013



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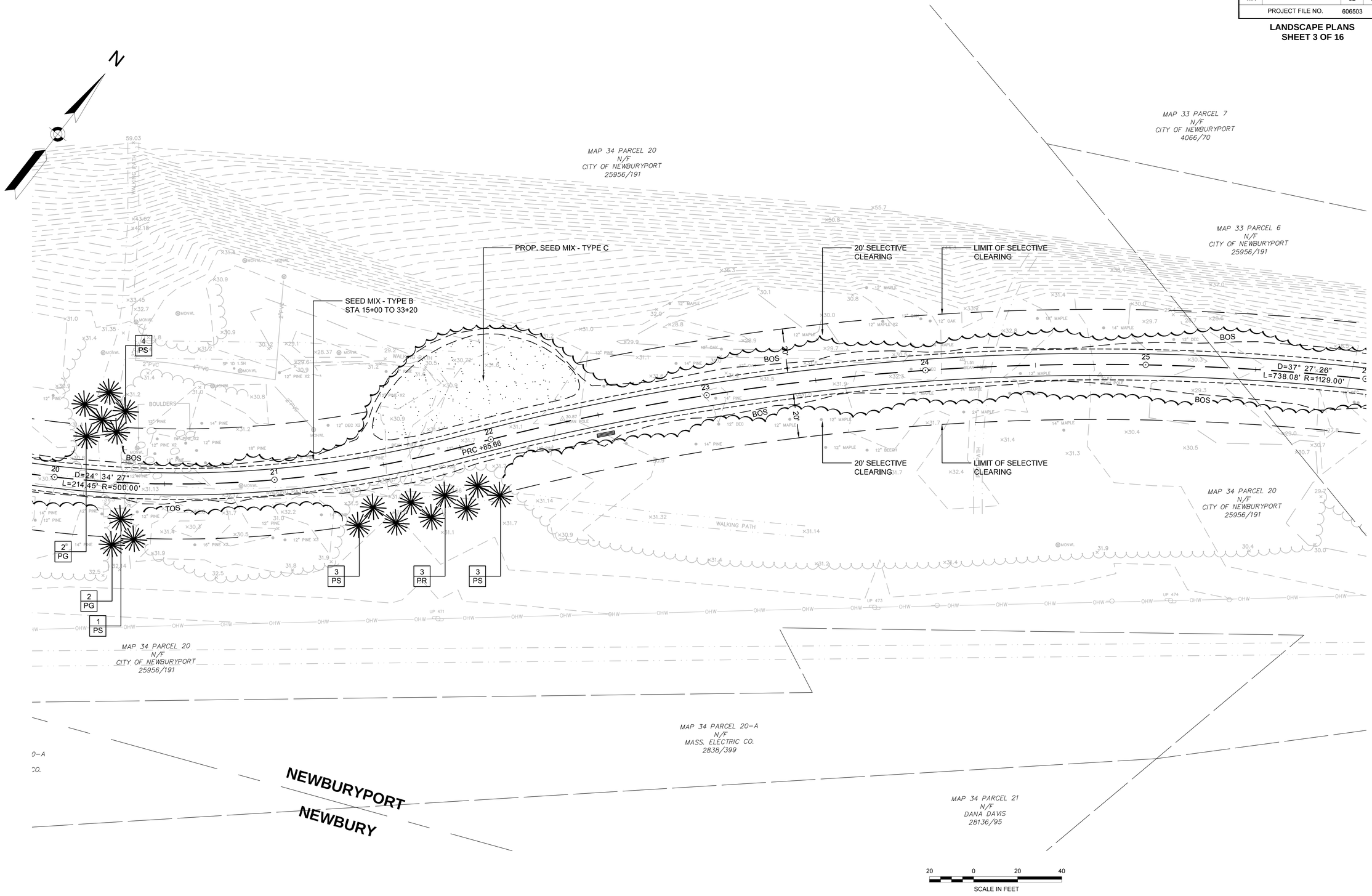
CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	92	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 3 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013



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CONTINUED ON SHEET NO. XX

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	93	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 4 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

MAP 33 PARCEL 6
N/F
CITY OF NEWBURYPORT
25956/191

SEED MIX - TYPE B
STA 15+00 TO 33+20

20' SELECTIVE CLEARING

LIMIT OF SELECTIVE CLEARING

D=37° 27' 26"
L=738.08' R=1129.00'

BOS

MAP 34 PARCEL 20
N/F
CITY OF NEWBURYPORT
25956/191

LIMIT OF SELECTIVE CLEARING

20' SELECTIVE CLEARING

PRC ×23.75

D=23° 42' 03"
L=206.83' R=500.00'

MAP 33 PARCEL 3 A
N/F
MASS. ELECTRIC CO.
LOT B
2832/399

MAP 33 PARCEL 2-A.3
N/F
DAVID LYMAN
26978/353

MAP 33 PARCEL 3
N/F
WILLIAM A. LINCOLN
15708/406

MAP 33 PARCEL 7
N/F
CITY OF NEWBURYPORT
4066/70

4 VP
3 HV
4 CR
2 CR
5 VP
7 VP
4 QR
3 QP
3 PR
4 UA

CONTINUED ON SHEET NO. XX

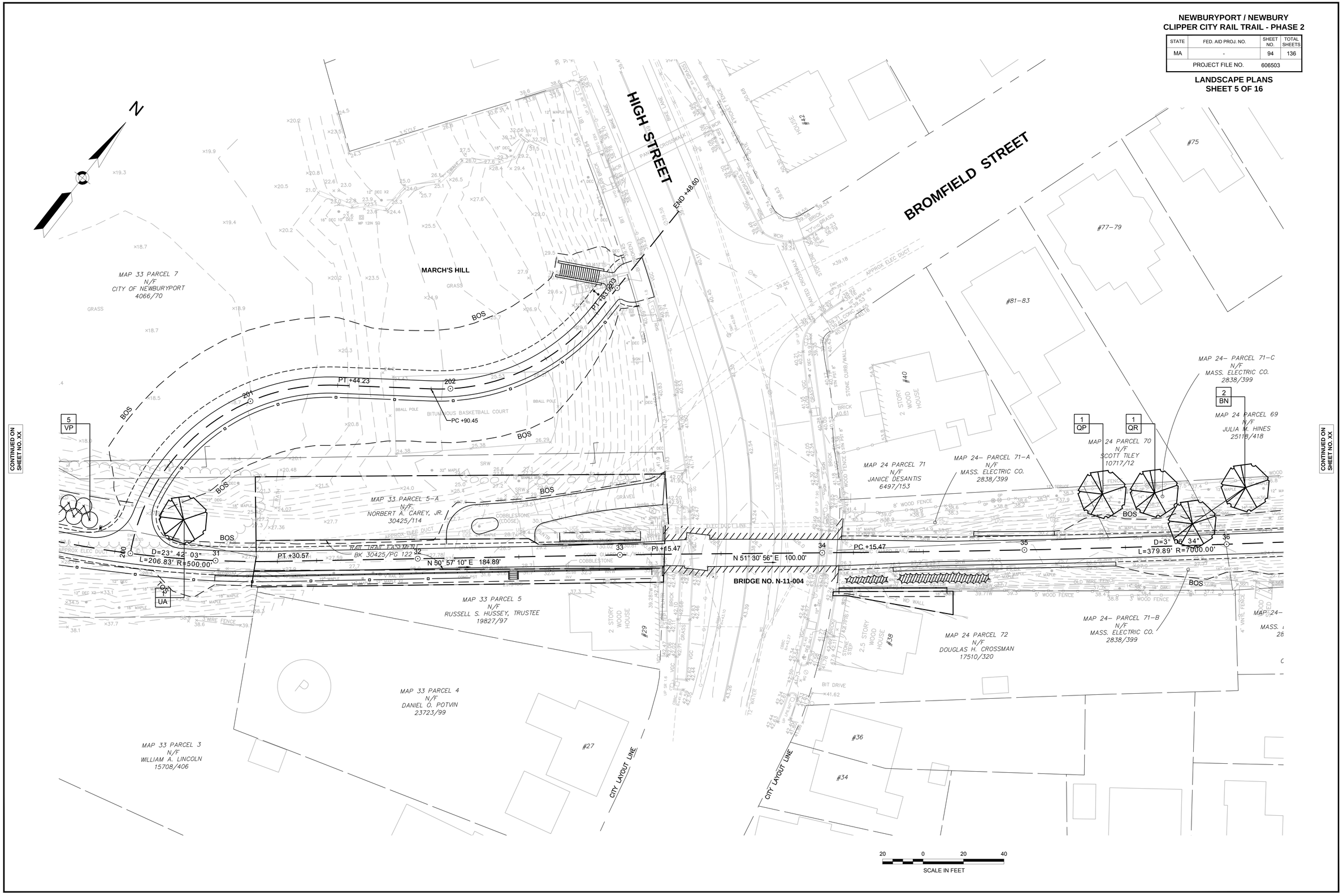
CONTINUED ON SHEET NO. XX

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	94	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 5 OF 16

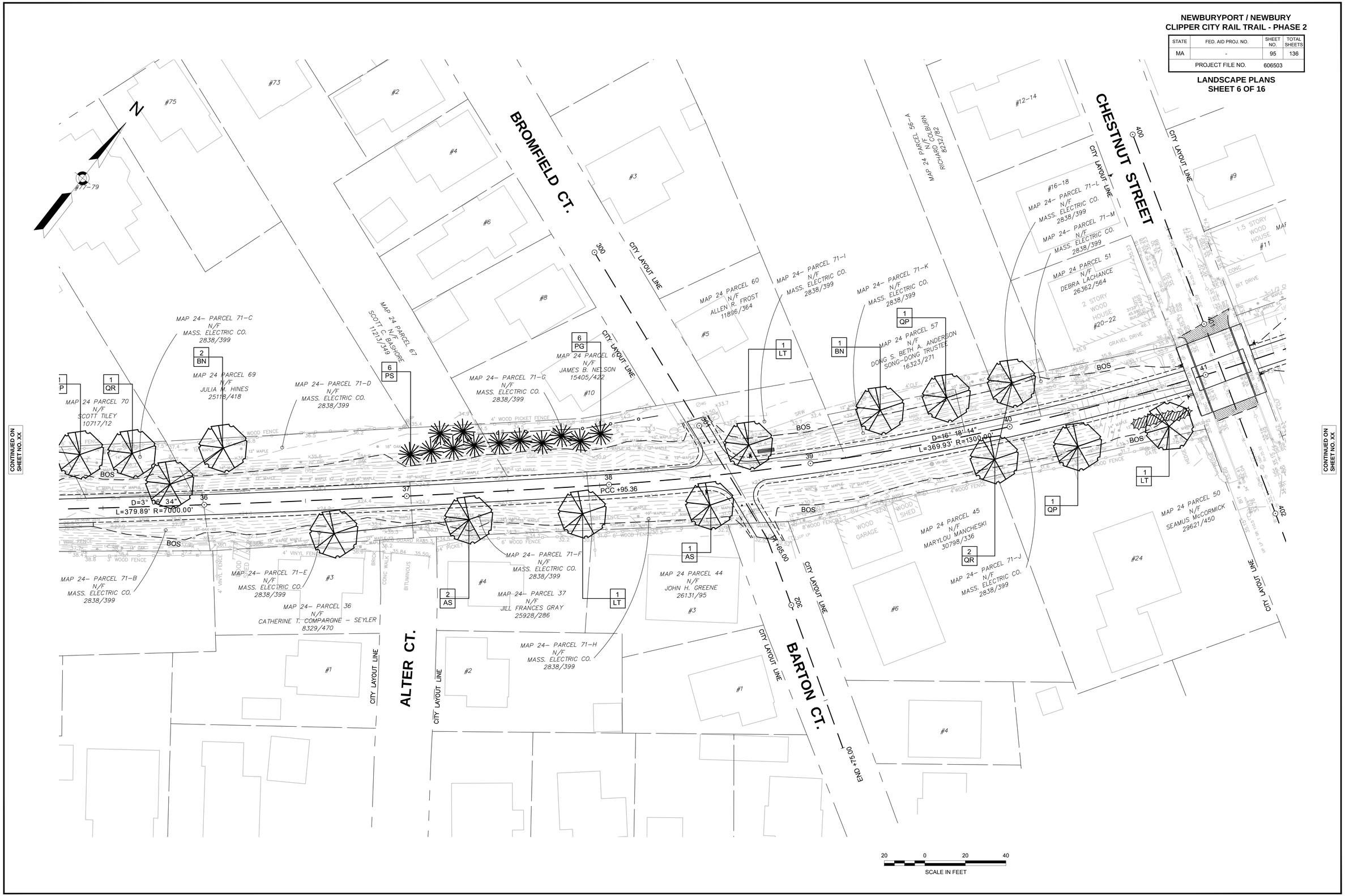


606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	95	136
PROJECT FILE NO.		606503	

LANDSCAPE PLANS
SHEET 6 OF 16



606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	96	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 7 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

CHESTNUT STREET

HANCOCK STREET

CITY LAYOUT LINE

#12–14

#16–18
MAP 24– PARCEL 71–L
N/F
MASS. ELECTRIC CO.
2838/399
MAP 24– PARCEL 71–M
N/F
MASS. ELECTRIC CO.
2838/399

MAP 24 PARCEL 51
N/F
DEBRA LACHANCE
26362/564

2 STORY WOOD HOUSE #20–22

GRAVEL DRIVE

#7

#9

#14

#16

1.5 STORY WOOD HOUSE #11

MAP 25 PARCEL 65
N/F
LISA STEWART
26225/353

MAP 25 PARCEL 50
N/F
PATRICIA BUCKLEY
22846/328

2 STORY WOOD HOUSE #22

MAP 24 PARCEL 50
N/F
SEAMUS McCORMICK
29621/450

1.5 STORY WOOD HOUSE #13

MAP 25 PARCEL 49
N/F
JOSHUA PIKE
26135/150

2 STORY WOOD HOUSE #24

MAP 25 PARCEL 66
N/F
SYLVIA TATTERSALL
29757/306

N/F
CITY OF NEWBURYPORT
259/191

#15

#17

#17

#15

#13

#7–9

#3

#54

MAP 25 PARCEL 40
N/F
RICHARD HILL
26472/547

MAP 25 PARCEL 14
N/F AARON C COFFIN
26983/569

MAP 25 PARCEL 19
N/F
ROBERT FOLEY
25637/385

MAP 25 PARCEL 18
N/F
ANTHONY LOWTHER
25513/365

MAP 25 PARCEL 17
N/F
GARY WELCH
6109/691

MAP 25 PARCEL 16
N/F
DANIEL CARLAT
29018/402

MAP 25 PARCEL 14
N/F
ROGER BLOCK
22874/266

MAP 25 PARCEL 42
N/F
ROBERT DOUGHTY
9471/518

MAP 25 PARCEL 13–B
N/F
AMY O'SULLIVAN
30076/397

MAP 25 PARCEL 13–A
N/F
CHRISTOPHER DAVIS
28856/245

#64

L=24.66' R=100.00'
Δ=14° 07' 46"

PRC +54.35

D=15° 26' 57"
L=269.64' R=1000.00'

PC +84.71

PT +65.28

N 32° 06' 08" E 219.43'

BOS

400 401 402 500 501 502

41 42 43 44 45 46

END +50.00

1 BN
1 LT
2 AS
5 CR
5 IV
9 CR
3 HV
9 CA
7 CA
18 CA

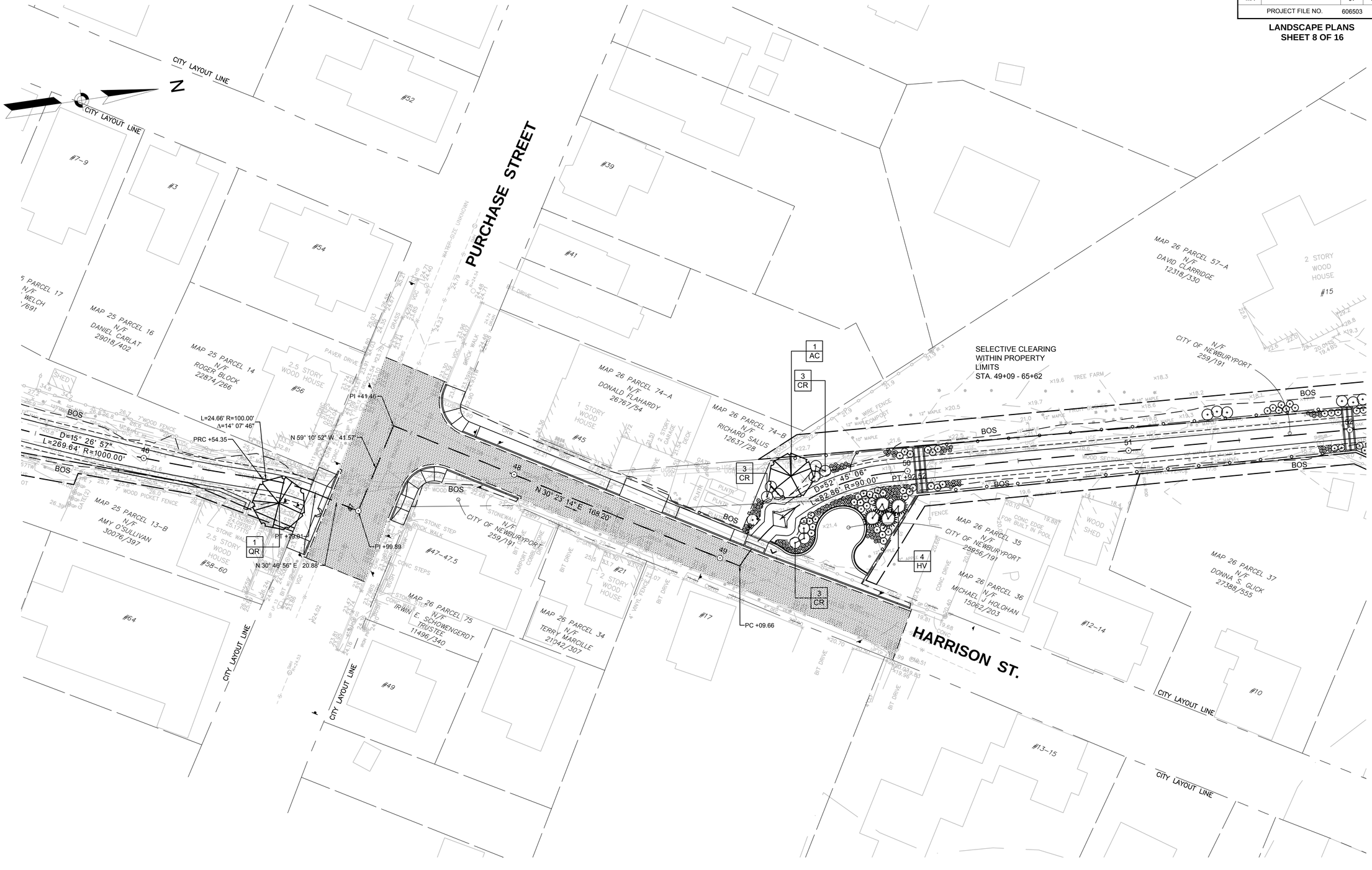
SCALE IN FEET
20 0 20 40

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	97	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 8 OF 16

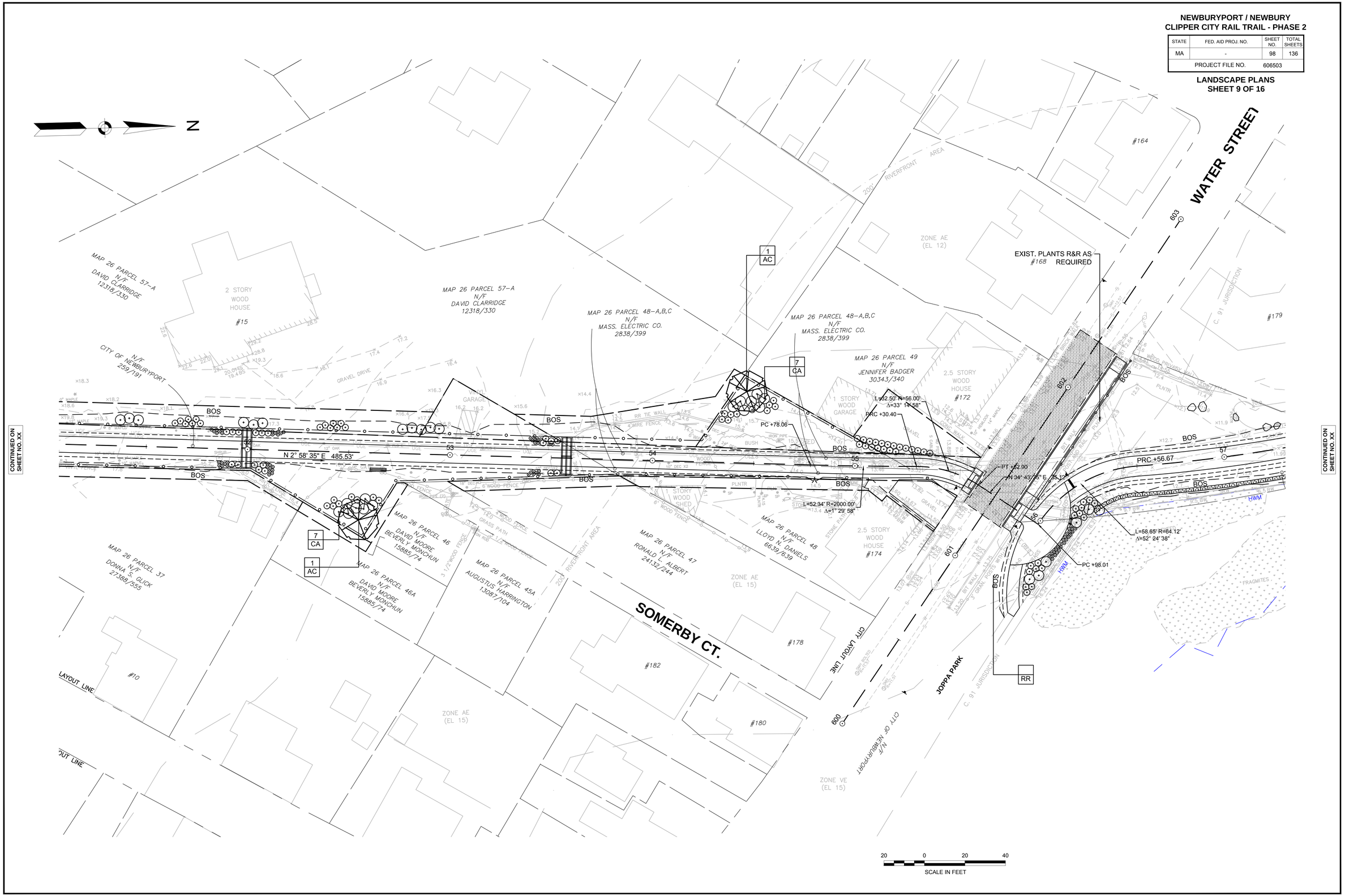
606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013



NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	98	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 9 OF 16



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CONTINUED ON SHEET NO. XX

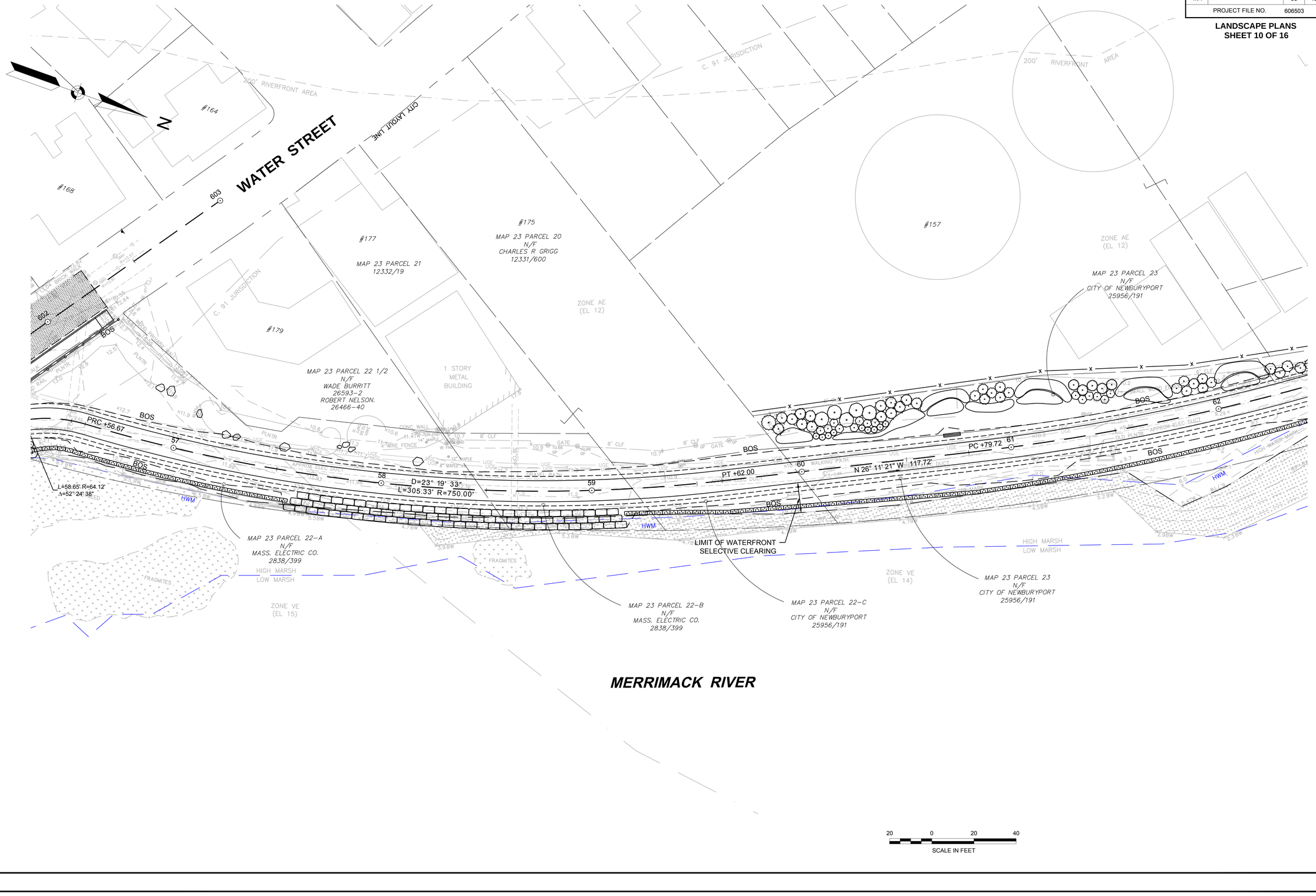
606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	99	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 10 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013



NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	100	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 11 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

200' RIVERFRONT AREA

200' RIVERFRONT AREA

MAP 23 PARCEL 11
N/F
CITY OF NEWBURYPORT
6364/536

CITY OF NEWBURYPORT
WASTEWATER TREATMENT PLANT

#157

#157

ZONE AE
(EL 12)

ZONE AE
(EL 12)

MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191

MAP 23 PARCEL 24
N/F
MASS. ELECTRIC CO.
2402/525

MAP 20 PARCEL 8
N/F
CITY OF NEWBURYPORT
6364/536
PL BK 143/92

L=461.61' R=1035.00'
Δ=25° 33' 14"

PCC +41.33

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

BOS

HWM

HIGH WATER MARK

HIGH MARSH
LOW MARSH

RIP-RAP

APPROX ELEC DUCT

LIMIT OF WATERFRONT
SELECTIVE CLEARING

ZONE VE
(EL 14)

ZONE VE
(EL 14)

MAP 23 PARCEL 11
N/F
CITY OF NEWBURYPORT
6364/536
PL BK 143/92

MAP 23 PARCEL 23
N/F
CITY OF NEWBURYPORT
25956/191

MERRIMACK RIVER

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	101	136
PROJECT FILE NO.		606503	

LANDSCAPE PLANS
SHEET 12 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

N

MAP 23 PARCEL 24
N/F
MASS. ELECTRIC CO.
2402/525

ZONE AE
(EL 12)

200' RIVERFRONT AREA

ACCESS EASEMENT
1885/88

MAP 20 PARCEL 8
N/F
CITY OF NEWBURYPORT
DOC. 503345
L.C. 15621A

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#95

1 STORY WOOD BUILDING

1 STORY BRICK BUILDING

N/F
CITY OF NEWBURYPORT
25956/191

NATIONAL GRID

MAP 20 PARCEL 13
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

N/F
MASS. ELECTRIC CO.
2838/399

#115-119 R
MAP 20 PARCEL 12
N/F
AMERICAN YACHT CLUB
DOC. 61727
L.C. 15621A

AMERICAN YACHT CLUB

MERRIMACK RIVER

ZONE AE
(EL 13)

ZONE VE
(EL 14)

HIGH MARSH
LOW MARSH

HWM

BOS

PRC +39.24

L=93.86' R=57.00'
Δ=94° 20' 50"

L=397.90' R=2500.00'
Δ=9° 07' 09"

PRC +33.10

D=101° 42' 30"
L=213.02' R=120.00'

PRC +46.11

67 68 69 70 71 72 73

GRAVEL PATH

GRAVEL DRIVE

CONC WALK

STORAGE BETWEEN POST

BITUMINOUS

APPROX ELEC DUCT

OLD-BROKEN DOWN BULKHEAD

GRASS/OVERGROWN

GRAVEL

BROKEN BIT

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	102	136
PROJECT FILE NO.		606503	

LANDSCAPE PLANS
SHEET 13 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#95

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

1 STORY METAL

2 STORY WOOD

2 STORY BRICK BUILDING COAST GUARD

MAP 17 PARCEL 10
N/F
U.S.A. COAST GUARD
BOOK 5878 PAGE 401

#63R

200' RIVERFRONT AREA

N/F
U.S.A.
5878/401

MAP 17 PARCEL 10
N/F
U.S.A.
5878/401

MAP 17 PARCEL 16
NEWBURYPORT MANAGER LLC
23921/421

N/F
CITY OF NEWBURYPORT
25956/191

ZONE AE
(EL 13)

ZONE VE
(EL 14)

L=44.91' R=60.00'
Δ=42° 52' 56"

PC +71.33

BOS

PRC +46.11

D=9° 04' 34"
L=139.40' R=880.00'

D=88° 46' 08"
L=120.85' R=78.00'

PT +06.36

S 32° 04' 26" W 164.97'

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

NATIONAL GRID

MAP 20 PARCEL 13
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

GRAVEL

GRASS/OVERGROWN

BITUMINOUS

ELECTRICAL

TRAILER

1 STORY METAL SHED

BROKEN BIT

CRUSHED STONE

FLAG STONE WALK

MULCH

APPROX ELEC DUCT

SHEET PILE BULKHEAD

OLD-BROKEN DOWN BULKHEAD

HWM

DOCK

MERRIMACK RIVER

20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	103	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 14 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

CONTINUED ON SHEET NO. XX

CONTINUED ON SHEET NO. XX

N

WATER STREET

CITY LAYOUT LINE

CITY LAYOUT LINE

#73-75

MAP 17 PARCEL 12
N/F
RANGE LIGHT LIMITED PARTNERSHIP
24852/303

MAP 17 PARCEL 13
N/F AUDRIUS E. KONTAUS
BOOK 17261 PAGE 570

#85

2 STORY WOOD

PI +61.22

BOS

78

N 40° 50' 49" W 210.74'

80

N 32° 45' 39" W 28.80'
PI +71.96

RAIL TRAIL EASEMENT

81

BOS

PI +00.76

ST

S 46° 42' 39" W 89.55'

PT +71.67

L=29.58' R=60.00'
Δ=28° 14' 43"

PC +42.09

S 74° 57' 22" W 25.85'

PT +16.24

L=44.91' R=60.00'
Δ=42° 52' 56"

PC +71.33

BOS

BOS

BOS

MAP 17 PARCEL 14
N/F MASS ELECTRIC COMPANY
BOOK 1185 PAGE 8

NATIONAL GRID

MAP 20 PARCEL 1
N/F
MASS. ELECTRIC CO.
DOC. 102563
L.C. 5968A

#95

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

1 STORY METAL

2 STORY WOOD

2 STORY BRICK GARAGE

2 STORY BRICK BUILDING COAST GUARD

MAP 17 PARCEL 10
N/F
U.S.A. COAST GUARD
BOOK 5878 PAGE 401

#63R

N/F
U.S.A.
5878/401

N/F
CITY OF NEWBURYPORT
25956/191

ZONE AE
(EL 12)

ZONE AE
(EL 13)

ZONE AE
(EL 13)

200' RIVERFRONT AREA

C. 91 JURISDICTION

C. 91 JURISDICTION

PAINTED PARKING

CONC RAMP

BITUMINOUS

FLAG STONE WALK

MULCH

CRUSHED STONE

GRAVEL

APPROX ELEC DUCT

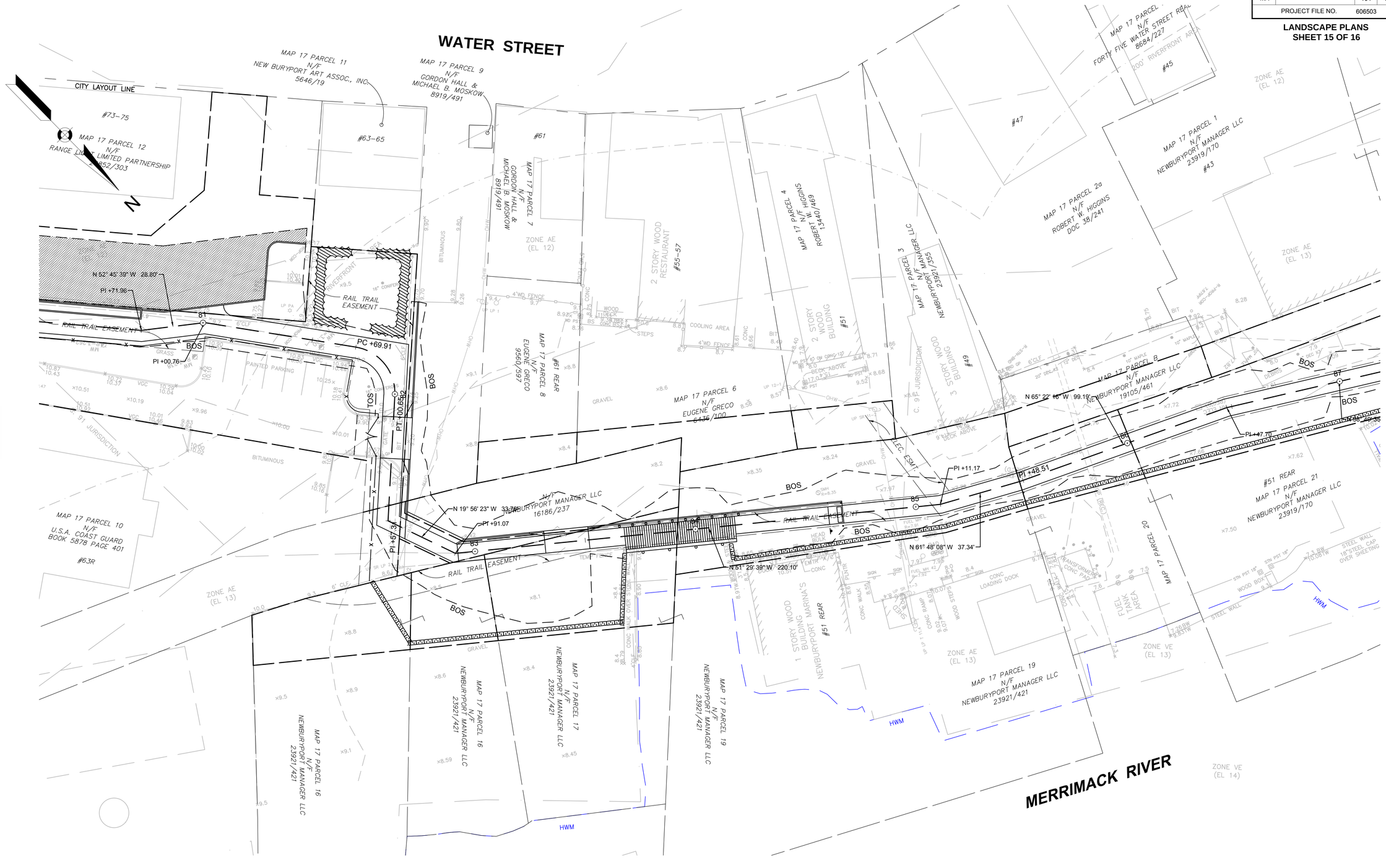
20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	104	136
PROJECT FILE NO.	606503		

LANDSCAPE PLANS
SHEET 15 OF 16

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

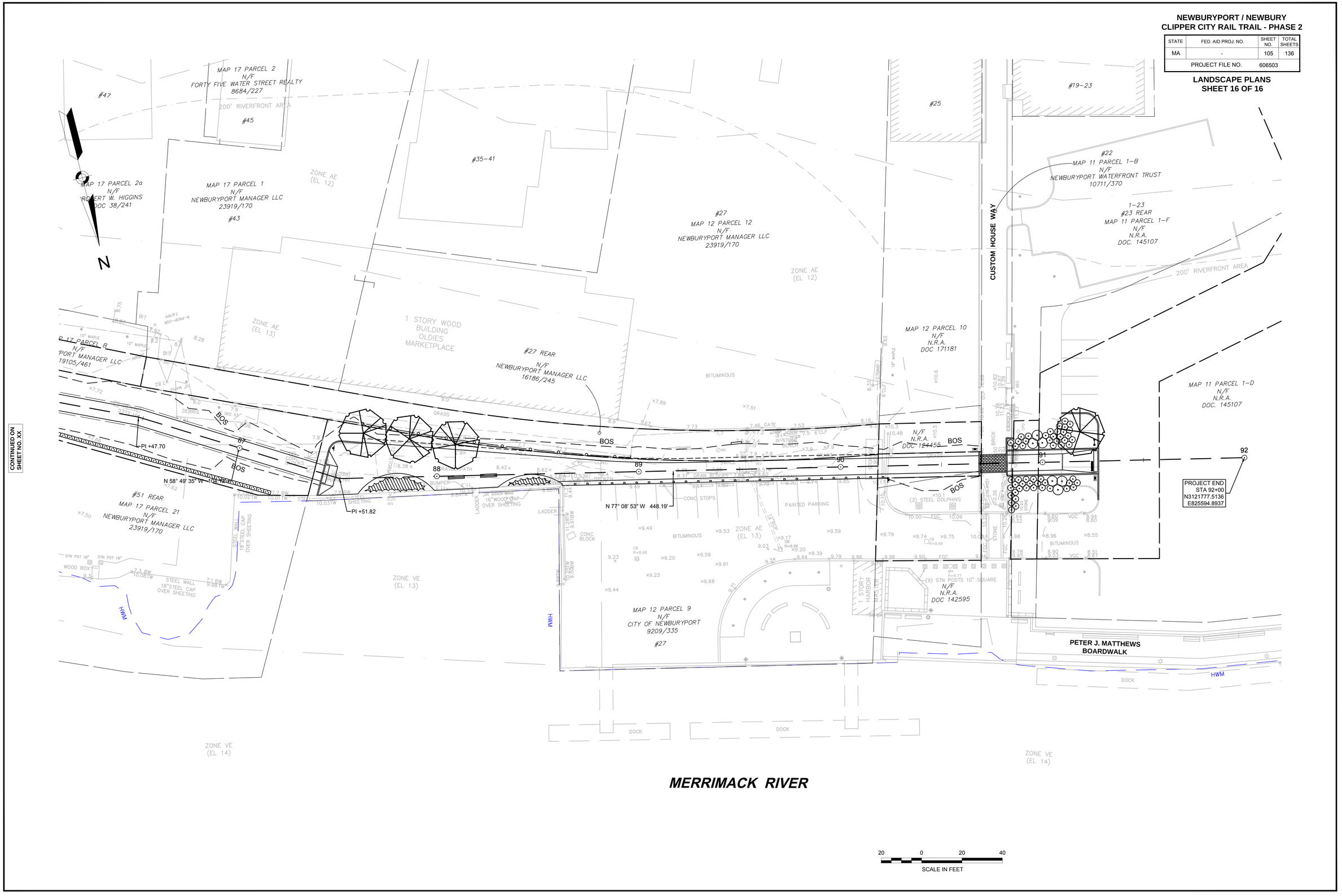


20 0 20 40
SCALE IN FEET

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	105	136
PROJECT FILE NO.		606503	

LANDSCAPE PLANS
SHEET 16 OF 16



CONTINUED ON SHEET NO. XX

606503(25%)LD(LANDSCAPE PLANS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

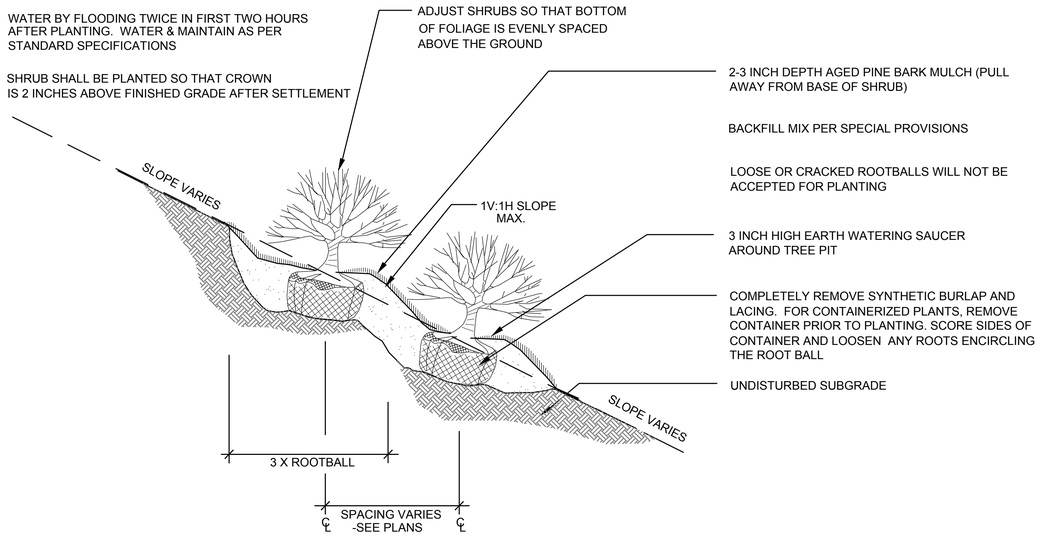
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	106	136
PROJECT FILE NO.		606503	

LANDSCAPE DETAILS
SHEET 1 OF 2

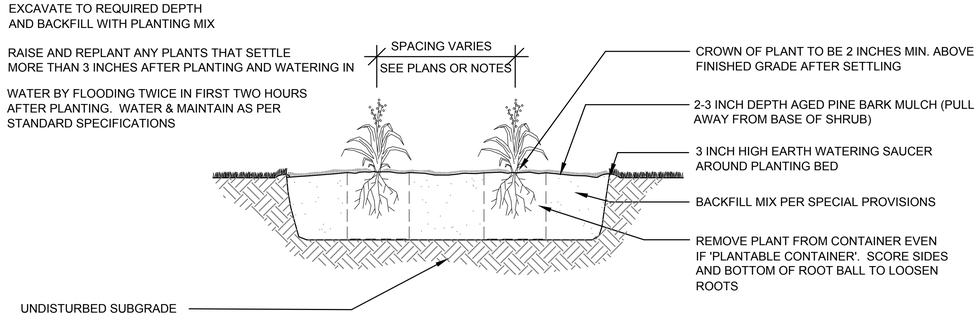
606503\[25%]LD\LANDSCAPE DETAILS).DWG 27-Jun-2013

PLANTING SCHEDULE

QTY.	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT	SHEET 1	SHEET 2	SHEET 3	SHEET 4	SHEET 5	SHEET 6	SHEET 7	SHEET 8	SHEET 9	SHEET 10	SHEET 11	SHEET 12	SHEET 13	SHEET 14	SHEET 15	SHEET 16
		TREES																			
0	AC	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8-10 FT. CLUMP	B&B	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-
0	AS	ACER SACCHARINUM	SILVER MAPLE	2.5-3 INCH CAL.	B&B	-	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-
0	BN	BETULA NIGRA 'HERITAGE'	HERITAGE RIVER BIRCH	8-10 FT. CLUMP	B&B	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-
0	LT	LIRIODENDRON TULIPIFERA	TULIP TREE	2.5-3 INCH CAL.	B&B	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	-
0	QP	QUERCUS PALUSTRIS	PIN OAK	2.5-3 INCH CAL.	B&B	-	-	-	3	1	2	-	-	-	-	-	-	-	-	-	-
0	QR	QUERCUS RUBRA	RED OAK	2.5-3 INCH CAL.	B&B	-	-	-	4	1	2	-	1	-	-	-	-	-	-	-	-
0	UA	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE ELM	2.5-3 INCH CAL.	B&B	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
		EVERGREEN TREES																			
0	PG	PICEA GLAUCA	WHITE SPRUCE	5-6 FT.	B&B	-	6	-	-	-	6	-	-	-	-	-	-	-	-	-	-
0	PR	PINUS RIGIDA	PITCH PINE	4-5 FT.	#5 CONT.	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-
0	PS	PINUS STROBUS	WHITE PINE	5-6 FT.	B&B	-	10	6	-	-	6	-	-	-	-	-	-	-	-	-	-
		SHRUBS																			
0	CA	CLETHRA ALNIFOLIA	SUMMERSWEET	3-4 FT.	B&B	-	-	-	-	-	-	41	-	-	-	-	-	-	-	-	-
0	CR	CORNUS RACEMOSA	GRAY DOGWOOD	4-5 FT.	B&B	-	-	-	6	-	-	24	-	-	-	-	-	-	-	-	-
0	HV	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	3-4 FT.	#3 CONT.	-	-	-	3	-	-	6	-	-	-	-	-	-	-	-	-
0	IV	ITEA VIRGINICA 'HENRY'S GARNET'	VIRGINIA SWEETSPIRE	2-3 FT.	#3 CONT.	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-
0	MP	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	?	?	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	RV	ROSA VIRGINIANA	VIRGINIA ROSE	5-6 FT.	PINK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	VD	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	3-4 FT.	B&B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	VP	VIBURNUM PRUNIFOLIUM	BLACKHAW VIBURNUM	3-4 FT.	#5 CONT.	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	-
		GROUNDCOVER & PERENNIALS																			
0	AA	ASTILBE ARENDSII	FALSE NETTLE	1 GAL.	VARIETY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	AF	ATHYRIUM FELIX-FEMINA	LADY FERN	1 GAL.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	AH	ANEMONE X HYBRIDA 'HONORINE JOBERT'	WINDFLOWER	1 GAL.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	CL	CHASMANTHIUM LATIFOLIUM	WOOD OATS	1 GAL.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	GR	GERANIUM X ROZANNE	GERANIUM	1 GAL.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	HS	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	1 GAL.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	JC	JUNIPERUS CONFERTA 'BLUE PACIFIC'	BLUE PACIFIC SHORE JUNIPER	2-2.5 FT.		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0	RR	ROSA RUGOSA	RUGOSA ROSE	?		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



1 CONTAINERIZED SHRUB PLANTING (SLOPE) DETAIL
NOT TO SCALE



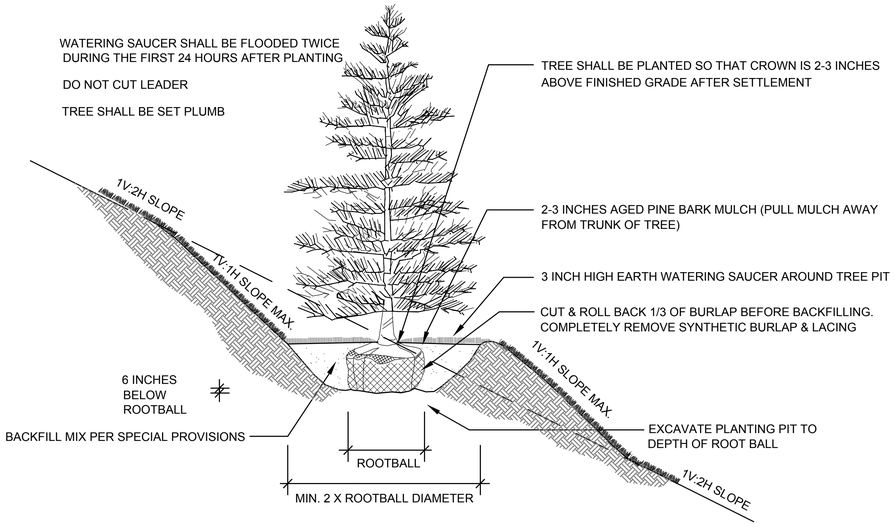
2 PERENNIAL PLANTING
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

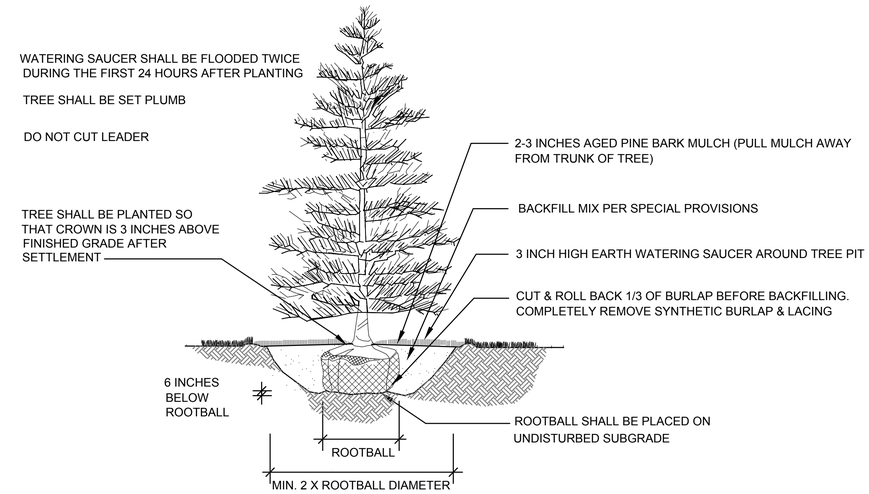
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	107	136
PROJECT FILE NO.	606503		

LANDSCAPE DETAILS
SHEET 2 OF 2

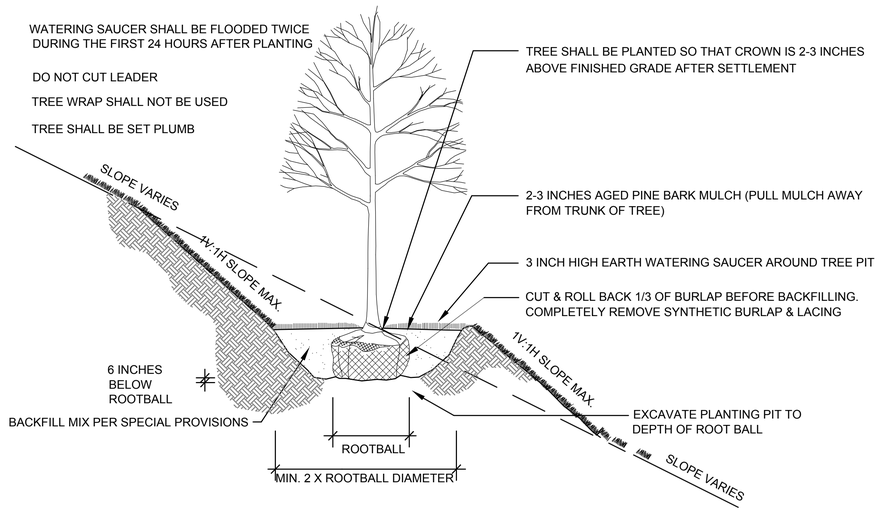
606503\[25%]LD\LANDSCAPE DETAILS\ DWG 27-Jun-2013



