DATE 05/24/2007

Columbia County Building Permit

This Permit Expires One Year From the Date of Issue

PERMIT 000025842

APPLICANT WILLICE LITTLEFIELD PHONE 904 626-5896

ADDRESS 2900 HARTLEY RD JACKSONVILLE FL 32257

OWNER UNITED STATES COLD STORAGE PHONE 856 354-9989

ADDRESS 211 NE MCCLOSKEY AVE LAKE CITY FL 32055

CONTRACTOR THE STELLAR GROUP PHONE 904 260-2900

LOCATION OF PROPERTY 90E, TL ON MCCLOUSKY, ON RIGHT SIDE

TYPE DEVELOPMENT FOUNDATION ONLY ESTIMATED COST OF CONSTRUCTION 458000.00

HEATED FLOOR AREA _____ TOTAL AREA _____ HEIGHT ____ STORIES 1

FOUNDATION CONC WALLS FRAMED ROOF PITCH _____ FLOOR SLAB

LAND USE & ZONING INDUSTRIAL MAX. HEIGHT _____

Minimum Set Back Requirments: STREET-FRONT 20.00 REAR 15.00 SIDE 15.00

NO. EX.D.U. 0 FLOOD ZONE X DEVELOPMENT PERMIT NO. _____

PARCEL ID 02-4S-17-07483-004 SUBDIVISION _____

LOT ____ BLOCK ____ PHASE ____ UNIT ____ TOTAL ACRES _____

Culvert Permit No.	Culvert Waiver	CGC052029 Contractor's License Number	Applicant/Owner/Contractor	
Driveway Connection	X07-182 Septic Tank Number	BK LU & Zoning checked by	JH Approved for Issuance	New Resident

COMMENTS: FINISH FLOOR TO BE 204.33 ELEVALTION LETTER REQUIRED BEFORE SLAB IS POURED

Check # or Cash 444605

FOR BUILDING & ZONING DEPARTMENT ONLY

(footer/Slab)

Temporary Power _____ date/app. by

Foundation _____ date/app. by

Monolithic _____ date/app. by

Under slab rough-in plumbing _____ date/app. by

Slab _____ date/app. by

Sheathing/Nailing _____ date/app. by

Framing _____ date/app. by

Rough-in plumbing above slab and below wood floor _____ date/app. by

Electrical rough-in _____ date/app. by

Heat & Air Duct _____ date/app. by

Peri. beam (Lintel) _____ date/app. by

Permanent power _____ date/app. by

C.O. Final _____ date/app. by

Culvert _____ date/app. by

M/H tie downs, blocking, electricity and plumbing _____ date/app. by

Pool _____ date/app. by

Reconnection _____ date/app. by

Pump pole _____ date/app. by

Utility Pole _____ date/app. by

M/H Pole _____ date/app. by

Travel Trailer _____ date/app. by

Re-roof _____ date/app. by

BUILDING PERMIT FEE $ 2290.00 CERTIFICATION FEE $ 0.00 SURCHARGE FEE $ 0.00

MISC. FEES $ 0.00 ZONING CERT. FEE $ 50.00 FIRE FEE $ 0.00 WASTE FEE $ _____

FLOOD DEVELOPMENT FEE $ _____ FLOOD ZONE FEE $ 25.00 CULVERT FEE $ _____ **TOTAL FEE** $2,365.00

INSPECTORS OFFICE _____ CLERKS OFFICE _____

NOTICE: IN ADDITION TO THE REQUIREMENTS OF THIS PERMIT, THERE MAY BE ADDITIONAL RESTRICTIONS APPLICABLE TO THIS PROPERTY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY. AND THERE MAY BE ADDITIONAL PERMITS REQUIRED FROM OTHER GOVERNMENTAL ENTITIES SUCH AS WATER MANAGEMENT DISTRICTS, STATE AGENCIES, OR FEDERAL AGENCIES.

"WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCEMENT MAY RESULT IN YOUR PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR AN ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT."

This Permit Must Be Prominently Posted on Premises During Construction

PLEASE NOTIFY THE COLUMBIA COUNTY BUILDING DEPARTMENT AT LEAST 24 HOURS IN ADVANCE OF EACH INSPECTION, IN ORDER THAT IT MAY BE MADE WITHOUT DELAY OR INCONVIENCE, PHONE 758-1008. THIS PERMIT IS NOT VALID UNLESS THE WORK AUTHORIZED BY IT IS COMMENCED WITHIN 6 MONTHS AFTER ISSUANCE.

The Issuance of this Permit Does Not Waive Compliance by Permittee with Deed Restrictions.

Columbia County Building Permit Application

Revised 9-23-04

For Office Use Only Application # 0705-06 Date Received 5/8/07 By GT Permit # 25842

Application Approved by - Zoning Official BLK Date 6.05.07 Plans Examiner OKJTH Date 5-24-07

Flood Zone X Development Permit N/A Zoning I Land Use Plan Map Category I

Comments Finish Floor Below 204.33 Elevation Letter Required SDP 07-1

FAX 904 899-9498

Applicants Name Jason Wright Phone 904-613-9817 CELL

Address 2900 Hartley Road Jacksonville, Florida 32257

Owners Name United States Cold Storage Phone 856-354-4699

911 Address 211 NE McCloskey Ave

Contractors Name The Stellar Group Phone 904-269-2900

Address 2900 Hartley Road Jacksonville, Florida 32257

Fee Simple Owner Name & Address United States Cold Storage 100 Dobbs Lane Cherry Hill, NJ 08034

Bonding Co. Name & Address N/A

Architect/Engineer Name & Address The Stellar Group 2900 Hartley Road Jacksonville Florida 32257

Mortgage Lenders Name & Address N/A

Circle the correct power company - FL Power & Light - Clay Elec. - Suwannee Valley Elec. - Progressive Energy

Property ID Number 38-3S-17-07483-004 Estimated Cost of Construction $458,345.00 Foundation Only

Subdivision Name _____ Lot ____ Block ____ Unit ____ Phase ____

Driving Directions US 90 East to McCloskey.

Type of Construction Industrial - Foundation Only Number of Existing Dwellings on Property 1

Total Acreage 29.21 Lot Size _____ Do you need a - Culvert Permit or Culvert Waiver or Have an Existing Drive

Actual Distance of Structure from Property Lines - Front 180' Side 590' Side 44' Rear 150'

Total Building Height 46'-0" Number of Stories 1 Heated Floor Area 18,300 SF Roof Pitch 1/8" Warehouse 1/4" Building

Application is hereby made to obtain a permit to do work and installations as indicated. I certify that no work or installation has commenced prior to the issuance of a permit and that all work be performed to meet the standards of all laws regulating construction in this jurisdiction.

OWNERS AFFIDAVIT: I hereby certify that all the foregoing information is accurate and all work will be done in compliance with all applicable laws and regulating construction and zoning.

WARNING TO OWNER: YOUR FAILURE TO RECORD A NOTICE OF COMMENCMENT MAY RESULT IN YOU PAYING TWICE FOR IMPROVEMENTS TO YOUR PROPERTY. IF YOU INTEND TO OBTAIN FINANCING, CONSULT WITH YOUR LENDER OR ATTORNEY BEFORE RECORDING YOUR NOTICE OF COMMENCEMENT.

Owner Builder or Agent (Including Contractor)

Contractor Signature

Contractors License Number CGC052029

Competency Card Number ND 2165909

STATE OF FLORIDA
COUNTY OF COLUMBIA

NOTARY STAMP/SEAL

RACHELLE R. GLISSON
Notary Public, State of Florida
My comm. expires Nov. 9, 2007
Comm. No. DD 265909

Sworn to (or affirmed) and subscribed before me this 8TH day of MAY 2007.

Personally known X or Produced Identification _____

Notary Signature

NOTICE OF COMMENCEMENT FORM
COLUMBIA COUNTY, FLORIDA

THIS DOCUMENT MUST BE RECORDED AT THE COUNTY CLERKS OFFICE BEFORE YOUR FIRST INSPECTION.

THE UNDERSIGNED hereby gives notice that improvement will be made to certain real property, and in accordance with Chapter 713, Florida Statutes, the following information is provided in this Notice of Commencement.

Tax Parcel ID Number 38-3S-17-07463-004

Inst:2007010974 Date:05/17/2007 Time:10:00
D.C.,P.DeWitt Cason,Columbia County B:1119 P:12

1. Description of property: (legal description of the property an
SEE ATTACHED.

ADDRESS: 211 N.E. McCLOSKEY AVENUE
LAKE CITY, FL 32055

2. General description of improvement: CONSTRUCTION OF 191,125 SQ FT OF REFRIGERATED WAREHOUSE, TWO-STORY OFFICE AND ASSOCIATED CAR AND TRUCK PARKING
3. Owner Name & Address UNITED STATES COLD STORAGE, INC. 100 DOBBS LANE, SUITE 102, CHERRY HILL, NJ 08034 Interest in Property FULL
4. Name & Address of Fee Simple Owner (if other than owner):
5. Contractor Name THE STELLAR GROUP Phone Number (904) 260-2900
   Address 2900 HARTLEY ROAD, JACKSONVILLE, FLORIDA 32257
6. Surety Holders Name Phone Number
   Address
   Amount of Bond
7. Lender Name Phone Number
   Address
8. Persons within the State of Florida designated by the Owner upon whom notices or other documents may be served as provided by section 718.13 (1)(a) 7; Florida Statutes:
   Name JASON WRIGHT, THE STELLAR GROUP Phone Number (904) 899-9498
   Address 2900 HARTLEY ROAD, JACKSONVILLE, FLORIDA 32257
9. In addition to himself/herself the owner designates JASON WRIGHT of THE STELLAR GROUP to receive a copy of the Lienor's Notice as provided in Section 713.13 (1) – (a) 7. Phone Number of the designee (904) 899-9498
10. Expiration date of the Notice of Commencement (the expiration date is 1 (one) year from the date of recording, (Unless a different date is specified)

NOTICE AS PER CHAPTER 713, Florida Statutes:
The owner must sign the notice of commencement and no one else may be permitted to sign in his/her stead.

, CONTROLLER + TREASURER
Signature of Owner

Sworn to (or affirmed) and subscribed before day of MAY 15, 2007

NOTARY STAMP/SEAL Colleen J Ansell
Notary Public, State of New Jersey
My Commission Expires March 8, 2011

Signature of Notary

SURVEY IN
TOWNSHIP 3 SOUTH RANGE 17 EAST

PARCEL "D"

Commence at the Northwest corner, Section 36, Township 3 South, Range 17 East, run S 6 degrees 05' 51" W, along the West boundry of said Section 36, 960.90 feet to the Southerly Right -of- way, of Seaboard Coastline Railroad, thence N 82 degrees 58' 21" E, along said Right-of-way, 1848.89 feet to the Easterly Right-of-way of Forest Service Road #236 and the POINT OF BEGINNING; thence continue N 82 degrees 58' 21" E, still along said Railroad Right-of-way, 1215.79 feet, thence S 1 degrees 56' 33" W, 766.03 feet thence N 88 degrees 37' 49" W, 35.98 feet, thence 3 1 degrees 55' 29" W, 411.30 feet to the North Rightway line of U.S. #90, thence S 89 degrees 47' 21" W. along said Right-of-way, 341.45 feet, S 0 degrees 38' 26" E. still along said Right-of-way, 10.00 feet, thence S 89 degrees 21' 39" W. along said Right-of-way, 600.17 feet, thence N 0 degrees 38' 26" W. still along said Right-of-way. 10.00 feet, thence S 89 degrees 21' 39" W, still along said Right-of-Way, 125.52 feet to the East Right-of-way of Forest Service Road #236, thence N 3 degrees 32' 23" W, along said East Right-of-way, 1041.85 feet to the POINT OF BEGINNING. Containing 29.18 Acres.

Inst:2007010974 Date:05/17/2007 Time:10:00
DC,P.DeWitt Cason,Columbia County B:1119 P:1292

COLUMBIA COUNTY 9-1-1 ADDRESSING

P. O. Box 1787, Lake City, FL 32056-1787
PHONE: (386) 758-1125 * FAX: (386) 758-1365 * Email: ron_croft@columbiacountyfla.com

Addressing Maintenance

To maintain the Countywide Addressing Policy you must make application for a 9-1-1 Address at the time you apply for a building permit. The established standards for assigning and posting numbers to all principal buildings, dwellings, businesses and industries are contained in Columbia County Ordinance 2001-9. The addressing system is to enable Emergency Service Agencies to locate you in an emergency, and to assist the United States Postal Service and the public in the timely and efficient provision of services to residents and businesses of Columbia County.

DATE REQUESTED: 4/30/2007 **DATE ISSUED:** 5/8/2007

ENHANCED 9-1-1 ADDRESS:

211 NE MCCLOSKEY AVE
LAKE CITY FL 32055

PROPERTY APPRAISER PARCEL NUMBER:

36-3S-17-07463-004

Remarks:

Address Issued By: _____
Columbia County 9-1-1 Addressing / GIS Department

NOTICE: THIS ADDRESS WAS ISSUED BASED ON LOCATION INFORMATION RECEIVED FROM THE REQUESTER. SHOULD, AT A LATER DATE, THE LOCATION INFORMATION BE FOUND TO BE IN ERROR, THIS ADDRESS IS SUBJECT TO CHANGE.

746

Approved Address

MAY 08 2007

911Addressing/GIS Dept

STATE OF FLORIDA :
COUNTY OF DUVAL :

The foregoing instrument was acknowledged before me this 19th day of APRIL, 2006 by Herman Morris, President of GHM REAL ESTATE & DEVELOPMENT, INC., a Florida corporation, on behalf of the corporation, he is personally known to me or he has produced N/A as identification and he did (did not) take an oath.

Janice L Hill
Notary Public

(Notarial Seal)

Janice L. Hill
[Print name]

My Commission Number: DD248537
My Commission Expires: 10/18/07

Janice L. Hill
Commission #DD248537
Expires: Oct 18, 2007
Bonded Thru
Atlantic Bonding Co., Inc.

Inst:2006010236 Date:04/27/2006 Time:14:19
Doc Stamp-Deed : 5112.10
DC,P.DeWitt Cason,Columbia County B:1081 P:2431

restrictions, reservations or easements that do not exist or have expired, terminated or otherwise been released of record.

IN WITNESS WHEREOF, the Grantor has executed this Warranty Deed on the day and year first above written.

Signed, sealed and delivered in the presence of:

GHM REAL ESTATE & DEVELOPMENT, INC., a Florida corporation

By: _____
Herman Morris, President
[Print name/title]

(CORPORATE SEAL)

_____
Witness Signature

Jackie Owens
[Witness print name]

_____
Witness Signature

J. Kenneth Royal
[Witness print name]

Inst:2006010236 Date:04/27/2006 Time:14:19
Doc Stamp-Deed : 5112.10
DC,P.DeWitt Cason,Columbia County B:1081 P:2430

Prepared by David M. Scolnic, Esquire
One Logan Square, 27th Floor
Philadelphia, Pennsylvania 19103

Return to: Sharon Roman
LandAmerica
1700n Market, Suite 2110
Philadelphia, PA 19103

Property Appraiser's Parcel
I.D. Number: R07463-004

Inst:2006010236 Date:04/27/2006 Time:14:19
Doc Stamp-Deed : 5112.10
DC,P.DeWitt Cason,Columbia County B:1081 P:2429

WARRANTY DEED

This Warranty Deed made this 19th day of APRIL, 2006 by and between **GHM REAL ESTATE & DEVELOPMENT, INC., a Florida corporation**, whose mailing address is 1650 CR 210 West, Jacksonville, FL 32259 hereinafter called the Grantor; and **UNITED STATES COLD STORAGE, INC., a New Jersey corporation**, hereinafter called the Grantee, whose mailing address is 100 Dobbs Lane, Suite 102, Cherry Hill, NJ 08034.

WITNESSETH, that the Grantor, for and in consideration of the sum of Seven Hundred Thirty Thousand Two Hundred Fifty Dollars ($730,250.00) and other valuable consideration, the receipt whereof is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys and confirms unto the Grantee all that certain land situate in the County of Columbia, State of Florida, to wit:

ALL THAT CERTAIN property, as more fully described on that certain survey prepared by Bailey Bishop & Lane, Inc. for United States Cold Storage, Inc., certified as of February 22, 2006, as more fully described on Exhibit "A" attached hereto and made a part hereof.

TOGETHER with all of the improvements thereon and tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND the Grantor hereby covenants with said grantee that the Grantor is lawfully seized of said land in fee simple; that the Grantor has good right and lawful authority to sell and convey said land; that the Grantor hereby fully warrants the title to said land and will defend the same against the lawful claims of all persons whomsoever; and that said land is free of all encumbrances, except taxes and assessments accruing subsequent to December 31, 2005, and valid restrictions, reservations and easements of record, if any; provided, however, this reference shall not serve to impose or reinstate any

RETURN TO: 0-050898-L
LandAmerica - Commercial Services
1001 N. Lake Destiny Road Ste 250
Maitland, FL 32751

EXHIBIT "A"

Legal Description

That part of the NW ¼ , and the NW ¼ of NE ¼, and a portion of the W ½ of SW ¼ of NE ¼ of Section 36, Township 3 South, Range 17 East, lying South of the Seaboard Coastline Railroad right-of-way, North of the North right-of-way line of U.S. Highway 90, and East of the East right-of-way line of Forest Service Road #236, more particularly described as follows: COMMENCE at the Northwest corner of said Section 36, and thence run S 6°05'51" W along the West boundary of said Section 36, a distance of 960.90 feet to the Southerly right-of-way of Seaboard Coastline Railroad; thence run N 82°58'21" E along said right-of-way, a distance of 1,843.94 feet to the Easterly right-of-way of Forest Service Road #236 and the POINT OF BEGINNING; thence continue N 82°58'21" E still along said Railroad right-of-way, a distance of 1,220.74 feet to the East line of the W ½ of the NW ¼ of the NE ¼; thence run S 1°56'33" W along the East line of the W ½ of NW ¼ of NE ¼, a distance of 766.03 feet; thence run N 88°37'49" W, a distance of 35.98 feet; thence S 1°55'29" W, a distance of 411.30 feet to the North right-of-way line of U.S. Highway 90; thence run S 89°17'21" W, along said right-of-way, a distance of 341.45 feet; thence run S 0°38'26" E, still along said right-of-way, a distance of 10.00 feet; thence run S 89°21'39" W, still along said right-of-way, a distance of 600.17 feet; thence N 0°38'26" W, still along said right-of-way, a distance of 10.00 feet; thence run S 89°21'39" W, still along said right-of-way, a distance of 125.52 feet to the East right-of-way of Forest Service Road #236; thence run N 3°48'36" W, along said East right-of-way, a distance of 1,041.57 feet to the POINT OF BEGINNING.

Inst:2006010236 Date:04/27/2006 Time:14:19
Doc Stamp-Deed : 5112.10
DC,P.DeWitt Cason,Columbia County B:1081 P:2432

stellar

May 14, 2007

Mr. Joe Haltiwanger
Plans Examiner
Building & Zoning Department
135 NE Hernando Ave.
Lake City, FL 32055
Ph. 386-758-1008

RE: United States Cold Storage – New Facility
Termite Protection Specs

Dear Mr. Haltiwanger:

Attached are construction specs for the above-mentioned project including termite protection.

Please do not hesitate to call if you have further questions or concerns.

Sincerely,

Michael Mendoza
Civil Engineer
Stellar

2900 Hartley Road
Jacksonville, FL 32257
Phone: 904.260.2900
Fax: 904.260.2900
stellar.net

SECTION 02560

TERMITE PROTECTION

PART I - GENERAL

1.01 DESCRIPTION

A. The General Requirements, Section 100, are hereby made a part of this section as if fully repeated herein.

B. Work Included:

1. Chemical treatment of the soil beneath all office slabs on grade for termite protection.

2. Chemical treatment of interior surfaces of office walls in contact with earth.

C. Related Work Specified Elsewhere:

1. Grading: Site Clearing & Grading - 02210

2. Excavation: Excavation & Backfill - 02220

3. Concrete work: Cast-In-Place Concrete - 03300

4. Masonry work: Masonry - 04810

1.02 QUALITY ASSURANCE

A. Perform all work specified herein in accordance with current requirements of governing regulations.

B. Use registered and licensed applicators, where such is required by Federal, State or local authority.

1.03 GUARANTEE

A. Upon completion of the work, guarantee the effectiveness of the treatment against termite infestation for a period of 1 year. If infestation should occur within the guarantee period, re-treat the soil and repair all associated damages. Owner shall have the right to renewal at end of guarantee period.

PART II - PRODUCTS

2.01 MATERIALS

A. Chemicals shall be water-based emulsion soil chemicals only and in working solutions.

B. Only chemicals approved by Local, State, or Federal Regulations shall be used. Subcontractor shall be responsible for verifying that the intended chemical to be used is not prohibited by applicable regulations.

PART III - EXECUTION

3.01 TIME OF APPLICATION

A. Do no soil poisoning work until all subgrade work is complete and ready for concrete placement or other finished work. Do not apply soil poison when surface water is present.

B. If walls are to receive a moisture-proofing coating, apply chemicals only after coatings are thoroughly dried.

3.02 LOCATION

A. Apply soil treatment beneath all slab areas and a minimum of 12" below the floor slab along the interior side of abutting foundation walls. Where the exterior of the wall is abutted by concrete slabs, asphalt paving or other permanent surfacing, treat the exterior side of foundation walls as specified for the interior side of such walls.

3.03 RATE OF APPLICATION

A. Building Areas: One gallon per ten square feet of slab area within the building.

B. Foundation Walls: Treat the voids of the foundation walls with a minimum of one gallon per five lineal feet.

C. Miscellaneous: Apply two gallons per five lineal feet immediately below expansion joints, control joints and all areas where slab will be penetrated by construction features, and where exterior facings or veneers extend below grade level along the exterior side of all foundation walls.

(END OF SECTION 02560)

stellar

2900 Hartley Road
Jacksonville, Florida 32257
Phone / Fax: (904) 899-9498
www.stellar.net

LETTER OF TRANSMITTAL: 00046

Date: May 23, 2007

To: Joe Haltiwanger
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

Project: USCS-New Facility Lake City, FL
Location: Lake City, FL
Project No.: 21003019
Ref: Permitting Documents

Phone:
Fax:

WE ARE SENDING:

☐ Shop Drawings ☐ Plans ☐ Prints ☐ Specifications
☐ Letter ☐ Samples ☐ Change Order ☒ Other: Permitting Documents

SUBMITTED FOR:

☐ Approval ☐ Your Use ☐ As Requested ☐ Review and Comment
☐ Due Date:

SENT VIA: Handy Carry

☐ Attached ☐ Separate Cover Via

COPIES	DATE	DESCRIPTION	PREPARED BY
1	05/14/07	Letter from Michael Mendoza	Stellar
1	05/10/07	Specification 02560 - Termite Protection	Stellar
2	05/15/07	Signed and Sealed -E002 - Electrical Site Plan	Stellar
2	05/15/07	Signed and Sealed -E205 - Electrical Grounding Lighting Protection Plan	Stellar
2	05/16/07	Signed and Sealed -R103A - Refrigeration Underfloor Wraming Layout	Stellar
2	05/22/07	Signed and Sealed -P001 - Schedules, Notes & Specs	Stellar
2	05/22/07	Signed and Sealed -P002- Schedules, Notes & Specs	Stellar
2	05/22/07	Signed and Sealed -P003 - Pipe Scope & Specifications	Stellar
2	05/22/07	Signed and Sealed -P100 - Overall FLoor Plan	Stellar
2	05/22/07	Signed and Sealed -P101 - Enlarged Sanitary & Process Piping Floor Plan	Stellar
2	05/22/07	Signed and Sealed -P102 - Enlarged Sanitary & Process Piping Floor Plan	Stellar
2	05/22/07	Signed and Sealed -P401 - Enlarged Sanitary & Utility Floor Plans	Stellar
2	05/22/07	Signed and Sealed -P402 - Enlarged Sanitary & Utility Floor Plans	Stellar
2	05/22/07	Signed and Sealed -P501 - Detail Sheet	Stellar
1	05/23/07	Check #444605 in the amount of $2,365.00	Stellar

Remarks:

stellar

2900 Hartley Road
Jacksonville, Florida 32257
Phone / Fax: (904) 899-9498
www.stellar.net

LETTER OF TRANSMITTAL: 00046

JSW/lmf

CC:

Signed: _____

Jason S. Wright
Project Manager

stellar

FAX COVER SHEET

To:	Bobby Nevin
Company:	White Cap Construction
Fax:	(386) 758-2160
Date:	8/21/2007

From:	Jason Wright		
Fax:	904/899-9498		
Phone:	904/260-2009	**Ext.:**	3498
# of pages including this page:	6		

Remarks: USCS – Lake City, FL

Bobby,

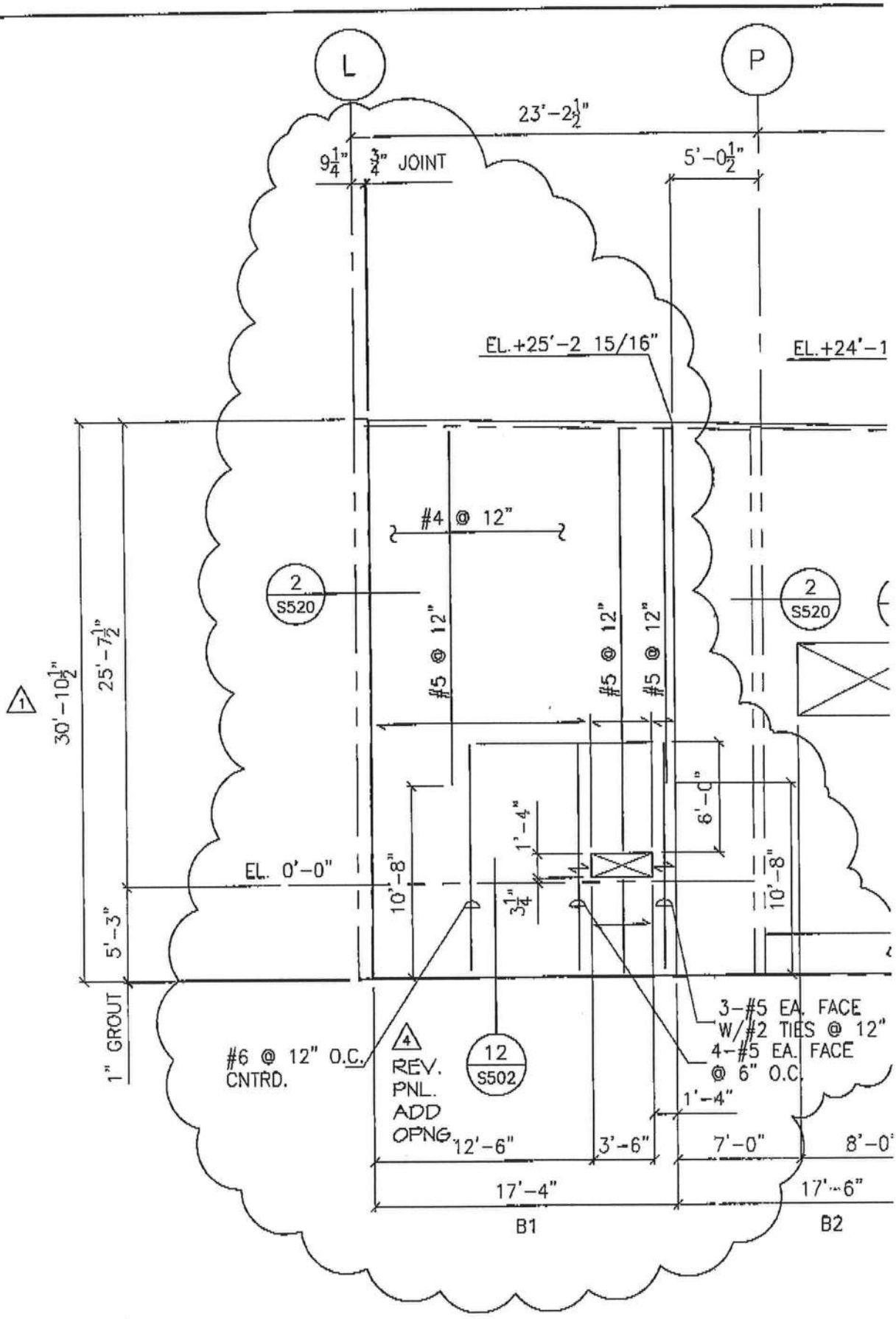
Per our telephone conversation please find the attached tilt panel changes. Call me if you should have any questions or comments.

