

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR BRIDGE REPAIR NO. 2440
BRIDGE 2440 LOCATED AT T.H. 65 OVER MISSISSIPPI RIVER AND CITY STREETS
6.0 MILES SOUTH OF JUNCTION OF I-35W AND T.H. 65

SCHEDULE OF QUANTITIES

ITEM NO.	ITEM	UNIT	PIER 1	PIER 2	PIER 5	QUANTITY TOTAL
2021.501	MOBILIZATION	LUMP SUM				1
2031.501	FIELD OFFICE TYPE D	EACH				1
2104.601	REMOVE MISCELLANEOUS DEBRIS	LUMP SUM	0.5		0.5	1
2401.541	REINFORCEMENT BARS (STAINLESS STEEL)	POUND	3030	2410	1230	6670
2433.601	RECONSTRUCT FOUNDATION TYPE 1	LUMP SUM	1			1
2433.601	RECONSTRUCTION FOUNDATION TYPE 2	LUMP SUM			1	1
2433.602	GROUTED REINF BARS (STAINLESS STEEL)	EACH	332	220	102	654
2433.607	CEMENT GROUT	CU. YD.			3	3
2433.618	CONCRETE SURFACE REPAIR	SQ. FT.	200			200
2433.618	CONCRETE SURFACE REPAIR TYPE 1	SQ. FT.	2032	1600	15	3647
2433.618	CONCRETE SURFACE REPAIR TYPE 2	SQ. FT.	203	160	2	365
2563.601	TRAFFIC CONTROL	LUMP SUM				1

CONSTRUCTION NOTES:

THE 2014 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

NO CUTTING WILL BE PERMITTED UNTIL THE CUTTING LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER, REMOVAL AND RECONSTRUCTION SHALL CONFORM TO SPEC. 2433.

ALL EXPOSED CUT LINES SHALL BE SAW CUT TO A MINIMUM DEPTH OF 1".

APPROVED BONDING GROUT TO BE APPLIED TO ALL ABOVE WATER CONTACT SURFACES BETWEEN NEW AND INPLACE CONCRETE AT AREAS OF RECONSTRUCTION.

THE BAR SIZES SHOWN IN THIS PLAN ARE IN U.S. CUSTOMARY DESIGNATIONS.

BARS MARKED WITH SUFFIX "S" SHALL BE STAINLESS STEEL IN ACCORDANCE WITH SPECIAL PROVISIONS.

PLANS OF INPLACE BRIDGE NO. 2440 ARE AVAILABLE AT THE MINNESOTA DEPARTMENT OF TRANSPORTATION.

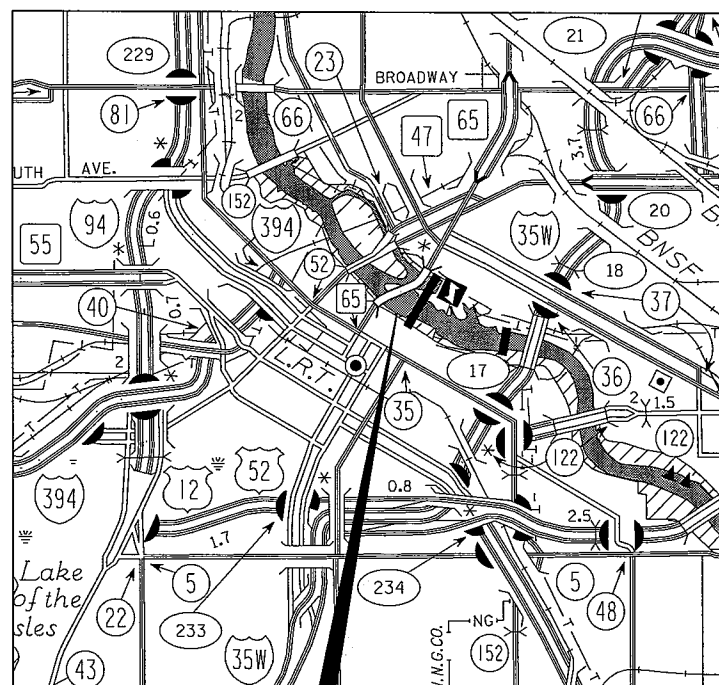
DIRECTIONS GIVEN IN PLANS (WEST FACE, EAST FACE, ETC.) ARE GIVEN BASED ON T.H. 65 RUNNING A NORTH/SOUTH ROUTE.

STATE FUNDS

BRIDGE NO.	STATE PROJECT NO.	JOB NO.
2440	2710-2440B	T9R548

LIST OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL PLAN AND ELEVATION
3	PIER 1 & 2 GEOMETRY
4	PIER 1 REMOVALS
5	PIER 1 REPAIR DETAILS
6	PIER 2 REMOVALS
7	PIER 2 REPAIR DETAILS
8	PIER 5 INPLACE CONDITIONS (1 OF 3)
9	PIER 5 INPLACE CONDITIONS (2 OF 3)
10	PIER 5 INPLACE CONDITIONS (3 OF 3)
11	PIER 5 FOOTING REPAIR (1 OF 2)
12	PIER 5 FOOTING REPAIR (2 OF 2)
13	BORING LOGS 1
14	BORING LOGS 2
15	BORING LOGS 3
16	AS-BUILT BRIDGE DATA
17	SWPPP AND WATER RESOURCES
18	SWPPP AND WATER RESOURCES
19	SWPPP AND WATER RESOURCES



BRIDGE 2440

RECOMMENDED
FOR APPROVAL

Beth Neenke 5-27-2014
METRO AREA WATER RESOURCES ENGINEER DATE

APPROVED

Nancy J. Daubinger 5/27/2014
STATE BRIDGE ENGINEER DATE

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: JACOB Z. BRONDER LICENSE: 41848

DATE: 5/23/14 SIGNATURE: *Jacob Z. Bronder* HDR Engineering, Inc.

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: LICENSE *

DATE: SIGNATURE:

STATE PROJ. NO. 2710-2440B (T.H. 65)

SHEET NO. 1 OF 19 SHEETS

DESIGN DATA

T.H. 65 (3RD AVENUE) OVER MISSISSIPPI RIVER
MAIN STREET AND WEST RIVER PARKWAY
6.0 MILES SOUTH OF JUNCTION OF I-35W
AND T.H. 65

SEC. 23 TWP. 29 N. R. 24 W.
CITY OF MINNEAPOLIS HENNEPIN COUNTY
Nancy A. Amburger DATE: 5/27/11
STATE BRIDGE ENGINEER

DR: JN	APPROVED:	BRIDGE NO. 2440
CHK: RJR		
NO. 2 OF 19 SHEETS		



- ① PERFORM CONCRETE SURFACE REPAIRS FROM BOTTOM OF ARCH TO TOP OF FOOTING AROUND PERIMETER OF PIER.
- ② CLEAN FOOTING VOIDS TO BEDROCK SURROUNDING DETERIORATED FOOTING. GROUT ALL VOIDS UNDER AND WITHIN FOOTING (SEE SPECIAL PROVISIONS). PROVIDE ANCHORED CONCRETE ENCASEMENT WALL ALONG PERIMETER OF GROUTED VOIDS TO LIMITS SHOWN IN PLANS. SEE SPECIAL PROVISIONS.
- ③ CONTRACTOR RESPONSIBLE FOR TEMPORARY REMOVAL OF SAFETY CABLE TO GAIN ACCESS TO PIER 5. COORDINATE WITH XCEL ENERGY. SEE SPECIAL PROVISIONS.
- ④ APPROX. 36' TO CURB INCLUDES APPROX. 22' SIDEWALKS AND PAVED BIKE TRAIL.
- ⑤ ARMY CORPS OF ENGINEERS WALKWAY AND GATE, SEE SPECIAL PROVISIONS.

DIMENSIONS BASED ON AVAILABLE PLANS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING DIMENSIONS.

CONTRACTOR IS RESPONSIBLE FOR RESTRAINING ANY CONCRETE ABOVE AND AROUND REPAIR AREAS.

NO CUTTING OR REMOVAL WILL BE PERMITTED UNTIL THE CUTT. LIMITS HAVE BEEN OUTLINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. REMOVAL AND RECONSTRUCTION SHALL CONFORM TO Mn/DOT SPEC. 2433.

