Leon County Research and Development Authority
Development Review Committee
Collins Building
2051 East Paul Dirac Drive
Tallahassee, FL 32310

November 8, 2022
9:00am to 10:00am

Agenda

Anyone wishing to submit written comments may do so by 9:00am the day before the scheduled meeting date so that the comments can be distributed to the Committee. Comments submitted after this time (up to the time of the meeting) will be accepted and included in the official record of the meeting. Email comments to: publicinput@inn-park.com and reference the meeting title and date in the subject line. Include your name and contact information. All times are approximate.

1. Call to Order

2. Introductions

3. Approval of Participation by Electronic Means
   In accordance with the Bylaws, there being a quorum of members present in person, the members of the Committee present in person are required to approve participation by those participating via Electronic Means acknowledging that the COVID-19 pandemic constitutes extraordinary circumstances.

4. Modifications to the Agenda

5. Public Comment
   Any public comment received prior to the meeting will be provided to the Committee members in addition to any in-person public comment.

6. Approval of Draft Meeting Minutes, November 9, 2021 *(Attachment A)*

7. Florida State University *(Attachments B1-B6)*
   Florida State University (FSU) is requesting approval of a plan to construct a solar array to be located behind the FSU Research Foundation Building A, 2000 Levy Avenue. See the project narrative and drawings for additional details.

8. New Business

9. Adjourn

Leon County Research and Development Authority
Development Review Committee
Collins Building
2051 East Paul Dirac Drive
Tallahassee, FL 32310

November 9, 2021
9:00am – 10:00am

DRAFT Minutes

Members in Attendance: Ron Miller (Chair), Ben Hood, John Reddick, Brad Richardson.

Members in Attendance Virtually: Kimberly Strobel-Ball.

Guests: Cheryl Poole, Poole Engineering & Surveying; Kathryn Stivers, Architects Lewis + Whitlock.

1. **Call to Order**
   Ron Miller called the meeting to order at 9:00am.

2. **Welcome/Introductions**
   All present introduced themselves.

3. **Approval of Participation by Electronic Means**
   In accordance with the Bylaws, there being a quorum of members present in person, the members of the Committee present in person are required to approve participation by those participating via Electronic Means acknowledging that the COVID-19 pandemic constitutes extraordinary circumstances.
   Ben Hood offered a motion to allow participation by electronic means. John Reddick seconded the motion which passed unanimously with Kimberly Strobel-Ball not voting.

4. **Modifications to the Agenda**
   None.

5. **Public Comment**
   None.

6. **Approval of Draft Meeting Minutes, October 12, 2020**
   John Reddick offered a motion to approve the draft meeting minutes. Brad Richardson seconded the motion which passed unanimously.

VARIANCE HEARING

Prior to the variance hearing agenda items, Ron Miller read into the record the variance process followed as required by the Innovation Park/Tallahassee Declaration of Protective Covenants and Restrictions included as Attachment A to these minutes.

7. **North Florida Innovation Labs**

Leon County Research and Development Authority, Parcel 410327E0050, requests a variance to Section VIII.1(d) to locate its East Paul Dirac driveway apron 12 feet 6 inches from the nearest adjacent Site line (Parcel 410327E0040) rather than the Innovation Park Covenants and Restrictions required 50 feet. A proposed mitigating factor is that the driveway is 197 feet from the driveway on the adjacent property.

Ben Hood offered a motion to recommend approval of the variance as requested. Brad Richardson seconded the motion which passed unanimously.

8. Danfoss Expansion

Danfoss LLC, Parcels 4103202350000 and 410327E0040, requests a variance to Sections II.3, VIII.1(d), and IX.1 to locate its parking lot the City of Tallahassee required setback of 8 feet from the eastern side property line, along with the corresponding landscape buffer, rather than the Innovation Park Covenants and Restrictions required 25 feet. An existing mature forested area and additional dense landscaping are proposed mitigating factors.

After discussion Kimberly Strobel-Ball offered a motion to recommend approval of the requested variance subject to the applicant's good faith effort to maintain a high level of opacity between the properties. John Reddick seconded the motion which passed unanimously.

9. New Business

None.

10. Adjourn

The meeting adjourned at 9:13am.

Leon County Research and Development Authority
Development Review Committee
Collins Building
2051 East Paul Dirac Drive
Tallahassee, FL 32310

November 8, 2022
9:00am to 10:00am

ATTACHMENT B1 PROVIDED AS A SUPPLEMENT

Hicks
Nation
Architects
Incorporated

Architecture
Programming
Planning

October 19, 2022

Mr. Bill Lickson
Executive Director
Leon County R & D Authority
Innovation Park
1736 Paul Dirac Drive
Tallahassee, FL 32310

RE: **Solar PV System Addition**
Center for Advanced Power Systems
2000 Levy Avenue
FSU Research Foundation
Tallahassee, Florida
HNA Project No. 2204

Dear Mr. Lickson,

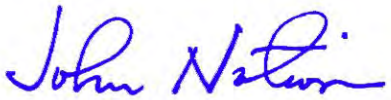
We are herein submitting our site preparation plans for the above referenced project for your review. The project consists of the addition of a 100 KW Solar PV System to the CAPS Research Building located north of the FSU Research Facility. The area to be developed for the Solar PV System contains approximately 20,201 sf which is less than ½ an acre. The location of the Solar PV System can be seen on the civil plans. A detail explanation of the project is included on Dwg. No. G1.1 Building Design Summary.

The Solar PV System will be located adjacent to the existing Chiller Plant which is north of the Research Facility parking lot. The work includes clearing and grubbing of existing trees and vegetation just north of the Chiller Plant. The site will be filled and graded to create a gentle slope to the north. A new gravel access road will be installed to access the Chiller Plant. 7 rows of solar panels will be installed on the south, west and north sides of the Chiller Plant. A gravel ground cover will be installed under the solar panels and a 6'-0" high black vinyl chain-link fence will be installed at the perimeter of the solar panels. No impervious surfaces will be installed as part of this project.

1382 Timberlane Road Suite C Tallahassee FL 32312 (850) 893-1130 Fax (850) 893 1132 License Number COO1403

This set of construction documents is for the preparation of the project site and is being submitted for approval to the Innovation Park DRC and FSU BCA. While the site is being cleared and prepared this November, the panel installation plans will be completed by EnergyLink and coordinated with our design team to complete the installation of the Solar PV System. These plans will be submitted in November 2022 for approval. The installation of the Solar PV System will be completed in the spring of 2023.

Sincerely,



John W. Nation, AIA

Xc: Mary Jo Spector, Wallis Walker & Craig Allen

CITY OF TALLAHASSEE/INNOVATION PARK
SITE PLAN REVIEW
COMPLETENESS DETERMINATION CHECKLIST

In order for an application to be eligible for review, the following materials must be submitted to the Innovation Park/Tallahassee Development Review Committee. Five copies are required for this review.

APPLICANT VERIFICATION	STAFF VERIFICATION	
		1. The applicant shall submit to the Innovation Park/Tallahassee Development Review Committee a detailed statement of objectives indicating:
✓		a. The general purpose of the development
✓		b. The type and square footage of non-residential development including floor area ratios, pervious and impervious surface areas, and other standards as may be required.
✓		2. A site conditions map drawn to an appropriate engineer's scale sufficient to show and to depict the location of existing property lines for both private and public property (boundary survey), existing contours shown at a contour interval of two (2) feet, streets, buildings, watercourses, transmission lines, sewers, culverts, and drain pipes, water mains, public utility easements, wooded area, streams, lakes, marshes, and any other physical conditions on the site.
		3. A site plan shall be drawn to an appropriate engineer's scale showing:
✓		a. The proposed grading plan.
✓		b. All rights-of-way and easements showing points of reference.
✓		c. All proposed buildings and other structures.

Prepared: February 1, 1993
Revised:

d. The location of phase lines indicating all applicable construction phases if applicable.
e. The off-street parking and loading plan.
f. A circulation diagram showing vehicular and pedestrian movements including any special engineering features and traffic regulation devices.
g. Provisions for the control of signs including size, shape and appearance.

4. A utility service plan showing:
   a. Existing drainage and sewer lines.
   b. The disposition and/or retention of sanitary waste and storm water.

5. A landscaping plan showing:
   a. Landscaped areas.
   b. All specimen trees or groups of trees thirty-six (36) inches in diameter or larger, indicating those to be retained, removed, or relocated.
   c. The location, height, and material for walks, fences, walkways, and other man-made landscape features.
   d. Any special landscape features including but not limited to, man-made lakes, land sculptures and waterfalls.

6. Statistical information including:
   a. Total acreage of the site.
   b. Maximum building coverage expressed as a percentage of the total site area.
   c. The area of land devoted to rights-of-way, transportation easements, parking and other transportation facilities expressed as a percentage of the total site area.
   d. The area of land devoted to undisturbed open space expressed as a percentage of the total site area.
   e. The calculated density/intensity for the project and impervious percentage.

Prepared: February 1, 1993
Revised:

✓		7.	Development schedule showing order of construction, proposed date for the beginning of construction and completion of the project as a whole and any phases thereof.
✓		8.	This completed checklist.
✓		9.	Other relevant information which is deemed to be appropriate by the Innovation Park/Tallahassee Development Review Committee to ensure consideration of all relevant issues.

If the Innovation Park/Tallahassee Development Review Committee refers the project to the City of Tallahassee the following will be required:

		10.	Completed application for Site Plan Review - Type A.
		11.	Application fee.

Note: All of the items listed above must be submitted at time of application, unless the Development Review Committee Chairman waives a specific item.

Prepared: February 1, 1993
Revised:

BUILDING DESIGN SUMMARY

OWNER: FLORIDA STATE UNIVERSITY

PROJECT LOCATION: FSU RESEARCH FOUNDATION
2000 LEVY AVENUE
FLORIDA STATE UNIVERSITY

SCOPE OF WORK: THIS PROJECT INCLUDES THE INSTALLATION OF A 100 KW SOLAR PV SYSTEM ADJACENT TO THE CHILLER PLANT ON THE SITE OF THE FSU RESEARCH FACILITY LOCATED AT 2000 LEVY AVENUE IN INNOVATION PARK. THE WORK INCLUDES CLEARING AND GRUBBING OF EXISTING TREES AND VEGETATION JUST NORTH OF THE CHILLER PLANT. THE SITE WILL BE FILLED AND GRADED TO CREATE A GENTLE SLOPE TO THE NORTH. A NEW GRAVEL ACCESS ROAD WILL BE INSTALLED TO ACCESS THE CHILLER PLANT. SEVEN ROWS OF SOLAR PANELS WILL BE INSTALLED ON THE SOUTH, WEST AND NORTH SIDES OF THE CHILLER PLANT. A GRAVEL GROUND COVER WILL BE INSTALLED UNDER THE SOLAR PANELS AND A 6'-0" HIGH BLACK VINYL CHAIN-LINK FENCE WILL BE INSTALLED AT THE PERIMETER OF THE SOLAR PANELS. NO IMPERVIOUS SURFACES WILL BE INSTALLED AS PART OF THIS PROJECT. THE TOTAL AREA DISTURBED FOR THIS PROJECT WILL BE 20, 201 S.F. WHICH IS LESS THAN 1/2 ACRE

BUILDING CODES:
APPLICABLE CODES ADOPTED BY FLORIDA STATE UNIVERSITY

APPLICABLE CODES:	
FLORIDA EXISTING BUILDING CODE (FEBC)	7th EDITION
FLORIDA BUILDING CODE, BUILDING (FBC-B)	7th EDITION
FLORIDA BUILDING CODE, ACCESSIBILITY (FBC-A)	7th EDITION
FLORIDA BUILDING CODE, MECHANICAL (FBC-M)	7th EDITION
FLORIDA BUILDING CODE, FUEL GAS (FBC-FG)	7tH EDITION
FLORIDA BUILDING CODE, PLUMBING (FBC-P)	7tH EDITION
FLORIDA FIRE PREVENTION CODE (FFPC)	7th EDITION
NATIONAL ELECTRICAL CODE (NEC)	7th EDITION

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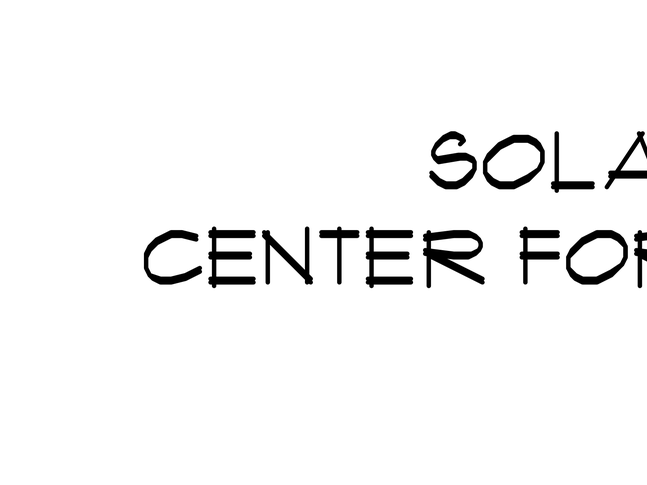
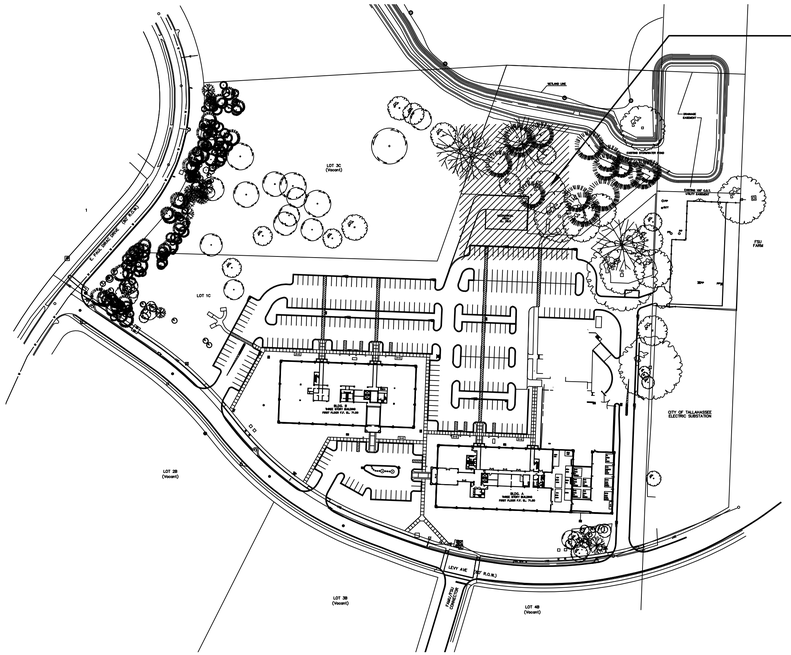
SOLAR PV SYSTEM ADDITION
CENTER FOR ADVANCED POWER SYSTEMS
2000 LEVY AVE.
FSU PROJECT NO. 2200079
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA

Project Site



LOCATION MAP

Project Site



OVERALL SITE PLAN

INDEX TO DRAWINGS

DWG. NO.	SHEET NO.	TITLE
G1.1	1 OF 6	TITLE SHEET, INDEX TO DRAWINGS & LOCATION MAP
C1.0	2 OF 6	SITE SURVEY
C1.1	3 OF 6	DEMOLITION SITE PLAN
C1.2	4 OF 6	GRADING SITE PLAN
C1.3	5 OF 6	SOLAR PANEL LAYOUT PLAN
C1.4	6 OF 6	GROUND COVER PLAN

BUILDING DESIGN SUMMARY

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PROJECT LOCATION: FSU RESEARCH FOUNDATION
2000 LEVY AVENUE
FLORIDA STATE UNIVERSITY

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FLORIDA BUILDING CODE, PLUMBING (FBC-P)	7th EDITION
FLORIDA FIRE PREVENTION CODE (FFPC)	7th EDITION
NATIONAL ELECTRICAL CODE (NEC)	7th EDITION

SITE PREPARATIONS
CONSTRUCTION DOCUMENTS

Hicks Nation Architects Incorporated
Architecture
Programming
Planning

1382
Timberlane Road
Suite C
Tallahassee Fl
32312
850.893.1130
License Number
AA C00 1403

SOLAR PV SYSTEM ADDITION
CENTER FOR ADVANCED POWER SYSTEMS
FSU PROJECT NO. 2200079
FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA

OCT. 19, 2022
HNA No. 2204

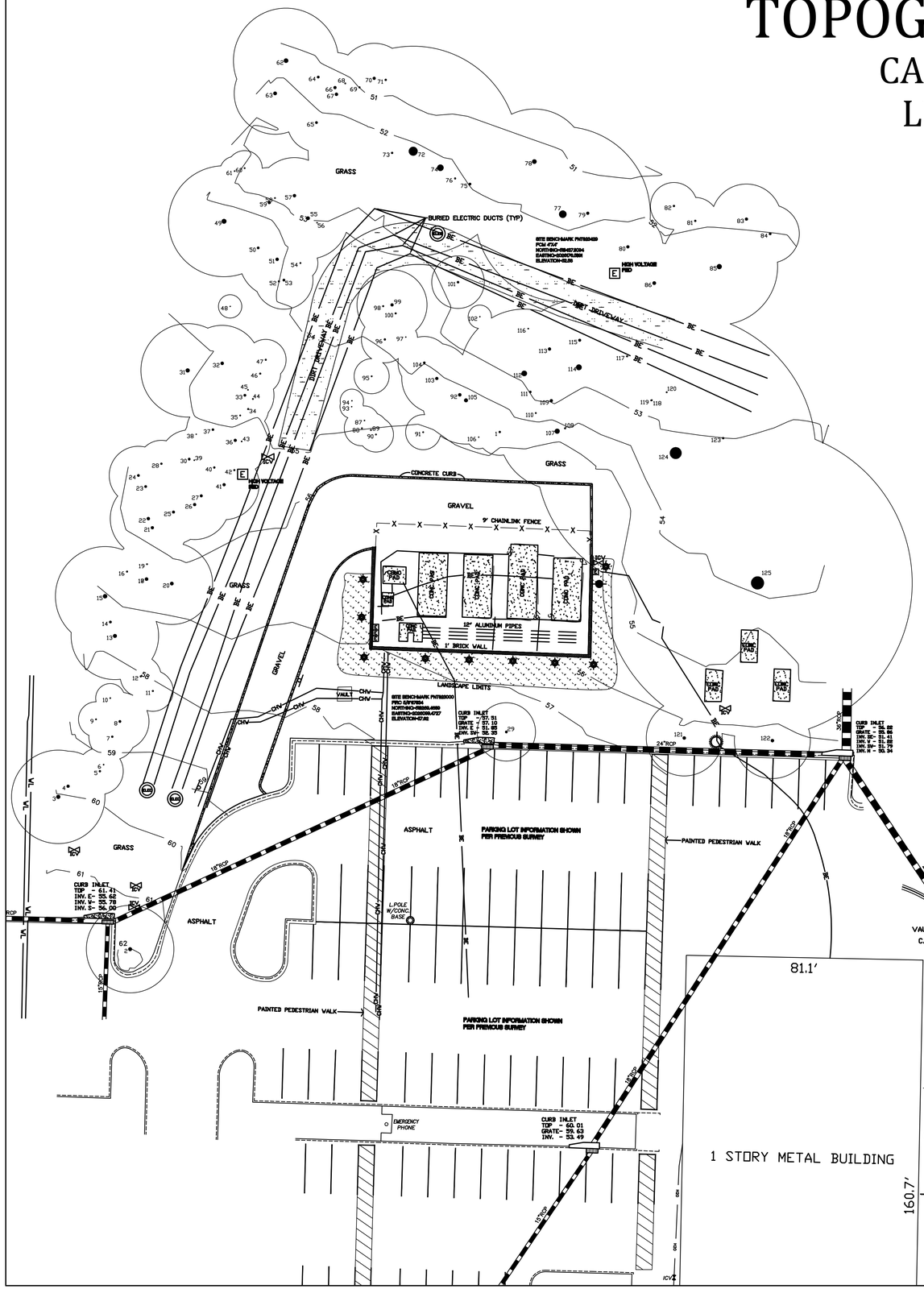
John W. Nation
AR 12778

G1.1

TOPOGRAPHIC SURVEY

CAPS SOLAR PANELS

LEON COUNTY, FL



SURVEYOR'S NOTES:

1. HORIZONTAL LOCATION IS BASED ON STATE PLANE COORDINATES, FLORIDA NORTH PROJECTION, NAD83 DATUM. THE ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 VERTICAL DATUM ESTABLISHED FROM FDOT RECORDED CONTROL POINT "55-02-A01GV" AND "55-22-A01G".
2. NO UNDERGROUND UTILITIES WERE PHYSICALLY LOCATED DURING THIS SURVEY EFFORT. UTILITIES SHOWN HEREON PER MAPS PROVIDED BY UTILITY OWNERS IN RESPONSE TO SUNSHINE ONE CALL DESIGN TICKET 089203489 DATED 03/30/22. THERE MAY BE SUBSURFACE UTILITIES WITHIN THIS SITE THAT ARE NOT SHOWN.
3. ALL MEASUREMENTS ARE IN U.S. SURVEY FEET.
4. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL SEAL OF A FLORIDA LICENSED SURVEYOR.
5. FIELD NOTES RECORDED IN FIELD BOOK 21-01, PAGE 64.
6. THIS IS NOT A BOUNDARY SURVEY.

SYMBOLS LEGEND

These standard symbols will be found in the drawing.

- WATER VALVE
- SITE BENCHMARK
- ELECTRIC PED/VAULT
- WATER METER
- SANITARY SEWER MANHOLE
- GRATED INLET
- STORM WATER MANHOLE
- GUY ANCHOR
- WOODEN POWER POLE
- CHW CHILLED AND RETURN WATER LINE
- BE BURIED ELECTRIC LINE
- GROUNDING ROD
- IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- FIRE DEPARTMENT CONTROL VALVE
- SINGLE SUPPORT SIGN
- BOLLARD
- ELECTRIC PEDESTAL/BOX
- LIGHT POLE
- SPRINKLER HEAD
- 29 DENOTES TREE SIZE & NUMBER (SEE TREE TABLE)

TREE TABLE

Number	Trunk	Type
1	8"	MULBERRY
2	15"	OAK
3	16"	WTR OAK
4	12"	WTR OAK
5	8"	MIMOSA
6	5"	BAY
7	8"	BAY
8	10"	CHERRY
9	6"	CHERRY
10	5"	BAY
11	7"	MIMOSA
12	7"	CHERRY
13	15"	CHERRY
14	10"	CHINABERRY
15	17"	PINE
16	7"	BAY
17	13"	PINE
18	13"	PINE
19	6"	BAY
20	14"	MIMOSA
21	12"	PINE
22	13"	SWEETGUM
23	10"	SWEETGUM
24	10"	PINE 10+8
25	11"	SWTGUM
26	12"	PINE
27	11"	PINE
28	8"	SWTGUM
29	10"	TULIP
30	10"	PINE
31	16"	PINE
32	13"	SWEETGUM
33	10"	PINE
34	7"	WTR OAK
35	6"	HOLLY
36	12"	PINE
37	9"	PINE
38	4"	WTR OAK
39	5"	SWEETGUM
40	8"	SWEETGUM
41	12"	PINE
42	7"	SWEETGUM
43	5"	HOLLY
44	6"	WTR OAK
45	5"	WTR OAK
46	7"	MIMOSA
47	7"	SWEETGUM
48	4"	HOLLY
49	19"	LV OAK
50	10"	CHERRY
51	13"	WTROAK
52	7"	SWEET GUM
53	10"	SWEETGUM
54	6"	SWEETGUM
55	14"	CHERRY
56	5"	WTROAK
57	13"	CHRRY
58	6"	CHRRY
59	12"	CHRRY
60	5"	CHRRY
61	5"	CHRRY
62	18"	CHRRY
63	14"	CHERRY
64	10"	CHERRY
65	10"	CHERRY
66	12"	CHRRY
67	13"	CHRRY
68	6"	CHERRY
69	7"	CHRRY
70	12"	SWTGUM
71	8"	LVOAK
72	36"	PINE
73	8"	CHERRY
74	26"	CHRRY
75	10"	CHERRY
76	7"	CHRRY
77	30"	SWTGUM
78	18"	CHRRY
79	12"	MULBERRY
80	12"	CHRRY
81	8"	CHERRY
82	8"	CHERRY
83	12"	WTR OAK
84	10"	CHERRY
85	20"	WTROAK
86	14"	SUGARBERRY
87	5"	MULBERRY
88	6"	MULBERRY
89	6"	MULBERRY
90	6"	MULBERRY
91	6"	MULBERRY
92	13"	LVOAK
93	4"	HOLLY
94	4"	HOLLY
95	6"	CHERRY
96	8"	HOLLY
97	4"	HOLLY
98	7"	CHRRY
99	12"	POPCORN
100	7"	CHERRY
101	9"	MULBERRY
102	4"	HOLLY
103	12"	LVOAK
104	9"	HOLLY
105	15"	CHERRY
106	4"	MULBERRY
107	20"	SWTGUM
108	7"	WTROAK
109	12"	WTR OAK
110	6"	MIMOSA
111	9"	WTROAK
112	22"	WTROAK
113	12"	CHERRY
114	23"	WTROAK
115	11"	CHERRY
116	5"	HOLLY
117	7"	SWTGUM
118	6"	CHERRY
119	6"	CHERRY
120	6"	SWTGUM
121	13"	TULIP
122	13"	TULIP
123	9"	SWT GUM
124	48"	LV OAK
125	53"	LV OAK

LEGEND:

AC.	- ACRES	I.R.	- IRON ROD
BLDG.	- BUILDING	MON.	- MONUMENT
BLVD.	- BOULEVARD	N	- NORTH
B.M.	- BENCHMARK	NE	- NORTHEAST
BRG.	- BEARING	NGVD	- NATIONAL GEODETIC VERTICAL DATUM
C.G.	- CURB and GUTTER	NO.	- NUMBER
C.M.	- CONCRETE MONUMENT	N&C	- NAIL and CAP
CMP.	- CORRUGATED METAL PIPE	NW	- NORTHWEST
CO.	- COUNTY	OHU	- OVERHEAD UTILITIES
CONC.	- CONCRETE	(P)	- PLAT INFORMATION
(D)	- DEED / DESIGN INFORMATION	P.C.	- POINT OF CURVATURE
E.	- EAST	P.C.C.	- POINT OF COMPOUND CURVATURE
ELEV.	- ELEVATION	P.C.P.	- PERMANENT CONTROL POINT
F.F.E.	- FINISHED FLOOR ELEVATION	P.I.	- POINT OF INTERSECTION
F.HYD.	- FIRE HYDRANT	P.O.B.	- POINT OF BEGINNING
Fnd.	- FOUND	P.O.C.	- POINT OF COMMENCEMENT
FT.	- FEET	P.R.C.	- POINT OF REVERSE CURVE
I.P.	- IRON PIPE	PRM	- PERMANENT REFERENCE MONUMENT
P.T.	- POINT OF TANGENCY		
R	- RADIUS		
RCP	- REINFORCED CONCRETE PIPE		
RNG.	- RANGE		
RD.	- ROAD		
R/W	- RIGHT OF WAY		
(S)	- SURVEY INFORMATION		
SEC.	- SECTION		
S.R.	- STATE ROAD		
S.S.	- SANITARY SEWER		
ST.	- STREET		
STA.	- STATION		
TBM	- TEMPORARY BENCHMARK		
T.C.	- TERRA COTTA		
TELE.	- TELEPHONE		
TR	- TRANSFORMER		
TWN.	- TOWNSHIP		
USGS	- U.S. GEOLOGICAL SURVEY		
W	- WEST		

CERTIFIED TO:
Hicks Nation Architects Inc.

S. Stinson & Associates, Inc.
147 JOHNNY RD. LAMONT, FL. 32336
LB-8393 (850) 509-3116

REVISIONS	DATE

DATE OF SURVEY: 5/2/2022
JOB NO: 22(60
SCALE: 1" = 20'
DRAWN BY: E.CAMPBELL
CHECKED BY: S.STINSON

I hereby certify that this survey meets the minimum technical standards set forth by the Florida Board of Professional Surveyors & Mappers in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes.