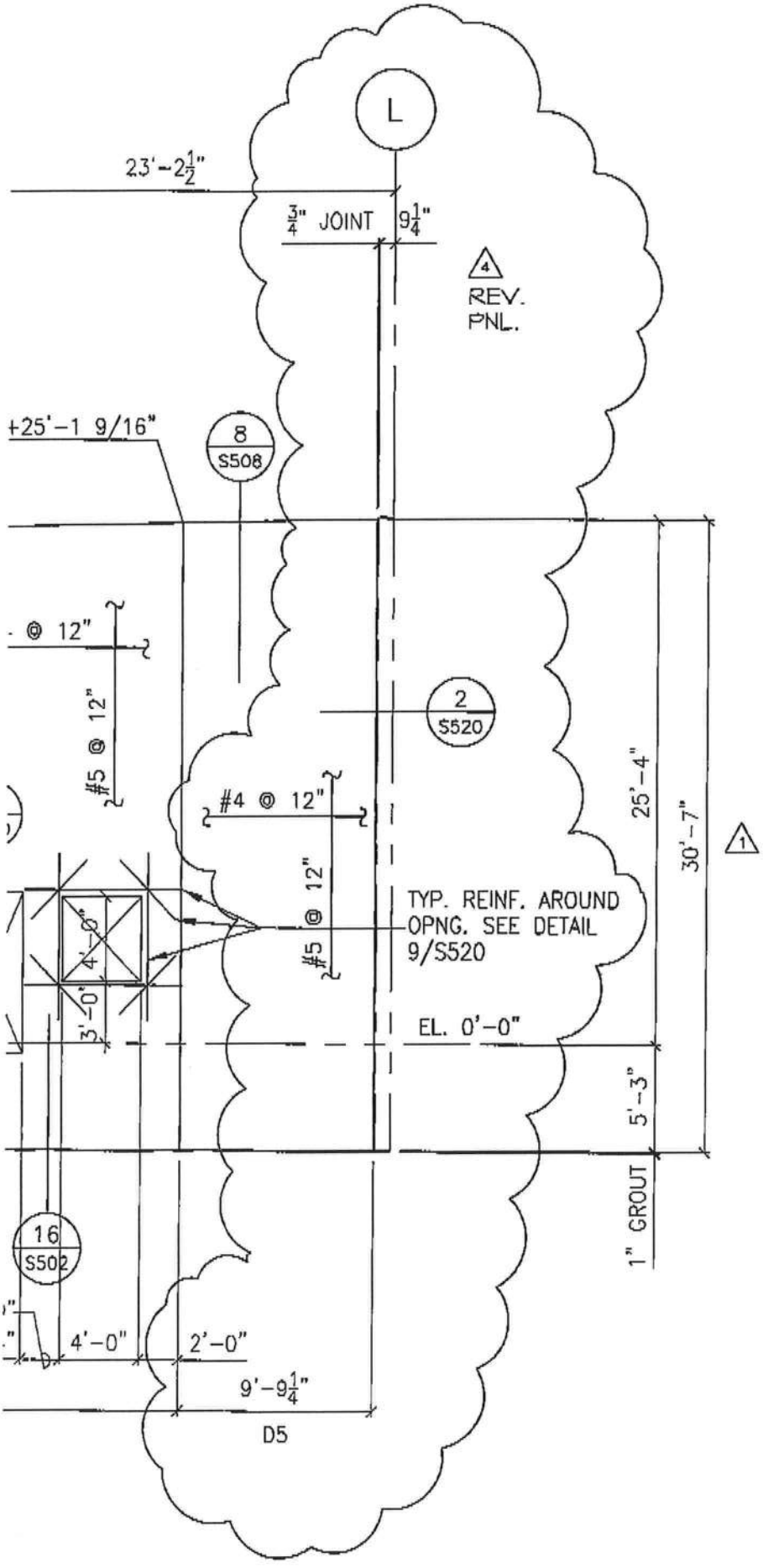
Regards,

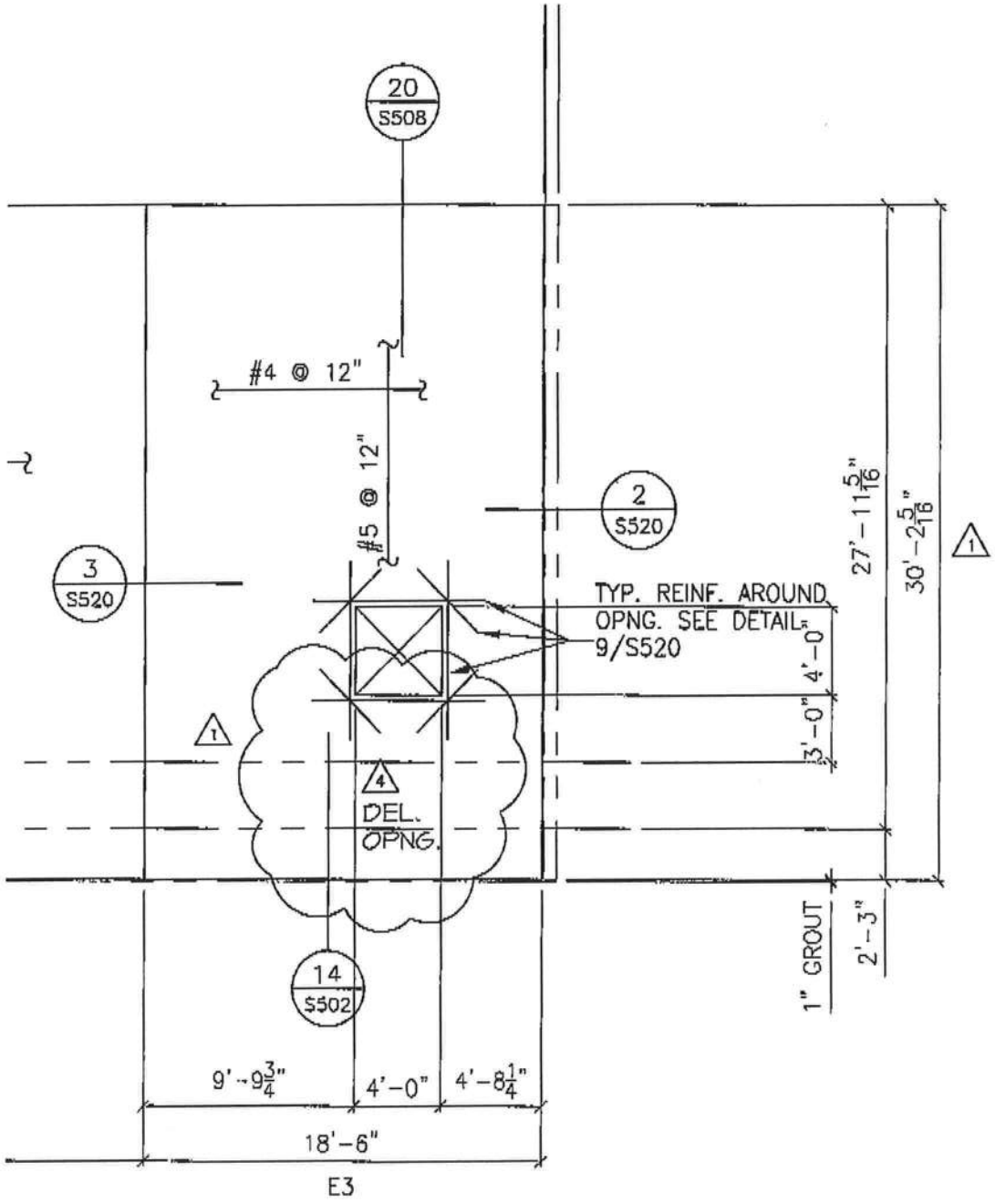
Jason Wright
Project Manager

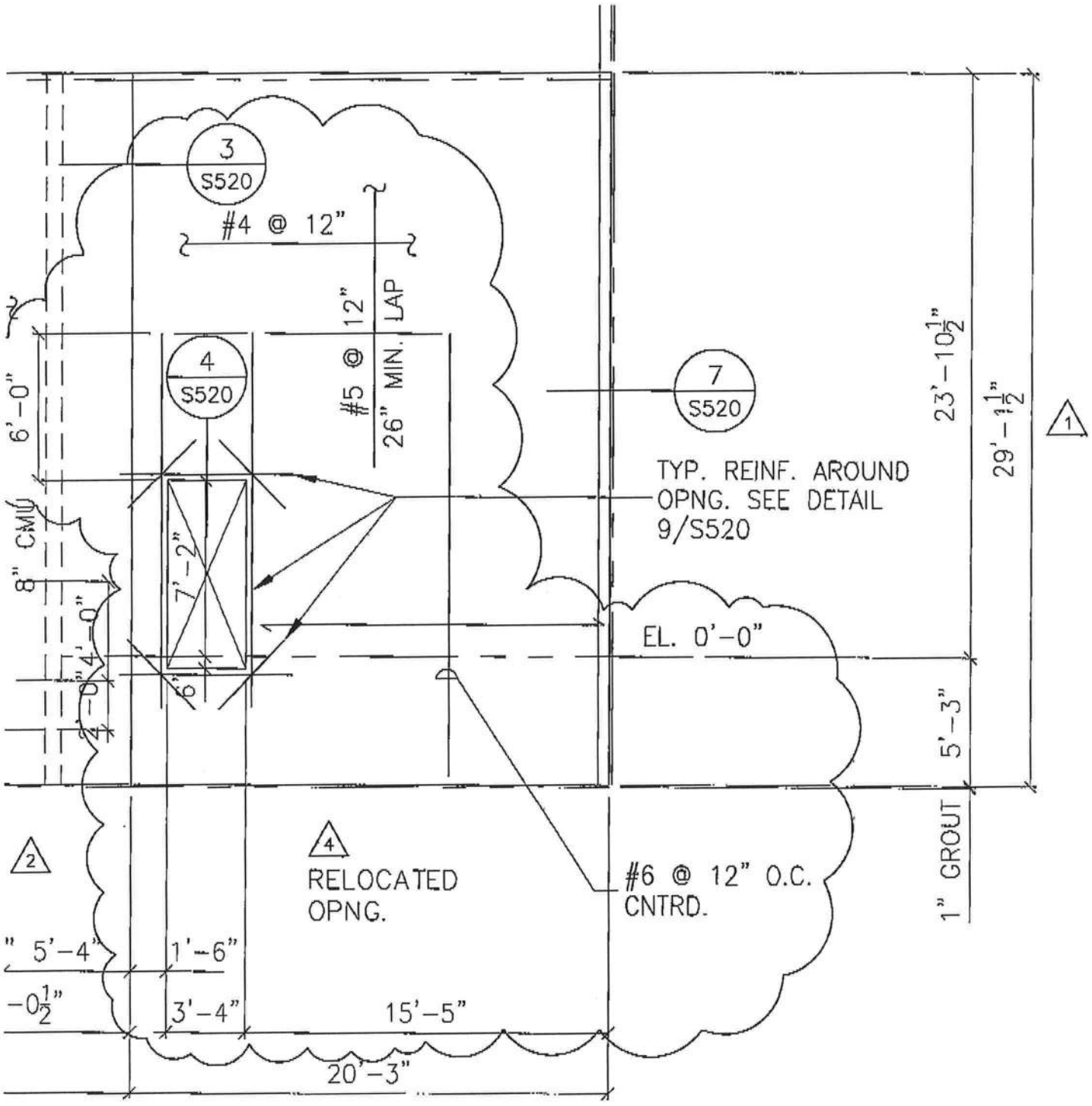
If you do not receive all pages, please call extension above as soon as possible.

2900 Hartley Road, Jacksonville, Florida 32257

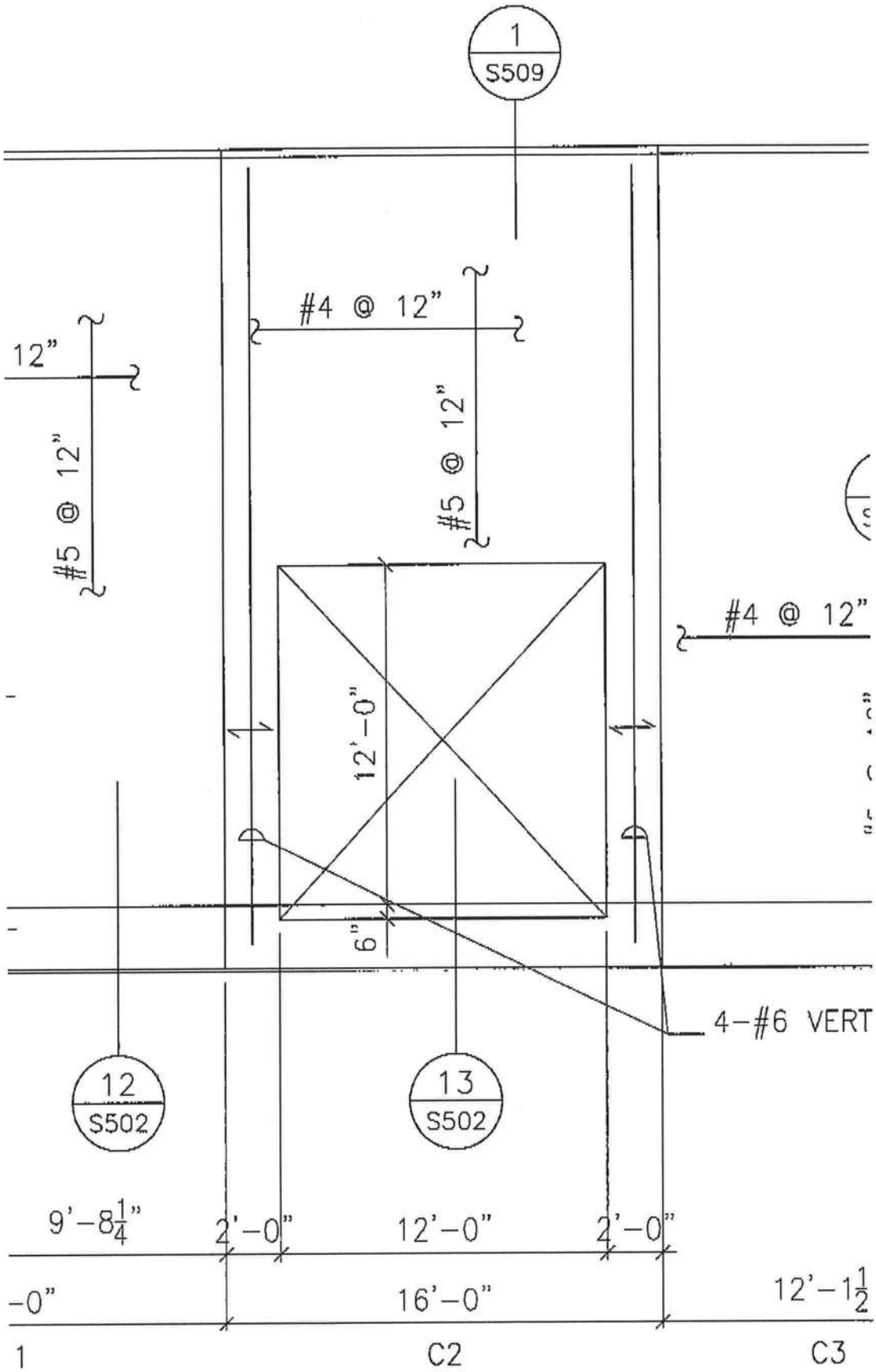

L
P
23'-2½"
9¼"
¾" JOINT
5'-0½"
EL.+25'-2 15/16"
EL.+24'-1
#4 @ 12"
2
S520
2
S520
#5 @ 12"
#5 @ 12"
#5 @ 12"
30'-10½"
25'-7½"
1
6'-0"
1'-4"
EL. 0'-0"
10'-8"
3¼"
10'-8"
5'-3"
1" GROUT
#6 @ 12" O.C.
CNTRD.
4
REV.
PNL.
ADD
OPNG
12
S502
3-#5 EA. FACE
W/#2 TIES @ 12"
4-#5 EA. FACE
@ 6" O.C.
1'-4"
12'-6"
3'-6"
7'-0"
8'-0"
17'-4"
17'-6"
B1
B2


L
23'-2 1/2"
3/4" JOINT
9 1/4"
4
REV.
PNL.
+25'-1 9/16"
8
S508
@ 12"
#5 @ 12"
2
S520
#4 @ 12"
#5 @ 12"
25'-4"
30'-7"
1
TYP. REINF. AROUND
OPNG. SEE DETAIL
9/S520
4'-0"
3'-0"
EL. 0'-0"
5'-3"
1" GROUT
16
S502
4'-0"
2'-0"
9'-9 1/4"
D5


20
S508
#4 @ 12"
#5 @ 12"
2
S520
3
S520
TYP. REINF. AROUND
OPNG. SEE DETAIL
9/S520
4'-0"
3'-0"
27'-11 5/16"
30'-2 5/16"
1
1
4
DEL.
OPNG.
14
S502
1" GROUT
2'-3"
9'-9 3/4"
4'-0"
4'-8 1/4"
18'-6"
E3


3
S520
#4 @ 12"
#5 @ 12" LAP
26" MIN.
4
S520
7
S520
6'-0"
8" CMU
7'-2"
4'-0"
6"
TYP. REINF. AROUND OPNG. SEE DETAIL 9/S520
EL. 0'-0"
23'-10½"
29'-1½"
5'-3"
1" GROUT
RELOCATED OPNG.
#6 @ 12" O.C. CNTRD.
5'-4"
1'-6"
3'-4"
15'-5"
20'-3"

F3



PANEL ELEVATION 'C'

Suwannee River Water Management District
9225 CR 49
Live Oak, FL 32060
TELEPHONE: 386-362-1001
TELEPHONE: 800-226-1066

Dear Permittee:

Enclosed is your approved Environmental Resource Permit. Based on the activity described in your application, Suwannee River Water Management District (District) staff has reasonable assurance that the proposed construction meets conditions for issuance, provided you follow the permit conditions and your stated activity.

The construction of a surfacewater management system requires filing a Notice of Commencement and as-built certification forms within 30 days of completion of construction. These forms are enclosed with your permit.

Be aware of the location of underground utilities before starting excavation.

If you wish, we will visit with you on site to discuss the terms of the permit, review existing pre-construction conditions, and answer any questions you may have prior to beginning work. If you would like to schedule a pre-construction meeting, please contact Resource Management staff at 386.362.1001 or 800.226.1066.

Sincerely,

Jon Dinges, P. E.
Department Director, Resource Management

SUWANNEE
RIVER
WATER
MANAGEMENT
DISTRICT
9225 CR 49
LIVE OAK, FLORIDA 32060
TELEPHONE: (386) 362-1001
TELEPHONE: 800-226-1066
FAX (386) 362-1056

GENERAL PERMIT

PERMITTEE:
UNITED STATES COLD STORAGE
100 DOBBS LANE, SUITE 102
CHERRY HILL, NJ 08034

PERMIT NUMBER: ERP07-0099
DATE ISSUED: 04/10/2007
DATE EXPIRES: 04/10/2010
COUNTY: COLUMBIA
TRS: S36/T3S/R17E

PROJECT: UNITED STATES COLD STORAGE

Approved entity to whom operation and maintenance may be transferred pursuant to rule 40B-4.1130, Florida Administrative Code (F.A.C.):

MICHAEL LYNCH
UNITED STATES COLD STORAGE
100 DOBBS LANE, SUITE 102
CHERRY HILL, NJ 08034

Based on information provided, the Suwannee River Water Management District's (District) rules have been adhered to and an environmental resource general permit is in effect for the permitted activity description below:

Construction and operation of a surfacewater management system serving 12.18 acres of impervious surface on a total project area of 29.21 acresaccording to the plans certified by Matthew E. Lane, P.E., of The Stellar Group, on March 29, 2007.

It is your responsibility to ensure that adverse off-site impacts do not occur either during or after construction. Any additional construction or alterations not authorized by this permit may result in flood control or water quality problems both on and off site and will be a violation of District rule.

You or any other substantially affected persons are entitled to request an administrative hearing or mediation. Please refer to enclosed notice of rights.

This permit is issued under the provisions of chapter 373, F.S., chapter 40B-4, and chapter 40B-400, F.A.C. A general permit authorizes the construction, operation, maintenance, alteration,

abandonment, or removal of certain minor surface water management systems. This permit authorizes the permittee to perform the work necessary to construct, operate, and maintain the surface water management system shown on the application and other documents included in the application. This is to notify you of District's agency action concerning Notice Of Intent. This action is taken pursuant to rule 40B-4 and 40B-400, F.A.C.

Standard Conditions for All General Permits:

1. The permittee shall perform all construction authorized in a manner so as to minimize adverse impacts to fish, wildlife, natural environmental values, and water quality. The permittee shall institute necessary measures during construction including riprap, reinforcement, or compaction of any fill materials placed around newly installed structures, to minimize erosion, turbidity, nutrient loading, and sedimentation in the receiving waters.

2. Water quality data representative of the water discharged from the permitted system, including, but not limited to, the parameters in chapter 62-302, F.A.C., shall be submitted to the District as required. If water quality data are required, the permittee shall provide data as required on the volume and rate of discharge including the total volume discharged during the sampling period. All water quality data shall be in accordance with and reference the specific method of analysis in "Standard Methods for the Examination of Water and Wastewater" by the American Public Health Association or "Methods for Chemical Analysis of Water and Wastes" by the U.S. Environmental Protection Agency.

3. The operational and maintenance phase of an environmental resource permit will not become effective until the owner or his authorized agent certifies that all facilities have been constructed in accordance with the design permitted by the District. If required by the District, such as-built certification shall be made by an engineer or surveyor. Within 30 days after the completion of construction of the system, the permittee shall notify the District that the facilities are complete. If appropriate, the permittee shall request transfer of the permit to the responsible entity approved by the District for operation and maintenance. The District may inspect the system and, as necessary, require remedial measures as a condition of transfer of the permit or release for operation and maintenance of the system.

4. Off-site discharges during and after construction shall be made only through the facilities authorized by the permit. Water discharged from the project shall be through structures suitable for regulating upstream stage if so required by the District. Such discharges may be subject to operating schedules established by the District.

5. The permit does not convey to the permittee any property right nor any rights or privileges other than those specified in the permit and chapter 40B-1, F.A.C.

6. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance, alteration, abandonment, or development in a Works of the District which is authorized by the permit.

7. The permit is issued based on the information submitted by the applicant which reasonably demonstrates that adverse off-site water resource impacts will not be caused by the permitted activity. It is the responsibility of the permittee to insure that such adverse impacts do not in fact occur either during or after construction.

8. It is the responsibility of the permittee to obtain all other clearances, permits, or authorizations required by any unit of local, state, or federal government.

9. The surfacewater management system shall be constructed prior to or concurrent with the development that the system is intended to serve and the system shall be completed within 30 days of substantial completion of the development which the system is intended to serve.

10. Except for General Permits After Notice or permits issued to a unit of government, or unless a different schedule is specified in the permit, the system shall be inspected at least once every third year after transfer of a permit to operation and maintenance by the permittee or his agent to ascertain that the system is being operated and maintained in a manner consistent with the permit. A report of inspection is to be sent to the District within 30 days of the inspection date. If required by chapter 471, F.S., such inspection and report shall be made by an engineer.

11. The permittee shall allow reasonable access to District personnel or agents for the purpose of inspecting the system to insure compliance with the permit. The permittee shall allow the District, at its expense, to install equipment or devices to monitor performance of the system authorized by their permit.

12. The surfacewater management system shall be operated and maintained in a manner which is consistent with the conditions of the permit and chapter 40B-4.2040, F.A.C.

13. The permittee is responsible for the perpetual operation and maintenance of the system unless the operation and maintenance is transferred pursuant to chapter 40B-4.1130, F.A.C., or the permit is modified to authorize a new operation and maintenance entity pursuant to chapter 40B-4.1110, F.A.C.

14. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.

15. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

16. Activities approved by this permit shall be conducted in a manner which do not cause violations of state water quality standards.

17. Prior to and during construction, the permittee shall implement and maintain all erosion and sediment control measures (best management practices) required to retain sediment on-site and to prevent violations of state water quality standards. All practices must be in accordance with the guidelines and specifications in the Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual unless a project specific erosion and sediment control plan is approved as part of the permit, in which case the practices must be in accordance with the plan. If site-specific conditions require additional measures during any phase of construction or operation to prevent erosion or control sediment, beyond those specified in the erosion and sediment control plan, the permittee shall implement additional best management practices as necessary, in accordance with the Florida Stormwater, Erosion, and Sedimentation Control Inspector's Manual. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

18. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than seven days after the construction activity in that portion of the site has temporarily or permanently ceased.

19. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a Construction Commencement Notice Form No. 40B-1.901(14) indicating the actual start date and the expected completion date.

20. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an Annual Status Report Form No. 40B-1.901(15). These forms shall be submitted during June of each following year.

21. For those systems which will be operated or maintained by an entity requiring an easement or deed restriction in order to provide that entity with the authority necessary to operate or maintain the system, such easement or deed restriction, together with any other final operation or maintenance documents as are required by Paragraph 40B-4.2030(2)(g), F.A.C., and Rule 40B-4.2035, F.A.C., must be submitted to the District for approval. Documents meeting the requirements set forth in these subsections of District rules will be approved. Deed restrictions,

easements and other operation and maintenance documents which require recordation either with the Secretary of State or Clerk of the Circuit Court must be so recorded prior to lot or unit sales within the project served by the system, or upon completion of construction of the system, whichever occurs first. For those systems which are proposed to be maintained by county or municipal entities, final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local governmental entity. Failure to submit the appropriate final documents referenced in this paragraph will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system.

22. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.

