

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	1	132
PROJECT FILE NO.		606517	

TITLE SHEET & INDEX

PLAN AND PROFILE OF WEST MAIN STREET (ROUTE 9)

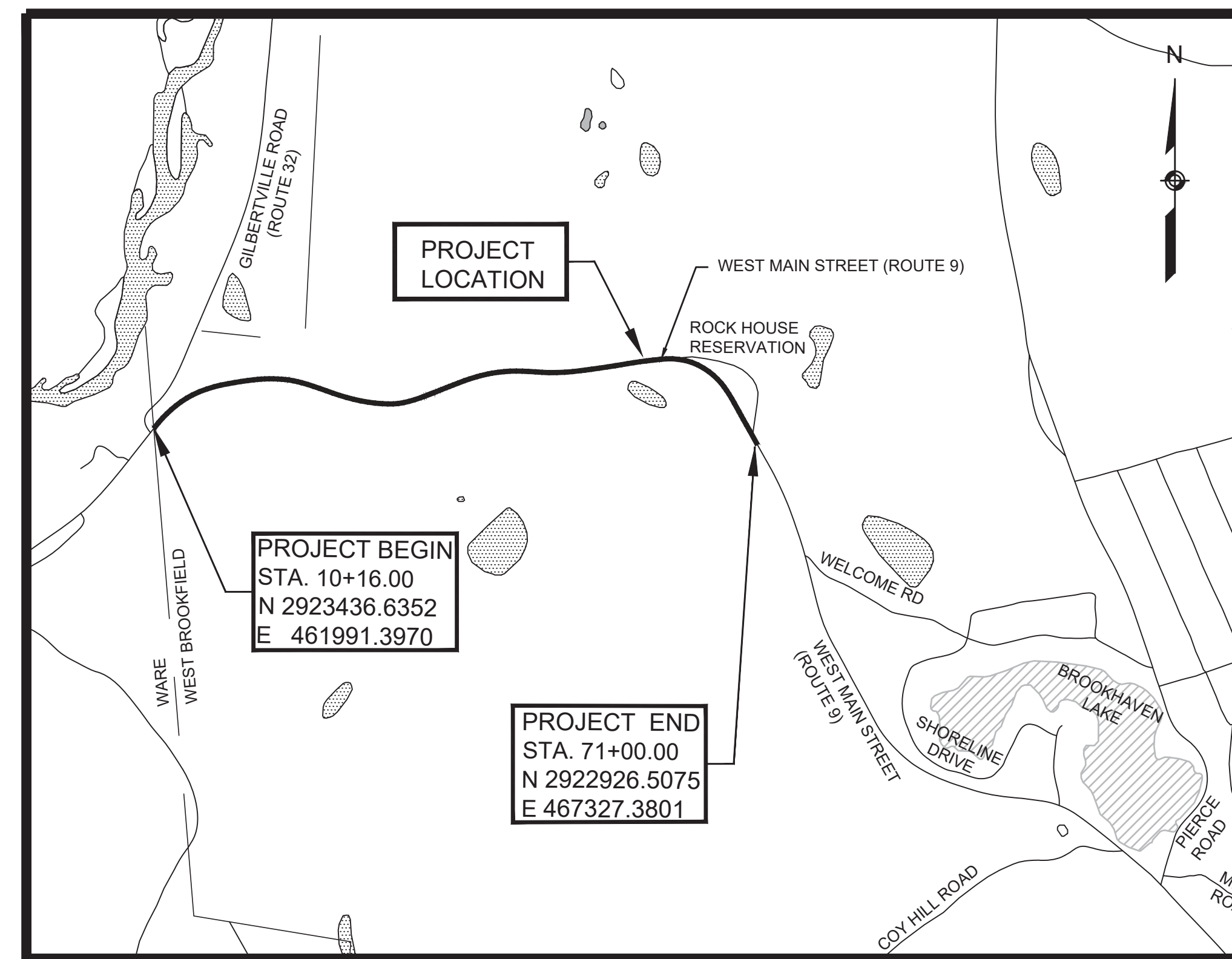
IN THE TOWN OF WEST BROOKFIELD WORCESTER COUNTY

FEDERAL AID PROJECT NO. STP/TAP-0032(040)

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

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LENGTH OF PROJECT = 6,082.56 FEET = 1.152 MILES

DESIGN DESIGNATION (WEST MAIN STREET / ROUTE 9)

	ROUTE 9
DESIGN SPEED	45 MPH
ADT (2014)	7,000 VPD
ADT (2034)	7,800 VPD
K	9.5%
D	50% WB
T (PEAK HOUR)	7%
T (PEAK AVERAGE DAY)	7%
DHV	740 VPH
DDHV	370 VPH
FUNCTIONAL CLASSIFICATION	RURAL PRINCIPAL ARTERIAL



Morgan Jr., John



DATE	DESCRIPTION	REV #



APPROVED

Carrie Lavallee, P.E. Digitally signed by Carrie Lavallee, P.E. Date: 2024.04.09 10:34:06 -0400
CHIEF ENGINEER DATE 04/09/2024

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN
		CATCH BASIN CURB INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		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
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		EDGE OF PAVEMENT
		LIMIT OF MICROMILLING 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
		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)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		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
		LEGEND "ONLY" - WHITE
		STOP LINE (12" WIDE)
		CROSSWALK
		SOLID WHITE LINE (6" WIDE)
		SOLID YELLOW LINE (6" WIDE)
		BROKEN WHITE LINE (10' LINE, 30' GAP)
		BROKEN YELLOW LINE (10' LINE, 30' GAP)
		DOTTED WHITE LINE (3' LINE, 9' GAP)
		DOTTED YELLOW LINE (3' LINE, 9' GAP)
		DOTTED WHITE LINE EXTENSION (2' LINE, 6' GAP)
		DOTTED YELLOW LINE EXTENSION (2' LINE, 6' GAP)
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL		ABBREVIATIONS (cont.)	
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PVI	POINT OF VERTICAL INTERSECTION
ABAN	ABANDON	PVT	POINT OF VERTICAL TANGENCY
ADJ	ADJUST	PVMT	PAVEMENT
APPROX.	APPROXIMATE	PWW	PAVED WATERWAY
A.C.	ASPHALT CONCRETE	R	RADIUS OF CURVATURE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	R&D	REMOVE AND DISPOSE
BIT.	BITUMINOUS	RCP	REINFORCED CONCRETE PIPE
BC	BOTTOM OF CURB	RD	ROAD
BD.	BOUND	RDWY	ROADWAY
BL	BASELINE	REM	REMOVE
BLDG	BUILDING	RET	RETAIN
BM	BENCHMARK	RET WALL	RETAINING WALL
BO	BY OTHERS	ROW	RIGHT OF WAY
BOS	BOTTOM OF SLOPE	RR	RAILROAD
BR.	BRIDGE	R&R	REMOVE AND RESET
BVW	BORDERING VEGETATED WETLAND	R&S	REMOVE AND STACK
CB	CATCH BASIN	RT	RIGHT
CBCI	CATCH BASIN WITH CURB INLET	SB	STONE BOUND
CC	CEMENT CONCRETE	SHLD	SHOULDER
CCM	CEMENT CONCRETE MASONRY	SMH	SEWER MANHOLE
CEM	CEMENT	ST	STREET
CI	CURB INLET	STA	STATION
CLP	CAST IRON PIPE	SSD	STOPPING SIGHT DISTANCE
CLF	CHAIN LINK FENCE	SHLO	STATE HIGHWAY LAYOUT LINE
CL	CENTERLINE	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	T	TANGENT DISTANCE OF CURVE/TRUCK %
CSP	CORRUGATED STEEL PIPE	TAN	TANGENT
CO.	COUNTY	TEMP	TEMPORARY
CONC	CONCRETE	TC	TOP OF CURB
CONT	CONTINUOUS	TOS	TOP OF SLOPE
CONST	CONSTRUCTION	TYP	TYPICAL
CR GR	CROWN GRADE	UP	UTILITY POLE
DHV	DESIGN HOURLY VOLUME	VAR	VARIES
DI	DROP INLET	VERT	VERTICAL
DIA	DIAMETER	VC	VERTICAL CURVE
DIP	DUCTILE IRON PIPE	WCR	WHEEL CHAIR RAMP
DW	STEADY DON'T WALK - PORTLAND ORANGE	WG	WATER GATE
DWY	DRIVEWAY	WIP	WROUGHT IRON PIPE
ELEV (or EL.)	ELEVATION	WM	WATER METER/WATER MAIN
EMB	EMBANKMENT	X-SECT	CROSS SECTION
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		
HT	HUB AND TACK		
HYD	HYDRANT		
INV	INVERT		
JCT	JUNCTION		
L	LENGTH OF CURVE		
LB	LEACH BASIN		
LP	LIGHT POLE		
LT	LEFT		
LUW	LAND UNDER WATER		
MAX	MAXIMUM		
MB	MAILBOX		
MH	MANHOLE		
MHB	MASSACHUSETTS HIGHWAY BOUND		
MIN	MINIMUM		
NIC	NOT IN CONTRACT		
NO.	NUMBER		
OHW	OVERHEAD WIRE		
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		

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WEST MAIN STREET (ROUTE 9)

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LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATERWAY
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
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 ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW 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, TILT, 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 WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

GENERAL NOTES

- ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH MASSDOT STANDARD DETAILS AND SPECIFICATIONS.
- TOPOGRAPHY AND DETAIL SHOWN HEREON ARE A RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY COLER & COLANTONIO INC. (NOW CHA CONSULTING) DURING NOVEMBER AND DECEMBER OF 2011.
- PRIMARY GEODETIC SURVEY CONTROL WAS ESTABLISHED FROM AN ON THE GROUND SURVEY USING GLOBAL POSITIONING SYSTEM (GPS) SURVEY METHODS ON SEPTEMBER 28, 2011. THE HORIZONTAL REFERENCED DATUM IS THE NAD 83 BASED ON THE GRS 80 REFERENCE ELLIPSOID. THE GRID COORDINATES ARE BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM OF 1983 (MAINLAND 2001). ELEVATIONS ARE REFERENCED TO THE NAVD 88 VERTICAL DATUM.

RIM AND INVERT ELEVATIONS AND SPOT ELEVATIONS ARE PUBLISHED FOR DESIGN PURPOSES ONLY. VERTICAL BENCHMARKS SHOWN ON THE PLAN ARE TO BE USED FOR CONSTRUCTION EFFORTS.

IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY, ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
- LOCATIONS OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD AND DIG-SAFE FIELD MARKINGS. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, CONTACT DIG-SAFE AT (1-800-344-7233) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
- THE LOCUS AREA LIES WITHIN A FEMA NON-PRINTED PANEL(S) REFERENCE ID NUMBER 25027C0540E, COMMUNITY ID NUMBER 25027C, TOWN OF WEST BROOKFIELD IN WORCESTER COUNTY.
- WETLAND AND CHANNEL LINES WERE DELINEATED IN NOVEMBER OF 2011 BY COLER & COLANTONIO, INC. (NOW CHA CONSULTING).

- PLAN REFERENCES:
- 1926 COUNTY LAYOUT PLAN BOOK 49, PLAN 44
- 1927 COUNTY LAYOUT PLAN BOOK 51, PLAN 4
- 1966 COUNTY LAYOUT PLAN BOOK 302, PLAN 19
- STATE HIGHWAY LAYOUT NO. 4990
- STATE HIGHWAY LAYOUT NO. 5001
- PLAN BOOK 781, PLAN 102
- PLAN BOOK 760, PLAN 54
- PLAN BOOK 777, PLAN 12
- PLAN BOOK 302, PLAN 36
- PLAN BOOK 318, PLAN 10
- PLAN BOOK 302, PLAN 35
- PLAN BOOK 300, PLAN 46
- THE CONTRACTOR WILL COORDINATE ALL PRIVATE CASTINGS AND POLES THAT ARE TO BE ADJUSTED, RESET OR RELOCATED WITH THE APPROPRIATE UTILITY PURVEYOR. THE RELOCATION, INSTALLATION OR REMOVAL OF PRIVATE UTILITIES SHALL BE ACCOMPLISHED BY THEIR OWNER. THE CONTRACTOR SHALL COOPERATE WITH THE PRIVATE UTILITY PURVEYORS AND ALLOW THEM ADEQUATE TIME TO COMPLETE THEIR WORK IN ADVANCE OF PERFORMING ANY PAVING OPERATIONS OR OTHER FINISH WORK.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
- THE CONTRACTOR SHALL MAKE DETERMINATIONS OF SUBSURFACE CONDITIONS, INCLUDING THE LOCATION OF ROCK AND THE ACTUAL LOCATION OF UTILITIES OR OTHER FEATURES WHICH MAY AFFECT THE WORK.

- THE CONTRACTOR SHALL CAUSE AS LITTLE INTERFERENCE AND INCONVENIENCE TO ABUTTERS AS POSSIBLE. THE CONTRACTOR SHALL MAINTAIN SAFE AND CONVENIENT ACCESS TO PRIVATE PROPERTIES AT ALL TIMES.
- THE FLOW OF TRAFFIC THROUGH CONSTRUCTION ZONES IN EXISTING PUBLIC WAYS SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE SPECIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
- ALL PERMANENT PAVEMENT MARKINGS SHALL BE RECESSED POLYUREA.
- BASED UPON THE SUBSURFACE CONDITIONS ENCOUNTERED IN THE BORINGS AND IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 3.1 (9TH EDITION, 2020), THE SITE CLASS FOR EACH CONCRETE RETAINING WALL LOCATION WAS DETERMINED AS FOLLOWS:

RETAINING WALL LOCATION	SEISMIC SITE CLASS
STA 31+10 TO STA 32+50 LT	C
STA 41+05 TO STA 43+02 LT	D
STA 57+60 TO STA 61+40 RT	C

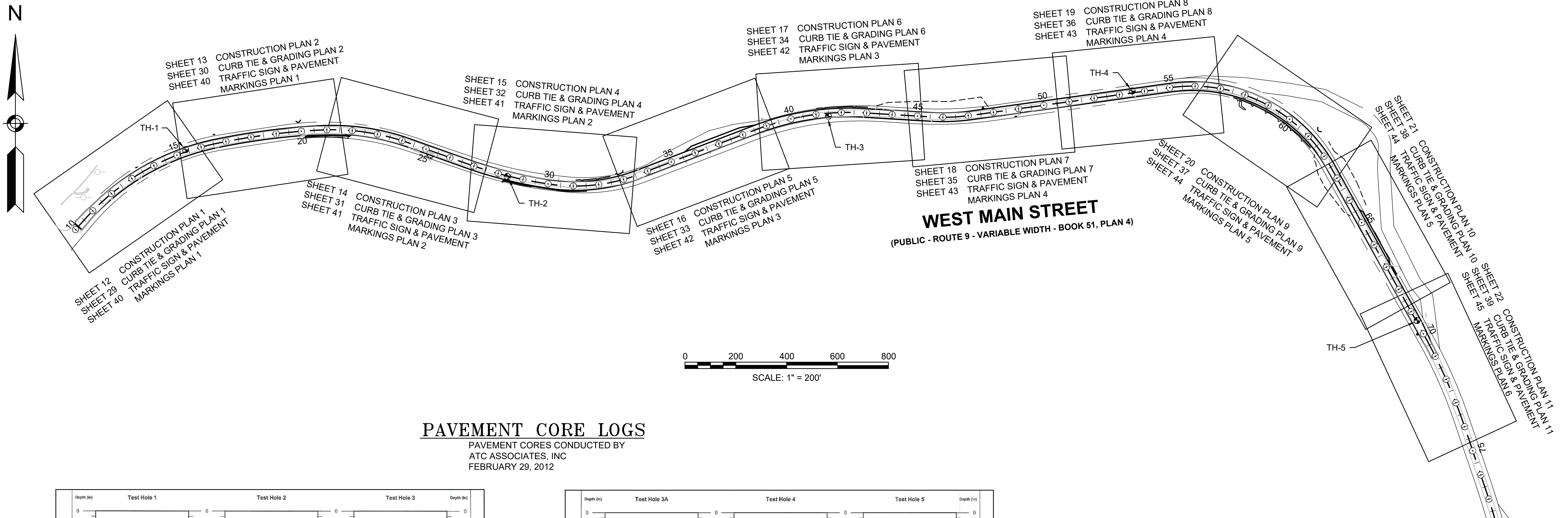
15. COMPOST BLANKET SHALL BE INSTALLED PER THE SPECIAL PROVISIONS.

16. FOR OTHER NOTES, REFER TO SPECIFIC PLANS AND DETAILS.

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

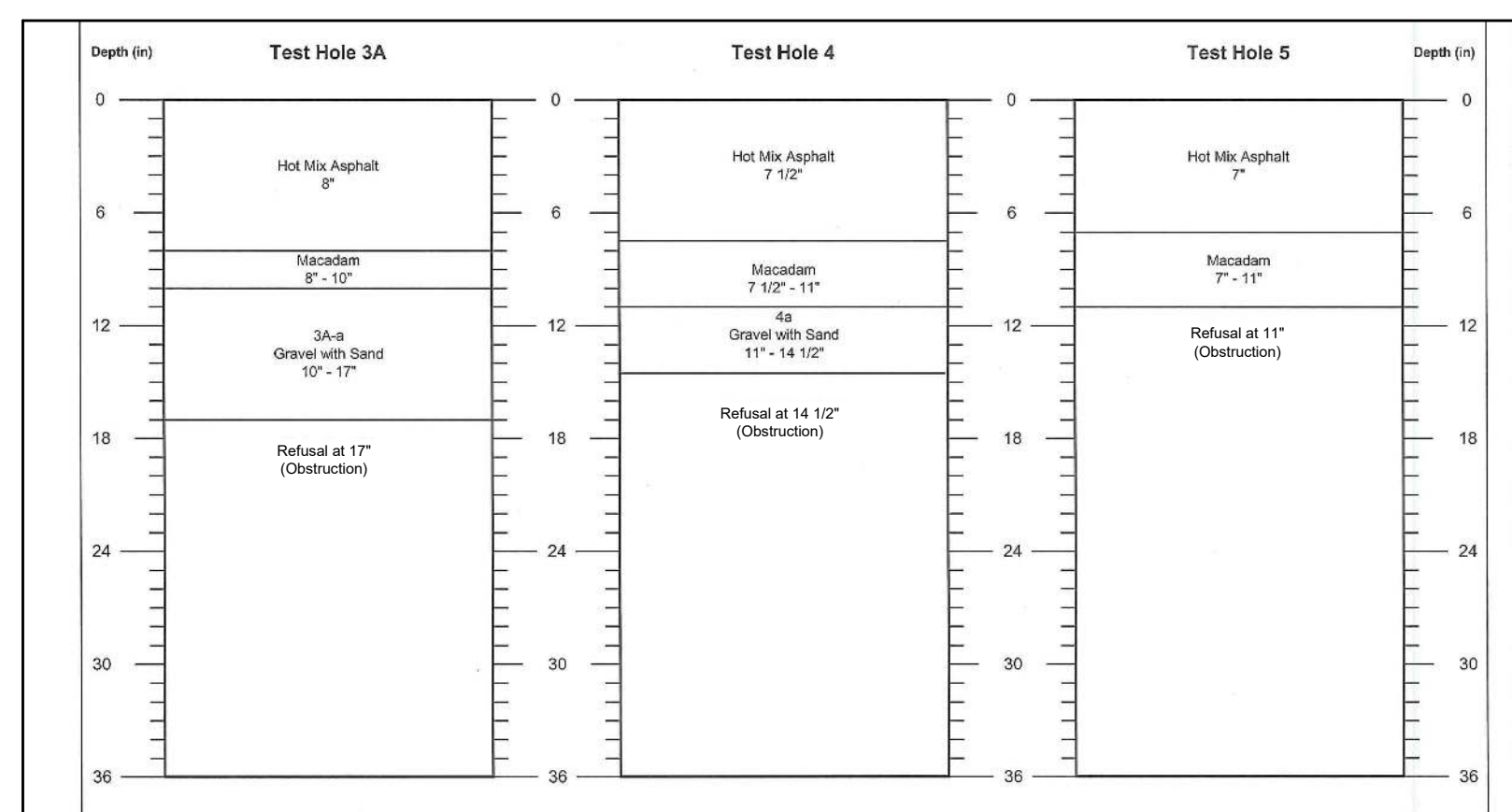
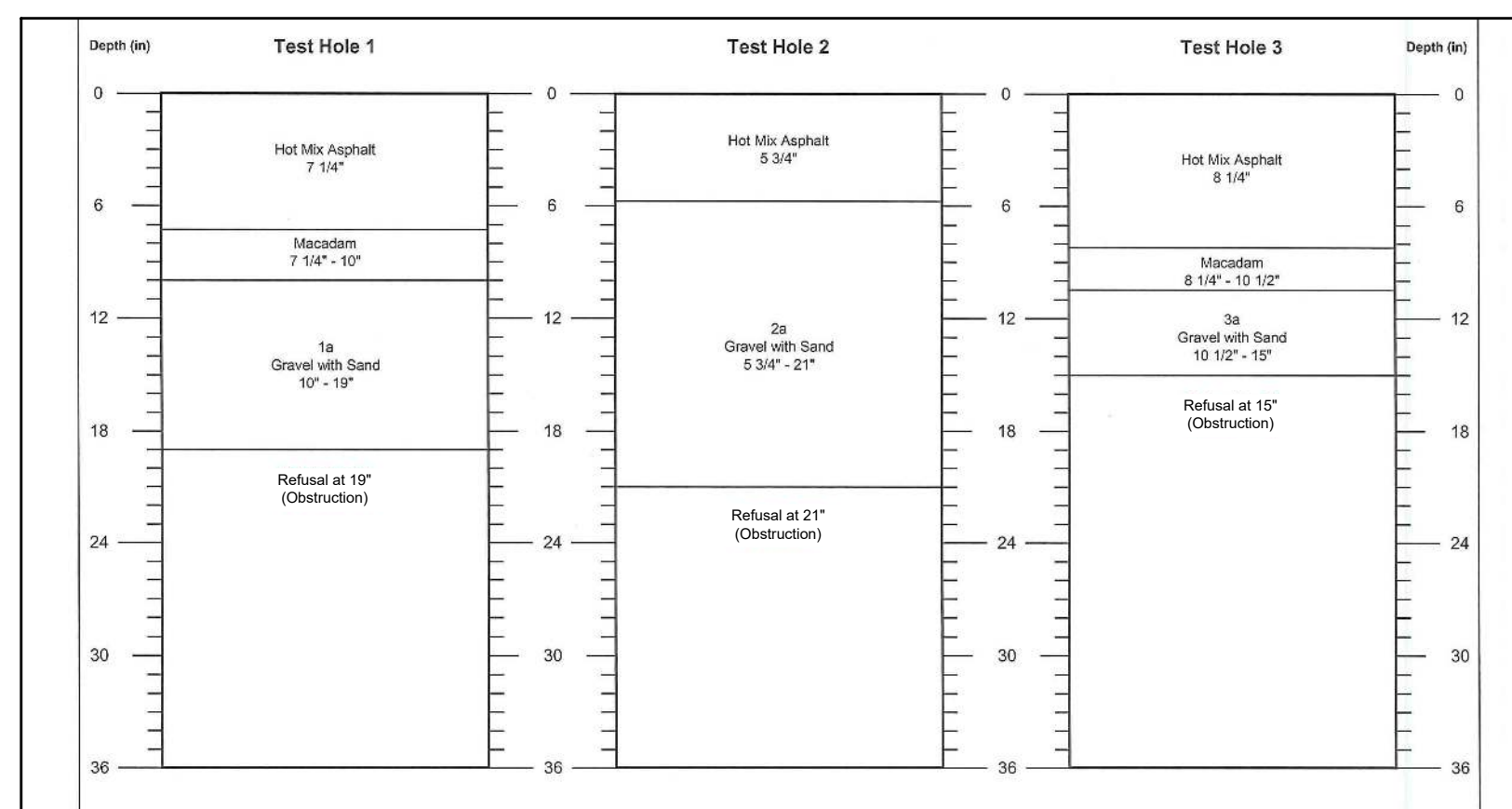
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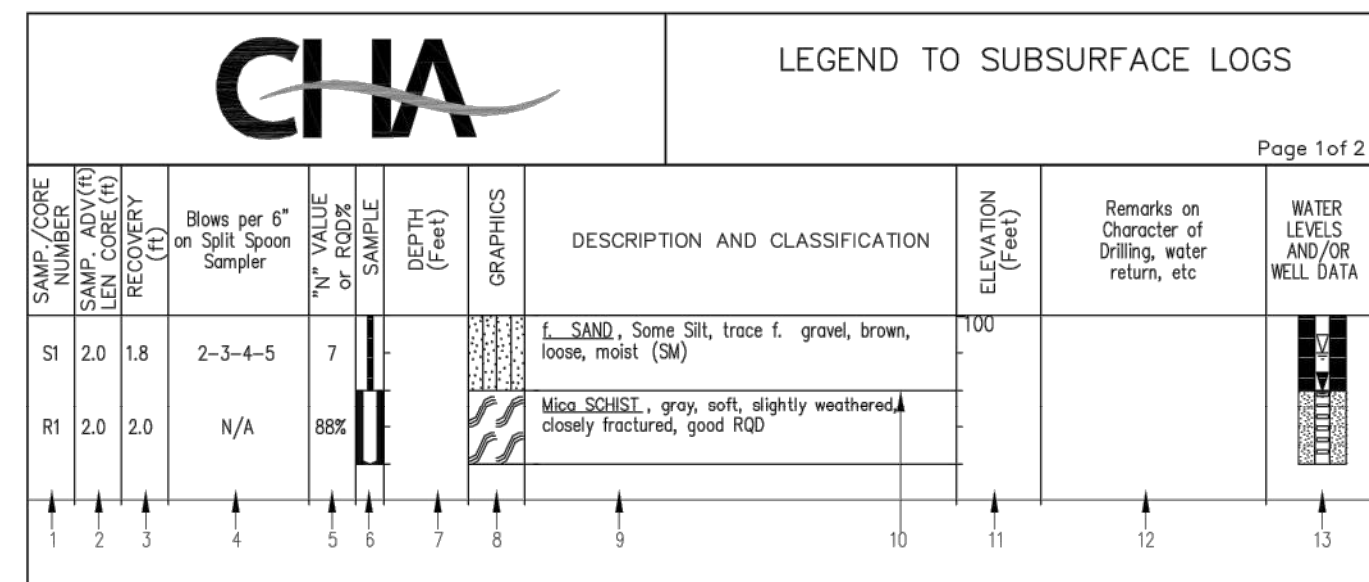
**KEY PLAN, GENERAL NOTES &
PAVEMENT CORE LOGS**



PAVEMENT CORE LOGS

PAVEMENT CORES CONDUCTED BY
ATC ASSOCIATES, INC
FEBRUARY 29, 2012





Subsurface Logs present material classifications, test data, and observations from subsurface investigations at the subject site as reported by the inspecting geologist or engineer. In some cases, the classifications may be made based on laboratory test data when available. It should be noted that the investigation procedures only provide a small portion of the subsurface materials at the site. Therefore, actual conditions between borings and sampled intervals may differ from those presented on the Subsurface Logs. The information presented on the logs provides a basis for an evaluation of the subsurface conditions and may indicate the need for additional exploration. Any evaluation of the conditions reported on the logs must be performed by Professional Engineers or Geologists.

- SAMP. CORE NUMBER** - Samples are numbered for identification on containers, laboratory reports or in text reports.
- SAMP. ADV./LEN. CORE** - Length of sampler advance or length of coring run measured in feet.
- RECOVERY** - Amount of sample actually recovered after withdrawing sampler or core barrel from bore hole measured in feet.
- SAMPLE BLOWS/AT** - Unless otherwise noted, blow counts represent values obtained by driving a 2.0" (O.D.), 1-3/8" (I.D.) split spoon sampler into the subsurface strata with a 140 pound weight falling 30" as per ASTM International (D1586). After an initial penetration of 6" to seat the sampler into undisturbed material, the sampler is then driven an additional 2 or 3 six inch increments. Refusal is defined as a resistance greater than 50 blows per 6" of penetration.
- "N" VALUE OF ROD** - "N" VALUE - The sum of the second and third sample blow increments is generally termed the Standard Penetration Test (SPT) "N" value. Refusal (R) is defined as a resistance greater than 50 blows for 6 inches of penetration. **CORE ROD** - Core Rock Quality Designation, RQD, is defined as the summed length of all pieces of core equal to or longer than 4 inches divided by the total length of the coring run. "Free" irregular breaks distinguished as being caused by drilling recovery operations are ignored and the pieces are counted as intact lengths. RQD values are used only for cores obtained with NX size core barrels.
- SAMPLE** - Graphical presentation of sample type and advance or core run length. See Table 1.
- DEPTH** - Depth as measured from the ground surface in feet.
- GRAPHICS** - Graphical presentation of subsurface materials. See Table 4. Dual soil classification and rock practices may vary and are not shown on Table 4.
- DESCRIPTION AND CLASSIFICATION** - SOIL - Recovered samples are visually classified in the field by the supervising geologist or engineer unless otherwise noted. Particle size and plasticity classification is based on field observations and using the Unified Soil Classification System (USCS). See Table 4. USCS symbols are presented in parentheses following the soil description. Where necessary, dual symbols may be used for combinations of soil types. Soil density or consistency description is based on the penetration resistance. See Table 3. Soil moisture description is based on the observed wetness of the soil recovered being dry, moist, wet, or saturated. Water introduced into the boring during drilling may affect the moisture content of the materials. Other geologic terms may also be used to further describe the subsurface materials. **ROCK** - Rock core descriptions are based on the inspector's observations and may be examined and described in greater detail by the project engineer or geologist. Terms used in the description of rock core are presented in Table 5.
- ELEVATION** - Elevation of strata changes in feet.
- REMARKS** - Miscellaneous observations.
- WATER LEVELS & WELL DATA** - Follow water level symbol, if present, represents level at which first saturated sample or water level was encountered. Solid water level symbol, if present, the most probable static water elevation at the time of drilling or as measured in an installed observation well at a later date. Subsurface water conditions are influenced by factors such as precipitation, atmospheric composition, and drilling/coring methods. Conditions at other times may differ from those described on the logs. For graphical presentation of observation/monitoring well construction, see Table 6. Elevations of changes in construction are noted at the bottom of each section.

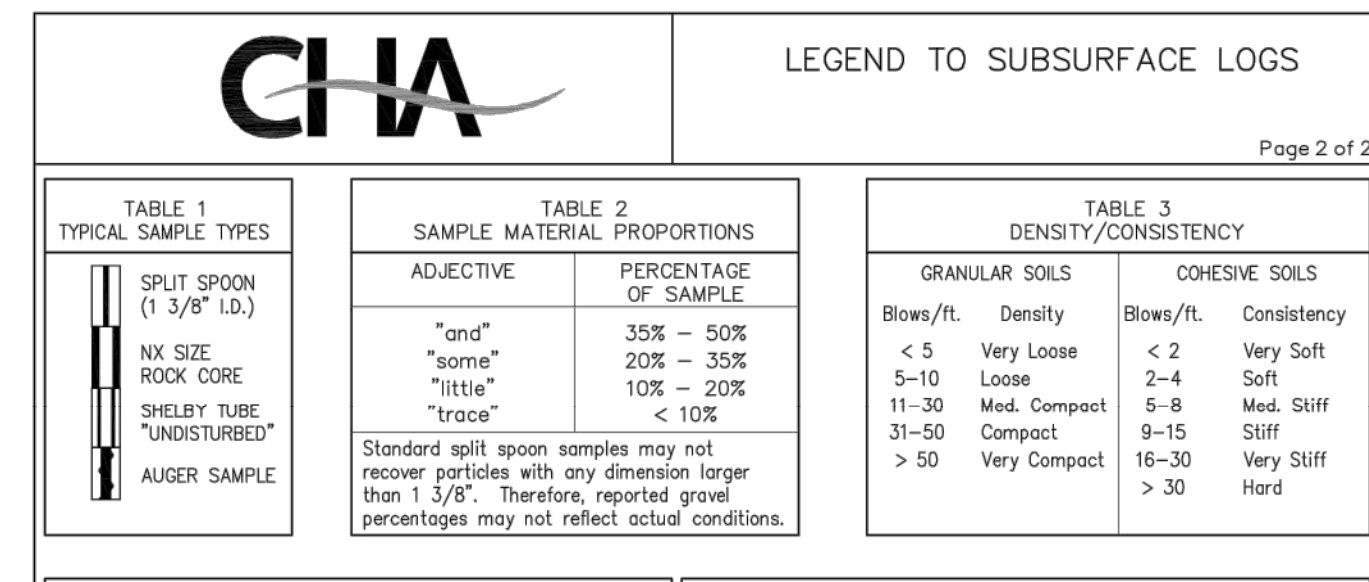


TABLE 1 TYPICAL SAMPLE TYPES

TABLE 2 SAMPLE MATERIAL PROPORTIONS

TABLE 3 DENSITY/CONSISTENCY

TABLE 4 COARSE GRAINED SOILS

TABLE 5 ROCK CLASSIFICATION TERMS

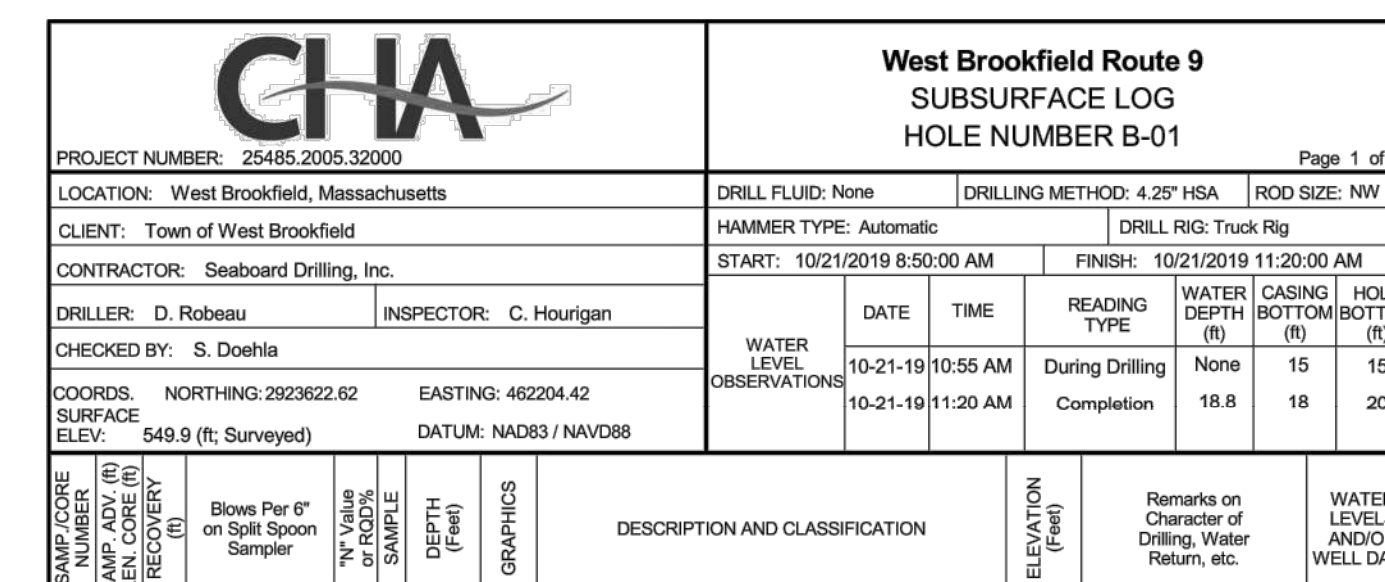
TABLE 6 WELL CONSTRUCTION

TABLE 7 WEATHERING

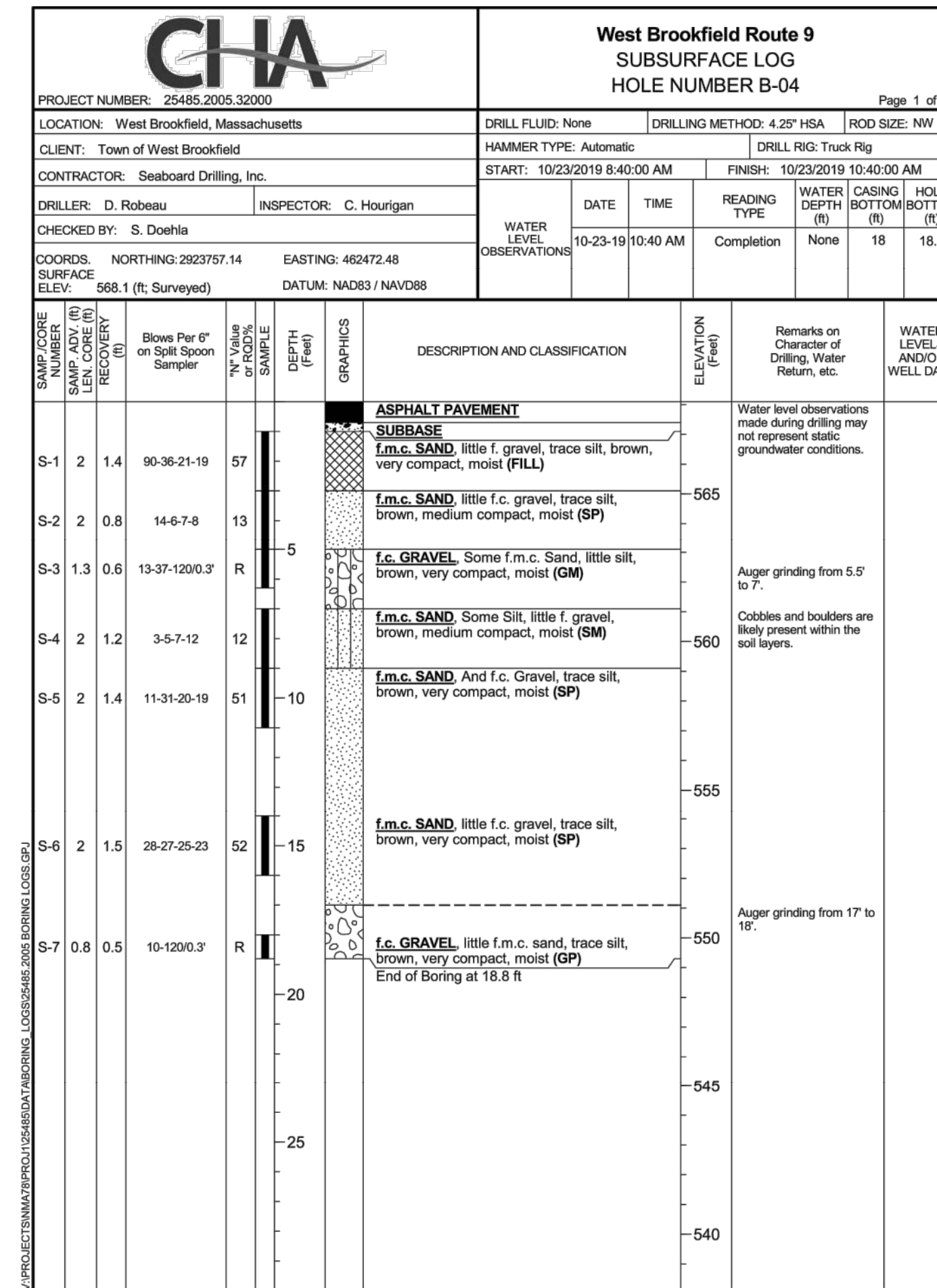
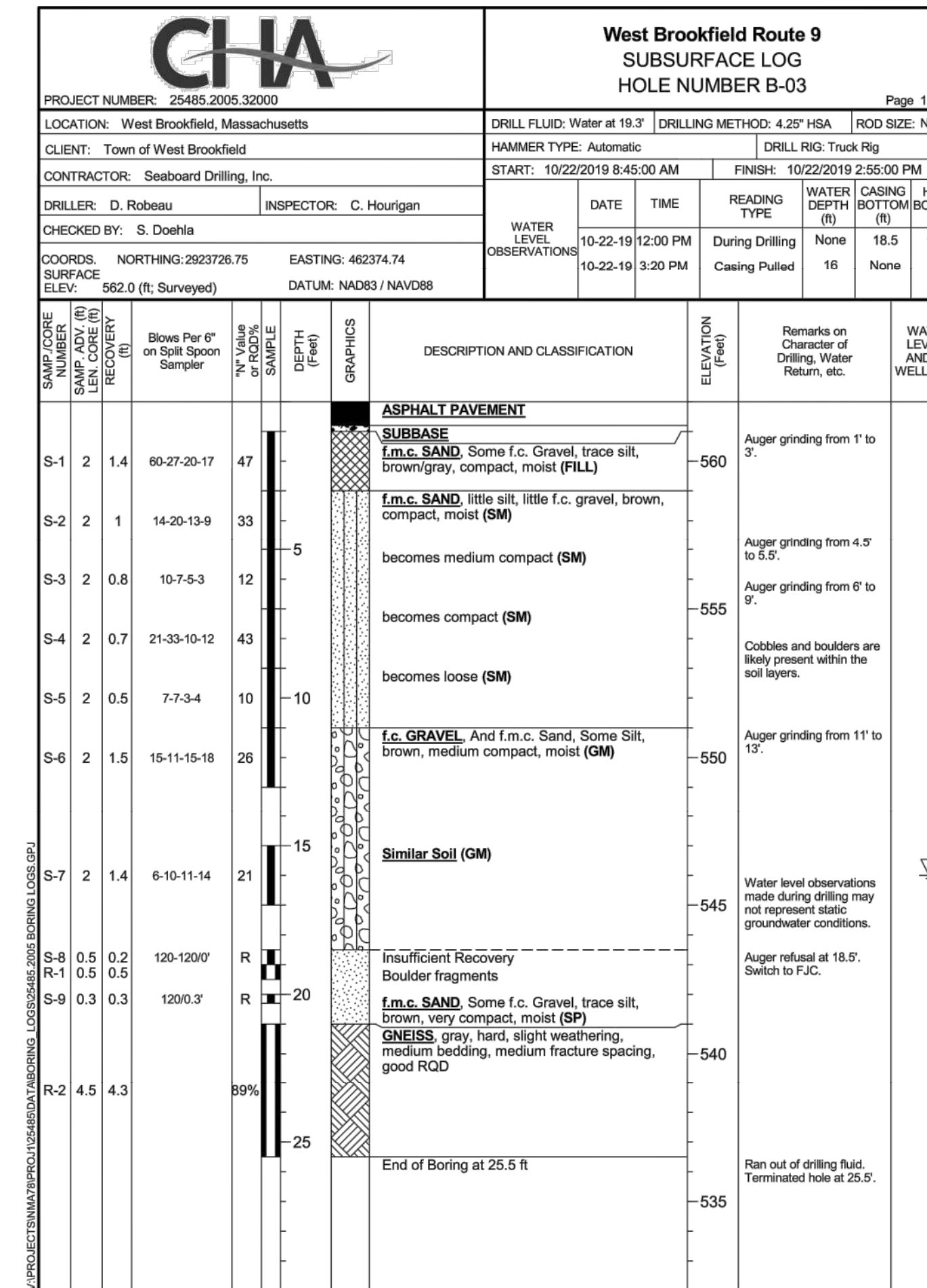
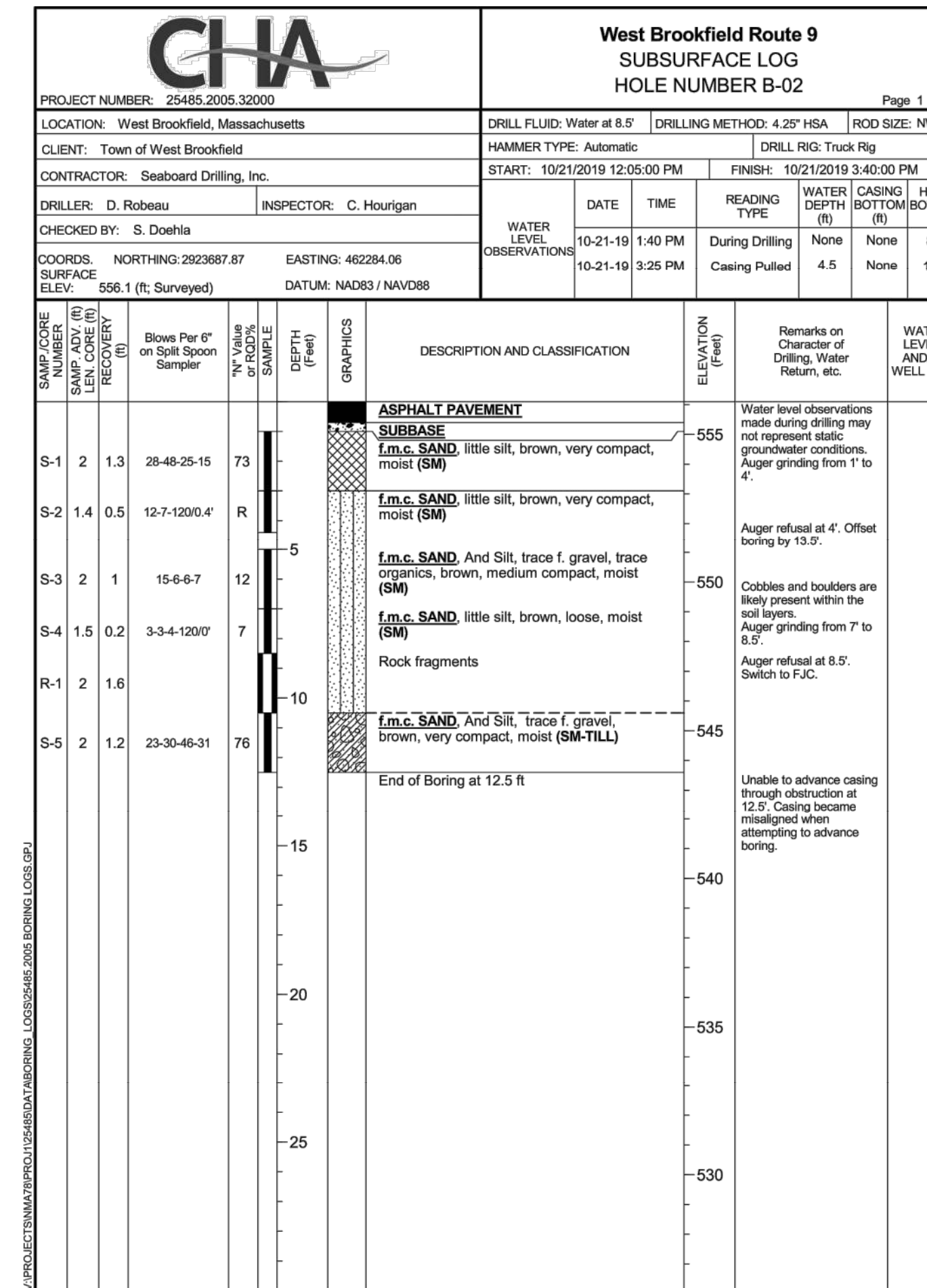
TABLE 8 BEDDING

TABLE 9 FRACTURE SPACING

TABLE 10 RQD



- BORING LOGS**
- LOCATION OF BORINGS SHOWN ON THE CONSTRUCTION PLANS 12-22 THUS:
 - 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.
 - 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.
 - REFER TO "LEGEND TO SUBSURFACE LOGS" FOR A DESCRIPTION OF SYMBOLS AND DATA SHOWN ON BORING LOGS.
 - BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
 - ALL BORINGS WERE MADE BETWEEN OCTOBER 21, 2019 AND NOVEMBER 26, 2019.
 - BORINGS WERE MADE BY:
SEABOARD DRILLING, LLC
154 HILDRETH STREET NORTH
BANGOR, ME 04401
 - THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.



SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-1	2	1.7	36-14-17-19	31								ASPHALT PAVEMENT	Water level observations made during drilling may not represent static groundwater conditions. Auger grinding from 1' to 4'.				
													SUBBASE				
S-2	2	1	12-10-14-13	24								f.m.c. SAND, little f. gravel, trace silt, brown, compact, moist (FILL)					
S-3	2	0.6	12-24-24-12	48								f.m.c. SAND, trace f. gravel, trace silt, trace organics, brown, medium compact, moist (SP)	Cobbles and boulders are likely present within the soil layers.				
S-4	2	1	6-5-14	14								f.m.c. SAND, trace f. gravel, trace silt, brown, medium compact, moist (SM)					
S-5	2	1.4	15-15-20-27	35								f.m.c. SAND, trace f. gravel, trace silt, brown, compact, moist (SM)					
S-6	2	0.9	16-23-29-37	52								f.m.c. SAND, little f. gravel, trace silt, brown, very compact, moist (SP)					
S-7	2	0	10-8-13	13								No Recovery					
S-8	2	1	18-16-30-24	46								f.m.c. SAND, trace f. gravel, trace silt, brown, compact, moist (SP)					
													End of Boring at 22 ft				

SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-1	2	1.4	15-28-20-17	48								ASPHALT PAVEMENT	Water level observations made during drilling may not represent static groundwater conditions. Auger grinding from 1' to 2'.				
													SUBBASE				
S-2	2	0.9	19-13-36-17	49								f.m.c. SAND, trace f. gravel, trace silt, brown, compact, moist (FILL)					
S-3	2	1	10-9-7	17								f.c. GRAVEL, And f.m.c. Sand, Some Silt, brown, medium compact, moist (SM-TILL)	Cobbles and boulders are likely present within the soil layers. Switch from HSA to FJC at 5'.				
S-4	2	0.3	15-11-8-8	19								Insufficient Recovery					
S-5	2	1	8-67-26-25	93								f.m.c. SAND, And f.c. Gravel, Some silt, brown, very compact, moist (SM-TILL)					
													End of Boring at 11 ft				
													Offset boring at 11' due to casing becoming misaligned and preserving drilling fluid. Offset boring encountered refusal at 3.5'.				

SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-1	2	1.4	15-13-9-8	22								ASPHALT PAVEMENT	Possible cobblestone roadway materials encountered from 1' to 2'.				
													SUBBASE				
S-2	2	0.8	7-5-4	10								f.m.c. SAND, little f. gravel, trace silt, brown, loose, moist (FILL)					
S-3	2	0.8	5-6-4-3	10								f.m.c. SAND, trace f. gravel, trace silt, trace organics, brown, loose, moist (FILL)					
S-4	2	0.8	3-5-107-6	R								f.m.c. SAND, little silt, brown, very compact, moist (SM-TILL)					
S-5	2	1.2	17-30-30-36	60								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)	Cobbles and boulders are likely present within the soil layers. Roller bit grinding from 17' to 18'.				
S-6	2	1	7-19-43-87	62								Similar Soil (SM-TILL)					
S-7	0.7	0.5	53-1200.2	R								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)	Roller bit grinding from 23' to 24'. Water level observations made during drilling may not represent static groundwater conditions.				

SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-8	0.9	0.5	56-1200.4	R								grades to little f.c. gravel (SM-TILL)	Roller bit grinding from 30' to 35'.				
S-9	0.3	0.3	1200.3	R								grades to no f.c. gravel (SM-TILL)	Roller bit refusal at 36.9'. Open hole bottom 10' of hole due to compaction of soil.				
													End of Boring at 36.5 ft				

SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-1	2	1.2	31-30-15-8	45								ASPHALT PAVEMENT	Water level observations made during drilling may not represent static groundwater conditions.				
													SUBBASE				
S-2	2	1.2	12-13-12-15	25								f.m.c. SAND, trace f. gravel, trace silt, brown, medium compact, moist (FILL)					
S-3	0.8	0.6	24-1200.3	R								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SP)	Cobbles and boulders are likely present within the soil layers. Auger grinding from 6' to 8'.				
S-4	2	1.4	19-16-16-19	32								f.m.c. SAND, trace f. gravel, trace silt, brown, compact, moist (SM)					
S-5	2	1.2	8-37-28-22	65								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)					
S-6	2	1.3	21-18-18-43	36								f.m.c. SAND, trace f. gravel, trace silt, brown, compact, moist (SP-TILL)					
													End of Boring at 20 ft				

SAMP. CORE NUMBER		SAMP. ADV. (ft)		SAMP. LEN. CORE (ft)		BLOWS PER 6" ON SPLIT SPOON SAMPLER		DEPTH (ft)		ELEVATION (ft)		DESCRIPTION AND CLASSIFICATION		REMARKS ON CHARACTER OF DRILLING, WATER RETURN, ETC.		WATER LEVELS AND/OR WELL DATA	
S-1	1.3	1	18-45-1200.3	R								ASPHALT PAVEMENT	Water level observations made during drilling may not represent static groundwater conditions. Possible cobblestone roadway materials encountered from 1' to 2'.				
													SUBBASE				
S-2	2	2	15-25-38-37	64								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)	Cobbles and boulders are likely present within the soil layers. Auger grinding from 3.5' to 4.5'.				
S-3	2	2	38-30-28-89	58								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)					
S-4	0.7	0.7	90-1200.2	R								f.m.c. SAND, trace f. gravel, trace silt, brown, very compact, moist (SM-TILL)	Auger grinding from 7.5' to 8'.				
S-5	0.6	0.4	87-1200.1	R								f.c. GRAVEL, trace f.m.c. Sand, trace silt, brown, very compact, moist (SP-TILL)	Auger refusal at 13.6'. Boring terminated.				

WEST BROOKFIELD WEST MAIN STREET (ROUTE 9)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	5	132
PROJECT FILE NO.		606517	

BORING NOTES
1. FOR BORING NOTES SEE SHEET 4.

WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	6	132
PROJECT FILE NO.		606517	

BORING LOGS - 3

BORING NOTES

1. FOR BORING NOTES SEE SHEET 4.

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-11		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: None		DRILLING METHOD: 4.25" HSA			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 10/28/2019 12:30:00 PM		FINISH: 10/28/2019 2:30:00 PM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923764.06		EASTING: 463360.25		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 600.0 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		10-28-19 2:05 PM		During Drilling			
		10-28-19 2:30 PM		Completion			
		None		None			
		10		10			
		13		13.9			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	0.9	45-19-19.21	ASPHALT PAVEMENT			
S-2	1.5	1.2	15-26-40-1200.1	SUBBASE f.m.c. SAND And f.c. Gravel, trace silt, gray, compact, moist (FILL)		Water level observations made during drilling may not represent static groundwater conditions.	
S-3	1.1	1.1	51-114-1200.1	f.m.c. SAND little silt, brown, very compact, moist (SM)	595		
S-4	1.4	1	21-42-1200.4	f.m.c. SAND Some f.c. gravel, little silt, brown, very compact, moist (SM-TILL)	590	Auger grinding from 7' to 8'.	
S-5	0.9	0.9	118-1200.4	f.m.c. SAND little silt, little f.c. gravel, brown, very compact, moist (SM-TILL)	585	Cobbles and boulders are likely present within the soil layers.	
				f.m.c. SAND Some f.c. Gravel, trace silt, brown, very compact, moist (SP-TILL)	580	Auger grinding from 11' to 13'.	
				End of Boring at 13.9 ft	575		

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-12		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: None		DRILLING METHOD: 4.25" HSA			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 10/23/2019 2:10:00 PM		FINISH: 10/23/2019 3:00:00 PM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923733.58		EASTING: 463356.31		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 602.5 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		10-23-19 3:10 PM		Completion			
		None		None			
		5		9.9			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1	52-16-21-23	ASPHALT PAVEMENT			
S-2	2	1	22-23-25-23	SUBBASE f.m.c. SAND Some f.c. Gravel, trace silt, brown, compact, moist (FILL)	600	Water level observations made during drilling may not represent static groundwater conditions.	
S-3	2	1.5	15-33-38-28	f.m.c. SAND Some Silt, Some f. Gravel, brown, compact, moist (SM-TILL)	595		
S-4	2	1.1	17-17-29-53	f.m.c. SAND Some f.c. Gravel, little silt, brown, very compact, moist (SM-TILL)	590	Cobbles and boulders are likely present within the soil layers.	
S-5	0.9	0.8	82-1200.4	grades to little f. gravel, becomes compact (SP-TILL)	585		
				becomes very compact (SP-TILL)	580		
				End of Boring at 9.9 ft	575		

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-13		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: None		DRILLING METHOD: 4.25" HSA			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 10/28/2019 2:50:00 PM		FINISH: 10/30/2019 9:30:00 AM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923747.88		EASTING: 463360.38		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 602.6 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		10-28-19 3:50 PM		During Drilling			
		10-30-19 8:15 AM		Start of Day			
		10-30-19 9:00 AM		Completion			
		None		None			
		5		4			
		9		9			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1.4	50-37-26-29	ASPHALT PAVEMENT			
S-2	2	2	22-22-17-16	SUBBASE f.m.c. SAND little silt, little f.c. gravel, brown, very compact, moist (FILL)	600	Water level observations made during drilling may not represent static groundwater conditions.	
S-3	2	1.5	12-15-36-55	f.m.c. SAND Some Silt, Some f.c. Gravel, brown, compact, moist (SM-TILL)	595		
S-4	0.9	0.7	56-1200.4	f.m.c. SAND Some f.c. Gravel, little silt, brown, very compact, moist (SM-TILL)	590	Auger grinding from 6' to 9'.	
S-5	2	1.5	47-17-14-17	f.m.c. SAND Some f.c. Gravel, little silt, brown, compact, moist (SM-TILL)	585	Cobbles and boulders are likely present within the soil layers.	
				End of Boring at 11 ft	580		

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-14		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: Water at 14.5'		DRILLING METHOD: 4" FJC			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 10/30/2019 9:50:00 AM		FINISH: 10/30/2019 2:30:00 PM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923718.16		EASTING: 463457.08		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 604.4 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		10-30-19 11:20 AM		During Drilling			
		10-30-19 2:30 PM		Completion			
		None		None			
		11.3		21.5			
		23.3		23.3			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1	9-19-19-22	ASPHALT PAVEMENT			
S-2	1.1	1	17-103-1200.1	SUBBASE f.m.c. SAND Some f.c. Gravel, little silt, brown, compact, moist (FILL)	600	Possible cobblestone roadway materials encountered from 1' to 2'.	
S-3	2	1.1	34-7-5-7	f.m.c. SAND And f.c. Gravel, trace silt, brown, very compact, moist (SP)	595		
S-4	2	1.2	8-7-12-13	f.c. GRAVEL Some Silt, Some f.m.c. Sand, brown, medium compact, moist (GM)	590		
S-5	2	1.2	12-12-32-56	f.m.c. SAND Some f.c. Gravel, little silt, brown, medium compact, moist (SM-TILL)	585		
S-6	1.8	1.8	28-23-80-1200.3	becomes compact (SM-TILL)	580	Water level observations made during drilling may not represent static groundwater conditions.	
R-1	2	0.7		rock fragments	575	Auger refusal at 14.5'. Switch to FJC.	
S-7	1.3	1.1	42-97-1200.3	f.m.c. SAND Some f.c. Gravel, little silt, brown, very compact, moist (SM-TILL)	570	Cobbles and boulders are likely present within the soil layers.	
S-8	1.7	1.1	42-97-1200.3	grades to no gravel (SM-TILL)	565	Rollerbit grinding from 21.5' to 22'.	
				End of Boring at 23.3 ft	560		

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-15		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: Water at 1'		DRILLING METHOD: 4" FJC			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 10/31/2019 8:30:00 AM		FINISH: 10/31/2019 1:20:00 PM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923600.40		EASTING: 463368.14		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 614.4 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		10-31-19 11:15 AM		During Drilling			
		10-31-19 1:20 PM		Completion			
		3.7		12			
		9.2		18			
		23.5		23.5			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	0.4	0.3	1200.4	ASPHALT PAVEMENT			
S-2	1.2	1.2	29-17-19-31	SUBBASE Insufficient Recovery	610		
S-3	2	1.1	14-34-47-55	f.m.c. SAND little silt, little f.c. gravel, brown, compact, moist (FILL)	605		
S-4	2	1.3	37-33-29-39	f.m.c. SAND And f.c. Gravel, little silt, brown, very compact, moist (SM-TILL)	600		
S-5	2	1.6	44-27-32-47	grades to Some f.c. Gravel (SM-TILL)	595		
S-6	2	1.2	28-44-32-65	f.m.c. SAND Some Silt, little f.c. gravel, brown, very compact, moist (SM-TILL)	590	Water level observations made during drilling may not represent static groundwater conditions. Rollerbit grinding from 11' to 12'.	
S-7	0.5	0.4	1200.5	Similar Soil (SM-TILL)	585	Cobbles and boulders are likely present within the soil layers.	
S-8	0.5	0.5	1200.5	grades to little f. gravel (SM-TILL)	580	Rollerbit grinding from 15' to 16'.	
S-9	0.5	0.5	1200.5	f.m.c. SAND Some silt, brown, very compact, moist (SM-TILL)	575	Rollerbit grinding from 19' to 20'.	
				End of Boring at 23.5 ft	570		

PROJECT NUMBER: 25485.2005.32000		West Brookfield Route 9 SUBSURFACE LOG HOLE NUMBER B-16		Page 1 of 1			
LOCATION: West Brookfield, Massachusetts		DRILL FLUID: Water at 6'		DRILLING METHOD: 4" FJC			
CLIENT: Town of West Brookfield		HAMMER TYPE: Automatic		DRILL RIG: Truck Rig			
CONTRACTOR: Seaboard Drilling, Inc.		START: 11/1/2019 10:40:00 AM		FINISH: 11/1/2019 1:20:00 PM			
DRILLER: D. Griffin		INSPECTOR: C. Hourigan		CHECKED BY: S. Doehla			
COORDS: NORTHING: 2923589.75		EASTING: 463368.56		DATUM: NAD83 / NAVD88			
SURFACE ELEV: 616.8 (ft. Surveyed)		WATER LEVEL OBSERVATIONS		DATE			
		TIME		READING TYPE			
		11-1-19 12:35 PM		During Drilling			
		11-1-19 1:20 PM		Completion			
		4.8		12			
		11.4		17			
		18.8		18.8			
SAMP. CORE NUMBER	RECOVERY (%)	Blows Per 6" on Split Spoon Sampler	DEPTH (Feet)	DESCRIPTION AND CLASSIFICATION	ELEVATION (Feet)	Remarks on Character of Drilling, Water Return, etc.	WATER LEVELS AND/OR WELL DATA
S-1	2	1.3	16-19-23-25	ASPHALT PAVEMENT			
S-2	2	1.4	44-48-30-33	SUBBASE COBBLES	615	Possible cobblestone roadway materials encountered from 1' to 2'.	
S-3	2	1.4	42-35-53-56	f.m.c. SAND Some f.c. Gravel, little silt, brown, compact, moist (FILL)	610		
S-4	2	1	43-30-22-21	f.m.c. SAND And f.c. Gravel, Some Silt, brown, very compact, moist (SM-TILL)	605		
S-5	2	1.2	16-24-40-50	grades to little f.c. gravel (SM-TILL)	600		
S-6	2	1.6	56-52-39-45	f.m.c. SAND Some Silt, Some f.c. Gravel, brown, very compact, moist (SM-TILL)	595	Water level observations made during drilling may not represent static groundwater conditions.	
S-7	2	1.6	56-52-39-45	Similar Soil (SM-TILL)	590	Rollerbit grinding from 15' to 16'.	
S-8	2	1.6	56-52-39-45	Similar Soil (SM-TILL)	585	Rollerbit grinding from 17' to 18'.	
				End of Boring at 20 ft	580		

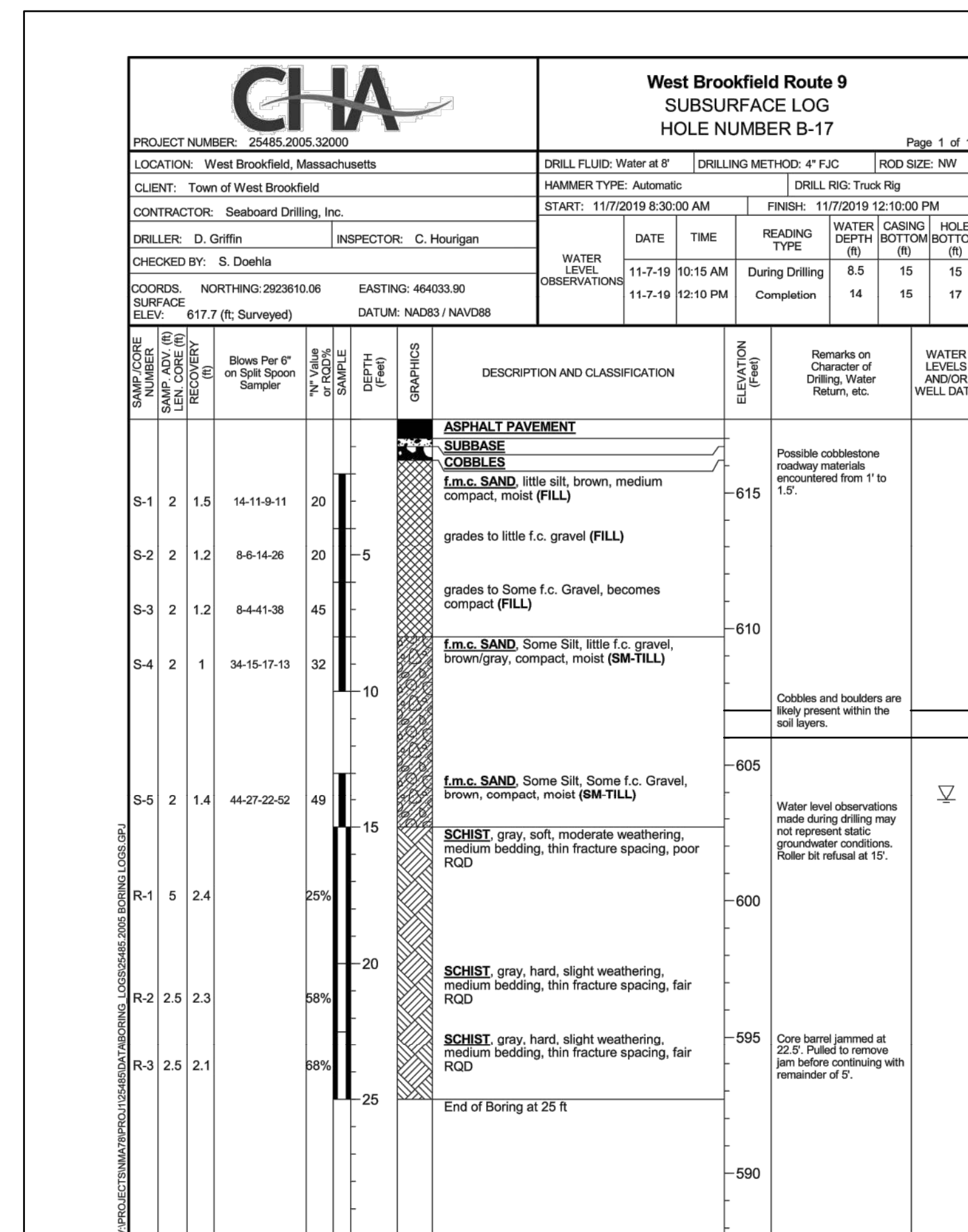
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	7	132
PROJECT FILE NO.		606517	

BORING LOGS - 4

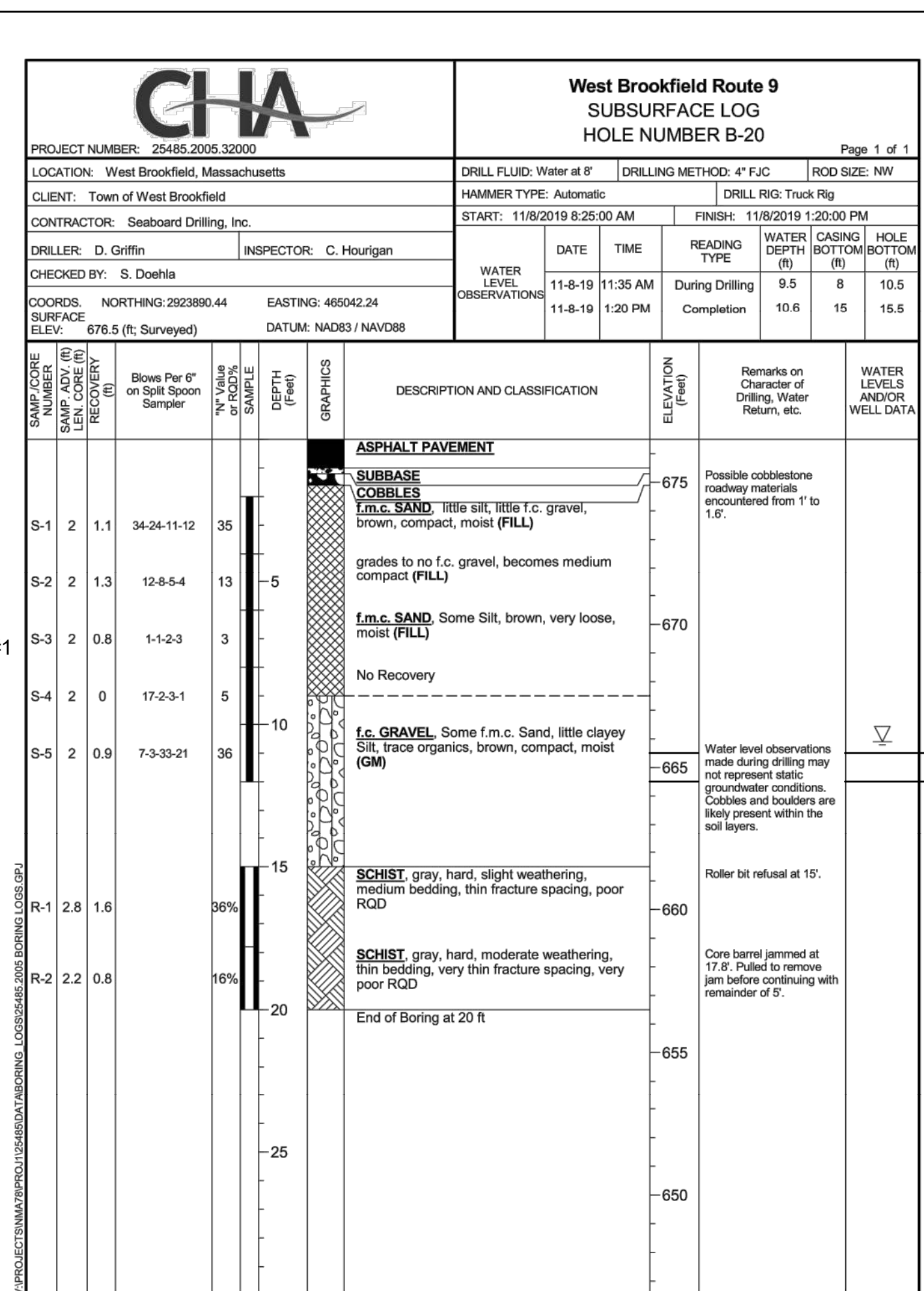
BORING NOTES

- FOR BORING NOTES SEE SHEET 4.
- THE BOTTOM OF WALL FOOTING ELEVATIONS ARE VARIOUS FOR THE RETAINING WALLS. THE BOTTOM OF WALL FOOTING ELEVATION SHOWN ON THE BORING LOGS IS THE BOTTOM OF WALL FOOTING ELEVATION NEAREST THAT PARTICULAR BORING HOLE.



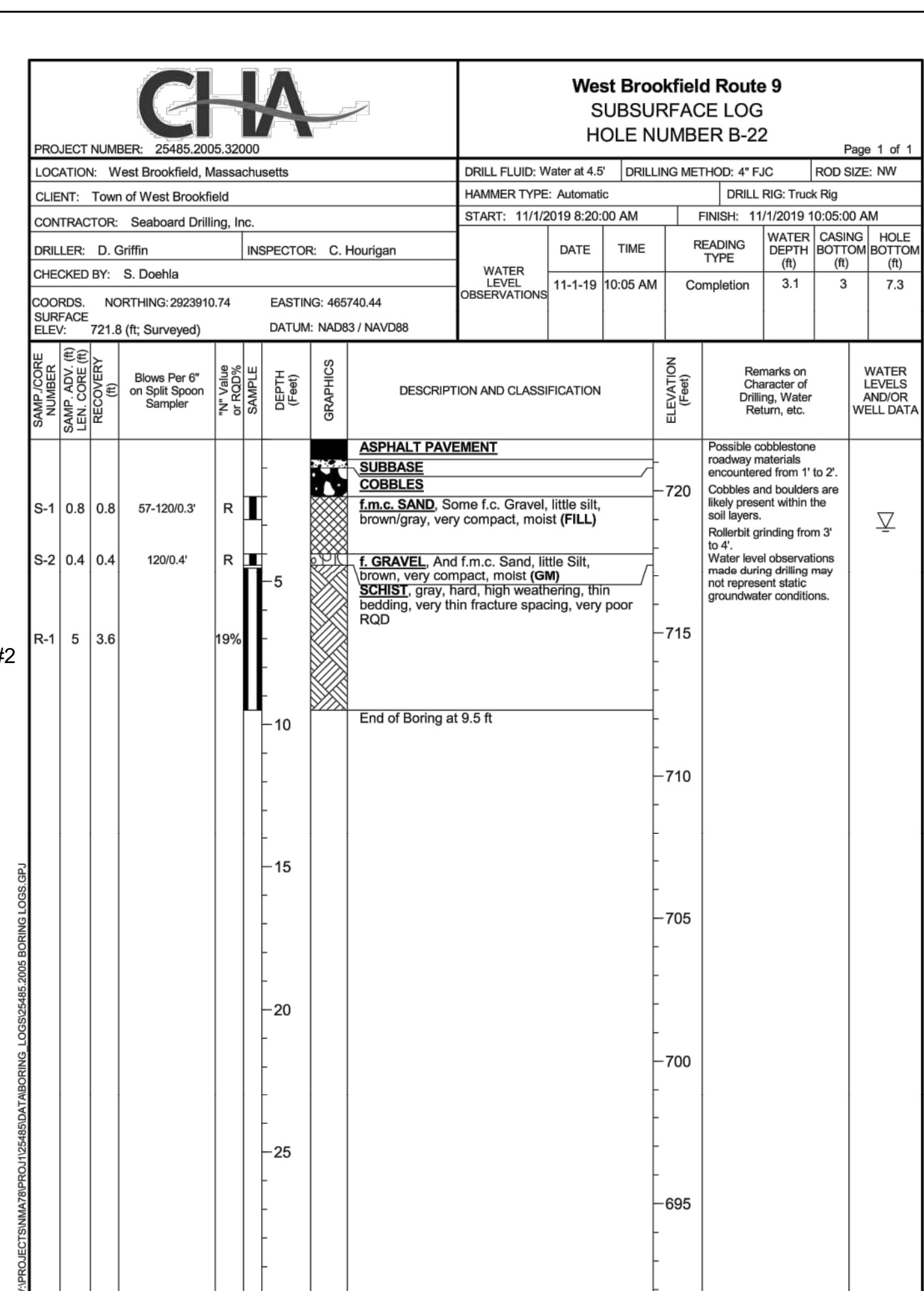
BOTTOM OF WALL #1 FOOTING ELEV= 607.00

BOTTOM OF GRAVEL BORROW FOR BRIDGE FOUND. ELEV= 606.00



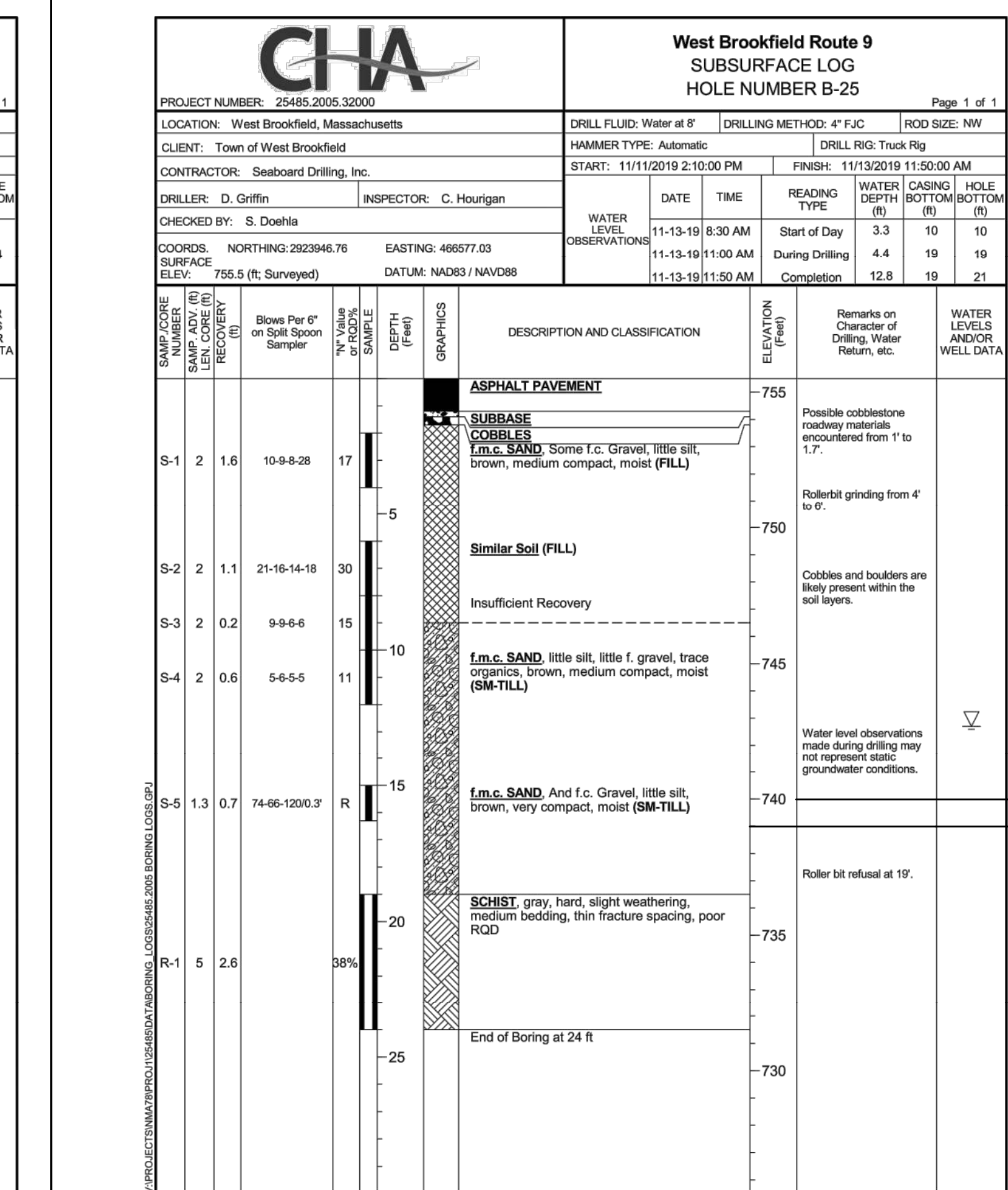
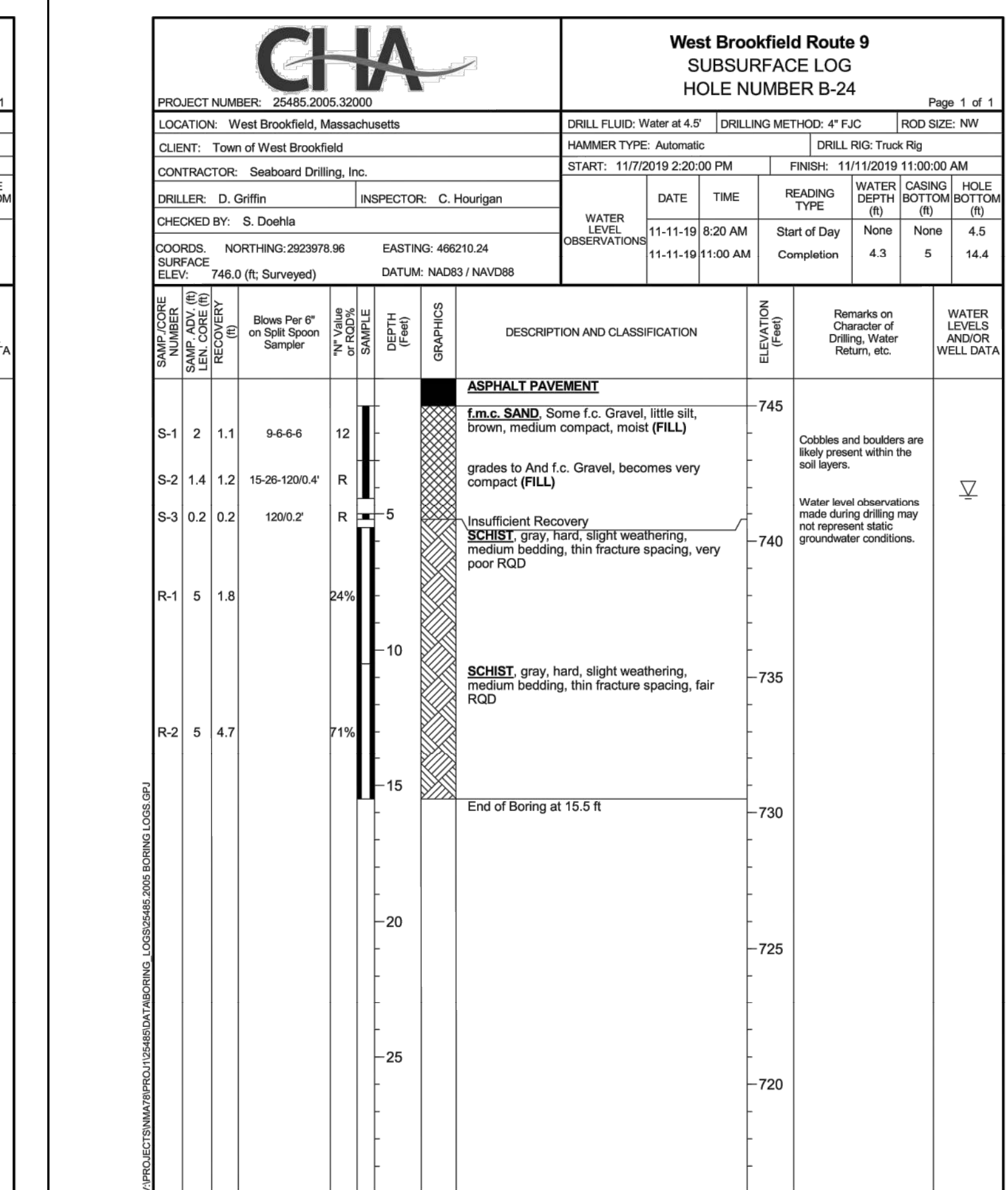
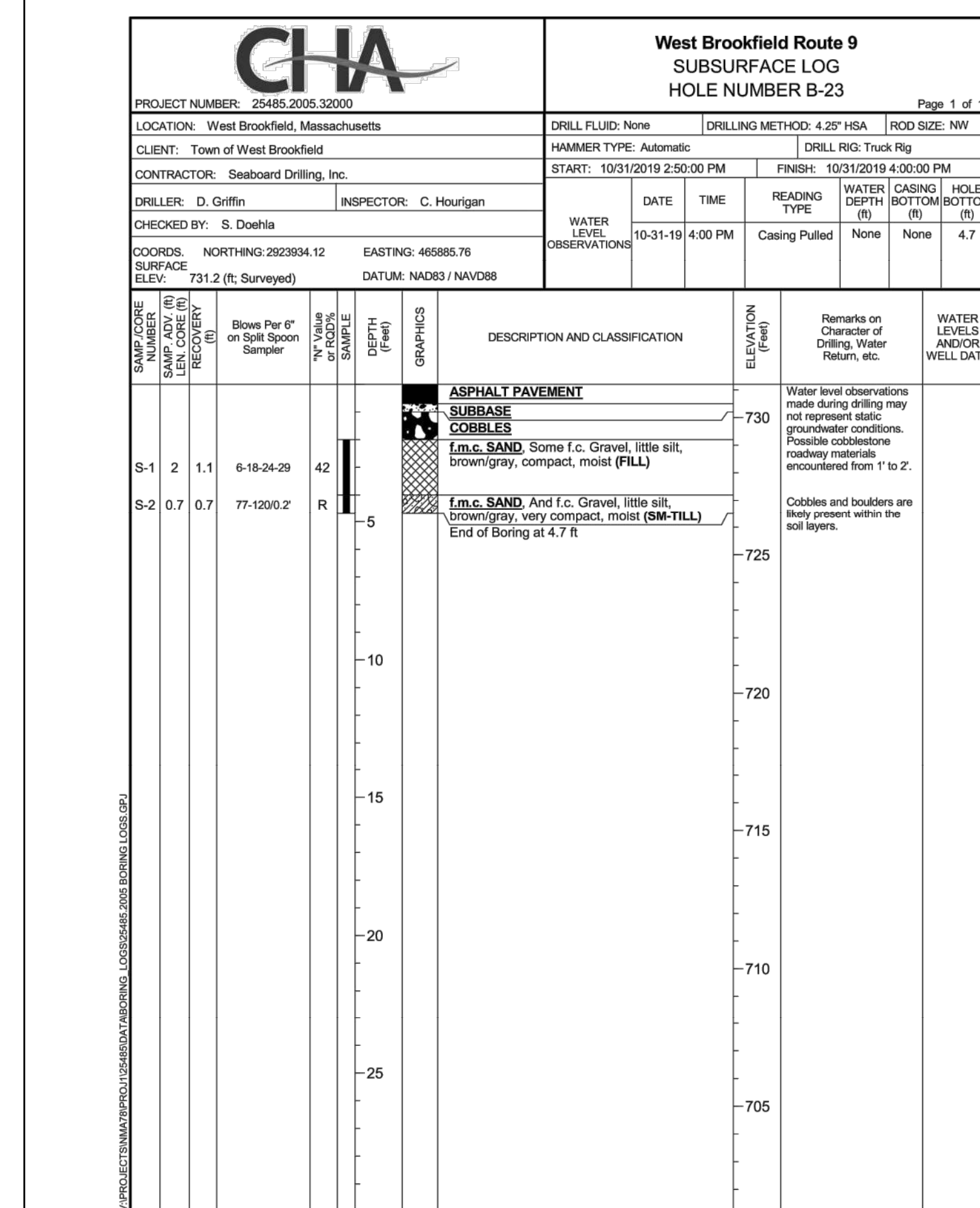
BOTTOM OF WALL #2 FOOTING ELEV= 665.50

BOTTOM OF GRAVEL BORROW FOR BRIDGE FOUND. ELEV= 664.50



BOTTOM OF WALL #3 FOOTING ELEV= 740.00

BOTTOM OF GRANULAR BORROW BELOW FOOTING ELEV= 739.00



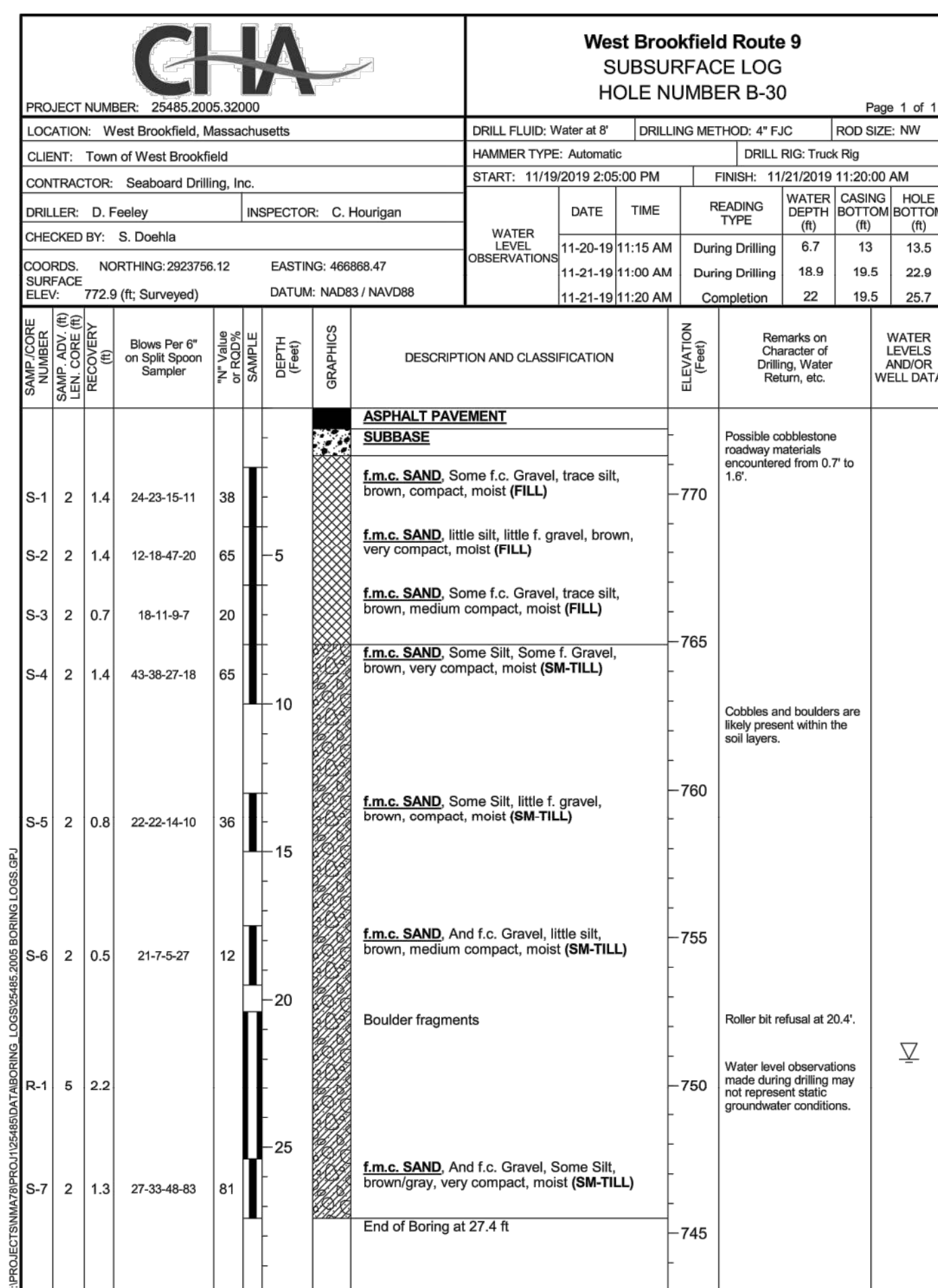
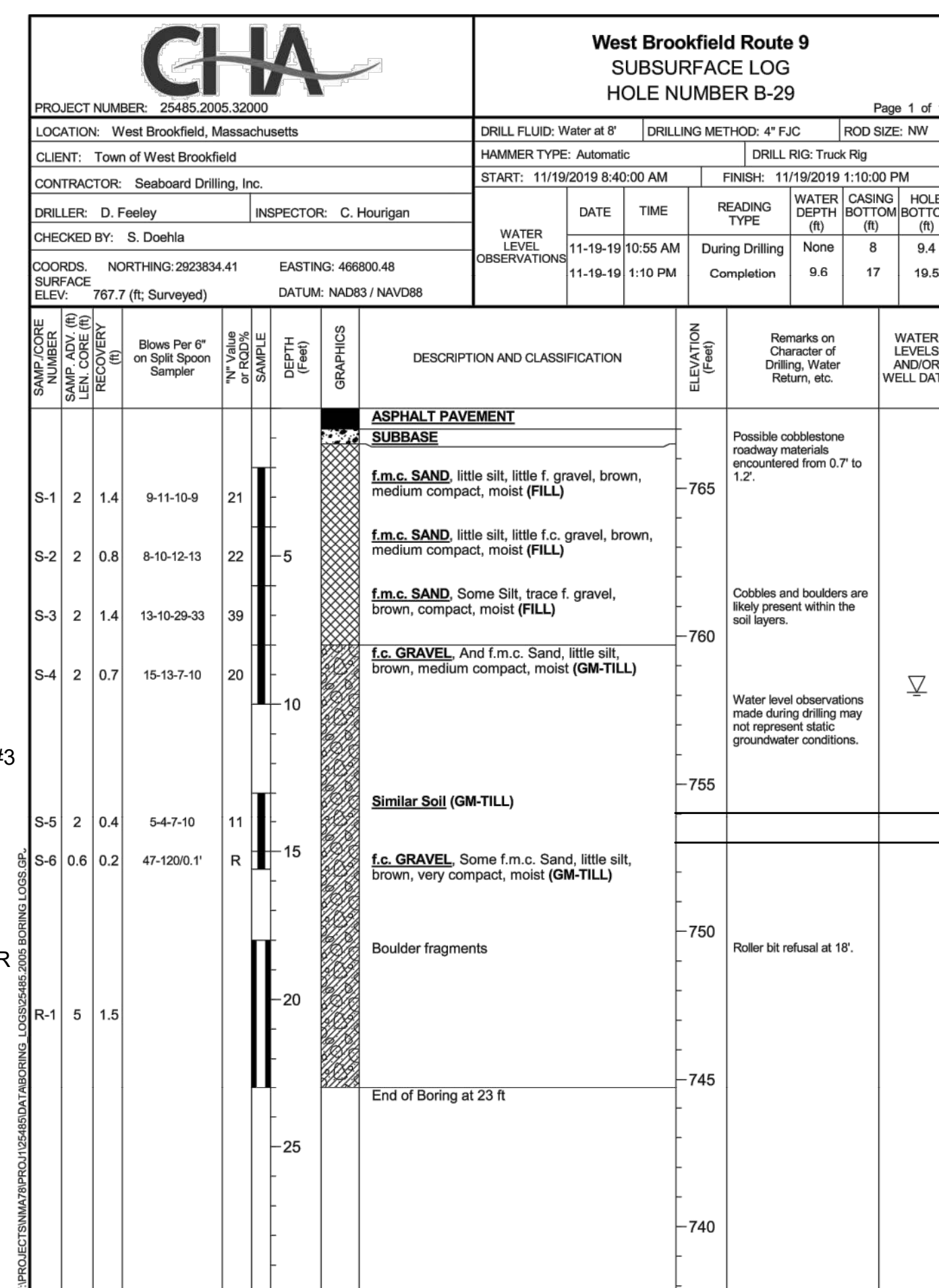
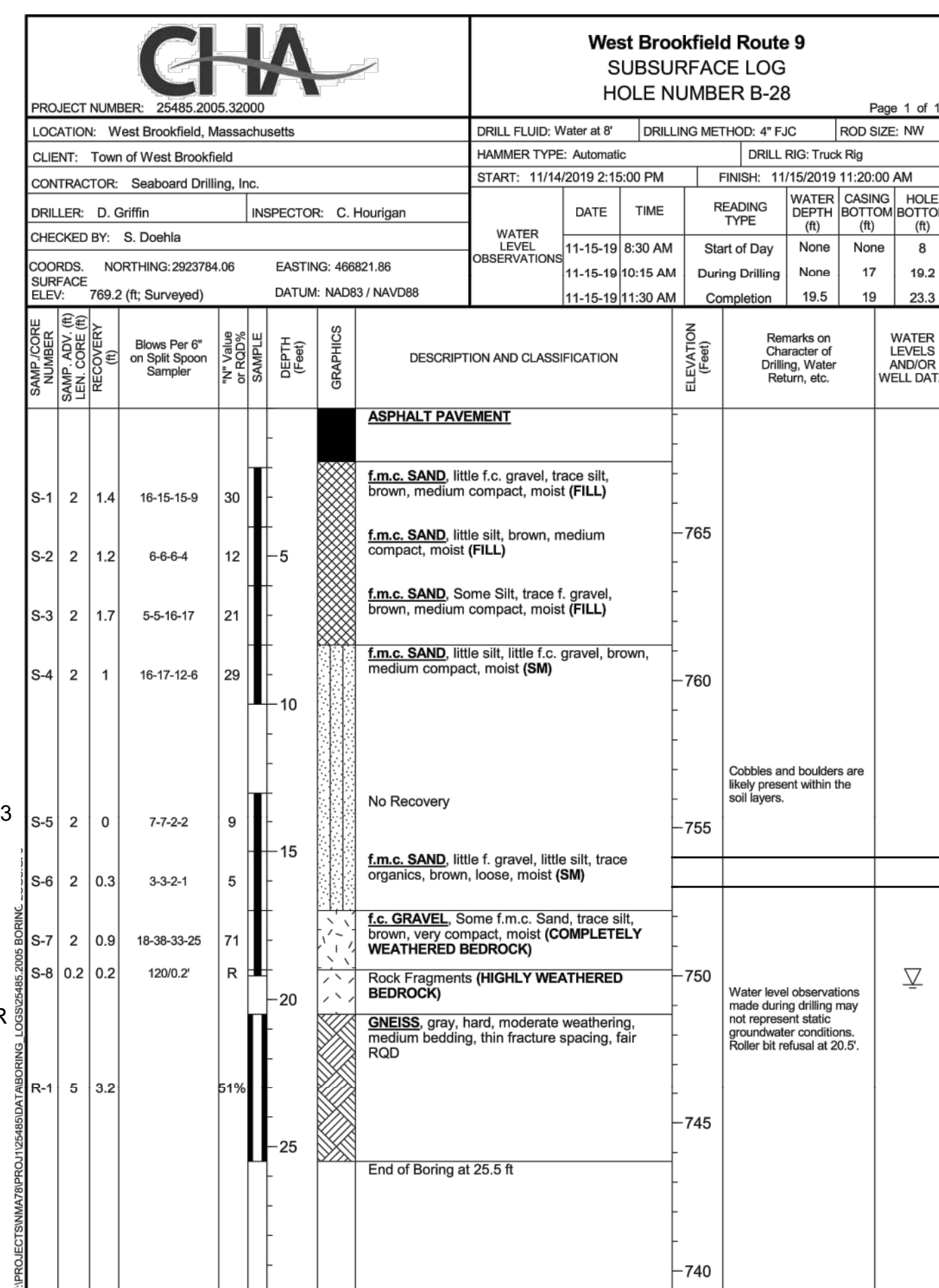
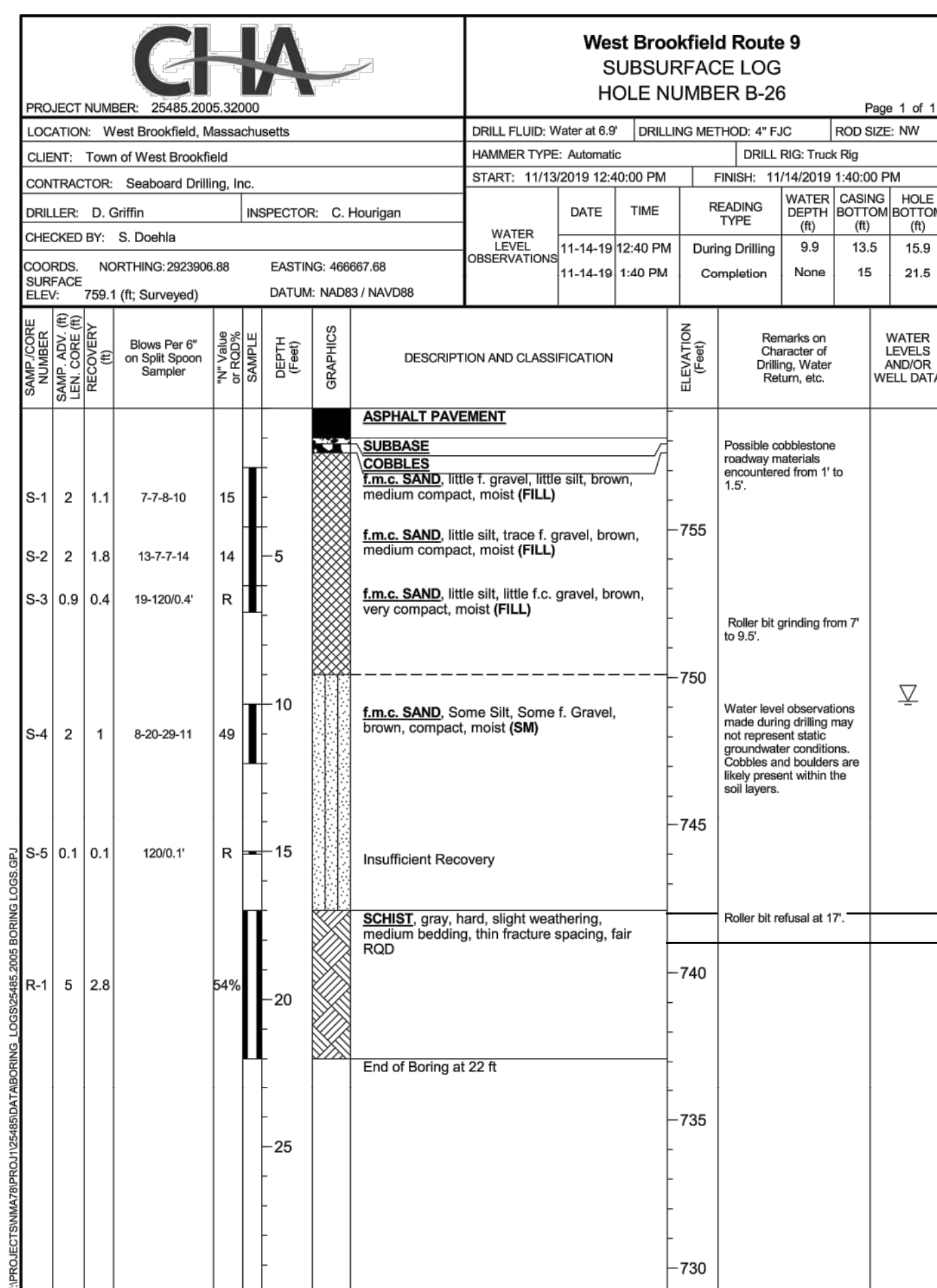
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	8	132
PROJECT FILE NO.		606517	

BORING LOGS - 5

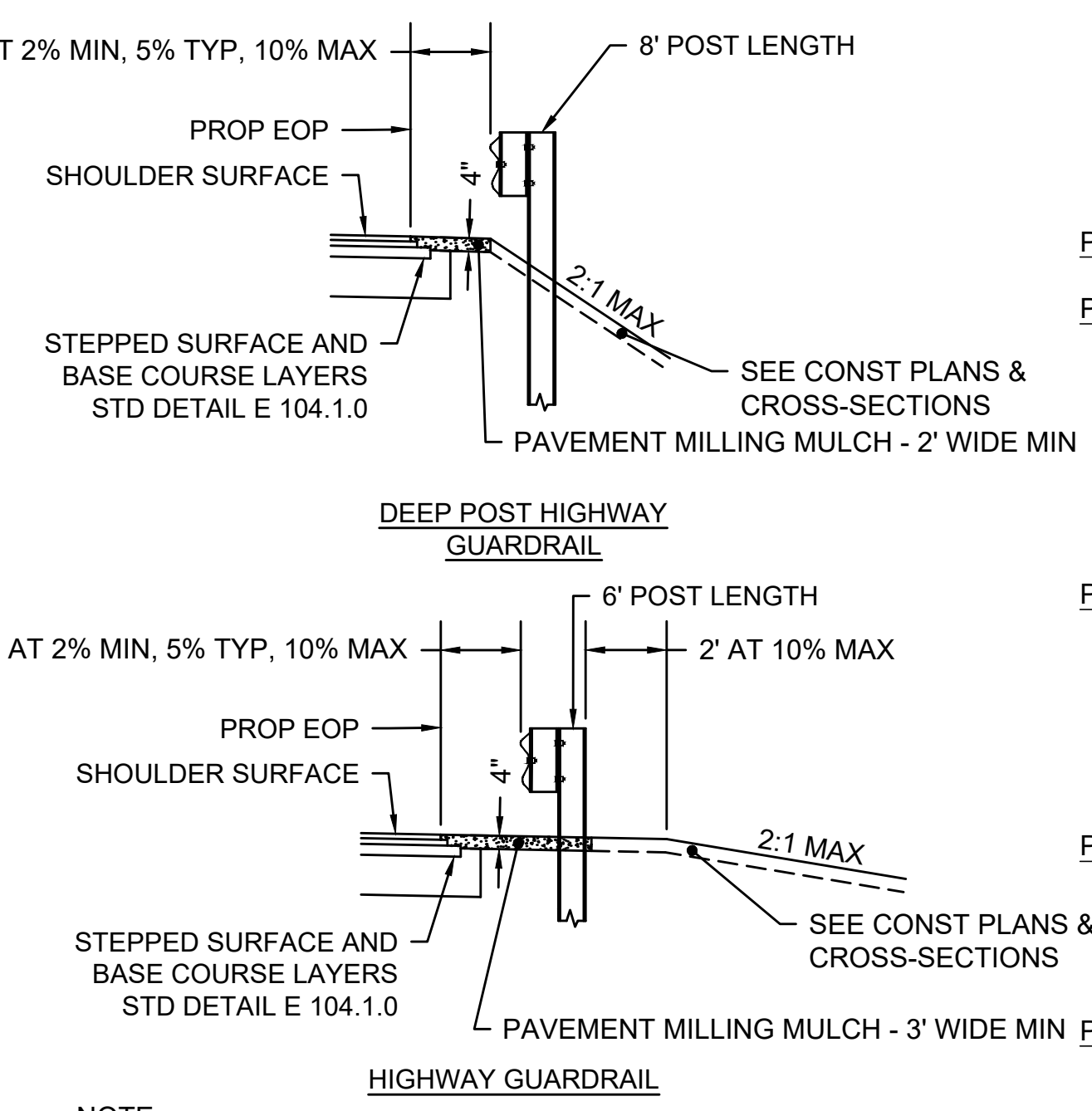
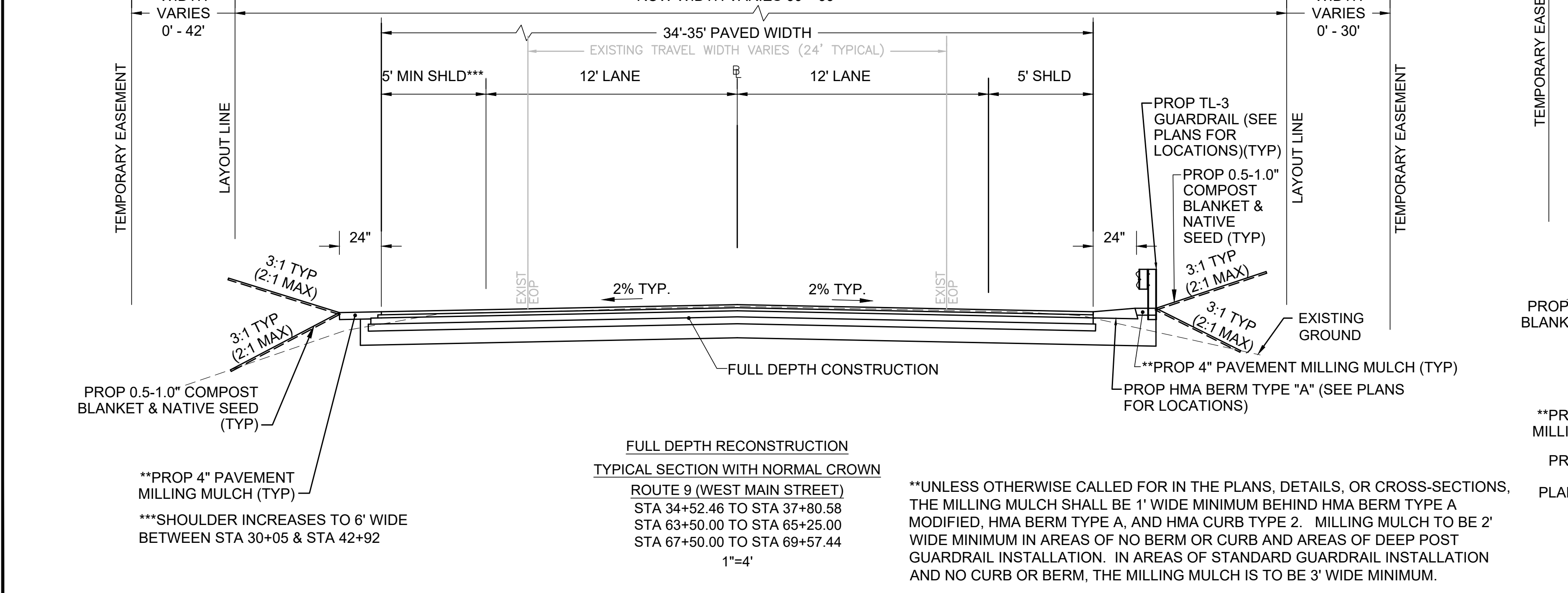
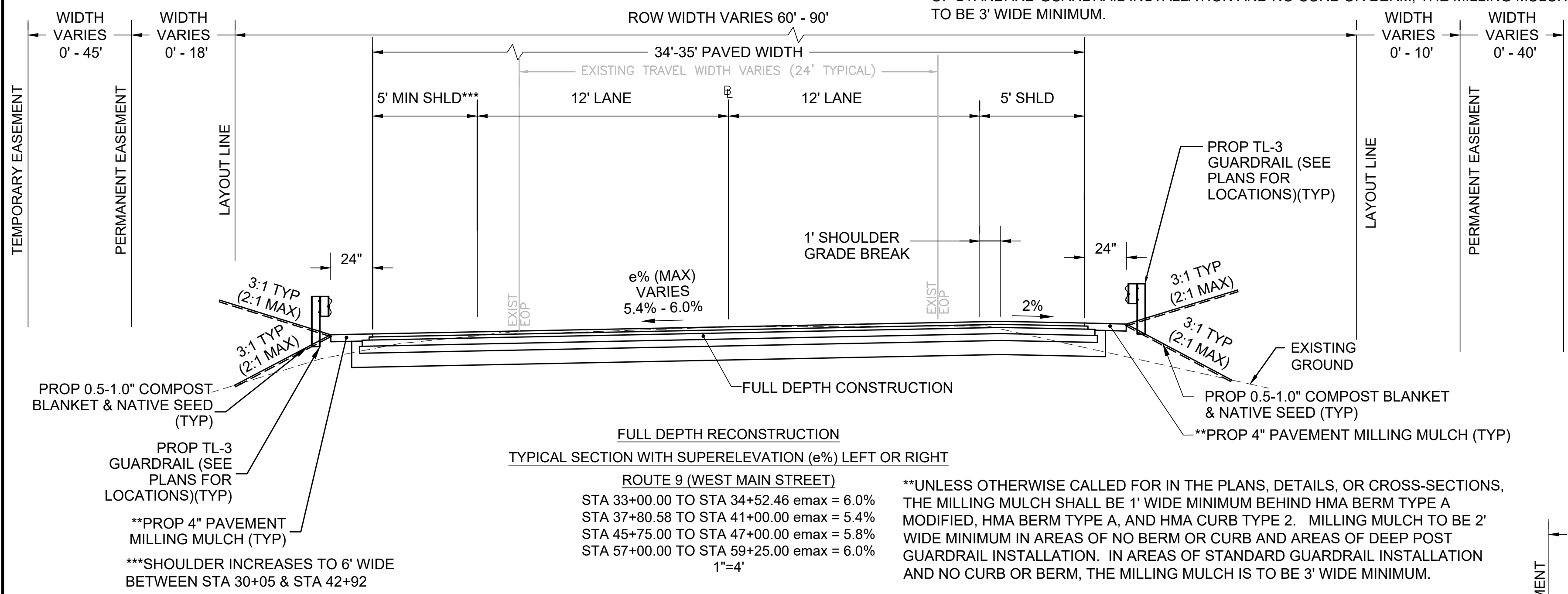
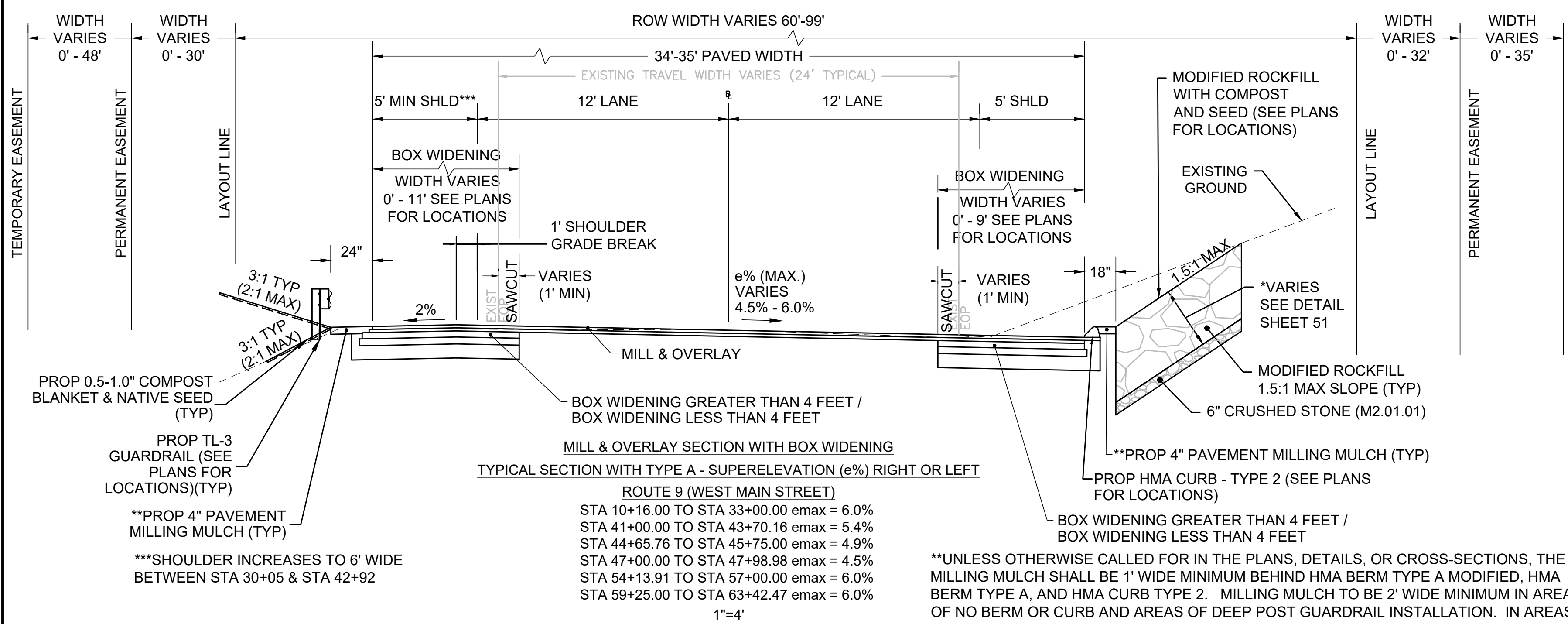
BORING NOTES

1. FOR BORING NOTES SEE SHEET 4.



WEST BROOKFIELD WEST MAIN STREET (ROUTE 9)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	9	132
PROJECT FILE NO.		606517	

TYPICAL SECTIONS - 1



PAVEMENT NOTES

PROPOSED FULL DEPTH CONSTRUCTION / BOX WIDENING GREATER THAN 4 FEET

1-1/2" SUPERPAVE SURFACE COURSE 9.5 POLYMER (SSC-9.5-P) OVER
 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE
 8" GRAVEL BORROW TYPE b SUB-BASE OVER
 EXISTING SUBGRADE FINE GRADED AND COMPACTED

PROPOSED MILL & OVERLAY

1-1/2" SUPERPAVE SURFACE COURSE 9.5 POLYMER (SSC-9.5-P) OVER
 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
 VARIABLE DEPTH PAVEMENT STANDARD MILLING AND
 SUPERPAVE LEVELING COURSE 12.5 (SLC-12.5) WHERE REQUIRED
 (SEE CONSTRUCTION DETAIL SHEET 51 AND CROSS-SECTIONS)

PROPOSED FULL DEPTH PERMANENT TRENCH PATCH

3" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
 3" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER
 12" GRAVEL BORROW TYPE b OVER COMPACTED TRENCH BACKFILL

PROPOSED TEMPORARY TRENCH PATCH

3" HOT MIX ASPHALT (ITEM #472.) OVER
 8" GRAVEL BORROW TYPE b OVER COMPACTED TRENCH BACKFILL

PROPOSED BOX WIDENING LESS THAN 4 FEET

1-1/2" SUPERPAVE SURFACE COURSE 9.5 POLYMER (SSC-9.5-P) OVER
 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
 6" CEMENT CONCRETE BASE COURSE OVER
 8" GRAVEL BORROW TYPE b OVER
 EXISTING SUBGRADE FINE GRADED AND COMPACTED

PROPOSED HOT MIX ASPHALT DRIVEWAYS

1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER
 2-1/2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
 8" GRAVEL BORROW TYPE b

PROPOSED GRAVEL TURNOUT

12" GRAVEL BORROW TYPE b OVER
 EXISTING SUBGRADE FINE GRADED AND COMPACTED

THE PROPOSED PAVEMENT LAYERS SHALL BE STAGGERED JOINTS TO RESIST CRACKING ALONG WIDENED SECTION AND IN THE WHEELPATH.