STEVEN W. STINSON
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE No. 6457 LICENSED BUSINESS No. 8393
DATE

SHEET NO: C1.0

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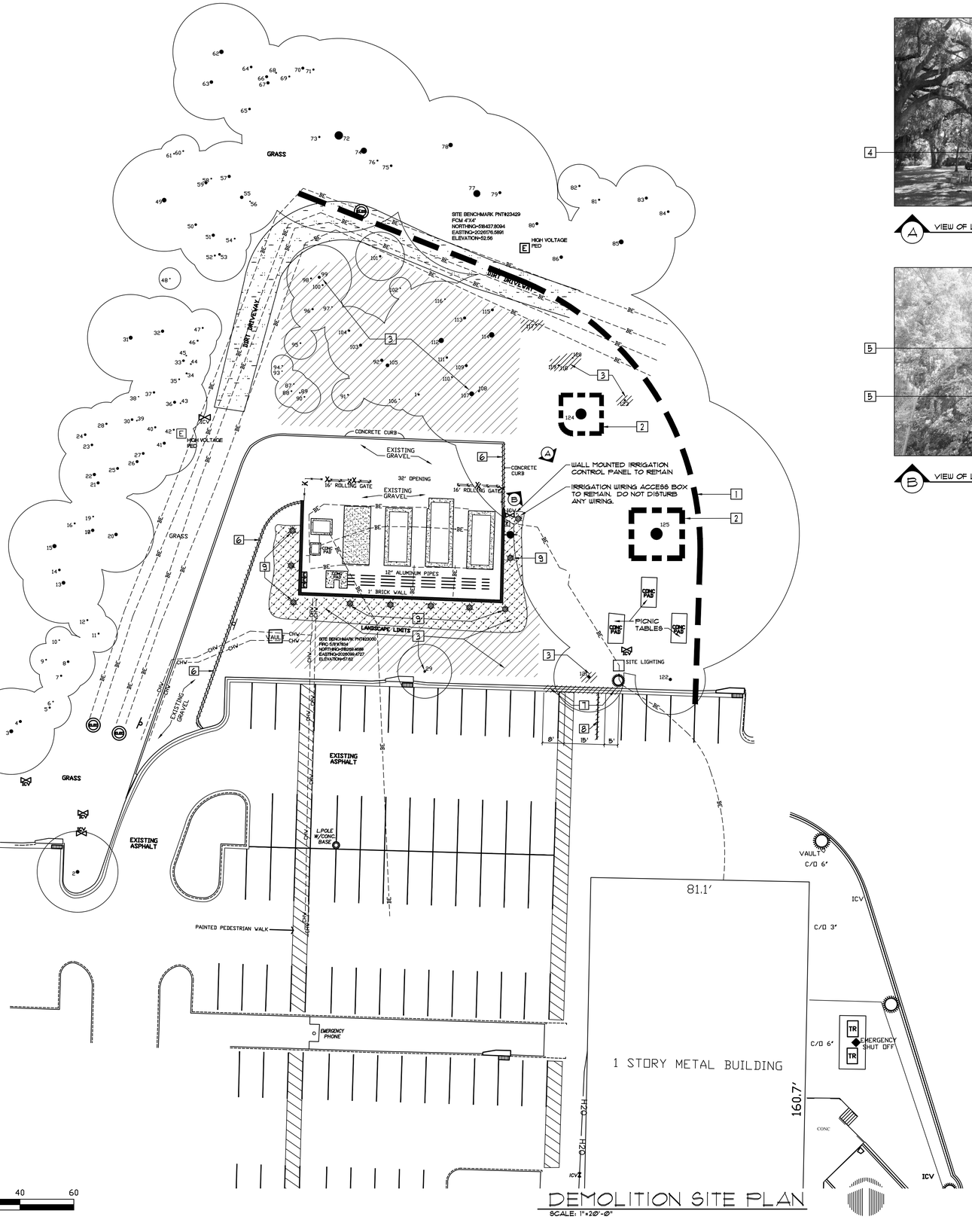

DEMOLITION SITE PLAN
SCALE: 1"=20'-0"

A VIEW OF LIVE OAK TREE LIMBS TO BE REMOVED

B VIEW OF LIVE OAK TREE LIMBS TO BE REMOVED

TREE TABLE

Number	Trunk	Type
1	8"	MULBERRY
2	15"	OAK
3	16"	WTR OAK
4	12"	WTR OAK
5	9"	MIMOSA
6	5"	BAY
7	8"	BAY
8	10"	CHERRY
9	6"	CHERRY
10	5"	BAY
11	7"	MIMOSA
12	7"	CHERRY
13	15"	CHERRY
14	10"	CHINABERRY
15	17"	PINE
16	7"	BAY
17	13"	PINE
18	13"	PINE
19	6"	BAY
20	14"	MIMOSA
21	12"	PINE
22	13"	SWEETGUM
23	10"	SWEETGUM
24	10"	PINE 10+8
25	11"	SVTGUM
26	12"	PINE
27	11"	PINE
28	8"	SVTGUM
29	10"	TULIP
30	10"	PINE
31	16"	PINE
32	13"	SWEETGUM
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40	8"	SWEETGUM
41	12"	PINE
42	7"	SWEETGUM
43	5"	HOLLY
44	6"	WTR OAK
45	5"	WTR OAK
46	7"	MIMOSA
47	7"	SWEETGUM
48	4"	HOLLY
49	19"	LV OAK
50	10"	CHERRY
51	13"	WTROAK
52	7"	SWEET GUM
53	10"	SWEETGUM
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59	12"	CHRRY
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61	5"	CHRRY
62	18"	CHRRY
63	14"	CHERRY
64	10"	CHERRY
65	10"	CHERRY
66	12"	CHRRY
67	13"	CHRRY
68	6"	CHERRY
69	7"	CHRRY
70	12"	SVTGUM
71	8"	LVOAK
72	36"	PINE
73	8"	CHERRY
74	26"	CHRRY
75	10"	CHERRY
76	7"	CHRRY
77	30"	SVTGUM
78	18"	CHRRY
79	12"	MULBERRY
80	12"	CHRRY
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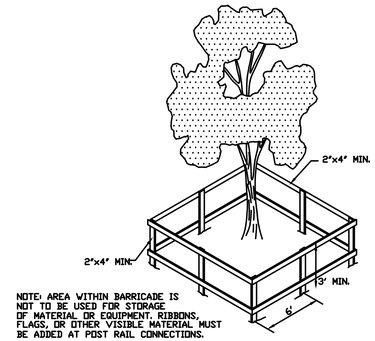
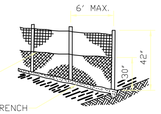
123	8"	SWT GUM
124	48"	LV OAK
125	33"	LV OAK



NOTE: AREA WITHIN BARRICADE IS NOT TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT. RIBBONS, FLAGS, OR OTHER VISIBLE MATERIAL MUST BE ADDED AT POST RAIL CONNECTIONS.

1 C/1.1 TREE BARRICADE DETAIL
N.T.S.



2 C/1.1 SILT FENCE DETAIL
N.T.S.

DEMOLITION NOTES:

1. INSTALL SILT FENCE PER DETAIL 1 THIS SHEET.
2. INSTALL TREE PROTECTION BARICADE PER DETAIL 2 THIS SHEET.
3. REMOVE EXISTING TREES, SOD AND LANDSCAPING AS SHOWN.
4. REMOVE EXISTING TREE LIMB TO LIMITS SHOWN.
5. REMOVE EXISTING DEAD TREE LIMB.
6. REMOVE EXISTING CONCRETE CURB TO LIMITS SHOWN. INFILL WHERE CURB REMOVED AND PREPARE FOR GRAVEL FILL.
7. REMOVE EXISTING CONCRETE CURB AND GUTTER TO LIMITS SHOWN.
8. REMOVE EXISTING PARKING STRIPPING (1) AS SHOWN.
9. REMOVE EXISTING IRRIGATION SPRINKLER HEADS AND PVC PIPING WITHIN THE LIMITS OF DEMOLITION SHOWN AND CAP. DO NOT REMOVE ANY IRRIGATION WIRING.

LEGEND

- AREA FOR TREE REMOVAL AND CLEARING & GRUBBING
- EXISTING CONSTRUCTION TO BE REMOVED.
- SILT FENCE. SEE DETAIL DRAWING NO. C1.1
- TREE PROTECTION. SEE DETAIL DRAWING NO. C1.1

SYMBOLS LEGEND

These standard symbols will be found in the drawing.

- WATER VALVE
- SITE BENCHMARK
- ELECTRIC PED/VAULT
- WATER METER
- SANITARY SEWER MANHOLE
- GRATED INLET
- STORM WATER MANHOLE
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- WOODEN POWER POLE
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- CHW— CHILLED AND RETURN WATER LINE
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- FIRE HYDRANT
- FIRE DEPARTMENT CONTROL VALVE
- SINGLE SUPPORT SIGN
- BOLLARD
- ELECTRIC PEDESTAL/BOX
- LIGHT POLE
- SPRINKLER HEAD
- 29 DENOTES TREE SIZE & NUMBER (SEE TREE TABLE)

LEGEND:

AC.	- ACRES
BLDG.	- BUILDING
BLVD.	- BOULEVARD
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CONC.	- CONCRETE
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Fnd.	- FOUND
FT.	- FEET
I. P.	- IRON PIPE
I. R.	- IRON ROD
MON.	- MONUMENT
N	- NORTH
NE.	- NORTHEAST
NGVD	- NATIONAL GEODETIC VERTICAL DATUM
NO.	- NUMBER
NAC	- NAIL and CAP
NW	- NORTHWEST
OHU	- OVERHEAD UTILITIES
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T. C.	- TERRA COTTA
TELE.	- TELEPHONE
TR	- TRANSFORMER
TWN.	- TOWNSHIP
USGS	- U. S. GEOLOGICAL SURVEY
W	- WEST

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Hicks Nation Architects Incorporated

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SOLAR PV SYSTEM ADDITION
CENTER FOR ADVANCED POWER SYSTEMS
FSU PROJECT NO. 2200079
FLORIDA STATE UNIVERSITY
DEMOLITION SITE PLAN

John W. Nation
AR 12778

DATE
OCT. 19, 2022
PROJECT NO.
2204
DESIGNED BY
JWN
DRAWN BY
MFL
CHECKED BY
JWN
DWG. NO.
C1.1

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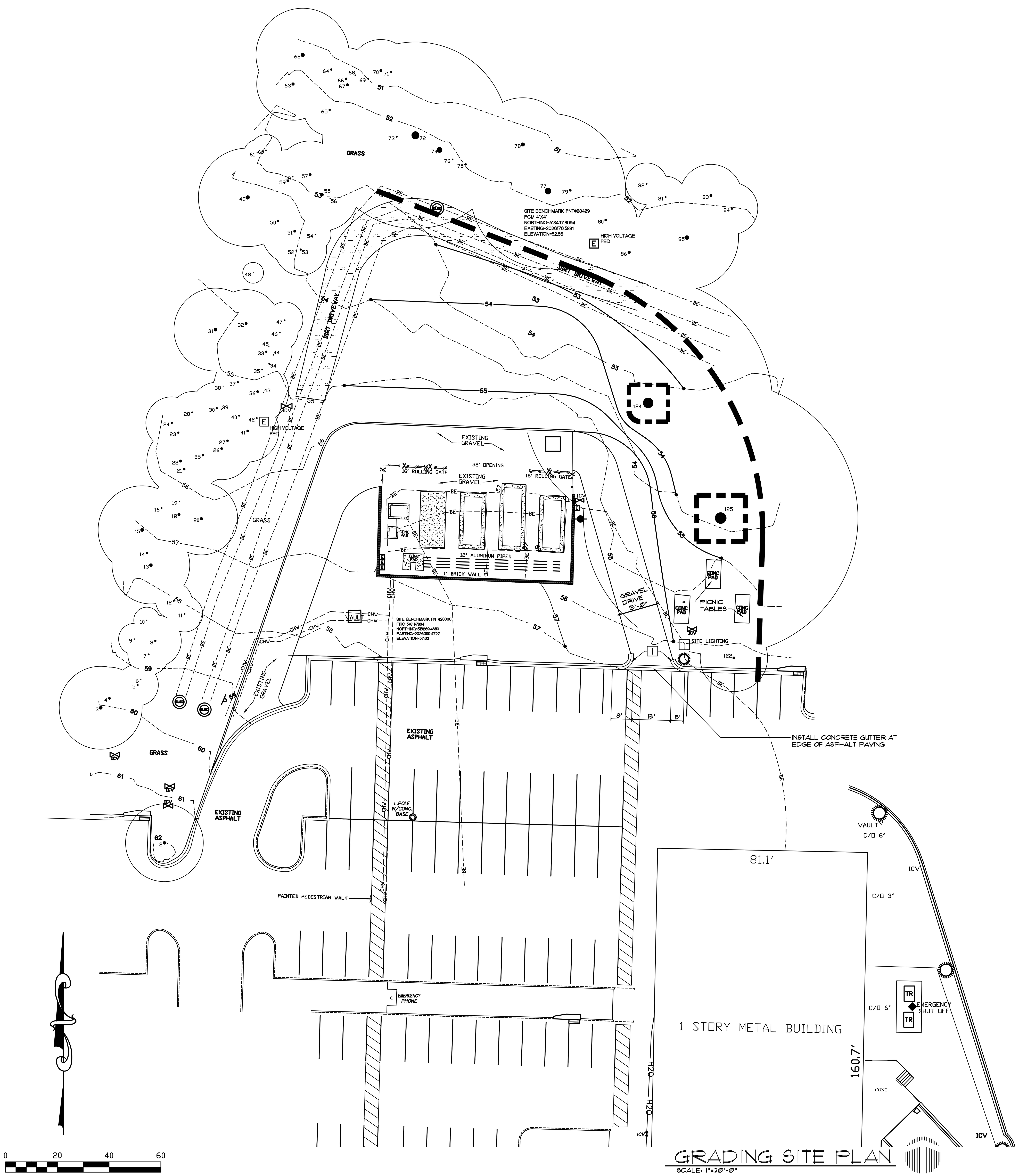

GRADING SITE PLAN

SCALE: 1"=20'-0"

CONSTRUCTION NOTES:

1. EXISTING TOPOGRAPHIC INFORMATION WAS OBTAINED FROM STINSON & ASSOCIATES, INC. AND THE UNDERGROUND UTILITY SURVEY BY SSMC. IF ANY DISCREPANCIES ARE FOUND DURING CONSTRUCTION WITH EXISTING TOPOGRAPHIC INFORMATION AND PROPOSED SPOT ELEVATIONS OR CONTOURS THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR CLARIFICATION PRIOR TO ANY FURTHER CONSTRUCTION OR INSTALLATION OF IMPROVEMENTS.
2. UNLESS OTHERWISE INDICATED OR MODIFIED ON THE PLANS OR IN THE SPECIFICATIONS, THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL BE THE GOVERNING SPECIFICATIONS FOR CONSTRUCTION MATERIAL AND SITE WORK.
3. WHERE REFERENCE IS MADE TO A STANDARD INDEX OR DETAIL, THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS SHALL BE USED AS IF A PART OF THIS PLAN.
4. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

SITE NOTES:

[1] INSTALL TYPE F CURB AND GUTTER PER FDOT STD. PLANS INDEX NO. 520.

LEGEND

----55---- EXISTING CONTOUR

——55—— PROPOSED CONTOUR

SILT FENCE. SEE DETAIL DRAWING NO. C1.1

TREE PROTECTION. SEE DETAIL DRAWING NO. C1.1

SYMBOLS LEGEND

These standard symbols will be found in the drawing.

- WATER VALVE
- SITE BENCHMARK
- ELECTRIC PED/VAULT
- WATER METER
- SANITARY SEWER MANHOLE
- GRATED INLET
- STORM WATER MANHOLE
- GUY ANCHOR
- WOODEN POWER POLE
- GROUNDING ROD
- —BE— BURIED ELECTRIC LINE
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- FIRE HYDRANT
- FIRE DEPARTMENT CONTROL VALVE
- SINGLE SUPPORT SIGN
- BOLLARD
- ELECTRIC PEDESTAL/BOX
- LIGHT POLE
- SPRINKLER HEAD
- 29 DENOTES TREE SIZE & NUMBER (SEE TREE TABLE)

TREE TABLE

Number	Trunk	Type
1	8"	MULBERRY
2	15"	OAK
3	16"	WTR OAK
4	12"	WTR OAK
5	8"	MIMOSA
6	5"	BAY
7	8"	BAY
8	10"	CHERRY
9	6"	CHERRY
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15	17"	PINE
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123	8"	SWT GUM
124	48"	LV OAK
125	53"	LV OAK

LEGEND:

AC. - ACRES
BLDG. - BUILDING
BLVD. - BOULEVARD
B. M. - BENCHMARK
BRG. - BEARING
C. G. - CURB and GUTTER
C. M. - CONCRETE MONUMENT
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F. F. E. - FINISHED FLOOR ELEVATION
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Hicks Nation Architects Incorporated
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License Number AA C00 1403

SOLAR PV SYSTEM ADDITION
CENTER FOR ADVANCED POWER SYSTEMS
FSU PROJECT NO. 2200079
FLORIDA STATE UNIVERSITY
GRADING SITE PLAN

John W. Nation
AR 12778

DATE
OCT. 19, 2022
PROJECT NO.
2204
DESIGNED BY
JWN
DRAWN BY
MFL
CHECKED BY
JWN
DWG. NO.
C1.2

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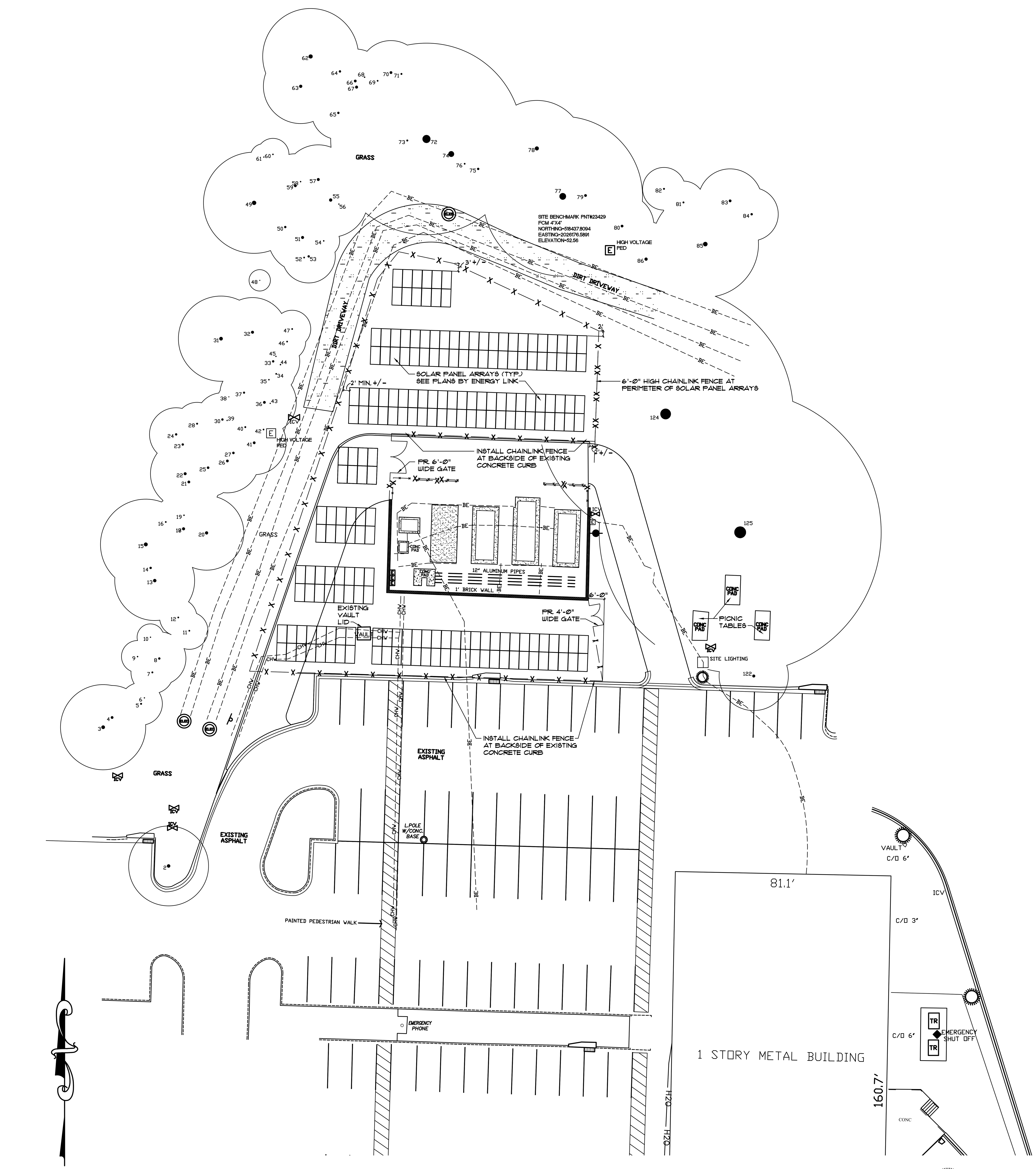
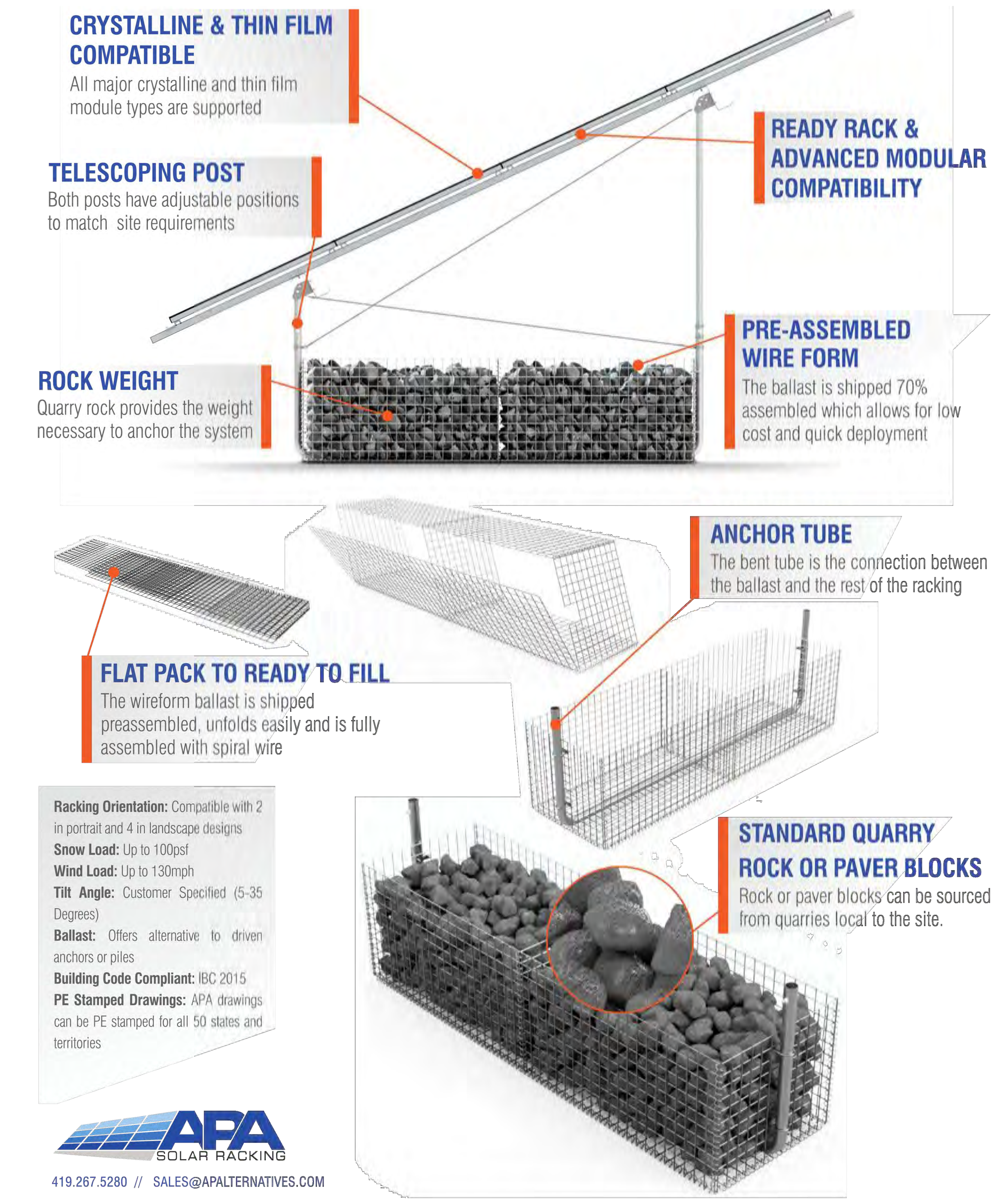


0 20 40 60

SOLAR PANEL LAYOUT PLAN

SCALE: 1"=20'-0"



SOLAR PANEL ARRAY SECTION

N.T.S. NOTE: SOLAR PANELS TO BE INSTALLED BY ENERGYLINK

CONSTRUCTION NOTES:

1. GRADING AND GROUND COVER SHALL BE INSTALLED PRIOR TO SOLAR PANEL ARRAY INSTALLATION.
2. SOLAR PANEL ARRAYS WILL BE INSTALLED BY ENERGYLINK.
3. ONCE SOLAR PANEL ARRAYS HAVE BEEN INSTALLED, THE 6'-0" HIGH BLACK VINYL FENCE WILL BE INSTALLED AT THE PERIMETER OF THE SOLAR PANEL ARRAYS AS SHOWN ON THE SOLAR PANEL LAYOUT PLAN.

LEGEND

—X—X— 6'-0" HIGH BLACK VINYL CHAINLINK FENCE

SOLAR PANEL ARRAYS

SYMBOLS LEGEND

These standard symbols will be found in the drawing.

- WATER VALVE
- SITE BENCHMARK
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- SPRINKLER HEAD
- DENOTES TREE SIZE & NUMBER (SEE TREE TABLE)

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SOLAR PANEL LAYOUT

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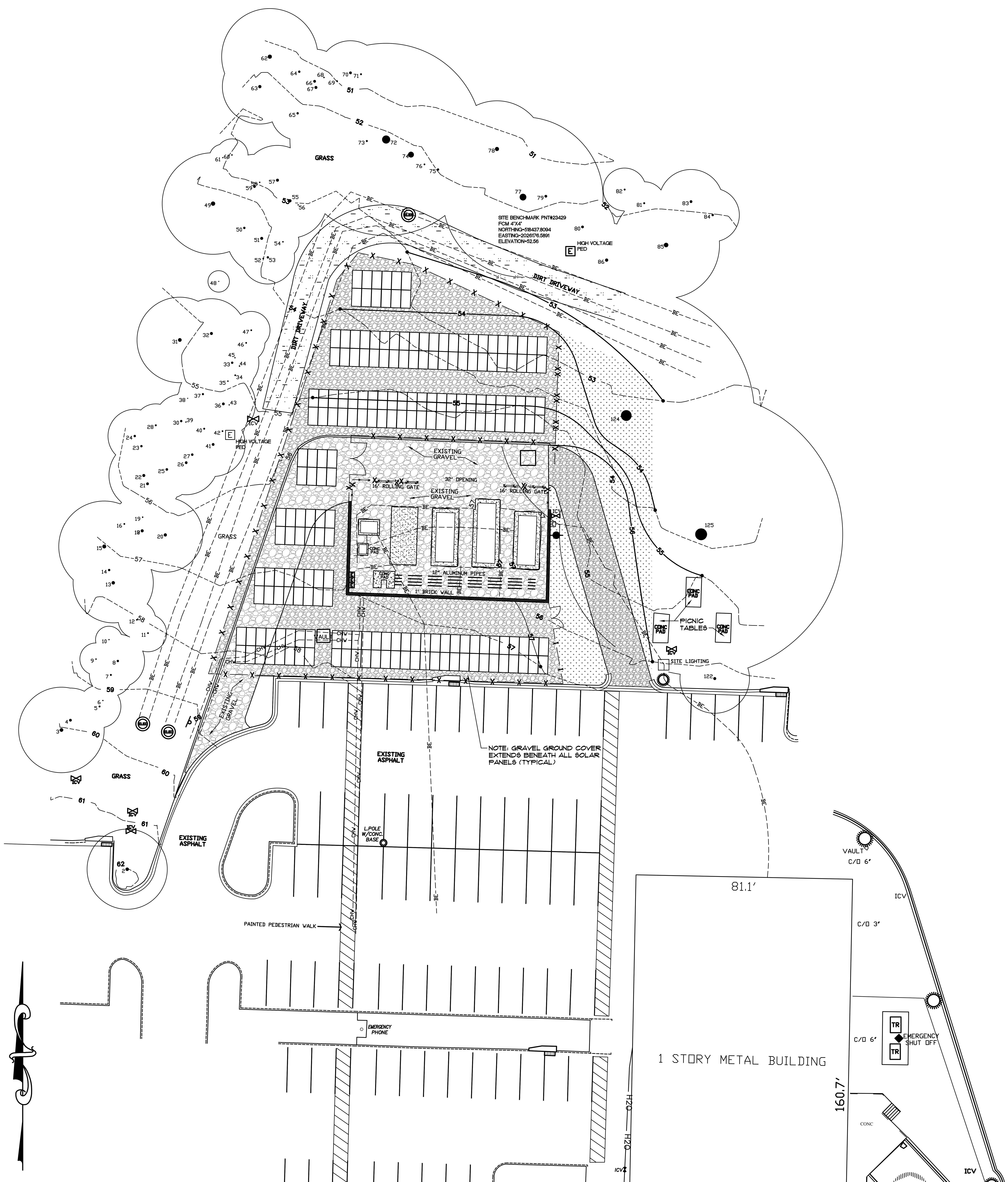
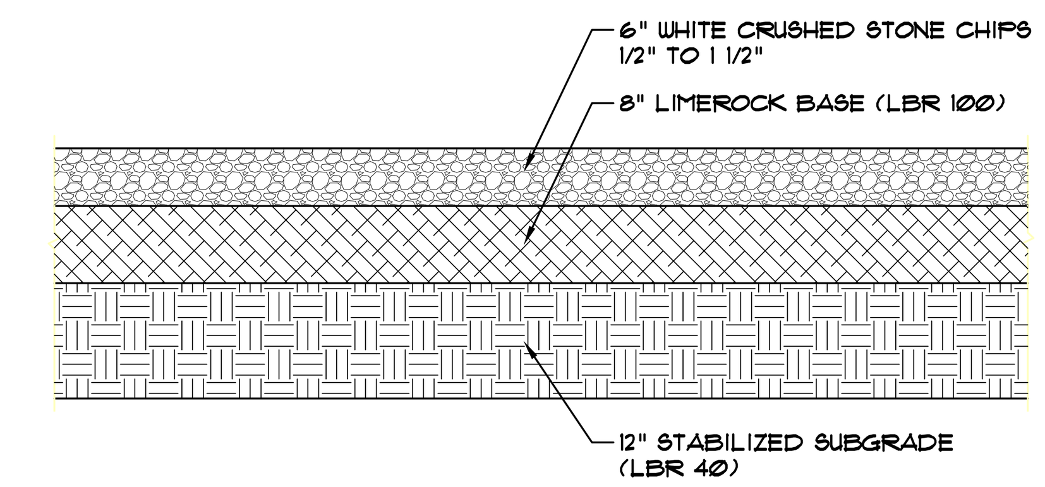


GROUND COVER PLAN

SCALE: 1"=20'-0"



GRAVEL DRIVE SECTION

N.T.S.