23. Within 30 days after completion of construction of the permitted system, or independent portion of the system, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, using the supplied As-Built Certification Form No. 40B-1.901(16) incorporated by reference in Subsection 40B-1.901(16), F.A.C. When the completed system differs substantially from the permitted plans, any substantial deviations shall be noted and explained and two copies of as-built drawings submitted to the District. Submittal of the completed form shall serve to notify the District that the system is ready for inspection. The statement of completion and certification shall be based on on-site observation of construction (conducted by the registered professional engineer, or other appropriate individual as authorized by law, or under his or her direct supervision) or review of as-built drawings for the purpose of determining if the work was completed in compliance with approved plans and specifications. As-built drawings shall be the permitted drawings revised to reflect any changes made during construction. Both the original and any revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawing. All surveyed dimensions and elevations shall be certified by a registered surveyor. The following information, at a minimum, shall be verified on the as-built drawings:

a. Dimensions and elevations of all discharge structures including all weirs, slots, gates, pumps, pipes, and oil and grease skimmers;

b. Locations, dimensions, and elevations of all filter, exfiltration, or underdrain systems including cleanouts, pipes, connections to control structures, and points of discharge to the receiving waters;

c. Dimensions, elevations, contours, or cross-sections of all treatment storage areas sufficient to

determine stage-storage relationships of the storage area and the permanent pool depth and volume below the control elevation for normally wet systems, when appropriate;

d. Dimensions, elevations, contours, final grades, or cross-sections of the system to determine flow directions and conveyance of runoff to the treatment system;

e. Dimensions, elevations, contours, final grades, or cross-sections of all conveyance systems utilized to convey off-site runoff around the system;

f. Existing water elevation(s) and the date determined; and

g. Elevation and location of benchmark(s) for the survey.

24. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the condition in paragraph 23 above, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District in accordance with Rule 40B-4.2035, F.A.C., accepts responsibility for operation and maintenance of the system. The permit may not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the approved responsible operation and maintenance operating entity if different from the permittee. Until the permit is transferred pursuant to Rule 40B-4.1130, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

25. Should any other regulatory agency require changes to the permitted system, the permittee shall provide written notification to the District of the changes prior to implementation so that a determination can be made whether a permit modification is required.

26. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and in this chapter and Chapter 40B-4, F.A.C.

27. The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary

authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.

28. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered specifically approved unless a specific condition of this permit or a formal determination under 40B-400.046, F.A.C., provides otherwise.

29. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40B-4.1130, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.

30. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District.

31. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

WITHIN 30 DAYS AFTER COMPLETION OF THE PROJECT, THE PERMITTEE SHALL NOTIFY THE DISTRICT, IN WRITING, THAT THE FACILITIES ARE COMPLETE.

Approved by _____ Date Approved 4-11-07
District Staff

_____ _____
Clerk Executive Director

NOTICE OF RIGHTS

1. A person whose substantial interests are or may be determined has the right to request an administrative hearing by filing a written petition with the Suwannee River Water Management District (District), or may choose to pursue mediation as an alternative remedy under Section 120.569 and 120.573, Florida Statutes, before the deadline for filing a petition. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for pursuing mediation are set forth in Sections 120.569 and 120.57 Florida Statutes. Pursuant to Rule 28-106.111, Florida Administrative Code, the petition must be filed at the office of the District Clerk at District Headquarters, 9225 C.R. 49, Live Oak, Florida 32060 within twenty-one (21) days of receipt of written notice of the decision or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail actual notice). A petition must comply with Chapter 28-106, Florida Administrative Code.

2. If the Governing Board takes action which substantially differs from the notice of District decision to grant or deny the permit application, a person whose substantial interests are or may be determined has the right to request an administrative hearing or may chose to pursue mediation as an alternative remedy as described above. Pursuant to Rule 28-106.111, Florida Administrative Code, the petition must be filed at the office of the District Clerk at District Headquarters, 9225 C.R. 49, Live Oak, Florida 32060 within twenty-one (21) days of receipt of written notice of the decision or within twenty-one (21) days of newspaper publication of the notice of District decision (for those persons to whom the District does not mail actual notice). Such a petition must comply with Chapter 28-106, Florida Administrative Code.

3. A substantially interested person has the right to a formal administrative hearing pursuant to Section 120.569 and 120.57(1), Florida Statutes, where there is a dispute between the District and the party regarding an issue of material fact. A petition for formal hearing must comply with the requirements set forth in Rule 28-106.201, Florida Administrative Code.

4. A substantially interested person has the right to an informal hearing pursuant to Section 120.569 and 120.57(2), Florida Statutes, where no material facts are in dispute. A petition for an informal hearing must comply with the requirements set forth in Rule 28-106.301, Florida Administrative Code.

5. A petition for an administrative hearing is deemed filed upon receipt of the petition by the Office of the District Clerk at the District Headquarters in Live Oak, Florida.

6. Failure to file a petition for an administrative hearing within the requisite time frame shall constitute a waiver of the right to an administrative hearing pursuant to Rule 28-106.111, Florida Administrative Code.

7. The right to an administrative hearing and the relevant procedures to be followed is governed by Chapter 120, Florida Statutes, and Chapter 28-106, Florida Administrative Code.

8. Pursuant to Section 120.68, Florida Statutes, a person who is adversely affected by final District action may seek review of the action in the District Court of Appeal by filing a notice of appeal pursuant to the Florida Rules of Appellate Procedure, within 30 days of the rendering of the final District action.

9. A party to the proceeding before the District who claims that a District order is inconsistent with the provisions and purposes of Chapter 373, Florida Statutes, may seek review of the order pursuant to Section 373.114, Florida Statutes, by the Florida Land and Water Adjudicatory Commission, by filing a request for review with the Commission and serving a copy of the Department of Environmental Protection and any person named in the order within 20 days of adoption of a rule or the rendering of the District order.

10. For appeals to the District Courts of Appeal, a District action is considered rendered after it is signed on behalf of the District, and is filed by the District Clerk.

11. Failure to observe the relevant time frames for filing a petition for judicial review, or for Commission review, will result in waiver of the right to review.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Notice of Rights has been sent by U.S. Mail to:

UNITED STATES COLD STORAGE
100 DOBBS LANE, SUITE 102
CHERRY HILL, NJ 08034

At 4:00 p.m. this 13 day of April, 2007.

Jon M. Dinges
Deputy Clerk
Suwannee River Water Management District
9225 C.R. 49

Live Oak, Florida 32060
386.362.1001 or 800.226.1066 (Florida only)

cc: File Number: ERP07-0099

COLUMBIA COUNTY FIRE DEPARTMENT

135 NE HERNANDO AVENUE
P. O. BOX 1529
SUITE 203
LAKE CITY, FL 32055

PHONE (386) 754-7089
FAX (386) 754-7064

David L. Boozer
Division Chief

09 May 2007

To: Columbia County Bldg. Department

From: David L. Boozer

Re: U.S. Cold Storage, Inc.

We have reviewed plans of the U.S. Cold Storage Facility to be located on US 90, East of Lake City. At this time we recommend approval for the foundation portion of this facility. We will continue the review process of this facility.

UNIVERSAL
ENGINEERING SCIENCES

REPORT OF A
GEOTECHNICAL EXPLORATION

Proposed United States Cold Storage Facility
US Highway 90
Lake City, Florida

March 29, 2006

PROJECT NO. 92625-001-01
REPORT NO. 458560

Prepared For:

United States Cold Storage, Inc
100 Dobbs Lane
Suite 102
Cherry Hill, NJ 08034

USCS
Lake City, FL

Prepared By:

UNIVERSAL ENGINEERING SCIENCES
5561 Florida Mining Boulevard South
Jacksonville, Florida 32257-3648
(904) 296-0757

CONSULTANTS:

Geotechnical Engineering ▪ Environmental Engineering ▪ Construction Materials Testing
Threshold Inspection ▪ Private Provider Inspection

OFFICES: Atlanta, GA ▪ Clermont, FL ▪ Daytona Beach, FL ▪ DeBary, FL ▪ Fort Myers, FL ▪ Fort Pierce, FL
Gainesville, FL ▪ Hollywood, FL ▪ Jacksonville, FL ▪ Ocala, FL ▪ Orlando, FL ▪ Palm Coast, FL ▪ Panama City, FL
Pensacola, FL ▪ Rockledge, FL ▪ Sarasota, FL ▪ St. Augustine, FL ▪ Tampa, FL ▪ West Palm Beach, FL

UNIVERSAL
ENGINEERING SCIENCES
Consultants In: Geotechnical Engineering • Environmental Engineering •
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

Offices In:
• Atlanta, GA
• Clermont, FL
• Daytona Beach, FL
• DeBary, FL
• Fort Myers, FL
• Fort Pierce, FL
• Gainesville, FL
• Hollywood, FL
• Jacksonville, FL
• Ocala, FL
• Orlando, FL
• Palm Coast, FL
• Panama City, FL
• Pensacola, FL
• Rockledge, FL
• Sarasota, FL
• St. Augustine, FL
• Tampa, FL
• West Palm Beach, FL

March 29, 2006

United States Cold Storage, Inc
100 Dobbs Lane – Suite 102
Cherry Hill, NJ 08034

Attention: Mr. Charles Toogood

Reference: **REPORT OF A GEOTECHNICAL EXPLORATION**
Proposed United States Cold Storage Facility
US Highway 90, Lake City, Florida
UES Project No. 92625-001-01 and Report No. 458560

Dear Mr. Toogood:

Universal Engineering Sciences, Inc. has completed a subsurface exploration at the site of the proposed United States Cold Storage Facility located off US Highway 90 in Lake City, Columbia County, Florida. These services were provided in general accordance with our Proposals No. 2006J-064 dated January 17, 2006 and No. 2006J-226 dated February 14, 2006. This report contains the results of our exploration, an engineering evaluation with respect to the project characteristics described to us, and recommendations for groundwater control, foundation design, pavement design, and site preparation. A summary of our findings is as follows:

- The borings generally encountered very loose to loose sand (SP) and sand with silt (SP-SM) with trace roots to a depth of 3 feet, followed by very loose to medium dense sand (SP) to depths of 7.5 to 9 feet below the existing ground surface. The borings then encountered loose to medium dense sand (SP) and sand with silt (SP-SM) with zones of very loose sand with silt (SP-SM) and zones of hardpan (SP-SM) to depths of 13 to 19 feet below the existing ground surface. From 13 to 19 feet, to the typical boring termination depths of 30 feet, the borings encountered medium dense to very dense sand (SP) and sand with silt (SP-SM) (hardpan).

- We measured the stabilized groundwater level at depths ranging from the existing ground surface to 2.8 feet below the ground surface. We estimate the normal seasonal high groundwater levels will typically occur at depths ranging from the existing ground surface to 1.0 foot below the existing ground surface encountered at the time of our exploration.

- Assuming the building area will be constructed in accordance with our Site Preparation Recommendations, we have recommended the proposed structure be supported on a conventional, shallow spread foundation with an allowable soil bearing pressure of 2,500 pounds per square foot.

- Pavement areas should be designed as a function of the anticipated traffic loadings. Either flexible or rigid pavement systems may be used at this site.

- A GPR study and a 115-foot deep SPT boring were performed, within the building area, to evaluate the sinkhole potential and/or possible cavities that may exist in northcentral Florida. Below a depth of 30 feet, the 115-foot deep boring encountered medium dense to loose sand (SP) and sand with silt (SP-SM) to a depth of 62 feet, underlain with very loose to medium dense clayey sand (SC), sand (SP) and sand with clay (SP-SC) to a depth of 87 feet. Medium dense clayey sand (SC) and stiff clay (CL) were next encountered to a depth of 97 feet, followed by dense to very dense clayey sand with limestone and cemented sand layers (marl) to the 115-foot terminatin depth. Results of the GPR findings are included in Appendix C. The GPR study and SPT boring did not reveal evidence of high sinkhole potential at this site.

- We recommend only normal, good practice site preparation techniques to prepare the existing subgrade to support the proposed structure and pavement areas. These techniques include stripping the construction areas of any topsoil, vegetation, compacting the subgrade with a heavy vibratory roller to densify the very loose to loose sands to depths of 4 to 5 feet, and placing engineered fill to the desired grades.

We trust this report meets yours needs and addresses the geotechnical issues associated with the proposed construction. We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549

Joel B. Wood, Jr., E.I.
Project Engineer

3/22/06

Stephen R. Weaver, P.E.
Geotechnical Services Manager
FL P.E. Number 37389

JBW/SRW

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of the subsurface exploration of the site for the proposed United States Cold Storage Facility located off US Highway 90 in Lake City, Columbia County, Florida. We have divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- APPENDICES - Presents support materials referenced in this report

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

Project information was provided to us in your transmittals dated December 14, 2005. We were provided with a copy of a proposed Preliminary Site Plan. This plan shows the boundary limits for the property and the existing roadway located adjacent to the site. We understand the proposed construction will consist of a 300,000 square foot structure with dock height fill. We understand that adjacent pavement and drive areas will be part of the project.

Detailed structural loading information has been provided to us with the maximum column and load bearing wall loads of 70 kips and 3 klf, respectively. In addition, we have assumed elevating fill heights will not exceed four feet to achieve the dock height elevation.

Our recommendations are based upon the above considerations. If any of this information is incorrect, or if you anticipate any changes, please inform Universal Engineering Sciences so that we may review our recommendations.

2.2 PURPOSE

The purposes of this exploration were:

- to explore the general subsurface conditions at the site;
- to interpret and evaluate the subsurface conditions with respect to the proposed construction; and

- to provide geotechnical engineering recommendations for groundwater control, foundation design, pavement design, and site preparation.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, if you desire.

Our exploration was confined to the zone of soil likely to be stressed by the proposed construction. Our work did not address the potential for surface expression of deep geological conditions. This evaluation requires a more extensive range of field services than performed in this study. We will be pleased to conduct an investigation to evaluate the probable effect of the regional geology upon the proposed construction, if you desire.

2.3 FIELD EXPLORATION

A field exploration was performed from February 14, 2006 to March 15, 2006. The approximate boring locations are shown on the attached Field Exploration Plan in Appendix A. The approximate boring locations were determined in the field by our personnel using taped measurements from existing features at the site, and should be considered accurate only to the degree implied by the method of measurement used. Samples of the soils encountered will be held in our laboratory for your inspection for 60 days unless we are notified otherwise.

2.3.1 SPT Borings

To explore the subsurface conditions within the area of the proposed structure, we located and drilled eighteen (18) Standard Penetration Test (SPT) borings to depths of approximately 30 feet below the existing ground surface and one (1) SPT boring to a depth of approximately 115 feet below the existing ground surface in general accordance with the methodology outlined in ASTM D 1586. A summary of this field procedure is included in Appendix A. Split-spoon soil samples recovered during performance of the borings were visually classified in the field and representative portions of the samples were transported to our laboratory for further evaluation.

2.3.2 Auger Borings

To determine the subsurface conditions within the proposed pavement area, we located and drilled fifteen (15) auger borings to depths of approximately 6 feet below the existing ground surface within the proposed pavement area in general accordance with the methodology outlined in ASTM D 1452. A summary of this field procedure is

included in Appendix A. Representative soil samples recovered from the auger borings were returned to our laboratory for further evaluation.

2.4 LABORATORY TESTING

Representative soil samples obtained during our field exploration were returned to our office and examined by a geotechnical engineer. The samples were visually classified in general accordance with ASTM D 2488 (Unified Soil Classification System).

Twenty (20) fines content tests, twenty (20) moisture content tests, and five (5) organic content tests were conducted in the laboratory on representative soil samples obtained from the borings. These tests were performed to aid in classifying the soils and to help quantify and correlate engineering properties. The results of these tests are presented on the Boring Logs in Appendix A. A brief description of the laboratory procedures used is also provided in Appendix A.

3.0 FINDINGS

3.1 SOIL SURVEY

Based on the 1984 Soil Survey for Columbia County, Florida, as prepared by the US Department of Agriculture Soil Conservation Service, the predominant predevelopment soil types at the site are identified as Chipley fine sand and Leon fine sand.

A summary of characteristics of this soil series was obtained from the Soil Survey and is included in Table 1.

TABLE 1
Summary of Soil Survey Information

Soil Type	Constituents		Hydrologic Group	Natural Drainage	Soil Permeability (Inches/Hr)		Seasonal High Water Table
Chipley (20)	0-7" 7-80"	Fine sand Sand, fine sand	C	Moderately Well Drained	0-7" 7-80"	6.0 – 20 6.0 – 20	2.0 – 3.0
Leon (32)	0-8" 8-19" 19-80"	Fine sand Sand, fine sand, loamy sand Sand, fine sand	B/D	Poorly Drained	0-8" 8-19" 19-80"	6.0 – 20 0.6 – 6.0 0.6 – 6.0	0 – 1.0

3.2 SURFACE CONDITIONS

The site of the proposed United States Cold Storage Facility located off US Highway 90 in Lake City, Columbia County, Florida. At the time of our visit, the site was mostly wooded with oak trees, pine trees, and palmettos. There was a dirt road that ran parallel with the overhead utility lines, which ran the length of the property from the

south to the north. An existing ditch also ran across the property from the southwestern portion of the site to the northeastern boundary lines. Standing water was sporadically observed in the ditch across the property. Topographic information was not provided to us at this time; however an isolated area in the southeastern section of the site appeared lower than the rest of the site due to the observance of standing water at the ground surface level.

3.3 SUBSURFACE CONDITIONS

The boring locations and detailed subsurface conditions are illustrated in Appendix A: Boring Location Plan and Boring Logs. The classifications and descriptions shown on the logs are generally based upon visual characterizations of the recovered soil samples and a limited number of laboratory tests. Also, see Appendix A: Key to Boring Logs, for further explanation of the symbols and placement of data on the Boring Logs. Table 2: General Soil Profile summarizes the soil conditions encountered.

TABLE 2
General Soil Profile

Typical depth (ft)		Soil Descriptions
From	To	
0	3	Very loose to loose sand (SP) and sand with silt (SP-SM) with trace roots
3	7.5 to 9	Very loose to medium dense sand (SP)
7.5 to 9	13 to 17	Loose to medium dense sand (SP) and sand with silt (SP-SM) with zones of very loose sand with silt (SP-SM) and zones of hardpan (SP-SM)
13 to 17	30	Medium dense to very dense sand (SP) and sand with silt (SP-SM) (hardpan)
30	62	Medium dense to loose sand (SP) and sand with silt (SP-SM)
62	87	Very loose to medium dense clayey sand (SC), sand (SP) and sand with clay (SP-SC)
87	97	Medium dense clayey sand (SC) and stiff clay (CL)
97	115*	Dense to very dense clayey sand with limestone and cemented sand layers (marl)

* Termination Depth of Deepest Boring
( ) Indicates Unified Soil Classification

The stabilized groundwater level was recorded at depths from the existing ground surface to 2.8 feet below the existing ground surface.

3.4 SINKHOLE POTENTIAL

A GPR study was performed to evaluate the sinkhole potential and/or possible cavities that may exist in northcentral Florida. In addition, one SPT borings was performed to a

depth of 115 feet in the building area to aid in our evaluation. In summary, the GPR testing and SPT boring did not reveal evidence of high sinkhole potential for this site. Results of the GPR findings are included in Appendix C.

4.0 RECOMMENDATIONS

4.1 GENERAL

In this section of the report, we present our detailed recommendations for groundwater control, building foundation, pavement design, site preparation, and construction related services. The following recommendations are made based upon a review of the attached soil test data, our understanding of the proposed construction, and experience with similar projects and subsurface conditions. We recommend that we be provided the opportunity to review the project plans and specifications to confirm that our recommendations have been properly interpreted and implemented. If the structural loadings or the building location change significantly from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes. The discovery of any subsurface conditions during construction which deviate from those encountered in the borings should be reported to us immediately for observation, evaluation and recommendations.

4.2 GROUNDWATER CONTROL

The groundwater table will fluctuate seasonally depending upon local rainfall. The rainy season in north central Florida is normally between June and September. Based upon our review of U.S.G.S. data, Columbia County Soil Survey, and regional hydrogeology, it is our opinion the seasonal high water level will occur at depths ranging from the existing ground surface to 1.0 foot below the existing ground surface encountered at the time of our exploration.

Note: it is possible the estimated seasonal high groundwater levels will temporarily exceed these estimated levels during any given year in the future. Should impediments to surface water drainage exist on the site, or should rainfall intensity and duration, or total rainfall quantities exceed the normally anticipated rainfall quantities, groundwater levels may exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

We recommend all foundation designs and pavement designs be based on the seasonal high groundwater conditions.

4.3 BUILDING FOUNDATION

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structure when constructed on a properly designed conventional shallow foundation system. Provided the site preparation and earthwork construction recommendations outlined in Section 4.5 of this report are performed, the following parameters may be used for foundation design.

4.3.1 Bearing Pressure

The maximum allowable net soil bearing pressure for use in shallow foundation design should not exceed 2,500 psf. Net bearing pressure is defined as the soil bearing pressure at the foundation bearing level in excess of the natural overburden pressure at that level. The foundation should be designed based on the maximum load which could be imposed by all loading conditions.

4.3.2 Foundation Size

The minimum widths recommended for any isolated column footings and continuous wall footings are 24 inches and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these width recommendations should control the minimum size of the foundations.

4.3.3 Bearing Depth

The exterior foundation should bear at a depth of at least 18 inches below the finished exterior grades and the interior foundation should bear at a depth of at least 12 inches below the finish floor elevation to provide confinement to the bearing level soils. It is recommended that stormwater be diverted away from the building exterior to reduce the possibility of erosion beneath the exterior footings.

4.3.4 Bearing Material

The foundation may bear in either the compacted suitable natural soils or compacted structural fill. The bearing level soils, after compaction, should exhibit densities equivalent to at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least one foot below the foundation bearing level.

4.3.5 Settlement Estimates

Post-construction settlements of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by

the contractor. Our settlement estimates for the structure are based on the use of site preparation/earthwork construction techniques as recommended in Section 4.5 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlements of the structure.

Due to the sandy nature of the near-surface soils, we expect the majority of settlement to occur in an elastic manner and fairly rapidly during construction. Using the recommended maximum bearing pressure, the assumed maximum structural loads and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structure could be on the order of one inch or less.

Differential settlements result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Because of the general uniformity of the subsurface conditions and the recommended site preparation and earthwork construction techniques outlined in Section 4.5, we anticipate that differential settlements of the structure should be within tolerable magnitudes (½ inch or less).

4.3.6 Floor Slab

The floor slab can be constructed as a slab-on-grade member using a modulus of subgrade reaction (K) of 150 pci provided the subgrade materials are compacted as outlined in Section 4.5. It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness. A 10-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear large sections of the membrane during placement of reinforcing steel and concrete.

4.4 PAVEMENTS

4.4.1 General

A rigid or flexible pavement section could be used on this project. Flexible pavement combines the strength and durability of several layer components to produce an appropriate and cost-effective combination of available construction materials. Concrete pavement has the advantage of the ability to "bridge" over isolated soft areas, it requires less security lighting, and it typically has a longer service life than asphalt pavement. Disadvantages of rigid pavement include an initial higher cost and more difficult patching of distressed areas than occurs with flexible pavement.

4.4.2 Asphalt (Flexible) Pavements

We have recommended a flexible pavement section with a 20-year design life for use on this project. Because traffic loadings are commonly unavailable, we have

generalized our pavement design into two groups. The group descriptions and the recommended component thicknesses are presented in Table 3: Pavement Component Recommendations. The structural numbers in Table 3 are based on a structural number analysis with the stated estimated daily traffic volume for a 20-year replacement design life.

TABLE 3
Summary of Pavement Component Recommendations

Traffic Group	Structural Number	Component Thickness (inches)		
		Stabilized Subgrade	Base Course	Surface Course
Automobile parking lots and driveways - **standard duty**	2.7	12	6	1.5
Truck parking lots and driveways - **heavy duty**	3.3	12	8	2.0

The Design Traffic Groups are defined below:

- Automobile Parking lots and driveways- **standard duty:**

  1,000 cars and light panel and pickup trucks per day, (average gross weight of 4,000 pounds), two tractor-trailer trucks per week (H-20 loading), and two trash trucks per week (46,000 pound gross weight)

- Truck Parking and driveways - **heavy duty:**

  Standard duty loading plus; twenty 18-wheel tractor-trailer trucks per day (H-20 loading)

4.4.2.1 Stabilized Subgrade

We recommend that subgrade materials be compacted in place according to the requirements in the "Site Preparation" section of this report. Further, beneath limerock base course, stabilize the subgrade materials to a minimum Limerock Bearing Ratio (LBR) of 40, as specified by Florida Department of Transportation (FDOT) requirements for Type B Stabilized Subgrade. The subgrade material should be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D 1557, AASHTO T-180) value.

The stabilized subgrade can be a blend of existing soil and imported material such as limerock. If a blend is proposed, we recommend that the contractor perform a mix design to find the optimum mix proportions.

The primary function of stabilized subgrade beneath the base course is to provide a stable and firm subgrade so that the limerock can be properly and uniformly placed and compacted. Depending upon the soil type, the subgrade material may have sufficient stability to provide the needed support without additional stabilizing material. Generally, sands with silt or clay should have sufficient stability and may not require additional stabilizing material. Conversely, relatively "clean" sand will not provide sufficient stability to adequately construct the limerock base course. Universal Engineering Sciences should observe the soils exposed on the finish grades to evaluate whether or not additional stabilization will be required beneath the base course.

4.4.2.2 Base Course

We recommend the base course consist of limerock. The limerock base course should have a minimum Limerock Bearing Ratio (LBR) of 100 and should be compacted to 98 percent of the Modified Proctor maximum dry density (ASTM D 1557, AASHTO T-180) value.

As an alternative base course, crushed concrete could be used. An advantage to using crushed concrete is a lower sensitivity to water than what occurs with limerock. The main disadvantage is that crushed concrete may not be available at the time of construction.

Crushed concrete should be supplied by an FDOT approved plant with quality control procedures. The crushed concrete stockpile should be free of sandy pockets, foreign materials, or uncrushed particles. We recommend the following specifications be enforced.

1. Crushed concrete shall not contain extremely hard pieces, lumps, balls or pockets of sand or clay sized material in sufficient quantity as to be detrimental to the proper binding, finishing or strength of the crushed concrete base.

2. Samples of base course materials shall be supplied to the engineer prior to use in the work. Additional samples shall be furnished during construction, as necessary.

3. At least 97 percent (by weight) of the material shall pass a 3-1/2 inch sieve and the material shall be graded uniformly down to dust. The fine material shall consist entirely of dust or fracture. All crushing or breaking-up which might be necessary in order to meet such size requirements shall be done before the material is placed within the area to be paved.

4. The base shall be bladed and shaped to conform to the typical sections shown on the plans. Then the base shall be compacted by rolling with a combination of

steel wheel and rubber tired rollers until a minimum density of at least 98 percent of the maximum density obtainable under AASHTO Method T-180 is reached. The base shall have an average LBR of not less than 100. The LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.

5. Testing shall be performed at the following frequencies:

   - Perform in-place density on crushed concrete base at a frequency of 1 test per 300 linear foot of roadway or 5,000 square feet of pavement.
   - Perform Limerock Bearing Ratio tests at a frequency of 1 test per visual change in material and a minimum of 1 test per 15,000 square feet of pavement.
   - Engineer should perform a final visual base inspection prior to placement of prime or tack coat and paving.

4.4.2.3 Wearing Surface

The wearing surface should consist of Florida Department of Transportation (FDOT) Type S asphaltic concrete having a minimum Marshall Stability of 1,500 lbs and a flow range of 0.07 to 0.12 inches. Specific requirements for Type S asphaltic concrete wearing surface are outlined in the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, 2000 Edition.

After placement and field compaction, the wearing surface should be cored to evaluate material thickness and to perform laboratory densities. Cores should be obtained at frequencies of at least one core per 10,000 square feet of placed pavement or a minimum of two cores per day's production.

