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NUCLEAR COMPACTION TEST REPORT

600mm Pipe

PROJECT NAME (SECTION) Snake River (Nyssa) Bridge Section				CONTRACT NUMBER 12770		
CONTRACTOR OR SUPPLIER F.E. Ward			PROJECT MANAGER Ric Young		BID ITEM NUMBER 290	
CODES FOR ROLLER TYPES SDV-SINGLE DRUM VIBRATORY SF-SHEEP FOOT DDV-DOUBLE DRUM VIBRATORY GR-GRID ROLLER			ROLLER TYPE AND DESCRIPTION (MANUFACTURE, WEIGHT, ETC) SDV			
REPRESENTS MATERIAL / AREA INCORPORATED						
From Station	0+507	Off Set	0.0m Rt of CL	Distance Below Grade	3.0m	
To Station	0+542	Off Set	9.0m Rt of CL	Distance Below Grade	3.0m	
Check Appropriate	<input type="checkbox"/>	Material deflected under loaded equipment	<input checked="" type="checkbox"/>	Material did not deflect under loaded equipment	<input type="checkbox"/>	
TEST NUMBER			1 * 1 "WQ" Line			
DATE OF TEST			5/29/2003			
TEST LOCATION (STATION)			Sta 0+ 525 (OR. Side)			
DISTANCE LT. OR RT. OF CENTERLINE (METERS)			9.0m Rt of CL			
LIFT	1	DIST BELOW GRADE	3.0m	LIFT THICKNESS	150mm SOURCE DEPTH 150mm	
AASHTO T 310		Wet Density kg/m ³	Moisture kg/m ³	Dry Density kg/m ³	Percent Moisture	
Shot 1		2079	140	WD - M	(M / DD) X 100	
Shot 2		2079	142			
Average		WD 2079	M 141	DD 1938	%M 7.3	
AASHTO T 99	A	4.75 Pc	COARSE	FINE	% Coarse	
	D	19 Pc	COARSE	FINE	% Coarse	
MASS OF MOLD AND MATERIALS	MASS OF MOLD	MASS OF WET MATERIAL	WET DENSITY kg/m ³ (A)	SPEEDY MOISTURE % WET (B) DRY (C)	AASHTO T 255 / T 265 MOISTURE % WET(a) DRY(b) % M (C)	DRY DENSITY kg/m ³ (D)
					1802.3 1668.8 8.00%	
101.6mm MOLD (A) = (M) X 1.060	SPEEDY MOISTURE %		T 255 / T 265 MOISTURE %		DRY DENSITY kg/m ³	
152.4mm MOLD (A) = (M) X 0.471	(C) = $\frac{(B)}{100 - (B)} \times 100$		(C) = $\frac{(a) - (b)}{(b)} \times 100$		(D) = $\frac{(A)}{(C) + 100} \times 100$	
(C) = unaltered one-point Mois.						
AASHTO T 224	CURVE NO.	DRY DENSITY Dr	OPTIMUM MOISTURE	MCF	k (Gsb x 1000)	MCc
Pf = 100 - Pc	3	1990 2079	11.1	9.6		
IN-PLACE COMBINED MOISTURE	W = $\frac{(C)P_r + MC_c P_c}{100}$		CORRECTED DRY DENSITY			
Within 1 % of T 310 % Moisture?	+		DD = $\frac{WD}{1 + (W/100)}$			
If not Correct T 310 DD	W =		DD = $\frac{WD}{1 + (W/100)}$			
OPTIMUM COMBINED MOISTURE (MCT)	MC_r = $\frac{(MC)P_r + MC_c P_c}{100}$		PERCENT COMPACTION			
Based on Curve Info.	+		Original or Corrected (DD / Dd) x 100			
RELATIVE MAXIMUM DRY DENSITY kg/m ³	Dd = $\frac{P_r}{D_r} + \frac{P_c}{k}$	Dd =	Percent Required 90 PERCENT OBTAINED 97 93			
Check appropriate based on spec.	<input checked="" type="checkbox"/>	Moisture is within specification	<input type="checkbox"/> Moisture is not within specification			
REMARKS <i>Moisture dried overnight outside roadway</i> RECEIVED Corrections by Phil Durr 5-30-03						
<input checked="" type="checkbox"/> QUALITY CONTROL	<input type="checkbox"/> VERIFICATION	TYPE GAUGE-SERIAL NUMBER: Troxler 3440 Ser. 20528				
CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER CHARLES D WALKER # 2738		COMPANY NAME MAY 30 2003 Materials Testing & Inspection	SIGNATURE <i>Charles D. Walker</i>	DATE 5/29/03		
OFFICE OF PROJECT MANAGER ONTARIO, OREGON <input type="checkbox"/> P.M. <input type="checkbox"/> A.P.M. <input type="checkbox"/> O.M. <input type="checkbox"/> C.S.						

SEE BT 0710 for Curve doc.

NUCLEAR COMPACTION TEST REPORT

PROJECT NAME (SECTION) Snake River (Nyssa) Bridge Section						CONTRACT NUMBER 12770	
CONTRACTOR OR SUPPLIER F.E. Ward				PROJECT MANAGER Ric Young		BID ITEM NUMBER 290	
CODES FOR ROLLER TYPES SDV-SINGLE DRUM VIBRATORY DDV-DOUBLE DRUM VIBRATORY				ROLLER TYPE AND DESCRIPTION (MANUFACTURE, WEIGHT, ETC) SDV			
SF-SHEEP FOOT GR-GRID ROLLER							
REPRESENTS MATERIAL / AREA INCORPORATED							
From Station		0+507		Off Set		0.0m Rt of CL	
Distance Below Grade		2.5m					
To Station		0+542		Off Set		9.0m Rt of CL	
Distance Below Grade		2.5m					
Check Appropriate <input type="checkbox"/> Material deflected under loaded equipment				X Material did not deflect under loaded equipment			
TEST NUMBER				1*2 "WQ" Line			
DATE OF TEST				5/29/2003			
TEST LOCATION (STATION)				Sta 0+ 520 (OR. Side)			
DISTANCE LT. OR RT. OF CENTERLINE (METERS)				9.0m Rt of CL			
LIFT	2	DIST BELOW GRADE	2.5m	LIFT THICKNESS	150mm	SOURCE DEPTH	150mm
AASHTO T 310		Wet Density kg/m ³		Moisture kg/m ³		Dry Density kg/m ³	
Shot 1		2088		155		WD - M	
Shot 2		2085		157		(M / DD) X 100	
Average		WD 2087		M 156		DD 1931 %M 8.1	
AASHTO T 99		A 4.75 Pc		COARSE		FINE	
		D 19 Pc		COARSE		FINE	
MASS OF MOLD AND MATERIALS		MASS OF MOLD		MASS OF WET MATERIAL		WET DENSITY kg/m ³ (A)	
						SPEEDY MOISTURE % WET (B) DRY (C)	
						AASHTO T 255 / T 265 MOISTURE % WET(a) DRY(b) % M (C)	
						DRY DENSITY kg/m ³ (D)	
101.6mm MOLD (A) = (M) X 1.060		SPEEDY MOISTURE %		T 255 / T 265 MOISTURE %		DRY DENSITY kg/m ³	
152.4mm MOLD (A) = (M) X 0.471		(C) = $\frac{(B)}{100 - (B)} \times 100$		(C) = $\frac{(a) - (b)}{(b)} \times 100$		(D) = $\frac{(A)}{(C) + 100} \times 100$	
(C) = unaltered one-point Mois.							
AASHTO T 224		CURVE NO.		DRY DENSITY Dr		OPTIMUM MOISTURE MCr	
Pf = 100 - Pc		3		-1990 2074		11.7 9.6	
IN-PLACE COMBINED MOISTURE		W = $\frac{(C)P_r + MC \cdot P_c}{100}$				CORRECTED DRY DENSITY	
Within 1 % of T 310 % Moisture?		+				DD = $\frac{WD}{(1 + (W/100))}$	
If not Correct T 310 DD		W =				DD = $\frac{WD}{1 + (W/100)}$	
OPTIMUM COMBINED MOISTURE (MCT)		MC _r = $\frac{(MC)P_r + MC \cdot P_c}{100}$				PERCENT COMPACTION	
Based on Curve Info.		+				Original or Corrected (DD / Dd) x 100	
RELATIVE MAXIMUM DRY DENSITY kg/m ³		Dd = $\frac{P_r}{D_r} + \frac{P_c}{k}$		Dd = $\frac{100}{+}$		Percent Required 95 PERCENT OBTAINED 97 (92)	
Check appropriate based on spec. <input checked="" type="checkbox"/> Moisture is within specification				<input type="checkbox"/> Moisture is not within specification			
REMARKS <i>Moisture Dried overnight</i> <i>Corrections by Phil Bert</i> RECEIVED <i>5-30-03</i>							
QUALITY CONTROL <input checked="" type="checkbox"/>		VERIFICATION <input type="checkbox"/>		TYPE GAUGE-SERIAL NUMBER: Troxler 3440 Ser. 20528			
CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER CHARLES D WALKER # 2738				COMPANY NAME MAY 30 2003 Materials Testing & Inspection		SIGNATURE <i>Charles D. Walker</i> DATE 5/29/03	