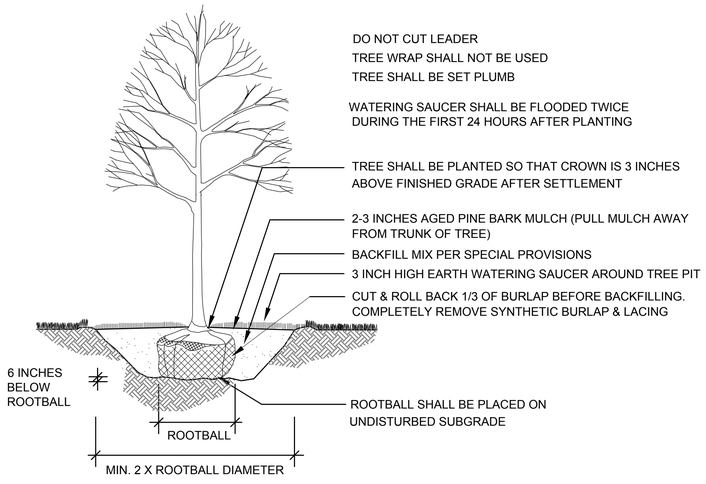
1 EVERGREEN TREE PLANTING (SLOPE)
NOT TO SCALE



2 EVERGREEN TREE PLANTING
NOT TO SCALE



3 DECIDUOUS TREE PLANTING (SLOPE)
NOT TO SCALE



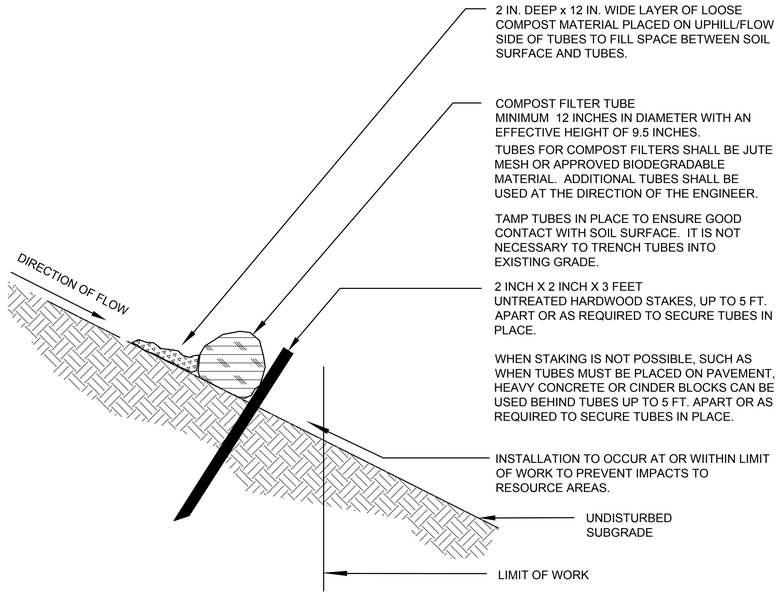
4 DECIDUOUS TREE PLANTING
NOT TO SCALE

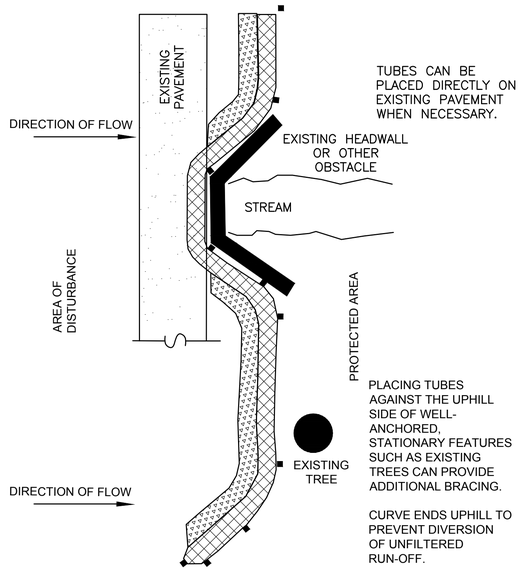
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	108	136
PROJECT FILE NO.	606503		

CONSTRUCTION DETAILS
SHEET 1 OF 4

606503(25%)HD(CONST DETAILS).DWG 27-Jun-2013

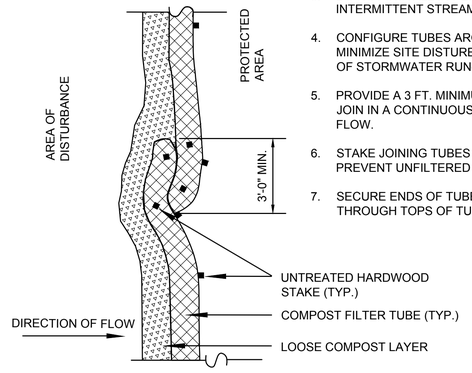




PLAN VIEW - TYPICAL

GENERAL NOTES:

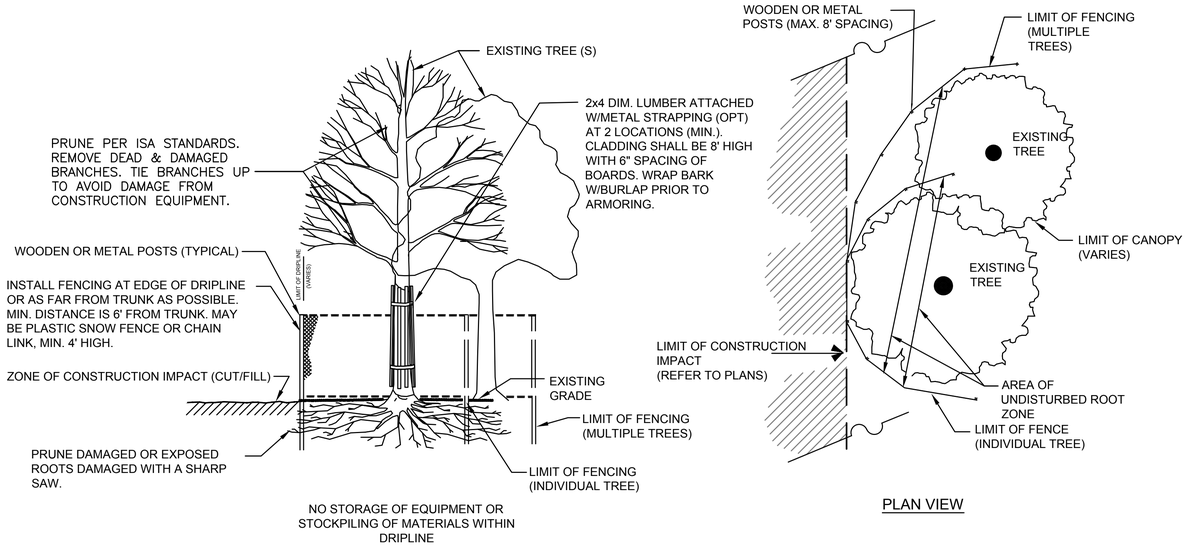
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
5. PROVIDE A 3 FT. MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.
6. STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.
7. SECURE ENDS OF TUBES WITH STAKES SPACED 18 IN. APART THROUGH TOPS OF TUBES.



PLAN VIEW - JOIN DETAIL

1 SINGLE COMPOST FILTER TUBE DETAIL

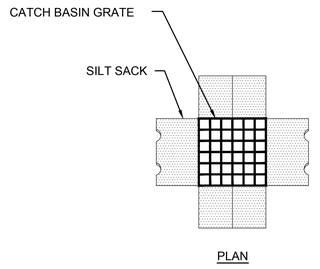
NOT TO SCALE



PLAN VIEW

2 TREE PROTECTION-EXISTING TREE(S)

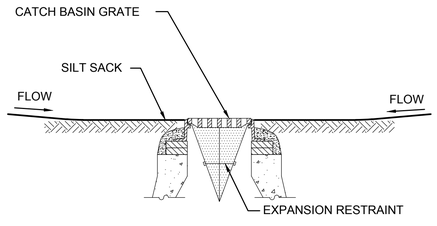
NOT TO SCALE



PLAN

NOTES:

1. INSTALL SILT SACK IN ALL CATCH BASINS BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.



SECTION

3 CATCH BASIN SILT SACK SEDIMENT TRAP

NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	109	136
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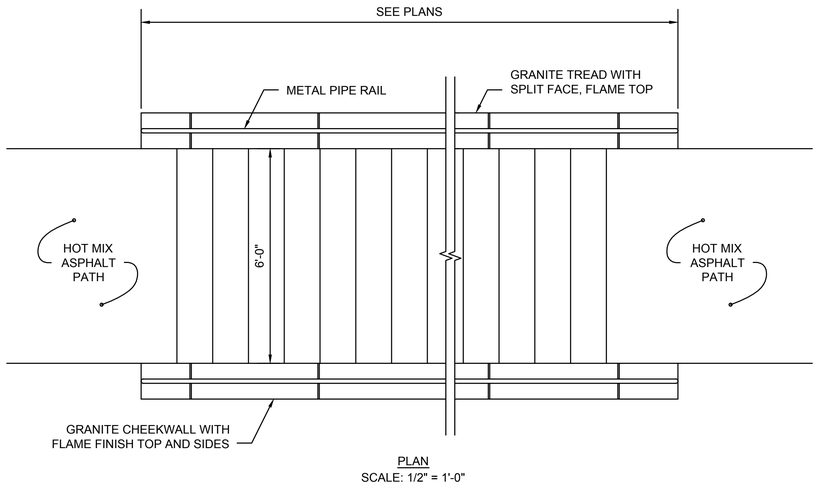
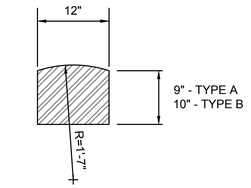
CONSTRUCTION DETAILS
SHEET 2 OF 4

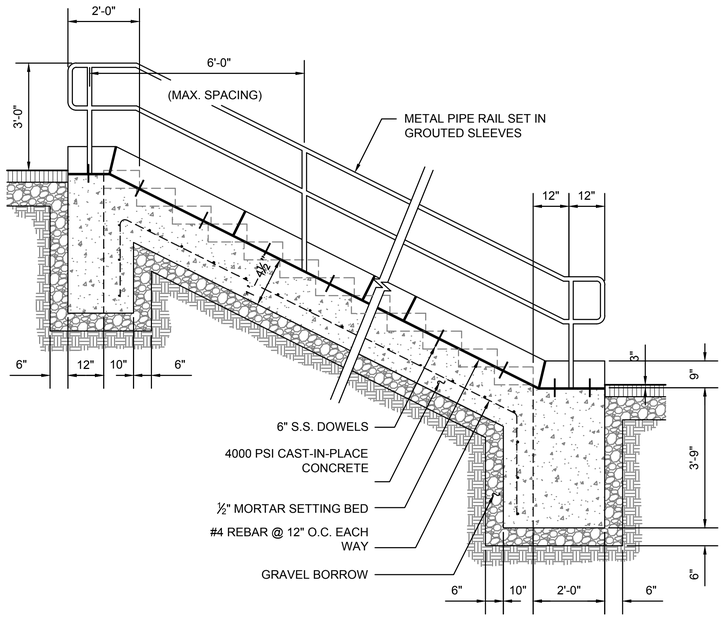
606503(25%)HD\CONST DETAILS\ DWG 27-Jun-2013



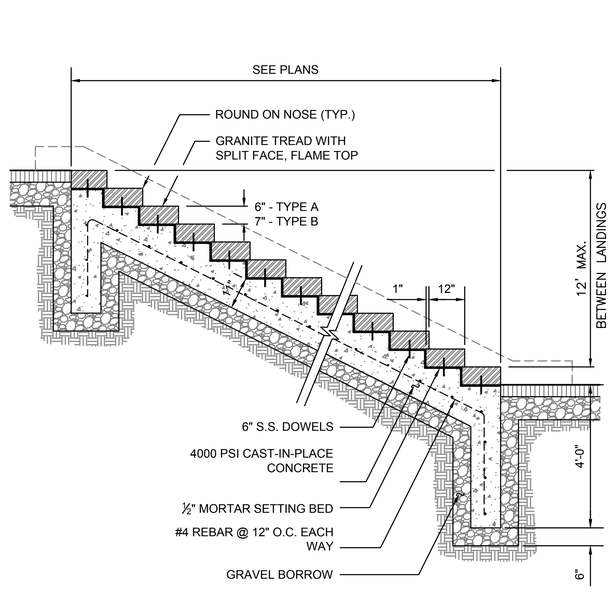
PLAN
SCALE: 1/2" = 1'-0"



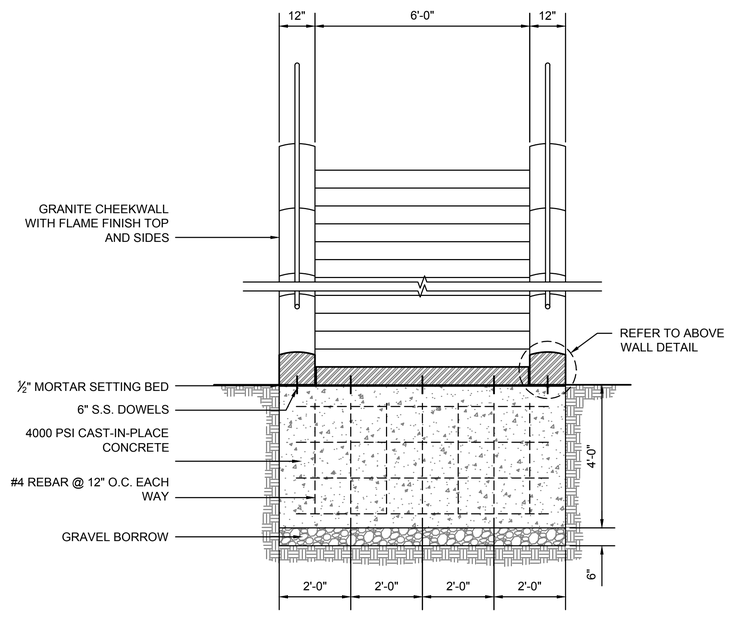
WALL DETAIL
SCALE: 1" = 1'-0"



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



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



GRANITE CHEEKWALLS
SCALE: 1/2" = 1'-0"

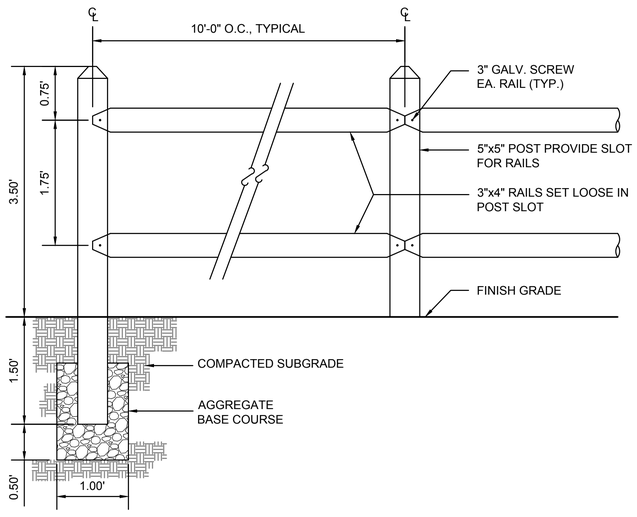
1 GRANITE STAIRCASE WITH METAL PIPE HANDRAILS
SCALE AS SHOWN

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	110	136
PROJECT FILE NO.	606503		

CONSTRUCTION DETAILS
SHEET 3 OF 4

606503(25%)HD\CONST DETAILS\ DWG 27-Jun-2013



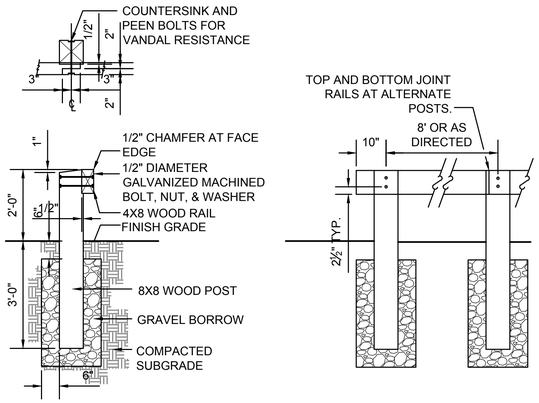
1 POST AND RAIL WOOD FENCE
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

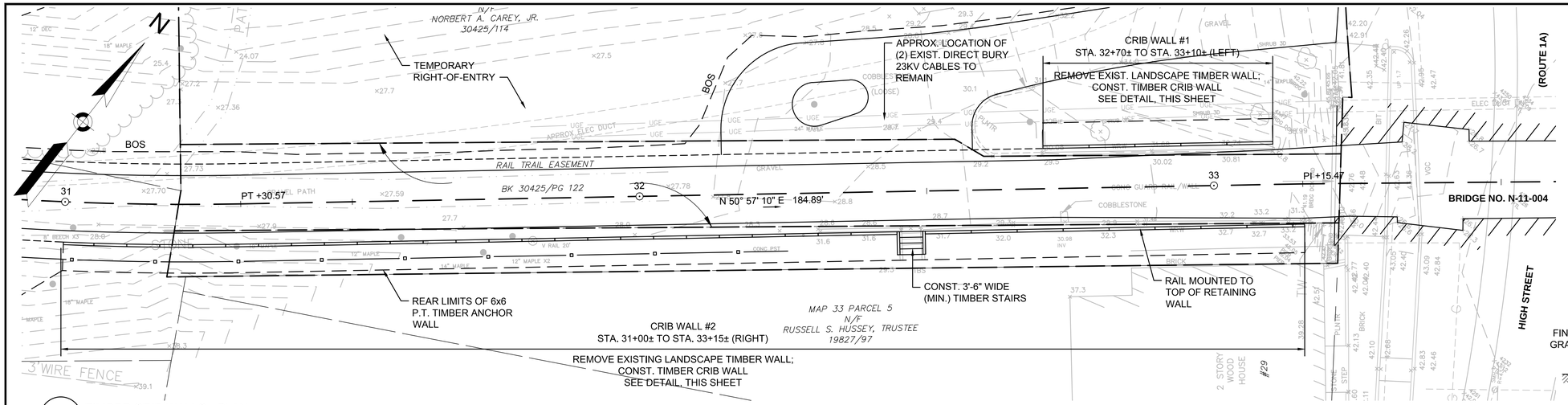
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	111	136
PROJECT FILE NO.	606503		

CONSTRUCTION DETAILS
SHEET 4 OF 4

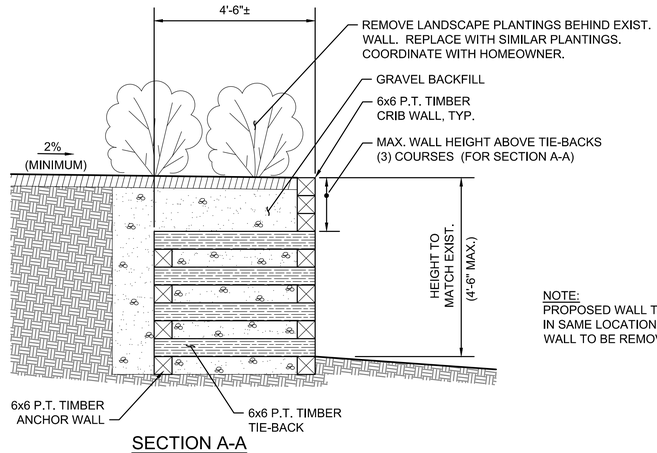
606503(25%)HD\CONST DETAILS).DWG 27-Jun-2013



1 TIMBER GUARD RAIL
NOT TO SCALE

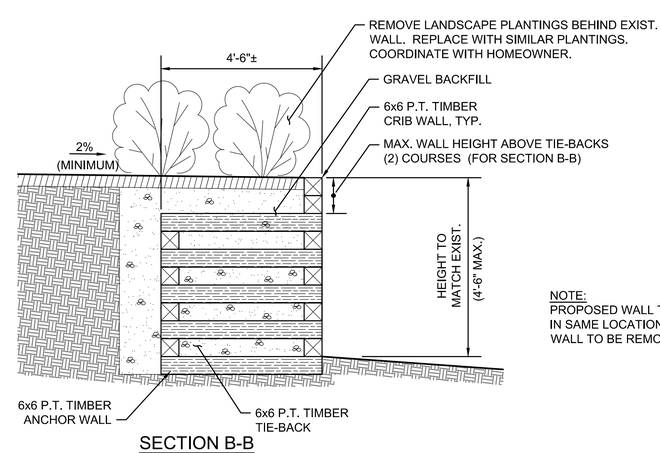


1 TIMBER CRIB WALLS - PLAN
SCALE: 1" = 10'-0"



SECTION A-A

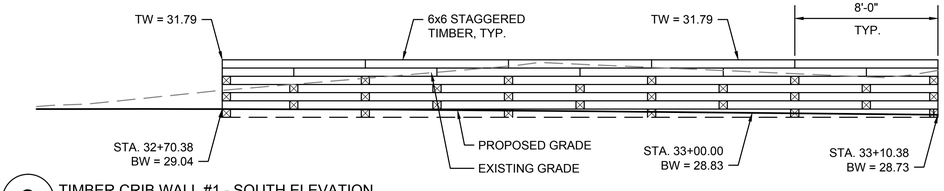
NOTE:
PROPOSED WALL TO BE INSTALLED
IN SAME LOCATION AS EXISTING
WALL TO BE REMOVED.



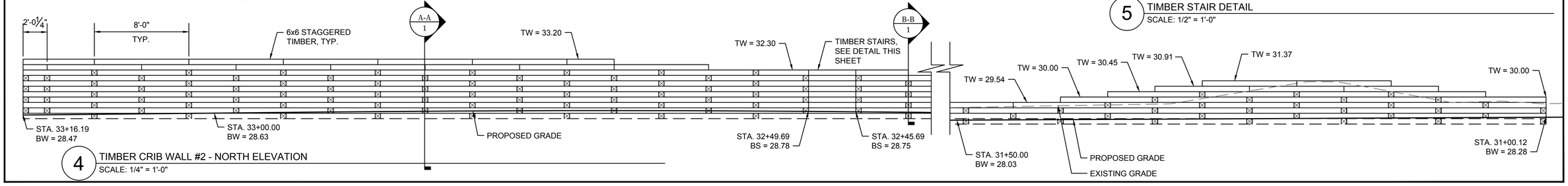
SECTION B-B

NOTE:
PROPOSED WALL TO BE INSTALLED
IN SAME LOCATION AS EXISTING
WALL TO BE REMOVED.