[illegible]

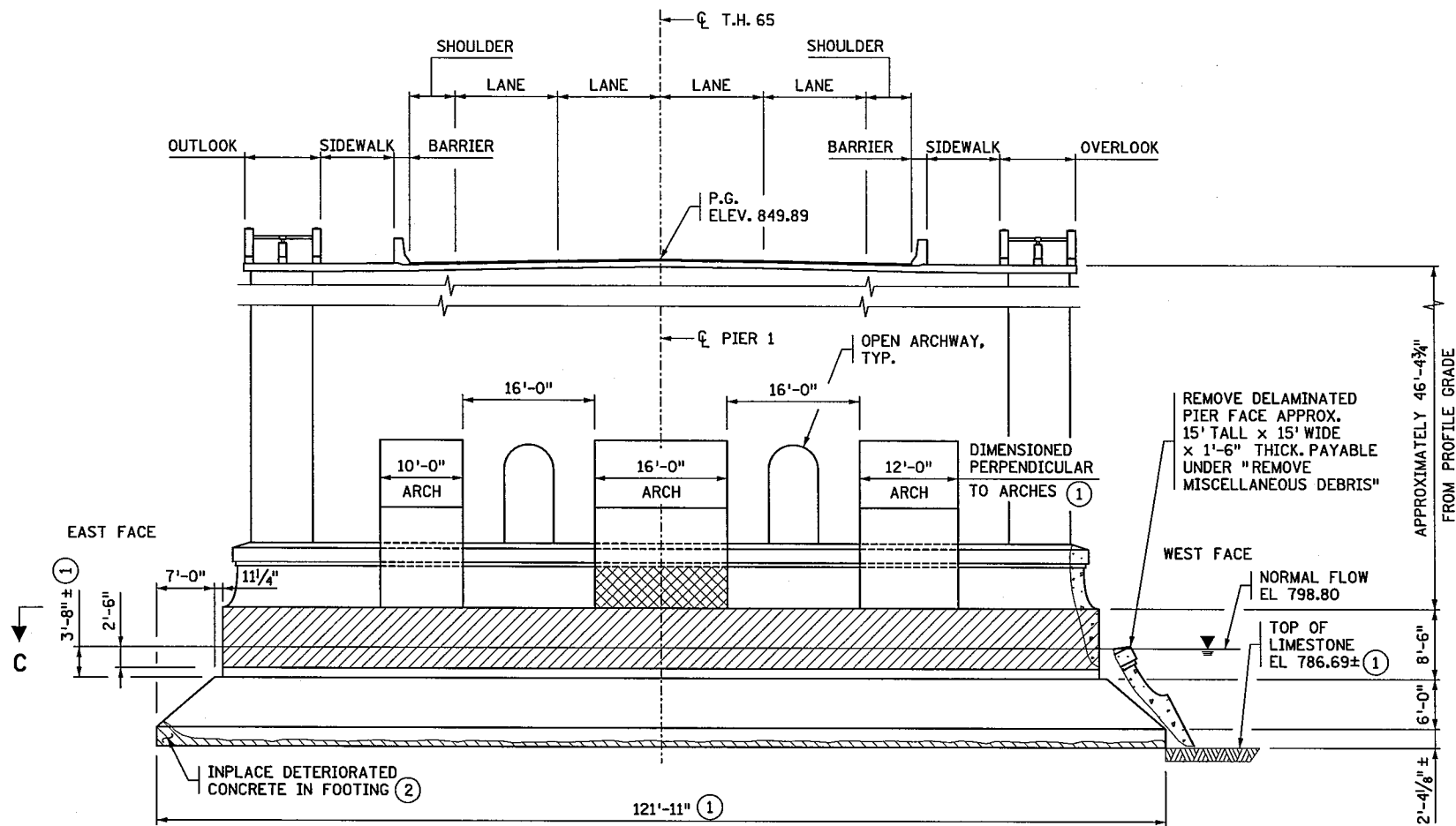
HDR
HDR Engineering, Inc.

CERTIFIED BY Jacob Z. Bronder 5/23/14
 LICENSED PROFESSIONAL ENGINEER DATE
 NAME: JACOB Z. BRONDER LIC. NO. 41848

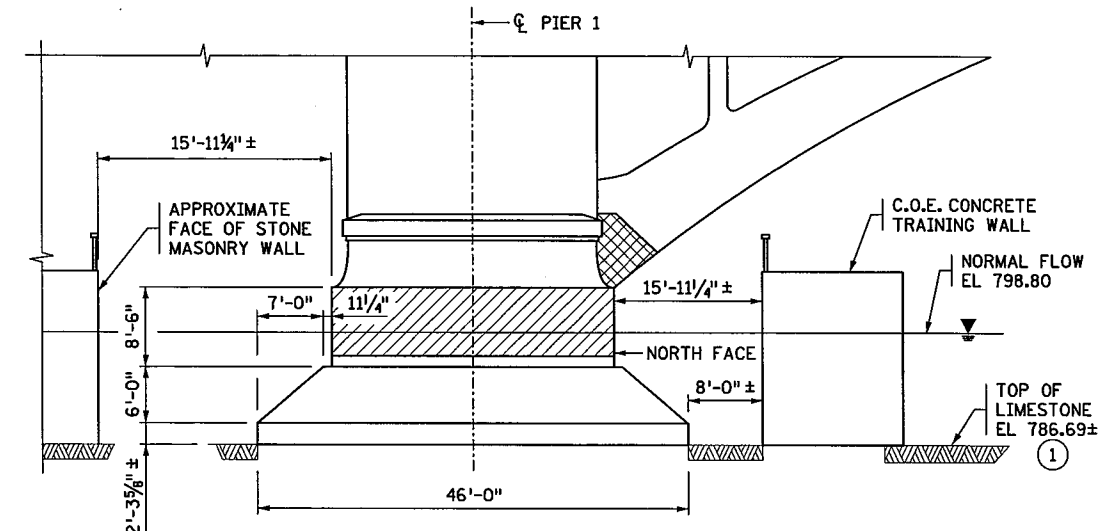
TITLE: GENERAL PLAN & ELEVATION

DES: JL	DR: JN	APPROVED:
CHK: RJR	CHK: RJR	
SHEET NO. 2 OF 19 SHEETS		

BRIDGE NO.	2440
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PIER 1 NORTH ELEVATION - VIEW A-A



PIER 1 EAST ELEVATION - VIEW B-B

NOTES:

UNVERIFIED INFORMATION INDICATES PIER 1 MAY CONTAIN A CONCRETE FOOTING SEAL, NOT SHOWN. VERIFY FOOTING DIMENSIONS PRIOR TO ORDERING MATERIALS.

REMOVE DETERIORATED CONCRETE FROM CENTER ARCH BASE BY SANDBLASTING AND REPAIR WITH SHOTCRETE OR CAST-IN PLACE CONCRETE. REMOVAL AREA NOT TO EXCEED 200 SF AND 6" DEEP. INCLUDED IN ITEM "CONCRETE SURFACE REPAIR".

DENOTES REMOVAL OF UNSOUND CONCRETE AND REPAIR WITH SHOTCRETE OR CAST-IN PLACE CONCRETE. INCLUDED IN ITEM "CONCRETE SURFACE REPAIR TYPE ...".

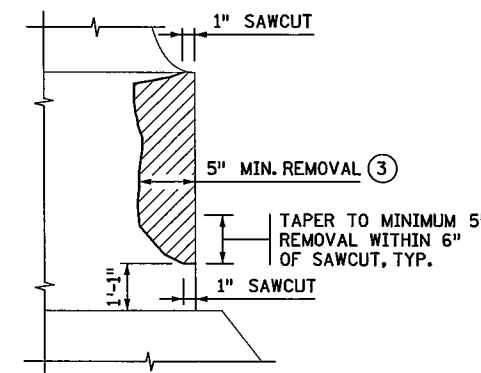
DENOTES POTENTIAL SPALLED AREAS ALONG PERIMETER. REMOVE UNSOUND CONCRETE AND REPAIR WITH STRUCTURAL CONCRETE (1XJM). INCLUDED IN ITEM "RECONSTRUCT FOUNDATION".

SEE SHEET 3 FOR LOCATION OF SECTIONS A-A & B-B.

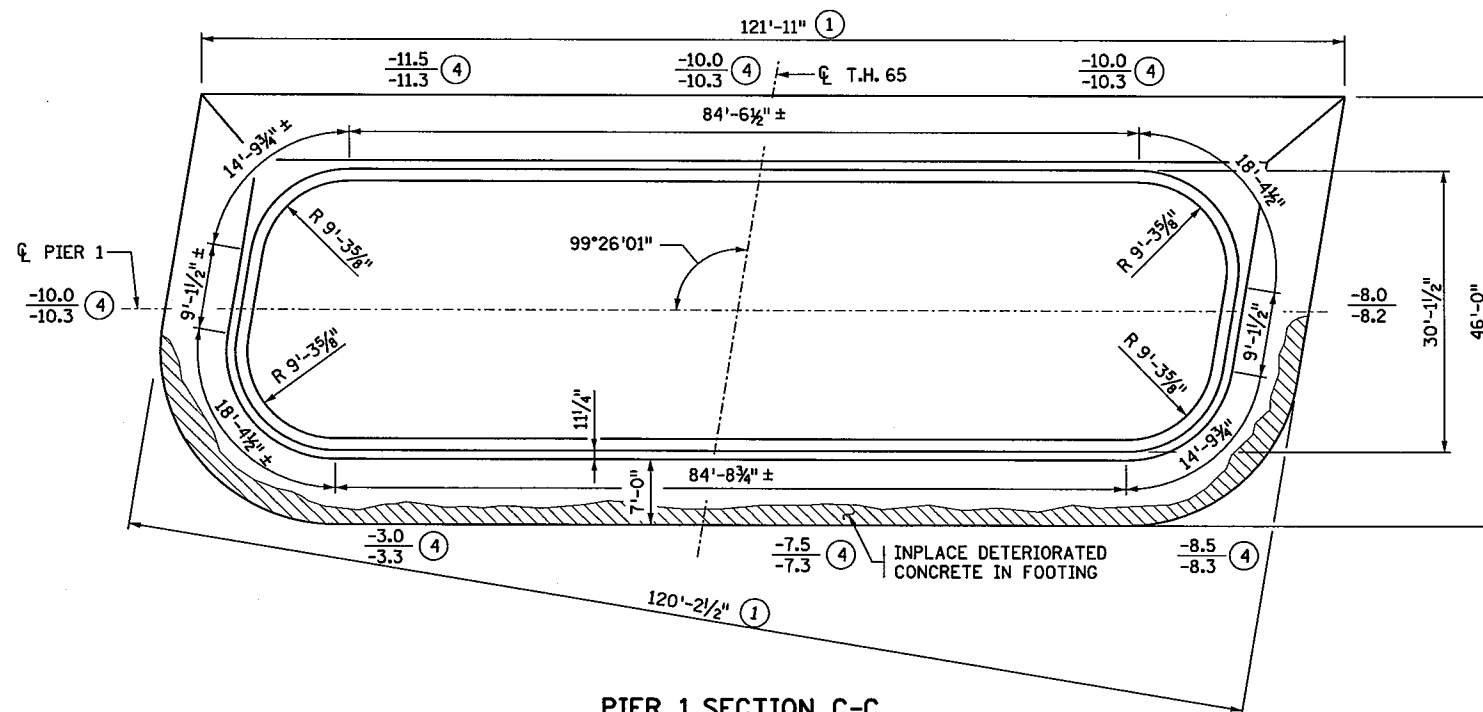
SEE SHEET 5 FOR SECTION C-C RECONSTRUCTION.

