

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: December 17, 2013
Date of Addendum: December 10, 2013

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
014	43-1831-041	BRIDGE REPLACEMENT - PPCB	HARRISON	BRFN-183-1(41)--39-43	17DEC014.A03

Notice: Only the bid proposal holders receive this addendum and responsibility for notifying any potential subcontractors or suppliers remains with the proposal holder.

Add Proposal Line No. 0215 2112-0000100 WICK DRAIN: LF 62,873.000

Add Proposal Line No. 0595 2599-9999009 ('LINEAR FEET' ITEM) HORIZONTAL STRIP DRAIN: LF 9,700.000

If the above changes are not made, they will be made as shown here.

Make the following change to the plans:

Estimate Reference Note:

2599-9999009 ('LINEAR FEET' ITEM) HORIZONTAL STRIP DRAIN

Refer to Sheets Q.3 and Q.4 for locations and details.

Method of Measurement: Lineal feet as installed according to the contract documents, calculated from measurements of installed lengths.

Basis of Payment: Payment for horizontal strip drain will be the contract unit price per lineal foot. Payment includes all labor, equipment, and materials necessary to complete the installation according to the contract documents. No payment will be made for unacceptable drain or trial drain installations.

Replace Sheets Q.3 & Q.4 with the attached Sheets Q.3 & Q.4.

Make the following note change on Sheet B.2:

Change 12" GRANULAR SUBBASE to 12" MODIFIED SUBBASE.

SEE SHEET 6.4 FOR ADDITIONAL INFORMATION ON HORIZONTAL STRIP DRAINS.

The horizontal strip drain shall conform to the following specifications:

Property	Value	Test Method
Compressive Strength	10,000 psf	ASTM D 1621
Thickness	1.0 inches	ASTM D 1777
Material Type	HDPE, formed dimple core	

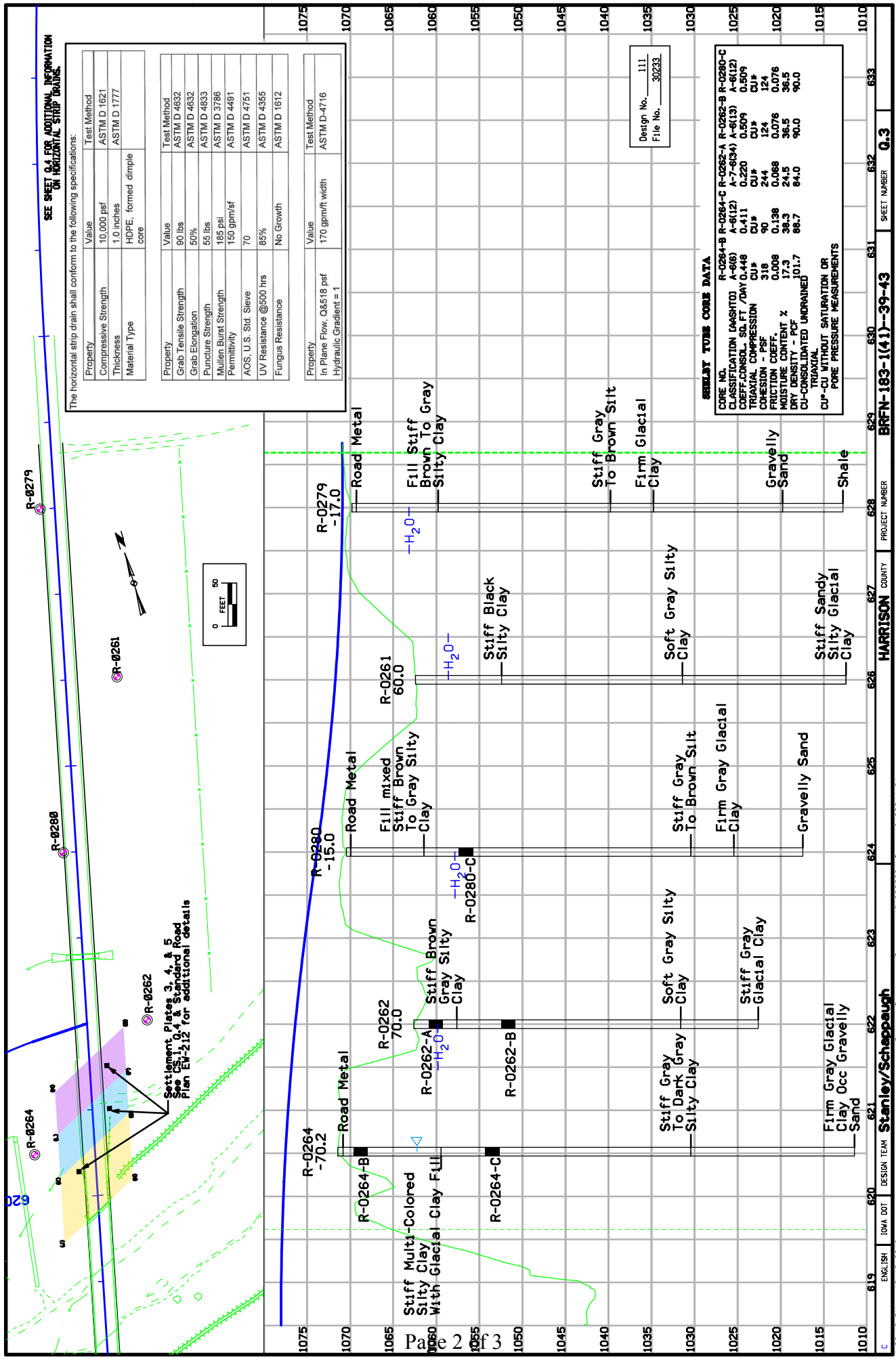
Property	Value	Test Method
Grab Tensile Strength	90 lbs	ASTM D 4632
Grab Elongation	50%	ASTM D 4632
Puncture Strength	55 lbs	ASTM D 4633
Mullen Burst Strength	185 psi	ASTM D 3786
Permittivity	150 gpm/ft	ASTM D 4491
AOS, U.S. Std. Sieve	70	ASTM D 4751
UV Resistance @500 hrs	85%	ASTM D 4355
Fungus Resistance	No Growth	ASTM D 1612