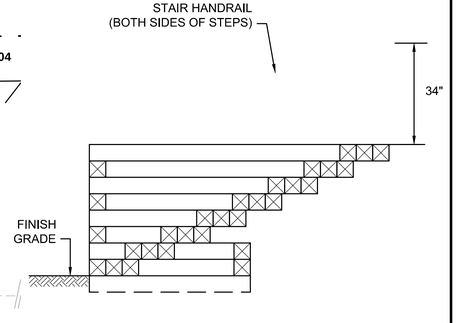
2 TIMBER CRIB WALL DETAILS
SCALE: 1/2" = 1'-0"



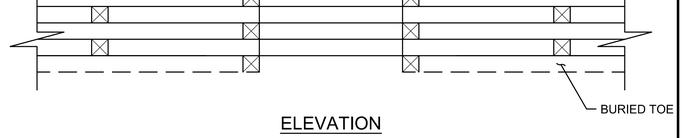
3 TIMBER CRIB WALL #1 - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



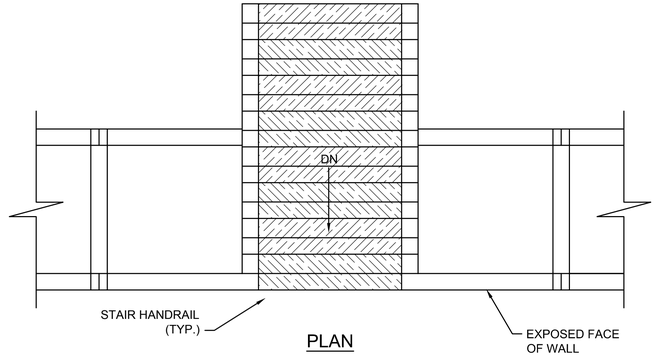
4 TIMBER CRIB WALL #2 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



SECTION



ELEVATION



PLAN

5 TIMBER STAIR DETAIL
SCALE: 1/2" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	112	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 1 OF 7

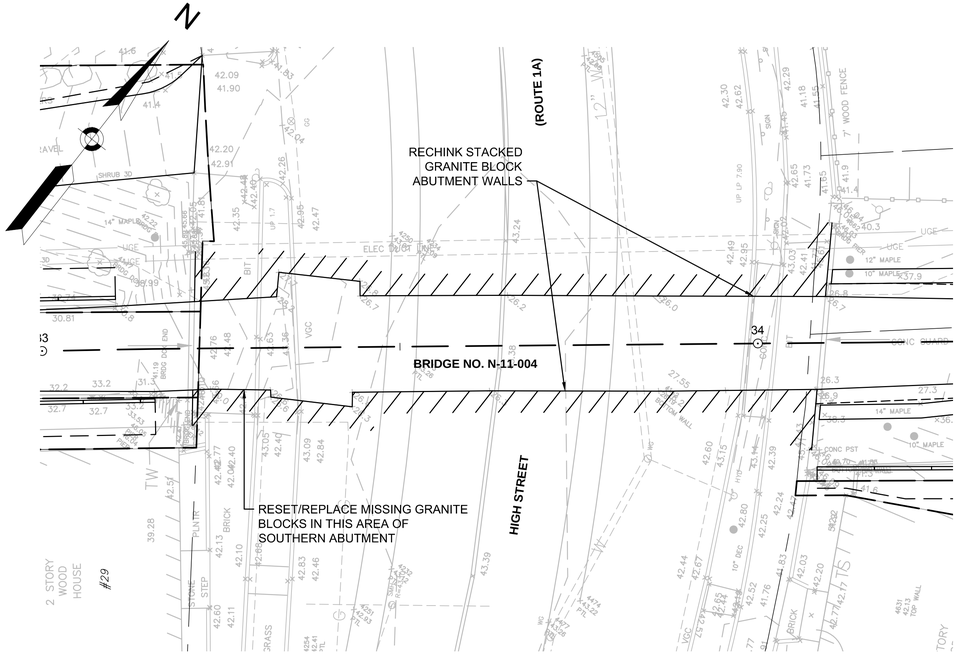
606503(25%)HD(WALL DETAILS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

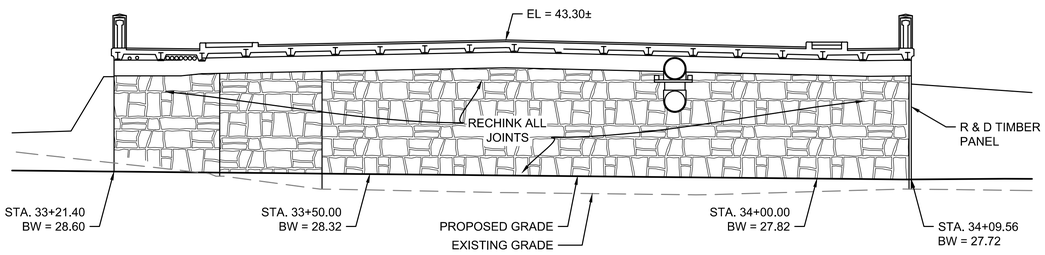
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	113	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 2 OF 7

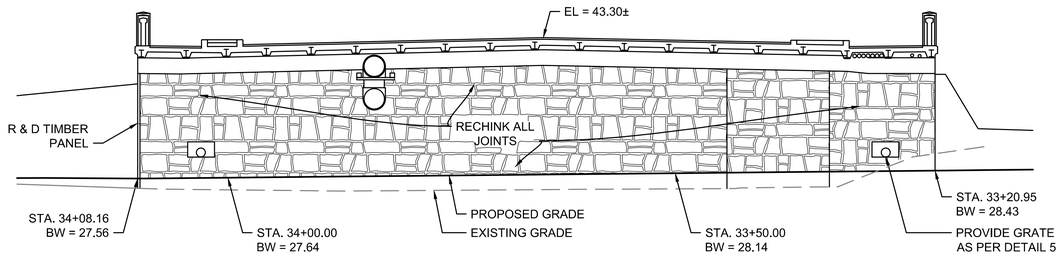
606503(25%)HD\WALL DETAILS).DWG 27-Jun-2013



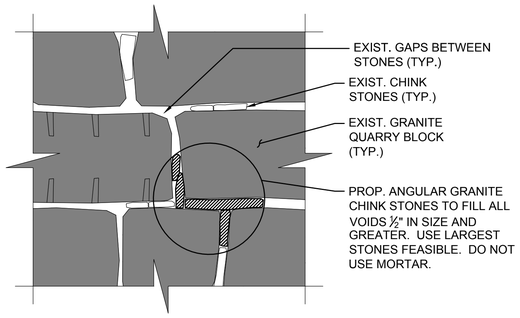
1 HIGH STREET UNDERPASS - PLAN
SCALE: 1" = 10'-0"



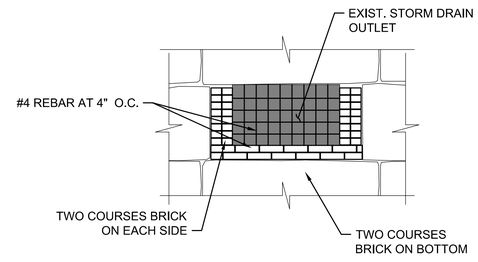
2 NORTHERN ABUTMENT - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 SOUTHERN ABUTMENT - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



4 JOINT CHINKING DETAIL
NOT TO SCALE



NOTES:

1. CONTRACTOR SHALL REMOVE DEBRIS FROM STORM DRAIN OUTLET AND RECONSTRUCT PORTION OF MASONRY WITHIN GRANITE WALL AS REQUIRED.
2. GRATE SHALL BE PREFABRICATED GALVANIZED #4 REBAR SPACED AT 4" O.C. WELDED AT ALL BAR CROSSING LOCATIONS.
3. GRATE SHALL BE EMBEDDED INSIDE MORTAR JOINT BETWEEN BRICK COURSES AT BOTTOM AND SIDES OF PENETRATION.
4. CONTRACTOR SHALL ENSURE SMOOTH TRANSITION FROM VERTICAL PORTION OF STORM DRAIN OUTLET TO FACE OF GRANITE WALL WITH POSITIVE DRAINAGE TOWARDS FACE OF ABUTMENT WALL.

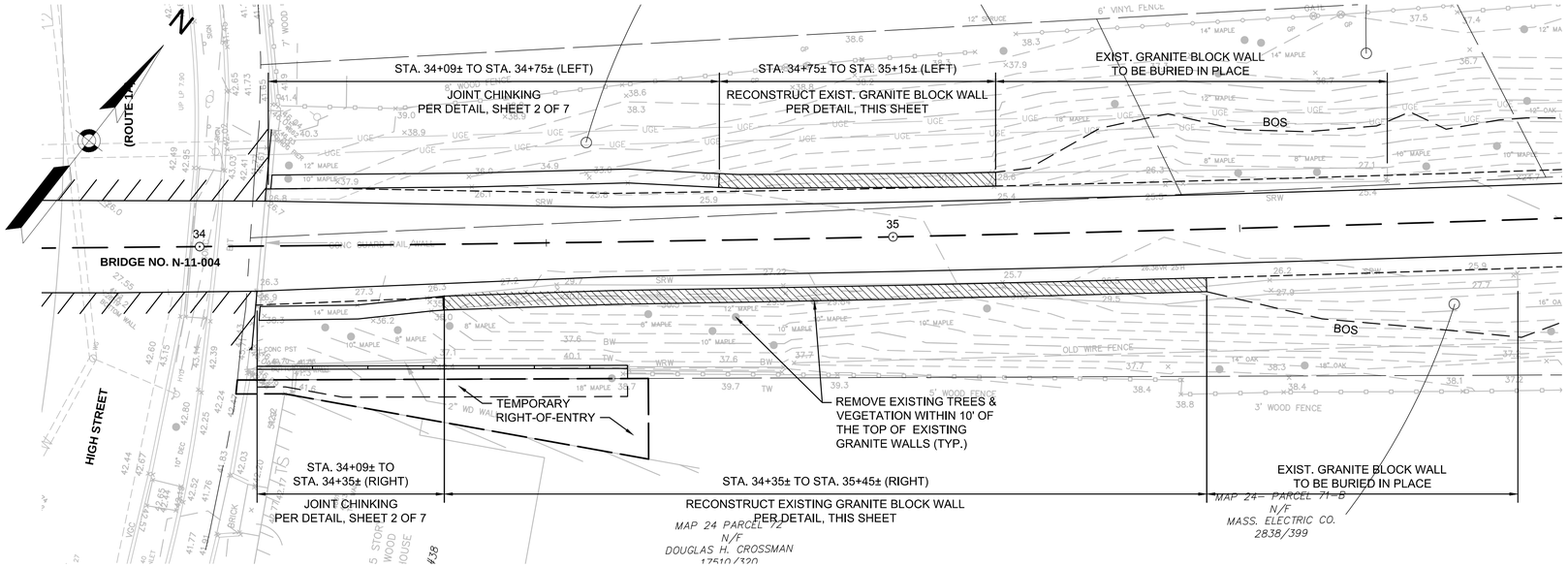
5 GRATE DETAIL
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

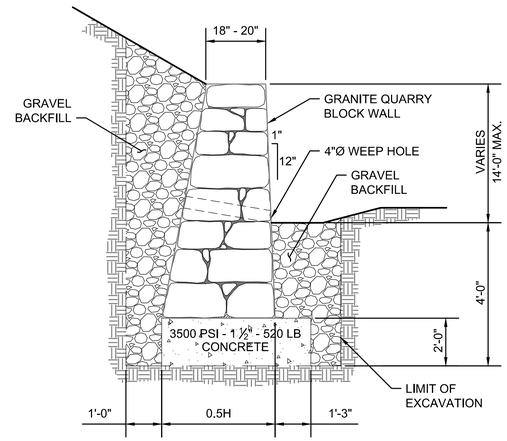
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	114	136
PROJECT FILE NO.		606503	

WALL DETAILS
SHEET 3 OF 7

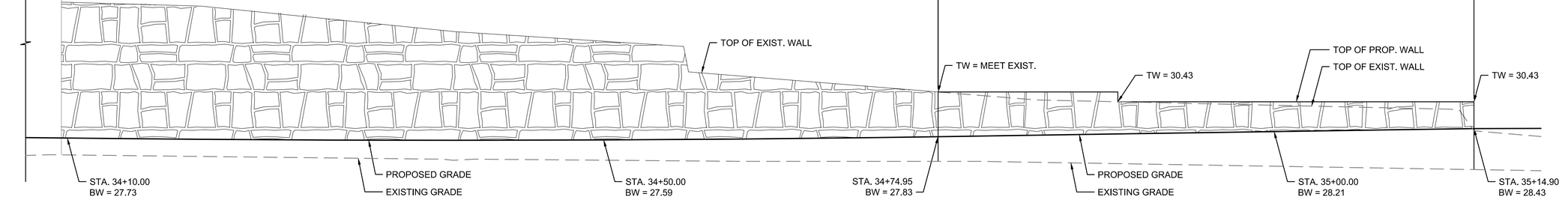
606503(25%)HD\WALL DETAILS).DWG 27-Jun-2013



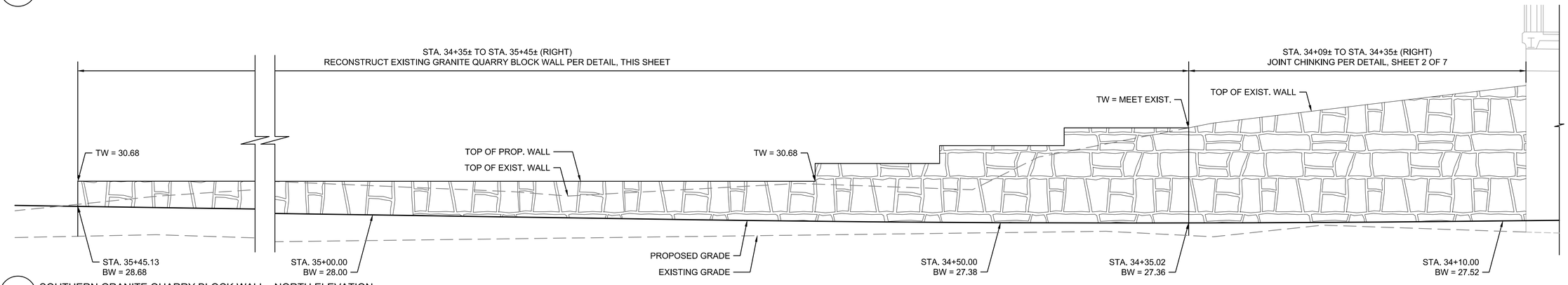
1 GANITE QUARRY BLOCK WALLS - PLAN
SCALE: 1" = 10'-0"



4 GRANITE QUARRY BLOCK WALL - SECTION
SCALE: 1/2" = 1'-0"



2 NORTHERN GRANITE QUARRY BLOCK WALL - SOUTH ELEVATION
SCALE: 1/4" = 1'-0"



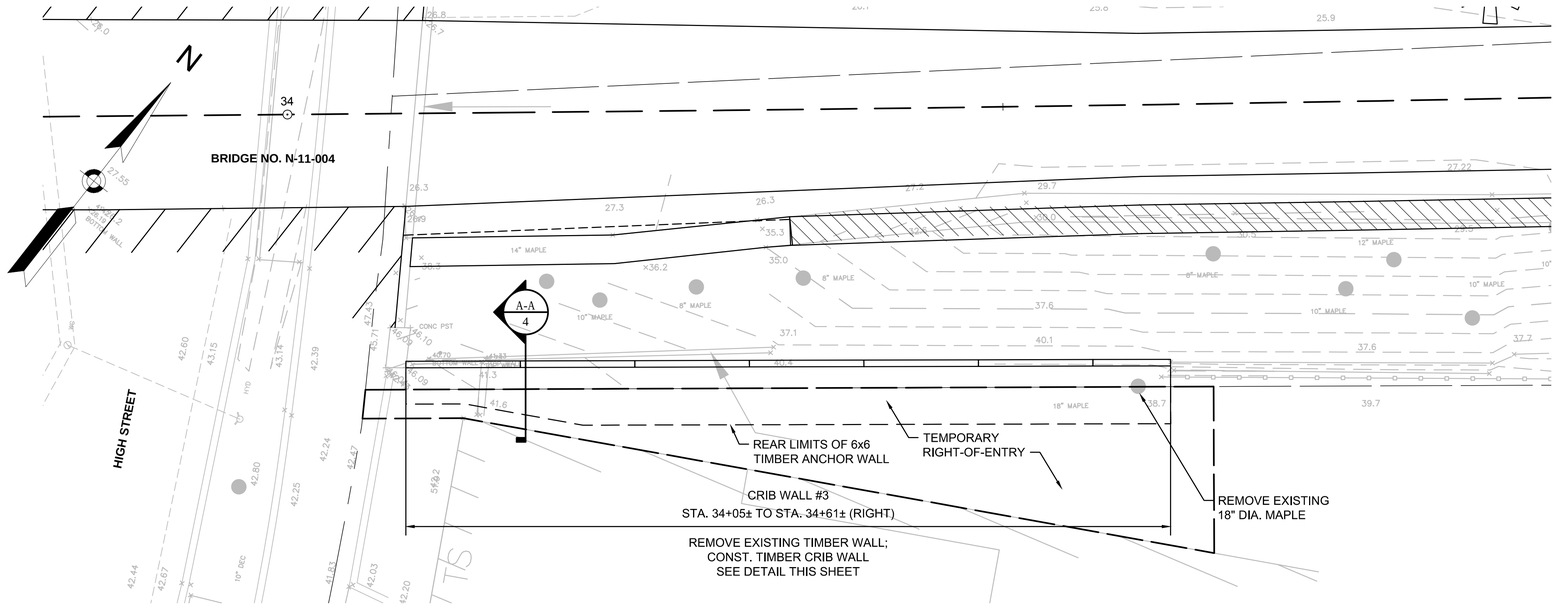
3 SOUTHERN GRANITE QUARRY BLOCK WALL - NORTH ELEVATION
SCALE: 1/4" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

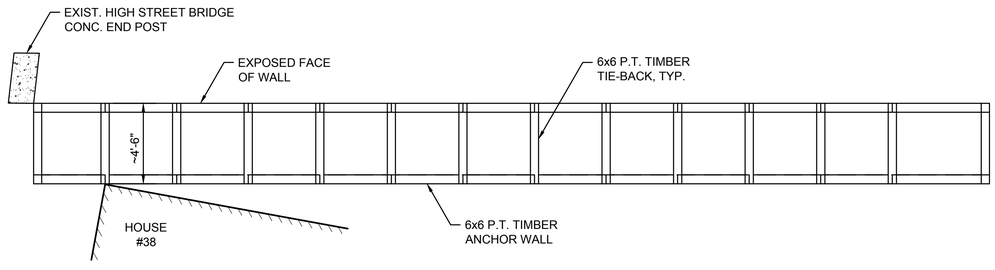
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	115	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 4 OF 7

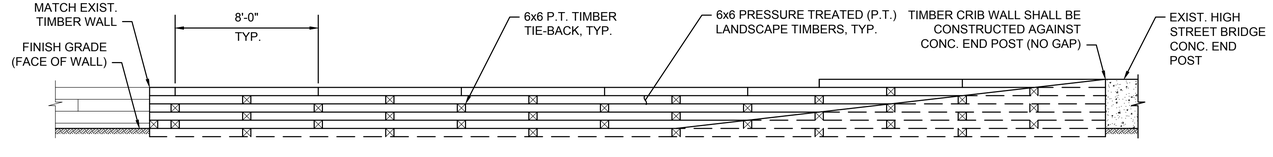
606503(25%)HD(WALL DETAILS).DWG 27-Jun-2013



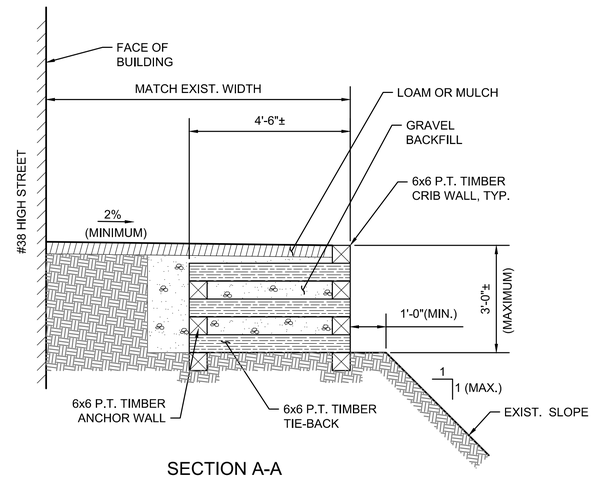
1 TIMBER CRIB WALL - PLAN
SCALE: 1" = 5'-0"



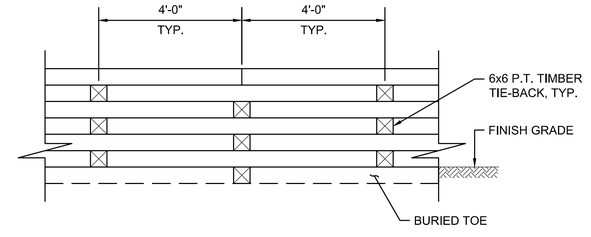
2 TIMBER CRIB WALL #3 - PLAN
SCALE: 1/4" = 1'-0"



3 TIMBER CRIB WALL #3 - NORTH ELEVATION
SCALE: 1/4" = 1'-0"



SECTION A-A



ELEVATION

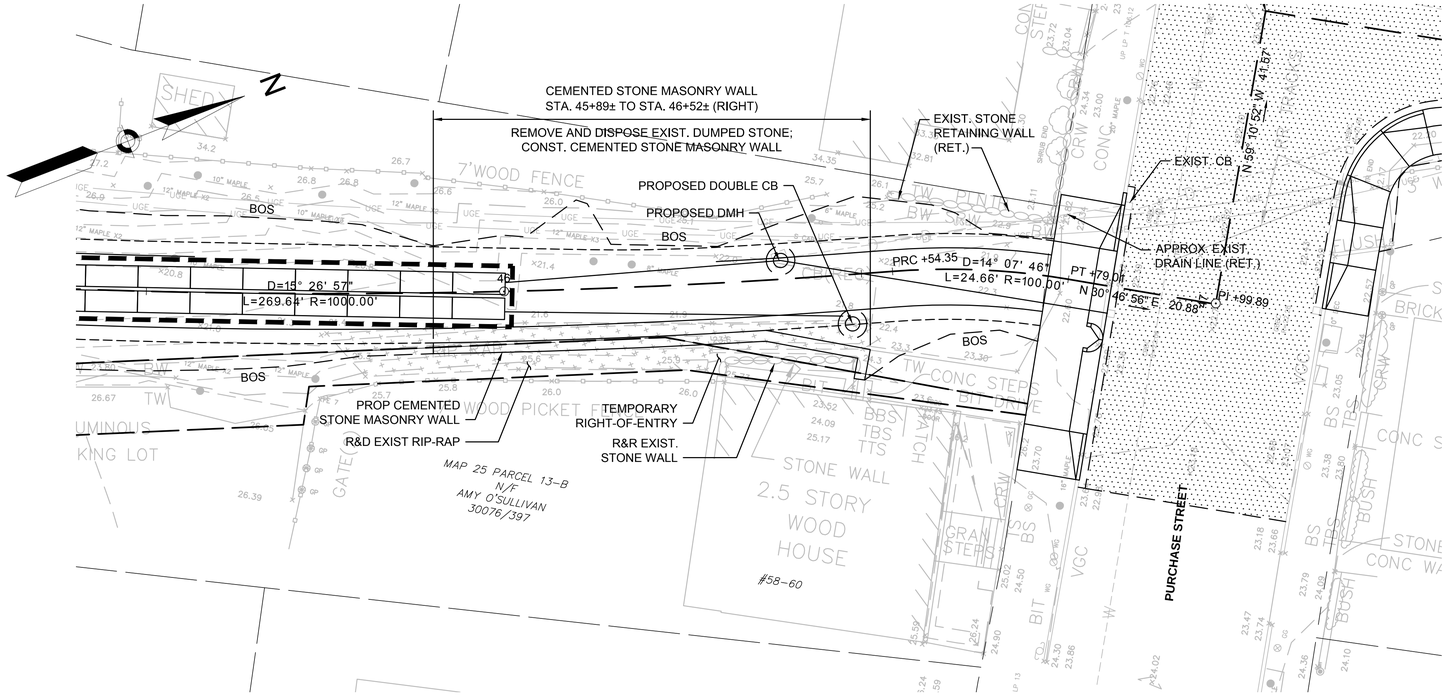
4 TIMBER CRIB WALL DETAIL
SCALE: 1/2" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

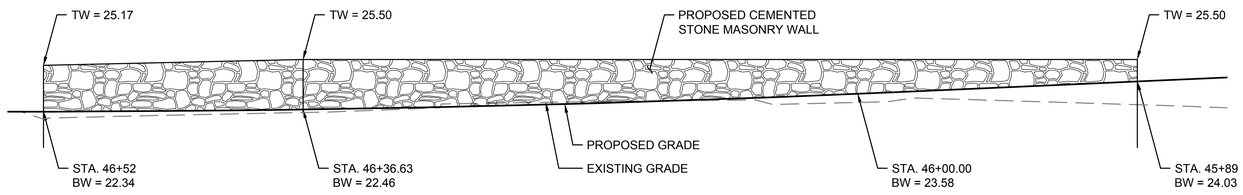
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	116	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 5 OF 7

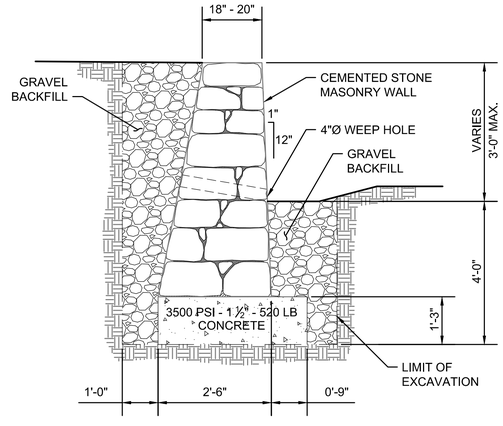
606503(25%)HD(WALL DETAILS).DWG 27-Jun-2013



1 CEMENTED STONE MASONRY WALL - PLAN
SCALE: 1" = 10'-0"



2 CEMENTED STONE MASONRY WALL - ELEVATION
SCALE: 1/4" = 1'-0"



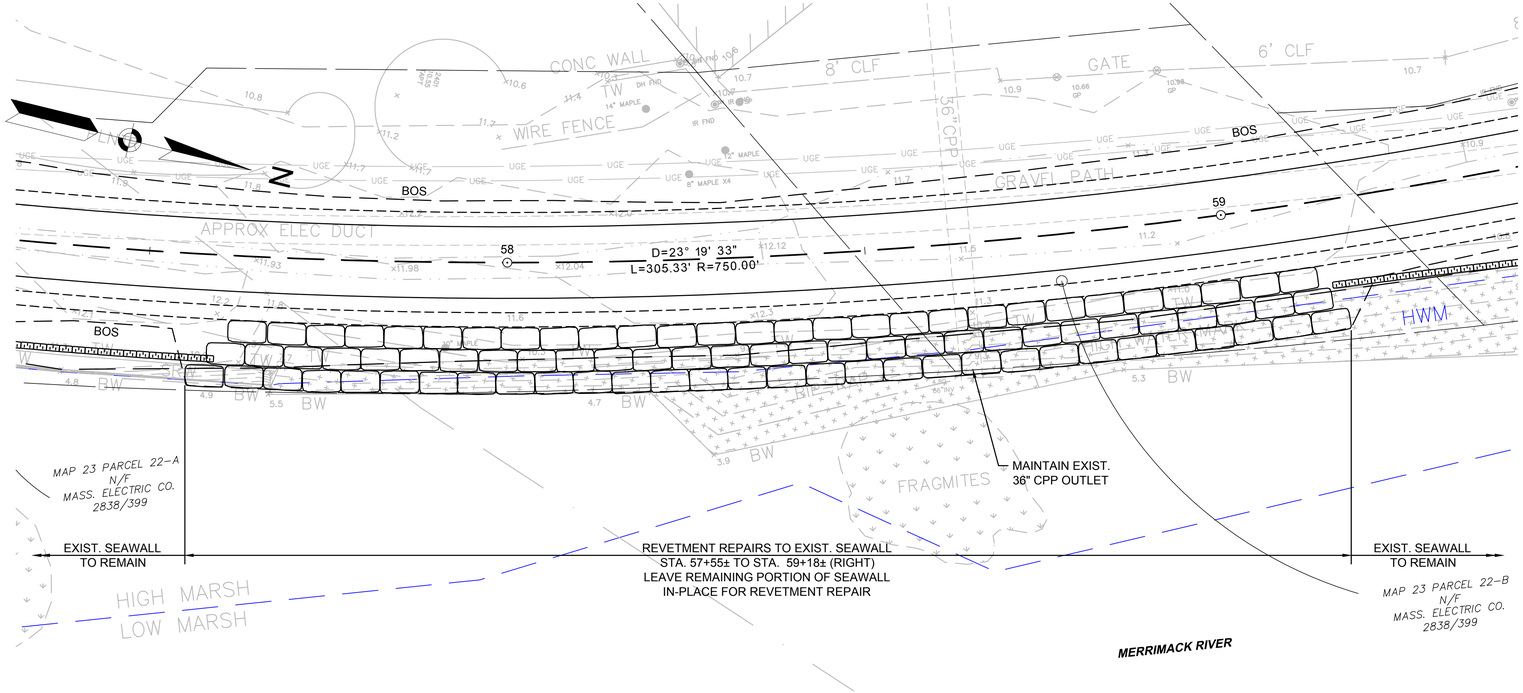
3 CEMENTED STONE MASONRY WALL - SECTION
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

