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REPORT OF GEOTECHNICAL CONSULTING SERVICES

Proposed Clay Electric District Office
SW S.R. 47
Lake City, Columbia County Florida

UES Project No. 0230.1100024.0000
UES Report No. 949986

Prepared for:

Clay Electric Cooperative, Inc.
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March 16, 2012

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March 16, 2012

Clay Electric Cooperative, Inc.
P.O. Box 308
Keystone Heights, FL 32656-0308

Attention: Mr. Barry Marquart
Senior Engineer

Reference: **Report of Geotechnical Consulting Services**
Proposed Clay Electric District Office
SW S.R. 47
Lake City, Columbia County, Florida
Section 18 Township 4 South, Range 17 East
UES Project No. 0230.1100024.0000 UES Report No. 949986

Dear Mr. Marquart:

Universal Engineering Sciences, Inc. (UES) has completed the geotechnical engineering services for the subject project in Lake City, Columbia County, Florida. This Geotechnical Report is submitted in satisfaction of the contracted scope of services as summarized in UES Proposal No. 943462, dated January 30, 2012.

This Report presents the results of our field subsurface exploration and laboratory soil testing programs, and recommendations for foundation design and construction, pavement design and geotechnical site preparation.

We appreciate the opportunity to have assisted you on this project and look forward to a continued association. Please do not hesitate to contact our office if you should have any questions, or to assist your office with the remaining phases of project design and construction.

Respectfully submitted,

UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization 549

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cc: Brame Architects, Inc

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EXECUTIVE SUMMARY

We have prepared this executive summary solely to provide a general overview. Do not rely on this executive summary for any purpose except that for which it was prepared. Rely on the full report for information about findings, recommendations, and other concerns.

Project Location and Description

The subject parcel is located off of SW State Road 47, approximately 1,000 feet south of Susan Road Drive in Lake City, Columbia County, Florida. Current site development plans include the construction of a new District Office with associated parking, driveways and stormwater management areas. Current site development plans include the construction of a one-story structure with a slab-on-grade Concrete Masonry Unit (CMU) walls and wood roof trusses. Also included in the project will be a metal building (garage) and asphalt and concrete parking and driveway areas.

Soil and Groundwater Conditions

Generally, the soil test borings encountered sand with silt [SP-SM] to depths of about 2 to 4 feet followed by silty/clayey sand [SM-SC] to depths of about 5 to 7 feet. Below the silty/clayey sand the soils borings encountered sandy clay [CH] to the boring termination depths of 15 feet below the existing ground surface. The groundwater level was not encountered at the boring locations at the time of our exploration. Fluctuations of perched groundwater level conditions on this project parcel should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

Geotechnical and Foundation Design Considerations

Assuming all questionable (clay) soils are removed to a minimum of 4 feet from beneath the structures, a shallow foundation system may be used for support of the proposed building construction on this project with the understanding that some aesthetic cracking and other minor architectural type nuisance issues may occur during the useful life of the structure. Following completion of the recommend geotechnical site preparation and building pad preparation activities, the proposed buildings may be supported on a shallow foundation system designed with a maximum average soil bearing pressure of 2,500 pounds per square foot (psf). Perform hand auger borings and cone penetrometer probes in the footing excavations and building pad areas to investigate for potentially expansive clayey soils. If encountered, clays should be removed to a minimum of 4 feet below the bottom of the footings/floor slabs.

Pavement Design

Both rigid and flexible pavement sections may be used on this project site. The most prevalent flexible pavement base material in Columbia County is crushed limerock. Recommendations for both rigid and flexible pavements are presented in this report.

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of the subsurface exploration of the site for the proposed new Clay Electric District Office in Lake City, Columbia County, Florida. We have divided this report into the following sections:

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

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

The subject parcel is located off of SW State Road 47, approximately 1,000 feet south of Susan Road Drive in Lake City, Columbia County, Florida. Current site development plans include the construction of a new District Office with associated parking, driveways and stormwater management areas.

