ADDENDUM #1
LIFT STATION NO. 14 RECONSTRUCTION
CITY OF DULUTH
PROJECT NO. 0858SN
BID NO. 13-0073
FEBRUARY 8, 2013

NOTICE

This Addendum is issued to modify, explain or correct the original drawings, specifications and/or previous addendums and is hereby made a part of the Contract Documents. Please attach this Addendum to the specifications in your possession and note receipt of this Addendum on The Request For Bid. The bid date remains unchanged.

PROJECT SPECIFICATIONS

SPECIAL PROVISIONS

Table of Contents

Delete "SP-4 (1903) Increased or Decreased Quantities" from the Special Provision Table of Contents.

ADD "SP-4 Geotechnical Report" to the Special Provision Table of Contents.

ADD the following Special Provisions:

> **"SP-4.0** The information contained in the geotechnical report is for borings conducted near Sta. 11+00 to Sta. 11+50 as part of the Goodwill Building Addition referenced on the drawings."

ADD the following Attachment to the Contract Documents:

> "Geotechnical Report titled "Geotechnical Investigation And Report, Goodwill Industries – Loading Dock Addition", dated November 30, 2011..

DIVISION 44

REPLACE Section 44 42 56.40, Page3, Part 2.01, Paragraph B with the following paragraph:

B. Submersible pumps shall be manufactured by KSB (represented by Quality Flow Systems, New Prague, MN) Model KRT F 100-185; Flygt (represented by Electric Pump, New Prague, MN) Model DP 3102 MT 3-471, or approved equal. Written requests for approval of alternate pumps including catalog cuts, certified pump curves, and documentation of conformance or deviation from this specification must be received no later than 10 working days prior to the bid opening.

END OF ADDENDUM

November 30, 2011

Project No. 113-81079

Ms. Marge Bray
Goodwill Industries
700 Garfield Avenue
Duluth, MN 55802

RE: GEOTECHNICAL INVESTIGATION AND REPORT
GOODWILL INDUSTRIES- LOADING DOCK ADDITION
DULUTH, MINNESOTA

Dear Ms Bray:

Golder Associates, Inc. (Golder) is pleased to submit this report to provide recommendations for the planned renovations at Goodwill Industries.

1.0 PROJECT INFORMATION

The project consists of improvements to the Goodwill Industries Building on Garfield Avenue in Duluth, Minnesota. Improvements include adding an escalator/elevator and a 12 foot by 24 foot loading dock off the north side of the warehouse. We understand the existing building has frost –depth spread footings, and if soil conditions are similar, KOA would like to design a concrete foundation wall extending from a minimum of frost depth (or matching existing footing depth) to 4 ft above exterior grade. Then a pre-engineered metal building will be placed on top.

2.0 FIELD INVESTIGATION RESULTS

The subsurface exploration consisted of drilling and sampling one borehole within the proposed development is shown in Figure 1. The boring was advanced to a depth of 25 ft below existing grade, and encountered five feet of loose fill overlying the native soil. The fill consists of sand with silt and gravel. The native soil consists of poorly graded sand with gravel, and was loose to seven feet below grade, medium dense to 14 feet below grade, and dense below 14 feet.

The borehole was drilled by EPC Engineering and Testing, under the direction of a Golder Senior Engineering Technician. Samples of the soil were obtained by driving a 2-inch outside diameter (O.D.) split spoon sampler ahead of the 4.25" Hollow-Stem Auger. Split spoon samples were collected at 2-ft intervals to a depth of 15 feet below grade, then sampled at 5-foot intervals to a depth of 25 feet. The sampler was driven using a 140-lb automatic drop hammer free falling 30 inches. The number of blows required to drive the sampler each 6-inch interval of the sampling attempt is recorded on the borehole log. In addition, the total number of blows required to advance the sampler through the 6-in. to 18-in. sampling interval is presented as "N" on the borehole log. The blow counts shown on the borehole log are field values that have not been corrected for overburden, sampler size or other factors.

Following completion of borings, the borehole was backfilled with auger cuttings. The boring log was generated by a Golder Engineer who reviewed the driller's field logs and recovered samples. Soils encountered were visually classified according to the United Soils Classification System (USCS) that is summarized in Figure 2. The borehole log is presented as Figure 3.

