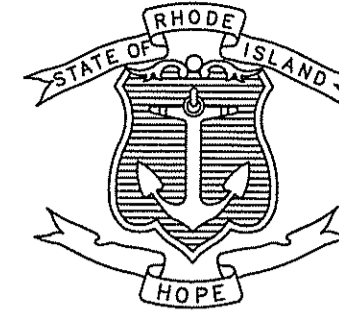


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STATE OF RHODE ISLAND



DEPARTMENT OF TRANSPORTATION

PLAN, PROFILE AND SECTIONS OF PROPOSED
STATE HIGHWAY

INTERSECTION SAFETY IMPROVEMENTS TO
ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295

TOWN OF CUMBERLAND
COUNTY OF PROVIDENCE

R.I. CONTRACT NO. 2017-CT-086 F.A. PROJECT NO. STP-HISP-045

PAVEMENT STRUCTURE

DIAMOND HILL ROAD
STA 213+00 TO 216+45
ANGELL ROAD AND BEAR HILL ROAD

2" MICROMILLING
2" MODIFIED CLASS 9.5 HMA
0.19 MILES

DIAMOND HILL ROAD
STA 216+45 TO 1025+65 (2025+65)

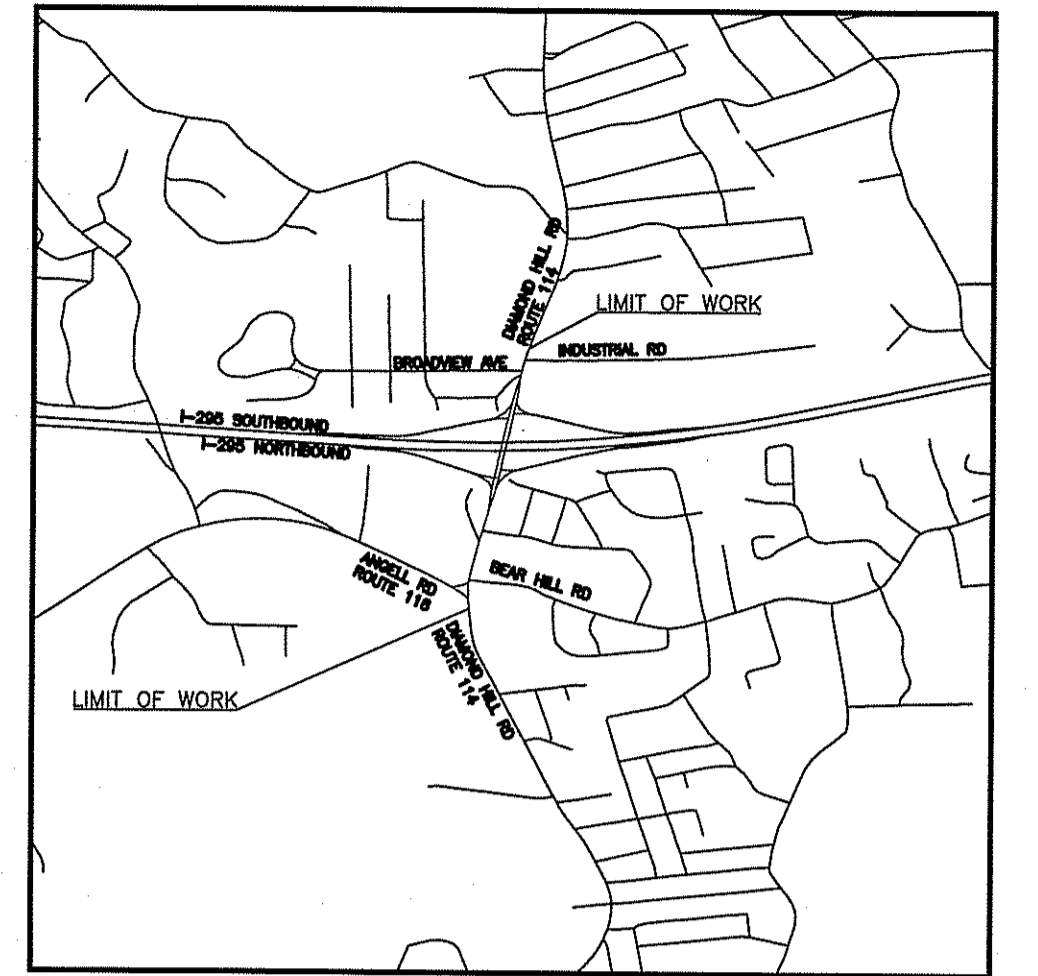
2" MODIFIED CLASS 9.5 HMA
7" CLASS 19.0 HMA - IN 2 LIFTS
12" GRAVEL BORROW SUBBASE COURSE
0.18 MILES

DIAMOND HILL ROAD AND RAMPS
STA 1025+65 (2025+65) TO 242+50

2" MODIFIED CLASS 9.5 HMA
4" CLASS 12.5 HMA
6" CLASS 19.0 HMA - IN 2 LIFTS
12" GRAVEL BORROW SUBBASE COURSE
0.33 MILES

R.I. STANDARD SPECIFICATIONS AND STANDARD DETAILS
SPECIFICATIONS TO GOVERN THIS PROJECT ARE THE R.I. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2013 EDITION WITH LATEST COMPILATIONS, AND THE STATE AND FEDERAL SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. STANDARD DETAILS FOR THIS PROJECT ARE R.I. STANDARD DETAILS, 1998 EDITION, WITH ALL REVISIONS.

| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------------------|-------------|-----------|--------------|
| | RI | STP-HISP-045 | | 1 | 192 |



LOCATION MAP
NOT TO SCALE

MAR 29 2018

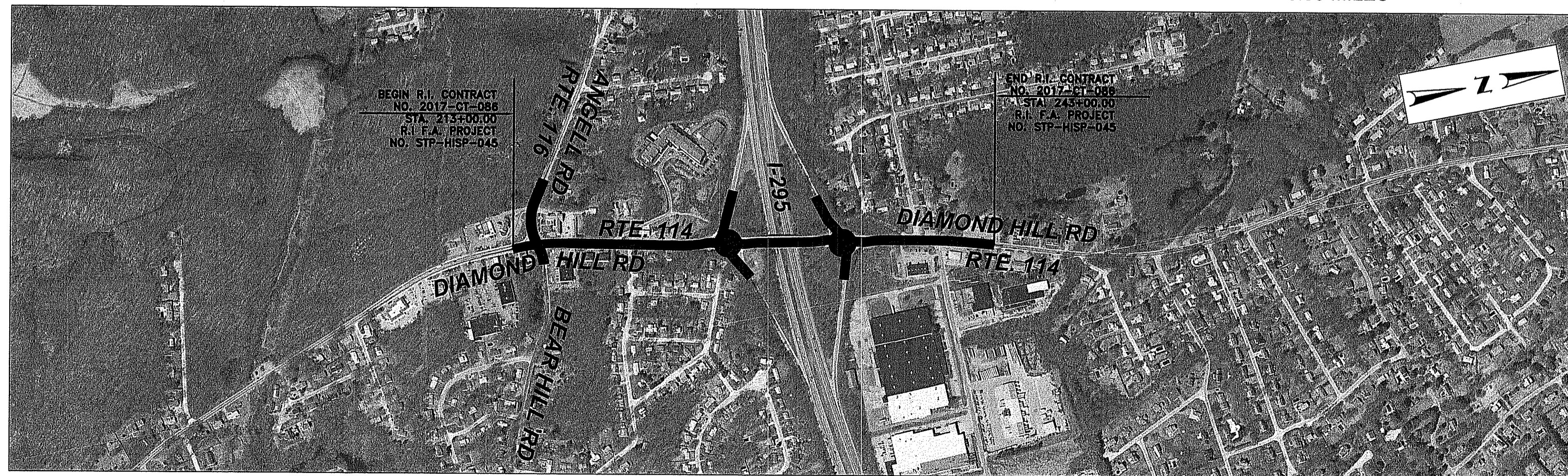
DIAMOND HILL ROAD (ROUTE 114)

| DESIGN | DESIGNATION |
|--------------|-----------------|
| 2016 AADT | 8,150 V.P.D. |
| 2036 AADT | 8,900 V.P.D. |
| D | 51% NB / 49% SB |
| K | 10% |
| T | 3.5% |
| DDHV | 420 V.P.H. |
| DHV | 815 V.P.H. |
| DESIGN SPEED | 35 M.P.H. |

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Harkin

3/28/2018
RPD PLANS
SHEET 1 OF 54



LOCUS
SCALE: 1"=500'

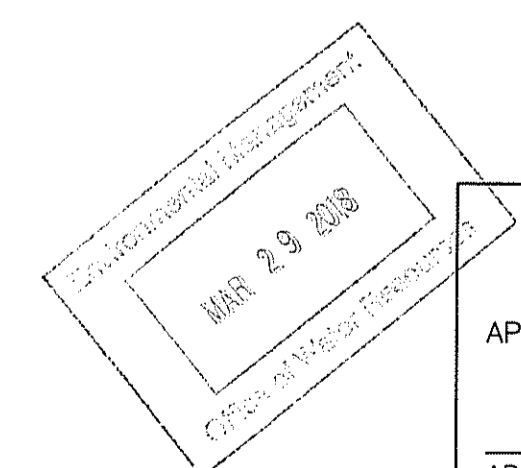
SCALES OF DRAWINGS

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

BASE OF LEVELS
NAD 83
NAVD 88



Contract Number 2017-CT-086
Number of Sheet 1
Total Sheets 192



R.I. DEPARTMENT OF TRANSPORTATION

APPROVED _____
ADMINISTRATOR, PROJECT MANAGEMENT DATE _____

APPROVED _____
CHIEF ENGINEER OF INFRASTRUCTURE DATE _____

APPROVED _____
DIRECTOR DATE _____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ADMINISTRATOR DATE _____

| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|--------------------|-------|-------------------------|-------------|-----------|--------------|
| 1 | RI | STP-HISP-045 | | 3 | 192 |

EXISTING

NEW

| | |
|---------------|--------------------------------------|
| --- | EDGE OF PAVEMENT |
| ===== | BERM |
| ===== | CURB |
| ===== | GUARDRAIL |
| o MB | MAILBOX |
| o NO. | UTILITY POLE |
| o | POLE GUY |
| o | LUMINARE |
| o 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 |
| o | HEADWALL |
| o WG OR GG | WATER OR GAS GATE |
| o CB | CATCH BASIN |
| o MH | MANHOLE |
| o HYD | HYDRANT |
| 1+00 | BASLINE OR CENTERLINE |
| --- | STATE HIGHWAY LINE |
| --- | STATE FREEWAY LINE |
| --- | PERMANENT EASEMENT LINE |
| --- | TEMPORARY EASEMENT LINE |
| --- | PROPERTY LINE |
| --- | CITY OR TOWN LINE |
| --- | PAVED WATERWAY |
| --- | CONTOUR LINE |
| --- | OPEN DITCH |
| --- | R.I. HIGHWAY BOUND |
| --- | STONE BOUND |
| --- | RETAINING WALL |
| --- | FIELD STONE WALL |
| --- | 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 |
| --- | 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 |
| --- | EDGE OF WETLAND |
| --- | WETLAND PERIMETER |
| --- | AREA SUBJECT TO STORM FLOW |
| --- | 100-YEAR FLOOD PLAIN |
| --- | LIMIT OF DISTURBANCE |
| --- | LIMIT OF CLEARING |

| | | | |
|-----|-----|--------------|--|
| --- | NO. | 1.1.0 | UNDERDRAIN |
| --- | NO. | 1.3.0 | CONCRETE CONNECTING COLLAR |
| --- | NO. | 2.1.0 | CONCRETE HEADWALLS FOR PIPE CULVERTS |
| --- | NO. | 2.2.0 | STANDARD HEADWALLS FOR MULTIPLE 3'-6" TO 7'-0" PIPE CULVERTS |
| --- | NO. | 2.3.0 (DIA.) | PRECAST CONCRETE FLARED END SECTION |
| --- | NO. | 3.2.0 | BRICK/SOLID BLOCK 4'-0" ROUND MANHOLE |
| --- | NO. | 3.2.1 (DIA.) | BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND MANHOLE |
| --- | NO. | 3.3.0 | BRICK/SOLID BLOCK TYPE "D" SQUARE CATCH BASIN |
| --- | NO. | 3.3.2 | BRICK/SOLID BLOCK TYPE "F" SQUARE CATCH BASIN |
| --- | NO. | 3.3.3 | SOLID BLOCK FLUSH SQUARE CATCH BASIN |
| --- | NO. | 3.4.0 | BRICK/SOLID BLOCK TYPE "D" ROUND CATCH BASIN |
| --- | NO. | 3.4.1 | BRICK/SOLID BLOCK ROUND CATCH BASIN WITH GUTTER INLET |
| --- | NO. | 3.4.2 | BRICK/SOLID BLOCK TYPE "F" ROUND CATCH BASIN |
| --- | NO. | 3.4.3 | BRICK/SOLID BLOCK TYPE "R" CATCH BASIN |
| --- | NO. | 3.4.4 | SOLID BLOCK FLUSH ROUND CATCH BASIN |
| --- | NO. | 3.4.5 (DIA.) | BRICK/SOLID BLOCK 5'-0" OR 6'-0" ROUND CATCH BASIN |
| --- | NO. | 3.5.0 | SOLID BLOCK SHALLOW TYPE "F" SQUARE CATCH BASIN |
| --- | NO. | 3.5.1 (SIZE) | SOLID BLOCK SHALLOW 5'-0" OR 6'-0" SQUARE CATCH BASIN |
| --- | NO. | 3.6.0 | BRICK/SOLID BLOCK DROP INLET |
| --- | NO. | 3.7.0 (DIA.) | BRICK/SOLID BLOCK ROUND MANHOLE OR CATCH BASIN GREATER THAN 12'-0" |
| --- | NO. | 4.2.0 | PRECAST 4'-0" ROUND MANHOLE |
| --- | NO. | 4.2.1 | PRECAST 5'-0" ROUND MANHOLE |
| --- | NO. | 4.2.2 | PRECAST 6'-0" ROUND MANHOLE |
| --- | NO. | 4.3.0 (SIZE) | PRECAST 4'-0" OR 6'-0" SQUARE MANHOLE OR CATCH BASIN |
| --- | NO. | 4.4.0 (DIA.) | PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN |
| --- | NO. | 4.5.0 | PRECAST CONCRETE DROP INLET |
| --- | NO. | 4.5.1 | PRECAST CONCRETE DROP INLET LATERAL OUTLET |
| --- | NO. | 4.5.2 | PRECAST CONCRETE DROP INLET LONGITUDINAL OUTLET |
| --- | NO. | 5.3.0 | CATCH BASIN AND MANHOLE STEP |
| --- | NO. | 5.4.0 | CONCRETE COLLARS |
| --- | NO. | 6.1.0 | LIGHT-DUTY SQUARE FRAME AND ROUND COVER |
| --- | NO. | 6.1.1 | HEAVY DUTY SQUARE FRAME AND ROUND COVER |
| --- | NO. | 6.2.0 | LIGHT-DUTY ROUND FRAME AND COVER |
| --- | NO. | 6.2.1 | HEAVY-DUTY ROUND FRAME AND COVER |
| --- | NO. | 6.3.0 | SQUARE FRAME AND GRATE |
| --- | NO. | 6.3.1 | SQUARE FRAME AND GRATE |
| --- | NO. | 6.3.2 | SQUARE FRAME AND GRATE (BICYCLE SAFE) |
| --- | NO. | 6.3.3 | HIGH CAPACITY FRAME AND GRATE |
| --- | NO. | 6.3.4 | HIGH CAPACITY FRAME AND GRATE (BICYCLE SAFE) |
| --- | NO. | 6.4.0 | ROUND FRAME AND GRATE |
| --- | NO. | 7.1.0S | PRECAST CONCRETE CURB (STRAIGHT) |
| --- | NO. | 7.1.0C | PRECAST CONCRETE CURB (CIRCULAR) |
| --- | NO. | 7.1.1 | 3'-0" PRECAST CONCRETE TRANSITION CURB |
| --- | NO. | 7.1.2 | 6'-0" PRECAST CONCRETE TRANSITION CURB |
| --- | NO. | 7.1.4 | PRECAST 2'-0" RADIUS CORNER |
| --- | NO. | 7.1.5 | PRECAST CONCRETE INLET STONE (FOR SQUARE CATCH BASIN) |
| --- | NO. | 7.1.6 | PRECAST CONCRETE INLET STONE (FOR ROUND CATCH BASIN) |
| --- | NO. | 7.1.7 | PRECAST CONCRETE APRON STONE (FOR SQUARE CATCH BASIN) |
| --- | NO. | 7.1.8 | PRECAST CONCRETE APRON STONE (FOR ROUND CATCH BASIN) |
| --- | NO. | 7.2.0S | PRECAST CONCRETE SLOPED FACE CURB (STRAIGHT) |
| --- | NO. | 7.2.0C | PRECAST CONCRETE SLOPED FACE CURB (CIRCULAR) |
| --- | NO. | 7.2.1 | PRECAST CONCRETE SLOPED FACE TRANSITION CURB |
| --- | NO. | 7.2.2 | PRECAST CONCRETE TRANSITION CURB (VERTICAL FACE TO SLOPED FACE) |
| --- | NO. | 7.3.0S | GRANITE CURB (STRAIGHT) |
| --- | NO. | 7.3.0C | GRANITE CURB (CIRCULAR) |
| --- | NO. | 7.3.1 | 3'-0" GRANITE TRANSITION CURB |
| --- | NO. | 7.3.2 | 6'-0" GRANITE TRANSITION CURB |
| --- | NO. | 7.3.3 | GRANITE WHEELCHAIR RAMP TRANSITION CURB |
| --- | NO. | 7.3.4 | GRANITE 2'-0" RADIUS CORNER |
| --- | NO. | 7.3.5 | GRANITE INLET STONE (FOR SQUARE CATCH BASIN) |
| --- | NO. | 7.3.6 | GRANITE INLET STONE (FOR ROUND CATCH BASIN) |
| --- | NO. | 7.3.7 | GRANITE APRON STONE (FOR SQUARE CATCH BASIN) |
| --- | NO. | 7.3.8 | GRANITE APRON STONE (FOR ROUND CATCH BASIN) |
| --- | NO. | 7.4.0 | GRANITE SLOPED FACE CURB |
| --- | NO. | 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 |
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| --- | 10.2.0 | RUBBLE MASONRY WALL |
| --- | 10.3.0 | CONCRETE RETAINING WALL |
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| --- | 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 |
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| --- | 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 |
| --- | AFB | 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 |
| --- | BPS | 3" BITUMINOUS CONCRETE TYPE 1-2 |
| --- | CCB | 8" GRAVEL BORROW SUBBASE COURSE |
| --- | CCP | BUILD NEW STRUCTURE OVER EXISTING PIPE |
| --- | CCF | CLEAN CATCH BASIN |
| --- | CG | CLEAN AND FLUSH PIPE |
| --- | CGM | CUT AND CAP PIPE WITH RESTRAINT (ALL SIZES) |
| --- | CP | CLEARING AND GRUBBING |
| --- | 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 |

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE IN CONSTRUCTION SITE

MAR 29 2018

RPD PLANS
SHEET 3 OF 54

THIS PLAN SHALL NOT BE ALTERED

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

STANDARD PLAN SYMBOLS & STANDARD LEGEND

CHECKED BY _____ DATE 3/30/2018 SCALE NO. SCALE

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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 IS THE R.I. STANDARD GRID SYSTEM, NAD 83. THE VERTICAL CONTROL IS NGVD 29.
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 SOIL MUST BE REESTABLISHED 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.
 - a. SEEDING TYPE 1.
 - b. 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.
 - a. ANY VEGETATIVE CLEARING SHALL BE LIMITED TO BRUSH AND TREES LESS THAN 3" DIAMETER.
 - b. 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.

| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| 1 | RI | STP-HISP-045 | | 4 | 192 |

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.

MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James H. Hobe

**RPD PLANS
SHEET 4 OF 54**

THIS PLAN SHALL NOT BE ALTERED

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| RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| CUMBERLAND, | RHODE ISLAND |
| STANDARD NOTES - 1 | |
| CHECKED BY _____ | DATE 3/30/2018 SCALE NO SCALE |

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| 1 | R.I. | STP-HISP-045 | | 5 | 192 |

LANDSCAPE NOTES:

- 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.
- 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.
- ALL PLANT MATERIAL IS TO BE FIELD LOCATED BY A REPRESENTATIVE FROM THE R.I.D.O.T. LANDSCAPE ARCHITECTURE UNIT.
- 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.
- 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.1B OF THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND SHRUBS SHALL BE MULCHED WITH PINE BARK MULCH IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- ALL TREES AND/OR SHRUBS THAT ARE PLANTED AS A BED SHALL BE MULCHED AS A BED.
- 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**
- 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

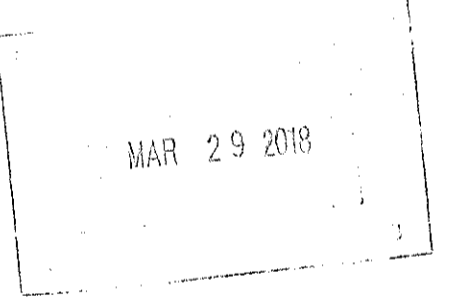
- THE FOLLOWING NOTES SHALL BE INCLUDED ON ALL PLANS AND/OR SHOP DRAWINGS IN REFERENCE TO ANCHOR BOLTS:
 - "PRETENSIONING OF ALL ANCHOR NUTS IS REQUIRED, AND SHALL BE ACCOMPLISHED BY TIGHTENING TO 1/6TH TURN BEYOND THE SNUG-TIGHT POSITION."
 - "THE MAXIMUM CLEARANCE BETWEEN THE BOTTOM OF THE LEVELING NUTS AND THE TOP OF THE CONCRETE IS CRITICAL AND SHALL NOT EXCEED THE AMOUNT SPECIFIED ON THIS DRAWING."
- 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.
- 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:

- ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE R.I.D.O.T. MAINTENANCE HEADQUARTERS, 360 LINCOLN AVENUE, WARWICK, RHODE ISLAND, 02888.
- BACK PLATES SHALL BE INSTALLED ON ALL TRAFFIC SIGNAL HEADS.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- ALL FOUNDATIONS MUST HAVE CONES OR BARRELS BOLTED TO FOUNDATION BASES UNTIL ACTUAL POLE IS INSTALLED.
- 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. 43.1.0. NO PATCHES WILL BE ALLOWED.
- 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.
- ALL LOOP DETECTORS SHALL BE CENTERED WITHIN EACH LANE AS DELINEATED, UNLESS OTHERWISE DIMENSIONED ON PLANS.
- ALL LOOP DETECTORS SHALL BE CUT INTO THE FINAL PAVEMENT SURFACE COURSE.
- TRAFFIC SIGNAL CONTROLLERS SHALL BE WIRED SO THAT ANY FIRE PRE-EMPTION SHALL OVERRIDE MANUAL (PUSH BUTTON) OPERATION.
- 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:

- 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.
- ALL SIGN MOUNTINGS FOR TEMPORARY AND CONSTRUCTION SIGNS SHALL BE IN ACCORDANCE WITH THE R.I.D.O.T. STANDARD SPECIFICATIONS, LATEST EDITION.
- 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.
- 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.
- POLICE OFFICERS (AND NOT FLAGPERSONS) SHALL BE UTILIZED WHEN WORK WILL IMPACT SIGNALIZED INTERSECTIONS AND LIMITED ACCESS HIGHWAYS.
- 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.
- 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.
- 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."
- 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.
- 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.
- 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-PLANNED AND NEW ROADWAY SURFACES THAT WILL BE OPENED TO TRAFFIC AT THE END OF THE SHIFT.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

RPD PLANS SHEET 5 OF 54

THIS PLAN SHALL NOT BE ALTERED

| | | | | |
|-----------|-------|-----|--|--|
| REVISIONS | | | RHODE ISLAND | |
| NO. | DATE | BY | DEPARTMENT OF TRANSPORTATION | |
| 1 | 4/07 | TRB | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| 2 | 11/07 | TRB | CUMBERLAND, RHODE ISLAND | |
| 3 | 3/10 | RBH | STANDARD NOTES - 2 | |
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GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

CHECKED BY _____ DATE 3/30/2018 SCALE NO SCALE

JOB SPECIFIC GENERAL NOTES:

- EXISTING CONDITIONS TOPOGRAPHY FEATURES SHOWN ON THE BASEMAP FOR CUMBERLAND (DIAMOND HILL ROAD (ROUTE 114) AND ANGELL/BEAR HILL ROAD INTERSECTION) ARE BASED ON ACTUAL FIELD INVESTIGATION CONDUCTED BY INSITE ENGINEERING SERVICES, LLC.
- EXISTING CONDITIONS UTILITY INFORMATION IS SHOWN AT UTILITY QUALITY LEVEL C AND IS BASED ON THE BEST AVAILABLE INFORMATION OF RECORD PROVIDED BY THE UTILITY OWNERS AND FIELD INVESTIGATION. THE EXISTENCE, LOCATION, SIZE, MATERIAL IS NOT WARRANTED TO BE EXACT.

UTILITY QUALITY LEVEL C
INFORMATION OBTAINED BY SURVEY AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D
INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

- THE CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION FENCE FOR PEDESTRIAN PROTECTION AROUND THE WORK AREAS WHEN DIRECTED BY THE ENGINEER OR WHERE THERE IS AN ELEVATION DIFFERENCE OF 6" OR MORE FROM EXISTING GRADE TO BOTTOM OF ANY EXCAVATION WORK. TEMPORARY CONSTRUCTION FENCE WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- ALL ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "RET" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- ALL DAMAGES TO EXISTING STATE OR PRIVATE PROPERTY CAUSED BY THE CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- ALL TREE TRIMMING WORK SHOWN ON THE PLANS SHALL BE PROVIDED THROUGH THE STATEWIDE TREE TRIMMING CONTRACT. CONTRACTOR SHALL COORDINATE THE TREE TRIMMING WITH THE RESIDENT ENGINEER DURING CONSTRUCTION.
- CONTRACTOR SHALL NOT PARK OR STORE CONSTRUCTION VEHICLES OR EQUIPMENT UNDER THE DRIPLINE OF TREES.
- FAST-DRYING WATERBORNE PAVEMENT MARKING PAINT, 8 MILS AND 16 MILS, SHALL BE PLACED IN ACCORDANCE WITH SECTION T20.03.4 OF THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", INCLUDING ALL ADDENDA; 8 MIL ON THE FINAL RIDING SURFACE OF ROADWAYS THAT WILL BE OPEN TO TRAFFIC AT THE COMPLETION OF EACH DAY'S PAVING OPERATION AND 16 MIL ON MILLED SURFACES OPEN TO TRAFFIC. PRIOR TO WINTER SHUTDOWN, EPOXY RESIN PAVEMENT MARKINGS SHALL BE PLACED ON FINAL RIDING SURFACE OF CONSTRUCTION SEASON AND SHALL REMAIN IN PLACE DURING THE ENTIRE WINTER SEASON.
- FINAL EPOXY RESIN PAVEMENT MARKINGS SHALL BE PROVIDED THROUGH THE STATEWIDE PAVEMENT MARKING CONTRACT. CONTRACTOR SHALL COORDINATE THE FINAL EPOXY PAVING WITH THE RESIDENT ENGINEER DURING CONSTRUCTION. FINAL PAVEMENT MARKINGS TO BE PLACED NO SOONER THAN TWO (2) WEEKS AFTER THE COMPLETION OF FINAL PAVING OPERATIONS BUT NO LATER THAN FOUR (4) WEEKS.
- PRIOR TO PAVEMENT PLACEMENT, CONTRACTOR SHALL PROVIDE CUT & MATCH LINES AS INDICATED ON THE PLAN.
- PROJECT COORDINATES ARE BASED ON NAD83 RECTANGULAR GRID SYSTEM.
- VERTICAL DATUM OF ELEVATIONS IS BASED ON NAVD 1988.
- CONTROLLED LOW STRENGTH MATERIAL (CLSM) TYPE III SHALL BE USED TO SUBSTITUTE CEMENT CONCRETE WHERE R.I. STANDARD DETAIL 7.6.0 CURB SETTING DETAIL IS IDENTIFIED ON THE PLANS.
- THE CONTRACTOR IS HEREBY NOTIFIED THAT SOME OF THE PROPOSED TRAFFIC SIGNAL POLES ARE LOCATED UNDER OR CLOSE TO OVERHEAD UTILITY WIRES. CONTRACTOR SHALL FIELD LOCATE THESE EXISTING OVERHEAD WIRES PRIOR TO PREPARING THE SHOP DRAWINGS OR FABRICATING THE POLES. THE CONTRACTOR SHALL TAKE THE LOCATION OF THE EXISTING OVERHEAD WIRES INTO CONSIDERATION AND PLAN THE CONSTRUCTION MEANS AND METHODS ACCORDINGLY.

JOB SPECIFIC WHEELCHAIR RAMP GENERAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- LOCATION OF WHEELCHAIR RAMPS SHALL BE AS SHOWN ON PLANS.
- ALL REQUIRED CUTTING OF CURB PIECES SHALL BE INCLUDED IN THE COST OF THE CURB.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0") AS INDICATED ON THE STANDARDS 43.3.0 AND 43.3.1.
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (LONGER LENGTHS PREFERRED).

JOB SPECIFIC TRAFFIC SIGN NOTES:

- THE SYMBOLS SHOWN IN THE PLANS FOR PROPOSED SIGNS ARE PICTORIAL ONLY. THE CONTRACTOR SHALL PROVIDE THE ACTUAL NUMBER OF POST REQUIRED FOR EACH SIGN ASSEMBLY BASED ON RI STD. 30.1.0.

JOB SPECIFIC GUARDRAIL NOTES:

- AT LOCATIONS WHERE ALL NEW PERMANENT GUARDRAIL SECTIONS ARE CALLED FOR ON THE PLANS, THE GUARDRAIL SHALL CONFORM TO THE MANUAL FOR ASSESSING SAFETY HARDWARE 2016 (M.A.S.H.) REQUIREMENTS AND THE REQUIREMENTS OF ITEM CODES 901.9901 THRU 901.9903. TRANSITION FROM NEW END SECTIONS SHALL BE INCLUDED IN ITEM CODE 901.9901.

JOB SPECIFIC DRAINAGE, UTILITY AND EROSION CONTROL NOTES:

- ALL INVERTS AND CONNECTIONS TO EXISTING STRUCTURES SHALL BE FIELD VERIFIED AND COORDINATED WITH THE RESIDENT ENGINEER BEFORE COMMENCING WORK.
- THE COST OF REMOVING AND DISPOSING INLET STONES AND APRON STONES SHALL BE PAID FOR UNDER THE BID ITEM FOR CURB REMOVAL.
- SANITARY SEWER, GAS WATER, AND OTHER UTILITY SERVICES ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR IS HEREBY MADE AWARE OF THESE SERVICES AND SHALL PROTECT AND MAINTAIN THESE SERVICES AT ALL TIMES DURING CONSTRUCTION. ALL DAMAGE TO SANITARY SEWER, GAS, WATER OR OTHER UTILITY SERVICES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.
- ALL EXISTING MANHOLES, CATCH BASINS AND ROADWAY BOXES FOR ALL UTILITIES WITHIN THE PAVING LIMITS SHALL BE ADJUSTED TO GRADE AS REQUIRED EXCEPT WHERE REPLACEMENT IS CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR IS HEREBY MADE AWARE THAT EXISTING UTILITIES, INCLUDING BUT NOT LIMITED TO EXISTING WATER AND DRAIN PIPES; DRAINAGE AND SEWER STRUCTURES; GAS LINES; TELEPHONE DUCTS AND UTILITY POLES, SHALL BE PROTECTED AND/OR SHORED UP DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS UNDER THIS PROJECT. THE COST OF THE ADDITIONAL WORK REQUIRED FOR THE PROTECTION, MAINTENANCE AND SUPPORT OF THESE OR OTHER EXISTING ABOVEGROUND OR UNDERGROUND UTILITIES IN THE VICINITY OF THE PROPOSED WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE WORK UNDER THIS CONTRACT.
- OFFSET DISTANCES LISTED FOR NEW CATCH BASINS ARE MEASURED TO THE CENTER OF THE PROPOSED GRATE.
- CONTRACTOR SHALL ENSURE, AT NO ADDITIONAL COST TO THE STATE, THAT NEWLY INSTALLED CATCH BASINS (CB), DRAINAGE STRUCTURES (DMH) & PIPES ARE CLEAN AND FREE FROM DEFECTS. AFTER ALL DISTURBED SOILS ARE STABILIZED WITH VEGETATION, THE CONTRACTOR SHALL REMOVE ALL ENVIRONMENTAL CONTROLS, CLEAN STRUCTURES, AND FLUSH PIPES.
- DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT/REPLACE ALL CONTROLS AS NEEDED OR DIRECTED. MAINTENANCE SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 212 OF THE RIDOT STANDARD SPECIFICATIONS, AMENDED MAY 2015. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT ALL NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION INCLUDING PERIODS OF "WINTER SHUTDOWN".
- THE CONTRACTOR SHALL INSTALL CATCH BASIN INLET PROTECTION AND COMPOST FILTER SOCK AT ALL EXISTING PROPOSED CATCH BASINS.
- NATIONAL GRID WILL PURGE THEIR OLD GAS MAIN OF GAS, WIPE TEST SAMPLE THE INSIDE OF THE PIPE, CAP THE ENDS AND ABANDON IN PLACE. PIPE FOUR INCHES AND LESS IN DIAMETER CAN'T BE SAMPLED; THIS PIPE WILL BE ASSUMED TO BE CONTAMINATED. IF THE WIPE TEST RESULTS SHOW PCB CONTAMINATION AND A SECTION OR SECTIONS NEED TO BE REMOVED BY THE CONTRACTOR THEN THERE ARE TWO POSSIBILITIES: IF THE QUANTITY TO BE REMOVED IS SMALL THE CONTRACTOR COULD TRANSPORT THE REMOVED SECTIONS WITH SEALED ENDS TO EITHER THE NATIONAL GRID FACILITY AT 642 ALLENS AVE IN PROVIDENCE OR AT 477 DEXTER ST IN PROVIDENCE AND PLACE THEM IN THEIR RED OPEN TOP "PIPE TO BE CLEANED" CONTAINER ON SITE. NATIONAL GRID WOULD THEN HANDLE THE CLEANING AND PROPER DISPOSAL ... OR ... THE CONTRACTOR COULD HIRE CLEAN HARBORS TO DELIVER AN OPEN TOP CONTAINER TO THE SITE, PLACE THE REMOVED SECTION INTO THE DUMPSTER AND THEN ARRANGE TO HAVE CLEAN HARBORS PICK UP THE CONTAINER. THE CHARGES ASSOCIATED WITH DELIVERY, ONSITE RENTAL AND PICKUP OF THE DUMPSTER WOULD BE THE CONTRACTORS RESPONSIBILITY AND NATIONAL GRID'S RESPONSIBILITY WILL BE FOR CLEANING AND PROPER DISPOSAL. NATIONAL GRID ALSO REQUIRES THAT THE OPEN PIPE ENDS OF THE ABANDONED PIPE REMAINING IN THE GROUND BE CAPPED OR SEALED WITH EXPANDING FOAM. THE COSTS ASSOCIATED WITH DISPOSAL OF OLD GAS MAINS ARE INCIDENTAL TO THE WORK ASSOCIATED WITH ITEM CODE 201.9903.

JOB SPECIFIC CONCRETE SIDEWALK NOTES:

- IF THE SIDEWALK IS TO ABUT A SMOOTH WALL FOUNDATION, OR STATIONARY OBJECT, THE EXPANSION JOINT FILLER SHALL BE PLACED FULL DEPTH BETWEEN THE SIDEWALK CONCRETE AND THE SURFACE OF THE WALL FOUNDATION OR STATIONARY OBJECT.
- IF THE SIDEWALK IS TO ABUT AN IRREGULAR WALL FOUNDATION, OR STATIONARY OBJECT, THE EXPANSION JOINT FILLER SHALL BE PLACED FULL DEPTH, FOUR INCHES FROM THE IRREGULAR SURFACE AND CONCRETE SHALL BE PLACED BETWEEN THE ABOVE MENTIONED SURFACES AND EXPANSION JOINT MATERIAL.
- THE FORCING OF PREMOLDED EXPANSION JOINT FILLER INTO FRESHLY PLACED CONCRETE WILL NOT BE ALLOWED.
- THE CONTRACTOR SHALL REMOVE MATERIAL BELOW PROPOSED SIDEWALKS AND DRIVEWAYS AND PLACE NEW GRAVEL SUBBASE TO THE DEPTH SHOWN ON R.I. STD. 43.1.0. AND 43.5.0 RESPECTIVELY UNLESS EXISTING GRAVEL SUBBASE IS CALLED OUT TO REMAIN ON THE PLANS.
- WHEELCHAIR RAMPS ARE TO BE LOCATED FREE FROM ALL OBSTRUCTIONS.
- NEW CONCRETE SIDEWALKS, INCLUDING WHEELCHAIR RAMPS, MUST BE PLACED WITHIN SEVEN (7) CONSECUTIVE WORKING DAYS AFTER REMOVAL OF OLD SIDEWALK.
- THE CURB OPENING WIDTH FOR ANY DRIVEWAY SHALL BE THE SAME AS THE EXISTING WIDTH UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL FULL DEPTH SAWCUT THE SIDEWALK 6 INCHES IN FRONT OF ALL WALKS, LOT CURB, BUILDING FACADES, TIMBER LANDSCAPE, ETC. PRIOR TO REMOVING SIDEWALK PAVEMENT. SEE SIDEWALK SAWCUT/REMOVAL DETAIL.
- THE CONTRACTOR SHALL INSTALL BOX FORMS, R.I. STANDARD 25.2.0, FOR ALL SIGN POSTS TO BE INSTALLED WITHIN THE SIDEWALKS PRIOR TO POURING CONCRETE.
- THE CONTRACTOR SHALL UTILIZE 3'-0" OR 6'-0" LENGTH OF TRANSITION CURB IN ADDITION TO THE REGULAR CURB TO ACHIEVE THE TRANSITION LENGTH SPECIFIED ON THE PLAN AS SHOWN IN RI STANDARD DETAIL 7.1.3 OR 7.3.3.
- THE CONTRACTOR SHALL MAINTAIN A CLEAR PEDESTRIAN WAY ON AT LEAST ONE SIDE OF AN EXISTING STREET THROUGH CONSTRUCTION ZONES AT ALL TIMES.
- THE CONTRACTOR SHALL DIRECT PEDESTRIANS TO THE OPEN SIDE WITH SIGNS AND DISCOURAGE THEM FROM USING THE CLOSED SIDE WITH BARRICADES AND SIGNS. A PEDESTRIAN WAY AS AN UNOBSTRUCTED CLEAR WIDTH OF FOUR FEET WITH A HARD SURFACE THAT SHALL CONFORM TO ALL ACCESSIBILITY REQUIREMENTS. THE SURFACE MAY BE EXISTING PAVEMENT, NEW PAVEMENT, OR PLYWOOD. ALL WOODEN WALKWAYS SHALL MEET THE ENGINEER'S APPROVAL FOR SURFACE SMOOTHNESS AND DEFLECTION. GRAVEL SURFACES WILL NOT BE ACCEPTABLE.
- A HANDRAIL CONFORMING TO ALL APPLICABLE STANDARDS SHALL BE PROVIDED WHEREVER AND WHENEVER THERE IS A DROP-OFF IN EXCESS OF SIX INCHES. PEDESTRIAN WAYS SHALL BE MAINTAINED TO ALL PRIVATE PROPERTIES, BUILDING ENTRANCES AND PARKING LOTS AT ALL TIMES. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR PROVIDING PEDESTRIAN WAYS; ALL COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- WHERE FEASIBLE, THE EXISTING SIDEWALK SHALL BE SAWCUT TWO FEET BEHIND THE CURB AND MAINTAINED IN PLACE WHILE THE CURB IS RESET, IN ACCORDANCE WITH SECTION 905.03 OF THE STANDARD SPECIFICATIONS.

EXISTING FEATURES LEGEND

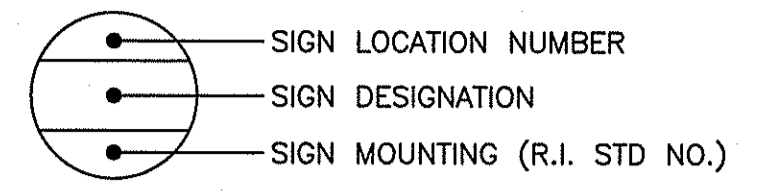
| | |
|---------|-------------------------------|
| x256.24 | EXISTING SPOT GRADE ELEVATION |
| CBCI | CATCH BASIN WITH CURB INLET |
| DIP | DUCTILE IRON PIPE |
| CB | CATCH BASIN |
| MH | MANHOLE |
| WSO | WATER SERVICE SHUT OFF |
| WV | WATER GATE VALVE |
| GV | GAS GATE VALVE |
| —OHW— | OVERHEAD WIRES |

PROPOSED FEATURES LEGEND

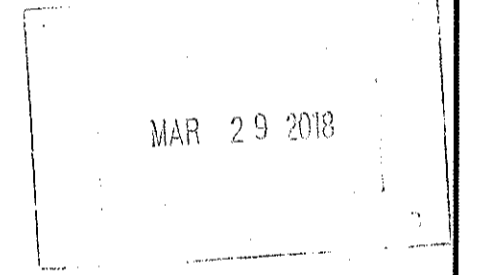
| | |
|-------|--|
| A | 2" MODIFIED CLASS 9.5 HMA OVER 7" CLASS 19.0 HMA - IN 2 LIFTS OVER 12" GRAVEL BORROW SUBBASE COURSE |
| B | 2" MODIFIED CLASS 9.5 HMA OVER 4" CLASS 19.0 HMA OVER 12" GRAVEL BORROW SUBBASE COURSE |
| C | 2" MODIFIED CLASS 9.5 HMA OVER 4" CLASS 12.5 HMA OVER 6" CLASS 19.0 HMA - IN 2 LIFTS OVER 12" GRAVEL BORROW SUBBASE COURSE |
| B-B | BACK TO BACK |
| BPV | BRICK PAVERS |
| BCD-1 | 3" MODIFIED CLASS 9.5 HMA FOR PATCHING OVER 8" GRAVEL BORROW SUBBASE COURSE |
| BIOR | BIORETENTION AREA |
| CDT | CUT AND DISPOSE ISOLATE TREES |
| DBW | REMOVE AND DISPOSE BRICK WALK |
| DSCB | DEEP SUMP CATCH BASIN WITH HOOD |
| CBGI | DEEP SUMP CATCH BASIN WITH HOOD AND GUTTER INLET |
| DTS | REMOVE AND DISPOSE OF TOP SLAB |
| ETEA | GUARDRAIL END TREATMENT - ENERGY ABSORBING TERMINAL |
| FS | COMPOST FILTER SOCK |
| INFR | INLET PROTECTION FOR CATCH BASIN |
| JFF | JELLYFISH FILTER |
| MM | MICRO MILLING, 2" DEPTH |
| OCS | OUTLET CONTROL STRUCTURE |
| PFP | PERFORATED PIPE |
| PO | MODIFIED CLASS 9.5 HMA - 2" |
| RBSW | REBUILD EXISTING STONE WALL |
| RCC | RECONSTRUCT CATCH BASIN/CORBEL CONE |
| RCVW | RECONSTRUCT CATCH BASIN VERTICAL WALL |
| RET | RETAIN |
| RFT | REMOVE FLAT TOP |
| RPMA | ROUNDOABOUT PAVEMENT MARKING ARROWS |
| RRNB | REMOVE AND RESET NEWSPAPER BOX |
| RSSW | REMOVE AND STOCKPILE STONEWALL |
| SCW | STAMPED ASPHALT CROSSWALK |
| STCN | INTEGRALLY COLORED AND STAMPED 8" PORTLAND CEMENT (FAST SETTING CONCRETE) WITH WIRE MESH OVER 12" GRAVEL BORROW SUBBASE COURSE |
| STU | STORMWATER TREATMENT UNIT |
| SSIS | SUBSURFACE INFILTRATION SYSTEM |
| TCLF | TEMPORARY 6'-0" CHAIN LINK FENCE |
| TWB | TEAKWOOD BENCH |
| TPEP | TIE PIPE INTO EXISTING PIPE |

| | |
|--------|--|
| T.E.B. | TEMPORARY EASEMENT BOUNDARY |
| P.U.B. | PERMANENT UTILITY EASEMENT BOUNDARY |
| P.G.B. | PERMANENT GUY EASEMENT BOUNDARY |
| P.A.B. | PERMANENT AERIAL EASEMENT BOUNDARY |
| P.D.B. | PERMANENT DRAINAGE EASEMENT BOUNDARY |
| PROP. | PROPOSED |
| R&D | REMOVE & DISPOSE |
| S/L | SITE LIGHTING |
| V.I.F. | VERIFY IN FIELD (NOTIFY ENGINEER) |
| X-80 | PROPOSED TOP OF CURB SPOT ELEVATION |
| X-80 | PROPOSED BOTTOM OF CURB SPOT ELEVATION |

TYPICAL SIGN DESIGNATION SYMBOL



| | |
|---------|---|
| WY | WHITE PAVEMENT MARKING WORD "YIELD" |
| YL | WHITE PAVEMENT MARKING YIELD LINE (SEE YIELD LINE LAYOUT DETAIL) |
| 6WD | 6" EPOXY RESIN PAVEMENT MARKING - WHITE (SKIP STRIPES - 2 FOOT LINE SEGMENTS WITH 4 FOOT GAP LENGTHS) |
| 6WS | 6" EPOXY RESIN PAVEMENT MARKING - WHITE (SKIP STRIPES - 10 FOOT LINE SEGMENTS WITH 30 FOOT GAP LENGTHS) |
| 12WD | 12" EPOXY RESIN PAVEMENT MARKING - WHITE (SKIP STRIPES - 2 FOOT LINE SEGMENTS WITH 4 FOOT GAP LENGTHS) |
| 12WDL | 12" EPOXY RESIN PAVEMENT MARKING - WHITE (SKIP STRIPES - 3 FOOT LINE SEGMENTS WITH 9 FOOT GAP LENGTHS) |
| 12Y | 12" EPOXY RESIN PAVEMENT MARKINGS - YELLOW |
| T4Y | 4 INCH YELLOW FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT |
| T6W | 6 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT |
| T12W | 12 INCH WHITE FAST - DRYING WATERBORNE PAVEMENT MARKING PAINT |
| TPMA | FAST DRYING WATERBORNE PAVEMENT ARROW - STRAIGHT, LEFT, RIGHT, OR COMBINED STANDARD 20.1.0 |
| TYL | WHITE PAVEMENT MARKING YIELD LINE (SEE YIELD LINE LAYOUT DETAIL) |
| 4.7.2 | ALTERNATE TOP COVER FOR ROUND PRECAST MANHOLES AND CATCH BASINS |
| 7.1.3S | PRECAST CONCRETE TRANSITION CURB (STRAIGHT) |
| 7.1.3C | PRECAST CONCRETE TRANSITION CURB (CIRCULAR) |
| 7.1.9S | PRECAST CONCRETE RAMP STONE 12" STRAIGHT STANDARD |
| 7.2.3 | PRECAST CONCRETE LOT CURB |
| 7.1.9C | PRECAST CONCRETE RAMP STONE 12" CIRCULAR STANDARD |
| 24.1.0 | PAVEMENT MARKING ARROWS |
| 34.1.0M | TYPICAL GUARDRAIL INSTALLATION MODIFIED |
| 34.3.4M | ANCHORAGE DETAILS TRAILING END SECTION MODIFIED |
| 43.3.2 | RAMP-LANDING FOR NARROW SIDEWALK |



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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APPROVED PLANS MUST BE ACCORDING TO THE CONSTRUCTION SITE

**RPD PLANS
SHEET 6 OF 54**

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|-----------|------|----|--|----------------|
| REVISIONS | | | RHODE ISLAND | |
| NO. | DATE | BY | DEPARTMENT OF TRANSPORTATION | |
| | | | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, | RHODE ISLAND |
| | | | JOB SPECIFIC PLAN SYMBOLS LEGEND AND NOTES | |
| | | | CHECKED BY _____ | DATE 3/30/2018 |
| | | | SCALE _____ | |



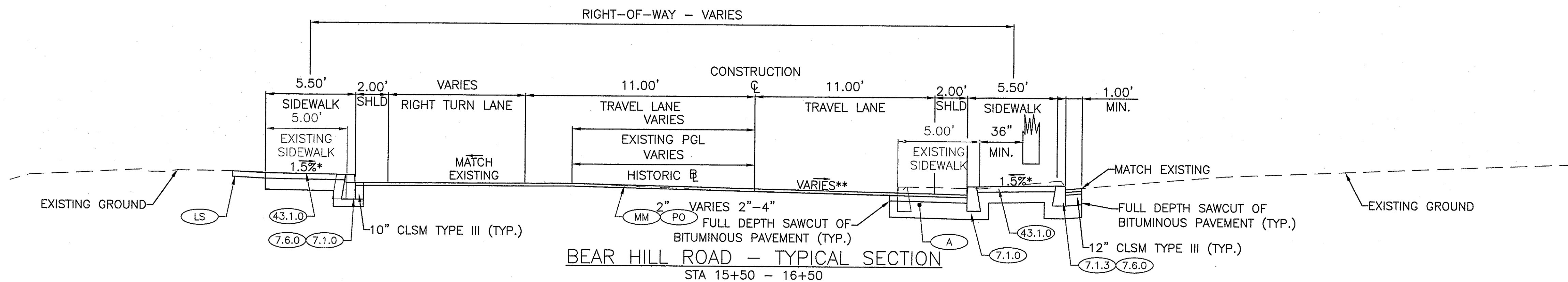
EXISTING PAVEMENT NOTES

STATION 213+00 TO 1024+00 (2024+00)
 (FROM RIC 9722)
 2" TYPE I-1 BITUMINOUS SURFACE COURSE OVER
 4" MODIFIED BITUMINOUS BASE COURSE OVER
 12" GRAVEL BORROW SUBBASE

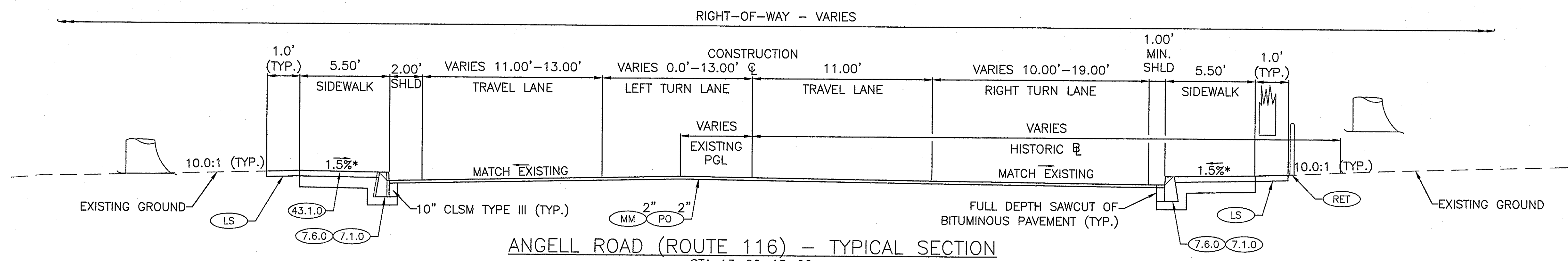
STATION 1024+00 (2024+00) TO 238+00
 (FROM RIC 6255)
 3" BIT. CONC. PAVEMENT OVER
 6" CRUSHED STONE OR CRUSHED GRAVEL BASE OVER
 16" GRAVEL FOUNDATION

ON/OFF-RAMPS A, B, C, D
 (FROM RIC 6255)
 8" REINFORCED CONC. PAVEMENT OVER
 GRAVEL FOUNDATION

ON/OFF-RAMPS A, B, C, D SHOULDER
 (FROM RIC 6255)
 2" BIT. CONC. PAVEMENT OVER
 6" CRUSHED STONE OR CRUSHED GRAVEL BASE OVER
 GRAVEL FOUNDATION

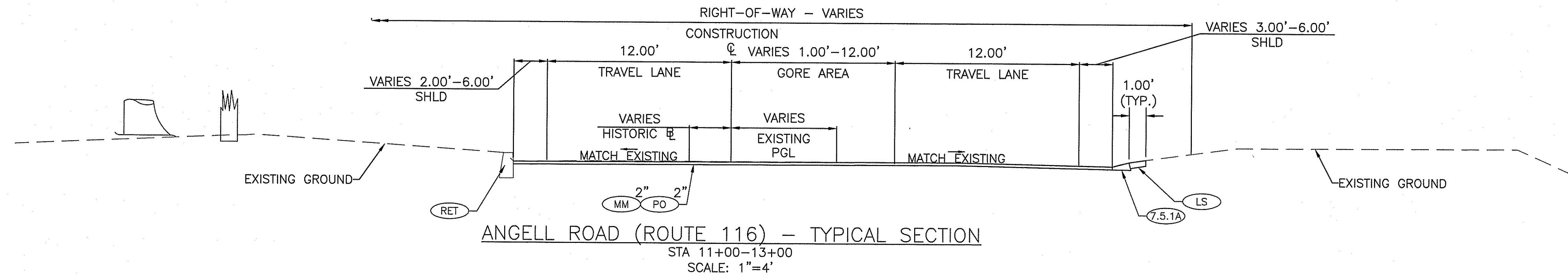


*TOLERANCE FOR CONSTRUCTION = ±0.5%
 ** SEE CROSS SECTIONS SHEET NO. 178 & 179 AND GRADING PLAN NO. 1

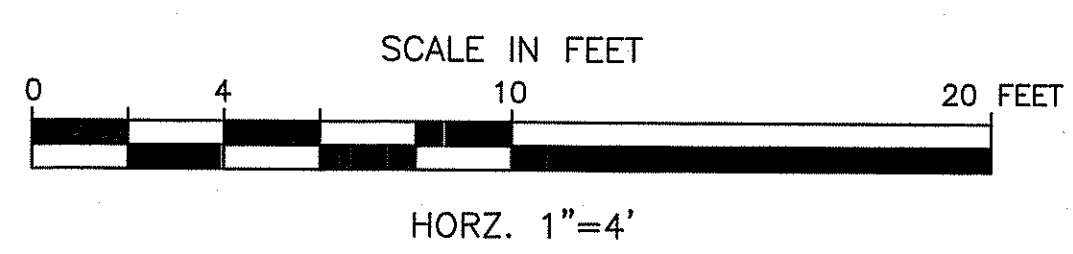


*TOLERANCE FOR CONSTRUCTION = ±0.5%

MAR 29 2018



NOTES:
 ALL EXISTING LANDSCAPE ON BOTH SIDES OF ANGELL ROAD (TREES, LAWN, PLANTS) SHALL REMAIN UNDAMAGED. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.



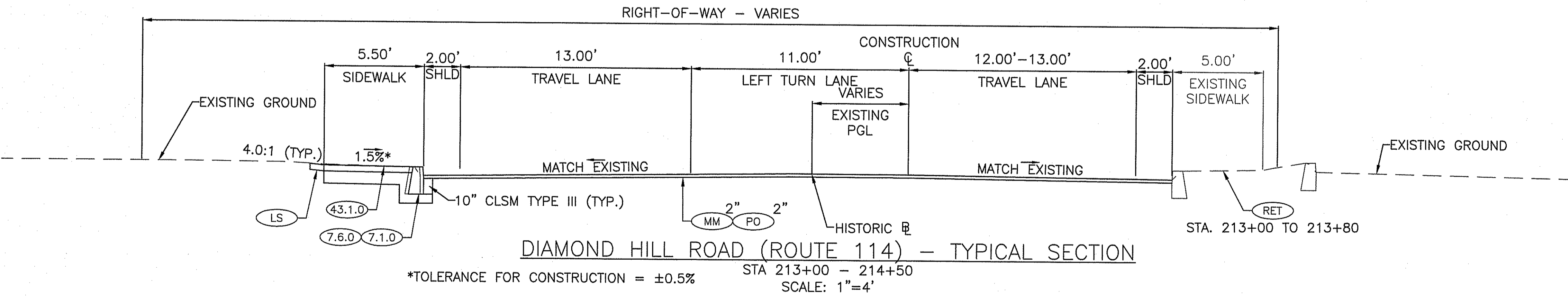
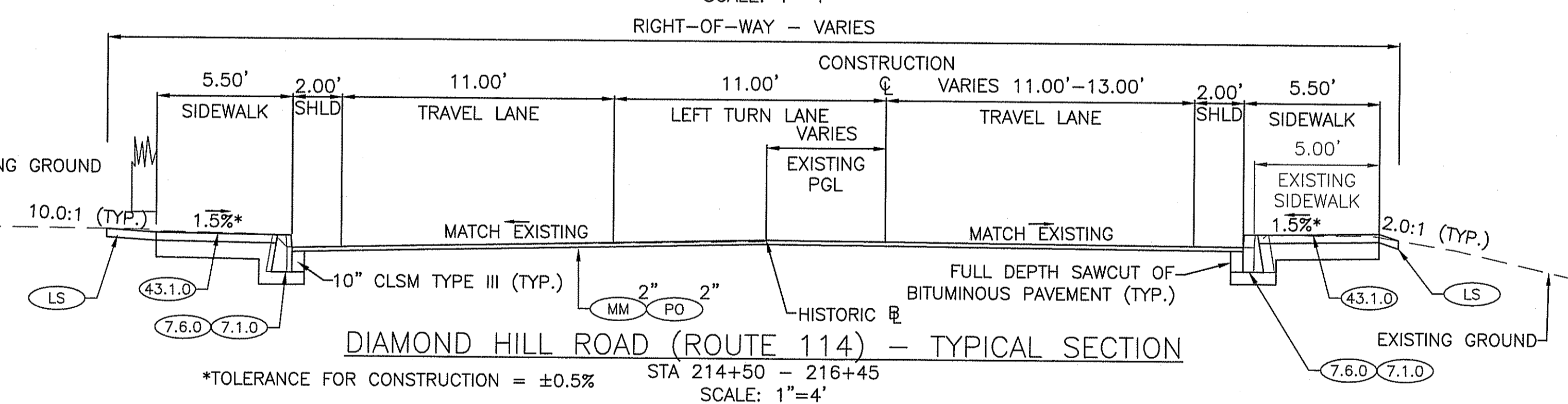
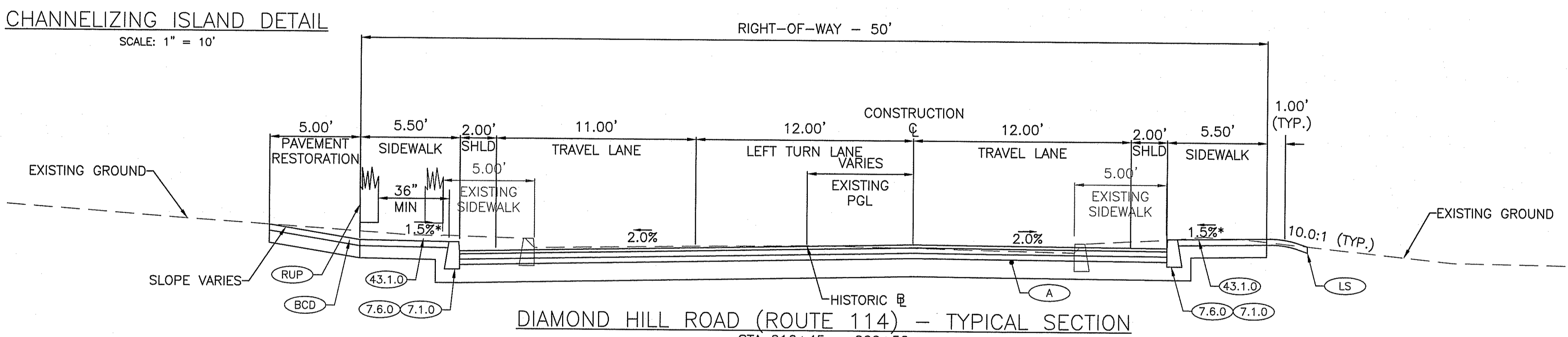
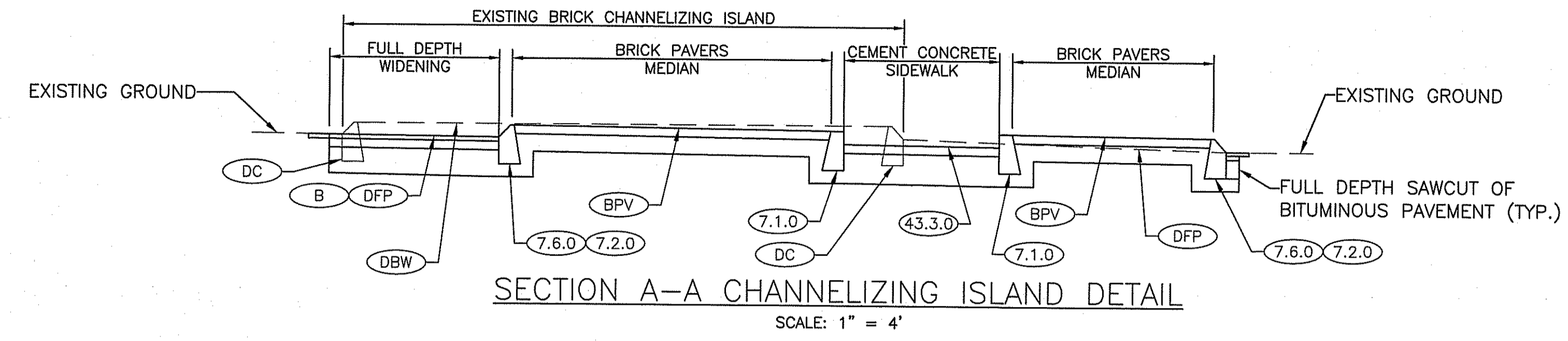
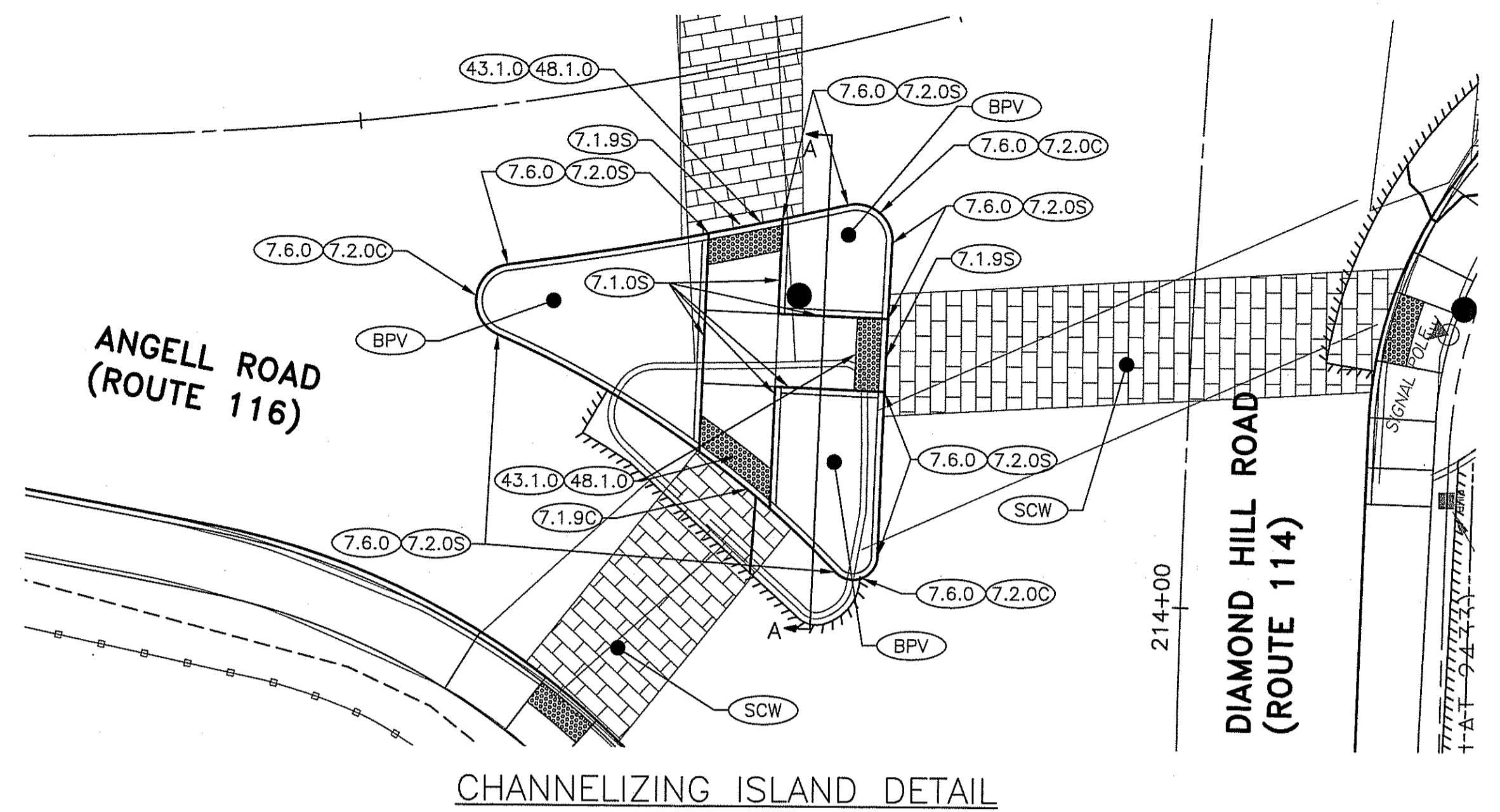
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Justin A. Harker

**RPD PLANS
 SHEET 7 OF 54**

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|-----------|------|----|--|--|
| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| NO. | DATE | BY | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, RHODE ISLAND | |
| | | | TYPICAL SECTIONS - 1 | |
| | | | CHECKED BY _____ DATE 3/30/2018 SCALE _____ | |

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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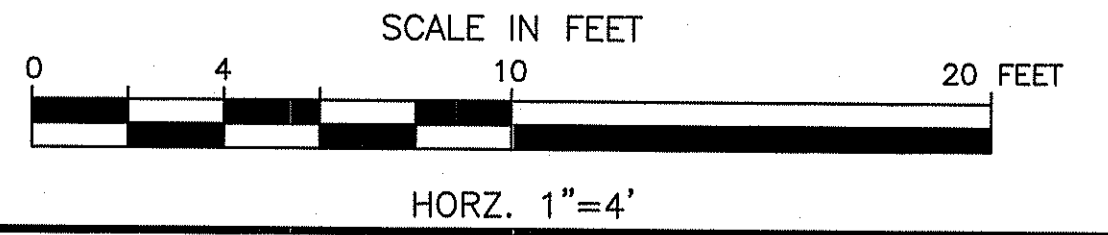
James H. Herbert

**RPD PLANS
SHEET 8 OF 54**

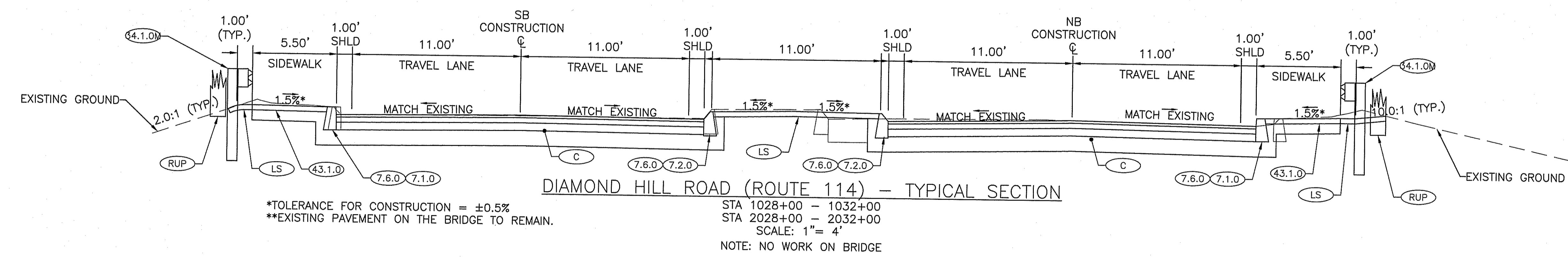
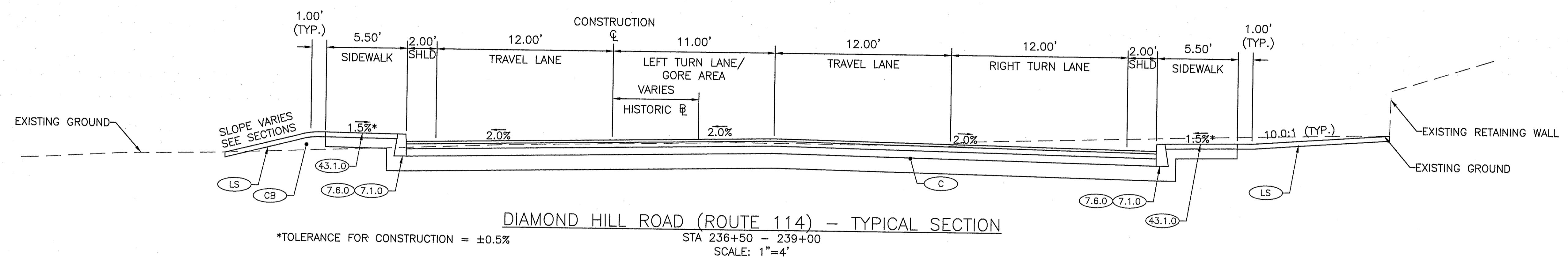
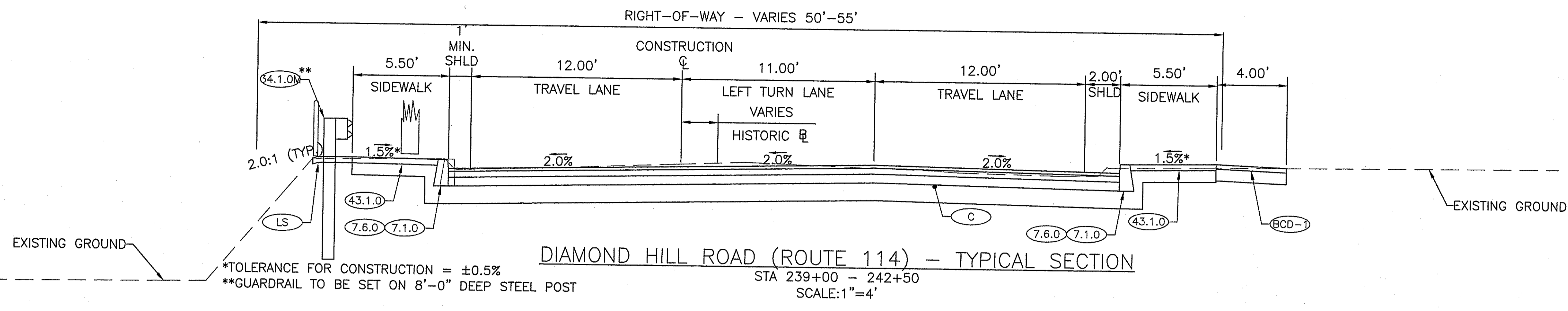
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

TYPICAL SECTIONS - 2

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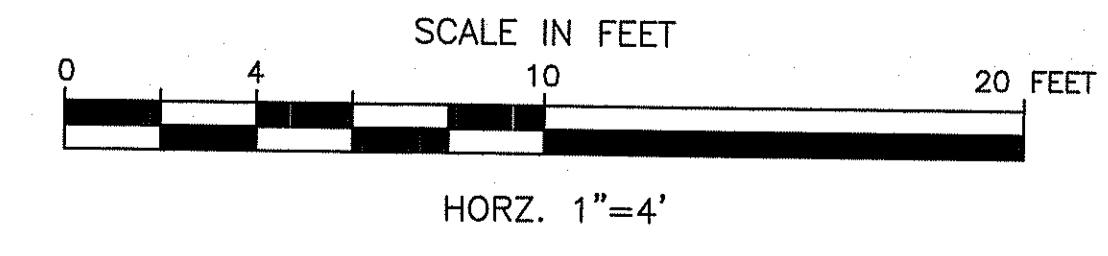


MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James H. Hester

RPD PLANS SHEET 9 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

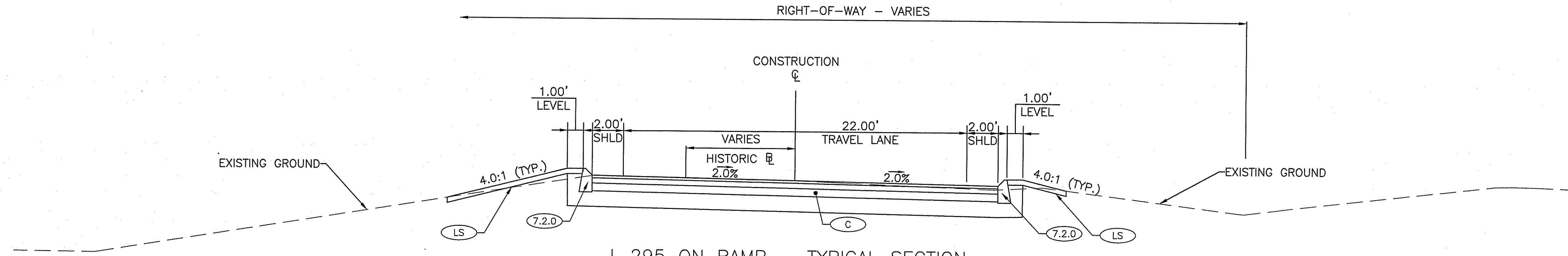
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

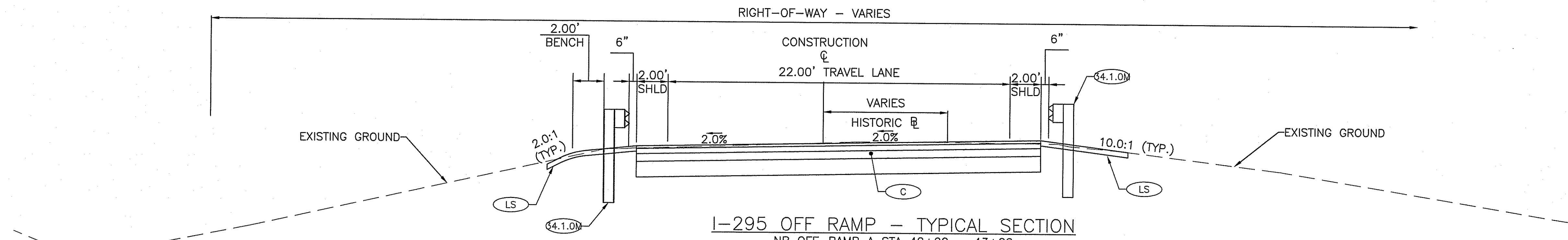
INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

TYPICAL SECTION - 3

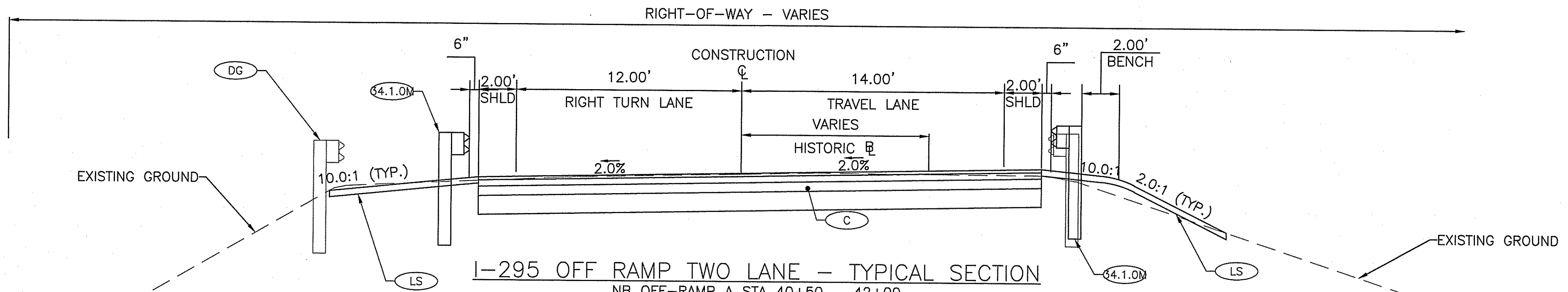
CHECKED BY _____ DATE 3/30/2018 SCALE _____



I-295 ON RAMP - TYPICAL SECTION
 NB ON-RAMP D STA 50+75 - 52+00
 SB ON-RAMP B STA 62+25 - 63+50
 SCALE: 1"=4'



I-295 OFF RAMP - TYPICAL SECTION
 NB OFF-RAMP A STA 42+00 - 43+00
 SB OFF-RAMP C STA 71+25 - 72+65
 SCALE: 1"=4'



I-295 OFF RAMP TWO LANE - TYPICAL SECTION
 NB OFF-RAMP A STA 40+50 - 42+00
 SB OFF-RAMP C STA 70+50 - 71+25
 SCALE: 1"=4'

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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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James A. Hubert

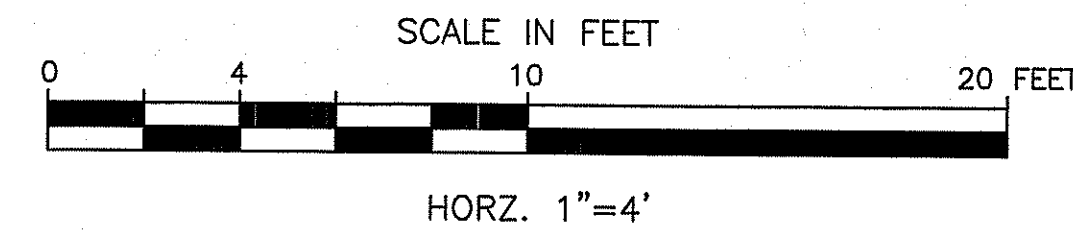
**RPD PLANS
 SHEET 10 OF 54**

| REVISIONS | | |
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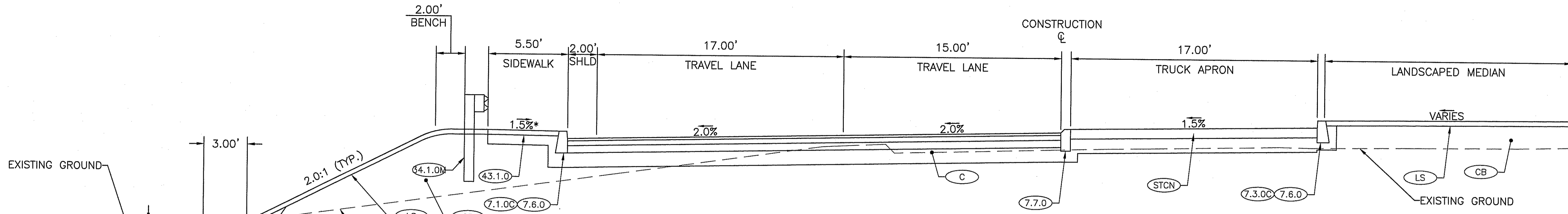
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

TYPICAL SECTION - 4

CHECKED BY _____ DATE 3/30/2018 SCALE _____



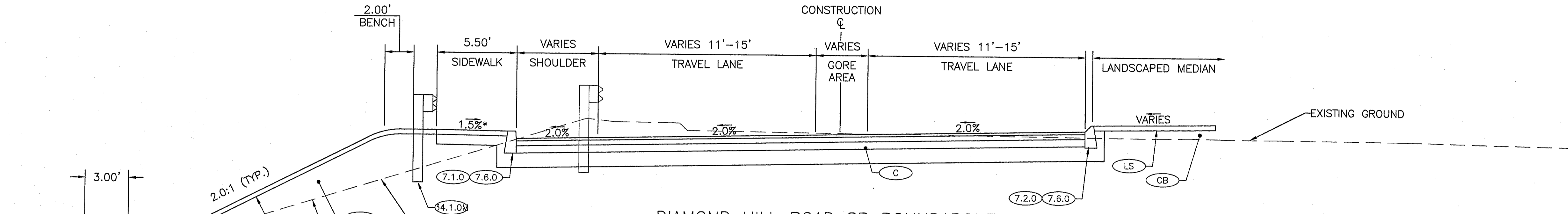
GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



ROUNDABOUT TWO-LANE - TYPICAL SECTION

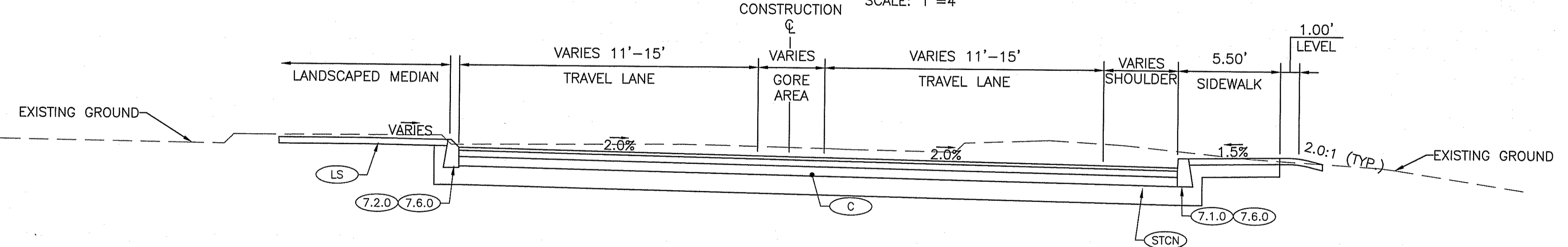
STA 1000+50 - 1001+00
STA 1001+95 - 1002+50
STA 2000+50 - 2001+00
SCALE: 1"=4'

*TOLERANCE FOR CONSTRUCTION = ±0.5%



DIAMOND HILL ROAD SB ROUNDABOUT APPROACH - TYPICAL SECTION

STA 1027+00 - 1028+00
STA 1034+50 - 1035+50
SCALE: 1"=4'



DIAMOND HILL ROAD NB ROUNDABOUT APPROACH - TYPICAL SECTION

STA 2025+00 - 2025+75
STA 2032+00 - 2033+00
SCALE: 1"=4'

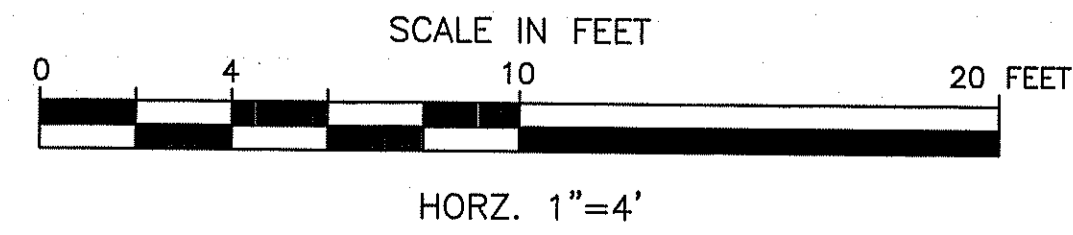
EXISTING PAVEMENT NOTES

- STATION 213+00 TO 1024+00 (2024+00) (FROM RIC 9722)
2" TYPE I-1 BITUMINOUS SURFACE COURSE OVER
4" MODIFIED BITUMINOUS BASE COURSE OVER
12" GRAVEL BORROW SUBBASE
- STATION 1024+00 (2024+00) TO 238+00 (FROM RIC 6255)
3" BIT. CONC. PAVEMENT OVER
6" CRUSHED STONE OR CRUSHED GRAVEL BASE OVER
16" GRAVEL FOUNDATION
- ON/OFF-RAMPS A, B, C, D (FROM RIC 6255)
8" REINFORCED CONC. PAVEMENT OVER GRAVEL FOUNDATION
- ON/OFF-RAMPS A, B, C, D SHOULDER (FROM RIC 6255)
2" BIT. CONC. PAVEMENT OVER APPROVED PLAN MATERIAL AT CONSTRUCTION SITE
6" CRUSHED STONE OR CRUSHED GRAVEL BASE OVER GRAVEL FOUNDATION

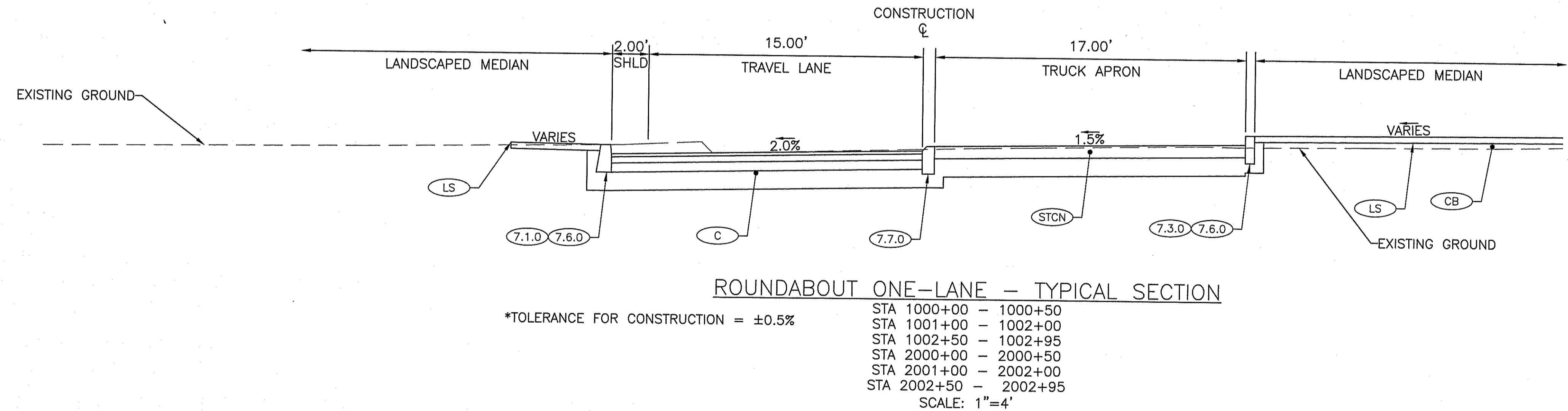
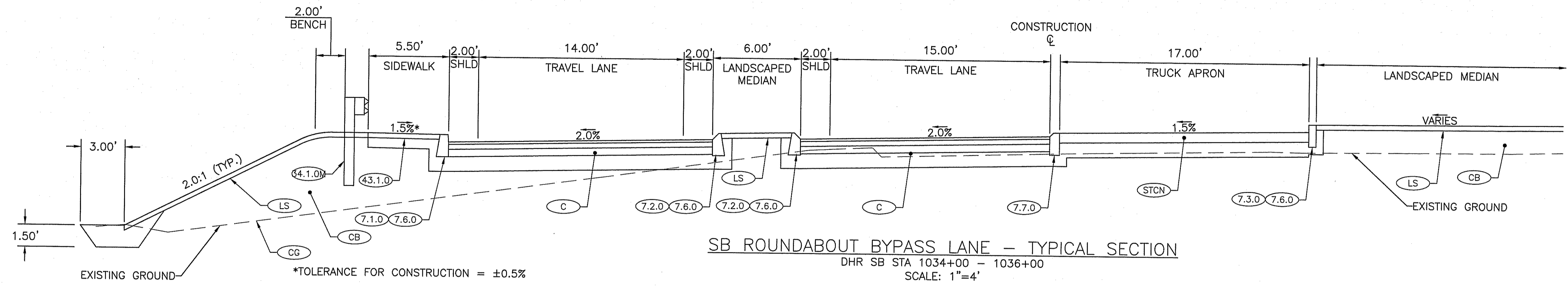
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL

RPD PLANS SHEET 11 OF 54

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| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| NO. | DATE | BY | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, RHODE ISLAND | |
| | | | TYPICAL SECTION - 5 | |
| | | | CHECKED BY _____ DATE 3/30/2018 SCALE _____ | |



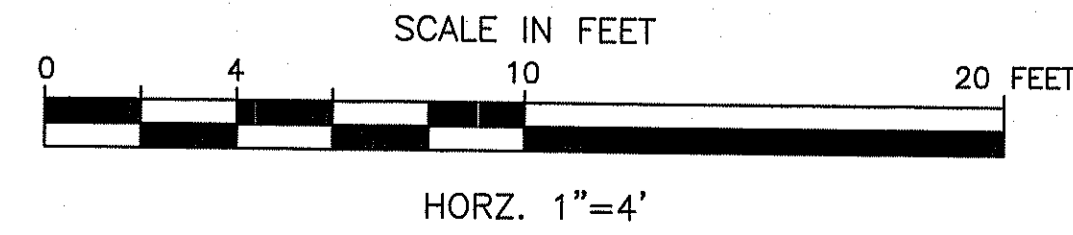
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers



MAR 29 2018

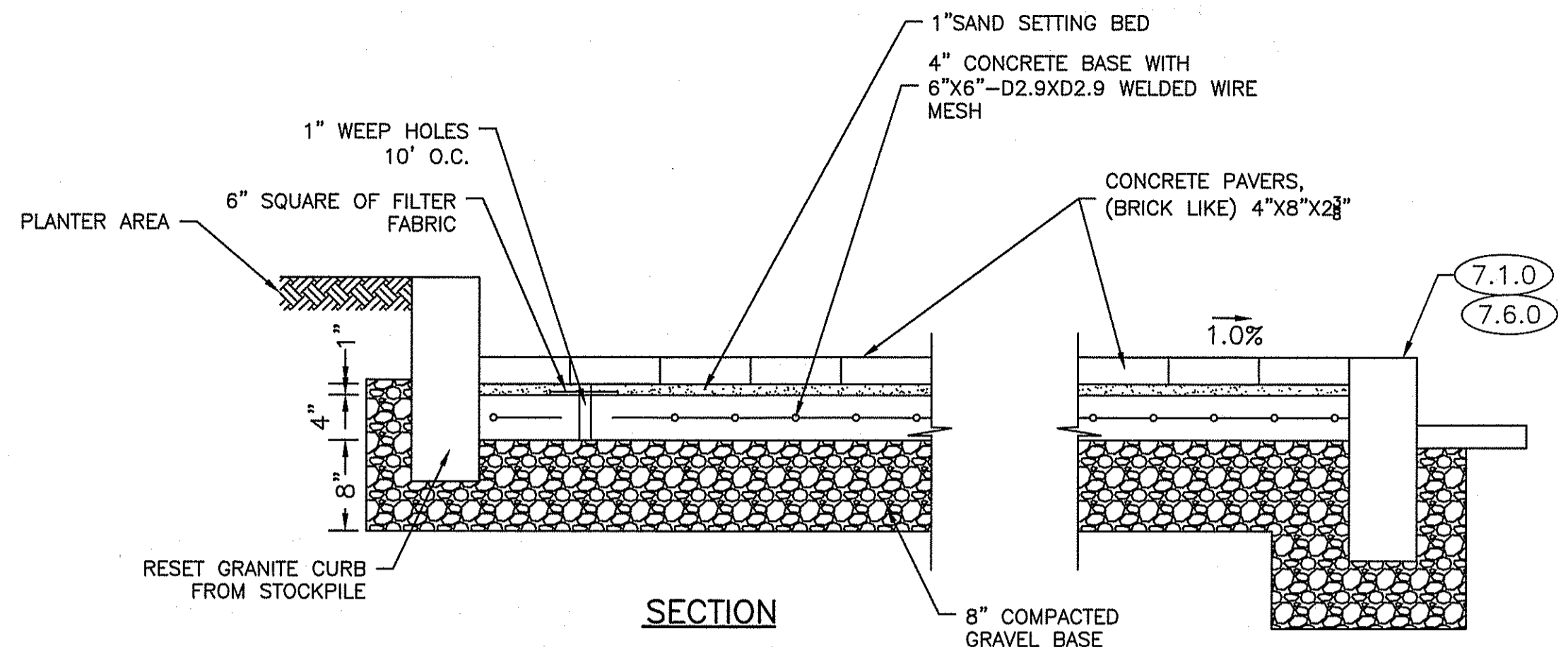
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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Charles A. Herbert
RPD PLANS
SHEET 12 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

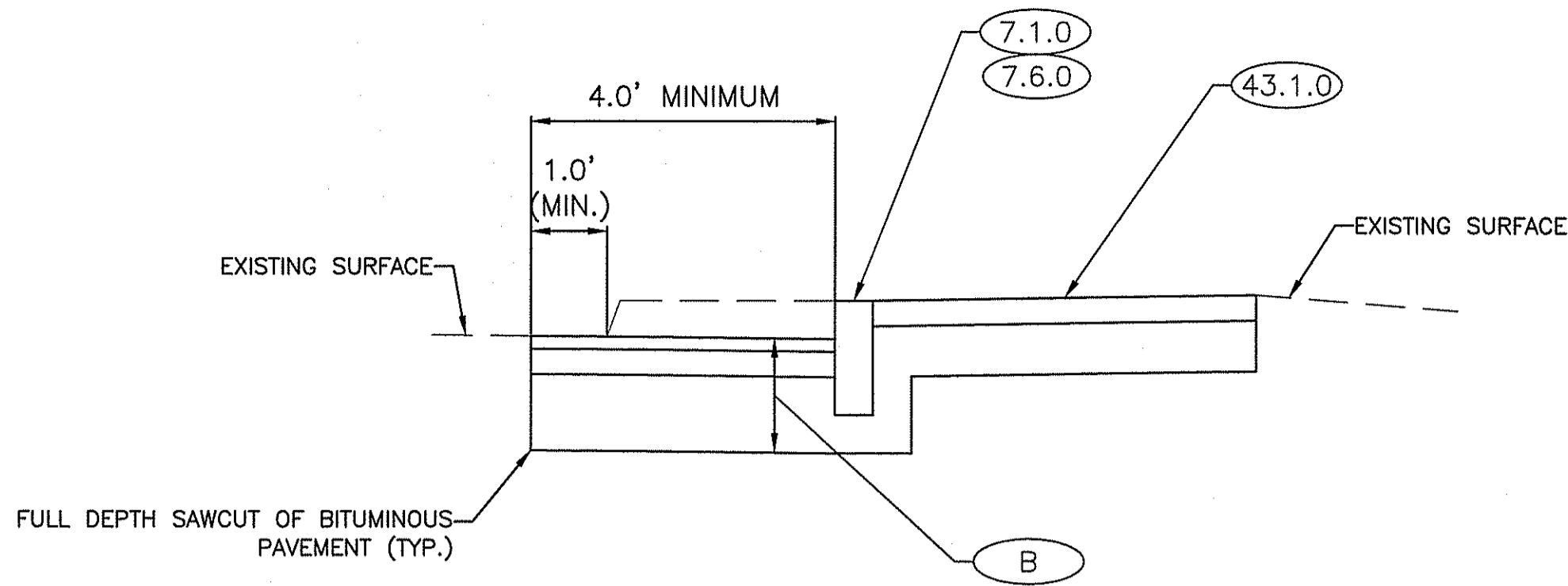
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| REVISIONS | | | RHODE ISLAND | |
| NO. | DATE | BY | DEPARTMENT OF TRANSPORTATION | |
| | | | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, RHODE ISLAND | |
| | | | TYPICAL SECTION - 6 | |
| | | | CHECKED BY _____ DATE 3/30/2018 SCALE 1" = 4' | |



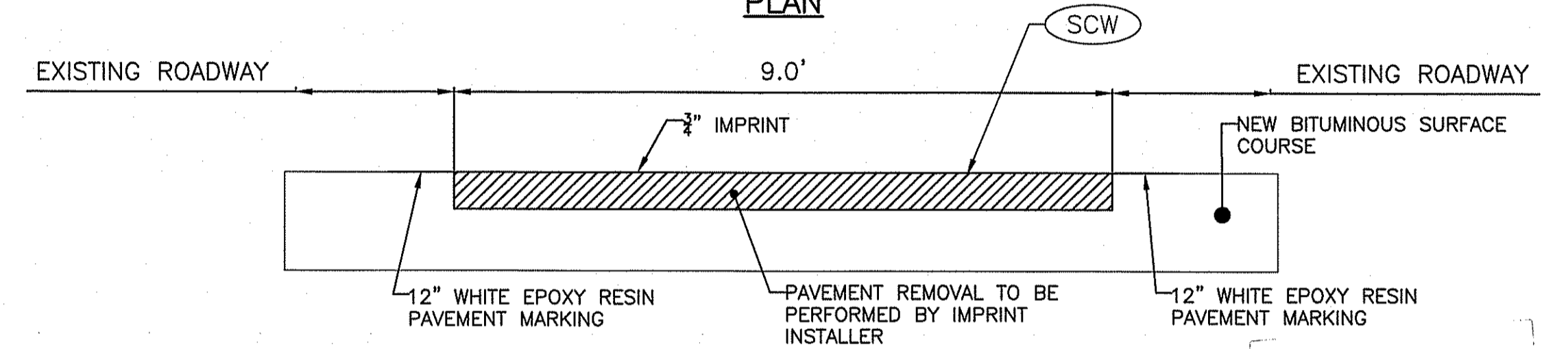
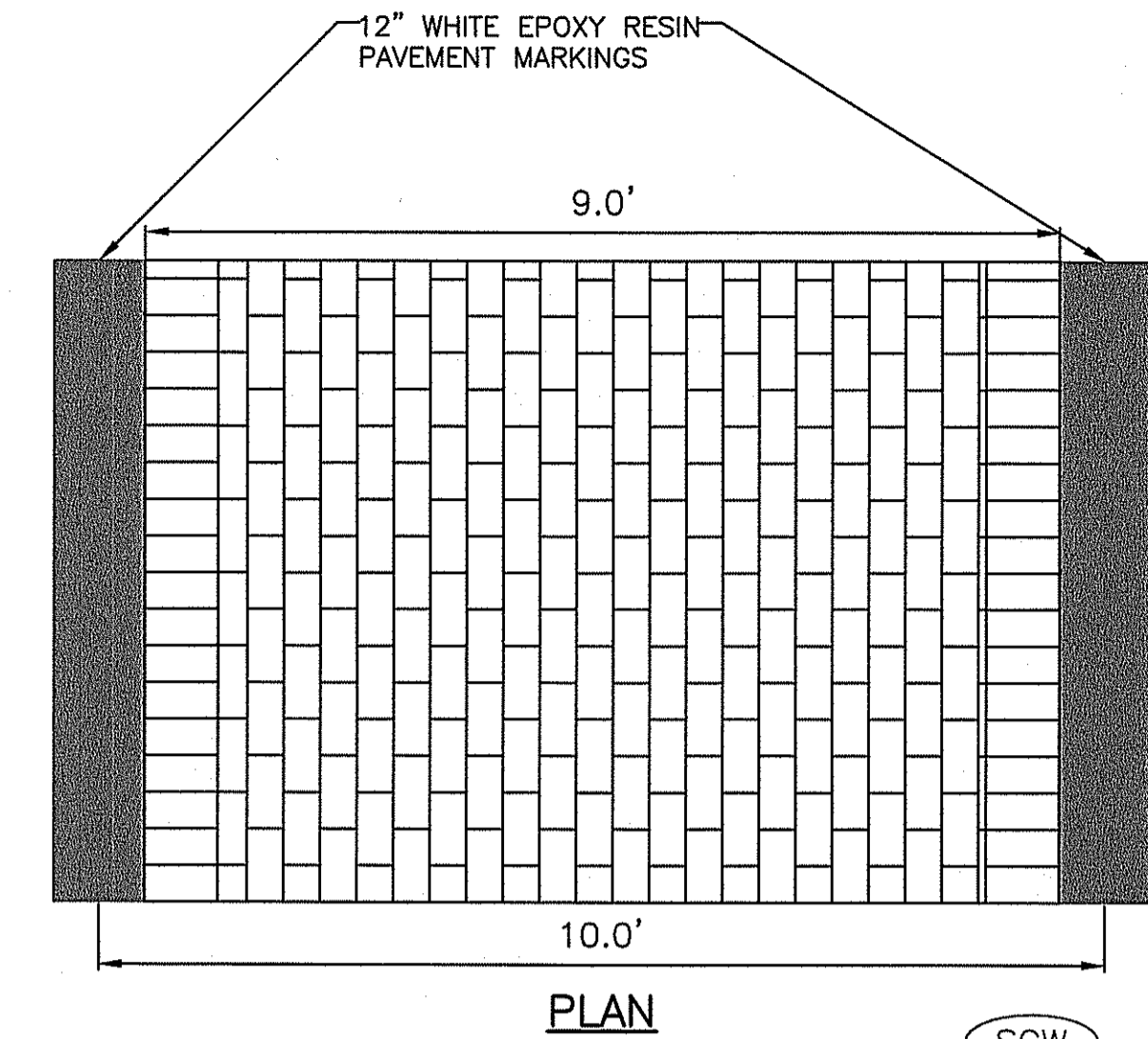
NOTES:

1. TOP OF BRICK PAVERS SHALL BE FLUSH WITH ADJACENT CONCRETE PAVEMENT.
2. CONFIRM QUANTITY PRIOR TO CONSTRUCTION.
3. CENTER WEEP HOLES IN GAPS BETWEEN WELDED WIRE MESH.
4. PATTERN SHALL BE RUNNING BOND.
5. CONTRACTOR SHALL SUBMIT PLAN SHOWING PATTERN.

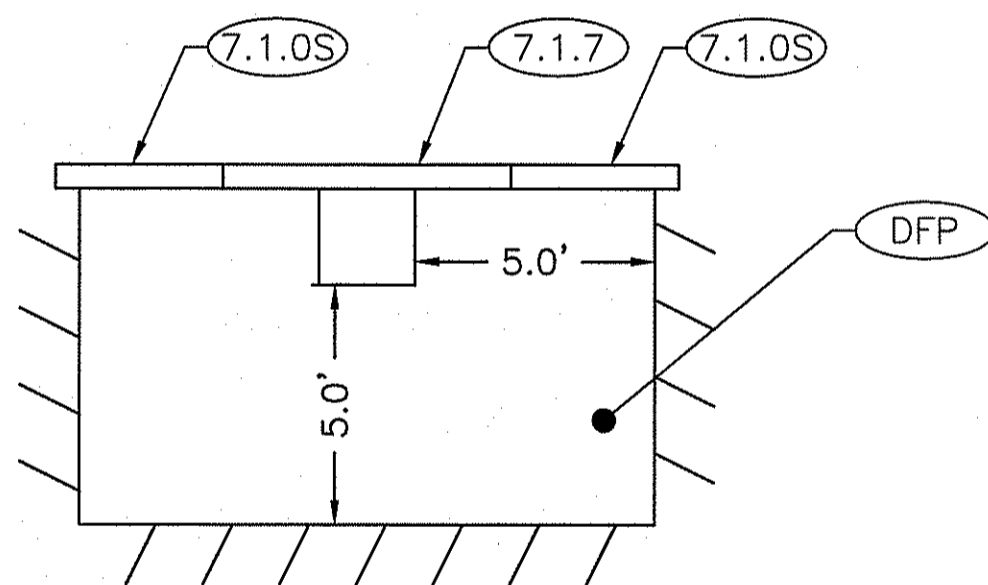
BRICK PAVERS (BPI)
NOT TO SCALE



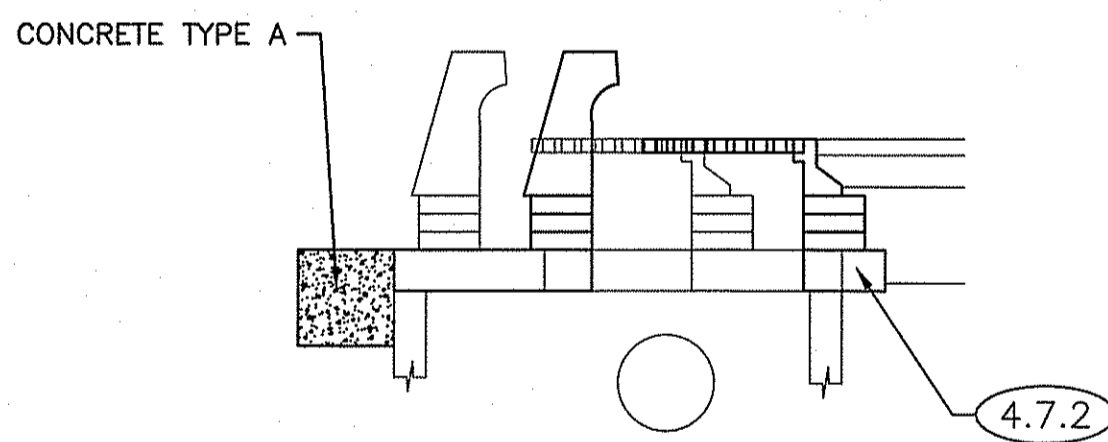
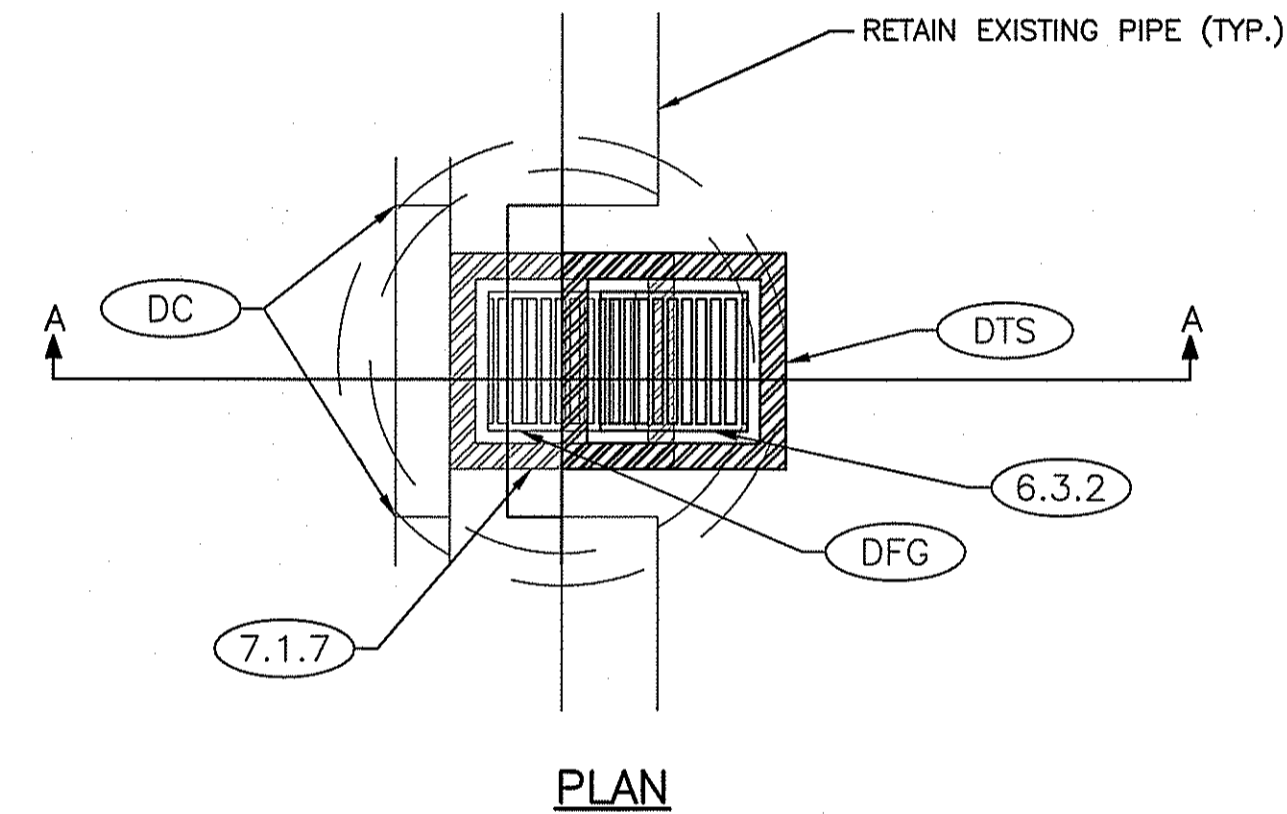
BOX WIDENING
NOT TO SCALE



SECTION
IMPRINT BRICK PATTERN CROSSWALK DETAIL (SCW)
NOT TO SCALE



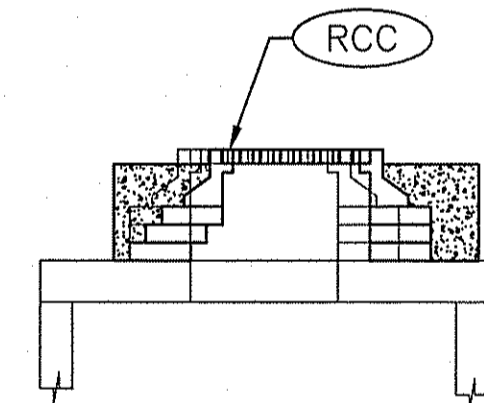
LIMITS FOR CATCH BASIN RECONSTRUCTION
NOT TO SCALE



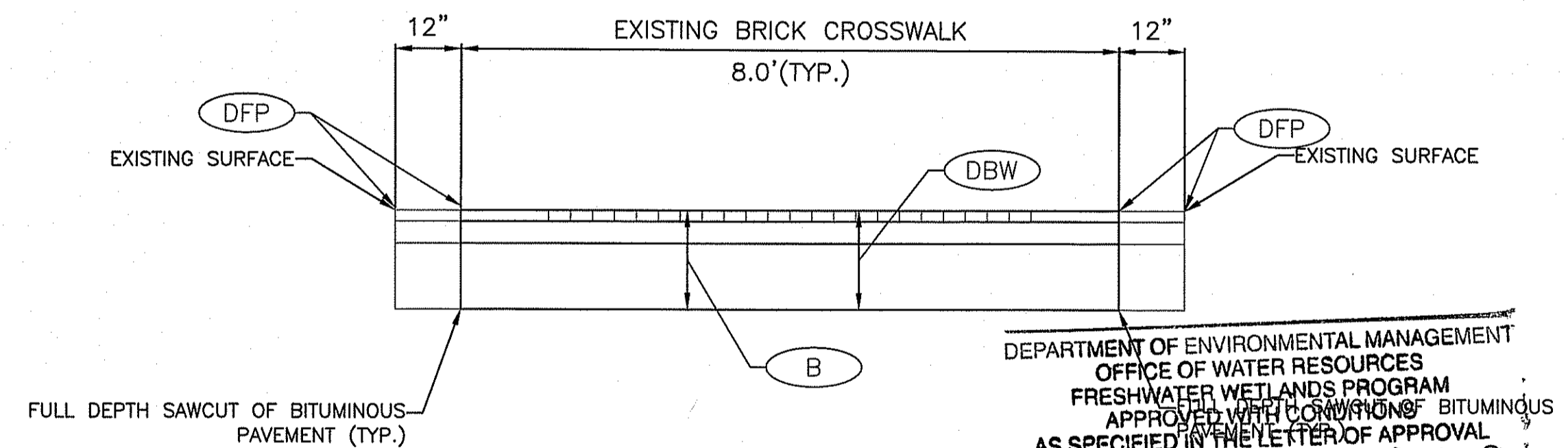
NOTES:

1. TOP SLAB SHALL BE CONSTRUCTED IN ACCORDANCE WITH RIDOT STANDARD DETAIL 4.7.2.

CATCH BASIN TOP SLAB REPLACEMENT
NOT TO SCALE
STA 215+32 LT



RECONSTRUCT CORBEL CONE
NOT TO SCALE



EXISTING BRICK CROSSWALK RECONSTRUCTION (DBW)
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITION OF BITUMINOUS PAVEMENT
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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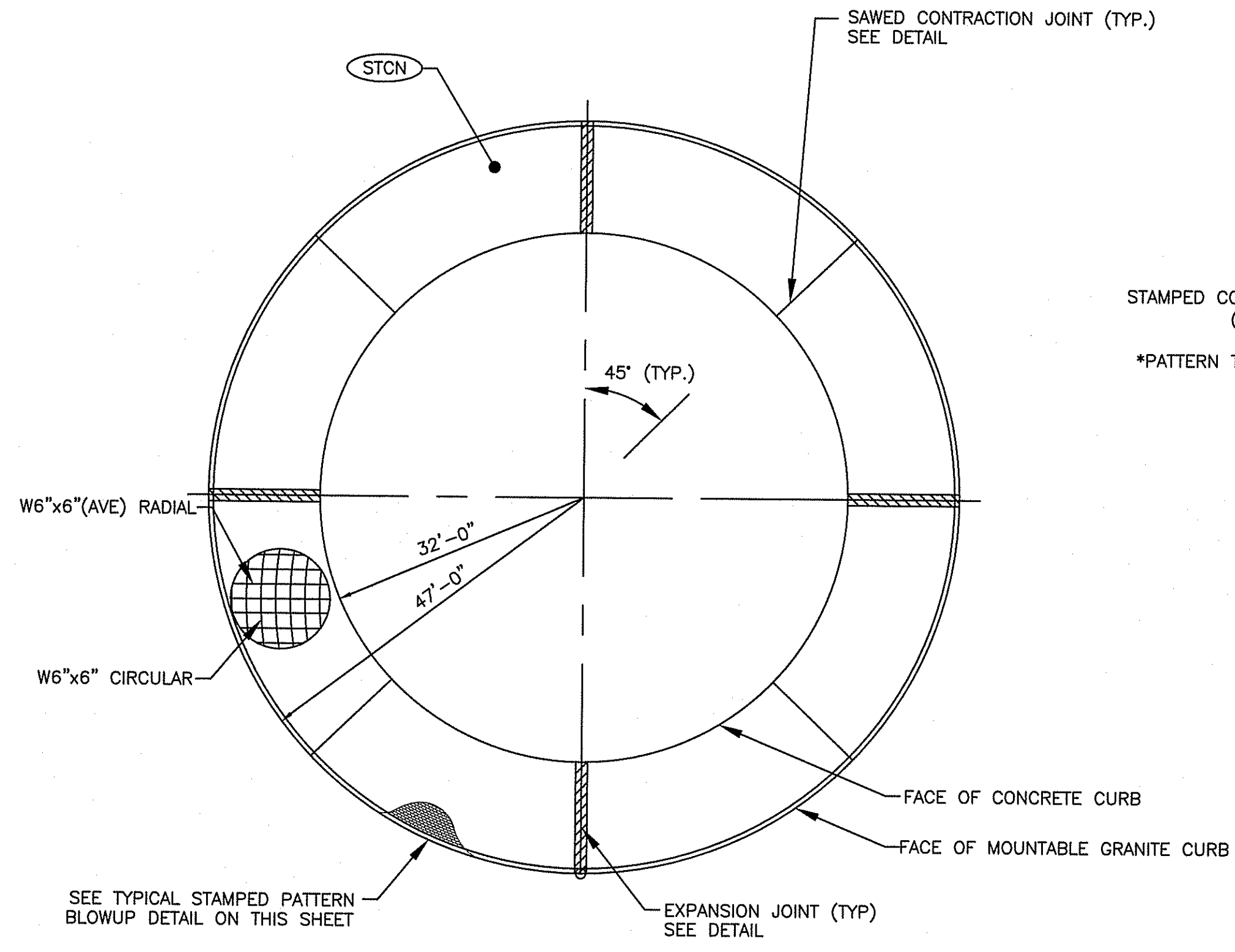
RPD PLANS
SHEET 13 OF 54

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

TYPICAL DETAILS - 1

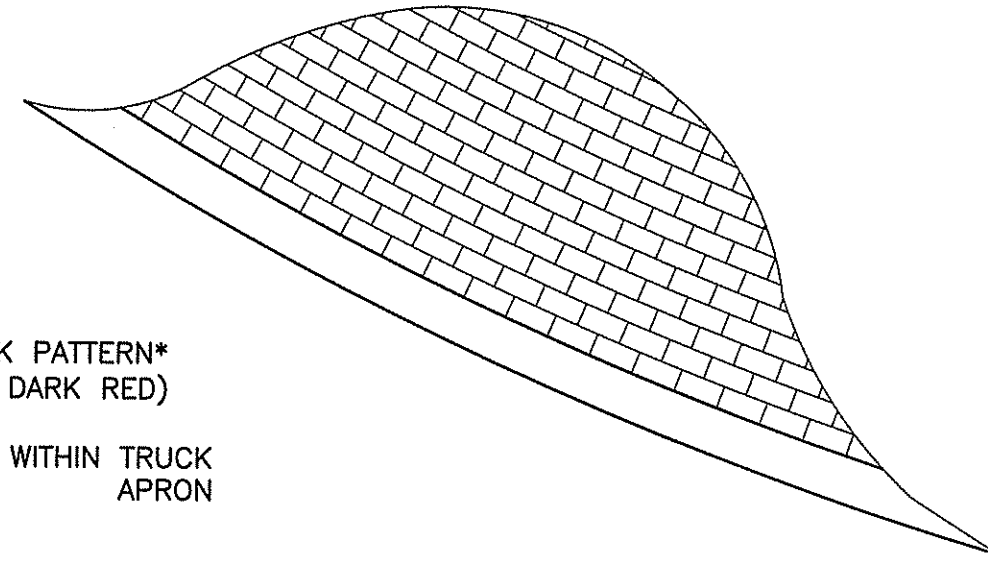
CHECKED BY _____ DATE 3/30/2018 SCALE _____



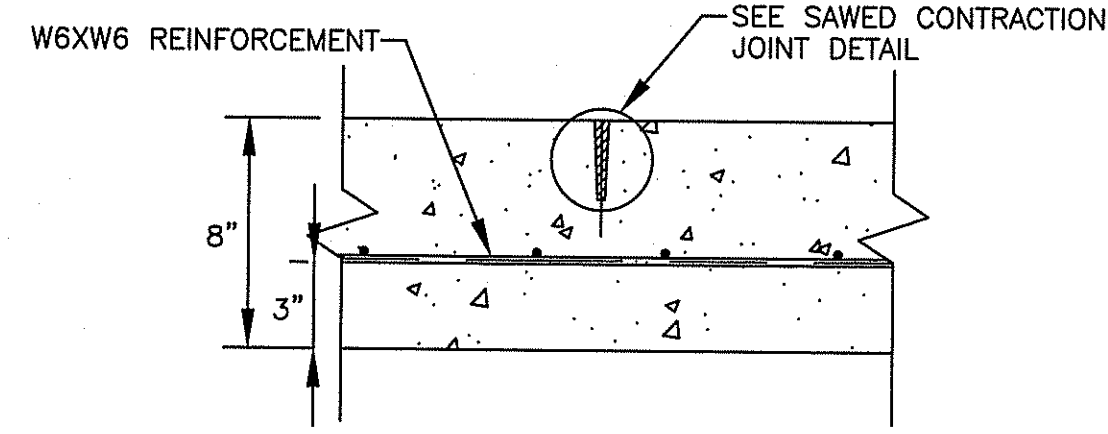
ROUNDABOUT TRUCK APRON PLAN
NOT TO SCALE

NOTE: JOINTS OTHER THAN THOSE SHOWN SHALL NOT BE ALLOWED WITHOUT ENGINEER'S APPROVAL

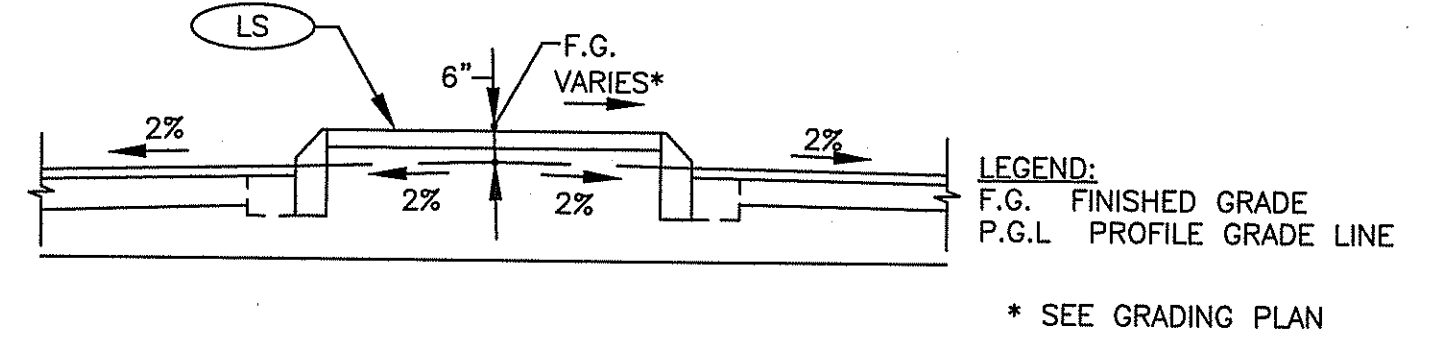
STAMPED CONCRETE BRICK PATTERN*
(COLOR A-27 DARK RED)
*PATTERN TO BE RADIAL WITHIN TRUCK APRON



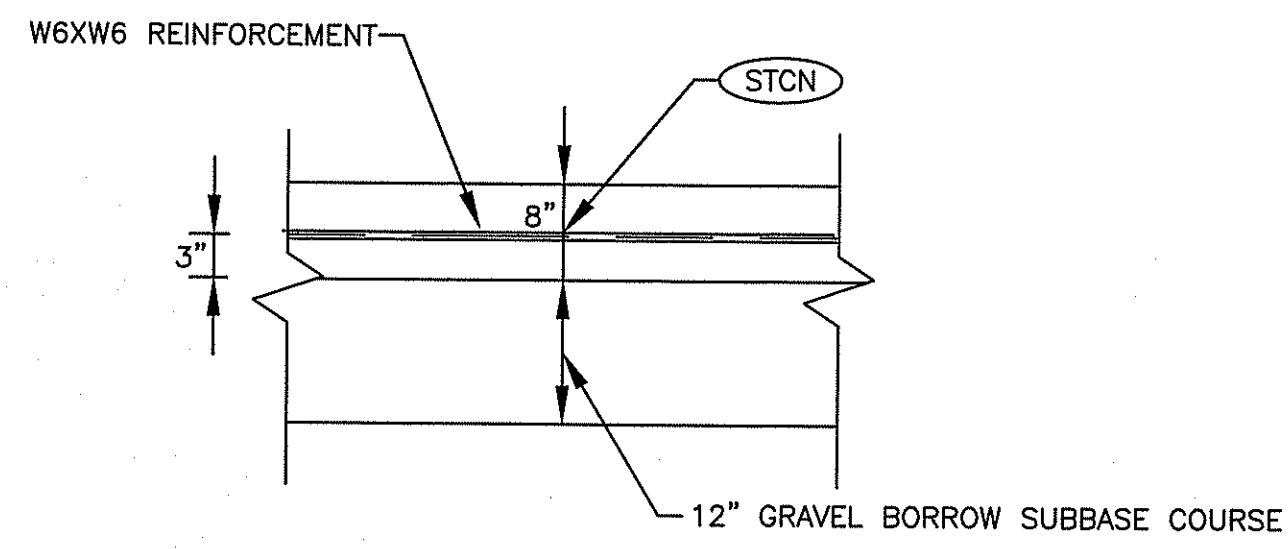
TYPICAL STAMPED PATTERN BLOWUP DETAIL
NOT TO SCALE



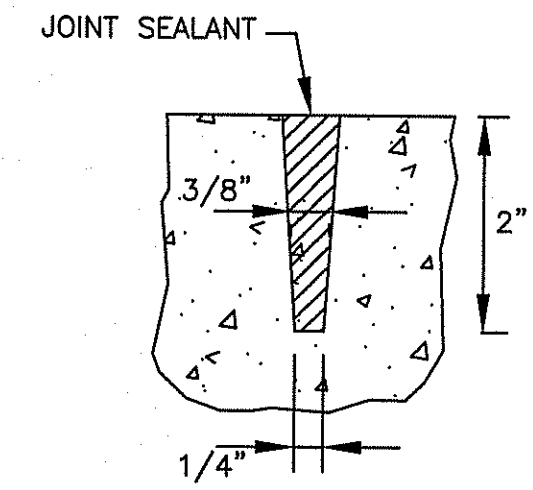
TYPICAL SECTION THRU CONTRACTION JOINT
NOT TO SCALE



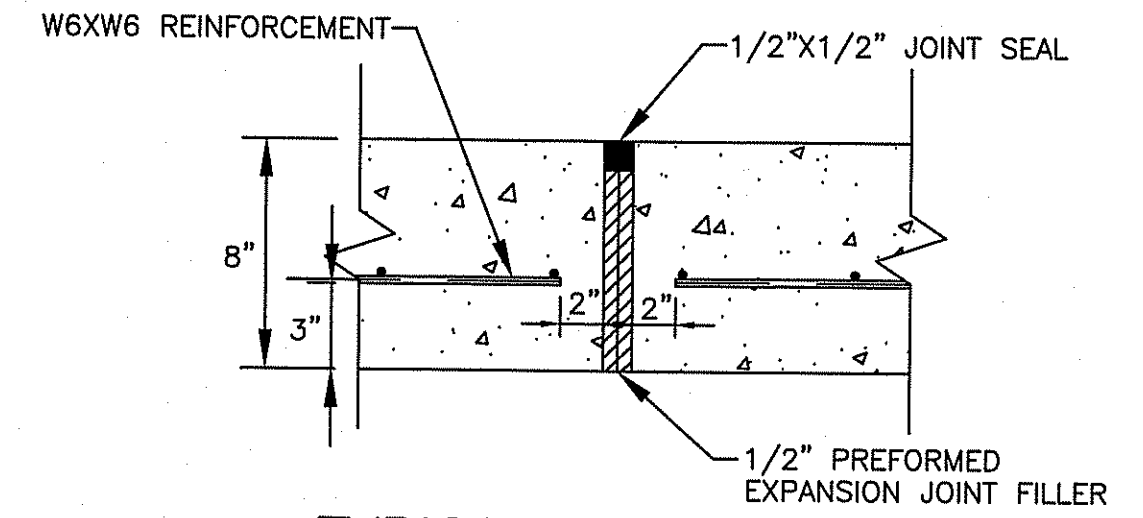
TYPICAL APPROACH ISLAND DETAIL
NOT TO SCALE



TYPICAL STAMPED CONCRETE SECTION
NOT TO SCALE

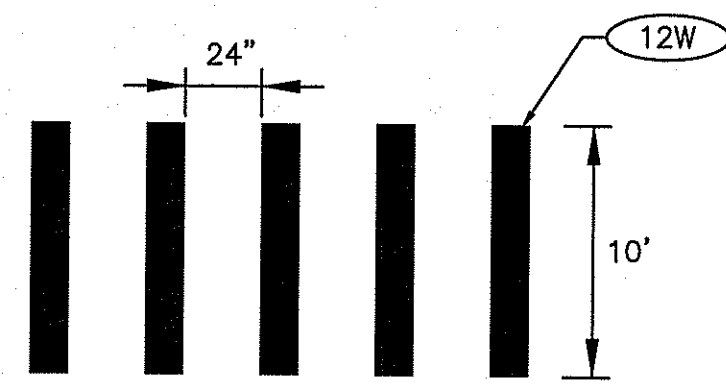


SAWED CONTRACTION JOINT DETAIL
NOT TO SCALE



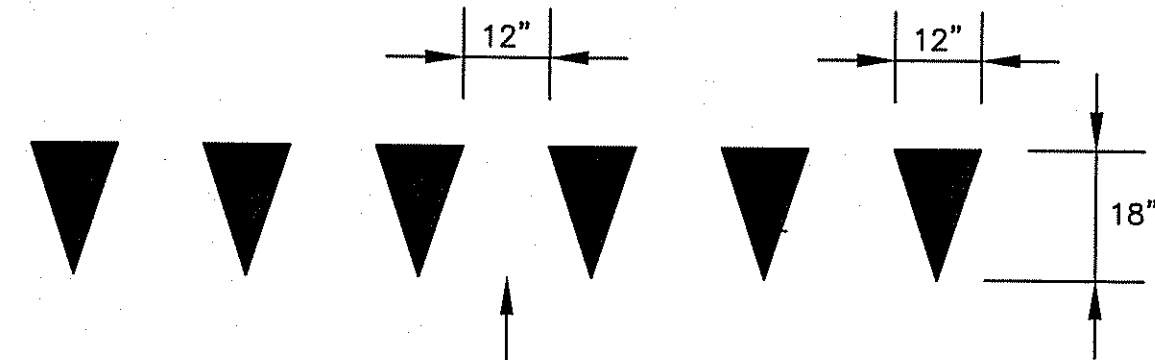
TYPICAL SECTION THRU EXPANSION JOINT
NOT TO SCALE

MAR 29 2018

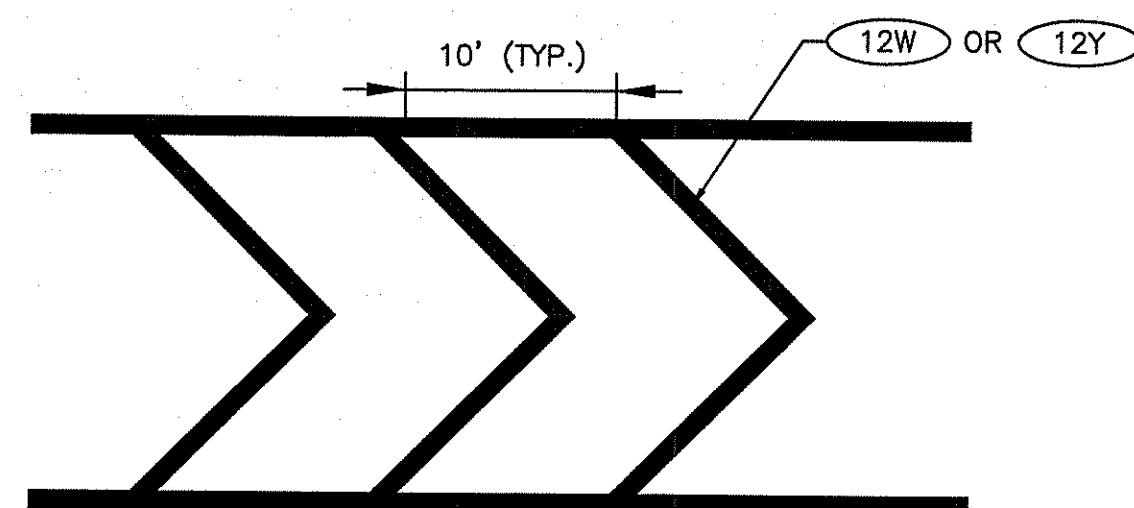


NOTES: REFER TO THE JOB SPECIFIC PAVEMENT MARKING NOTES.
ADJUST BAR PLACEMENT TO AVOID VEHICLE TIRE TRACK

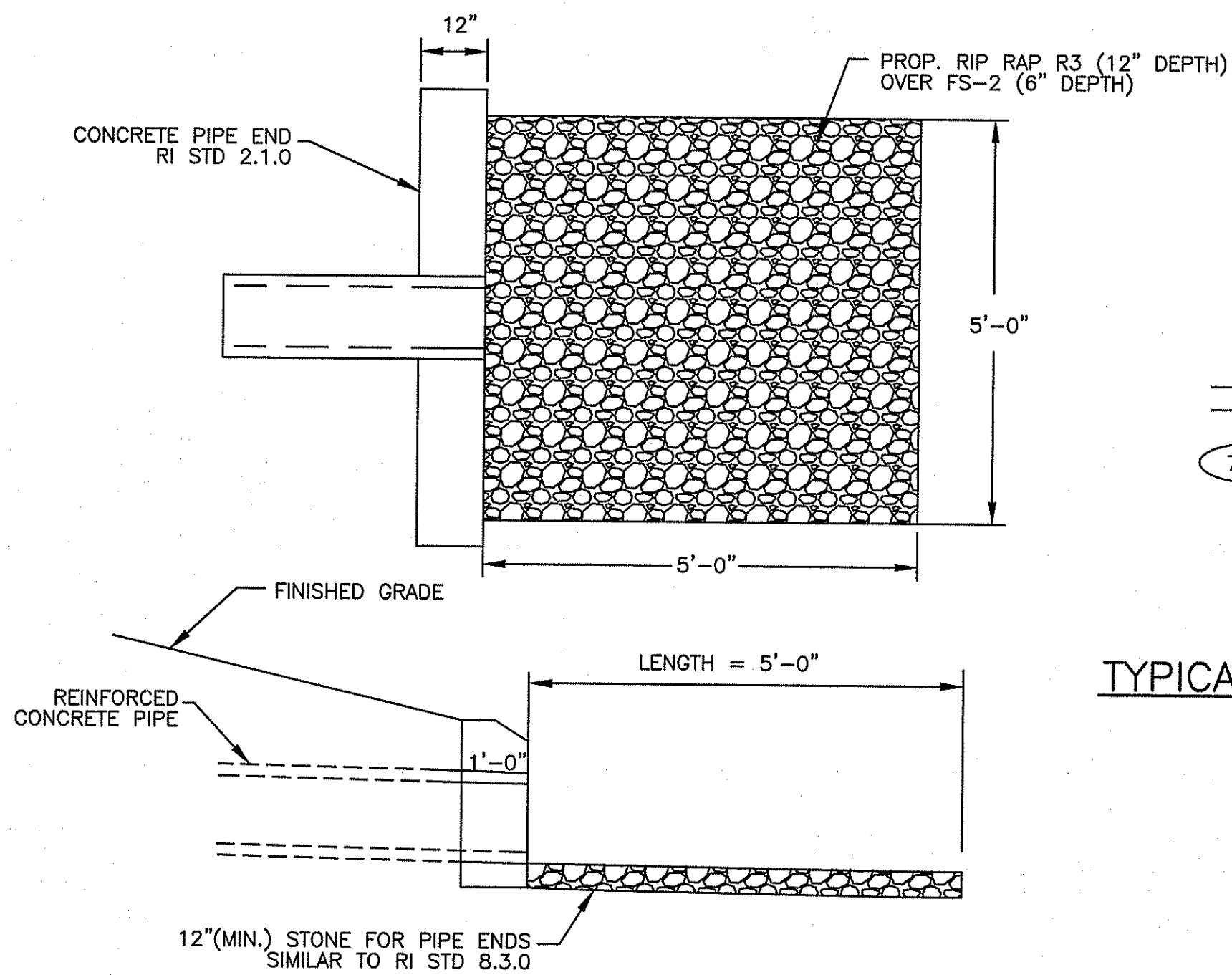
TYPICAL CROSSWALK MARKING DETAIL
NOT TO SCALE



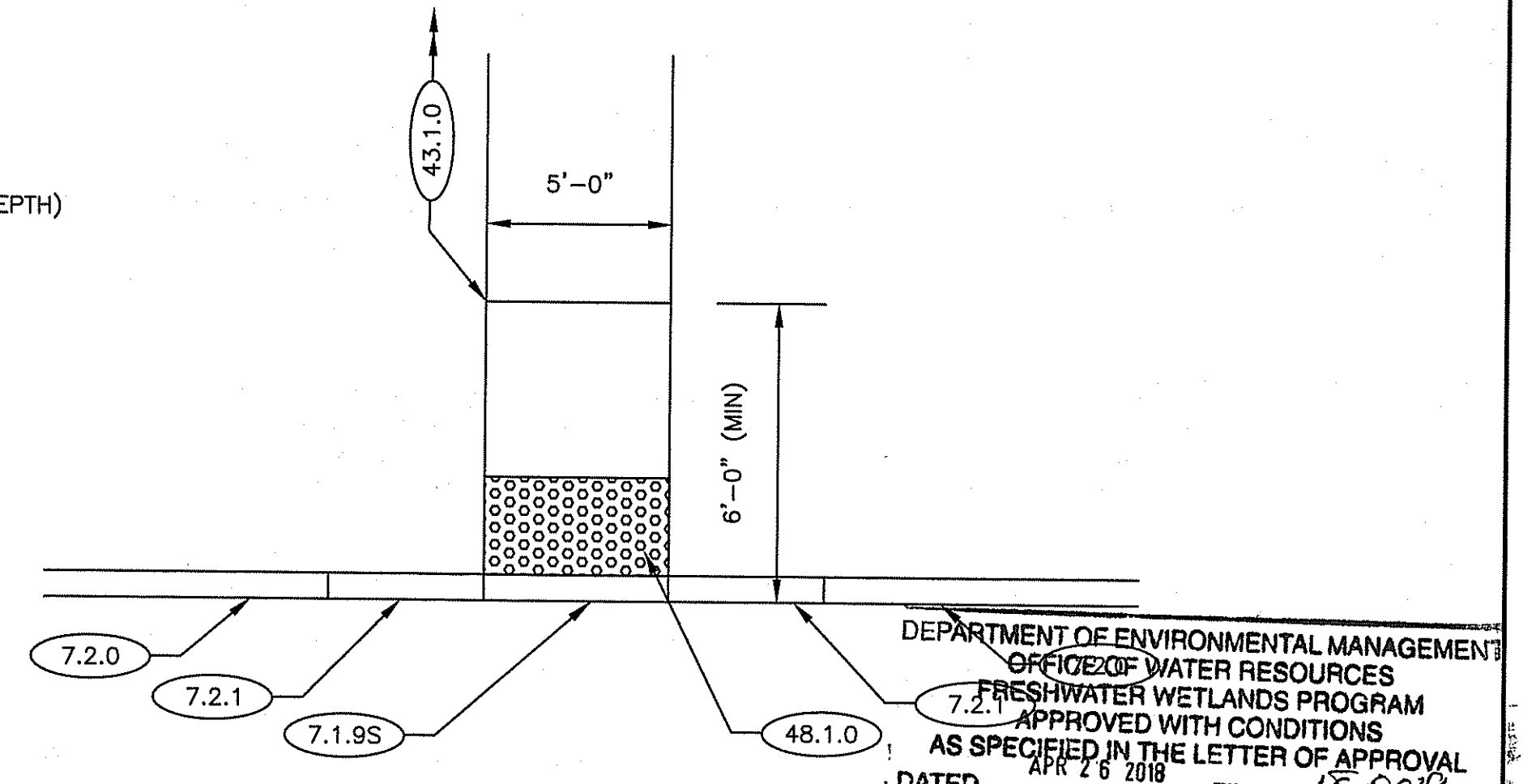
YIELD LINE LAYOUTS
NOT TO SCALE



TYPICAL GORE MARKING DETAIL
NOT TO SCALE



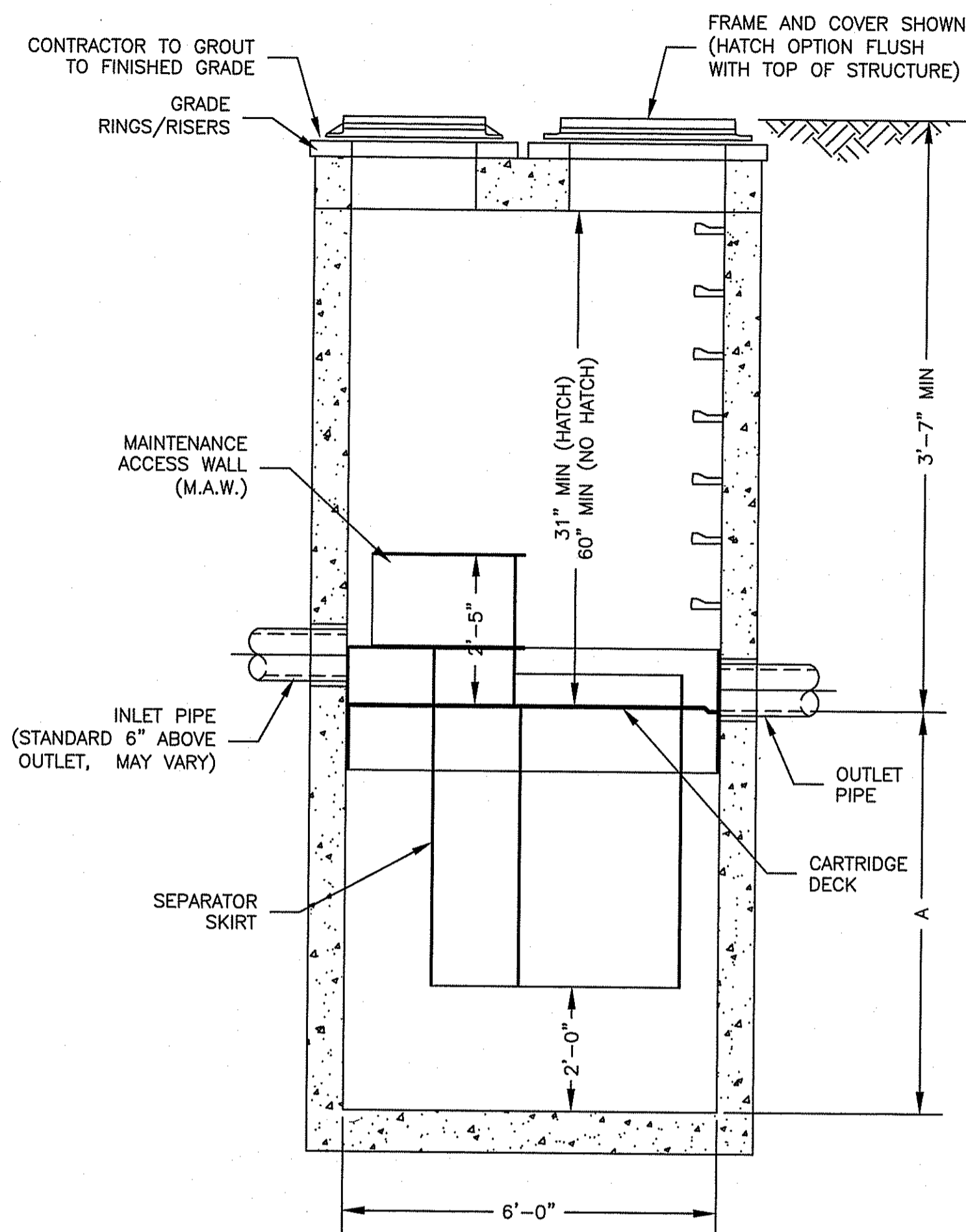
MODIFIED STONE FOR PIPE ENDS
NOT TO SCALE



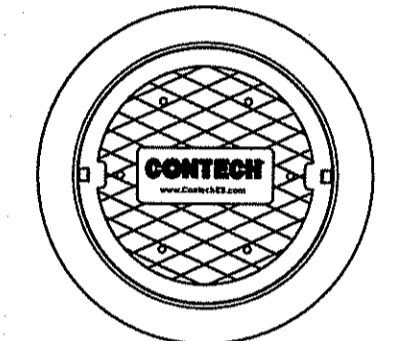
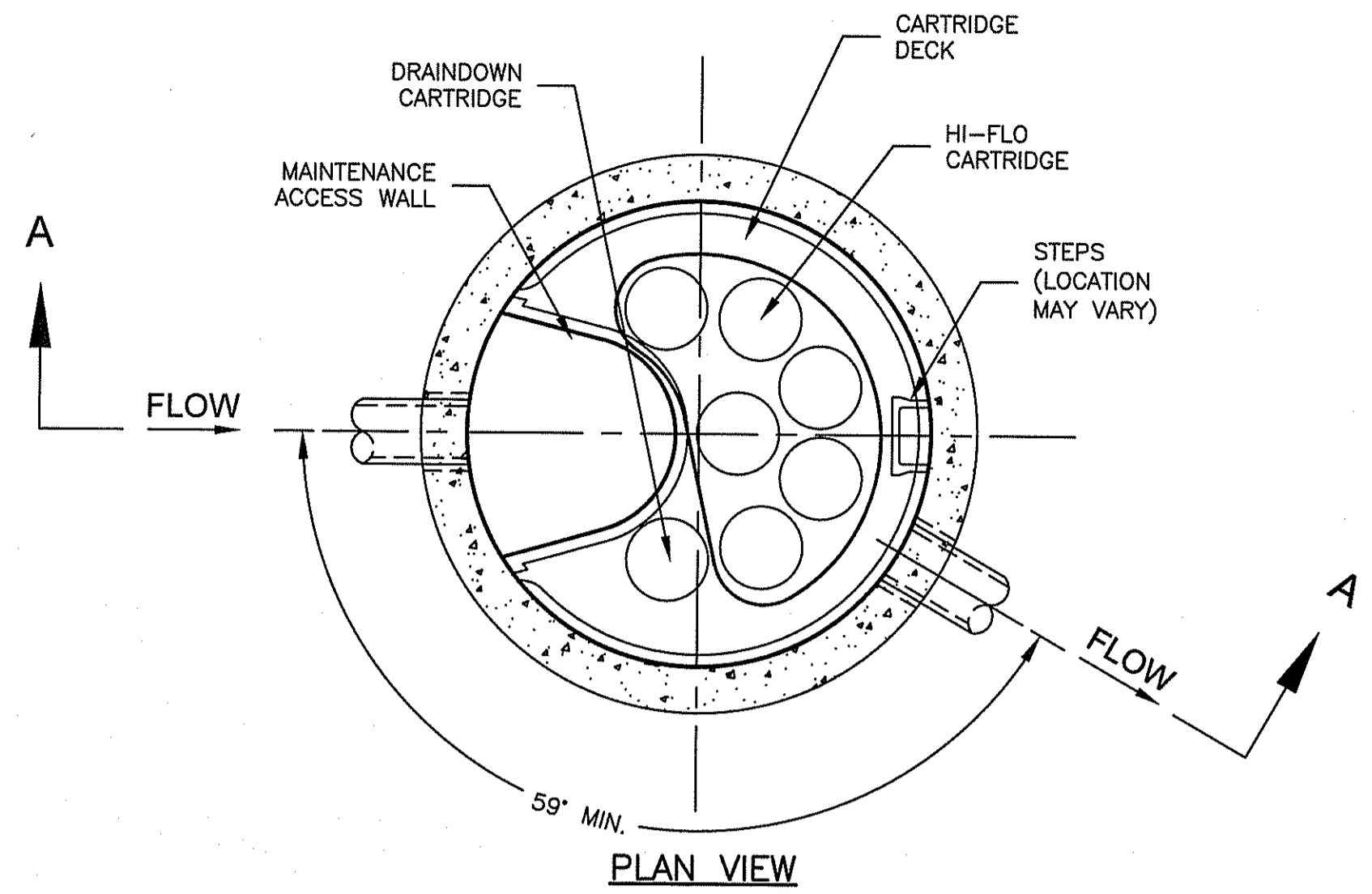
TYPICAL CONTINUOUS TYPE WHEELCHAIR RAMP DETAILS
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| NO. | DATE | BY | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, RHODE ISLAND | |
| | | | TYPICAL DETAILS - 2 | |
| | | | CHECKED BY _____ DATE 3/30/2018 SCALE _____ | |



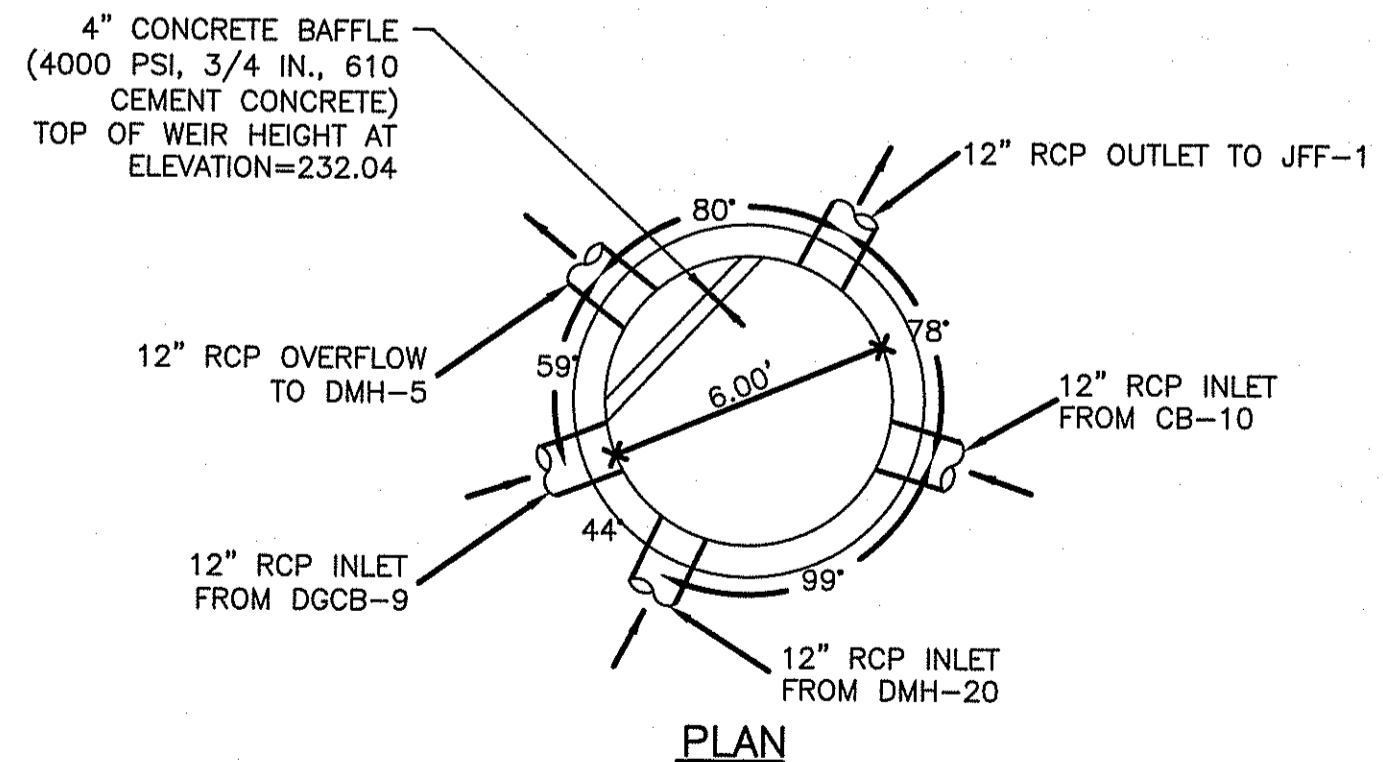
SECTION A-A



FRAME AND COVER (DIAMETER VARIES) N.T.S.

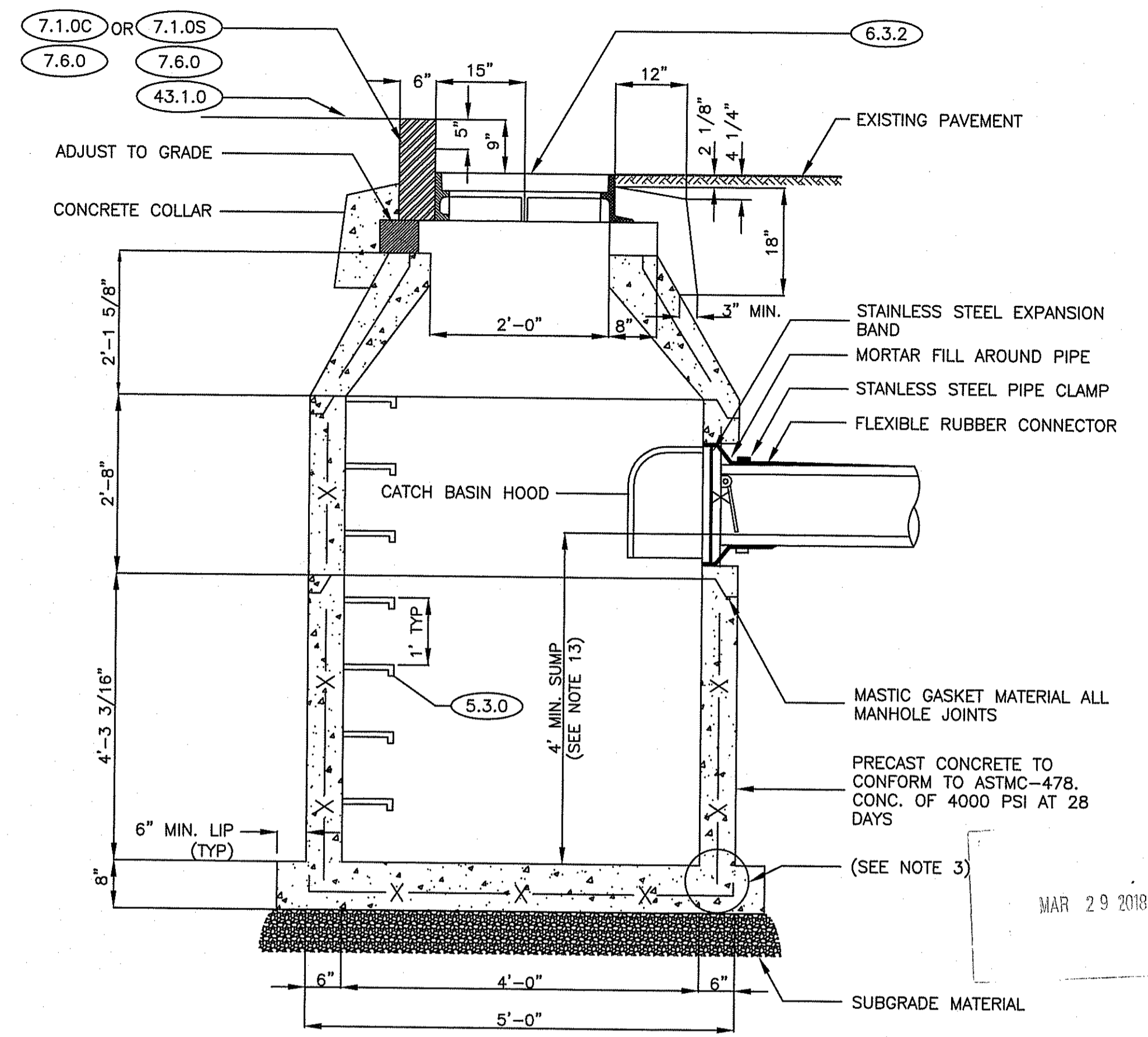
- GENERAL NOTES:**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
 - JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
 - STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0' - 3' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH THE CONTECH LOGO.
 - STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.
 - NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

JELLYFISH JF-6-4-1 (JFF-1) NOT TO SCALE



PLAN

BYPASS MANHOLE (BMH-21) NOT TO SCALE



- NOTES:**
- SHALL BE IN ACCORDANCE WITH SECTION 702 OF THE R.I. STANDARD SPECIFICATIONS.
 - SEE TABLE 1 OF STD. 4.4.0 FOR STEEL REINFORCEMENT REQUIREMENTS.
 - STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SHALL BE A MINIMUM OF 0.12 SQ. IN./LIN/ FT. (BOTH WAYS)
 - STEPS SHALL CONFORM TO STD 5.3.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
 - ONE POUR MONOLITHIC BASE SECTION.
 - ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY. NO JACKHAMMERS, HAMMERS AND CHISELS OR PNEUMATIC TOOLS WILL BE ALLOWED.
 - CORBEL MADE OF RED CLAY BRICK WILL BE PERMITTED FOR THE "CONE SECTION" OF THE CATCH BASIN
 - FOR CATCH BASIN TYPES "D" AND "F" STEPS MUST BE INSTALLED ON THE CURB SIDE OF THE STRUCTURE (SEE STD. 4.4.0 FOR DIAGRAMS OF CATCH BASIN TYPES).
 - THE CENTERLINE OF THE OPENING MUST BE WITHIN 2'-0" FROM THE STEPS.
 - ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2)
 - ALTERNATE TOP SLAB IS ONLY FOR USE WHEN REDUCING SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
 - REFER TO STD. 5.2.0 FOR MAXIMUM PIPE SIZES.
 - ALL PROPOSED CATCH BASINS SHALL INCLUDE A 4' MINIMUM DUMP DEPTH INCLUDING RI STD. 3.4.1, 3.5.2, 3.5.4, AND DSCB. THE COST ASSOCIATED WITH THE ADDITIONAL DEPTH SHALL BE INCIDENTAL TO THE COST OF THE ITEM.

TYPICAL PRECAST CATCH BASIN DETAIL NOT TO SCALE

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RPD PLANS SHEET 15 OF 54

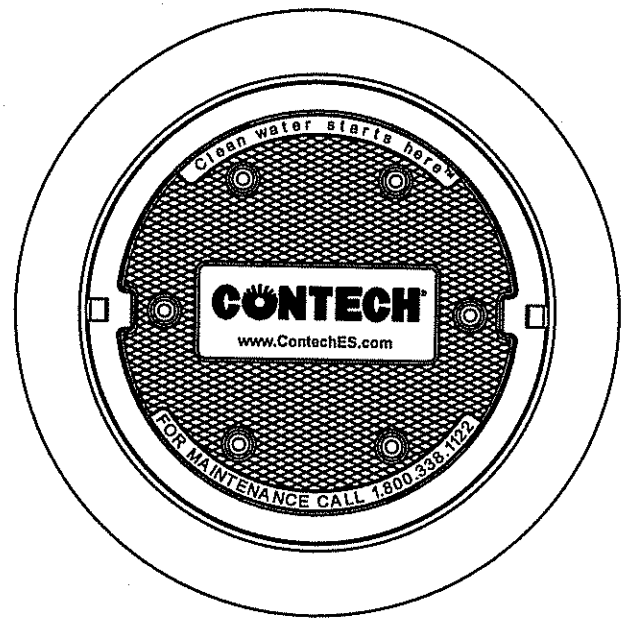
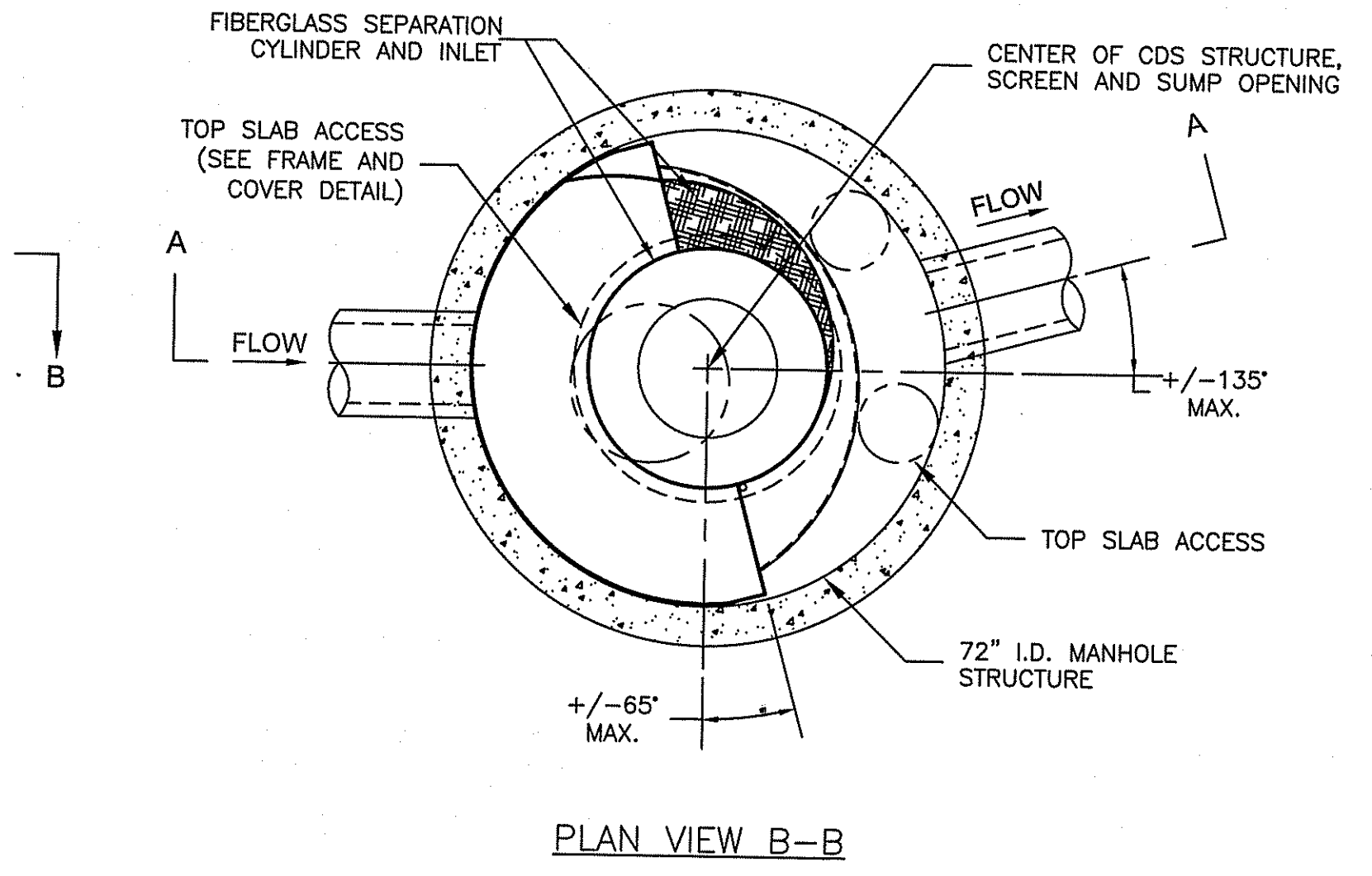
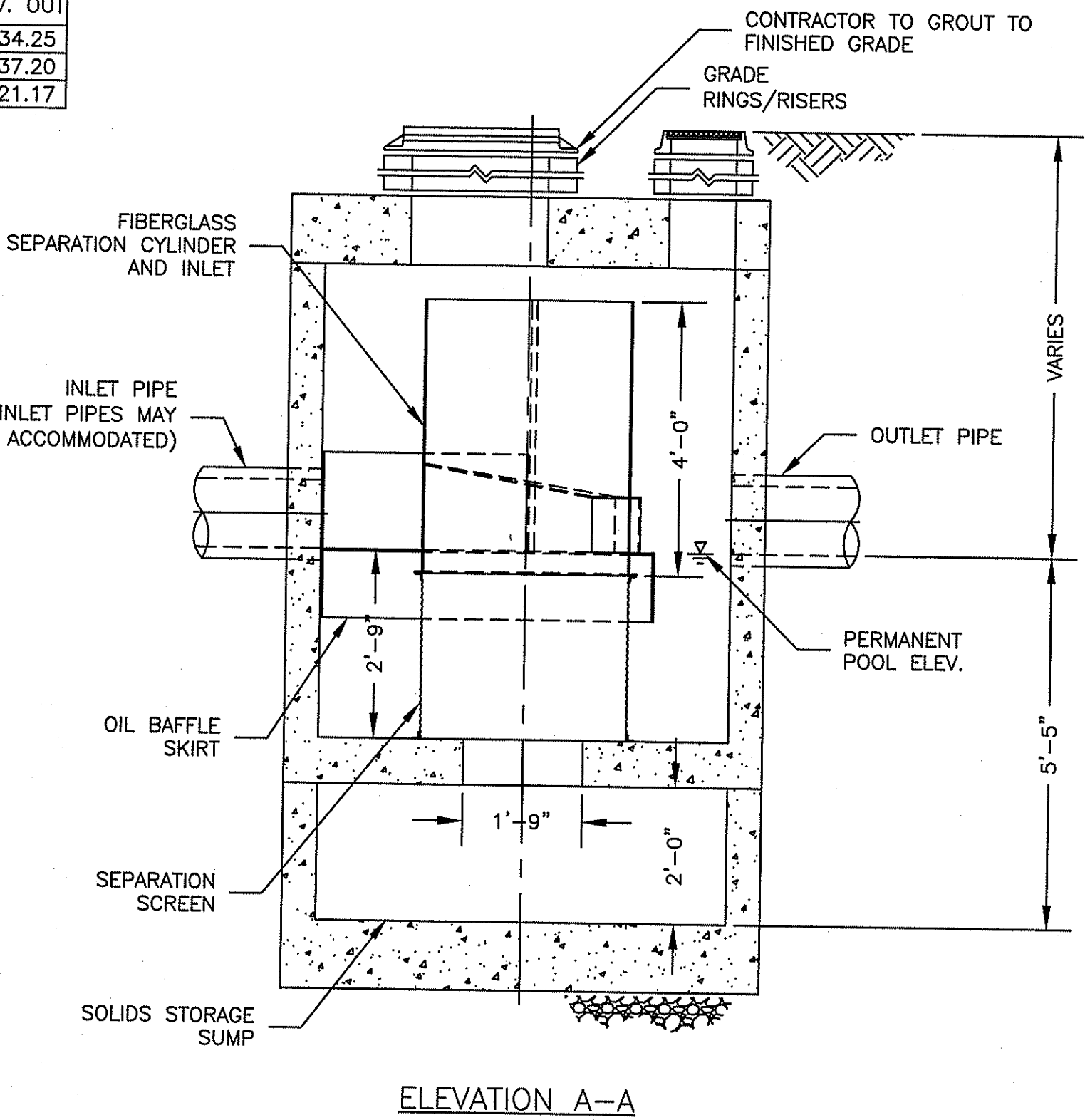
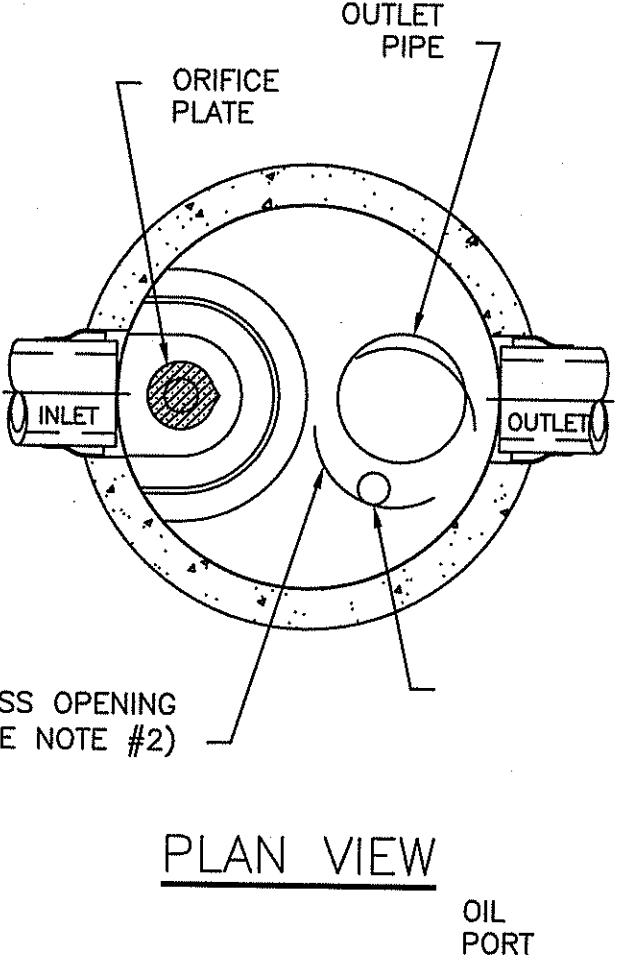
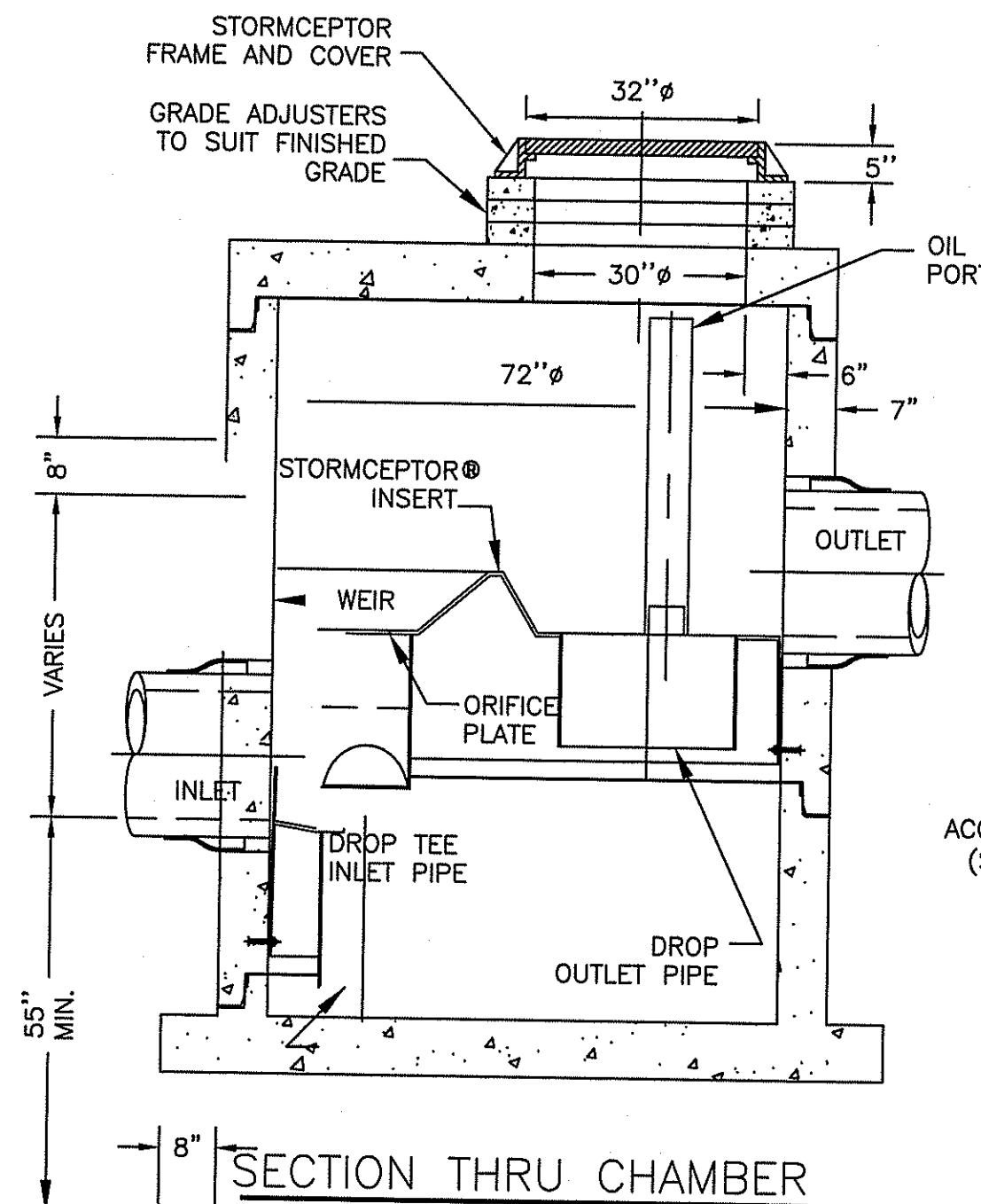
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

TYPICAL DETAILS - 3

CHECKED BY _____ DATE 3/30/2018 SCALE _____

| STU # | STATION | OFFSET | RIM EL. | INV. IN | INV. OUT |
|-------|------------|----------|---------|---------|----------|
| 1 | 1025+97.09 | 47.7'± R | 239.90 | 234.50 | 234.25 |
| 2 | 2027+56.41 | 29.4'± R | 242.53 | 237.45 | 237.20 |
| 3 | 2036+07.03 | 53.0'± L | 225.76 | 221.42 | 221.17 |



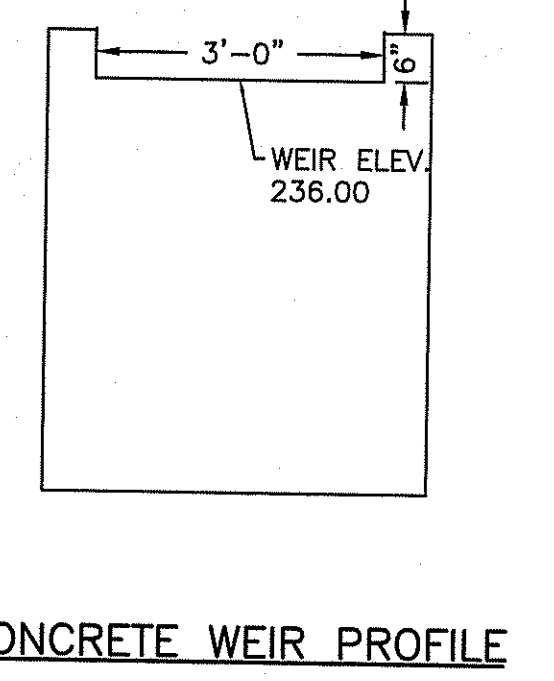
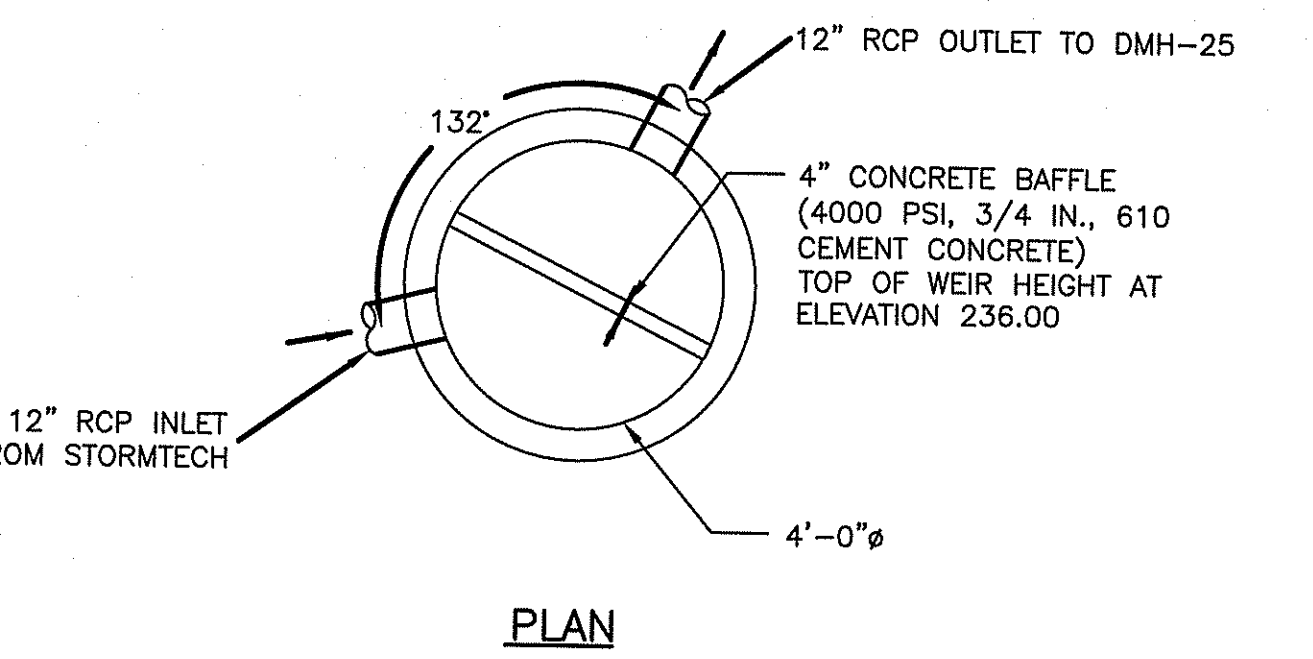
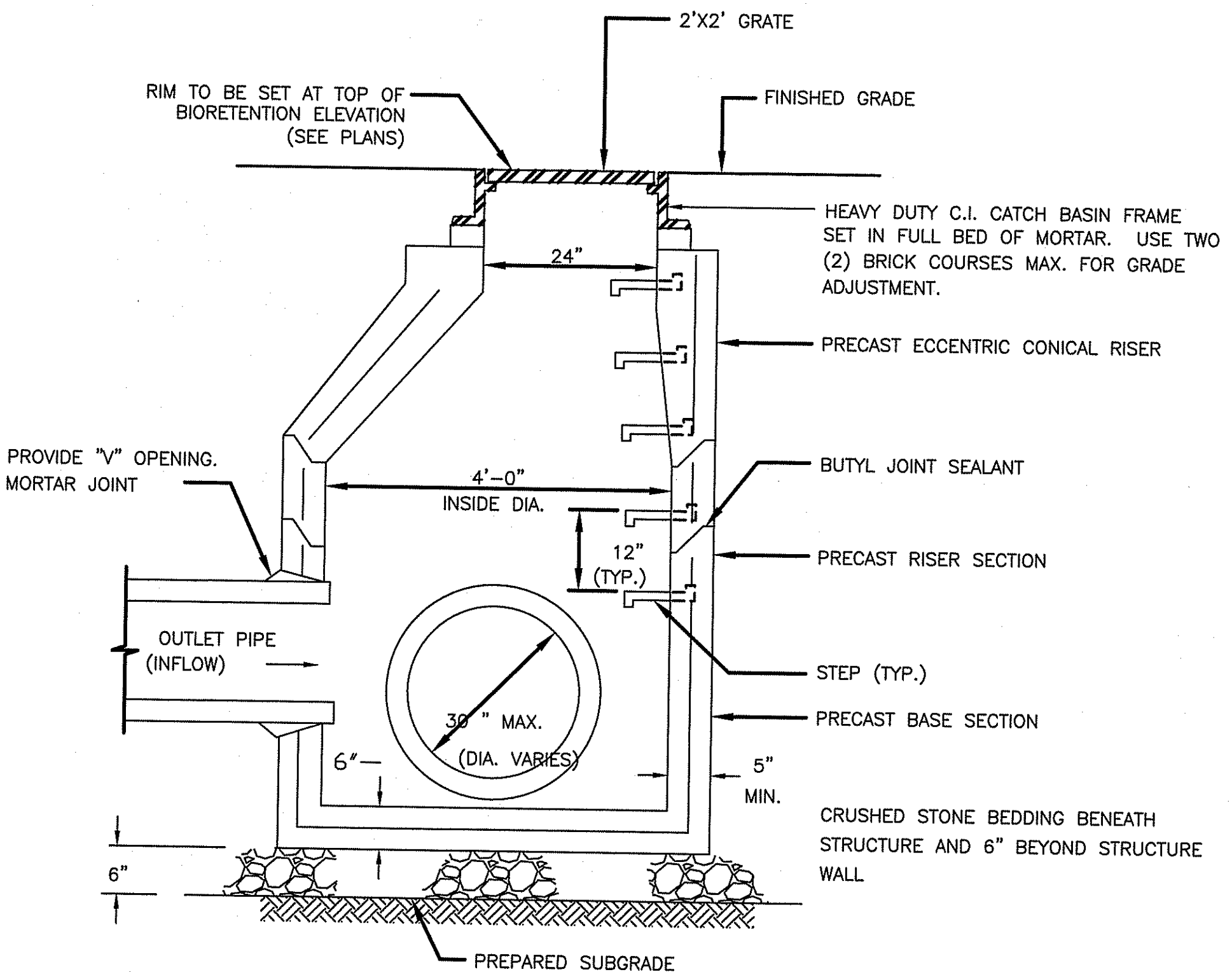
- Notes:
- THE USE OF FLEXIBLE CONNECTION IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
 - THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL PORT.
 - THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #5753115, #5849181, #6068765, #6371690, #7582216, #766630.
 - CONTACT A CONCRETE PIPE DIVISION REPRESENTATIVE FOR FURTHER DETAILS NOT LISTED ON THIS DRAWING.

STC-900 PRECAST CONCRETE STORMCEPTOR (STU-1 & STU-2)
NOT TO SCALE

- GENERAL NOTES
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
 - DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
 - FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
 - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
 - STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET HS20 (AASHTO M 306) LOAD RATING, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
 - PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.

- INSTALLATION NOTES
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
 - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
 - CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
 - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
 - CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CDS3020-6-C (STU-3)
NOT TO SCALE



OUTLET CONTROL STRUCTURE (OCS)
NOT TO SCALE

- NOTES:
- PRECAST CONCRETE SECTIONS SHALL CONFORM TO ASTM C-478
 - STEEL REINFORCING SHALL CONFORM TO ASTM A185
 - MANHOLE STEPS SHALL BE 14" WIDE STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC AND SHALL BE CAST INTO MANHOLE SECTIONS BY THE PRECAST MANHOLE MANUFACTURER.

TYPICAL OVERFLOW STRUCTURE (OS)
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
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Charles A. Harker

RPD PLANS
SHEET 16 OF 54

| REVISIONS | | |
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

TYPICAL DETAILS - 4

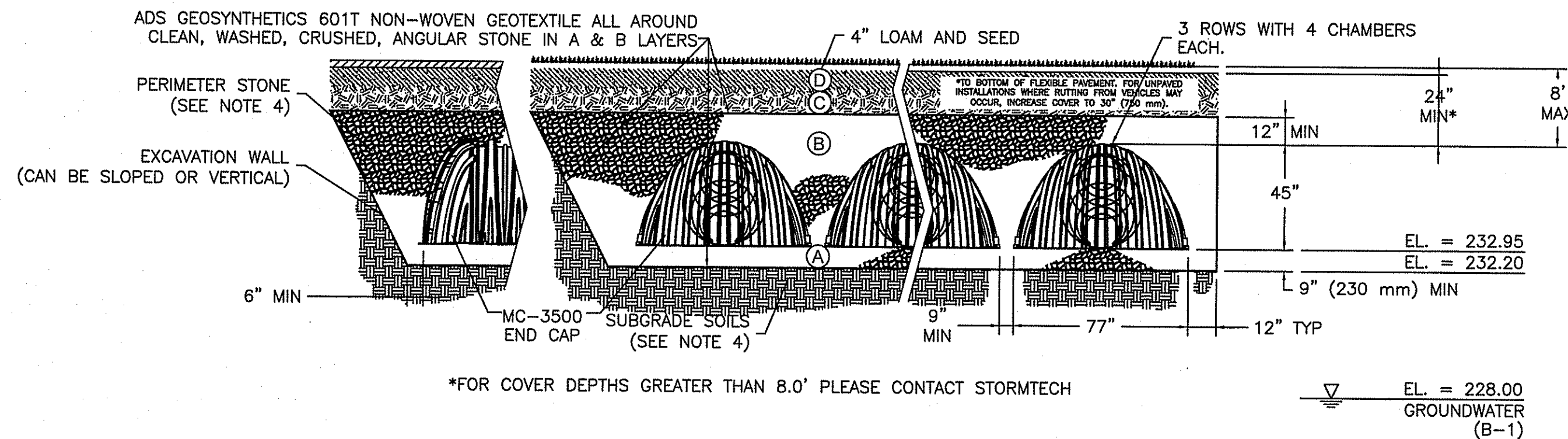
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GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

| MATERIAL LOCATION | DESCRIPTION | AASHTO MATERIAL CLASSIFICATIONS | COMPACTION / DENSITY REQUIREMENT |
|--|--|---|---|
| D FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER | ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. | N/A | PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS. |
| C INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER. | GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER. | AASHTO M145' A-1, A-2-4, A-3 OR AASHTO M43' 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 | BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. |
| B EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE. | CLEAN, WASHED, CRUSHED, ANGULAR STONE | AASHTO M43' 3, 4 | NO COMPACTION REQUIRED. |
| A FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. | CLEAN, WASHED, CRUSHED, ANGULAR STONE | AASHTO M43' 3, 4 | PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. 2 3 |

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, WASHED, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, WASHED, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

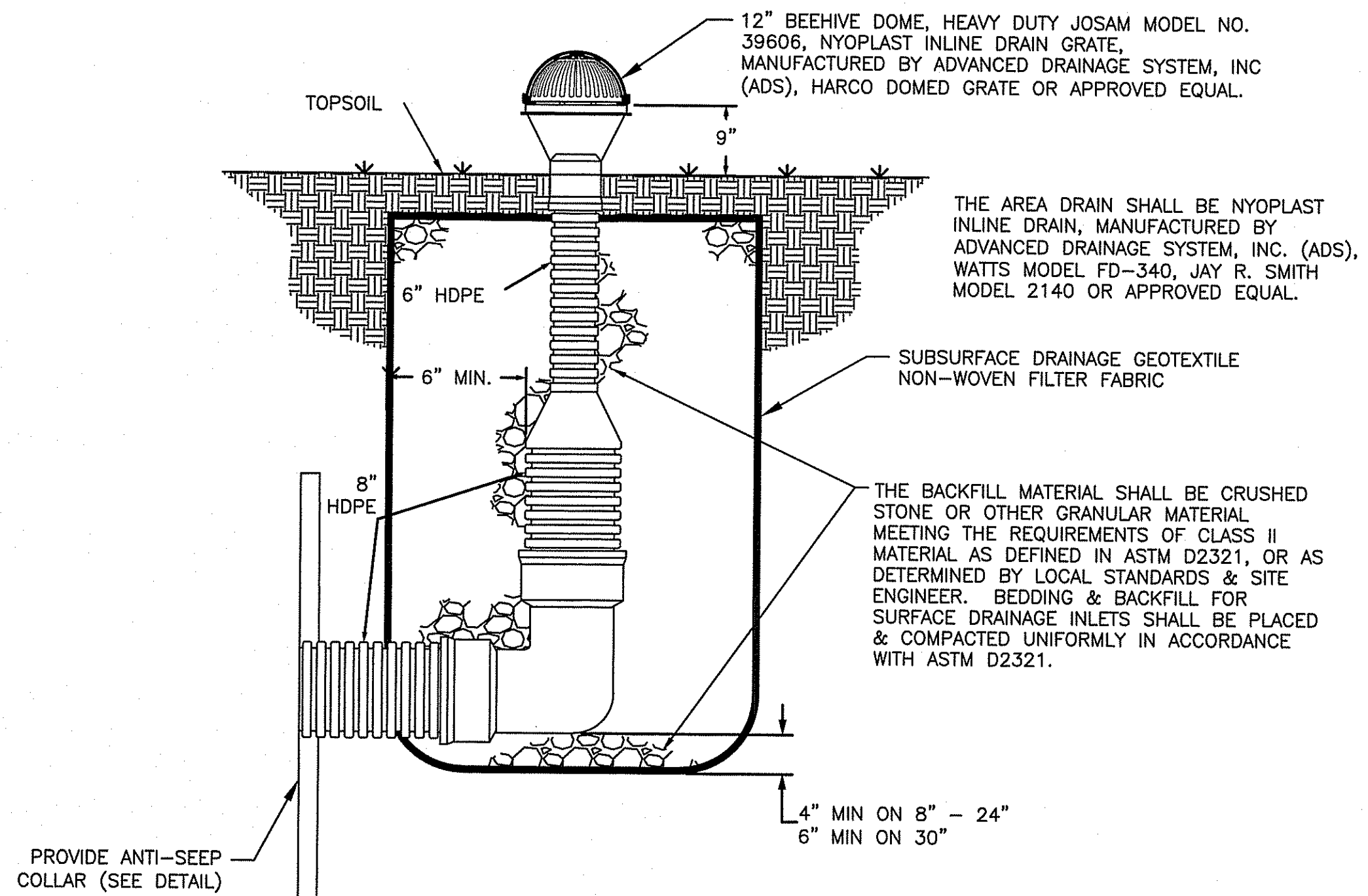


NOTES:

- MC-3500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

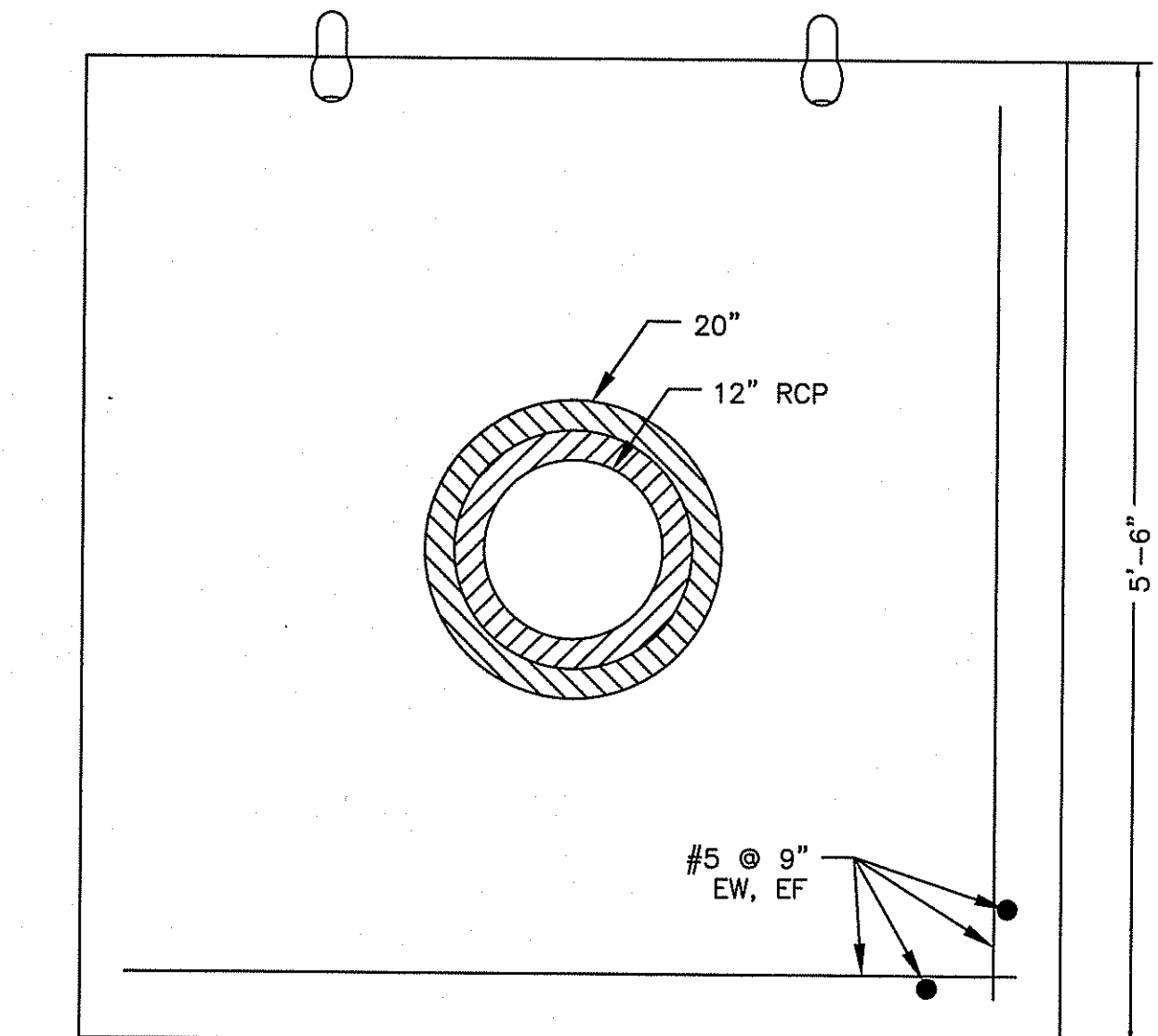
MC-3500 STORMTECH (SUBSURFACE INFILTRATION CHAMBER)

NOT TO SCALE



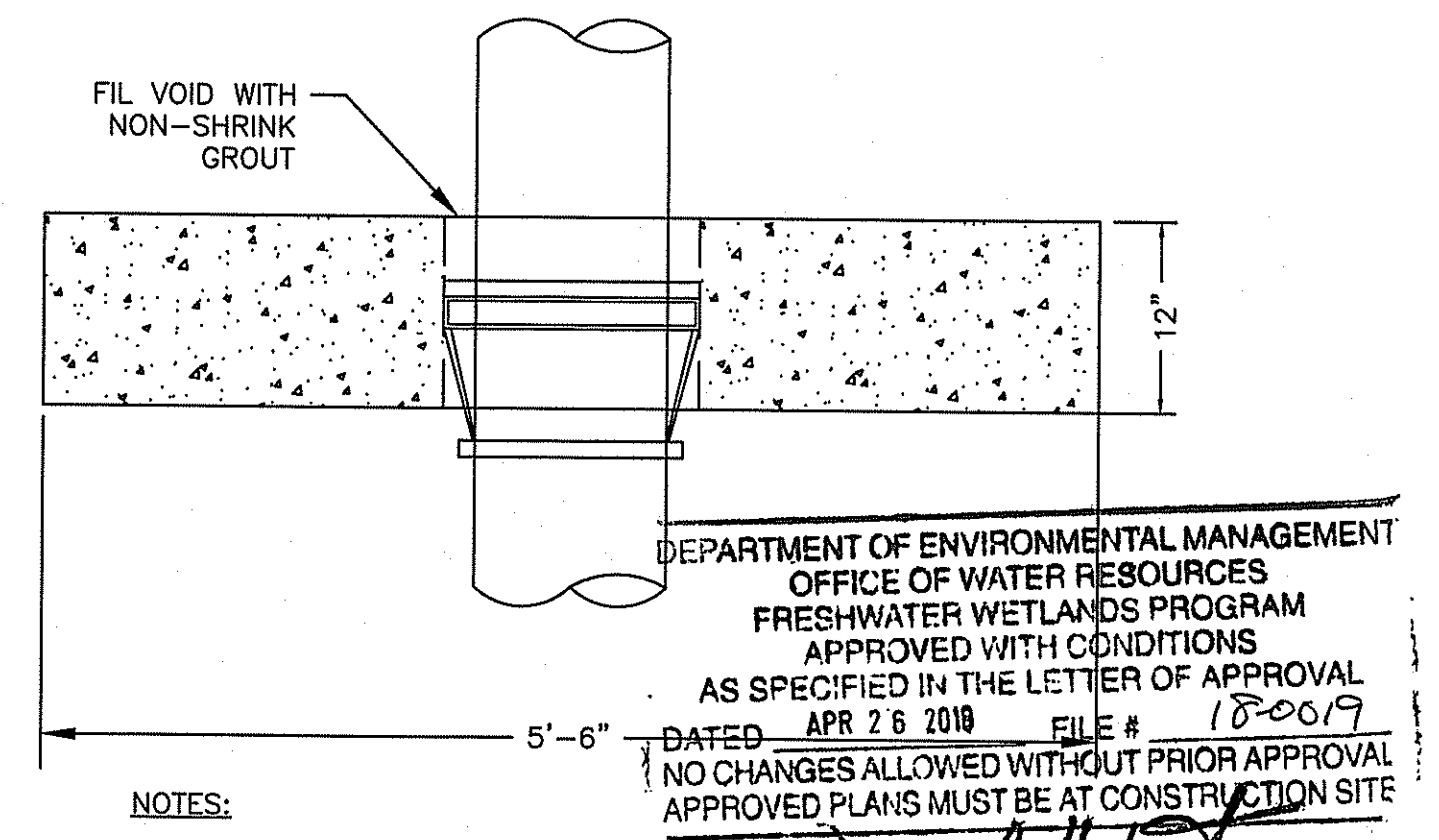
TYPICAL AREA DRAINS (AD)

NOT TO SCALE



ANTI-SEEP COLLAR

NOT TO SCALE

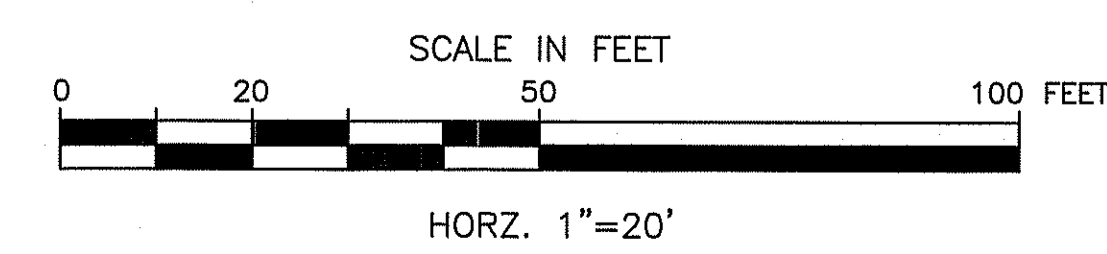
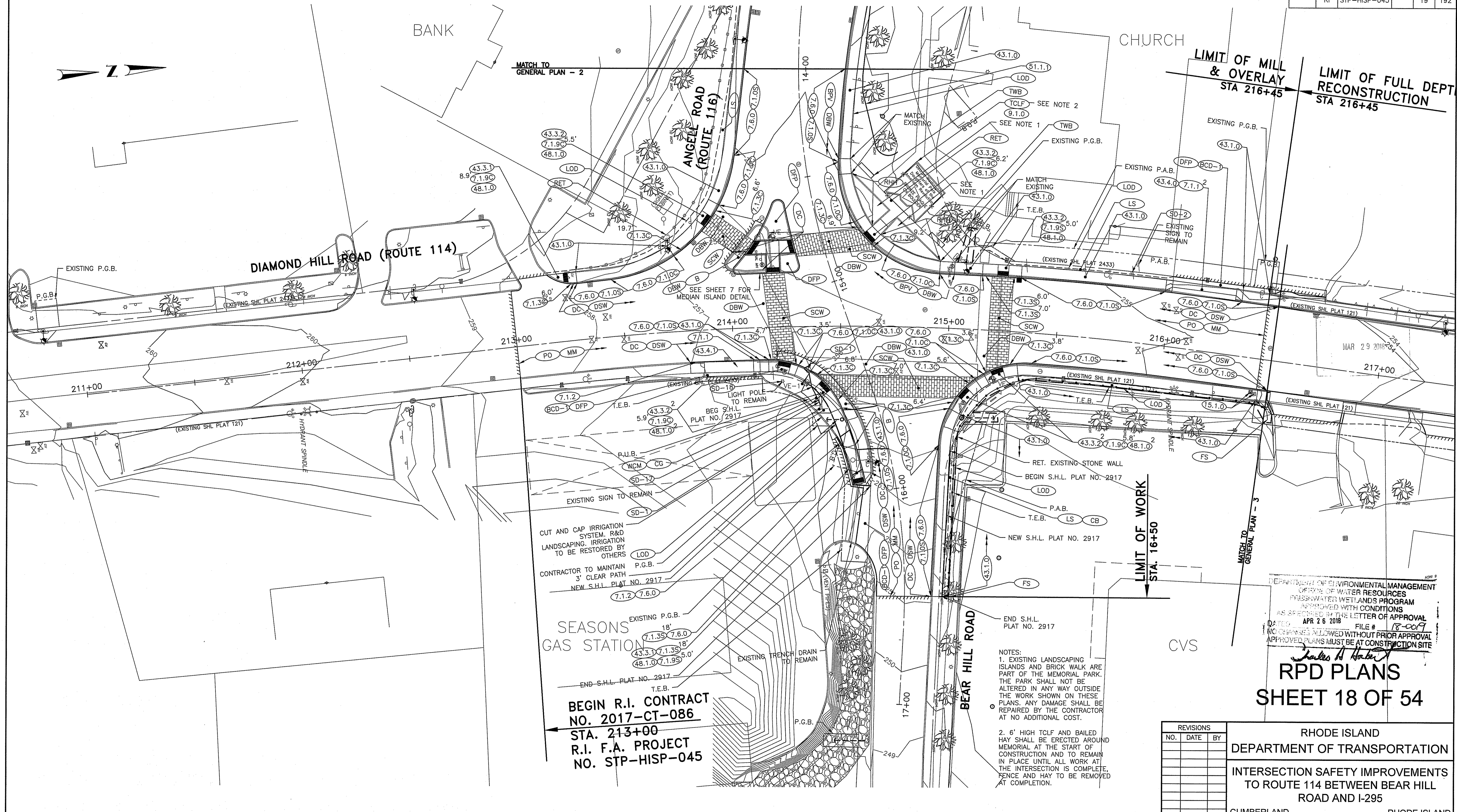


NOTES:

- STEEL REINFORCEMENT CONFORMS TO LATEST SPECIFICATION: ASTM A-615 GRADE 60 BLACK DEFORMED BARS
- CONCRETE: $f_c=5,000$ PSI @ 28 DAYS MAXIMUM
- FLEXIBLE SLEEVE PROVIDED FOR PIPE OPENING
- SET COLLAR DOWNGRADIANT OF AREA DRAIN
- BOOT IS S106-20B

RPD PLANS SHEET 17 OF 54

| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
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| NO. | DATE | BY | | |
| | | | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, | RHODE ISLAND |
| | | | TYPICAL DETAILS - 5 | |
| | | | CHECKED BY _____ | DATE 3/30/2018 SCALE _____ |



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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Juanita H. Hobbs
RPD PLANS
SHEET 18 OF 54

BEGIN R.I. CONTRACT
NO. 2017-CT-086
STA. 213+00
R.I. F.A. PROJECT
NO. STP-HISP-045

NOTES:
1. EXISTING LANDSCAPING ISLANDS AND BRICK WALK ARE PART OF THE MEMORIAL PARK. THE PARK SHALL NOT BE ALTERED IN ANY WAY OUTSIDE THE WORK SHOWN ON THESE PLANS. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST.
2. 6' HIGH TCLF AND BAILED HAY SHALL BE ERRECTED AROUND MEMORIAL AT THE START OF CONSTRUCTION AND TO REMAIN IN PLACE UNTIL ALL WORK AT THE INTERSECTION IS COMPLETE. FENCE AND HAY TO BE REMOVED AT COMPLETION.

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RHODE ISLAND
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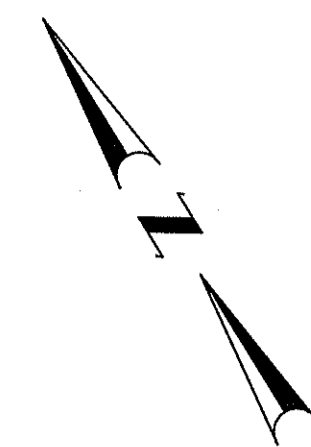
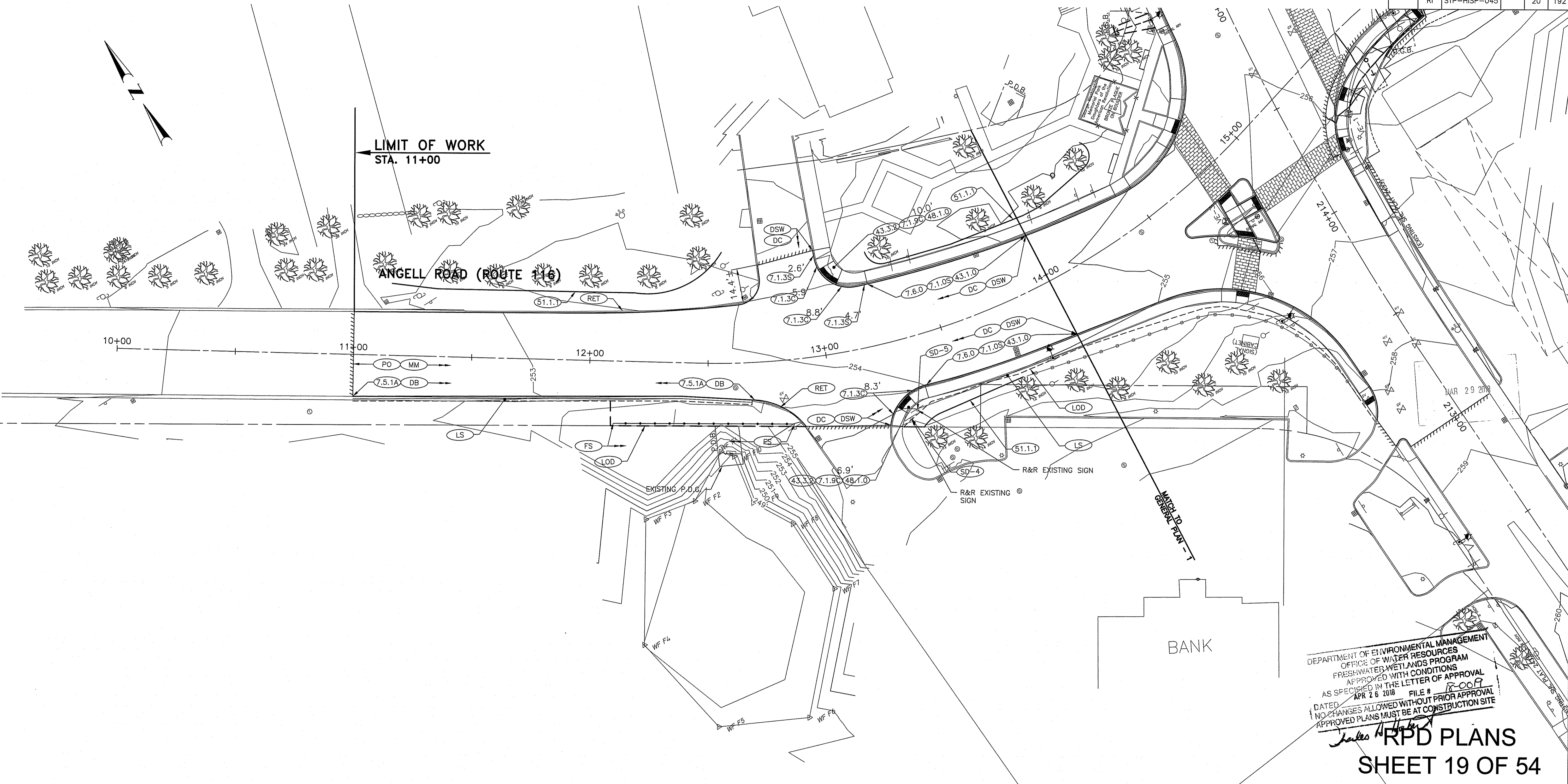
GENERAL PLAN - 1

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

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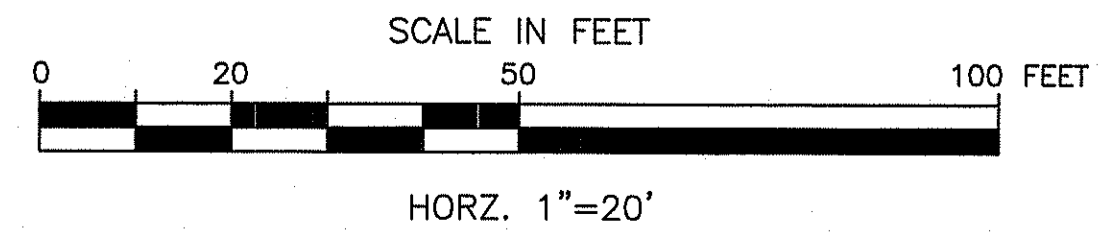
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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James H. Harker

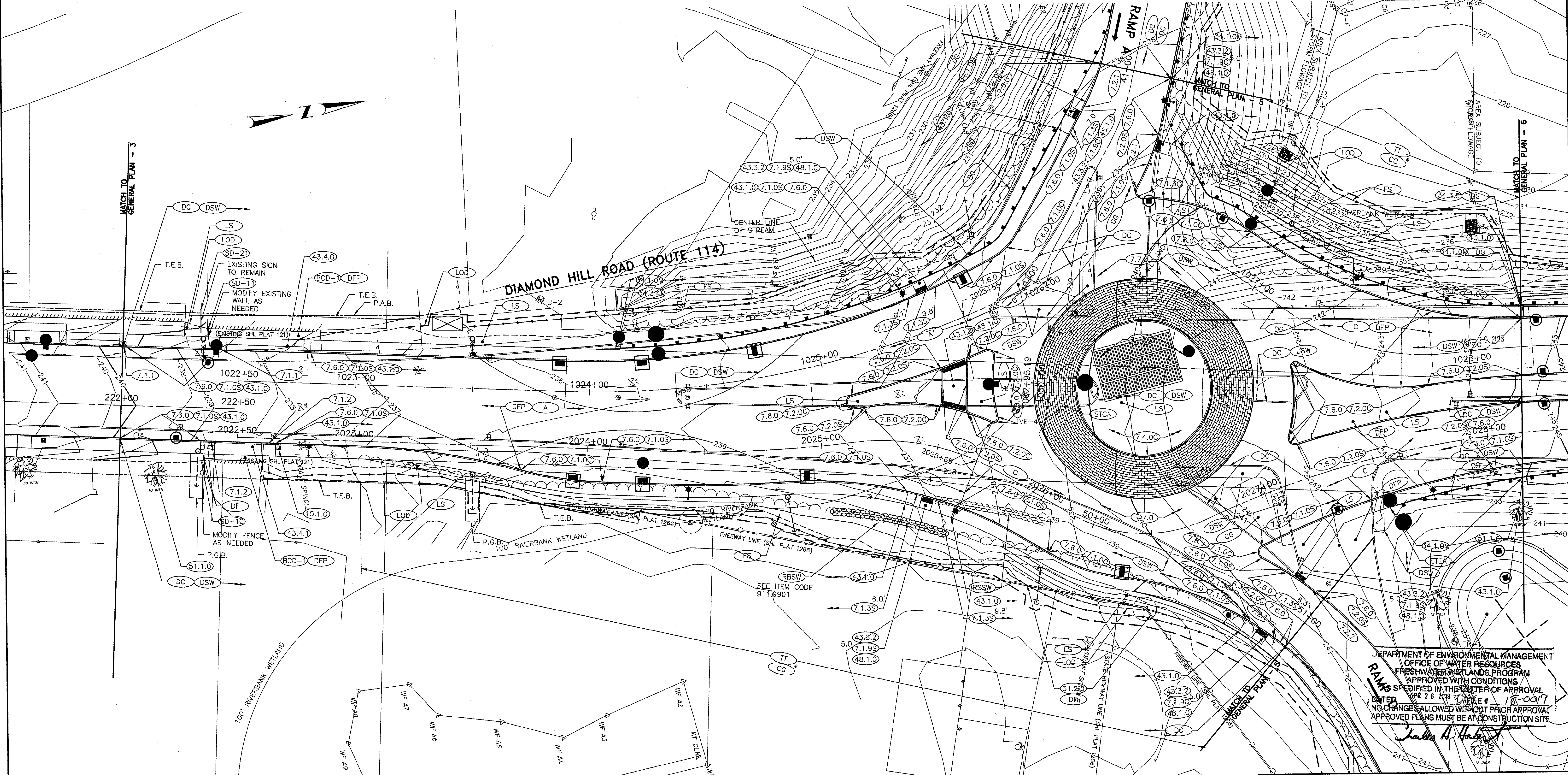
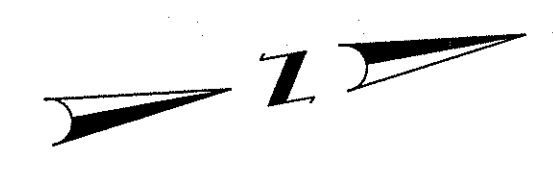
**RPD PLANS
 SHEET 19 OF 54**



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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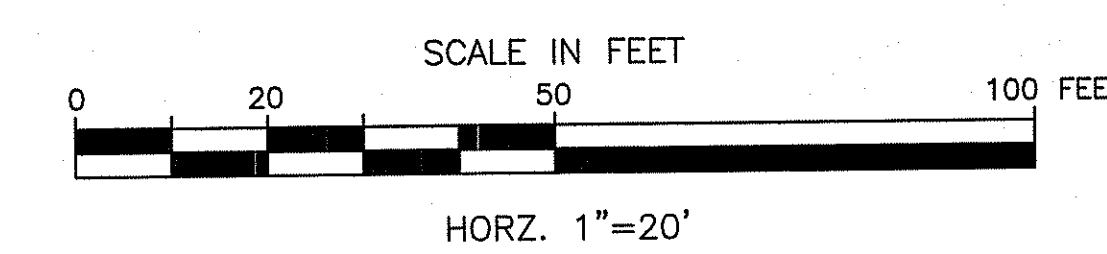
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND
GENERAL PLAN - 2
 CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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James B. Harker

* CLEARING AND GRUBBING TO BE PERFORMED UP TO 3 FEET BEYOND THE LIMIT OF DISTURBANCE.



RPD PLANS
SHEET 21 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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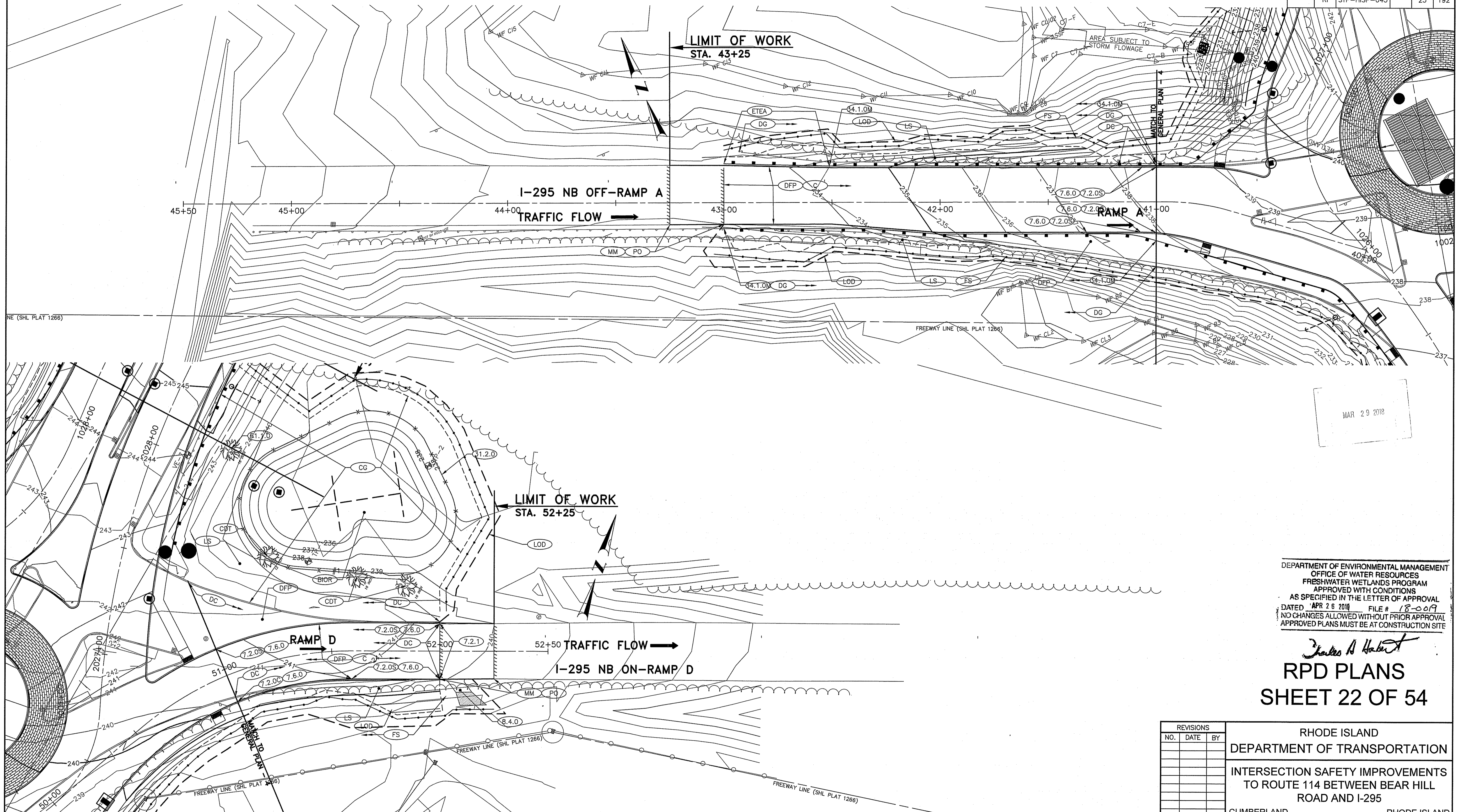
RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

GENERAL PLAN - 4

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



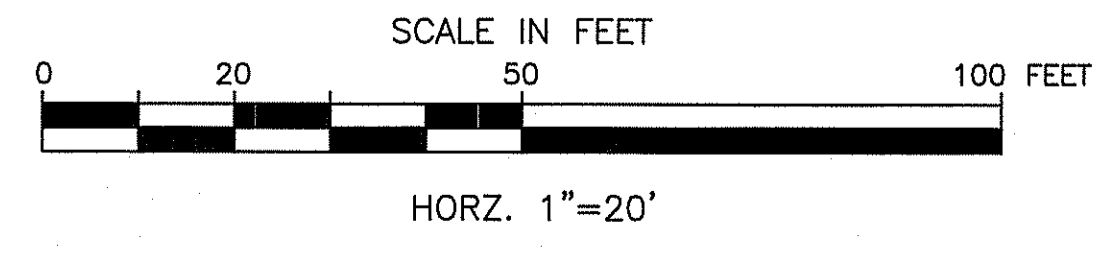
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Charles A. Haber
RPD PLANS
SHEET 22 OF 54

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RHODE ISLAND
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 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

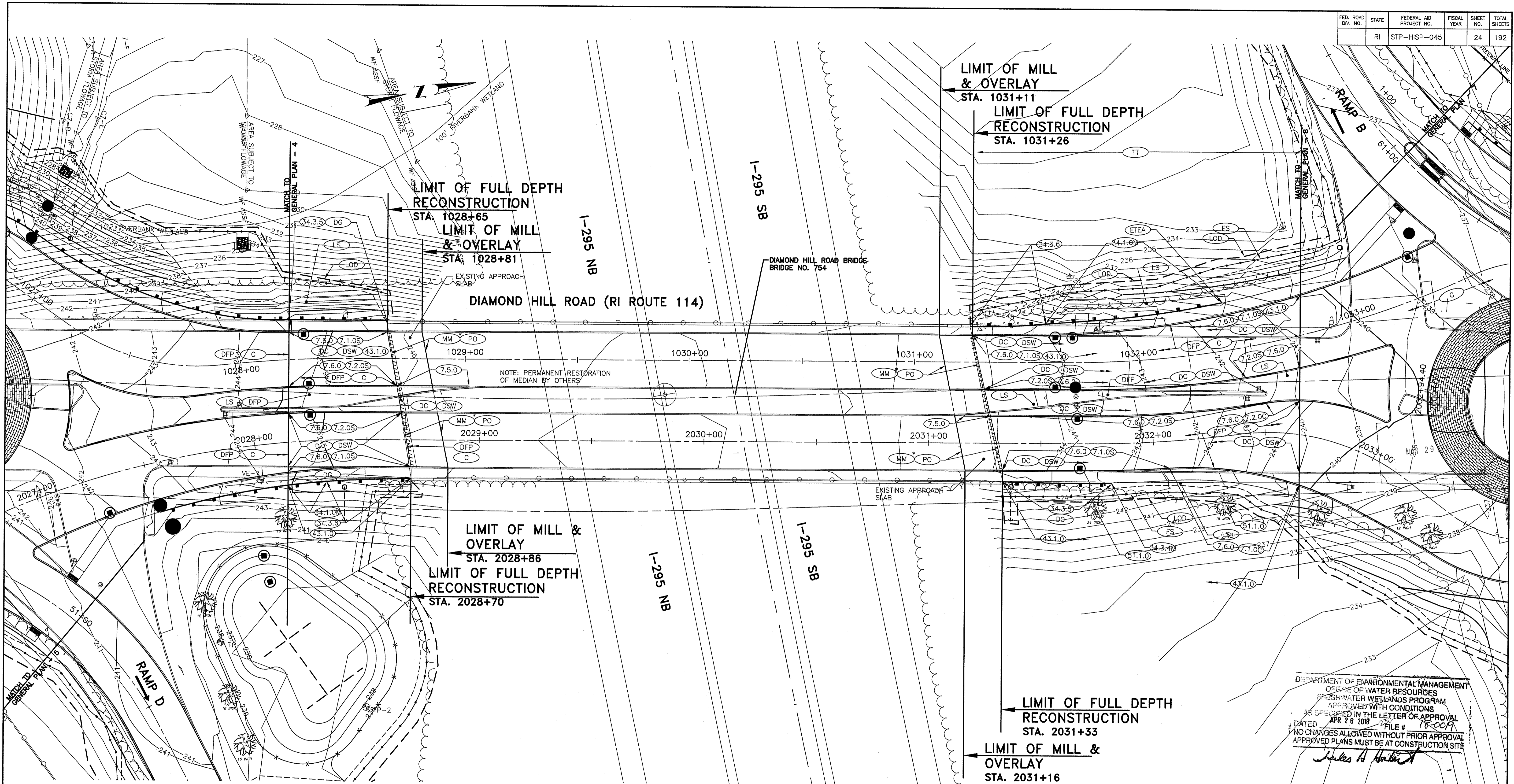
GENERAL PLAN - 5



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| | RI | STP-HISP-045 | | 24 | 192 |

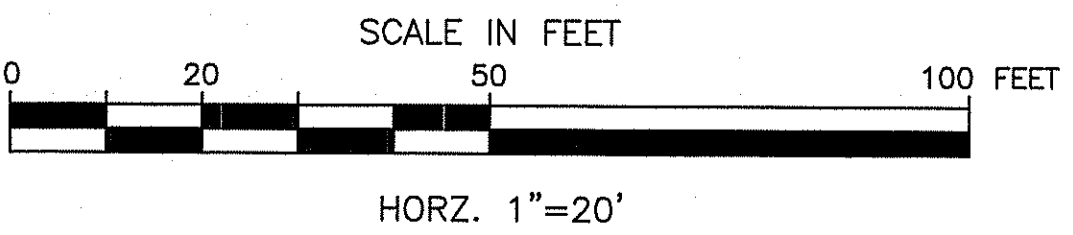


NOTE: PERMANENT RESTORATION OF MEDIAN BY OTHERS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-007A
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James H. Hartley

* CONTRACTOR TO MILL PAVEMENT UP TO THE BRIDGE JOINT. THE CONTRACTOR SHALL NOT IMPACT THE BRIDGE JOINT.



**RPD PLANS
SHEET 23 OF 54**

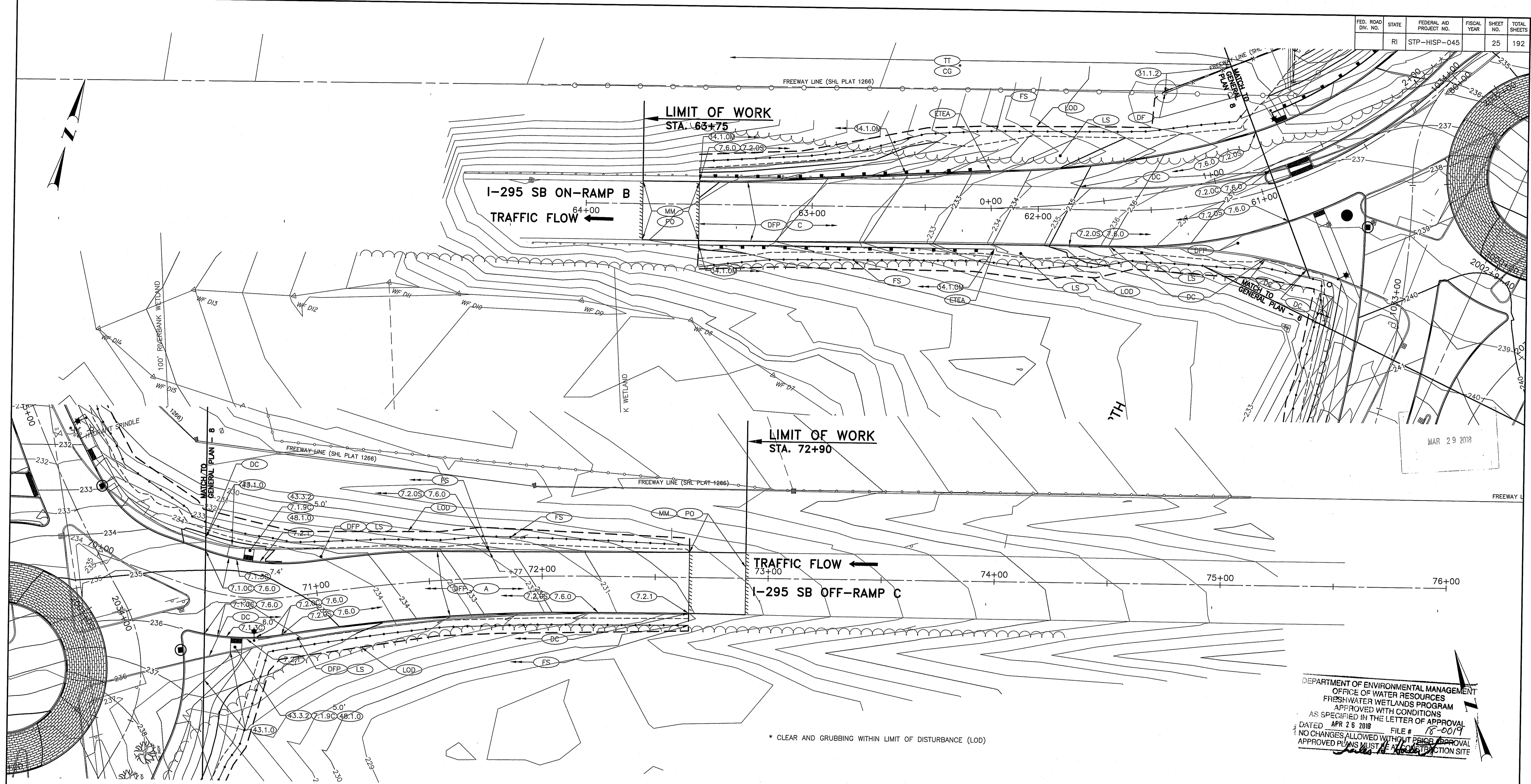
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

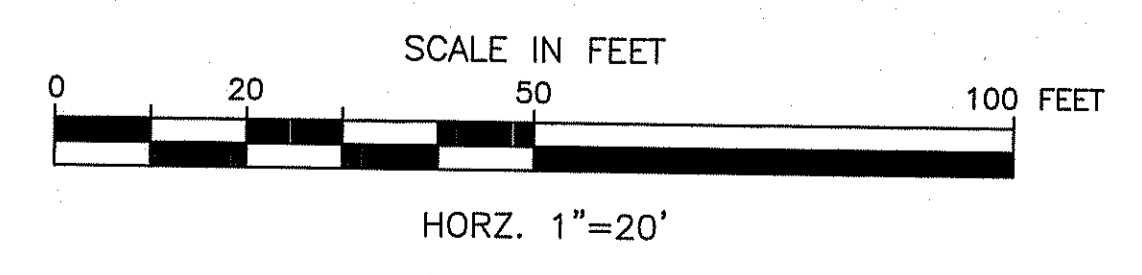
GENERAL PLAN - 6

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



* CLEAR AND GRUBBING WITHIN LIMIT OF DISTURBANCE (LOD)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE ACCORDING TO CONSTRUCTION SITE



RPD PLANS SHEET 24 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

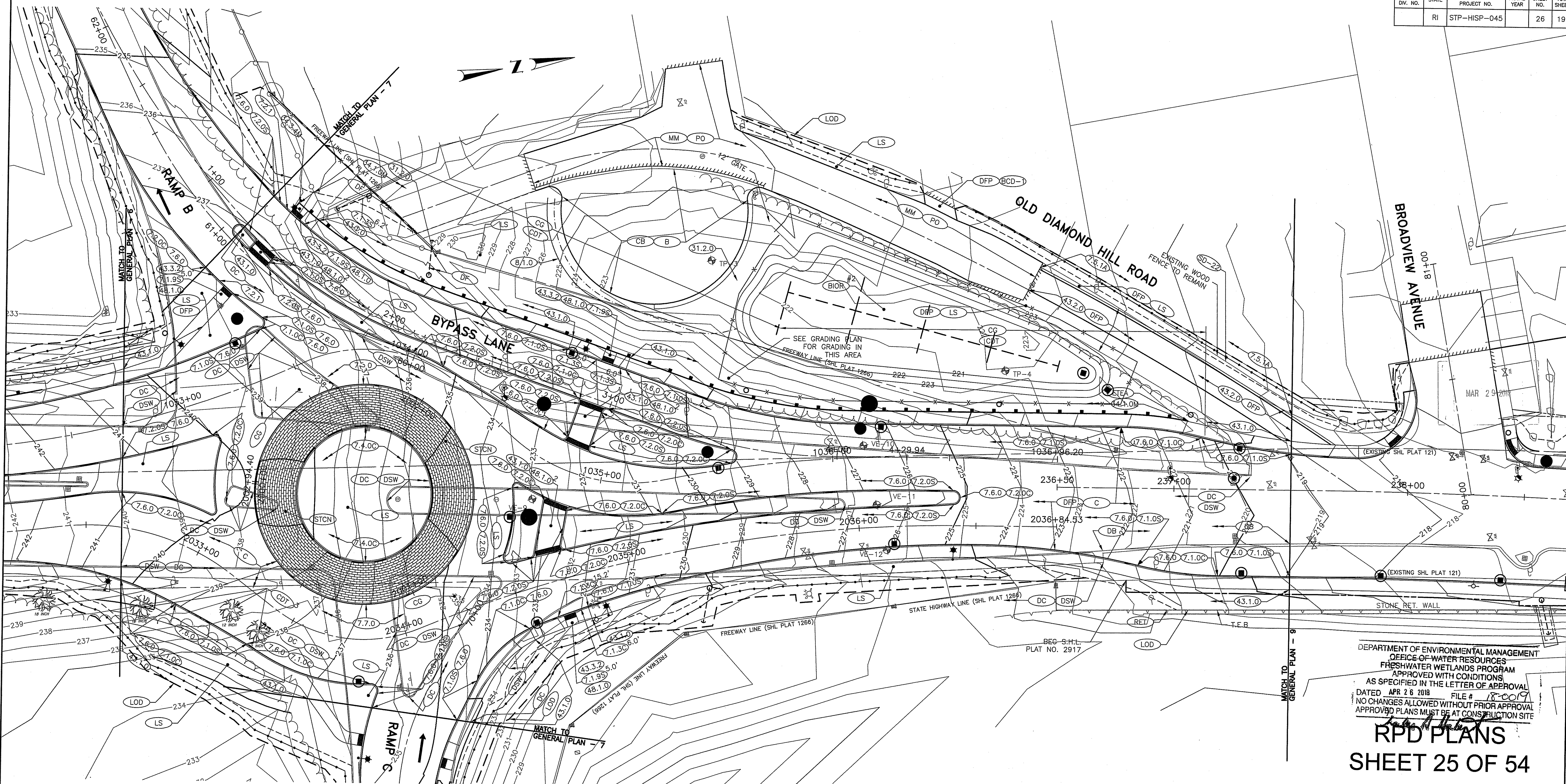
CUMBERLAND, RHODE ISLAND

GENERAL PLAN - 7

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

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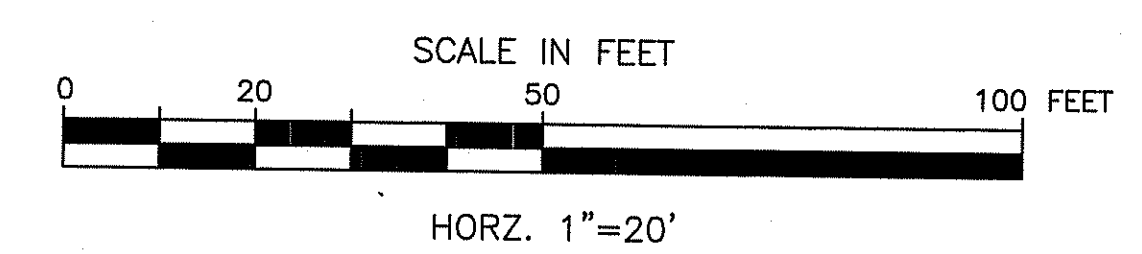
| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
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| | RI | STP-HISP-045 | | 26 | 192 |



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

[Signature]

RPD PLANS
SHEET 25 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

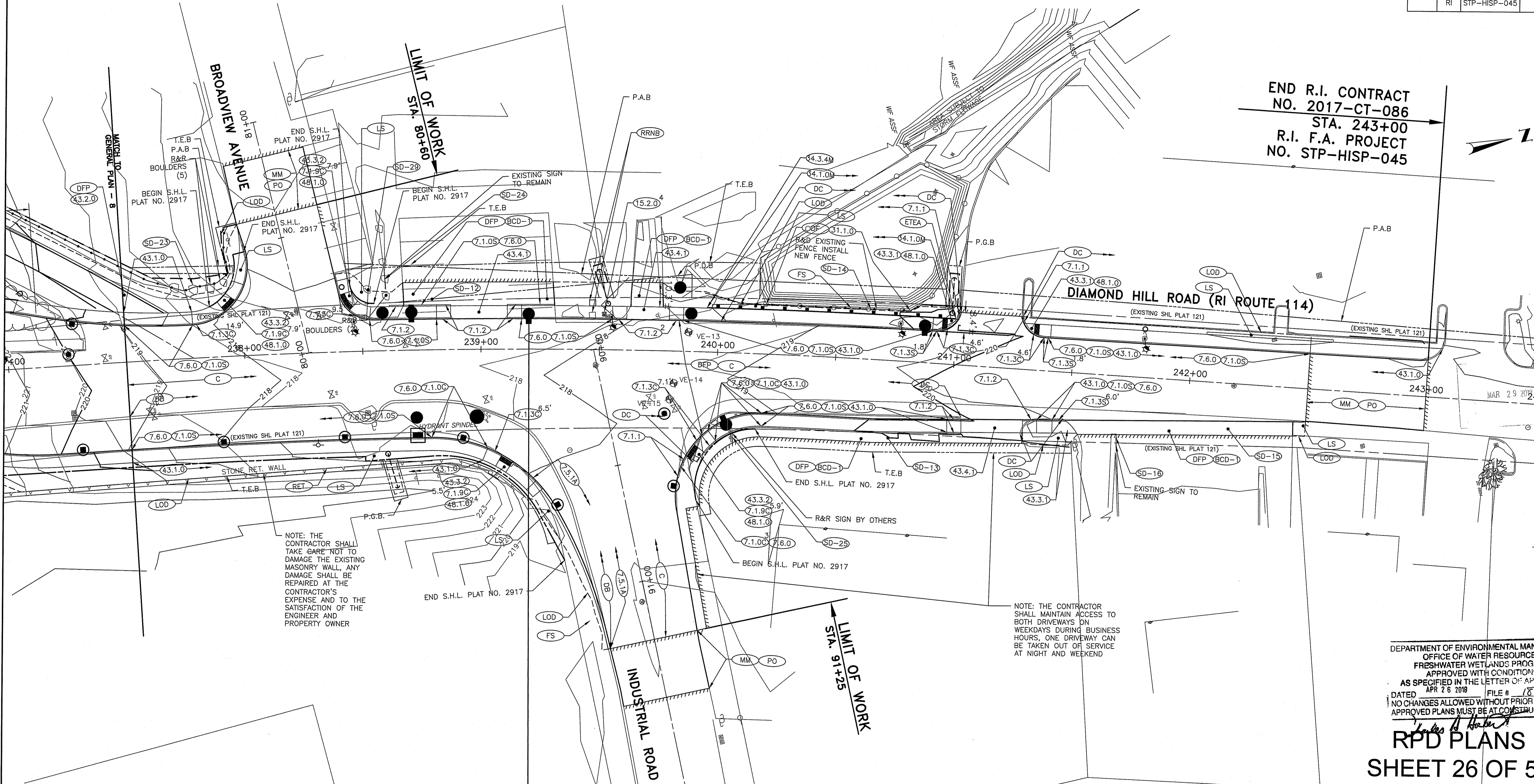
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

GENERAL PLAN - 8

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED
 0073X_V1_026_GENERAL

END R.I. CONTRACT
NO. 2017-CT-086
STA. 243+00
R.I. F.A. PROJECT
NO. STP-HISP-045



NOTE: THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING MASONRY WALL, ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER AND PROPERTY OWNER

NOTE: THE CONTRACTOR SHALL MAINTAIN ACCESS TO BOTH DRIVEWAYS ON WEEKDAYS DURING BUSINESS HOURS, ONE DRIVEWAY CAN BE TAKEN OUT OF SERVICE AT NIGHT AND WEEKEND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

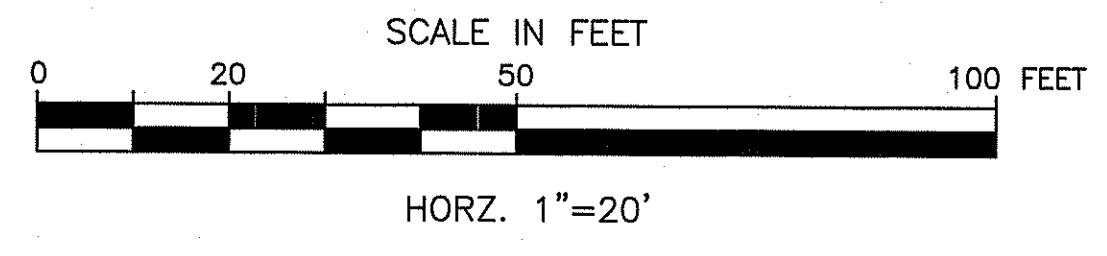
RPD PLANS SHEET 26 OF 54

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

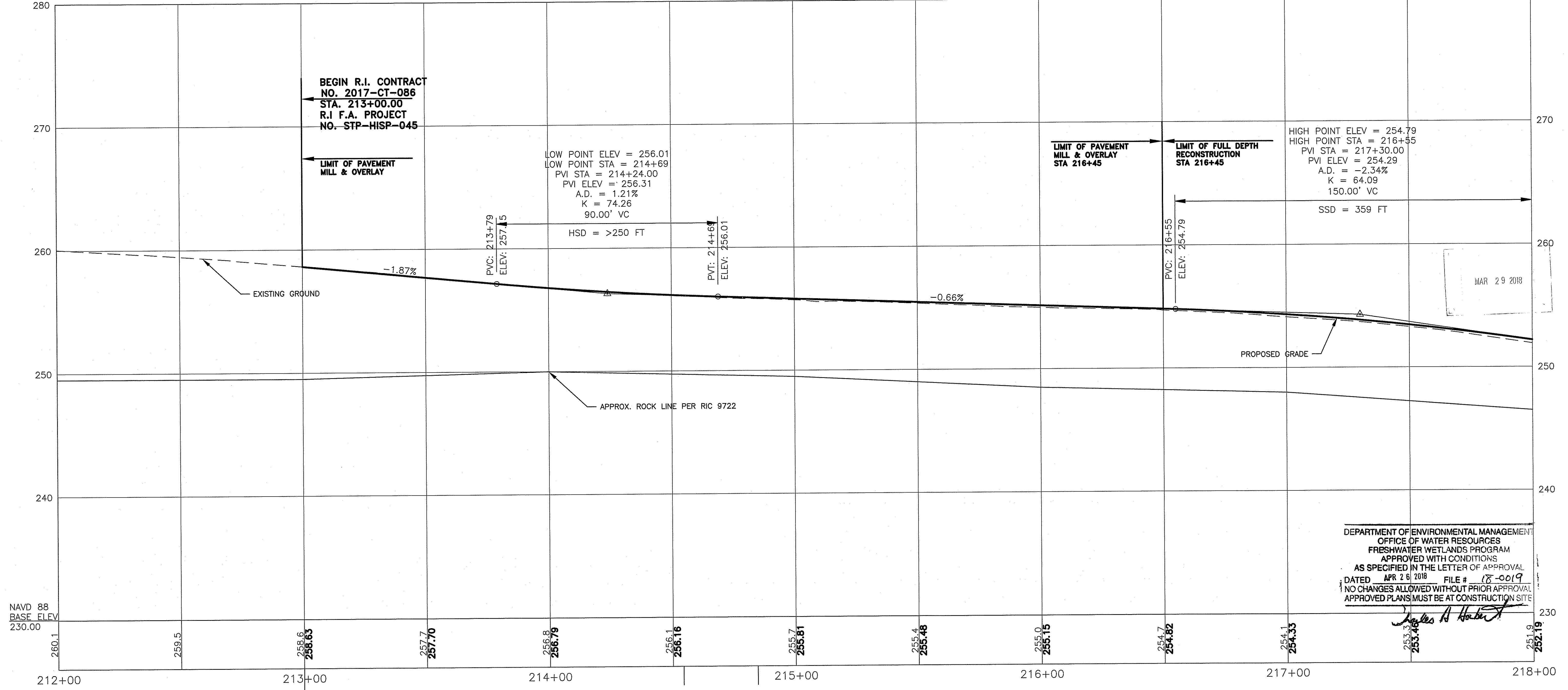
GENERAL PLAN - 9

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

DIAMOND HILL ROAD (ROUTE 114)



NAVD 88
BASE ELEV
230.00

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James A. Harkin

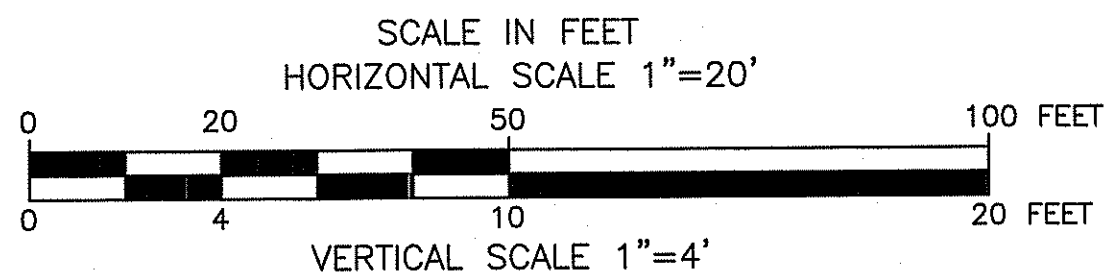
MAR 29 2018

213+00 DIAMOND HILL ROAD (ROUTE 114)=
113+00.00 DIAMOND HILL ROAD HISTORIC

214+54.41 DIAMOND HILL ROAD (ROUTE 114)=
15+21.96 ANGELL ROAD (ROUTE 116) - BEAR HILL ROAD

214+84.46 DIAMOND HILL ROAD (ROUTE 114)=
0+05.42 BEAR HILL ROAD HISTORIC

NOTE:
MILL AND OVERLAY PROFILES HAVE BEEN SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MAINTAIN EXISTING PROFILE GRADES AT THE EXISTING ROADWAY CROWN. REFER TO THE GRADING PLANS FOR GRADING REQUIREMENTS.



RPD PLANS SHEET 27 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

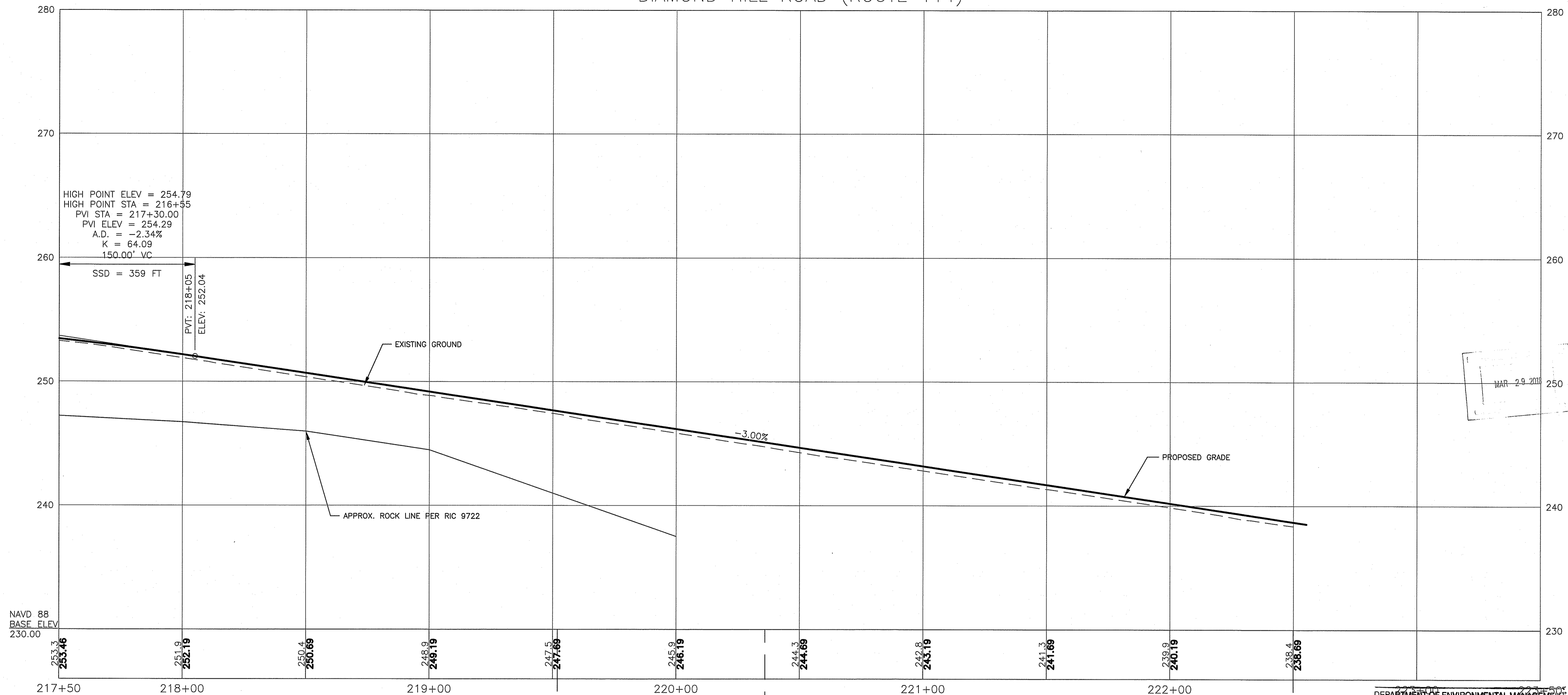
CUMBERLAND, RHODE ISLAND

DIAMOND HILL ROAD PROFILE - 1

CHECKED BY _____ DATE 3/30/2018 SCALE _____

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| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| | RI | STP-HISP-045 | | 29 | 192 |

DIAMOND HILL ROAD (ROUTE 114)



APR 29 2018

NAVD 88
BASE ELEV
230.00

219+51.95 DIAMOND HILL ROAD (ROUTE 114) =
20+00.00 OLD DIAMOND HILL SOUTH

220+36.04 DIAMOND HILL ROAD (ROUTE 114) =
30+00.00 SHIRLEY DRIVE

222+50 DIAMOND HILL ROAD (ROUTE 114) =
1022+50.00 DIAMOND HILL ROAD SB =
2022+50.00 DIAMOND HILL ROAD NB

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
James H. Baker

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**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

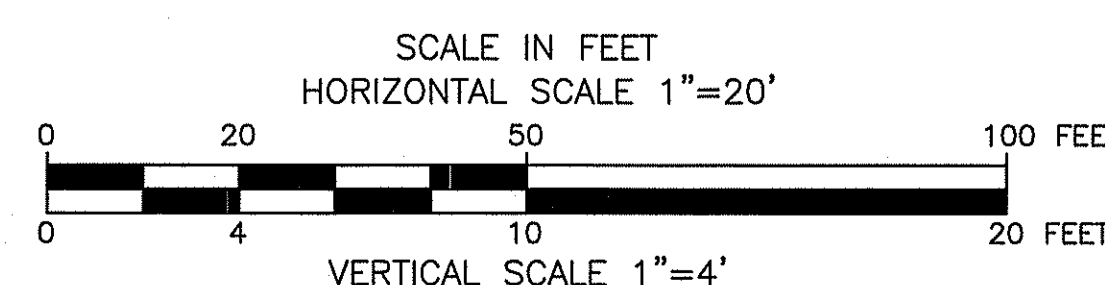
**INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295**

CUMBERLAND, RHODE ISLAND

**DIAMOND HILL ROAD
PROFILE - 2**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

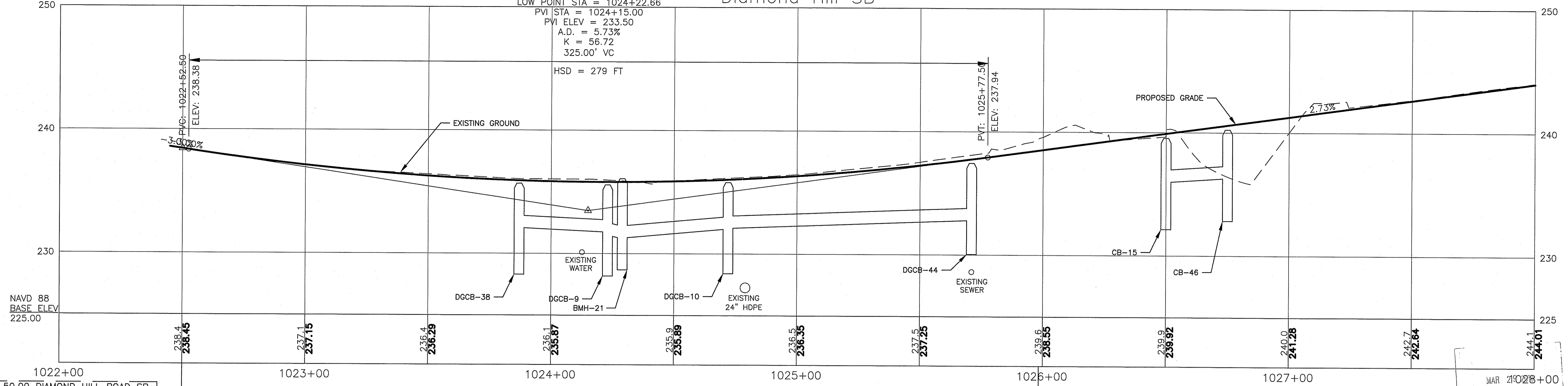
**RPD PLANS
SHEET 28 OF 54**



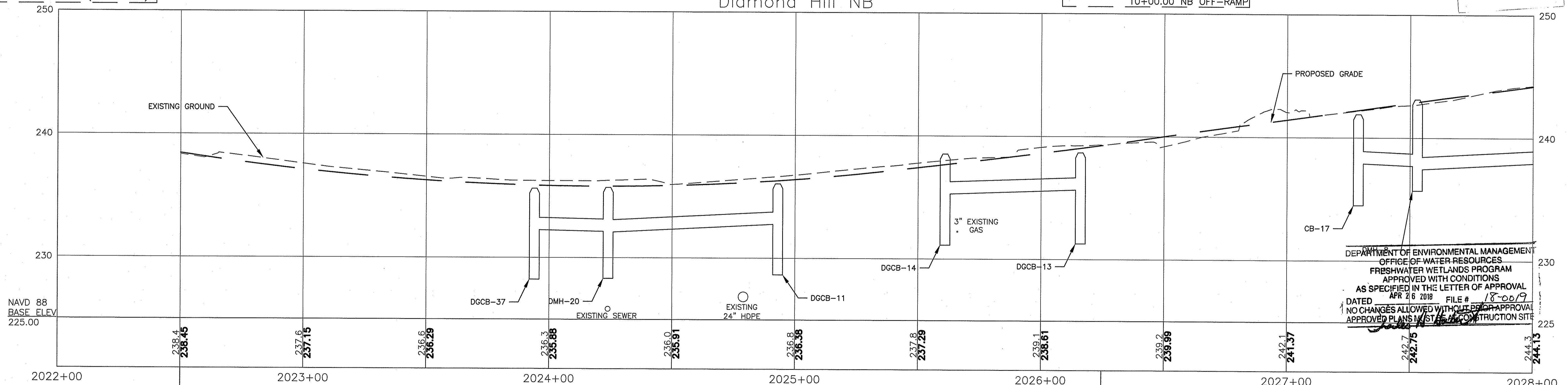
GREEN INTERNATIONAL ASSOCIATES, INC.
Civil and Structural Engineers

Diamond Hill SB

LOW POINT ELEV = 235.82
 LOW POINT STA = 1024+22.66
 PVI STA = 1024+15.00
 PVI ELEV = 233.50
 A.D. = 5.73%
 K = 56.72
 325.00' VC
 HSD = 279 FT



Diamond Hill NB



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

1022+50.00 DIAMOND HILL ROAD SB=
 222+50 DIAMOND HILL ROAD (ROUTE 114)=

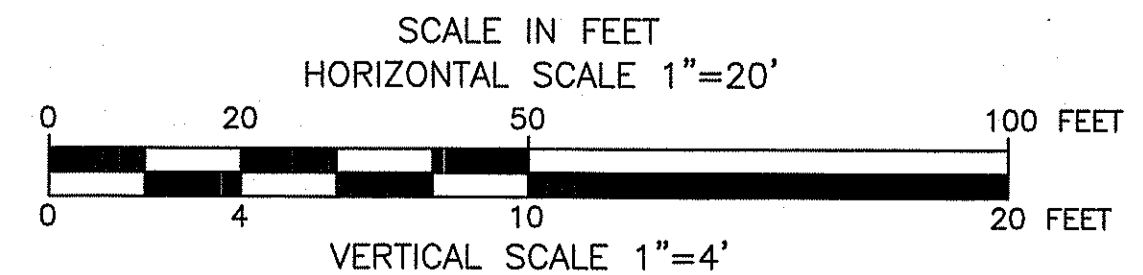
1025+98.38 DIAMOND HILL ROAD SB=
 10+00.00 NB OFF-RAMP

2022+50.00 DIAMOND HILL ROAD NB=
 222+50 DIAMOND HILL ROAD (ROUTE 114)=

2026+24.66 DIAMOND HILL ROAD NB=
 50+00.00 NB ON-RAMP

RPD PLANS SHEET 29 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

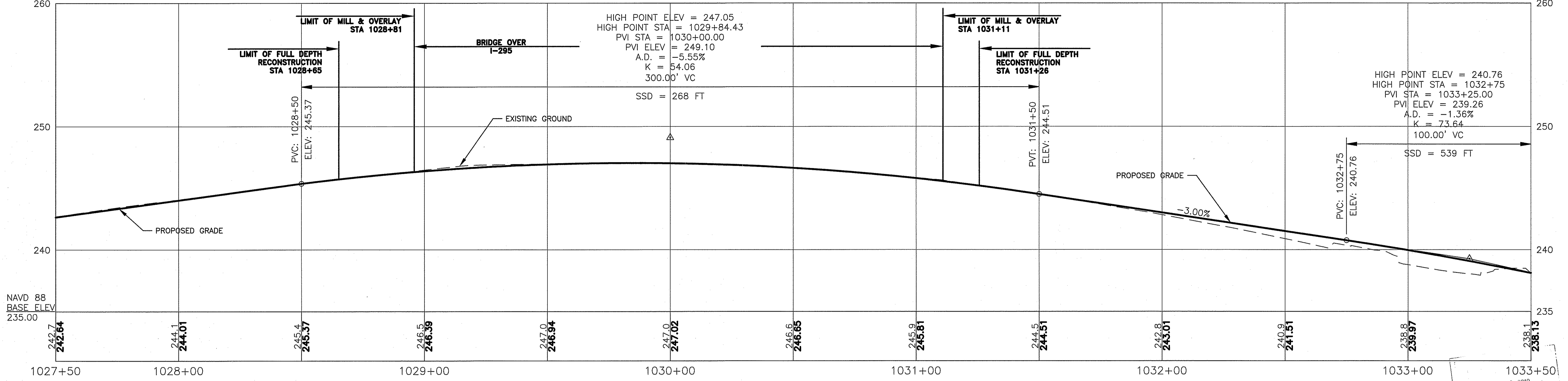


NOTE:
 DIAMOND HILL ROAD NB PROFILES SHOWN ARE A GRAPHICAL REPRESENTATION.
 SEE GRADING PLAN FOR DETAILS.

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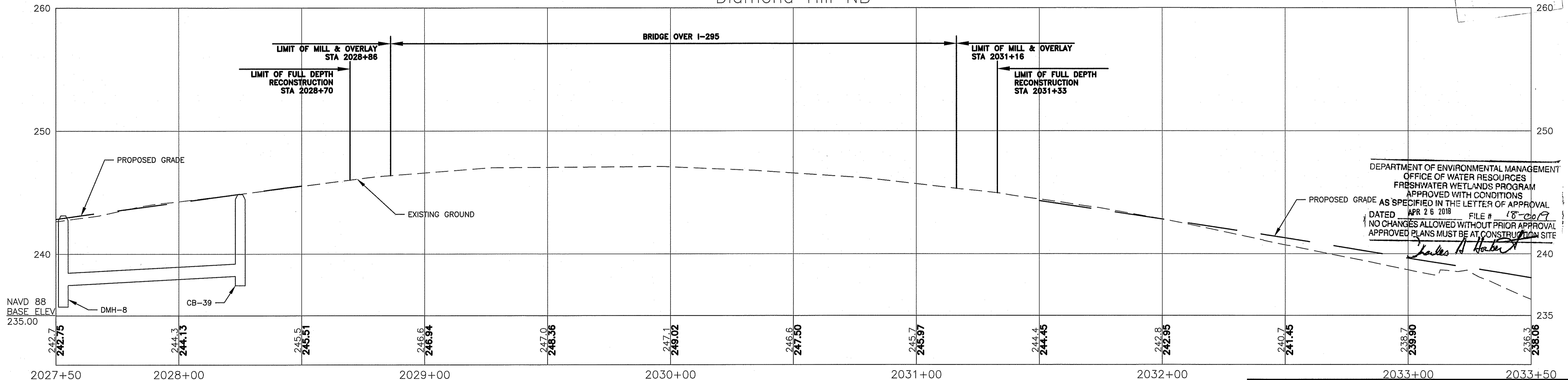
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND
**DIAMOND HILL ROAD
 PROFILE - 3**
 CHECKED BY _____ DATE 3/30/2018 SCALE _____

Diamond Hill SB



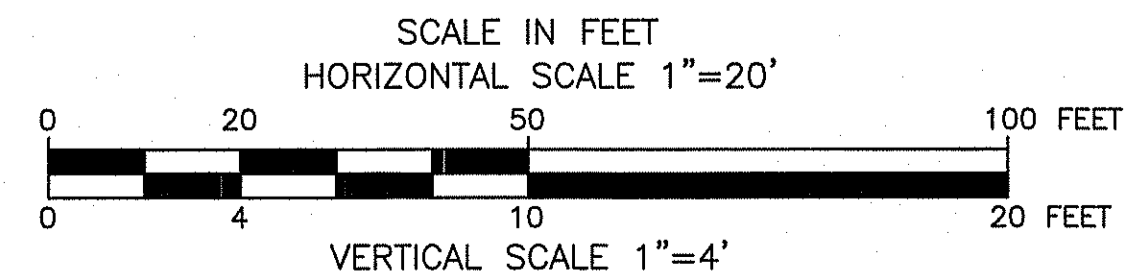
MAR 29 2018

Diamond Hill NB



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-009
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 James H. Haber

NOTE: DIAMOND HILL ROAD NB PROFILES SHOWN ARE A GRAPHICAL REPRESENTATION. SEE GRADING PLAN FOR DETAILS.



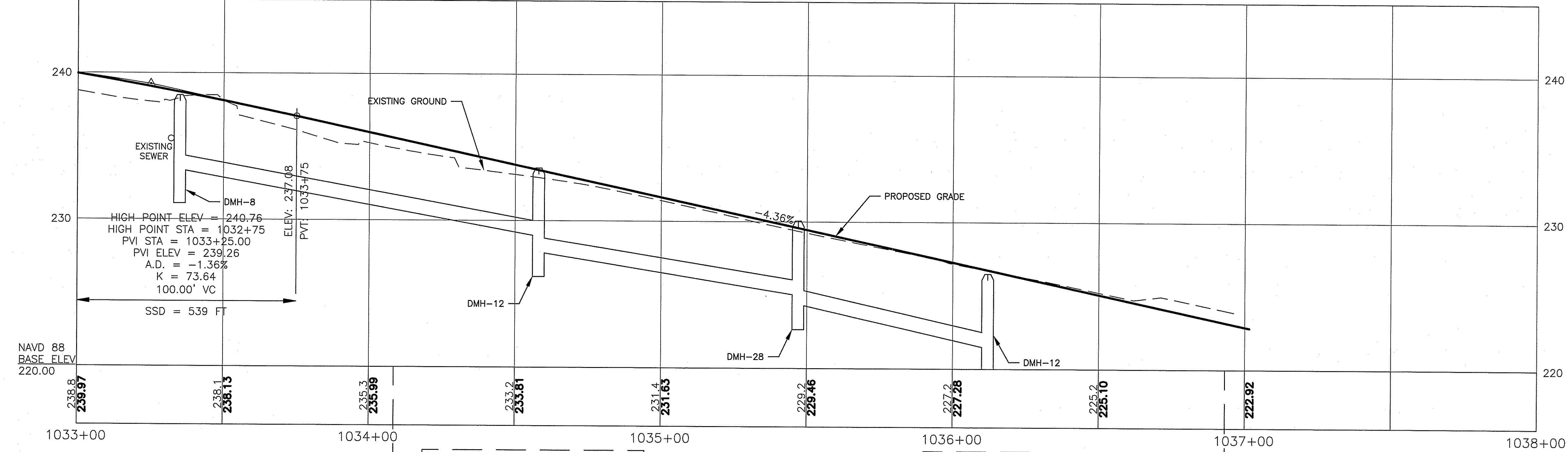
RPD PLANS SHEET 30 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND
DIAMOND HILL ROAD PROFILE - 4
 CHECKED BY _____ DATE 3/30/2018 SCALE _____

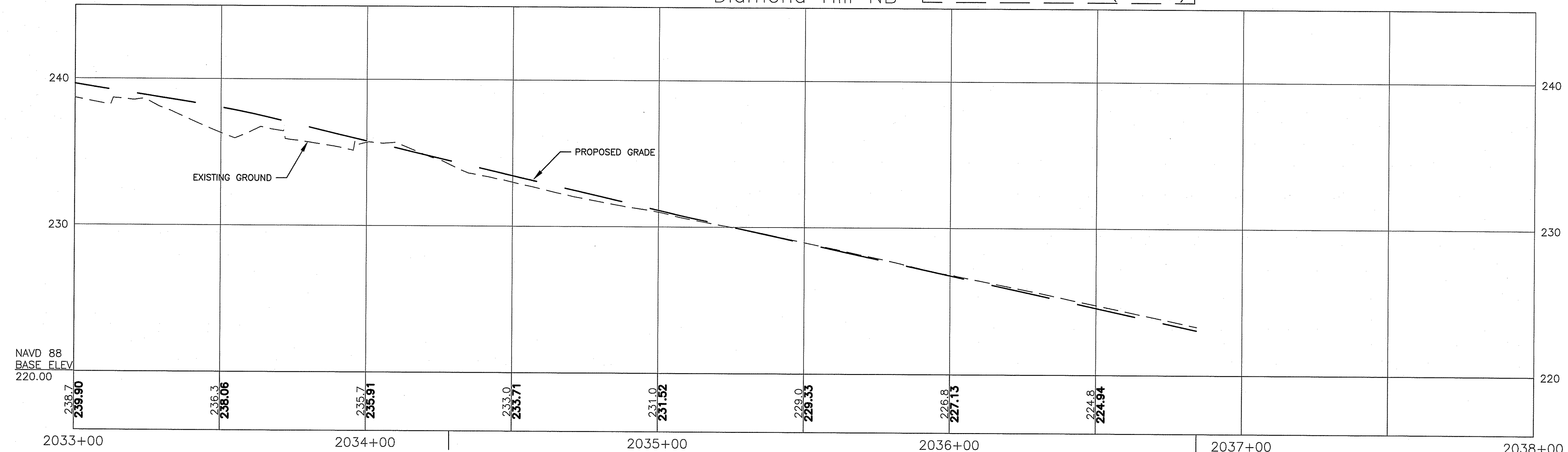
Diamond Hill SB



1034+08.49 DIAMOND HILL ROAD NB= 60+00.00 SB ON-RAMP

1036+93.23 DIAMOND HILL ROAD SB= 236+50.00 DIAMOND HILL ROAD (ROUTE 114)=

Diamond Hill NB



2034+28.58 DIAMOND HILL ROAD NB= 70+00.00 SB OFF-RAMP

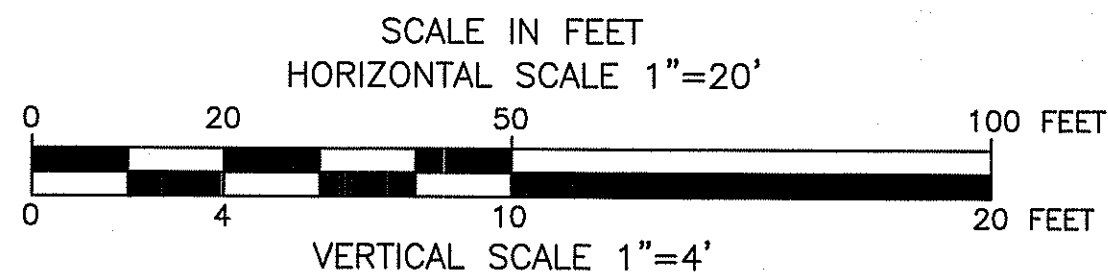
2036+84.53 DIAMOND HILL ROAD NB= 236+50 DIAMOND HILL ROAD (ROUTE 114)=

MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Haber

NOTE:
DIAMOND HILL ROAD NB PROFILES SHOWN ARE A GRAPHICAL REPRESENTATION.
SEE GRADING PLAN FOR DETAILS.



RPD PLANS SHEET 31 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

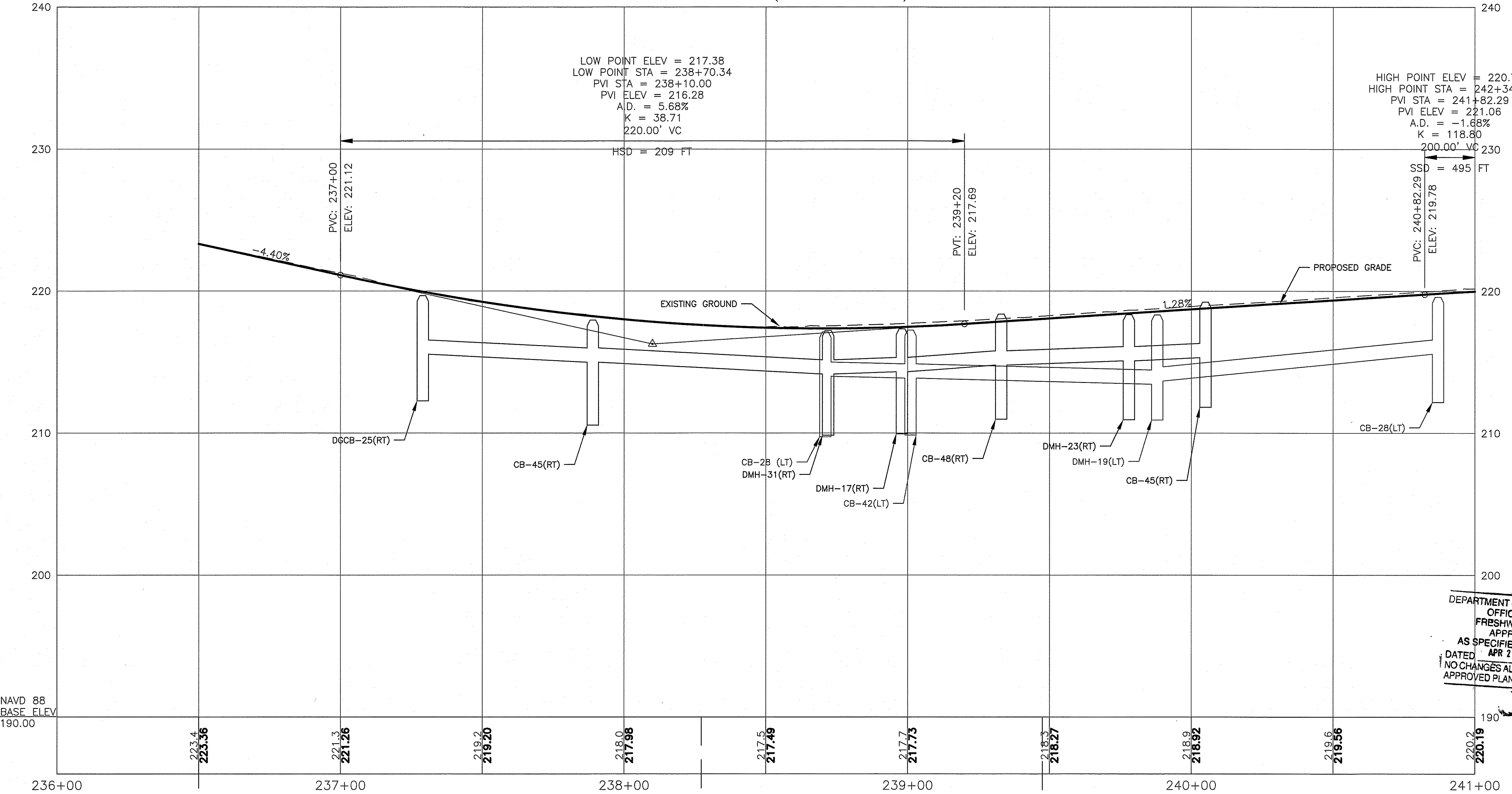
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

DIAMOND HILL ROAD PROFILE - 5

CHECKED BY _____ DATE 3/30/2018 SCALE _____

DIAMOND HILL ROAD (ROUTE 114) NORTH



MAR 29 2018

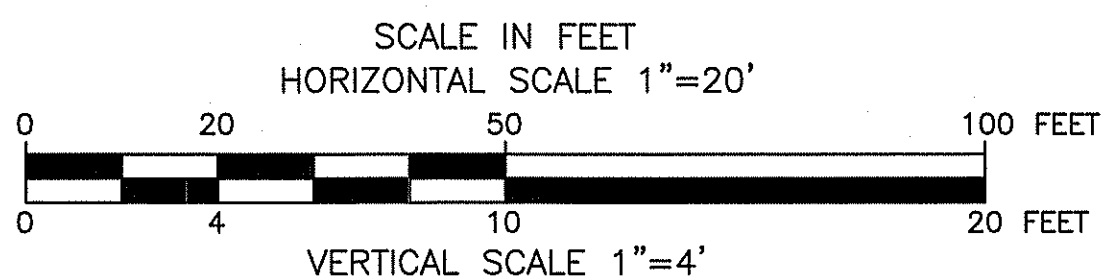
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
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Charles A. Haber

236+50.00 DIAMOND HILL ROAD (ROUTE 114) NORTH=
1036+93.23 DIAMOND HILL ROAD SB=
2036+84.53 DIAMOND HILL ROAD NB

238+27.25 DIAMOND HILL ROAD (ROUTE 114) NORTH=
80+00.00 BROADVIEW AVENUE

239+47.52 DIAMOND HILL ROAD (ROUTE 114) NORTH=
90+00.00 INDUSTRIAL ROAD



RPD PLANS SHEET 32 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

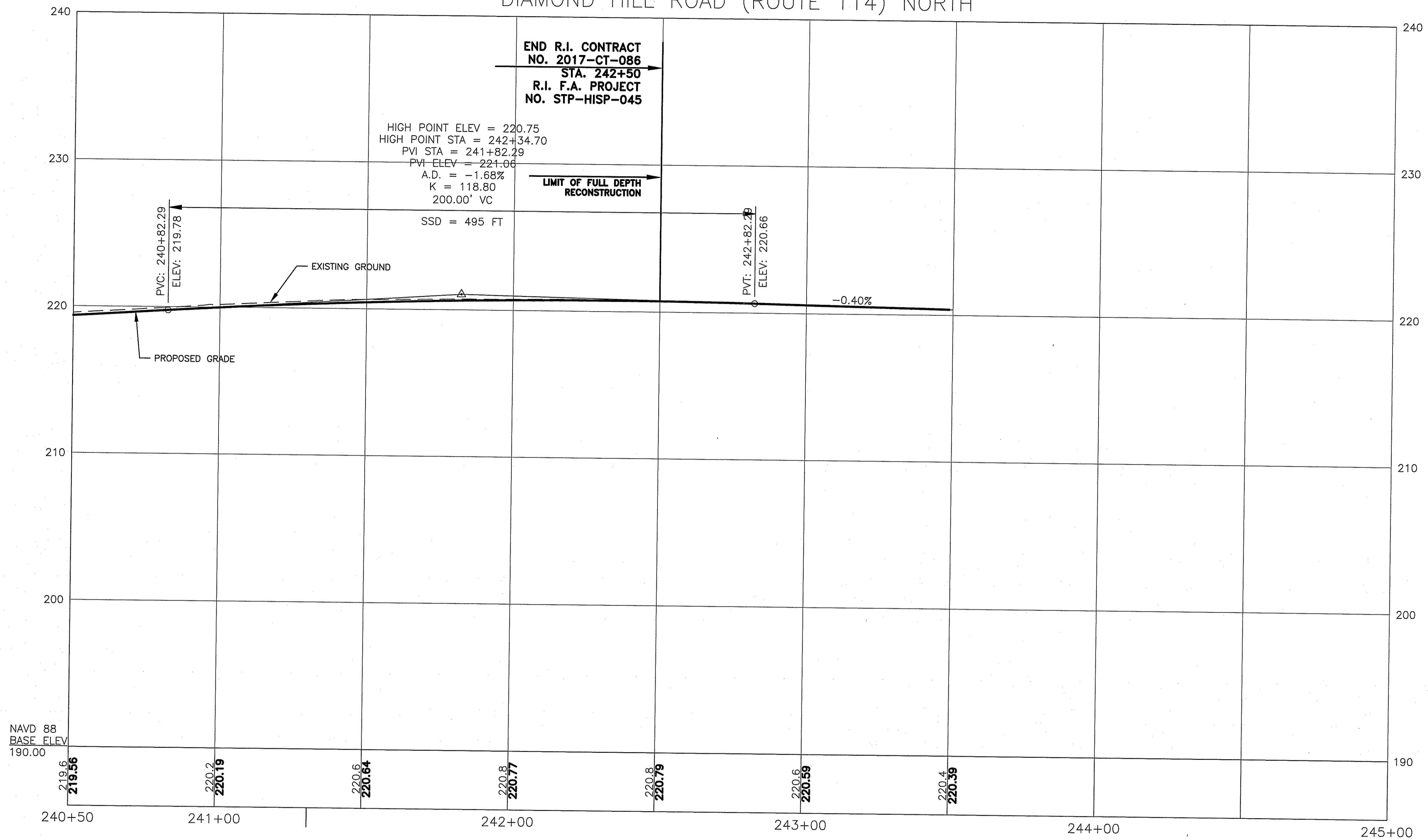
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

**DIAMOND HILL ROAD
PROFILE - 6**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

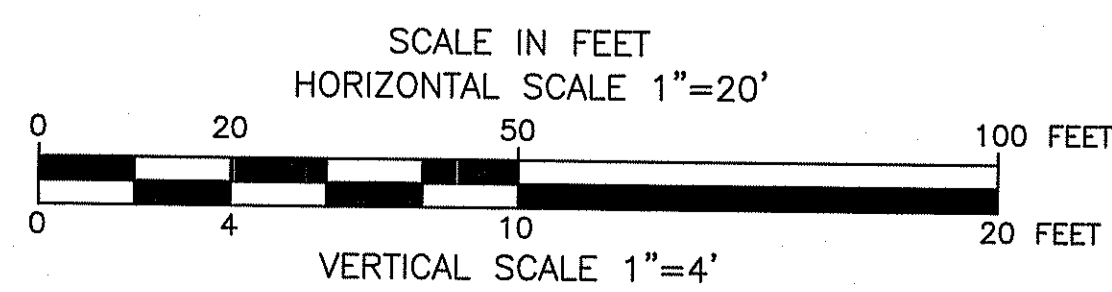
DIAMOND HILL ROAD (ROUTE 114) NORTH



MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles H. Herbert

241+31.40 DIAMOND HILL ROAD (ROUTE 114) NORTH=
141+32.11 DIAMOND HILL ROAD HISTORIC=



RPD PLANS
SHEET 33 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

| REVISIONS | | |
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

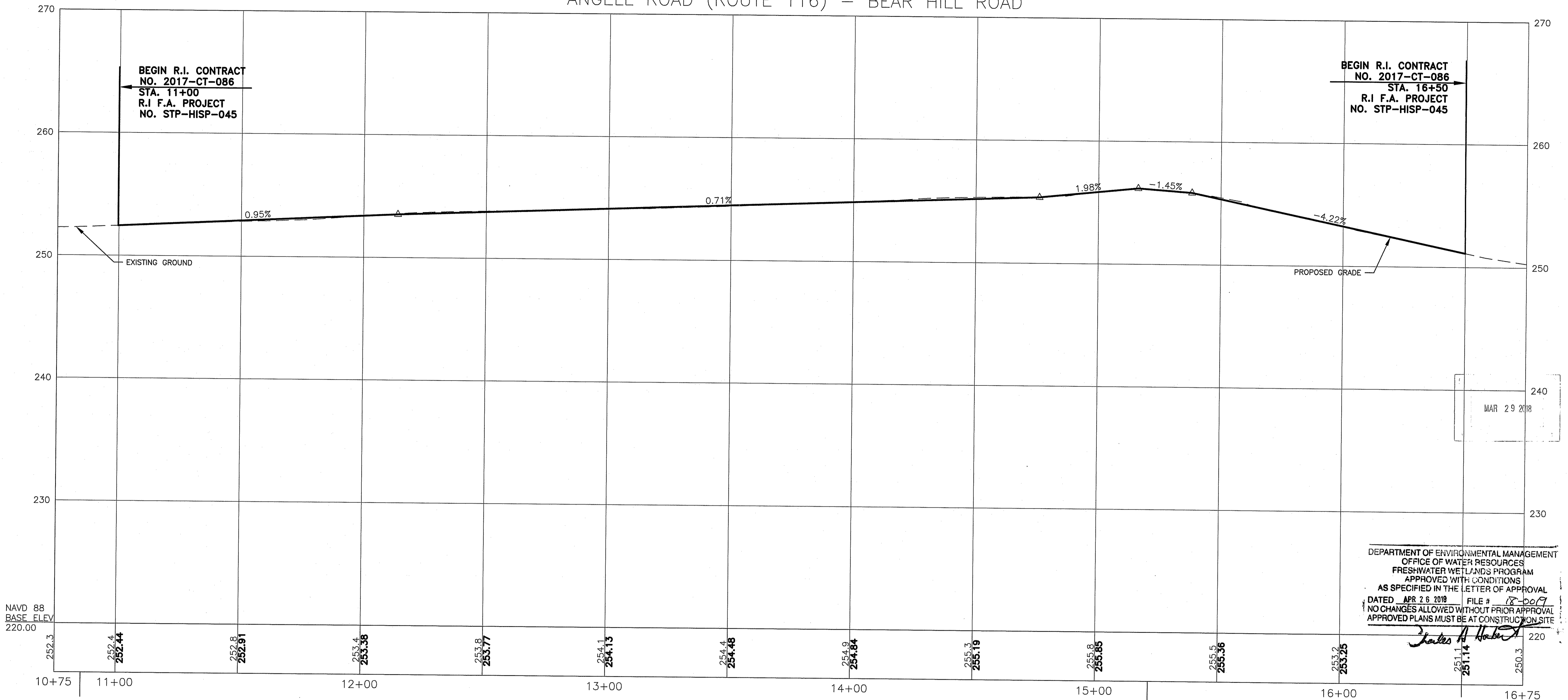
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

**DIAMOND HILL ROAD
PROFILE - 7**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

ANGELL ROAD (ROUTE 116) - BEAR HILL ROAD



BEGIN R.I. CONTRACT
NO. 2017-CT-086
STA. 11+00
R.I. F.A. PROJECT
NO. STP-HISP-045

BEGIN R.I. CONTRACT
NO. 2017-CT-086
STA. 16+50
R.I. F.A. PROJECT
NO. STP-HISP-045

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-009
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James A. Haber
251.1
251.14

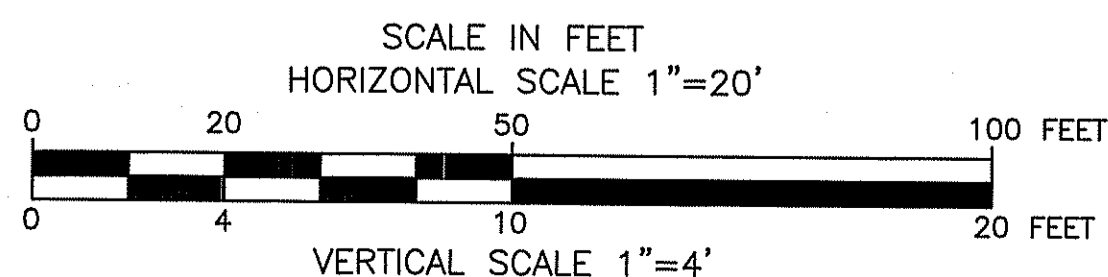
NAVD 88
BASE ELEV
220.00

10+85.74 ANGELL ROAD (ROUTE 116) - BEAR HILL ROAD=
82+85.74 ANGELL ROAD HISTORIC

214+54.33 DIAMOND HILL ROAD (ROUTE 114)=
15+21.68 ANGELL ROAD (ROUTE 116) - BEAR HILL ROAD

16+50 ANGELL ROAD (ROUTE 116) - BEAR HILL ROAD=
1+29.84 BEAR HILL ROAD HISTORIC

NOTE:
MILL AND OVERLAY PROFILES HAVE BEEN SHOWN FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL MAINTAIN EXISTING PROFILE GRADES AT THE EXISTING ROADWAY CROWN. REFER TO THE GRADING PLANS FOR GRADING REQUIREMENTS.



RPD PLANS SHEET 34 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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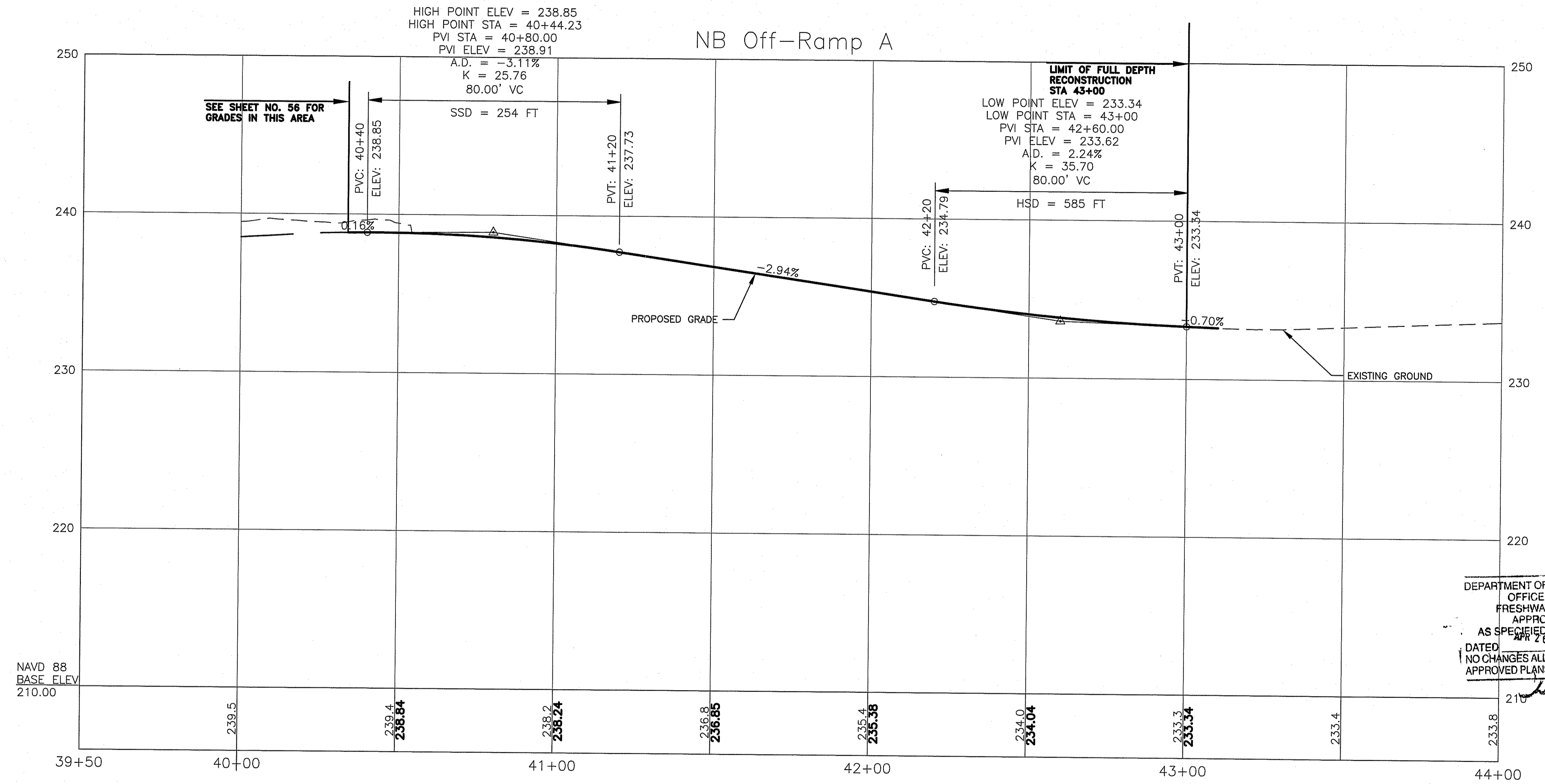
**RHODE ISLAND
DEPARTMENT OF TRANSPORTATION**

**INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295**

CUMBERLAND, RHODE ISLAND

ANGELL ROAD & BEAR HILL PROFILE

CHECKED BY _____ DATE 3/30/2018 SCALE _____



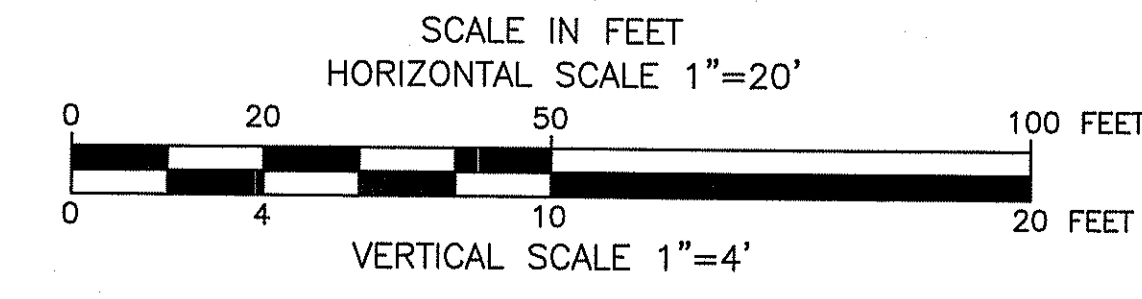
MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-009
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Haber

2025+98.38 40+00.00 NB OFF-RAMP
DIAMOND HILL ROAD SB=

RPD PLANS SHEET 35 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

| REVISIONS | | |
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

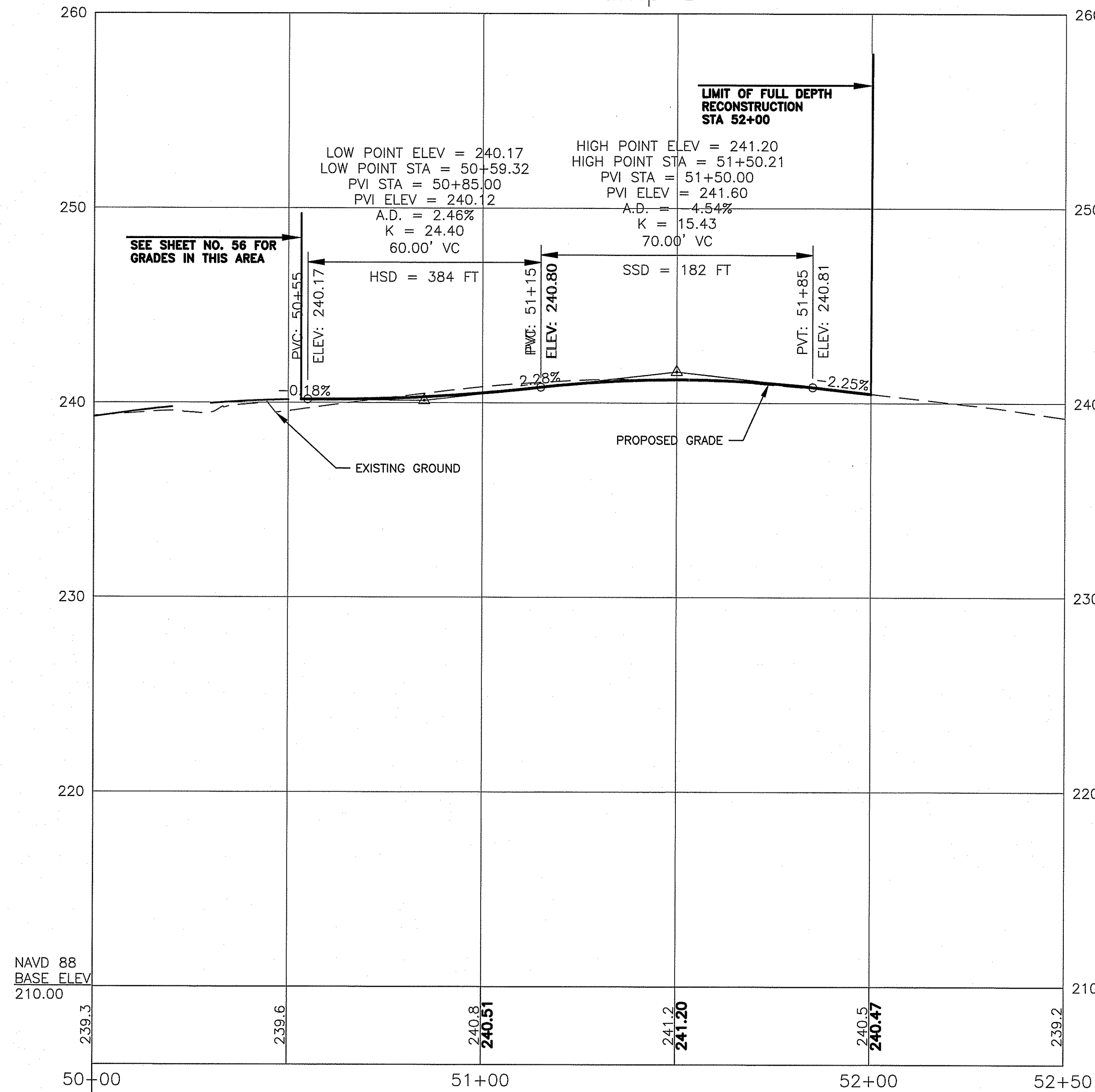
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

**NB OFF-RAMP
PROFILE**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

NB On-Ramp D

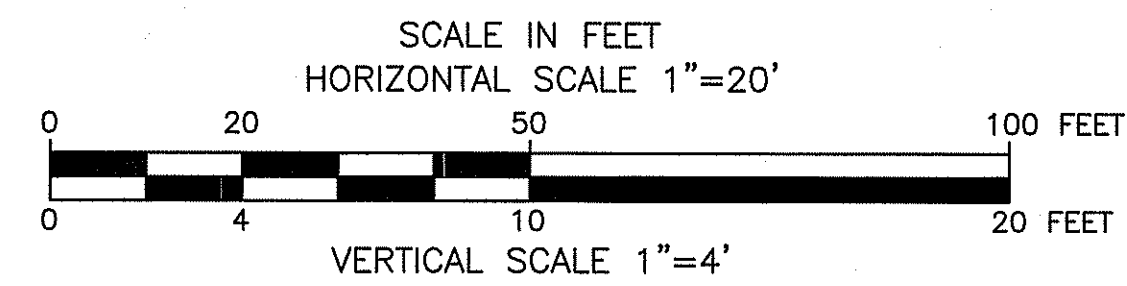


MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Herbert

2026+24.66 DIAMOND HILL ROAD NB=
 50+00.00 NB ON-RAMP

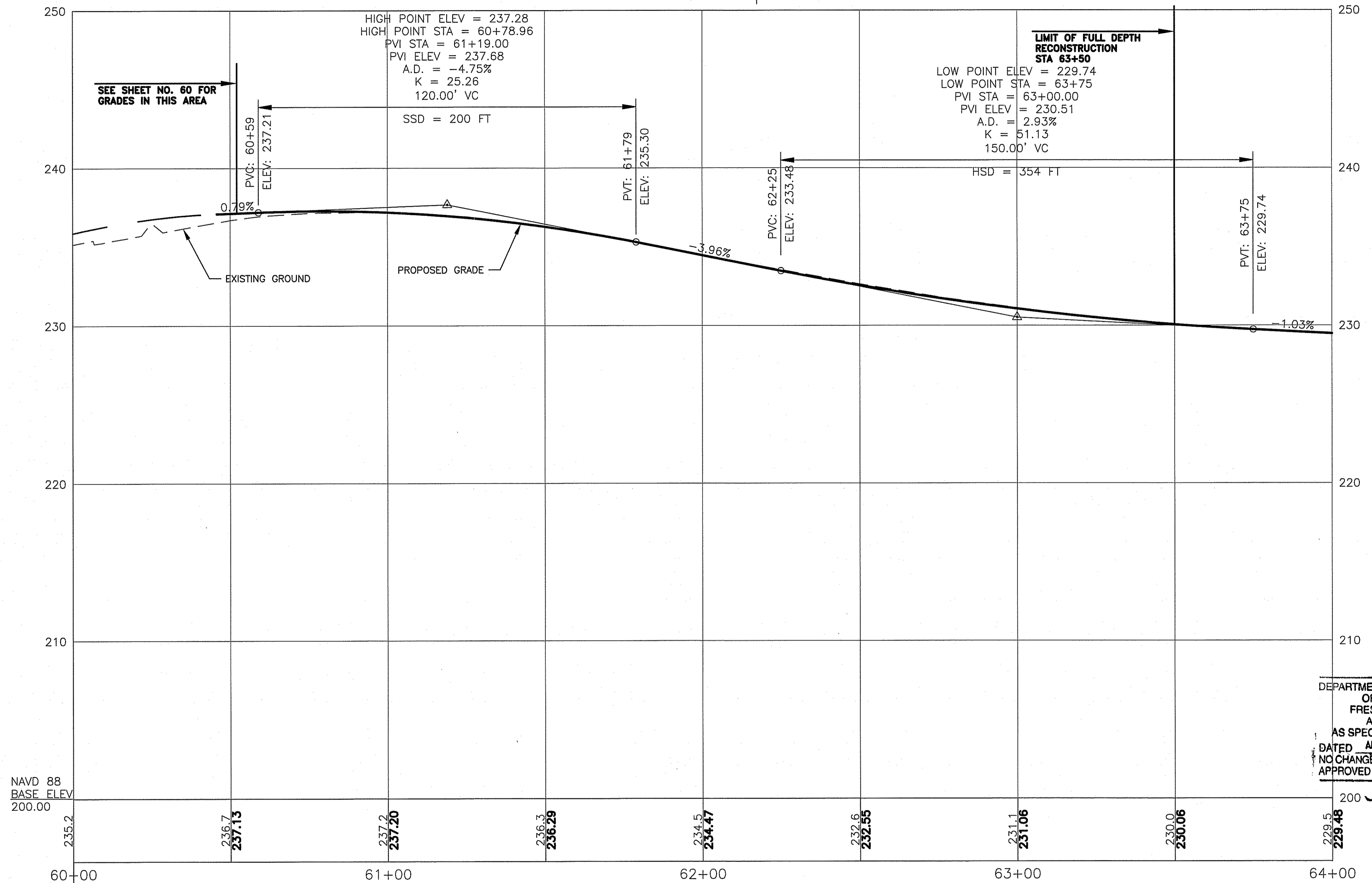


RPD PLANS SHEET 36 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
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| NO. | DATE | BY | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
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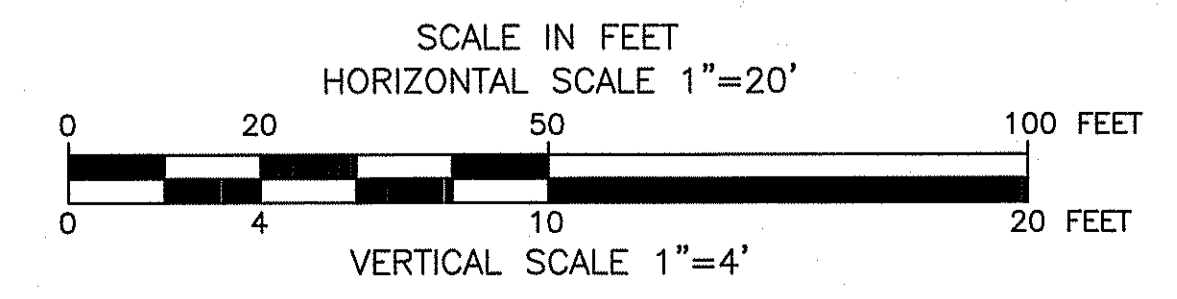
SB On-Ramp B



MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
 James H. Haber

1034+08.49 DIAMOND HILL ROAD SB
 60+00.00 SB OFF-RAMP



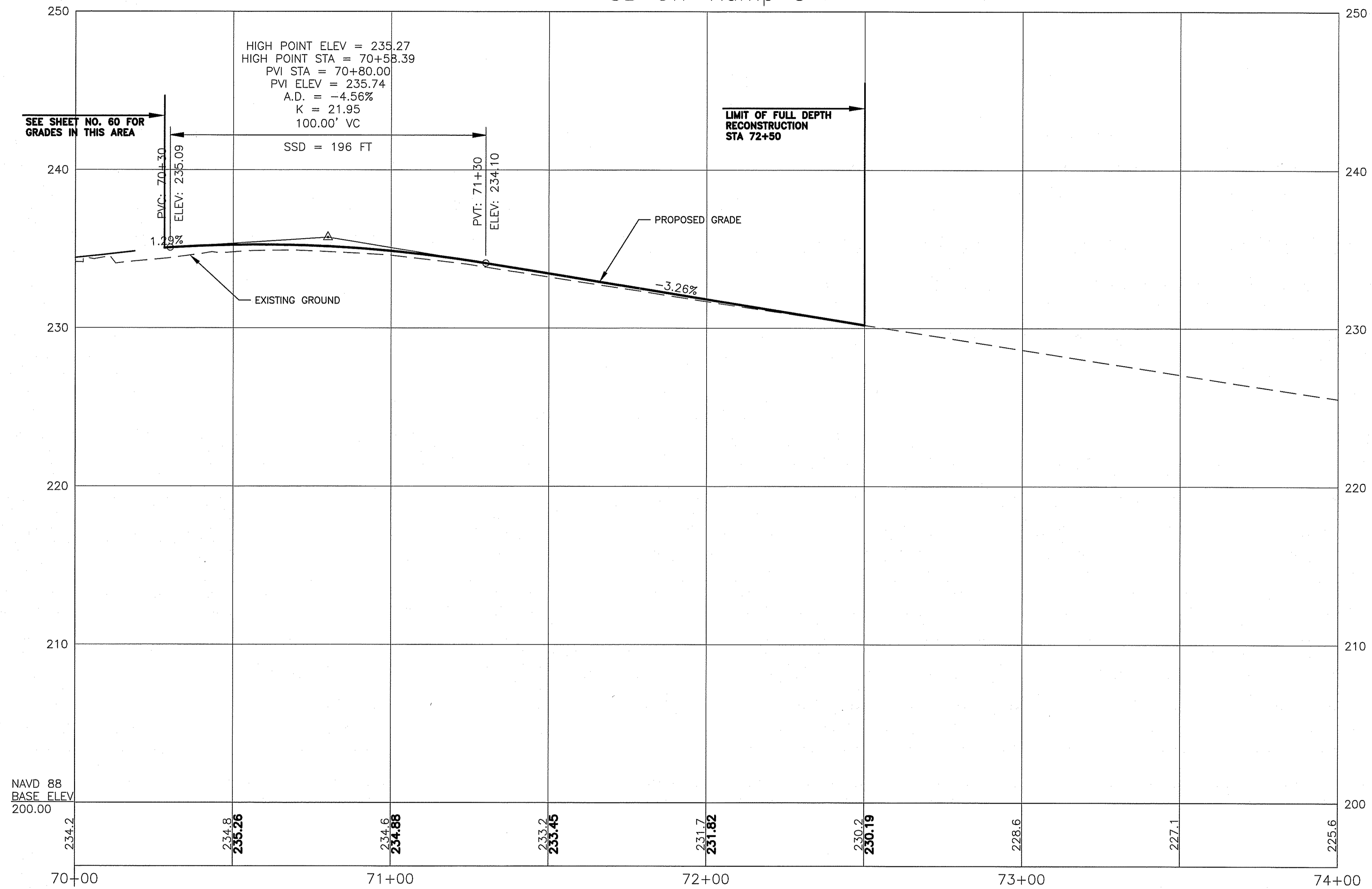
RPD PLANS
 SHEET 37 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

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| RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| CUMBERLAND, | RHODE ISLAND |
| SB ON-RAMP PROFILE | |
| CHECKED BY _____ | DATE 3/30/2018 SCALE _____ |

SB Off-Ramp C



SEE SHEET NO. 60 FOR GRADES IN THIS AREA

HIGH POINT ELEV = 235.27
 HIGH POINT STA = 70+58.39
 PVI STA = 70+80.00
 PVI ELEV = 235.74
 A.D. = -4.56%
 K = 21.95
 100.00' VC

SSD = 196 FT

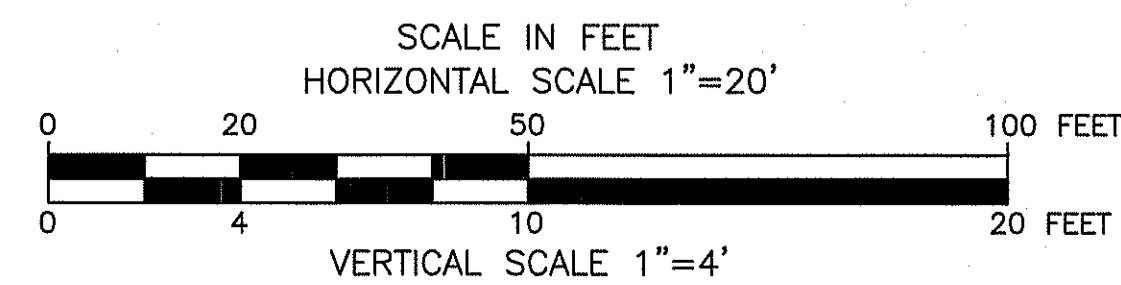
LIMIT OF FULL DEPTH RECONSTRUCTION STA 72+50

NAVD 88
 BASE ELEV
 200.00

MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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Jacob A. Haber

2034+28.58 DIAMOND HILL ROAD NB=
 70+00.00 SB OFF-RAMP=



RPD PLANS SHEET 38 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

| REVISIONS | | |
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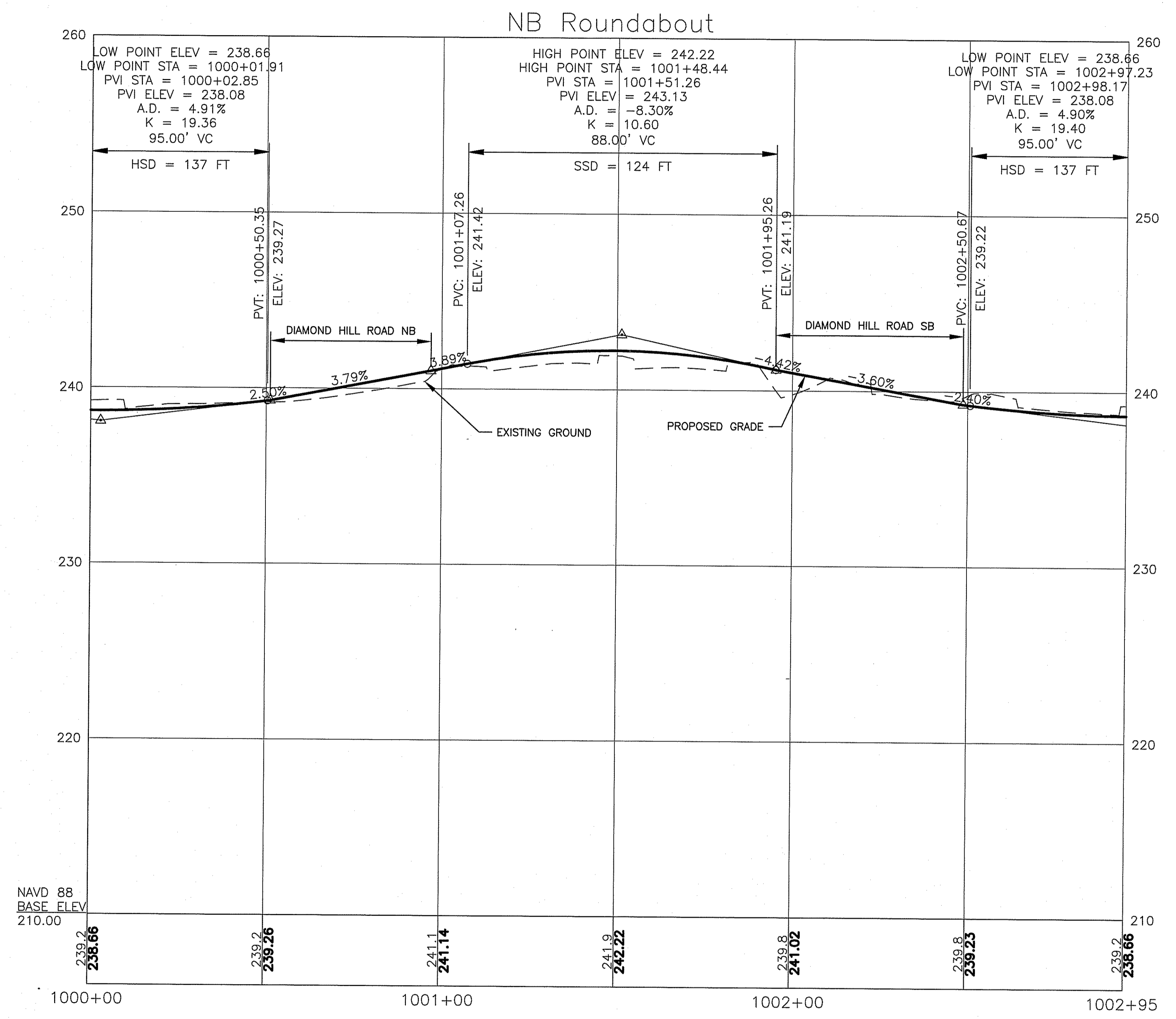
**RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295**

CUMBERLAND, RHODE ISLAND

**SB OFF-RAMP
 PROFILE**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

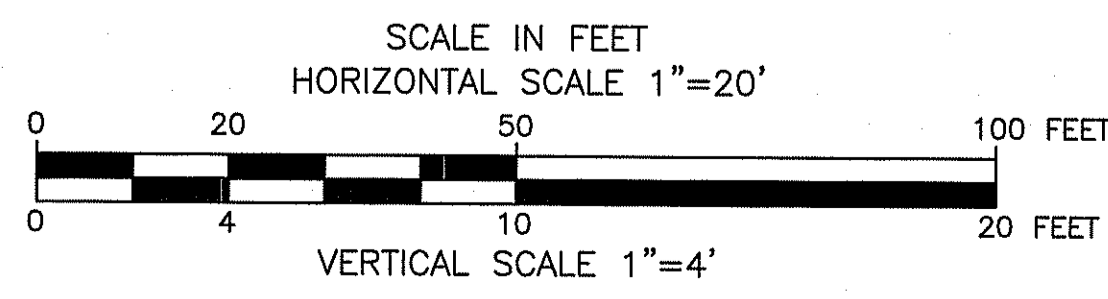


MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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James H. Harkin

**RPD PLANS
 SHEET 39 OF 54**



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

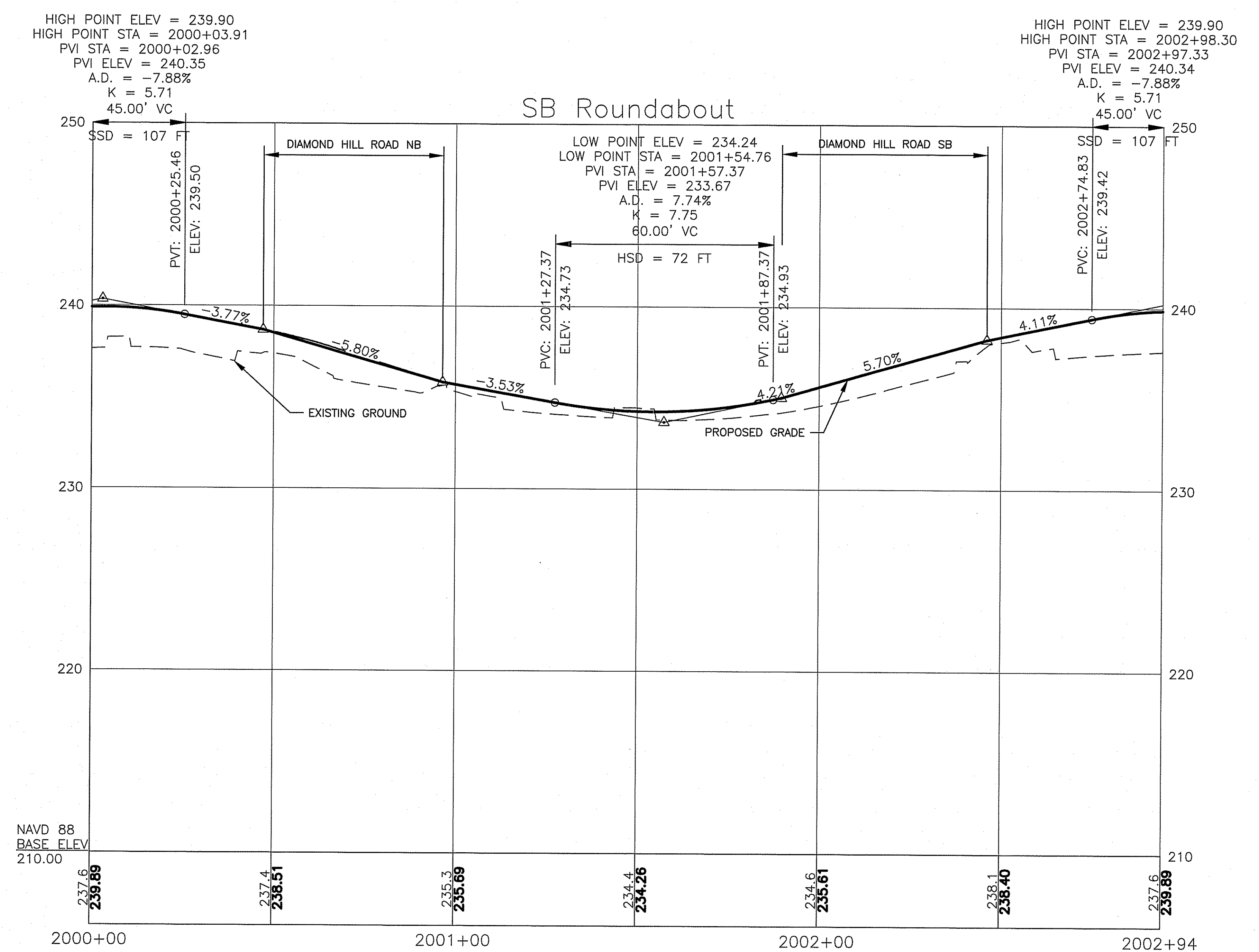
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

**NB ROUNDABOUT
 PROFILE**

CHECKED BY _____ DATE 3/30/2018 SCALE _____

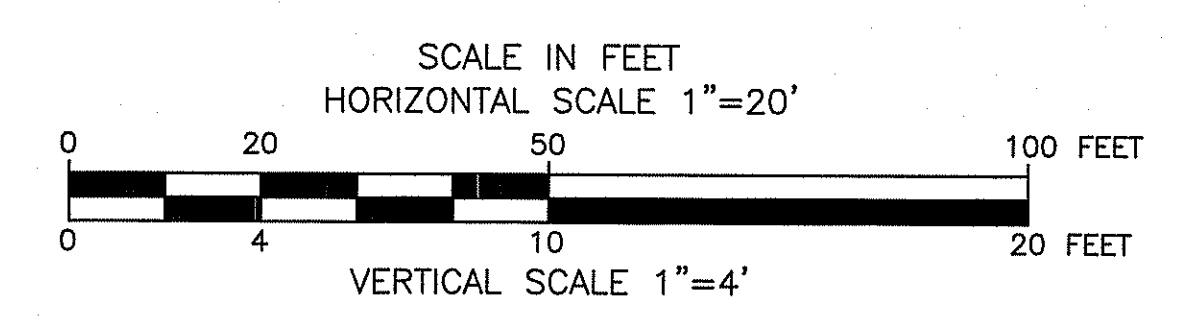


MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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DATED APR 26 2018 FILE # 18-009
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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James A. Haber

RPD PLANS
SHEET 40 OF 54

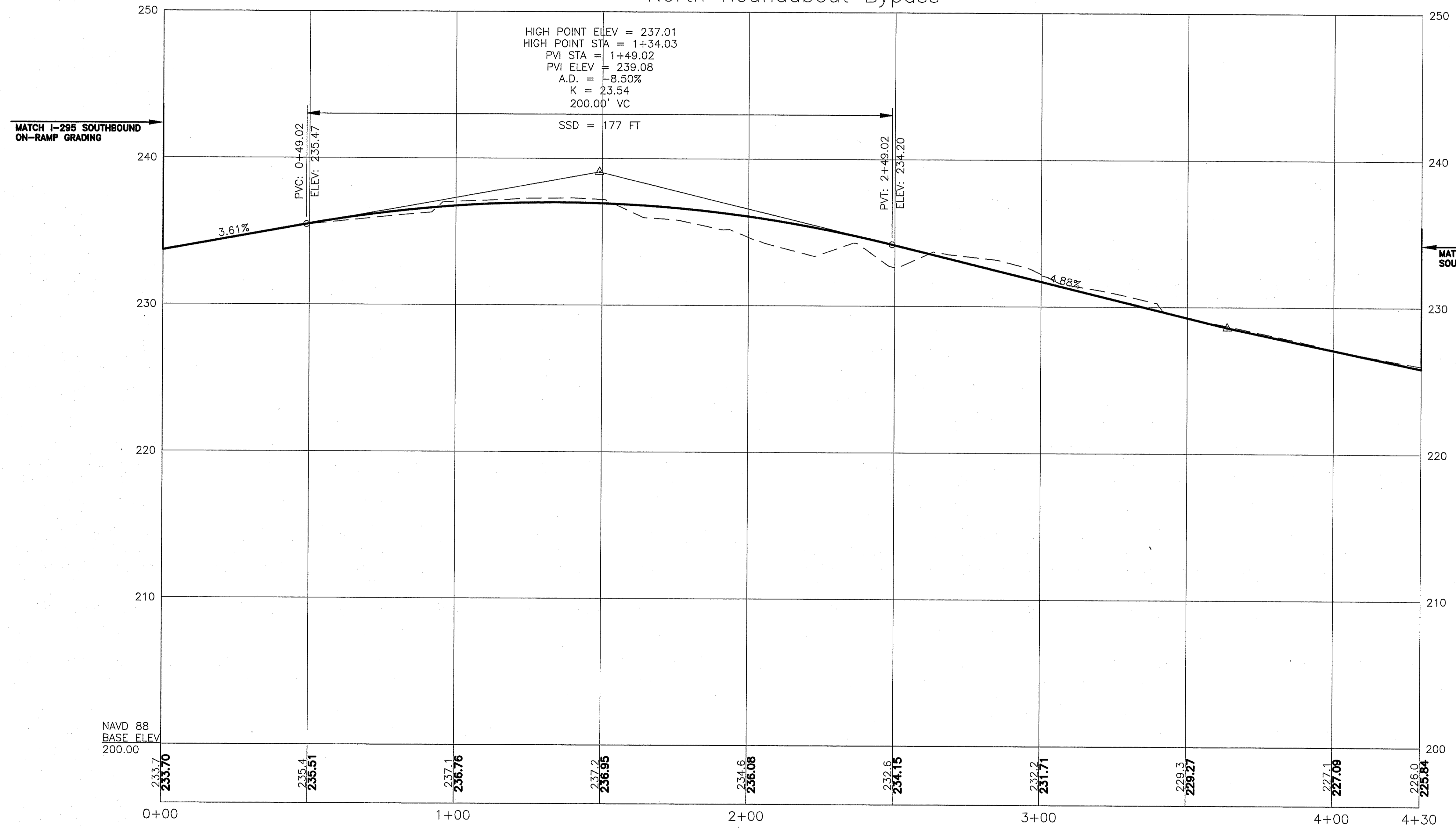


GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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| RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| CUMBERLAND, | RHODE ISLAND |
| SB ROUNDABOUT PROFILE | |
| CHECKED BY _____ | DATE 3/30/2018 SCALE _____ |

North Roundabout Bypass



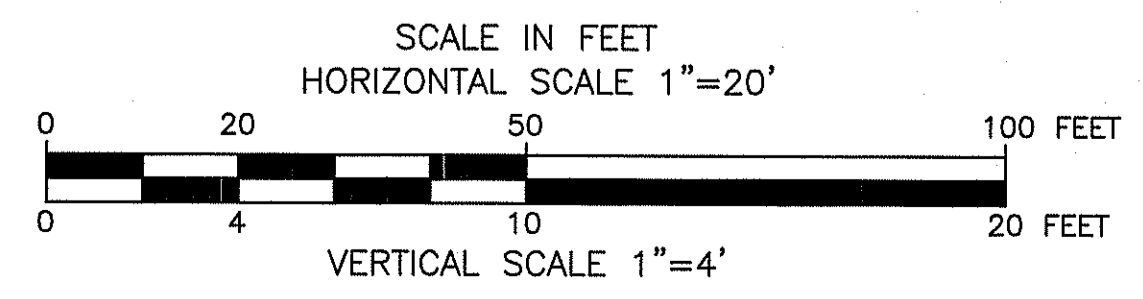
MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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James H. Haber

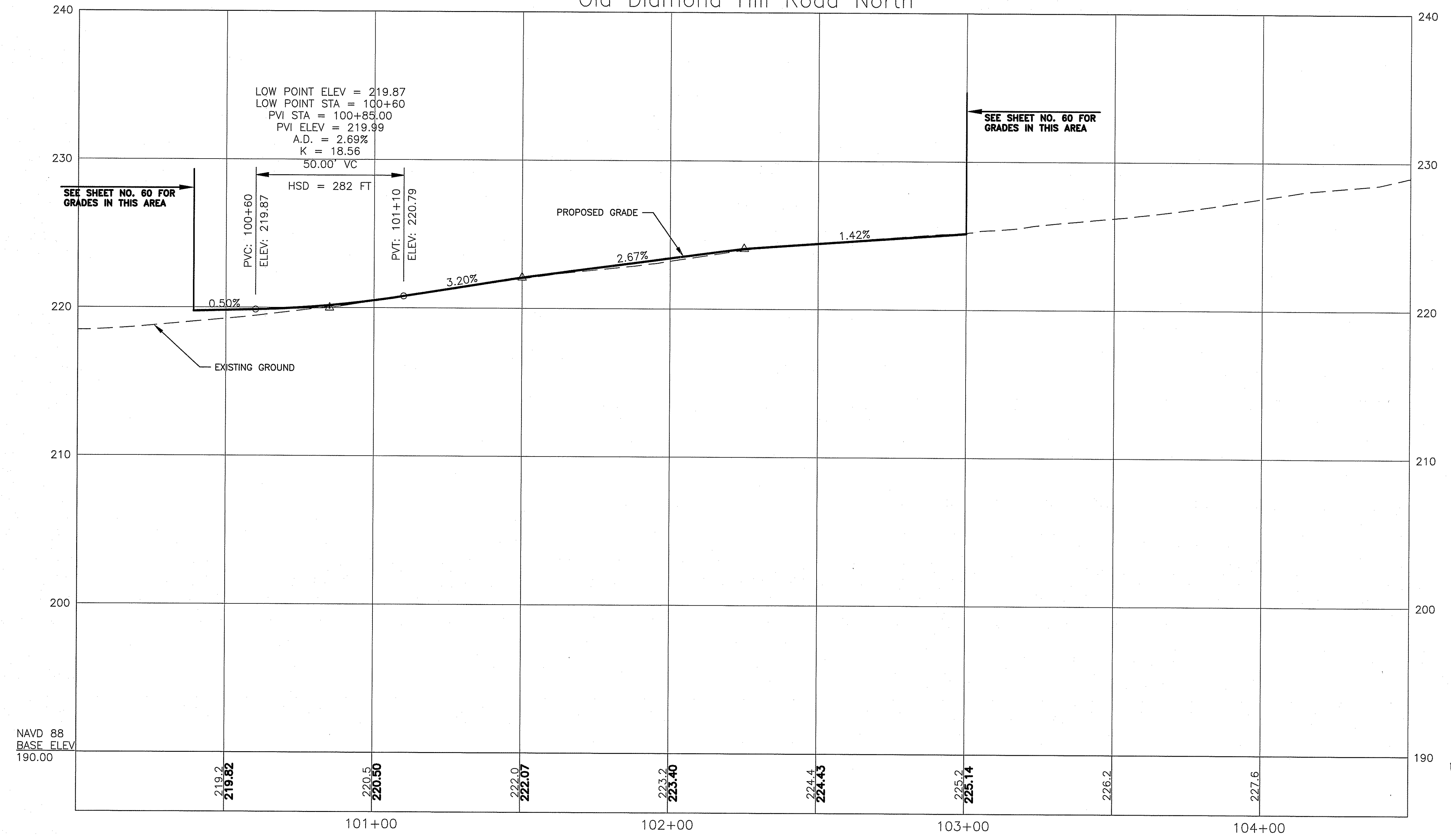
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| REVISIONS | | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION |
| NO. DATE BY | | | | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 |
| | | | | CUMBERLAND, RHODE ISLAND |
| | | | | BYPASS LANE PROFILE |
| | | | | CHECKED BY _____ DATE 3/30/2018 SCALE _____ |

RPD PLANS SHEET 41 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

Old Diamond Hill Road North



SEE SHEET NO. 60 FOR GRADES IN THIS AREA

SEE SHEET NO. 60 FOR GRADES IN THIS AREA

MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED 3/26/2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. Haber

| REVISIONS | | |
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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

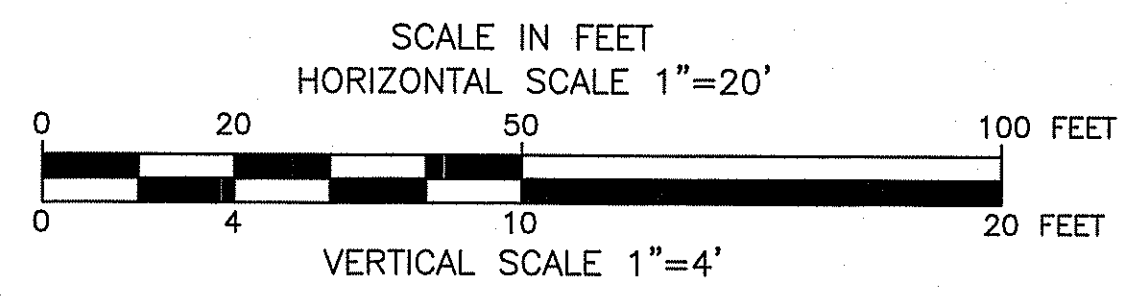
OLD DIAMOND HILL
PROFILE

CHECKED BY _____ DATE 3/30/2018 SCALE _____

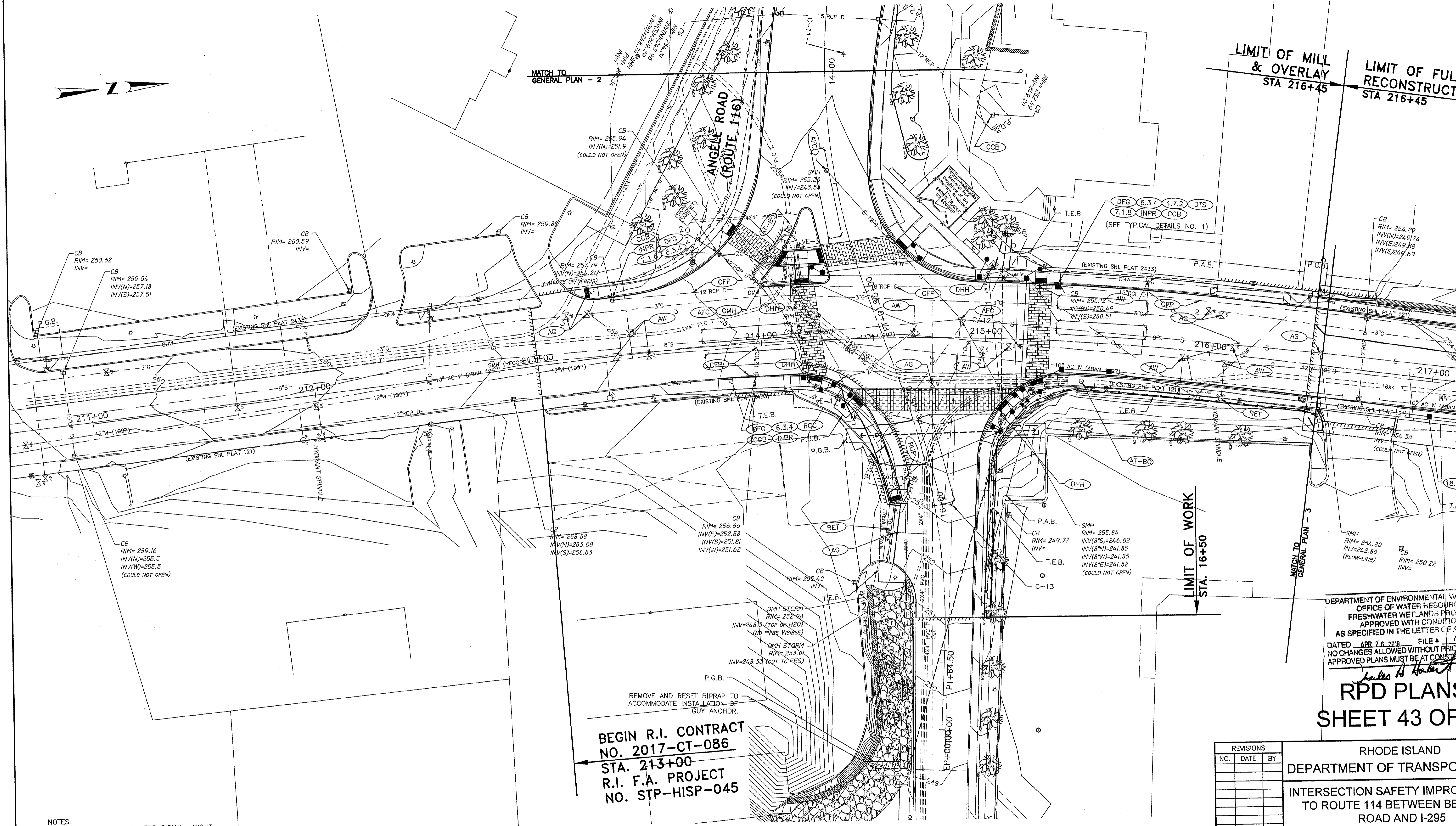
RPD PLANS

SHEET 42 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

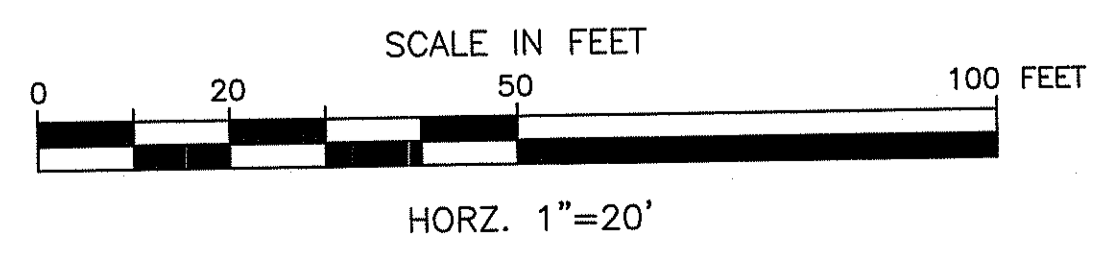


| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|--------------------|--------------|-------------------------|-------------|-----------|--------------|
| RI | STP-HISP-045 | | | 62 | 192 |



NOTES:
SEE TRAFFIC SIGNAL PLAN FOR SIGNAL LAYOUT

BEGIN R.I. CONTRACT NO. 2017-CT-086 STA. 213+00 R.I. F.A. PROJECT NO. STP-HISP-045



LIMIT OF MILL & OVERLAY STA 216+45
LIMIT OF FULL DEPT RECONSTRUCTION STA 216+45

LIMIT OF WORK STA. 16+50

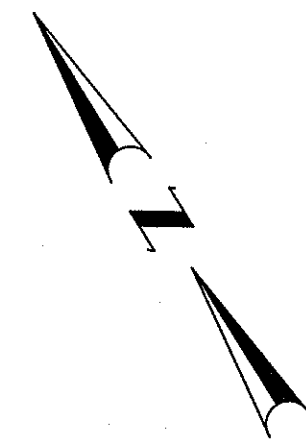
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 26 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Jacob H. Haber

RPD PLANS SHEET 43 OF 54

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| REVISIONS | | | RHODE ISLAND DEPARTMENT OF TRANSPORTATION | |
| NO. | DATE | BY | INTERSECTION SAFETY IMPROVEMENTS TO ROUTE 114 BETWEEN BEAR HILL ROAD AND I-295 | |
| | | | CUMBERLAND, RHODE ISLAND | |
| | | | DRAINAGE AND UTILITY PLAN - 1 | |
| | | | CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED | |

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers



← **LIMIT OF WORK STA. 11+00**

ANGELL ROAD (ROUTE 116)

ANGELL ROAD (ROUTE 116)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

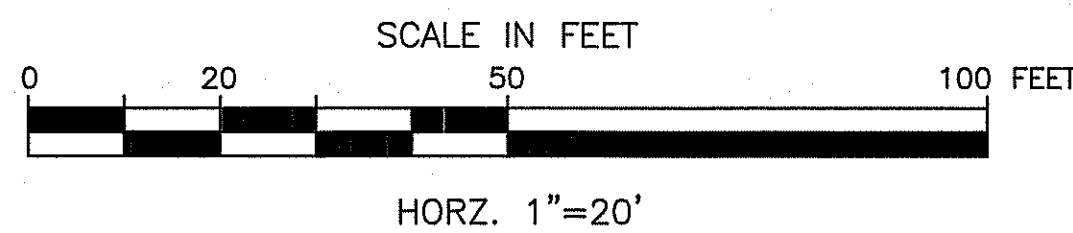
**RPD PLANS
 SHEET 44 OF 54**

| REVISIONS | | |
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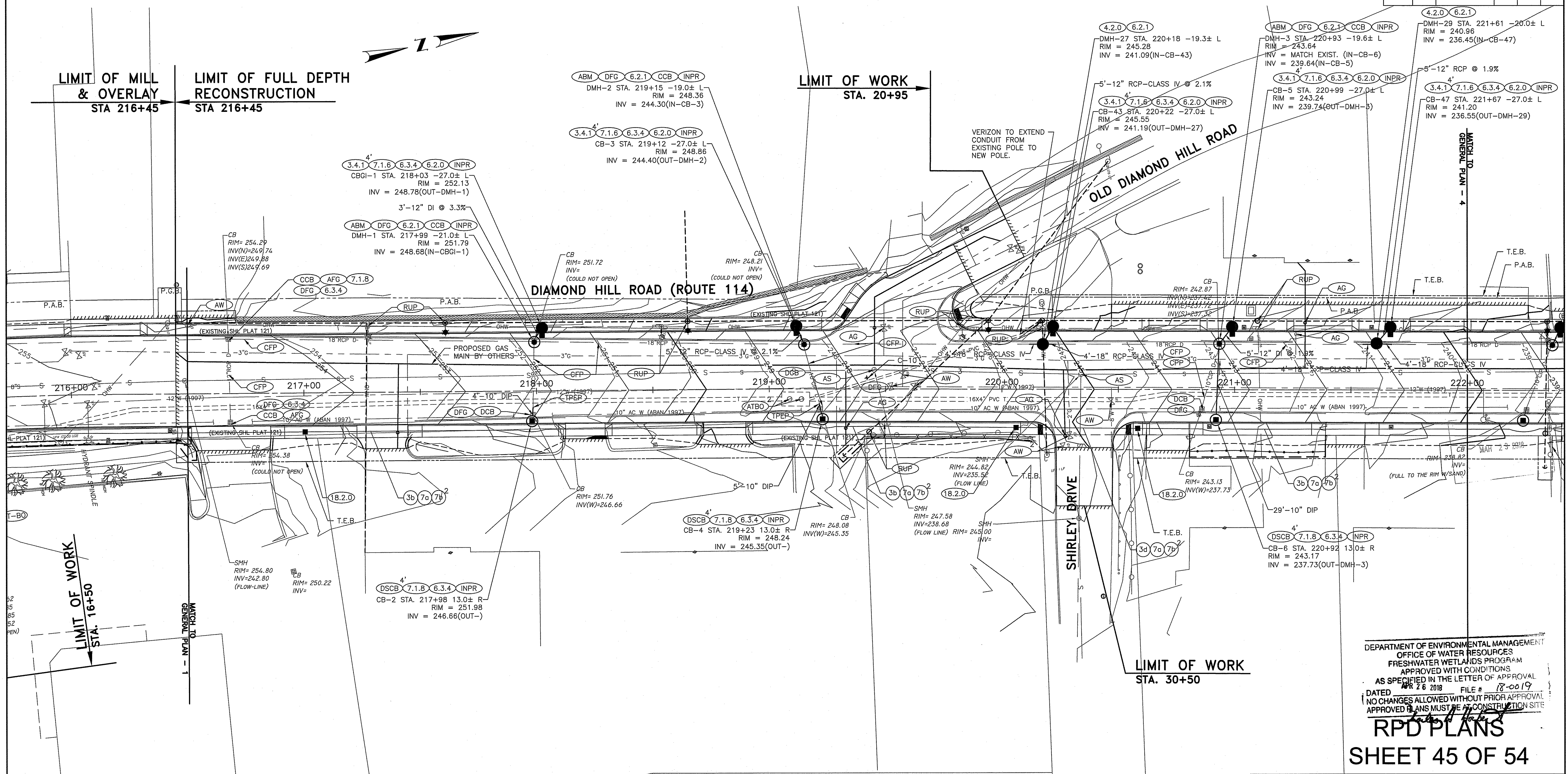
RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

**DRAINAGE AND
 UTILITY PLAN - 2**

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



LIMIT OF MILL & OVERLAY
 STA 216+45

LIMIT OF FULL DEPTH RECONSTRUCTION
 STA 216+45

LIMIT OF WORK
 STA. 20+95

LIMIT OF WORK
 STA. 30+50

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
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RPD PLANS

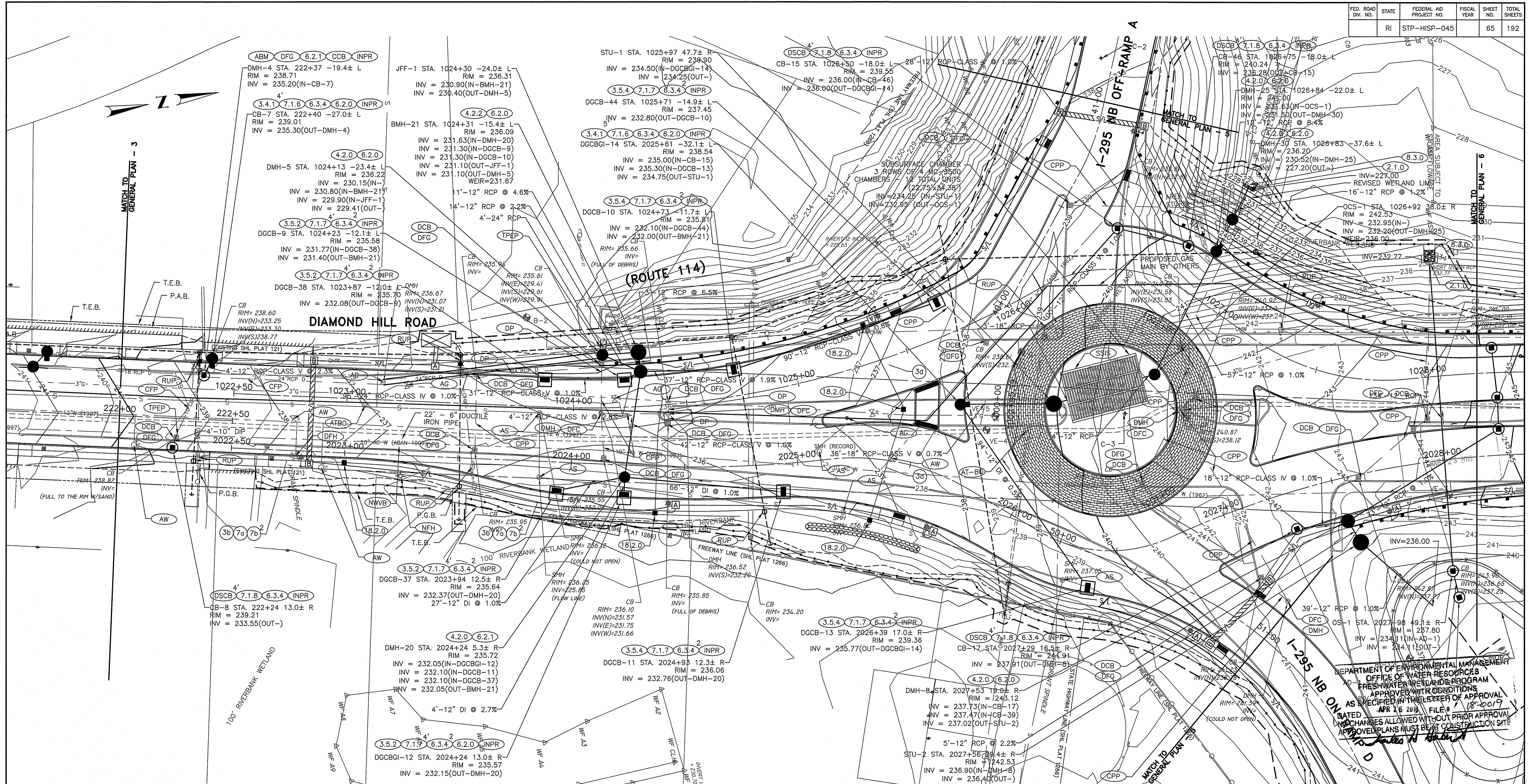
SHEET 45 OF 54

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

DRAINAGE AND UTILITY PLAN - 3

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



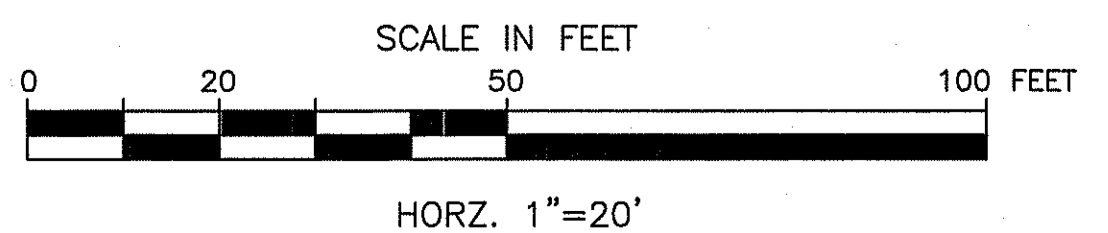
DIAMOND HILL ROAD

(ROUTE 114)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER QUALITY PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 APR 26 2018 FILE # 18-0019
 ANY CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

TRAFFIC SIGNAL MATERIALS LIST

- 3b ————— 3" PVC CONDUIT (UNDERGROUND)(40)
- 3d ————— 3" PVC CONDUIT (UNDERGROUND)(80)
- 7a ————— CABLE, SINGLE CONDUCTOR, NO. 6 A.W.G., 600V INSULATION
- 7b ————— LOOP DETECTOR SHIELDED, TWISTED CABLE, 2 CONDUCTOR, NO. 14 A.W.G.



**RPD PLANS
 SHEET 46 OF 54**

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

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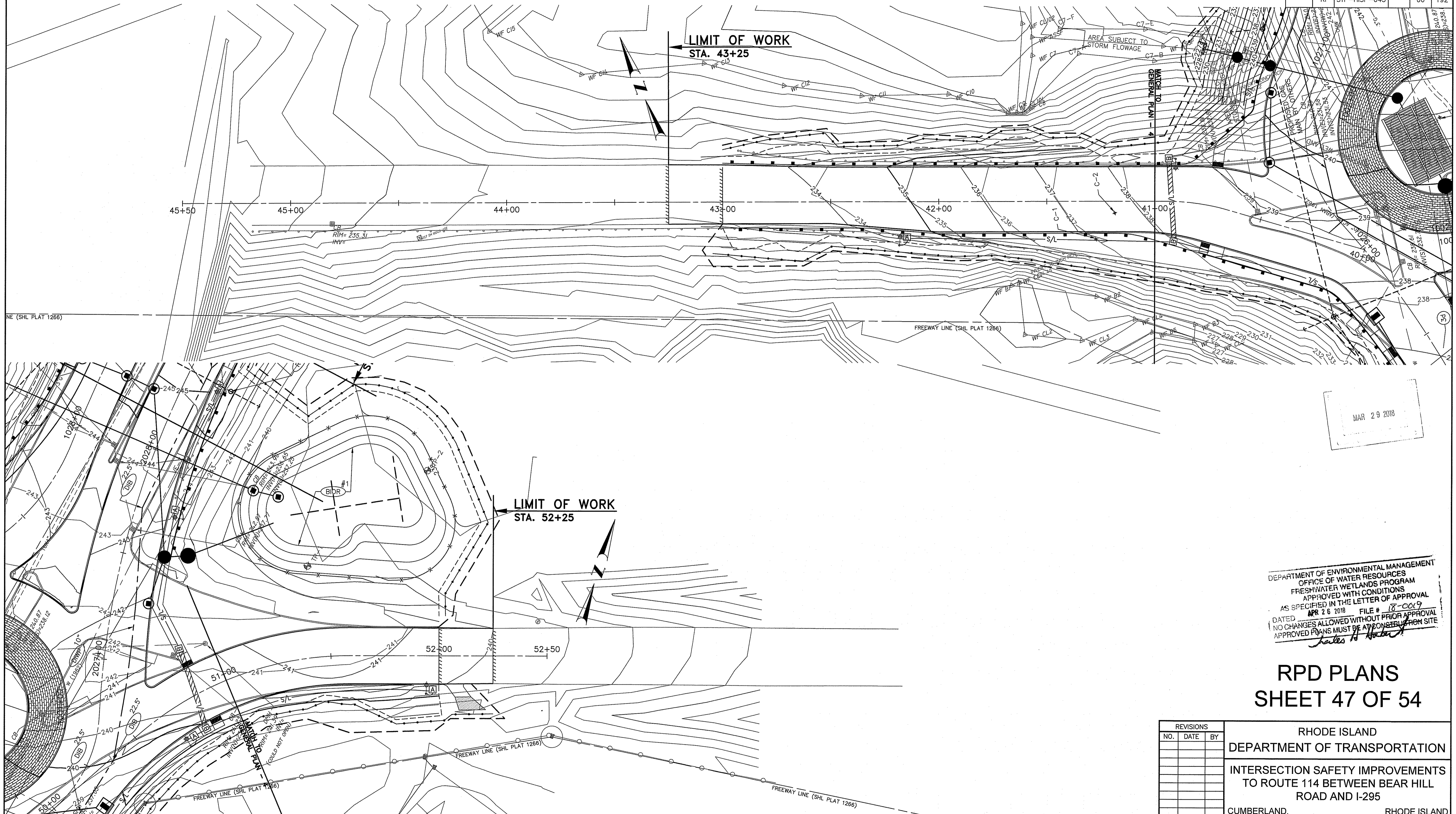
**RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION**

**INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295**

CUMBERLAND, RHODE ISLAND

**DRAINAGE AND
 UTILITY PLAN - 4**

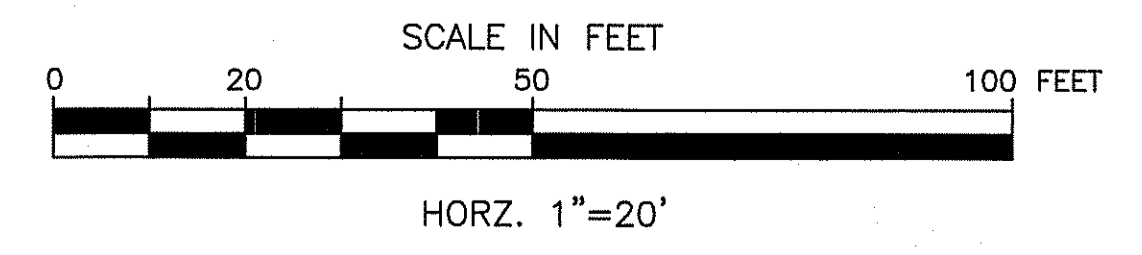
CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE
James R. Huber

RPD PLANS SHEET 47 OF 54



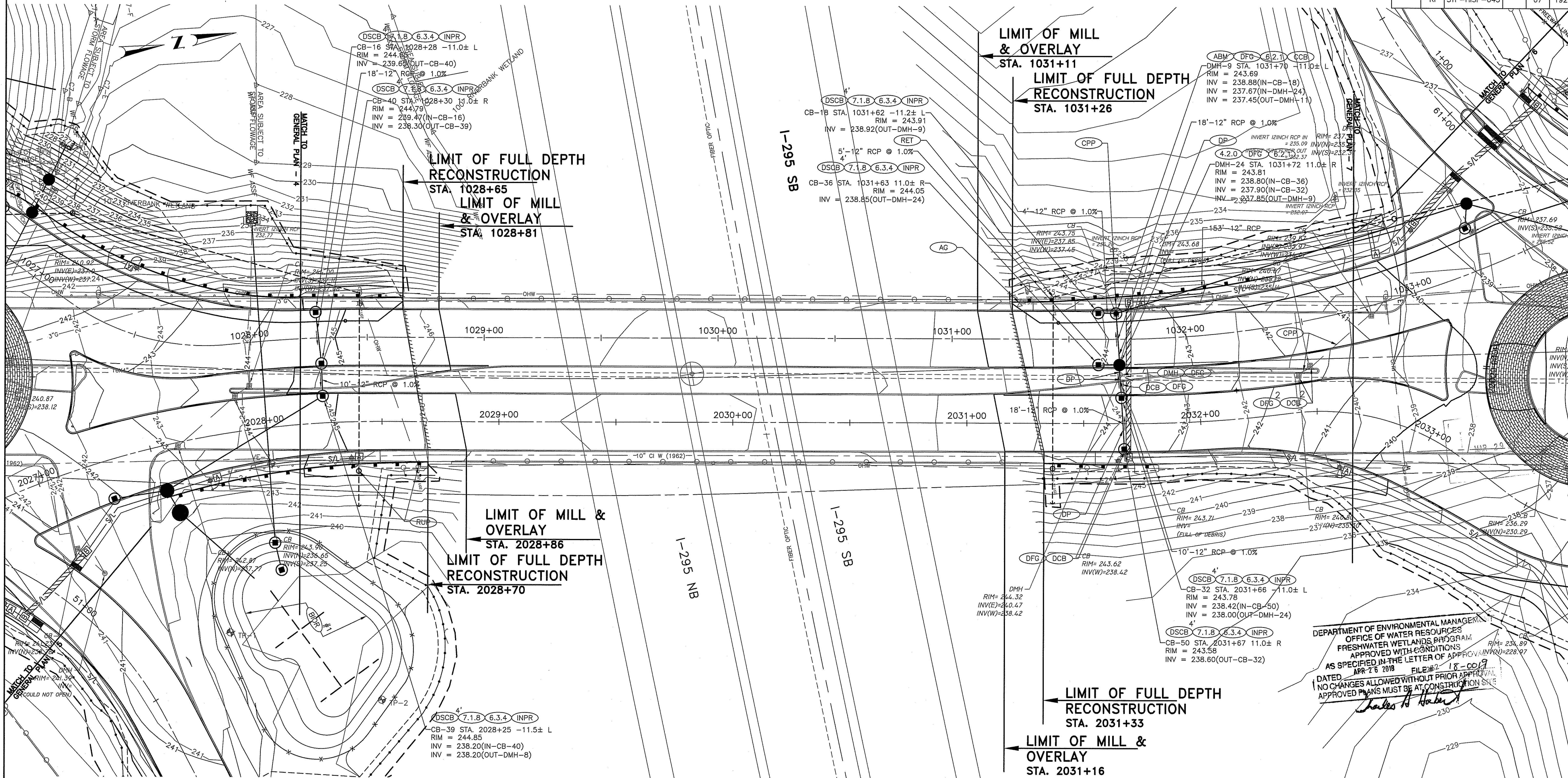
GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

**DRAINAGE AND
UTILITY PLAN - 5**

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



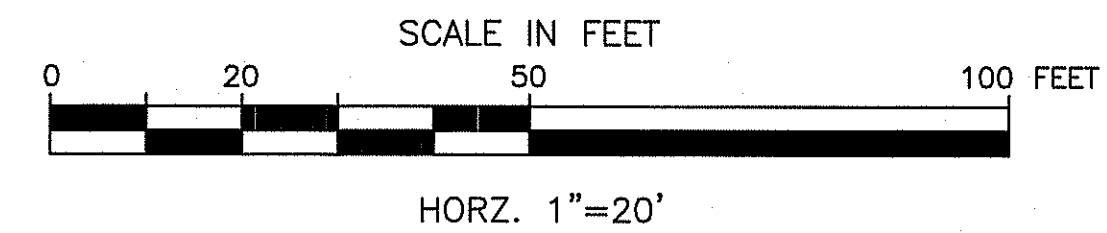
LIMIT OF FULL DEPTH RECONSTRUCTION
STA. 1028+65
LIMIT OF MILL & OVERLAY
STA. 1028+81

LIMIT OF MILL & OVERLAY
STA. 1031+11
LIMIT OF FULL DEPTH RECONSTRUCTION
STA. 1031+26

LIMIT OF MILL & OVERLAY
STA. 2028+86
LIMIT OF FULL DEPTH RECONSTRUCTION
STA. 2028+70

LIMIT OF FULL DEPTH RECONSTRUCTION
STA. 2031+33
LIMIT OF MILL & OVERLAY
STA. 2031+16

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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RPD PLANS SHEET 48 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

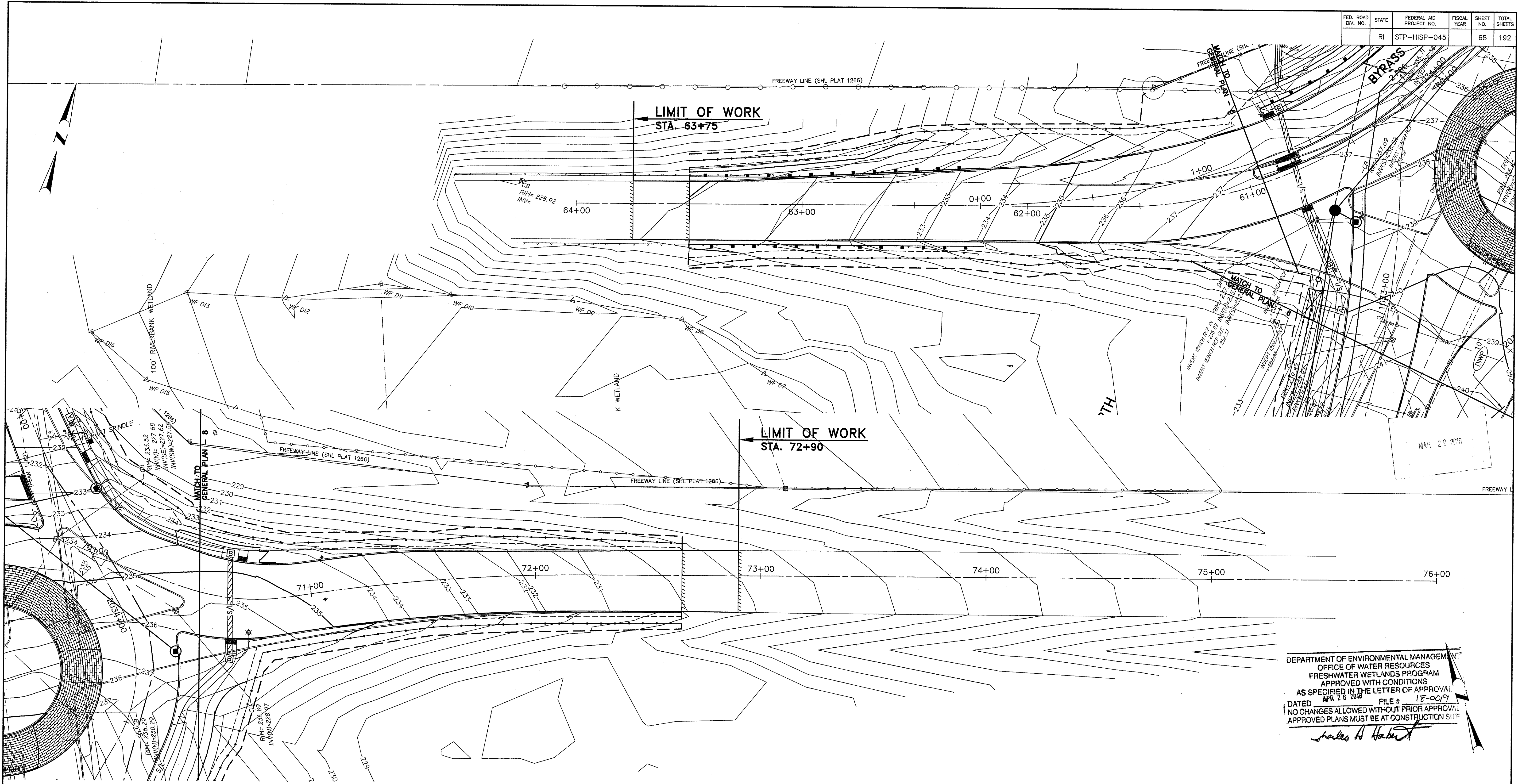
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

**DRAINAGE AND
 UTILITY PLAN - 6**

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED



MAR 29 2018

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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 DATED APR 26 2018 FILE # 18-0079
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles H. Haber

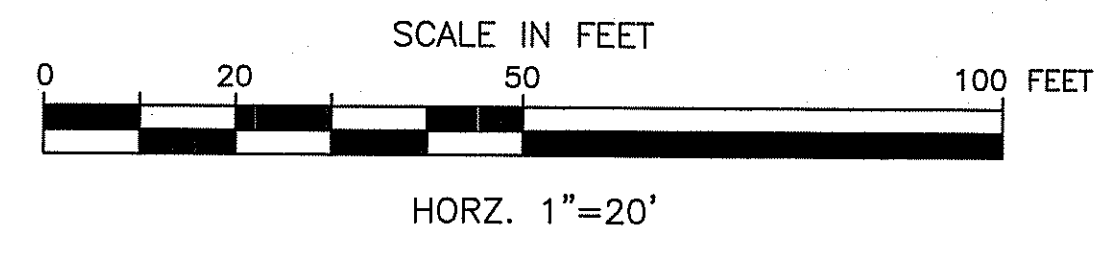
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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

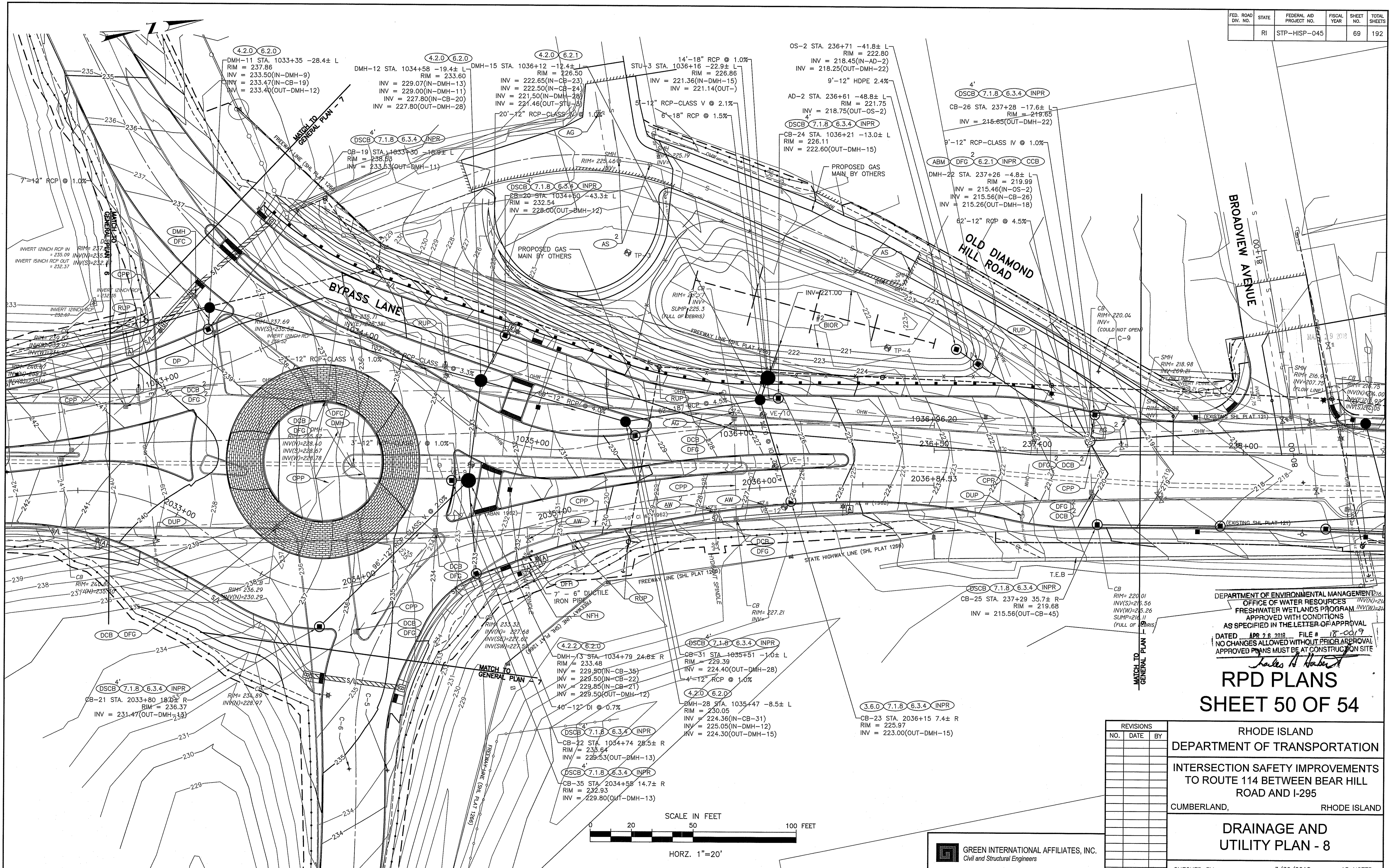
DRAINAGE AND
 UTILITY PLAN - 7

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

RPD PLANS
 SHEET 49 OF 54



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED APR 25 2018 FILE # 18-0019
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James B. Hubbard

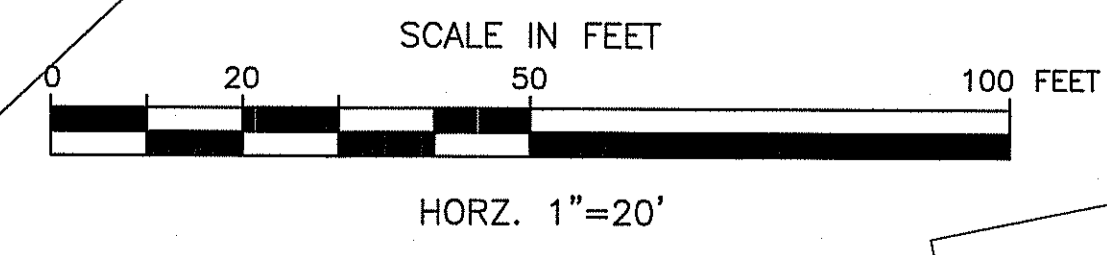
RPD PLANS SHEET 50 OF 54

RHODE ISLAND
DEPARTMENT OF TRANSPORTATION
INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295
CUMBERLAND, RHODE ISLAND

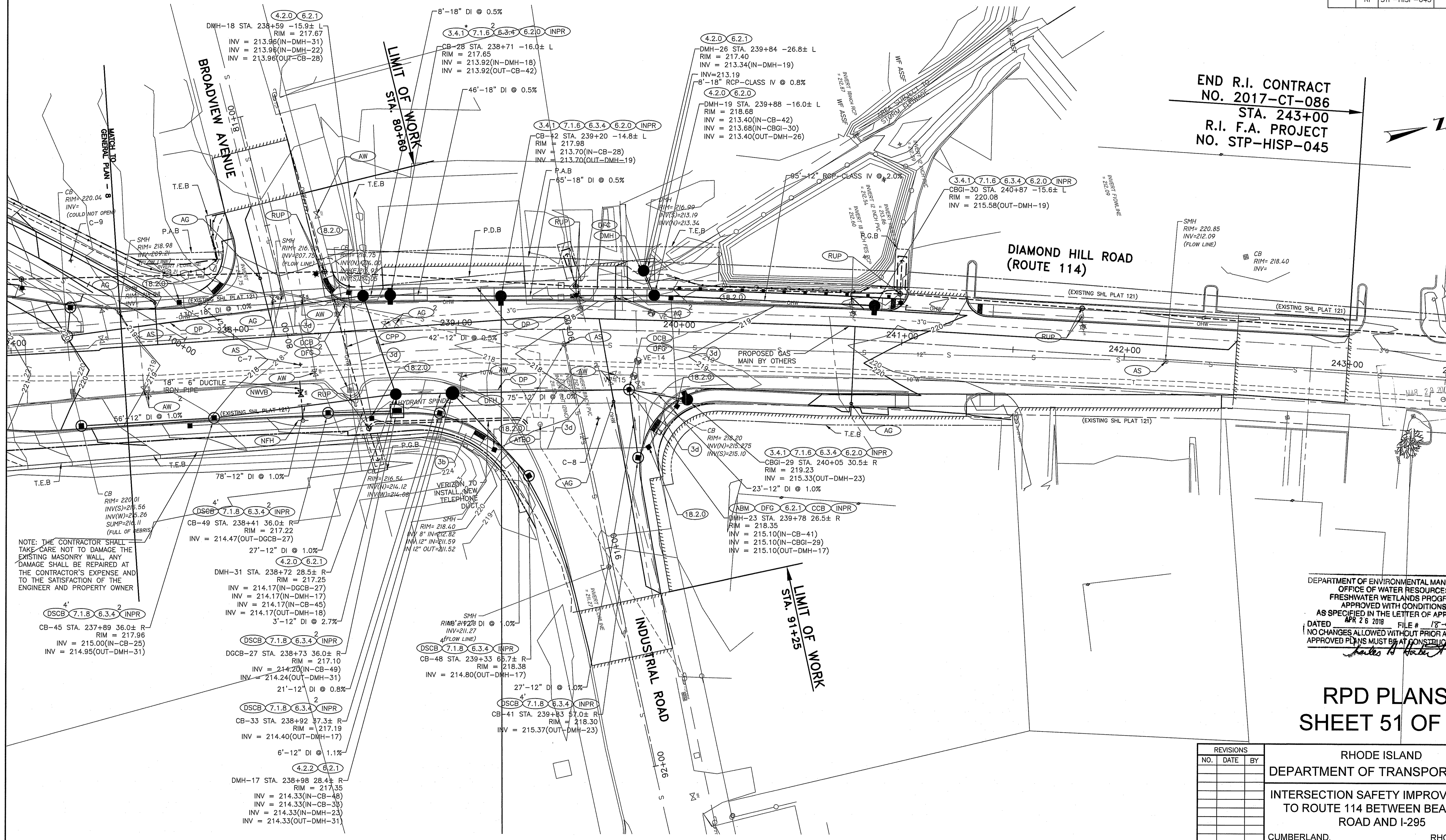
DRAINAGE AND UTILITY PLAN - 8

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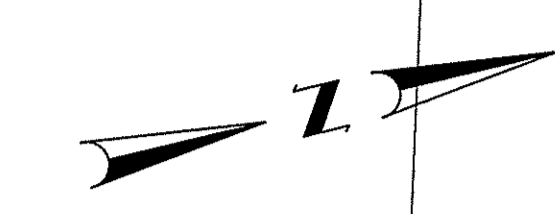
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GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers



END R.I. CONTRACT NO. 2017-CT-086
 STA. 243+00
 R.I. F.A. PROJECT NO. STP-HISP-045



NOTE: THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING MASONRY WALL. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ENGINEER AND PROPERTY OWNER

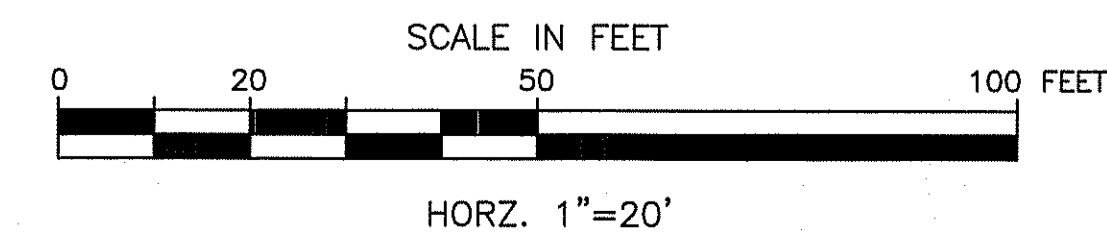
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-2019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
James H. Horbe

RPD PLANS SHEET 51 OF 54

TRAFFIC SIGNAL MATERIALS LIST

- 3b _____ 3" PVC CONDUIT (UNDERGROUND)(40)
- 3d _____ 3" PVC CONDUIT (UNDERGROUND)(80)

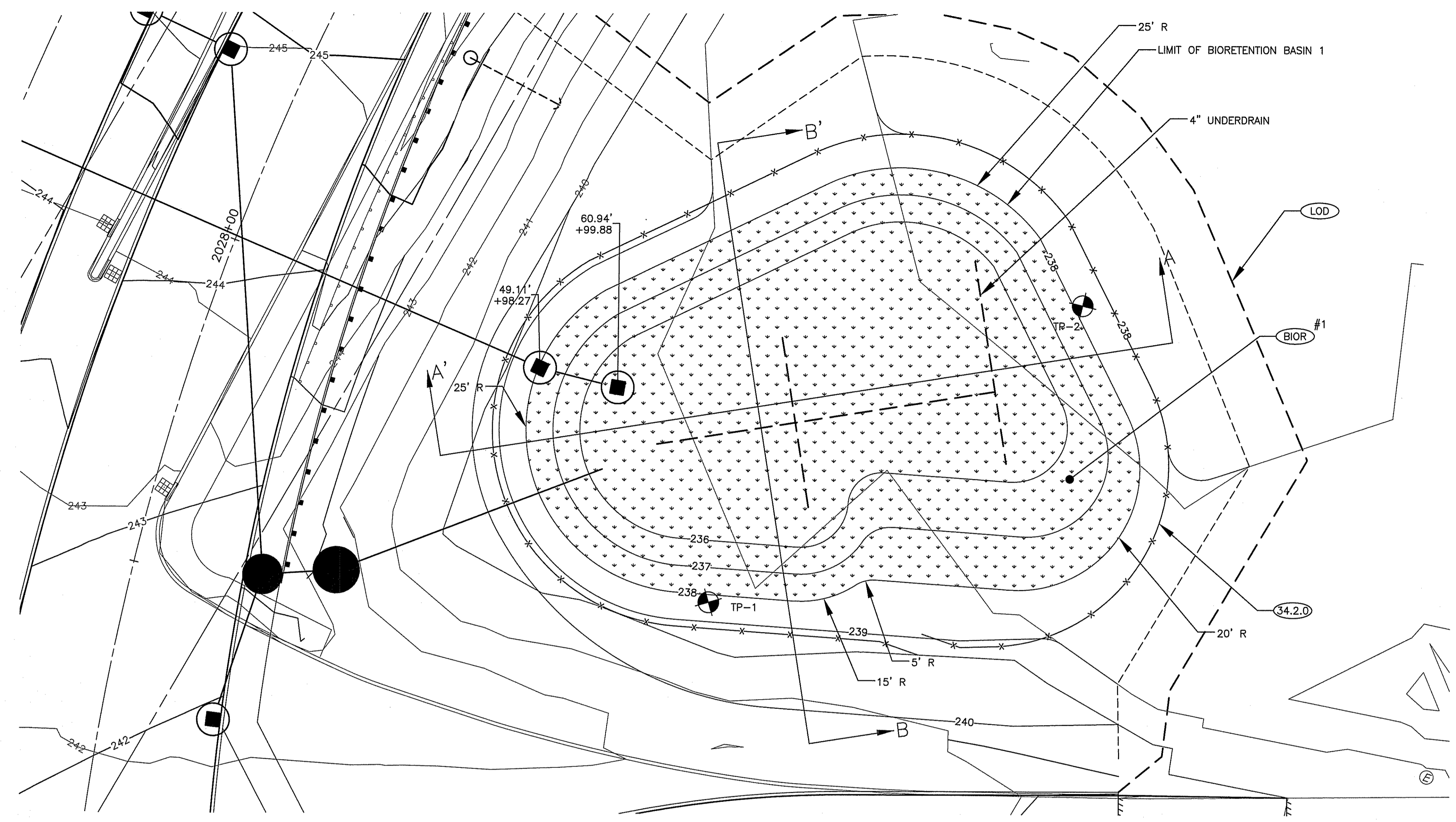
*CB-28 SHALL BE RI STD 3.4.1. THE STRUCTURE SHALL BE MODIFIED TO INCLUDE AN INLET STONE ON THE WEST SIDE OF THE STRUCTURE. THE COST ASSOCIATED WITH THIS MODIFICATION SHALL BE INCIDENTAL TO THE COST OF THE STRUCTURE. THE COST OF THE INLET STONE SHALL BE PAID FOR UNDER ITEM 702.0531.



GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND
**DRAINAGE AND
 UTILITY PLAN - 9**
 CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

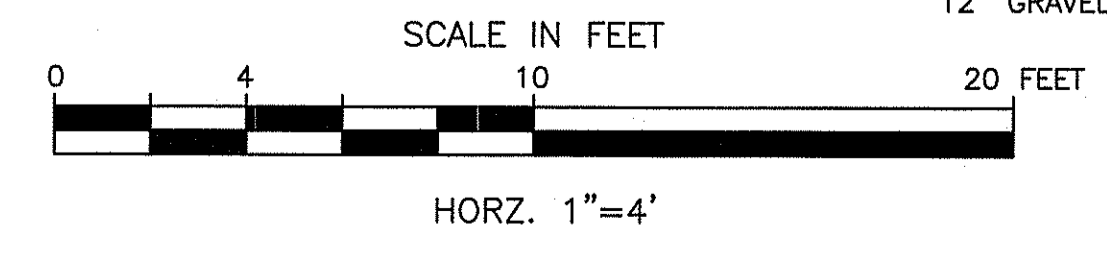
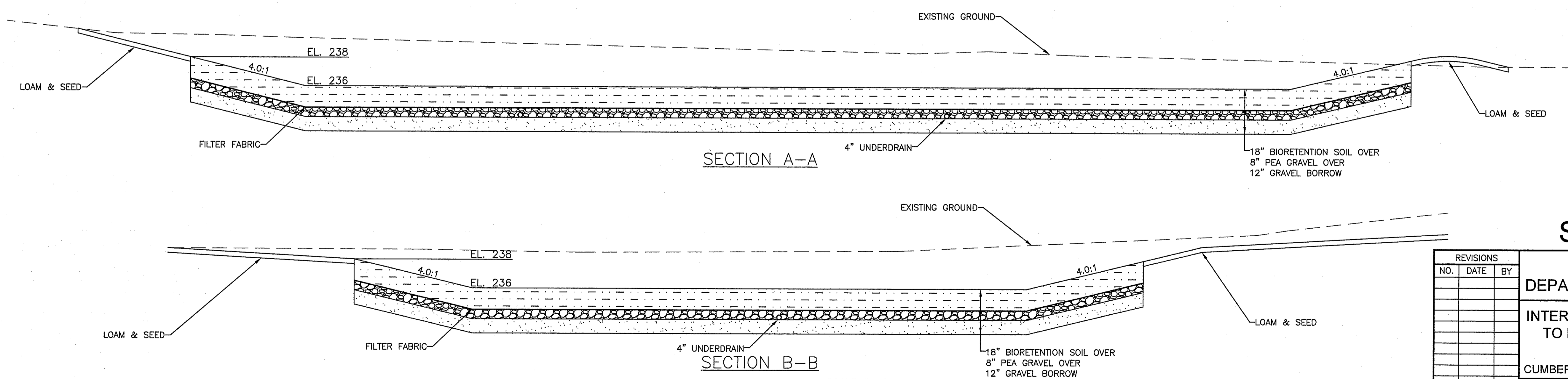
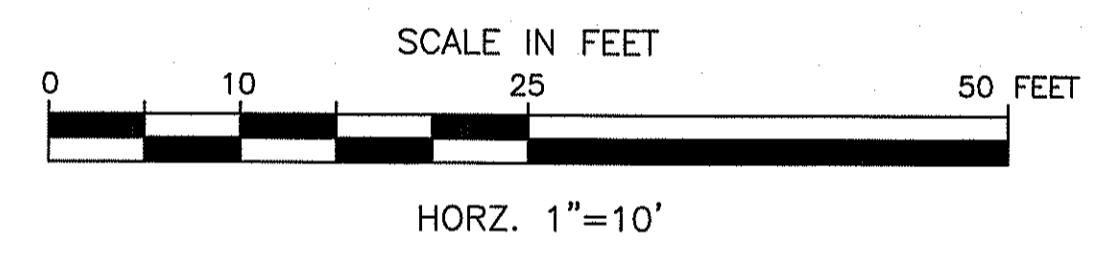


TEST PIT DATA
 TP-1
 GROUND ELEVATION: 240'
 REDOXIMORPHIC FEATURES NOT OBSERVED
 GROUNDWATER NOT OBSERVED

TP-2
 GROUND ELEVATION: 238'
 REDOXIMORPHIC FEATURES NOT OBSERVED
 GROUNDWATER NOT OBSERVED

BIORETENTION SOIL GRADATION:
 SAND: 85-88%
 SILT: 8-12%
 CLAY: 0-2%
 ORGANIC MATTER: 3-5%

MAR 29 2018



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED APR 26 2018 FILE # 18-0019
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

James A. Haber

**RPD PLANS
 SHEET 52 OF 54**

RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND

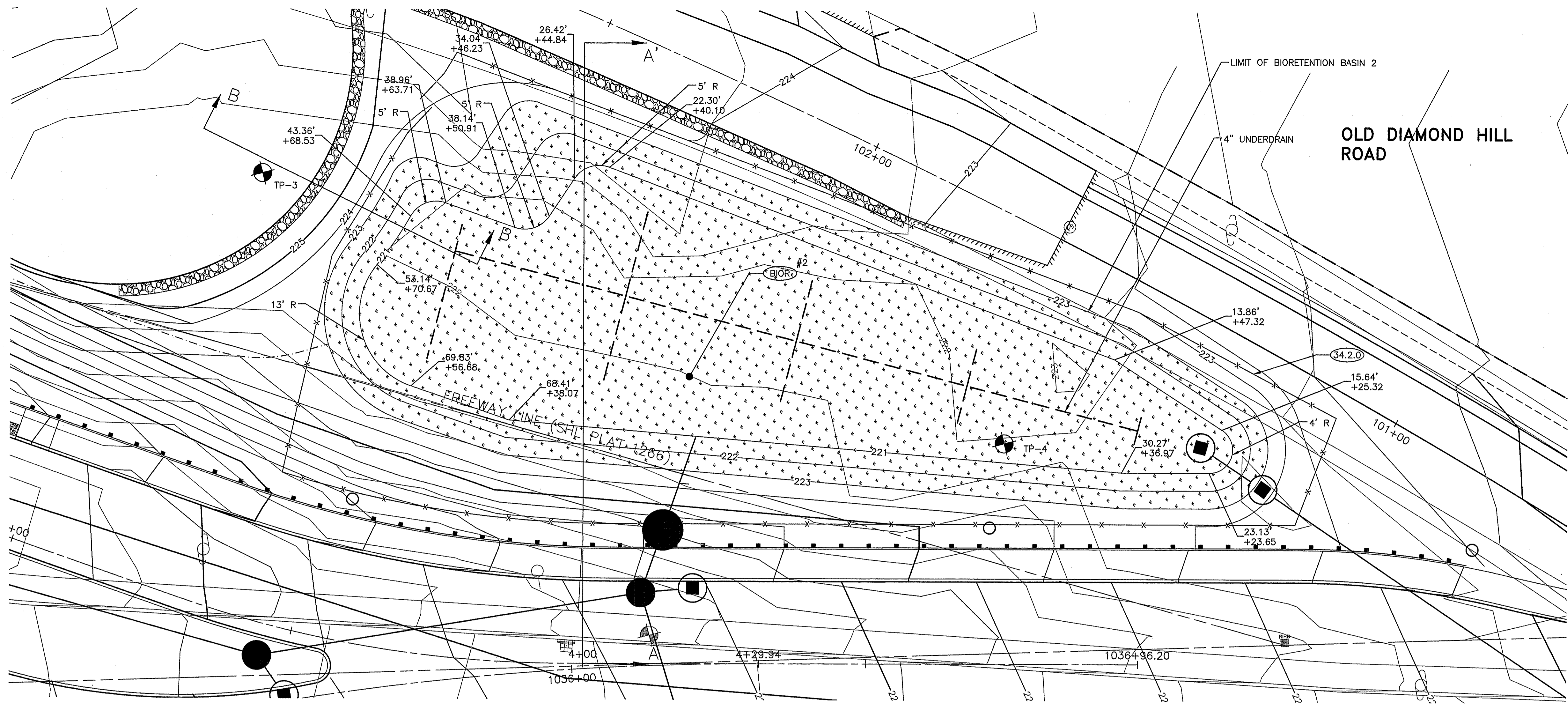
**BIORETENTION BASIN - 1
 TYPICAL DETAILS**

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GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

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| FED. ROAD DIV. NO. | STATE | FEDERAL AID PROJECT NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| | RI | STP-HISP-045 | | 72 | 192 |

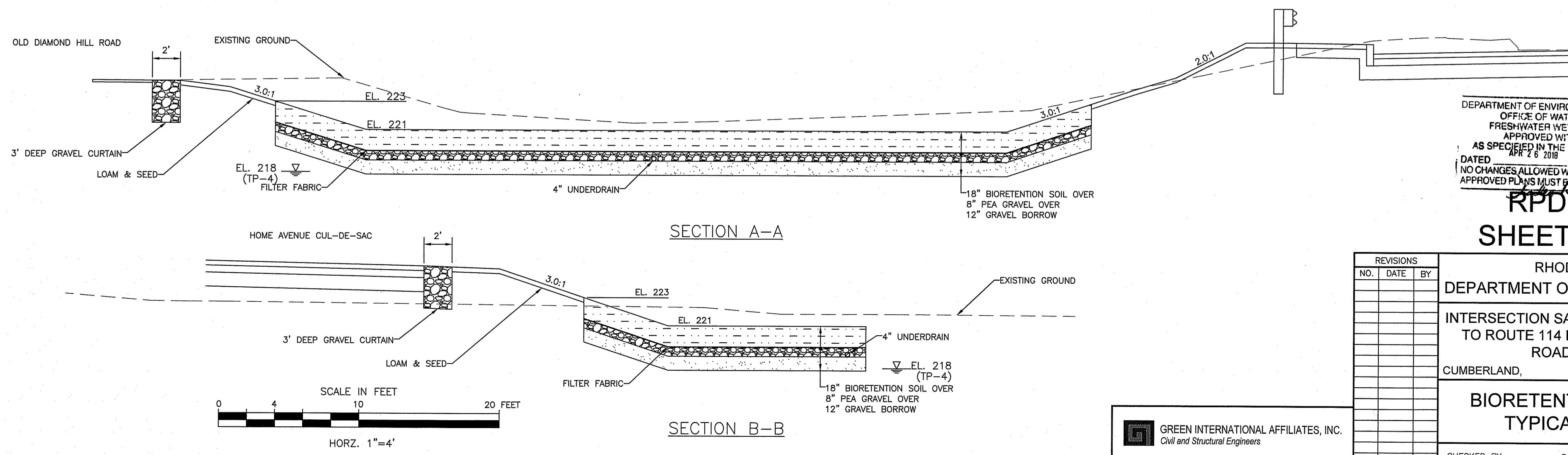
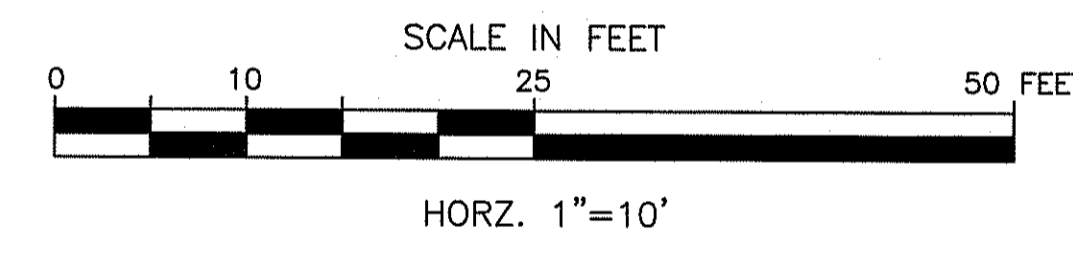


TEST PIT DATA
TP-3
 GROUND ELEVATION: 223'
 REDOXIMORPHIC FEATURES OBSERVED AT 4 FEET
 GROUNDWATER OBSERVED AT 5.8 FEET
TP-4
 GROUND ELEVATION: 222'
 REDOXIMORPHIC FEATURES OBSERVED AT 4 FEET
 GROUNDWATER OBSERVED AT 6.1 FEET

BIORETENTION SOIL GRADATION:
 SAND: 85-88%
 SILT: 8-12%
 CLAY: 0-2%
 ORGANIC MATTER: 3-5%

NOTES
 ALL STATION AND OFFSET CALLOUTS REFERENCE THE OLD DIAMOND HILL ROAD ALIGNMENT

MAR 29 2018



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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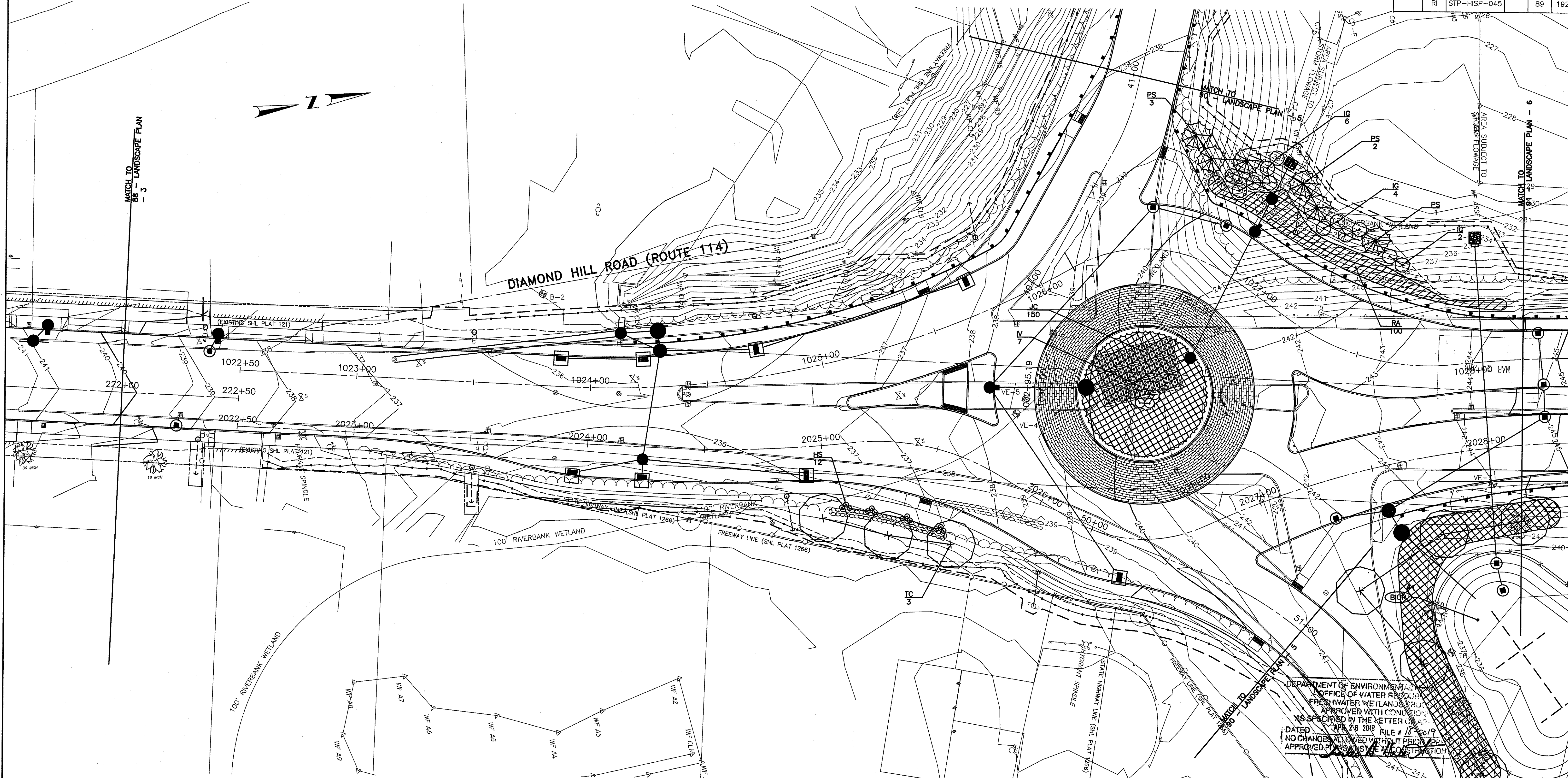
RPD PLANS
SHEET 53 OF 54

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RHODE ISLAND
 DEPARTMENT OF TRANSPORTATION
 INTERSECTION SAFETY IMPROVEMENTS
 TO ROUTE 114 BETWEEN BEAR HILL
 ROAD AND I-295
 CUMBERLAND, RHODE ISLAND
BIORETENTION BASIN - 2
TYPICAL DETAILS

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED

GREEN INTERNATIONAL AFFILIATES, INC.
 Civil and Structural Engineers



MATCH TO
86 - LANDSCAPE PLAN

MATCH TO
87 - LANDSCAPE PLAN - 6

DIAMOND HILL ROAD (ROUTE 114)

100' RIVERBANK WETLAND

100' RIVERBANK WETLAND

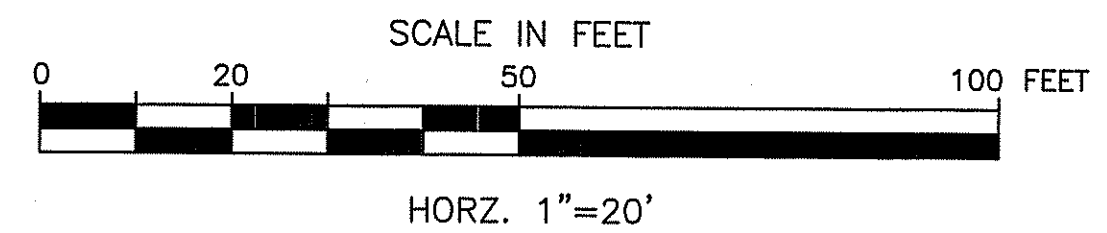
100' RIVERBANK WETLAND

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF
DATED APR 26 2018 FILE # 10-0017
NO CHANGES ALLOWED WITHOUT PRIOR
APPROVED PLANS AND SITE CONSTRUCTION

PLANT LIST - LANDSCAPE PLAN 4

| QTY | Key | Botanical Name | Common Name | Size | Condition |
|-----|-----|--|------------------------------|------------|-----------|
| 12 | HS | <i>Hemerocallis 'Stella D'Oro'</i> | Stella D'Oro Daylily | 1 Gal. | Container |
| 12 | IG | <i>Ilex glabra</i> | Inkberry | 2½-3' HT. | B&B |
| 7 | IV | <i>Ilex verticillata 'Red Sprite' *</i> | Red Sprite Winterberry | 2-3' HT. | Container |
| 150 | JC | <i>Juniperus conferta 'Blue Pacific'</i> | Blue Pacific Shore Juniper | 1½-2' HT. | Container |
| 6 | PS | <i>Pinus Strobus</i> | White Pine | 4-5' HT. | B&B |
| 100 | RA | <i>Rhus aromatic 'Gro-low'</i> | Grow Low Fragrant Sumac | 1-1½' HT. | Container |
| 3 | TC | <i>Tilia cordata 'Greenspire'</i> | Greenspire Littleleaf Linden | 2-2½' Cal. | B&B |

*INCLUDE ONE MALE PER PLANTING GROUP FOR POLLINATION
SEE LANDSCAPE PLAN 1 FOR TOTAL PLANT LIST



RPD PLANS SHEET 54 OF 54

GREEN INTERNATIONAL AFFILIATES, INC.
Civil and Structural Engineers

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RHODE ISLAND
DEPARTMENT OF TRANSPORTATION

INTERSECTION SAFETY IMPROVEMENTS
TO ROUTE 114 BETWEEN BEAR HILL
ROAD AND I-295

CUMBERLAND, RHODE ISLAND

LANDSCAPE PLAN - 4

CHECKED BY _____ DATE 3/30/2018 SCALE AS NOTED