MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

WALKER STREET RECONSTRUCTION

WALKER STREET

IN THE TOWN OF

LENOX

BERKSHIRE COUNTY

FEDERAL AID PROJECT NO.

100% SUBMITTAL

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	199
PROJECT FILE NO.	606462		

TITLE SHEET & INDEX
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	KEY PLAN & BORING LOCATIONS
4	BORING & TEST PIT LOGS
5 - 8	TYPICAL SECTIONS & PAVEMENT NOTES
9 - 24	CONSTRUCTION PLANS
25 - 39	PROFILES
40 - 55	GRADING & TIE PLANS
56 - 71	UTILITY PLANS
72 - 87	SIGNS & PAVEMENT MARKINGS
88	SIGN SUMMARY
89 - 91	TRAFFIC MANAGEMENT PLANS
92	WETLAND REPLICATION PLAN
93 - 95	WHEELCHAIR RAMP/DRIVEWAY DETAILS
96 - 97	CONSTRUCTION DETAILS
98 - 104	CULVERT PLANS & DETAILS
105 - 185	CROSS SECTIONS - WALKER STREET
186 - 199	CROSS SECTIONS - DRIVEWAYS

CONVENTIONAL SIGNS

COUNTY, CITY, OR TOWN BOUNDARY

COUNTY, CITY, OR TOWN SIDE LINE

FENCE LINE

BASE LINE OR SURVEY LINE — S36°04'20"W 53.578 — 2+00

RIGHT OF WAY LINE

CULVERT

RETAINING WALL

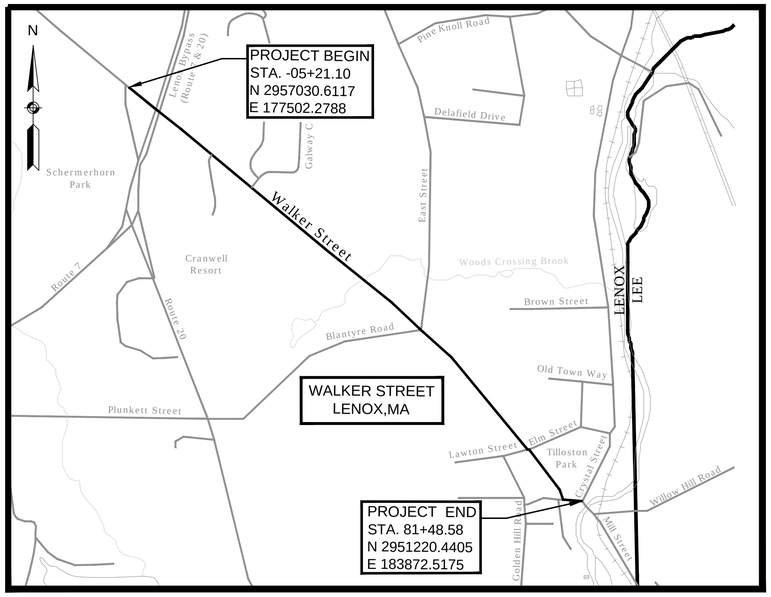
GUARD RAIL

STONE WALL

TREE LINE

POLE

ELEVATIONS — PROPOSED SURFACE / PRESENT SURFACE — PRES. 90.7 — PROP. 90.91 — 10+20



1000 0 1000 2000

SCALE 1" = 1000'

LENGTH OF PROJECT = 8,669.68 FEET = 1.642 MILES

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

GENERAL NOTES

1. Topographic Survey was performed by Foresight Land Services during the months of November and December in the year 2010 and in the months of January, February and April in the year 2011, using Electronic Total Station with Data Collector.

2. Horizontal Datum is based upon NAD 83 Massachusetts State Plane Coordinate System Mainland Zone US Feet by GPS coordinates. Referenced to Massachusetts Geodetic Survey Disk 414 A. The station is located on the northwest side of Lee, along the east bound lane of Interstate Highway 90 (Massachusetts Turnpike), Cemented in a drill hole in a massive rock ledge located 22.5 M (73.8 FT) east of the southeast corner and 1.23 M (4.04 FT) above the Marble Street overpass bridge. 10.37 M (34.02 FT) west of the east end of the rock ledge and 7.62 M (20.00 FT) northeast of the north gate post.

3. Vertical Datum is based upon National Geodetic Survey (NAVD88). Referenced to MAGS Benchmark Disc AJ-54 in 3-foot ledge outcrop about 1.85 miles southeast of Town Hall, 375 feet east of the intersection of Walker Street and East Street, 32 feet north of the centerline of Walker Street, 54.6 feet northeast of Pole #54, 104 feet northwest of pole #53, about 10 feet above the level of the road. Elevation=1117.70'. Temporary benchmarks were established on site; reference plan for TBM locations.

DESIGN DESIGNATION (WALKER STREET)

DESIGN SPEED	40 MPH
ADT (2009)	3,200
ADT (2029)	3,905
K	9%
D	7.3%
DHV	351
DDHV	183
FUNCTIONAL CLASSIFICATION	URBAN MINOR ARTERIAL

DATE	DESCRIPTION	REV #
11/01/17	100% Design Submission	0

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

FORESIGHT LAND SERVICES
Surveying • Engineering • Landscape Architecture • Environmental Permitting
1 ARK WEST MOUNTAINS STREET - FITCHBURG, MA 01201
TEL: (413) 499-1560 FAX: (413) 499-3307 www.foresightland.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

GENERAL SYMBOLS

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

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

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	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
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	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
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

ABBREVIATIONS (cont.)

GENERAL

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

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	199
PROJECT FILE NO.	606462		

LEGEND & ABBREVIATIONS
100% DESIGN SUBMISSION

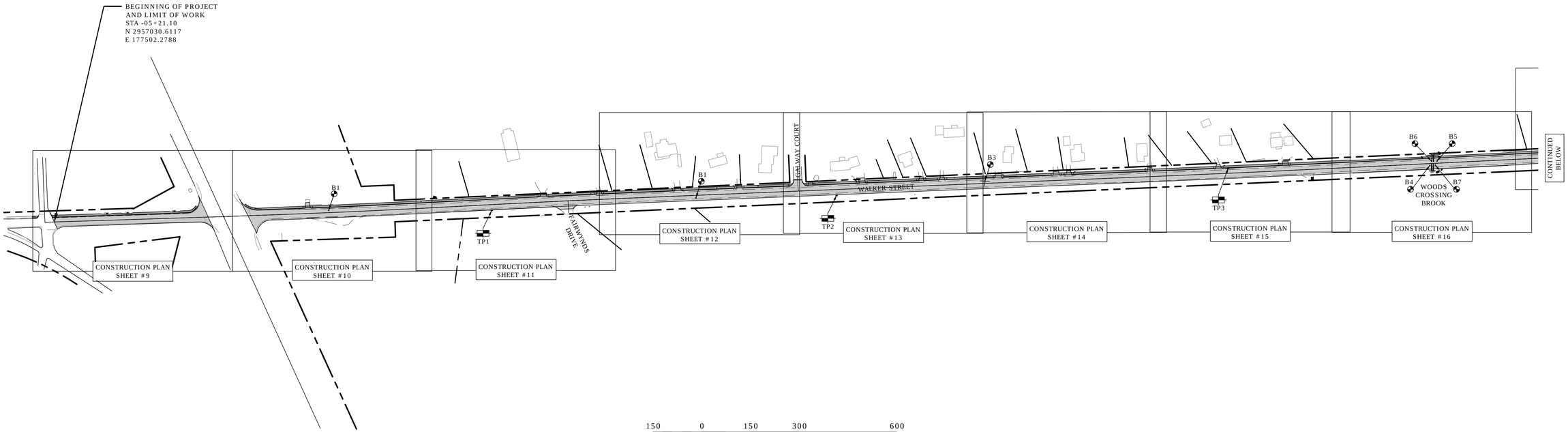
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	199
PROJECT FILE NO.	606462		

KEY PLAN & BORING LOCATIONS
100% DESIGN SUBMISSION



DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

PROJECT NAME:	Walker Street Pavement Rehabilitation	LOG OF BORING NO.	B - 1
PROJECT LOCATION:	Town of Lenox, Massachusetts	OFFSET - ON	
CLIENT:	Foresight Land Services, Pittsfield, MA		

DESCRIPTION OF MATERIAL

SURFACE ELEVATION 1189.72'

Elevation	Depth	Sample Number	Sample Type	Sample Recovery
1188.72'		S1	SS	
1187.72'				
1186.72'		S2	SS	
1185.72'		PA		
1184.72'	5.0	S3	SS	
1183.72'				

Note A

Fine to Medium Gravel, light brown, dense (GP) crushed stone or cobble fragments

Gravel, some Sand, trace Silt, mixed brown colors, moist, dense (GP)

Cobble or Small Boulder

Fine to Coarse Sand, some Gravel, trace Silt, Brown, Moist, medium dense (SM)Fill

End of Boring - 6.0 feet

Note A: 0.3 feet (3.5 inches) asphalt concrete core. Large stone stops core at 0.5 ft (6 inches)

UNCONFINED COMPRESSIVE STRENGTH (TSF)

PLASTIC LIMIT X — WATER CONTENT ○ — LIQUID LIMIT △

STANDARD PENETRATION (BLOWS/FOOT) 10 20 30 40 50

WATER LEVEL	dry	VCH FILE NO.	6311	VERNON HOFFMAN PE
DATE	November 10, 2010	STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU TRANSITION MAY BE GRADUAL		SOIL AND FOUNDATION ENGINEERING 30 TULIP STREET ROTTERDAM NY 12306 (518) 382-0227 fax (518) 382-1035

LOG OF BORING B-1
(STA 3+23.38±)

PROJECT NAME:	Walker Street Pavement Rehabilitation	LOG OF BORING NO.	B - 2
PROJECT LOCATION:	Town of Lenox, Massachusetts	OFFSET - ON	
CLIENT:	Foresight Land Services, Pittsfield, MA		

DESCRIPTION OF MATERIAL

SURFACE ELEVATION 1182.94'

Elevation	Depth	Sample Number	Sample Type	Sample Recovery
1181.94'		Core		
1180.94'		S1	SS	
1179.94'		S2	SS	
1178.94'				
1177.94'	5.0	S3	SS	
1176.94'				

Note A

Fine Sand, some Gravel & Cobbles, trace Silt, brown and White(cobbles), moist, dense (SM) Fill

Fine Sand, trace to some Gravel, trace to some Silt, brown, moist, medium dense (SM) Fill

End of Boring - 6.0 feet

Note A: 0.5 ft. (6.0 inches) core at 6 inch diameter through asphalt concrete

UNCONFINED COMPRESSIVE STRENGTH (TSF)

PLASTIC LIMIT X — WATER CONTENT ○ — LIQUID LIMIT △

STANDARD PENETRATION (BLOWS/FOOT) 10 20 30 40 50

WATER LEVEL	Dry	VCH FILE NO.	6311	VERNON HOFFMAN PE
DATE	November 10, 2010	STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU TRANSITION MAY BE GRADUAL		SOIL AND FOUNDATION ENGINEERING 30 TULIP STREET ROTTERDAM NY 12306 (518) 382-0227 fax (518) 382-1035

LOG OF BORING B-2
(STA 14+53.07±)

PROJECT NAME:	Walker Street Pavement Rehabilitation	LOG OF BORING NO.	B - 3
PROJECT LOCATION:	Town of Lenox, Massachusetts	OFFSET - ON	
CLIENT:	Foresight Land Services, Pittsfield, MA		

DESCRIPTION OF MATERIAL

SURFACE ELEVATION 1149.88'

Elevation	Depth	Sample Number	Sample Type	Sample Recovery
1148.88'		S1	SS	
1147.88'				
1146.88'		S2	SS	
1145.88'				
1144.88'	5.0	S3	SS	
1143.88'				

Note A

Note B

Poor Sample recovery in medium dense to dense gravelly material with cobbles

End of Boring - 6.0 feet

Note A: 0.35 ft (4.2inch) asphalt concrete 6 inch diameter core sample

Note B Fine to Coarse Sand, trace to some fine Gravel, trace Silt, brown with white gravels, moist, medium dense (GP) Fill

UNCONFINED COMPRESSIVE STRENGTH (TSF)

PLASTIC LIMIT X — WATER CONTENT ○ — LIQUID LIMIT △

STANDARD PENETRATION (BLOWS/FOOT) 10 20 30 40 50

WATER LEVEL	Dry BCR	VCH FILE NO.	6311	VERNON HOFFMAN PE
DATE	November 10, 2010	STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU TRANSITION MAY BE GRADUAL		SOIL AND FOUNDATION ENGINEERING 30 TULIP STREET ROTTERDAM NY 12306 (518) 382-0227 fax (518) 382-1035

LOG OF BORING B-3
(STA 23+43.11±)

PROJECT NAME:	Walker Street Pavement Rehabilitation	LOG OF BORING NO.	B - 4
PROJECT LOCATION:	Town of Lenox, Massachusetts	OFFSET - ON	
CLIENT:	Foresight Land Services, Pittsfield, MA		

DESCRIPTION OF MATERIAL

SURFACE ELEVATION 1093.97'

Elevation	Depth	Sample Number	Sample Type	Sample Recovery
1092.97'		Core		
1091.97'		S1	SS	
1090.97'		S2	SS	
1089.97'				
1088.97'	5.0	S3	SS	
1087.97'				
1086.97'		S4	SS	
1085.97'				
1084.97'				
1083.97'	10	S5	SS	
1082.97'				
1081.97'				
1080.97'				
1079.97'				
1078.97'	15			
1077.97'		S6	SS	
1076.97'				

Note A

Fine to Coarse Sand, trace to some Gravel, trace Silt, brown, moist (SW-SM) Fill

Fine to Coarse Sand, some Fine Gravel, trace Silt, light brown, moist (SW) Fill

Note B

Organic Silt, trace Sand, Gravel, and glass fragments, dark brown, moist to wet, loose (OL) Fill

Organic Silt, trace to some white stones & wood pieces, moist, medium dense (OL) Fill

Peat with decomposed wood, moist, loose/soft, dark brown to black (Pt)

Silty Clay and Silt layers, silver gray, wet (saturated) soft/loose (CL & ML)

End of Boring - 17.0 feet

Note A 0.3 ft (3.5 inch) asphalt concrete 6 inch diameter core

Note B Very Fine Sand, trace to some Silt & Fine Gravel, light brown, moist (SM) Fill

* Ground water will probably rise to near the top of the organic deposits at times which is near the original ground surface. Organic deposits would oxidize above the water table

UNCONFINED COMPRESSIVE STRENGTH (TSF)

PLASTIC LIMIT X — WATER CONTENT ○ — LIQUID LIMIT △

STANDARD PENETRATION (BLOWS/FOOT) 10 20 30 40 50

WATER LEVEL	Dry WS Probable GWL 4 to 6 feet *	VCH FILE NO.	6311	VERNON HOFFMAN PE
DATE	November 10, 2010	STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU TRANSITION MAY BE GRADUAL		SOIL AND FOUNDATION ENGINEERING 30 TULIP STREET ROTTERDAM NY 12306 (518) 382-0227 fax (518) 382-1035

LOG OF BORING B-4
(STA 37+12.14±)

PROJECT NAME:	Walker Street Pavement Rehabilitation	LOG OF BORING NO.	B - 5
PROJECT LOCATION:	Town of Lenox, Massachusetts	OFFSET - ON	
CLIENT:	Foresight Land Services, Pittsfield, MA		

DESCRIPTION OF MATERIAL

SURFACE ELEVATION 1093.94'

Elevation	Depth	Sample Number	Sample Type	Sample Recovery
1092.94'		Core		
1091.94'		S1	SS	
1090.94'				
1089.94'		S2	SS	
1088.94'	5.0	LS3	SS	
1087.94'				
1086.94'		S4	SS	
1085.94'				
1084.94'				
1083.94'	10			
1082.94'		S5	SS	
1081.94'				
1080.94'				
1079.94'				
1078.94'	15			
1077.94'		S6	SS	
1076.94'				

Note X

Note B

Fine to Coarse Sand, some Gravel, trace Silt & Cobble, light brown and brown, moist, dense to very dense (SM-SP) Fill

Silt, trace to some Sand, trace Gravel, dark gray, moist, loose (ML)

Peat, some deomposed wood, black, moist, loose/soft, (Pt)

Silt, light silver gray, wet (saturated), loose to medium dense (ML)

End of Boring - 17.0 feet

Note A 0.3 ft (3.5 inches) asphalt concrete core

Note B Fine Sand, some Silt, trace to some Gravel, dark brown, moist, dense (SM) Fill

UNCONFINED COMPRESSIVE STRENGTH (TSF)

PLASTIC LIMIT X — WATER CONTENT ○ — LIQUID LIMIT △

STANDARD PENETRATION (BLOWS/FOOT) 10 20 30 40 50

WATER LEVEL	Dry WS	VCH FILE NO.	6311	VERNON HOFFMAN PE
DATE	November 10, 2010	STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES IN SITU TRANSITION MAY BE GRADUAL		SOIL AND FOUNDATION ENGINEERING 30 TULIP STREET ROTTERDAM NY 12306 (518) 382-0227 fax (518) 382-1035

LOG OF BORING B-5
(STA 37+34.72±)

BORING LOG

PROJECT:	Walker Street Borings			JOB NUMBER:	G021-17
LOCATION:	Lenox, Massachusetts			BORING NUMBER:	B-6
CLIENT:	Foresight Land Services, Inc.			SURFACE ELEVATION:	As Obtained by Client
				GROUND WATER READINGS	
DATE STARTED:	04/03/17	DATE COMPLETED:	04/03/17	WHILE DRILLING:	Depth to Water: 5.4' / Casing At: 10.0'
DRILLER:	Marc Cheney	HELPER:	Zack Cheney	BEFORE CASING REMOVED:	8.1' / 46.0'
CASING TYPE:	3 1/4" Hollow Stem Augers			AFTER CASING REMOVED:	4.9'
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55			CAVED AT DEPTH:	7.9'

	SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
1094.08'						8" Asphalt Pavement	0.7
1093.08'							
1092.08'	1	0.7'-2.7'	11-28-31-28	N/59	13	Brown cmf SAND and cmf GRAVEL, trace SILT, trace	
1091.08'						Asphalt Fragments (moist, very compact)	2.7
1090.08'							
1089.08'							
1088.08'	2	5.0'-7.0'	5-10-6-5	N/16	10	Grey/Brown SILT and cmf GRAVEL, some cmf SAND, trace	
1087.08'						Organics (moist to wet, very stiff)	
1086.08'							
1085.08'							
1084.08'							
1083.08'	3	10.0'-12.0'	2-2-2-3	N/4	0	No Sample Recovery - *Sampler Pushing Gravel*	
1082.08'							12.0
1081.08'	4	12.0'-14.0'	4-3-3-3	N/6	16	Grey/Brown SILT and cmf GRAVEL, some cmf SAND, trace	
1080.08'						Peat (wet, medium stiff)	
1079.08'	5a	14.0'-14.3'	1-1-1-1	N/2	18	Peat and Organic SILT (wet)	14.3
1078.08'	5b	14.3'-16.0'				Grey SILT and CLAY, little mf SAND (wet to saturated, soft)	
1077.08'							
1076.08'							
1075.08'							
1074.08'	6	19.0'-21.0'	4-4-2-2	N/6	6	Similar Soil (saturated, medium stiff)	
1073.08'							
1072.08'							
1071.08'							
1070.08'						*Augering Gravelly @ 23.6'*	
1069.08'	7	24.0'-26.0'	27-30-51-63	N/81	14	Brown SILT and cmf GRAVEL, little cmf SAND (moist, hard)	

Notes:

Key to Drilling Terms: N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"; C - % of Bedrock Core Recovery

LOG OF BORING B-6
(STA 37+18.04±)

BORING LOG

PROJECT:	Walker Street Borings			JOB NUMBER:	G021-17
LOCATION:	Lenox, Massachusetts			BORING NUMBER:	B-6
CLIENT:	Foresight Land Services, Inc.			SURFACE ELEVATION:	As Obtained by Client
				GROUND WATER READINGS	
DATE STARTED:	04/03/17	DATE COMPLETED:	04/03/17	WHILE DRILLING:	Depth to Water: 5.4' / Casing At: 10.0'
DRILLER:	Marc Cheney	HELPER:	Zack Cheney	BEFORE CASING REMOVED:	8.1' / 46.0'
CASING TYPE:	3 1/4" Hollow Stem Augers			AFTER CASING REMOVED:	4.9'
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55			CAVED AT DEPTH:	7.9'

	SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
1068.08'							
1067.08'							
1066.08'							
1065.08'							
1064.08'							
1063.08'	8	29.0'-29.3'	100@3"	N/100+		Brown/Grey SILT and cmf GRAVEL, little cmf SAND (moist,	
1062.08'						hard)	
1061.08'							
1060.08'							
1059.08'							
1058.08'	9	34.0'-34.0'	100@0"	N/100+	0	No Sample Recovery - *8" Cobble Noted*	
1057.08'							
1056.08'							
1055.08'							
1054.08'							
1053.08'	10	39.0'-40.4'	65-72-100@5"	N/100+	16	Brown SILT and cmf GRAVEL, little cmf SAND (moist,	
1052.08'						hard)	
1051.08'							
1050.08'							
1049.08'							
1048.08'	11	44.0'-46.0'	44-81-64-74	N/145	18	Similar Soil (moist, hard)	
1047.08'							
1046.08'	12	46.0'-46.6'	64-100@1"	N/100+	5	Similar Soil (moist, hard)	
						Bottom of Boring @ 46.6'	

Notes:

N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"

C - % Bedrock Core Recovery

LOG OF BORING B-6 (Continued)
(STA 37+18.04±)

BORING LOG

PROJECT:	Walker Street Borings			JOB NUMBER:	G021-17
LOCATION:	Lenox, Massachusetts			BORING NUMBER:	B-7
CLIENT:	Foresight Land Services, Inc.			SURFACE ELEVATION:	As Obtained by Client
				GROUND WATER READINGS	
DATE STARTED:	03/30/17	DATE COMPLETED:	03/30/17	WHILE DRILLING:	Depth to Water: 7.9' / Casing At: 33.0'
DRILLER:	Marc Cheney	HELPER:	Zack Cheney	BEFORE CASING REMOVED:	6.3' / 45.0'
CASING TYPE:	3 1/4" Hollow Stem Augers/Rotary - Roller Bit/NQ-Core			AFTER CASING REMOVED:	5.7'
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55			CAVED AT DEPTH:	23.5'

	SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
1093.93'						9" Asphalt Pavement	0.8
1092.93'							
1091.93'	1	0.8'-2.8'	21-20-19-22	N/39	11	Brown cmf SAND and cmf GRAVEL, trace SILT (moist,	
1090.93'						compact)	
1089.93'							
1088.93'							
1087.93'	2	5.0'-7.0'	7-5-2-2	N/7	9	Grey cmf SAND and SILT, trace fine GRAVEL, trace Organics	
1086.93'						(moist, loose)	7.0
1085.93'	3	7.0'-9.0'	2-3-2-3	N/5	13	Grey SILT, little cmf SAND, trace Interlayered Peat and	
1084.93'						Wood (moist to wet, medium stiff)	
1083.93'	4	9.0'-11.0'	1-1-2-2	N/3	14	Brown Peat (wet)	
1082.93'							
1081.93'	5	11.0'-13.0'	2-2-2-3	N/4	10	Brown Organic SILT with Interlayered Peat (wet)	
1080.93'							
1079.93'	6	13.0'-15.0'	WH-WH-1-3	N/1	17	Grey SILT and CLAY, little cmf SAND, trace Organics (moist	
1078.93'						to wet, very soft)	15.0
1077.93'	7	15.0'-17.0'	3-4-11-10	N/15	10	Grey SILT, trace CLAY, trace Interlayered cmf SAND (wet to	
1076.93'						saturated, very stiff)	
1075.93'							
1074.93'							
1073.93'							
1072.93'	8	20.0'-22.0'	5-2-2-2	N/4	10	Grey SILT, trace CLAY, trace Interlayered cmf SAND, trace	
1071.93'						mf GRAVEL (moist, medium stiff)	
1070.93'						*Augering Gravelly @ 23.5'*	
1069.93'							
1068.93'							

Notes:

Key to Drilling Terms: N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"; C - % of Bedrock Core Recovery

LOG OF BORING B-7
(STA 37+29.18±)

BORING LOG

PROJECT:	Walker Street Borings			JOB NUMBER:	G021-17
LOCATION:	Lenox, Massachusetts			BORING NUMBER:	B-7
CLIENT:	Foresight Land Services, Inc.			SURFACE ELEVATION:	As Obtained by Client
				GROUND WATER READINGS	
DATE STARTED:	03/30/17	DATE COMPLETED:	03/30/17	WHILE DRILLING:	Depth to Water: 7.9' / Casing At: 33.0'
DRILLER:	Marc Cheney	HELPER:	Zack Cheney	BEFORE CASING REMOVED:	6.3' / 45.0'
CASING TYPE:	3 1/4" Hollow Stem Augers/Rotary - Roller Bit/NQ-Core			AFTER CASING REMOVED:	5.7'
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55			CAVED AT DEPTH:	23.5'

	SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
1067.93'	9	25.0'-27.0'	50-57-47-51	N/104	13	Brown SILT and cmf GRAVEL, some cmf SAND (moist,	
1066.93'						hard)	
1065.93'							
1064.93'							
1063.93'							
1062.93'	10	30.0'-31.4'	49-77-100@5"	N/100+	11	Similar Soil (moist, hard)	
1061.93'						*Auger Refusal @ 32.5'*	32.5
1060.93'	11	32.5'-32.5'	100@0"	N/100+	1	Grey Cobble Fragments (moist)	
1059.93'						*Set-Up to Core*	33.0
1058.93'	R1	33.0'-38.0'	NQ-Core			Brown SILT and cmf GRAVEL, some cmf SAND	
1057.93'						*16" Cobble noted at start of core run*	38.0
1056.93'	12	38.0'-39.8'	53-59-88-100@4"	N/100+	18	Brown SILT and cmf GRAVEL, some cmf SAND (moist,	
1055.93'						hard)	
1054.93'						*Roller Bit to 43.0'*	
1053.93'							
1052.93'							
1051.93'							
1050.93'							
1049.93'	13	43.0'-44.8'	49-96-94-100@4"	N/190	17	Similar Soil (moist, hard)	
1048.93'						*Roller Bit to 45.0'*	
1047.93'	14	45.0'-46.3'	59-93-100@4"	N/100+	11	Similar Soil (moist, hard)	
						Bottom of Boring @ 46.3'	

Notes: 1. Water used to obtain NQ-Core.

N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"

C - % Bedrock Core Recovery

LOG OF BORING B-7 (Continued)
(STA 37+29.18±)

TEST PIT NO. 1

Location: Road Shoulder, South Side, 6 Feet South of Edge of Pavement

S1	0.0' - 0.5'	Top soil with roots (ML-SM)
S2	0.5' -1.0'	Sand & Gravel, trace to some Silt, brown, moist (SM-SP) Fill
S3	1.0' -3.0'	Sand & Gravel, trace to some Silt, grayish brown, moist (SM-SP)
S4	3.0' - 5.0'	Cobbles, some Gravel, trace to some Silt, yellowish brown with white stones (GP)

Notes: End of Test Pit @ 5.0 Feet, No Water, Took Pail Sample of S3

TEST PIT NO. 2

Location: 45 Feet West of Plan Location on South Side & 7 Feet From Edge of Pavement

S1	0.0' - 1.0'	Topsoil with surface seepage through topsoil
S2	1.0' - 5.0'	Sand & Gravel, trace to some Silt & white limestone pieces, grayish brown, moist (SM-GM)

Notes: End of Test Pit @ 5.0 Feet, No Groundwater, Little Seepage from Top and Sides Collects in Bottom, Took Pail Sample of S2

TEST PIT NO. 3

Location: North Side of Road, 5 Feet from Edge of Pavement

S1	0.0' - 1' to 2'	Silt, trace to some Sand, trace organic, dark brown (ML-OL) Fill
S2	1' to 2' - 5.0'	Sand, some Gravel, trace to some silt & Cobbles, brown, moist (SM-SP)

Notes: End of Test Pit @ 5.0 Feet, No Water, Took Pail Sample of S2

TEST PIT NO. 4

Location: North Side of Road about 6 to 7 Feet from Edge of Pavement

S1	0.0' - 0.5'	Top soil, dark brown, (ML-SM) Fill
S2	0.5' -2.0'	Gravel & Sand, trace Silt, light brown, moist (GM-SM) Fill
S3	2.0' -3.0'	Silt, organic, dark brown, moist to wet (ML-OL) probably original topsoil
S4	3.0' - 5.0'	Fine sand, trace to some Gravel & Silt, grayish brown, moist to wet (SM)

Notes: End of Test Pit @ 5.0 Feet, No Groundwater, Small Seepage on Upper Sides

TEST PIT NO. 5

Location: South Side of Road, 9 Feet from Edge of Pavement

S1	0.0' - 0.5'	Fine Sand & Silt, with tree roots, dark brown, topsoil (SM-ML) Fill
S2	0.5' -1.5'	Silt, trace to some Sand, trace Gravel, brown, moist (SM) probable Fill
S3	1.5' - 5.0'	Gravel, trace to some Sand, Silt and Cobbles, brown, moist (GM-GP)

Notes: End of Test Pit @ 5.0 Feet, No Groundwater

TEST PIT NO. 6

Location: North Side of Road about 8 Feet North of Edge of Pavement in Lawn

S1	0.0' - 1.0'	Topsoil with grass sod, dark brown, moist (SM)
S2	1.0' - 4.0'	Sand, some Gravel, trace Silt, moist (SM-SP)

Notes: End of Test Pit @ 4.0 Feet, Water Seeping in at 3.5 Feet, Encountered Top of Wooden Duct Bank at 3 Feet Below Grade

TEST PIT NO. 20

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 4"	Topsoil	Loam	Dark Brown	Friable Crumbs
4" - 3'(5')	Varies, Gravel	Sandy Loam	Gravel to 5' Closer to Road Light Brown	Coarse Sands, Medium Coarse Gravels, Some Fines, Medium Dense
3'(5') - 9'	C	Silty Loam	Very Dark Brown/Gray	Many Fines, Wet, Dark, Hole Collapsing
Location: 5' North of Guardrail, Westbound			Estimated Seasonal High Ground Water (ESHGW): 3'	

TEST PIT NO. 21

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 3"	Topsoil	Loam	Dark Brown	Friable Crumbs
3" - 3'(2')	3' at Roadside, 2' at Wetland Side	Sandy Loam	Light Brown	Gravels and Sand Fill, Medium Dense
(2')3' - 6'	Mulch with Organics, C	Silty Loam	Very Dark Brown/Gray	Large 15"Ø Tree Buried at 5' - 6', Many Organics, Many Fine Sands and Silts, Wood Debris, Dense, Could not Remove Buried Tree without Extensive Excavation
Location: 8' East of Guardrail, Eastbound			Estimated Seasonal High Ground Water (ESHGW): 2.5'	

TEST PIT NO. 22

DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 4"	Topsoil	Loam	Dark Brown	Some Fines, Friable
4" - 2'	Gravel	Sandy Loam	Light Brown	Moist, Dense, Similar to TP-20, Large Rock at 2'
2' - 4'	Peat	Organics	Very Dark Brown/Black	Dark, Friable, Loose
4' - 8'	C	Silty Loam	Very Dark Brown	Dense, Some Sands, Many Fines
Location: 8' North of Road, 20'± West of Guardrail, Westbound			Estimated Seasonal High Ground Water (ESHGW): 3'	

CLASSIFICATION

COHESIONLESS SOILS

"Trace"	:	1% to 10%
"Trace to Some"	:	10% to 20%
"Some"	:	20% to 35%
"And"	:	35% to 50%
Loose	:	0 to 9 Blows
Medium Dense	:	10 to 29 Blows
Dense	:	30 to 59 Blows
Very Dense	:	≥ 60 Blows

or equivalent

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, then clay becomes the principle noun with the other major soil constituent as modifiers: i.e., silty clay. Other minor soil constituents may be added according to classification breakdown for cohesionless soils; i.e., silty clay, trace to some sand, trace gravel.

Soft	:	0.00-0.59 tons/ft^2
Medium	:	0.60-0.99 tons/ft^2
Stiff	:	1.00-1.99 tons/ft^2
Very Stiff	:	2.00-3.99 tons/ft^2
Hard	:	≥ 4.00 tons/ft^2

DRILLING & SAMPLING SYMBOLS

SS	:	Split-Spoon - 1$\frac{3}{8}$" I.D., 2" O.D., except where noted
S	:	Shelby Tube - 2" O.D., except where noted
PA	:	Power Auger Sample
DB	:	Diamond Bit - NX:BX:AX:
CB	:	Carbology Bit - NX:BX:AX:
OS	:	Osterberg Sampler - 3" Shelby Tube
HS	:	House Sampler
WS	:	Wash Sample
FT	:	Fish Tail
RB	:	Rock Bit
WO	:	Wash Out

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted

WATER LEVEL MEASUREMENT SYMBOLS

WL	:	Water Level
WCI	:	Wet Cave In
DCI	:	Dry Cave In
WS	:	While Sampling
WD	:	While Drilling
BCR	:	Before Casting Removal
ACR	:	After Casting Removal
AB	:	After Boring

Water levels indicated on the boring logs are the levels measured in the boring at the times indicated. In pervious soils, the indicated elevations are considered reliable ground water levels. In impervious soils the accurate determination of ground water elevations is not possible in even several day's observations, and additional evidence of ground water elevations must be sought.

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	199
PROJECT FILE NO.	606462		

BORING & TEST PIT LOGS
100% DESIGN SUBMISSION

BORING NOTES

1. LOCATION OF BORINGS SHOWN ON THE PLAN THUS: ⊕ BORING #NO.

2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.

3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.

4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOW REQUIRED TO DRIVE A 2" O.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".

5. BORING SAMPLES ARE STORED AT THE OFFICE OF SOIL MATERIAL TESTING, INC. IN CASTLETON, NY. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES (IF APPLICABLE) BY CONTACTING SOIL MATERIAL TESTING, INC. 57 SOUTH MAIN STREET, CASTLETON, NY 12033 518-732-7205.

6. BORINGS 1 THROUGH 5 WERE PERFORMED IN NOVEMBER 2010 AND PRIOR TO APPROXIMATELY 3.5 INCH AVERAGE OVERLAY. BORINGS 6 AND 7 WERE PERFORMED IN MARCH 2017 AND AFTER APPROXIMATELY 3.5 INCH AVERAGE OVERLAY.

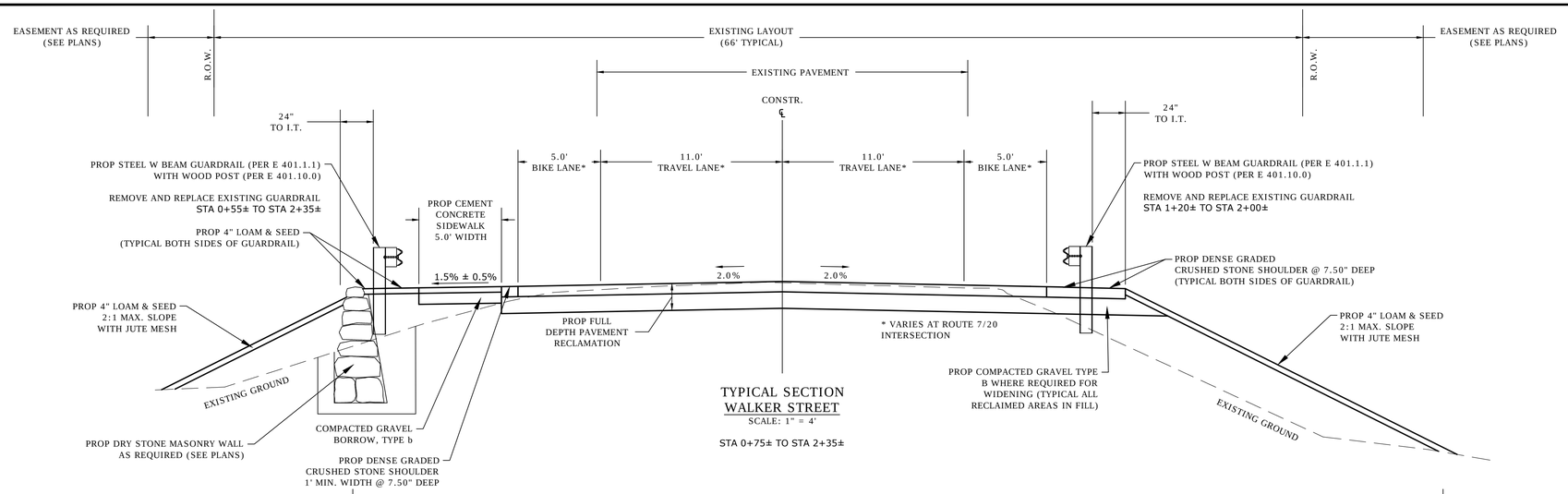
7. BORINGS 1-5 WERE MADE BY SOIL MATERIAL TESTING, INC. 57 SOUTH MAIN STREET, CASTLETON, NY 12033 518-732-7205. BORINGS 6-7 WERE MADE BY NORTHEAST SPECIALIZED DRILLING, INC., LIVERPOOL, NY 10388 315-439-1155

8. A NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

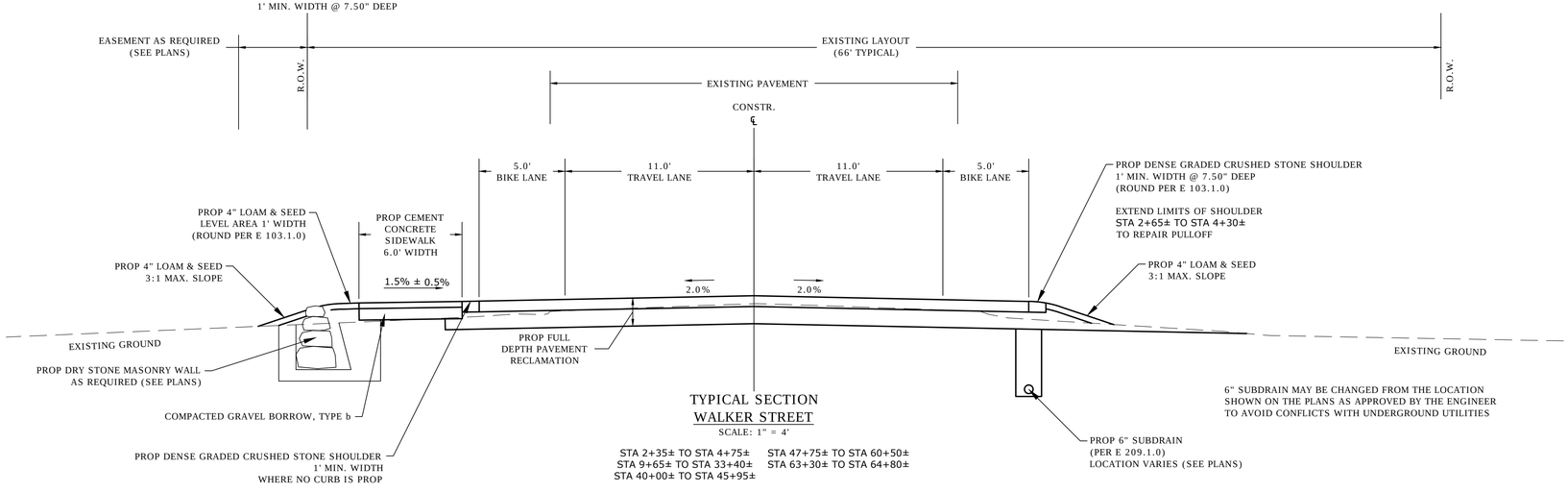
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017



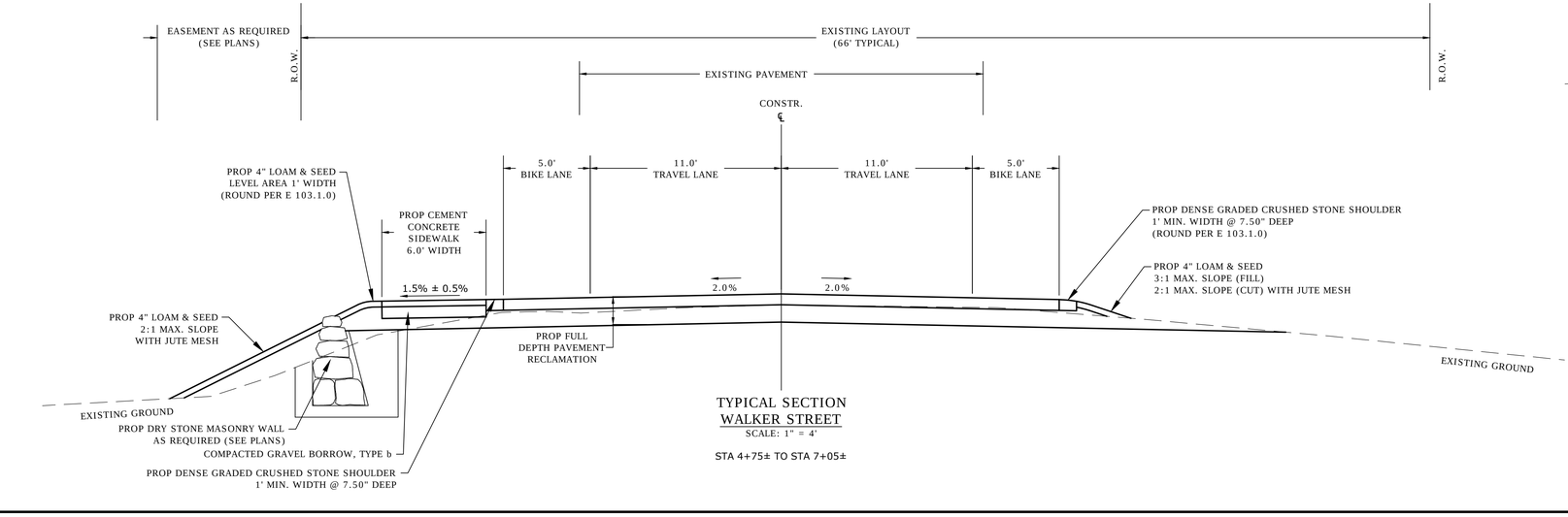
TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 0+75± TO STA 2+35±



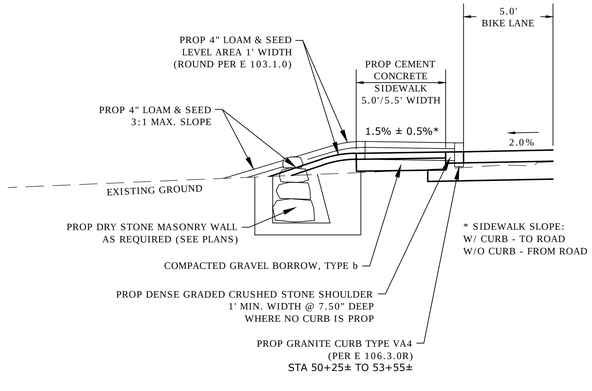
TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 2+35± TO STA 4+75±
STA 9+65± TO STA 33+40±
STA 40+00± TO STA 45+95±
STA 47+75± TO STA 60+50±
STA 63+30± TO STA 64+80±



TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 4+75± TO STA 7+05±



1/4 SECTION (5' SIDEWALK - LEFT)
WALKER STREET
SCALE: 1" = 4'

STA 50+25± TO STA 53+55±
STA 55+90± TO STA 56+95±
STA 58+20± TO STA 58+50±
STA 60+20± TO STA 61+55±

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	199
PROJECT FILE NO.	606462		

TYPICAL SECTIONS & PAVEMENT NOTES
100% DESIGN SUBMISSION

PAVEMENT NOTES

PROP FULL DEPTH PAVEMENT RECLAMATION

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 4.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) (PLACED IN ONE COURSE) OVER

SUB-BASE: 12" RECLAIMED PAVEMENT BORROW WITH LIQUID ASPHALT EMULSION

PROP FULL DEPTH DRIVEWAY APRON

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

SUB-BASE: 8" RECLAIMED PAVEMENT BORROW OR 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

PROP MILL AND OVERLAY

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.07 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

SUB-BASE: 1.50" - 3.50" PAVEMENT MICROMILLING

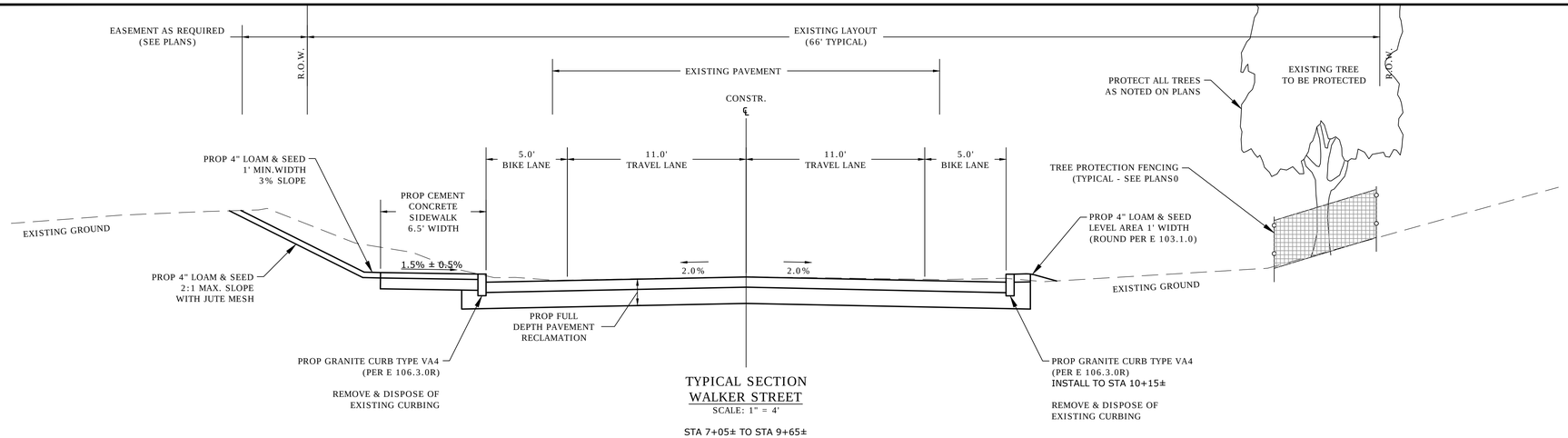
PROP CEMENT CONCRETE SIDEWALKS

SURFACE: 4" CEMENT CONCRETE (TYPICAL SIDEWALK)
6" CEMENT CONCRETE (DRIVEWAY SIDEWALK)
STEEL REINFORCED, AIR ENTRAINED 4000 PSI, 3/4", 610

SUB-BASE: 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

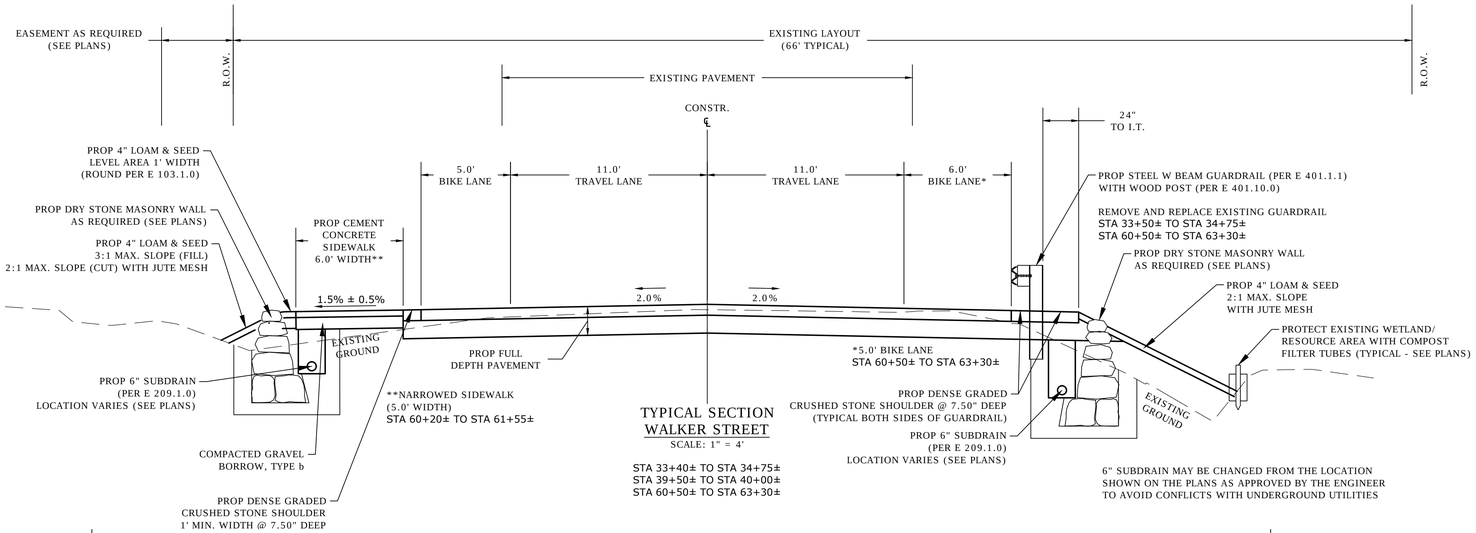
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG



TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

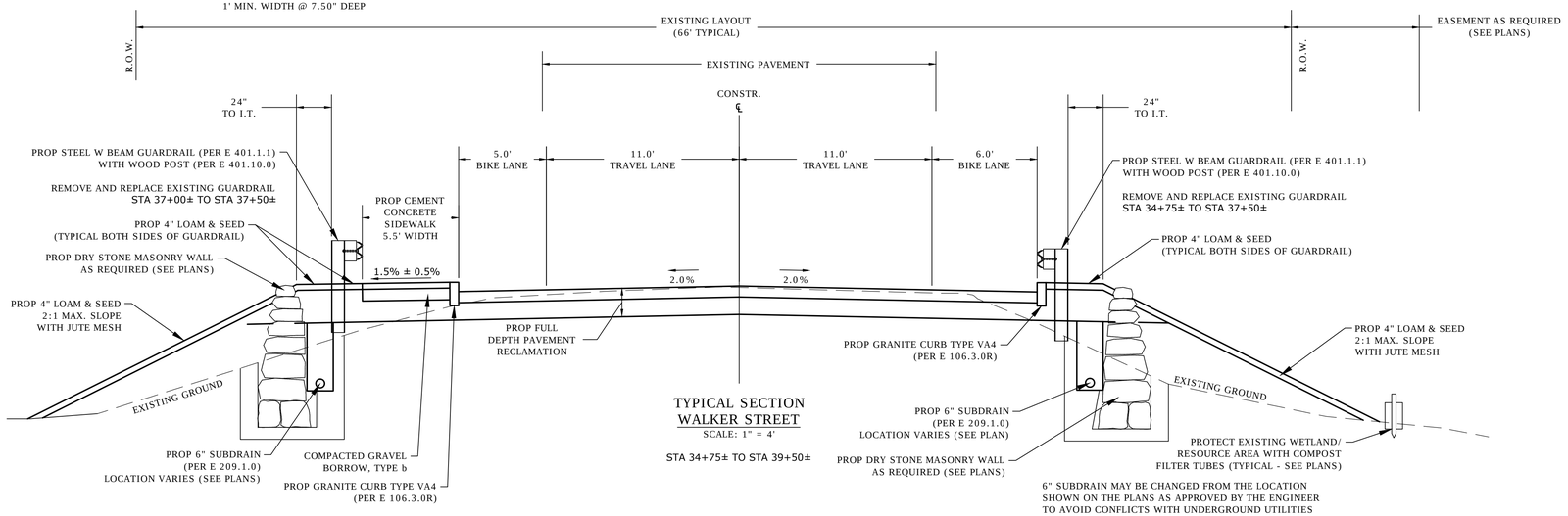
STA 7+05± TO STA 9+65±



TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 33+40± TO STA 34+75±
STA 39+50± TO STA 40+00±
STA 60+50± TO STA 63+30±

6" SUBDRAIN MAY BE CHANGED FROM THE LOCATION SHOWN ON THE PLANS AS APPROVED BY THE ENGINEER TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES



TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 34+75± TO STA 39+50±

6" SUBDRAIN MAY BE CHANGED FROM THE LOCATION SHOWN ON THE PLANS AS APPROVED BY THE ENGINEER TO AVOID CONFLICTS WITH UNDERGROUND UTILITIES

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	199
PROJECT FILE NO.	606462		

TYPICAL SECTIONS & PAVEMENT NOTES
100% DESIGN SUBMISSION

PAVEMENT NOTES

PROP FULL DEPTH PAVEMENT RECLAMATION

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 4.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) (PLACED IN ONE COURSE) OVER

SUB-BASE: 12" RECLAIMED PAVEMENT BORROW WITH LIQUID ASPHALT EMULSION

PROP FULL DEPTH DRIVEWAY APRON

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

SUB-BASE: 8" RECLAIMED PAVEMENT BORROW OR 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

PROP MILL AND OVERLAY

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.07 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

SUB-BASE: 1.50" - 3.50" PAVEMENT MICROMILLING

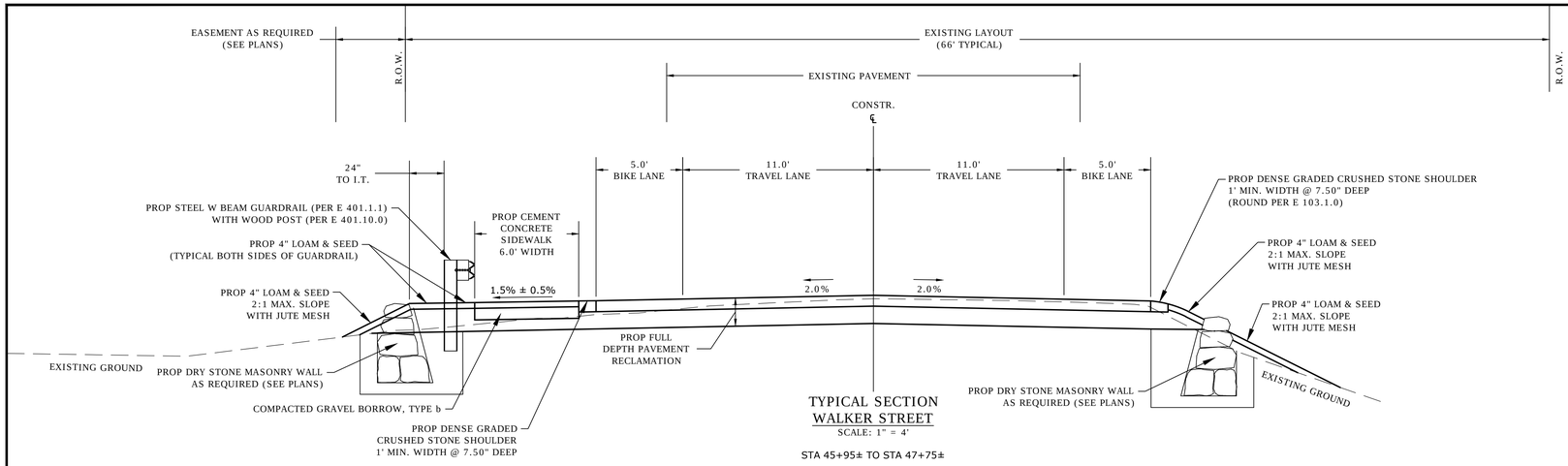
PROP CEMENT CONCRETE SIDEWALKS

SURFACE: 4" CEMENT CONCRETE (TYPICAL SIDEWALK)
6" CEMENT CONCRETE (DRIVEWAY SIDEWALK)
STEEL REINFORCED, AIR ENTRAINED 4000 PSI, 3/4", 610

SUB-BASE: 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

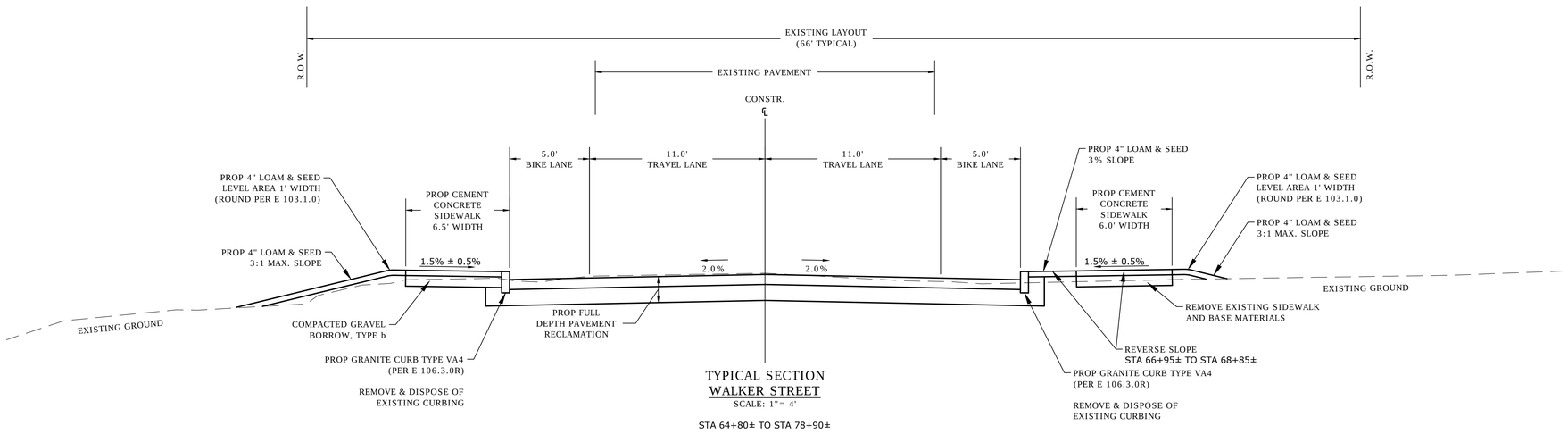
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG



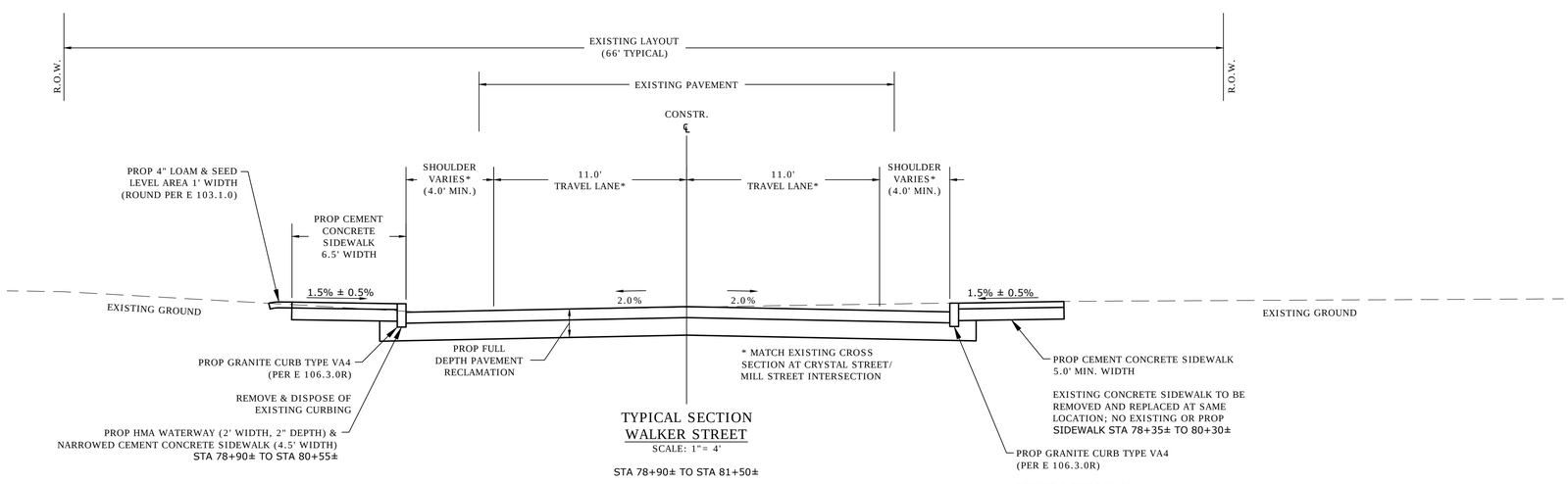
TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA 45+95± TO STA 47+75±



TYPICAL SECTION
WALKER STREET
SCALE: 1"= 4'

STA 64+80± TO STA 78+90±



TYPICAL SECTION
WALKER STREET
SCALE: 1"= 4'

STA 78+90± TO STA 81+50±

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	199
PROJECT FILE NO.	606462		

TYPICAL SECTIONS & PAVEMENT NOTES
100% DESIGN SUBMISSION

PAVEMENT NOTES

PROP FULL DEPTH PAVEMENT RECLAMATION

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 4.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
(PLACED IN ONE COURSE) OVER

SUB-BASE: 12" RECLAIMED PAVEMENT BORROW WITH
LIQUID ASPHALT EMULSION

PROP FULL DEPTH DRIVEWAY APRON

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

SUB-BASE: 8" RECLAIMED PAVEMENT BORROW OR
8" GRAVEL BORROW, TYPE b OVER
COMPACTED SUB-GRADE

PROP MILL AND OVERLAY

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
0.07 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

SUB-BASE: 1.50" - 3.50" PAVEMENT MICROMILLING

PROP CEMENT CONCRETE SIDEWALKS

SURFACE: 4" CEMENT CONCRETE (TYPICAL SIDEWALK)
6" CEMENT CONCRETE (DRIVEWAY SIDEWALK)
STEEL REINFORCED, AIR ENTRAINED 4000 PSI, 3/4", 610

SUB-BASE: 8" GRAVEL BORROW, TYPE b OVER
COMPACTED SUB-GRADE

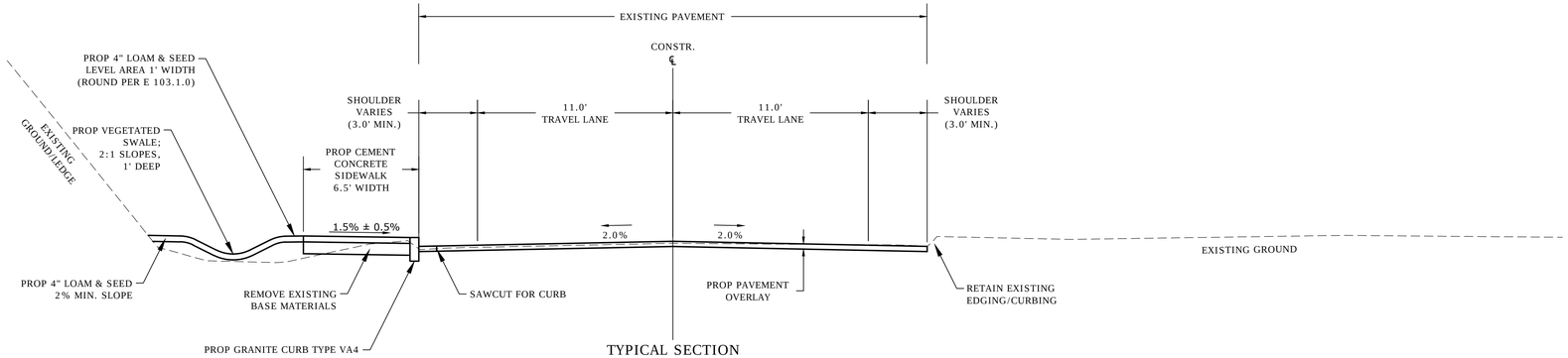
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

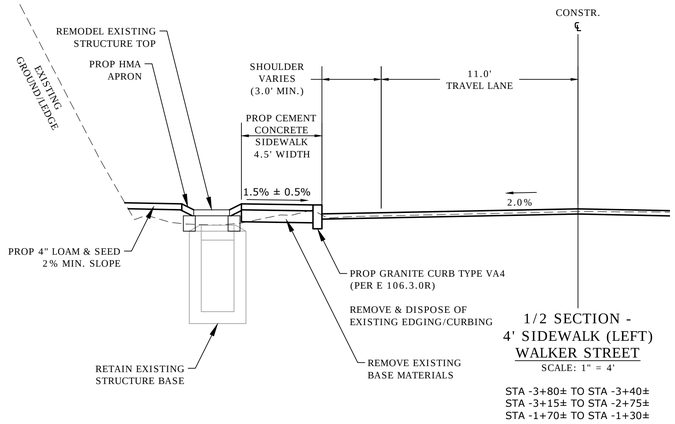
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	199
PROJECT FILE NO.	606462		

TYPICAL SECTIONS & PAVEMENT NOTES
100% DESIGN SUBMISSION



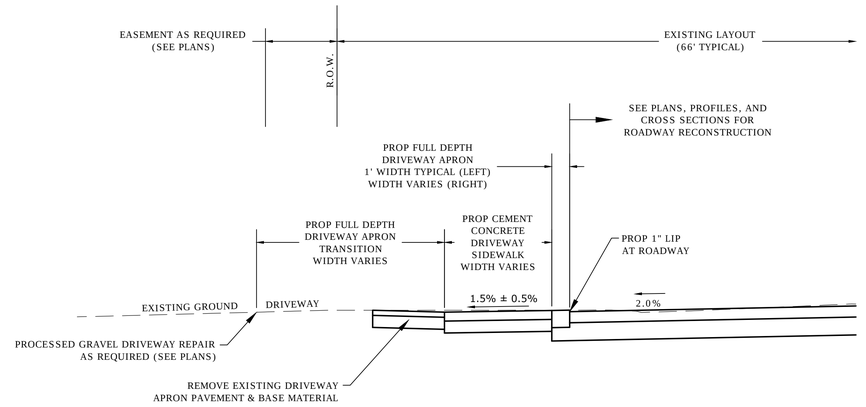
TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

STA -5+25± TO STA -3+80±
STA -3+40± TO STA -3+15±
STA -2+75± TO STA -1+70±
STA -1+30± TO STA -0+80±



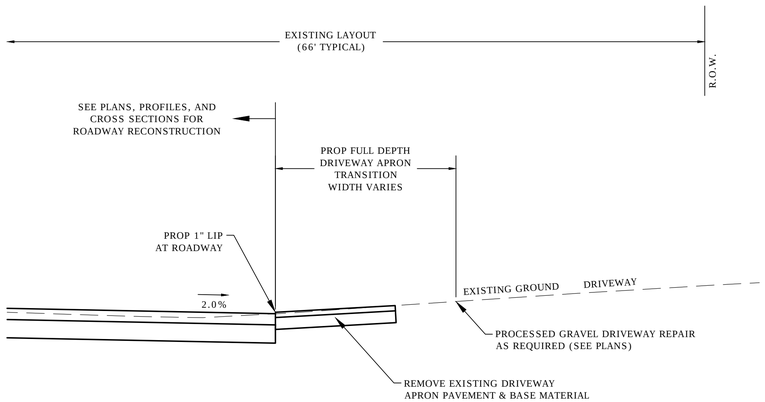
1/2 SECTION -
4' SIDEWALK (LEFT)
WALKER STREET
SCALE: 1" = 4'

STA -3+80± TO STA -3+40±
STA -3+15± TO STA -2+75±
STA -1+70± TO STA -1+30±



TYPICAL SECTION
WALKER STREET
SCALE: 1" = 4'

DRIVEWAY APRON TRANSITION WITH SIDEWALK



TYPICAL SECTION
WALKER STREET
SCALE: 1' = 4'

DRIVEWAY APRON TRANSITION

PAVEMENT NOTES

PROP FULL DEPTH PAVEMENT RECLAMATION

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

INTERMEDIATE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 4.00" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) (PLACED IN ONE COURSE) OVER

SUB-BASE: 12" RECLAIMED PAVEMENT BORROW WITH LIQUID ASPHALT EMULSION

PROP FULL DEPTH DRIVEWAY APRON

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

SUB-BASE: 8" RECLAIMED PAVEMENT BORROW OR 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

PROP MILL AND OVERLAY

SURFACE: 1.50" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER 0.05 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

BASE: 2.00" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER 0.07 GAL/SY ASPHALT EMULSION FOR TACK COAT OVER

SUB-BASE: 1.50" - 3.50" PAVEMENT MICROMILLING

PROP CEMENT CONCRETE SIDEWALKS

SURFACE: 4" CEMENT CONCRETE (TYPICAL SIDEWALK)
6" CEMENT CONCRETE (DRIVEWAY SIDEWALK)
STEEL REINFORCED, AIR ENTRAINED 4000 PSI, 3/4", 610

SUB-BASE: 8" GRAVEL BORROW, TYPE b OVER COMPACTED SUB-GRADE

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 40

UTILITIES

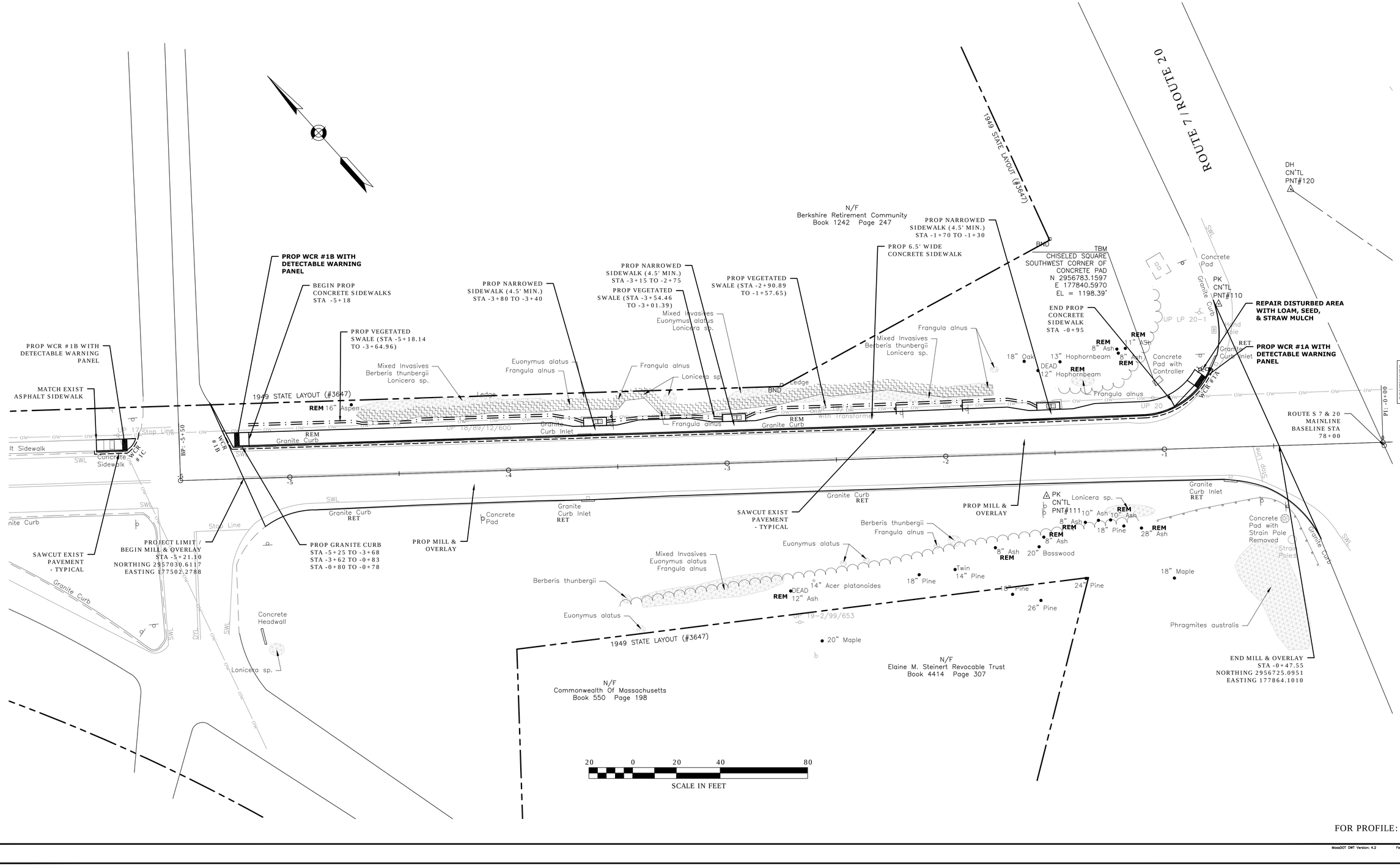
SEE SHEET NO. 56

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: N/A

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD
STA 1+18.8 TO 2+02.2 (RT)
STA 0+57.3 TO 2+35.7 (LT)

ALIGNMENT & GRADING
SEE SHEET NO. 41

UTILITIES
SEE SHEET NO. 57

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	199
PROJECT FILE NO.	606462		

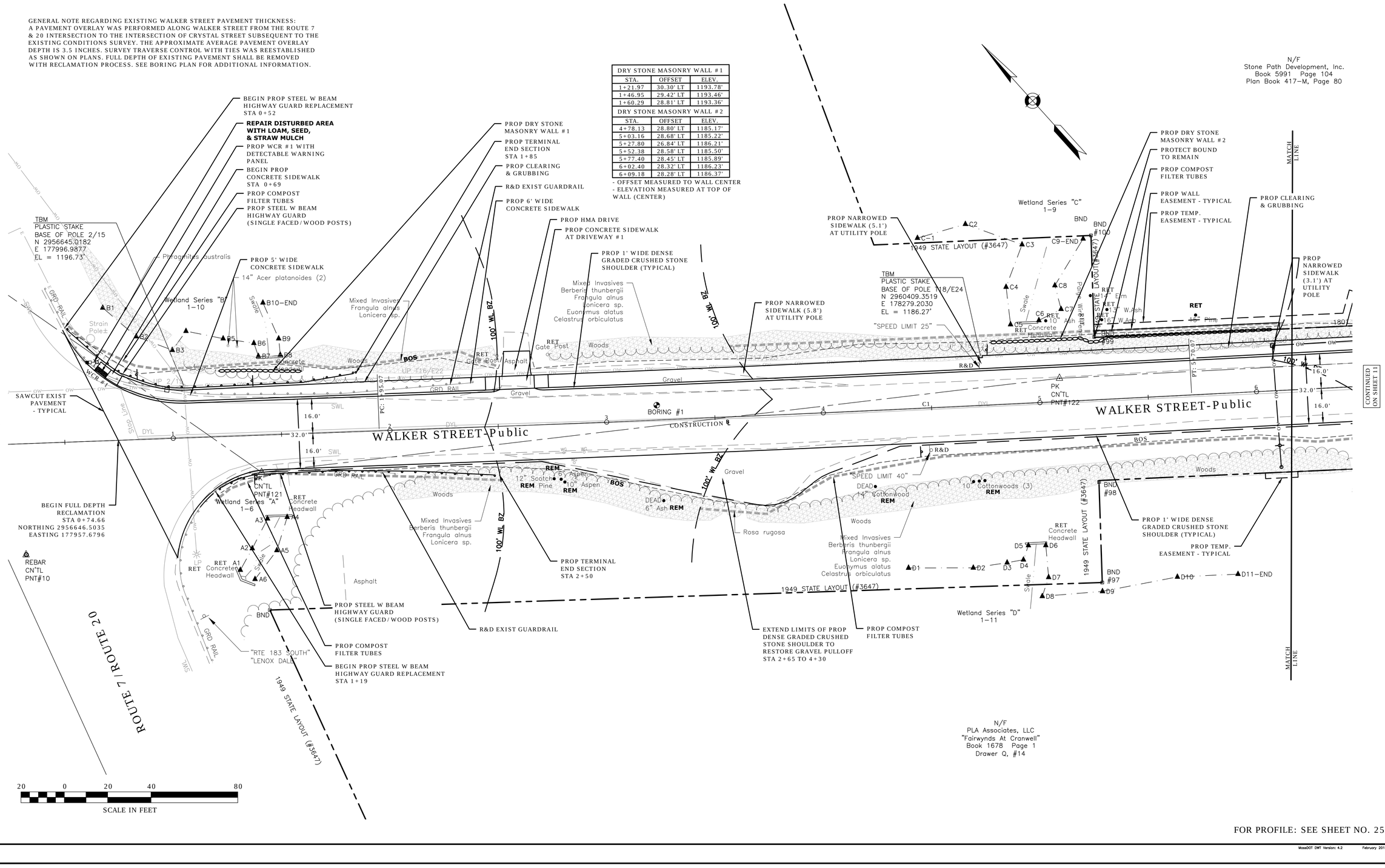
CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

GENERAL NOTE REGARDING EXISTING WALKER STREET PAVEMENT THICKNESS:
A PAVEMENT OVERLAY WAS PERFORMED ALONG WALKER STREET FROM THE ROUTE 7 & 20 INTERSECTION TO THE INTERSECTION OF CRYSTAL STREET SUBSEQUENT TO THE EXISTING CONDITIONS SURVEY. THE APPROXIMATE AVERAGE PAVEMENT OVERLAY DEPTH IS 3.5 INCHES. SURVEY TRAVERSE CONTROL WITH TIES WAS REESTABLISHED AS SHOWN ON PLANS. FULL DEPTH OF EXISTING PAVEMENT SHALL BE REMOVED WITH RECLAMATION PROCESS. SEE BORING PLAN FOR ADDITIONAL INFORMATION.

