Appendix C

Forms

Oregon Department of Transportation

Print Form

General Daily Progress Report

Project Information

Project Name (Section) _____ Contract No. _____

Highway _____ Federal Aid No. _____

Contractor or Subcontractor _____

Weather

Clear	Fair	Cloudy	Shower	Rain	Snow
☐	☐	☐	☐	☐	☐

TEMP	10-32	32-50	50-70	70-83	Over 83
	☐	☐	☐	☐	☐

WIND	Still	Low	Med	High
	☐	☐	☐	☐

HUMIDITY	Dry	Low	Med	High
	☐	☐	☐	☐

Contractor/Subcontractor	Hours

Number of Personnel and Major Equipment

The first four columns are fixed and cannot be changed. In each of the remaining columns, please enter a heading specific to your job (e.g., Trainees, Backhoe, Flaggers) and record the numbers used by each contractor or sub.

Supervisors	Operators	Truck Drivers	Laborers																					

Location	and/or Description of Work

Estimated Quantities		
Item No.	This Date	Total

Traffic Control (TP & DT)

All TP & DT items have been inspected and found to be satisfactory ☐ Yes ☐ No (if no, explain below)

Equipment

Effects on Work (weather, accidents, breakdowns, delays, personnel, etc.)

Prepared by _____ Cert No. _____ Signature _____

Shift _____ ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday Work Date _____

General Daily Progress Report (Page 2)

Project Name (Section) | Work Date

Materials Rejected

Project Visitors

Remarks

Include condition of traffic control and roadway; important discussions with contractors regarding rejected work or materials and reasons; delays, difficulties, accidents, utility damage and other unusual conditions and events; arrivals and departures of major equipment, visitors.

Oregon Department of Transportation

MATERIAL DAILY PROGRESS REPORT

Special Provisions 00330.71

PROJECT NAME (SECTION)	CONTRACT NO.
HIGHWAY	FEDERAL AID NO.
CONTRACTOR OR SUBCONTRACTOR	

LOCATION AND DESCRIPTION OF WORK	(P) PLACED OR (R) REMOVED & TYPE OF MATERIAL	TYPE OF TESTS PERFORMED	B.I. NO.	ESTIMATED DAILY QUANTITY	DATE

REMARKS:
Include both FAILING and PASSING tests, identify rejected materials and reasons; delays, difficulties, accidents, utility damage and other unusual conditions and events. THIS FORM IS INFORMATIONAL ONLY AND WILL NOT BE USED AS A PAY DOCUMENT.

SEE BACK FOR ADDITIONAL REMARKS ☐

PREPARED BY CONTRACTOR	DATE	DATES WORK WAS PERFORMED

Submit this report to the Engineer at least weekly

OREGON DEPARTMENT OF TRANSPORTATION

FIELD INSPECTION REPORT

REPORT NO.	FOR BID ITEM NO.
PROJECT NAME (SECTION)	CONTRACT NO.
HIGHWAY	F.A. PROJECT NO.
PROJECT MANAGER	

REASON FOR THIS REPORT

☐ INSPECTION OF MATERIAL ☐ MATERIALS ON HAND

☐ OTHER (EXPLAIN)

MATERIALS DELIVERED FOR PROJECT

TYPE OF MATERIAL			DATE DELIVERED
SOURCE OF MATERIAL (MANUFACTURER OR FABRICATOR)		DELIVERED TO (NAME OF CONTRACTOR/SUBCONTRACTOR)	
QUANTITY DELIVERED	UNIT	QUANTITY APPROVED	QUANTITY REJECTED (EXPLAIN)
TOTAL APPROVED TO DATE	ESTIMATED TOTAL REQUIRED	SAMPLE DATA SHEET NO. FOR SAMPLE SENT TO MATERIALS LAB FOR TESTS	

SUPPORTING DATA

☐ MATERIALS INSPECTION LABORATORY REPORT NO. I- _____ TEST _____ LABORATORY REPORT NO. _____

☐ MATERIALS LABORATORY INSPECTION LABEL OR MARK.

☐ TEST RESULTS CERTIFICATE

☐ QUALITY COMPLIANCE CERTIFICATE

☐ QPL ITEM

☐ CONFORMANCE TO EQUIPMENT LIST AND DRAWINGS (EXPLAIN)

☐ CERTIFICATE OF MATERIAL ORIGIN FOR PERMANENTLY INCORPORATED IRON OR STEEL MATERIALS AND THEIR COATINGS ON FEDERAL AID PROJECTS

☐ 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.

WHERE INSPECTED	DATE	INSPECTOR SIGNATURE	CERT NO.

OREGON DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION)	CONTRACT NO.

BID ITEM NO.	BID ITEM NAME

DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS)

DOMESTIC MATERIALS DESCRIPTION

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.

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.

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

AUTHORIZED REPRESENTATIVE*

NAME: _____

TITLE: _____

SIGNATURE: _____

DATE: _____

Submit a new certificate for subsequent shipments if any of the above information changes.

COMPANY* NAME AND ADDRESS:

*May be Contractor, Sub-Contractor or supplier

OREGON DEPARTMENT OF TRANSPORTATION

CERTIFICATE OF MATERIALS ORIGIN

PROJECT NAME (SECTION)	CONTRACT NO.
FORM EXAMPLE	c12345

BID ITEM NO.	BID ITEM NAME
480	Reinforcement

DOMESTIC MATERIALS SOURCE (NAME AND ADDRESS)

DOMESTIC MATERIALS DESCRIPTION

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

Taiwan Steel, Korea

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

287 Each #32 round bars @ $2.18/ea - $625.00

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.

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.

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

AUTHORIZED REPRESENTATIVE*

NAME: Ted Stanley

TITLE: President

SIGNATURE: _____

DATE: _____

Submit a new certificate for subsequent shipments if any of the above information changes.

COMPANY* NAME AND ADDRESS:

Stanley Rebar
123 Manley Ave
Jonesville OR 97000

*May be Contractor, Sub-Contractor or supplier

Oregon Department of Transportation

FIELD INSPECTION

	CONTRACT NO.	REPORT NO. FOR BID ITEM NO
MANUAFACTURER OR FABRICATOR		BID ITEM NAME
QUANTITY DELIVERED	QUANTITY ACCEPTED	QUANTITY REJECTED EXPLAIN

VERIFIED ON MATERIALS ☐ HEAT, LOT OR BATCH NO. ☐ AASHTO / ASTM SPEC. NO. ☐ ODOT LAB LABEL OR MARK ☐ OTHER (EXPLAIN)

SUPPORT DATA ☐ TEST RESULT CERTIFICATE ☐ QUALITY COMPL. CERTIFICATE ☐ EQUIP. LIST & DRAWINGS ☐ OTHER (EXPLAIN)

INSPECTED BY	DATE	CERT NO.