Our office was provided a copy of the following documents to assist the preparation of this Report:

- Paving and Grading Plan, Clay Electric Cooperative - Lake City District Office, prepared by Eng, Denman & Associates, Inc., dated February 17, 2012.

- Floor Plan, Exterior Building Sections, Building Elevations, New District Office - Clay Electric Cooperative, prepared by Brame Architects, Inc., dated February 07, 2012.

- Foundation Plan, Structural Foundation Notes & Details, New District Office - Clay Electric Cooperative, prepared by Sputo, Lammert Engineering, LLC, dated February 07, 2012.

Current site development plans include the construction of a one-story structure with a slab-on-grade Concrete Masonry Unit (CMU) walls and wood roof trusses. Also included in the project will be a metal building (garage) and asphalt and concrete parking and driveway areas.

Our office was not provided with any other construction-related information other than that discussed herein. If our understandings and assumptions of project issues are incorrect our conclusions and recommendations will not be considered valid until we have had the opportunity to review all pertinent issues. Considering the limitations stated above and based on prior experience with structures of this type, we assumed the following structural loading conditions: ground floor slab loads not exceeding 200 psf, a maximum of 3 kips per linear feet (klf) on wall footings, and a maximum load of 10 kips on individual footings. We understand the proposed office-warehouse building construction will require up to 5 feet of structural fill placement and less than 2 feet of cut for leveling of the proposed building footprints and building pad construction. The proposed garage/metal building construction will require nominal structural fill placement operations (2 feet or less) for leveling of the proposed building footprint.

If our foundation loading estimates and assumptions are incorrect we should be advised so that we may review our engineering evaluations, conclusions and recommendations. If our understandings and assumptions of project issues are incorrect our conclusions and recommendations will not be considered valid until we have had the opportunity to review all pertinent issues. The above constitutes all of the project information provided to our office at the time of this Report preparation.

We note that, our authorized scope of services and this Report do not address any other project elements, such as earth retaining walls, sidewalks, or slope stability issues that may be part of the overall project site plan. Since other site improvements could have detrimental effects on the performance of a foundation system at this site, UES, or another qualified geotechnical consultant, should be consulted to review the entire site development plan and conduct additional services as required to minimize any impact of associated improvements on foundation performance.

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

2.2 PURPOSE

The purposes of this exploration were:

- To explore the prevailing site subsurface conditions within the proposed building footprints and parking areas.
- To perform a series of laboratory tests on selected subsurface soil specimens, recovered from the field exploration program to assist with engineering soil classifications,
- To evaluate the subsurface response to anticipated structural loadings and discuss the groundwater level characteristics,
- To evaluate and discuss geotechnical issues deemed relevant to the proposed on-site building construction,
- To prepare building foundation design and construction recommendations,
- To discuss technical suitability of subgrade soils for pavement section support and provide parameters for pavement design.

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

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

2.3 FIELD EXPLORATION

The field geotechnical testing activities were started on March 7, 2012, and completed on March 8, 2012. Field tests for the geotechnical study included eight (8) soil test borings to a depth of 15 feet below the ground surface within the vicinity of the proposed building areas, and eight (8) soil test borings to a depth of 6 feet below the ground surface within the limits of the proposed parking areas. The actual test locations shown are approximate and were staked in the field by UES personnel using existing landmarks and site features. All boreholes were backfilled upon field work completion. The soil test boring locations have been presented on the attached Boring Location Plan.

Representative portions of the subsurface soil samples recovered were transported to our Gainesville Soils Laboratory. The soil samples were visually classified by an experienced geotechnical engineer. It should be noted that soil conditions might vary between soil test boring locations, and between the subsurface soil strata interfaces which have been shown on the Boring Logs. The soil test boring data reflect information from the specific test locations only.