DRY STONE MASONRY WALL #1		
STA.	OFFSET	ELEV.
1+21.97	30.30' LT	1193.78'
1+46.95	29.42' LT	1193.46'
1+60.29	28.81' LT	1193.36'
DRY STONE MASONRY WALL #2		
STA.	OFFSET	ELEV.
4+78.13	28.80' LT	1185.17'
5+03.16	28.68' LT	1185.22'
5+27.80	26.84' LT	1186.21'
5+52.38	28.58' LT	1185.50'
5+77.40	28.45' LT	1185.89'
6+02.40	28.32' LT	1186.23'
6+09.18	28.28' LT	1186.37'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)



DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 42

UTILITIES

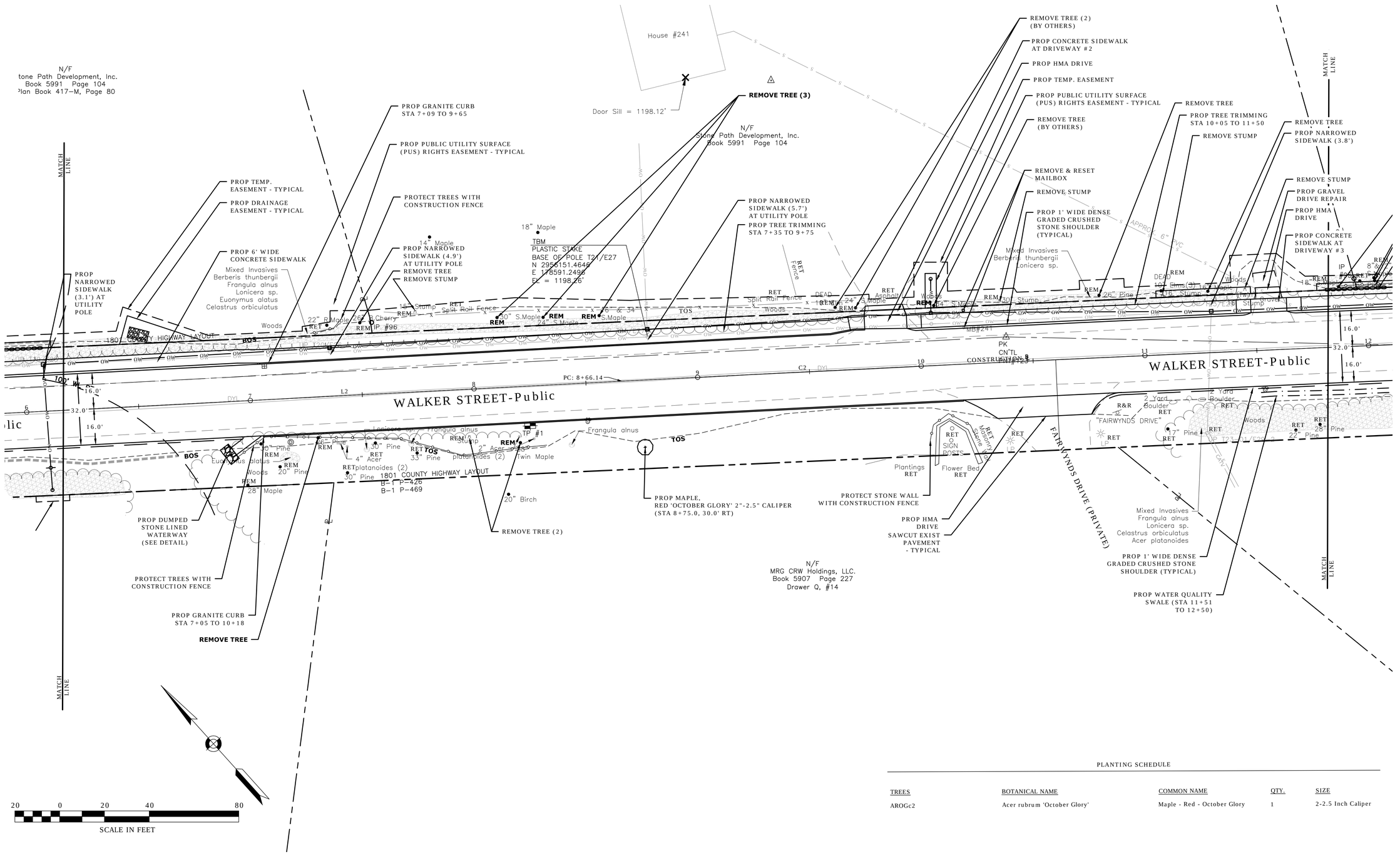
SEE SHEET NO. 58

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
AROGc2	Acer rubrum 'October Glory'	Maple - Red - October Glory	1	2-2.5 Inch Caliper

FOR PROFILE: SEE SHEET NO. 26

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 43

UTILITIES

SEE SHEET NO. 59

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DRY STONE MASONRY WALL #3		
STA.	OFFSET	ELEV.
11+80.95	25.71' LT	1192.28'
12+05.94	25.64' LT	1191.48'
12+09.69	25.63' LT	1191.36'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)

PROP SPRUCE,COLORADO GREEN 5'-6' (16)*
STA 16+49.7, 28.0' LT; STA 16+55.7, 28.0' LT;
STA 16+61.7, 28.0' LT; STA 16+67.7, 28.0' LT;
STA 16+73.7, 28.0' LT; STA 16+79.7, 28.0' LT;
STA 16+85.7, 28.0' LT; STA 16+91.7, 28.0' LT;
STA 16+97.7, 28.6' LT; STA 17+03.6, 29.1' LT;
STA 17+09.6, 29.7' LT; STA 17+15.6, 30.2' LT
STA 17+21.6, 30.8' LT; STA 17+27.5, 31.3' LT;
STA 17+33.5, 31.9' LT; STA 17+33.5, 37.9' LT

MATCH LINE

N/F
William C. Colvin and
Melissa A. Clement
Book 5714 Page 184

House #257

Door Sill = 1186.95'

N/F
Thomas F. Flynn, III
and Anne K. Flynn
Book 1395 Page 265

PROP TEMP. EASEMENT - TYPICAL

PROP 1' WIDE DENSE GRADED CRUSHED STONE SHOULDER (TYPICAL)

PROTECT TREES WITH CONSTRUCTION FENCE

PROP NARROWED SIDEWALK (3.0')

PROP CONCRETE SIDEWALK AT DRIVEWAY #4

PROP HMA DRIVE

REMOVE TREE (2)

REMOVE TREE (2)

PROTECT TREES WITH CONSTRUCTION FENCE

PROP DRY STONE MASONRY WALL #3

PROP TREE TRIMMING STA 11+65 TO 12+75

REMOVE STUMP

PROP NARROWED SIDEWALK (3.9') AT UTILITY POLE

TBM
PLASTIC STAKE
BASE OF POLE T25/E3
N 2955831.7641
E 178980.6394
EL = 1186.66'

PROP CONCRETE SIDEWALK AT DRIVEWAY #3

Lonicera sp.

Berberis thunbergii

Lonicera sp.

PROP TREE TRIMMING

PROP NARROWED SIDEWALK (3' MIN.) AROUND UTILITY POLE STA 15+08 TO 15+29

House #263

N/F
Deena Lynn Gilbert
Book 4989 Page 74

Door Sill = 181.33'

PROP 6' WIDE CONCRETE SIDEWALK

REMOVE & RESET MAILBOX

PROP CONCRETE SIDEWALK AT DRIVEWAY #5

PROP GRAVEL DRIVE REPAIR

PROP HMA DRIVE

N/F
Terry P. Weaver
Book 5850 Page 240
Drawer B, #90

House #1

PROP NARROWED SIDEWALK (3.4')

PROP CLEARING & GRUBBING OF TREE (4)

PROTECT TREES WITH CONSTRUCTION FENCE

PROP SPRUCE, COLORADO GREEN 5'-6' (16)*

PROP CLEARING & GRUBBING

SMH #3837
RIM ELEV. = 1167.93'
(E)8"PVC(SW)Inv.=1162.13'
(S)8"AC(NE)Inv.=1162.10'
(W)8"PVC(SE)Inv.=1165.03'
(N)8"PVC(NW)Inv.=±1164.93'

"STOP"

"GALWAY COURT"

1981 TOWN WAY
B-1044 P-1211

RET Hedge Row

RET Asphalt Curb

GALWAY COURT
Public

Lonicera sp.

Woods

Gravel Apron

Asphalt Apron

MB#263

WCP#2

CNTL

16.0'#125

Stop Line

CONTINUED ON SHEET 13

MATCH LINE

WALKER STREET-Public

1801 COUNTY HIGHWAY LAYOUT

PC: 15+72.24

PT: 12+66.22

CONSTRUCTION

BORING #2

PK

CNTL

PNT#124

CONTINUED ON SHEET 11

Public

16.0'

32.0'

16.0'

BOS

Woods

24" Maple

10" Cherry

40" S.Maple

28" Pine

22" Pine

40" Pine

REM

REMOVE & RESET MAILBOX; RELOCATE PLANTINGS (BY OTHERS)

PROP 1' WIDE DENSE GRADED CRUSHED STONE N/F SHOULDER (TYPICAL)

PLA Associates, LLC
"Fairwynds At Cranwell"
Book 1678 Page 1
Drawer Q, #14

Mixed Invasives
Frangula alnus
Lonicera sp.
Celastrus orbiculatus
Acer platanoides

REMOVE TREE (2)

PROP VEGETATED SWALE (STA 12+50 TO 15+81)

PROP VEGETATED SWALE (STA 15+85 TO 18+12)

Rosa rugosa

Lonicera sp.

16" N.Maple

28" W.Pine

34" W.Pine

12" S.Maple

10" W.Ash

20" W.Ash

10" W.Ash

12"&14 W.Ash

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14

20 0 20 40 80
SCALE IN FEET

PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
PPh5	Picea pungens	Spruce - Colorado Green	16	5-6 Feet

FOR PROFILE: SEE SHEET NO. 27

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/RDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 444

UTILITIES

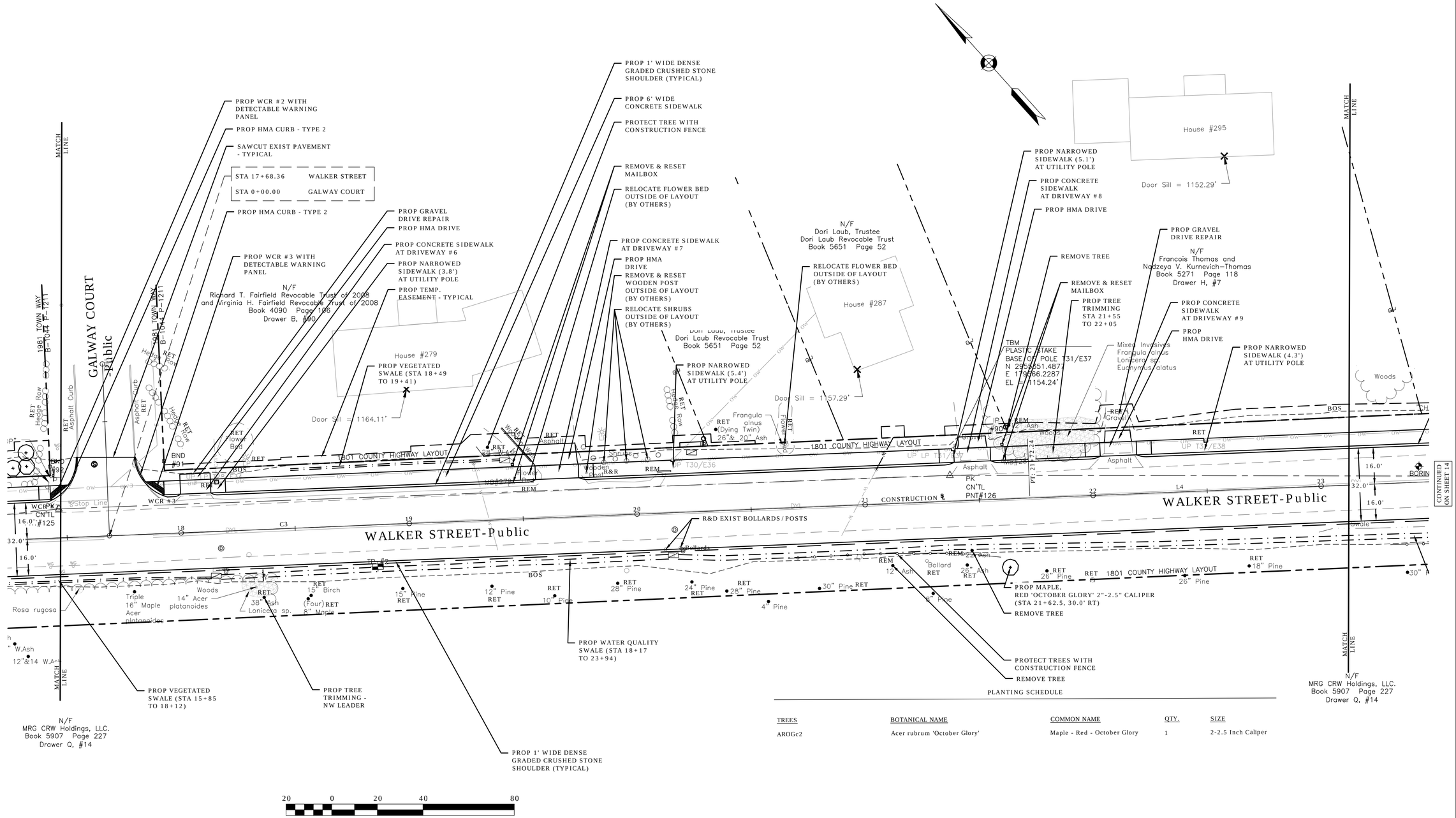
SEE SHEET NO. 60

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
AROGc2	Acer rubrum 'October Glory'	Maple - Red - October Glory	1	2-2.5 Inch Caliper

FOR PROFILE: SEE SHEET NO. 28

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 45

UTILITIES

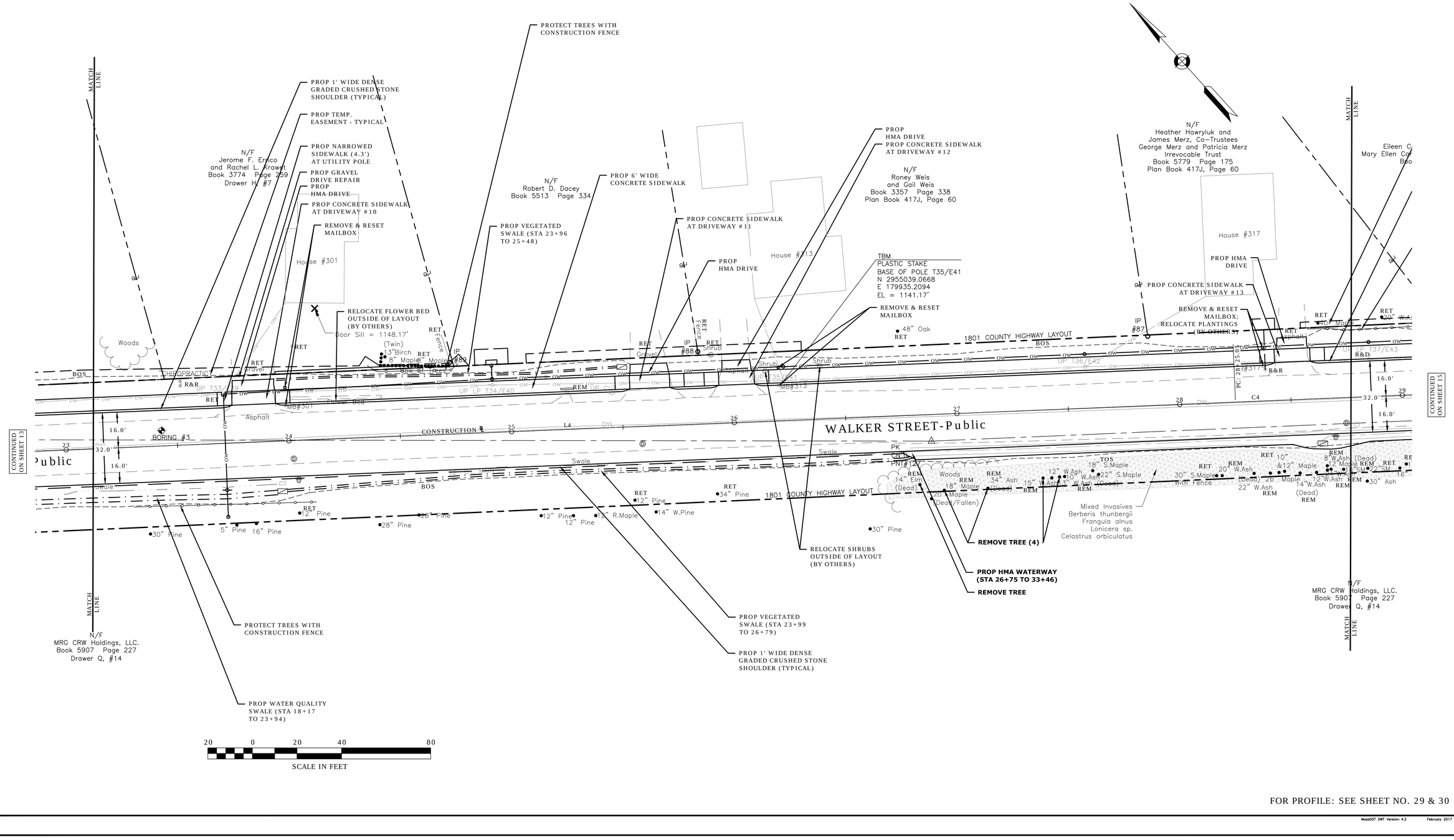
SEE SHEET NO. 61

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 29 & 30

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD
STA 32+62.7 TO 39+97.6 (RT)

ALIGNMENT & GRADING
SEE SHEET NO. 46

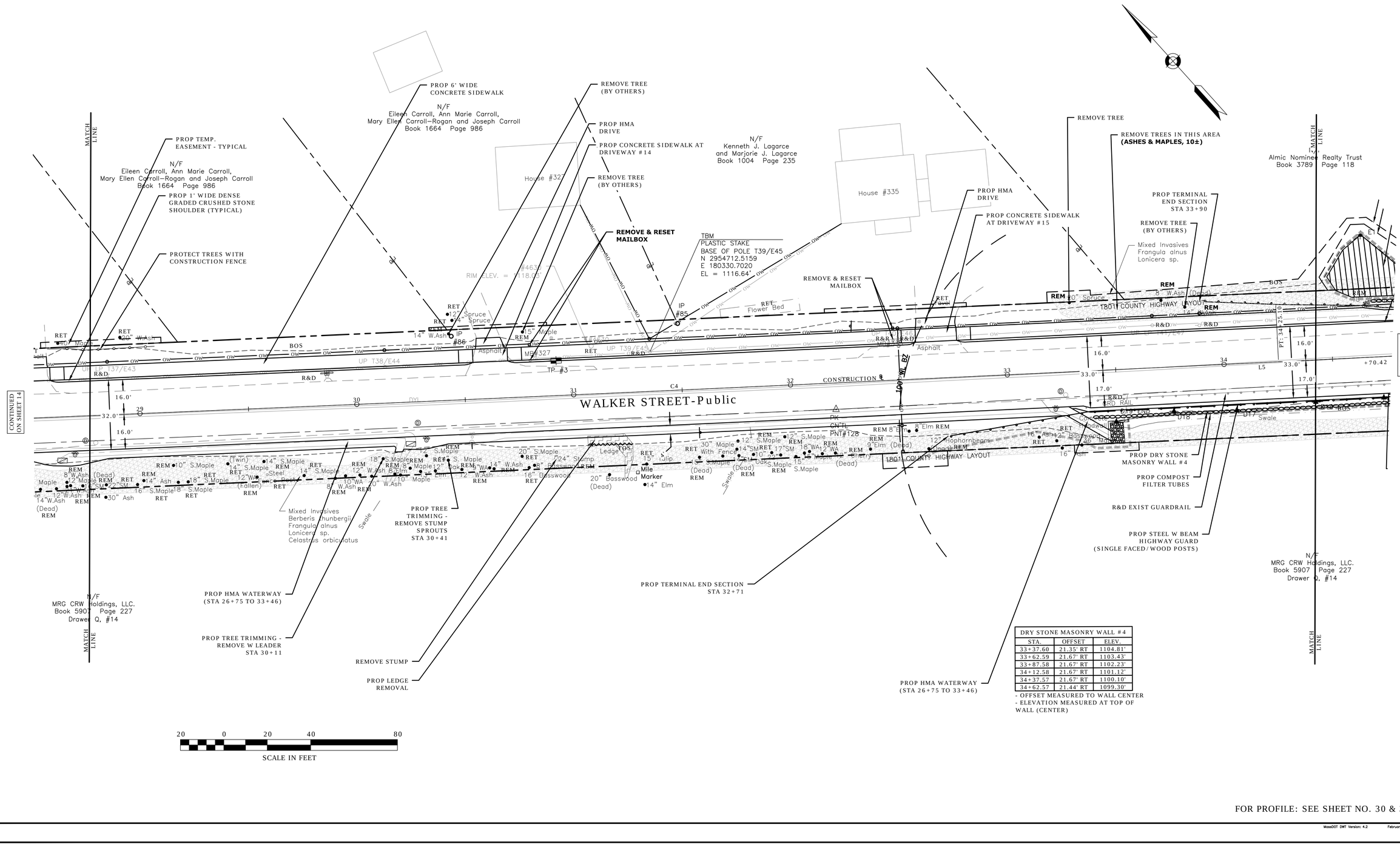
UTILITIES
SEE SHEET NO. 62

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



DRY STONE MASONRY WALL #4		
STA.	OFFSET	ELEV.
33+37.60	21.35' RT	1104.81'
33+62.59	21.67' RT	1103.43'
33+87.58	21.67' RT	1102.23'
34+12.58	21.67' RT	1101.12'
34+37.57	21.67' RT	1100.10'
34+62.57	21.44' RT	1099.30'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)

FOR PROFILE: SEE SHEET NO. 30 & 31

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD
STA 32+62.7 TO 39+97.6 (RT)
STA 34+69.2 TO 39+64.1 (LT)

ALIGNMENT & GRADING
SEE SHEET NO. 47

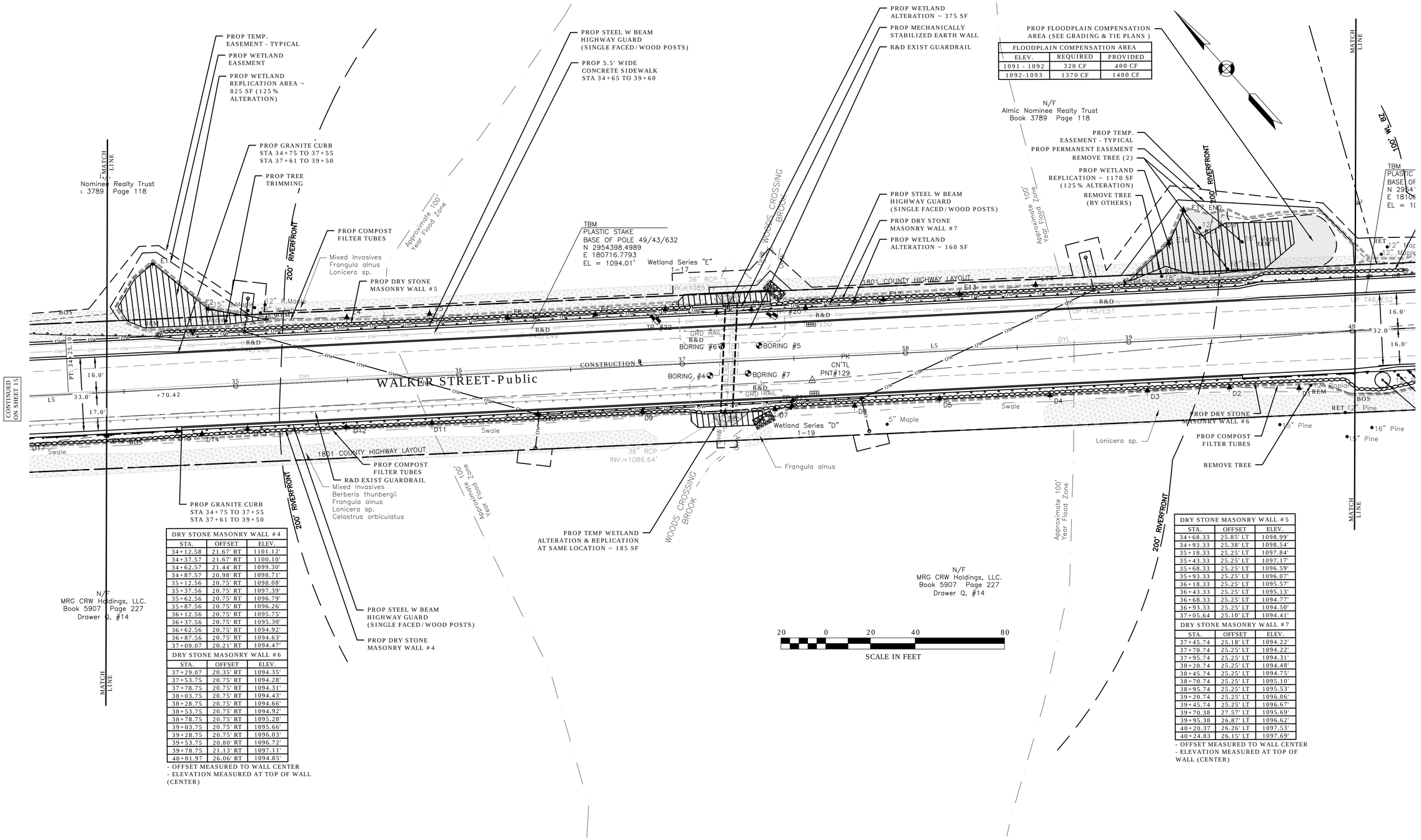
UTILITIES
SEE SHEET NO. 63

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 30 & 31

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 48

UTILITIES

SEE SHEET NO. 64

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

14-Nov-2017

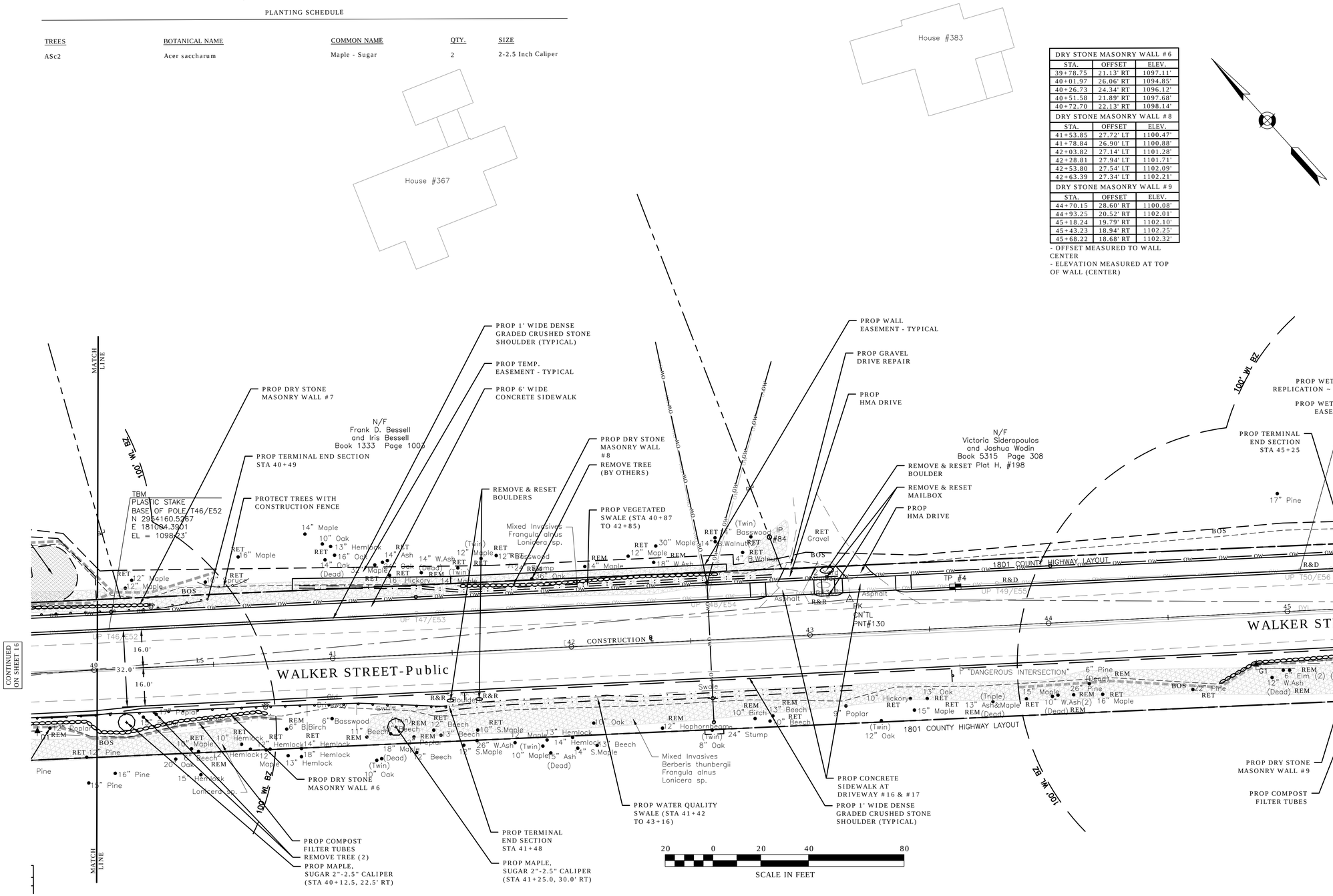
E2148D10 - SHEET LAYOUTS.DWG

PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
ASc2	Acer saccharum	Maple - Sugar	2	2-2.5 Inch Caliper

DRY STONE MASONRY WALL #6		
STA.	OFFSET	ELEV.
39+78.75	21.13' RT	1097.11'
40+01.97	26.06' RT	1094.85'
40+26.73	24.34' RT	1096.12'
40+51.58	21.89' RT	1097.68'
40+72.70	22.13' RT	1098.14'
DRY STONE MASONRY WALL #8		
STA.	OFFSET	ELEV.
41+53.85	27.72' LT	1100.47'
41+78.84	26.90' LT	1100.88'
42+03.82	27.14' LT	1101.28'
42+28.81	27.94' LT	1101.71'
42+53.80	27.54' LT	1102.09'
42+63.39	27.34' LT	1102.21'
DRY STONE MASONRY WALL #9		
STA.	OFFSET	ELEV.
44+70.15	28.60' RT	1100.08'
44+93.25	20.52' RT	1102.01'
45+18.24	19.79' RT	1102.10'
45+43.23	18.94' RT	1102.25'
45+68.22	18.68' RT	1102.32'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)



FOR PROFILE: SEE SHEET NO. 32 & 33

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD
STA 45+96.4 TO 47+73.7 (LT)

ALIGNMENT & GRADING
SEE SHEET NO. 49

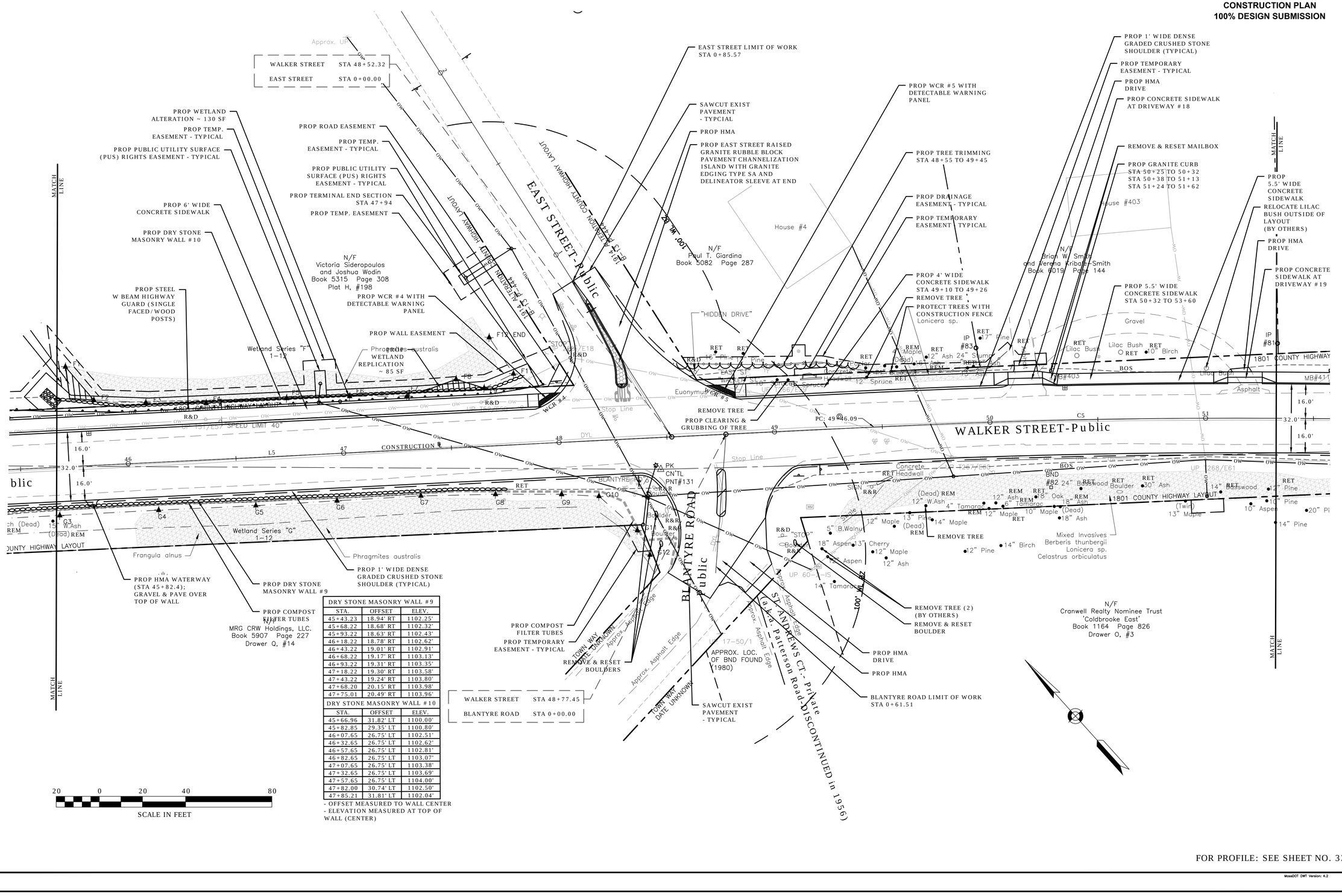
UTILITIES
SEE SHEET NO. 65

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 14-Nov-2017



DRY STONE MASONRY WALL #9		
STA.	OFFSET	ELEV.
45+43.23	18.94' RT	1102.25'
45+68.22	18.68' RT	1102.32'
45+93.22	18.63' RT	1102.43'
46+18.22	18.78' RT	1102.62'
46+43.22	19.01' RT	1102.91'
46+68.22	19.17' RT	1103.13'
46+93.22	19.31' RT	1103.35'
47+18.22	19.30' RT	1103.58'
47+43.22	19.24' RT	1103.80'
47+68.20	20.15' RT	1103.98'
47+75.01	20.49' RT	1103.96'

DRY STONE MASONRY WALL #10		
STA.	OFFSET	ELEV.
45+66.96	31.82' LT	1100.00'
45+82.85	29.35' LT	1100.80'
46+07.65	26.75' LT	1102.51'
46+32.65	26.75' LT	1102.62'
46+57.65	26.75' LT	1102.81'
46+82.65	26.75' LT	1103.07'
47+07.65	26.75' LT	1103.38'
47+32.65	26.75' LT	1103.69'
47+57.65	26.75' LT	1104.00'
47+82.00	30.74' LT	1102.50'
47+85.21	31.81' LT	1102.04'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)

FOR PROFILE: SEE SHEET NO. 33 & 34

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 50

UTILITIES

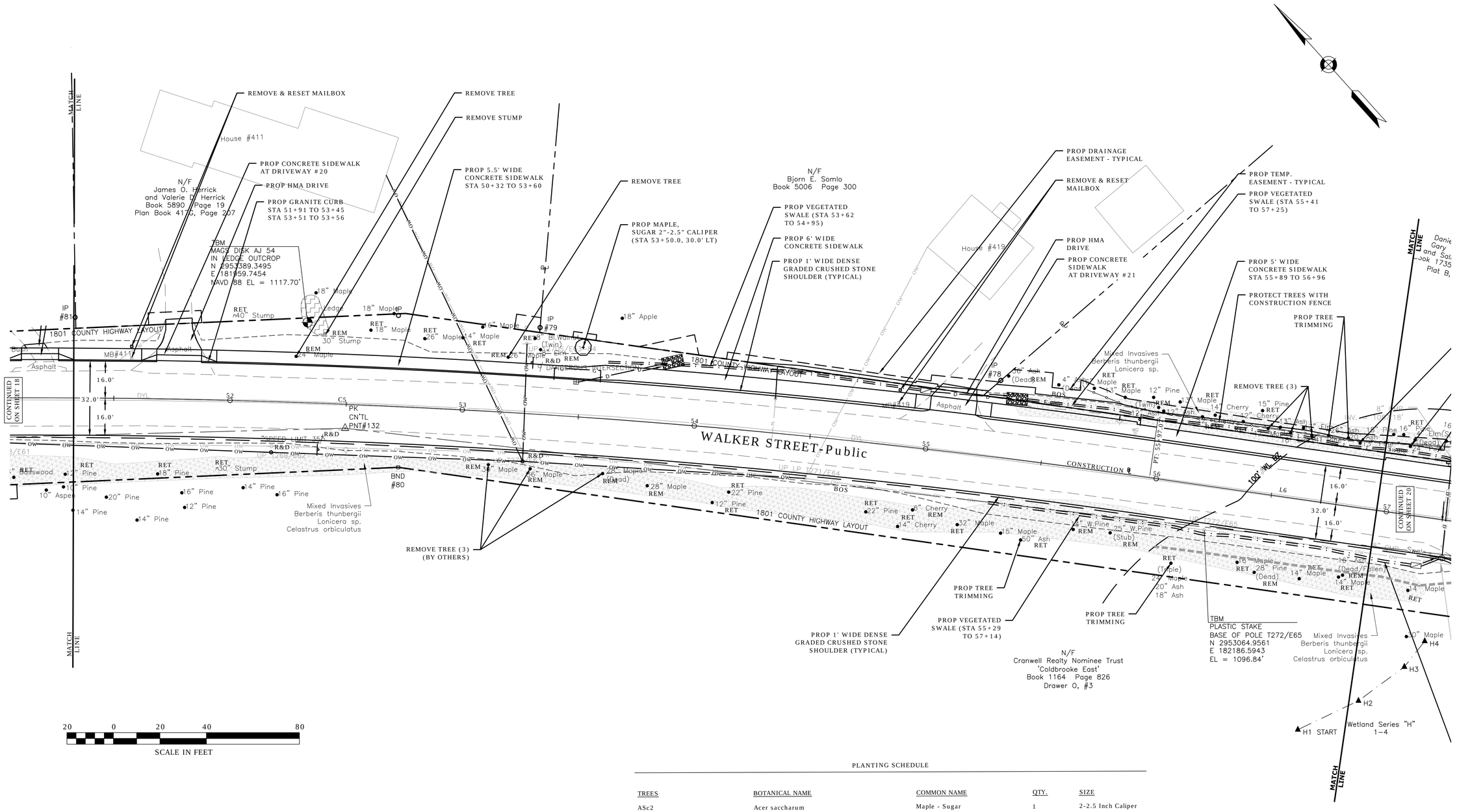
SEE SHEET NO. 66

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
ASc2	Acer saccharum	Maple - Sugar	1	2-2.5 Inch Caliper

FOR PROFILE: SEE SHEET NO. 34 & 35

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

STA 60+37.5 TO 63+27.5 (RT)

ALIGNMENT & GRADING

SEE SHEET NO. 51

UTILITIES

SEE SHEET NO. 67

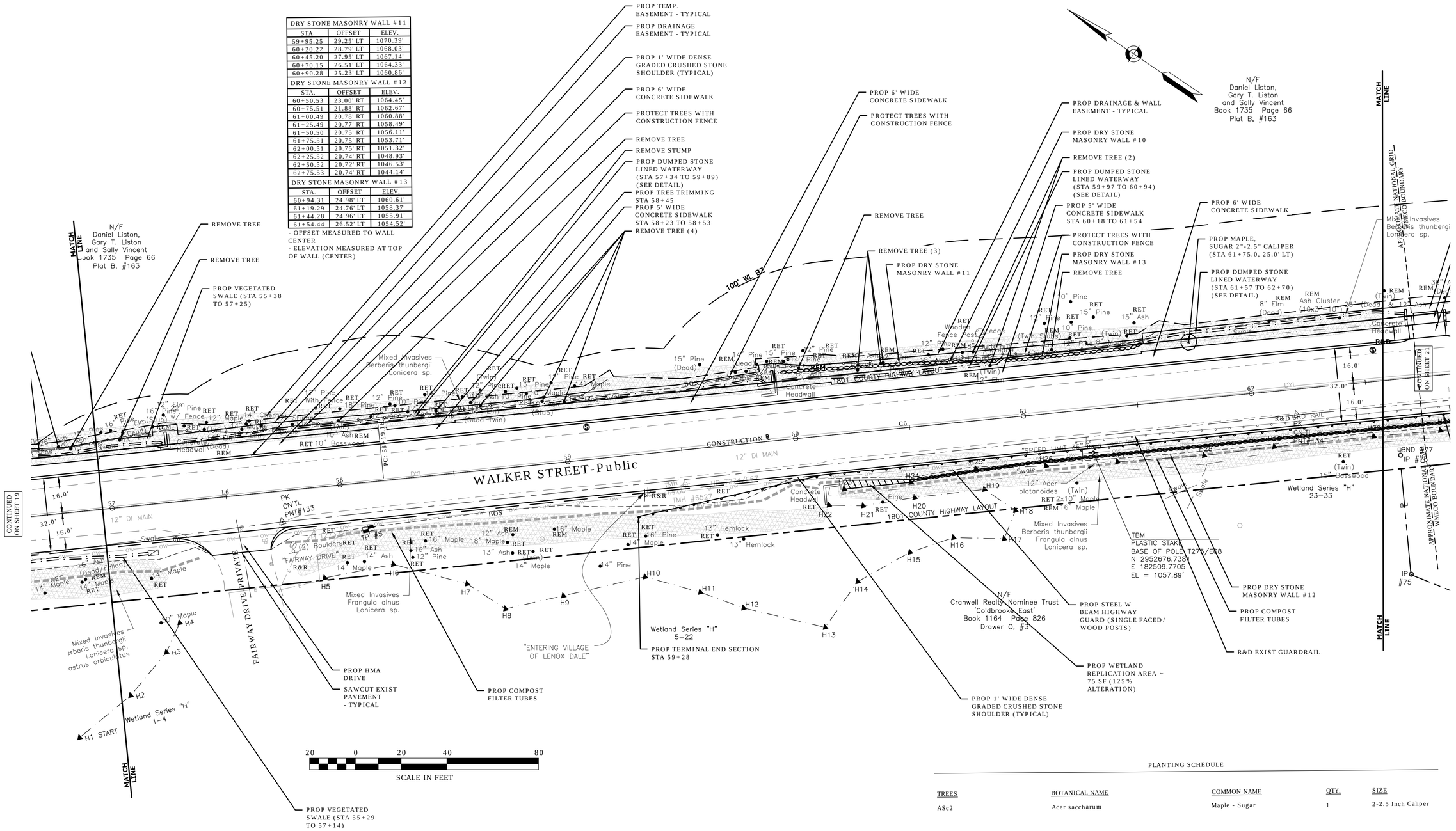
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

DRY STONE MASONRY WALL #11		
STA.	OFFSET	ELEV.
59+95.25	29.25' LT	1070.39'
60+20.22	28.79' LT	1068.03'
60+45.20	27.95' LT	1067.14'
60+70.15	26.51' LT	1064.33'
60+90.28	25.23' LT	1060.86'
DRY STONE MASONRY WALL #12		
STA.	OFFSET	ELEV.
60+50.53	23.00' RT	1064.45'
60+75.51	21.88' RT	1062.67'
61+00.49	20.78' RT	1060.88'
61+25.49	20.77' RT	1058.49'
61+50.50	20.75' RT	1056.11'
61+75.51	20.75' RT	1053.71'
62+00.51	20.75' RT	1051.32'
62+25.52	20.74' RT	1048.93'
62+50.52	20.72' RT	1046.53'
62+75.53	20.74' RT	1044.14'
DRY STONE MASONRY WALL #13		
STA.	OFFSET	ELEV.
60+94.31	24.98' LT	1060.61'
61+19.29	24.76' LT	1058.37'
61+44.28	24.96' LT	1055.91'
61+54.44	26.52' LT	1054.52'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
ASc2	Acer saccharum	Maple - Sugar	1	2-2.5 Inch Caliper

FOR PROFILE: SEE SHEET NO. 35 & 36

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017

STEEL W BEAM HIGHWAY GUARD

STA 60+37.5 TO 63+27.5 (RT)

ALIGNMENT & GRADING

SEE SHEET NO. 52

UTILITIES

SEE SHEET NO. 68

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	199
PROJECT FILE NO.	606462		

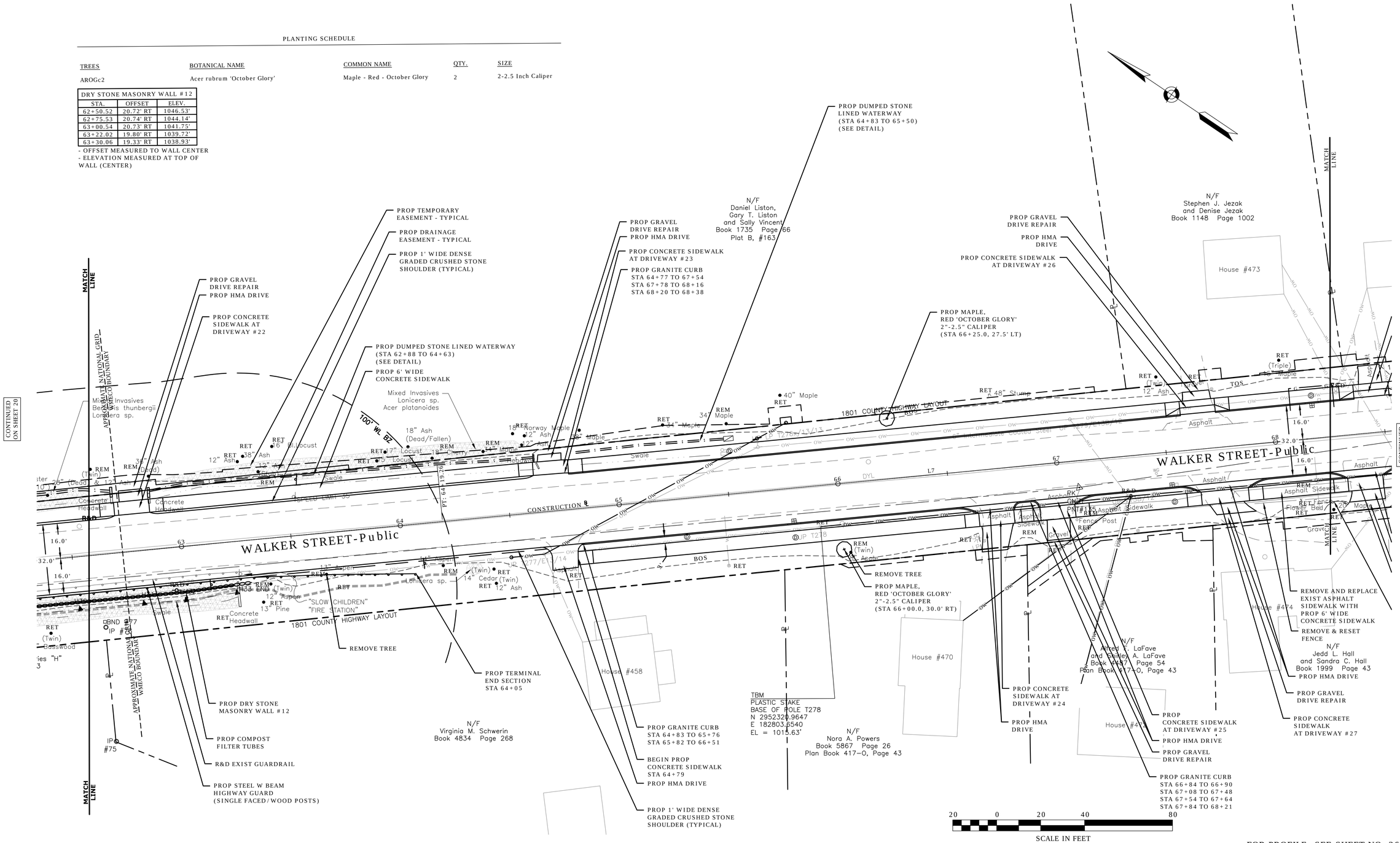
CONSTRUCTION PLAN
100% DESIGN SUBMISSION

PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
AROGc2	Acer rubrum 'October Glory'	Maple - Red - October Glory	2	2-2.5 Inch Caliper

DRY STONE MASONRY WALL #12		
STA.	OFFSET	ELEV.
62+50.52	20.72' RT	1046.53'
62+75.53	20.74' RT	1044.14'
63+00.54	20.73' RT	1041.75'
63+22.02	19.80' RT	1039.72'
63+30.06	19.33' RT	1038.93'

- OFFSET MEASURED TO WALL CENTER
- ELEVATION MEASURED AT TOP OF WALL (CENTER)



FOR PROFILE: SEE SHEET NO. 36 & 37

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 53

UTILITIES

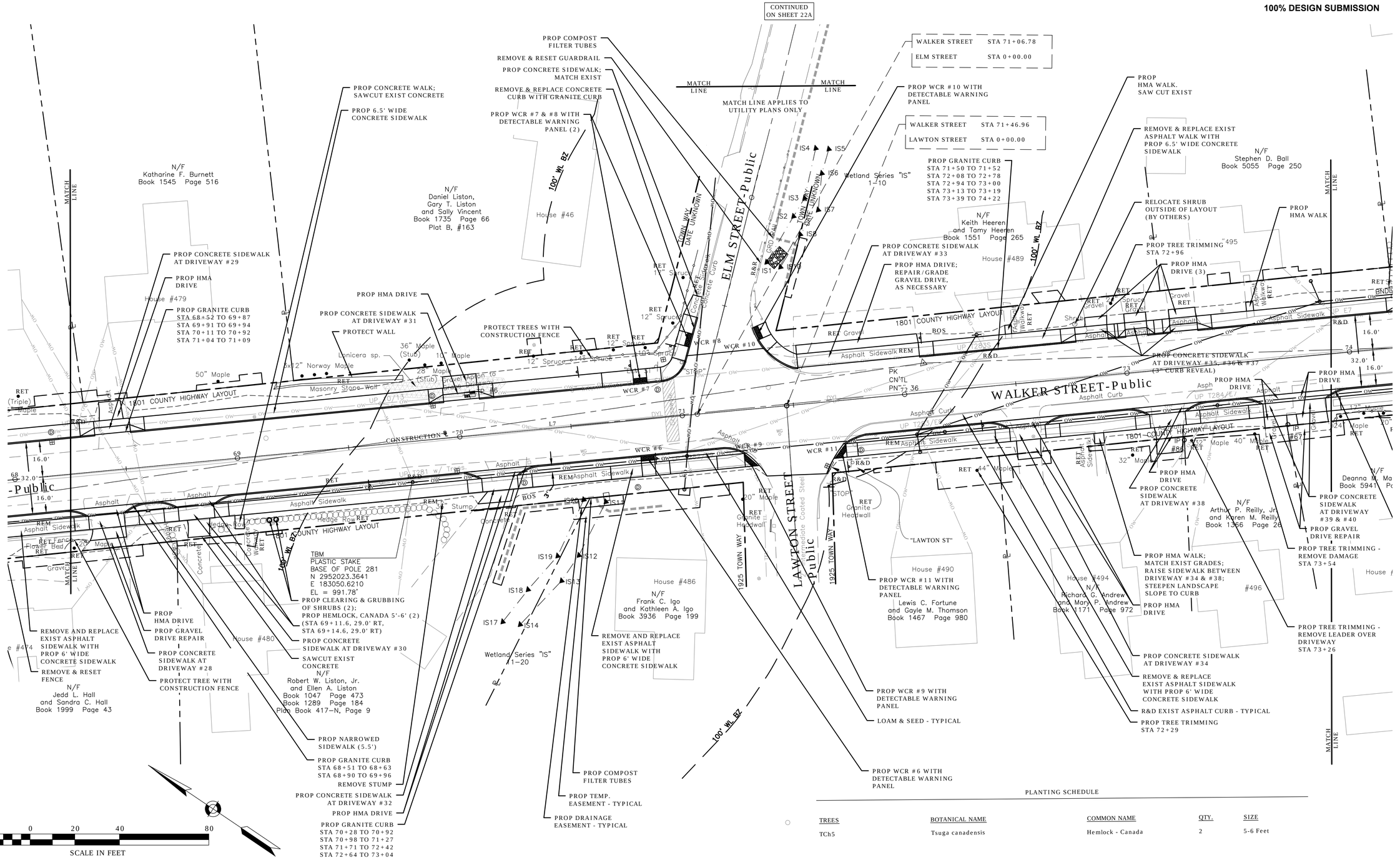
SEE SHEET NO. 69

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
TCh5	Tsuga canadensis	Hemlock - Canada	2	5-6 Feet

FOR PROFILE: SEE SHEET NO. 35 & 36

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 54

UTILITIES

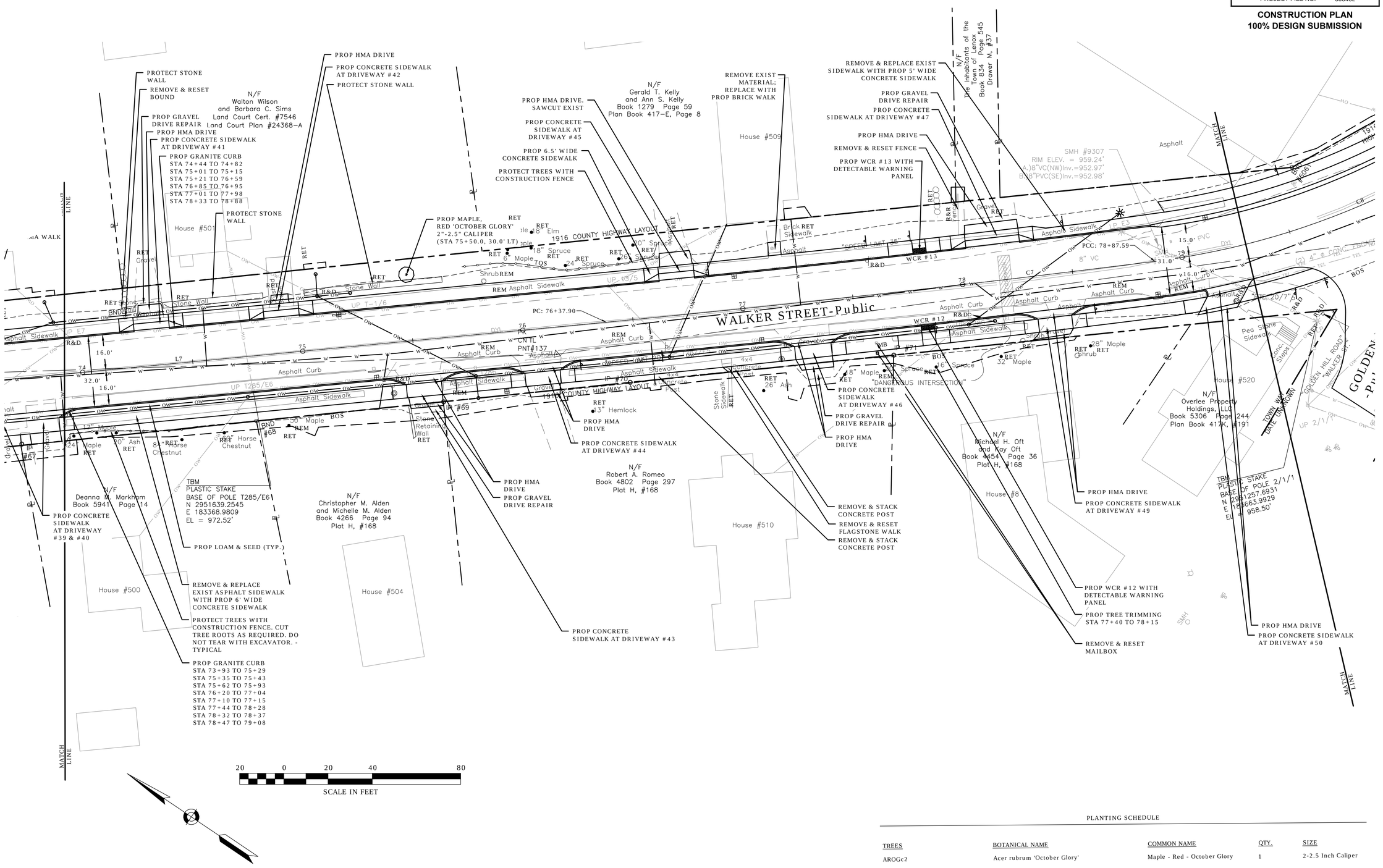
SEE SHEET NO. 70

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



PLANTING SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	QTY.	SIZE
AROGc2	Acer rubrum 'October Glory'	Maple - Red - October Glory	1	2-2.5 Inch Caliper

FOR PROFILE: SEE SHEET NO. 38 & 39

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

STEEL W BEAM HIGHWAY GUARD

NONE

ALIGNMENT & GRADING

SEE SHEET NO. 55

UTILITIES

SEE SHEET NO. 71

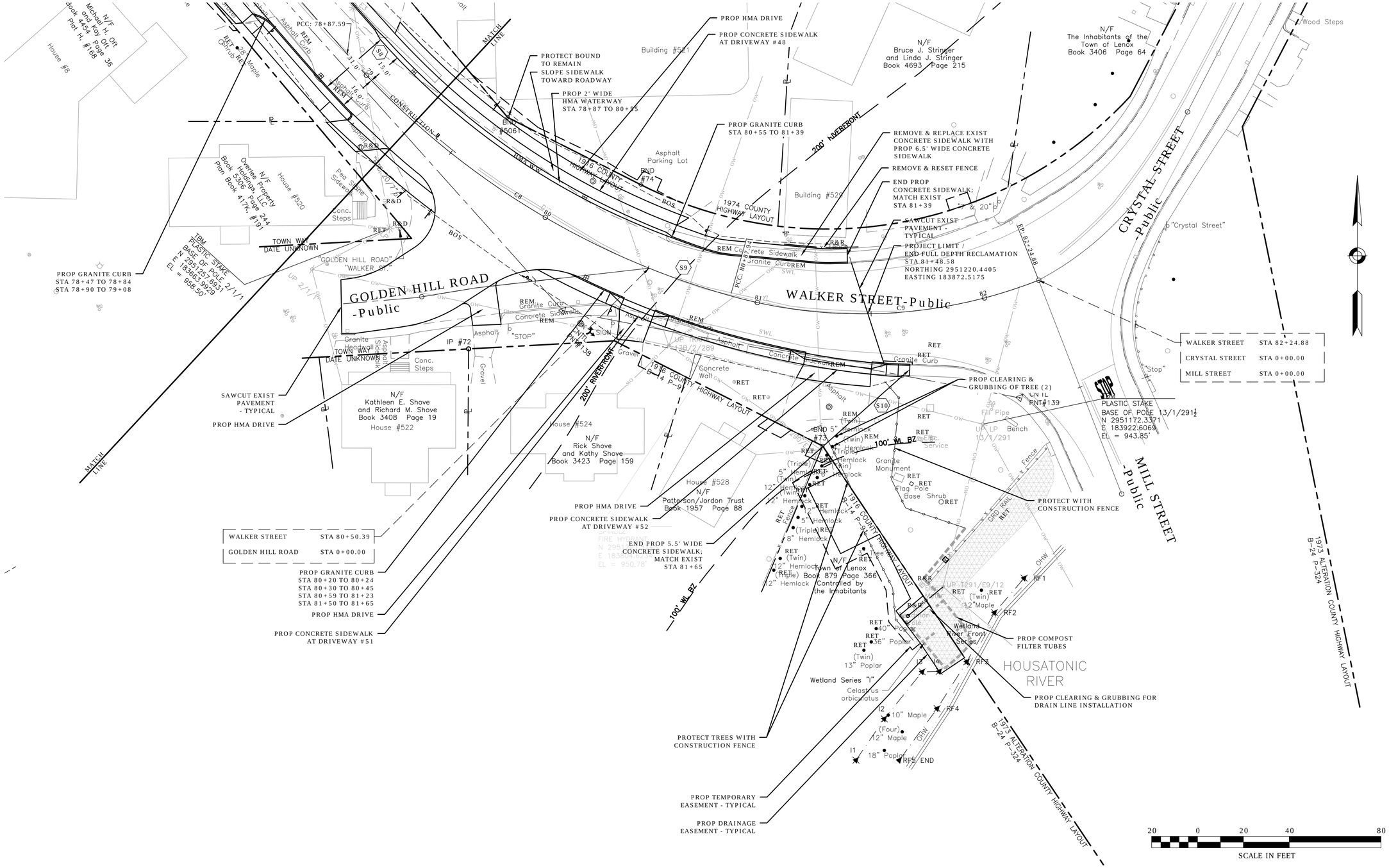
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	199
PROJECT FILE NO.	606462		

CONSTRUCTION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

CONTINUED ON SHEET 23



FOR PROFILE: SEE SHEET NO. 39

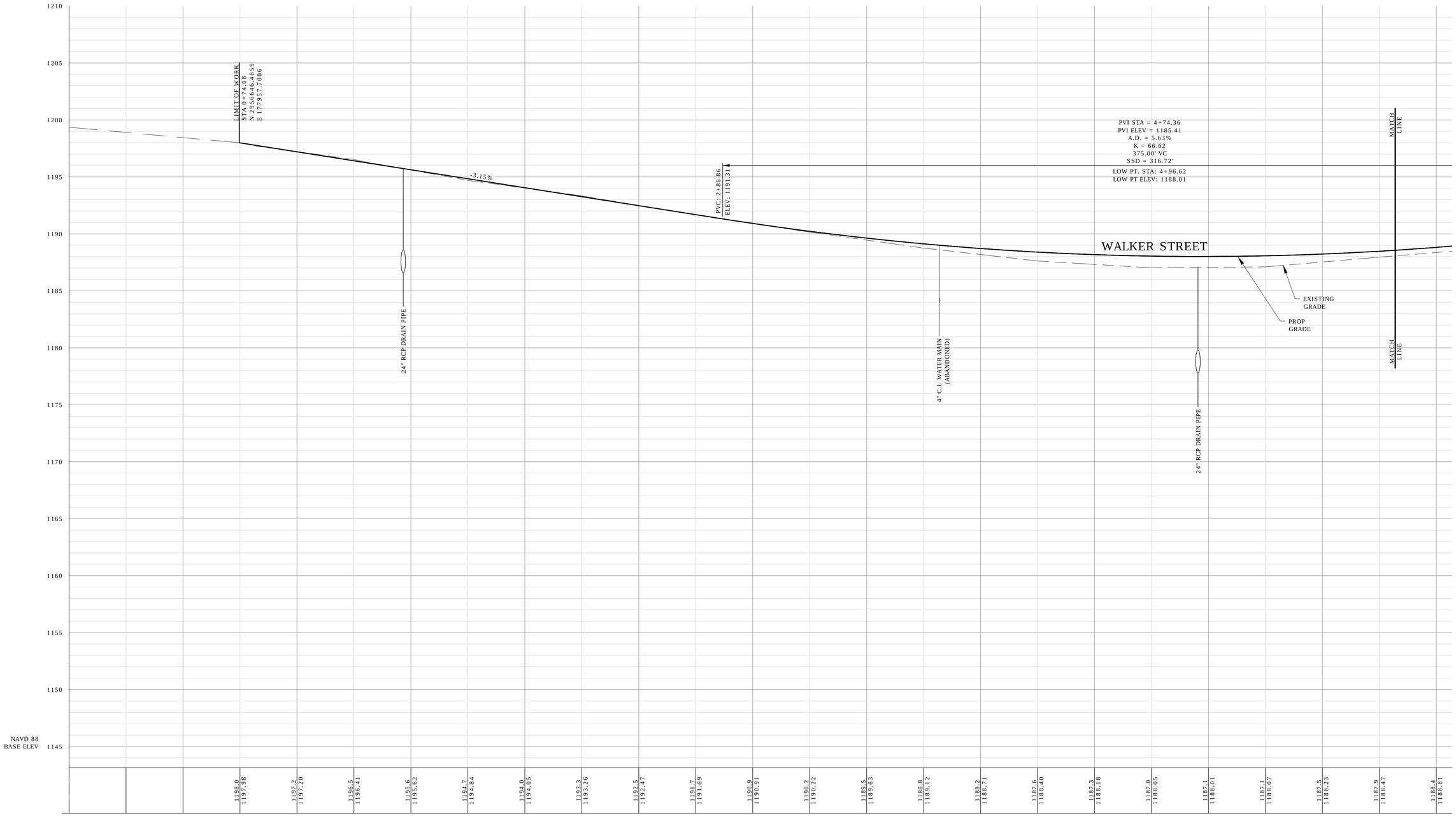
DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



