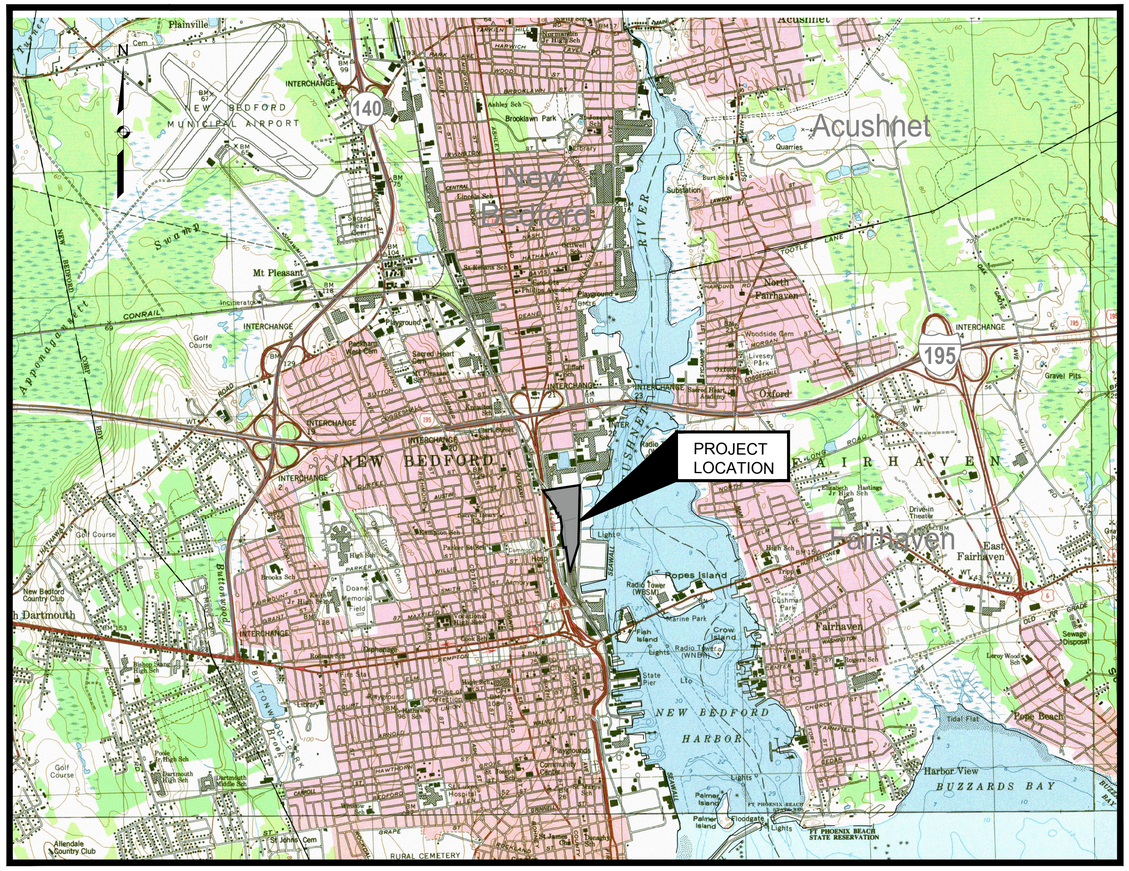

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

South Coast Rail

Wamsutta Layover
Notice of Intent Plans
Track and Facility Infrastructure

SEPTEMBER 7, 2017
REVISED NOVEMBER 28, 2017

APPROVALS:

Edmund F. Hunter Date:
Assistant General Manager for Design and Construction

James E. Jackson, P.E. Date:
Director of Design and Construction - Commuter Rail

ISSUED FOR NOTICE OF INTENT

SHEET: GN-300

DRAWING INDEX

NEW BEDFORD NOI WAMSUTTA LAYOVER DRAWING LIST

SHEET NO.	LINE	DRAWING DESCRIPTION
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GN-302	NEW BEDFORD MAIN LINE	GENERAL NOTES
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UT-301	NEW BEDFORD MAIN LINE	GRADING AND UTILITY PLAN 1
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
INDEX SHEET

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

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99 HIGH STREET
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:

PROJECT MANAGER Date | PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY	PLAN NO.	ISSUE
VERT: NONE	ADZ	RRD	KJC		
DATE: 08/04/2017				SHEET GN-301	

GENERAL

1. 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.
2. 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).
3. WORK IMPACTING RAILROAD PROPERTY AND / OR RIGHT-OF-WAY SHALL BE COORDINATED WITH MBTA, KEOLIS, MCRR, AND CSX.
4. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. ALL CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH MassDOT, MBTA & OSHA STANDARDS AND LOCAL REQUIREMENTS.
5. THE CONTRACTOR SHALL PROVIDE 72 HOURS NOTICE TO ALL PRIVATE PROPERTY OWNERS ABUTTING CONSTRUCTION AREAS PRIOR TO COMMENCEMENT OF WORK.
6. ALL WORK PERFORMED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO APPLICABLE MUNICIPAL AND / OR STATE HIGHWAY STANDARDS.
7. ALL SIGNAGE AND PAVEMENT MARKINGS WITH MUNICIPAL AND STATE HIGHWAY LAYOUT SHALL CONFORM TO THE 2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
8. ALL PROPOSED GRANITE BOUNDS AND ANY EXISTING MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR (PLS).
9. ALL EXISTING U.S.G.S DISKS, HIGHWAY BOUNDS, RAILROAD MONUMENTS, PROPERTY BOUNDS, AND CITY BOUNDS SHALL BE PROTECTED AND RAISED TO FINISHED GRADE AS REQUIRED, U.S.G.S. AND MASSDOT RESPECTIVELY. ANY DAMAGE TO U.S.G.S DISKS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND THE U.S. GEOLOGICAL SURVEY AND SHALL BE REPAIRED AT NO COST TO THE AUTHORITY. ANY DAMAGE TO TOWN BOUNDS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND MASSDOT AND SHALL BE REPAIRED AT NO COST TO THE AUTHORITY. THE CONTRACTOR SHALL INVENTORY ALL SUCH BOUNDS, DISKS, AND MONUMENTS PRIOR TO THE START OF ANY WORK.
10. ALL EXISTING ROADWAY SIGNS WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND STACKED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
11. CONTRACTOR SHALL INSTALL APPROVED EROSION CONTROL MEASURES PRIOR TO EARTHWORK OPERATION AND MAINTAIN EROSION CONTROL MEASURES AND SEEDED EMBANKMENTS DURING CONSTRUCTION. EROSION CONTROL SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
12. TEMPORARY CONSTRUCTION EASEMENT AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITIONS UNLESS OTHERWISE NOTED AT NO ADDITIONAL COST TO THE PROJECT.
13. AREAS OUTSIDE THE LIMIT 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.
14. JOINTS BETWEEN NEW BITUMINOUS CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HOT POURED RUBBERIZED ASPHALT SEALER AND BACKSANDED.
15. ALL AREAS DISTURBED DURING CONSTRUCTION EXCEPT PAVEMENT AND STRUCTURES SHALL RECEIVE LOAM AND SEEDING PER THE SPECIFICATIONS UNLESS OTHERWISE NOTED.
16. TREES AND SHRUBS OUTSIDE THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.

EXISTING CONDITIONS

1. HORIZONTAL DATUM IS REFERENCED TO THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM - NORTH AMERICAN DATUM OF 1983(2011). LOCUS IS WITHIN THE MAINLAND ZONE. SOURCE CONTROL FOR THE TIE TO THE DATUMS IS MAINE TECHNICAL SOURCE'S REFERENCE STATIONS IN FOXBOROUGH, MA (XMTS), MASSDOT CORS STATION (MAMI) IN MILTON, MA, MASSDOT CORS STATION (MADA) IN DARTMOUTH AND COAST GUARD STATION (ACU6) IN ACUSHNET MA. COORDINATE VALUES WERE DERIVED USING STATIC METHODS BASED ON VARIOUS COMBINATIONS OF THE AFOREMENTIONED CORS STATIONS.
2. VERTICAL DATUM IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SOURCE CONTROL FOR THE TIE TO THE VERTICAL DATUM ARE SAME CORS STATIONS REFERRED TO IN NOTE 1.
3. BOUNDARY INFORMATION SHOWN (IF ANY) IS FROM GIS DATA SOURCES ONLY, UNLESS NOTED OTHERWISE. BOUNDARY SURVEY OR RETRACEMENT OF THE RIGHT OF WAY HAS NOT BEEN PERFORMED BY BRYANT ASSOCIATES OR PRIME AE GROUP.
4. SURVEY DATA SHOWN HAS BEEN PREPARED BY BRYANT ASSOCIATES, INC., 90 CANAL STREET, SUITE 301, BOSTON, MA 02114 (617) 248-0300 AND PRIME AE GROUP, INC., 55 CAPITAL BOULEVARD, 2ND FLOOR, ROCKY HILL, CT 06067 (860) 436-5600. GENERICALLY AND WITH SOME EXCEPTIONS, BRYANT HAS PRODUCED THE DATA NORTH OF WEIR JUNCTION AND SOUTH OF MYRICK'S JUNCTION ON THE FALL RIVER SECONDARY TO THE TERMINUS IN FALL RIVER. PRIME HAS PRODUCED THE DATA SOUTH OF WEIR JUNCTION ON THE NEW BEDFORD MAINLINE TO THE TERMINUS IN NEW BEDFORD. THE SURVEY DATA HAS BEEN COMPILED UTILIZING MANY DIFFERENT TECHNOLOGIES TO MATCH THE BEST PRACTICES AND REQUIREMENTS OF THE PROJECT. AERIAL DATA WAS PROVIDED BY COL-EAST, INC. THROUGHOUT THE PROJECT CORRIDOR BASED ON SURVEY CONTROLS PROVIDED BY BRYANT ASSOCIATES. MAPPING WAS SPECIFIED FOR 1"=20' WITH 1' CONTOUR ACCURACY. THE AERIAL SURVEY WAS SUPPLEMENTED WITH GROUND SURVEY PERFORMED USING TOTAL STATIONS AND LASER SCANNING.

EXISTING CONDITIONS (CONTINUED)

5. THE SURFACE EVIDENCE OF THE UTILITIES SHOWN HAS BEEN LOCATED BY FIELD SURVEY, UNLESS NOTED OTHERWISE. THE LINEWORK REPRESENTING ALL UNDERGROUND STRUCTURES AND PIPES HAS BEEN SHOWN HEREON IN ITS APPROXIMATE LOCATION BASED ON AVAILABLE RECORD PLANS. THE SURVEYORS MAKE NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY DO CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. EVIDENCE OF ADDITIONAL UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR.
6. WETLAND BOUNDARIES WERE DELINEATED AND SURVEYED IN 2012, AND SUPPLEMENTED IN 2015 AND 2016.
7. THE CONTRACTOR SHALL CONFIRM EXISTING CONDITIONS AND REPORT ALL DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ENGINEER.
8. UNLESS OTHERWISE NOTED, EXISTING RAILROAD RIGHT-OF-WAY LINES ARE APPROXIMATE AND SHALL BE DETERMINED BY THE CONTRACTOR AND STAKED IN THE FIELD BY A LAND SURVEYOR REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS PRIOR TO THE START OF WORK UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PLACE STAKES ALONG THE RAILROAD RIGHT-OF-WAY AT NO GREATER THAN 50' INTERVALS AND AT EACH CHANGE IN DIRECTION. STAKES SHALL BE MAINTAINED BY THE CONTRACTOR AND REPLACED IF DAMAGED OR REMOVED. ALL PROPERTY LINE DATA HAS BEEN COMPILED FROM AVAILABLE RECORD DRAWINGS AND ASSESSORS INFORMATION AND IS NOT WARRANTED TO BE CORRECT.

UTILITIES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND 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 AGREES TO 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 CONTRACTOR SHALL CONTACT "DIG SAFE" 72 HOURS PRIOR TO ANY EXCAVATION PERFORMED ON OR OFF SITE AT 1-888-344-7233 AND SHALL COORDINATE LOCATION OF NON "DIG SAFE" MEMBER UTILITIES WITHIN THE TIME FRAME SPECIFIED BY THE UTILITY OWNER.
2. THE CONTRACTOR SHALL MAKE ARRANGEMENTS AND SHALL BE RESPONSIBLE FOR PAYING ANY FEES FOR ANY POLE RELOCATION AND FOR THE ALTERATION OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANY.
3. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZE, INVERTS, AND TYPES OF EXISTING PIPES AT ALL PROPOSED POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. 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 IN WRITING TO THE ENGINEER FOR THE RESOLUTION OF THE CONFLICT.
4. ALL EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE AND KEPT OPERATIONAL DURING CONSTRUCTION EXCEPT AS NOTED ON THE CONTRACT DRAWINGS. ANY NECESSARY DISRUPTION TO OR ABANDONMENT OF EXISTING UTILITIES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY ALL UTILITY COMPANIES AND CITIES / TOWNS THAT MAY BE AFFECTED BY ANY PORTION OF THIS CONSTRUCTION AND TO COORDINATE ALL WORK INVOLVING UTILITY COMPANIES OR CITY / TOWN FACILITIES, WHETHER THOSE FACILITIES ARE EXISTING OR PROPOSED. IT IS ALSO THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPORT AND PROTECT EXISTING UTILITIES IN AND AROUND EXCAVATIONS. PROTECTION AND OR SUPPORT SHALL BE CONSIDERED INCIDENTAL WORK AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM BEING INSTALLED.
6. EXISTING UTILITIES CALLED FOR TO BE RELOCATED SHALL BE VERIFIED WITH RESPECTIVE CONTROLLING AUTHORITY AS TO THEIR FINAL DISPOSITION.
7. ALL ABOVE GRADE STRUCTURES, POLES, TRANSFORMERS, ETC. TO BE RELOCATED SHALL BE PLACED AT OR BEYOND THE REQUIRED MBTA STANDARD CLEARANCE FROM THE CENTERLINE OF ANY EXISTING AND FUTURE TRACK.
8. ALL UTILITY SURFACE CASTINGS (COVERS, GRATES, GATE BOXES, ETC.) TO REMAIN SHALL BE ADJUSTED TO THE NEW SURFACE GRADE AS REQUIRED, WHETHER OR NOT CALLED FOR ON THE PLANS.
9. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE 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 CONFORMING TO M4.05.2 OF THE MASSDOT HIGHWAY STANDARD SPECIFICATIONS.
10. CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER, AND UTILITY FACILITIES FROM ALL LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
11. FIELD VERIFY EXISTING DRAINAGE MANHOLE AND CATCH BASIN INVERTS AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE ENGINEER PRIOR TO START OF ANY DRAINAGE INSTALLATION.
12. ALL UTILITIES SHOWN ON PLANS SHALL BE RETAINED UNLESS OTHERWISE INDICATED.
13. CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL, MAINTAIN, AND REMOVE APPROVED EROSION CONTROL CHECKS AROUND CATCH BASIN FRAMES AND GRATES TO PREVENT RUNOFF SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

SITE PREPARATION

1. MAINTAIN EXISTING DRAINAGE SYSTEM TO THE GREATEST POSSIBLE EXTENT DURING ALL CONSTRUCTION ACTIVITIES.
2. DEMOLITION TO BE PERFORMED IN ACCORDANCE WITH MASSACHUSETTS STATE BUILDING CODE.
3. DISCONNECT ALL UTILITIES AND CAP EXISTING FIELD LINES SUCH AS GAS MAINS, WATER MAINS, AND ELECTRICAL BEFORE STARTING DEMOLITION. COORDINATE THE UTILITY DISCONNECTS WITH THE APPLICABLE UTILITY COMPANY.
4. PROTECT ANY ADJOINING STRUCTURES AND SAFEGUARD THE NEIGHBORING AREAS FROM DUST AND DEBRIS.
5. ALL EXISTING RETAINING WALL FOUNDATIONS, COLUMNS, GRADE BEAMS, GRADE SLABS, ETC. SHALL BE DEMOLISHED UP TO 2' BELOW THE PROPOSED FINISHED GRADE UNLESS OTHERWISE NOTED.
6. ALL DEMOLISHED MATERIALS, RUBBISH, EXCAVATED MATERIALS AND DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
7. DISPOSAL OF HAZARDOUS WASTE SHALL BE IN ACCORDANCE WITH APPLICABLE CODES, REGULATIONS, AND PROJECT SPECIFICATIONS. ALL DEMOLISHED MATERIALS SHALL BE DISPOSED OF LEGALLY AS PER PROJECT SPECIFICATIONS.