2.3.1 Standard Penetration Test (SPT) Borings

Penetration tests were performed in accordance with ASTM Procedure D-1586, *Penetration Test and Split-Barrel Sampling of Soils*. This test procedure generally involved driving a 1.4-inch I.D. split-tube sampler into the soil profile in six inch increments for a minimum distance of 18 inches using a 140-pound hammer free-falling 30 inches. The total number of blows required to drive the sampler the second and third 6-inch increments has been designated as the N-value, and provides an indication of in-place soil strength, density and consistency.

2.3.2 Auger Borings

The auger borings were performed in accordance with ASTM Procedure D-1452, *Standard Practice for Soil Investigation and Sampling by Auger Borings*. This test procedure advances a solid stem auger into the soil in a manner which reduces soil disturbance. At the selected depth, the auger advance and rotation are stopped, and the auger flight retracted from the borehole. The in-place soil profile is determined by visual inspection of the soils recovered from the auger flights.

2.4 LABORATORY TESTING

2.4.1 Visual Classification

The soil samples recovered from the soil test borings were returned to our laboratory where a geotechnical engineer visually reviewed the field descriptions in accordance with ASTM D-2488. Using the results of the laboratory tests, our visual examination, and our review of the field boring logs we classified the soil borings in accordance with the current Unified Soil Classification System (USCS). We then selected representative soil samples for laboratory testing.

2.4.2 Index Testing

Laboratory testing was performed on selected samples of the soils encountered in the field exploration to better define soil composition and properties. Testing was performed in accordance with ASTM procedures and included Percent passing No. 200 Sieve (ASTM D-1140), Natural Moisture Content (ASTM D-2216) and Atterberg Limits (ASTM D- D-43180). The test results have been presented on the attached Boring Logs.

3.0 FINDINGS

3.1 REGIONAL GEOLOGY

The general geology of Columbia County is characterized by undifferentiated sediments consisting primarily of clay and clayey sand of the Hawthorne and Alachua formation lying beneath the ground surface. These formations are not so thick south of the central ridge as they are to the north. Pleistocene terrace deposits, consisting of unconsolidated sands, are underlain by clay. The slow absorption of water into the clay results in the development of a high water table in the overlying sand during the rainy season. Information obtained from the Suwannee River Water Management District (SRWMD) Potentiometric Surface Map dated September 2002 suggests the potentiometric level of the Floridan Aquifer in the general area of the project site to be in the elevation range of +40 to +45 feet NGVD.

3.2 GENERAL AREA SOIL INFORMATION

The United States Department of Agriculture (USDA) *Soil Survey of Columbia County, Florida* describes the near-surface soil profile in the general project area as Blanton and Bonneau soils. Relevant engineering index properties of these soils have been summarized in Table 1 and 2.

Table 1 – Relevant Engineering Index Properties of Blanton Soils

Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0-52	Fine sand	SP-SM, SM	5-14	NP	Very Low	6.0-20 in/hr
52-80	Sandy clay loam, sandy loam, fine sandy loam	SC, SM-SC, SM	25-50	NP-22	Low	0.6-2.0 in/hr

Table 2 – Relevant Engineering Index Properties of Bonneau Soils

Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0-27	Fine sand	SM, SP-SM	8-20	NP	Low	6.0-20 in/hr
27-80	Sandy loam, sandy clay loam, sandy clay	CL, SC, SM-SC, CL-ML	34-60	4-23	Low	0.6-2.0 in/hr

3.3 SURFACE CONDITIONS

UES personnel visited the project site prior to and during the performance of the field portion of this geotechnical study. Our on-site observations have been summarized as follows. At the time of our exploration, the project parcel was undeveloped with planted pine trees; exposed surface soils were observed to be sandy and dry. Surface organic soils, surface debris, unusual ground depressions, or rock outcroppings were not observed on the project site.