Golder Associates Inc.
4438 Haines Road
Duluth, MN 55811 USA
Tel: (218) 724-0088 Fax: (218) 724-0089 www.golder.com

3.0 LABORATORY TEST RESULTS

Laboratory tests were performed by Golder Associates Inc. to measure selected Index properties of the samples. Moisture content tests were conducted on all samples according to procedures described in ASTM D2216. Grain Size Distribution Tests were performed on two samples in accordance with ASTM procedures C136 and C117. The results of the laboratory testing are summarized below and are shown graphically as Figure 4.

TABLE 1
Summary of Laboratory Testing

Boring Number	Sample Depth (below grade)	Moisture Content (%)	Gravel (%)	Sand (%)	Passing #200 Sieve (%)
G11-01	.5' – 1.5'	8.1	-	-	-
G11-01	2.0' – 4.0"	11.9	4.5	90.7	5.8
G11-01	4.0' – 5.0'	14.0	-	-	-
G11-01	5.0' – 6.0'	11.7	-	-	-
G11-01	7.0' – 8.5'	22.6	-	-	-
G11-01	9.5' – 11.0'	22.6	0.0	98.6	1.4
G11-01	12.0' – 13.5'	21.3	-	-	-
G11-01	14.5' – 16.0'	19.1	-	-	-
G11-01	19.5' – 21.0'	27.6	-	-	-
G11-01	24.5' – 26.0'	26.2	-	-	-

4.0 RECOMENDATIONS

We recommend the foundations be provided with a minimum of 72 inches of soil cover for protection from possible frost action. Thus for a one foot thick footing, the bottom of footing would be at seven feet below grade. We understand this is similar or lower than footings for the existing building, so the new addition footings would not transfer additional load on the existing footings.

Foundations constructed on the undisturbed native soils encountered at a depth of seven feet below grade, or on compacted engineered fill placed directly over the dense undisturbed native soils can be designed for an allowable bearing pressure of 3000 psf. If any soft soils exist in the foundation excavation, or if surface disturbance does occur, any soft soils should be removed and replaced with compacted engineered fill Golder estimates that total and differential settlements should be less than 1 inch and ½ inch, respectively.

All fill placed within the building footprint, and for backfill of building foundations should be an engineered fill meeting the following gradation specifications.

Table 2
Recommended Gradation for Engineered Fill

U.S. Standard Sieve Size	Percent Passing
4"	100
2"	80 – 100
#4	60 – 100
#200	0 – 10

Engineered fill within the building footprint should be placed in thin, loose lifts, and compacted to 95% of modified Proctor dry density as determined by ASTM Test Method D1557.

5.0 STANDARD OF CARE

This report was prepared for the exclusive use of KOA and Goodwill Industries for use during design of the planned loading dock addition to Goodwill. We understand that we may be contacted as the design finalizes and the construction process begins so we can verify the proposed construction conforms to our engineering recommendations.

There are possible variations in subsurface conditions between explorations and also with time. Therefore, inspection and testing by a qualified geotechnical engineer should be included during construction to provide corrective recommendations adapted to the conditions revealed during the work.

Unanticipated soil conditions are commonly encountered that cannot fully be determined by a limited number of explorations and inspections. Such unexpected conditions frequently result in additional project costs in order to build the project as designed. Therefore, a contingency for unanticipated conditions should be included in the construction budget and schedule.

Inspection and testing by a qualified structural/geotechnical engineer should be included during construction to provide corrective recommendations adapted to the conditions revealed during the work.

The work program followed the standard of care expected of professionals undertaking similar work in the State of Minnesota under similar conditions. No warranty expressed or implied is made.

6.0 CLOSING

We trust that this report provides you with the information you need to for the design of the planned addition to Goodwill. Please contact Amy Thorson at (218) 724-0088 if you have any questions or if we can assist you further in the design or construction process.

Sincerely,

GOLDER ASSOCIATES INC.

