



MASS CENTRAL RAIL TRAIL
IN THE TOWNS OF HUDSON, STOW, MARLBOROUGH & SUDBURY
MASSACHUSETTS
MIDDLESEX COUNTY

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.

DCR CONTRACT NO. P19-3295-D1A

CHARLES D. BAKER, GOVERNOR

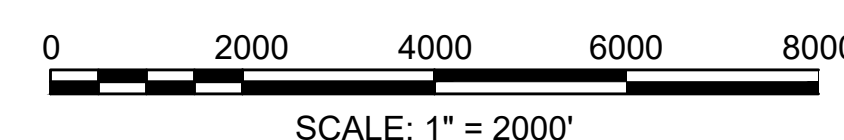
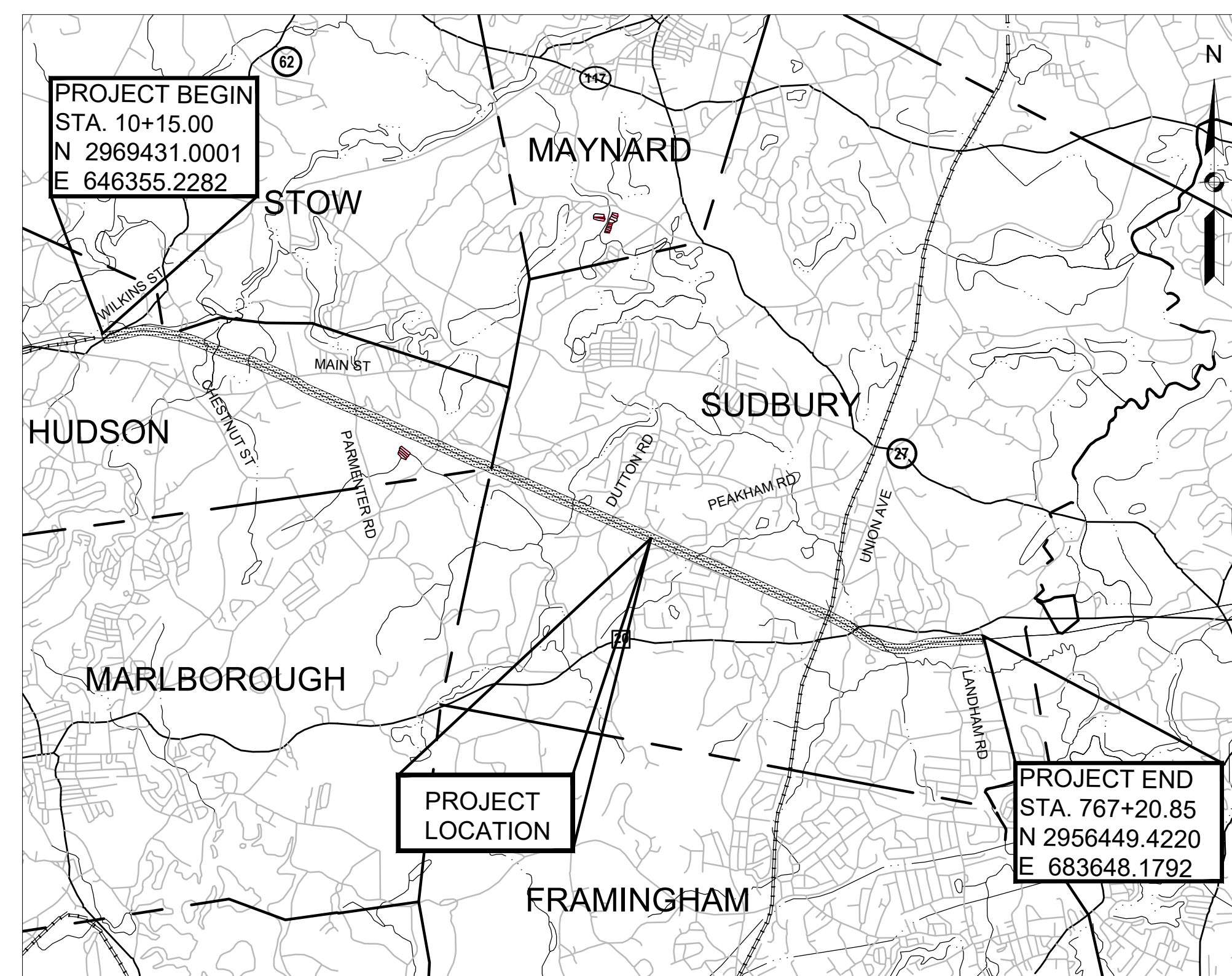
KARYN E. POLITO, LT. GOVERNOR

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JIM MONTGOMERY, INTERIM COMMISSIONER
DEPARTMENT OF CONSERVATION & RECREATION

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LENGTH OF PROJECT = 40,410.06 FEET = 7.653 MILES

SUDBURY STORMWATER PERMIT PLANS
NOT APPROVED FOR CONSTRUCTION

ORIGINALLY SUBMITTED JULY 13, 2020
 REVISED JOCTOBER 21, 2020
 REVISED DECEMBER 2, 2020
 REVISED JANUARY 13, 2021

REV.	DATE	DESCRIPTION	B
			
		 <p> Transportation Land Development Environmental Services 101 Walnut St., P.O. Box 9151 Watertown, MA 02472 617 924 1770 FAX 617 924 2286 </p>	

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION DIVISION OF PLANNING AND ENGINEERING			
MASS CENTRAL RAIL TRAIL - WAYSIDE			
MASS CENTRAL RAIL TRAIL HUDSON, STOW, MARLBOROUGH & SUDBURY, MA			
DESIGNER: JCR CHECKED: SHK	<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 80%;"> TITLE SHEET & INDEX </div>		SHEET NO. <div style="font-size: 24pt; font-weight: bold;">G-01</div>
DRAWN: JCR CHECKED: TAL	CONT. P19-3295-D1A ACC. XXXXXXXX	SCALE: AS NOTED DATE: JAN 2021	1 OF 1

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
		CONCRETE BOUND/DRILL HOLE
		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
		WETLAND FLAG
		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
		WOOD GUARD RAIL
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT AREA BUFFER
		APPROX 200 FT RIVERFRONT BUFFER
		100 FT RIVERFRONT AREA BUFFER
		APPROX 100 FT RIVERFRONT AREA BUFFER
		AURA BUFFER
		100 FT AURA BUFFER
		100 FT VERNAL POOL AREA BUFFER
		STATE HIGHWAY LAYOUT/STATE OWNED LAND
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT
		EROSION CONTROL BARRIER
		TRAVERSE OR TRIANGULATION STATION
		CHECK DAM
		SE BENCH W/ CONCRETE PAD

ABBREVIATIONS

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

ABBREVIATIONS (cont.)