ALL CONCRETE PLACED BELOW WATER SHALL BE PUMPED OR TREMIED INPLACE AND NOT MIXED WITH WATER.

- FIELD VERIFY.
- VERTICAL FOOTING EXPOSURE BETWEEN 2' AND 3' TALL. MODERATE TO HEAVY SPALLING AND DETERIORATION WITH 6" TYPICAL AND UP TO 2' MAXIMUM PENETRATION.
- REMOVE UNSOUND CONCRETE 12" MAX.
- 8.0 SOUNDING DEPTH FROM WATERLINE (10/28/12)
-8.2 SOUNDING DEPTH FROM WATERLINE (10/23/08)



PIER 1 REMOVAL



PIER 1 SECTION C-C



CERTIFIED BY

Jacob Z. Browder
LICENSED PROFESSIONAL ENGINEER

5/23/14

LIC. NO. 41848

TITLE:

PIER 1 REMOVALS

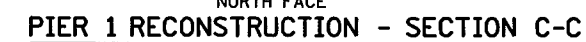
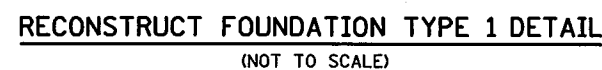
DES: JL DR: JN APPROVED:

CHK: RJR CHK: RJR

SHEET NO. 4 OF 19 SHEETS

BRIDGE NO.
2440

UP: H:\ed
2:15:04 PM
5/23/2014
\\naspe-srv1\ecgcaud\ondor-da\undot_br_v81\PLTDRIV\undot_plt
\\naspe-srv1\ecgcaud\ondor-da\undot_br_v81\PLTDRIV\undot_plt
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\\naspe-srv1\ecgcaud\ondor-da\undot_br_v81\PLTDRIV\undot_plt



P406S, P409S & P410S ①③


SUMMARY OF QUANTITIES FOR PIER 1		
REINFORCEMENT BARS (STAINLESS STEEL)	3030	POUND
GRouted REINF BARS (STAINLESS STEEL)	332	EACH
RECONSTRUCT FOUNDATION TYPE 1	1	LUMP SUM
CONCRETE SURFACE REPAIR	200	SQ. FT.
CONCRETE SURFACE REPAIR TYPE 1	2032	SQ. FT.
REMOVE MISCELLANEOUS DEBRIS	0.5	LUMP SUM
CONCRETE SURFACE REPAIR TYPE 2	203	SQ. FT.


- NOTES:**

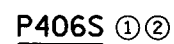
- ① REINFORCEMENT BARS DRILLING AND INSTALLING INCLUDED IN PAYMENT FOR "GROUTED REINF BARS (STAINLESS STEEL)". NOT INCLUDED IN WEIGHT OF REINFORCEMENT.
- ② BEND AND/OR CUT TO LENGTH IN FIELD.
- ③ 12" MINIMUM EMBEDMENT.
- ④ 6 VERTICAL CONSTRUCTION JOINTS MAY BE USED.
- ⑤ TOP EXPOSURE, SPALLING AND DETERIORATION OF FOOTING CONCRETE BETWEEN 6" (TYPICAL) UP TO 2' PENETRATION. CLEAN UNSUITABLE MATERIALS FROM SPALLS AND VOIDS. FORM AND CAST ENCAPSULATION CONCRETE. ALL WORK ASSOCIATED WITH REPAIRING CONCRETE FOOTING SEAL SPALLS SHALL BE PAID UNDER "RECONSTRUCT FOUNDATION TYPE 1".
- ⑥ 6 VERTICAL CONSTRUCTION JOINTS MAY BE USED.
- ⑦ THIS DIMENSION TIED TO THE CONCRETE FOOTING SEAL DIMENSION, VERIFY IN THE FIELD.
- ⑧ GROUT BAGS OR ENCAPSULATION FORMING SHALL NOT BE INSTALLED UNTIL ENGINEER REVIEWS AND APPROVES VOID IS ADEQUATELY CLEARED OF SEDIMENT AND DEBRIS. ALL CLEANING AND DEBRIS REMOVAL TO BE PAID FOR AS "REMOVE MISCELLANEOUS DEBRIS".
- ⑨ FIELD TRIM R406S AS NECESSARY.
- ⑩ PAID FOR UNDER "RECONSTRUCT FOUNDATION TYPE 1".

SEE SHEET 11 FOR LETTERED NOTES RELATING TO
CONSTRUCTION SEQUENCE FOR UNDERWATER CONSTRUCTION.


SEE SHEET 4 FOR LOCATION OF SECTION C-C.

 REPAIR WITH SHOTCRETE CENTER ARCH RIB AT SPRINGLINE.

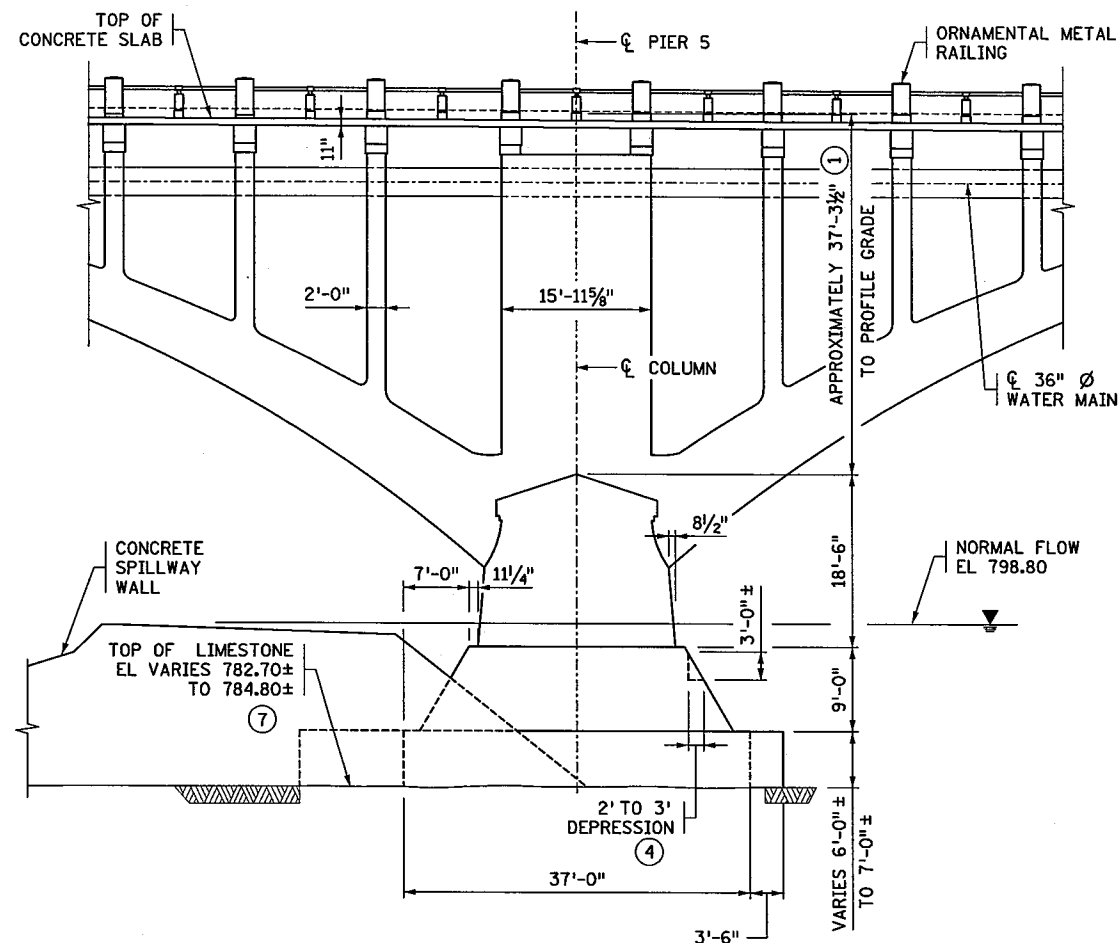
 DENOTES CAST-IN-PLACE CONCRETE REPAIR.