3.4 SUBSURFACE CONDITIONS

The soil test borings were reviewed to evaluate the subsurface soil strata lateral continuity and uniformity, both parameters that would have an impact in foundation system selection and performance. Soil classifications and descriptions for this geotechnical study were based both on the results of the laboratory soil testing programs and on visual examination of soil specimens by the Geotechnical Engineer. The subsurface soil conditions encountered in the soil test borings have been summarized in the attached Boring Logs and have been described below.

Generally, the soil test borings encountered sand with silt [SP-SM] to depths of about 2 to 4 feet followed by silty/clayey sand [SM-SC] to depths of about 5 to 7 feet. Below the silty/clayey sand the soils borings encountered sandy clay [CH] to the boring termination depths of 15 feet below the existing ground surface.

3.5 GROUNDWATER DEPTH

The groundwater level was not encountered at the boring locations at the time of our exploration. Fluctuations of perched groundwater level conditions on this project parcel should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

3.6 LABORATORY TESTING

The soil samples recovered during the field exploration program were placed in containers and returned to our soils laboratory, where the Geotechnical Engineer visually examined and classified the samples. Laboratory soil tests were performed to aid in the classification of the soils, and to help in the evaluation of engineering characteristics of the soils. Representative soil samples were selected for moisture content, percent fines determination and Atterberg Limits. The test results have been presented on the attached Boring Logs and summarized in Table 3.

3.6.1 Percent Passing No. 200 Sieve

Certain recovered soil samples were selected to determine the percentage of fines. In these tests the soil sample was dried and washed over a U.S. No. 200 mesh sieve. The percent of soil by weight passing the sieve was the percentage of fines or portion of the sample in the silt and clay size range. This test was conducted in accordance with ASTM Procedure D-1140, *Standard Test Methods for Amount of Material in Soils Finer than the No. 200 Sieve.*

3.6.2 Moisture Content

Certain recovered soil samples were selected to determine their moisture content. The moisture content was the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles. These tests were conducted in accordance with ASTM Procedure D-2216, *Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.*

3.6.3 Atterberg Limits

Certain recovered soil samples were selected for Atterberg Limits testing to determine the soil plasticity characteristics. The soil's Plasticity Index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the Liquid Limit (LL) and the Plastic Limit (PL). The LL is the moisture content at which the soil will flow as a heavy viscous fluid. The PL is the lowest moisture content at which the soil is sufficiently plastic so as to be manually rolled into a 1/8-inch diameter thread. The test is conducted in accordance with ASTM

Procedure D-4318, *Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.*

Table 3- Laboratory Soil Test Results

Soil Boring	Sample Depth	Type of Test	Results	Soil Description
B-3	5 feet	% Finer #200	39 %	Silty-Clayey Sand
		Moisture Content	14 %	
B-3	8 feet	% Finer #200	52 %	Sandy Clay
		Moisture Content	26 %	
		Atterberg Limits	LL=52 % PI=25 %	
B-3	13 feet	% Finer #200	85 %	Clay
		Moisture Content	47 %	
		Atterberg Limits	LL=82 % PI=34 %	
B-7	3 feet	% Finer #200	51 %	Sandy Clay
		Moisture Content	28 %	
		Atterberg Limits	LL=43 % PI=13 %	

4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon a review of the attached soil test data, our understanding of the *client's willingness to accept nuisance and aesthetic movements of the structure*, and experience with similar projects and subsurface conditions. If plans change from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes.

Additionally, if subsurface conditions are encountered during construction, which were not encountered in the borings, report those conditions immediately to us for observation and recommendations. In this section of the report, we present our detailed recommendations for groundwater control, building foundations, site preparation, and construction related services.

4.2 GEOTECHNICAL CONSIDERATIONS

Recommendations for foundation design are dependent, among other factors, on the amount of total settlement and more importantly differential settlement between various structural elements that can be safely tolerated by the individual structures.

If the anticipated total and differential settlements estimated herein exceed the tolerable limits as set forth by the Structural Engineer, we should be advised so that we may consider other foundation system alternatives.