4.4.3 Concrete (Rigid) Pavements

Concrete pavement is a rigid pavement that transfers much lighter wheel loads to the subgrade soils than a flexible asphalt pavement. For a concrete pavement subgrade, we recommend using the existing surficial sands or recommend clean fine sand fill (SP), densified to at least 98 percent of Modified Proctor test maximum dry density (ASTM D 1557) without additional stabilization, with the following stipulations:

1. Subgrade soils must be densified to at least 98 percent of Modified Proctor test maximum dry density (ASTM D 1557) to a depth of at least 2 feet prior to placement of concrete.

2. The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of concrete.

3. The subgrade soils must be moistened prior to placement of concrete.

4. Concrete pavement thickness should be uniform throughout, with exception to thickened edges (curb or footing).

The bottom of the pavement should be separated from the estimated typical wet season groundwater level by at least 18 inches.

Our recommendations for slab thickness for standard duty and heavy duty concrete pavements are based on a) subgrade soils densified to 98 percent of the Modified Proctor maximum dry density (ASTM D 1557) b) modulus of subgrade reaction (k) equal to 200 pounds per cubic inch, c) a 20 year design life, and 3) previously stated traffic conditions in Section 4.4.2, we recommend using the design shown in Table 4 for standard duty concrete pavements.

TABLE 4
Standard Duty (Unreinforced) Concrete Pavement

Minimum Pavement Thickness	Maximum Control Joint Spacing	Minimum Sawcut Depth
5 Inches	10 Feet x 10 Feet	1¼ Inches

Our recommended design for heavy duty concrete pavement is shown in Table 5 below.

TABLE 5
Heavy Duty (Unreinforced) Concrete Pavement

Minimum Pavement Thickness	Maximum Control Joint Spacing	Minimum Sawcut Depth
6 Inches	12 Feet x 12 Feet	1½ Inches

We recommend using concrete with a minimum 28-day compressive strength of 4000 psi and a minimum 28-day flexural strength (modulus of rupture) of at least 650 pounds per square inch, based on 3rd point loading of concrete beam test samples. Layout of the sawcut control joints should form square panels, and the depth of sawcut joint should be at least ¼ of the concrete slab thickness. The joints should be sawed within six hours of concrete placement or as soon as the concrete has developed sufficient strength to support workers and equipment. We recommend allowing Universal to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing on Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Associates, Inc., and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

4.4.4 Effects of Groundwater

One of the most critical factors influencing pavement performance in North central Florida is the relationship between the pavement subgrade and the seasonal high groundwater level. Many roadways and parking areas have been damaged as a result of deterioration of the base conditions and/or the base/surface course bond. We recommend that the seasonal high groundwater and the bottom of the flexible pavement limerock base course be separated by at least 24 inches. We recommend a separation of at least 18 inches below the bottom of a rigid concrete pavement or below a flexible pavement with a crushed concrete base. If this separation cannot be establish and maintained by grading and surface drainage improvements, permanent groundwater control measures (underdrains) will be required.

4.4.5 Curbing

We recommend that curbing around the landscaped sections adjacent to the parking areas and driveways be constructed with full-depth curb sections. Using extruded curb sections which lie directly on top of the final asphalt level, or eliminating the curbing entirely, can allow migration of irrigation water from the landscape areas to the interface between the asphalt and the base. This migration often causes separation of the wearing surface from the base and subsequent rippling and pavement deterioration. Topsoil placed behind curbing in landscaped areas should be limited to 6 inches vertical thickness within five feet of flexible pavement.

4.4.6 Construction Traffic

Light duty roadways and incomplete pavement sections will not perform satisfactorily under construction traffic loadings. We recommend that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, dump trucks, etc.) be re-routed away from these roadways or that the pavement section be designed for these loadings.

4.5 SITE PREPARATION

We recommend normal, good practice site preparation procedures. These procedures include: stripping the site of remaining vegetation and topsoil, compacting the subgrade and placing necessary fill or backfill to grade with engineered fill. A more detailed synopsis of this work is as follows:

1. Prior to construction, the location of any existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement of overlying structure(s).

2. Strip the proposed construction limits of any grass, roots, topsoil, and other deleterious materials within 5 feet beyond the perimeter of the proposed building area and within 3 feet beyond the perimeter of the proposed paved areas. Expect typical stripping at this site to depths of 6 to 12 inches. Some isolated areas may require more than a foot of stripping or undercutting to remove the root systems of underbrush or trees, or organic material.

3. The groundwater level was encountered at depths from the existing ground surface to 2.8 feet below the existing ground surface at the time of our exploration. The seasonal high groundwater level is estimated to occur at depths ranging from the existing ground surface to 1.0 foot below the existing ground surface encountered at the time of our exploration. The groundwater level should be maintained at least 2 feet below the surface of any vibratory compaction procedures. If required, temporary groundwater control can probably be achieved by pumping from sumps located in perimeter ditches. Each sump should be located outside the bearing area to avoid loosening of the fine sandy bearing soils.

4. Compact the subgrade from the surface with a heavy weight vibratory roller (an 8- to 10-ton roller, static weight and 4- to 5-foot drum diameter) until you obtain a minimum density of at least 95 percent of the Modified Proctor maximum dry density (ASTM D-1557), to a depth of 1 foot below the compacted surface. Typically, the soils should exhibit moisture contents within ± 2 percent of the Modified Proctor optimum moisture content during compaction. A minimum of eight (8) complete coverages (in perpendicular directions) should be made in the building construction area with the roller to improve the uniformity and increase the density of the underlying sandy soils.

   Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess pore pressures within the disturbed soils allowed to dissipate before recompacting.

   Care should be exercised to avoid damaging any nearby structures while the compaction operation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified and the existing conditions of the

APPENDIX A

BORING LOCATION PLAN
BORING LOGS
KEY TO BORING LOGS
FIELD EXPLORATION PROCEDURES
LABORATORY TESTING PROCEDURES

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-2

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

BORING DESIGNATION: **B- 1** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 2.8
DATE OF READING: 2/13/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/13/06
DATE FINISHED: 2/13/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						TOPSOIL						
		1-2-1	3			Very loose to loose gray to light brown SAND (SP)						
		4-1-3	4	▼								
		3-3-4	7									
5		2-2-3	5									
		4-4-3	7			Loose to medium dense grayish brown SAND (SP)						
		5-7-7	14									
10		6-10-9	19			Medium dense dark grayish brown SAND with Silt (SP-SM)						
15		5-8-6	14									
20		3-5-8	13									
		16-19-20	39			Dense to very dense brown SAND (SP)						
25												
30		10-19-32	51									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-3

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

BORING DESIGNATION: B- 2 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.4
DATE OF READING: 2/15/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/15/06
DATE FINISHED: 2/15/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0						TOPSOIL						
		1-1-2	3	▼		Very loose to loose grayish brown to light brown SAND (SP)						
		3-2-2	4									
		2-3-3	6									
5		2-2-2	4									
		2-1-2	3			Medium dense gray SAND (SP)						
		4-5-7	12			Medium dense dark grayish brown SAND with Silt (SP-SM)						
10		4-7-8	15									
						Loose gray SAND (SP)						
15		2-3-5	8									
						Dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
20		8-16-16	32									
						Very dense brown SAND (SP)						
25		15-27-48	75									
30		20-39-50/5"	100+									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-4

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B- 3 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 2/16/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/16/06
DATE FINISHED: 2/16/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%)
0				▼		TOPSOIL						
		1-2-3	5			Loose light gray to light brown SAND (SP)						
		2-1-3	4									
		3-5-5	10				5.1	17.1				
5		5-5-3	8									
		3-2-3	5									
		3-2-4	6									
10		5-7-12	19			Medium dense to loose gray SAND (SP)						
15		1-2-2	4									
20		16-17-14	31			Medium dense to dense dark grayish brown and dark brown SAND with Silt (SP-SM) (HARDPAN)						
25		9-10-15	25									
30		12-19-18	37									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-5

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B- 4** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 2/16/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/16/06
DATE FINISHED: 2/16/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/18"	1			Very loose to loose light gray and light brown SAND (SP)						
		1-2-1	3									
		3-4-4	8									
5		3-3-5	8			Loose to medium dense light gray to gray SAND (SP)						
		5-6-6	12									
		3-4-5	9									
10		6-9-13	22									
						Loose dark grayish brown SAND with Silt (SP-SM)						
15		5-4-4	8									
						Dense to very dense brown SAND (SP)						
20		18-27-33	60				3.6	25.9				
25		10-15-15	30									
30		19-36-50/6"	100+									

BORING LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-6

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B- 5** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 2/28/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/28/06
DATE FINISHED: 2/28/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0												
	X	1/9"-1/9"	1	▼		TOPSOIL Very loose to loose light gray, brown, light brown and grayish brown SAND (SP)						
	X	5-3-4	7									
	X	2-3-4	7									
5	X	4-3-3	6									
	X	1-2-4	6									
	X	4-7-9	16			Medium dense dark grayish brown SAND with Silt with some Organics (SP-SM)						
10	X	4-6-9	15									
	X	4-7-9	16				8.7	28.2				7.6
15												
						Very dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
	X	9-20-33	53									
20												
						Medium dense to dense gray to brown SAND (SP)						
	X	9-12-17	29									
25												
	X	20-18-26	44									
30												

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-7

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B- 6 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.9
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/12"-2	2			Very loose gray SAND with Silt (SP-SM)						
		1-2-4	6			Loose to medium dense light brown SAND (SP)						
		3-3-4	7									
5		3-5-6	11									
		6-5-3	8									
		4-7-6	13			Medium dense brown to dark brown to dark grayish brown SAND with Silt (SP-SM)						
10		5-6-7	13				8.4	19.5				
15		13-12-10	22									
						Dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
20		14-16-17	33									
25		25-24-24	48									
						Dense brown SAND (SP)						
30		37-16-23	39									

BORING LOG 92625-001-01.GPJ UNIENGSC.GDT 3/22/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-8

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B-7 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.9
DATE OF READING: 2/14/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/14/06
DATE FINISHED: 2/14/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/12"-1	1			Very loose gray SAND with Silt with trace Roots (SP-SM)						
		1-1-1	2			Very loose to loose light brown SAND (SP)						
		3-4-5	9									
5		2-5-5	10			Loose to medium dense grayish brown to gray SAND (SP)						
		6-7-8	15				4.1	17.5				
		8-8-10	18									
10		10-10-9	19									
15		2-3-5	8									
						Medium dense dark grayish brown SAND with Silt (SP-SM)						
20		4-7-9	16									
						Very dense to dense brown SAND (SP)						
25		18-23-30	53									
30		14-20-22	42									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-9

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B- 8 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.6
DATE OF READING: 2/15/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/15/06
DATE FINISHED: 2/15/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/12"-1	1			Very loose dark gray SAND with Silt (SP-SM)						
		1-2-2	4			Loose to medium dense light gray SAND (SP)						
		4-6-6	12									
5		5-6-5	11									
		5-5-5	10									
		6-7-8	15			Medium dense grayish brown SAND (SP)						
10		7-8-14	21									
						Medium dense dark grayish brown SAND with Silt (SP-SM)						
15		4-7-10	17									
						Very dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
20		23-26-33	59									
						Very dense brown SAND (SP)						
25		13-29-50/5"	100+									
30		23-23-27	50									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/22/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-10

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B-9 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 2/16/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/16/06
DATE FINISHED: 2/16/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/12"-1	1			Very loose grayish brown SAND with Silt (SP-SM)						
		1/12"-1	1			Very loose light brown SAND with trace Roots (SP)						
		2-2-1	3									
5						Loose brownish gray SAND (SP)						
		1-2-3	5									
		3-5-5	10			Medium dense to very dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
		3-4-8	12									
10		5-14-15	29									
15		50/6"	100+									
						Medium dense dark brown to dark gray SAND (SP)						
20		9-10-16	26									
25		13-7-11	18									
						Dense brown SAND (SP)						
30		9-12-19	31									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-11

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-10** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.2
DATE OF READING: 2/27/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/27/06
DATE FINISHED: 2/27/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%)
0						TOPSOIL						
		1/12-1	1	▼		Very loose light gray SAND with trace Roots (SP)						
		5-6-13	19			Loose to medium dense brown SAND (SP)						
		6-8-8	16									
5		3-3-4	7									
		5-7-7	14			Medium dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
		10-13-12	25									
10		7-10-12	22									
						Very dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
15		20-21-30	51									
						Dense brown to light brown SAND (SP)						
20		8-10-22	32									
25		6-8-14	22									
30		16-23-23	46									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-12

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-11** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 2/28/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/28/06
DATE FINISHED: 2/28/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1-1-1	2			Very loose gray SAND with Silt with trace Roots (SP-SM)						
		2-2-2	4			Loose to medium dense light brown SAND (SP)						
		1-4-7	11									
5		5-8-9	17									
		7-4-5	9									
		4-5-8	13			Medium dense dark grayish brown SAND with Silt (SP-SM)						
10		8-11-18	29									
15		8-11-17	28									
						Medium dense gray SAND (SP)						
20		4-7-11	18									
						Very dense dark gray to dark brown SAND with Silt (SP-SM) (HARDPAN)						
25		28-50/6"	100+									
30		50/5"	100+									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-13

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: B-12 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.5
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		Very loose brownish gray SAND with Silt with trace Roots (SP-SM)						
		1/12-2	2			Loose to medium dense light grayish brown SAND (SP)						
		1-2-5	7									
		2-6-8	14									
5		7-7-10	17									
		7-6-6	12									
		7-6-7	13									
10		8-8-12	20			Medium dense to dense dark gray SAND with Silt (SP-SM)						
15		8-11-12	23									
20		10-15-24	39									
						Dense dark brown SAND with Silt (SP-SM) (HARDPAN)						
25		14-19-25	44									
						Medium dense dark brown SAND (SP)						
30		6-9-12	21									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/22/06

Ring Power CAT

OLYMPIAN™ GENERATORS

CAT Power Systems

Your North and Central Florida Caterpillar Dealer

ST. AUGUSTINE	TALLAHASSEE	OCALA	ORLANDO	TAMPA
500 World Commerce Prkwy	4752 Capital Circle NW	6202 N US 301/441	9901 Ringhaver Dr.	9797 Gibsonton Dr
St. Augustine, FL 32092	Tallahassee, FL 32303	Ocala, FL 34475	Orlando, FL 32824	Riverview, FL 33569
904-737-7730	**850-562-1622**	**352-732-4600**	**407-855-6195**	**813-671-3700**

SALES ***SERVICE*** ***PARTS*** ***LEASING*** ***RENTALS***

QUOTATION / SALES AGREEMENT / SECURITY AGREEMENT

DATE: **5/7/2007**

QUOTATION NO: **050707**

CUSTOMER NAME: **THE STELLAR GROUP**
ADDRESS:
CITY/STATE/ZIP: **JACKSONVILLE, FL**
PHONE: **904-899-9351**

ESTIMATED SHIPPING LEAD TIME: **12/14 WEEKS**
SHIPPING VIA/FOB: **BEST WAY**
ESTIMATED SUBMITTAL LEAD TIME: **3/4 WEEKS**
JOBSITE ADDRESS: **TBA**
CITY/STATE/ZIP:
PROJECT NAME: **TBA**

TERMS: *Full payment is due from buyer within 10 days of delivery or pickup of the equipment.*

DESCRIPTION OF MATERIAL	UNIT PRICE	EXTENSION
ONE NEW CATERPILLAR DIESEL FUELED ELECTRIC SET, RATED 40KW STANDBY, 480V, 3PH WITH THE FOLLOWING BILL OF MATERIAL: D40-4 PACKAGE SET UL LABELED AND LISTED CONTROL PANEL – AUTO START/STOP SAFETY SHUTDOWNS – HWT,LOP,OS,OC CIRCUIT BREAKER – 60A BATTERY BATTERY CHARGER JACKET WATER HEATER MUFFLER – CRITICAL, SHIPPED LOOSE FUEL TANK BASE – 24 HOUR CAPACITY REMOTE ANNUNCIATOR AUTOMATIC TRANSFER SWITCH – 100A, 3P, NEMA 1 FOB ST. AUGUSTINE FACILITY WARRANTY – 24 MONTHS		
NET GENERATOR PACKAGE – FOB ST.AUGUSTINE FACILITY	$18,481.00	

Quotation Accepted By: _____ Date: _____ Tax No.: _____

Customer: _____ Salesman's Signature: _____

DAVE GARDNER

_____

TERMS

- This offer to sell is made subject to buyer's acceptance within ten (10) days from this date (noted above).
- All quoted prices are subject to change without notice. Those in effect on the date of shipment shall prevail.
- Subject to credit approval.
- Used equipment is subject to prior sale.
- A 25% restocking fee will be assessed for all canceled orders or returned materials.
- No retainage to be withheld. Ring Power Systems is an equipment supplier and is not a sub-contractor. Our terms are Net 10 days.
- No sales tax is included.
- Buyer grants to seller a security interest in all equipment as described in this agreement until such time as payment is made in full in accordance with the terms and conditions of this agreement and in accord with the seller's credit application.
- Ring Power requires a purchase order to secure this sales agreement.

DESCRIPTION OF MATERIAL	UNIT PRICE	EXTENSION
NET 100A AUTOMATIC TRANSFER SWITCH DELIVERED	$1,687.00	

NOTE:
FLORIDA STATE SALES TAX, IF APPLICABLE, ARE NOT INCLUDED.
NO MECHANICAL OR ELECTRICAL INSTALLATION IS INCLUDED.
OFFICIAL START-UP EXPENSE BY LOCAL CATERPILLAR DEALER IS NOT INCLUDED. START-UP FOR A UNIT THIS SIZE USUALLY RUNS ABOUT $1,500.00
PRICE QUOTED ABOVE INCLUDES THE STANDARD SERVICE FEE FOR PUTTING A NEW UNIT IN ANOTHER CATERPILLAR DEALER'S TERRITORY.

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-14

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-13** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 2/14/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/14/06
DATE FINISHED: 2/14/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL						
		1-3-3	6			Loose to very loose gray to light brown SAND (SP)						
		3-3-3	6									
		3-3-3	6									
5		2-1-1	2			Medium dense grayish brown SAND (SP)						
		2-4-7	11									
		5-7-9	16				4.5	19.5				
10		6-6-9	15			Medium dense to dense grayish brown to dark grayish brown SAND with Silt (SP-SM)						
15		4-4-8	12									
20		16-16-16	32									
25		12-14-18	32									
						Dense brown SAND (SP)						
30		14-21-23	44									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-15

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-14** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 2/15/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/15/06
DATE FINISHED: 2/15/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT (%)
0				▼								
	X	1/12"-1	1			Very loose grayish brown SAND with trace Roots (SP)						
	X	2-2-4	6			Loose to medium dense light brown SAND (SP)						
	X	4-7-8	15									
5	X	5-5-6	11									
	X	5-5-4	9									
	X	6-8-10	18			Medium dense brownish gray SAND (SP)						
10	X	12-12-15	27			Medium dense to dense dark grayish brown SAND with Silt (SP-SM)						
	X	5-7-8	15									
15												
	X	8-15-22	37									
20												
	X	50/6"	100+			Very dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
25												
	X	10-17-24	39			Dense brown SAND (SP)						
30												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-16

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-15** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.6
DATE OF READING: 2/16/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/16/06
DATE FINISHED: 2/16/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL						
		1/12"-1	1			Very loose brownish gray SAND with Silt with trace Roots (SP-SM)						
		1-1-1	2			Very loose to loose light brown to brown SAND (SP)						
		1-2-1	3				3.1	23.8				
5		1-2-2	4			Loose to medium dense dark brown SAND with Silt (SP-SM)						
		2-2-2	4									
		2-2-3	5									
10		2-4-9	13									
						Dense dark grayish brown SAND with Silt (SP-SM) (HARDPAN)						
15		15-19-16	35									
						Medium dense to very dense brown SAND (SP)						
20		6-6-5	11									
25		8-16-21	37									
30		14-19-28	47									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-17

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-16** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.2
DATE OF READING: 2/27/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/27/06
DATE FINISHED: 2/27/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%)
0												
	X	1/18"	1	▼		Very loose light gray SAND with trace Roots (SP)						
	X	2-2-2	4			Loose to medium dense light brown SAND (SP)						
	X	3-4-6	10									
5	X	4-5-4	9									
	X	4-5-7	12									
	X	8-12-14	26			Medium dense to dense gray SAND (SP)						
10	X	12-14-18	32									
	X	8-9-12	21			Medium dense dark grayish brown SAND with Silt (SP-SM)						
15												
	X	5-9-16	25									
20												
	X	8-11-16	29			Medium dense brown SAND (SP)						
25												
	X	8-9-11	20									
30												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-18

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-17** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.5
DATE OF READING: 2/28/06
EST. W.S.W.T. (ft):

DATE STARTED: 2/28/06
DATE FINISHED: 2/28/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
		1/18"	1			Very loose brown and gray SAND with few Roots (SP)						
		WOH-1/18"	1									
		1-1-1	2									
5						Loose grayish brown SAND with Silt (SP-SM)						
		1-2-4	6				6.8	21.3				
		2-3-5	8									
		5-9-10	19			Loose to medium dense dark brown and dark grayish brown SAND with Silt (SP-SM)						
10		9-11-14	25									
						Loose dark brown SAND with Silt (SP-SM)						
15		2-3-3	6									
						Medium dense dark gray SAND with Silt (SP-SM)						
20		8-9-16	25									
						Dense dark brown SAND (SP)						
25		13-22-26	48									
30		10-19-28	47									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-19

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-18** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.8
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL						
		1/12"-1	1			Very loose to medium dense light gray and light brown SAND with trace Roots (SP)						
		1-1-2	3				5.2	23.1				
		2-3-6	9									
5		5-8-10	18									
		7-4-2	6									
		2-3-4	7									
10		6-7-8	15			Medium dense dark grayish brown SAND with Silt (SP-SM)						
		2-1-1	2			Very loose dark grayish brown Silty SAND with some Organics (SM)	13.4	30.2				5.2
15												
						Medium dense to dense dark brown and dark grayish brown SAND with Silt (SP-SM)						
20		3-5-9	14									
25		11-14-19	33									
30		8-10-12	22									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/22/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-20

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **B-19** SHEET: **1 of 3**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 2.9
DATE OF READING: 3/15/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/15/06
DATE FINISHED: 3/15/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1586

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0												
		1-1-2	3			Very loose to medium dense light gray to brown to light brown SAND with trace Roots (SP)						
		2-2-4	6	▼								
		3-6-7	13									
5		3-4-5	9									
		2-4-7	11			Medium dense brownish gray SAND (SP)						
		3-6-8	14									
10		4-7-9	16			Medium dense dark grayish brown SAND with Silt (SP-SM)						
						Very loose dark grayish brown SAND with Silt with trace Organics (SP-SM)						
15		1-1-1	2				10.4	29.3				
						Medium dense brownish gray SAND (SP)						
20		3-6-10	16									
						Dense brownish gray SAND with Silt (SP-SM)						
25		8-18-21	39									
						Medium dense to loose brown SAND (SP)						
30		5-10-12	22									
35		5-9-11	21									
40		6-13-16	29									

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/29/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-21

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

BORING DESIGNATION: **B-19** SHEET: **2 of 3**
SECTION: TOWNSHIP: RANGE:

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
40												
45	X	3-4-10	14									
50	X	2-2-3	5				5.6	30.0				
						Loose brown SAND with Silt (SP-SM)						
55	X	2-3-5	8									
						Loose light grayish brown SAND with Clay Layers (SP)						
60	X	2-4-5	9									
						Loose brownish gray Clayey SAND (SC)						
65	X	4-4-5	9									
						Very loose gray very Clayey SAND (SC)						
70	X	WOH-1-1	2									
						Medium dense brown SAND (SP)						
75	X	3-4-7	11									
						Very loose brownish gray SAND with Clay (SP-SC)						
80	X	WOH	0				10.9	41.6				

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/29/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-22

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

BORING DESIGNATION: **B-19** SHEET: **3 of 3**
SECTION: TOWNSHIP: RANGE:

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
80												
						Loose dark gray Clayey SAND (SC)						
85	X	WOH-4	4									
						Medium dense gray Clayey SAND (SC)						
90	X	1-4-7	11									
						Stiff light gray CLAY (CL) (MARL)						
95	X	2-3-12	15				64.5	35.2				
						Dense light greenish gray very Clayey SAND (SC) (MARL)						
100	X	12-16-25	41				30.7	13.1				
						Very dense light greenish gray Clayey SAND with trace cemented Sand (SC) (MARL)						
105	X	14-25-39	64				22.5	11.6				
						Dense to very dense greenish gray very Clayey SAND CLAY with Limestone (SC) (MARL)						
110	X	10-15-19	34									
115	X	11-27-98	125				34.9	17.4				

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UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-20

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A-1 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.9
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL Light grayish brown SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-21

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A-2 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CONT (%)
0				▼		TOPSOIL						
						Brown SAND with Silt (SP-SM)						
						Light gray SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-22

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 3 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
						Dark grayish brown SAND with Silt with few Organics (SP-SM)	6.6	26.3				4.2
						Light brownish gray SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-23

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 4 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.9
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
						Light gray SAND with trace Roots (SP)						
						Brown to light brown SAND (SP)						
5												

BORING LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-24

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 5 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%)
0				▼		TOPSOIL						
						Light gray to light brown SAND with trace Roots (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-25

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 6 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.8
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CONT (%)
0						TOPSOIL						
						Gray SAND with trace Roots (SP)						
				▼		Light grayish brown SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-26

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A-7 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.5
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
						Grayish brown SAND with Silt with trace Roots (SP-SM)						
						Light brown to light gray SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-27

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 8 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.2
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%
0				▼		TOPSOIL						
						Dark grayish brown SAND with Silt with trace Organics (SP-SM)						
						Dark brown SAND (SP)						
5						Gray SAND with Silt (SP-SM)						

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-28

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A- 9 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.0
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL						
						Dark gray SAND with Silt with trace Roots (SP)						
						Light gray to gray SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
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PAGE:	A-29

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **A-10** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.9
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT (%)
0				▼		TOPSOIL						
						Grayish brown SAND with Silt with trace Roots (SP-SM)						
						Light brown SAND(SP)						
5						Grayish brown SAND with Silt with trace Roots (SP-SM)						

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
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PAGE:	A-30

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **A-11** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 1.3
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CONT (%)
0				▼		TOPSOIL						
						Grayish brown SAND (SP)						
						Light grayish brown SAND (SP)						
5												

BORING LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-31

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: A-12 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.8
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0				▼		TOPSOIL	6.7	23.8				3.9
						Brown SAND with Silt with trace Roots and with few Organics (SP-SM)						
						Light gray SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/22/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-32

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: *GROUND WATER ENCOUNTERED AT GROUND SURFACE

BORING DESIGNATION: A-13 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): GL*
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CONT (%)
0						TOPSOIL						
						Dark grayish brown SAND with Silt (SP-SM)	10.0	21.6				3.6
						Gray SAND (SP)						
5						Dark grayish brown SAND with Silt (SP-SM)						

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-33

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS: *GROUND WATER ENCOUNTERED AT GROUND SURFACE

BORING DESIGNATION: A-14 SHEET: 1 of 1
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): GL*
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						TOPSOIL						
						Dark grayish brown SAND with Silt with trace Organics (SP-SM)						
						Brown SAND (SP)						
5						Gray SAND with Silt (SP-SM)						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	92625-001-01
REPORT NO.:	458560
PAGE:	A-34

PROJECT: GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY- LAKE CITY, FLORIDA
LAKE CITY, FLORIDA

CLIENT: US COLD STORAGE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING DESIGNATION: **A-15** SHEET: **1 of 1**
SECTION: TOWNSHIP: RANGE:

G.S. ELEVATION (ft):
WATER TABLE (ft): 0.7
DATE OF READING: 3/1/06
EST. W.S.W.T. (ft):

DATE STARTED: 3/1/06
DATE FINISHED: 3/1/06
DRILLED BY: UES
TYPE OF SAMPLING: ASTM D 1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N (BLOWS/ FT.)	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG CON (%)
0				▼		TOPSOIL						
						Gray SAND with trace Roots (SP)						
						Brown to light brown SAND (SP)						
5												

BORING_LOG 92625-001-01.GPJ UNIENGSC.GDT 3/17/06

UNIVERSAL
ENGINEERING SCIENCES

KEY TO BORING LOGS

SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
N-Value	No. of Blows of a 140-lb. Weight Falling 30 Inches Required to Drive Standard Spoon 1 Foot
WOR	Weight of Drill Rods
WOH	Weight of Drill Rods and Hammer
	Sample From Auger Cuttings
	Standard Penetration Test Sample
	Thin-wall Shelby Tube Sample (Undisturbed Sampler Used)
% REC	Percent Core Recovery from Rock Core Drilling
RQD	Rock Quality Designation
	Stabilized Groundwater Level
	Seasonal High Groundwater Level
NE	Not Encountered
BT	Boring Terminated
-200	Fines Content or % Passing No. 200 Sieve
MC	Moisture Content
LL	Liquid Limit
PI	Plasticity Index
K	Coefficient of Permeability
Org. Cont.	Organic Content

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve *	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels and gravel-sand-silt mixtures
			GC	Clayey gravels and gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS 5% or less passing No. 200 sieve	SW**	Well-graded sands and gravelly sands, little or no fines
			SP**	Poorly graded sands and gravelly sands, little or no fines
		SANDS with 12% or more passing No. 200 sieve	SM**	Silty sands, sand-silt mixtures
			SC**	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes the No. 200 sieve *	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diamicaceous fine sands or silts, elastic silts
			CH	Inorganic clays or clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
			PT	Peat, muck and other highly organic soils

* Based on the material passing the 3-inch (75 mm) sieve
** Use dual symbol (such as, SP-SM and SP-SC) for soil with more than 5% but less than 12% passing the No. 200 sieve

RELATIVE DENSITY
(Sands and Gravels)

Very Loose -Less than 4 Blows / Foot
Loose - 4 to 10 Blows / Foot
Medium Dense - 11 to 30 Blows / Foot
Dense - 31 to 50 Blows / Foot
Very Dense - More than 50 Blows / Foot

CONSISTENCY
(Silts and Clays)

Very Soft - Less than 2 Blows / Foot
Soft - 2 to 4 Blows / Foot
Firm - 5 to 8 Blows / Foot
Stiff - 9 to 15 Blows / Foot
Very Stiff - 16 to 30 Blows / Foot
Hard - More than 30 Blows / Foot

RELATIVE HARDNESS
(Limestone)

Soft - 100 Blows for more than 2"
Hard - 100 Blows for less than 2"

MODIFIERS

These Modifiers Provide Our Estimate of the Amount of Minor Constituents (Silt or Clay Size Particles) in the Soil Sample

Trace - 5% or Less
With Silt or With Clay - 6% to 11%
Silty or Clayey - 12% to 30%
Very Silty or Very Clayey - 31% to 50%

These Modifiers Provide Our Estimate of the Amount of Organic Components In the Soil Sample

Trace - Less than 3%
Few - 3% to 4%
Some - 5% to 8%
Many - Greater than 8%

These Modifiers Provide Our Estimate of the Amount of Other Components (Shell, Gravel, Etc.) In the Soil Sample

Trace - 5% or Less
Few - 6% to 12%
Some - 13% to 30%
Many - 31% to 50%

FIELD EXPLORATION PROCEDURES

Standard Penetration Test Boring

The penetration boring was made in general accordance with the latest revision of ASTM D 1586, "Penetration Test and Split-Barrel Sampling of Soils". The boring was advanced by rotary drilling techniques using a circulating bentonite fluid for borehole flushing and stability. At 2 ½ to 5 foot intervals, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom and driven 18 inches into the soil using a 140 pound hammer falling on the average 30 inches per hammer blow. The number of blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less if in hard rock-like material), the sampler was retrieved from the borehole and representative samples of the material within the split-barrel were placed in glass jars and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where they were examined by our engineer in order to verify the driller's field classification.

Auger Boring

The auger boring was performed mechanically by the use of a continuous-flight auger attached to the drill rig and in general accordance with the latest revision of ASTM D 1452, "Soil Investigation and Sampling by Auger Borings". Representative samples of the soils brought to the ground surface by the augering process were placed in glass jars, sealed and transported to our laboratory where they were examined by our engineer to verify the driller's field classification.

LABORATORY TESTING PROCEDURES

Natural Moisture Content

The water content of the sample tested was determined in general accordance with the latest revision of ASTM D 2216. The water content is defined as the ratio of "pore" or "free" water in a given mass of material to the mass of solid material particles.

Percent Fines Content

The percent fines or material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with the latest revision of ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Organic Loss on Ignition (Percent Organics)

The organic loss on ignition or percent organic material in the sample tested was determined in general accordance with ASTM D 2974. The percent organics is the material, expressed as a percentage, which is burned off in a muffle furnace at 550° Celsius.

APPENDIX B

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

CONSTRAINTS AND RESTRICTIONS

CONSTRAINTS AND RESTRICTIONS

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data

presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last

reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of investigation. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.

APPENDIX C

Ground Penetrating Radar Geophysical Testing
Results to Determine General Sinkhole Probability

UNIVERSAL
ENGINEERING SCIENCES
Consultants in: Geotechnical Engineering • Environmental Sciences
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

March 27, 2006

United States Cold Storage, Inc.
100 Dobbs Lane, Suite 102
Cherry Hill, New Jersey 08034

Attn: Mr. Charles Toogood

Reference: Geophysical Exploration and Geologic Characterization
Proposed US Cold Storage Facility
Lake City, Columbia County, Florida
UES Project No. 92625-001-01

Dear Mr. Toogood:

Universal Engineering Sciences, Inc. (UES) has completed a limited Geophysical Exploration and Geologic Characterization for the above-referenced project. The geophysical exploration was conducted to aid in the evaluation of near surface geological conditions which may associated with deeper karst *or sinkhole* activity. The following report presents the results of our field exploration with a geologic interpretation of those results with respect to the project characteristics as provided to us. This information should be coupled with a final geotechnical exploration to fully assess geotechnical considerations for the proposed development.

We appreciate the opportunity to have worked with you on this project and look forward to a continued association. Please do not hesitate to contact us if you should have any questions, or if we may further assist you as your plans proceed.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization No. 549/GB33

James Funderburk, P.G.
Geophysical Services Manager
Professional Geologist No. 2354
Date: 03/27/06

Attachments: Figures 1-3

Proposed US Cold Storage Facility
UES Project No. 92625-001-01
February 2, 2006

1.0 INTRODUCTION

UES has completed a limited geophysical exploration and geological characterization for the proposed US Cold Storage Facility, which is located on US Highway 90, in Lake City, Columbia County, Florida. Survey methodology included collection of Ground Penetrating Radar (GPR) data, available literature review, and site reconnaissance. The goal of the exploration was to characterize the existing site geology in light of proposed development, with special attention given to karst or sinkhole activity.

The field work and collection of the Ground Penetrating Radar (GPR) field data was conducted during March 9 and 10, 2006. The GPR survey was performed within previously cleared paths within the approximate envelope of the proposed freezer/cooler structure located in the northern portion of the site. A general Site Location Plan and GPR Survey Plan are attached (Figures 1,2).

The site currently appears to be undeveloped and covered with mature growth trees. UES cleared several paths prior to the collection of the GPR data. The site is bound on the south by Us Highway 90 and an existing railway to the north. Lake City Municipal Airport is located immediately to the southwest.

2.0 GEOLOGIC SETTING

Geomorphology

The subject site sits within the Northern Highlands, a physiographic region characterized by thick sequences of clayey soils overlying limestone bedrock at depths greater than 100 feet. Drainage patterns are moderately to well developed and widespread karst features are less common than typical western and central Florida regions. Elevations within the vicinity are generally between +150 and +200 feet NGVD. The elevation of the site is approximately +190 to +200 feet NGVD. This geomorphic area is flanked to the southwest by the Gulf Coastal Lowlands.

Stratigraphy

The surficial soils blanketing the surface in the region are comprised of Pleistocene to Recent undifferentiated quartz sands. In Columbia County, these marine sediments are described as undifferentiated fine to coarse grained and may contain locally reworked clasts of underlying strata.

The Mid Miocene Hawthorn Group underlies the surficial sands at shallow depths of 10 to 20 feet below native elevations. The Hawthorn group is described as variable and includes clays, sands may be locally phosphatic to cherty.

The Suwannee Limestone underlies the upper sequences of surficial sands and lower clays and is described as a white to tan marine very pure limestone deposited during the early Late Eocene. This limestone unit is generally found at depths of 160 to 200 feet within the local vicinity in central Columbia County.

3.0 GROUND PENETRATING RADAR

The specific target of the GPR survey was the contact between the upper surficial sands and underlying Miocene clayey materials. Oftentimes, deeper karst or sinkhole activity are expressed as breaches within the near surface clays. Should significant shallow features be imaged within the GPR data, then deeper soil borings would be placed within the features.

Methodology

Ground Penetrating Radar (GPR) is a geophysical exploration tool used to provide a graphic cross-sectional view of subsurface conditions. This cross-sectional profile is created from the reflections of repetitive short-duration electromagnetic (EM) waves which are generated by an antenna in contact with the ground surface as the antenna is pulled in linear traverses across the ground surface. The reflections occur at the subsurface contacts between materials with differing electrical properties. The electrical property contrast that causes the reflections is the dielectric permittivity, which is directly related to the electrical conductivity of the material. The GPR method is commonly used to identify such targets as underground utilities, underground storage tanks, buried debris, or geological features. This recorded information can be used to assist in setting locations for geotechnical borings and characterizing the shallow expressions of deeper geologic conditions, such as karst activity.

The greater the electrical contrast between the surrounding earth materials and the target of interest, the greater the amplitude of the reflected return signal. Unless the buried object/target of interest is highly conductive, only part of the signal energy is reflected back to the antenna located on the ground surface with the remaining portion of the signal continuing to propagate downward to be reflected by deeper features. If there is little or no electrical contrast between the target of interest and the surrounding earth materials, it would be very difficult if not impossible to identify the target object or horizon using GPR.

The GPR unit consists of a set of integrated electronic components which transmits high frequency (100 to 1500 megahertz [MHz]) electromagnetic waves into the ground and records the energy reflected back to the ground surface. The GPR system is comprised of an antenna, which serves as both a transmitter and receiver, and a profiling recorder that both processes the data and provides a graphical display of the data.

The depth of penetration of the GPR is very site specific and is controlled by two primary factors: subsurface soil conditions and antenna frequency. The GPR signal is attenuated (absorbed) as it passes through earth materials. As the energy of the GPR signal is diminished

due to attenuation, the energy of the reflected waves is reduced, eventually to a level where the reflections can no longer be detected. In general, the more conductive the earth materials, the greater the GPR signal attenuation. In Florida, typical soil conditions which severely limit the GPR signal penetration are near-surface clays, organic materials, and the presence of sea water in the soil pore water space.

A GPR survey is conducted along survey lines (transects) which are measured paths along which the GPR antenna is moved. Known reference points (e.g., property corners, existing boring locations, etc.) are placed on a master map, which includes traces of the GPR transects overlying the survey geometry. This survey map allows for correlation between the GPR data and the position of the GPR antenna on the ground.

During this project, differential GPS coordinates were coupled with every GPR sounding location. These positions are illustrated in Figure 2. For large geological characterization surveys, the GPR survey is conducted along a set of parallel oriented transects, However, due to accessibility issues, GPR data were collected where the GPR unit could be towed within the cleared areas. GPR data was primarily collected within the proposed building envelope located along the existing railway tracks in the north of the property.

The target features observed within the virtual GPR profiles that are most commonly associated with potential sinkhole activity are:

- A down-warping of GPR reflector sets, that are associated with suspected lithological contacts, towards a common center. Such features typically have a bowl or funnel shaped configuration and are often associated with deflection of the horizontal bedding of the overlying sediment horizons caused by the migration of sediments into voids in the underlying limestone. In addition to karst related subsidence and apparent down-warping, buried depressions caused by differential subsidence over buried organic deposits and debris may also cause these observed features.

- A localized significant increase in the depth of penetration and/or amplitude of the GPR signal response. The increase in GPR signal penetration depth or amplitude is often associated with a localized increase in sand content at depth. Thicker surficial sands may be associated with subsidence, erosion, or loss of the clayey soil horizons.

- An apparent discontinuity in GPR reflector sets or missing reflector sets, that are associated with suspected or previously imaged lithological contacts. The apparent discontinuities and/or disruption of the GPR reflector sets may be associated with the downward migration of sediments as described above.

The greater the number and severity of the above features or a combination of these features, the greater the likelihood that the identified feature may be associated with relict or currently active sinkhole conditions.

Depth estimates to the top of the lithological contacts or targets of interest are derived by dividing the time of travel of the GPR signal from the ground surface to the top of the feature by the inverse of the velocity (time per unit length) of the GPR signal. The velocity of the GPR signal is usually obtained for a given geographic area and earth material from published sources. In general, the accuracy of the GPR-derived depth estimates average about ±25 percent of the total depth. The maximum effective depth of exploration, based on measured groundwater regimes and attenuation of the GPR signal and soil types encountered at the subject site, is estimated at approximately 22 to 25 feet.

Results and interpretation of the collected GPR profiles are discussed below in the Site Specific Evaluation Section.

Although the GPR is very useful in locating significant lithologic soil changes, strata thickness, and inferred subsurface anomalies, the GPR cannot identify the nature of earth materials nor their condition (i.e., loose vs. dense sand, soft vs. stiff clay). The GPR data is best used in conjunction with other geotechnical and physical tests, such as in-situ soil borings, to constrain the interpretation of the virtual cross-section profiles.

4.0 SITE SPECIFIC EVALUATION

Geophysical Survey Results

Within a majority of the collected GPR transects, the collected GPR transects imaged two distinct subsurface reflective horizons at approximately 40 and 160 nanoseconds. Based on our knowledge of local geologic conditions, these two imaged reflective horizons are interpreted as transitions from relatively sandy conditions to underlying clayey horizons.

These two imaged transitions remained constant throughout the collected GPR transects collected at the site. No areas displaying significant increases in depth of penetration of the GPR signal nor down-warping of the imaged horizons were imaged within the building envelope.

It is noted that the absence of features nor interpretable horizons does not necessarily suggest the *absence* of potential for sinkhole development. Rather, it is commented that areas with characteristic features, in general, have a higher probability of being associated with karst or sinkhole activity.

A sample portion of a GPR transect collected within the building envelope is attached (Figure 3).

Site Sinkhole Indicators

Based on the limited cursory, non-intrusive geophysical services performed at the site and associated literature review, **it is our opinion that sinkhole potential for the site is average for the general area, which is considered low.**

The geologic setting of the area is generally not conducive to sinkhole activity. Thicker sequences of clays, as found across the site and within the general vicinity, generally act as a barrier to considerable groundwater flow. Also, due to the cohesive nature of the relatively clayey sediments comprising the overburden, potential for cover collapse events are considered minimal.

No conditions were imaged in the collected GPR data that may be associated with the shallow expression of deeper karst or sinkhole activity.

5.0 DEVELOPMENT CONSIDERATIONS

Specifically within the subject site, it appears that the potential for sinkhole activity may be considered average for the area, which is low. No conditions were encountered within our exploration to suggest that sinkhole potential would be higher than what would be considered normal for the general vicinity and region.

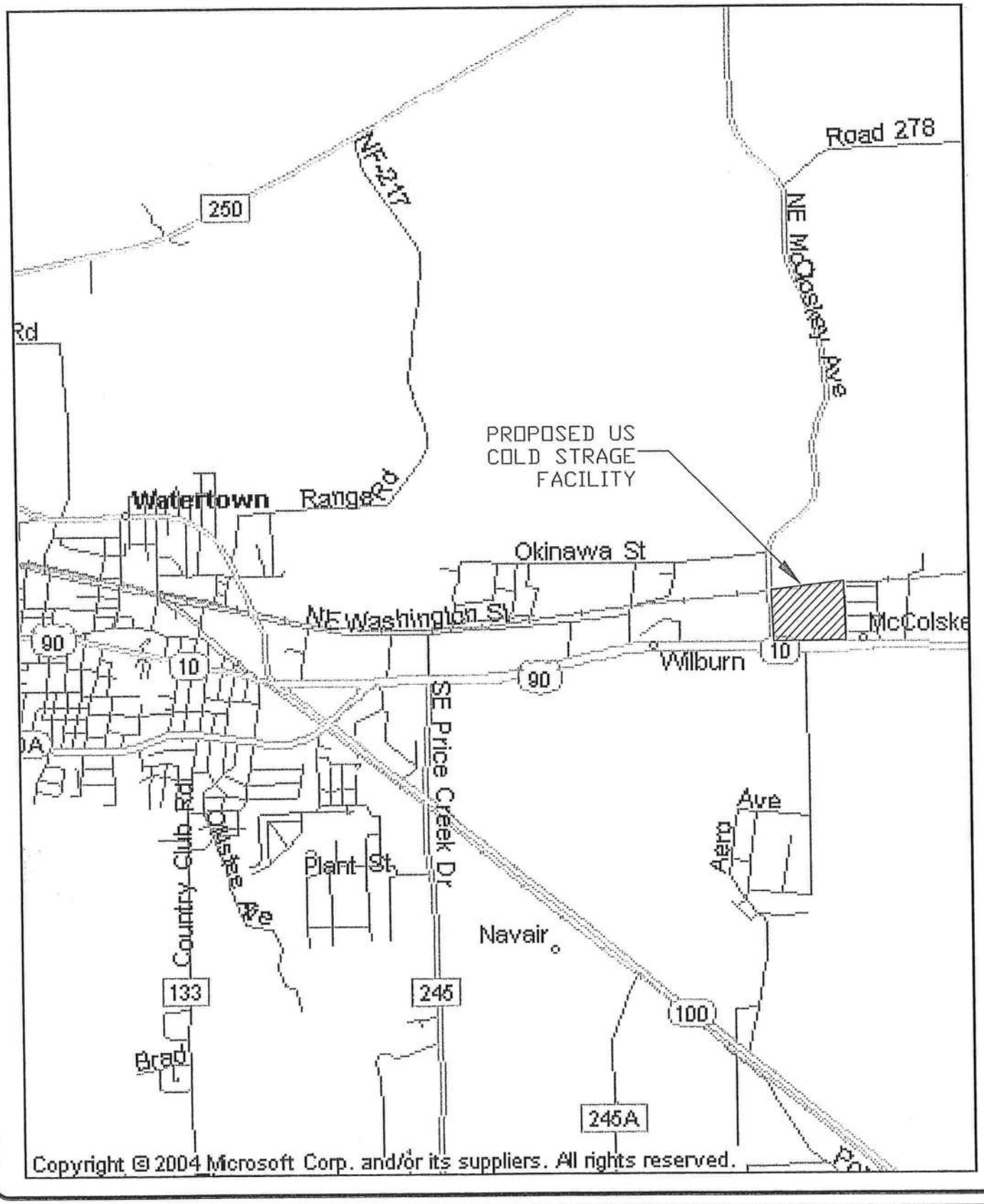
The geologic and hydrogeologic character of the site presents no significant considerations outside of what would be considered typical that may hinder the development of the parcel. Final geotechnical recommendations should describe clearing and ground preparation recommendations.

6.0 CONCLUSIONS

The limited geophysical survey and geologic characterization at the proposed US Cold Storage Facility provided helpful insight into the nature of the geologic subsurface.

Across the site, two reflective horizons were imaged which were interpreted as transitions from relatively sandy soils to soils with increased clay content. No significant indicators were imaged with the recorded profiles that may be associated with deeper sinkhole activity.

In our opinion, the data collected and analyzed during the geophysical survey as well as the geologic and hydrogeologic research conducted during the assessment indicate that on a preliminary basis, the site has low sinkhole potential. Subsequently, cover collapse or ravelling sinkhole potential beneath the proposed building and roadway should be minimal.



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PROPOSED US COLD STORAGE FACILITY
US HIGHWAY 90 AND NE McCLOSKEY AVE
LAKE CITY, COLUMBIA COUNTY, FLORIDA

SITE LOCATION PLAN

DRAWN BY: JF	DATE: MAR 27, 2006	SURVEY BY: CB	DATE: MAR 9, 2006
SCALE: NOT TO SCALE	UES PROJECT NO: 92625-001-01		FIGURE 1

GPR TRANSECTS ILLUSTRATED IN BLUE. ACTUAL GPR POSITIONS DETERMINED WITH DIFFERENTIAL GPS COUPLED WITH GPR UNIT. ACCURACY ESTIMATED AT SUB-METER.

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PROPOSED US COLD STORAGE FACILITY
US HIGHWAY 90 AND NE McCLOSKEY AVE
LAKE CITY, COLUMBIA COUNTY, FLORIDA

GPR SURVEY PLAN

DRAWN BY: JF	DATE: MAR 27, 2006	SURVEY BY: CB	UES PROJECT NO: 92625-001-01		FIGURE 2
SCALE: NOT TO SCALE				DATE:	MAR 9, 2006

SAMPLE GPR TRANSECT FROM GPR PROFILE, ILLUSTRATING SUBSURFACE REFLECTIVE HORIZONS AT 40 AND 160 NANOSECONDS. THESE REFLECTIONS ARE INTERPRETED AS CONTINUOUS TRANSITIONS IN STRATA. SEE TEXT FOR TESTING METHODOLOGY AND DISCUSSION OF FINDINGS/INTERPRETATION.

UNIVERSAL
ENGINEERING SCIENCES

PROPOSED US COLD STORAGE FACILITY
US HIGHWAY 90 AND NE McCLOSKEY AVE
LAKE CITY, COLUMBIA COUNTY, FLORIDA

SAMPLE GPR TRANSECT

DRAWN BY: JF	DATE: MAR 27, 2006	SURVEY BY: CB	DATE: MAR 9, 2006
SCALE: NOT TO SCALE	UES PROJECT NO: 92625-001-01		FIGURE 3

THE STELLAR GROUP

April 11, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

Per our telephone conversation as of April 11, 2007, this is to confirm the roof deck type will be a minimum of 22 GA. Grade "C" 33 KSI min. as per the Firestone letter.

Sincerely yours,
THE STELLAR GROUP

Rex Smith
Design Project Manager

RRS/clw

Enclosure: Firestone letter

THE STELLAR GROUP

April 10, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

Please review the attached documents in reference to the use of a 1/8" per foot roof slope. As an alternate design and method of construction, per section 104.11 of the Florida Building Code, we propose increasing the size of gutters and downspouts to allow better drainage from the roof. A letter from Firestone confirming the 1/8" per foot of slope is acceptable, is attached.

Sincerely yours,
THE STELLAR GROUP

Rex Smith
Design Project Manager

4-10-07

RRS/clw

Enclosure: Gutter & Downspout Calculations
Roof Plan
Firestone letter
April 02, 2007 letter

2900 Hartley Road, Jacksonville, Florida 32257 • Telephone (904) 260-2900
www.thestellargroup.com

Firestone
BUILDING PRODUCTS COMPANY

05 April 2007

Kevin Dufresne
Divisional Vice President
The Stellar Group
2900 Hartley Road
Jacksonville, FL 32257

RE: United States Cold Storage - Lake City, Florida

To Whom It May Concern:

The following assembly has been reviewed and found to be acceptable if installed in accordance with current Firestone specifications and details. The assembly will be eligible for the Firestone 15-Year Red Shield Warranty upon inspection and acceptance of the installed assembly by Firestone.

Roof Assembly	**Firestone UltraPly .060 TPO 120 MAS Roof System**
Construction:	New
Deck Type:	Min. 22 Ga. Grade "C" 33 KSI Min.
Slope:	1/8" rise per one foot or travel
Insulation:	3.3" Firestone ISO 95 +GL over Office/welfare, 4" over Cold Dock, 8" over Freezer fastened 5 per 4'X8' Board with AP or HD Fasteners throughout
Field Sheets:	9' 6" Seam Spacing Fastened 12" o. c. with Firestone HD Fasteners and HD Plates in the Seam
Perimeter Half Sheets	5' Half Sheets fastened 4' 6" o. c. in seam fastened at 12" o c. with Firestone HD Fasteners and HD Plates in the Seam per Firestone Specifications

Note: It is the responsibility of a design professional to specify bar joist/beam spacing, deck and deck attachment and all other roofing related requirements to insure that the roofing assembly specified will meet the performance requirements for the building on which it is to be installed.

Please refer to the current Firestone Roofing Systems Technical Specifications Manual for detailed assembly information and requirements. If you have any questions, or require further assistance, please do not hesitate to contact me at 1-800-428-4511 ext. 57096

Sincerely
Firestone Building Products,

Kurt E. Webb

Technical Coordinator
Southern Region

cc: Bill Jordan
Rex Smith
File

THE STELLAR GROUP

Gutter and Downspout
For
US Cold Storage
New Facility
Lake City, Florida

Florida Plumbing Code 2004:
Rainfall Rate for 100-year = 4.5 inches/hr.
Building Roof with 1/8"/ft. slope on both direction for Roof "A" & "B" with equal distance.

Roof "A":
426'-8" wide x 165'-1" long = 70,436 SQ. FT.
426'-8" divided by 18 sections = 23'-8 ½" (width for each section)
23'-8 ½" x 165'-1" = **3,914 sq. ft. per section**

Gutter size:
Table 1106.6 Sizes for semicircular roof gutter with 1/8 unit vertical horizontal (1-percent slope): 10" diameter gutter required for 4, 080 sq. ft. area (w/ 5-in/hr. rainfall) = 39.25 sq. in.
Roof "A" gutter: Use 8"W x 7"H cont. gutter = 56 sq. in.
This is over sized by 42%

Downspout size:
Table 1106.2 Size for vertical conductors and Leader required for 5" diameter of downspout with 5-in/.hr rainfall and an area of 6,920 sq. ft. = 20 sq. in.
Roof "A" downspout size: Use 6" x 6" of downspout at (19) locations = 36 sq. in.
Can handle an area of 10,800 sq. ft. each downspout which is over sized by more than 100%.

Roof "B" is similar to Roof "A" with the same size of gutter and number of downspout.

4-10-07

2900 Hartley Road, Jacksonville, Florida 32257 • Telephone (904) 260-2900
www.thestellargroup.com

Table 1106.2
Size of Vertical Conductors and Leaders

Diameter of Leader (inches)	Horizontally Projected Roof Area (square feet) Rainfall Rate (inches per hour)											
	1	2	3	4	**5**	6	7	8	9	10	11	12
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	**6,920**	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,600

Table 1106.6
Size of Semicircular Roof Gutters

1/8 Unit Vertical 12 Units Horizontal (1-percent slope)

Diameter of Leader (inches)	Horizontally Projected Roof Area (square feet) Rainfall Rate (inches per hour)					
	1	2	3	4	**5**	6
3	960	480	320	240	192	160
4	2,040	1,020	681	510	408	340
5	3,520	1,760	1,172	880	704	587
6	5,440	2,720	1,815	1,360	1.085	905
7	7,800	3,900	2,60	1,950	1,560	1,300
8	11,200	5,600	3,740	2,800	2,240	1,870
10	20,400	10,200	6,800	5,100	**4,080**	3,400

RODGERS ARCHITECTS
"A Professional Resource for Asset Management"

3 May 2007

Mr. Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: United States Cold Storage Warehouse

Dear Mr. Haltiwanger,

Mr. Rex Smith, with The Stellar Group asked me to look at the roof design for the construction of a new facility for United States Cold Storage. It is my understanding they are requesting the use of 1/8" slope for the building.