STA 0+00.00 WALKER STREET
STA 0+00.00 ROUTE 7/ROUTE 20

TBM
PLASTIC STAKE
BASE OF POLE 2/15
N 2956645.0182
E 177996.9877
EL = 1196.73'
STA 1+05.75, 24.09' LT

TBM
PLASTIC STAKE
BASE OF POLE 18/24
N 2960409.3519
E 178279.2030
EL = 1186.27'
STA 4+73.70, 22.86' LT

CONTINUED ON SHEET 26

FOR CONSTRUCTION PLAN SEE SHEET #10

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

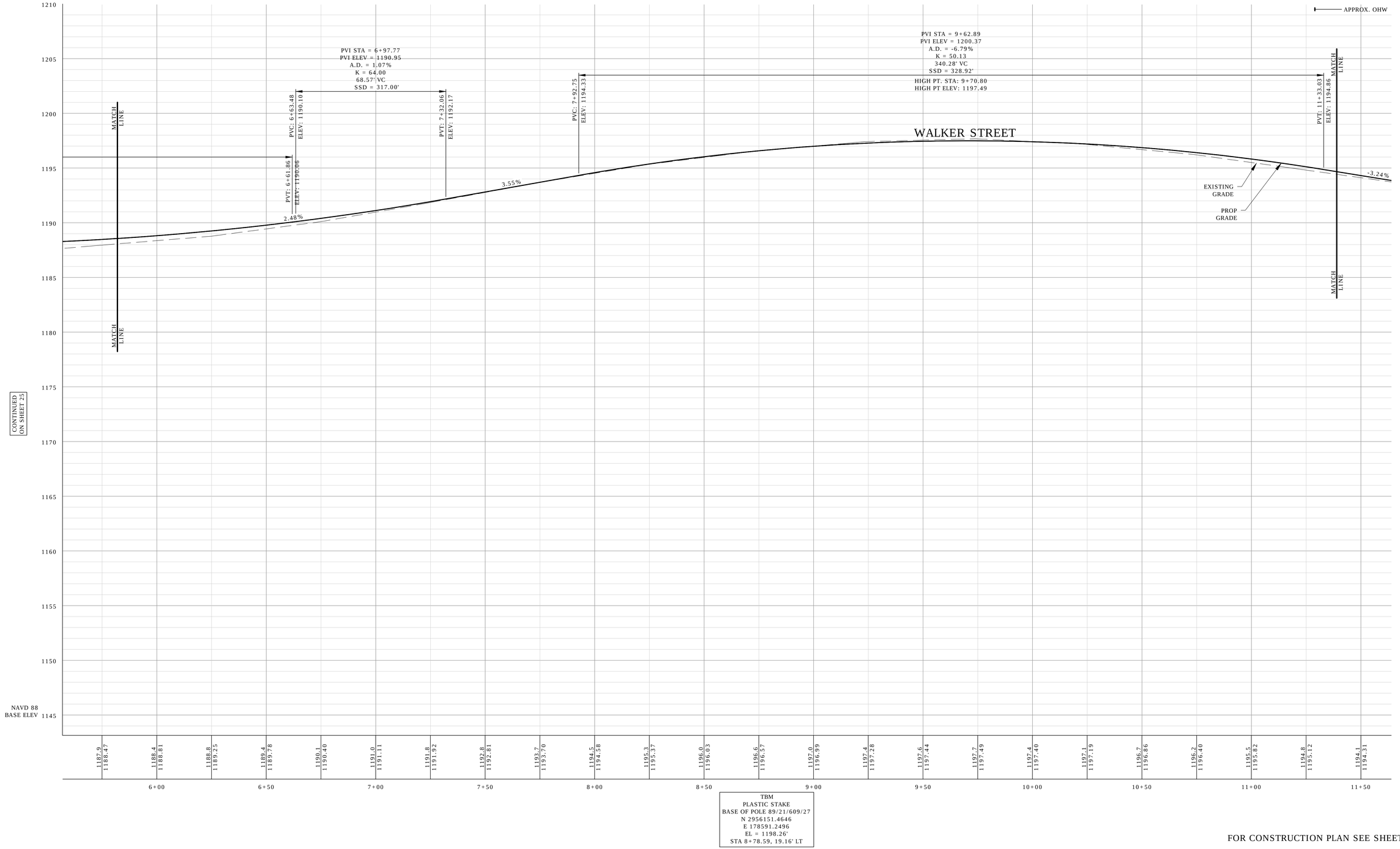
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



CONTINUED ON SHEET 25

CONTINUED ON SHEET 27

TBM
PLASTIC STAKE
BASE OF POLE 89/21/609/27
N 2956151.4646
E 178591.2496
EL = 1198.26'
STA 8+78.59, 19.16' LT

FOR CONSTRUCTION PLAN SEE SHEET #11

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

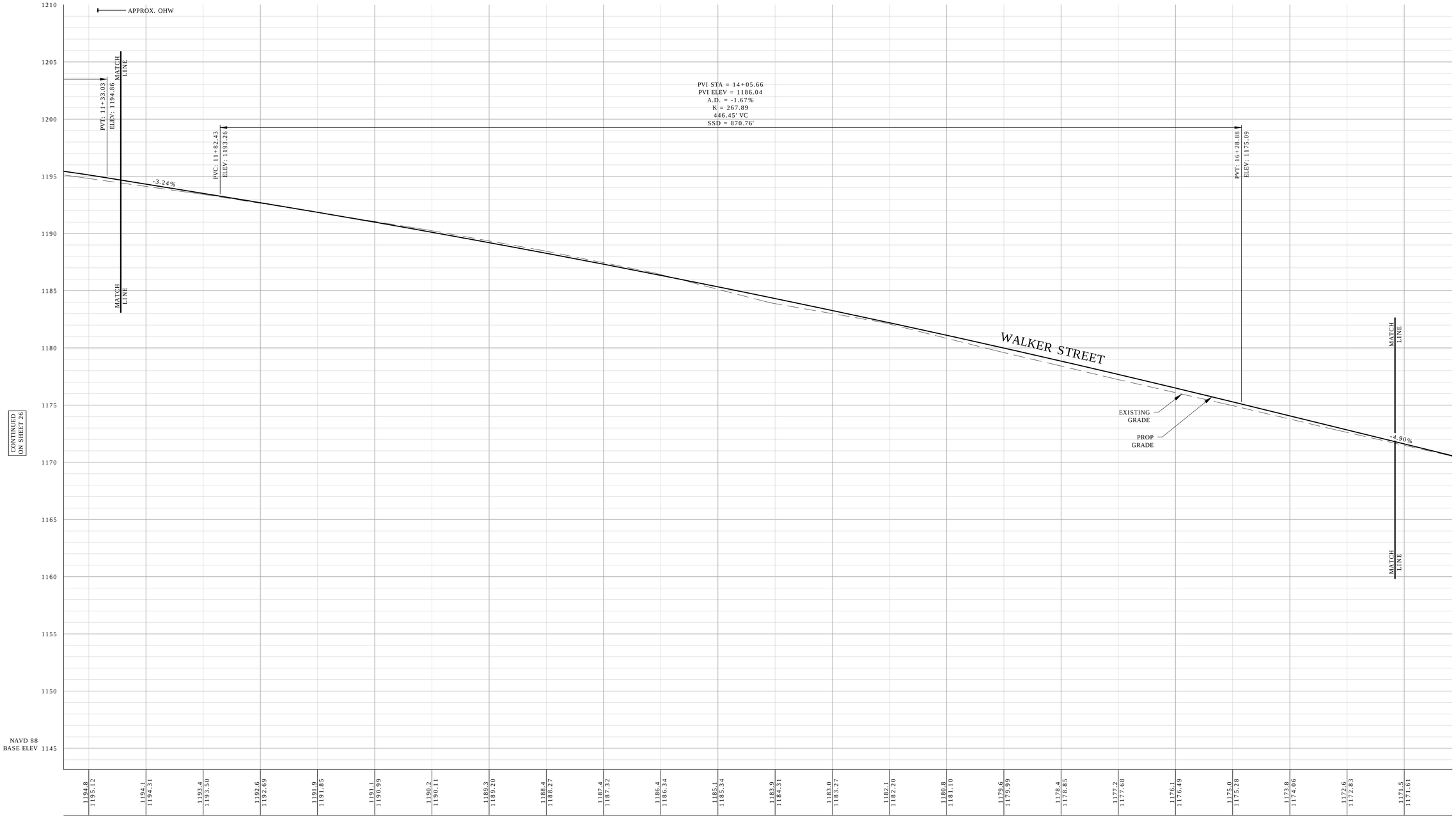
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



TBM
PLASTIC STAKE
BASE OF POLE 31/63/89/25
N 2955831.7641
E 178980.6394
EL = 1186.66'
STA 13+82.21, 19.24' LT

FOR CONSTRUCTION PLAN SEE SHEET #12

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

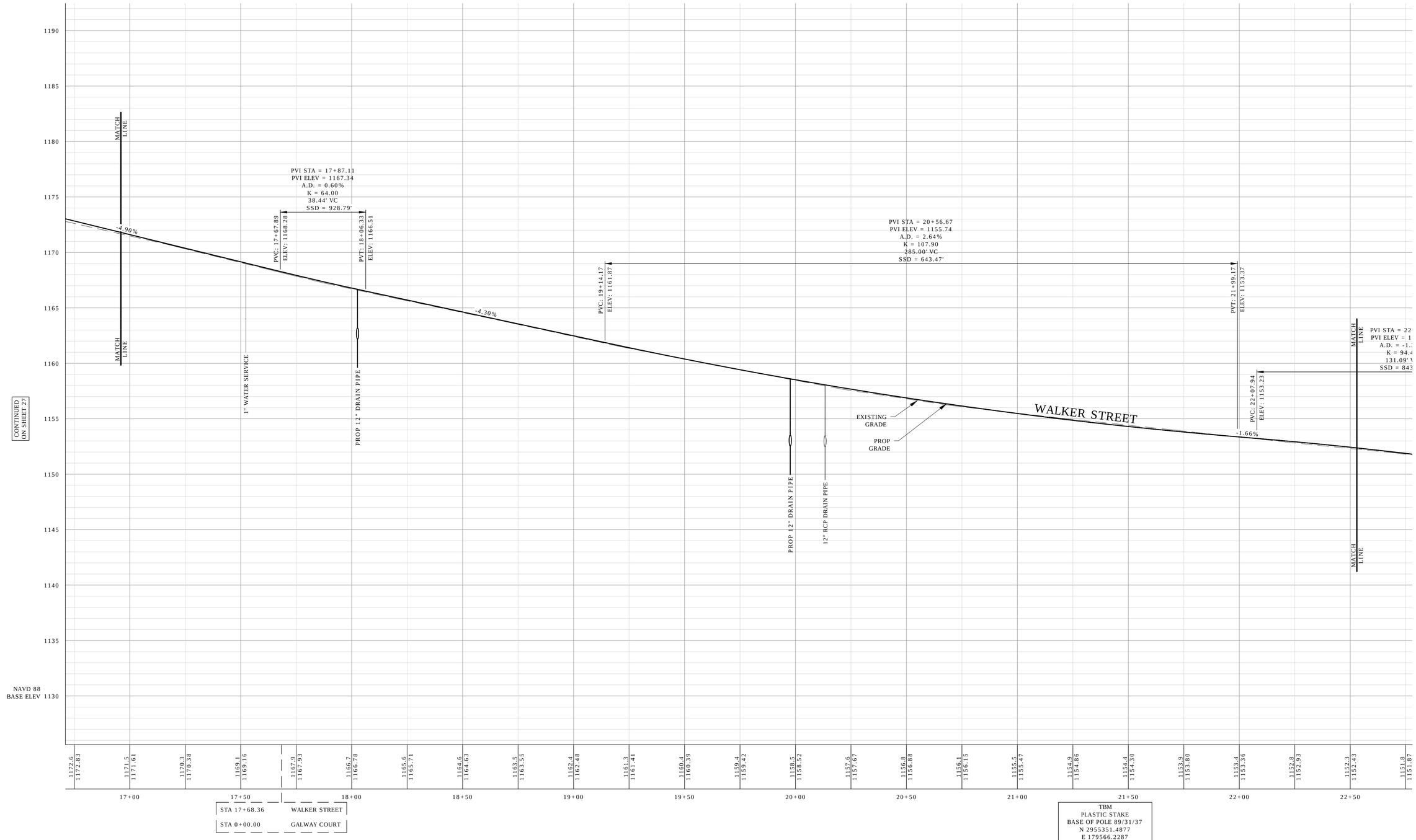
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



TBM
PLASTIC STAKE
BASE OF POLE 89/31/37
N 2955351.4877
E 179566.2287
EL = 1154.24'
STA 21+39.57, 22.90' LT

FOR CONSTRUCTION PLAN SEE SHEET #13

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

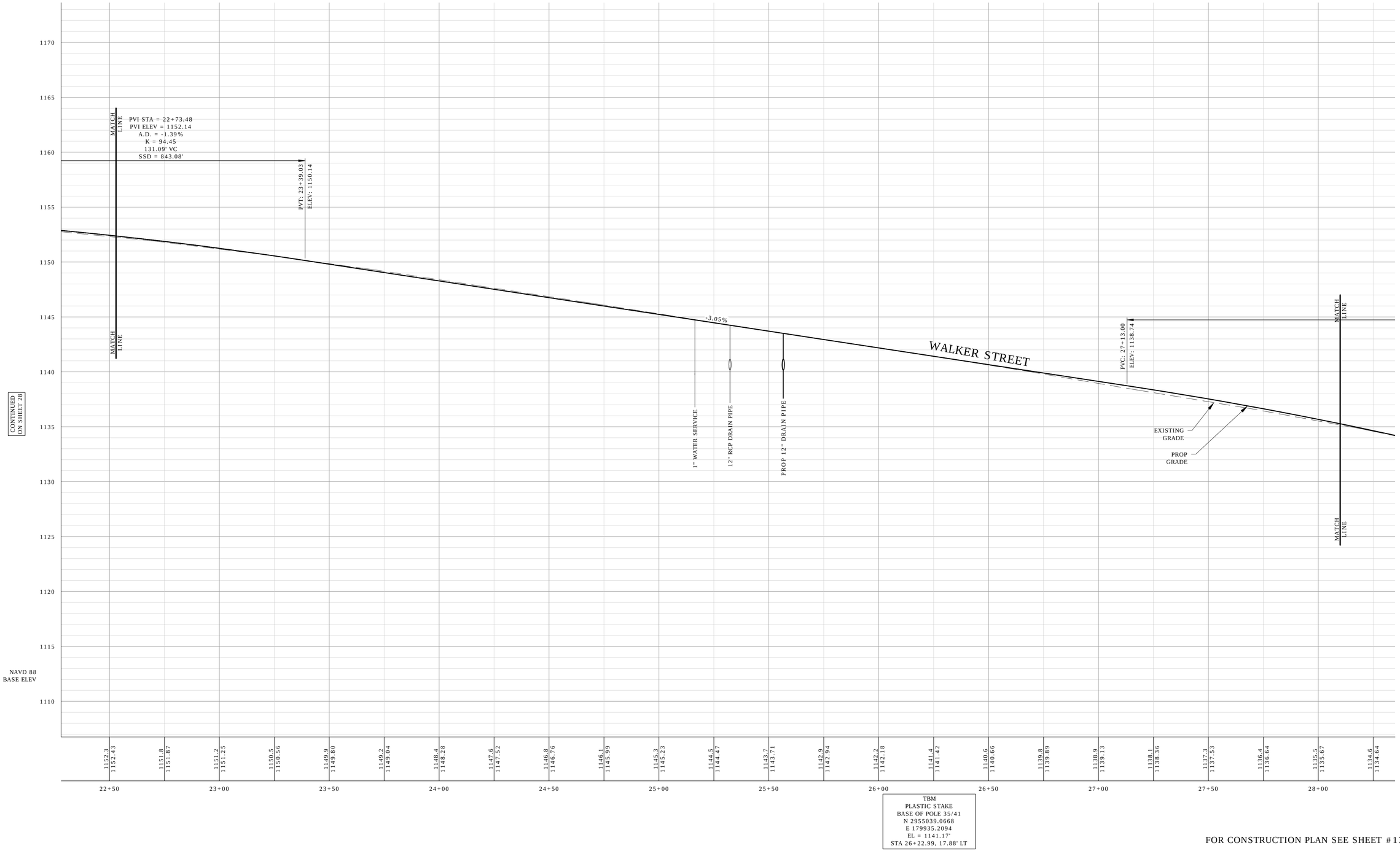
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



TBM
PLASTIC STAKE
BASE OF POLE 35/41
N 2955039.0668
E 179935.2094
EL = 1141.17'
STA 26+22.99, 17.88' LT

FOR CONSTRUCTION PLAN SEE SHEET #13 & 14

DESIGNED BY: SAM
DRAFTED BY: MAU/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

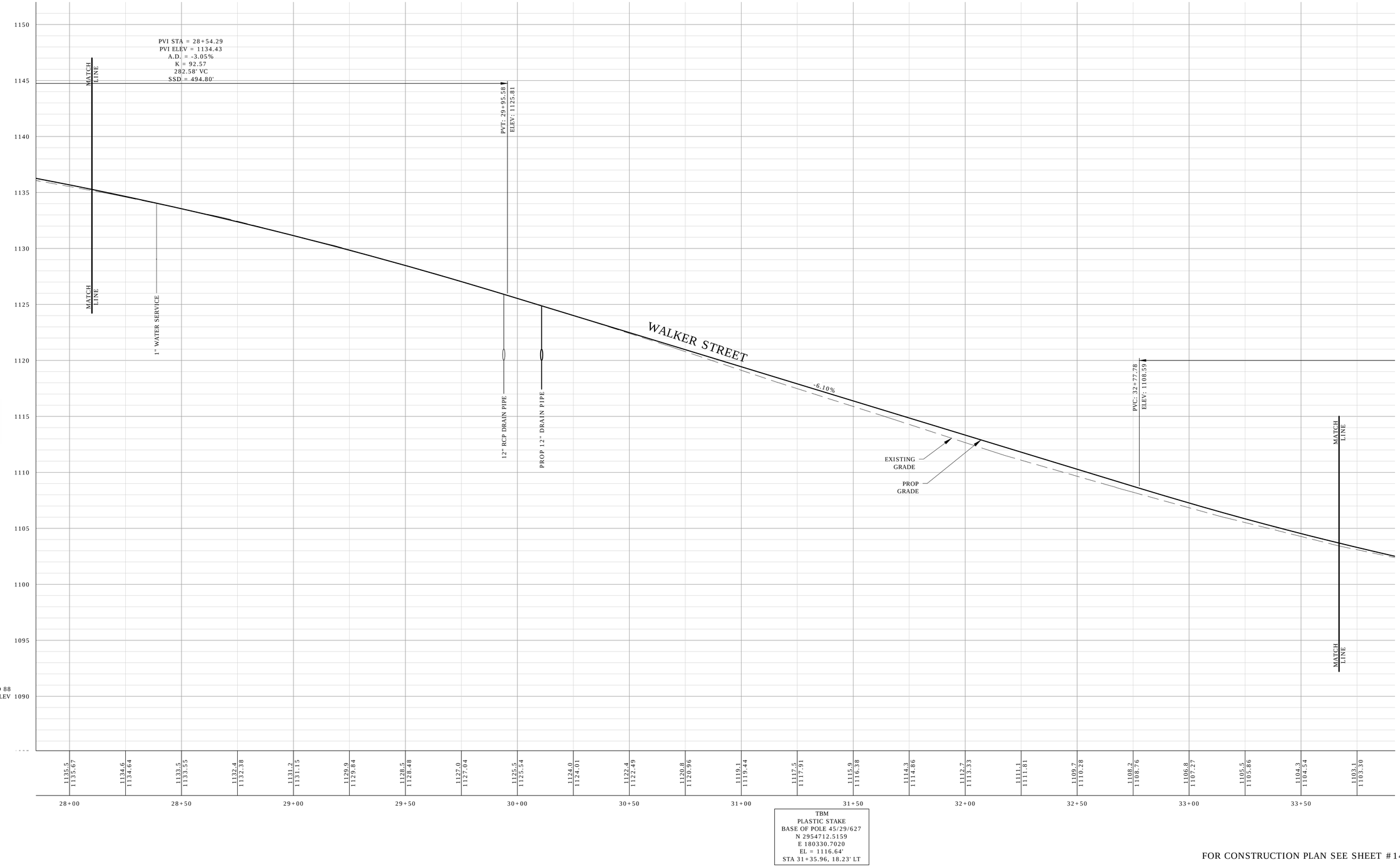
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



TBM
PLASTIC STAKE
BASE OF POLE 45/29/627
N 2954712.5159
E 180330.7020
EL = 1116.64'
STA 31+35.96, 18.23' LT

FOR CONSTRUCTION PLAN SEE SHEET #14 & 15

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

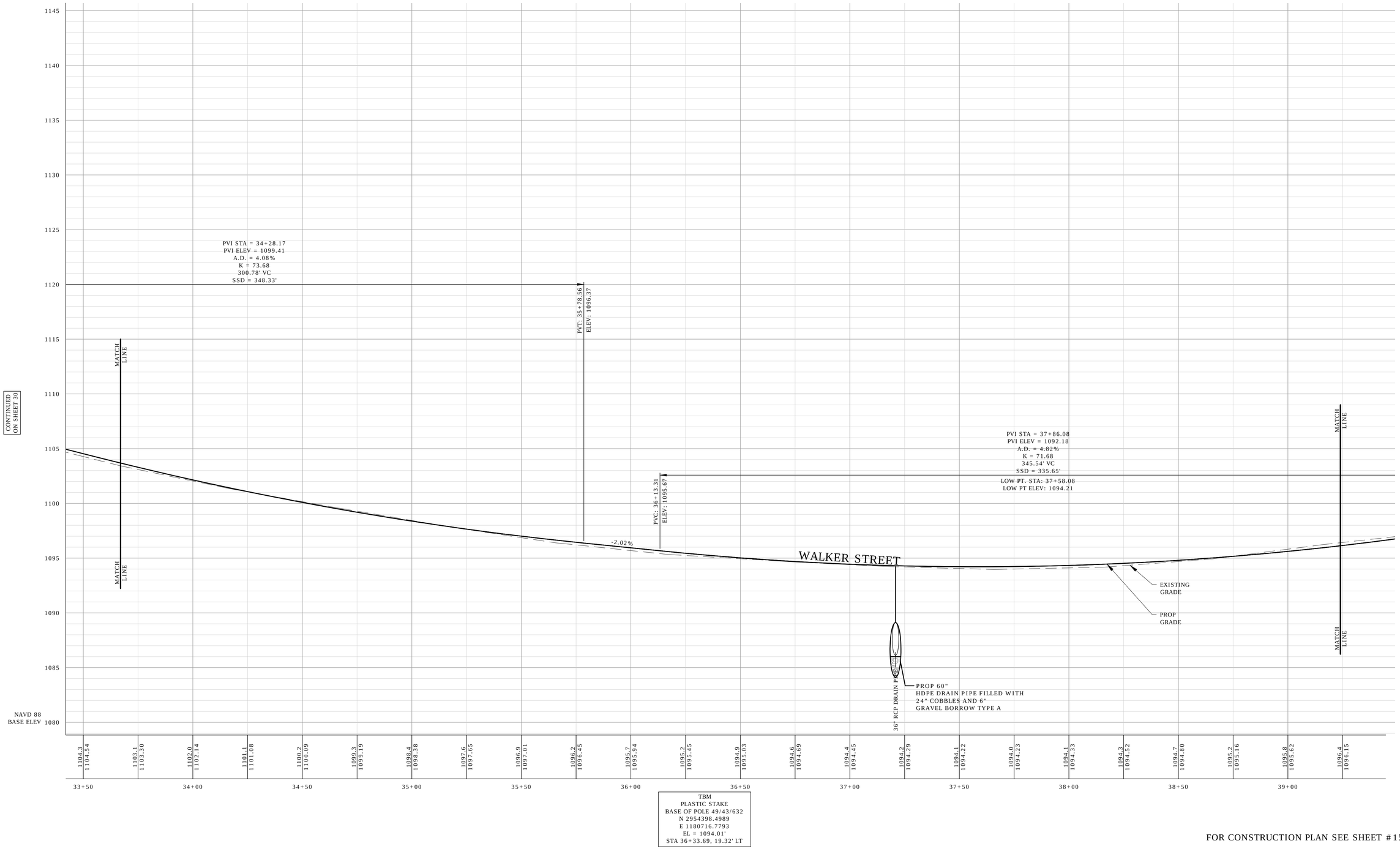
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG



TBM
PLASTIC STAKE
BASE OF POLE 49/43/632
N 2954398.4989
E 1180716.7793
EL. = 1094.01'
STA 36+33.69, 19.32' LT

FOR CONSTRUCTION PLAN SEE SHEET #15 & 16

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

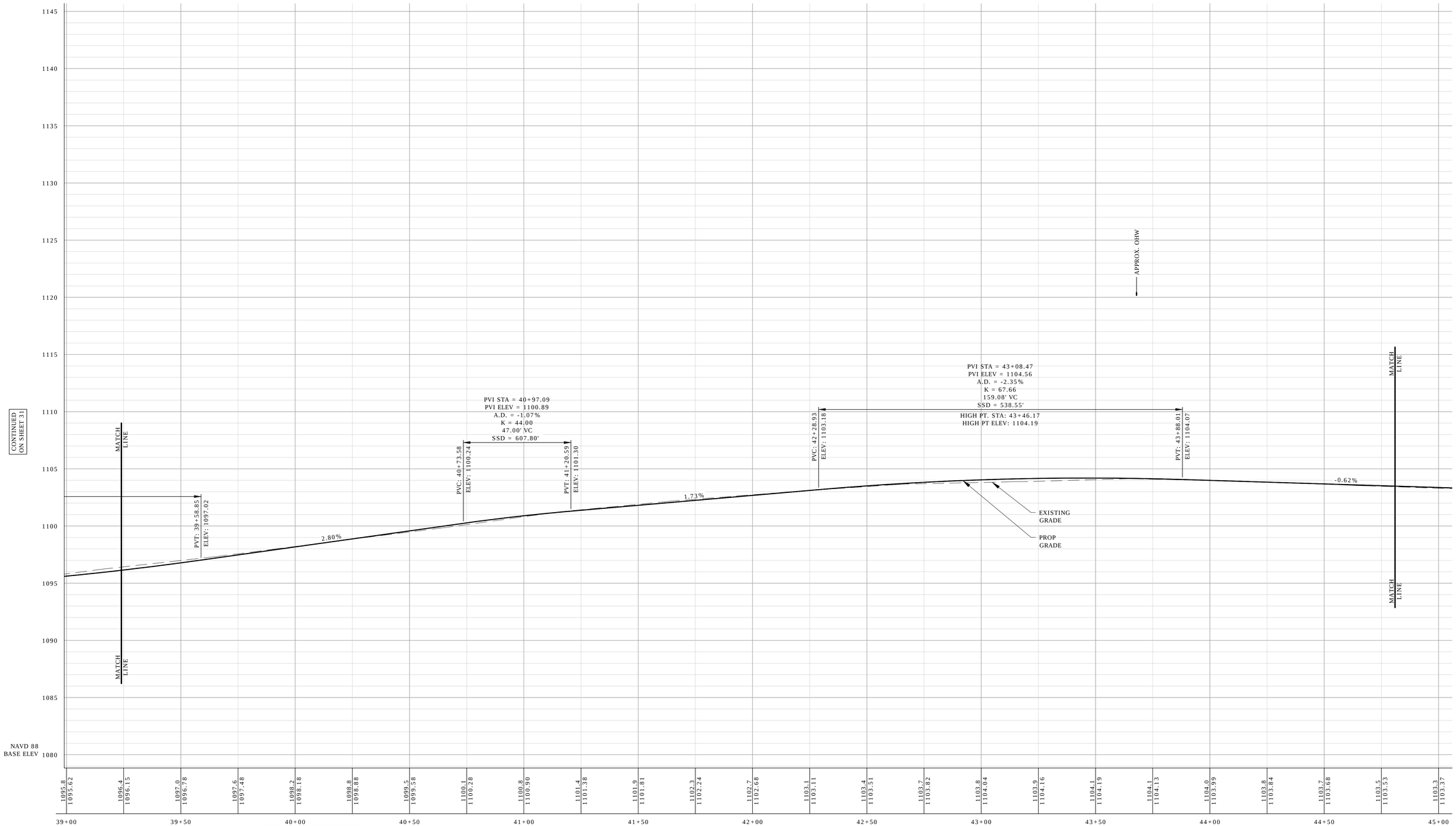
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



TBM
PLASTIC STAKE
BASE OF POLE 52/46
N 2954160.5267
E 181004.3901
EL = 1098.23'
STA 40+06.97, 16.57' LT

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

FOR CONSTRUCTION PLAN SEE SHEET #16 & 17

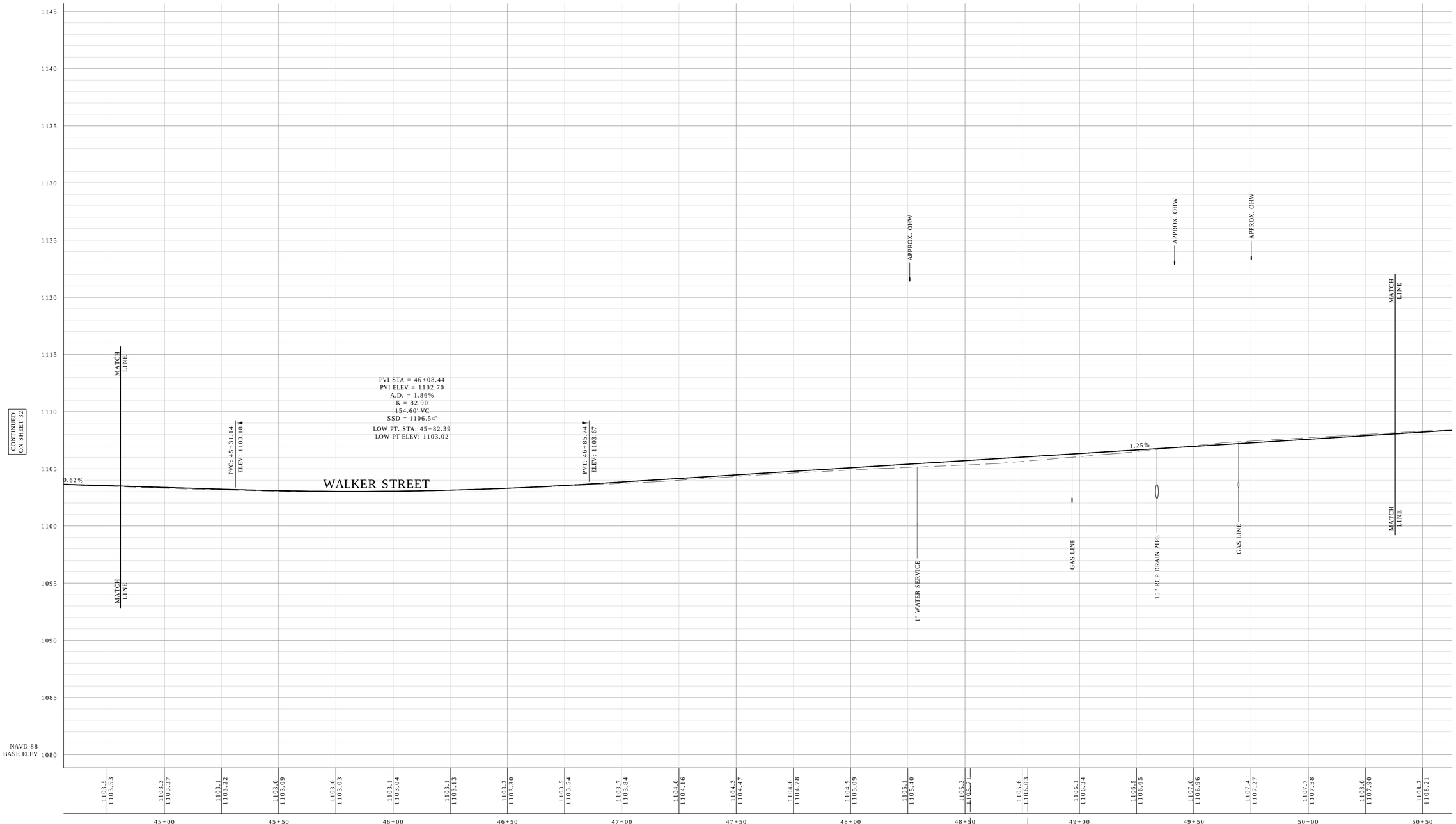
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

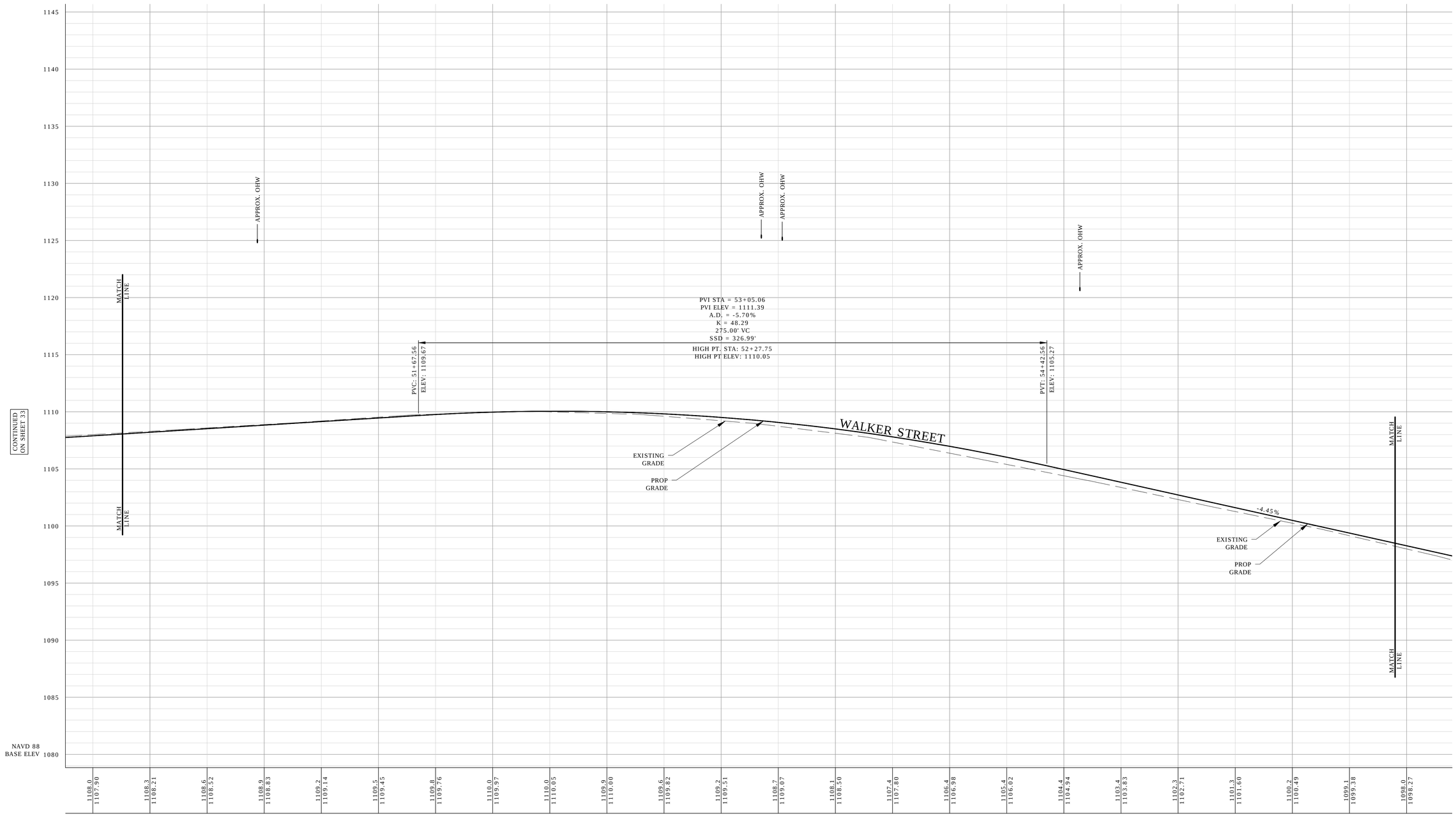
FOR CONSTRUCTION PLAN SEE SHEET #17 & 18

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



TBM
MAGS DISK AJ 54
IN LEDGE OUTCROP
N 2953389.3495
E 181959.7454
NAVD 88 EL = 1117.70'
STA 52+32.17, 34.53' LT

FOR CONSTRUCTION PLAN SEE SHEET #18 & 19

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

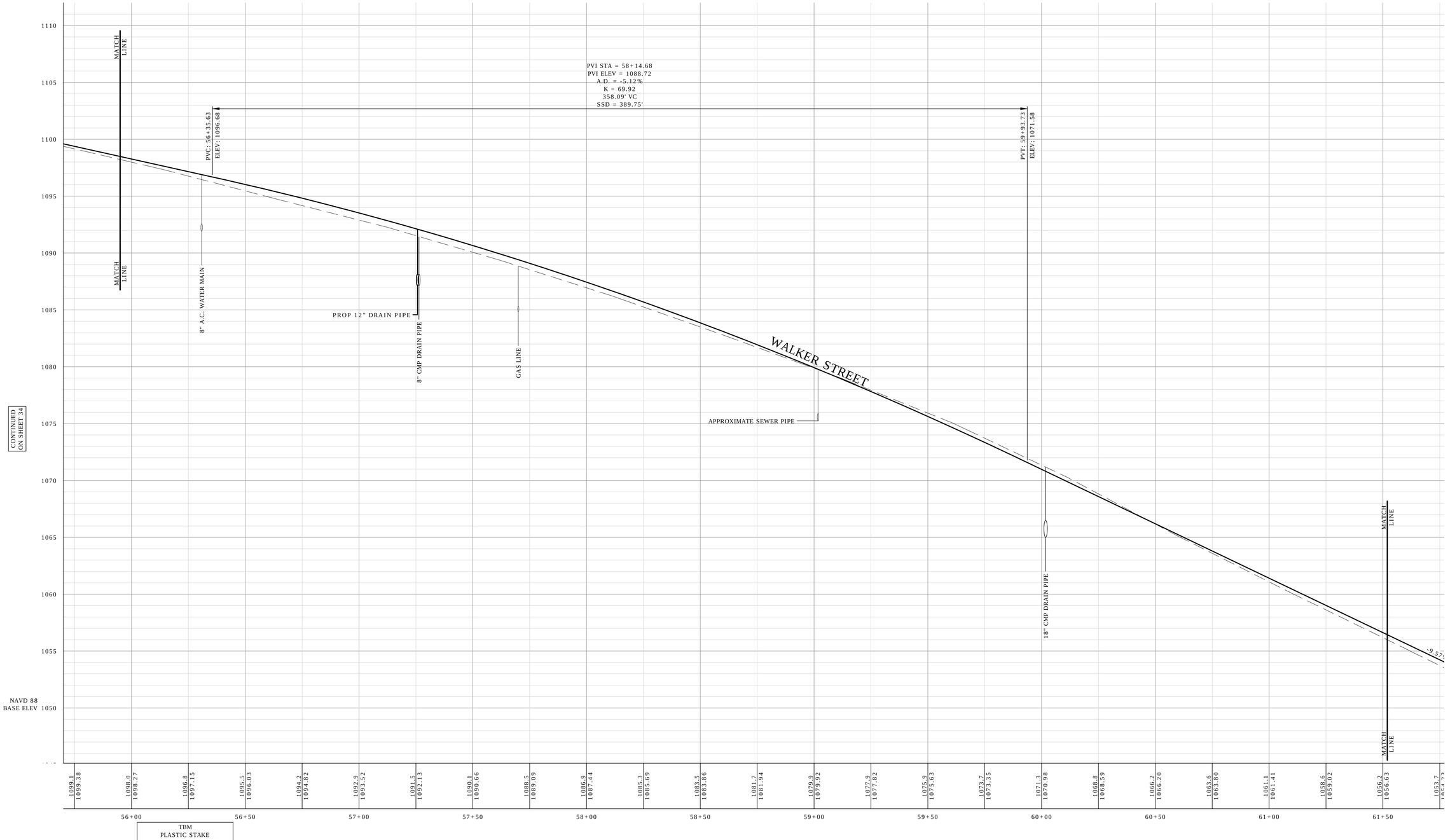
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



TBM
PLASTIC STAKE
BASE OF POLE 275/65
N 2953064.9561
E 182186.5943
EL = 1096.846'
STA 56+23.57, 18.92' RT

FOR CONSTRUCTION PLAN SEE SHEET #19 & 20

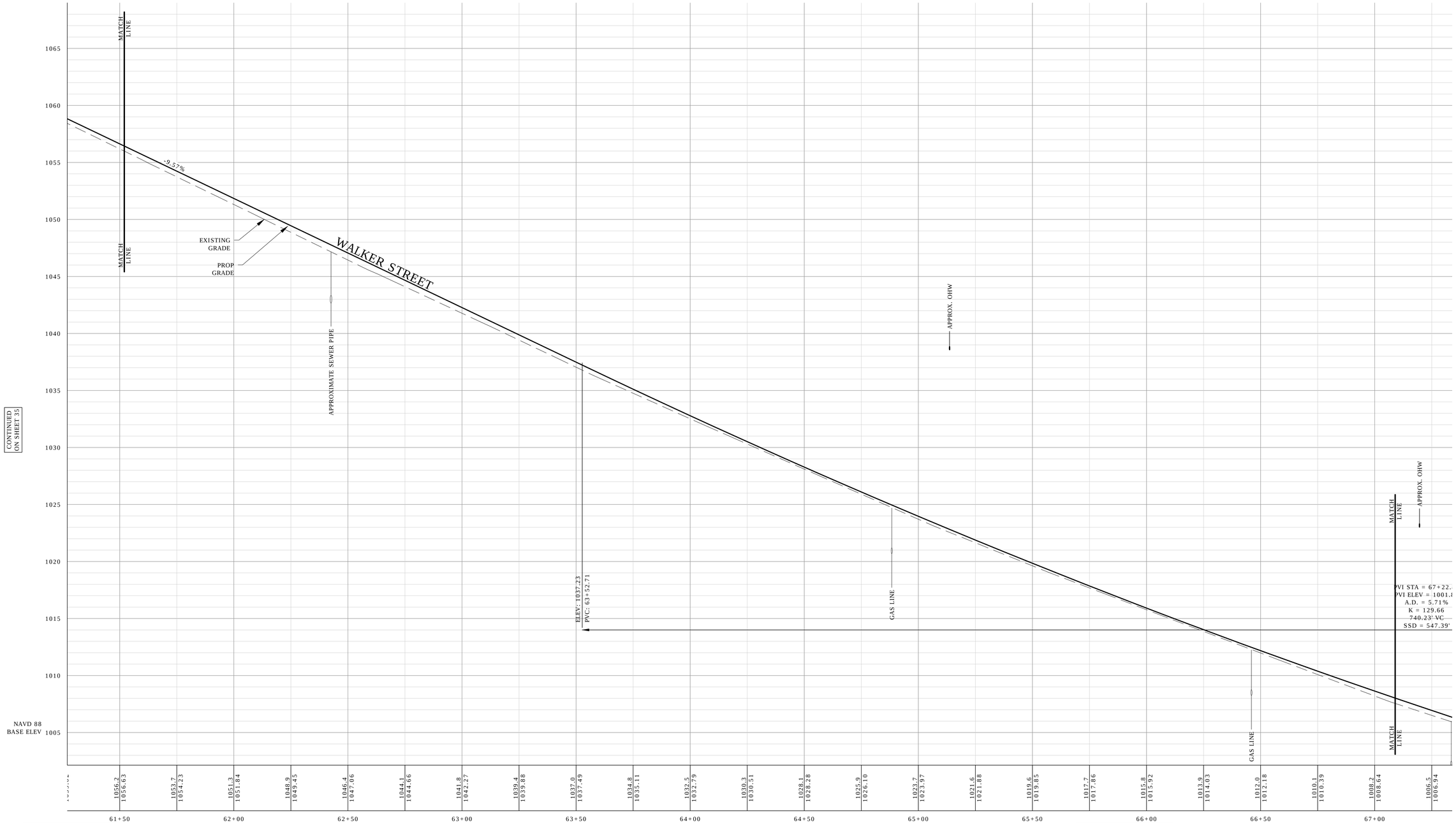
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



TBM
PLASTIC STAKE
BASE OF POLE 68/99/275
N 2952676.7381
E 182509.7705
EL = 1057.89'
STA 61+28.77, 19.01' RT

TBM
PLASTIC STAKE
BASE OF POLE 278
N 2952320.9647
E 182803.6540
EL = 1015.63'
STA 65+90.29, 18.70' RT

FOR CONSTRUCTION PLAN SEE SHEET #20 & 21

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

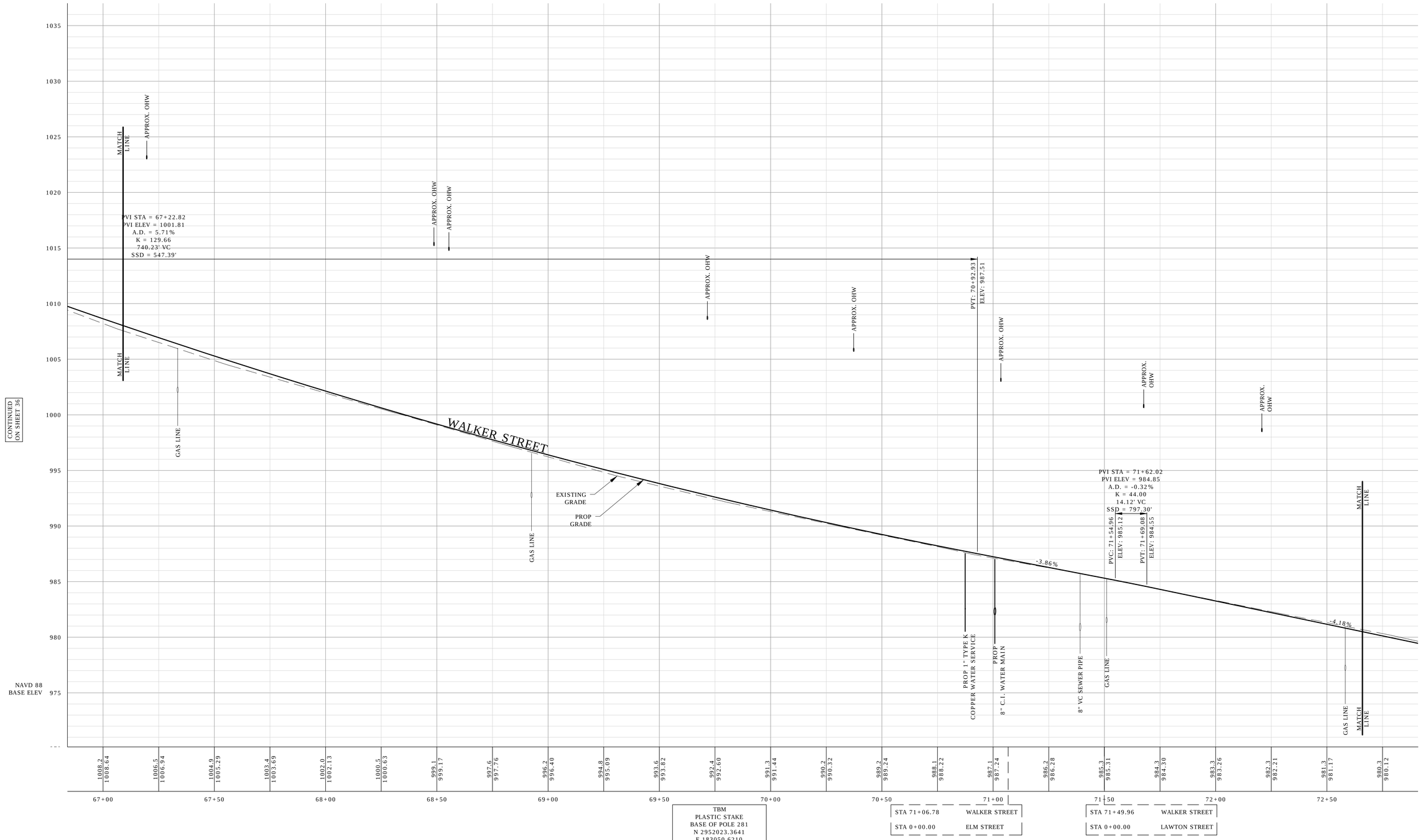
HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



TBM
PLASTIC STAKE
BASE OF POLE 281
N 2952023.3641
E 183050.6210
EL = 991.78'
STA 69+77.01, 17.16' RT

STA 71+06.78 WALKER STREET
STA 0+00.00 ELM STREET

STA 71+49.96 WALKER STREET
STA 0+00.00 LAWTON STREET

FOR CONSTRUCTION PLAN SEE SHEET #21 & 22

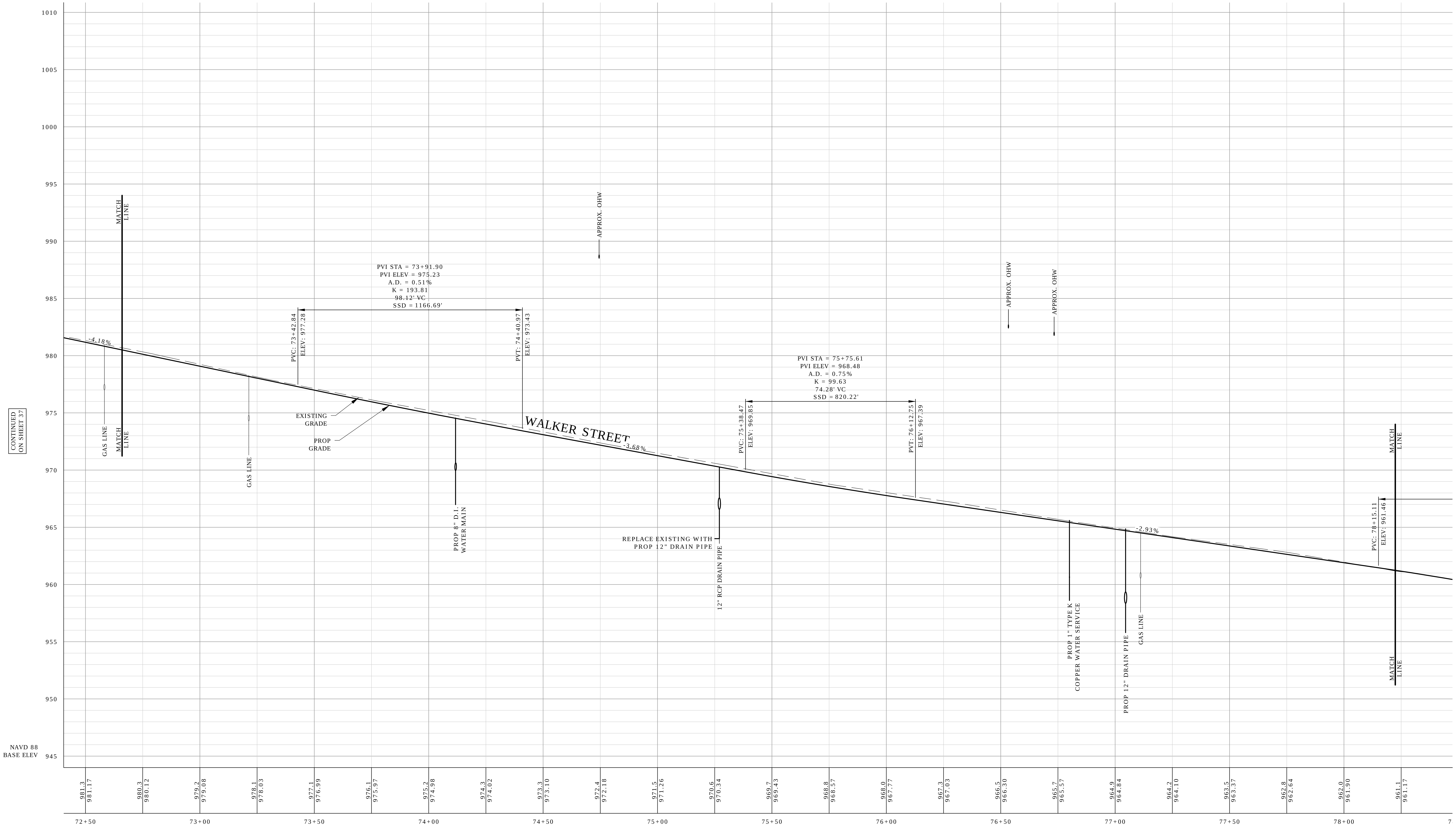
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	38	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET



TBM
PLASTIC STAKE
BASE OF POLE 285/13B/6
N 2951639.2545
E 183368.9809
EL = 972.52'
STA 74+75.90, 15.49' RT

FOR CONSTRUCTION PLAN SEE SHEET #22 & 23

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

10-Nov-2017
E2148D10 - SHEET LAYOUTS.DWG

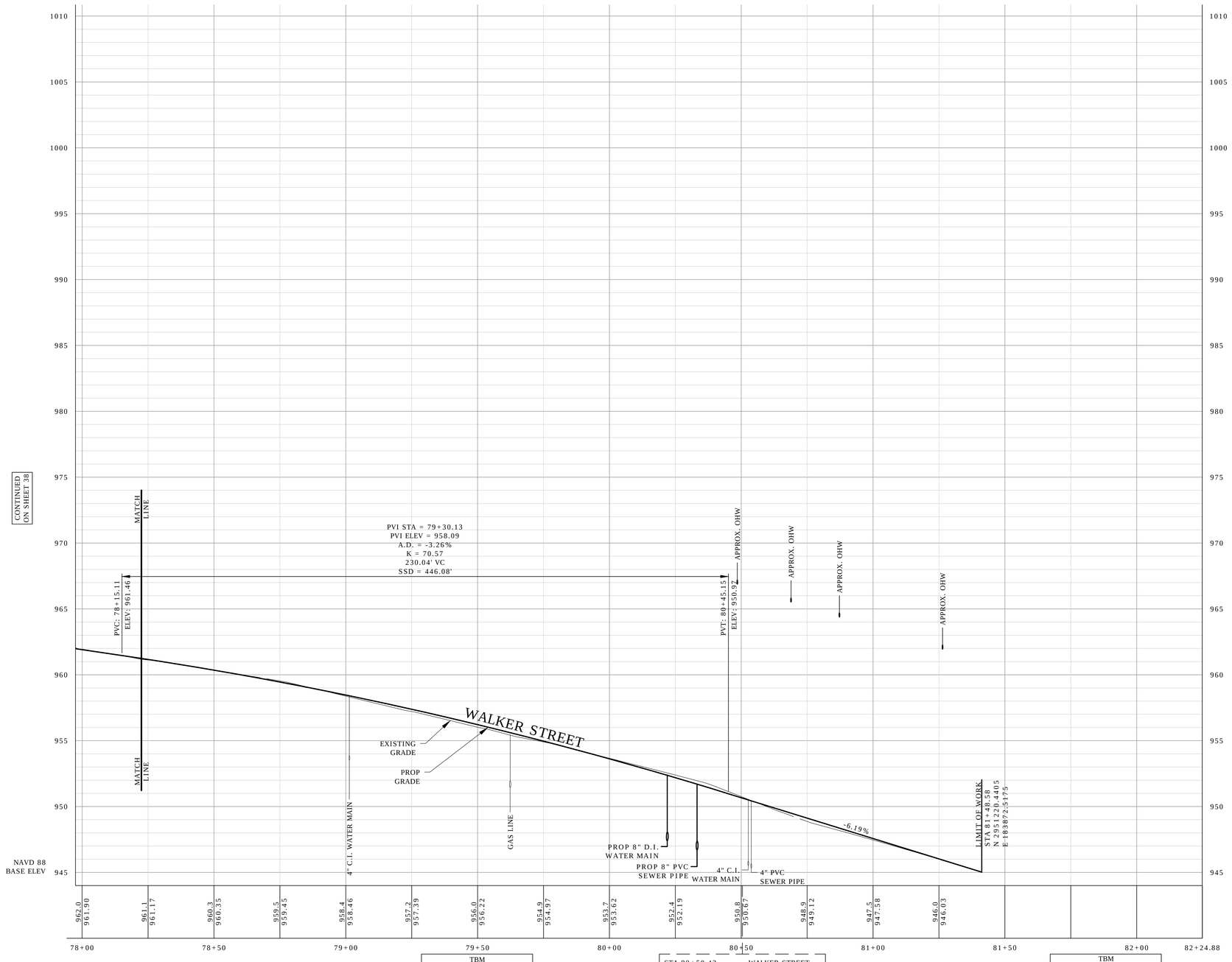
MassDOT DWT Version: 4.2 February 2017

HORIZONTAL
20 0 20 40 80
4 0 4 8 16
VERTICAL
SCALE IN FEET

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	39	199
PROJECT FILE NO.	606462		

PROFILE
100% DESIGN SUBMISSION



FOR CONSTRUCTION PLAN SEE SHEET #23 & 24

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

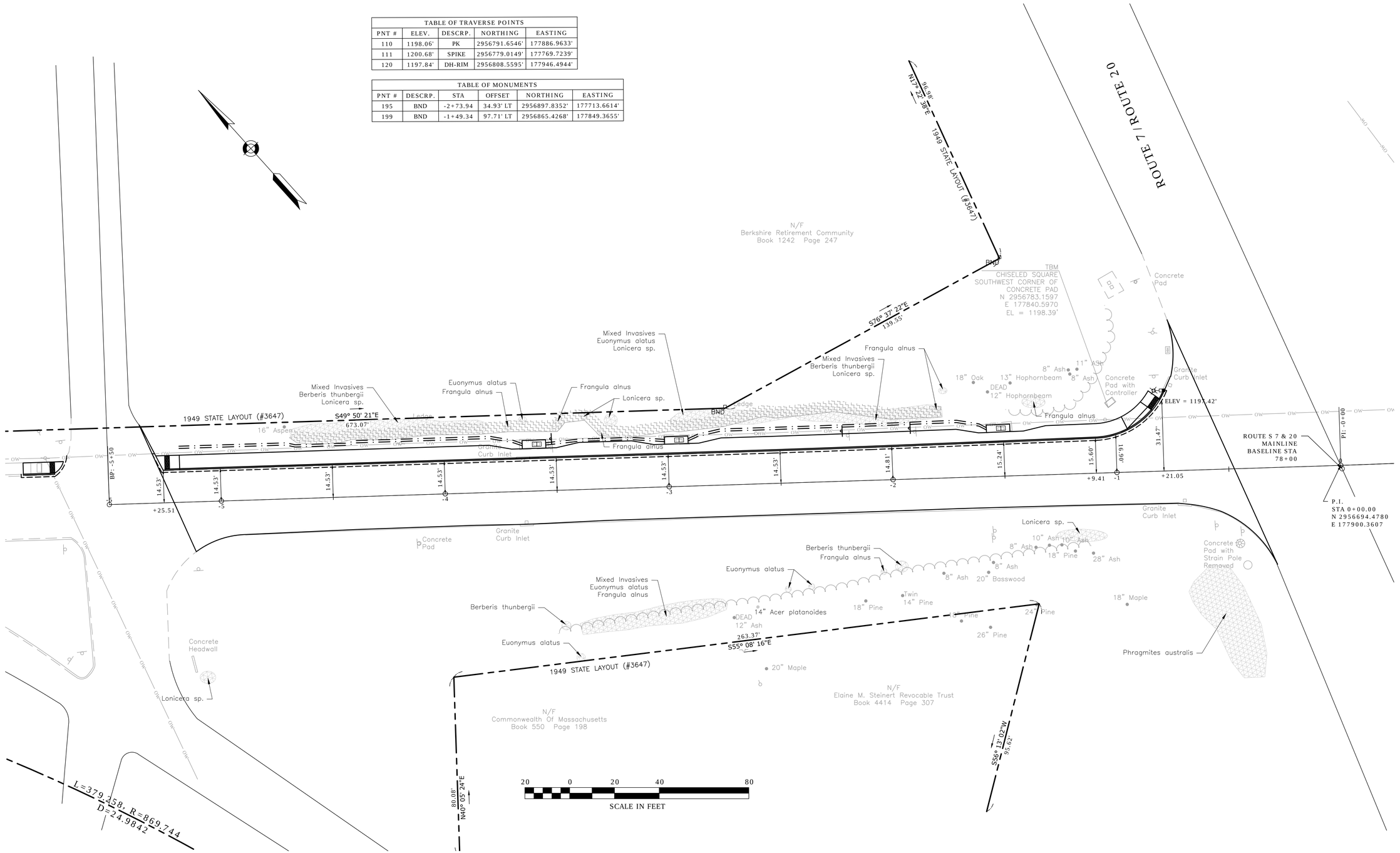
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	40	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
110	1198.06'	PK	2956791.6546'	177886.9633'
111	1200.68'	SPIKE	2956779.0149'	177769.7239'
120	1197.84'	DH-RIM	2956808.5595'	177946.4944'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
195	BND	-2+73.94	34.93' LT	2956897.8352'	177713.6614'
199	BND	-1+49.34	97.71' LT	2956865.4268'	177849.3655'



FOR PROFILE: N/A

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	41	199
PROJECT FILE NO.	606462		

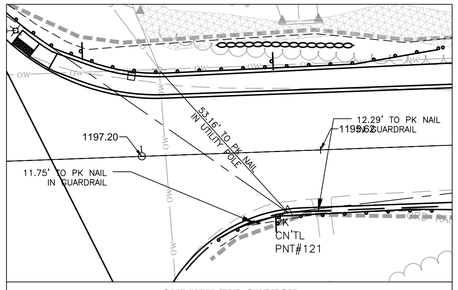
GRADING & TIE PLAN
100% DESIGN SUBMISSION

10-Nov-2017

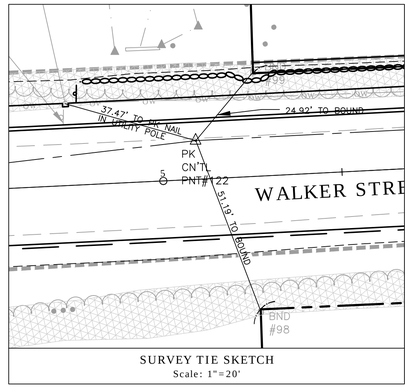
E2148D10 - SHEET LAYOUTS.DWG

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
121	1197.63'	PK	2956591.3535'	177996.8778'
122	1186.63'	PK	2956377.3993'	178299.3100'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
97	BND	5+24.59	84.23' RT	2956294.1519'	178251.0147'
98	BND	5+25.43	37.85' RT	2956329.6038'	178280.9397'
99	BND	5+26.61	29.08' LT	2956380.7801'	178324.0920'
100	BND	5+27.42	75.88' LT	2956416.5729'	178354.2434'
190	BND	1+41.56	80.72' RT	2956541.6668'	177957.1723'

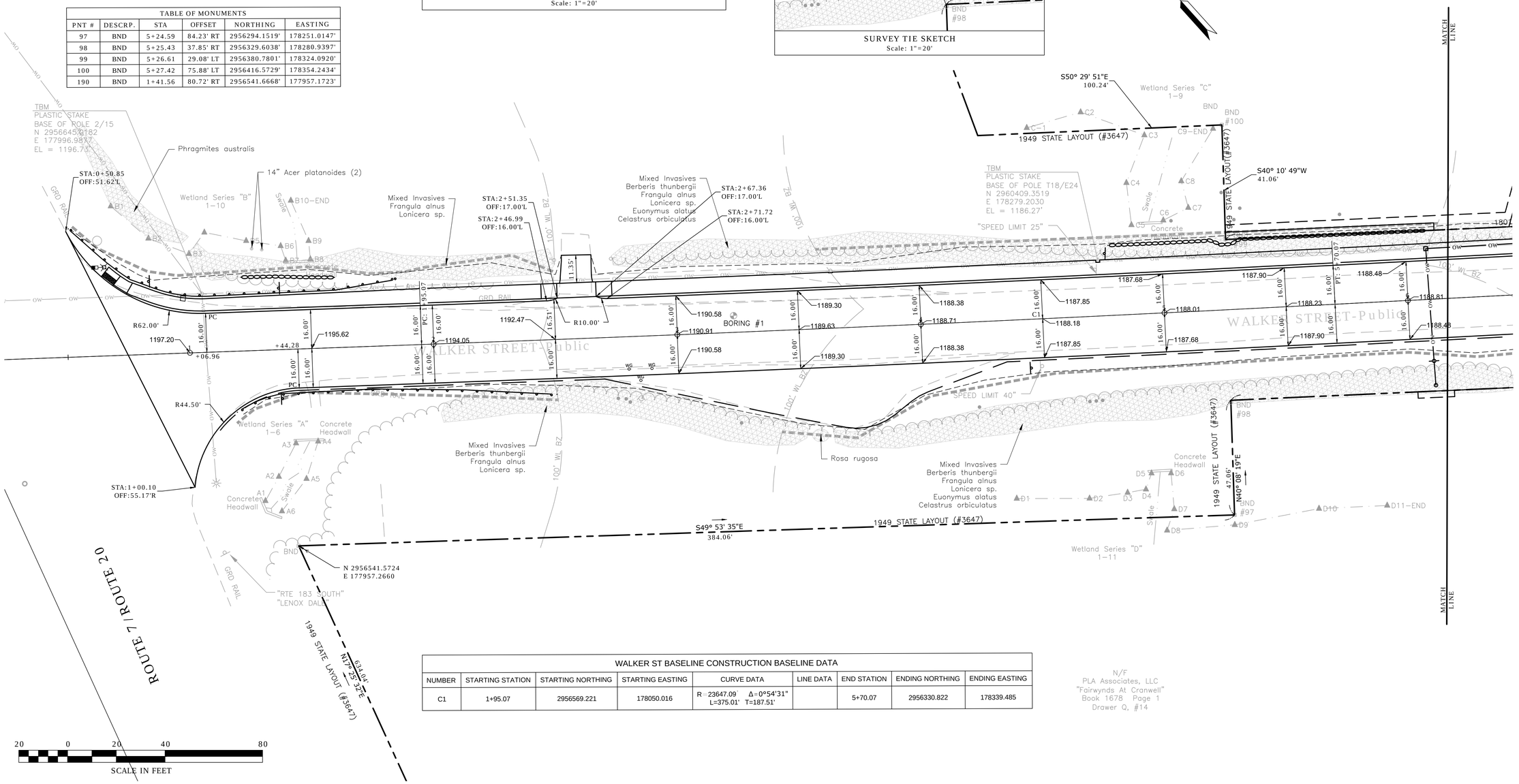


SURVEY TIE SKETCH
Scale: 1"=20'



SURVEY TIE SKETCH
Scale: 1"=20'

N/F
Stone Path Development, Inc.
Book 5991 Page 104
Plan Book 417–M, Page 80



WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
C1	1+95.07	2956569.221	178050.016	R=23647.09' Δ=0°54'31" L=375.01' T=187.51'		5+70.07	2956330.822	178339.485

N/F
PLA Associates, LLC
"Fairwynds At Cranwell"
Book 1678 Page 1
Drawer Q, #14

FOR PROFILE: SEE SHEET NO. 25

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	42	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

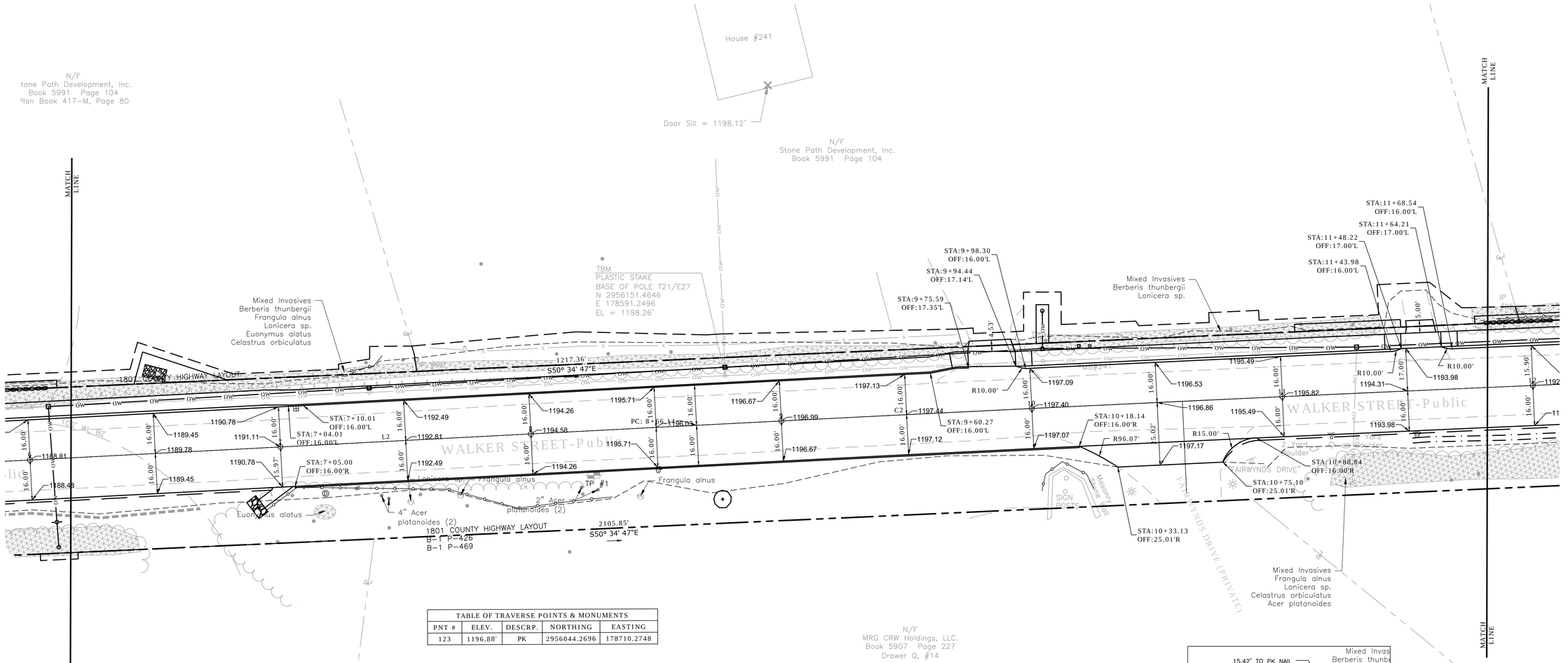
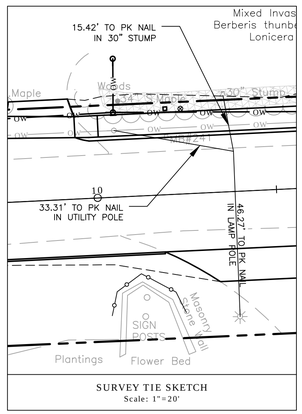


TABLE OF TRAVERSE POINTS & MONUMENTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
123	1196.88'	PK	2956044.2696	178710.2748

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
95	IP	11+94.76	30.14' LT	2955959.6823'	178843.1056'
96	IP	7+55.87	31.97' LT	2956238.6860'	178503.9592'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L2	5+70.07	2956330.822	178339.485		S50° 58' 49"E 296.07'	8+66.14	2956144.423	178569.507
C2	8+66.14	2956144.423	178569.507	R=38180.00' Δ=0°36'01" L=400.09' T=200.04'		12+66.22	2955890.910	178879.020

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14



SURVEY TIE SKETCH
Scale: 1"=20'

FOR PROFILE: SEE SHEET NO. 26

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	43	199
PROJECT FILE NO.	606462		