OFFICE OF PROJECT MANAGER
ONTARIO, OREGON

P.M. A.P.M. O.M. C.S

NUCLEAR COMPACTION TEST REPORT

PROJECT NAME (SECTION) Snake River (Nyssa) Bridge Section				CONTRACT NUMBER 12770		
CONTRACTOR OR SUPPLIER F.E. Ward			PROJECT MANAGER Ric Young		BID ITEM NUMBER 290	
CODES FOR ROLLER TYPES SDV-SINGLE DRUM VIBRATORY SF-SHEEP FOOT DDV-DOUBLE DRUM VIBRATORY GR-GRID ROLLER			ROLLER TYPE AND DESCRIPTION (MANUFACTURE, WEIGHT, ETC) SF / 30-20-5 / Wacker			
REPRESENTS MATERIAL / AREA INCORPORATED						
From Station	0+507	Off Set	0.0m Rt of CL	Distance Below Grade	2.5m	
To Station	0+542	Off Set	10.0m Rt of CL	Distance Below Grade	2.5m	
Check Appropriate	<input type="checkbox"/>	Material deflected under loaded equipment	<input checked="" type="checkbox"/>	Material did not deflect under loaded equipment	<input type="checkbox"/>	
TEST NUMBER			1 * 2 "WQ" Line RETEST			
DATE OF TEST			6/11/2003			
TEST LOCATION (STATION)			Sta 0+ 520 (OR. Side)			
DISTANCE LT. OR RT. OF CENTERLINE (METERS)			10m Rt of CL			
LIFT	2	DIST BELOW GRADE	2.5m	LIFT THICKNESS	150mm	
AASHTO T 310		Wet Density kg/m ³	Moisture kg/m ³	Dry Density kg/m ³	Percent Moisture	
Shot 1		2090	112	WD - M	(M / DD) X 100	
Shot 2		2093	117			
Average		WD 2092	M 115	DD 1977	%M	
AASHTO T 99	A	4.75 Pc	COARSE		FINE	
	D	19 Pc	COARSE		FINE	
MASS OF MOLD AND MATERIALS	MASS OF MOLD	MASS OF WET MATERIAL	WET DENSITY kg/m ³ (A)	SPEEDY MOISTURE % WET (B) DRY (C)	AASHTO T 255 / T 265 MOISTURE % WET(a) DRY(b) % M (C)	
					1530.3 1435.6 6.60%	
101.6mm MOLD (A) = (M) X 1.060		SPEEDY MOISTURE %		T 255 / T 265 MOISTURE %		
152.4mm MOLD (A) = (M) X 0.471		(C) = $\frac{(B)}{100 - (B)} \times 100$		(C) = $\frac{(a) - (b)}{(b)} \times 100$		
(C) = unaltered one-point Mois.				DRY DENSITY kg/m ³ (D) = $\frac{(A)}{(C) + 100} \times 100$		
AASHTO T 224		CURVE NO.	DRY DENSITY D _r	OPTIMUM MOISTURE	M _c f k (G _{sb} x 1000) M _c c	
Pf = 100 - Pc		3	2090	9.6		
IN-PLACE COMBINED MOISTURE		W = $\frac{(C)P_r + M_C P_c}{100}$			CORRECTED DRY DENSITY	
Within 1 % of T 310 % Moisture?		+			DD = $\frac{WD}{(1 + (W/100))}$	
If not Correct T 310 DD		W =			DD = $\frac{WD}{1 + (W/100)}$	
OPTIMUM COMBINED MOISTURE (MCT)		M _C T = $\frac{(M_C P_r + M_C P_c)}{100}$			PERCENT COMPACTION	
Based on Curve Info.		M _C T =			Original or Corrected (DD / D _d) x 100	
RELATIVE MAXIMUM DRY DENSITY kg/m ³		D _d = $\frac{P_r}{D_f} + \frac{P_c}{k}$		D _d = $\frac{100}{\quad} + \frac{100}{\quad}$		
Percent Required		95		PERCENT OBTAINED 95		
Check appropriate based on spec.		<input checked="" type="checkbox"/> Moisture is within specification		<input type="checkbox"/> Moisture is not within specification		
REMARKS Moisture dried overnight						
<h2 style="font-size: 2em; opacity: 0.5;">RECEIVED</h2>						
<input checked="" type="checkbox"/> QUALITY CONTROL		<input type="checkbox"/> VERIFICATION		TYPE GAUGE-SERIAL NUMBER: Troxler 3440 Ser. 20528		
CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER		COMPANY NAME		SIGNATURE		
CHARLES D WALKER # 2738		JUN 12 2003 Materials Testing & Inspection		<i>Charles D. Walker</i> 6/11/03		
OFFICE OF PROJECT MANAGER ONTARIO, OREGON						
<input type="checkbox"/> P.M. <input type="checkbox"/> A.P.M. <input type="checkbox"/> O.M. <input type="checkbox"/> C.S.						

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TEST SUMMARY (A)

(NONFIELD TESTED MATERIALS)

LINE	REVIEWERS AND DATES			ITEM NUMBERS AND DESCRIPTIONS										CONTRACT NO.		SHEET		
	DATE OF SAMPLE, TEST, OR INSPECTION	FIR REPORT NO.	DATA SHEET NO. OR MATERIALS LAB. REPORT NO.	LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	0310	0320	0330	0340	0350	0360	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY
F L T O Q I E O INCORPORATED QUANTITIES																		
1	6/31/03	1		03-003383						PIPE PROTECTION BLOCK	CONCRETE MANHOLES	CONCRETE MANHOLES, TYPE SEDIMENTATION	CONCRETE INLETS, TYPE CG-2	CONCRETE INLETS, TYPE D	CONCRETE INLETS, TYPE G-2	M ³	1.0	
2	6/31/03	2		03-003384												EA	1	
3	3/4/03	1														EA	1	
4	6/14/03	3														EA	4	
5	6/24/03	2														EA	1	
6	6/24/03	1														EA	2	
7	See Notes																	
8																		
9																		
10																		
11																		
12																		
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14																		
15																		
16																		
17																		
18																		
19																		
20																		

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FIELD INSPECTION REPORT

		REPORT NO. 1	FOR BID ITEM NO. 310
PROJECT NAME (SECTION) SNAKE RIVER (NYSSA) BRIDGE		CONTRACT NO. 12770	
HIGHWAY CENTRAL OREGON		F.A. PROJECT NO. X-BHF-STP-S007(32)	
PROJECT MANAGER RIC YOUNG			
REASON FOR THIS REPORT <input checked="" type="checkbox"/> INSPECTION OF MATERIAL <input type="checkbox"/> MATERIALS ON HAND <input type="checkbox"/> OTHER (EXPLAIN)			
MATERIALS DELIVERED FOR PROJECT	TYPE OF MATERIAL REINFORCEMENT	DATE DELIVERED 6/4/03	
	SOURCE OF MATERIAL (MANUFACTURER OR FABRICATOR) NUCOR UTAH	DELIVERED TO (NAME OF CONTRACTOR / SUB CONTRACTOR) WILDISH	
	QUANTITY DELIVERED ALL	UNIT ALL	QUANTITY ACCEPTED ALL
	TOTAL ACCEPTED TO DATE	ESTIMATED TOTAL REQUIRED	QUANTITY REJECTED (EXPLAIN) NONE
		SAMPLE DATA SHEET NO. FOR SAMPLE SENT TO MATERIALS LAB FOR TESTS	
SUPPORTING DATA	<input type="checkbox"/> MATERIALS INSPECTION I- TEST LABORATORY <input type="checkbox"/> MATERIALS LABORATORY INSPECTION LABEL OR MARK. <input type="checkbox"/> TEST RESULTS CERTIFICATE <input type="checkbox"/> QUALITY COMPLIANCE CERTIFICATE <input type="checkbox"/> CONFORMANCE TO EQUIPMENT LIST AND DRAWINGS (EXPLAIN) <input checked="" type="checkbox"/> CERTIFICATE OF MATERIALS ORIGIN FOR PERMANENTLY INCORPORATED IRON OR STEEL MATERIALS AND THEIR COATINGS ON FEDERAL AID PROJECTS <input checked="" type="checkbox"/> FIELD TESTS OR OBSERVATIONS (EXPLAIN)		
REMARKS AND EXPLANATIONS, MATERIALS DESCRIPTIONS, DATES OF MANUFACTURE, HEAT AND LOT NOS. DAMAGED OR SUBSTANDARD MATERIALS, REASONS FOR REJECTION AND DISPOSITION OF REJECTED MATERIALS.			
MARKED AND APPROVED ACCORDING TO THE LATEST QPL. VISUALLY INSPECTED, SUITABLE FOR USE INTENDED.			
WHERE INSPECTED JOB SITE		DATE 6-24-03	INSPECTED AND PREPARED BY Buck Rebar



CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION) SNAKE RIVER (NYSSA) BRIDGE		CONTRACT NO. 12770
BID ITEM NO. 031	BID ITEM NAME PIPE PROTECTION BLOCK	
DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS) NUCOR STEEL 1231 BRIGHAM YOUNG LANE PLYMOUTH, UTAH 66666		
DOMESTIC MATERIALS DESCRIPTION REINFORCING STEEL		
FOREIGN MATERIALS SOURCE INCLUDING MATERIAL OF UNKNOWN ORIGIN (NAME AND ADDRESS)		
FOREIGN MATERIALS (OR OF UNKNOWN ORIGIN) DESCRIPTION AND VALUE OF IRON OR STEEL PRODUCT AS IT IS DELIVERED TO THE PROJECT		
<p>This certification is made for the purpose of establishing materials acceptance under the Contract Special Provisions titled 00160.20(a) Buy America. All iron or steel manufacturing processes, including protective coatings, for the domestic materials described above occurred within the United States of America.</p> <p>Manufactures' certificates verifying the origin of the above described domestic materials will be kept on file for three years following final payment. Copies will be furnished to the Engineer upon request.</p> <p>I declare under penalty of perjury under Oregon and Federal laws that the foregoing is true and correct.</p>		
AUTHORIZED REPRESENTATIVE * NAME: <u>J. C. CONTRACTOR</u> TITLE: <u>PRESIDENT</u> SIGNATURE: <u>J. C. Contractor</u> DATE: <u>6/4/03</u>	COMPANY* NAME AND ADDRESS - WILDISH 333 PRIMROSE LANE IDONTCARE, OR 99999	

Submit a new certificate for subsequent shipments if any of the above information changes. * May be Contractor, Sub-Contractor or supplier

OREGON DEPARTMENT OF TRANSPORTATION

MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

Contract No.: C12770 EA No.: CON01479 Lab No.: 03-003383
 Project: SNAKE RIVER (NYSSA) BRIDGE
 Highway: CENTRAL OREGON County: MALHEUR Data Sheet No.: NONE
 Contractor: F.E. WARD INC Org Unit: 5804 FA No.: X-BHF-STP-S007(32)
 Project Manager: RIC YOUNG Org Unit: 5804 Bid Item No.: 320 & 330
 Submitted By: ERIC KNAPP Qty Represented: NA
 Material Source: AMCOR PRECAST Received: 03/ 6/ 6 Tested: 03/ 7/14 Reported: JUL 31 2003
 DATE-Sampled: NA Use: PRECAST PCC ITEMS

PCC PIPE REPORT

Product : Manhole Sections
 Class : NA
 Manufacturer : AMCOR PRECAST
 Invoice No. : NONE
 Dated Shipped : 03/ 6/ 4
 Location Tested : AMCOR PRECAST
 Diameter (inches) : 48.0
 Shell Thickness (inches) : 5.000
 AASHTO Specification : AASHTO M199

Date Made	Date Tested	Number & Type of Pieces	Test No.
03/ 3/20	03/ 4/16	1 - 1200mm X 0.76m BASE	A057
03/ 4/18	03/ 5/14	1 - 1200mm X 0.30m BASE	A058
03/ 4/15	03/ 5/14	1 - 1200mm DOGHOUSE	A058
03/ 4/16	03/ 5/14	1 - 1200mm X 0.91m SECT	A058
03/ 4/14	03/ 5/14	1 - 1200mm X 1.07m BASE	A058
Total Quantity This Shipment : 5.0			

An authorized company representative has certified that all material indicated above has been tested and found to meet specified requirements.
 All steel or iron that went into the fabrication of these items was produced from domestic origin. CMO's are on file at the Salem Materials Lab.

729CV @ \$ 0.

