

FOSDICK & HILMER, INC.**CONSULTING ENGINEERS**

309 VINE STREET, SUITE 50
CINCINNATI, OHIO 45202
(513) 241-5640

TO: Doyon Utilities

ATTN: Wily Splain (wsplain@doyonutilities.com)

DATE 08.20.10
CLIENT Doyon Utilities
PROJECT Util Extension to Aircraft Parts Storage
FTW336A
PROJECT # DOY01.233700

WE ARE SENDING VIA:

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<input type="checkbox"/> UPS - GROUND	<input type="checkbox"/> DRAWINGS	<input type="checkbox"/> AS REQUESTED
<input type="checkbox"/> HAND DELIVERED	<input type="checkbox"/> PRINTED MATERIAL	<input type="checkbox"/> FOR YOUR REVIEW
<input type="checkbox"/> COURIER	<input type="checkbox"/> SPECIFICATIONS	
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COPIES	SPEC/DWG NO.	DATE/REV.	DESCRIPTION
1	02200-1.3B1a		Structural Fill

REMARKS:

FINAL APPROVAL AUTHORITY SHALL BE BY DOYON UTILITIES.

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FOSDICK & HILMER, INC.

BY Eric Erpenbeck

Doyon 233700

FILE COPY 5001

FOR REFERENCE ONLY

Doyon Utilities J101395, J101396, J101397
Utility Service Extension to Aircraft Parts Storage-FTW336A
Fort Wainwright, Alaska

SUBMITTAL CERTIFICATION FORM			
CONTRACTOR'S NAME:	TAR/TBI Construction LLC		
PROJECT NAME:	Utility Service Ext APS 336A		
DU JOB NO:	J101395, J101396, and J101397		
As Prime Contractor, we checked this submittal and we certify it is correct, complete, and in compliance with Contract Drawings and Specifications. All affected Contractors and suppliers are aware of, and will integrate this submittal into their own work.			
SUBMITTAL NUMBER	4	DATE RECEIVED	8-8-10
REVISION NUMBER		DATE RECEIVED	
SPECIFICATION SECTION NUMBER /PARAGRAPH NUMBER	02200 1.3 B 1a		
DRAWING NUMBER			
SUBCONTRACTOR'S NAME	HC Construction		
SUPPLIER'S NAME			
MANUFACTURER'S NAME			
NOTE: DEVIATIONS FROM CONTRACT DOCUMENTS ARE PROPOSED AS FOLLOWS (Indicate "NONE" if there are no deviations)			
None			
CERTIFIED BY	Kris Manke		

RECEIVED AUG 15 2010

☐ NO EXCEPTIONS NOTED☐ EXCEPTIONS NOTED

REVISE AND SUBMIT FILE COPY

☐ RETURN FOR CORRECTION

REVISE AND RESUBMIT

BY EAE DATE 8/20/10
 REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM
 RESPONSIBILITY FOR ERRORS OR DEVIATIONS FROM
 CONTRACT REQUIREMENTS

FOSDICK & HILMER, INC.

309 VINE STREET, SUITE 50

CINCINNATI, OHIO 45202

Fosdick & Hilmer, Inc.