- ① REINFORCEMENT BARS PLUS DRILLING AND
INSTALLING INCLUDED IN PAYMENT FOR
"GROUTED REINF BARS (STAINLESS STEEL)".
- ② BEND AND/OR CUT TO LENGTH IN FIELD.
- ③ 12" MINIMUM EMBEDMENT.
- ④ 6 VERTICAL CONSTRUCTION JOINTS MAY BE USED.
SEE SHEET 6 FOR LOCATION OF SECTION F-F.

 DENOTES CONCRETE REPAIR.

BILL OF REINFORCEMENT FOR PIER 2 CONCRETE SURFACE REPAIR TYPE --				
BAR	NO	LENGTH	SHAPE	LOCATION
P401S	16	50'-0"	—	FOOTING HORIZONTAL
P404S	220	7'-0"	—	FOOTING VERTICAL
P406S	110	2'-8"	L	HORIZONTAL DOWEL
P407S	110	3'-6"	—	VERTICAL DOWEL
P408S	16	28'-9"	—	FOOTING HORIZONTAL
P409S	32	25'-1"	L	FOOTING HORIZONTAL



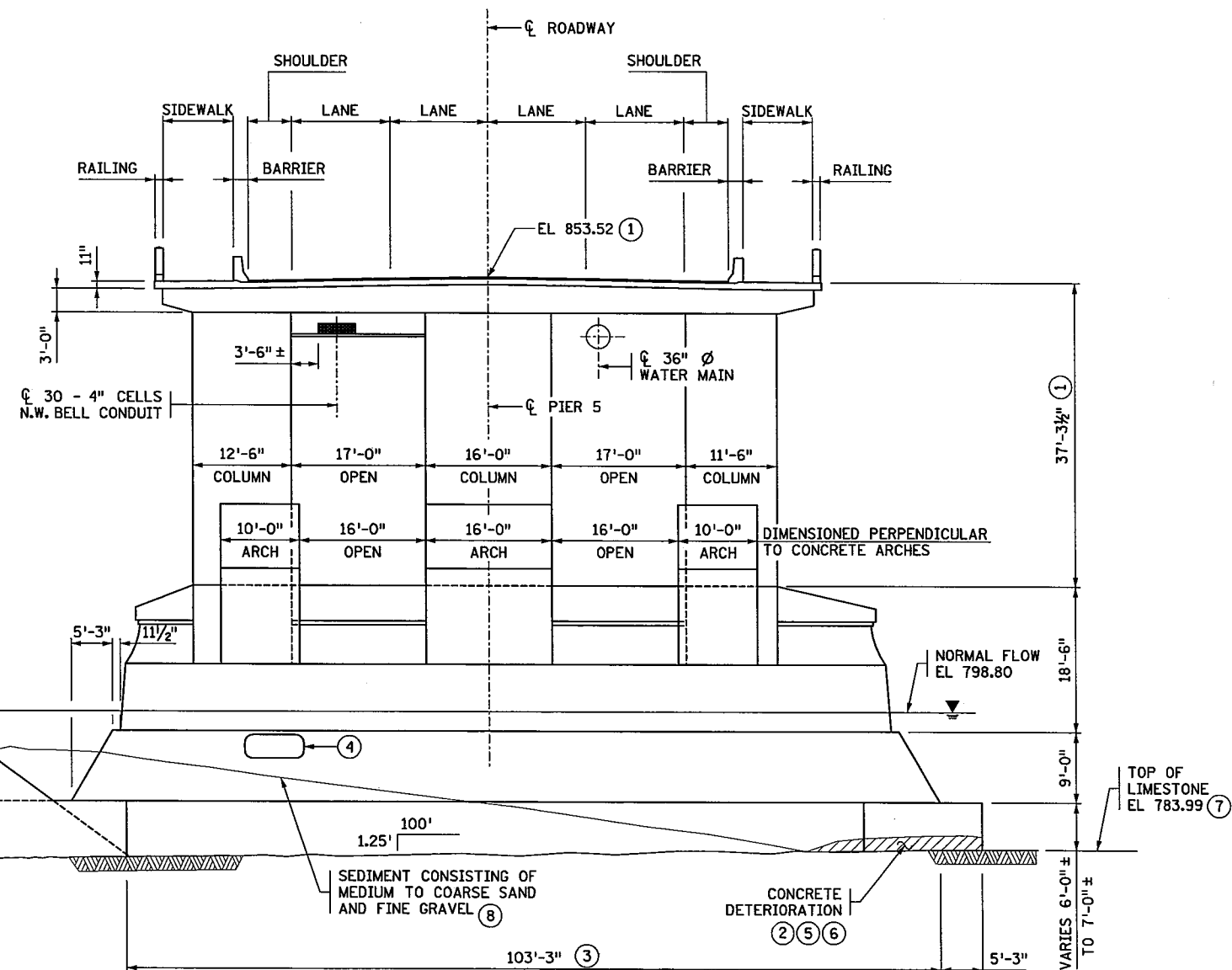
EAST ELEVATION - LOOKING WEST

NOTES:

/// DENOTES KNOWN UNDERCUT AREA ALONG PERIMETER. REMOVE UNSOUND CONCRETE AND REPAIR WITH STRUCTURAL CONCRETE (IAJM). INCLUDED IN ITEM "RECONSTRUCT FOUNDATION".

SEE SHEETS 12, 13 AND 14 FOR BORING LOGS.

- ① ELEVATION TO PROFILE GRADE, CENTERLINE OF PIER 5.
- ② FIELD VERIFY ANY ADDITIONAL UNDERCUT AREAS. DETAILS SHOW KNOWN AREAS REQUIRING REPAIR. ACTUAL AREAS SHALL BE DETERMINED IN THE FIELD.
- ③ CONCRETE FOOTING SEAL LIMITS TO BE IDENTIFIED IN THE FIELD AS NECESSARY.
- ④ 5' WIDTH x 3' HEIGHT AREA OF SPALL, 2' TO 3' DEPTH, CENTERED APPROXIMATE 3' BELOW NORMAL POOL. SEE SURFACE REMOVAL AND REPAIR DETAILS SHEET 12.
- ⑤ A VOID, POTENTIALLY CONTINUING THROUGH CONCRETE FOOTING SEAL, WAS DISCOVERED DURING NOVEMBER 2012 UNDERWATER INSPECTION. LIMITS AT THE SOUTH FACE AT THE TIME OF INSPECTION WERE DESCRIBED AS "UP TO 6' WIDE AND VARYING IN HEIGHT FROM 1' TO 3'".
- ⑥ 3-D ACOUSTIC SCAN AVAILABLE FOR CONTRACTOR REVIEW. AN UNDERCUT AREA WAS DISCOVERED IN A 3-D ACOUSTIC IMAGING SCAN MEASURING MAXIMUM APPROXIMATE DEPTH OF 2'-6" AND 15' LONG ALONG CONCRETE FOOTING SEAL.
- ⑦ FIELD VERIFY TOP OF LIMESTONE AS NECESSARY.
- ⑧ SEDIMENT LEVELS APPROXIMATE AND VARY SEASONALLY. FIELD VERIFY.



NORTH ELEVATION - LOOKING SOUTH

Unit: Feet
 5/23/2014 2:52:26 PM
 \\mspc-srv1\NECCCAD5\hondar\dwg\INDOT\BR-V8\PILOTORV\INDOT.PLT
 \\mspc-srv1\NECCCAD5\hondar\dwg\INDOT\BR-V8\PILOTORV\INDOT.BR.TB
 \\mspc-srv1\NECCCAD5\hondar\dwg\INDOT\BR-V8\PILOTORV\INDOT.BR.TB
 \\mspc-srv1\NECCCAD5\hondar\dwg\INDOT\BR-V8\PILOTORV\INDOT.BR.TB



CERTIFIED BY

NAME: JACOB Z. BRONDER

Jacob Z. Bronder
 LICENSED PROFESSIONAL ENGINEER

5/23/14

LIC. NO. 41848

TITLE:

PIER 5
 INPLACE CONDITIONS
 (1 OF 3)

DES: JL

CHK: RJR

DR: JN

CHK: RJR

APPROVED:

SHEET NO. 8 OF 19 SHEETS

BRIDGE NO.

2440



(FIELD VERIFY DIMENSIONS)





P403S



NOTES:

- ① REINFORCEMENT BARS PLUS DRILLING AND INSTALLING INCLUDED IN PAYMENT FOR "GROUTED REINF BARS (STAINLESS STEEL)".
- ② 12" MINIMUM EMBEDMENT.
- ③ FIELD BEND TO MATCH FACE SLOPE.
- ④ NO COMPENSATION WILL BE PAID ABOVE LUMP SUM PRICE FOR CHANGE IN QUANTITIES EXCEPT AS NOTED IN ⑤. ESTIMATED QUANTITIES ARE BASED ON BEST AVAILABLE INFORMATION. ACTUAL QUANTITIES ARE TO BE DETERMINED BY CONTRACTOR IN FIELD AS NECESSARY TO EXECUTE REPAIRS SHOWN.
- ⑤ PRIMARY GROUTING OF VOID ESTIMATED.
- ⑥ QUANTITY OF SECONDARY GROUTING IS INCIDENTAL. SEE SPECIAL PROVISIONS FOR ADDITIONAL VOLUME PAYMENT TERMS.