TOTAL CHARGES: \$ 0.00

REMARKS:

Material indicated above DOES comply with specifications.
 SEE LAB # 03-003384 FOR THE REMAINING MR SECTIONS SHIPPED WITH THE ABOVE
 *

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

C: FILES ; PROJ MGR: RIC YOUNG ; REG 5 Q.A.C. ; F.E. WARD INC

FIELD USE ONLY

Field Insp # : 1 Bid Item # : 320 & 330 Quantity Accepted : All Total to Date : Quantity Rejected : 0
 Date Verified by : Class X Date Made AASHTO Spec Mfg Mark Inspected By : *[Signature]* Date : 6-31-03

Bob Pappas, PE, PLS

Interim State Construction And Materials Engineer

OREGON DEPARTMENT OF TRANSPORTATION

MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

Page 1 of 1
(503)986-3100
FAX(503)986-3096

Contract No.: C12770	EA No.: CON01479	Lab No.: 03-003384
Project: SNAKE RIVER (NYSSA) BRIDGE		
Highway: CENTRAL OREGON	County: MALHEUR	Data Sheet No.: NONE
Contractor: F.E. WARD INC		FA No.: X-BHF-STP-S007(32)
Project Manager: RIC YOUNG	Org Unit: 5804	Bid Item No.: 320 & 330
Submitted By: ERIC KNAPP	Org Unit: 5804	Field Insp. No.: 1
Material Source: AMCOR PRECAST		Qty Represented: NA
DATE-Sampled: NA	Received: 03/ 6/ 6	Tested: 03/ 7/14
Type of Test: CERTIFICATION OF SHIPMENT		Reported: JUL 31 2003
	Use: PRECAST PCC ITEMS	

PCC PIPE REPORT

Product : Manhole Sections
 Class : NA
 Manufacturer : AMCOR PRECAST
 Invoice No. : NONE
 Dated Shipped : 03/ 6/ 4
 Location Tested : AMCOR PRECAST
 Diameter (inches) : 48.0
 Shell Thickness (inches) : 5.000
 AASHTO Specification : AASHTO M199

Date Made	Date Tested	Number & Type of Pieces	Test No.
03/ 4/16	03/ 5/14	1 - 1200mm X 0.91m SECT	A058
03/ 4/23	03/ 5/21	1 - 1200mm X 0.61m SECT	A059
03/ 4/11	03/ 5/ 7	1 - 1200mm X 0.91m CONE	A041
03/ 5/30	03/ 6/ 2	1 - 1200mm X 0.61m CONE	A053
03/ 6/ 2	03/ 6/ 4	1 - 1200mm X 0.61m CONE	A055
Total Quantity This Shipment : 5.0			

An authorized company representative has certified that all material indicated above has been tested and found to meet specified requirements. All steel or iron that went into the fabrication of these items was produced from domestic origin. CMO's are on file at the Salem Materials Lab.

729CV @\$ 0.

TOTAL CHARGES: \$ 0.00

REMARKS:

Material indicated above DOES comply with specifications.
 SEE LAB # 03-003383 FOR THE REMAINING MH SECTIONS SHIPPED WITH THE ABOVE
 *

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF THIS LABORATORY.

C: FILES ; PROJ MGR: RIC YOUNG ; REG 5 Q.A.C. ; F.E. WARD INC

FIELD USE ONLY

Field Insp # : 2 Bid Item # : 32 & 33 Quantity Accepted : ALL Total to Date : 0 Quantity Rejected : 0
 Serial Verified by : Class ✓ Date Made AASHTO Spec Mfg Mark Inspected By : Phil [Signature] Date : 6-31-03

Bob Pappo, PE, PLS
 Interim State Construction And Materials Engineer

INLAND FOUNDRY Co. INC.

Oregon Sales:
181 N. 39th St.
Springfield, OR 97471
(541) 747-9172

Date: February 13, 2003

To: RLC SOUTH
32929 Roberts Court
Coburg, OR 97408

Attn: Kimberly

Subject: Certification
Project:
Contract#

Item: Ifco 706 frames & 2-hole covers

Certification:

Inland Foundry Co., Inc. certifies the above items meet ASTM-A 48 Class 30-B Gray Iron specification. These items meet H-20 load suitable for heavy traffic. All materials used in manufacturing the above castings are domestic.

Tom Fieck
Oregon Sales Manager
Inland Foundry Co., Inc.
191 North 39th St.
Springfield, OR 97478

Oregon Department of Transportation		FIELD INSPECTION	
CONTRACT NO. <i>C12770</i>		REPORT NO. FOR BID ITEM NO. <i>3 320,330</i>	
MANUFACTURER OR SUPPLIER <i>Inland Foundry</i>		BID ITEM NAME <i>Manholes</i>	
QUANTITY DELIVERED <i>3ea</i>	QUANTITY ACCEPTED <i>3ea</i>	QUANTITY REJECTED EXPLAIN <i>Ø</i>	
VERIFIED ON MATERIALS <input type="checkbox"/>	HEAT, LOT OR BATCH NO. <input type="checkbox"/>	MASHTO / ASTM SPEC. NO. <input type="checkbox"/>	OSHD LABEL OR MARK <input type="checkbox"/>
SUPPORT DATA <input checked="" type="checkbox"/> TEST RESULT CERTIFICATE		QUALITY COMPL. CERTIFICATE <input checked="" type="checkbox"/>	
INSPECTED BY <i>Burt Horgan</i>		DATE <i>2-14-03</i>	
REMARKS			
734-2207 (4-97)			

RECEIVED TIME FEB. 13. 11:10AM



CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION) Snake River (NYSSA) BRIDGE		CONTRACT NO. C12770
BID ITEM NO. 0320 & 0330	BID ITEM NAME CONCRETE MANHOLES & MANHOLES , TYPE SEDIMENTATION	
DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS)		
INLAND FOUNDRY CO., INC. 191 NORTH 39th STREET SPRINGFIELD OR 97478		OREGON STEEL MILLS PO BOX 2760 6880 NE COLUMBIA BLVD PORTLAND OR 97221
DOMESTIC MATERIALS DESCRIPTION		
IFCO 706 MANHOLE FRAMES AND 2-HOLE COVERS		
FOREIGN MATERIALS SOURCE INCLUDING MATERIAL OF UNKNOWN ORIGIN (NAME AND ADDRESS)		
FOREIGN MATERIALS (OR OF UNKNOWN ORIGIN) DESCRIPTION AND VALUE OF IRON OR STEEL PRODUCT AS IT IS DELIVERED TO THE PROJECT		
<p>This certification is made for the purpose of establishing materials acceptance under the Contract Special Provisions titled 00160.20(a) Buy America. All iron or steel manufacturing processes, including protective coatings, for the domestic materials described above occurred within the United States of America.</p> <p>Manufacturers' certificates verifying the origin of the above described domestic materials will be kept on file for three years following final payment. Copies will be furnished to the Engineer upon request.</p> <p>I declare under penalty of perjury under Oregon and Federal laws that the foregoing is true and correct.</p>		
AUTHORIZED REPRESENTATIVE* NAME: <u>Randy Gartner</u> TITLE: <u>Project Manager</u> SIGNATURE: <i>Randy Gartner</i> DATE: <u>6/14/03</u>		COMPANY* NAME AND ADDRESS - Benge Construction Tualatin, Oregon
<p><small>Submit a new certificate for subsequent shipments if any of the above information changes.</small></p> <p style="text-align: right;"><small>*May be contractor, sub-contractor or supplier</small></p>		

ODOT CONSTRUCTION/MATERIALS SECTION

QUALIFIED PRODUCTS LIST
 APPROVED LIST - NO SAMPLES OR TESTS REQUIRED
 QUALIFIED LIST - ADDITIONAL REQUIREMENTS**
 JULY 2002

STANDARD SPEC NO.	CATEGORY	PRODUCT NAME	LOCAL REPRESENTATIVE AND/OR MANUFACTURER	EFFECTIVE DATE	PRODUCT NUMBER	LIST	REMARKS
02040.30	ADMIXTURE, CONCRETE, MISC BONDING ENHANCER	ACRYL SET	MASTER BUILDERS 800/237-3350 BRUCE JACKSON 503-722-4101 MASON SUPPLY 800/537-3407 WHITE CAP 503/287-4151	05/01/88	2033	A	FOLLOW MANUFACTURER'S INFO FOR APPLICATION AND USE. THIS SHOULD ONLY BE USED AS AN ADMIXTURE.
02050.10	CURING COMPOUND, CONCRETE TYPE 1, CLASS A	SEALIGHT 1300 CLEAR OREGON VOC'S = 18G/L	M.R. MEADOWS 800/342-5976 JIM SULLIVAN 800/439-6569 SCHARFF'S 800/378-3572 CONCR SPECIAL TIE 503/661-2350	05/01/88	776	Q	CLEAR WAX. WATCH SHELF LIFE. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 1, CLASS A VOC'S = 45G/L	WAX EMULSION CURE (CLEAR)	BURKE COMPANY 888/287-5387 WHITE CAP 503/287-4151	05/01/88	2138	Q	CLEAR RESIN. WATCH SHELF LIFE. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A VOC'S = 18 G/L	L & M CURE W-2 VOC = 25 G/L	L & M CONSTRUCTION CHEMICALS 800/362-3331 OR 420/453-6600 BILL PAVITT 425/562-6076	07/09/92	850	Q	WATERBASED. MIX WELL. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON THE OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A VOC'S = 18 G/L	SEALIGHT 1635	M.R. MEADOWS 800/342-5976 JIM SULLIVAN 800/439-6569 SCHARFF'S 800/378-3572	03/09/00	1038	Q	WHITE WAX. WATCH SHELF LIFE. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A VOC'S = 42/L	AMERICAN WHITE WAX DOT CURE	AMERICAN CONCRETE SYSTEMS INC REP: JAN WILM 619/378-5270 WESTSIDE CONCRETE ACCESSORIES BRIAN MCALLISTER 503/591-0203	02/13/92	832	Q	WHITE WAX. MIX WELL. TEST BY LOT, EXCEPT MSC OK IF ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A VOC'S = 45 G/L	BURKE WAX EMULSION D.O.T.	BURKE COMPANY 800/456-7445 WHITE CAP 800/452-2994	05/01/88	2075	Q	WHITE WAX. MIX WELL. TEST BY LOT, EXCEPT MSC OK IF ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A & B	SEALT: VOC'S			760	Q	WHITE RESIN. WATCH SHELF LIFE. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON OPL.
02050.10	CURING COMPOUND, CONCRETE TYPE 2, CLASS A & B VOC'S = 0G/L	SEALT: VOC'S			479	Q	WHITE RESIN. WATCH SHELF LIFE. TEST BY LOT, EXCEPT MSC OK IF PRODUCT IS ON OPL.

**LIST 'A' = APPROVED. MAY BE USED WITHOUT SAMPLING.
 **LIST 'Q' = QUALIFIED. USE WITH SAMPLING, TEST LIST PUBLISHED BY: ODOT MATERIALS LAB, 800 AIRP

		FIELD INSPECTION	
CONTRACT NO.	C12770	REPORT NO. FOR BID ITEM NO	34,36,37
MANUFACTURER OR SUPPLIER	Amer. Concrete Systems	BID ITEM NAME	Inlets
QUANTITY DELIVERED	ALL	QUANTITY ACCEPTED	
VERIFIED ON MATERIALS	<input type="checkbox"/> HEAT LOT OR BATCH NO. <input type="checkbox"/> OSHO LABEL OR MARK <input checked="" type="checkbox"/> OTHER (EXPLAIN)	EXPLAIN	
SUPPORT DATA	<input type="checkbox"/> TEST RESULT & CERTIFICATE <input type="checkbox"/> EQUIP. LIST & DRAWINGS <input checked="" type="checkbox"/> OTHER (EXPLAIN)	EXPLAIN	
INSPECTED BY	Phil Kurt	DATE	3/4/03
REMARKS	Not tested - used on msc in inlets		



Beko's WELDING, INC.

P.O. Box 1075
1100 S. Berg Parkway
Canby, OR 97013

Dick and Rick Beko
(503) 266-3507
(503) 266-3500 Fax

CERTIFICATION OF COMPLIANCE

Date: 6-20-03

To: OSHD/Material
Milwaukie, OR

RE: SNAKE R. BR SEC.
C12770

We hereby certify materials and workmanship to be in accordance with
Oregon Standard Specifications.

Attached are copies of Mill Test Reports and Bill of Lading.

Sincerely,

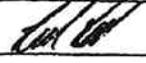
Dick & Rick Beko
Beko's Welding, Inc.