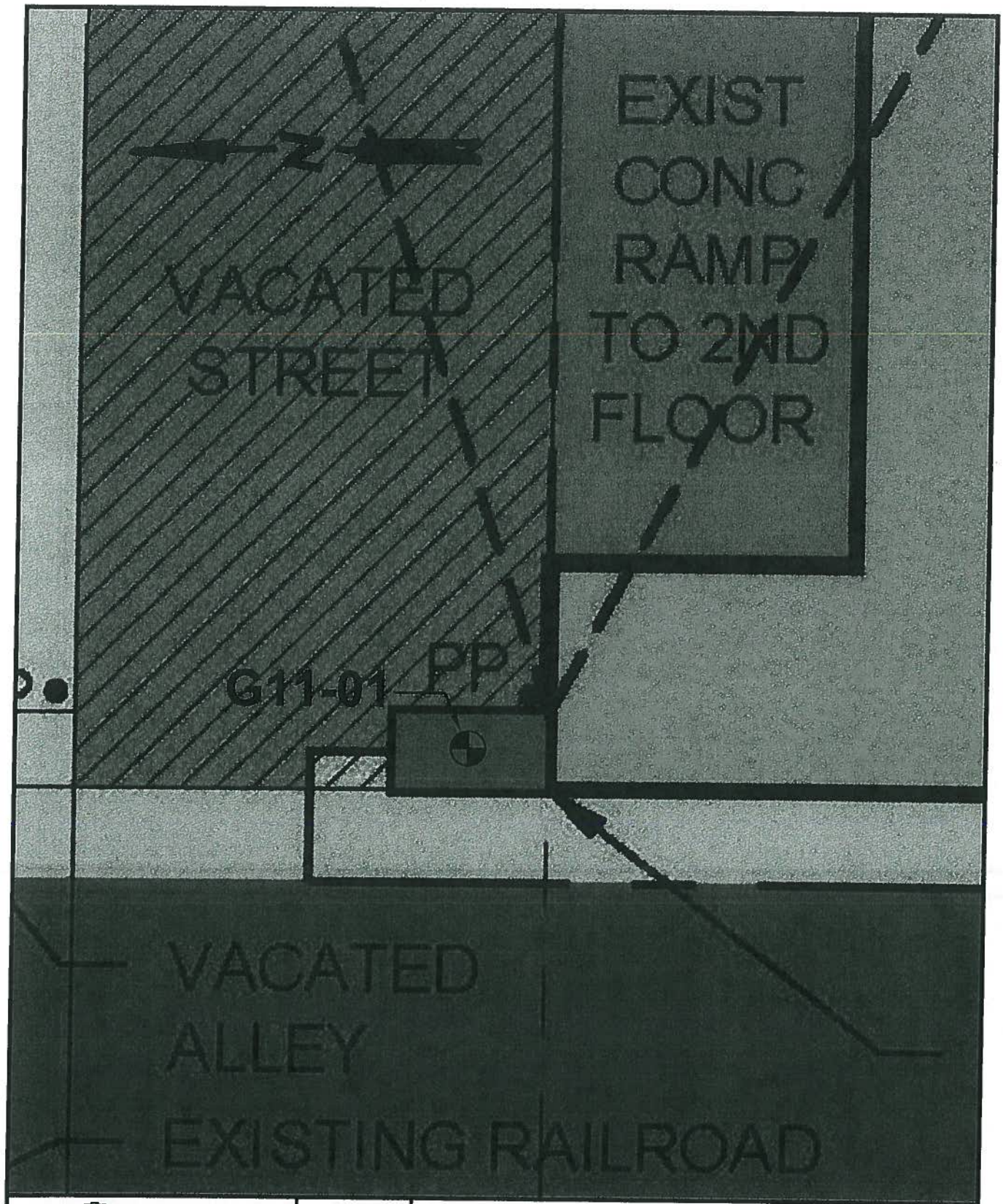
Amy Thorson

Amy C. Thorson, P.E.
Senior Engineer, Manager Duluth Operations
MN License No. 42917

Thomas G. Krzewinski, P.E.
Principal Geotechnical Engineer
MN License No. 18391

Figures:
Figure 1 Site Plan
Figure 2 Soil Classification Index/Legend
Figure 3 Record of Borehole G11-01
Figures 4 Grain Size Distribution