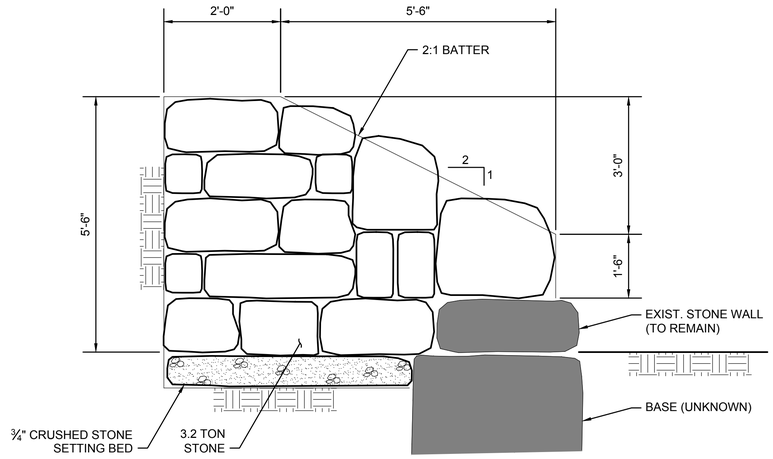
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	117	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 6 OF 7

606503(25%)HD\WALL DETAILS).DWG 27-Jun-2013



1 REVETMENT REPAIRS - PLAN
SCALE: 1" = 10'-0"

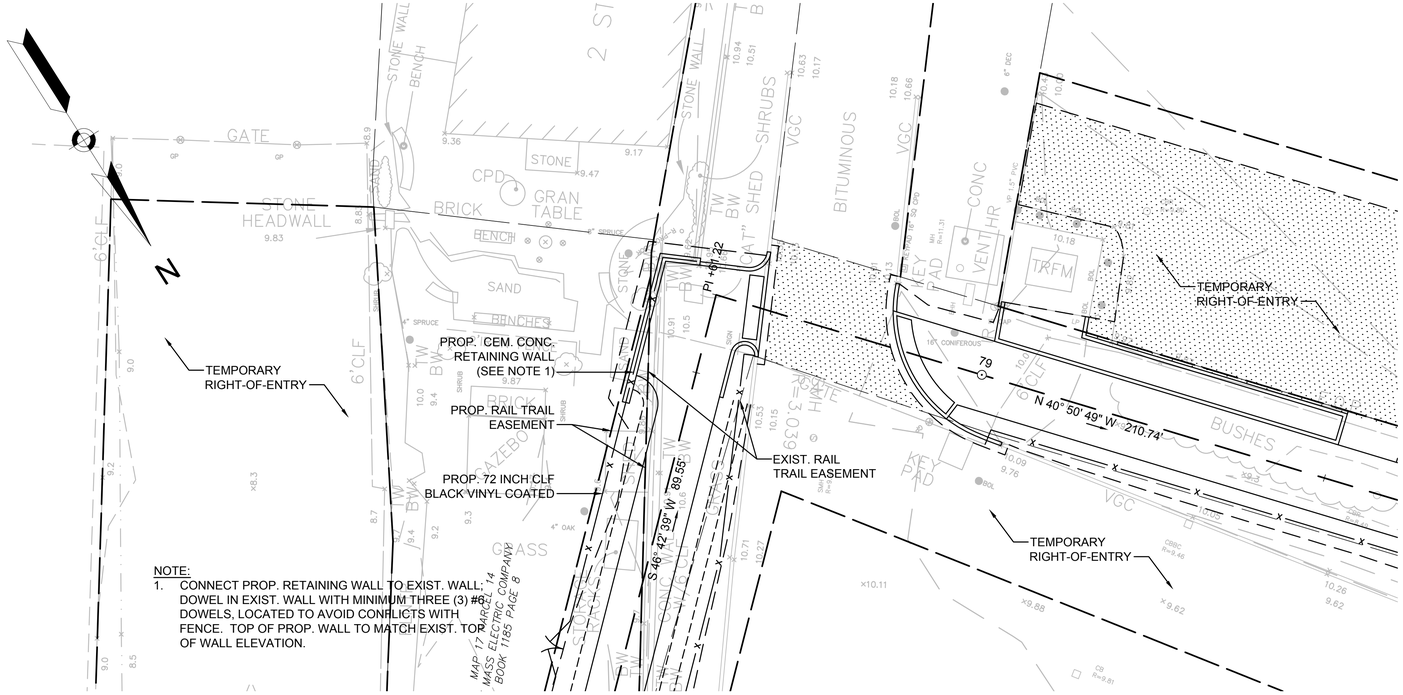


2 REVETMENT DETAIL
NOT TO SCALE

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

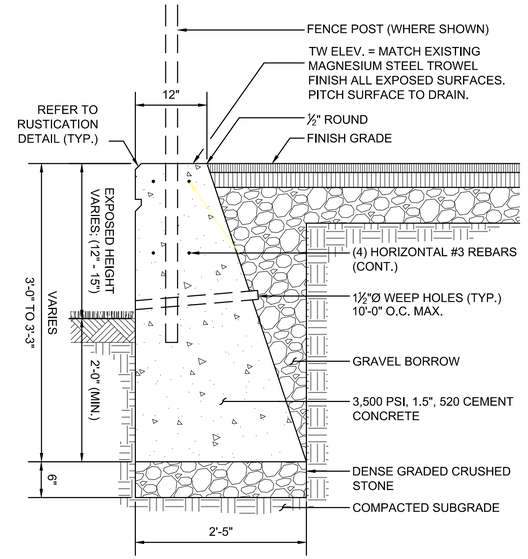
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	118	136
PROJECT FILE NO.	606503		

WALL DETAILS
SHEET 7 OF 7



NOTE:
1. CONNECT PROP. RETAINING WALL TO EXIST. WALL; DOWEL IN EXIST. WALL WITH MINIMUM THREE (3) #6 DOWELS, LOCATED TO AVOID CONFLICTS WITH FENCE. TOP OF PROP. WALL TO MATCH EXIST. TOP OF WALL ELEVATION.

1 CEMENT CONCRETE GRAVITY WALL - PLAN
SCALE: 1" = 10'-0"



2 CONCRETE RETAINING WALL
SCALE: 1" = 1'-0"

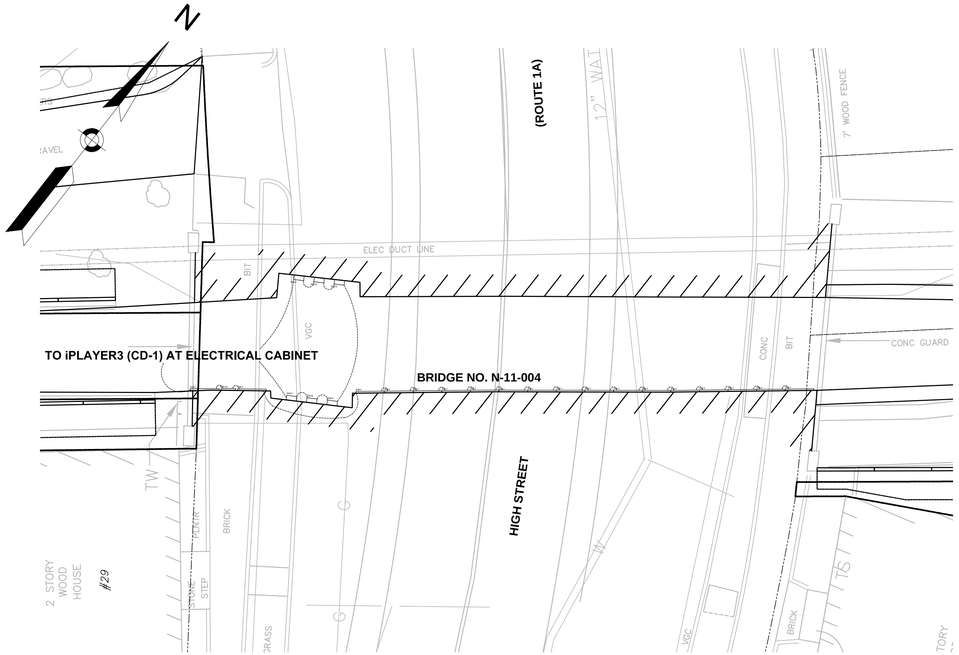
606503(25%)HD(WALL DETAILS).DWG 27-Jun-2013

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

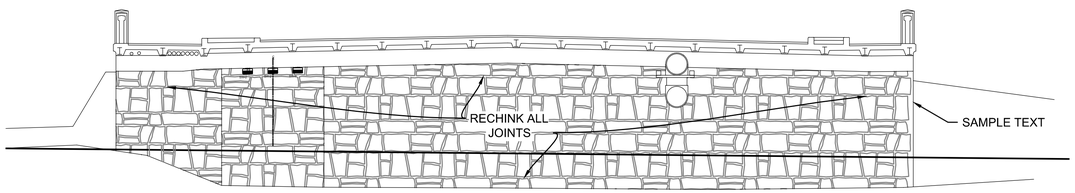
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	119	136
PROJECT FILE NO.	606503		

LIGHTING DETAILS

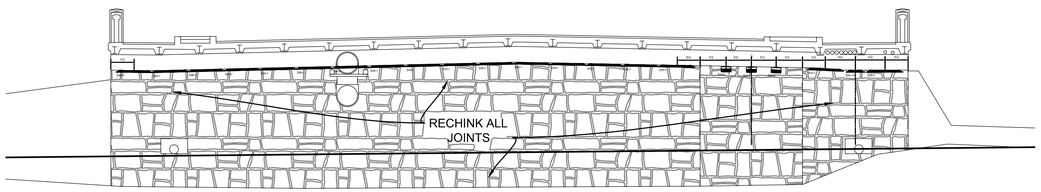
606503(25%)UTILIGHTING DETAILS).DWG 30-May-2013



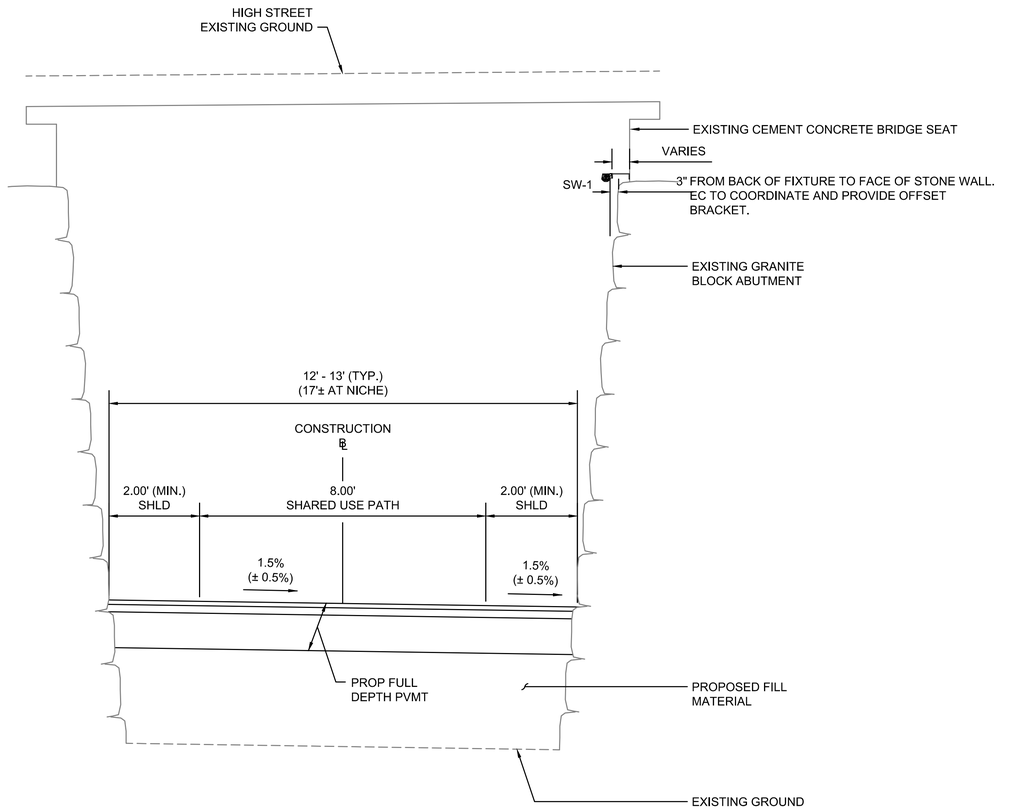
1 HIGH STREET UNDERPASS - PLAN
SCALE: 1" = 10'-0"



2 NORTHERN ABUTMENT - SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3 SOUTHERN ABUTMENT - NORTH ELEVATION
SCALE: 1/8" = 1'-0"



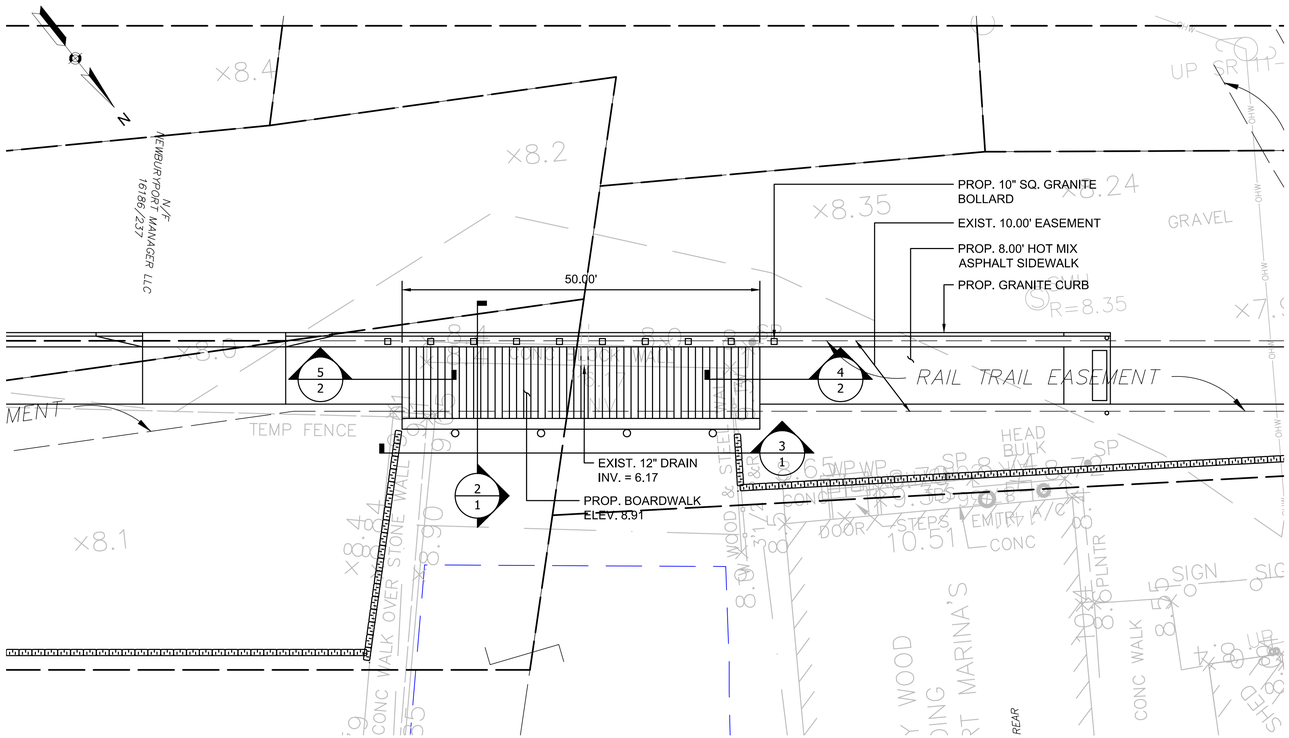
4 HIGH ST. UNDERPASS - TYPICAL SECTION
SCALE: 1/2" = 1'-0"

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

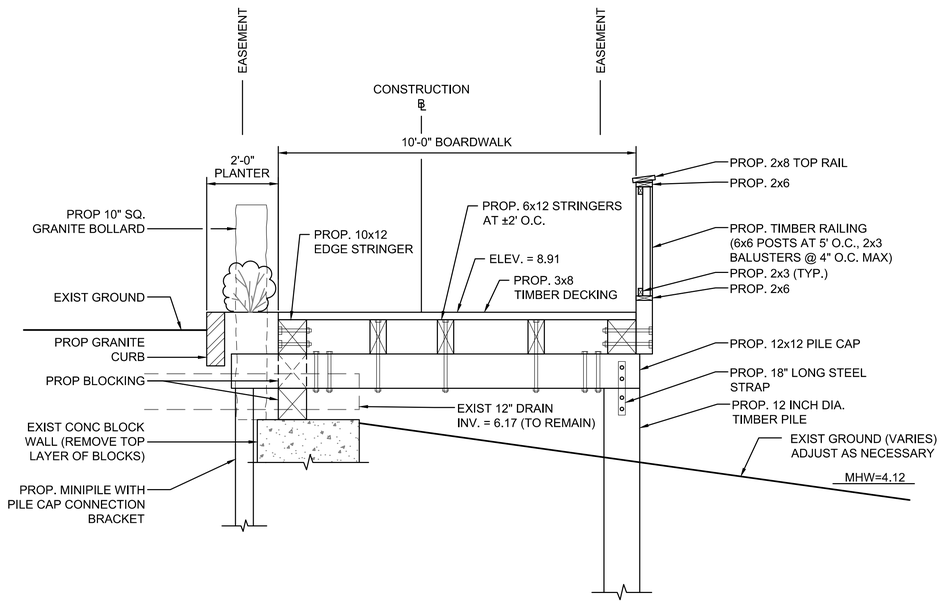
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	120	136
PROJECT FILE NO.		606503	

BOARDWALK DETAILS
SHEET 1 OF 2

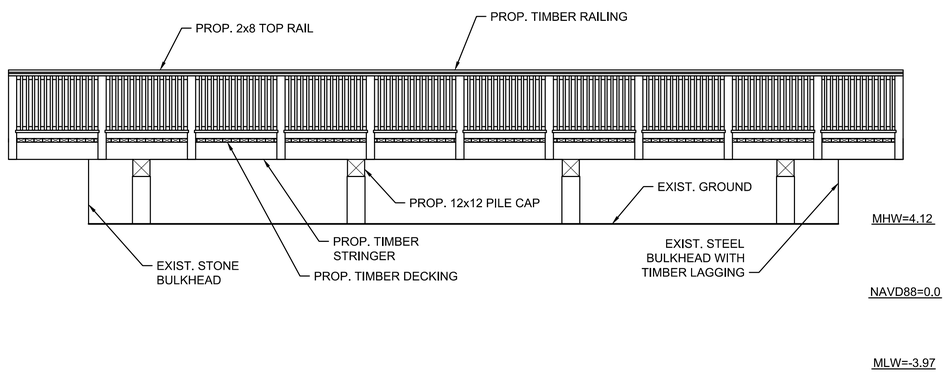
606503(25%)HD\BOARDWALK DETAILS).DWG 27-Jun-2013



1 BOARDWALK - PLAN
SCALE: 1" = 10'-0"



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



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

BOARDWALK NOTES:

1. DATUM: NAVD88=0.0, MLW=-3.97, MHW=4.12.
2. TEST BORING LOG INFORMATION PROVIDED ON SHEET ??
3. X

NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

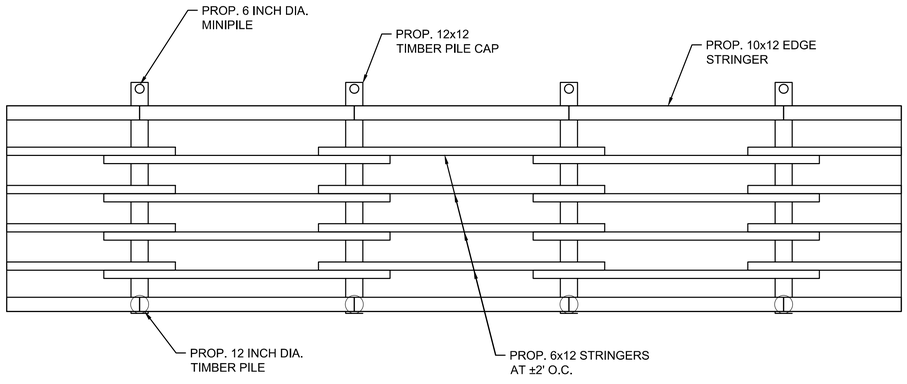
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	121	136
PROJECT FILE NO.	606503		

BOARDWALK DETAILS
SHEET 2 OF 2

606503(25%)HD\BOARDWALK DETAILS).DWG 27-Jun-2013

4 BOARDWALK WEST END - DETAIL
SCALE: 1/2" = 1'-0"

5 BOARDWALK EAST END - DETAIL
SCALE: 1/2" = 1'-0"



6 BOARDWALK FRAMING - PLAN
SCALE: 1/4" = 1'-0"

7 XXX - DETAIL
SCALE: 1/2" = 1'-0"

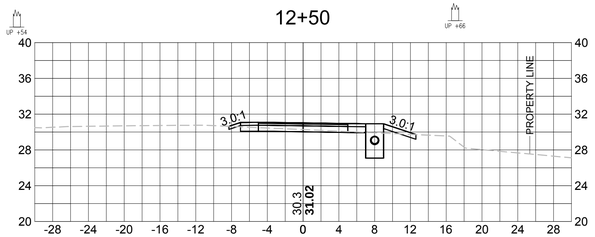
8 XXX - DETAIL
SCALE: 1/2" = 1'-0"

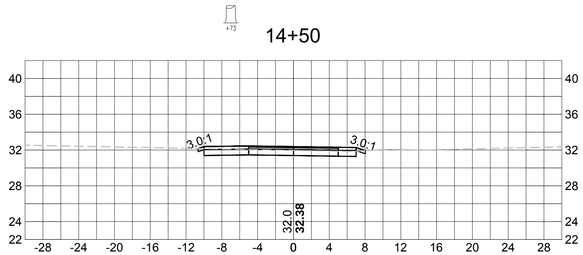
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

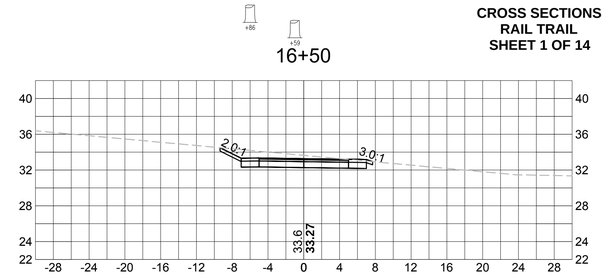
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	122	136
PROJECT FILE NO.	606503		

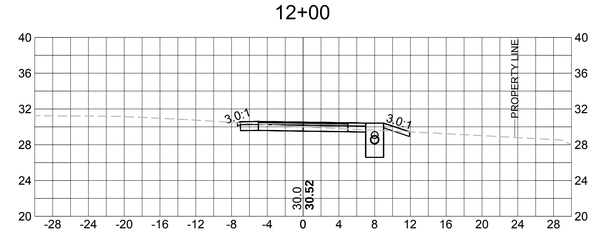
CROSS SECTIONS
RAIL TRAIL
SHEET 1 OF 14

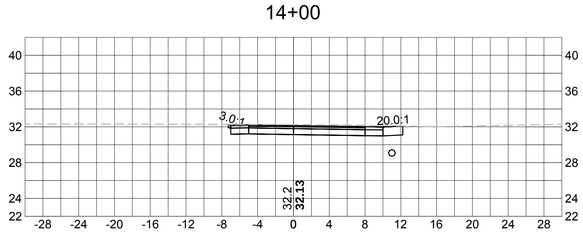
606503(25%)HD\CROSS SECTIONS\.DWG 27-Jun-2013