April 2010

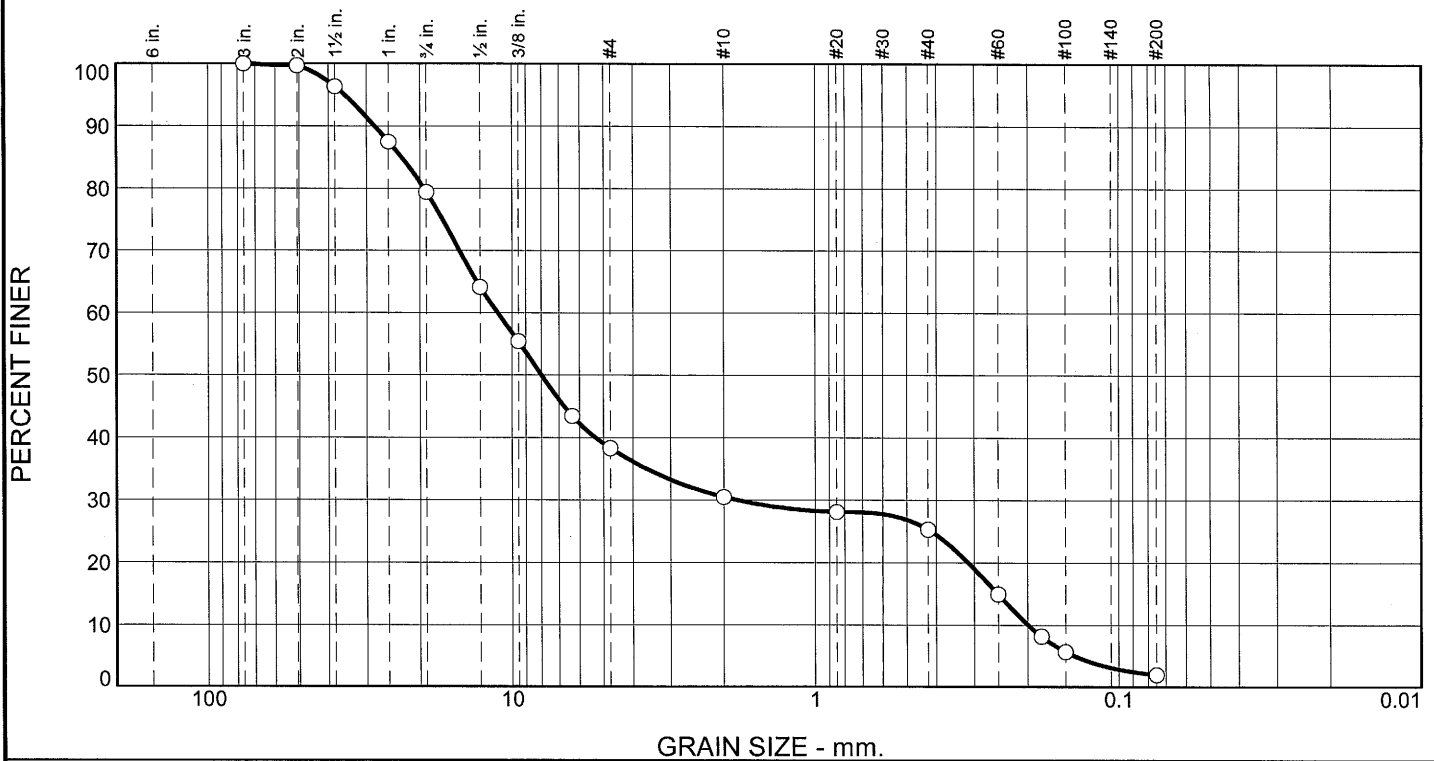
Final approval authority
 shall be by Doyon Utilities.
 E

for review only.

SUBMITTAL REQUIREMENTS

01330 - 6

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0	21	41	7	6	23	2

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100		
2	100		
1.5	96		
1	87		
3/4	79		
1/2	64		
3/8	55		
1/4	43		
#4	38		
#10	31		
#20	28		
#40	25		
#60	15		
#80	8		
#100	6		
#200	2.0		

* (no specification provided)

Material Description

Pit Run

Atterberg Limits (ASTM D 4318)