CC: Ms Sara Ojard PE
Krech Ojard & Associates
227 West First Street, Suite 200
Duluth, MN 55802



Golder Associates
Duluth, Minnesota

FILE No.	113-81079_figure1.DWG
PROJECT No.	053-9999x000.0000

SCALE	1"= ~20'
CADD	MTK
DATE	11/14/11
CHECK	ACT
DATE	11/14/11
REV.	0

TITLE

BOREHOLE LOCATION

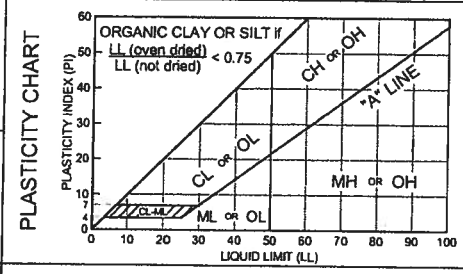
GOODWILL INDUSTRIES LOADING DOCK ADDTION
DULUTH, MINNESOTA

GOODWILL / LOADING DOCK / DULUTH, MN

FIGURE 1

UNIFIED SOIL CLASSIFICATION (ASTM D 2487-00)

MATERIAL TYPES	CRITERIA FOR ASSIGNING SOIL GROUP NAMES AND GROUP SYMBOLS USING LABOARATORY TESTS			GROUP SYMBOL	SOIL GROUP NAMES & LEGEND	
COARSE-GRAINED SOILS >50% RETAINED ON NO. 200 SIEVE	GRAVELS >50% OF COARSE FRACTION RETAINED ON NO 4. SIEVE	CLEAN GRAVELS <5% FINES	$C_U \geq 4$ AND $1 \leq C_C \leq 3$	GW	WELL-GRADED GRAVEL	If soil contains ≥ 15% sand, add "with sand"
			$C_U > 4$ AND/OR $1 > C_C > 3$	GP	POORLY-GRADED GRAVEL	
		GRAVELS WITH FINES >12% FINES	FINES CLASSIFY AS ML OR CL	GM	SILTY GRAVEL	
			FINES CLASSIFY AS CL OR CH	GC	CLAYEY GRAVEL	
	SANDS ≥50% OF COARSE FRACTION PASSES ON NO 4. SIEVE	CLEAN SANDS <5% FINES	$C_U \geq 6$ AND $1 \leq C_C \leq 3$	SW	WELL-GRADED SAND	If soil contains ≥ 15% gravel, add "with gravel"
			$C_U > 6$ AND/OR $1 > C_C > 3$	SP	POORLY-GRADED SAND	
		SANDS AND FINES >12% FINES	FINES CLASSIFY AS ML OR MH	SM	SILTY SAND	
			FINES CLASSIFY AS CL OR CH	SC	CLAYEY SAND	
FINE-GRAINED SOILS >50% PASSES NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT <50	PLASTICITY CHART		CL	LEAN CLAY	If soil contains coarse-grained soil from 15% to 29%, add "with sand" or "with gravel" for whichever type is prominent, or for ≥30%, add "sandy" or "gravelly"
				ML	SILT	
				OL	ORGANIC CLAY OR SILT	
	SILTS AND CLAYS LIQUID LIMIT ≥50			CH	FAT CLAY	
				MH	ELASTIC SILT	
				OH	ORGANIC CLAY OR SILT	
HIGHLY ORGANIC SOILS		PRIMARILY ORGANIC MATTER, DARK IN COLOR, AND ORGANIC ODOR		PT	PEAT	



Gravels or sands with 5% to 12% fines require dual symbols (GW-GM, GW-GC, GP-GM, GP-GC, SW-SM, SW-SC, SP-SM, SP-SC) and add "with clay" or "with silt" to group name. If fines classify as CL-ML for GM or SM, use dual symbol GC-GM or SC-SM.