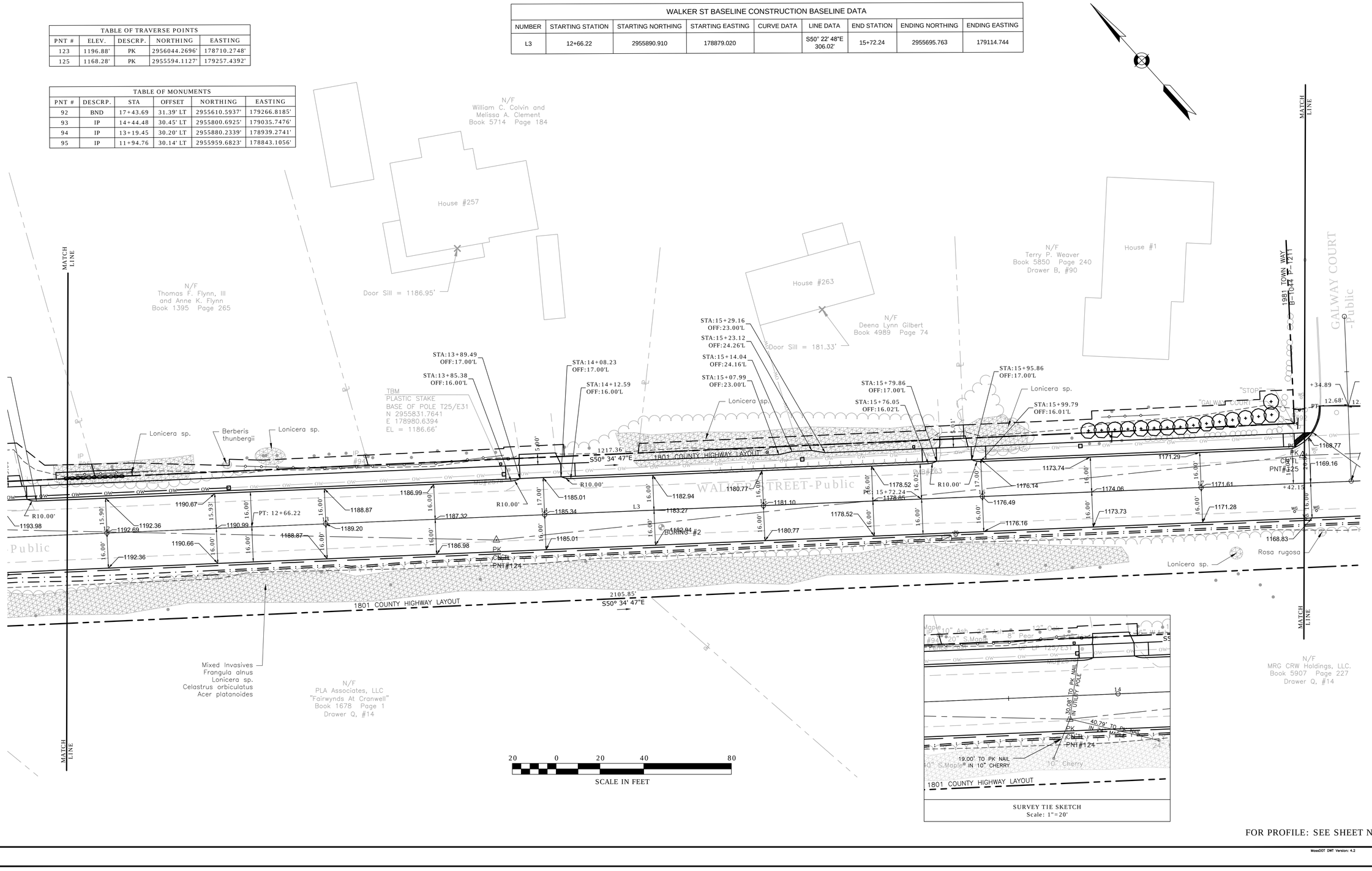
GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
123	1196.88'	PK	2956044.2696'	178710.2748'
125	1168.28'	PK	2955594.1127'	179257.4392'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
92	BND	17+43.69	31.39' LT	2955610.5937'	179266.8185'
93	IP	14+44.48	30.45' LT	2955800.6925'	179035.7476'
94	IP	13+19.45	30.20' LT	2955880.2339'	178939.2741'
95	IP	11+94.76	30.14' LT	2955959.6823'	178843.1056'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L3	12+66.22	2955890.910	178879.020		S50° 22' 48"E 306.02'	15+72.24	2955695.763	179114.744



SURVEY TIE SKETCH
Scale: 1"=20'

FOR PROFILE: SEE SHEET NO. 27

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

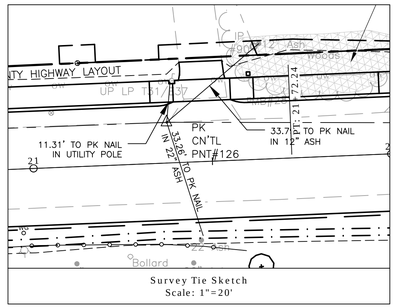
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	44	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
125	1168.28'	PK	2955594.1127'	179257.4392'
126	1154.20'	PK	2955343.7791'	179557.4435'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
-	IP	20+30.42	31.82' LT	2955427.9914'	179487.8956'
90	IP	21+62.82	31.53' LT	2955343.2766'	179589.6516'
91	BND	17+93.75	31.74' LT	2955578.9350'	179305.5938'
92	BND	17+43.69	31.39' LT	2955610.5937'	179266.8185'



WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
C3	15+72.24	2955695.763	179114.744	R=860560.00' Δ=0°02'24" L=600.00' T=300.00'		21+72.24	2955312.989	179576.781
L4	21+72.24	2955312.989	179576.781		S50° 20' 24"E 652.81'	28+25.05	2954896.348	180079.340

FOR PROFILE: SEE SHEET NO. 28

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

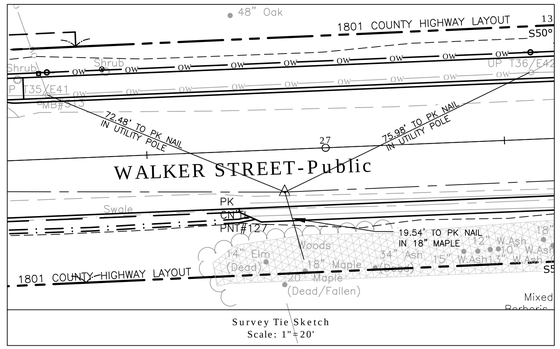
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	45	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG



20 0 20 40 80
SCALE IN FEET

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
127	1139.01'	PK	2954974.5666'	179966.3289'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
87	IP	27+86.93	31.09' LT	2954944.6080'	180069.8365'
88	IP	25+84.95	32.51' LT	2955074.6112'	179915.2479'
89	IP	24+73.55	32.23' LT	2955145.4970'	179829.3139'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA							
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L4	21+72.24	2955312.989	179576.781		S50° 20' 24"E 652.81'	28+25.05	2954896.348	180079.340
C4	28+25.05	2954896.348	180079.340	R=71940.00' Δ=0°28'40" L=600.05' T=300.03'		34+25.10	2954515.307	180542.880

FOR PROFILE: SEE SHEET NO. 29 & 30

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/RDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

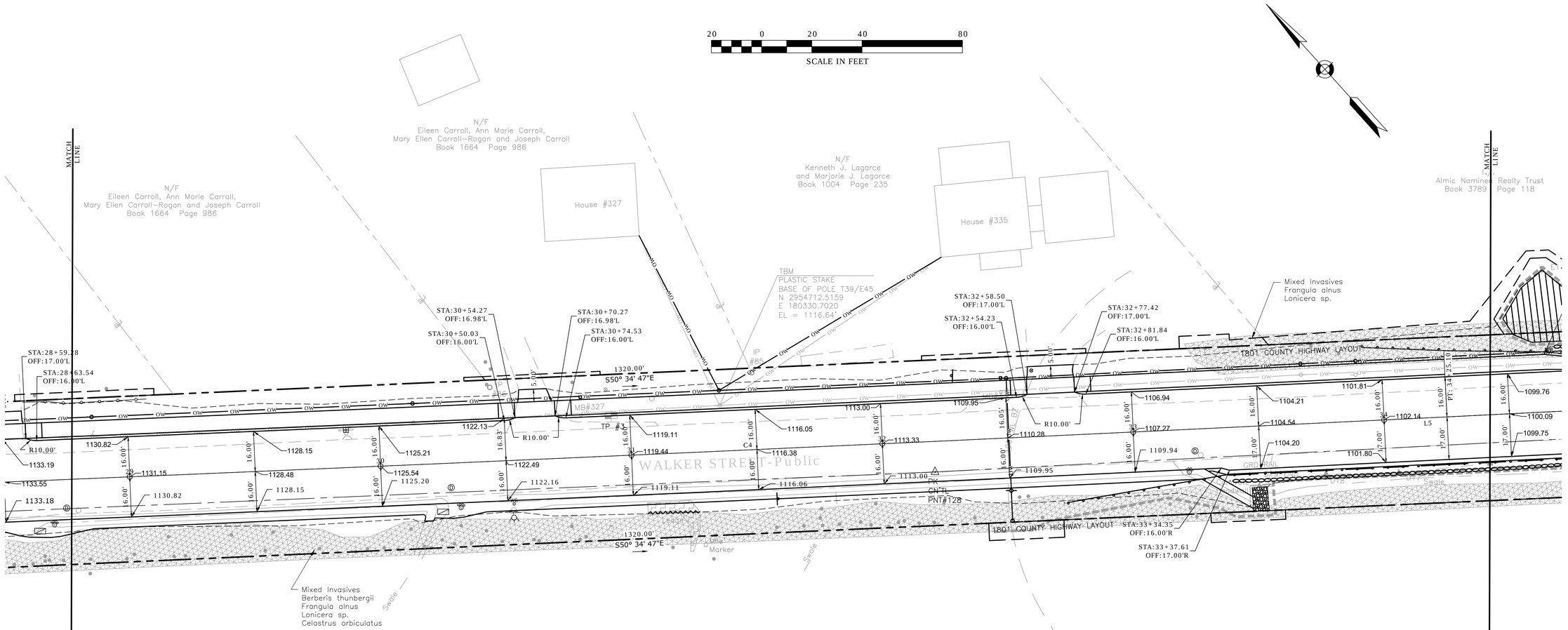
LENOX
WALKER STREET

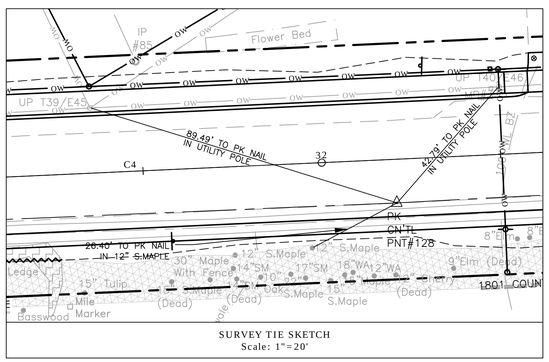
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	46	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

20 0 20 40 80
SCALE IN FEET





SURVEY TIE SKETCH
Scale: 1"=20'

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
128	1100.85'	PK	2954635.3734'	180376.7556'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
85	IP	31+49.32	30.65' LT	2954713.6294'	180348.9008'
86	IP	30+44.82	29.46' LT	2954779.0760'	180267.4775'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
C4	28+25.05	2954896.348	180079.340	R=71940.00' Δ=0°28'40" L=600.05' T=300.03'		34+25.10	2954515.307	180542.880
L5	34+25.10	2954515.307	180542.880		S50° 49' 04"E 1520.99'	49+46.09	2953554.362	181721.866

FOR PROFILE: SEE SHEET NO. 30 & 31

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

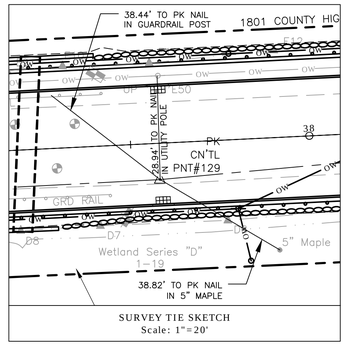
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	47	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

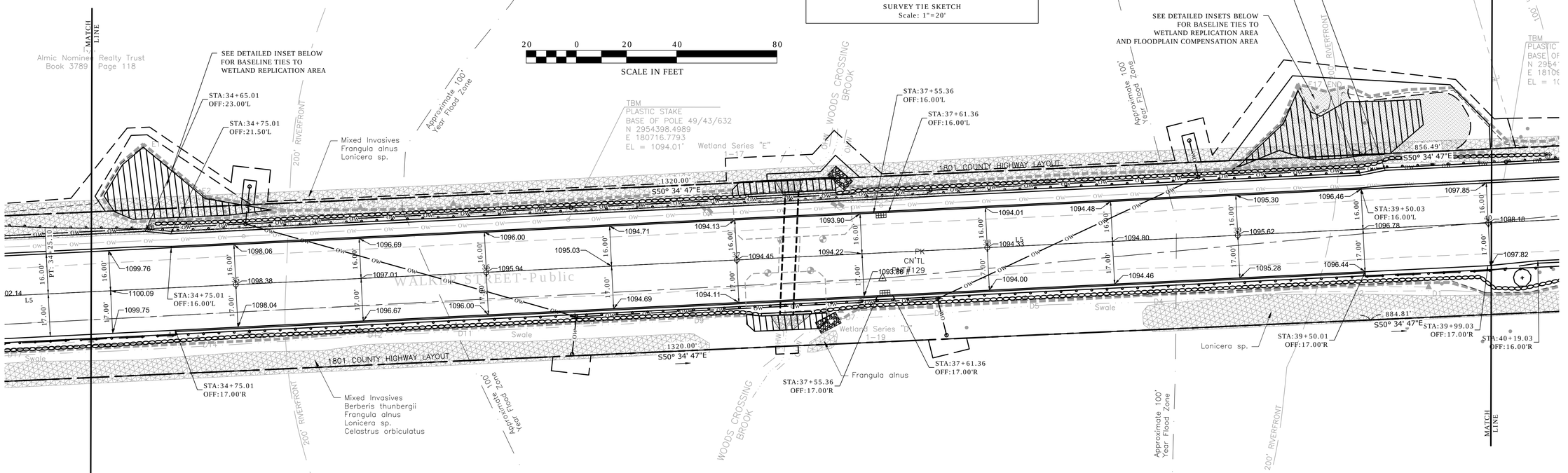
TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
129	1093.69'	PK	2954297.2740'	180794.3407'

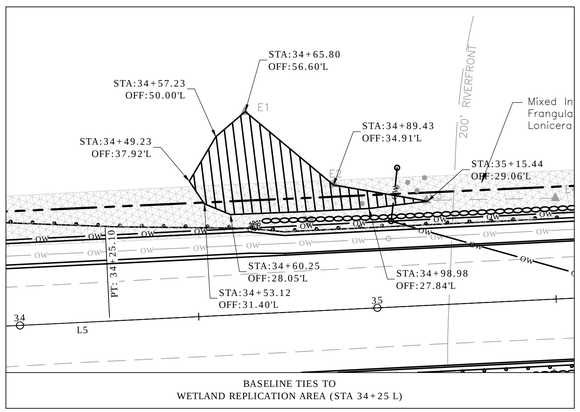
WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L5	34+25.10	2954515.307	180542.880		S50° 49' 04"E 1520.99'	49+46.09	2953554.362	181721.866



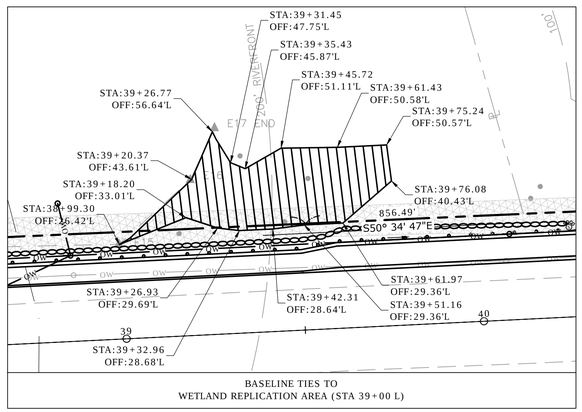
SURVEY TIE SKETCH
Scale: 1"=20'

SCALE IN FEET
20 0 20 40 80

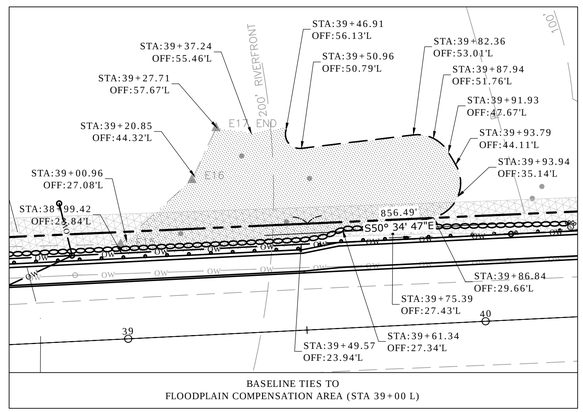




BASELINE TIES TO
WETLAND REPLICATION AREA (STA 34+25 L)



BASELINE TIES TO
WETLAND REPLICATION AREA (STA 39+00 L)



BASELINE TIES TO
FLOODPLAIN COMPENSATION AREA (STA 39+00 L)

FOR PROFILE: SEE SHEET NO. 30 & 31

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	48	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

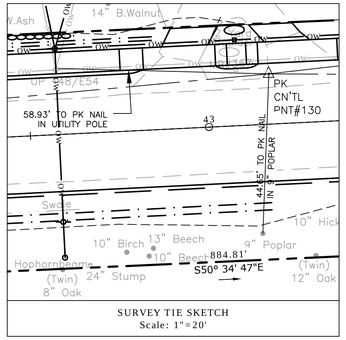
14-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L5	34+25.10	2954515.307	180542.880		S50° 49' 04"E 1520.99'	49+46.09	2953554.362	181721.866

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
130	1103.95'	PK	2953962.4364'	181243.4139'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
84	IP	42+85.04	41.73' LT	2954004.3496'	181235.8182'



SURVEY TIE SKETCH
Scale: 1"=20'

FOR PROFILE: SEE SHEET NO. 32 & 33

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	49	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 14-Nov-2017

WALKER STREET	STA 48+52.32
EAST STREET	STA 0+00.00

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
131	1104.85'	PK	2953605.8489'	181635.4142'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
81	IP	51+33.15	34.71' LT	2953457.9151'	181886.9121'
82	BND	50+27.57	30.99' RT	2953478.5927'	181764.2508'
83	IP	49+94.72	34.65' LT	2953549.9161'	181781.6071'

EAST STREET BASELINE TIES TO GRANITE RUBBLE BLOCK

BLANTYRE ROAD BASELINE TIES TO PAVEMENT MARKING GORE

SURVEY TIE SKETCH
Scale: 1"=20'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L5	34+25.10	2954515.307	180542.880		S50° 49' 04"E 1520.99'	49+46.09	2953554.362	181721.866
C5	49+46.09	2953554.362	181721.866	R=3400.00' Δ=10°58'12" L=650.97' T=326.49'		55+97.07	2953097.435	182184.133

WALKER STREET	STA 48+77.45
BLANTYRE ROAD	STA 0+00.00

SCALE IN FEET

CONTINUED ON SHEET 48

CONTINUED ON SHEET 50

FOR PROFILE: SEE SHEET NO. 31 & 32

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

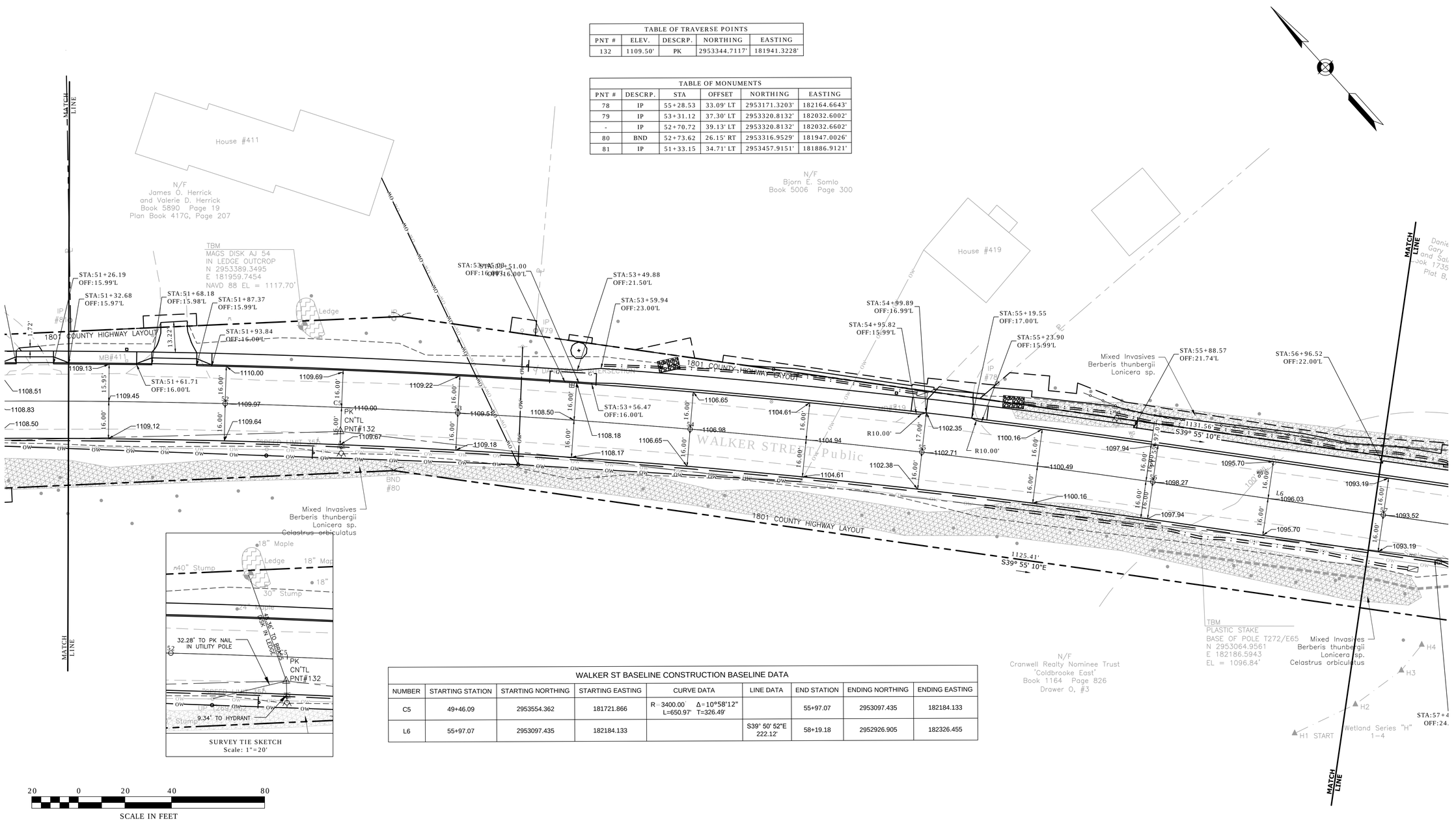
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	50	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
132	1109.50'	PK	2953344.7117'	181941.3228'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
78	IP	55+28.53	33.09' LT	2953171.3203'	182164.6643'
79	IP	53+31.12	37.30' LT	2953320.8132'	182032.6002'
-	IP	52+70.72	39.13' LT	2953320.8132'	182032.6602'
80	BND	52+73.62	26.15' RT	2953316.9529'	181947.0026'
81	IP	51+33.15	34.71' LT	2953457.9151'	181886.9121'



SURVEY TIE SKETCH
Scale: 1"=20'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
C5	49+46.09	2953554.362	181721.866	R=3400.00' Δ=10°58'12" L=650.97' T=326.49'		55+97.07	2953097.435	182184.133
L6	55+97.07	2953097.435	182184.133		S39° 50' 52"E 222.12'	58+19.18	2952926.905	182326.455

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 34 & 35

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

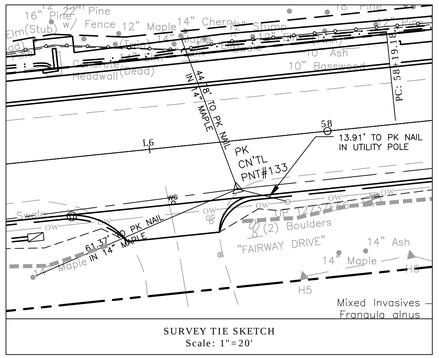
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	51	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

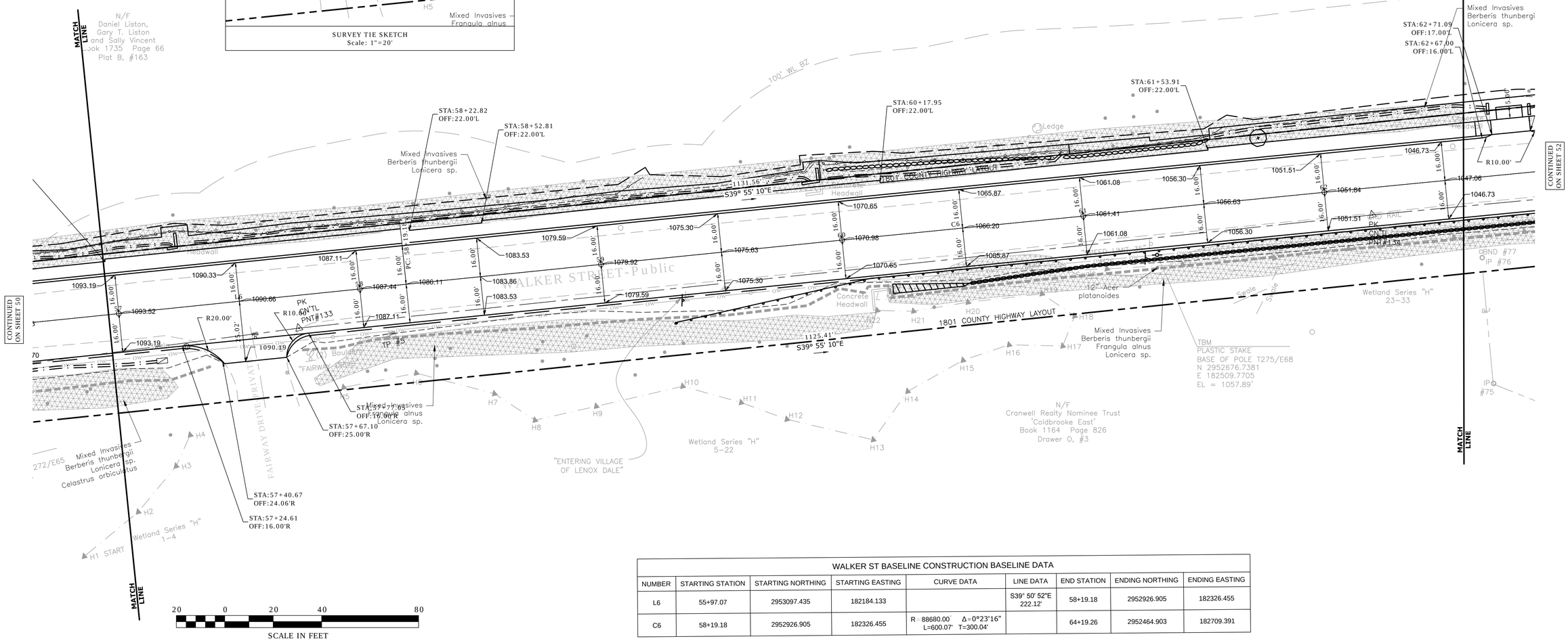
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
133	1088.31'	PK	2952953.4214'	182286.7054'
134	1049.24'	PK	2952612.2983'	182573.2186'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
75	IP	62+61.91	85.40' RT	2952531.9038'	182543.4444'
76	IP	62+62.22	33.21' RT	2952564.9067'	182583.8766'
77	BND	62+62.01	30.69' RT	2952566.6740'	182585.6828'



SURVEY TIE SKETCH
Scale: 1"=20'



WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L6	55+97.07	2953097.435	182184.133		S39° 50' 52"E 222.12'	58+19.18	2952926.905	182326.455
C6	58+19.18	2952926.905	182326.455	R=88680.00' Δ=0°23'16" L=600.07' T=300.04'		64+19.26	2952464.903	182709.391

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 35 & 36

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	52	199
PROJECT FILE NO.	606462		

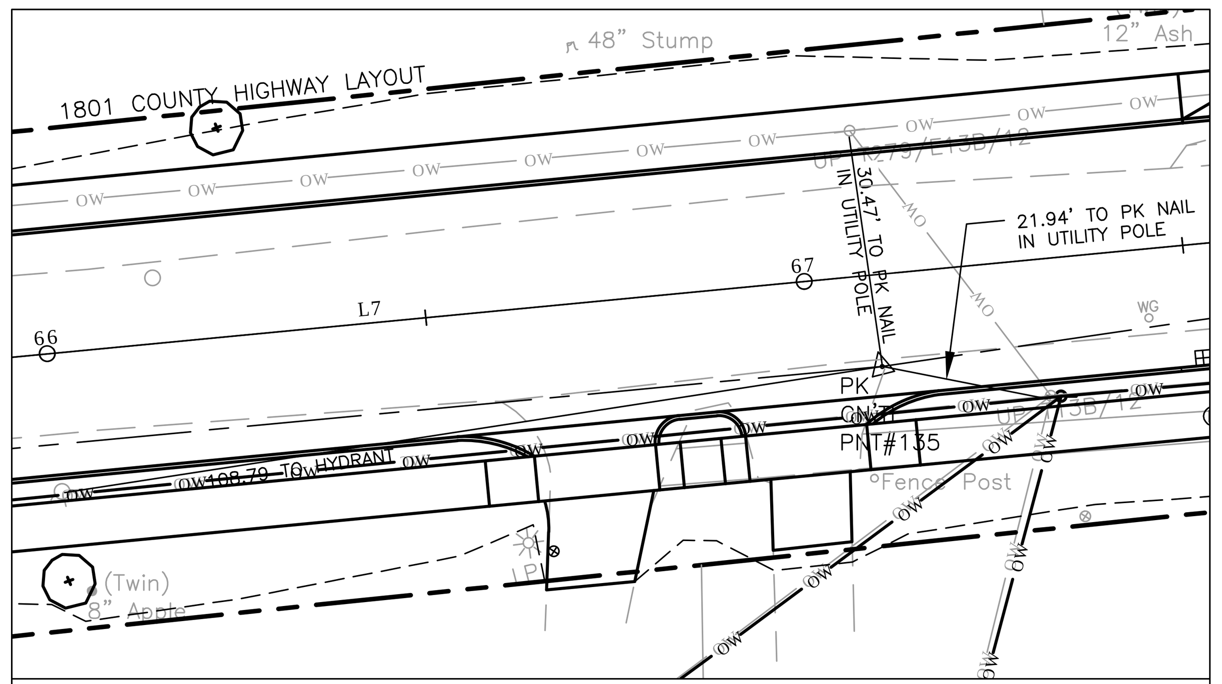
GRADING & TIE PLAN
100% DESIGN SUBMISSION

10-Nov-2017
E2148D10 - SHEET LAYOUTS.DWG

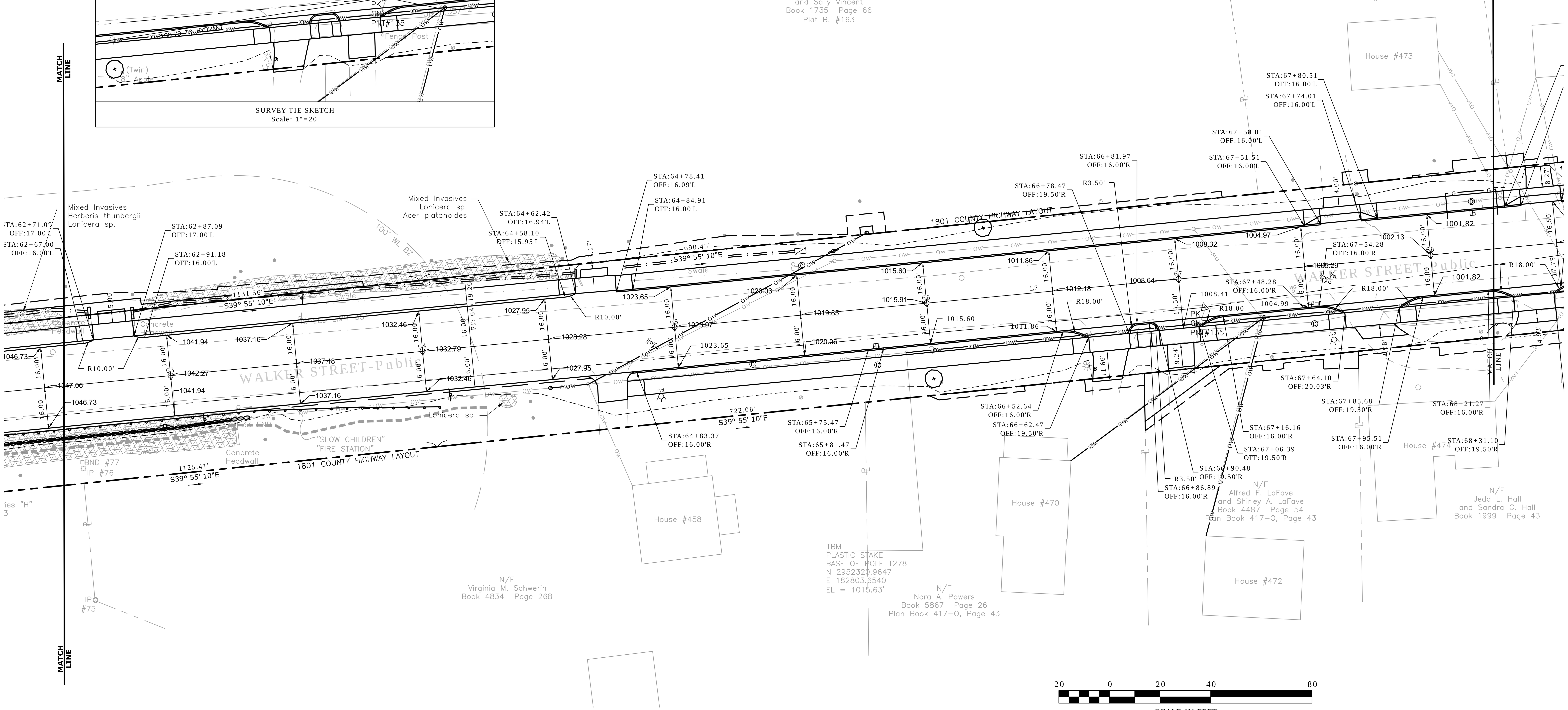
WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L7	64+19.26	2952464.903	182709.391		S39° 27' 37"E 1218.64'	76+37.90	2951524.029	183483.889

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
135	1007.07'	PK	2952233.3945'	182884.2789'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
75	IP	62+61.91	85.40' RT	2952531.9038'	182543.4444'
76	IP	62+62.22	33.21' RT	2952564.9067'	182583.8766'
77	BND	62+62.01	30.69' RT	2952566.6740'	182585.6828'



SURVEY TIE SKETCH
Scale: 1"=20'



CONTINUED ON SHEET 51

CONTINUED ON SHEET 53

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 36 & 37

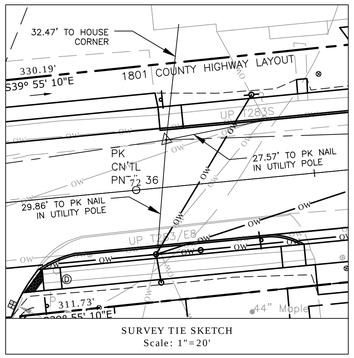
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	53	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



SURVEY TIE SKETCH
Scale: 1"=20'

TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
16	983.36'	PK	2951863.0007'	183221.9396'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
67	IP	73+69.52	29.75' RT	2951712.3296'	183290.3569'
86	IP	73+22.68	32.29' RT	2951746.8835'	183258.6251'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L7	64+19.26	2952464.903	182709.391		S39° 27' 37"E 1218.64'	76+37.90	2951524.029	183483.889

FOR PROFILE: SEE SHEET NO. 37 & 38

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	54	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

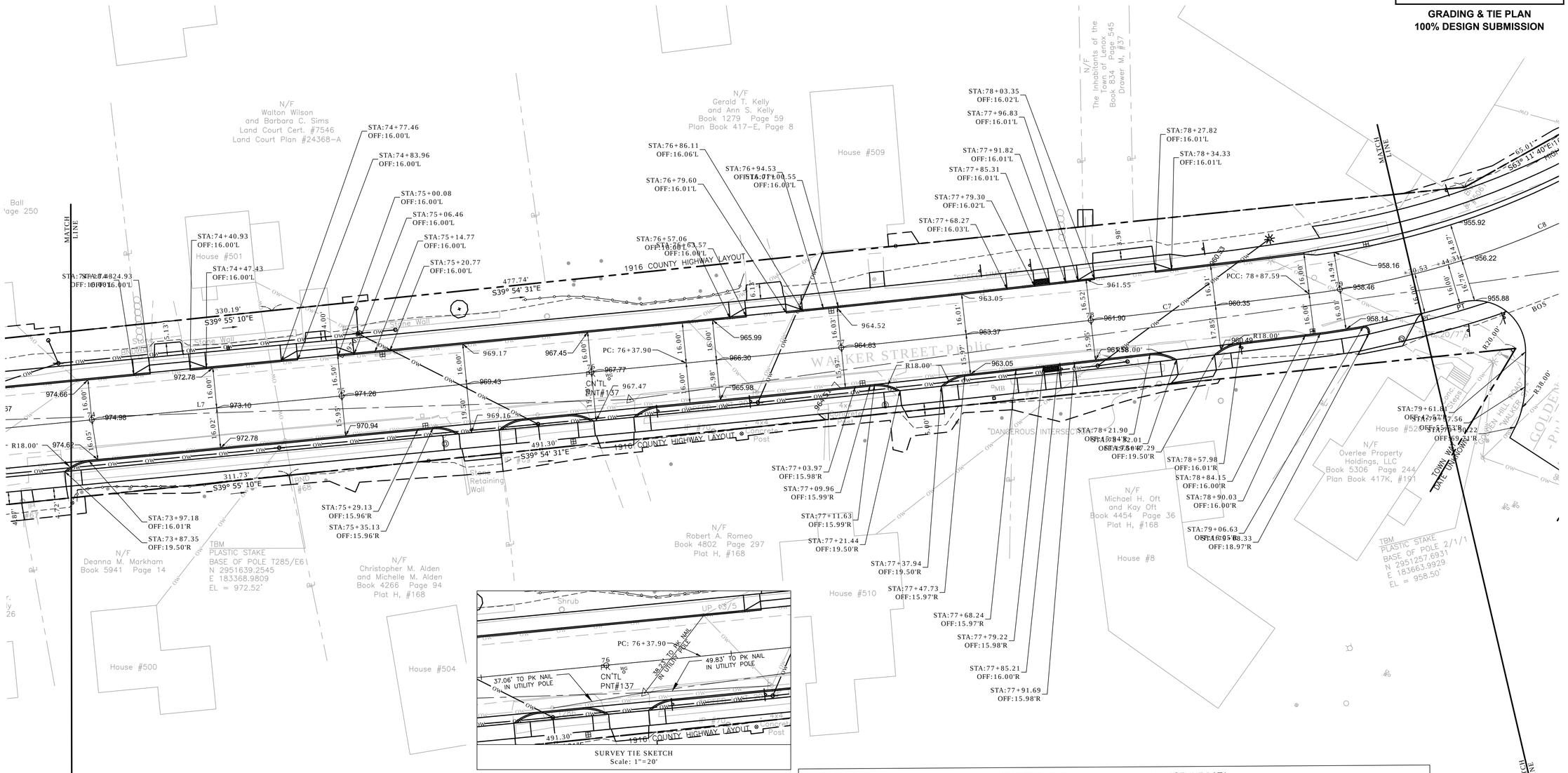


TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
137	967.58'	PK	2951534.4546'	183459.3422'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
67	IP	73+69.52	29.75' RT	2951712.3296'	183290.3569'
68	BND	74+76.16	29.59' RT	2951630.0984'	183358.2518'
69	IP	75+61.26	28.88' RT	2951564.8456'	183412.8866'
70	IP	76+46.11	28.15' RT	2951499.7982'	183467.4139'
71	IP	77+65.52	28.13' RT	2951407.9162'	183544.3228'
5061	BND	79+60.73	27.37' LT	2951306.1367'	183715.5008'

WALKER ST BASELINE CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L7	64+19.26	2952464.903	182709.391		S39° 27' 37"E 1218.64'	76+37.90	2951524.029	183483.889
C7	76+37.90	2951524.029	183483.889	R=8200.00' Δ=1°44'41" L=249.69' T=124.85'		78+87.59	2951333.700	183645.486
C8	78+87.59	2951333.700	183645.486	R=346.80' Δ=33°06'04" L=200.35' T=103.06'		80+87.94	2951228.284	183812.595

FOR PROFILE: SEE SHEET NO. 38 & 39

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	55	199
PROJECT FILE NO.	606462		

GRADING & TIE PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

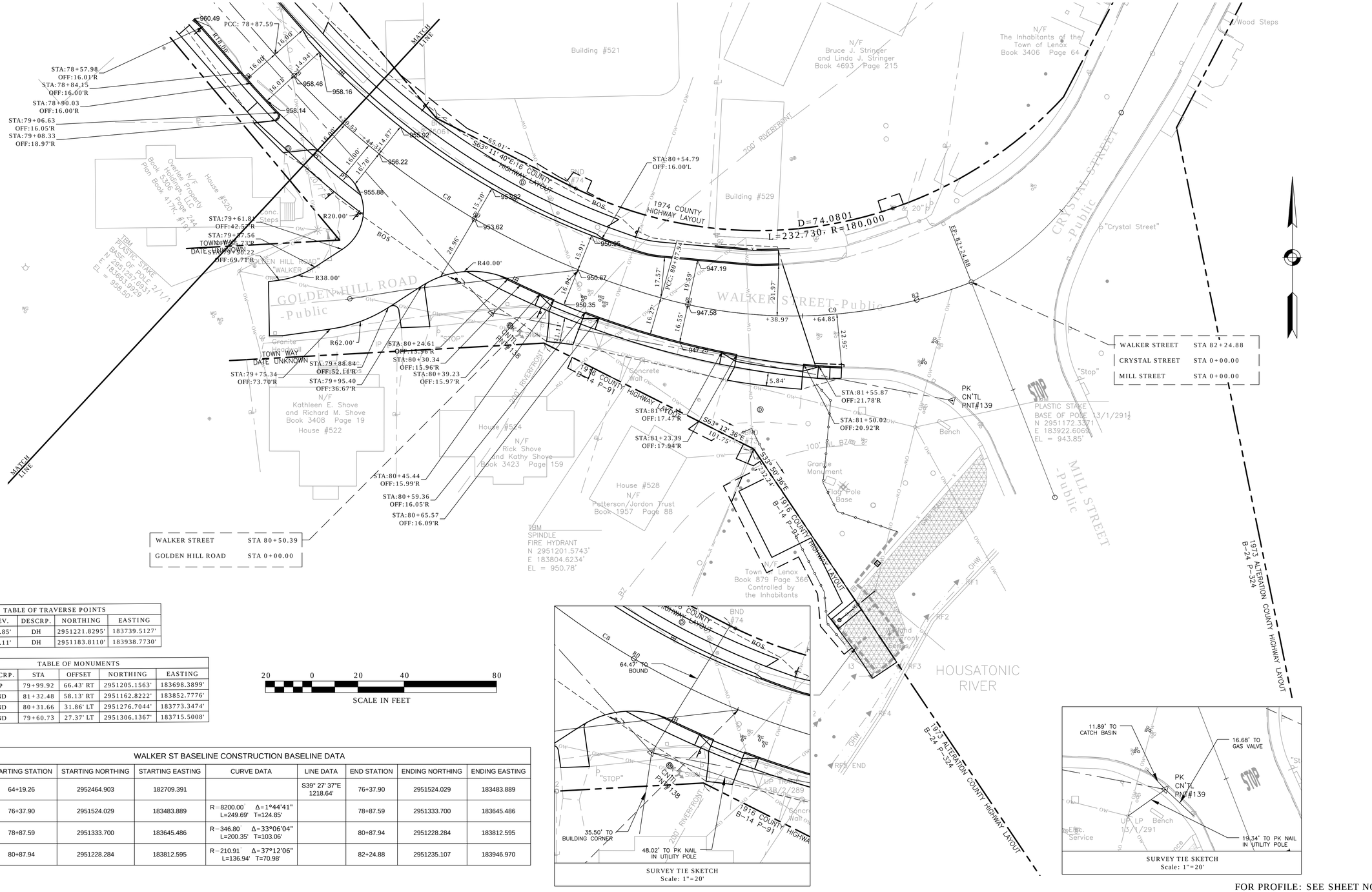


TABLE OF TRAVERSE POINTS				
PNT #	ELEV.	DESCRP.	NORTHING	EASTING
138	952.85'	DH	2951221.8295'	183739.5127'
139	943.11'	DH	2951183.8110'	183938.7730'

TABLE OF MONUMENTS					
PNT #	DESCRP.	STA	OFFSET	NORTHING	EASTING
72	IP	79+99.92	66.43' RT	2951205.1563'	183698.3899'
73	BND	81+32.48	58.13' RT	2951162.8222'	183852.7776'
74	BND	80+31.66	31.86' LT	2951276.7044'	183773.3474'
5061	BND	79+60.73	27.37' LT	2951306.1367'	183715.5008'

20 0 20 40 80
SCALE IN FEET

WALKER ST BASELINE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	STARTING NORTHING	STARTING EASTING	CURVE DATA	LINE DATA	END STATION	ENDING NORTHING	ENDING EASTING
L7	64+19.26	2952464.903	182709.391		S39° 27' 37"E 1218.64'	76+37.90	2951524.029	183483.889
C7	76+37.90	2951524.029	183483.889	R=8200.00' Δ=1°44'41" L=249.69' T=124.85'		78+87.59	2951333.700	183645.486
C8	78+87.59	2951333.700	183645.486	R=346.80' Δ=33°06'04" L=200.35' T=103.06'		80+87.94	2951228.284	183812.595
C9	80+87.94	2951228.284	183812.595	R=210.91' Δ=37°12'06" L=136.94' T=70.98'		82+24.88	2951235.107	183946.970

SURVEY TIE SKETCH
Scale: 1"=20'

SURVEY TIE SKETCH
Scale: 1"=20'

FOR PROFILE: SEE SHEET NO. 37

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

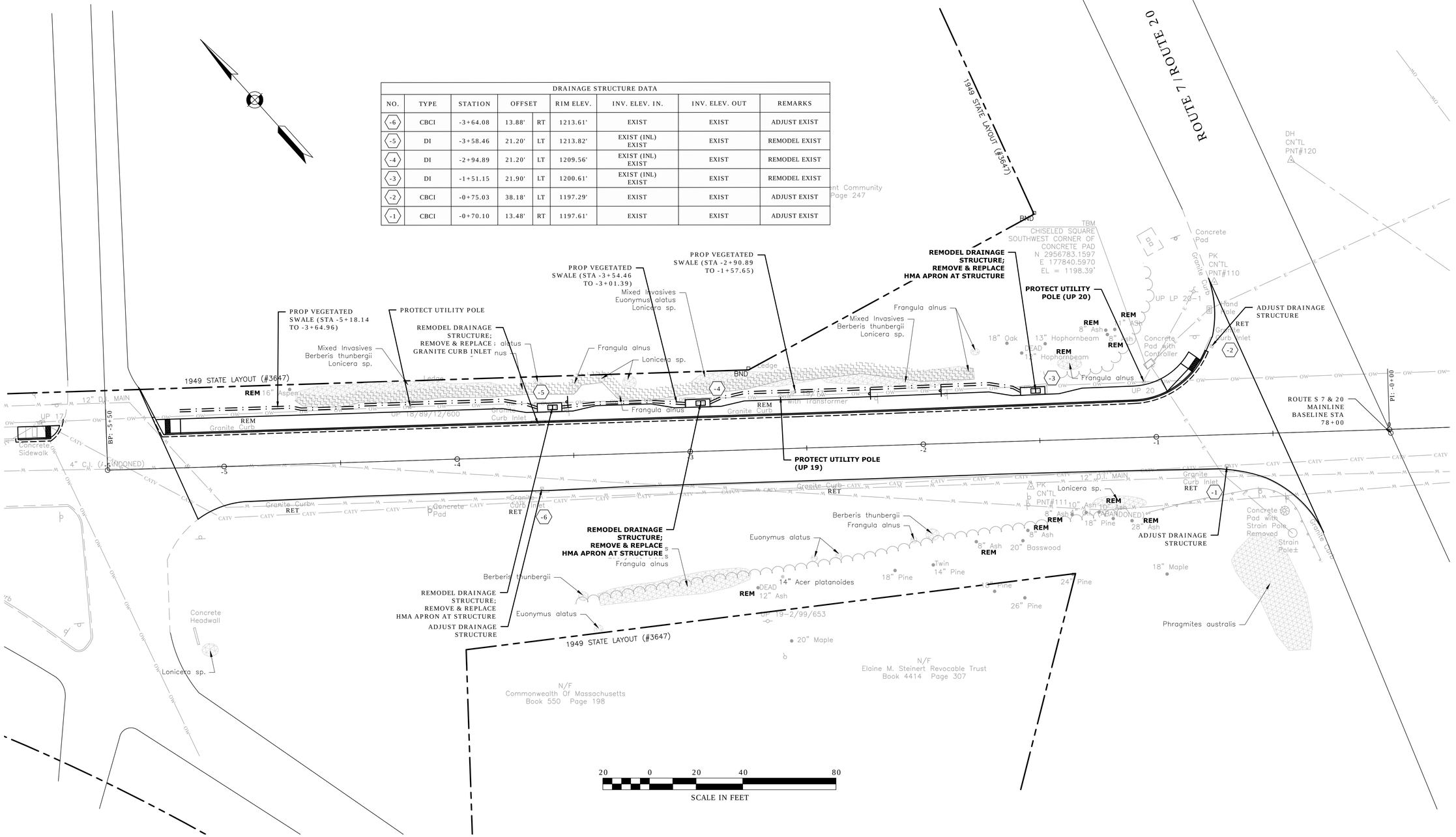
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	56	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
-6	CBCI	-3+64.08	13.88'	RT	1213.61'	EXIST	EXIST	ADJUST EXIST
-5	DI	-3+58.46	21.20'	LT	1213.82'	EXIST (INL) EXIST	EXIST	REMODEL EXIST
-4	DI	-2+94.89	21.20'	LT	1209.56'	EXIST (INL) EXIST	EXIST	REMODEL EXIST
-3	DI	-1+51.15	21.90'	LT	1200.61'	EXIST (INL) EXIST	EXIST	REMODEL EXIST
-2	CBCI	-0+75.03	38.18'	LT	1197.29'	EXIST	EXIST	ADJUST EXIST
-1	CBCI	-0+70.10	13.48'	RT	1197.61'	EXIST	EXIST	ADJUST EXIST



FOR PROFILE: SEE SHEET NO. 23

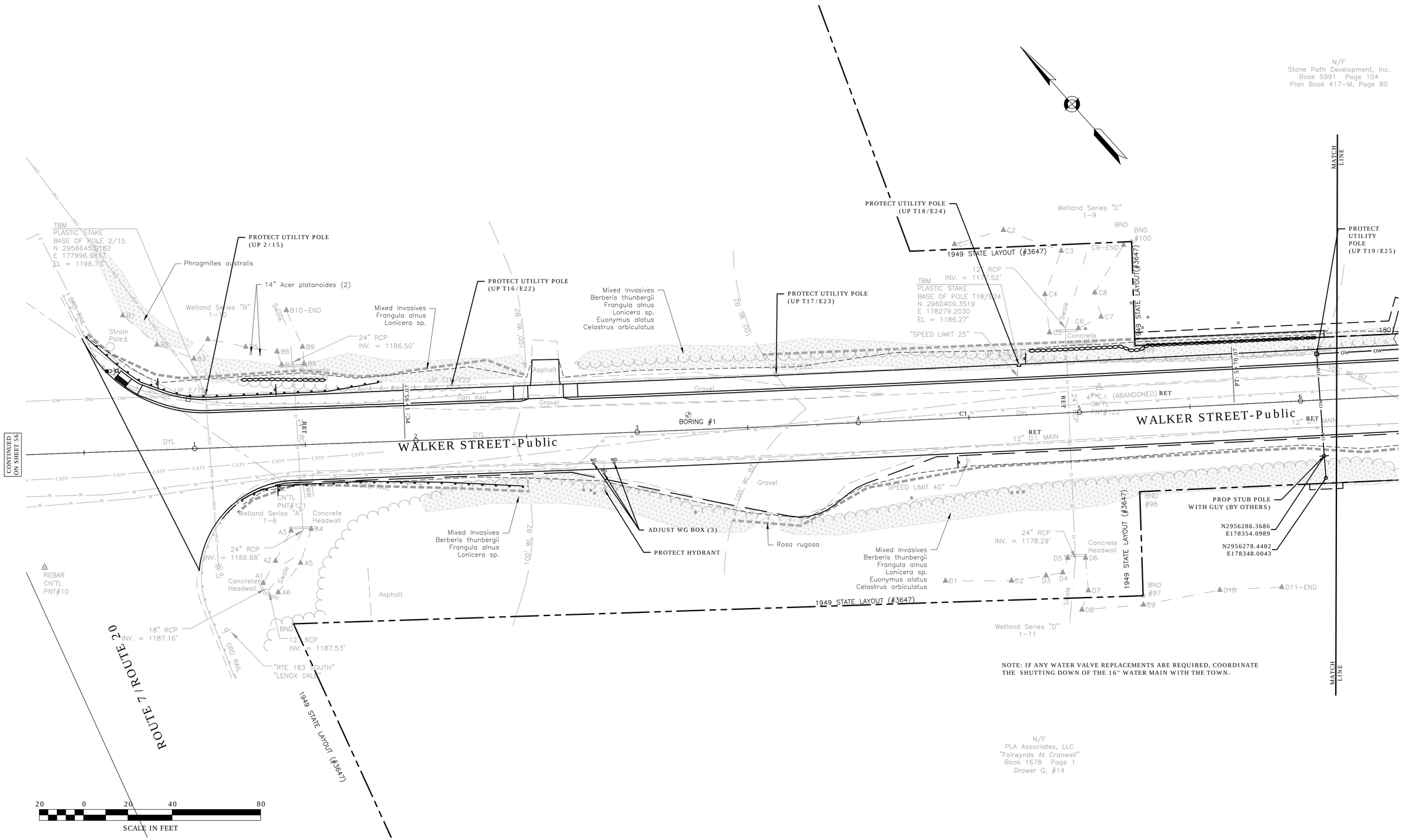
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	57	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 25

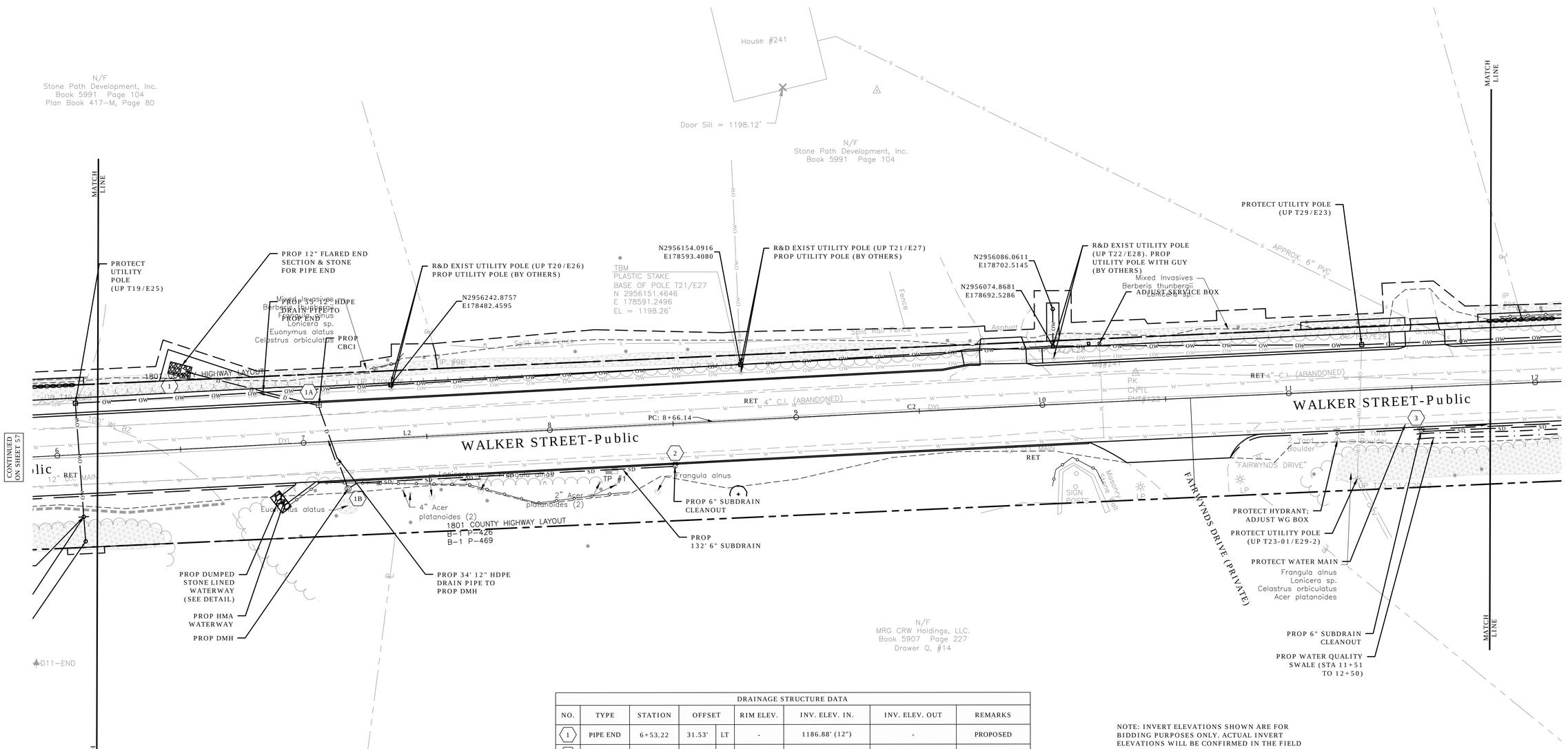
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	58	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
1	PIPE END	6+53.22	31.53'	LT	-	1186.88' (12")	-	PROPOSED
1A	CBCI	7+07.00	15.00'	LT	1191.03'	1187.63' (12")	1187.53' (12")	PROPOSED
1B	DMH	7+17.04	19.50'	RT	1191.68'	1188.30' (6")	1187.80' (12")	PROPOSED
2	SDCO	8+49.95	17.34'	RT	1196.23'	-	1192.73' (6")	PROPOSED
3	SDCO	11+52.97	17.89'	RT	1193.56'	-	1190.06' (6")	PROPOSED

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

FOR PROFILE: SEE SHEET NO. 26

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	59	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

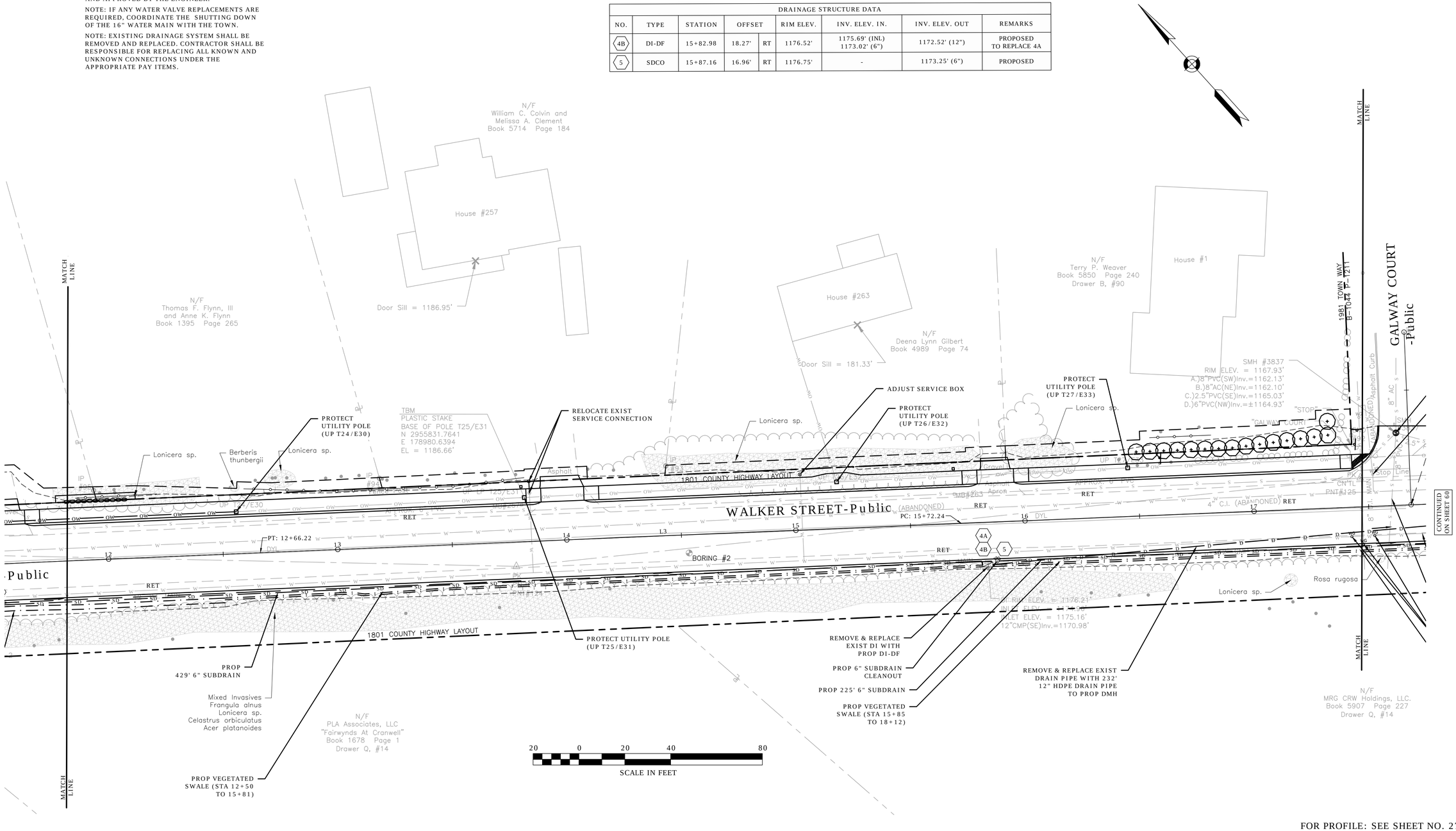
NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
4B	DI-DF	15+82.98	18.27'	RT	1176.52'	1175.69' (INL) 1173.02' (6")	1172.52' (12")	PROPOSED TO REPLACE 4A
5	SDCO	15+87.16	16.96'	RT	1176.75'	-	1173.25' (6")	PROPOSED



FOR PROFILE: SEE SHEET NO. 27

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	60	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
6B	DI-DF	18+14.60	19.35'	RT	1165.01'	1164.18' (INL) 1161.51' (6")	1161.01' (12")	PROPOSED TO REPLACE 6A
7B	DMH	18+17.24	7.47'	RT	1165.89'	1160.81' (12") [4B] 1160.81' (12") [6B]	1160.31' (18")	PROPOSED TO REPLACE 7A
8	DI-DF	19+42.98	25.91'	LT	1159.57'	1158.74' (INL)	1155.57' (12")	PROPOSED
9B	DI-DF	20+24.96	26.04'	LT	1156.57'	-	1152.57' (12")	PROPOSED TO REPLACE 9A
10	DMH	20+16.22	7.49'	RT	1157.82'	1153.82' (12") [8] 1152.93' (12") [11B] 1151.91' (12") [9B] 1151.41' (18")	1151.31' (18")	PROPOSED
11	SDCO	18+18.94	17.95'	RT	1165.29'	-	1161.79' (6")	PROPOSED
11B	DI-DF	20+15.12	18.06'	RT	1157.11'	1156.28' (INL) 1153.61' (6")	1153.11' (12")	PROPOSED TO REPLACE 11A
12	SDCO	20+19.42	17.08'	RT	1157.47'	-	1153.97' (6")	PROPOSED

STA 17+68.36	WALKER STREET
STA 0+00.00	GALWAY COURT

GALWAY COURT -Public

WALKER STREET-Public

1801 COUNTY HIGHWAY LAYOUT

1981 TOWN WAY B-1044 P-1211

MATCH LINE

CONTINUED ON SHEET 59

CONTINUED ON SHEET 61

N/F
Richard T. Fairfield Revocable Trust of 2008
and Virginia H. Fairfield Revocable Trust of 2008
Book 4090 Page 106
Drawer B, #90

N/F
Dori Laub, Trustee
Dori Laub Revocable Trust
Book 5651 Page 52

N/F
Francois Thomas and
Nadzeya V. Kurnevich-Thomas
Book 5271 Page 118
Drawer H, #7

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14

House #279
House #287
House #295

Door Sill = 1164.11'
Door Sill = 1157.29'
Door Sill = 1152.29'

ADJUST SANITARY SEWER STRUCTURE
CLOSE EXIST 4" WG; R&D WG BOX; FILL WITH SAND
PROTECT SEWER
PROTECT UTILITY POLE (UP LP T28/E34)
PROP VEGETATED SWALE (STA 18+49 TO 19+41)
ADJUST SERVICE BOX
PROP DI-DF
PROP 78' 12" HDPE DRAIN PIPE TO PROP DMH
PROTECT UTILITY POLE (UP T30/E36)
PROP DI-DF
RELOCATE EXIST SERVICE CONNECTION
PROTECT UTILITY POLE (UP LP T31/E37)
TBM
PLASTIC STAKE
BASE OF POLE T31/E37
N 2955351.4877
E 179566.2287
EL = 1154.24'
Mixed Invasives
Frangula alnus
Lonicera sp.
Eu
PROTECT UTILITY POLE (UP T32/E38)
PROP 33' 12" HDPE DRAIN PIPE TO PROP DMH
R&D EXIST CBCI
CBCI # 4018
RIM ELEV. = 1156.87'
A.) 2"RCP(SW)Inv.=1153.03'
R&R
PROTECT WATER MAIN
PROTECT SEWER
ADJUST WG BOX (3)
PROP VEGETATED SWALE (STA 15+85 TO 18+12)
R&D EXIST DMH
PROP DMH
PROP 6" SUBDRAIN CLEANOUT
PROP 10' 12" HDPE DRAIN PIPE TO PROP DMH
REMOVE & REPLACE EXIST DI WITH PROP DI-DF
PROP 197' 18" HDPE DRAIN PIPE TO PROP DMH
PROP 194' 6" SUBDRAIN
PROP WATER QUALITY SWALE (STA 18+17 TO 23+94)
PROTECT EXIST UTILITIES
VERIFY YARD DRAIN OPERATION; PROTECT/CONNECT AS APPROPRIATE
PROP 376' 6" SUBDRAIN
PROP DMH
PROP 6" SUBDRAIN CLEANOUT
PROP 9' 12" HDPE DRAIN PIPE TO PROP DMH
REMOVE & REPLACE EXIST DI WITH PROP DI-DF
PROTECT HYDRANT; ADJUST WG BOX
PROP JUTE MESH WATERWAY (STA 20+17 TO 23+94)
PROP 384' 18" HDPE DRAIN PIPE TO PROP DMH
POSSIBLE INLET
INV. = 1148.86'
VERIFY AND PROTECT OR ADJUST AS REQUIRED

DMH # 3867
RIM ELEV. = 1165.17'
A.)12"RCP(NW)Inv.=1159.85'
B.)15"RCP(NW)Inv.=1160.22'
C.)15"RCP(SE)Inv.=1159.95'

CBCI RIM ELEV. = 1156.09'
INLET ELEV. = 1155.05'
2"RCP(NE)Inv.=1151.86'
8"RCP(SE)Inv.=1151.52'

INLET ELEV. = 1164.83'
INLET ELEV. = 1163.59'
INLET ELEV. = 1163.60'
12"CMP(NE)Inv.=1161.38'
12"RCP(SE)Inv.=1160.44'

4" CMP
INV. = 1156.13
4" CMP
INV. = 1155.94'

YARD DRAIN

APPROX. 2.5" PVC

14" Ac platanoides
Rosa rugosa
Lonicera sp.