IN AREAS OF OVERLAY WHERE THE BOTTOM OF THE PROPOSED PAVEMENT IS AT THE SURFACE OF THE EXISTING PAVEMENT, THE EXISTING PAVEMENT SHALL BE MILLED TO A DEPTH AS DIRECTED BY THE ENGINEER TO REMOVE ANY SURFACE DEFORMATIONS PRIOR TO PAVING ON TOP OF THE EXISTING PAVEMENT.

NOTES:

FOR GUARDRAIL LOCATIONS SEE CONSTRUCTION PLANS

NOTES:

TACK COAT APPLICATION RATES FOR SPECIFIC SURFACE CONDITIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

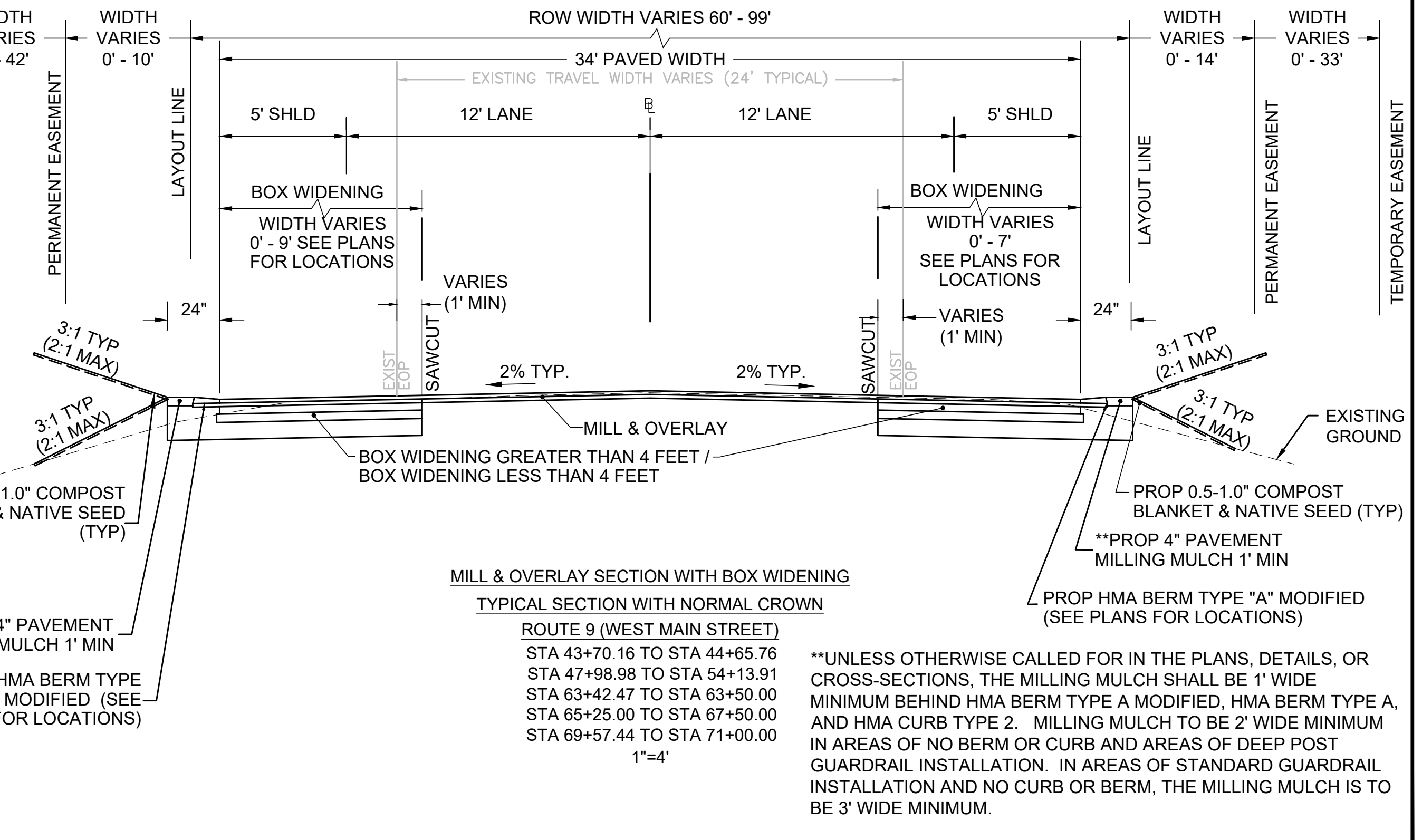
A. ON A NEW HMA SURFACE, NOT OPENED TO TRAFFIC, THE EMULSION APPLICATION RATE SHALL EQUAL 0.06 TO 0.08 GALLONS PER SQUARE YARD

B. ON AN EXISTING TIGHT SMOOTH PAVEMENT THE EMULSION APPLICATION RATE SHALL EQUAL 0.06 TO 0.08 GALLONS PER SQUARE YARD

C. ON A MILLED SURFACE THE EMULSION APPLICATION RATE SHALL EQUAL 0.07 TO 0.09 GALLONS PER SQUARE YARD

D. ON CEMENT CONCRETE BASE COURSE THE EMULSION APPLICATION RATE SHALL BE EQUAL TO SPRAY APPLICATION FOR ADJACENT SURFACE

E. ON NEW HMA PATCHES THE EMULSION APPLICATION RATE SHALL EQUAL 0.06 TO 0.09 GALLONS PER SQUARE YARD

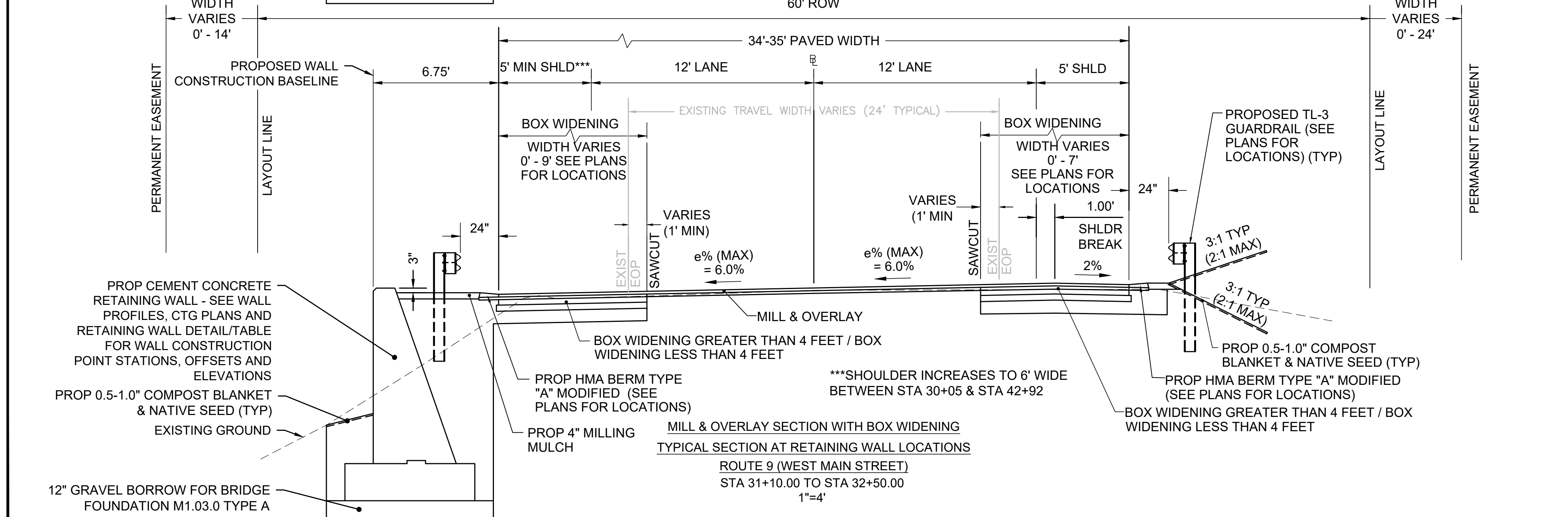
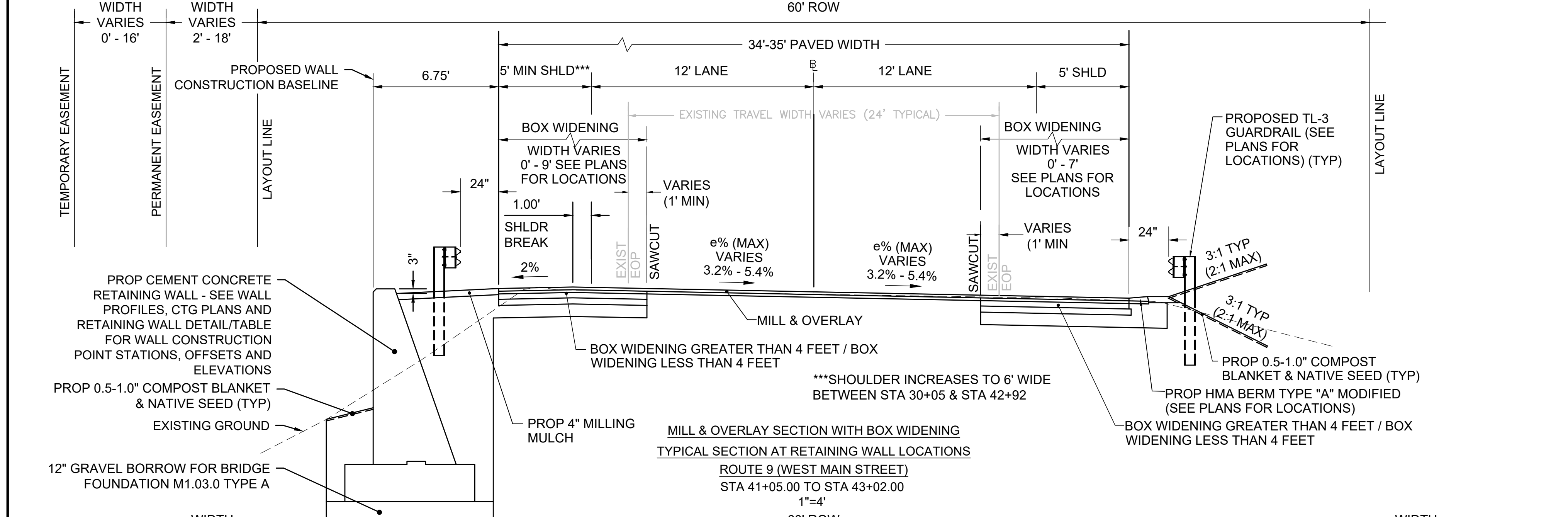
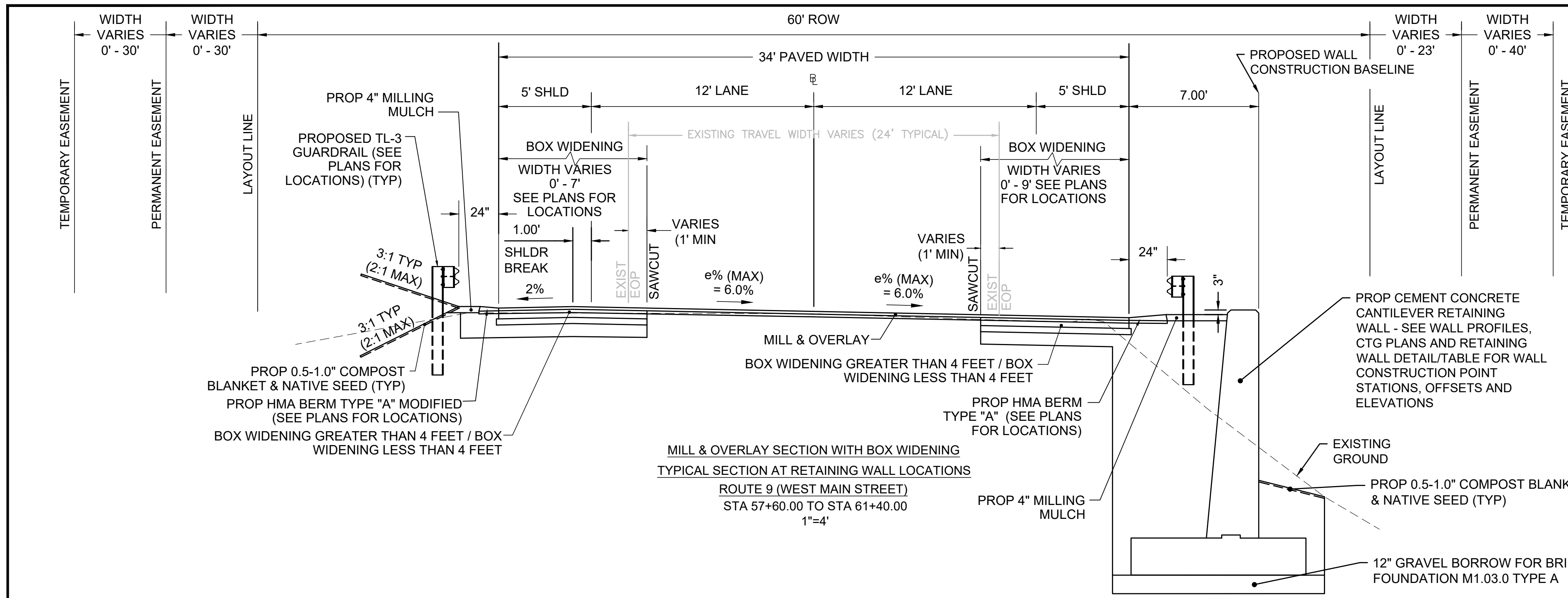
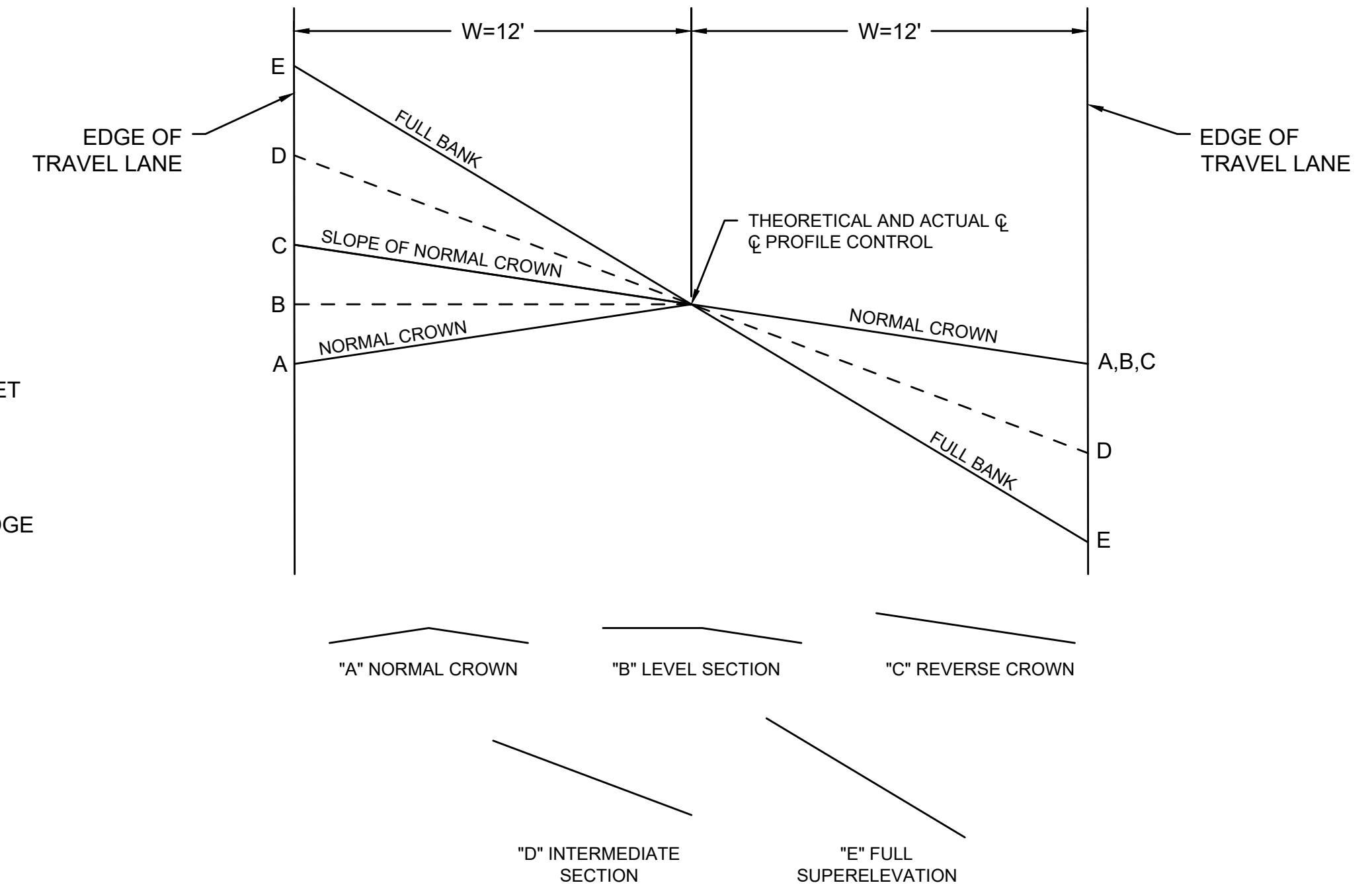


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	10	132
PROJECT FILE NO. 606517			

TYPICAL SECTIONS - 2

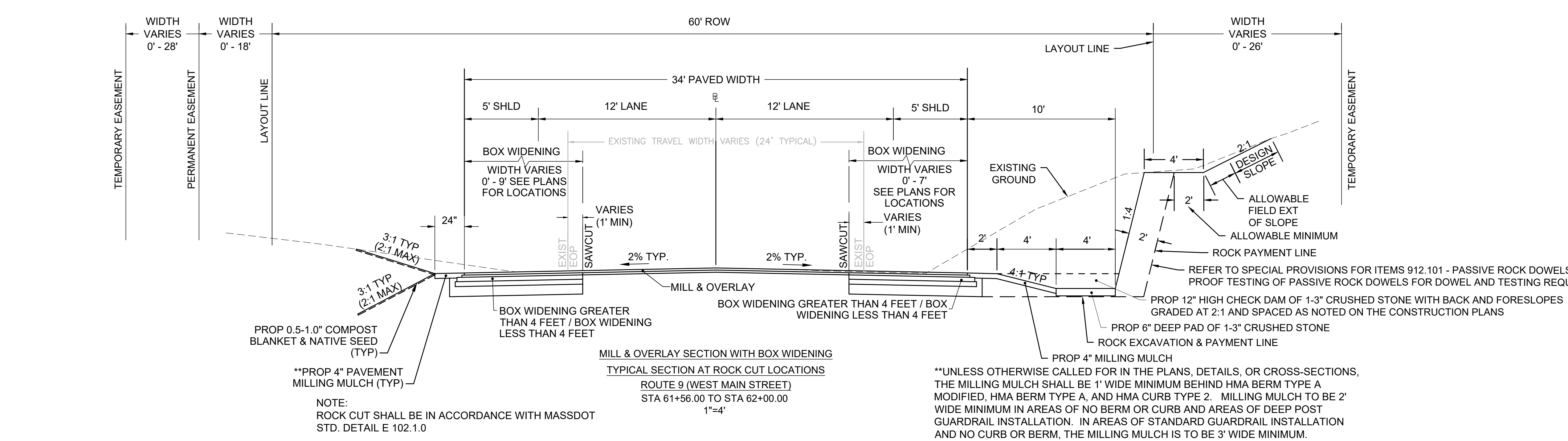
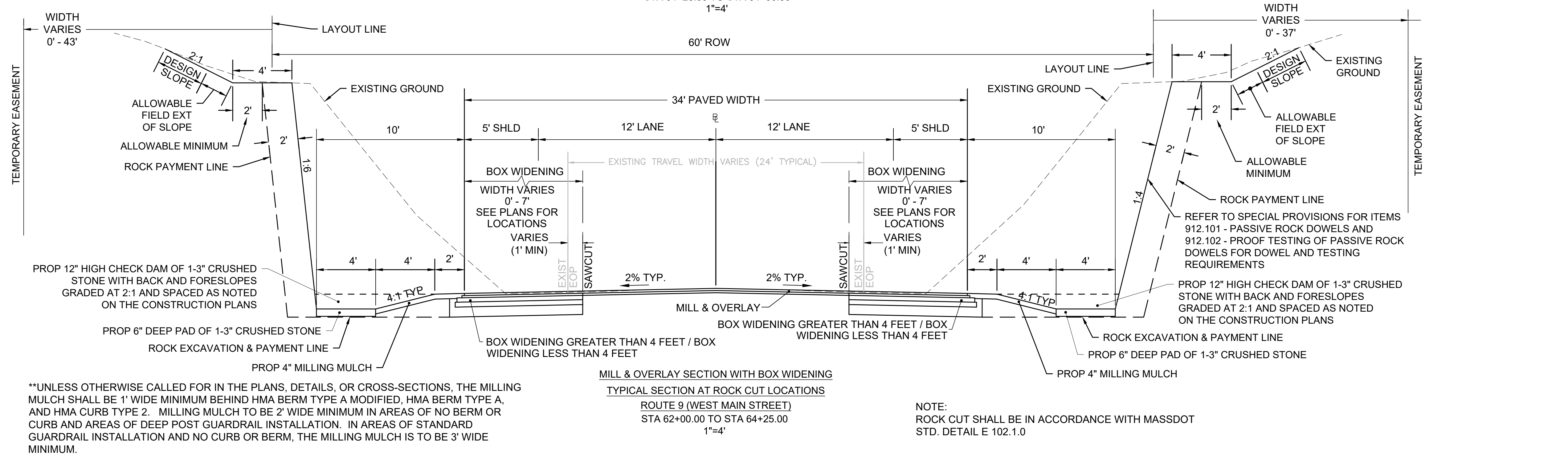
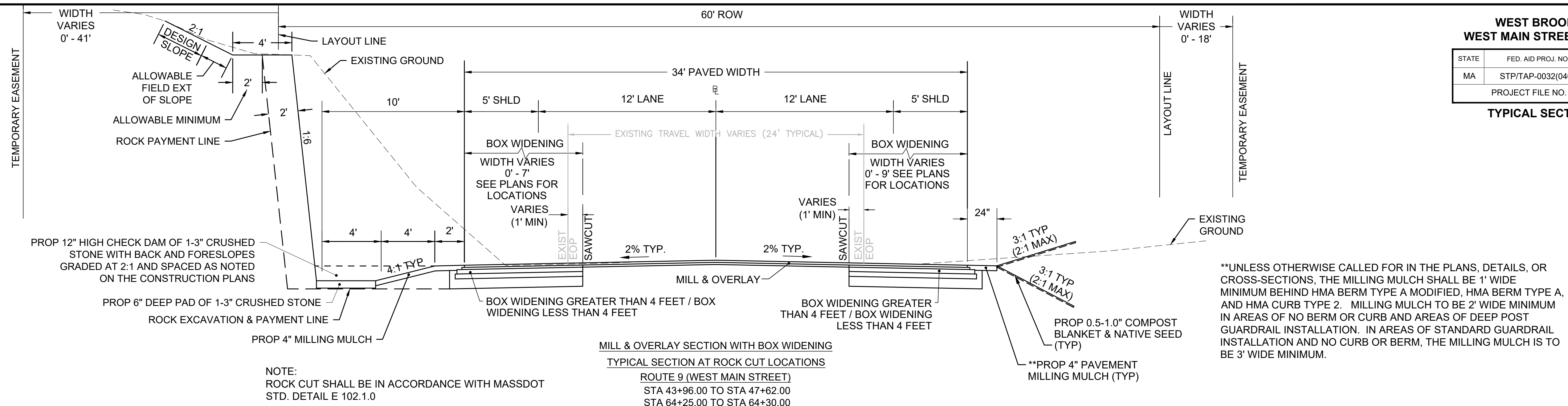
**METHOD OF BANKING
UNDIVIDED HIGHWAY
ROTATION AROUND CENTERLINE**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	11	132
PROJECT FILE NO.		606517	

TYPICAL SECTIONS - 3



**UNLESS OTHERWISE CALLED FOR IN THE PLANS, DETAILS, OR CROSS-SECTIONS, THE MILLING MULCH SHALL BE 1' WIDE MINIMUM BEHIND HMA BERM TYPE A MODIFIED, HMA BERM TYPE A, AND HMA CURB TYPE 2. MILLING MULCH TO BE 2' WIDE MINIMUM IN AREAS OF NO BERM OR CURB AND AREAS OF DEEP POST GUARDRAIL INSTALLATION. IN AREAS OF STANDARD GUARDRAIL INSTALLATION AND NO CURB OR BERM, THE MILLING MULCH IS TO BE 3' WIDE MINIMUM.

**UNLESS OTHERWISE CALLED FOR IN THE PLANS, DETAILS, OR CROSS-SECTIONS, THE MILLING MULCH SHALL BE 1' WIDE MINIMUM BEHIND HMA BERM TYPE A MODIFIED, HMA BERM TYPE A, AND HMA CURB TYPE 2. MILLING MULCH TO BE 2' WIDE MINIMUM IN AREAS OF NO BERM OR CURB AND AREAS OF DEEP POST GUARDRAIL INSTALLATION. IN AREAS OF STANDARD GUARDRAIL INSTALLATION AND NO CURB OR BERM, THE MILLING MULCH IS TO BE 3' WIDE MINIMUM.

REFER TO SPECIAL PROVISIONS FOR ITEMS 912.101 - PASSIVE ROCK DOWELS AND 912.102 - PROOF TESTING OF PASSIVE ROCK DOWELS FOR DOWEL AND TESTING REQUIREMENTS

REFER TO SPECIAL PROVISIONS FOR ITEMS 912.101 - PASSIVE ROCK DOWELS AND 912.102 - PROOF TESTING OF PASSIVE ROCK DOWELS FOR DOWEL AND TESTING REQUIREMENTS

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	12	132
PROJECT FILE NO. 606517		606517	

CONSTRUCTION PLAN 1

HIGHWAY GUARD DETAILS

PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 9+86, OFFSET LT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 10+24 TO STA 10+86, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 11+24, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 12+83, OFFSET LT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 13+21 TO STA 13+75, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 13+75 TO STA 17+25, OFFSET LT

TRAFFIC SIGNAL CONDUIT

NONE

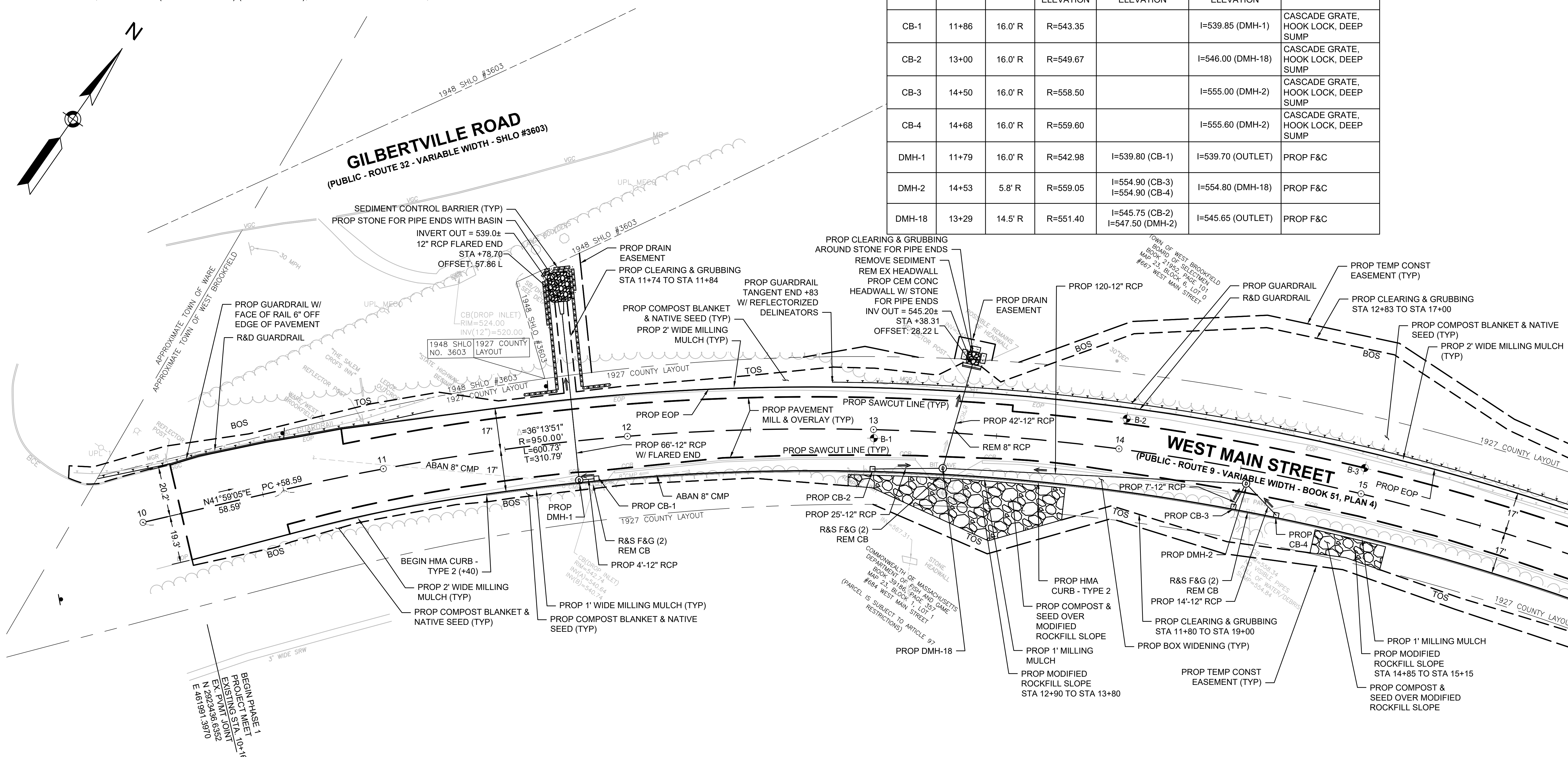
WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE SHEET 51

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-1	11+86	16.0' R	R=543.35		I=539.85 (DMH-1)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
CB-2	13+00	16.0' R	R=549.67		I=546.00 (DMH-18)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
CB-3	14+50	16.0' R	R=558.50		I=555.00 (DMH-2)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
CB-4	14+68	16.0' R	R=559.60		I=555.60 (DMH-2)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
DMH-1	11+79	16.0' R	R=542.98	I=539.80 (CB-1)	I=539.70 (OUTLET)	PROP F&C
DMH-2	14+53	5.8' R	R=559.05	I=554.90 (CB-3) I=554.90 (CB-4)	I=554.80 (DMH-18)	PROP F&C
DMH-18	13+29	14.5' R	R=551.40	I=545.75 (CB-2) I=547.50 (DMH-2)	I=545.65 (OUTLET)	PROP F&C



UPLAND NATIVE SEEDING NOTES

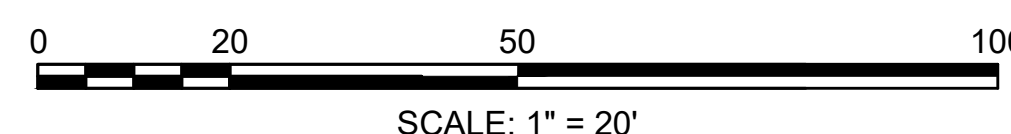
- SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
- SUBMITTALS FOR SEED MIXES SHALL BE APPROVED BY THE ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO SEED APPLICATION.
- SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
- WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.

SEDIMENT CONTROL BARRIER NOTES

- SEDIMENT CONTROL BARRIER SHALL BE LEFT TO DEGRADE OVER TIME AND THEREFORE MUST BE COMPRISED OF 100% BIODEGRADABLE MATERIALS - BURLAP, COTTON, HEMP, ETC.
- DUE TO THE LONG AND STEEP SLOPES ON THIS PROJECT, ADDITIONAL SEDIMENT CONTROL BARRIER MAY BE REQUIRED THAN WHAT IS SHOWN ON THE PLANS. THIS ADDITIONAL BARRIER MAY BE REQUIRED FOR EROSION CONTROL AS SEEDING ESTABLISHES. THESE ADDITIONAL LOCATIONS MAY INCLUDE AT THE TOP OF SLOPES WHERE THERE IS NO CURB TO CONTAIN ROADWAY RUNOFF, MID-SLOPE, AND PERPENDICULAR TO THE ROADWAY DUE TO STEEP LONGITUDINAL GRADES. USE OF BARRIER SHALL BE IF AND WHERE NEEDED AND AS APPROVED BY THE ENGINEER. PLACEMENT SHALL BE WHERE MOST EFFECTIVE TO REDUCE POTENTIAL EROSION OF SLOPES UNTIL VEGETATION ESTABLISHES AND TO CONTAIN SEDIMENT. SEE CONSTRUCTION DETAIL ON SHEET 53.

LEGEND:

UTILITY	PROPOSED	EXISTING	RECORD
ELECTRIC UNDERGROUND	---	---	---
ELECTRIC/COMM/CATV OHW	---	--- OHW ---	--- OHW ---
GAS-OIL-STEAM	---	---	---
COMMUNICATION / CATV	---	---	---
PORTABLE WATER	---	---	---
SEWER	---	---	---
DRAINAGE	---	---	---



FOR PROFILES SEE SHEET NO. 23

CONTINUED ON SHEET NO. 13

606517_HD(CP).DWG Plotted on 25-Mar-2024 10:57 AM

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	14	132
PROJECT FILE NO.		606517	

CONSTRUCTION PLAN 3

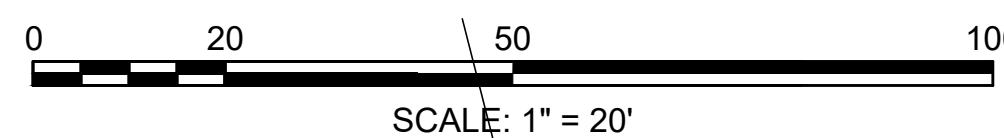
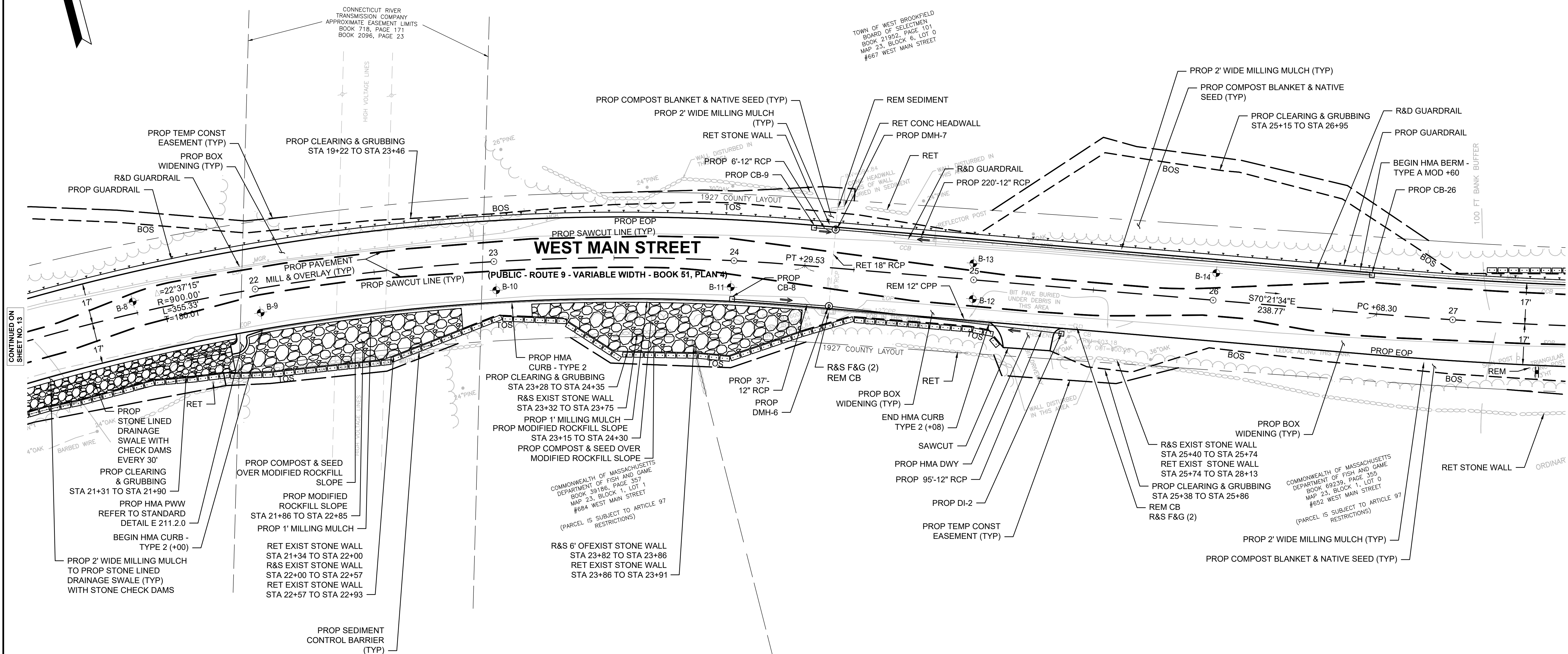
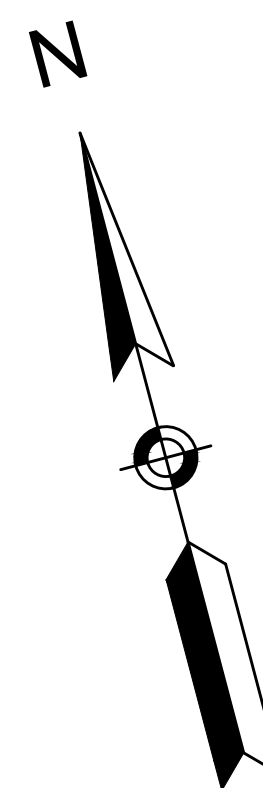
HIGHWAY GUARD DETAILS
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 18+96 TO STA 22+75, OFFSET LT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 22+75 TO STA 24+50, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 24+50 TO STA 30+00, OFFSET LT

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE SHEET 51

DRAINAGE STRUCTURE TABLE						DRAINAGE STRUCTURE TABLE							
NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS	NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-8	24+00	16.0' R	R=599.75		I=596.10 (DMH-6)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-6	24+41	16.0' R	R=600.90	I=595.90 (CB-8) I=596.80 (DI-2)	I=595.8 EX. (DMH-7)	PROP F&C. CONSTRUCT OVER 18" RCP
CB-9	24+30	16.0' L	R=601.84		I=598.00 (DMH-7)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-7	24+41	16.0' L	R=602.03	I=597.90 (CB-9) I=597.60 (CB-26)	I=595.1 EX. (OUTLET)	PROP F&C. CONSTRUCT OVER 18" RCP
CB-26	26+65	16.0' L	R=605.98		I=602.00 (DMH-7)	CASCADE GRATE, HOOK LOCK, DEEP SUMP							
DI-2	25+38	20.0' R	R=603.60		I=600.00 (DMH-6)	TYPE DF, DROP INLET GRATE							



FOR PROFILES SEE SHEET NO. 24

606517_HD(CP).DWG Plotted on 25-Mar-2024 10:57 AM

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	15	132
PROJECT FILE NO.		606517	

CONSTRUCTION PLAN 4

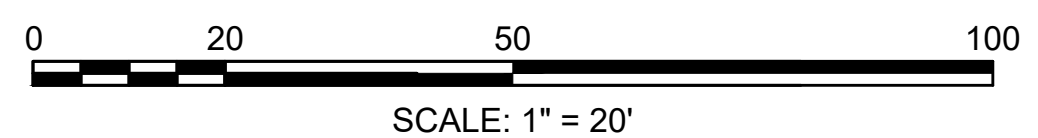
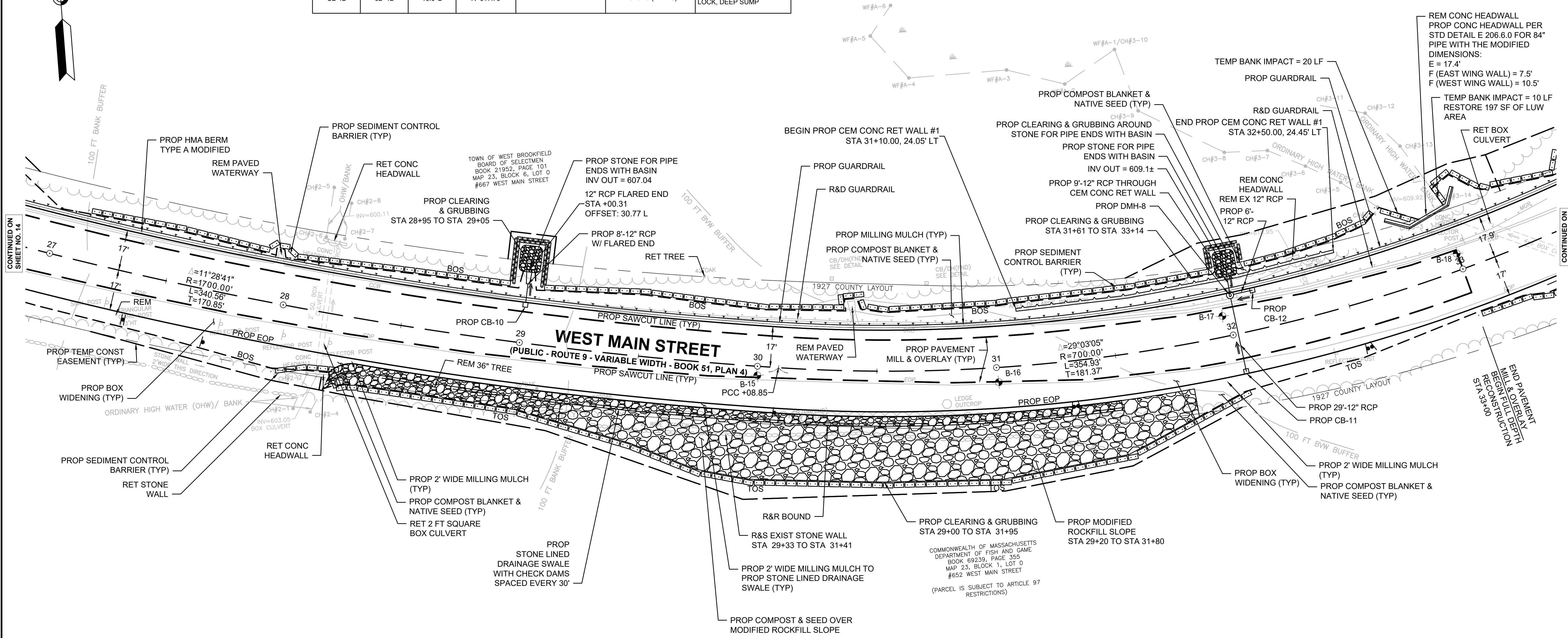
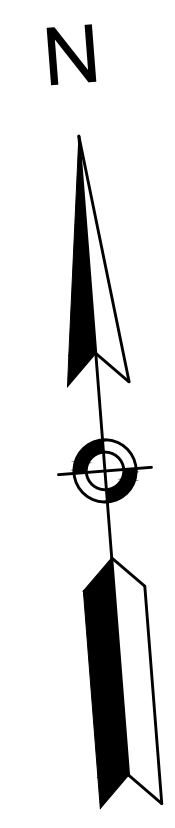
HIGHWAY GUARD DETAILS
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 24+50 TO STA 30+00, OFFSET LT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 30+00 TO STA 32+50, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 32+50 TO STA 33+19, OFFSET LT

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE SHEET 51

DRAINAGE STRUCTURE TABLE							DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET	RIM ELEVATION	INVERT ELEVATION	INVERT OUT ELEVATION	REMARKS	NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-10	29+00	16.0' L	R=611.17		I=607.17 (OUTLET)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-8	32+02	16.0' L	R=617.65	I=613.65 (CB-11) I=613.65 (CB-12)	I=609.20 (OUTLET)	PROP F&C
CB-11	32+02	16.0' R	R=619.34		I=615.34 (DMH-8)	CASCADE GRATE, HOOK LOCK, DEEP SUMP							
CB-12	32+12	16.0' L	R=617.79		I=613.79 (DMH-8)	CASCADE GRATE, HOOK LOCK, DEEP SUMP							



FOR PROFILES SEE SHEET NO. 24-25

HIGHWAY GUARD DETAILS

PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 30+00 TO STA 32+50, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 32+50 TO STA 33+19, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 33+57, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 33+30, OFFSET RT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 33+68 TO STA 39+00, OFFSET RT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 39+00 TO STA 40+75, OFFSET RT

TRAFFIC SIGNAL CONDUIT
 NONE

WATER SUPPLY ALTERATIONS
 NONE

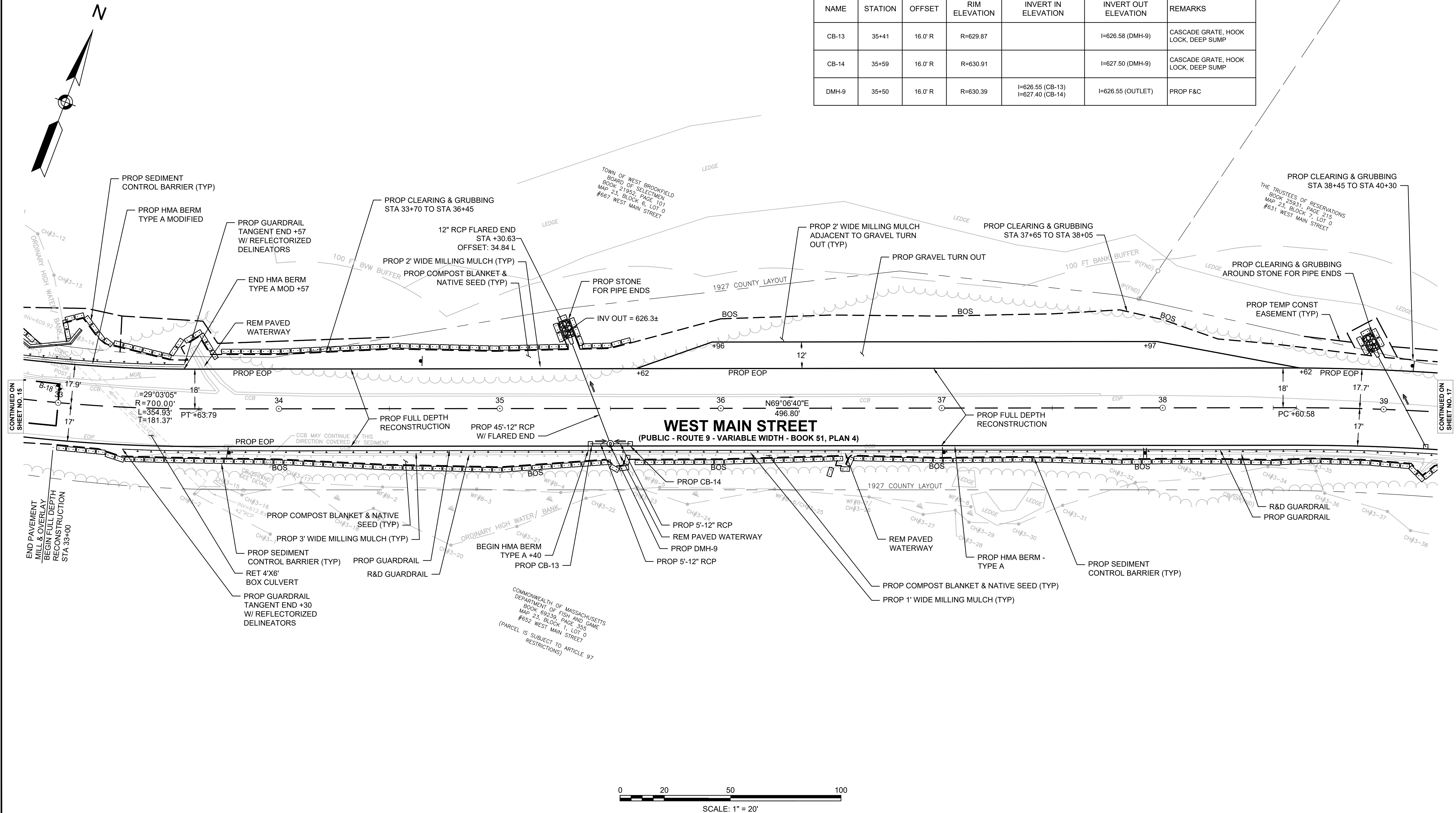
DRAINAGE DETAILS
 SEE SHEET 51

WEST BROOKFIELD
 WEST MAIN STREET (ROUTE 9)

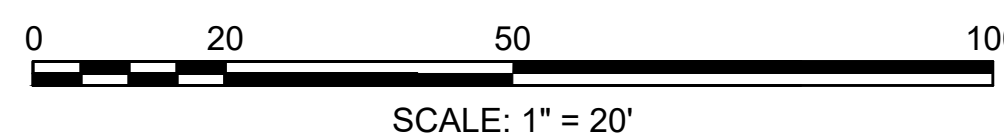
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	16	132
PROJECT FILE NO. 606517			

CONSTRUCTION PLAN 5

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-13	35+41	16.0' R	R=629.87		I=626.58 (DMH-9)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
CB-14	35+59	16.0' R	R=630.91		I=627.50 (DMH-9)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
DMH-9	35+50	16.0' R	R=630.39	I=626.55 (CB-13) I=627.40 (CB-14)	I=626.55 (OUTLET)	PROP F&C



COMMONWEALTH OF MASSACHUSETTS
 DEPARTMENT OF FISH AND GAME
 BOOK 89239, PAGE 385
 MAP 23, BLOCK 1, LOT 0
 #652 WEST MAIN STREET
 (PARCEL IS SUBJECT TO ARTICLE 97
 RESTRICTIONS)



FOR PROFILES SEE SHEET NO. 25

HIGHWAY GUARD DETAILS

PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 40+52, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 40+90 TO STA 41+05, OFFSET LT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 41+05 TO STA 43+13, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 43+51, OFFSET LT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 33+68 TO STA 39+00, OFFSET RT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 39+00 TO STA 40+75, OFFSET RT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 40+75 TO STA 42+77, OFFSET RT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 43+15, OFFSET RT

TRAFFIC SIGNAL CONDUIT
 NONE

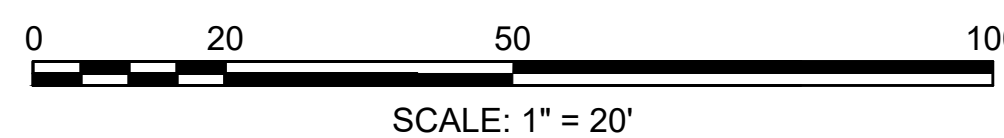
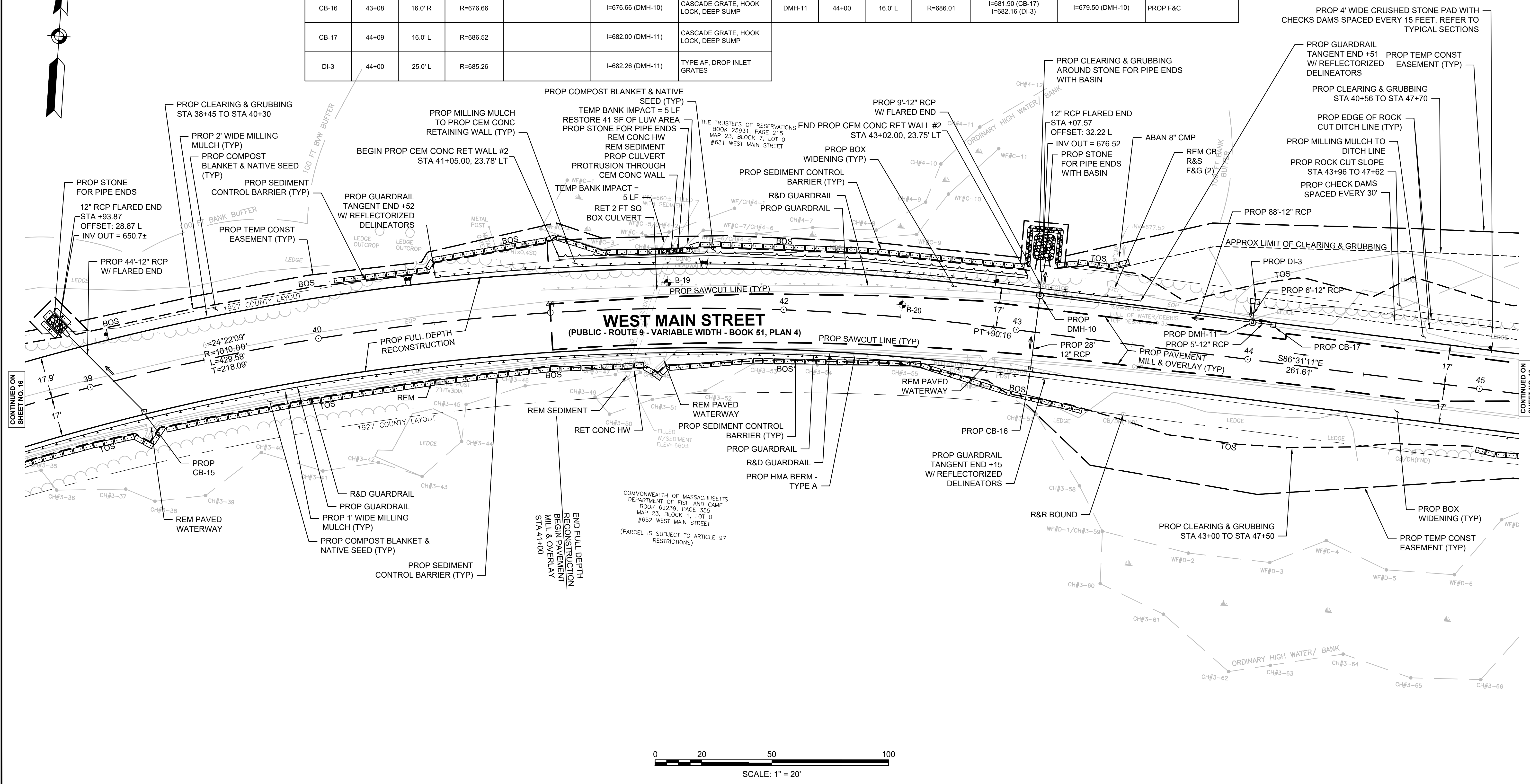
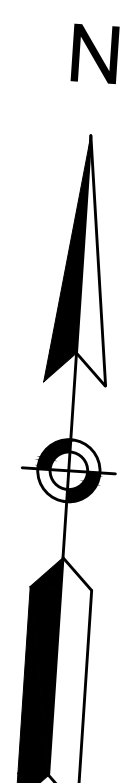
WATER SUPPLY ALTERATIONS
 NONE

DRAINAGE DETAILS
 SEE SHEET 51

WEST BROOKFIELD WEST MAIN STREET (ROUTE 9)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	17	132
PROJECT FILE NO.		606517	

CONSTRUCTION PLAN 6

DRAINAGE STRUCTURE TABLE						DRAINAGE STRUCTURE TABLE							
NAME	STATION	OFFSET	RIM ELEVATION	INVERT ELEVATION	INVERT OUT ELEVATION	REMARKS	NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-15	39+20	16.0' R	R=654.15		I=650.92 (OUTLET)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-10	43+08	16.0' L	R=680.62	I=676.52 (CB-16) I=676.62 (DMH-11)	I=676.52 (OUTLET)	PROP F&C
CB-16	43+08	16.0' R	R=676.66		I=676.66 (DMH-10)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-11	44+00	16.0' L	R=686.01	I=681.90 (CB-17) I=682.16 (DI-3)	I=679.50 (DMH-10)	PROP F&C
CB-17	44+09	16.0' L	R=686.52		I=682.00 (DMH-11)	CASCADE GRATE, HOOK LOCK, DEEP SUMP							
DI-3	44+00	25.0' L	R=685.26		I=682.26 (DMH-11)	TYPE AF, DROP INLET GRATES							



FOR PROFILES SEE SHEET NO. 25-26

606517_HDCP.DWG Plotted on 1-Apr-2024 5:01 PM

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	18	132
PROJECT FILE NO. 606517			

CONSTRUCTION PLAN 7

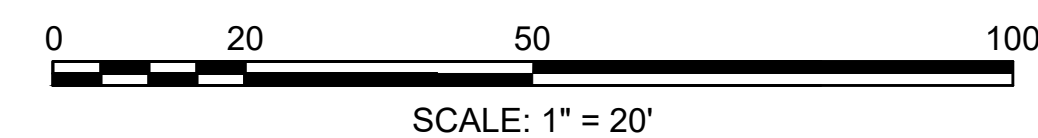
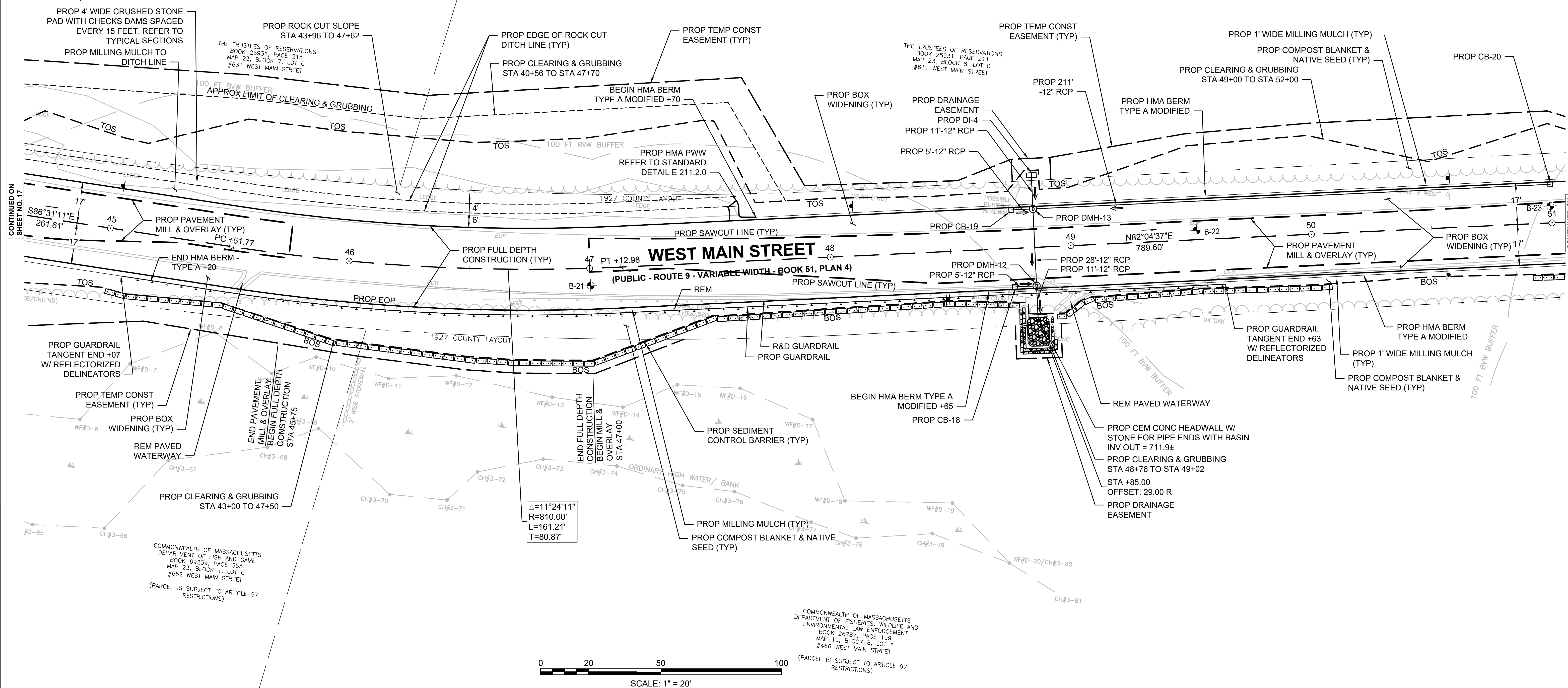
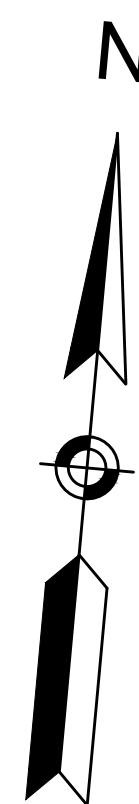
HIGHWAY GUARD DETAILS
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 45+07, OFFSET RT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 45+45 TO STA 49+25, OFFSET RT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 49+63, OFFSET RT

TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE SHEET 51

DRAINAGE STRUCTURE TABLE							DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET	RIM ELEVATION	INVERT ELEVATION	INVERT OUT ELEVATION	REMARKS	NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-18	48+76	16.0' R	R=716.62		I=713.00 (DMH-12)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-12	48+85	16.0' R	R=717.22	I=712.90 (CB-18) I=712.50 (DMH-13)	I=712.40 (OUTLET)	PROP F&C
CB-19	48+76	16.0' L	R=716.62		I=713.00 (DMH-13)	CASCADE GRATE, HOOK LOCK, DEEP SUMP	DMH-13	48+85	16.0' L	R=717.22	I=712.90 (CB-19) I=713.90 (CB-20) I=713.03 (DI-4)	I=712.80 (DMH-12)	PROP F&C
CB-20	51+00	16.0' L	R=731.08		I=727.00 (DMH-13)	CASCADE GRATE, HOOK LOCK, DEEP SUMP							
DI-4	48+85	30.0' L	R=716.13		I=713.13 (DMH-13)	TYPE AF, DROP INLET GRATES							



FOR PROFILES SEE SHEET NO. 26

HIGHWAY GUARD DETAILS

PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 56+87 TO STA 61+93, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 62+31, OFFSET LT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 56+36, OFFSET RT
 PROP GUARDRAIL, DEEP POST (SINGLE FACED) (ITEM 620.131), STA 56+74 TO STA 57+60, OFFSET RT
 PROP GUARDRAIL, TL-3 (SINGLE FACED) (ITEM 620.13), STA 57+60 TO STA 61+47, OFFSET RT
 PROP GUARDRAIL TANGENT END TREATMENT, TL-3 (ITEM 627.83), STA 61+85, OFFSET RT

TRAFFIC SIGNAL CONDUIT
 NONE

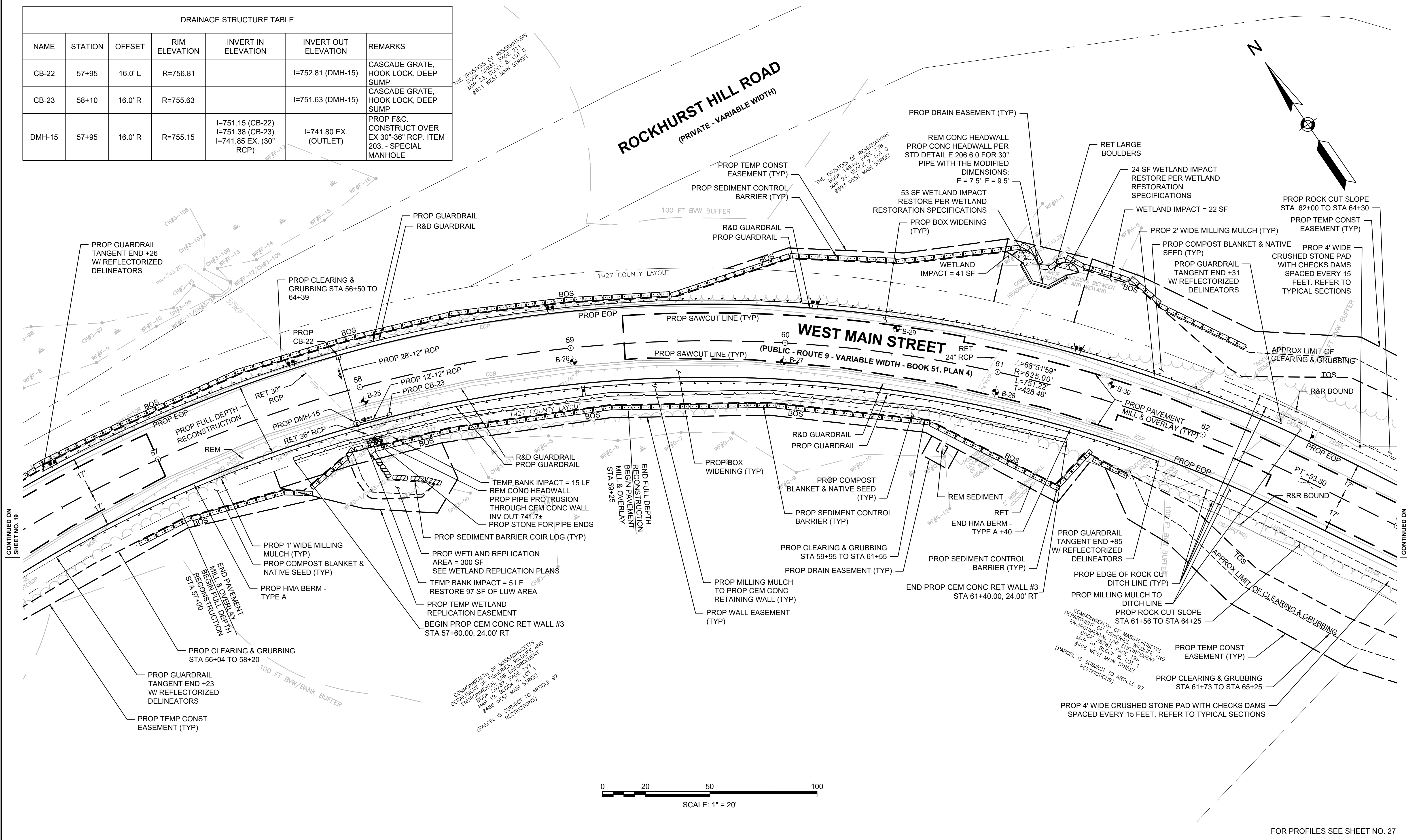
WATER SUPPLY ALTERATIONS
 NONE

DRAINAGE DETAILS
 SEE SHEET 51

WEST BROOKFIELD WEST MAIN STREET (ROUTE 9)			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	20	132
PROJECT FILE NO.		606517	

CONSTRUCTION PLAN 9

DRAINAGE STRUCTURE TABLE						
NAME	STATION	OFFSET	RIM ELEVATION	INVERT IN ELEVATION	INVERT OUT ELEVATION	REMARKS
CB-22	57+95	16.0' L	R=756.81		I=752.81 (DMH-15)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
CB-23	58+10	16.0' R	R=755.63		I=751.63 (DMH-15)	CASCADE GRATE, HOOK LOCK, DEEP SUMP
DMH-15	57+95	16.0' R	R=755.15	I=751.15 (CB-22) I=751.38 (CB-23) I=741.85 EX. (30" RCP)	I=741.80 EX. (OUTLET)	PROP F&C. CONSTRUCT OVER EX 30"-36" RCP. ITEM 203. - SPECIAL MANHOLE



CONTINUED ON SHEET NO. 19

CONTINUED ON SHEET NO. 21

COMMONWEALTH OF MASSACHUSETTS
 DEPARTMENT OF FISHERIES, WILDLIFE, AND
 ENVIRONMENTAL LAW ENFORCEMENT
 MAP 19, BLOCK 8, LOT 1
 #468 WEST MAIN STREET
 (PARCEL IS SUBJECT TO ARTICLE 97
 RESTRICTIONS)

FOR PROFILES SEE SHEET NO. 27

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	21	132
PROJECT FILE NO. 606517			

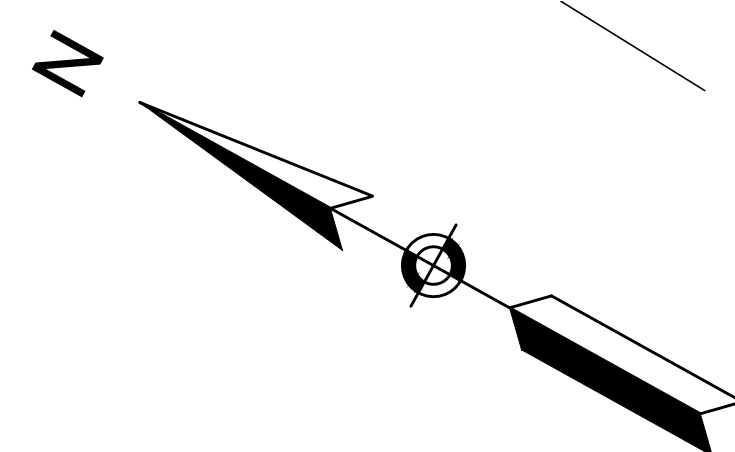
CONSTRUCTION PLAN 10

HIGHWAY GUARD DETAILS
NONE

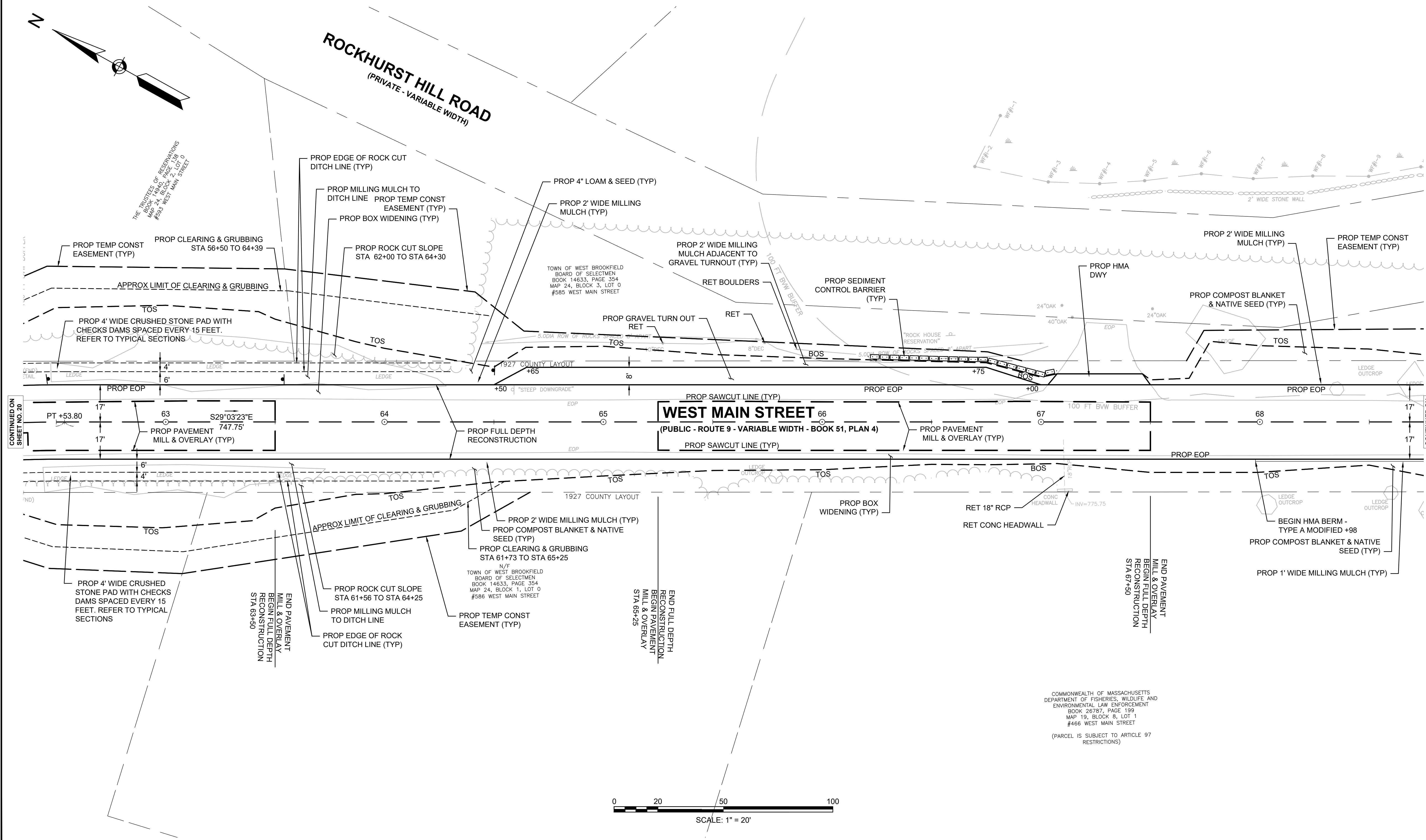
TRAFFIC SIGNAL CONDUIT
NONE

WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE SHEET 51

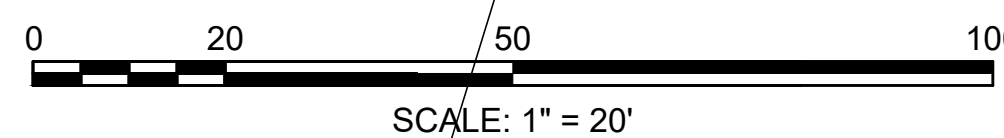


ROCKHURST HILL ROAD
(PRIVATE - VARIABLE WIDTH)



CONTINUED ON
SHEET NO. 20

CONTINUED ON
SHEET NO. 22



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 199
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

FOR PROFILES SEE SHEET NO. 27-28

606517_HD(CP).DWG Plotted on 29-Mar-2024 10:56 AM

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
NONE

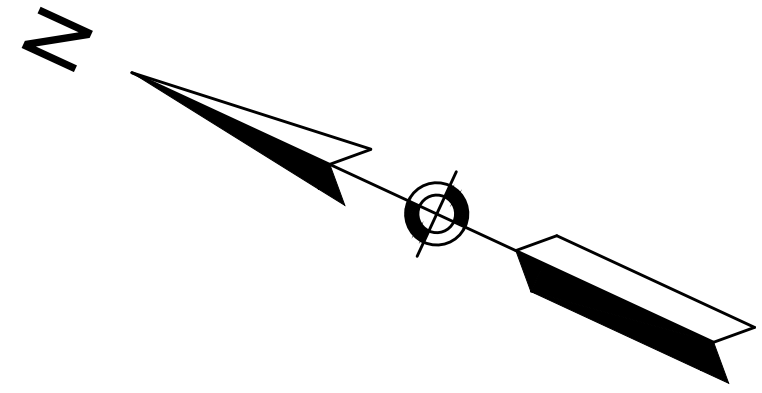
WATER SUPPLY ALTERATIONS
NONE

DRAINAGE DETAILS
SEE SHEET 51

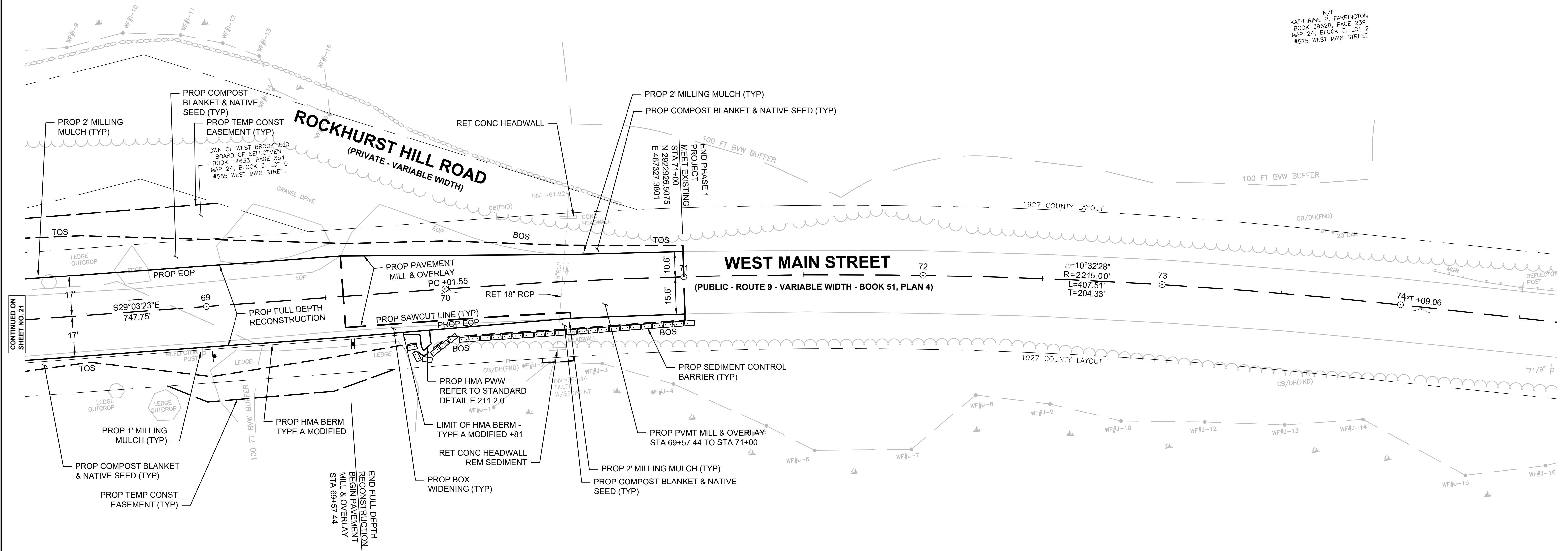
WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	22	132
PROJECT FILE NO.		606517	

CONSTRUCTION PLAN 11

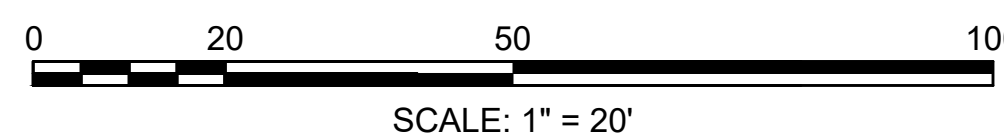


N/F
KATHERINE P. FARRINGTON
BOOK 39628, PAGE 239
MAP 24, BLOCK 3, LOT 2
#575 WEST MAIN STREET



CONTINUED ON
SHEET NO. 21

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 199
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)



FOR PROFILES SEE SHEET NO. 28

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

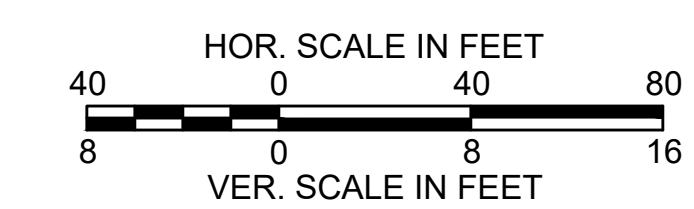
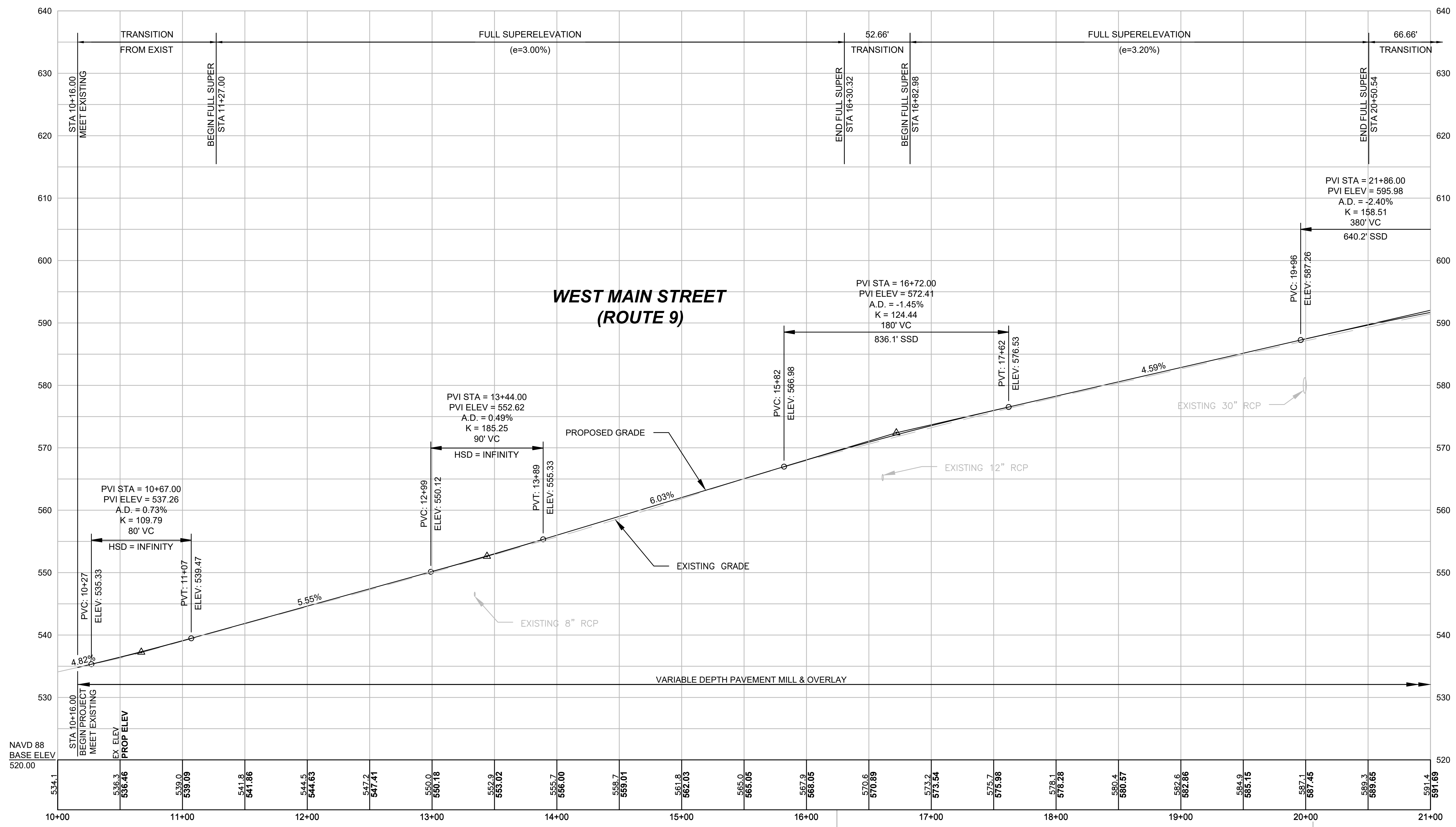
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	23	132
PROJECT FILE NO. 606517		606517	

**WEST MAIN STREET - ROUTE 9
PROFILE - 1**

Plotted on: 29-Mar-2024 10:56 AM

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CONTINUED ON
SHEET NO. 24



TBM #2
Chisel Square in
Concrete Sign Base
Elevation = 568.95 (NAVD88)
Sta. 16+24.38, 21.62 LT

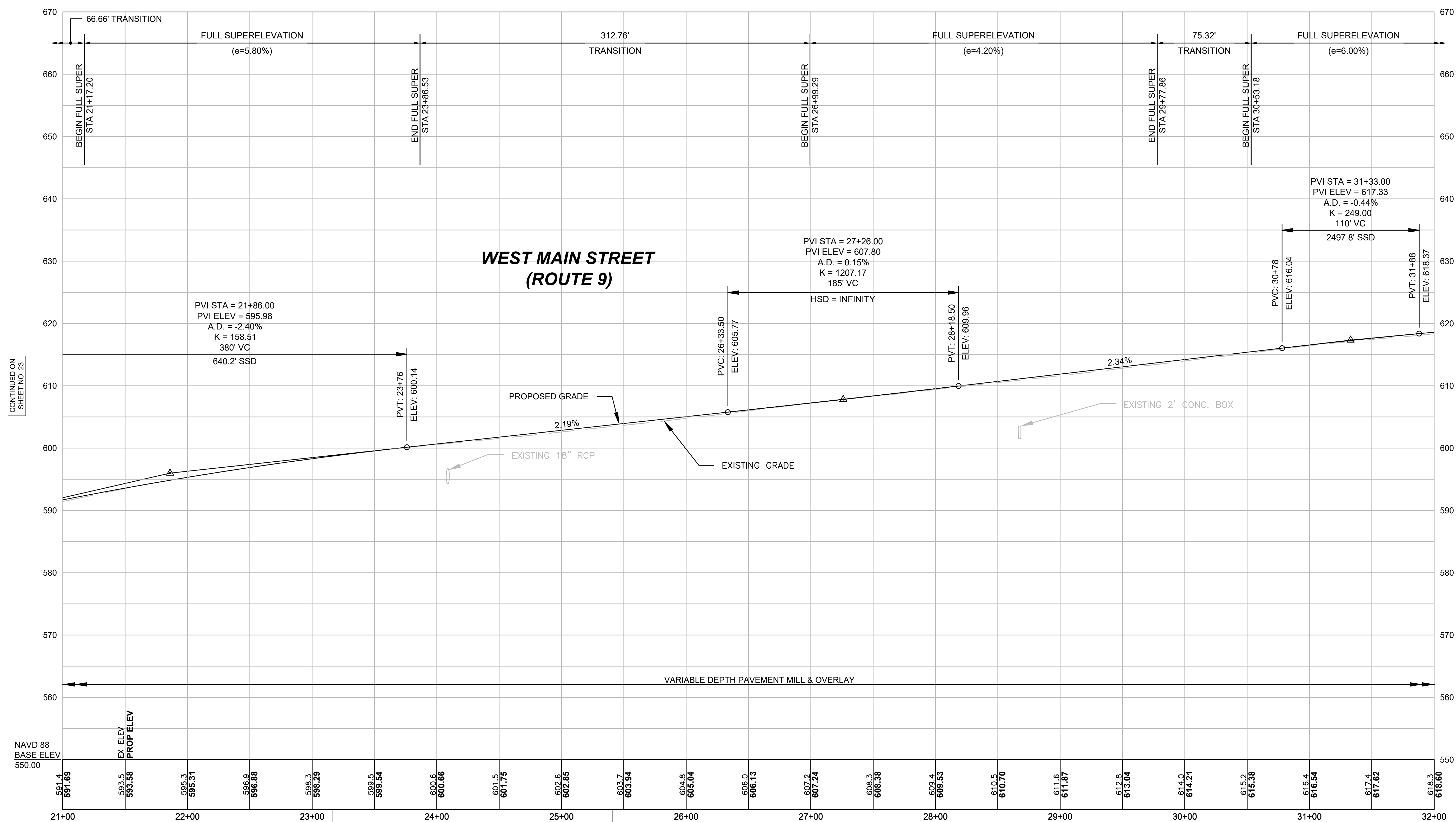
TBM #3
X-CUT in
Catch basin Corner
Elevation = 586.15 (NAVD88)
Sta. 20+05.94, 17.40 RT

FOR CONSTRUCTION PLANS SEE SHEETS 12-13

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	24	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET - ROUTE 9
PROFILE - 2**



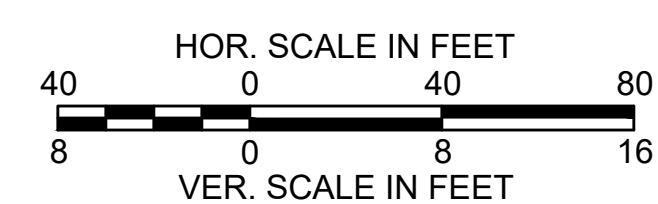
CONTINUED ON
SHEET NO. 23

CONTINUED ON
SHEET NO. 25

TBM #4
X-CUT Top of
Guard Rail Post
Elevation = 601.25 (NAVD88)
Sta. 23+16.13, 15.69LT

TBM #4B
Duplex Nail in
36 inch Oak
Elevation = 607.00 (NAVD88)
Sta. 25+40.81, 19.63RT

TBM #5
Duplex Nail in
36 inch Oak
Elevation = 5613.79 (NAVD88)
Sta. 29+09.20, 21.90RT

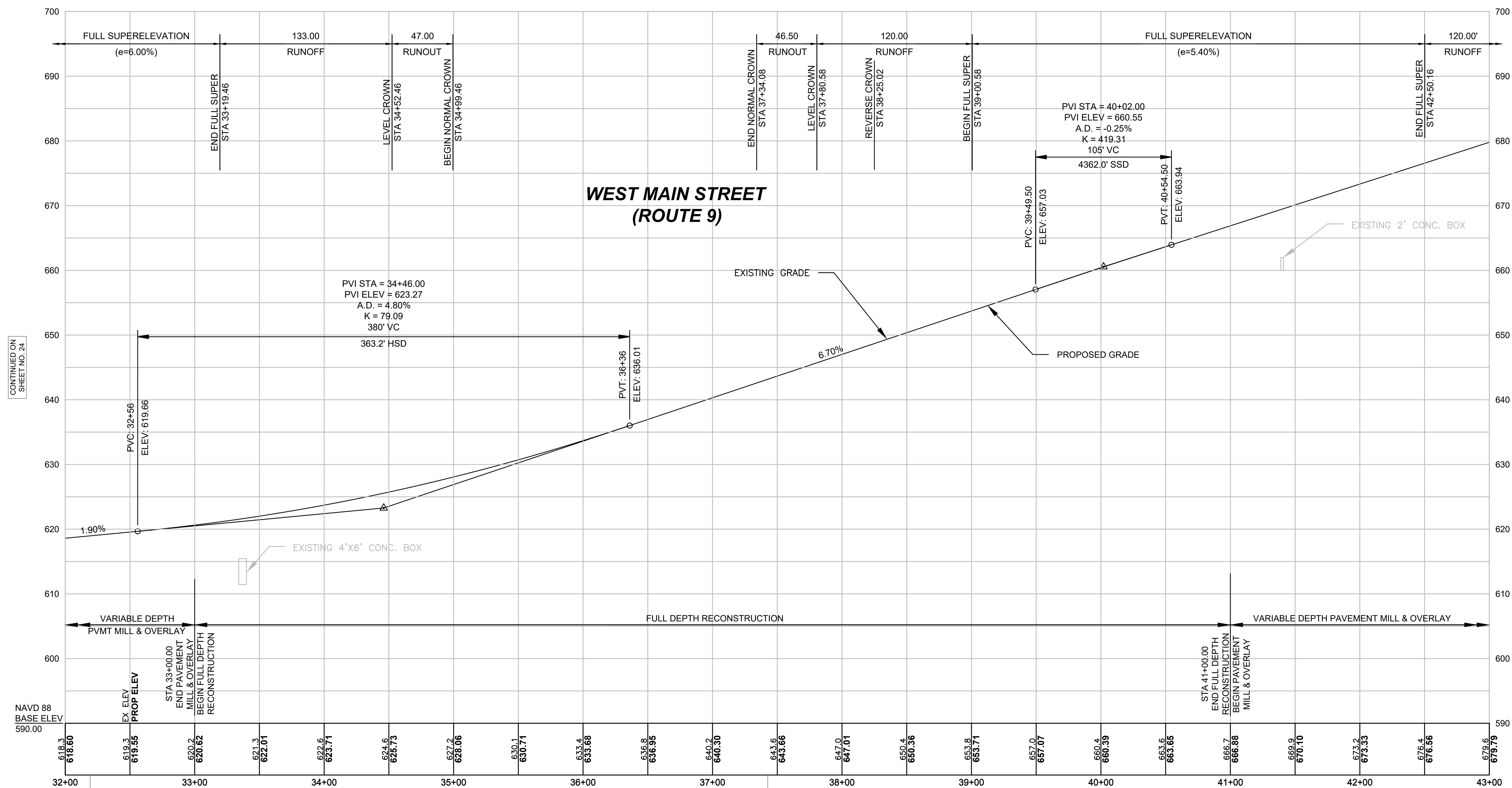


FOR CONSTRUCTION PLANS SEE SHEETS 14-15

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	25	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET - ROUTE 9
PROFILE - 3**



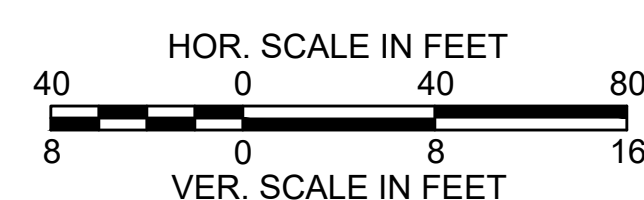
CONTINUED ON
SHEET NO. 24

CONTINUED ON
SHEET NO. 26

TBM #6
X-CUT Top of
Guard Rail Post
Elevation = 620.28 (NAVD88)
Sta. 32+19.26, 14.99LT

TBM #7
X-CUT Top of
Guard Rail Post
Elevation = 645.39 (NAVD88)
Sta. 37+42.62, 17.67RT

TBM #8
X-CUT Top of
Guard Rail Post
Elevation = 690.61 (NAVD88)
Sta. 41+09.68, 13.31LT

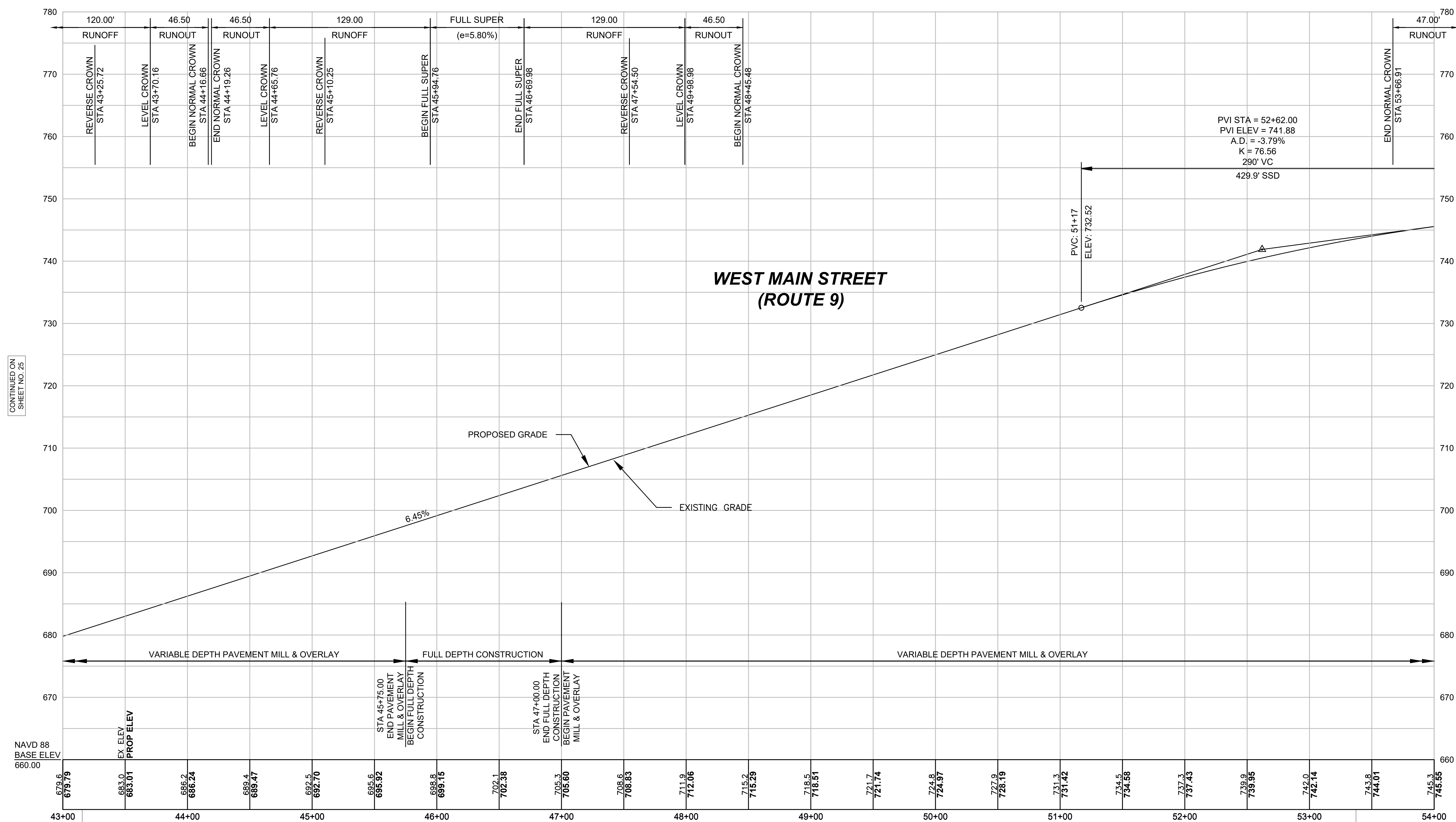


FOR CONSTRUCTION PLANS SEE SHEETS 15-17

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	26	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET - ROUTE 9
PROFILE - 4**



CONTINUED ON
SHEET NO. 25

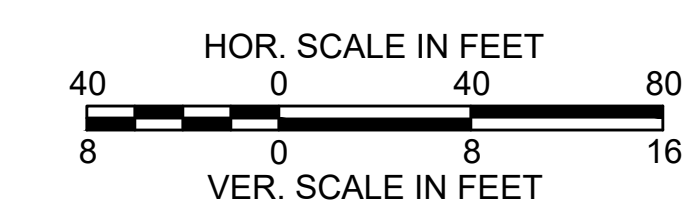
CONTINUED ON
SHEET NO. 27

NAVD 88
BASE ELEV
660.00

BM #9
Mass Geodetic
Sta. 43+15.55, 19.94' LT
Elevation = 684.21' (NAVD88) (Record)

TM #10
X-CUT Top of
Guard Rail Post
Elevation = 714.45 (NAVD88)
Sta. 48+08.88, 14.10' RT

TM #11
Duplex Nail in
24 Inch Oak
Elevation = 742.56 (NAVD88)
Sta. 53+37.28, 24.59' RT

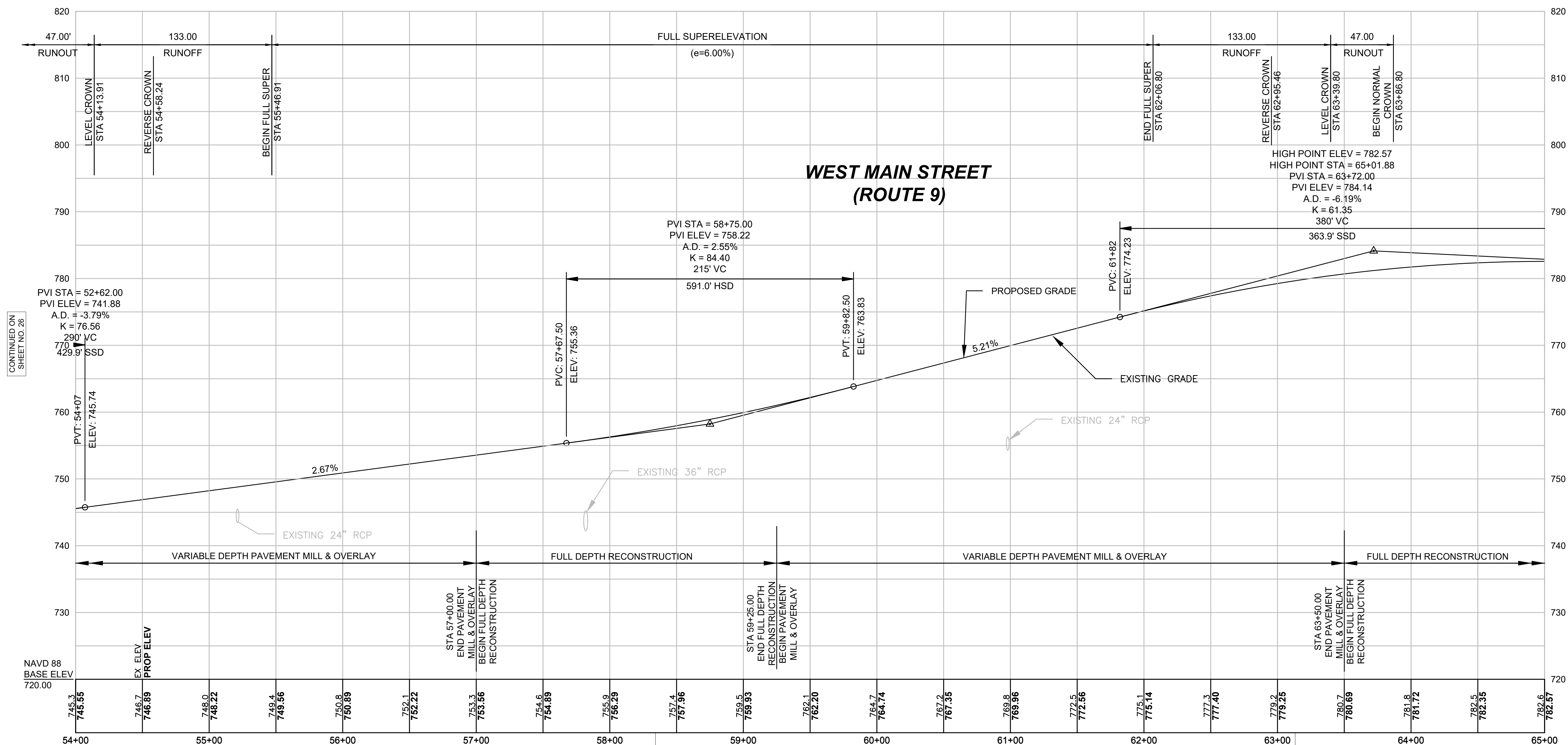


FOR CONSTRUCTION PLANS SEE SHEETS 17-19

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	27	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET - ROUTE 9
PROFILE - 5**

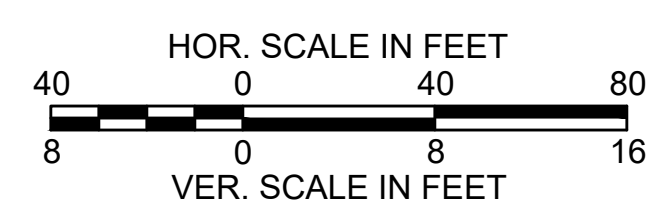


CONTINUED ON SHEET NO. 26

CONTINUED ON SHEET NO. 28

TBM #12
X-CUT Top of
Guard Rail Post
Elevation = 760.11 (NAVD88)
Sta. 59+34.16, 15.26' LT

TBM #13
Chess Circle High
Point on Ledger
Elevation = 783.56 (NAVD88)
Sta. 63+13.23, 16.66' LT



FOR CONSTRUCTION PLANS SEE SHEETS 19-21

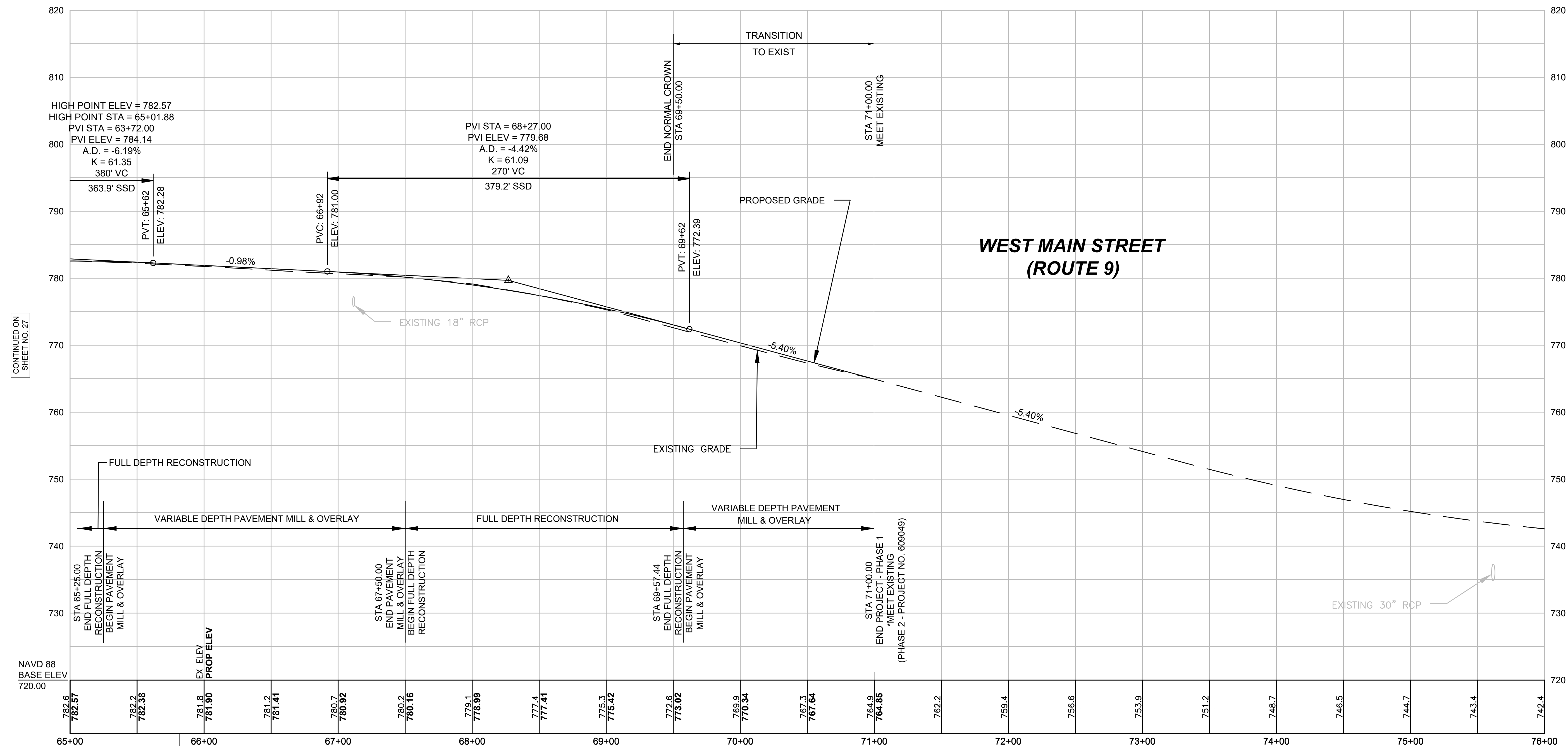
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	28	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET - ROUTE 9
PROFILE - 6**

***NOTE:**

1. THE PROPOSED PROFILE SHOWN BELOW SHOWS THE FINAL COMBINED PROFILE OF PHASE 1 AND PHASE 2. SINCE PHASE 1 WILL BE CONSTRUCTED PRIOR TO PHASE 2, THE CONTRACTOR SHALL PROVIDE A 20' PAVEMENT TRANSITION FROM STATION 70+80 TO STATION 71+00 TO MEET THE EXISTING PROFILE GRADE AT THE LIMIT OF WORK FOR PHASE 1.