GENERAL	
PWW	PAVED WATER WAY
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
TMA	TELEPHONE MAST ARM
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

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		STOP LINE
		CROSSWALK
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE
		BROKEN YELLOW LINE
		DOTTED WHITE LINE
		DOTTED YELLOW LINE
		DOTTED WHITE LINE EXTENSION
		DOTTED YELLOW LINE EXTENSION
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

GENERAL NOTES:

- THE PROPERTY LINES SHOWN ON THIS PLAN OF THE PARCELS AT 44 FOREST AVENUE IN HUDSON, 163 BOSTON POST ROAD IN SUDBURY AND THE FORMER RAILROAD RIGHT-OF-WAY ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN 2015 AND FROM DEEDS AND PLANS OF RECORD.
- THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY EASTERN TOPOGRAPHICS, INC., BASED ON AERIAL PHOTOGRAPHS TAKEN ON FEBRUARY 22, 2013, AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB DURING 2015 AND 2017.
- THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE DELINEATED WETLANDS SHOWN ON THIS PLAN WERE FLAGGED BY THE VHB ENVIRONMENTAL DEPARTMENT AND FIELD SURVEYED BY THE VHB SURVEY DEPARTMENT IN SEPTEMBER AND OCTOBER 2017 AND WERE UPDATED IN MAY 2018 (SUDBURY ONLY). IN HUDSON, ADDITIONAL WETLANDS WERE DELINEATED AND SURVEYED BY VHB IN JANUARY 2019.
- THE APPROXIMATE WETLANDS AND STREAMS, AND THEIR ASSOCIATED BUFFERS AND RIVERFRONT AREAS, WHERE APPLICABLE, WERE TAKEN FROM AVAILABLE MASSGIS DATA. THESE WERE NOT FIELD DELINEATED OR FIELD VERIFIED.
- WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
- TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
- JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH BITUMEN AND BACKSANDS.
- EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- IF SUITABLE, ALL EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
- ALL PROPOSED HOT MIX ASPHALT CURB SHALL BE MASSDOT TYPE 3 UNLESS STATED OTHERWISE ON THE PLANS.
- ALL EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
- ALL EXISTING EROSION CONTROL BARRIER, CONSTRUCTION FENCING AND SILT SACKS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION ACTIVITIES AND REMOVED AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE.

COMMONWEALTH OF MASSACHUSETTS
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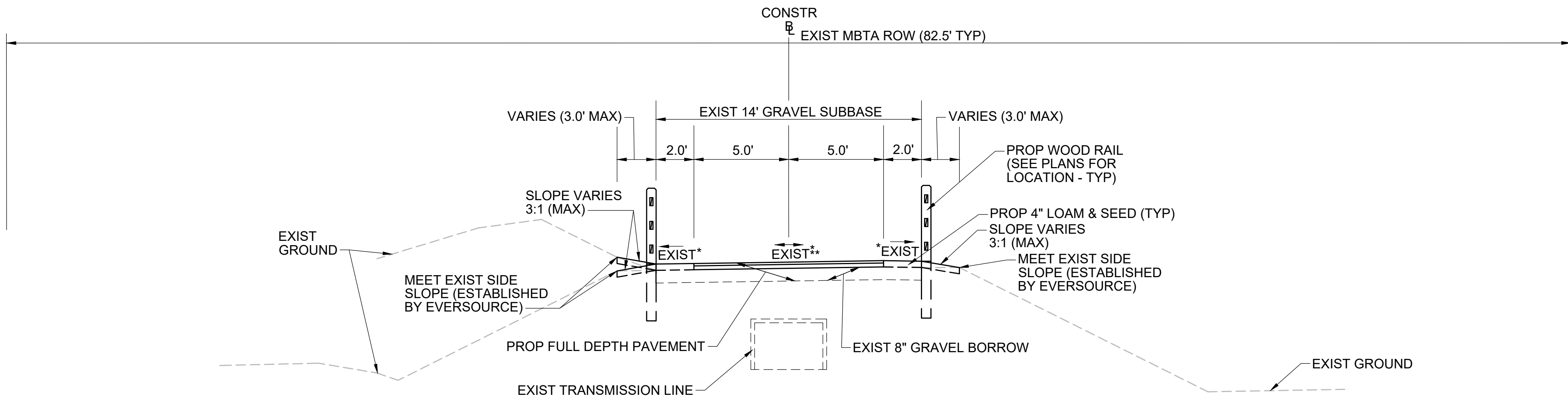
MASS CENTRAL RAIL TRAIL - WAYSIDE

MASS CENTRAL RAIL TRAIL
HUDSON, STOW, MARLBOROUGH & SUDBURY, MA

DESIGNER: JCR	 Transportation Land Development Environmental Services 101 Walnut St., P.O. Box 9151 Watertown, MA 02472 617 924 1770 FAX 617 924 2286	SHEET NO.
CHECKED: SHK		L-01
DRAWN: JCR		1 OF 1
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LEGEND ABBREVIATIONS & GENERAL NOTES

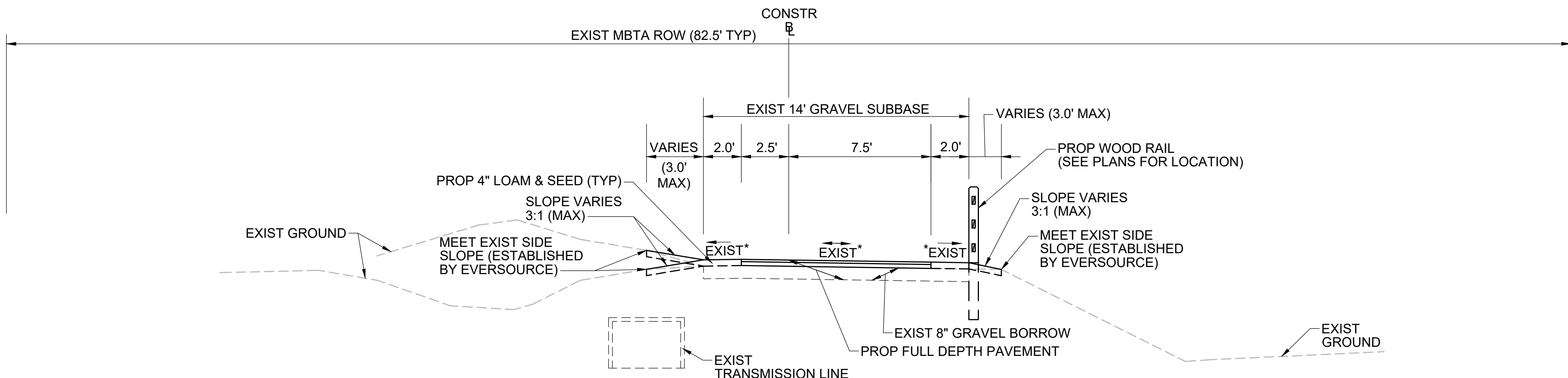
CONT. P19-3295-D1A	SCALE: NTS
ACC. XXXXXXXx	DATE: JAN 2021