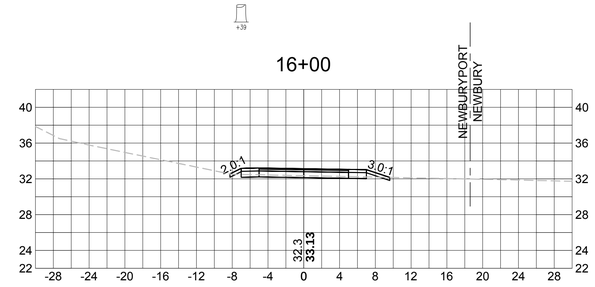


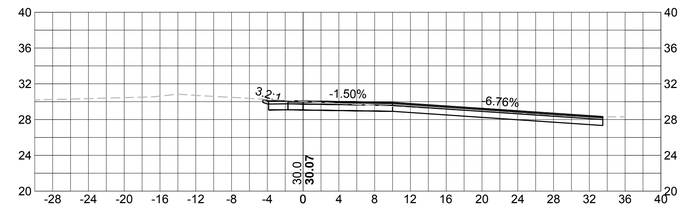


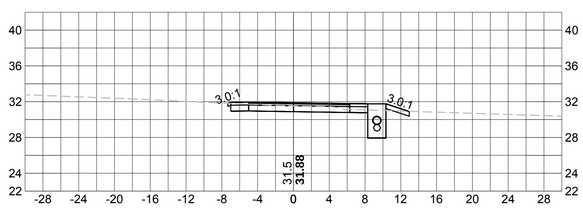


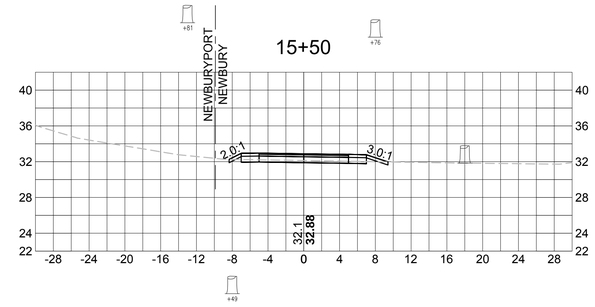


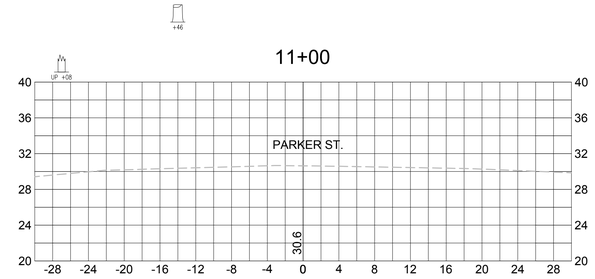


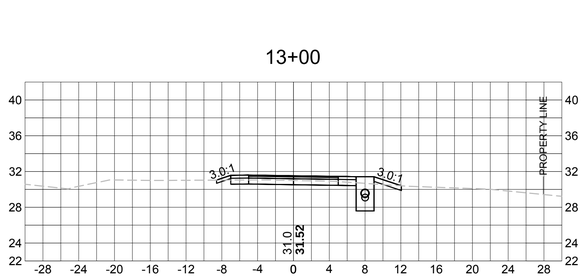


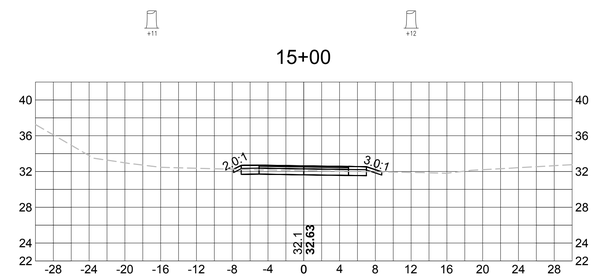












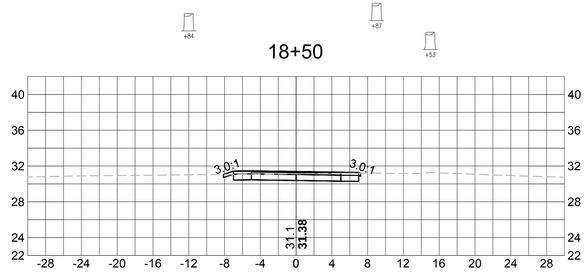
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	123	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 2 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

18+50



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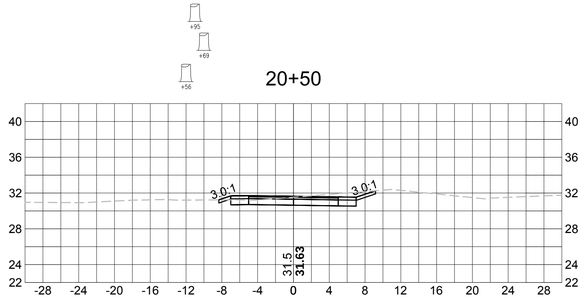

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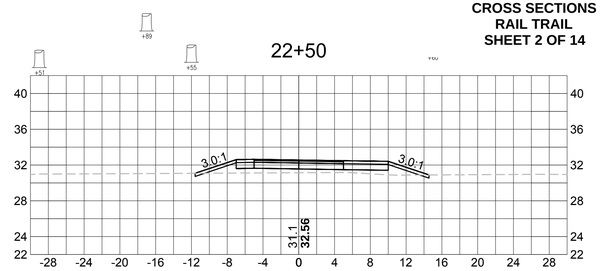
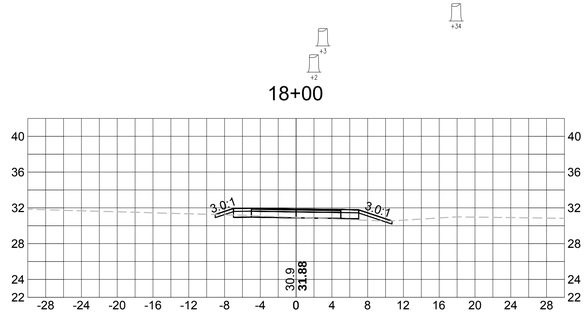
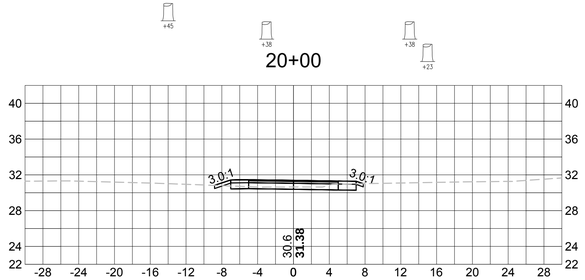


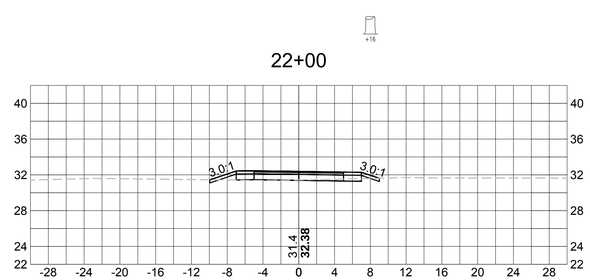
18+00



20+00



22+00



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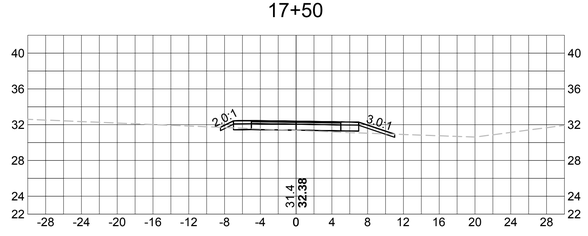
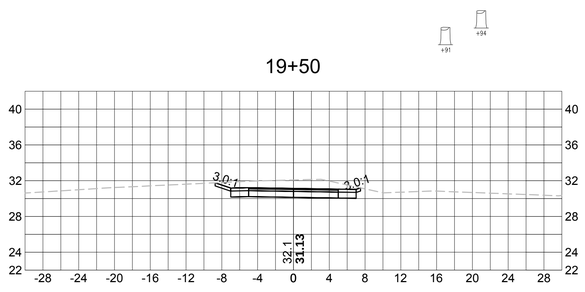


19+50



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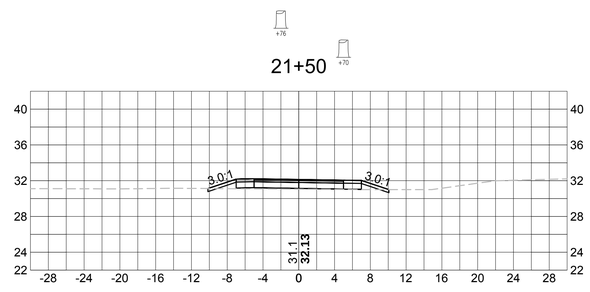
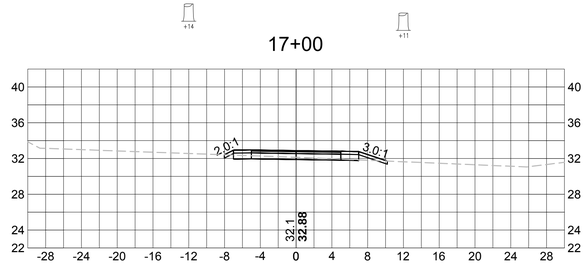
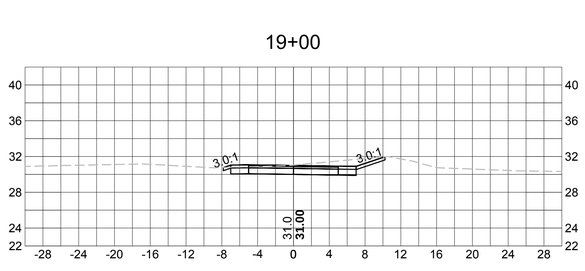


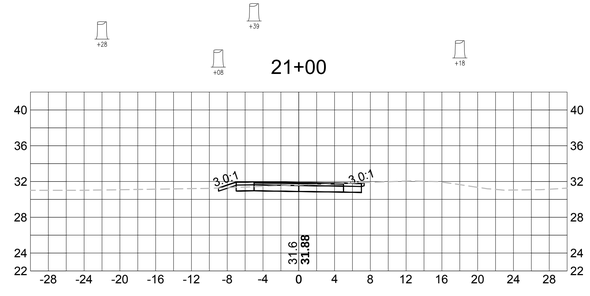
17+00



19+00



21+00



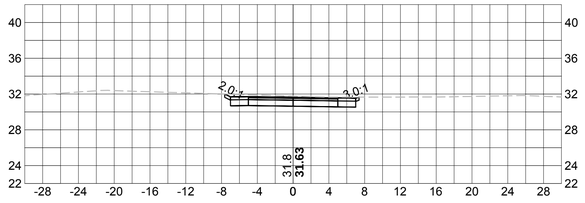
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	124	136
PROJECT FILE NO.	606503		

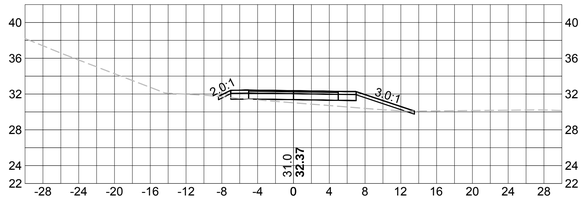
CROSS SECTIONS
RAIL TRAIL
SHEET 3 OF 14

606503(25%)HD\CROSS SECTIONS\.DWG 27-Jun-2013

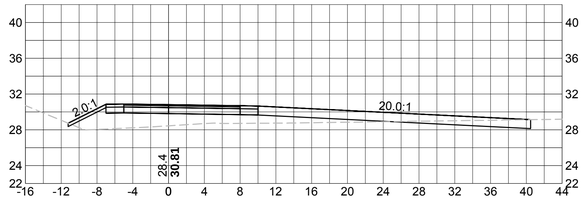
24+50



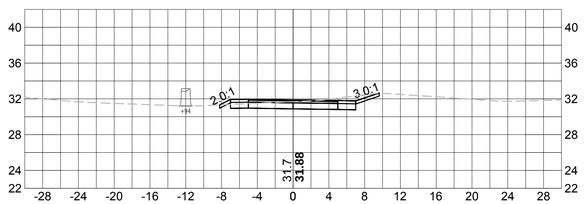
26+50



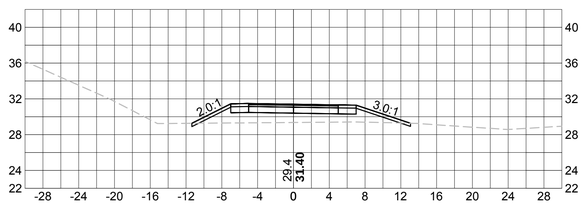
28+50



24+00



26+00



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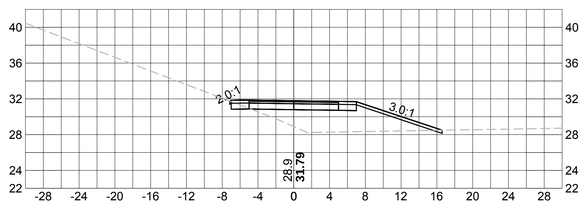
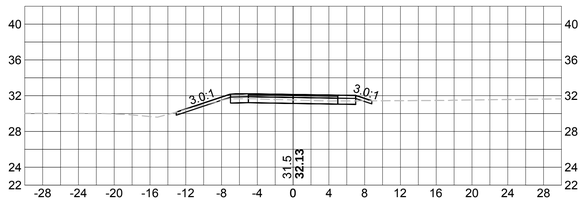
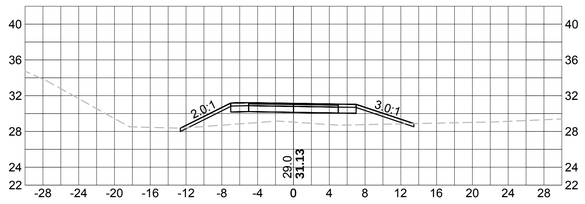


23+50



25+50



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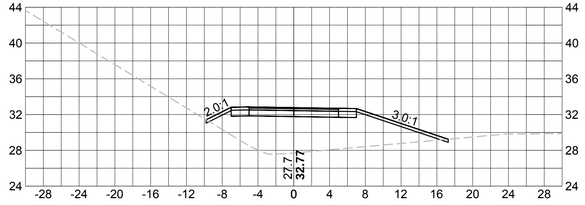
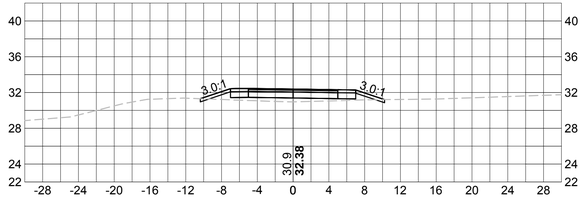
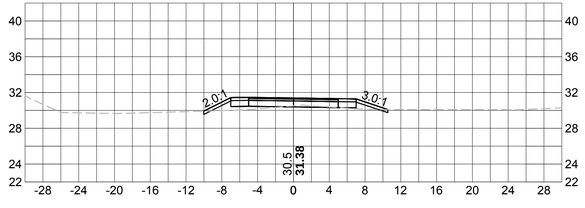


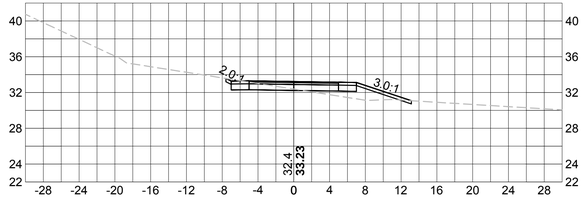
23+00



25+00



27+00



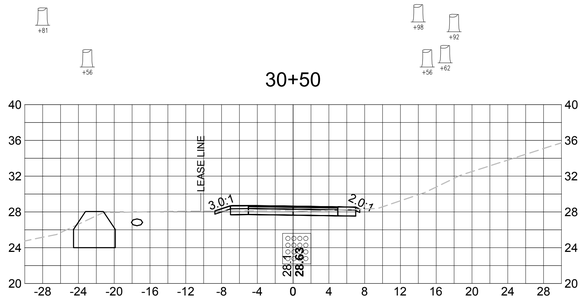
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	125	136
PROJECT FILE NO.	606503		

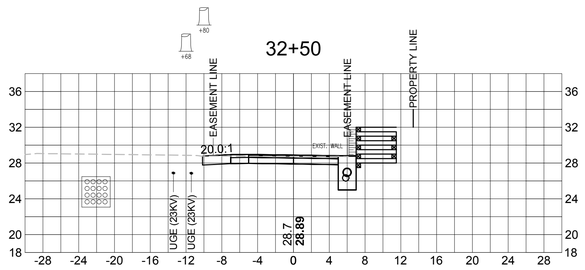
CROSS SECTIONS
RAIL TRAIL
SHEET 4 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

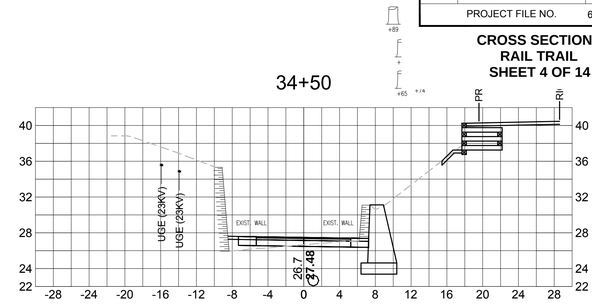
30+50



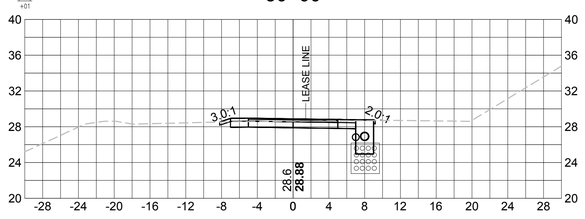
32+50



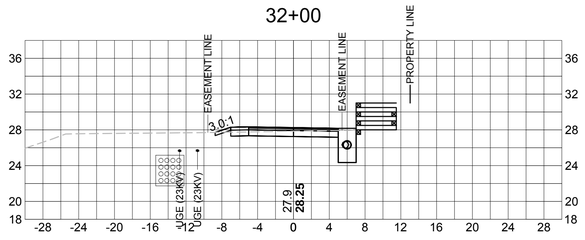
34+50



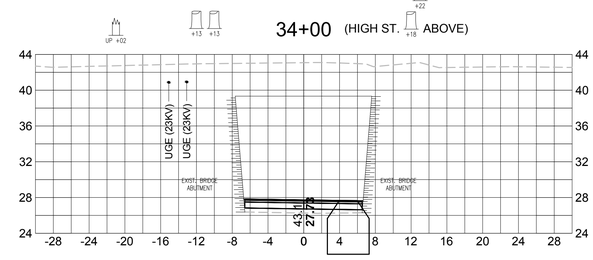
30+00



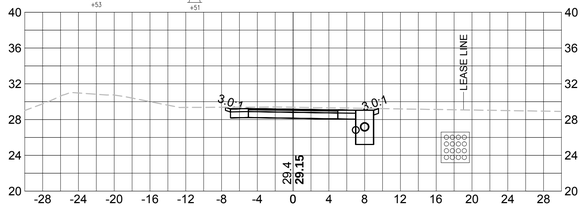
32+00



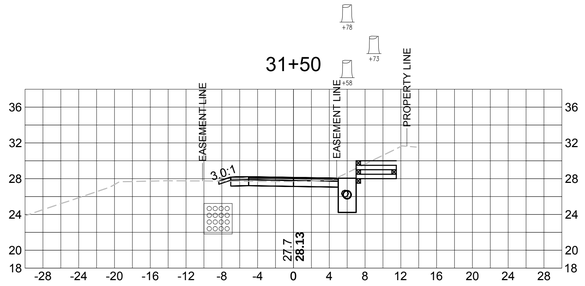
34+00 (HIGH ST. ABOVE)



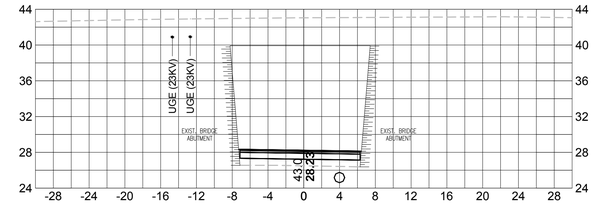
29+50



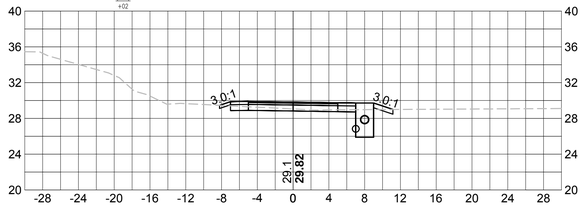
31+50



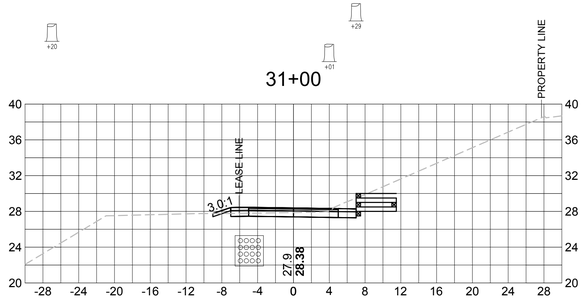
33+50 (HIGH ST. - ABOVE)



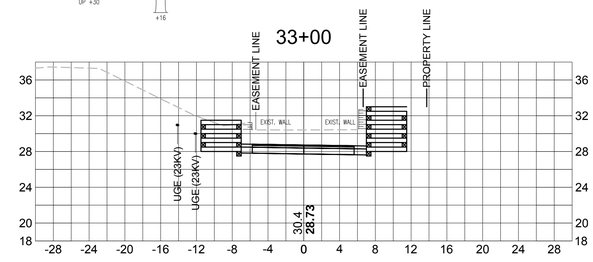
29+00



31+00



33+00

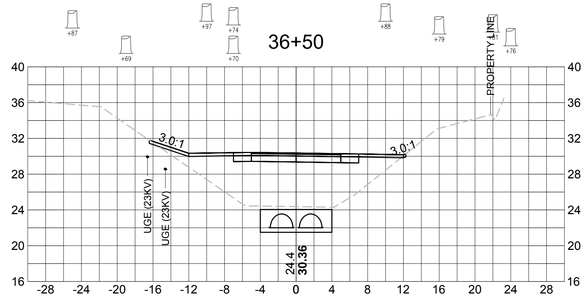


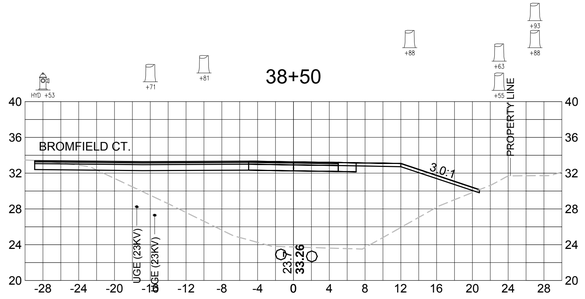
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

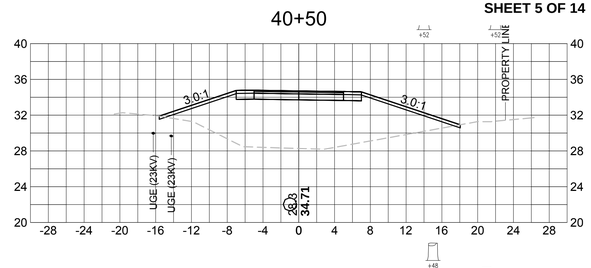
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	126	136
PROJECT FILE NO.	606503		

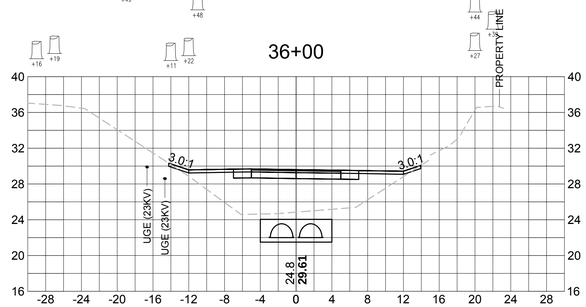
CROSS SECTIONS
RAIL TRAIL
SHEET 5 OF 14

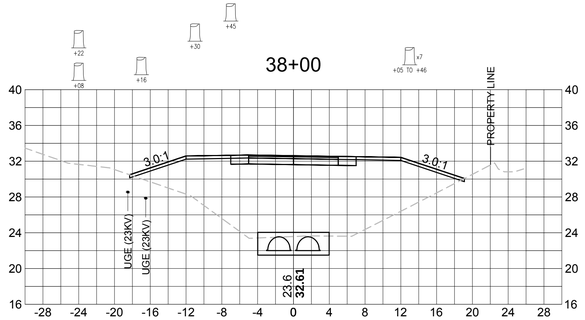
606503(25%)HD\CROSS SECTIONS).DWG 27-Jun-2013

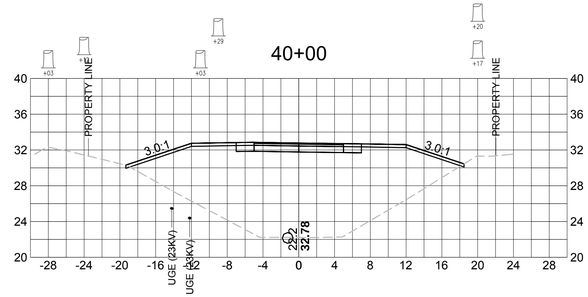


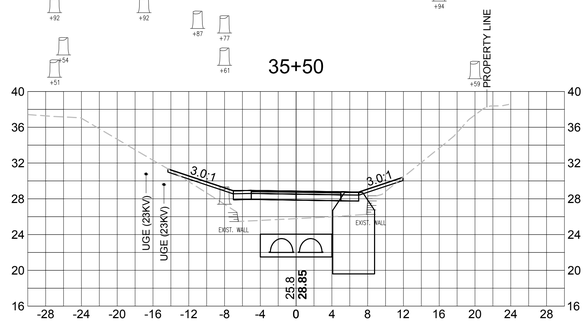


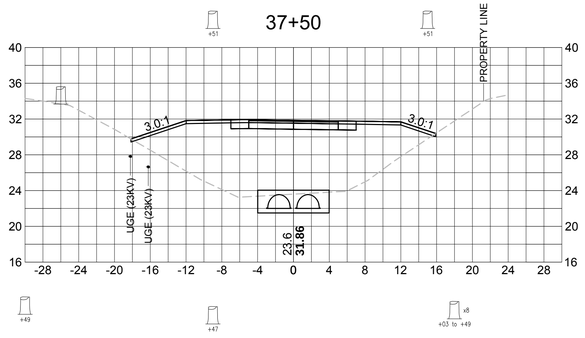


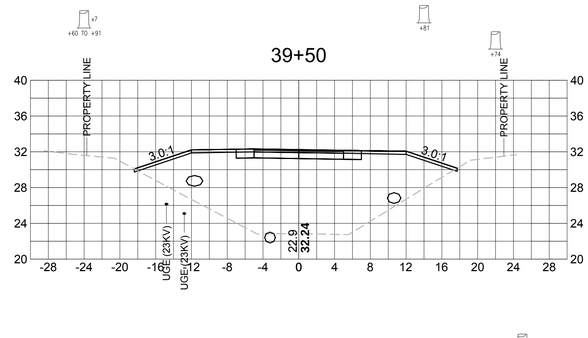


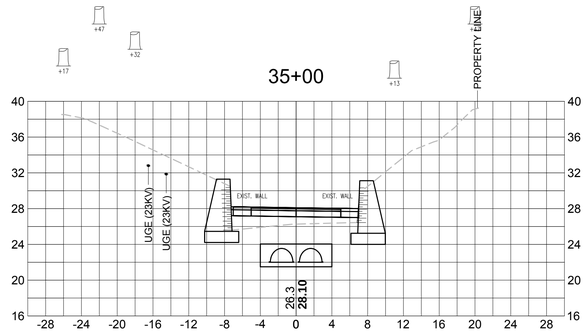


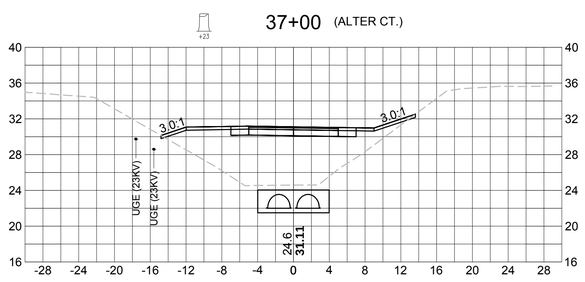


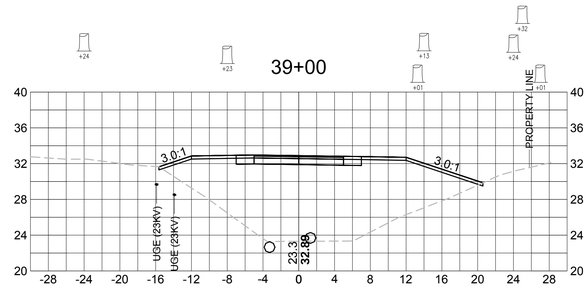












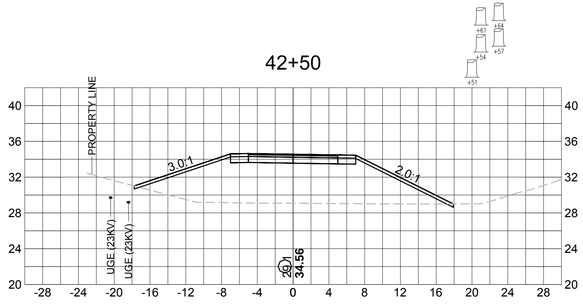
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	127	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 6 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

