FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BHO-0741(001)	2019	1	25

INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	STANDARD PLAN SYMBOLS & STANDARD LEGEND
3-4	STANDARD NOTES 1-2
5	LIST OF ABBREVIATIONS
6	KEY PLAN
7	JOB SPECIFIC PLAN SYMBOLS, LEGEND AND NOTES
8	HIGHWAY TYPICAL SECTIONS
9-13	GENERAL PLANS
14-19	DRAINAGE & UTILITY PLANS
20	CROSS SECTIONS
21-25	DETAILS

STATE OF RHODE ISLAND

DEPARTMENT OF TRANSPORTATION

PLAN, PROFILE AND SECTIONS OF PROPOSED

STATE HIGHWAY

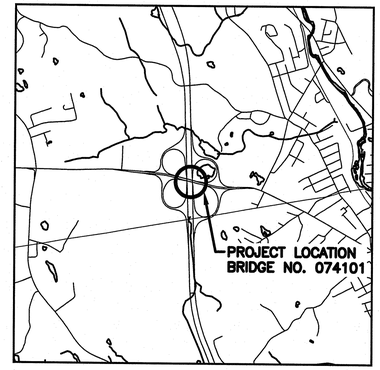
BRIDGE GROUP 35
US 44 PUTNAM PIKE

PROJECT LIMITS

TOWN OF SMITHFIELD
COUNTY OF PROVIDENCE

R.I. CONTRACT NO. 2020-CB-037 F.A. PROJECT NO. BHO-0741(001)

PROJECT LENGTH = 0.504 MILES



LOCATION MAP
1" = 2000'

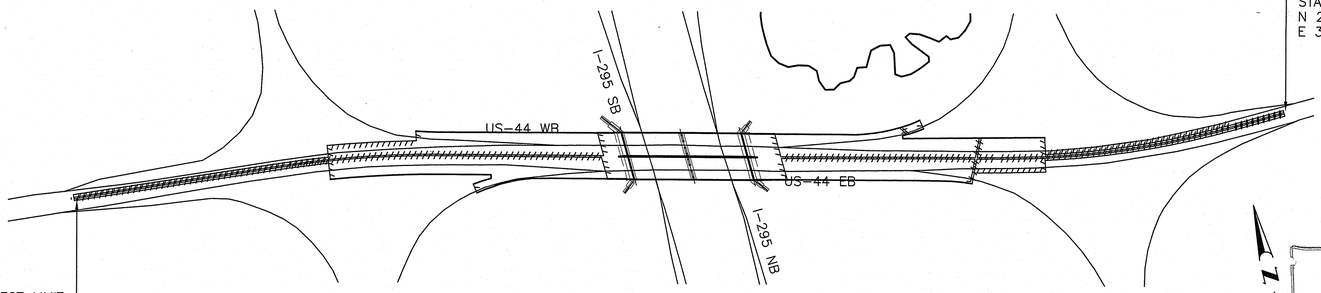
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Environmental Management
JUN 10 2020
Office of Water Resources

US-44 PAVEMENT STRUCTURE

FULL DEPTH RECONSTRUCTION:
3" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS
8.5" CLASS 19 HMA
12" GRAVEL BORROW SUBBASE COURSE

MICROMILL:
1.5" HMA MICROMILLING
1.5" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS
BRIDGE DECK:
3" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS



PROJECT LIMIT
RI CONTRACT NO. 2020-CB-037
STA. 195+43
N 286633.0072
E 322737.0220

PROJECT LIMIT
RI CONTRACT NO. 2020-CB-037
STA. 169+84
N 286209.1420
E 325250.8109

LAYOUT PLAN
1" = 150'

DESIGN DESIGNATION (I-295)

2018 AADT	85,730
DESIGN SPEED	65

DESIGN DESIGNATION (US 44 PUTNAM PIKE)

2018 AADT (EB)	17,820
2018 AADT (WB)	22,164
D	56%
K	2.5%
T	3.9%
DDHV	52
DHV	582
DESIGN SPEED	40

SCALES OF DRAWINGS

Plans	1	inch =	20	feet
Profiles	1	inch =	20	feet Horizontal
Profiles	1	inch =	5	feet Vertical
Cross Sections	1	inch =	4	feet Horizontal
Cross Sections	1	inch =	4	feet Vertical

BASE OF LEVELS
VERTICAL DATUM: NAVD 88

R.I. HORIZONTAL DATUM:
STATE PLANE COORDINATES NAD 1983

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

R.I. DEPARTMENT OF TRANSPORTATION

APPROVED

ADMINISTRATOR, PROJECT MANAGEMENT DATE

APPROVED

CHIEF ENGINEER DATE

APPROVED

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR DATE

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS

SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AMENDED MARCH 2018, WITH ALL REVISIONS AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1996 EDITION, WITH ALL REVISIONS.

HURRICANE EVACUATION ROUTE

THIS PROJECT INCLUDES WORK ON A DESIGNATED HURRICANE EVACUATION AND DIVERSIONARY ROUTE AS FOLLOWS:
- I-295 NORTHBOUND & SOUTHBOUND
- ROUTE 44 PUTNAM PIKE
- REFER TO GENERAL NOTE 18 ON SHEET 3

ROBERT PAUL TALBOT
No. 11814
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
06-04-20

FOR DEM USE ONLY

Contract Number 2020-CB-037
Number of Sheet 1
Total Sheets 25

CHA
272 West Exchange Street, Suite 101
Providence, RI 02903
860-206-2412
www.chacompanies.com

Environmental Management
JUN 10 2020
Office of Water Resources

0016N_V1_001_COVER

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	2	25

EXISTING

	EDGE OF PAVEMENT
	BERM
	CURB
	GUARDRAIL
MB	MAILBOX
NO.	UTILITY POLE
	POLE GUY
	LUMINARE
SIGN	SIGN
(SIZE)SD	SUBDRAIN
(SIZE)D	STORMDRAIN
(SIZE)S	SANITARY SEWER
(SIZE)W	WATER MAIN
(SIZE)G	GAS MAIN
(SIZE)T	TELEPHONE DUCT
(SIZE)E	ELECTRIC DUCT
	PLUG AND CAP PIPE
	ABANDONED UTILITY
	FLARED END SECTION
	HEADWALL
WG OR GG	WATER OR GAS GATE
CB	CATCH BASIN
MH	MANHOLE
HYD	HYDRANT
1+00	BASELINE OR CENTERLINE
EXIST. S.H.L. PLAT NO. XX	STATE HIGHWAY LINE
EXIST. S.F.L. PLAT NO. XX	STATE FREEWAY LINE
EXIST. P.E.B.	PERMANENT EASEMENT LINE
EXIST. T.E.B.	TEMPORARY EASEMENT LINE
	PROPERTY LINE
CITY NAME / TOWN NAME	CITY OR TOWN LINE
PWW	PAVED WATERWAY
ELEV.	CONTOUR LINE
	OPEN DITCH
R.I.H.B.	R.I. HIGHWAY BOUND
S.B.	STONE BOUND
	RETAINING WALL
	FIELD STONE WALL
NO.	BORINGS
TYPE	FENCE
	WOOD OR BRUSH LINE
	TREES
(NAME)	RIVER OR STREAM
	WETLAND AREA
NO. TYPE MATERIAL	BUILDING
	FOUNDATION
	BUILDING TO BE REMOVED
	RAILROAD TRACKS
	CUT AND MATCH
	RIP-RAP
	CUT SLOPE
	FILL SLOPE
	ROCK CUT
00x00	SPOT GRADE
	AREA GRADED TO DRAIN
	BALED HAY RI STD 9.1.0
	BALED HAY & SILT FENCE RI STD. 9.3.0
123 124 125	EDGE OF WETLAND
	WETLAND PERIMETER
ASSF	AREA SUBJECT TO STORM FLOW
100 YR. FLOOD BOUNDARY	100-YEAR FLOOD PLAIN
	LIMIT OF DISTURBANCE
	LIMIT OF CLEARING

NEW

	EDGE OF PAVEMENT
	BERM
	CURB
	GUARDRAIL
	MAILBOX
NO.	UTILITY POLE
GUY	POLE GUY
	LUMINARE
	SIGN
N(SIZE)SD (Length — Size)	SUBDRAIN
(Length — Size)	STORMDRAIN
N(SIZE)W	WATER MAIN
N(SIZE)G	GAS MAIN
N-#(SIZE)T	TELEPHONE DUCT
N-#(SIZE)E	ELECTRIC DUCT
	PLUG AND CAP PIPE
	ABANDONED UTILITY
	FLARED END SECTION
	HEADWALL
	WATER OR GAS GATE
	CATCH BASIN
	MANHOLE
	HYDRANT
1+00	BASELINE OR CENTERLINE
NEW S.H.L. PLAT NO. XX	STATE HIGHWAY LINE
NEW S.F.L. PLAT NO. XX	STATE FREEWAY LINE
NEW P.E.B.	PERMANENT EASEMENT LINE
NEW T.E.B.	TEMPORARY EASEMENT LINE
	PROPERTY LINE
	CITY OR TOWN LINE
ELEV.	PAVED WATERWAY
	CONTOUR LINE
	OPEN DITCH
	R.I. HIGHWAY BOUND
	STONE BOUND
	RETAINING WALL
	FIELD STONE WALL
NO.	BORINGS
	FENCE
	WOOD OR BRUSH LINE
	TREES
	RIVER OR STREAM
	WETLAND AREA
	BUILDING
	FOUNDATION
	BUILDING TO BE REMOVED
	RAILROAD TRACKS
	CUT AND MATCH
	RIP-RAP
ROADWAY / TOP OF SLOPE / ROADWAY	CUT SLOPE
TOE OF SLOPE	FILL SLOPE
ROCK SHELF / ROCK CUT	ROCK CUT
x 00.00	SPOT GRADE
ELEV. x	AREA GRADED TO DRAIN
	BALED HAY RI STD 9.1.0
	BALED HAY & SILT FENCE RI STD. 9.3.0
	EDGE OF WETLAND
	WETLAND PERIMETER
	AREA SUBJECT TO STORM FLOW
	100-YEAR FLOOD PLAIN
LIMIT OF DISTURBANCE	LIMIT OF DISTURBANCE
LIMIT OF CLEARING	LIMIT OF CLEARING

1.1.0	UNDERDRAIN
1.3.0	CONCRETE CONNECTING COLLAR
2.1.0	CONCRETE HEADWALLS FOR PIPE CULVERTS
2.2.0	STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS
2.3.0 (DIA.)	PRECAST CONCRETE FLARED END SECTION
3.2.0	BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE
3.2.1 (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE
3.3.0	BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN
3.3.2	BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN
3.3.3	SOLID BLOCK FLUSH SQUARE CATCH BASIN
3.4.0	BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN
3.4.1	BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET
3.4.2	BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN
3.4.3	BRICK/SOLID BLOCK TYPE "R" CATCH BASIN
3.4.4	SOLID BLOCK FLUSH ROUND CATCH BASIN
3.4.5 (DIA.)	BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN
3.5.0	SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN
3.5.1 (SIZE)	SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN
3.6.0	BRICK/SOLID BLOCK DROP INLET
3.7.0 (DIA.)	BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'-0"
4.2.0	PRECAST 4'-0" ROUND MANHOLE
4.2.1	PRECAST 5'-0" ROUND MANHOLE
4.2.2	PRECAST 6'-0" ROUND MANHOLE
4.3.0 (SIZE)	PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN
4.4.0 (DIA.)	PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN
4.5.0	PRECAST CONCRETE DROP INLET
4.5.1	PRECAST CONCRETE DROP INLET LATERAL OUTLET
4.5.2	PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET
5.3.0	CATCH BASIN AND MANHOLE STEP
5.4.0	CONCRETE COLLARS
6.1.0	LIGHT-DUTY SQUARE FRAME AND ROUND COVER
6.1.1	HEAVY DUTY SQUARE FRAME AND ROUND COVER
6.2.0	LIGHT-DUTY ROUND FRAME AND COVER
6.2.1	HEAVY-DUTY ROUND FRAME AND COVER
6.3.0	SQUARE FRAME AND GRATE
6.3.1	SQUARE FRAME AND GRATE
6.3.2	SQUARE FRAME AND GRATE (BICYCLE SAFE)
6.3.3	HIGH CAPACITY FRAME AND GRATE
6.3.4	HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE)
6.4.0	ROUND FRAME AND GRATE
7.1.0S	PRECAST CONCRETE CURB (STRAIGHT)
7.1.0C	PRECAST CONCRETE CURB (CIRCULAR)
7.1.1	3'-0' PRECAST CONCRETE TRANSITION CURB
7.1.2	6'-0" PRECAST CONCRETE TRANSITION CURB
7.1.4	PRECAST 2'-0" RADIUS CORNER
7.1.5	PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN)
7.1.6	PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN)
7.1.7	PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN)
7.1.8	PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN)
7.2.0S	PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT)
7.2.0C	PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR)
7.2.1	PRECAST CONCRETE SLOPED FACE TRANSITION CURB
7.2.2	PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SPLOPED FACE)
7.3.0S	GRANITE CURB (STRAIGHT)
7.3.0C	GRANITE CURB (CIRCULAR)
7.3.1	3'-0" GRANITE TRANSITION CURB
7.3.2	6'-0" GRANITE TRANSITION CURB
7.3.3	GRANITE WHEELCHAIR RAMP TRANSITION CURB
7.3.4	GRANITE 2'-0" RADIUS CORNER
7.3.5	GRANITE INLET STONE (FOR SQUARE CATCH BASIN)
7.3.6	GRANITE INLET STONE (FOR ROUND CATCH BASIN)
7.3.7	GRANITE APRON STONE (FOR SQUARE CATCH BASIN)
7.3.8	GRANITE APRON STONE (FOR ROUND CATCH BASIN)
7.4.0	GRANITE SLOPED FACE CURB
7.4.1	GRANITE SLOPED FACE TRANSITION CURB
7.4.2	GRANITE TRANSITION CURB (VERTICAL FACE TO SLOPE FACE)
7.5.0	BITUMINOUS CONCRETE LIP CURB
7.5.1A	BITUMINOUS BERM (CONSTRUCTION METHOD A)
7.5.1B	BITUMINOUS BERM (CONSTRUCTION METHOD B)
7.6.0	CURB SETTING DETAIL
8.2.0	BITUMINOUS CONCRETE DITCH
8.3.0	RIP-RAP DITCH
8.4.0	PAVED WATERWAY
9.1.0	BALED HAY EROSION CHECK
9.2.0	SILT FENCE DETAIL
9.3.0	BALED HAY DITCH EROSION CHECK AND SILT FENCE COMBINED
9.4.0	BALED HAY DITCH AND SWALE EROSION CHECK
9.5.0	LOG AND HAY CHECK DAM
9.7.0	DEWATERING BASIN
9.8.0	BALED HAY CATCH BASIN INLET PROTECTION
9.9.0	CONSTRUCTION ACCESS
10.1.0	WET STONE MASONRY RETAINING WALL
10.2.0	RUBBLE MASONRY WALL
10.3.0	CONCRETE RETAINING WALL
10.4.0	STONE MASONRY STEPS
14.1.0	CONCRETE HIGHWAY BOUND
15.1.0	POST AND MOUNTINGS FOR RURAL MAILBOX
15.2.0 (NO.)	POST AND MULTIPLE MOUNTINGS FOR RURAL MAILBOXES
18.2.0	PRECAST TYPE "A" HANDHOLE
18.2.2	HEAVY DUTY TYPE "H" HANDHOLE
18.3.0	ALUMINUM LIGHTING STANDARDS
20.2.0	BI-DIRECTIONAL CONTROL DEVICE
24.6.1	STREET SIGN MOUNTING DETAIL
26.2.0	POLYETHYLENE DRUM WITH MARKINGS
26.3.0	PVC PLASTIC PIPE TYPE III BARRICADE
31.1.0	CHAIN LINK FENCE 3'-0" TO 4'-0"
31.2.0	CHAIN LINK FENCE 5'-0" TO 6'-0"
31.2.1	CHAIN LINK FENCE 5'-0" TO 6'-0" INTERMEDIATE POST
31.3.0	WOVEN WIRE RIGHT-OF-WAY FENCE (STEEL POST)
34.1.0	TYPICAL GUARDRAIL INSTALLATION
34.2.0	STEEL BEAM GUARDRAIL
34.2.1	STEEL BEAM GUARDRAIL DETAILS
34.2.2	STEEL BEAM GUARDRAIL DOUBLE FACED ASSEMBLY
34.2.3	STEEL BEAM GUARDRAIL FIXTURES
34.2.5	STEEL BEAM GUARDRAIL REFLECTORIZED TRIANGULAR DELINEATOR
34.3.1	GUARDRAIL END SECTION
34.3.2	TERMINAL END SECTION (SINGLE FACE)
34.3.3	ANCHORAGE DETAILS APPROACH END SECTION
34.3.4	ANCHORAGE DETAILS TRAILING END SECTION
34.4.0	STEEL BACKED TIMBER GUARDRAIL
34.4.1	STEEL BACKED TIMBER GUARDRAIL TERMINAL SECTION-TYPE 1
40.1.0	DOUBLE-FACED PRECAST MEDIAN BARRIER
40.2.0	SINGLE-FACED PRECAST MEDIAN BARRIER
40.2.1	SINGLE-FACED PRECAST MEDIAN BARRIER
40.3.0	PRECAST MEDIAN BARRIER TRANSITION UNIT
40.5.0	PRECAST MEDIAN BARRIER FOR TEMPORARY TRAFFIC CONTROL
43.1.0	CEMENT CONCRETE SIDEWALK
43.2.0	BITUMINOUS CONCRETE SIDEWALK
43.3.0	WHEELCHAIR RAMP
43.3.1	WHEELCHAIR RAMP FOR LIMITED RIGHT-OF-WAY AREAS
43.4.0	DRIVEWAY DEVELOPMENT FOR 3'-0" TRANSITION CURB
43.4.1	DRIVEWAY DEVELOPMENT FOR 6'-0" TRANSITION CURB
43.5.0	CEMENT CONCRETE DRIVEWAYS
48.1.0	DETECTABLE WARNING SYSTEM
51.1.0	TREE PROTECTION DEVICE
51.1.1	DRIP LINE TREE PROTECTION DEVICE FOR EXISTING TREES
51.2.0	SHRUB PROTECTION DEVICE
51.3.0	TREE WELL
51.4.0	TREE WALL

AB	ADJUST CATCH BASIN TO GRADE
ABM	ADJUST CATCH BASIN TO MANHOLE
AC	ADJUST CURB STOP TO GRADE
AD	ADJUST DRAINAGE MANHOLE TO GRADE
AE	ADJUST ELECTRIC MANHOLE TO GRADE
AFC	ADJUST FRAME AND COVER TO GRADE
AFG	ADJUST FRAME AND GRATE TO GRADE
AG	ADJUST GAS GATE BOX TO GRADE
AHH	ADJUST HANDHOLE TO GRADE
AS	ADJUST SANITARY SEWER MANHOLE TO GRADE
AT	ADJUST TELEPHONE MANHOLE TO GRADE
AW	ADJUST WATER GATE BOX TO GRADE
BCD	BITUMINOUS CONCRETE DRIVEWAY 3" BITUMINOUS CONCRETE TYPE I-2 8" GRAVEL BORROW SUBBASE COURSE
BPS	BUILD NEW STRUCTURE OVER EXISTING PIPE
CCB	CLEAN CATCH BASIN
CCP	CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES)
CFP	CLEAN AND FLUSH PIPE
CG	CLEARING AND GRUBBING
CMH	CLEAN MANHOLE
CP (DEPTH)	COLD PLANE
CPP	CUT AND PLUG PIPE (ALL TYPES, ALL SIZES)
DB	REMOVE AND DISPOSE BITUMINOUS CURB
DC	REMOVE AND DISPOSE CONCRETE CURB
DCB	REMOVE AND DISPOSE CATCH BASIN
DDI	REMOVE AND DISPOSE DROP INLET
DF	REMOVE AND DISPOSE FENCE
DFC	REMOVE AND DISPOSE FRAME AND COVER
DFE	REMOVE AND DISPOSE FLARED END SECTION
DFG	REMOVE AND DISPOSE FRAME AND GRATE
DFH	REMOVE AND DISPOSE FIRE HYDRANT
DFP	REMOVE AND DISPOSE FLEXIBLE PAVEMENT
DG	REMOVE AND DISPOSE GUARDRAIL
DH	REMOVE AND DISPOSE HEADWALL
DHB	REMOVE AND DISPOSE HIGHWAY BOUND
DHH	REMOVE AND DISPOSE HANDHOLE
DL	REMOVE AND DISPOSE LIGHT AND FOUNDATION
DMB	REMOVE AND DISPOSE MEDIAN BARRIER
DMH	REMOVE AND DISPOSE MANHOLE
DMM	REMOVE AND DISPOSE MEDIAN MARKER
DOW	REMOVE AND DISPOSE OBSERVATION WELL
DP	REMOVE AND DISPOSE PIPE
DPB	REMOVE AND DISPOSE PAVEMENT AND RIGID BASE
DRB	REMOVE AND DISPOSE RIGID BASE
DS	REMOVE AND DISPOSE SIGN
DSS	REMOVE AND DISPOSE TRAFFIC SIGNAL SYSTEM
DSW	REMOVE AND DISPOSE SIDEWALK
DTD	REMOVE AND DISPOSE TELEPHONE DUCT BANKS
DUP	REMOVE AND DISPOSE UTILITY POLE
DWW	REMOVE AND DISPOSE PAVED WATERWAY
FF	FILTER FABRIC RIPRAP FLARED END UNDERLAYMENT
GET	FLARED GUARDRAIL END TREATMENT
IA	IMPACT ATTENUATOR
IDL	IMPERVIOUS DITCH LINER
LOD	LIMIT OF DISTURBANCE
LOR	LIMIT OF REGRADING
LS	4" LOAM AND SEED

NFH	NEW FIRE HYDRANT WITH GATE VALVE
NIC	NOT IN THIS CONSTRUCTION CONTRACT
NWB	FURNISH AND INSTALL NEW WATER GATE VALVE BOX
NWVB	FURNISH AND INSTALL NEW WATER GATE VALVE AND BOX
NWCB	FURNISH AND INSTALL NEW WATER CURB STOP BOX
NWSB	FURNISH AND INSTALL NEW WATER CURB STOP AND BOX
PCD	PERMANENT CHECK DAM
PS	4" PLANTABLE SOIL AND SEED
RCB	RECONSTRUCT TYPE "D" CATCH BASIN, TO CATCH BASIN WITH GUTTER INLET
RCM	R.I.D.O.T. COMMUNICATIONS MANHOLE
RHH	REMOVE, HANDLE, HAUL, TRIM, RESET CURB EDGING, STRAIGHT, CIRCULAR (ALL TYPES)
RLP	RELOCATE LAMP POST
RMB	RELOCATE MAILBOX (BY OTHERS)
RPM	REMOVE PAVEMENT MARKINGS
RRP	RIP-RAP PAD (SEE DETAIL)
RRS	REMOVE AND RELOCATE SIGN
RUP	RELOCATE UTILITY POLE (BY OTHERS)
SB	STONE BAFFLE
SBAE	STEEL BEAM BRIDGE CONNECTION APPROACH END (W/O NESTED RAIL)
SBTE	STEEL BEAM BRIDGE CONNECTION TRAILING END (W/NESTED RAIL)
SD-	STRUCTURAL DISPOSITION - SEE CS PAGES OF SPECIFICATION
SF	REMOVE AND STOCKPILE FENCE
SGA	SPECIAL GRADED AGGREGATE
SGC	REMOVE AND STOCKPILE GRANITE CURB
SGR	REMOVE AND STOCKPILE GUARDRAIL
SH	REMOVE AND STOCKPILE HYDRANT
SS	REMOVE AND STOCKPILE SIGN
STS	REMOVE AND STOCKPILE TRAFFIC SIGNAL SYSTEM
TB	CONCRETE THRUST BLOCK
TEP	TIE EXISTING PIPE INTO NEW STRUCTURE
TNP	TIE NEW PIPE INTO EXISTING STRUCTURE
TBT	THRIE BEAM TRANSITION
TBBC	THRIE BEAM BRIDGE CONNECTION
TT	TREE TRIMMING
WCM	4" WOOD CHIP MULCH
4DY	4" EPOXY RESIN PAVEMENT MARKINGS - DOUBLE YELLOW
6W	6" EPOXY RESIN PAVEMENT MARKINGS - WHITE
12W	12" EPOXY RESIN PAVEMENT MARKINGS - WHITE
6WT	6" PREFORMED PATTERNED MARKING (HIGH PERFORMANCE TAPE)
4Y	4" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
6Y	6" EPOXY RESIN PAVEMENT MARKINGS - YELLOW
P.G.L.	PROFILE GRADE LINE

RECEIVED JUL 10 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THIS PLAN SHALL NOT BE ALTERED

REVISIONS		
NO.	DATE	BY
1	6/07	TRB

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

STANDARD PLAN SYMBOLS & STANDARD LEGEND

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

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Providence, RI 02903
860-206-2412
www.chacompanies.com

0016N_V1_002_STDSYM

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	3	25

GENERAL NOTES:

1. ANY DAMAGE TO EXISTING PAVEMENT, BRIDGES, CONDUIT, SIDEWALK, FENCES, ETC., CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
2. THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND MATERIAL AS FAR AWAY AS POSSIBLE FROM THE EDGE OF THE TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD, IN ACCORDANCE WITH SECTION 106.06 OF THE R.I.D.O.T. STANDARD SPECIFICATION, LATEST EDITION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE EXISTING CONDITIONS ARE NOT OBLITERATED BEFORE CONTROL POINTS ARE LOCATED AND CONSTRUCTION LAYOUT IS ESTABLISHED. THE CONSTRUCTION LAYOUT SHALL BE PROVIDED IN SUFFICIENT DETAIL, THEREBY ENABLING HIM TO CONSTRUCT THE PROJECT IN CONFORMITY WITH THE PLANS AND SPECIFICATIONS. SURVEY WILL BE PROVIDED BY THE CONTRACTOR. THE RESIDENT ENGINEER WILL NOT AUTHORIZE CONSTRUCTION ACTIVITIES TO BEGIN UNTIL HE IS SATISFIED THAT ALL GROUND CONTROL HAS BEEN ESTABLISHED, TIED DOWN, AND DULY RECORDED IN STANDARD FIELD BOOKS.
4. ALL R.I. STD. 9.9.0 CONSTRUCTION ACCESS ROADS SHALL BE CONSTRUCTED PRIOR TO ANY ROADWAY ACCEPTING CONSTRUCTION TRAFFIC.
5. THE FREQUENCY AND APPLICATION RATES FOR THE DUST CONTROL ITEMS WILL BE AS DIRECTED BY THE ENGINEER.
6. ALL SIDEWALK AND DRIVEWAYS DESIGNATED FOR REPLACEMENT SHALL BE CUT AND MATCHED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
7. ASPHALT EMULSION TACK COAT SHALL BE PLACED PRIOR TO PAVEMENT PLACEMENT ON THE CONCRETE BASE OR COLD PLANED PAVEMENT, AND ON ANY NEW COURSE WHICH HAS BEEN OPEN TO TRAFFIC, OR ANY NEW COURSE WHICH HAS BEEN EXPOSED FOR MORE THAN 3 DAYS, AND/OR AS DIRECTED BY THE ENGINEER. IT SHALL ALSO BE APPLIED TO VERTICAL PAVEMENT FACES BETWEEN ADJOINING PAVEMENT SECTIONS. ALL APPLICATIONS ON BOTH HORIZONTAL AND VERTICAL SURFACES SHALL BE PAID FOR UNDER THE CONTRACT UNIT BID PRICE FOR CODE 403.0300 "ASPHALT EMULSION TACK COAT."
8. THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND PLACING, AT HIS OWN EXPENSE, PLANTABLE SOIL AND SEED IN AREAS WHICH ARE OUTSIDE OF THE PROJECT'S AREAS OF DISTURBANCE AND WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS INCLUDING THOSE AREAS WHERE VEHICLES, EQUIPMENT AND MATERIALS ARE STORED WITH THE PERMISSION OF THE ENGINEER.
9. UNDER NO CIRCUMSTANCE WILL THE CONTRACTOR BE ALLOWED TO STOCKPILE REMOVED PAVEMENT MATERIALS WITHIN THE PROJECT LIMITS.
10. CLEANING AND SWEEPING OF PAVEMENT WILL INCLUDE REMOVAL OF ALL PAVEMENT DEBRIS PRIOR TO THE PLACEMENT OF EACH BITUMINOUS PAVEMENT LIFT. ALL CLEANING AND SWEEPING SHALL BE DONE TO THE SATISFACTION OF THE ENGINEER.
11. PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE ENGINEER.
12. THE COORDINATE SYSTEM, IF SHOWN, IS THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM.
13. PAVEMENT OPERATIONS FOR CURBED SECTIONS: IN AREAS WHERE CURBING IS SET TO FINISH LINE AND GRADE, THE CONTRACTOR WILL NOT BE REQUIRED TO UTILIZE THE SENSOR AND SKY-TYPE DEVICE FOR AUTOMATIC GRADE CONTROL, BUT WILL BE ALLOWED TO MANUALLY ADJUST THE BITUMINOUS PAVER FOR CONTROLLING GRADE.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.
15. NO FUEL STORAGE, VEHICLE REFUELING, OR EQUIPMENT STORAGE SHALL TAKE PLACE IN DESIGNATED WETLANDS, NOR WITHIN 100' OF ANY WATER BODY. THIS REQUIREMENT SHALL NOT SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAW, ORDINANCE, RULE OR REGULATION THAT APPLIES TO THE SAME, UNLESS THIS REQUIREMENT IS MORE STRINGENT THAN SAID LAW, ORDINANCE, RULE OR REGULATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT AT THE END OF FINAL PAVING OPERATIONS, FLOW TO EXISTING DRAINAGE STRUCTURES HAS BEEN REESTABLISHED AND THAT NO ISOLATED DEPRESSIONS REMAIN. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS PROVISION; IT SHALL BE CONSIDERED INCIDENTAL TO PAVING AND COLD PLANING OPERATIONS.
17. ALL EMBANKMENTS SHALL BE PLACED IN HORIZONTAL LAYERS NOT EXCEEDING 12" (AFTER COMPACTION) AND SHALL BE COMPACTED AS SPECIFIED BEFORE THE NEXT LAYER IS PLACED. ALSO, EMBANKMENT CONSTRUCTION SHALL CONFORM TO SECTION 202.03.2 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
18. IF THIS PROJECT IS ON A HURRICANE EVACUATION AND DIVERSIONARY ROUTE, AS DESIGNATED ON THE COVERSHEET, THE CONTRACTOR IS ADVISED THAT UPON 12 (TWELVE) HOURS NOTICE THE ROADWAY SHALL BE OPEN TO EVACUEES AND EMERGENCY PERSONNEL. ANY EXTRA WORK NECESSARY TO COMPLY WITH THIS REQUIREMENT WILL BE REIMBURSED UNDER FORCE ACCOUNT PROCEDURES.
19. THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS STATED IN THE ENVIRONMENTAL APPROVALS ISSUED FOR THE PROJECT FROM THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (RIDEM). AND/OR THE ARMY CORPS OF ENGINEERS (ACOE). AND/OR THE COASTAL RESOURCES MANAGEMENT COUNCIL (CRMC). COPIES OF EACH OF THESE PERMITS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH THESE CONDITIONS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
20. FOR ALL PROJECTS INVOLVING KNOWN SITE REMEDIATION ISSUES, THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE CONSTRUCTION RELATED PROVISIONS, CONDITIONS, AND STIPULATIONS OF ANY REMEDIAL PLANS DEVELOPED FOR THE PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THESE DOCUMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
21. NO UNPROTECTED CONSTRUCTED FEATURE MAY PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. HEADWALL, DRAINAGE INLET, ETC.
22. THE REMAINING SECTION OR STUB OF A BREAKAWAY BASE MAY NOT PROJECT MORE THAN 4 INCHES ABOVE THE FINISHED GRADE OF A TRAVERSABLE SLOPE IN A CLEAR ZONE, e.g. SIGN POSTS, LIGHT POLES, FIRE HYDRANTS, ETC.

DRAINAGE AND EROSION CONTROL NOTES:

1. FOR ALL PROJECTS WITH AT LEAST ONE(1) ACRE OF SOIL DISTURBANCE, R.I.D.O.T. IS REQUIRED TO DEVELOP AND ENFORCE A SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ORDER TO REMAIN IN COMPLIANCE WITH THE RIPDES GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL READ, BECOME FAMILIAR WITH, AND ADHERE TO ALL OF THE PROVISIONS, CONDITIONS, AND STIPULATIONS OF THE GENERAL PERMIT AND THE SITE SPECIFIC SWPPP FOR THIS PROJECT. COPIES OF THESE DOCUMENTS ARE INCLUDED IN THE CS PAGES OF THE CONTRACT DOCUMENTS. ALL COSTS ASSOCIATED WITH ADHERENCE TO THE SWPPP SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION AND INCLUDED WITH THE COST FOR THE ASSOCIATED BID ITEM(S).
2. NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15 OF ANY CALENDAR YEAR OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE RESIDENT ENGINEER OR ENVIRONMENTAL INSPECTOR, BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE R.I. SOIL EROSION AND SEDIMENT CONTROL HANDBOOK. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOILS MUST BE RESTABILIZED WITHIN 5 WORKING DAYS. ANY WORK TO CORRECT PROBLEMS RESULTING FROM FAILURE TO COMPLY WITH THIS PROVISION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THERE WILL BE NO SEPARATE PAYMENT FOR THIS PROVISION, IT SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OPERATIONS. STABILIZATION OF ONE FORM OR ANOTHER AS DESCRIBED ABOVE SHALL BE ACHIEVED WITHIN 2 WEEKS OF FINAL GRADING.
3. STOCKPILES OF MATERIAL SHALL NOT BE LOCATED WITHIN REGULATED WETLANDS OR BUFFER ZONE AREAS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN 30% AND STOCKPILES OF ERODABLE MATERIAL SHALL ALSO BE SEEDED AND RINGED WITH R.I. STD. 9.1.0 TO STABILIZE.
4. IF THE PLANS INCLUDE SPECIFIC AREAS FOR PLACEMENT OF CONSTRUCTION DEWATERING BASINS AND/OR EQUIPMENT AND MATERIALS STORAGE AND STOCKPILING, AND IF THE CONTRACTOR ELECTS TO UTILIZE ANY OTHER AREAS FOR THESE PURPOSES, THIS SHALL BE APPROVED BY THE ENGINEER ONLY AFTER OBTAINING ANY NECESSARY PERMITS AND/OR PERMIT MODIFICATIONS FROM THE APPROPRIATE REGULATORY AUTHORITY(IES). ANY PERMITTING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE ACCOMPLISHED AT NO COST TO THE STATE. THE ENGINEER WILL COORDINATE SUBMISSION OF ANY REQUIRED PERMIT APPLICATION MATERIALS WITH THE R.I.D.O.T. OFFICE OF ENVIRONMENTAL PROGRAMS.
5. JUTE MESH SHALL BE USED TO STABILIZE PLANTABLE SOIL AND/OR LOAM IN ALL DITCHES, ON ALL SLOPES ADJACENT TO WETLANDS AND WETLAND PERIMETERS, AND ON ALL SLOPES WITHIN WATER QUALITY BASINS. JUTE MESH IN DITCHES SHALL EXTEND TO AN ELEVATION 2 FEET ABOVE THE BOTTOM OF THE DITCH.
6. SEEDING ON ALL SLOPES 3 TO 1 OR STEEPER SHALL CONSIST OF THE FOLLOWING APPLICATIONS UNLESS CHANGED IN THE CONTRACT.

   SEEDING TYPE I.

   ADHESIVE MULCH STABILIZER
7. UNVEGETATED SLOPES SHALL NOT BE UNATTENDED OR EXPOSED FOR PERIODS IN EXCESS OF 2 WEEKS OR THROUGH THE INACTIVE WINTER SEASON.
8. PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION (HORIZONTAL AND VERTICAL) OF ALL EXISTING PIPES AND/OR STRUCTURES WHICH ARE TO BE CONNECTED. ANY VARIATION FOUND FROM THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO DRAINAGE AND UTILITY CONSTRUCTION. WORK CAN COMMENCE ONLY UPON THE ENGINEER'S AUTHORIZATION.
9. ALL DRAINAGE AND UTILITY STRUCTURES WITHIN THE PAVED ROADWAY SHALL BE ADJUSTED TO GRADE WITH THE SURROUNDING PAVEMENT PRIOR TO THE WINTER SHUTDOWN.
10. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL THROUGHOUT THE WORK AREA.
11. CATCH BASIN RIM GRADES NOTED ON PLANS ARE DEPRESSED 0.1' LOWER THAN THE GUTTER GRADE. RIM ELEVATIONS SHOWN ARE FINAL GRADES. THE CONTRACTOR SHALL PLACE FRAMES AND GRATES 0.1' BELOW THE GRADE CONSTRUCTED IN THIS CONTRACT OR AS DIRECTED BY THE ENGINEER.
12. PROVISIONS FOR CLEARING TO ACCESS OUTFALLS DURING THE CLEANING AND FLUSHING OF THE CLOSED DRAINAGE SYSTEM SHALL BE KEPT TO A MINIMUM.

    ANY VEGETATIVE CLEARING SHALL BE LIMITED TO BRUSH AND TREES LESS THAN 3" DIAMETER.

    NO HEAVY EQUIPMENT MAY ENCROACH UPON VEGETATED PERIMETER OR RIVERBANK WETLANDS AS WELL AS BIOLOGICAL WETLANDS.
13. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL DEVICES FOR OUTLET PROTECTION PRIOR TO CLEANING AND FLUSHING STORM WATER DRAINAGE. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL FLUSHED SEDIMENTS ARE REMOVED. AT ALL OUTFALL LOCATIONS WHERE PIPES ARE TO BE CLEANED AND FLUSHED, OUTLET PROTECTION (R.I. STD. 9.1.0 OR 9.3.0) SHALL BE INSTALLED TO TRAP SEDIMENTS. THESE SEDIMENTS SHALL THEN BE REMOVED AND DISPOSED OF LEGALLY BEFORE THE OUTLET PROTECTION DEVICES ARE REMOVED. IF OUTLET PROTECTION AT THE OUTFALL IS NOT FEASIBLE, THEN THE OUTLET PIPE OF THE LAST DRAINAGE STRUCTURE TO BE CLEANED SHALL BE PLUGGED TO CAPTURE ALL MATERIALS FLUSHED FROM PIPES. AFTER THE MATERIALS ARE REMOVED FROM THE DRAINAGE STRUCTURE, THE OUTLET SHALL BE UNPLUGGED TO RESUME NORMAL FUNCTIONING.
14. R.I. STD. 9.8.0 BALED HAY INLET PROTECTION SHALL BE INSTALLED AT ALL CATCH BASINS AND INLETS WHENEVER SUBBASE IS EXPOSED, AND SHALL REMAIN IN PLACE UNTIL THE ABUTTING GROUND SURFACES ARE STABILIZED.
15. WHERE BALED HAY INLET PROTECTION AND SILT FENCES ARE USED AT CATCH BASINS, THEY SHALL BE REMOVED AT THE END OF THE PROJECT OR AS DIRECTED BY THE ENGINEER IN ORDER TO PREVENT CLOGGING OF THE INLET.

DRAINAGE AND EROSION CONTROL NOTES (CONTINUED):

16. DETENTION AND RETENTION BASINS MAY BE ROUGH GRADED AND STABILIZED WITH VEGETATION AND/OR OTHER EROSION CONTROL MEASURES AS REQUIRED BY THE ENGINEER PRIOR TO USE AS TEMPORARY SEDIMENTATION BASINS DURING PROJECT CONSTRUCTION. FINAL BASIN CONSTRUCTION SHALL NOT COMMENCE UNTIL ALL SOURCES OF SEDIMENT HAVE BEEN ELIMINATED, FINAL ROADSIDE VEGETATION IS ESTABLISHED AND USE OF TEMPORARY BASINS IS NO LONGER REQUIRED AS DIRECTED BY THE ENGINEER. ANY ISSUES RELATING TO EROSION AND/OR SEDIMENT TRANSPORT INTO WETLAND AREAS RESULTING FROM SUCH USE OF SEDIMENTATION BASINS DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY CORRECTIVE ACTION REQUIRED TO RESOLVE SUCH ISSUES SHALL BE COMPLETED BY THE CONTRACTOR.
17. THE TOE OF ANY FILL SLOPE IS TO REMAIN AT LEAST 1' INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROL MEASURES WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED.
18. PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES, EROSION AND SEDIMENTATION CONTROLS SHALL BE INSTALLED AT THOSE AREAS INDICATED ON THE PLANS. CLEARING MAY OCCUR PRIOR TO INSTALLATION OF SUCH CONTROLS, HOWEVER NO GRUBBING, GRADING, FILLING, OR OTHER SOIL DISTURBANCE SHALL OCCUR PRIOR TO INSTALLATION. THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS.
19. ALL HAY BALES, SILT FENCE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS IS ESTABLISHED. IF NEEDED, TEMPORARY SEEDING CAN HELP TO MINIMIZE EROSION. TEMPORARY SEED WILL CONFORM TO R.I.D.O.T. STANDARD TEMPORARY SEED MIX.
20. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR AND HE SHALL DO SO AT NO ADDITIONAL EXPENSE TO THE STATE.
21. THE NORMAL ACCEPTABLE SEASONAL SEEDING DATES ARE SPECIFIED IN SUBSECTION L.02.03 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
22. ADDITIONAL EROSION CONTROLS, SHALL BE INSTALLED AS DIRECTED BY THE RESIDENT ENGINEER. THESE ADDITIONAL ITEMS WILL BE PAID AT THE UNIT PRICE FOR THAT BID ITEM.

UTILITY NOTES:

1. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS USING THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE. BUILDING SERVICE CONNECTIONS (ELECTRIC, GAS, TELEPHONE, WATER AND SANITARY) ARE NOT SHOWN. CONTRACTOR IS TO ASSUME SERVICES ARE PRESENT TO ALL BUILDINGS.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING DRAINAGE AND UTILITIES BOTH UNDERGROUND AND OVERHEAD BEFORE EXCAVATION BEGINS IN ACCORDANCE WITH CHAPTER 39-1.2 OF THE R.I. GENERAL LAWS ENTITLED "EXCAVATION NEAR UNDERGROUND UTILITY FACILITIES", WITH AMENDMENTS EFFECTIVE AS OF NOVEMBER 1, 2009 AND, WHEN NECESSARY, BY CONTACTING THE INDIVIDUAL UTILITY COMPANIES. EXCAVATION SHALL BE IN ACCORDANCE WITH ALL STATUTES, ORDINANCES, RULES AND REGULATIONS OF ANY APPLICABLE CITY, TOWN, STATE OR FEDERAL AGENCY. THE CONTRACTOR SHOULD UNDERSTAND THAT NOT ALL UTILITIES SUBSCRIBE TO THE DIG SAFE PROGRAM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES AND ENSURE THAT ALL UTILITIES HAVE BEEN MARKED PRIOR TO COMMENCING THEIR WORK. ANY DAMAGE TO EXISTING UTILITIES MARKED IN THE FIELD, OR AS A RESULT OF FAILING TO CONTACT THE APPROPRIATE UTILITY COMPANY, SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE STATE.
3. ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE CAPPED.
4. EXISTING WATER SERVICES SHALL BE RECONNECTED TO THE NEW WATER MAINS.
5. UTILITY SERVICE CONNECTIONS SHALL BE MAINTAINED TO ALL EXISTING FACILITIES TO REMAIN.
6. FIRE HYDRANTS SHALL NOT BE REMOVED FROM SERVICE WITHOUT WRITTEN AUTHORIZATION FROM THE FIRE DEPARTMENT OR THE WATER AUTHORITY.
7. ALL NEW WATER LINES SHALL BE DISINFECTED TO THE SATISFACTION OF THE WATER AUTHORITY IN ACCORDANCE WITH THE SPECIFICATIONS.
8. ALL UTILITY POLE RELATED WORK SHALL BE BY OTHERS.

ENVIRONMENTAL MANAGEMENT
JUN 10 2020

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SI...

THIS PLAN SHALL NOT BE ALTERED

REVISIONS		
NO.	DATE	BY
1	4/07	TRB
2	3/10	RBH
3	4/14	MLP

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

STANDARD NOTES - 1

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

CHA
272 West Exchange Street, Suite 101
Providence, RI 02903
860-206-2412
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0016N_V1_003_STDNOTES01

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	4	25

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL MUST BE TAGGED AT THE NURSERY (A RECOGNIZED GROWER OF PLANT MATERIAL) IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION. ALL PLANT MATERIAL MUST BE NURSERY GROWN; NO PLANTATION GROWN PLANT MATERIAL WILL BE ACCEPTED.
2. ALL PLANT SUBSTITUTIONS AND/OR CHANGES IN PLANT LOCATION MUST BE APPROVED IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
3. ALL PLANT MATERIAL IS TO BE FIELD LOCATED BY A REPRESENTATIVE FROM THE R.I.D.O.T. LANDSCAPE ARCHITECTURE UNIT.
4. A R.I.D.O.T. LANDSCAPE REPRESENTATIVE MUST BE ON SITE TO APPROVE ALL TRIMMING AND CLEARING NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS.
5. ANY TOPSOIL USED AS PLANTABLE SOIL SHALL HAVE A SANDY LOAM TEXTURE RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, AND SHALL CONFORM TO SECTION M.18 OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
6. ALL TREES AND SHRUBS SHALL BE MULCHED WITH PINE BARK MULCH IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
7. ALL TREES AND/OR SHRUBS THAT ARE PLANTED AS A BED SHALL BE MULCHED AS A BED.
8. PROVIDE A MINIMUM 6'-8" BRANCHING STANDARD ON ALL TREES INSTALLED ADJACENT TO SIDEWALKS AND/OR PEDESTRIAN ACCESS AREAS.

STRUCTURAL NOTES FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS:

GENERAL

1. ALL SUPPORT DESIGNS AND ASSOCIATED SHOP DRAWING REVIEWS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION, OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS (THE "SPECIFICATIONS"), INCLUDING THE LATEST INTERIM SPECIFICATIONS, EXCEPT AS MODIFIED HEREIN.

CONSTRUCTION DRAWINGS AND DETAILS

1. THE FOLLOWING NOTES SHALL BE INCLUDED ON ALL PLANS AND/OR SHOP DRAWINGS IN REFERENCE TO ANCHOR BOLTS:
   - "PRETENSIONING OF ALL ANCHOR NUTS IS REQUIRED, AND SHALL BE ACCOMPLISHED BY TIGHTENING TO 1/6TH TURN BEYOND THE SNUG-TIGHT POSITION."
   - "THE MAXIMUM CLEARANCE BETWEEN THE BOTTOM OF THE LEVELING NUTS AND THE TOP OF THE CONCRETE IS CRITICAL AND SHALL NOT EXCEED THE AMOUNT SPECIFIED ON THIS DRAWING."
2. THE USE OF GROUT UNDER BASE PLATES SHALL GENERALLY NOT BE PERMITTED. IF SPECIFIC CONDITIONS WARRANT ITS USE, THE GROUT SHALL NOT BE CONSIDERED LOAD CARRYING; LOADS SHALL BE DIRECTLY SUPPORTED BY THE ANCHOR BOLTS. ADEQUATE DRAINAGE SHALL BE PROVIDED.
3. THE DAMPENING EFFECTS OF VIBRATION MITIGATION DEVICES SHALL NOT BE CONSIDERED IN THE DESIGN OF STRUCTURAL SUPPORTS FOR SIGNS AND TRAFFIC SIGNALS. IF THE CONTRACTOR CHOOSES TO USE THESE DEVICES FOR WARRANTY PURPOSES, THE TYPE OF DEVICES PROPOSED SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO FABRICATION OF SUPPORTS.

TRAFFIC SIGNAL NOTES:

1. ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE R.I.D.O.T. MAINTENANCE HEADQUARTERS, 360 LINCOLN AVENUE, WARWICK, RHODE ISLAND, 02888.
2. BACK PLATES SHALL BE INSTALLED ON ALL TRAFFIC SIGNAL HEADS.
3. THE CONTRACTOR SHALL SUPPLY AND INSTALL ON THE UPPER LEFT HAND CORNER OF THE BACK OF THE CONTROLLER CABINET DOOR A LAMINATED INTERSECTION GRAPHIC AND TABLE DEPICTING THE TRAFFIC DETECTOR RELAY CHANNEL ASSIGNMENTS. THE DIAGRAM SHALL BE A GRAPHIC OF THE INDIVIDUAL INTERSECTION ORIENTED SIMILAR TO THE PLANS SHOWING THE LOCATIONS OF EACH OF THE LOOP DETECTORS. THE DIAGRAM SHALL, AT A MINIMUM, INCLUDE DETECTOR NUMBERS, STREET NAME LABELS, NORTH ARROW, AND CONTROLLER CABINET LOCATION. THE ASSIGNMENT INFORMATION SHALL BE INCLUDED IN A TABLE WHICH SHALL INCLUDE, AT A MINIMUM, THE APPROACH NAME, DETECTOR NUMBER, TERMINAL NUMBER, DETECTOR RACK SLOT NUMBER, RELAY NUMBER, RELAY CHANNEL NUMBER, AND PHASE ASSOCIATED WITH EACH DETECTOR.
4. TRAFFIC CONTROLLER CABINETS, UNLESS OTHERWISE NOTED, SHALL BE NEMA TS2 TYPE 1 CABINET SIZE 6 ("P" TYPE) WITH NOMINAL DIMENSIONS OF 52"Hx44"Wx24"D.
5. ALL DELAY AND EXTENSION TIMES, AS CALLED FOR ON THE PLANS, FOR PROPOSED LOOP DETECTORS SHALL BE PROGRAMMED IN THE TRAFFIC SIGNAL CONTROLLER AND NOT THE DETECTOR RELAY.
6. A BARE GROUND WIRE SHALL BE PLACED IN ALL PVC CONDUITS AND SHALL BE BONDED TO GROUND RODS IN ACCORDANCE WITH SECTION T.03 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
7. THE FINAL POSITION OF SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, DETECTORS, AND STOP LINE AND CROSSWALK PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD ACCORDING TO ACTUAL INTERSECTION CHARACTERISTICS.
8. A 2' MINIMUM BUFFER SHALL BE PROVIDED BETWEEN THE CURB AND ALL LATERAL OBSTRUCTIONS (INCLUDING ALL SIGNAL POLES AND TRAFFIC/PEDESTRIAN SIGNAL HEADS) TO PROVIDE ADEQUATE CLEARANCE FOR TURNING VEHICLES.
9. ALL FOUNDATIONS MUST HAVE CONES OR BARRELS BOLTED TO FOUNDATION BASES UNTIL ACTUAL POLE IS INSTALLED.
10. WHEN PLACING TRAFFIC SIGNAL HANDHOLES OR CONDUIT IN EXISTING PORTLAND CEMENT CONCRETE SIDEWALKS, THE ENTIRE SIDEWALK SQUARE OF CONCRETE SHALL BE REPLACED IN ACCORDANCE WITH R.I. STD. 4.3.1.0. NO PATCHES WILL BE ALLOWED.
11. ALL PEDESTRIAN PUSHBUTTONS SHALL BE COMPLIANT WITH "THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES" (ADAAG) AND SHALL INCLUDE A PRESSURE-ACTIVATED (NON-MOVING) BUTTON. SIGNS APPLICABLE TO PUSHBUTTON ACTUATION SHALL BE INSTALLED SUCH THAT THE CROSSING ASSIGNED TO EACH BUTTON IS CLEARLY INDICATED. IF SITE CONDITIONS DO NOT ALLOW PEDESTRIAN PUSHBUTTONS TO BE INSTALLED WHERE CALLED FOR ON THE PLANS, THE R.I.D.O.T. TRAFFIC ENGINEERING UNIT SHALL BE CONSULTED WITH THROUGH AN R.F.I. PRIOR TO INSTALLING THE PUSHBUTTONS. THE FINAL PLACEMENT OF ALL PEDESTRIAN PUSHBUTTONS SHALL BE IN ACCORDANCE WITH ADAAG AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
12. ALL LOOP DETECTORS SHALL BE CENTERED WITHIN EACH LANE AS DELINEATED, UNLESS OTHERWISE DIMENSIONED ON PLANS.
13. ALL LOOP DETECTORS SHALL BE CUT INTO THE FINAL PAVEMENT SURFACE COURSE.
14. TRAFFIC SIGNAL CONTROLLERS SHALL BE WIRED SO THAT ANY FIRE PRE-EMPTION SHALL OVERRIDE MANUAL (PUSH BUTTON) OPERATION.
15. THE CONTRACTOR SHALL WORK CONTINUOUSLY TO RESTORE TRAFFIC SIGNAL OPERATION TO ITS INTENDED PURPOSE WHEN REPLACING THE TRAFFIC SIGNAL EQUIPMENT. A POLICE DETAIL IS REQUIRED TO DIRECT TRAFFIC AT THE INTERSECTION AT ALL TIMES WHEN THE TRAFFIC SIGNAL IS INOPERATIVE. AT NO TIME SHALL THE CONTRACTOR LEAVE THE SITE BEFORE RESTORING FULL TRAFFIC OPERATIONS.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

1. ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS, CHANNELIZING DEVICES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. ALL SIGN MOUNTINGS FOR TEMPORARY AND CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
3. THE CONTRACTOR SHALL COVER ALL EXISTING AND/OR TEMPORARY SIGNS THAT ARE NOT RELEVANT TO THE TRAFFIC CONTROL REQUIRED DURING ANY PARTICULAR STAGE OF THE CONTRACT.
4. ADVANCE FLAGPERSON SIGNS (W20-7A) SHALL BE USED IN ADVANCE OF ANY POINT AT WHICH A FLAGPERSON OR A POLICE OFFICER HAS BEEN STATIONED TO CONTROL TRAFFIC. WHEN NEEDED, AN APPROPRIATE DISTANCE MESSAGE MAY BE DISPLAYED ON A SUPPLEMENTAL PLATE (24"x18") BELOW THE FLAGPERSON SYMBOL SIGN. THE SIGN SHALL BE PROMPTLY REMOVED OR COVERED WHENEVER THE FLAGPERSON IS NOT AT THE STATION.
5. POLICE OFFICERS (AND NOT FLAGPERSONS) SHALL BE UTILIZED WHEN WORK WILL IMPACT SIGNALIZED INTERSECTIONS AND LIMITED ACCESS HIGHWAYS.
6. POLYETHYLENE DRUMS SHALL BE UTILIZED AS A CHANNELIZING DEVICE WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN BEYOND WORKING HOURS WHEN NO WORKERS ARE PRESENT. CONES SHALL BE UTILIZED WHEN A TRAFFIC CONTROL SET-UP IS TO REMAIN ONLY DURING WORKING HOURS AND IS SUBSEQUENTLY BROKEN DOWN AT THE END OF THE WORKDAY.
7. ARROW PANELS SHALL BE SET IN THE FLASHING FOUR CORNERS CAUTION MODE UNLESS UTILIZED FOR A MERGING TAPER. ARROW PANELS SET IN THE FLASHING ARROW MODE SHALL NOT BE UTILIZED FOR LANE SHIFTS.
8. TEMPORARY CONSTRUCTION SIGNS AND OTHER WORKZONE TRAFFIC CONTROL DEVICES THAT ARE DAMAGED OR REQUIRE RELOCATION SHALL BE REPLACED AND / OR RELOCATED UNDER THE PAY ITEM FOR "MAINTENANCE AND MOVEMENT TRAFFIC PROTECTION."
9. THE PRIVATE VEHICLES OF CONSTRUCTION WORKERS SHALL NOT BE PARKED ON THE TRAVEL LANES OR SHOULDERS. THEY MAY BE PARKED WITHIN THE STATE RIGHT-OF-WAY ONLY IN AREAS 30' BEYOND THE OUTSIDE EDGE OF THE TRAVEL LANES AND/OR IN AREAS APPROVED BY THE ENGINEER.
10. TEMPORARY CONSTRUCTION SIGNS AND OTHER TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC, AND SHALL BE REMOVED AS SOON AS PRACTICAL WHEN THEY ARE NO LONGER APPROPRIATE.
11. THE INTENDED VEHICLE PATHS THROUGH EACH WORK ZONE SHALL BE CLEARLY MARKED AT ALL TIMES. WATERBORNE PAVEMENT MARKINGS SHALL BE INSTALLED BEFORE THE END OF THE WORK SHIFT ON ALL COLD-PLANED AND NEW ROADWAY SURFACES THAT WILL BE OPENED TO TRAFFIC AT THE END OF THE SHIFT.

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JUN 10 2020
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0038
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

THIS PLAN SHALL NOT BE ALTERED

REVISIONS		
NO.	DATE	BY
1	4/07	TRB
2	11/07	TRB
3	3/10	RBH

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

STANDARD NOTES - 2

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	5	25

LIST OF ABBREVIATIONS

A

ABUTMENT	= ABUT.
ALTERNATE	= ALT.
ANCHOR BOLT	= A.B.
APPROVED	= APPD.
APPROXIMATE	= APPROX.
AVERAGE	= AVG.

B

BEAM	= BM.
BACK TO BACK	= B TO B
BETWEEN	= BTWN
BEARING	= BRG.
BITUMINOUS	= BIT.
BUILDING	= BLDG.
BUILDING LINE	= B.L.
BOLT CIRCLE	= B.C.
BOTTOM	= BOT.

C

CENTER TO CENTER	= C TO C
CENTERLINE	= ℄
CIRCLE	= CIR.
CLEARANCE	= CL.
COLUMN	= COL.
CONCRETE	= CONC.
CONDUIT	= COND.
CONNECTION	= CONN.
CONSTRUCTION	= CONST.
CONTRACTION	= CONTR.
COUNTERSINK	= CSK.
COUPLING	= CPLG.
CLASS I CONTROLLED LOW STRENGTH MATERIAL	= CLSM

D

DETAIL	= DET.
DIAGONAL	= DIAG.
DIAPHRAGM	= DIAPHM.
DIAMETER	= DIA.
DIMENSION	= DIM.
DRAWING	= DWG.
DRAIN	= DR.

E

EACH	= EA.
EACH FACE	= E.F.
ELEVATION	= EL.
EXISTING	= EXIST.
EXPANSION	= EXP.

F

FAR FACE	= F.F.
FAR SIDE	= F.S.
FABRICATE	= FAB.
FACE TO FACE	= F TO F
FLANGE	= FLG.
FLAT HEAD	= F.H.
FOOTING	= FTG.
FOUNDATION	= FDN.
FURNISH, FABRICATE & ERECT	= F.F. & E.

G

GAGE	= GA.
GALVANIZE	= GALV.
GRADE	= GR.
GRATING	= GRTG.
GROUND	= GND.

H

HEIGHT	= HGT.
HEXAGON	= HEX.
HOT MIX ASPHALT	= HMA
HORIZONTAL	= HORIZ.

I

INCH	= IN.
INFORMATION	= INFO.
INSIDE DIAMETER	= I.D.
INVERT	= INV.

J

JOINT	= JT.

L

LENGTH	= LGTH.
LIGHTING	= LTG.
LONG	= LG.
LOAD & RESISTANCE FACTOR DESIGN	= LRFD

M

MATERIAL	= MATL.
MAXIMUM	= MAX.
MEAN HIGH WATER	= M.H.W.
MEAN SEA LEVEL	= M.S.L.
MINIMUM	= MIN.
MISCELLANEOUS	= MISC.

N

NEAR FACE	= N.F.
NEAR SIDE	= N.S.
NOT TO SCALE	= N.T.S.
NUMBER	= NO.

O

ON CENTER	= O.C.
OPENING	= OPNG.
OUTSIDE DIAMETER	= O.D.
OPTIONAL	= OPT.

P

PLATE	= ℙ
POINT OF VERTICAL CURVATURE	= P.V.C.
POINT OF VERTICAL TANGENCY	= P.V.T.
POLYVINYL CHLORIDE	= PVC
POINT OF TANGENCY	= P.T.
POUNDS PER SQUARE INCH	= P.S.I.
POUNDS PER SQUARE FOOT	= P.S.F.

R

RADIUS	= RAD.
RAILROAD	= RR
REQUIRED	= REQD.
REINFORCING	= REINF.
REHABILITATION	= REHAB.
REMOVE & DISPOSE	= R & D

S

SECTION	= SECT.
SCHEDULE	= SCH.
SCHEMATIC	= SCHEM.
SHEET	= SH.
SPACES	= SP.
STATION	= STA.
SYMMETRICAL	= SYM.
STAY IN PLACE	= S.I.P.

T

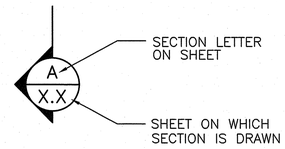
TOP	= T
TYPICAL	= TYP.

V

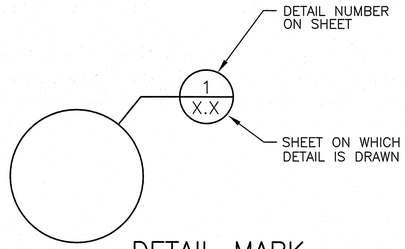
VARIES	= VAR.
VERTICAL CURVE	= V.C.
VERTICAL	= VERT.

W

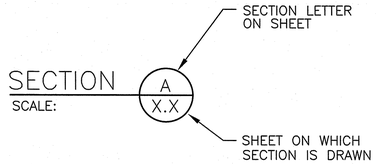
WELDED WIRE FABRIC	= W.W.F.
WITH	= W/
WIDE FLANGE	= W
WORKING POINT	= W.P.



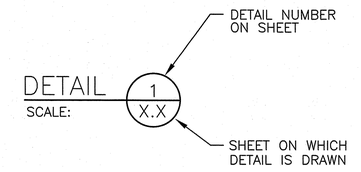
SECTION MARK



DETAIL MARK



SECTION TITLE



DETAIL TITLE

SECTION & DETAIL DESIGNATIONS

Environmental Management
JUN 10 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0125
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

REVISIONS		
NO.	DATE	BY

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

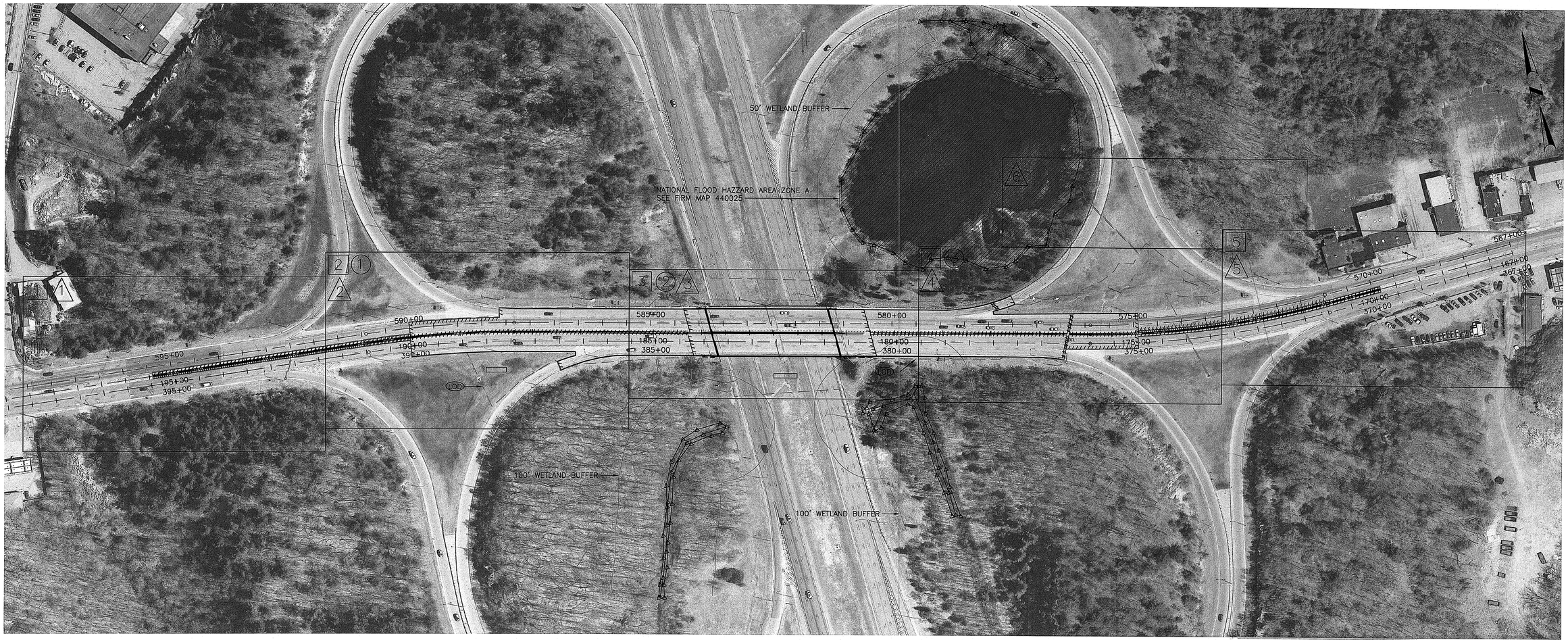
SMITHFIELD, RHODE ISLAND

LIST OF ABBREVIATIONS

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

0016N_V1_005_STDABBREV

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	6	25



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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Environmental Management
JUN 10 2020
Office of Water Resources

LEGEND

- [#] GENERAL PLAN
- (#) SIGNING & STRIPING PLAN
- <#> DRAINAGE & UTILITY PLAN

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

100 0 50 100 200 400
GRAPHIC SCALE

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

KEY PLAN

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

0016N_VI_XX_KEY – KEY PLAN

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	7	25

JOB SPECIFIC LEGEND

CBSC	HIGH FLOW SACK INSERT CATCH BASIN INLET PROTECTION
CFS	COMPOST FILTER SOCK
CM	CUTTING AND MATCHING ASPHALT
ECB	EROSION CONTROL BLANKET
FCBT	MEDIAN BARRIER HEIGHT TRANSITION
GB	GABION BASKET
GETD	DOUBLE FACE ENERGY ABSORBING END TREATMENT
GRHT	GUARDRAIL HEIGHT TRANSITION (SEE DETAIL)
GRBA	GUARDRAIL BRIDGE ATTACHMENT (SEE GUARDRAIL DETAILS)
GRM	GUARDRAIL MASH (TL-3)
GRMD	DOUBLE FACE MASH GUARDRAIL (TL-3)
GRT	GUARDRAIL TRAILING END ANCHORAGE MASH (TL-3)
GTC	6'-0" GRANITE TRANSITION CURB (SEE DETAIL)
GTEM	GUARDRAIL END TREATMENT - ENERGY ABSORBING MASH (TL-3)
GTRB	GUARDRAIL TRANSITION TO RIGID BARRIER (DOUBLE FACED)
IBPS	INFILTRATION BASIN PLANTING SOIL AND SEED
MMO-1	1.5" HMA MICROMILLING 1.5" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS
P-1	3.0" MODIFIED CLASS 9.5 HMA FOR BRIDGE DECKS 8.5" CLASS 19 HMA (PLACED IN 3 LIFTS: MIN. LIFT THICKNESS 2.5" AND MAX. LIFT THICKNESS 4.0") 12" GRAVEL BORROW SUBBASE COURSE TRIMMING AND FINE GRADING
P-2	1.5" CLASS 9.5 HMA FOR MISCELLANEOUS WORK 9.5" CLASS 19 HMA (PLACED IN 3 LIFTS: MIN. LIFT THICKNESS 2.5" AND MAX. LIFT THICKNESS 4.0") 12" GRAVEL BORROW SUBBASE COURSE TRIMMING AND FINE GRADING
PM	PLACEMENT OF MILLINGS BENEATH GUARDRAIL
PP	PLUNGE POOL
RCB	RECONSTRUCT CATCH BASIN VERTICAL WALLS
S-1	FULL-DEPTH SAWCUT OF BITUMINOUS PAVEMENT
SM	SEDIMENT MAKER
6WD	6" EPOXY RESIN DOTTED (3' SKIP - 9' SPACE) PAVEMENT MARKINGS - WHITE
6WS	6" EPOXY RESIN BROKEN (10' SKIP - 30' SPACE) PAVEMENT MARKINGS - WHITE
YLL	YIELD LINE LAYOUT

JOB SPECIFIC GENERAL NOTES

1. CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE STANDARD SPECIFICATIONS FOR THE STATE OF RHODE ISLAND AND THE SPECIFICATIONS ACCOMPANYING THESE PLANS. IN CASE OF CONFLICT, THE SPECIAL PROVISIONS OF THE SPECIFICATIONS ACCOMPANYING THESE PLANS SHALL GOVERN.
2. ALL EXISTING ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. ALL DAMAGES TO EXISTING STATE OR PRIVATE PROPERTY CAUSED BY THE CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO RIDOT.
4. THE CONTRACTOR SHALL HAVE A SUITABLE AND APPROVED LOCATION BY THE ENGINEER, CONCRETE WASHOUT AREA AVAILABLE ON-SITE FOR ALL PLACEMENTS.
5. ALL CHIPPED CONCRETE SHALL BE PROPERLY REMOVED AND/OR COVERED UNTIL SUCH TIME THAT IT IS REMOVED AND PROPERLY DISPOSED OF.
6. NOTE 14 & 15 OF THE "DRAINAGE AND EROSION CONTROL NOTES" ON "STANDARD NOTES - 1" SHALL REQUIRE INLET SEDIMENT BAGS INSTEAD OF HAY BALES. INLET SEDIMENT BAGS SHALL BE MAINTAINED ON A REGULAR BASIS, AS NEEDED TO PREVENT POTENTIAL FOR PONDING.
7. EXISTING CONDITIONS AND TOPOGRAPHIC IMFORMATION DEPICTED HEREON WAS DERIVED FROM AN ON THE GROUND SURVEY PERFORMED FROM MAY TO AUGUST OF 2019 BY CME ASSOCIATES, INC. ALL FEATURES WERE LOCATED USING CONVENTIONAL INSTURMENT METHODS.
8. AERIAL INFORMATION OBTAINED FROM RHODE ISLAND DEPARTMENT OF ENVIRONMENT MANAGEMENT (RIDEM) 2011 AERIAL PHOTOGRAPHY, 6" (0.15M) GSD MULTISPECTRAL DIGITAL ORTHOIMAGERY.
9. SURVEY OF BRIDGE NO. 074101 ROUTE 44 OVER INTERSTATE 295, EXISTING CONDITIONS SURVEY AND BRIDGE DETAIL, DATED 5/18/20, 3 SHEETS, PREPARED BY CME ASSOCIATES.

JOB SPECIFIC TRAFFIC SIGN NOTES

1. ALL NEW DIRECTIONAL AND WARNING SIGNS SHALL INCLUDE SUPPORTS. SIGN MOUNTINGS SHALL FOLLOW RIDOT STANDARD 24.2.0, UNLESS OTHERWISE NOTED ON THE PLANS.
2. THE CONTRACTOR SHALL NOT REMOVE EXISTING SIGNAGE UNTIL THE NEW SIGN/POST(S) ARE FURNISHED AND READY TO BE INSTALLED.

JOB SPECIFIC PAVEMENT MARKINGS NOTES

1. ALL PERMANENT MARKINGS FOR THIS PROJECT SHALL BE PLACED ON THE FINAL SURFACE COURSE NO SOONER THAN 2 WEEKS BUT NO LONGER THAN 4 WEEKS FROM COMPLETION OF THE PAVEMENT OPERATIONS.
2. THE LOCATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, AS AMENDED.

JOB SPECIFIC DRAINAGE NOTES

1. ALL PIPES WITHIN THE PROJECT LIMITS SHALL BE CLEANED & FLUSHED.

Environmental Management
JUN 10 2020
Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Jonathan D. Mercer

REVISIONS		
NO.	DATE	BY

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

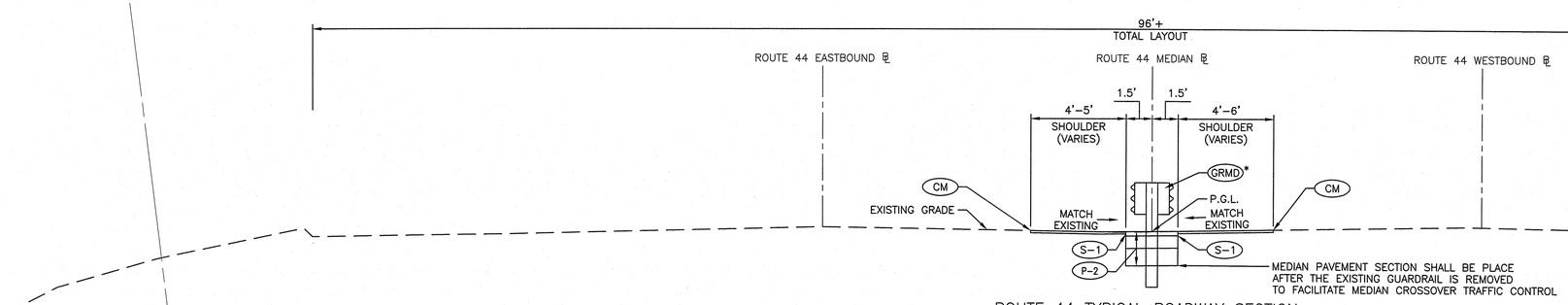
REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295
SMITHFIELD, RHODE ISLAND

JOB SPECIFIC SYMBOLS, LEGEND & NOTES

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

0016N_V1_006_JSNOTSYM

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	8	25

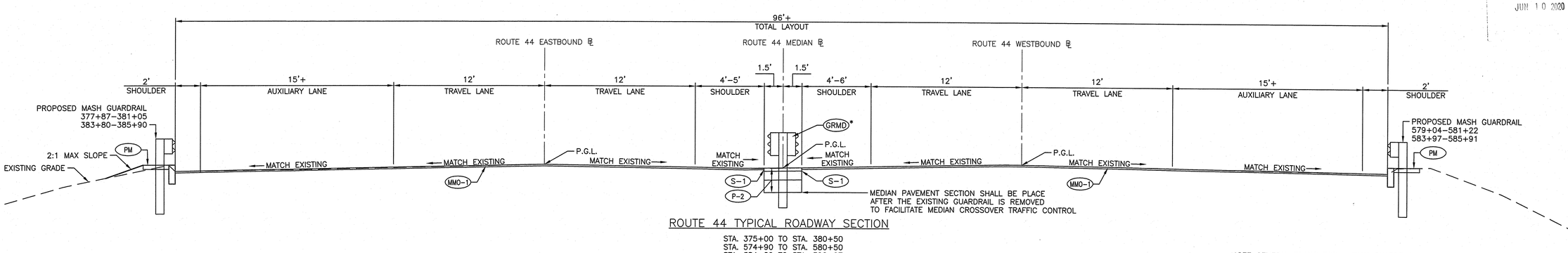


ROUTE 44 TYPICAL ROADWAY SECTION

STA. 169+84 TO STA. 174+96
STA. 190+03 TO STA. 195+43

*SEE GENERAL PLANS FOR MEDIAN GUARDRAIL TRANSITION TO MEDIAN BARRIER

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138

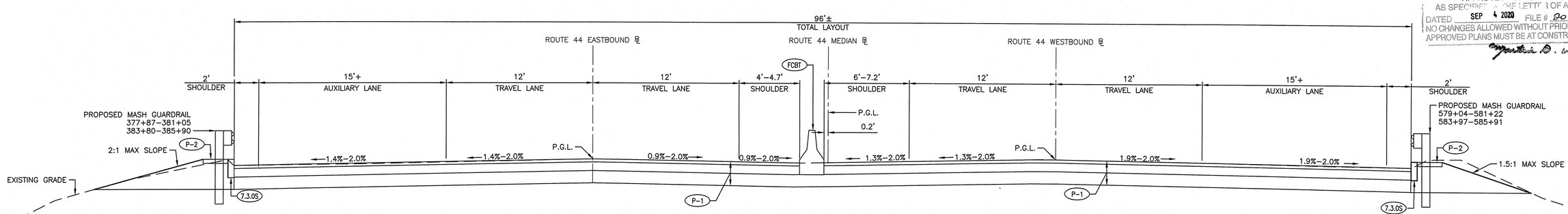


ROUTE 44 TYPICAL ROADWAY SECTION

STA. 375+00 TO STA. 380+50
STA. 574+90 TO STA. 580+50
STA. 384+29 TO STA. 390+07
STA. 584+24 TO STA. 590+00

*SEE GENERAL PLANS FOR MEDIAN GUARDRAIL TRANSITION TO MEDIAN BARRIER

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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ROUTE 44 TYPICAL ROADWAY SECTION

STA. 380+50 TO STA. 381+24
STB. 580+50 TO STA. 581+24
STA. 383+79 TO STA. 384+29
STB. 583+79 TO STA. 584+24

REVISIONS		
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

TYPICAL SECTIONS

CHECKED BY RPT DATE 4/30/2020 SCALE 1"=4'

GRAPHIC SCALE
4 0 2 4 8 16

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0016N_VI_XX_TYPICAL

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	9	25

Environmental Management

JUN 10 2020

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-028
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

MATCH TO GENERAL PLAN SHEET 2

* MEDIAN PAVEMENT SECTION SHALL BE PLACE AFTER THE EXISTING GUARDRAIL IS REMOVED TO FACILITATE MEDIAN CROSSOVER TRAFFIC CONTROL

20 0 10 20 40 80
GRAPHIC SCALE

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NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

GENERAL PLAN
SHEET 1 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

Environmental Management
JUN 10 2020

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	10	25

MATCH TO GENERAL PLAN SHEET 1

MATCH TO GENERAL PLAN SHEET 3

LIMIT OF MILLING STA. 590+00 MEET EXIST.

LIMIT OF MILLING STA. 588+14, 21' RT. MEET EXIST.

LIMIT OF MILLING STA. 390+07 MEET EXIST.

LIMIT OF MILLING STA. 387+00, 51' LT MEET EXIST.

ROUTE 44 WEST

ROUTE 44 EAST

PT 590+90.75

PT 190+93.06

PT 390+95.38

PC 587+83.07

PC 187+88.28

PC 387+93.50

CATCH BASIN RIM=250.32' INV.(a)=244.22

DRAINAGE MANHOLE RIM=247.76' INV.(a)=237.54 INV.(b)=237.51 INV.(c)=237.23

CATCH BASIN RIM=241.09' INV.(a)=236.80 INV.(b)=236.83 INV.(c)=236.00

CATCH BASIN RIM=255.80' INV.(a)=250.60 INV.(b)=250.49

CATCH BASIN RIM=241.04' INV.(a)=235.36 INV.(b)=235.25

CM DFP DG MMO-1 GRMD P-2 S-1 GRM PM GRT GTEM

8" CMP 15" CMP 12" CMP 18" RCP

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* MEDIAN PAVEMENT SECTION SHALL BE PLACE AFTER THE EXISTING GUARDRAIL IS REMOVED TO FACILITATE MEDIAN CROSSOVER TRAFFIC CONTROL

20 0 10 20 40 80
GRAPHIC SCALE

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NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

GENERAL PLAN

SHEET 2 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	11	25

Environmental Management
JUN 10 2020
Coastal Resources

MATCH TO GENERAL PLAN SHEET 2

MATCH TO GENERAL PLAN SHEET 4

APPROXIMATE UNDERGROUND WATER LINE

OLD PUTNAM PIKE (ROUTE 44) BASELINE

INTERSTATE 295 SOUTH

INTERSTATE 295 NORTH

RUMBLE STRIP

EDGE OF PAVEMENT

SOLID WHITE LINE

DASHED WHITE LINE

STA:182+84.51 OLD ROUTE 44
STA:76+67.88 I-295 BASELINE
N: 286569.342
E: 324003.085

MATCH EXISTING GUARDRAIL

N: 286501.1154
E: 324109.3648

12" CMP
ELEV=192.18'

CATCH BASIN
RIM=198.80'

BENCHMARK: MAG NAIL
IN POLE
ELEV=198.66' (NAVD88)

NECO #88

NECO #89

NECO #87

DRAINAGE MANHOLE
RIM=235.52'
INV.(a)=229.87
INV.(b)=229.93

15" CMP
INV.=224.33'

CATCH BASIN
RIM=232.62'
INV.(a)=FILLED
INV.(b)=228.47'

7.3.0S 8" REVEAL

WING WALL

APPROXIMATE UNDERGROUND COMM LINE

COMM CONDUIT

PIER (TYP.)

ABUTMENT

CATCH BASIN
RIM=203.35'

SEE BRIDGE PLANS FOR MEDIAN BARRIER STA. 581+00 TO STA. 583+93

STA:182+51.69 RELOCATED ROUTE 44
STA:75+58.86 I-295 BASELINE

RELOCATED PUTNAM PIKE (ROUTE 44) BASELINE

CATCH BASIN
RIM=232.64'
INV.(a)=227.93
INV.(b)=227.87

12" RCP

CATCH BASIN
RIM=232.59'
INV.(a)=226.78
INV.(b)=226.73

12" CMP

BENCHMARK: IRON ROD
ELEV=232.04' (NAVD88)

TREE LINE (TYP.)

DRAINAGE MANHOLE
RIM=235.20'
INV.(a)=229.74
INV.(b)=229.71

12" FES
INV.=215.98'

12" FES
INV.=209.85'

TRAFFIC CONTROL BOX

CAMERA POLE

POLE

N: 286315.8194
E: 323903.0530

12" STEEL 99PSIG GAS MAIN

UNKNOWN UTILITY LINE

APPROXIMATE UNDERGROUND GAS LINE

I-295 BASELINE (1966)
PLAT NO. 1351

ROUTE 44 WEST

ROUTE 44 EAST

PUTNAM PIKE

585+00 584+00 583+00 582+00 581+00 580+00

185+00 184+00 183+00 182+00 181+00 180+00

385+00 384+00 383+00 382+00 381+00 380+00

45' 50' 74' 450' 500'

SOLID WHITE LINE
DASHED WHITE LINE
SOLID YELLOW LINE
DASHED YELLOW LINE
RUMBLE STRIP
EDGE OF PAVEMENT

MMO-1 P-1 P-2 S-1 DFP DG GRM PM GRMD GRBA GTC GRT GTEM LOD FCBT GRHT GTRB

20 0 10 20 40 80
GRAPHIC SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

GENERAL PLAN

SHEET 3 OF 5

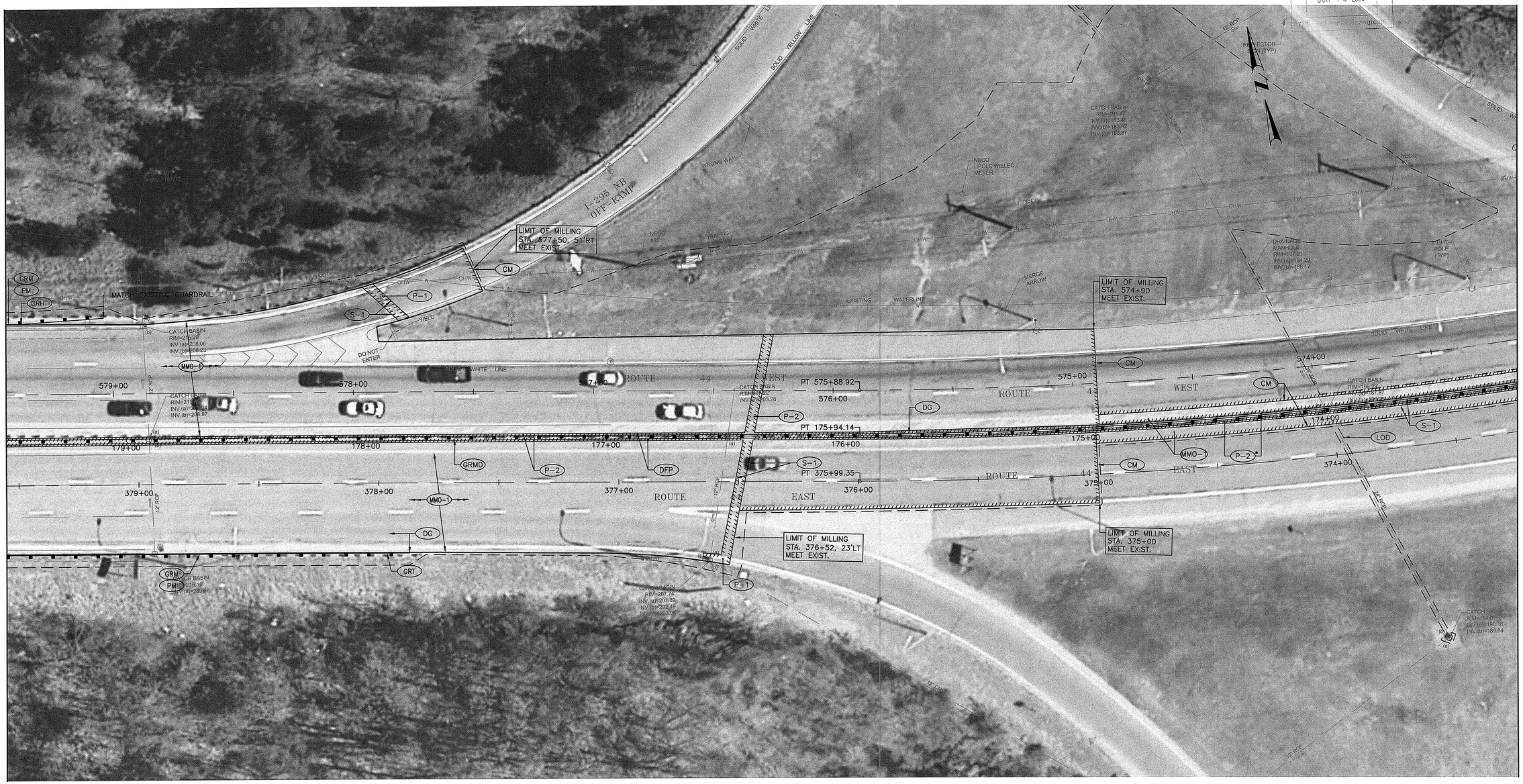
CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

FED. DIV.	ROAD NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		RI	BRO-0741(001)	2019	12	25

Environmental Management
JUN 10 2020
ROUTE

MATCH TO GENERAL PLAN SHEET 3

MATCH TO GENERAL PLAN SHEET 5



* MEDIAN PAVEMENT SECTION SHALL BE PLACE AFTER THE EXISTING GUARDRAIL IS REMOVED TO FACILITATE MEDIAN CROSSOVER TRAFFIC CONTROL

U.S. DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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GRAPHIC SCALE
20 0 10 20 40 80

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REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

GENERAL PLAN

SHEET 4 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

0016N_VI_XX_GENERAL – 4

Environmental Compliance
JUN 10 2020
Water Resource

FED. RD. NO.	ROAD NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		RI	BRO-0741(001)	2019	13	25

MATCH TO GENERAL PLAN SHEET 4



* MEDIAN PAVEMENT SECTION SHALL BE PLACE AFTER THE EXISTING GUARDRAIL IS REMOVED TO FACILITATE MEDIAN CROSSOVER TRAFFIC CONTROL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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20 0 10 20 40 80
GRAPHIC SCALE

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DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

GENERAL PLAN
SHEET 5 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

RECEIVED
JUN 10 2020
RIDOT PROJECT MANAGEMENT

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	16	25



MATCH TO DRAINAGE AND UTILITY PLAN SHEET 2

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED SEP 4 2020 FILE # 20-0176
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN

SHEET 1 OF 6

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	17	25

JUN 10 2020

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 1

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 3

LIMIT OF MILLING STA. 590+00 MEET EXIST.

LIMIT OF MILLING STA. 588+14, 21' RT. MEET EXIST.

ROUTE 44 WEST

ROUTE 44 EAST

PT 590+90.75

PT 190+93.06

PT 390+95.38

PC 587+83.07

PC 187+88.28

PC 387+93.50

CATCH BASIN RIM=250.32' INV.(a)=244.22

DRAINAGE MANHOLE RIM=247.76' INV.(a)=237.54 INV.(b)=237.51 INV.(c)=237.46

CATCH BASIN RIM=241.99' INV.(a)=236.30 INV.(b)=235.53 INV.(c)=236.00

CATCH BASIN RIM=241.04' INV.(a)=235.36 INV.(b)=235.29

CATCH BASIN RIM=255.80' INV.(a)=250.60 INV.(b)=250.49

LIMIT OF MILLING STA. 390+07 MEET EXIST.

LIMIT OF MILLING STA. 387+00, 51' LT MEET EXIST.

POTENTIAL STAGING AREA

LOD

CFP

CBSC

AFG

CCB

CMH

CFS

15" RCP

8" CMP

12" CMP

15" CMP

PLAT NO. 404

GRAPHIC SCALE 20 0 10 20 40 80

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN

SHEET 2 OF 6

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	18	25

Environmental Management
JUN 10 2020
Water Resources

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 2

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 4

Alignment=PUTNAM PIKE-ROUTE44
Calculated Point Based Off Field Locations
Station=182+84.51
Alignment=I-295 BASELINE
Station=76+67.88
Offset=0.000
Northing=286523.3471
Easting=324003.0852

Alignment=RELOCATED PP
Calculated Point Based Off Field Locations
Station=182+51.69
Alignment=I-295 BASELINE
Station=75+58.86
Offset=0.000
Northing=286414.3840
Easting=324006.5042

OLD PUTNAM PIKE (ROUTE 44) BASELINE

RELOCATED PUTNAM PIKE (ROUTE 44) BASELINE

STA:182+84.51 OLD ROUTE 44
STA:76+67.88 I-295 BASELINE
N: 286523.347
E: 324003.085

STA:182+51.69 RELOCATED ROUTE 44
STA:75+58.86 I-295 BASELINE

I-295 BASELINE PLAT NO. 1351 (1956)

NATIONAL FLOOD HAZARD AREA ZONE A
SEE FIRM MAP 440025

50' WETLAND BUFFER

100' WETLAND BUFFER

SEE BRIDGE PLANS FOR LIGHTING CONDUIT OVER BRIDGE

BENCHMARK: MAG NAIL IN POLE
ELEV=198.66' (NAVD88)

BENCHMARK: IRON ROD
ELEV=232.04' (NAVD88)

SEE BRIDGE PLANS FOR WATER LINE OVER BRIDGE

POTENTIAL STAGING AREA FOR SUBSTRUCTURE WORK

3" PVC SCH 40 CONDUIT

12" CMP ELEV=192.18'

15" CMP INV.=224.33'

18" CMP

12" FES INV.=215.98'

12" FES INV.=209.85'

12" RCP

CATCH BASIN RIM=232.69' INV.(a)=229.87 INV.(b)=229.93

CATCH BASIN RIM=232.64' INV.(a)=227.93 INV.(b)=227.87

CATCH BASIN RIM=232.58' INV.(a)=226.79 INV.(b)=226.76

CATCH BASIN RIM=203.35'

CATCH BASIN RIM=196.80'

DRAINAGE MANHOLE RIM=235.20' INV.(a)=229.74 INV.(b)=229.71

DRAINAGE MANHOLE RIM=236.62' INV.(a)=229.87 INV.(b)=229.93

NECO #89

NECO #87

NECO #88

12" STEEL 99PSIG GAS MAIN

APPROXIMATE UNDERGROUND WATER LINE

APPROXIMATE UNDERGROUND COMM LINE

APPROXIMATE UNDERGROUND GAS LINE

UNKNOWN UTILITY LINE

TREE LINE (TYP.)

TRAFFIC CONTROL BOX

CAMERA POLE

POLE

PIER (TYP.)

ABUTMENT

WING WALL

EXIT SIGN

RUMBLE STRIP

EDGE OF PAVEMENT

SOLID WHITE LINE

DASHED WHITE LINE

SOLID YELLOW LINE

COMM CONDUIT

INTERSTATE 295 SOUTH

INTERSTATE 295 NORTH

ROUTE 44 WEST

PUTNAM PIKE

8003 184.85 WE-O-21

8002 186.18 WE-O-20

8001 184.44 WE-O-19

8000 185.78 WE-O-18

8119 198.51 WE-E-13

8118 195.51 WE-E-12

8074 195.50 WE-E

8075 195.52 WE-E-

8094 192 WE

8070 198.67 WE-E-10

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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DATED SEP 4 2020 FILE # 20-0128
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GRAPHIC SCALE 20 0 10 20 40 80

REVISIONS		
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN

SHEET 3 OF 6

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

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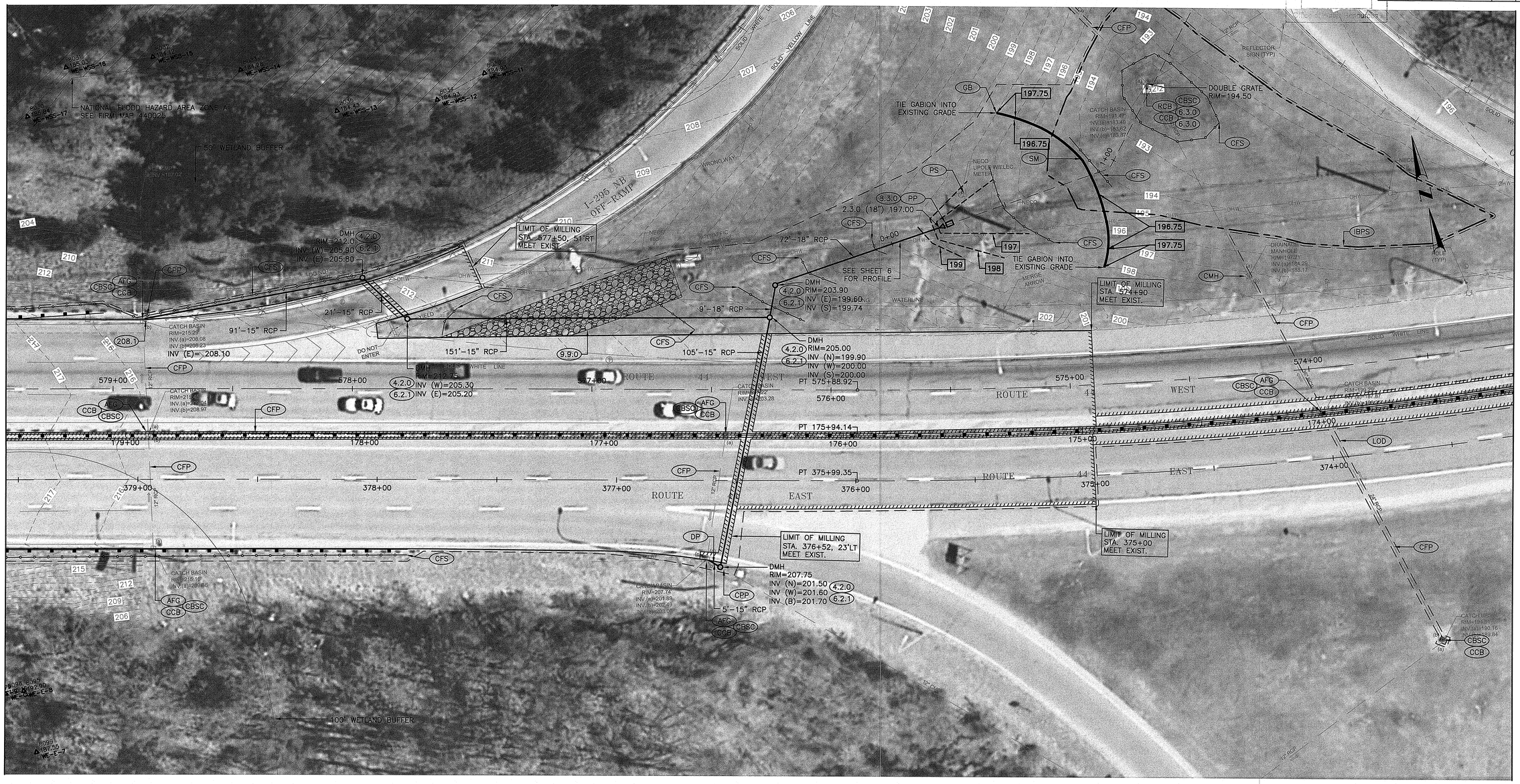
MATCH TO DRAINAGE AND UTILITY PLAN SHEET 6

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 3

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 5

JUN 10 2020

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	19	25



GRAPHIC SCALE 20 0 10 20 40 80

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN

SHEET 4 OF 6

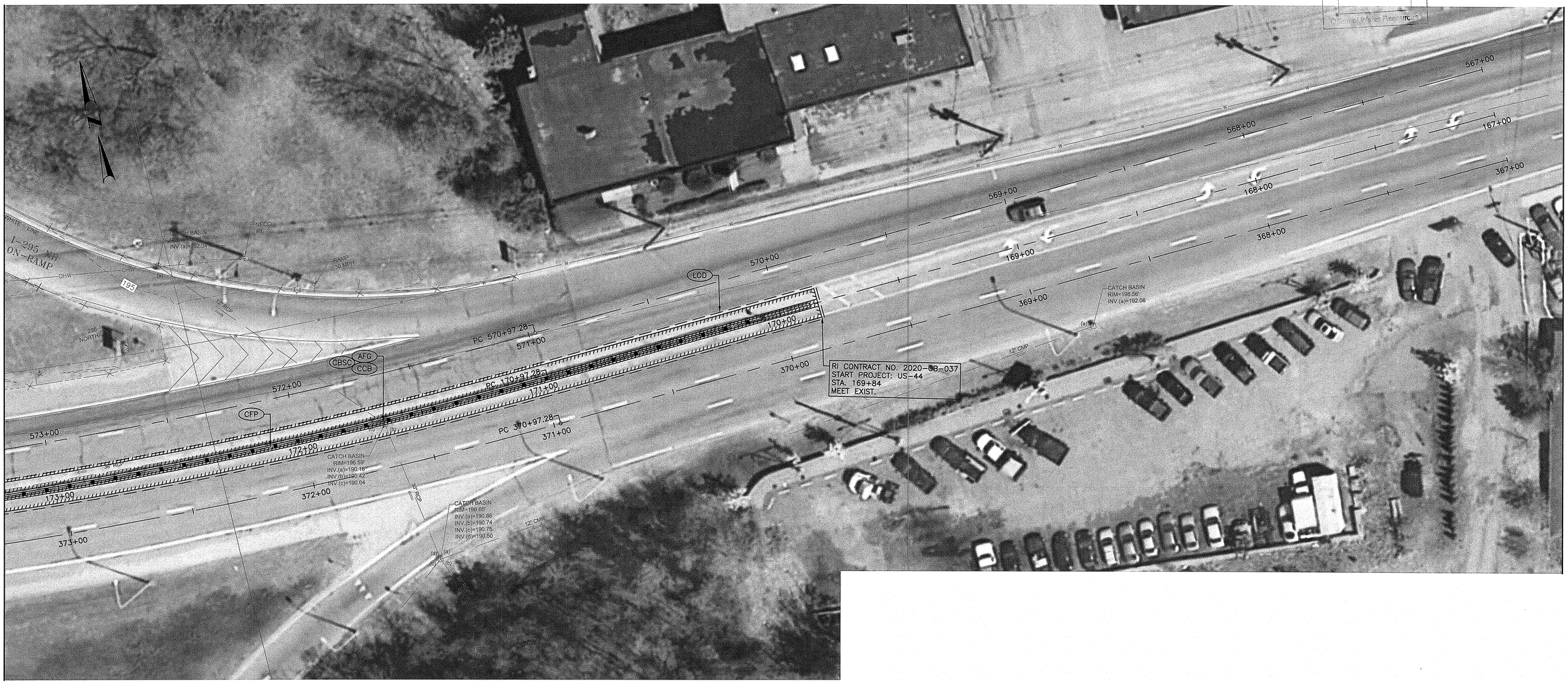
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0016N_VI_XX_DRAINAGE — 4

Environmental Engineer
JUN 10 2020
Division of Water Resources

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	20	25

MATCH TO DRAINAGE AND UTILITY PLAN SHEET 4



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295
SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN
SHEET 5 OF 6

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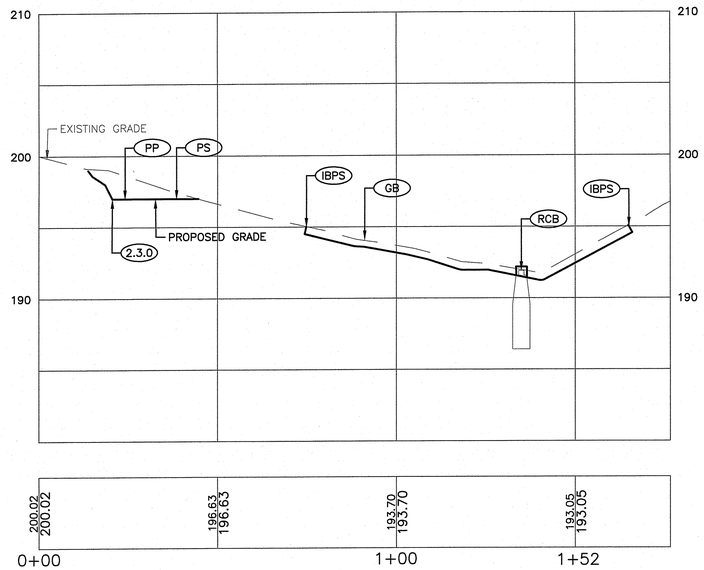
0016N_VI_XX_DRAINAGE – 5

FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	21	25

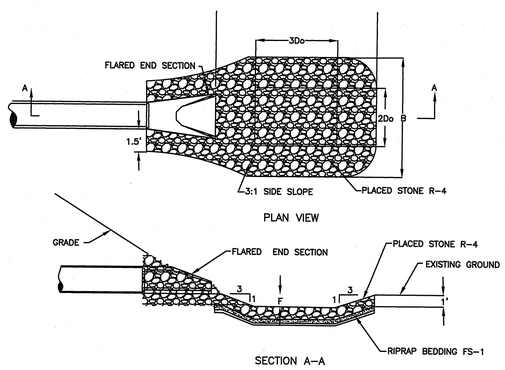
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MATCH TO DRAINAGE AND UTILITY PLAN SHEET 4

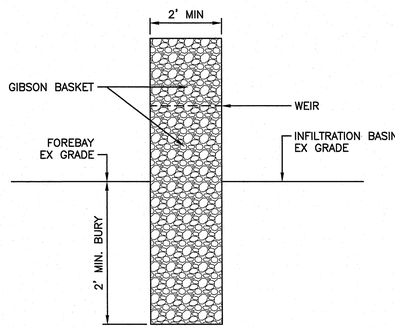


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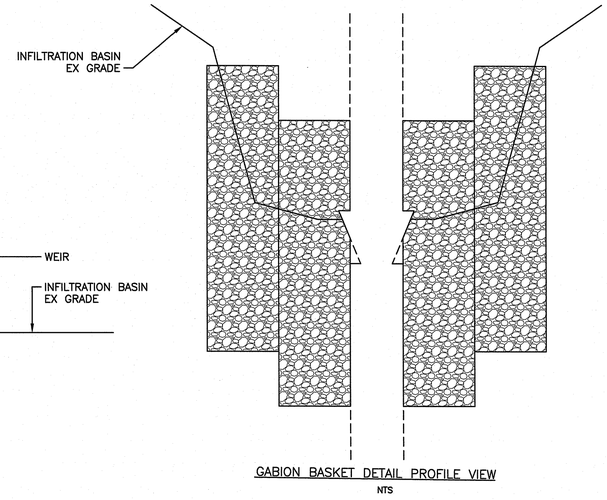


PLUNGE POOL
NTS

STA	PIPE SIZE	RIP-RAP	2Do	3Do	F	B	C
576+50 L	18"	R-4	2'	3'	0.5'	5'	6'



GABION BASKET DETAIL
NTS



GABION BASKET DETAIL PROFILE VIEW
NTS

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REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

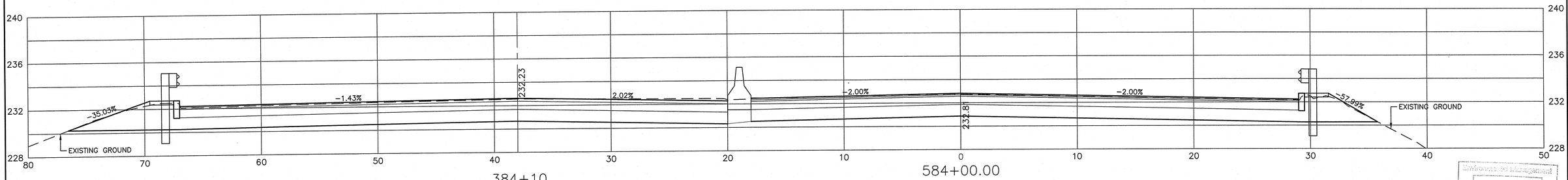
SMITHFIELD, RHODE ISLAND

DRAINAGE AND UTILITY PLAN

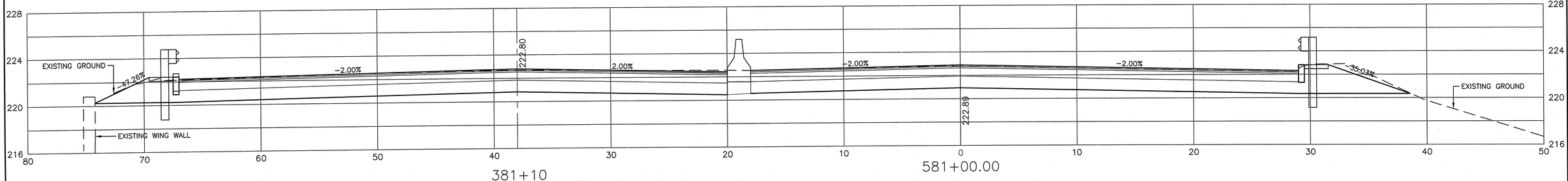
SHEET 6 OF 6

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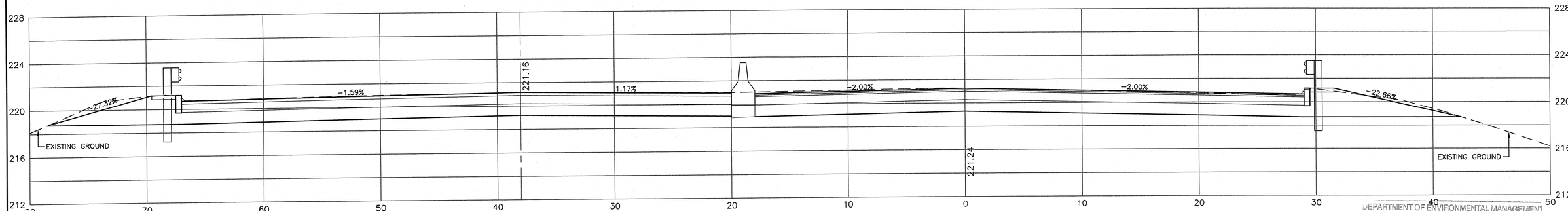
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	22	25



384+10 584+00.00



381+10 581+00.00



380+60 580+50.00

Environmental Management
JUN 10 2020
Office of Water Resources

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295
SMITHFIELD, RHODE ISLAND

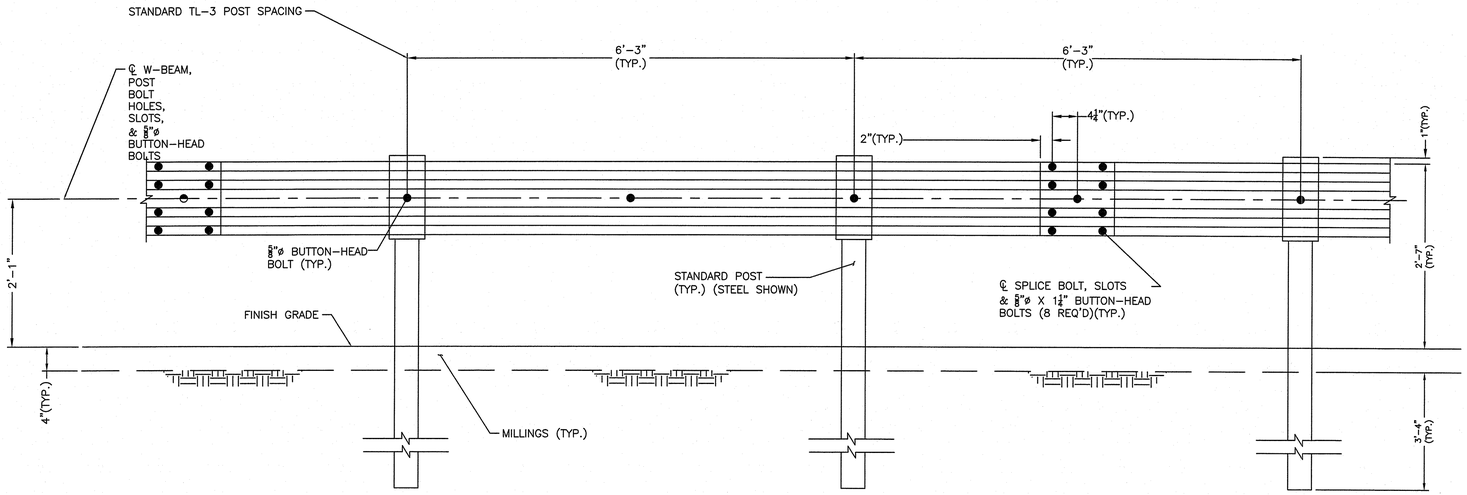
CROSS SECTIONS

CHECKED BY RPT DATE 4/30/2020 SCALE AS NOTED

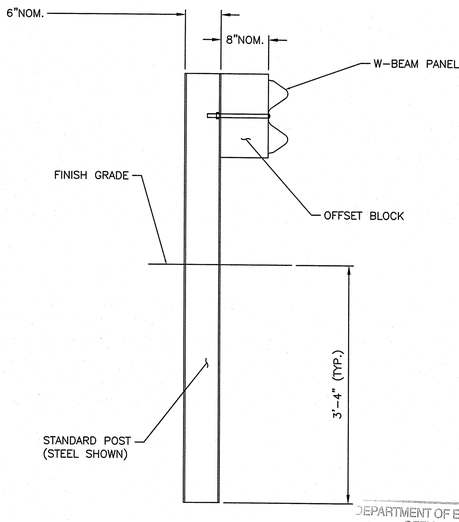
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FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	33	25



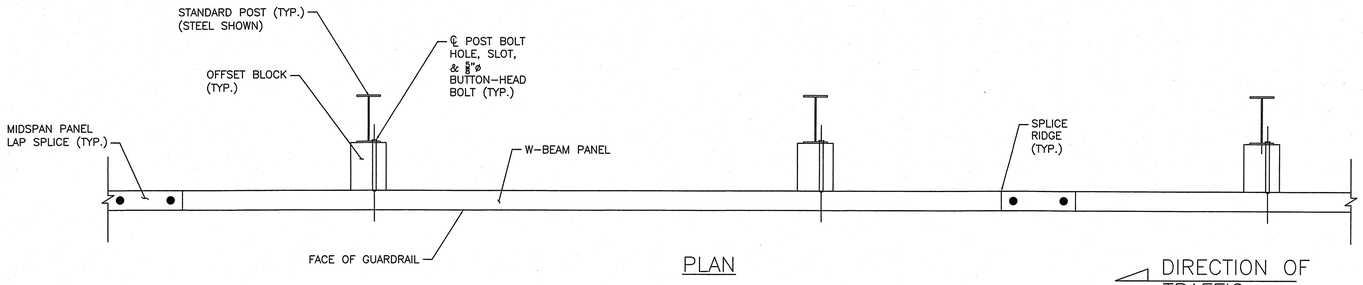
ELEVATION



SECTION

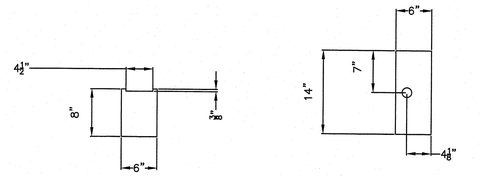
ENVIRONMENTAL MANAGEMENT
JUN 10 2020
OFFICE OF WATER RESOURCES

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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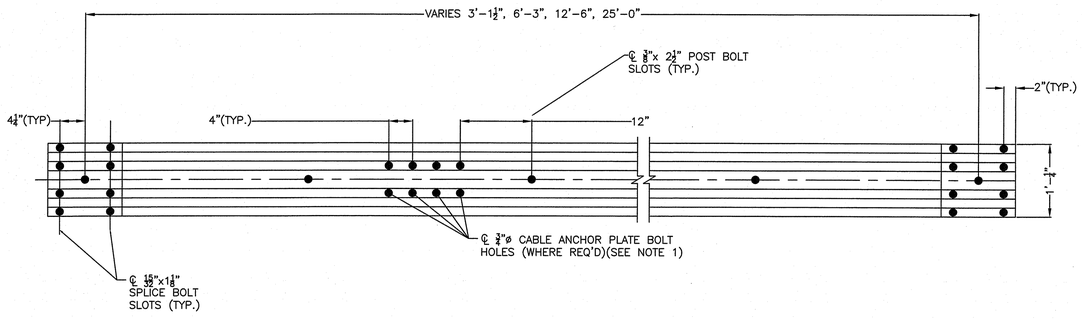
PLAN

DIRECTION OF TRAFFIC

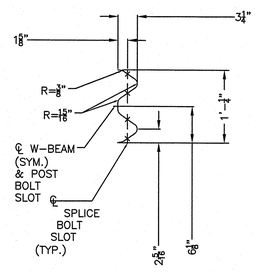


PLAN ELEVATION

W-BEAM COMPOSITE OFFSET BLOCK FOR USE WITH STEEL POSTS (6"x8") NOM.



W-BEAM PANEL ELEVATION



W-BEAM PANEL SECTION

NOTES:

1. INCLUDE 3/4" ø CABLE ANCHOR PLATE BOLT HOLES ONLY WHERE REQUIRED FOR THE INSTALLATION OF THE CABLE ANCHOR PLATE.
2. INSTALL BUTTON-HEAD BOLTS FOR POST MOUNTS AND SPLICES, AS REQUIRED. BOLT LENGTHS SHALL CONFORM TO TABLE 2 UNLESS OTHERWISE INDICATED. PLACES WASHERS UNDER NUTS; WASHERS ARE OPTIONAL AGAINST STEEL FLANGES. DO NOT PLACE WASHERS BETWEEN BOLT HEADS AND PANELS UNLESS OTHERWISE INDICATED.

GRM STEEL GUARDRAIL MASH (TL-3) DETAILS

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

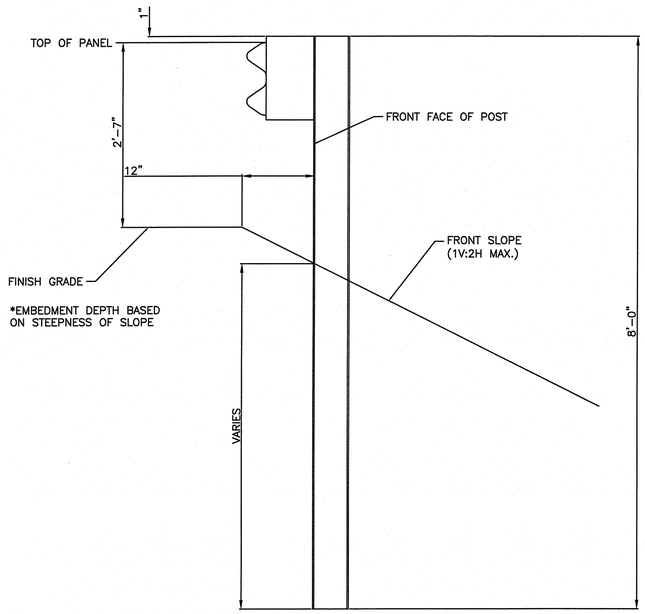
SMITHFIELD, RHODE ISLAND

MISCELLANEOUS DETAILS
SHEET 1 OF 5

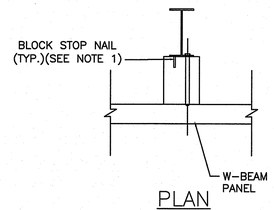
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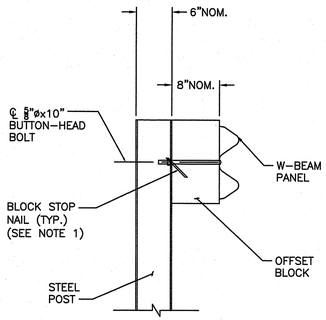
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	34	25



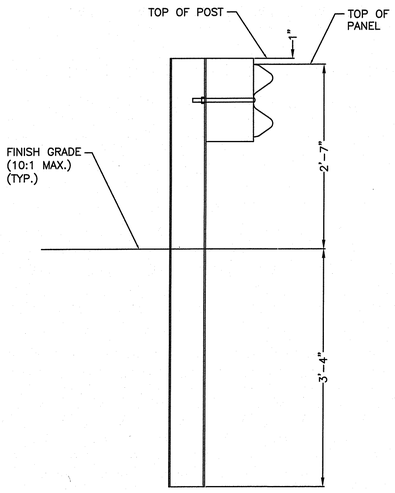
SLOPE BREAK CONDITION STEEL DEEP POST



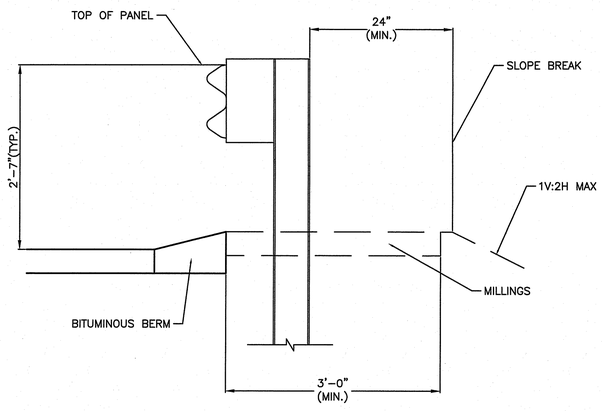
PLAN



ELEVATION



W-BEAM



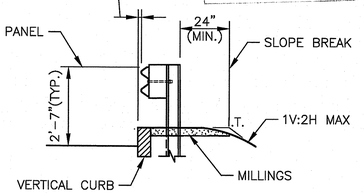
BITUMINOUS BERM

GRM

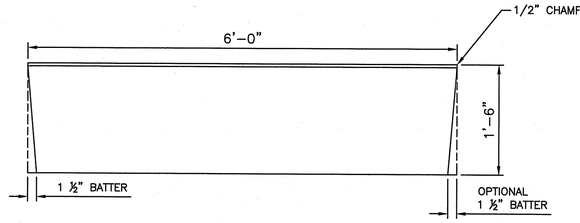
STEEL GUARDRAIL MASH (TL-3) DETAILS

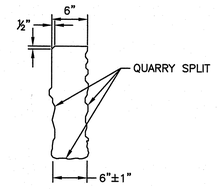
	TL-2	TL-3
(AT FACE)	0" TO 6"	0" TO 6"
(OFFSET)	6'-0" (MIN.)	N/A(SEE NOTE 1)

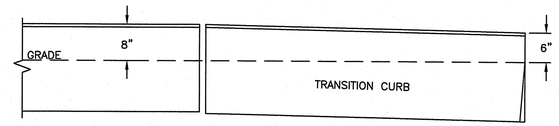
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JUN 10 2020
Office of Water Resources



VERTICAL CURB





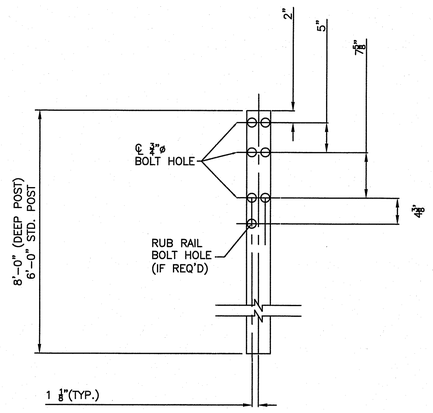


GCT

6' GRANITE TRANSITION CURB

NOT TO SCALE

NOTES:
1. TRANSITION CURB SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.
2. THE CONTRACTOR MAY CUT EXISTING CURB SECTIONS AS REQUIRED TO MEET THIS DETAIL AND THE R.I. STANDARD SPECIFICATIONS, WHERE OLD CURBING IS BEING REUSED.
3. TOP SURFACE TO BE DRESSED BY SAW. REMAINDER MAY BE QUARRY SPLIT.



STEEL POST
(W6x8.5 or W6x9)

NOTES:

1. SINGLE FACED AND DOUBLE FACED TL-3 GUARDRAIL SHALL NOT BE OFFSET FROM VERTICAL CURB OR BITUMINOUS BERM UNLESS OTHERWISE SHOWN IN THE PLANS OR THESE STANDARDS.
2. DRIVE ONE NAIL PER W-BEAM TIMBER OFFSET BLOCK TO PREVENT BLOCK ROTATION. USE ASTM A153 HOT DIP GALVANIZED STEEL 3 ¾" TYPE 16D NAILS. FOR STEEL POSTS, DRIVE THE NAIL THROUGH THE UNUSED FLANGE BOLT HOLE AND BEND THE NAIL SO ITS HEAL CONTACTS THE FLANGE.
3. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
4. WHERE BACK OF POSTS ARE EXPOSED AND PLACED WITHIN 2'-0" OF A SIDEWALK, SEPARATED BIKE FACILITY OR SHARED- USE PATH, TIMBER POSTS SHALL BE USED. ALTERNATIVELY, STEEL POSTS WITH A TIMBER BACKING MAY BE SUBSTITUTED WAT NO ADDITIONAL COST. WHEN TIMBER POSTS ARE USED, ONE OF THE FOLLOWING SAFETY TREATMENTS IS REQUIRERD FOR ALL BOLTS PROTRUDING FROM THE BACK FACE OF THE POST:
   A. AFTER TIGHTENING THE NUT, TRIM THE PROTRUDING POST BOLT FLUSH WITH THE NUT AND GALVANIZE PER M7.04.11.
   B. USE 15" POST BOLTS AND COUNTERSINK THE WASHER AND NUT BETWEEN 1" AND 1½" DEEP INTO THE BACK FACE OF THE POST OR
   C. USE 15" POST BOLT SLEEVE NUT AND WASHERS.

END TREATMENTS AND TRANSITIONS, WHERE SPECIFIC MATERIAL TYPES ARE REQUIRED, ARE EXEMPT FROM THESE REQUIREMENTS.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 4 2020 FILE # 20-0128
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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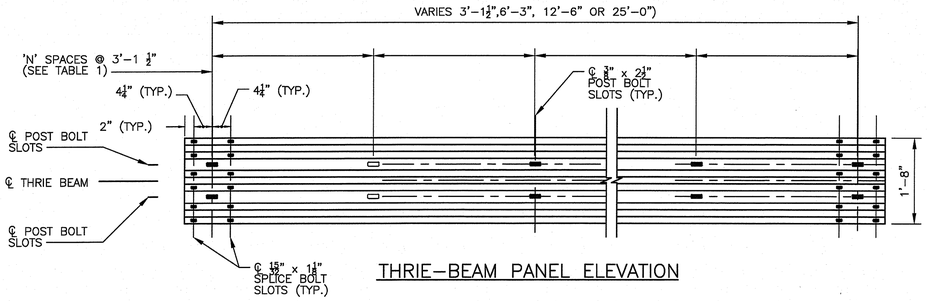
REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

MISCELLANEOUS DETAILS
SHEET 2 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

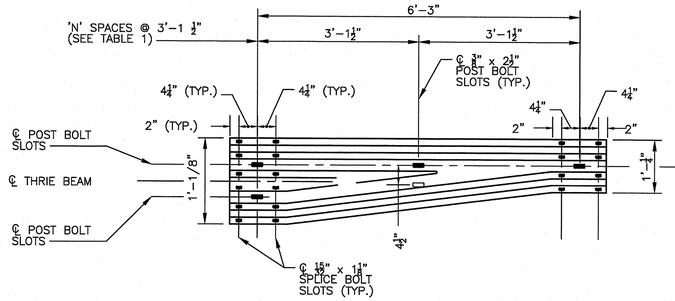
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	35	25



THRIE-BEAM PANEL ELEVATION

TABLE 1: PANEL SUMMARY

PANEL TYPE	NUMBER OF SPACES 'N'	GAUGE
6'-3" W-BEAM	2	12
9'-4½" W-BEAM	3	12
12'-6" W-BEAM	4	12
25'-0" W-BEAM	8	12
12'-6" THRIE BEAM	4	12
25'-0" THRIE BEAM	8	12
THRIE BEAM TRANS.	2	10



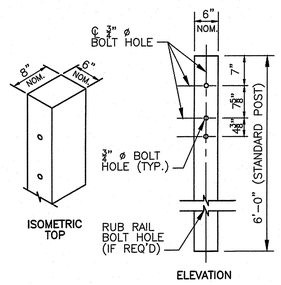
THRIE-BEAM TRANSITION PANEL ELEVATION
(REVERSE DIRECTION SAME DIMENSIONS)

TABLE 2: 5/8" BUTTON-HEAD BOLT LENGTHS

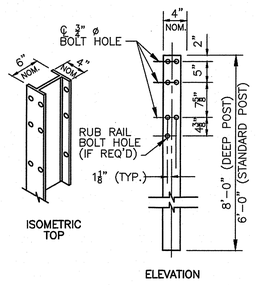
APPLICATION(S)	LENGTH 'L'	MIN. THREAD LENTH
PANEL SPLICE	1¼"	FULL LENGTH
STEEL POST MOUNT-SINGLE FACED	10"	4"
TIMBER POST MOUNT-SINGLE FACED	18"	4"
STEEL POST MOUNT-DOUBLE FACED	10"	4"
TERMINAL CONNECTOR SPLICE	2"	FULL LENGTH

NOTES:
1. INCLUDE ¾"ø CABLE ANCHOR PLATE BOLT HOLES ONLY WHERE REQUIRED FOR THE INSTALLATION OF THE CABLE ANCHOR PLATE.
2. INSTALL BUTTON-HEAD BOLTS FOR POST MOUNTS AND SPLICES, AS REQUIRED. BOLT LENGTHS SHALL CONFORM TO TABLE 2 UNLESS OTHERWISE INDICATED. PLACES WASHERS UNDER NUTS; WASHERS ARE OPTIONAL AGAINST STEEL FLANGES. DO NOT PLACE WASHERS BETWEEN BOLT HEADS AND PANELS UNLESS OTHERWISE INDICATED.

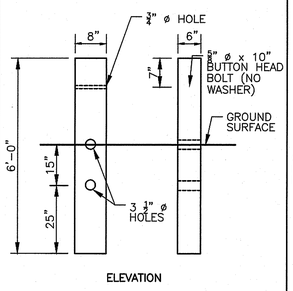
ENVIRONMENTAL MANAGEMENT
JUN 10 2020
OFFICE OF WATER RESOURCES



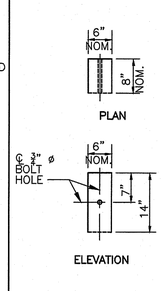
TIMBER POST
(6"x8" NOMINAL)



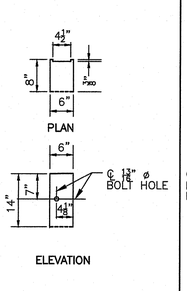
STEEL POST
(W6x8.5 OR W6x9)



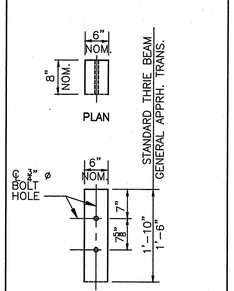
CRT POST (TIMBER ONLY)
(6x8" NOMINAL)
USE ONLY WHERE SPECIFIED



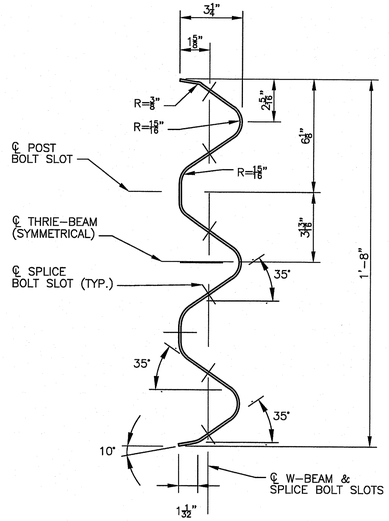
W-BEAM TIMBER OFFSET BLOCK
FOR USE WITH TIMBER POSTS
(6"x8" NOMINAL)



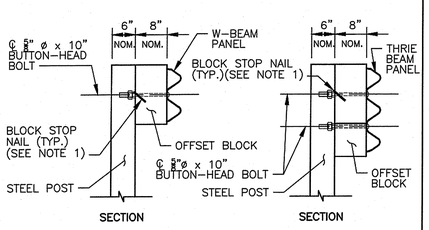
W-BEAM TIMBER OFFSET BLOCK
FOR USE WITH STEEL POSTS
(6"x8" NOMINAL)



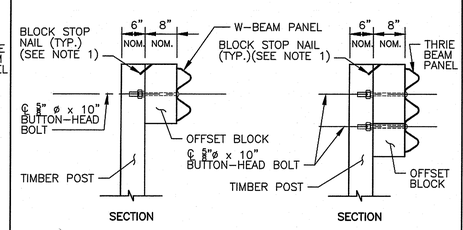
THRIE BEAM TIMBER OFFSET BLOCK
(6"x8" NOMINAL)



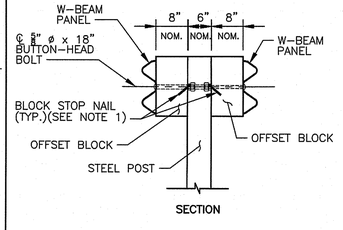
THRIE-BEAM PANEL SECTION



W-BEAM & THRIE BEAM
STEEL POST



W-BEAM & THRIE BEAM
TIMBER POST



DOUBLED FACED W-BEAM
STEEL POST ONLY

POST & OFFSET BLOCK DETAILS

NOTES:
1. DRIVE ONE NAIL PER W BEAM TIMBER OFFSET BLOCK TO PREVENT BLOCK ROTATION. USE ASTM A153 HOT DIP GALVANIZED STEEL 3 ½" TYPE 16D NAILS. FOR STEEL POSTS, DRIVE THE NAIL THROUGH THE UNUSED FLANGE BOLT HOLE AND BEND THE NAIL SO ITS HEAD CONTACTS THE FLANGE.
2. DEEP STEEL POSTS SHALL ONLY BE USED WHERE INDICATED IN THESE STANDARDS OR THE PLANS.
3. WHERE BACK OF POSTS ARE EXPOSED AND PLACED WITHIN 2'-0" OF A SIDEWALK, SEPARATED BIKE FACILITY OR SHARED-USE PATH, TIMBER POSTS SHALL BE USED. ALTERNATIVELY, STEEL POSTS WITH A TIMBER BACKING. MAY BE SUBSTITUTED AT NO ADDITIONAL COST. WHEN TIMBER POSTS ARE USED, ONE OF THE FOLLOWING SAFETY TREATMENTS IS REQUIRED FOR ALL BOLTS PROTRUDING FROM THE BACK FACE OF THE POST:
   A. AFTER TIGHTENING THE NUT, TRIM THE PROTRUDING POST BOLT FLUSH WITH THE NUT AND GALVANIZE PER M7.04.11;
   B. USE 15" POST BOLTS AND COUNTERSINK THE WASHER AND NUT BETWEEN 1" AND 1 ½" DEEP INTO THE BACK FACE OF THE POST; OR
   C. USE 15" POST BOLT SLEEVE NUT AND WASHERS.

END TREATMENTS AND TRANSITIONS, WHERE SPECIFIC MATERIAL TYPES ARE SPECIFIED, ARE EXEMPT FROM THESE REQUIREMENTS.

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FRESHWATER WETLANDS PROGRAM
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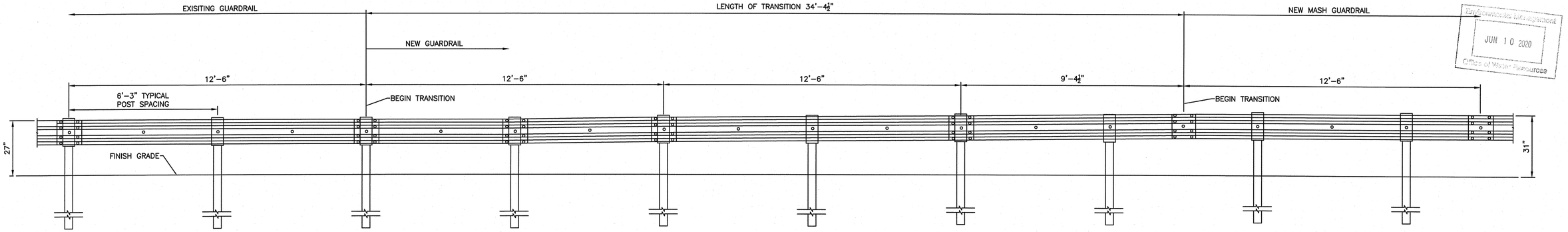
REPLACEMENT OF BRIDGE NO.
074101 US 44 PUTNAM PIKE
OVER I-295

SMITHFIELD, RHODE ISLAND

MISCELLANEOUS DETAILS
SHEET 3 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE

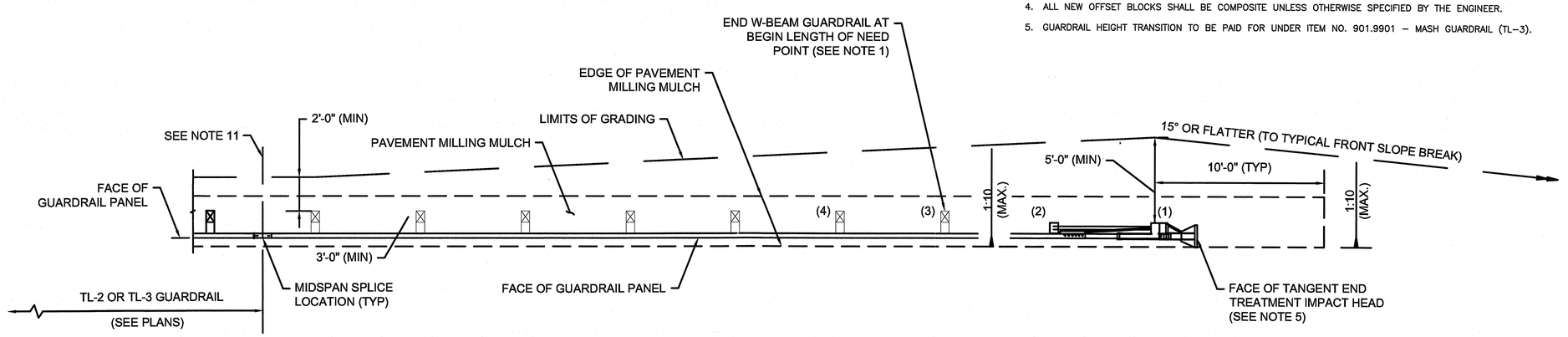
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	36	25



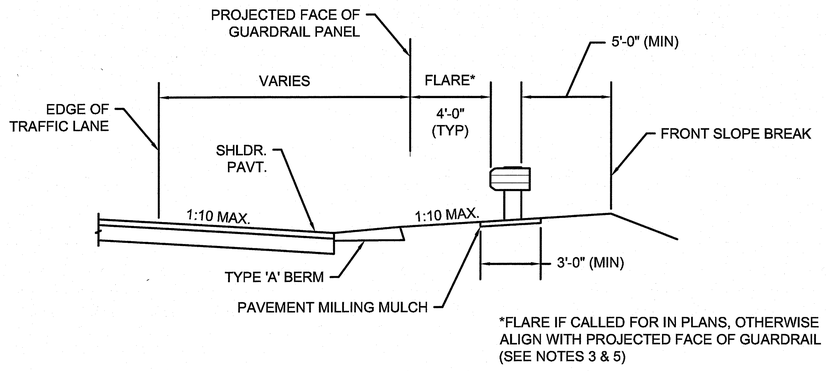
GRHT GUARDRAIL HEIGHT TRANSITION

GUARDRAIL HEIGHT TRANSITION NOTES:

1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.
2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.
3. ALL NEW POSTS SHALL BE 72" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
4. ALL NEW OFFSET BLOCKS SHALL BE COMPOSITE UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
5. GUARDRAIL HEIGHT TRANSITION TO BE PAID FOR UNDER ITEM NO. 901.9901 – MASH GUARDRAIL (TL-3).



GRA APPROACH END TREATMENT
TANGENT LAYOUT – PLAN



*FLARE IF CALLED FOR IN PLANS, OTHERWISE ALIGN WITH PROJECTED FACE OF GUARDRAIL (SEE NOTES 3 & 5)

SECTION AT POST (1) WITH TYPE 'A' BERM

APPROACH END TREATMENT NOTES:

1. INSTALL GUARDRAIL AT STATION AND OFFSET SHOWN IN THE PLANS. THE END OF THE GUARDRAIL SHOWN IN THE PLANS CORRESPONDS WITH THE BEGIN LENGTH OF NEED POINT FOR THE END TREATMENT (SHOWN AT POST 3 IN THESE STANDARDS, BUT MAY VARY BY MANUFACTURER)
2. PROPRIETARY END TREATMENTS MAY VARY IN SIZE AND SHAPE FROM WHAT IS DEPICTED IN THESE STANDARDS. HOWEVER, THE MAXIMUM SLOPES AND MINIMUM OFFSETS DIMENSIONED FROM THE POSTS SHOWN HEREIN SHALL STILL APPLY.
3. CONSTRUCT TANGENT END TREATMENTS IN ACCORDANCE WITH THE MANUFACTURER'S UNIQUE DRAWING DETAILS, PROCEDURES AND SPECIFICATIONS.
4. AT THE DISCRETION OF THE ENGINEER, THE FACE OF THE TANGENT END TREATMENT IMPACT HEAD MAY BE OFFSET UP TO 2'-0" FROM THE PROJECTED FACE OF GUARDRAIL TO MINIMIZE NUISANCE HITS. THE OFFSET SHALL OCCUR OVER THE ENTIRE LENGTH OF THE END TREATMENT UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER.
5. END TREATMENT SHALL NOT TERMINATE CURVED W-BEAM SEGMENTS.
6. INSTALL GRADING AS SHOWN HEREIN UNDER SEPARATE PAY ITEMS.
7. MAINTAIN 2'-0" (MIN) OFFSET TO FRONT SLOPE BREAK DOWNSTREAM OF MIDSPAN SPLICE LOCATION AT ALL TIMES. IF, DOWNSTREAM OF THE SPLICE, GRADING CONSTRAINTS INHIBIT THIS MINIMUM OFFSET THEN USE DEEP STEEL POSTS AND TRANSITION TO A SLOPE BREAK CONDITION DESIGN PER THE "SLOPE BREAK CONDITION STEEL DEEP POST" DETAIL UNTIL THE 2'-0" OFFSET CAN BE MET.

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JUN 10 2020
Office of Water Resources

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OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

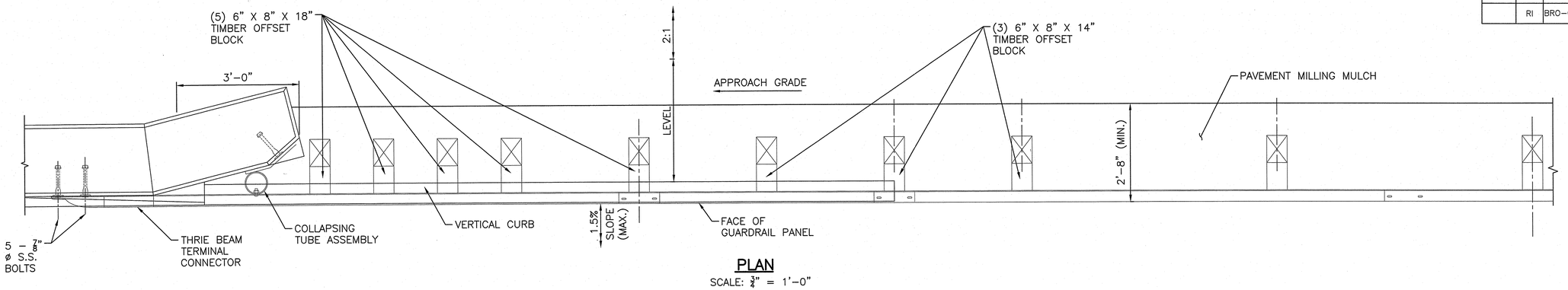
SMITHFIELD, RHODE ISLAND

MISCELLANEOUS DETAILS
SHEET 4 OF 5

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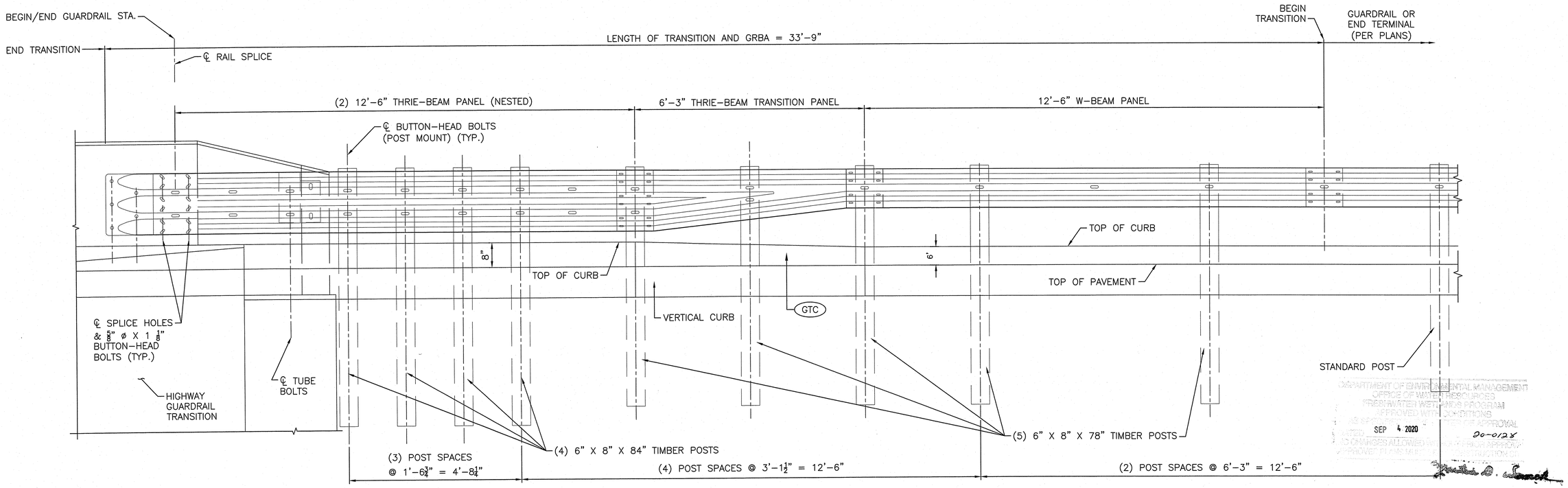
FED. ROAD DIV. NO.	STATE	FEDERAL AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	RI	BRO-0741(001)	2019	37	25

Environmental Management
JUN 10 2020
Coastal Resources



PLAN

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

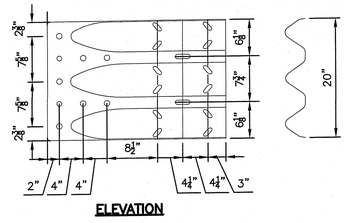


ELEVATION

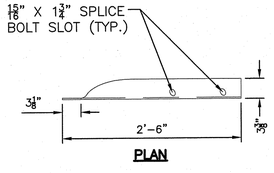
SCALE: 3/4" = 1'-0"

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
SEP 4 2020
20-0128

GRBA GUARDRAIL BRIDGE ATTACHMENT (TL-3)

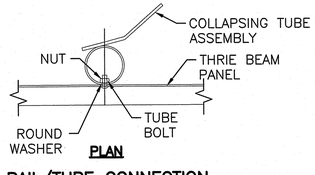


ELEVATION



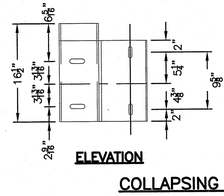
PLAN

TERMINAL CONNECTOR

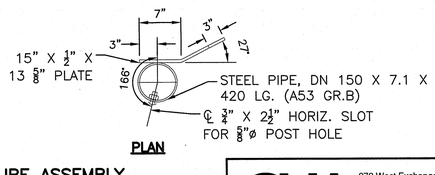


PLAN

RAIL/TUBE CONNECTION



ELEVATION



PLAN

COLLAPSING TUBE ASSEMBLY

CHA
272 West Exchange Street, Suite 101
Providence, RI 02903
860-206-2412
www.chacompanies.com

REVISIONS		
NO.	DATE	BY

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

REPLACEMENT OF BRIDGE NO. 074101 US 44 PUTNAM PIKE OVER I-295

SMITHFIELD, RHODE ISLAND

MISCELLANEOUS DETAILS

SHEET 5 OF 5

CHECKED BY RPT DATE 4/30/2020 SCALE NO SCALE