Optional Abbeviations: Lower case "s" after USCS group symbol denotes either "sandy" or "with sand" and "g" denotes either "gravelly" or "with gravel"

$$C_U = \frac{D_{60}}{D_{10}} \qquad C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

CRITERIA FOR DESCRIBING MOISTURE CONDITION (ASTM D 2488-00)

DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH
MOIST	DAMP BUT NO VISIBLE WATER
WET	VISIBLE FREE WATER, USUALLY SOIL IS BELOW WATER TABLE

COMPONENT DEFINITIONS BY GRADATION

COMPONENT	SIZE RANGE
BOULDERS	ABOVE 12 IN.
COBBLES	3 IN. TO 12 IN.
GRAVEL	3 IN. TO NO. 4 (4.76 mm)
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 (4.76 mm)
SAND	NO. 4 (4.76 mm) TO NO. 200 (0.074 mm)
COARSE SAND	NO. 4 (4.76 mm) TO NO. 10 (2.0 mm)
MEDIUM SAND	NO. 10 (2.0 mm) TO NO. 40 (0.42 mm)
FINE SAND	NO. 40 (0.42 mm) TO NO. 200 (0.074 mm)
SILT AND CLAY	SMALLER THAN NO. 200 (0.074 mm)
SILT	0.074 mm TO 0.005 mm
CLAY	LESS THAN 0.005 mm

DESCRIPTIVE TERMINOLOGY FOR PERCENTAGES (ASTM D 2488-00)

DESCRIPTIVE TERMS	RANGE OF PROPORTION
TRACE	0 - 5%
FEW	5 - 10%
LITTLE	10 - 25%
SOME	30 - 45%
MOSTLY	50 - 100%

RELATIVE DENSITY / CONSISTENCY ESTIMATE USING STANDARD PENETRATION TEST (SPT) VALUES

COHESIONLESS SOILS [a]		COHESIVE SOILS[b]		
RELATIVE DENSITY	N_1 (BLOWS/FOOT)[c]	CONSISTENCY	N_1 (BLOWS/FOOT)[c]	UNCONFINED COMPRESSIVE STRENGTH (TSF)[d]
VERY LOOSE	0 - 4	VERY SOFT	0 - 2	0 - 0.25
LOOSE	4 - 10	SOFT	2 - 4	0.25 - 0.50
COMPACT	10 - 30	FIRM	4 - 8	0.50 - 1.0
DENSE	30 - 50	STIFF	8 - 15	1.0 - 2.0
VERY DENSE	OVER 50	VERY STIFF	15 - 30	2.0 - 4.0
		HARD	OVER 30	OVER 4.0

(a) Soils consisiting of gravel, sand, and silt, either separately or in combination possessing no characteristics of plasticity, and exhibiting drained behavior.

(b) Soils possessing the characteristics of plasticity, and exhibiting undrained behavior.

(c) Refer to ASTM D 1586-99 for a definition of N. Values shown are based on N values corrected for overburden pressure (N_1). N values may be affected by a number of factors including material size, depth, drilling method, and borehole disturbance. N values are only an approximate guide for frozen soil or cohesive soil.

(d) Undrained shear strength, s_u= 1/2 unconfined compression strength, U_c. Note that Torvane measures s_u and Pocket Penetrometer measures U_c

SAMPLER ABBREVIATIONS

SS	SPT Sampler (2 in. OD, 140 lb hammer)	C	Core (Rock)
SSO	Oversize Split Spoon (2.5 in. OD, 140 lb typ.)	TW	Thin Wall (Shelby Tube)
HD	Heavy Duty Split Spoon (3 in. OD, 300/340 lb typ.)	MS	Modified Shelby
BD	Bulk Drive (4 in. OD, 300/340 lb hammer typ.)	GP	Geoprobe
CA	Continous Core (Soil in Hollow-Stem Auger)	RC	Air Rotary Cuttings
GS	Grab Sample from surface / testpit	AG	Auger Cuttings

LABORATORY TEST ABBREVIATIONS

Con	Consolidation	PM	Modified Proctor	TXCD	Consolidated Drained Triaxial
Dd	Dry Density	PP	Pocket Penetrometer	TXCU	Consolidated Undrained Triaxial
MA	Sieve and Hydrometer Analysis	RD	Relative Density	TXUU	Unconsolidated Undrained Triaxial
NP	Non-plastic	SA	Sieve Analysis	W_c	Liquid Limit (LL)
OLI	Organic Loss	SpG	Specific Gravity	W_p	Plastic Limit (PL)
P200	Percent Fines (Silt & Clay)	TS	Thaw Consolidation		
PID	Photoionization Detector	TV	Torvane		