CC:

- 2 G-2 Frames & Grates
- 5 CG-2 Frames & Grates

Oregon Department of Transportation		FIELD INSPECTION	
		CONTRACT NO. 12770	REPORT NO. FOR BID ITEM NO. 2 34 & 36
MANUFACTURER OR SUPPLIER BEKO'S		BID ITEM NAME G2 & CG2 INLETS	
QUANTITY DELIVERED 7	QUANTITY ACCEPTED 7	QUANTITY REJECTED EXPLAIN 0	
VERIFIED ON MATERIALS	<input checked="" type="checkbox"/> HEAT, LOT OR BATCH NO.	<input type="checkbox"/> AASHTO / ASTM SPEC. NO.	<input type="checkbox"/> OSHD LABEL OR MARK
SUPPORT DATA	<input type="checkbox"/> TEST RESULT CERTIFICATE	<input checked="" type="checkbox"/> QUALITY COMPL. CERTIFICATE	<input type="checkbox"/> EQUIP. LIST & DRAWINGS
INSPECTED BY Phil Dirt		DATE 6-24-03	
REMARKS 4-73			

CERTIFICATE OF MATERIALS ORIGIN

OBJECT NAME (SECTION) Snake R. (Nyssa) Be.		CONTRACT NO. 12770
BID ITEM NO. 34, & 36	BID ITEM NAME CG-2 & G-2 Frames & Grates	
DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS) Cascade Steel Rolling Mills, Inc. McMinnville, OR Nucor Steel Jewett, TX Davis Wire Corp.		
DOMESTIC MATERIALS DESCRIPTION <div style="display: flex; justify-content: space-between;"> <div style="width: 80%;"> <p>1/2"x2-1/2" A36 Flat Bar (12.7mm x 63mm)</p> <p>3/8"x2-1/2" A36 Flat Bar (9.5mm x 63mm)</p> <p>3/8"x2" A36 Flat Bar (9.5mm x 51mm)</p> <p>3"x2-1/2"x3/8" A36 Angle (76mm x 63mm x 9.5mm)</p> <p>3/8" HRR (9.5mm)</p> </div> <div style="width: 15%; text-align: center;"> <p><u>CASCADE STEEL ROLLING MILLS</u></p> <p><u>NUCOR STEEL</u></p> <p><u>DAVIS WIRE CORP.</u></p> </div> </div>		
FOREIGN MATERIALS SOURCE INCLUDING MATERIAL OF UNKNOWN ORIGIN (NAME AND ADDRESS) NONE		
FOREIGN MATERIALS (OR OF UNKNOWN ORIGIN) DESCRIPTION AND VALUE OF IRON OR STEEL PRODUCT AS IT IS DELIVERED TO THE PROJECT NONE		
<p>This certification is made for the purpose of establishing materials acceptance under the Contract Special Provisions titled 00160.20(a) Buy America. All iron or steel manufacturing processes, including protective coatings, for the domestic materials described above occurred within the United States of America.</p> <p>Manufacturers' certificates verifying the origin of the above described domestic materials will be kept on file for three years following final payment. Copies will be furnished to the Engineer upon request.</p> <p>I declare under penalty of perjury under Oregon and Federal laws that the foregoing is true and correct.</p>		
AUTHORIZED REPRESENTATIVE * NAME: <u>Rick Beko</u> TITLE: <u>Vice President</u> SIGNATURE: <u></u> DATE: <u>6-20-03</u>	COMPANY* NAME AND ADDRESS - BEKO'S WELDING, INC. P.O. BOX 1075 1100 S. BERG PARKWAY CANBY, OR 97013 (503) 266-3507	

Submit a new certificate for subsequent shipments if any of the above information changes. * May be Contractor, Sub-Contractor or supplier

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MATERIALS TESTING & INSPECTION, INC.

*Cast-in-Place
Concrete Inlets
BI 340, 350 + 360, 310, 370*

Page 4 of 4
Revised
C:\BANKS\ADMIN\602

- Environmental Services
- Geotechnical Services
- Construction Materials Testing
- Special Inspections

ODOT CONCRETE

Test Results

Mix Design - ~~CLASS 25~~ - 1/2" - Mix 601 (Metric Revision)

Mix Component		Batch Weight - Kg/m ³ (aggregates, SSD)	
		Trial Batch	
Cement (Ashgrove Type I)	573 (6.1 bk)	342	✓
Water (Well)	260 (31.2 gal.)	155	
Aggregate	1/2" (ORE 8c)	1669	992
	Sand (ORE 8c)	1310	779
Admixtures	Water Reducing (MB Prokret 220N I)	19 oz.	562 ml
	Air Entraining (MBAC90)	5.0 oz. *	148 ml

- * Based on same dose rate for Prokret and Pozzolith 220N
- ** Quantity must be adjusted as required to yield the desired air content
- ** Quantity must be adjusted as required to maintain workability.

Design Concrete Properties

Slump	2 3/4"	70 mm
Air Content %	6.2	6.2
Fresh Unit weight	141.3 pcf	2268 Kg/m ³
Yield	27.00	1 m ³
Water-Cement Ratio	0.45	0.45
Strength *		
Age, days	3 7 14 28	3 7 14 28
Compressive, PSI	2610 3850 4580 5210	182 266 316 359

* Average of 5 cylinders

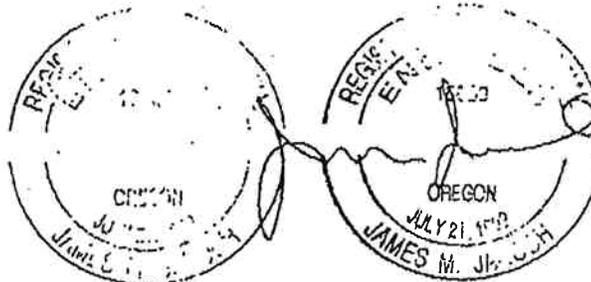
Aggregate Properties

Coarse Specific Gravity (SSD)		
Lab No. 951613 (3/4")		
Fine Specific Gravity (SSD)	2.593 @ 1.4% Absorption	
Lab No. 951614 (Sand)	2.590 @ 1.7% Absorption	
Coarse Unit Weight (Rotted)		
Lab No. 951613 (3/4")	96.2 pcf	1544 Kg/m ³
Finesness Modulus of Sand	3.03	

Metric conversion of existing mix design by:

MATERIALS TESTING & INSPECTION, INC.

Reviewed by: James M. Janoch, P.E.
Staff Engineer



FAXED
3-4-03

To Clearwater

Snake River (Nyssa) Bridge Section
Central Oregon Highway
Malheur Co OR & Canyon Co ID
C12770 CON01479
FAP# X-BHF-STP-S007(32)

*MSC
OK
JH*

30017

jm 3/4/03
jm 3/12/03

SAMPLE DATA SHEET FOR CONCRETE CYLINDERS

LABORATORY REPORT NUMBER		CON NO.		EXP. ACCT.		DATA SHEET NUMBER	
PROJECT NAME (SECTION) Snake River (nyssa) Bridge Section						CONTRACT NUMBER 12770	
CONTRACTOR F.E. Ward / Crea Const.				PROJECT MANAGER RIC YOUNG		BID ITEM NUMBER 360 / 34	
CONCRETE SUPPLIER Clearwater Concrete				SUBMITTED BY		QUANTITY REPRESENTED 2.67 m ³	
CONCRETE FOR USE IN (LOCATION OR PLACEMENT) M.S.C. / Concrete Inlets, Type G-2				BRIDGE NUMBER 19175		STRENGTH REQUIRED 20 MPa 28 DAYS	
REPRESENTED BY NO. OF CYLS. 6		SET NUMBER 1		DATE CAST 3/4/03		DATE SHIPPED	
				CYLINDER SIZE 100 mm X 200 mm			
TEST SPECIMENS AT DAYS INDICATED							
A.	7	B.	28	C.	28	D.	28
		E.	FC	F.	FC	G.	H.
MIX DESIGN		LAB or I.D. NO		DESIGN NUMBER 610M		DESIGN CEMENT + FLYASH + SILICA CONTENT	
						FREE (SURFACE) MOISTURE	
						COARSE #2 SAND	
						2.20 % 0.00 % 2.70 %	
FIELD TEST RESULTS		CONCRETE TEMP 15.1 °C		SLUMP 89 mm		AIR CONTENT 5.8 %	
				UNIT WEIGHT 2260 kg/m ³		CEMENT + ASH + SILICA CONTENT 342 kg/m ³	
						FIELD W/C RATIO 0.45 BY W/T.	
ADDITIVES		CEMENT 2432 MI 920 kg		FLYASH 0 kg		SILICA 0 kg	
				COARSE #2 2710 kg		SAND 2146 kg	
						WATER 280 L	
INITIAL CURE OF CYLINDERS		LOW TEMP. °C		HIGH TEMP. °C		AMBIENT TEMP. 7.3 °C	
				POT CALIBRATION 0.007067		NET WEIGHT 15.97	
						CURING	
						CAPPING	
						WATER AT JOB 19 L	
REMARKS Initial testing- 17.2°C, 76 mm slump, 5.3% air content, 2263 unit weight, 2.69 yield, 342 cement content. .45 W/C ratio. Contractor added 19 kg of water onsite and gave truck 55 revs. Total revs of 201							
<input checked="" type="checkbox"/> QUALITY CONTROL <input type="checkbox"/> VERIFICATION <input type="checkbox"/> INFORMATION PHONE NUMBER: 541-889-3602							
T 22 CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER Randy G. Crum #43262				COMPANY NAME AND CREW NUMBER Materials Testing & Inspect		SIGNATURE <i>Randy G. Crum</i> DATE 3/04/03	

LAB USE ONLY BELOW

CYLINDER ID	DATE OF BREAK	AGE DAYS	MAXIMUM LOAD	CYLINDER AREA	STRENGTH MPa	TYPE OF FRACTURE	REMARKS
27 A	11-Mar	7	43165	12.17	24.45	D	R. Crum 3-11
28 B	1-Apr	28	65980	12.17	37.26	A	R. Roberts 4-1-03
29 C	1-Apr	28	64990	12.17	36.82	A	R. Roberts 4-1-03
30 D	1-Apr	28	67500	12.17	38.24	C	R. Roberts 4-1-03
31 E	FC 7-Mar	3	22335	12.17	12.6	C	R. Crum 3-7
32 F	FC			12.17			
G							
H							

AVE 28 DAY **37.44** MPa PASS FAIL

COMMENTS (WHEN MATERIAL, CYLINDERS OR DATA RECEIVED)

FAXED
3/12

<input checked="" type="checkbox"/> QUALITY CONTROL <input type="checkbox"/> VERIFICATION		CYLINDERS REC'D 15-Mar		DATA SHEET REC'D 4-Mar	
T 22 CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER Randy G. Crum #094494				SIGNATURE <i>Randy G. Crum</i> DATE 3/04/03	
Rodney Roberts #42860				MAR 5 2003	

jm 3/10/03
jm 3/12/03

CLEARWATER CONCRETE

PO BOX 10610
Ontario, OR 97999-9999
541-889-9999

Contractor: Wildish

May 10, 2003

Project: Snake River (Nyssa) Bridge C12770

MIX DESCRIPTION:

590 LBS. CEMENTITIOUS

CURB MIX

MIX #

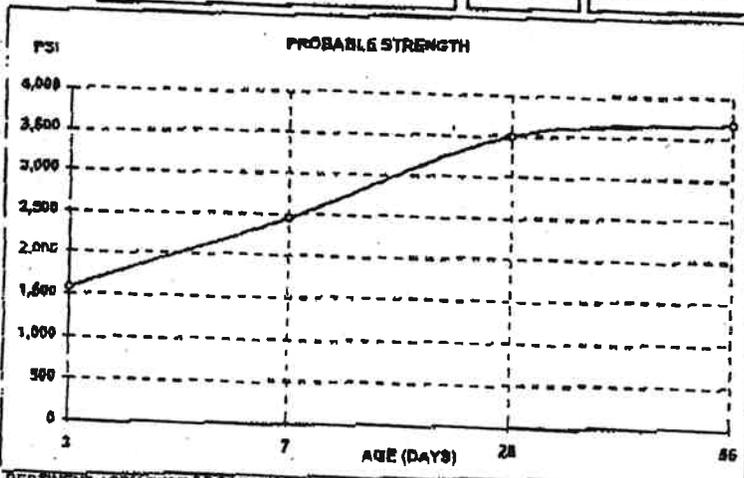
CB3524

STRENGTH:

3,500 PSI @ 28 Days

3500 PSI (3/8" (CURBS))

SPEC. GRAY.	MIX INGREDIENTS	SOLID VOL.(CF)	SSD WTS/CYD	AIR-ENTRAINED
3.15	CEMENT	2.55	501 LBS.	EST. WT. OF 8"X12" TEST CYL. 27.91 LBS. EST. WT. OF 4"X8" TEST CYL. 8.27 LBS.
2.23	FLY ASH 15%	0.64	89 LBS.	
2.20			LBS.	
1.00	WATER (WT.)	3.54	220.7 LBS.	WATER/CEMENTITIOUS RATIO 0.374
	WATER (GALS.)		26.5 GALS	TARGET SLUMP (INCHES) 3.00 MAX.
	5.0% AIR PERCENTAGE	1.36		
2.60	3/4" COARSE AGG. (1)		LBS.	AGG. (1) /TTL.C.A. PERCENTAGE %
2.59	3/8" COARSE AGG. (2)	9.59	1,550 LBS.	AGG. (2) /TTL.C.A. PERCENTAGE 100.0 %
2.63	3/4" COARSE AGG. (3)		LBS.	AGG. (3) /TTL.C.A. PERCENTAGE %
2.54	FINE AGGREGATE	9.40	1,490 LBS.	SAND /TTL AGG. PERCENTAGE 49.5 %
	Polyheed		OZ.	OZ./CWT. CEMENTITIOUS
	200 N	0.03	35 OZ.	OZ./CWT. CEMENTITIOUS 6.00
	Glenium3030		OZ.	OZ./CWT. CEMENTITIOUS
	NC534		OZ.	OZ./CWT. CEMENTITIOUS
	VMA		OZ.	OZ./CWT. CEMENTITIOUS
	MBAE00		5.9 OZ.	OZ./CWT. CEMENTITIOUS 1.00
	YIELD	27.10	3,854 LBS.	WEIGHT PER CUBIC FOOT 142.2 LBS.



DESIGN MEETS FOLLOWING ASTM CATEGORIES WHEN PERTINENT.

- | | |
|------------|----------------------|
| ASTM C-84 | READY-MIXED CONCRETE |
| ASTM C-150 | CEMENT |
| ASTM C-818 | FLY ASH |
| ASTM C-33 | CONCRETE AGGREGATES |
| ASTM C-494 | ADMIXTURES |

TYPE C-494 CLASSIFICATIONS:

- ASTM C-494 TYPE A
POLYHEED, POZZOLITH 200-N, 322-N
- ASTM C-494 TYPE C & E
POZZ/TEC 20, NC 534 (NON-CHLORIDE)
- ASTM C-494 TYPE D
POZZOLITH 100-2R, POZZOLITH 300-R
- ASTM C-494 TYPE F
RHEOBUILD, POLYHEED, POZZOLITH 440-N
- ASTM C-260
MICRO-AIR, MD 4E:20

PERTINENT ASTM TEST PROCEDURES:

- SAMPLING CONCRETE
- SLUMP TEST
- FIELD AIR TEST
- FIELD TEST CYLINDERS
- UNIT WEIGHT (YIELD)

- ASTM C 172-90 Standard Method of Sampling Freshly Mixed Concrete
- ASTM C 143-90a Standard Test Method for Slump of Portland Cement Concrete
- ASTM C 231-97 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
- ASTM C 31-96 Standard Method of Making and Curing Concrete Test Specimens in the Field
- ASTM C 128-82 Standard Test Method for Unit Weight, Yield and Air Content of Concrete

STRENGTH & PROPORTIONS PROBABLE (RESULTS MUST BE VERIFIED BY LOCAL TESTING LAB)

TEST SUMMARY (A)

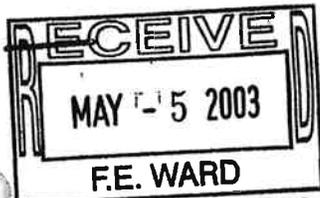
(NONFIELD TESTED MATERIALS)

REVIEWERS AND DATES		ITEM NUMBERS AND DESCRIPTIONS						CONTRACT NO. C12770		SHEET 7A									
DATE OF SAMPLE, TEST, OR INSPECTION	FIR REPORT NO.	DATA SHEET NO. OR MATERIALS LAB. "I" REPORT NO.	LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS "I" REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	0370	0380	0390	0400	0410	0420	ITEM NO.	UNIT	ORIGINAL QUANTITY	FINAL QUANTITY	
LINE									DRAINAGE CURBS	BRIDGE REMOVAL WORK	TEMPORARY WORK BRIDGE	SHORING, CRIBBING, ETC.	STRUCTURE EXCAVATION	GRANULAR WALL BACKFILL	0370	M	108		
1	See Notes								F, QPL <td>NDR <td>NDR <td>NDR <td>NDR <td></td> <td>EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION</td> <td></td> <td></td> <td></td> <td></td> </td></td></td></td>	NDR <td>NDR <td>NDR <td>NDR <td></td> <td>EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION</td> <td></td> <td></td> <td></td> <td></td> </td></td></td>	NDR <td>NDR <td>NDR <td></td> <td>EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION</td> <td></td> <td></td> <td></td> <td></td> </td></td>	NDR <td>NDR <td></td> <td>EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION</td> <td></td> <td></td> <td></td> <td></td> </td>	NDR <td></td> <td>EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION</td> <td></td> <td></td> <td></td> <td></td>		EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION				
2	See Notes								X						See B-Sheet #6B for Concrete				
3	See Notes								X						See BI 0310 for Curing Compound				
4														X	See B-Sheet #7B - Field Tested Materials				
5																			
6																			
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CONTRACT CHANGE ORDER

PROJECT NAME (SECTION) Snake River (Nyssa) Bridge Section			CONTRACT NO. 12770		
HIGHWAY Central Oregon Highway		PROJECT MANAGER (PLEASE PRINT) Ric Young		F. A. PROJECT NO. XBHF-STP-S007(32)	
CONTRACTOR NAME AND ADDRESS F.E. Ward 2710 NE 78th St. Vancouver, WA 98665			REASON CODE 1	REASON FOR TIME 0	REGION 5
			CONTRACT CHANGE ORDER NUMBER 2		
REQUESTED BY ODOT					

THIS CONTRACT IS HEREBY MODIFIED AS FOLLOWS:
DESCRIPTION AND LOCATION OF WORK OR ITEMS COVERED BY THIS ORDER:
 Furnish all drilling equipment and tools including Bauer Bg-22 drill rig with torque multiplier.
 Drill 1.80M diameter shafts to grade.
 Provide and install permanent shaft casings.
 Reinforce existing work bridge.

SPECIFICATIONS AND PROVISIONS - THE WORK TO BE DONE UNDER THIS ORDER IS TO BE PERFORMED, MEASURED, AND PAID FOR IN ACCORDANCE WITH THE TERMS FOR THE ABOVE CONTRACT EXCEPT AS MODIFIED AS FOLLOWS -

Install permanent casings using a twisting method.

Adjustments in time due to this change is addressed in CCO #4

PAY ITEM	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	AMOUNT
4002A	Delete BI #430	1.00	LS	(\$25,000.00)	(\$25,000.00)
4002B	Delete BI #440	77.00	M	(\$850.00)	(\$65,450.00)
4002C	Delete BI #450	41.00	M	(\$1,600.00)	(\$65,600.00)
4002D	Furnish Drilling Equipment	1.00	LS	\$75,749.00	\$75,749.00
4002E	Drilled Shafts, 1.80M Diameter	77.00	M	\$1,681.63	\$129,485.51
4002F	Permanent Shaft Casings	41.00	M	\$3,998.82	\$163,951.62
4002G	Reinforce Existing Work Bridge	1.00	LS	\$85,352.76	\$85,352.76

ESTIMATED NET COST EFFECT OF THIS AGREEMENT ON THE CONTRACT:	INCREASE <input checked="" type="checkbox"/> \$298,488.89 DECREASE <input type="checkbox"/>
--	--

CONTRACTOR SIGNATURE IS IS NOT NECESSARY
 CONTRACTOR SIGNATURE MAKES THIS CONTRACT CHANGE ORDER A SUPPLEMENTAL AGREEMENT.

FOR SUPPLEMENTAL AGREEMENTS ONLY: Please indicate your agreement by signing, dating and returning the original to the Project Manager. Work shall not begin until you are notified that the agreement has either been approved or that work may commence under advance approval. Your signature further indicates agreement that payments in accordance with this agreement constitute full and complete compensation for all costs, both direct and indirect, arising out of the described work covered by this agreement, and releases and discharges the State from other costs except as provided herein.

<input checked="" type="checkbox"/> RECOMMENDED	<input type="checkbox"/> APPROVED BY PROJECT MANAGER	DATE
<i>FOR</i>	<i>Ric Young</i>	<i>05-12-03</i>
<input type="checkbox"/> NOTED	<input checked="" type="checkbox"/> RECOMMENDED	<input type="checkbox"/> APPROVED BY AREA MGR
	<i>[Signature]</i>	<i>8-1-03</i>
<input type="checkbox"/> NOTED	<input checked="" type="checkbox"/> APPROVED BY CONSTRUCTION	DATE
	<i>[Signature]</i>	<i>6-4-03</i>

[Signature] **CONTRACTOR SIGNATURE**
5-5-03 **DATE**

APPROVAL RECOMMENDED BY LOCAL AGENCY _____ DATE _____

DISTRIBUTION: After obtaining the contractor's signature (if needed) Project Manager submits the original through the Area Manager to Construction. Construction distributes copies to the contractor and others as appropriate.