 DENOTES REMOVAL OF UNSOUND CONCRETE INCLUDED IN ITEM "CONCRETE SURFACE REPAIR TYPE ---".

 DENOTES CAST-IN-PLACE CONCRETE REPAIR.
INCLUDED IN ITEM "CONCRETE SURFACE
REPAIR TYPE ---".

$$\begin{array}{c} \textcircled{1} \\ \textcircled{3} \textcircled{1} \end{array}$$

untitled
11/27/14 4 AM
5/23/2014
\\mspc-srv1\c\ccp\55\ford-64\MDOT BR V8 INP\OTRRV\MDOT PLT
\\mspc-srv1\c\ccp\55\ford-64\MDOT BR V8 INP\OTRRV\MDOT PLT
\\mspc-srv1\c\ccp\55\ford-64\MDOT BR V8 INP\OTRRV\MDOT PLT
\\mspc-srv1\c\ccp\55\ford-64\MDOT BR V8 INP\OTRRV\MDOT PLT

Boring By: SOIL ENGINEERING SERVICES, INC. Logged By: E. H. Anderson
Minneapolis, Minnesota Inspector: J. Murphy

LOG OF BORING

PROJECT: 68-80 3rd Avenue Bridge Minneapolis, Minnesota		BORING NO: ST-3-5 SHEET 1 OF 2	
DATE OF BORING STARTED: 4/11/98 COMPLETED: 4/16/98		LOCATION STATION: Pier 5 OFFSET: 0	
GROUND WATER HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____		BORING TYPE Rotary CME 55 R12	
SAMPLER TYPE AND DATA <input checked="" type="checkbox"/> SPLIT BARREL 1 3/8" I.D., 2" O.D. <input type="checkbox"/> UNDISTURBED SAMPLE <input type="checkbox"/> ROCK CORE NX Diamond Bit <input type="checkbox"/> AUGER <input type="checkbox"/> OTHER		SOIL DESCRIPTION AND REMARKS CLASSIFICATION SYSTEM ELEV. 799.8	
DEPTH-Feet SAMPLE NO. PENETRATION RESISTANCE RECOVERY % CORRECTION TO STANDARD 1-4 INCHES PER MINUTE DRILLING RATE BY THE TYPE OF CIRCULATION TYPE OF DRILLING FLUID CASING SIZE, TYPE AND WEIGHT PER FOOT WHICH IS BEING USED		Water Concrete Paving Broken wood Light grey mottled with dark grey Platteville Formation. (lost water at 15.5' - two short core runs taken) Bluish grey to yellowish brown Glenwood Formation *Classification below 17' on Very dense, greenish grey St. Peter Sandstone (upper portions well cemented -- retained in core barrel)	

FORM NO. 072-3613 HOWARD, NEEDLES, TAMMEN & BERGENDOFF

Boring By: SOIL ENGINEERING SERVICES, INC. Logged By: P. H. Anderson
Minneapolis, Minnesota Inspector: J. Murphy

LOG OF BORING

PROJECT: 68-80 3rd Avenue Bridge Minneapolis, Minnesota		BORING NO: ST-3-5 SHEET 1 OF 2	
DATE OF BORING STARTED: 4/10/98 COMPLETED: 4/10/98		LOCATION STATION: Pier 5 OFFSET: 0	
GROUND WATER HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____		BORING TYPE Rotary CME 55 R12	
SAMPLER TYPE AND DATA <input checked="" type="checkbox"/> SPLIT BARREL 1 3/8" I.D., 2" O.D. <input type="checkbox"/> UNDISTURBED SAMPLE <input type="checkbox"/> ROCK CORE NX Diamond Bit <input type="checkbox"/> AUGER <input type="checkbox"/> OTHER		SOIL DESCRIPTION AND REMARKS CLASSIFICATION SYSTEM ELEV. 800.0	
DEPTH-Feet SAMPLE NO. PENETRATION RESISTANCE RECOVERY % CORRECTION TO STANDARD 1-4 INCHES PER MINUTE DRILLING RATE BY THE TYPE OF CIRCULATION TYPE OF DRILLING FLUID CASING SIZE, TYPE AND WEIGHT PER FOOT WHICH IS BEING USED		Water Concrete Paving (lower portions badly fractured and easier drilling -- possibly leaner concrete) Light grey mottled with dark grey Platteville Formation Bluish grey to yellowish brown Glenwood Formation Very dense, brownish grey St. Peter Sandstone (W indicates sample obtained from wash water)	

FORM NO. 072-3613 HOWARD, NEEDLES, TAMMEN & BERGENDOFF

Boring By: SOIL ENGINEERING SERVICES, INC. Logged By: P. Anderson
Minneapolis, Minnesota Inspector: J. Murphy

LOG OF BORING

PROJECT: 68-80 3rd Avenue Bridge Minneapolis, Minnesota		BORING NO: ST-3-5 SHEET 1 OF 1	
DATE OF BORING STARTED: 4/12/98 COMPLETED: 4/12/98		LOCATION STATION: Pier 5 OFFSET: 0	
GROUND WATER HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____ HOURS AFTER DRILLING: _____		BORING TYPE Rotary CME 55 R12	
SAMPLER TYPE AND DATA <input checked="" type="checkbox"/> SPLIT BARREL 1 3/8" I.D., 2" O.D. <input type="checkbox"/> UNDISTURBED SAMPLE <input type="checkbox"/> ROCK CORE NX Diamond Bit <input type="checkbox"/> AUGER <input type="checkbox"/> OTHER		SOIL DESCRIPTION AND REMARKS CLASSIFICATION SYSTEM ELEV. 799.8	
DEPTH-Feet SAMPLE NO. PENETRATION RESISTANCE RECOVERY % CORRECTION TO STANDARD 1-4 INCHES PER MINUTE DRILLING RATE BY THE TYPE OF CIRCULATION TYPE OF DRILLING FLUID CASING SIZE, TYPE AND WEIGHT PER FOOT WHICH IS BEING USED		Water Loose, brown, medium to coarse sand and fine gravel, wet Light grey mottled with dark grey Platteville Formation Bluish grey to yellowish brown Glenwood Formation Very dense, brownish grey St. Peter Sandstone	

FORM NO. 072-3613 HOWARD, NEEDLES, TAMMEN & BERGENDOFF



TITLE: BORING LOGS 1		DES: JL CHK: RJR	DR: JN CHK: RJR	APPROVED:	BRIDGE NO. 2440
SHEET NO. 13 OF 19 SHEETS					

Boring By: SOIL ENGINEERING SERVICES, INC. Logged By: F.H. Anderson
Minneapolis, Minnesota Inspector: J. Murphy

LOG OF BORING

[illegible]

FORM NO. 173-283-3

HOWARD, NEELES, TAMMEN & BERGENDORF

Boring By: SOIL ENGINEERING SERVICES, INC. Logged By: P.M. Anderson
Minneapolis, Minnesota Inspector: J. Murphy

LOG OF BORING

PROJECT: 08-83 32d Avenue Bridge		Boring No. 82-1-5	
Minneapolis, Minnesota		SHEET 1 OF 1	
DATE OF BORING		LOCATION	
STARTED: _____	GROUND WATER	STATION: _____	
COMPLETED: 5/1/63	HOURS AFTER DRILLING: _____	OFFSET: _____	
BORING TYPE	HOURS AFTER DRILLING: _____	Pier 5	
POTENTIAL			
CWE 36.114			
DEPTH-Feet SAMPLE NO. THE PENETRATION RESISTANCE RECOVERY, % COMPRESSION STRENGTH DRILLING DATA BY SITE OF OBSERVATION, TYPE OF TESTING FLUID CORRECTION FACTOR, % WHICH IS NAME		SAMPLER TYPE AND DATA <input checked="" type="checkbox"/> SOIL BARREL <input type="checkbox"/> UNDISTURBED SAMPLE <input type="checkbox"/> ROCK CORE <input type="checkbox"/> AUGER <input type="checkbox"/> OTHER	
		SOIL DESCRIPTION AND REMARKS	
		CLASSIFICATION SYSTEM	
		REV.	
		820.0	
		Water	
		8.5' 791.	
		Sand -- not sampled.	
		16.6' 735.	
		Light gray mottled with dark gray Platteville Formation	
		26.6' 774.	
		26.6' 773.	
		Bluish gray Glenwood Formation	

ADONIS 0022-273X-93-0003-9

HOWARD NEEDLES TAMMEN & BERGENCOFF

Designed By: SOIL ENGINEERING SERVICES, INC. Logged By: P.R. Anderson
Minneapolis, Minnesota Inspector: J. Murthy