REMARKS

734-2207 (3-05)

SAMPLE DATA SHEET FOR CONCRETE CYLINDERS

☐ English (E) or Metric (M)

* CON NO. & EA	* DATA SHEET NUMBER	LABORATORY REPORT NUMBER
	F - -	

PROJECT NAME (SECTION)	CONTRACT NUMBER

CONTRACTOR	PROJECT MANAGER	BID ITEM NUMBER

CONCRETE SUPPLIER	* SUBMITTED BY	QUANTITY REPRESENTED
		yd³(m³)

CONCRETE FOR USE IN (LOCATION OR PLACEMENT)	BRIDGE NUMBER	* SPECIFIED STRENGTH
		PSI(MPa) DAYS

REPRESENTED BY NO. OF CYLS.	SET NUMBER	* DATE CAST	DATE SHIPPED	CYLINDER SIZE	INVOICE NUMBER

* TEST SPECIMENS AT DAYS INDICATED								YIELD
A.	B.	C.	D.	E.	F.	G.	H.	yd³(m³)

* MIX DESIGN	* ODOT LAB / MIX DESIGN NUMBER	* CONCRETE SUPPLIER MIX DESIGN NUMBER	* DESIGN CEMENTITIOUS MATERIAL CONTENT	* FREE (SURFACE) MOISTURE			
			lb/yd³ kg/m³	* COARSE #1	* COARSE #2	* COARSE #3	* SAND
				%	%	%	%

* AMBIENT TEMP.	* CONCRETE TEMP.	* SLUMP	* AIR CONTENT	* UNIT WEIGHT	* CEMENTITIOUS MAT. CONTENT	* FIELD W/C RATIO
°F °C	°F °C	in mm	%	lb/ft³ kg/m³	lb/yd³ kg/m³	BY WT.

* ADDITIVES	* CEMENT	* FLYASH	* SILICA	* WATER BATCHED	* NET WEIGHT	* POT CALIBRATION
oz ml	lb kg	lb kg	lb kg	lb L		

* AGGREGATE #1	* AGGREGATE #2	* AGGREGATE #3	* FINE AGG (SAND)	* WATER AT JOB	* CURING	* CAPPING
lb kg	lb kg	lb kg	lb kg	lb L		

* PROJECT CONTACT PERSON	* CONTACT PHONE NUMBER	* TIME CYL CAST	* LOW TEMP.	* HIGH TEMP.
			°F °C	°F °C

FIELD REMARKS

☐ QUALITY CONTROL ☐ VERIFICATION ☐ INFO * PHONE No. FAX No.

T 23 CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE

LAB USE ONLY BELOW

CYLINDER ID	DATE OF BREAK	AGE DAYS	MAXIMUM LOAD	CYLINDER AREA	STRENGTH PSI(MPa)	COMPOUND TYPE / PAD DUROMETER	BREAK TYPE	REMARKS
A								
B								
C								
D								
E								
F								
G								
H								

AVE _____ DAY ☐ ☐ PASS ☐ FAIL

COMMENTS (WHEN MATERIAL ,CYLINDERS OR DATA RECEIVED)

☐ QUALITY CONTROL ☐ VERIFICATION CYLINDERS REC'D DATA SHEET RECD

T 22 CERTIFIED TECHNICIAN (PLEASE PRINT) AND CARD NUMBER	COMPANY NAME	SIGNATURE	DATE

Note: *** Required information. If this information is missing, testing will be delayed.**

734-4000_C (10-2008)

Oregon Department of Transportation

FLAGGER AND PILOT CAR RECEIPT

PROJECT NAME (SECTION)			CONTRACT NO.
CONTRACTOR OR SUBCONTRACTOR NAME			DATE OF WORK
ITEM NO FLAGGER	ITEM NO PILOT CAR		SHIFT

FLAGGER NAMES	WORK LOCATION	HOURS

PILOT CAR OPERATOR NAMES	WORK LOCATION	HOURS

CONTRACTOR REPRESENTATIVE (SIGN)	
INSPECTOR (SIGN)	CERT NO.

734-3955(3-05)

MARGINAL WORDS (RED INK)

PART 1 WHITE - PROJECT MANAGER
PART 2 CANARY - CONTRACTOR
PART 3 PINK - OTHER

Oregon Department of Transportation

DAILY FORCE ACCOUNT RECORD

CONTRACTOR	PROJECT NAME (SECTION)		CONTRACT NO.	
SUB-CONTRACTOR	HIGHWAY	COUNTY	EWO NO.	DATE OF WORK
DESCRIPTION OF WORK				
REMARKS				

LABOR

NAME	CRAFT GROUP NO.	HOURS ST	HOURS OT

Ordered by Engineer

MATERIALS

DESCRIPTION	QUANTITY	UNIT
DO NOT LIST: "ALL" "LUMP SUM" OR "PER ATTACHED INVOICE"		

EQUIPMENT

CONTR.	TYPE OF EQUIPMENT	MANUFACTURER	MODEL NO.	YEAR AND/OR SERIAL #	GAS	DIESEL	SIZE, CAPACITY, HP CFM, AXLE CONFIG.	PAY ATTACHMENT	OPER	STDBY

Ordered by Engineer

SEE THE INSTRUCTIONS ON THE COVER. The Daily Force Account Record is prepared each day by the Inspector and signed by the Contractor's Representative. Original to the Contractor Representative, copy one to Construction Contract Services with Contractor's billing, copy two to Project Manager, copy three to Originator.

CONTRACTOR'S REPRESENTATIVE SIGNATURE	PREPARED BY SIGNATURE	CERT NO.

734-3428(3-05)

PILE AND DRIVING EQUIPMENT DATA

HIGHWAY	MILEPOST

CONTRACT NO	STRUCTURE NAME AND NO.