42+50



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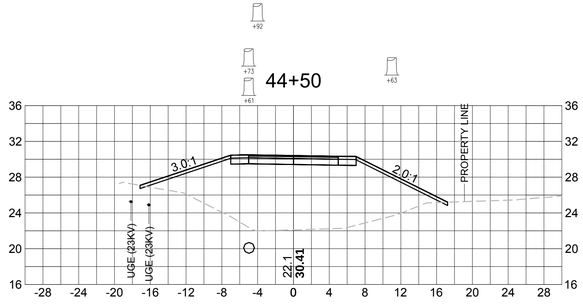

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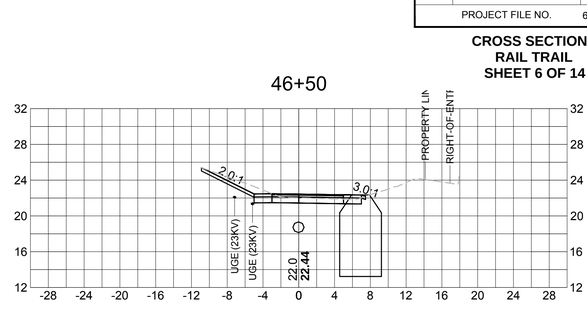

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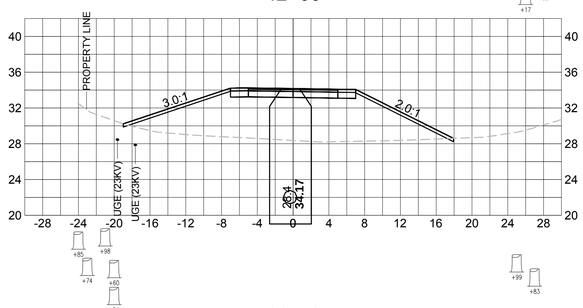

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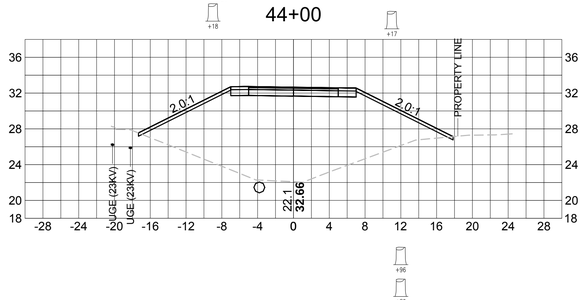

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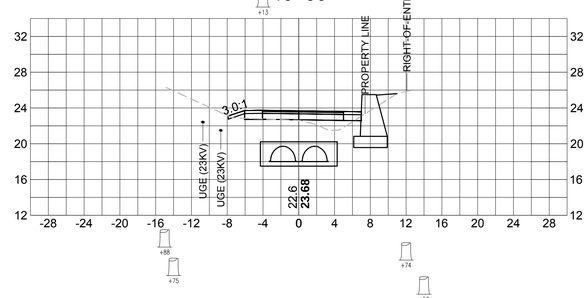

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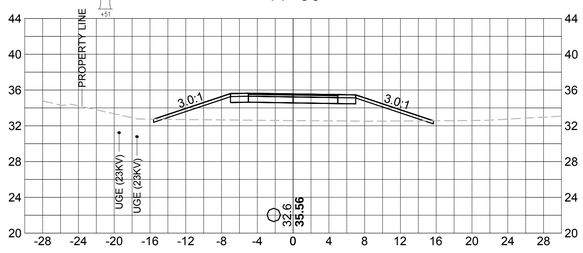
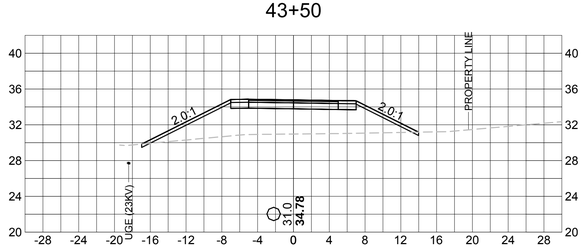


43+50



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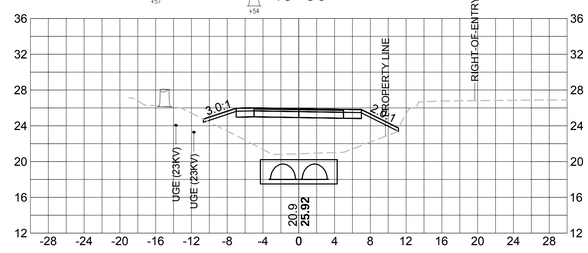

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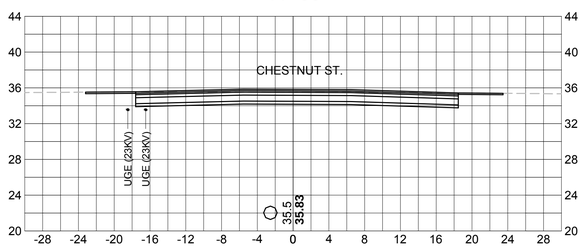
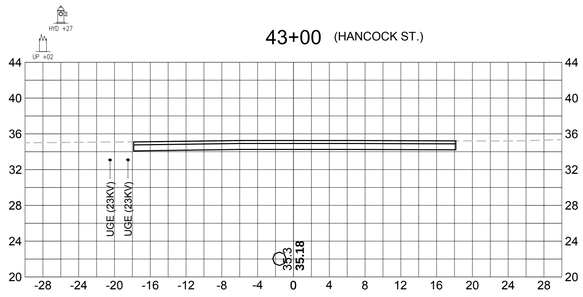


43+00 (HANCOCK ST.)



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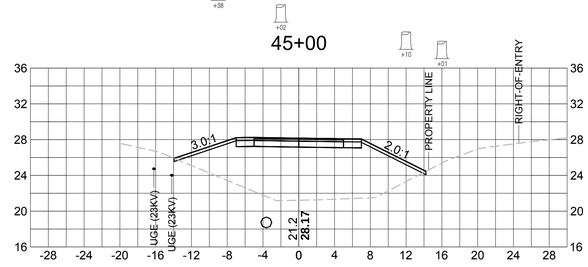


NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

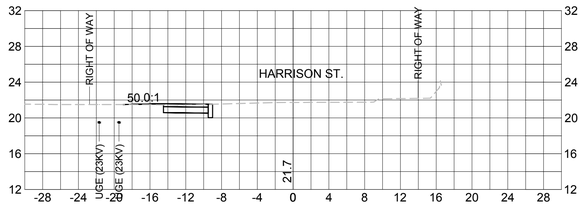
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	128	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 7 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

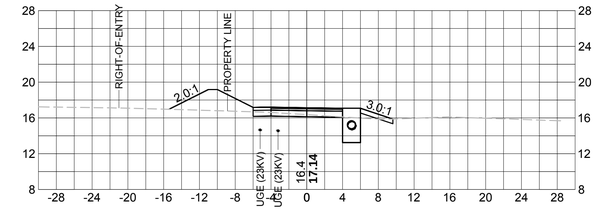
UP +74

48+50

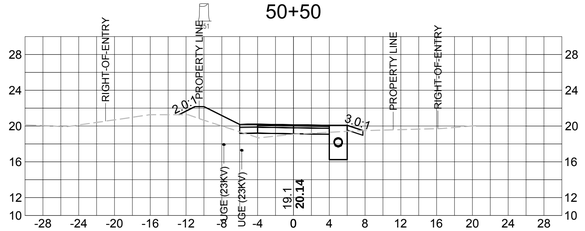


+94 +81

52+50

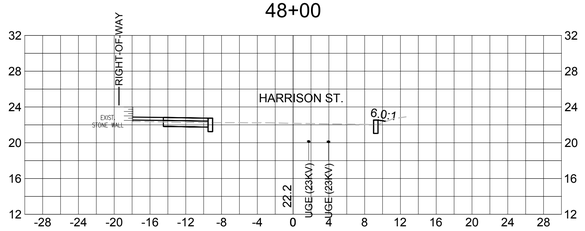


50+50



+38

48+00



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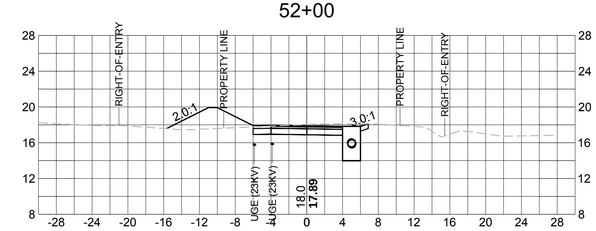

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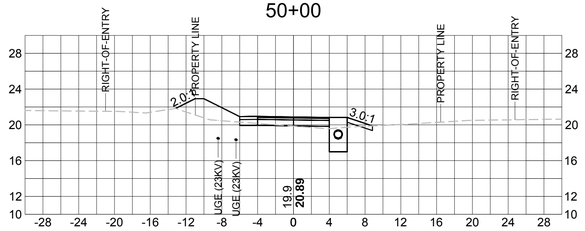
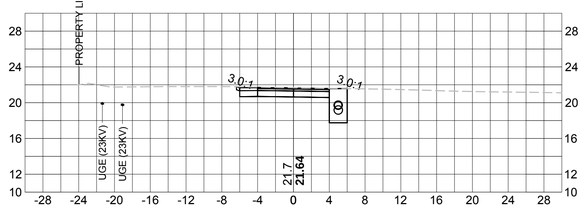


+95

+71

47+50

49+50



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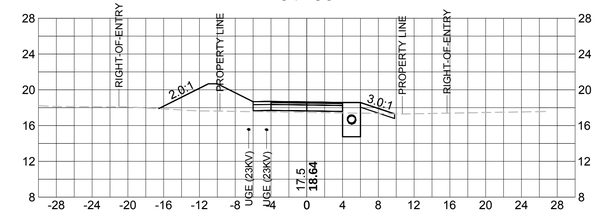
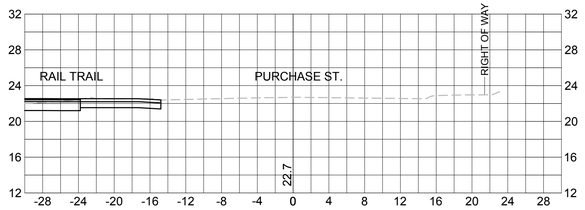


+37 +37

+29 +27

47+00



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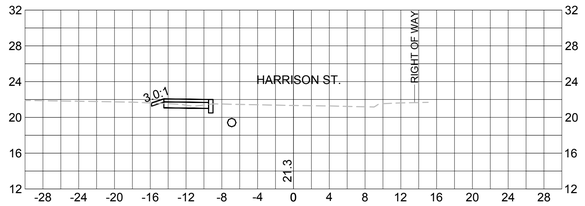

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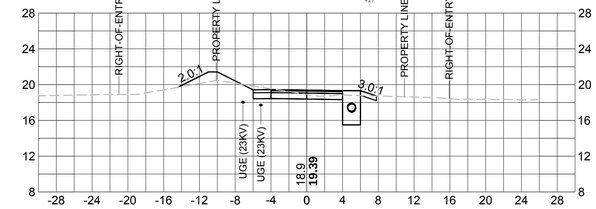


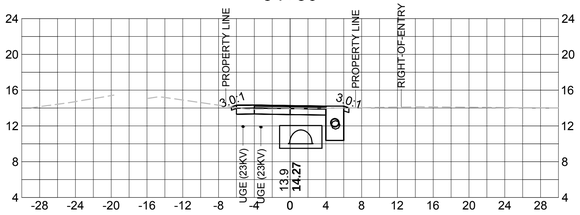
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	129	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 8 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

54+50



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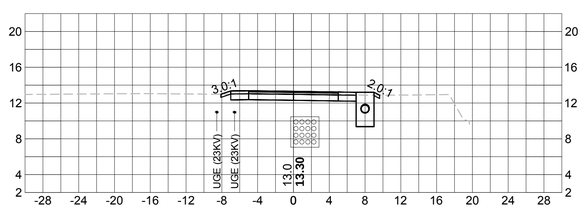
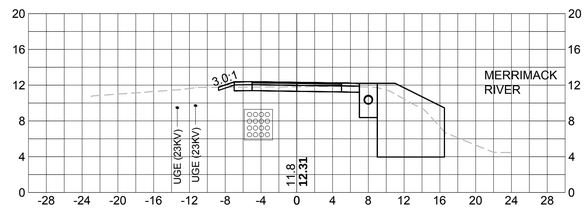


58+50



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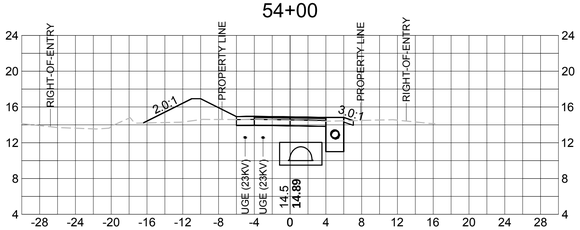
54+00



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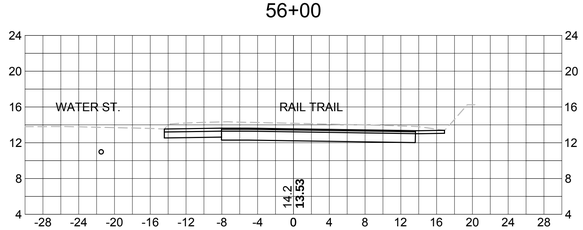
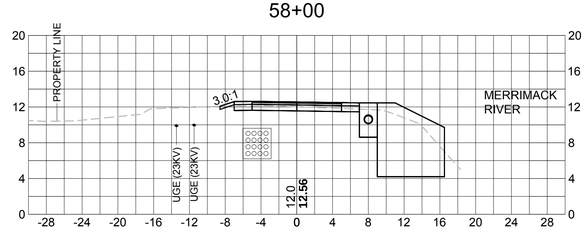


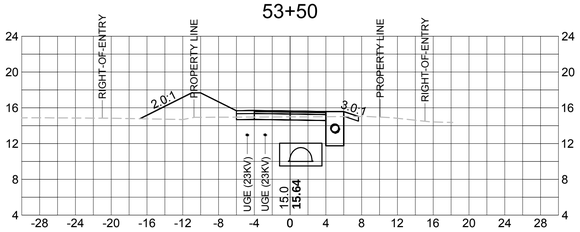
+26

58+00



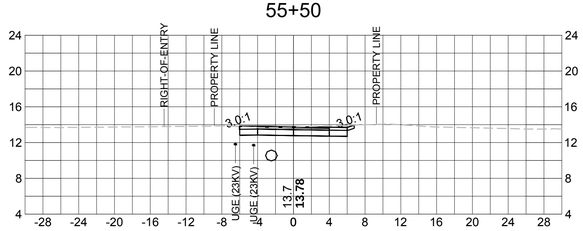
+91

53+50



UP +60

55+50



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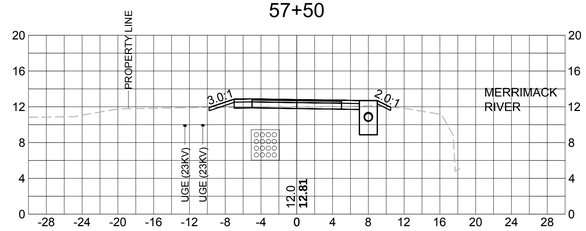

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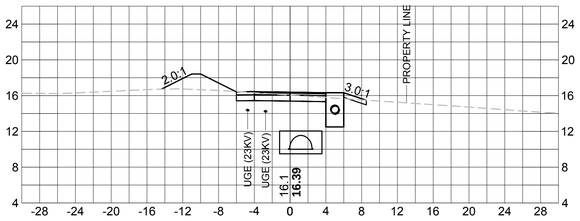

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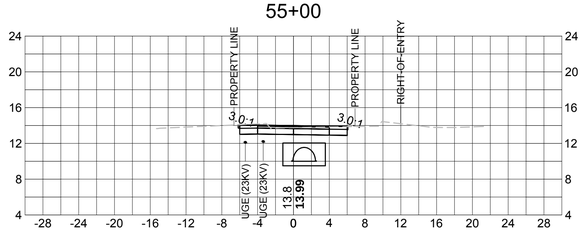

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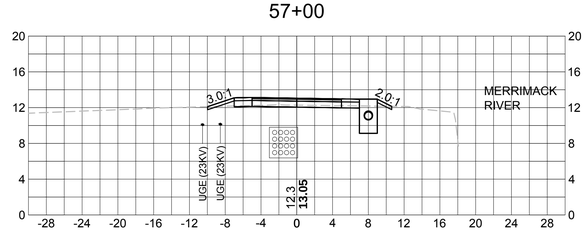


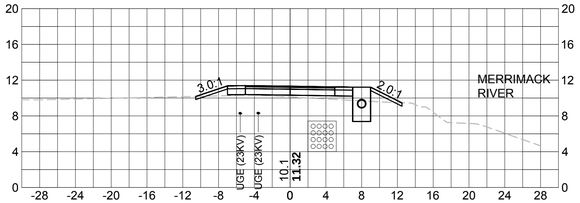
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	130	136
PROJECT FILE NO.	606503		

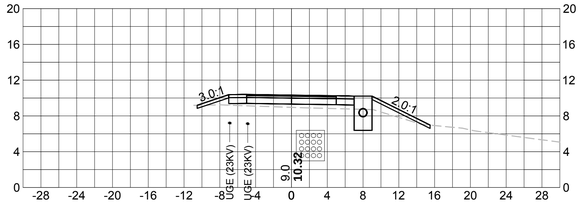
CROSS SECTIONS
RAIL TRAIL
SHEET 9 OF 14

606503(25%)HD\CROSS SECTIONS).DWG 27-Jun-2013

60+50



62+50



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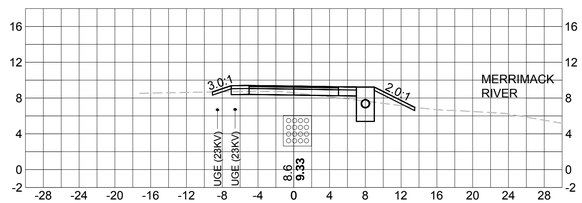

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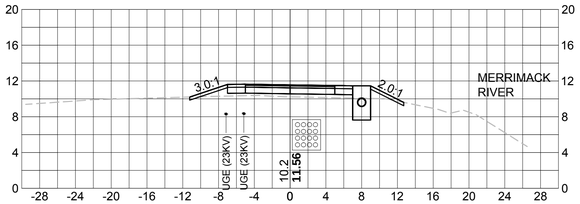

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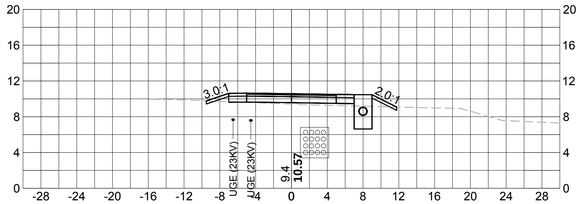
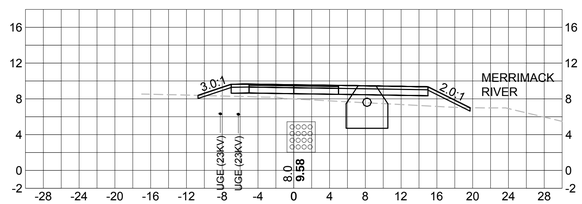
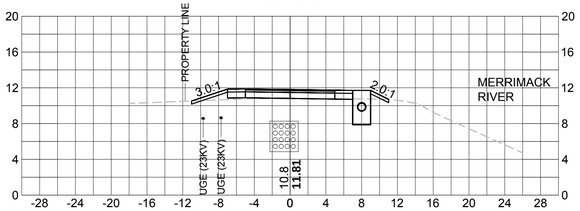


64+00



59+50



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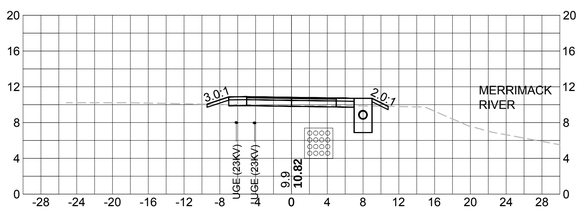

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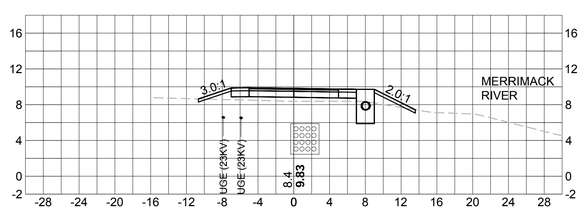

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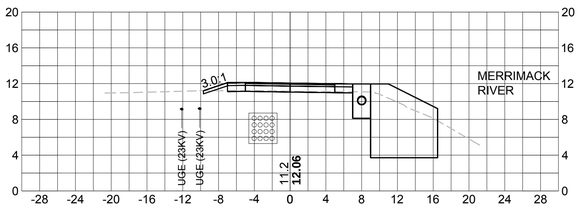

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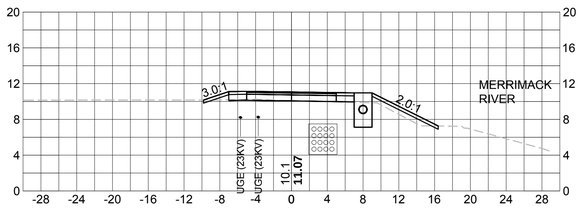

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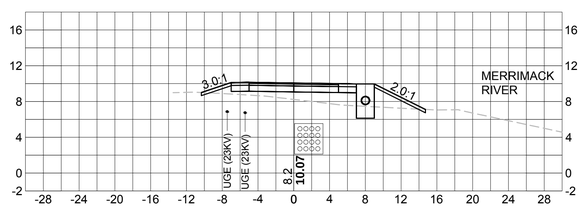


NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

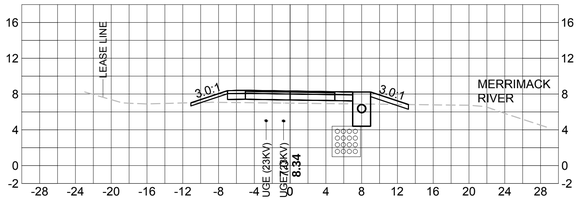
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	131	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 10 OF 14

606503(25%)HD\CROSS SECTIONS\.DWG 27-Jun-2013

UP +87 UP +88

66+50



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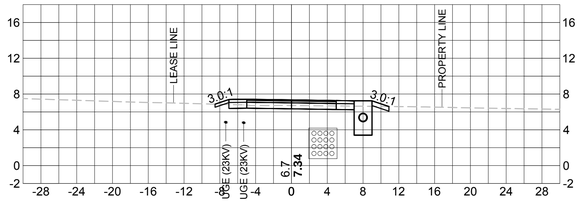

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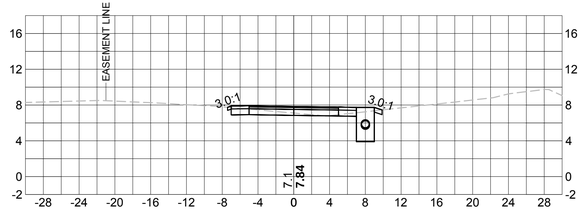

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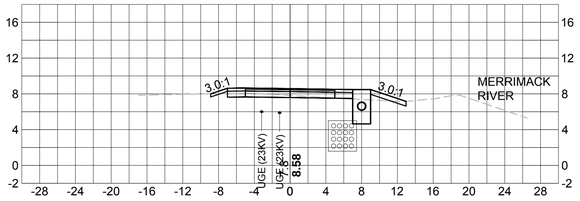