PL=

LL=

PI=

Classification

USCS (D 2487)= GW

AASHTO (M 145)=

Coefficients

D₉₀= 28.1689

D₈₅= 23.0351

D₆₀= 11.1387

D₅₀= 8.0001

D₃₀= 1.8046

D₁₅= 0.2506

D₁₀= 0.1992

C_u= 55.93

C_c= 1.47

Remarks

Max Dry Density = 143.4 pcf @ 6.3% moisture

Date Received: 6/5/10

Date Tested: 6/7/10

Tested By: CM

Checked By: SM

Title: Engineer

Source of Sample: Dennis Rd Pit
Sample Number: 10-585

Depth: Stockpile

Date Sampled: 6/5/10

Mappa TestLab

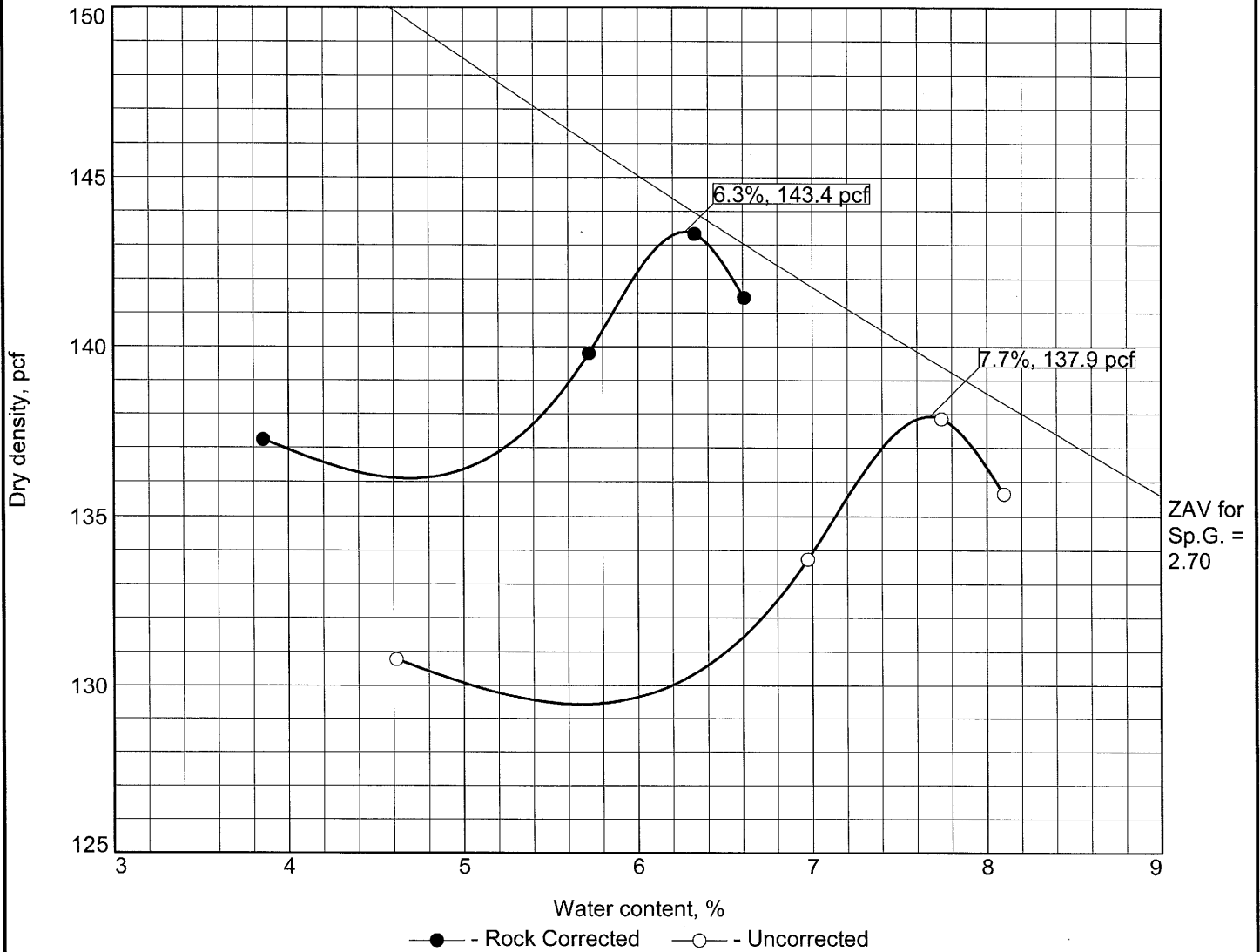
North Pole, Alaska

Client: HC Contractors
Project: 2010 QC Testing

Project No: 2010-032

Figure

COMPACTION TEST REPORT For Curve No. 10-585



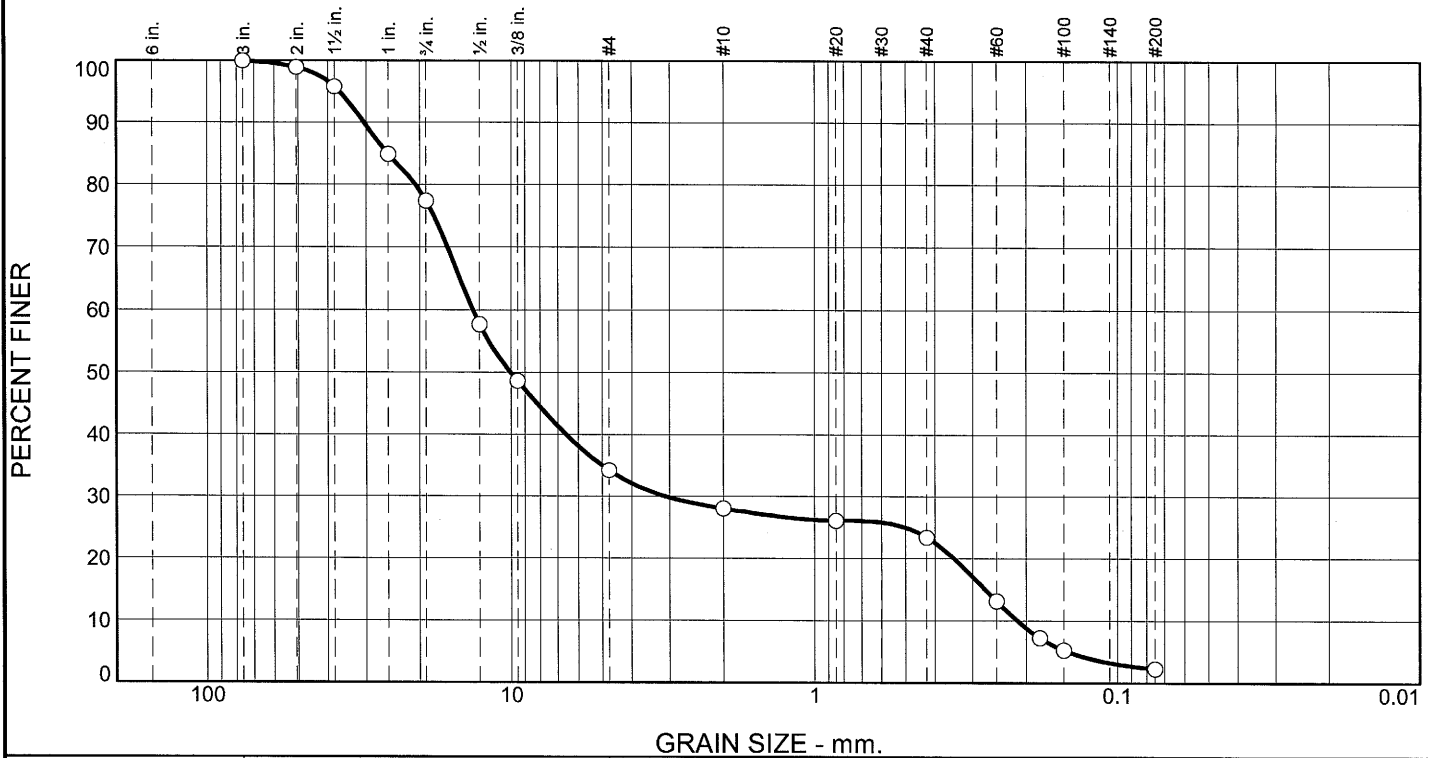
Test specification: ASTM D 1557-09 Method C Modified
 ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
Stockpile	GW		4.6	2.7			21	2.0

ROCK CORRECTED TEST RESULTS		UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 143.4 pcf		137.9 pcf	Pit Run
Optimum moisture = 6.3 %		7.7 %	
Project No. 2010-032 Client: HC Contractors Project: 2010 QC Testing Date: 6/6/10 Sample Source: Dennis Rd Pit Depth: Stockpile Sample No.: 10-585 Mappa TestLab North Pole, Alaska			Remarks: Specific Gravity Assumed Figure

Tested By: MM Checked By: SM

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines
	Coarse	Fine	Coarse	Medium	Fine	
0	23	43	6	5	21	2

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3	100	100 - 100	
2	99		
1.5	96		
1	85		
3/4	77		
1/2	58		
3/8	49		
#4	34	0 - 60	
#10	28		
#20	26		
#40	23		
#60	13		
#80	7		
#100	5		
#200	2.3	0 - 5	

* COE Structural

Material Description

Classified Fill
Structural Fill

Atterberg Limits (ASTM D 4318)