LEGEND

- --55-- EXISTING CONTOUR
- —55— PROPOSED CONTOUR
- EXISTING GRAVEL TO REMAIN.
- GRAVEL GROUND COVER OVER WOVEN POLYPROPYLENE FABRIC. FABRIC SHALL BE BLACK WOVEN 3 OZ/SQ. YD. MINIMUM WEIGHT. GRAVEL SHALL BE WHITE CRUSHED STONE CHIPS 1/2" TO 1 1/2" WITH A MINIMUM 3" DEPTH.
- GRAVEL DRIVE. SEE GRAVEL DRIVE SECTION THIS SHEET.
- CENTIPEDE SOD AS SPECIFIED

SYMBOLS LEGEND

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37	9"	PINE
38	4"	WTR OAK
39	5"	SWEETGUM
40	8"	SWEETGUM
41	12"	PINE
42	7"	SWEETGUM
43	5"	HOLLY
44	6"	WTR OAK
45	5"	WTR OAK
46	7"	MIMOSA
47	7"	SWEETGUM
48	4"	HOLLY
49	19"	LV OAK
50	10"	CHERRY
51	13"	WTROAK
52	7"	SWEET GUM
53	10"	SWEETGUM
54	6"	SWEETGUM
55	14"	CHERRY
56	5"	WTROAK
57	13"	CHRRY
58	6"	CHRRY
59	12"	CHRRY
60	6"	CHRRY
61	5"	CHRRY
62	18"	CHRRY
63	14"	CHERRY
64	10"	CHERRY
65	10"	CHERRY
66	12"	CHRRY
67	13"	CHRRY
68	6"	CHERRY
69	7"	CHRRY
70	12"	SWTGUM
71	8"	LVOAK
72	36"	PINE
73	8"	CHERRY
74	26"	CHRRY
75	10"	CHERRY
76	7"	CHRRY
77	30"	SWTGUM
78	18"	CHRRY
79	12"	MULBERRY
80	12"	CHRRY
81	8"	CHERRY
82	8"	CHERRY
83	12"	WTR OAK
84	10"	CHERRY
85	20"	WTROAK
86	14"	SUGARBERRY
87	5"	MULBERRY
88	6"	MULBERRY
89	6"	MULBERRY
90	6"	MULBERRY
91	6"	MULBERRY
92	13"	LVOAK
93	4"	HOLLY
94	4"	HOLLY
95	6"	CHERRY
96	8"	HOLLY
97	4"	HOLLY
98	7"	CHRRY
99	12"	POPCORN
100	7"	CHERRY
101	9"	MULBERRY
102	4"	HOLLY
103	12"	LVOAK
104	9"	HOLLY
105	15"	CHERRY
106	4"	MULBERRY
107	20"	SWTGUM
108	7"	WTROAK
109	12"	WTR OAK
110	6"	MIMOSA
111	9"	WTROAK
112	22"	WTROAK
113	12"	CHERRY
114	23"	WTROAK
115	11"	CHERRY
116	5"	HOLLY
117	7"	SWTGUM
118	6"	CHERRY
119	6"	CHERRY
120	6"	SWTGUM
121	13"	TULIP
122	13"	TULIP
123	8"	SWT GUM
124	48"	LV OAK
125	53"	LV OAK

LEGEND:

AC. - ACRES
BLDG. - BUILDING
BLVD. - BOULEVARD
B. M. - BENCHMARK
BRG. - BEARING
C. G. - CURB and GUTTER
C. M. - CONCRETE MONUMENT
CMP. - CORRUGATED METAL PIPE
CO. - COUNTY
CONC. - CONCRETE
(D) - DEED / DESIGN INFORMATION
E - EAST
ELEV. - ELEVATION
F. F. E. - FINISHED FLOOR ELEVATION
F. HYD. - FIRE HYDRANT
Fnd. - FOUND
FT. - FEET
I. P. - IRON PIPE
I. R. - IRON ROD
MON. - MONUMENT
N - NORTH
NE - NORTHEAST
NGVD - NATIONAL GEODETIC VERTICAL DATUM
NO. - NUMBER
N&C - NAIL and CAP
NW - NORTHWEST
OHU - OVERHEAD UTILITIES
(P) - PLAT INFORMATION
P. C. - POINT OF CURVATURE
P. C. C. - POINT OF COMPOUND CURVATURE
P. C. P. - PERMANENT CONTROL POINT
P. I. - POINT OF INTERSECTION
P. O. B. - POINT OF BEGINNING
P. O. C. - POINT OF COMMENCEMENT
P. R. C. - POINT OF REVERSE CURVE
PRM - PERMANENT REFERENCE MONUMENT
P. T. - POINT OF TANGENCY
R - RADIUS
RCP - REINFORCED CONCRETE PIPE
RNG. - RANGE
RD. - ROAD
R/W - RIGHT OF WAY
(S) - SURVEY INFORMATION
SEC. - SECTION
S. R. - STATE ROAD
S. S. - SANITARY SEWER
ST. - STREET
STA. - STATION
TBM - TEMPORARY BENCHMARK
T. C. - TERRA COTTA
TELE. - TELEPHONE
TR - TRANSFORMER
TWN. - TOWNSHIP
USGS - U. S. GEOLOGICAL SURVEY
W - WEST

NO | DATE | REVISION

Hicks Nation Architects Incorporated
Architecture
Programming
Planning
1382 Timberlane Road
Suite C
Tallahassee Fl 32312
850.893.1130
License Number AA C00 1403

SOLAR PV SYSTEM ADDITION
CENTER FOR ADVANCED POWER SYSTEMS
FSU PROJECT NO. 2200079
FLORIDA STATE UNIVERSITY
GROUND COVER PLAN

John W. Nation
AR 12778

DATE
OCT. 19, 2022
PROJECT NO.
2204
DESIGNED BY
JWN
DRAWN BY
MFL
CHECKED BY
JWN
DWG. NO.
C1.4

SHEET OF

PROJECT MANUAL

FOR

SITE PREPARATION

SOLAR PV SYSTEM ADDITION

CENTER FOR ADVANCED POWER SYSTEMS

200 LEVY AVENUE

FSU RESEARCH FOUNDATION

FSU PROJECT NO. 2200079

FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA

HICKS NATION Architects, Inc.
1382 Timberlane Road, Suite C
Tallahassee, Florida 32312

October 19, 2022

HNA Project No. 2204

PROJECT MANUAL

FOR

SITE PREPARATION

SOLAR PV SYSTEM ADDITION

CENTER FOR ADVANCED POWER SYSTEMS

200 LEVY AVENUE

FSU RESEARCH FOUNDATION

FSU PROJECT NO. 2200079

FLORIDA STATE UNIVERSITY
TALLAHASSEE, FLORIDA

HICKS NATION Architects, Inc.
1382 Timberlane Road, Suite C, Tallahassee, Florida 32312
850-893-1130 Facsimile 850-893-1132
License Number: AA C001403

HNA Project No. 2204

October 19, 2022

P R O J E C T M A N U A L

for

Site Preparation

Solar PV System Preparation

Center for Advanced Power Systems

200 Levy Avenue

FSU Research Foundation

FSU Project No. 2200079

by

THE FLORIDA STATE UNIVERSITY

Set No._____

HICKS NATION ARCHITECTS, INC.

627 McDANIEL STREET

TALLAHASSEE, FLORIDA 32303

PROJECT MANUAL

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PROJECT INFORMATION SHEET SECTION A

A.1 - The Architect/Engineer for this project is:

HICKS NATION ARCHITECTS, INC.

627 McDANIEL STREET

TALLAHASSEE, FLORIDA 32303

A.2 - The project shall be substantially completed within 90 calendar days.

Liquidated Damages shall be **$100.00** per day after Substantial Completion

A.3 - The project shall be finally completed within **30** calendar days after substantial completion

A.4 - The Project name and location is as follows:

Site Preparation
Solar PV System Addition
Center for Advanced Power Systems
FSU Research Foundation
FLORIDA STATE UNIVERSITY
FSU PROJECT NO. 220079

A.5 - The project shall be warranted for a period of **ONE** year(s).

A.6 - The following must be submitted with the bid:

1. Proposal Form, Pages 16 to 18.
2. List of Subcontractors form, page 19 and 20.
3. Bid guarantee, 5% of base bid.
4. Invitation to Bid Cover Sheet (FSU form PUR 2043)
5. Documentation of licensing and specific certifications

A.7 - Plans and Specifications are available from Seminole Blueprinting, Inc.

A.8 - A Pre-Bid Conference will be held at: TBD
(Place) _____to be announced_____N/A_____

Pre-Bid Conference is: ___Mandatory ___Not Mandatory

INSTRUCTIONS TO BIDDERS SECTION B

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INSTRUCTIONS TO BIDDERS

B-1 PROJECT MANUAL TERMINOLOGY

INDEX OF TERMS: Whenever in this Project Manual the following terms (or pronouns which replace these terms) are used, their intent and meaning shall be interpreted as follows:

ADDENDA: A written or graphic instrument issued by the Architect/Engineer or Owner prior to the execution of the Contract which modifies or interprets the Bidding Documents by addition, deletion, clarification and/or correction.

ALTERNATE: An alternative use or type of material or an increase or decrease in the scope of the project, as specifically identified by the plans and/or the specifications.

ARCHITECT/ENGINEER: The firm identified in the Project Information Sheet, Section A.

BASE BID: The sum stated in the Proposal for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added, or from which Work may be deleted for sums stated in Alternate Bids.

BIDDER: Any individual, firm, partnership or corporation submitting a proposal for the Work contemplated.

BIDDING DOCUMENTS: The Invitation To Bid, Instructions to Bidders, Project Manual, Specifications, Drawings, the Proposal Form, and the proposed Contract Documents, including any Addenda issued prior to receipt of bids.

CALL FOR BIDS: The "Call for Bids" consists of the Advertisement for Bids and/or the Invitation To Bid.

CHANGE ORDER: Changes in the work as described in Article 5 of the Contractual Conditions, Section F.

CONTRACT ADMINISTRATOR: The FSU Purchasing Agent authorized to oversee the bid and contract portions of the project.

CONTRACT: The "Contract" is the Purchase Order issued by the Florida State University supported by the Contract Documents as defined in Article 1 of the Contractual Conditions.

CONTRACTOR: Any individual, firm, partnership or corporation entering into an agreement to perform the Work specified herein.

DRAWINGS: The drawings or reproductions thereof pertaining to the Work to be performed and which have been prepared or approved by the Architect/Engineer.

MAJOR SUBCONTRACTOR: The subcontractors as identified on the List of Subcontractors, Section D.

OWNER: The Florida State University

OWNER REPRESENTATIVE: The individual authorized by the Owner to oversee the Project.

PROJECT MANUAL: All items listed in the Project Manual Index.

PROJECT REPRESENTATIVE: An authorized representative of the Architect/Engineer assigned to assist the Architect/Engineer in carrying out contractual responsibilities.

PROPOSAL: A bid for the Work contemplated which the Bidder shall submit on approved forms.

SPECIFICATIONS: The Project Manual.

SURETY: The corporate body that is bound with and for the Contractor, which is primarily liable and which guarantees the faithful performance of the Contract.

B-2 QUALIFICATION OF BIDDERS

In order to be eligible to submit a Proposal, a Bidder must:

(1) Where the scope of the Work falls within the provisions of Chapter 489, Florida Statutes, hold the required applicable license in good standing at the time of the receipt of bids.

(2) Hold a currently active Florida Corporation Charter Number in accordance with Chapter 607, Florida Statutes, if the Bidder is a corporation, and

(3) Not be disqualified at the time of the bid submittal through disqualification procedures described in Chapter 6C-14.022, Florida Administrative Code, and

(4) Meet any special requirements set forth in the Special Conditions of this Project Manual.

B-3 FAMILIARITY WITH LAWS

The Bidder is required to be familiar with all federal, state and local laws, ordinances, rules and regulations that in any manner affect the Work. Ignorance on the part of the Bidder will in no way be considered relief from responsibility for compliance with their requirements. The application of Chapter 558 "threshold building" requirements to this project is specifically addressed in the Special Conditions of this Project Manual.

B-4 FLORIDA PRODUCTS AND LABOR

The Contractor's attention is called to Section 255.04, Florida Statutes, which requires that on public building contracts Florida products and labor shall be used wherever price and quality are equal, subject to considerations set forth in that Section of the Statutes relating to comparisons of quality of materials, as well as qualifications, character, responsibility and fitness of materialmen, contractors, and builders proposed for employment.

B-5 TAXES

Contractors who purchase materials that will be used in the construction of a State-owned building will not be exempted from the sales tax on these materials.

The Owner is not subject to:

Federal excise taxes on materials or appliances that are incorporated into and become a part of the completed improvement.
Federal tax on transportation of property.

In every case of purchase of materials to be incorporated in the Work which are subject to Federal Excise Tax, the Owner will furnish to the Contractor the necessary Federal Excise Tax Exemption Certificate upon receipt of a copy of the supplier's invoice showing the item or items, the net price, and federal excise tax separately.

The Bidder shall take these factors into consideration in preparing the Proposal, including therein the cost of the state sales and use tax on materials, but excluding the cost of those taxes not applicable.

B-6 PROGRESS PAYMENTS

Based upon Applications for Payment submitted to the Architect/Engineer by the Contractor and Certificates for Payment issued by the Architect/Engineer, the Owner Shall make progress payments to the Contractor as noted in Article 7 of the Contractual Conditions. For projects of less than $100,000, which are exempt from the requirements for Payment and Performance Bonds, special requirements relating to payments are addressed in the Special Conditions.

B-7 CONTRACT DOCUMENTS

Contract Documents are as described under Article 1 of the Contractual Conditions.

B-8 ALTERNATES

The Proposal Form (Section C) shall be filled out in such a manner that the Bidder shall be able to clearly indicate what sums he will add to (or deduct from) his Base Bid. Failure of a Bidder to quote one or more Alternates may result in the bid being rejected.

B-9 ADDENDA

In case the Architect/Engineer or the Owner finds it necessary to supplement, modify or interpret any portion of the Bidding Documents during the bidding period, such procedure will be accomplished by the issuance of written Addenda to the Bidding Documents, which will be delivered or mailed to all known prospective Bidders. Except for minor revisions, corrections, or clarification, Addenda will be issued no less than seven (7) calendar days prior to the date scheduled for receipt of bids. Minor revisions, corrections or clarifications will be issued no less than three (3) calendar days prior to the date scheduled for the receipt of bids. Thereafter, the only addendum will be to withdraw the request for bids, or to postpone the date for the receipt of bids.

B-10 INTERPRETATION OF BIDDING DOCUMENT

No interpretation of the meaning of the Drawings, Specifications, or other Bidding Documents, and no correction of any apparent ambiguity, inconsistency or error therein, will be made to any Bidder orally. Every request for such interpretation or correction shall be in writing, addressed to the Architect/Engineer if applicable otherwise, to the Contract Administrator. All such interpretations and supplemental instructions will be in the form of written addenda to the Bidding Documents as approved by the Contract Administrator.

Only the interpretation or correction so given by the Architect/Engineer, if applicable, in writing, through the University, shall be binding. Bidders are advised that no other source is authorized to give information concerning, or to explain or interpret the Bidding Documents.

B-11 EXAMINATION OF BIDDING DOCUMENTS AND SITE OF WORK

Bidders are required, before submitting their Proposals, to visit the site of the proposed Work and completely familiarize themselves with the nature and extent of the Work and any local conditions that may in any manner affect the Work to be performed and the equipment, materials, and labor required. They are also required to examine carefully the drawings, specifications and other Bidding Documents, to inform themselves thoroughly regarding any and all conditions and requirements that may in any manner affect the Work.

B-12 BASIS FOR BIDDING - TRADE NAMES

For clarity of description and as a standard of comparison, certain equipment, materials, etc., have been specified by trade names or manufacturers. To insure a uniform basis for bidding, the Bidder shall base the Proposal on the particular systems, equipment or materials specified. Proposed substitutes must be submitted for approval by the architect/engineer prior to the bid date. After bids are received, no materials, equipment, etc., will be approved as a substitute for the specified product.

B-13 BID GUARANTEE

Proposals shall be accompanied by a bid guarantee of not less than five (5) percent of the amount of the base bid. This bid guarantee may be a certified check, a cashier's check, treasurer's check, or bank draft of any National or State bank; or bid bond made payable to the Owner. Such check or bid bond shall be submitted with the understanding that it shall guarantee that the Bidder will not withdraw the bid for a period of forty-five (45) days after the scheduled closing time for the receipt of bids; that if the Proposal is accepted, the Bidder will enter into a written contract with the Owner in accordance with the Agreement included as part of the contract documents or purchase order, and that the required Labor and Materials Payment Bond and Performance Bond for projects in excess of $100,000 will be given; and that in the event of failure to execute said Agreement and deliver said bonds within ten (10) days after issuance of the Notice of Intent to Award Contract and receipt of the form of the Agreement from the owner, the Bidder shall be liable to the Owner for the full amount of the bid guarantee as representing the damage to the Owner on account of the default of the Bidder in any particular hereof. The bid guarantees shall be returned to all Bidders after the execution of the Agreement and the Labor and Materials Payment Bond and Performance Bond have been approved by the Owner.

If the required Agreement and bonds have not been executed within forty-five (45) days after the date of the opening of the bids, then the bid bond or check of any Bidder will be returned upon request, provided the Bidder has not been notified of the acceptance of the Bidder's Proposal prior to the date of such request.

B-14 BONDS & INSURANCE

1. Bid Bonds

The Bid Bond must be written by a Surety Company acceptable to the Owner (see B-15) and signed by a Florida Licensed Resident Agent who holds a current Power of Attorney from the Surety Company issuing the Bid Bond.

2. Payment & Performance Bonds

For all projects in excess of $100,000 the Contractor shall furnish the Owner with a State of Florida 100% Labor and Materials Payment Bond and a Performance Bond. The cost of the Bonds shall be borne by the Contractor. Projects of $100,000 or less are exempt from the requirement to provide such Bonds.

For projects requiring Payment and Performance Bonds, the Owner will provide to the Contractor a "Notice of Intent to Award Contract". This Notice may be provided by email or letter and will instruct the Contractor to immediately acquire the Bonds for the project. Payment and Performance Bonds shall be acquired by the Contractor and submitted within 10 calendar days of the Notice of Intent to Award Contract, and must be received and accepted by the Owner prior to issuance of the Construction Contract Purchase Order.

The Bonds must be written by a Surety Company acceptable to the Owner (see B-15) and signed or countersigned by a Florida Licensed Resident Agent who holds a current Power of Attorney from the Surety issuing the Bonds. The Bonds shall be accompanied by a duly authenticated or certified document, evidencing that the person executing the Bonds in behalf of the Surety had the authority to do so on the date of the Bonds. In the usual case the conferring of that authority has occurred prior to the date of the Bonds, and the document showing the date of appointment and enumeration of powers of the person executing the Bonds is accompanied by a certification that the appointment and powers have not been revoked and remain in effect. The date of that certification cannot be earlier than the date of the Bonds. The Bonds shall not be dated earlier than the Agreement.

3. Liability Insurance

A current copy of the Contractor's Certificate of Liability Insurance must be provided to the Owner prior to issuance of the Construction Contract Purchase Order.

B-15 SURETY COMPANIES ACCEPTABLE TO THE FLORIDA STATE UNIVERSITY

The surety for the Bid Bond does not necessarily have to be the same as for the Labor and Materials Payment and Performance Bonds.

1. Bid Bonds.

To be acceptable to the Florida State University as Surety for Bid Bonds, a Surety Company must meet the following requirements at the time the Invitation to Bid is issued:

a. Be in good standing with the Florida Department of Insurance.

b. Be authorized or approved to do business in the State of Florida.

c. Be authorized to write Surety Bonds in the State of Florida.

d. Have twice the minimum surplus and capital required by the Florida Insurance Code.

e. Be in compliance with all other provisions of the Florida Insurance Code (no violation).

f. Hold a current valid certificate of authority issued by the United States Department of Treasury under SS 31 USC 9304-9308.

2. Performance and Labor and Materials Payment Bonds

To be acceptable to the Florida State University as Surety for Performance and Labor and Material Payment Bonds, a Surety Company must meet the following requirements at the time the Invitation to Bid is issued:

a. Be in good standing with the Florida Department of Insurance.

b. Be authorized to do business in the State of Florida.

c. Be authorized to write Surety Bonds in the State of Florida.

d. For projects for which the contract amount is $500,000 or less:

(1) Have twice the minimum surplus and capital required by the Florida Insurance Code.

(2) Be in compliance with all other provisions of Florida Insurance Code (no violation).

(3) Hold a current valid certificate of authority issued by the United States Department of Treasury under SS 31 USC 9304-9308.

e. For projects for which the contract amount is $500,000 or greater:

(1) The Surety Company shall have been in business and have a record of successful continuous operation for at least five years, unless this provision is expressly deleted by addendum or by the Special Conditions to this Project Manual; and

(2) Except for asbestos abatement contracts, for which a B rating is acceptable, the Surety Company shall have at least the following minimum ratings:

CONTRACT AMOUNT	BEST RATING	REQUIRED FINANCIAL SIZE
500,000 to 749,999	A	Class V
750,000 to 999,999	A	Class VI
1,000,000 to 1,499,999	A	Class VII
1,500,000 to 9,999,999	A	Class VIII
10,000,000 or more	A	Class IX

B-16 LISTING OF SUBCONTRACTORS

Each Bidder shall submit with the Proposal a full and proper list of the subcontractors who will perform the work for each Division of the Specifications as indicated by the List of Subcontractors Form contained in these specifications. The Bidder shall have determined to the Bidder's own complete satisfaction that a listed subcontractor has been successfully engaged in this particular type of business for a reasonable length of time, has successfully completed installations comparable to that which is required by this Agreement and is qualified both technically and financially to perform that pertinent subcontract for which the subcontractor is listed.

Subcontractors shall be listed in such a way that their identities may not be confused with other subcontractors doing business under the same or similar name. The street address or telephone number or the registration or certification number may be given on the Proposal form for this purpose. If subcontractors will not be used and if the contractor is qualified to do listed work, contractor shall state in the proposal "subcontractor will not be used" on the appropriate line.

In some instances, the Bidder may wish to divide a listed Division and award the subcontract to more than one subcontractor. In these cases, the Bidder must indicate on the List of Subcontractors Form that the Division has been divided, and note the subdivisions together with the proposed subcontractors in the spaces provided.

Within 7 days after the Notice of Award the low Bidder shall confirm in writing subcontractor license registration or certification numbers, and in the event that the subcontractor is a corporation, the state corporate charter number shall also be noted. If the subcontractor is an out of state firm, the charter number with the Secretary of State to do business in the State of Florida should also be noted.

After the reading of the Proposals, no change shall be made in the list of subcontractors, before or after the award of a Contract, without full justification and unless agreed to in writing by the Owner.

B-17 PREPARATION AND SUBMISSION OF BIDS

Each Proposal shall be submitted on the form contained in the Project Manual and bid prices shall be indicated thereon in proper spaces, for the entire Work and for all Alternates.

In the event of a discrepancy in the bid amount on the Proposal between the numeric and written quotes, the written amount will govern.

Each Proposal must give the full business address of the Bidder and state whether it is an individual, corporation or partnership.

Proposals by a corporation must be signed with the legal name and seal of the corporation followed by the name of the state of its incorporation and the manual signature and designation of an officer, agent or other person authorized to bind the corporation.

B-18 BID MODIFICATIONS

Bid modifications will be accepted from Bidders, if addressed as indicated on the Proposal Form and if received prior to the Opening of Bids. No bid modification will be accepted after the close of bidding has been announced. Modifications may be in the form of telegrams or may be indicated in the modification space provided on the Proposal Form.

IMPORTANT NOTE: Modifications indicated on the outside of the sealed bid envelope and unsigned modifications will have no status and will not be a consideration of the bid award, but will not serve to disqualify the Bidder.

Modifications to a bid will be read by the Contract Administrator during the reading of the formal bid.

B-19 WITHDRAWAL OF BIDS

Bids may be withdrawn on written request to the Contract Administrator and must be received from Bidders prior to the time of posting the Notice of Award. Further, the University reserves the right to reject a request for the withdrawal of a bid received after the posting of the Notice of Award as the best interest of the University may dictate.

B-20 RECEIPT AND OPENING OF BIDS

Bids shall be deposited at the designated location prior to the time for receipt of bids indicated in the Call for Bids, or any extension thereof made by Addendum. Bids received after the time for receipt of bids will not be accepted.

Bids will be publicly opened and read at the time and place stated in the Call for Bids. The officer whose duty it is to open them will decide when the specified time has arrived and no bids received thereafter will be considered. No responsibility will be attached to any officer for the premature opening of a bid not properly addressed and identified.

B-21 DISQUALIFICATION OF BIDS

By submittal of a Proposal, a Bidder professes not to be disqualified from bidding State work nor under suspension resulting from conviction of contract crime including any act prohibited by state or federal criminal law which involves fraud, bribery, collusion, conspiracy, violation of state or federal antitrust laws, or material misrepresentation committed in any federal or state jurisdiction with respect to public contract.

More than one bid from and individual, firm, partnership, corporation or association under the same or different names will not be considered. Reasonable grounds for believing that a Bidder has an interest in more than one Proposal for the same Work will cause rejection of all Proposals in which such Bidders are believed to have an interest.

Any or all Proposals will be rejected if there is reason to believe that collusion exists among the Bidders; participants in such collusion will be subject to disqualification procedures pursuant to rule 6C-14.022, F.A.C. Proposals containing prices that are obviously unbalanced may be rejected by the Owner.

Falsification of any entry made on a Bidder's Proposal will be deemed a material irregularity and will be grounds for rejection.

B-22 REJECTION OF BIDS

The Owner reserves the right to reject any and all bids when in the opinion of the Owner such rejection is in the interest of the State of Florida.

B-23 BID PROTEST

To be considered, a bid protest must be received by the Associate Vice President for Administrative Affairs, Room 116 Mendenhall Building 'A', Florida State University, Tallahassee, Florida 32306-4149, as provided in Section 120.53 Florida Statutes. Failure to file a notice of protest in this manner shall constitute a waiver of the Bidder's right to proceedings under Chapter 120, Florida Statutes.

B-24 CONTRACT AWARD

The Contract will be awarded by the Florida State University to the lowest qualified Bidder provided the bid is reasonable and it is in the best interest of the Owner to accept it.

The contract award will be made to that responsive Bidder submitting the low aggregate bid within the pre-established construction budget. The aggregate bid shall consist of the base bid plus accepted additive alternate bids, or less accepted deductive alternate bids. If the base bid exceeds the amount of the pre-established construction budget, the Owner may reject all bids.

B-25 MINORITY BUSINESS ENTERPRISE

Bidders are encouraged to utilize Minority Business Enterprises certified by the Department of Management Services, Office of Supplier Diversity.

B-26 SPECIAL CONDITIONS

Bidders shall be thoroughly familiar with the Special Conditions and shall strictly adhere to their requirements.

B-27 PUBLIC ENTITY CRIMES

The following is excerpted from 287.133, Florida Statutes:
(2)(a) A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

(b) A public entity may not accept any bid, proposal, or reply from, award any contract to, or transact any business in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO with any person or affiliate on the convicted vendor list for a period of 36 months following the date that person or affiliate was placed on the convicted vendor list unless that person or affiliate has been removed from the list pursuant to paragraph (3)(f). A public entity that was transacting business with a person at the time of the commission of a public entity crime resulting in that person being placed on the convicted vendor list may not accept any bid, proposal, or reply from, award any contract to, or transact any business with any other person who is under the same, or substantially the same, control as the person whose name appears on the convicted vendor list so long as that person's name appears on the convicted vendor list.

(3)(a) All invitations to bid, requests for proposals, and invitations to negotiate, as defined is s. 287.012, and any contract documents described by s. 287.058 shall contain a statement informing persons of the provision of paragraph (2)(a).
(b) Any person must notify the department within 30 days after a conviction of a public entity crime applicable to that person or to an affiliate of that person. Any public entity which receives information that a person has been convicted of a public entity crime shall transmit that information to the department in writing within 10 days.
(f)1. A person on the convicted vendor list may petition for removal from the list no sooner than 6 months from the date a final order is entered disqualifying that person from the public purchasing and contracting process pursuant to this section, but may petition for removal at any time if the petition is based upon a reversal of the conviction on appellate review or pardon. The petition shall be filed with the department, and the proceeding shall be conducted pursuant to the procedures and requirements of this subsection.

B-28 PRE-BID CONFERENCE

A Pre-bid Conference and/or Site Visit will be held, if necessary, at the time, date and place specified in Section A.8

SECTION C
PROPOSAL FORM
Page 1 of 3

FROM:_____ DATE:_____
(Bidder's Name)

_____
(Address)

_____
(FL Corporate Charter Number)

_____
(Federal I.D. Number)

BIDS TO BE OPENED AT:

TIME: _____
PLACE:_____
_____
_____
_____

TO: Florida State University

_____
_____
_____
_____
_____

If the Bidder wishes to make last minute modifications to his Proposal, the following spaces may be used (See B-18):
To the Base Bid,
Add_____
Deduct_____
To Alternate#_____
Add_____
Deduct_____

Gentleman:

The undersigned, hereinafter called "Bidder," having visited the site of the proposed Project and having become familiar with the local conditions, nature and extent of the Work, and having examined carefully the drawings and the Project Manual, proposes to furnish all labor, materials, equipment and other items, facilities, and services for the proper execution and completion of _____(Name and Address of Project), _____(Project Number), in full accordance with the Contract Documents prepared by the firm of_____ (Name and Address of the Architect/Engineer) in full accordance with the Call for Bids, Instructions to Bidders, Agreement and all other documents relating thereto on file in the Office of the Architect/Engineer and if awarded the Contract, to complete said Work within the time limits specified for the following bid price:

Base Bid_____

_____Dollars ($_____)

With the foregoing as a Base Bid, the following cost of alternate proposals are submitted in accordance with the drawings and specifications. All alternates must be quoted. (See B-8) Unless the Bidder specifically indicates on the Proposal Form that the quotation for the alternate is deductive, all quotations will be considered as additive to the Base Bid.