PROJECT NAME (SECTION)

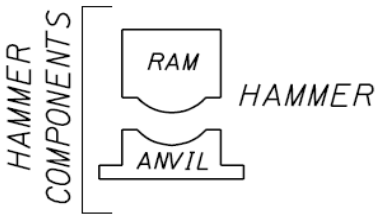
PROJECT MANAGER	CONTRACTOR

COUNTY	PILE DRIVING SUBCONTRACTOR (Piles Driven By):

TYPE OF LEADS: ☐ Fixed ☐ Semi-Fixed ☐ Swinging

OTHER (Provide Description): _____

LEAD DIMENSIONS Depth _____ Width _____



MANUFACTURER	MODEL	TYPE
SERIAL NO.	OWNER:	
RATED ENERGY (KN-m)	@ LENGTH OF STROKE (m)	RAM WT. (KN)
MODIFICATIONS		

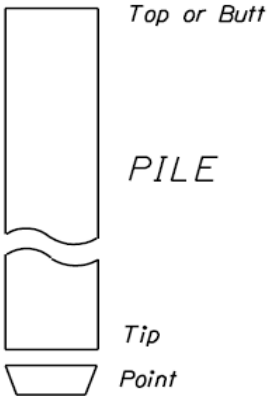
MATERIAL	THICKNESS (mm.)	AREA (mm^2)

MATERIALS	
TOTAL THICKNESS (mm.)	AREA (mm^2)
MODULUS OF ELASTICITY (E): (MPa)	
COEFFICIENT OF RESTITUTION (e)	

ALL COMPONENTS

WEIGHT (KN)	MODIFICATIONS `

CUSHION MATERIALS		AREA (mm^2)
NO OF LAYERS	THICKNESS (EACH) (mm.)	TOTAL THICKNESS (mm.)
MODULUS OF ELASTICITY (E): (MPa)	COEFFICIENT OF RESTITUTION (e)	



PILE TYPE & SIZE	Weight (KN/m)
LENGTH IN LEADS (m)	
WALL THICKNESS (mm)	TAPER

NOMINAL PILE RESISTANCE (KN)	ACCEPTANCE BY WAVE EQUATION ☐ Yes ☐ No
DESCRIPTION OF SPLICE	
TIP TREATMENT DESCRIPTION (TYPE, MANUFACTURER, MODEL NO., ETC.)	

NOTE: If mandrel is used to drive the pile, attach separate manufacturer's detail sheet(s) including weight and dimensions.

SUBMITTED BY:	DATE

734-2608 (8-2009)

OREGON DEPARTMENT OF TRANSPORTATION

MICROPILE INSTALLATION LOG

Project Name				Contract No.
Bridge No.	Bent No.	Pile No.	Design Load (kips)	Installation Date:

Micropile Type (A, B, C, or D)		Start of Drilling (date & time)	
Drill Rig/Drill Method		End Drilling	
Flushing Media (air/water)		Start of Grouting	
Drill Rig #, Operator		Pile Completion	
Grout Plant #, Operator		Total Duration	

Drill Bit Type and Size		Cement Type*	
Casing Dia./Wall Thickness		w/c ratio	
Casing (temporary/permanent)		Grout Strength (psi)	
Pile Inclination		Reinforcement Size/Grade/Length	

* describe any grout admixtures below in grout comments

Pile Length Above B.O.F.		Tremie Grout Quantity (bags)	
Upper Cased Length		Pressure Grout Quantity (bags)	
Casing Plunge Length		Grouting After Plunge (bags)	
Bond Length Below Casing		Total Grout Quantity (bags)	
Total Pile Length		Grout Ratio (bags/ft. bond)	

COMMENTS - PILE DRIVING

Depth from B.O.F. (ft)	Soil / Rock Description	Flush Description	Comments

COMMENTS - PILE GROUTING

Depth from B.O.F. (ft)	Pressure Range Max/Average (psi)	Comments

B.O.F. = Bottom of Footing

Was a load test performed? ☐ Yes ☐ No

If load test was performed attach load test results.

Did micropile pass load test? ☐ Yes ☐ No ☐ N/A

Oregon Department of Transportation

DRILLED SHAFT CONCRETE PLACEMENT LOG

PROJECT		BRIDGE NO.	CONTRACT NO	
BENT	STATION	SHAFT NO.	SHAFT DIAMETER	
DRILLED SHAFT CONTRACTOR		INSPECTED BY	CERT. NO.	DATE

REFERENCE ELEVATION	SHAFT TOP ELEVATION	REBAR CAGE TOP ELEVATION:	AT START	AT FINISH
DEPTH TO WATER OR SLURRY	SHAFT BOTTOM ELEVATION	REBAR DESIGN ELEV.	WITHIN SPEC? ☐ YES	☐ NO
TOP OF ROCK ELEVATION	SHAFT LENGTH	REBAR CAGE CENTERED WITHIN SPEC? ☐ YES	☐ NO	

SHAFT CONCRETE INFORMATION

Placement Method

____ Free Fall

____ Tremie

De-Airing Method

____ Tremie Plug

____ Tremie Cap

____ Relief Valve

Volume in Lines

#	ID	Length	Volume
____	____	____	____ cy
____	____	____	____ cy
____	____	____	____ cy

Total Volume in Lines (VL) ____ cy

Estimated Waste Concrete (VW) ____ cy

Begin Pour: Date: _____ Time: _____

End Pour: Date: _____ Time: _____

Shaft Completion Time: _____
(including casing removal)

_____ **Total Concrete Volume Delivered (TVD)**

_____ **Total Concrete Volume In Shaft; cy (=TVD-VL-VW)**

Truck No.	Concrete Volume	Slump	Arrival Time	Start Time	Finish Time	Tremie Depth	Depth To Concrete	NOTES (delays, additives, breaching, casing removal)

_____ **Total Concrete Volume Delivered (TVD)**

_____ INSPECTOR SIGNATURE

_____ DATE

NOTES: _____

CASING REMOVAL

	OD	Top Elev.	Bot. Elev.	Start	Finish
	____	____	____	____	____
	____	____	____	____	____
	____	____	____	____	____
Permanent Casing	____	____	____		

DRILLED SHAFT CONCRETE VOLUMES

PROJECT		BRIDGE NO.	CONTRACT NO	
BENT	STATION	SHAFT NO.	SHAFT DIAMETER	
DRILLED SHAFT CONTRACTOR		INSPECTED BY	CERT. NO.	DATE

CONCRETING CURVE

Prior to pouring concrete, a plot should be made showing the theoretical concrete surface (by depth or elev.) vs. concrete volume placed. During concrete placement the actual concrete surface vs. the actual concrete volume placed is then plotted.