PL= np

LL= nv

PI=

Classification

USCS (D 2487)= GP

AASHTO (M 145)= A-1-a

Coefficients

D₉₀= 30.5005

D₈₅= 25.5504

D₆₀= 13.3696

D₅₀= 10.0474

D₃₀= 3.1055

D₁₅= 0.2725

D₁₀= 0.2137

C_u= 62.58

C_c= 3.38

Remarks

Max Dry Density = 142.1 pcf @ 6.0% moisture

%passing #200 base on -3/4" = 2.9%

Date Received: 6/24/10

Date Tested: 6/25/10

Tested By: MM

Checked By: SM

Title: Engineer

Source of Sample: HC Contractors Tanana Pit
Sample Number: 10-740

Date Sampled: JT

Mappa TestLab

North Pole, Alaska

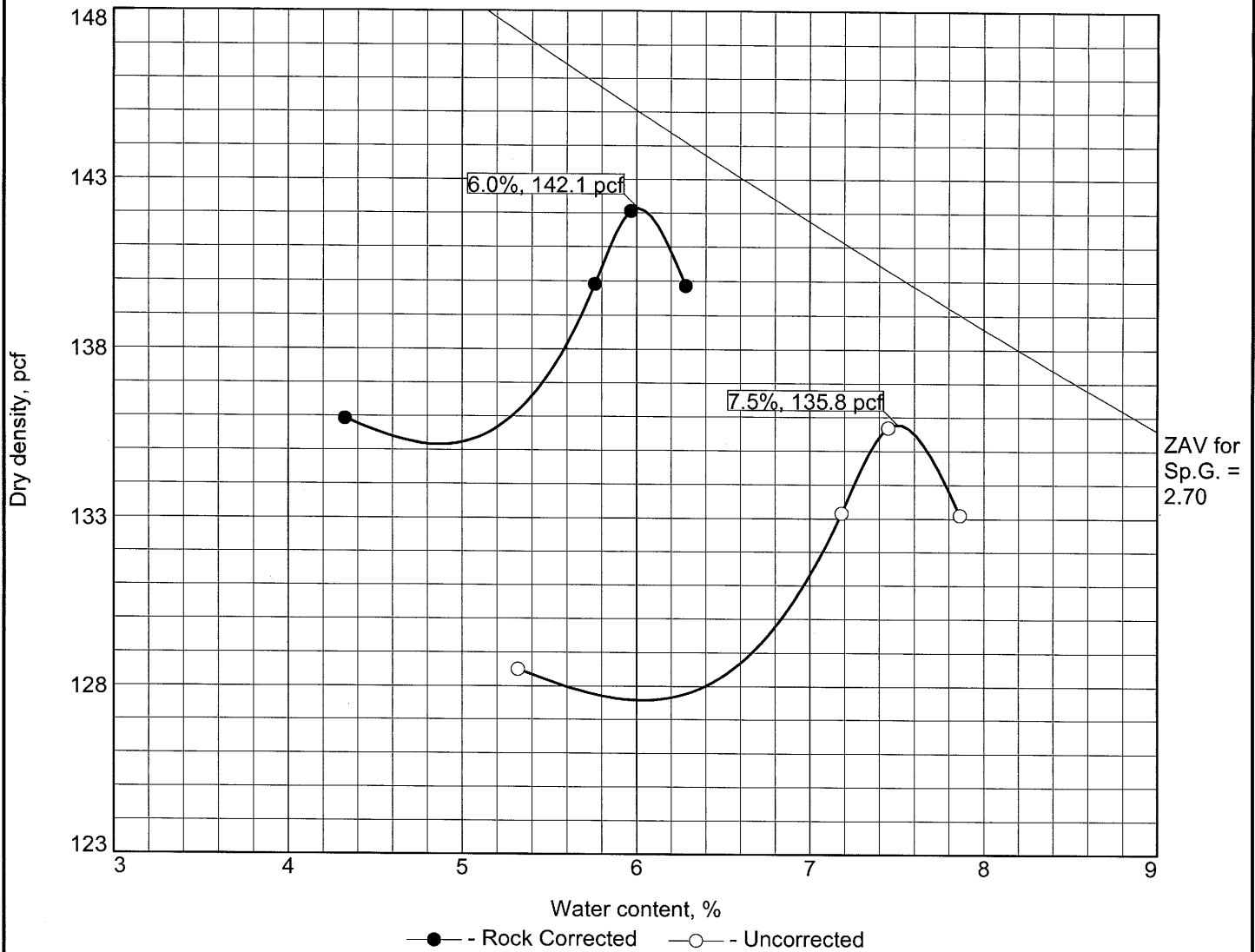
Client: HC Contractors

Project: 2010 QC Testing
FTW336A Aircraft Storage

Project No: 2010-032

Figure

COMPACTION TEST REPORT For Curve No. 10-740



Test specification: ASTM D 1557-09 Method C Modified
ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > 3/4 in.	% < No.200
	USCS	AASHTO						
	GP	A-1-a		2.7	nv		23	2.3

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 142.1 pcf	135.8 pcf	Classified Fill Structural Fill
Optimum moisture = 6.0 %	7.5 %	

Project No. 2010-032 Client: HC Contractors Project: 2010 QC Testing FTW336A Aircraft Storage ○ Sample Source: HC Contractors Tanana Pit Sample No.: 10-740 Date: 6/25/10	Remarks: Specific Gravity Assumed
Mappa TestLab North Pole, Alaska	

Figure

Tested By: LC

Checked By: SM