The key for any roof design is positive drainage. From my inspection of the drawings provided by the Stellar Group, it appears there will be few penetrations or roof-top equipment to impede the flow of water off this roof. Stellar also provided me with calculations of the gutters and downspouts design, which appear to be more than adequate to handle rainfall loads.

We recommend Columbia County consider approving this request.

RODGERS ARCHITECTS LLC (www.rodgersarchitects.net)

Rodgers Architects is a firm specializing in the inspection, design and construction management of all phases of building waterproofing. Roof design is our specialty. Rodgers Architects is headed by Darryl Rodgers, AIA, RCI. He has over 24 years experience in the roofing industry as both an owner's representative and roofing consultant. Currently, Mr. Rodgers is the Treasurer for the Florida Chapter of the Roof Consultant Institute. Rodgers Architects has no affiliation with either The Stellar Group or with United States Cold Storage.

Sincerely yours,

RODGERS ARCHITECTS

Darryl Rodgers, AIA, RCI
Architect

10175 Fortune Parkway Suite 1105 Jacksonville, FL 32256 www.rodgersarchitects.net Ph: 904.519.8018 Fax: 904.519.8019

755-7744

April 10, 2007

Johnny

Communication in regard to The Stellard Group, United States Cold Storage Project #21003019

Mr. Rex Smith (Design Project Manger) with The Stellard Group request that the roof slope of the warehouse be design using a 1/8" per foot of slope.

Chapter 15 of the Florida Building code 2004 requires roof slope ¼" per foot of slope.

1507.12.1 Slope.
Thermoset single-ply membrane roofs shall have a design slope of a minimum of one-fourth unit vertical in 12 unit's horizontal (2-percent slope) for drainage.

As the plan examiner I have ask Mr. Smith to provide supporting information which would merit the code deviation. Mr. Smith has provided the following attached documentation as supporting information:

Letter #1: An introduction from The Stellard Group requesting a 1/8" roof slope with the advantages for using this roof slope design.

Letter #2: This is an eleven page product approval report of the material which will be used on the warehouse as side wall panel's material. Manufactured by Metecno-Aluma Shield Company this product is a 26 gauge steel facers with a foam core which will be used for the side wall panels.

Letter#3: This is a (fax letter the original to be forwarded) from Firestone Building Product Company (Kurt Webb Technical Coordinator of Firestone Building Product Company Southern Region). Mr. Webb advises The Stellard Group that if the product is installed to Firestone Building Product Company specifications this roofing assembly will be eligible for the Firestone 15-year Red Shield Warranty. The roof slope of 1/8" will not affect the performance of there roofing product, and will not affect the product warranty. The roof decking product specifications are Firestone Ultraply .060 TPO Mas Roof System, Deck type Min 22 gauge Grade "C" 33 KSI Min.

Letter # 4: This is a (fax letter original to be forwarded) from Mr. Rex Smith (Design Project Manger) with The Stellard Group. Mr. Smith has preformed rainfall runoff rate calculations using 1/8' slope for the roof area. The Florida Plumbing Code 2004 table 1106.2 was used a as the reference standard to obtain the rainfall rate.

After reviewing the Florida Building Code 2004 chapter 1 section 104.11 Alternative materials, design and methods of construction and equipment the following conclusion are offered for your review.

Section 104.11: The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. When alternate life safety systems are designed, the SFPE Engineering Guide to Performance-Based Fire Protection Analysis and Design of Buildings, or other methods approved by the building official may be used. The building official shall require that sufficient evidence or proof be submitted to substantiate any claim made regarding the alternative.

By the language of section104.11 the building code allows the building official to deviate form code requirements provide the following requirements are met.

1. The design or construction method complies with the intent of the provisions of the code or is equivalent to the code requirements.

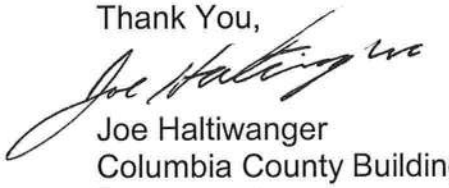
2. Structural strength, effectiveness, fire resistance and durability will not be affected the by the requested design or construction method.

3. The building official has been presented sufficient evidence to substantiate any claim made within the code regarding the alternative design.

In my opinion sufficient information has been presented to meet the requirements of section104.11 of the Florida building code.

Please review the above information and attached documents, and render your opinion in written form to The Stellard Group, Mr. Rex Smith so they may move forward on the structural design for the United States Cold Storage building Project #21003019 which is scheduled to start construction in May of 2007.

Thank You,



Joe Haltiwanger
Columbia County Building Department
Plan Examiner

Letter #1

THE STELLAR GROUP

April 02, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

We are proposing using a 1/8" per foot slope at the new United States Cold Storage Warehouse. The Florida Building Code section 1507.12.1 references a minimum slope of ¼" per foot.

The horizontal run for the roof of the warehouse is +-165 feet which will equal a total slope of 1'-8" from the peak to the gutters with a 1/8" per foot of slope.

The structural system will be designed for the 1/8" per foot slope and the gutters and downspouts will be oversized to allow better drainage.

The Fire Protection System will function more efficiently with the 1/8" per foot roof slope with less volume above the racks that would be added with a ¼" per foot roof slope.

Please review this request to allow the use of 1/8" vs. ¼" roof slope at the referenced warehouse. All other areas of this project including the dock, office and penthouse roofs will be designed at ¼" per foot slope.

Sincerely yours,

THE STELLAR GROUP

Rex R. Smith
Design Project Manager

RRS/lmf

Enclosure:

Letter #2

FM Approvals℠
Member of the FM Global Group

APPROVAL REPORT

AW200, AW300, AW400 & AW500 WALL AND CEILING PANELS, HR900 WALL AND ROOF PANELS AND MR100 ROOF PANELS PRODUCED WITH RUBITHERM WR 40536, RUBINATE 1850 & EXXSOL 2000 AND MINIMUM 26 GA. STEEL FACERS

Prepared for:
Metecno - Aluma Shield
725 Summerhill Drive
DeLand, Florida 32724

Project ID: 3024555
Class: 4880, 4471
Date of Approval: 9 December 2005
Authorized by:
G. A. Smith P.E., Assist. V. P., Materials Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102
Norwood, MA 02062

FM APPROVALS
Project ID: 3024555

AW200, AW300, AW400 & AW500 WALL AND CEILING PANELS, HR900 WALL AND ROOF PANELS AND MR100 ROOF PANELS PRODUCED WITH RUBITHERM WR 40536, RUBINATE 1850 & EXXSOL 2000 AND MINIMUM 26 GA. STEEL FACERS

From

METECNO - ALUMA SHIELD
725 SUMMERHILL DRIVE
DELAND, FLORIDA 32724

I INTRODUCTION

1.1 Metecno -Aluma Shield submitted their AW200, AW300, AW400 & AW500 wall and ceiling panels, HR900 wall and roof panels and MR100 roof panels with minimum 26 ga. steel facers and maximum 6 in. (152 mm) thick foam cores produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 to determine if they continue to meet the Approval requirements of the **Standards** listed below for Class 1 insulated wall and roof/ceiling panels for installation with no height restriction and Class 1 panel roofs.

1.2 Previous tests, including two 50 ft. (15.2 m) FM Approvals Corner Tests, have been conducted with Metecno - Aluma Shield's insulated wall and roof/ceiling panels produced with similar polyisocyanurate and polyurethane foam systems. See FM Approvals Reports for Project ID 3015605 dated October 3, 2003, Project ID 3013062 dated October 18, 2002, Project ID 3012454 dated December 20, 2001, J.I. 3Z8A0.AM dated November 21, 1997, J.I. 3B0A2.AM dated January 10, 1997, J.I. 3B3A6.AM dated September 12, 1996, J.I. 3Z7A9.AM dated May 8, 1996, J.I. 0Z6A7.AM dated November 10, 1995, J.I. 2X2A6.AM dated September 2, 1993 and J.I. 1V4A8.AM dated December 27, 1991 for details.

1.3 This Report may be reproduced only in its entirety and without modification.

1.4 **Standards:**

Title	Class Number	Date
Approval Standard for Class 1 Insulated Wall or Wall & Roof/Ceiling Panels, Plastic Interior Finish Materials, Plastic Exterior Building Panels, Wall/Ceiling Coating Systems and Interior or Interior Finish Systems	4880	August, 1994
Approval Standard for Class 1 Panel Roofs	4471	August, 1995

1.5 Examination included a UBC 26-3 (formerly 17-5) room fire test of sample Metecno - Aluma Shield wall and ceiling panels and a flammability characterization using the FM Approvals 50 kW Scale Flammability Apparatus and small scale foam identification testing of the polyisocyanurate foam panel cores.

1.6 Tests show that Aluma Shield AW200, AW300, AW400 & AW500 wall and ceiling panels, HR900 wall and roof panels and MR100 roof panels produced with minimum 26 ga. steel facers and Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000, as tested, continue to meet the Approval requirements of the **Standards** listed above for Class 1 insulated wall and roof/ceiling panels for installation with no height restriction and Class 1 panel roofs.

1.7 **Listings:** The tested constructions meet the Approval criteria of FM Approvals when installed as specified in the **CONCLUSIONS** of this report and when Approval is effective will be listed in the FM Approval Guide.

II DESCRIPTION

2.1 Aluma Shield AW200, AW300, AW400 & AW500 wall & ceiling panels, HR900 wall and roof panels and MR100 roof panels consist of minimum 0.0170 in. (0.43 mm) thick painted steel, Galvalume or galvanized steel facers (the top facer of MR100 roof panels is minimum 0.0190 (0.48 mm) thick galvanized steel coated with PVC) with maximum 6 in. thick polyurethane or polyisocyanurate foam cores produced from an Approved foam system and optional adhesion promoter. Panels are available in various lengths with a maximum width of 42 in. (1065 mm). Panel side joints are modified tongue and groove with sealant. The foam system formulations, adhesion promotor identity and panel specifications and drawings are on file at FM Approvals.

2.2 The Huntsman Rubitherm WR 40536/Huntsman Rubinate 1850/ExxonMobil Exxsol 2000 polyisocyanurate foam system consists of an A component (isocyanate), a B component (polyol) and a C component (blowing agent) which are mixed together at the Metecno - Aluma Shield manufacturing facility to produce the foam cores of the above panels. The A component is Rubinate 1850. The specifications and identity are on file at FM Approvals. The B component is a mixture of polyols, surfactant, catalysts and flame retardants designated as Rubitherm WR 40536. The formulation is on file at FM Approvals. The C component is a mixture of cyclopentane and isopentane designated as Exxsol 2000. The specifications and formulation are on file at FM Approvals.

III EXAMINATIONS AND TESTS

3.1 Samples were submitted for examination and testing as follows:

3.1.1 Tests conducted were as required by the **Standards** listed in paragraph 1.4 above.

3.1.2 Production of sample 6 in. (150 mm) thick Metecno - Aluma Shield AW360 wall and ceiling panels with adhesion promoter on the bottom facer was witnessed by a representative of FM Approvals at the Metecno - Aluma Shield production facility in Deland, FL on August 9, 2005. AW360 panels are considered by FM Approvals to be the most critical Aluma Shield wall and roof/ceiling panels in the room fire test. The sample panel facers were 26 ga. galvanized steel painted white. Production of the Rubitherm WR 40536 polyol used in the production of the sample panels was witnessed by a representative of FM Approvals at the Huntsman production facility in Mississauga, Ontario on August 3, 2005. All samples were considered to be representative of standard production and were examined and tested as indicated below.

3.1.3 Sample panels incorporated into test samples were selected by FM Approvals personnel. Test samples were prepared by, or under the supervision of, FM Approvals personnel. All testing was conducted at the Fire Technology Center at the FM Global Research Campus in West Glocester, RI.

3.1.4 All data is on file at FM Approvals under Project ID #3024555 along with other documents and correspondence applicable to this program.

3.2 Flammability Characterization

3.2.1 A series of measurements was made in the 50 kW FM Approvals Flammability Apparatus to determine the material flammability properties of the samples.

3.2.1.1 The critical heat flux for ignition (q''_{cr}) and the thermal response parameter (TRP) were determined by exposing the coated surfaces of several samples to known radiant heat fluxes and recording the time to piloted ignition. The inverse square root of the time to ignition was plotted against the applied external radiant heat flux. The intercept on the applied heat flux axis is defined as the critical heat flux for ignition (the value of the external heat flux at or below which the sample can no longer achieve piloted ignition during the 15 minute exposure). The inverse of the slope at large external heat fluxes is the thermal response parameter (a measure of the thermal inertia of the material).

3.2.1.2 The chemical heat of combustion (ΔH_{ch}) and the effective heat of gasification (L_e) were determined by measuring the sample mass loss and heat generation rate history during exposure of a sample to an external heat flux of 50 kW/m^2. The chemical heat of combustion was obtained by measuring the chemical heat release rate by CO/CO_2 generation at the applied external heat flux, time integrating to obtain the total energy released and dividing by the total mass lost. The effective heat of gasification was obtained from the chemical heat release rate, the chemical heat of combustion and the net heat flux which was assumed to be the difference between external heat flux and the critical heat flux for ignition.

3.2.1.3 The convective flame spread parameter (FSP_c) was determined from the chemical heat of combustion, effective heat of gasification, net heat flux and the thermal response parameter.

3.2.1.4 Performance in the 50 kW FM Approvals Flammability Apparatus is considered acceptable if the FSP_c is 0.39 $s^{-1/2}$ or less and compares favorably with that for the material successfully fire tested in the 50 ft (15.2 m) high FM Approvals Building Corner Test reported in J.I. 3Z7A9.AM. A FSP_c of 0.39 $s^{-1/2}$ or less for the thermoset plastic foam cores of insulated steel clad wall and ceiling panels has been found to correlate with the successful performance of thermoset plastic insulated steel clad wall and ceiling panels in the FM Approvals 25 ft (7.6 m) High Corner Test.

3.2.2 Test specimens were removed from a 6 in. (150 mm) thick by 42 in. (1065 mm) wide by 72 in. (1830 mm) long sample of witnessed polyisocyanurate core foam with facers removed produced with witnessed Rubitherm WR 40536 polyol, Rubinate 1850 isocyanate and Exxsol 2000 blowing agent. Each test specimen was coated with a high absorptivity selective black coating prior to placement in the sample holder of the 50 kW FM Approvals Flammability Apparatus.

3.2.3 The material flammability properties of the test sample were as follows. The material flammability properties of test samples from panels successfully fire tested in the FM Approvals 50 ft (15.2 m) High Corner Test reported in J.I. 3Z7A9.AM and the Class 1 limit are given for comparison.

	Rubitherm 40536/Rubinate 1850/ Exxsol 2000	Corner Tested	Class 1 Limit
ΔH_{ch} (kJ/g)	13.09	17.6	-
$q"_{cr}$ (kW/m^2)	25	21	-
TRP (kW/m^{2}s$^{-1/2}$)	134	94	-
FSP_c (s$^{-1/2}$)	0.16	0.34	0.39

The performance of the test sample in the Approvals 50 kW FM Approvals Flammability Apparatus compares favorably with the Class 1 limit and that of the material evaluated in the FM Approvals 50 ft (15.2 m) High Corner Test.

3.3 Room Fire Test

3.3.1 A room fire test was conducted in accordance with Uniform Building Code Standard No. 26-3 (formerly 17-5) "Room Fire Test Standard for Interior of Foam Plastic Systems".

3.3.1.1 The room fire test was conducted in a room sheathed on the ceiling and all four walls with glass fiber faced gypsum board secured to wood framing. A 2 ft 6 in. (760 mm) wide by 7 ft 0 in. (2135 mm) high door was located in one 8 by 8 ft (2440 by 2440 mm) wall (front). Sample wall panels were installed vertically on the 8 by 8 ft (2440 by 2440 mm) wall opposite the door (back) and the first 8 ft (2440 mm) of the adjacent 12 by 8 ft (3660 by 2440 mm) wall (left). Sample ceiling panels were installed on the first 8 ft (2440 mm) of the 8 ft (2440 mm) high ceiling adjacent to the left and back walls parallel to the 8 ft (2440 mm) dimension. Test panels were fastened through both facers to the wood framing behind the gypsum sheathing with self drilling screws as indicated in 3.3.2. Panel side joints were tongue and groove with butyl sealant in the exterior joint. The finished interior of the room after sample installation was 12 ft (3660 mm) long by 8 ft (2440 mm) wide by 8 ft (2440 mm) high.

3.3.1.2 The exposure fire was a 15 by 15 in. (380 by 380 mm) 28.7 lb. (13.0 kg) crib of 1-1/2 in. (38 mm) square Douglas fir sticks conditioned to a moisture content of 6.9% placed at the intersection of the sample covered walls 1 in. (25 mm) from the interior of the sample panels and 3 in. (76 mm) above the noncombustible floor. The exposure fire was ignited using 1 lb. (0.45 kg) of shredded wood excelsior and 4 oz. (0.12 l) of ethanol.

3.3.1.3 15 minutes after ignition, the exposure fire and flaming on sample panel surfaces or at sample panel joints was extinguished with a hose stream.

3.3.1.4 A video tape of the room fire test was taken through the door opposite the exposure fire. Temperature readings were taken at 1 second intervals using thermocouples located 3 (TC1), 5 (TC2) and 7 (TC3) ft (915, 1525 and 2135 mm) above the floor 3 in. (76 mm) from the adjacent interior wall surfaces above the exposure fire and 1 in. below the ceiling at the center of the 8 by 8 ft (2440 by 2440 mm) sample ceiling area (TC4).

3.3.1.5 Performance in the room fire test is satisfactory if charring of the foam plastic panel core does not extend to the outer extremities of the test area within 15 minutes of the ignition of the excelsior and smoke levels generated during the test are not excessive. Discoloration extending up to 1/4 in. (6.4 mm) into the foam plastic is not considered to be charring.

3.3.2 Twelve 6 in (150 mm) thick by 42 by 96 in. (1070 by 2440 mm) witnessed sample AW360 wall panels, and six 6 in. (150 mm) thick by 42 by 102 in. (1070 by 2590 mm) witnessed sample AW360 ceiling panels produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 as described in 2.1 above were supplied.

3.3.2.1 Two 42 in. (1070 mm) wide wall panels (6 self drilling screws per panel into the wall) and one 42 in. (1070 mm) wide wall panel (2 self drilling screws per panel into the wall) cut to a width of 17.5 in. (445 mm) were installed vertically on the left wall of the test room with the panel cut to width furthest from the rear wall. One 42 in. (1070 mm) wide wall panel (6 self drilling screws per panel into the wall) cut to a width of 39.5 in. (1005 mm), one 42 in. (1070 mm) wide wall panel (6 self drilling screws per panel into the wall) and one 42 in. (1070 mm) wide wall panel (2 self drilling screws per panel into the wall) cut to a width of 14.5 in. (370 mm) were installed vertically on the rear wall of the test room starting at the left wall with the panel cut to a width of 14.5 in. (370 mm) furthest from the left wall and cut edge of the panel cut to a width of 39.5 in. (1005 mm) butted against the first panel on the left wall. Wall panels were set in 1.5 by 6-1/4 by 1.5 in. (38 by 160 by 38 mm) 14 ga. galvanized base channels secured to the interior facers of the wall panels with three self drilling sheet metal screws per full width panel.

3.3.2.2 Two 42 in. (1070 mm) wide ceiling panels (6 self drilling screws per panel into the ceiling) and one 42 in. (1070 mm) wide ceiling panel cut to a width of 17.5 in. (445 mm) (2 self drilling screws into the ceiling) were installed from back to front on the ceiling of the test room parallel to the 8 ft (2440 mm) test room dimension with the panel cut to width furthest from the rear wall.

3.3.2.3 The wall/wall corner joint and wall/ceiling corner joints were covered with 2 by 2 in. (50 by 50 mm) 26 ga. painted galvanized steel corner trim secured to the interior facers of the panels with self drilling sheet metal screws approximately 6 in. (150 mm) on center. Bare panel edges at the open end of each wall and at the open edges of the ceiling were covered with 1.5 by 6-1/4 by 1.5 in. (38 by 160 by 38 mm) 14 ga. galvanized steel caps secured to the interior facer of the wall or ceiling panels with self drilling sheet metal screws approximately 18 in. (455 mm) on center.

3.3.3 The results of the Uniform Building Code Standard No. 26-3 room test were as follows:

3.3.3.1 Visual observations during the test period were as follows:

Time(min:sec)	Observation
0:00	Ignition of exposure fire.
0:45	Exposure flames to approx 7 ft (2100 mm).
1:25	Exposure flames to approx 7 ft (2100 mm).
1:45	Exposure flames licking to the ceiling.
2:00	Flaming at the corner flashing behind the exposure fire to approx 7 ft (2100 mm).
2:30	Flaming to approx 2 ft (600 mm) along both eaves and entire length of flashing behind the exposure fire.
3:15	Flaming to approx 4 ft (1200 mm) along both eaves, light smoke to approx 6 in. (150 mm) below the top of the door frame.

Time(min:sec)	Observation
4:00	Flaming to approx 6 ft (1800 mm) along left eave, approx 5 ft (1500 mm) along rear eave, light smoke to approx 1 ft (300 mm) below the top of the door frame.
4:45	Flaming intermittently to 8 ft (2400 mm) along left eave, approx 4 ft (1200 mm) along rear eave, light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
6:00	Intermittent Flaming to 8 ft (2400 mm) along left eave, approx 4 ft (1200 mm) along rear eave, light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
7:00	Flaming to approx 4 ft (1200 mm) along both eaves with occasional licks to 8 ft (2400 mm) along left eave, light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
8:00	Flaming to approx 4 ft (1200 mm) along both eaves, some flaming at bottom of left wall to approx 6 ft (1800 mm) and rear wall to approx 4 ft (1200 mm), light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
9:00	Flaming to approx 3 ft (900 mm) along both eaves, some flaming at bottom of left wall to approx 6 ft (1800 mm) and rear wall to approx 4 ft (1200 mm), light to moderate smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
10:00	Flaming to approx 3 ft (900 mm) along both eaves, some flaming at bottom of left wall to approx 6 ft (1800 mm) and rear wall to approx 4 ft (1200 mm), light to moderate smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
11:00	Flaming to approx 3 ft (900 mm) along both eaves, some flaming at bottom of both walls to approx 4 ft (1200 mm), light to moderate smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
12:00	Flaming to approx 4 ft (1200 mm) along left eave, approx 3 ft (900 mm) along rear eave, light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
13:00	Flaming to approx 4 ft (1200 mm) along left eave, approx 3 ft (900 mm) along rear eave, light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
14:00	Flaming to approx 2 ft (600 mm) along left eave, approx 1 ft (300 mm) along rear eave, some flaming at bottom of both walls to approx 3.5 ft (1050 mm), light smoke to approx 1-1/2 ft (450 mm) below the top of the door frame.
15:00	Test terminated, exposure fire and sample panels extinguished with water.

3.3.3.2 Upon examination of the test panels after the room fire test, no charring of the polyisocyanurate foam core was observed at the extremities of the test panel area.

3.3.3.3 Smoke levels generated by the test panels during the test period were not considered excessive.

3.3.3.4 See Appendix A for a record of temperatures recorded at the thermocouple locations outlined in 3.3.1.4 above.

3.3.3.5 A videotape (8 mm format) is on file in the Technical Information Center at FM Approvals under Project ID #3024555.

3.4 Ignition Residue

3.4.1 The ignition residue of polyisocyanurate foam panel cores produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 was determined in accordance with ASTM D482-03, Standard Test Method for Ash from Petroleum Products.

3.4.2 Test specimens were removed from the polyisocyanurate core foam sample with facers removed produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 described in 3.2.2 above.

3.4.3 The residue left after ignition of the test specimens was 0.5% by weight.

3.5 Heat of Combustion

3.5.1 The heat of combustion of polyisocyanurate foam panel cores produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 was determined in accordance with ISO 1716:2002, Determination of the Heat of Combustion.

3.5.2 Test specimens were removed from the polyisocyanurate core foam sample with facers removed produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 described in 3.2.2 above.

3.5.3 The heat of combustion of the test specimens was 7,055 Btu/lb (16.4 MJ/kg).

3.6 Ignition Properties

3.6.1 The ignition properties of polyisocyanurate foam panel cores produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 were determined in accordance with ASTM D1929-96(2001)e1, Standard Test Method for Determining Ignition Properties of Plastics.

3.6.2 Test specimens were removed from the polyisocyanurate core foam sample with facers removed produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 described in 3.2.2 above.

3.6.3 The ignition properties of the test specimens were as follows:

Self-ignition temperature	856°F (458°C)
Flash-ignition temperature	842°F (450°C)

3.7 Apparent Density

3.7.1 The apparent density of polyisocyanurate foam panel cores produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 was determined in accordance with ASTM D1622-03, Standard Test Method for Apparent Density of Rigid Cellular Plastics.

3.7.2 A 4 in. (100 mm) thick by 4 in. (100 mm) wide by 4 in.(100 mm) long specimen from the polyisocyanurate core foam sample with facers removed produced with Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 as described in 3.2.2 above was weighed and measured.

3.7.3 The apparent density of the sample was 2.1 lb/ft^3 (34 kg/m^3).

IV MARKING

4.1 The manufacturer shall mark each panel or packing container with the manufacturer's name and product trade name. In addition, the panel or container must be marked with the Approval Mark of FM Approvals.

4.2 Markings denoting Approval by FM Approvals shall by applied by the manufacturer only within and on the premises of manufacturing locations that are under the FM Approvals Facilities and Procedures Audit program.

4.3 The manufacturer agrees that use of the FM Approvals name or Approval Mark is subject to the conditions and limitations of the Approval by FM Approvals. Such conditions and limitations must be included in all references to Approval by FM Approvals.

V REMARKS

Polyisocyanurate foam produced from Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 has not been evaluated for the toxicity of the products of combustion.

VI FACILITIES AND PROCEDURES AUDITS

The Metecno - Aluma Shield manufacturing location in Deland, FL is subject to periodic audit inspections to determine that the quality and uniformity of the materials have been maintained and will provide the same level of performance as originally Approved. The facilities and quality control procedures in place have been found to be satisfactory to manufacture product identical to that examined and tested as described in this report.

VII MANUFACTURER'S RESPONSIBILITIES

7.1 To assure compliance with his procedures in the field, the manufacturer shall supply to the installer and owner such necessary instruction or assistance required to produce the desired performance achieved in the tests.

7.2 The manufacturer shall notify FM Approvals of any planned change in the Approved product, prior to general sale or distribution, using Form 797, Approved Product Revision Report.

VIII DOCUMENTATION

The following document describes Metecno - Aluma Shield insulated wall & roof/ceiling panels.