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 28

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

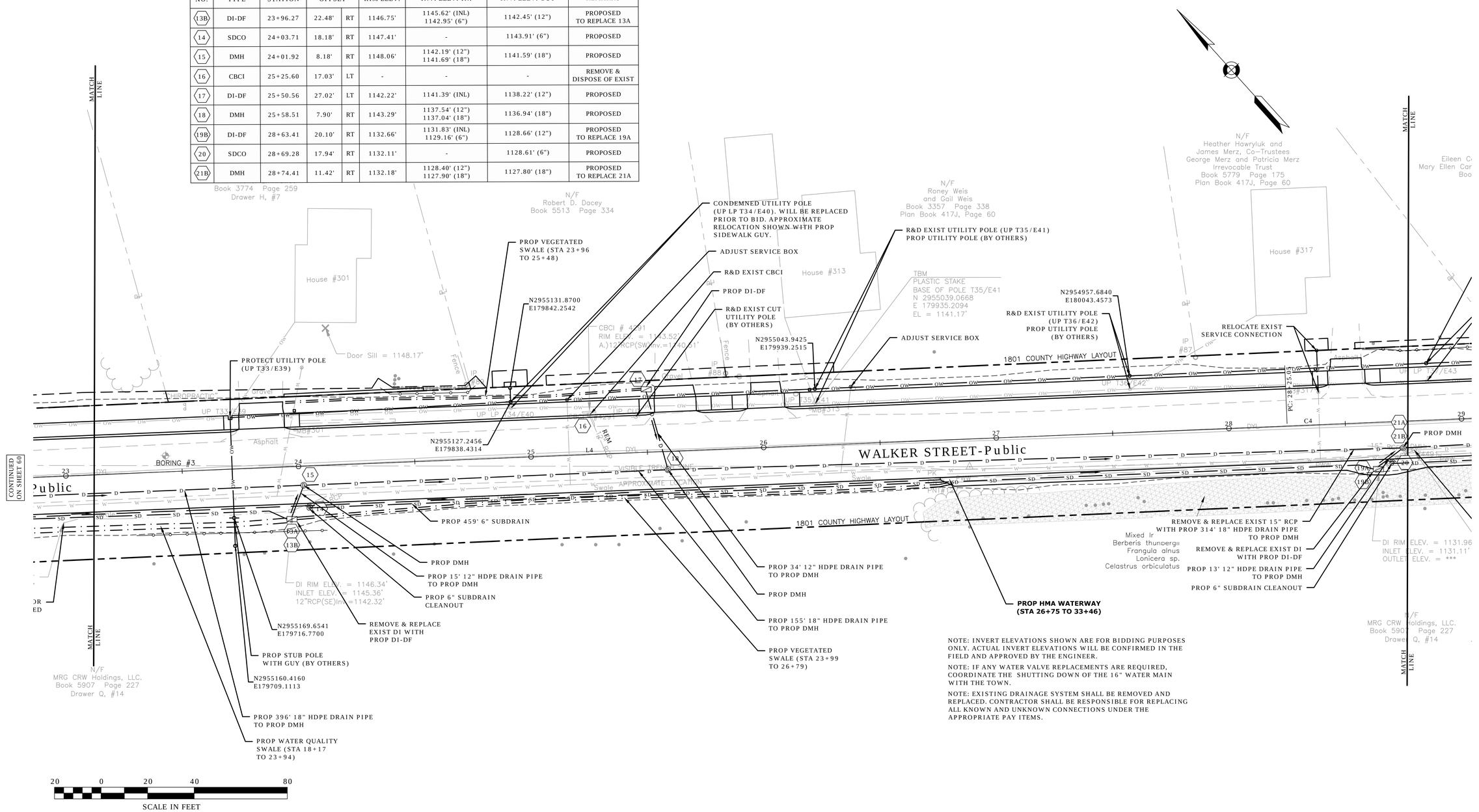
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	61	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
13B	DI-DF	23+96.27	22.48'	RT	1146.75'	1145.62' (INL) 1142.95' (6")	1142.45' (12")	PROPOSED TO REPLACE 13A
14	SDCO	24+03.71	18.18'	RT	1147.41'	-	1143.91' (6")	PROPOSED
15	DMH	24+01.92	8.18'	RT	1148.06'	1142.19' (12") 1141.69' (18")	1141.59' (18")	PROPOSED
16	CBCI	25+25.60	17.03'	LT	-	-	-	REMOVE & DISPOSE OF EXIST
17	DI-DF	25+50.56	27.02'	LT	1142.22'	1141.39' (INL)	1138.22' (12")	PROPOSED
18	DMH	25+58.51	7.90'	RT	1143.29'	1137.54' (12") 1137.04' (18")	1136.94' (18")	PROPOSED
19B	DI-DF	28+63.41	20.10'	RT	1132.66'	1131.83' (INL) 1129.16' (6")	1128.66' (12")	PROPOSED TO REPLACE 19A
20	SDCO	28+69.28	17.94'	RT	1132.11'	-	1128.61' (6")	PROPOSED
21B	DMH	28+74.41	11.42'	RT	1132.18'	1128.40' (12") 1127.90' (18")	1127.80' (18")	PROPOSED TO REPLACE 21A



NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

FOR PROFILE: SEE SHEET NO. 27 & 28

DESIGNED BY: SAM
DRAFTED BY: MAU/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	62	199
PROJECT FILE NO.	606462		

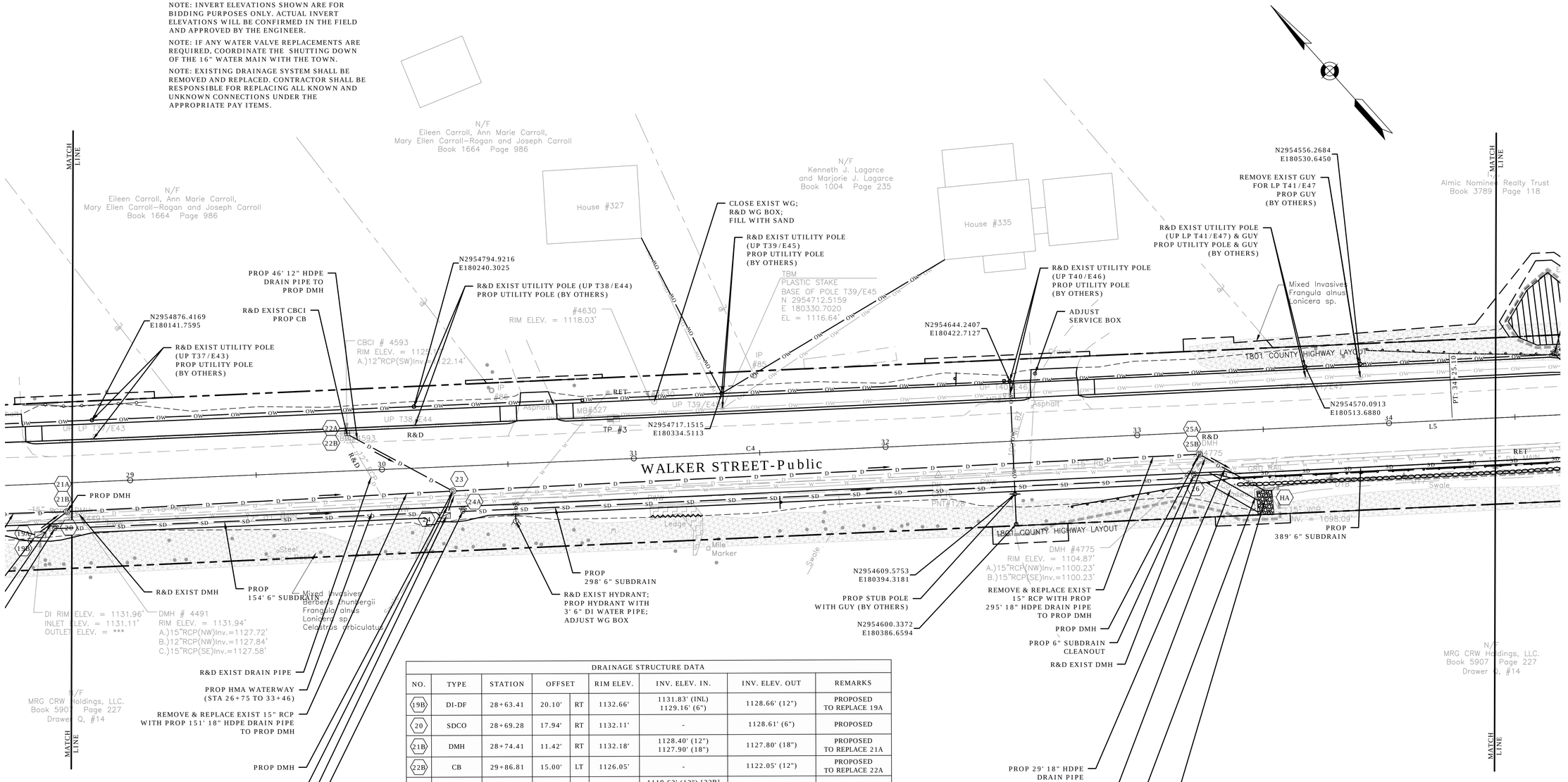
UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.



DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
19B	DI-DF	28+63.41	20.10'	RT	1132.66'	1131.83' (INL) 1129.16' (6")	1128.66' (12")	PROPOSED TO REPLACE 19A
20	SDCO	28+69.28	17.94'	RT	1132.11'	-	1128.61' (6")	PROPOSED
21B	DMH	28+74.41	11.42'	RT	1132.18'	1128.40' (12") 1127.90' (18")	1127.80' (18")	PROPOSED TO REPLACE 21A
22B	CB	29+86.81	15.00'	LT	1126.05'	-	1122.05' (12")	PROPOSED TO REPLACE 22A
23	DMH	30+27.73	9.75'	RT	1123.65'	1119.62' (12") [22B] 1119.62' (12") [24] 1119.12' (18")	1119.02' (18")	PROPOSED
24	DI-DF	30+24.09	19.25'	RT	1123.78'	1122.95' (INL) 1120.28' (6")	1119.78' (12")	PROPOSED
24A	SDCO	30+31.30	17.99'	RT	1123.35'	-	1119.85'	PROPOSED
25B	DMH	33+24.25	8.71'	RT	1105.73'	1102.23' (6") 1101.23' (18")	1101.13' (18")	PROPOSED TO REPLACE 25A
26	SDCO	33+21.56	17.05'	RT	1105.67'	-	1102.17' (6")	PROPOSED
HA	HWALL	33+50.10	23.54'	RT	-	-	1099.60 (18")	EXIST TO REMAIN

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 30 & 31

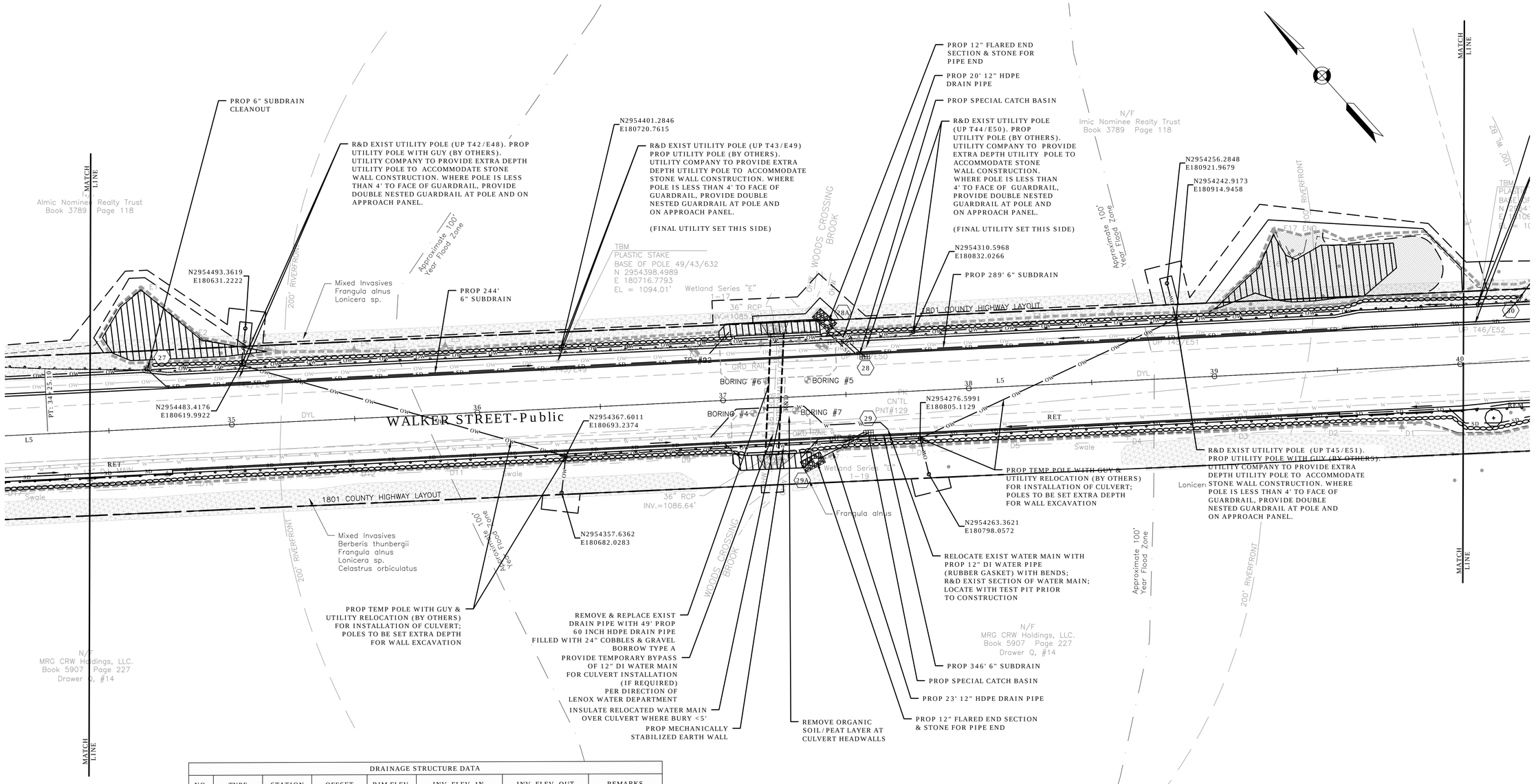
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	63	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
27	SDCO	34+66.86	24.13'	LT	1099.07'	-	1095.57' (6")	PROPOSED
28	SPECIAL CB	37+58.35	15.00'	LT	1093.91'	-	1091.88' (12")	PROPOSED
28A	PIPE END	37+45.11	24.69'	LT	-	1091.31' (12")	-	PROPOSED
29	SPECIAL CB	37+58.35	16.00'	RT	1093.89'	-	1091.66' (12")	PROPOSED
29A	PIPE END	37+42.63	19.56'	RT	-	1089.14' (12")	-	PROPOSED
30	SDCO	40+25.00	25.11'	LT	1098.04'	-	1094.54' (6")	PROPOSED

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

FOR PROFILE: SEE SHEET NO. 30 & 31

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	64	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

14-Nov-2017

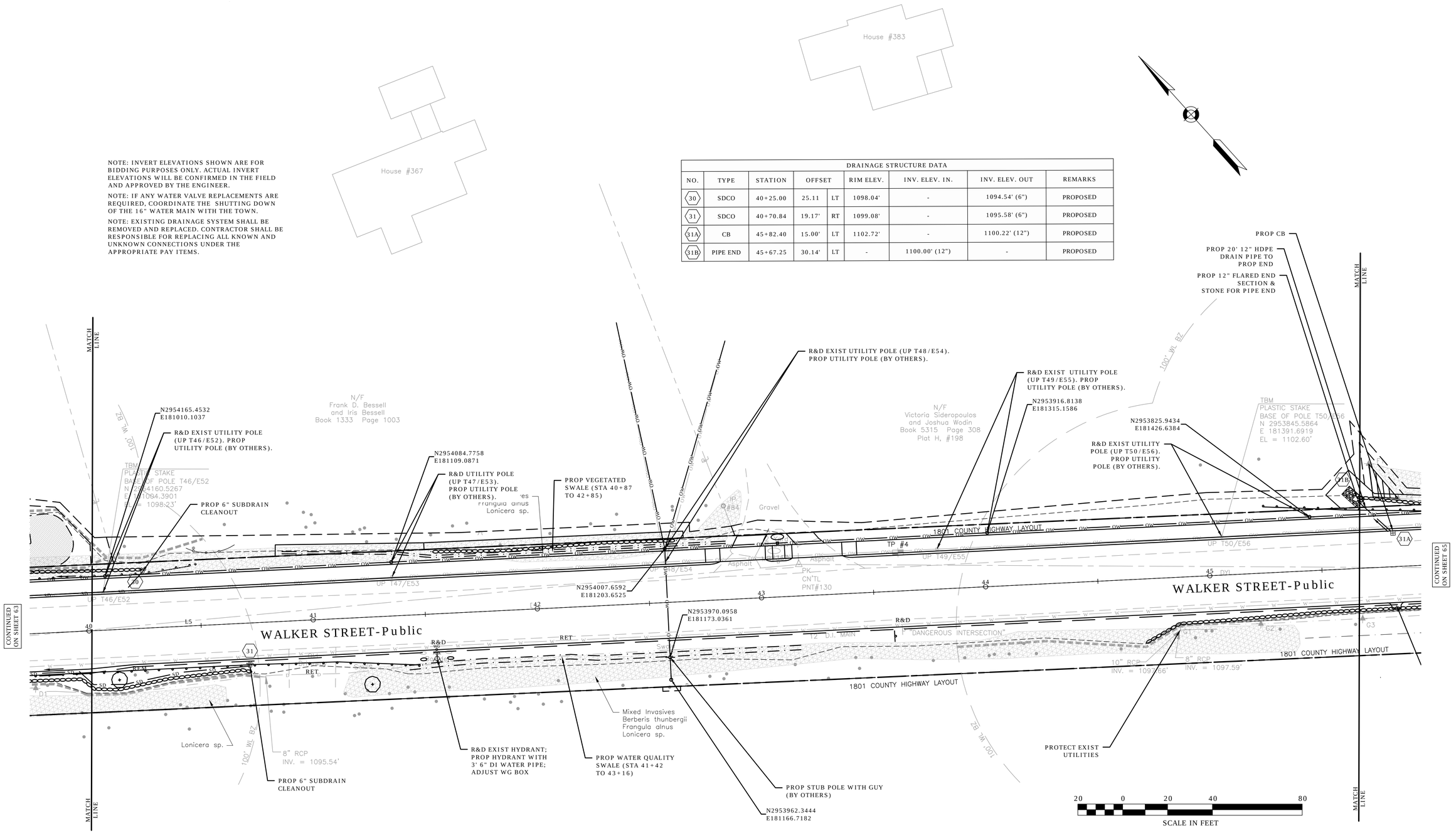
E2148D10 - SHEET LAYOUTS.DWG

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
30	SDCO	40+25.00	25.11	LT	1098.04'	-	1094.54' (6")	PROPOSED
31	SDCO	40+70.84	19.17'	RT	1099.08'	-	1095.58' (6")	PROPOSED
31A	CB	45+82.40	15.00'	LT	1102.72'	-	1100.22' (12")	PROPOSED
31B	PIPE END	45+67.25	30.14'	LT	-	1100.00' (12")	-	PROPOSED



FOR PROFILE: SEE SHEET NO. 32 & 33

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	65	199
PROJECT FILE NO.		606462	

UTILITY PLAN
100% DESIGN SUBMISSION

14-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

WALKER STREET STA 48+52.32

EAST STREET STA 0+00.00

WALKER STREET STA 48+77.45

BLANTYRE ROAD STA 0+00.00

MATCH LINE

CONTINUED ON SHEET 64

CONTINUED ON SHEET 66

EAST STREET-Public

WALKER STREET-Public

BLANTYRE ROAD-Public

ST. ANDREWS CT.- Private (a.k.a. Patterson Road-DISCONTINUED in 1956)

1801 COUNTY HIGHWAY LAYOUT

N2953728.2971
E181652.3346

PROP UTILITY POLE (BY OTHERS)

ADJUST WG BOX (2)

PROP PUSH POLE (BY OTHERS)

N2953732.3799
E181627.6703

N2953741.0118
E181544.6436

R&D EXIST UTILITY POLE (UP T51/E57). PROP UTILITY POLE & GUYS (BY OTHERS).

R&D EXIST UTILITY POLE (UP T52/E58) AND GUYS (BY OTHERS)

R&D EXIST UTILITY POLE (UP T265/E18) (BY OTHERS)

R&D EXIST UTILITY POLE (UP T266/E59) & GUYS (BY OTHERS)

HEADWALL TO REMAIN

PROTECT DRAIN

PROP DMH

PROP 105' 12" HDPE DRAIN PIPE TO PROP DMH

PROP CBCI

PROP GAS MAIN RELOCATION AROUND PROP CBCI (BY OTHERS). LOCATE GAS MAIN AND WATER MAIN WITH TEST PITS PRIOR TO CONSTRUCTION.

N2953728.7622
E181545.8813

N2953735.0686
E181538.1172

N2953608.7789
E181634.9162

N2953440.2301
E181826.0158

N2953512.6603
E181734.0254

N2953427.0975
E181815.2207

N2953600.9419
E181621.9000

N2953592.3260
E181612.1651

ADJUST WG BOX

ADJUST WG BOX (4)

PROP UTILITY POLE WITH LIGHT AND GUY (BY OTHERS). PROTECT BURIED WATER MAINS

PROP HMA WATERWAY (STA 45+82.4); GRAVEL & PAVE OVER TOP OF WALL

R&D EXIST UTILITY POLE (UP T267/E60) PROP UTILITY POLE (BY OTHERS)

R&D EXIST UTILITY POLE (UP T268/E61) PROP UTILITY POLE WITH PUSH POLE (BY OTHERS)

ADJUST GAS BOX (2) (BY OTHERS)

PROTECT UP 60-2-1S

PROTECT UP 17-50/1

N/F Victoria Sideropoulos and Joshua Wodin Book 5315 Page 308 Plat H, #198

N/F Paul T. Giardina Book 5082 Page 287

N/F Brian W. Smith and Verena Kribale-Smith Book 6019 Page 14

N/F MRG CRW Holdings, LLC. Book 5907 Page 227 Drawer Q, #14

N/F Cranwell Realty Nominee Trust 'Coldbrooke East' Book 1164 Page 826 Drawer O, #3

House #4

House #403

Wetland Series "F" 1-12

Wetland Series "G" 1-12

Phragmites australis

Frangula alnus

Mixed Invasives Frangula alnus

Euonymus alatus

Berberis thunbergii

Lonicera sp.

Celastrus orbiculatus

"HIDDEN DRIVE"

10" CMP INV. = 1101.91'

3" PVC INV. = 1102.47'

15" RCP INV. = 1102.92'

12" CPP INV. = 1102.83'

12" CPP INV. = 1103.6'

APPROX. LOC. OF BND FOUND (1980)

TOWN WAY DATE UNKNOWN

Approx. Asphalt Edge

6" Intermediate Coated Steel

Concrete Headwall

Gravel

Boulder

Asphalt

R&D

RET

DYL

AC

CONC

SIGN

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
31A	CB	45+82.40	15.00'	LT	1102.72'	-	1100.22' (12")	PROPOSED
31B	PIPE END	45+67.25	30.14'	LT	-	1100.00' (12")	-	PROPOSED
32	DMH	49+30.45	5.67'	LT	1106.60'	1102.53' (12") 1102.28' (15")	1101.25' (15")	PROPOSED
33	CBCI	50+36.07	15.00'	LT	1107.71'	-	1103.71' (12")	PROPOSED
HB	HWALL	49+18.10	23.56'	LT	-	-	1101.88' (15")	EXIST TO REMAIN

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

20 0 20 40 80

SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 33 & 34

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	66	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

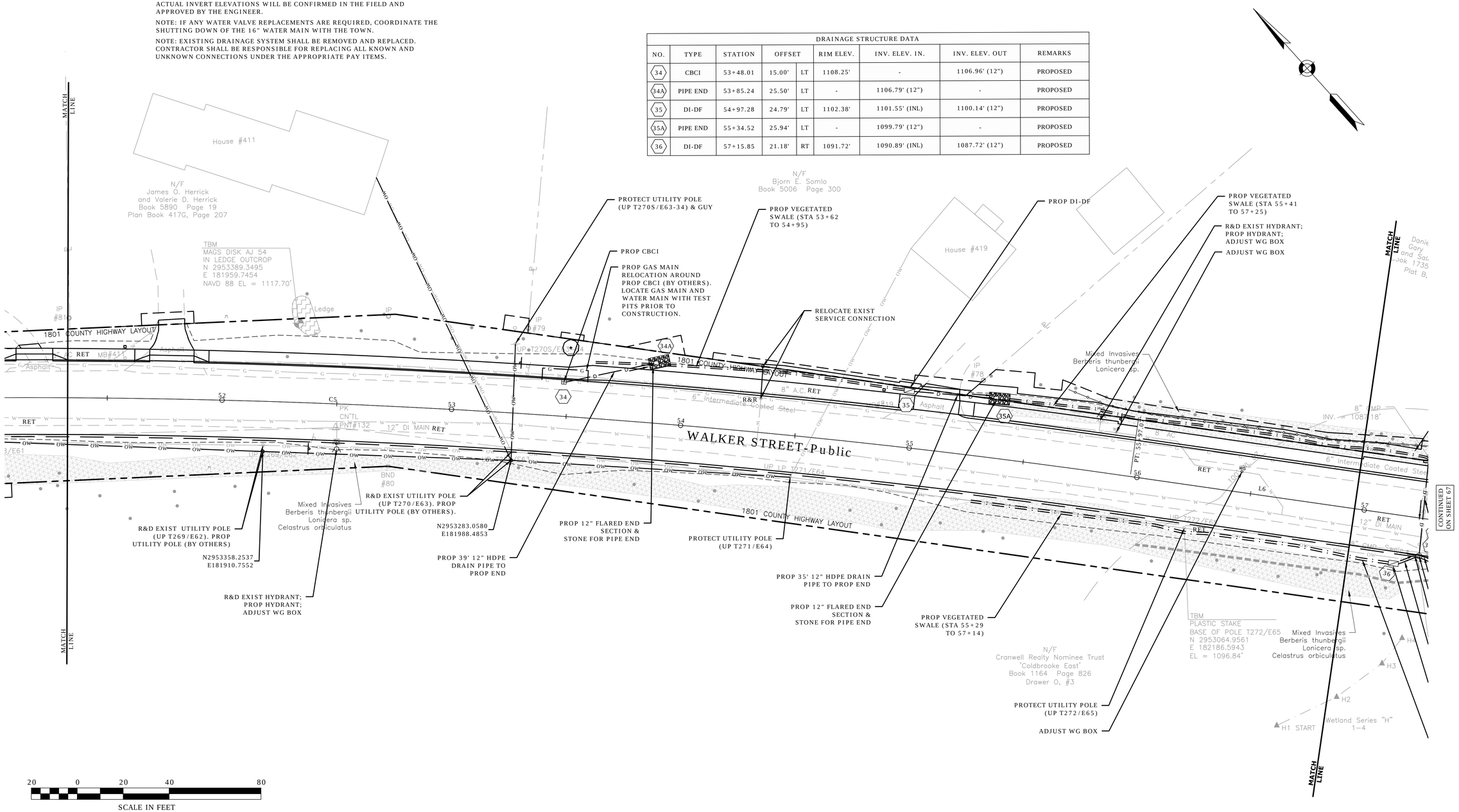
NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
34	CBCI	53+48.01	15.00'	LT	1108.25'	-	1106.96' (12")	PROPOSED
34A	PIPE END	53+85.24	25.50'	LT	-	1106.79' (12")	-	PROPOSED
35	DI-DF	54+97.28	24.79'	LT	1102.38'	1101.55' (INL)	1100.14' (12")	PROPOSED
35A	PIPE END	55+34.52	25.94'	LT	-	1099.79' (12")	-	PROPOSED
36	DI-DF	57+15.85	21.18'	RT	1091.72'	1090.89' (INL)	1087.72' (12")	PROPOSED



FOR PROFILE: SEE SHEET NO. 34 & 35

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

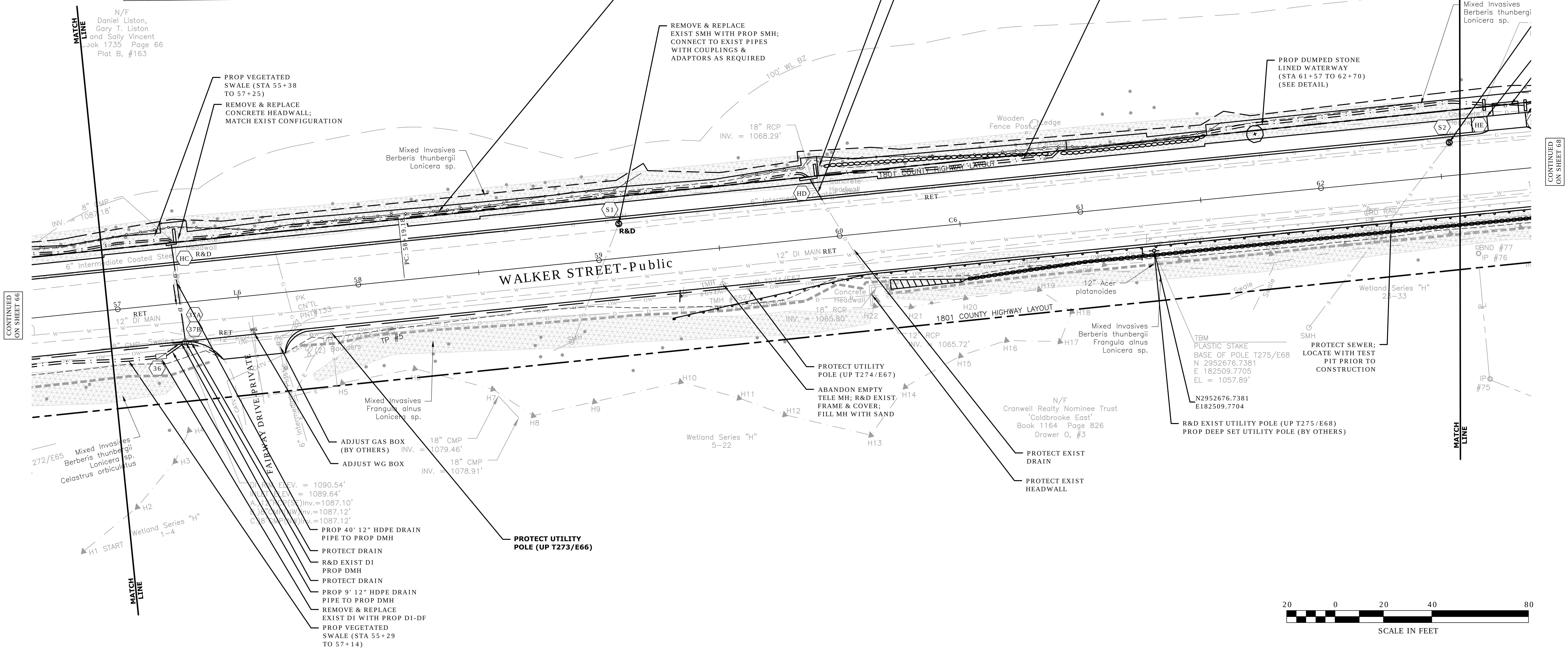
DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
36	DI-DF	57+15.85	21.18'	RT	1091.72'	1090.89' (INL)	1087.72' (12")	PROPOSED
37B	DMH	57+26.47	16.42'	RT	1091.71'	1087.20' (12") [36] 1087.20' (12") [HC] 1087.12' (8")	1087.10' (12")	PROPOSED TO REPLACE 37A
HC	HWALL	57+24.74	24.31'	LT	-	1089.58' (12")	-	PROPOSED TO REPLACE EXIST
HD	HWALL	59+90.07	24.55'	LT	-	1068.55' (12")	-	PROPOSED TO REPLACE EXIST
HE	HWALL	62+70.90	27.77'	LT	-	1041.44' (12")	-	PROPOSED TO REPLACE EXIST

SANITARY SEWER STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
S1	SMH	59+09.62	14.20'	LT	1078.83	EXIST (8")	EXIST (8")	PROPOSED TO REPLACE EXIST
S2	SMH	62+54.59	13.72'	LT	1046.34	EXIST (8") EXIST (8")	EXIST (8")	PROPOSED TO REPLACE EXIST

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.



20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 35 & 36

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	68	199
PROJECT FILE NO.	606462		

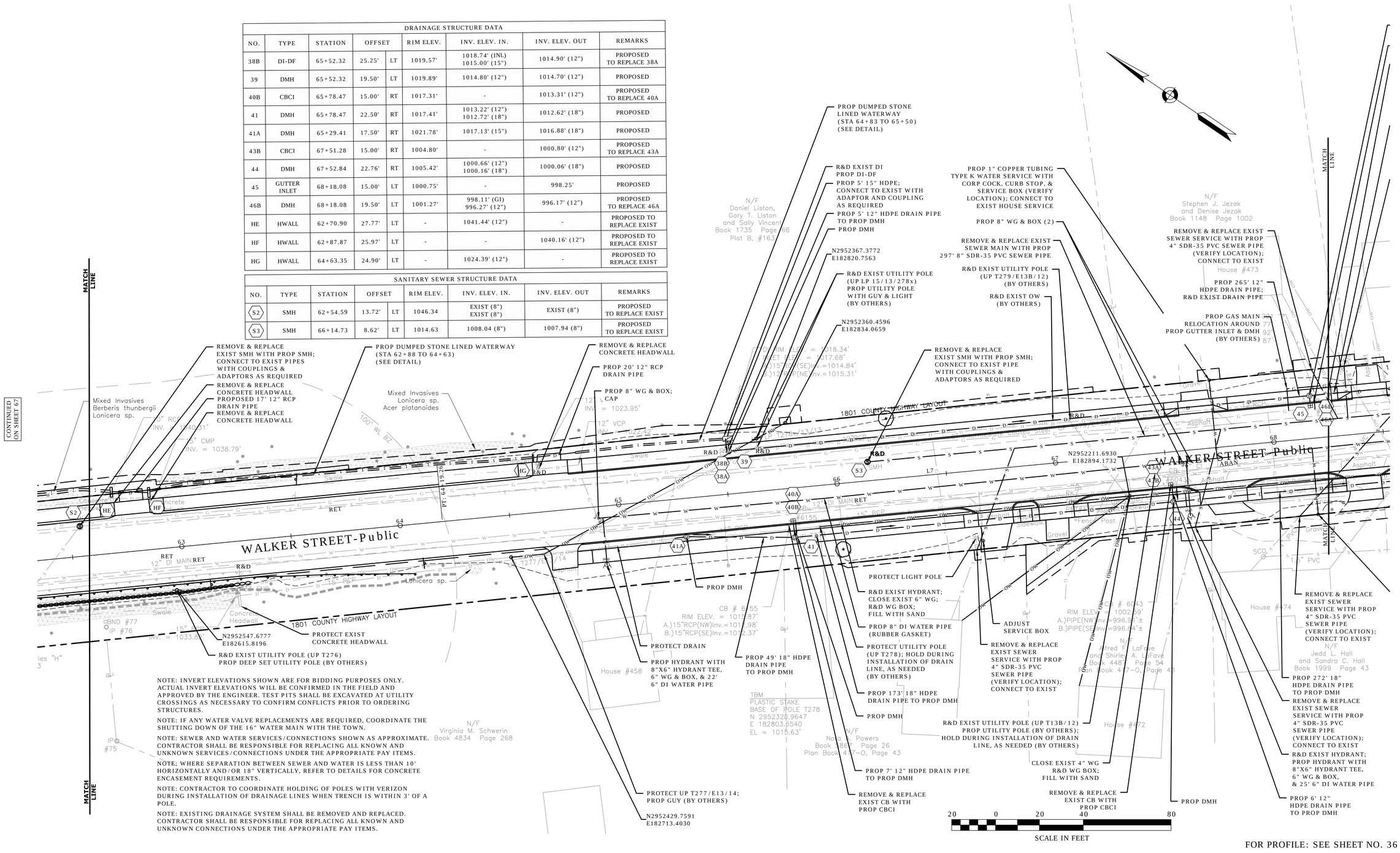
UTILITY PLAN
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
38B	DI-DF	65+52.32	25.25'	LT	1019.57'	1018.74' (INL) 1015.00' (15")	1014.90' (12")	PROPOSED TO REPLACE 38A
39	DMH	65+52.32	19.50'	LT	1019.89'	1014.80' (12")	1014.70' (12")	PROPOSED
40B	CBCI	65+78.47	15.00'	RT	1017.31'	-	1013.31' (12")	PROPOSED TO REPLACE 40A
41	DMH	65+78.47	22.50'	RT	1017.41'	1013.22' (12") 1012.72' (18")	1012.62' (18")	PROPOSED
41A	DMH	65+29.41	17.50'	RT	1021.78'	1017.13' (15")	1016.88' (18")	PROPOSED
43B	CBCI	67+51.28	15.00'	RT	1004.80'	-	1000.80' (12")	PROPOSED TO REPLACE 43A
44	DMH	67+52.84	22.76'	RT	1005.42'	1000.66' (12") 1000.16' (18")	1000.06' (18")	PROPOSED
45	GUTTER INLET	68+18.08	15.00'	LT	1000.75'	-	998.25'	PROPOSED
46B	DMH	68+18.08	19.50'	LT	1001.27'	998.11' (GI) 996.27' (12")	996.17' (12")	PROPOSED TO REPLACE 46A
HE	HWALL	62+70.90	27.77'	LT	-	1041.44' (12")	-	PROPOSED TO REPLACE EXIST
HF	HWALL	62+87.87	25.97'	LT	-	-	1040.16' (12")	PROPOSED TO REPLACE EXIST
HG	HWALL	64+63.35	24.90'	LT	-	1024.39' (12")	-	PROPOSED TO REPLACE EXIST

SANITARY SEWER STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
S2	SMH	62+54.59	13.72'	LT	1046.34	EXIST (8") EXIST (8")	EXIST (8")	PROPOSED TO REPLACE EXIST
S3	SMH	66+14.73	8.62'	LT	1014.63	1008.04 (8")	1007.94 (8")	PROPOSED TO REPLACE EXIST



FOR PROFILE: SEE SHEET NO. 36 & 37

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

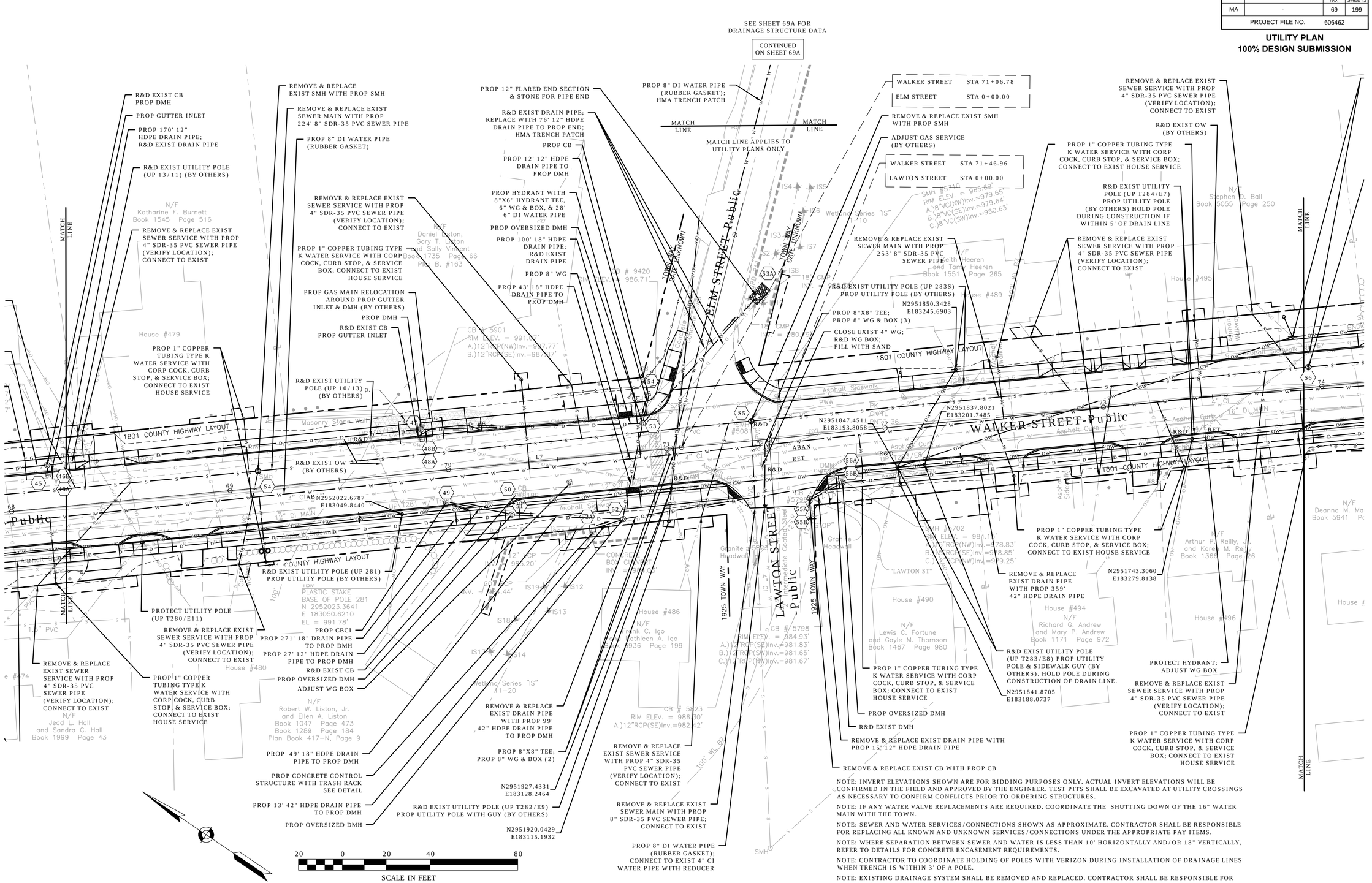
MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	69	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER. TEST PITS SHALL BE EXCAVATED AT UTILITY CROSSINGS AS NECESSARY TO CONFIRM CONFLICTS PRIOR TO ORDERING STRUCTURES.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: SEWER AND WATER SERVICES/CONNECTIONS SHOWN AS APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN SERVICES/CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

NOTE: WHERE SEPARATION BETWEEN SEWER AND WATER IS LESS THAN 10' HORIZONTALLY AND/OR 18" VERTICALLY, REFER TO DETAILS FOR CONCRETE ENCASEMENT REQUIREMENTS.

NOTE: CONTRACTOR TO COORDINATE HOLDING OF POLES WITH VERIZON DURING INSTALLATION OF DRAINAGE LINES WHEN TRENCH IS WITHIN 3' OF A POLE.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

FOR PROFILE: SEE SHEET NO. 37 & 38

DESIGNED BY: SAM
DRAFTED BY: MAU/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

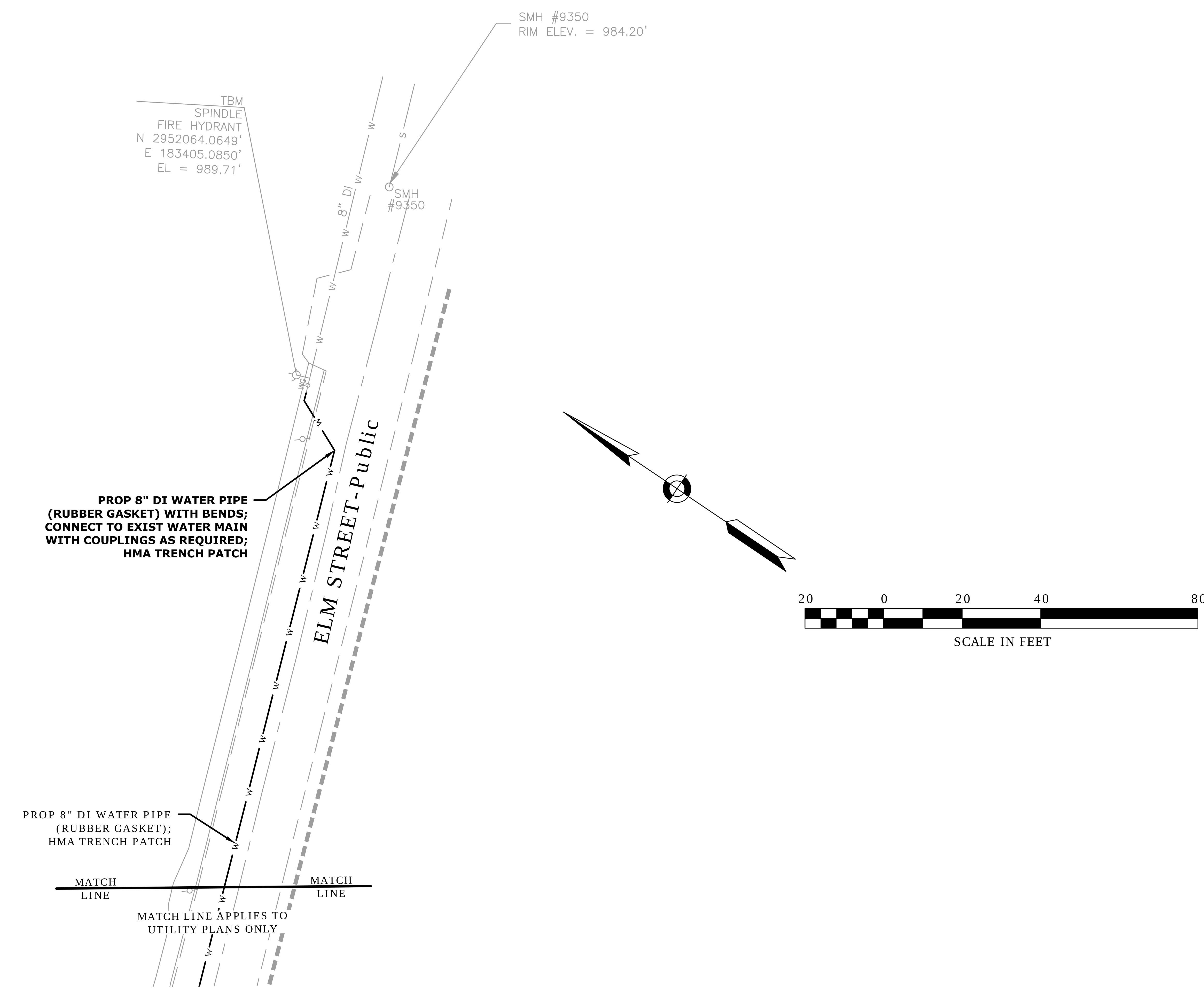
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	69A	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

10-Nov-2017
E2148D10 - SHEET LAYOUTS.DWG

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
45	GUTTER INLET	68+18.08	15.13'	LT	1000.75'	-	998.25'	PROPOSED
46B	DMH	68+18.08	19.50'	LT	1001.27'	998.11' (GI) 996.27' (12")	996.17' (12")	PROPOSED TO REPLACE 46A
47	DMH	69+89.39	19.49'	LT	992.16'	988.99' (GI) 987.80' (12")	987.30' (18")	PROPOSED
48B	GUTTER INLET	69+89.38	15.00'	LT	991.63'	-	989.13'	PROPOSED TO REPLACE 48A
49	CBCI	69+97.37	15.00'	RT	990.89'	-	986.89' (12")	PROPOSED
50	CB	70+29.82	14.32'	RT	-	-	-	REMOVE & DISPOSE OF EXIST
51	SPECIAL DMH	70+26.84	23.16'	RT	990.61'	986.47' (12") 985.97' (18")	985.87' (18")	PROPOSED
52	SPECIAL DMH	70+77.21	30.00'	RT	987.48'	980.31' (18") [51] 980.31' (18") [53] 978.31' (42")	977.31' (42")	PROPOSED
52A	CONTROL STRUCT.	70+62.85	32.85'	RT	986.50' (W1)	984.00' (W2)	979.00' (42")	PROPOSED
53	SPECIAL DMH	70+90.18	12.64'	LT	987.37'	982.87' (12") 982.87' (18")	982.77' (12") 982.77' (18")	PROPOSED
53A	PIPE END	71+47.48	65.12'	LT	-	980.78' (12")	-	PROPOSED
54	CB	70+93.94	25.81'	LT	987.22'	-	983.22' (12")	PROPOSED
55B	CB	71+62.53	28.61'	RT	984.93'	981.65' (12")	981.85' (12") [56B] 981.65' (12") [EXIST]	PROPOSED TO REPLACE 55A
56B	SPECIAL DMH	71+78.34	22.97'	RT	984.49'	981.55' (12") 973.95' (42")	973.85' (42")	PROPOSED TO REPLACE 56A

SANITARY SEWER STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
S4	SMH	69+13.56	7.66'	LT	995.53	987.83 (8") 988.96 (4")	987.73 (8")	PROPOSED TO REPLACE EXIST
S5	SMH	71+39.55	8.94'	LT	985.54	978.74 (8") [S2] 980.63 (8") [LS]	978.64 (8")	PROPOSED TO REPLACE EXIST
S6	SMH	73+94.79	9.30'	LT	975.00	969.63 (8")	969.53 (8")	PROPOSED



CONTINUED ON SHEET 69

FOR PROFILE: N/A

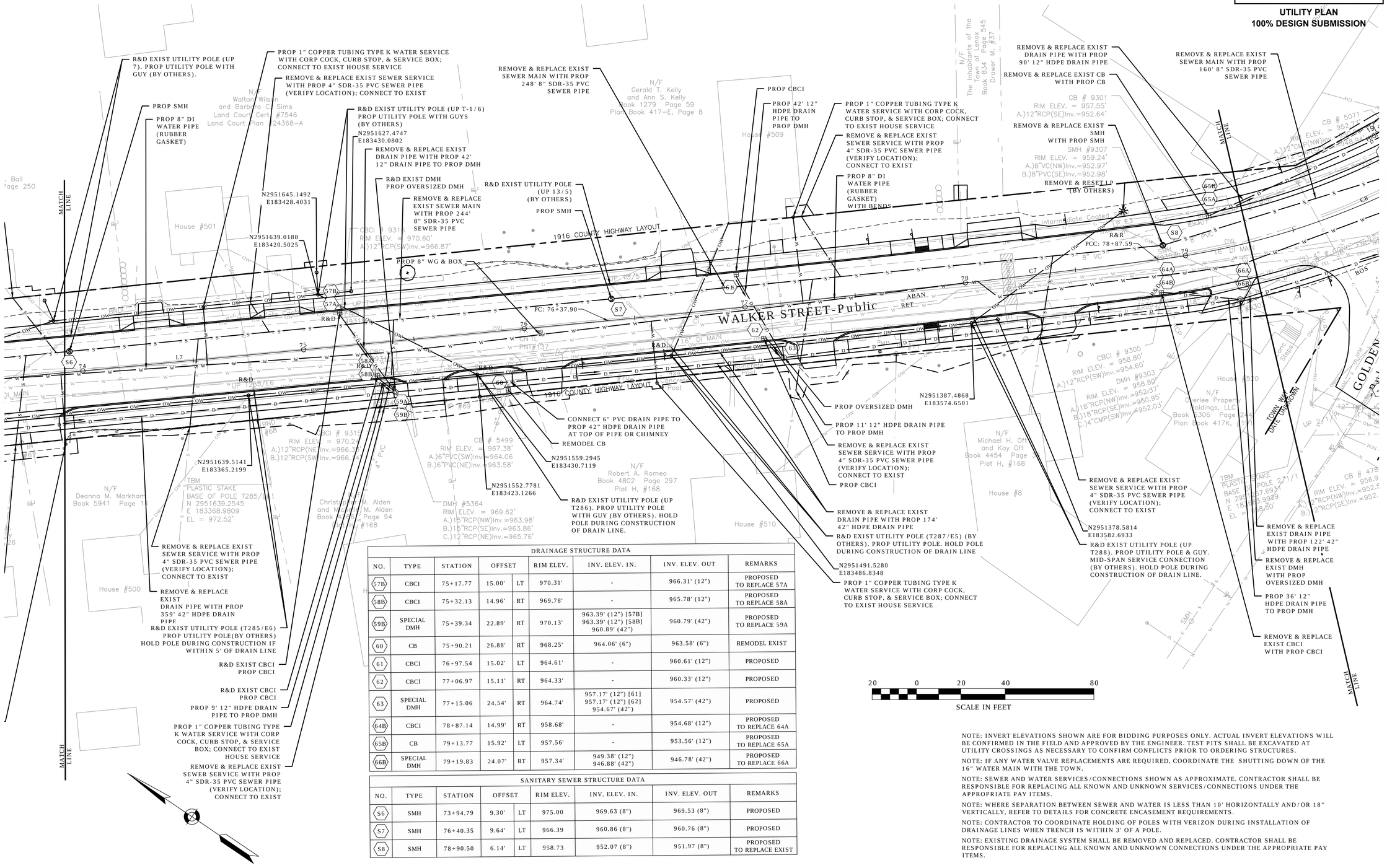
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	70	199
PROJECT FILE NO.	606462		

UTILITY PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
57B	CBCI	75+17.77	15.00'	LT	970.31'	-	966.31' (12")	PROPOSED TO REPLACE 57A
58B	CBCI	75+32.13	14.96'	RT	969.78'	-	965.78' (12")	PROPOSED TO REPLACE 58A
59B	SPECIAL DMH	75+39.34	22.89'	RT	970.13'	963.39' (12") [57B] 963.39' (12") [58B] 960.89' (42")	960.79' (42")	PROPOSED TO REPLACE 59A
60	CB	75+90.21	26.88'	RT	968.25'	964.06' (6")	963.58' (6")	REMODEL EXIST
61	CBCI	76+97.54	15.02'	LT	964.61'	-	960.61' (12")	PROPOSED
62	CBCI	77+06.97	15.11'	RT	964.33'	-	960.33' (12")	PROPOSED
63	SPECIAL DMH	77+15.06	24.54'	RT	964.74'	957.17' (12") [61] 957.17' (12") [62] 954.67' (42")	954.57' (42")	PROPOSED
64B	CBCI	78+87.14	14.99'	RT	958.68'	-	954.68' (12")	PROPOSED TO REPLACE 64A
65B	CB	79+13.77	15.92'	LT	957.56'	-	953.56' (12")	PROPOSED TO REPLACE 65A
66B	SPECIAL DMH	79+19.83	24.07'	RT	957.34'	949.38' (12") 946.88' (42")	946.78' (42")	PROPOSED TO REPLACE 66A

SANITARY SEWER STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
S6	SMH	73+94.79	9.30'	LT	975.00	969.63 (8")	969.53 (8")	PROPOSED
S7	SMH	76+40.35	9.64'	LT	966.39	960.86 (8")	960.76 (8")	PROPOSED
S8	SMH	78+90.50	6.14'	LT	958.73	952.07 (8")	951.97 (8")	PROPOSED TO REPLACE EXIST

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER. TEST PITS SHALL BE EXCAVATED AT UTILITY CROSSINGS AS NECESSARY TO CONFIRM CONFLICTS PRIOR TO ORDERING STRUCTURES.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: SEWER AND WATER SERVICES/CONNECTIONS SHOWN AS APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN SERVICES/CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

NOTE: WHERE SEPARATION BETWEEN SEWER AND WATER IS LESS THAN 10' HORIZONTALLY AND/OR 18" VERTICALLY, REFER TO DETAILS FOR CONCRETE ENCASEMENT REQUIREMENTS.

NOTE: CONTRACTOR TO COORDINATE HOLDING OF POLES WITH VERIZON DURING INSTALLATION OF DRAINAGE LINES WHEN TRENCH IS WITHIN 3' OF A POLE.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

FOR PROFILE: SEE SHEET NO. 38 & 39

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	71	199
PROJECT FILE NO.		606462	

UTILITY PLAN
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

CONTINUED ON SHEET 70

MATCH LINE

MATCH LINE

SANITARY SEWER STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
S8	SMH	78+90.50	6.14'	LT	958.73	952.07 (8")	951.97 (8")	PROPOSED TO REPLACE EXIST
S9	SMH	80+52.91	5.63'	RT	950.37	942.50 (8") [S6] 944.20 (8") [GHR] 946.41 (4")	942.40 (8")	PROPOSED TO REPLACE EXIST
S10	SMH	81+51.16	46.71'	RT	944.77	937.70 (8")	937.60 (12")	REMODEL EXIST

DRAINAGE STRUCTURE DATA								
NO.	TYPE	STATION	OFFSET		RIM ELEV.	INV. ELEV. IN.	INV. ELEV. OUT	REMARKS
64B	CBCI	78+87.14	14.99'	RT	958.68'	-	954.68' (12")	PROPOSED TO REPLACE 64A
65B	CB	79+13.77	15.92'	LT	957.56'	-	953.56' (12")	PROPOSED TO REPLACE 65A
66B	SPECIAL DMH	79+19.83	24.07'	RT	957.34'	949.38' (12") 946.88' (42")	946.78' (42")	PROPOSED TO REPLACE 66A
67B	CB	80+10.83	16.21'	LT	952.88'	-	948.88' (12")	PROPOSED TO REPLACE 67A
68	DMH	80+10.80	24.03'	LT	952.35'	948.76' (12") [65B] 948.76' (12") [67B]	948.66' (12")	PROPOSED
69B	CBCI	80+27.48	14.95'	RT	951.74'	-	947.74' (12")	PROPOSED TO REPLACE 69A
70	CB	79+60.43	88.99'	RT	952.92'	952.56' (12")	952.46' (12")	REMODEL EXIST
71	SPECIAL DMH	80+33.30	33.93'	RT	952.51'	946.74' (12") [69B] 946.74' (12") [70] 939.66' (42")	939.56' (42")	PROPOSED
72	SPECIAL DMH	81+33.95	40.91'	RT	945.10'	940.60' (12") 933.04' (42")	932.94' (42")	PROPOSED
73	BYPASS STRUCT.	81+49.61	79.54'	RT	943.95'	933.68' (WEIR) 932.68' (15") 932.68' (42")	932.68' (15") 932.68' (42")	PROPOSED
74	QUALITY STRUCT.	81+42.51	84.43'	RT	943.75'	932.68' (15")	932.68' (15")	PROPOSED
75	PIPE END	81+62.27	145.56'	RT	942.09' (42")		942.09' (42")	PROPOSED

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 205' 42" HDPE DRAIN PIPE

REMOVE & REPLACE EXIST CBCI WITH PROP CBCI

PROP 34' 12" HDPE DRAIN PIPE TO PROP DMH

REMOVE & REPLACE EXIST DMH WITH PROP OVERSIZED DMH

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 122' 42" HDPE DRAIN PIPE

PROTECT UTILITY POLE (UP 2/1/1)

REMODEL EXIST CB FOR NEW PIPE CONNECTION

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 102' 12" HDPE DRAIN PIPE

REMOVE & REPLACE EXIST CB WITH PROP CBCI

PROP 8" DI WATER PIPE (RUBBER GASKET) WITH BENDS

PROP 20' 12" HDPE DRAIN PIPE TO PROP DMH

PROP CONCRETE ENCASEMENT OF WATER AND SEWER PIPE (AS NECESSARY)

ADJUST GAS SERVICE BOX (BY OTHERS)

PROTECT GAS

PROP DMH

PROP 6' 12" HDPE DRAIN PIPE TO PROP DMH

REMOVE & REPLACE EXIST CB WITH PROP CB

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 142' 12" HDPE DRAIN PIPE

ADJUST GAS SERVICE BOX (BY OTHERS)

PROP 1" COPPER TUBING TYPE K WATER SERVICE WITH CORP COCK, CURB STOP, & SERVICE BOX; CONNECT TO EXIST HOUSE SERVICE

REMOVE & REPLACE EXIST SEWER SERVICE WITH PROP 4" SDR-35 PVC SEWER PIPE (VERIFY LOCATION); CONNECT TO EXIST; ADJUST SEWER CLEANOUT

CLOSE EXIST 4" WG; R&D WG BOX; FILL WITH SAND

PROP CONCRETE ENCASEMENT OF WATER AND SEWER PIPE (AS NECESSARY)

PROP 8"X8" TEE; PROP 8" WG & BOX (2)

REMOVE & REPLACE EXIST SEWER MAIN WITH PROP 115' 8" SDR-35 PVC SEWER PIPE

CLOSE EXIST 8" WG; R&D WG BOX; FILL WITH SAND

CONNECT PROP 8" DI TO EXIST WATER MAIN WITH FITTINGS AS REQUIRED; HMA TRENCH PATCH

PROP 1" COPPER TUBING TYPE K WATER SERVICE WITH CORP COCK, CURB STOP, & SERVICE BOX; CONNECT TO EXIST HOUSE SERVICE; HMA TRENCH PATCH

WALKER STREET	STA 82+24.88
CRYSTAL STREET	STA 0+00.00
MILL STREET	STA 0+00.00

PROP 8"X8" TEE (2); PROP 8" WG & BOX (2); CONNECT TO EXIST 8" CI WATER MAIN

REMOVE & REPLACE EXIST 8" CI WATER MAIN WITH 8" DI WATER PIPE (RUBBER GASKET) WITH BENDS; HMA TRENCH PATCH

WALKER STREET	STA 80+50.39
GOLDEN HILL ROAD	STA 0+00.00

REMOVE & REPLACE EXIST SMH WITH PROP SMH

REMOVE & REPLACE EXIST SEWER SERVICE WITH PROP 4" SDR-35 PVC SEWER PIPE (VERIFY LOCATION); CONNECT TO EXIST

ADJUST WG BOX

PROTECT UTILITY POLE (UP 13B/2/289) HOLD POLE DURING INSTALLATION OF DRAIN LINE

PROTECT HYDRANT; ADJUST WG BOX

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 114' 42" DRAIN PIPE

REMOVE & REPLACE EXIST SEWER SERVICE WITH PROP 4" SDR-35 PVC SEWER PIPE (VERIFY LOCATION); CONNECT TO EXIST

PROP OVERSIZED DMH

PROTECT UTILITY POLE (UP T290/E13B/1)

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 38' 42" HDPE DRAIN PIPE

PROP WATER QUALITY STRUCTURE

PROP 5' 15" HDPE DRAIN PIPE (x2) BETWEEN STRUCTURES

REMOVE & REPLACE EXIST DRAIN PIPE WITH PROP 68' 42" HDPE DRAIN PIPE

PROP RIP-RAP (M2.02.0)

N2951088.6735
E183889.8836

REMOVE GUY POLE

CONTRACTOR SHALL PROTECT FOR WATER QUALITY STRUCTURE INSTALL; TEMPORARY RELOCATION SHALL ONLY OCCUR WITH TOWN'S PERMISSION

PROP WATER QUALITY BYPASS STRUCTURE

EXIST ELECTRICAL METER TO BE RELOCATED BY TOWN REQUEST (BY OTHERS); CONTRACTOR TO COORDINATE RELOCATION WITH TOWN AND OTHERS & PROVIDE ANY EXCAVATION NECESSARY TO EXPOSE EXIST UNDERGROUND ELEC TO PROP LOCATION

PROTECT UTILITY POLE (UP T291/E9/12) ADD TEMP TREE GUY FOR DRAINAGE CONSTRUCTION. PROP 20' GUY (BY OTHERS).

NOTE: INVERT ELEVATIONS SHOWN ARE FOR BIDDING PURPOSES ONLY. ACTUAL INVERT ELEVATIONS WILL BE CONFIRMED IN THE FIELD AND APPROVED BY THE ENGINEER. TEST PITS SHALL BE EXCAVATED AT UTILITY CROSSINGS AS NECESSARY TO CONFIRM CONFLICTS PRIOR TO ORDERING STRUCTURES.

NOTE: IF ANY WATER VALVE REPLACEMENTS ARE REQUIRED, COORDINATE THE SHUTTING DOWN OF THE 16" WATER MAIN WITH THE TOWN.

NOTE: SEWER AND WATER SERVICES/CONNECTIONS SHOWN AS APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN SERVICES/CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

NOTE: WHERE SEPARATION BETWEEN SEWER AND WATER IS LESS THAN 10' HORIZONTALLY AND/OR 18" VERTICALLY, REFER TO DETAILS FOR CONCRETE ENCASEMENT REQUIREMENTS.

NOTE: CONTRACTOR TO COORDINATE HOLDING OF POLES WITH VERIZON DURING INSTALLATION OF DRAINAGE LINES WHEN TRENCH IS WITHIN 3' OF A POLE.

NOTE: EXISTING DRAINAGE SYSTEM SHALL BE REMOVED AND REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL KNOWN AND UNKNOWN CONNECTIONS UNDER THE APPROPRIATE PAY ITEMS.

SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 39

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	72	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

10-Nov-2017

E2148D10 - SHEET LAYOUTS.DWG

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

"Stop"

Stop Line

SWL 6" SWL

1949 STATE LAYOUT (#3647)

BP -5+50

6" DBYL
STA -5+21.1

6" SWL

6" DBYL

-5

-4

-3

-2

-1

6" SWL

6" SWL

6" SWL

6" DBYL

6" SWL

REMOVE & RESET
"CHURCH" SIGN

Sign

Ledge

BND

"Speed Limit 35"

"South 183"

6" SWL

R & D

6" DBYL

PROPOSED SIGN & SUPPORT
SPEED LIMIT R2-1 (35 MPH)

PROPOSED SIGNS
& SUPPORT
M3-3 (SOUTH)
M1-5 (183)

R & D

N/F
Berkshire Retirement Community
Book 1242 Page 247

1949 STATE LAYOUT (#3647)

BND

TBM
CHISELED SQUARE
SOUTHWEST CORNER OF
CONCRETE PAD
N 2956783.1597
E 177840.5970
EL = 1198.39'

PROPOSED 3" CONDUIT WITH
PEDESTRIAN SIGNAL CABLE
PROPOSED 8' SIGNAL POST
WITH ACCESSIBLE PEDESTRIAN
SIGNAL AND LED COUNTDOWN
SIGNAL HEAD

ROUTE 7 / ROUTE 20

"183 South
Historic Lenox
Tanglewood"
"October Mt
Lenoxdale"

SWL

Concrete
Pad

REMOVE EXIST
PAVEMENT MARKINGS
TO TANGENT SECTIOIN
ON ROUTE 7 / 20

"Walker St."

Concrete
Pad with
Controller

6" SWL

ROUTE S 7 & 20
MAINLINE
BASELINE STA
78+00

PI: -0+00

6" DBYL
STA -0+59.5

CONTINUED
ON SHEET 73

"Stop Line"

Concrete
Pad with
Strain Pole
Removed

SWL

"7 North 20 West"

"7 South 20 East"

PROPOSED LOOP DETECTOR
(TYPE Q); CONTRACTOR TO
PROVIDE TEMP. DETECTION,
AS REQUIRED

"7 South 20 East
Stockbridge–Lee"
"7 North 20 West"

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C.
PROPOSED PAVEMENT MARKINGS
12" STOP LINE (WHITE)
STA -0+57.5, 8.1' RT
REMOVE EXIST PAVEMENT MARKINGS
TO TANGENT SECTION ON ROUTE 7/20

"JCT 7 and 20"

Stop Line

"Stop"

REMOVE EXIST
PAVEMENT MARKINGS
TO STOP LINE

Concrete
Pad

"7 South 20 East
Stockbridge–Lee"
"7 North 20 West"

SWL

DYL

SWL

"DO NOT ENTER"

Yield Sign

1949 STATE LAYOUT (#3647)

N/F
Commonwealth Of Massachusetts
Book 550 Page 198

N/F
Elaine M. Steinert Revocable Trust
Book 4414 Page 307

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: N/A

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

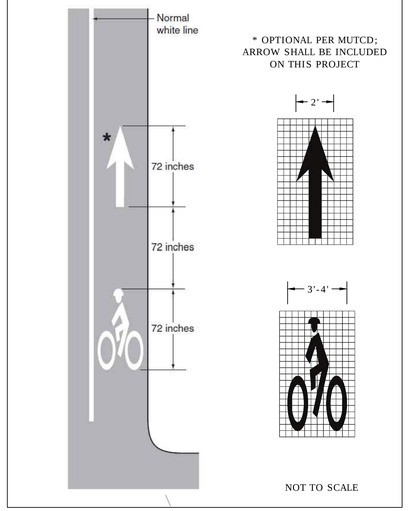
LENOX
WALKER STREET

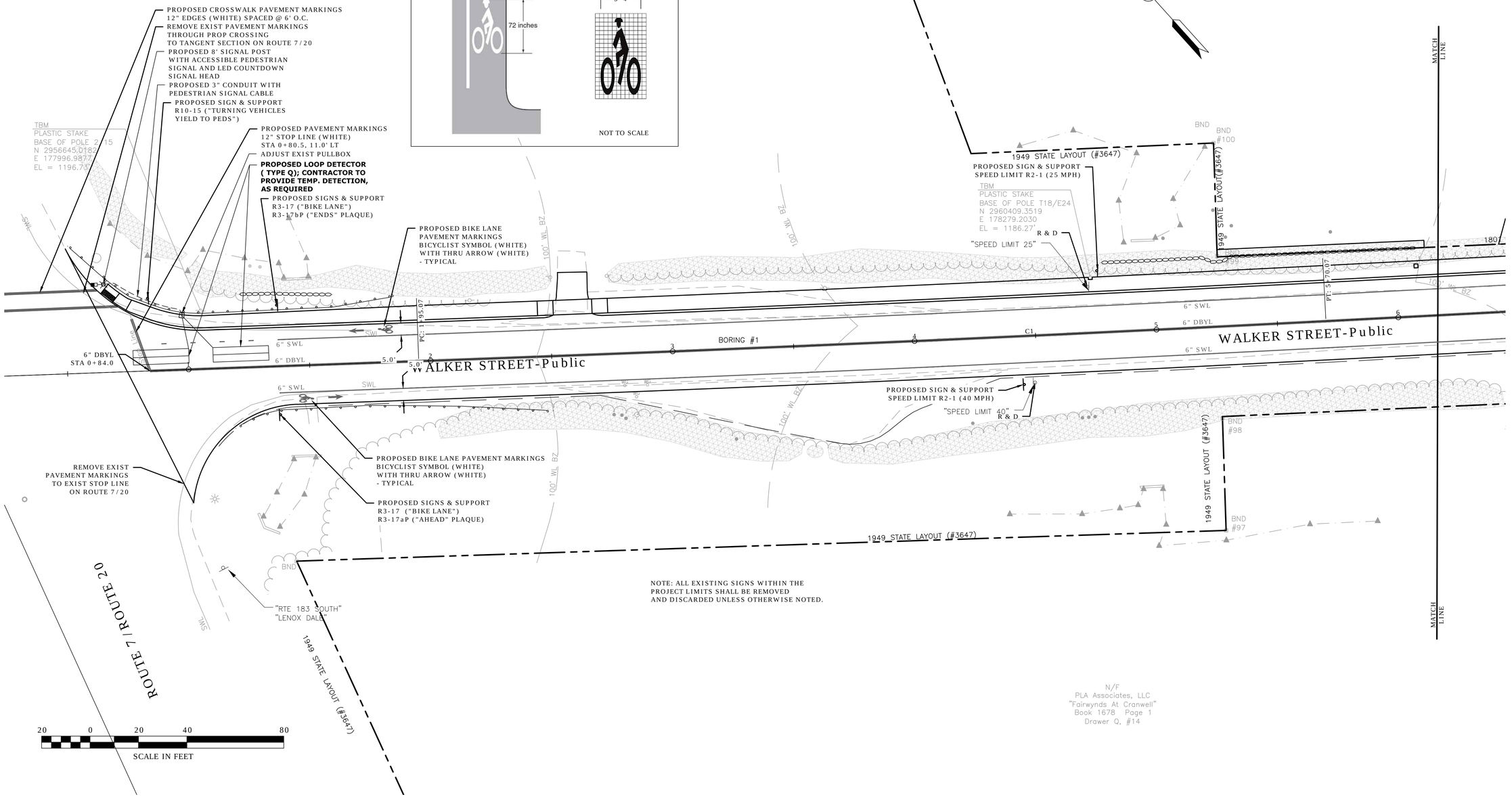
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	73	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TYPICAL BICYCLE LANE PAINT MARKINGS
(FROM MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES)





NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

FOR PROFILE: SEE SHEET NO. 25

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	74	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

N/F
Stone Path Development, Inc.
Book 5991 Page 104
Plan Book 417-M, Page 80

House #241

N/F
Stone Path Development, Inc.
Book 5991 Page 104

MATCH LINE

TBM
PLASTIC STAKE
BASE OF POLE T21/E27
N 2956151.4646
E 178591.2496
EL = 1198.26'

IP #96

IP #95

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

180' COUNTY HIGHWAY LAYOUT

CONTINUED ON SHEET 73

CONTINUED ON SHEET 75

6" SWL
6" DBYL
5.0'
5.0'
6" SWL

WALKER STREET-Public

PC: 8+66.14

6" DBYL
STA 10+75.1

6" DBYL
STA 10+33.1

6" SWL
6" DBYL
6" SWL

"FAIRWYNDS DRIVE"

TP #1

SIGN POSTS

REMOVE & RESET
"FAIRWYNDS DRIVE" SIGN

PROTECT SIGN

FAIRWYNDS DRIVE (PRIVATE)

1801 COUNTY HIGHWAY LAYOUT
B-1 P-426
B-1 P-469

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14

MATCH LINE

MATCH LINE

20 0 20 40 80
SCALE IN FEET

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

FOR PROFILE: SEE SHEET NO. 26

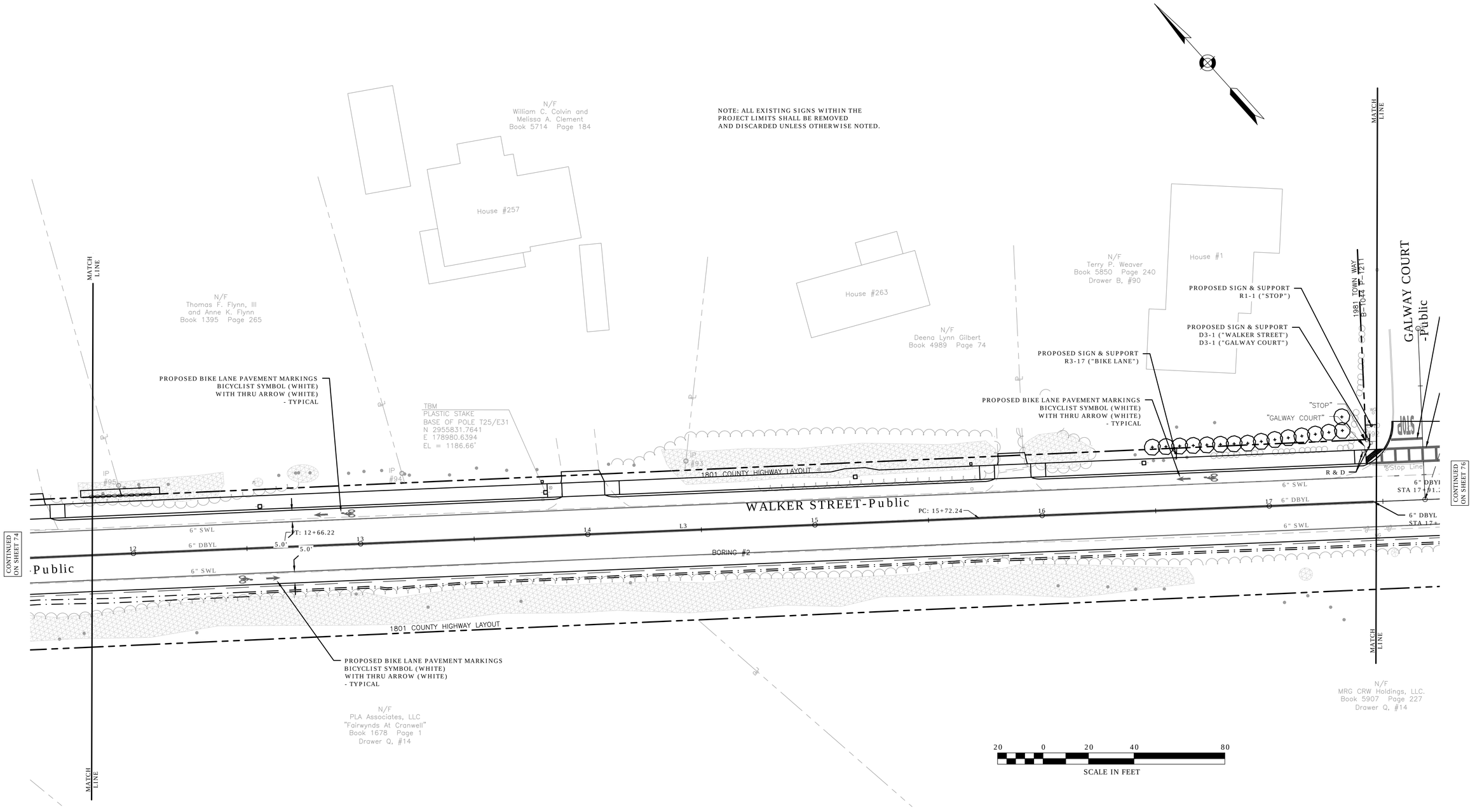
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	75	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.