FIELD INSPECTION REPORT

		REPORT NO. 1	FOR BID ITEM NO. 0470
PROJECT NAME (SECTION) Snake River (Nyssa) Bridge		CONTRACT NO. 12270	
HIGHWAY CENTRAL OREGON		F.A. PROJECT NO. X-BHF-STP-S007(32)	
PROJECT MANAGER RIC YOUNG			
REASON FOR THIS REPORT <input checked="" type="checkbox"/> INSPECTION OF MATERIAL <input type="checkbox"/> MATERIALS ON HAND <input type="checkbox"/> OTHER (EXPLAIN)			
MATERIALS DELIVERED FOR PROJECT	TYPE OF MATERIAL drilled shaft reinforcement		DATE DELIVERED 2-14-03
	SOURCE OF MATERIAL (MANUFACTURER OR FABRICATOR) Nucor, North Star.		DELIVERED TO (NAME OF CONTRACTOR / SUB CONTRACTOR) FE Ward
	QUANTITY DELIVERED 24,976	UNIT kg	QUANTITY ACCEPTED 24,976
	TOTAL ACCEPTED TO DATE 24,976.00		ESTIMATED TOTAL REQUIRED 50,800.00
		SAMPLE DATA SHEET NO. FOR SAMPLE SENT TO MATERIALS LAB FOR TESTS	
SUPPORTING DATA: <input type="checkbox"/> MATERIALS INSPECTION TEST LABORATORY <input type="checkbox"/> MATERIALS LABORATORY INSPECTION LABEL OR MARK. <input type="checkbox"/> TEST RESULTS CERTIFICATE <input type="checkbox"/> QUALITY COMPLIANCE CERTIFICATE <input checked="" type="checkbox"/> CONFORMANCE TO EQUIPMENT LIST AND DRAWINGS (EXPLAIN) <input checked="" type="checkbox"/> CERTIFICATE OF MATERIALS ORIGIN FOR PERMANENTLY INCORPORATED IRON OR STEEL MATERIALS AND THEIR COATINGS ON FEDERAL AID PROJECTS <input checked="" type="checkbox"/> FIELD TESTS OR OBSERVATIONS (EXPLAIN)			
REMARKS AND EXPLANATIONS, MATERIALS DESCRIPTIONS, DATES OF MANUFACTURE, HEAT AND LOT NOS. DAMAGED OR SUBSTANDARD MATERIALS, REASONS FOR REJECTION AND DISPOSITION OF REJECTED MATERIALS.			
<p>Drilled shaft reinforcement All steel is in the latest QPL</p> <p>There was 4 different sizes of rebar delivered. #16 total weight delivered 131 kg #22 total weight delivered 1,112 kg #25 total weight delivered 1,372 kg #36 total weight delivered 22,361 kg</p> <p>Rebar delivered was from 3 different manufactures, North Star, Nucor-Utah, Cascade Steel</p> <p>Lenton rebar mechanical threaded splices was delivered on site. Splices are found in the latest QPL on page 22, section 530.42 245 pcs #11 mechanical splices delivered on job site. #36 rebar delivered for testing, weight 44 kg</p> <p>Visually inspected no defects found Suitable for use intended</p> <p>Report # 4</p>			
WHERE INSPECTED <i>Job Site</i>		DATE <i>2/14/03</i>	INSPECTED AND PREPARED BY <i>Tina Neal</i>



34600 Solon Road
Solon, OH 44139
PHONE: (800) 248-0100
FAX: (440) 248-0723

TRANSMITTAL DOCUMENT

CUSTOMER:	Farwest Steel	CUSTOMER PO#:	72557
Job:	Snake River Bridge	DATE SHIPPED:	January 22, 2003
SHIPMENT#:	423690	CERTS MAILED:	NO
CERTS ENCLOSED:	NO	Contract No.:	N/A
CERTS FAXED:	NO		BY: GZ

PART NO.	LOT NO.	QTY.	PART NO.	LOT NO.	QTY.
EL36A2	L 2679	245			

CERTIFICATE OF CONFORMANCE

ERICO, INC., does hereby certify the LENTON SLEEVE manufactured and shipped against the referenced purchase order was fabricated from a homogenous lot of material for which a Certified Material Test Report is on file in our office. Material is of domestic origin. The product was processed and inspected in accordance with the procedures set forth in the ERICO Quality Assurance Manual and Customer purchase order requirements.

ERICO, INC.

Geri Zola

Quality Assurance Department

Certification given this date of January 22, 2003



CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION) SNAKE RIVER (NYSSA) BRIDGE	CONTRACT NO. 12770
--	-----------------------

BID ITEM NO. 047	BID ITEM NAME DRILLED SHAFT REINFORCEMENT
---------------------	--

DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS)

NUCOR STEEL 1231 BRIGHAM YOUNG LANE PLYMOUTH, UTAH 66666	NORTH STAR 1234 COOPER RD COOPERTOWN, NY 55555	ERICO 35600 SOLON RD SOLON, OH 44444
--	--	--

DOMESTIC MATERIALS DESCRIPTION

REINFORCING STEEL

REINFORCING STEEL SPLICE CONNECTORS

FOREIGN MATERIALS SOURCE INCLUDING MATERIAL OF UNKNOWN ORIGIN (NAME AND ADDRESS)

FOREIGN MATERIALS (OR OF UNKNOWN ORIGIN) DESCRIPTION AND VALUE OF IRON OR STEEL PRODUCT AS IT IS DELIVERED TO THE PROJECT

This certification is made for the purpose of establishing materials acceptance under the Contract Special Provisions titled 00160.20(a) Buy America. All iron or steel manufacturing processes, including protective coatings, for the domestic materials described above occurred within the United States of America.

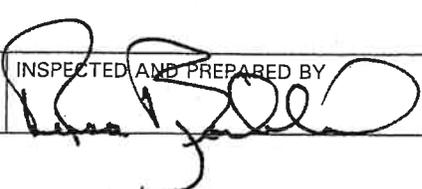
Manufactures' certificates verifying the origin of the above described domestic materials will be kept on file for three years following final payment. Copies will be furnished to the Engineer upon request.

I declare under penalty of perjury under Oregon and Federal laws that the foregoing is true and correct.

AUTHORIZED REPRESENTATIVE * NAME: <u>J. C. CONTRACTOR</u> TITLE: <u>PRESIDENT</u> SIGNATURE: <u>JC Contractor</u> DATE: <u>2-14-03</u>	COMPANY* NAME AND ADDRESS -- WILDISH 333 PRIMROSE LANE IDONTCARE, OR 99999
--	---

Submit a new certificate for subsequent shipments if any of the above information changes. * May be Contractor, Sub-Contractor or supplier

FIELD INSPECTION REPORT

PROJECT NAME (SECTION) SNAKE RIVER (NYSSSA) BRIDGE		REPORT NO. /	FOR BID ITEM NO. 480
HIGHWAY CENTRAL OREGON		CONTRACT NO. 12270	
PROJECT MANAGER RIC YOUNG		F.A. PROJECT NO. X-BHF-STP-S007(32)	
REASON FOR THIS REPORT <input checked="" type="checkbox"/> INSPECTION OF MATERIAL <input type="checkbox"/> MATERIALS ON HAND <input type="checkbox"/> OTHER (EXPLAIN)			
MATERIALS DELIVERED FOR PROJECT	TYPE OF MATERIAL CSL Tubes		DATE DELIVERED 5-09-03
	SOURCE OF MATERIAL (MANUFACTURER OR FABRICATOR) Wheatland		DELIVERED TO (NAME OF CONTRACTOR / SUB CONTRACTOR) F.E. Ward
	QUANTITY DELIVERED 735	UNIT M	QUANTITY ACCEPTED 735
	TOTAL ACCEPTED TO DATE 735.00		ESTIMATED TOTAL REQUIRED 735.00
SAMPLE DATA SHEET NO. FOR SAMPLE SENT TO MATERIALS LAB FOR TESTS			
SUPPORTING DATA	<input type="checkbox"/> MATERIALS INSPECTION I- TEST _____ LABORATORY _____ <input type="checkbox"/> MATERIALS LABORATORY INSPECTION LABEL OR MARK. <input checked="" type="checkbox"/> TEST RESULTS CERTIFICATE <input checked="" type="checkbox"/> QUALITY COMPLIANCE CERTIFICATE <input type="checkbox"/> CONFORMANCE TO EQUIPMENT LIST AND DRAWINGS (EXPLAIN) <input checked="" type="checkbox"/> CERTIFICATE OF MATERIALS ORIGIN FOR PERMANENTLY INCORPORATED IRON OR STEEL MATERIALS AND THEIR COATINGS ON FEDERAL AID PROJECTS <input checked="" type="checkbox"/> FIELD TESTS OR OBSERVATIONS (EXPLAIN)		
REMARKS AND EXPLANATIONS, MATERIALS DESCRIPTIONS, DATES OF MANUFACTURE, HEAT AND LOT NOS. DAMAGED OR SUBSTANDARD MATERIALS, REASONS FOR REJECTION AND DISPOSITION OF REJECTED MATERIALS. 36 mm schedule 40 pipe with couplers and caps visually inspected, suitable for use intended Report #11			
WHERE INSPECTED JOBSITE		DATE 5-9-03	INSPECTED AND PREPARED BY 

CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION) Snake River (Nyssa) Bridge		CONTRACT NO. 12770
BID ITEM NO. 480	BID ITEM NAME CSL TEST ACCESS TUBES	
DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS) Wheatland Tube Comp. One Council Ave Wheatland Pa. 16161		
DOMESTIC MATERIALS DESCRIPTION 1 1/2" OR 36 mm schedule 40 Black Pipe.		
FOREIGN MATERIALS SOURCE INCLUDING MATERIAL OF UNKNOWN ORIGIN (NAME AND ADDRESS)		
FOREIGN MATERIALS (OR OF UNKNOWN ORIGIN) DESCRIPTION AND VALUE OF IRON OR STEEL PRODUCT AS IT IS DELIVERED TO THE PROJECT		
<p>This certification is made for the purpose of establishing materials acceptance under the Contract Special Provisions titled 00160.20(a) Buy America. All iron or steel manufacturing processes, including protective coatings, for the domestic materials described above occurred within the United States of America.</p> <p>Manufactures' certificates verifying the origin of the above described domestic materials will be kept on file for three years following final payment. Copies will be furnished to the Engineer upon request.</p> <p>I declare under penalty of perjury under Oregon and Federal laws that the foregoing is true and correct.</p>		
AUTHORIZED REPRESENTATIVE * NAME: <u>Allen T Harrison</u> TITLE: <u>SUPERINTENDENT</u> SIGNATURE: <u>Allen T Harrison</u> DATE: <u>5-9-03</u>	COMPANY* NAME AND ADDRESS -- WILDISH CONST. Co Po Box 1234 Idontcare, OR 99999	

Submit a new certificate for subsequent shipments if any of the above information changes. * May be Contractor, Sub-Contractor or supplier



Wheatland Tube Company

Wheatland Division

*** CERTIFICATE OF COMPLIANCE ***

December 04, 2002

SOLD TO:

FAMILIAN NORTHWEST
2121 N. COLUMBIA BLVD.
P.O. BOX 17901
PORTLAND OR 97217

SHIP TO:

FAMILIAN NORTHWEST, INC.
C/O UNISERVE
MASURY OH 44483

RE:

REGISTER NO:
WO42485-001
40-1083-00

To Whom It May Concern:

This is to certify the Standard Weight and Extra Heavy Weight Black or Galvanized Steel Pipe and Couplings produced by the WHEATLAND TUBE COMPANY, U.S.A. All items that have been stenciled as A53-F have been tested, inspected, and comply with the applicable provisions of the ASTM Standard Specification A-53-01 Type F Grade A and also with the requirements set forth in Federal Specification WWP 404 and ASME B36. 10M-2000

Threaded couplings have also been tested, inspected and comply with the applicable provisions of ASTM Standard Specification A865-97, Threaded Couplings for use in steel pipe.

Richard F. McKee
Division Manager
Technical Services

This certificate of compliance is issued expressly and exclusively for the above customer order number, register number or project number and is not to be altered in any manner whatsoever.

CC-001
REV.0.