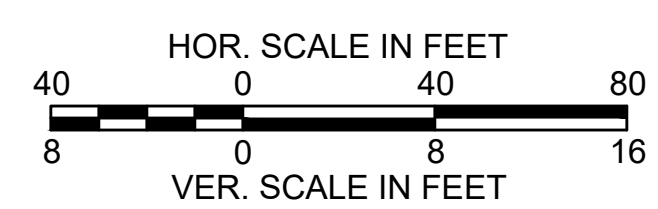
CONTINUED ON
SHEET NO. 27

NAVD 88
BASE ELEV
720.00

BM #14
Mass Geodetic
Staff 7620 Brass Rivet in Ledge
Elevation = 783.38 (NAVD88) (Record)
Sta. 65+81.67, 21.97 RT

TBM #15
Chisel Square
on Ledge
Elevation = 780.91 (NAVD88)
Sta. 68+37.94, 13.87 LT

TBM #17
High point on
Conc. Post
Elevation = 745.81 (NAVD88)
Sta. 75+48.09, 23.15 RT



FOR CONSTRUCTION PLANS SEE SHEETS 21-22

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	29	132

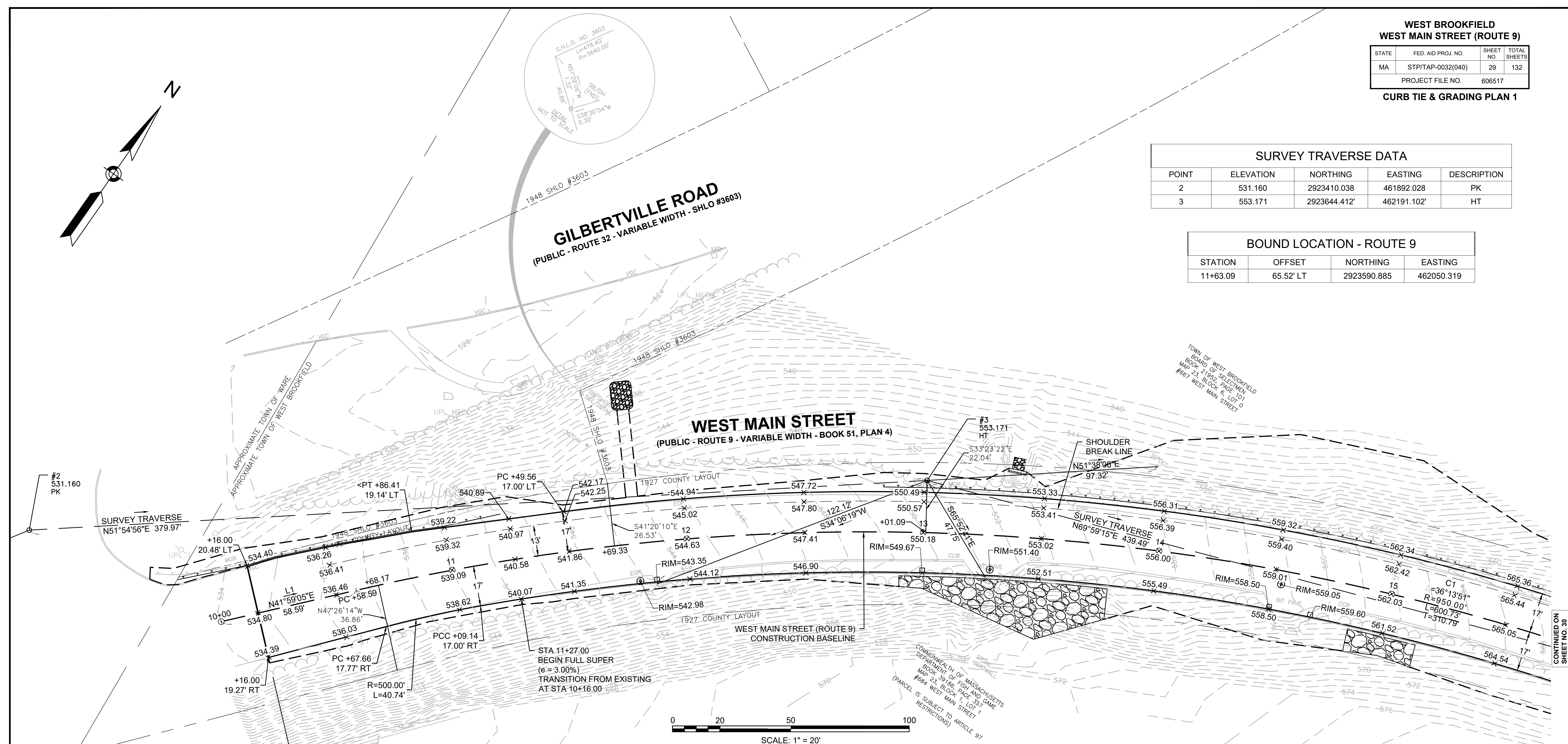
PROJECT FILE NO. 606517
CURB TIE & GRADING PLAN 1

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
2	531.160	2923410.038	461892.028	PK
3	553.171	2923644.412	462191.102	HT

BOUND LOCATION - ROUTE 9

STATION	OFFSET	NORTHING	EASTING
11+63.09	65.52' LT	2923590.885	462050.319



WEST MAIN STREET CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	BEGIN 10+00.00	2923424.7420	461980.6940		N41° 59' 05"E 58.59'	10+58.59	2923468.2932	462019.8867
C1	PC 10+58.59	2923468.2932	462019.8867	R=950.00' Δ=36°13'51" L=600.73' T=310.79'		16+59.32	2923762.7835	462532.0260
C2	PCC 16+59.32	2923762.7835	462532.0260	R=2700.00' Δ=8°48'15" L=414.88' T=207.85'		20+74.20	2923816.0388	462943.0628
C3	PCC 20+74.20	2923816.0388	462943.0628	R=900.00' Δ=22°37'15" L=355.33' T=180.01'		24+29.53	2923764.8946	463292.3604
L2	PT 24+29.53	2923764.8946	463292.3604		S70° 21' 34"E 238.77'	26+68.30	2923684.6396	463517.2406
C4	PC 26+68.30	2923684.6396	463517.2406	R=1700.00' Δ=11°28'41" L=340.56' T=170.85'		30+08.85	2923602.9566	463847.2701
C5	PCC 30+08.85	2923602.9566	463847.2701	R=700.00' Δ=29°03'05" L=354.93' T=181.37'		33+63.79	2923641.8742	464196.2482
L3	PT 33+63.79	2923641.8742	464196.2482		N69° 06' 40"E 496.80'	38+60.58	2923819.0113	464660.3911

WEST MAIN STREET CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C6	PC 38+60.58	2923819.0113	464660.3911	R=1010.00' Δ=24°22'09" L=429.58' T=218.09'		42+90.16	2923883.5332	465081.8263
L4	PT 42+90.16	2923883.5332	465081.8263		S86° 31' 11"E 261.61'	45+51.77	2923867.6526	465342.9528
C7	PC 45+51.77	2923867.6526	465342.9528	R=810.00' Δ=11°24'11" L=161.21' T=80.87'		47+12.98	2923873.8909	465503.7745
L5	PT 47+12.98	2923873.8909	465503.7745		N82° 04' 37"E 789.60'	55+02.58	2923982.7314	466285.8417
C8	PC 55+02.58	2923982.7314	466285.8417	R=625.00' Δ=68°51'59" L=751.22' T=428.48'		62+53.80	2923667.2424	466918.3310
L6	PT 62+53.80	2923667.2424	466918.3310		S29° 03' 23"E 747.75'	70+01.55	2923013.6000	467281.4941
C9	PC 70+01.55	2923013.6000	467281.4941	R=2215.00' Δ=10°32'28" L=407.51' T=204.33'		74+09.06	2922641.2317	467445.6191
L7	PT 74+09.06	2922641.2317	467445.6191		S18° 30' 56"E 268.05'	76+77.11	2922387.0545	467530.7417

CONTINUED ON SHEET NO. 30

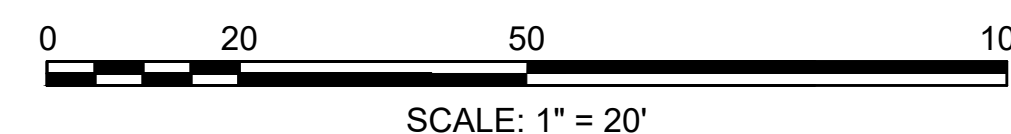
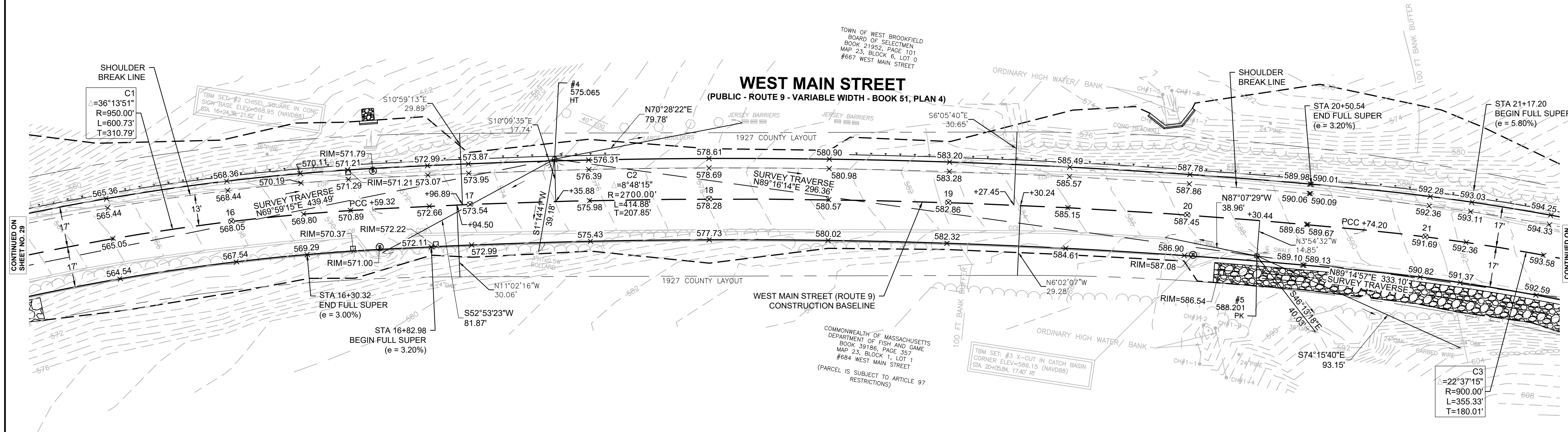
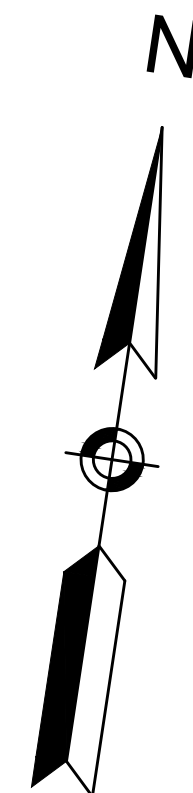
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	30	132
PROJECT FILE NO.		606517	

CURB TIE & GRADING PLAN 2

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
4	575.065	2923794.817'	462604.055'	HT
5	588.201	29237980.591'	462900.391'	PK



CONTINUED ON
SHEET NO. 29

CONTINUED ON
SHEET NO. 31

TOWN OF WEST BROOKFIELD
BOARD OF SELECTMEN
BOOK 21952, PAGE 101
MAP 23, BLOCK 6, LOT 0
#667 WEST MAIN STREET

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 39156, PAGE 357
MAP 23, BLOCK 1, LOT 1
#684 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

TBM SET: #3 X-CUT IN CATCH BASIN
CORNER ELEV=586.15 (NAVD83)
SIR 20+05.84, 17.40' RT

TBM SET: #2 CHISEL SQUARE IN CONC
SIGN-BASE ELEV=568.95 (NAVD83)
STA 16+24.38, 21.62' LT

C1
Δ=36°13'51"
R=950.00'
L=600.73'
T=310.79'

C3
Δ=22°37'15"
R=900.00'
L=355.33'
T=180.01'

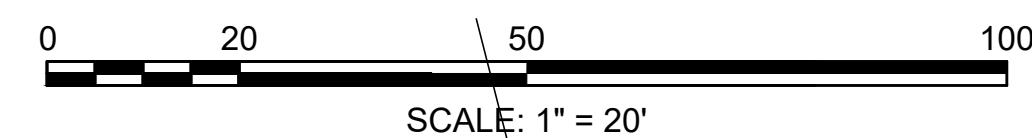
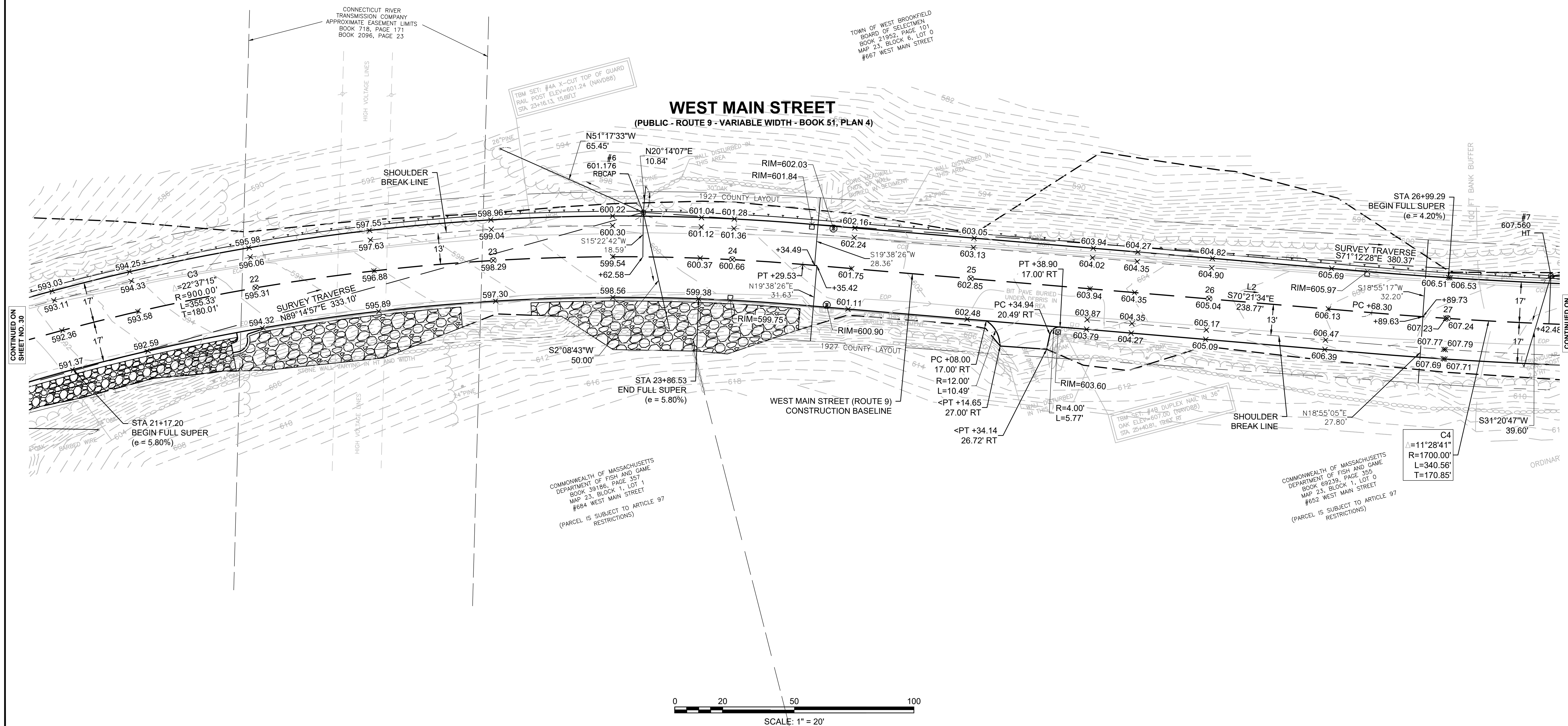
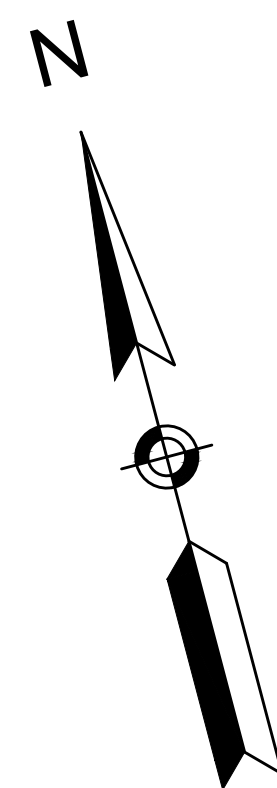
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	31	132
PROJECT FILE NO.		606517	

CURB TIE & GRADING PLAN 3

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
6	601.176	2923802.956'	463233.459'	RBCAP
7	607.560	2923680.427'	463593.550'	HT



CONTINUED ON
SHEET NO. 30

CONTINUED ON
SHEET NO. 32

FBM SET: #44 X-CUT TOP OF GUARD
RAIL POST ELEV=601.24 (NAVDS88)
STA 23+16.13, 15.69' L

TOWN OF WEST BROOKFIELD
BOARD OF SELECTMEN
BOOK 21952, PAGE 101
MAP 23, BLOCK 6, LOT 0
#667 WEST MAIN STREET

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 59186, PAGE 357
MAP 23, BLOCK 1, LOT 1
#684 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 69239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

C4
Δ=11°28'41"
R=1700.00'
L=340.56'
T=170.85'

NOTES:
 1. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.

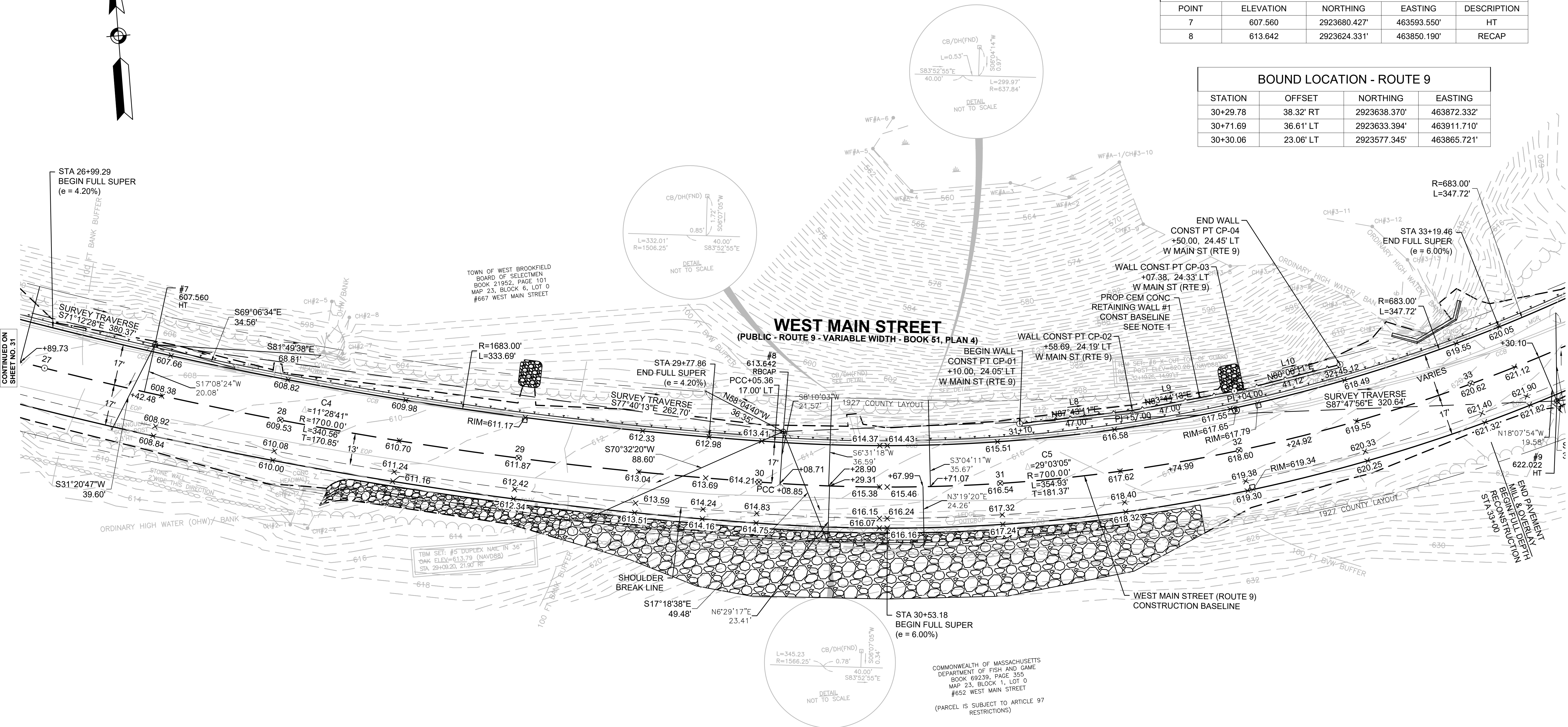
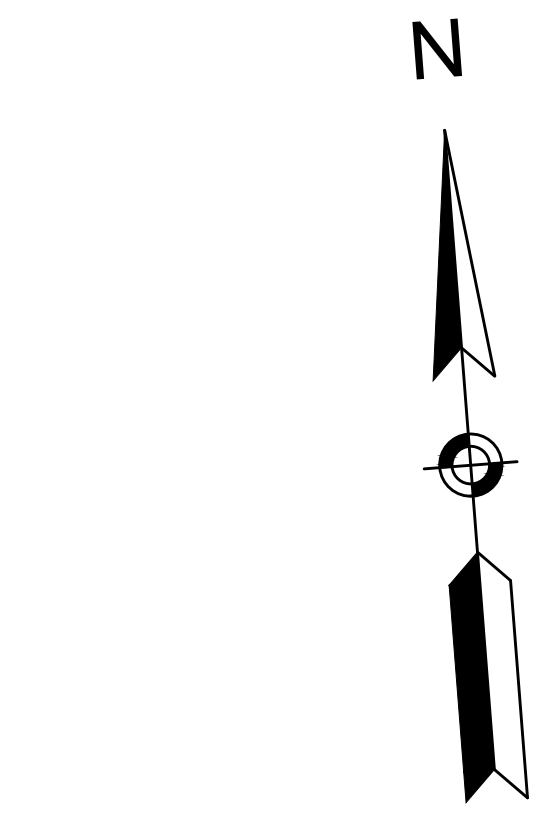
**WEST BROOKFIELD
 WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	32	132
PROJECT FILE NO. 606517			

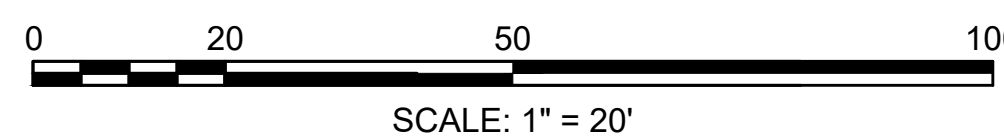
CURB TIE & GRADING PLAN 4

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
7	607.560	2923680.427'	463593.550'	HT
8	613.642	2923624.331'	463850.190'	RECAP

BOUND LOCATION - ROUTE 9			
STATION	OFFSET	NORTHING	EASTING
30+29.78	38.32' RT	2923638.370'	463872.332'
30+71.69	36.61' LT	2923633.394'	463911.710'
30+30.06	23.06' LT	2923577.345'	463865.721'



RET WALL #1 (31+10 LT TO 32+50 LT) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L8	BEGIN 31+10.00	2923619.9177	463948.0296		N87° 43' 11"E 47.00'	31+57.00	2923621.7876	463994.9929
L9	PI 31+57.00	2923621.7876	463994.9929		N83° 44' 13"E 47.00'	32+04.00	2923626.9150	464041.7124
L10	PI 32+04.00	2923626.9150	464041.7124		N80° 00' 11"E 41.12'	32+45.12	2923634.0541	464082.2125



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	33	132
PROJECT FILE NO.		606517	

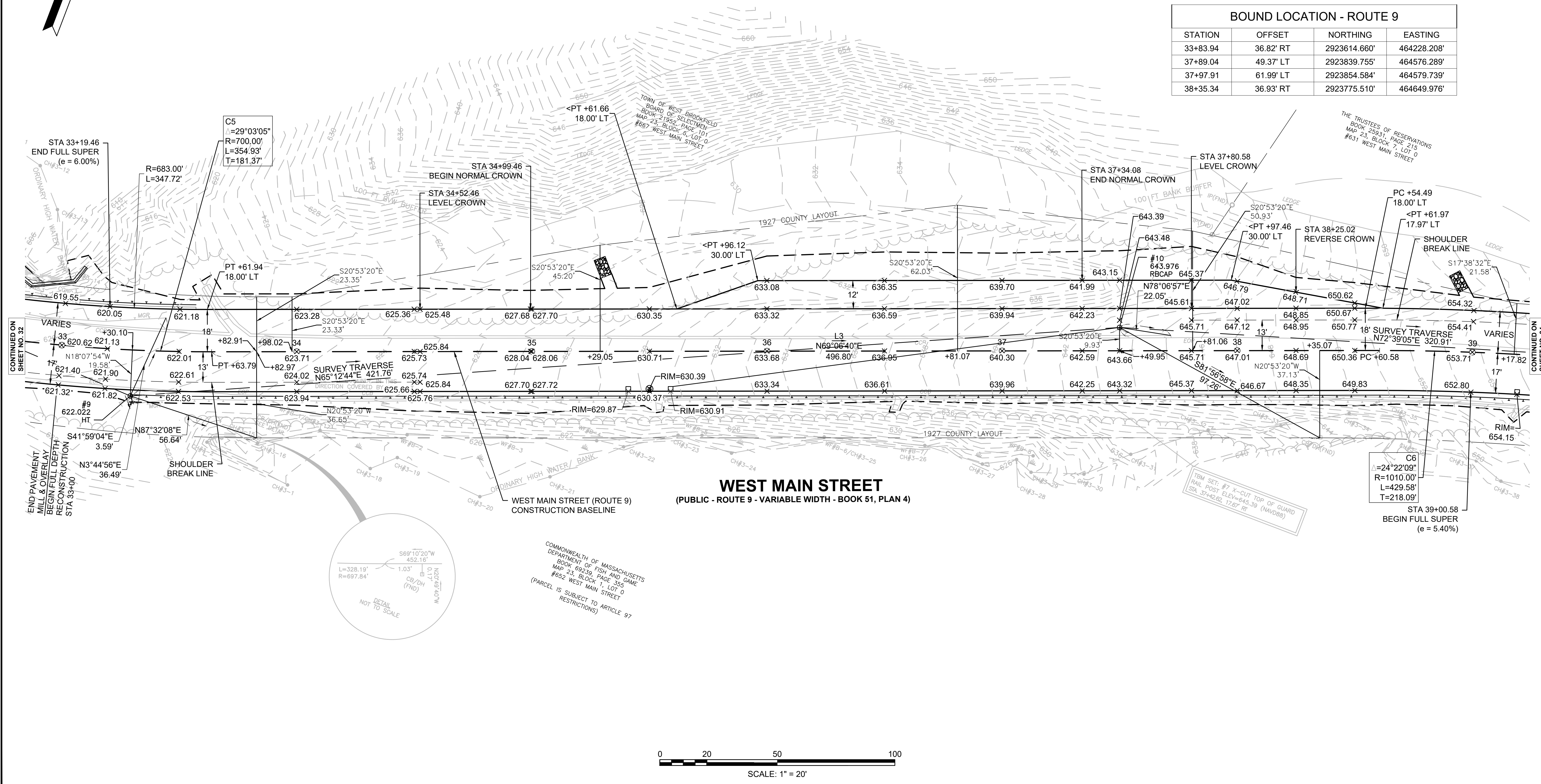
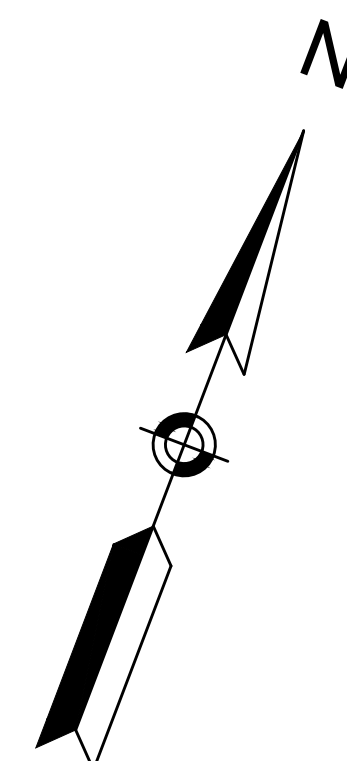
CURB TIE & GRADING PLAN 5

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
9	622.022	2923612.017'	464170.592'	HT
10	643.976	2923788.844'	464553.492'	RBCAP

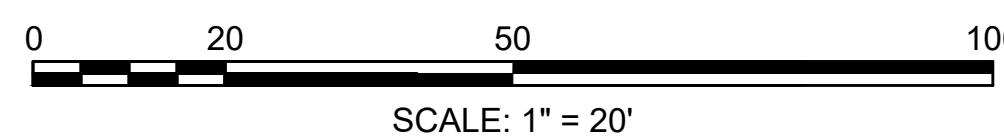
BOUND LOCATION - ROUTE 9

STATION	OFFSET	NORTHING	EASTING
33+83.94	36.82' RT	2923614.660'	464228.208'
37+89.04	49.37' LT	2923839.755'	464576.289'
37+97.91	61.99' LT	2923854.584'	464579.739'
38+35.34	36.93' RT	2923775.510'	464649.976'



**WEST MAIN STREET
(PUBLIC - ROUTE 9 - VARIABLE WIDTH - BOOK 51, PLAN 4)**

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 89239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)



NOTES:
 1. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.

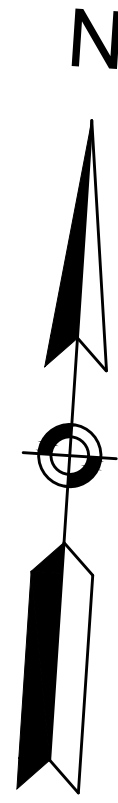
**WEST BROOKFIELD
 WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	34	132
PROJECT FILE NO. 606517		606517	

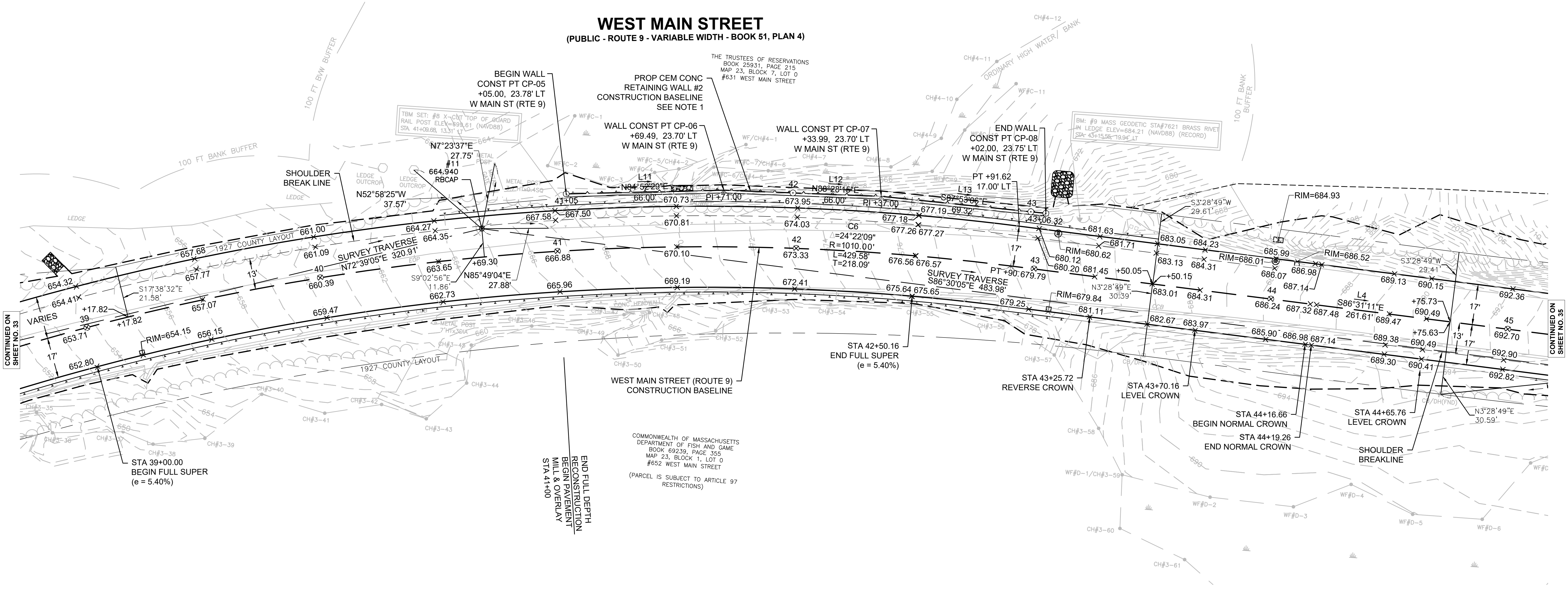
CURB TIE & GRADING PLAN 6

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
11	664.940	35086614.408'	464859.799'	RBCAP

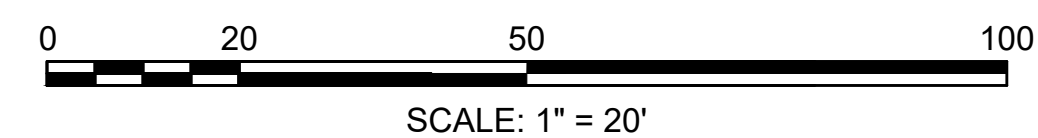
BOUND LOCATION - ROUTE 9			
STATION	OFFSET	NORTHING	EASTING
43+50.12	30.07' RT	2923849.876'	465139.848'
44+75.63	30.36' RT	2923841.970'	465265.114'



**WEST MAIN STREET
 (PUBLIC - ROUTE 9 - VARIABLE WIDTH - BOOK 51, PLAN 4)**



RET WALL #2 (41+05 LT TO 43+02 LT) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L11	BEGIN 41+05.00	2923901.4215	464894.1074		N84° 52' 29"E 66.00'	41+71.00	2923907.3174	464959.8436
L12	PI 41+71.00	2923907.3174	464959.8436		N88° 28' 15"E 66.00'	42+37.00	2923909.0786	465025.8201
L13	PI 42+37.00	2923909.0786	465025.8201		S87° 53' 06"E 69.32'	43+06.32	2923906.5205	465095.0879



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	35	132
PROJECT FILE NO.		606517	

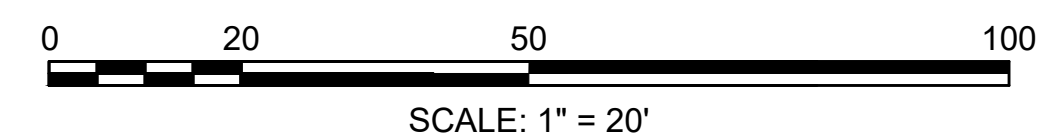
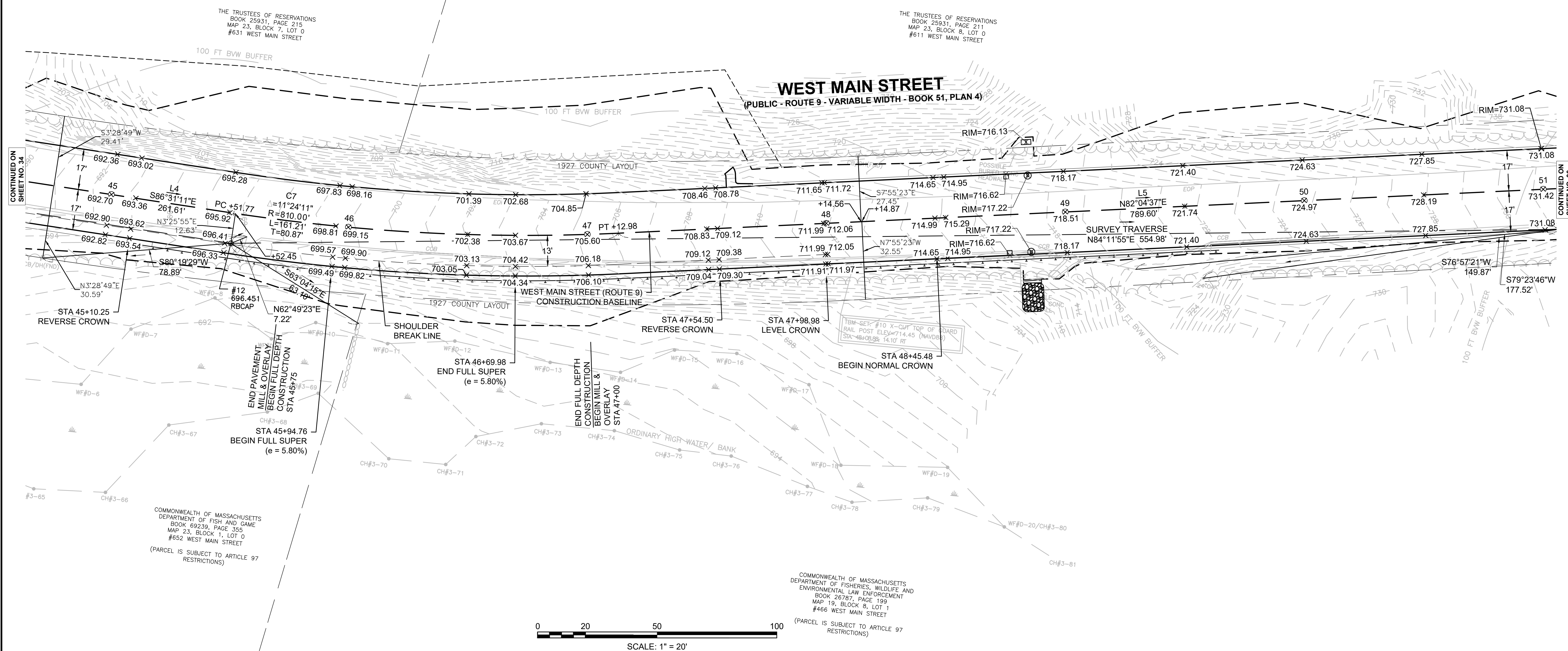
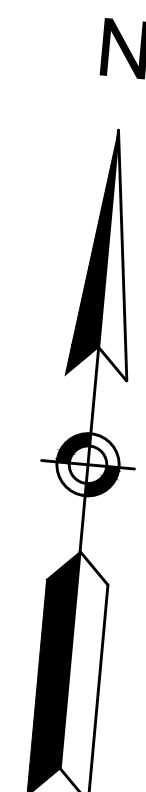
CURB TIE & GRADING PLAN 7

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
12	696.451	2923855.000'	465342.876'	RBCAP

BOUND LOCATION - ROUTE 9

STATION	OFFSET	NORTHING	EASTING
48+14.50	27.62' LT	2923915.237'	465600.527'

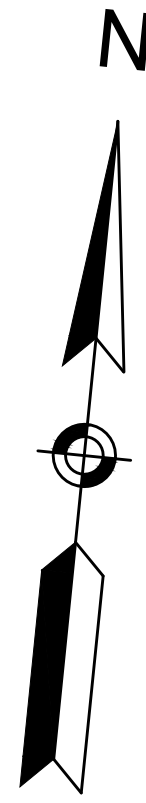


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SHEET NO. 34

CONTINUED ON
SHEET NO. 36

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 69239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 189
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)



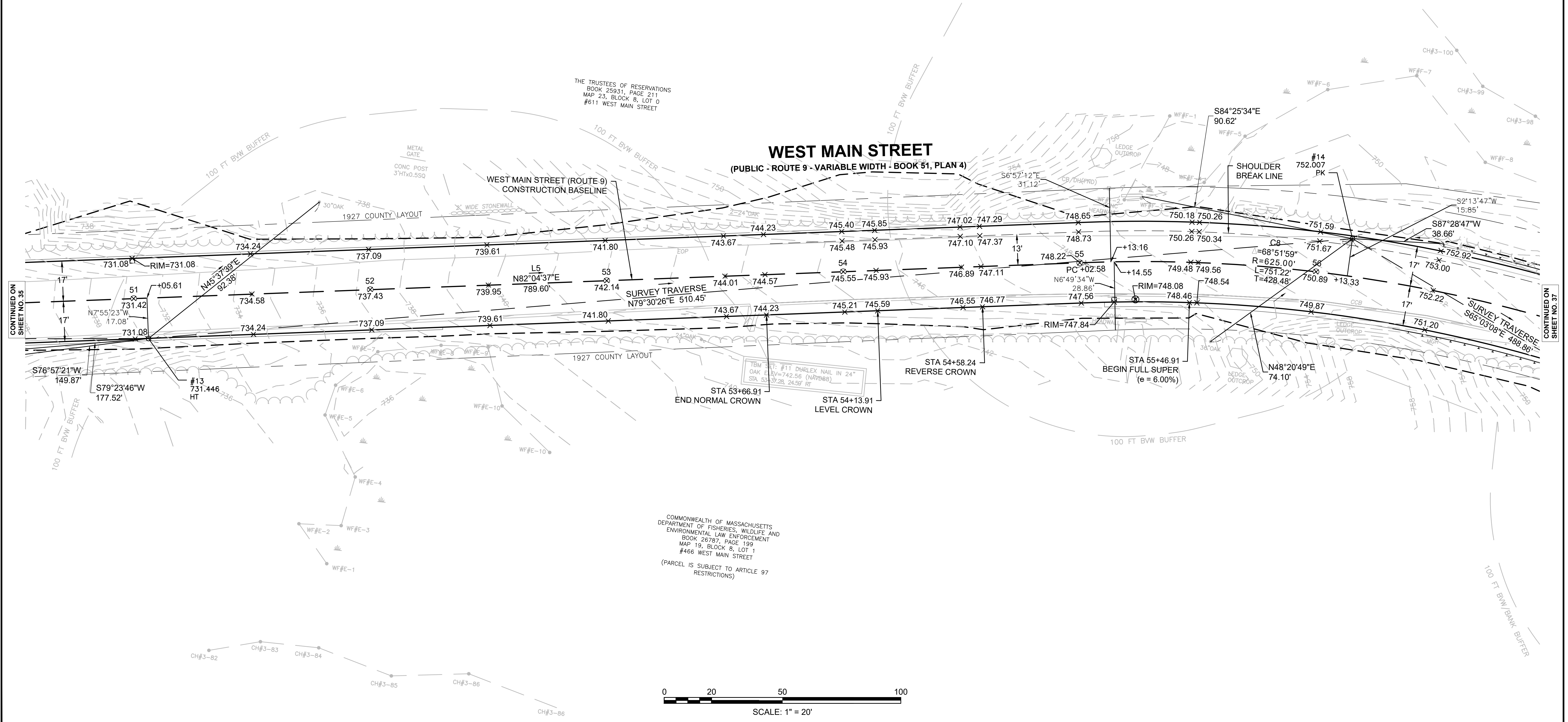
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	36	132
PROJECT FILE NO. 606517			

CURB TIE & GRADING PLAN 8

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
13	731.446	2923911.099'	465895.012'	HT
14	752.007	2924004.058'	466396.925'	PK

BOUND LOCATION - ROUTE 9			
STATION	OFFSET	NORTHING	EASTING
55+13.00	31.07' LT	2924014.926'	466292.404'



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 199
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

CONTINUED ON
SHEET NO. 35

CONTINUED ON
SHEET NO. 37

NOTES:
 1. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.

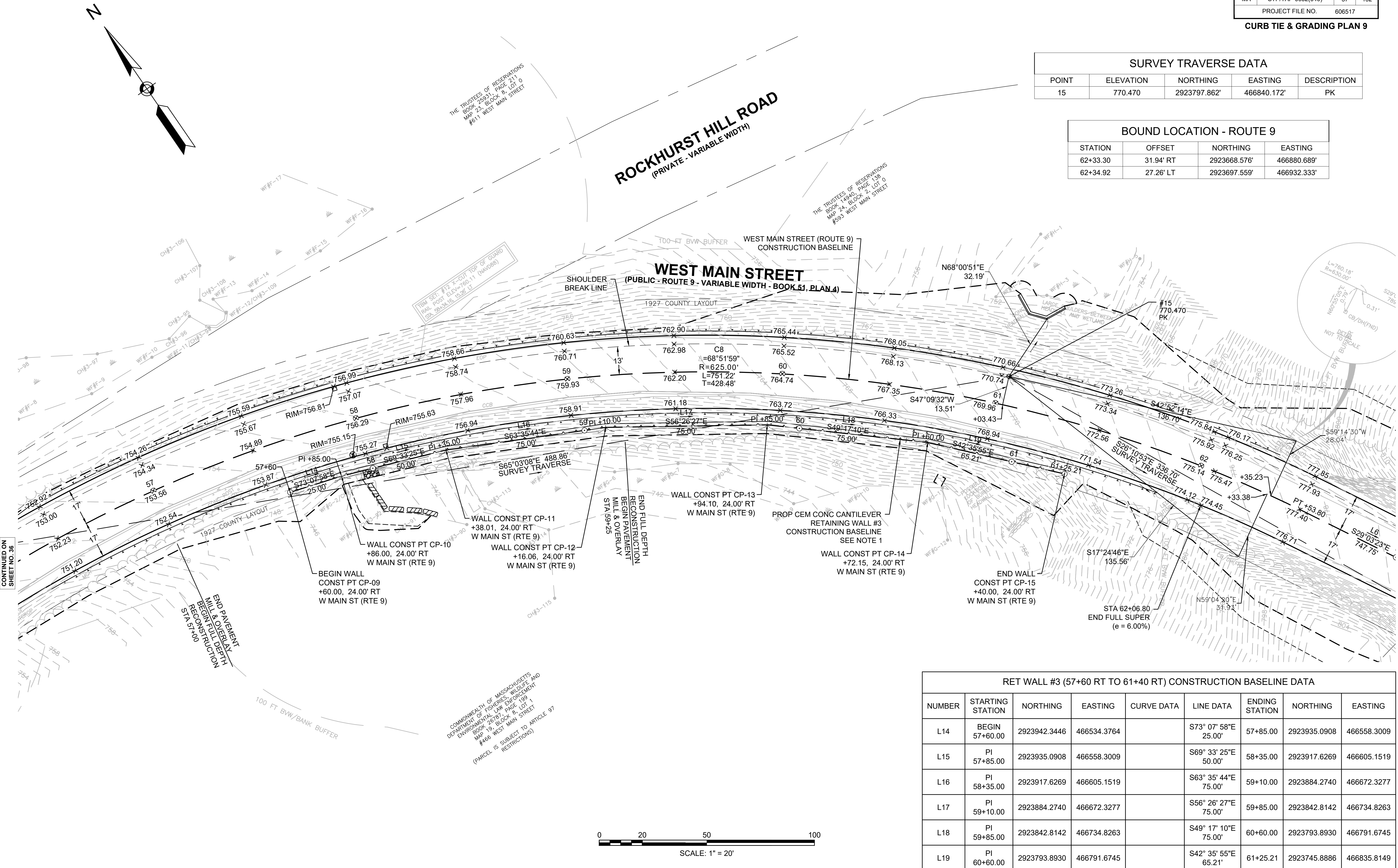
**WEST BROOKFIELD
 WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	37	132
PROJECT FILE NO. 606517			

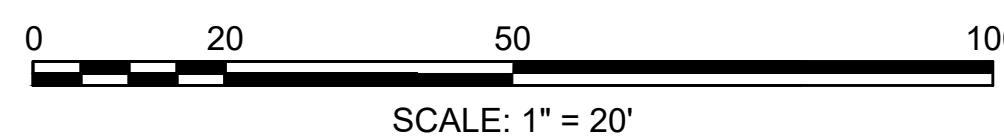
CURB TIE & GRADING PLAN 9

SURVEY TRAVERSE DATA				
POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
15	770.470	2923797.862'	466840.172'	PK

BOUND LOCATION - ROUTE 9			
STATION	OFFSET	NORTHING	EASTING
62+33.30	31.94' RT	2923668.576'	466880.689'
62+34.92	27.26' LT	2923697.559'	466932.333'



RET WALL #3 (57+60 RT TO 61+40 RT) CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	BEGIN 57+60.00	2923942.3446	466534.3764		S73° 07' 58"E 25.00'	57+85.00	2923935.0908	466558.3009
L15	PI 57+85.00	2923935.0908	466558.3009		S69° 33' 25"E 50.00'	58+35.00	2923917.6269	466605.1519
L16	PI 58+35.00	2923917.6269	466605.1519		S63° 35' 44"E 75.00'	59+10.00	2923884.2740	466672.3277
L17	PI 59+10.00	2923884.2740	466672.3277		S56° 26' 27"E 75.00'	59+85.00	2923842.8142	466734.8263
L18	PI 59+85.00	2923842.8142	466734.8263		S49° 17' 10"E 75.00'	60+60.00	2923793.8930	466791.6745
L19	PI 60+60.00	2923793.8930	466791.6745		S42° 35' 55"E 65.21'	61+25.21	2923745.8886	466835.8149



CONTINUED ON SHEET NO. 36

CONTINUED ON SHEET NO. 38

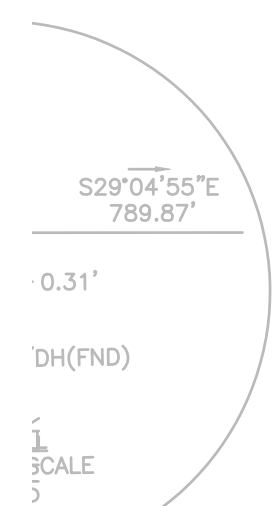
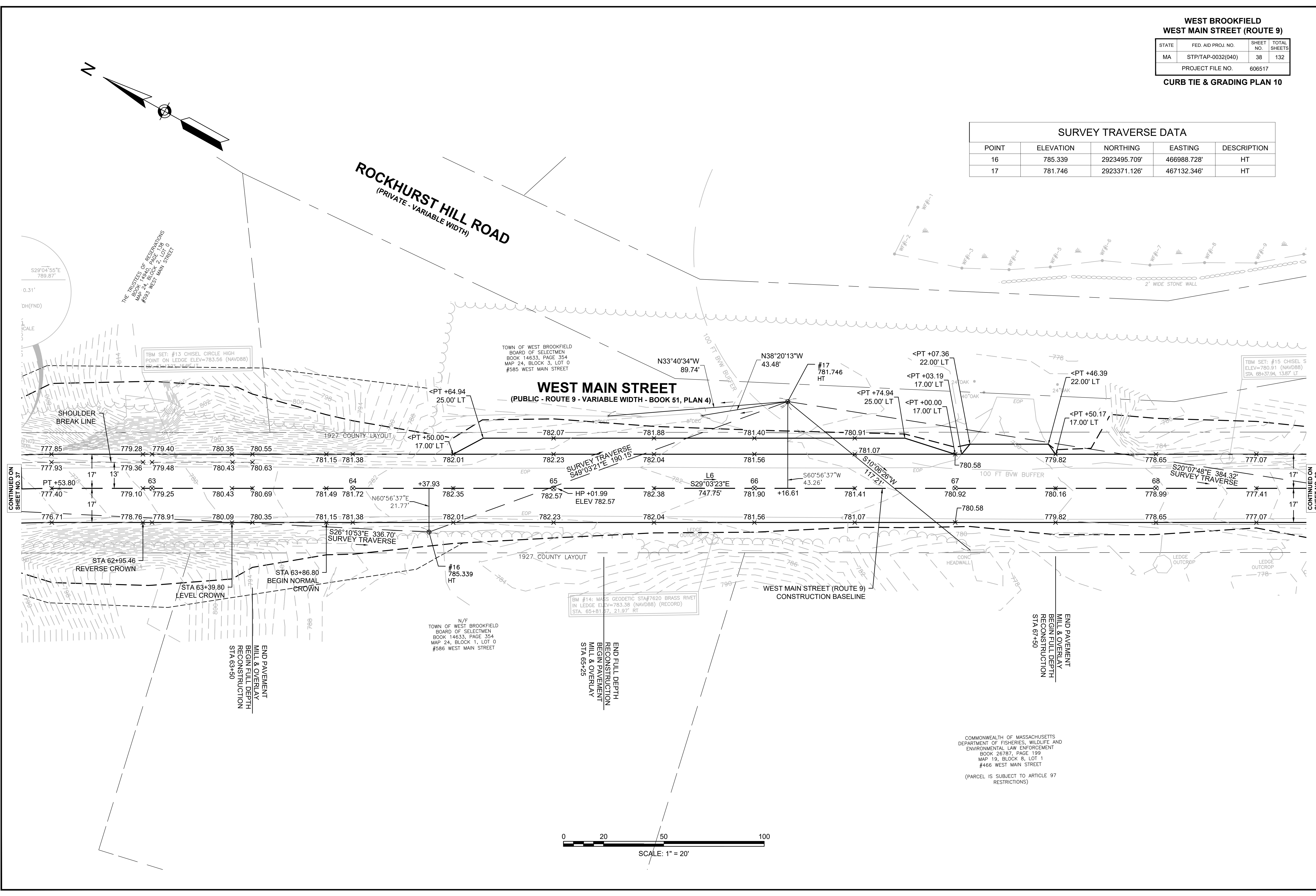
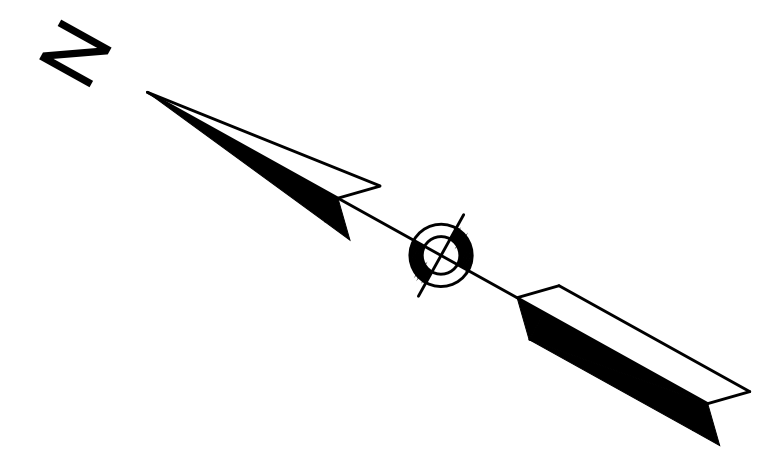
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	38	132
PROJECT FILE NO. 606517			

CURB TIE & GRADING PLAN 10

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
16	785.339	2923495.709'	466988.728'	HT
17	781.746	2923371.126'	467132.346'	HT



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 199
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

0 20 50 100
SCALE: 1" = 20'

CONTINUED ON
SHEET NO. 37

CONTINUED ON
SHEET NO. 39

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**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	39	132

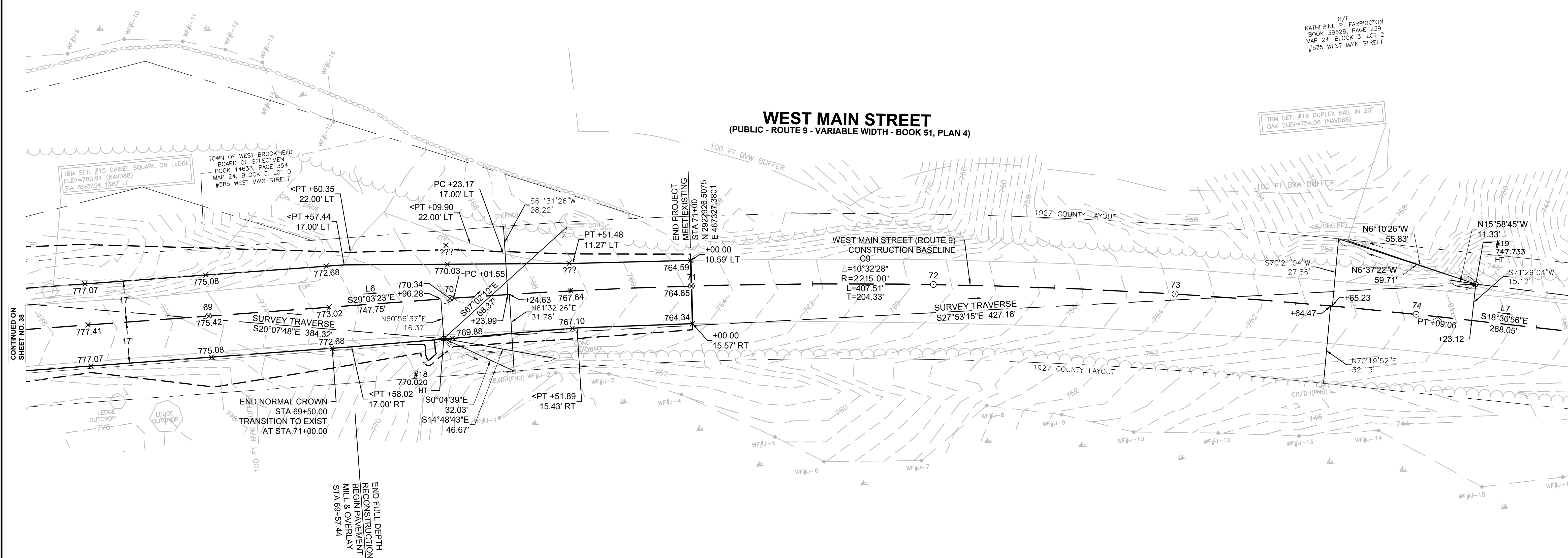
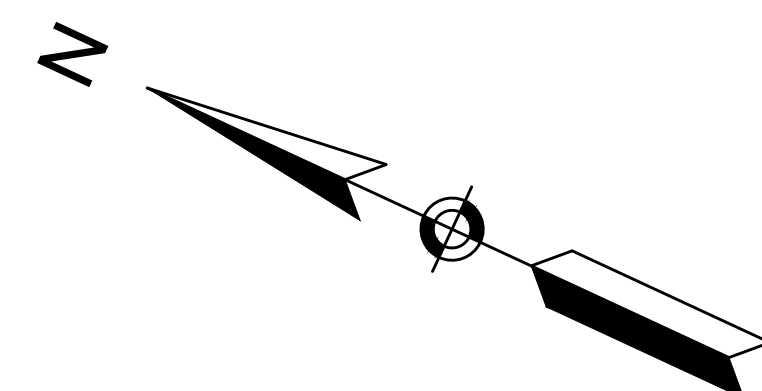
PROJECT FILE NO. 606517
CURB TIE & GRADING PLAN 11

BOUND LOCATION - ROUTE 9

STATION	OFFSET	NORTHING	EASTING
73+64.47	32.13' RT	2922672.557'	467400.776'
73+65.23	27.86' LT	2922692.016'	467457.533'

SURVEY TRAVERSE DATA

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION
18	770.020	2923010.258'	467264.619'	HT
19	747.733	2922632.704'	467464.420'	HT



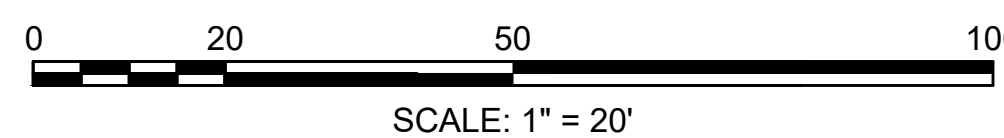
N/F
KATHERINE P. FARRINGTON
BOOK 39628, PAGE 239
MAP 24, BLOCK 3, LOT 2
#575 WEST MAIN STREET

TBM SET: #16 DUPLEX NAIL IN 20"
OAK ELEV=754.06 (NAVD89)

**WEST MAIN STREET
(PUBLIC - ROUTE 9 - VARIABLE WIDTH - BOOK 51, PLAN 4)**

CONTINUED ON
SHEET NO. 38

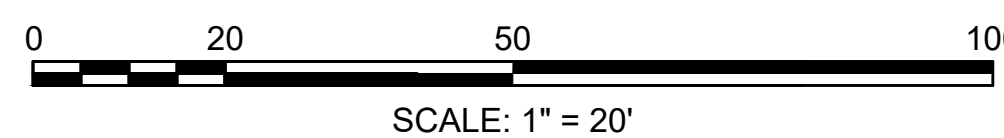
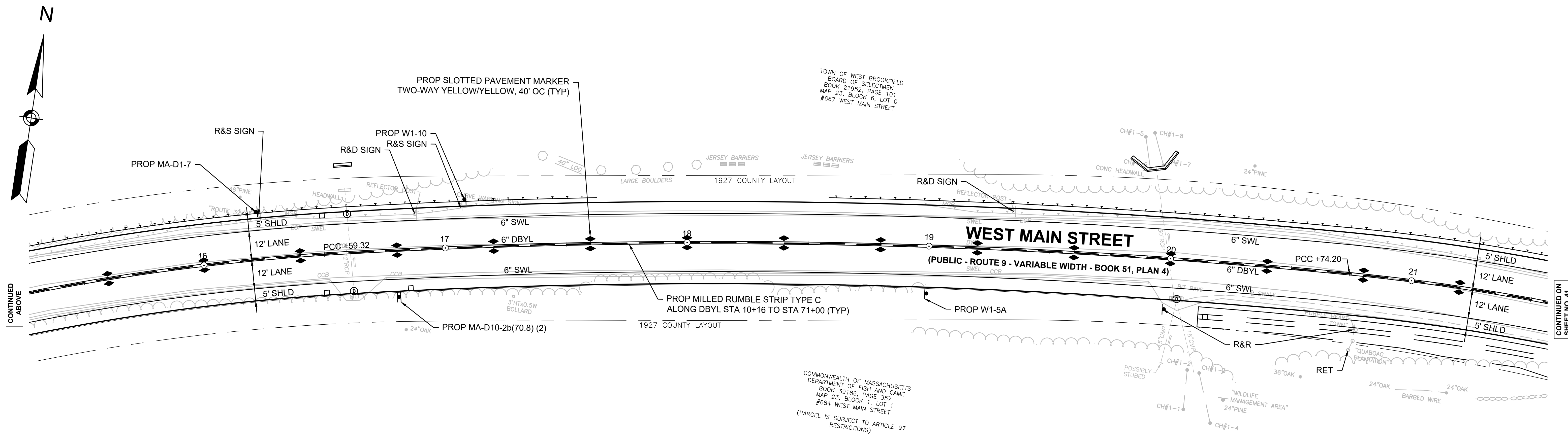
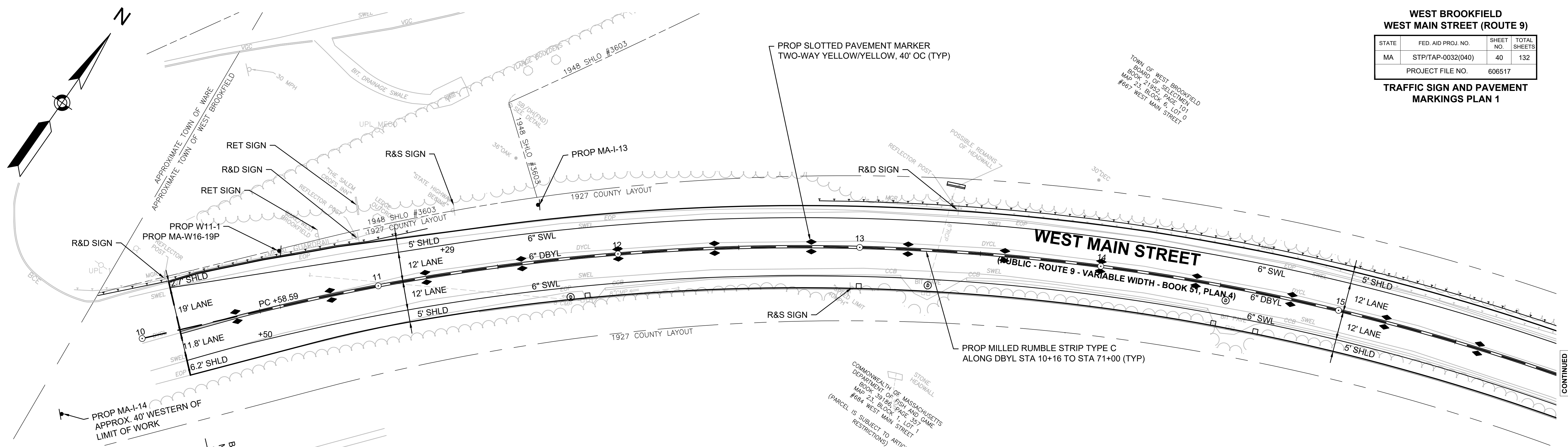
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISHERIES, WILDLIFE AND
ENVIRONMENTAL LAW ENFORCEMENT
BOOK 26787, PAGE 199
MAP 19, BLOCK 8, LOT 1
#466 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	40	132
PROJECT FILE NO.		606517	

TRAFFIC SIGN AND PAVEMENT MARKINGS PLAN 1



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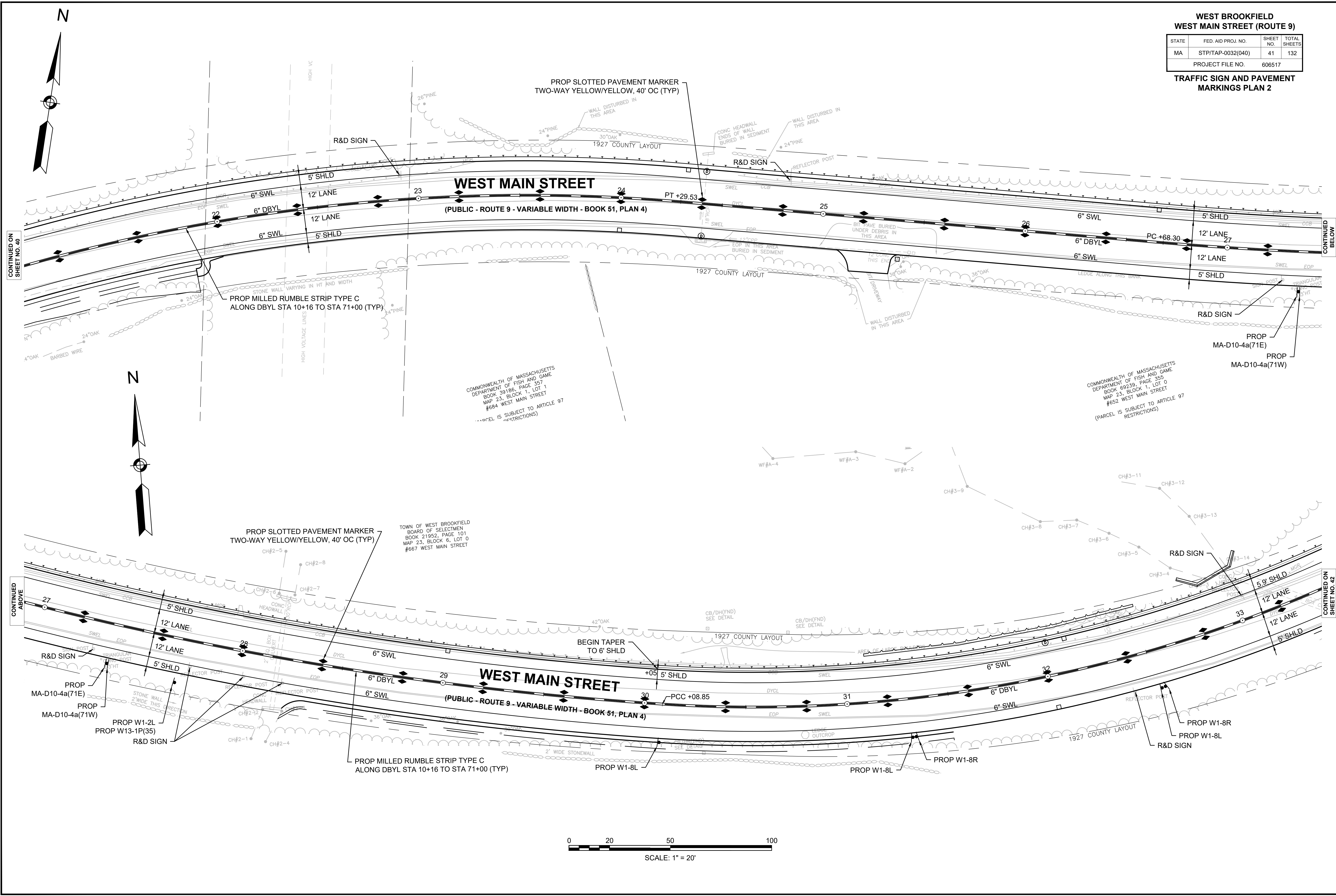
CONTINUED ON SHEET NO. 41

CONTINUED BELOW

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	41	132
PROJECT FILE NO.		606517	

TRAFFIC SIGN AND PAVEMENT MARKINGS PLAN 2

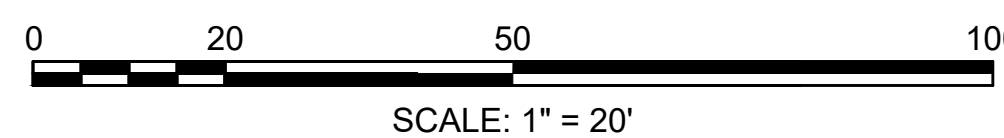


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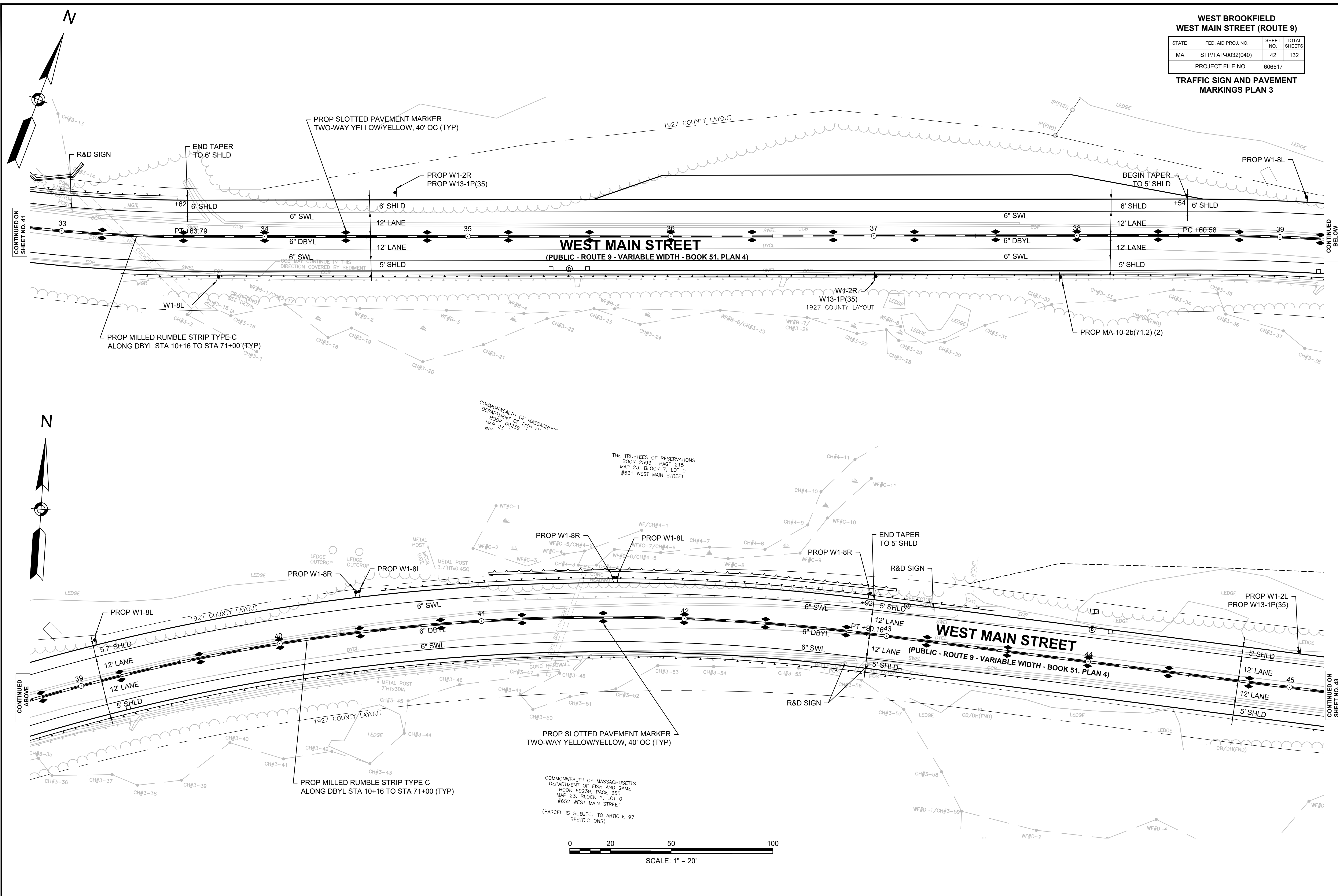
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**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	42	132
PROJECT FILE NO. 606517			

TRAFFIC SIGN AND PAVEMENT MARKINGS PLAN 3

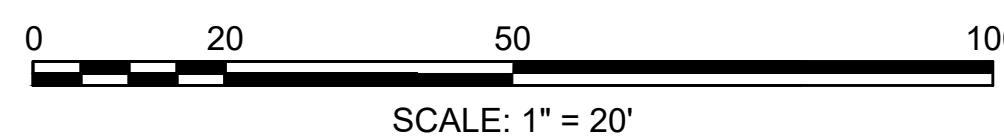


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SHEET NO. 41

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BELOW

CONTINUED
ABOVE

CONTINUED ON
SHEET NO. 43



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 69239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET
(PARCEL IS SUBJECT TO ARTICLE 97
RESTRICTIONS)

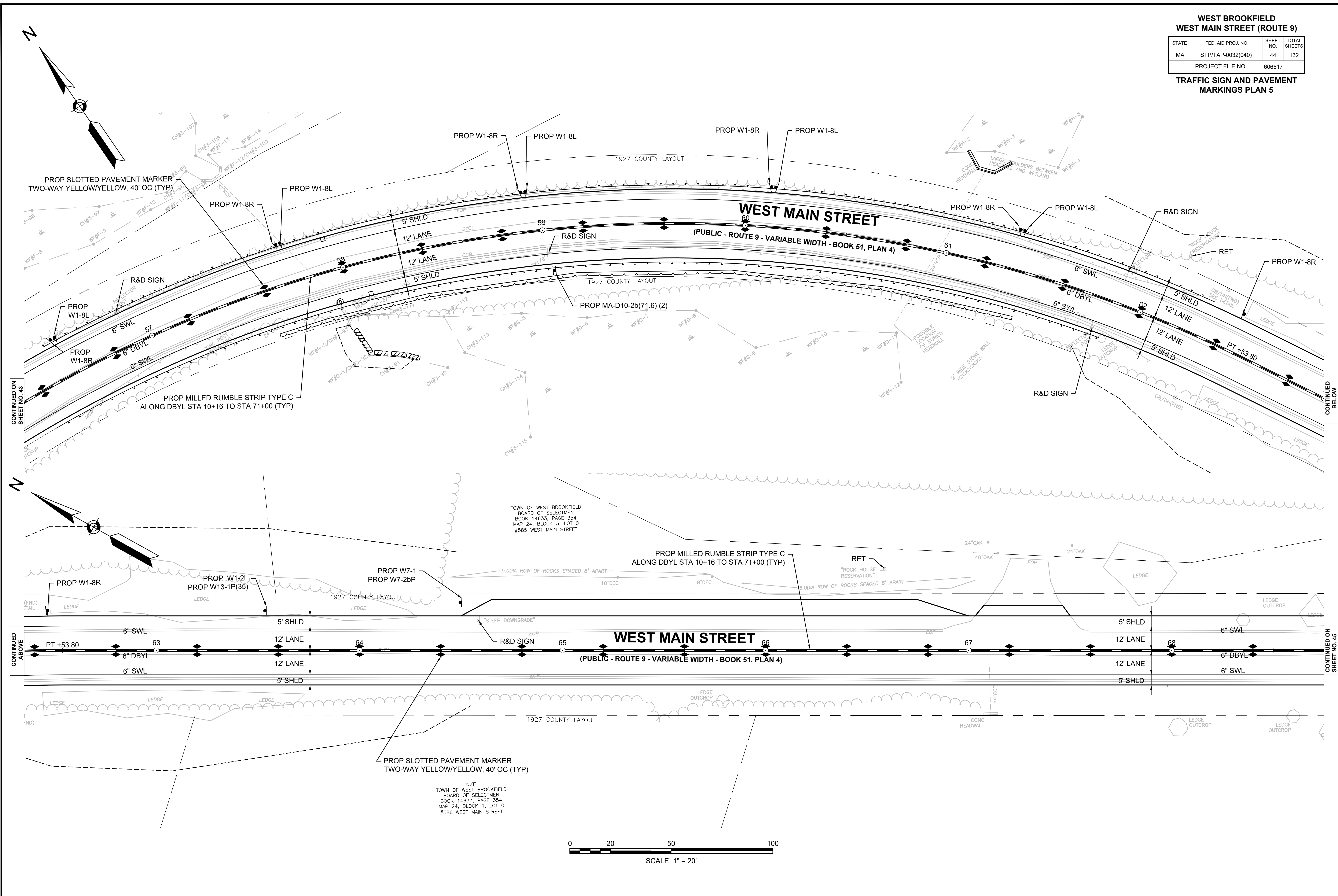
THE TRUSTEES OF RESERVATIONS
BOOK 25931, PAGE 215
MAP 23, BLOCK 7, LOT 0
#631 WEST MAIN STREET

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 69239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	44	132
PROJECT FILE NO.		606517	

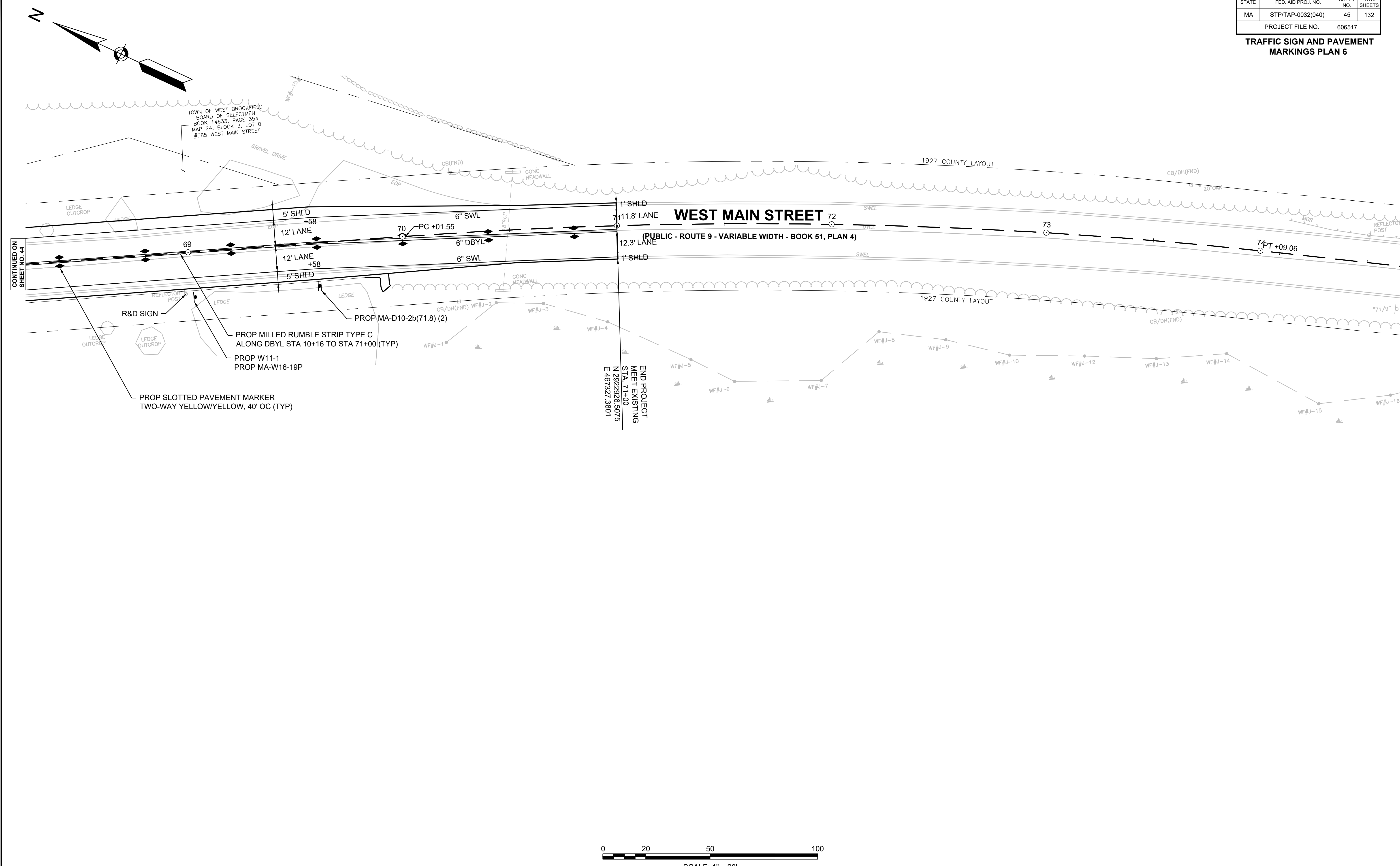
TRAFFIC SIGN AND PAVEMENT MARKINGS PLAN 5



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	45	132
PROJECT FILE NO.		606517	

**TRAFFIC SIGN AND PAVEMENT
MARKINGS PLAN 6**



TRAFFIC SIGN SUMMARY

WEST BROOKFIELD WEST MAIN STREET (ROUTE 9)

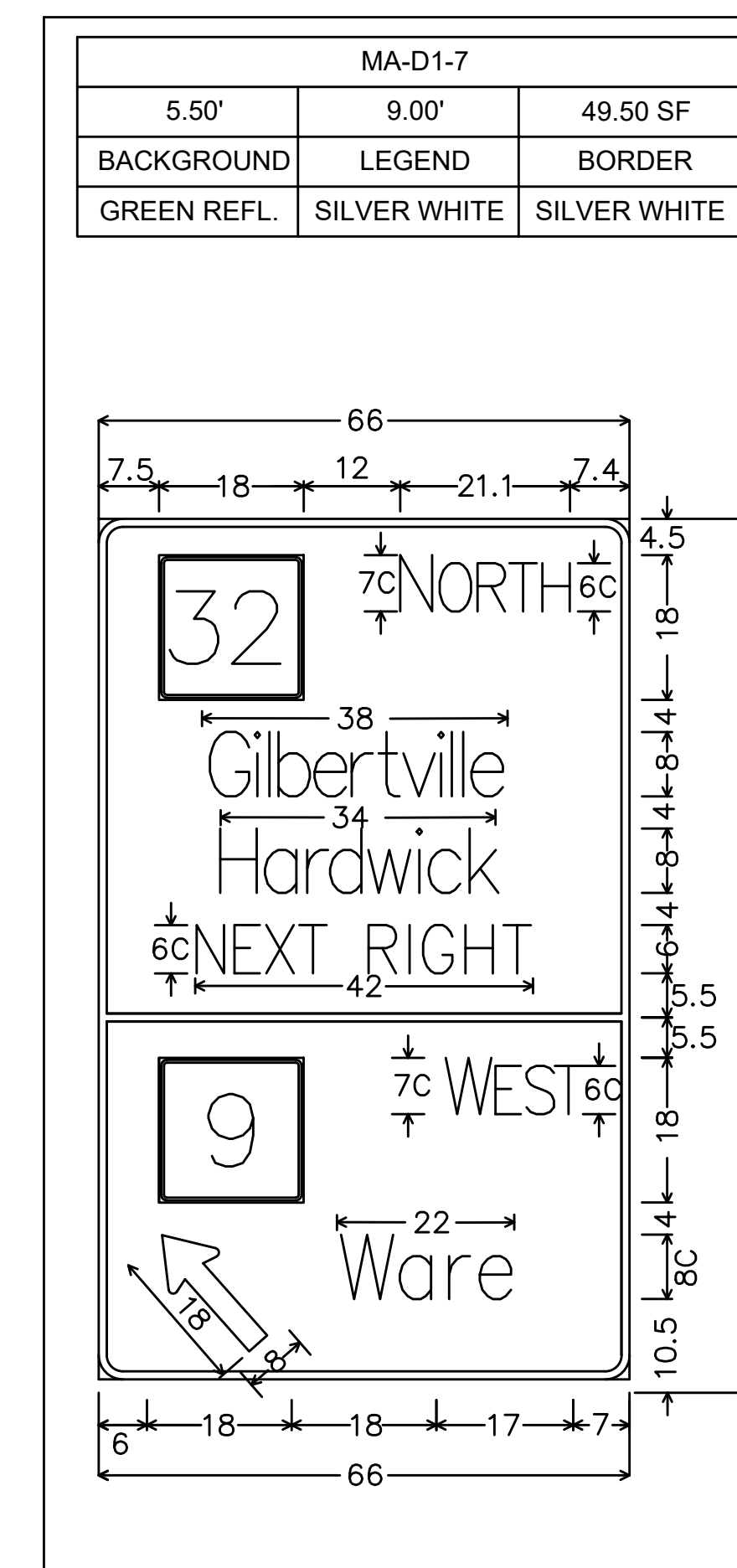
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	46	132
PROJECT FILE NO. 606517			

TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
W1-2L	30"	30"		①	①	①	3	YELLOW	BLACK	BLACK	P-5 (3)	6.25	18.75
W1-2R	30"	30"					3	YELLOW	BLACK	BLACK	P-5 (3)	6.25	18.75
W1-5A	30"	30"					1	YELLOW	BLACK	BLACK	P-5 (1)	6.25	6.25
W1-5B	30"	30"					1	YELLOW	BLACK	BLACK	P-5 (1)	6.25	6.25
W1-8L	18"	24"					13	YELLOW	BLACK	BLACK	P-5 (13)	3.00	39.00
W1-8R	18"	24"					10	YELLOW	BLACK	BLACK	P-5 (10)	3.00	30.00
W1-10	36"	36"					1	YELLOW	BLACK	BLACK	P-5 (1)	9.00	9.00
W7-1	30"	30"					1	YELLOW	BLACK	BLACK	P-5 (1)	6.25	6.25
W7-2bP	24"	18"					1	YELLOW	BLACK	BLACK	MOUNT W/ W7-1 (1)	3.00	3.00
W11-1	30"	30"					2	YELLOW	BLACK	BLACK	P-5 (2)	6.25	12.50
W13-1P(35)	18"	18"					6	YELLOW	BLACK	BLACK	MOUNT W/ W1-2R (3) & W1-2L (3)	2.25	13.50
MA-W16-19P	24"	18"		②	②	②	2	YELLOW	BLACK	BLACK	MOUNT W/ W11-1 (2)	3.00	6.00
M3-2P	24"	12"		①	①	①	1	WHITE	BLACK	BLACK	MOUNT W/ MA-M5-1 (1)	2.00	2.00
M3-4P	24"	12"		①	①	①	1	WHITE	BLACK	BLACK	MOUNT W/ MA-M5-1 (1)	2.00	2.00
MA-M1-5	24"	24"		②	②	②	2	WHITE	BLACK	BLACK	P-5 (2)	4.00	8.00
MA-I-14	24"	30"					1	GREEN	WHITE	WHITE	P-5 (1)	5.00	5.00
MA-I-13	24"	30"					1	GREEN	WHITE	WHITE	P-5 (1)	5.00	5.00

- ① SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
- ② SEE MASSDOT STANDARD SIGN BOOK

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. MKR.		BACK-GROUND	LEGEND	BORDER			
MA-D10-2b (70.8)	24"	30"		②	②	②	2	GREEN	WHITE	WHITE	P-5 (1)	5.00	10.00
MA-D10-2b (71.2)	24"	30"		②	②	②	2	GREEN	WHITE	WHITE	P-5 (1)	5.00	10.00
MA-D10-2b (71.4)	24"	30"		②	②	②	2	GREEN	WHITE	WHITE	P-5 (1)	5.00	10.00
MA-D10-2b (71.6)	24"	30"		②	②	②	2	GREEN	WHITE	WHITE	P-5 (1)	5.00	10.00
MA-D10-2b (71.8)	24"	30"		②	②	②	2	GREEN	WHITE	WHITE	P-5 (1)	5.00	10.00
MA-D10-4a (71E)	18"	36"		②	②	②	1	GREEN	WHITE	WHITE	P-5 (1)	4.50	4.50
MA-D10-4a (71W)	18"	36"		②	②	②	1	GREEN	WHITE	WHITE	MOUNT W/ MA-D10-4a (71E)	4.50	4.50



SHEET SUMMARY
TOTAL AREA OF SIGNS 49.50 SF

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	47	132
PROJECT FILE NO. 606517			

TEMPORARY TRAFFIC CONTROL PLAN 1

GENERAL NOTES

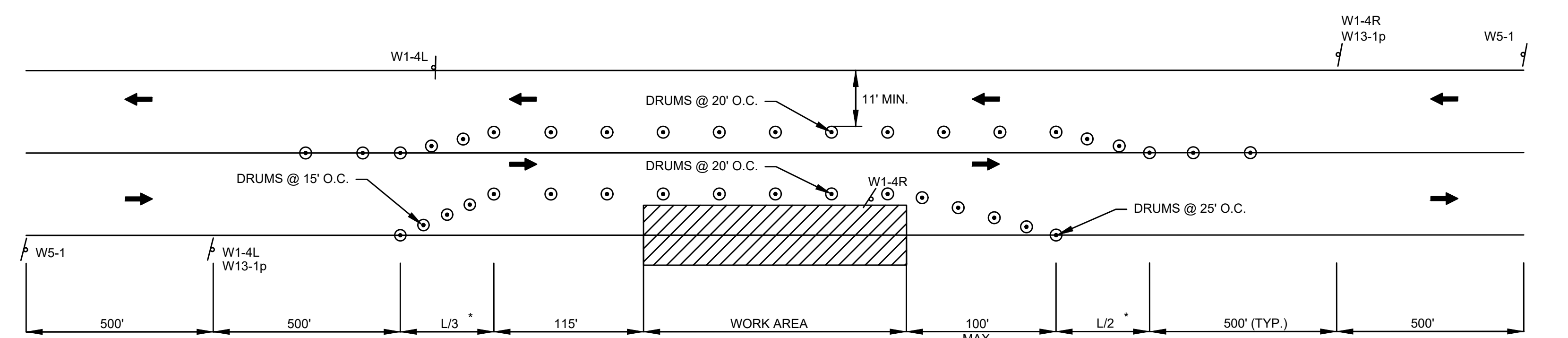
- ALL CONSTRUCTION SIGNING, DRUMS, BARRICADES AND OTHER DEVICES SHALL CONFORM WITH PART 8 OF THE LATEST EDITION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
- ALL DRUMS SHALL BE SET @ 25' O.C. MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE RESIDENT ENGINEER.
- ALL DRUMS SHALL BE APPROPRIATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN ADEQUATE ABUTTER ACCESS AT ALL TIMES. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR, AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORK HOURS, TO MAINTAIN SUCH ACCESS.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE CONTRACTOR SHALL NOTIFY THE TOWN OF WEST BROOKFIELD POLICE, FIRE, D.P.W. AND MASSDOT AT LEAST 48 HOURS IN ADVANCE OF LANE CLOSURES.
- GRADE SEPARATIONS IN EXCESS OF 2 INCHES DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF DRUMS AND TEMPORARY RAMPING AS REQUIRED BY THE RESIDENT ENGINEER.
- EXCAVATION EDGES IN EXCESS OF 4 INCHES DEEP SHALL BE PROTECTED DURING NON-WORKING HOURS BY BACKFILLING WITH A WEDGE OF GRAVEL OR SOIL COMPACTED TO A 4:1 SLOPE.
- 11" MINIMUM LANE WIDTHS SHALL BE MAINTAINED DURING CONSTRUCTION.
- NONESSENTIAL TEMPORARY CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS.
- ADVISORY SPEED PLATES (W13-1) SHALL BE USED IF APPROPRIATE AND AS DIRECTED BY THE ENGINEER.
- ALL TRAFFIC MANAGEMENT SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN POST.
- THE SUGGESTED GENERAL CONSTRUCTION SEQUENCE IS:
 - CLEAR AND GRUB AND CONSTRUCT CUT AND FILL SLOPES PER PLANS. WIDEN ROADWAY ON ONE SIDE AT A TIME.
 - MAINTAIN ROADWAY OPEN TO TWO-LANE TRAFFIC AT THE END OF THE WORK DAY EXCEPT AREAS OF RETAINING WALL CONSTRUCTION THAT REQUIRE A TEMPORARY SIGNAL.
 - ONCE ALL ROADWAY WIDENING HAS BEEN COMPLETED PAVE ROADWAY TO FINAL GRADE.
 - REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

OPERATIONAL SIGNING

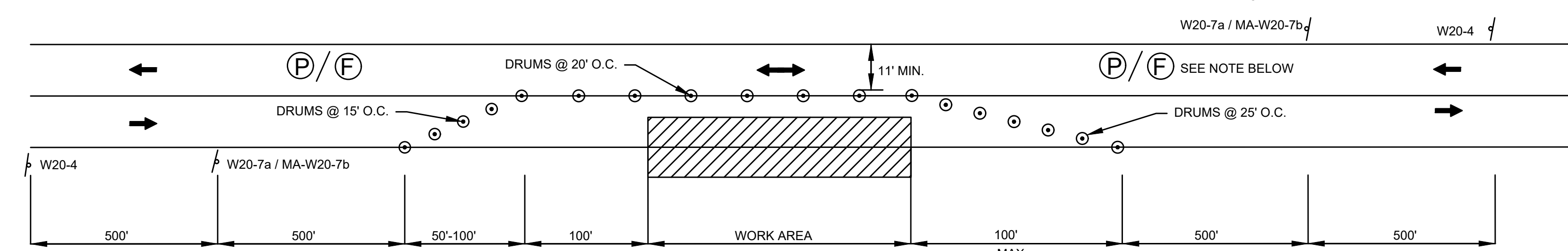
TEMPORARY LANE CLOSURES SHOWN ARE FOR ROADWAY CONSTRUCTION. ALL DRUMS AND SIGNS ARE SHOWN AS THEY SHOULD APPEAR DURING THE WORKING DAY, OR WHILE OPERATING IN THE WORK ZONE. FOR WORK ON OPPOSITE SIDES OF ROADWAY, REVERSE ALL SIGNING, DRUMS, AND TAPER LENGTHS.

LEGEND

- REFLECTORIZED DRUM
- PROPOSED TRAFFIC FLOW
- WORK ZONE
- ROADWAY FLAGGER
- POLICE DETAIL
- CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE



TYPICAL TWO WAY STREET LANE SHIFT
N.T.S.



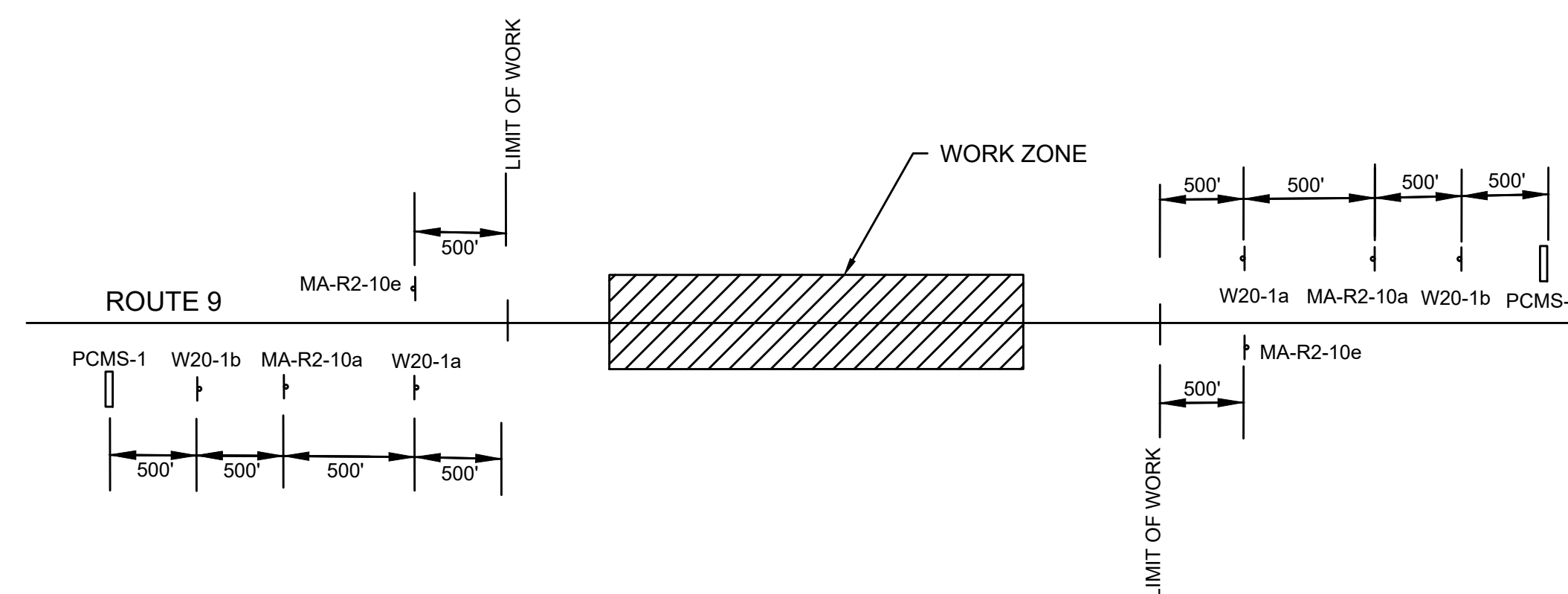
TYPICAL TWO WAY STREET LANE CLOSURE
N.T.S.

- NOTES:
- WORK THAT WILL DISRUPT EXISTING TRAFFIC PATTERNS WITHIN THE EXISTING ROADWAYS (LANE REDUCTION, ETC.) SHALL ONLY BE DONE DURING OFF PEAK HOURS OR IF A TEMPORARY TRAFFIC CONTROL SIGNAL IS USED AS DIRECTED BY THE ENGINEER. NUMBERS AND LOCATION OF ROADWAY FLAGGERS FOR WORK ZONE AND/OR DETOUR MANAGEMENT SHALL BE DETERMINED BY THE RESIDENT ENGINEER ON A CASE BY CASE BASIS, AS WORK PROGRESSES.

TEMPORARY TRAFFIC SIGN SUMMARY

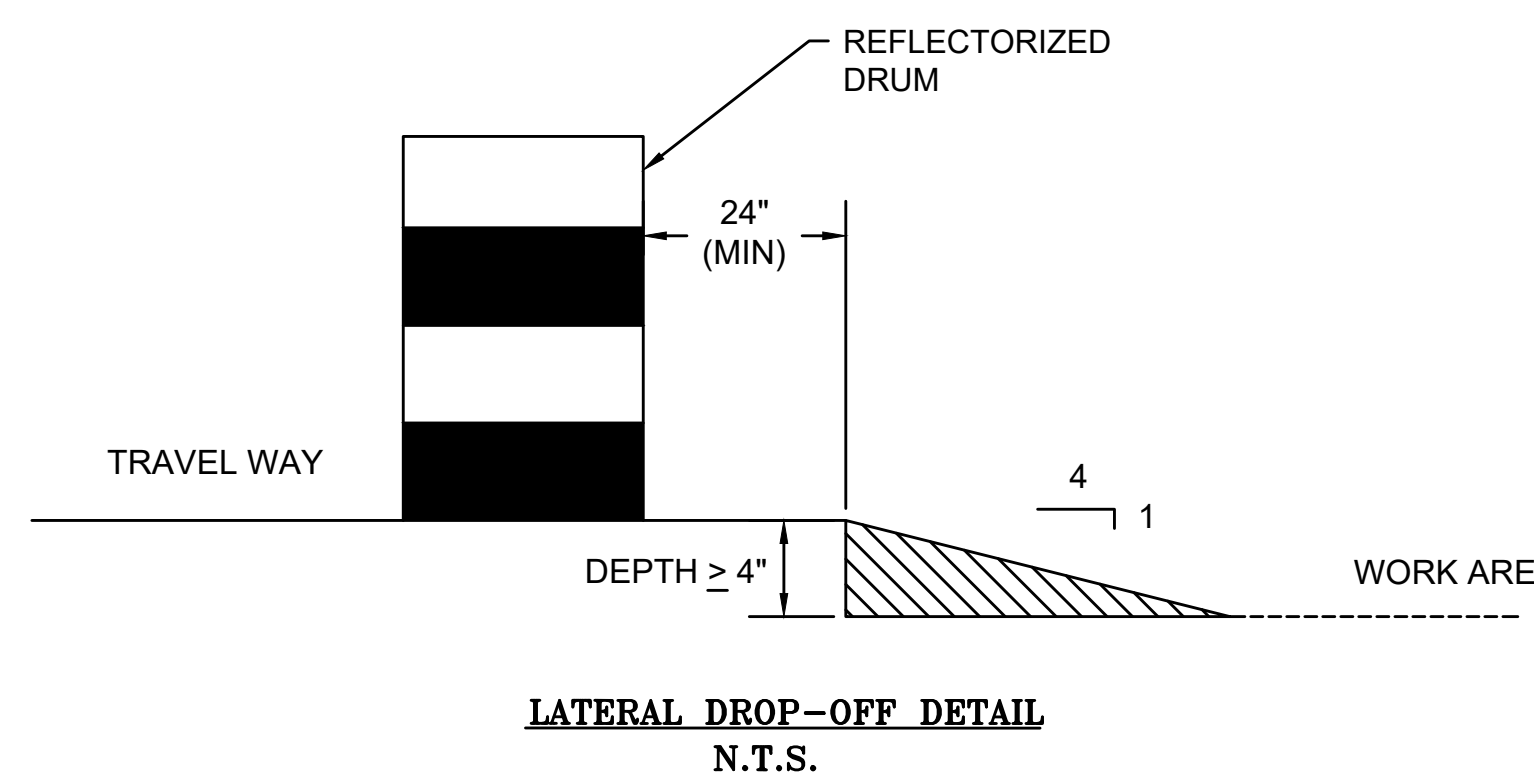
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	AREA IN SQUARE FEET	COLOR		
	WIDTH	HEIGHT					BACKGROUND	LEGEND	BORDER
MA-R2-10a	48"	36"	WORK ZONES SPEEDING FINES DOUBLED	2	12.0	24.00	FLUORESCENT ORANGE/ WHITE	BLACK	BLACK
MA-R2-10e	36"	48"	END ROAD WORK DOUBLES FINES END	2	12.0	24.00	FLUORESCENT ORANGE/ WHITE	BLACK	BLACK
W1-4L	36"	36"		2	9.00	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W1-4R	36"	36"		3	9.00	27.00	FLUORESCENT ORANGE	BLACK	BLACK
W5-1	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W13-1p	24"	24"	XX M.P.H.	2	4.0	8.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-1a	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-1b	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-4	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-7a	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
MA-W20-7b	36"	36"		3	9.0	27.00	FLUORESCENT ORANGE	BLACK	BLACK
W8-1	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W8-3	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W8-24	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK
W8-15	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK

NOTE: SIGNS SHALL CONFORM TO THE MASSDOT STANDARD SIGN BOOK AND 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS

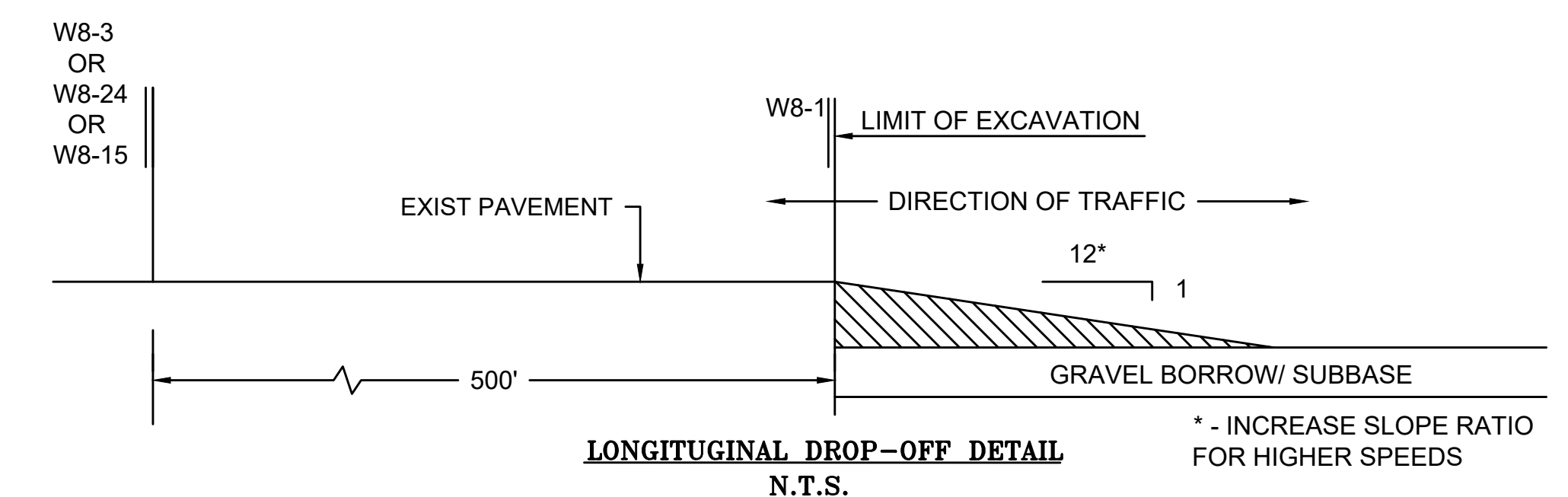


ADVANCED WARNING SIGN SCHEMATIC
N.T.S.

- NOTE:
- PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PLACED ONE WEEK PRIOR TO WORK WHICH MAY REQUIRE LANE CLOSURES OR RESTRICTIONS.