Our local experience has found that clay layers are often laterally discontinuous, which makes it more difficult to ascertain their presence on a given project parcel with a few soil test borings. If at the time of construction the Contractor encounters or suspects that clay soils may be near the slab grade or foundation bearing elevations, UES should be contacted to prepare appropriate recommendations. If encountered, these shallow deposits of clay soils must be addressed through site grading, over-excavation and replacement, site drainage and stiffened foundations.

The silty-clayey sand soils may require stringent moisture control during compaction, particularly during rainy periods. Footings that are excavated through the upper layer of compacted sand fill soils into the native silty-clayey sands, should be visually inspected and tested to verify the in-place density and condition of the subgrade bearing soils.

We recommend that we be provided the opportunity to review the project plans and specifications to confirm that our recommendations have been properly interpreted and implemented. If the structural loadings or the building locations change significantly from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes. The discovery of any subsurface conditions during construction which deviate from those encountered in the borings should be reported to us immediately for observation, evaluation, and recommendations.

The discovery of any subsurface conditions during construction which deviate from those encountered in the borings should be reported to us immediately for observation, evaluation, and recommendations.

4.3 GROUNDWATER CONSIDERATIONS

The groundwater level will fluctuate seasonally depending upon local rainfall. The rainy seasons in North Central Florida are normally between June and September and December and February. Based upon our review of regional hydrogeology and the Columbia County Soil Survey, we estimate the normal seasonal high groundwater level will occur deeper than 6 feet below the ground surface in the general area of the project site; however stormwater can perch on clayey sands when sandy soils are present at the surface. Isolated areas with a transient perched groundwater should be expected to occur. The perched groundwater will be a transient condition, directly related to rainfall, irrigation and site grading.

It should be noted that the normal estimated seasonal high water levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should the impediments to surface water drainage be present, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels might once again exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

4.4 BUILDING FOUNDATION

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structures when constructed on a properly designed conventional shallow foundation system. Assuming all questionable (clay) soils are removed to a minimum of 4 feet from beneath the structures, positive drainage is established, a shallow foundation system may be used for support of the proposed building construction on this project with the understanding that some aesthetic cracking and other minor architectural type nuisance issues may occur during the useful life of the structure.

Provided the site preparation and earthwork construction recommendations outlined in Section 4.6 of this report are performed, the following parameters may be used for foundation design.

4.4.1 Bearing Pressure

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

4.4.2 Foundation Size

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

4.4.3 Bearing Depth

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

4.4.4 Bearing Material

The foundations may bear in either the compacted suitable existing soils or compacted structural fill. The bearing level soils, after compaction, should exhibit densities equivalent to at least 95 percent of the modified Proctor maximum dry density (ASTM D-1557) to a depth of at least **two feet** below the foundation bearing level. We recommend that the bottom of all footings be probed to confirm the suitability of the bearing soils.

4.4.5 Settlement Estimates

Post-construction settlement of the structures will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the Contractor. Our settlement estimates for the structures are based on the use of site preparation/earthwork construction techniques as recommended in Section 4.6 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlement of the structures.

Using the recommended maximum bearing pressure, the assumed maximum structural loads and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structure should be less than 1 inch. Differential settlement results from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Because of the general uniformity of the subsurface conditions and the recommended site preparation and earthwork construction techniques outlined in Section 4.6, we anticipate that differential settlement of the structures should be within tolerable magnitudes (½ inch or less).

4.4.6 Ground Floor Slab

The floor slab can be constructed as a slab-on-grade member using a modulus of subgrade reaction (K) of 100 pci provided the subgrade materials are compacted as outlined in Section 4.6. It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness. A 10-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear large sections of the membrane during placement of reinforcing steel and concrete. Probing of the proposed subgrade should be performed to check for unsuitable soils.