Alternate No. 1 Add (Deduct) $_____
(Brief description by Architect/Engineer)

PROPOSAL FORM
Page 2 of 3

Alternate No. 2 Add (Deduct) $_____
(Brief description by Architect/Engineer)

Alternate No. 3 Add (Deduct) $_____
(Brief description by Architect/Engineer)

Alternate No. 4 Add (Deduct) $_____
(Brief description by Architect/Engineer)

There is enclosed a certified check, cashier's check, treasurer's check, bank draft, or Bid Bond in the amount of not less than five (5) percent of the Base Bid payable to the Florida State University, as a guarantee for the purpose set out in the Instructions to Bidders.

There is enclosed a list of subcontractors as prescribed by Article B-16 of the Instructions to Bidders.

The Bidder hereby agrees that:

a. The above Proposal shall remain in full force and effect for a period of forty-five (45) calendar days after the time of the opening of this Proposal and that the Bidder will not revoke or cancel this Proposal or withdraw from the competition within the said forty-five (45) calendar days.

b. In the event the contract is awarded to this Bidder, The Bidder will furnish to the Owner a Performance Bond and a Labor and Material Payment Bond with good and sufficient sureties, satisfactory to the Owner, in the amount of 100% of the accepted bid, on the forms comprising Section E of the Project Manual. The executed payment and performance bonds shall be delivered to the owner within ten (10) calendar days of the Notice of Intent to Award Contract. The Bidder further agrees that in the event of the Bidder's default or breach of any of the agreements of this Proposal, the bid deposit shall be forfeited as liquidated damages.

PROPOSAL FORM
Page 3 of 3

Acknowledgment is hereby made of receipt of the following Addenda issued during the bidding period. Failure to properly acknowledge addenda may be cause for rejection of the bid proposal.

Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____
Addendum No. _____ Dated _____

Florida Construction Industries Licensing Board Certification/Registration (as required under the provisions of Chapter 489, Florida Statutes)

_____ _____
(Name of Holder) (Number)

SIGNED AND SEALED THIS _____ DAY OF _____, 19___.

_____

By:_____

Title:_____

SECTION D
LIST OF SUBCONTRACTORS FORM
Page 1 of 2

(This list must be filled out in its entirety and must accompany the Proposal)

DATE:_____

This list is attached to, and is an integral part of, the Proposal submitted by:

_____
_____
_____
_____
(Bidder to insert full name and address)

For the Construction of: _____
_____
_____
(Insert Title of Project, Location and Project Number)

The undersigned, hereinafter called "Bidder", lists below the names of major subcontractors who will perform the segments of the work indicated. Only one subcontractor shall be listed for each subcontract except where the subcontract may be divided for award by the Bidder in one or more parts. In that event each subdivision shall be identified by the Bidder in the spaces provided below. If the contractor does not intend to use subcontractors and is qualified to perform work listed below, indicate "no subcontractor" on the appropriate line.

SUBCONTRACT	SUBCONTRACTOR IDENTIFICATION*
1.	_____
2.	_____
3.	_____
4.	_____
5. Asbestos Abatement	_____

SUB-DIVISIONS OF THE ABOVE: This section is to be filled out ONLY if the Bidder intends to award one of the above listed subcontracts to more than one subcontractor. See Article B-16. (List only one subcontractor for each subdivision.)

SUB-DIVISION (Bidder must identify)	SUBCONTRACTOR IDENTIFICATION*
_____	_____
_____	_____
_____	_____
_____	_____

*Identification may be street address or telephone number, or registration or certification number.

Revised November 2006

SECTION D
LIST OF SUBCONTRACTORS FORM
Page 2 of 2

SUBCONTRACTORS FOR ALTERNATES

This section is to be completed ONLY if the Bidder would like to make subcontractor changes dependent upon the Alternates accepted by the Owner.

In the event that the acceptance of alternates would change the subcontractor(s) listed on the previous page, these changes shall be so noted in the columns for the affected alternates. This shall be done by entering the name of the subcontractor in the appropriate place. Additional categories or columns shall be added as necessary.

	Sub	Alt.#1	Alt. #2	Alt. #3	Alt. #4
1)					
2)					
3)					
4)					

Subdivisions of the above:

By:_____
Bidder's Signature

State of Florida SECTION E

FLORIDA STATE UNIVERSITY
Tallahassee, Florida 32306

PAYMENT BOND
(FOR LABOR AND MATERIALS)

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT AS PROVIDED BY SECTION 255.05, F.S.

KNOW ALL MEN BY THESE PRESENTS: that (Here insert full name and address of Contractor)

as Principal, hereinafter called Contractor and, (Here insert full name and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Florida State University, of the State of Florida, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of (Here insert a sum equal to the Contract Sum) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS:

Contractor has by written agreement dated _____, 20___, entered into a contract with Owner for construction of (Here insert name of project)

in accordance with Drawings and Specifications prepared by (Here insert full name and address of Architect/Engineer)

which Purchase Order is by reference made a part hereof, and is hereinafter referred to as the Agreement.

THE CONDITIONS OF THIS BOND are such that:
1. If Contractor shall promptly make all payments owing when due to all persons who are defined in Section 713.01, Florida Statutes, whose claims derive directly or indirectly from the prosecution of the Work provided for in the Agreement, then this bond is void; otherwise, it remains in full force and effect.

2. Each said claimant shall have a right of action against the Contractor and Surety for the amount due the claimant. No such action shall subject the Owner to any cost, expense, loss or damage, and Contractor shall promptly pay Owner for the full measure of all cost, expense, loss, damage, and attorney's fees sustained by Owner result of any default by Contractor under the Agreement.

3. A claimant, except a laborer, who is not in privity with the Contractor and who has not yet received payment for his labor, materials, equipment or supplies shall, within forty five (45) days after beginning to furnish labor, materials, equipment or supplies for the prosecution of the Work, furnish the Contractor with a notice that the claimant intends to look to the bond for protection. A claimant who is not in privity with the Contractor and who has not received payment for labor, materials, equipment or supplies shall, within ninety (90) days after completing performance of the labor or after completing delivery of the materials, equipment or supplies and of the nonpayment. No action for the labor, materials, equipment or supplies may be instituted against the Contractor or the Surety after one year from the date performance of the labor is completed or delivery of the materials, equipment or supplies is completed.

4. An action against the Surety or the Contractor, or both, may be brought in the county in which the public building or public work is being constructed or repaired or in any other place authorized by the provisions of Chapter 47, Florida Statutes.

5. The amount of this bond shall be changed only to the extent that the Contract Sum is changed in accord with applicable provisions of the Contract For Construction.

6. Neither any change in or under the Contract Documents, nor any compliance or non-compliance with any formalities provided in the Agreement or the change shall relieve the Surety of its obligations under this Bond.

SIGNED AND SEALED THIS _____ DAY OF _____, 20_____.

_____
(Contractor) (Seal)

_____
(Witness)

By:_____

_____
(name & title)

_____
(Surety) (Seal)

_____
(Witness)

By:_____

_____
(Resident Agent as Attorney in Fact)
(Address/Power of Attorney Attached Hereto)

State of Florida

FLORIDA STATE UNIVERSITY
Tallahassee, Florida 32306

PERFORMANCE BOND

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PAYMENT BOND (FOR LABOR & MATERIALS) IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT AS PROVIDED BY SECTION 255.05, F.S.

KNOW ALL MEN BY THESE PRESENTS: that (Here insert full name and address of Contractor)

as Principal, hereinafter called Contractor, and, (Here insert full name and address of Surety)

as Surety, hereinafter called Surety, are held and firmly bound unto the Florida State University, of the State of Florida hereinafter called Owner, in the amount of (Here insert a sum equal to the Contract Sum) for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

WHEREAS,

Contractor has by written agreement dated_____ 20 __, entered into a contract with Owner for construction of (Here insert name of Project.)

in accordance with Drawings and Specifications prepared by
(Here insert full name and address of Architect/Engineer)

which Purchase Order is by reference made a part hereof, and is hereinafter referred to as the Agreement.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Agreement, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor is in default under the Agreement, and the Owner has performed its obligations thereunder, the Surety shall promptly remedy the default, in accordance with Section 255.05, Florida Statutes, or shall promptly obtain a bid or bids for completing the Agreement in accordance with its terms and conditions, and arrange for a contract between such bidder and the Surety, and pay as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) the cost of completion less the balance of the Contract Sum; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Sum", as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Purchase Order and any amendments thereto, less the amount properly paid by Owner to Contractor.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrator or successors of the Owner.

SIGNED AND SEALED THIS _____ DAY OF _____, 20_____.

_____
(Contractor) (Seal)

_____
(Witness)

By:_____

_____
(name & title)

_____
(Surety) (Seal)

_____
(Witness)

By:_____

_____
(Resident Agent as Attorney in Fact)

_____

_____
(Address)

(Power of Attorney attached hereto)

SECTION F

THE FLORIDA STATE UNIVERSITY
CONTRACTUAL CONDITIONS

ARTICLE 1. THE CONTRACT DOCUMENTS

The Contract Documents consist of the Purchase Order, the Drawings, the Project Manual, Specifications, and all Addenda issued prior to execution of this Agreement and all Modifications issued subsequent thereto. These form the Contract, and all are as fully a part of the Contract as if attached to this Agreement or repeated herein.

If any portion of the Contract Documents is in conflict with any other portion, the various documents comprising the Contact Documents shall govern in the following order of precedence: The Purchase Order; Modifications; Addenda; this Project Manual; the Specifications; the Drawings; as between schedules and information given on Drawings, the schedules shall govern; as between figures given on Drawings and the scaled measurements, the figures shall govern; as between large-scale Drawings and small-scale Drawings, the larger scale shall govern.

ARTICLE 2. THE WORK

The Contractor shall perform all the Work required by the Contract Documents for: (See Section A.4)

ARTICLE 3. THE ARCHITECT/ENGINEER

The Architect/Engineer for this project is: (See Section A.1)

ARTICLE 4. TIME OF COMMENCEMENT AND COMPLETION

4.1 The Work to be performed under this contract shall be commenced within ten (10) calendar days after the date indicated on the Notice to Proceed, shall be substantially completed within (See Section A.2) calendar days after the date indicated on the Notice to Proceed, and shall be finally completed within (See Section A.3) calendar days after the date of Substantial Completion. Despite Substantial Completion, the Owner may terminate the contract when Final Completion is not achieved as of the date indicated herein.

4.2 Liquidated Damages for Failure to Complete on Time

Inasmuch as failure to complete the project within the time fixed in Article 4.1 hereof will result in substantial injury to the Owner, and as damages arising from such failure cannot be calculated with any degree of certainty, it is hereby agreed that if the Work is not substantially completed, according to the definition of "Substantial Completion" in Article 9.4 hereof, or within such further time, if any, as shall allowed for time extensions in accordance with the provision of the Contract Documents, the Contractor shall pay to the Owner as liquidated damages for such delay, and not as a penalty, (See Section A.2) for each and every calendar day elapsing between the date fixed for Substantial Completion in Article 4.1 hereof and the date such Substantial Completion shall have been fully accomplished. Said liquidated damages shall be payable by the Contractor to the Owner, and shall not preclude the recovery of damages by the Owner under other provisions of the Contract Documents, except for Contractor's delays. This provision for liquidated damages for delay shall in no manner affect the Owner's right to terminate the Contract. The Owner's exercise of the right to terminate shall not release the Contractor from the obligation to pay said liquidated damages in the amount set out in Article 4.2 hereof. It is further agreed that the Owner may deduct from the balance retained by the Owner under the provisions of Article 4.1 hereof the liquidated damages stipulated herein or in Article 4.3 as the case may be, or such portion thereof as the retained balance will cover.

4.3 Liquidated Damages When Owner Terminates Contract

The owner is entitled to completion of the project within the time fixed in Article 4.1 hereof or within such further time, if any, as may be allowed in accordance with the provisions of the Contract. In the event of termination of the Contract by the Owner prior to completion, the Contractor shall be liable to the Owner for the expenses for additional managerial and administrative services and also for the per diem liquidated damages agreed upon in Article 4.2 hereof:

.1 for each day the Contractor is in arrears in his Work at the time of said termination as determined by the Architect/Engineer, and

.2 for each day of thirty (30) additional calendar days hereby stipulated and agreed to be the time it will require the Surety to effect another contract for completion of the Work, including resumption of Work thereon, provided, however, that the sum of 4.3.1 and 4.3.2 shall not exceed the number of days beyond the original agreed completion date, or any extension thereof as herein provided, reasonably required for completion of the Work.

ARTICLE 5. CHANGES IN THE WORK

5.1 Changes

5.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order or order for a minor change in the work, subject to the limitations stated in this Article 5 and elsewhere in the Contract Documents.

5.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect/Engineer; an order for a minor change in the Work may be issued by the Architect/Engineer as provided in Paragraph 5.3.

5.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order or order for a minor change in the Work.

5.1.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are so changed in a proposed Change Order that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

5.2 Change Orders

5.2.1 A Change Order is a written instrument prepared by the Architect/Engineer and signed by the Owner, Contractor and Architect/Engineer, stating their agreement upon all of the following:

.1 a change in the Work;
.2 the amount of the adjustment in the Contract Sum, if any; and
.3 the extent of the adjustment in the Contract Time, if any.

5.2.2 All Change Orders must be on the Florida State University Change Order form, included in Section G of this Project Manual.

5.3 Minor Changes in the Work

The Architect/Engineer will have authority, after receiving the Owner's approval, to order minor changes in the Work, not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

ARTICLE 6. CONTRACT SUM

The Owner shall pay the Contractor for the performance of the Work, subject to additions and deductions by Change Order as provided in the Conditions of the Contract.

ARTICLE 7. PAYMENTS OF CONTRACT SUM

7.1 Progress Payments

Based upon Applications for Payment (See Section H) submitted to the Architect/Engineer by the Contractor and Certificates of Payment issued by the Architect/Engineer and by the Owner, the Owner shall make progress payments to the Contractor against the account of the Sum, as provided in the Conditions of the Contract in accordance with the following:

7.1.1 Within thirty (30) days from the Owner's receipt of any Application for Payment submitted by the Contractor, the Owner shall pay or cause to be paid to the Contractor that portion of the Contract Sum previously unpaid, properly allocable to labor, materials, and equipment already incorporated in Work that has been satisfactorily performed in accordance with the requirements of the Contract Documents, as determined by the Architect/Engineer, together with that portion of the Contract Sum properly allocable to materials and equipment suitably stored by the last day of the preceding calendar month at the Project site or at some other location(s) mutually agreed upon in writing by the parties, as determined by the Architect/Engineer.

.1 The Contractor shall pay each Subcontractor, within seven days receipt of payment from the Owner out of the amount paid to the Contractor on account of such Subcontractor's work, the amount to which said Subcontractor is entitled, reflecting the percentage actually retained, if any, from payments to the Contractor on account of such Subcontractor's work.

.2 The Architect/Engineer may, at the Architect/Engineer's discretion, furnish to a Subcontractor, if practicable, information regarding the percentages of completion of the amounts applied for by the Contractor and the action taken thereon by the Architect/Engineer on account of Work done by such Subcontractor.

.3 Neither the Owner nor the Architect/Engineer shall have any obligation to pay or to see to the payment of any moneys to any Subcontractor except as may otherwise be required by law.

.4 No Certificate for a progress payment, nor any partial or entire use of occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

7.1.2 As provided by Section 215.422, Florida Statutes, if a warrant in payment of an invoice is not mailed by the Owner within 40 days after receipt of the invoice and receipt, inspection and approval of the services, the Owner shall pay to the Contractor, in addition to the amount of the invoice, interest at a rate of one percent per month or portion thereof on the unpaid balance from the expiration of such 40-day period until such time as the warrant is mailed to the Contractor. These provisions apply only to undisputed amounts for which payment has been authorized.

7.2 PAYMENTS WITHHELD

7.2.1 With the exception of Work which may be exempted from this requirement by a provision in the Special Conditions in the Project Manual, retainage shall be withheld from each monthly payment request, in an amount not to exceed 10% of the request, until 50% of construction payments are made. After the Work is considered to be 50% complete, retainage not to exceed 10% of the request, may or may not be withheld at the discretion of the Architect/Engineer or Owner.

7.2.2 The Architect/Engineer may decline to certify payment or, because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary, in the Architect/Engineer's opinion, to protect the Owner from loss because of:

.1 defective work not remedied,
.2 third party claims filed or reasonable evidence indicating probable filing of such claims,
.3 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum,
.4 damage to the Owner or another contractor,
.5 reasonable evidence that the Work will not be completed within the Contract Time or,
.6 persistent failure to carry out the Work in accordance with the Contract Documents.

When the above grounds in Subparagraph 7.2.2. are removed, payment shall be made for the amount withheld.

ARTICLE 8. FINAL PAYMENT

Within forty (40) days from the date of Final Contract Completion the Owner shall pay or cause to be paid to the Contractor, the entire unpaid balance of the Contract Sum, less the amount of any sums which continued to be retained to satisfy the cost of performing any change in the Work which is the subject of any claim or dispute and which has not yet been satisfactorily performed by the Contractor, and less any amount being withheld for liquidated damages, provided that the parties have not otherwise stipulated in the Certificate of Substantial Completion, and provided further that the Work has been satisfactorily completed, the Contractor's obligations under the Contract have been fully performed, and a final Certificate for Payment has been issued by the Architect/Engineer.

ARTICLE 9. MISCELLANEOUS PROVISIONS

9.1 Terms used in the Agreement which are defined in the Conditions of the Contract shall have the meaning designated in those Conditions.

9.2 The Contract Documents, which constitute the entire Contract between the Owner and Contractor, are listed in Article 1.

9.3 As required by Section 287.058, Florida Statutes, this Contract may be unilaterally canceled by the Owner for refusal by the Contractor to allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119 and made or received by the Contractor in conjunction with the Contract.

9.4 The Date of Substantial Completion of the Work or designated portion thereof is the date certified by the Architect/Engineer when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended.

The term "Substantial Completion" shall not mean the inclusion of such minor alterations and patching as the final inspection shall disclose.

9.5 Claims

9.5.1 Under this Contract the Contractor shall not have the right to compensation to satisfy any claim for costs, liabilities, or debts of any kind whatever from any act or omission attributable to the Owner unless the Contractor has provided notice to the Architect/Engineer and the Owner within 20 days of the event giving rise to the claim(s) and unless the detailed claim therefore is delivered to the Architect/Engineer and the Owner within 30 days following the notice. The detailed claim shall include:

.1 The date of the occurrence of the event giving rise to the claim and the date and manner of the Contractor's compliance with the notice requirements of Article 9.5.1.

.2 The reasons upon which the Contractor bases the claim, demonstrating thereby that the costs, liabilities or debts reflected in the claim are not already a part of the Contract and his compensation under the Contract; and that specific relief is due him for the claim.

9.5.2 The Architect/Engineer shall make a recommendation to the Owner within 30 days after receipt of a claim. Copies of his recommendation will be presented to the Contractor as well as the Owner. Unless the Architect/Engineer's recommendation is accepted by the Contractor, the Florida State University, the Architect/Engineer and the Contractor shall meet to attempt to resolve the claim.

9.5.3 The Contractor shall carry on the Work and maintain the progress schedule during any mediation of litigation proceeding unless otherwise agreed by the Contractor and the Owner in writing, and the Owner shall continue to make payments to the Contractor in accordance with the Contract Documents.

9.6 Harmony

9.6.1 Contractor is advised and hereby agrees that every reasonable and diligent effort shall be exerted to assure that all labor employed by the Contractor and the Subcontractors for Work on the Project shall work in harmony with and be compatible with all other labor being used by separate contractors during the course of the Work.

9.6.2 Contractor further agrees that this provision will be included in all subcontracts of the Subcontractor as well as in the Contractor's own contract; provided, however, that this provision shall not be interpreted or enforced so as to deny or abridge, on account of membership or non-membership in any labor union or labor organization, the right of any person to work as guaranteed by Article 1, Section 6 of the Florida Constitution.

9.7 Assignment of Antitrust Claims

9.7.1 The Contractor agrees that, after completion of all Work under this Contract this Contract and all amendments thereto and prior to final payment, the Contractor will execute and deliver to the Owner an Assignment of Antitrust Claims in the following form: (See Section K)

9.7.2 The Contractor also agrees that prior to final payment, the Contractor will cause each of the suppliers and Subcontractors who have furnished services, goods or materials in connection with the performance of this Contract to execute and deliver to the Owner an Assignment of Antitrust Claims in the same form as specified in 9.7.1 hereinabove.

ARTICLE 10. MINOR PROJECT COMPLETION CHECKLIST

The Contractor's application for final payment shall be accompanied by a completed Minor Project Completion Checklist (See Section L) and all related closeout documents.

ARTICLE 11. ASBESTOS CONTAINING MATERIALS

The Contractor shall not utilize any asbestos containing materials during the accomplishment of this project.

ARTICLE 12. WARRANTY

The contractor shall provide to the owner, a written unlimited, uninterruptible warranty, guaranteeing all work, labor, and materials performed and installed under this contract for a period of (See section A.5) starting from the date of Substantial Completion. The warranty shall also guarantee the work of all subcontractors.

SECTION G

CHANGE ORDER NO.___

FLORIDA STATE UNIVERSITY

MINOR CONSTRUCTION PROJECT REQUEST FOR CHANGE ORDER

PURCHASE ORDER NUMBER: ACCOUNT NUMBER:

CONTRACTOR:

PROJECT LOCATION & DESCRIPTION OF WORK:

CHANGE REQUESTED:

JUSTIFICATION FOR CHANGE ORDER:

PRESENT CONTRACT AMOUNT: $_____

COST OF THIS CHANGE ORDER: $_____

TOTAL OF CONTRACT AFTER CHANGE: $_____

The contract time will be (increased) (decreased) (unchanged) by_____

The date of substantial/ final completion as of the date of this change order is_____

I, the undersigned do hereby certify, that based on my professional opinion:

1. This Change Order is in the best interest of the University;

2. This Change Order is essential to the successful and satisfactory completion of this project;

3. That the price submitted by the contractor for this Change Order has been carefully evaluated and has been found to be the lowest and best price available under the circumstances.

_____ _____

Architect/ Engineer Signature - Date (If Applicable)

Project Manager Signature - Date

_____ _____

Budget Account Manager – Date Signature

Contractor Signature - Date

_____
Senior Project Manager Signature - Date

Revised November 2006

SECTION H

CERTIFICATE OF PARTIAL CONTRACT COMPLETION
FLORIDA STATE UNIVERSITY

I. INSTRUCTIONS

The vendor must complete Section II of this form and have the appropriate signature notarized.

The vendor must also complete Section III by having the University representative responsible for approving the service or work performed sign in the proper space.

The fully executed form should be attached to the invoice and submitted for payment.

II. CERTIFICATE OF COMPLETION BY VENDOR

AGENCY: Florida State University PROJECT TITLE: _____

CONTRACTOR: _____ PURCHASE ORDER NUMBER_____

ORIGINAL CONTRACT AMOUNT $

CURRENT CONTRACT AMOUNT $

COMPLETED TO DATE $

LESS RETAINAGE (10%) $

LESS PREVIOUS PAYMENT $

TOTAL AMOUNT DUE THIS CERTIFICATE $

CONTRACTOR'S AFFIDAVIT

I CERTIFY, that the work under the above named contract and all amendments thereto have been satisfactorily completed, that all materials, labor and other charges against the project have been paid in accordance with the terms of the contract, that no liens have been attached against the project, that no suits are pending by reason of work on the project under the contract, that all Workmen's Compensation claims have been settled and that no Public Liability claims are pending, except as follows:

_____.

Sworn to and subscribed before me, _____ A Notary Public, this the ___ day

of _____, 20___. _____(Seal)

CONTRACTOR:

_____ _____

Signature – Date Typed Name

III. CERTIFICATE OF ACCEPTANCE BY UNIVERSITY REPRESENTATIVE

THIS IS TO CERTIFY THAT, to the best of my knowledge and belief the statements made in the above affidavit are true and the contractor's work on the project is accepted as being satisfactorily completed under the terms of the contract.

AGENCY: Florida State University

_____ _____

Signature – Date Typed Name

ARCHITECT/ENGINEER:

_____ _____

Signature – Date (If Applicable) Typed Name

SECTION I

FLORIDA STATE UNIVERSITY CERTIFICATE OF SUBSTANTIAL COMPLETION

DATE:_____ PROJECT NO:_____

PURCHASE ORDER NO:_____

The Work performed under the Purchase Order dated _____ between FLORIDA STATE UNIVERSITY,STATE OF FLORIDA, Owner, and _____, Contractor, for the construction of_____, was inspected and found to be substantially completed as of _____.

The Date of Substantial Completion of the Work or designated portion thereof is the date certified by the Architect/Engineer when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it was intended.

A list of items to be completed or corrected is appended hereto. This list may not be exhaustive and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents, including authorized changes thereto.

The Contractor will complete or correct the Work on the list of items appended hereto within _____ calendar days from the Date of Substantial Completion.

Owner assumed full possession of the facility above described on _____.

The responsibility of the Contractor to provide utilities shall cease on the date the Architect/Engineer determines the Work to have been substantially completed in accordance with the requirements of the Contract Documents. On the date so established by the Architect/Engineer as the date of Substantial Completion of the project, or beneficial occupancy, whichever comes first, the one year warranty shall commence running. All insurance coverage shall continue in force as provided by the Contract Documents.

ARCHITECT/ENGINEER	CONTRACTOR
(type name of firm)	(type name of firm)
By,_____	By,_____
(Authorized Representative)	(Authorized Representative)

**********FLORIDA STATE UNIVERSITY**********

Accepted by:_____

Revised November 2006

SECTION J

FLORIDA STATE UNIVERSITY

CERTIFICATE OF FINAL CONTRACT COMPLETION
Page 1 of 2

PROJECT/PURCHASE ORDER NUMBER:

CONTRACTOR:

CONTRACT FOR:

CONTRACT DATE: CONTRACT AMOUNT:

CONTRACTOR'S AFFIDAVIT

I solemnly swear and affirm: That the Work under the above named Contract has been completed in accordance with the requirements of said Contract; that all costs incurred for equipment, materials, labor, and services against the Project have been paid; that no liens have been attached against the Project; that no suits are pending by reason of Work on the Project under the Contract; that all Workers' Compensation claims are covered by Workers' Compensation insurance as required by law; that all public liability claims are adequately covered by insurance, and that the Contractor shall save, protect, defend, indemnify, and hold the Owner harmless from and against any and all claims which arise as a direct or indirect result of any transaction, event, occurrence, or omission related to performance of the Work contemplated under said Contract.

CONTRACTOR:

_____(SEAL)
TITLE:_____

DATE:_____

STATE OF:
COUNTY OF:

Personally appeared before me this _____ day of _____20__
_____, known (or made known) to me to be the
_____of
(Owner) Partner) (Corporate Officer-Title)

_____,

Contractor(s), who, being by me duly sworn, subscribed to the forgoing affidavit in my presence.

_____
(Notary Public)
(Type Name):

My Commission Expires_____

Revised November 2006

Certificate of Final Contract Completion, Page 2 of 2

CERTIFICATE OF ARCHITECT/ENGINEER

I CERTIFY: That, to the best of my knowledge and belief, the Work under the Owner- Contractor Agreement by and between the Florida State University, State of Florida and _____, dated_____, has been satisfactorily completed under the terms of the Contract; that the Work is recommended for occupancy or use by the Owner; and that the Contractor has submitted a sworn affidavit as evidence that the Contractor has paid all labor, materials and other charges against the Project in accordance with the terms of the Contract.

Contract Date of Purchase Order_____

Date of Notice to Proceed_____

Days allowed by Contract_____

Extensions Granted by C. O._____

Total Days Allowable_____

Work Began_____

Project Substantially Completed_____

Days to Complete_____

Underrun_____

Overrun_____

A/E Firm Name_____

Date:_____ By:_____

CERTIFICATE OF ACCEPTANCE BY OWNER

THIS IS TO CERTIFY: That, based upon the statements made in the above affidavit and certificate, the Work is hereby accepted as completed for occupancy, operation and maintenance.

Florida State University: _____

By: _____

Date:_____ Title:_____
(Authorized Representative)

Revised November 2006

SECTION K

ASSIGNMENT OF ANTITRUST CLAIMS

Upon receiving award of Contract, the Contractor and major Sub-Contractors agree to execute the following Assignment:

For and in recognition of good and valuable consideration, receipt of which is hereby acknowledged,_____
(Company Name)

_____

acting herein by and through_____
(Authorized Individual's Name)

its _____
(Title of Authorized Individual whose signature appears below)

and duly authorized agent, hereby conveys, sells, assigns, and transfers to the State of Florida all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the State of Florida for price fixing, relating to the particular goods or services purchased or acquired by the State of Florida pursuant to

_____

_____

_____
(state Contract Name, Number, Etc.)

PLACE SEAL HERE

By:_____

As Witnessed By: Date:_____

_____ _____
(Company Name)

SECTION L

F.S.U. MINOR PROJECT COMPLETION CHECKLIST

PROJECT NUMBER: _____ DATE:_____

BUILDING & PROJECT NAME:_____

CONTRACTOR:_____

ARCHITECT/ENGINEER:_____

DATE OF SUBSTANTIAL COMPLETION:_____

The following list of items MUST be achieved and/or submitted prior to final completion or final payment as delineated.

FINAL COMPLETION

____ 1. Certificate of Contract Completion.

____ 2. Certificate of Architect/Engineer.

____ 3. Assignment of Antitrust Claims from all subcontractors and materials suppliers.

____ 4. Letter of Certification of Completion of Punch List from Contractor.

____ 5. Completion of walk-thru and demonstration of electrical, HVAC, controls and other systems.

____ 6. Final Test and Balance Report.

FINAL PAYMENT

____ 1. As-Built Drawings.

____ 2. All Warranties and Operation and Maintenance Manuals.

____ 3. Return of any keys that you may have.

____ 4. Consent of Surety for Final Payment.

____ 5. Final Payment Request.

IMPORTANT: 1. CONTRACTOR SHALL INITIAL BY EACH COMPLETED ITEM AND RETURN THIS FORM TO THE FSU PROJECT MANAGER
2. ITEMS THAT ARE NOT APPLICABLE TO THIS PROJECT SHALL BE MARKED "N/A" AND INITIALED BY THE CONTRACTOR.