FOR PROFILE: SEE SHEET NO. 27

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\ E2148D10.DWG

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	76	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

PROPOSED PAVEMENT MARKINGS
12" STOP LINE (WHITE)
STA 17+61.7, 27.0' LT
WITH "STOP" MESSAGE (WHITE)

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

STA 17+68.36	WALKER STREET
STA 0+00.00	GALWAY COURT

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

MATCH LINE

GALWAY COURT -Public

1981 TOWN WAY B-1044 P-121

1801 TOWN WAY B-1044 P-121

N/F
Richard T. Fairfield Revocable Trust of 2008
and Virginia H. Fairfield Revocable Trust of 2008
Book 4090 Page 106
Drawer B, #90

House #279

N/F
Dori Laub, Trustee
Dori Laub Revocable Trust
Book 5651 Page 52

House #287

N/F
Dori Laub, Trustee
Dori Laub Revocable Trust
Book 5651 Page 52

House #295

N/F
Francois Thomas and
Nadzeya V. Kurnevich-Thomas
Book 5271 Page 118
Drawer H, #7

TBM
PLASTIC STAKE
BASE OF POLE T31/E37
N 2955351.4877
E 179566.2287
EL = 1154.24'

JP
Pond

BND #91

STOP"

IRT"

1801 COUNTY HIGHWAY LAYOUT

1801 COUNTY HIGHWAY LAYOUT

PT, 21+72.24

6" SWL

6" DBYL

WALKER STREET-Public

WALKER STREET-Public

Stop Line

R & D

6" SWL

6" DBYL
STA 17+91.2

6" DBYL
STA 17+45.9

6" SWL

6" DBYL

6" SWL

C3

5.0'

5.0'

18

19

20

21

22

23

TO #2

Bollard

1801 COUNTY HIGHWAY LAYOUT

CONTINUED ON SHEET 75

CONTINUED ON SHEET 77

MATCH LINE

MATCH LINE

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14

N/F
MRG CRW Holdings, LLC.
Book 5907 Page 227
Drawer Q, #14

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

PROPOSED SIGN & SUPPORT
R3-17 ("BIKE LANE")

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 27 & 28

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

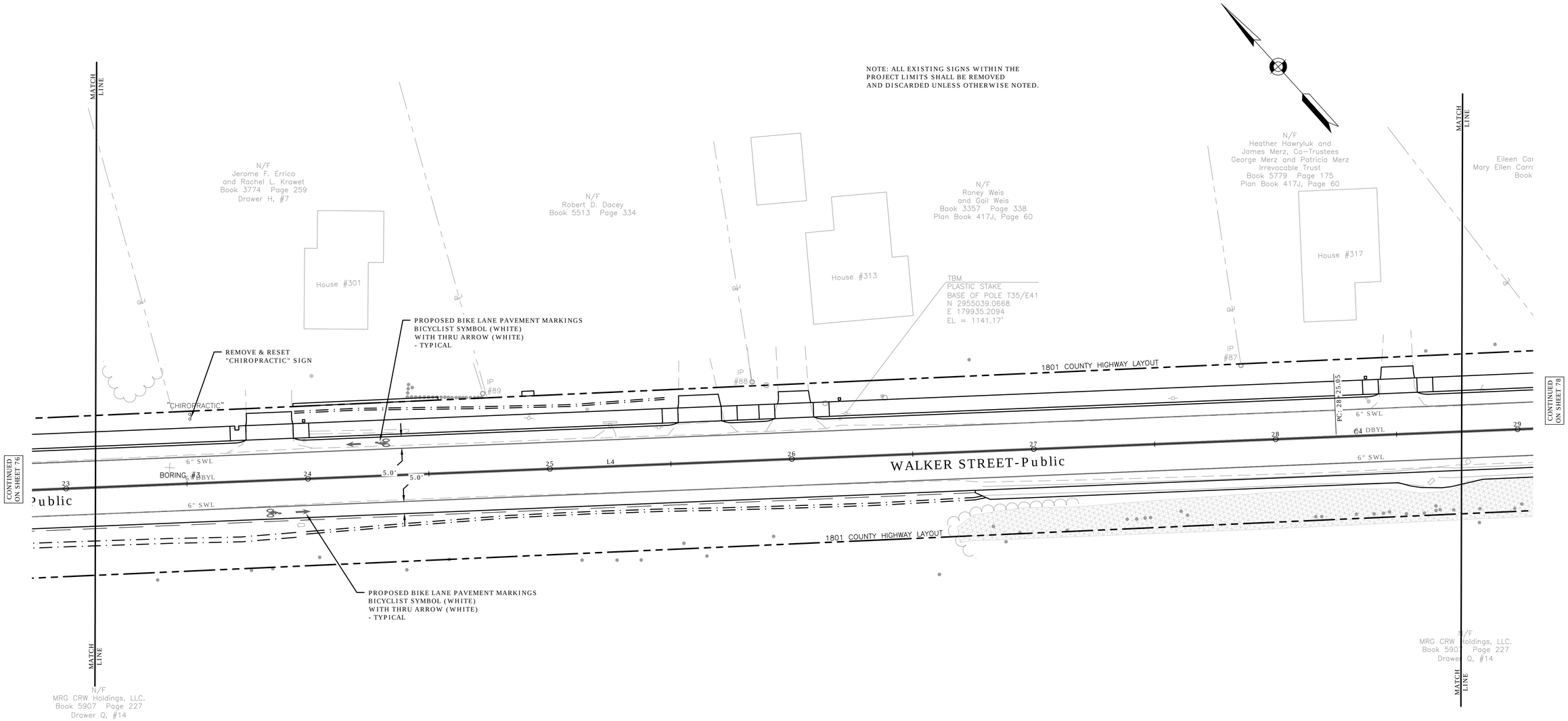
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	77	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.



20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 28 & 29

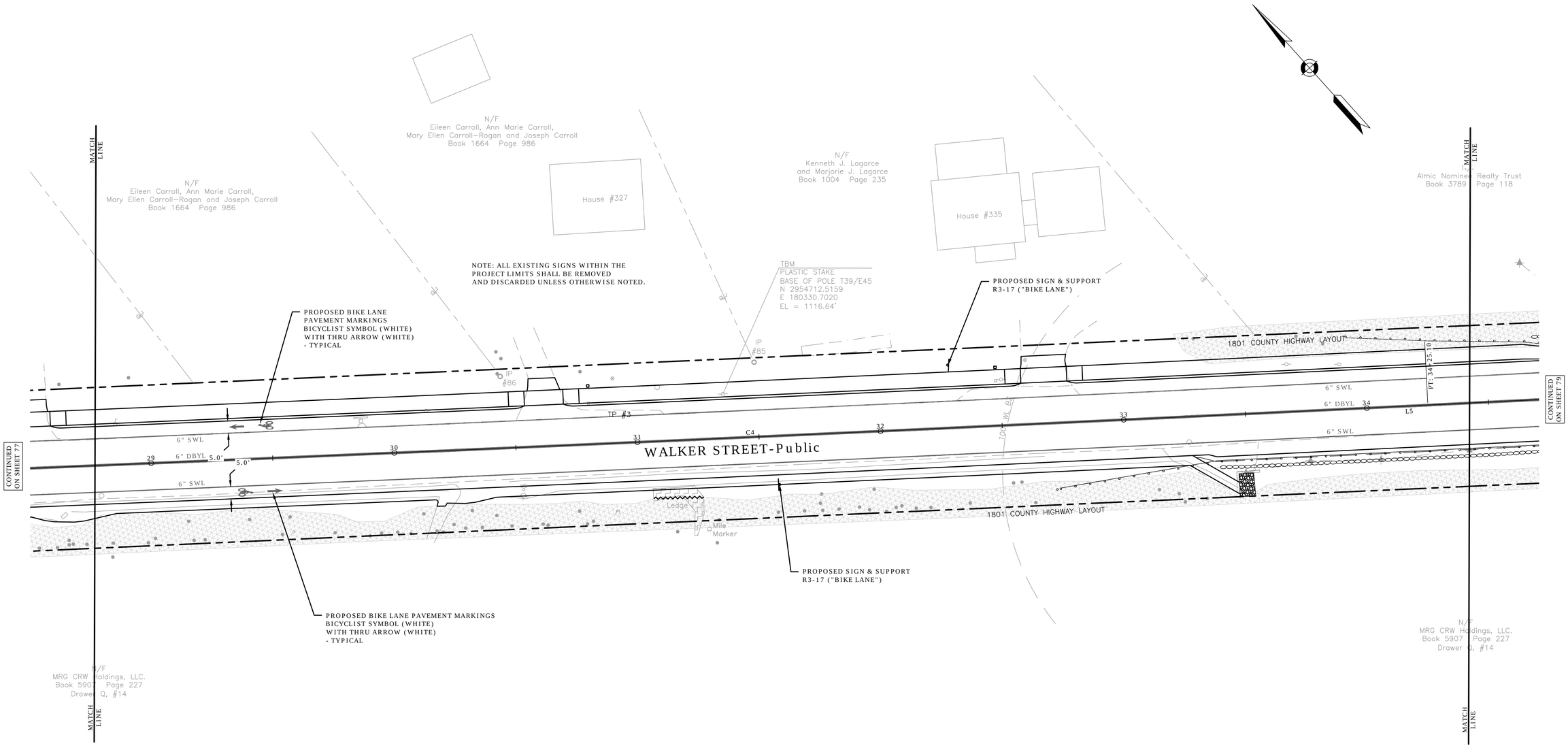
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	78	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 29 & 30

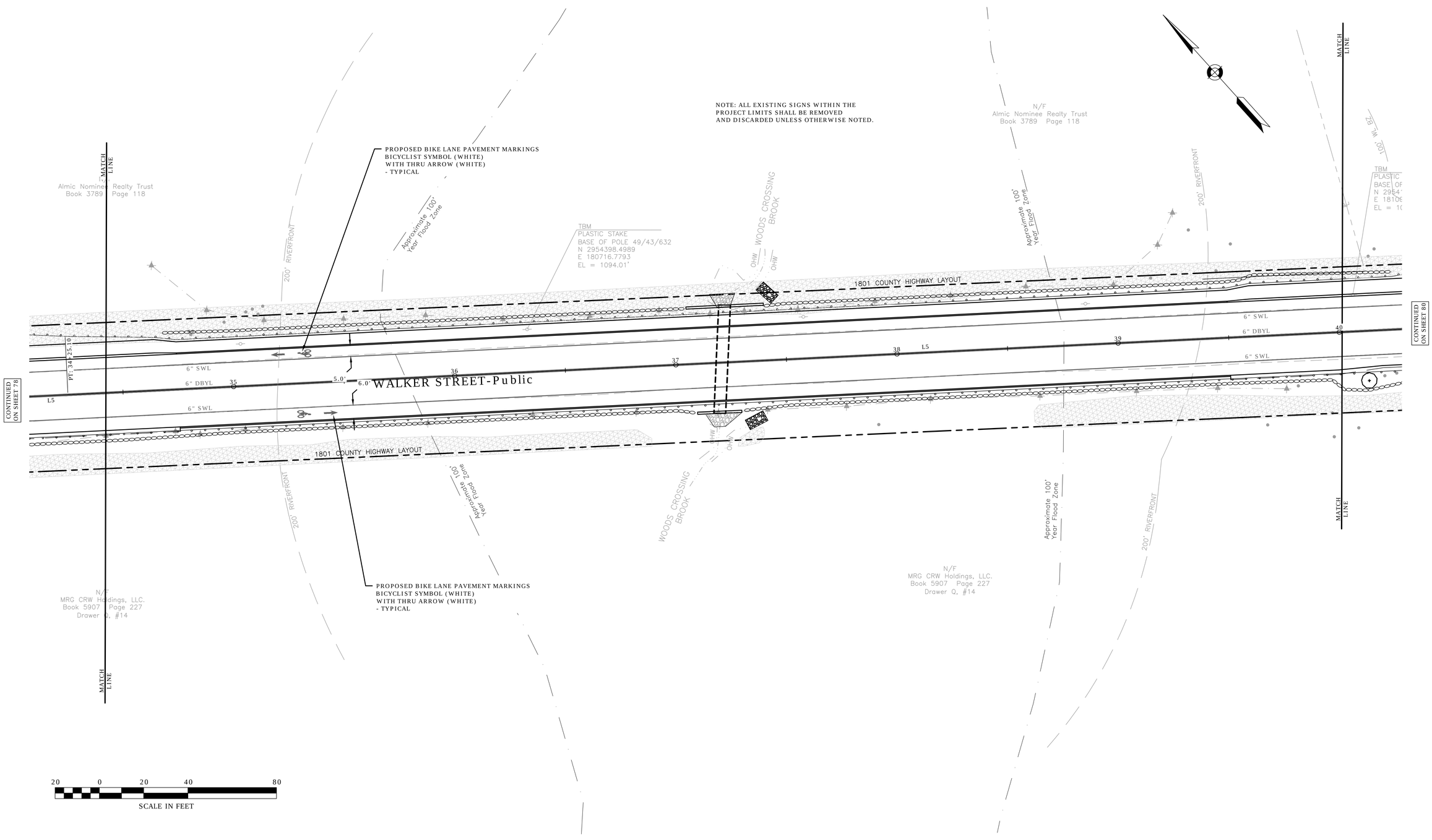
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	79	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



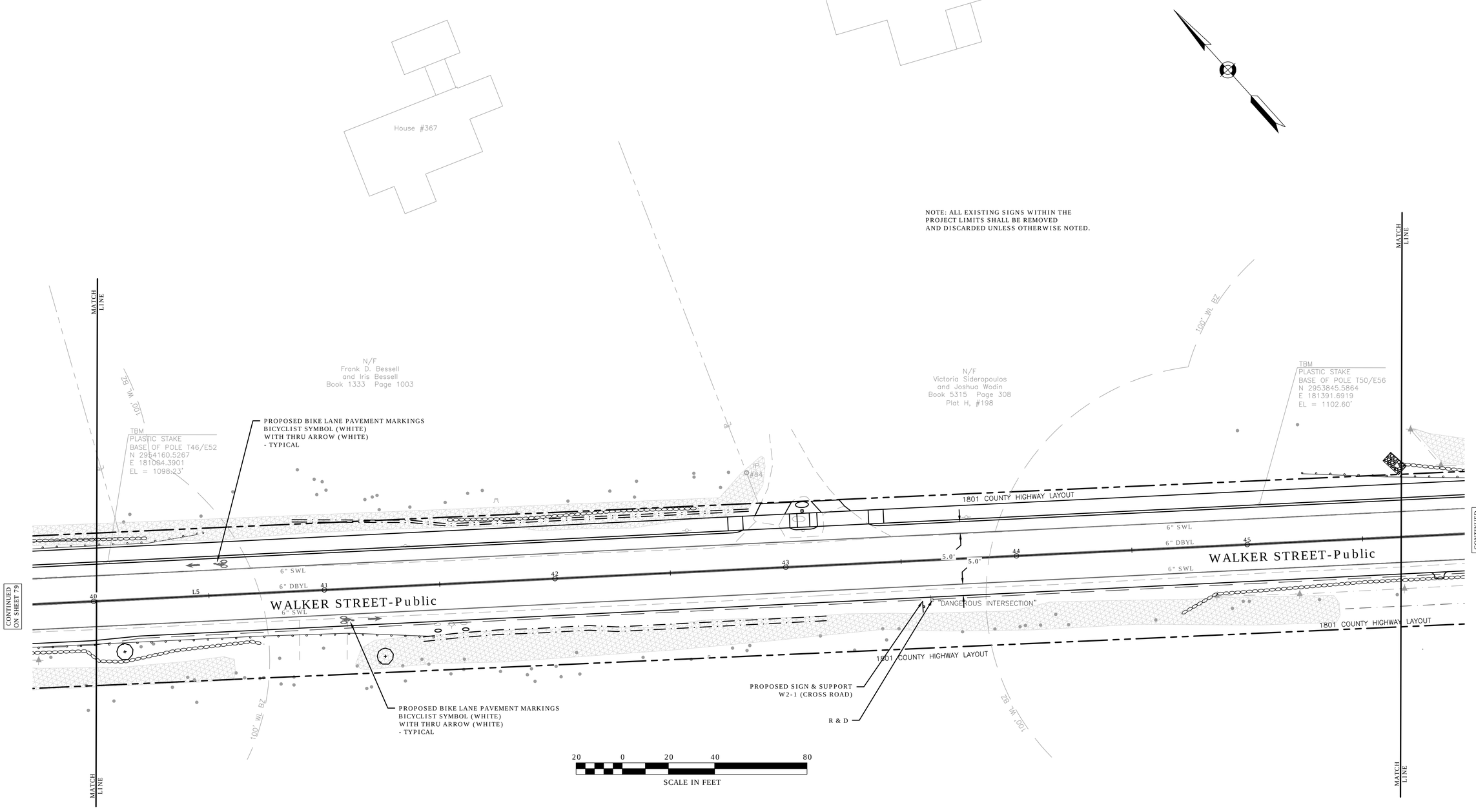
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	80	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 31 & 32

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

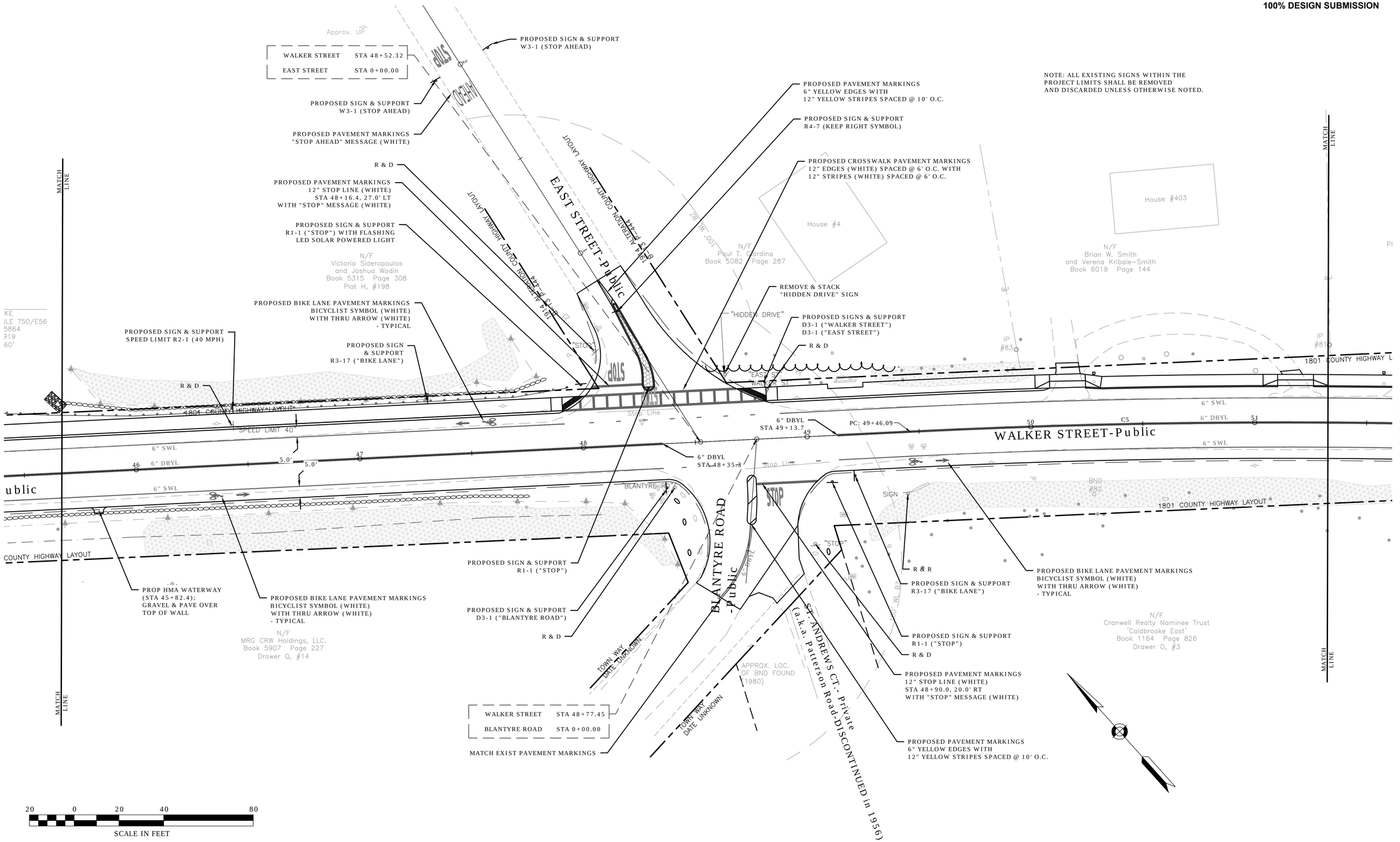
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	81	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.



FOR PROFILE: SEE SHEET NO. 32 & 33

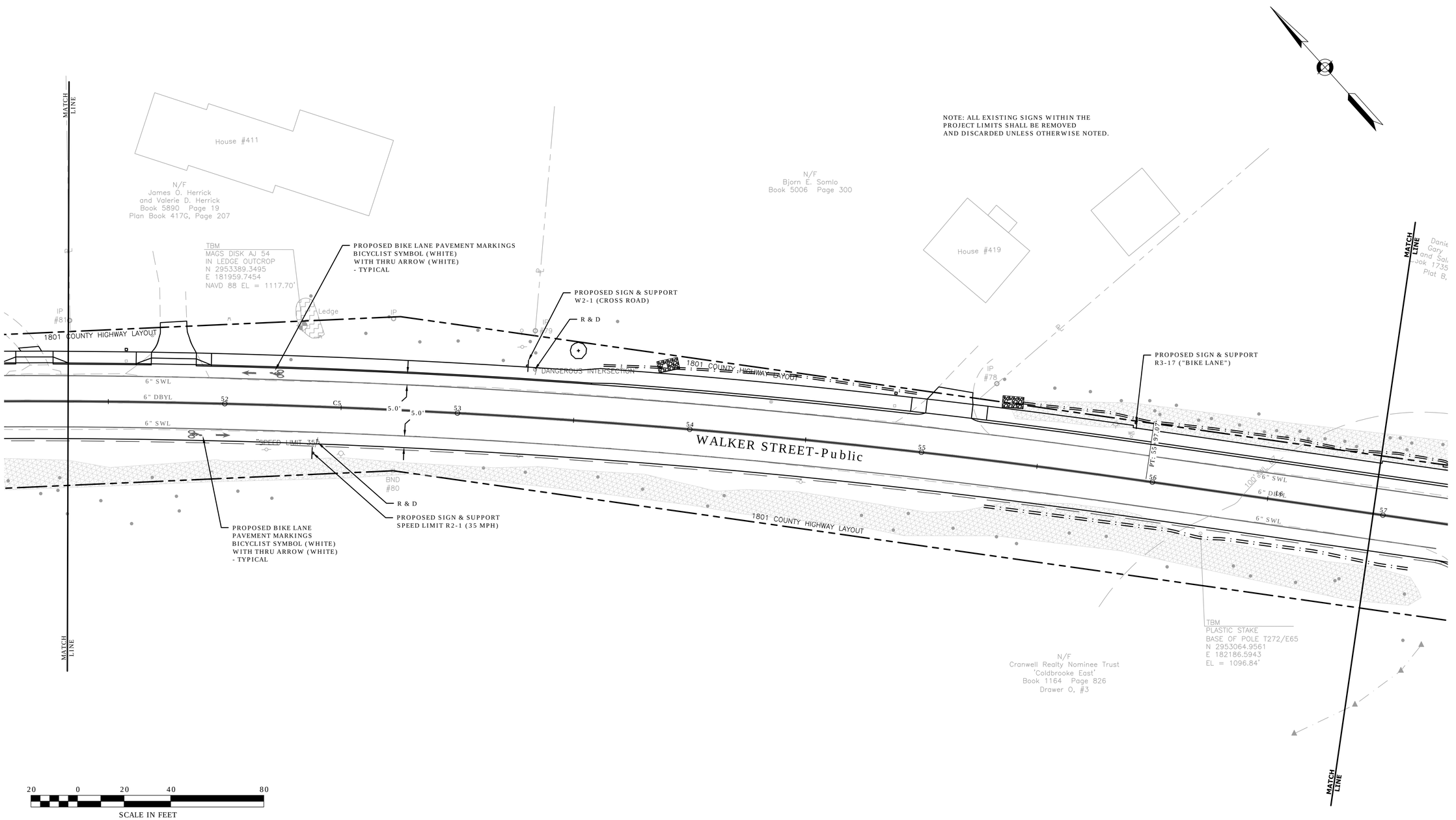
DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	82	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



FOR PROFILE: SEE SHEET NO. 33 & 34

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

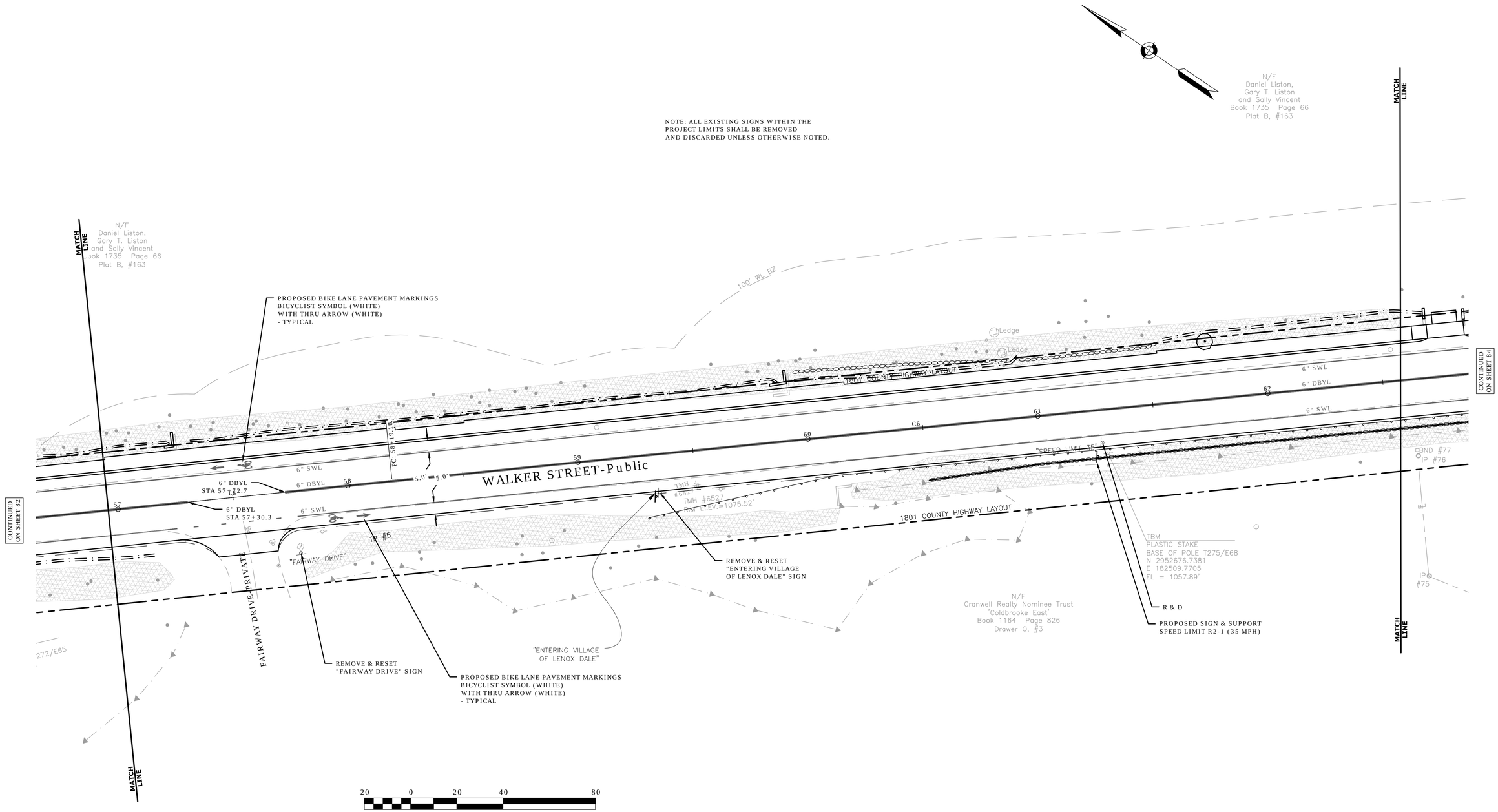
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	83	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.



20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 34 & 35

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

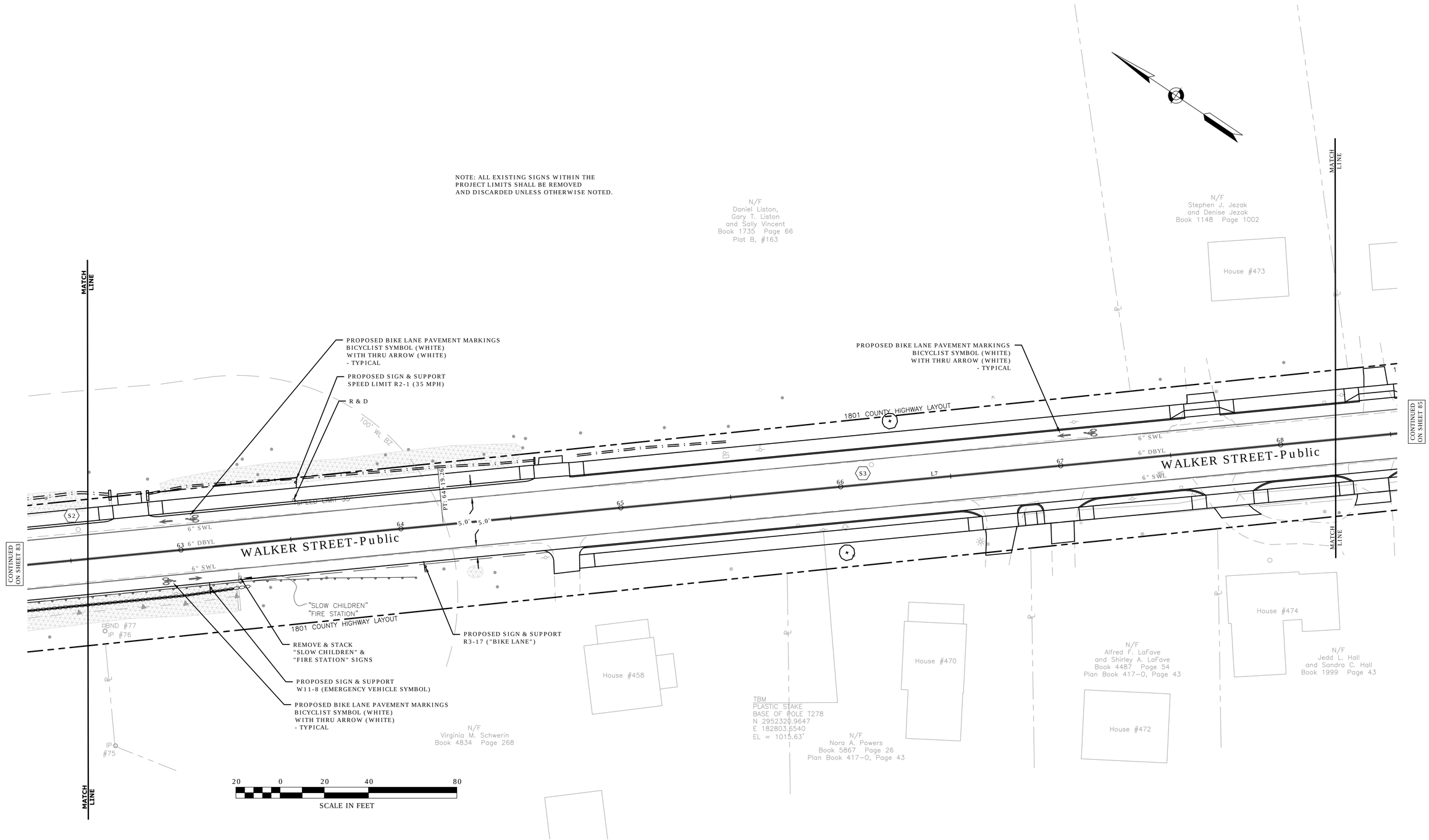
LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	84	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E21480D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.



FOR PROFILE: SEE SHEET NO. 35 & 36

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	85	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

PROPOSED PAVEMENT MARKINGS
12" STOP LINE (WHITE)
STA 71+15.5, 40.2' LT
WITH "STOP" MESSAGE (WHITE)

PROPOSED SIGNS & SUPPORT
R1-1 ("STOP")
D3-1 ("ELM STREET")

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-7P (LEFT ARROW PLAQUE)

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

PROPOSED SIGN & SUPPORT
R3-17 ("BIKE LANE")

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-9P ("AHEAD" PLAQUE)

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

MATCH LINE — MATCH LINE
MATCH LINE APPLIES TO UTILITY PLANS ONLY

WALKER STREET STA 71+06.78
ELM STREET STA 0+00.00

WALKER STREET STA 71+46.96
LAWTON STREET STA 0+00.00

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-9P ("AHEAD" PLAQUE)

PROPOSED SIGN & SUPPORT
R3-17 ("BIKE LANE")

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

R & D

PROPOSED SIGN & SUPPORT
D3-1 ("LAWTON STREET")

R & D

PROPOSED SIGN & SUPPORT
R1-1 ("STOP")

PROPOSED PAVEMENT MARKINGS
12" STOP LINE (WHITE)
STA 71+55.7, 29.9' RT
WITH "STOP" MESSAGE (WHITE)

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-7P (LEFT ARROW PLAQUE)

R & D
6" DBYL STA 71+78.7
6" DBYL STA 70+92.3

ELM STREET-Public
WALKER STREET-Public
LAWTON STREET-Public
1925 TOWN WAY
TOWN WAY DATE UNKNOWN
1801 COUNTY HIGHWAY LAYOUT
"LAWTON ST"
"STOP"

N/F Katharine F. Burnett Book 1545 Page 516
House #479
N/F Daniel Liston, Gary T. Liston and Sally Vincent Book 1735 Page 66 Plat B, #163
House #46
N/F Keith Heeren and Tamy Heeren Book 1551 Page 265
House #489
N/F Stephen D. Ball Book 5055 Page 250
House #495
House #480
N/F Robert W. Liston, Jr. and Ellen A. Liston Book 1047 Page 473 Book 1289 Page 184 Plan Book 417-N, Page 9
House #486
N/F Frank C. Igo and Kathleen A. Igo Book 3936 Page 199
House #490
N/F Lewis C. Fortune and Gayle M. Thomson Book 1467 Page 980
House #494
N/F Richard G. Andrew and Mary P. Andrew Book 1171 Page 972
House #496
N/F Arthur P. Reilly, Jr. and Karen M. Reilly Book 1366 Page 26
N/F Jedd L. Hall and Sandra C. Hall Book 1999 Page 43

ITEM
PLASTIC STAKE
BASE OF POLE 281
N 2957023.3641
E 1835000.6210
EL = 969.78'

100' WL BZ

CONTINUED ON SHEET 84
CONTINUED ON SHEET 86

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 36 & 37

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	86	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

CONTINUED ON SHEET 85

CONTINUED ON SHEET 87

MATCH LINE

N/F
Walton Wilson
and Barbara C. Sims
Land Court Cert. #7546
Land Court Plan #24368-A

N/F
Gerald T. Kelly
and Ann S. Kelly
Book 1279 Page 59
Plan Book 417-E, Page 8

N/F
The Inhabitants
Town of Len
Book 834 Pag
Drawer M, #

House #501

House #509

House #520

House #500

House #504

House #510

House #8

1916 COUNTY HIGHWAY LAYOUT

WALKER STREET-Public

"SPEED LIMIT 35"

"SPEED LIMIT 20"

"DANGEROUS INTERSECTION"

"DEAD END"

"GOLDEN HILL ROAD-WALKER ST."

PC: 76+37.90

PCC: 78+87.59

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-9P ("AHEAD" PLAQUE)

PROPOSED SIGN & SUPPORT
SPEED LIMIT R2-1 (25 MPH)

PROPOSED SIGNS & SUPPORT
W11-2 (PEDESTRIAN SYMBOL)
W16-7P (LEFT ARROW PLAQUE)

PROPOSED SIGN & SUPPORT
SPEED LIMIT R2-1 (35 MPH)

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

PROPOSED BIKE LANE PAVEMENT MARKINGS
BICYCLIST SYMBOL (WHITE)
WITH THRU ARROW (WHITE)
- TYPICAL

PROPOSED SIGN & SUPPORT
R3-17 ("BIKE LANE")

PROPOSED SIGNS & SUPPORT
R3-17 ("BIKE LANE")
R3-17bP ("ENDS" PLAQUE)

R & D

6" SWL

6" DBYL

4x4 Concrete Post

TBM
PLASTIC STAKE
BASE OF POLE T285/E61
N 2951639.2545
E 183368.9809
EL = 972.52'

TBM
PLASTIC STAKE
BASE OF POLE 2/1/1
N 2951257.6931
E 183663.9929
EL = 958.50'

N/F
Deanna M. Markham
Book 5941 Page 14

N/F
Christopher M. Alden
and Michelle M. Alden
Book 4266 Page 94
Plat H, #168

N/F
Robert A. Romeo
Book 4802 Page 297
Plat H, #168

N/F
Michael H. Oft
and Kay Oft
Book 4454 Page 36
Plat H, #168

N/F
Overlee Property
Holdings, LLC
Book 5306 Page 244
Plan Book 417K, #191

20 0 20 40 80
SCALE IN FEET

FOR PROFILE: SEE SHEET NO. 37 & 38

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	87	199
PROJECT FILE NO.	606462		

SIGNS & PAVEMENT MARKINGS
100% DESIGN SUBMISSION

CONTINUED ON SHEET 86

PROPOSED SIGNS & SUPPORT
M4-5 ("TO")
M1-4 ("ROUTE 20")
M1-4 ("ROUTE 7")
M6-2R (ARROW)

R & D

PROPOSED SIGNS & SUPPORT
D3-1 ("WALKER STREET")
D3-1 ("GOLDEN HILL ROAD")

PROPOSED CROSSWALK PAVEMENT MARKINGS
12" EDGES (WHITE) SPACED @ 6' O.C. WITH
12" STRIPES (WHITE) SPACED @ 6' O.C.

PROPOSED PAVEMENT MARKINGS
12" STOP LINE (WHITE)
STA 79+93.2, 26.1' RT
WITH "STOP" MESSAGE (WHITE)

PROPOSED SIGN & SUPPORT
R1-1 ("STOP")

R & D

WALKER STREET	STA 80+50.39
GOLDEN HILL ROAD	STA 0+00.00

PROPOSED SIGN & SUPPORT
W1-10L(CURVE WITH INTERSECTION SYMBOL)

R & D

PROPOSED SIGNS & SUPPORT
R3-17 ("BIKE LANE")
R3-17aP ("AHEAD" PLAQUE)

PROPOSED SIGNS & SUPPORT
R3-17 ("BIKE LANE")
R3-17aP ("AHEAD" PLAQUE)

MATCH EXIST PAVEMENT MARKINGS

WALKER STREET	STA 82+24.88
CRYSTAL STREET	STA 0+00.00
MILL STREET	STA 0+00.00

NOTE: ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISCARDED UNLESS OTHERWISE NOTED.

FOR PROFILE: SEE SHEET NO. 39

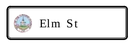
20 0 20 40 80
SCALE IN FEET

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MARKER		BACK-GROUND	LEGEND	BORDER			
R1-1	30"	30"		SEE MUTCD STANDARDS			6 1*	SEE MUTCD STANDARDS *SOLAR-POWERED LED SIGN			P5-7	6.25 6.25	37.50 6.25
W3-1	30"	30"					2				P5-2	6.25	12.50
R2-1	24"	30"					2				P5-2	5.00	10.00
R2-1	24"	30"					5				P5-5	5.00	25.00
R2-1	24"	30"					2				P5-2	5.00	10.00
R3-17	24"	18"					15				P5-15	3.00	45.00
R3-17aP	24"	8"					2				ON R3-17	1.33	2.66
R3-17bP	24"	8"					2				ON R3-17	1.33	2.66
W11-2	30"	30"					8				P5-8	6.25	50.00
W16-7P	24"	12"					4				ON W11-2	2.00	8.00
R10-15	30"	30"					1				P5-1	6.25	6.25
R4-7	24"	30"					1				P5-1	5.00	5.00
W2-1	30"	30"					2				P5-2	6.25	12.50
W16-9P	24"	12"					4				ON W11-2	2.00	8.00

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MARKER		BACK-GROUND	LEGEND	BORDER			
W1-10(L)	36"	36"		SEE MUTCD STANDARDS			1	SEE MUTCD STANDARDS			P5-1	9.00	9.00
W11-8	30"	30"		SEE MUTCD STANDARDS			1				P5-1	6.25	6.25
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		3				P5-3	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				ON D3-1 (Walker St)	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				ON R1-1	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				P5-1	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				P5-1	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				ON D3-1 (Walker St)	PAY UNDER ITEM 874	
D3-1	VARIES	9"		6"C/6"C	1.5" 1.5"		1				ON D3-1 (Walker St)	PAY UNDER ITEM 874	
M4-5	24"	12"		SEE MUTCD STANDARDS			1				P5-1	2.00	2.00
M1-4	24"	24"		SEE MASSDOT STANDARDS			1				ON M4-5	4.00	4.00
M1-4	24"	24"		SEE MASSDOT STANDARDS			1				ON M4-5	4.00	4.00
M6-2(R)	21"	15"		SEE MUTCD STANDARDS			1				ON M4-5	2.19	2.19
M1-5	30"	24"		SEE MASSDOT STANDARDS			1				ON M3-3	5.00	5.00
M3-3	24"	12"		SEE MUTCD STANDARDS			1				P5-1	2.00	2.00

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	88	199
PROJECT FILE NO.	606462		

SIGN SUMMARY
100% DESIGN SUBMISSION

NOTE: ALL STOP AND YIELD SIGNS PROPOSED IN THIS CONTRACT ARE SUBJECT TO FIELD INVESTIGATION BY THE DISTRICT OFFICE OF MASSDOT TO JUSTIFY WARRANTS BEFORE INSTALLATION.

NOTE: HIGH INTENSITY PRISMATIC SHEETING SHALL BE USED FOR ALL SIGNS. THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THE 2006 AMENDMENTS TO THE MUTCD, THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, THE 1990 MDPW "STANDARD DRAWINGS FOR SIGNS AND SUPPORTS", THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AND ALL AMENDMENTS, WILL GOVERN.

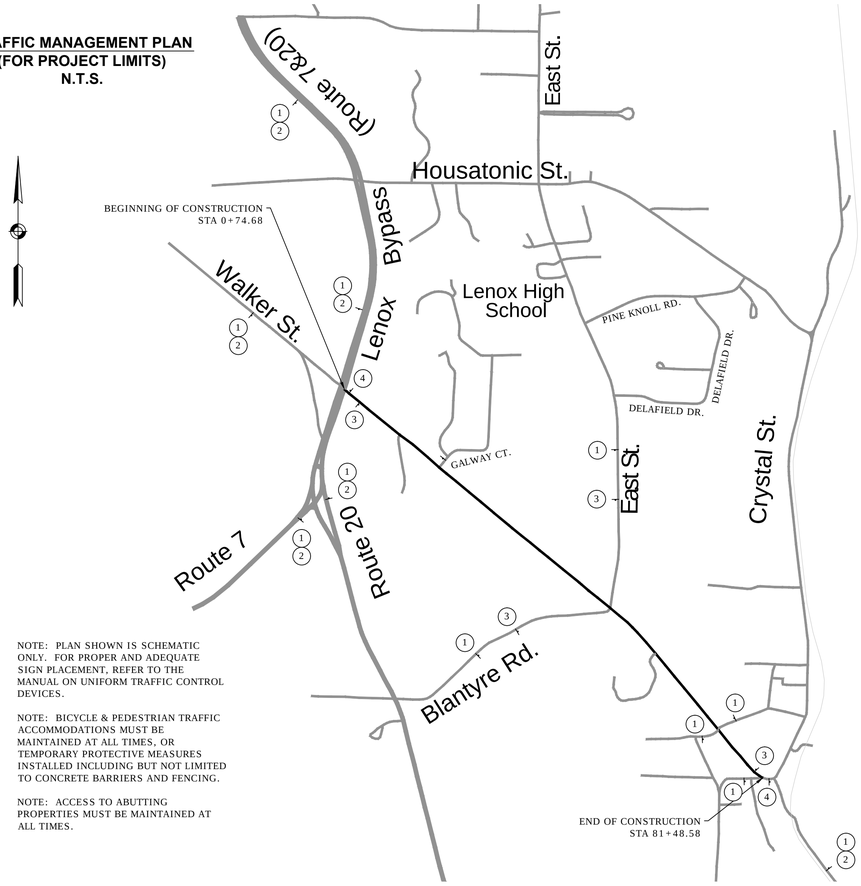
NOTE: ALL STREET NAMES SIGNS SHALL HAVE THE TOWN SEAL AS PER TOWN STANDARDS.



E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

TRAFFIC MANAGEMENT PLAN (FOR PROJECT LIMITS) N.T.S.

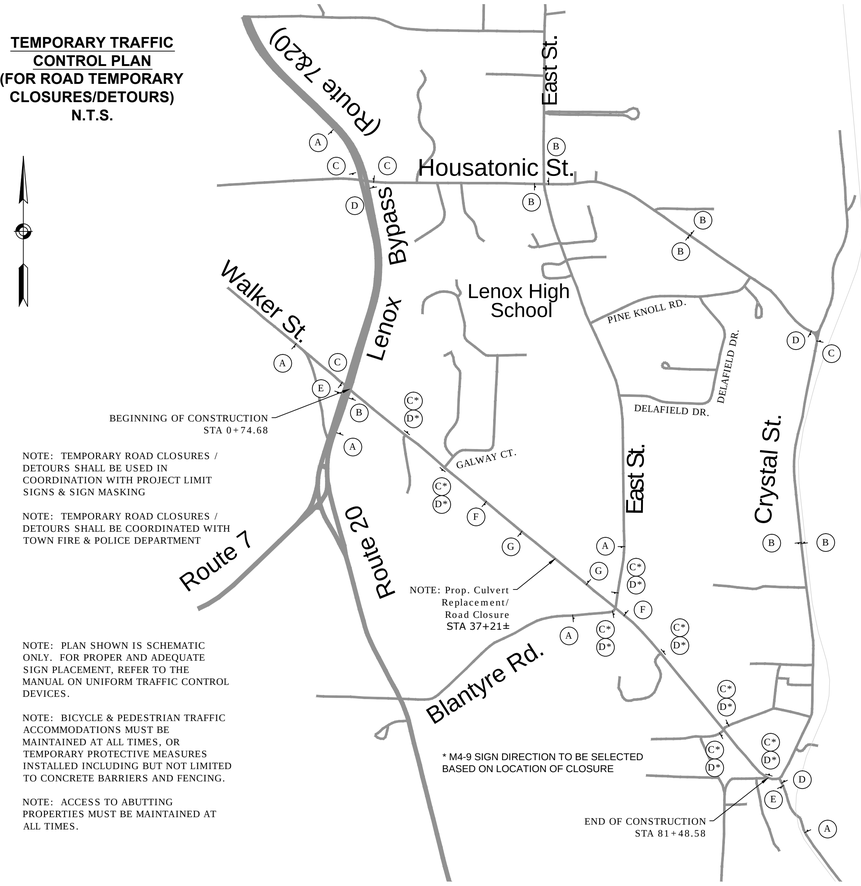


NOTE: PLAN SHOWN IS SCHEMATIC ONLY. FOR PROPER AND ADEQUATE SIGN PLACEMENT, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTE: BICYCLE & PEDESTRIAN TRAFFIC ACCOMMODATIONS MUST BE MAINTAINED AT ALL TIMES, OR TEMPORARY PROTECTIVE MEASURES INSTALLED INCLUDING BUT NOT LIMITED TO CONCRETE BARRIERS AND FENCING.

NOTE: ACCESS TO ABUTTING PROPERTIES MUST BE MAINTAINED AT ALL TIMES.

TEMPORARY TRAFFIC CONTROL PLAN (FOR ROAD TEMPORARY CLOSURES/DETOURS) N.T.S.



NOTE: TEMPORARY ROAD CLOSURES / DETOURS SHALL BE USED IN COORDINATION WITH PROJECT LIMIT SIGNS & SIGN MASKING

NOTE: TEMPORARY ROAD CLOSURES / DETOURS SHALL BE COORDINATED WITH TOWN FIRE & POLICE DEPARTMENT

NOTE: PLAN SHOWN IS SCHEMATIC ONLY. FOR PROPER AND ADEQUATE SIGN PLACEMENT, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

NOTE: BICYCLE & PEDESTRIAN TRAFFIC ACCOMMODATIONS MUST BE MAINTAINED AT ALL TIMES, OR TEMPORARY PROTECTIVE MEASURES INSTALLED INCLUDING BUT NOT LIMITED TO CONCRETE BARRIERS AND FENCING.

NOTE: ACCESS TO ABUTTING PROPERTIES MUST BE MAINTAINED AT ALL TIMES.

* M4-9 SIGN DIRECTION TO BE SELECTED BASED ON LOCATION OF CLOSURE

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	89	199
PROJECT FILE NO.	606462		

TRAFFIC MANAGEMENT PLAN
100% DESIGN SUBMISSION

LEGEND
(PARTIAL ONLY - SEE SIGNS FOR DETOUR)



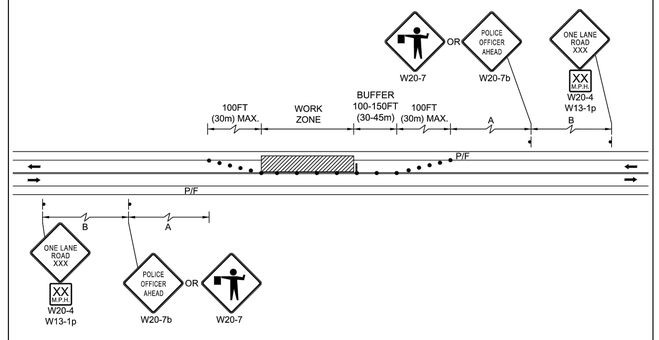
SIGNS FOR PROJECT LIMITS									
SIGN #	I.D. #	SIZE (INCHES)		TEXT	# OF SIGNS	COLOR			UNIT AREA (S.F)	TOTAL AREA (S.F.)
		W	H			BACKGROUND	LEGEND	BORDER		
1	W20-1	36	36	ROAD WORK AHEAD	11	ORANGE	BLACK	BLACK	9.00	99.00
2	D3-1	42	12	WALKER ST	6	ORANGE	BLACK	BLACK	3.50	21.00
3	R2-10a	24	30	WORK ZONES SPEEDING FINES DOUBLED	4	ORANGE	BLACK	BLACK	5.00	20.00
4	R2-10e	24	30	END ROAD WORK DOUBLE FINES END	2	ORANGE	BLACK	BLACK	5.00	10.00

SIGNS FOR DETOUR									
SIGN #	I.D. #	SIZE (INCHES)		TEXT	# OF SIGNS	COLOR			UNIT AREA (S.F)	TOTAL AREA (S.F.)
		W	H			BACKGROUND	LEGEND	BORDER		
A	W20-2	36	36	DETOUR 1000 FT	6	ORANGE	BLACK	BLACK	9.00	54.00
B	M4-9(S)	30	24	DETOUR ARROW STRAIGHT	7	ORANGE	BLACK	BLACK	5.00	35.00
C	M4-9(L)	30	24	DETOUR ARROW LEFT	12*	ORANGE	BLACK	BLACK	5.00	30.00
D	M4-9(R)	30	24	DETOUR ARROW RIGHT	11*	ORANGE	BLACK	BLACK	5.00	35.00
E	M4-8a	24	18	END DETOUR	2	ORANGE	BLACK	BLACK	3.00	6.00
F	W20-3	36	36	ROAD CLOSED AHEAD	2	ORANGE	BLACK	BLACK	9.00	18.00
G	R11-4	60	30	ROAD CLOSED TO THRU TRAFFIC	2	WHITE	BLACK	BLACK	12.50	25.00

* ACCOUNTS FOR SIGNS USED BASED ON LOCATION OF ROADWAY CLOSURE

GENERAL NOTES:

1. ALL TRAFFIC MANAGEMENT CONFIGURATIONS SHALL CONFORM TO THE STANDARD MASSDOT DETAILS ON THE FOLLOWING SHEETS AND APPLY TO ALL LOCATIONS INCLUDED IN THE CONTRACT.
2. ALL TRENCHES IN THE ROADWAY SHALL BE BACKFILLED AND PATCHED WITH HOT MIX ASPHALT OR COVERED WITH BEVELED EDGE STEEL PLATES BEFORE REOPENING THE ROADWAY TO TRAFFIC.
3. COVER ALL EXISTING SIGNAGE THAT CONFLICTS WITH THE TRAFFIC MANAGEMENT SETUP IN PLACE.
4. ALL ADVANCED SIGNAGE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.



massDOT Massachusetts Department of Transportation Highway Division

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE TLR-5

TWO LANE ROAD
ONE LANE ALTERNATING TRAFFIC

NOT TO SCALE

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6. CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
7. THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.
8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
11. MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

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

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

MEASURED AVERAGE WORK ZONE CAPACITIES

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

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

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

massDOT Massachusetts Department of Transportation Highway Division | Notes for Traffic Management | FIGURE GEN-1 GENERAL GUIDELINES

SUGGESTED WORK ZONE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS **		
	A	B	C
LOCAL OR LOW VOLUME ROADWAYS*	350 (100)	350 (100)	350 (100)
MOST OTHER ROADWAYS*	500 (150)	500 (150)	500 (150)
FREEWAYS AND EXPRESSWAYS*	1,000 (300)	1,500 (450)	2,640 (800)

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.

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

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

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

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

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

Based on: Table 6C-1 MUTCD LATEST EDITION

STOPPING SIGHT DISTANCE AS A FUNCTION OF SPEED

SPEED* (km/h)	DISTANCE (m)
30	35
40	50
50	65
60	85
70	105
80	130
90	160
100	185
110	220
120	250

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

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

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

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

Source: Table 6C-2 MUTCD LATEST EDITION

massDOT Massachusetts Department of Transportation Highway Division | Notes for Traffic Management | FIGURE GEN-2 NOTES ON WORK ZONE DISTANCES

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

EXPRESSWAY- A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY- A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

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

Source: MUTCD LATEST EDITION

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

TYPE OF TAPER	TAPER LENGTH (L)*
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN.(15 m) 100 FT(30 m) MAX.
DOWNSTREAM TAPER	50 FT MIN.(15 m) 100 FT MAX.(30 m) PER LANE

Source: Table 6C-3 MUTCD LATEST EDITION

FORMULAS FOR DETERMINING TAPER LENGTHS

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

SPEED LIMIT (S)	TAPER LENGTH (L) Meters
60 KM/H OR LESS	$L = \frac{WS^2}{155}$
70 KM/H OR MORE	$L = \frac{WS}{1.6}$

WHERE: L = TAPER LENGTH IN FEET (METERS)

W = WIDTH OF OFFSET IN FEET (METERS)

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICAPATED OPERATING SPEED IN MPH (KM/H)

Source: Table 6C-4 MUTCD LATEST EDITION

massDOT Massachusetts Department of Transportation Highway Division | Notes for Traffic Management | FIGURE GEN-3 NOTES ON WORK ZONE DISTANCES

LENOX
WALKER STREET

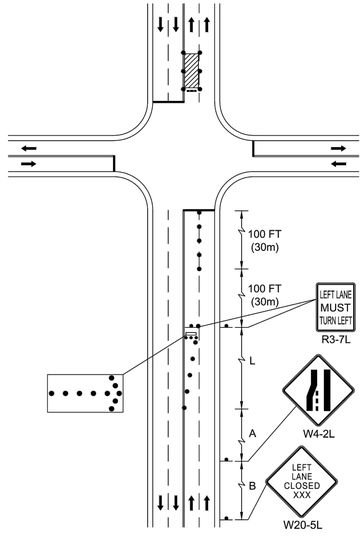
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	90	199
PROJECT FILE NO.	606462		

TRAFFIC MANAGEMENT PLAN
100% DESIGN SUBMISSION

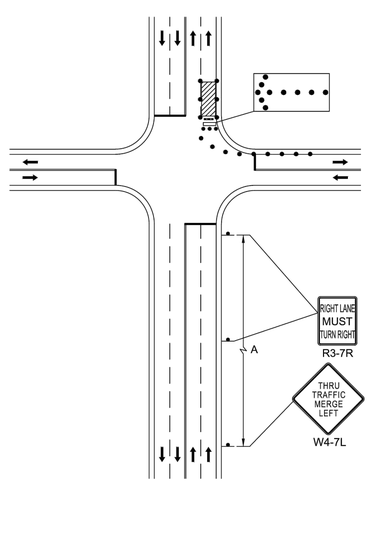
GENERAL NOTES:

1. IF ANY STAGE REQUIRES MODIFICATION OF THE TRAFFIC SIGNAL OPERATION, THE CONTRACTOR SHALL SUBMIT A REVISED SIGNAL TIMING AND PHASING PLAN TO THE MASSDOT FOR APPROVAL BEFORE MODIFYING THE TRAFFIC SIGNAL.
2. ALL TRAFFIC MANAGEMENT CONFIGURATIONS SHALL CONFORM TO THE STANDARD MASSDOT DETAILS ON THE FOLLOWING SHEETS AND APPLY TO ALL LOCATIONS INCLUDED IN THE CONTRACT.
3. THE CONTRACTOR SHALL BE PERMITTED TO PERFORM ROADWAY OR LANE CLOSURES FROM 9:00AM TO 3:00PM. APPROVAL FROM MASSDOT AND THE TOWN OF LENOX IS REQUIRED FOR CHANGES TO WORK HOURS.
4. ALL TRENCHES IN THE ROADWAY SHALL BE BACKFILLED AND PATCHED WITH HOT MIX ASPHALT OR COVERED WITH BEVELED EDGE STEEL PLATES BEFORE REOPENING THE ROADWAY TO TRAFFIC.
5. COVER ALL EXISTING SIGNAGE THAT CONFLICTS WITH THE TRAFFIC MANAGEMENT SETUP IN PLACE.
6. ALL ADVANCED SIGNAGE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.

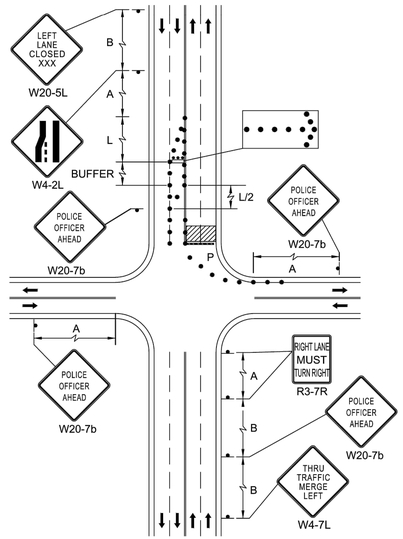
WALKER STREET	
ROADWAY TYPE	URBAN MINOR ARTERIAL
ADT	3,200
DISTANCE 'A'	500'
DISTANCE 'B'	500'
DISTANCE 'C'	500'
ANTICIPATED SPEED	25 MPH



massDOT Massachusetts Department of Transportation Highway Division | Standard Details and Drawings for the Development of Temporary Traffic Control Plans | FIGURE INT-3 DOUBLE LANE APPROACH FAR SIDE CLOSURE INSIDE LANE NOT TO SCALE



massDOT Massachusetts Department of Transportation Highway Division | Standard Details and Drawings for the Development of Temporary Traffic Control Plans | FIGURE INT-4 DOUBLE LANE APPROACH FAR SIDE CLOSURE RIGHT LANE NOT TO SCALE



massDOT Massachusetts Department of Transportation Highway Division | Standard Details and Drawings for the Development of Temporary Traffic Control Plans | FIGURE INT-5 DOUBLE LANE APPROACH HALF ROAD CLOSURE NOT TO SCALE

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	91	199
PROJECT FILE NO.	606462		

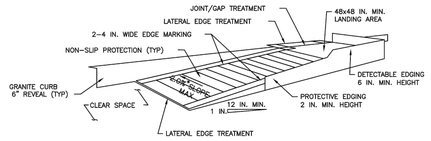
TRAFFIC MANAGEMENT PLAN
100% DESIGN SUBMISSION

10-Nov-2017

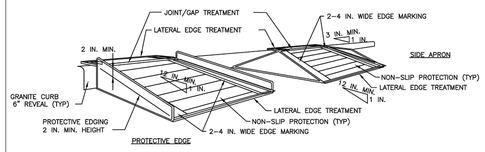
E2148D10 - SHEET LAYOUTS.DWG

NOTES:

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOP STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHOULD HAVE A 1:50 (2%) MAX CROSS-SLOPE.
5. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR 2 TO 4 IN. WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.

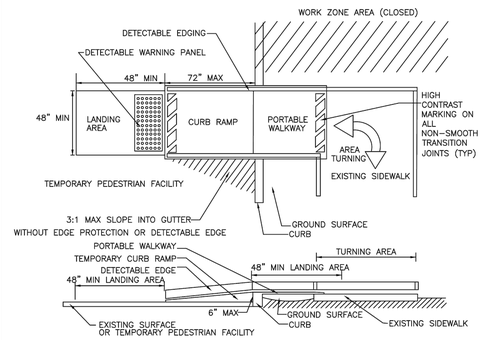


TEMPORARY CURB RAMP-PARALLEL TO CURB



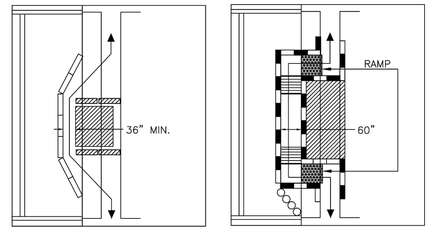
TEMPORARY CURB RAMP-PERPENDICULAR TO CURB

massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE PED-1 PEDESTRIAN DETAILS NOT TO SCALE



TEMPORARY CURB RAMP-TYPE 2

massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE PED-2 PEDESTRIAN DETAILS NOT TO SCALE

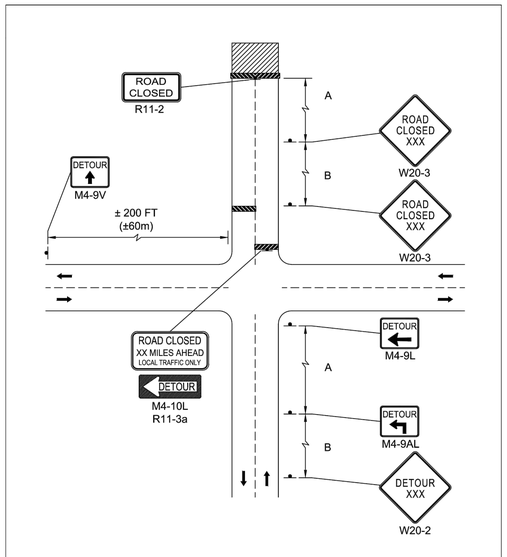


- When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, temporary facilities shall be provided and they shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
- A pedestrian channelizing device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

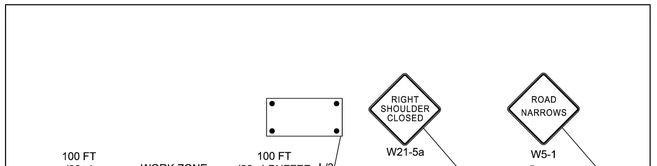
AUDIBLE DEVICES

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

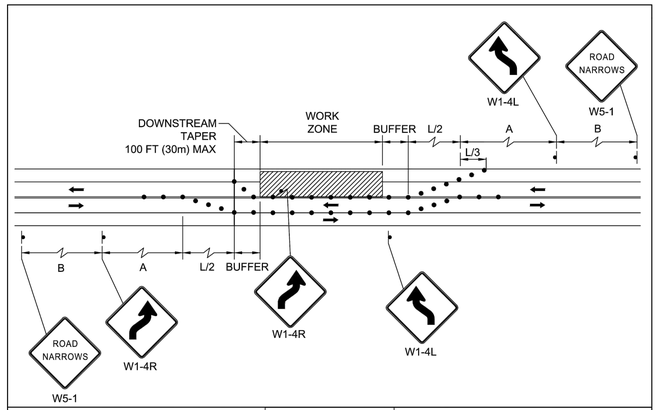
massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE PED-3 PEDESTRIAN DETAILS NOT TO SCALE



massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE D-1 DETOUR ADVANCE SIGNING NOT TO SCALE



massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE TLR-1 TWO LANE ROAD SHOULDER CLOSED NOT TO SCALE



massDOT Massachusetts Department of Transportation Highway Division	Standard Details and Drawings for the Development of Temporary Traffic Control Plans	FIGURE TLR-2 TWO LANE ROAD SHOULDER AND TRAVEL LANE CLOSED NOT TO SCALE

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

LENOX
WALKER STREET

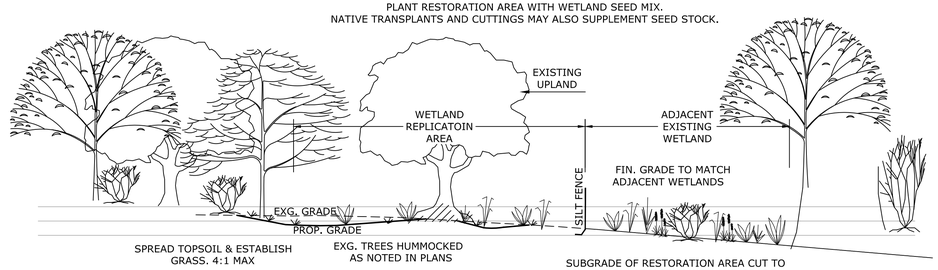
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	92	199
PROJECT FILE NO.	606462		

WETLAND REPLICATION PLAN
100% DESIGN SUBMISSION

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

TYPICAL WETLAND REPLICATION CROSS SECTION WL-WL'

NTS



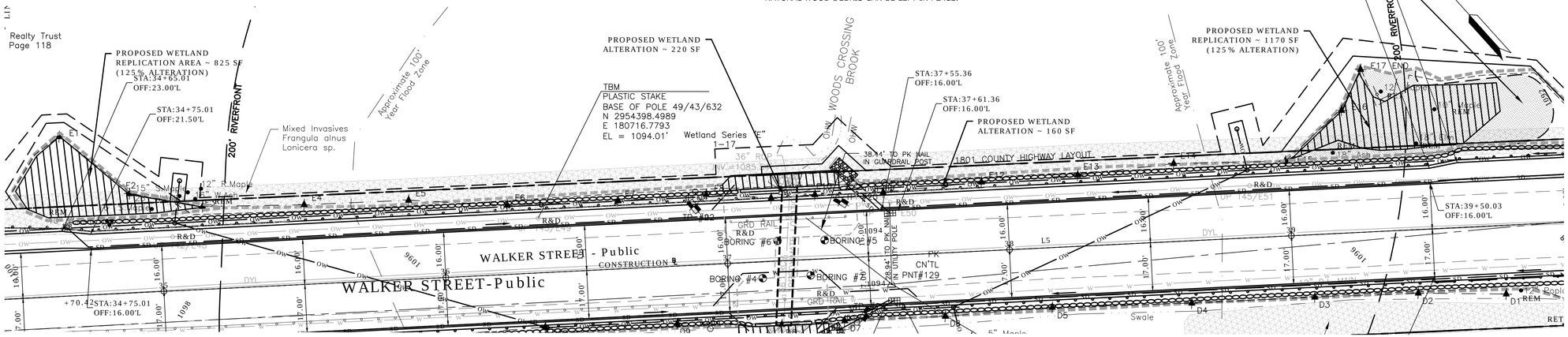
NOTE: SEE BELOW GENERAL WETLAND REPLACEMENT NOTES

SUBGRADE OF RESTORATION AREA CUT TO 12"± BELOW ADJACENT WETLAND GRADE, LEAVE EXCAVATION ROUGH.

TRANSFER EXG. DISTURBED WETLAND SOIL TO REPLICATION AREA, OR PLACE 12" OF ORGANIC TOPSOIL ON ROUGH GRADE. NATURAL WOOD DEBRIS CAN BE LEFT IN PLACE.

SEE PLAN FOR ELEVATIONS

FLOODPLAIN COMPENSATION AREA		
ELEV.	REQUIRED	PROVIDED
1091 - 1092	320 CF	400 CF
1092-1093	1370 CF	1400 CF



General Wetland Replacement Notes
(Refer to Project Specifications for Detail)

Section 1 - General Conditions

- Contractor Responsibility
  The Conservation Commission will be notified in writing at least five days before the meeting. The purpose of the meeting is to review sediment and erosion control measures, construction methods, and wetland replacement procedures. The contractor, site engineer, and botanist will have and be familiar with copies of the Order of Conditions and Wetland Replacement Procedures.