4.4.7 Site Walls

Earth pressures on retaining walls are influenced by structural design of walls, conditions of wall restraint, construction methods, and the strength of the materials being restrained. The most common conditions assumed for earth retaining wall design are the active and at-rest conditions. Active conditions apply to relatively flexible earth retention structures, such as free-standing walls, where some movement and rotation may occur to mobilize shear strength. Walls which are rigidly restrained, such as loading dock or service pits walls, should be designed for the at-rest condition. However, if the walls will be backfilled before they are braced by the floor slabs, they should also be designed to withstand active earth pressures as self supporting cantilever walls

Development of the full active earth pressure case requires a magnitude of horizontal wall movement that often cannot be tolerated or cannot occur due to the rigidity of the wall and other design restrictions such as the impact on adjacent structures. In such cases, walls are often designed for either the at-rest condition or a condition intermediate of the active and at-rest conditions, depending on the amount of permissible wall movement. Passive earth pressure represents the maximum possible pressure when a structure is pushed against the soil, and is used in wall foundation design to help resist active or at-rest pressures. Because significant wall movements are required to develop the passive pressure, the total calculated passive pressure is usually reduced by one-half for design purposes.

We recommend that the retaining walls be backfilled with materials deemed suitable by the retaining wall designer. Typical sandy soils [SP, SP-SM, SP-SC] have been satisfactorily used as fill for this purpose. We recommend that the soils selected for use as backfill be tested as specified by the retaining wall designer prior to commencement of wall construction. Recommended soil parameters for design of low retaining walls for loading docks and landscape features using soils such as those found on site are shown in Table 4.

The recommended lateral earth pressure coefficients do not consider the development of hydrostatic pressure behind the earth retaining wall structures. As such, positive wall drainage must be provided for all earth retaining structures. These drainage systems can be constructed of open-graded washed stone isolated from the soil backfill with a geosynthetic filter fabric and drained by perforated pipe, or with one of several wall drainage products made specifically for this application. Where constructed below the estimated seasonal high groundwater table, the truck dock area should include underdrains (routed to positive outfall) to maintain the groundwater at least 12 inches below the bottom of the concrete pavement section. In addition, the walls will need to be waterproofed.

Table 4- Lateral Earth Pressure Design Parameters (Level Backfill)*	
Design Parameter	**Recommended Value**
At-rest Earth Pressure Coefficient, K_o	0.5
Active Earth Pressure Coefficient, K_a	0.33
Passive Earth Pressure Coefficient, K_p	3.0
Wet Unit Soil Weight (pounds per cubic foot - pcf)	115
Submerged Unit Weight of Soil (pcf)	52
Coefficient of Friction (sliding)	0.4
Angle of Internal Friction, φ	30 degrees

* For sloping backfill or backfill with clayey sands the table values must be adjusted.
**Hydrostatic pressure should be accounted for based on seasonal high water table estimates and other site drainage considerations

4.5 PAVEMENTS

4.5.1 General

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

We assume that a combination of flexible asphaltic and rigid concrete pavement sections will be used for the new pavement areas on this project. Our recommendations for both pavement types have been presented in the following sections. The following recommendations have been based on the pavement areas being prepared as recommended in this report.

At the time of this exploration, specific traffic loading information was not provided to us. We have assumed the following conditions for our recommended minimum pavement design.

- the subgrade soils are prepared as described in this report,
- a twenty (20) year design life,
- terminal serviceability index (P_t) of 2.5,
- reliability of 90 percent,
- total equivalent 18 kip single axle loads (E_{18}SAL) up to 50,000 for light duty pavements – primarily car and pickup truck traffic (parking stalls),
- total equivalent 18 kip single axle loads (E_{18}SAL) up to 300,000 for heavy duty pavements.

The available subsurface data relies on eight soil borings, and suggests that the subgrade soils in these areas consist of relatively clean sands followed by discontinuous layers of silty/clayey sand. The clean sandy soils may require some moisture control to facilitate compaction. We recommend undercutting any clayey soils to a depth of 24 inches below the bottom of the base course in accordance with the Florida Department of Transportation (FDOT) index 500. We recommend proof-rolling of the exposed subgrade to help determine area that will need to be undercut. Positive drainage around the roadway area should be established to prevent irrigation and stormwater from migrating into the pavement area. We recommend using a flexible pavement section on this project.