Property	Value	Test Method
In Plane Flow, 0.8518 psf Hydraulic Gradient = 1	170 gpm/ft width	ASTM D-4716

Design No. 111
File No. 30233

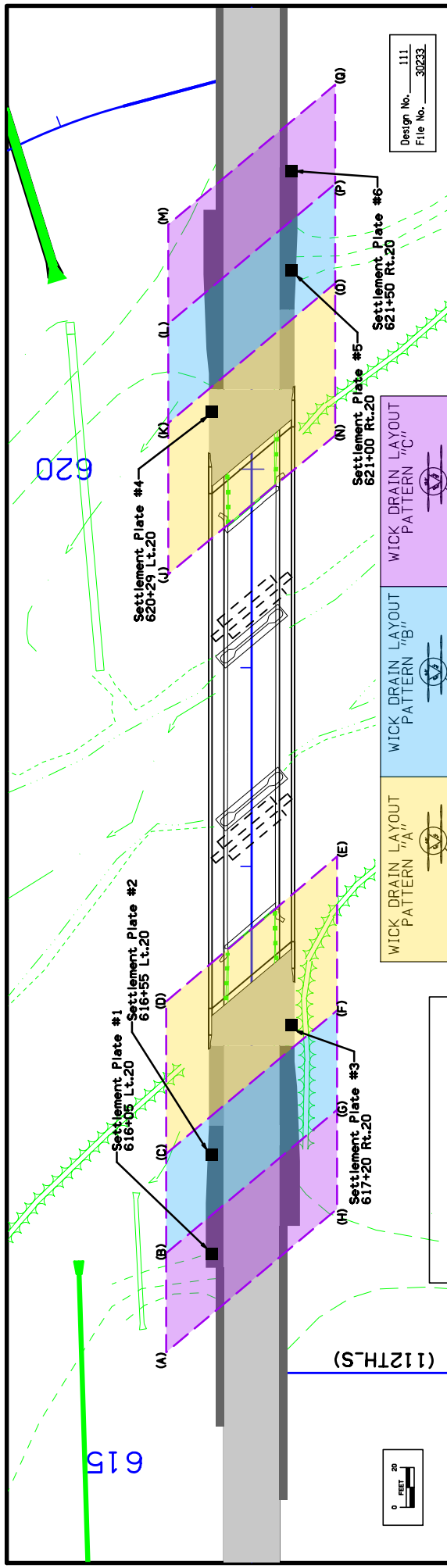
SELECTED CORE DATA

CORE NO.	R-0264-B	R-0264-C	R-0262-A	R-0262-B	R-0280-C
CLASSIFICATION (AASHTO)	A-6(12)	A-6(12)	A-7-6(34)	A-6(13)	A-6(12)
COEFF. CONSOL. - SD. FT. / DAY	0.448	0.411	0.220	0.509	0.509
TRIAxIAL COMPRESSION	CU#	CU#	CU#	CU#	CU#
COHESION - PSF	318	90	244	124	124
FRICTION COEFF.	0.008	0.138	0.068	0.076	0.076
MOISTURE CONTENT %	17.3	36.3	24.5	36.5	36.5
DRY DENSITY - PCF	101.7	86.7	84.0	90.0	90.0
CU-CONSOLIDATED UNRAINED TRIAXIAL PURE PRESSURE MEASUREMENTS					



Settlement Plates 3, 4, & 5
See CS-1, 0.4 & Standard Road
Plan EV-212 for additional details

SEE 0.3 FOR ADDITIONAL INFORMATION.