Section 2 - Site Preparation

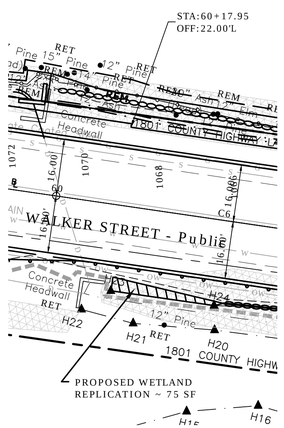
- All wetland boundaries in the replacement areas will be reflagged every 20 feet.
- Site grading and construction will be scheduled to avoid periods of high water. Once begun, grading and construction will continue on interrupted to completion to restrict erosion and the siltation of wetlands
- A single row of staked compost filter tubes shall be installed along the border of the existing wetland and the limit of wetland fill as shown on the plans. Compost filter tubes shall be staked with 1" x 1" x 3' stakes spaced evenly and driven solidly into the underlying material.
- There should be extra compost filter tubes on the premises with sufficient stakes for staking them. The filter tubes will be used as necessary to reinforce or repair existing straw bale barriers, to establish new barriers where needed, or to be spread as mulch

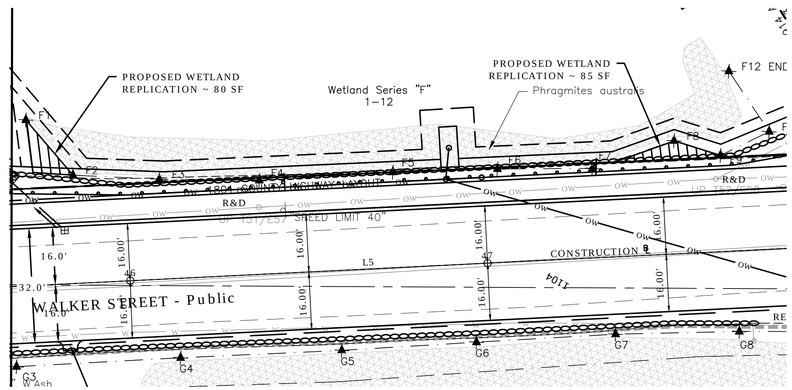
2.03 Replacement Area Preparation

- This wetland replacement shall be performed under the direction and guidance of a qualified Botanist and as specified in these provisions. The preparation of the replacement area shall be accomplished in the following order.
- The replacement area shall be excavated to a minimum depth of 12 inches below the finished grade shown on the plan. Any wetland resource area adjacent to the replacement area shall be separated from the replacement area by a barrier of straw bales and silt fence as shown on the drawings. No grading will extend into the wetland areas.
- All soil within the top 12 inches of the proposed replacement area surface shall be inspected for rubble; if rubble is found, it shall be removed from the topsoil. If the soil is beyond usable quality as determined by the Botanist, it shall be disposed of. Usable soil shall be stripped and stockpiled for reuse.
- There shall be a 1-foot deep layer of hydric soils placed in the replacement area. If there is not sufficient usable hydric soil in the proposed wetland fill areas to provide 12 inches of backfill in the wetland replacement area, an alternative soil mixture may be used. This shall consist of plantable soil borrow and at least 20% organic matter by volume. Peat moss of any type shall not be used as a source of organic matter. No woodchips shall be used, and organic material shall be well or partially decomposed. If offsite soils are to be used, documentation to and verification from the botanist and engineer is required regarding the source, preparation, and placement of the offsite soil. Enough A and B-Horizon material shall be provided to create a suitable rooting medium, and to approximate the conditions at the nearest undisturbed existing wetland. Consistency shall be loose to friable and texture shall be loamy sand to silt loam. To prevent soil drying and contamination, replacement soil shall be used immediately if possible or stockpiled for as little time as possible. When stockpiled, the soils shall be kept wet and maintained at the same moisture content as the existing wetland soils. Soils shall be transported in washed vehicles so that no exotic or invasive species get mixed in. All soils shall be verified that they do not contain invasive species before use. (see Invasive Species List below, provided by DEP)
- Purple Loosestrife (*Lythrum salicaria*);
- Phragmites (*Phragmites australis);*
- Buckthorn, *(Rhamnus Frangula alnus);*
- Honeysuckles *(Lonicera spp.);*
- Garlic Mustard *(Alliaria petiolata);*
- Japanese Knotweed (*Polygonum cuspidatum or Fallopia Japonica);*
- Japanese Stilt Grass (Microstegium vimineum);
- Reed Canary Grass (*Phalaris arundinacea*);
- Bittersweet nightshade (*Celastrus Orbiculatus);*
- Black Swallow-wort (*Cynanchum nigrum);*
- Pale Swallow-wort (*Cynanchum rossicum*).
- The previously excavated area (replacement area) shall be backfilled with the hydric soils to a minimum depth of one foot. The added soils used shall be graded so as to be at a grade compatible with the adjacent wetland, as shown on the plans.
- Finished grade shall be at an elevation, which shall provide a hydrologic connection between the replacement area and the adjacent wetland, as shown on the plans. The Contractor shall verify that this elevation is not at a level that could dewater an adjacent wetland.
- The wetland soils shall be deposited in the replacement area in a manner minimizing travel and subsequent compaction of the underlying material and replacement wetland soils.
- The side slopes will be graded with a minimum of four inches of the hydric soil described above and seeded with soil conservation seed mix. All disturbed areas will then be mulched with straw at an application rate of 100 pounds per 1000 square feet.
- Upon completion of the replacement area, compost filter tube barrier shall be placed around the entire perimeter to protect it during the rest of the construction.
- The final grading of the wetland soils shall result in no breaks in elevation upon removal of sedimentation barriers.
- The sedimentation barriers shall be removed at the completion of all construction for the project. The ground under the sedimentation barriers shall be reseeded when the barriers are removed.

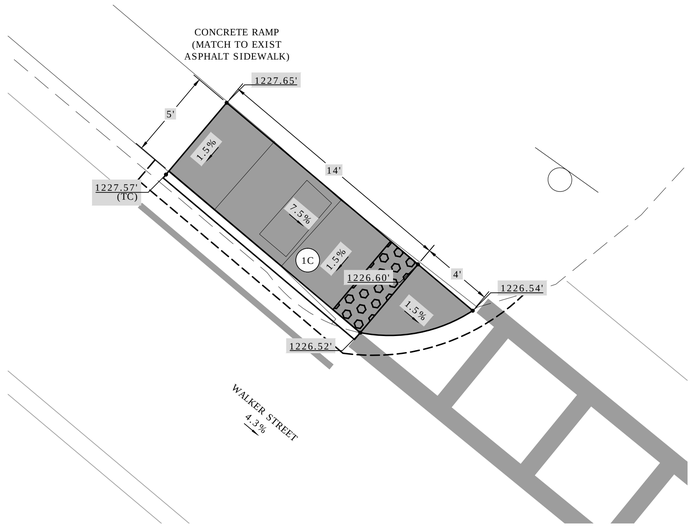
Section 3 - Seeding

- Seeding shall be conducted after soil has been raked. Seed shall be sown by hand or by a small mechanical lawn seeder. Seed mix and application rate shall be as specified.



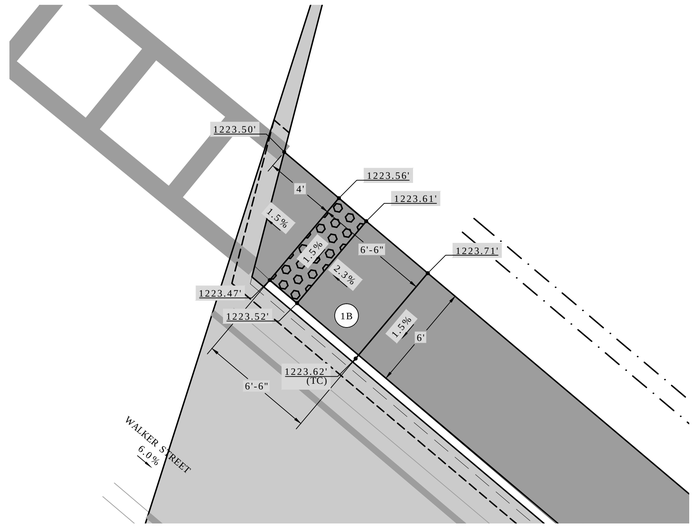


DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG



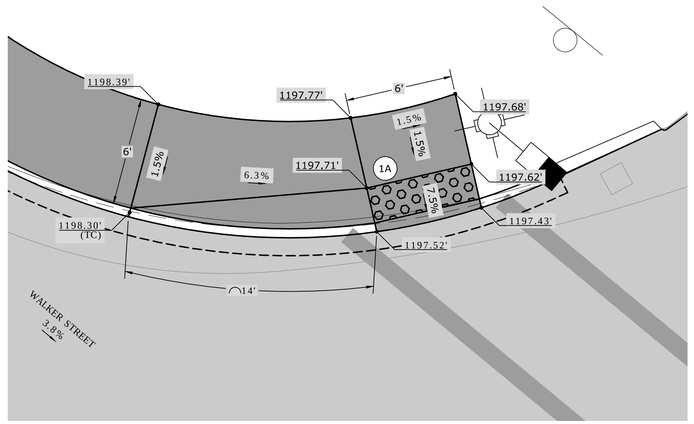
WCR #1C - STA -5+74.93, 17.29' L

Scale: 1"=4'



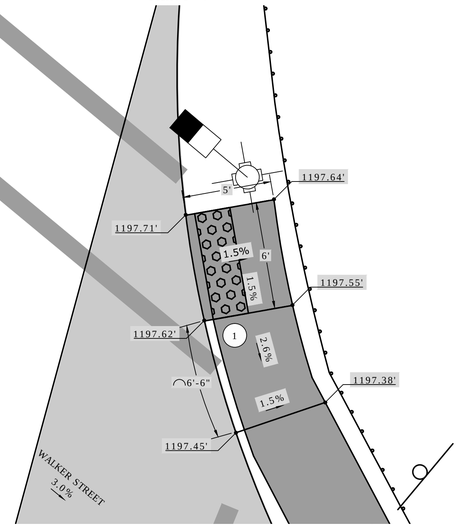
WCR #1B - STA -5+23.64, 18.04' L

Scale: 1"=4'



WCR #1A - STA -0+82.76, 30.57' L

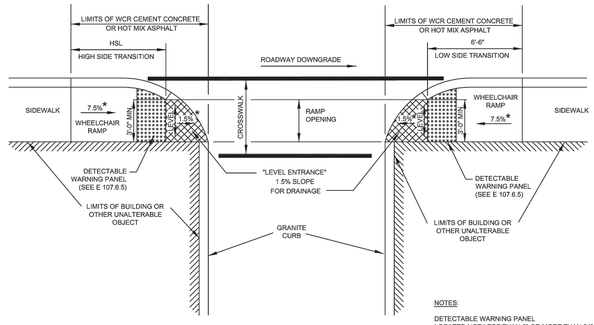
Scale: 1"=4'



WCR #1 - STA 0+67.72, 31.39' L

Scale: 1"=4'

WHEELCHAIR RAMP DATA TABLE											
WCR#	RAMP REFERENCE POINT		SIDEWALK WIDTH	ROADWAY GUTTER SLOPE	TRANSITION LENGTH (FT)		RAMP LENGTH (FT)		RAMP WIDTH (FT)	LEVEL LANDING DEPTH (FT)	WARNING PANEL	DESCRIPTION
	STATION	OFFSET			LEFT SIDE	RIGHT SIDE	PRIMARY	SECONDARY				
1C	-5+74.93	17.29' L	5'-0"	4.3%	14'-0"	---	14'-0"	---	5'-0"	4'-0"	YES	CROSSWALK
1B	-5+23.64	18.04' L	6'-0"	6.0%	---	6'-6"	6'-6"	---	6'-0"	4'-0"	YES	CROSSWALK
1A	-0+82.76	30.57' L	6'-0"	3.8%	14'-0"	---	2'-6"	14'-0"	6'-0"	4'-0"	YES	CROSSWALK
1	0+67.72	31.39' L	5'-0"	3.0%	---	6'-6"	6'-6"	---	6'-0"	5'-0"	YES	CROSSWALK
2	17+46.44	20.00' L	6'-0"	4.9%	---	6'-6"	5'-0"	---	6'-0"	8'-6"	YES	CROSSWALK
3	17+90.23	20.00' L	6'-0"	4.3%	6'-6"	---	7'-2"	---	6'-0"	8'-6"	YES	CROSSWALK
4	47+95.53	20.00' L	6'-0"	1.3%	---	---	5'-0"	---	6'-0"	10'-5"	YES	CROSSWALK
5	48+77.56	20.00' L	6'-0"	1.3%	---	---	5'-0"	---	6'-0"	13'-4"	YES	CROSSWALK
6	70+82.82	17.50' R	6'-0"	4.0%	14'-0"	6'-6"	3'-6"	14'-0"/6'-6"	6'-0"	6'-0"	YES	CROSSWALK
7	70+82.77	17.50' L	6'-0"	4.0%	14'-0"	6'-6"	---	14'-0"/6'-6"	6'-0"	6'-0"	YES	CROSSWALK
8	71+05.89	33.55' L	6'-0"	0.6%	6'-6"	7'-8"	---	6'-6"/7'-8"	6'-0"	6'-0"	YES	CROSSWALK
9	71+27.42	22.50' R	6'-0"	4.0%	14'-0"	---	12'-4"	---	6'-0"	6'-3"	YES	CROSSWALK
10	71+37.41	33.53' L	6'-0"	3.9%	---	6'-6"	6'-6"	---	6'-0"	6'-0"	YES	CROSSWALK
11	71+70.33	22.50' R	6'-0"	4.2%	---	6'-6"	5'-1"	---	6'-0"	6'-0"	YES	CROSSWALK
12	77+82.21	17.49' R	6'-0"	3.0%	11'-0"	6'-6"	3'-6"	11'-0"/6'-6"	6'-0"	6'-0"	YES	CROSSWALK
13	77+82.30	17.49' L	6'-0"	3.0%	11'-0"	6'-6"	---	11'-0"/6'-6"	6'-0"	6'-0"	YES	CROSSWALK



LEGEND

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)

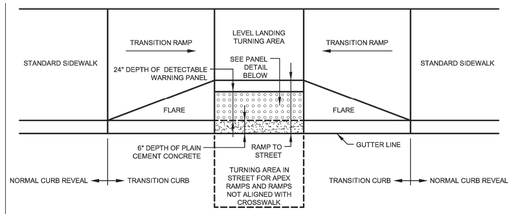
★ = TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:

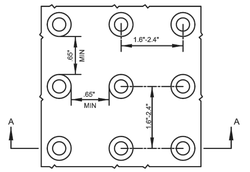
DETECTABLE WARNING PANEL LOCATED NOT LESS THAN 6" OR MORE THAN 24" FROM ROADWAY EDGE (GUTTER LINE). TRUNCATED DOMES TO BE ALIGNED WITH DIRECTION OF TRAVEL.

FOR DETAILS OF TRUNCATED DOMES SEE DRAWING E 107.6.5.

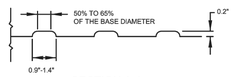
ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS.



TYPICAL INSTALLATION



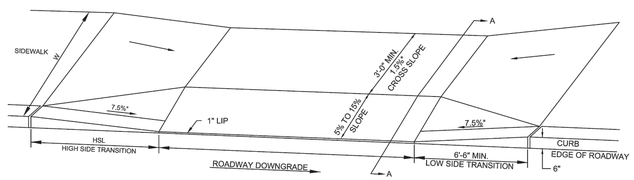
DETAIL OF DETECTABLE WARNING PANEL

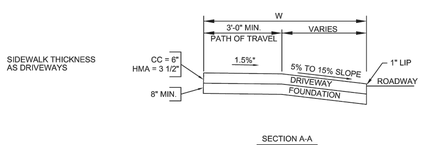


SECTION A-A

NOTE:

PANELS MAY BE CONCRETE PRECAST OR CAST IN PLACE OR OTHER SUITABLE MATERIAL PERMANENTLY APPLIED TO THE RAMP. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.





SECTION A-A

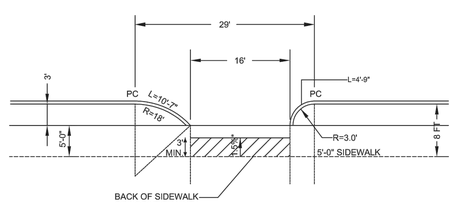
LEGEND

HSL = HIGH SIDE TRANSITION LENGTH. SEE E 107.9.0
W = SIDEWALK WIDTH
* = TOLERANCE FOR CONSTRUCTION ±0.5%
CC = CEMENT CONCRETE
HMA = HOT MIX ASPHALT

NOTES:

1. WHEN THE SIDEWALK IS PAVED TO THE CURB LINE, USE SHORT CURB RETURNS AT THE HIGHWAY CURB LINE PC'S, SHOWN IN THESE DESIGNS.

*MUST MAINTAIN PATH OF TRAVEL WITH 1.5% CROSS SLOPE (± 0.5% CONSTRUCTION TOLERANCE)



LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	93	199
PROJECT FILE NO.		606462	

WHEELCHAIR RAMP DETAILS
100% DESIGN SUBMISSION

NOTES:

- ALL CONCRETE SIDEWALKS, CONCRETE SIDEWALKS AT DRIVEWAYS, AND WHEELCHARIR RAMPS SHALL BE STEEL REINFORCED AS SHOWN IN THE CONSTRUCTION DETAILS.
- FOR ALL WHEELCHAIR RAMPS, THE WHEELCHAIR RAMP SHALL BE FORMED AND POURED SEPARATELY FROM THE ADJACENT SIDEWALK. AN EXPANSION JOINT - "EJ" - SHALL BE CONSTRUCTED ALONG THE GRADE BACK AT THE TOP OF THE RAMP AND GLARED SIDES WHERE APPLICABLE.
- WCR TYPES DESCRIBED ARE GENERALIZATIONS ONLY. CONTRACTOR SHALL CONFORM TO MassDOT STANDARDS, ADA, AND THE WHEELCHAIR RAMP PLANS.
- ALL CURB REVEAL IS TO BE 6" AT TOP OF TRANSITIONS.
- DETECTABLE WARNING PANEL COLOR TO BE BRICK RED FOR CONTRAST WITH CONCRETE SIDEWALK.

SIDEWALK THROUGH DRIVEWAYS DATA TABLE				
#	REFERENCE POINT			SIDEWALK WIDTH
	START STATION	END STATION	OFFSET	
1	2+51.35	2+67.36	17.00' L	6.0'
2	9+75.61	9+94.44	17.00' L	6.0'
3	11+48.22	11+64.21	17.00' L	6.0'
4	13+89.49	14+08.23	17.00' L	6.0'
5	15+79.86	15+95.86	17.00' L	6.0'
6	18+00.42	18+13.72	17.00' L	6.0'
7	19+56.13	19+75.08	17.00' L	6.0'
8	21+39.76	21+55.75	17.00' L	6.0'
9	22+03.80	22+19.80	17.00' L	6.0'
10	23+75.16	23+94.71	17.00' L	6.0'
11	25+53.77	25+71.75	17.00' L	6.0'
12	25+93.76	26+09.76	17.00' L	6.0'
13	28+43.28	28+59.28	17.00' L	6.0'
14	30+54.27	30+70.28	16.98' L	6.0'
15	32+58.50	32+77.42	17.00' L	6.0'
16	42+82.43	43+02.67	17.00' L	6.0'
17	43+14.55	43+36.83	17.00' L	6.0'
18	50+08.97	50+24.88	17.00' L	6.0'
19	51+10.26	51+26.19	16.48' L	5.0'
20	51+68.18	51+87.37	16.50' L	5.0'
21	54+99.89	55+19.55	17.00' L	6.0'
22	62+71.09	62+87.09	17.00' L	6.0'
23	64+62.42	64+78.22	16.98' L	6.0'
24	66+62.47	66+78.47	19.50' R	6.0'
25	66+90.39	67+06.39	19.50' R	6.0'
26	67+58.01	67+74.01	16.50' L	6.0'
27	67+64.10	67+85.68	19.50' R	6.0'
28	68+31.10	68+47.10	19.50' R	6.0'
29	68+37.42	68+53.42	16.50' L	6.0'
30	68+71.44	68+87.44	19.50' R	6.0'
31	69+94.31	70+10.31	16.50' L	6.0'
32	70+07.96	70+23.93	19.50' R	6.0'
33	71+52.41	72+08.24	16.50' L	6.0'
34	72+45.23	72+61.23	19.50' R	6.0'
35	72+78.71	72+93.05	16.50' L	6.0'
36	73+01.01	73+10.77	16.50' L	6.0'
37	73+21.22	73+33.32	16.50' L	6.0'
38	73+08.23	73+24.23	19.50' R	6.0'
39	73+59.16	73+69.48	19.50' R	6.0'
40	73+73.19	73+87.35	19.50' R	6.0'
41	74+24.93	74+40.93	16.50' L	6.0'
42	74+83.96	74+99.96	16.50' L	6.0'
43	75+45.16	75+61.16	19.50' R	6.0'
44	75+99.08	76+15.08	19.50' R	6.0'
45	76+63.57	76+79.60	16.51' L	6.0'
46	77+21.44	77+37.94	19.50' R	6.0'
47	78+03.35	78+27.83	16.51' L	6.0'
48	78+95.06	80+54.90	21.5' L	4.5'
49	80+45.71	80+59.00	21.7' R	3.5'
50	81+22.88	81+49.76	19.1' R	4.0'

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

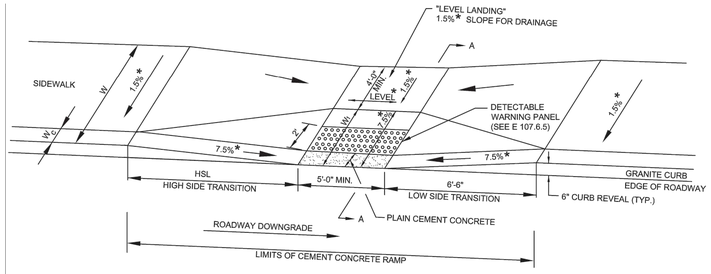
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

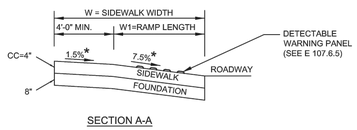
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	94	199
PROJECT FILE NO.	606462		

WHEELCHAIR RAMP DETAILS
100% DESIGN SUBMISSION

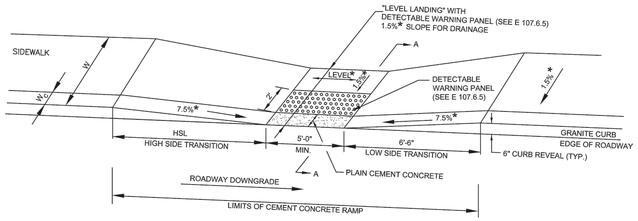


LEGEND

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
W = SIDEWALK WIDTH
W_C = CURB WIDTH
W_1 = PERPENDICULAR RAMP LENGTH
CC = CEMENT CONCRETE
★ = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
RAMP LENGTH, W1 = W-4'-0" Min



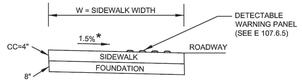
SECTION A-A



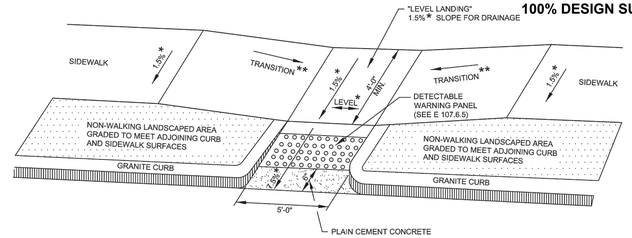
LEGEND

HSL = HIGH SIDE TRANSITION LENGTH (SEE E 107.9.0)
W = SIDEWALK WIDTH
W_C = CURB WIDTH
CC = CEMENT CONCRETE
★ = TOLERANCE FOR CONSTRUCTION ±0.5%
USABLE SIDEWALK WIDTH PER AAB = W-Wc
USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'0"
SEE E 107.6.5 FOR DETAILS OF DETECTABLE WARNING PANEL

NOTE:
ROADWAY, GUTTER, AND FIRST 6" OF SIDEWALK TO BE ADJUSTED FOR FIELD CONDITIONS

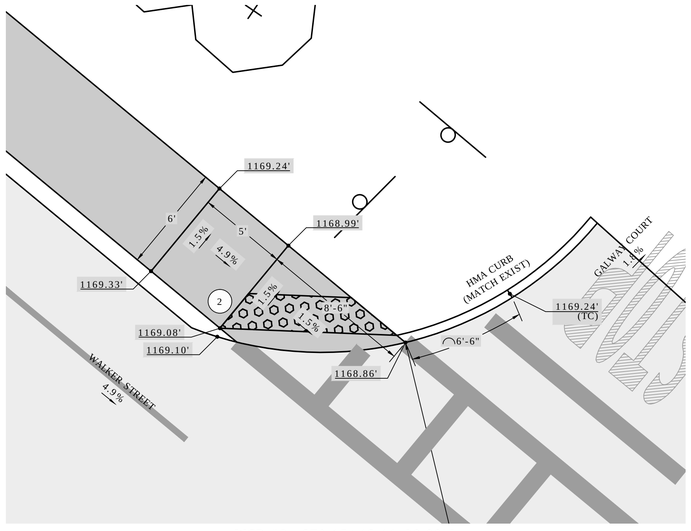


SECTION A-A

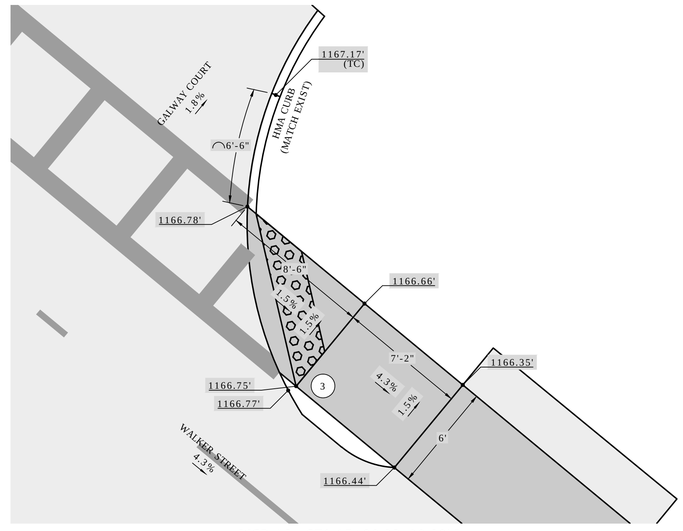


LEGEND

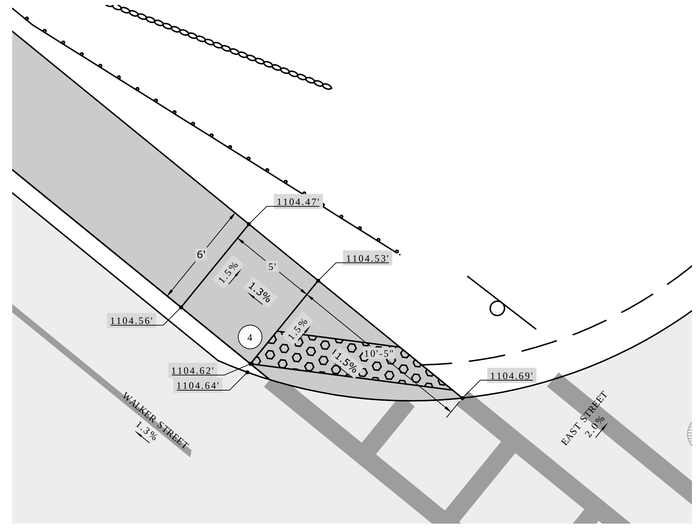
★ = TOLERANCE FOR CONSTRUCTION ±0.5%
** = SEE E 107.9.0 FOR TRANSITION LENGTH



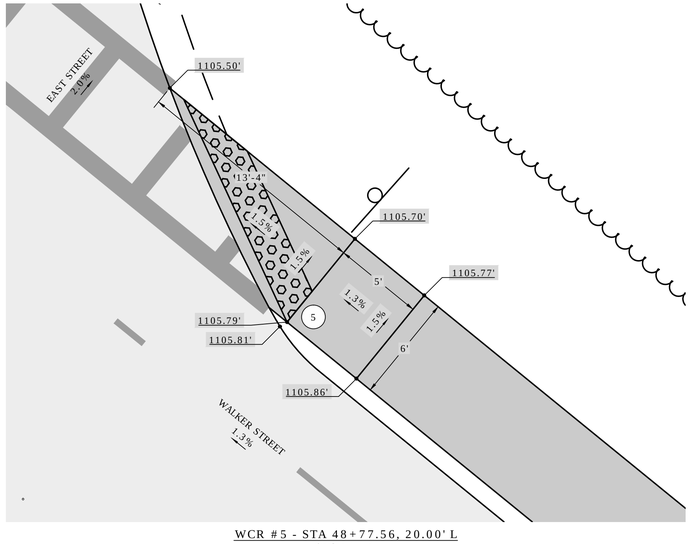
WCR #2 - STA 17+46.44, 20.00' L
Scale: 1"=4'



WCR #3 - STA 17+90.23, 20.00' L
Scale: 1"=4'



WCR #4 - STA 47+95.53, 20.00' L
Scale: 1"=4'



WCR #5 - STA 48+77.56, 20.00' L
Scale: 1"=4'



WCR #6 - STA 70+82.82, 17.50' R
Scale: 1"=4'



WCR #9 - STA 71+27.42, 22.50' R
Scale: 1"=4'

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017

LENOX
WALKER STREET

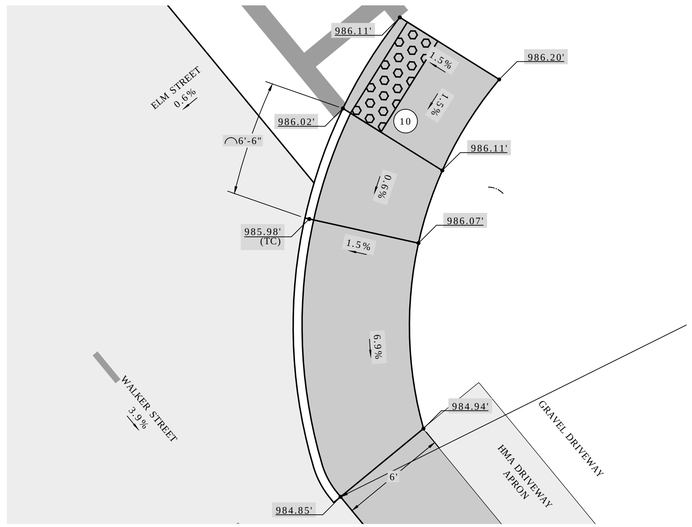
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	95	199
PROJECT FILE NO.	606462		

WHEELCHAIR RAMP DETAILS
100% DESIGN SUBMISSION

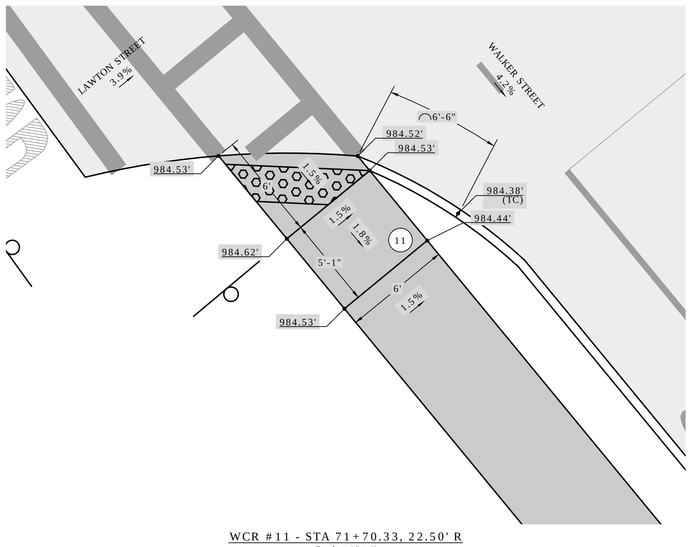
E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



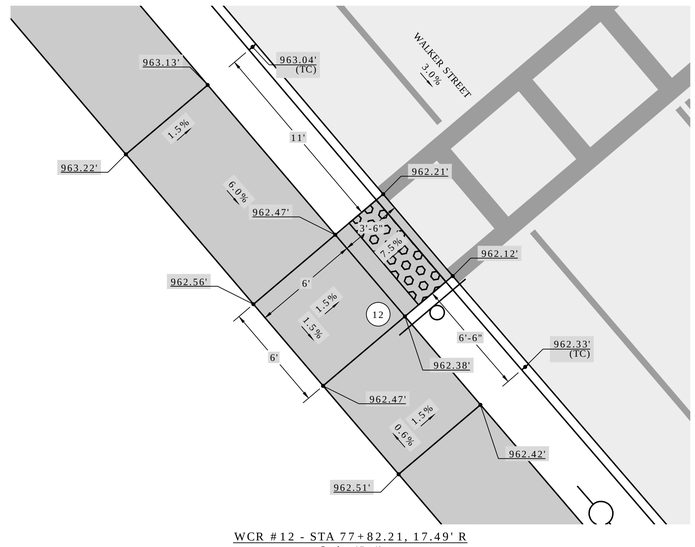
WCR #7 - STA 70+82.77, 17.50' L
WCR #8 - STA 71+05.89, 33.55' L
Scale: 1"=4'



WCR #10 - STA 71+37.41, 33.53' L
Scale: 1"=4'



WCR #11 - STA 71+70.33, 22.50' R
Scale: 1"=4'

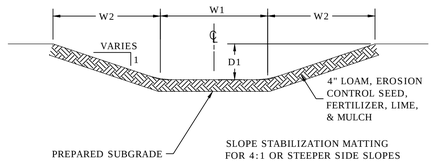


WCR #12 - STA 77+82.21, 17.49' R
Scale: 1"=4'



WCR #13 - STA 77+82.30, 17.49' L
Scale: 1"=4'

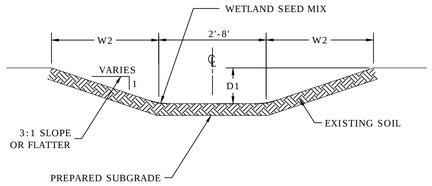
DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG



SIDESLOPE	DEPTH "D1"	BOTTOM WIDTH "W1"	BACKSLOPE WIDTH "W2"
2 : 1	6" 1'	1'	1' 2'
3 : 1	6" 1'	1'	1.5' 3'
4 : 1	6" 1'	1'	2' 4'

VEGETATED SWALE

32105B 7/18/2011 REV# 2

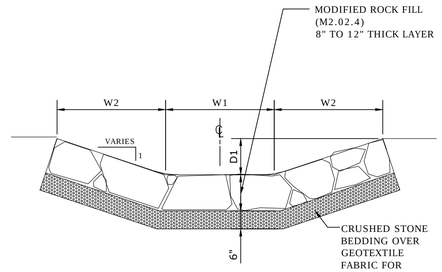


SIDESLOPE	DEPTH "D1"	BOTTOM WIDTH "W1"	BACKSLOPE WIDTH "W2"
3 : 1	6" 1'	2'-8'	1.5' 3'
4 : 1	6" 1'	2'-8'	2' 4'

DESIGN CRITERIA:
- MIN. 2' BOTTOM WIDTH
- MAX. 3:1 SIDESLOPE
- MAX. 5% LONGITUDINAL SLOPE

WATER QUALITY SWALE

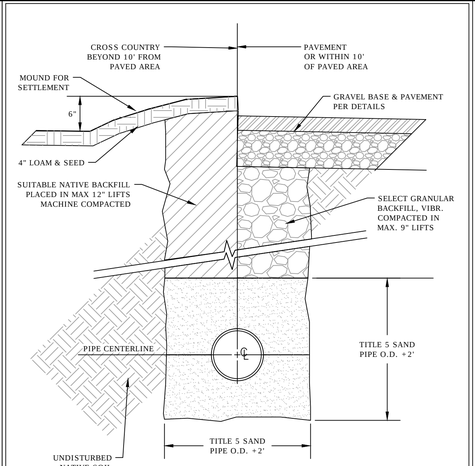
32105B 7/18/2011 REV# 2



SIDESLOPE	DEPTH "D1"	BOTTOM WIDTH "W1"	BACKSLOPE WIDTH "W2"
2 : 1	1'	VARIES	2'
3 : 1	1'	VARIES	3'
4 : 1	1'	VARIES	4'

STONE-LINED WATERWAY

32105A 4/2/93 REV# 2



WATER MAIN TRENCH CROSS SECTION

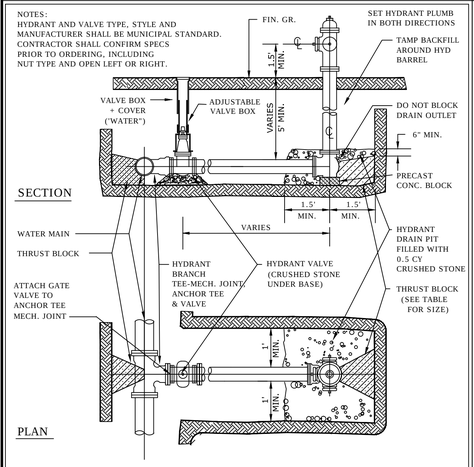
34003A 7/6/93 REV# 0

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	96	199
PROJECT FILE NO.	606462		

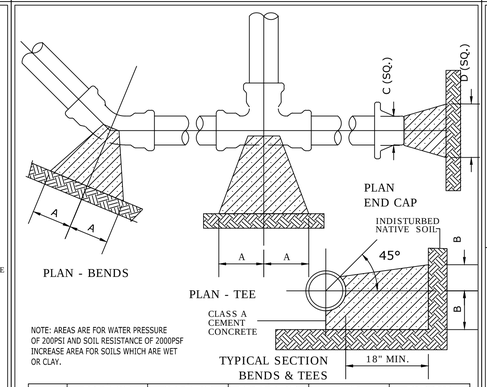
CONSTRUCTION DETAILS
100% DESIGN SUBMISSION

NOTES:
HYDRANT AND VALVE TYPE, STYLE AND MANUFACTURER SHALL BE MUNICIPAL STANDARD. CONTRACTOR SHALL CONFIRM SPECS PRIOR TO ORDERING, INCLUDING NUT TYPE AND OPEN LEFT OR RIGHT.



HYDRANT ASSEMBLY

34007A 2/1/02 REV#1

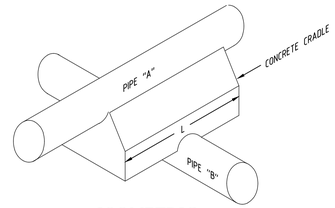


NOTE: AREAS ARE FOR WATER PRESSURE OF 200PSI AND SOIL RESISTANCE OF 2000PSF INCREASE AREA FOR SOILS WHICH ARE WET OR CLAY.

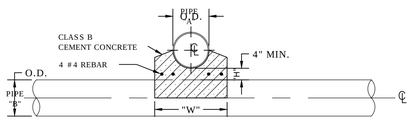
SIZE	90° BEND A	90° BEND B	45° BEND A	45° BEND B	22.5° BEND A	22.5° BEND B	TEE A	TEE B	END CAP C	END CAP D
4"-6"										
8"	2.5'	1.5'	2.0'	1.5'	1.50'	1.00'	2.50'	1.75'	2.50'	1.75'
10"										
12"										

THRUST BLOCKS

34006A 7/6/93 REV# 0



ISOMETRIC



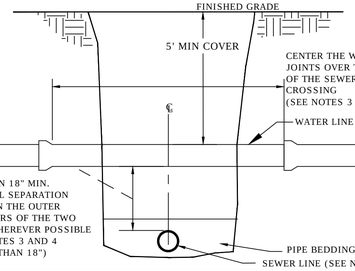
CROSS SECTION

NOTES:
MINIMUM LENGTH ("L") OF CRADLE SHALL BE O.D. OF PIPE "B" PLUS 2 FEET.
MINIMUM WIDTH ("W") SHALL BE O.D. OF PIPE "A" PLUS 1 FOOT.
WHEN SEPARATION ("H") IS 18 INCHES (1.5') OR MORE, NO CRADLE IS REQUIRED.

PIPE CRADLE

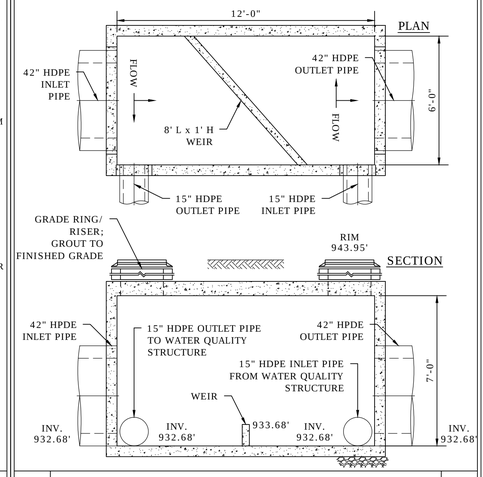
34005A 7/6/93 REV# 0

NOTES:
1. SEWER LINES SHALL TYPICALLY BE INSTALLED AT LEAST 18" LOWER THAN EXISTING OR PROPOSED WATER MAINS WITHIN 10 FEET HORIZONTALLY UNLESS CONDITIONS PROHIBIT IT.
2. WHERE SEWER MUST CROSS UNDER THE WATER MAIN, THE SEWER SHALL BE LAID SO THE TOP OF THE SEWER IS AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN. (SEE DETAIL BELOW)
3. IF THE VERTICAL SEPARATION AT THE WATER/SEWER CROSSING MUST BE LESS THAN 18" FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN, THE WATER LINE SHOULD BE RELOCATED TO CONFORM TO THE REQUIRED SEPARATION. ALTERNATIVELY,THE WATER MAIN SHALL BE RECONSTRUCTED WITH MECHANICAL JOINT CEMENT-LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10 FEET EACH SIDE OF THE SEWER; AND ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THE JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
4. IF THE REQUIRED 18" VERTICAL SEPARATION (AND/OR REQUIRED HORIZONTAL SEPARATION) CANNOT BE MET, BOTH THE WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT-LINED DUCTILE IRON PIPE FOR AT LEAST 10 FEET EACH SIDE OF THE CROSSING; AND BOTH PIPES SHALL BE PRESSURE TESTED FOR WATERTIGHTNESS OR BOTH PIPES SHALL BE ENCASED IN CONCRETE.



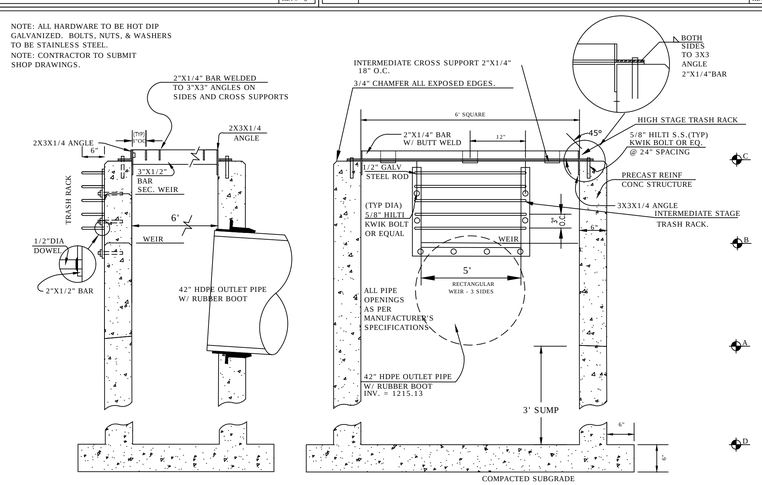
WATER/SEWER CROSSING

REV# 2

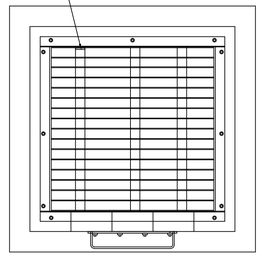


WATER QUALITY BYPASS (ITEM 299.2)

NOTE: ALL HARDWARE TO BE HOT DIP GALVANIZED. BOLTS, NUTS, & WASHERS TO BE STAINLESS STEEL.
NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS.

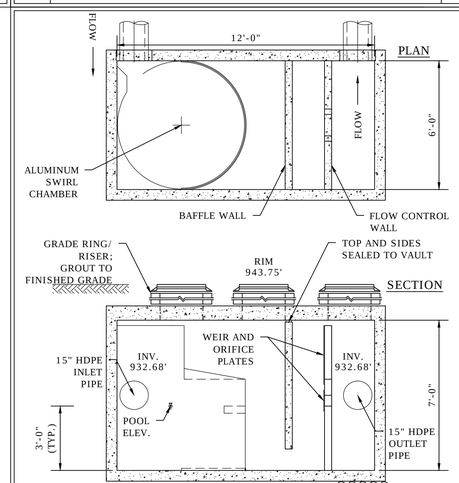


BEND CROSS SUPPORTS (L) AND WELD TO ANGLE BARS - TYP



	ELEVATION (ft.)
A	979.0
B	984.0
C	968.5
D	976.0

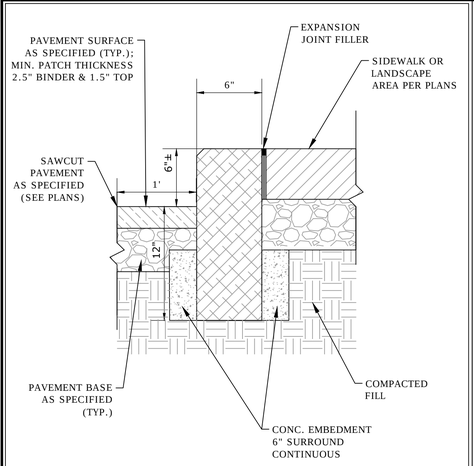
OUTLET CONTROL STRUCTURE (ITEM 209.2)



WATER QUALITY STRUCTURE (ITEM 299.3)

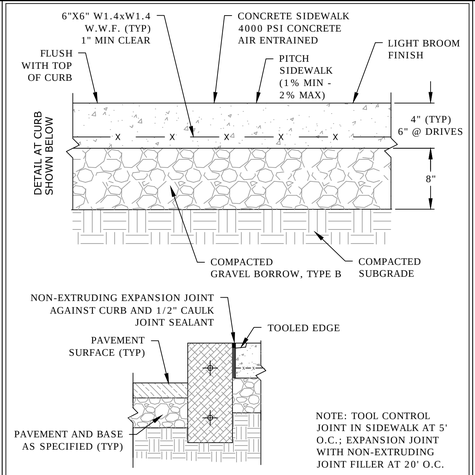
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017



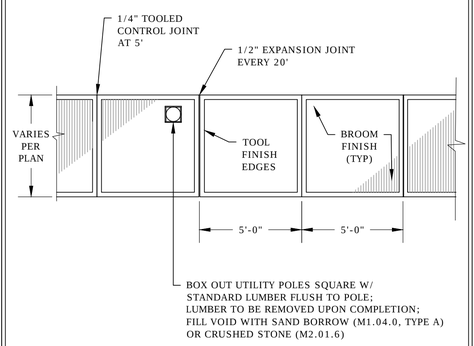
GRANITE CURBING

36028B 5-28-97 REV# 0



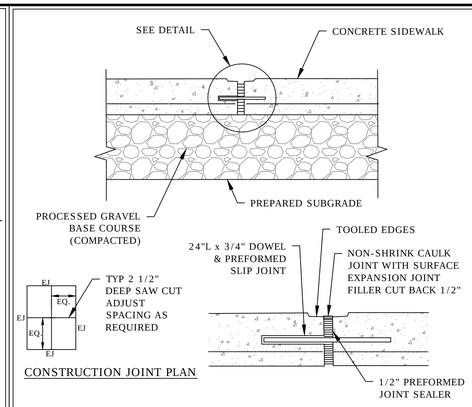
CONCRETE SIDEWALK/SIDEWALK @ DRIVES

36026B 2/25/02 REV#



CONCRETE SIDEWALK PLAN

36036a 5/22/98 REV# 0



NOTES:
1. EXPANSION JOINTS TO BE SPACED AT 20' MAX O.C.
2. WHERE CONCRETE WALKWAYS ABUT STRUCTURES, USE 1/2" PREFORMED JOINT FILLER AND 1" DEEP MASTIC JOINT SEALER
3. PROVIDE SLIP JOINTS AT 24" O.C. (TYP)

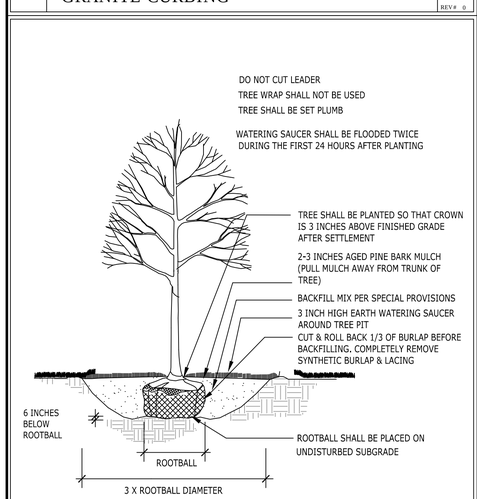
EXPANSION JOINT FOR SIDEWALK/SIDEWALK @ DRIVES

36043A 1/10/02 REV#

LENOX
WALKER STREET

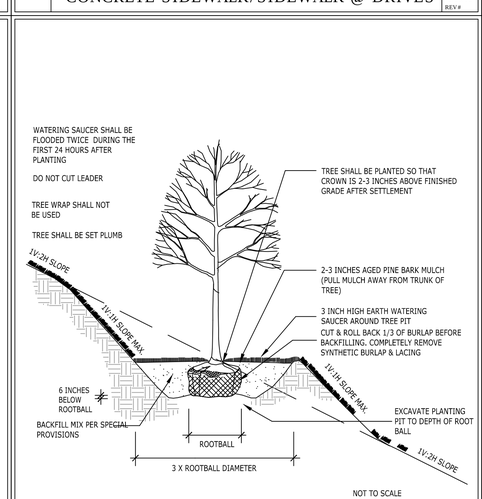
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	97	199
PROJECT FILE NO.	606462		

CONSTRUCTION DETAILS
100% DESIGN SUBMISSION



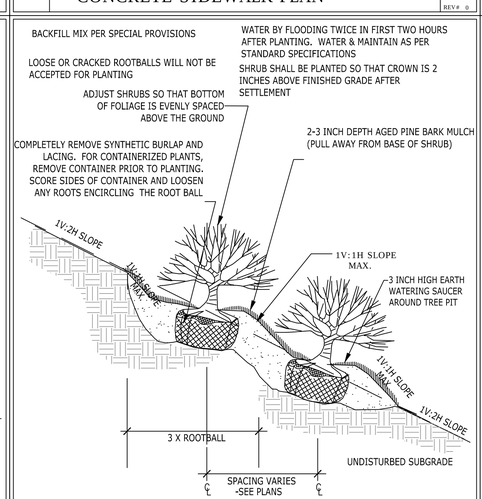
DECIDUOUS TREE PLANTING

REV#



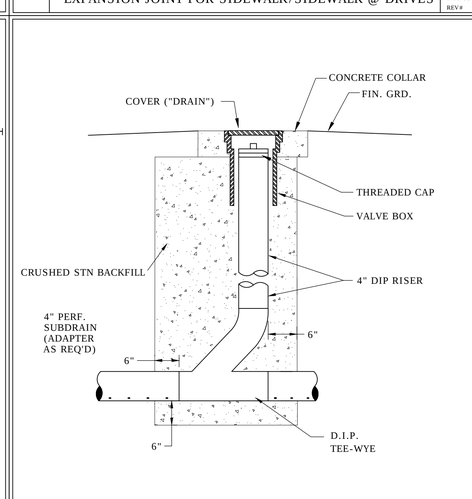
DECIDUOUS TREE PLANTING (SLOPE)

REV#



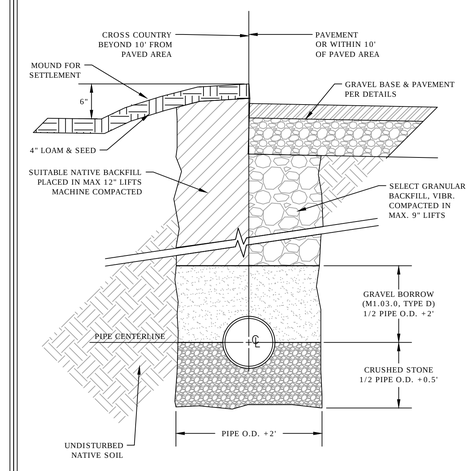
SHRUB PLANTING (SLOPE)

REV#

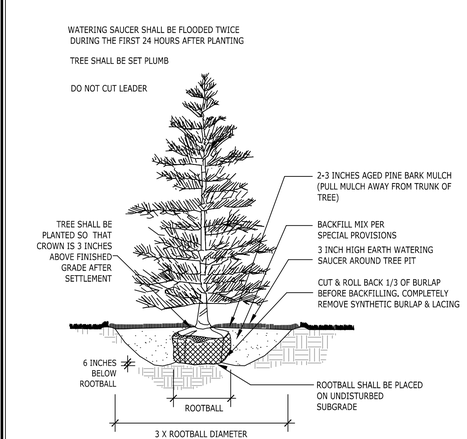


SUBDRAIN CLEANOUT

10/13/04 REV# 0

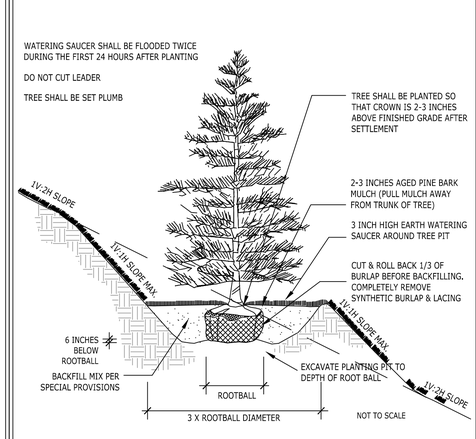


DRAINAGE TRENCH CROSS SECTION



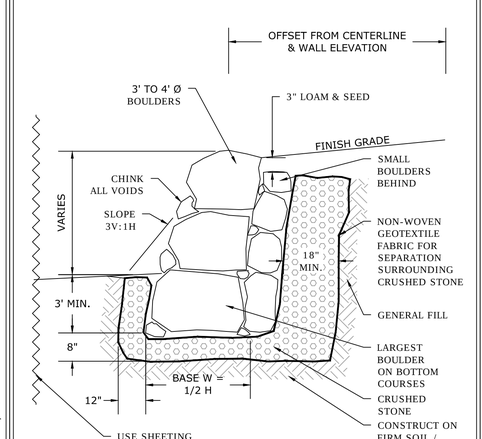
EVERGREEN TREE PLANTING

REV#



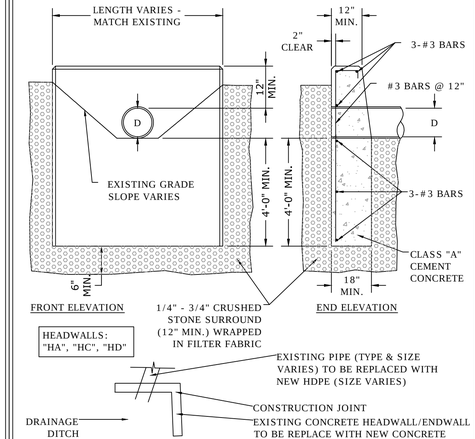
EVERGREEN TREE PLANTING (SLOPE)

REV#



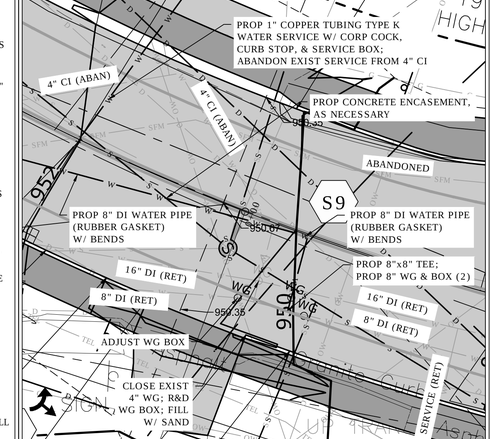
DRY STONE MASONRY WALL

REV# 0



CONCRETE MASONRY HEADWALL & ENDWALL

10/13/04 REV# 0



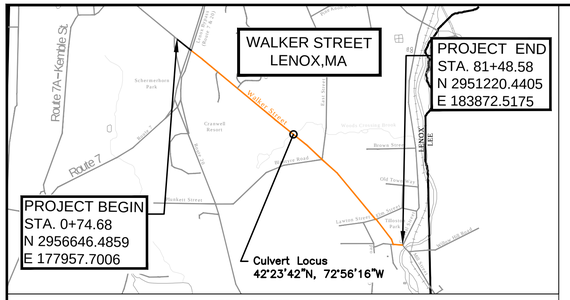
WATER CONNECTION DETAIL (STA 80+63)

SCALE 1"=10'

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10.DWG

E2148D10 - SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version: 4.2 February 2017



WALKER STREET LOCUS PLAN
1" = 2000' ±

DESIGN:
IN ACCORDANCE WITH THE 2014 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS WITH CURRENT INTERIM SPECIFICATIONS THROUGH 2016, FOR HL-93 LOADING.

BENCH MARK:
PLASTIC STAKE IN BASE OF POLE 49/43/632, NAVD ELEVATION 1094.01. NORTHING 2954398.4986, EASTING 180716.7793

DATE:
TO BE PLACED ON THE OUTSIDE FACE OF THE HEADWALLS IN 5" BLOCK LETTERS. THE DATE USED SHALL BE THE LATEST YEAR OF THE CONTRACT COMPLETION AS OF THE DATE THE FIRST HEADWALL IS CONSTRUCTED. ALL HEADWALLS SHALL FEATURE THE SAME DATE. NOT APPLICABLE

SURVEY NOTEBOOKS:
COPIES OF SURVEY FILES MAY BE OBTAINED FROM FORESIGHT LAND SERVICES, INC.

FOUNDATIONS:
FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL:
ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, AS DIRECTED BY THE ENGINEER.

SEISMIC GROUND SHAKING HAZARD:
DESIGN SPECTRA:
S_S = 0.1290g, SITE CLASS = B, Pga = 0.0574g, SEISMIC DESIGN CATEGORY (SDC) = A
S_1 = 0.0391

ANCHOR BOLTS:
NOT APPLICABLE FOR ROUND PLASTIC CULVERT

REINFORCEMENT:
REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

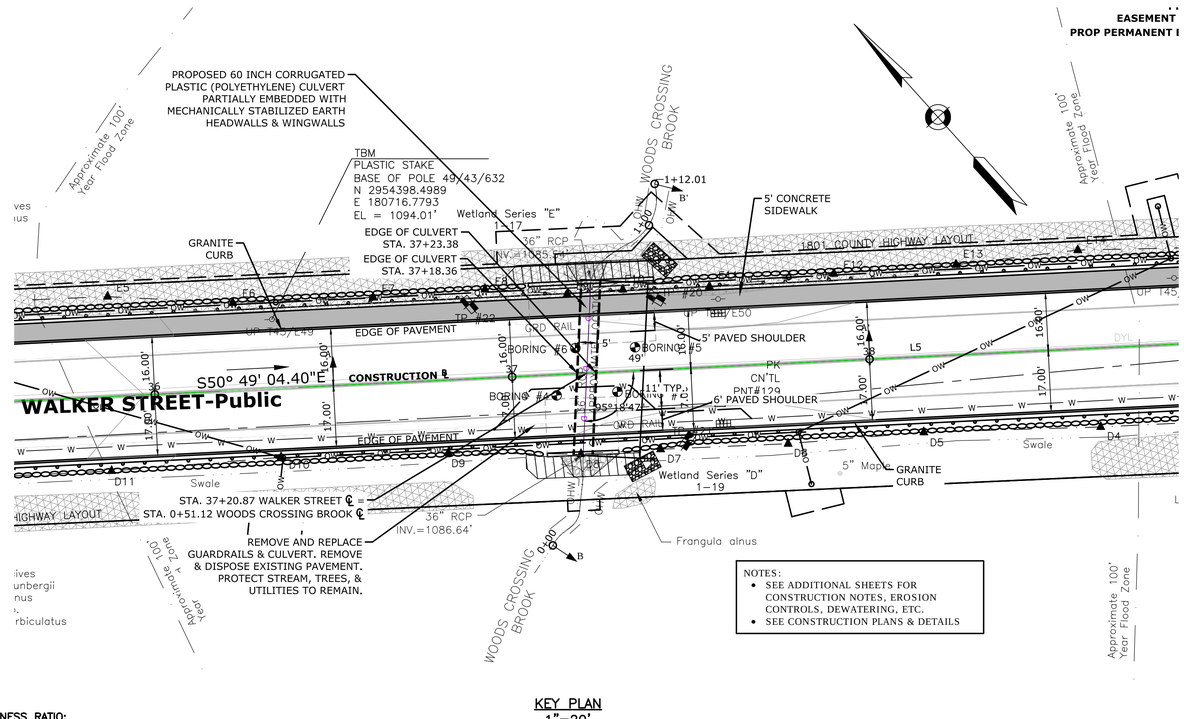
MODIFICATION CONDITION	#4 BARS	#5 BARS
1. NONE	21"	26"
2. 12" OF CONCRETE BELOW BAR	29"	36"
3. COATED BARS, COVER < 3db, OR CLEAR SPACING < 6db	31"	39"
4. COATED BARS, ALL OTHER CASES	25"	31"
5. CONDITION 2. AND 3.	35"	44"
6. CONDITION 2. AND 4.	34"	43"

IF THE ABOVE BARS ARE SPACED 6" OR MORE ON CENTER, THE LAP LENGTH SHALL BE 80% OF THE LAP LENGTH GIVEN ABOVE.
ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS.

NOTES:
1. APPROVAL DOES NOT INCLUDE STRUCTURAL ANALYSIS.
2. DIMENSIONS OF STRUCTURAL MEMBERS ARE APPROXIMATE, AND WILL BE FINALIZED DURING THE FINAL DESIGN PHASE.
3. SEE GEOTECHNICAL REPORT, DATED JANUARY 31, 2012
4. SEE HYDRAULIC REPORT, DATED NOVEMBER 28, 2016

EXISTING CONDITIONS SURVEY NOTES

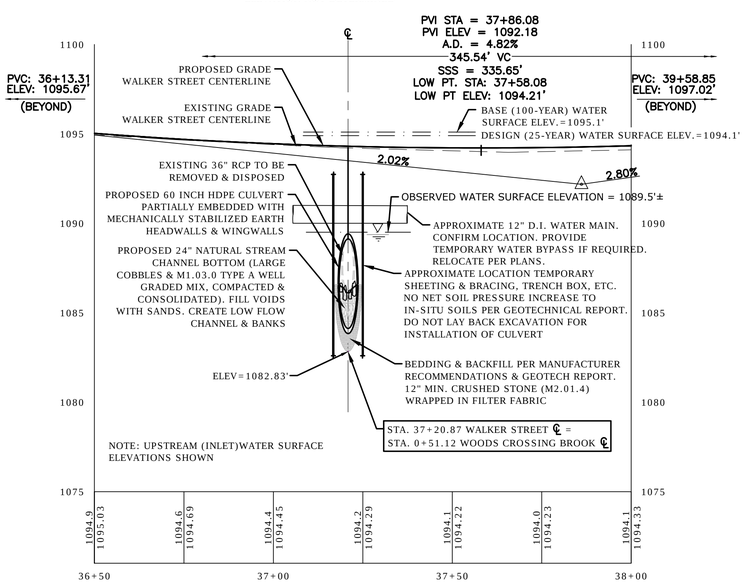
1. WETLANDS WERE DELINEATED BY FORESIGHT LAND SERVICES ON JANUARY 4, 2011.
2. TOPOGRAPHIC SURVEY WAS PERFORMED BY FORESIGHT LAND SERVICES IN NOVEMBER 2010 THROUGH APRIL 2012, JANUARY 2014, APRIL 2014, MAY 2014 AND JUNE 2016 USING ELECTRONIC TOTAL STATION WITH DATA COLLECTOR.
3. PLAN IS COMPILED ON A PC-BASED COMPUTER USING AUTOCAD CIVIL 3D 2014.
4. CONTOURS ARE COMPUTER-GENERATED INTERPOLATIONS, EDITED TO GENERALLY CONFORM TO FIELD OBSERVATIONS. CONTOUR INTERVAL = 1 (ONE) FOOT. CONTRACTOR SHALL VERIFY CRITICAL ELEVATIONS AND GRADES IN THE FIELD PRIOR TO CONSTRUCTION.
5. HORIZONTAL DATUM IS BASED ON NAD83.
6. VERTICAL DATUM IS BASED UPON NAVD88.
7. THE LOCATIONS AND INFORMATION ABOUT UNDERGROUND PIPES, UTILITIES OR OTHER STRUCTURES ARE COMPILED FROM AVAILABLE RECORD DATA AND VISIBLE FIELD EVIDENCE AND ARE NOT REPRESENTED AS BEING EXACT OR COMPLETE. PRIOR TO BEGINNING EXCAVATION, THE EXCAVATOR SHALL GIVE ADEQUATE ADVANCE NOTICE TO THE DIG SAFE CENTER, THE MUNICIPAL AND/OR STATE PUBLIC WORKS DEPARTMENT, AND PRIVATE UTILITY COMPANIES, TO ALLOW FOR FIELD LOCATION OF FACILITIES IN THE VICINITY.
8. IF CONTRACTOR OBSERVES ANY FIELD CONDITIONS WHICH VARY SIGNIFICANTLY FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER FOR RESOLUTION OF THE CONFLICTING INFORMATION.
9. THE CONTRACTOR SHALL RECORD TIE MEASUREMENTS, DEPTHS, DIMENSIONS, MATERIALS, FIELD CONDITIONS AND OTHER PERTINENT DATA ABOUT ALL UNDERGROUND PIPES, UTILITIES AND STRUCTURES ENCOUNTERED DURING THE WORK, BOTH EXISTING AND CONSTRUCTED. CONTRACTOR SHALL SUBMIT RECORD DRAWINGS WITH THIS INFORMATION TO THE OWNER AND ENGINEER PRIOR TO COMPLETION OF THE WORK.
10. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DAMAGE TO EXISTING PIPES, UTILITIES, OR STRUCTURES TO THE OWNER AND ENGINEER, AND OBTAIN DIRECTIONS AS TO REPAIR, REPLACEMENT OR ABANDONMENT.



KEY PLAN
1"=20'

OPENNESS RATIO:
(12.3±SF)/49'=0.25±
< MASS RIVER & STREAM CROSSING STANDARDS GENERAL CONDITIONS =0.82 (NO DOWNSTREAM FLOODING)
SPAN:
REQUIRED=4' AVG. X 1.2 = 4.8'
PROVIDED=5' (AT TOP OF STREAM BED)

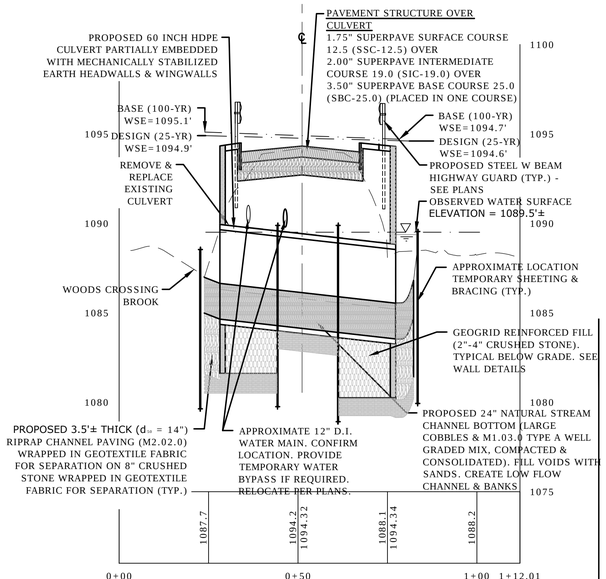
100-YEAR FLOODPLAIN ZONE A FROM MASSGIS ELEVATION NOT DETERMINED



A-A' - PROFILE ALONG ℄ OF CONSTRUCTION OF WALKER STREET
1"=20' HORIZONTAL 1"=4' VERTICAL

STRUCTURE ELEVATIONS (SOUTH):
TOP OF STRUCTURE (INSIDE) = 1089.64'
BOTTOM OF STRUCTURE (INSIDE) = 1084.64'
CHANNEL BOTTOM = 1086.64'

STRUCTURE ELEVATIONS (NORTH):
TOP OF STRUCTURE (INSIDE) = 1088.54'
BOTTOM OF STRUCTURE (INSIDE) = 1083.54'
CHANNEL BOTTOM = 1085.54'



B-B' - PROFILE ALONG WOODS CROSSING BROOK CENTERLINE
1"=20' HORIZONTAL 1"=4' VERTICAL

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	98	199
PROJECT FILE NO.	606462		

CULVERT PLAN
GENERAL NOTES, LOCUS PLAN, KEY PLAN & PROFILE
100% DESIGN SUBMISSION

SOIL BEARING DATA		
ALLOWABLE SOIL BEARING CAPACITY	1.5	TON PER SQUARE FOOT
APPLIED BEARING PRESSURE	1.0	TON PER SQUARE FOOT
NOTE: APPROXIMATE APPLIED BEARING PRESSURE ONLY. FINAL APPLIED BEARING PRESSURE TO BE PROVIDED BY MANUFACTURER.		

HYDRAULIC DATA		
DRAINAGE AREA:	0.13	SQUARE MILES
DESIGN FLOOD DISCHARGE:	198	CUBIC FEET PER SECOND
DESIGN FLOOD RECURRENCE INTERVAL:	25	YEARS
DESIGN FLOOD ELEVATION:	1094.9	FEET, NAVD
DESIGN FLOOD VELOCITY:	1.6	FEET PER SECOND

BASE (100-YEAR) FLOOD DATA		
BASE FLOOD DISCHARGE:	292	CUBIC FEET PER SECOND
BASE FLOOD ELEVATION:	1095.1	FEET, NAVD

DESIGN AND CHECK SCOUR DATA		
DESIGN SCOUR FLOOD EVENT RECURRENCE INTERVAL:	50	YEARS
CHECK SCOUR FLOOD EVENT RECURRENCE INTERVAL:	100	YEARS

FLOOD OF RECORD		
DISCHARGE:	UNKNOWN	CUBIC FEET PER SECOND
ELEVATION:	UNKNOWN	FEET, NAVD
DATE:	UNKNOWN	MONTH, YEAR

HISTORY OF ICE FLOES:	UNKNOWN
EVIDENCE OF SCOUR OR EROSION:	NONE OBSERVED

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version:

BORING NOTES

1. LOCATION OF BORINGS SHOWN ON THE PLAN THUS: B#
2. BORINGS ARE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW THE NATURE OF THE MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
3. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOW REQUIRED TO DRIVE A 1⅜" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. BORING SAMPLES ARE STORED AT FORESIGHT LAND SERVICES, INC. AT 1496 WEST HOUSATONIC STREET IN PITTSFIELD, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES, IF APPLICABLE, BY CONTACTING FORESIGHT LAND SERVICES, INC. AT (413) 499–1560.
6. ALL BORINGS WERE MADE IN NOVEMBER 2014, APRIL 2017, & MAY 2017.
7. BORINGS WERE MADE BY NEW HAMPSHIRE BORING, INC., 40 FORDWAY EXTENSION, DERRY, NH 03038 & NORTHEAST SPECIALIZED DRILLING INC., 31 LOWER ROAD, CONSTANTIA, NY 13044
8. THE NORTH AMERICAN VERITICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

DRILLING & SAMPLING SYMBOLS

SS : Split–Spoon – 1⅜" I.D., 2" O.D., except where noted
S : Shelby Tube – 2" O.D., except where noted
PA : Power Auger Sample
DB : Diamond Bit – NX:BX:AX:
CB : Carbology Bit – NX:BX:AX:
OS : Osterberg Sampler – 3" Shelby Tube
HS : House Sampler
WS : Wash Sample
FT : Fish Tail
RB : Rock Bit
WO : Wash Out

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2 inch OD split spoon, except where noted.

WATER LEVEL MEASUREMENT SYMBOLS

WL : Water Level
WCI : Wet Cave In
DCI : Dry Cave In
WS : While Sampling
WD : While Drilling
BCR : Before Casting Removal
ACR : After Casting Removal
AB : After Boring

Water level readings on the boring logs are the levels measured in the boring at the times indicated. In pervious soils with indicated low permeability, accurate determination of water levels may not be possible without long observations. In addition, fluctuations in water levels may occur with variations in precipitation and other factors than those present at the time measurements were made. Long observations and additional evidence of ground water elevations must be sought.

CLASSIFICATION

COHESIONLESS SOILS

"Trace"	:	1% to 10%
"Trace to Some"	:	10% to 20%
"Some"	:	20% to 35%
"And"	:	35% to 50%
Loose	:	0 to 9 Blows
Medium Dense	:	10 to 29 Blows
Dense	:	30 to 59 Blows
Very Dense	:	≥ 60 Blows

or equivalent

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, then clay becomes the principle noun with the other major soil constituent as modifiers: i.e., silty clay. Other minor soil constituents may be added according to classification breakdown for cohesionless soils; i.e., silty clay, trace to some sand, trace gravel.