TYPICAL SECTION - TRANSMISSION LINE IN CENTER

NTS

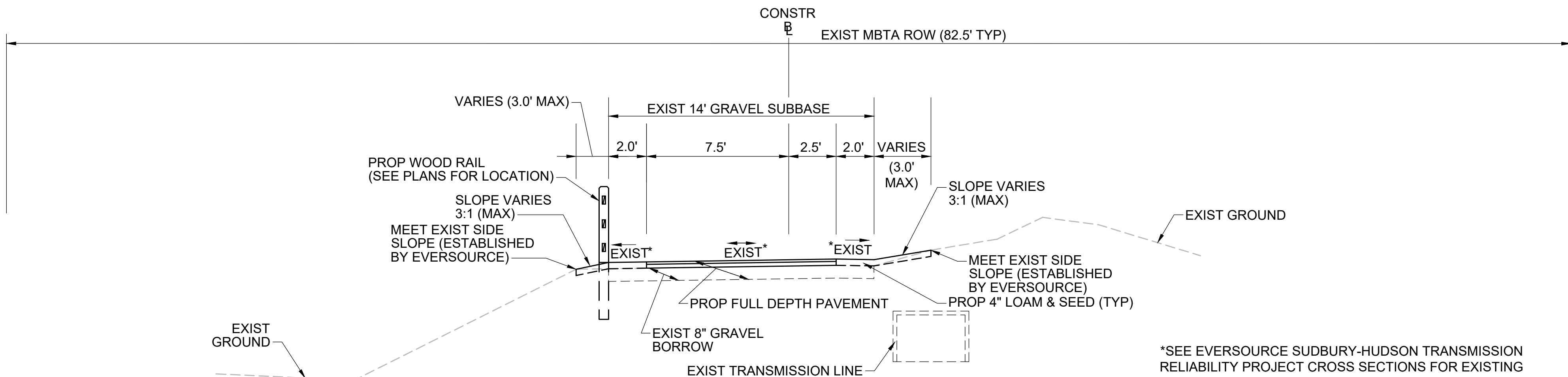
*SEE EVERSOURCE SUDBURY-HUDSON TRANSMISSION RELIABILITY PROJECT CROSS SECTIONS FOR EXISTING CROSS SLOPE INFORMATION
**CROSS SLOPE IS CROWNED AT CONSTRUCTION FROM STATION 704+00 TO 710+50.



TYPICAL SECTION - TRANSMISSION LINE ON LEFT

NTS

*SEE EVERSOURCE SUDBURY-HUDSON TRANSMISSION RELIABILITY PROJECT CROSS SECTIONS FOR EXISTING CROSS SLOPE INFORMATION



TYPICAL SECTION - TRANSMISSION LINE ON RIGHT

NTS

*SEE EVERSOURCE SUDBURY-HUDSON TRANSMISSION RELIABILITY PROJECT CROSS SECTIONS FOR EXISTING CROSS SLOPE INFORMATION

PAVEMENT NOTES

PROPOSED PATH PAVEMENT

SURFACE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)
INTERMEDIATE: 2.5" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)
SUBBASE: 8" GRAVEL BORROW, TYPE b

*NOTE:
FROM STA 100+00± TO STA 767+20± EXIST GRAVEL FROM EVERSOURCE ACCESS ROAD SHALL BE USED FOR SUBBASE MATERIAL.

PROPOSED CATTLE CROSSING PAVEMENT

SURFACE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5)
INTERMEDIATE: 2.5" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0)

*NOTE:
2.5" SUPERPAVE INTERMEDIATE COURSE TO BE INSTALLED AS PART OF EVERSOURCE SUDBURY-HUDSON TRANSMISSION LINE RELIABILITY PROJECT.

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMP

SURFACE: 6" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

SUBBASE: 8" GRAVEL BORROW, TYPE b

*NOTE:
EXIST GRAVEL FROM EVERSOURCE ACCESS ROAD SHALL BE USED FOR SUBBASE MATERIAL.

PROPOSED CEMENT CONCRETE PULL OFF/TURN AROUND

SURFACE: 4" CEMENT CONCRETE
AIR ENTRAINED 4000 PSI, 3/4", 610

SUBBASE: 8" GRAVEL BORROW, TYPE b

*NOTE:
EXIST GRAVEL FROM EVERSOURCE ACCESS ROAD SHALL BE USED FOR SUBBASE MATERIAL.

PROPOSED HOT MIX ASPHALT WALK

SURFACE: 1" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
1.5" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)

SUBBASE: 8" GRAVEL BORROW, TYPE b

NOTES:

- ALL HOT MIX ASPHALT SHALL BE PRODUCED WITH A WARM-MIX ASPHALT ADDITIVE.
- ALL HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED AND PRODUCED IN ACCORDANCE WITH SECTION 450 HOT MIX ASPHALT PAVEMENT.
- ASPHALT EMULSION FOR TACK COAT (RS-1H) SHALL BE SPRAY APPLIED FOR DOUBLE OVERLAP COVERAGE AT 0.05 GALLONS PER SQUARE YARD OVER SMOOTH SURFACES.
- HMA JOINT SEALANT (ASPHALT RUBBER) SHALL BE APPLIED IN SURFACE COURSE AT ALL VERTICAL COLD JOINTS PRIOR TO PAVING.
- ALL HOT MIX ASPHALT WALKS SHALL BE MEASURED AND PAID FOR UNDER ITEM 702 OF STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.

REV.	DATE	DESCRIPTION	BY



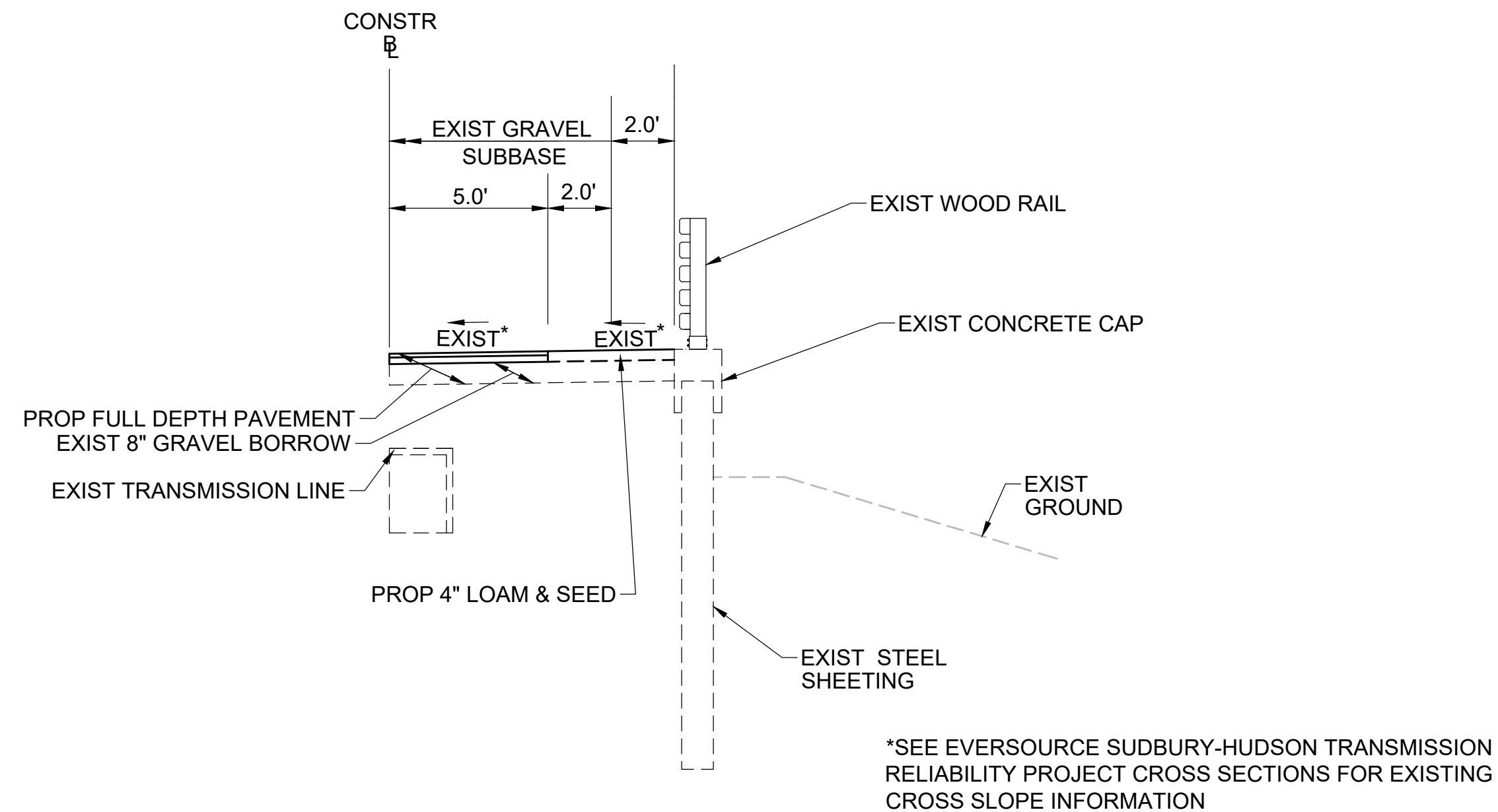
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617 924 1770 FAX 617 924 2286