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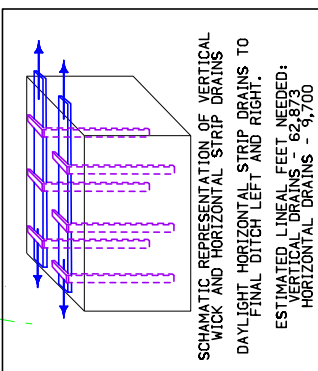


Table 1. Corner Coordinates of Wick Drain Layout South Bridge Abutment

Corner	Station	Offset
A	615+55.36	LT.43
B	616+05.36	LT.43
C	616+55.36	LT.43
D	617+32.00	LT.43
E	618+05.00	RT.43
F	617+27.52	RT.43
G	616+77.52	RT.43
H	616+27.52	RT.43

Table 3. Corner Coordinates of Wick Drain Layout North Bridge Abutment

Corner	Station	Offset
J	619+47.00	LT.42
K	620+23.12	LT.42
L	620+73.12	LT.42
M	621+23.12	LT.42
N	620+17.00	RT.42
O	620+93.60	RT.42
P	621+43.60	RT.42
Q	621+93.60	RT.42



Grade in stationing shall be necessary for prefabricated vertical (wick) drains in stationing. It will be incidental to the wick and horizontal drain system installation.

See Section 2112 Standard Specification Series 2012 for Wick Drains. The sand blanket discussed in Section 2112 shall be installed as approved by the Engineer. After installation, cut off the wick drains a minimum of 12 inches above ground level, but long enough to contact with and overlap the prefabricated horizontal (strip) drains. Prefabricated horizontal (strip) drains shall be used to convey wick water beyond the embankment boundaries. See Sheet 0.3 for strip drain specifications. Nominal horizontal strip drain thickness shall be approximately 1 inch. Nominal strip drain width shall be 6 inches or wider. Install the horizontal drains on the ground surface in rows laid out in a triangular pattern. Secure the horizontal drain material in position at each wick drain by staking, nailing, or by the manufacturer's recommended method. Extend the horizontal drains to final ditch locations left and right. Follow the material manufacturer's recommendations to make any necessary splice and bedding connections. There is an estimated 9,700 lineal feet of horizontal drain needed.

Build the embankment over the drainage system, placing initial soil lifts by methods recommended by the drain manufacturers to prevent damage to the drains.

Table 2. Table of Wick Drain Installation Spacing

Station to Station Area	Center to Center Spacing	Approx. Number of Wick Drains	Est. # of Wick Drains	Est. Avg. Length of Wick Drains
Pattern "A" * C - D - E - F J - K - N - O	4.0'	478	1016	54
Pattern "B" * B - C - F - G K - L - O - P	4.0'	463	1020	53
Pattern "C" * A - B - G - H L - M - P - Q	8.0'	78	1018	48
	8.0'	76	1022	50
	12.0'	34	1030	36
	12.0'	34	1030	42

• Pattern "A" (gold) designed for 0.4 inch remaining settlement at 30 days, with bridge pile driving contiguous on settlement plate readings.

Paving is also contingent on settlement plate readings:

- Pattern "B" (blue) designed for 1 inch remaining settlement at 120 days.
- Pattern "C" (purple) designed for 4 inches remaining settlement at 120 days.

• Wick drain tip are elevations estimated from borings R-0263 and R-0264 on Sheets 0.2 and 0.3, and from borings T-1517 and T-1518 on Sheet SPS1. If full depth installation is not attainable due to stiffer soil layers at depth, contact IDOT Soils Design to allow reassessment of tip elevations.

From Station 615+50, Left 43, to Station 618+05, Right 43, and from Station 619+47, Left 42, to Station 620+23, Right 42, install prefabricated vertical (wick) drains in a triangular pattern with center-to-center spacings shown in Table 2 and the three details (see left), surface to the estimated tip elevations shown in Table 2. There is an estimated 62,873 lineal feet of vertical wick drains needed. The Contractor should be aware that because of the stiffness of some soils layers, variability in soil material types and the depths to be penetrated. See the blow counts in the boring logs on sheet accordance with Iowa DOT Specification 2112 for Wick Drains (except no sand blanket is needed for drainage), which requires additional soil borings by the contractor.