LIBRARY-ANC(8-17-10).GLB [ANC_SOIL_LEGEND] 11/14/11

Golder Associates

SOIL CLASSIFICATION / LEGEND

Figure 2

RECORD OF BOREHOLE G11-01

PROJECT: Goodwill Industries - Loading Dock Addition
PROJECT NUMBER: 113-81079
LOCATION: Loading Dock Addition
CLIENT: Krech Ojard & Goodwill Industires

DRILLING METHOD: Hollow-Stem Auger
DRILLING DATE: 11-2-11
DRILL RIG: 55

DATUM: Ground Surface
AZIMUTH: ---
COORDS: n/a

SHEET 1 of 1
GS ELEVATION: ---
TOC ELEVATION: ---
INCLINATION: -90

DEPTH (ft)	BORING METHOD	SOIL PROFILE: DESCRIPTION	USCS	GRAPHIC LOG	ELEV. / DEPTH (ft)	SAMPLES: NUMBER	TYPE	BLOWS per 6 in (140 lb hammer 30 inch drop)	N	REC / ATT	PENETRATION RESISTANCE BLOWS / ft ■ (20 40 60 80) / WATER CONTENT (PERCENT) W_p W W_l (10 20 30 40)	NOTES WATER LEVELS / GRAPHIC
0		VEGETATION: None										
		0.0 - 0.3 Bituminous Pavement - 4" Thickness										
		0.3 - 5.0 Loose, moist, brown, SAND with silt and gravel. (SP-SM, FILL)	SP-SM		0.3	1	AUGER			20.0		
						2	SS	2-3-2-2	5	14.0 / 24.0		P200 = 5.7%
						3	SS	3-2	2	9.0 / 12.0		
5		5.0 - 7.0 Loose, moist, brown, poorly graded SAND with gravel. (SP)	SP		5.0	4	SS	2-2	2	12.0 / 12.0		
		7.0 - 14.0 Compact, moist, brown, poorly graded SAND with gravel. (SP)	SP		7.0	5	SS	5-7-10	17	14.0 / 18.0		7 ft 11-2-11 WD
10	3.25" HSA					6	SS	12-12-8	20	14.0 / 18.0		P200 = 1.4%
						7	SS	7-13-13	26	14.0 / 18.0		Borehole backfilled with auger cuttings.
		14.0 - 26.0 Dense, moist, brown, poorly graded SAND with Gravel. (SP)	SP		14.0	8	SS	12-18-22	40	14.0 / 18.0		
20						9	SS	10-17-16	33	15.0 / 18.0		
25						10	SS	12-18-17	35	14.0 / 18.0		
30		Boring completed at 26.0 ft.										

NOTES:
1. End of Borehole at 26.0 feet.
2. Groundwater encountered while drilling at 7.0 feet.
3. Borehole backfilled with auger cuttings.