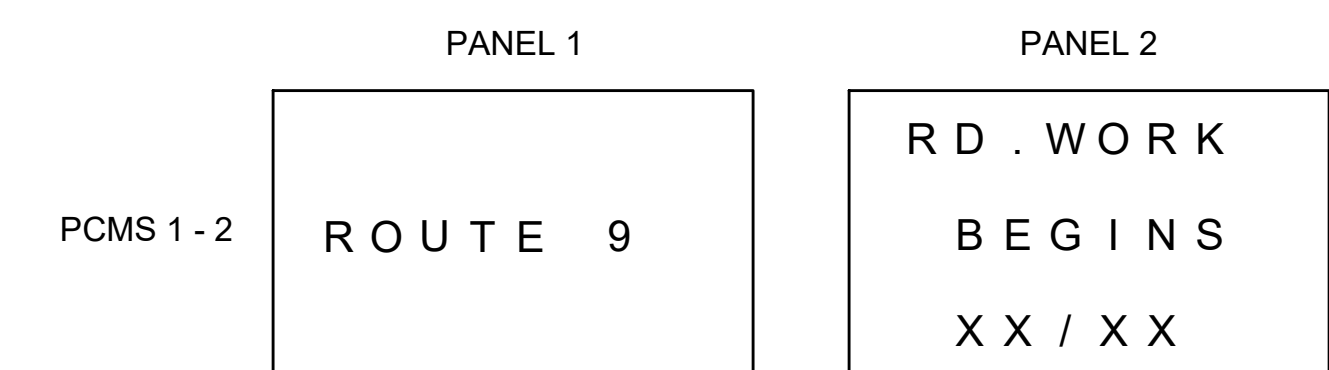


LATERAL DROP-OFF DETAIL
N.T.S.

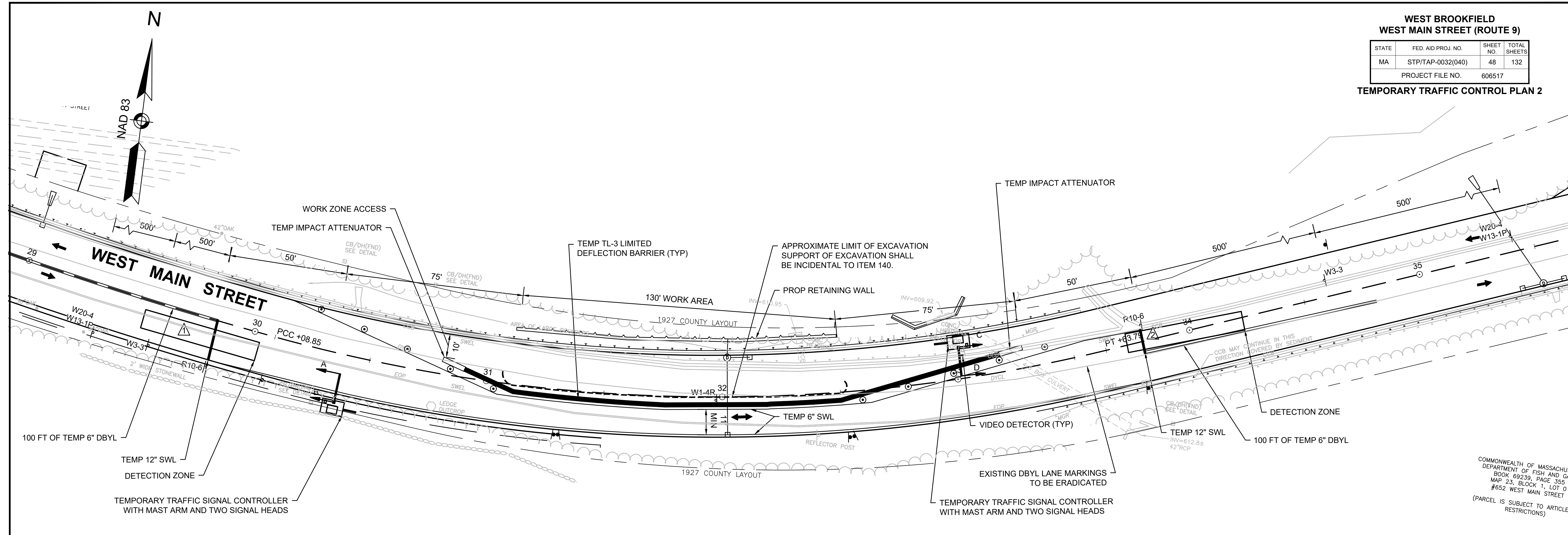


LONGITUDINAL DROP-OFF DETAIL
N.T.S.

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

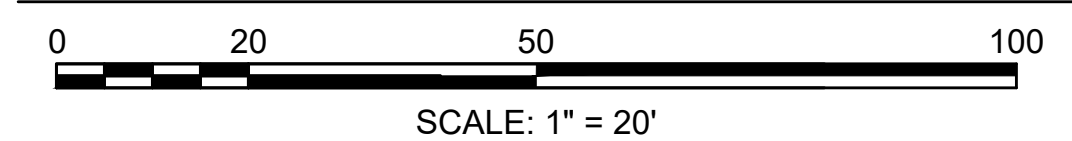


PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

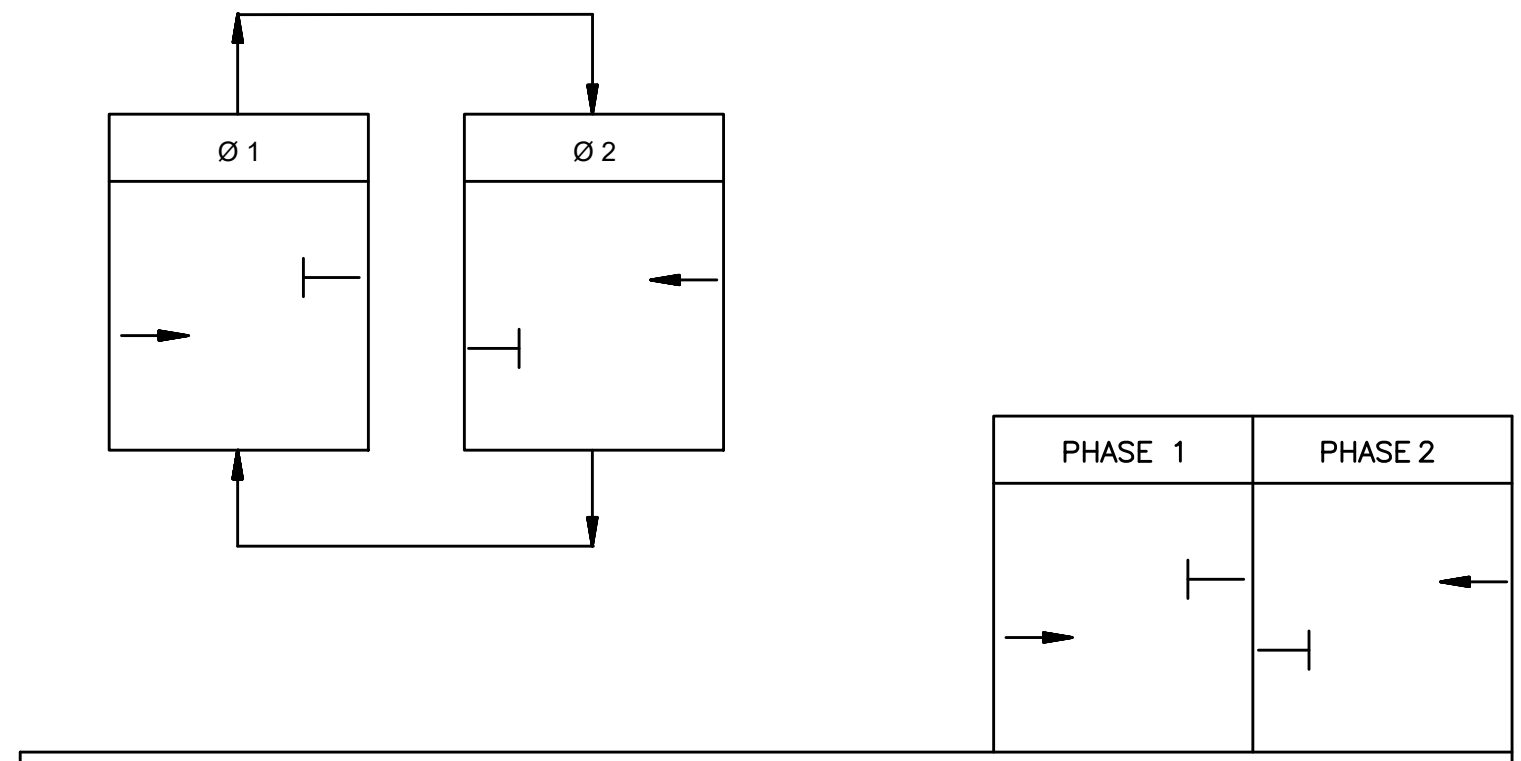


COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF FISH AND GAME
BOOK 69239, PAGE 355
MAP 23, BLOCK 1, LOT 0
#652 WEST MAIN STREET
(PARCEL ...)

ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC CONTROL SIGNAL - LOCATION 1



PREFERENTIAL PHASING SEQUENCE



SEQUENCE AND TIMING FOR PRE-TIMED CONTROL (ISOLATED)			
STREET	DIRECTION	HOUSINGS	
ROUTE 9	EB	A,B	G Y R R R R
ROUTE 9	WB	C,D	R R R G Y R
TIMING IN SECONDS			
MINIMUM GREEN			8 8
MAXIMUM GREEN			23 19
YELLOW CLEARANCE			4 4
RED CLEARANCE			11 11
RECALL		MIN	MIN
MEMORY		NON-LOCK	NON-LOCK

NOTE: THE ADVISORY SPEED USED FOR THE CLEARANCE INTERVALS WAS 30 MPH.

NOTES

- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER FOR RETAINING WALL CONSTRUCTION.
- WIDENED AREAS ON THE SOUTH SIDE SHALL BE PREPARED AND SURFACE SHALL BE RESTORED PRIOR TO THE WALL EXCAVATION TO MAINTAIN A MINIMUM 11' WIDE LANE AT ALL TIMES.
- THE FIRST TEN DRUMS USED FOR TAPERS ADJACENT TO THE WORK ZONE SHALL BE EQUIPPED WITH FLASHING LIGHTS.
- A TRAFFIC CONTROL SIGNAL REGULATION MUST BE SUBMITTED AND SIGNED BY THE STATE TRAFFIC ENGINEER FOR ALL TEMPORARY SIGNAL LOCATIONS BEFORE THEY ARE ERECTED.

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	AREA IN SQUARE FEET	COLOR		
	WIDTH	HEIGHT					BACK-GROUND	LEGEND	BORDER
R10-6	24"	36"		2	6.0	12.00	WHITE	BLACK	BLACK
W1-4R	36"	36"		1	9.0	9.00	FLUORESCENT ORANGE	BLACK	BLACK
W3-3	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK/RED/YELLOW/GREEN	BLACK
W13-1p	24"	24"		2	4.0	8.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-4	36"	36"		2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK

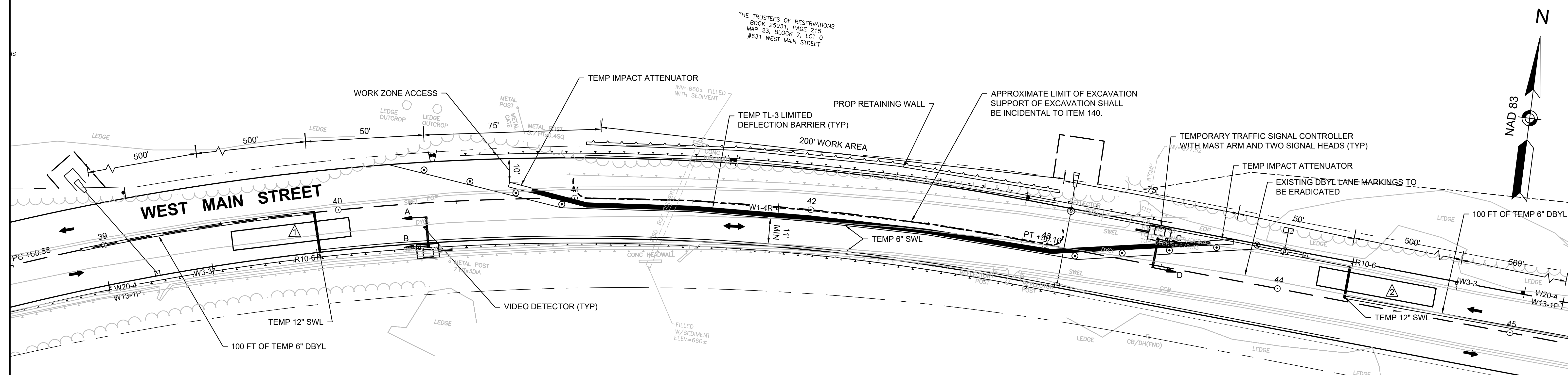
DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-

LEGEND

- REFLECTORIZED CONE
- REFLECTORIZED DRUM
- PROPOSED TRAFFIC FLOW
- WORK ZONE
- TYPE III BARRIER
- CONSTRUCTION SIGN
- NOT TO SCALE
- PORTABLE TRAFFIC SIGNAL WITH VIDEO DETECTOR
- TEMP IMPACT ATTENUATOR



ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC CONTROL SIGNAL - LOCATION 2

0 20 50 100
SCALE: 1" = 20'

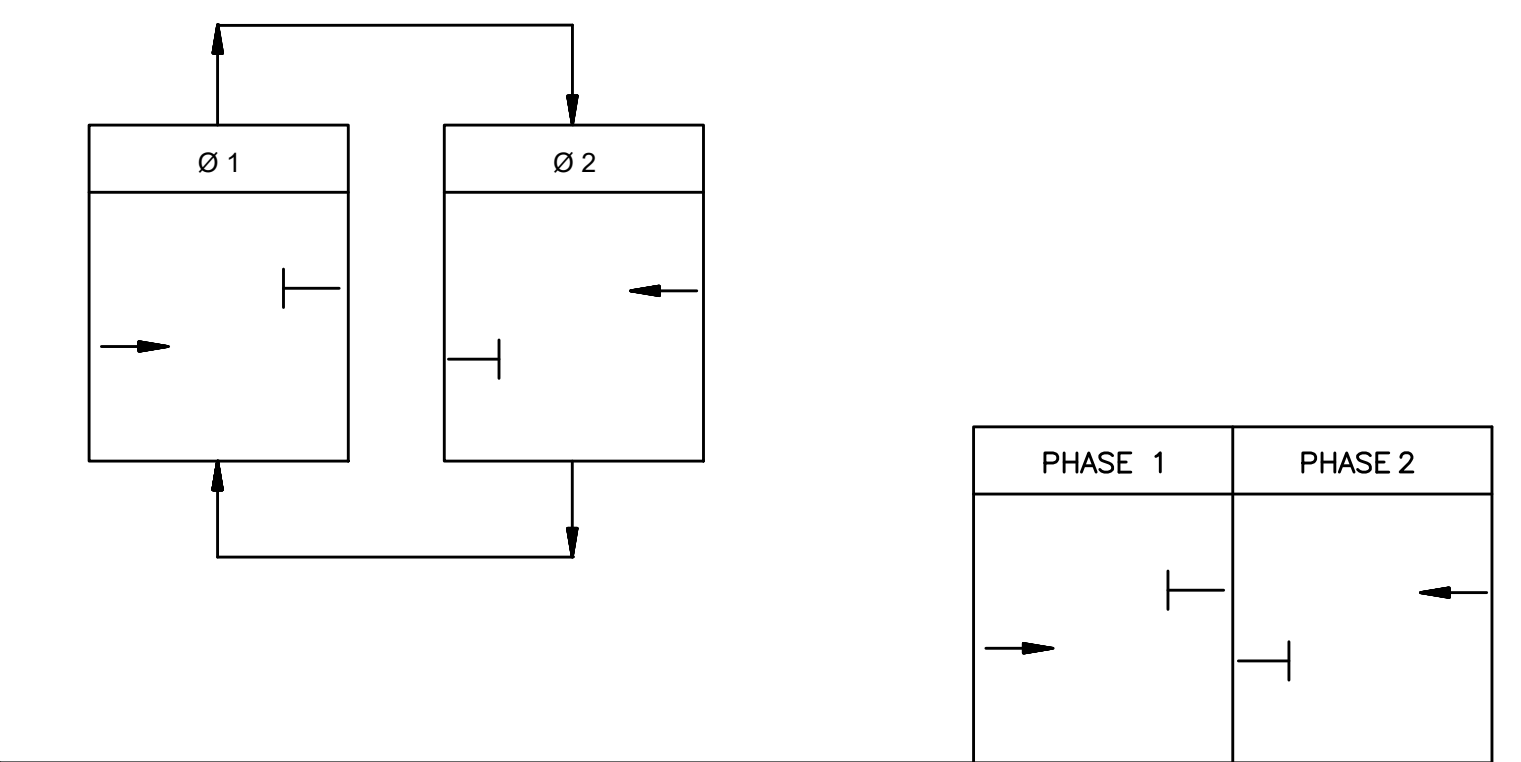
- NOTES**
- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER FOR RETAINING WALL CONSTRUCTION.
 - WIDENED AREAS ON THE NORTHWEST & SOUTH SIDES SHALL BE PREPARED AND SURFACE SHALL BE RESTORED PRIOR TO THE WALL EXCAVATION TO MAINTAIN A MINIMUM 11' WIDE LANE AT ALL TIMES.
 - THE FIRST TEN DRUMS USED FOR TAPERS ADJACENT TO THE WORK ZONE SHALL BE EQUIPPED WITH FLASHING LIGHTS.
 - A TRAFFIC CONTROL SIGNAL REGULATION MUST BE SUBMITTED AND SIGNED BY THE STATE TRAFFIC ENGINEER FOR ALL TEMPORARY SIGNAL LOCATIONS BEFORE THEY ARE ERECTED.

DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-

PREFERENTIAL PHASING SEQUENCE



SEQUENCE AND TIMING FOR PRE-TIMED CONTROL (ISOLATED)								
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6
ROUTE 9	EB	A,B	G	Y	R	R	R	R
ROUTE 9	WB	C,D	R	R	R	G	Y	R
TIMING IN SECONDS								
MINIMUM GREEN			8			8		
MAXIMUM GREEN			26			22		
YELLOW CLEARANCE				4			4	
RED CLEARANCE					12			12
RECALL			MIN		MIN			
MEMORY			NON-LOCK		NON-LOCK			

NOTE: THE ADVISORY SPEED USED FOR THE CLEARANCE INTERVALS WAS 30 MPH.

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	AREA IN SQUARE FEET	COLOR		
	WIDTH	HEIGHT					BACK-GROUND	LEGEND	BORDER
R10-6	24"	36"	STOP HERE ON RED	2	6.0	12.00	WHITE	BLACK	BLACK
W1-4R	36"	36"	Right Turn Arrow	1	9.0	9.00	FLUORESCENT ORANGE	BLACK	BLACK
W3-3	36"	36"	Three Vertical Bars	2	9.0	18.00	FLUORESCENT ORANGE	BLACK/RED/YELLOW/GREEN	BLACK
W13-1p	24"	24"	XX M.P.H.	2	4.0	8.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-4	36"	36"	ONE LANE ROAD AHEAD	2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK

LEGEND

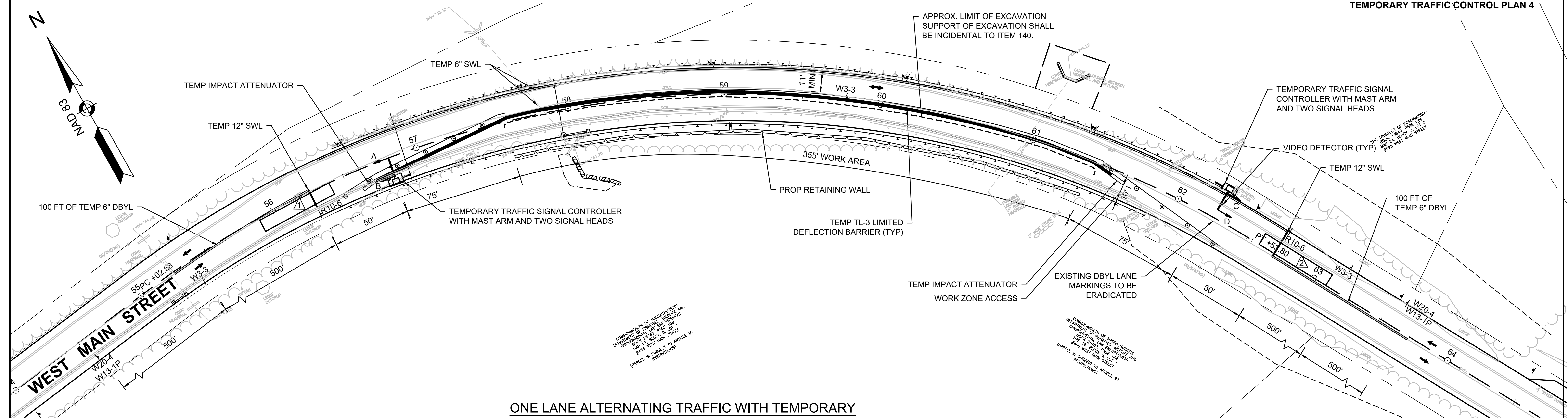
- REFLECTORIZED CONE
- REFLECTORIZED DRUM
- PROPOSED TRAFFIC FLOW
- WORK ZONE
- TYPE III BARICADE
- CONSTRUCTION SIGN
- NOT TO SCALE
- PORTABLE TRAFFIC SIGNAL WITH VIDEO DETECTOR
- TEMP IMPACT ATTENUATOR

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

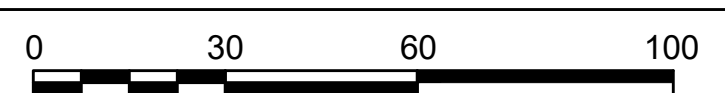
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	50	132
PROJECT FILE NO. 606517			

TEMPORARY TRAFFIC CONTROL PLAN 4

NOTE:
TEMPORARY SHORING MAY BE REQUIRED FOR WALL EXCAVATION AND SHALL BE INCIDENTAL TO ITEM 140.



ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY TRAFFIC CONTROL SIGNAL - LOCATION 3

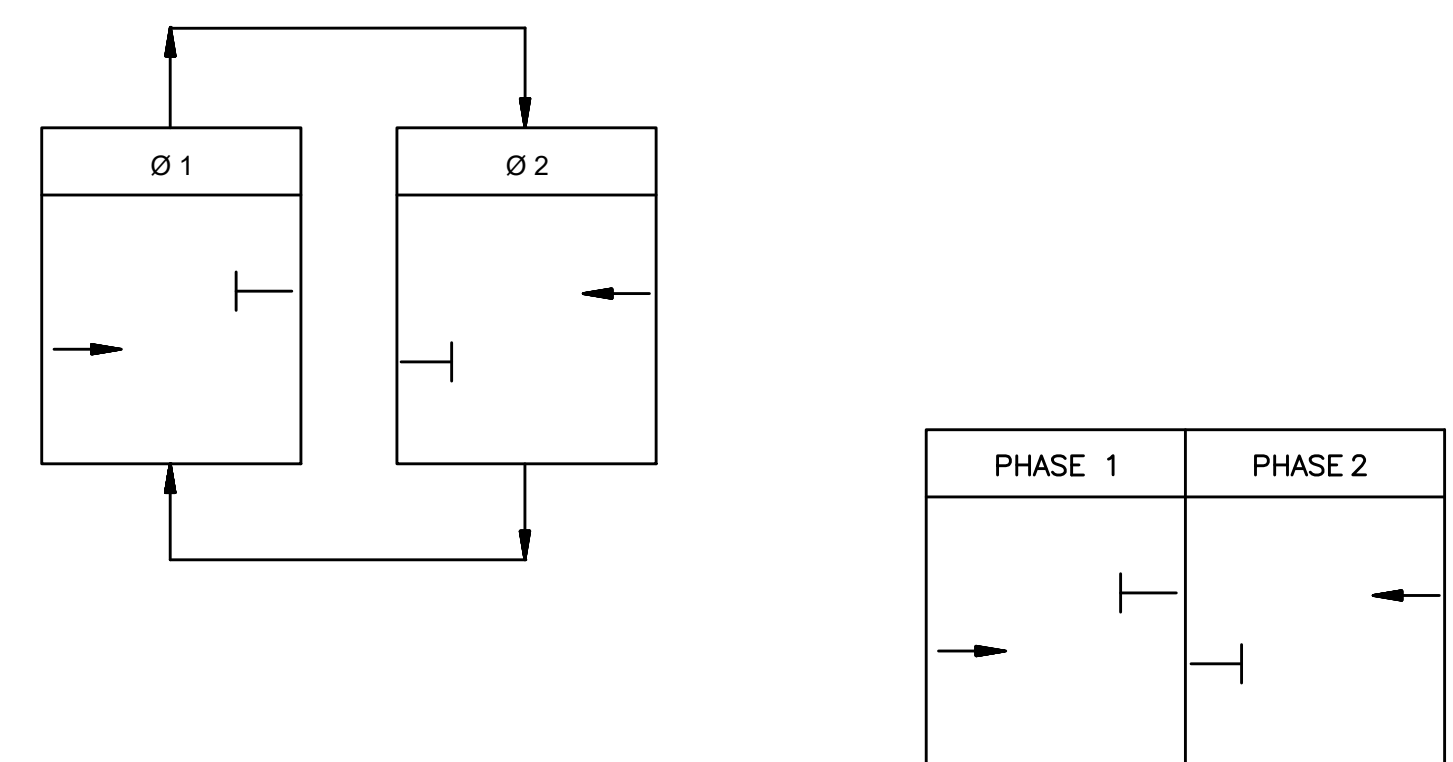


SCALE: 1" = 30'

NOTES

- TEMPORARY TRAFFIC CONTROL SIGNALS SHALL BE USED AS DIRECTED BY THE ENGINEER FOR RETAINING WALL CONSTRUCTION.
- WIDENED AREAS ON THE NORTH SIDE SHALL BE PREPARED AND SURFACE SHALL BE RESTORED PRIOR TO THE WALL EXCAVATION TO MAINTAIN A MINIMUM 11' WIDE LANE AT ALL TIMES.
- THE FIRST TEN DRUMS USED FOR TAPERS ADJACENT TO THE WORK ZONE SHALL BE EQUIPPED WITH FLASHING LIGHTS.
- A TRAFFIC CONTROL SIGNAL REGULATION MUST BE SUBMITTED AND SIGNED BY THE STATE TRAFFIC ENGINEER FOR ALL TEMPORARY SIGNAL LOCATIONS BEFORE THEY ARE ERECTED.

PREFERENTIAL PHASING SEQUENCE



SEQUENCE AND TIMING FOR PRE-TIMED CONTROL (ISOLATED)									
STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	
ROUTE 9	EB	A,B	G	Y	R	R	R	R	
ROUTE 9	WB	C,D	R	R	R	G	Y	R	
TIMING IN SECONDS									
MINIMUM GREEN			8				8		
MAXIMUM GREEN			28				24		
YELLOW CLEARANCE				4				4	
RED CLEARANCE					16				16
RECALL				MIN			MIN		
MEMORY				NON-LOCK			NON-LOCK		

NOTE: THE ADVISORY SPEED USED FOR THE CLEARANCE INTERVALS WAS 30 MPH.

DETECTOR DATA

DELAY TIME EFFECTIVE ONLY DURING CALLED Ø RED. TIME IN SEC.

DETECTOR ZONE #	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	8'x50'	1	1	B	-	-
2	8'x50'	2	2	B	-	-

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	AREA IN SQUARE FEET	COLOR		
	WIDTH	HEIGHT					BACK-GROUND	LEGEND	BORDER
R10-6	24"	36"	STOP HERE ON RED	2	6.0	12.00	WHITE	BLACK	BLACK
W1-4R	36"	36"	[Right Turn Arrow]	1	9.0	9.00	FLUORESCENT ORANGE	BLACK	BLACK
W3-3	36"	36"	[Traffic Signal]	2	9.0	18.00	FLUORESCENT ORANGE	BLACK/RED/YELLOW/GREEN	BLACK
W13-1p	24"	24"	XX M.P.H.	2	4.0	8.00	FLUORESCENT ORANGE	BLACK	BLACK
W20-4	36"	36"	ONE LANE ROAD AHEAD	2	9.0	18.00	FLUORESCENT ORANGE	BLACK	BLACK

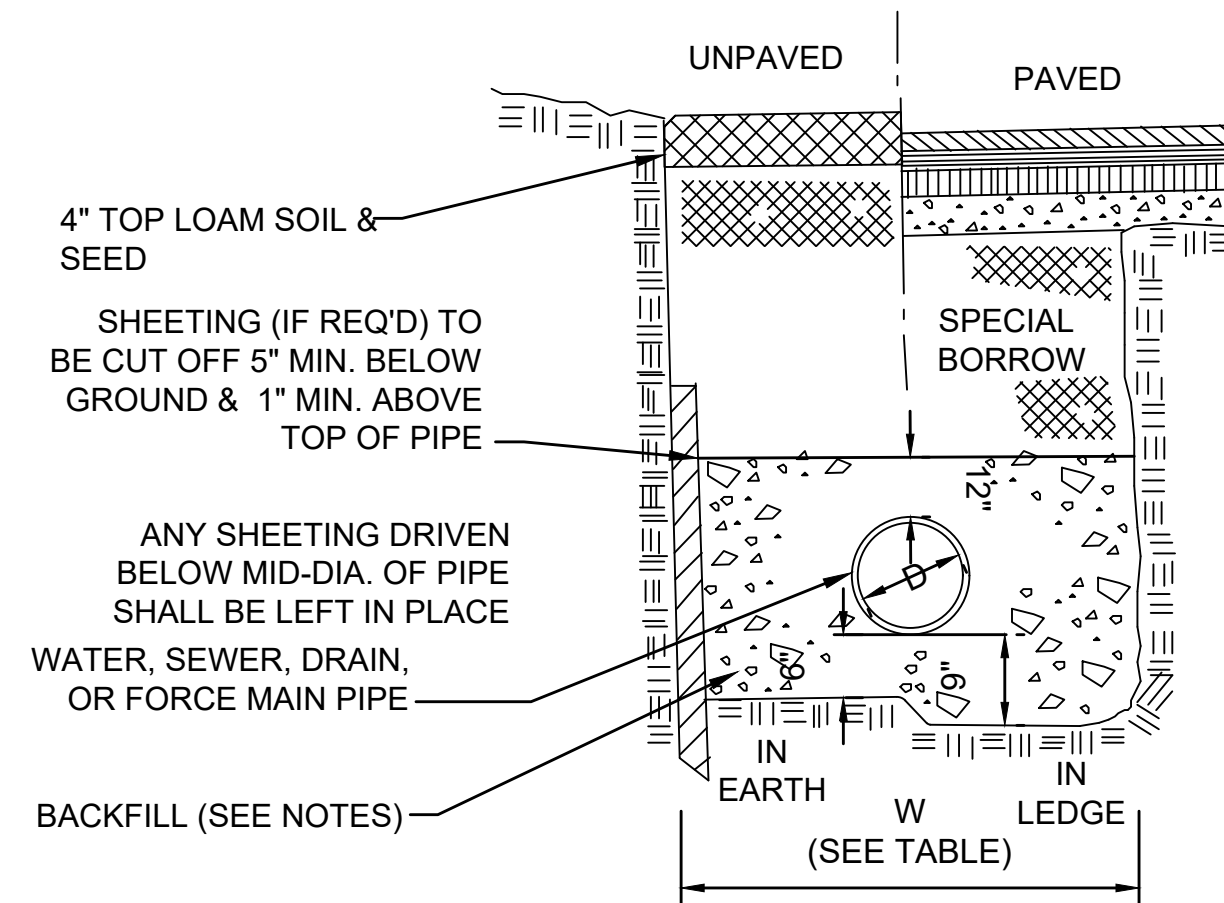
LEGEND

- ▲ REFLECTORIZED CONE
- REFLECTORIZED DRUM
- ➔ PROPOSED TRAFFIC FLOW
- ▨ WORK ZONE
- ⊥ TYPE III BARRICADE
- ⊥ CONSTRUCTION SIGN
- N.T.S. NOT TO SCALE
- ☐ PORTABLE TRAFFIC SIGNAL WITH VIDEO DETECTOR
- ▭ TEMP IMPACT ATTENUATOR

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	51	132
PROJECT FILE NO. 606517			

CONSTRUCTION DETAILS - 1



PERMANENT HMA TRENCH PATCH
(SEE PAVEMENT NOTES SHEET 9)

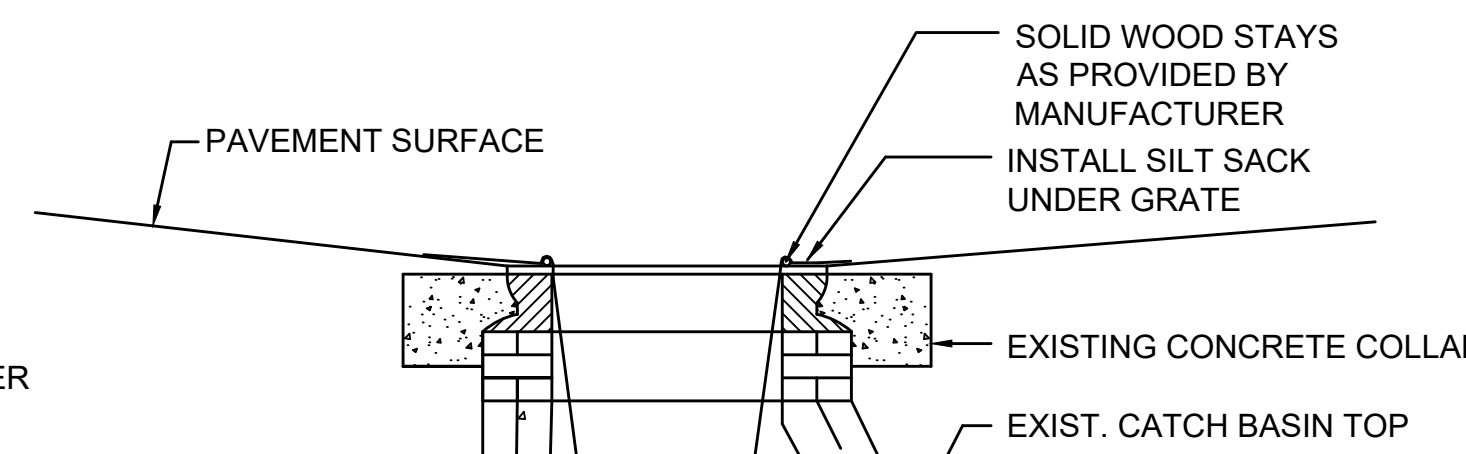
NOTES:

- BACKFILL WITH MATERIAL CONTAINING NO STONES LARGER THAN 3" GREATEST DIMENSION TO 12" OVER PIPE FOR DRAIN PIPES.
- PROVIDE SCREENED GRAVEL BEDDING TO MID PIPE DIAMETER WHERE GROUNDWATER IS ENCOUNTERED AS DIRECTED BY THE ENGINEER.
- REMOVE UNSUITABLE MATERIAL BELOW GRADE IF ENCOUNTERED, TO SUITABLE DEPTHS AS DIRECTED BY ENGINEER AND REPLACE WITH CLEAN GRANULAR FILL.
- PAYMENT FOR PERMANENT HMA TRENCH PATCHING SHALL BE PAID FOR UNDER ITEM 451. HMA FOR PATCHING. PAYMENT FOR TEMPORARY HMA TRENCH PATCHING SHALL BE PAID FOR UNDER ITEM 472. TEMPORARY ASPHALT PATCHING.
- ALL TRENCH CONSTRUCTION TO CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- COMPACT FILL AND TAMP PIPE TO 93% MAX. DENSITY UNLESS OTHERWISE SPECIFIED.

TRENCH WIDTH		
D DIAMETER OF PIPE	W UNSHEETED	W SHEETED
TO 12"	3'	4'
14" TO 24"	4'	5'
30" TO 36"	5'	6'

PERMANENT TRENCH PATCH

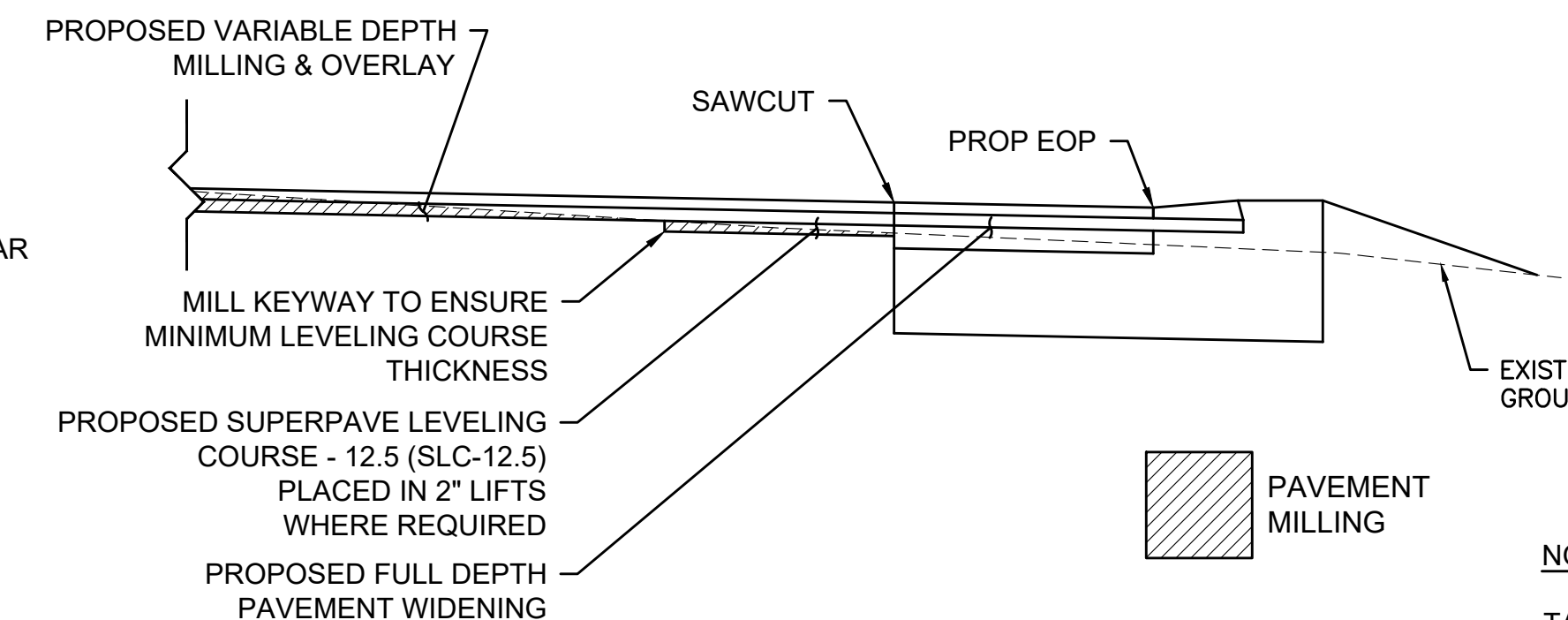
NOT TO SCALE



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

SILT SACK

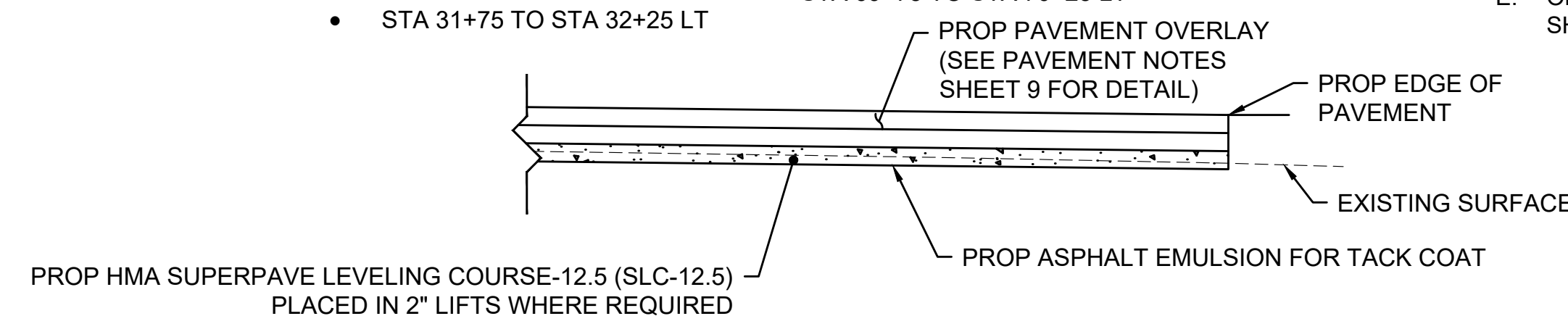
NOT TO SCALE



LEVELING COURSE ADJACENT TO FULL DEPTH WIDENING

APPROXIMATE LOCATIONS OF LEVELING COURSE ADJACENT TO FULL DEPTH WIDENING:

- STA 10+50 TO STA 11+50 LT
- STA 13+90 TO STA 14+25 LT
- STA 17+10 TO STA 19+20 LT
- STA 20+60 TO STA 21+60 LT
- STA 23+50 TO STA 26+60 LT
- STA 25+80 TO STA 26+80 RT
- STA 27+75 TO STA 28+75 LT
- STA 28+75 TO STA 29+80 RT
- STA 31+75 TO STA 32+25 LT
- STA 41+25 TO STA 42+60 LT
- STA 44+80 TO STA 45+75 RT
- STA 47+00 TO STA 48+00 RT
- STA 53+00 TO STA 54+75 RT
- STA 59+40 TO STA 59+60 LT
- STA 60+50 TO STA 61+25 LT
- STA 66+75 TO STA 67+15 LT
- STA 69+75 TO STA 70+25 LT



LEVELING COURSE UNDER FULL WIDTH OF OVERLAY

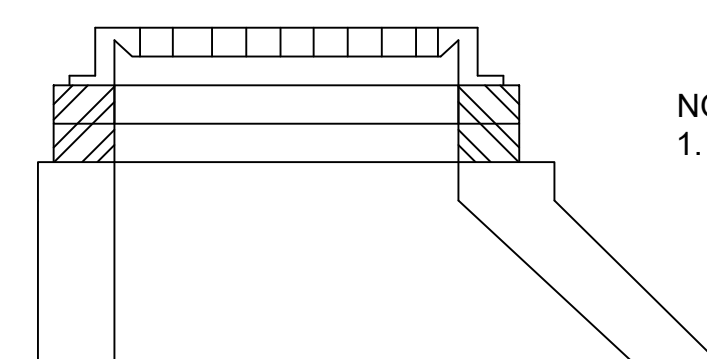
APPROXIMATE LOCATIONS OF LEVELING COURSE UNDER ROADWAY:

- STA 14+25 TO STA 14+90
- STA 16+40 TO STA 17+10
- STA 19+90 TO STA 20+60

NOTE:
THE CONTRACTOR SHALL MILL A KEYWAY TO ENSURE MINIMUM LEVELING COURSE THICKNESS AS REQUIRED BY RESIDENT ENGINEER

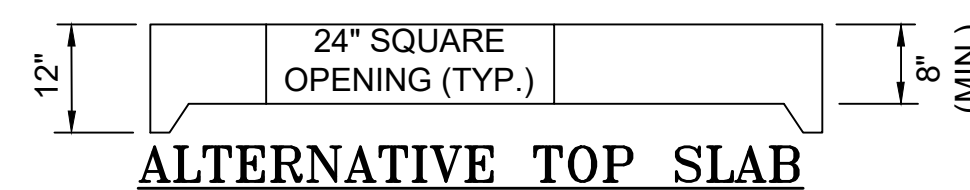
LEVELING COURSE DETAILS

NOT TO SCALE

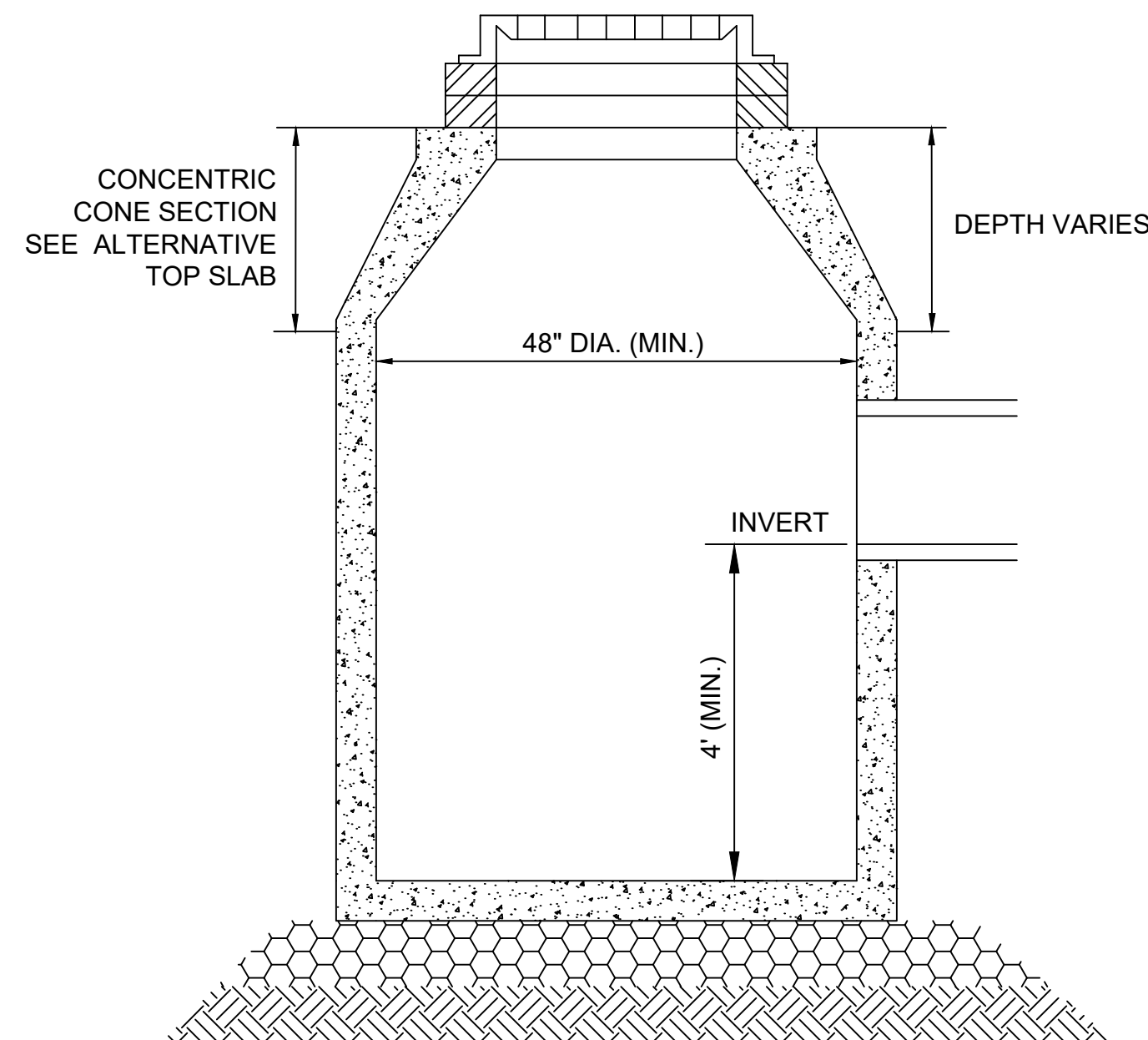


- NOTES:**
- BASED ON ACTUAL, FIELD CONDITIONS; THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF TOP SECTION SHOULD BE USED

ALTERNATIVE ECCENTRIC CONE SECTION

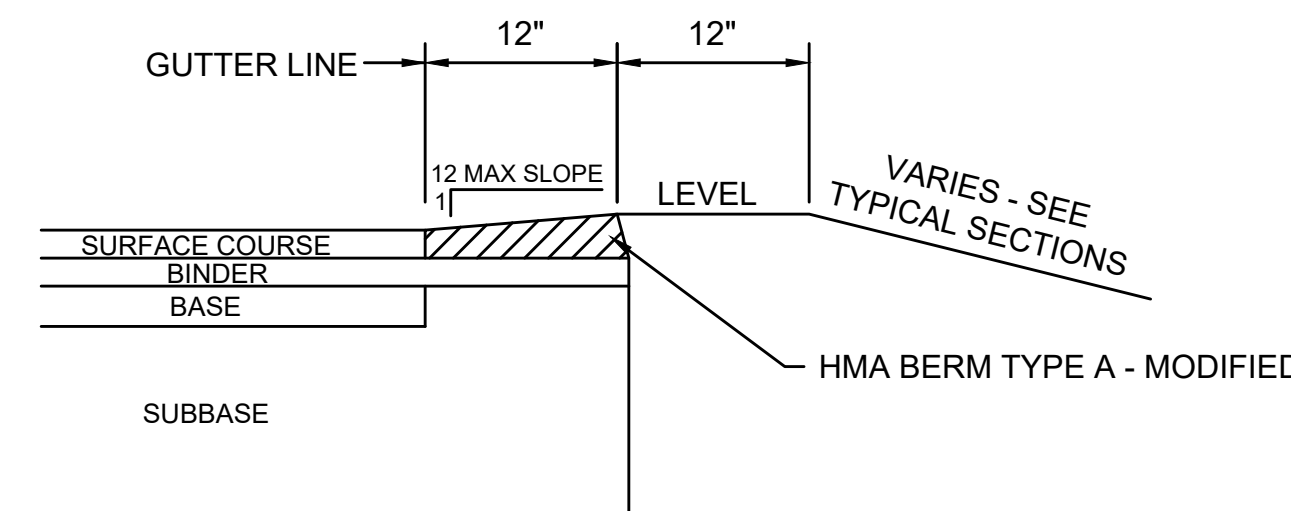


ALTERNATIVE TOP SLAB



CATCH BASIN DETAIL

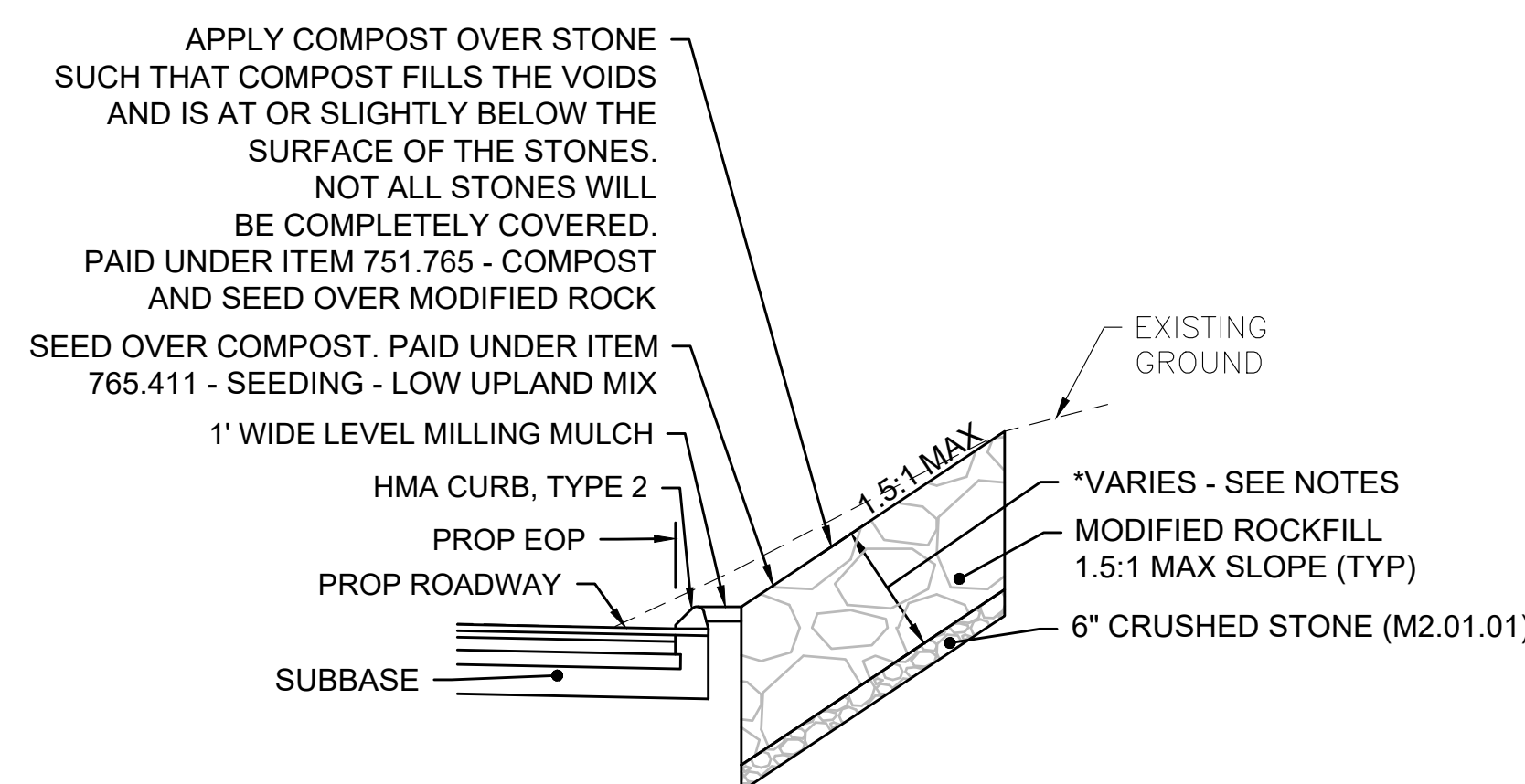
NOT TO SCALE



HOT MIX ASPHALT BERM, TYPE A - MODIFIED

NOT TO SCALE

FOR ALL OTHER DIMENSIONS, SEE MASSDOT E 106.1.0



SECTION ON UPHILL SLOPE

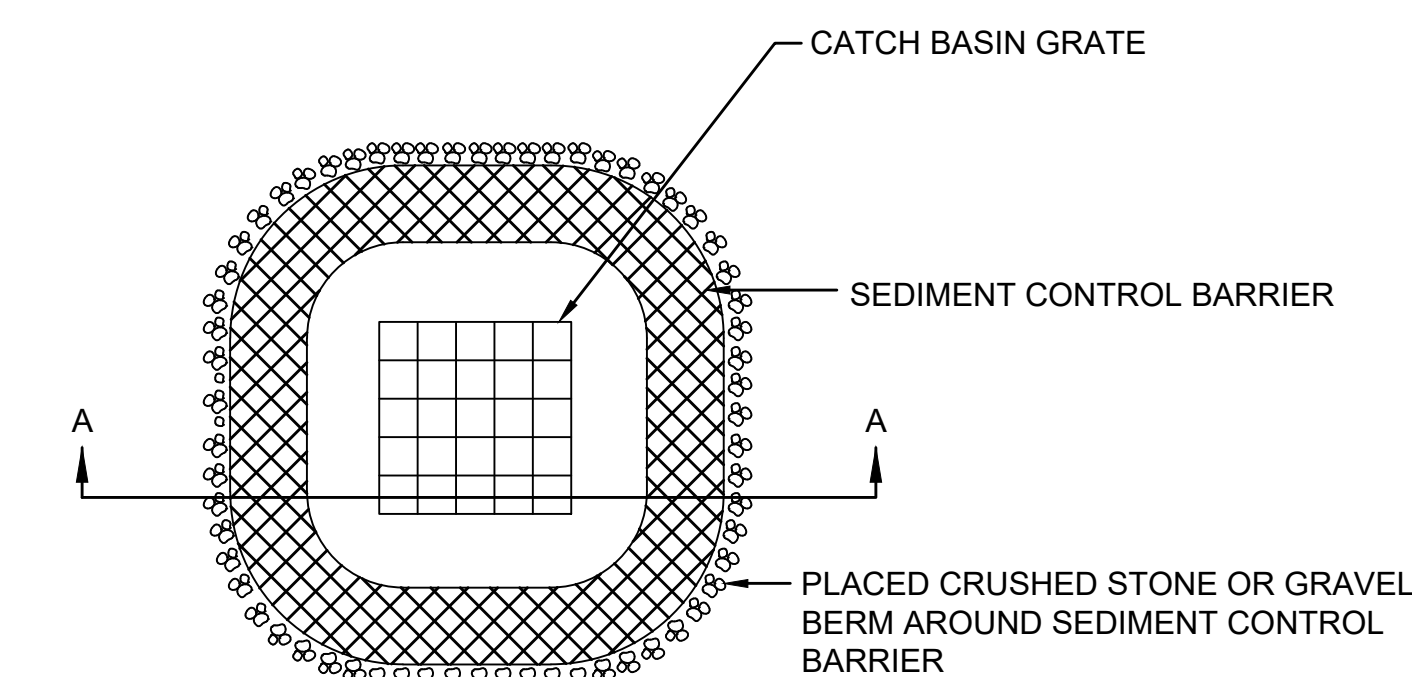
***NOTES:**

- THE MODIFIED ROCKFILL SLOPE FROM STATION 23+15 RT TO 24+30 RT SHALL BE 4' DEEP.
- ALL OTHER MODIFIED ROCKFILL AREAS SHALL BE 3' DEEP.

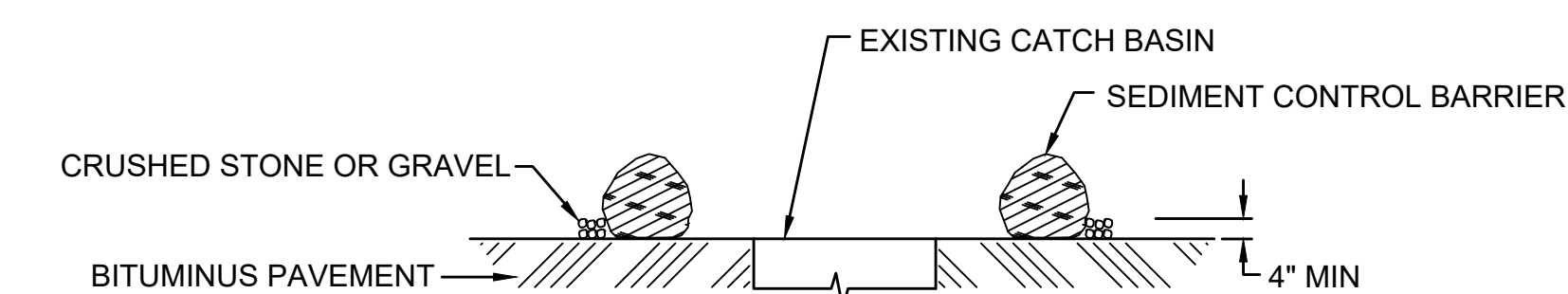
TYPICAL MODIFIED ROCKFILL DETAIL

WITH COMPOST AND SEED

NOT TO SCALE



PLAN VIEW



SECTION A-A

NOTES:

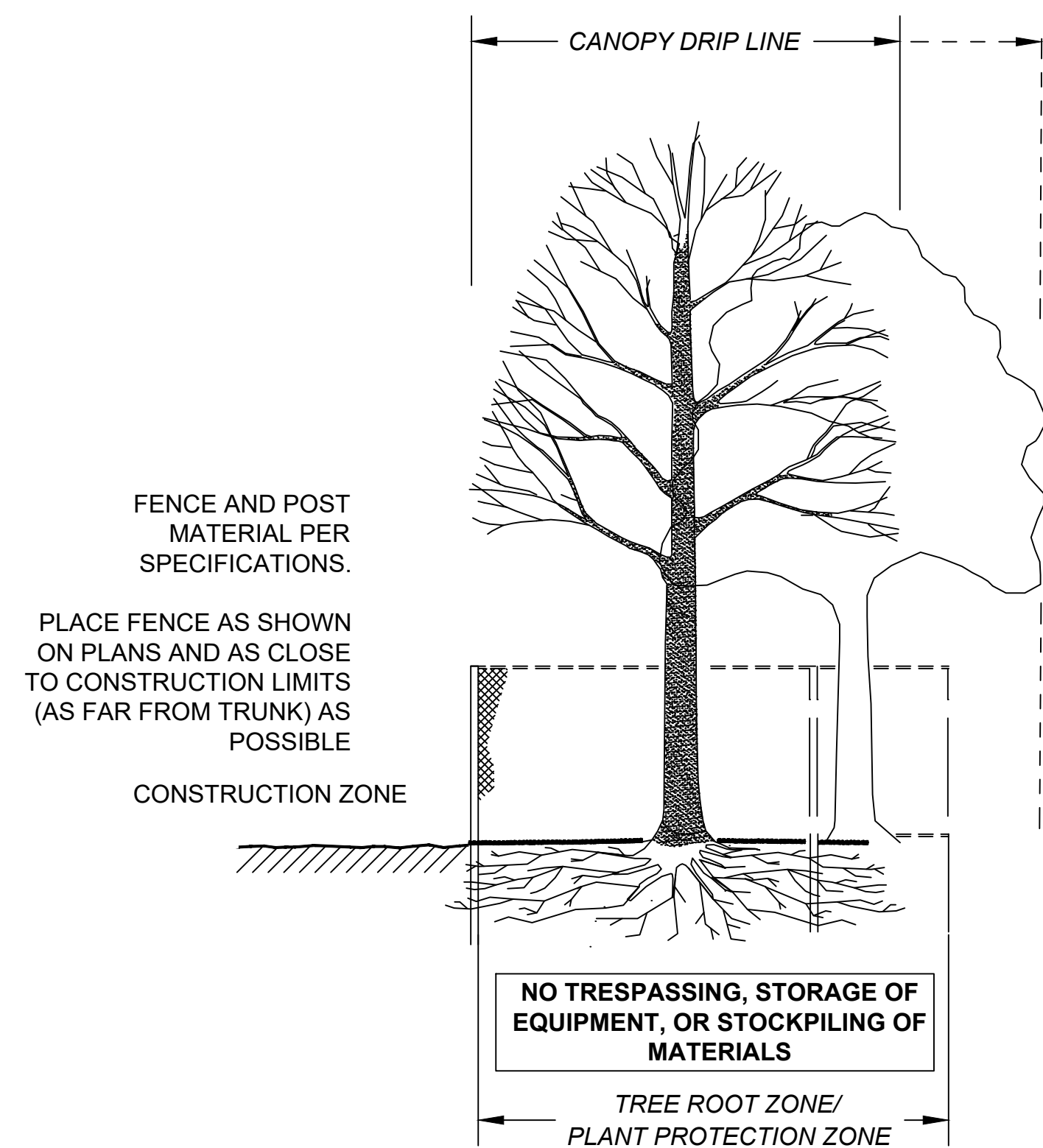
- SURROUND DRAINAGE STRUCTURE INLET WITH SEDIMENT CONTROL BARRIER PRIOR TO CONSTRUCTION AND MAINTAIN UNTIL CONSTRUCTION IS COMPLETED. ACCUMULATED SEDIMENTS SHALL BE REMOVED.
- 4" MIN GRAVEL BERM AROUND BOTTOM OF SEDIMENT CONTROL BARRIER.

OFF ROADWAY CATCH BASIN/DROP INLET

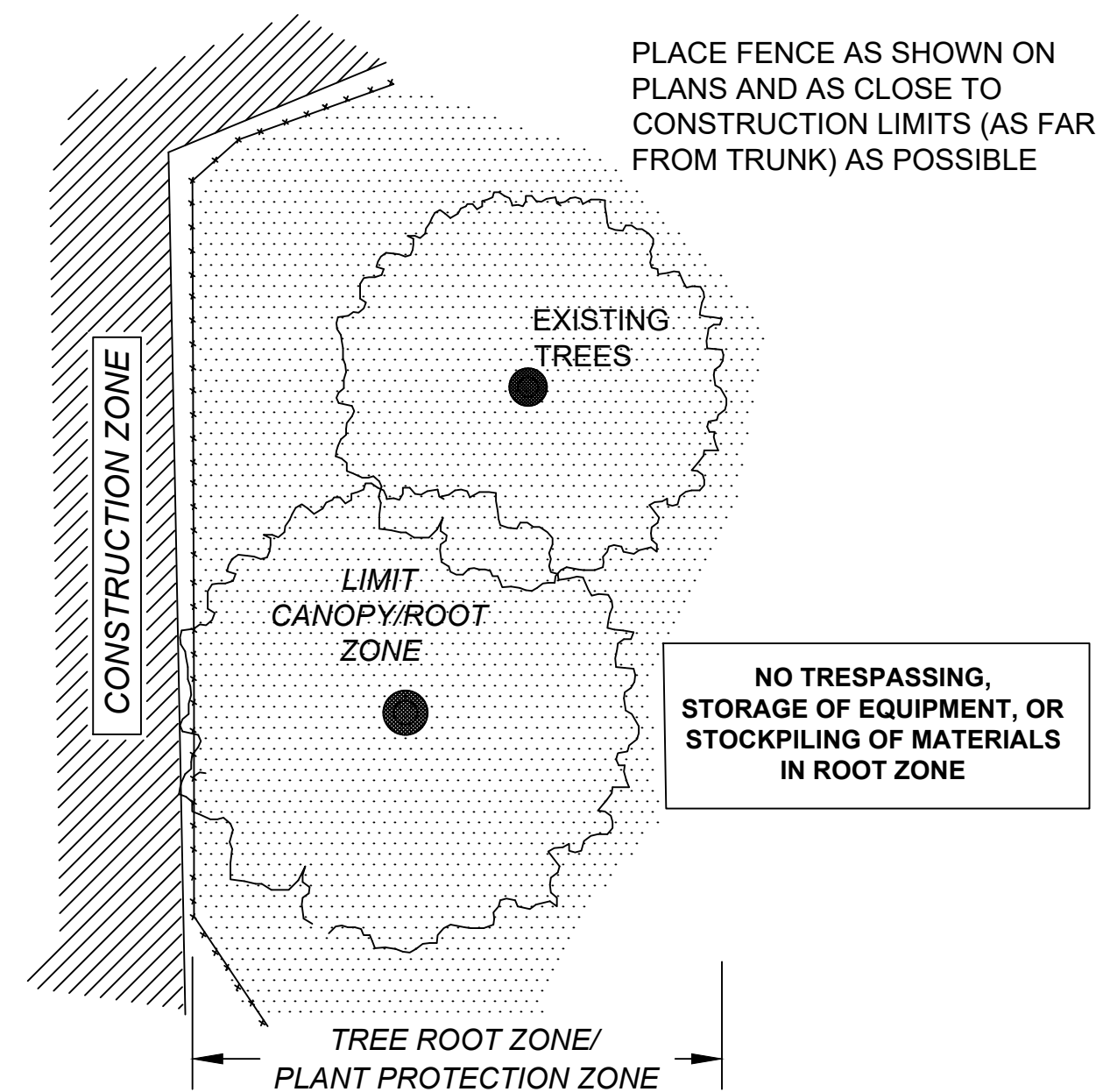
EROSION CONTROL MEASURE

NOT TO SCALE

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	52	132
PROJECT FILE NO.		606517	



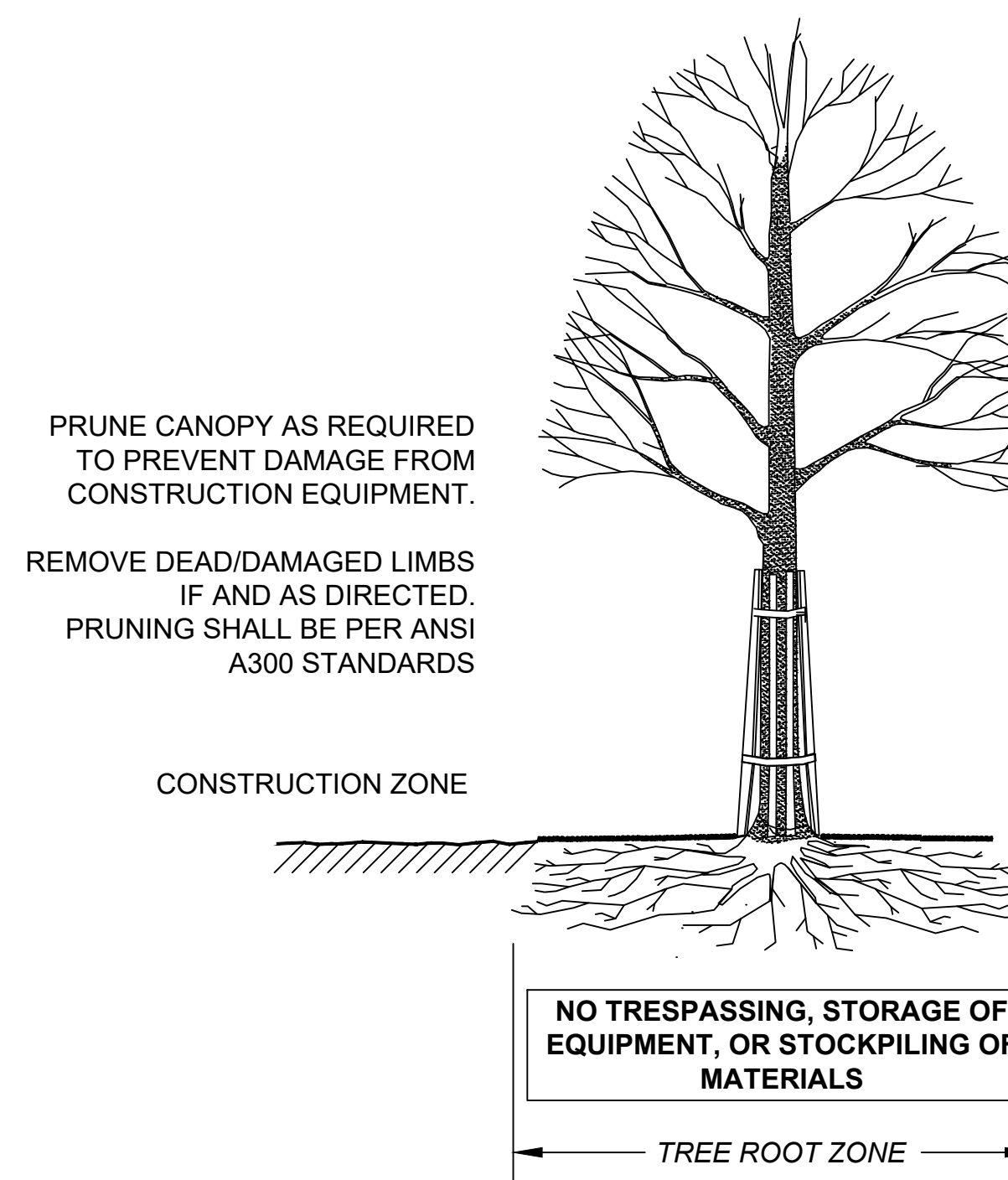
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION ROOT ZONE

NOT TO SCALE

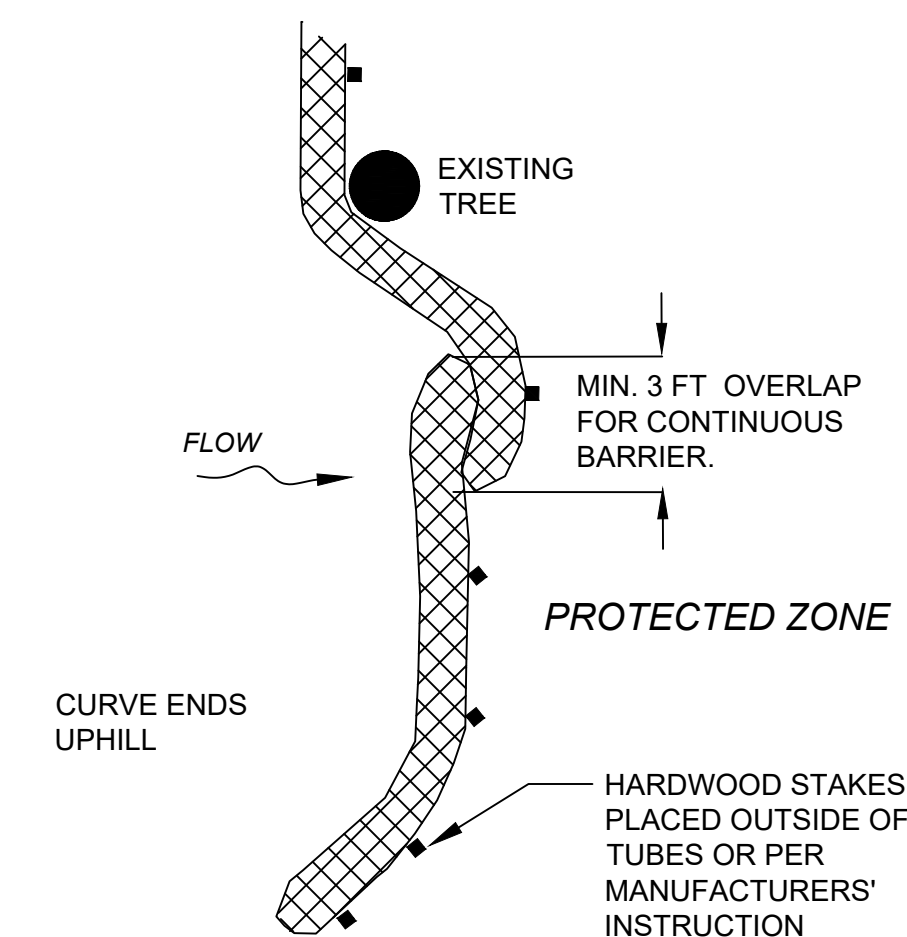


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION TRUNK

ARMOR TREES AS SHOWN ON PLANS OR PER ARBORIST

ARMOR FROM BASE OF TREE, INCLUDING ROOT FLARE, TO FIRST BRANCH.



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

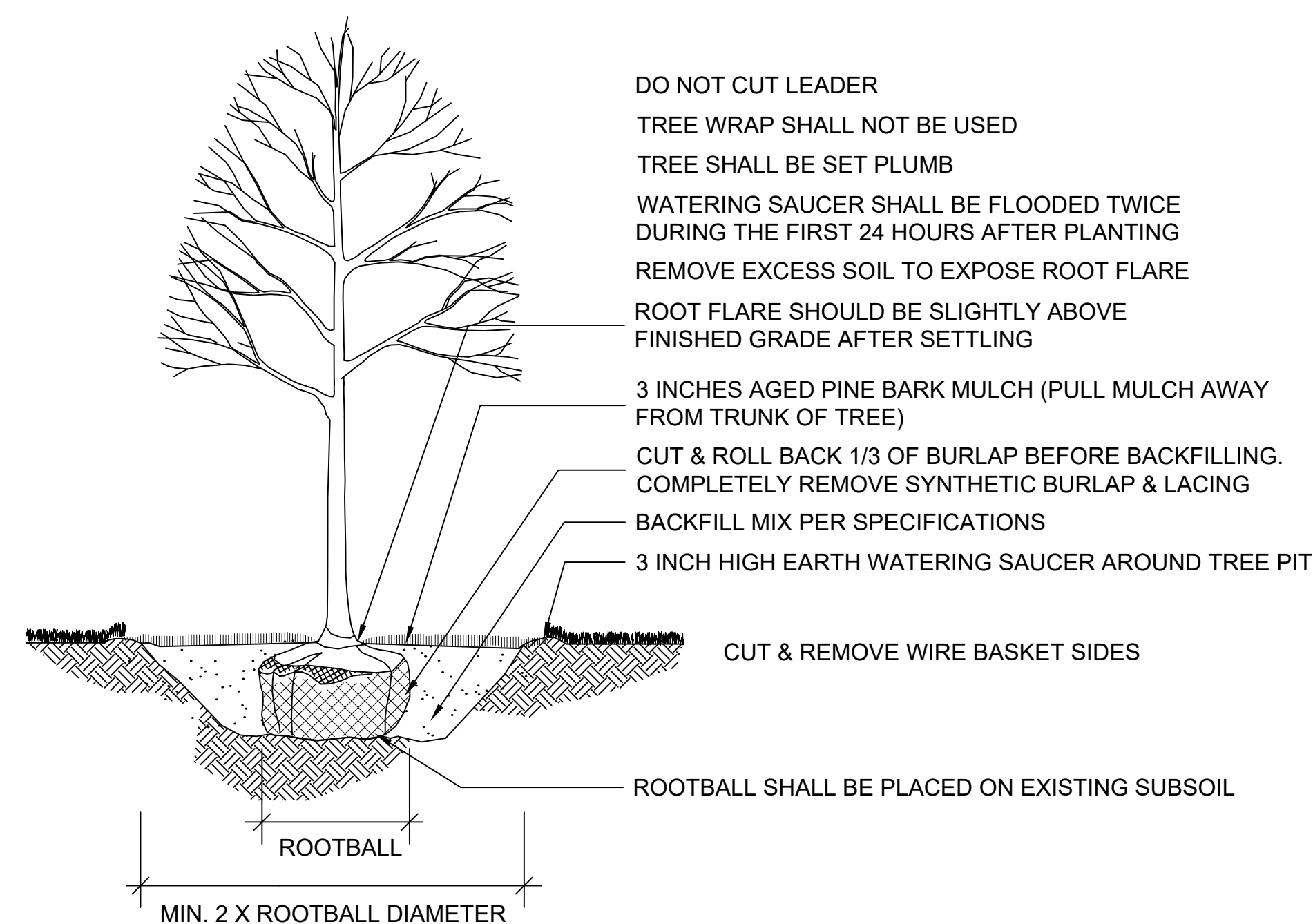
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

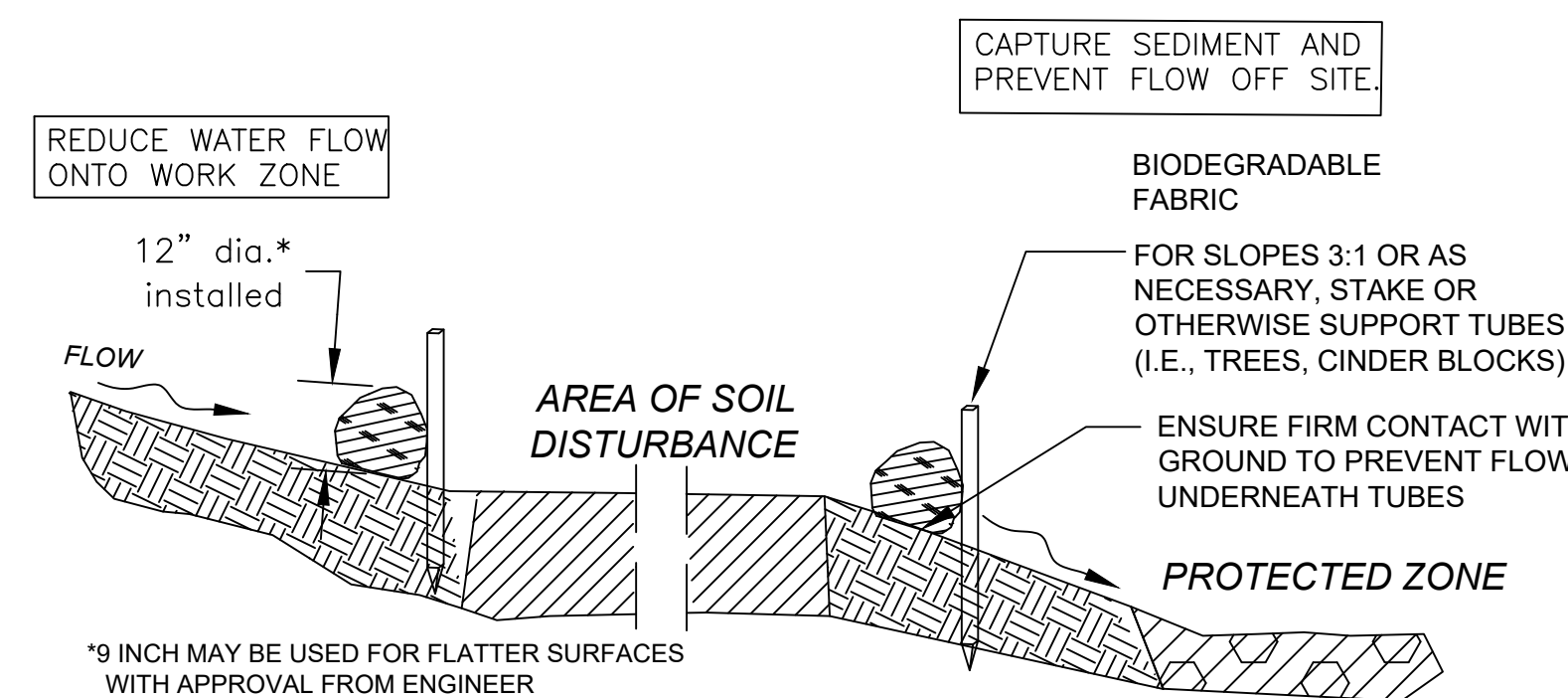
SEDIMENT BARRIERS

NOT TO SCALE



DECIDUOUS TREE PLANTING

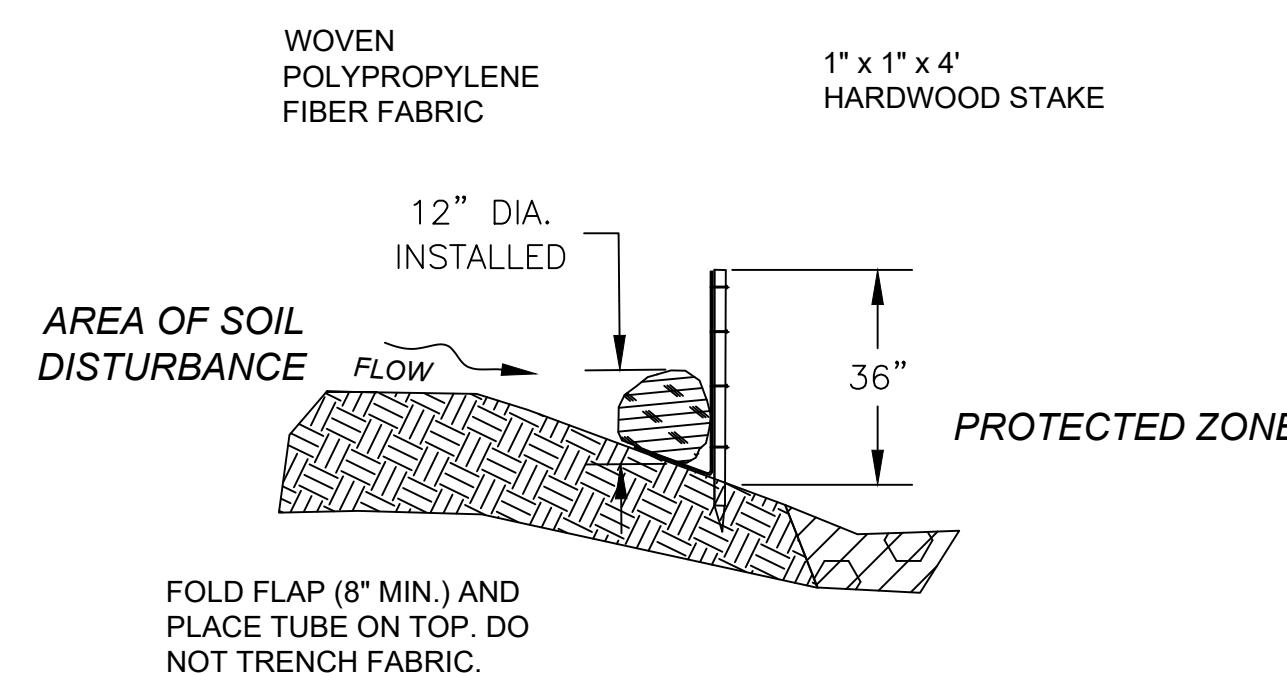
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

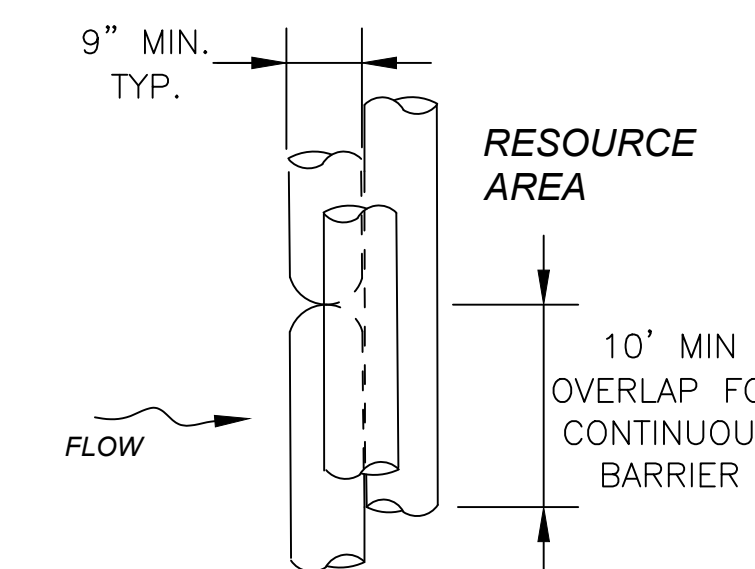
NOT TO SCALE



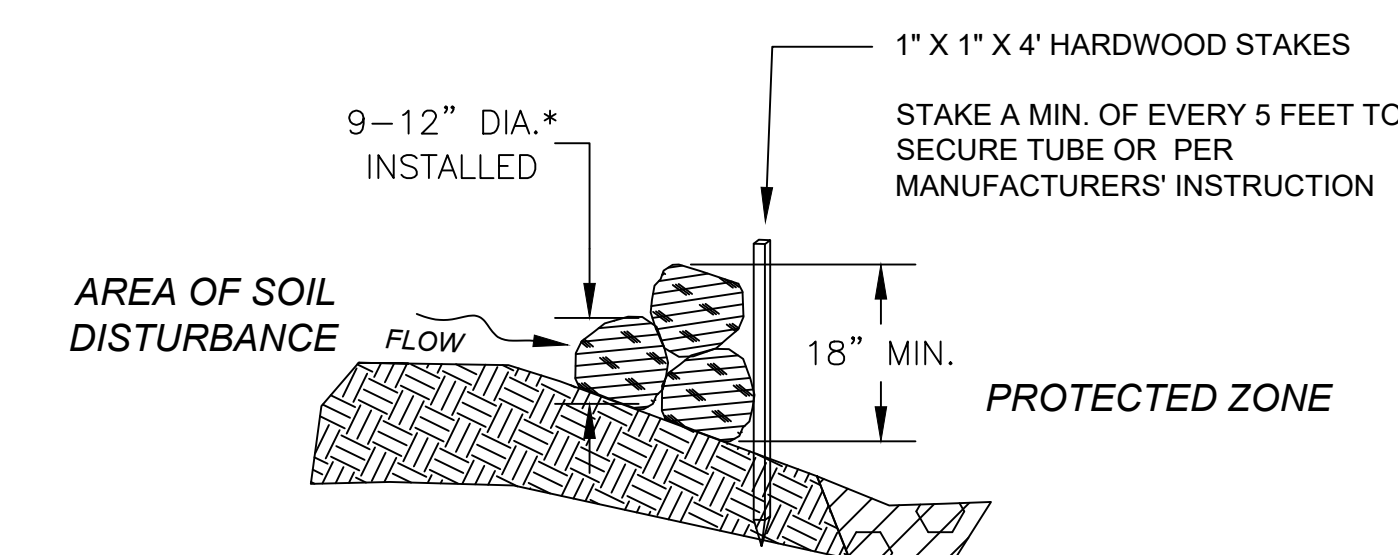
SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



PLAN VIEW

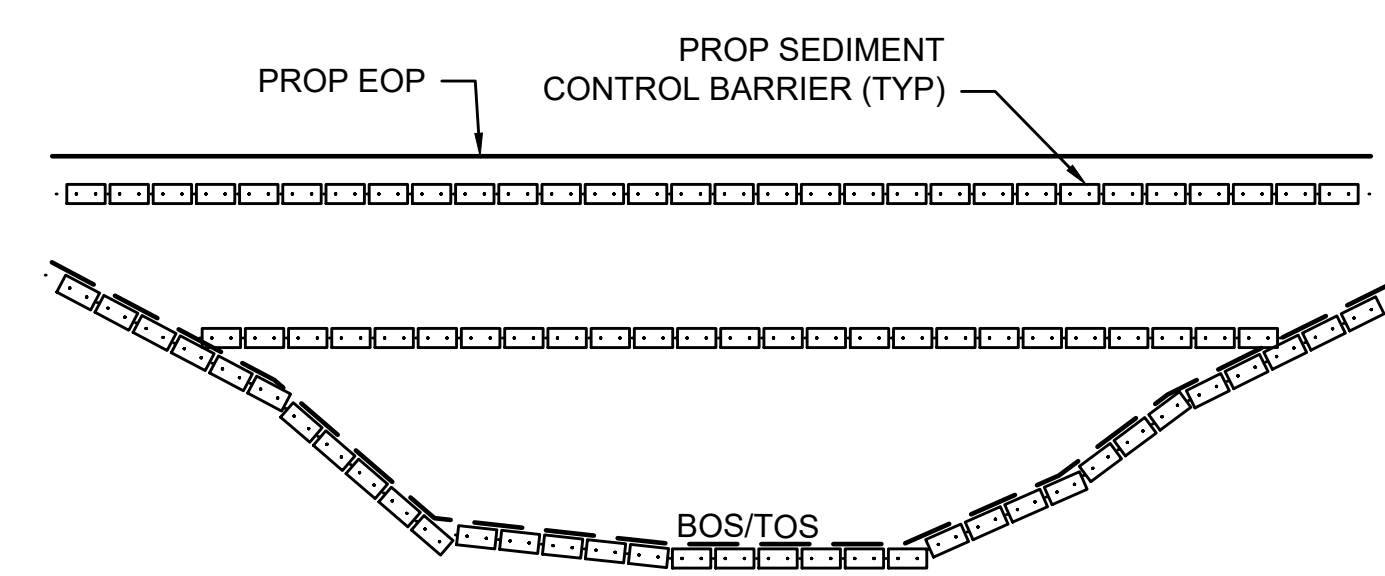


SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE

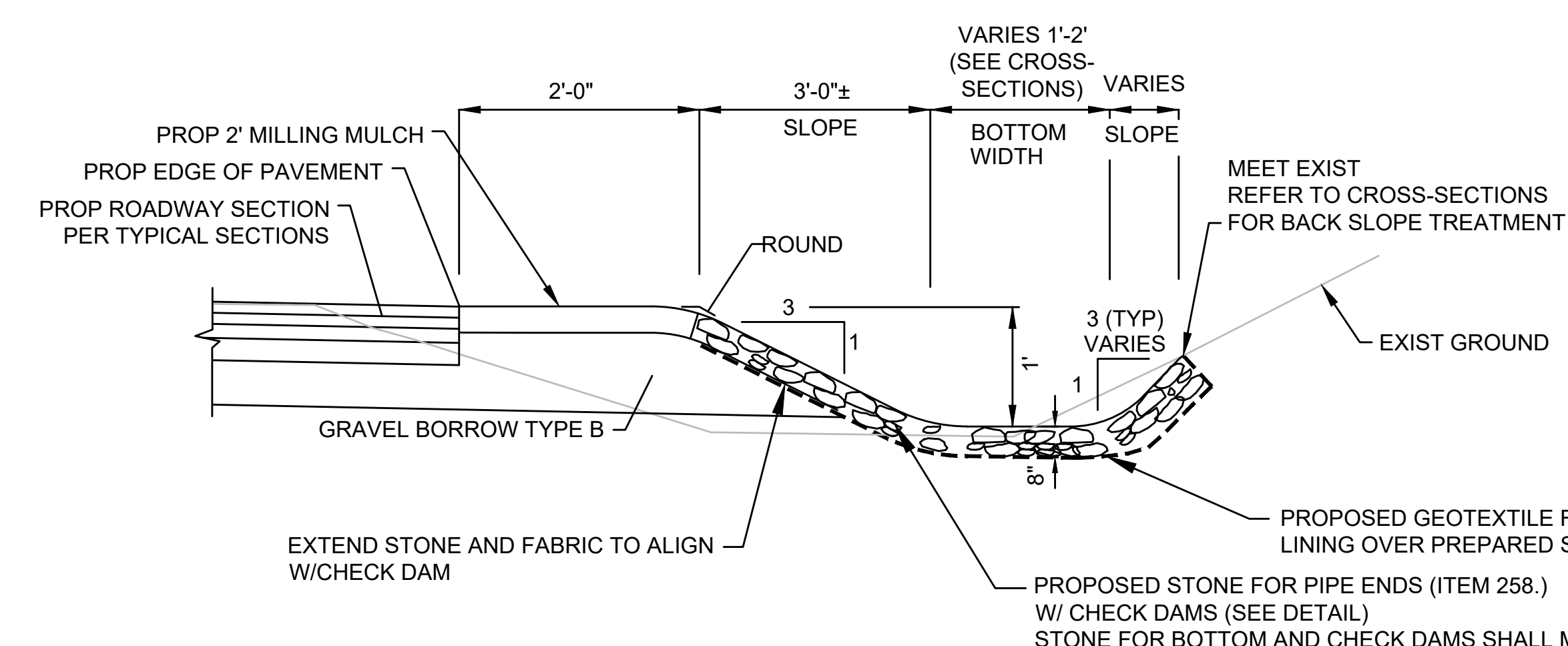
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	53	132
PROJECT FILE NO.		606517	



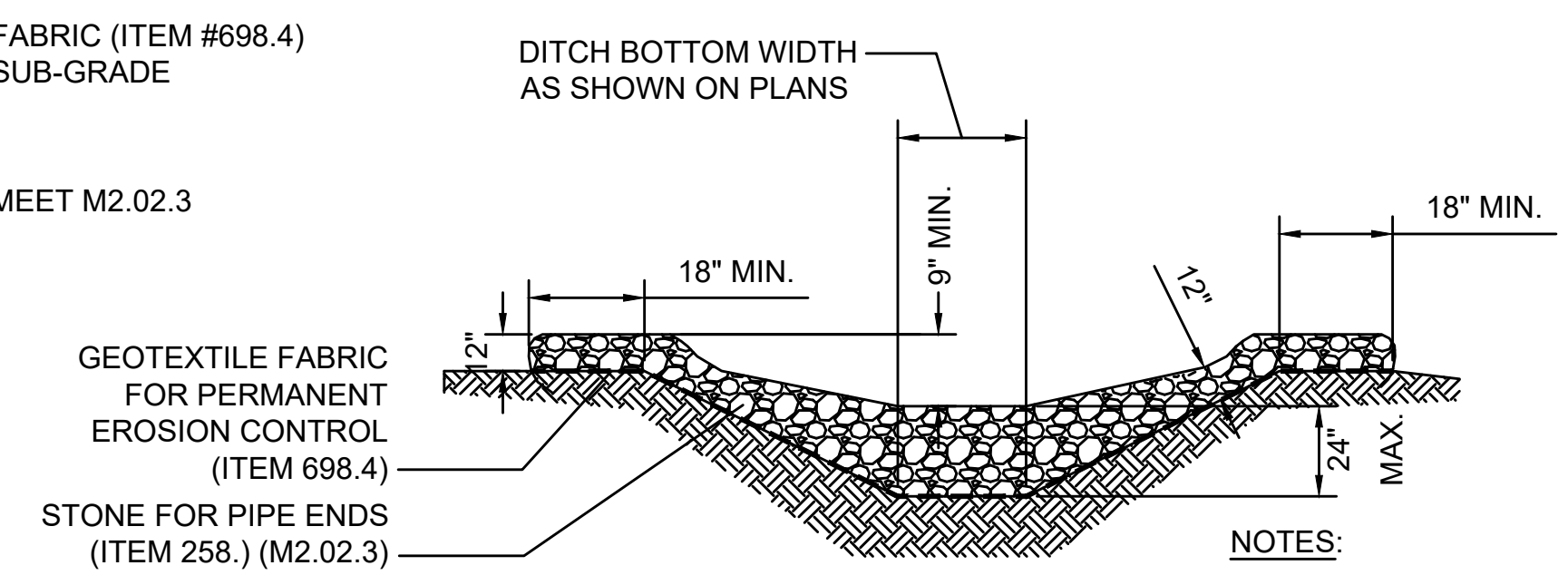
NOTES:

1. REFER TO NOTES ON SHEET 12.

SEDIMENT CONTROL BARRIER
NOT TO SCALE



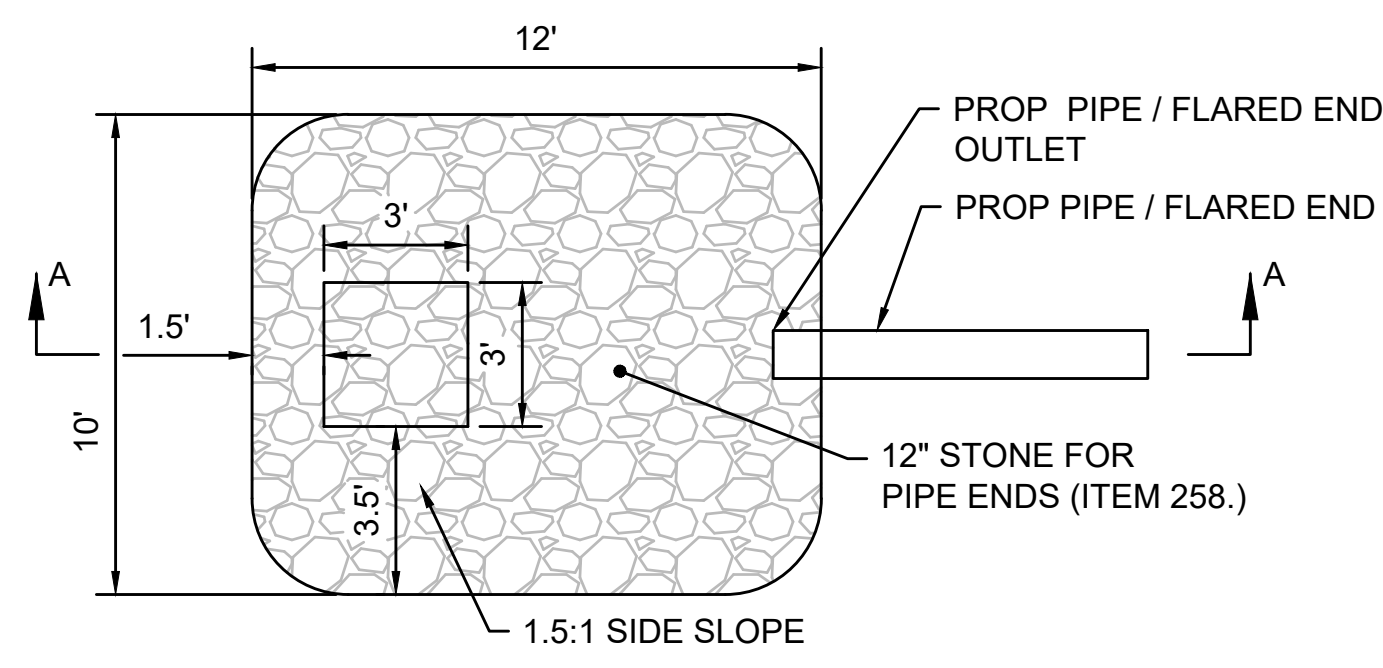
SECTION AT STONE LINED DRAINAGE SWALE WITH ROCK FILL SLOPE TREATMENT
NOT TO SCALE



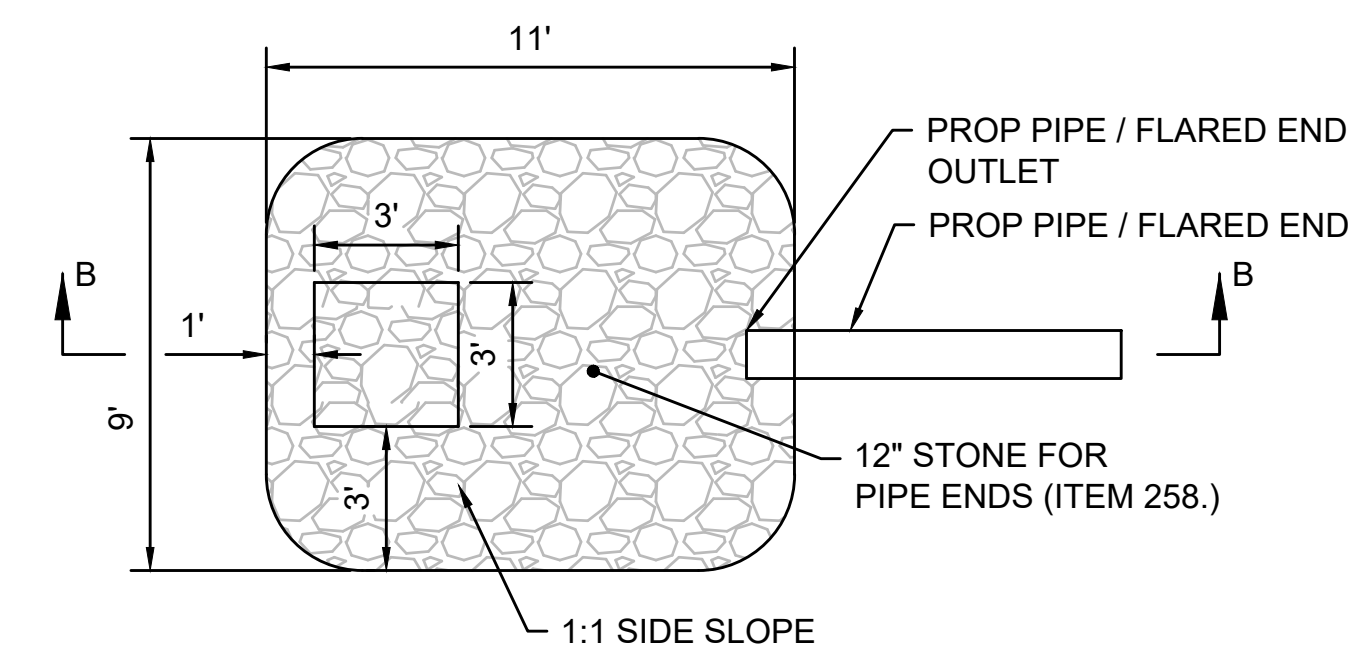
NOTES:

1. THE RECOMMENDED SPACING OF CHECK DAMS IS SUCH THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM. REFER TO CONSTRUCTION PLANS FOR CHECK DAM SPACING.
2. EXTEND THE STONE A MINIMUM OF 18" BEYOND THE DITCH BANKS.

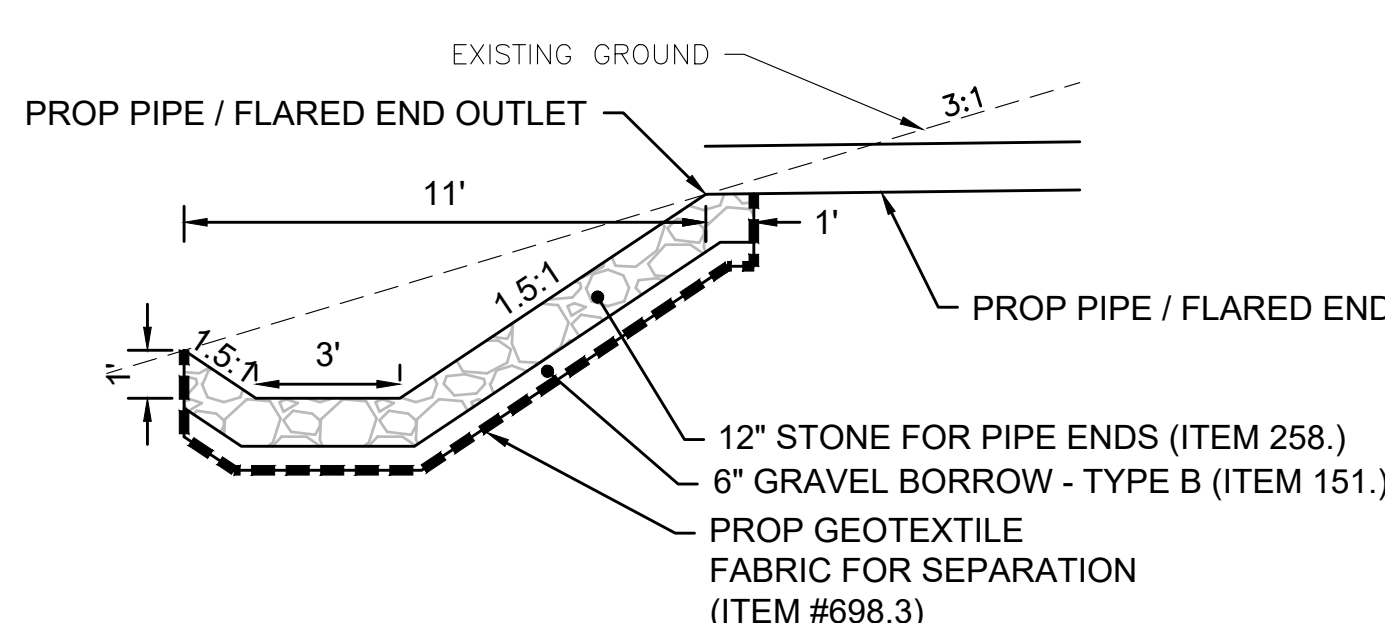
STONE CHECK DAM DETAIL
NOT TO SCALE



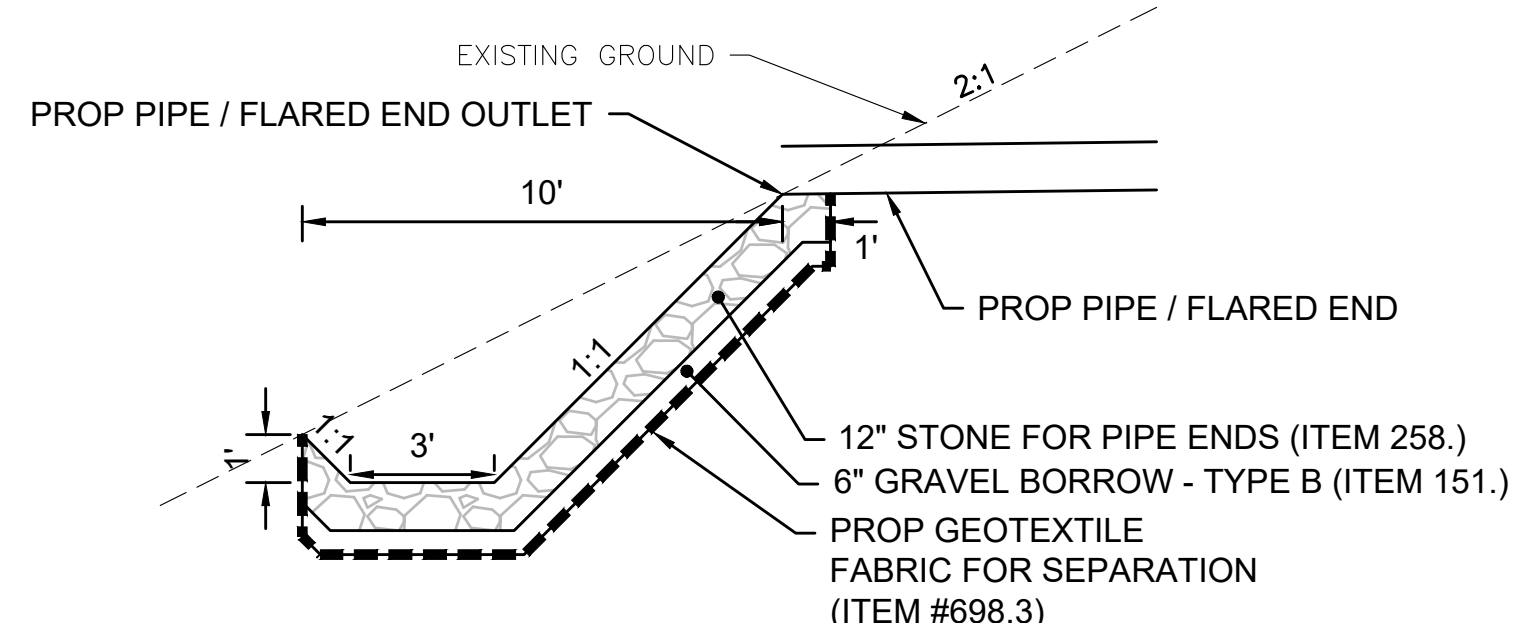
PLAN VIEW: 3:1 SLOPE



PLAN VIEW: 2:1 SLOPE



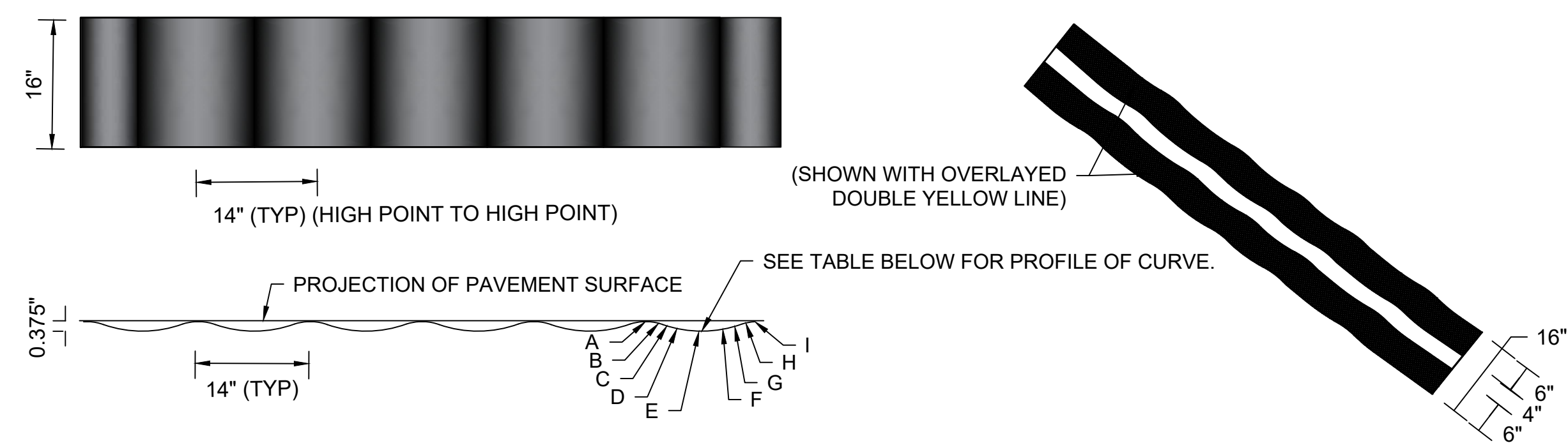
SECTION A-A: 3:1 SLOPE



SECTION B-B: 2:1 SLOPE

NOTE: FOR STONE FOR PIPE ENDS ON SLOPES LESS THAN 3:1 REFER TO MASSDOT STANDARD DETAIL E 206.7.0.