Document	Issue or Revision	Description
Facilities and Procedures Audit Manual For AW200, AW300, AW400, AW500, HR900 & MR100 Series Insulated Wall and Roof/Ceiling Panels	Revised 10/18/05	F&PA Manual

IX CONCLUSIONS

9.1 Test results indicate that Metecno - Aluma Shield AW200, AW300, AW400 & AW500 wall & ceiling panels, HR900 wall and roof panels and MR100 roof panels with painted (optional) minimum 26 ga. steel facers and maximum 6 in. (152 mm) thick polyisocyanurate foam cores produced using Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 continue to meet the Approval requirements of the **Standard** listed above for Class 1 Approval of insulated wall and roof/ceiling panels with no height restriction as indicated in the Metecno - Aluma Shield listings in the current edition of the Approval Guide, a publication of FM Approvals.

9.2 HR900 & MR100 roof panels with 1.5 to 6 in. (40 to 150 mm) thick (HR900) or 2 to 6 in. (50 to 150 mm) thick (MR100) polyisocyanurate foam cores produced using Huntsman Rubitherm WR 40536, Huntsman Rubinate 1850 and ExxonMobil Exxsol 2000 continue to meet the Approval requirements of the **Standard** listed above for Approval of Class 1 panel roofs as indicated in the Metecno - Aluma Shield listings in the current edition of RoofNav.

9.3 Tests show 1) that the panels in and of themselves would not create a need for automatic sprinklers and 2) that the panels would be acceptable in a combustible occupancy protected by automatic sprinklers as defined by FM Global Loss Prevention Standards.

9.4 Since a duly signed Master Agreement is on file for this customer, Approval is effective as of the date of this report.

9.5 Continued Approval will depend upon satisfactory field experience and periodic Facilities and Procedures Audits.

TESTING SUPERVISED BY: **J. M. Goodwillie, Jr.**

PROJECT DATA RECORD: **Project ID # 3024555**

ORIGINAL TEST DATA: **PDR for Project ID #3024555**

ATTACHMENTS: **Appendix A (1 page)**

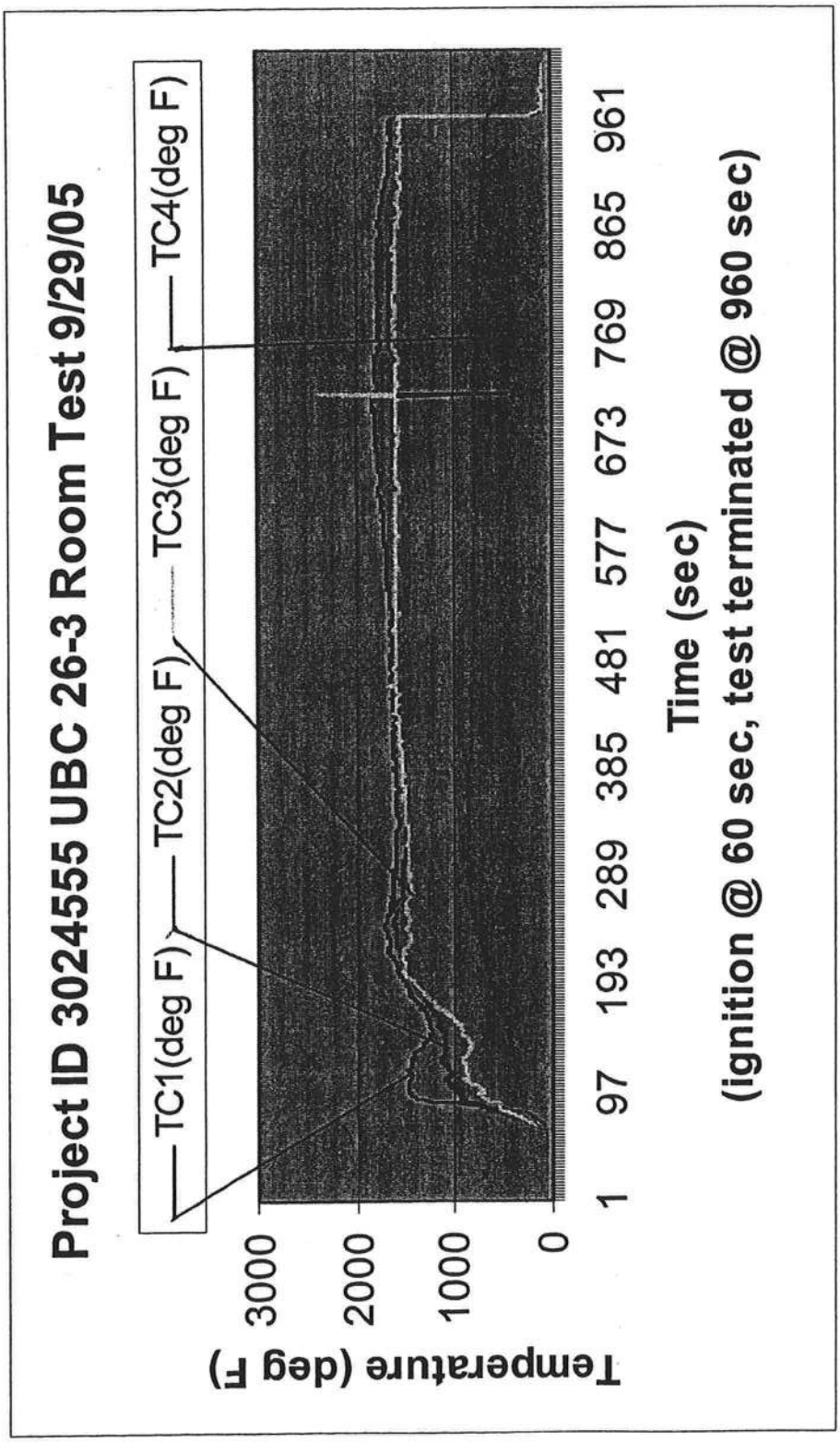
REPORT BY:

J. M. Goodwillie, Jr.
Senior Engineer - Materials Group

REPORT REVIEWED BY:

R. P. Ferron, P.E.
Technical Team Manager - Materials Group

Appendix A


Project ID 3024555 UBC 26-3 Room Test 9/29/05
TC1(deg F)
TC2(deg F)
TC3(deg F)
TC4(deg F)
Temperature (deg F)
3000
2000
1000
0
1
97
193
289
385
481
577
673
769
865
961
Time (sec)
(ignition @ 60 sec, test terminated @ 960 sec)

SOUTHWEST RESEARCH INSTITUTE®

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CHEMISTRY AND CHEMICAL ENGINEERING DIVISION
DEPARTMENT OF FIRE TECHNOLOGY
WWW.FIRE.SWRI.ORG
FAX (210) 522-3377

NSF-ISR
QUALITY SYSTEM REGISTERED TO ISO 9001:2000

INVESTIGATION OF THE SURFACE BURNING CHARACTERISTICS OF A NOMINAL 4.0-IN. THICK RIGID POLYISOCYANURATE FOAM INSULATION PANEL (TEST 2) MATERIAL ID: HUNTSMAN RUBITHERM WR40536/RUBINATE 1850/EXSOL 2000 (7659-099D)

FINAL REPORT
Consisting of 5 Pages
SwRI® Project No.: 01.11810.01.060b
Test Date: December 14, 2005

Report Date: January 13, 2006

Prepared for:

METECNO-ASI
725 SUMMERHILL DRIVE
DELAND, FL 32724

Prepared by:

Anthony L. Sauceda
Senior Engineering Technologist
Material Flammability Section

Approved by:

Gladys M. Miller, M.S., M.B.A.
Assistant Director
Department of Fire Technology

INTRODUCTION

This report presents the results of an ASTM E 84 test on a specimen submitted by the Client, tested at Southwest Research Institute's (SwRI's) Department of Fire Technology, located in San Antonio, Texas. The test is conducted in accordance with the procedure outlined in ASTM E 84-05, "Standard Test Method for Surface Burning Characteristics of Building Materials" (NFPA 255, ANSI/UL 723 and UBC 8-1).

This test method is applicable to exposed surfaces, such as ceilings or walls, provided that the material or assembly of materials, by its own structural quality or the manner in which it is tested and intended for use, is capable of supporting itself in position or being supported during the test period. The test is conducted with the material in the ceiling position.

The purpose of this test method is to determine the relative burning behavior of the material by observing the flame spread along the specimen. Flame Spread and Smoke Developed index are reported. However, there is not necessarily a relationship between these two measurements.

This standard should be used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions and should not be used to describe or appraise the fire-hazard or fire-risk of materials, products, or assemblies under actual fire conditions. However, results of the test may be used as elements of a fire-hazard assessment or a fire-risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard or fire risk of a particular end use.

Test specimens are conditioned as appropriate in an atmosphere maintained between 68 and 78°F and 45 to 55% relative humidity. Immediately prior to the test, the specimen is mounted in the furnace with the side to be tested facing the test flame. Sometimes, because of the nature of the material undergoing testing, additional support (e.g. wire, wire and rods, rods, and/or bars) is used to ensure that the specimen will remain in position during the test. The use of supporting materials on the underside of the test specimen may lower the Flame Spread Index from that which might be obtained if the specimen could be tested without such support, and the test results do not necessarily relate to indices obtained by testing materials without such support.

The flame front position and light obscuration are recorded throughout the 10-minute test and used to calculate the Flame Spread and Smoke Developed indices. The temperature at 23 ft is also recorded. The Flame Spread and Smoke Developed indices reported herein are relative to the results obtained for mineral fiber-reinforced cement board and select grade red oak (moisture content between 6 and 8%). The mineral fiber-reinforced cement board is the calibration material used to obtain 0 values for Flame Spread and Smoke; red oak decks are used to obtain 100 values for Flame Spread and Smoke.

The results apply specifically to the specimens tested, in the manner tested, and not to the entire production of these or similar materials, nor to the performance when used in combination with other materials.

Two model building codes (2003 International Building Code®, Chapter 8 *Interior Finishes*, Section 803 *Wall and Ceiling Finishes*; NFPA 5000, Chapter 10 *Interior Finish*, Section 10.3 *Interior Wall or Ceiling Finish Testing and Classification*) classify materials based on the Flame Spread and Smoke Developed indices. For reference purposes, the classification criteria are listed below:

Classification	Flame Spread Index	Smoke Developed Index
A	0 – 25	0 – 450
B	26 – 75	0 – 450
C	76 – 200	0 – 450

ASTM E 84-05 REPORT

CLIENT: METECNO-ASI
SWRI PROJECT NO.: 01.11810.01.060b
TEST DATE: DECEMBER 14, 2005
DAILY TEST NO.: 2

DESCRIPTION OF SPECIMEN

DATE RECEIVED:	13-Dec-2005 (received ready-to-test)
MATERIAL ID:*	Huntsman Rubitherm WR40536/Rubinate 1850/Exsol 2000
DESCRIPTION:*	Rigid polyisocyanurate foam insulation panels (7659-099D)
COMPOSITION:*	Rigid polyisocyanurate foam
THICKNESS:	4.0 in. (nominal)
DENSITY:*	2.0 to 2.1 pcf
COLOR:	Light yellow
SPECIMEN SIZE:	Three panels, 22.5 in. wide x 96.0 in. long
CONDITIONING TIME:	1 day at 70°F and 50% relative humidity
SUPPORT USED:	None
WITNESSED BY:	Messrs. Ian Manser (Metecno-ASI) and Rick Stewart (Huntsman) representing Metecno-ASI

* From Client's material description and/or instructions

ASTM E 84-05 REPORT

CLIENT: METECNO-ASI
SWRI PROJECT NO.: 01.11810.01.060b
TEST DATE: DECEMBER 14, 2005
DAILY TEST NO.: 2

TEST RESULTS (ROUNDED TO NEAREST 5)

FLAME SPREAD INDEX (FSI):	25
SMOKE DEVELOPED INDEX (SDI):	160

TEST DATA

UNROUNDED FSI:	25.6
UNROUNDED SDI:	160.8
FS*TIME AREA (Ft*Min):	49.9
SMOKE AREA (%*Min):	157.9
FUEL AREA (°F*Min):	5872.1

OBSERVATIONS DURING TEST

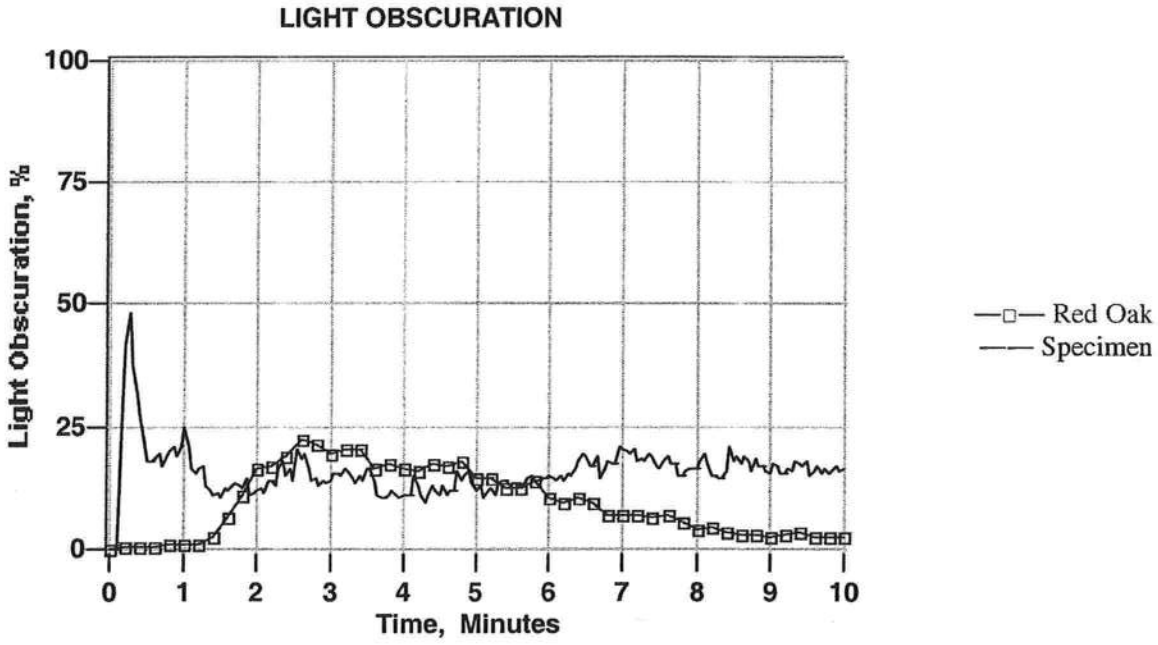
IGNITION TIME (Min:Sec):	0:02
MAXIMUM FLAME FRONT ADVANCE (Ft.):	5.5
TIME TO MAXIMUM ADVANCE (Min:Sec):	7:06
MAXIMUM TEMP. AT EXPOSED TC (°F):	659
TIME TO MAXIMUM TEMP. (Min:Sec):	9:57
TOTAL FUEL BURNED (Cu. Ft.):	52.0
DRIPPING (Min:Sec):	None
FLAMING ON FLOOR (Min:Sec):	None
AFTERFLAME TOP (Min:Sec):	2:32
AFTERFLAME FLOOR (Min:Sec):	None

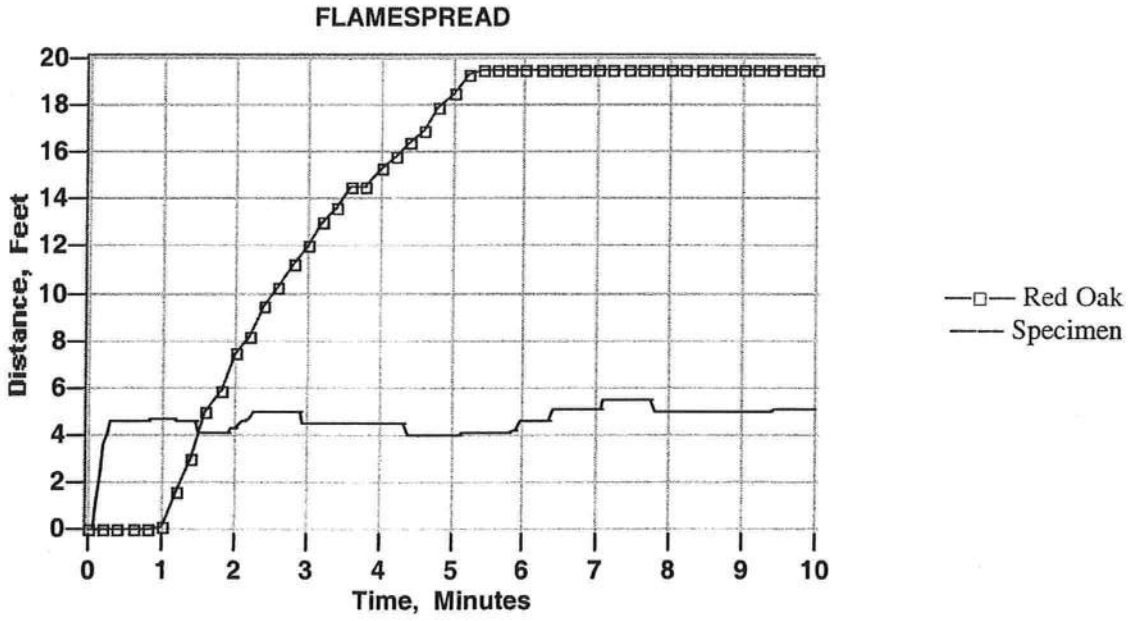
CALIBRATION DATA (LAST RED OAK)

RED OAK SMOKE AREA (%*Min):	95.2
RED OAK FUEL AREA (°F*Min):	8401.4
GRC BOARD FUEL AREA (°F*Min):	5501.4

ASTM E 84-05 REPORT

CLIENT: METECNO-ASI
SWRI PROJECT NO.: 01.11810.01.060b
TEST DATE: DECEMBER 14, 2005
DAILY TEST NO.: 2





Letter #3

THE STELLAR GROUP

April 11, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

Per our telephone conversation as of April 11, 2007, this is to confirm the roof deck type will be a minimum of 22 GA. Grade "C" 33 KSI min. as per the Firestone letter.

Sincerely yours,
THE STELLAR GROUP

Rex Smith
Design Project Manager

RRS/clw

Enclosure: Firestone letter

Firestone
BUILDING PRODUCTS COMPANY

Letter #3
05 April 2007

Kevin Dufresne
Divisional Vice President
The Stellar Group
2900 Hartley Road
Jacksonville, FL 32257

RE: United States Cold Storage - Lake City, Florida

To Whom It May Concern:

The following assembly has been reviewed and found to be acceptable if installed in accordance with current Firestone specifications and details. The assembly will be eligible for the Firestone 15-Year Red Shield Warranty upon inspection and acceptance of the installed assembly by Firestone.

Roof Assembly	**Firestone UltraPly .060 TPO 120 MAS Roof System**
Construction:	New
Deck Type:	Min. 22 Ga. Grade "C" 33 KSI Min.
Slope:	1/8" rise per one foot or travel
Insulation:	3.3" Firestone ISO 95 +GL over Office/welfare, 4" over Cold Dock, 8" over Freezer fastened 5 per 4'X8' Board with AP or HD Fasteners throughout
Field Sheets:	9' 6" Seam Spacing Fastened 12" o. c. with Firestone HD Fasteners and HD Plates in the Seam
Perimeter Half Sheets	5' Half Sheets fastened 4' 6" o. c. in seam fastened at 12" o c. with Firestone HD Fasteners and HD Plates in the Seam per Firestone Specifications

Note: It is the responsibility of a design professional to specify bar joist/beam spacing, deck and deck attachment and all other roofing related requirements to insure that the roofing assembly specified will meet the performance requirements for the building on which it is to be installed.

Please refer to the current Firestone Roofing Systems Technical Specifications Manual for detailed assembly information and requirements. If you have any questions, or require further assistance, please do not hesitate to contact me at 1-800-428-4511 ext. 57096

Sincerely
Firestone Building Products,

Kurt E. Webb
Technical Coordinator
Southern Region

cc: Bill Jordan
Rex Smith
File

Letter #4

THE STELLAR GROUP

April 10, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

Please review the attached documents in reference to the use of a 1/8" per foot roof slope. As an alternate design and method of construction, per section 104.11 of the Florida Building Code, we propose increasing the size of gutters and downspouts to allow better drainage from the roof. A letter from Firestone confirming the 1/8" per foot of slope is acceptable, is attached. (Letter #3

Sincerely yours,
THE STELLAR GROUP

Rex Smith
Design Project Manager
4-10-07
RBS/clw

Enclosure: Gutter & Downspout Calculations
Roof Plan
Firestone letter
April 02, 2007 letter

Letter #4

THE STELLAR GROUP

Gutter and Downspout
For
US Cold Storage
New Facility
Lake City, Florida

Florida Plumbing Code 2004:
Rainfall Rate for 100-year = 4.5 inches/hr.
Building Roof with 1/8"/ft. slope on both direction for Roof "A" & "B" with equal distance.

Roof "A":
426'-8" wide x 165'-1" long = 70,436 SQ. FT.
426'-8" divided by 18 sections = 23'-8 ½" (width for each section)
23'-8 ½" x 165'-1" = **3,914 sq. ft. per section**

Gutter size:
Table 1106.6 Sizes for semicircular roof gutter with 1/8 unit vertical horizontal (1-percent slope): 10" diameter gutter required for 4, 080 sq. ft. area (w/ 5-in/hr. rainfall) = 39.25 sq. in.
Roof "A" gutter: Use 8"W x 7"H cont. gutter = 56 sq. in.
This is over sized by 42%

Downspout size:
Table 1106.2 Size for vertical conductors and Leader required for 5" diameter of downspout with 5-in/.hr rainfall and an area of 6,920 sq. ft. = 20 sq. in.
Roof "A" downspout size: Use 6" x 6" of downspout at (19) locations = 36 sq. in.
Can handle an area of 10,800 sq. ft. each downspout which is over sized by more than 100%.

Roof "B" is similar to Roof "A" with the same size of gutter and number of downspout.

4-10-07

2900 Hartley Road, Jacksonville, Florida 32257 • Telephone (904) 260-2900
www.thestellargroup.com

Table 1106.2
Size of Vertical Conductors and Leaders

Diameter of Leader (inches)	Horizontally Projected Roof Area (square feet) Rainfall Rate (inches per hour)											
	1	2	3	4	5	6	7	8	9	10	11	12
2	2,880	1,440	960	720	575	480	410	360	320	290	260	240
3	8,800	4,400	2,930	2,200	1,760	1,470	1,260	1,100	980	880	800	730
4	18,400	9,200	6,130	4,600	3,680	3,070	2,630	2,300	2,045	1,840	1,675	1,530
5	34,600	17,300	11,530	8,650	6,920	5,765	4,945	4,325	3,845	3,460	3,145	2,880
6	54,000	27,000	17,995	13,500	10,800	9,000	7,715	6,750	6,000	5,400	4,910	4,500
8	116,000	58,000	38,660	29,000	23,200	19,315	16,570	14,500	12,890	11,600	10,545	9,600

Table 1106.6
Size of Semicircular Roof Gutters

1/8 Unit Vertical 12 Units Horizontal (1-percent slope)

Diameter of Leader (inches)	Horizontally Projected Roof Area (square feet) Rainfall Rate (inches per hour)					
	1	2	3	4	5	6
3	960	480	320	240	192	160
4	2,040	1,020	681	510	408	340
5	3,520	1,760	1,172	880	704	587
6	5,440	2,720	1,815	1,360	1.085	905
7	7,800	3,900	2,60	1,950	1,560	1,300
8	11,200	5,600	3,740	2,800	2,240	1,870
10	20,400	10,200	6,800	5,100	4,080	3,400

THE STELLAR GROUP

April 10, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

Please review the attached documents in reference to the use of a 1/8" per foot roof slope. As an alternate design and method of construction, per section 104.11 of the Florida Building Code, we propose increasing the size of gutters and downspouts to allow better drainage from the roof. A letter from Firestone confirming the 1/8" per foot of slope is acceptable, is attached.