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SECTION M

SPECIAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

(Note to Architect/Engineer - this section is established for the inclusion of non-typical, non-technical items which, in the opinion of the Architect/Engineer, will require written clarification or instruction in connection with a specific project. With the exception of Article 1, Minority Business Enterprise Requirements, which is required for all projects, if one or more of the following items are totally, partially or not at all applicable to a particular project, it/they may be included, modified or deleted by the Architect/Engineer.)

TABLE OF ARTICLES

1. Minority Business Enterprise
2. Special Requirements for Threshold Buildings
3. Projects of Less than $100,000.00
4. Special Pre-qualification Requirements
5. Construction Facilities
6. Water
7. Electricity
8. Pre-construction conference
9. Project Drawings - Copies Furnished to Contractors
10. Federally Funded Projects

ARTICLE 1

MINORITY BUSINESS ENTERPRISE

1.1 RECOMMENDATION

Bidders are encouraged to utilize Minority Business Enterprises certified by the Department of Management Services, Office of Supplier Diversity.

ARTICLE 2

SPECIAL REQUIREMENTS FOR THRESHOLD BUILDINGS

2.1 STRUCTURAL INSPECTION PLAN

Chapter 553, Florida Statutes, defines a "Threshold Building" as "any building which is greater than three stories or 50 feet in height, or which has an assembly occupancy classification that exceeds 5,000 square feet in area and an occupant content greater than 500 persons." For such buildings the Contractor shall request from the Owner a structural inspection plan prepared by the Architect/Engineer prior to proceeding with the requirements of a Notice to Proceed. Usually this structural inspection plan will accompany the Notice to Proceed from the Owner. In the State University System, the Notice to Proceed equates with the building permit.

The structural inspection plan shall provide specific inspection procedures and schedules to assure compliance with the permitted plans. The Owner, with the advice of the Architect/Engineer shall determine whether a structure is a "Threshold Building".

2.2 SHORING, RESHORING AND INSPECTION

For a threshold building the Contractor shall provide or shall require his Subcontractor to provide, plans prepared by an engineer licensed to practice in Florida and retained by the Contractor or his Subcontractor for the preparation of plans for the shoring and the reshoring of the Work. These plans shall be filed with the Owner prior to the shoring or reshoring of the Work. Section 553.79(8), Florida Statutes, identifies the Contractor's responsibilities as: "The named contractor to whom the building permit is issued shall have the responsibility for supervision, direction, management, and control of the construction activities on the project for which the building permit was issued". The Contractor shall notify the special inspector when the shoring is ready for inspection for conformance with the shoring and reshoring plans submitted to the Owner; however, such inspection shall not relieve the Contractor from responsibilities under Section 553.79(8), Florida Statutes.

ARTICLE 3

PROJECTS OF LESS THAN $100,000

3.1 WORK EXEMPT FROM BOND REQUIREMENTS

Any person or corporation entering into a formal contract with any university or with the Board of Regents for the construction of a public building, for the prosecution and completion of a public work, or for repairs upon a university building or university work the cost of which is less than $100,000 shall be exempt from payment and performance bonds in accordance with the provisions of Section 255.05, Florida Statutes, provided that the contract requires the contractor to be paid periodically only upon compliance with the applicable provisions of Section 255.05, Florida Statutes, and any rules adopted thereunder.

3.2 PROCEDURES FOR WORK WITHOUT BONDS

In all cases where a performance and payment bond is not provided, the following procedures shall be followed:

3.2.1 At any time prior to final completion of the Contract certified under Subparagraph 3.2.2 of these Special Conditions, the contracting authorities shall not authorize or make payment to the Contractor in excess of ninety percent (90%) of the amount due on the Contract on the basis of the Work suitably completed and material suitably stored on the site. In case of default by the Contractor, the laborers, materialmen, and Subcontractors, as defined in Section 713.01, F.S., making claims for unpaid bills, will be paid from the ten percent (10%) retainage on a pro rata basis as follows: the sum of all substantiated claims made shall be divided into each individual claim thereby deriving a percentage for each claim. The total retainage will then be multiplied by the percentage value and the result shall be the pro rata share of the retainage to be paid to the claimants; however, the payment shall not be more than the claim.

3.2.2 The final payment of retainage shall not be made until the Work has been inspected by the Architect/Engineer or other person designated by the contracting authority for that purpose and until that person designated by the contracting authority for that purpose and until that person has issued a written certificate that the Work has been constructed in accordance with the approved plans and specifications and approved change orders and until the contracting authority has accepted the building project.

3.2.3 Final payment shall not be made until the Contractor has supplied the contracting authority with signed and dated statements from all laborers, materialmen, and Subcontractors as defined in Section 713.01, F.S. and identified under Subparagraph 3.2.5 hereinafter, that they have no claims against the Contractor for Work under the Contract. Said statements shall identify the project by name and project number.

3.2.4 The Contractor shall provide evidence in the form of certified copies, that the Contractor has placed in the following form, on three occasions, in a local newspaper and has posted such notice in a conspicuous place on the Project site.

"Notice is hereby made to all those concerned and affected that

Childers Construction, Inc is performing
Site Preparation, Solar PV System Addition,
FSU Project No. 2200079
at CAPS Research Building, FSU Research Foundation.

All parties furnishing labor and/or materials to said Project are to provide notice of such in writing by certified mail to Ms. Mary Jo Spector within twenty days of first providing such labor and/or materials."

3.2.5 The Contractor shall provide a certified list of all Subcontractors, laborers, and material suppliers to the Owner within thirty days of receipt of the notice to proceed with the Work. This list shall be updated thereafter each month (on the same date as the filing of the first certification) with a certified statement that the list and its updates include the names and addresses of all of those Subcontractors, laborers, and material suppliers furnishing labor and/or material or the Project.

3.2.6 When a Contractor receives any payment, the Contractor shall pay such moneys received to each Subcontractor and supplier in accordance with Section 287.0585, Florida Statutes.

3.2.7 The Contractor shall provide a written statement to the Owner which indicates how each payment requested will be distributed to Subcontractors and suppliers. This pay request breakdown shall define the disbursement intended for all of the funds requested.

3.2.8 The Contractor shall provide a written statement with all but the first pay request from each of the Subcontractors and suppliers indicated in 3.2.7 above that they have in fact received payment as indicated in the preceding statements.

In the event any payment is not made as indicated a prior statement noted in Subparagraph 3.2.7 above, the Contractor shall furnish an explanation as to the reasons for such deviation and shall request approval from the Owner. The Contractor shall also return such unpaid funds to the Owner by providing a credit properly identified on the next pay request.

ARTICLE 4

SPECIAL PREQUALIFICATION REQUIREMENTS

This section is not required for this project.

ARTICLE 5

CONSTRUCTION FACILITIES

5.1 FIELD OFFICES

5.1.1 Architect/Engineer Field Offices: If required by the Contract Documents, the Contractor shall provide and maintain a watertight office at the Project for the exclusive use of the Architect/Engineer's representatives. It shall be a one-room office, at least 12' x 12' in size, with at least one window in each exterior wall and an independent outside entrance door fitted with hardware and lock. The room shall be equipped with artificial light, a bench with one drawer, a blueprint rack, a heater and a window air conditioner. This office and equipment shall become the property of the Contractor upon completion of the Work. A trailer satisfying the above requirements will be acceptable.

5.1.2 Contractor's Field Office: Trailers may be used for field offices. If required by the Contract Documents, the Contractor shall have a telephone installed in the Contractor's office and shall permit business use of it to Subcontractors and other trades who shall reimburse the Contractor for such use if so directed by the Contractor. Trades or Subcontractors wishing to install their own telephone service may do so at their own expense. The Architect/Engineer shall be informed of the job telephone numbers and a directory of all trades shall be installed adjacent to the phone in the Contractor's field office.

5.2 STORAGE AND WORK AREAS

At the start of the operations the Contractor shall make arrangements with the Architect/Engineer's Project Representative and the University's authorized representative for the assignment of storage and work areas. During construction the Contractor shall maintain the areas in a neat condition.

5.3 SANITARY PROVISIONS

The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of the Contractor's employees as may be necessary to comply with regulations of the State Board of Health.

ARTICLE 6

WATER

6.1 Water necessary to carry out the Work and for testing its plumbing and mechanical systems shall be furnished by the Owner; however, the Contractor shall make all connections, install a meter (if required), take out and pay for all permits necessary, do all piping and clear away all evidence of same after the Work is completed, as required to carry out the Work.

ARTICLE 7

ELECTRICITY

7.1 Unless otherwise required in the contract documents, all electricity for light and power necessary to carry out the Work and to test its electrical and mechanical systems shall be provided and paid for by the Owner; however, the Contractor shall make all connections, install a meter (if required), take out and pay for all permits necessary, perform all temporary wiring and clear away all evidence of same after the Work is completed, as required to carry out the Work.

7.2 TEMPORARY WIRING

Wiring shall meet all safety requirements of the National Electric Code and local requirements. In addition, all wire shall be so sized that it is not overloaded according to the National Electric Code and O.S.H.A. Standards, and any wire used shall be fused to adequately protect that wire according to the most restrictive applicable Code. The Contractor shall have an adequate number of outlets and each outlet shall be properly and clearly labeled with the maximum voltage and fuse protection. Where temporary lighting is used, outlets shall consist of weatherproof sockets insulated and provided with a locking type wire guard. All devices shall be provided with ground-fault protection.

ARTICLE 8

PRE-CONSTRUCTION CONFERENCE

8.1 Before beginning Work at the site the Contractor shall attend a pre-construction conference and be accompanied by the superintendent employed for the Work.

This conference will be scheduled by the university project manager who will arrange for the Architect/Engineer and other interested parties to be present. At this time all parties concerned will discuss the Work and prepare a program of procedure in keeping with requirements of the Contract Documents. The superintendent shall thereafter make every effort to expeditiously coordinate all segments of the Work, including the required reporting procedure, to obtain the end result within the full purpose and intent of the plans and specifications for the Work.

ARTICLE 9

PROJECT DRAWINGS - COPIES FURNISHED TO CONTRACTORS

9.1 The Architect/Engineer will provide the Contractor with one set of drawings and one set of specifications upon Contract award. If additional sets are required by the Contractor, they may be purchased at Seminole Blueprint, Inc., 2915 Park Avenue, Tallahassee, FL 32301, (850-671-2714).

ARTICLE 10

FEDERALLY FUNDED PROJECTS

(Note to Architect/Engineer: Article 10 of the Special Conditions is required in connection with projects whose funding includes any of several types of federal assistance moneys. It will be incumbent upon the Architect/Engineer to investigate and make a determination regarding the inclusion of this item for a particular project).

10.1 ACCESS TO RECORDS

The Contractor agrees to allow duly authorized representatives of the Owner, Governor's Energy Office, The Auditor General of the State of Florida, U.S. Department of Energy, or the Comptroller General of the United States access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purpose of making audits, excerpts, and examinations.

10.2 COMPLIANCE WITH THE CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970 (42 USC 1857 et seq.) and the Federal Water Pollution Control Act (33 USC 1251 et seq.) as amended.

DIVISION AND SECTION PAGE

DIVISION 1 - GENERAL REQUIREMENTS

SECTION

01010 - Summary of Work 01010-1 thru 01010-4
01040 - Coordination 01040-1 thru 01040-5
01045 - Cutting and Patching 01045-1 thru 01045-3
01200 - Project Meetings 01200-1 thru 01200-2
01300 - Submittals 01300-1 thru 01300-5
01400 - Quality Control Services 01400-1 thru 01400-4
01500 - Temporary Facilities 01500-1 thru 01500-5
01600 - Materials and Equipment 01600-1 thru 01600-4
01631 - Product Substitutions 01631-1 thru 01631-3
01740 - Warranties and Bonds 01740-1 thru 01740-2

DIVISION 2 - SITE WORK

SECTION

02070 - Selective Demolition 02070-1 thru 02070-2
02300 - Earthwork 02300-1 thru 02300-14
02512 - Concrete Curbs 02512-1 thru 02512-2
02515 - Stabilized Subbase 02515-1 thru 02515-2
02516 - Limerock Base Course 02516-1 thru 02516-4
02831 - Chain Link Fence and Gates 02831-1 thru 02831-6
02930 - Sodding, Seeding and Mulching 02930-1 thru 02930-3

DIVISION 3 – CONCRETE – NOT INCLUDED

DIVISION 4 – MASONRY – NOT INCLUDED

DIVISION 5 – METALS – NOT INCLUDED

DIVISION 6 - WOOD AND PLASTICS – NOT INCLUDED

DIVISION 7 - THERMAL AND MOISTURE PROTECTION – NOT INCLUDED

DIVISION 8 - DOORS AND WINDOWS – NOT INCLUDED

DIVISION AND SECTION PAGE

DIVISION 9 – FINISHES – NOT INCLUDED

DIVISION 10 – SPECIALTIES – NOT INCLUDED

DIVISION 11 - EQUIPMENT - NOT INCLUDED

DIVISION 12 - FURNISHINGS - NOT INCLUDED

DIVISION 13 - SPECIAL CONSTRUCTION – NOT INCLUDED

DIVISION 14 - CONVEYING SYSTEMS - NOT INCLUDED

DIVISION 15 – MECHANICAL – NOT INCLUDED

DIVISION 16 – ELECTRICAL – NOT INCLUDED

APPENDIX

Geotechnical Report

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SECTION 01010- SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:
1. Work covered by the Contract Documents.
2. Work under other contracts.
3. Use of premises.
4. Owner's occupancy requirements.
5. Scheduling
6. Specification formats and conventions.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project Identification: Site Preparation, Solar PV System Addition, CAPS Research Building, FSU Research Foundation, Florida State University, Tallahassee, Florida. Hicks Nation project number 2204.

B. Owner: Florida State University
1. Owner's Representative: Mary Jo Spector, FSU Facilities Design & Construction

C. Architect: Hicks Nation Architects, Inc., 627 McDaniel Street, Tallahassee, Florida 32303.

D. The Work consists of the following:
1. The work includes clearing & grubbing of existing trees and vegetation around the existing Research Foundation Chiller Plant in order to install a 100 KW Solar PV System. The site will be filled and graded to create a gently slope. A new gravel access road will be installed along with gravel ground cover under the solar panel arrays and sod over disturbed areas. A 6'-0" high black vinyl chain-link fence with two gates will be installed around the solar panels once installed.

E. Project will be constructed under a single prime contract.

1.3 WORK UNDER OTHER CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

B. Concurrent Work: Owner may award separate contract(s) for work at Project site. Those operations may be conducted simultaneously with work under this Contract.

1.4 USE OF PREMISES

A. General: Contractor shall have limited use of premises for his re-roofing operations, including limited use of Project site, during construction period. Occupied buildings must continue to be occupied and will continue normal functions during the re-roofing operations.

1.5 OWNER'S OCCUPANCY REQUIREMENTS

A. Owner Occupancy During Construction: The Owner will continue to occupy buildings which are currently occupied throughout the duration of the project. The Contractor shall protect Building Occupants from his operations and work and not interfere with the normal operations within the building being retrofitted with the new roof system.

1.5 SCHEDULING

A. The Contractor shall be required to complete the retrofit metal standing seam roof system on one building before starting work on another building. Multiple work crews may be utilized to install the retrofit metal standing seam roof system concurrently on other buildings. Each work crew shall complete the roof it began prior to commencing work on another building. A schedule for completing all work shall be submitted for review and approval prior to beginning the work. A **Substantial Completion** inspection shall be scheduled as each building is completed.

1.6 SPECIFICATION FORMATS AND CONVENTIONS

A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSVCSC's "MasterFormat" numbering system.
   1. Division 1: Sections in Division 1 govern the execution of the Work of all Sections in the Specifications.

B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
   1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.

2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section Text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.7 MISCELLANEOUS PROVISIONS

A. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION: The Contractor shall be solely responsible for all applicable obligations prescribed as employer obligations under any and all governmental regulations.

B. SAFEGUARDS: In addition to normal construction safeguards, the contractor shall provide and maintain appropriate safeguards around all construction activities. When construction activities are in progress, the contractor shall secure the area of construction so that the public are prevented from entering the area of construction activity. The contractor shall construct safeguards to protect public, staff and patients from the construction areas and areas where materials are stored.

C. LAYOUT OF WORK: Dimensions and elevations indicated on the drawings shall be verified by the Contractor. Discrepancies between drawings, specifications, and existing conditions shall be referred to the Architect/Engineer for adjustment before affected work is performed. Failure to make such notification shall place responsibility upon the Contractor to carry out the work in a satisfactory and workmanlike manner at no additional cost to the Owner. **It is understood that only limited information concerning the construction and condition of the existing building has been made available to the Architect for preparation of these construction documents. The Contractor shall verify existing conditions to determine the condition and materials on which he will be installing the building addition.**

D. COORDINATION: Drawings showing location of equipment, piping, etc., are diagrammatic. The Contractor will need to verify actual locations and work with existing conditions. The Contractor shall remove and relocate such items at his own expense as needed to complete his work. Relocated items shall be recorded on the record drawings. Careful planning and coordination by the contractor is required in order to avoid conflict.

E. RIGHT OF ACCESS: The Contractor agrees that representatives of the Owner and Architect/Engineer will have access to the work wherever it is in preparation or progress and that the Contractor will provide facilities for such access.

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F. CLEANING UP: At completion of the work, the Contractor shall remove from the building roof and site all tools, appliances, surplus materials, debris, temporary structures and facilities, scaffolding, and equipment; clean the roof thoroughly and remove all marks, stains, fingerprints, dust, dirt, paint drippings, and the like from all surfaces.

The exterior of the building, the grounds, approaches, equipment, pavement, sidewalks, etc., shall be clean and left in good order at the time of final acceptance.

PART 2- PRODUCTS

2.1 *As required by Florida Statute 553.842 and the Florida Administrative Code 9B-72, the Contractor is required to provide the information and the product approval number(s) on building components listed on the attached PRODUCT APPROVAL SPECIFICATION SHEET included at the end of this specification section if products referenced therein will be utilized on the construction project for which you are applying for a building permit after April 1, 2004. This project meets this criteria. Should you not know the project approval number for any of the listed products applicable to this project, contact your local product supplier or find the approved product numbers at www.floridabuilding.org.*

PART 3- EXECUTION (Not Applicable)

END OF SECTION 01010

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SECTION 01040 - PROJECT COORDINATION

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

Coordination.
Administrative and supervisory personnel.
General installation provisions.
Cleaning and protection.

Progress meetings, coordination meetings and pre-installation conferences are included in Section "Project Meetings.@ Project meetings shall be held monthly.

Construction Schedule: Requirements for the Contractor's Construction CPM Schedule are included in the Supplementary Conditions of the contract.

COORDINATION

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work and coordination between trades. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

Make adequate provisions to accommodate items scheduled for later installation.

Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

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Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

Preparation of schedules.
Installation and removal of temporary facilities.
Delivery and processing of submittals.
Progress meetings.
Project Close-out activities.

SUBMITTALS

Coordination Drawings: Prepare and submit coordination Drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.

Show the interrelationship of components shown on separate Shop Drawings.

Indicate required installation sequences.

Comply with requirements contained in Section "Submittals."

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

GENERAL INSTALLATION PROVISIONS

Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

Recheck measurements and dimensions, before starting each installation.

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Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

Mounting Heights: If mounting heights are not indicated, coordinate heights with Architect. Comply with applicable codes, pay particular attention to the Florida Handicapped Accessibility Code. Refer questionable mounting height decisions to the Architect for final decision.

CLEANING AND PROTECTION

During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

Excessive static or dynamic loading.
Excessive internal or external pressures.
Excessively high or low temperatures.
Excessively high or low humidity.
Water.
Solvents.
Puncture.
Soiling, staining and corrosion.
Rodent and insect infestation.
Combustion.
Contact between incompatible materials.
Excessive weathering.
Unprotected storage.
Theft.
Vandalism.

Clarification and Interpretations of the Contract Documents: When requesting clarifications and Interpretations of the Architect and Engineer's documents, the Contractor shall submit a Request for Information (RFI) on the form provided at the end of this specification section. The contractor shall provide references to the appropriate specification section, drawing or detail. The Architect and his Engineer's shall respond in the space provided on the RFI form. In the event that a more extensive response is required, the Architect shall issue an Architect's Supplemental Instruction (ASI) containing

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pertinent information and drawings. In the event that the contractor anticipates a change in contract cost or time due to information addressed in an RFI or ASI, then **THE CONTRACTOR SHALL FOLLOW THE PROCEDURES OUTLINED IN THE GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION. The contractors failure to notify the Architect as described above, shall indicate that the clarification and/or interpretation shall not result in change in contract cost or time.**

END OF SECTION 01040

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REQUEST FOR INFORMATION
NO. _____
SITE PREPARATION
SOLAR PV SYSTEM ADDITION
CAPS RESEARCH BULDING
FLORIDA STATE UNIVERSITY
FSU PROJECT No. 2200079

HNA PROJECT No. 2204

To: Hicks Nation Architects, Inc.
1382 Timberlane Road/Suite C
Tallahassee, Florida 32312
FAX 850/893-1132

From: _____

Attn.: _____

This is a Request for Information to resolve conflicts to clarify the design professional's intentions as described in the Drawings and/or Specifications or to request instructions relative to unforeseen field conditions. If the design professional's response will require changes to the contract sum or contract time, the contractor shall notify the Architect verbally, within 24 hours of receiving the response, that such a change is indicated, and shall notify the Architect in writing within seven (7) days of receiving the response by submitting a formal proposal detailing the proposed changes in Contract Sum and/or Contract Time.

REQUEST FOR INFORMATION

References: DWG.# _____ DETAIL # _____

SPECIFICATION SECTION/PAGE _____

Submitted by: _____ Date: _____

Response Due Date: _____

RESPONSE TO REQUEST FOR INFORMATION

Referred to: Architect _____ Engineer _____

Response by: _____ Date: _____
Attachments: _____

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SECTION 01045 - CUTTING AND PATCHING

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements for cutting and patching.

Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

Requirements of this Section apply to mechanical and electrical installations. Refer to Division 15 and Division 16 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

SUBMITTALS

Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.

Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.

List products to be used and firms or entities that will perform Work.

Indicate dates when cutting and patching is to be performed.

List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

QUALITY ASSURANCE

Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces,

in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

PART 2 - PRODUCTS

MATERIALS

Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

INSPECTION

Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

PREPARATION

Temporary Support: Provide temporary support of Work to be cut.

Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

PERFORMANCE

General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.

In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum

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disturbance of adjacent surfaces. Temporarily cover openings when not in use.

To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

Cut through concrete and masonry using a cutting machine such as a Carborundum saw or diamond core drill.

Comply with requirements of applicable Sections of Division-2 where cutting and patching requires excavating and backfilling. Bypass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after bypassing and cutting.

Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken containing the patch, after the patched area has received primer and second coat.

CLEANING

Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01045

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SECTION 01200 - PROJECT MEETINGS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements for project meetings including but not limited to:

Pre-Construction Conference.
Pre-Installation Conferences.
Coordination Meetings.
Progress Meetings.

PRE-CONSTRUCTION CONFERENCE

Schedule a pre-construction conference and organizational meeting at the Project site prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

Attendees: The Owner, Architect and their consultants, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the Work.

PRE-INSTALLATION CONFERENCES

Conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction. The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect of scheduled meeting dates.

Record significant discussions and agreements and disagreements of each conference, along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner and Architect.

Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of Work and reconvene the conference at the earliest feasible date.

COORDINATION MEETINGS

Conduct Project coordination meetings at regularly scheduled times convenient for all parties involved. Project coordination meetings are in addition to specific meetings held for other purposes, such as regular progress meetings and special pre-installation meetings.

Request representation at each meeting by every party currently involved in coordination or planning for

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the construction activities involved.

Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PROGRESS MEETINGS

Conduct progress meetings at the Project site at monthly intervals. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request. The Architect may schedule periodic progress meetings with more frequency for the purpose of coordinating or expediting work.

Attendees: In addition to representatives of the Owner and Architect, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the current status of the Project.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01200

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SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

Permits.
Applications for payment.
Performance and payment bonds.
Insurance certificates.
List of Subcontractors.

The Schedule of Values submittal is included in Section "Applications for Payment."

Inspection and test reports are included in Section "Quality Control Services."

SUBMITTAL PROCEDURES

Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.

Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect will promptly advise the Contractor when a submittal being processed must be delayed for coordination.

Allow two weeks for reprocessing each submittal.

No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

Include the following information on the label for processing and recording action taken:

Project name.
Date.
Name and address of Architect.
Name and address of Contractor.
Name and address of subcontractor.
Name and address of supplier.
Name of manufacturer.
Number and title of appropriate Specification Section.
Drawing number and detail references, as appropriate.

Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than the Contractor will be returned without action.

On the transmittal record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

CONTRACTOR'S CONSTRUCTION SCHEDULE

The contractor shall within thirty (30) days of the Notice to Proceed, submit, to the Architect, a construction schedule. The schedule shall be in accordance with the requirements specified in the Supplementary General Conditions.

Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by requirements for phased completion to permit Work by separate Contractors and partial occupancy by the Owner prior to Substantial Completion.

Work Stages: Indicate important stages of construction for each major portion of the Work, including testing and installation.

Area Separations: Provide a separate time bar to identify each major construction area for each major building. Indicate where each element in an area must be sequenced or integrated with other activities.

Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting. The contractor

shall submit an updated progress schedule with each Application for Payment clearly indicating work completed.

SUBMITTAL SCHEDULE

Prepare a complete schedule of submittals. Submit the schedule within 10 days of the Notice to Proceed date.

Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.

Prepare the schedule in chronological order; include submittals required during the first 90 days of construction. Provide the following information:

Scheduled date for each submittal.
Related Section number.
Name of subcontractor.
Description of the part of the Work covered.
Scheduled date for resubmittal
Scheduled date for Architect's release.

Distribution: The contractor shall provide a minimum of six (6) copies of all submittals for the following distribution:

Architect:	1 copy	
Owner:		1 copy (retained by Architect)
Consultants:	1 copy	
Contractor:	3 copies	

The Contractor shall print and distribute copies to the Architect, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the Project meeting room and field office.

When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each application for payment until all submittals have been reviewed and released.

SHOP DRAWINGS

Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
Dimensions.
Identification of products and materials included.

Compliance with specified standards.
Notation of coordination requirements.
Notation of dimensions established by field measurement.

Sheet Size: Except for templates, patterns and similar full size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 36" x 48".

Do not use Shop Drawings without an appropriate final stamp indicating action taken in connection with construction.

Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.

Preparation of coordination Drawings is specified in section "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.

Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

PRODUCT DATA

Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

Manufacturer's printed recommendations.
Compliance with recognized trade association standards.
Compliance with recognized testing agency standards.
Application of testing agency labels and seals.
Notation of dimensions verified by field measurement.
Notation of coordination requirements.
Compliance with F.A.C.-6A-2

Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

Do not permit use of unmarked copies of Product Data in connection with construction.

SAMPLES

Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.

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Package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect's Sample. Include the following:

Generic description of the Sample.
Sample source.
Product name or name of manufacturer.
Compliance with recognized standards.

Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.

Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of construction.

Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the Work will be judged.

ARCHITECT'S ACTION

Except for submittals for record, information or similar purposes, where action and return are required or requested, the Architect will review each submittal, mark to indicate action taken, and return promptly.

Compliance with specified characteristics is the Contractor's responsibility.

Action Stamp: The Architect will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

Final Unrestricted Release: Where submittals are marked "No Exception Taken," that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.

Final-But-Restricted Release: When submittals are marked "Note Markings," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.

Returned for Resubmittal: When submittal is marked "Rejected, Revise and Resubmit," do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.

Do not permit submittals marked "Rejected, Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION (Not Applicable). END OF SECTION 01300

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SECTION 01400 - QUALITY CONTROL SERVICES - SPECIAL TESTING & INSPECTION REQUIREMENTS - STRUCTURAL INSPECTION PLAN FOR THRESHOLD BUILDINGS

PART 1 - GENERAL

CONTRACTOR'S NOTICE

THE CONTRACTOR SHALL NOTE THAT THIS SECTION SUPERSEDES ALL OTHER SPECIFICATION REFERENCES DESCRIBING RESPONSIBILITY FOR TESTING. THE RESPONSIBILITIES ARE DESCRIBED BELOW. THE CONTRACTOR SHALL REFER TO OTHER SPECIFICATION SECTIONS FOR SPECIFIC TYPES OF TESTING AND PROCEDURAL REFERENCES FOR PERFORMING TESTS.

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements for quality control services.

Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the Contractor. They do not include Contract enforcement activities performed by the Architect.

Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the Contractor of responsibility for compliance with Contract Document requirements.

RESPONSIBILITIES

The Contractor shall provide inspections, tests and similar quality control services, specified in individual Specification Sections and required by governing authorities, these services include those specified to be performed by an independent agency and not by the Contractor. Costs for tests described as the Contractor's responsibility herein shall be included in the contract sum. Those tests and inspections described as the Owner's responsibility shall not be included in the contract sum.

The Contractor shall engage and pay for the services of an independent agency to perform inspections and tests specified. The Contractor is responsible for testing soil compaction, soil density, topsoil quality, paving, base and sub-base including gradation of material, fill material, concrete slump tests and concrete compressive strength testing, structural and non-structural welding, bolted structural connections, water quality and sterilization of piping. The frequency, requirements and quantity of these tests are specified elsewhere in these documents.

Associated Services: The Contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Auxiliary services required include but are not limited to:

Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests including ladders and scaffolding.

Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.

Security and protection of samples and test equipment at the Project site.