STONE FOR PIPE ENDS WITH BASIN
NOT TO SCALE



DESIGN OF CURVE PROFILE FOR SINUSOIDAL RUMBLE STRIP									
POINT	A	B	C	D	E	F	G	H	I
DEPTH FROM PAVEMENT SURFACE (IN.)	1/16	1/8	7/27	11/32	3/8	11/32	7/32	1/8	1/16
DISTANCE FROM HIGH POINT "A" (IN.)	0	1.75	3.5	5.25	7	8.75	10.5	12.25	14

NOTES:

1. SEE PLANS FOR LOCATIONS AND START AND END STATIONS FOR ALL RUMBLE STRIP INSTALLATIONS.
2. HIGH POINT OF SINUSOIDAL RUMBLE STRIP LOCATED 1/16" BELOW PAVEMENT SURFACE.

RUMBLE STRIP DETAIL
TYPE C CONTINUOUS SINUSOIDAL RUMBLE STRIP
NOT TO SCALE

NOTES:

1. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
2. GRAVITY WALLS BASED ON MASSDOT 2013 LFRD BRIDGE MANUAL STANDARD PLATE 3.2.1.
3. CANTILEVER WALLS BASED ON MASSDOT STANDARD PLATE E305.5.0.
4. CALCULATED FACTORED BEARING PRESSURE FOR GRAVITY WALLS IS 4.1 KSF PER AASHTO LFRD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION FOR THE WALL FROM STA 31+10.00 TO 32+45.12.

FACTORED BEARING RESISTANCE = 4.8 KSF FOR THE WALL FROM STA 31+10.00 TO 32+45.12.
FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE, WHICH INCLUDES A REDUCTION FOR THE PRESENCE OF FORESLOPE, EQUAL TO 0.29, AND A RESISTANCE FACTOR OF 0.45.

5. CALCULATED FACTORED BEARING PRESSURE FOR GRAVITY WALLS IS 5.1 KSF PER AASHTO LFRD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION FOR THE WALL FROM STA 41+05.00 TO 43+06.32.

FACTORED BEARING RESISTANCE = 14.5 KSF FOR THE WALL FROM STA 41+05.00 TO 43+06.32.
FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE AND A RESISTANCE FACTOR OF 0.45.

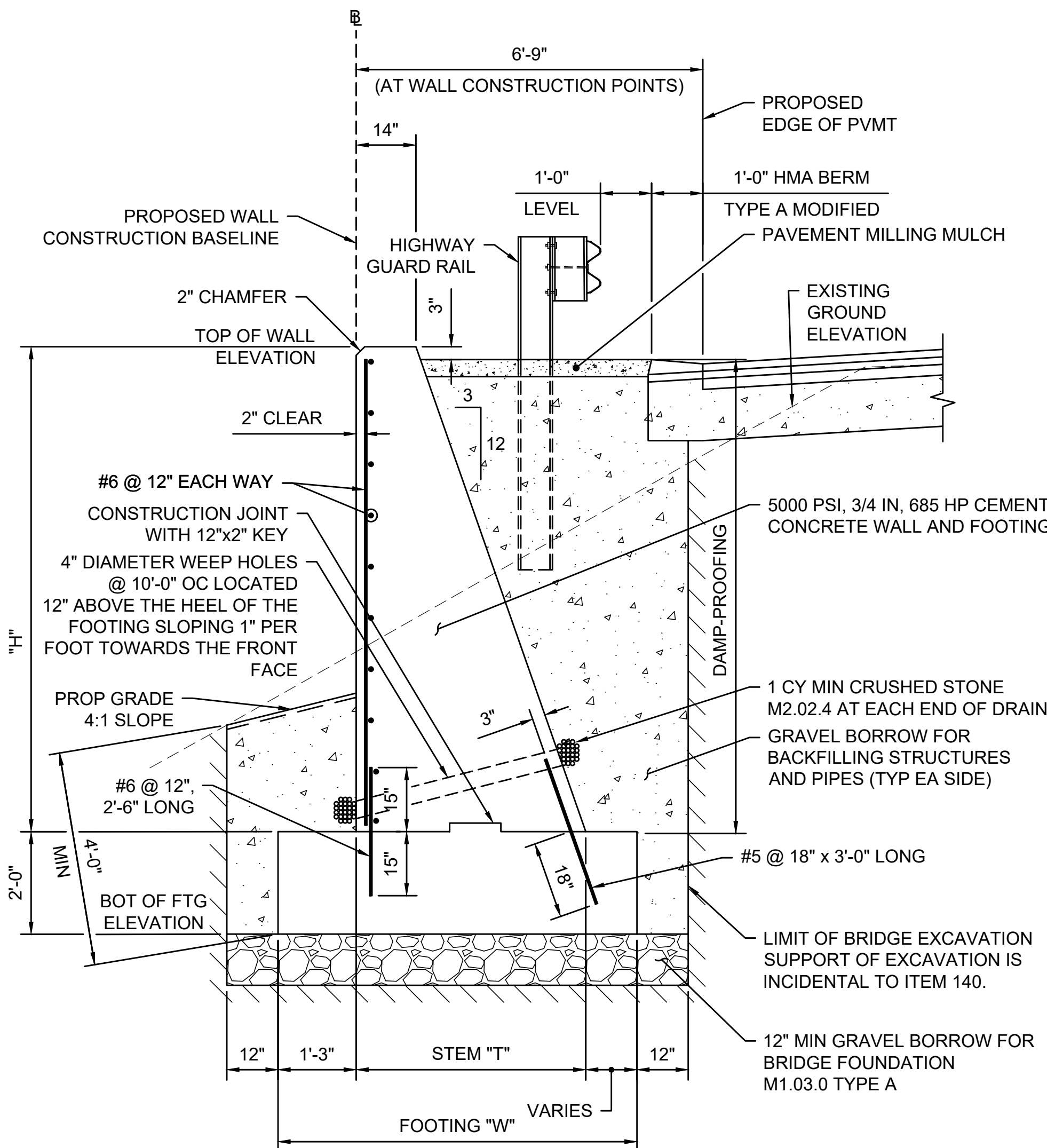
6. FACTORED BEARING PRESSURE FOR CANTILEVER WALL IS 5.13 KSF PER MASSDOT STANDARD PLATE E305.5.0.

FACTORED BEARING RESISTANCE = 17.2 KSF FOR THE CANTILEVER WALL. FACTORED BEARING RESISTANCE IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE AND A RESISTANCE FACTOR OF 0.45.

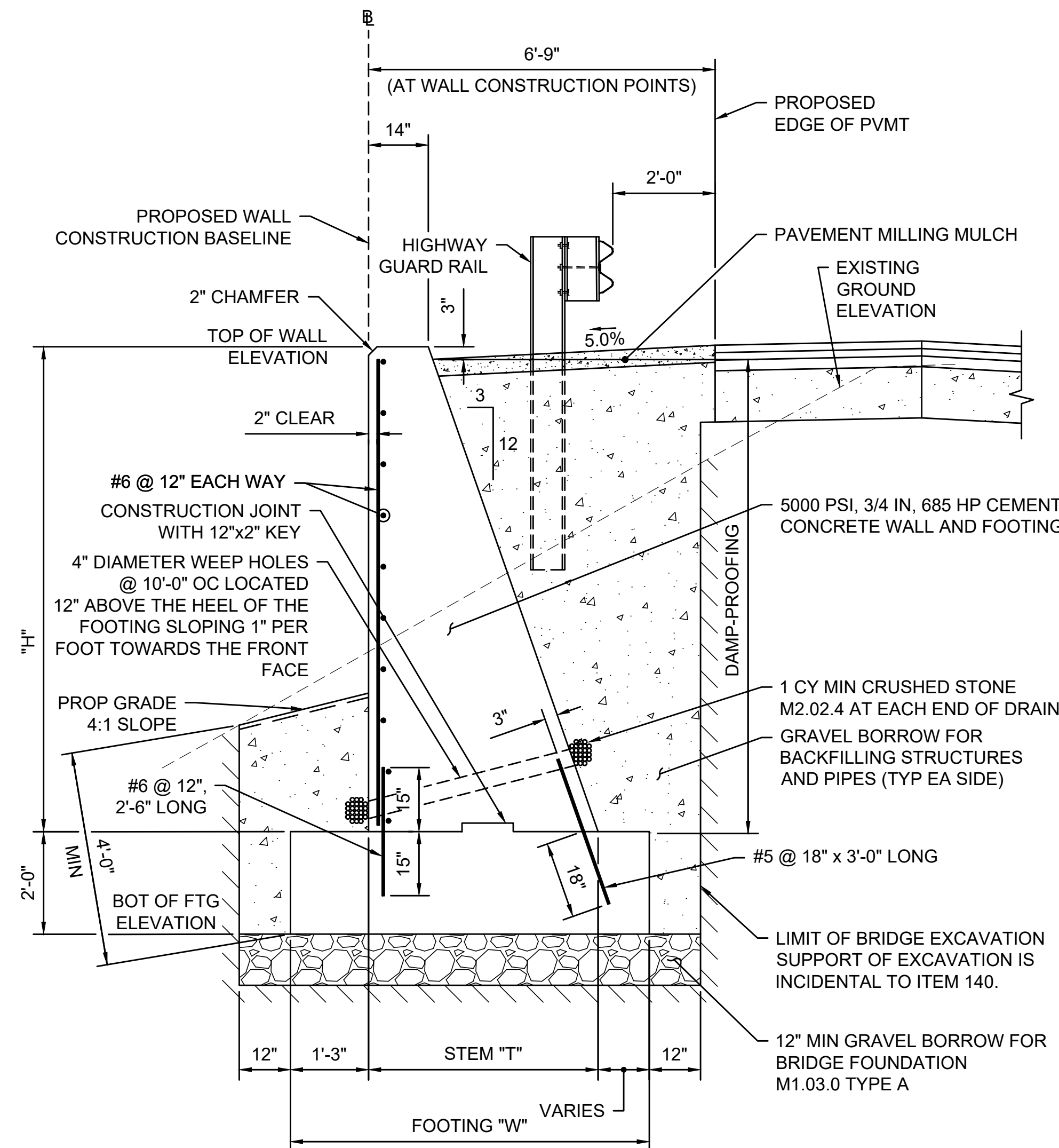
ALIGNMENT	WALL @ STATION	HIGHEST TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"H" VARIES (FT)	"W" DOWN STATION (FT)	"T" DOWN STATION (FT)	"W" UP STATION (FT)	"T" UP STATION (FT)
WALL BASELINE	31+10.00 TO 31+33.50	616.58	609.00	5.06 TO 5.58	4.75	2.43	5.00	2.56
WALL BASELINE	31+33.50 TO 31+57.00	617.08	609.00	5.58 TO 6.08	5.00	2.56	5.00	2.69
WALL BASELINE	31+57.00 TO 31+78.50	617.51	606.50	8.58 TO 9.01	5.75	3.31	5.75	3.42
WALL BASELINE	31+78.50 TO 32+04.00	618.02	606.50	9.01 TO 9.52	5.75	3.42	6.00	3.55
WALL BASELINE	32+04.00 TO 32+24.50	618.42	606.50	9.52 TO 9.92	6.75	4.34	6.75	4.47
WALL BASELINE	32+24.50 TO 32+35.00	618.62	608.50	7.92 TO 8.12	5.50	3.15	5.50	3.20
WALL BASELINE	32+35.00 TO 32+45.12	618.82	612.00	4.62 TO 4.82	4.75	2.32	4.75	2.37

ALIGNMENT	WALL @ STATION	HIGHEST TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"H" VARIES (FT)	"W" DOWN STATION (FT)	"T" DOWN STATION (FT)	"W" UP STATION (FT)	"T" UP STATION (FT)
WALL BASELINE	41+05.00 TO 41+16.00	668.43	660.50	5.23 TO 5.93	4.75	2.47	5.00	2.65
WALL BASELINE	41+16.00 TO 41+27.00	669.13	658.50	7.93 TO 8.63	5.50	3.15	5.75	3.32
WALL BASELINE	41+27.00 TO 41+49.00	670.53	658.50	8.63 TO 10.03	6.50	4.04	7.00	4.51
WALL BASELINE	41+49.00 TO 41+71.00	671.88	656.50	11.53 TO 12.88	7.75	5.01	8.00	5.46
WALL BASELINE	41+71.00 TO 41+93.00	673.30	660.50	9.38 TO 10.80	6.75	4.29	7.25	4.77
WALL BASELINE	41+93.00 TO 42+15.00	674.68	663.50	7.80 TO 9.18	5.50	3.12	5.75	3.46
WALL BASELINE	42+15.00 TO 42+37.00	676.04	663.50	9.18 TO 10.54	6.50	4.23	7.00	4.68
WALL BASELINE	42+37.00 TO 42+60.00	677.50	665.50	8.54 TO 10.00	6.50	4.01	6.75	4.50
WALL BASELINE	42+60.00 TO 42+83.00	678.81	668.50	7.00 TO 8.31	5.25	2.92	5.50	3.24
WALL BASELINE	42+83.00 TO 42+94.50	679.47	671.50	5.31 TO 5.97	4.75	2.49	5.00	2.66
WALL BASELINE	42+94.50 TO 43+06.32	680.15	673.50	3.97 TO 4.65	4.50	2.16	4.75	2.33

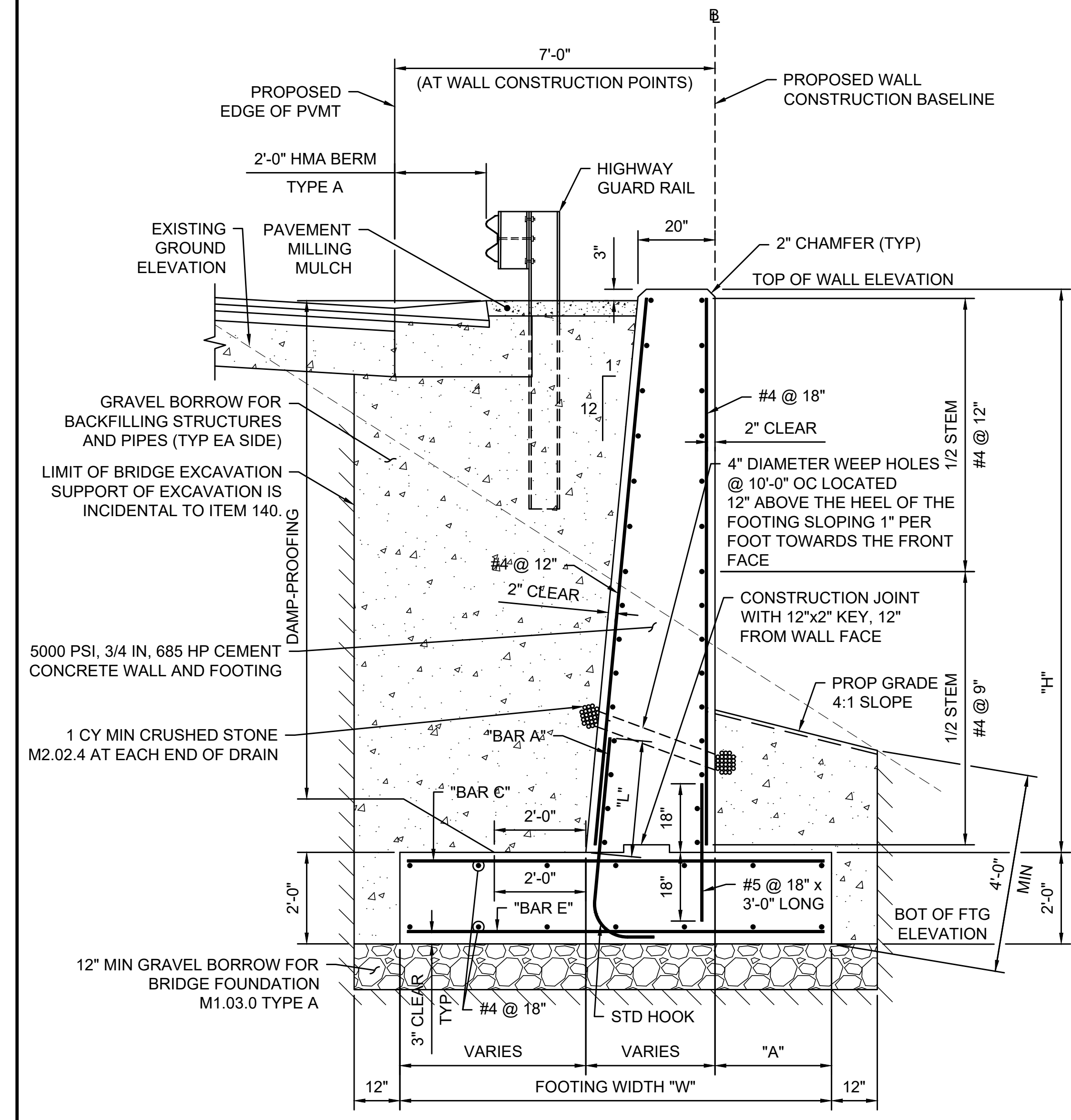
ALIGNMENT	WALL @ STATION	HIGHEST TOP OF WALL ELEVATION	BOTTOM OF FOOTING ELEVATION	"H" VARIES (FT)	"A"	"W"	"BAR A"	"L"	"BAR C"	"BAR E"
WALL BASELINE	57+60.00 TO 57+85.00	755.29	742.00	10.55 TO 11.29	1.50	7.50	#5 @ 12"	2.40	#5 @ 18"	#4 @ 18"
WALL BASELINE	57+85.00 TO 58+10.00	756.08	739.00	14.29 TO 15.08	2.50	9.00	#7 @ 12"	6.40	#6 @ 18"	#5 @ 18"
WALL BASELINE	58+10.00 TO 58+35.00	756.95	739.00	15.08 TO 15.95	2.50	9.00	#7 @ 12"	6.40	#6 @ 18"	#5 @ 18"
WALL BASELINE	58+35.00 TO 58+60.00	757.90	742.00	12.95 TO 13.90	1.75	8.00	#6 @ 12"	4.20	#6 @ 18"	#4 @ 18"
WALL BASELINE	58+60.00 TO 58+85.00	758.93	742.00	13.90 TO 14.93	2.00	8.50	#6 @ 12"	4.50	#6 @ 18"	#4 @ 18"
WALL BASELINE	58+85.00 TO 59+10.00	760.03	742.00	14.93 TO 16.03	2.50	9.50	#7 @ 12"	6.80	#7 @ 18"	#5 @ 18"
WALL BASELINE	59+10.00 TO 59+35.00	761.23	745.00	13.03 TO 14.23	2.00	8.50	#6 @ 12"	4.50	#6 @ 18"	#4 @ 18"
WALL BASELINE	59+35.00 TO 59+60.00	762.52	747.00	12.23 TO 13.52	1.75	8.00	#6 @ 12"	4.20	#6 @ 18"	#4 @ 18"
WALL BASELINE	59+60.00 TO 59+85.00	763.84	747.00	13.52 TO 14.84	2.00	8.50	#6 @ 12"	4.50	#6 @ 18"	#4 @ 18"
WALL BASELINE	59+85.00 TO 60+10.00	765.18	750.50	11.34 TO 12.68	1.50	8.00	#5 @ 12"	2.60	#6 @ 18"	#4 @ 18"
WALL BASELINE	60+10.00 TO 60+35.00	766.54	750.50	12.68 TO 14.04	2.00	8.50	#6 @ 12"	4.50	#6 @ 18"	#4 @ 18"
WALL BASELINE	60+35.00 TO 60+60.00	767.89	754.00	10.54 TO 11.89	1.50	7.50	#5 @ 12"	2.40	#5 @ 18"	#4 @ 18"
WALL BASELINE	60+60.00 TO 60+82.00	769.09	754.00	11.89 TO 13.09	1.75	8.00	#6 @ 12"	4.20	#6 @ 18"	#4 @ 18"
WALL BASELINE	60+82.00 TO 61+04.00	770.28	754.00	13.09 TO 14.28	2.00	8.50	#6 @ 12"	4.50	#6 @ 18"	#4 @ 18"
WALL BASELINE	61+04.00 TO 61+25.21	771.44	758.00	10.28 TO 11.44	1.50	7.50	#5 @ 12"	2.40	#5 @ 18"	#4 @ 18"



CEMENT CONCRETE GRAVITY RETAINING WALL #1
(STA 31+10.00 LT TO STA 32+50.00 LT)
NOT TO SCALE



CEMENT CONCRETE GRAVITY RETAINING WALL #2
(STA 41+05.00 LT TO STA 43+02.00 LT)
NOT TO SCALE

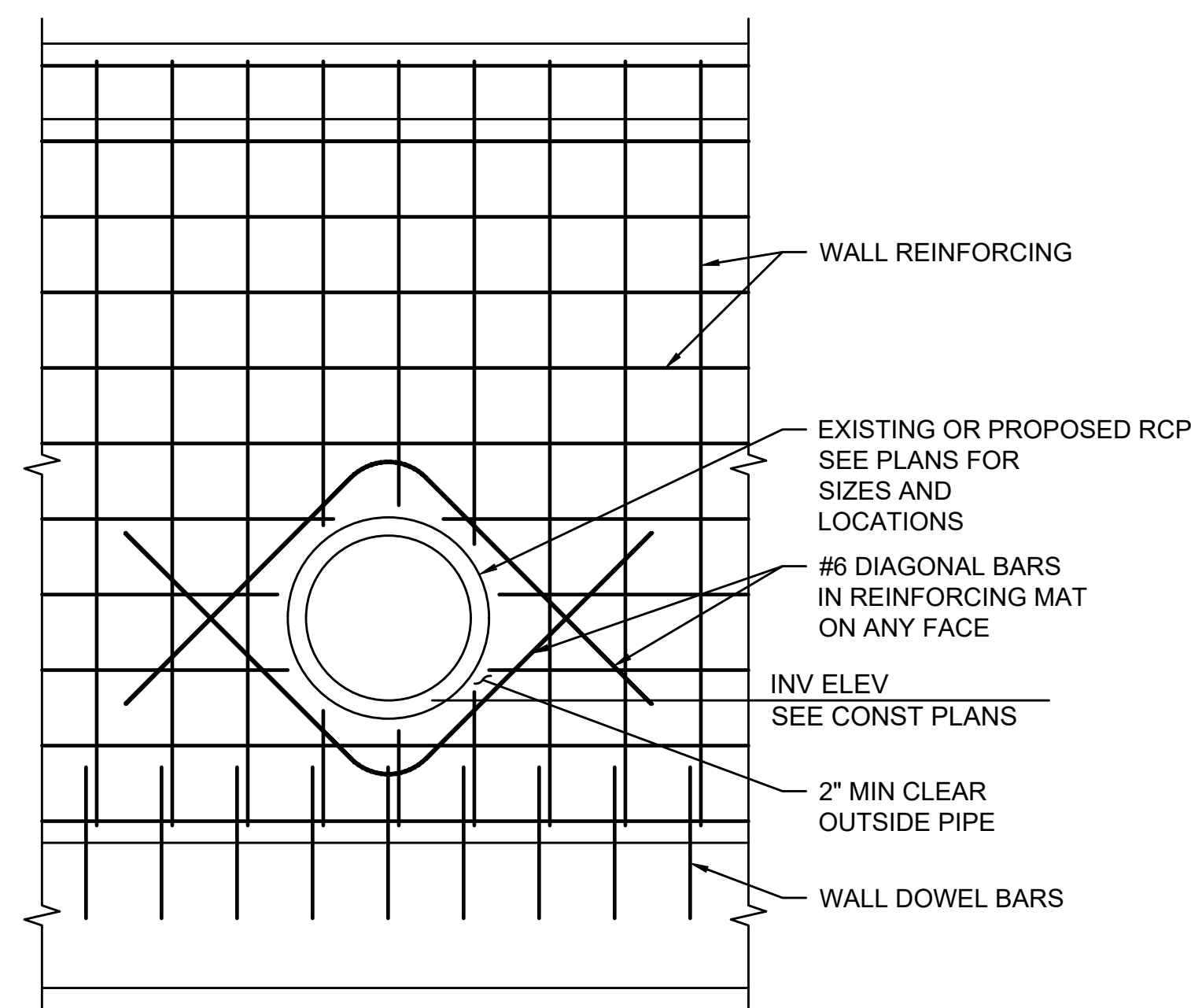


CEMENT CONCRETE CANTILEVER RETAINING WALL #3
(STA 57+60.00 RT TO STA 61+40.00 RT)
NOT TO SCALE

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

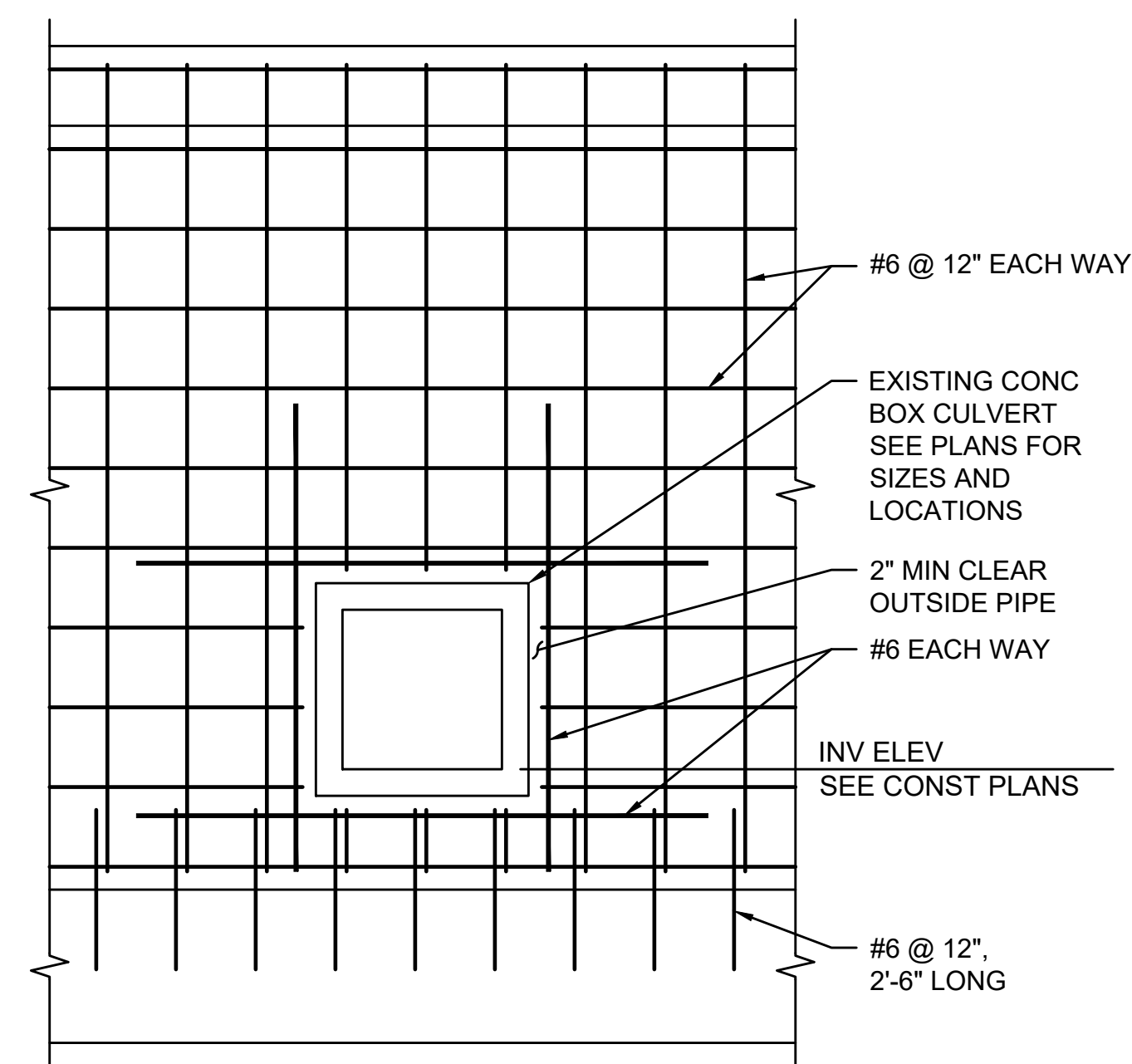
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	55	132
PROJECT FILE NO.		606517	

CONSTRUCTION DETAILS - 5



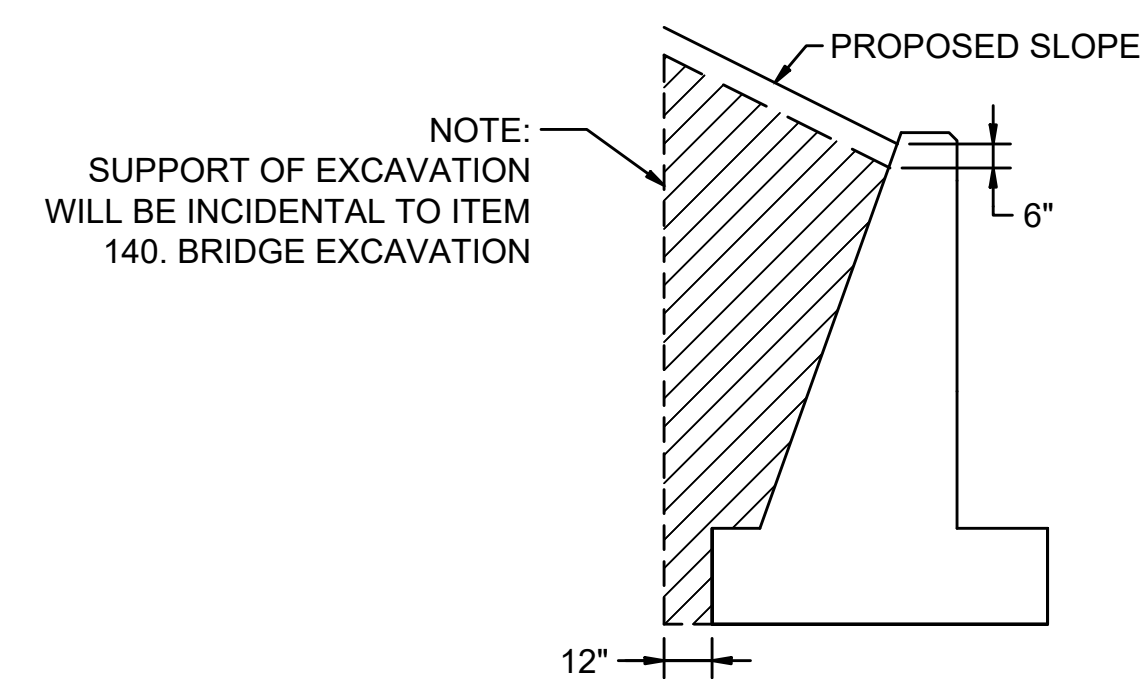
REINFORCED CONC PIPE CULVERT PENETRATION THROUGH PROPOSED CEMENT CONCRETE RETAINING WALL

NOT TO SCALE



CONCRETE BOX CULVERT PENETRATION THROUGH PROPOSED CEMENT CONCRETE RETAINING WALL

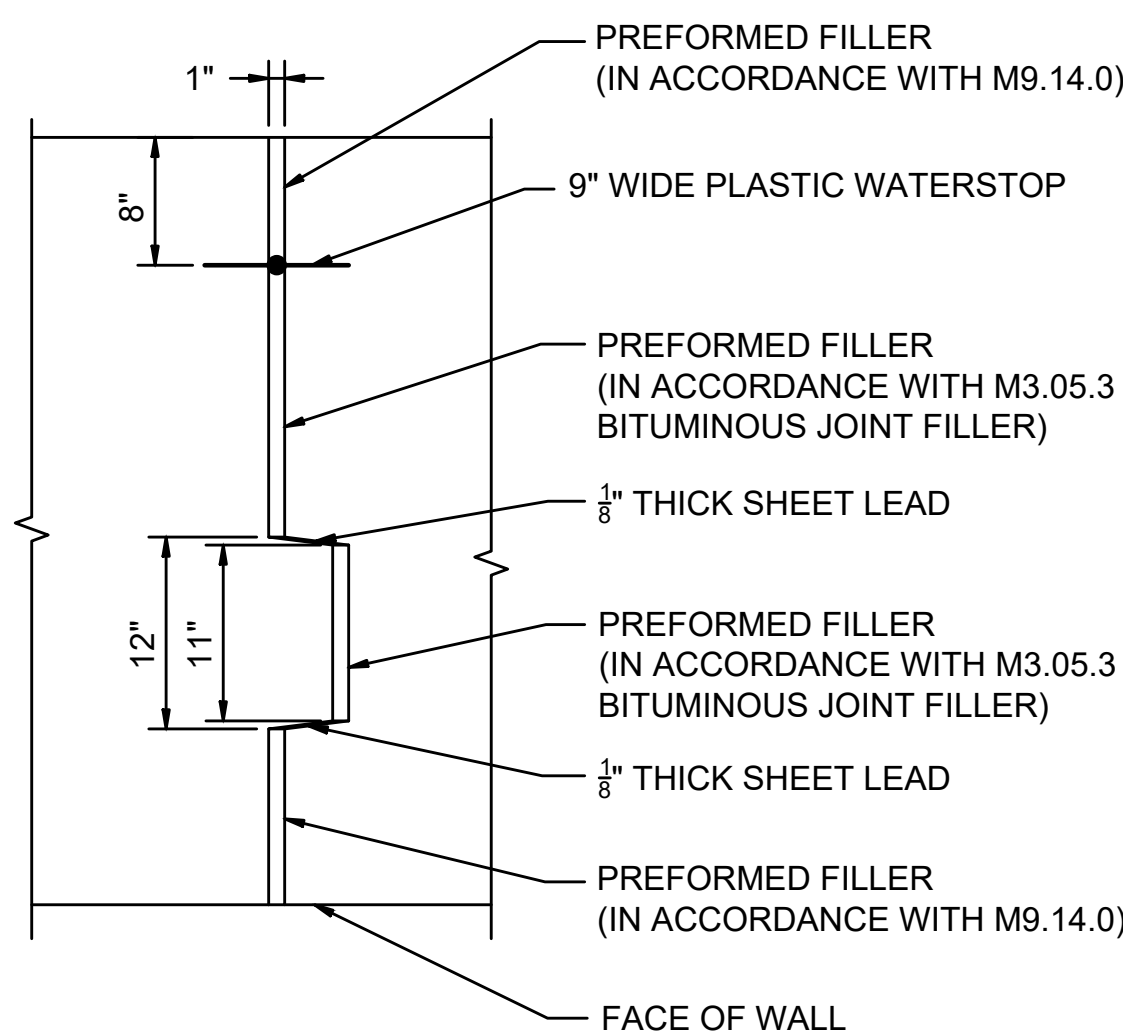
NOT TO SCALE



NOTE:
HATCHED AREA INDICATES LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES.

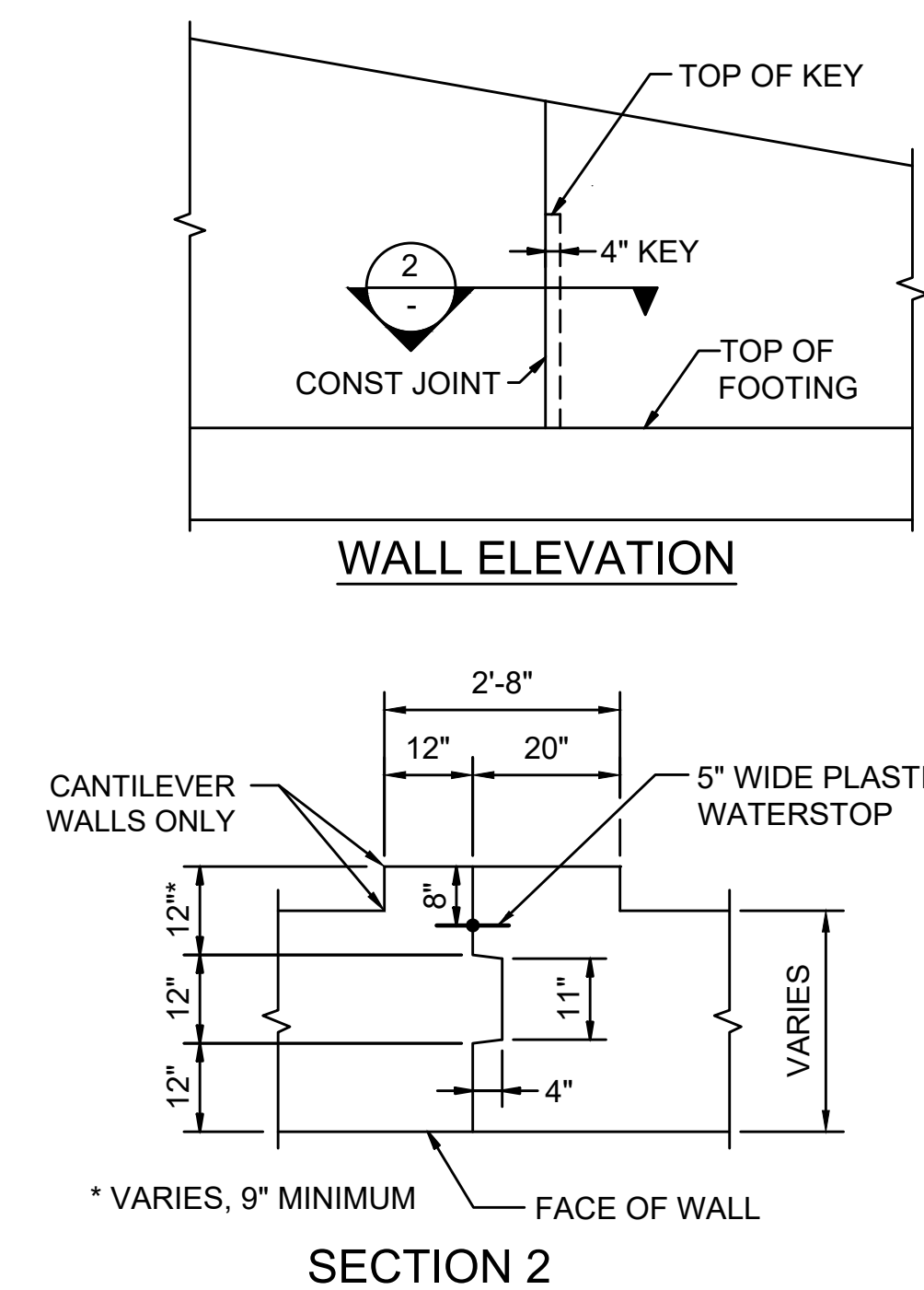
LIMITS OF GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES

NOT TO SCALE

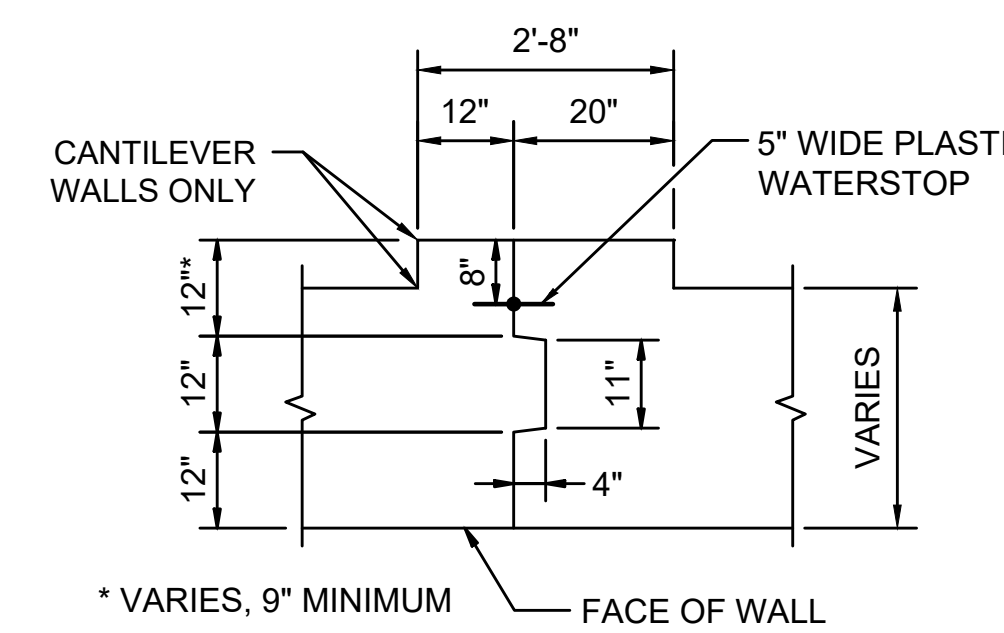


LIMITS OF PREFORMED FILLER

NOT TO SCALE



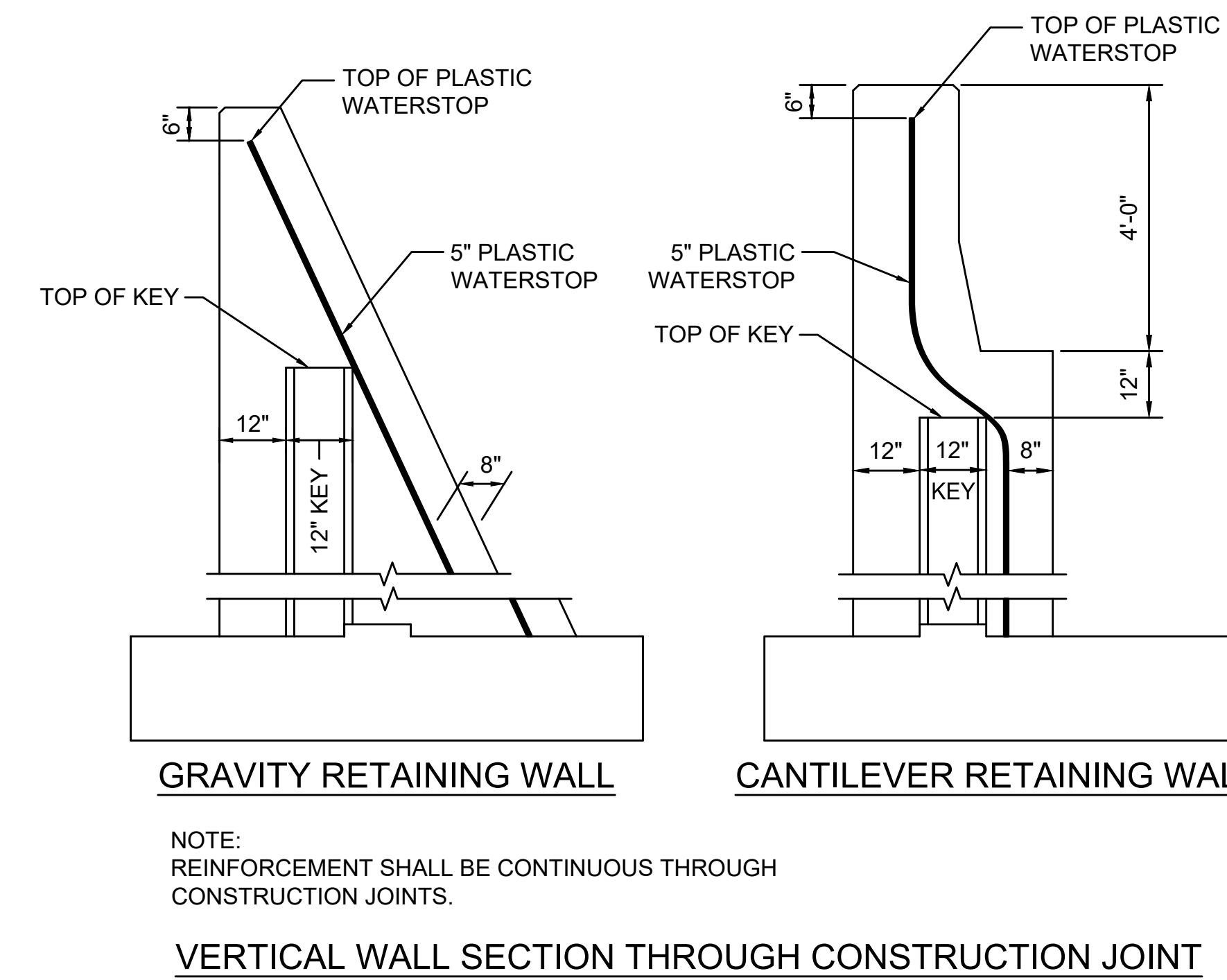
WALL ELEVATION



SECTION 2

TYPICAL CONSTRUCTION JOINT

NOT TO SCALE

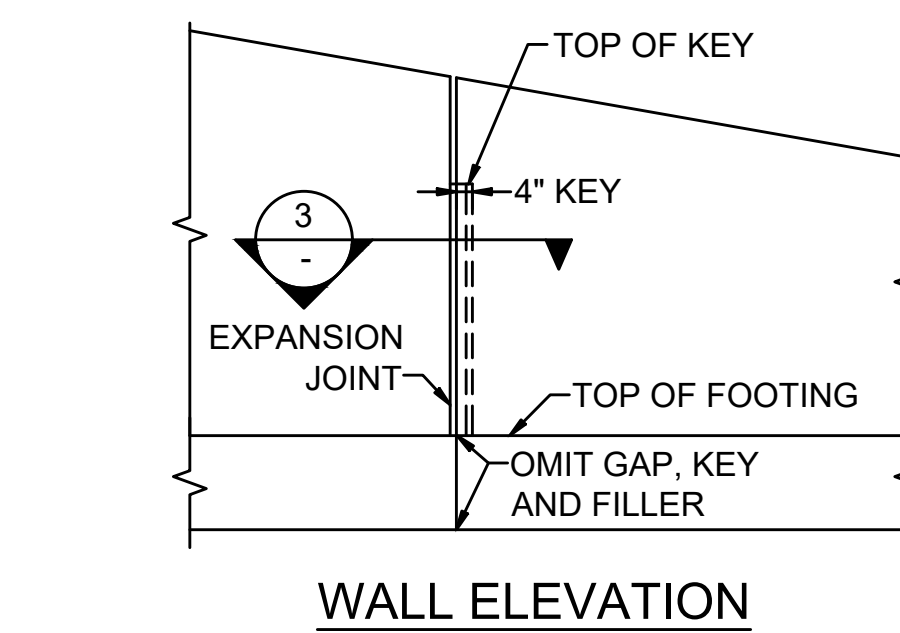


GRAVITY RETAINING WALL

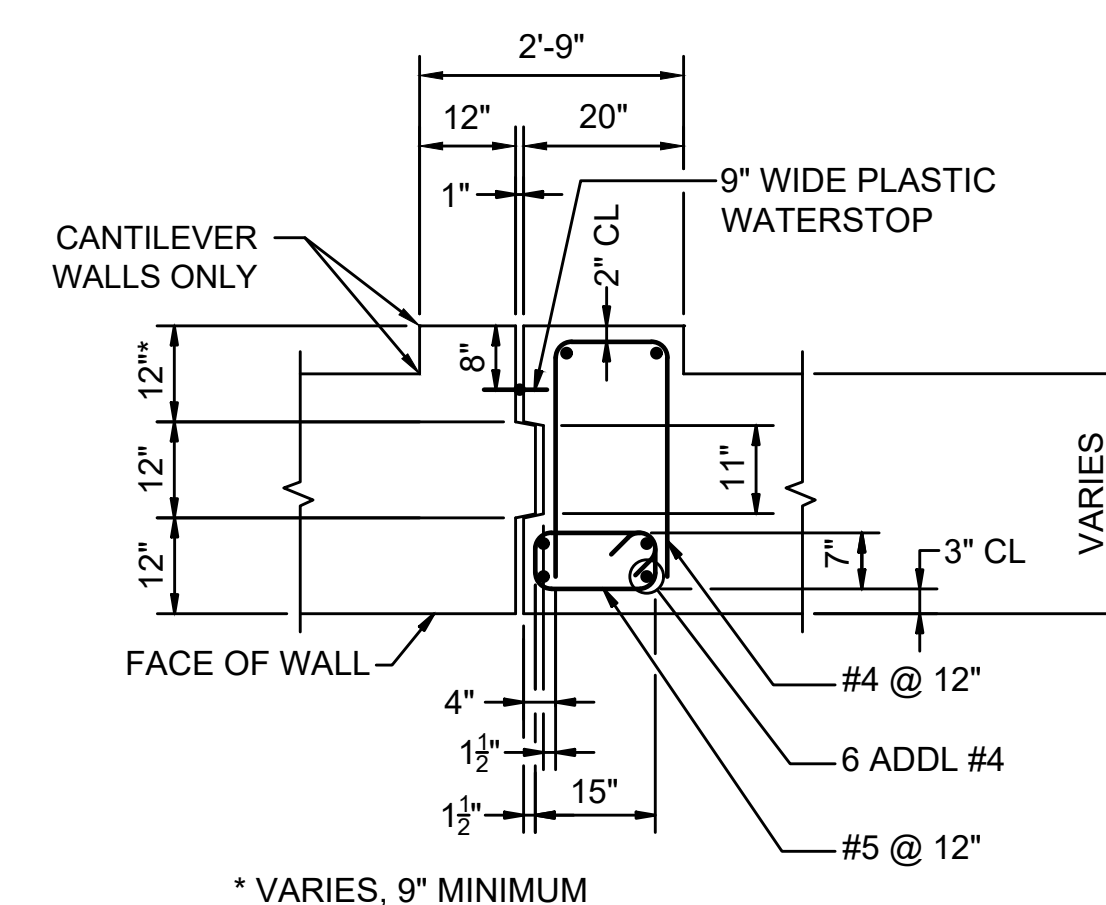
CANTILEVER RETAINING WALL

NOTE:
REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONSTRUCTION JOINTS.

VERTICAL WALL SECTION THROUGH CONSTRUCTION JOINT



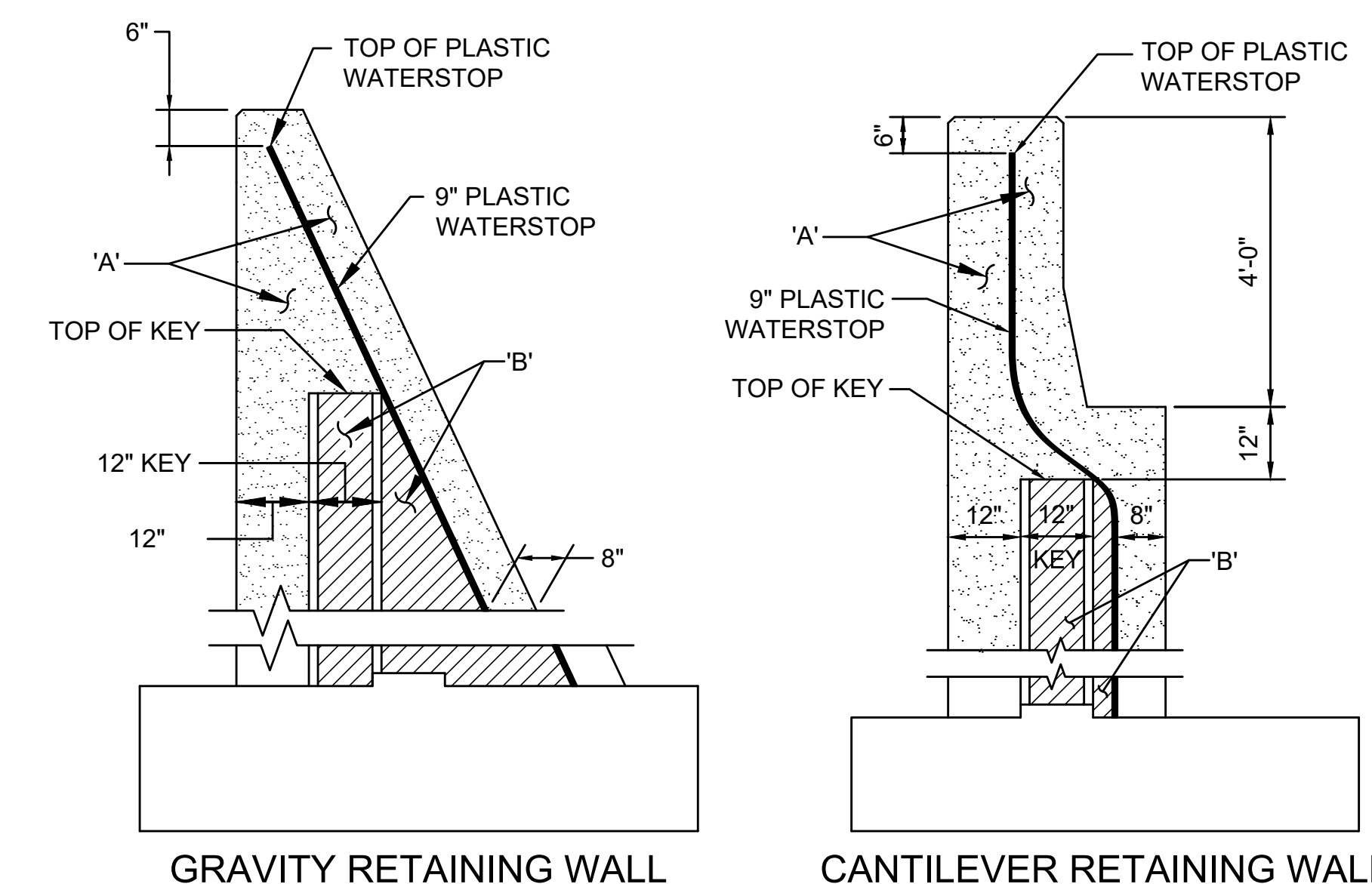
WALL ELEVATION



SECTION 3

TYPICAL EXPANSION JOINT

NOT TO SCALE



GRAVITY RETAINING WALL

CANTILEVER RETAINING WALL

VERTICAL WALL SECTION THROUGH EXPANSION JOINT

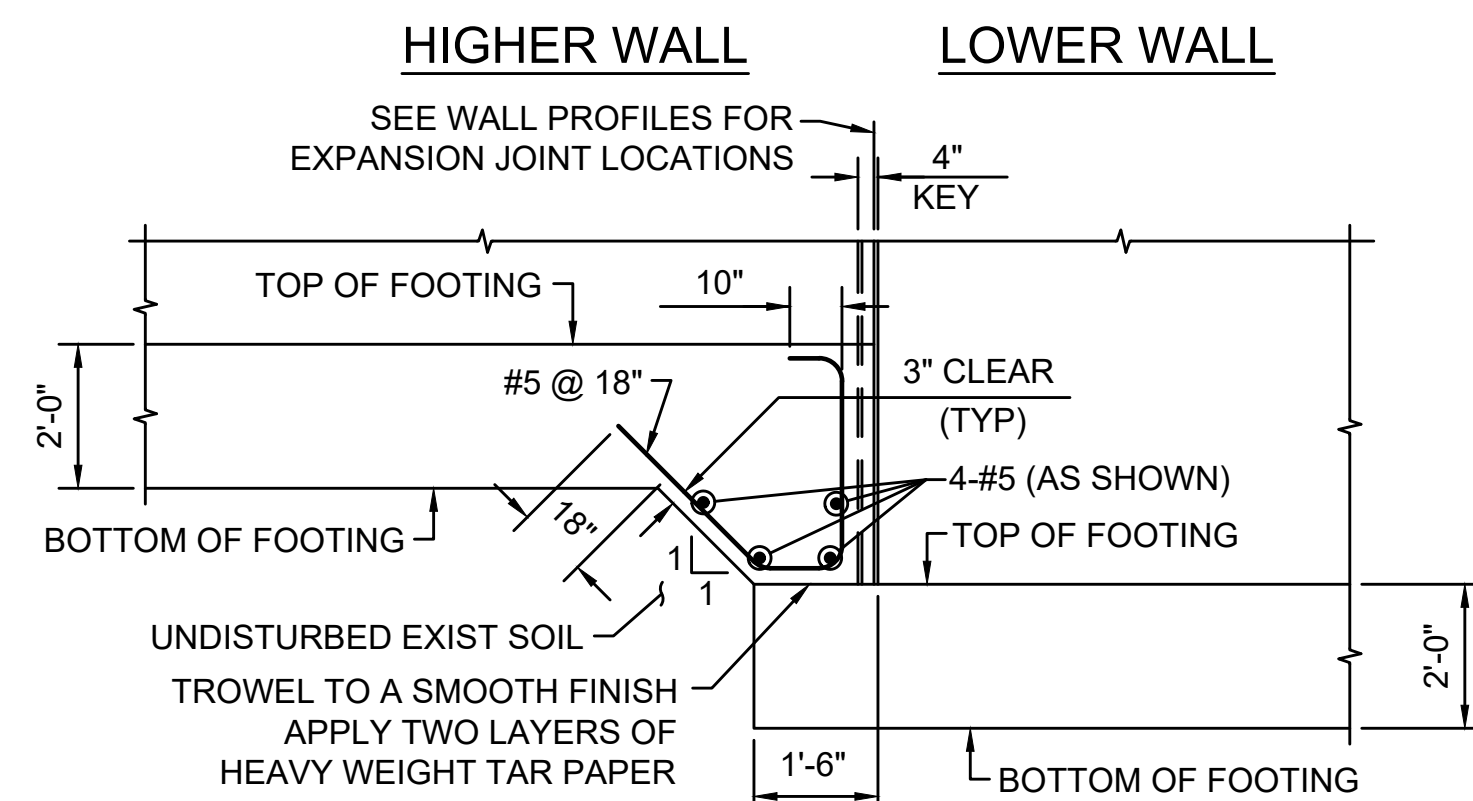
EXPANSION JOINT NOTES:

- LONGITUDINAL REINFORCEMENT SHALL END 2" CLEAR OF EXPANSION JOINT.
- 'A' - PREFORMED FILLER (IN ACCORDANCE WITH M9.14.0).
'B' - PREFORMED FILLER (IN ACCORDANCE WITH M3.05.3 BITUMINOUS JOINT FILLER).
- FILLER MATERIAL SHALL BE FASTENED SECURELY TO ONE SIDE OF JOINT.

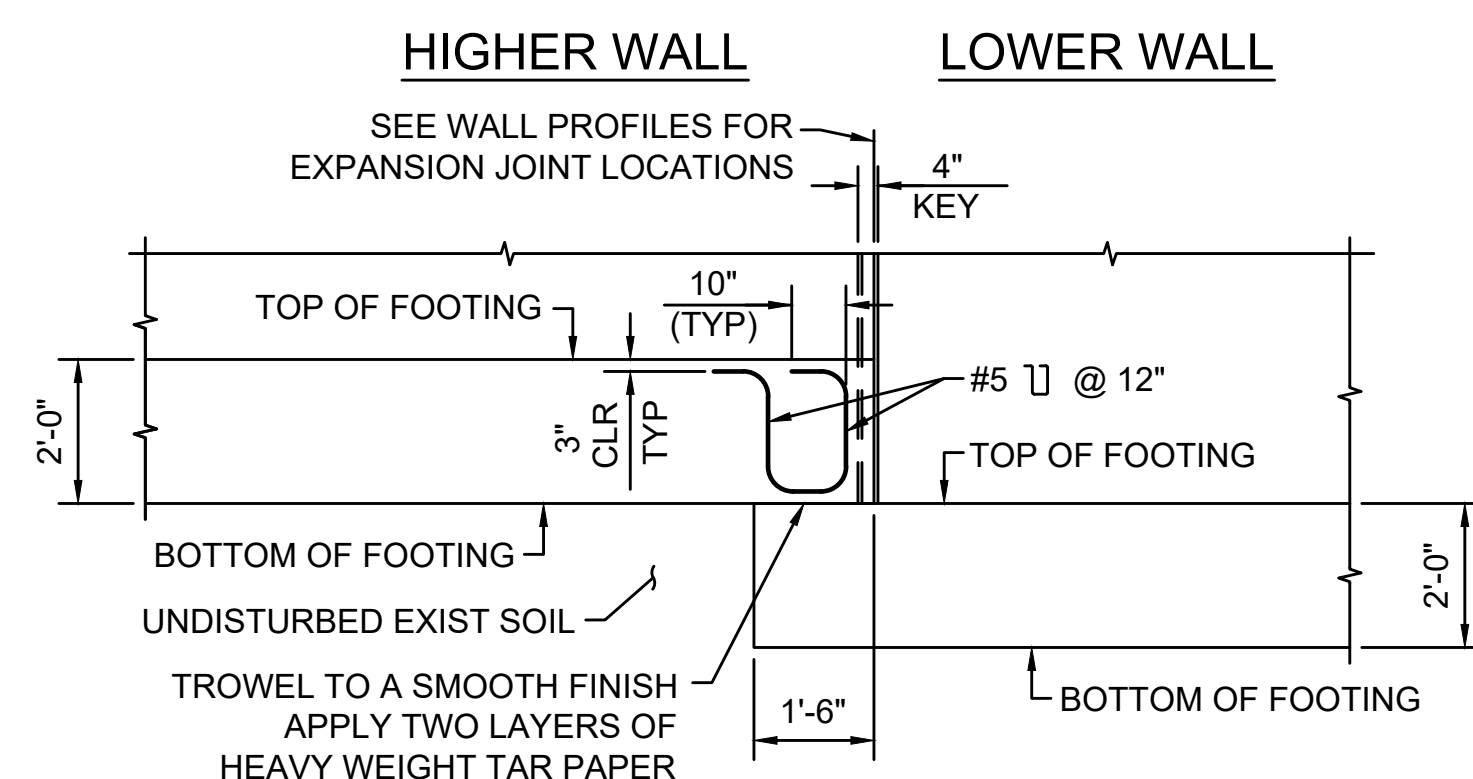
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	56	132
PROJECT FILE NO.		606517	

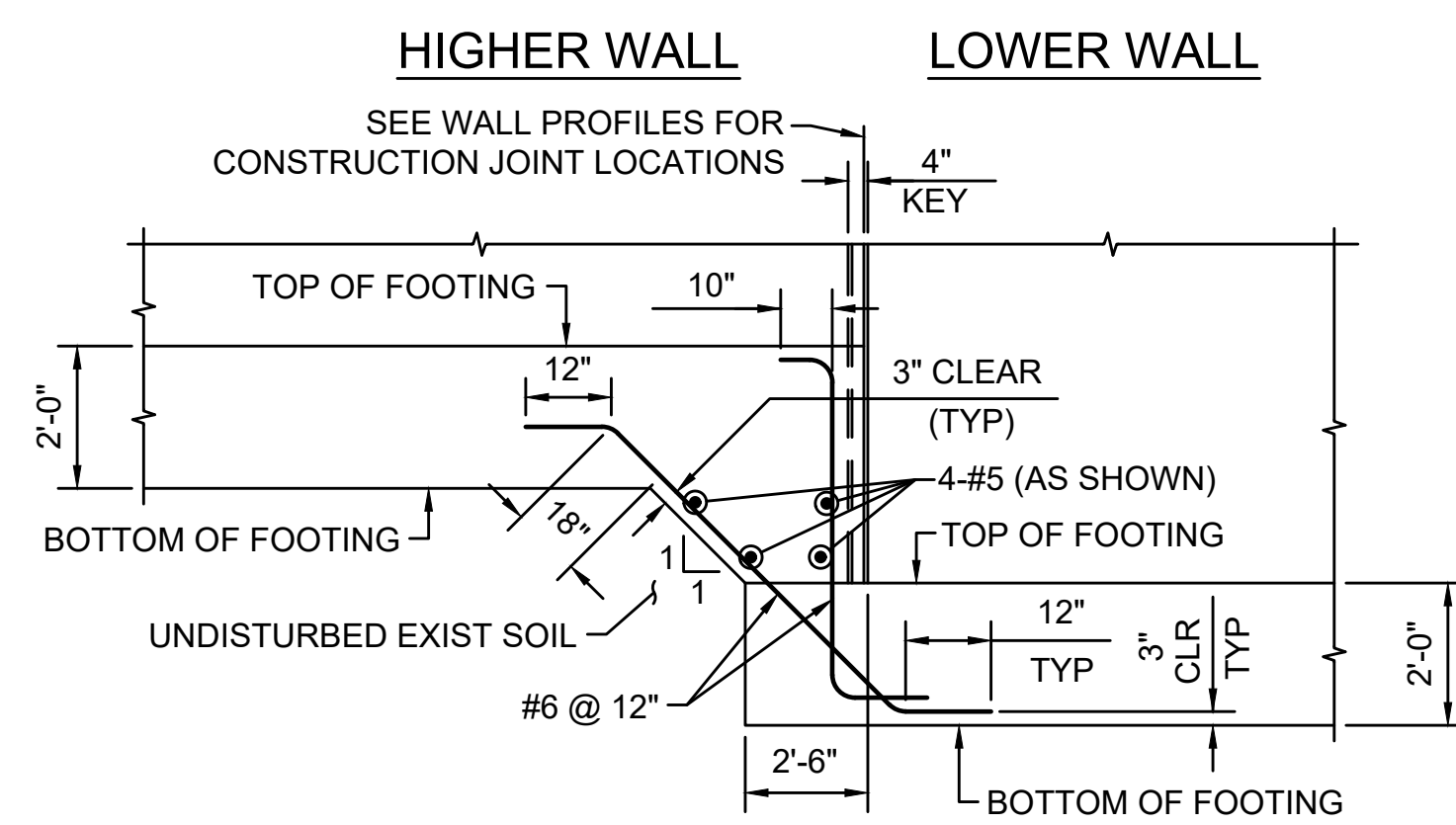
CONSTRUCTION DETAILS - 6



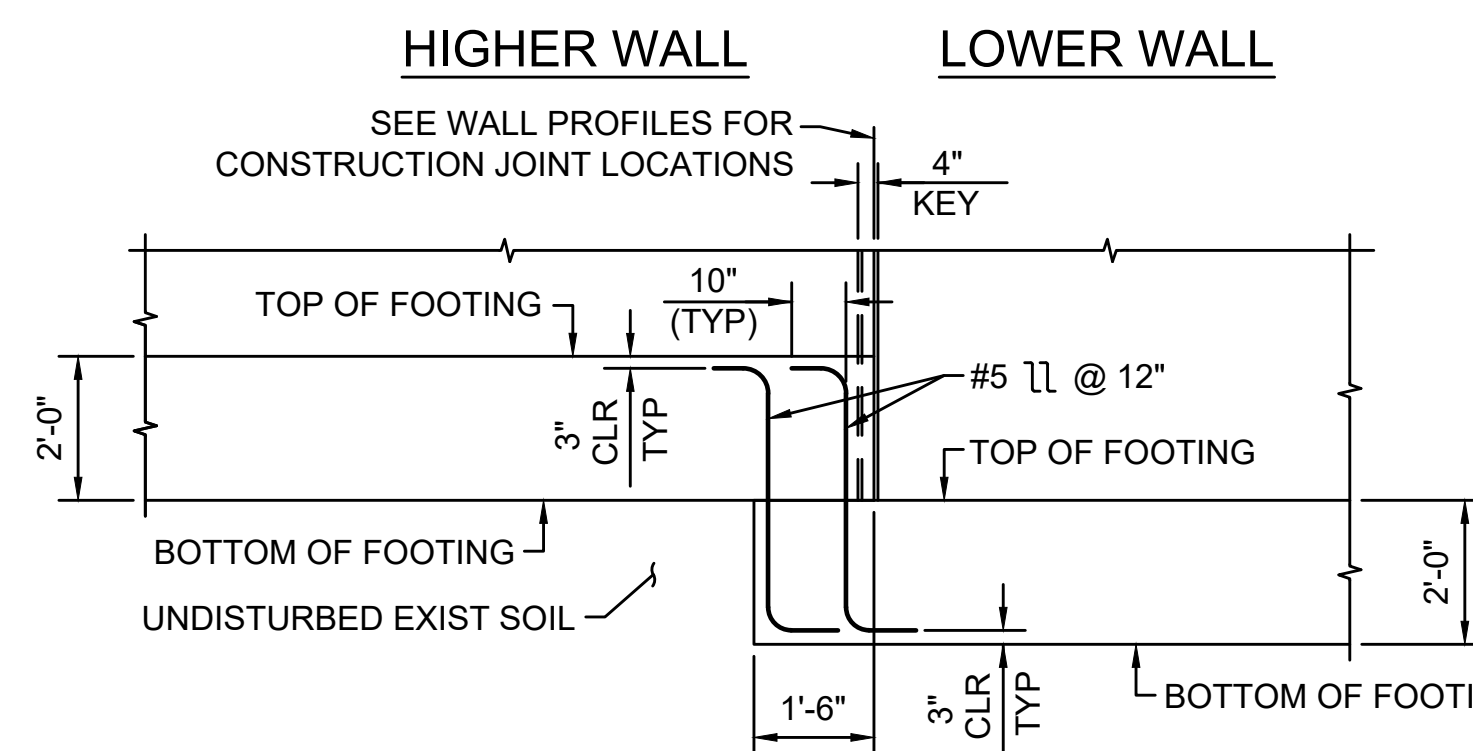
**STEPPED-UP FOOTING DETAIL AT EXPANSION JOINT
UPPER FOOTING ABOVE LOWER FOOTING**
NOT TO SCALE



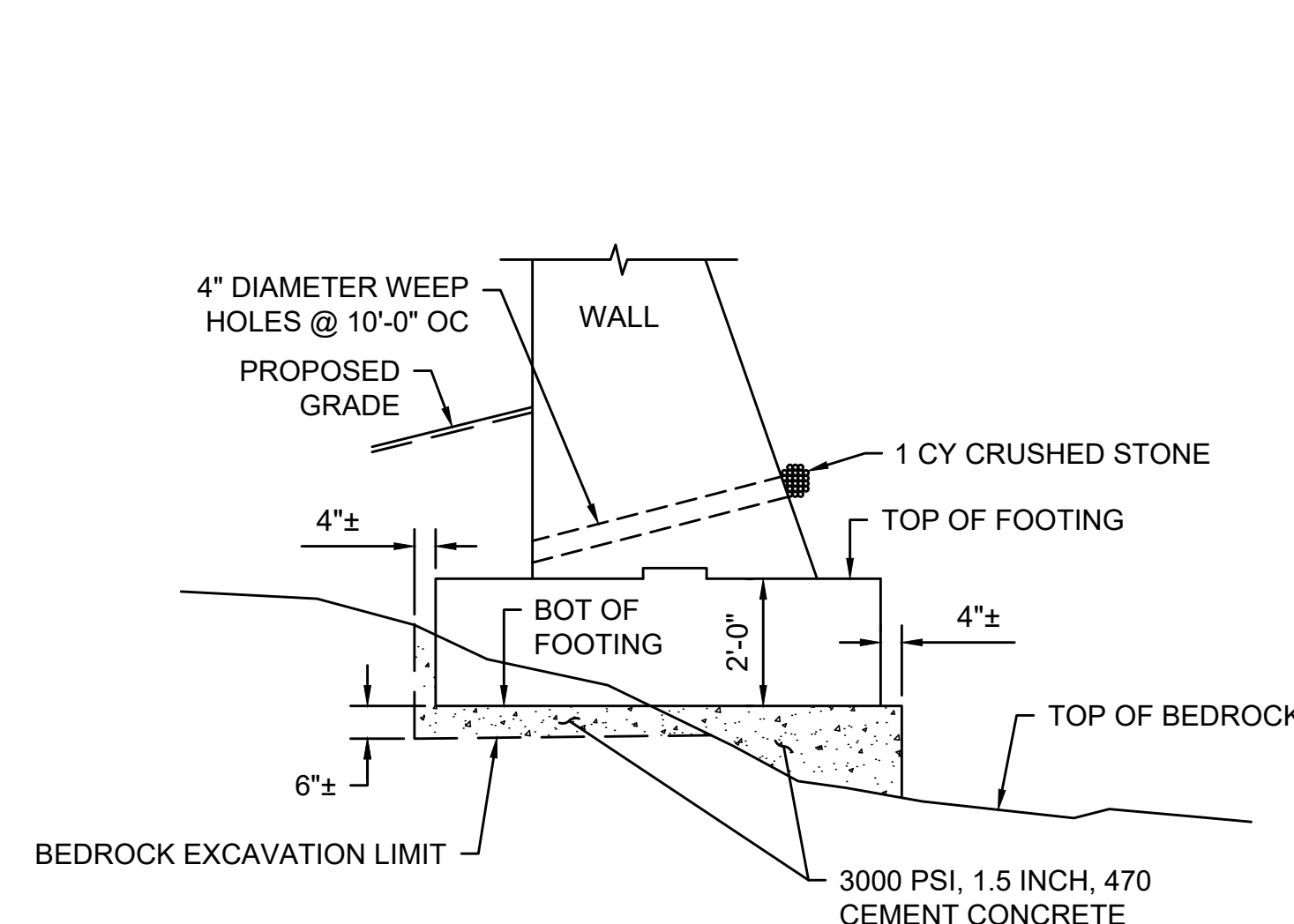
**STEPPED-UP FOOTING DETAIL AT EXPANSION JOINT
UPPER FOOTING ON LOWER FOOTING**
NOT TO SCALE



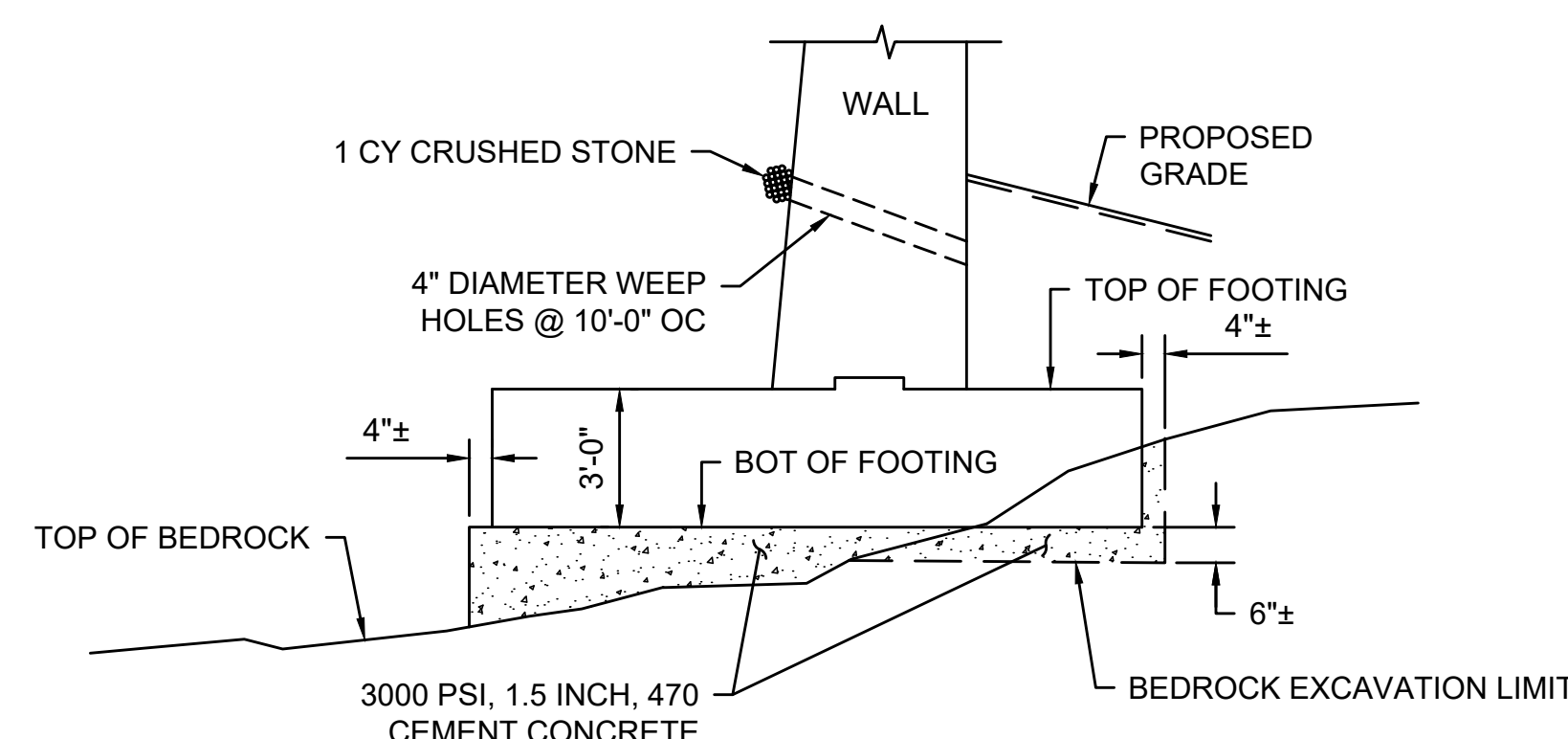
**STEPPED-UP FOOTING DETAIL AT CONSTRUCTION JOINT
UPPER FOOTING ABOVE LOWER FOOTING**
NOT TO SCALE



**STEPPED-UP FOOTING DETAIL AT CONSTRUCTION JOINT
UPPER FOOTING ON LOWER FOOTING**
NOT TO SCALE



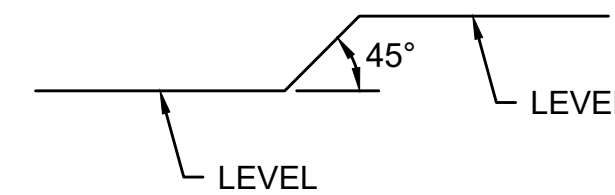
GRAVITY RETAINING WALL



CANTILEVER RETAINING WALL

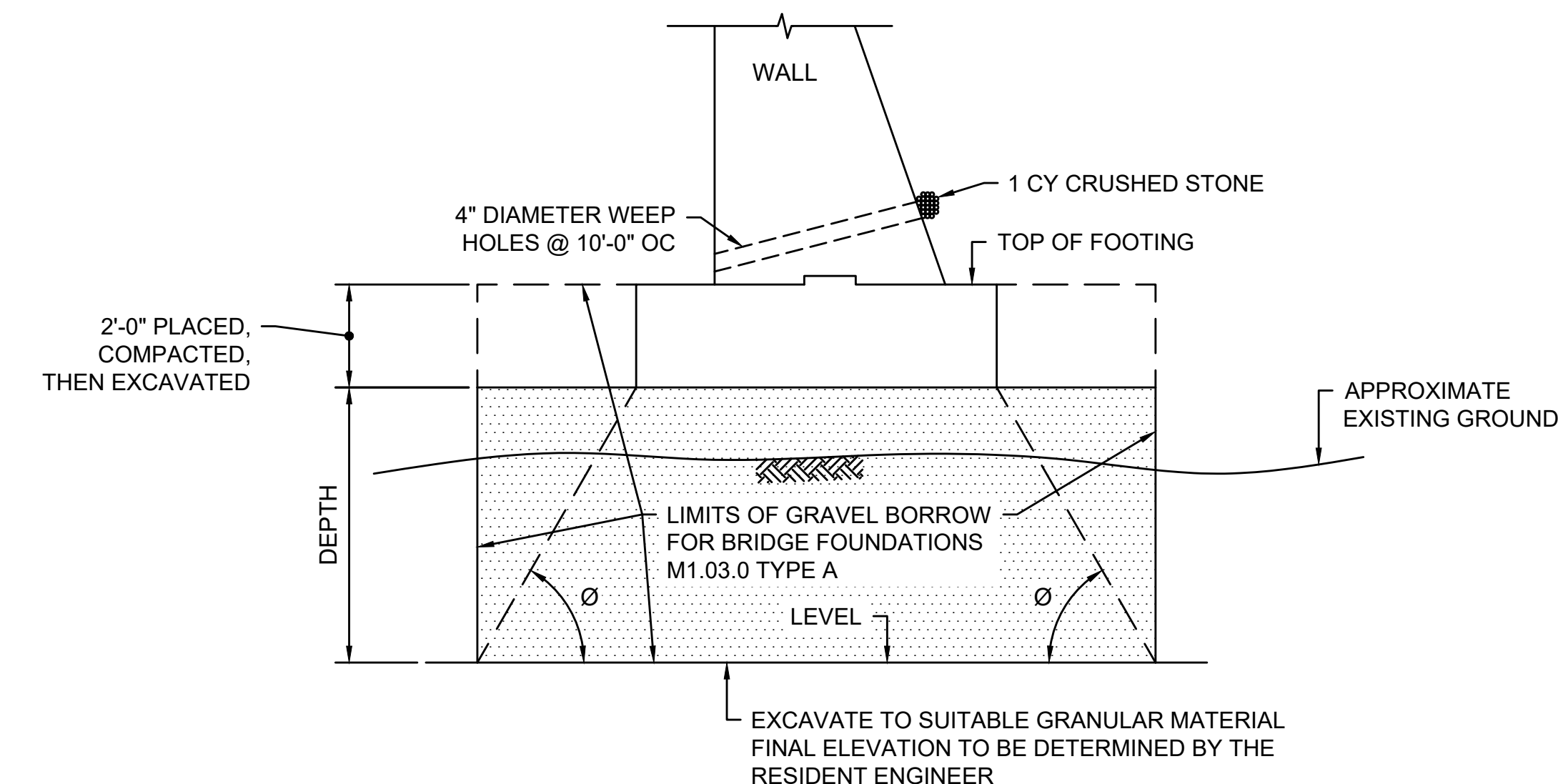
NOTE:
BOTTOM OF FOOTING SHALL BE STEPPED ALONG ITS LENGTH TO CONFORM WITH BEDROCK.

- FOUNDATION NOTES:
- ENTIRE FOOTING FOR ANY WALL SHALL BEAR ON THE SAME MATERIAL, EITHER ROCK AND CONCRETE FILL OR A MINIMUM OF 18" OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS. ALTERNATIVELY, THE CONTRACTOR MAY EXCAVATE ROCK 18" BELOW THE BOTTOM OF FOOTING AND FILL WITH GRAVEL BORROW FOR BRIDGE FOUNDATIONS.

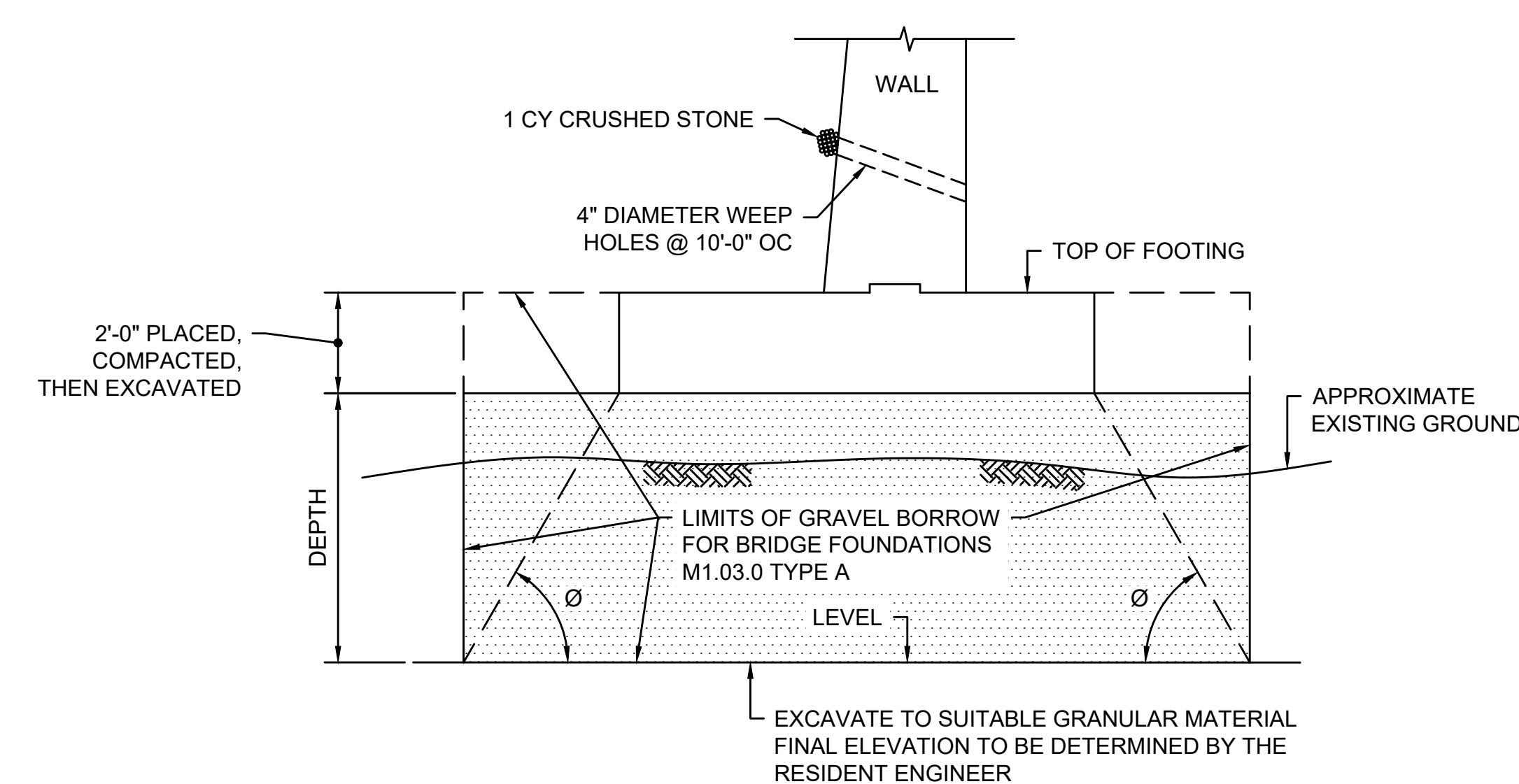


BEDROCK STEP DETAIL

MODIFICATIONS FOR FOOTINGS ON ROCK
NOT TO SCALE



GRAVITY RETAINING WALL



CANTILEVER RETAINING WALL

- NOTES:
- $\theta = 45^\circ$ FOR DEPTH OF 5'-0" OR LESS.
 $\theta = 60^\circ$ FOR DEPTH OVER 5'-0".
 - SAME TREATMENT IS TO BE USED AT ENDS OF WALLS, PIERS AND ABUTMENTS.

LIMITS OF GRAVEL BORROW FOR BRIDGE FOUNDATIONS
NOT TO SCALE

- CONCEPTUAL CONTROL OF WATER:
- CONTRACTOR SHALL USE WELL POINTS OR OTHER APPROVED METHOD FOR CONTROLLING WATER IN ORDER TO PLACE GRAVEL BORROW IN THE DRY. ALL PUMPED WATER SHALL BE PROCESSED THROUGH AN APPROPRIATE FILTRATION SYSTEM IN ACCORDANCE WITH THE APPROVED PERMITS.

**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	57	132
PROJECT FILE NO.		606517	

WETLAND REPLICATION PLAN - 1

WETLAND REPLICATION PLAN NOTES

- IMPACTS TO EXISTING TREES AND FOREST SOILS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. THERE SHALL BE NO DISTURBANCE OUTSIDE THE LIMIT OF GRADING REQUIRED FOR THE WETLAND AND THE ACCESS ROUTE TO CONSTRUCT THE WETLAND WITHOUT WRITTEN PERMISSION FROM THE ENGINEER. NO STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN THE EASEMENT.
- PRIOR TO CLEARING AND/OR GRUBBING THE CONTRACTOR, ENGINEER, MASSDOT LANDSCAPE ARCHITECT, AND WETLAND SPECIALIST SHALL REVIEW THE SITE CONDITIONS TO DETERMINE THE FOLLOWING:
 - TREES WITHIN THE WETLAND TO REMAIN AS SNAGS/HUMMOCKS. APPROPRIATE COARSE WOODY MATERIAL SHALL ALSO BE SELECTED AND SET ASIDE IN AN APPROVED LOCATION.
 - ACTUAL ACCESS ROUTE WHICH SHALL BE MARKED IN FIELD. ROUTE AND SIZE SHALL DEPEND ON EQUIPMENT BEING USED AND PRESERVATION OF EXISTING VEGETATION. EQUIPMENT SHALL BE AS SMALL AS POSSIBLE AND APPROVED BY THE ENGINEER.
 - ACCESS ROUTE AND LIMITS OF REQUIRED DISTURBANCE SHALL BE DELINEATED WITH STAKES PER ITEM 102.523.
- EQUIPMENT USED FOR WETLAND SHALL BE AS SMALL AS POSSIBLE, ETC. AND SHALL BE APPROVED BY THE ENGINEER AND WETLAND SPECIALIST.
- SEDIMENT BARRIERS SHALL BE USED AS REQUIRED TO PREVENT ROADWAY CONSTRUCTION SEDIMENT FROM ENTERING THE NEWLY CONSTRUCTED WETLAND AND AS REQUIRED AFTER CONSTRUCTION OF THE WETLAND TO PREVENT SEDIMENT FROM SLOPES AND ACCESS ROUTE FROM ENTERING THE WETLAND WHILE THE NATIVE SEED ESTABLISHES.
- ACCESS ROUTE SHALL BE RESTORED TO THE FINAL GRADING AND CONTOURS SHOWN OR AS APPROVED BY THE ENGINEER.
- THE REPRESENTATIVE FROM MASSDOT LANDSCAPE DESIGN SECTION FOR THIS PROJECT IS TARA MITCHELL: TARA.MITCHELL@DOT.STATE.MA.US

UPLAND NATIVE SEEDING NOTES

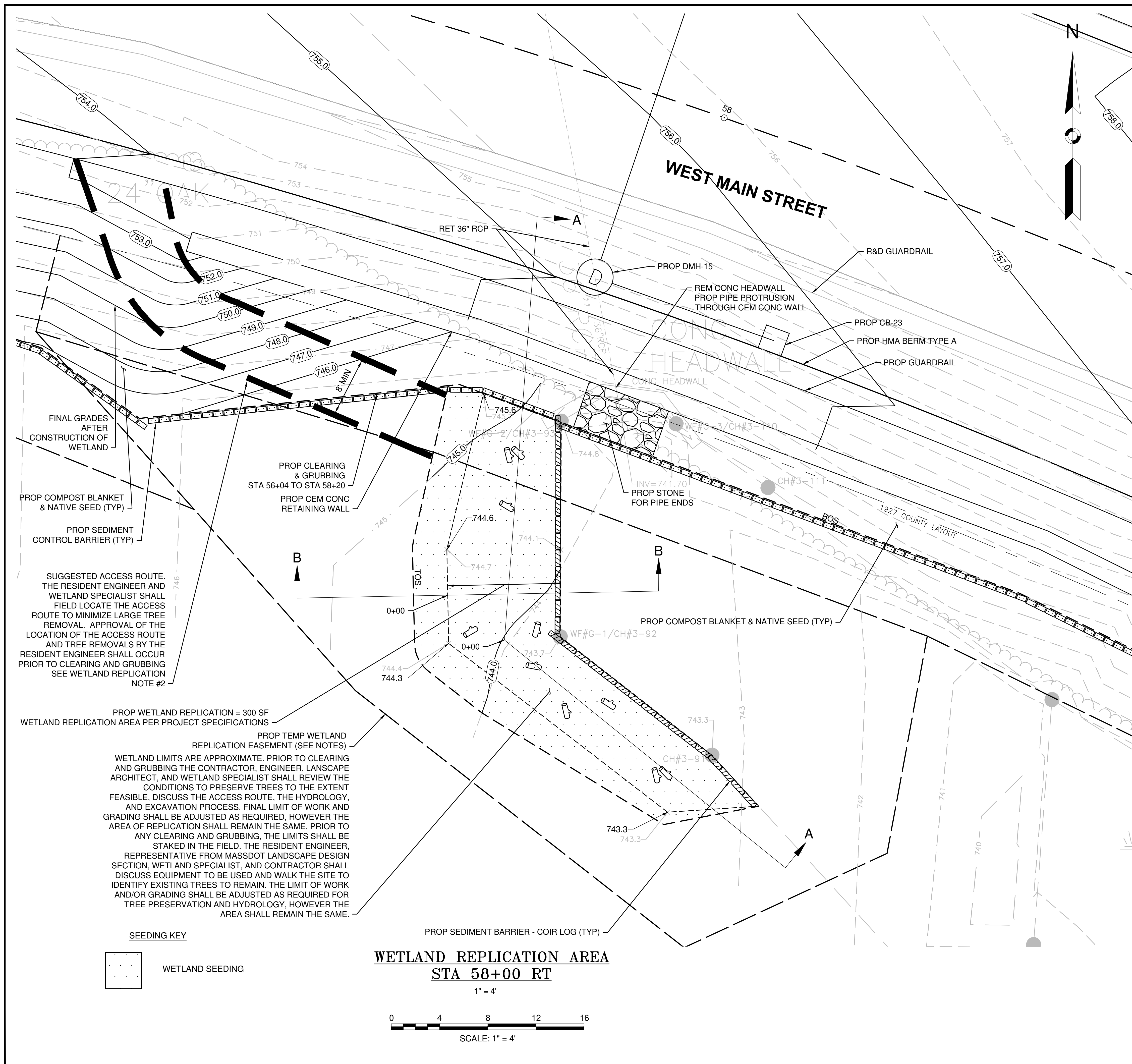
- SEEDING AND SUBMITTALS SHALL BE PER THE SPECIAL PROVISIONS.
- SUBMITTALS FOR SEED MIXES SHALL BE APPROVED BY THE ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO SEED APPLICATION.
- SITE PREPARATION SHALL BE PER SPECIFICATIONS AND APPROVED BY THE ENGINEER PRIOR TO SEEDING.
- WHEN SEEDING OUT OF SEASON APPLICATION RATE SHALL BE INCREASED BY 50%.

SEEDING & COMPOST BLANKET NOTES

- COMPOST BLANKET AND SEEDING SHALL OCCUR AFTER PLANTING.
- SEEDING WITH COMPOST BLANKET SHALL BE PER THE SPECIAL PROVISIONS.
- SEED RATES SHALL BE INCREASED AS SPECIFIED FOR SLOPE CONDITIONS.

SEDIMENT CONTROL BARRIER NOTES

- SEDIMENT CONTROL BARRIER SHALL BE LEFT TO DEGRADE OVER TIME AND THEREFORE MUST BE COMPRISED OF 100% BIODEGRADABLE MATERIALS - BURLAP, COTTON, HEMP, ETC.



SEEDING KEY



**WETLAND REPLICATION AREA
STA 58+00 RT**

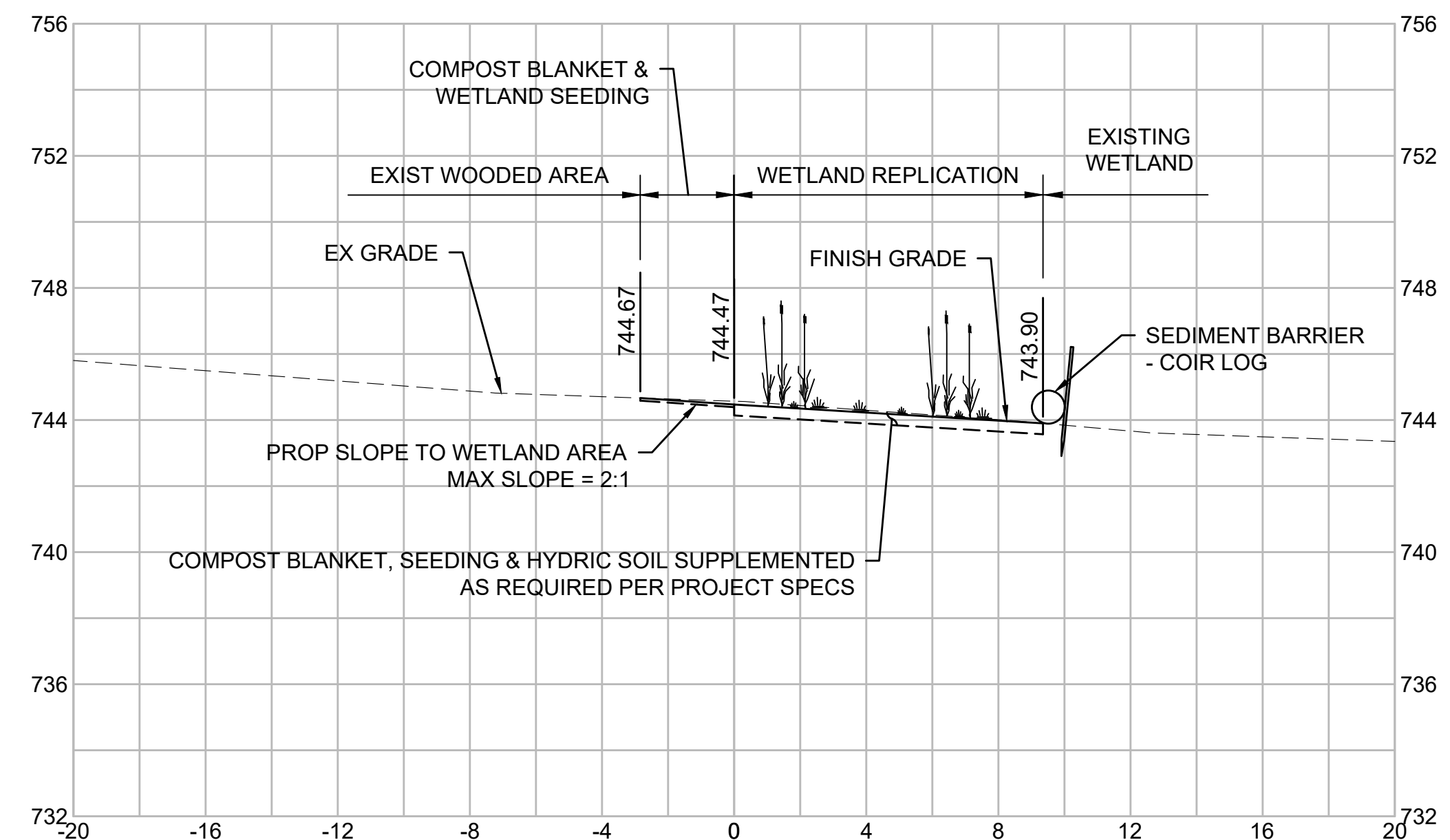
1" = 4'



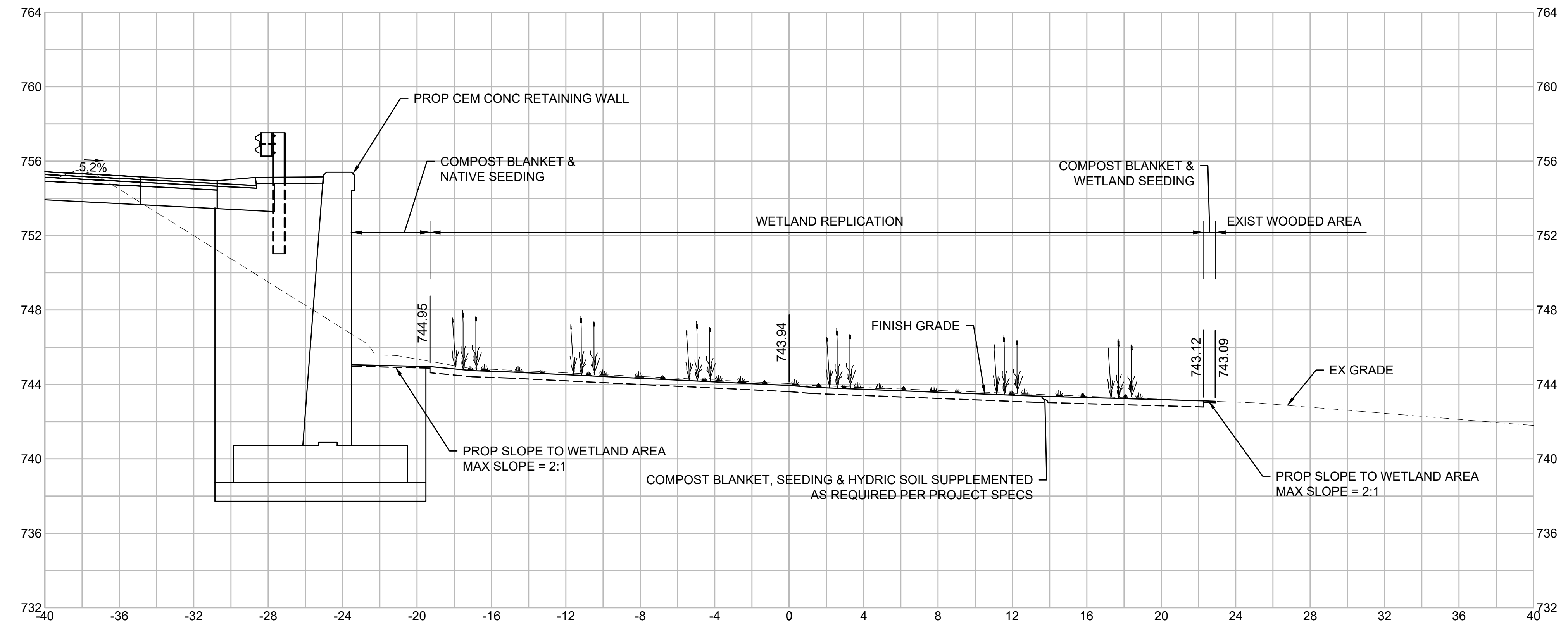
WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	58	132
PROJECT FILE NO.		606517	

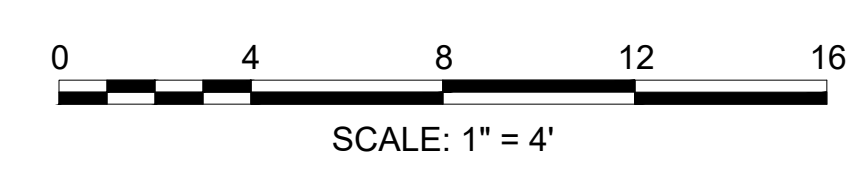
WETLAND REPLICATION PLAN - 2



SECTION "B-B"



SECTION "A-A"



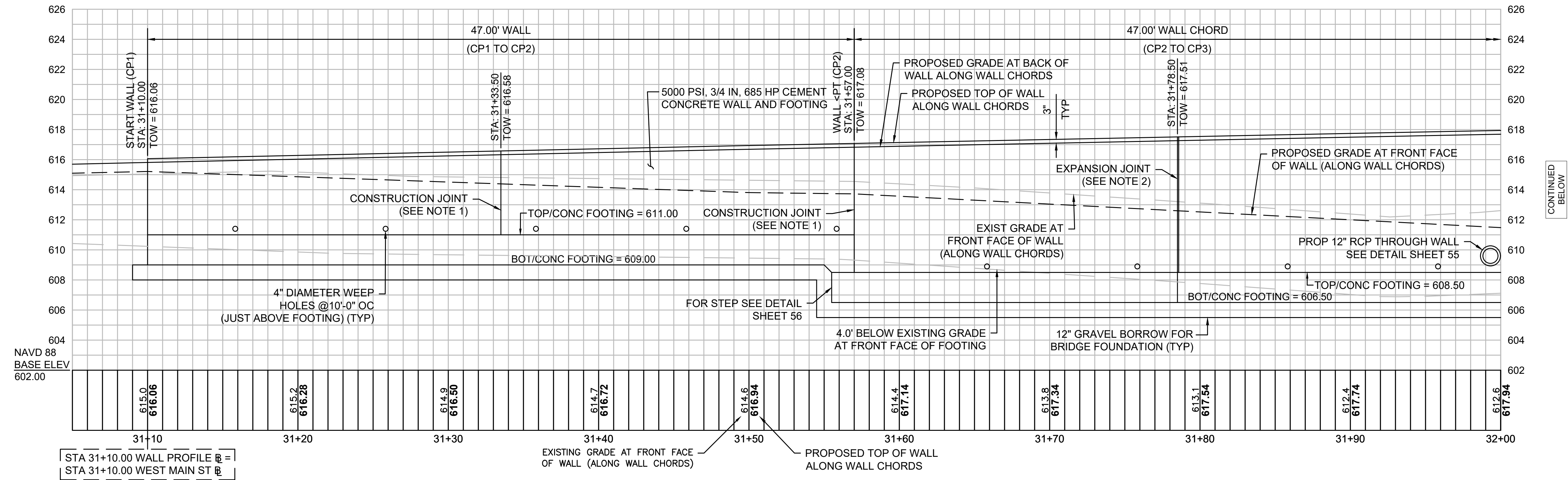
- NOTES:
- FOR CONSTRUCTION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
 - FOR EXPANSION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
 - THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
 - FOR RETAINING WALL DETAILS SEE SHEET 54, FOR CONSTRUCTION DETAILS SEE SHEET 55.

WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

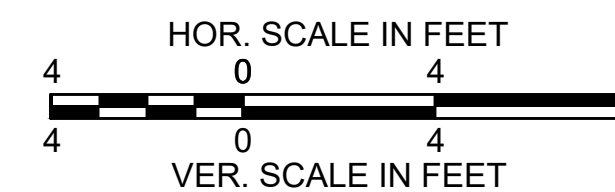
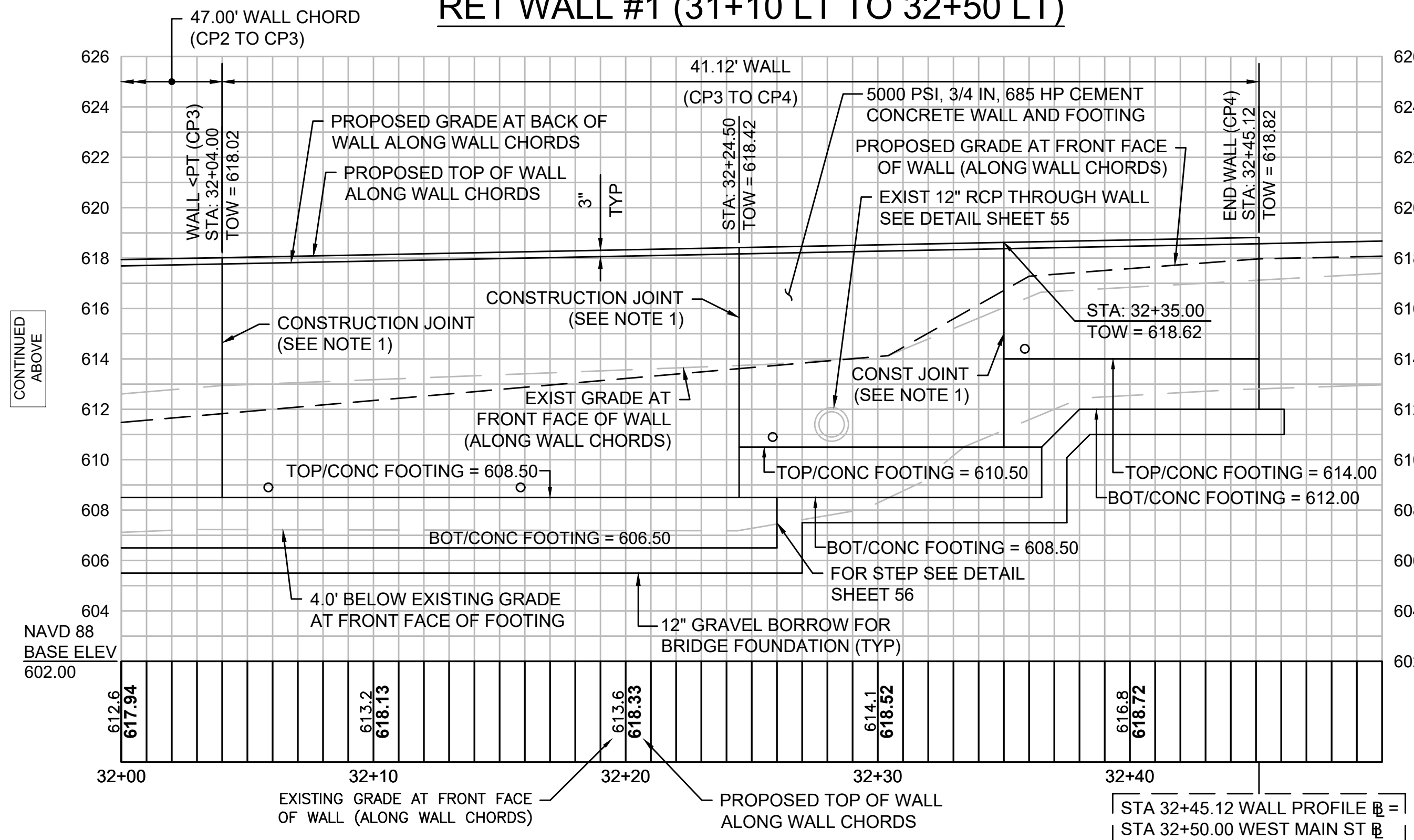
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	59	132
PROJECT FILE NO.		606517	

WALL PROFILE 1

WEST MAIN STREET
RET WALL #1 (31+10 LT TO 32+50 LT)



WEST MAIN STREET
RET WALL #1 (31+10 LT TO 32+50 LT)



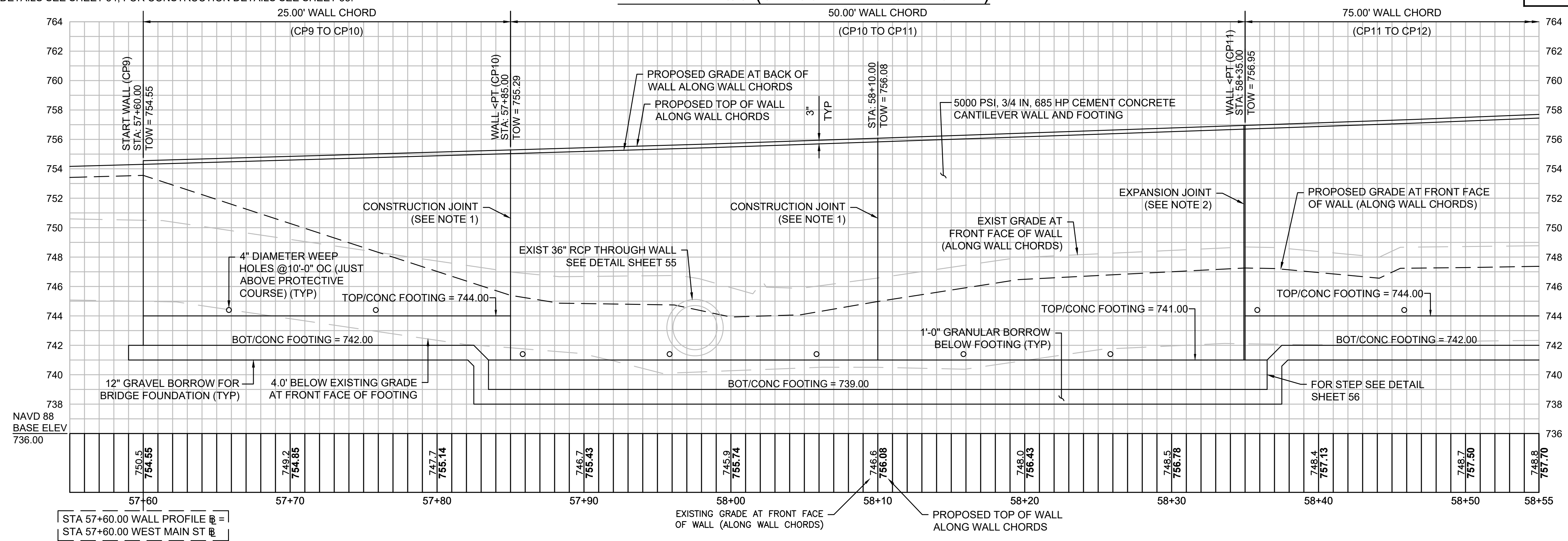
NOTES:

1. FOR CONSTRUCTION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
2. FOR EXPANSION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
3. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
4. FOR RETAINING WALL DETAILS SEE SHEET 54, FOR CONSTRUCTION DETAILS SEE SHEET 55.

WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	61	132
PROJECT FILE NO.		606517	

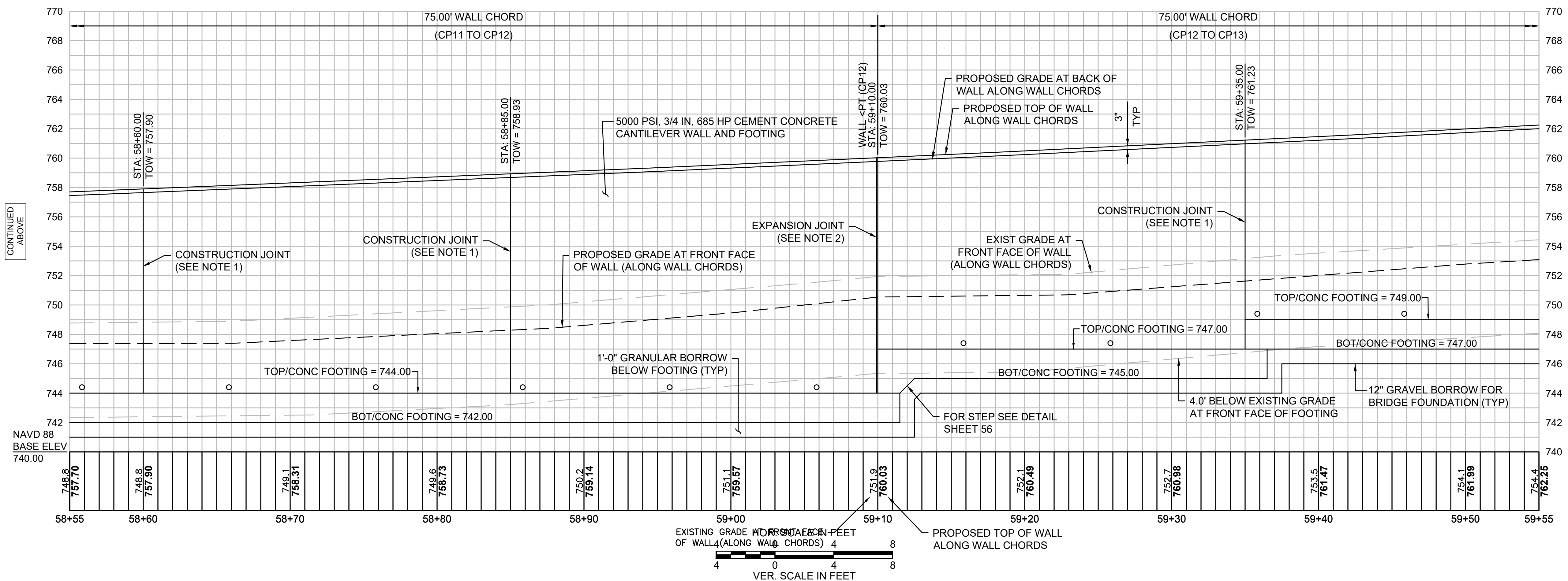
WEST MAIN STREET
RET WALL #3 (57+60 RT TO 61+40 RT)



WALL PROFILE 3

CONTINUED
BELOW

WEST MAIN STREET
RET WALL #3 (57+60 RT TO 61+40 RT)



CONTINUED
ON SHEET 62

NOTES:

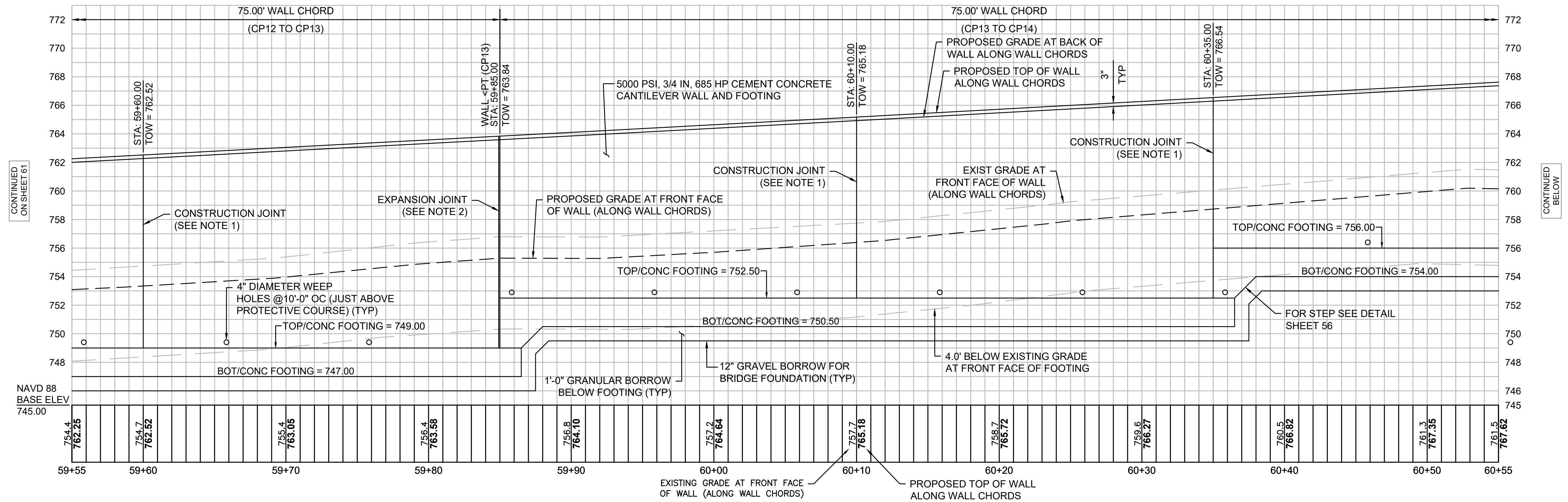
1. FOR CONSTRUCTION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
2. FOR EXPANSION JOINT DETAILS SEE CONSTRUCTION DETAILS ON SHEET 56.
3. THE WALL IS TO BE CONSTRUCTED ON CHORDS. SEE WALL PROFILES, CONSTRUCTION PLANS, CURB TIE AND GRADING PLANS, AND RETAINING WALL DETAILS / TABLES FOR WALL CONSTRUCTION POINT STATIONS, OFFSETS AND ELEVATIONS.
4. FOR RETAINING WALL DETAILS SEE SHEET 54, FOR CONSTRUCTION DETAILS SEE SHEET 55.

WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

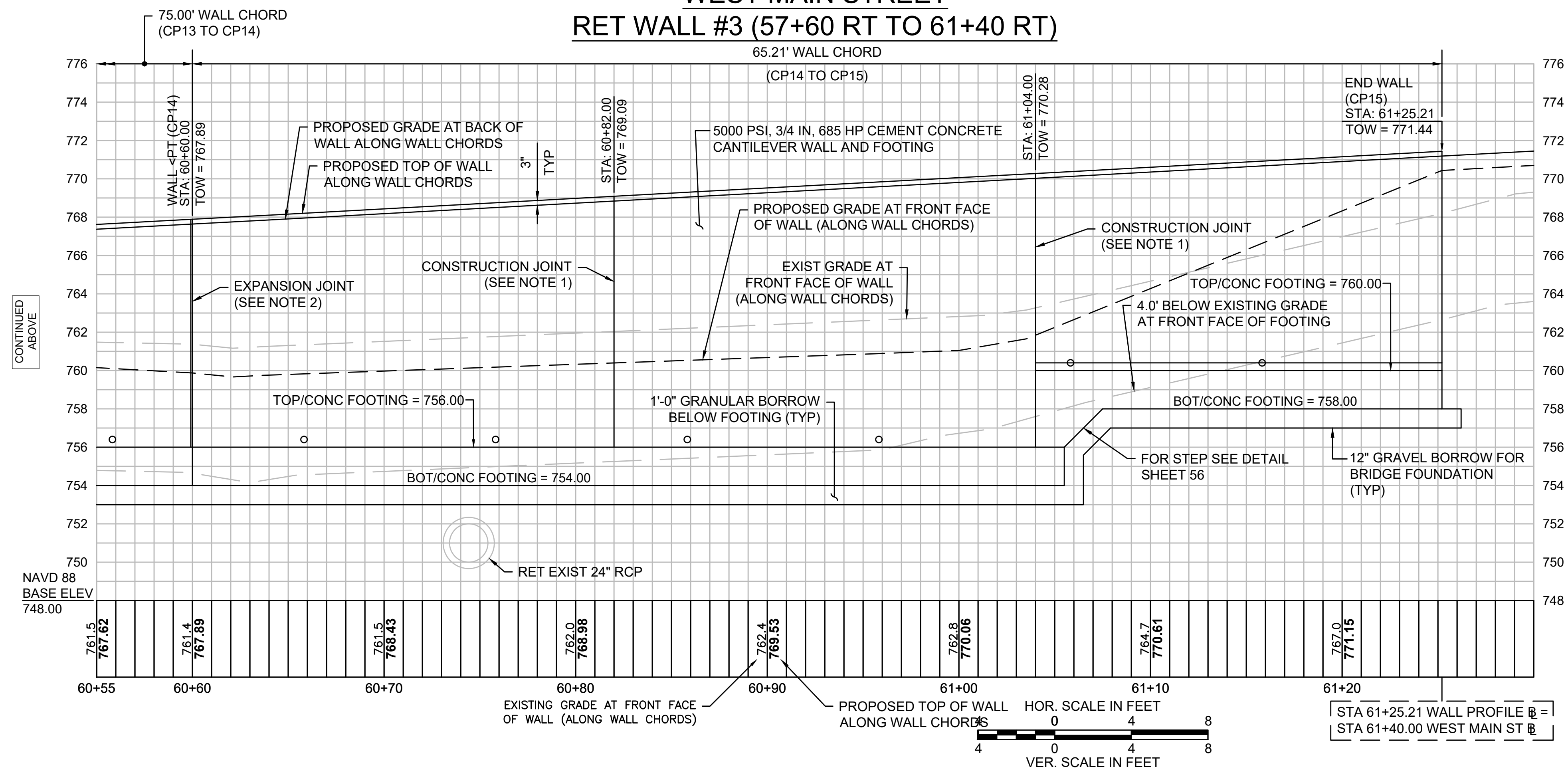
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	62	132
PROJECT FILE NO.		606517	

WALL PROFILE 4

WEST MAIN STREET
RET WALL #3 (57+60 RT TO 61+40 RT)



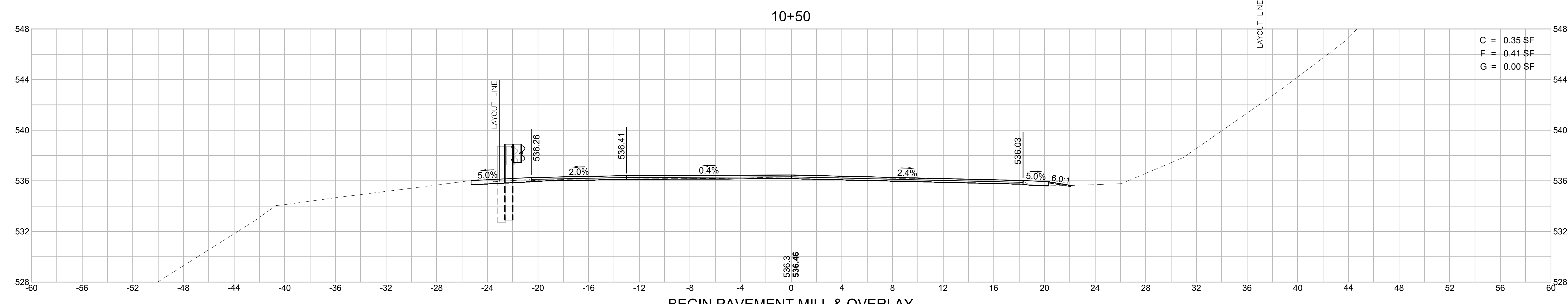
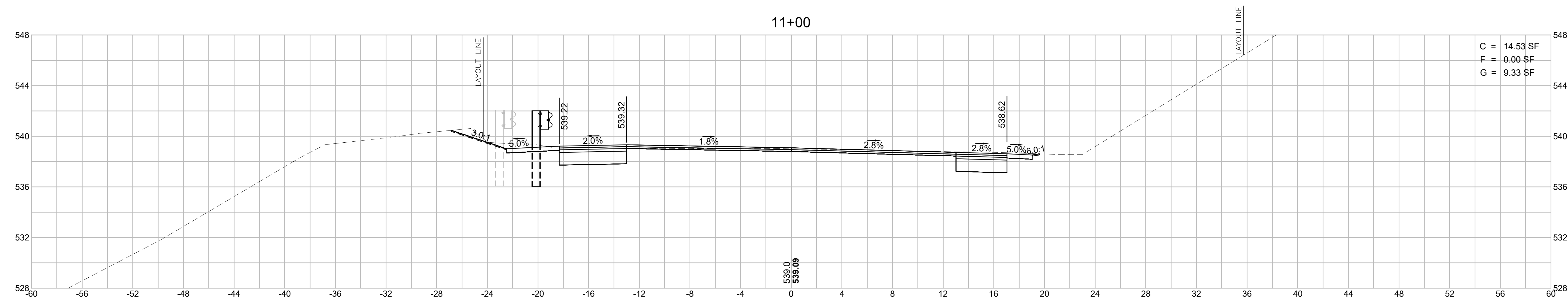
WEST MAIN STREET
RET WALL #3 (57+60 RT TO 61+40 RT)



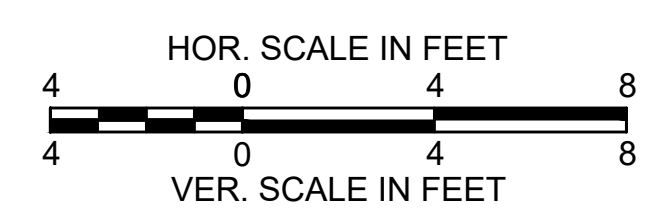
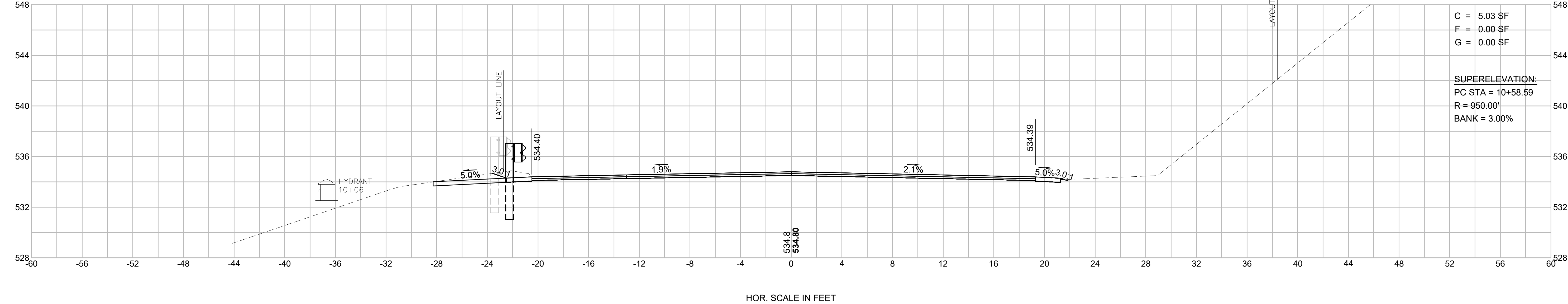
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	63	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 1**



**BEGIN PAVEMENT MILL & OVERLAY
10+16**



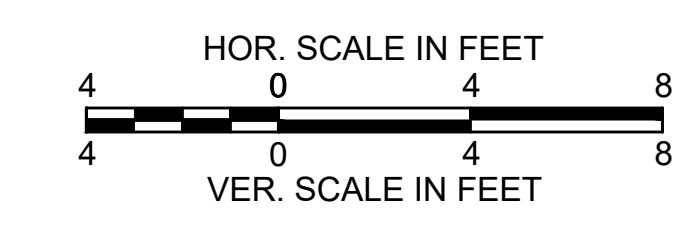
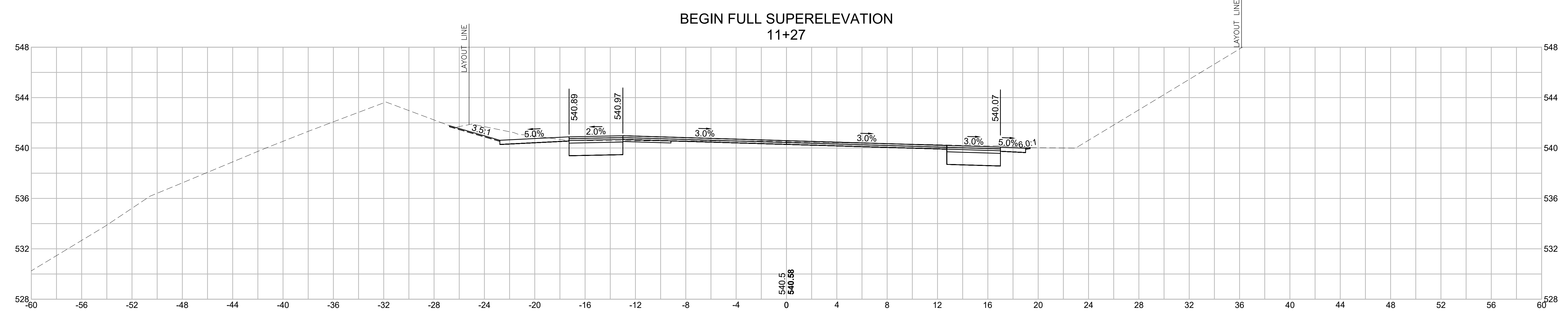
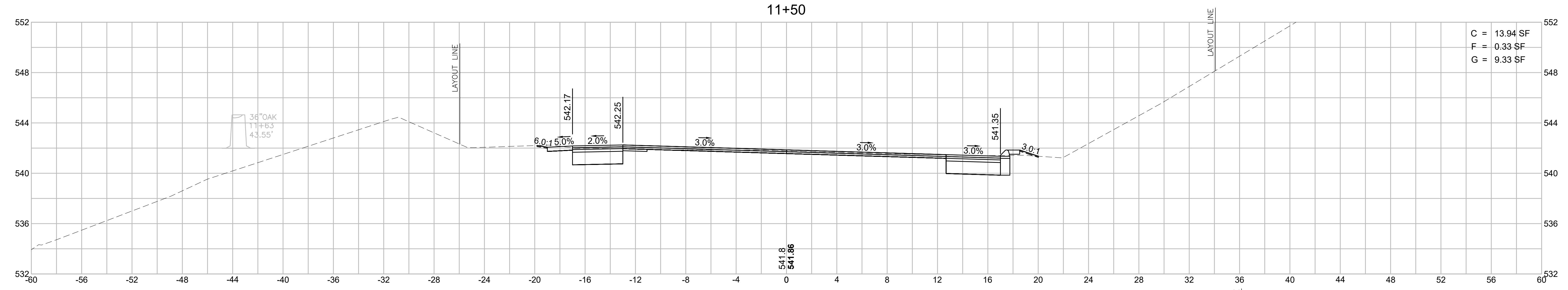
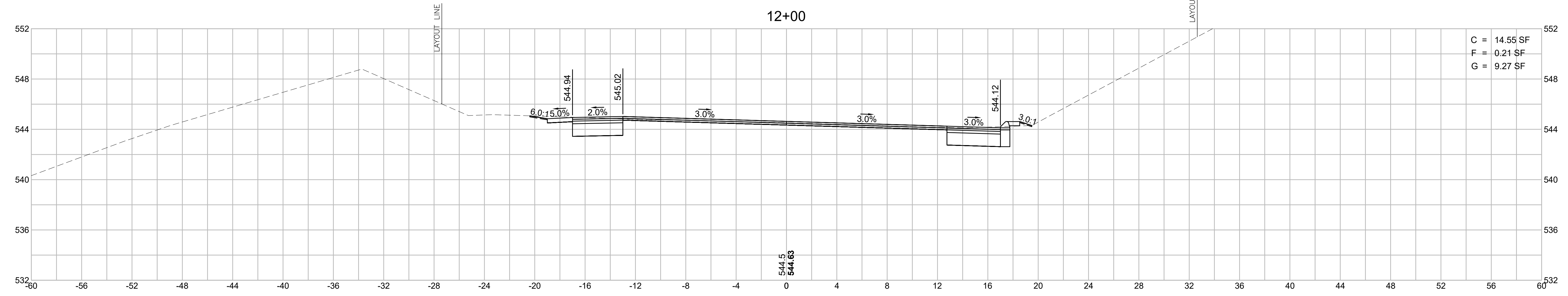
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	64	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 2**

C = 14.55 SF
F = 0.21 SF
G = 9.27 SF

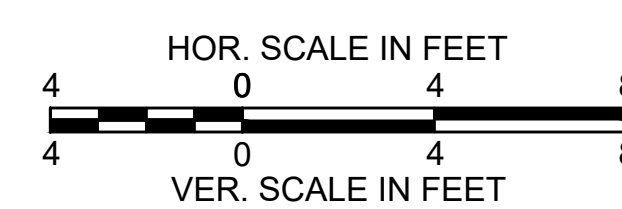
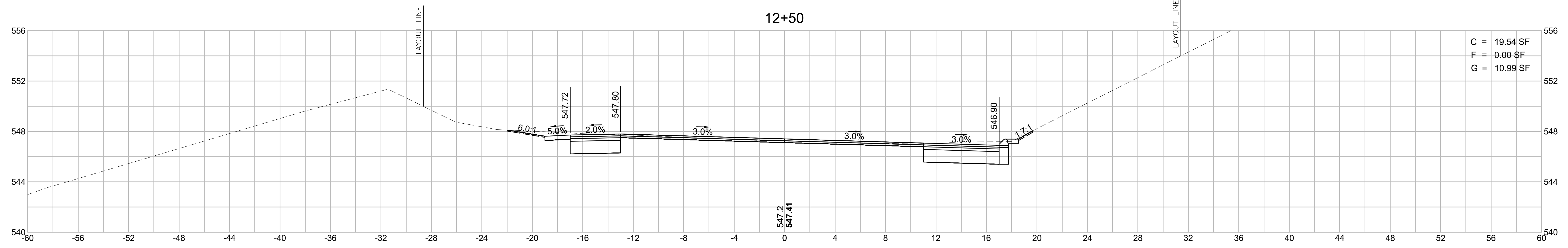
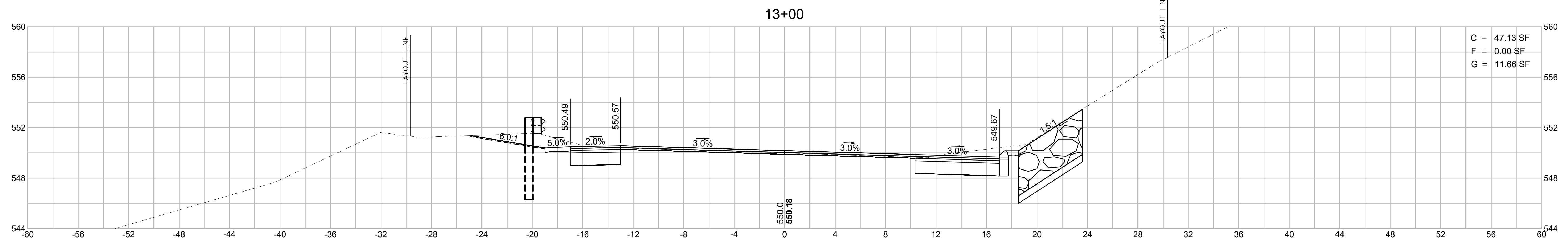
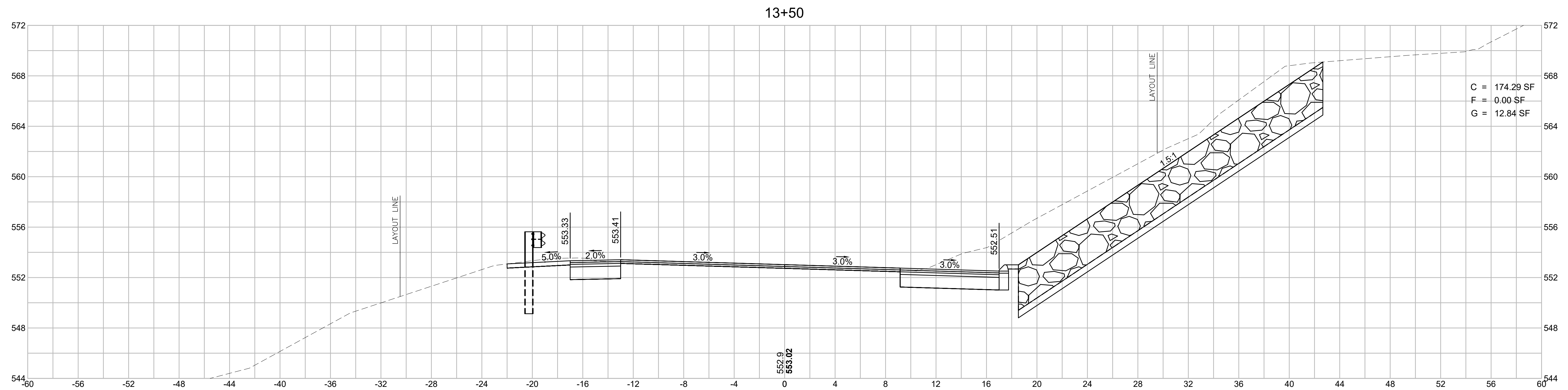
C = 13.94 SF
F = 0.33 SF
G = 9.33 SF



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	65	132
PROJECT FILE NO.		606517	

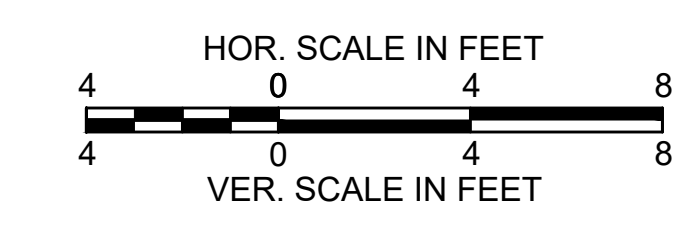
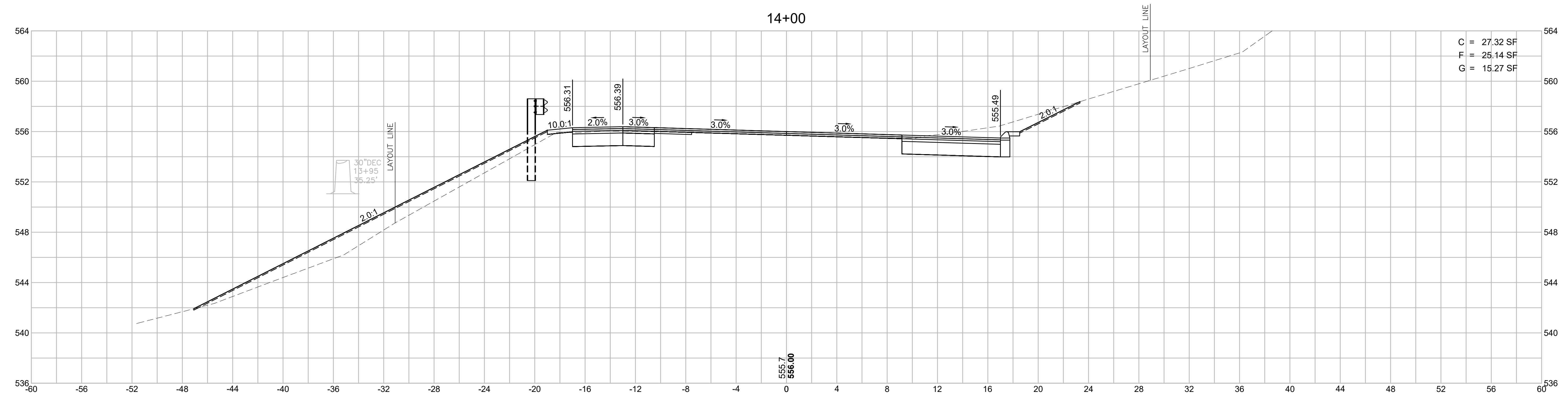
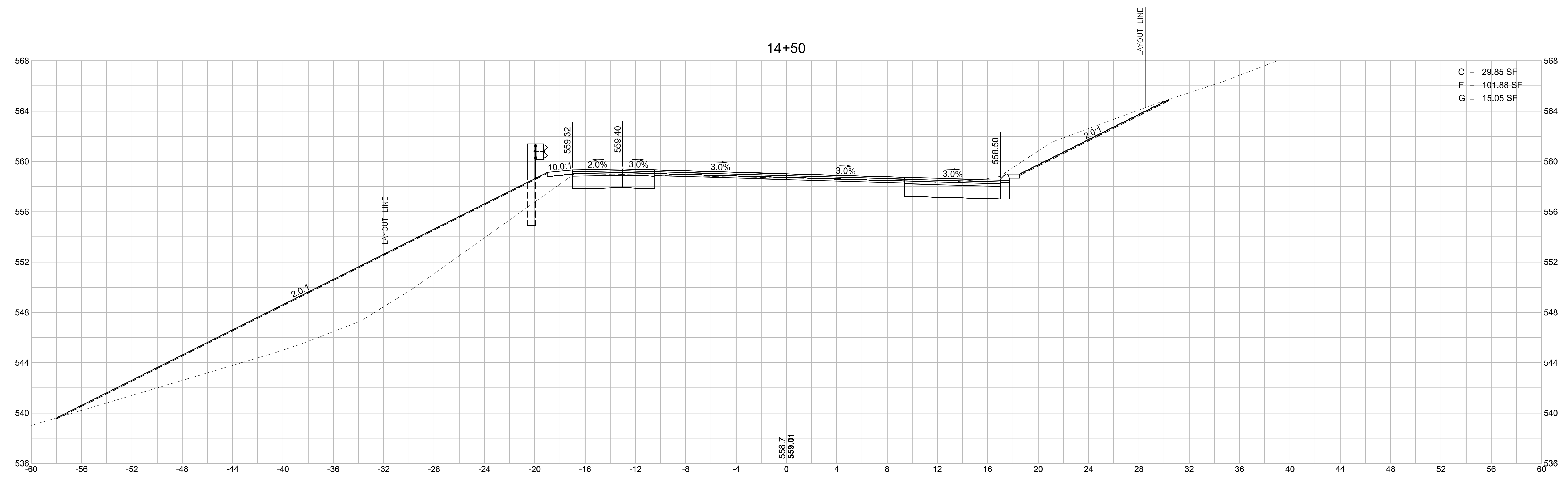
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 3**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	66	132
PROJECT FILE NO.		606517	

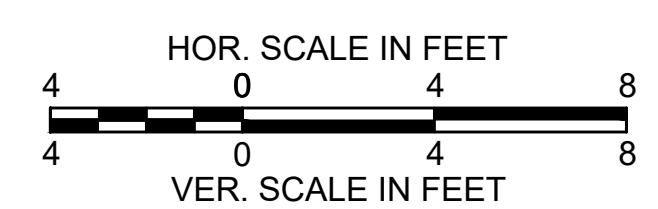
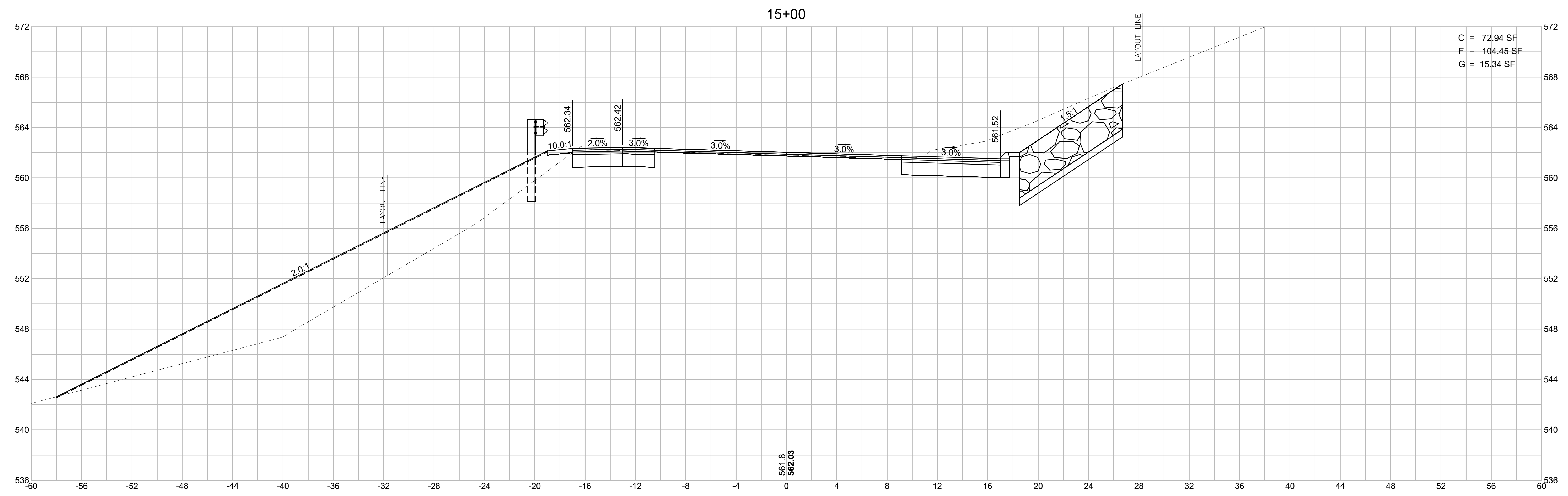
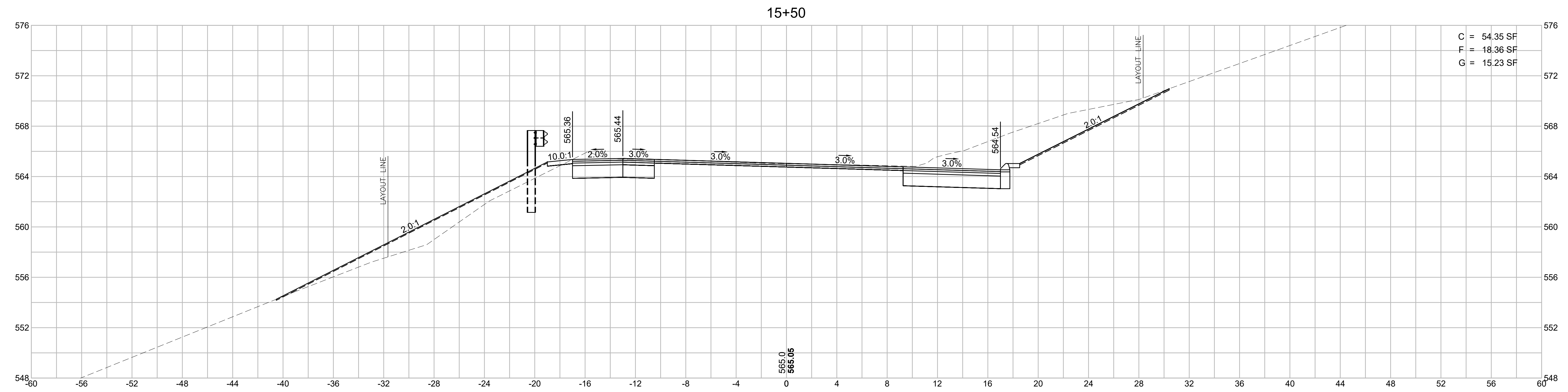
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 4**



WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	67	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 5

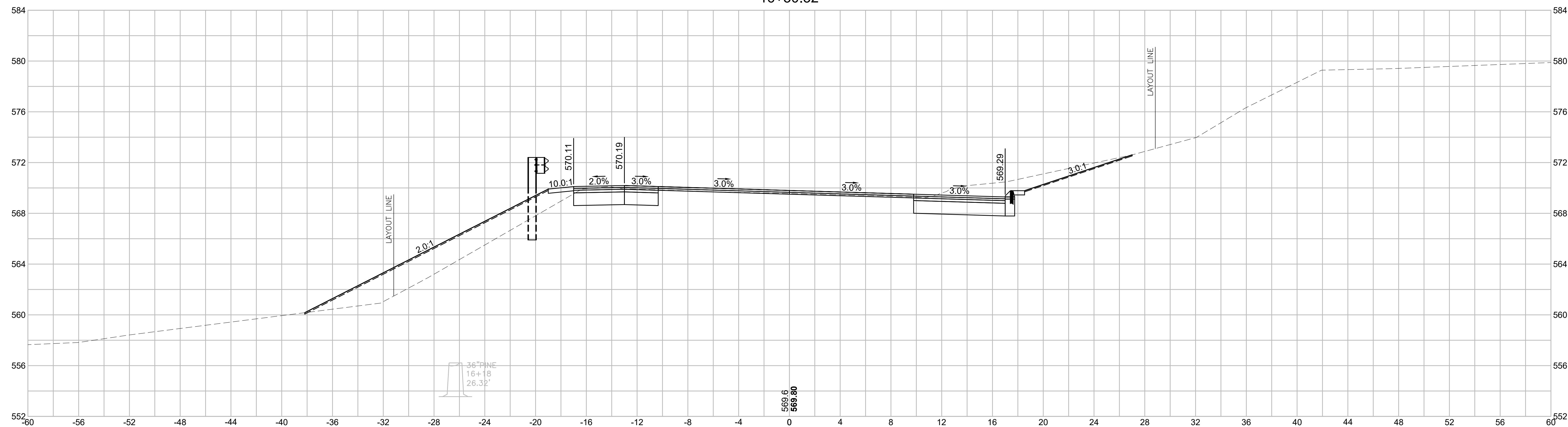


WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

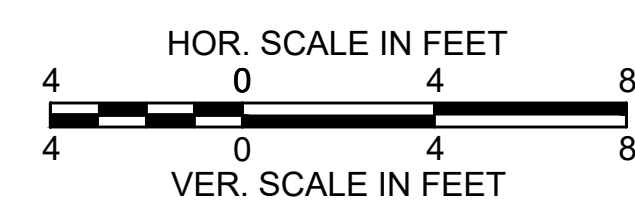
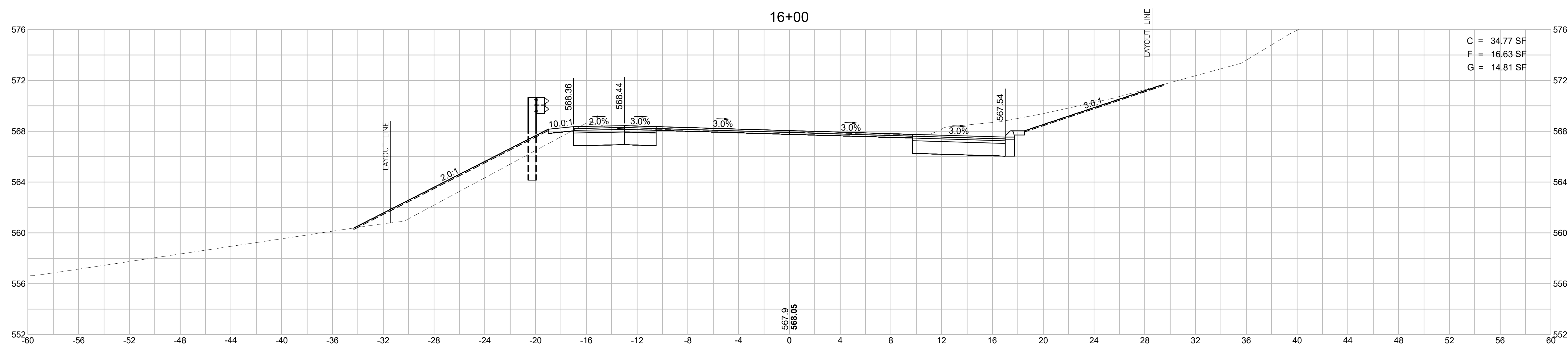
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	68	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 6

END FULL SUPERELEVATION
16+30.32



16+00

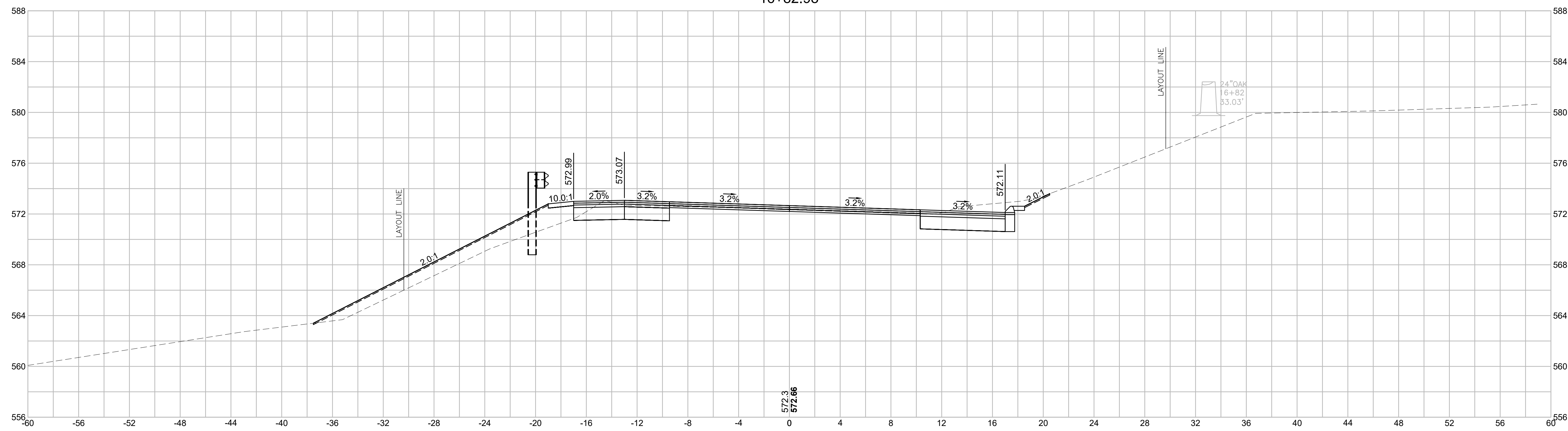


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

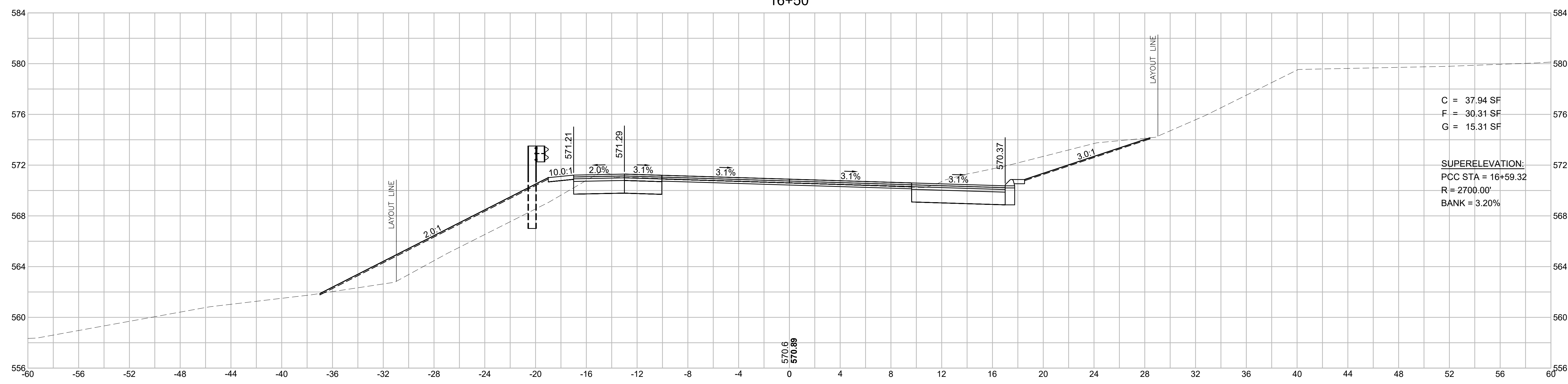
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	69	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 7**

**BEGIN FULL SUPERELEVATION
16+82.98**

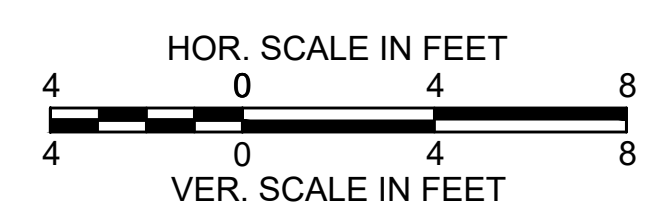


16+50



C = 37.94 SF
 F = 30.31 SF
 G = 15.31 SF

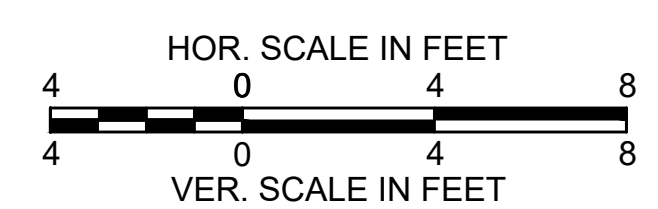
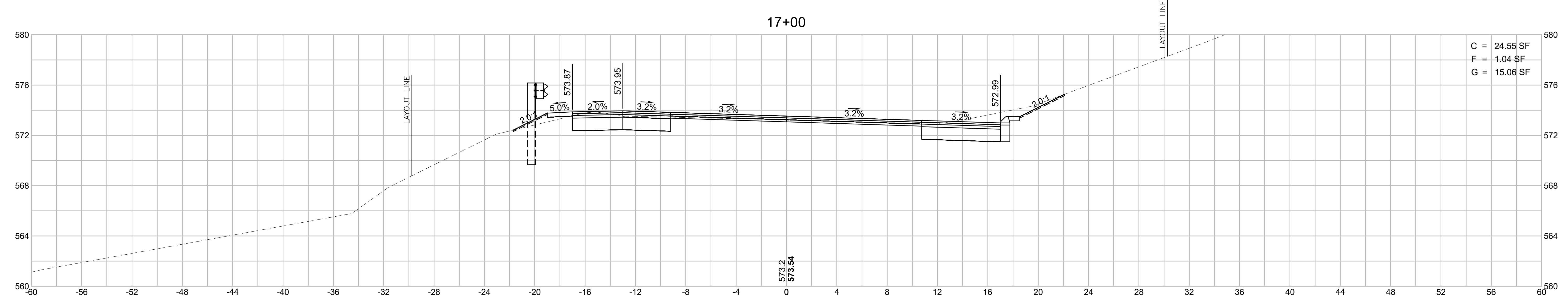
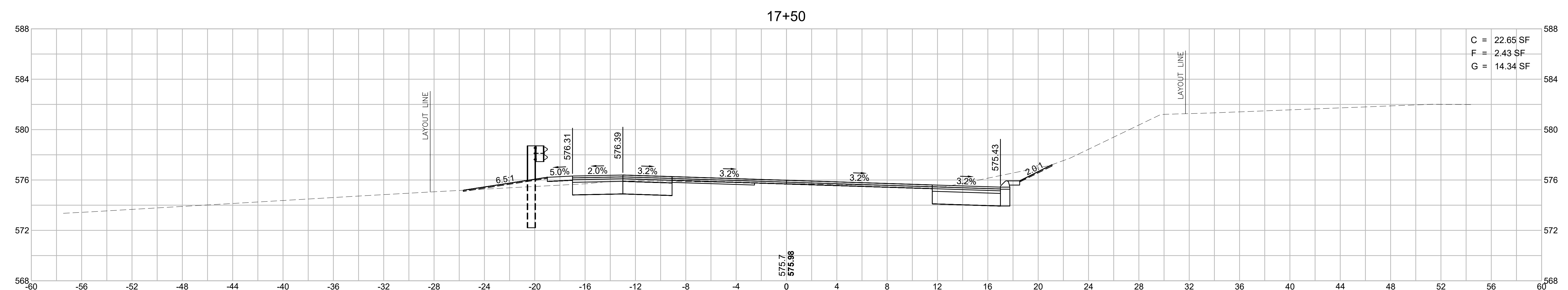
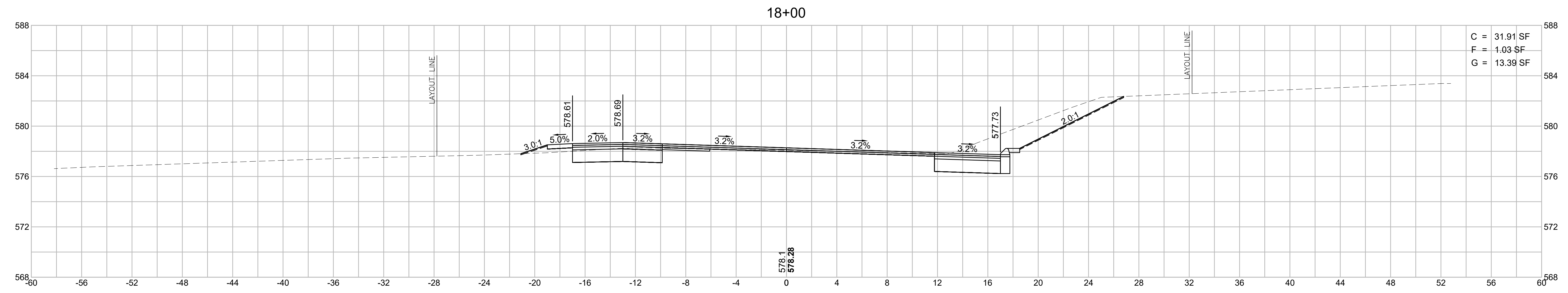
SUPERELEVATION:
 PCC STA = 16+59.32
 R = 2700.00'
 BANK = 3.20%



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	70	132
PROJECT FILE NO.		606517	

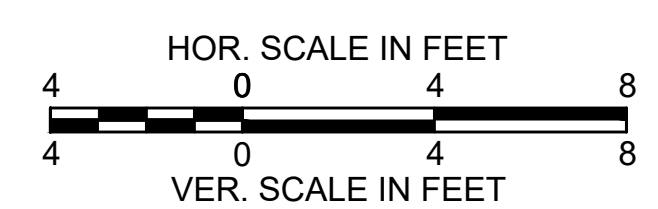
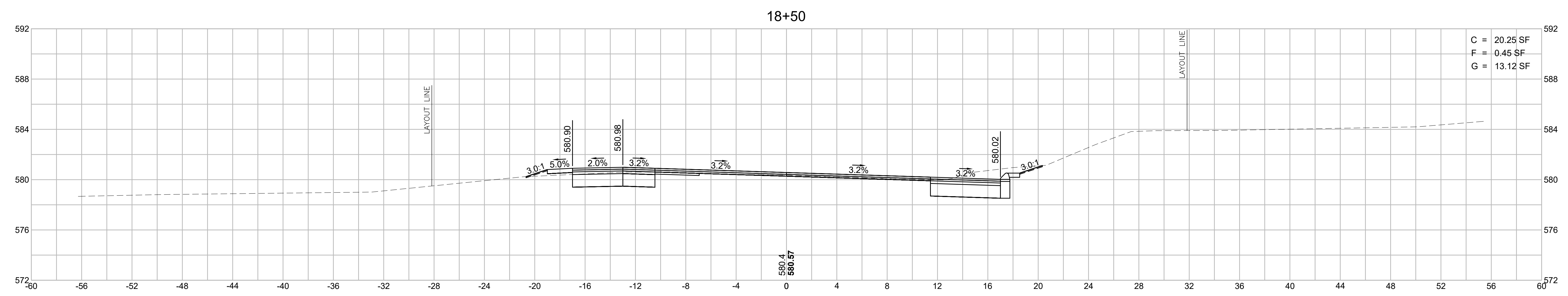
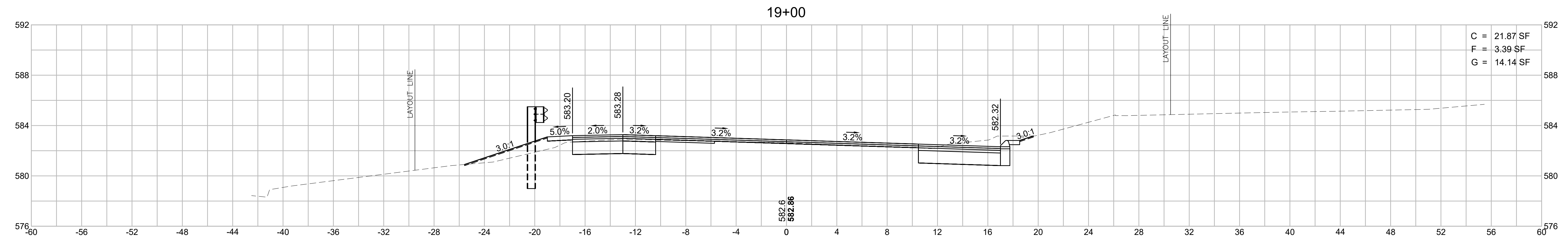
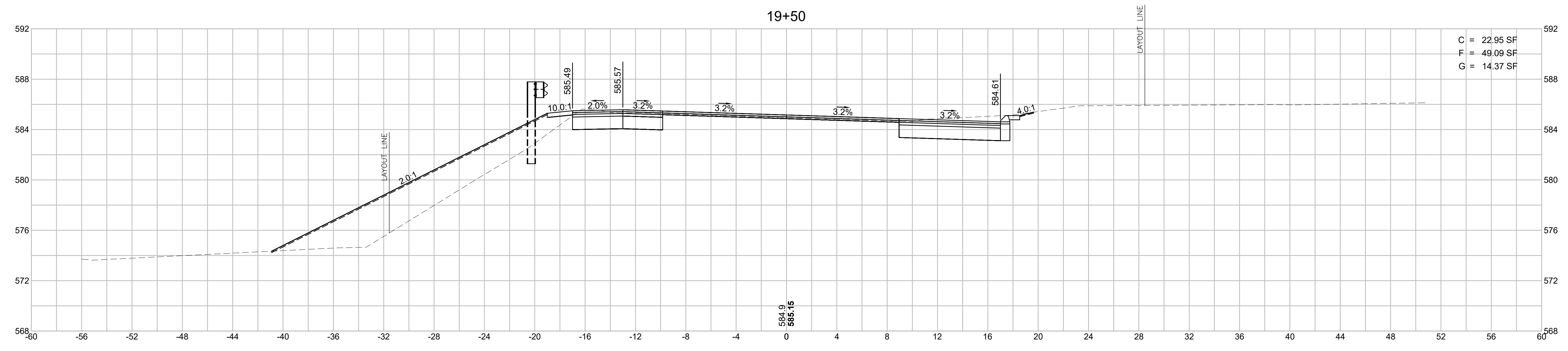
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 8**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	71	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 9**



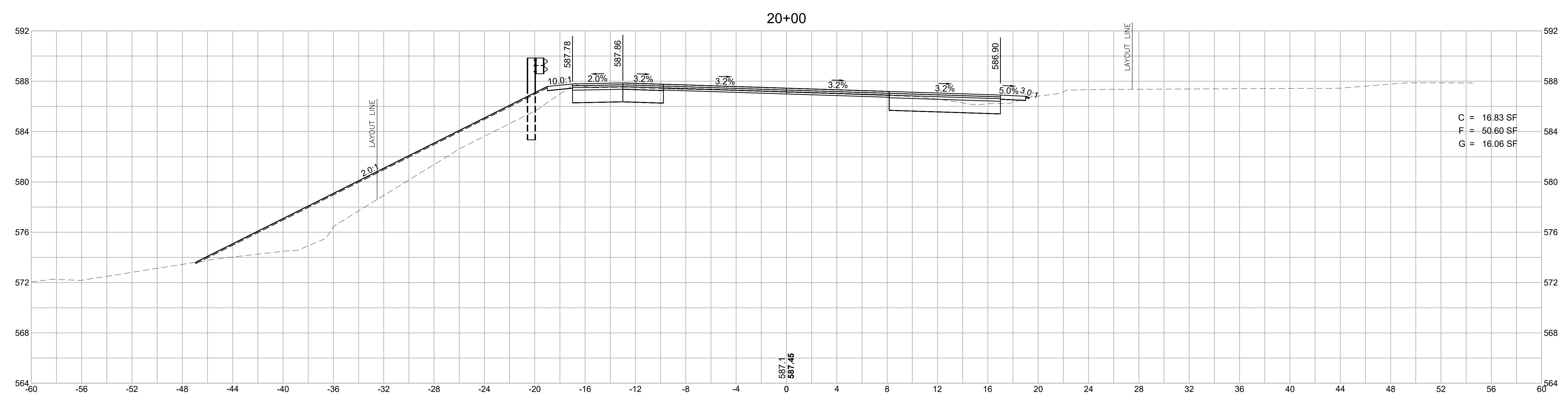
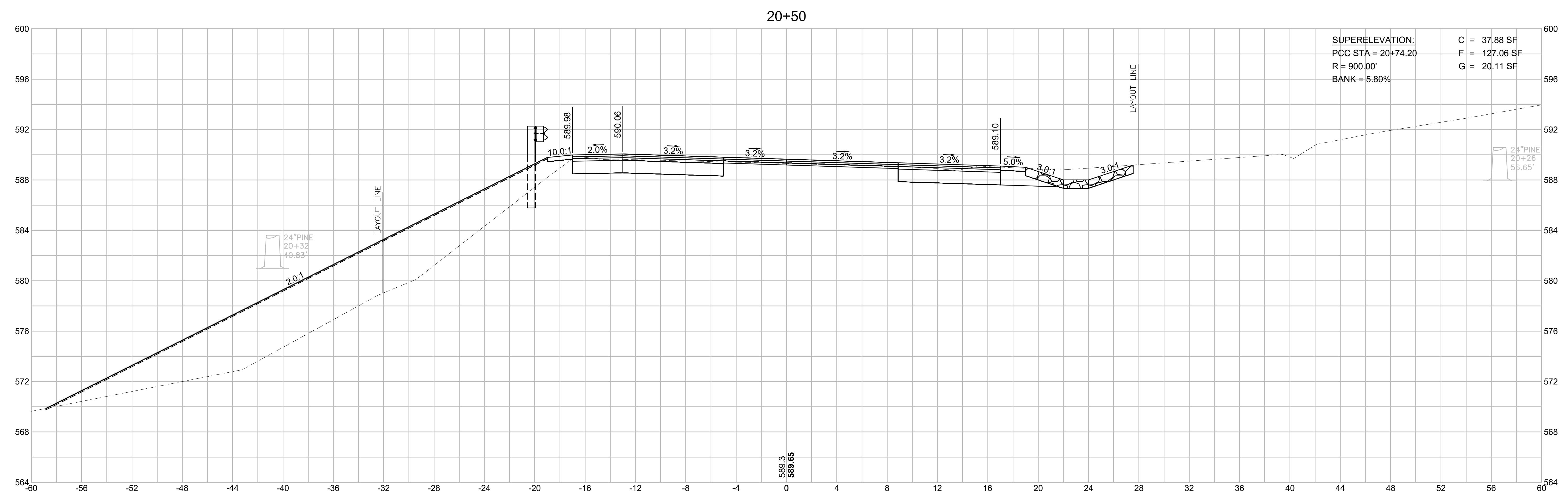
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	72	132
PROJECT FILE NO. 606517			

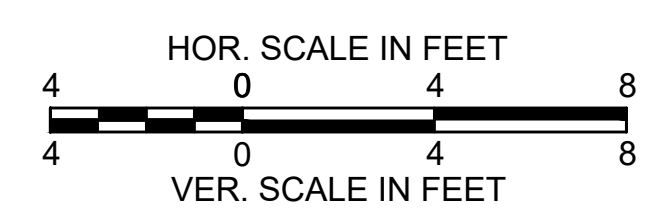
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 10**

SUPERELEVATION:
PCC STA = 20+74.20
R = 900.00'
BANK = 5.80%

C = 37.88 SF
F = 127.06 SF
G = 20.11 SF



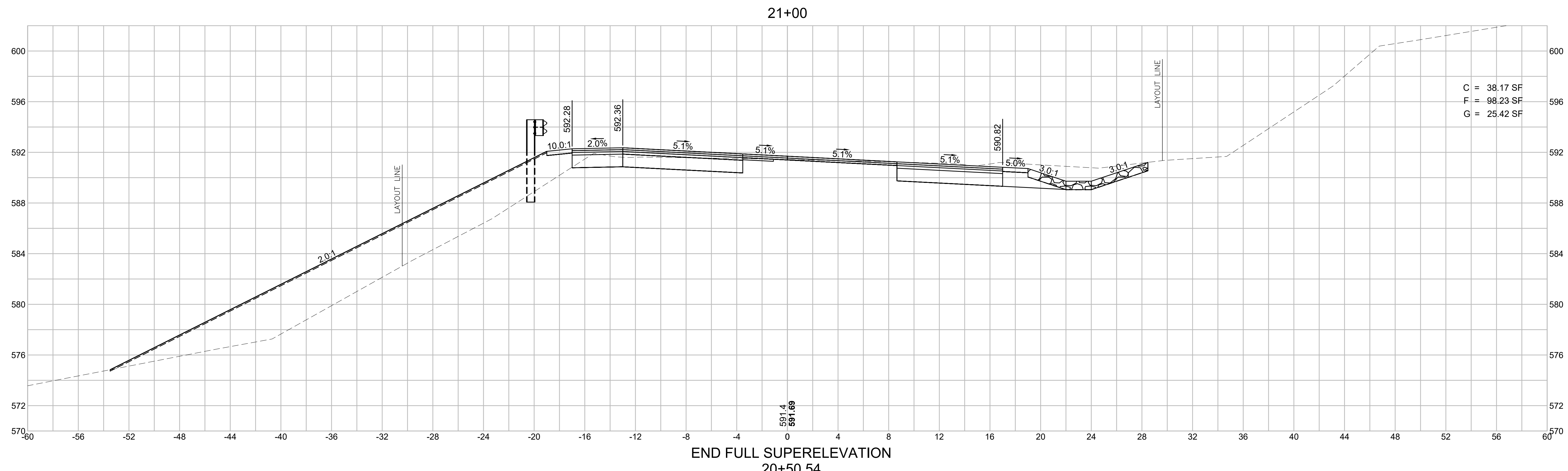
C = 16.83 SF
F = 50.60 SF
G = 16.06 SF



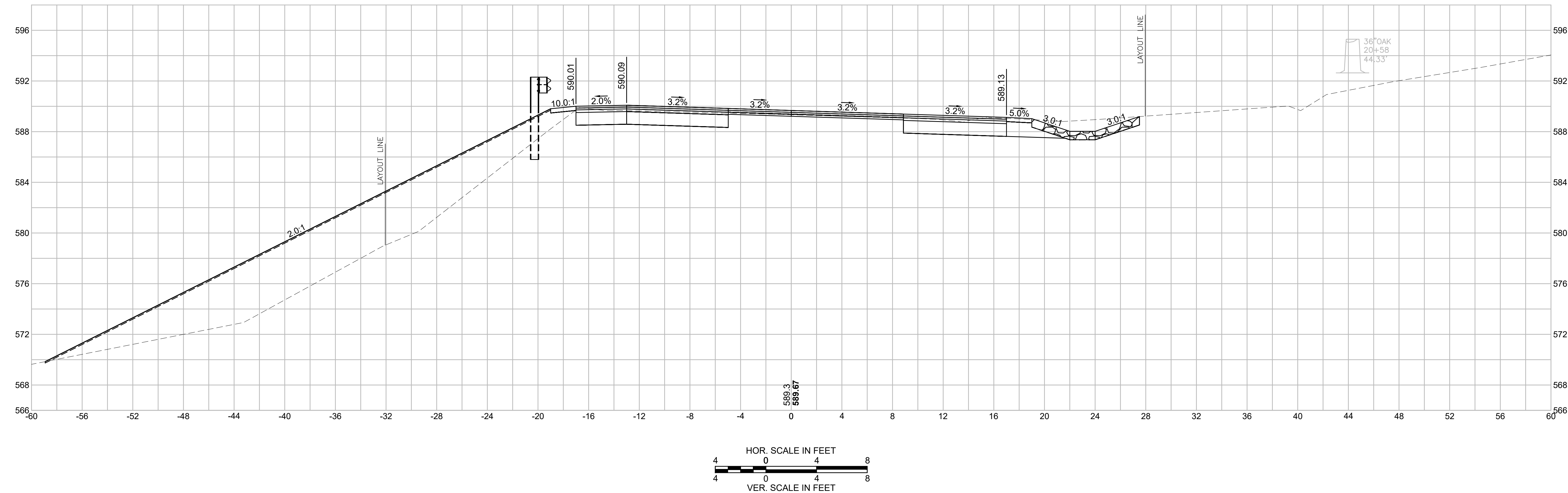
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	73	132
PROJECT FILE NO.		606517	

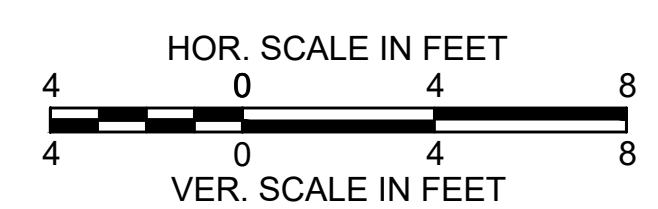
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 11**



C = 38.17 SF
F = 98.23 SF
G = 25.42 SF



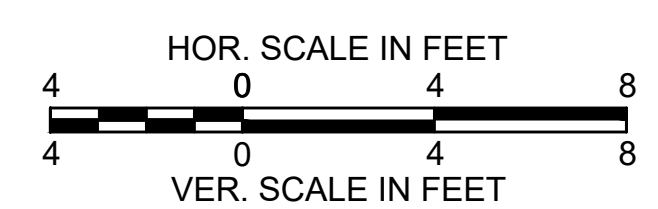
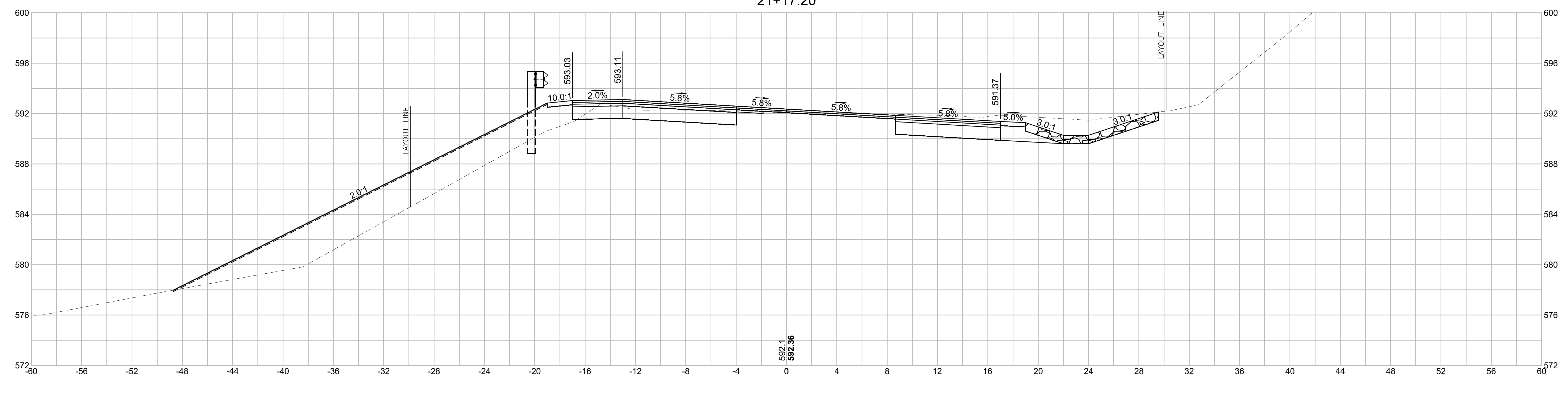
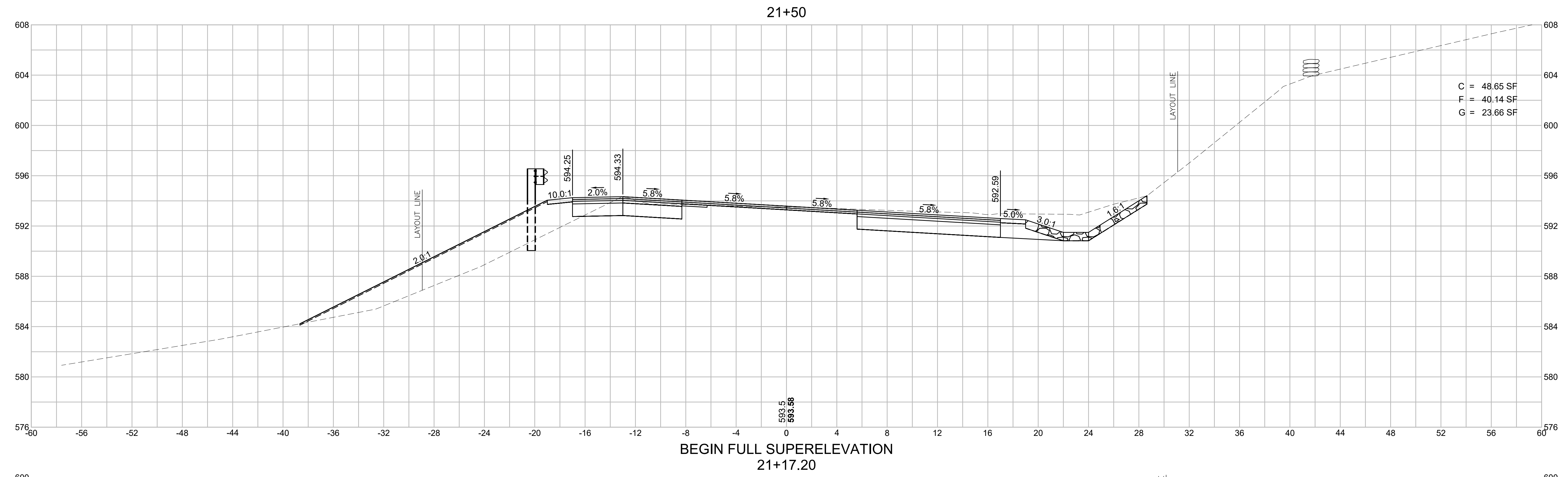
36" OAK
20+58
44.33'



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	74	132
PROJECT FILE NO.		606517	

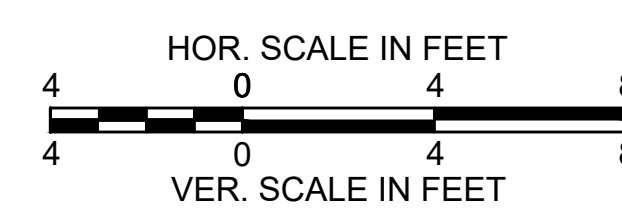
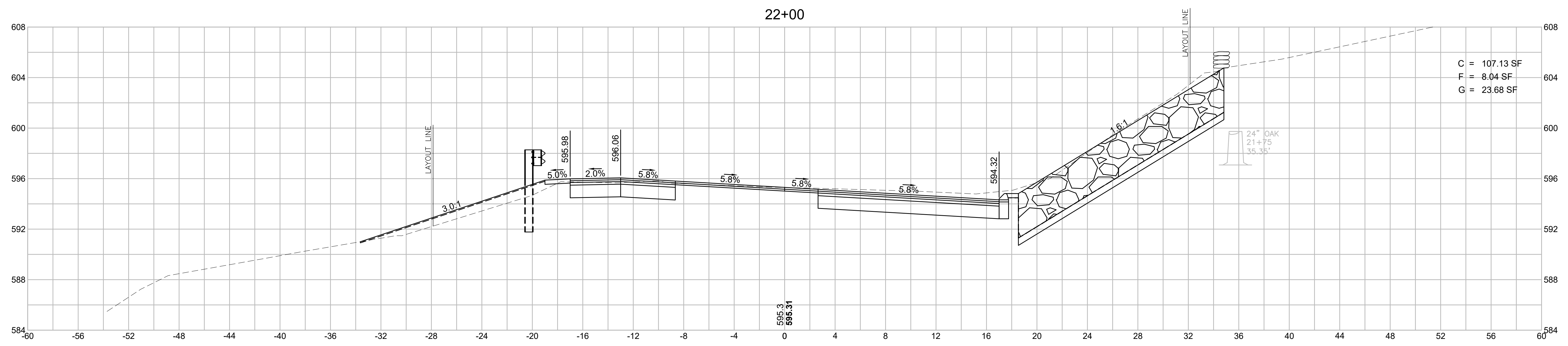
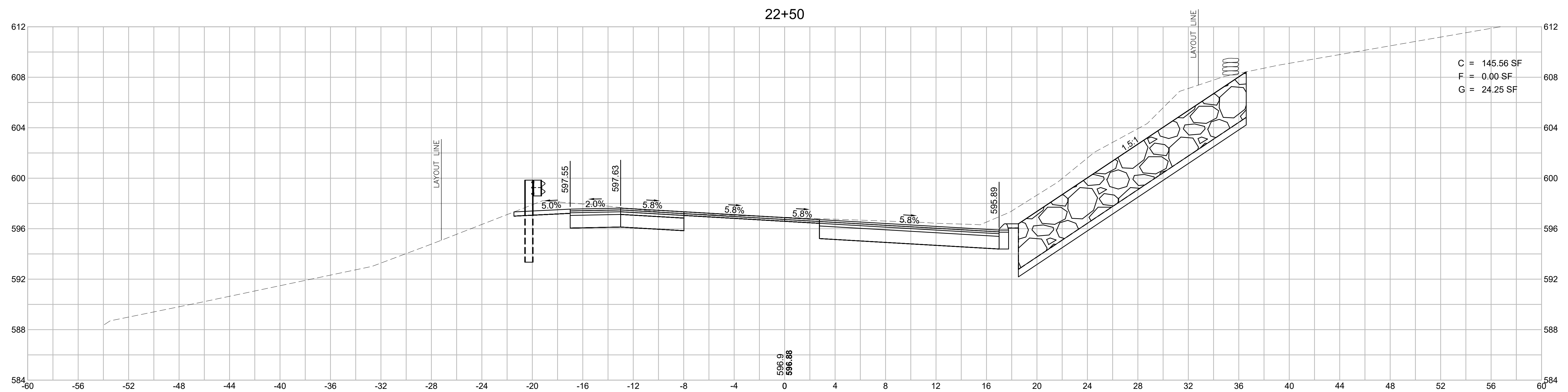
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 12**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	75	132
PROJECT FILE NO.		606517	

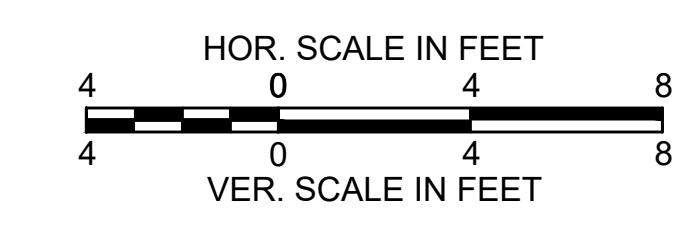
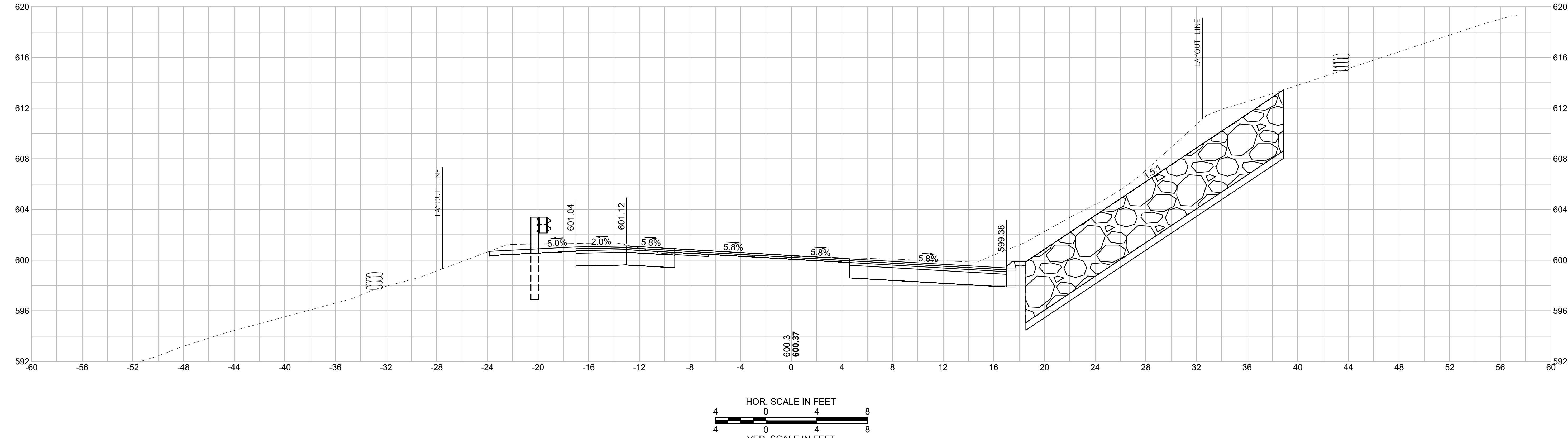
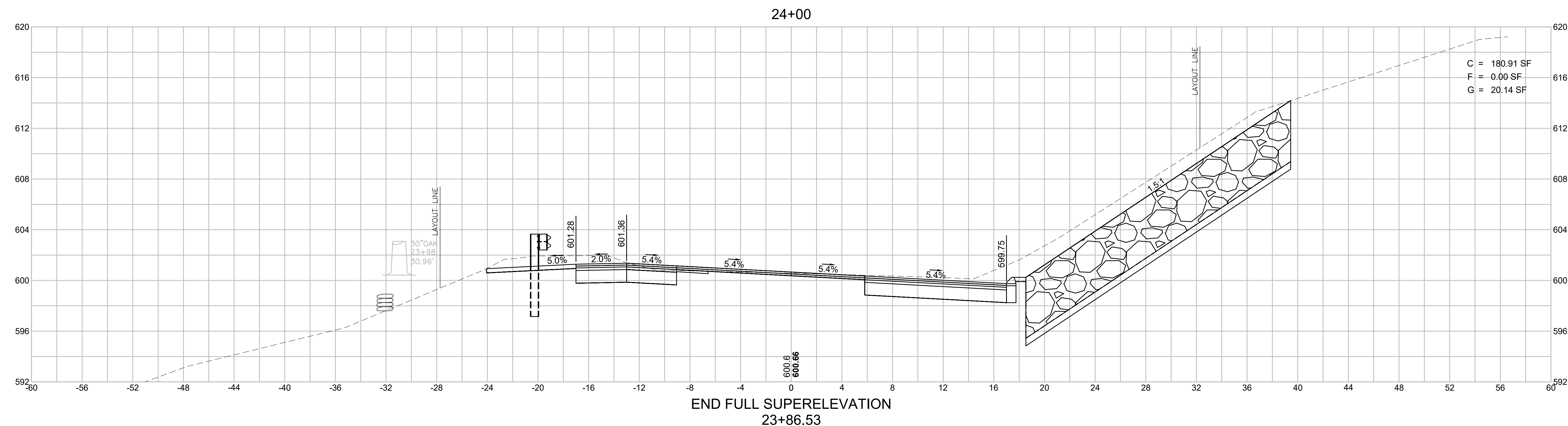
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 13**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	77	132
PROJECT FILE NO.		606517	

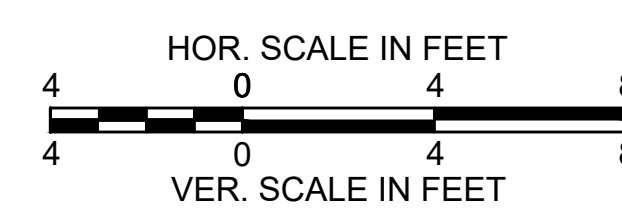
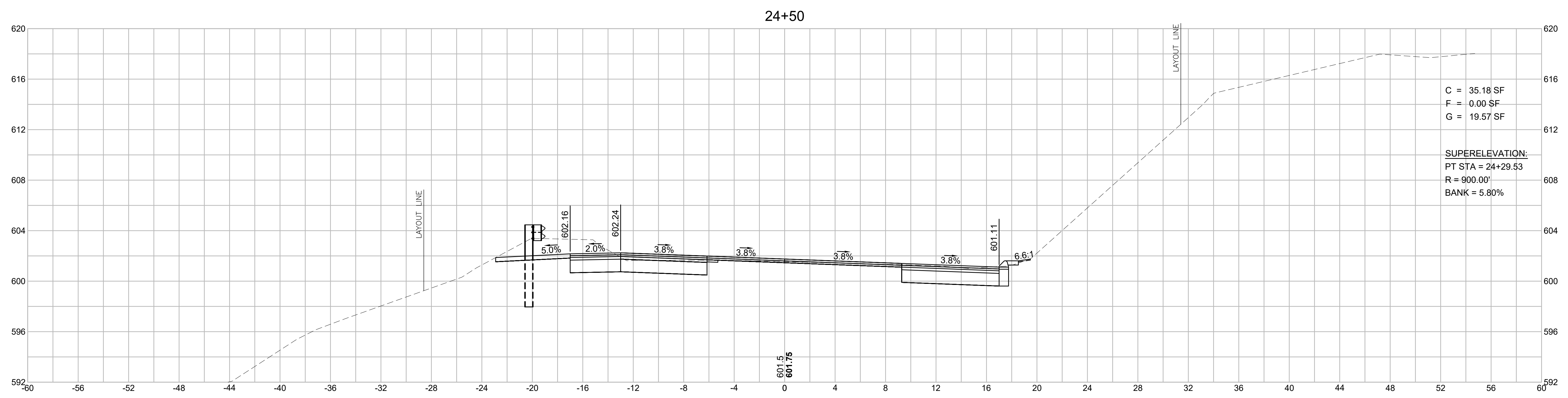
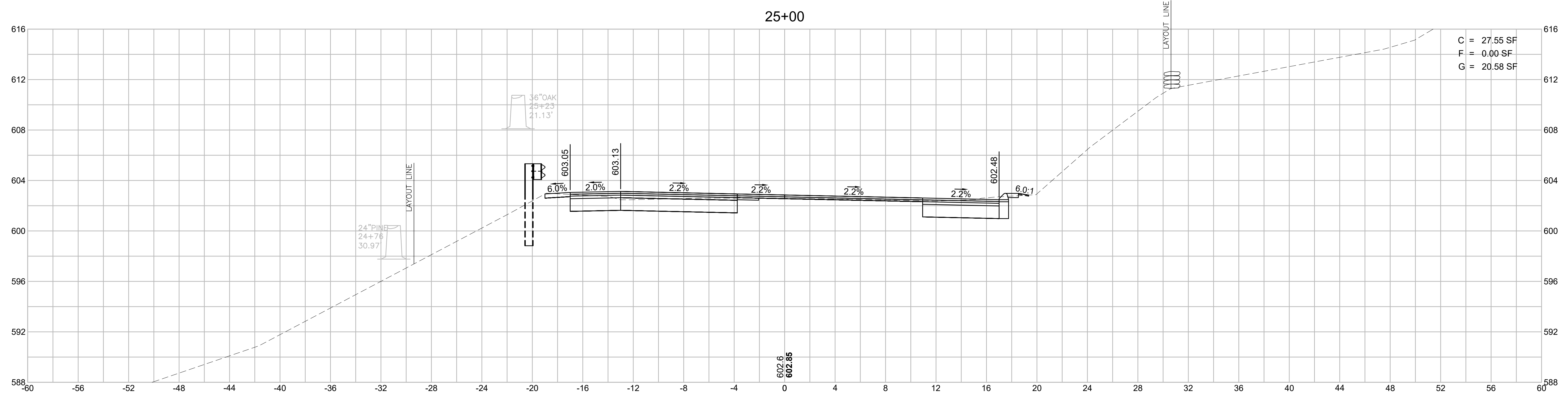
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 15**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	78	132
PROJECT FILE NO.		606517	

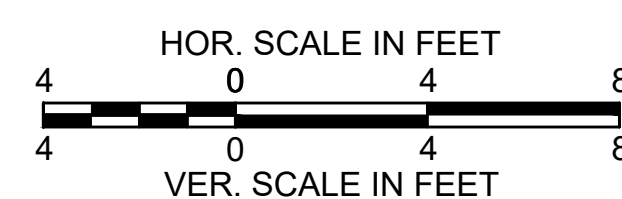
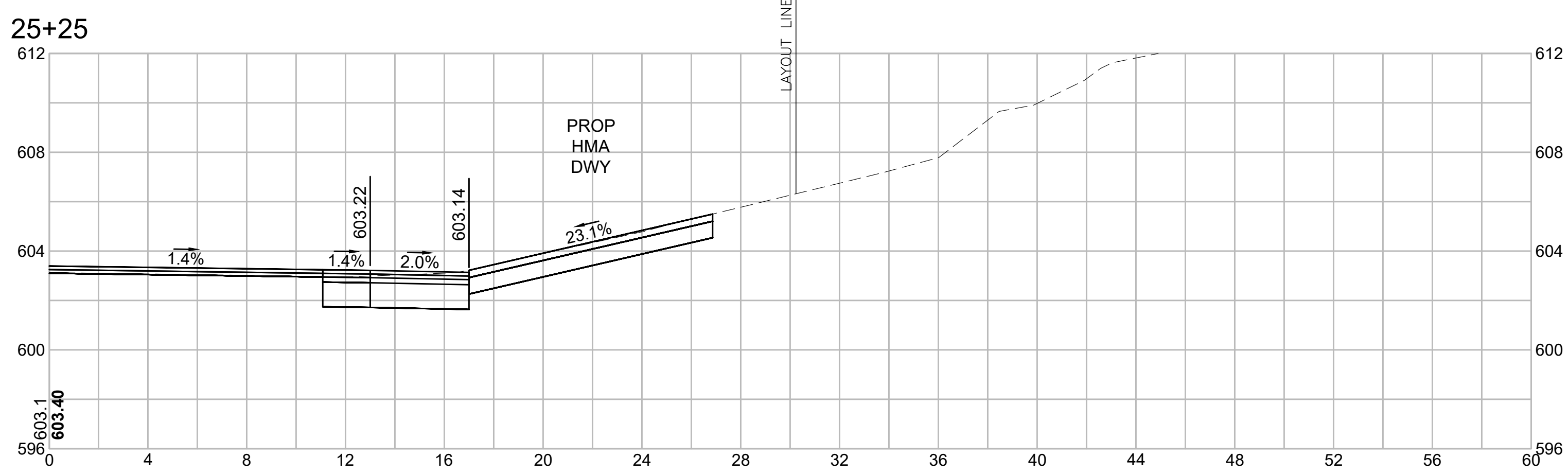
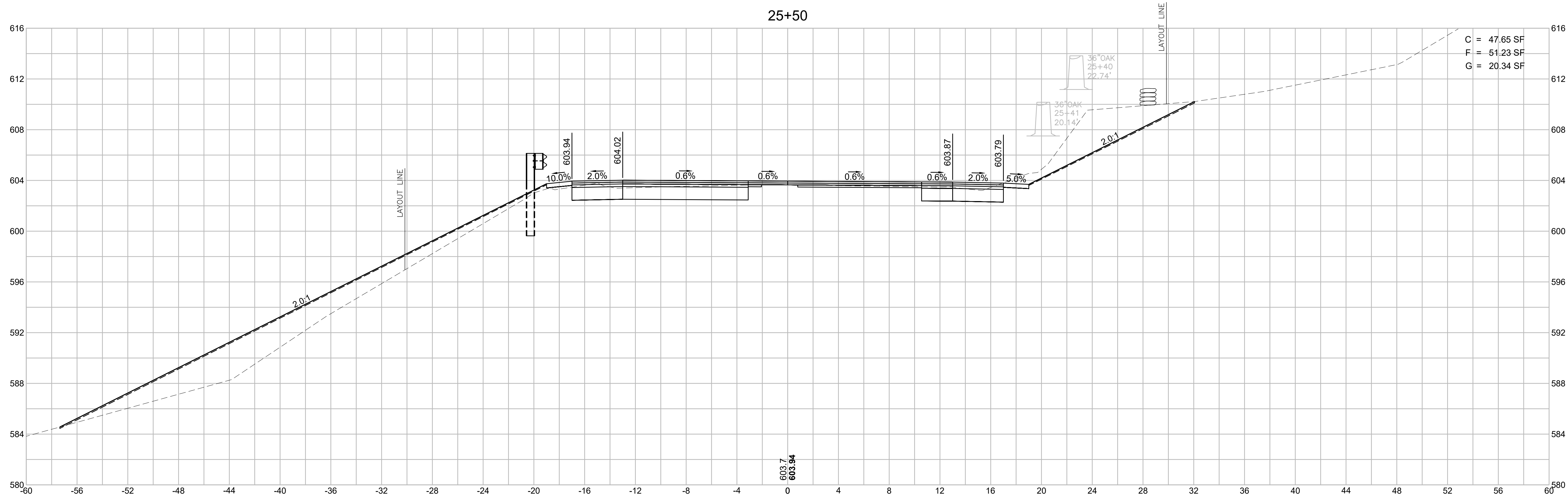
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 16**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	79	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 17**

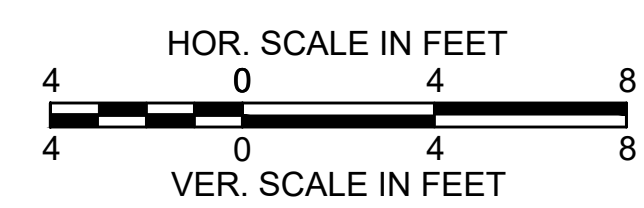
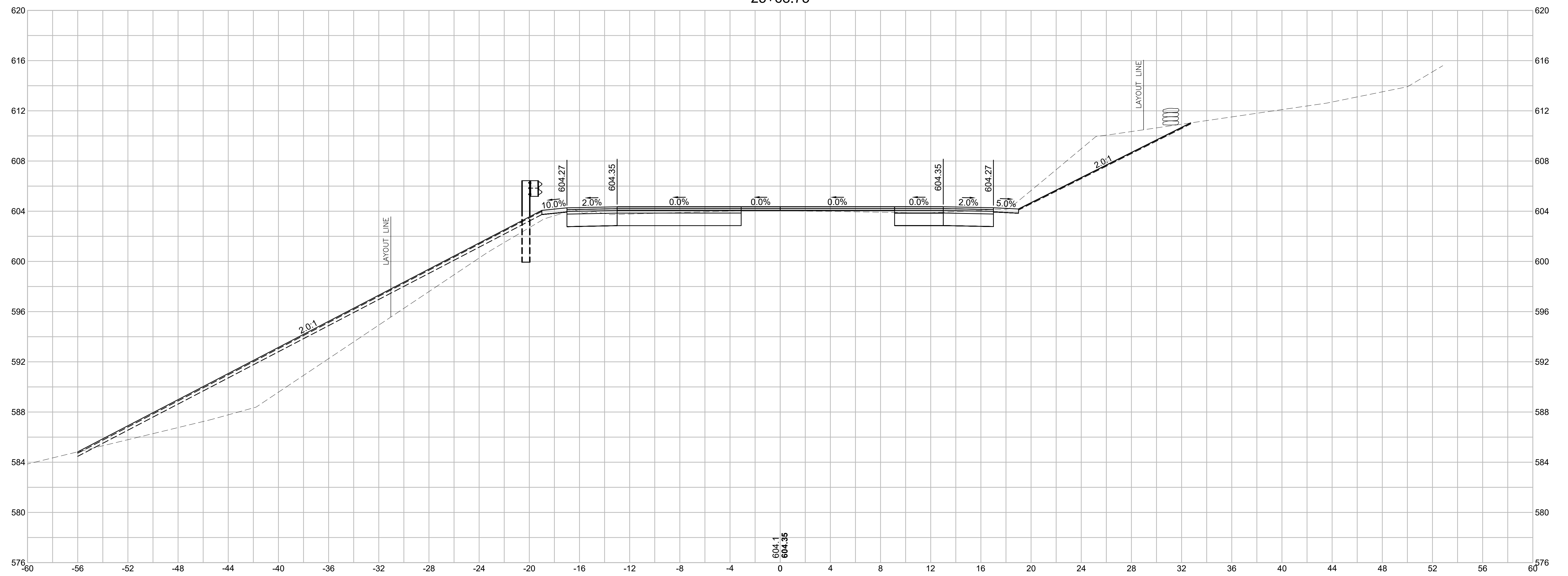


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	80	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 18**

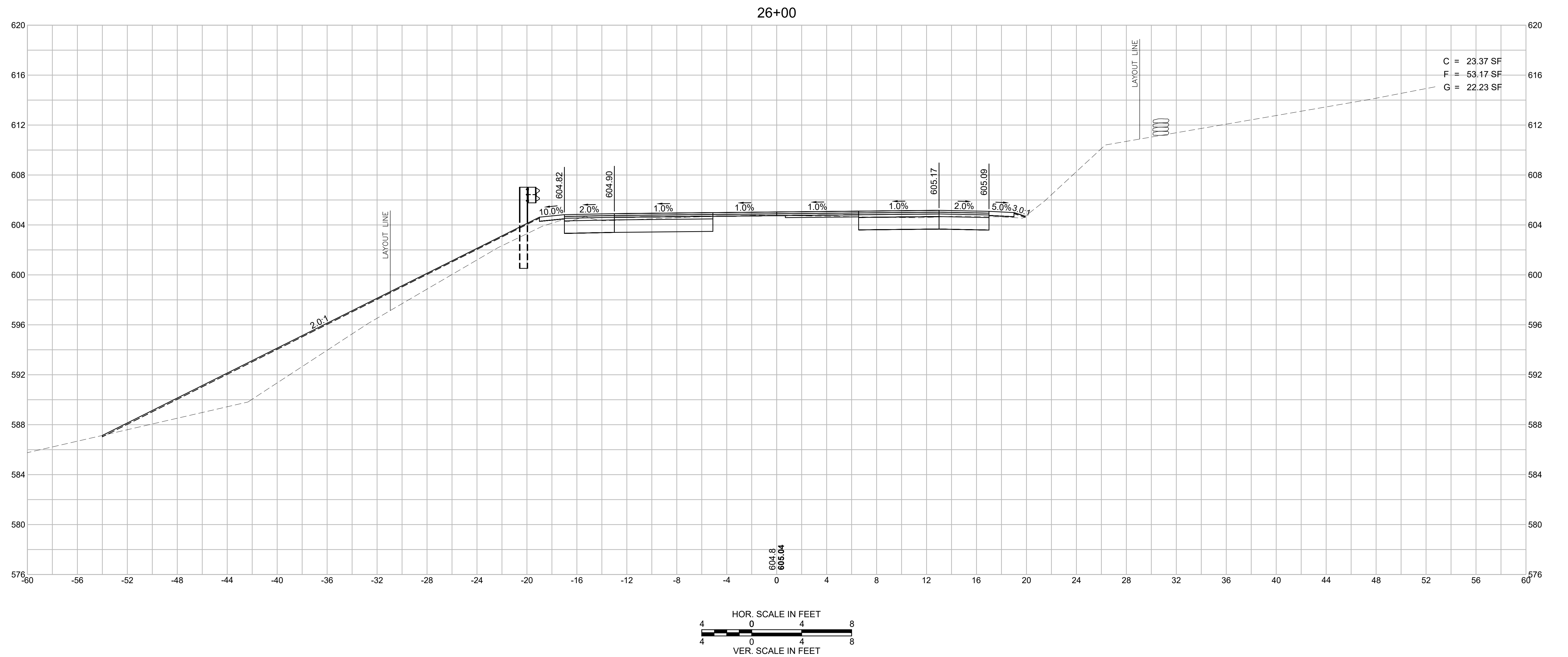
**LEVEL CROWN
25+68.75**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	81	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 19**

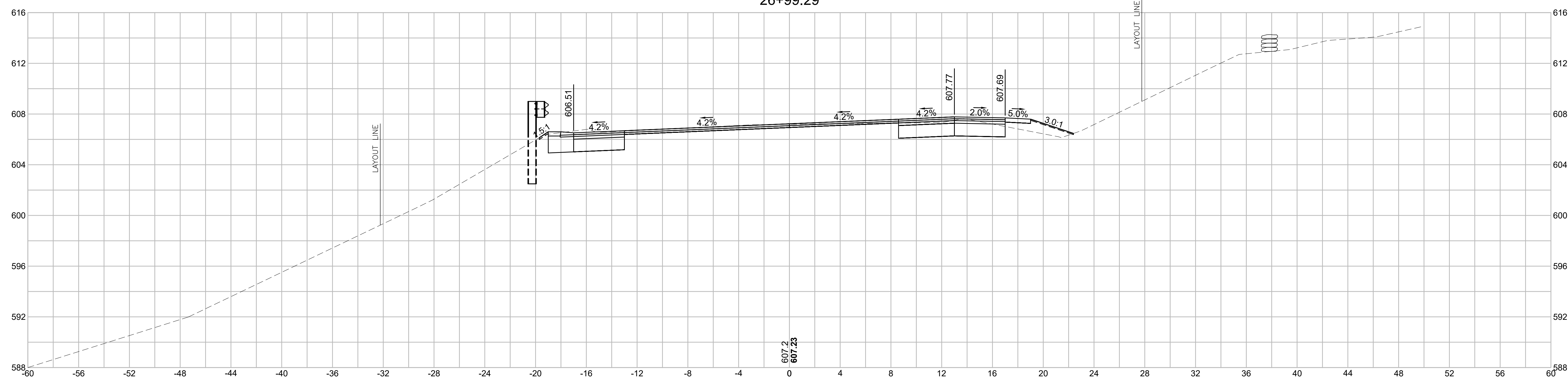


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

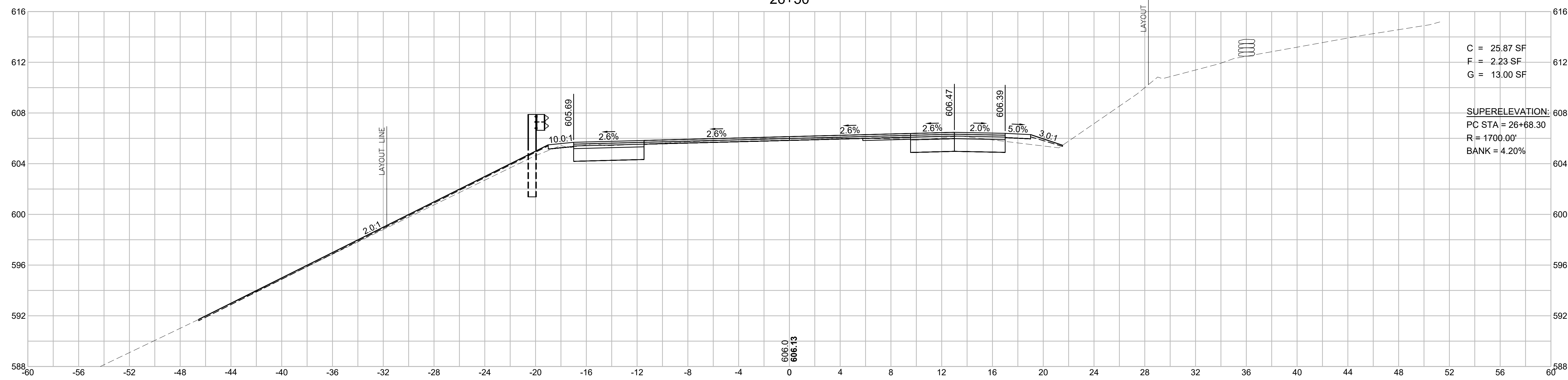
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	82	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 20**

**BEGIN FULL SUPERELEVATION
26+99.29**

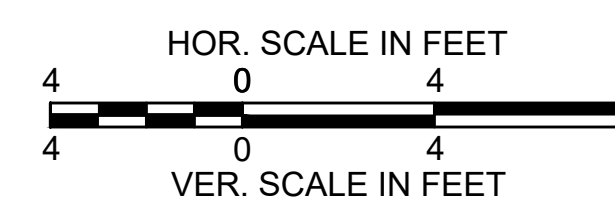


26+50



C = 25.87 SF
F = 2.23 SF
G = 13.00 SF

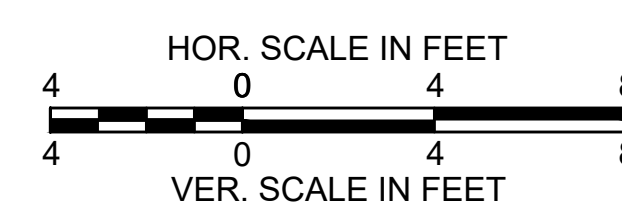
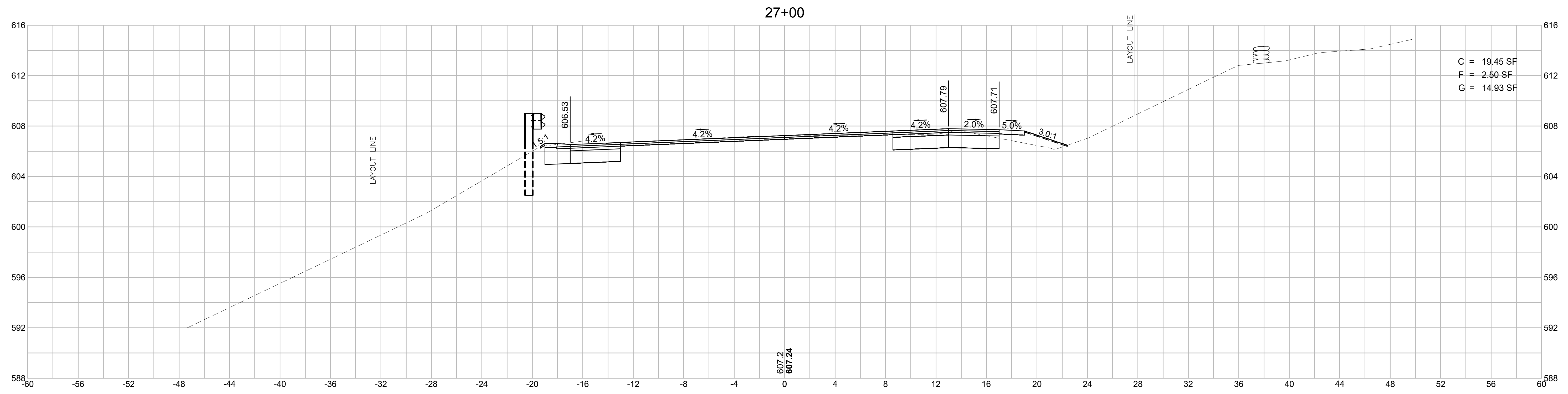
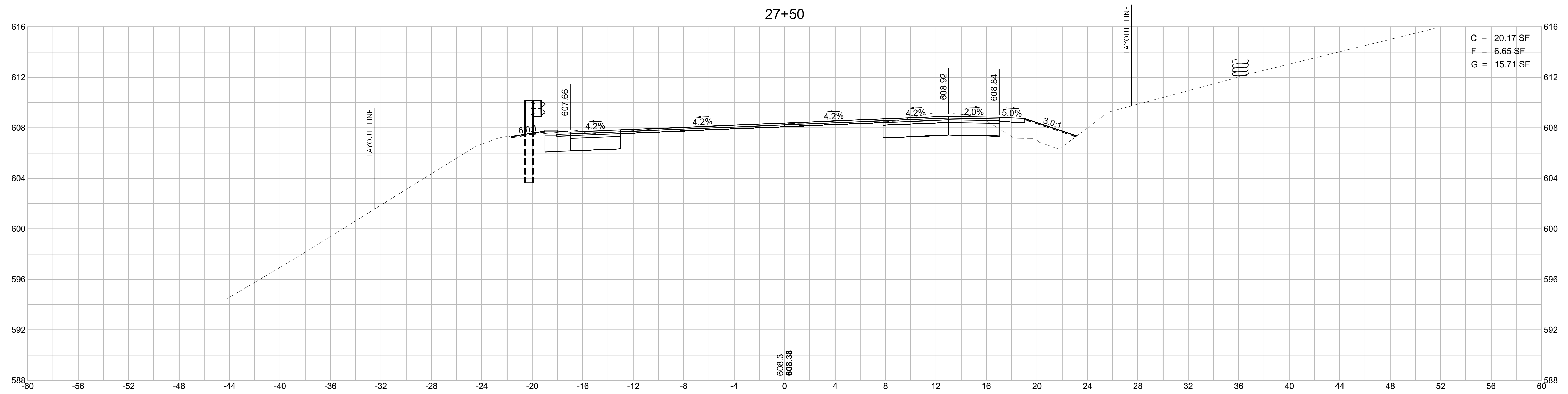
SUPERELEVATION:
PC STA = 26+68.30
R = 1700.00'
BANK = 4.20%



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	83	132
PROJECT FILE NO.		606517	

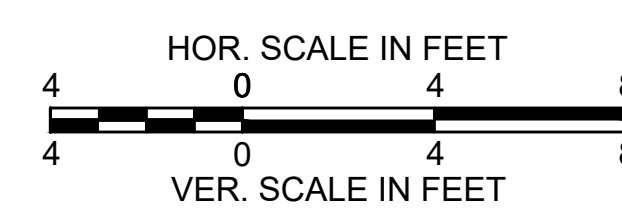
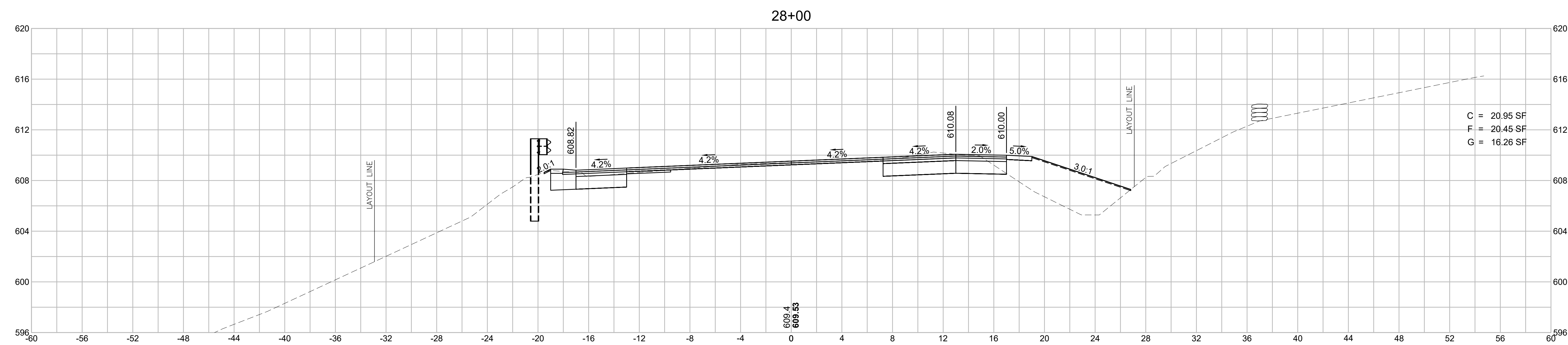
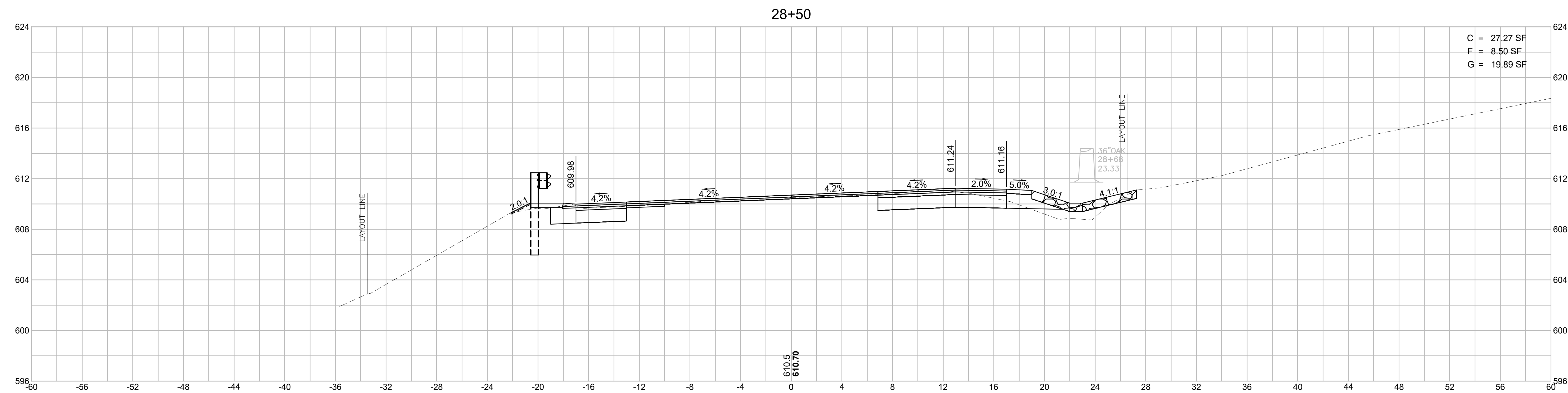
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 21**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	84	132
PROJECT FILE NO. 606517			