TRACK AND RAILROAD

1. THE CONTRACTOR SHALL NOT ENTER ONTO RAILROAD RIGHT-OF-WAY WITHOUT PERMISSION OF OPERATING RAILROAD NOR WITHOUT AN APPOINTED RAILROAD FLAGMAN ON DUTY.
2. LIMITS OF TIE-IN POINTS INTO EXISTING TRACKWORK ARE APPROXIMATE. ACTUAL LIMITS SHALL BE DETERMINED IN FINAL DESIGN AND SHALL CONSIST OF A WELD CONNECTION.
3. EXISTING TRACK CONSISTS OF VARIOUS SIZES OF WELDED AND JOINTED RAIL, SINGLE AND DOUBLE SHOULDER TIE PLATES, RAIL ANCHORS OF VARIOUS TYPES, TIMBER AND CONCRETE TIES, AND SOME GAUGE BARS.
4. PROPOSED COMMUTER RAIL TRACKS SHALL CONSIST OF 136# RE CWR ON NEW 8'-6" x 7" x 9" PRESSURE TREATED TIMBER CROSSTIES WITH RESILIENT FASTENERS.
5. BRIDGE GUARD RAIL WILL CONSIST OF 115# RE SECONDHAND RAIL.
6. TIES ON ALL PROPOSED TRACK CONSTRUCTION SHALL BE AT 19.5" CENTER TO CENTER SPACING EXCEPT WITHIN THE LIMITS OF BRIDGE GUARD RAIL AND AT-GRADE ROADWAY CROSSINGS WHERE SPACING SHALL BE 18".
7. LINE SIDE OF THE TRACK SHALL BE THE RIGHT SIDE LOOKING UPSTATION (SOUTHERLY).
8. LEFT AND RIGHT SHALL BE THE LEFT AND RIGHT SIDES OF THE TRACK LOOKING UPSTATION (SOUTHERLY).
9. RAILROAD PROFILE GRADE LINE OF TRACK IS THE TOP OF LOW RAIL IN ALL CASES.
10. COMPROMISE CONNECTIONS FOR TRACK WILL CONSIST OF ONE 39' LENGTH OF 132# RE RAIL AND PAIRS OF COMPROMISE BARS FOR EACH RAIL. SEE MBTA STANDARD DRAWING No. 1328 FOR DETAILS.
11. STANDARD TRACK GAUGE SHALL BE 4'-8 1/2" WHEN MEASURED BETWEEN THE RUNNING EDGES, 5/8" BELOW THE TOP OF RAIL FOR THE COMMUTER RAIL.
12. THE CONTRACTOR SHALL REFER TO AND COMPLY WITH THE CURRENT ISSUE OF MASSACHUSETTS BAY TRANSPORTATION AUTHORITY RAIL OPERATIONS BOOK OF STANDARD PLANS FOR TRACK DETAILS RELATED TO THE FOLLOWING ELEMENTS: TIES, TIE SPACING AND SPIKING, SPIKES, TIE PLATES, FASTENERS, RAIL, AND ALL TURNOUT LAYOUTS AND DETAILS CORRESPONDING TO THE TURNOUT PROPOSED IN THESE PLANS.
13. ALL PROPOSED CROSS SECTION EMBANKMENT SLOPES ARE 2:1, UNLESS SPECIFICALLY DENOTED OTHERWISE.

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	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
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NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
GENERAL NOTES

vhb HNTB
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

PROJECT MANAGER Date

HORIZ: NONE
VERT: NONE
DATE: 08/04/2017

DES. BY	DR. BY	CHK. BY
ADZ	RRD	KJC

PLAN NO.

SHEET GN-302

ISSUE

Plotted on November 28, 2017 3:52 PM

FILE NAME: SEGMENT3_EV(GN_WAMSUTTA).DWG

ABBREVIATIONS

GENERAL

ABD	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
CAB.	CABINET
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 (or ℄)	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CONC	CONCRETE
CONST	CONSTRUCTION
CWK	CONCRETE WALK
DI	DROP INLET
DIA (or Ø)	DIAMETER
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
DWY	DRIVEWAY
DYL	DOUBLE YELLOW LINE
EC	EROSION CONTROL
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRIC MANHOLE
EOP (or EP)	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FES	FLARED END SECTION
FT	FOOT
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HDPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
IN	INCH
INV (or I)	INVERT
JCT	JUNCTION
L (or LT)	LEFT
L	LENGTH (OF CURVE)
LB	LEACH BASIN
LF	LINEAR FEET
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MBTA	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
MCRR	MASSACHUSETTS COASTAL RAILROAD
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

ABBREVIATIONS (cont.)

GENERAL

NIC	NOT IN CONTRACT
NO.	NUMBER
OCS	OVERHEAD CONTACT SYSTEM
OFF	OFFSET
OHW	OVERHEAD WIRE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PED	PEDESTRIAN
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
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY
R (or RT)	RADIUS OF CURVATURE, RIGHT, RIM
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
RGS	RIGID GALVANIZED STEEL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
S	SLOPE
SB	STONE BOUND
SD	STORM DRAIN
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET, STONE
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SIH	SIGNAL INSTRUMENT HOUSE
SW	SIDEWALK
SWEL	SOLID WHITE EDGE LINE
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TMH	TELEPHONE MANHOLE
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
U.S.G.S.	UNITED STATES GEOLOGICAL SURVEY
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
WMH	WATER MANHOLE
WQS	WATER QUALITY STRUCTURE
X-SECT	CROSS SECTION

RAILROAD TRACK / SIGNAL ABBREVIATIONS

CS	CURVE TO SPIRAL
CWR	CONTINUOUSLY WELDED RAIL
Ea	ACTUAL SUPERELEVATION
LB.	POUND
LVC	LENGTH OF VERTICAL CURVE
P/F	PASSENGER FREIGHT
PS	POINT OF SWITCH
r	RATE OF CHANGE
R	RADIUS
RE	AREMA (AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION)
SC	SPIRAL TO CURVE
S.E.	SUPER ELEVATION
ST	SPIRAL TO TANGENT
STA	STATION
TS	TANGENT TO SPIRAL
T/R	TOP OF RAIL

ENVIRONMENTAL ABBREVIATIONS

BF	BANK FLAG
BLSF	BORDERING LAND SUBJECT TO FLOODING
BVW	BORDERING VEGETATED WETLANDS
CVP	CERTIFIED VERNAL POOL
LSCSF	LAND SUBJECT TO COASTAL STORM FLOWAGE
LUW	LAND UNDER WATER
RA	RIVERFRONT AREA
WF	WETLAND FLAG
WL	WETLAND

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DES. BY	DR. BY	CHK. BY
ADZ	RRD	KJC

PLAN NO.

SHEET GN-303

ISSUE

Plotted on November 28, 2017 3:52 PM

FILE NAME: SEGMENT3_EV(LG2_WAMSUTTA).DWG

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WV	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
99 / 100		CONTOURS (ON-THE-GROUND SURVEY DATA)
99 / 100		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 12 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 12 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 12 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 12 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 12 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 12 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
x	x	6' HIGH CHAIN LINK FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
℄		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		RIGHT OF WAY
		EASEMENT
	PS	POINT OF SWITCH
#10		POINT OF SWITCH - MANUAL WITH ELECTRIC LOCK - POS
#10		POINT OF SWITCH - POWERED - POS
		CENTERLINE OF STREAM
		PERMANENT EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
RRSG	RRSG	RAILROAD SIGNAL
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE
RXR	RXR	RAILROAD GRADE CROSSING

ENVIRONMENTAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		LIMIT OF GRADING
	EC EC EC EC EC	EROSION CONTROL / LIMIT OF WORK
		100 YR-FLOODPLAIN / BLSF
		RIVERFRONT AREA
		BANK
		BORDERING VEGETATED WETLAND
		100 FT WETLAND BUFFER ZONE
		200 FT RIVERFRONT AREA
		EDGE OF CHANNEL
		PERMANENT BVW / BANK IMPACT
		TEMPORARY BVW / BANK IMPACT
		PERMANENT LSCSF IMPACT
		TEMPORARY LSCSF IMPACT

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
LEGEND SHEET

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-15-17	RTC CON. COMM. 11/06/17	SK	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

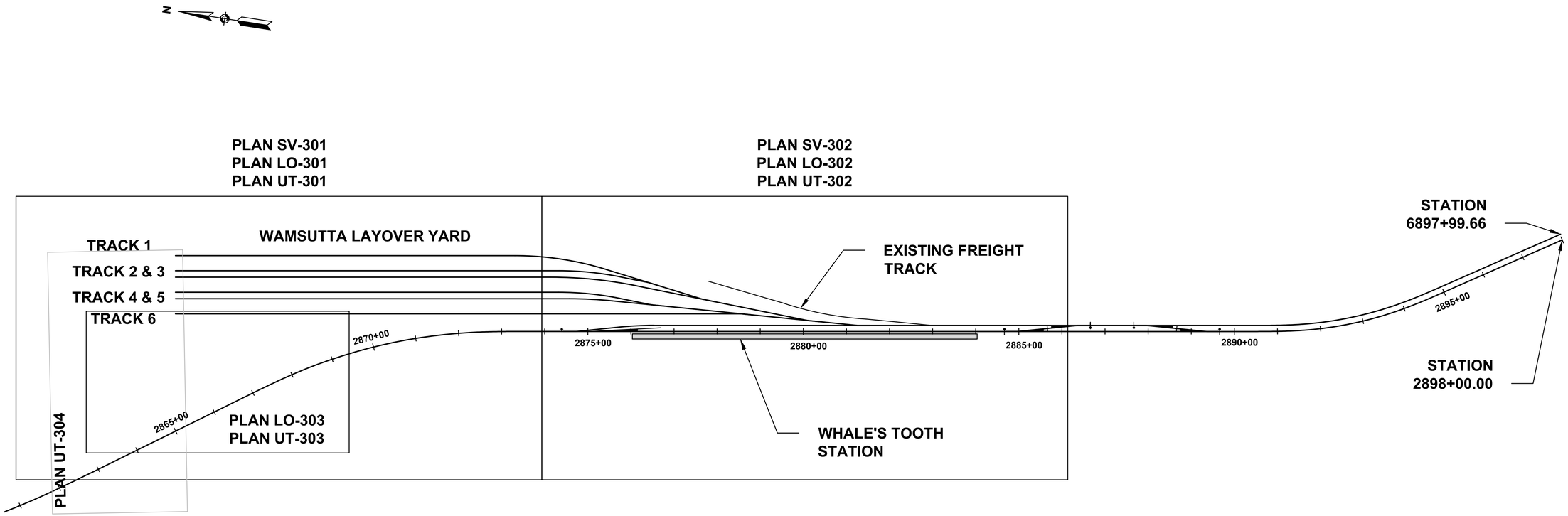
PLAN NO.

SHEET GN-304

ISSUE

Plotted on November 28, 2017 3:52 PM

FILE NAME: SEGMENT3_EVLG_WAMSUTTA).DWG



0 125 250 375 500

SCALE: 1" = 125'

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ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
KEY PLAN

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

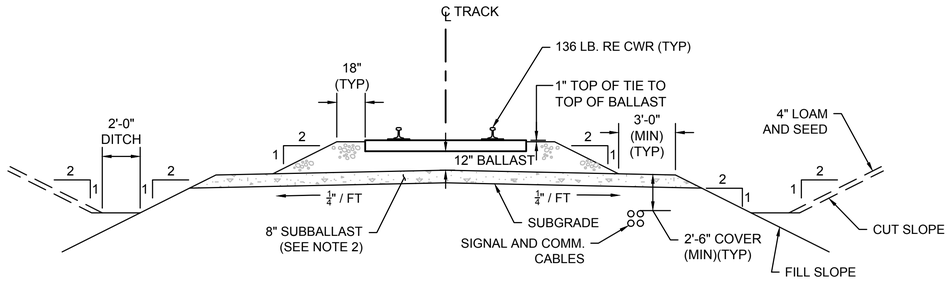
HORIZ: AS SHOWN	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

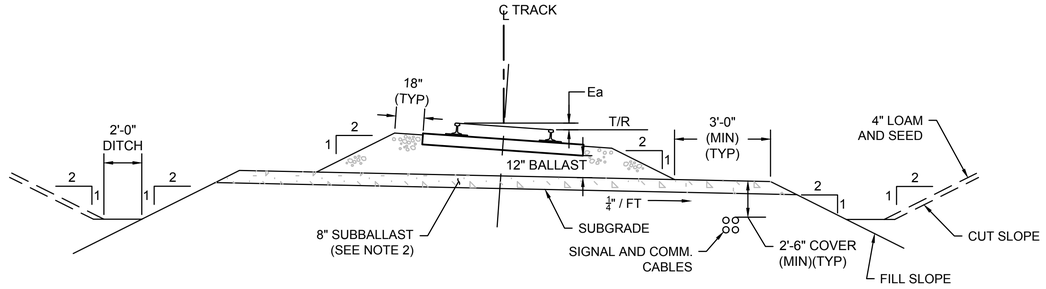
SHEET CV-301

ISSUE

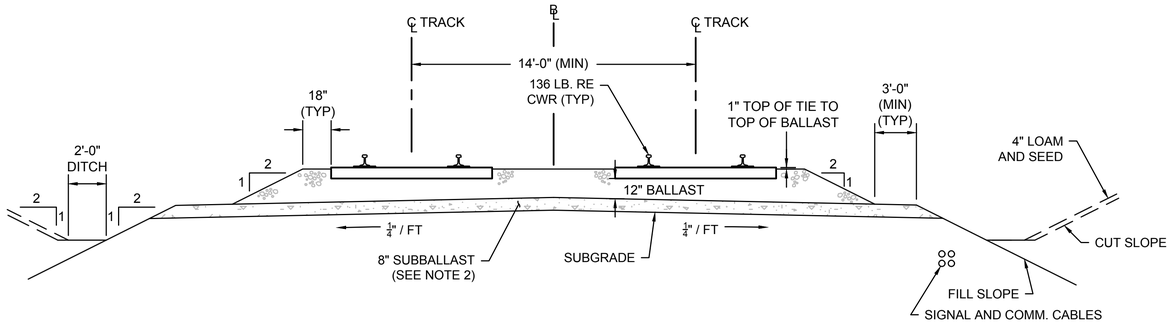
FILE NAME: SEGMENT3_EV(KP_WAMSUTTA).DWG



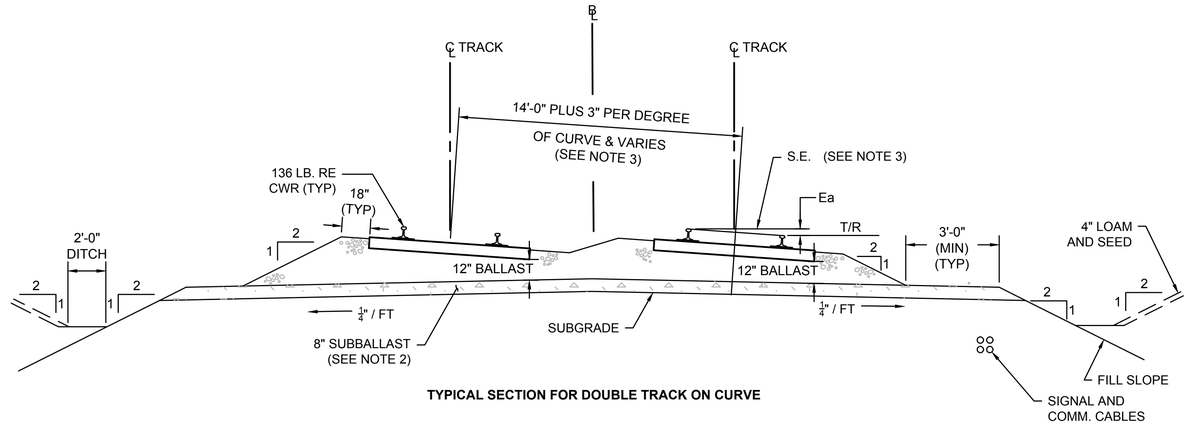
TYPICAL SECTION FOR SINGLE TRACK ON TANGENT



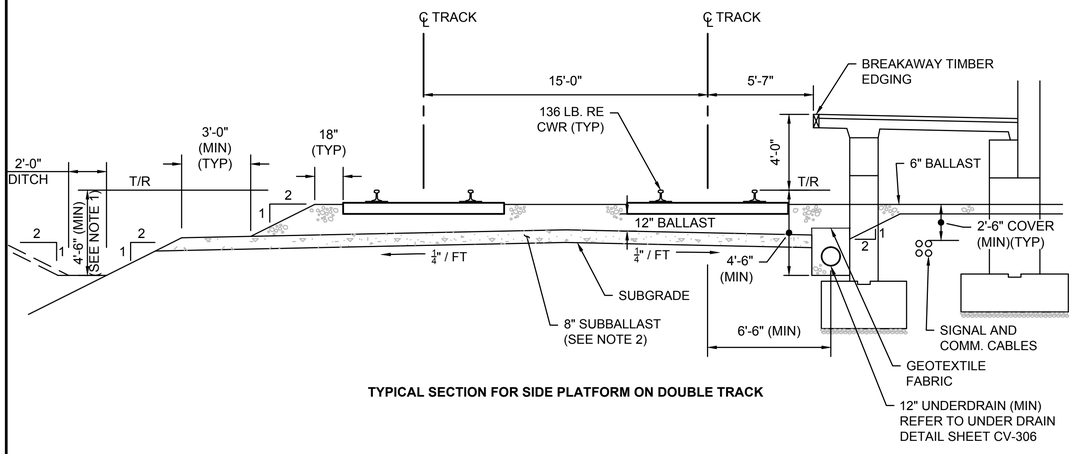
TYPICAL SECTION FOR SINGLE TRACK ON CURVE



TYPICAL SECTION FOR DOUBLE TRACK ON TANGENT



TYPICAL SECTION FOR DOUBLE TRACK ON CURVE



TYPICAL SECTION FOR SIDE PLATFORM ON DOUBLE TRACK

NOTES:

1. AT LOCATIONS WHERE SUFFICIENT SIDE DITCH IS NOT POSSIBLE, USE PERFORATED PIPE UNDERDRAIN (12" MIN. DIA.)
2. IN NEW CONSTRUCTION, WHEN SUBGRADE CONDITIONS WARRANT THE USE OF GEOTEXTILE FABRIC, PLACE THE FABRIC BENEATH THE SUBBALLAST.
3. WHENEVER THE OUTSIDE TRACK HAS THE GREATER SUPERELEVATION, INCREASE THE TRACK CENTERS 3 1/2" PER 1" OF SUPERELEVATION DIFFERENCE.