SUBMITTALS

The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the Architect and Owner. COPIES OF ALL ORIGINAL TEST REPORTS SHALL BE SUBMITTED WITHIN TEN (10) DAYS FOLLOWING COMPLETION OF THE TEST.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

REPAIR AND PROTECTION

General: Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Comply with Contract Document requirements for "Cutting and Patching."

SPECIAL TESTING AND INSPECTION REQUIREMENTS

The Contractor shall employ and pay for the services of an independent testing laboratory acceptable to both the Architect and the Owner to perform testing specified in the documents. Testing shall include, but is not limited to that described under PART 1, "RESPONSIBILITIES,@ elsewhere in this section and in other sections throughout the documents.

1. The Contractor shall cooperate with the independent laboratory to facilitate the execution of its contracted services.

2. The Contractor shall provide sufficient notification to the independent laboratory for purposes of scheduling testing.

3. Employment of the laboratory shall in no way relieve the Contractor's obligations to perform the work of the contract in accordance with the contract documents.

4. Retest due to failure for any and all reasons shall be at the expense of the Contractor.

RELATED REQUIREMENTS

A. General Conditions of the Contract for Construction: Inspections and testing required by laws, ordinances, rules, regulations, orders of approvals of public authorities or authorities having jurisdiction.

B. Respective sections of specifications: Certification of products.

C. Each specification section where required: Laboratory tests required, and standards for testing.

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LABORATORY DUTIES

A. The independent testing laboratory shall fully cooperate with the Architect, Owner and Contractor and shall provide qualified personnel to perform the various tests required by these documents. Testing shall be performed when scheduled by the Contractor and certified reports shall be furnished to all parties described herein.

B. The independent laboratory shall perform the specified inspections, sampling and testing of materials and methods of construction to:

1. Comply with the specific standards included by reference, and;

2. Ascertain compliance of materials with requirements of the contract documents.

C. The independent laboratory shall promptly notify the Architect and Contractor of observed deficiencies or irregularities in work or products.

D. The independent laboratory shall promptly submit certified written reports of each test and inspection; provide one certified copy each to the Architect, Owner and General Contractor. Each report shall include the following information:

1. Date issued,

2. Project title and number,

3. Testing Laboratory name, address and telephone number,

4. Name and signature of laboratory inspector,

5. Date and time of sampling or inspection,

6. Record of temperature and weather conditions,

7. Date of test,

8. Identification of product and specification section,

9. Location of sample or test in the project,

10. Type of inspection or test,

11. Results of tests and compliance with Contract Documents,

12. Interpretation of test results, when requested by Architect, Owner or Contractor.

E. Perform additional tests as required by the Architect, Owner or the Contractor.

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LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

The independent testing laboratory is not authorized to:

1. Release, revoke, alter or enlarge on the requirements of the Contract Documents,

2. Approve or accept any portion of the work,

3. Perform any duties of the Contractor.

CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel, provide access to work, and/or to manufacturers operations.

B. Secure and deliver to the laboratory adequate quantities of representational samples of materials proposed to be used and which require testing.

C. Provide to the laboratory the preliminary design mix proposed to be used for concrete and other material mixes (ie) Asphaltic concrete, base, sub-base, topsoil, fill, etc. which require control by the testing laboratory.

D. Furnish copies of Products test reports as required.

E. Furnish incidental labor and facilities:

1. To provide access to work to be tested.

2. To obtain and handle samples at the project site or at the source of the product being tested.

3. To facilitate inspections and tests.

4. For storage and curing of test samples.

F. Notify appropriate persons sufficiently in advance (24 hour minimum) of operations to allow for laboratory assignment of personnel and scheduling of tests.

G. Make arrangements with the laboratory and pay for additional samples and tests required for the Contractor's convenience.

H. Maintain a log at the site of all inspections and tests performed. The log shall indicate the date, time and type of inspection and/or test and shall be initialed by the person who performed same.

I. At the Architect's discretion, uncover any work concealed by subsequent construction that was not inspected and/ tested by the appropriate party. The uncovering shall be performed at the Contractor's expense without change in the Contract time.

END OF SECTION 01400

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SECTION 01500 - TEMPORARY FACILITIES

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection.

Temporary utilities required include but are not limited to:

Water service and distribution. Contractor may connect to existing water.
Temporary electric power and light. Contractor may connect to existing electrical service.
Telephone service. Contractor shall provide his own telephone service.

Temporary construction and support facilities required include but are not limited to:

Temporary heat and air-conditioning.
Field offices and storage sheds.
Sanitary facilities.
Temporary enclosures.

Security and protection facilities required include but are not limited to:

Barricades, warning signs, lights.
Enclosure fence for the site.
Environmental protection.

QUALITY ASSURANCE

Regulations: Comply with industry standards and applicable laws and regulations if authorities having jurisdiction, including but not limited to:

Building Code requirements.
Environmental protection regulations in accordance with the permit issued for this project by the Authority having Jurisdiction.

Standards: Temporary structures and utilities shall comply with all applicable local codes and ordinances.

Construction power, lighting, water, fire protection, ventilation and climate control shall comply with the provisions of the Occupational Safety and Health Administration (OSHA), Florida Construction Industry Licensing Bureau and all applicable codes and ordinances.

PART 2 - PRODUCTS

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MATERIALS

Materials may be new or used, but shall be adequate in capacity for the required usage, shall not create unsafe conditions and shall not violate requirements of applicable codes and standards.

PART 3 - EXECUTION

INSTALLATION

Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

Use Charges: Cost or use charges for temporary facilities are not chargeable to the Owner or Architect, and will not be accepted as a basis of claims for a Change Order.

Water Service: The Contractor may provide temporary water by connecting to the existing service. The contractor shall exercise care to assure conservation of water. Abuse of the Owner's water will require the contractor to provide his own service.

Temporary Electric Power Service: Contractor may connect to existing service for power and lighting needs other than welding. Connection shall comply with NEC. Abuse of Owner's power will result in contractor being denied use of power. Contractor will then be required to provide his own service.

Provide required disconnects, grounding, and all other devices and appurtenances required by all applicable codes and agencies, and remove same upon completion of the work.

Provide generator, if required, to obtain power required which is greater than temporary service furnished.

Provide all required transformers, fused main switches, distribution boards, panels, but-outs, wiring and grounding, sockets, lamps, fuses and motor connections to suit all loads and safety requirements.
Install circuit and branch wiring with distribution boxes located so that power and lighting is available throughout the construction site by the use of construction type power cords.

Provide artificial lighting for all areas of work when natural light is not adequate for work and for areas accessible to the public.

Provide and maintain temporary feeders to permanent mechanical equipment requiring service, including ventilation, until permanent feeds are connected and energized.

When directed by the Architect, after permanent power has been switched over, remove those portions of temporary light and power installation which are the responsibility of the Contractor.

Install and operate temporary lighting that will fulfill security and protection requirements(minimum 3 fc), without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.

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Temporary Telephones: The contractor shall arrange with the local telephone service company to provide direct line telephone service at the construction site for the use of personnel and employees. The required service shall be as follows:

1. One direct line instrument in the Contractor's field office.

The Contractor shall pay all costs for installation, maintenance and removal and service charges for local calls. Toll charges shall be paid by the party who places the call unless preapproved by the Contractor.

TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION

Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.

Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

Field Offices: Provide insulated, air-conditioned and heated weathertight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small progress meetings. Field office trailer may be eliminated if temporary field office can be located on the floor to be renovated.

Temporary Sanitary Facilities: The Contractor shall provide sanitary facilities in compliance with laws and regulations. Since no services will be available for temporary toilets, provide, maintain and remove, when directed, portable chemical toilets for construction personnel. Provide quantity and location of temporary toilets as required by authorities having jurisdiction, including but not limited to OSHA, and subject to further directions by the Architect. Temporary toilets shall be located as accepted by the Owner and the Architect.

Temporary toilets shall be serviced as required to maintain a sanitary environment. However, they shall be serviced a minimum of once per week.

Field office trailers toilets may be provided with temporary connections into existing sanitary gravity drains.

Temporary Enclosures: Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.

SECURITY AND PROTECTION FACILITIES INSTALLATION

Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations."

Maintain unobstructed access to fire extinguishers, temporary fire protection facilities, and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.

Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

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Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against.

Enclosure Fence: Prior to commencement of construction, install an enclosure fence with lockable entrance gates. Provide open-mesh, chain-link fencing with posts. Fence shall be six feet high and shall be maintained in good condition throughout the construction period. Enclosure fences shall be installed where located on the site plan.

Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.

Storage: Where materials and equipment must be stored, and are of value or attractive for theft, provide a secure lockup.

Environmental Protection: Provide protection, operate temporary facilities and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable effects might result.

Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

Temporary Heat and Ventilation: The contractor shall provide temporary heat and ventilation as required to maintain adequate environmental conditions to facilitate progress of the work, to meet the specified minimum conditions for the installation of materials and to protect materials and finishes from damage due to temperature and humidity.

Provide adequate forced ventilation of enclosed areas for curing of installed materials, to disperse humidity and to prevent hazardous accumulations of dust, fumes, vapors or gasses.

Portable heaters shall be standard acceptable units complete with controls.

Pay all costs of installation, maintenance, operation, removal and for fuel consumed.

Termination and Removal: Unless the Architect requests that it be maintained longer, the Contractor shall remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility.
Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired. Repair any areas damaged by temporary facilities including existing and new construction, landscaping, paved areas and other facilities as determined by the Architect. All repairs shall be equal to or better than that which pre-existed construction, as determined by the Architect.
All materials and facilities that constitute temporary facilities are and shall remain the property of the Contractor.

At Substantial Completion, clean and renovate permanent facilities that have been used during the construction period, including but not limited to:

Replace air filters and clean inside of ductwork and housings.

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Replace significantly worn parts and parts that have been subject to unusual operating conditions.

Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

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SECTION 01600 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section "Product Substitutions."

DEFINITIONS

Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms such are self-explanatory and have well recognized meanings in the construction industry.

"Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.

"Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

"Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

"Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

SUBMITTALS

Product List Schedule: Prepare a schedule showing products specified in a tabular form acceptable to the Architect. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.

Coordinate the product list schedule with the Contractor's Construction Schedule and the Schedule of Submittals.

Form: Prepare the product listing schedule with information on each item tabulated under the following column headings:

Related Specification Section number.

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Generic name used in Contract Documents.
Proprietary name, model number and similar designations.

Initial Submittal: Within 30 days after date of commencement of the Work, submit 3 copies of an initial product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.

Completed Schedule: Within 60 days after date of commencement of the Work, submit 3 copies of the completed product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.

Architect's Action: The Architect will respond in writing to the Contractor within 2 weeks of receipt of the completed product list schedule. No response within this time period constitutes no objection to listed manufacturers or products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Architect's response will list unacceptable products and include a brief explanation of reasons for this action.

QUALITY ASSURANCE

Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.

Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface that is not conspicuous.

Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces.

PRODUCT DELIVERY, STORAGE, AND HANDLING

Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

Deliver products to the site in the manufacturer's original sealed container or other packaging

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system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.

Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.

Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.

Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

PRODUCT SELECTION

General Product Requirements: Provide products that comply with the Contract Documents that are undamaged and, unless otherwise indicated, unused at the time of installation. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of these products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.

Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.

Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern and texture from the product line selected.

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PART 3 - EXECUTION

INSTALLATION OF PRODUCTS:

Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

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SECTION 01631 - PRODUCT SUBSTITUTIONS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies administrative and procedural requirements for handling requests for substitutions made after award of the Contract.

The Contractor's Construction Schedule and the Schedule of Submittals are included under Section "Submittals."

Standards: Refer to Section "Definitions and Standards" for applicability of industry standards to products specified.

Procedural requirements governing the Contractor's selection of products and product options are included under Section "Materials and Equipment."

DEFINITIONS

Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.

TIME FOR SUBSTITUTION REQUESTS

Substitutions: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor are considered requests for "substitutions."

Substitutions requested by Bidders during the bidding period, and accepted prior to award of Contract, are considered as included in the Contract Documents. Requests for substitutions shall be submitted to the Architect no later than twenty-one days prior to receipt of bids. Bidders shall be notified by Addendum of acceptable substitutions.

Substitutions requested by the Contractor after award of the contract shall be requested within sixty (60) days of the Notice to Proceed date. Requests made during this time period shall be considered by the Architect.

SUBMITTALS

Substitution Request Submittal: Requests for substitution will be considered if received as specified above. Requests received less than twenty-one days before the bid will not be considered. Requests received more than 60 days after Notice to Proceed may be considered or rejected at the discretion of the Architect.

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The procedures for requesting substitutions shall be as follows:

Submit 3 copies of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.

Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:

Product Data, including Drawings and descriptions of products, fabrication and installation procedures.

Samples, where applicable or requested.

A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.

Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by others, that will become necessary to accommodate the proposed substitution.

A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.

Cost information, including a proposal of the net change, if any in the Contract Sum.

Certification by the Contractor that the substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.

Architect's Action: Prior to receipt of bids for this project, the Architect shall review requests for substitution. If upon review, the Architect accepts the product for substitution, an addendum shall be issued listing the product. The addendum shall be issued no later than seven days before receipt of bids. If the substitution is not acceptable, no action shall be taken.

Substitution requests following the Notice to Proceed, shall receive the following action. Within one week of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request. Within 2 weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution.

If a decision on use of a proposed substitute cannot be made or obtained within the time allocated, use the product specified by name. Acceptance will be in the form of an Architect's Supplemental Instruction if no change in contract time or contract sum is required. If a change in contract time

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or contract sum is required, then a Change Order will be issued.

PART 2 - PRODUCTS

SUBSTITUTIONS

Conditions: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.

Extensive revisions to Contract Documents are not required.

Proposed changes are in keeping with the general intent of Contract Documents.

The request is timely, fully documented and properly submitted.

The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.

The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01631

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SECTION 01740 - WARRANTIES AND BONDS

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties.

Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.

General closeout requirements are included in Section "Project Closeout."

Specific requirements for warranties for the Work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions-2 through -16.

Certifications and other commitments and agreements for extended warranties are specified elsewhere in the Contract Documents.

Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

WARRANTY REQUIREMENTS

Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment or workmanship for a period of one (1) year (or for the extended period) from the date of substantial completion for this project.

SUBMITTALS

Submit written warranties to the Architect within fifteen days after the date certified for Substantial Completion.

When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.

When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.

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Refer to individual Sections of Divisions-2 through -16 for specific content requirements, and particular requirements for submittal of special warranties.

Form of Submittal: At Final Completion compile three copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.

Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS, the Project title or name, and the name of the Contractor.

When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (not applicable)

PART 3 - EXECUTION

WARRANTY SERVICE

The Contractor shall proceed with warranty repair or replacement within 24 hours of being notified that a warranty deficiency exists.

In order to insure prompt and effective correction of warranty deficiencies, the Contractor shall, if he or any of his subcontractors do not maintain fully staffed service organizations within Leon County, designate firms within Leon County authorized to perform warranty work on the Contractor's behalf. The name, addresses, and phone numbers of these designated firms shall be included within the closeout documents, along with affidavits signed by officers of the designated firms stating that they have been retained and will perform required warranty service.

END OF SECTION 01740

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SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL:

RELATED DOCUMENTS:

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

DESCRIPTION OF WORK:

Extent of selective demolition work is indicated on drawings.

Types of Selective Demolition Work: Demolition requires the selective removal and subsequent offsite disposal and coordination of the following:

Removal of asphalt paving.
Removal of concrete curbs and paving.
Removal of concrete curb inlets & RCP.
Removal of landscaping and trees.
Removal of chain link fencing.
Removal of light poles and associated wiring.

JOB CONDITIONS:

Occupancy: Owner will be continuously occupying areas of the campus immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.

Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.

Conditions existing at time of commencement of contract will be maintained by Owner insofar as practicable. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.

Partial Demolition and Removal: Unless noted, items to be removed but of salvable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.

Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.

Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Explosives: Use of explosives will not be permitted.

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Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION

DEMOLITION:

Locate, identify, stub off and disconnect utility services that are not indicated to remain. Provide bypass connections as necessary to maintain continuity of service to occupied areas of campus. Provide minimum of 72 hours advance notice to Owner if shut-down of service is necessary during changeover.

Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on Drawings in accordance with demolition schedule and governing regulations.

Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel or sand, free of trash and debris, stones over 6" diameter, roots or other organic matter.

DISPOSAL OF DEMOLISHED MATERIALS:

Remove debris, rubbish and other materials resulting from demolition operations from building site. Transport and legally dispose of materials off site.

If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling and protection against exposure or environmental pollution.

Burning of removed materials is not permitted on project site.

CLEAN-UP AND REPAIR:

Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.

Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION 02070

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SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.01 SCOPE OF WORK

The work includes all clearing, excavation, borrow, filling, backfilling and grading indicated on the Drawings and necessary for the proper completion of the project, including for pipes, structures, and pavement.

1.02 MEASUREMENT AND PAYMENT

No specific payment shall be made for items covered in this section unless that item is listed in the Bid Schedule. Compensation for work not listed shall be included in the appropriate pay items for piping manholes, pumping stations, etc., with which they are associated.

The basis of payment for unsuitable soils excavation, replacement and compaction shall be the unit prices contained in the Bid, or if these are not available, then payment will be determined in accordance with applicable provisions of the General Conditions. Quantities for unsuitable soils excavation, replacement and compaction for water and sewer pipelines will be computed using the following table regardless of the actual quantity of backfill material used. No consideration will be given to the number of truckloads of backfill delivered nor the actual dimensions of the trench that is backfilled. Backfill quantities will only be based on the depth and lineal feet of the pipeline constructed. No consideration will be given for the number of manholes, sewer service laterals, or valves required.

Use of this standard table is for quantity computations purposes only and does not restrict the Contractor from following OSHA guidelines for trench excavations.

DEPTH OF CUT TO PIPE INVERT	PAY QUANTITY IN CUBIC YARDS PER LINEAL FOOT OF PIPELINE
2' to 4'	0.25
4' to 6'	0.40
6' to 8'	0.80
8' to 10'	1.30
10' to 12'	1.90
12' to 14'	2.50
14' to 16'	3.30
16' to 18'	4.20
18' to 20'	5.20
20' to 22'	6.20
22' to 24'	7.40

1.03 APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS

All work shall be performed in accordance with Florida Department of Transportation standards, specifications and indexes and in accordance with other state and local requirements.

Current editions or revisions of the following specifications and standards will apply unless specifically noted otherwise herein or on the Drawings.

A. American Society for Testing and Materials (ASTM) Standard

ASTM C33-03	Concrete Aggregate
ASTM D698-12	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb. (2.49 Kg) Rammer and 12 in. (304.8 mm) Drop. Standard Proctor.
ASTM D1556-07	Test Methods for Density of Soil in Place by the Sand-Cone Method.
ASTM D1557-12	Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (45 Kg) Rammer 2 and 18 in. (457 mm) Drop. Modified Proctor.
ASTM D2487-11	Classification of Soil for Engineering Purposes
ASTM D2922-05	Density of Soil and Soil-Aggregate in place by Nuclear Methods (Shallow Depth)
ASTM D 3017-05	Moisture Content of Soil and Soil-Aggregate in place by Nuclear Methods (Shallow Depth)

B. American Association of State Highway and Transportation Officials (AASHTO) Standards

AASHTO T-99	Standard Proctor
AASHTO T-180	Modified Proctor

1.04 SUBMITTALS

Contractor shall have reports submitted to the Engineer as required in the testing portion of this Section.

1.05 RELATED WORK

- Project Geotechnical Report Ardaman & Associates, Inc. File No. 113-16-40-1447
- Testing

1.06 SITE CONDITIONS

A. Character of Excavation Material: Prior to submitting his bid, the Contractor shall satisfy himself as to the character and amount of different soil materials, groundwater and the subsurface conditions to be encountered in the work to be performed. Information and data, when furnished, are for the Contractor's general information. However, it is expressly understood that any interpretation or conclusion drawn therefrom is totally the responsibility of the Contractor.

B. Subsurface Investigation: If subsurface information is included as an appendix of these specifications it is the results of soil borings and soil classification and testing made at the exact locations only. While the soil borings and information are representative of subsurface conditions at their respective exact locations, local variations in soils and groundwater will be encountered.

C. Existing Underground Facilities: Underground structures and utilities shown on the drawings are located according to the best available records. However, it shall be the Contractor's responsibility to acquaint himself with all information, and to accurately locate and uncover all underground structures and utilities along the line of work in order to avoid conflicts with existing facilities. Underground utilities shall be located by the Contractor far enough in advance of the trench or site excavation and pipe laying operations to assure ample opportunity to make the necessary adjustments to avoid conflicts. The Owner shall not be held accountable for inaccuracies or omissions in the locations or grade of facilities of this type.

D. Conflicts: Where actual conflicts are unavoidable, work shall be performed so as to cause as little interference as possible with the service rendered by the facility disturbed. The Owner may require the Contractor to work in off hours (i.e. 1:00am or Holidays) in order to minimize disturbance. Facilities or structures damaged in the prosecution of the work shall be repaired immediately in conformance with the best standard practices or according to the direction of the owner of such facility, to the extent required, including replacement, at no cost to the Owner.

PART 2 - MATERIALS AND EQUIPMENT

2.01 BACKFILL

The following shall define the terms used in the plans and specifications.

A. Topsoil - shall be the upper most layer of soil usually dark in color and approximately 6 inches thick, rich in organic matter.

B. Gravel Bedding - Gravel bedding shall consist of well-graded crushed stone or crushed gravel meeting the requirements of ASTM Designation C-33, Gradation 67 (3/4-inches to No. 4). Air cooled blast furnace slag, alone or in combination with crushed stone and/or crushed gravel, conforming to ASTM C-33 requirements may also be used.

C. Select Backfill - shall be a select granular material free from organic matter and of such size and gradation that desired compaction can be readily attained. Select backfill is

defined as those complying with AASHTO soil classification Groups A-1, A-3, and A-2-4 having a maximum size not to exceed 3 inches with at least 95% passing the 1 1/2 inch sieve and not more than 15% passing the No. 200 sieve with a coefficient of uniformity of six or greater. The liquid limit shall be less than 15. In most situations the existing backfill will not meet these requirements, therefore, select backfill is material which must be transported to the site from an approved borrow pit.

D. Suitable or Common Backfill - shall be a satisfactory soil material free from organic matter, muck, marl and rock exceeding 3 inches in diameter. At least 95% shall pass the 1 1/2 inch sieve. Common backfill shall comply with AASHTO soil classification Groups of A-2-5, A-2-6, A-2-7, A-4, A-5, A-6, and A-7 providing that the liquid limit shall be less than 35. Suitable backfill is usually considered on site material that meets these requirements.

E. Existing or Unsatisfactory Backfill - shall be material obtained from the Contractor's excavations to be used in areas not requiring specific compaction densities. This material shall not be used for pipe bedding nor under streets, street shoulders, or structures. Such backfill shall be free of debris, deleterious materials and shall contain no material larger than 6 inches. Under no conditions are destroyed pavement materials, curbs, broken concrete, etc., to be included in the backfill.

F. Concrete Encasement - shall be of portland cement type with a compressive strength at 28 days of 2500 psi.

G. Clean Sand - shall be a quartz material with less than 5 percent of the soil particles finer than the No. 200 mesh sieve, a uniformity coefficient greater than 1.5 and an effective grain size of 0.20 to 0.55 millimeters in diameter. Clean sand is required for filter material requiring good permeability.

PART 3 - EXECUTION

3.01 GENERAL REQUIREMENTS

A. Safety

In the Contractor's use of streets and highway for the work to be done under these Specifications he shall conform to all City, State, and local laws and regulations. The Contractor shall provide, erect, and maintain effective barricades, danger signals, and signs on all intercepted streets or highways for protection of the work and safety of the public rights-of-ways shall be provided with lights which shall be kept burning at all times between sunset and sunrise. The Contractor shall be responsible for all damages resulting from any neglect or failure to meet these requirements. Where conditions require the presence of a watchman to fulfill the requirements stated herein, same shall be furnished without extra cost to the Owner.

1. Access to Fire hydrants shall be maintained at all times. Do not block or barricade with spoil, materials or equipment for any period of time.

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B. Maintenance of Service

The Contractor shall arrange his work to cause minimum disturbance of normal pedestrian and vehicular traffic and will be held responsible for providing suitable means of access to all public and private properties during all stages of the construction. Should the construction work require repairs, changes or modifications of other utilities, it shall be the responsibility of the Contractor to provide for the maintenance of continuous water, electric, telephone, and gas as well as sewage and other utility services to all present customers of such utilities, unless approval in writing is secured from the utility company for interruption of such service. A minimum of one lane of traffic shall be maintained at all times. Contractor shall keep all disturbed roads graded smooth and passable. If the road becomes impassable, the Contractor shall stabilize with dry, select backfill. The Owner may require the Contractor to work in off hours (i.e. 1:00 am or Holidays) in order to minimize disturbance.

C. Limits of Construction

In locations where the work is to be installed in streets or road rights-of-way the activities of the Contractor shall be confined to these public properties. Where the use of private property is deemed necessary by the Contractor to facilitate construction work arrangement for such use with the property owner shall be the responsibility of the Contractor. The Contractor shall save the Owner harmless from all claims by adjacent property owners for trespassing or damage due to the activities of the Contractor in the prosecution of the work.

D. Existing Utilities

The Contract Documents contain data relative to existing public utility installations and structures above and below the ground surface. These data are not guaranteed as to their completeness or accuracy and it is the responsibility of the Contractor to make his own investigations to inform himself fully of the character, condition and extent of all such installations and structures as may be encountered and as may affect the construction operations.

All existing improvements such as pavements, conduit, poles, pipes, overhead wires and other structures, shall be carefully supported and fully protected from injury. The Contractor shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their original condition at no cost to the Owner.

Contractor shall give written notice to the Owner and other governmental utility departments and other owners of public utilities of the location of his proposed construction operations, at least forty-eight hours in advance of breaking ground in any area or on any unit of work.

E. Property Protection

Trees, fences, poles, and all other property shall be protected unless their removal is authorized; and any property damaged shall be satisfactorily restored by the Contractor at the Contractor's expense to a condition equal to or better than that existing prior to beginning the work.

3.02 CLEARING AND GRUBBING

On all areas within limits of clearing and grubbing indicated on the Drawings or specified where earthwork is to be done, all timber, brush, stumps, roots, rubbish, and unsuitable material shall be removed to a depth of not less than one foot below the ground surface. Sound trees and shrubs which do not interfere with the construction and are elsewhere indicated or directed not to be removed, shall be protected properly from damage. The surface shall be plowed to a depth of not less than six (6) inches and all stumps, roots and other perishable matter thus exposed shall be removed to a depth of not less than one foot. Any deposits of muck, peat, bark or trash occurring within the limits of clearing and grubbing or where directed by the Engineer shall be removed to their full depth and backfilled with suitable backfill as specified herein. Material removed during clearing and grubbing shall be hauled to the County landfill in accordance with local laws and regulations. Landfill fees shall be paid by the Contractor. All shrubbery, ornamental trees and other such plantings including those within construction area shall be fully protected. If it becomes necessary to remove any grass, shrubbery or planting to accomplish the work, it shall be satisfactorily replaced before the work will be accepted. All areas disturbed during construction shall be restored to a condition equal to or better than that existing prior to beginning the work.

Trees and shrubs selected for preservation shall have their root systems protected from construction traffic, surface storage of materials, and any type of land disturbance within the drip line of the tree or shrub. The drip line of a tree or shrub is the outer outline of the tree crown where it intercepts the ground. Barricade all trees or tree groups which are selected for preservation if the possibility of root damage, surface soil disturbance within the drip line, soil compaction, or impact with construction equipment is prevalent. Barricading shall consist of continuous wood fencing constructed to the outline of the tree crown and shall be sturdy, highly visible and shall be maintained during the construction.

3.03 EROSION AND FLOODING CONTROL

During construction operations, the Contractor shall install and maintain temporary erosion and flooding control features to the extent necessary to prevent pollution of streams and lakes, detrimental effects on public or private property adjacent to the construction or damage to work on the Project. Additional erosion control devices may be requested by the Engineer to protect the property described above. This shall be done immediately when directed by Engineer at no additional cost to the Owner.

The Contractor shall attempt to limit the surface areas of erodible earth exposed by clearing and grubbing, excavation or filling operations.

Temporary features may include, but not be limited to silt fences, temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings or berms. All City, County, State and Federal ordinances will be complied with.

The contractor shall comply with The Florida Development Manual -- A Guide to Sound Land and Water Management, Department of Environmental Regulation -- Stormwater Management Practices.

3.04 DUST CONTROL

If, in the opinion of the Owner or the Engineer it is necessary to control dust during construction period, the Contractor shall furnish and spread water or calcium chloride at points where dust is a nuisance, or as directed by the Engineer, at no additional cost to the Owner.

3.05 PAVEMENT AND SIDEWALK REMOVAL AND REPLACEMENT

A. Pavement and sidewalk shall be removed and replaced as follows unless shown otherwise on the Drawings.

B. Pavement, which is to be removed for open-cut trenching, shall be cut vertically with a power-driven friction saw prior to removal. The surface shall be scored to sufficient depth to provide uniform, straight break lines. All removal of pavement shall conform to local, County, State or Federal requirements where applicable. Under no condition shall pavement be cut with a trenching machine, power shovel or backhoe. Width of cut of pavement or sidewalk shall be two feet wider than top of trench, one foot on each side of trench. In the event that trench excavation becomes wider than initial cut, pavement or sidewalk shall be recut to at least one foot back from all edges of actual excavation by the Contractor at his own expense.

All cut lines shall be parallel to or at right angles to the longitudinal axis of the trench.

C. Pavement, driveway or sidewalk material shall be separated from other excavated materials and shall not be placed in backfill, but shall be satisfactorily disposed of by the Contractor. Base materials may be salvaged and stockpiled for reuse, but such reuse of base materials shall be subject to the review of the Engineer.