REPORT OF CHEMICAL ANALYSIS
CERTIFICATION STATEMENT

WHEATLAND TUBE COMPANY
METALLURGICAL DEPARTMENT

GC-007

WHEATLAND TUBE COMPANY

DATE
3/07/03

CUSTOMER'S P. O. NUMBER
001C9008496

CERTIFICATION STATEMENT

MILL ORDER NUMBER

WO42485-001

SOLD TO

FAMILIAN NORTHWEST, INC.
2121 N. COLUMBIA BLVD
P O BOX 17901
PORTLAND OR 97217-7901

SHIP TO

FAMILIAN NORTHWEST, INC.
C/O UNISERVE
MASURY OH 44483

THIS IS TO CERTIFY THAT
THE PRODUCT DESCRIBED
HEREIN WAS MFG.,
SAMPLED, TESTED, AND/OR
INSPD. IN ACCORDANCE
WITH THE SPECIFICATION
AND FULFILLS
REQUIREMENTS IN SUCH
RESPECTS.

R.F. McKee
Division Manager
Technical Services

MATERIAL

RUN NO.	DESCRIPTION	SPECIFICATION	PHYSICAL TESTS				% ELONG. IN 2 INCHES	SOURCE
			YIELD POINT LBS. PER SQ. INCH	TENSILE STRENGTH LBS. PER SQ. INCH	S	Cu		
80003	1 1/2 x 21 STD BLK TC	A53-F GR A	42913	62827	60	5/18/02		

RUN NO.	HEAT NO.	CHEMICAL ANALYSIS								
		C	Mn	P	S	Cu	Ni	Cr	Mo	V
80003	2118488	.190	.460	.010	.003	.020	.030	.040	.010	ND

ASTM A53-01, GRADE A OR B, ALSO MEETS THE REQUIREMENTS OF ASME SA-53-99, GRADE A OR B.
IF APPLICABLE, ALL REQUIREMENTS FOR BEND, FLATTENING, HYDROSTATIC AND NONDESTRUCTIVE ELECTRIC
TESTS HAVE BEEN MET.



Cementitious Grouts

CONSTRUCTION GROUT

General construction, natural-aggregate nonshrink grout

Description

CONSTRUCTION GROUT is a noncatalyzed, multi-purpose construction grout containing mineral aggregate.

Features/Benefits

- Free of inorganic accelerators, including chlorides or other salts detrimental to reinforcing steel
- Color similar to concrete after curing
- Can be extended with clean, well-graded coarse aggregate to fill large voids without additional mix water
- Hardens free of bleeding when placed at a plastic or flowable consistency and when ambient temperatures are 50°F (10°C) and above

Where to Use CONSTRUCTION GROUT

- Normal loads for columns and baseplates
- Anchoring bolts and reinforcing bars
- Bedding grout for precast panels
- Repairing of cavities resulting from ineffective concrete consolidation
- Caulking concrete pipe
- Backfilling, underpinning foundations, and pressure grouting of slabs needing alignment
- General construction applications
- Dry pack applications

How to Apply CONSTRUCTION GROUT

Application

Consult the CONSTRUCTION GROUT product bag for details on the installation of CONSTRUCTION GROUT. For aggregate extension guidelines, see Guide to Cementitious Grouting (page A-10 in the Appendix).

ChemRex® recommends that the user request the services of the local representative for a pre-job conference to plan the installation.

Curing

Cure all exposed grout shoulders by wet curing for 24 hours a by applying a recommended curing compound compliant with ASTM C 309.

For Best Performance

- CONSTRUCTION GROUT is designed to be used in the 50°F to 90°F (10° to 32°C) temperature range. Use cold and hot weather concreting practices (ACI 305 and ACI 306) when grouting within 10°F (6°C) of the minimum and maximum stated temperature range.
- For best results a minimum of 1.5 in. (38 mm) vertical clearance should be allowed under baseplates when placing CONSTRUCTION GROUT.
- Do not use CONSTRUCTION GROUT where it will come in contact with steel designed for stresses above 80,000 psi (552 MPa). Use MASTERFLOW® 816 or MASTERFLOW® 1205 cable grout for those applications.
- Do not add plasticizers, accelerators, or retarders.
- The surface to be grouted should be clean, strong, and rough to permit proper bond.
- Do not place CONSTRUCTION GROUT in any lifts greater than 6 in. (152 mm) unless the product is extended with aggregate to dissipate the heat of hydration.
- Where precision alignment and severe service such as heavy loading, rolling, and/or impact resistance are required, use metallic-reinforced, noncatalyzed EMBECO® 885 grout. If the amount of impact resistance needed is not great enough to require metallic reinforcement, use natural-aggregate, MASTERFLOW® 92B
- Make certain the most current version of this data guide is being used; call Customer Service (1-800-433-9517) to verify the most current version.
- Proper application is the responsibility of the user. Field visits by ChemRex® personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Oregon Department of Transportation		FIELD INSPECTION	
CONTRACT NO. 127.70		REPORT NO. FOR BID ITEM NO. 2 48	
MANUFACTURER OR SUPPLIER ChemRex (grout)		BID ITEM NAME CSL Access	
QUANTITY DELIVERED all	QUANTITY ACCEPTED all	QUANTITY REJECTED EXPLAIN	
VERIFIED ON MATERIALS	<input type="checkbox"/> HEAT, LOT OR BATCH NO.	<input type="checkbox"/> AASHTO / ASTM SPEC. NO.	<input type="checkbox"/> OSHD LABEL OR MARK
SUPPORT DATA	<input type="checkbox"/> TEST RESULT CERTIFICATE	<input type="checkbox"/> QUALITY COMPL. CERTIFICATE	<input checked="" type="checkbox"/> EQUIP. LIST & DRAWINGS
INSPECTED BY John Edmond		DATE 6/6/03	
REMARKS Procedure & materials approved by Keyway Grout acceptable per J. Gent (1-7-03) John Gent, Geo/Hydro unit			

PR
3/12/07

Technical Data

Compliances

- CRD C 621, Grade C, at flowable or plastic consistency

Typical Mixed Grout Data (Flowable Mix)

Approximate Water	1.15 gallon (4.35 L)
Flow	5 drops (ASTM C 230) 126% to 145%
Initial Set @ 70°F (21°C)	6 hours
Final Set @ 70°F (21°C)	8 hours

At a constant percent of water, consistency will vary with temperature. Final set takes place in approximately 8 hours at a flowable consistency, 70°F (21°C).

Compressive Strength (ASTM C 942)

	Flowable ¹		Consistency Plastic ²		Stiff ³	
	psi	MPa	psi	MPa	psi	MPa
1 day	1,500	10				
3 days	5,000	34.5	6,000	41.4	8,000	55.2
7 days	6,000	41.3	7,000	48.3	9,500	65.5
28 days	7,000	48.0	8,500	58.6	10,000	69.0

¹40% flow on flow table, ASTM C 230, 5 drops in 3 seconds.
²100% flow on flow table, ASTM C 230, 5 drops in 3 seconds.
³40% flow on flow table, ASTM C 230, 5 drops in 3 seconds.

Volume Change, Flowable Consistency (ASTM C 1090)

28 days	0.08%
---------	-------

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

Order Information

Packaging/Estimating

CONSTRUCTION GROUT

- 50 lb. (22.7 kg) moisture-resistant bags

Shelf Life

- Shelf life is 12 months if stored in original, unopened bags under normal conditions.

Coverage

- One 50 lb. (22.7 kg) bag of CONSTRUCTION GROUT mixed with 1.15 gallon (4.35 L) of water (flowable mix) provides approximately 0.45 ft.³ (0.013 m³) of mixed grout.

Limited Warranty Notice

Every reasonable effort is made to apply ChemRex® exacting standards both in the manufacture of our products and in the information which we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, CHEMREX® MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and CHEMREX® shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the ChemRex® Technical Manager.

Caution

CONSTRUCTION GROUT

Risks

Eye irritant. Skin irritant. Causes burns. Lung irritant. May cause delayed lung injury.

Precautions

KEEP OUT OF THE REACH OF CHILDREN. Avoid contact with eyes. Wear suitable protective eyewear. Avoid prolonged or repeated contact with skin. Wear suitable gloves. Wear suitable protective clothing. Do not breathe dust. In case of insufficient ventilation, wear suitable respiratory equipment. Wash soiled clothing before reuse.

First Aid

Wash exposed skin with soap and water. Flush eyes with large quantities of water. If breathing is difficult, move person to fresh air.

Waste Disposal Method

This product when discarded or disposed of is not listed as a hazardous waste in federal regulations. Dispose of in a landfill in accordance with local regulations.

For additional information on personal protective equipment, first aid, and emergency procedures, refer to the product Material Safety Data Sheet (MSDS) on the job site or contact the company at the address or phone numbers given below.

Proposition 65

This product contains materials listed by the state of California as known to cause cancer, birth defects, or reproductive harm.

VOC Content

This product contains 0 g/L or 0 lbs./gallon.

For medical emergencies only, call ChemTrec (1/800/424-9300).



MBT mark used under license from MBT Holding AG

ChemRex®

Corporate Office:

889 Valley Park Drive, Shakopee, MN 55379

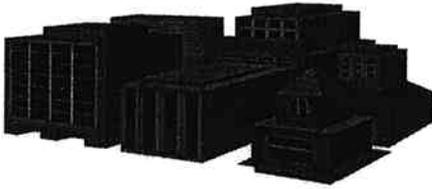
Customer Service: 1/800/433-9517

Technical Services: 1/800/ChemRex (1/800/243-6739)

Web Site: www.chemrex.com

4-96

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was intentionally
left blank.**



CLEAR WATER CONCRETE
CLEAR WATER CONCRETE

CONCRETE MIX DESIGN

Project: Snake River (NYSSA) Bridge
 Mix ID Number: 261-44N13K3S9
 Design Strength: 4350 PSI

Contractor: F.E. Wards
 Date: 20-2-03
 Designed By: Clear Water Concrete

MIX DESIGN QUANTITIES

Material	Product/Source #	Spec. Grav.	Weight	Volume
Cement	Ash Grove Type I Durkee	3.15	380 Kg	0.121
Fly Ash	ISG	2.26	71 Kg	0.032
Water		1.00	159 Kg	0.158
¾"-#4 PCC	Clear Water	2.5	1097 Kg	0.406
PCC Sand	Clear Water	2.65	610 Kg	0.23
Admix		1.00	2 Kg	0.002
			<u>2319 Kg</u>	

ADMIXTURES:

Supplier	Product Name	Dosage
Grace	Daravair	58.85 ml/m ³
Grace	WRDA 64	884 ml/m ³
Master Builders	Glennium 3000 NS	1471 ml/m ³

MIX DESIGN PROPERTIES

Aggregate Properties	Product Code	SSD	Abs	Dry Unit
¾"-#4 PCC	2015-0-750-00014-001	2.7	1.00	1656 Kg/m ³
PCC Sand	2015-00000-0SAND-001	2.65	2.00	
Slump		150mm	+/- 2.0	
Air Content		5.0	+/- 5.0	
Unit Weight		2318 kg/m ³		
Total Cement		451 kg		
% of Fly Ash		15.8		
			W/C Ratio:	0.36