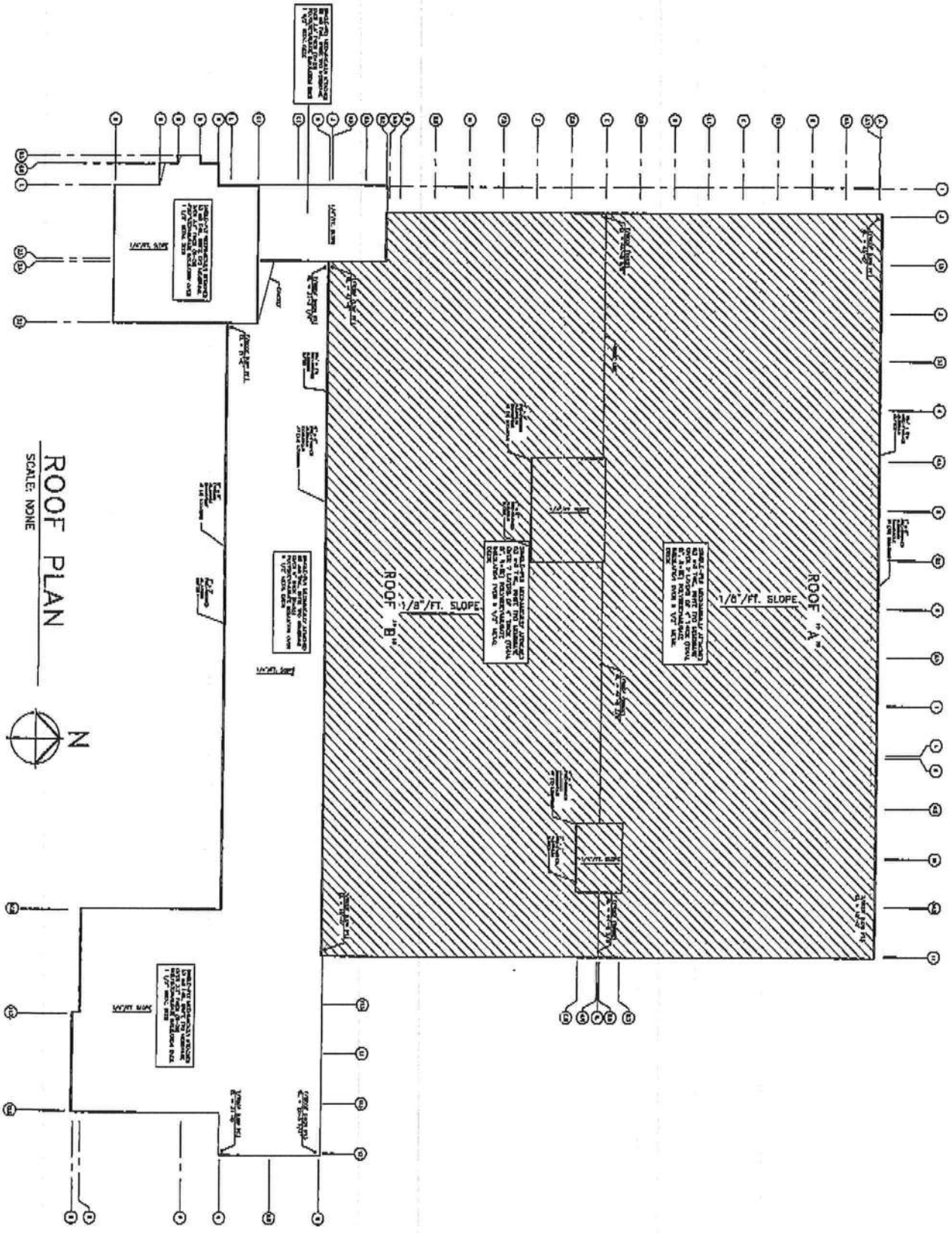
Sincerely yours,
THE STELLAR GROUP

Rex Smith
Design Project Manager

4-10-07

RRS/clw

Enclosure: Gutter & Downspout Calculations
Roof Plan
Firestone letter
April 02, 2007 letter


ROOF PLAN
SCALE: NONE
N
ROOF "B"
1/8"/FT. SLOPE
ROOF "A"
1/8"/Ft. SLOPE

Home
Obi-Wan
Wrangler
Wagoneer
Trips
Tech
Misc
Forums

Google

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Reformatted from: http://www4.law.cornell.edu/uscode/15/206.html

Sec. 206. Standard gauge for sheet and plate iron and steel

For the purpose of securing uniformity the following is established as the only standard gauge for sheet and plate iron and steel in the United States of America, namely:

	Thickness			Weight				
Gauge	Frac. Inch	Dec. Inch	mm	oz/ft^2	lb/ft^2	kg/ft^2	kg/m^2	lb/m^2
0000000	1/2	.5	12.7	320	20.00	9.072	97.65	215.28
000000	15/32	.46875	11.90625	300	18.75	8.505	91.55	201.82
00000	7/16	.4375	11.1125	280	17.50	7.983	85.44	188.37
0000	13/32	.40625	10.31875	260	16.25	7.371	79.33	174.91
000	3/8	.375	9.525	240	15	6.804	73.24	161.46
00	11/32	.34375	8.73125	220	13.75	6.237	67.13	148.00
0	5/16	.3125	7.9375	200	12.50	5.67	61.03	134.55
1	9/32	.28125	7.14375	180	11.25	5.103	54.93	121.09
2	17/64	.265625	6.746875	170	10.625	4.819	51.88	114.37
3	1/4	.25	6.35	160	10	4.536	48.82	107.64
4	15/64	.234375	5.953125	150	9.375	4.252	45.77	100.91
5	7/32	.21875	5.55625	140	8.75	3.969	42.72	94.18
6	13/64	.203125	5.159375	130	8.125	3.685	39.67	87.45
7	3/16	.1875	4.7625	120	7.5	3.402	36.62	80.72
8	11/64	.171875	4.365625	110	6.875	3.118	33.57	74.00
9	5/32	.15625	3.96875	100	6.25	2.835	30.52	67.27
10	9/64	.140625	3.571875	90	5.625	2.552	27.46	60.55
11	1/8	.125	3.175	80	5	2.268	24.41	53.82
12	7/64	.109375	2.778125	70	4.375	1.984	21.36	47.09
13	3/32	.09375	2.38125	60	3.75	1.701	18.31	40.36
14	5/64	.078125	1.984375	50	3.125	1.417	15.26	33.64
15	9/128	.0703125	1.7859375	45	2.8125	1.276	13.73	30.27
16	1/16	.0625	1.5875	40	2.5	1.134	12.21	26.91
17	9/160	.05625	1.42875	36	2.25	1.021	10.99	24.22
18	1/20	.05	1.27	32	2	.9072	9.765	21.53
19	7/160	.04375	1.11125	28	1.75	.7938	8.544	18.84
20	3/80	.0375	.9525	24	1.50	.6804	7.324	16.15
21	11/320	.034375	.873125	22	1.375	.6237	6.713	14.80
22	1/32	.03125	.793750	20	1.25	.567	6.103	13.46
23	9/320	.028125	.714375	18	1.125	.5103	5.493	12.11
24	1/40	.025	.635	16	1	.4536	4.882	10.76
25	7/320	.021875	.555625	14	.875	.3969	4.272	9.42
26	3/160	.01875	.47625	12	.75	.3402	3.662	8.07
27	11/640	.0171875	.4365625	11	.6875	.3119	3.357	7.40
28	1/64	.015625	.396875	10	.625	.2835	3.052	6.73
29	9/640	.0140625	.3571875	9	.5625	.2551	2.746	6.05
30	1/80	.0125	.3175	8	.5	.2268	2.441	5.38
31	7/640	.0109375	.2778125	7	.4375	.1984	2.136	4.71
32	13/1280	.01015625	.25796875	6 1/2	.40625	.1843	1.983	4.37
33	3/320	.009375	.238125	6	.375	.1701	1.831	4.04
34	11/1280	.00859375	.21828125	5 1/2	.34375	.1559	1.678	3.70

35	5/640	.0078125	.1984375	5	.3125	.1417	1.526	3.36
36	9/1280	.00703125	.17859375	4 1/2	.28125	.1276	1.373	3.03
37	17/2560	.006640625	.168671875	4 1/4	.265625	.1205	1.297	2.87
38	1/160	.00625	.15875	4	.25	.1134	1.221	2.69

The same and no other shall be used in determining duties and taxes levied by the United States of America on sheet and plate iron and steel. But this subchapter shall not be construed to increase duties upon any articles which may be imported.

Back to Obi-Wan's Popular Modifications page

last updated 28 Jan 99
Obi-Wan (obiwan@jedi.com)

April 02, 2007

Joe Haltiwanger
Plans Examiner
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

RE: ***Roof Slope***
USCS-New Facility Lake City, FL
Lake City, FL
Project #21003019

Dear Mr. Haltiwanger:

We are proposing using a 1/8" per foot slope at the new United States Cold Storage Warehouse. The Florida Building Code section 1507.12.1 references a minimum slope of ¼" per foot.

The horizontal run for the roof of the warehouse is +-165 feet which will equal a total slope of 1'-8" from the peak to the gutters with a 1/8" per foot of slope.

The structural system will be designed for the 1/8" per foot slope and the gutters and downspouts will be oversized to allow better drainage.

The Fire Protection System will function more efficiently with the 1/8" per foot roof slope with less volume above the racks that would be added with a ¼" per foot roof slope.

Please review this request to allow the use of 1/8" vs. ¼" roof slope at the referenced warehouse. All other areas of this project including the dock, office and penthouse roofs will be designed at ¼" per foot slope.

Sincerely yours,

THE STELLAR GROUP

Rex R. Smith
Design Project Manager

RRS/lmf

Enclosure:

stellar

2900 Hartley Road
Jacksonville, Florida 32257
Phone / Fax: (904) 899-9498
www.stellar.net

LETTER OF TRANSMITTAL: 00036

Date: May 08, 2007

To: Joe Haltiwanger
Columbia County Building & Zoning
135 NE Hernando Avenue
Suite B-21
Lake City, FL 32055

Project: USCS-New Facility Lake City, FL
Location: Lake City, FL
Project No.: 21003019
Ref: Pemit Documents

Phone:
Fax:

WE ARE SENDING:

☐ Shop Drawings ☐ Plans ☐ Prints ☐ Specifications
☐ Letter ☐ Samples ☐ Change Order ☒ Other: Pemit Documents

SUBMITTED FOR:

☐ Approval ☒ Your Use ☐ As Requested ☐ Review and Comment
☐ Due Date:

SENT VIA: Hand Carry

☒ Attached ☐ Separate Cover Via

COPIES	DATE	DESCRIPTION	PREPARED BY
2		Signed and Sealed Structural Drawings Per Drawing Revision Memo #07 05/07/07 (attached)	Stellar
1		Columba County Building Permit Application (Foundation Only)	Stellar
1		Suwannee River Water Managemnt District Permit (#ERP07-0099)	Suwannee River Water Managemnt
1		Geotechnical Report (#458560)	Universal Engineering
1	05/03/07	Roof Slope Letter dated 05/03/07	Rodgers Architects

Remarks:

JSW/lmf

CC:

Signed: _____
Jason S. Wright
Project Manager

Drawing List

CONCRETE FOUNDATIONS

United States Cold Storage
USCS Lake City
21003019
Lake City, Florida

DWG #	TITLE	REV	DATE	DESCRIPTION
~~A100~~	~~Overall Floor Plan~~	~~E~~	~~05/08/07~~	~~Bid Issue~~
*S000	General Design Notes and Typical Details	C	05/07/07	Foundation Permit Issue
*S100	Freezer Foundation Plan	C	05/07/07	Foundation Permit Issue
*S101	Welfare Area and Partial Dock Foundation Plan	C	05/07/07	Foundation Permit Issue
*S102	Maintenance Area and Partial Dock Foundation Plan	C	05/07/07	Foundation Permit Issue
*S500	Foundation Sections and Details	B	05/07/07	Foundation Permit Issue
*S501	Foundation Sections and Details	A	05/07/07	Foundation Permit Issue
*S502	Foundation Sections and Details	A	05/07/07	Foundation Permit Issue
*S503	Foundation Sections and Details	A	05/07/07	Foundation Permit Issue

THE STELLAR GROUP

THE STELLAR GROUP
2900 HARTLEY ROAD
JACKSONVILLE, FLORIDA 32257
(904) 260-2900

DESIGN DEPARTMENT
MEMORANDUM

DATE: May 7, 2007

TO: Distribution

FROM: Joe Bove

SUBJECT: United States Cold Storage
New Facility
Lake City, Florida
Job #71003019
Drawing Revision #07

Below is a list of current project documents. Documents which have been added or revised to reflect the latest project requirements are highlighted.

DWG #	TITLE	REV	DATE	DESCRIPTION
G002	Overall Life Safety Plan	A	04/27/07	Owner Review
G003	Admin., Welfare, Maintenance & Machine Room Life Safety Plans	A	04/27/07	Owner Review
C100	Cover Sheet	0	04/18/07	Construction Issue
C101	Site Geometry Plan	0	04/18/07	Construction Issue
C101a	Site Master Plan	A	03/06/07	Permitting Issue
C102	Site Utilities Plan	0	04/18/07	Construction Issue
C103	Grading and Drainage Plan	0	04/18/07	Construction Issue
C104	Erosion and Sediment Control Plan	0	04/18/07	Construction Issue
C107	Landscaping Plan	0	04/18/07	Construction Issue
C501	Site Details	0	04/18/07	Construction Issue
C502	Site Details	0	04/18/07	Construction Issue
A100	Overall Floor Plan	D	04/27/07	Owner Review
A101	Enlarged Floor Plan	A	04/27/07	Owner Review
A101A	Enlarged Overall Rack Layout	A	04/27/07	Owner Review
A102	Enlarged Floor Plan	A	04/27/07	Owner Review
A103	Enlarged Floor Plan	B	04/27/07	Owner Review
A104	Admin. Office & Welfare Reflected Ceiling Plan	A	04/27/07	Owner Review
A105	Reflected Ceiling Plan	B	04/27/07	Owner Review
A106	Roof Plan	A	04/27/07	Owner Review
A200	Exterior Elevations	A	04/27/07	Owner Review
A201	Enlarged Exterior Elevations	A	04/27/07	Owner Review
A300	Wall Sections	A	04/27/07	Owner Review
A301	Wall Sections	A	04/27/07	Owner Review
A302	Wall Sections	A	04/27/07	Owner Review
A303	Wall Sections	A	04/27/07	Owner Review
A304	Wall Sections	A	04/27/07	Owner Review

A305	Wall Sections	A	04/27/07	Owner Review
A501	Roof Detail	A	04/27/07	Owner Review
A601	Door Hardware & Schedule & Door Types	A	04/27/07	Owner Review
A602	Room Finish Schedule & Window Types	A	04/27/07	Owner Review
A603	Window Details	A	04/27/07	Owner Review
A604	Door Details	A	04/27/07	Owner Review
A605	Door Details	A	04/27/07	Owner Review
***S000**	***General Design Notes and Typical Details***	***C***	***05/07/07***	***Foundation Permit Issue***
***S100**	***Freezer Foundation Plan***	***C***	***05/07/07***	***Foundation Permit Issue***
***S101**	***Welfare Area and Partial Dock Foundation Plan***	***C***	***05/07/07***	***Foundation Permit Issue***
***S102**	***Maintenance Area and Partial Dock Foundation Plan***	***C***	***05/07/07***	***Foundation Permit Issue***
S103	Freezer Concrete Slab Plan	A	04/27/07	Owner Review
S104	Welfare Area and Partial Dock Concrete Slab Plan	A	04/27/07	Owner Review
S105	Maintenance Area and Partial Dock Concrete Slab Plan	A	04/27/07	Owner Review
S106	Freezer Roof Framing Plan	A	04/27/07	Owner Review
S107	Welfare Area and Partial Dock Roof Framing Plan	A	04/27/07	Owner Review
S108	Maintenance Area and Partial Dock Roof Framing Plan	A	04/27/07	Owner Review
S109	Penthouse Flr. Framing, Grating and Roof Framing Plans	A	04/27/07	Owner Review
S110	Second Floor and Mezzanine Framing Plans	A	04/27/07	Owner Review
S111	Condensor Support Framing Plan and Elevations	A	04/27/07	Owner Review
S200	Structural Elevations	A	04/27/07	Owner Review
S201	Structural Elevations	A	04/27/07	Owner Review
S400	Freezer in Floor Stair Plan & Details	B	05/01/07	Foundation Bid Issue
S401	Freezer in Floor Stair Plan & Details	B	05/01/07	Foundation Bid Issue
***S500**	***Foundation Sections and Details***	***B***	***05/07/07***	***Foundation Permit Issue***
***S501**	***Foundation Sections and Details***	***A***	***05/07/07***	***Foundation Permit Issue***
***S502**	***Foundation Sections and Details***	***A***	***05/07/07***	***Foundation Permit Issue***
***S503**	***Foundation Sections and Details***	***A***	***05/07/07***	***Foundation Permit Issue***
S505	Framing Sections and Details	A	04/27/07	Owner Review
S506	Framing Sections and Details	A	04/27/07	Owner Review
S507	Framing Sections and Details	A	04/27/07	Owner Review
S508	Framing Sections and Details	A	04/27/07	Owner Review
S509	Framing Sections and Details	A	04/27/07	Owner Review
S515	Bracing Sections and Details	A	04/27/07	Owner Review
S600	Joist and Joist Girder Load Tables	A	04/27/07	Owner Review
S601	Roof Deck Attachment Diagram	A	04/27/07	Owner Review
S602	Roof Joist Uplift Diagram	A	04/27/07	Owner Review
M001	Mechanical Legend and Schedules	A	04/27/07	Owner Review
M002	Mechanical Specs	A	04/27/07	Owner Review
M101	Overall Mechanical First Floor Plan	A	04/27/07	Owner Review
M102	Mechanical Second Floor Plan	A	04/27/07	Owner Review
M103	Overall Mechanical Roof Plan	A	04/27/07	Owner Review
M401	Enlarged Mechanical Floor Plan	A	04/27/07	Owner Review
M402	Enlarged Mechanical Floor Plans	A	04/27/07	Owner Review

M501	Mechanical Details	A	04/27/07	Owner Review
M502	Mechanical Details	A	04/27/07	Owner Review
P001	Schedules, Notes, & Specs	A	04/27/07	Owner Review
P002	Schedules, Notes, & Specs	A	04/27/07	Owner Review
P003	Pipe Scope & Specifications	A	04/27/07	Owner Review
P100	Overall Floor Plan	A	04/27/07	Owner Review
P101	Enlarged Sanitary & Process Piping Floor Plan	A	04/27/07	Owner Review
P102	Enlarged Sanitary & Process Piping Floor Plan	A	04/27/07	Owner Review
P401	Enlarged Sanitary & Utility Floor Plan	A	04/27/07	Owner Review
P402	Enlarged Sanitary & Utility Floor Plan	A	04/27/07	Owner Review
P501	Detail Sheet	A	04/27/07	Owner Review
E001	Legend Notes and Fixture Schedule	C	04/27/07	Owner Review
E002	Electrical Site Plan	C	04/27/07	Owner Review
E101	Lighting Plan Warehouse and Dock	C	04/27/07	Owner Review
E102	Lighting Plan Office and Mechanical	C	04/27/07	Owner Review
E103	Lighting Plan Machine, Maintenance Penthouses & Mezzanine North	C	04/27/07	Owner Review
E201	Power Plan Warehouse and Dock	B	10/30/06	Revised Pricing Documents
E202	Power Plan Office and Mechanical	B	10/30/06	Revised Pricing Documents
E203	Power Plan Machine, Roof Maintenance Penthouses & Mezzanine North	C	04/27/07	Owner Review
E204	Roof Plans Office, Machine & Maintenance	C	04/27/07	Owner Review
E205	Electrical Grounding Lightning Protection Plan	C	04/27/07	Owner Review
E301	Refrig. Controls Plan Warehouse and Docks	B	10/30/06	Revised Pricing Documents
E302	Refrig. Controls Plan Machine Room	B	10/30/06	Revised Pricing Documents
E303	Refrig. Controls Plan Warehouse and Docks	A	10/30/06	Revised Pricing Documents
E304	Refrig. Controls Plan Warehouse and Docks	A	10/30/06	Revised Pricing Documents
E501	Electrical Details	C	04/27/07	Owner Review
E502	Electrical Details	C	04/27/07	Owner Review
E503	Electrical Details	C	04/27/07	Owner Review
E601	One Line Diagram	C	04/27/07	Owner Review
E602	Refrigeration MCP Diagram	C	04/27/07	Owner Review
E603	Panel Schedules	C	04/27/07	Owner Review

Specifications:

01000	04/23/07	Issue #1	General Requirements
16010	04/11/07	Issue #1	Basic Electrical Requirements
16111	04/11/07	Issue #1	Conduit
16112	04/11/07	Issue #1	Surface Raceways
16120	04/11/07	Issue #1	Wire and Cable-600 volts
16130	04/11/07	Issue #1	Boxes
16141	04/11/07	Issue #1	Wiring Devices

16180	04/11/07	Issue #1	Equipment Installation & Wiring Systems
16190	04/11/07	Issue #1	Supporting Devices
16195	04/11/07	Issue #1	Electrical Identification
16420	04/11/07	Issue #1	Electrical Service Entrance
16425	04/11/07	Issue #1	Switchboards-600 volts and less
16440	04/11/07	Issue #1	Disconnect Switches
16442	04/11/07	Issue #1	Fuses
16445	04/11/07	Issue #1	Enclosed Circuit Breakers
16450	04/11/07	Issue #1	Grounding
16461	04/11/07	Issue #1	Dry Type Transformers
16470	04/11/07	Issue #1	Panelboards
16480	04/11/07	Issue #1	Motor Starters
16485	04/11/07	Issue #1	Contactors
16510	04/11/07	Issue #1	Lighting Fixtures
16740	04/11/07	Issue #1	Basic Electrical Requirements
16741	04/11/07	Issue #1	Telephone Service Entrance

Please call if you have any questions.

Cc: Project – 03019 Rachelle Glisson Kristen Lovell Cristi Whitham
Judd Chambers

stellar

May 14, 2007

Mr. Joe Haltiwanger
Plans Examiner
Building & Zoning Department
135 NE Hernando Ave.
Lake City, FL 32055
Ph. 386-758-1008

RE: United States Cold Storage – New Facility
Termite Protection Specs

Dear Mr. Haltiwanger:

Attached are construction specs for the above-mentioned project including termite protection.

Please do not hesitate to call if you have further questions or concerns.

Sincerely,

Michael Mendoza
Civil Engineer
Stellar

2900 Hartley Road
Jacksonville, FL 32257
Phone: 904.260.2900
Fax: 904.260.2900
stellar.net

SECTION 02560

TERMITE PROTECTION

PART I - GENERAL

1.01 DESCRIPTION

A. The General Requirements, Section 100, are hereby made a part of this section as if fully repeated herein.

B. Work Included:

1. Chemical treatment of the soil beneath all office slabs on grade for termite protection.

2. Chemical treatment of interior surfaces of office walls in contact with earth.

C. Related Work Specified Elsewhere:

1. Grading: Site Clearing & Grading - 02210

2. Excavation: Excavation & Backfill - 02220

3. Concrete work: Cast-In-Place Concrete - 03300

4. Masonry work: Masonry - 04810

1.02 QUALITY ASSURANCE

A. Perform all work specified herein in accordance with current requirements of governing regulations.

B. Use registered and licensed applicators, where such is required by Federal, State or local authority.

1.03 GUARANTEE

A. Upon completion of the work, guarantee the effectiveness of the treatment against termite infestation for a period of 1 year. If infestation should occur within the guarantee period, re-treat the soil and repair all associated damages. Owner shall have the right to renewal at end of guarantee period.

PART II - PRODUCTS

2.01 MATERIALS

A. Chemicals shall be water-based emulsion soil chemicals only and in working solutions.

B. Only chemicals approved by Local, State, or Federal Regulations shall be used. Subcontractor shall be responsible for verifying that the intended chemical to be used is not prohibited by applicable regulations.

PART III - EXECUTION

3.01 TIME OF APPLICATION

A. Do no soil poisoning work until all subgrade work is complete and ready for concrete placement or other finished work. Do not apply soil poison when surface water is present.

B. If walls are to receive a moisture-proofing coating, apply chemicals only after coatings are thoroughly dried.

3.02 LOCATION

A. Apply soil treatment beneath all slab areas and a minimum of 12" below the floor slab along the interior side of abutting foundation walls. Where the exterior of the wall is abutted by concrete slabs, asphalt paving or other permanent surfacing, treat the exterior side of foundation walls as specified for the interior side of such walls.

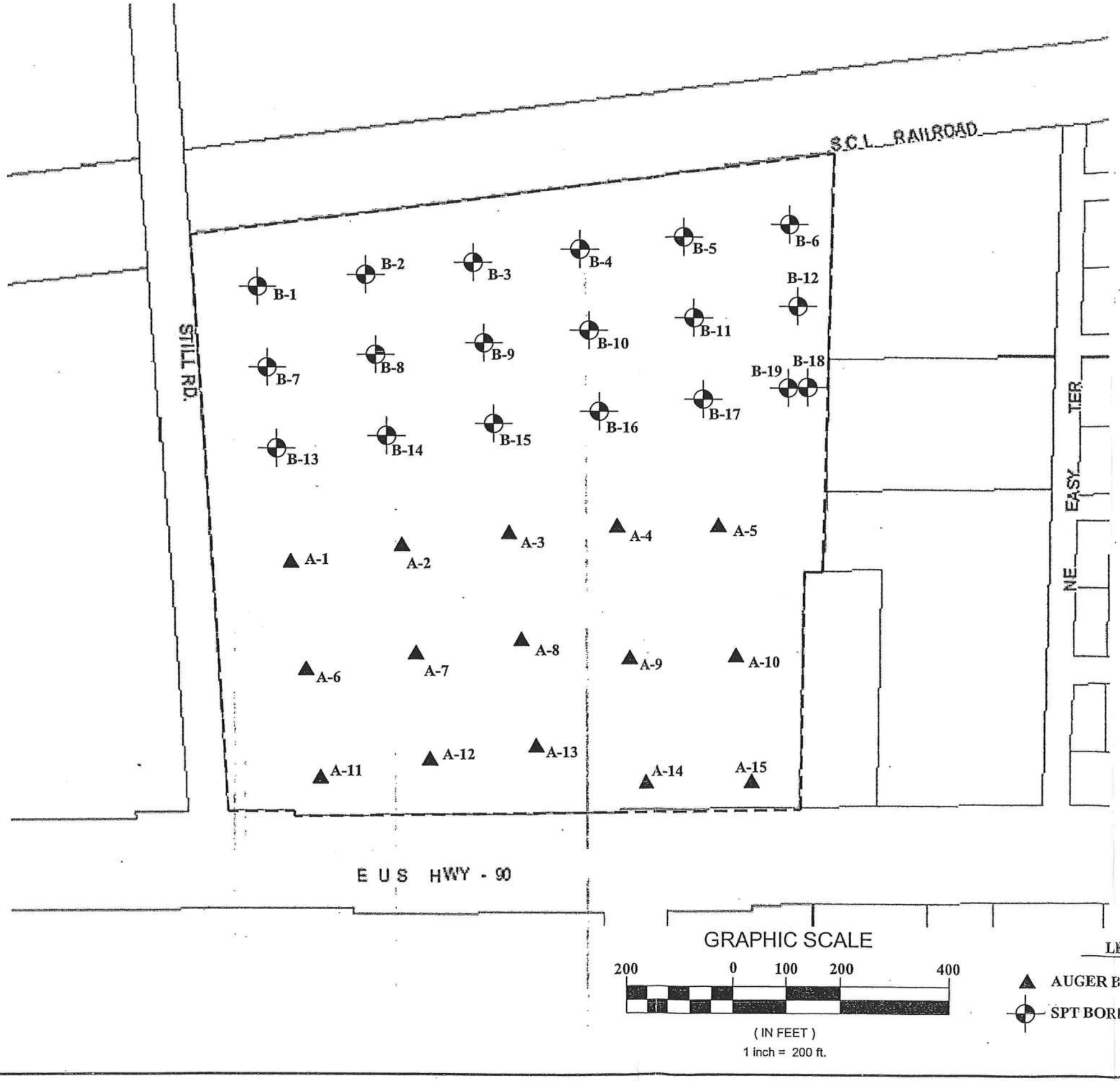
3.03 RATE OF APPLICATION

A. Building Areas: One gallon per ten square feet of slab area within the building.

B. Foundation Walls: Treat the voids of the foundation walls with a minimum of one gallon per five lineal feet.

C. Miscellaneous: Apply two gallons per five lineal feet immediately below expansion joints, control joints and all areas where slab will be penetrated by construction features, and where exterior facings or veneers extend below grade level along the exterior side of all foundation walls.

(END OF SECTION 02560)



CLIENT: US COLD STORAGE, INC.

DRAWN BY: TW | DATE: 3/13/06

CHECKED BY: JW | DATE: 3/13/06

SCALE: 1"= 200'

PROJECT NO: 92625-001-01 | REPORT NO: 458560

GEOTECHNICAL EXPLORATION
US COLD STORAGE FACILITY
LAKE CITY, FLORIDA

BORING LOCATION PLAN

UNIVERSAL
ENGINEERING SCIENCES

PAGE NO:
A-1

ROOF "A"

1/8"/FT. SLOPE

ROOF "B"

1/8"/FT. SLOPE

1/4"/FT. SLOPE

SINGLE-PLY MECHANICALLY ATTACHED 60 mil THK., WHITE TPO MEMBRANE OVER 2 LAYERS OF 4" THICK (TOTAL 8", R=50) POLYISOCYANURATE INSULATION OVER 1 1/2" METAL DECK

SINGLE-PLY MECHANICALLY ATTACHED 60 mil THK., WHITE TPO MEMBRANE OVER 3.3" THICK (R=20) POLYISOCYANURATE INSULATION OVER 1 1/2" METAL DECK

SINGLE-PLY MECHANICALLY ATTACHED 60 mil THK., WHITE TPO MEMBRANE OVER 4" THICK (R=25) POLYISOCYANURATE INSULATION OVER 1 1/2" METAL DECK

T/ROOF (LOW PT.) EL = 43'-0"

T/ROOF (RIDGE) EL = 44'-8 5/8"

RIDGE LINE

T/ROOF (HIGH PT.) EL = 22-3 1/4"

T/ROOF (LOW PT.) EL = 21'-0"

CRICKET

10" x 5" PRE-FINISHED ALUMINUM GUTTER

8" x 5" PRE-FINISHED ALUMINUM DOWNSPOUT AT (19) LOCATIONS

5" x 5" PRE-FINISHED ALUMINUM DOWNSPOUT AT (3) LOCATIONS

5" x 5" FINISHED ALUMINUM DOWNSPOUT AT (3) LOCATIONS

7" x 7" PRE-FINISHED ALUMINUM GUTTER

ROOF PLAN

SCALE: NONE

N