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
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CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
TYPICAL SECTIONS 1

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: NONE
VERT: NONE
DATE: 08/04/2017

DES. BY	DR. BY	CHK. BY
ADZ	RRD	KJC

PLAN NO.

SHEET CV-302

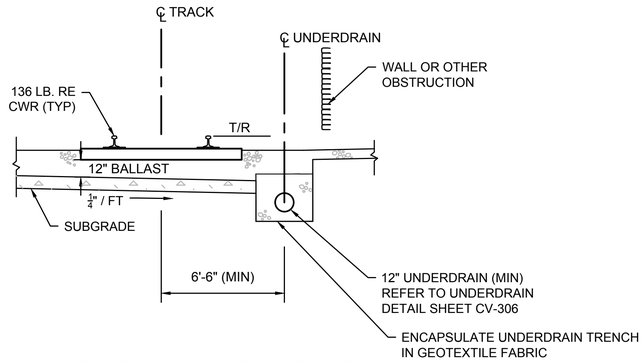
ISSUE

NOTES:

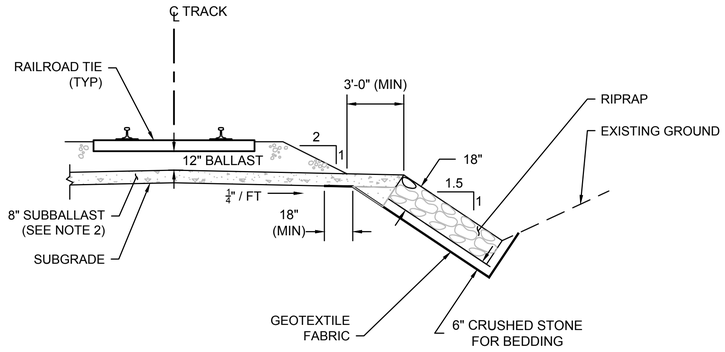
1 AT LOCATIONS WHERE SUFFICIENT SIDE DITCH IS NOT POSSIBLE, USE PERFORATED PIPE UNDERDRAIN (12" MIN. DIA.)

2 IN NEW CONSTRUCTION, WHEN SUBGRADE CONDITIONS WARRANT THE USE OF GEOTEXTILE FABRIC, PLACE THE FABRIC BENEATH THE SUBBALLAST.

3 WHENEVER THE OUTSIDE TRACK HAS THE GREATER SUPERELEVATION, INCREASE THE TRACK CENTERS 3 1/2" PER 1" OF SUPERELEVATION DIFFERENCE.



SECTION WHEN SIDE DITCH IS NOT POSSIBLE

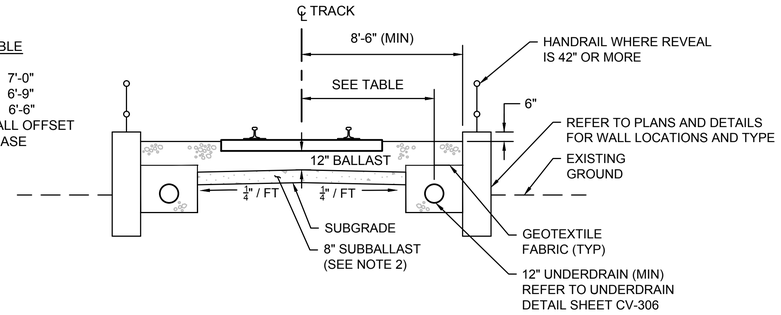


TYPICAL SECTION WITH RIPRAP END TREATMENT
(FOR USE WHERE SIDE SLOPE IS 1.5:1 TO AVOID R.O.W. OR ENV. IMPACT).

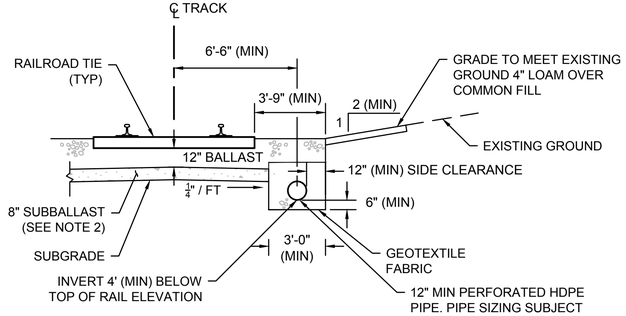
TABLE

12" PIPE	7'-0"
18" PIPE	6'-9"
24" PIPE	6'-6"

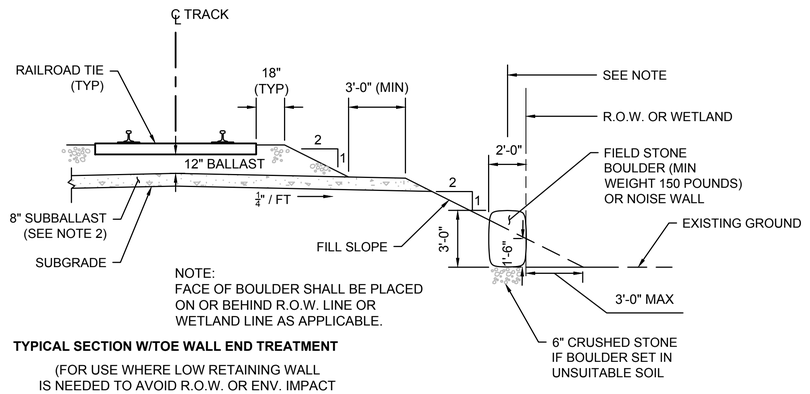
OVER 24" WALL OFFSET MUST INCREASE



TYPICAL SECTION FOR TRACK WITH RETAINING WALLS

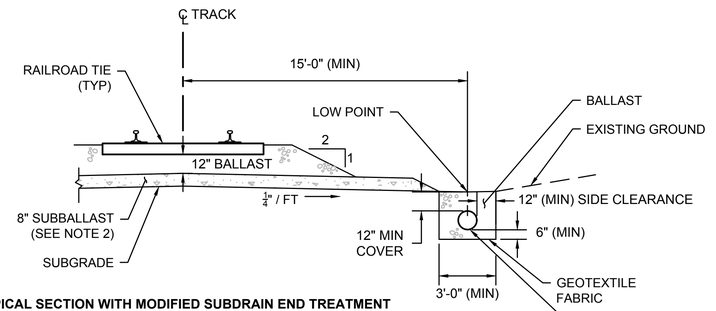


TYPICAL TRACK SUBDRAIN
(FOR USE WHERE SUBDRAIN IS INSIDE TYPICAL LIMIT OF SUBBALLAST).



NOTE:
FACE OF BOULDER SHALL BE PLACED ON OR BEHIND R.O.W. LINE OR WETLAND LINE AS APPLICABLE.

TYPICAL SECTION W/TOE WALL END TREATMENT
(FOR USE WHERE LOW RETAINING WALL IS NEEDED TO AVOID R.O.W. OR ENV. IMPACT AND 1.5:1 SLOPE DOES NOT AVOID IMPACT).



TYPICAL SECTION WITH MODIFIED SUBDRAIN END TREATMENT
(FOR USE WHERE SUBDRAIN IS BEYOND TYPICAL LIMIT OF SUBBALLAST).

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
TYPICAL SECTIONS 2

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
PROJECT MANAGER Date

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HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
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PLAN NO.
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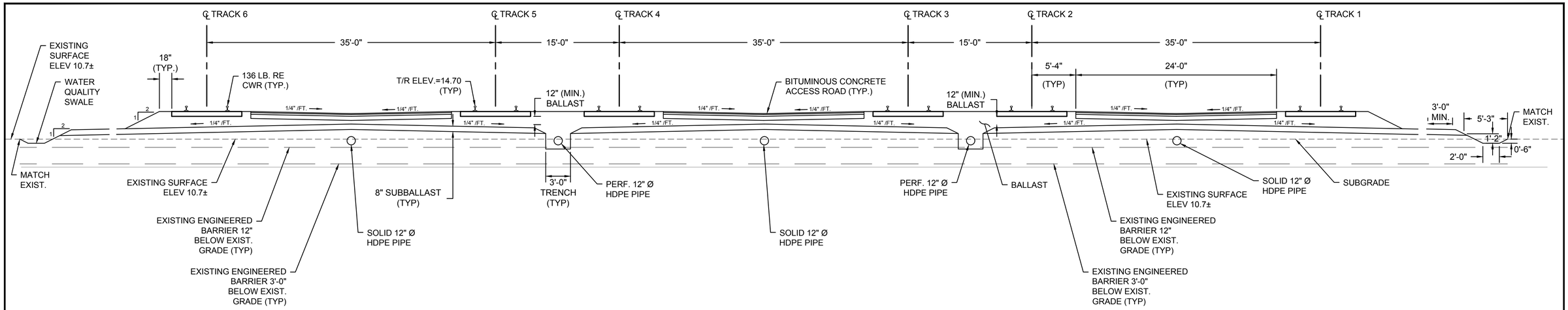
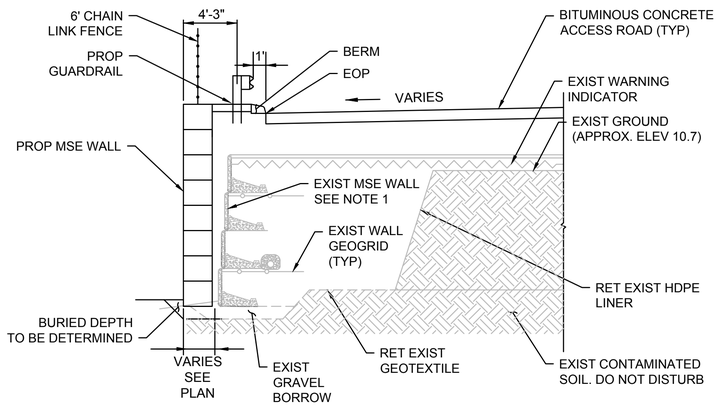


TYPICAL SECTION THROUGH LAYOVER YARD (LOOKING NORTH)

N.T.S.

FOR LIMITS OF ENGINEERED BARRIERS
REFER TO LAYOUT PLANS LO-301 TO LO-302

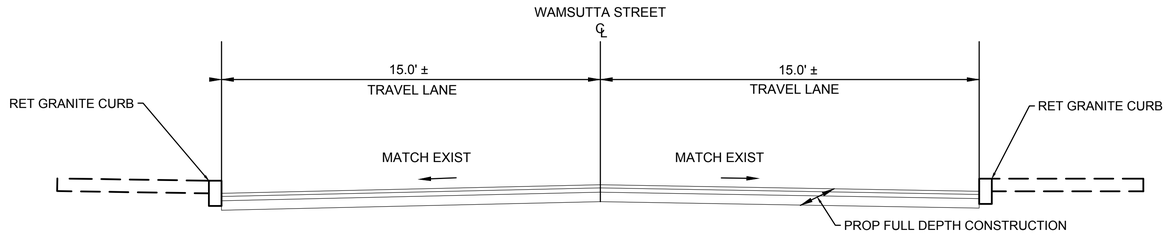


TYPICAL SECTION AT MSE WALL

N.T.S.

WALL NOTES

1. EXISTING MSE WALL WILL BE REMOVED AND REPLACED WITH PROPOSED MSE WALL.



TYPICAL SECTION FOR WAMSUTTA STREET

N.T.S.

PAVEMENT NOTES

PROPOSED BITUMINOUS CONCRETE ACCESS ROAD

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)

INTERMEDIATE COURSE: 2.5" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC-19.0)

SUBBASE: 8" GRAVEL BORROW TYPE B (SEE NOTE 5)

PROPOSED FULL DEPTH PAVEMENT TRANSITION

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)
1.5" PAVEMENT MICRO MILLING

PROPOSED HOT MIX ASPHALT DRIVEWAY AND PARKING

SURFACE COURSE: 1.5" SUPERPAVE SURFACE COURSE - 9.5 (SSC-9.5)

INTERMEDIATE COURSE: 2" SUPERPAVE INTERMEDIATE COURSE - 12.0 (SIC-12.0)

SUBBASE: 8" GRAVEL BORROW - TYPE B

PROPOSED CEM CONC SIDEWALKS & WHEELCHAIR RAMPS

SURFACE COURSE: 4" CEMENT CONCRETE (AIR ENTRAINED 4000 PSI - $\frac{3}{4}$" - 610 LB)
SUBBASE: 8" GRAVEL BORROW - TYPE B

ROADWAY NOTES

1. ALL SUPERPAVE HOT MIX ASPHALT SHALL BE A WARM MIX ASPHALT TECHNOLOGY.
2. ALL MILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.07 GALLONS PER SQUARE YARD AND ALL UNMILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.05 GALLONS PER SQUARE YARD PRIOR TO PAVING.
3. TEMPORARY CONSTRUCTION SHALL USE SUPERPAVE HOT MIX ASPHALT MIXTURES AND MAY NOT BE SUBJECT TO THE SAME SAMPLING AND TESTING REQUIRED FOR PERMANENT CONSTRUCTION.
4. WHERE EXISTING SUBBASE/SUBGRADE IS FOUND TO MEET SPECIAL BORROW SPECIFICATION REQUIREMENTS, THE EXISTING MATERIAL MAY BE LEFT IN PLACE, AFTER APPROVAL OF THE ENGINEER.
5. SUBBASE SHALL BE SEPARATED FROM BALLAST BY A LAYER OF GEOTEXTILE FILTER FABRIC.

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
TYPICAL SECTIONS 3

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
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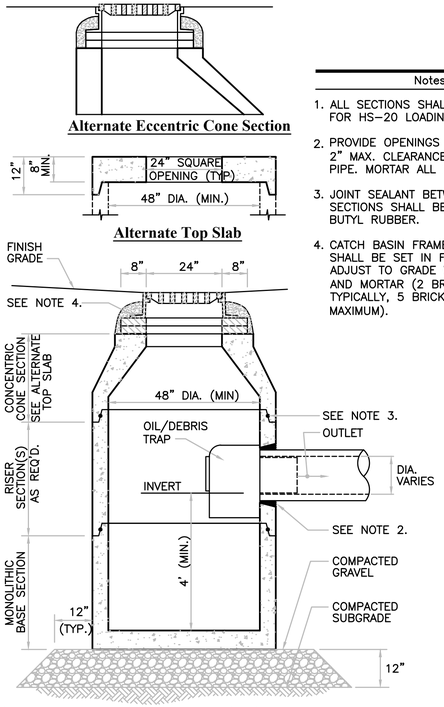
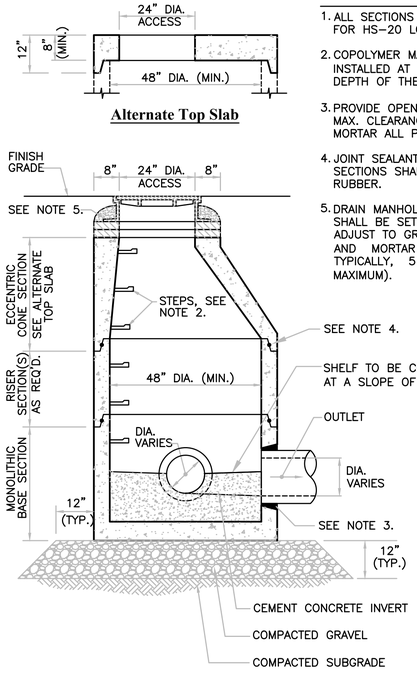


Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB) with Oil/Debris Trap

SCALE: N.T.S.

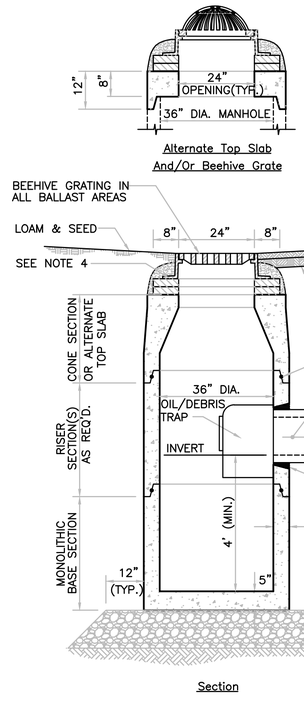


Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Drain Manhole (DMH)

SCALE: N.T.S.

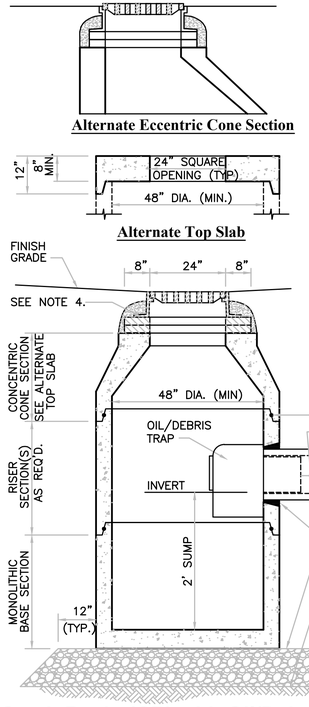


Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Ballast Inlet

SCALE: N.T.S.

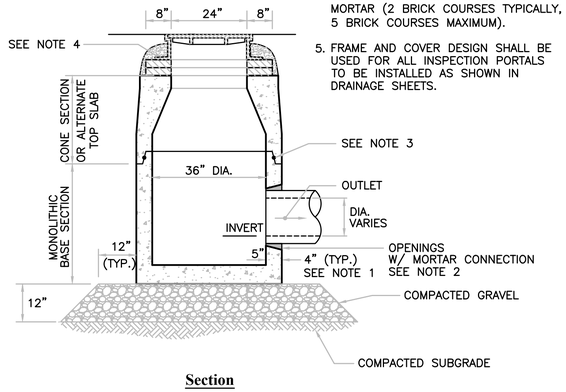


Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB) with Oil/Debris Trap - 2' Sump

SCALE: N.T.S.

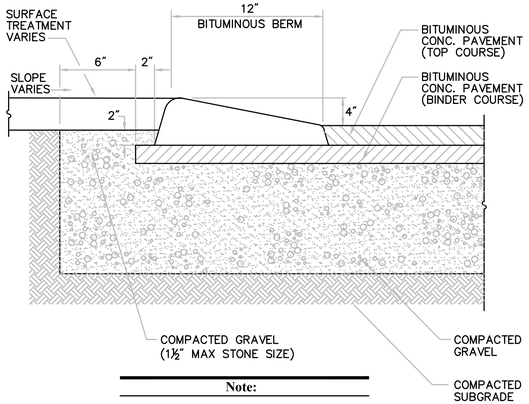


Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS–20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CLEANOUT FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).
5. FRAME AND COVER DESIGN SHALL BE USED FOR ALL INSPECTION PORTALS TO BE INSTALLED AS SHOWN IN DRAINAGE SHEETS.

Cleanout

SCALE: N.T.S.



Note:

ALL CURBING TO BE MACHINE EXTRUDED

Bituminous Berm (BB)

SCALE: N.T.S.

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
DETAILS 1

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

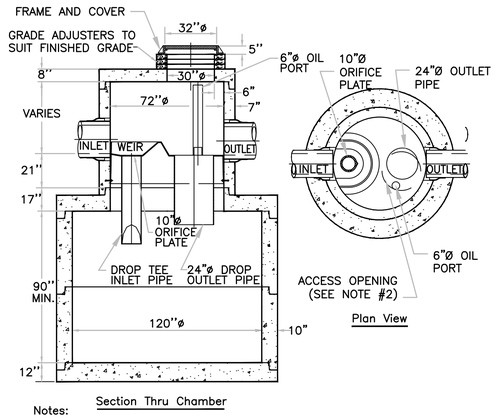
PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET CV-305

ISSUE

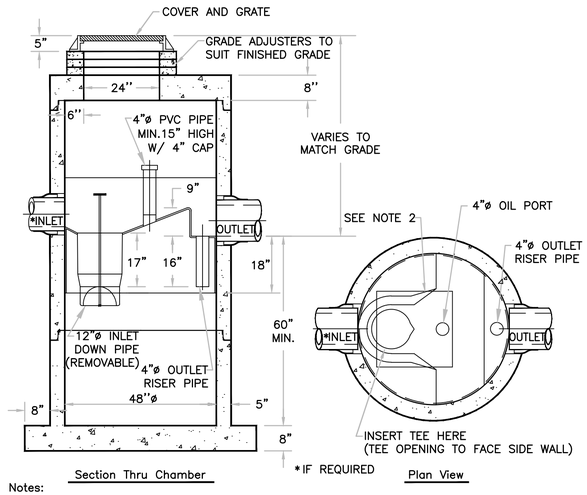


Notes:

1. THE USE OF FLEXIBLE CONNECTION IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL PORT.
3. APPROVED EQUIVALENT MUST PROVIDE 80% TSS REMOVAL FOR 2.9 ACRES OF IMPERVIOUS AREA.

Water Quality Unit 1 (WQU)

SCALE: N.T.S.

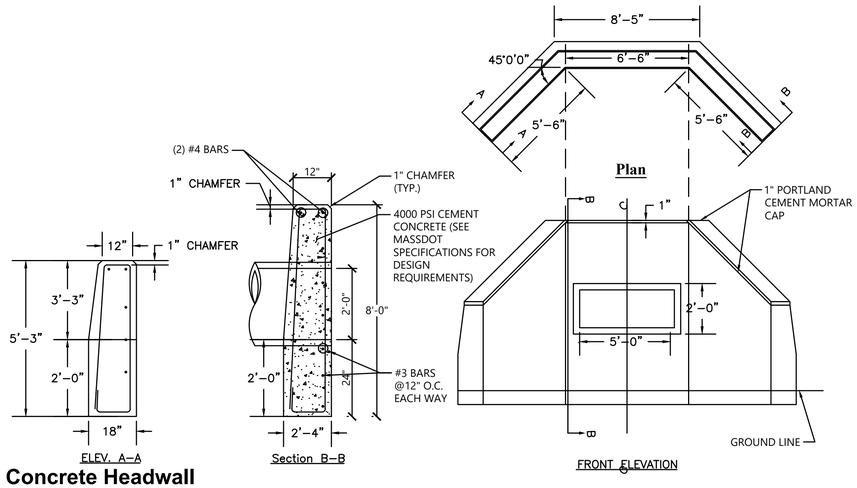


Notes:

1. THE USE OF FLEXIBLE CONNECTION IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE INLET DROP PIPE AND THE OIL PORT.
3. APPROVED EQUIVALENT MUST PROVIDE 80% TSS REMOVAL FOR 0.32 ACRES OF IMPERVIOUS AREA.

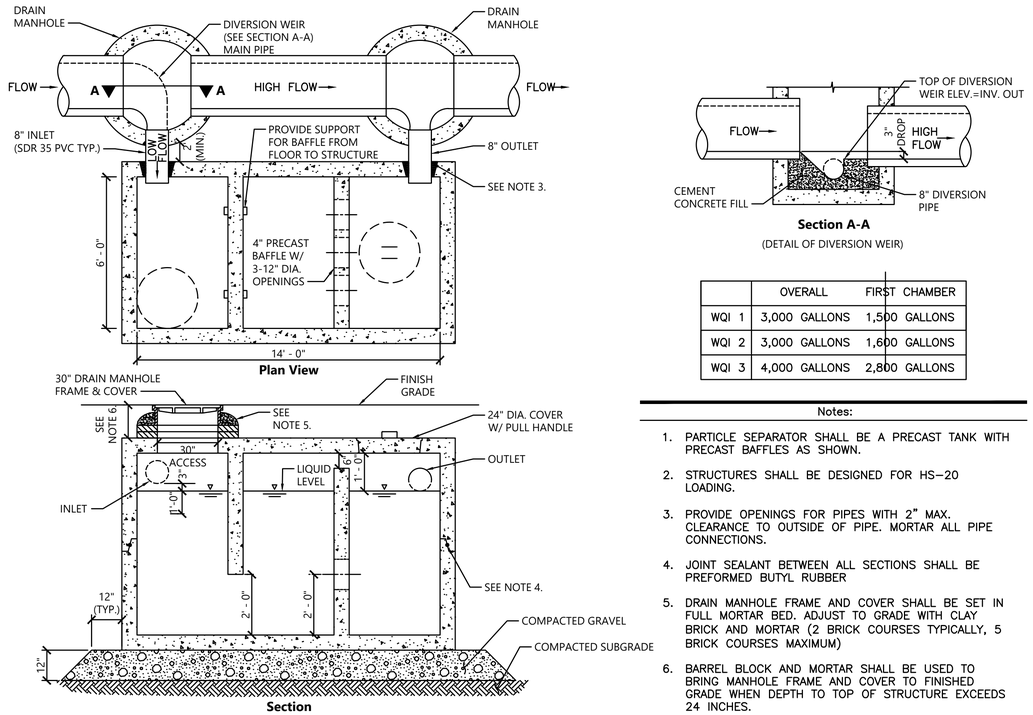
Water Quality Unit 3 (WQU)

SCALE: N.T.S.



Concrete Headwall

SCALE: N.T.S.



Notes:

1. PARTICLE SEPARATOR SHALL BE A PRECAST TANK WITH PRECAST BAFFLES AS SHOWN.
2. STRUCTURES SHALL BE DESIGNED FOR HS-20 LOADING.
3. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN ALL SECTIONS SHALL BE PREFORMED BUTYL RUBBER
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)
6. BARREL BLOCK AND MORTAR SHALL BE USED TO BRING MANHOLE FRAME AND COVER TO FINISHED GRADE WHEN DEPTH TO TOP OF STRUCTURE EXCEEDS 24 INCHES.

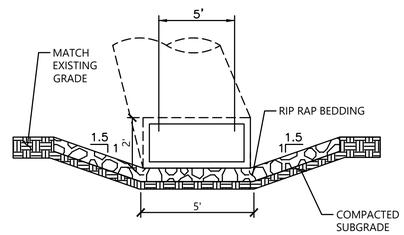
Section A-A

(DETAIL OF DIVERSION WEIR)

	OVERALL	FIRST CHAMBER
WQI 1	3,000 GALLONS	1,500 GALLONS
WQI 2	3,000 GALLONS	1,600 GALLONS
WQI 3	4,000 GALLONS	2,800 GALLONS

Water Quality Inlet Tank

SCALE: N.T.S.



Channel Outlet Section

SCALE: N.T.S.

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN DETAILS 2

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

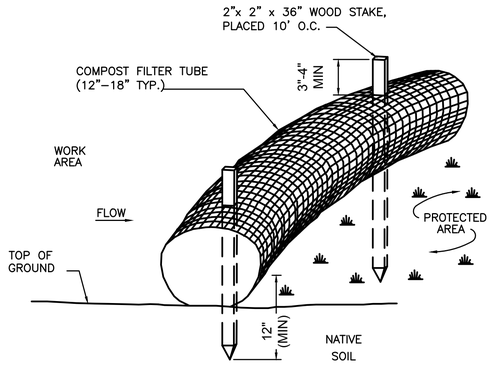
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:

PROJECT MANAGER Date | PROJECT MANAGER Date

HORIZ: NONE
VERT: NONE
DATE: 08/04/2017

DES. BY	DR. BY	CHK. BY
ADZ	RRD	KJC

PLAN NO.
SHEET CV-306
ISSUE

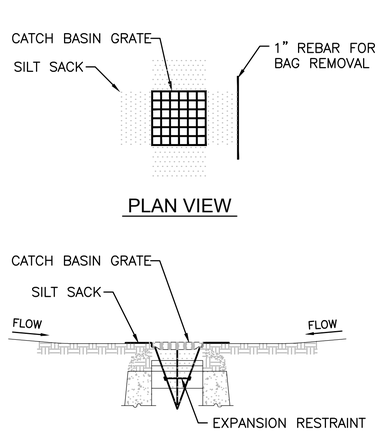


NOTES:

1. FILTER TUBE SHALL BE FILLED BY BLOWN IN ORGANIC COMPOST AND PLACED AS ILLUSTRATED ON THE PROJECT PLANS.
2. COMPOST FILTER TUBES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIRED OR REPLACED AS NEEDED.
3. AT COMPLETION OF PROJECT, COMPOST FILTER TUBES SHALL BE CUT OPEN AND COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
4. THE EMPTY FILTER TUBE FABRIC SHALL BE COLLECTED AND DISPOSED OF PROPERLY.

Linear Sedimentation and Erosion Control

SCALE: N.T.S.

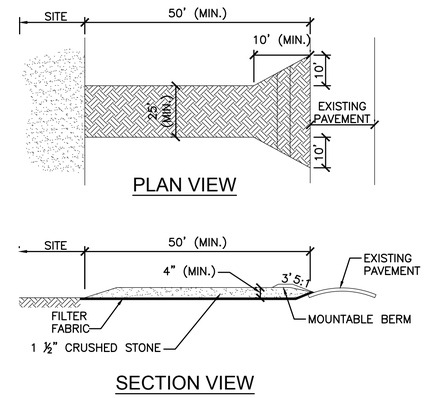


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

Inlet Protection - Silt Sack In Catch Basin

SCALE: N.T.S.

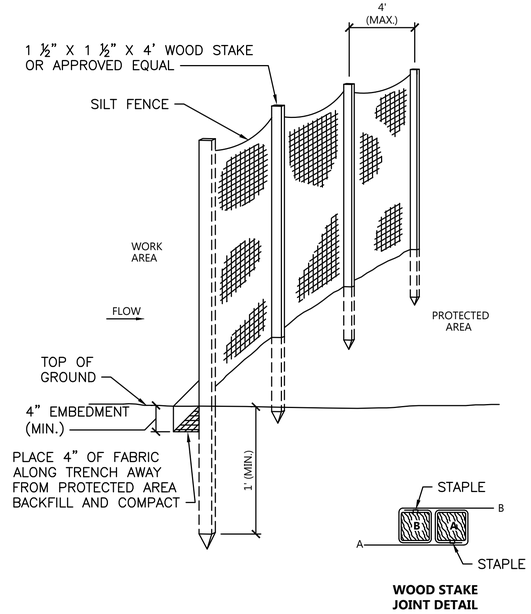


NOTES:

1. EXIT WIDTH SHALL BE A TWENTY–FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

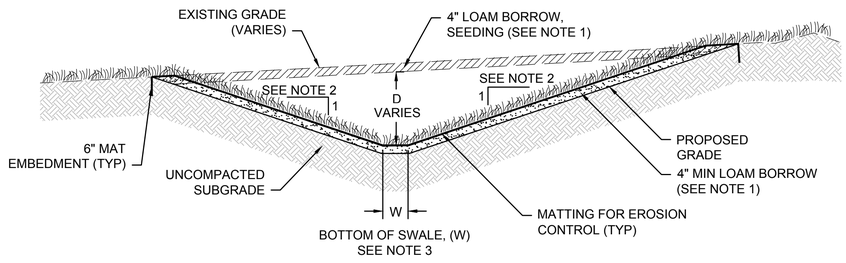
Stabilized Construction Exit

SCALE: N.T.S.



Silt Fence Barrier

SCALE: N.T.S.



NOTES:

1. PLACE LOAM BORROW TO A MINIMUM DEPTH OF 4". SEEDED WITH ITEM 765.457 INFILTRATION BASIN BOTTOM/SWALE MIX.
2. SIDE SLOPES TO MATCH PROPOSED OR EXISTING GRADE AS SHOWN ON PLANS BUT SHOULD NOT EXCEED 4:1.
3. CONTRACTOR TO MATCH EXISTING SWALE GEOMETRY WHERE REMOVING CONCRETE SWALE. BOTTOM SWALE WIDTH (W), LABELED ON PLANS, IS APPROXIMATE AND VARIES FROM 3' TO 7'.

Grass Channel Section

SCALE: N.T.S.

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	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
DETAILS 3

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

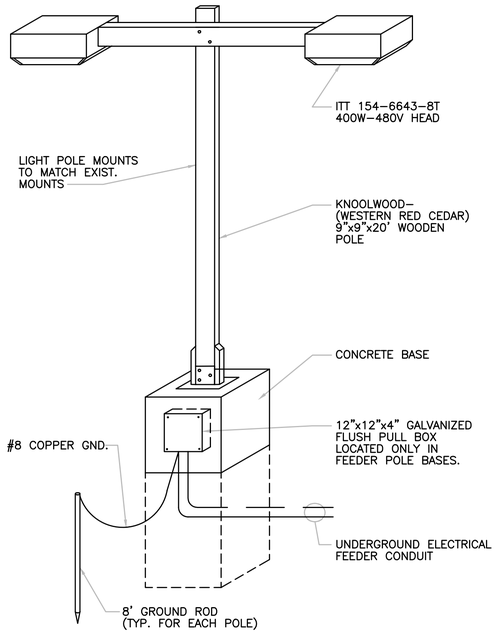
PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

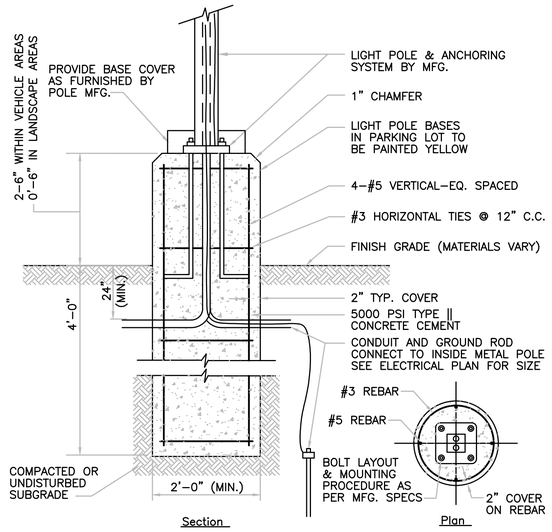
SHEET CV-307

ISSUE



Light Pole

SCALE: N.T.S.

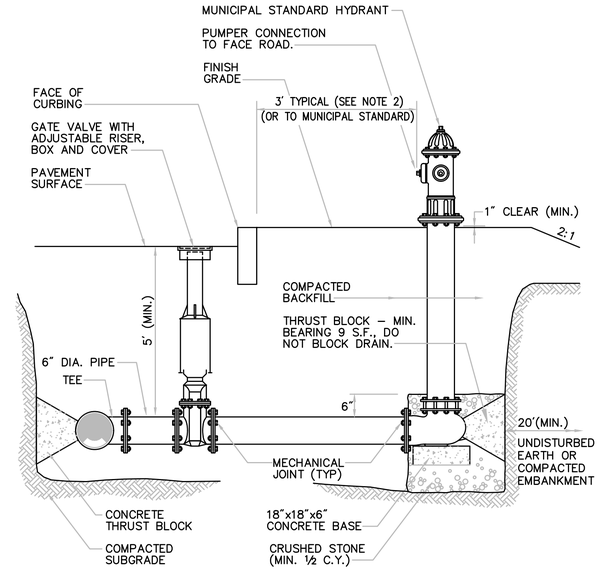


Notes:

LIGHT POLE FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON FINAL POLE AND FIXTURE SELECTION AND GEOTECHNICAL SITE INVESTIGATION.

Light Pole Foundation Detail (Up to 15' Pole)

SCALE: N.T.S.

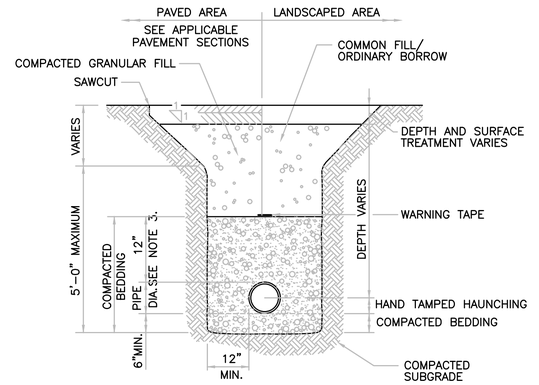


Notes:

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.

Hydrant Construction

SCALE: N.T.S.

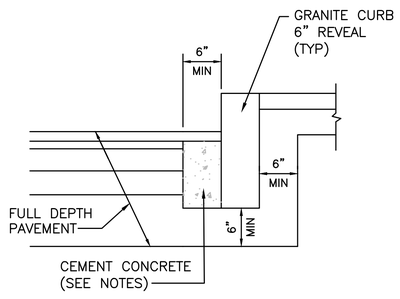


Notes:

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
3. FOR HDPE PIPE, DIMENSION IS 24 INCHES.

Utility Trench

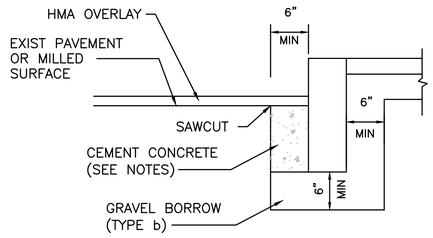
SCALE: N.T.S.



NOTES:
1. TO BE PLACED IF CURB IS INSTALLED AFTER HOT MIX ASPHALT
2. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB
3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

Granite Curb in Full Depth Pavement

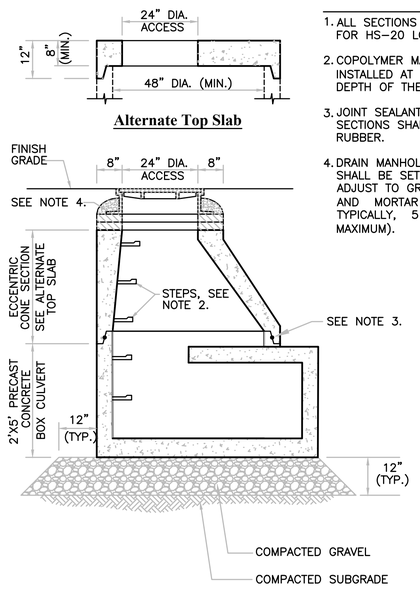
SCALE: N.T.S.



NOTES:
1. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
2. SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

Granite Curb in Existing Pavement - with Overlay

SCALE: N.T.S.



Notes:

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Inspection Portal (IP)

SCALE: N.T.S.

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
DETAILS 4

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

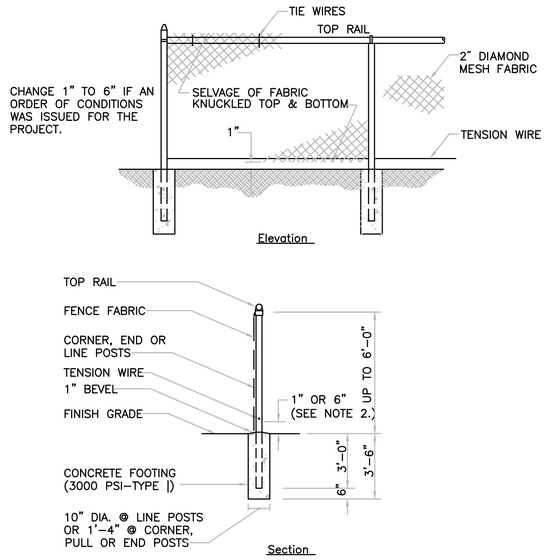
PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET CV-308

ISSUE

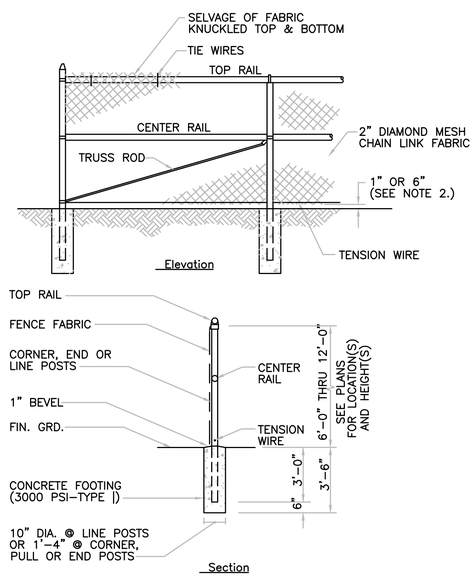


Note:

1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.
2. PROVIDE 6" OF CLEARANCE BETWEEN THE BOTTOM OF FABRIC AND FINISH GRADE AROUND BMP IF AN ORDER OF CONDITIONS WAS ISSUED FOR THE PROJECT.

Chain Link Fence up to 6'

SCALE: N.T.S.

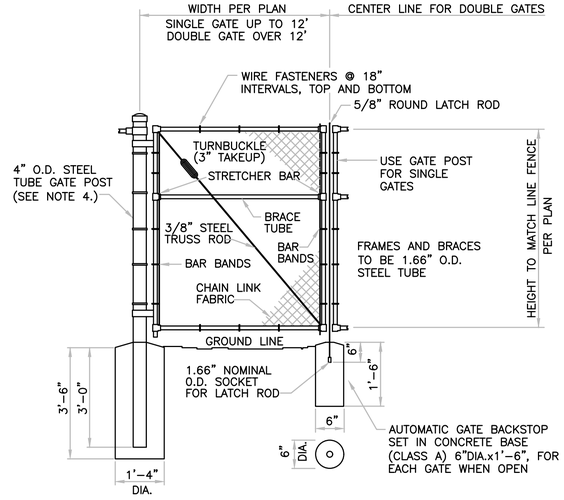


Note:

1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.
2. PROVIDE 6" OF CLEARANCE BETWEEN THE BOTTOM OF FABRIC AND FINISH GRADE AROUND BMP IF AN ORDER OF CONDITIONS WAS ISSUED FOR THE PROJECT.

6' to 12' Chain Link Fence

SCALE: N.T.S.

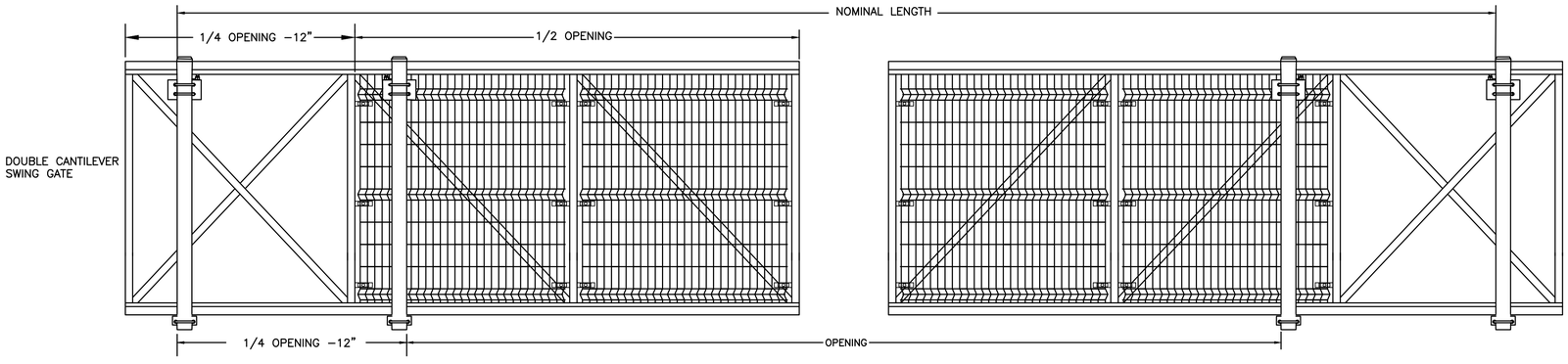


Notes:

1. CHAIN LINK FABRIC FOR GATES TO BE THE SAME AS REQUIRED FOR FENCE.
2. GATE POST BASE–PORTLAND CEMENT CONCRETE (3000 PSI).
3. FENCE FABRIC, POSTS, FRAMEWORKS, AND HARDWARE SHALL BE GALVANIZED STEEL PER SPECIFICATIONS.
4. GATE POSTS TO BE USED ON EACH SIDE OF SINGLE AND DOUBLE GATE OPENINGS.

Chain Link Fence Gate

SCALE: N.T.S.



Tube Braced Cantilever Slide:

Single and Double Tube Braced Cantilever Slide Gate

N.T.S.

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	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
DETAILS 5

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

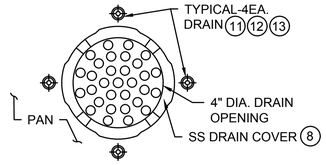
PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

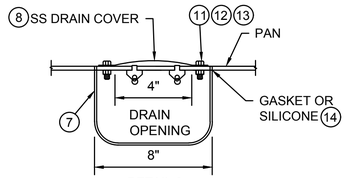
PLAN NO.

SHEET CV-309

ISSUE

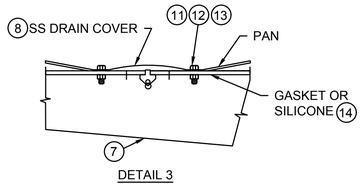


DETAIL 1

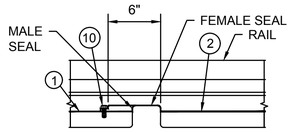


DETAIL 2

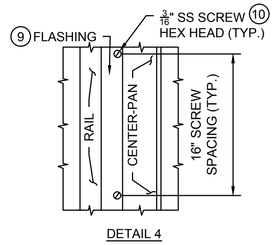
ITEM	QTY.	DESCRIPTION
1	1	CENTER PAN END-MALE
2	3	CENTER PAN FEMALE-MALE
3	1	CENTER PAN FEMALE-END
4	2	SIDE PAN END-MALE
5	6	SIDE PAN FEMALE-MALE
6	2	SIDE PAN FEMALE-END
7	5	POSI-PIPE
8	15	DRAIN COVER SS
9	5	FLASHING FRP
10		SELF-DRILLING SCREWS SS
11		BOLT HEX 5/16" SS
12		NUT HEX 5/16" SS
13		WASHER FLAT SS
14		GASKET



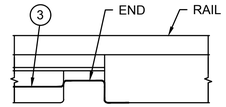
DETAIL 3



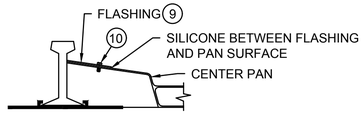
SECTION C-C



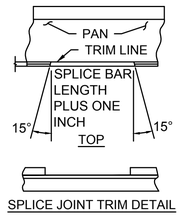
DETAIL 4



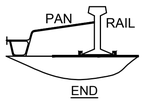
SECTION D-D



DETAIL 5



SPLICE JOINT TRIM DETAIL



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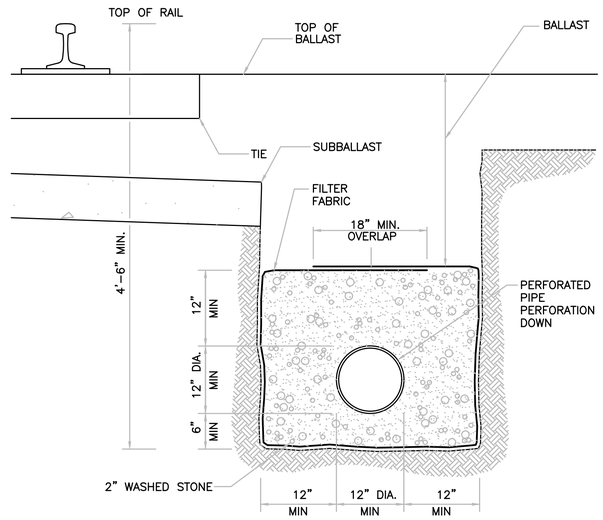
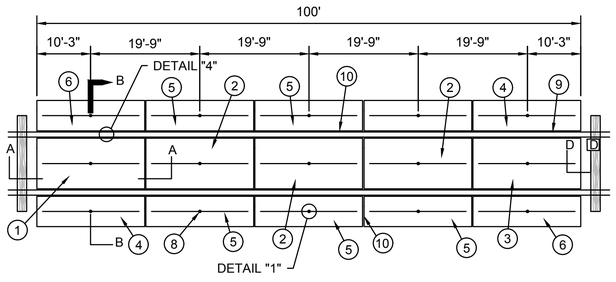
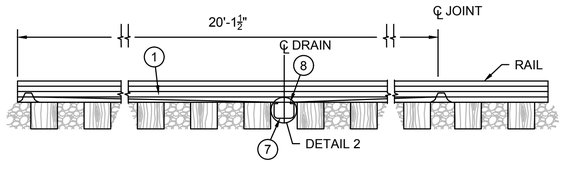


Underdrain (UD)

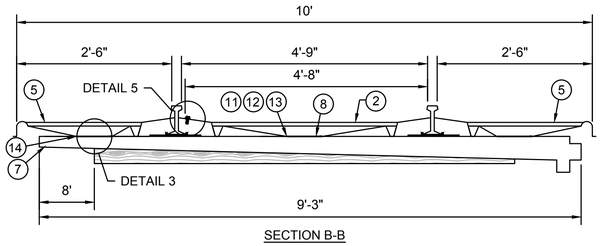
SCALE: N.T.S.



PLAN VIEW



SECTION A-A



SECTION B-B

Oil Drip Pan Section and Details Sheet

SCALE: N.T.S.

ISSUED FOR NOTICE OF INTENT

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
DETAILS 6

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

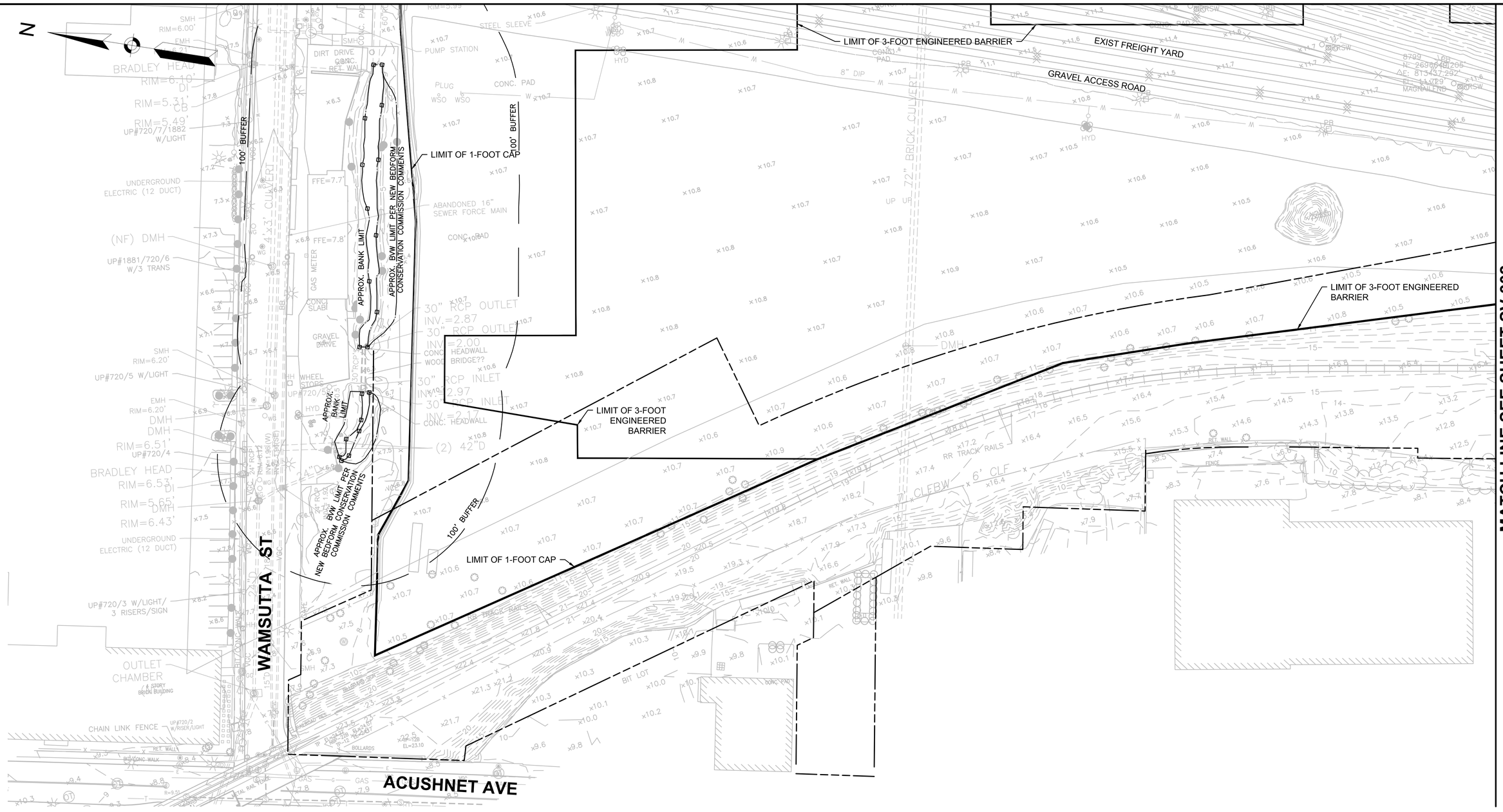
PROJECT MANAGER Date

HORIZ: NONE	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET CV-310

ISSUE



LEGEND & SYMBOLS

- RIGHT OF WAY
- BORDERING VEGETATED WETLAND
- BANK
- CL STREAM
- BLSF/LSCSF
- 25' / 200' RIVERFRONT AREA
- 100' WETLAND BUFFER ZONE
- TREE
- CONTOUR MINOR
- CONTOUR MAJOR

HOR. SCALE IN FEET
40 0 40 80

ISSUED FOR NOTICE OF INTENT

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
SITE SURVEY PLAN 1

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1" = 40'	DES. BY	DR. BY	CHK. BY
VERT: NONE	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET SV-301

ISSUE

Plotted on November 28, 2017 3:56 PM

FILE NAME: SEGMENT3_EV(SV_WAMSUTTA).DWG

ISSUED FOR NOTICE OF INTENT

LEGEND & SYMBOLS

- RIGHT OF WAY
- BORDERING VEGETATED WETLAND
- BANK
- CL STREAM
- BLSF/LSCSF
- 25' / 200' RIVERFRONT AREA
- 100' WETLAND BUFFER ZONE
- TREE
- CONTOUR MINOR
- CONTOUR MAJOR

HOR. SCALE IN FEET

40 0 40 80

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
SITE SURVEY PLAN 2

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1" = 40'	DES. BY	DR. BY	CHK. BY
VERT: 1" = 40'	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET SV-302

ISSUE

N

EROSION CONTROL

LIMIT OF 1-FOOT CAP

LIMIT OF 3-FOOT ENGINEERED BARRIER

EXIST FREIGHT YARD

LIMIT OF 3-FOOT ENGINEERED BARRIER

GRAVEL ACCESS

LIMIT OF GRADING WITH SILT FENCE

PROP SILT SACK (TYP)

℄ TRACK 1

℄ TRACK 2

℄ TRACK 3

℄ TRACK 4

℄ TRACK 5

℄ TRACK 6

EROSION CONTROL AND LIMIT OF GRADING

LIMIT OF 3-FOOT ENGINEERED BARRIER

LIMIT OF 1-FOOT CAP

PROP SILT SACK (TYP)

CONSTRUCTION EXIT/ENTRANCE

PROP SIGNAL

LIMIT OF GRADING

MATCH LINE SEE SHEET EC-301

100 YEAR FLOOD ELEVATION - 6.0
500 YEAR FLOOD ELEVATION - 15.2

HOR. SCALE IN FEET
40 0 40 80

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLAN
EROSION CONTROL PLAN 1

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	SK	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1"=40'	DES. BY	DR. BY	CHK. BY	PLAN NO.	ISSUE
VERT: NONE	DC	DC	RJC		
DATE: 08/04/2017				SHEET EC-301	

FILE NAME: SEGMENT3_EV(EC_WAMSUTTA).DWG

Plotted on November 28, 2017 4:00 PM

MATCH LINE SEE SHEET EC-300

LIMIT OF 3-FOOT ENGINEERED BARRIER

MW TOPUP3.4

CONSTRUCTION EXIT/ENTRANCE

MW UP3.0FT

LIMIT OF GRADING WITH SILT FENCE

LIMIT OF 3-FOOT ENGINEERED BARRIER

LIMIT OF 1-FOOT CAP

℄ PROP SIDING 5 FILED SEPARATELY

℄ PROP TRACK 1

LIMIT OF YARD PROJECT LAYOUT

LIMIT OF 1-FOOT CAP

℄ PROP TRACK 1 FILED SEPARATELY

PROP WHALE'S TOOTH STATION PLATFORM FILED SEPARATELY

LIMIT OF GRADING

EARL ST

VARIABLE WIDTH

100 YEAR FLOOD ELEVATION - 6.0
500 YEAR FLOOD ELEVATION - 15.2

HOR. SCALE IN FEET
40 0 40 80

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
EROSION CONTROL PLAN 2

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	SK	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

vhb INTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1"=40'	DES. BY	DR. BY	CHK. BY
VERT: NONE	DC	DC	KJC
DATE: 08/04/2017			

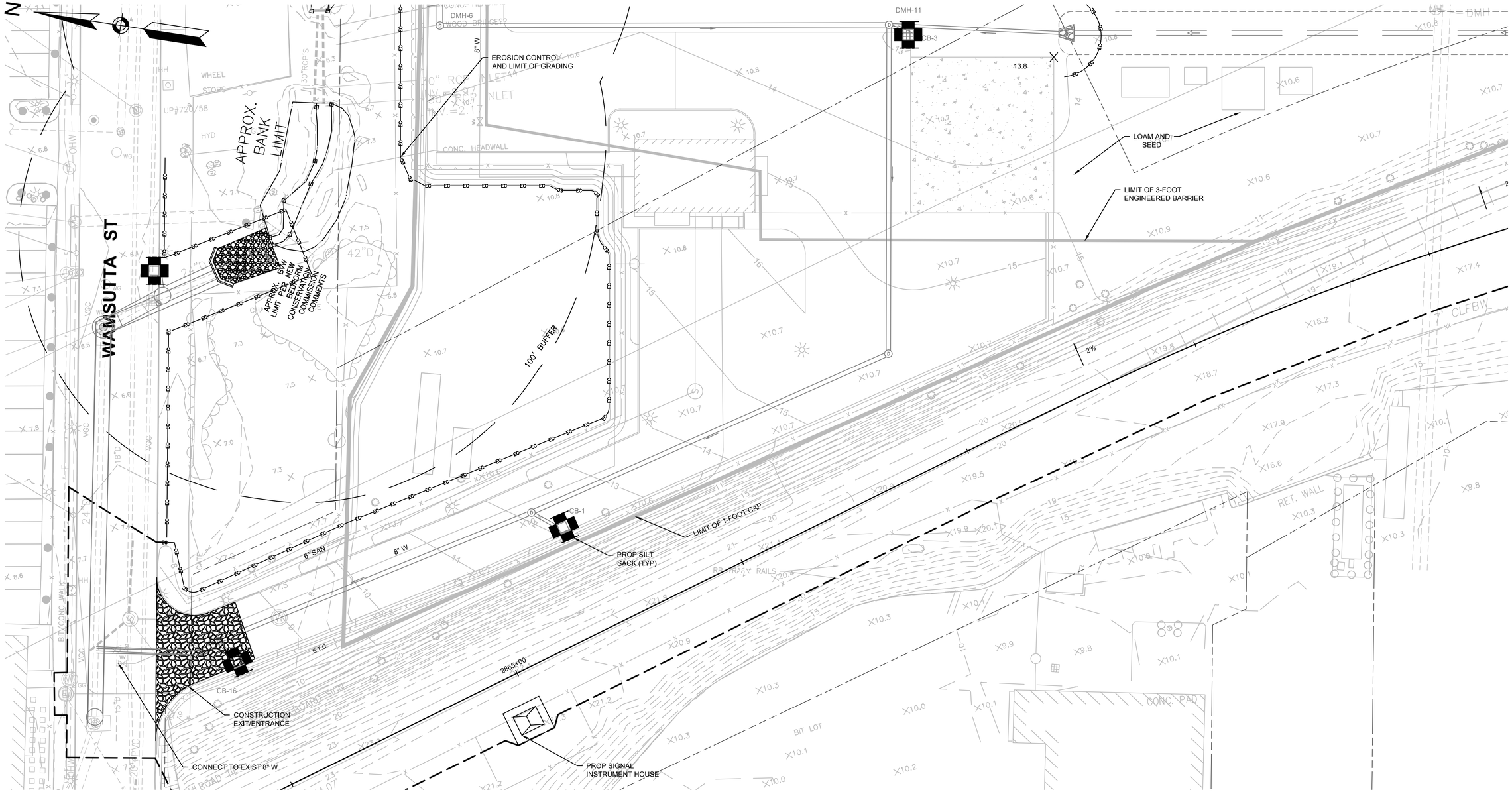
PLAN NO.

SHEET EC-302

ISSUE

FILE NAME: SEGMENT3_EV(EC_WAMSUTTA).DWG

Plotted on November 28, 2017 5:02 PM



FILE NAME: SEGMENT3_EV(EC_WAMSUTTA).DWG

Plotted on November 28, 2017 4:01 PM

ISSUED FOR NOTICE OF INTENT

HOR. SCALE IN FEET
20 0 20 40

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-7-17	RTC CON. COMM. 11/06/17	SK	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
EROSION CONTROL PLAN 3

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:

PROJECT MANAGER Date | PROJECT MANAGER Date

HORIZ: 1"=20'	DES. BY	DR. BY	CHK. BY	PLAN NO.	ISSUE
VERT: NONE	DC	DC	KJC		
DATE: 08/04/2017				SHEET EC-303	

N

RETAIN EXIST GRAVEL ACCESS ROAD

LIMIT OF 3-FOOT ENGINEERED BARRIER

LIMIT OF 3-FOOT ENGINEERED BARRIER

EXIST FREIGHT YARD

LIMIT OF 1-FOOT CAP

PROP 6' CLF (TYP)

PROP BUMPING POST (TYP)

PROP DITCH

LIMIT OF GRADING

DRIP PAN (TYP.)

100' BUFFER

PROP BIT CONC BERM

PROP GUARD RAIL W/ 6' CLF

PROP MSE WALL (REFER TO SHEET CV-304 FOR DETAIL)

FFE=7.8'

APPROX. BANK LIMIT

APPROX. BVW LIMIT PER NEW BEDFORM CONSERVATION COMMISSION COMMENTS

UP#720/7/1882 W/LIGHT

UNDERGROUND ELECTRIC (12 DUCT)

UP#1881/720/6 W/3 TRANS

UP#720/5 W/LIGHT

EMH RIM=6.20'

UP#720/4

UNDERGROUND ELECTRIC (12 DUCT)

UP#720/3 W/LIGHT/ 3 RISERS/SIGN

UP#720/2 W/RISER/LIGHT

℄ TRACK 1

℄ TRACK 2

℄ TRACK 3

℄ TRACK 4

℄ TRACK 5

℄ TRACK 6

BALLAST

24' BITUMINOUS CONCRETE ACCESS ROAD

30.00

35.00

15.00

10+00

5+00

15+00

CREW BLDG

PROP DITCH SEE NOTE 1

REM EXIST TRACK

2870+00

℄ PROP TRACK 1

LIMIT OF GRADING

PROP SIGNAL INSTRUMENT HOUSE

LIMIT OF 3-FOOT ENGINEERED BARRIER

PROP 6' CLF

REM LP

LIMIT OF 1-FOOT CAP

2865+00

REM EXIST TRACK

PROP SIGNAL INSTRUMENT HOUSE

SEE SHEET LO-303 FOR DETAILED BUILDING AND FACILITY LAYOUT IN THIS AREA

ACUSHNET AVE

MATCH LINE SEE SHEET LO-302

NOTES

1. AREA BETWEEN MAIN LINE TRACK AND YARD DITCH TO BE CAPPED WITH 6" OF 3/4" CRUSHED STONE

BANK & LAND UNDER WATER IMPACT (THIS SHEET)	
BANK	0 LF
LAND UNDER WATER	0 SF

LEGEND & SYMBOLS

- RIGHT OF WAY
- BORDERING VEGETATED WETLAND
- BANK
- CL STREAM
- BLSF/LSCSF
- 25' / 200' RIVERFRONT AREA
- 100' WETLAND BUFFER ZONE
- TREE
- CONTOUR MINOR
- CONTOUR MAJOR

HOR. SCALE IN FEET

40 0 40 80

ISSUED FOR NOTICE OF INTENT

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
SITE PLAN 1

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1" = 40'	DES. BY	DR. BY	CHK. BY
VERT: 1" = 40'	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET LO-301

ISSUE

Plotted on November 28, 2017 4:03 PM

FILE NAME: SEGMENT3_EV(LO_WAMSUTTA).DWG

MATCH LINE SEE SHEET LO-301

N

EXIST FREIGHT YARD

DRIP PAN (TYP.)

LIMIT OF 3-FOOT ENGINEERED BARRIER

PROP GATE (SINGLE CANTILEVER)

LIMIT OF YARD PROJECT LAYOUT

RETAIN EXIST FREIGHT YARD LEAD

PROP GATE (DOUBLE CANTILEVER)

LIMIT OF 3-FOOT ENGINEERED BARRIER

LIMIT OF GRADING

LIMIT OF 1-FOOT CAP

℄ PROP SIDING 5 FILED SEPARATELY

℄ TRACK 1

℄ TRACK 2

℄ TRACK 3

℄ TRACK 4

℄ TRACK 5

℄ TRACK 6

PROP DITCH

5+00

6875+00

2875+00

6880+00

2880+00

6885+00

2885+00

PROP SIGNAL INSTRUMENT HOUSE

℄ PROP TRACK 1

PROP WHALE'S TOOTH STATION PLATFORM FILED SEPARATELY

PROP PLATFORM EMERGENCY EGRESS FILED SEPARATELY

PROP WHALE'S TOOTH TRANSITION PLAZA FILED SEPARATELY

℄ PROP TRACK 1 FILED SEPARATELY

PEARL ST (PUBLIC, VARIABLE WIDTH)

1 STORY BRICK BUILDING #618

FFE=12'

CONC SUPPORT POST

HEDGE 3'H

3'D METAL BILLBOARD BASE

COMPACT CARS ONLY

LP ON 1.5'SQ 2.5H CONC. BASE TYP. WITHIN CAREER CNT. PROP.

ELECTRIC TRANSFORMERS WITHIN FENCED AREA

WOODEN STEPS AND LANDING

CRUSHED STONE

11' CLFBW

6' CLF

UNDERGROUND ELECTRIC (4-4" DUCT)

16"W

RB REDCAPUP0.1

MW TOPUP3.4

MW UP3.0FT

EMH RIM=7.68'

TMH RIM=7.45'

LEGEND & SYMBOLS

- RIGHT OF WAY
- BORDERING VEGETATED WETLAND
- BANK
- CL STREAM
- BLSF/LSCSF
- 25' / 200' RIVERFRONT AREA
- 100' WETLAND BUFFER ZONE
- TREE
- CONTOUR MINOR
- CONTOUR MAJOR

HOR. SCALE IN FEET

40 0 40 80

ISSUED FOR NOTICE OF INTENT

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
SITE PLAN 2

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

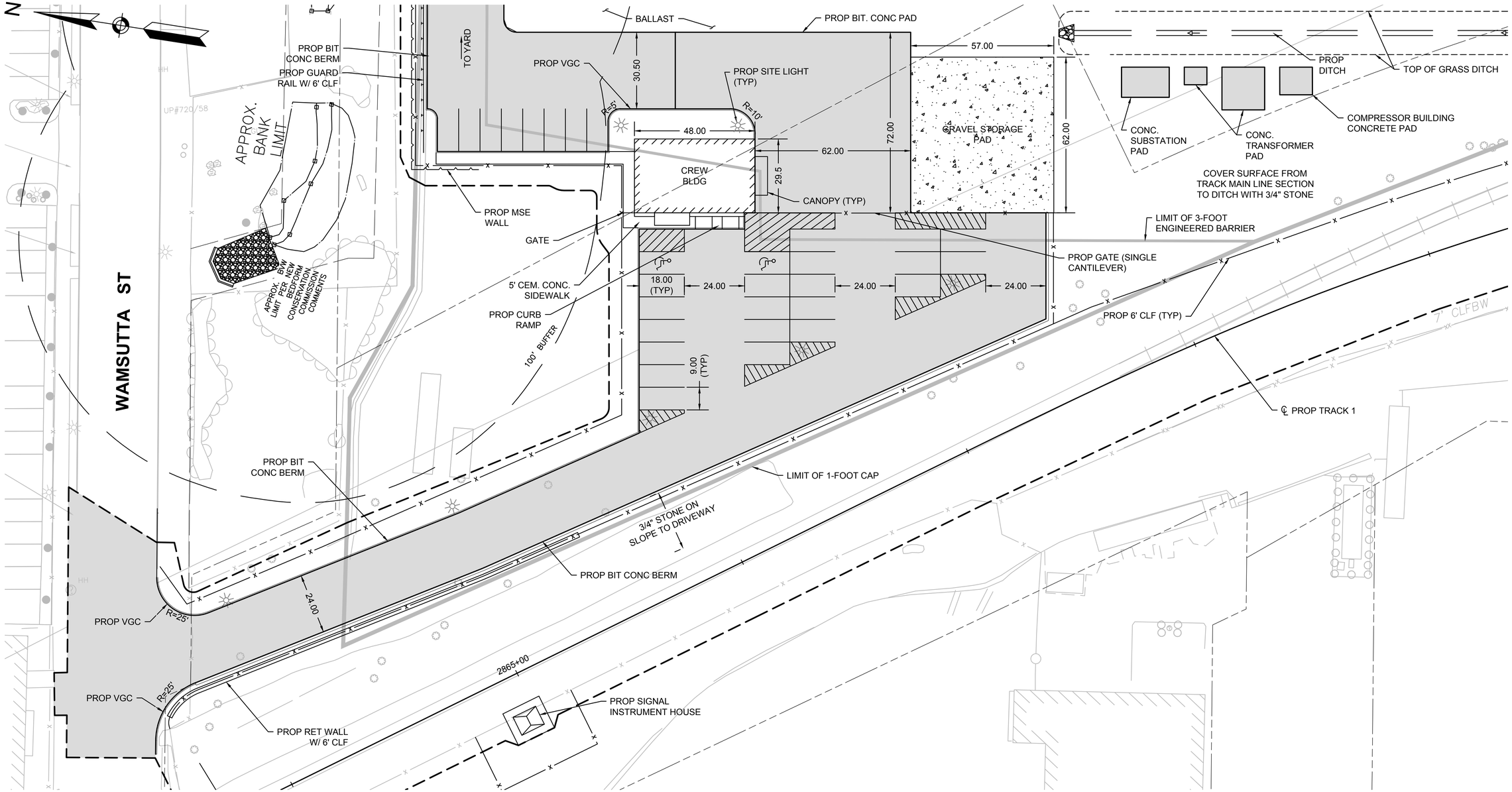
	DES. BY	DR. BY	CHK. BY
HORIZ: 1" = 40'			
VERT: 1" = 40'	ADZ	RRD	KJC
DATE: 08/04/2017			

PLAN NO.

SHEET LO-302

ISSUE

FILE NAME: SEGMENT3_EV(LO_WAMSUTTA).DWG



HOR. SCALE IN FEET
20 0 20 40

ISSUED FOR NOTICE OF INTENT

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	RG	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC
	11-3-17	RTC CON. COMM. 10/20/17	RG	HF	RC

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
BUILDING AND FACILITY SITE PLAN

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

PROJECT MANAGER Date

HORIZ: 1"=20'	DES. BY	DR. BY	CHK. BY
VERT: NONE	DC	DC	KJC
DATE: 08/04/2017			

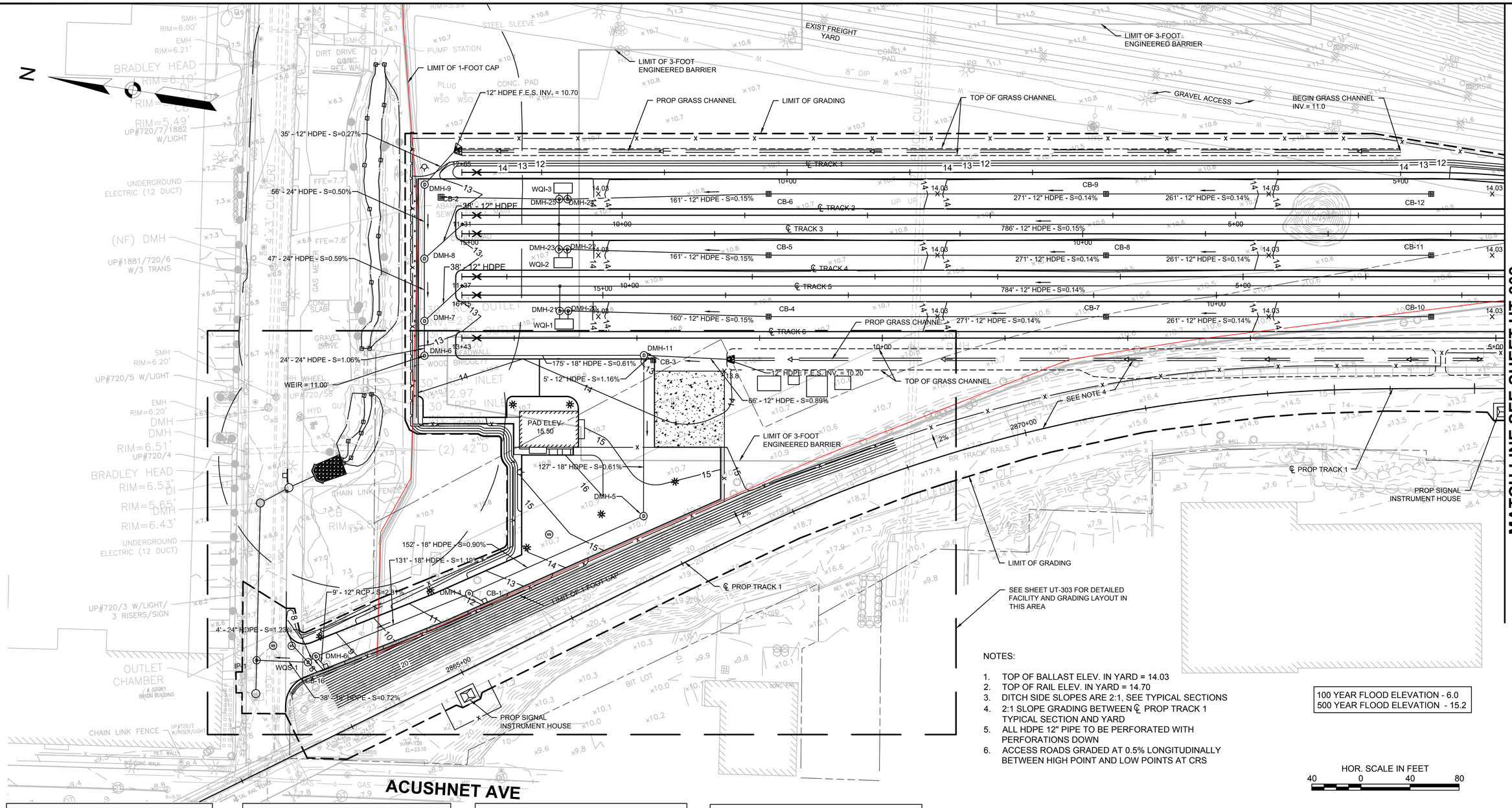
PLAN NO.

SHEET LO-303

ISSUE

Plotted on November 28, 2017 4:03 PM

FILE NAME: SEGMENT3_EV(LO_WAMSUTTA).DWG



NOTES:

1. TOP OF BALLAST ELEV. IN YARD = 14.03
2. TOP OF RAIL ELEV. IN YARD = 14.70
3. DITCH SIDE SLOPES ARE 2:1, SEE TYPICAL SECTIONS
4. 2:1 SLOPE GRADING BETWEEN ℄ PROP TRACK 1 TYPICAL SECTION AND YARD
5. ALL HDPE 12" PIPE TO BE PERFORATED WITH PERFORATIONS DOWN
6. ACCESS ROADS GRADED AT 0.5% LONGITUDINALLY BETWEEN HIGH POINT AND LOW POINTS AT CRS

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
CB-1	RIM = 12.2		I=8.00' (DMH-4)
CB-2	RIM = 12.3		I=10.10' (DMH-25)
CB-3	RIM = 12.9		I=10.00' (DMH-11)
CB-4	RIM = 13.4	I=10.23' (CB-7)	I=10.23' (DMH-20)
CB-5	RIM = 13.4	I=10.23' (CB-8)	I=10.23' (DMH-22)
CB-6	RIM = 13.4	I=10.23' (CB-9)	I=10.23' (DMH-24)
CB-7	RIM = 13.4	I=10.62' (CB-10)	I=10.62' (CB-4)
CB-8	RIM = 13.4	I=10.62' (CB-11)	I=10.62' (CB-5)

NOTE:

1. DMH 6 FUNCTIONS AS OUTLET CONTROL FOR SYSTEM.

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
CB-9	RIM = 13.4	I=10.62' (CB-12)	I=10.62' (CB-6)
CB-10	RIM = 13.4		I=11.00' (CB-7)
CB-11	RIM = 13.4		I=11.00' (CB-8)
CB-12	RIM = 13.4		I=11.00' (CB-9)
CB-16	RIM = 8.2		I=4.30' (DMH-60)
DMH-4	RIM = 12.2	I=5.60' (DMH-5) I=7.60' (CB-1)	I=5.60' (DMH-60)
DMH-5	RIM = 15.3	I=7.00' (DMH-11)	I=7.00' (DMH-4)
DMH-6	RIM = 13.0	I=8.90' (DMH-7)	I=8.90' (DMH-11)
		WEIR	I=10.8'

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
DMH-7	RIM = 12.9	I=9.20' (DMH-8) I=9.50' (CO)	I=9.20' (DMH-6)
DMH-8	RIM = 12.6	I=9.50' (DMH-9) I=9.50' (CO)	I=9.50' (DMH-7)
DMH-9	RIM = 12.3	I=10.60' (FES)	I=9.80' (DMH-8)
DMH-11	RIM = 12.9	I=7.80' (DMH-6) I=9.60' (FES) I=9.90' (CB-3)	I=7.80' (DMH-5)
DMH-20	RIM = 11.6	I=9.98' (CB-4)	I=10.10' (DMH-21) I=9.98' (WQI-1)
DMH-21	RIM = 11.4	I=9.80' (DMH-20) I=9.45' (WQI-1)	I=9.45' (CO)
DMH-22	RIM = 11.6	I=9.98' (CB-5)	I=10.10' (DMH-23) I=9.98' (WQI-2)
DMH-23	RIM = 11.4	I=9.80' (DMH-22) I=9.45' (WQI-2)	I=9.45' (CO)

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
DMH-24	RIM = 11.6	I=9.98' (CB-6)	I=9.98' (WQI-3) I=10.10' (DMH-25)
DMH-25	RIM = 13.7	I=9.80' (CB-2) I=9.80' (DMH-24) I=9.45' (WQI-3)	I=9.45' (CO)
DMH-60	RIM = 8.2	I=4.00' (DMH-4) I=4.00' (CB-16)	I=4.00' (WQS-1)
IP-1	RIM = 7.7	I=3.50' (WQS-1) I=2.29' (DMH-115)	I=2.29' (IP-2)
WQI-1	RIM = 1.1	I=9.80' (DMH-20)	I=9.55' (DMH-21)
WQI-2	RIM = 1.1	I=9.80' (DMH-22)	I=9.55' (DMH-23)
WQI-3	RIM = 1.1	I=9.80' (DMH-24)	I=9.55' (DMH-25)
WQS-1	RIM = 8.0	I=3.90' (DMH-60)	I=3.80' (IP-1)

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
GRADING AND UTILITY PLAN 1

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	SK	HF	RC
	11-17-17	RTC CON. COMM. 11/16/17	SK	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1" = 40'	DES. BY	DR. BY	CHK. BY
VERT: NONE	DC	DC	KJC
DATE: 08/04/2017			

PLAN NO.

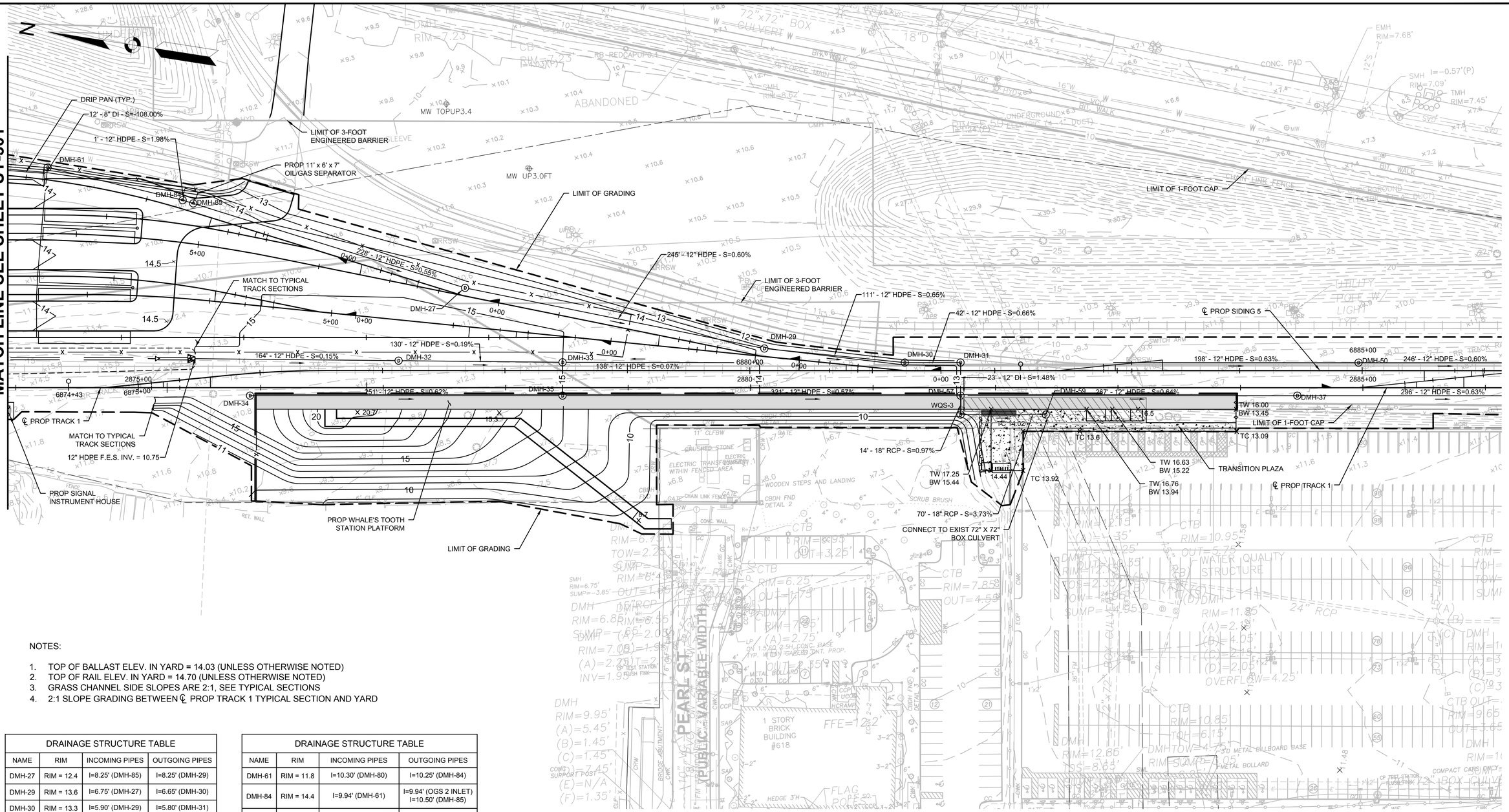
SHEET UT-301

ISSUE

MATCH LINE SEE SHEET UT-302

Plotted on November 28, 2017 4:06 PM

FILE NAME: SEGMENT3_EV(UT_WAMSUTTA).DWG



NOTES:

1. TOP OF BALLAST ELEV. IN YARD = 14.03 (UNLESS OTHERWISE NOTED)
2. TOP OF RAIL ELEV. IN YARD = 14.70 (UNLESS OTHERWISE NOTED)
3. GRASS CHANNEL SIDE SLOPES ARE 2:1, SEE TYPICAL SECTIONS
4. 2:1 SLOPE GRADING BETWEEN ℄ PROP TRACK 1 TYPICAL SECTION AND YARD

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
DMH-27	RIM = 12.4	I=8.25' (DMH-85)	I=8.25' (DMH-29)
DMH-29	RIM = 13.6	I=6.75' (DMH-27)	I=6.65' (DMH-30)
DMH-30	RIM = 13.3	I=5.90' (DMH-29)	I=5.80' (DMH-31)
DMH-31	RIM = 13.0	I=5.50' (DMH-30)	I=5.40' (DMH-57)
DMH-32	RIM = 16.2	I=10.75' ()	I=10.75' (DMH-33)
DMH-33	RIM = 13.2	I=11.60' () I=10.50' (DMH-32)	I=10.34' (DMH-35)
DMH-34	RIM = 16.2		I=13.25' (DMH-35)
DMH-35	RIM = 15.7	I=11.67' (DMH-34) I=10.20' (DMH-33)	I=11.67' (DMH-57)
DMH-37	RIM = 13.6	I=7.90' ()	I=7.90' (DMH-38)
DMH-50	RIM = 11.0	I=7.60' ()	I=7.50' (DMH-51)
DMH-57	RIM = 13.7	I=9.80' (DMH-35) I=5.00' (DMH-31)	I=4.90' (WQS-3)
DMH-59	RIM = 11.5	I=2.00' (WQS-3)	

DRAINAGE STRUCTURE TABLE			
NAME	RIM	INCOMING PIPES	OUTGOING PIPES
DMH-61	RIM = 11.8	I=10.30' (DMH-80)	I=10.25' (DMH-84)
DMH-84	RIM = 14.4	I=9.94' (DMH-61)	I=9.94' (OGS 2 INLET) I=10.50' (DMH-85)
DMH-85	RIM = 14.1	I=9.53' (OGS OUTLET) I=10.10' (DMH-84)	I=9.53' (DMH-27)
WQS-3	RIM = 14.9	I=4.75' (DMH-57)	I=4.60' (DMH-59)

100 YEAR FLOOD ELEVATION - 6.0
500 YEAR FLOOD ELEVATION - 15.2

HOR. SCALE IN FEET
40 0 40 80

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
GRADING AND UTILITY PLAN 2

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	SK	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	RG	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
PROJECT MANAGER Date

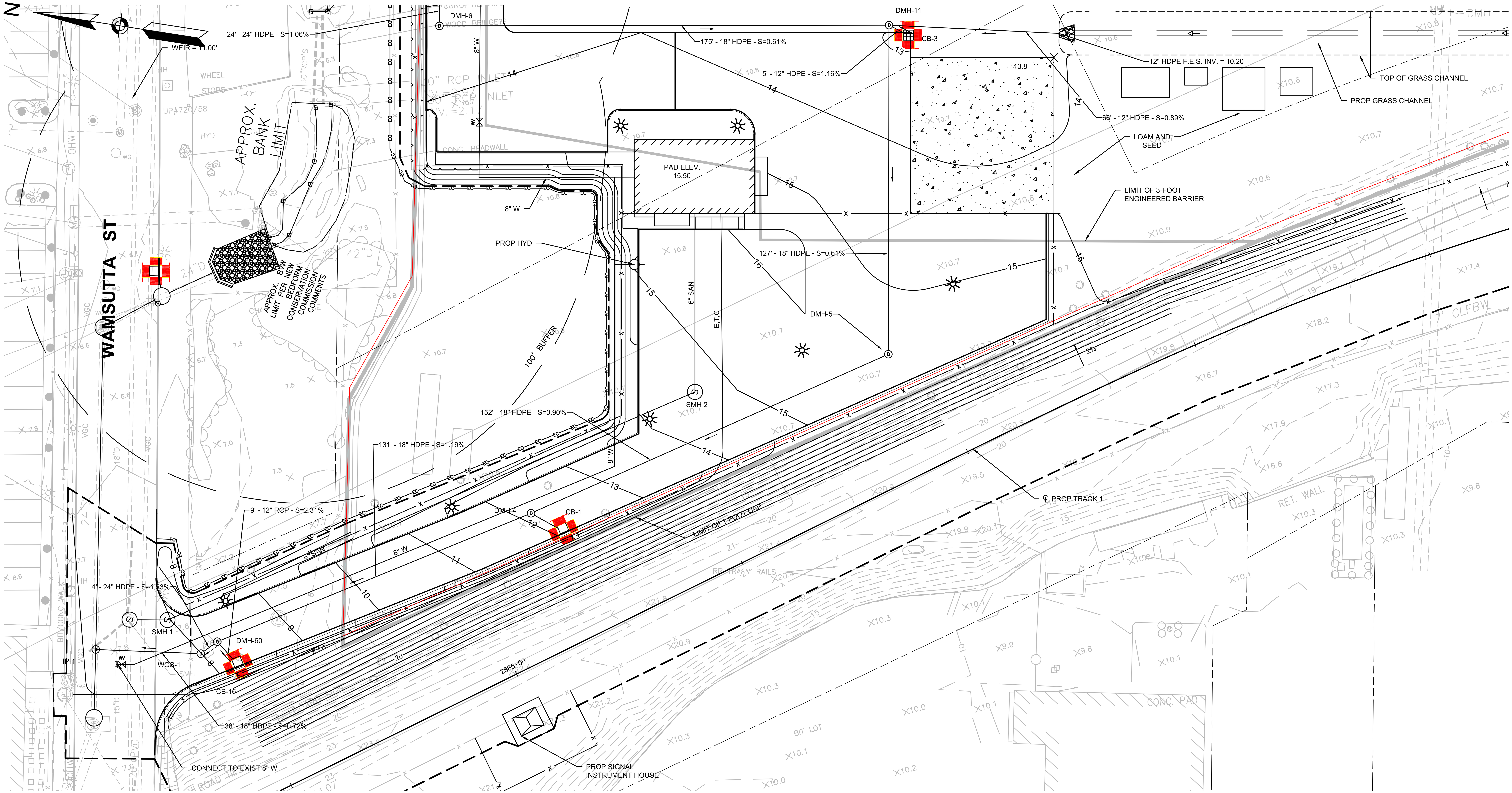
HORIZ: 1" = 40'
VERT: NONE
DATE: 08/04/2017

DES. BY	DR. BY	CHK. BY
DC	DC	KJC

PLAN NO.
SHEET UT-302
ISSUE

FILE NAME: SEGMENT3_EV(UT_WAMSUTTA).DWG

Plotted on November 28, 2017 4:07 PM



HOR. SCALE IN FEET

20 0 20 40

Plotted on November 28, 2017 4:07 PM

FILE NAME: SEGMENT3_EV(UT_WAMSUTTA).DWG

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO.

NEW BEDFORD MAIN LINE
WAMSUTTA LAYOVER AND TRACK PLANS
FACILITY GRADING AND UTILITY PLAN

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.
	11-28-17	RTC CON. COMM. 11/20/17	SK	HF	RC
	11-15-17	RTC CON. COMM. 11/06/17	SK	HF	RC

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

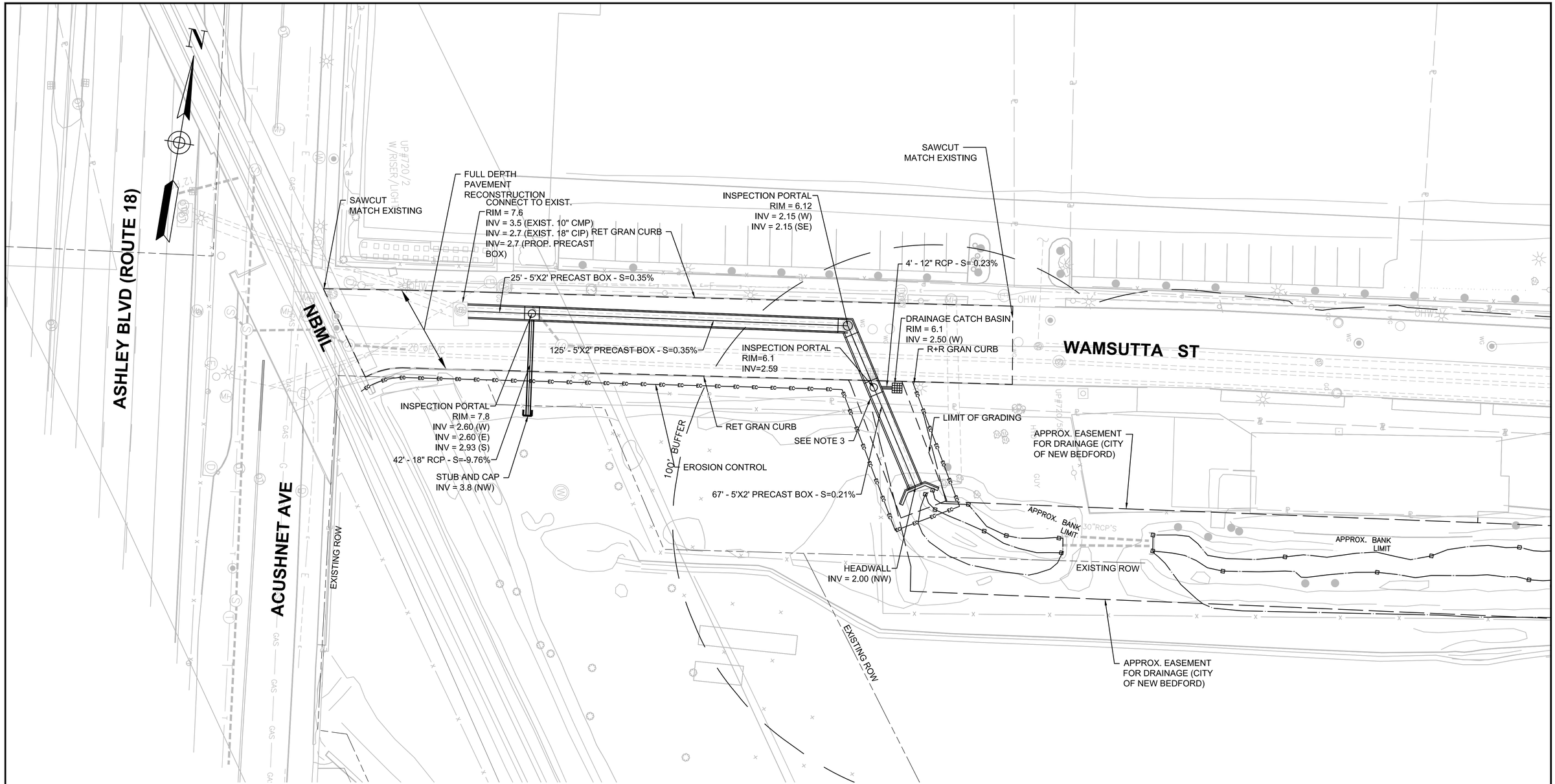
PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

APPROVED BY:

PROJECT MANAGER Date

HORIZ: 1"=20'	DES. BY	DR. BY	CHK. BY	PLAN NO.	ISSUE
VERT: NONE	DC	DC	KJC		
DATE: 08/04/2017				SHEET UT-303	



PROPOSED DRAINAGE CONDITIONS

20 0 20 40
SCALE IN FEET

NOTES:
1. EXISTING INVERTS TO BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION AND REPORTED TO THE DESIGN ENGINEER IF THERE ARE ANY DISCREPANCIES.
2. INSTALL SILT SACK IN EXISTING CATCH BASIN, BEFORE COMMENCING WORK AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
3. REMOVE EXISTING CATCH BASIN FRAME AND GRATE; CREATE PAVED SWALE OUTLET AT CURB LINE AND CONSTRUCT STONE LINED SWALE OVER CULVERT TO OUTLET.

ISSUED FOR NOTICE OF INTENT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
SOUTH COAST RAIL
DESIGN ENGINEERING AND PM/CM SERVICES
CONTRACT NO. K78PS01

NEW BEDFORD MAIN LINE
WAMSUTTA STREET
PROPOSED DRAIANGE PLAN

ISSUE	DATE	DESCRIPTION	BY	CHKD.	APP.

vhb HNTB
99 HIGH STREET
BOSTON, MA 02110
(617) 728-7777

PROJECT MANAGER Date

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPROVED BY:
PROJECT MANAGER Date

HORIZ: 1" = 20'	DES. BY	DR. BY	CHK. BY
VERT: 1" = 20'			
DATE: 08/04/2017			

PLAN NO. ###
SHEET UT-304
ISSUE ###

FILE NAME: SEGMENT3_EV(LO2_WAMSUTTA).DWG

Plotted on November 15, 2017 4:38 PM