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MASS CENTRAL RAIL TRAIL - WAYSIDE

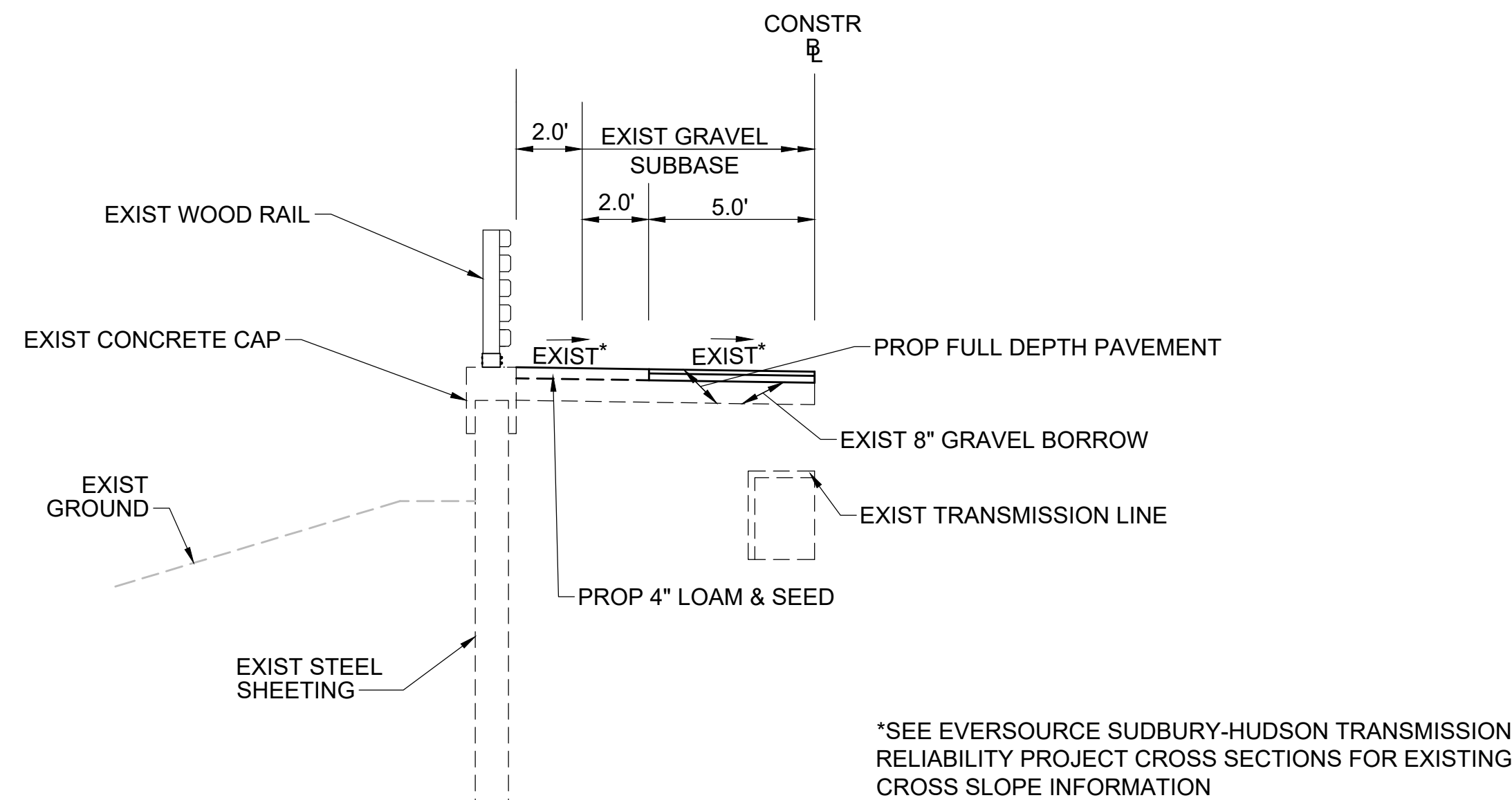
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HUDSON, STOW, MARLBOROUGH & SUDBURY, MA

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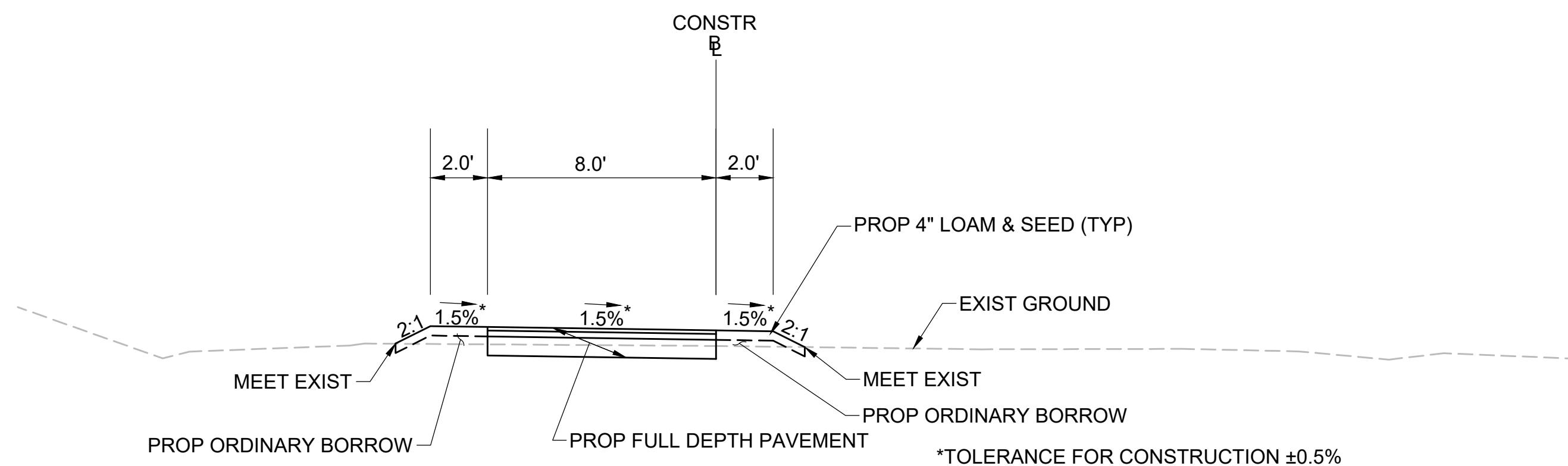
SHEETING SECTION RT