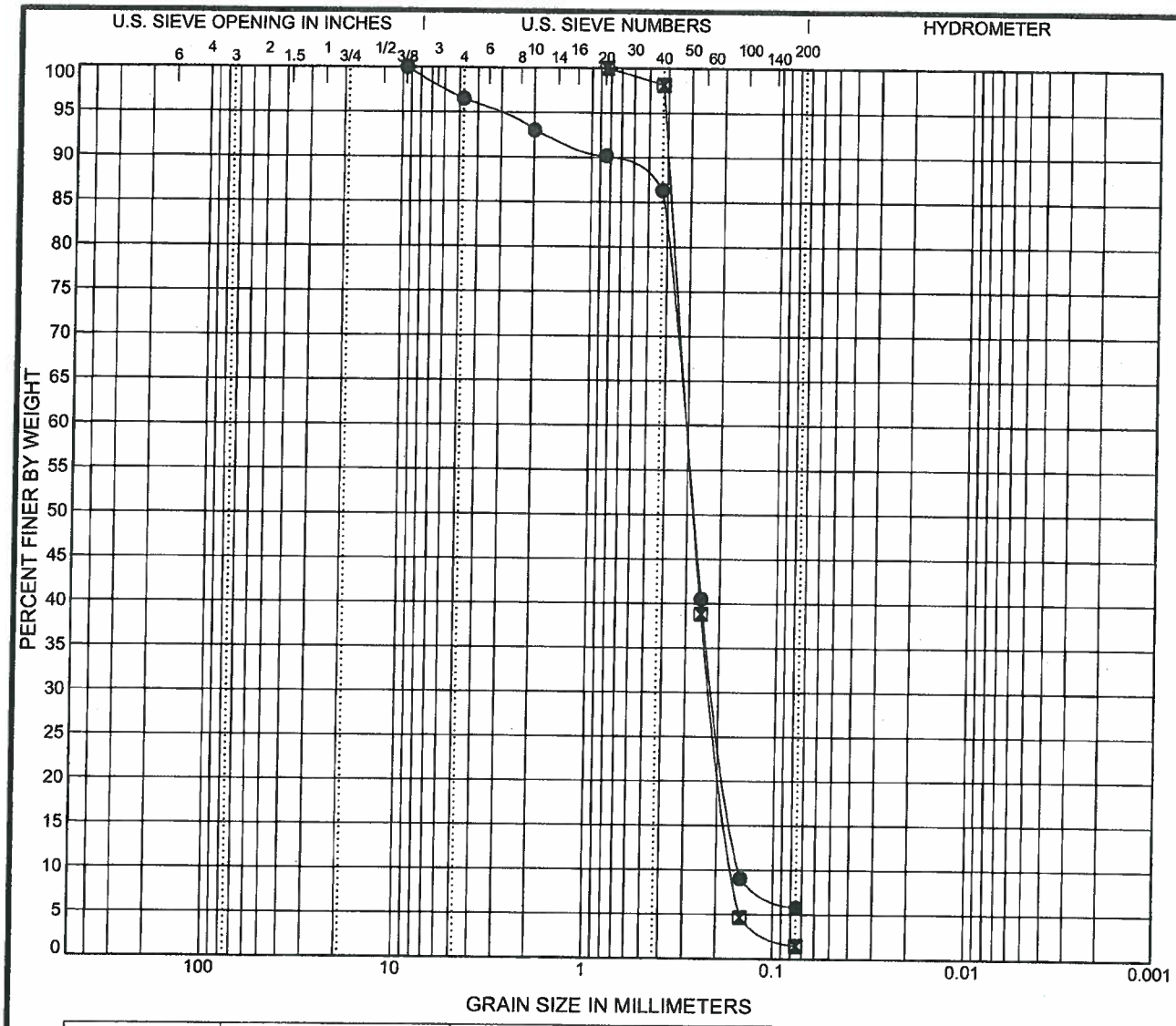
DUL_BOREHOLE 113-81079 GOODWILL GINT.GPJ DUL.GOLDER.GDT 11/14/11

Golder Associates

DEPTH SCALE:1 in to 3.8 ft
DRILLING CONTRACTOR: Engineering Partners Corporation
DRILLER: A. Senarighi

LOGGED: M. Krzewinski
CHECKED: A. Thorson
DATE: 11/11/2011

Figure 3



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Specimen Identification		Depth (ft)	USCS Classification	LL	PL	PI	Cc	Cu
●	G11-01	sample#2	2.0	SAND with silt and gravel (SP-SM)				0.9	2.1
⊠	G11-01	sample#6	9.5	SAND (SP)				1.0	1.9

	Specimen Identification		Depth (ft)	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	G11-01	sample#2	2.0	9.5	0.31	0.21	0.15	3.5	90.7	5.7	
⊠	G11-01	sample#6	9.5	0.8	0.3	0.22	0.16	0.0	98.6	1.4	

Golder Associates
4438 Haines Road
Duluth, MN 55811
Telephone: (218) 724-0088
Fax: (218) 724-0089

Figure 4
GRAIN SIZE DISTRIBUTION

Project: Goodwill Industries - Loading Dock Addition

Number: 113-81079

Tested By: J. Berger Reviewed By: A. Thorson Reviewed Date: 11/11/11

US GRAIN SIZE 113-81079 GOODWILL GINT.GPJ DUL.GOLDER1-31-08.GDT 11/14/11