LOG OF BORING

PROJECT:		BORING NO. ST-2-2	
58-80 3rd Avenue Bridge Minneapolis, Minnesota		SHEET 2 OF 3	
DATE OF BORING:		LOCATION	
STARTED: 4/19/68		STATION:	
COMPLETED: 4/22/68		QUIST:	
BORING TYPE		Pier 5	
CNG 55 P.S.I.		HOURS AFTER DRILLING:	
		HOURS AFTER DRILLING:	
		HOURS AFTER DRILLING:	
SAMPLER TYPE AND DATA			
<input checked="" type="checkbox"/>	SPLIT BARREL	1 3/8" I.D. 2' 0" D.I.	
<input type="checkbox"/>	UNDISTURBED SAMPLE		
<input type="checkbox"/>	ROCK CORE	XX Diamond RIF	
<input type="checkbox"/>	AUGER		
<input type="checkbox"/>	OTHER		
SOIL DESCRIPTION AND REMARKS			LEV.
CLASSIFICATION SYSTEM			299.6
2.8		Water	
3.5			
4.5			
7.5		Sand - not sampled	792.6
10.0			
12.5			
15.0			
17.5			
18.5			783.1
20.0		Light grey mottled with dark grey Platteville Formation (upper 1-foot fragmented)	
22.5	53'		
24.0	92'		
25.0	100'		
27.0	104'		
28.0	106'		
30.0	108'		
31.5	110'		
32.5	112'		
33.5	114'		
34.5	116'		
35.5	118'		
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105.5	258'		
106.5	260'		
107.5	262'		
108.5	264'		
109.5	266'		
110.5	268'		
111.5			

FORM NO. 123-223-2

HOWARD NEEDLES TAMM & BERENSON



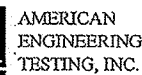
TITLE:	
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BORING LOGS 2

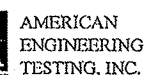
DES: JL	DR: JN	APPROVED:
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CHK: RJR	CHK: RJR	
SHEET NO. 14 OF 19 SHEETS		

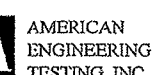
BRIDGE NO.
2440



AET CORP 01-08003.GPJ AET-CPT+VELL.GDT 4/15/94



KEY CORP 01-45965.GPJ AET-CPT+VELL.GOT 4/2/14



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☐ LOW SLUMP

☐ OTHER _____

TYPE OR MANUFACTURER

JOINT MANUFACTURER _____

MANUFACTURER'S IDENTIFICATION _____
MFR'S No. AND/OR LETTER DESIGNATION FOR JOINT USED _____

GLAND MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE) _____

SIZE OF GLAND _____

MANUFACTURER'S IDENTIFICATION _____
MFR'S No. AND/OR LETTER DESIGNATION FOR GLAND USED _____

PAD MANUFACTURER _____	
	NAME AND ADDRESS (CITY, STATE)

SYSTEM: _____ COLOR: _____

TYPE: _____ COLOR: _____

MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)
PRODUCT NAME: _____ LOCATION: _____

Mn/DOT SPECIFICATION NUMBER _____
2478 OR 2479 OR OTHER

MANUFACTURER _____
NAME AND ADDRESS (CITY, STATE)

PRIME COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER

INTERMEDIATE COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER

FINISH COAT _____
Mn/DOT MATERIAL SPECIFICATION NUMBER COLOR

RATE 1 (AGREE), 2 (NEUTRAL), OR 3 (DISAGREE, PLEASE COMMENT BELOW)

DIMENSIONING AND DETAILING ADEQUATELY DESCRIBED REQUIRED CONSTRUCTION. _____

BAR LISTS AND QUANTITIES WERE TYPICALLY COMPLETE AND FREE OF ERRORS. _____

SCALE OF DRAWINGS AND OVERALL LEGIBILITY OF LINES AND TEXT WAS GOOD. _____

(SB) SPECIAL PROVISIONS ADEQUATELY DESCRIBED SPECIAL WORK AND PAYMENT. _____

COMMENTS: _____

NUMBER OF BRIDGE
SUPPLEMENTAL AGREEMENTS: _____ COST: \$ _____

LIST SIGNIFICANT ERRORS OR OMISSIONS IN PLAN DETAILS OR PAY QUANTITIES IN THE SPACE PROVIDED AT RIGHT.

NUMBER OF AND DATE OLD BRIDGE WAS REMOVED (IF APPLICABLE):

BRIDGE NUMBER _____ DATE REMOVED _____

DATE NEW BRIDGE WAS OPENED TO TRAFFIC _____

NOTIFY THE BRIDGE OFFICE BRIDGE MANAGEMENT UNIT WITH THIS INFORMATION AS SOON AS POSSIBLE. (651) 366-4557

① UTILITIES ADDED DURING CONSTRUCTION AND SPECIALTY ITEMS.

FINAL QUANTITIES ENTERED ON SCHEDULE OF QUANTITIES: YES ☐ NO ☐

[illegible]

INSPECTOR(S) SIGNATURE _____ DATE _____

CHECKED BY: _____ PROJECT ENGINEER/SUPERVISOR SIGNATURE _____ DATE _____

AT THE TIME OF THE FINAL, THIS COMPLETED AS-BUILT BRIDGE DATA SHEET MUST BE SUBMITTED TO THE BRIDGE OFFICE - ATTN: REGIONAL CONSTRUCTION ENGINEER (MS610).

APPROVED: SEPTEMBER 26, 2003



HDR
HDR Engineering, Inc.

DES:	DR:	APPROVED:
CHK:	CHK:	
SHEET NO. 16 OF 19 SHEETS		

BRIDGE NO.
2440

untitled
12/15/2014 PM
7:23:20 AM
\\naspe-srv1\ECGCAUS\tender\dms\INDOT_BR_V8\PLTORTV\INDOT_PLT
\\naspe-srv1\ECGCAUS\tender\dms\INDOT_BR_V8\PLTORTV\PEAN\INDOT_BW_TBL
\\naspe-srv1\ECGCAUS\tender\dms\INDOT_BR_V8\PLTORTV\PEAN\INDOT_BW_TBL
\\PAPADPOA001-NorThCentral_ClinicalDocuments\007569\CON085500
0000000000223061\13_00_CAD\Plan Sheet#5001

entitled
1/12/14 9 PM
1/16/2014
Vasep-srv1\ECGCADSFondar de VINDOT_BR_V8\PILOTORV\INDOT_PLT
Vasep-srv1\ECGCADSFondar de VINDOT_BR_V8\PILOTORV\PIEN\INDOT_BW_TBL
Vasep-srv1\PIAPP\AMC\NorthCentral_Omaho\Documents\007569\CON008550\0000000000000221061\13.00_CAD\Plan_Sheets\4000