STA 148+25± TO STA 148+49±, STA 149+13± TO STA 149+75±, STA 399+91± TO STA 400+07±, STA 400+58± TO STA 401+25±, STA 724+73± TO STA 725+03±, STA 725+59± TO STA 725+96±, STA 731+00± TO STA 734+25±
NTS



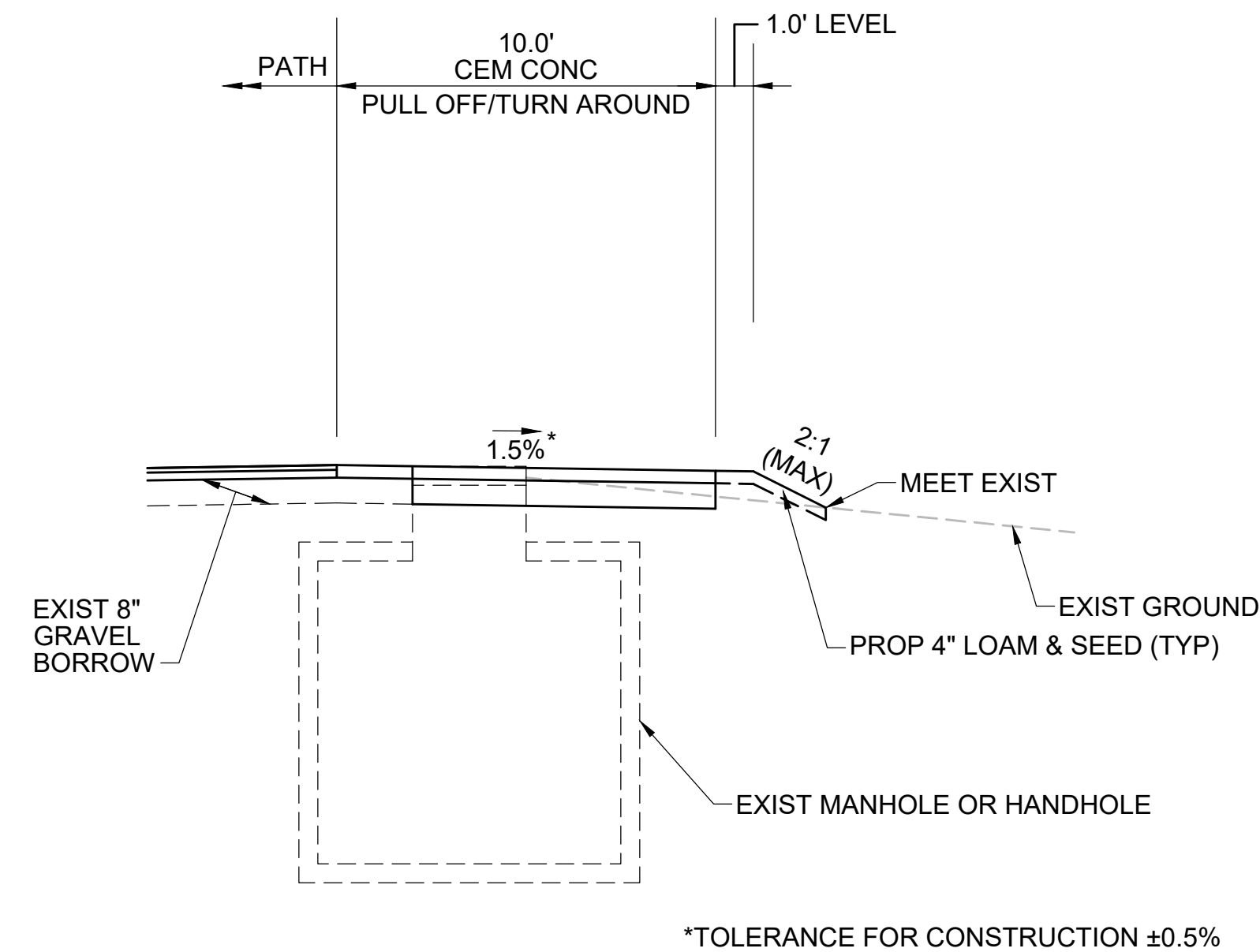
SHEETING SECTION LT

STA 119+00± TO STA 119+38±, STA 119+52± TO STA 125+00±, STA 148+25± TO STA 148+49±, STA 149+13± TO STA 149+75±, STA 300+50± TO STA 400+07±, STA 400+58± TO STA 401+25±, STA 724+73± TO STA 725+03±, STA 725+59± TO STA 725+96±
NTS