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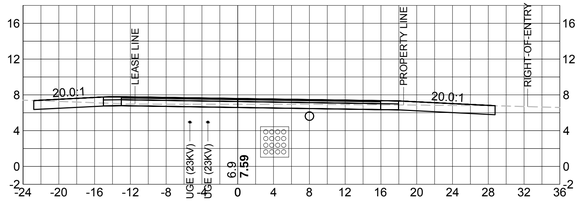

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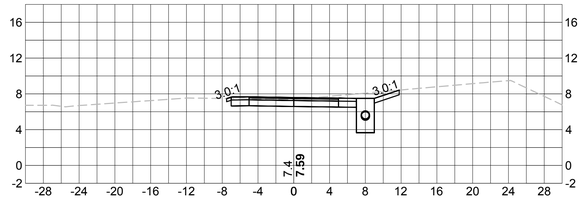

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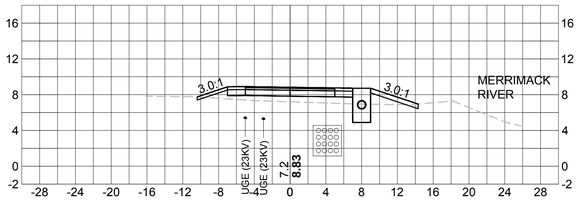

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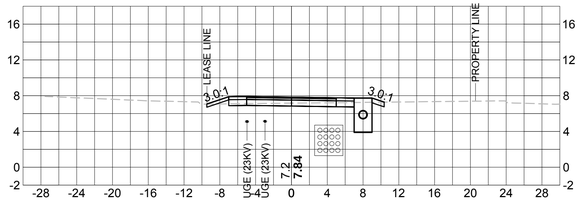

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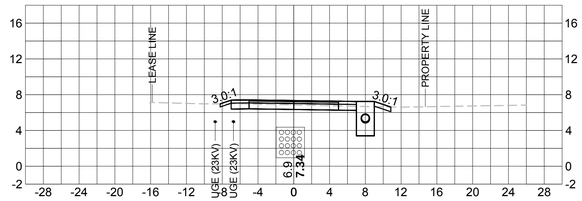

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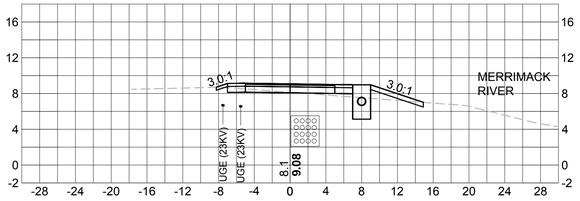

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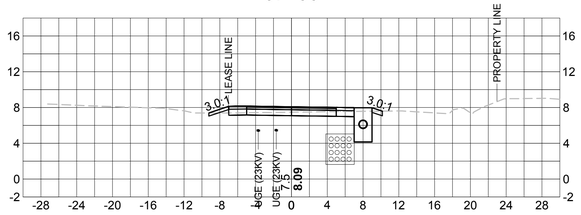

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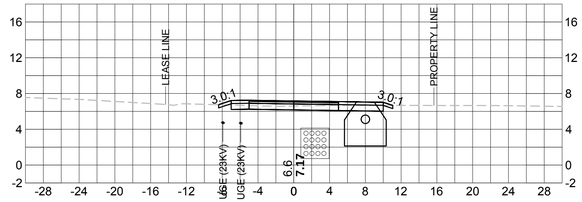


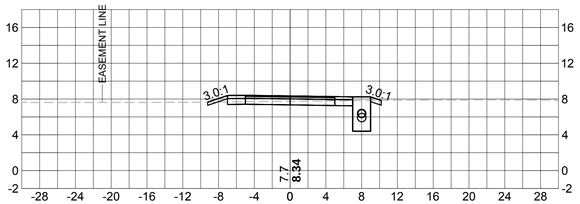
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	132	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 11 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

72+50



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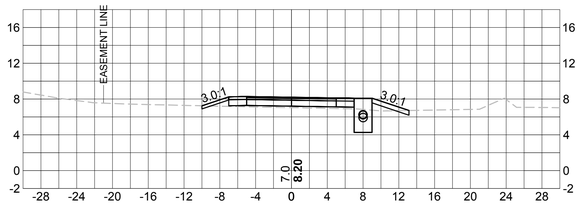

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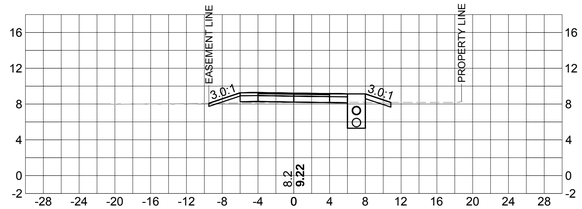

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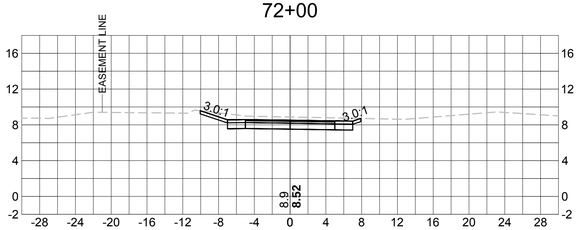

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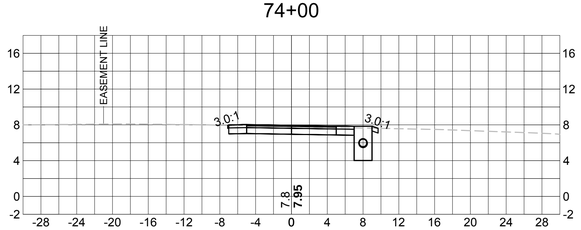

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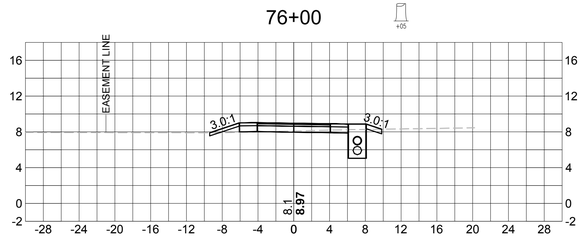

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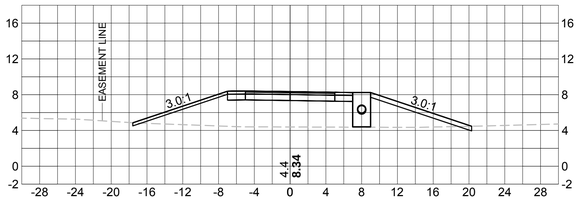

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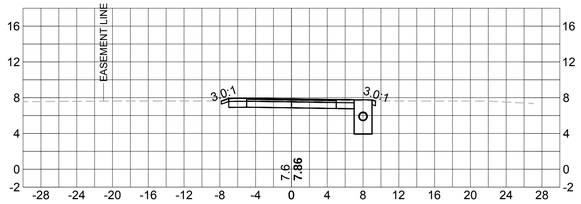

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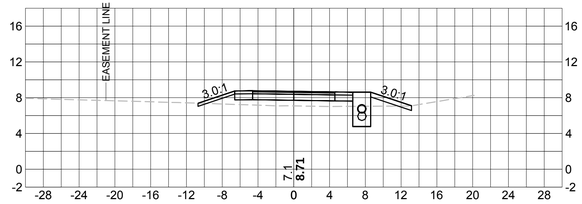

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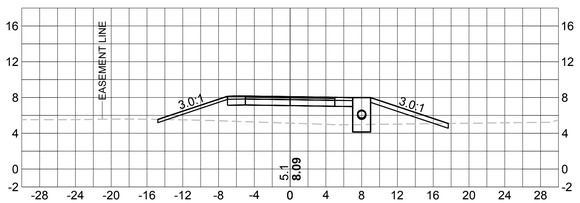

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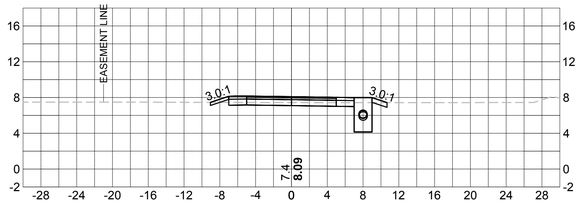

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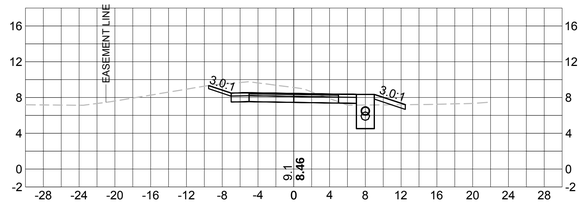


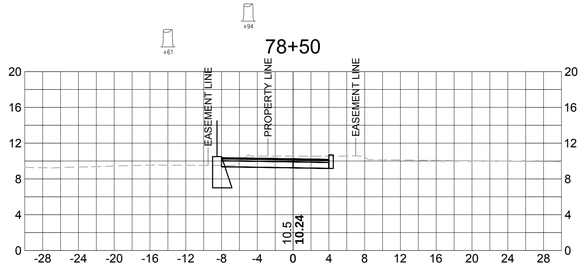
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	133	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 12 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

78+50



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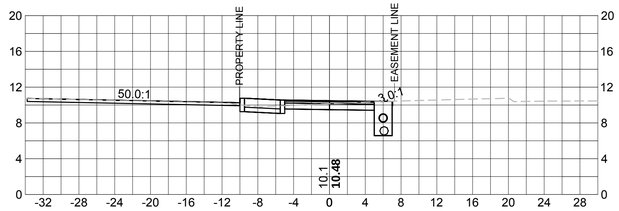

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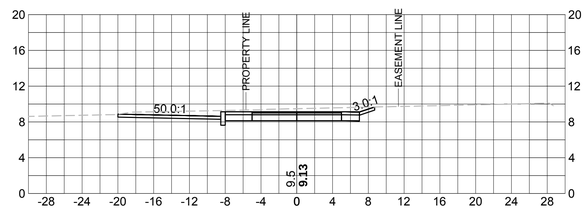

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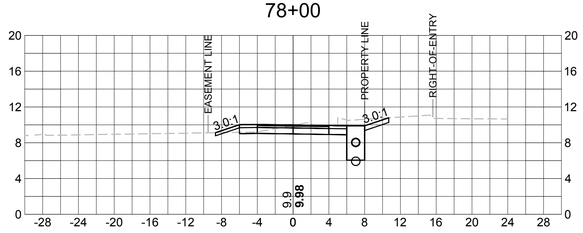

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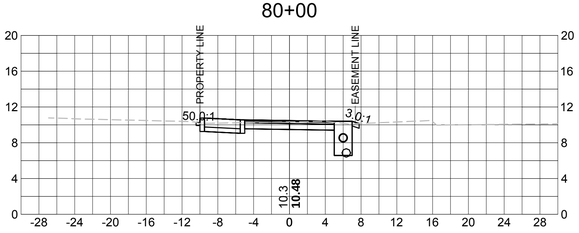

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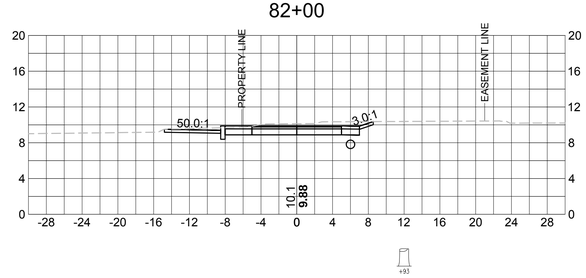

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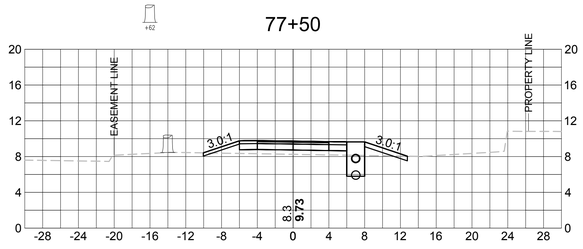

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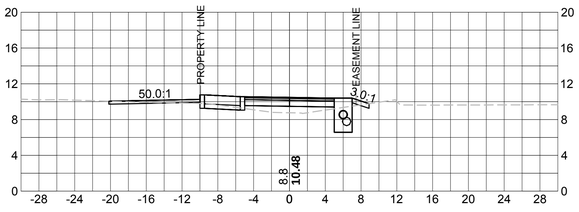

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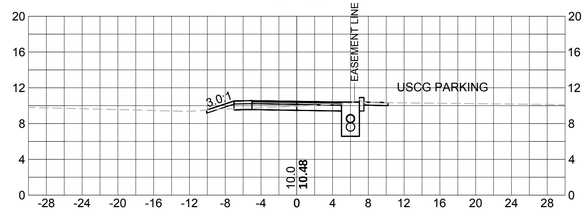

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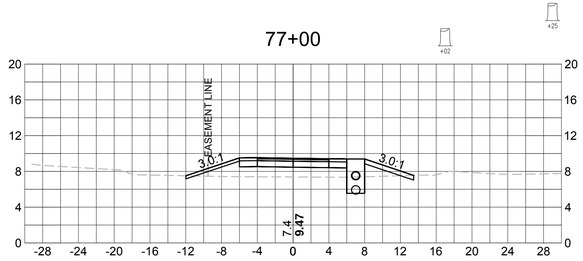

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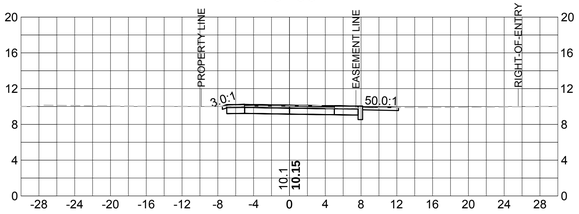

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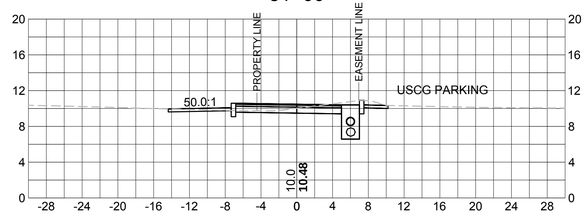


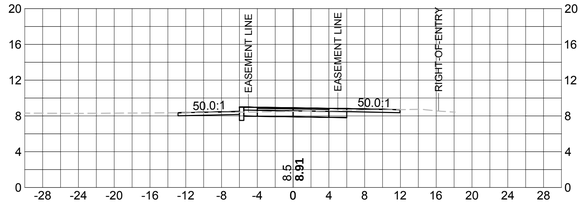
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	134	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 13 OF 14

606503(25%)HD(CROSS SECTIONS).DWG 27-Jun-2013

84+50



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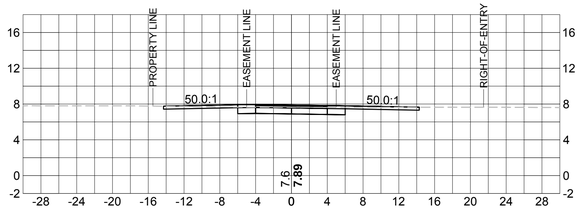

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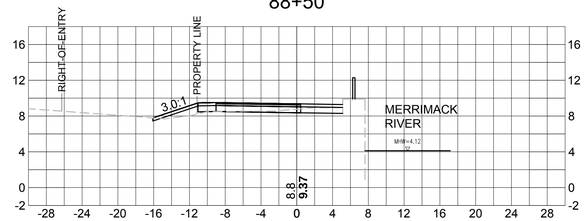

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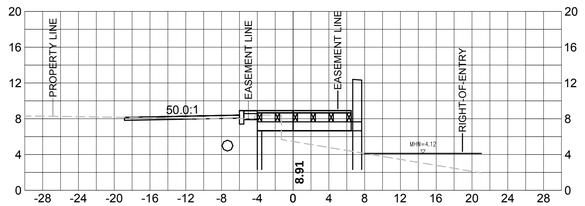

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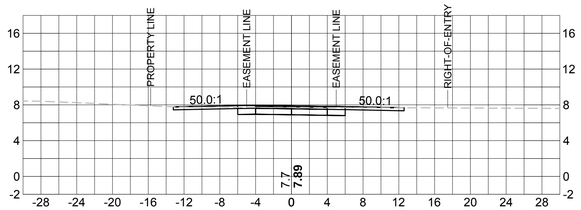

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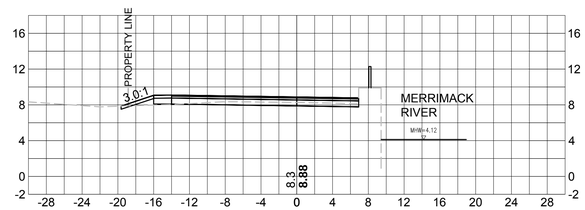

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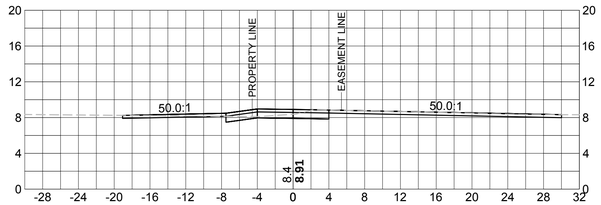

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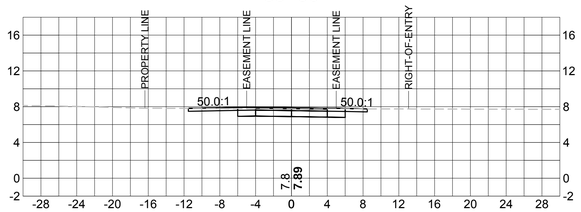

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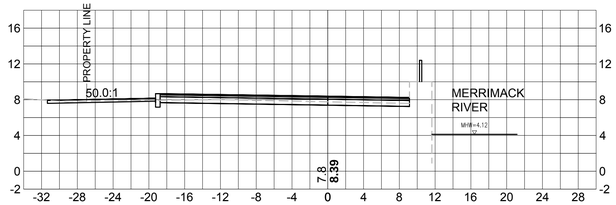

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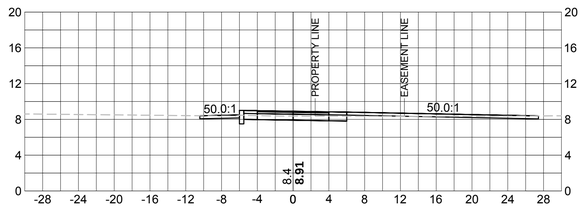

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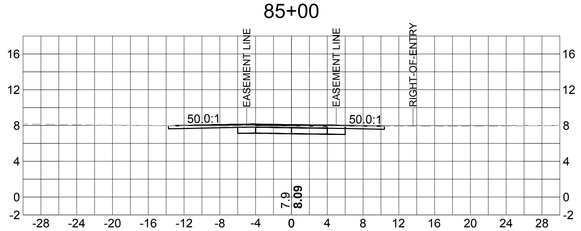

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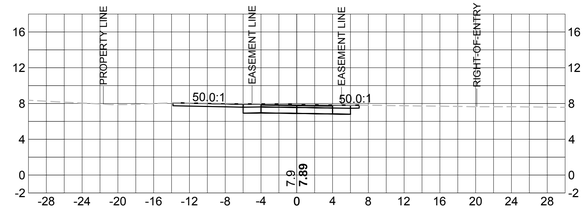


NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

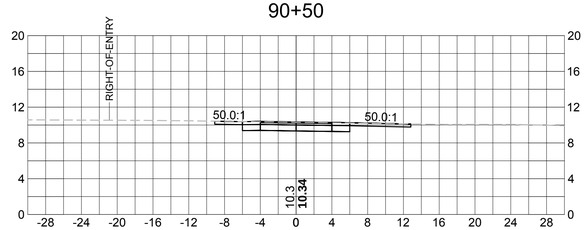
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	135	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
RAIL TRAIL
SHEET 14 OF 14

606503(25%)HD\CROSS SECTIONS).DWG 27-Jun-2013

+84

90+50



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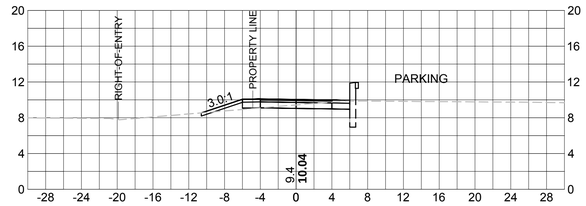

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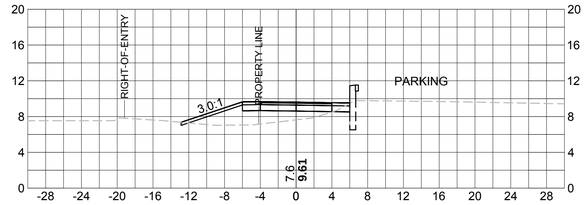

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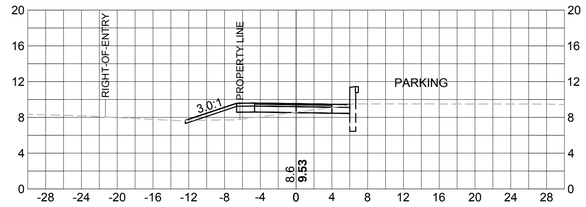


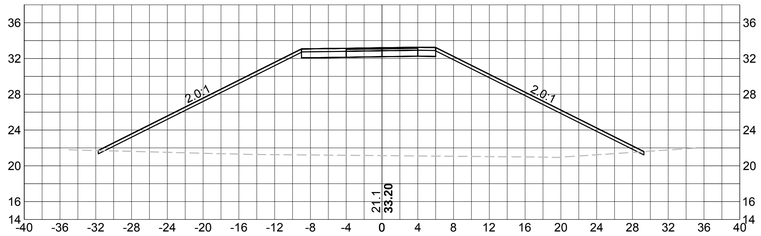
NEWBURYPORT / NEWBURY
CLIPPER CITY RAIL TRAIL - PHASE 2

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	136	136
PROJECT FILE NO.	606503		

CROSS SECTIONS
HIGH STREET CONNECTION

606503(25%)HD\CROSS SECTIONS).DWG 27-Jun-2013

201+50



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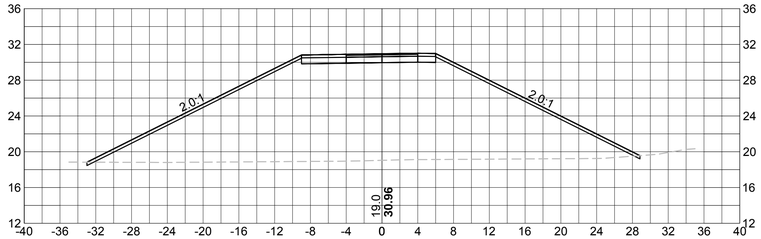

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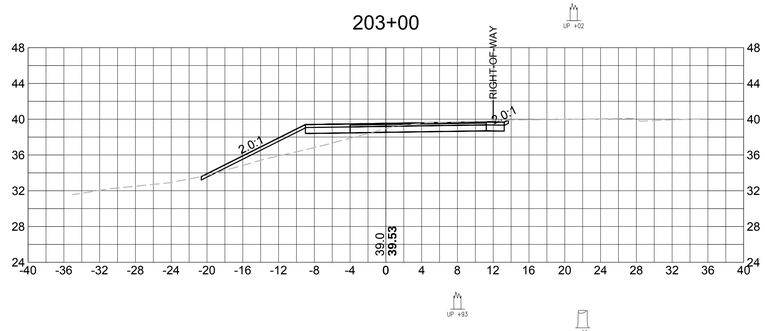

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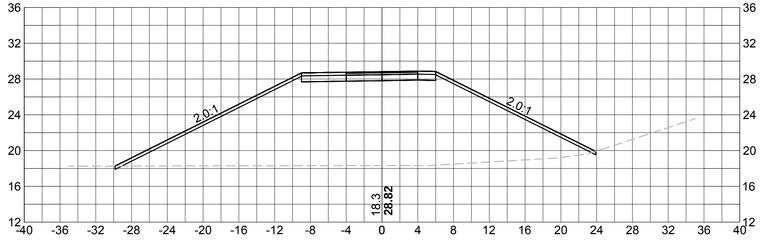

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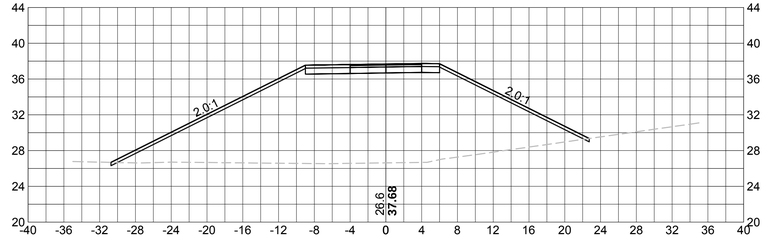

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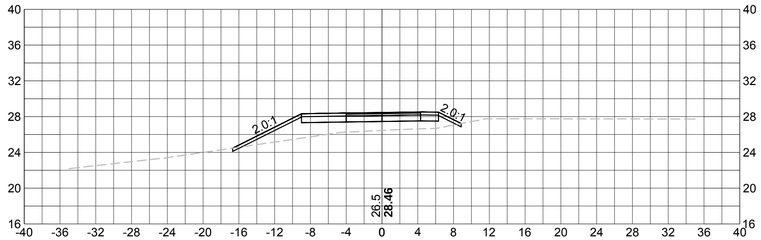
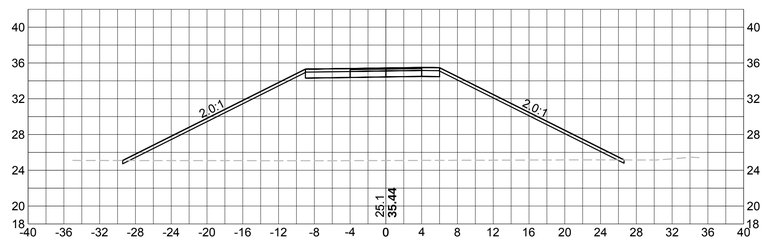
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