Shaft Top

DEPTH/ELEVATION (Feet

Shaft Bottom

CONCRETE VOLUME PLACED (cubic yards)

VOLUME CALCULATIONS

Volume Delivered	TVD	____ cy	Notes/Comments: _____
Volume in Lines	VL	____ cy	_____
Wastage	VW	____ cy	_____
Volume Placed (= TVD-VL-VW)	VP	____ cy	_____
Theoretical Volume ($\pi(D^2/4)$(Shaft Length,ft)/27)	VT	____ cy	_____
Overpour (VP-VT)	OP	____ cy	_____

DRILLED SHAFT EXCAVATION LOG

PROJECT		BRIDGE NO.	CONTRACT NO	
BENT	STATION	SHAFT NO.	SHAFT DIAMETER	
DRILLED SHAFT CONTRACTOR		INSPECTED BY	CERTIFICATION NO.	DATE

DATE/TIME EXCAVATED		TYPE OF CONSTRUCTION
START	FINISH:	☐ DRY ☐ WET

ELEVATIONS

Reference Elev. _____
Grd. Surface Elev. _____
Water Table Elev. _____
Top Shaft Elev. _____
Msd Top Rock Elev. _____
Msd Avg. Shaft Bot Elev. _____

DIMENSIONS

Soil Auger Dia. _____
Soil Shaft Length _____
Rock Auger Dia. _____
Rock Socket Length _____
Construc. Shaft Length _____

DRILLING SLURRY

Slurry Type & Manufacturer : _____

Slurry Meets Specifications? **Y** **N**

CLEANOUT METHOD

Bucket _____ Airlift _____ Pump _____
Other: _____

BOTTOM INSPECTION

Visual _____ Tape/Probe _____
Record 5 depths to the bottom of finished shaft:

1 _____ 3 _____
4 _____
2 _____ 5 _____

Ave. Shaft Bottom Elev.: _____
Meet Cleanout Specification? **Y** **N**
Meet Alignment Specifications? **Y** **N**

CASING INFORMATION (if applicable)

Casing (Temp / Perm)	Casing (Temp / Perm)	Casing (Temp / Perm)
Type _____	Type _____	Type _____
OD (in.) _____	OD (in.) _____	OD (in.) _____
Thickness _____	Thickness _____	Thickness _____
Top Elev. _____	Top Elev. _____	Top Elev. _____
Length: _____	Length: _____	Length: _____

Record and describe all materials encountered during drilled shaft excavation, water table information, depths of seepage and seepage rates, obstructions encountered, equipment used and equip. breakdowns (use additional sheets if necessary).

DEPTH	ELEVATION	START	FINISH	SOIL OR ROCK MATERIAL DESCRIPTION AND NOTES	LOG

INSPECTOR SIGNATURE _____ DATE _____

NOTES: _____

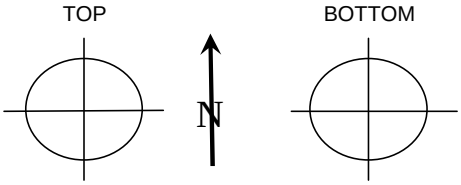
DRILLED SHAFT INSPECTION REPORT

BRIDGE NAME				PROJECT:			CONTRACT NO.:
BRIDGE NO.	BENT	STATION	SHAFT NO.	SHAFT DIAMETER	INSPECTED BY	CERTIFICATION NO.	DATE
DRILLED SHAFT CONTRACTOR				PRIME CONTRACTOR			

Time Excavation Started: _____ STOPPED _____

Date/Time Bottom Inspected: _____

Date Concreting Started: _____ STOPPED _____



Mark Deviation from Plan

As-built location within tolerances? _____

	Plan Measurements	"As-Built" Measurements
Top Elevation	_____	_____
Bottom Elevation	_____	_____
Shaft Diameter	_____	_____
Rock Socket Diameter (if appl.)	_____	_____
Shaft Length*	_____	_____

*Was longer shaft approved for payment? ☐ Yes ☐ No

Concrete Volume (cy) _____ _____

Concrete Mix Design _____ _____

Concrete Placement Method ☐ Tremie ☐ Free Fall

Concrete Slump @ time or pour _____

Water Inflow Rate _____ gal/min (est.)

Bottom of Shaft Cleanliness Meets Specification? ☐ Yes ☐ No

Proper reinforcement and CSL tubes installed: _____

Description of bottom of shaft: _____

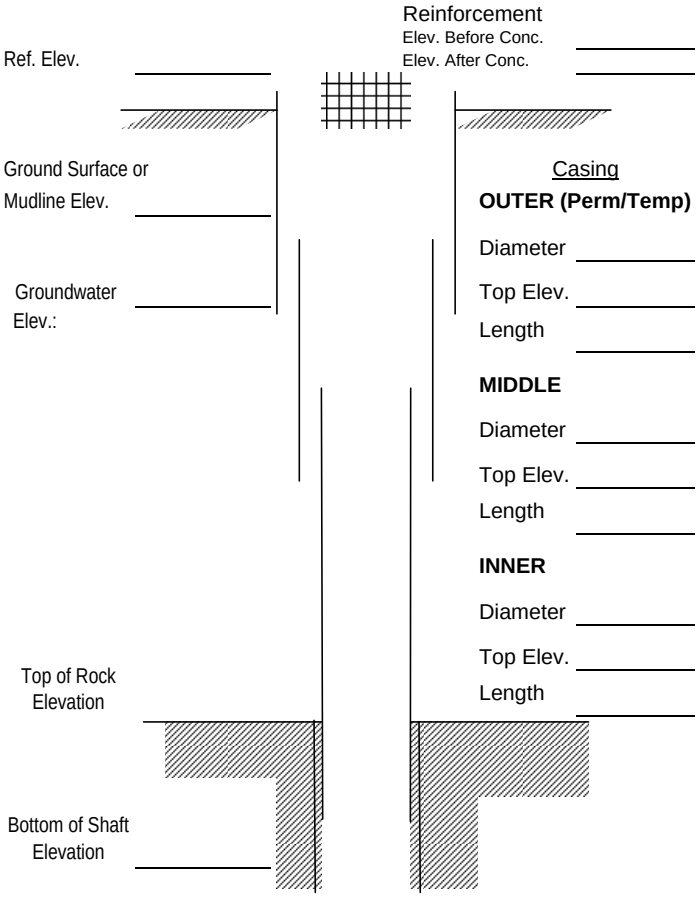
COMMENTS (Obstructions Encountered, etc.):