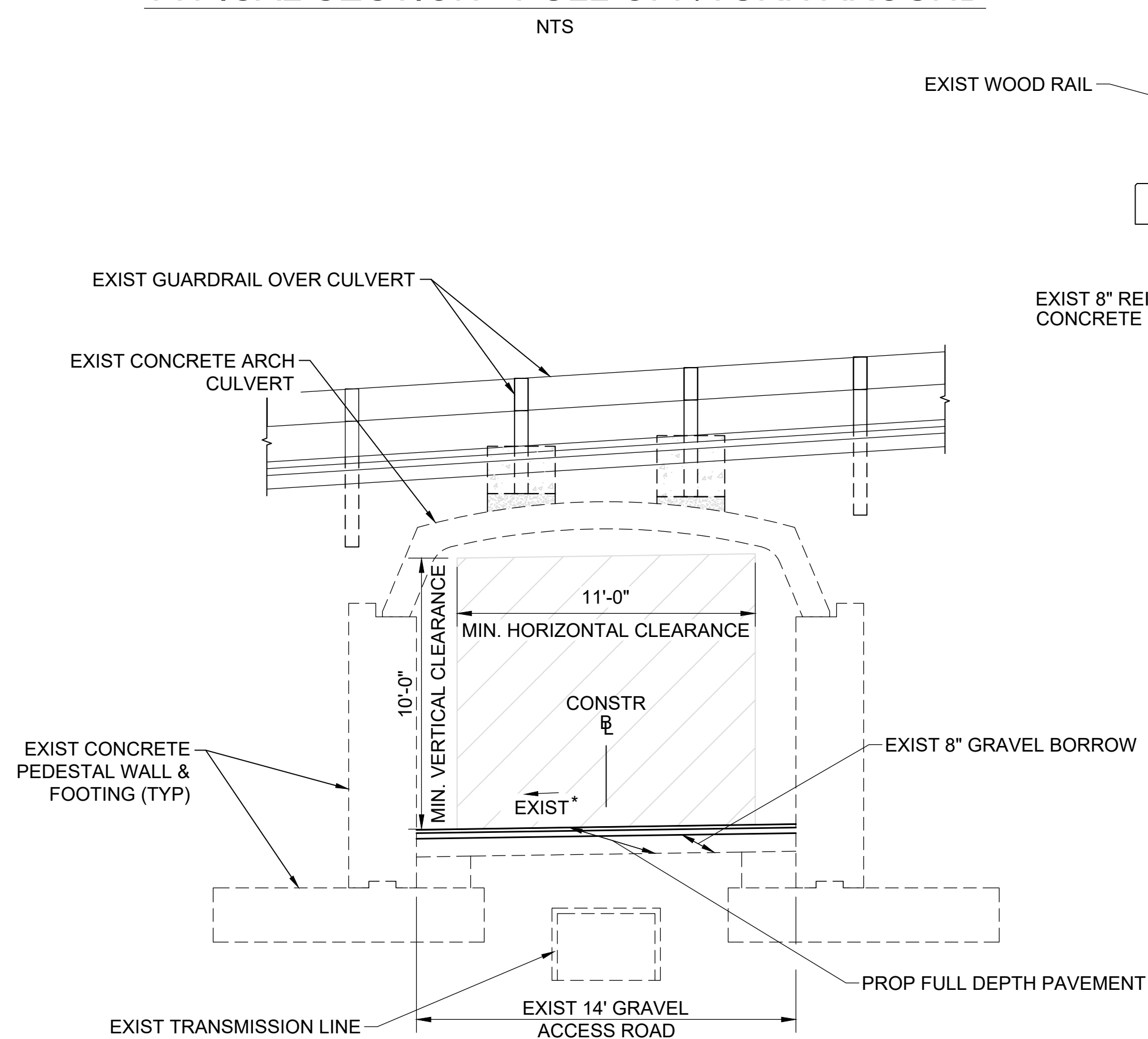
TYPICAL SECTION - MCRT CONNECTION

STA 10+15± TO STA 12+40±
NTS



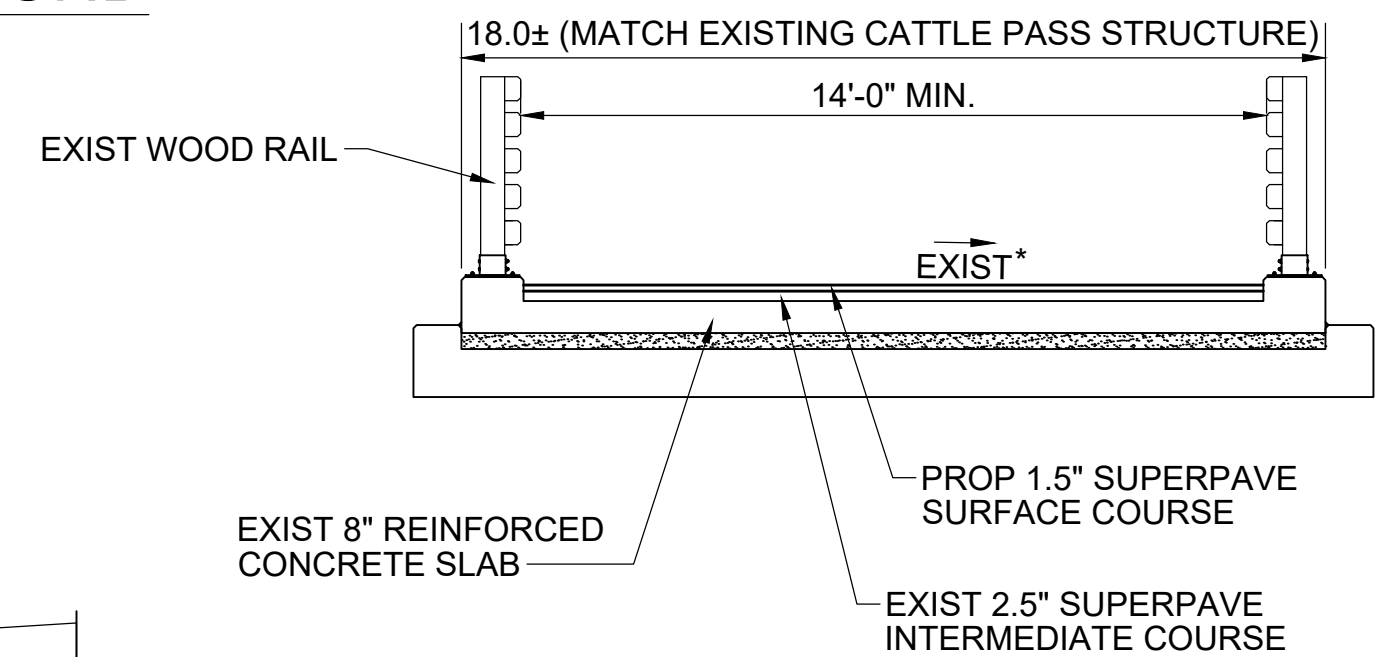
TYPICAL SECTION - PULL OFF/TURN AROUND

NTS



CHESTNUT STREET CULVERT

STA 132+44± TO STA 132+84±
NTS



CATTLE CROSSING

STA 119+38± TO STA 119+52±
NTS

*SEE EVERSOURCE SUDBURY-HUDSON TRANSMISSION
RELIABILITY PROJECT CROSS SECTIONS FOR EXISTING
CROSS SLOPE INFORMATION

*SEE EVERSOURCE SUDBURY-HUDSON TRANSMISSION
RELIABILITY PROJECT CROSS SECTIONS FOR EXISTING
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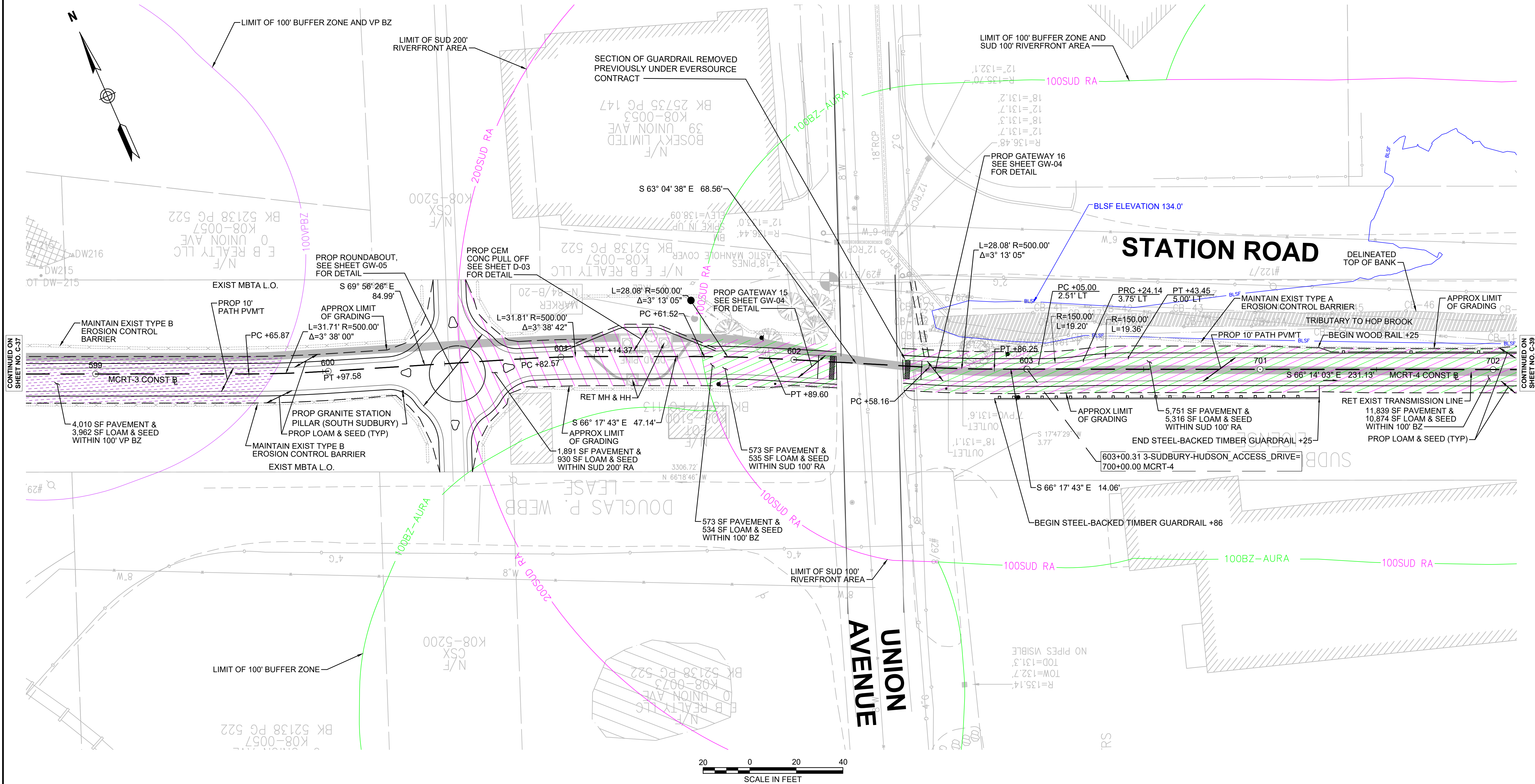
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MASS CENTRAL RAIL TRAIL - WAYSIDE

MASS CENTRAL RAIL TRAIL
HUDSON, STOW, MARLBOROUGH & SUDBURY, MA

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ACC: XXXXXXXX	DATE: JAN 2021	SCALE: 1" = 20'-0"	2 OF 2

vhb
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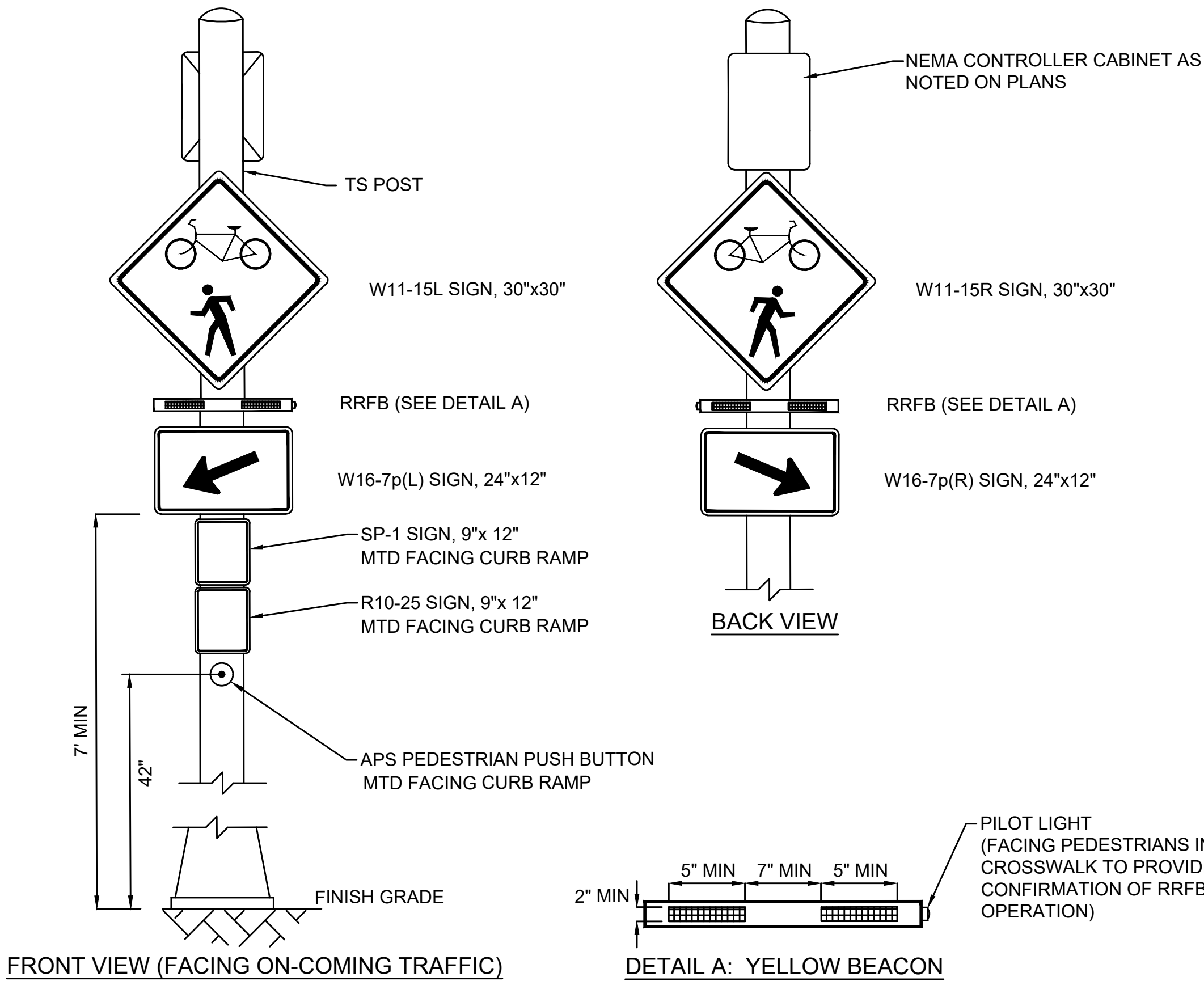
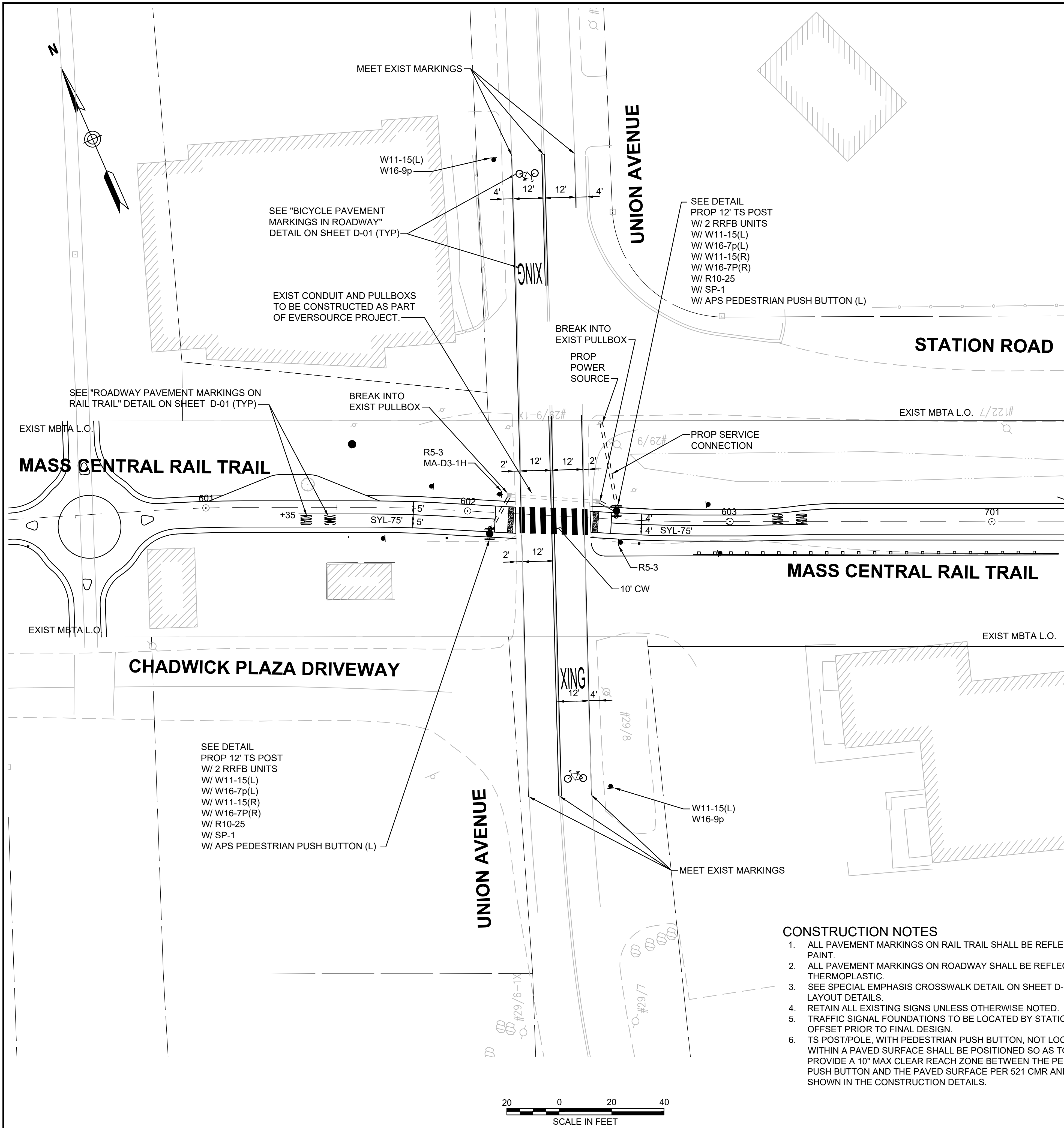
NOTE:
1. WETLAND RESOURCE AREA BOUNDARIES SHOWN HEREIN WERE APPROVED IN AN ORAD DATED AUGUST 27, 2018 (MADEP FILE NO. 301-1227).

ENVIRONMENTAL IMPACTS LEGEND	
HATCH	DESCRIPTION
	ISOLATED VEGETATED WETLAND
	BORDERING VEGETATED WETLAND
	LAND UNDER WATER
	VERNAL POOL
	PERMANENT DISTURBANCE TO VEGETATED WETLAND
	DISTURBANCE TO 100' VERNAL POOL BUFFER ZONE (100' VP BZ)
HATCH	DESCRIPTION
	DISTURBANCE TO WPA 200' RIVERFRONT AREA (WPA 200' RA)
	DISTURBANCE TO SUDBURY 200' RIVERFRONT AREA (SUD 200' RA)
	DISTURBANCE TO WPA 100' RIVERFRONT AREA (WPA 100' RA)
	DISTURBANCE TO SUDBURY 100' RIVERFRONT AREA (SUD 100' RA)
	DISTURBANCE TO 100' BUFFER ZONE (100' BZ-AURA)
	DISTURBANCE TO BLSF
	EXISTING TREE LINE
	LIMIT OF GRADING

REV.	DATE	DESCRIPTION	BY

Transportation Land Development
Environmental Services
101 Walnut St., P.O. Box 9151
Watertown, MA 02472
617 924 1770 FAX 617 924 2286

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION DIVISION OF PLANNING AND ENGINEERING	
MASS CENTRAL RAIL TRAIL - WAYSIDE	
MASS CENTRAL RAIL TRAIL HUDSON, STOW, MARLBOROUGH & SUDBURY, MA	
CONSTRUCTION PLANS	
DESIGNER: JCR CHECKED: SHK DRAWN: JCR CHECKED: TAL	CONT: P19-3295-D1A ACC: XXXXXXXX SCALE: 1" = 20'-0" DATE: JAN 2021
SHEET NO. C-38 38 OF 46	



- NOTES:
1. DURATION OF FLASHING UPON RECEIPT OF VALID PEDESTRIAN PUSHBUTTON ACTUATION SHALL BE INITIALLY SET FOR 15 SECONDS. THE MINIMUM ALLOWABLE TIME INTERVAL BETWEEN ACTUATION WILL BE 1 MINUTE.
 2. ALL RRFB UNITS SHALL FLASH SIMULTANEOUSLY.
 3. SEE SPECIAL PROVISIONS ITEMS 824.212 FOR MORE DETAILS.

RECTANGULAR RAPID FLASHING BEACON (RRFB) - POST MOUNTED

SCALE: N.T.S.

LIST OF MAJOR ITEMS REQUIRED

UNION AVENUE AT MASS CENTRAL RAIL TRAIL

PAY ITEMS	QUANTITY	DESCRIPTION
824.211	1	3R NEMA ENCLOSURE FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISION
	1	SERVICE CONNECTION (OVERHEAD)
	2	12' TRAFFIC SIGNAL POST & PEDESTAL INCL FOUNDATION
	2	APS PEDESTRIAN PUSHBUTTON
	4	DUAL RECTANGULAR YELLOW LED BEACON IN NEMA ENCLOSURE
	2	R10-25 SIGN
804.3	2	SP-1 SIGN
	55±	3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC - (UL)
832.	2	W11-15L SIGN
	2	W11-15R SIGN
	2	W16-7pL SIGN
	2	W16-7pR SIGN

PLUS NECESSARY DUCT, CABLE, LABOR, MISCELLANEOUS MATERIAL AND EQUIPMENT TO COMPLETE THE INSTALLATION AND PROVIDE AN OPERATING RECTANGULAR RAPID FLASHING BEACON SYSTEM.

CONSTRUCTION NOTES

1. ALL PAVEMENT MARKINGS ON RAIL TRAIL SHALL BE REFLECTORIZED PAINT.
2. ALL PAVEMENT MARKINGS ON ROADWAY SHALL BE REFLECTORIZED THERMOPLASTIC.
3. SEE SPECIAL EMPHASIS CROSSWALK DETAIL ON SHEET D-01 FOR LAYOUT DETAILS.
4. RETAIN ALL EXISTING SIGNS UNLESS OTHERWISE NOTED.
5. TRAFFIC SIGNAL FOUNDATIONS TO BE LOCATED BY STATION AND OFFSET PRIOR TO FINAL DESIGN.
6. TS POST/POLE, WITH PEDESTRIAN PUSH BUTTON, NOT LOCATED WITHIN A PAVED SURFACE SHALL BE POSITIONED SO AS TO PROVIDE A 10' MAX CLEAR REACH ZONE BETWEEN THE PEDESTRIAN PUSH BUTTON AND THE PAVED SURFACE PER 521 CMR AND AS SHOWN IN THE CONSTRUCTION DETAILS.



REV.	DATE	DESCRIPTION	BY

vhb
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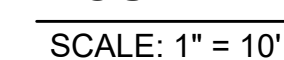
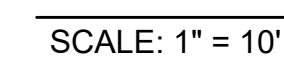
**COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION
DIVISION OF PLANNING AND ENGINEERING**

MASS CENTRAL RAIL TRAIL - WAYSIDE

**MASS CENTRAL RAIL TRAIL
HUDSON, STOW, MARLBOROUGH & SUDBURY, MA**

TRAFFIC PLANS

DESIGNER: KEW	CHECKED: SHK	DRAWN: KEW	CHECKED: PTN	CONT: P19-3295-D1A	ACC: XXXXXXXX	SCALE: 1" = 20'-0"	DATE: JAN 2021	SHEET NO. TR-11 11 OF 14
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5	OF 5
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