Soft	:	0.00–0.59 tons/ft
Medium	:	0.60–0.99 tons/ft
Stiff	:	1.00–1.99 tons/ft
Very Stiff	:	2.00–3.99 tons/ft
Hard	:	≥ 4.00 tons/ft

LEGEND

- WETLAND FLAG
- UTILITY POLE
- CATCH BASIN
- HYDRANT
- DECIDUOUS TREE
- APPROX. PROPERTY LINE
- EDGE OF PAVEMENT
- DOUBLE YELLOW CENTERLINE
- STONEWALL
- FENCE
- GUARDRAIL
- DRAIN LINE
- STREAM CENTERLINE
- EDGE OF STREAM
- SWALE
- WETLAND BOUNDARY
- RIPARIAN ZONE
- APPROX. 100–YEAR FLOODPLAIN
- 1' CONTOUR
- 5' CONTOUR
- LEDGE
- WALL

SITE/WORK CONSTRUCTION NOTES

A. GENERAL

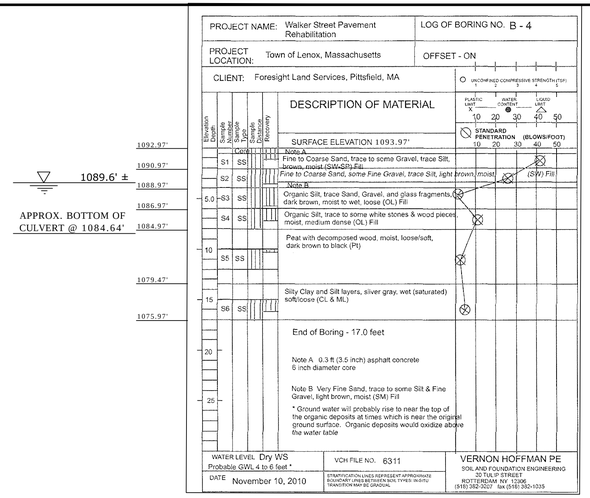
1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS. WORK IN WETLANDS AND WATERWAYS ARE SUBJECT TO REGULATION UNDER THE MASS. WETLANDS PROTECTION ACT (WPA), CLEAN WATER ACT (CWA), NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) AND/OR OTHER STATUTES AND REGULATIONS PERTAINING TO WETLANDS, WATER QUALITY, AND STORMWATER MANAGEMENT.
2. CONTRACTOR SHALL PERFORM ALL PROPOSED WORK IN COMPLIANCE WITH THE APPROVED WETLANDS PERMIT (ORDER OF CONDITIONS OR DETERMINATION OF APPLICABILITY AS APPLICABLE).
3. CONTRACTOR SHALL INSTALL, MONITOR, MAINTAIN AND REPLACE, WHENEVER NECESSARY, ALL EROSION AND SEDIMENTATION CONTROL MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, EROSION AND SEDIMENTATION FROM THE WORK, AND TO PREVENT SEDIMENTS FROM ALTERING ANY WETLANDS OR WATERCOURSES. REFER TO PLANS, SPECIFICATIONS AND PERMITS FOR MINIMUM REQUIREMENTS. CONTRACTOR SHALL INSTALL ADDITIONAL MEASURES WHEREVER NECESSARY TO CONTROL SITE RUNOFF.
4. CONTRACTOR SHALL DISPOSE OF ANY UNSUITABLE OR EXCESS EARTH MATERIALS EXCAVATED FROM THE SITE ("SPOIL MATERIAL") IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. UNLESS AN ON–SITE SPOIL AREA IS SPECIFIED, CONTRACTOR SHALL DISPOSE OF EXCESS CLEAN EARTH MATERIAL OFF–SITE IN AN UPLAND AREA OUTSIDE ANY WETLAND BUFFER ZONES OR RESOURCE AREAS.
5. CONTRACTOR SHALL DISPOSE OF ANY DEMOLITION DEBRIS, CONSTRUCTION DEBRIS, WOOD WASTES, CONTAMINATED SOILS, HAZARDOUS MATERIALS AND OTHER SPECIAL WASTES IN STRICT ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.
6. EARTH SUPPORT SYSTEM AND WATER CONTROL STRUCTURES SHALL BE STEEL SHEETING THAT ARE CUT DOWN AND LEFT IN PLACE UPON COMPLETION OF THE PROJECT IN ACCORDANCE WITH MASSDOT B.M. SECTION 3.2.4, PERMANENT AND TEMPORARY SUPPORT OF EXCAVATION.
7. RETAINING WALL'S BOTTOM OF FOOTING ARE REQUIRED TO BE A MINIMUM OF 4 FT. BELOW FINISH GRADE.

B. WORK LIMITS

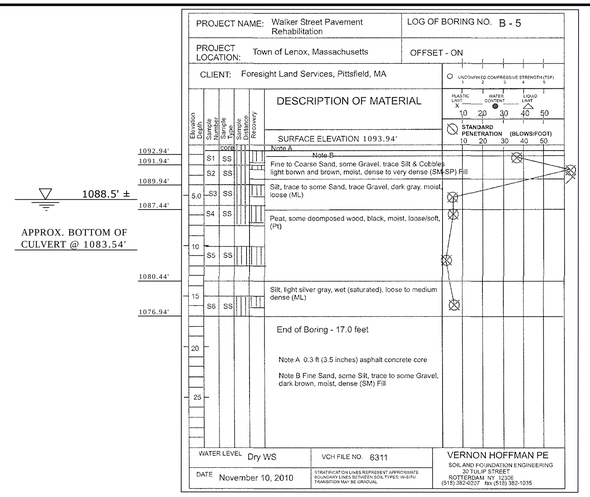
1. CONTRACTOR SHALL CONFINE ACTIVITIES TO THE WORK LIMITS SHOWN ON THE PLANS OR DIRECTED IN THE FIELD.
2. UNLESS OTHERWISE INDICATED, CONTRACTOR SHALL PROTECT ALL TREES, STRUCTURES, AND UTILITIES AGAINST DAMAGE, AND SHALL REPAIR OR REPLACE DAMAGED AREAS AT CONTRACTOR'S EXPENSE.
3. IN ORDER TO AVOID DAMAGING TREE ROOTS BY COMPACTING THE SOIL, CONTRACTOR SHALL NOT ALLOW EQUIPMENT OR VEHICLES TO OPERATE UNDER TREE CANOPIES EXCEPT WHERE NECESSARY TO CARRY OUT THE WORK.

C. SOIL CONDITIONS

1. REFER TO SPECIFICATIONS FOR SOILS INFORMATION. ANY REFERENCE ON THE PLANS TO LEDGE OR BEDROCK ARE FOR INFORMATION ONLY AND SHALL NOT BE RELIED UPON AS REPRESENTING LIMITS, QUANTITIES, PRESENCE OR ABSENCE OF ROCK REQUIRING EXCAVATION.



LOG OF BORING B-4
(STA 37+12.1, 8.5' RT)



LOG OF BORING B-5
(STA 37+34.7, 6.6' LT)

NORTHEAST NSD SPECIALIZED DRILLING,INC.

Page 1 of 2

BORING LOG

PROJECT:	Walker Street Borings		JOB NUMBER:	G021-17	
LOCATION:	Lenox, Massachusetts		BORING NUMBER:	B-6	
CLIENT:	Foresight Land Services, Inc.		SURFACE ELEVATION:	As Obtained by Client	
			GROUND WATER READINGS	Depth to Water:	Casing At:
DATE STARTED:	04/03/17	DATE COMPLETED: 04/03/17	WHILE DRILLING:	5.4'	10.0'
DRILLER:	Marc Cheney	HELPER: Zack Cheney	BEFORE CASING REMOVED:	8.1'	46.0'
CASING TYPE:	3 1/4" Hollow Stem Augers		AFTER CASING REMOVED:	4.9'	
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55		CAVED AT DEPTH:	7.9'	

SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
					8" Asphalt Pavement	0.7
1	0.7-2.7	11-28-31-28	N/59	13	Brown cmf SAND and cmf GRAVEL, trace SILT, trace	
					Asphalt Fragments (moist, very compact)	2.7
2	5.0'-7.0'	5-10-6-5	N/16	10	Grey/Brown SILT and cmf GRAVEL, some cmf SAND, trace Organics (moist to wet, very stiff)	
3	10.0'-12.0'	2-2-2-3	N/4	0	No Sample Recovery - *Sampler Pushing Gravel*	12.0
4	12.0'-14.0'	4-3-3-3	N/6	16	Grey/Brown SILT and cmf GRAVEL, some cmf SAND, trace Peat (wet, medium stiff)	
5a	14.0'-14.3'	1-1-1-1	N/2	18	Peat and Organic SILT (wet)	14.3
5b	14.3'-16.0'				Grey SILT and CLAY, little mf SAND (wet to saturated, soft)	
6	19.0'-21.0'	4-4-2-2	N/6	6	Similar Soil (saturated, medium stiff)	
7	24.0'-26.0'	27-30-51-63	N/81	14	Brown SILT and cmf GRAVEL, little cmf SAND (moist, hard)	
8	29.0'-29.3'	100@3"	N/100+		Brown/Grey SILT and cmf GRAVEL, little cmf SAND (moist, hard)	
9	34.0'-34.0'	100@0"	N/100+	0	No Sample Recovery - *8" Cobble Noted*	
10	39.0'-40.4'	65-72-100@5"	N/100+	16	Brown SILT and cmf GRAVEL, little cmf SAND (moist, hard)	
11	44.0'-46.0'	44-81-64-74	N/145	18	Similar Soil (moist, hard)	
12	46.0'-46.6'	64-100@1"	N/100+	5	Similar Soil (moist, hard)	
					Bottom of Boring @ 46.6'	

Notes:
N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"
C - % Bedrock Core Recovery

LOG OF BORING B-6
(STA 37+18.0, 7.1' LT)

NORTHEAST NSD SPECIALIZED DRILLING,INC.

Page 1 of 2

BORING LOG

PROJECT:	Walker Street Borings		JOB NUMBER:	G021-17	
LOCATION:	Lenox, Massachusetts		BORING NUMBER:	B-7	
CLIENT:	Foresight Land Services, Inc.		SURFACE ELEVATION:	As Obtained by Client	
			GROUND WATER READINGS	Depth to Water:	Casing At:
DATE STARTED:	03/30/17	DATE COMPLETED: 03/30/17	WHILE DRILLING:	7.9'	33.0'
DRILLER:	Marc Cheney	HELPER: Zack Cheney	BEFORE CASING REMOVED:	6.3'	45.0'
CASING TYPE:	3 1/4" Hollow Stem Augers/Rotary - Roller Bit/NQ-Core		AFTER CASING REMOVED:	5.7'	
DRILL RIG:	Truck Mounted Central Mine Equipment Model 55		CAVED AT DEPTH:	23.5'	

SAMPLE NUMBER	DEPTH OF SAMPLE	BLOW COUNTS OF SAMPLER DRIVE (per 6")	C/N	RECOVERY (Inches)	DESCRIPTION OF SOIL (Color, Primary Matrix, Complementary Matrix)	DEPTH OF STRATA CHANGE
					9" Asphalt Pavement	0.8
1	0.8'-2.8'	21-20-19-22	N/39	11	Brown cmf SAND and cmf GRAVEL, trace SILT (moist, compact)	
2	5.0'-7.0'	7-5-2-2	N/7	9	Grey cmf SAND and SILT, trace fine GRAVEL, trace Organics (moist, loose)	7.0
3	7.0'-9.0'	2-3-2-3	N/5	13	Grey SILT, little cmf SAND, trace Interlayered Peat and Wood (moist to wet, medium stiff)	
4	9.0'-11.0'	1-1-2-2	N/3	14	Brown Peat (wet)	
5	11.0'-13.0'	2-2-2-3	N/4	10	Brown Organic SILT with Interlayered Peat (wet)	
6	13.0'-15.0'	WH-WH-1-3	N/1	17	Grey SILT and CLAY, little cmf SAND, trace Organics (moist to wet, very soft)	15.0
7	15.0'-17.0'	3-4-11-10	N/15	10	Grey SILT, trace CLAY, trace Interlayered cmf SAND (wet to saturated, very stiff)	
8	20.0'-22.0'	5-2-2-2	N/4	10	Grey SILT, trace CLAY, trace Interlayered cmf SAND, trace mf GRAVEL (moist, medium stiff)	
9	25.0'-27.0'	50-57-47-51	N/104	13	Brown SILT and cmf GRAVEL, some cmf SAND (moist, hard)	
10	30.0'-31.4'	49-77-100@5"	N/100+	11	Similar Soil (moist, hard)	
11	32.5'-32.5'	100@0"	N/100+	1	Grey Cobble Fragments (moist)	
R1	33.0'-38.0'	NQ-Core			Brown SILT and cmf GRAVEL, some cmf SAND	
12	38.0'-39.8'	53-59-88-100@4"	N/100+	18	Brown SILT and cmf GRAVEL, some cmf SAND (moist, hard)	
13	43.0'-44.8'	49-96-94-100@4"	N/190	17	Similar Soil (moist, hard)	
14	45.0'-46.3'	59-93-100@4"	N/100+	11	Similar Soil (moist, hard)	
					Bottom of Boring @ 46.3'	

Set-Up to Core 33.0
16" Cobble noted at start of core run 38.0
Roller Bit to 43.0' 32.5
Auger Refusal @ 32.5'
Roller Bit to 45.0'
Auger Refusal @ 23.5'
APPROX. BOTTOM OF CULVERT @ 1084.64'

Notes: 1. Water used to obtain NQ-Core.
Key to Drilling Terms: N - No. of blows to drive sampler 12" w/ 140 lb. hammer falling / 30"; C - % of Bedrock Core Recovery

LOG OF BORING B-7
(STA 37+29.2, 5.6' RT)

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	99	199
PROJECT FILE NO.	606462		

CULVERT PLAN
BORING INFORMATION, EROSION CONTROL NOTES & DETAIL
100% DESIGN SUBMISSION

TEST PIT NO. 20				
DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 4"	Topsoil	Loam	Dark Brown	Friable Crumbs
4" - 3'(5')	Varies, Gravel	Sandy Loam	Gravel to 5' Closer to Road Light Brown	Coarse Sands, Medium Coarse Gravels, Some Fines, Medium Dense
3'(5') - 9'	C	Silty Loam	Very Dark Brown/Gray	Many Fines, Wet, Dark, Hole Collapsing
Location: 5' North of Guardrail, Westbound			Estimated Seasonal High Ground Water (ESHGW): 3'	

TEST PIT NO. 21				
DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 3"	Topsoil	Loam	Dark Brown	Friable Crumbs
3" - 3'(2')	3' at Roadside, 2' at Wetland Side	Sandy Loam	Light Brown	Gravels and Sand Fill, Medium Dense
(2')3' - 6'	Mulch with Organics, C	Silty Loam	Very Dark Brown/Gray	Large 15"Ø Tree Buried at 5' - 6', Many Organics, Many Fine Sands and Silts, Wood Debris, Dense, Could not Remove Buried Tree without Extensive Excavation
Location: 8' East of Guardrail, Eastbound			Estimated Seasonal High Ground Water (ESHGW): 2.5'	

TEST PIT NO. 22				
DEPTH FROM SURFACE	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR	SOIL MOTTLING & COMMENTS
0" - 4"	Topsoil	Loam	Dark Brown	Some Fines, Friable
4" - 2'	Gravel	Sandy Loam	Light Brown	Moist, Dense, Similar to TP-20, Large Rock at 2'
2' - 4'	Peat	Organics	Very Dark Brown/Black	Dark, Friable, Loose
4' - 8'	C	Silty Loam	Very Dark Brown	Dense, Some Sands, Many Fines
Location: 8' North of Road, 20'± West of Guardrail, Westbound			Estimated Seasonal High Ground Water (ESHGW): 3'	

CONSTRUCTION–PHASE MEASURES FOR CONTROL OF SEDIMENT AND EROSION AND PROTECTION OF WETLANDS

1. DO NOT DISTURB EXISTING VEGETATED AREAS FAR IN ADVANCE OF CONSTRUCTION. LIMIT DISTURBANCE ONLY TO THE EXTENT AND DURATION REQUIRED FOR IMMINENT CONSTRUCTION ACTIVITIES. RETAIN AND PROTECT NATURAL VEGETATION AND VEGETATIVE FILTER STRIPS WHEREVER POSSIBLE.
2. TEMPORARY VEGETATION OR A HEAVY MAT OF WOOD CHIPS SHALL BE ESTABLISHED ON ALL EARTH STOCKPILES OR STRIPPED AREAS WHICH WILL BE BARE FOR MORE THAN TWO MONTHS AND LESS THAN 12 MONTHS. SUCH VEGETATION SHALL CONSIST OF A COMMERCIAL CONSERVATION SEED MIXTURE WITH A HIGH PERCENTAGE OF ANNUAL RYE GRASS. PERMANENT HERBACEOUS COVER SHALL BE ESTABLISHED ON AREAS WHICH WOULD BE BARE MORE THAN 12 MONTHS.
3. A HEAVY MAT OF STRAW MULCH, WOOD CHIPS, EROSION CONTROL NETTING, MESH OR BLANKET MATTING SHALL BE USED ON DISTURBED AREAS IF VEGETATION CANNOT BE ESTABLISHED DUE TO SEASON OR ON–GOING CONSTRUCTION PROCESS, OR IF OTHERWISE REQUIRED.
4. SILT FENCE OR CAREFULLY POSITIONED STAKED STRAW BALES SHALL BE INSTALLED ALONG THE DOWNHILL EDGE OF DISTURBED EARTHWORK AREAS WHERE REQUIRED TO CONTROL EROSION AND SEDIMENTATION.
5. WATER COURSES, INCLUDING INTERMITTENT DRAINAGE SWALES, SHALL BE PROTECTED FROM SILTATION BY SILT FENCE BARRIERS OR CAREFULLY POSITIONED STAKED STRAW BALE CHECK DAMS.
6. SEDIMENT TRAPS SHALL BE CONSTRUCTED DOWNHILL OF DISTURBED AREAS AND UPSTREAM OF WATERCOURSES AND/OR WETLANDS. TRAPPED SEDIMENTS SHALL BE REMOVED FROM THE BASINS DURING THE CONSTRUCTION PERIOD BEFORE THEY BECOME 50% FULL TO PREVENT SEDIMENT FROM BEING TRANSPORTED DOWNHILL. DISPOSE OF SEDIMENTS IN ON–SITE UPLAND DISPOSAL AREAS, PROPERLY GRADED, SEEDED AND MULCHED.
7. PERMANENT DRAINAGE CONTROL STRUCTURES SHALL BE INSTALLED AS EARLY AS POSSIBLE IN THE CONSTRUCTION PROCESS. DRAINS SHALL BE PROVIDED WITH DRAIN INLET SEDIMENT FILTERS AND/OR TRAPS.
8. DO NOT FUEL CONSTRUCTION EQUIPMENT OR STORE FUEL OR OTHER POTENTIAL CONTAMINANTS WITHIN 100 FEET OF WATER COURSES OR WETLANDS.
9. STRICTLY ADHERE TO ALL GENERAL AND SPECIAL CONDITIONS OF ANY WETLANDS PROTECTION ACT PERMITS, INCLUDING PLANS, DETAILS, CONSTRUCTION SEQUENCING OUTLINE, AND OTHER APPLICABLE REQUIREMENTS.

SPECIAL EROSION AND SEDIMENTATION CONTROL CONSTRUCTION PHASE NOTE

CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION AND SEDIMENTATION CONTROLS DAILY AND SUBMIT DAILY REPORTS ON A WEEKLY BASIS TO THE CONSERVATION COMMISSION, TOWN, AND ENGINEER. DAILY REPORTS SHALL INCLUDE, AT A MINIMUM, DATE AND TIME OF REVIEW, REVIEWER NAME AND COMPANY, RECENT PRECIPITATION EVENTS, ACTIONS PERFORMED (IF ANY), AND ANY OTHER COMMENTS. PHOTOGRAPHS OF THE EROSION CONTROLS SHALL ALSO BE PROVIDED ON A WEEKLY BASIS.

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS .DWG

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version:

PLAN VIEW
1"=4'

PROPOSED TEMPORARY WETLAND ALTERATION AND PROPOSED REPLICATION AREA

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED 60 INCH CORRUGATED PLASTIC (POLYETHYLENE) CULVERT PARTIALLY EMBEDDED WITH MECHANICALLY STABILIZED EARTH HEADWALLS & WINGWALLS

PROPOSED RIPRAP CHANNEL PAVING (3.5' THICK) UNDER NATURAL STREAMBED MATERIALS (2' THICK)

WOODS CROSSING BROOK

OHW

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

PROPOSED PERMANENT DRAINAGE EASEMENT

END OF WALL
STA. 37+40.79, 25.9' RT

+85

1801 COUNTY LAYOUT

PROPOSED TEMPORARY CONSTRUCTION EASEMENT

1801 COUNTY LAYOUT

36" RCP
INV.=1085.64'

END OF WALL
STA. 37+05.79, 25.9' RT

Wetland Series 1-17

15.0' NORTHWEST WINGWALL

15.0' NORTHEAST WINGWALL

REMOVE & RESET UTILITY POLE

E9

E10

E1

EDGE OF WETLAND

EDGE OF WETLAND

TP #22

TP #20

PROPOSED STEEL W BEAM HIGHWAY GUARD WITH WOOD POSTS SPACED @ 6'-3" O.C. (TYPICAL). INSTALL POSTS PER WALL MANUFACTURER SPECIFICATIONS

5' CEMENT SIDEWALK

UP T44/E50

GRANITE CURB

EDGE OF PAVEMENT

GRD RAIL

5' PAVED SHOULDER

PROPOSED SPECIAL CATCH BASIN WITH DEEP SUMP AND OUTLET TO STONE DISCHARGE APRON. SEE CONSTRUCTION PLANS

APPROXIMATE LIMITS OF REINFORCED FILL FOR MSE WALL. FINAL WALL DESIGN BY WALL MANUFACTURER

BORING #6

5'

BORING #5

11' TRAVELLED WAY

EDGE OF CULVERT
STA. 37+23.38

STA. 37+20.87 WALKER STREET ℄ =
STA. 0+51.12 WOODS CROSSING BROOK ℄

37

+50

+50

49'

EDGE OF CULVERT
STA. 37+18.36

BORING #4

REMOVE AND REPLACE GUARDRAILS & CULVERT. REMOVE & DISPOSE EXISTING PAVEMENT. PROTECT STREAM, TREES, & UTILITIES TO REMAIN.

APPROXIMATE LIMITS OF REINFORCED FILL FOR MSE WALL. FINAL WALL DESIGN BY WALL MANUFACTURER

36" RCP
INV.=1085.47'

APPROXIMATE LOCATION

BORING #7

11' TYP.

PROPOSED SPECIAL CATCH BASIN WITH DEEP SUMP AND OUTLET TO STONE DISCHARGE APRON. REMOVE & RELOCATE WATER MAIN. SEE CONSTRUCTION PLANS

6' PAVED SHOULDER

GRD RAIL

EDGE OF PAVEMENT

TP #21

GRANITE CURB

D9

D8

D7

EDGE OF WETLAND

EDGE OF WETLAND

CENTERLINE DRAINAGE SWALE

CENTERLINE DRAINAGE SWALE

PROPOSED BOULDER WALL - TYPICAL. SEE CONSTRUCTION PLANS

PROPOSED STEEL W BEAM HIGHWAY GUARD WITH WOOD POSTS SPACED @ 6'-3" O.C. (TYPICAL). INSTALL POSTS PER WALL MANUFACTURER SPECIFICATIONS

7.5' SOUTHWEST WINGWALL

7.5' SOUTHEAST WINGWALL

Wetland Series "D" 1-19

END OF WALL
STA. 37+08.75, 22.9' RT

END OF WALL
STA. 37+28.75, 22.9' RT

PROPOSED TEMPORARY WETLAND ALTERATION AND PROPOSED REPLICATION AREA

36" RCP
INV.=1086.64'

+20

OHW

PROPOSED RIPRAP CHANNEL PAVING (3.5' THICK) UNDER NATURAL STREAMBED MATERIALS (2' THICK)

1801 COUNTY LAYOUT

WOODS CROSSING BROOK

OHW

PROPOSED PERMANENT DRAINAGE EASEMENT

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	100	199
PROJECT FILE NO.	606462		

CULVERT PLAN
PLAN VIEW
100% DESIGN SUBMISSION

NOTES:

1. ROAD CLOSURE TO THROUGH TRAFFIC MAY BE ALLOWED DURING THE CONSTRUCTION PHASE. COORDINATE WITH TOWN. PROPER DETOUR SIGNAGE, ROAD CLOSURE SIGNAGE, AND BARRICADES SHALL BE INSTALLED PRIOR TO CONSTRUCTION. IF REQUIRED, TEMPORARY JERSEY BARRIERS AND FENCING SHALL BE CONSIDERED INCIDENTAL.
2. IF REQUIRED DURING CULVERT INSTALLATION, DEWATERING OPERATIONS SHALL BE PUMPED INTO A STAKED SILT FENCED AND STRAW BALE RINGED DEWATERING AREA AND A SILTATION BAG NEAR THE CONSTRUCTION STAGING AREA. CONTRACTOR SHALL SUBMIT A STAMPED DEWATERING PLAN PRIOR TO EXISTING CULVERT DEMOLITION.. ALL DEWATERING & SHORING WILL BE CONSIDERED INCIDENTAL WORK.
3. LOAM, SEED, & STRAW MULCH ALL DISTURBED AREAS.
4. REMOVE & DISPOSE OFFSITE EXISTING CULVERT, PAVEMENT, GUARDRAILS, AND UTILITIES BEING REMOVED. PROTECT STREAM, WETLANDS, TREES, & UTILITIES.
5. PROVIDE TEMPORARY PEDESTRIAN ACCESS AT ALL TIMES. COORDINATE WITH TOWN.
6. BORINGS WERE LOCATED USING A STEEL TAPE FROM EXISTING SITE CONDITIONS.
7. TEMPORARY UTILITY RELOCATION(S) AND/OR SUPPORT(S) SHALL BE CONSIDERED INCIDENTAL WORK AT NO ADDITIONAL COMPENSATION (NOT INCLUDING WATER MAIN RELOCATION. WATER MAIN RELOCATION PAID FOR UNDER SEPARATE ITEMS). WORK TO INSTALL WATER CONTROL/SUPPORT OF EXCAVATION MAY BE PERFORMED WITH RELOCATED UTILITIES IN PLACE. CONTRACTOR SHALL COORDINATE WITH PUBLIC AND PRIVATE UTILITY COMPANIES. WATER CONTROL & SUPPORT OF EXCAVATION SHALL BE CONSIDERED INCIDENTAL.
8. IF REQUIRED, CRANE FOR SETTING STRUCTURES SHALL BE CONSIDERED INCIDENTAL.
9. FINAL MECHANICALLY STABILIZED EARTH RETAINING WALL PLANS TO BE PREPARED BY CONTRACTOR'S WALL MANUFACTURER AND SHALL CONFORM TO AASHTO HL 93 LIVE LOADS. STAMPED MANUFACTURERS PLANS SHALL BE SUBMITTED TO MASSDOT FOR APPROVAL PRIOR TO CONSTRUCTION AT NO ADDITIONAL COMPENSATION. ANY REVISIONS TO APPROVED PLANS SHALL BE SUBMITTED TO THE ENGINEER AND MASSDOT FOR APPROVAL.
10. IF REQUIRED, WORK WITHIN THE STREAM SHALL COMPLY WITH ACOE. TIME OF YEAR RESTRICTIONS MAY APPLY (IN-STREAM WORK FROM JULY 1 TO SEPTEMBER 30) OR APPLICABLE PCN PERMIT WITH WAIVER.
11. SEE SHEET 4 FOR CONCEPTUAL DIVERSION PLAN DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT A STAMPED DIVERSION PLAN PRIOR TO EXISTING CULVERT DEMOLITION.
12. REVIEW SOIL STRATA CONDITIONS BELOW CULVERT FOOTINGS WITH GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
13. CRUSHED STONE SHALL BE WRAPPED IN FILTER FABRIC.
14. VERIFY SOILS CONDITIONS AND PROVIDE DESIGN FOR TEMPORARY EARTH SUPPORT SYSTEM IF REQUIRED.
15. IF REQUIRED, ANY EARTH SUPPORT(S) UTILIZED WITHIN THE LIMITS OF THE CULVERT SHALL BE STEEL SHEETING AND LEFT IN PLACE PER 3.2.4.5 MASSDOT 2013 LRFD BRIDGE MANUAL. ANY EARTH SUPPORT(S) SHALL BE CONSIDERED INCIDENTAL WORK OR PAID FOR UNDER SEPARATE ITEMS.
16. THE WATER MAIN RELOCATION OUT OF THE MSE WALL GEOGRID AREA WILL BE PAID FOR UNDER THE RESPECTIVE WATER ITEMS.

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

MassDOT DWT Version:

EROSION CONTROLS, DEWATERING & GRADING PLAN
1"=4'

NOTE: SEE CONSTRUCTION DETAILS FOR WETLAND REPLICATION DETAILS

NOTE:
CONTRACTOR SHALL PROVIDE FINAL WATER CONTROL PLANS, DEWATERING PLANS, DETAILS AND CALCULATIONS TO MASSDOT AND ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION

NOTE: RESTORE ALL TEMPORARY WETLAND DISTURBANCE TO PRE-EXISTING GRADES AND REPLICATE WETLANDS PER CONSTRUCTION DETAILS AND SPECIAL PROVISIONS

LENOX
WALKER STREET

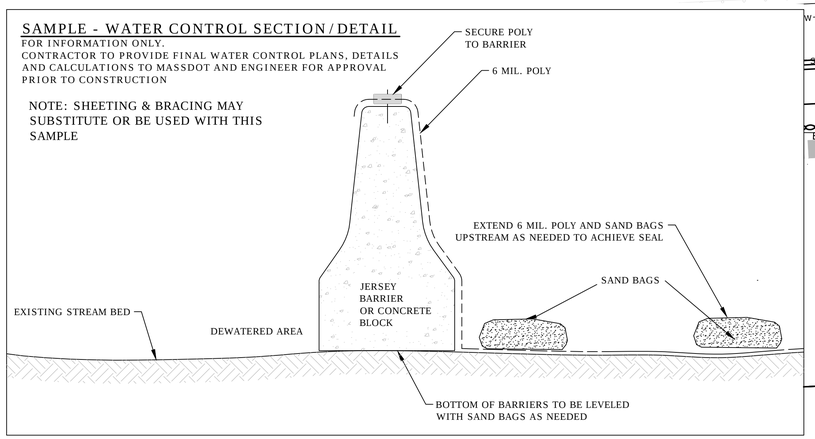
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	101	199
PROJECT FILE NO.	606462		

CULVERT PLAN
PLAN VIEW
100% DESIGN SUBMISSION

CONCEPT TEMPORARY SCOUR PROTECTION AT OUTLET
PROPOSED TEMPORARY CONSTRUCTION EASEMENT
CONCEPT STEEL SHEETING AND/OR COFFERDAM FOR DEWATERING & WATER CONTROL
CONCEPT LOCATION DEWATERING PUMP IF REQUIRED
PROPOSED PERMANENT DRAINAGE EASEMENT
1801 COUNTY LAYOUT
36" RCP INV.=1085.54'
COMPOST FILTER TUBES
Wetland Series "E" 1-17
EDGE OF WETLAND
TP #22
TP #20
UP T44/E50
GRD RAIL
BORING #6
BORING #5
STAKED STRAW BALES
CONCEPT LOCATION FILTER BAG FOR CONSTRUCTION DEWATERING
IF REQUIRED, CONCEPT TEMPORARY 36"Ø CULVERT @ S=1.0% MIN OR EQUIVALENT DOUBLE BARREL CULVERTS (q=53 CFS MIN. FOR 2-YEAR DESIGN STORM EVENT), CONTRACTOR TO PROVIDE FINAL WATER CONTROL PLAN AND DETAILS TO ENGINEER FOR APPROVAL. ALTERNATIVE PUMP SYSTEM DESIGNED FOR THE 2-YEAR FLOWS MAY BE CONSIDERED PROVIDED WORK IS PERFORMED DURING THE LOW FLOW PERIOD FROM JULY 1 TO SEPTEMBER 30 AND/OR CONFORMS TO ACOE SV OR PCN PERMITS.
WOODS CROSSING
OHW
WALKER STREET-Public
BORING #4
BORING #7
36" RCP APPROXIMATE LOCATION
EDGE OF WETLAND
COMPOST FILTER TUBES
CENTERLINE DRAINAGE SWALE
Wetland Series "D" 1-19
TEMPORARILY DIVERT ROADSIDE DRAINAGE IF REQUIRED
ALT. CONCEPT 3'x3'x3' CONC BLOCKS WITH POLY FACE & SANDBAG FILLERS FOR DEWATERING IF REQUIRED
PROPOSED PERMANENT DRAINAGE EASEMENT

SAMPLE - WATER CONTROL SECTION/DETAIL
FOR INFORMATION ONLY.
CONTRACTOR TO PROVIDE FINAL WATER CONTROL PLANS, DETAILS AND CALCULATIONS TO MASSDOT AND ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION

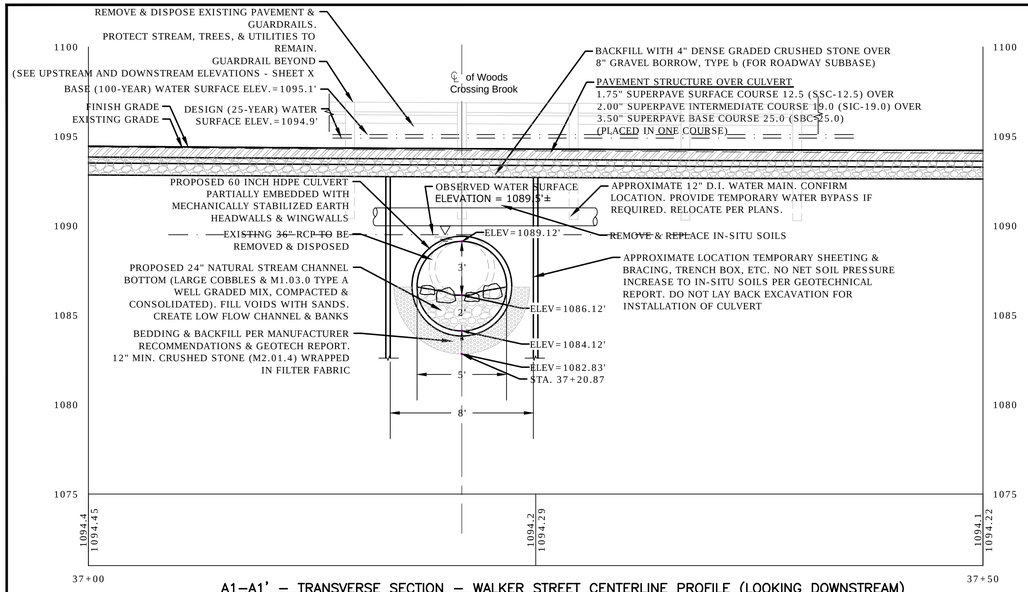
NOTE: SHEETING & BRACING MAY SUBSTITUTE OR BE USED WITH THIS SAMPLE



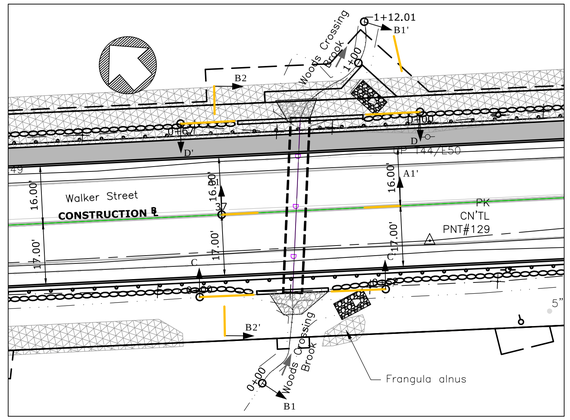
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

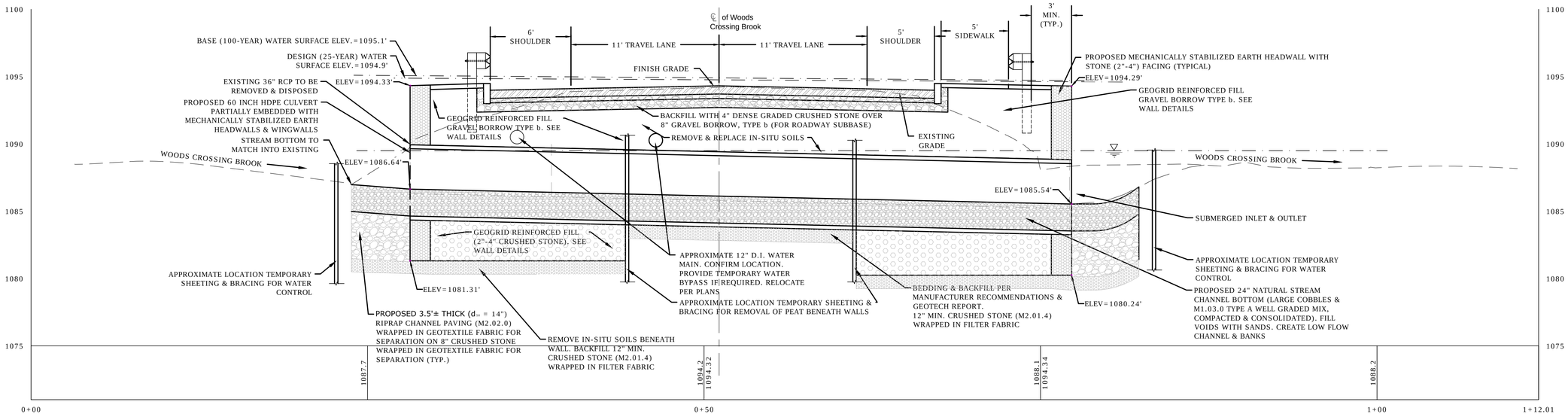
MassDOT DWT Version:



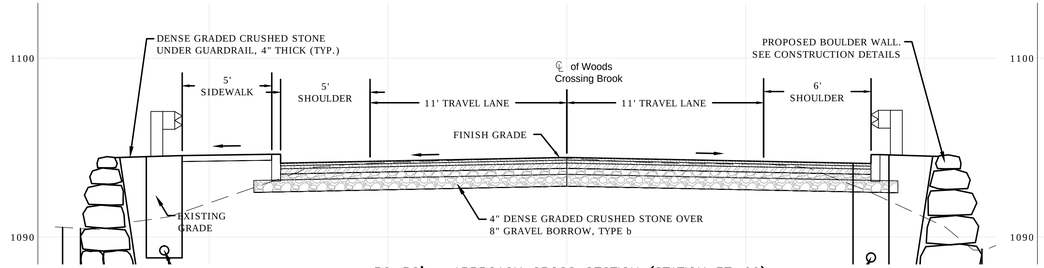
A1–A1' – TRANSVERSE SECTION – WALKER STREET CENTERLINE PROFILE (LOOKING DOWNSTREAM)
1"=4' HORIZONTAL 1"=4' VERTICAL



SECTIONS & ELEVATIONS KEY
SCALE: 1"=20'



B1–B1' – LONGITUDINAL SECTION – WOODS CROSSING BROOK CENTERLINE PROFILE
1"=4' HORIZONTAL 1"=4' VERTICAL



B2–B2' – APPROACH CROSS SECTION (STATION 37+00)
1"=4' HORIZONTAL 1"=4' VERTICAL

LENOX
WALKER STREET

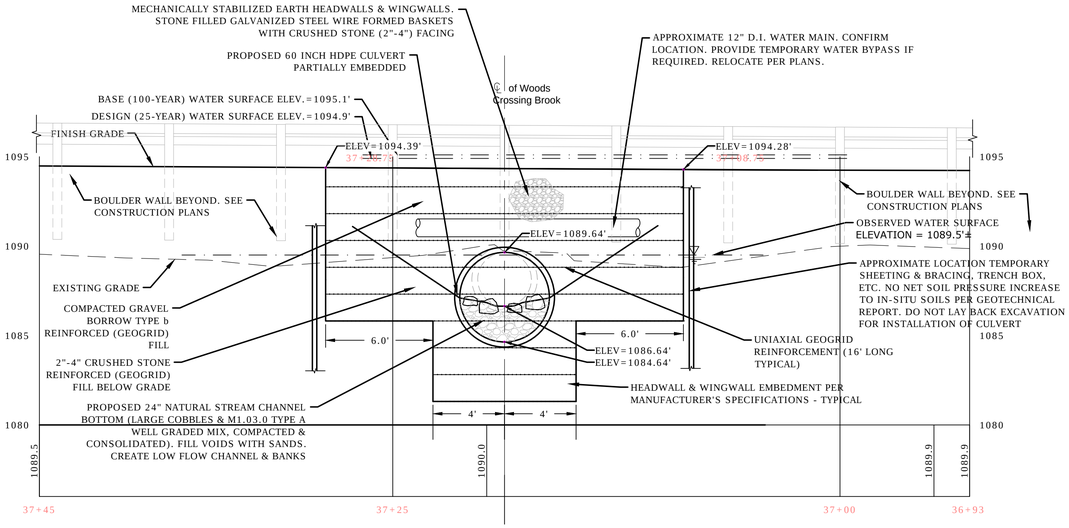
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	102	199
PROJECT FILE NO.	606462		

CULVERT PLAN
LONGITUDINAL & TRANSVERSE SECTIONS
100% DESIGN SUBMISSION

10-Nov-2017
E2148D10 - BRIDGE SHEET LAYOUTS.DWG

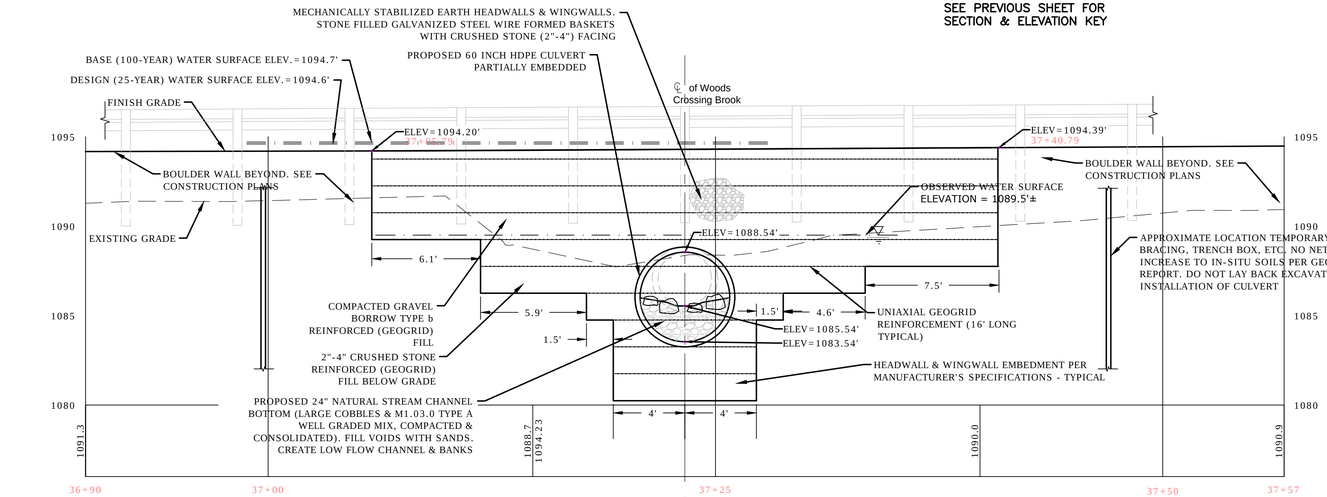
DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

MassDOT DWT Version:

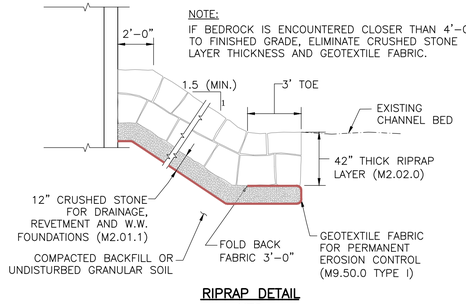


C–C' – SOUTH (UPSTREAM FACE) ELEVATION – LOOKING DOWNSTREAM
SCALE: 1"=4'

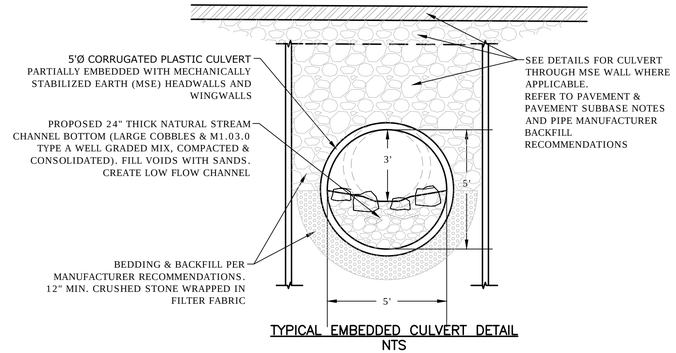
NOTE:
SEE PREVIOUS SHEET FOR SECTION & ELEVATION KEY



D–D' – NORTH (DOWNSTREAM FACE) ELEVATION – LOOKING UPSTREAM
SCALE: 1"=4'

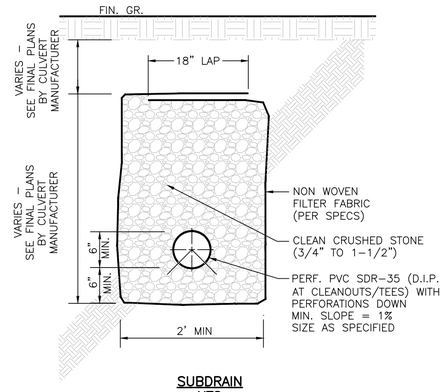


RIPRAP DETAIL
NTS

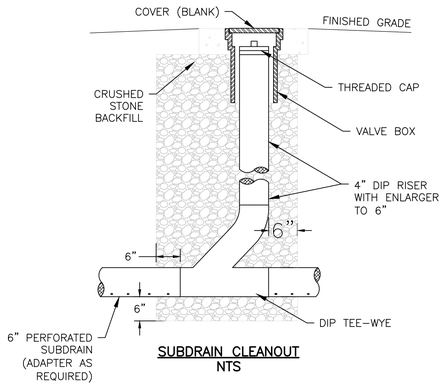


TYPICAL EMBEDDED CULVERT DETAIL
NTS

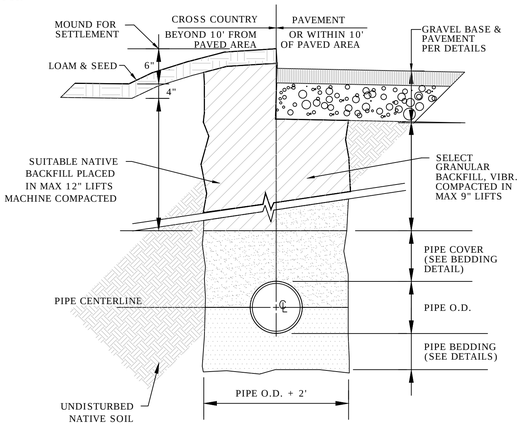
NOTE: PROVIDE A 4' LENGTH OF SOLID–WALL DUCTILE IRON PIPE AT OUTLET TO DAYLIGHT, OR AT CONNECTION TO DRAINAGE STRUCTURE. PROVIDE SMALL ANIMAL GUARD IF OUTLET TO DAYLIGHT.



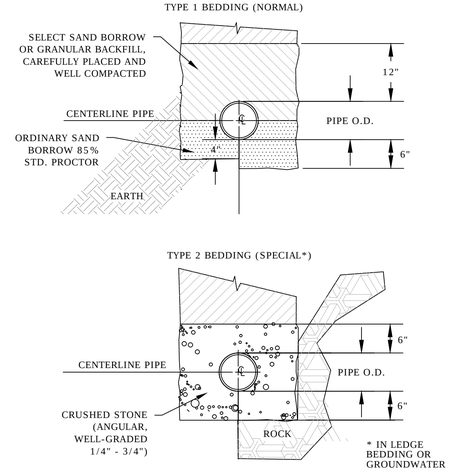
SUBDRAIN
NTS



SUBDRAIN CLEANOUT
NTS



TRENCH CROSS SECTION
N.T.S.



PIPE BEDDING
NTS

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	103	199
PROJECT FILE NO.	606462		

CULVERT PLAN
STRUCTURE ELEVATIONS, WINGWALL ELEVATIONS & DETAILS
100% DESIGN SUBMISSION

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

DESIGNED BY: SAM
DRAFTED BY: MAL/RAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

MassDOT DWT Version:

NOTES:

1. THE CUT LENGTHS SHOWN ARE THE MINIMUM LENGTHS TO BE USED. THE CONTRACTOR MAY USE LONGER LENGTHS WHERE THEY MAY EASE INSTALLATION.

2. CARE SHOULD BE TAKEN TO REMOVE ALL ORGANIC MATERIAL FROM THE BASE EXCAVATION FOR THE RETAINING WALL.

3. GEOGRID CUT LENGTHS ARE MEASURED FROM THE CONNECTION AT THE WIRE FACE BASKET, ALL GEOGRID IS TO BE PLACED PERPENDICULAR TO THE WALL FACE, i.e. THE GRID ROLL IS PLACED ON THE WALL, ROLLED OUT BEHIND THE WALL, AND CUT TO LENGTH.

4. ENDS OF THE RETAINING WALL SHALL BE BLENDED INTO THE PROPOSED/EXISTING GRADE IN A MANNER SATISFACTORY TO THE OWNER'S SITE REPRESENTATIVE. AT THE ENDS OF THE WALL WHERE BLENDING TAKES PLACE, THE ISSUE IS NOT A STRUCTURAL FACTOR BUT AN AESTHETIC FACTOR AND THE OWNER'S SITE REPRESENTATIVE IS QUALIFIED TO MAKE THIS JUDGMENT.

5. THE PREFERRED LOCATION FOR GUARDRAIL INSTALLATION IS BEYOND THE LENGTH OF THE GEOGRID. WHERE THIS CANNOT BE ACCOMPLISHED, THE FOLLOWING ALTERNATIVES ARE AVAILABLE FOR POST INSTALLATION.

   a. ALTERNATIVE #1: FOR GUARDRAILS INSTALLED WHERE GEOGRID IS LESS THAN 19" FROM THE SURFACE, THE SOIL ABOVE THE GEOGRID IS TO BE EXCAVATED AND THE GEOGRID HAND-CUT. THE HOLE CUT IN THE GRID IS TO BE JUST LARGE ENOUGH FOR THE POST INSTALLATION. IF THE POST EXTENDS THROUGH FURTHER GRID LAYERS, IT MAY BE DRIVEN THROUGH ADDITIONAL LAYERS, PROVIDED THE DRIVEN END IS TAPERED IN SOME FORM TO PROVIDE A POINT. SQUARE-EDGE POSTS SHALL NOT BE DRIVEN THROUGH GEOGRID LAYERS. DRIVING WOOD POSTS IN CLOSE PROXIMITY TO THE REAR OF THE WALL MAY PUSH THE WALL FACE OUTWARD DUE TO DISPLACED SOIL.

   b. ALTERNATIVE #2: FOR GUARDRAILS INSTALLED WHERE GEOGRID IS MORE THAN 19" FROM THE SURFACE, THE POST MAY BE DRIVEN THROUGH THE GRID LAYER(S), PROVIDED THE DRIVEN END IS TAPERED IN SOME FORM TO PROVIDE A POINT. SQUARE EDGE POSTS SHALL NOT BE DRIVEN THROUGH GEOGRID LAYERS. DRIVING WOOD POSTS IN CLOSE PROXIMITY TO THE REAR OF THE WALL MAY PUSH THE WALL FACE OUTWARD DUE TO DISPLACED SOIL.

   AUGERING OF POST HOLES IS ACCEPTABLE, PROVIDED GEOGRID LAYERS WITHIN 19" OF THE SURFACE ARE HAND CUT PRIOR TO AUGERING THE HOLE.

   IF THE POSTS ARE TO BE SLEEVED AND SET IN CONCRETE, ALL GRID LAYERS MUST BE HAND CUT, WITH THE CUT HOLES JUST LARGE ENOUGH TO PROVIDE ROOM FOR THE SLEEVE. USE OF A HAND OPERATED POST HOLE SHOVEL TO CUT THROUGH GEOGRID IS ACCEPTABLE FOR GRID LAYERS DEEPER THAN 19" FROM THE SURFACE.

   THE PREFERRED MINIMUM DISTANCE FROM THE BACK OF THE WIRE BASKET TO A GUARDRAIL POST IS 2 FEET, UTILIZING A 6.5-FOOT POST DEPTH. IF THE GUARDRAIL MUST BE CLOSER THAN 2 FEET FROM THE BACK OF THE WIRE BASKET, SIGNIFICANTLY DEEPER POST DEPTHS AND/OR ALTERNATIVE METHODS OF INSTALLATION MAY BE REQUIRED.

   EVALUATION OF THE STRUCTURAL CAPABILITIES OF ANY GUARDRAIL OR FENCE SYSTEM INSTALLED AT THIS SITE WAS NOT PART OF THE DESIGN.

6. WHERE POSSIBLE, CATCH BASINS/MANHOLES THAT ARE PLACED IN CLOSE PROXIMITY TO THE PROPOSED RETAINING WALL SHOULD USE ECCENTRIC CONES TO HELP DISTANCE THE STRUCTURE FROM THE GEOGRID AND RETAINING WALL.

7. ANY PLANTINGS SET BEHIND THE WALLS SHALL BE PLACED WITHOUT CUTTING OF THE GEOGRID REINFORCEMENT LAYERS. THIS CAN BE ACCOMPLISHED BY SETTING PLANTINGS ABOVE THE GEOGRID LAYERS OF BEYOND THE LIMITS OF THE GEOGRID LAYERS.

SPECIAL INSTALLATION NOTES:

1. A MINIMUM LEVEL SHELF OF 3 FEET, UNLESS OTHERWISE NOTED, SHALL BE MAINTAINED IN FRONT OF THE BASE ELEVATION OF THE MSE WALL SYSTEM. THIS SHELF SHALL BE IN-SITU MATERIAL, BE IT LEDGE OR GLACIAL TILL. GRANULAR MATERIALS (i.e. MATERIAL OTHER THAN LEDGE) SHALL BE DENSIFIED WITH A COMPACTOR (MIN. 24" SIZE), PRIOR TO WALL BASE INSTALLATION, IN ORDER TO COMPACT ANY MATERIAL LOOSENED DURING THE EXCAVATION PROCESS.

2. THE 3-FOOT LEVEL SHELF SHALL BE COVERED WITH A FILTER FABRIC (MASSDOT TYPE 2 FOR SEPARATION) AND STONE (D50=6") IN ORDER TO HELP PROTECT THE SHELF FROM EROSION. THIS REQUIREMENT IS A MINIMUM AND A GEOTECHNICAL ENGINEER FAMILIAR WITH THE SITE SOILS SHOULD BE CONSULTED TO VERIFY THAT IT IS SUFFICIENT BASED ON THE MATERIALS FOUND AT THE SITE.

3. WHERE LEDGE IS ENCOUNTERED AT THE BASE ELEVATION, THE SITE GEOTECHNICAL ENGINEER SHALL DETERMINE THE STABILITY OF THE LEDGE, i.e. WHETHER OR NOT THE LEDGE IS FRACTURED, THE DIRECTION OF THE FRACTURE PLANES, ETC. IF THERE IS A DETERMINATION THAT THE LEDGE WILL NOT PROVIDE LONG-TERM STABILITY FOR THE LOADS IMPOSED BY THE WALL SYSTEM, A DESIGN SHOULD BE DEVELOPED BY THE SITE GEOTECHNICAL ENGINEER FOR STABILIZING THE LEDGE PRIOR TO THE WALL INSTALLATION.

4. WHERE LEDGE IS ENCOUNTERED AT THE BASE ELEVATION, THE LEDGE NEEDS TO BE RELATIVELY LEVEL (LESS THAN 2% GRADE) AS IT COMES OUT FROM UNDER THE WALL FACE. IF THE LEDGE SLOPES MORE THAN 2% GRADE, A LEVELING PAD OF UNREINFORCED CONCRETE SHALL BE INSTALLED. THE LEVELING PAD SHALL EXTEND AT LEAST 1 FOOT OUTSIDE THE WALL FACE AND BE AT LEAST 24" WIDE. ANCHORS (1" DIAMETER GALVANIZED) SHALL BE DRILLED INTO THE LEDGE AT 4-FOOT INTERVALS ALONG THE WALL BASE AND SHALL EXTEND INTO THE CONCRETE LEVELING PAD AT LEAST 4". THEIR DEPTH INTO THE LEDGE SHALL BE DETERMINED BY THE SITE GEOTECHNICAL ENGINEER BASED UPON THE STABILITY OF THE LEDGE.

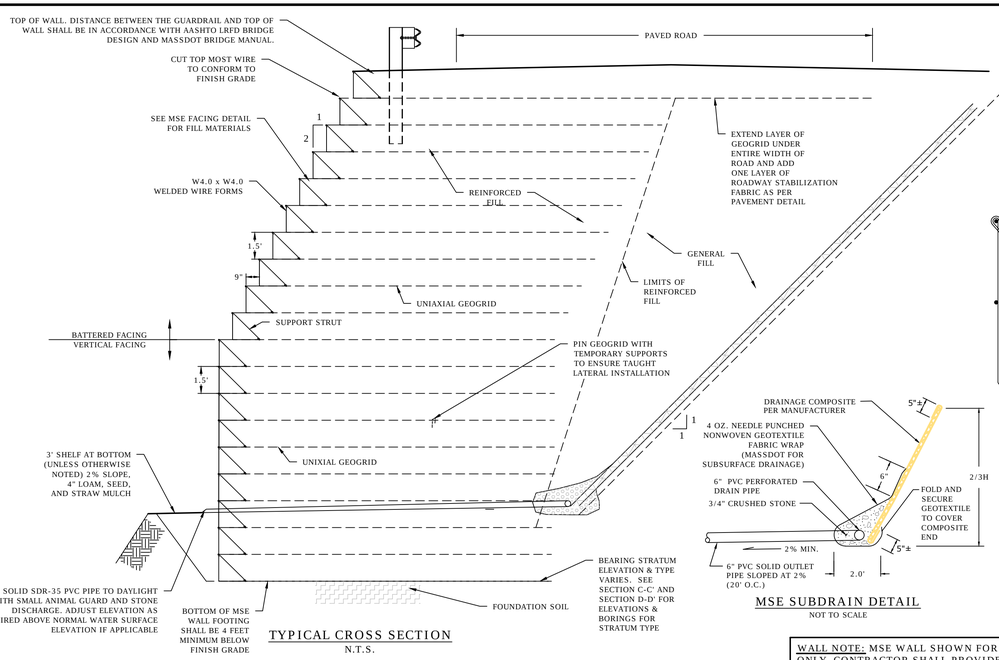
   NOTE THAT A CONCRETE LEVELING PAD, IF USED, IS ALLOWED TO ENCROACH UPON THE 3-FOOT LEVEL AREA REQUIRED IN FRONT OF THE WALL SYSTEM. THE FACE OF THE WALL SYSTEM SHALL STILL BE AT LEAST 3 FEET FROM THE "BREAK" IN THE LEDGE SLOPE.

5. AS THE WALL IS BEING BROUGHT AROUND THE ENDS TO TIE INTO THE SLOPE, THE BASE STEPS MAY BE INCREASED IN HEIGHT IN ORDER TO BETTER FOLLOW THE SLOPE WITH THE EXCAVATION. AS LONG AS AT LEAST 12" OF EMBEDMENT IS ABLE TO BE MAINTAINED, AND A 3-FOOT LEVEL AREA IS PROVIDED OUTSIDE THE WALL FACE, THE WALL STABILITY SHOULD NOT BE IMPACTED BY TALLER BASE STEPS.

6. THE WALL MAY BE INSTALLED ON COMPACTED SOIL, PROVIDED ITS DENSITY IS CONFIRMED TO MEET THE MINIMUM COMPACTION REQUIREMENTS FOR BACKFILL AS NOTED ON THE DESIGN PLANS. A 3-FOOT LEVEL AREA IN FRONT OF THE WALL BASE IS REQUIRED AS NOTED ABOVE.

7. IF LEDGE IS ENCOUNTERED WITHIN THE REINFORCEMENT ZONE OF THE WALL SYSTEM, THE GEOGRID MAY BE REDUCED IN LENGTH SUCH THAT IT ABUTS THE LEDGE FACE. HOWEVER, THE GRID LENGTHS SHALL NOT BE REDUCED TO A LENGTH LESS THAN 0.4 x WALL HEIGHT WITHOUT THE GEOGRID BEING SECURED THE TO LEDGE. IF LEDGE IS ENCOUNTERED AT A DISTANCE LESS THAN 0.4 x WALL HEIGHT FROM THE REAR OF THE WALL BASKETS, A METHOD OF SECURING THE GEOGRID TO THE LEDGE SHALL BE DETERMINED BY AGREEMENT OF THE SITE GEOTECHNICAL ENGINEER AND THE WALL DESIGN ENGINEER.

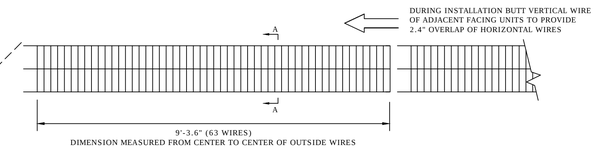
8. THE WALL DESIGNER AND THE SITE GEOTECHNICAL ENGINEER SHALL BOTH BE NOTIFIED AND BOTH AGREE TO FIELD MODIFICATIONS REQUESTED THAT ARE NOT OUTLINED ON THESE DESIGN PLANS.



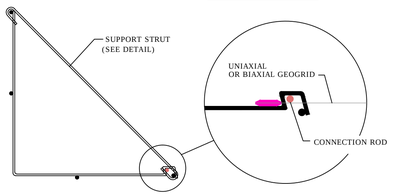
TYPICAL CROSS SECTION
N.T.S.

MSE SUBDRAIN DETAIL
NOT TO SCALE

WALL NOTE: MSE WALL SHOWN FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL PROVIDE MASSACHUSETTS PE STAMPED PLANS AND SUPPORTING CALCULATIONS FOR APPROVAL PRIOR TO CONSTRUCTION.

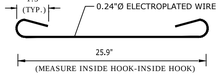


ELEVATION VIEW

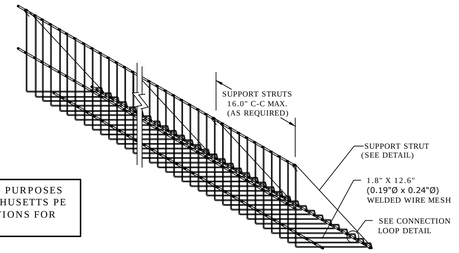


SECTION A-A

CONNECTION LOOP DETAIL



SUPPORT STRUT DETAIL



NOTE:
UNLESS OTHERWISE SPECIFIED IN THE FACING DETAIL
ALL FACING UNITS SHALL BE GALVANIZED PER ASTM A123 AFTER BENDING.

FACING UNIT
NOT TO SCALE

NOTES:

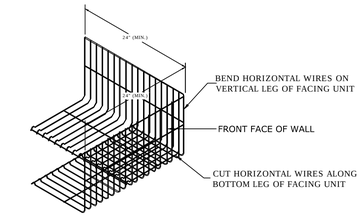
1. SEE FACING UNIT DETAIL FOR FACING MATERIAL AND DIMENSIONS.
2. ALL FACING UNITS SHALL BE GALVANIZED PER ASTM A123 AFTER FABRICATION.
3. OPTIONAL - A THIN LAYER (2" MIN.) OF FINER STONE (1/4"-1") MAY BE PLACED AT THE TOP OF EACH UNIT TO PROVIDE A LEVEL SURFACE FOR THE UNIT ABOVE.

STONE FACING DETAIL
NOT TO SCALE

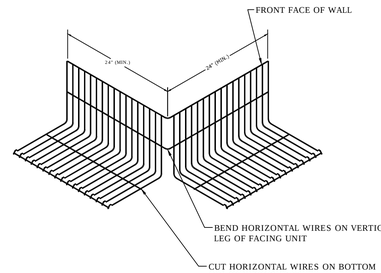
NOTES:

1. SET TOPMOST FACING UNIT INSIDE FACING UNIT BELOW TO FOLLOW GRADE.
2. HORIZONTAL WIRES OF TOPMOST FACING UNIT MAY BE CUT TO ALLOW INSTALLATION OF STRUTS ON FACING UNIT BELOW.

NESTED BASKET DETAIL
NOT TO SCALE

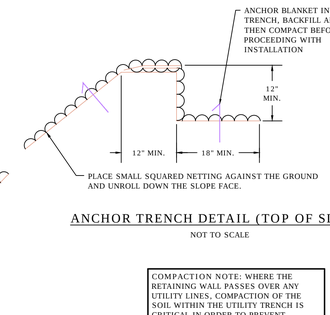


OUTSIDE CORNER UNIT
NOT TO SCALE



NOTE: SEE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS

INSIDE CORNER UNIT
NOT TO SCALE



ANCHOR TRENCH DETAIL (TOP OF SLOPE)
NOT TO SCALE

ANCHOR TRENCH DETAIL (TOE OF SLOPE)
NOT TO SCALE

COMPACTION NOTE: WHERE THE RETAINING WALL PASSES OVER ANY UTILITY LINES, COMPACTION OF THE SOIL WITHIN THE UTILITY TRENCH IS CRITICAL IN ORDER TO PREVENT SETTLEMENT OF THE WALL. COMPACTION OF ALL FILL MATERIAL IN UTILITY TRENCHES WHICH PASS UNDER THIS RETAINING WALL MUST BE AT LEAST 95% OF THE MAXIMUM DENSITY OF THE FILL MATERIAL.

REINFORCED BACKFILL GENERAL REQUIREMENTS

SIEVE SIZE	% PASSING
3"	100%
1/2"	50 - 85%
#4	40 - 75%
#50	8 - 28%
#200	0 -10%

NOTE: THE DESIGN ENGINEER MUST BE MADE AWARE WHENEVER THE PERCENT PASSING THE #200 SIEVE EXCEEDS 10%. GROUNDWATER CONTROL METHODS MAY BE USED.

GRID OVERLAP IN RADIUS: IN A RADIUS WHERE GRID WILL OVERLAP, THE INSTALLER SHALL PLACE 2"-3" OF FILL MATERIAL BETWEEN THE LAYERS OF OVERLAPPING GEOGRID. GRID-ON-GRID CONTACT SHALL BE MINIMIZED. MAXIMUM SIZE PARTICLES BETWEEN THE GRID SHALL BE 2".

SITE SPECIFIC NOTE: THE WALL HEIGHTS AT THIS SITE VARY AND ARE SHOWN ON UPSTREAM & DOWNSTREAM PROFILES. THE GEOGRID TYPE & LENGTH SHALL BE DESIGNED BY THE WALL MANUFACTURER. THE WALL FACE DETAIL DRAWING AND SPECIFICATIONS IS PRELIMINARY ONLY . THE PRELIMINARY CUT LENGTHS OF THE GEOGRID LAYERS, AND THE PLACEMENT ELEVATIONS OF THE GEOGRID LAYERS ARE SHOWN ON THE WALL FACE DETAIL DRAWING. THE GEOGRID SHALL PROVIDE 100% COVERAGE. THE CONTRACTOR SHOULD CONTACT THE DESIGN ENGINEER WITH ANY QUESTIONS.

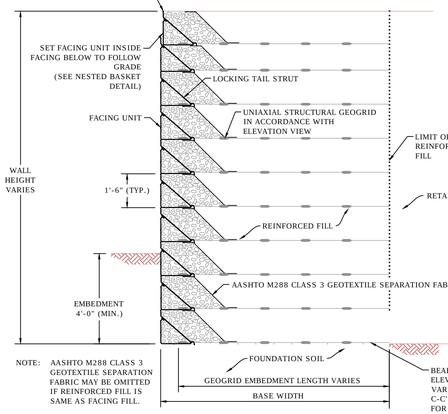
DESIGN ASSUMPTIONS*

SOIL	SOIL UNIT WEIGHT	Ø
REINFORCED SELECT FILL	120	37
RETAINED EARTH (VARIES)*	67-120	30
FOUNDATION SOIL (VARIES)*	67-120	30

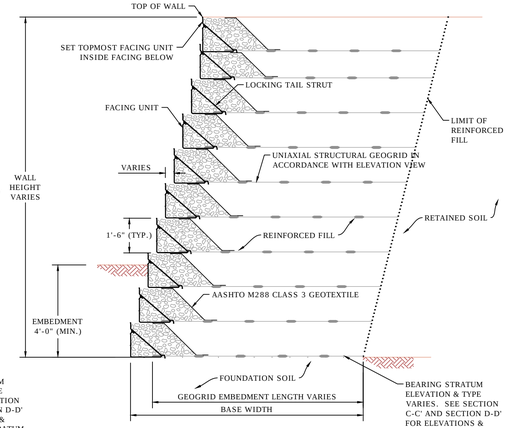
COEFFICIENT OF BASE SLIDING = 0.50
APPLIED SURCHARGE LOADING = 250 psf
SEISMIC ACCELERATIONS: Ss=0.129g, S1=0.039g As=0.091g
MAX. SLOPE ABOVE WALL = LEVEL
* SEE GEOTECHNICAL REPORT

MINIMUM FACTORS OF SAFETY

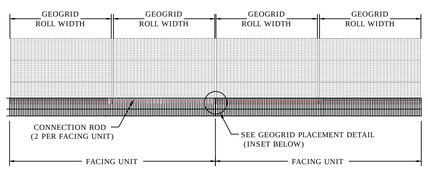
OVERTURNING	2.0
SLIDING	1.5
GEOGRID PULLOUT	1.5
BEARING CAPACITY	2.0
GLOBAL STABILITY	1.3



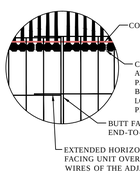
TYPICAL 2"-4" STONE FACING CROSS-SECTION
NOT TO SCALE



TYPICAL CROSS-SECTION
NOT TO SCALE



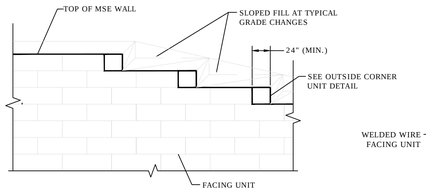
PLAN VIEW



NOTES:

1. SEE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
2. TWO ROLLS OF UNIAXIAL GEOGRID SHALL BE PLACED ON EACH FACING UNIT WITH TWO GEOGRID RIBS BETWEEN EACH PAIR OF WIRE CONNECTION LOOPS.
3. DURING INSTALLATION BUTT VERTICAL WIRE OF ADJACENT FACING UNITS TO PROVIDE 2.4" OVERLAP OF HORIZONTAL WIRES.

TYPICAL GEOGRID COVERAGE
NOT TO SCALE



NOTES:

1. SEE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
2. USE FACING UNIT TO FABRICATE CONTINUOUS CORNER. PROVIDE 24" (MIN.) OF SIERRASCAPE FACING UNIT IN BOTH DIRECTIONS AS MEASURED FROM THE CORNER BEND.
3. INSTALL ADJACENT FACING UNITS TO PROVIDE 4" OVERLAP OF HORIZONTAL WIRES.

TOP OF MSE WALL, FINISHING DETAIL
NOT TO SCALE

LENOX
WALKER STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	104	199
PROJECT FILE NO.	606462		

CULVERT PLAN
SITE DETAILS
100% DESIGN SUBMISSION

DESIGNED BY: SAM
DRAFTED BY: MAL/KAC/KDM
DATE: NOVEMBER 2017
FILE: Z:\ENGINEERING\E2148 WALKER ST_DWG\E2148D10 - BRIDGE SHEET LAYOUTS.DWG

E2148D10 - BRIDGE SHEET LAYOUTS.DWG 10-Nov-2017

L-XX-XXX (XXX) Structural Submittal (S1) 9-DEC-2016

MassDOT DWT Version: