#### REVIEWER NOTES

- I. ALL WORK WILL BE PERFORMED ON THE BRIDGE DECK, NE RETAINING WALL, AND ROADWAY EXCEPT FOR WATERPROOFING OF SUBSTRUCTURE CONCRETE, POINTING AND PATCHING MASONRY, AND INSTALLING DRAINAGE.
- 2. THERE ARE NO IN-STREAM OR WETLAND IMPACTS.
- 3. NEW DRAINAGE STRUCTURES OUTLETTING TO THE BROOK WILL BE INCLUDED.
- 4. THE BRIDGE WILL BE CLOSED FOR A MAXIMUM OF 10 DAYS DURING CONSTRUCTION.
- 5. THE SIDEWALK WILL BE CLOSED DURING THE BRIDGE CLOSURE AND FOR ONE WEEK AFTER THE BRIDGE CLOSURE.
- 6. THE EXISTING RAILING TO REMIAN ON THE SIDEWALK WILL BE REPAIRED AS NEEDED.

# STATE OF VERMONT

## AGENCY OF TRANSPORTATION

CANADA

Commonwealth of

/MASSACHUSETTS

**APRIL 5, 2018** 

PROJECT MANAGER : MAHENDRA THILLIYAR, P.E

PUTNEY

PROJECT NUMBER : STP DECK (38)

SHEET I OF 22 SHEETS

PROJECT NAME :

\_ DATE

State of

NEW HAMPSHIRE

State of

NEW YORK

\PROJECT LOCATION

PUTNEY

STP DECK (38)

FUSS & O'NEILL

540 COMMERCIAL STREET

MANCHESTER, NH 03101

603.668.8223

www.fando.com

LOCATION MAP NOT TO SCALE





## BRIDGE PROJECT

## TOWN OF PUTNEY COUNTY OF WINDHAM

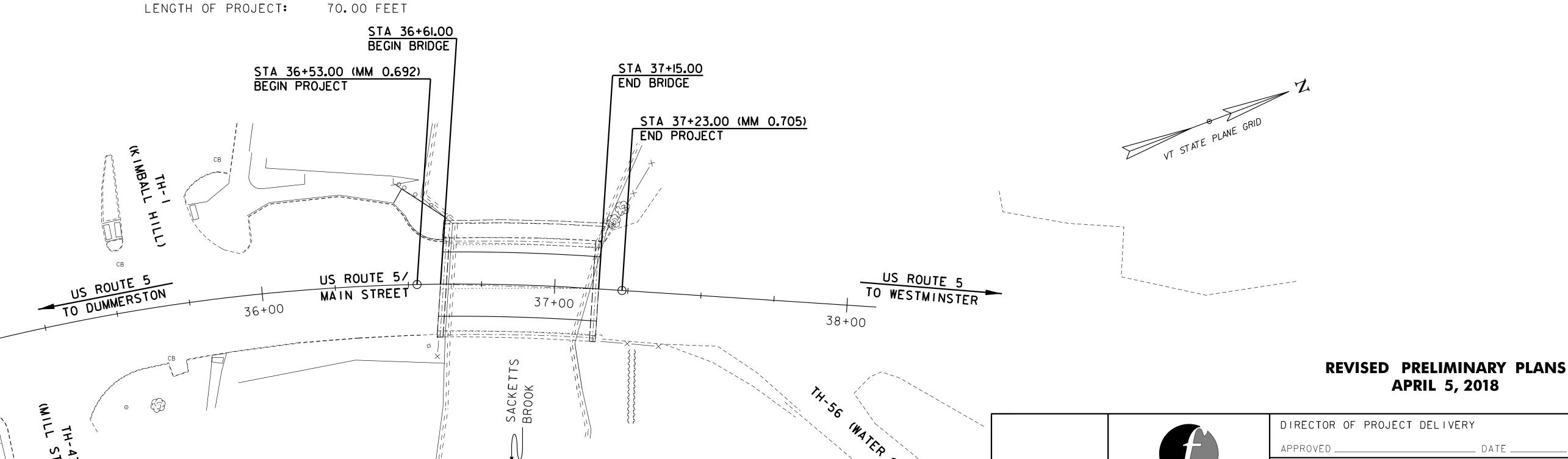
## US ROUTE 5 (MAJOR COLLECTOR) BRIDGE NO. 15

PROJECT LOCATION:

LOCATED IN THE TOWN OF PUTNEY, ON US ROUTE 5, APPROXIMATELY 0.698 MILES NORTHERLY OF THE DUMMERSTON/PUTNEY TOWN LINE.

PROJECT DESCRIPTION: WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES THE REPLACEMENT OF THE EXISTING CONCRETE BRIDGE DECK INCLUDING RELATED APPROACH WORK, SIDEWALK AT NORTHWEST CORNER AND DRAINAGE IMPROVEMENTS.

LENGTH OF STRUCTURE: 54.00 FEET LENGTH OF ROADWAY: 16.00 FEET



SCALE IN FEET

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM: LEVEL 2

SURVEYED BY : CLD

SURVEYED DATE : 09/21/2015

DATUM

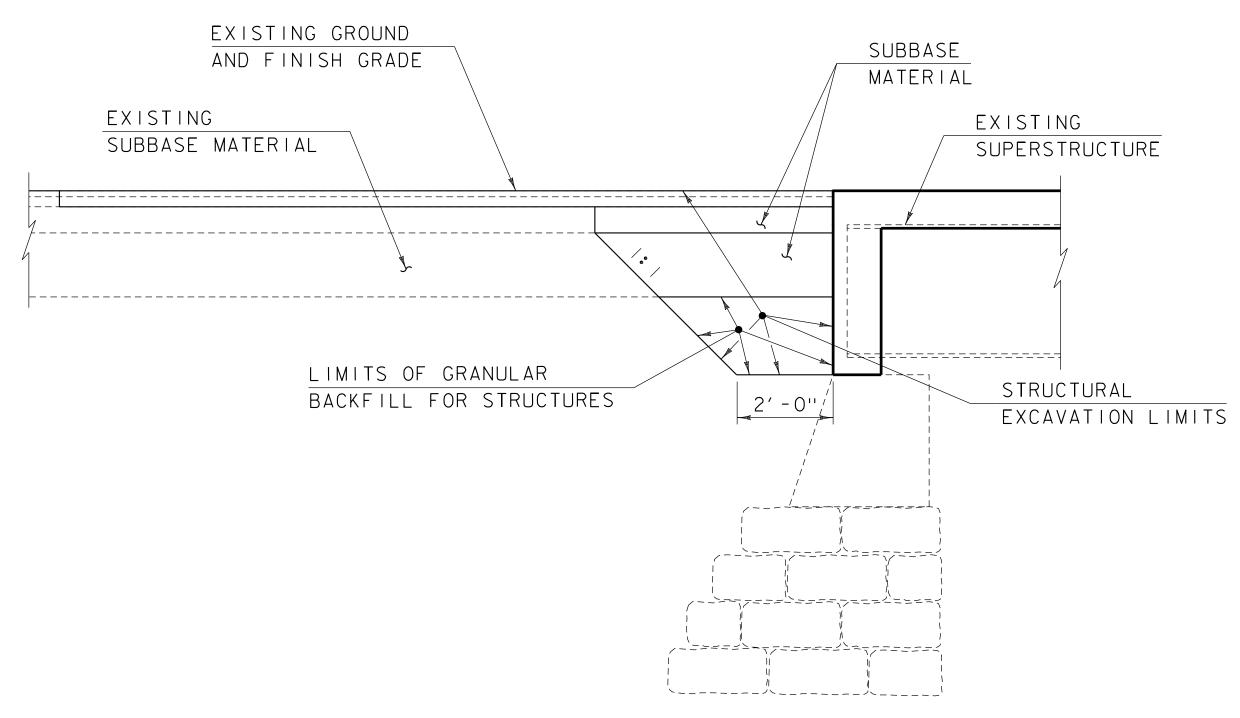
VERTICAL NAVD 88 HORIZONTAL NAD 83

### STATE OF VERMONT AGENCY OF TRANSPORTATION

# PRELIMINARY INFORMATION SHEET (BRIDGE)

**LRFD** 

#### **INDEX OF SHEETS** FINAL HYDRAULIC REPORT **PLAN SHEETS** STANDARDS LIST STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES TITLE SHEET E-127 ROUTE MARKINGS AT RURAL INTERSECTIONS PRELIMINARY INFORMATION SHEET 08-08-1995 TYPICAL EARTHWORK SECTION SHEET C-2A PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK A 10-14-2005 TYPICAL BRIDGE SECTIONS SHEET C-2B PORTLAND CEMENT CONCRETE SIDEWALK DRIVE ENTRANCES WITH SIDEWALK A 10-14-2005 C-3A TYPICAL ROADWAY SECTIONS SHEET SIDEWALK RAMPS 03-10-2008 ROADWAY DETAILS SHEET C-3B SIDEWALK RAMPS AND MEDIAN ISLANDS 03-10-2008 CONVENTIONAL SYMBOLOGY LEGEND SHEET C-10 02-11-2008 SURVEY TIE SHEET D-16 DRAINAGE DETAILS INCLUDING DROP INLETS, IRON GRATE TYPE B&C, CONC END 06-01-1994 LAYOUT SHEET E-193 PAVEMENT MARKING DETAILS 08-18-1995 10 PROFILE SHEET G-1BM BOX BEAM GUARD RAIL 06-01-1994 **REGIONAL DETOUR SHEET 1-2** G-1D STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN) 02-10-2014 13 PHASING SECTIONS SHEET T-1 TRAFFIC CONTROL GENERAL NOTES 08-06-2012 US 5 CROSS SECTIONS 1-3 T-10 CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING 08-06-2012 T-17 EPSC NARRATIVE TRAFFIC CONTROL MISCELLANEOUS DETAILS 08-06-2012 T-28 EPSC EXISTING PLAN SHEET CONSTRUCTION SIGN DETAILS 08-06-2012 EPSC CONSTRUCTION PLAN SHEET EPSC FINAL PLAN SHEET EPSC DETAIL SHEET EARTH DISTURBANCE SHEET STRUCTURES DETAIL SHEETS SD-501.00 CONCRETE DETAILS AND NOTES 5/7/2010 5/7/2010 SD-502.00 CONCRETE DETAILS AND NOTES SD-516.10 BRIDGE JOINT ASHPALTIC PLUG 8/29/2011 TRAFFIC MAINTENANCE NOTES 1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR. 2. TRAFFIC SIGNALS ARE NOT NECESSARY. 3. SIDEWALKS ARE NOT NECESSARY DESIGN VALUES 1. DESIGN LIVE LOAD HL-93 **d**p: 0.0 INCH 2. FUTURE PAVEMENT *L:* 52.00 FT DESIGN SPAN 4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) Δ: ---5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX) **f**y: 270 KSI 6. PRESTRESSED CONCRETE STRENGTH **f**'c: 8.0 KSI 7. PRESTRESSED CONCRETE RELEASE STRENGTH **f**'ci: 5.5 KSI **f**'c: 4.0 KSI 8. CONCRETE, HIGH PERFORMANCE CLASS AA 9. CONCRETE, HIGH PERFORMANCE CLASS A **f**′c: 4.0 KSI 10. CONCRETE, HIGH PERFORMANCE CLASS B **f**'c: 3.5 KSI **f**'c: 3.0 KSI 11. CONCRETE, CLASS C **f**y: 60 KSI 12. REINFORCING STEEL 13. STRUCTURAL STEEL AASHTO M270 **f**y:\_\_\_\_\_ 14. NOMINAL BEARING RESISTANCE OF SOIL ф: ---15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) **q**n: ---16. NOMINAL BEARING RESISTANCE OF ROCK LRFR LOAD RATING FACTORS 17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) φ: ---LOADING LEVELS 6 AXLE 3A STR. 4A STR. 5A SEMI 18. PILE RESISTANCE FACTOR 3S2 Δ: ---20 36 30 34.5 38 19. LATERAL PILE DEFLECTION 36 TONNAGE 20. BASIC WIND SPEED **V**3s: ---INVENTORY 1.45 1.33 21. MINIMUM GROUND SNOW LOAD **p**g:\_\_\_\_ POSTING **PGA**: 0 22. SEISMIC DATA **S**s: ---OPERATING 1.88 1.72 3 2.13 2.19 2 2.39 **S**1: ---COMMENTS: AS BUILT "REBAR" DETAIL LEVEL I LEVEL III LEVEL I - - -TYPE: PUTNEY PROJECT NAME: GRADE: GRADE: GRADE: PROJECT NUMBER: STP DECK(38) TRAFFIC DATA ADT DHV % D % T 20 year ESAL for flexible pavement from 2016 to 2036 : 0 FILE NAME: zI5bI05pi-I5.dgn PLOT DATE: 4/5/2018 PROJECT LEADER: J. BYATT DRAWN BY: M.G. SMITH 56 3.6 40 year ESAL for flexible pavement from 2016 to 2056 : 0 CHECKED BY: L. GREER DESIGNED BY: S. FORTIER Design Speed: 30 mph 5.5 2036 3100 PRELIMINARY INFORMATION SHEET SHEET 2 OF 22



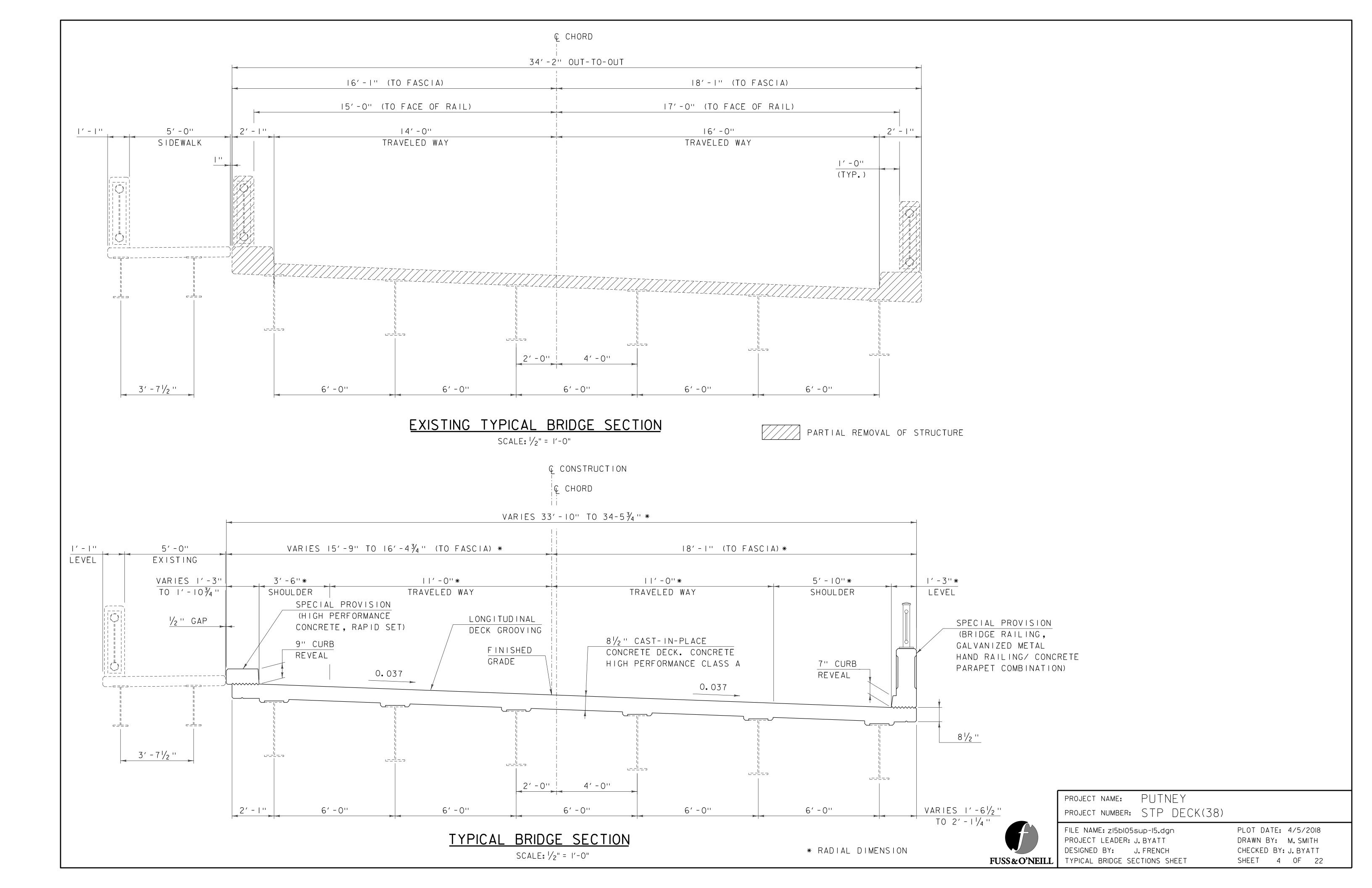
### TYPICAL ABUTMENT EARTHWORK SECTION

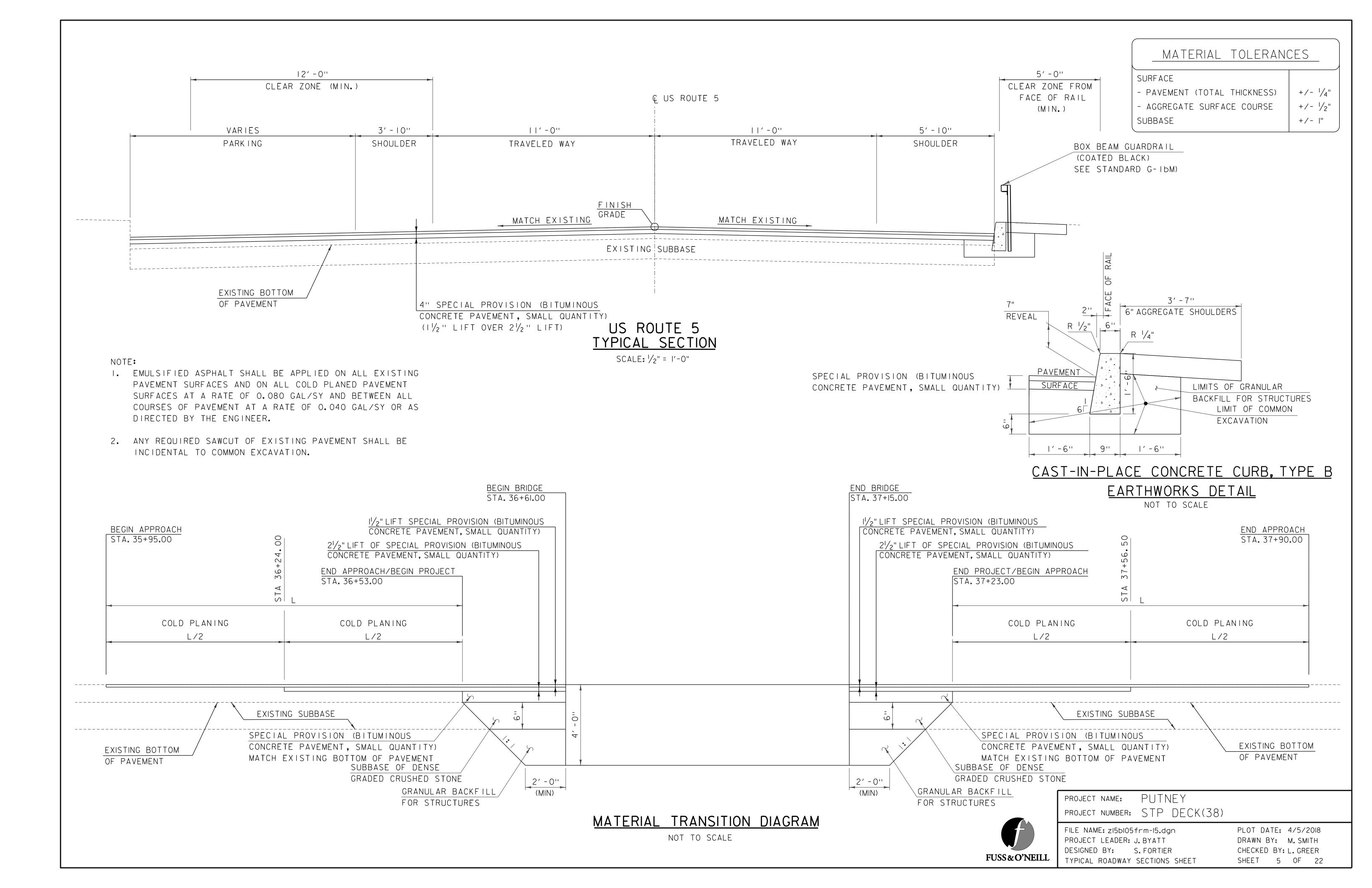
NOT TO SCALE

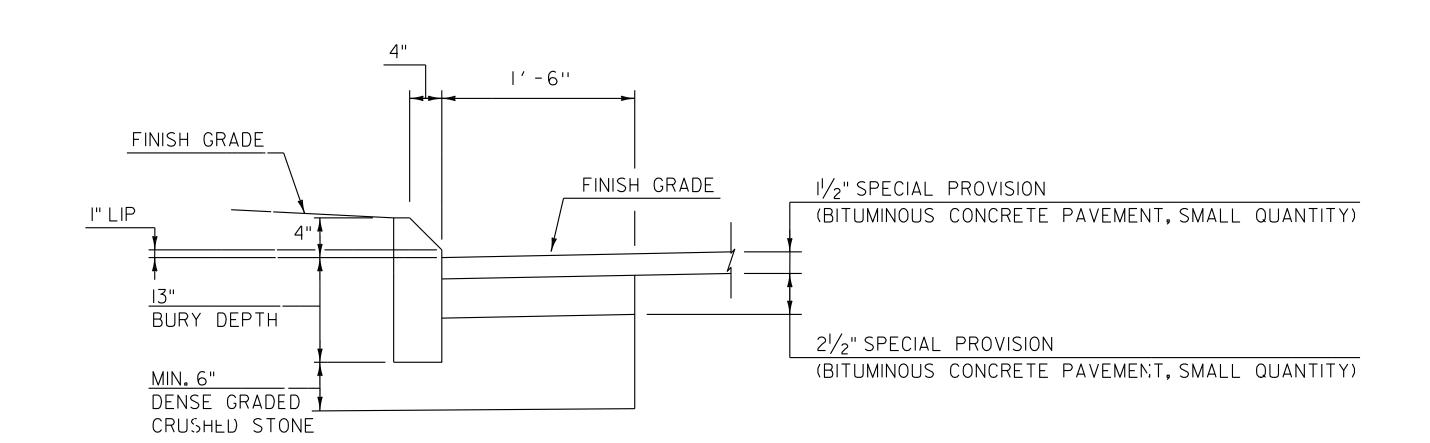
NOTE: ACTUAL EXCAVATION LIMITS SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, PAYMENT UNDER CONTRACT ITEM 204.25 AND 204.30 WILL ONLY BE MADE TO THE LIMITS SHOWN.

PROJECT NAME: PUTNEY PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05sub-I5.dgn PROJECT LEADER: J. BYATT DESIGNED BY: J.FRENCH FUSS&O'NEILL TYPICAL EARTHWORK SECTION SHEET PLOT DATE: 4/5/2018 DRAWN BY: M.SMITH CHECKED BY: J. BYATT SHEET 3 OF 22



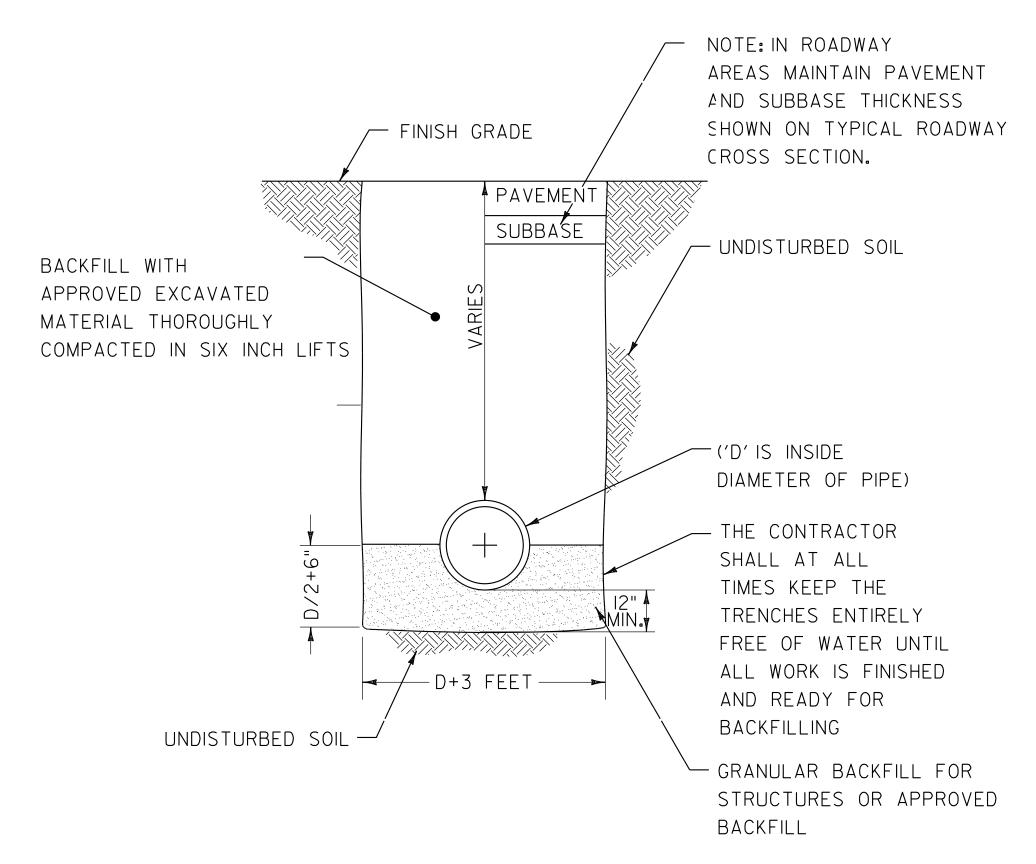




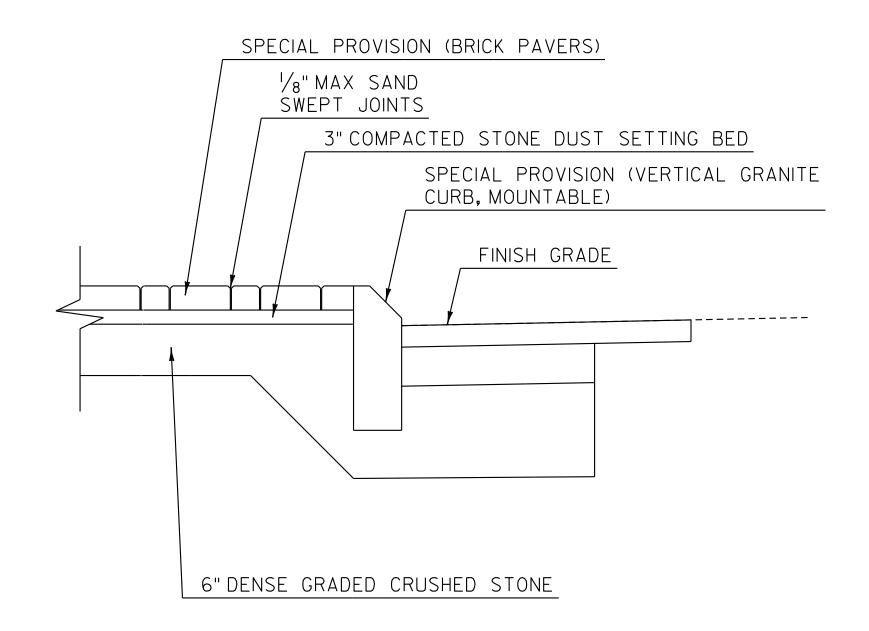
ITEM 900.640 - SPECIAL PROVISION

(VERTICAL GRANITE CURB, MOUNTABLE)

NOT TO SCALE



TYPICAL STORM DRAIN TRENCH



## ITEM 900.670 - SPECIAL PROVISION (BRICK PAVERS) NOT TO SCALE

- I. ITEM 900.670 SPECIAL PROVISION (BRICK PAVERS) SHALL BE FULL COMPENSATION FOR ALL BRICK PAVERS, CUTTING TO SIZE, STONE DUST SETTING BED, COMPACTION AND SAND SWEPT JOINTS INCLUDING ALL MATERIALS AND LABOR. DENSE GRADED CRUSHED STONE BASE SHALL BE PAID FOR SEPARATELY.
- 2. BRICKS SHALL CONSIST OF TWO COMPLEMENTARY COLORS, 70% RED-COLOR AND 30% IRON-COLOR. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE BRICK COLORS FOR APPROVAL. PAVERS SHALL BE PLACED IN A RANDOM PATTERN.
- 3. BRICK PAVER FIELDS SHALL BE BOUND FLUSH ON ALL SIDES BY CONCRETE SIDEWALK OR GRANITE CURB, TO BE PAID FOR SEPARATELY.



PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05frm-I5.dgn
PROJECT LEADER: J.BYATT
DESIGNED BY: S.FORTIER
ROADWAY DETAILS SHEET

PLOT DATE: 4/5/2018
DRAWN BY: M. SMITH
CHECKED BY: L. GREER
SHEET 6 OF 22

#### GENERAL INFORMATION

#### SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

| R. O. W.   | ABBREV | IATIONS (CODES) & SYMBOLS    |
|------------|--------|------------------------------|
| POINT      | CODE   | DESCRIPTION                  |
|            | СН     | CHANNEL EASEMENT             |
|            | CONST  | CONSTRUCTION EASEMENT        |
|            | CUL    | CULVERT EASEMENT             |
|            | D&C    | DISCONNECT & CONNECT         |
|            | DIT    | DITCH EASEMENT               |
|            | DR     | DRAINAGE EASEMENT            |
|            | DRIVE  | DRIVEWAY EASEMENT            |
|            | EC     | EROSION CONTROL              |
|            | HWY    | HIGHWAY EASEMENT             |
|            | 1&M    | INSTALL & MAINTAIN EASEMENT  |
|            | LAND   | LANDSCAPE EASEMENT           |
|            | R&RES  | REMOVE & RESET               |
|            | R&REP  | REMOVE & REPLACE             |
|            | SR     | SLOPE RIGHT                  |
|            | UE     | UTILITY EASEMENT             |
|            | (P)    | PERMANENT EASEMENT           |
|            | (T)    | TEMPORARY EASEMENT           |
|            | BNDNS  | BOUND SET                    |
|            | BNDNS  | BOUND TO BE SET              |
|            | IPNS   | IRON PIN SET                 |
| <b>(</b>   | IPNS   | IRON PIN TO BE SET           |
|            | CALC   | EXISTING ROW POINT           |
| $\bigcirc$ | PROW   | PROPOSED ROW POINT           |
| [LENG      |        | LENGTH CARRIED ON NEXT SHEET |
| _          | _      |                              |

#### COMMON TODOCDADUIC DOINT SYMBOLS

| COMMON             | I TOPOG | RAPHIC POINT SYMBOLS      |
|--------------------|---------|---------------------------|
| POINT              | CODE    | DESCRIPTION               |
| ζ. <u>λ</u><br>ζ.ÿ | APL     | BOUND APPARENT LOCATION   |
| •                  | ВМ      | BENCHMARK                 |
| •                  | BND     | BOUND                     |
|                    | СВ      | CATCH BASIN               |
| $\phi$             | COMB    | COMBINATION POLE          |
|                    | DITHR   | DROP INLET THROATED DNC   |
| <del>,</del>       | EL      | ELECTRIC POWER POLE       |
| ⊙                  | FPOLE   | FLAGPOLE                  |
| $\odot$            | GASFIL  | GAS FILLER                |
| $\odot$            | GP      | GUIDE POST                |
| ×                  | GS0     | GAS SHUT OFF              |
| ⊙                  | GUY     | GUY POLE                  |
| ⊙                  | GUYW    | GUY WIRE                  |
| M                  | GV      | GATE VALUE                |
|                    | Н       | TREE HARDWOOD             |
| $\triangle$        | HCTRL   | CONTROL HORIZONTAL        |
|                    | HVCTRL  | CONTROL HORIZ. & VERTICAL |
| $\Diamond$         | HYD     | HYDRANT                   |
| •                  | IP      | IRON PIN                  |
| <b>⊚</b>           | IPIPE   | IRON PIPE                 |
| Ċ                  | LI      | LIGHT - STREET OR YARD    |
| \$                 | MB      | MAILBOX                   |
| $\odot$            | MH      | MANHOLE (MH)              |
| •                  | MM      | MILE MARKER               |
| Θ                  | PM      | PARKING METER             |
| •                  | PMK     | PROJECT MARKER            |
| •<br>              | POST    | POST STONE/WOOD           |
|                    | RRSIG   | RAILROAD SIGNAL           |
| <del>•</del>       | RRSL    | RAILROAD SWITCH LEVER     |
|                    | S       | TREE SOFTWOOD             |
|                    | SAT     | SATELLITE DISH            |
|                    | SHRUB   | SHRUB                     |
| 0                  | SIGN    | SIGN                      |
| A                  | STUMP   | STUMP                     |
| -0-                | TEL     | TELEPHONE POLE            |
| ⊙                  | TIE     | TIE                       |
| 0.0                | TSIGN   | SIGN W/DOUBLE POST        |
| $\downarrow$       | VCTRL   | CONTROL VERTICAL          |
| 0                  | WELL    | WELL                      |
| M                  | WSO     | WATER SHUT OFF            |
|                    |         |                           |

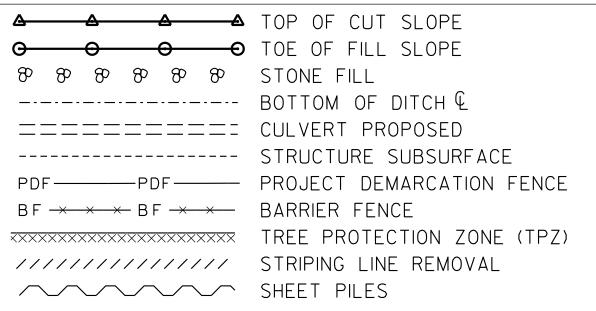
THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

### PROPOSED GEOMETRY CODES

| 11101 031 | <u> </u>                |
|-----------|-------------------------|
| CODE      | DESCRIPTION             |
| PC        | POINT OF CURVATURE      |
| PI        | POINT OF INTERSECTION   |
| CC        | CENTER OF CURVE         |
| PT        | POINT OF TANGENCY       |
| PCC       | POINT OF COMPOUND CURVE |
| PRC       | POINT OF REVERSE CURVE  |
| POB       | POINT OF BEGINNING      |
| POE       | POINT OF ENDING         |
| STA       | STATION PREFIX          |
| АН        | AHEAD STATION SUFFIX    |
| BK        | BACK STATION SUFFIX     |
| D         | CURVE DEGREE OF (100FT) |
| R         | CURVE RADIUS OF         |
| Τ         | CURVE TANGENT LENGTH    |
| L         | CURVE LENGTH OF         |
| E         | CURVE EXTERNAL DISTANCE |
|           |                         |

### UTILITY SYMBOLOGY UNDERGROUND UTILITIES - UGU - - - - - UTILITY (GENERIC-UNKNOWN) — UT — · · · - TELEPHONE — *UE* — · · · - ELECTRIC — *UC* — · · - - CABLE (TV) — UEC — · · - ELECTRIC+CABLE — UET — · · - - ELECTRIC+TELEPHONE — UCT — · · - CABLE+TELEPHONE — UECT — · · - ELECTRIC+CABLE+TELEP. — G — · · - - GAS LINE -- W -- -- WATER LINE — s — · · - · SANITARY SEWER (SEPTIC) ABOVE GROUND UTILITIES (AERIAL) - AGU - · · - · UTILITY (GENERIC-UNKNOWN) — T — · · - TELEPHONE — E — · · · - ELECTRIC — C — · · · - CABLE (TV) — EC — · · - ELECTRIC+CABLE — ET — · · - ELECTRIC+TELEPHONE - AER E&T - · · - · ELECTRIC+TELEPHONE — CT — · · · - CABLE+TELEPHONE — ECT — · · - ELECTRIC+CABLE+TELEP. — · · · — · · · — UTILITY POLE GUY WIRE PROJECT CONSTRUCTION SYMBOLOGY PROJECT DESIGN & LAYOUT SYMBOLOGY — -- — CZ — -- — CLEAR ZONE PLAN LAYOUT MATCHLINE

#### PROJECT CONSTRUCTION FEATURES

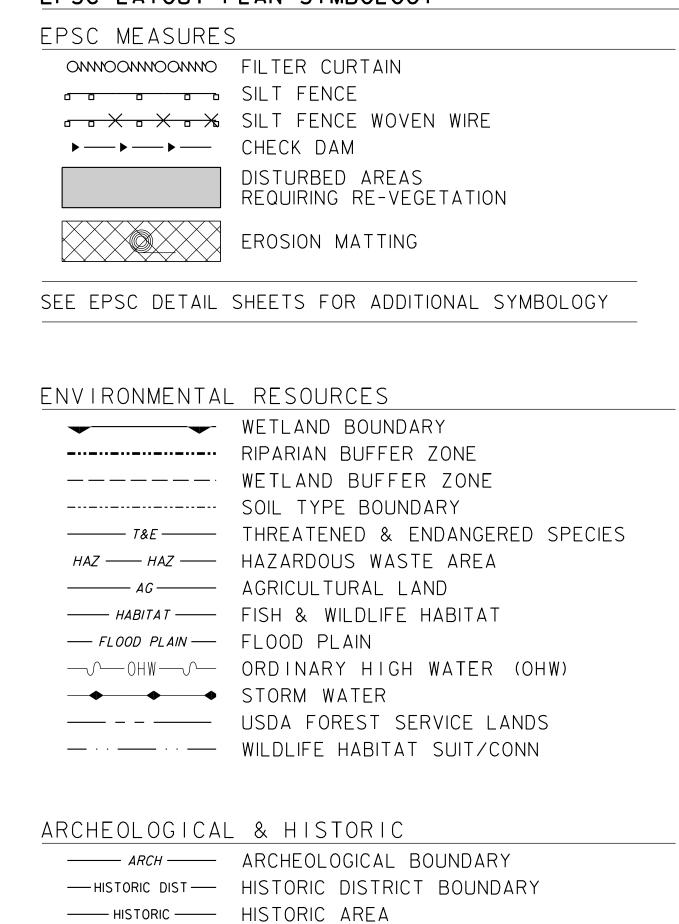


#### CONVENTIONAL BOUNDARY SYMBOLOGY

#### DOLLNIDADY I INICC

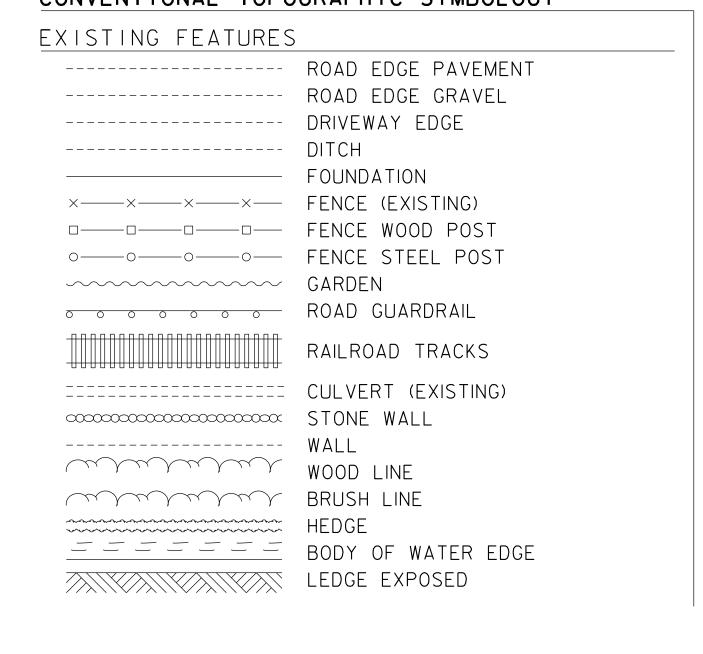
| BOUNDARY LINES                            |                                       |
|---|---------------------------------------|
| TOWN LINE                                 | TOWN BOUNDARY LINE                    |
| COUNTY LINE                               | COUNTY BOUNDARY LINE                  |
| STATE LINE                                | STATE BOUNDARY LINE                   |
| <del></del>                               | PROPOSED STATE R.O.W. (LIMITED ACCESS |
|   | PROPOSED STATE R.O.W.                 |
|   | STATE ROW (LIMITED ACCESS)            |
| ·   | STATE ROW                             |
|   | TOWN ROW                              |
| <u> </u>                                  | PERMANENT EASEMENT LINE (P)           |
|   | TEMPORARY EASEMENT LINE (T)           |
| + + +                                     | SURVEY LINE                           |
| $\frac{P}{L}$ $\frac{P}{L}$ $\frac{P}{L}$ | PROPERTY LINE (P/L)                   |
| SR SR SR SR →                             | SLOPE RIGHTS                          |
| 6f ————————————————————————————————————   | 6F PROPERTY BOUNDARY                  |
| 4f ————————————————————————————————————   | 4F PROPERTY BOUNDARY                  |
| HAZ HAZ                                   | HAZARDOUS WASTE                       |
|   |                                       |

#### EPSC LAYOUT PLAN SYMBOLOGY



### CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

HISTORIC STRUCTURE



PROJECT NAME: PUTNEY PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05frm-I5.dgn PROJECT LEADER: J. BYATT DESIGNED BY: S. FORTIER

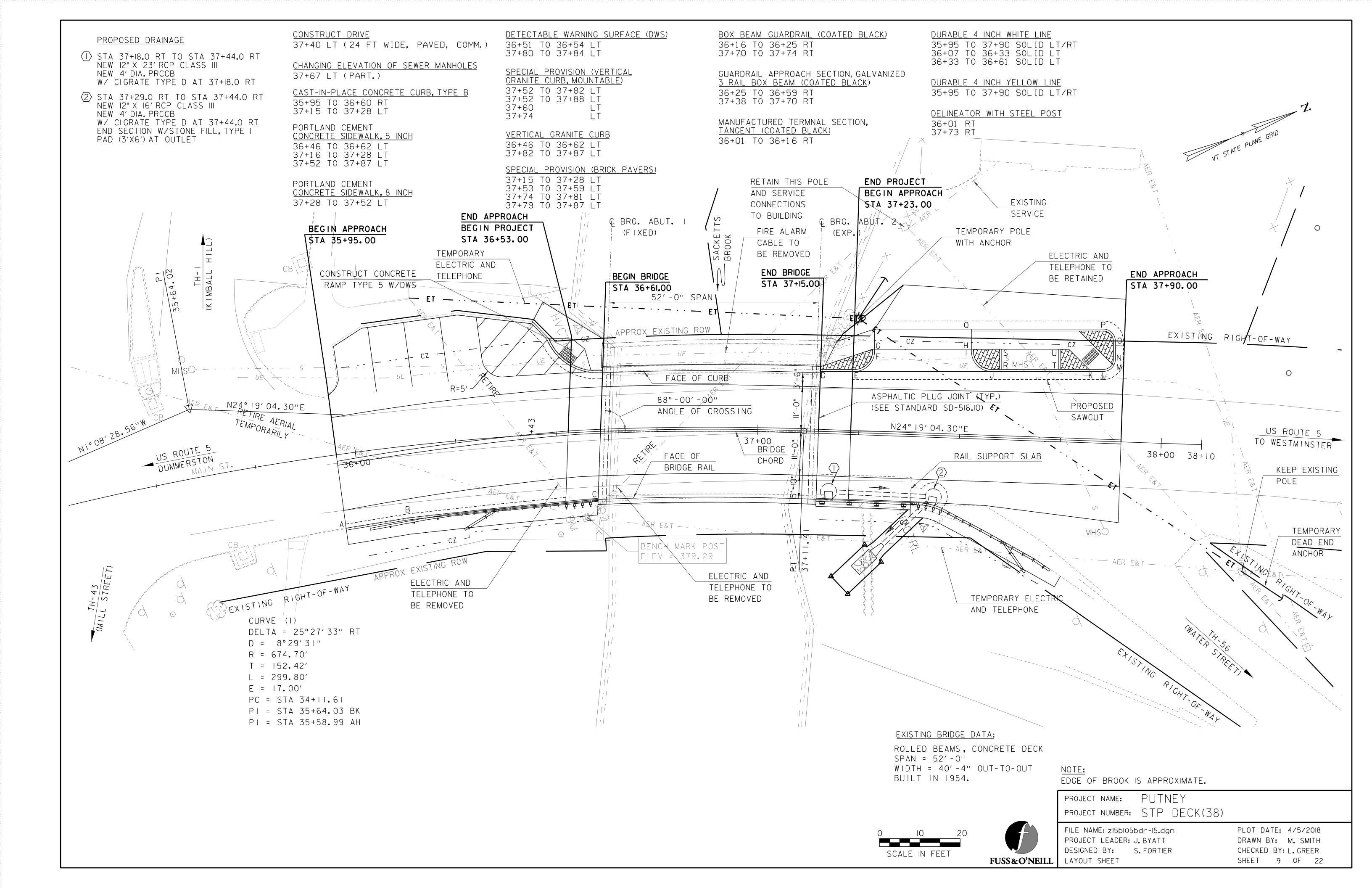
PLOT DATE: 4/5/2018 DRAWN BY: M.G. SMITH CHECKED BY: L. GREER CONVENTIONAL SYMBOLOGY LEGEND SHEET SHEET 7 OF 22

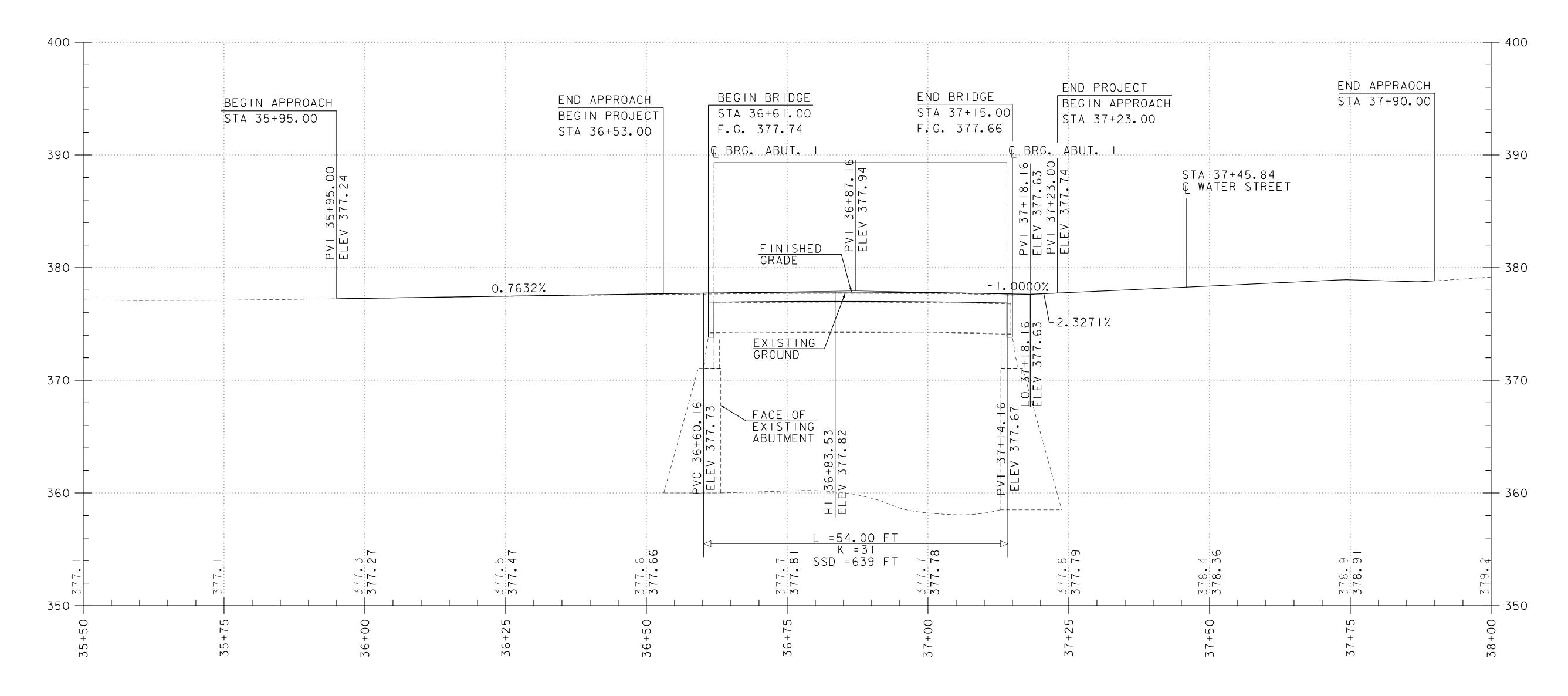


 $\bigcirc$ RUS NORTH = 152472.45 EAST = 1631008.49ELEV. = 125.94GENERAL LOCATION, DUMMERSTON TOWN GARAGE, WEST ROAD, EAST DUMMERSTON, VT. 05346., OWNERSHIP, TRANSPORTATION DEPARMENT, DEPARTMENT OF TRANSPORTATION, 870 US ROUTE 5, DUMMERSTON, VT 05301. TO REACH FROM INTERSECTION OF US ROUTE 5 AND WEST ROAD IN EAST DUMMERSTON, PROCEED WEST ON WEST ROAD THROUGH THE INTERSECTION OF MIDDLE ROAD AND BUNKER ROAD. AT 2.0 MILES THE DUMMERSTON TOWN GARAGE IS LOCATED ON LEFT. A GNSS MONUMENT, DESIGNATION "DUMMERSTON CORS ARP", ID "VTD2", IS LOCATED ON THE GARAGE ROOF ATTACHED TO THE TOP FLANGE OF A STEEL 12" X 26' "W" BEAM WHICH IS PART OF THE ROOF STRUCTURE FOR A TWO STORY STEEL FRAMED, WOOD-SIDED BUILDING WITH A 5' CONCRETE FOUNDATION. THE MAST IS A HALF-INCH DIAMETER GALVANIZED PIPÉ THAT IS 108 INCHES IN LENGTH. THE MAST IS FITTED WITH A 5 1/2 " X 5 1/2 " X I" BASE PLATE THAT IS WELDED TO THE BASE OF THE MAST. THE BASE PLATE IS DRILLED AND TAPPED WITH 4 3/8 " HOLES AND SECURED TO THE FLANGE WITH STAINLESS STEEL BOLTS. THE MAST PROJECTS THROUGH THE ROOF STRUCTURE AND HAS BEEN WEATHER PROOFED.  $\bigcirc$  $\bigcirc$  $\bigcirc$ HVCTRL\_#4 HVCTRL\_#3 NORTH = 173284.23 NORTH = 173344.83 NORTH = NORTH = NORTH = EAST = 1634607.94 EAST = 1634685.91 EAST = EAST = EAST = ELEV. = 378.54 ELEV. = 378.06 ELEV. = ELEV. = ELEV. = UTILITY POLE 点 \_\_\_\_ /UTILITY POLE # MAIN STREET  $\bigcirc$  $\bigcap$ BLDG. CORNER  $\triangleleft$  $\bigcap$ LEGAL LOAD LIMIT 24000 POUNDS PT 37+11.41 PC 34+11.61 NORTH = 173035.14 NORTH = 173326.42 NORTH = NORTH = NORTH = EAST = 1634592.86 EAST = 1634652.59EAST = EAST = EAST = ELEV. = 377.60 ELEV. = 378.04 ELEV. = ELEV. = ELEV. = 5 MAIN STREET US ROUTE 5 \_\_\_\_ Z34+11.61  $\geq$  $\triangleleft$ 33+60 PROJECT NAME: PUTNEY DATUM PROJECT NUMBER: STP DECK(38) NAVD 88 VERTICAL FILE NAME: zI5bI05tie-I5 PLOT DATE: 4/5/2018 NAD 83 HORIZONTAL PROJECT LEADER: J. BYATT DRAWN BY: M.G. SMITH DESIGNED BY: S. FORTIER COMPASS CHECKED BY: L. GREER ADJUSTMENT \_

SURVEY TIE SHEET

SHEET 8 OF 22





#### <u>NOTES</u>

I. STATIONS AND ELEVATIONS ARE IN FEET.

2. THE ELEVATIONS SHOWN TO THE NEAREST TENTH ARE THE EXISTING GROUND ALONG THE CENTERLINE.

3. THE ELEVATIONS SHOWN TO THE NEAREST HUNDRETH ARE THE FINISHED GRADE ALONG THE CENTERLINE.

### US 5 ROUTE PROFILE

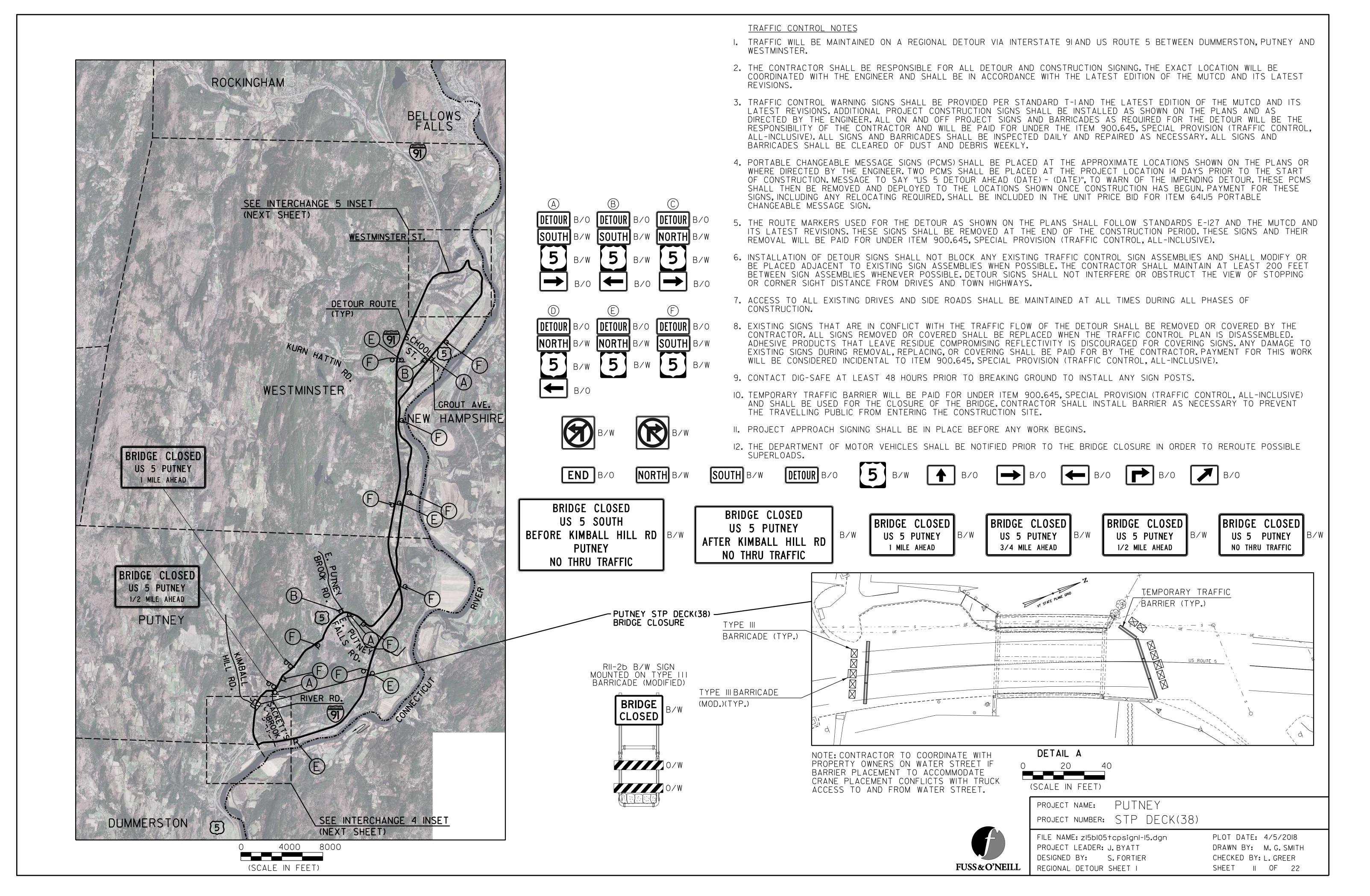
HOR. SCALE I'' = 20'-0''
VER. SCALE I'' = 10'-0''

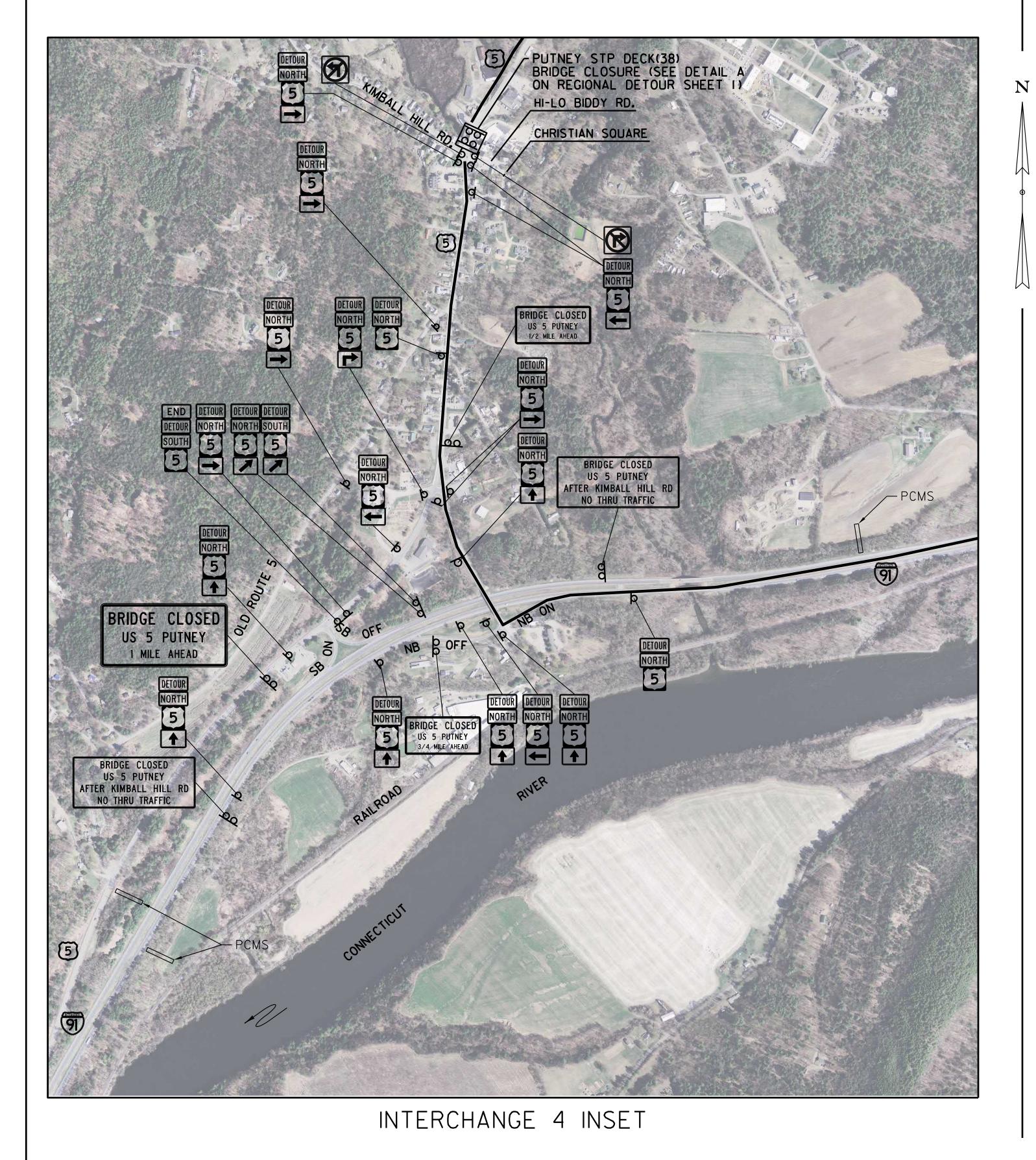


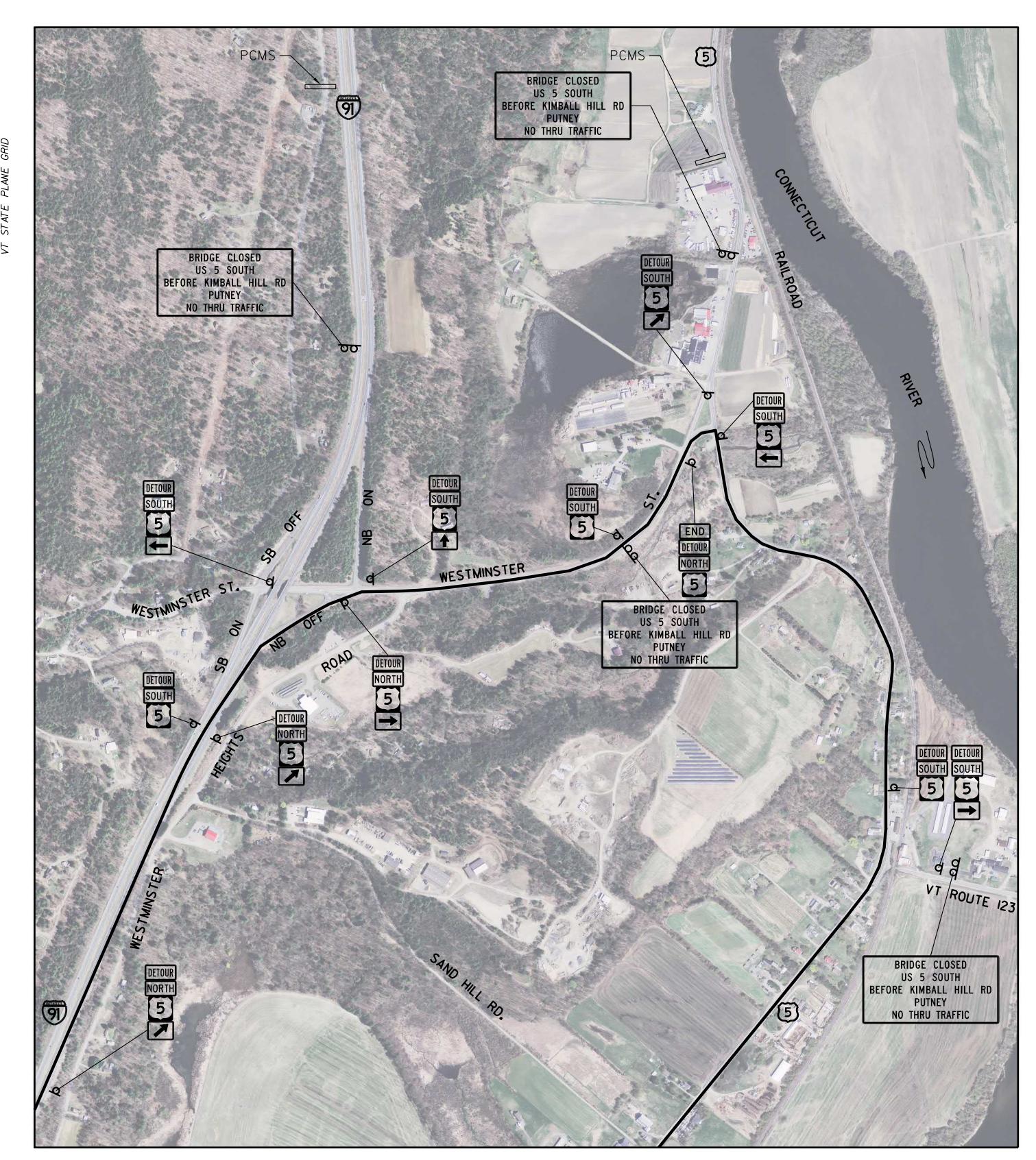
PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05pro-I5.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. FORTIER
PROFILE SHEET

PLOT DATE: 4/5/2018
DRAWN BY: S. FORTIER
CHECKED BY: L. GREER
SHEET 10 OF 22







INTERCHANGE 5 INSET

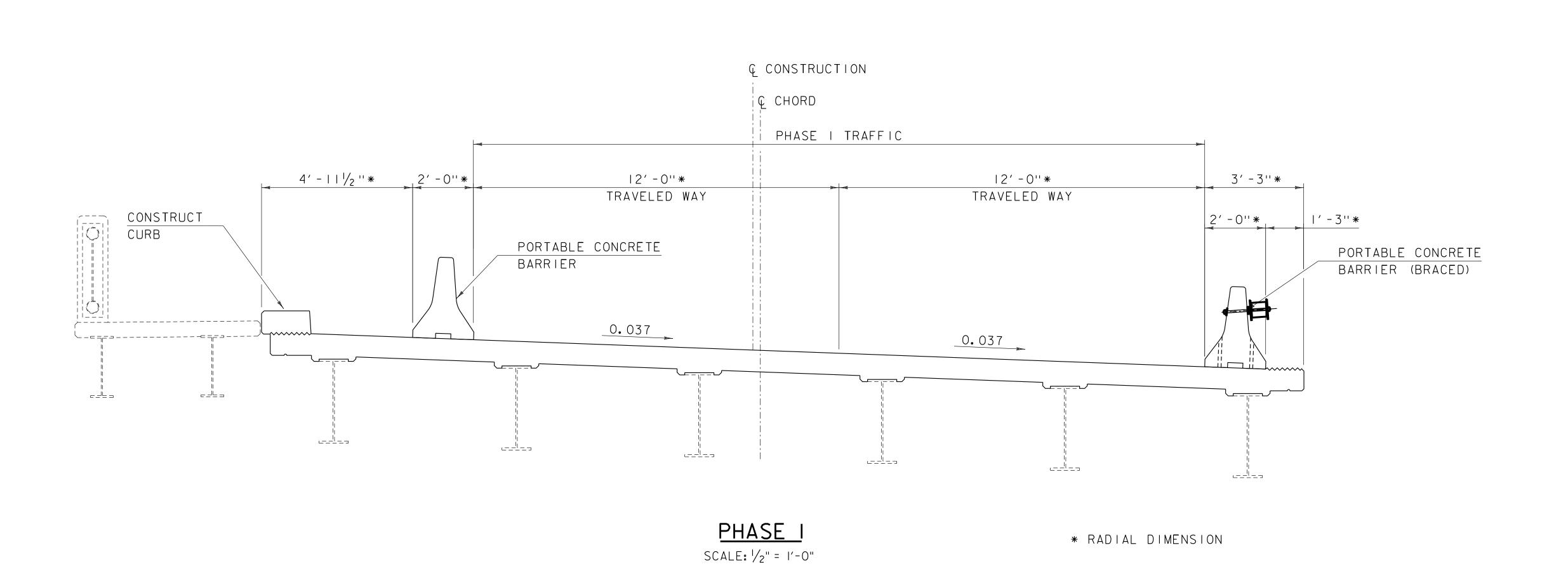


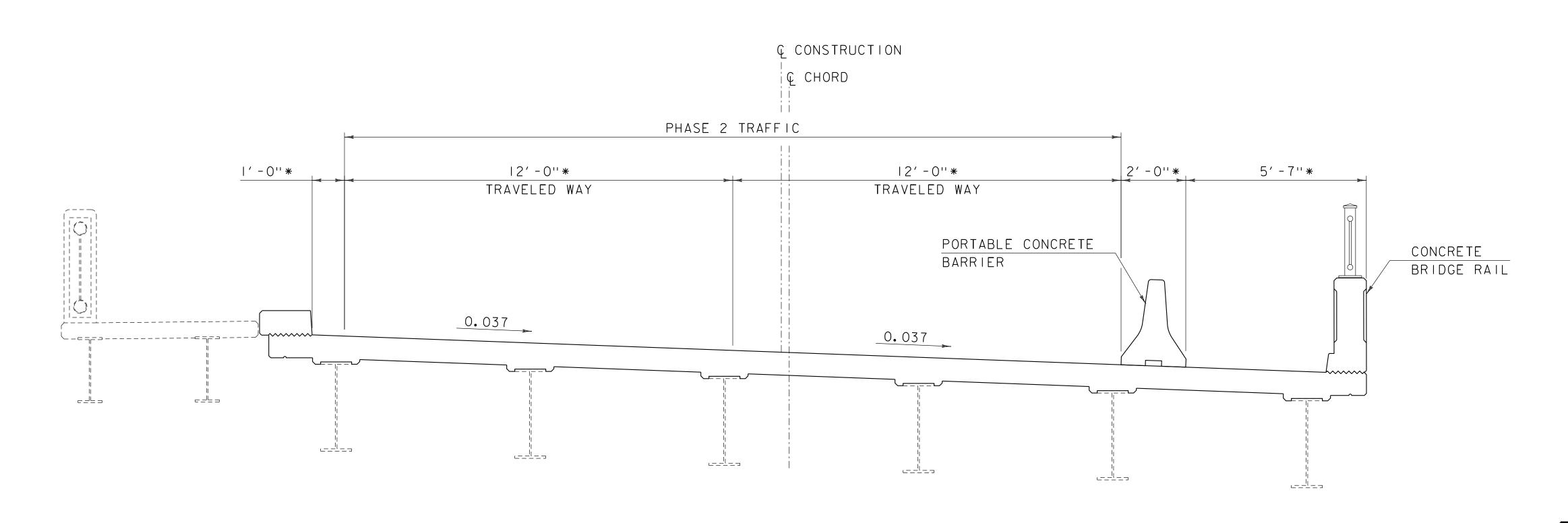


PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05tcpsign2-I5.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. FORTIER
REGIONAL DETOUR SHEET 2

PLOT DATE: 4/5/2018
DRAWN BY: M.G. SMITH
CHECKED BY: L. GREER
SHEET 12 OF 22





PHASE 2

SCALE:  $\frac{1}{2}$ " = 1'-0"

NOTES:

- I. PHASING REQUIRED TO CONSTRUCT BRIDGE CURB AND RAIL AFTER BRIDGE CLOSURE PERIOD.
- 2. DAYTIME LANE CLOSURES WILL BE PERMITTED DURING PHASED CONSTRUCTION.

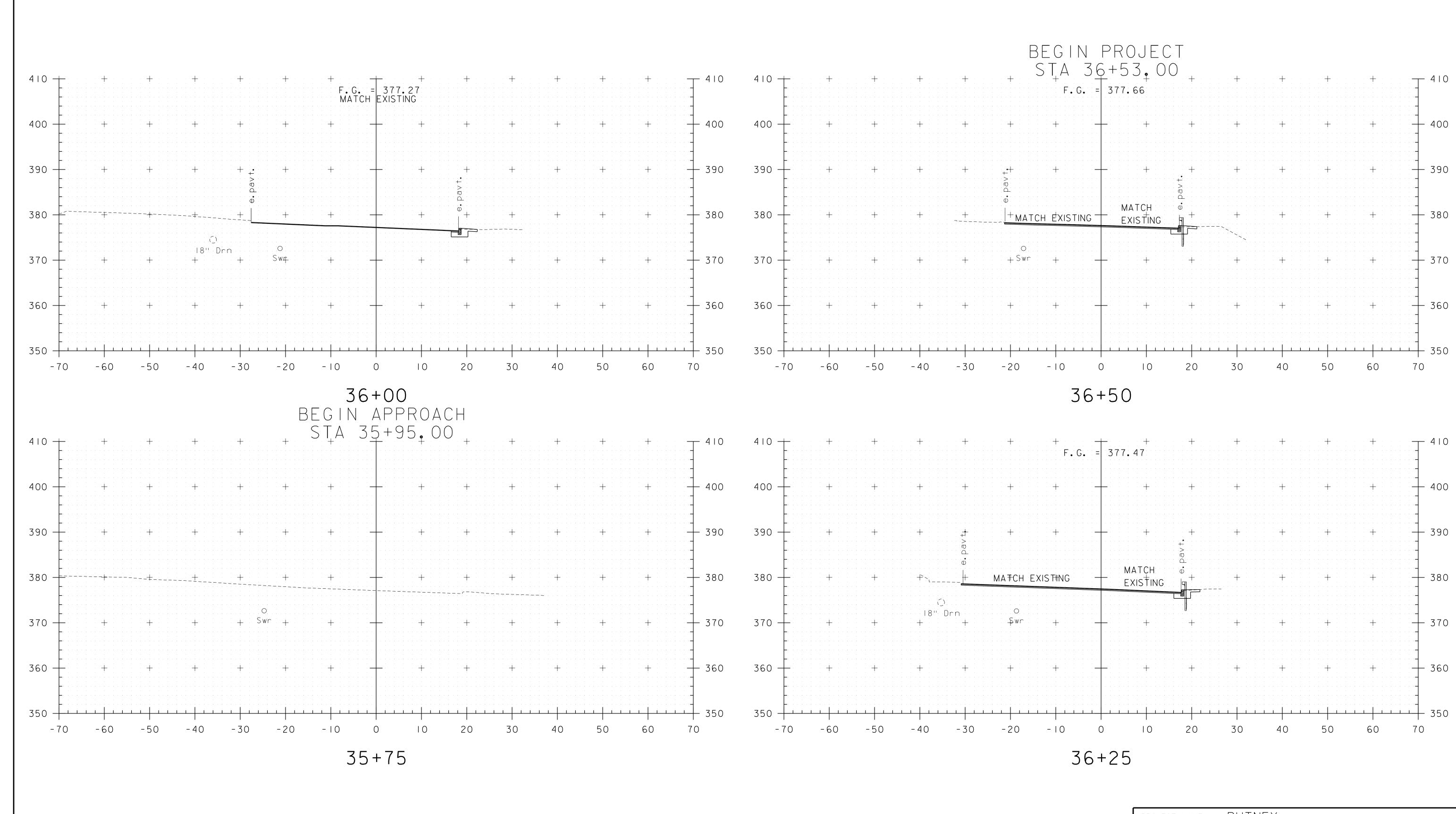
PROJECT FILE NAM

\* RADIAL DIMENSION

PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: z15b105sup-15.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: J. FRENCH
PHASING SECTIONS SHEET

PLOT DATE: 4/5/2018
DRAWN BY: M. SMITH
CHECKED BY: J. BYATT
SHEET 13 OF 22

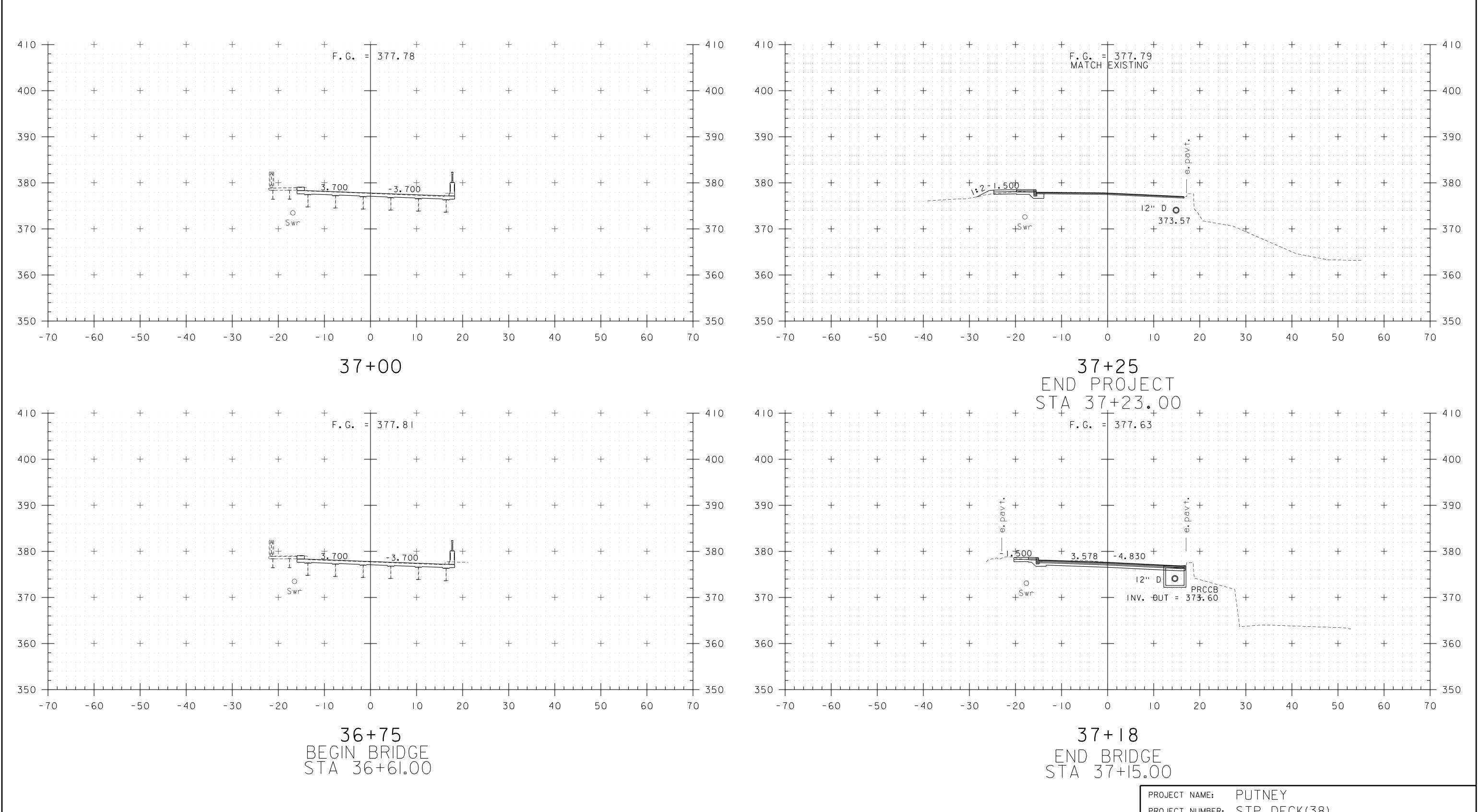


FUSS&O'NEILL

PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05xs-I5.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. FORTIER
US 5 CROSS SECTIONS I

PLOT DATE: 4/5/2018
DRAWN BY: M.G. SMITH
CHECKED BY: L. GREER
SHEET 14 OF 22



NOTE: Existing utilities elevations are approximate

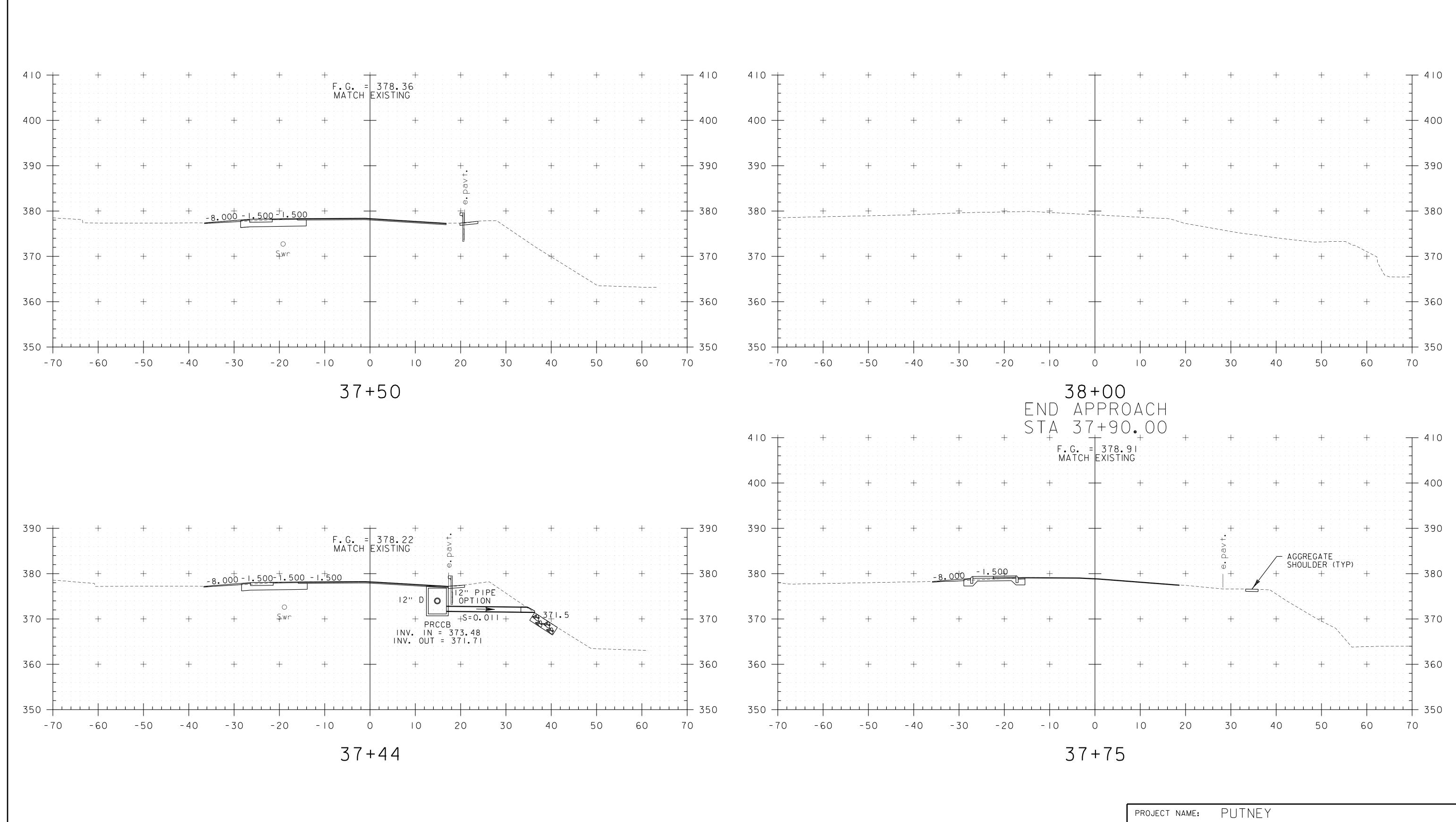
STA. 36+75 TO STA. 37+25



PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05xs-I5.dgn PROJECT LEADER: J. BYATT DESIGNED BY: S. FORTIER US 5 CROSS SECTIONS 2

PLOT DATE: 4/5/2018 DRAWN BY: M.G. SMITH CHECKED BY: L. GREER SHEET IS OF 22



NOTE: Existing utilities elevations are approximate

FUSS&O'NEILL

PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05xs-I5.dgn PROJECT LEADER: J. BYATT DESIGNED BY: S. FORTIER US 5 CROSS SECTIONS 3

PLOT DATE: 4/5/2018 DRAWN BY: M.G. SMITH CHECKED BY: L. GREER SHEET 16 OF 22

#### **EPSC PLAN NARRATIVE**

#### 1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE DECK REPLACEMENT OF BRIDGE 15 OVER SACKETTS BROOK. BRIDGE 15 IS LOCATED ON MAIN STREET/US ROUTE 5 IN THE TOWN OF PUTNEY, APPROXIMATELY 0.7 MILES NORTH OF THE DUMMERSTON/PUTNEY TOWN LINE AND INTERSTATE 91.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 0.06 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

#### 1.2 SITE INVENTORY

#### 1.2.1 TOPOGRAPHY

THE TOPOGRAPHY OF THE AREA IS DEVELOPED LAND. A GENERAL STORE IS ON THE SOUTHWEST CORNER OF THE BRIDGE, WITH PARKING SPOTS WITHIN THE PROJECT LIMITS. NORTHWEST OF THE BRIDGE IS A PAVED, OPEN ACCESS PARKING AREA IN FRONT OF A COMMERCIAL BUILDING. EAST OF THE BRIDGE ARE PAPER MILL BUILDINGS, LOCATED ALONG SACKETTS BROOK. THE INTERSECTION WITH WATER STEEET, AN UNPAVED STREET ON A STEEP SLOPE DOWN TO THE PAPER MILL, IS ALSO WITHIN THE PROJECT LIMITS ON THE NORTHEAST CORNER.

## 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

SACKETTS BROOK IS LOCATED IN THE PROJECT AREA AND OUTLETS TO THE CONNECTICUT RIVER APPROXIMATELY 4,500 FEET SOUTH OF THE BRIDGE. A DAM IS LOCATED APPROXIMATELY 30 FEET WEST OF THE BRIDGE. THE STREAM IS CHARACTERIZED LOCALLY AS STRAIGHT. THE STREAM BED MAINLY CONSISTS OF LEDGE. THE DRAINAGE AREA IS 15.3 SQUARE MILES.

CLOSED DRAINAGE SYSTEMS ON EITHER SIDE OF THE BRIDGE OUTLET BELOW THE BRIDGE OR IMMEDIATELY NORTH OF THE BRIDGE.

#### 1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF TREES AND BRUSH ALONG THE RIVER. THE REST OF THE PROJECT CONSISTS MAINLY OF DEVELOPED LAND.

#### 1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR WINDHAM COUNTY, VERMONT. SOILS ON THE PROJECT SITE ARE: WINDSOR LOAMY SAND, 3 TO 8 PERCENT SLOPES. "K FACTOR" = UNKNOWN, MARKEY MUCK, "K FACTOR" = UNKNOWN.

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0-0.23 = LOW EROSION POTENTIAL 0.24-0.36 = MODERATE EROSION POTENTIAL 0.37 AND HIGHER = HIGH EROSION POTENTIAL

#### 1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: UNKNOWN AT THIS TIME
HISTORICAL OR ARCHEOLOGICAL AREAS: UNKNOWN AT THIS TIME
PRIME AGRICULTURAL LAND: UNKNOWN AT THIS TIME.
THREATENED AND ENDANGERED SPECIES: UNKNOWN AT THIS TIME
WATER RESOURCE: SACKETTS BROOK
WETLANDS: UNKNOWN AT THIS TIME

#### 1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK PROJECTS. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

#### 1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. THEY HAVE BEEN PROPOSED BY THE DESIGNER AS A BASIS FOR PROTECTING RESOURCES AND WILL NEED TO BE BUILT UPON BASED ON THE SPECIFIC MEANS AND METHODS OF THE CONTRACTOR. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

#### 1.4.1 MARK SITE BOUNDARIES

SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, FTC.)

#### 1.4.2 LIMIT DISTURBANCE AREA

PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

#### 1.4.3 SITE ENTRANCE/EXIT STABILIZATION

TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR'S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES ARE NOT ANTICIPATED ON THIS PROJECT. THE EXISTING ROADWAY WILL BE USED TO ACCESS THE BRIDGE.

#### 1.4.4 INSTALL SEDIMENT BARRIERS

SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

FILTER CURTAINS ARE NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.5 DIVERT UPLAND RUNOFF

DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

THE PROJECT AREA IS RELATIVELY FLAT. THEREFORE IT IS NOT ANTICIPATED THAT DIVERSION MEASURES WILL BE NECESSARY.

#### 1.4.6 SLOW DOWN CHANNELIZED RUNOFF

CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

STONE CHECK DAMS ARE NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.7 CONSTRUCT PERMANENT CONTROLS

PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH PERMIT CONDITIONS.

PERMANENT STORMWATER TREATMENT DEVICES ARE NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION

ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

#### 1.4.9 WINTER STABILIZATION

VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

WINTER STABILIZATION IS NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.10 STABILIZE SOIL AT FINAL GRADE

EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

TEMPORARY EROSION CONTROL MATTING IS NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.11 DE-WATERING ACTIVITIES

DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DEWATERING ACTIVITIES ARE NOT ANTICIPATED TO BE NEEDED AS DESIGNED.

#### 1.4.12 INSPECT YOUR SITE

INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

#### 1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

#### 1.5.1 CONSTRUCTION SEQUENCE

#### 1.5.2 OFF-SITE ACTIVITIES

IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

#### 1.5.3 UPDATES

PROJECT NAME: PUTNEY
PROJECT NUMBER: STP DECK(38)

FILE NAME: zI5bI05bdrerodet-I5.dgn
PROJECT LEADER: J. BYATT
DESIGNED BY: S. FORTIER

LL EPSC NARRATIVE

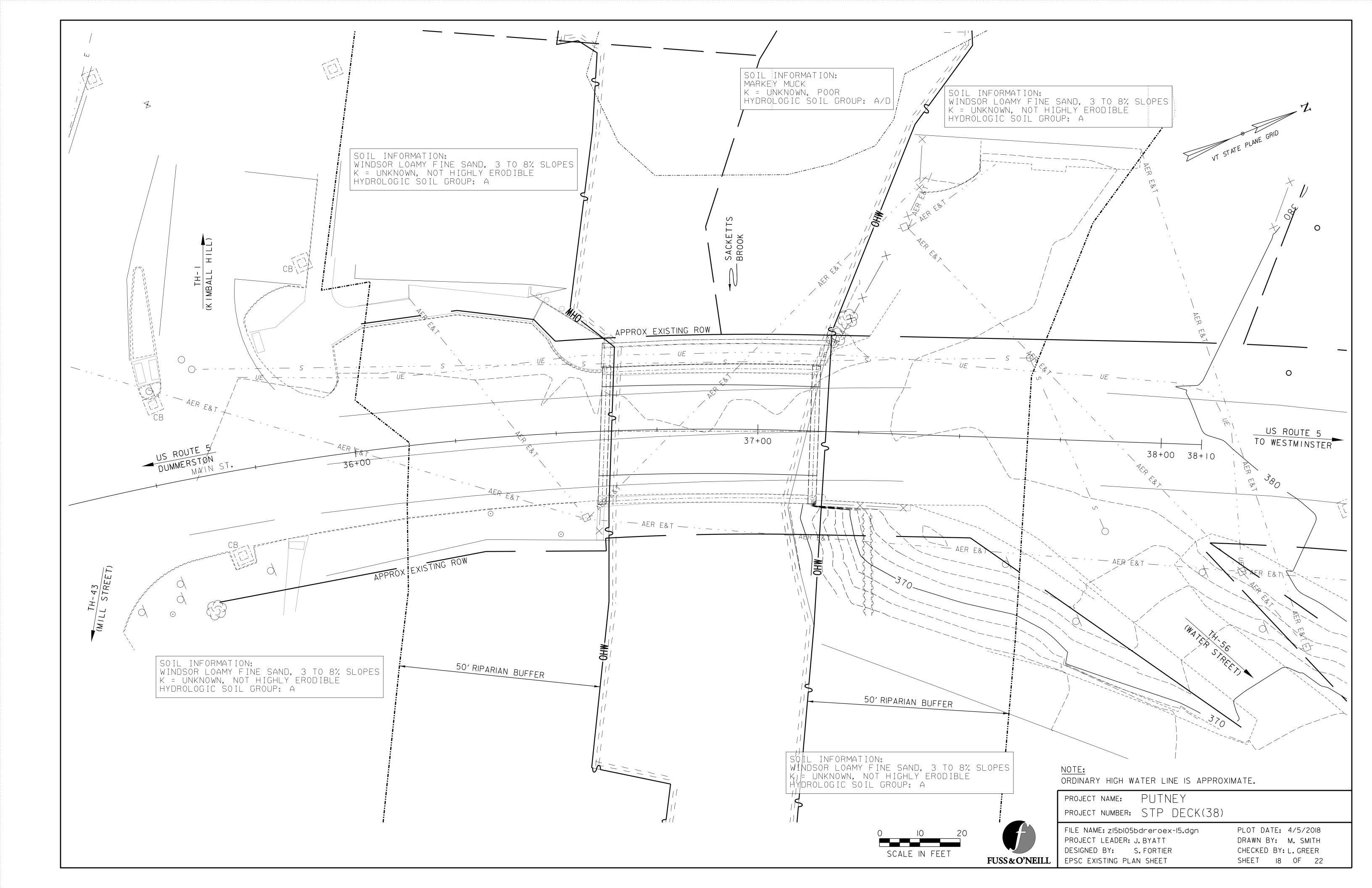
PLOT DATE: 4/5/2018

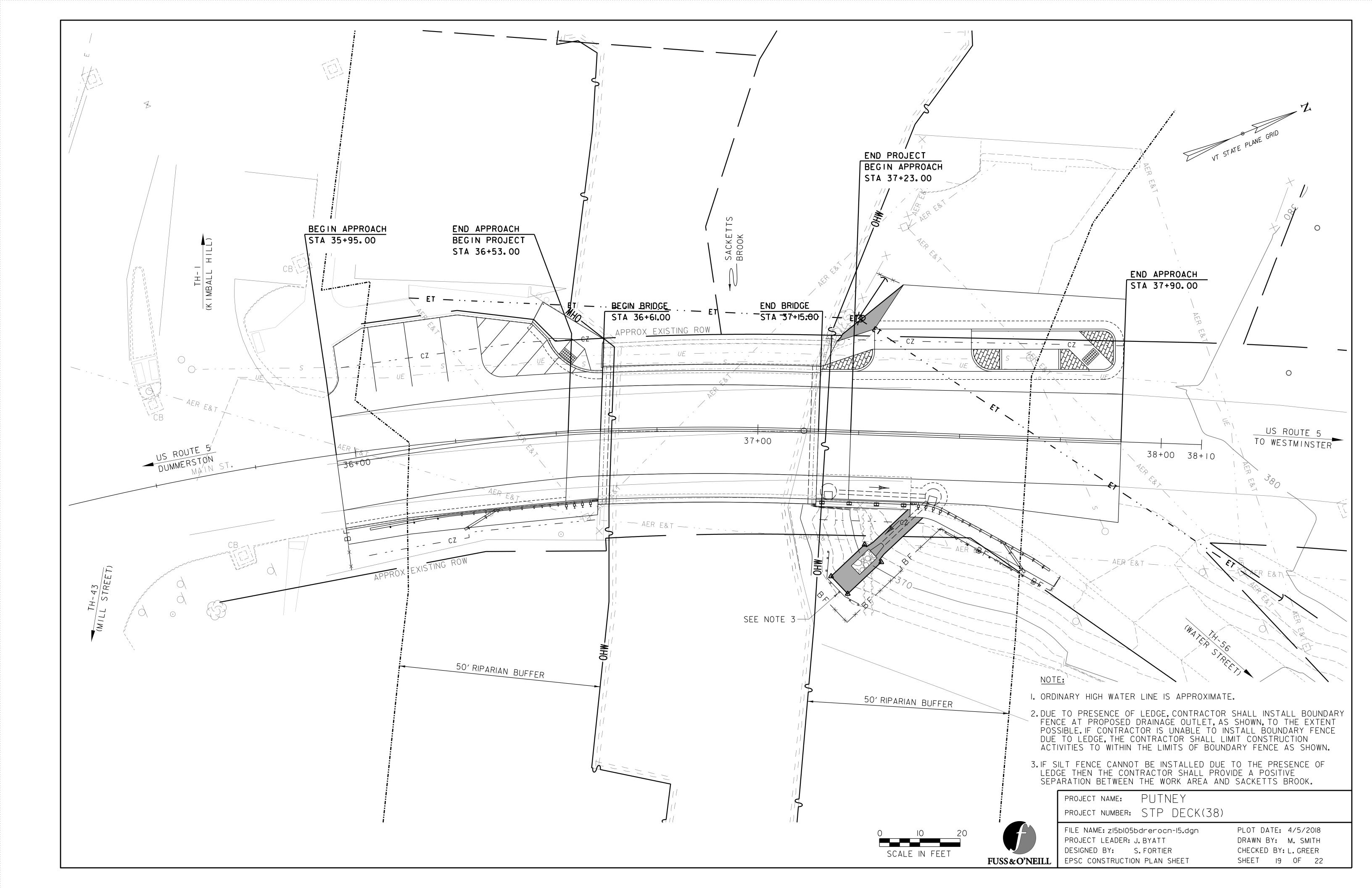
DRAWN BY: M. SMITH

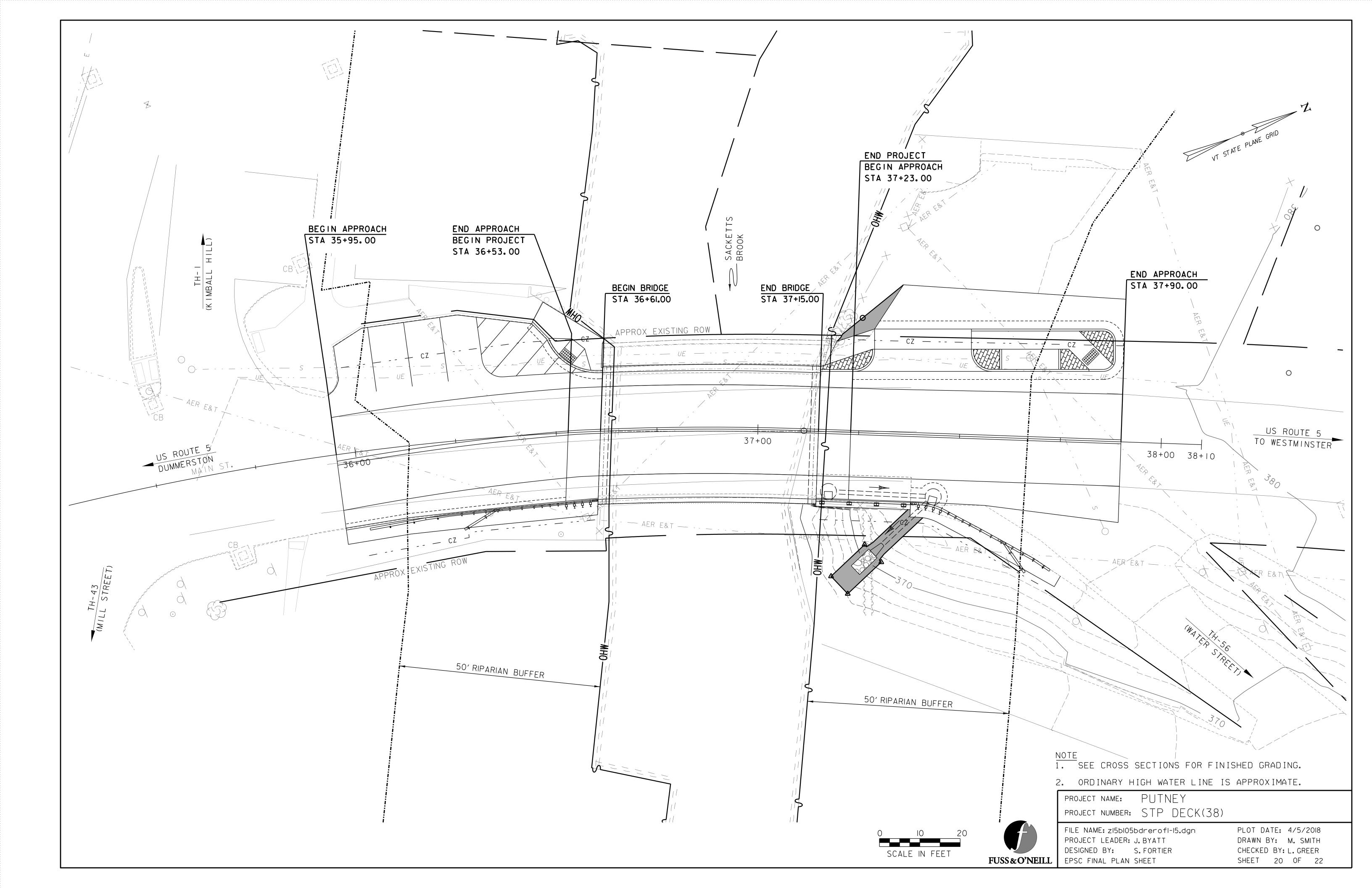
CHECKED BY: L. GREER

SHEET 17 OF 22









| VAOT URBAN LAWN MIX |           |           |                     |                       |      |        |
|---------------------|-----------|-----------|---------------------|-----------------------|------|--------|
|                     | LBS       | /AC       |                     |                       |      |        |
| WEIGHT              | BROADCAST | HYDROSEED | NAME                | LATIN NAME            | GERM | PURITY |
| 42.5%               | 34        | 68        | CREEPING RED FESCUE | FESTUCA RUBRA X RUBRA | 85%  | 98%    |
| 20.0%               | 16        | 32        | PERENNIAL RYE GRASS | LOLIUM PERENNE        | 90%  | 95%    |
| 32.5%               | 26        | 52        | KENTUCKY BLUE GRASS | POA PRATENSIS         | 85%  | 85%    |
| 5.0%                | 4         | 8         | ANNUAL RYE GRASS    | LOLIUM MULTIFLORUM    | 85%  | 95%    |

| GENERAL AMENDMENT GUIDANCE |           |            |
|----------------------------|-----------|------------|
| FERTILIZER                 | LIME      |            |
| 10/20/10                   | AG LIME   | PELLITIZED |
| 500 LBS/AC                 | 2 TONS/AC | 1 TONS/AC  |

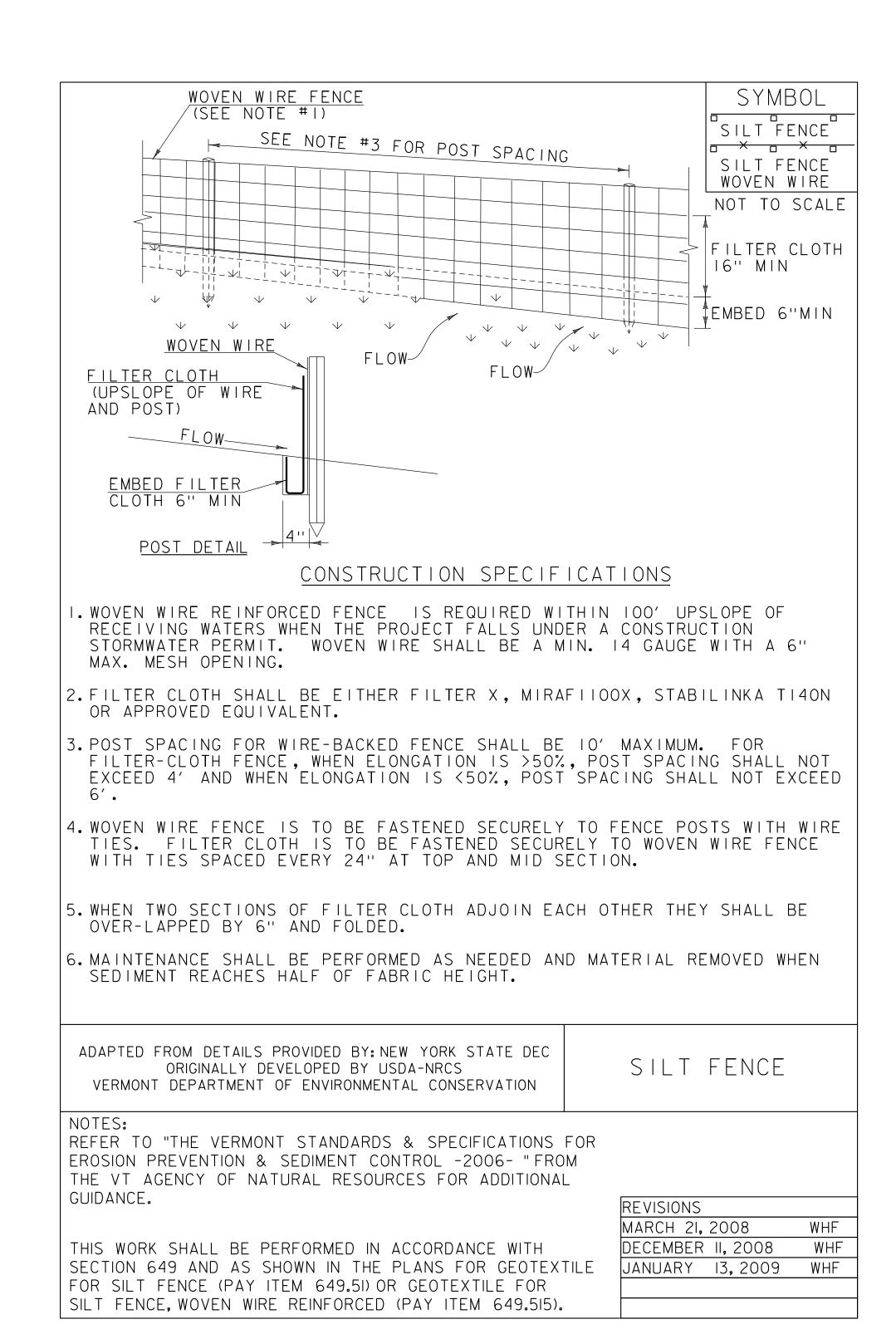
#### CONSTRUCTION GUIDANCE

- I.SEED MIX: THE URBAN AREA MIX SHALL NOT BE USED IN WETLANDS OR ANY WATERS OF THE STATE OF VERMONT.
- 2. SEED MIX: USE ONLY AS INDICATED IN THE PLANS.

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- 3. SEED MIX: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- 4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
- 5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
- 6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
- 7. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

| ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES | TURF ESTABLISHMENT   |
|---|----------------------|
| THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH   | REVISIONS            |
| SECTION 651 FOR SEED (PAY ITEM 651.15)  | JANUARY 22, 2015 WHF |
|   |                      |



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FILE NAME: zI5bI05bdrerodet-I5.dgn PROJECT LEADER: J. BYATT DESIGNED BY: S. FORTIER FUSS&O'NEILL | EPSC DETAIL SHEET

PLOT DATE: 4/5/2018 DRAWN BY: M. SMITH CHECKED BY: L. GREER SHEET 21 OF 22