CSL Test Performed: ☐ Yes ☐ No

CSL Test Results Approved: ☐ Yes ☐ No* *If not approved, describe results and resolution

Shaft Approved by:

INSPECTOR SIGNATURE DATE



Note: Forward completed reports to ODOT Bridge Section.

http://www.oregon.gov/ODOT/HWY/CONSTRUCTION/HwyConstForms1.shtml

734-2598 (8-2009)

OREGON DEPARTMENT OF TRANSPORTATION

HIGH STRENGTH BOLTING SUMMARY
TURN-OF-NUT METHOD (LONG BOLTS)

PROCESSES	PURPOSE
1. Rotational Capacity Test	Checks bolts for proper lubrication & for damage during storage or transit
2. Verification Test	Demonstrates that Contractor's personnel, equipment & procedure will tighten bolts to proper tension
3. Inspection Torque	Determines torque value to be used in the random field inspection
4. Random Field Inspection	Checks bolt installation on structure using the Inspection Torque

PROCESSES	PROCEDURE
1. Rotational Capacity Test	1. Sample 2 bolt, washer & nut assemblies
(02560.60 (a))	2. Assemble fastener with 3-5 threads within the grip
	3. Snug tight (10% of Required Fastener Tension in Table 560-1); Tolerance= -0 kips, +2 kips
	4. Mark the bolt, nut & plate
	5. Tighten to Required Fastener Tension & record torque (torque must not exceed T=0.25PD) (P in lbs, D in ft)
	6. Turn nut to twice the rotation in Table 560-3 (tension must exceed 115% of Required Fastener Tension)
	7. Remove nut and check threads
2. Verification Test	1. Sample 3 bolt, washer & nut assemblies
(00560.29 (c)(1 & 5))	2. Snug tight (Plies of joint in firm contact, full effort on 12" spud wrench; 10% of RFT< Tension < 50% of RFT)
	3. Mark the bolt, nut & plate
	4. Tighten nut to the rotation in Table 560-3 (max. of 10 seconds with impact wrench)
	5. Verify tension is 5% greater than Required Fastener Tension
3. Inspection Torque	1. Sample 3 bolt, washer & nut assemblies
(00560.29 (d))	2. Place in Skidmore & tighten to Required Fastener Tension in Table 560-1
	3. Measure torque required to turn the nut 5 degrees (1" @ 12" radius)
	4. Average the 3 tests to determine the Inspection Torque
4. Random Field Inspection	1. Select at random 10% of the tensioned bolts in each connection (2 minimum)
(00560.29 (d))	2. Apply Inspection Torque. If none turn, the connection passes.
	3. If one or more fasteners turn, apply inspection torque to all fasteners in the connection.
	4. Re-tension & inspect all fasteners that turned when applying the Inspection Torque.

OREGON DEPARTMENT OF TRANSPORTATION

HIGH STRENGTH BOLTING SUMMARY
TURN-OF-NUT METHOD (SHORT BOLTS)

PROCESSES	PURPOSE
1. Rotational Capacity Test	Checks bolts for proper lubrication & for damage during storage or transit
2. Verification Test	Demonstrates that Contractor's personnel, equipment & procedure will tighten bolts to proper tension
3. Inspection Torque	Determines torque value to be used in the random field inspection
4. Random Field Inspection	Checks bolt installation on structure using the Inspection Torque

PROCESSES	PROCEDURE
1. Rotational Capacity Test	1. Sample 2 bolt, washer & nut assemblies
(02560.60 (a))	2. Assemble fastener with 3-5 threads within the grip
	3. Snug tight (10% of max allowable torque < Torque < 20% of MAT, MAT=1.15(0.25PD)) (P in lbs, D in ft)
	4. Mark socket
	5. Tighten nut to rotation in Table560-3 & record torque (torque must not exceed T=1.15(0.25PD)
	6. Turn nut to twice the rotation in Table 560-3
	7. Remove nut and check threads
2. Verification Test	1. Sample 3 bolt, washer & nut assemblies
(00560.29 (c)(1 & 5))	2. Snug tight (Joint plies in firm contact, full effort on spud wrench; 10% of MAT< Torque < 50% of MAT
	3. Mark the bolt, nut & plate
	4. Tighten nut to the rotation in Table 560-3
	5. Verify torque is 5% greater than average of the recorded torques @ turn requirement in the RoCap Test
3. Inspection Torque	1. Sample 3 bolt, washer & nut assemblies
(00560.29 (d))	2. Snug tight (10% of max allowable torque < Torque < 20% of MAT, MAT=1.15(0.25PD)) (P in lbs, D in ft)
	3. Mark the bolt, nut & plate
	4. Tighten nut to the rotation in Table 560-3
	3. Measure torque required to turn the nut 5 degrees (1" @ 12" radius)
	4. Average the 3 tests to determine the Inspection Torque
4. Random Field Inspection	1. Select at random 10% of the tensioned bolts in each connection (2 minimum)
(00560.29 (d))	2. Apply Inspection Torque. If none turn, the connection passes.
	3. If one or more fasteners turn, apply inspection torque to all fasteners in the connection.
	4. Re-tension & inspect all fasteners that turned when applying the Inspection Torque.