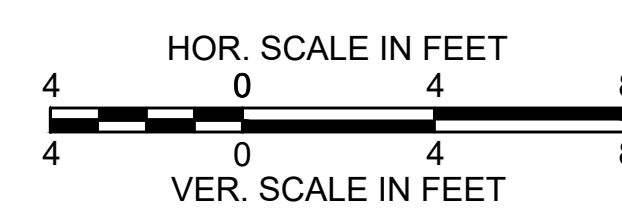
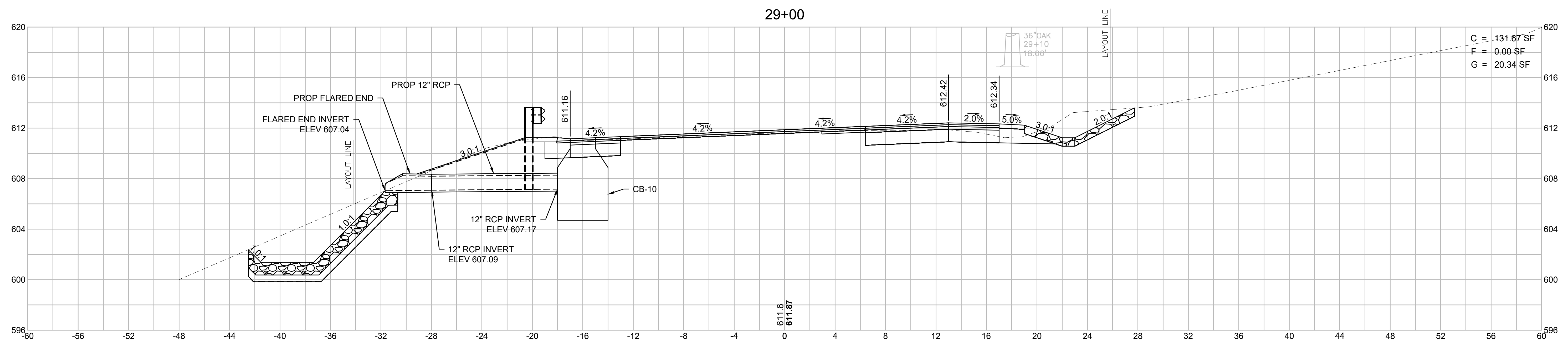
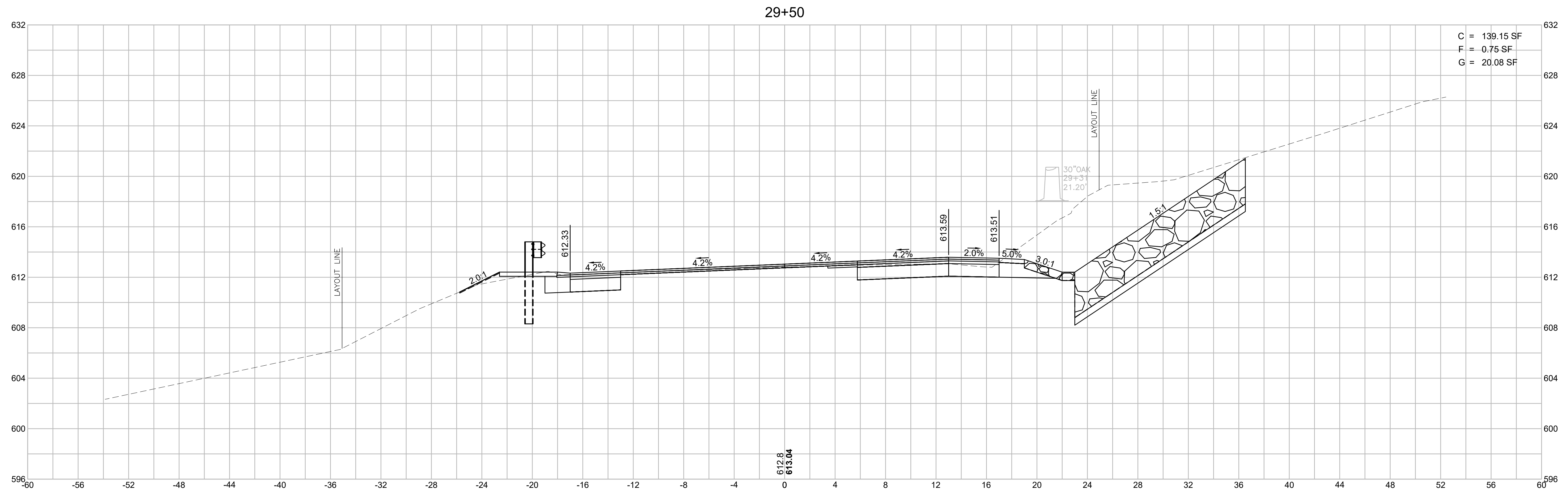
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 22**



WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	85	132
PROJECT FILE NO.		606517	

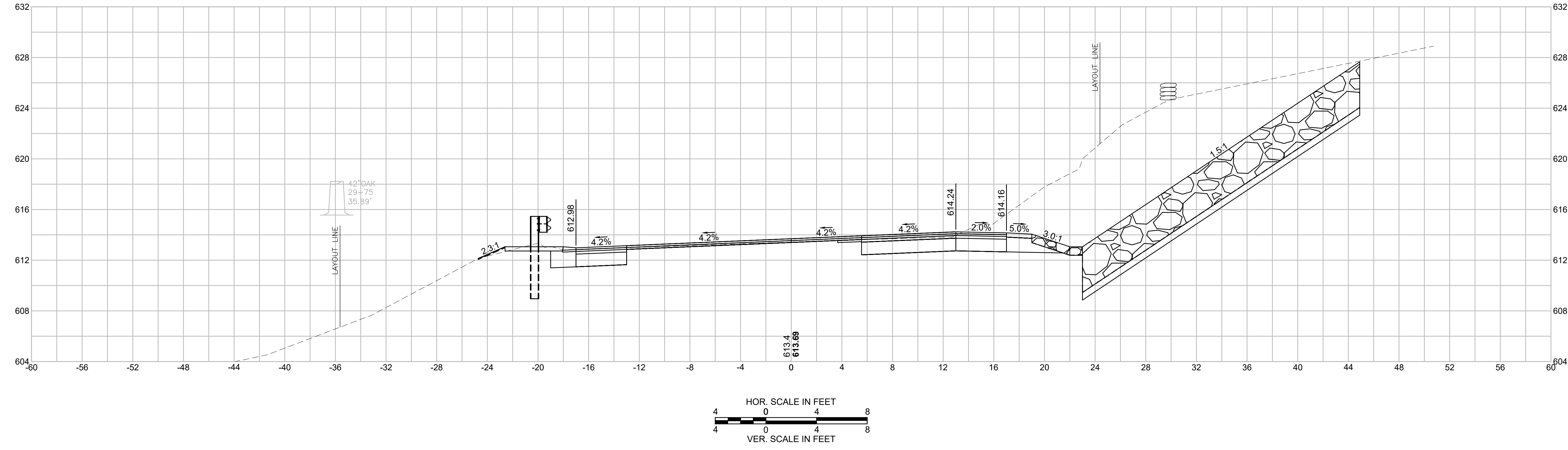
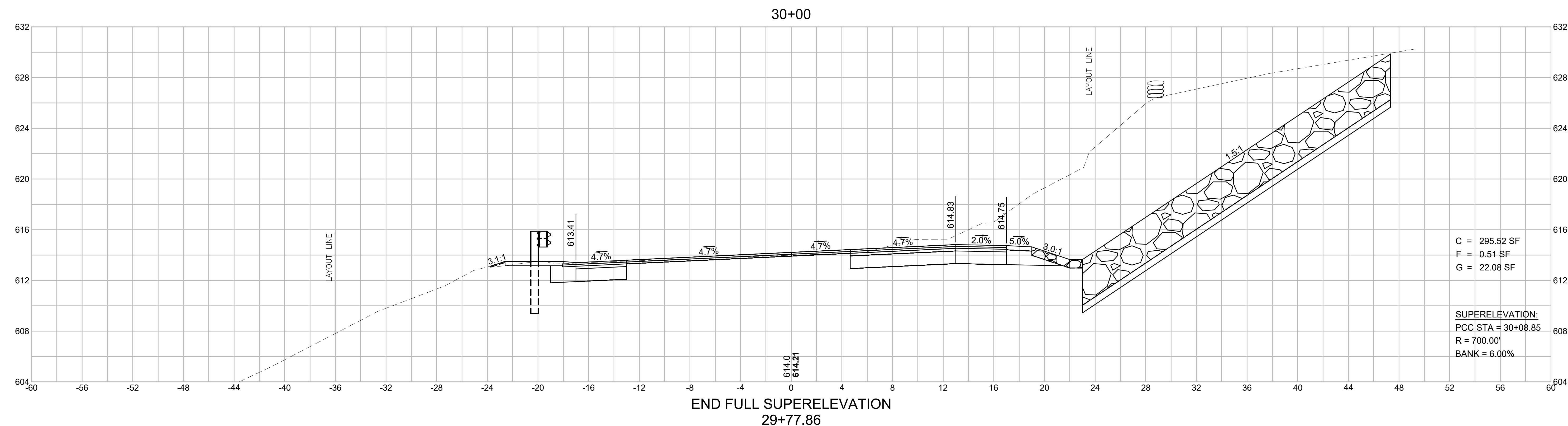
WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 23



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	86	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 24**

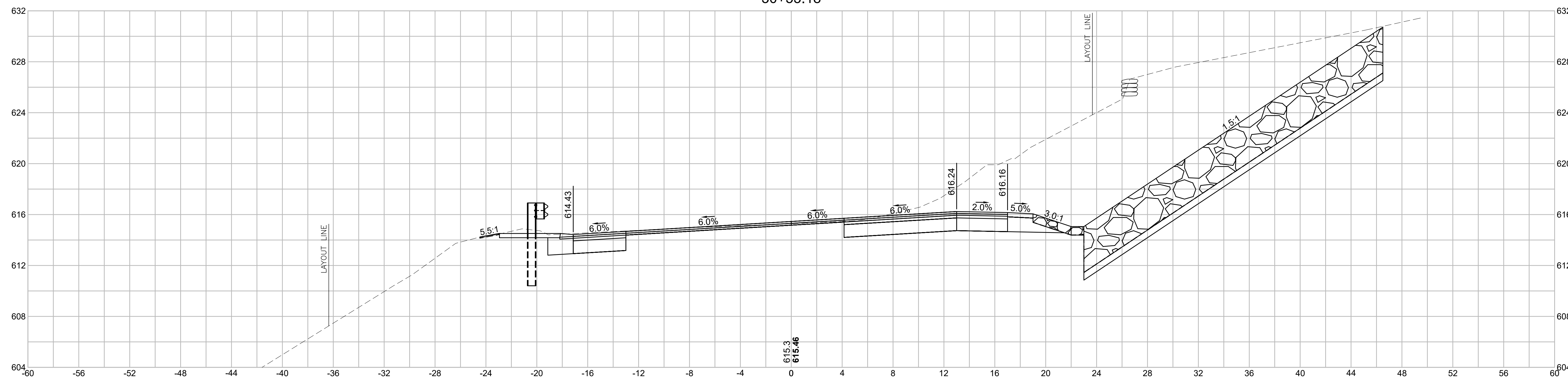


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

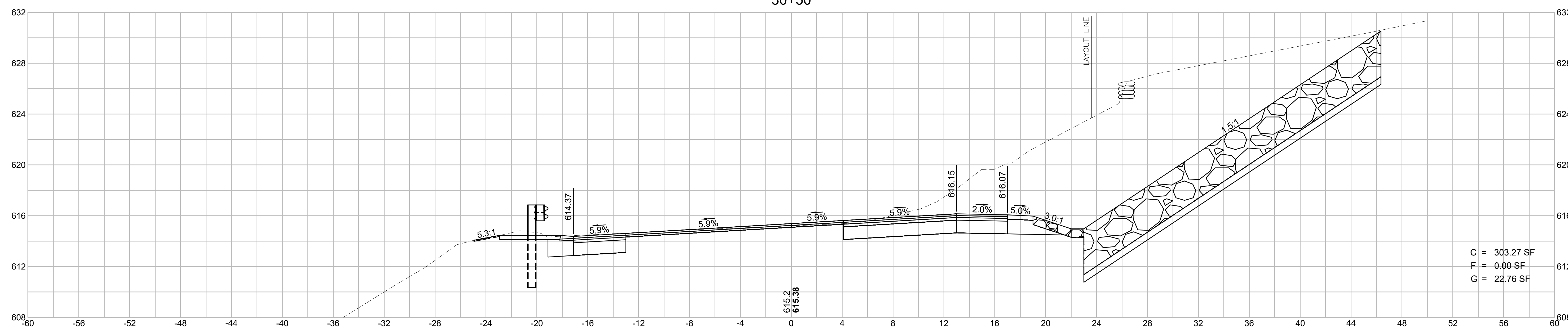
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	87	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 25**

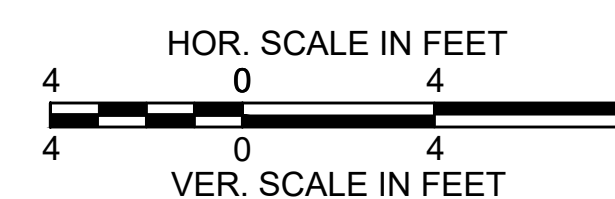
BEGIN FULL SUPERELEVATION
30+53.18



30+50



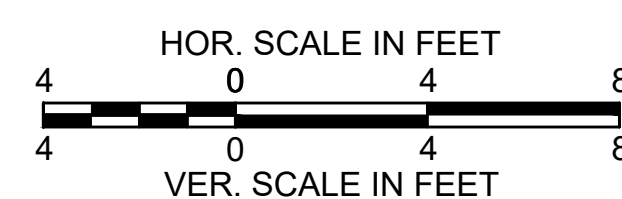
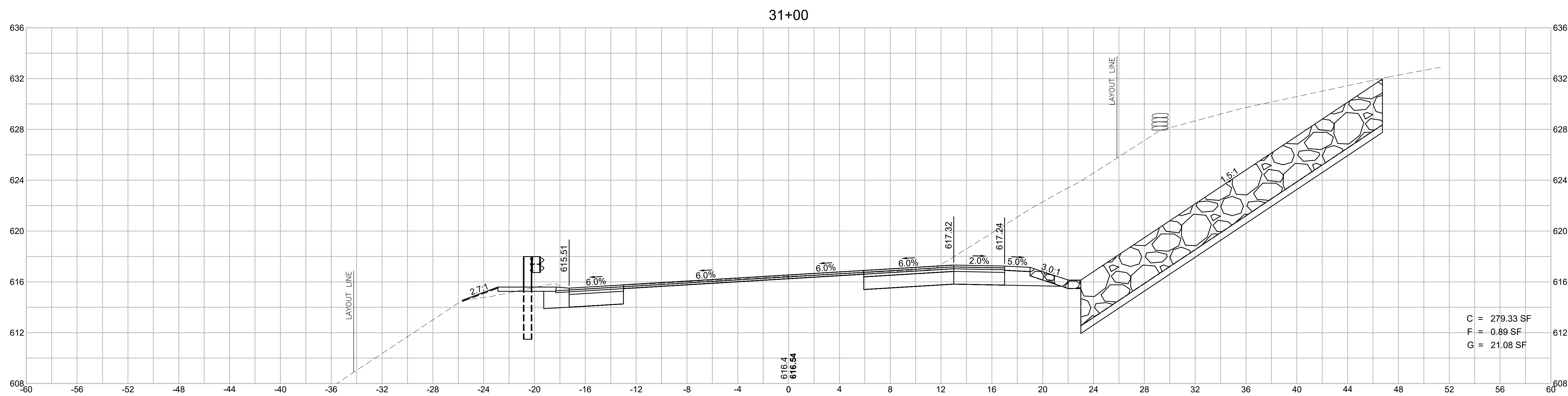
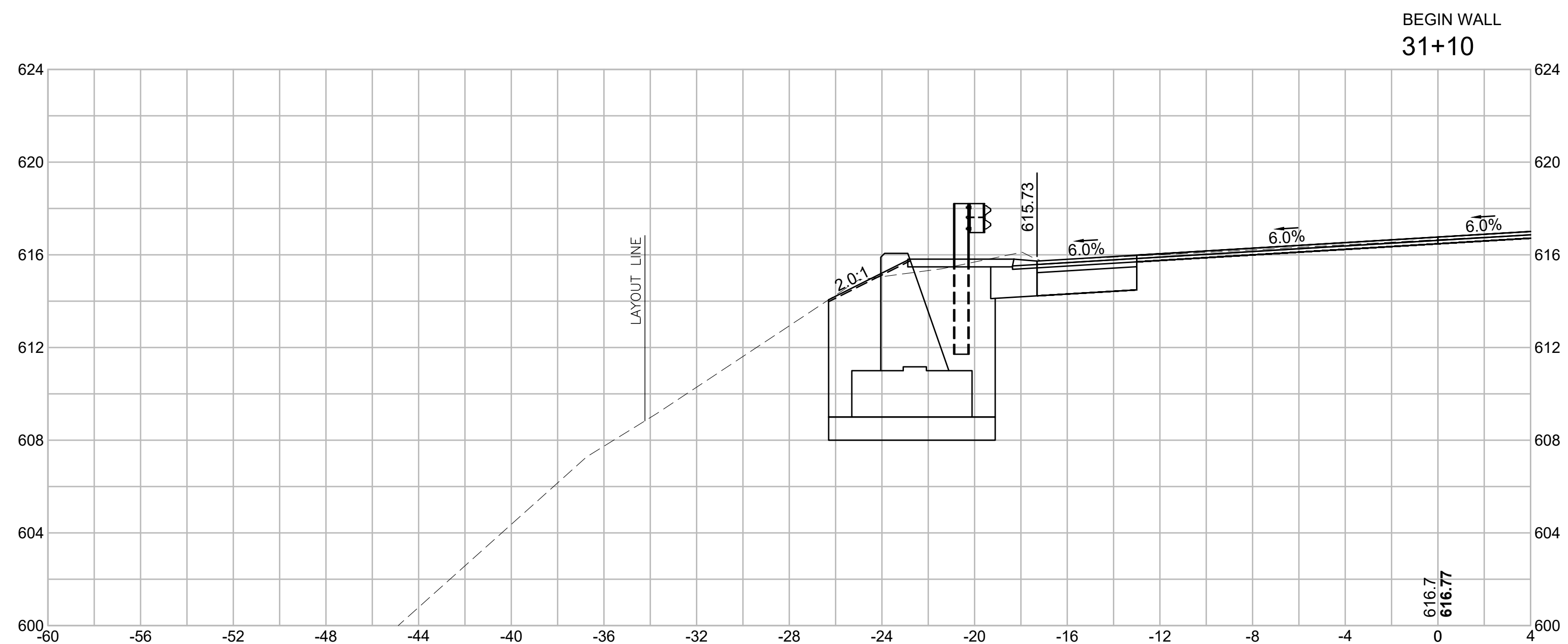
C = 303.27 SF
F = 0.00 SF
G = 22.76 SF



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	88	132

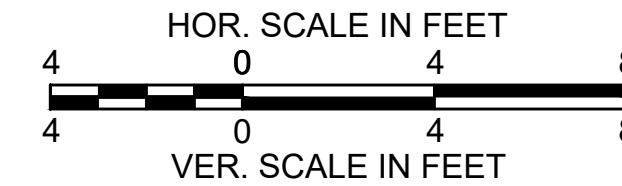
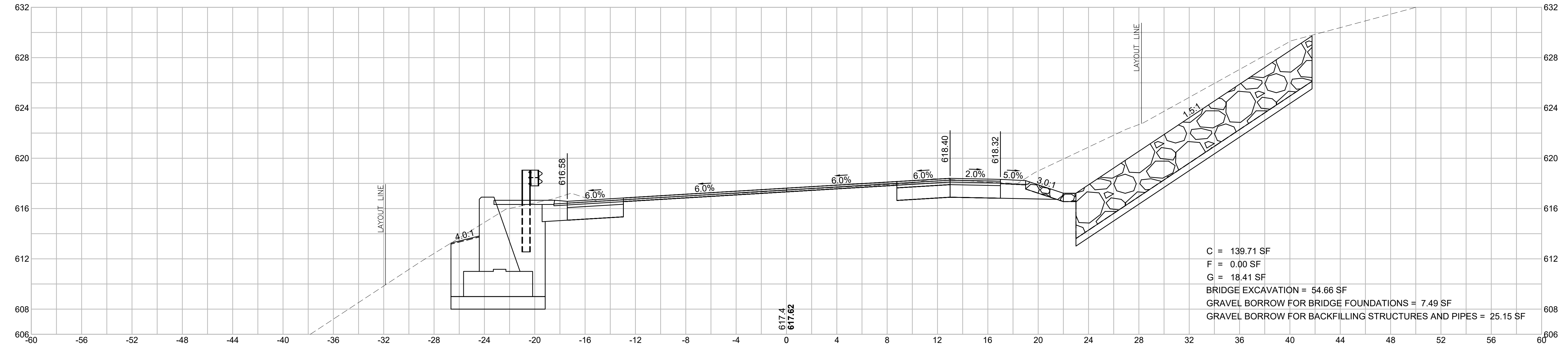
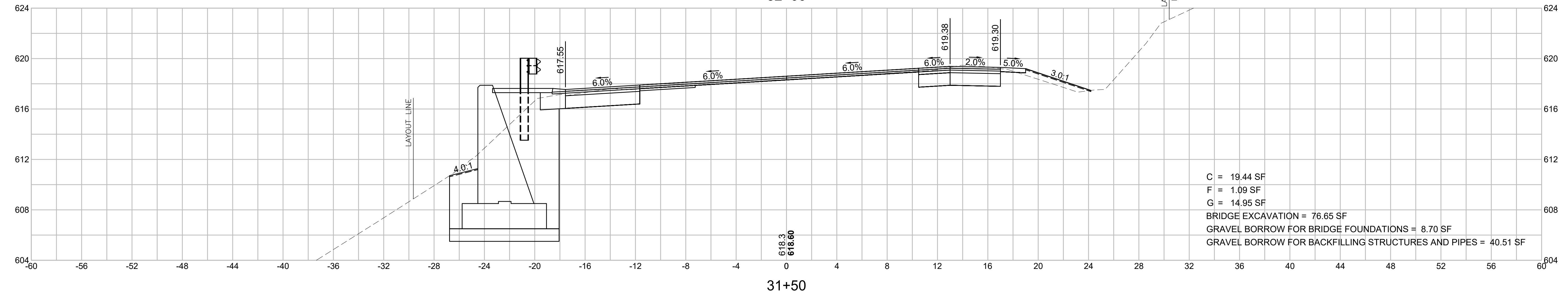
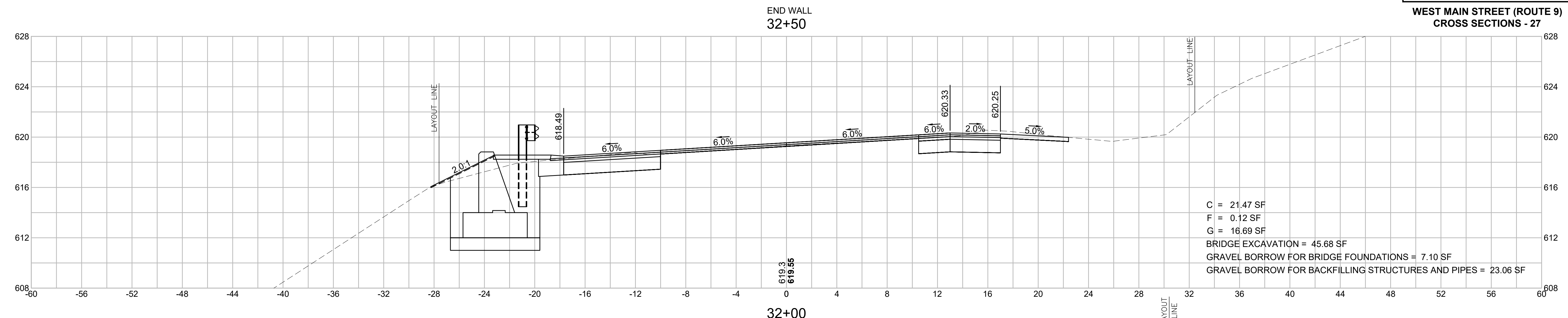
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 26**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	89	132
PROJECT FILE NO. 606517			

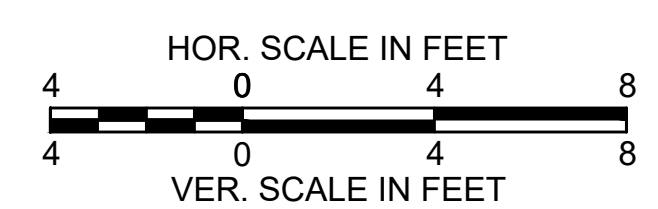
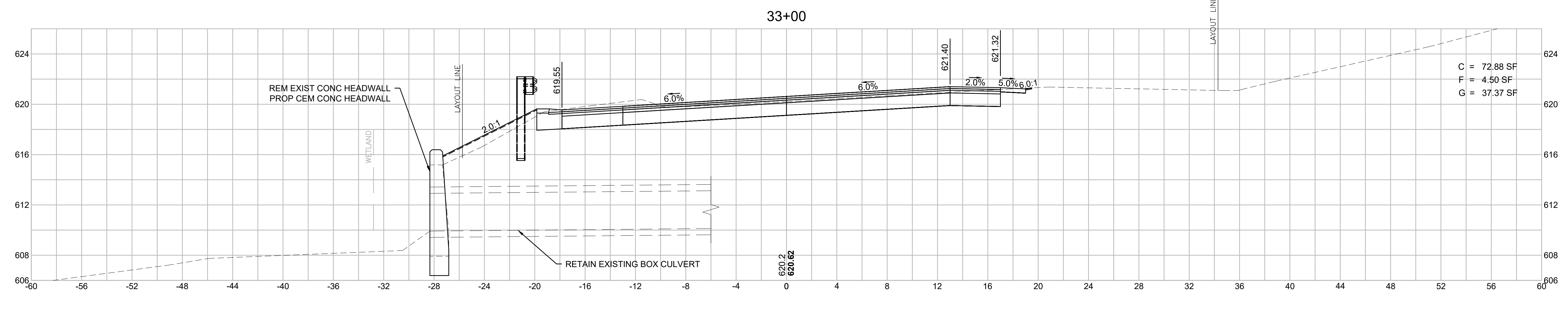
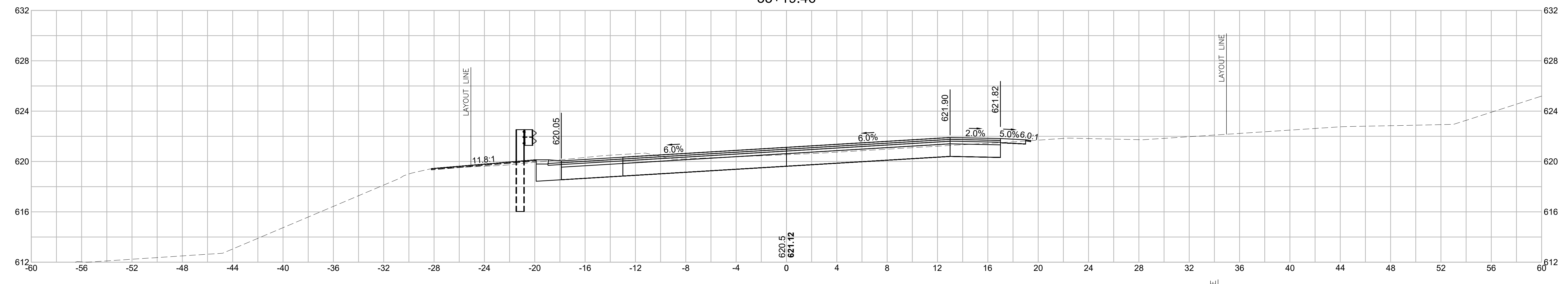
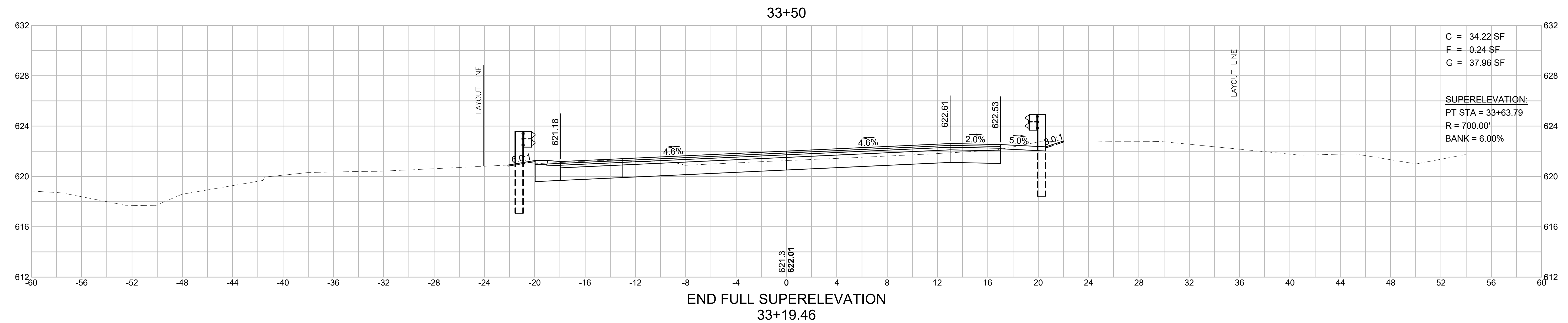
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 27**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	90	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 28**

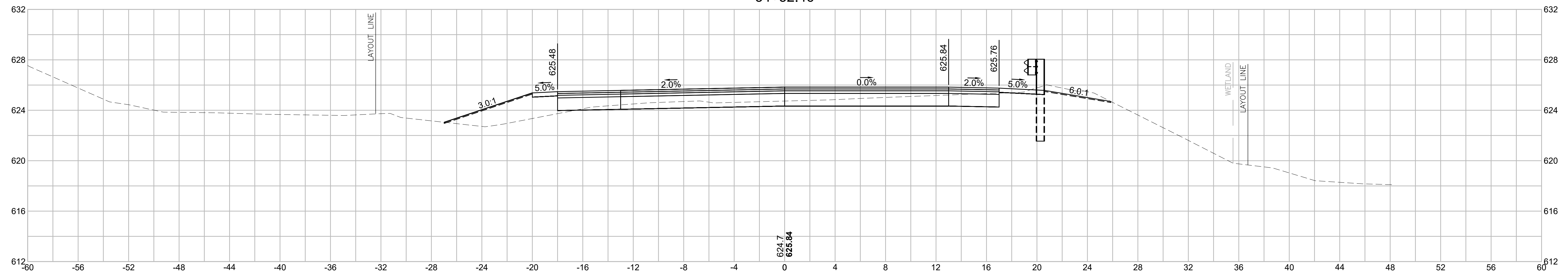


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

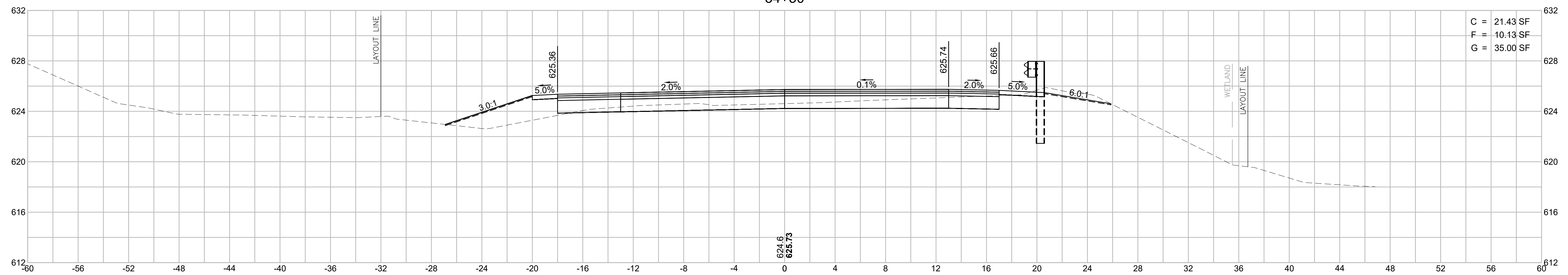
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	91	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 29**

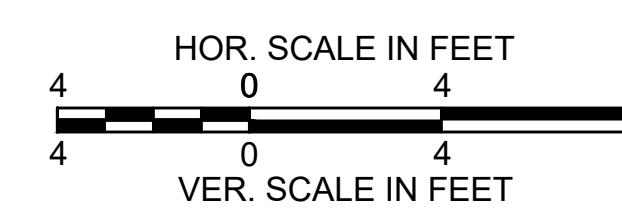
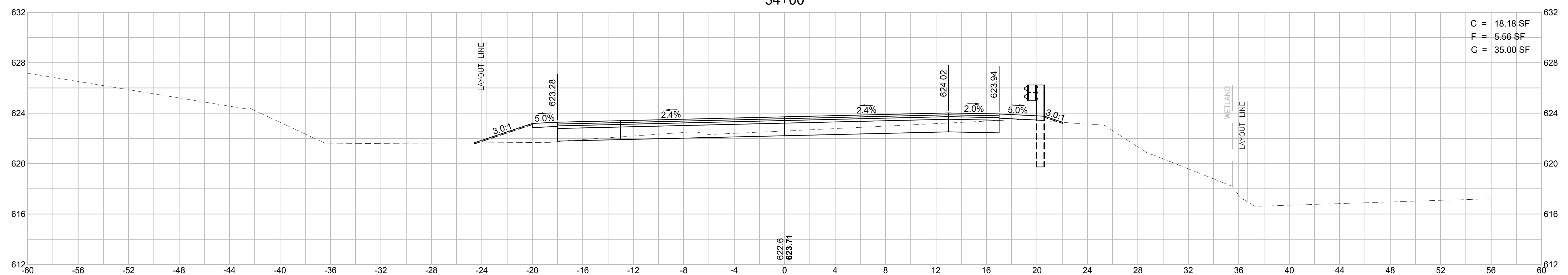
**LEVEL CROWN
34+52.46**



34+50



34+00



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

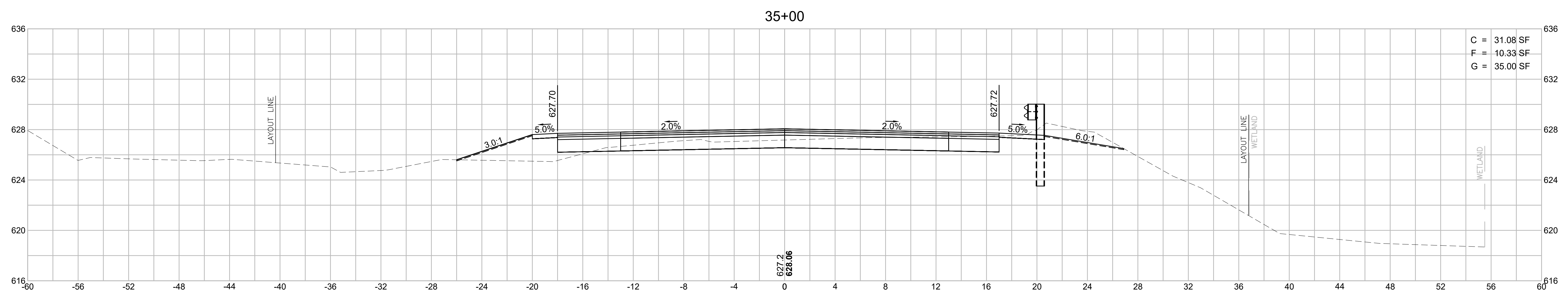
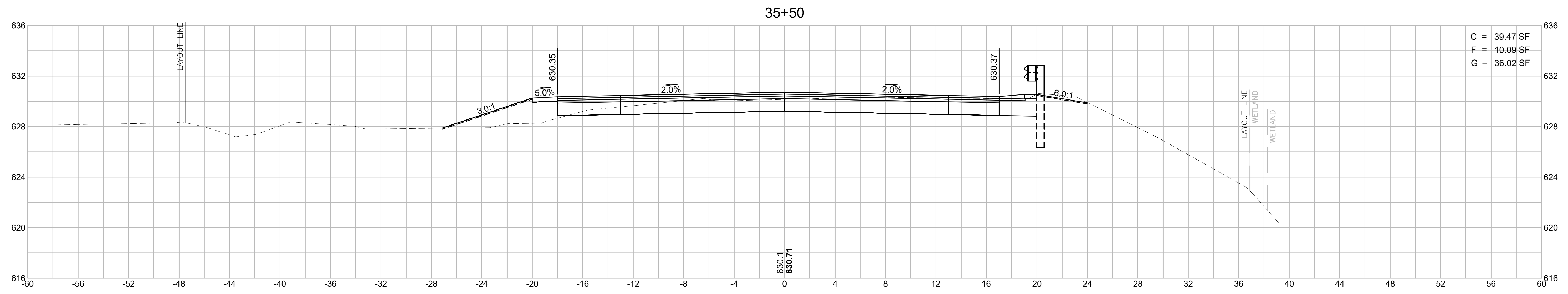
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	92	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 30**

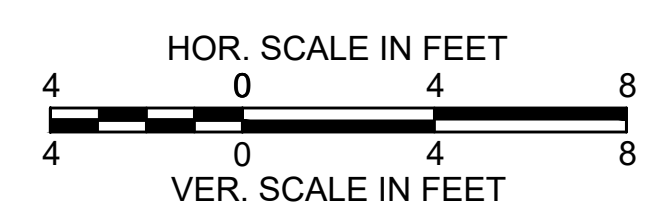
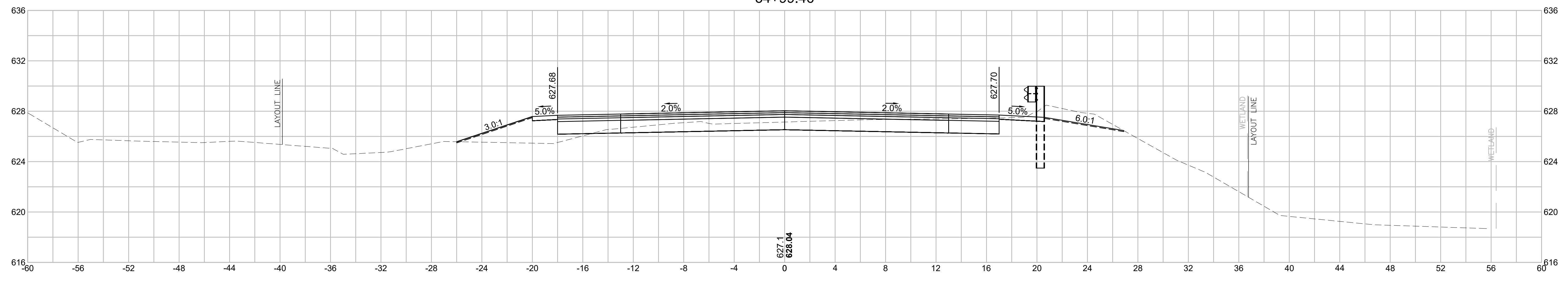
C = 39.47 SF
F = 10.09 SF
G = 36.02 SF

C = 31.08 SF
F = 10.33 SF
G = 35.00 SF

C = 31.08 SF
F = 10.33 SF
G = 35.00 SF



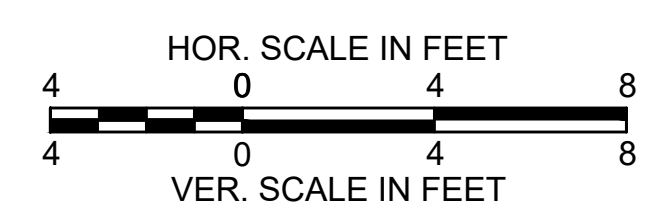
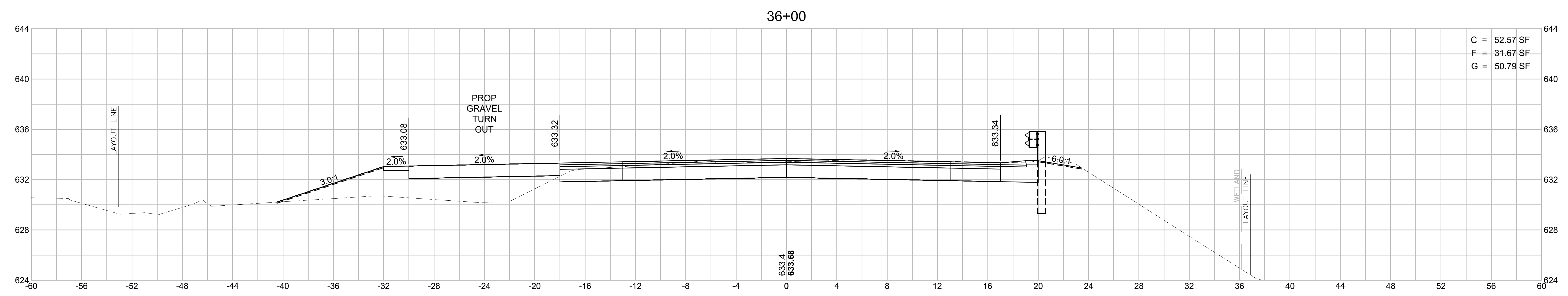
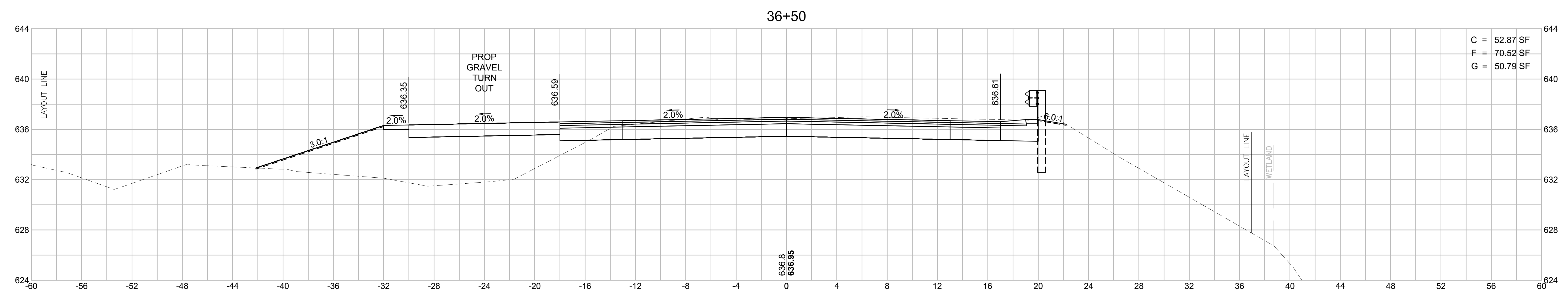
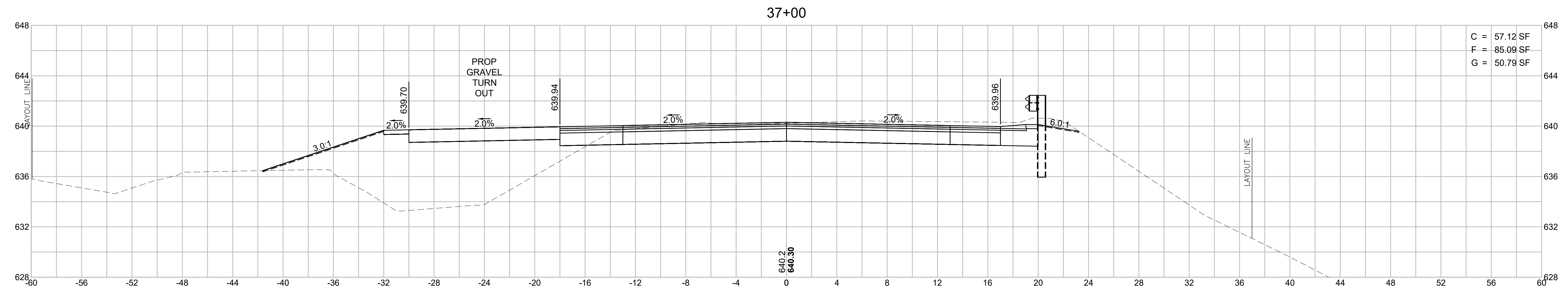
BEGIN NORMAL CROWN
34+99.46



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	93	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 31**

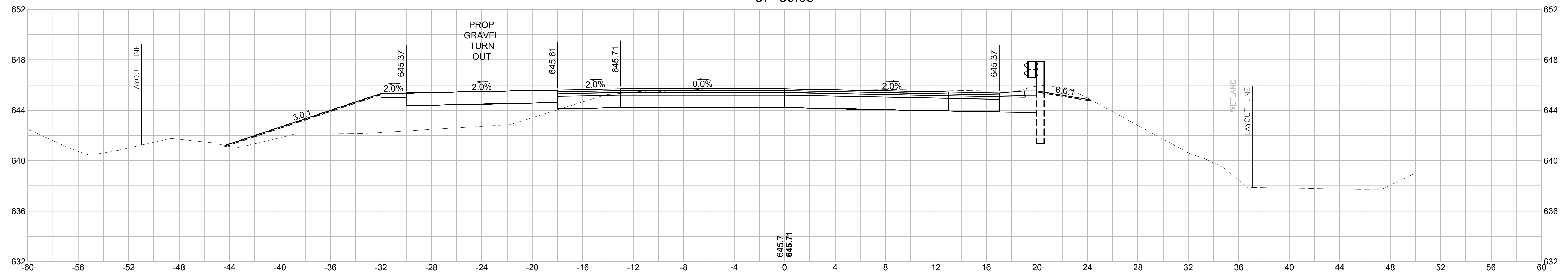


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

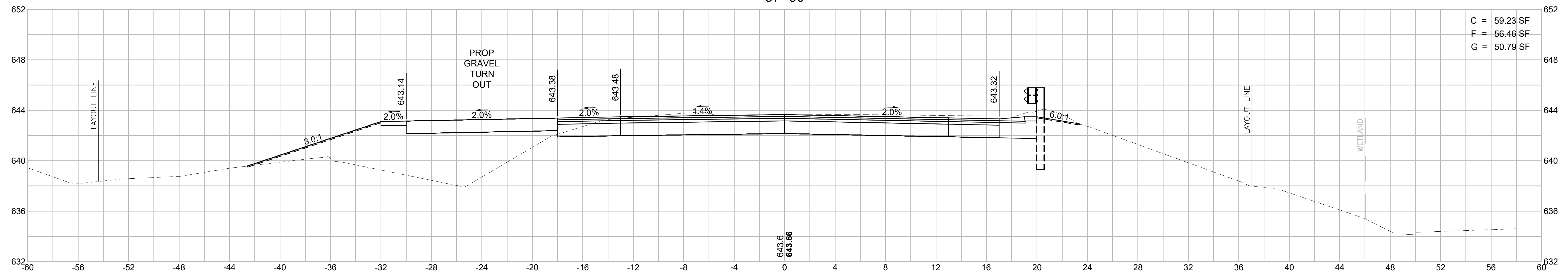
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	94	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 32**

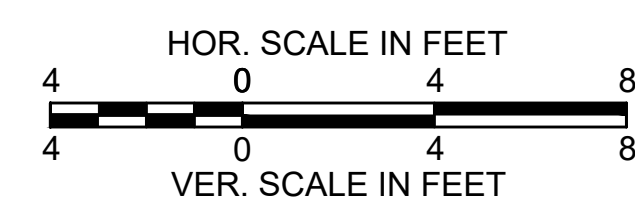
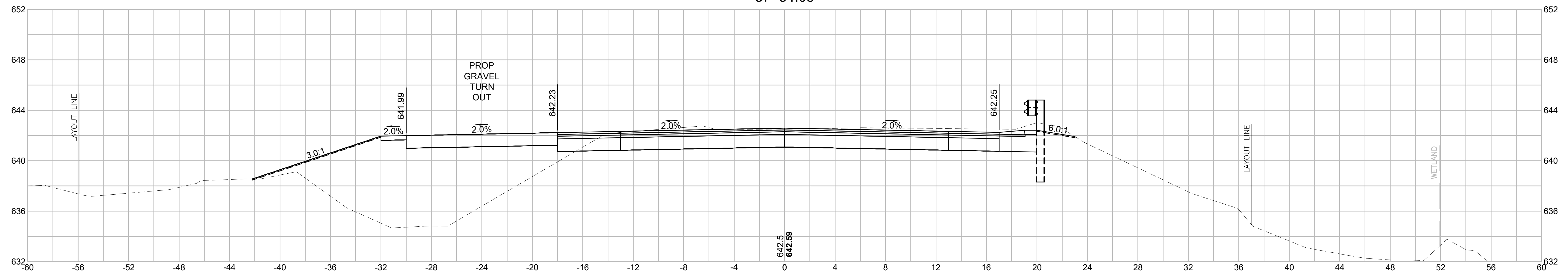
**LEVEL CROWN
37+80.58**



37+50



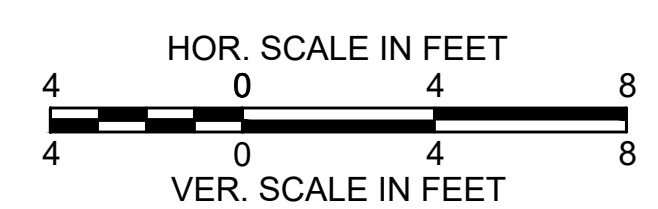
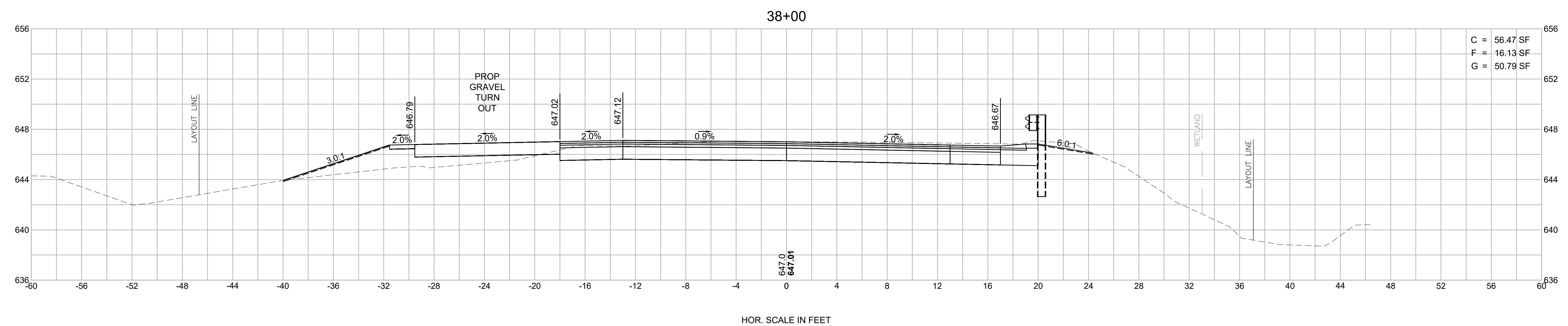
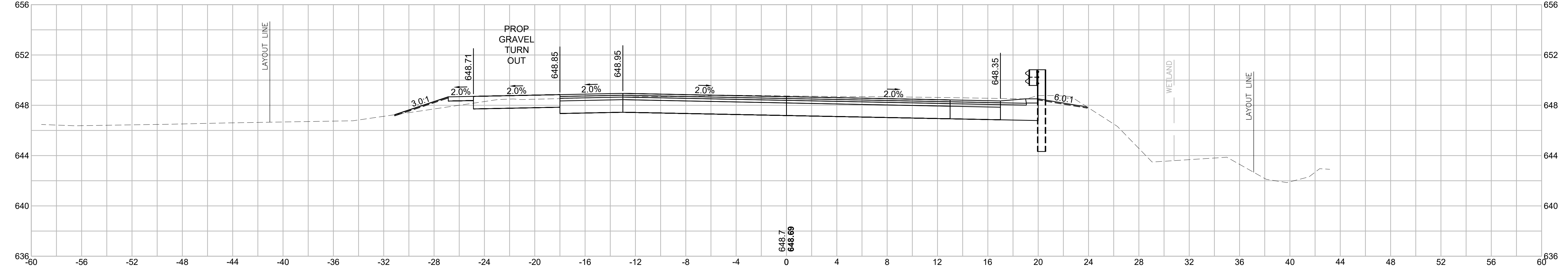
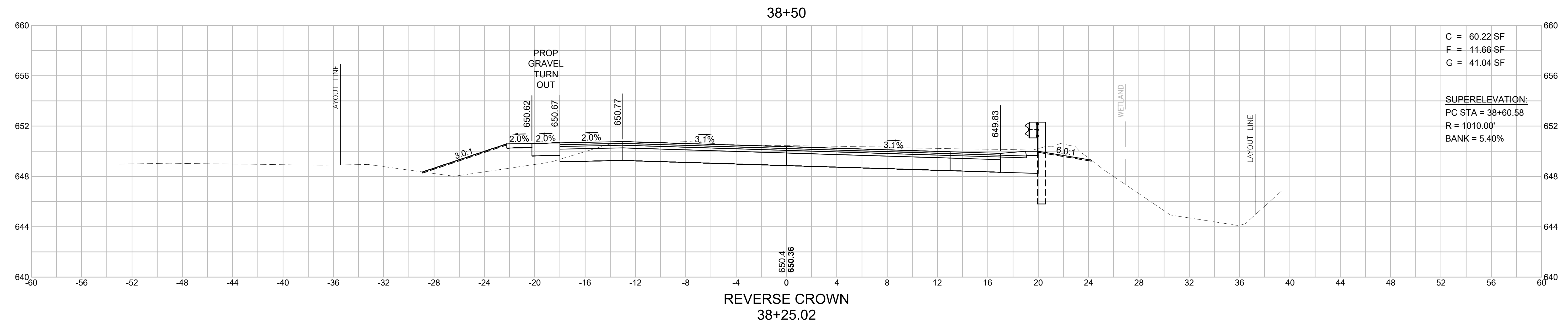
**END NORMAL CROWN
37+34.08**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	95	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 33**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

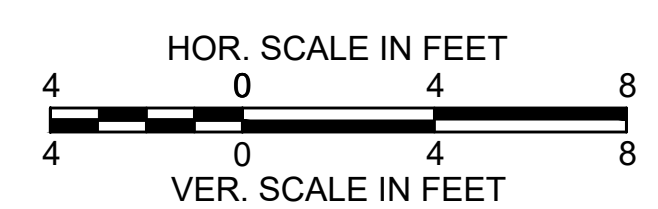
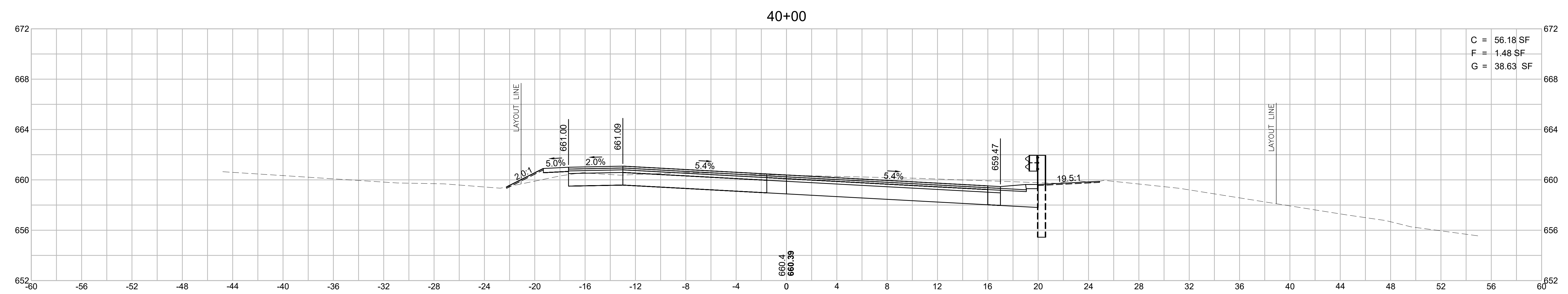
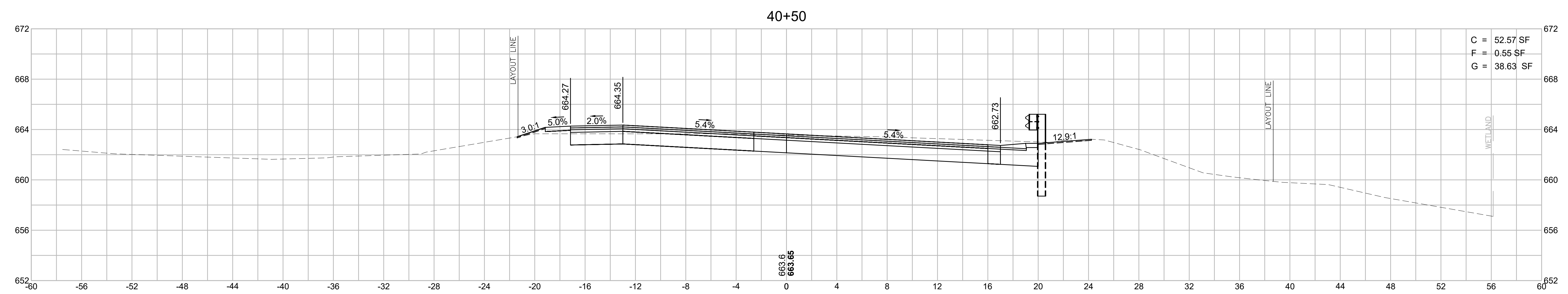
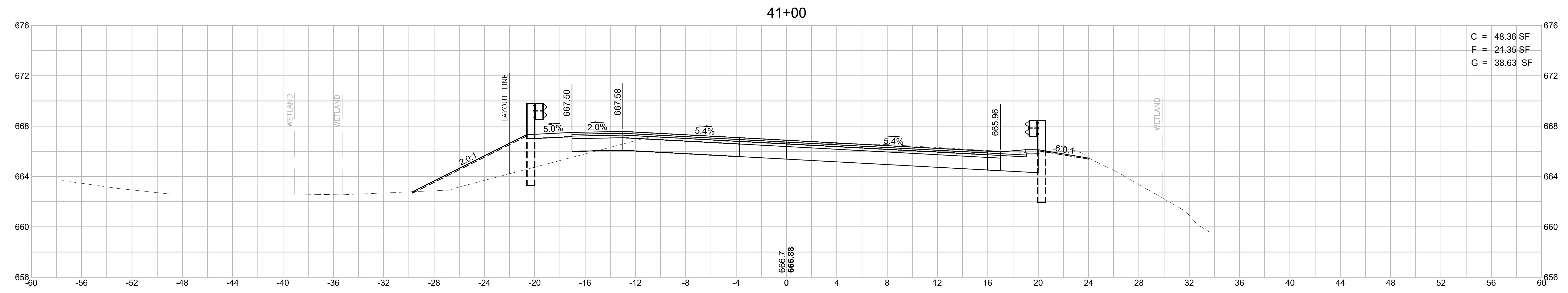
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	97	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 35**

C = 48.36 SF
F = 21.35 SF
G = 38.63 SF

C = 52.57 SF
F = 0.55 SF
G = 38.63 SF

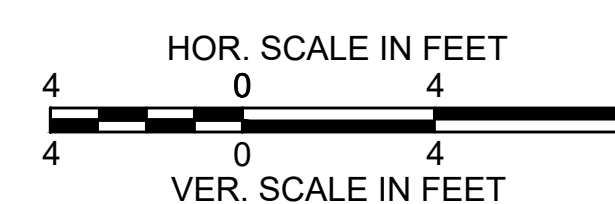
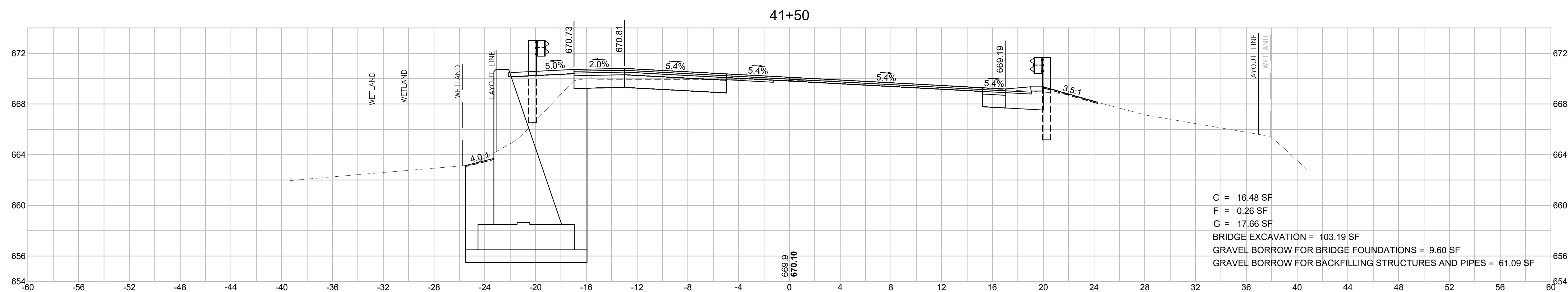
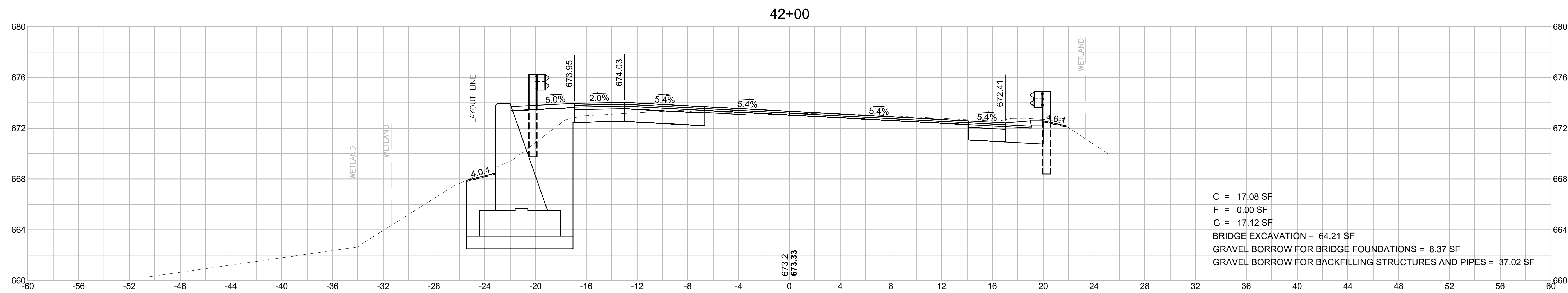
C = 56.18 SF
F = 1.48 SF
G = 38.63 SF



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	98	132

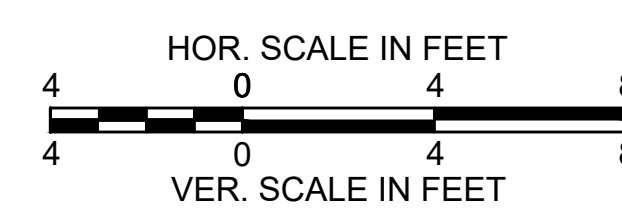
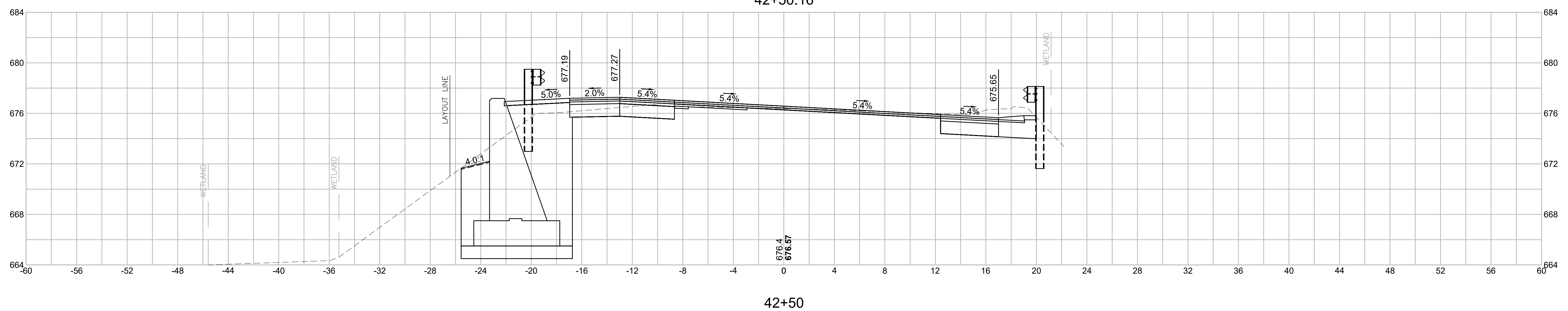
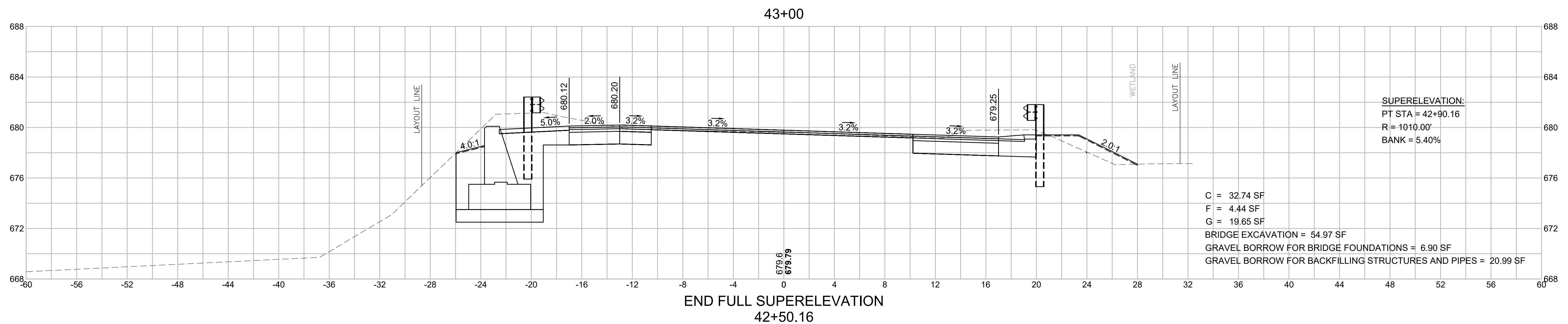
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 36**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	99	132
PROJECT FILE NO.		606517	

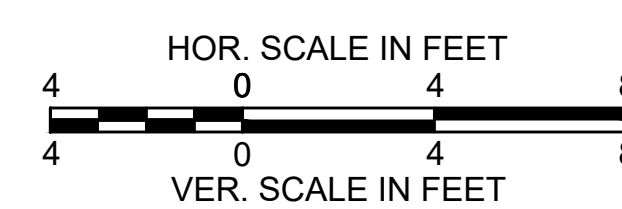
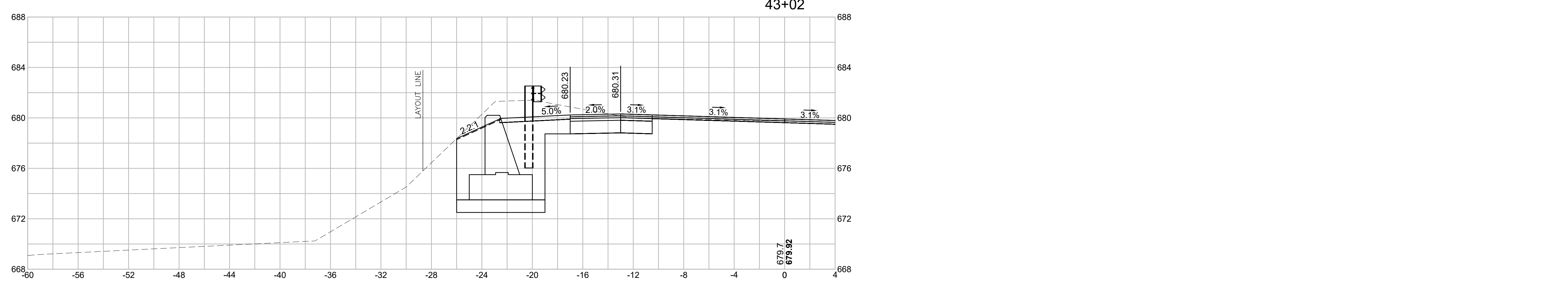
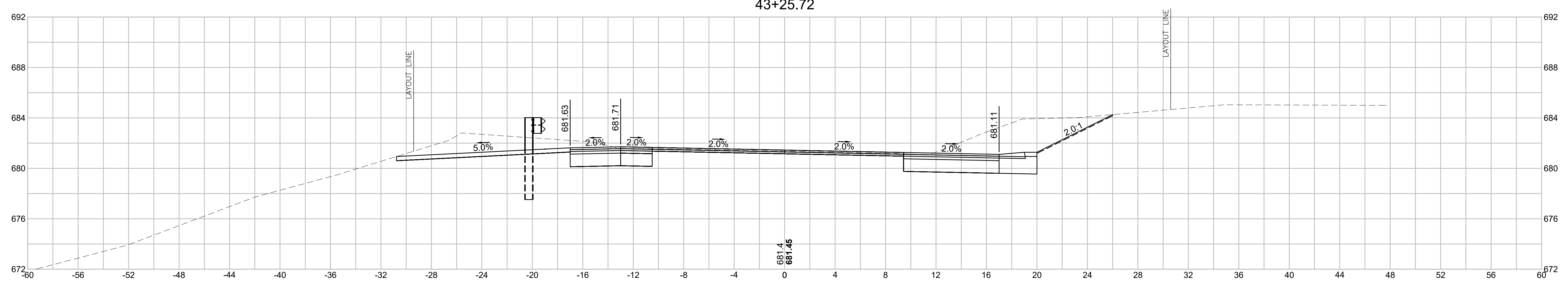
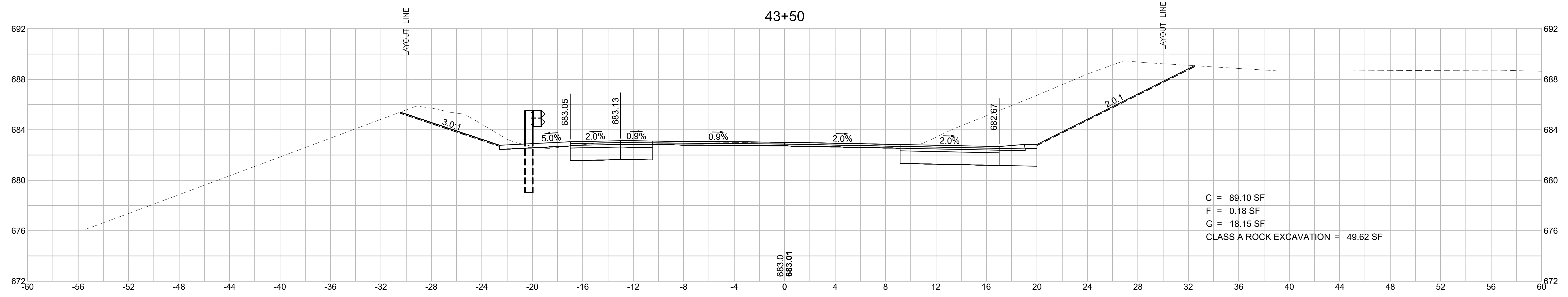
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 37**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	100	132
PROJECT FILE NO.		606517	

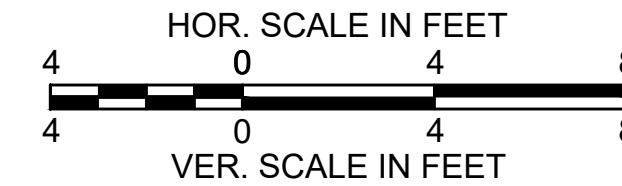
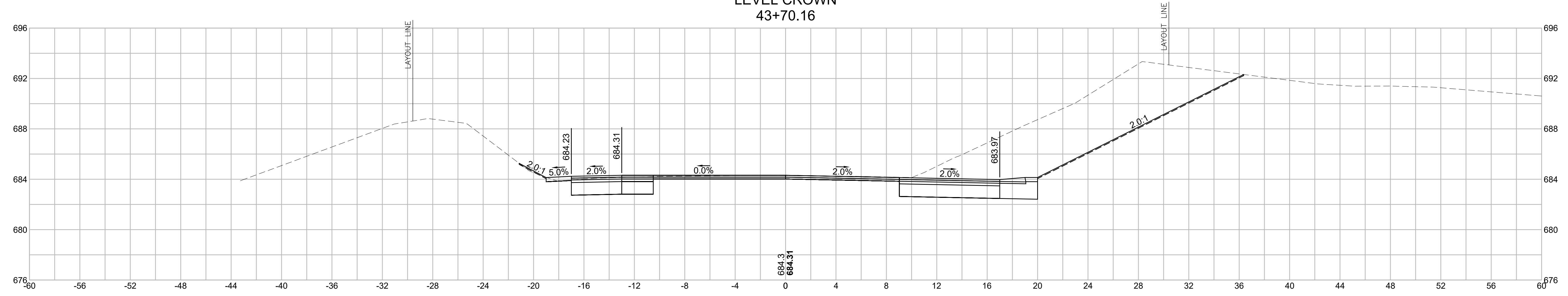
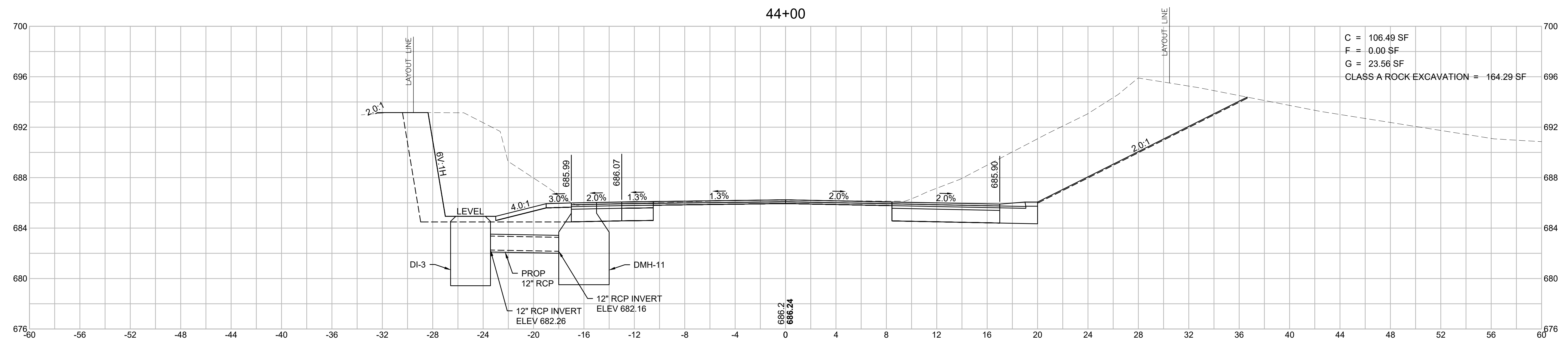
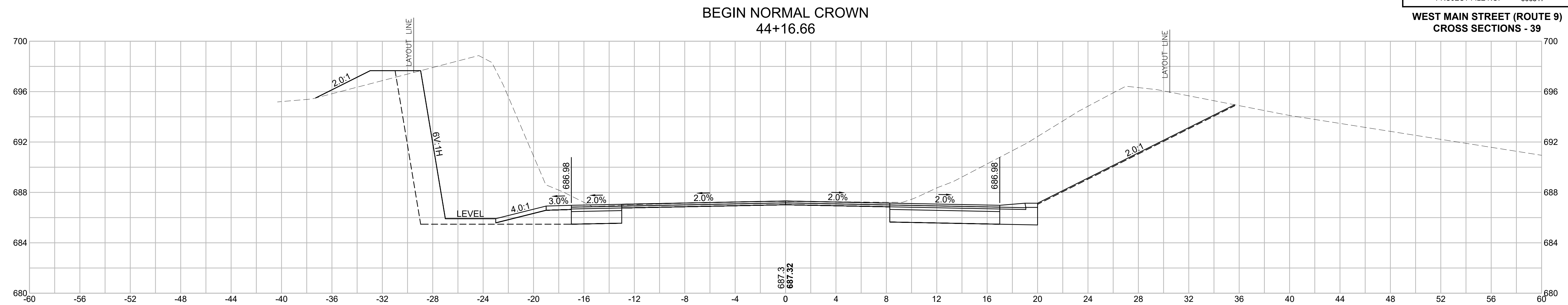
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 38**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	101	132
PROJECT FILE NO. 606517			

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 39**

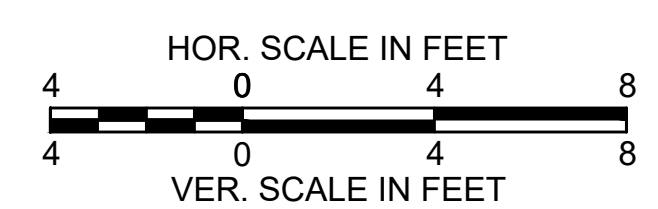
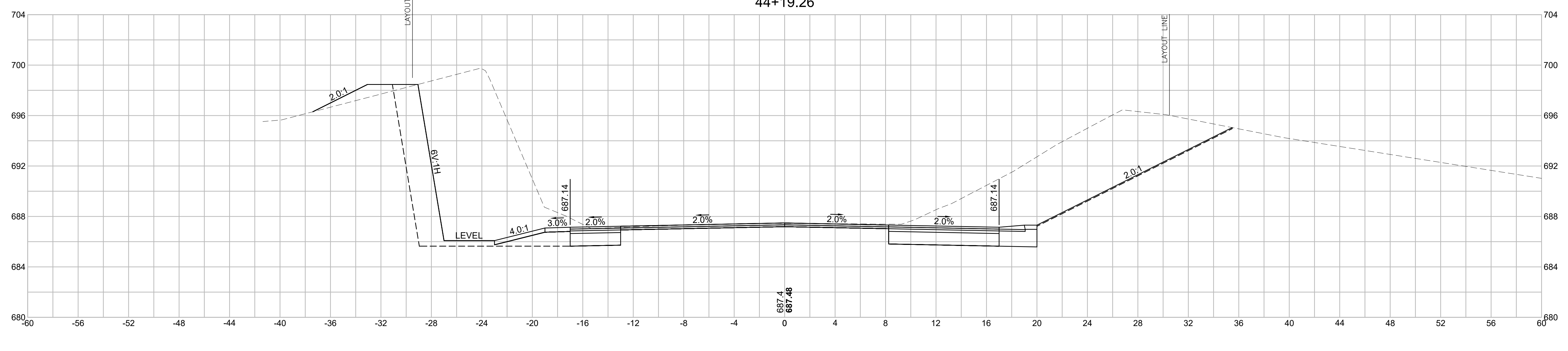
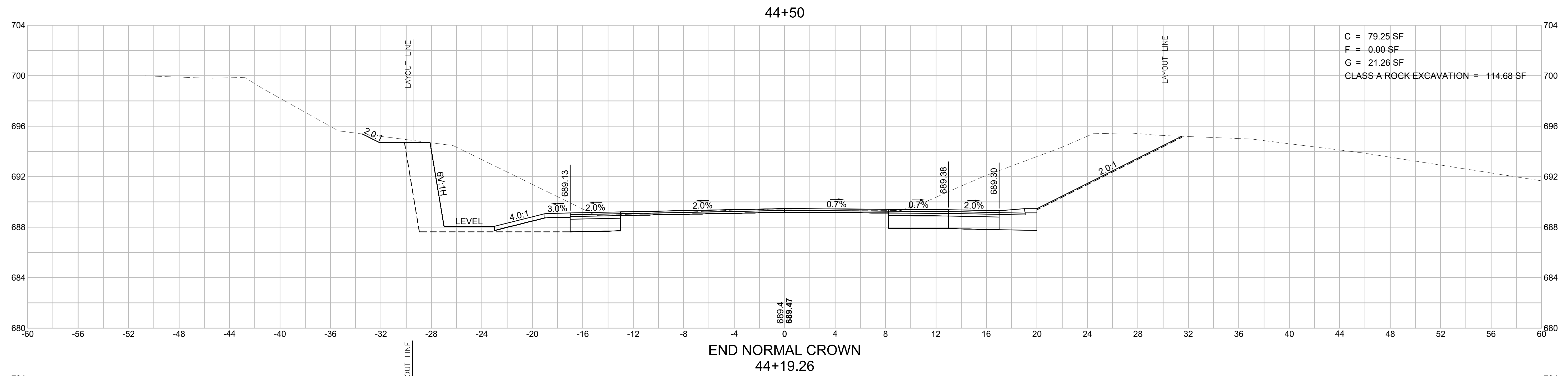


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	102	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 40**

C = 79.25 SF
F = 0.00 SF
G = 21.26 SF
CLASS A ROCK EXCAVATION = 114.68 SF



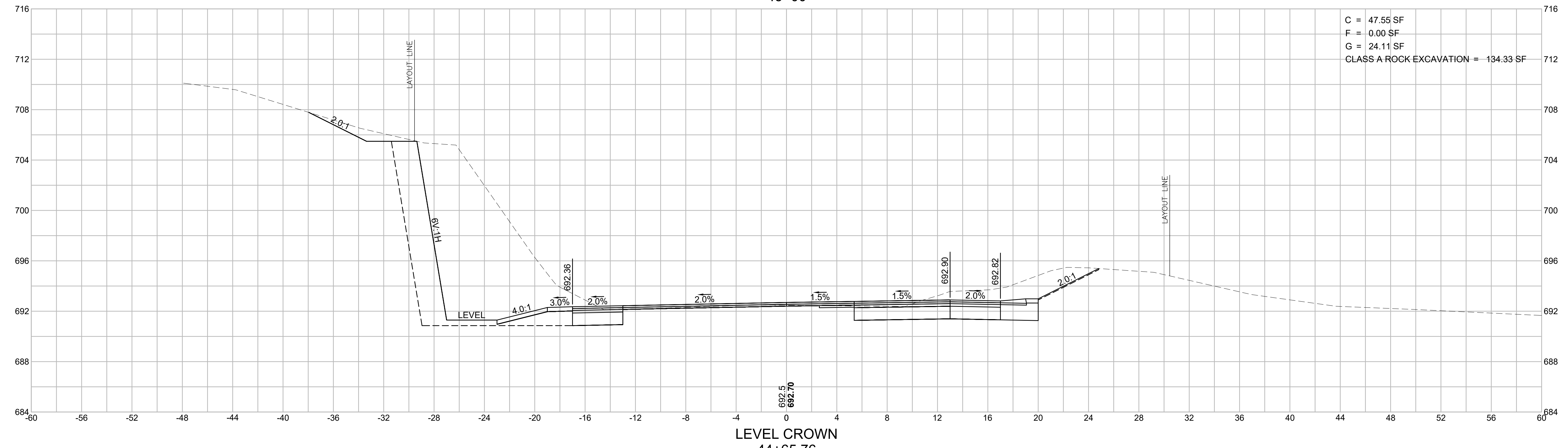
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	103	132
PROJECT FILE NO.		606517	

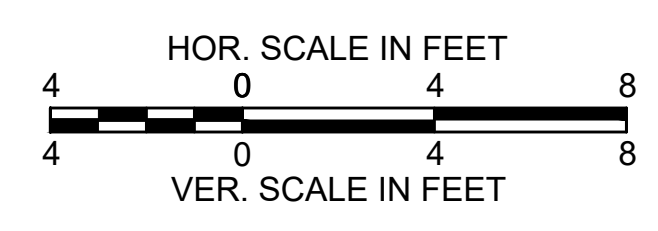
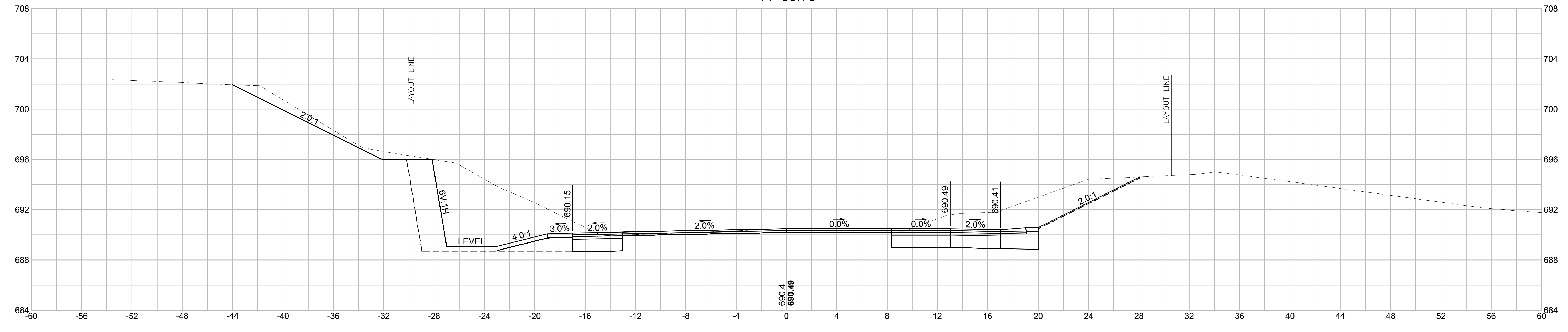
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 41**

C = 47.55 SF
 F = 0.00 SF
 G = 24.11 SF
 CLASS A ROCK EXCAVATION = 134.33 SF

45+00



LEVEL CROWN
44+65.76



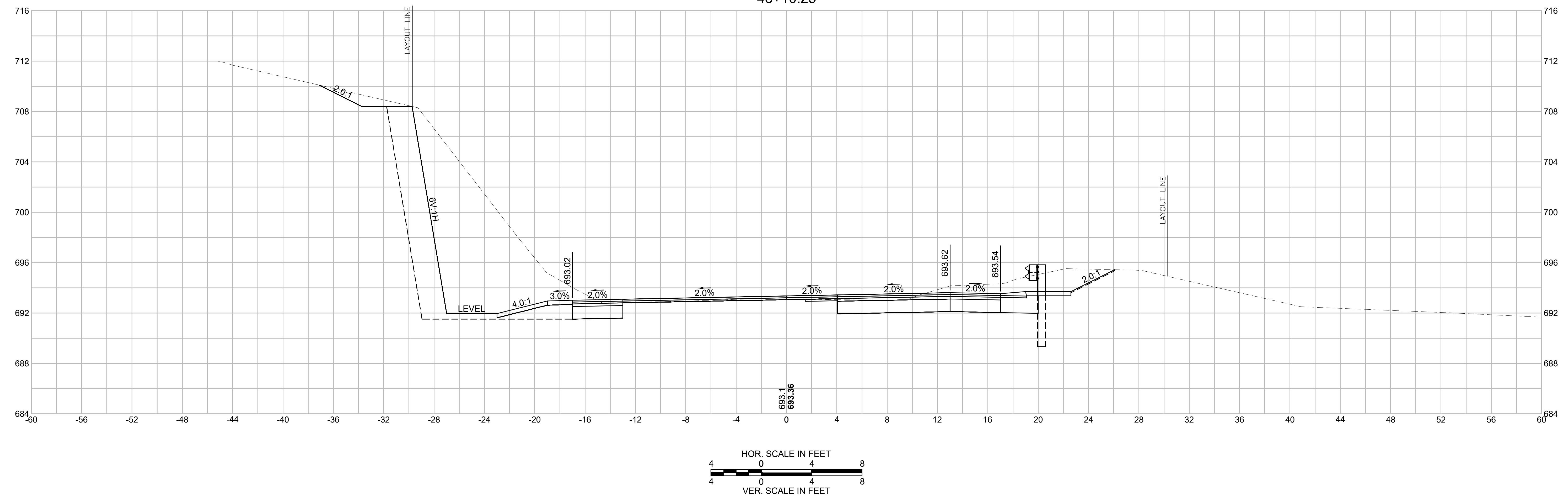
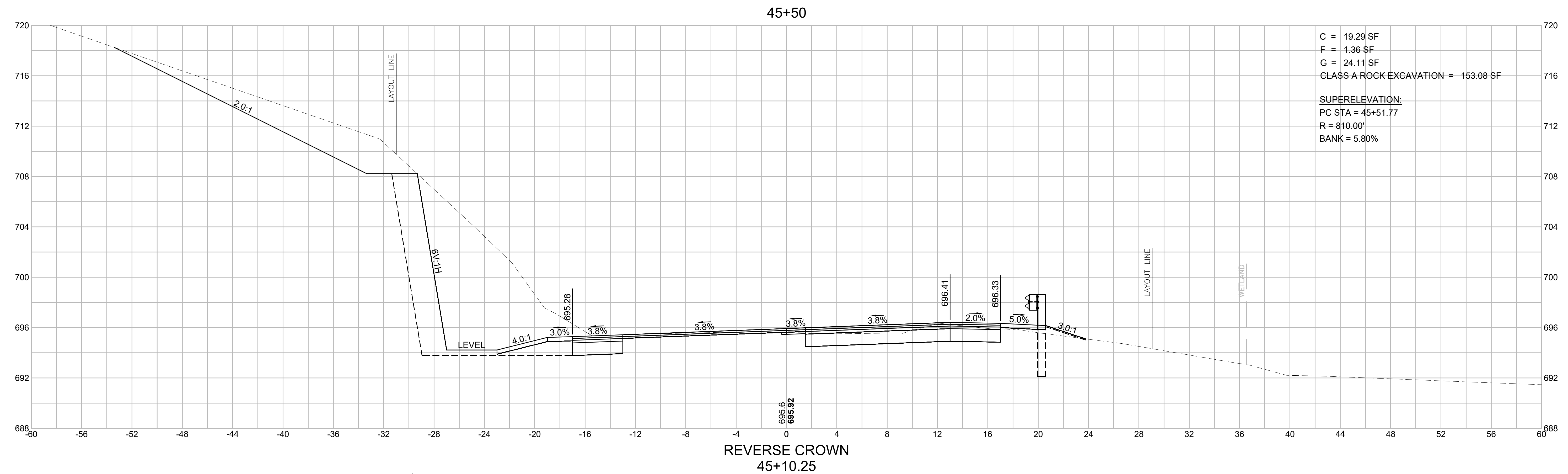
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	104	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 42**

C = 19.29 SF
 F = 1.36 SF
 G = 24.11 SF
 CLASS A ROCK EXCAVATION = - 153.08 SF

SUPERELEVATION:
 PC STA = 45+51.77
 R = 810.00'
 BANK = 5.80%

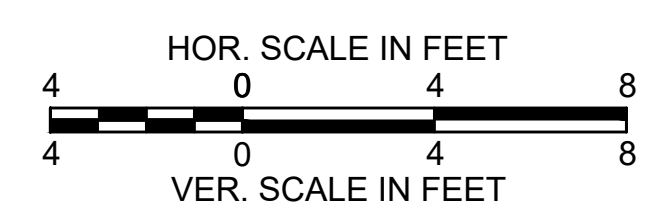
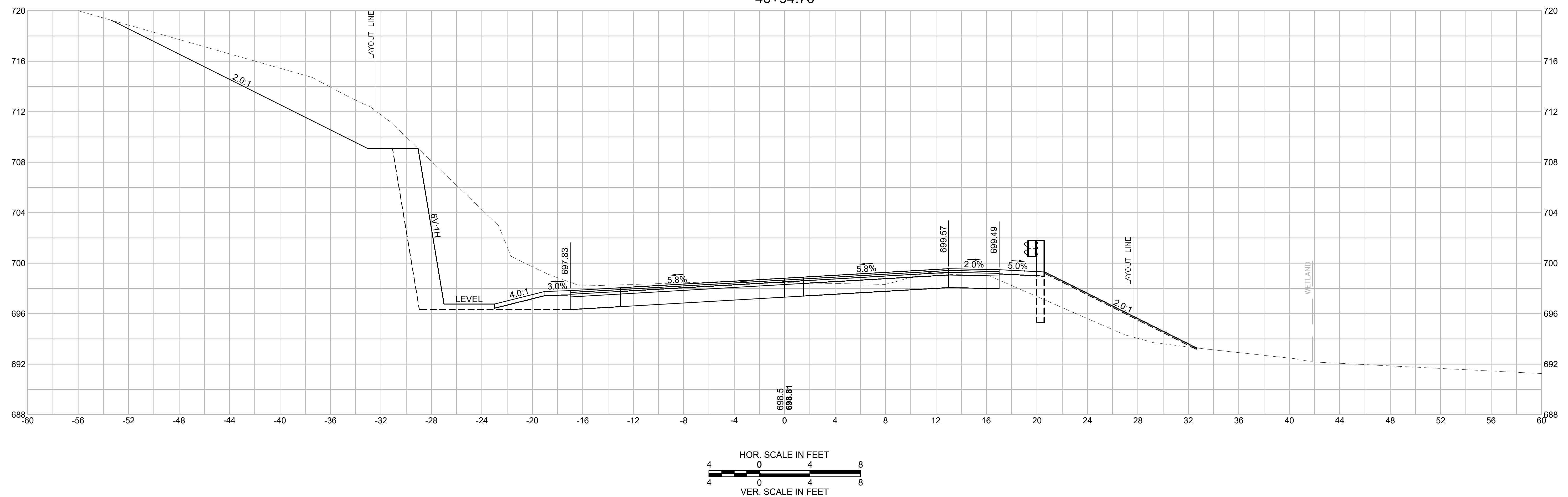
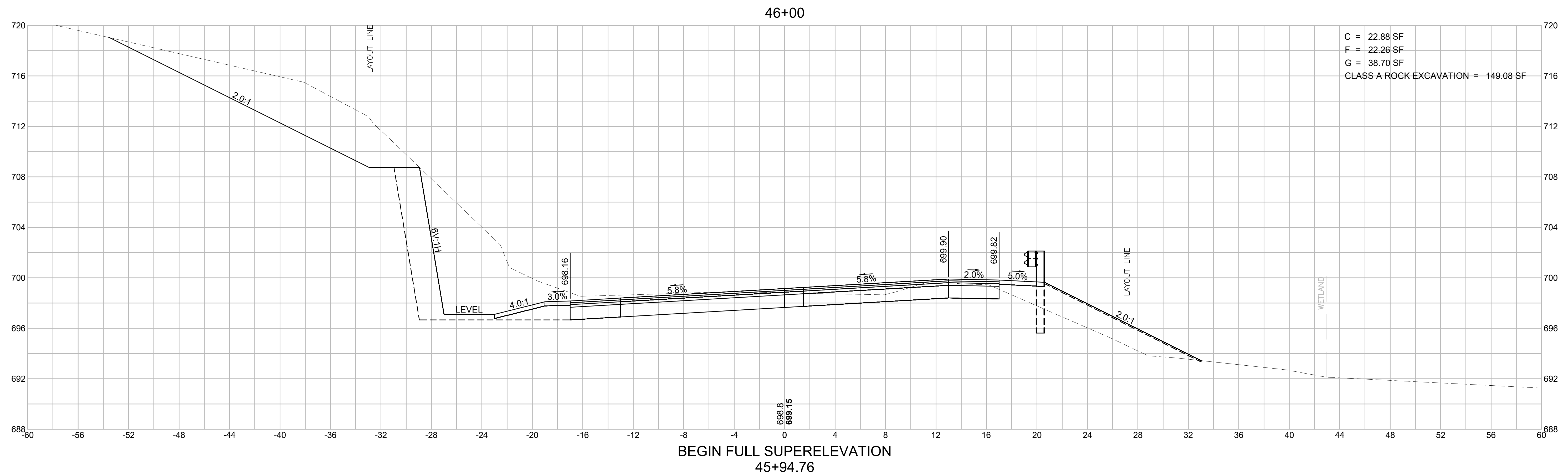


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	105	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 43**

C = 22.88 SF
 F = 22.26 SF
 G = 38.70 SF
 CLASS A ROCK EXCAVATION = -149.08 SF

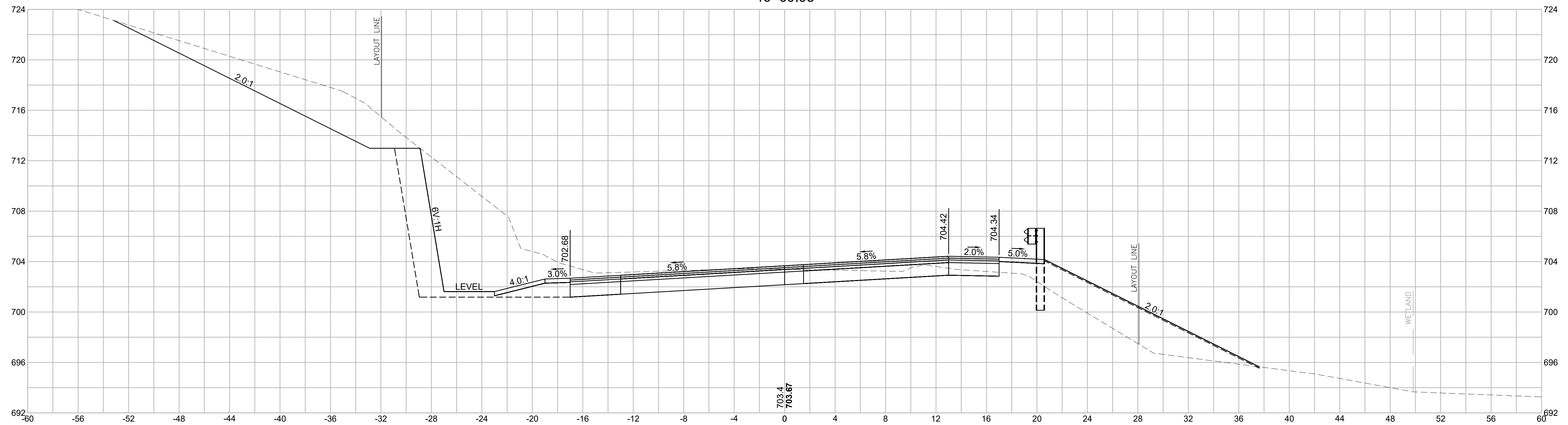


WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

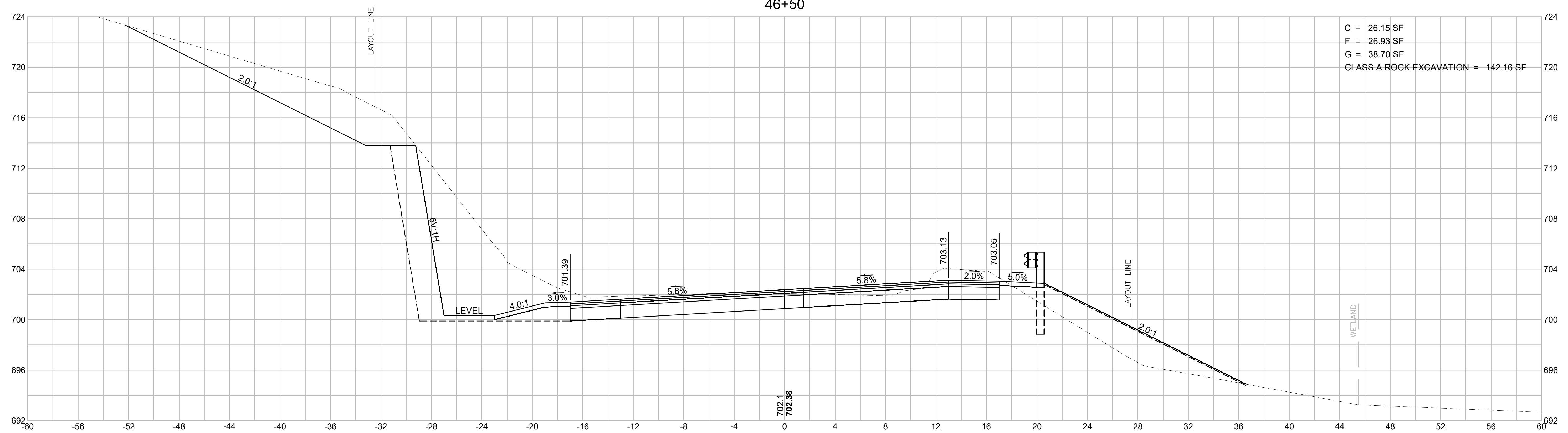
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	106	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 44

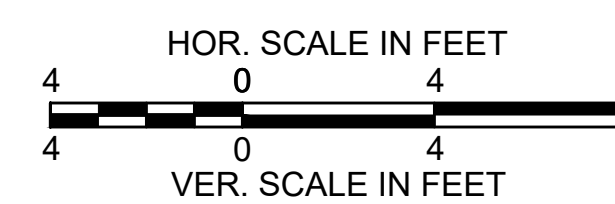
END FULL SUPERELEVATION
46+69.98



46+50



C = 26.15 SF
F = 26.93 SF
G = 38.70 SF
CLASS A ROCK EXCAVATION = 142.16 SF

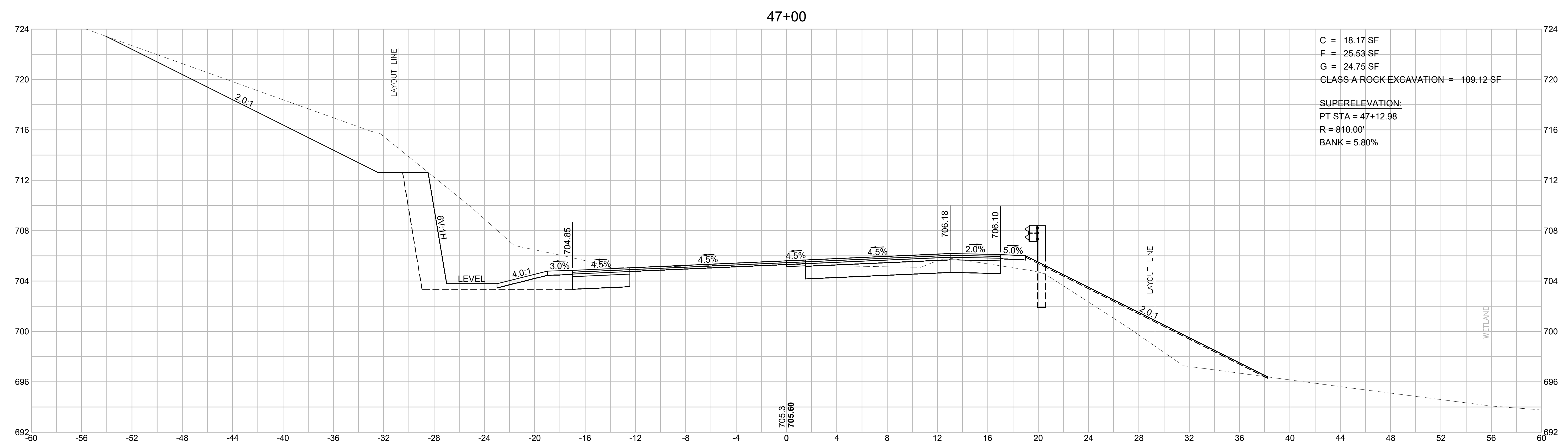
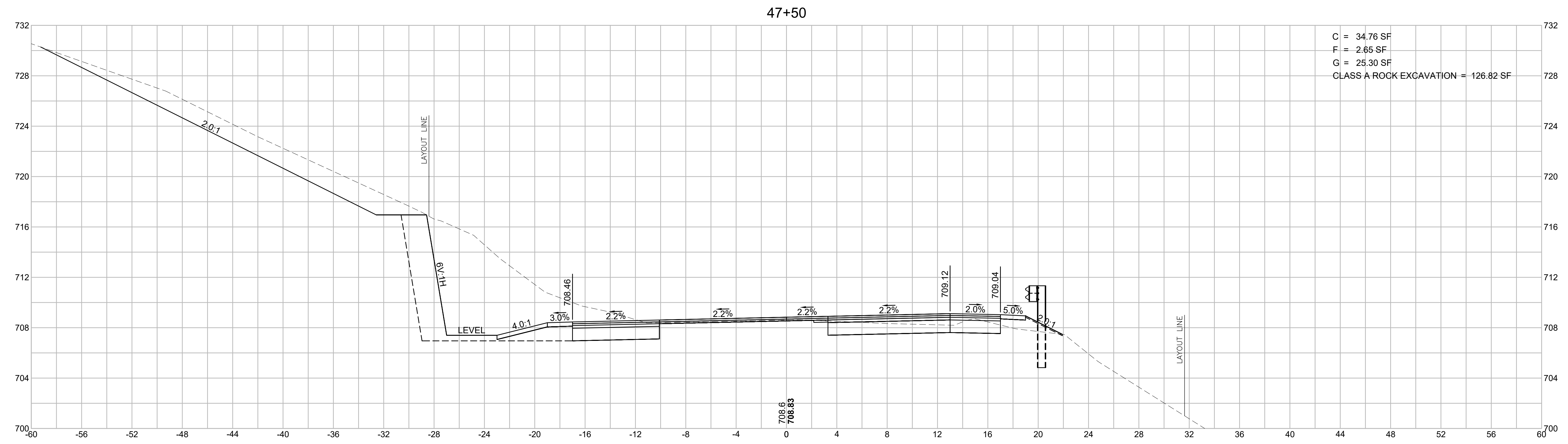


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	107	132
PROJECT FILE NO.		606517	

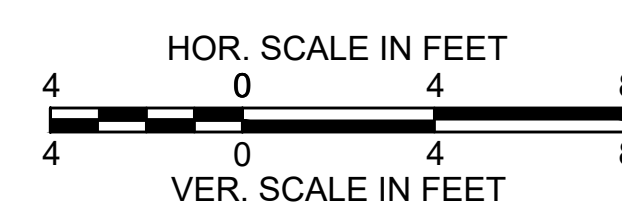
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 45**

C = 34.76 SF
 F = 2.65 SF
 G = 25.30 SF
 CLASS A ROCK EXCAVATION = 126.82 SF



C = 18.17 SF
 F = 25.53 SF
 G = 24.75 SF
 CLASS A ROCK EXCAVATION = 109.12 SF

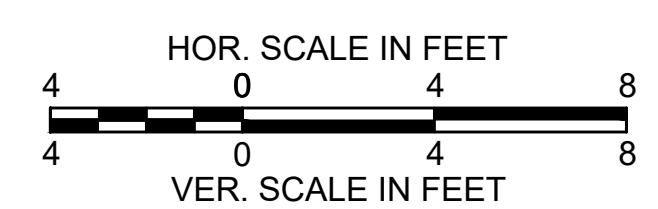
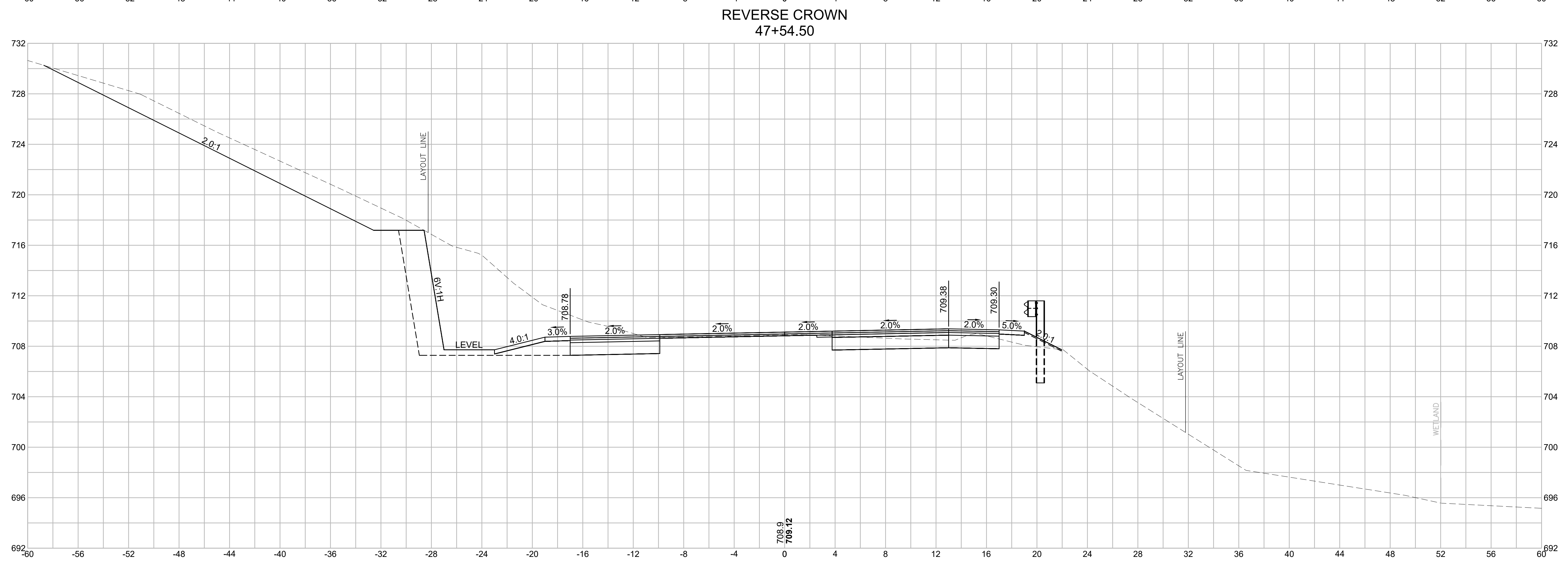
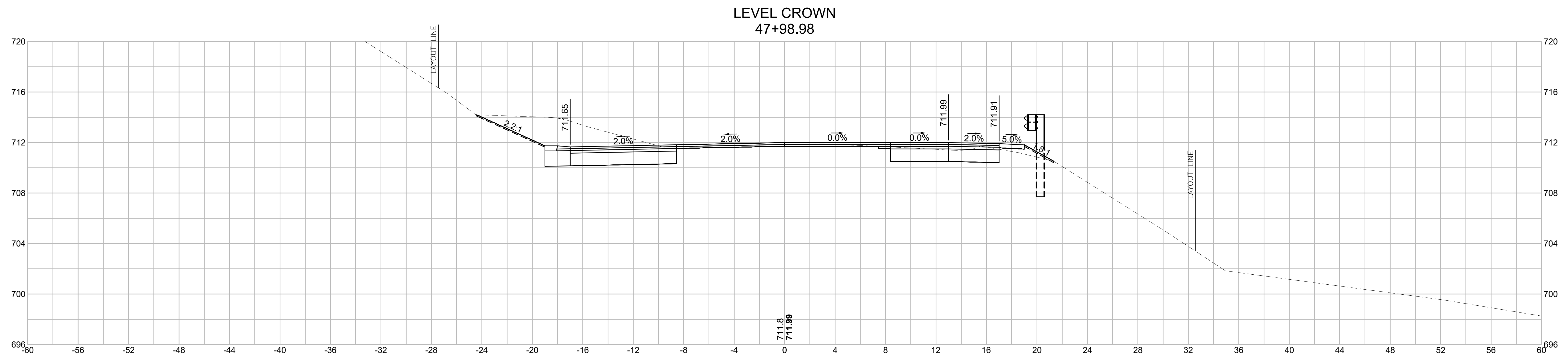
SUPERELEVATION:
 PT STA = 47+12.98
 R = 810.00'
 BANK = 5.80%