D. All pavement and sidewalk removed shall be replaced with base and surface materials which conform as closely as possible in thickness and quality to materials removed. Minimum pavement and pavement base replacement shall consist of 1 1/2 inch of Type SP-12.5 asphaltic concrete surface with a 12 inch limerock base (LBR 100 compacted to 98% Modified Proctor). All painted street markings and other traffic control devices shall be restored to former conditions. Use Safety Coatings Co. Roadrunner Traffic marking paint, or approved equal, and Ferro Co. glass spheres or approved equal. Pavement with traffic control devices and sidewalks shall be replaced as soon as practicable after compaction of backfill. Replacement pavement shall be tapered at curb.

E. Workmanship and materials shall be in accordance with best standard practice for work of this type, and shall conform to the requirements of Section 330-12, Surface Requirements of Florida Department of Transportation Road and Bridge Manual.

F. All necessary barricades, detours, lights and other protective measures shall be provided for protection of both pedestrians and vehicular traffic and shall conform to Florida DOT specifications where no local agency has specifications.

3.06 STATE HIGHWAY AND RAILROAD RIGHTS-OF-WAY

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Pipe crossings and installations along all railroads and State highways shall be in accordance with the applicable portions of American Railroad Engineers Association (AREA) Specifications for "Pipeline Crossing under Railroad Tracks for Non-Flammable Substances" or Florida DOT "Utility Accommodation Guide" and with details shown on the drawings. Verify the existence of a formal permit to work on the right-of-way at each specific location prior to any work at that site and notify the owner of the right-of-way as required by that permit. Furnish the Engineer and the Owner with a copy of any separate certificate of insurance that is required by the owner of the right-of-way.

3.07 CURB AND GUTTER REMOVAL REPLACEMENT

Curb or curb and gutter removal, where required in construction of this work, shall be held to a minimum. Curb and gutter material to be removed shall be carefully separated from trench excavation material and shall be satisfactorily disposed of by the Contractor.

The Contractor shall replace all curb or curb and gutter which has been removed. Curb or curb and gutter shall be replaced as soon as possible after backfill is placed and compacted and shall be a duplicate in all respects to original construction. Workmanship shall be in accordance with the controlling agency (City, County, State).

3.08 RESTORATION OF ROADWAY CROSSINGS AND DRIVEWAY CROSSINGS

Clay, marl, shell or similar roadways and driveways that are crossed or traversed by trenches shall be restored to existing conditions prior to excavation. The Contractor may reclaim existing material, or he may furnish and compact new material. There will be no additional compensation for this type of restoration unless specifically called for in the Special Provisions or on the Bid Proposal.

Final and complete restoration of crossings in existing public roadways shall be completed not more than 24 hours subsequent to the final lift of the backfill.

3.09 EXCAVATION

A. General

Excavation shall be performed in accordance with all State, County and local regulations. Blasting will not be permitted except by written approval of the Engineer for each specific location where it is to be performed. Excavation shall conform to the dimensions indicated or specified for the pipeline or structure and topography and subgrade conditions encountered.

The Contractor shall notify the Engineer in due time to permit him to inspect completed excavations, and no pipes or concrete shall be placed in excavations or upon subgrades until they have been approved by the Engineer.

In areas where excavation may endanger existing structures, roads or utilities, Contractor will provide suitable support to these existing facilities so as to insure that damage will not occur. Contractor shall submit proposed method of support of these facilities to the Engineer for approval. The Contractor shall obtain written approval from the facility concerned before proceeding with any construction which might undermine or endanger existing facilities.

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B. Control of Water

Furnish, install and operate all necessary machinery, appliances and equipment to keep excavations free from water during construction. Dewater and dispose of water so as not to cause injury to public or private property or to cause a nuisance or a menace to the public. The Contractor shall at all times have on-hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies and shall have available at all times competent workmen for operation of pumping equipment. Dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages without written approval from the Engineer.

Control of ground water shall be such that softening of the bottom of excavations or formation of "quick" conditions or "boils" shall be prevented. Dewatering systems shall be designed and operated so as to prevent removal of natural soils.

Static water level shall be drawn and maintained one-foot below bottom of excavation so as to maintain undisturbed state or natural soils and allow placement of backfill to required density. Dewatering system shall be installed and operated so that ground water level outside excavation is not reduced to extent that would damage or endanger adjacent structures or property.

Release of ground water to its natural static level shall be performed in a manner so as to maintain undisturbed state of natural foundation soils, prevent disturbance of compacted fill or backfill and prevent flotation or movement of all structures and pipelines.

Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.

C. Shoring, Sheeting and Bracing

Excavations shall be shored and sheeted in accordance with requirements of the Department of Labor Occupational Safety and Health Administration (OSHA) with members of sizes and arrangement sufficient to prevent injury to persons, damage to structures, injurious caving, or erosion. They shall be designed, furnished, placed, maintained and removed by the Contractor. Sheeting and shoring design shall be submitted to the Engineers as a shop drawing prior to installation and shall bear the seal of a structured engineer registered in the State of the job site.

Design, planning, installation and removal of all sheeting, shoring, sheet piling and bracing shall be accomplished in a manner so as to maintain required trench or excavated section with an undisturbed state of soils at and below excavation bottom.

Sheet piling and timbers used in trench excavations shall be withdrawn in such a manner so as to prevent subsequent settlement or misalignment of pipe or additional backfill loadings which might overload pipe. Where, in the opinion of the Engineer, removal of sheeting and shoring will or may cause damage to the work or to adjacent buildings, utilities or property, the Engineer may direct Contractor to leave all or a portion of

sheeting and shoring in place. Sheeting and shoring shall also be provided as necessary to keep excavations within the available right-of-way.

The right of the Engineer to order sheeting and bracing left in place shall not be construed as creating any obligation on his part to issue orders, and his failure to exercise his right to do so shall not relieve the Contractor from liability for damages to persons or property occurring from or upon the work occasioned by negligence or otherwise growing out of a failure on the part of the Contractor to leave in place sufficient sheeting and bracing to prevent any caving or moving of the ground.

D. Excavation for Pipes and Other Structures

1. Common Excavation

Machine excavation shall be carried to a depth above final centerlines that will allow final grading using hand tools, as indicated on the Plans. Care shall be taken to not excavate below required depth. If excavations are carried below required depth, overcut depth shall be backfilled with select backfill material or gravel bedding material furnished at Contractor's expense and compacted to provide support at least equal to that of original material.

Contractor may, at his option, elect to overcut trench and backfill with select backfill or bedding material. If Contractor so elects, depth of overcut shall be such that a minimum of two inches of compacted backfill material will result under lowest projection of anchor centerline. No additional payment will be made for this overcut or for furnishing and placing of the required backfill material.

The Contractor shall exercise sound construction practices in excavating trench and maintaining it so no damage will occur to any foundation structure, pole line, pipeline or other facility because of slough of slopes or from any other cause. If, as a result of excavation, there is a disturbance of ground that endangers other property, the Contractor shall immediately take remedial action at his own expense. No act of the Owner or his representatives shall in any way affect liability of the Contractor for damages, expenses or costs that may result from trench excavation.

Trees, stumps and roots within limits of trench excavation shall be removed to a depth of at least 12 inches below bottom of trench.

2. Trench Requirements

Width of trench banks from bottom to 12 inches above top of pipes shall not exceed 18 inches nor be less than 12 inches on each side.

The trench shall be dry when the bottom is prepared. A continuous trough shall be excavated by hand to receive the bottom half of the pipes. When pipes are placed in select backfill over rock or other overdepth, additional backfill of same material shall be tamped on each side of the pipes forming a trough of firm, compacted bedding.

F. Unsuitable Material

Unsuitable materials are soils exposed at the bottom of excavations that are compressible, expansive, contain extraneous rubble, or offer uneven foundation support. Unsuitable materials/soils will include, but not be limited to, mulch, peat, expansive clays, boulders, rubble, any portion of trees or similar vegetation, wood, or unyielding material such as rock.

The Contractor shall notify the Engineer immediately when unsuitable material is encountered. The Engineer will investigate questionable material to determine its suitability. Should the Engineer require soils testing be performed to aid in his determination, then tests revealing suitable materials shall be paid for by the Contractor.

Where the Engineer determines that unsuitable material is present below the excavation which will not provide adequate support the Contractor shall remove the unsuitable material as directed by the Engineer and replace the unsuitable material with Select backfill. Prior to the excavation of any unsuitable material, written approval must be obtained from the Engineer. The approval shall state the linear feet of excavation. No payment shall be made for the removal of any unsuitable bedding material if prior approval is not obtained.

3.10 BACKFILL AND COMPACTION

A. General

Contractor shall not perform any backfilling operation other than that necessary to hold pipes and other structures in place until the locations have been recorded on the "as-built" drawings and they have been inspected and released for backfilling. Backfill and compaction shall be performed as specified herein and as shown on the drawings. Backfilling of trenches shall progress as rapidly as the construction, testing and acceptance of work permits. In areas subject to traffic temporary backfill or base material is required to provide a smooth stable driving surface until final base and/or pavement can be constructed.

B. Haunching and Initial Backfill

After pipes and other structures have been properly installed and inspected, backfill shall be carefully placed and compacted in loose horizontal layers not exceeding 8 inches in loose depth, equally on both sides of anchor and shall be spaded (walked in) and compacted with hand tampers to obtain the required density. This shall continue to a level of one foot above the top of the anchor.

C. Subsequent Backfill

Above the level of initial backfill, the trench shall be filled in horizontal layers and mechanically compacted to the density required up to 3 feet below the base of pavement or structures, up to 6 inches in areas to receive topsoil, seeding, or soiling and up to final grade in non-paved streets.

D. Backfill and Compaction Requirements for Anchors (unless shown differently on the plans)

1. Paved Areas

   a. Initial - Select backfill in 6" lifts at 100%.

   b. Subsequent - Select backfill in 8" lifts at 100%.

   c. Top 3 feet below road base - Select backfill in 6" lifts at 100%.

2. Unpaved Off-Street Parking Areas

   a. Initial - Suitable backfill in 6" lifts at 95%.

   b. Subsequent - Suitable backfill in 8" lifts at 95%.

3. Off Street Areas

   a. Initial - Suitable backfill in 6" lifts at 95%.

   b. Subsequent - Unsuitable or existing backfill in 18" lifts compact till firm.

NOTE: Density listed are maximum dry density in accordance with AASHTO T-99 Standard Proctor Density.

3.11 GRADING

Grading shall be performed at such places as are indicated on the drawings, to the lines, grades, and elevations shown or as directed by the Engineer and shall be made in such a manner that the requirements for formation of embankments can be followed. All unacceptable material encountered, of whatever nature within the limits indicated, shall be removed and disposed of as directed. During the process of excavation, the grade shall be maintained in such condition that it will be well drained at all times. When directed, temporary drains and drainage ditches shall be installed to intercept or divert surface water which may affect the prosecution or condition of the work.

Grade all areas as indicated. Fill shall be brought to finish grades shown and shall be graded to drain water away from structures.

Overall area grading for which no grades are indicated within the limits of construction and outer limits of clearing and grubbing, all holes and other depressions shall be filled, all mounds and ridges cut down and the area brought to sufficiently uniform contour that the Owner's subsequent mowing operations will not be hindered by irregular terrain. This work shall be done regardless of whether the irregularities were the result of the Contractor's operations or originally existed. Permanent ponds or other permanent water areas, as so designated by the Engineer, will not be required to be filled.

3.12 TESTING

A. General

Contractor shall comply and pay for the services of an independent testing laboratory to perform testing specifically indicated herein.

Exact location of the test shall be selected by the Engineer or his representative. If the Engineer, after being notified by the Contractor, is unable to be present during the test, the laboratory personnel shall randomly select testing locations that are representative of the work being tested. All cost of this testing and providing of certificates shall be a subsidiary obligation of the Contractor with the cost included in the item for which the testing is associated.

The minimum testing rate shall not prevent the Contractor nor the testing laboratory from performing additional testing to insure the construction is in accordance with the plans and specifications.

A minimum of two (2) copies of reports of test results of all maximum dry density and optimum moisture content determinations and all in-place density tests shall be submitted to the Engineer. Reports must be signed by a registered Professional Engineer.

The Contractor shall repair all test holes and borings resulting from the testing and retesting of his work at no cost to the Owner.

Any areas failing to pass the tests as called for, and interpreted by the Engineer, shall immediately be brought into conformance with these Specifications at the Contractor's expense.

B. Minimum Schedule of Tests Required

1. Determination of the soil classification for each type of soil material used to determine its suitability for use as defined herein and in accordance with the AASHTO or Unified Soil Classification System.

2. Determination of maximum dry density and optimum moisture content for each type of soil to be compacted to a specified density. At least one determination will be made for each soil used. Tests shall be performed in accordance with the appropriate ASTM or AASHTO Standards.

3. In-place (insitu) density test shall be made in accordance with ASTM and AASHTO Standards and shall be made at a frequency to assure contract requirements are met but in no case less than the following:

    a. Trench backfill at the rate of one test for each 50 linear feet of trenchline for each backfill lift. A backfill lift shall never be considered to be greater than one foot in thickness. In unpaved areas, testing rate by be reduced to one test for each 150 lineal feet of trenchline for each backfill lift.

    b. Off-street parking area backfill at the rate of one test for each 2000 square feet for each backfill lift (maximum lift of 12 inches).

    c. Pavement, sidewalk and curb backfill at the rate of one test for each 50 lineal feet of street for each backfill lift (maximum lift of 12 inches).

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3.13 MAINTENANCE

Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

END OF SECTION 02300

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SECTION 02512

CONCRETE CURBS, CURBS AND GUTTERS, AND SIDEWALKS

PART 1 - GENERAL

1.1 SCOPE OF WORK

This Section includes all labor, materials, transportation and equipment necessary to properly perform all work specified herein, indicated on the Drawings, or reasonably implied to complete the construction. Included as a part of the work of this Section, but not necessarily limited by it, are curbs, curbs and gutters and sidewalks.

1.2 REFERENCED SPECIFICATIONS

A. Florida Department of Transportation – FDOT Standard Specifications for Road and Bridge Construction, 2017.

B. Section 02300 - Earthwork

1.3 BASIS OF PAYMENT

A. Measurement

1. Measurement for payment of new concrete curbs, curb and gutters, and sidewalks will be the linear footage of each of these items installed as shown on the drawings.

2. Measurement for payment of removal and replacement of concrete curbs, curbs and gutters and sidewalks will be the linear footage cut measured on the horizontal plane, along the centerline of the piping installed. Only that concrete located directly over the centerline of the piping being installed, will be considered eligible for payment unless shown on the Drawings or authorized by the Engineer.

3. Measurement for payment of removal and replacement of concrete curbs and curbs and gutters will be the linear footage cut on the horizontal plane but limited to a distance equal to the depth of the pipeline trench at the point of crossing.

B. Payment

1. Payment for concrete curbs, curb and gutters and sidewalk will be at the unit price per linear foot as set forth in the Bid Form (Proposal). The respective unit price will be payment in full for the item including, but not limited to, all placements and compactions required, materials as specified and shown on the Drawings, joint fabricated, all as applicable.

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PART 2 - MATERIALS

2.1 CONCRETE

A. Curbs, curbs and gutters shall be Class I concrete as required in Section 345 of the FDOT Standard Specifications. Concrete for retaining walls shall be Class II as specified therein.

2.2 REINFORCEMENT

A. Any steel reinforcement shall conform to the requirements of Section 415 of the FDOT Standard Specifications.

2.3 JOINT MATERIALS

A. Joint materials shall be in accordance with Section 932-1, FDOT Standard Specifications.

PART 3 - EXECUTION

3.1 CURBS AND CURBS AND GUTTERS

A. Curbs and curbs and gutters shall be formed, excavated for, placed, constructed jointed, finished, cured and backfilled, and the concrete tested in accordance with Section 520 of the FDOT Standard Specifications.

3.2 SIDEWALKS

A. Sidewalks shall be formed, excavated for, placed, cured in accordance with Section 522 of the FDOT Standard Specifications. Joints and finishes shall be placed as shown on the architectural plans.

3.3 MACHINE PLACEMENT

A. Curbs and curb and gutters may be placed by machines at the Contractor's option. The finished product shall be true to line, grade and cross-section as shown on the Drawings.

END OF SECTION 02512

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SECTION 02515

STABILIZED SUBBASE

PART 1 - GENERAL

1.01 SCOPE OF WORK

The work specified in this Section includes all labor, materials, transportation and equipment necessary to properly construct a Type B stabilized roadbed having a Limerock Bearing Ratio (LBR) of 35. The required LBR shall be obtained by stabilizing the roadbed material with crushed limerock, oyster shell, coquina shell or any other material specified in Section 914 of the FDOT Standard Specifications.

1.02 RELATED WORK

The following items of related work are included and specified in other Sections of these Specifications:

Earthwork
Limerock Base

1.03 COMPLIANCE WITH STANDARDS

Except as modified or supplemented herein, all work in this Section shall meet the requirements and standards listed. In case of conflict between the referenced Specifications or standards, the one having the more stringent requirements shall govern.

American Association of State Highway and Transportation Officials - AASHTO
Florida Department of Transportation - FDOT

1.04 SUBMITTALS

A. Submit reports to Engineer demonstrating materials comply with requirements herein.
B. Test Results: Submit results of all tests conducted to the Engineer.

PART 2 - MATERIALS

2.01 CRUSHED SHELL

Crushed shell shall be mollusk shell (i.e. oysters, mussels, clams, cemented coquina, etc.). Steamed shell will not be permitted. At least 97 percent, by weight, of the total material shall be retained on the No. 4 sieve. Not more than 20 percent, by weight, of the total material shall pass the No. 200 sieve. The determination of the percentage passing the No. 200 sieve shall be made by washing the material over the sieve.

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2.02 LOCAL MATERIALS

Local materials shall be high bearing value soils or sand-clay material. Material passing the 40 mesh sieve shall have a liquid limit not greater than 30. The plasticity index shall not be greater than 10. No blending of materials to meet these requirements will be permitted unless authorized by the engineer. When blending is permitted, the blended material shall be tested and approved prior to being spread on the roadway.

PART 3 - EXECUTION

3.01 APPLICATION

The stabilizing material shall be spread, mixed and compacted in accordance with Section 160 of the FDOT Standard Specifications.

3.02 TESTING

Contractor shall comply and pay for the services of an independent testing laboratory.

A. Bearing Value Tests

Bearing value samples will be obtained and tested for approximately each 500 square yards of pavement area, as directed by the engineer.

B. Density Requirements

Minimum density requirements at any location in the stabilized subbase area will be as shown on the plans and set forth in Section 02300 - "Earthwork". Density tests will be made for approximately each 500 square yards of pavement area as directed by the engineer. The contractor shall dewater the subbase, if required, to ensure proper compaction.

END OF SECTION 02515

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SECTION 02516

LIMEROCK BASE COURSE

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work specified in this Section includes all labor, materials, transportation and equipment necessary to properly perform all work specified here, indicated on the drawings or reasonably implied to complete the construction of a base course composed of limerock. It shall be constructed on a prepared subgrade and stabilized sub-base, in accordance with these Specifications and in conformity with the lines, grades, notes and typical cross-sections shown on the Drawings and in the Plans. Included as a part of this work are the following items:

1. Limerock Base Course

1.2 RELATED WORK

A. The following items of related work are included and specified in other Sections of these Specifications:

1. Earthwork
2. Stabilized Sub-base
3. Asphalt Concrete Surface Course

1.3 SCHEDULE

A. The Contractor, at his option, may construct a Limerock Base Course when such an alternate is shown on the Plans. If selected for construction it shall be used throughout the project. It shall NOT be mixed with other types of base courses for construction of contiguous portions of the work.

B. Limerock Base Course construction shall not commence (nor shall limerock material be placed on the roadway) until the drainage system (including underdrains) is completed and 100 percent functional and the curbs and gutters, if any, have been properly constructed.

C. Base Course construction shall commence within 24 hours of completion of the stabilized subbase work.

1.4 COMPLIANCE WITH STANDARDS

A. Except as modified or supplemented herein, all work in this Section shall meet the requirements and standards listed. In case of conflict between the referenced Specifications or standards, the one having the more stringent requirements shall govern.

1. American Association of State Highway and Transportation Officials - AASHTO
2. Florida Department of Transportation – FDOT Standard Specifications for Road and Bridge Construction, 2017.

1.5 SUBMITTALS

A. Submit reports to Engineer demonstrating materials comply with requirements herein.

B. Test Results: Submit results of all tests conducted to the Engineer.

1.6 BASIS OF MEASUREMENT AND PAYMENT

A. For Pipe Construction

1. Measurement for payment of limerock base removed and replaced will be the linear footage of base material cut on the horizontal plane along the centerline of the piping installed including service pipe and branch lines installed. Only that base material directly over the centerline of the piping installed will be considered eligible for payment unless shown on the Drawings or authorized by the Engineer.

2. Payment for limerock base will be at the unit price per linear foot as set forth in the Bid Form (Proposal). The unit price bid will be full compensation for the item including, but not limited to materials as specified and shown on the Drawings, all placement and compaction required, testing and other work as applicable.

B. For Road Construction

1. Measurement and payment shall be as set forth in the Bid Proposal and as provided by FDOT Standard Specifications Section 200.

PART 2 - MATERIALS

2.1 LIMEROCK

A. The Limerock material shall meet the requirements of FDOT "Standard Specifications for Road and Bridge Construction", Section 911. At the Contractor's option limerock of either Miami or Ocala formation may be used but only limerock of one formation may be used on this contract. The material shall originate in quarries currently on the FDOT approved list for limerock base material sources. Provide certificate of conformance to the requirements of Section 911, FDOT.

2.2 PRIME COAT (REQUIRED)

A. The material used for prime coat shall be cut-back Asphalt Grade RC-70 or RC-250 meeting the requirements of Section 916-2, of the FDOT Specifications, Emulsified Asphalt Grades SS-1 or CSS-1, SS-1H or CSS-1H diluted in equal proportion with water; Asphalt Emulsified Grades AE-60, AE-90, AE-150 or AE-200 diluted at the ratio of 6 parts emulsified asphalt to 4 parts water; special MS-Emulsion diluted at the ratio of 6 parts emulsified asphalt to 4 parts water; Asphalt Emulsion Prime (AEP) meeting the requirements of Section 916-4, of the FDOT Specifications, or other types and grades of bituminous material which may be called for in the Plans or Special Provisions.

B. The Contractor may select any of the specified bituminous materials unless the Plans or Special Provisions indicate the use of a specific material. Types and Grades of bituminous material other than those specified above may be allowed if it can be shown that the alternate material will properly perform the function of prime coat material.

2.3 COVER MATERIAL FOR PRIME COAT (REQUIRED)

A. If an emulsified asphalt is used for prime coat, the Engineer may require that cover material be hot-asphalt coated (mix to contain from two to four percent asphalt-cement) if necessary to achieve a prime coat which will remain reasonably intact until the surface course is placed.

B. If material other than emulsified asphalt is used for the prime coat, the cover material shall be either sand (bare or hot-asphalt coated) or screenings, at the Contractor's option. The sand shall be non-plastic and free from any appreciable amount of silt, clay balls and root particles, and from any noticeable sticks, trash, vegetation or other organic matter.

PART 3 - EXECUTION

3.1 LIMEROCK BASE COURSE

A. Equipment to construct the base course shall be as set forth in Section 200-3, FDOT Specifications.

B. Limerock shall be transported to the point where it is to be used (placed on the roadbed) by hauling over previously placed rock and deposited at the end of the preceding spread material.

C. The limerock shall be spread, compacted, finished, tested, primed and maintained in accordance with Sections 200-5 through 200-9 (inclusive) of the FDOT Specifications.

D. In addition to the above requirements, the following shall apply:

1. Section 200-7 shall only apply when the asphalt concrete surface course is to be paid for by the ton.

2. The Contractor shall not be compensated for areas of limerock base that are thicker than shown on the Plans or Drawings. Areas of excess thickness shall not be used to compensate for areas of deficient thickness as set forth in Section 200-9.

3. In maintaining the base the Contractor is required to place sandbag berms at each inlet so as to divert stormwater into the inlet. In all road sections with a grade greater than 2%, per the Drawings, the Contractor shall place sandbag berms at distances no greater than 200 feet between inlets.

3.2 PRIME COAT AND COVER MATERIAL (REQUIRED)

A. Equipment to construct the prime coat and spread the cover material shall be as set forth in Section 300-3, FDOT Specifications.

B. Cover material shall be transported over the portions of the roadbed previously coated with cover material.

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C. The prime coat and cover material shall be constructed in accordance with Section 300-4, -5, and -6 of the FDOT Specifications.

3.3 TESTING

A. General

1. Testing Agency - The Agency shall be approved by the Engineer, and shall be the type and possess the degree of experience required. If required, furnish evidence of agency's ability to perform the test required in this Specification.

2. All testing shall be arranged and paid for by the Contractor.

3. The horizontal and vertical locations of the tests shall be reported. Station numbers shall be used with distances right or left of centerline or baseline.

B. Frequency of Tests

1. LBR Test - One (1) for each 750 tons or portion thereof delivered to site, but in no case less than two tests unless otherwise specified in the plans or bid proposal. The LBR shall be conducted by the quarry and results sent to the Engineer.

2. In-situ Density - One (1) for each 500 square yards or part thereof finished as a unit, but in no case less than two tests or at intervals of not more than 200 feet.

3. Thickness - Thickness of the base shall be determined at all density test sites at intervals of not more than 200 feet.

4. Proof Rolling - Prior to asphaltic concrete placement, the base shall be proof-rolled with heavy pneumatic-tired rollers having unit pressures of 200 psi. All soft, loose, or yielding areas of base shall be excavated and filled with sand-asphalt hot mix and compacted.

5. Contractor shall provide template and conduct cross section/crown test in the presence of the engineer.

END OF SECTION 02516

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SECTION 02831 - CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

SUMMARY

This Section includes the following:

PVC-coated steel fabric or
Galvanized-steel framework.

SUBMITTALS

General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.

Product data in the form of manufacturer's technical data, specifications, and installation instructions for fence and gate posts, fabric, gates, gate operators, and accessories.

QUALITY ASSURANCE

Installer Qualifications: Engage an experienced Installer who has at least three years' experience and has completed at least five chain link fence projects with same material and of similar scope to that indicated for this Project with a successful construction record of in-service performance.

Single-Source Responsibility: Obtain chain link fences and gates, including accessories, fittings, and fastenings, from a single source.

PROJECT CONDITIONS

Field Measurements: Verify layout information for fences and gates shown on the Drawings in relation to the property survey and existing structures. Verify dimensions by field measurements.

PART 2 - PRODUCTS

FABRIC

Selvage: Knuckled on both selvages for 2-inch mesh size.

Steel Chain-Link Fence Fabric: Fabricated in one-piece widths for fencing 12 feet and less in height to comply with Chain Link Fence Manufacturers Institute (CLFMI) "Product Manual" and with requirements indicated below. The site perimeter fence shall be 6' high.

Mesh and Wire Size: 2-inch mesh, 0.148-inch diameter (9 gage).
Coating: PVC-Coated Fabric: ASTM F668, Class 1 over metal-coated steel wire. Black complying with ASTM F934.

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FRAMING

Type I Round Posts: Standard weight (schedule 40) galvanized-steel pipe conforming to ASTM F 1083, according to heavy industrial requirements of ASTM F 669, Group IA, with minimum yield strength of 25,000 psi, not less than 1.8 oz. of zinc per sq. ft. Type A coating inside and outside according to ASTM F 1234, as determined by ASTM A 90, and weights per foot as follows:

Actual OD	Weight (lb/ft)	NPS Size
1.315	1.68	1
1.660	2.27	1-1/4
1.900	2.72	1-1/2
2.375	3.65	2
2.875	5.79	2-1/2
3.500	7.58	3
4.000	9.11	3-1/2
6.625	8.97	6
8.625	28.55	8

Type II Round Posts: Cold-formed, electric-welded steel pipe conforming to heavy industrial requirements of ASTM F 669, Group IC, with minimum yield strength of 50,000 psi, either protective coating system below according to ASTM F 1234, and weights per foot as follows:

Coatings: Type B outside with a minimum of 0.9 oz. of zinc per sq. ft. after welding, a chromate conversion coating and a clear polymer overcoat. Type B inside with a minimum of 0.9 oz. of zinc per sq. ft. or Type D inside with a minimum 0.3-mil-thick, 81-percent zinc-pigmented nominal coating.

Coatings: Type C inside and outside with not less than 0.9 oz. of zinc-5 percent aluminum-mischmetal alloy per sq. ft.

Actual OD	Weight (lb/ft)	NPS Size
1.315	1.35	1
1.660	1.84	1-1/4
1.900	2.28	1-1/2
2.375	3.12	2
2.875	4.64	2-1/2
3.500	5.71	3
4.000	6.56	3-1/2

Steel posts for fabric heights up to 6 feet:

Round Line or Intermediate Posts: 1.90-inch OD Type I or II steel pipe.

Round End, Corner, and Pull Posts: 2.375-inch OD Type I or II steel pipe.

Roll-Formed Line or Intermediate Posts: 1.875-by-1.625-inch C section weighing a minimum of 2.28 lb per linear ft.

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FITTINGS AND ACCESSORIES

Material: Comply with ASTM F 626. Mill-finished aluminum or galvanized iron or steel to suit manufacturer's standards.

Steel and Iron: Unless specified otherwise, hot-dip galvanize pressed steel or cast-iron fence fittings and accessories with at least 1.2 oz. zinc per sq. ft. as determined by ASTM A 90.

Post and Line Caps: Provide weathertight closure cap for each post. Provide line post caps with loop to receive tension wire or top rail.

Post Brace Assembly: Manufacturer's standard adjustable brace. Use material specified below for brace, and truss to line posts with 3/8-inch-diameter rod and adjustable tightener. Provide manufacturer's standard galvanized-steel, cast-iron or cast-aluminum cap for each end.

Round Steel: 1.660-inch OD Type I or II steel pipe.

Bottom and Center Rail: Same material as top rail. Provide manufacturer's standard galvanized-steel, cast-iron or cast-aluminum cap for each end.

Tension or Stretcher Bars: Hot-dip galvanized steel with a minimum length 2 inches less than the full height of fabric, a minimum cross section of 3/16 inch by 3/4 inch, and a minimum of 1.2 oz. of zinc coating per sq. ft. Provide one bar for each gate and end post, and two for each corner and pull post, except where fabric is integrally woven into the post.