HIGH STRENGTH BOLTS
ROTATIONAL CAPACITY TEST & INSPECTION TORQUE
(LONG BOLTS)

☐ Turn of Nut Method ☐ Direct Tension Indicator ☐ Tension Control Fastener

Project		**Contract No.**
Company		**Test No.**
Torque Wrench Serial No.		**Calibration Due Date**
Skidmore Serial No.		**Calibration Due Date**
Bolt Diameter	**Bolt Length**	**Quantity**
Bolt Mfg.	**Lot No.**	**Heat No.**
Nut Mfg.	**Lot No.**	**Heat No.**
Washer Mfg.	**Lot No.**	**Heat No.**

Ro-Cap Sample 1:

Required Fastener Tension = _____ Lbs. (Table 00560-1)
Snug Tight = _____ Lbs. (0.10 x Req. Fastener Tension): Tol. = -0 kips + 2 kips
Measured Torque = _____ Ft.-Lbs. @ Required Fastener Tension (Go to Insp. Torque)
Maximum Allowable Torque = _____ Ft.-Lbs. (T < 0.25PD); (P in Lbs., D in Ft.)
Measured Tension = _____ Lbs. @ _____ Turn (2x Rotation In Table 00560-3)
Minimum Tension Required = _____ Lbs. (1.15 X Required Fastener Tension)

Sample 1 Results: ☐ Pass ☐ Fail

Ro-Cap Sample 2:

Required Fastener Tension = _____ Lbs. (Table 00560-1)
Snug Tight = _____ Lbs. (0.10 x Req. Fastener Tension): Tol. = -0 kips + 2 kips
Measured Torque = _____ Ft.-Lbs. @ Required Fastener Tension (Go to Insp. Torque)
Maximum Allowable Torque = _____ Ft.-Lbs. (T < 0.25PD); (P in Lbs., D in Ft.)
Measured Tension = _____ Lbs. @ _____ Turn (2x Rotation In Table 00560-3)
Minimum Tension Required = _____ Lbs. (1.15 X Required Fastener Tension)

Sample 2 Results: ☐ Pass ☐ Fail

Rotational Capacity Test Results: ☐ Accept ☐ Reject

Inspection Torque Sample 1:

Required Fastener Tension = _____ Lbs. (Table 00560-1)
Measured Torque = _____ Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque Sample 2:

Required Fastener Tension = _____ Lbs. (Table 00560-1)
Measured Torque = _____ Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque Sample 3:

Required Fastener Tension = _____ Lbs. (Table 00560-1)
Measured Torque = _____ Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque = _____ Ft.-Lbs. (Average of the 3 Inspection Torque Samples)

Comments:

Inspector	Cert No.	Title
Contractor's Representative		Date

Oregon Department of Transportation

HIGH STRENGTH BOLTS
ROTATIONAL CAPACITY TEST & INSPECTION TORQUE
(SHORT BOLTS)

Project		**Contract No.**
Company		**Test No.**
Torque Wrench Serial No.		**Calibration Due Date**
Skidmore Serial No.		**Calibration Due Date**
Bolt Diameter 7/8 inch	**Bolt Length**	**Quantity**
Bolt Mfg.	**Lot No.**	**Heat No.**
Nut Mfg.	**Lot No.**	**Heat No.**
Washer Mfg.	**Lot No.**	**Heat No.**

Ro-Cap Sample 1:

Required Fastener Tension	=	39000	Lbs. (Table 00560-1)
Snug Tight	=	82	Ft.-Lbs.; T = 0.1(1.15)(0.25PD); (P in Lbs., D in Ft.)
Measured Torque	=		Ft.-Lbs. @ _____ Turn (Table 00560-3) (Go to Insp. Torque)
Maximum Allowable Torque	=	818	Ft.-Lbs.; T = 1.15(0.25PD); (P in Lbs., D in Ft.)
2 x Rotation	=		Turn (2x Rotation In Table 00560-3)

Sample 1 Results: ☐ Pass ☐ Fail

Ro-Cap Sample 2:

Required Fastener Tension	=	39000	Lbs. (Table 00560-1)
Snug Tight	=	82	Ft.-Lbs.; T = 0.1(1.15)(0.25PD); (P in Lbs., D in Ft.)
Measured Torque	=		Ft.-Lbs. @ _____ Turn (Table 00560-3) (Go to Insp. Torque)
Maximum Allowable Torque	=	818	Ft.-Lbs.; T = 1.15(0.25PD); (P in Lbs., D in Ft.)
2 x Rotation	=		Turn (2x Rotation In Table 00560-3)

Sample 2 Results: ☐ Pass ☐ Fail

Rotational Capacity Test Results: ☐ Accept ☐ Reject

Inspection Torque Sample 1:

Measured Torque	=		Ft.-Lbs. @ _____ Turn (Turn Rotation in Table 00560-3)
Sample Inspection Torque	=		Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque Sample 2:

Measured Torque	=		Ft.-Lbs. @ _____ Turn (Turn Rotation in Table 00560-3)
Sample Inspection Torque	=		Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque Sample 3:

Measured Torque	=		Ft.-Lbs. @ _____ Turn (Turn Rotation in Table 00560-3)
Sample Inspection Torque	=		Ft.-Lbs. @ Additional 5 Degrees (Apprx. 1" @ 12" Radius)

Inspection Torque = _____ Ft.-Lbs. (Average of the 3 Sample Inspection Torques)

Comments:

Inspector	Cert No.	Title
Contractor's Representative		Date

Oregon Department of Transportation

HIGH STRENGTH BOLTS VERIFICATION TEST (TURN OF NUT METHOD FOR LONG BOLTS)

Project			**Contract No.**
Company			**Test No.**
Torque Wrench Serial No.			**Calibration Due Date**
Skidmore Serial No.			**Calibration Due Date**
Bolt Diameter	3/4 inch	**Bolt Length**	**Quantity**
Bolt Mfg.		**Lot No.**	**Heat No.**
Nut Mfg.		**Lot No.**	**Heat No.**
Washer Mfg.		**Lot No.**	**Heat No.**

Verification Sample 1:

Required Fastener Tension = 28000 Lbs. (Table 00560-1)
Meas'd Tension @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench)
(10% Req'd Fastener Tension < Snug Tight < 50% RFT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Tension = _____ Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Tension Required = 29400 Lbs. (1.05 X Required Fastener Tension)

Sample 1 Results: ☐ Pass ☐ Fail

Verification Sample 2:

Required Fastener Tension = 28000 Lbs. (Table 00560-1)
Meas'd Tension @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench)
(10% Req'd Fastener Tension < Snug Tight < 50% RFT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Tension = _____ Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Tension Required = 29400 Lbs. (1.05 X Required Fastener Tension)

Sample 2 Results: ☐ Pass ☐ Fail

Verification Sample 3:

Required Fastener Tension = 28000 Lbs. (Table 00560-1)
Meas'd Tension @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench)
(10% Req'd Fastener Tension < Snug Tight < 50% RFT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Tension = _____ Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Tension Required = 29400 Lbs. (1.05 X Required Fastener Tension)

Sample 3 Results: ☐ Pass ☐ Fail

Verification Test Results: ☐ Accept ☐ Reject

Comments:

Inspector	Cert No.	Title
Contractor's Representative		Date

Oregon Department of Transportation

HIGH STRENGTH BOLTS VERIFICATION TEST (TURN OF NUT METHOD FOR SHORT BOLTS)

Project		**Contract No.**
Company		**Test No.**
Torque Wrench Serial No.		**Calibration Due Date**
Skidmore Serial No.		**Calibration Due Date**
Bolt Diameter 3/4 inch	**Bolt Length**	**Quantity**
Bolt Mfg.	**Lot No.**	**Heat No.**
Nut Mfg.	**Lot No.**	**Heat No.**
Washer Mfg.	**Lot No.**	**Heat No.**

Required Fastener Tension = 28000 Lbs. (Table 00560-1)

Verification Sample 1:

Maximum Allowable Torque = 503 Ft.-Lbs.; MAT = 1.15(0.25PD), (P in Lbs., D in Ft.)
Meas'd Torque @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench) (10% MAT < Snug Tight < 50% MAT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Torque = _____ Ft.-Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Torque Required = _____ Lbs. (1.05 X Avg. RoCap Torque @ Rotation in Table 00560-3)
Sample 1 Results: ☐ Pass ☐ Fail

Verification Sample 2:

Maximum Allowable Torque = 503 Ft.-Lbs.; MAT = 1.15(0.25PD), (P in Lbs., D in Ft.)
Meas'd Torque @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench) (10% MAT < Snug Tight < 50% MAT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Torque = _____ Ft.-Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Torque Required = _____ Lbs. (1.05 X Avg. RoCap Torque @ Rotation in Table 00560-3)
Sample 2 Results: ☐ Pass ☐ Fail

Verification Sample 3:

Maximum Allowable Torque = 503 Ft.-Lbs.; MAT = 1.15(0.25PD), (P in Lbs., D in Ft.)
Meas'd Torque @ Snug Tight = _____ Lbs.(Joint Plies in Firm Contact, Full Effort on Spud Wrench) (10% MAT < Snug Tight < 50% MAT)
Measured Time = _____ Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Maximum Allowable Time = 10 Seconds (From Snug Tight to Turn Rotation in Table 00560-3)
Measured Torque = _____ Ft.-Lbs. @ _____ Turn (Turn Rotation In Table 00560-3)
Minimum Torque Required = _____ Lbs. (1.05 X Avg. RoCap Torque @ Rotation in Table 00560-3)
Sample 3 Results: ☐ Pass ☐ Fail

Verification Test Results: ☐ Accept ☐ Reject

Comments:

Inspector	Cert No.	Title
Contractor's Representative		Date

POST-TENSIONING GROUTING RECORD

PROJECT NAME					CONTRACT NO.
HIGHWAY		SECTION			COUNTY
CONTRACTOR		POST-TENSIONING CONTRACTOR			POST-TENSIONING FOREMAN
STRUCTURE NO.	DATE	PAGE NO.	PROJECT MANAGER	INSPECTOR	CERT NO.

TRIAL BATCH	Specific Gravity (mud balance)	Flow Cone 0 sec quesence	Flow Cone 30 min retest	Wick Test

Certified Grouting Technician:	
Grout Brand(from QPL):	
Water per bag:	
Number of Bags/ Batch:	
Water per batch:	
Mixer (Brand/model):	

PRODUCTION	Specific Gravity Mud Balance +/- 3% from trial batch	Flow Cone 0 seconds quiescent time

TRIAL BATCH Section 00555.13	Perform at least 48 hrs before production grouting
MUD BALANCE (API RP 13B-1)	Perform during trial batch and each production batch Production tolerance +/- 3.0% from trial batch
FLOW CONE (ASTM C 939)	Efflux time between 5 and 30 seconds Perform during trial batch and at least once per day during production
FLOW CONE RETEST	Let the mixed grout sit for 30 min. Remix the grout for 30 seconds Retest efflux time, 5 - 30 seconds Perform during trial batch
BLEEDING (ASTM C 940)	Perform the wick induced test, max allowed 0.0 % at 3hrs Perform during trial batch
Compressive Strength (ASTM C 109)	Contractor to supply two sets of 3 grout cubes to the Engineer for informational testing

POST-TENSIONING STRAND INSTALLATION RECORD

PROJECT NAME					CONTRACT NO.
HIGHWAY			SECTION		COUNTY
CONTRACTOR			POST-TENSIONING CONTRACTOR		POST-TENSIONING FOREMAN
STRUCTURE NO.	DATE	PAGE NO.	PROJECT MANAGER	INSPECTOR	CERT NO.

	R	R	Fv	Fv	Fv
Date	Girder No.	Tendon No.	Reel No.	Heat No.	Number of Strands
12/12/2008					

Oregon Department of Transportation

POST-TENSIONING RECORD (TENSIONING FROM ONE END)

PROJECT NAME		CONTRACT NO.
HIGHWAY	SECTION	COUNTY
CONTRACTOR	POST-TENSIONING CONTRACTOR	POST-TENSIONING FOREMAN

STRUCTURE NO.	DATE	PAGE NO.	PROJECT MANAGER	INSPECTOR	CERT NO.

	R	R	R	R	R	R	R	R	R	R	Fm	Fm	PTc	Fc	PTc	Fc	Fm	PTc	Fc	R
											A	B	C	D	E	F	G	H	I	
Date	Gir. No.	Tendon No.	Reel No.	Jack Serial No.	Gauge Serial No.	Jack Location	Req'd Jacking Force Per Tendon (Kips)	Strands per Tendon	Gauge @ 20% Jacking Force (p.s.i.)	Gauge @ Req'd Jacking Force (p.s.i.)	Measured Tail Length @ 20% Gauge (in.)	Measured Tail Length @ 100% Gauge (in.)	Calc. 100% Elong. (in.)	(B - A) = Measured 80% Elong. (in.)	Calc. 80% Elong. (in.)	% Elong. Per Tendon	Seated Tail Length (in.)	Jack Elong (in.)	(B - G - H) = Measured Anchor Set (in.)	Plan Anchor Set (in.)
																		0.25		
																		0.25		
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R: Recorded info. From Plans, Shop Drawings, PT Supplier, Equipment.

PTc: PT Supplier Calculations from Shop Drawings.

Fm: Field Measured Values

Fc: Field Calculations

Note: % Elong. Per Tendon (F) = Column (D) of the tendon divided by column (E) of the tendon x 100

Note: % Elong. Per Tendon shall be between 95% minimum and 105% maximum.
If Measured Anchor Set is > Plan Anchor Set, contact Engineer of Record.

Oregon Department of Transportation

POST-TENSIONING RECORD
(TENSIONING FROM BOTH ENDS)

PROJECT NAME			CONTRACT NO.
HIGHWAY	SECTION		COUNTY
CONTRACTOR	POST-TENSIONING CONTRACTOR		POST-TENSIONING FOREMAN
STRUCTURE NO.	DATE	PAGE NO.	PROJECT MANAGER	INSPECTOR	CERT NO.

	R	R	R	R	R	R	R	R	R	R	Fm	Fm	PTc	Fc	PTc	Fc	Fm	PTc	Fc	R
											A	B	C	D	E	F	G	H	I	
Date	Gir. No.	Tendon No.	Reel No.	Jack Serial No.	Gauge Serial No.	Jack Location	Req'd Jacking Force Per Tendon (Kips)	Strands per Tendon	Gauge @ 20% Jacking Force (p.s.i.)	Gauge @ Req'd Jacking Force (p.s.i.)	Measured Tail Length @ 20% Gauge (in.)	Measured Tail Length @ 100% Gauge (in.)	Calc. 100% Elong. (in.)	(B - A) = Measured 80% Elong. (in.)	Calc. 80% Elong. (in.)	% Elong. Per Tendon	Seated Tail Length (in.)	Jack Elong (in.)	(B - G - H) = Measured Anchor Set (in.)	Plan Anchor Set (in.)
																		0.25		
																		0.25		
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																		0.25		
																		0.25		

R: Recorded info. From Plans, Shop Drawings, PT Supplier, Equipment.
PTc: PT Supplier Calculations from Shop Drawings.
Fm: Field Measured Values
Fc: Field Calculations

Note: % Elong. Per Tendon (F) = The sum of columns (D) for both ends of the tendon divided by the sum of columns (E) for both ends of the tendon x 100

Note: % Elong. Per Tendon shall be between 95% minimum and 105% maximum.
If Measured Anchor Set is > Plan Anchor Set, contact Engineer of Record.

OREGON DEPARTMENT OF TRANSPORTATION

DECK PLACEMENT CONFERENCE OUTLINE

00540.02(a)(b)

PROJECT NAME		CONTRACT NO.
HIGHWAY	COUNTY	DATE
CONTRACTOR	PROJECT MANAGER	

1. **Estimated Date**	**Estimated quantity/day**

2. **Mix Design Approved** List Types of admixtures to be used	**Mix Design No.**

3. **Deck Finishing Machine**
A. Type 00540.24 _____
B. Brand Name _____
C. Approved working drawings showing location of deck machine rails 00540.24(a) _____
D. Deck machine to set up and run over full length of area of placement 00540.48(g).
E. Experience operator _____ with good knowledge of machine operation.
F. Changes in crown or super? _____
How will changes be handled?

G. Method of checking rebar clearance:
_____
H. C, D, F, and G to be completed prior to placement.

4. **Contractor Quality Control**
A. CCT name and certification # _____
B. QCT name and certification # _____
C. Individual authorized for acceptance and rejection of materials. _____

5. **Supplier notified well in advance. Supplier's name:** _____
A. Supplier aware of specification on truck mixer equipment. §00540.21(b).
B. Communication between batch plant and project. How? Who? _____
C. Continuous delivery assured for cubic yards needed per hour, at what intervals? _____
D. Supplier has sufficient material on hand for quantity required.
E. Assure concrete mix temperature range.

6. **Forms**
A. Cleanliness of bottom and rebar -- How? _____ When? _____
B. Edge of forms set to line and grade -- How? _____ When? _____
C. Supports for outside edge?

7. **Temperature**
A. Air temperature per specifications 00540.49 and surface evaporation chart figure 00540-1.
B. Mix temperature at 50°F min and 80°F max, except when air temperature is below 40°F then min concrete temperature is not less than 60°F.

Construction Forms Website: http://www.oregon.gov/ODOT/Hwy/Construction/ConstForms1.shtml

8. **Deck Placement**

A. Minimum rate of placement 20 Ft./hr. 00540.48(g) second bullet.

B. Calculated Yd³ to be placed. _____

C. Method of Placement _____ Back-up Method _____

D. Slump Range _____ W/C _____ Air Content _____

F. Vibrators 00540.48(c)

Experienced vibrator person? _____

Size of vibrators to be used? _____ Meet requirements of 00540.23? _____

Number of vibrators to be used? _____ (2 minimum)

Discuss methods of consolidation. §00540.48(c).

Power source:

Generators _____

Direct power _____

Backup _____ Type: _____

F. Placement direction 00540.48(g)

G. 00540.54 -- A 12-Ft. straightedge is required for final acceptance of bridge deck surface.

Straightedge on jobsite prior to start of pour? _____

9. **Environmental**

A. Where will concrete trucks clean out? _____ Containment? _____

B. Where will deck machine clean out? _____ Containment? _____

C. Steps to assure containment of in forms? _____

10. **Curing concrete 00540.51(b)**

A. Provide wind breaks, for spray or other approved methods to prevent premature drying during placement operations.

B. Presoaked wet burlap or dry non-woven polypropene fabric with 4-Mil polyethylene film. Color as weather dictates.

C. Additional soaking to keep the deck moist at all times during the cure period.

D. Water availability during and after placement.

Where: _____

How: _____

If above information not available, who will advise PM prior to start of placement? _____

During non-working days, who will be available to add water for cure?

Name _____ Phone # _____

Other types of curing prior approved (Contract Change Order)

11. **General information: Check special provisions for additional information.**

A. Some admixtures may change the handling time for final placement.

B. Wind velocity effect on deck cure. Maximum in specifications.

C. Cold or hot weather concreting discussed. 00540.49

D. Monitor falsework, tattletales installed (when needed).

E. Review for sign supports, conduit, electrical pole bolts, etc., are in place.

F. Cold weather curing when necessary.

G. All forming and bulkhead in place prior to start of placement.

Attendees:

Name	Representing

Construction Forms Website: http://www.oregon.gov/ODOT/Hwy/Construction/ConstForms1.shtml