CLEAR WATER CONCRETE
QA/QC Division

CONCRETE PROCESS CONTROL SUMMARY-COMPRESSIVE

MIX ID: 261-44N1K3S9
REQ. STRENGTH 4350 PSI
REQ. AGE 28 Days

Project Name	Date Sampled	Time Sampled	Laboratory	Lab ID Number	Test Type	%Air	SLUMP	W/C Ratio	7-day Average	28-day Average	3 Test Moving Average
H-84: Nolin Rd. Bridge Section	8/26/2001	10:30	Clear Water	01-005580	Field	5.50	6.00	0.38	4240	5300	
Crooked River (N. Elliott Rd) Br.	5/16/2002	13:15	PSI	01-002397	Field	5.30	6.50	0.33	2822	5040	
Crooked River (N. Elliott Rd) Br.	5/16/2002	4:10	Clear Water	01-002397	Field	4.90	6.25	0.36	4601	5680	5340
Crooked River (N. Elliott Rd) Br.	5/16/2002	5:30	Clear Water	01-002397	Field	5.30	7.00	0.37	3930	5240	5320
10th St. to Providence Dr Ph 1 (Bend)	5/23/2002	8:00	Clear Water	01-006350	Field	5.00	6.75	0.40	3941	5630	5517
WCL Mt. Vernon - John Day	6/21/2002	11:00	PSI	01-005191	Field	5.20	6.25	0.37	4624	5780	5550
WCL Mt. Vernon - John Day	6/21/2002	14:38	PSI	01-005191	Field	4.80	6.50	0.38	3881	5390	5600
H-84: Nolin Rd. Bridge Section	8/22/2002	13:30	PSI	01-005580	Field	4.90	6.25	0.38	3270	5450	5540
10th St. to Providence Dr Ph 1 (Bend)	8/22/2002	14:30	PSI	01-006350	Field	5.00	6.25	0.36	4712	5890	5577
H-84: Nolin Rd. Bridge Section	9/14/2002	5:35	PSI	01-005580	Field	5.50	6.25	0.35	2804	4920	5420
H-84: Nolin Rd. Bridge Section	9/14/2002	6:00	PSI	01-005580	Field	4.60	7.00	0.37	4512	5640	5483
H-84: Nolin Rd. Bridge Section	9/14/2002	7:00	PSI	01-005580	Field	5.00	6.75	0.37	4448	5560	5373
Average						5.08	6.48	0.37	3982	5460	
Standard Deviation						0.28	0.33	0.02	683.94	294.49	
Average 7.28 Day Ratio									0.73		
Number of Tests									12	12	



INTEROFFICE MEMO

DATE: March 1, 2003

TO: Project Managers

FROM: Region Q.A.C

SUBJECT: Commercial Source Quality Control For:

CLEAR WATER CONCRETE (Source # 13-013-5)

The following products (Stockpiles) are under the ODOT/Industry commercial source system. These products have been tested by ODOT certified technicians and verified by the departments Quality Assurance Group and have been found to meet all ODOT quality requirements. Target values and test results are on file at the Region QA office.

Copies of the commercial source system are also available from the Region 2 QA office.

HMAC

19 – 12.5 mm
12.5 – 6.3 mm
6.3 – 0 mm
2.00 – 0 mm

PCC

19 – 4.75 mm
12.5 – 4.75 mm
Sand

BASES

37.5 – 0 mm
19 – 0 mm

NOTES:

This memo represents materials produce through the above date and will stay in effect for six months, unless ODOT verification testing shows that the material no longer meets quality standards.

This memo also replaces previously required Quality Control documentation (QL levels) for project documentation on these products.

MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

(503) 986-3100
FAX(503) 986-3096

Contract No.: EA No.: IN7872 Lab No.: 02-004687
 Project: CONCRETE MIX DESIGN- CLASS 30 DRILLED SHAFT
 Highway: County: Data Sheet No.: NONE
 Contractor: FA No.:
 Project Manager: Org Unit: Bid Item No.:
 Submitted By: ERIC KNAPP Org Unit: Sample No.: NA
 Material Source: CLEAR WATER CONCRETE (Source 13-013-5 Qty Represented: NA
 DATE-Sampled: NA Received: 02/11/ 1 Tested: 02/11/ 1 Reported:
 Type of Test: Mix Design Review - Structural Use: Class 30.0-19.0 mm- Class 4350 psi

REVIEW OF CONTRACTOR CONCRETE MIX DESIGN - TM 741x

Mix Producer: CLEAR WATER CONCRETE PLAN Contractor Mix Design No.: CWC 261-44N1K3S9

The request to review Class 30 concrete mix design for Drilled Shafts was evaluated according to the Standard Specifications.

Average Compressive Strength: 48.8 MPa @ 28 days

Based on a review of the mix proportions and the available data it has been determined that the mix design complies with the specifications. This mix design is approved for use on ODOT projects for one year.

Mix proportions as submitted by CLEAR WATER CONCRETE PLANT :

Cement	380 kg/m3	ASH GROVE	Type I Durkee
Fly Ash	71 kg/m3	ISG	Class F Centralia
19-4.75	1097 kg/m3 SSD	Gssd : 2.700 Abs : 1.3 %	Source : 05-037-1
4.75-0	610 kg/m3 SSD	Gssd : 2.650 Abs : 3.0 %	Source : 05-037-1 FM : 2.65
Water	158 kg/m3	W/C Ratio : 0.36	Slump : 150 mm
Air Content	5.0 %		
Density	2318 kg/m3		
	Air Entrainment Agent : WR Grace/Daravair		
	Water Reducer : WR Grace/WRDA-64		
	HRWR Admixture : Mstr Bldrs/Glennium 3000 NS		

This report does not supersede, delete or amend the project specifications. Our review of this mix design does not relieve the Contractor of the responsibility to produce satisfactory concrete.

741X	= \$ 0.	TOTAL CHARGES: \$ 0.00
REMARKS: Mix Design DOES comply with specifications. *		



**Compressive Strength Test
ASTM C39-96**

Client: F.E. Wards		Date: 4/29/2003		Report Number: 702-20389-6																																																																																	
Project: Snake River (NYSSA) Bridge			Contractor Clear Water Concrete																																																																																		
Permits			Material Inspected Concrete																																																																																		
Address Snake River Bridge			Speciment Type Cylinders																																																																																		
Placement Location Bent 1 Shaft 2																																																																																					
Tested By: Eat Mud		Supplier: Clear Water Concrete		Delivery Ticket: 606284	Truck # 123																																																																																
Date Palced: 4/22/2003			Mix Number & Proportions: 44N1K359																																																																																		
Batch Time:		Sample Time:		Cement (kg) 3815, Flyash- 625																																																																																	
Slump(mm) 200			Water Batched (L): 887 Addedtd @ Job:																																																																																		
Air Content(%): 6.1			Fine Aggregate(kg): 5470																																																																																		
Concrete Temp °C 19			Coarse Aggregate (kg) 9299																																																																																		
Air Temp °C 11			Admbxtures: AEA																																																																																		
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02-2954	C	28	5/20/2003	206,850	6.00	28.27	50.6 Cone																																																																														
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Set # (x of y) 1 OF 1		Mix Design Strength (Mpa): 51.6		Specified Structural Strength: 30																																																																																	

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and is not intended for use on any past, present or
future projects)



 Concrete Technician

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**Compressive Strength Test
ASTM C39-96**

Client: F.E. Wards		Date: 4/29/2003		Report Number: 702-20389-6																																																																																											
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Date Palced: 4/25/2003			Mix Number & Proportions: 44N1K359																																																																																												
Batch Time:		Sample Time:		Cement (kg) 3180, Flyash- 625																																																																																											
Slump(mm) 165			Water Batched (L): 771 Addedtd @ Job: 132																																																																																												
Air Content(%): 4.6			Fine Aggregate(kg): 5454																																																																																												
Concrete Temp °C 17			Coarse Aggregate (kg) 9306																																																																																												
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Set # (x of y) 1 OF 1		Mix Design Strength (Mpa): 47.5		Specified Structural Strenght: 30																																																																																											

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 Concrete Technician

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MATERIALS LABORATORY
800 AIRPORT RD. SE SALEM, OR 97301-4798

(503) 986-3100
FAX (503) 986-3096

Contract No.: C12770 EA No.: CON01479 Lab No.: **03-005196**

Project: SNAKE RIVER (NYSSA) BRIDGE
 Location: CENTRAL OREGON County: CLACKAMAS Data Sheet No.: F2736 158
 Contractor: F.E. WARDS FA No.: X-BHF-STP-S007(32)
 Project Manager: RIC YOUNG Org Unit: 1809 Bid Item No.: 46
 Submitted By: BARB WORBINGTON Org Unit: 1000 Sample No.: V-1
 Material Source: CLEAR WATER CONCRETE PLANT Qty Represented: 10% QA/QC TESTS
 Field Tests By : BARB WORBINGTON Cylinders By : BARB WORBINGTON Witnessed By:
 DATE-Sampled: 02/11/25 Received: 03/04/25 Tested: 03/05/23 Reported:
 Type of Test: Verification Use: DRILLED SHAFT

CONCRETE CYLINDER TEST REPORT

CYLINDER SET INFORMATION

Set Number : V-1	Slump : 165 mm
Number of Cylinders : 3	Air Content : 4.6 %
Cylinder Size : 100mm x 200mm	Unit Weight : 2331 kg/m3
Strength Required : 30.0 MPa in 28 Days	Water/Cement Ratio : 0.35
Cement + Flyash : 455 kg/m3	Concrete Temperature : 16.1 C

MIX DESIGN

Materials Lab ID No. : 02-004687
 Contractors ID No. : CWC261-44N1K3S9
 Design Strength : 30.0 in 28 Days
 Type of Concrete : Flyash

LAB RESULTS

Cylinder ID No.	Date Tested	Cylinder Age (days)	Area (mm ²)	Strength (MPa)	Lab Remarks
A	03/05/23	28	8107	42.9	
B	03/05/23	28	8107	43.8	
C	03/05/23	28	8107	44.3	
Average Strength :				43.7 MPa	6334 psi
Specimens tested in accordance with AASHTO T22/ASTM C39					

719X =\$ 0.

TOTAL CHARGES: \$ 0.00

REMARKS:

Concrete represented by these cylinders **DOES** meet required strength.

*

REPORT SHALL NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT WRITTEN APPROVAL OF

C: FILES ; PROJ MGR: Ric Young ; REG 5 Q.A.C. ; F E Wards.
Clear Water Concrete Plant ; FHWA ; CONSTRUCTION - R KESSLER

#6

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TEST SUMMARY (A)

(NONFIELD TESTED MATERIALS)

REVIEWERS AND DATES		ITEM NUMBERS AND DESCRIPTIONS										ITEM NO.	UNIT	ORIGINAL QUANTITY	SHEET	FINAL QUANTITY			
DATE OF SAMPLE TEST OR INSPECTION	FIR REPORT NO.	DATA SHEET NO. OR MATERIALS LAB. REPORT NO.	LAB REPORT NO.	TEST RESULTS CERTIFICATE	QUALITY COMPLIANCE CERTIFICATE	"Q" WITH MATERIALS REPORT NO.	EQUIPMENT LISTS AND DRAWINGS	CERTIFICATE OF MATERIALS ORIGIN	0490	0500	0510	0520	0530	0540	0490	LS	100	9	
LINE									FURNISH PILE DRIVING EQUIPMENT	FURNISH PP 324 X 12.7 STEEL PILES	DRIVE PP 324X12.7 STEEL PILES	PP 324 X 12.7 STEEL SPLICES	Reinforcement	Coated Reinforcement					
EXPLANATIONS AND NONCOMPLIANCE MATERIALS DESCRIPTION																			
1	2/12/03	1	P03-0060							225.83 M									16 each Steel Piles
2	10/28/03	1						X					16207 Lb						APL Reinforcement (Nucon/Cascade Steel)
3	10/28/03	1			X			X						446 Lb					APL Reinforcement (Cascade/Western)
4	10/24/03		03-000165											X					Mechanical Splice - Technician Certification
5																			
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