Tension and Brace Bands: 3/4-inch-wide minimum hot-dip galvanized steel with a minimum of 1.2 oz. of zinc coating per sq. ft.

Tension Bands: 0.074 inch thick (14 gage) minimum.

Brace Bands: 0.105 inch thick (12 gage) minimum.

Tension Wire: 0.177-inch-diameter metallic-coated steel marcelled tension wire conforming to ASTM A 824 with finish to match fabric.

Coating Type II zinc in the following class as determined by ASTM A 90.

Class 1, with a minimum coating weight of 0.80 oz. per sq. ft. of uncoated wire surface.

Tie Wires: 0.106-inch-diameter (12-gage) galvanized steel with a minimum of 0.80 oz. per sq. ft. of zinc coating according to ASTM A 641, Class 3 or 0.148-inch-diameter (9-gage) aluminum wire alloy 1350-H19 or equal, to match fabric wire.

CONCRETE

Concrete: Provide concrete consisting of portland cement per ASTM C 150, aggregates per ASTM C 33, and potable water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 3000 psi. Use at least four sacks of cement per cu. yd., 1-inch maximum size aggregate, 3-inch maximum slump.

Packaged Concrete Mix: Mix dry-packaged normal-weight concrete conforming to ASTM C 387 with

clean water to obtain a 2- to 3-inch slump.

GATES

Fabricate perimeter frames of gates from same material and finish as fence framework. Assemble gate frames by welding. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware, and accessories. Install rubber pneumatic wheel on main swinging gates as detailed. Space frame members maximum of 8 feet apart unless otherwise indicated.

Fabric: Same as for fence unless otherwise indicated. Secure fabric at vertical edges with tension bars and bands and to top and bottom of frame with tie wires.

Bracing: Install diagonal cross-bracing consisting of 5/16-inch-diameter adjustable-length truss rods on gates to ensure frame rigidity without sag or twist.

Swing Gates: Comply with ASTM F 900.

Steel: Gates up to 8 feet wide:

Up to 6 Feet High: Fabricate perimeter frames of 1.660-inch minimum OD Type I or II steel pipe or 1-1/2-inch-square galvanized-steel tubing weighing 1.84 lb per sq. ft.

Swing Gate Posts: Furnish posts to support single gate leaf, or one leaf of a double-gate installation, according to ASTM F 900, sized as follows for steel and aluminum pipe posts:

Steel posts for fabric height of 6 feet or less and gate leaf width:

Up to and Including 4 Feet: 2.375-inch OD pipe weighing at least 3.11 lb per ft

Opening Width Over 12 feet: 4.000-inch OD pipe weighing not less than 6.56 lb per ft.

Gate Hardware: Provide galvanized hardware and accessories for each gate according to the following:

Hinges: Size and material to suit gate size, non-lift-off type, offset to permit 180-degree gate opening. Provide 1-1/2 pair of hinges for each leaf over 6-foot nominal height.

Latch: Forked type or plunger-bar type to permit operation from either side of gate, with padlock eye as an integral part of latch.

Keeper: Provide a keeper for vehicle gates that automatically engages gate leaf and holds it in the open position until manually released.

Gate Stops: Provide gate stops for double gates consisting of mushroom-type flush plate with anchors, set in concrete, and designed to engage a center drop rod or plunger bar. Include a locking device and padlock eyes as an integral part of the latch, permitting both gate leaves to be locked with a single padlock.

PART 3 - EXECUTION

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INSTALLATION

General: Install fence to comply with ASTM F 567. Do not begin installation and erection before final grading is completed, unless otherwise permitted.

Excavation: Drill or hand-excavate (using post-hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

If not indicated on Drawings, excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than four times the largest cross section of post.

Unless otherwise indicated, excavate hole depths approximately 3 inches lower than post bottom, with bottom of posts set not less than 36 inches below finish grade surface.

Setting Posts: **Center and align posts in holes 3 inches above bottom of excavation**. The bottom of the post shall be separated from the earth by a minimum of 3 inches. Post shall not be driven into the earth. Space a maximum of 10 feet o.c., unless otherwise indicated.

Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.

Unless otherwise indicated, extend concrete footings 2 inches above grade and trowel to a crown to shed water.

Where post are indicated to be installed in concrete slab, core drill holes to receive epoxy grouted posts. Refer to drawings.

Top Rails: Run rail continuously through line post caps, bending to radius for curved runs and at other posts terminating into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.

Center Rails: Install center rails in one piece between posts and flush with post on fabric side, using rail ends and special offset fittings where necessary.

Brace Assemblies: Install braces at end and gate posts and at both sides of corner and pull posts. Locate horizontal braces at midheight of fabric on fences with top rail and at two thirds fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.

Bottom Tension Wire: Install tension wire within 6 inches of bottom of fabric before stretching fabric and tie to each post with not less than same gage and type of wire. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch-diameter (11-gage) hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c.

Top Tension Wire: Install tension wire through post cap loops before stretching fabric. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch-diameter (11-gage) hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c.

Fabric: Leave approximately 2 inches between finish grade and bottom selvage unless otherwise

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indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on security side of fence, and anchor to framework so that fabric remains under tension after pulling force is released.

Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not over 15 inches o.c.

Tie Wires: Use wire of proper length to secure fabric firmly to posts and rails. Bend ends of wire to minimize hazard to persons or clothing.

Maximum Spacing: Tie fabric to line posts 12 inches o.c. and to rails and braces 24 inches o.c.

Fasteners: Install nuts for tension bands and carriage bolts on the side of the fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts for added security.

GATE INSTALLATION

Install gates plumb, level, and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary. Install gates according to manufacturer's instructions, plumb, level, and secure.

ADJUSTING

Gates: After repeated operation of completed installation equivalent to 3 days' use by normal traffic, readjust gates for optimum operating condition and safety. Lubricate operating equipment and clean exposed surfaces.

END OF SECTION 02831

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SECTION 02930

SODDING, SEEDING AND MULCHING

PART 1 - GENERAL

SCOPE OF WORK

Furnish all labor, materials, equipment and incidentals required to prepare lawn bed and install sodding, seeding and mulching as shown on contract drawings and as specified.

Areas to receive sodded grass shall be:

Two foot wide strip along edge of off-street parking area constructed as a part of this contract.

Five foot wide strip around the perimeter of all concrete structures constructed or reconstructed as a part of this contract.

All areas indicated on the drawings.

All areas in lawns disturbed by Contractor.

Two foot wide strip along edge of all sidewalks constructed or reconstructed as a part of this contract.

Areas to receive seed and mulch shall be:

All areas disturbed by Contractor that are not required to be sodded.

All areas indicated on the drawings.

SUBMITTALS

Contractor shall submit to the Engineer a signed statement of total weight for each type of seed and fertilizer actually installed on the project with copies of purchase receipts.

PART 2 - MATERIALS

MULCH

The mulch used shall be normally dry mulch and shall consist of pangola, coastal bermuda or bahia grass hay.

SEED

Grass seed shall be Centipede. Seed which has become wet or moldy shall not be used.

All seed shall meet the requirements of the State Department of Agriculture and Consumer Services and all applicable State laws, and shall be approved by the Engineer before being sown.

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FERTILIZER

Commercial fertilizer shall comply with the State fertilizer laws.
The numeral designations for fertilizer indicate the minimum percentage (respectively) of (1) total nitrogen, (2) available phosphoric acid, and (3) water-soluble potash, contained in the fertilizer.

The chemical designation shall be 12-8-8. Either dry or liquid fertilizer may be used.

SOD

All sod shall be Centipede. Sod shall meet the applicable requirements of Section 981, Grassing and Sodding Materials of the "Florida Department of Transportation Standard Specification for Road and Bridge Construction", (2010).

WATER

The Water used in the grassing operations shall be free of excess and harmful chemicals, acids, alkalies, or any substance which may be harmful to plant growth or obnoxious to traffic. Saltwater shall not be used.

PART 3 - EXECUTION

LAWN BED PREPARATION

Areas to be seeded shall be cleared of all rough grass, weeds, and debris, and the ground brought to an even grade as approved. The soil shall then be thoroughly tilled to a minimum 8-inch depth. The areas shall then be brought to proper grade, free of sticks, stones, or other foreign matter over 1-inch in diameter or dimension. The surface shall conform to finish grade, free of water-retaining depressions, the soil friable and of uniformly firm texture.

SEEDING AND MULCHING

Fertilizing, seeding or mulching operations will not be permitted when wind velocities exceed 15 miles per hour. Seed shall be planted or sown only when the soil is moist and in proper condition to induce growth.

Apply the lawn seed with a drop type spreader at the rate of eight (8) pounds per one thousand (1,000) square feet.

Apply half the seed in one direction and the remainder at right angles to the first seeding.

After applying the seed, rake the seed into the seed bed and roll with a lawn roller.

Seeded areas shall be uniformly mulched in a continuous blanket immediately following seeding and compacting operations, using at least 1 1/2 tons of hay or straw per acre. Hay with noxious seeds or plants will not be acceptable. Rotted, brittle, molded hay will not be accepted. It is intended that mulch shall allow some sunlight to penetrate and air to circulate, at the same time shading the ground, reducing erosion and conserving soil moisture. Thickness of covering shall be

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adequate to hold soil but sufficiently loose and open to favor development of grass. Immediately following spreading of mulch, material shall be anchored to soil by means of a seed drill, dish harrow set to cut only slightly, or other suitable equipment which will secure mulch firmly and prevent loss or bunching by wind or rain, or may be anchored with string lines placed at sufficient intervals. On slopes where machinery cannot be used mulch may be retained in place by hand spading, string lines, or non-metallic open weave fabric. Unless rain is imminent, mulched areas shall be watered immediately after placing. Upon completion, surface or mulched areas shall be free from clods of earth, bumps, or waterholding pockets and to required grades.

SODDING

Sodding shall be incorporated into the project at the earliest practical time in the life of the contract. No sod which has been cut for more than 72 hours shall be used unless specifically authorized by the Engineer after his careful inspection thereof. Any sod which is not planted within 24 hours after cutting shall be stacked in an approved manner and maintained properly moistened.

Sodding shall not be performed when weather and soil conditions are, in the Engineer's opinion, unsuitable for proper results.

The sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by light tamping with appropriate tools.

Where sodding is used in drainage ditches, the setting of the pieces shall be staggered such as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas the offsets of individual strips shall not exceed six inches. In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a featheredge effect.

On areas where the sod may slide, due to height and slope, the Engineer may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals.

Any pieces of sod which, after placing, show an appearance of extreme dryness shall be removed from the work.

MAINTENANCE

Maintenance shall begin immediately following the last operation of grassing and continue until final acceptance. Maintenance shall include watering, mowing, replanting, and all other work necessary to produce a uniform stand of grass.
Sufficient watering shall be done by the Contractor to maintain adequate moisture for optimum development of the lawn areas. Grassed areas shall receive no less than 1.5 inches of water per week.

Grassing will be considered for final acceptance when the permanent grass is healthy and growing on 95 percent of the area with no bare areas wider than twelve (12) inches.

END OF SECTION 02930

APPENDIX

Alpha Geotechnical and Testing Services, Inc.
Certificate of Authorization No. 00007967

Foundation Evaluations
Environmental Studies
Construction Materials Testing

September 6, 2022
File No. 18-3510

Mr. John Nation
Hicks Nation Architects, Inc.
1382 Timberlane Road, Suite C
Tallahassee, FL 32312
JNation@HicksNation.com

Subject: Subsurface Exploration and Geotechnical Evaluation for Solar Panel Installation, Center for Advanced Power Systems (CAPS) Facility, 2000 Levy Avenue, Tallahassee, Florida.

Dear Mr. Nation:

As authorized by you, Alpha Geotechnical and Testing Services has completed the subsurface soil exploration for the subject project. The primary purpose of this exploration was to evaluate subsurface conditions encountered in four test borings as they relate to the construction of a solar array for generating electricity. This evaluation provides you with recommendations for foundation design parameters for the panels to be constructed.

In general, our borings first penetrated loose to medium dense silty sand strata until about 5 ½' deep at the north array and to about 3 ½' deep at the south array, underlain by loose to medium dense clayey sand until termination at 10' or 15' below the ground surface. No groundwater was encountered in the borings.

We understand that the solar panels may be supported by shallow foundations, possibly weighted ballast at the ground surface. In such case, we recommend vibratory densification of the near surface silty sands to achieve a safe allowable bearing capacity of 2,500 pounds per square foot (psf). Where relatively short pile foundations (5' to 15' deep) may be constructed for support, allowable end bearing and side resistance capacities of 4,000 psf and 250 psf, respectively, may be used as design parameters.

The recommendations submitted in this report are based upon the data obtained from the soil borings presented on Figure 1 and the structure loading conditions outlined. This report does not reflect any variations that may occur between or away from the borings. Possible variations may not become evident until during the course of construction or during additional investigation. If modifications in the design or location of the solar array are made, we should be notified to review the applicability of the conclusions and recommendations in this report. This exploration only deals with the near surface soil deposits. It is not intended to include analysis of deeper soil or rock strata where cavities and caverns may exist. Sinkholes do occur in Leon County; however, this report does not address the possibility of sinkhole occurrence at the site.

Finally, we recommend a review of final design drawings and specifications by our office, to determine if recommendations made herein have been properly interpreted and implemented. This report documents our findings and recommendations and has been prepared exclusively for use by our Client and their Consultants only for this project.

Yours truly,
Alpha Geotechnical and Testing Services, Inc.

Stephen P. Shanley, PE
FL #40653

STEPHEN P. SHANLEY LICENSE No. 40653 9/6/22 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Stephen P. Shanley, PE on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

1.0 PROJECT DESCRIPTION

As listed by the Leon County Property Appraiser's office, parcel ID 410327 C0010 at 2000 Levy Avenue is the subject of our exploration. The site is approximately a 13-acre tract located on the north side of Levy Avenue just east of East Paul Dirac Drive.

We understand that two solar arrays are planned for installation on the north side of the site – one array will be north of the cooling tower compound and the other south of the compound. You furnished us with an aerial photo site plan showing the general footprints of the arrays along with the locations of the four soil test borings to be performed. Ground surface generally slopes towards the north.

At the time of our exploration and evaluation, it was not known whether the arrays will be supported on a shallow foundation system – possibly large rock ballast interconnected with the array supports or shallow spread footings, or deep foundation with piles or shafts. Although we were not provided load information, we anticipate supports for the arrays will impart less than 1,000 pounds vertical axial load. The recommendations contained in this report will not necessarily apply if loading conditions are in excess of these estimates, so please advise if needed.

2.0 FIELD EXPLORATION

To evaluate subsurface conditions, four soil test borings were performed – designated B-1 through B-4 as shown on Figure 1. The locations were determined by taped measurement from existing site features. Therefore, locations should be considered accurate to the degree of the method of measurement used.

All borings were conducted with hand augers and samples were secured by means of a portable derrick and "cathead" assembly. The consistency (relative hardness) of the soils was determined by measuring blow counts (N-values) by driving a split-spoon sampler with a 140-pound sliding hammer in accord with the Standard Penetration Test (SPT) method (ASTM D 1586). The bore holes were back-filled with drill cuttings after completion.

3.0 SUBSURFACE CONDITIONS

3.1 General

Subsurface conditions encountered during our field exploration are shown on the soil boring profiles presented on Figure 1. The stratification lines represent the approximate boundaries between the soil layers, but subtle changes in the soil matrix may make these changes more gradual than the boundary lines tend to illustrate.

The soil descriptions shown adjacent to the boring profiles on the Figure are based on a visual/manual classification procedure in accordance with the methodology presented in ASTM D 2488. We supplemented these with a few laboratory classification tests to confirm our classifications in accordance with the Unified Soil Classification System (ASTM D 2487).

3.2 Soil Conditions

The borings were done in grassy areas where we first encountered brown silty sand topsoil in the two north borings (B-1 and B-2) and reddish-brown silty sand topsoil in the south bores (B-3 and B-4). These topsoil layers extend to about 1 ½' to 2' deep. Next, dark gray silty sand was penetrated in all four borings until 3' to 4' deep. The north array borings next encountered orange to brownish orange slightly silty sand until about 5 ½' below the surface. On the other hand, brownish orange to reddish orange clayey sand was discovered below the dark gray silty sand layer until 8' deep, underlain by orange clayey sand until 12 ½' at B-3 and until termination at 10' deep in B-4. Variable orange, red, white and tan marbled or mottled clayey sand was finally found in the deeper reaches of B-1 through B-3 until termination at 15' or 10' below the surface.

Based on the resistance to advancement of the "split-spoon" sampling device, the silty and clayey sand soils in the upper 5' are generally loose to medium dense. Below this, the strata are typically medium dense with exception of loose conditions found at the 15' deep in boring B-1 and at 10' deep in B-4.

Variations from the above generalization exist at each of the borings; the reader is advised to examine the individual boring profiles on the attached Figure 1.

3.3 Groundwater Conditions

A groundwater table was not detected in any of the borings within 24 hours after completion. The marbled coloration of the deeper clayey sands may be characteristic of hydric soils, indicating that the seasonal high groundwater table could be around 5 ½' below the surface at the north array site but more than 10' deep at the south array. Such would be considered temporary "perched" groundwater that should dissipate within a short period after heavy, prolonged rain events.

4.0 LABORATORY TESTING PROGRAM

Laboratory testing was performed on selected samples to aid in soil classification and to further define the engineering properties of the soils. The laboratory tests included Natural Moisture Content (ASTM D 2216), Percent Finer than the U.S. No. 200 Sieve (ASTM D 1140, to assess percent silt and clay), and Atterberg Limits tests (ASTM D 4318, to evaluate plasticity characteristics). The test results are presented on Figure 1 adjacent to the soil boring profiles, at the respective depths from which the samples were recovered.

5.0 ENGINEERING EVALUATION AND RECOMMENDATIONS

5.1 General

In view of our findings, subsurface soil conditions are such that satisfactory support of the planned solar array on either shallow or deep foundation systems should perform well. For shallow foundation support however, we recommend intensive vibratory densification of the near surface soils to improve bearing capacity and to aid in detection of possible "weak" areas that could need further improvement.

5.2 Site Preparation

The following are our recommendations for site soil preparation and foundation design for a shallow foundation system. These recommendations should be **incorporated into the project specifications.**

1. The entire structure area "footprint" and planned pavement areas, plus a minimum margin of five feet laterally, should be stripped and grubbed of all surface vegetation, debris and other deleterious material, as encountered. During the clearing and grubbing operation, roots with a diameter greater than one-inch or small roots in high density should be completely removed. These materials should be disposed in areas designated by the Owner. **Existing underground utilities such as storm drain lines, water lines, sanitary sewer lines and septic tanks should be removed (not just abandoned), where possible**.

2. The cleared and/or cut surface in the solar array construction area must be proof-rolled using a heavily loaded dump truck to aid in evaluating areas that could require undercutting. Soils that "pump" (deflect) more than 1" under the passing weight of the rear tires should be explored with test pits to determine if undercutting is necessary. Thereafter, **the site structure and pavment areas should be subjected to a heavy vibratory roller-compactor**. Adjust the moisture content of the soil, as necessary, to aid compaction. We recommend using a nominal 15,000-pound static weight; 30,000-pounds (±) dynamic force, single drum vibratory roller. The vibratory roller should be operated on a minimum frequency of 1700 vibrations per minute, and each

compaction lane must overlap the adjacent compaction lane by 2 feet. We recommend 5 passes in one direction, and 5 passes in a perpendicular direction in the building area. More passes could be needed however. The objective is to achieve a minimum 95% percent Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least 18" below the compacted surface.

We recommend performance of at least one field density test for each 5,000 square feet of prepared area (but a minimum of three tests, regardless of the size). **It is important to contact the testing laboratory at least a few days prior to proof-rolling, so that they can obtain proctor test samples, and perform the proctor tests in the laboratory, so that the maximum proctor dry density values will be available at the time of proof-rolling and density testing.**

3. If any areas yield during proof-rolling, they must be explored in a few small test pits to evaluate the condition of the soils. Should yielding result from excessive soil moisture, two corrective alternatives may be considered.

   a. If the existing soils are sands or clayey sands (less than 50% clay), dry the soils until the moisture content is 2 to 3 percent below the optimum moisture content as determined from the Modified Proctor test. The soils may be harrowed and air-dried to obtain the desired moisture for compaction.
   b. Replace the wet material with soils conforming to that stated in Item 5, below.

   Replace any materials, if determined to be deleterious, in areas that "yield" during the proof-rolling operation, with suitable fill material conforming to that stated in Item 5, below.

4. After satisfactory proof-rolling of the cleared and/or cut surfaces in accordance with the above, filling with suitable, well-compacted soil may proceed. Fill material should conform to that stated in Item 5 below, and should be placed in level lifts not exceeding 12 inches in uncompacted thickness. Each lift should be compacted by repeated passes with appropriate compaction equipment, to achieve at least 95 percent of the Modified Proctor maximum dry density. The filling and compaction operations should continue until the desired elevation is achieved. Again, at least one field density test for each 5,000 square feet of prepared fill area should be performed (minimum 3 tests).

5. Fill materials required to elevate the slab area should consist of select fills, which are uniformly graded clean sands to slightly silty or slightly clayey sands, free of organics and other deleterious materials, **with less than 35 percent passing the No. 200 sieve**. These soil types are less sensitive to moisture problems and are less likely to experience time related settlement than more silty or clayey soils, so the use of select fill tends to reduce earthwork delays caused by seasonal rains and minimize the potential for differential settlement of foundations. The near surface silty sand soils encountered in our borings do comply with these recommendations; alternatively, an off-site borrow source should be considered.

5.3 Shallow Foundation Design

Foundation soils prepared in accordance with the above recommendations (natural soils or fills) should be suitable for supporting the proposed structures with a design soil contact pressure of 2,500 pounds per square foot (psf) or less. The weight of the concrete may be neglected when computing the contact pressure. Footings should be embedded at least 18" below surrounding ground. Isolated footings should be at least 18" on each side to prevent punching shear failures.

Based on the information gathered during our exploration and the loading conditions previously estimated, along with satisfactory completion of the recommended soil and foundation improvements discussed above, the recommended soil contact pressure will yield a minimum factor of safety greater than 2.0 against bearing capacity failure. The total load related settlement is estimated to be one inch or less.

5.4 Deep Foundation Design

Driven steel or concrete piles, helical piles, or cast in place concrete shafts (caissons) could be used for support of the solar arrays. We have analyzed the design parameters of relatively short piles or shafts installed to depths of about 5' to 15' and determined that a safe allowable end bearing value of 4,000 psf may be used for vertical down support. An allowable side resistance of 250 psf may be used in down force and uplift resistance.

A settlement of no more than about ¼" of the pile/shaft tip is anticipated after constructed and loaded. We do not believe it will be necessary to perform any load testing of the piles to confirm our analyses but pile installation should be monitored by qualified personnel as discussed in the following section.

5.5 Pile/Shaft Installation

1 After confirming the locations and final disposition of possible underground utilities (including possible on-site septic systems that may need to be removed), the precise location of the planned piles or shafts should be determined by surveying.

2. For driven piles, requirements and installation should be performed in strict accord with FDOT's *Standard Specifications for Road and Bridge Construction* section A455, latest edition. When the pile driving equipment has been selected, we recommend that the design driving blow count be determined by the minimum design *Modified Engineering News Record* Blow Count or *Gates Formula*. The reason for the is that current practice is to utilize the Wave Equation form of analysis, but for this size project the Wave Equation method is not recommended.

   We recommend that the design driving blows be achieved for at least the last 12 inches of driving, and at least 50 percent of the design driving blows should be achieved in the prior foot. However, once design driving blows are achieved in some fraction of the last foot (less than ½ foot), driving may stop to avoid damaging the pile.

   Concrete piles should be pre-stressed with a minimum compressive strength of 4,000 psi.

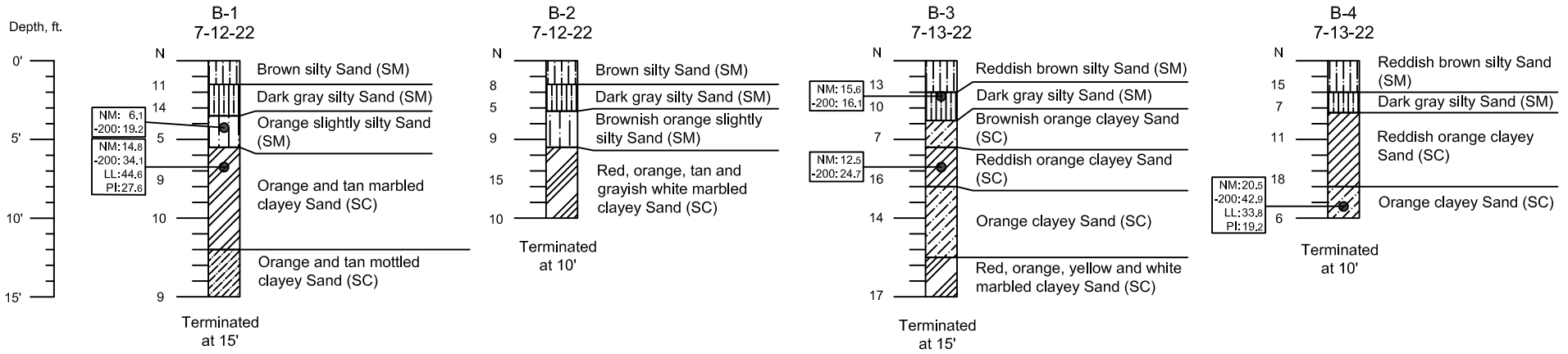
3. For cast in place shafts, excavation bottoms should be inspected to assure stable ground exists, free from cave-in materials. Configuration and placement of any reinforcing "cages" must be checked prior to pouring. Calculations of estimated v. placed concrete volume must be made to assure shaft integrity.

4. Helical piles must be installed to a depth sufficient to achieve the required down force and uplift resistance. Hydraulic output pressure during installation must be monitored to assure sufficient torque has been applied for use in calculating expected bearing values.

5. Alpha Geotechnical and Testing Services should be employed by the owner to observe pile/shaft installation.

END OF REPORT

Soil Boring Profiles and Locations



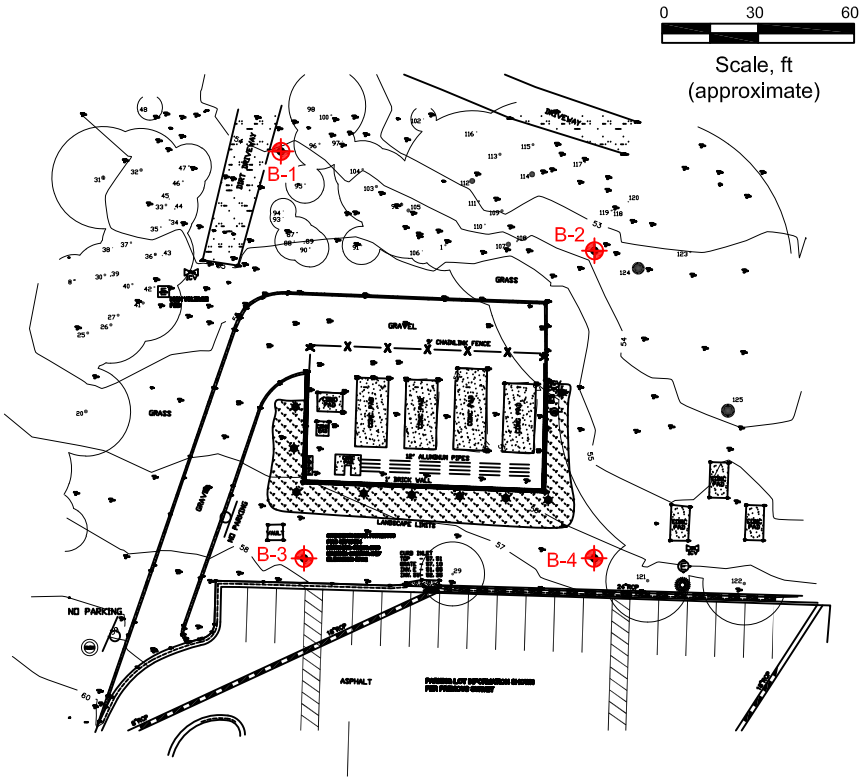
LEGEND

- N - Standard Penetration Test "N-value". Number of blows from 140-pound hammer to advance sampler last 12" of 18" drive.
- NM - Natural Moisture Content, %.
- -200 - Finer than # 200 sieve, %.
- OC - Organic Content (weight basis), %.
- LL - Liquid Limit, %.
- PI - Plastic Index (LL - plastic limit), %.
- (SP) - Unified Soil Classification System, fine to medium sand (typical).
- ▽ - Groundwater level, if discernable.

Penetration Resistance and Soil Properties on Basis of Standard Penetration Test [1]

Sands (Fairly Reliable)		Clays (Rather Unreliable)	
Number of Blows per foot, N	Relative Density	Number of Blows per foot, N	Consistency
		Below 2	Very soft
0-4	Very loose	2-4	Soft
4-10	Loose	4-8	Medium
10-30	Medium	8-15	Stiff
30-50	Dense	15-30	Very stiff
Over 50	Very dense	Over 30	Hard

1- Table 5.3 from Peck, Hanson, Thornburn, Foundation Engineering, 2nd Edition, 1973



NOTES

1) Although the borings represent the subsurface conditions at their respective locations, it should be understood that significant differences could exist between borings and these may not be discovered until later.

2) Borings were performed using a portable derrick and cat-head apparatus in accordance with ASTM D 1586 (The Standard Penetration Test).

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September 6, 2022

Subsurface Exploration and Geotechnical Evaluation for CAPS Solar Panel Installation
2000 Levy Av., Tallahassee, FL

Figure 1

Drawing Source
Stinson & Associates
Topographic Survey
Sheet C1.0

File: 18-3510 nation caps solar panels fig 1