GENERAL SWPPP NOTES FOR CONSTRUCTION ACTIVITY

1. THE CONTRACTOR WILL DEVELOP A CHAIN OF COMMAND WITH ALL OPERATORS ON SITE TO ENSURE THAT THE SWPPP WILL BE IMPLEMENTED AND STAY IN EFFECT UNTIL THE CONSTRUCTION PROJECT IS COMPLETE AND THE ENTIRE SITE HAS UNDERGONE FINAL STABILIZATION.
2. THE CONTRACTOR WILL PREPARE A WRITTEN, NOT ORAL, WEEKLY SCHEDULE OF PROPOSED EROSION AND SEDIMENT CONTROL ACTIVITIES FOR THE PROJECT ENGINEER'S APPROVAL AS PER MN/DOT SPEC. 1717.2C.
3. THE CONTRACTOR WILL PREPARE AND SUBMIT A SITE PLAN FOR THE PROJECT ENGINEER'S APPROVAL AS PER MN/DOT SPEC. 1717.2D FOR CONCRETE MANAGEMENT, WORK IN ENVIRONMENTALLY SENSITIVE AREAS, AND ANY WORK THAT WILL REQUIRE DEWATERING. ALL SITE PLANS MUST BE SUBMITTED TO THE PROJECT ENGINEER IN WRITING. THE CONTRACTOR SHALL ALLOW A MINIMUM OF 7 DAYS FOR MN/DOT TO REVIEW AND APPROVE SITE PLAN SUBMITTALS. THE CONTRACTOR WILL NOT BE ALLOWED TO COMMENCE WORK FOR WHICH A SITE PLAN IS REQUIRED UNTIL APPROVAL HAS BEEN GRANTED BY THE PROJECT ENGINEER. THE CONTRACTOR WILL NOT BE GIVEN ANY EXTRA TIME IN THE CONTRACT DUE TO THE UNTIMELY SUBMITTAL OF A SITE PLAN.
4. THE CONTRACTOR IS RESPONSIBLE FOR CREATING AND FOLLOWING A WRITTEN DISPOSAL PLAN FOR ALL WASTE MATERIALS. THE PLAN WILL INCLUDE HOW THE MATERIAL WILL BE DISPOSED OF AND THE LOCATION OF THE DISPOSAL SITE. SUBMIT TO THE PROJECT ENGINEER.
5. THE EROSION PREVENTION AND SEDIMENT CONTROL BMPs SHALL BE PLACED AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND TO CAPTURE SEDIMENT ON-SITE. ALL EROSION CONTROL MEASURE SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY REMOVAL WORK AND/OR GROUND DISTURBING ACTIVITIES AND SHALL BE MAINTAINED UNTIL THE POTENTIAL FOR EROSION HAS BEEN ELIMINATED.
6. SEDIMENT DEPOSITS IN A WATER OF THE STATE MUST BE REMOVED WITHIN 7 DAYS.
7. SITE DRAINING ACTIVITIES OF TURBID OR SEDIMENT LADEN WATER WILL BE DISCHARGED TO SETTLEMENT TANKS OR SEDIMENT BAGS. WATER MUST BE TREATED BEFORE BEING DISCHARGED BACK INTO THE RECEIVING WATERS.
8. THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING MAINTENANCE REQUIREMENTS:
 - A. TEMPORARY SEDIMENT BASINS MUST HAVE THE SEDIMENT REMOVED ONCE THE SEDIMENT HAS REACHED 1/2 THE STORAGE VOLUME WITHIN 72 HOURS OF DISCOVERY.
 - B. TRACKED SEDIMENT MUST BE REMOVED WITHIN 24 HOURS OF DISCOVERY OF TRACKING ONTO PAVED SURFACES.
 - C. ALL OTHER NON-FUNCTIONAL BMPs MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WITHIN 24 HOURS OF DISCOVERY.
 - D. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL BMPs UNTIL WORK HAS BEEN COMPLETED AND THE SITE HAS GONE UNDER FINAL STABILIZATION.
9. PROVIDE PERIMETER CONTROLS AROUND ALL STOCKPILES.
10. WATER CONTAINMENT BOOM - INSTALL FLOATING WATER CONTAINMENT BOOM AROUND ALL AREAS WHERE WORK IS BEING DONE IN THE WATER. INSTALLATION SHALL BE COMPLETED PRIOR TO DISTURBANCE.
11. THE CONTRACTOR SHALL SUBMIT A BARGE LAYOUT PLAN THAT PROVIDES TOTAL CONTAINMENT OF THE WORK SURFACE FROM THE RIVER, A BARGE PERIMETER CONTAINMENT SYSTEM AND FILTER TREATMENT PORTALS TO TREAT STORM WATER DISCHARGE FROM THE SURFACE. SECONDARY CONTAINMENT OF ALL EQUIPMENT THAT COULD LEAK, SURFACE COVERS OF EXPOSED MATERIALS DURING PERIODS OF WORK SUSPENSION, INCLUDING OVERNIGHT, TURN RADIUS CAPTURE OF CLAM OR EXCAVATED MATERIALS TO TRANSPORT BARGES, ETC. AND A RAPID RESPONSE PROGRAM FOR LEAKS AND LOSS OF CHEMICALS, FLUIDS, AND SEDIMENTS.
12. THE CONTRACTOR MUST USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST, PARTICLES, SAW CUT SLURRY, PLANING WASTE AND OTHER CONCRETE WASTES FROM LEAVING THE PROJECT SITE AND DEPOSITING IN SURFACE WATERS.
12. ALL SEDIMENT DISTURBED BY THE PROJECT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF ACCORDING TO APPLICABLE CODES AND PERMITS. ALL WATERS DISCHARGED BACK INTO SURFACE WATERS MUST MEET WATER QUALITY SPECIFICATIONS DETAILED IN THE PROJECT DIVISION SB SPECIAL PROVISIONS.

BRIDGE PIER REPAIR WORK

ACCESS TO THE PIER LOCATIONS ANTICIPATED BY BARGE.

1. ANY COFFERDAMS USED ON THE PROJECT SHALL BE DEWATERED INTO IN-BARGE SETTLING TANKS OR DUMPSTERS.
2. IN-BARGE SETTLING TANKS SHALL BE PLACED OR CONSTRUCTED ON A BARGE. WATER FROM THE DEWATERING OF THE COFFERDAMS SHALL BE PUMPED INTO SETTLING TANKS. 2 OR MORE TANKS SHALL BE USED IN SERIES. FLOCCULANTS SHALL BE USED IN THE SECOND TANK TO INCREASE THE EFFECTIVENESS OF THE SETTLING. ONCE TREATED TO NO MORE THAN 25 NTU ABOVE RIVER BASELINE NTU'S AND 7.0 PH +/- PH (MEASURED HOURLY UNTIL DATA INDICATES NO CHANGE), WATER WILL BE DISCHARGED BACK TO RIVER. TANKS SHALL BE CLEANED OUT WHEN MORE THAN 1/3 FILLED WITH SILT. RELEASE RATE WILL BE CONTROLLED SUCH THAT SEDIMENT IS ACHIEVED. THE RELEASE RATE WILL DEPEND UPON THE TANK SIZE USED BY THE CONTRACTOR.

THIS WORK SHALL CONSIST OF PROVIDING, USING, AND MAINTAINING TEMPORARY DEWATERING DUMPSTERS DESIGNED FOR TREATING STORMWATER FROM CONSTRUCTION ACTIVITIES, AS PART OF MECHANICAL DEWATERING OPERATIONS, AND BASED ON SITE CONDITION CONSTRAINTS. THE CONTRACTOR WILL FURNISH COMMERCIALY ENGINEERED DEWATERING DUMPSTERS TO BE KEPT OF PROJECT SITE AT ALL TIMES, FOR THE LIFE OF THE CONTRACT. THIS WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE MN/DOT STANDARD SPECIFICATIONS, THE PLAN, AND THE FOLLOWING:

THE PORTABLE SEDIMENT CONTAINMENT SYSTEM IS COMMERCIALY AVAILABLE FROM WIMCO, 799 THIS DRIVE, SHAKOPEE, MN 55379
952-222-3055

THIS DEVICE WILL MEASURE 8 FOOT BY 20 FOOT, SIMILAR IN FORM TO A TRASH DUMPSTER, WITH ORIFICE ATTACHMENT PORTALS FOR DEWATERING HOSES, AND SEDIMENT CLEANOUT ACCESS. THE DEVICE WILL INCLUDE A GEOTEXTILE FILTER WALL FOLLOWED BY A REPLACEABLE FILTER MEDIA IN THE FORM OF SLASH MULCH, EXCELSIOR FIBERS, OR OTHER FILTER MEDIA, DEPENDING ON POLLUTANT LOAD. THE PORTABLE SEDIMENT CONTAINMENT SYSTEM WILL BE INSTALLED IN THE FIELD FOLLOWING MANUFACTURER'S RECOMMENDATIONS AND APPROVED SITE PLANS. THE PORTABLE SEDIMENT CONTAINMENT SYSTEM WILL BE SLIGHTLY TILTED SUCH THAT THE WATER WILL FLOW OVER THE INTERNAL WEIR, AND WILL BE PLACED ON A SLASH MULCH OR FILTER AGGREGATE OVER A SUITABLE GEOTEXTILE.

FAILURE TO PERFORM

IF THE CONTRACTOR FAILS TO PROVIDE OR USE THE DEWATERING DUMPSTERS TO TREAT SEDIMENT OR OTHER POLLUTANT CONTAINING GROUND OR STORMWATER, THE CONTRACTOR SHALL SUSPEND OPERATIONS, AND RELATED OPERATIONS, IF ORDERED BY THE PROJECT ENGINEER UNTIL THE ISSUE IS RESOLVED.

EROSION AND SEDIMENT CONTROL BMPs

THE NECESSARY EROSION AND SEDIMENT CONTROL CONSTRUCTION BMPs INCLUDE, BUT ARE NOT LIMITED TO:

1. STOCKPILE MANAGEMENT -THE CONTRACTOR SHALL DEVELOP A WRITTEN STOCKPILE MANAGEMENT PROGRAM THAT ADDRESSES THE FOLLOWING ITEMS RELATED TO STOCKPILES PLACED ON LAND OR ON A BARGE:
 - A. ALL ACTIVE OR IN-ACTIVE PORTLAND CEMENT, CONCRETE RUBBLE, ASPHALT CONCRETE, ASPHALT RUBBLE, AGGREGATE BASE, ROADWAY SUBBASE, PRE-MIXED AGGREGATE, AND ASPHALT BINDER SHALL BE COVERED WITH PLASTIC OR COMPARABLE MATERIAL TO PREVENT WIND EROSION AND AIR POLLUTION. PERIMETER SUPER DUTY SILT FENCE WILL ALSO BE ESTABLISHED AS AN EROSION CONTROL MEASURE.
 - B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STOCKPILE LOCATIONS. STOCKPILES WILL BE SHAPED TO FACILITATE STABILIZATION AND MINIMIZE EROSION. PLACE STOCKPILES NO CLOSER THAN 25 FEET FROM ANY DRIVEWAY OR CATCH BASIN. SUPER DUTY SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF ALL STOCKPILE AREAS.
 - C. ALL SOIL STOCKPILES THAT REMAIN IN PLACE FOR 7 DAYS OR MORE WILL BE STABILIZED PER MNDOT SPECIFICATION 2575.3 RAPID STABILIZATION METHOD 3.
 - D. AGGREGATE STOCKPILES WILL BE STABILIZED.
 - E. IF RAPID STABILIZATION METHOD 3 CANNOT BE USED, THEN THE STOCKPILE SHALL BE COVERED WITH TARPS OR PLASTIC SHEETING AND WEIGHTED TO PREVENT DISPLACEMENT.
 - F. IF TEMPORARY STOCKPILES ARE NECESSARY, CONTRACTOR SHALL ESTABLISH EROSION CONTROL MEASURES IN COMPLIANCE WITH MNDOT SPECS AND SWPPP REQUIREMENTS. THE COST ASSOCIATED WITH POTENTIAL TEMPORARY STOCKPILE EROSION PREVENTION MEASURES, INCLUDING MATERIAL, LABOR, AND EQUIPMENT, SHALL BE CONSIDERED INCIDENTAL.
 - G. PROTECTION OF STOCKPILES IS REQUIRED THROUGHOUT CONSTRUCTION. REPAIR AND/OR REPLACE PERIMETER CONTROLS AND COVERS AS NEEDED TO KEEP THEM FUNCTIONING PROPERLY.
 - H. STOCKPILES PLACED ON BARGES SHALL HAVE ALL NECESSARY PERIMETER CONTROLS TO REMAIN CONTAINED ON THE BARGE AND PREVENT SPILLING INTO SURFACE WATERS.
2. CONCRETE SLURRY, TRUCK AND MIXER WASHOUT
 - A. A DESIGNATED WASHOUT AREA SHALL BE PROVIDED AT THE CONSTRUCTION SITE AND SHALL BE CLEARLY MARKED.
 - B. THE WASHOUT SHALL BE CONSTRUCTED AND MAINTAINED TO PROVIDE SUFFICIENT IMPERVIOUS CONTAINMENT FOR ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
 - C. FOR EQUIPMENT THAT DOES NOT HAVE SELF-CONTAINED WASHOUT WATER STORAGE, CONCRETE WASHOUTS OF CONCRETE TRUCKS, CHUTES, PUMPS, MIXING PLANTS AND OTHER CONCRETE HANDLING EQUIPMENT SHALL BE WASHED OUT INTO A LEAK-PROOF CONTAINMENT FACILITY OF IMPERMEABLE LINER.
 - D. THE WASHOUT AREAS MUST BE IDENTIFIED BY SIGNAGE AND MUST BE AT LEAST 200' FROM SITE PLAN REQUIREMENT AREAS OR ENVIRONMENTALLY SENSITIVE AREAS. AN ENGINEERED COLLECTION SYSTEM CAN ALSO BE USED IF IT IS APPROVED BY THE PROJECT ENGINEER.
 - F. PROCESS WASTEWATER FROM GRINDING OR GROOVING OF CONCRETE SHALL BE COLLECTED AND TREATED AS CONCRETE WASH WATER AND PROPERLY DISPOSED. REFER TO THE PROJECT SWPPP DOCUMENT FOR MNDOT'S ACCEPTABLE DISPOSAL PROCEDURES OF CONCRETE WASHOUT.
 - G. CONCRETE WASHOUT FACILITIES WILL BE PERIODICALLY INSPECTED AND EMPTIED/REMOVED FROM THE SITE WHEN NEARING CAPACITY TO PREVENT OVERFLOWS.
 - H. THE SWPPP WILL BE AMENDED AS NEEDED FOR CONCRETE OPERATIONS AS THEY OCCUR.

3. VEHICLE MAINTENANCE
 - A. ROUTINE MAINTENANCE OF VEHICLES SHALL OCCUR IN OFFSITE STAGING AREAS ONLY. NO ON-SITE VEHICLE MAINTENANCE IS ALLOWED, UNLESS IN AN ENGINEER-APPROVED SYSTEM.
 - B. VEHICLE WASHING SHALL BE AVOIDED. IF WASHING IS NECESSARY, RUNOFF FROM THE WASHING SHALL BE CONTAINED IN A LINED SEDIMENT TRAP AND THE WASH WATER SHALL BE PROPERLY DISPOSED OF AT A TREATMENT FACILITY.
 - C. ENGINE DEGREASING SHALL ALSO BE CONTAINED IN A LINED SEDIMENT TRAP AND PROPERLY DISPOSED OF AT A TREATMENT FACILITY.
4. FUELING
 - A. FUEL TRUCKS WILL BE USED PRIMARILY FOR REFUELING IN THIS AREA. STORAGE TANKS IN EXCESS OF 1,000 GALLONS WILL NOT USED. CONTAINMENT WILL BE ESTABLISHED IF STORAGE TANK IS USED.
 - B. ABSORBENT MATERIALS SHALL BE AVAILABLE IN THE FUEL TRUCK FOR USE IN CLEANING UP SMALL SPILLS.
 - C. EDUCATION ON SPILL RESPONSE PROCEDURES SHALL BE PROVIDED BY THE CONTRACTOR.
5. HAZARDOUS MATERIALS
 - A. CONTRACTOR SHALL FOLLOW ALL RECOMMENDED DIRECTIONS AND PRECAUTIONS ACCORDING TO MANUFACTURER/SUPPLIER OF HAZARDOUS MATERIALS. STORAGE OF HAZARDOUS MATERIALS SHALL NOT OCCUR IN THE CONSTRUCTION AREA.
 - A. STORAGE OF HAZARDOUS MATERIAL SHALL NOT OCCUR ON BARGES.
6. CHEMICAL CONTAINMENT
 - A. CHEMICALS NOT BEING USED SHALL BE STORED AT STAGING AREAS.
 - B. GASOLINE, OIL, PAINT, SOLVENTS, AND OTHER CHEMICALS NECESSARY FOR CONSTRUCTION ARE NOT ALLOWED TO CONTACT THE SURFACE WATER.
 - C. HAZARDOUS MATERIAL SHALL BE RETURNED TO THE HAZARDOUS MATERIAL STORAGE AREA AND LOCKED AT THE END OF EACH DAY.
 - D. TEMPORARY SANITARY FACILITIES SHALL BE LOCATED AT LEAST 25 FEET FROM DRAINAGE INLETS AND 200 FEET UPGRADE FROM STREAMS AND WETLANDS. FACILITIES SHALL BE LOCATED ON STABLE, LEVEL SURFACES AND ANCHORED TO AVOID TIPPING.
 - E. THE CONTRACTOR SHALL PROVIDE TANKS OR BARRELS TO COLLECT LIQUID BYPRODUCTS THAT POSE A POLLUTION HAZARD.
 - F. THE POLLUTANTS SHALL BE REMOVED FROM THE SITE ON, AT MOST, A WEEKLY BASIS AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
 - G. ALL STATIONARY EQUIPMENT (NON-VEHICLE) WITH THE POTENTIAL TO LEAK FLUIDS OR DUE TO REFUELING OPERATIONS SHALL HAVE SECONDARY CONTAINMENT THAT PREVENTS THE DISCHARGE OF FLUIDS TO GROUND OR SURFACE WATERS.
 - H. CHEMICAL SPILLS OF ANY KIND (OIL, FUEL, FERTILIZER, ETC.) MUST BE CLEANED UP AND REMOVED FROM THE SITE IMMEDIATELY. IF DRIPS AND LEAKS ARE DISCOVERED, THE SOILS MUST BE MANAGED BY THE CONTRACTOR ACCORDING TO MPCA RULES. SPILLS EQUAL TO OR GREATER THAN 5 GALLONS MUST BE REPORTED TO THE STATE DUTY OFFICER.
7. SOLID WASTE (INCLUDES TRASH)
 - A. SOLID WASTE SHALL BE COLLECTED AND STORED IN APPROPRIATE CONTAINERS AND PROPERLY DISPOSED OF ON A REGULAR BASIS.
 - B. CONTAINERS SHALL BE COVERED TO PREVENT WIND FROM BLOWING THE WASTE AROUND OR OFF THE SITE.
 - C. NO MATERIALS SHALL BE BURIED OR BURNED ON SITE.
 - D. MPCA DISPOSAL REQUIREMENTS WILL BE FOLLOWED FOR ALL SOLID WASTE.
8. DUST CONTROL
 - A. USE METHODS AND OPERATIONAL PROCEDURES THAT PREVENT CONCRETE DUST AND OTHER DUST PARTICLES FROM LEAVING THE PROJECT SITE. THE CONTRACTOR SHALL USE A VARIETY OF DUST CONTROL METHODS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - I. RAPID STABILIZATION METHOD 3 (MNDOT SPECIFICATION 2575.3) ON IN-ACTIVE SOIL STOCKPILES.
 - II. THE CONTRACTOR SHALL PRE-WATER AND SWEEP HAUL ROADS TO MINIMIZE DUST.
 - III. PAVEMENT SURFACES SHALL BE SWEEPED WITHIN 24 HOURS OF DISCOVERY OF SEDIMENT OR TRACKING ONTO PAVEMENT. PAVEMENT SHALL BE LIGHTLY WETTED PRIOR TO SWEEPING. THIS WORK IS INCIDENTAL.
 - IV. DUST PLUMES RESULTING FROM ANY SANDBLASTING AND SHOTCRETE WORK ON THE PROJECT ARE NOT ALLOWED TO BE RELEASED INTO THE AIR. DUST PLUMES ARE REQUIRED TO BE CONTAINED ON-SITE BY APPROVED METHODS.



CERTIFIED BY Brett Voth 5-16-14
LICENCED PROFESSIONAL ENGINEER DATE
NAME: BRETT A. VOTH LIC. NO. 49045

TITLE: STORM WATER POLLUTION PREVENTION PLAN

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