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	108	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 46**

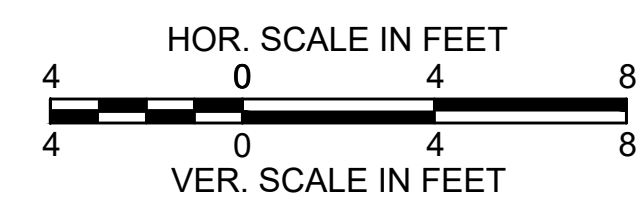
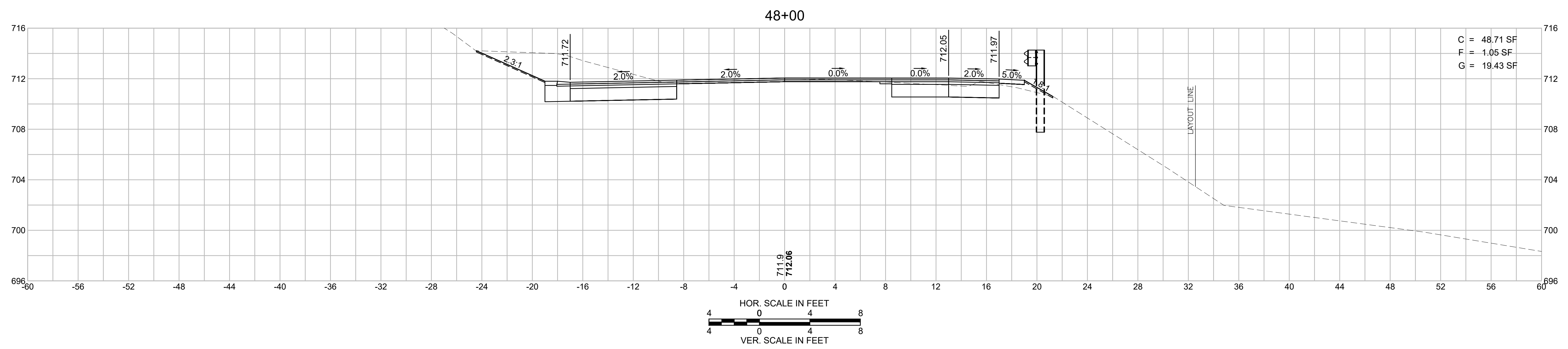
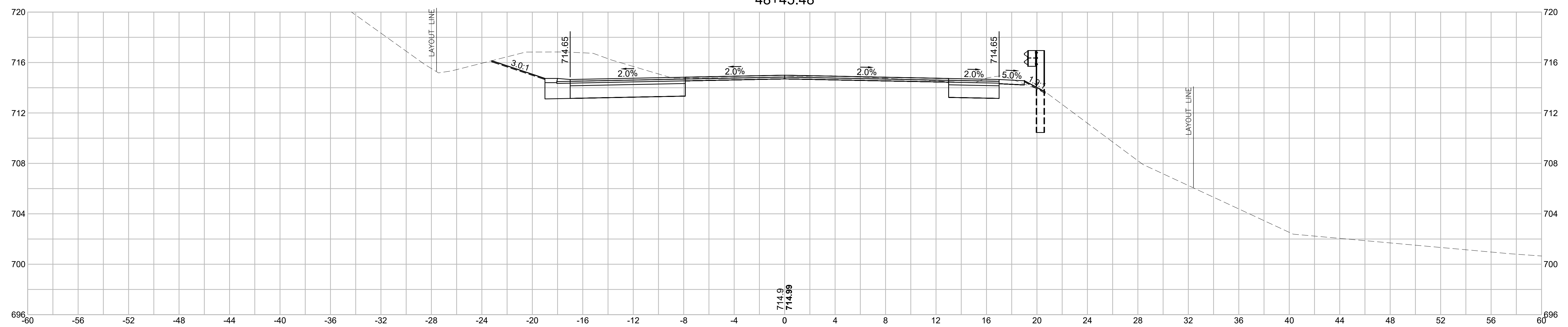
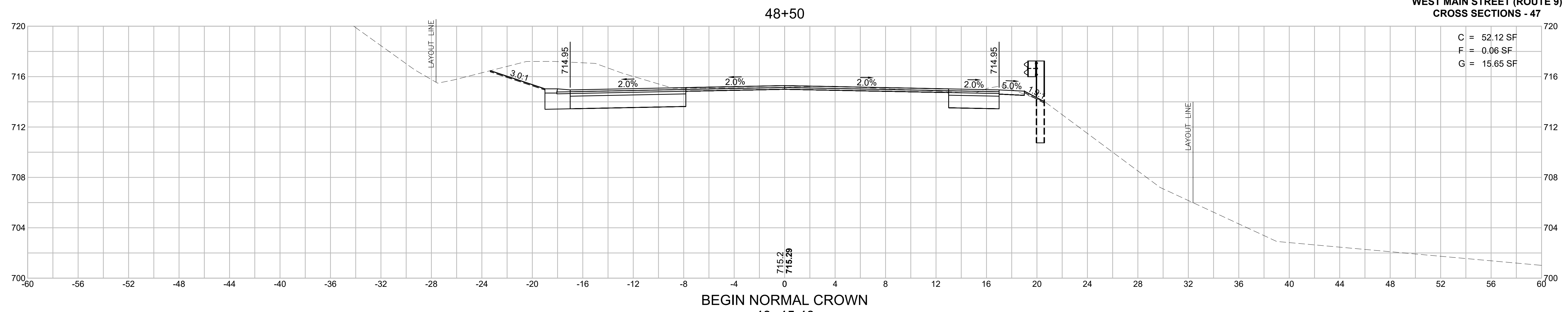


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	109	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 47**

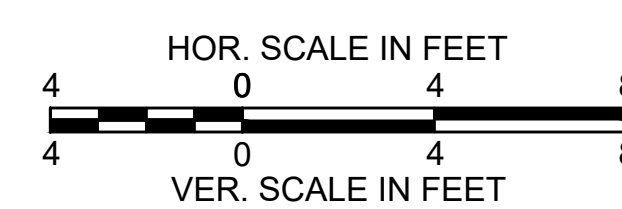
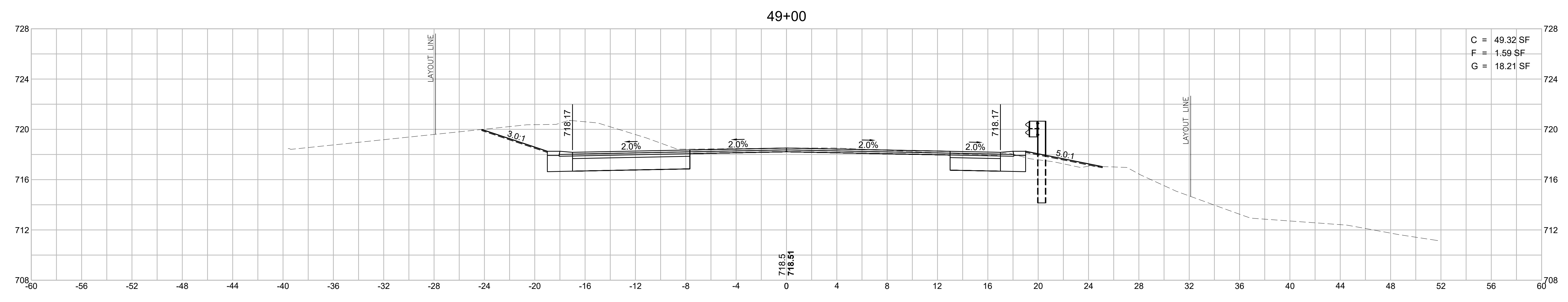
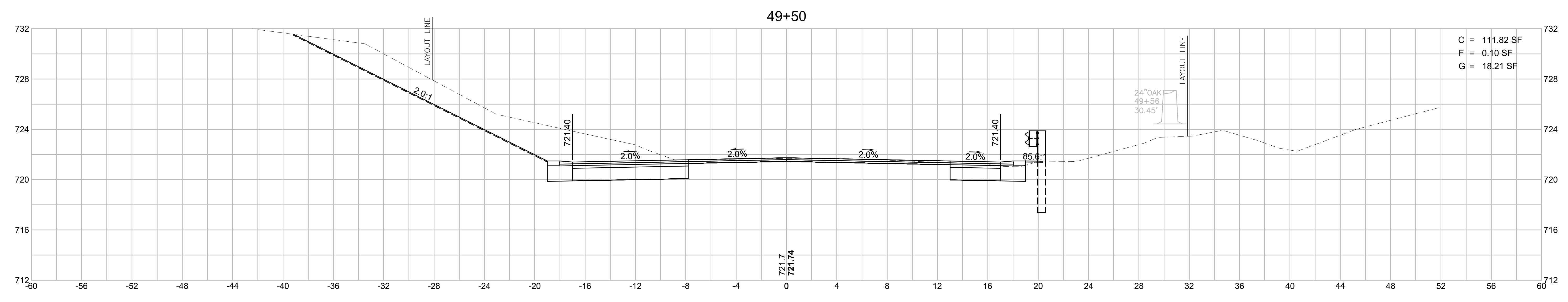
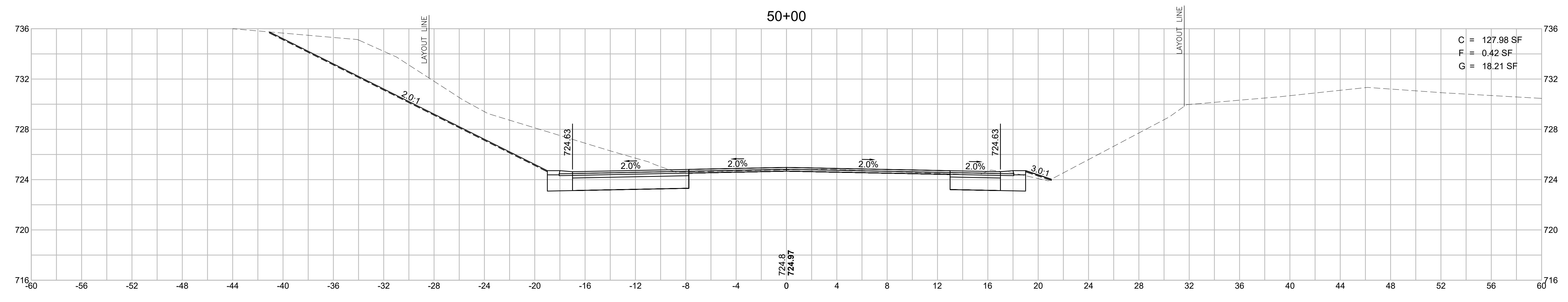
C = 52.12 SF
F = 0.06 SF
G = 15.65 SF



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	110	132
PROJECT FILE NO.		606517	

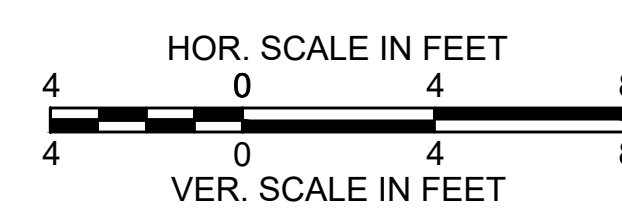
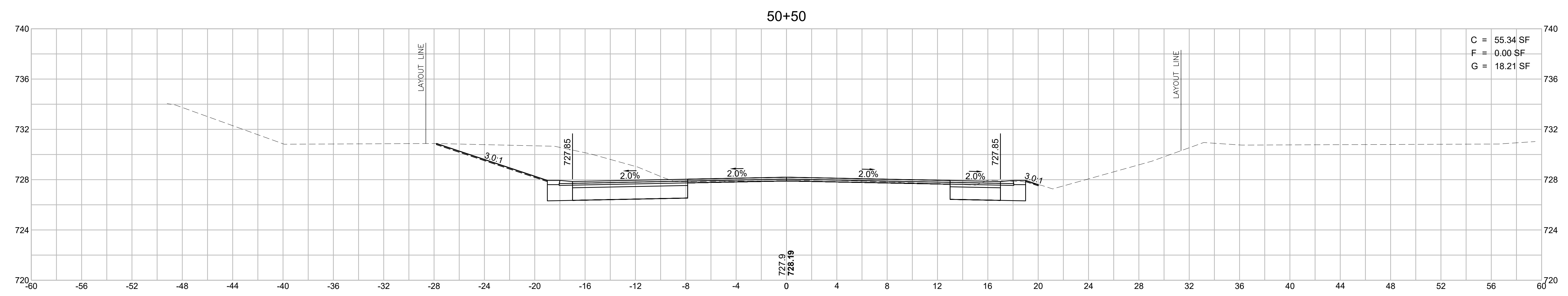
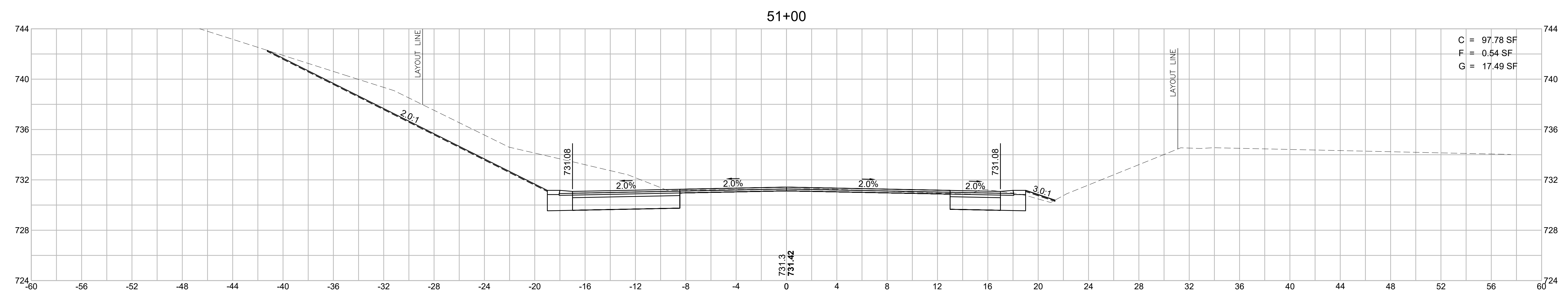
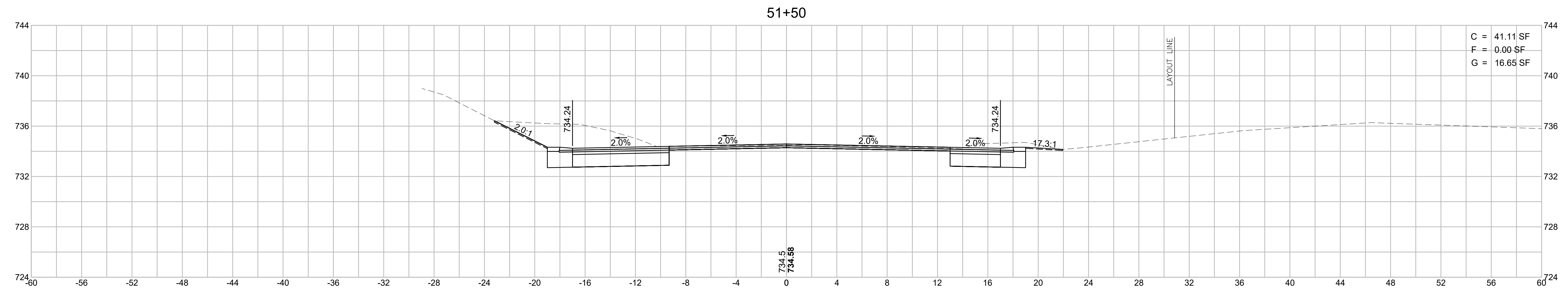
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 48**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	111	132
PROJECT FILE NO.		606517	

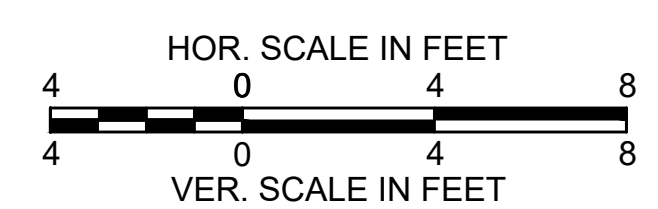
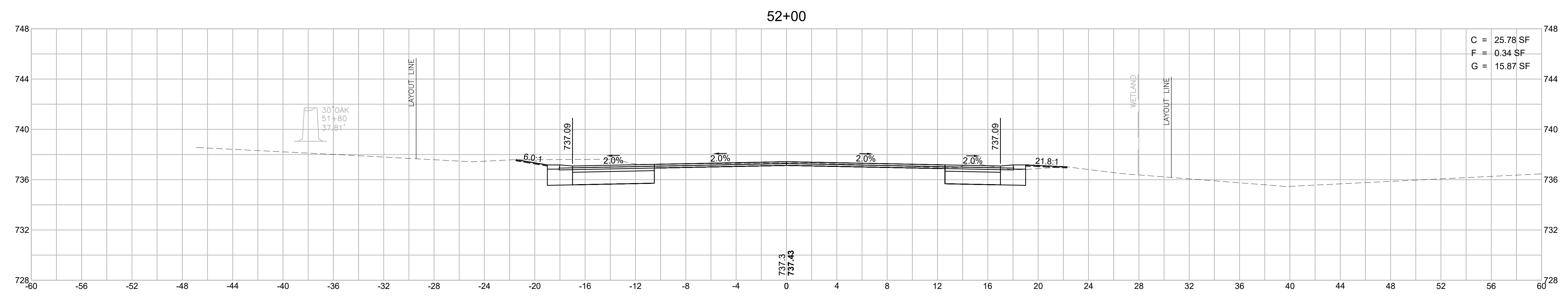
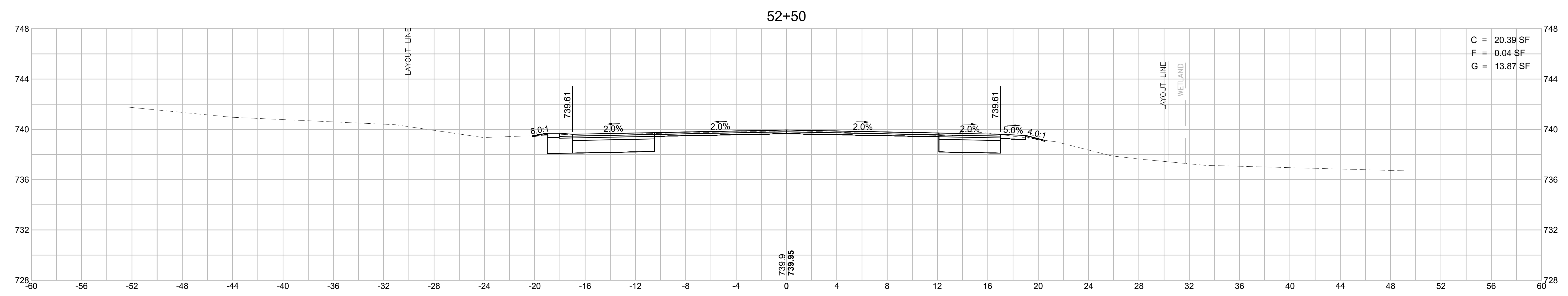
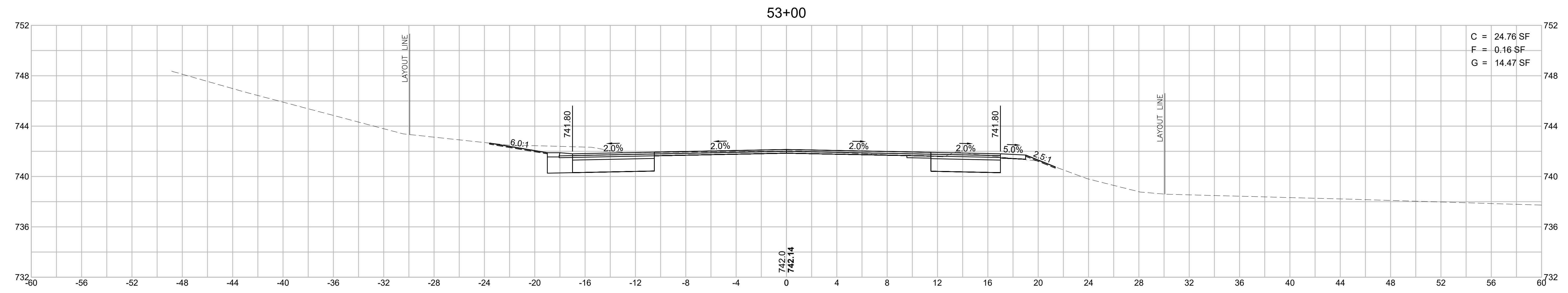
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 49**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	112	132
PROJECT FILE NO.		606517	

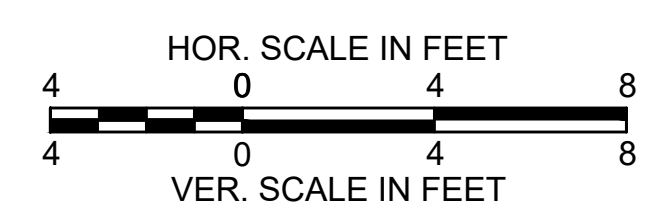
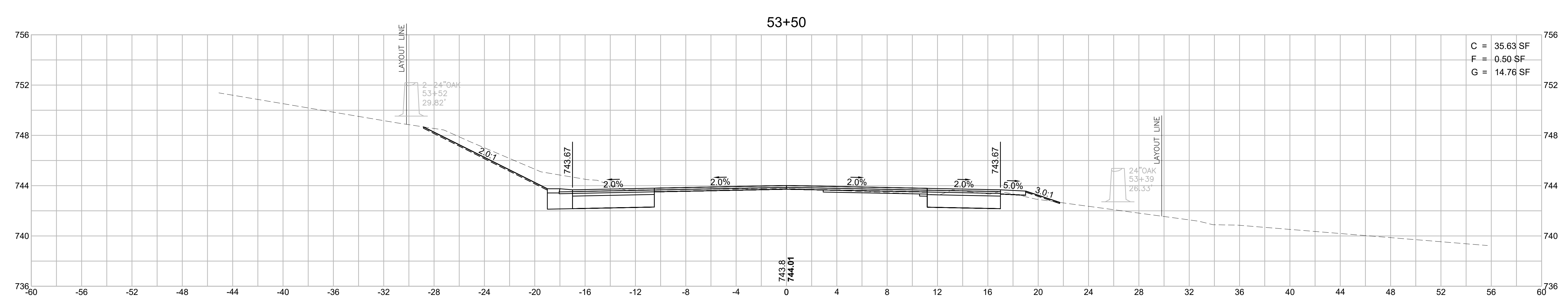
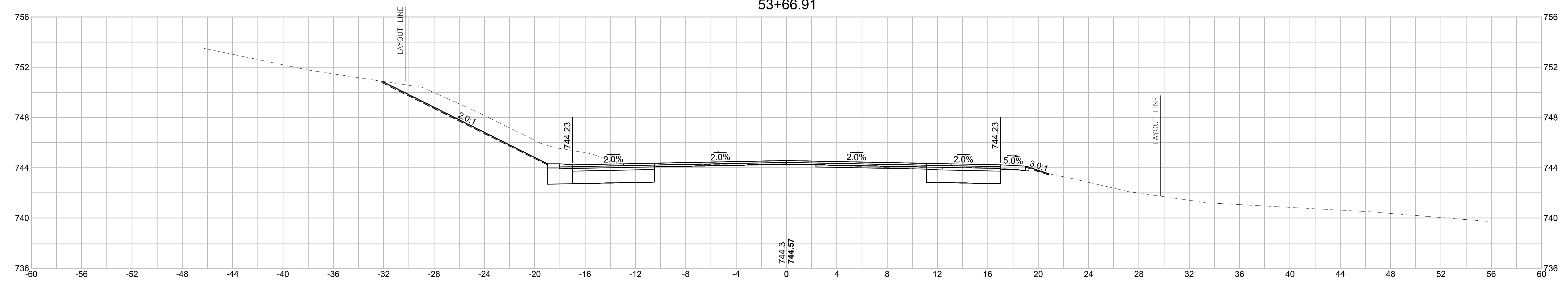
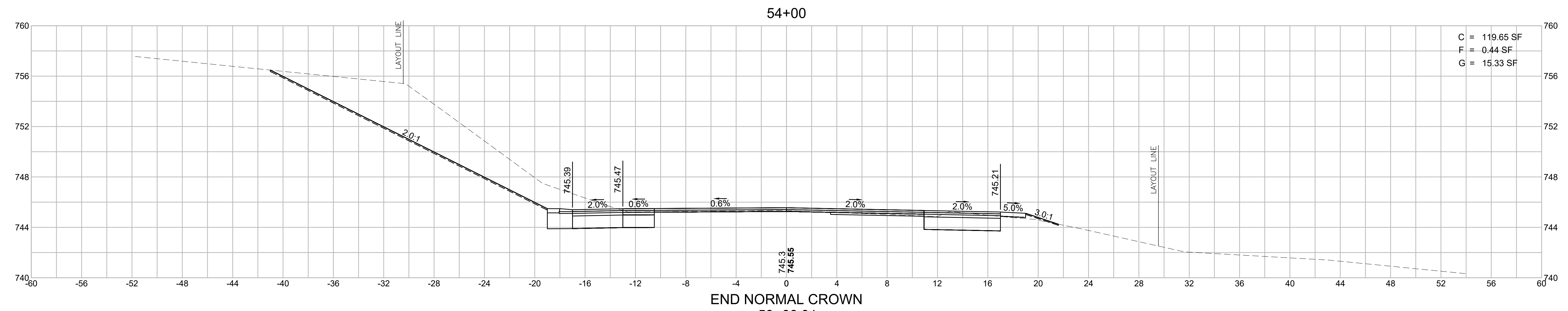
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 50**



WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	113	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 51

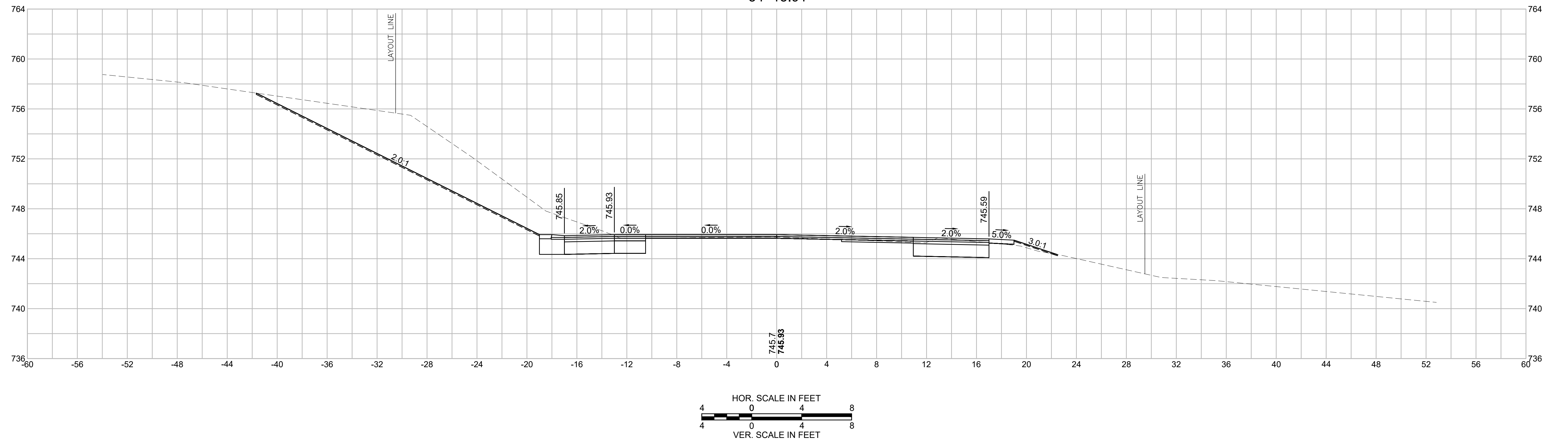
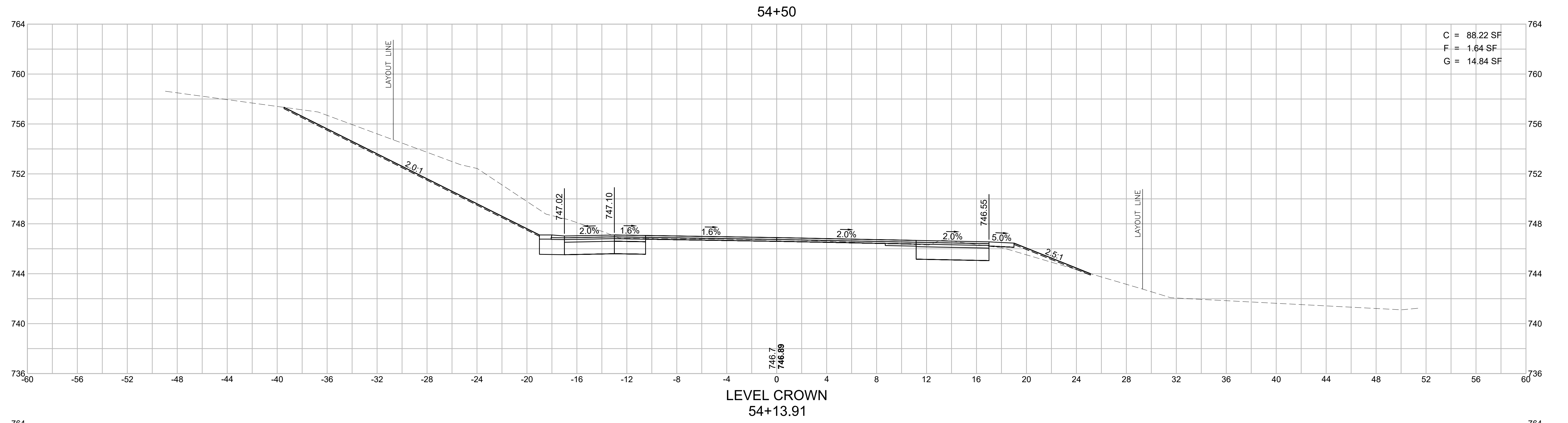


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	114	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 52**

C = 88.22 SF
F = 1.64 SF
G = 14.84 SF

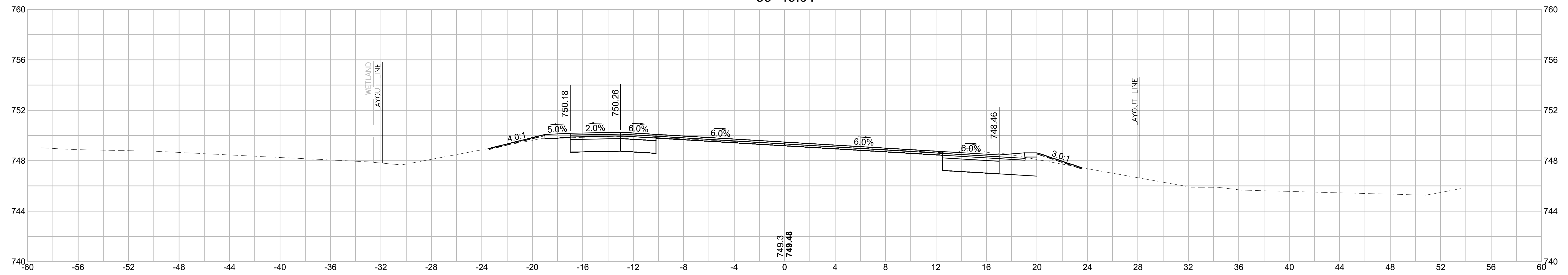


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

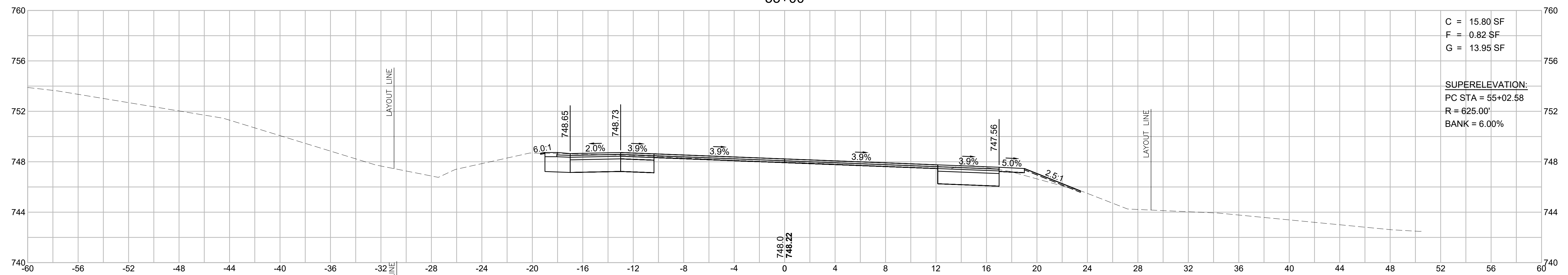
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	115	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 53**

**BEGIN FULL SUPERELEVATION
55+46.91**



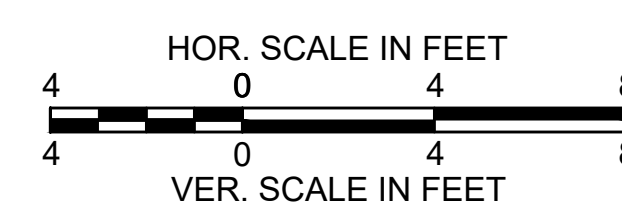
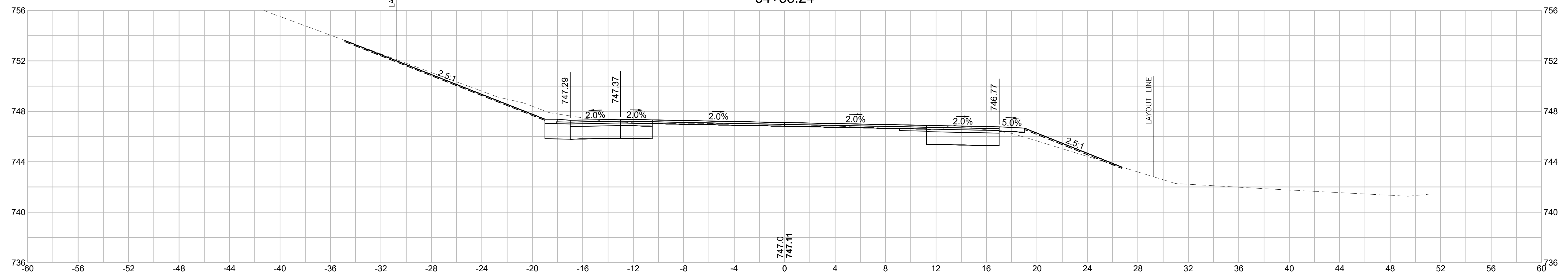
55+00



C = 15.80 SF
F = 0.82 SF
G = 13.95 SF

SUPERELEVATION:
PC STA = 55+02.58
R = 625.00'
BANK = 6.00%

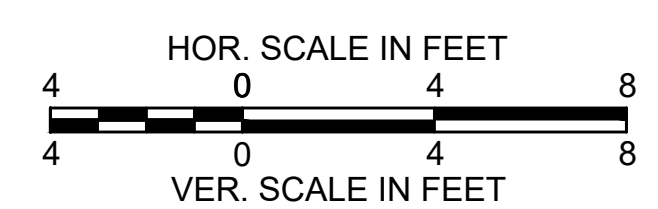
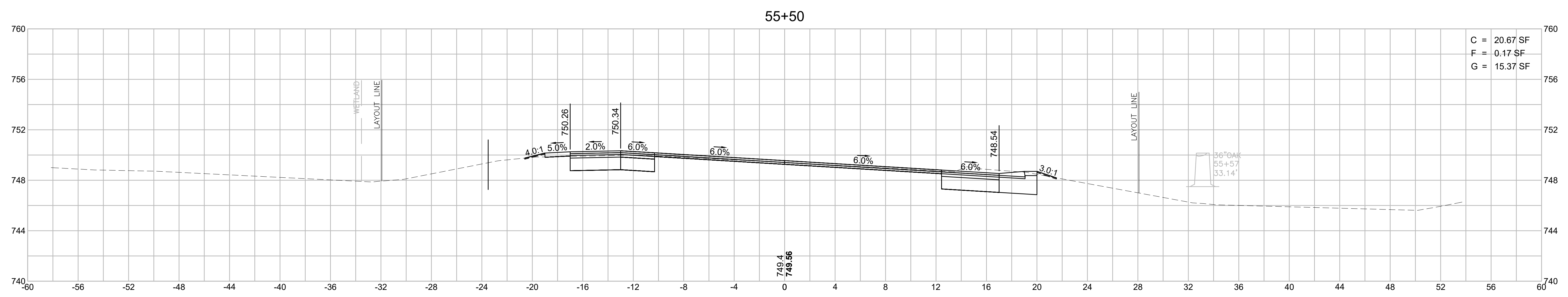
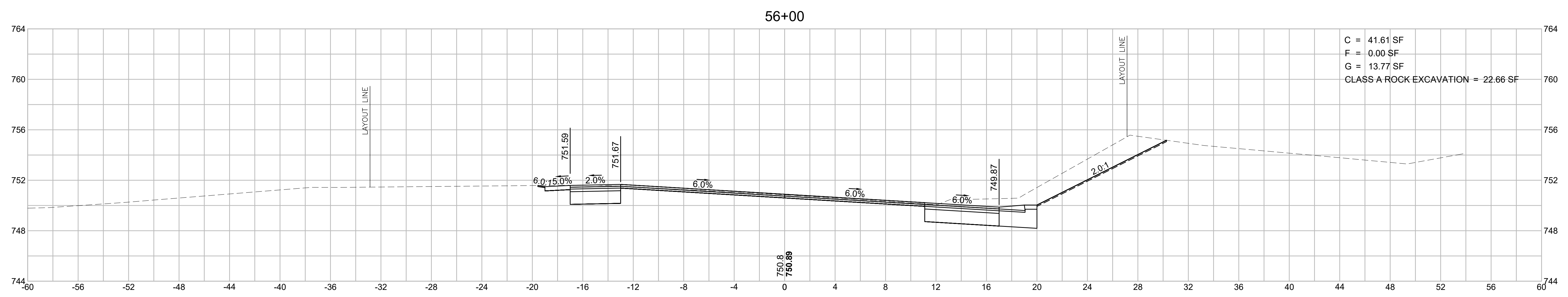
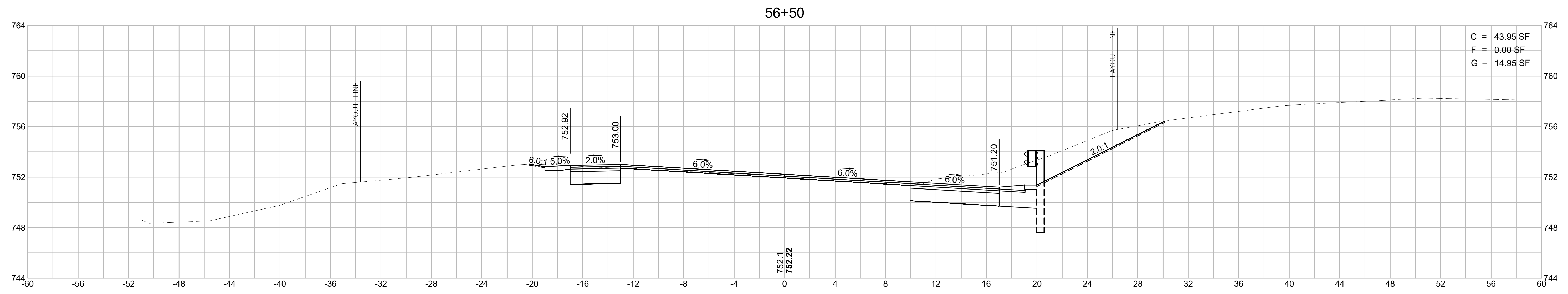
**REVERSE CROWN
54+58.24**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	116	132
PROJECT FILE NO.		606517	

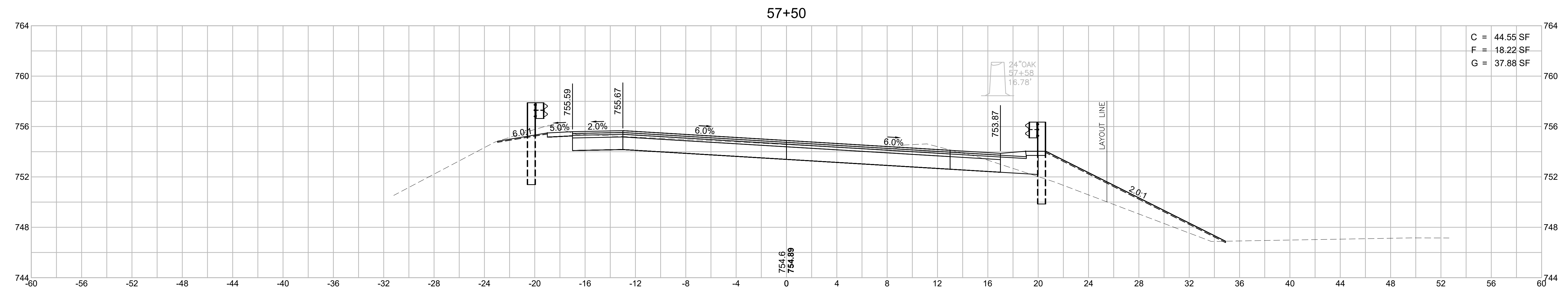
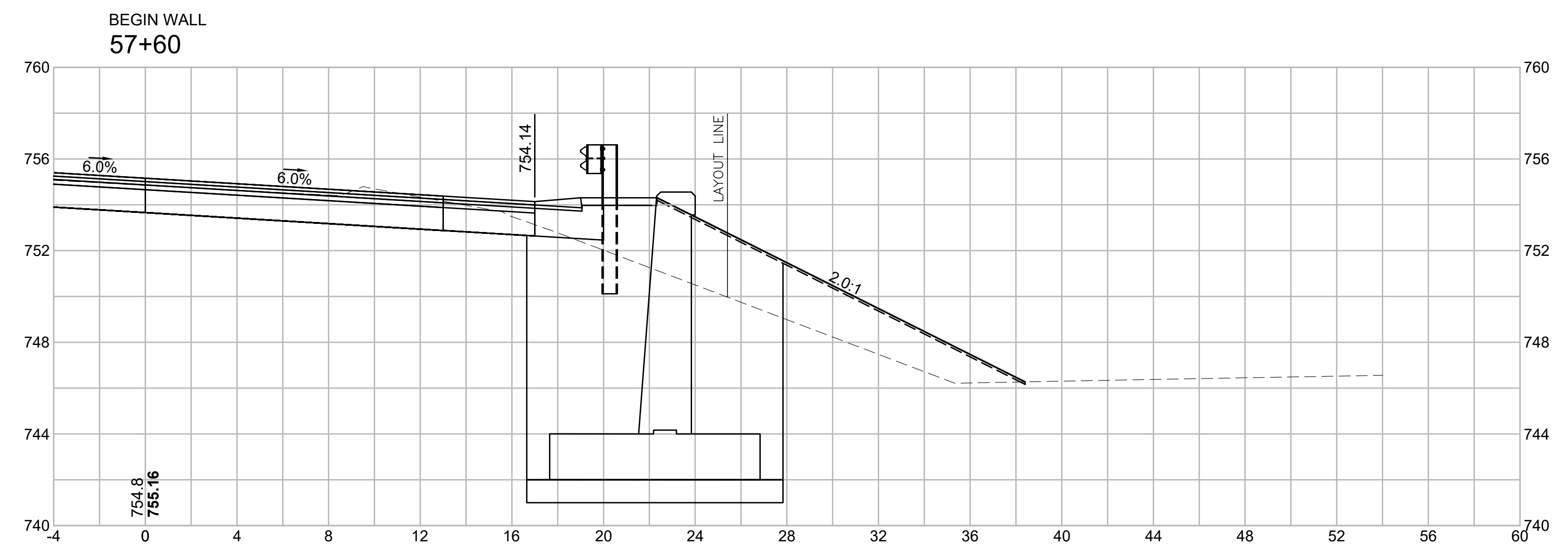
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 54**



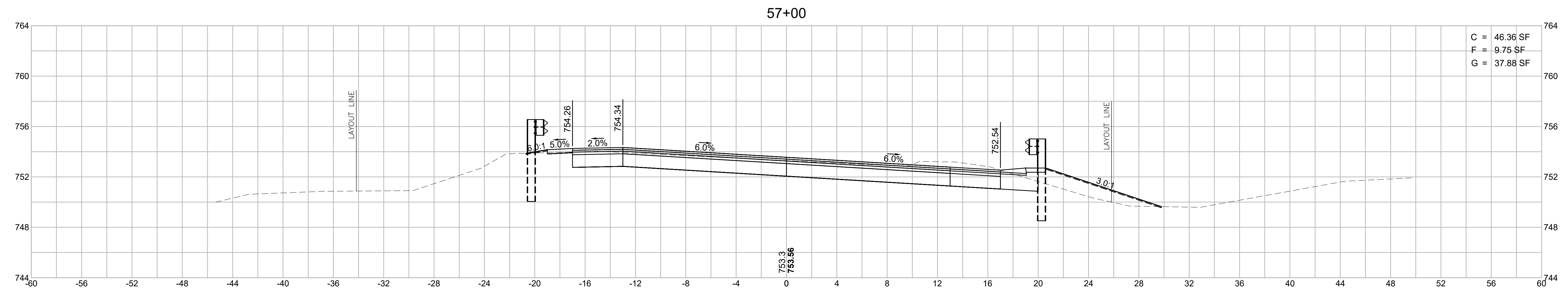
**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	117	132
PROJECT FILE NO. 606517		606517	

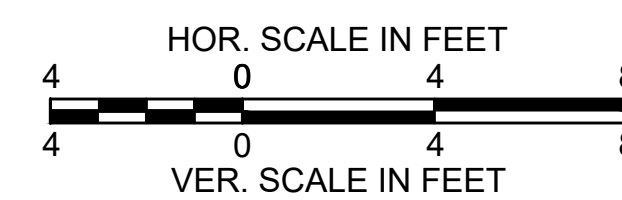
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 55**



C = 44.55 SF
F = 18.22 SF
G = 37.88 SF



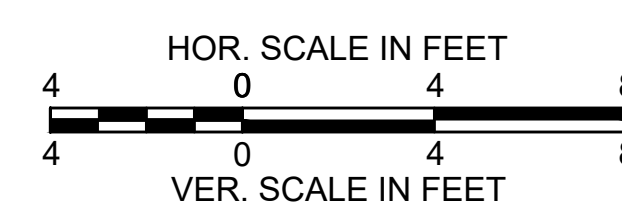
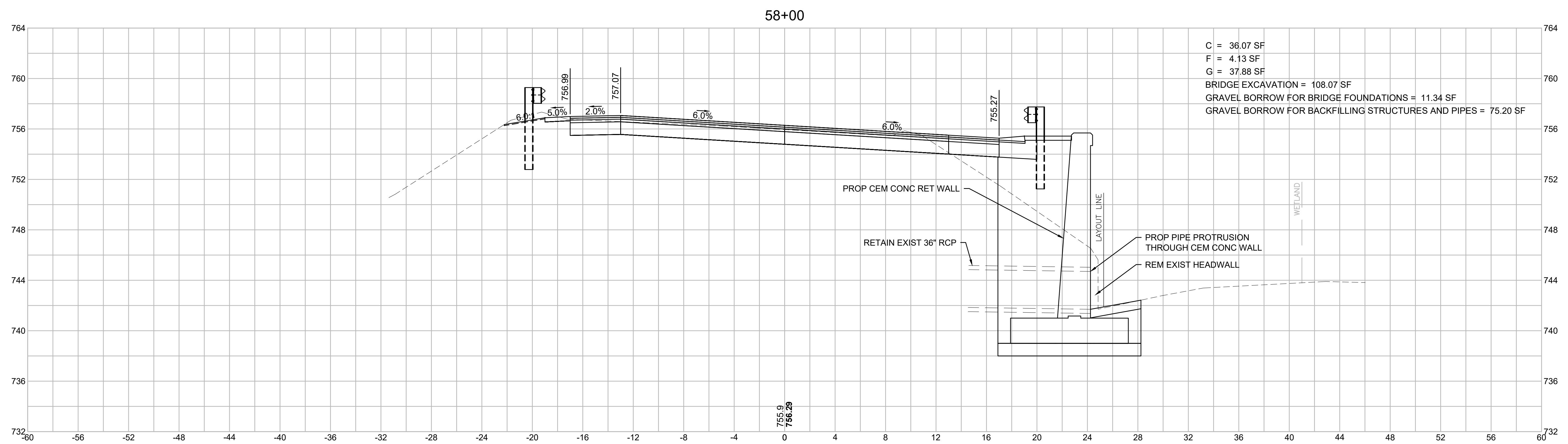
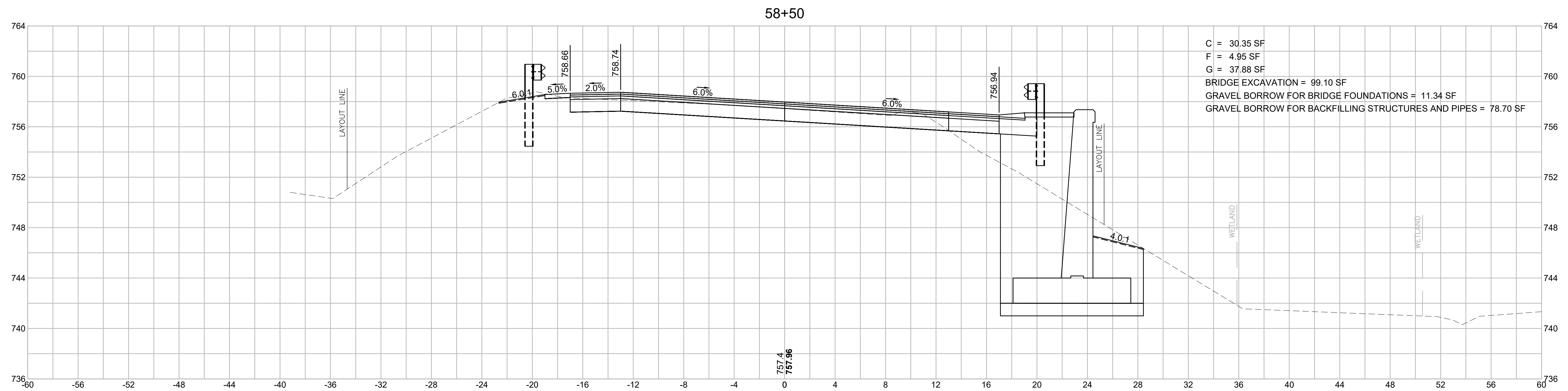
C = 46.36 SF
F = 9.75 SF
G = 37.88 SF



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	118	132
PROJECT FILE NO.		606517	

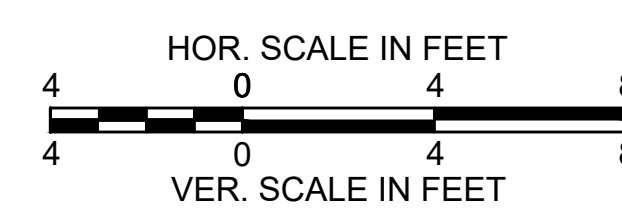
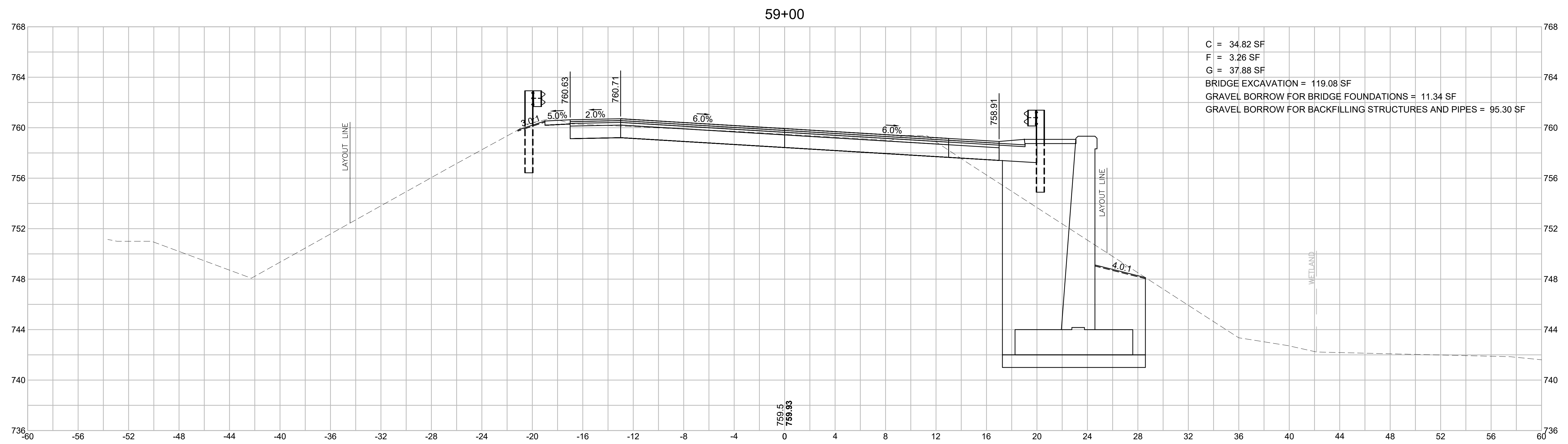
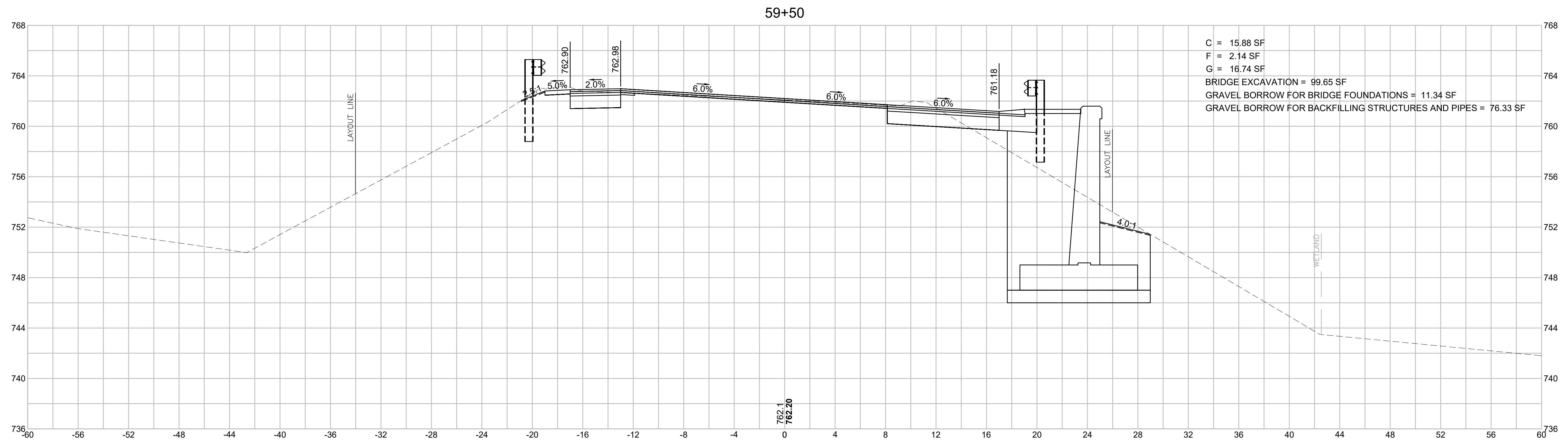
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 56**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	119	132
PROJECT FILE NO.		606517	

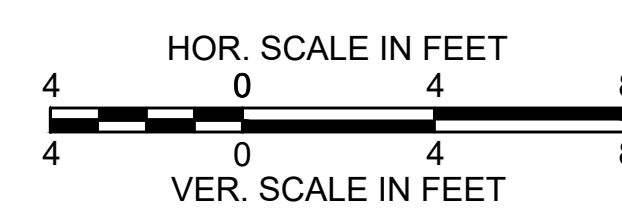
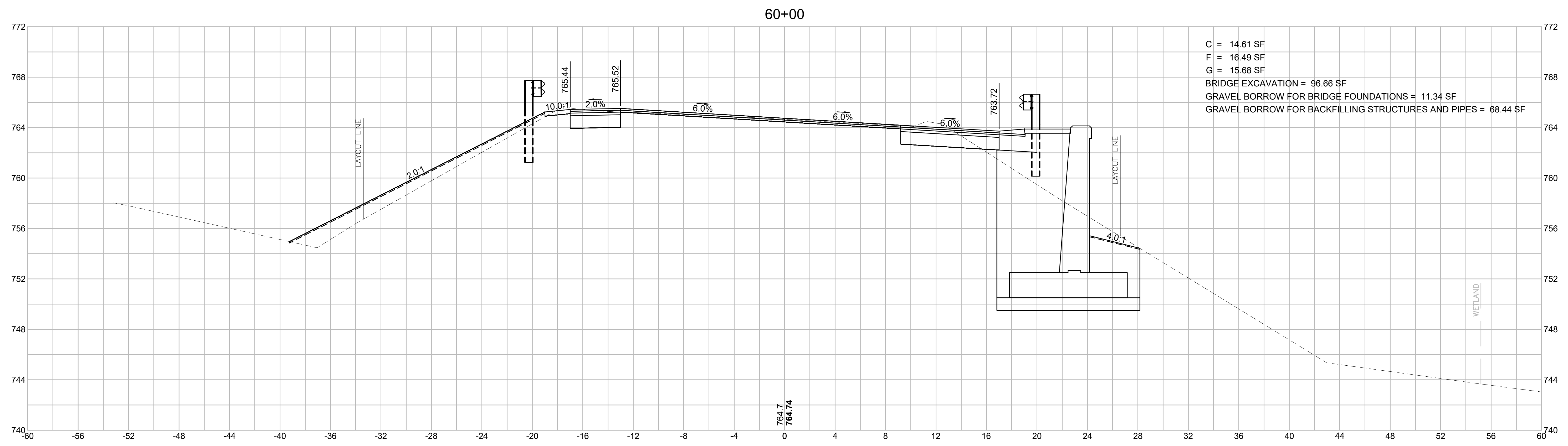
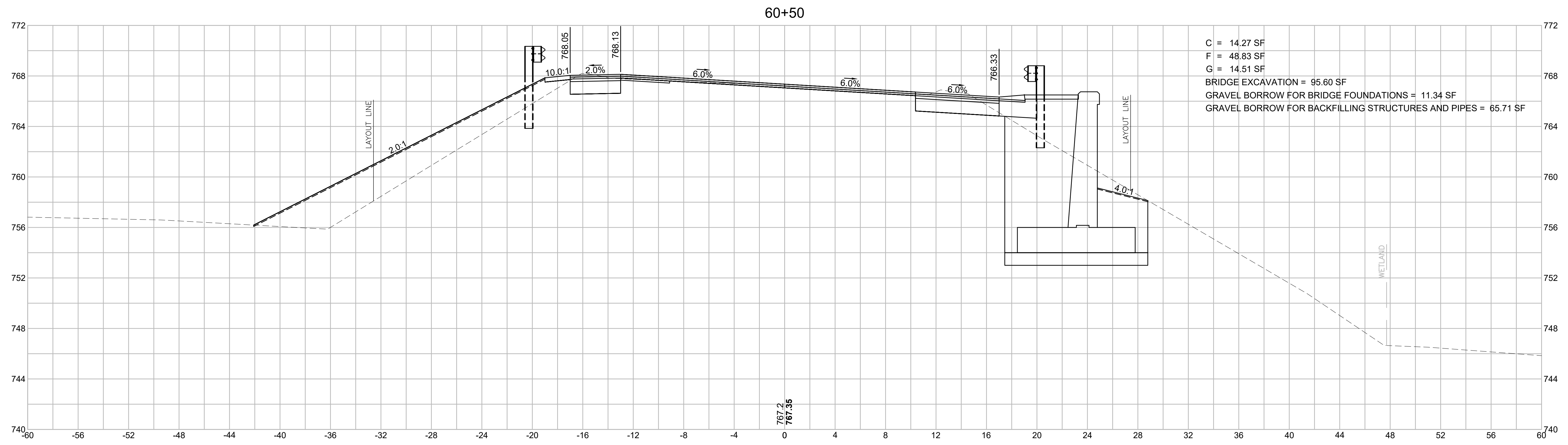
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 57**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	120	132
PROJECT FILE NO. 606517			

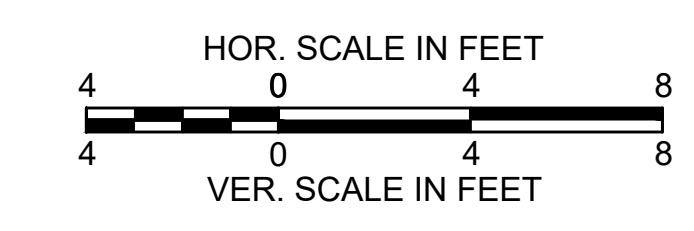
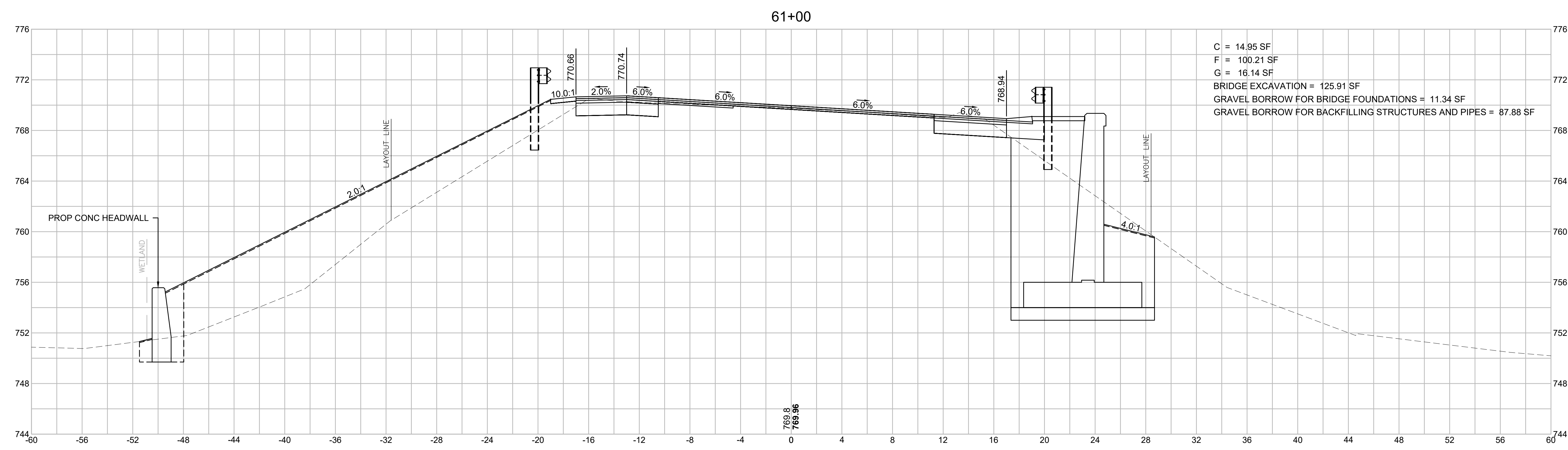
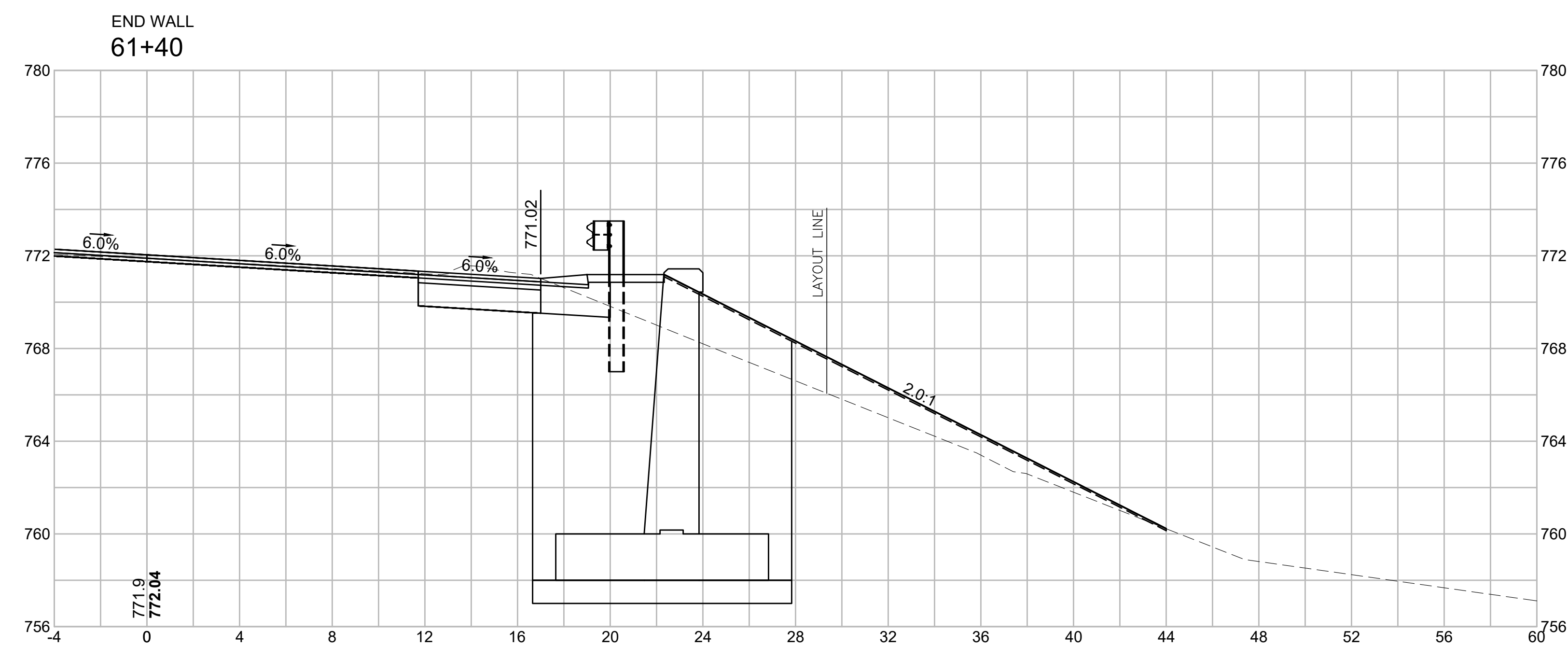
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 58**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	121	132
PROJECT FILE NO.		606517	

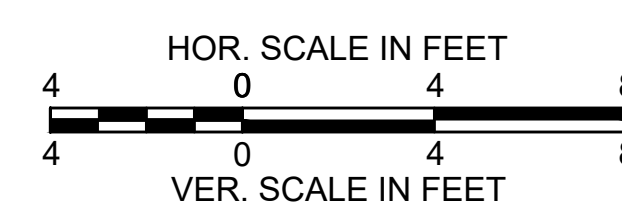
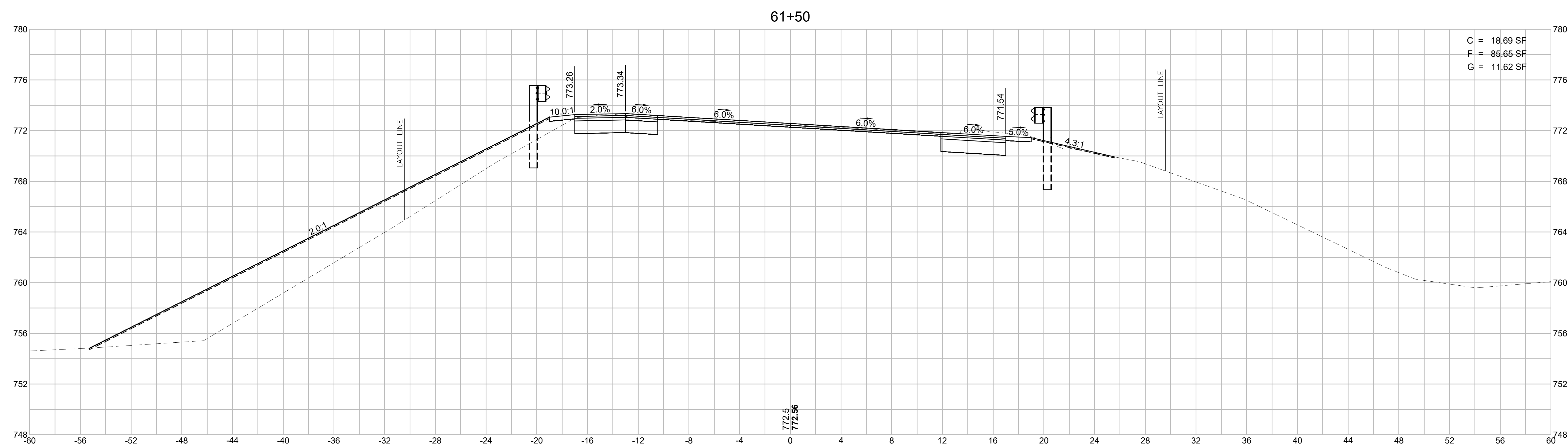
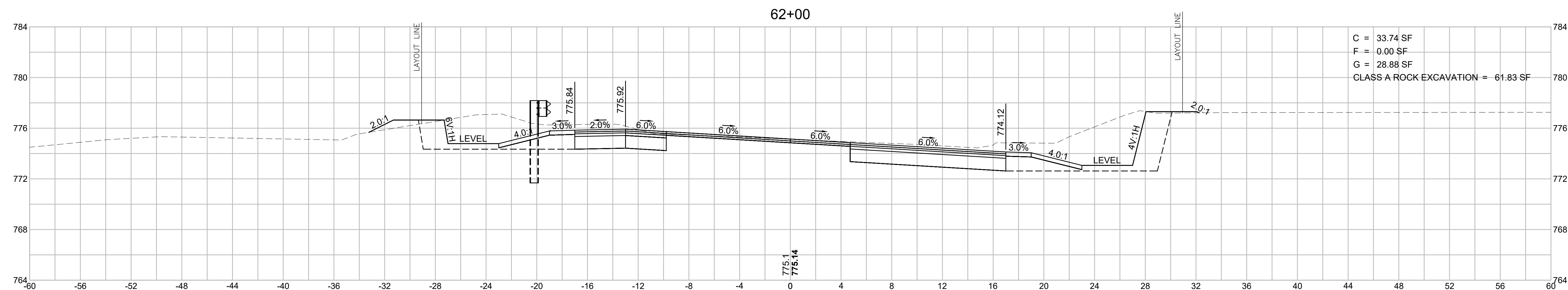
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 59**



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	122	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 60**



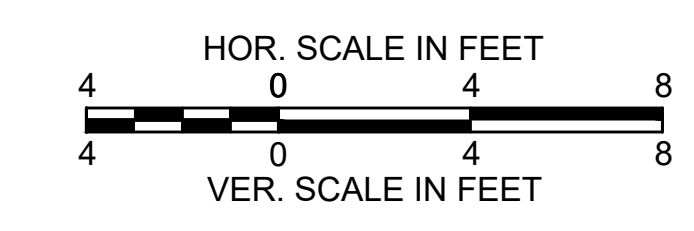
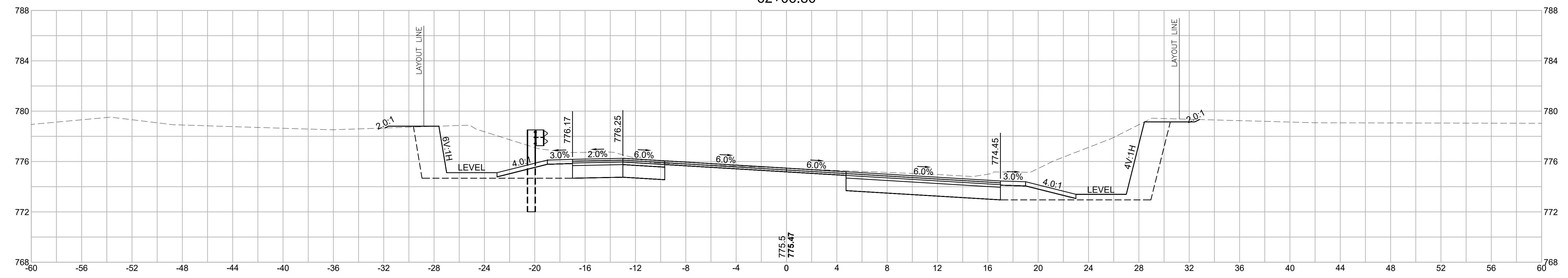
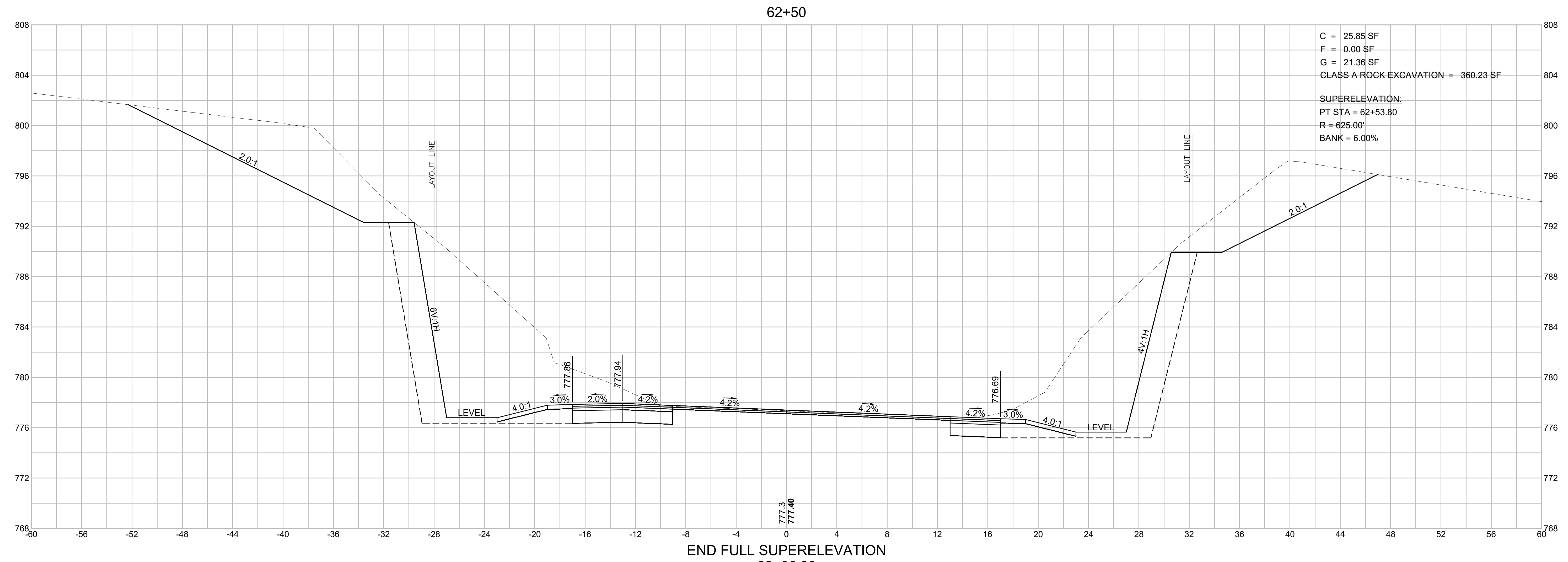
WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	123	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 61

C = 25.85 SF
F = 0.00 SF
G = 21.36 SF
CLASS A ROCK EXCAVATION = - 360.23 SF

SUPERELEVATION:
PT STA = 62+53.80
R = 625.00'
BANK = 6.00%

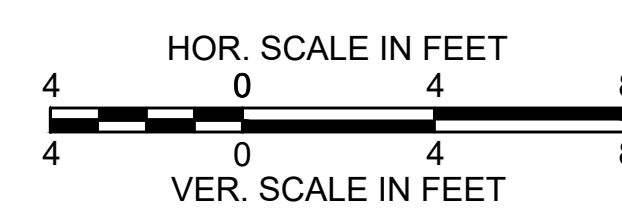
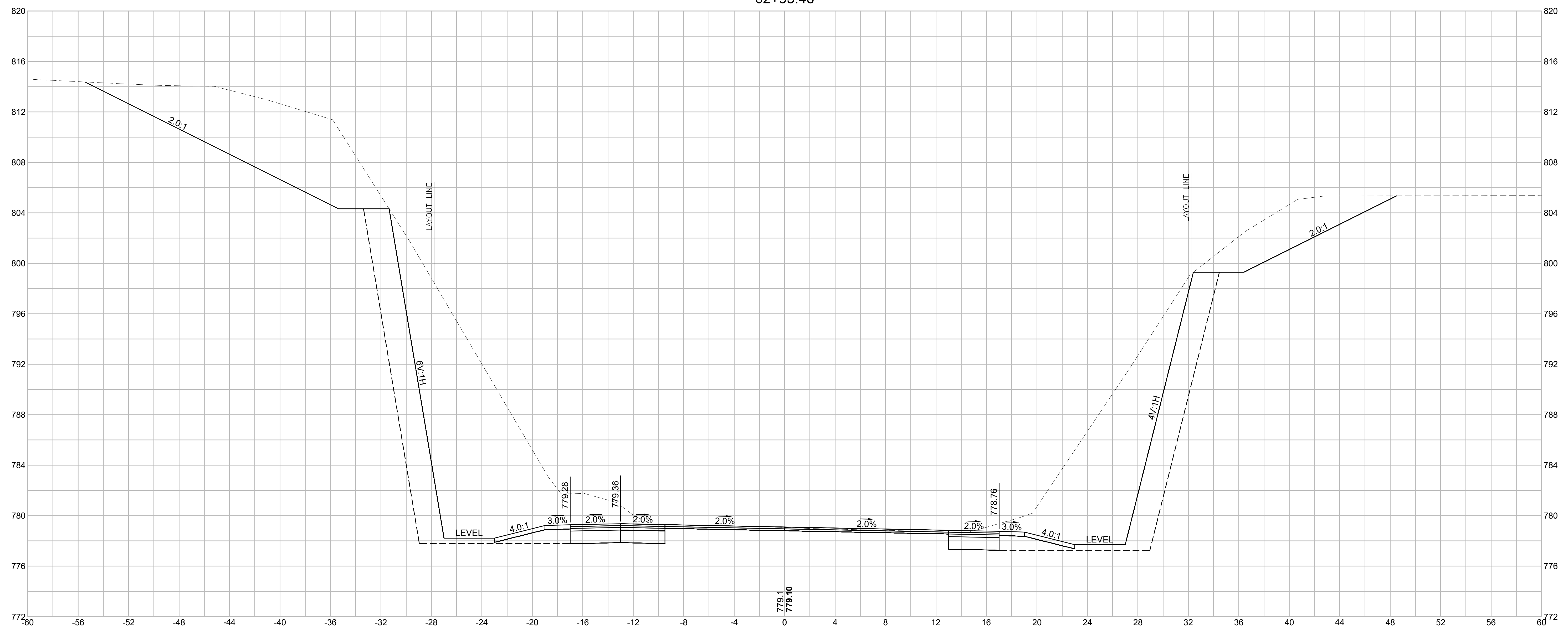


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	124	132
PROJECT FILE NO.		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 62**

**REVERSE CROWN
62+95.46**

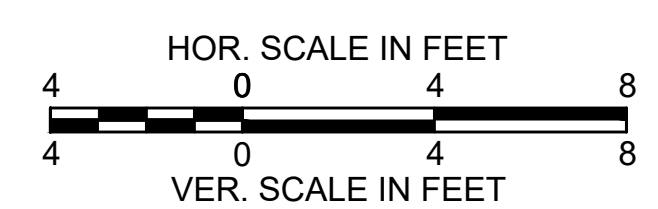
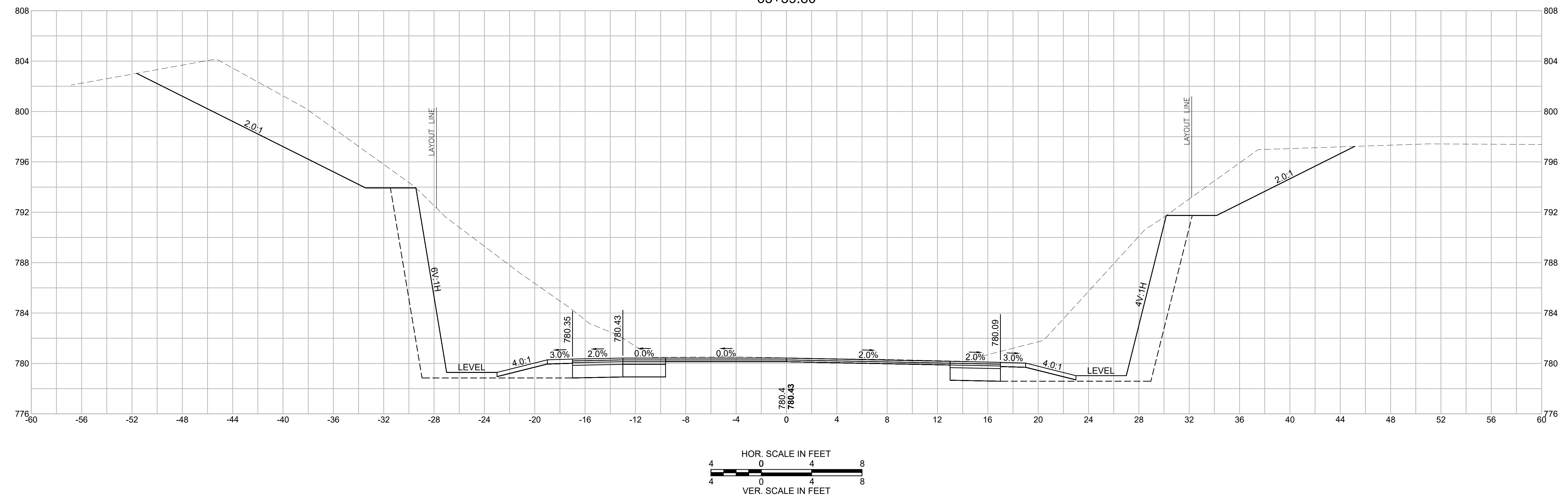
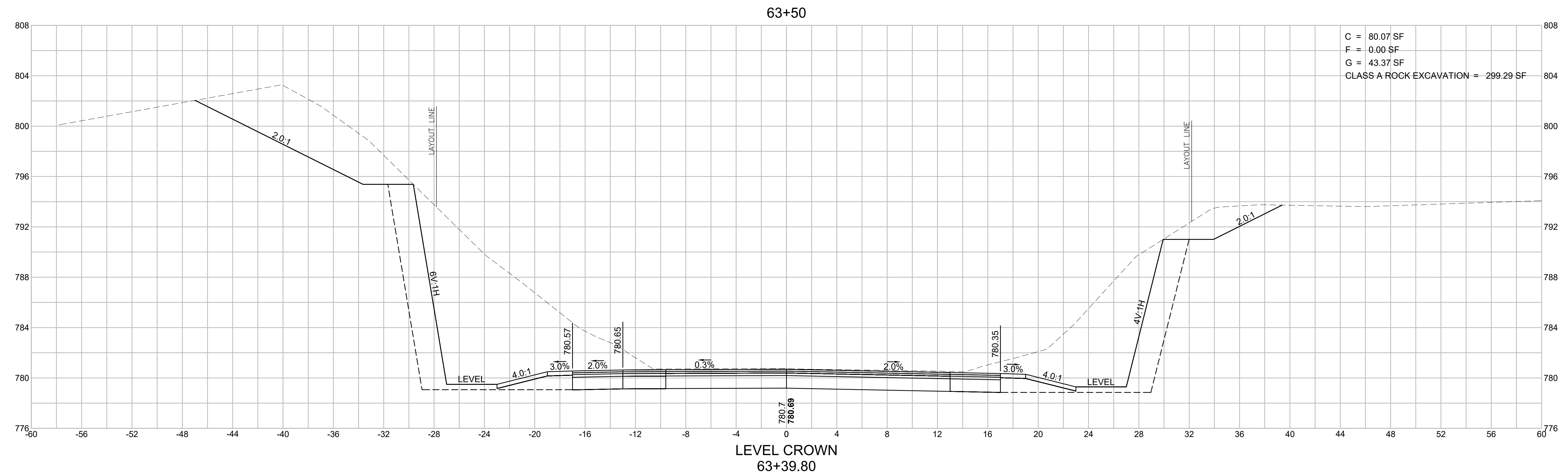


WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	126	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 64

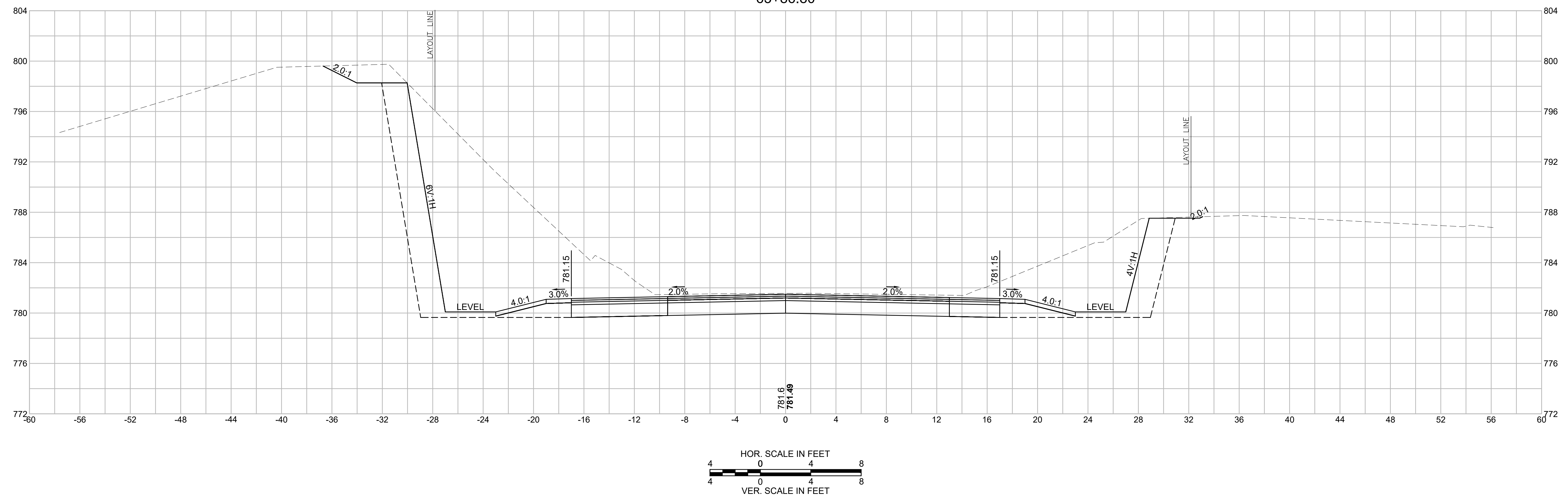
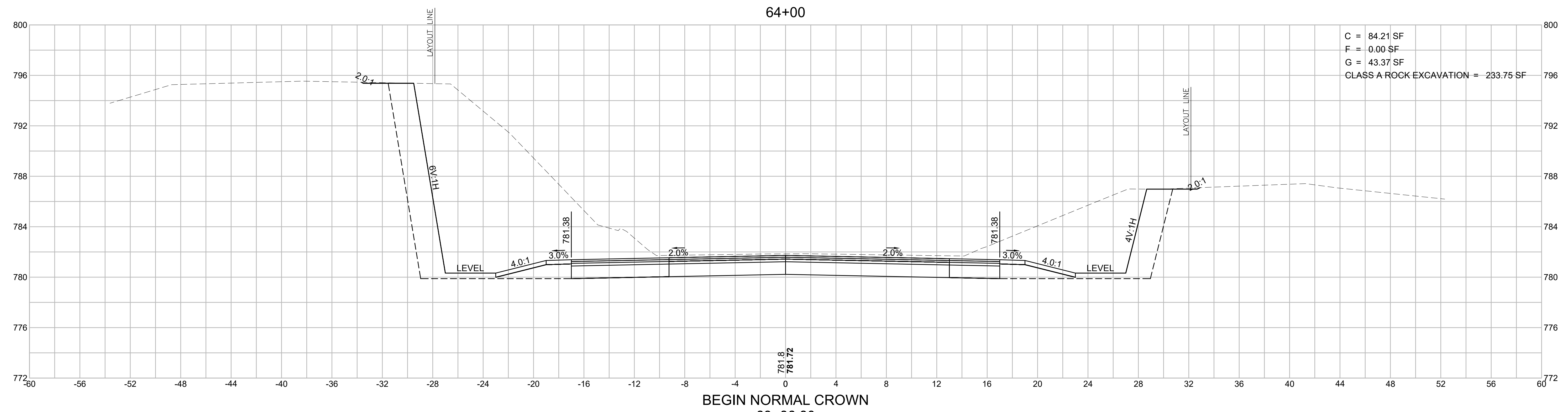
C = 80.07 SF
F = 0.00 SF
G = 43.37 SF
CLASS A ROCK EXCAVATION = 299.29 SF



WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	127	132
PROJECT FILE NO.		606517	

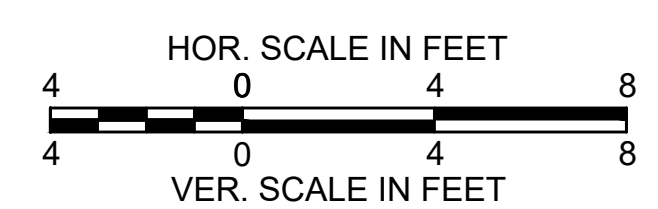
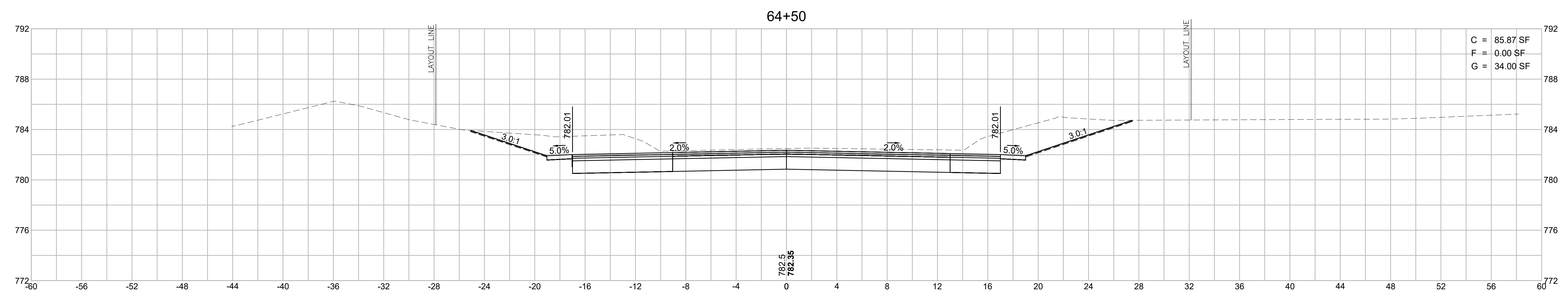
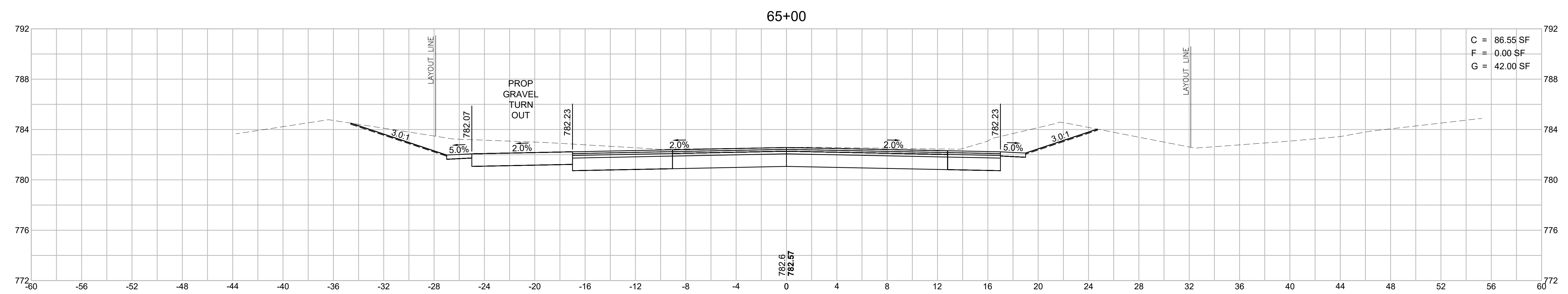
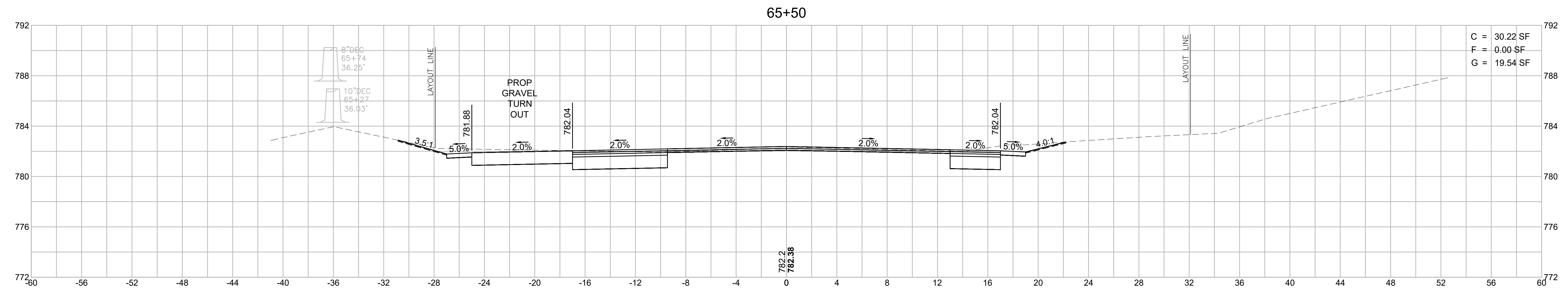
WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 65



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	128	132
PROJECT FILE NO. 606517			

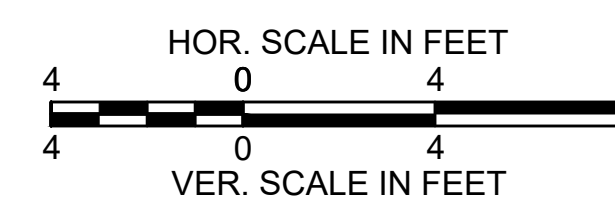
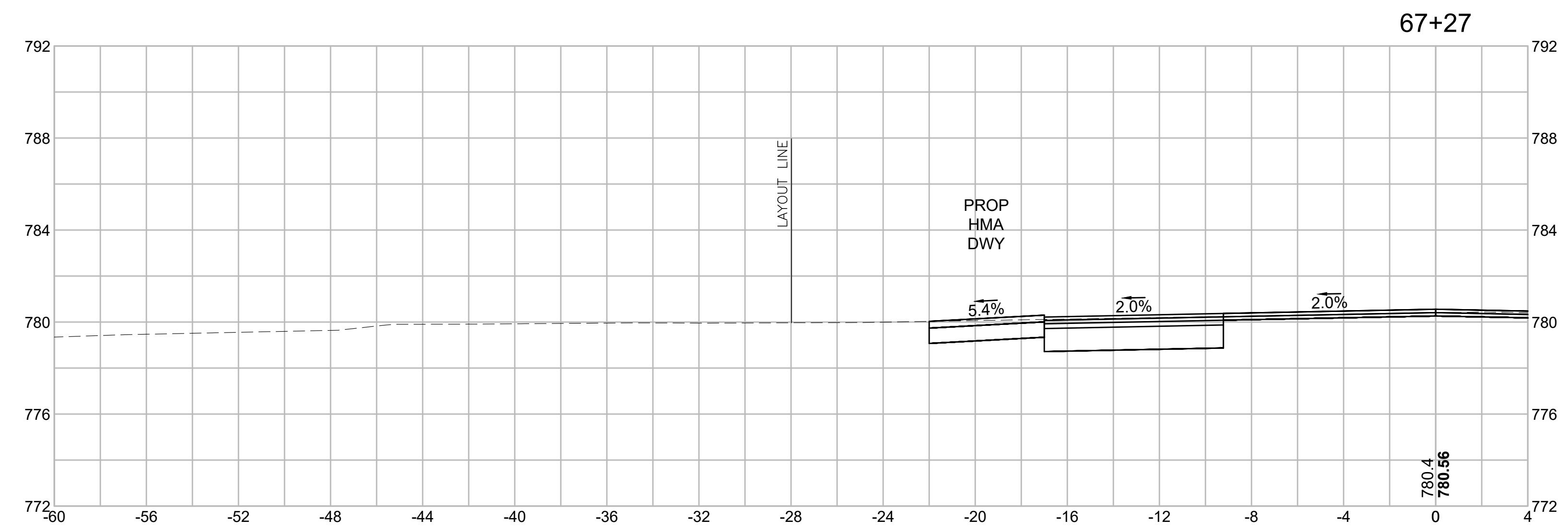
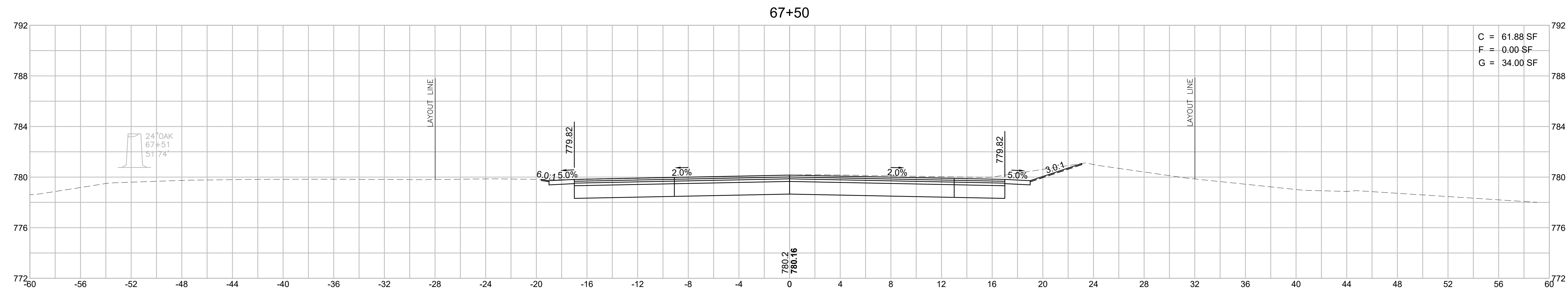
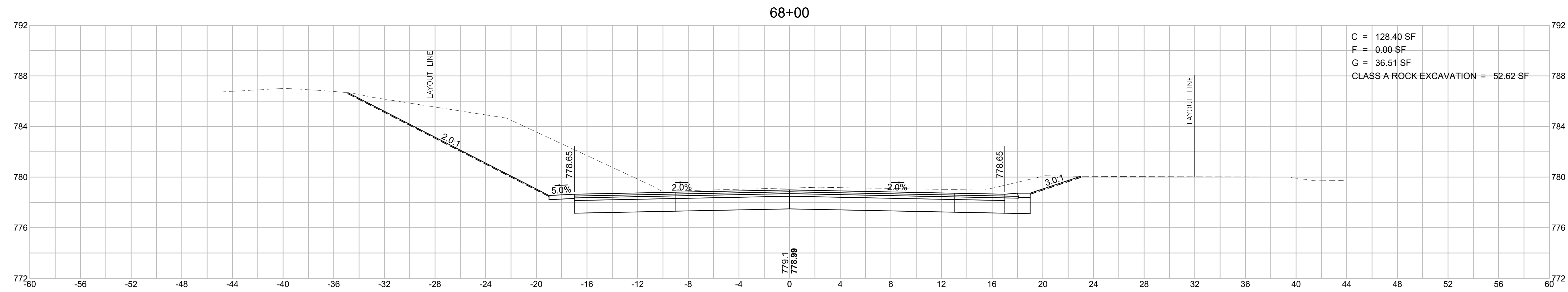
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 66**



WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	130	132
PROJECT FILE NO.		606517	

WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 68

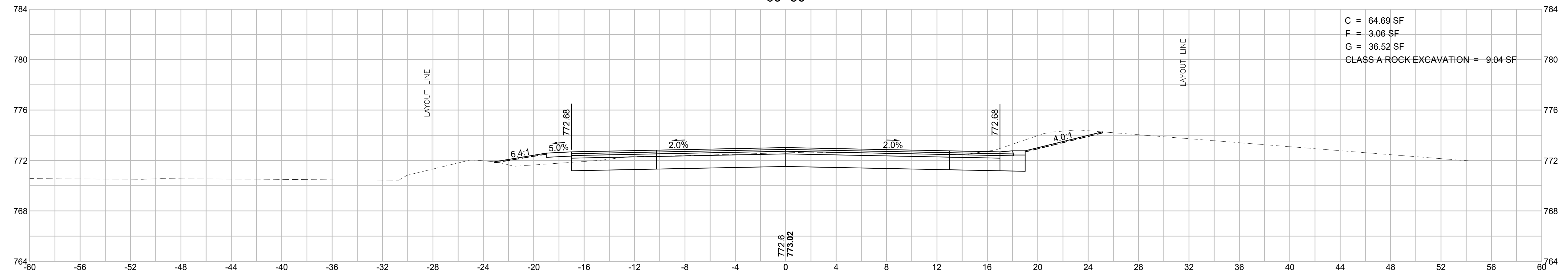


**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

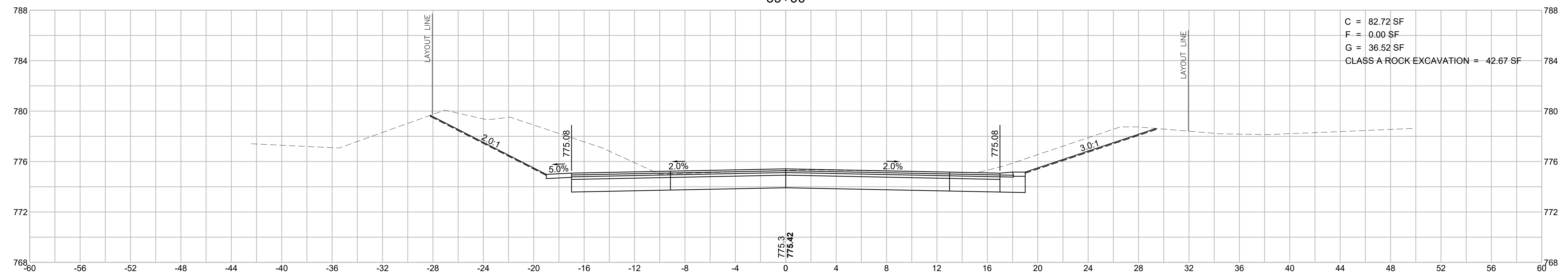
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	131	132
PROJECT FILE NO. 606517		606517	

**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 69**

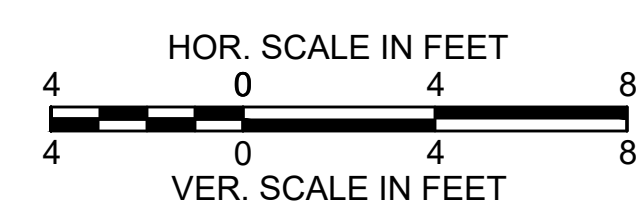
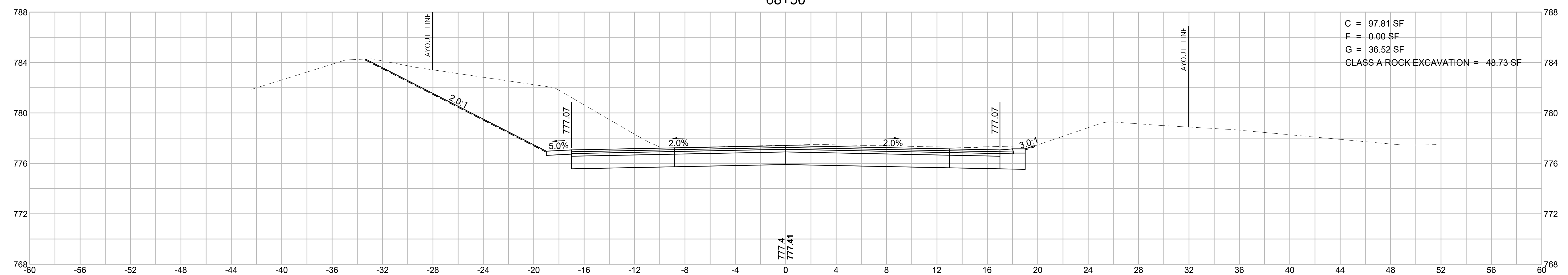
**END NORMAL CROWN
69+50**



69+00



68+50



**WEST BROOKFIELD
WEST MAIN STREET (ROUTE 9)**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP/TAP-0032(040)	132	132
PROJECT FILE NO.		606517	

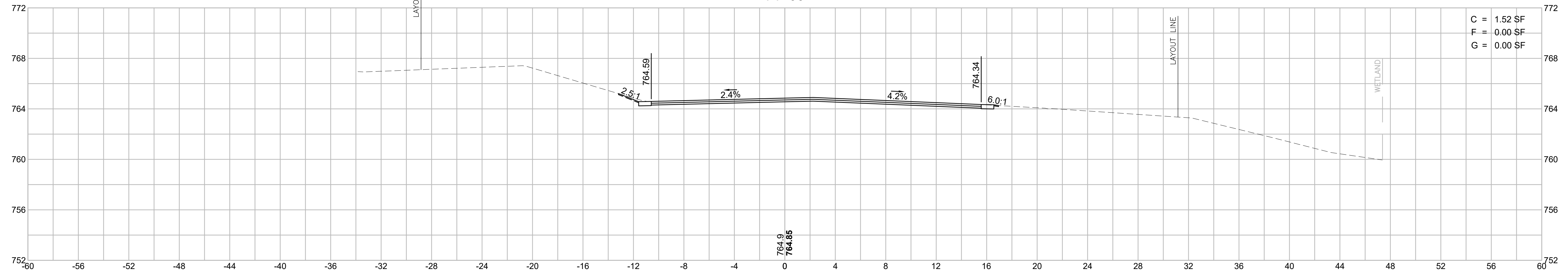
**WEST MAIN STREET (ROUTE 9)
CROSS SECTIONS - 70**

C = 1.52 SF
F = 0.00 SF
G = 0.00 SF

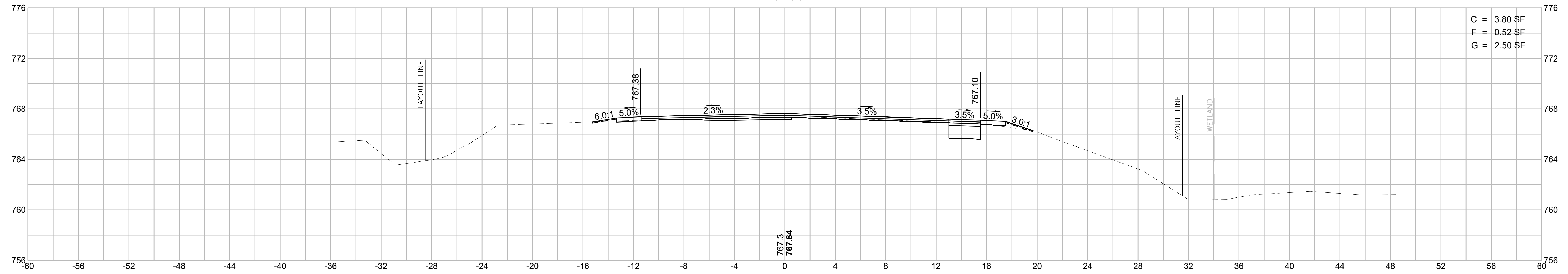
C = 3.80 SF
F = 0.52 SF
G = 2.50 SF

C = 5.45 SF
F = 0.05 SF
G = 3.55 SF

**END PAVEMENT MILL & OVERLAY
71+00**



70+50



70+00