4.5.2 Asphalt (Flexible) Pavements

Based on the results of our soil borings, the assumed traffic loading information and review of the 2008 FDOT Flexible Pavement Design Manual, our minimum recommended pavement component thicknesses for new construction have been presented in Table 5.

Table 5 Minimum Asphaltic Pavement Component Thickness

Service Level	Maximum Traffic Loading	Layer Component		Estimated Structural Number *
		Surface Course (inches)	Base Course (inches)	
Light Duty	up to 50,000 E_{18}SAL	2	6	2.7
Heavy Duty	up to 300,000 E_{18}SAL	3	8	3.3

* Estimated structural number is based on 12 inches of stabilized subgrade below the base course.

4.5.2.1 Stabilized Subgrade

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

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

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

4.5.2.2 Base Course

We recommend the base course consist of limerock. The limerock base course should have a minimum LBR value of 100 and should be compacted to 98 percent of the modified Proctor maximum dry density (AASHTO T-180).

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

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

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

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

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

4. The base shall be bladed and shaped to conform to the typical sections shown on the plans. Then the base shall be compacted by rolling with a combination of steel wheel and rubber tired rollers until a minimum density of at least 98 percent of the maximum density obtainable under AASHTO T-180 is reached. The base shall have an average LBR value of not less than 100. The LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.

5. Testing shall be performed at the following frequencies:

    - Perform in-place density on crushed concrete base at a frequency of 1 test per 300 linear foot of roadway or 5,000 square feet of pavement.

    - Perform LBR tests at a frequency of 1 test per visual change in material and a minimum of 1 test per 15,000 square feet of pavement.

    - The Engineer should perform a final visual base inspection prior to placement of prime or tack coat and paving.

Regardless of the base type selected, a minimum of 2 feet separation should be maintained between the bottom of the base course and the clayey soils. If necessary, the minimum separation can be obtained by undercutting the clays or filling the site.

4.5.2.3 Wearing Surface

The wearing surface should consist of FDOT Type SP asphaltic concrete. Specific requirements for Type SP asphaltic concrete wearing surface are outlined in the FDOT, *Standard Specifications for Road and Bridge Construction, current Edition.*

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

4.5.3 Effects of Groundwater

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

4.5.4 Curbing

Typical curbing is extruded and placed atop the asphaltic concrete surface. This type of curbing does not act as a horizontal cutoff for lateral migration of storm and irrigation water into the base material and as a result of this it is not uncommon for base and subgrade materials adjacent to these areas to become saturated, promoting subsequent localized pavement deterioration. Consequently, we recommend that most pavements abutting irrigated landscape areas be equipped with an underdrain system that penetrates a minimum depth equivalent to the bottom of the stabilized subgrade to intercept trapped shallow water and discharge it into a closed system or other acceptable discharge point.

Alternatively, curbing around landscaped sections adjacent to the parking lots and driveways could be constructed with full-depth curb sections to reduce horizontal water migration. However, underdrains may still be recommended dependent upon the soil type and spatial relationships. UES should review final grading plans to evaluate the need and placement of pavement and landscape underdrains.

4.5.5 Concrete (Rigid) Pavement

Concrete pavement is a rigid pavement that is strong, durable and handles the heavy loads more effectively than asphalt pavement. Concrete pavement is recommended under the dumpster area, and 10 feet in front of the trash enclosure, at a minimum.

We recommend using the existing surficial sands or approved structural fill densified to at least 98 percent of Modified Proctor test maximum dry density (AAHTO T-180) without additional stabilization under concrete pavement, with the following stipulations:

1. Prior to placement of concrete, the subgrade soils should be densified as recommended in Section 4.5.7 of this report.

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

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

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

5. The bottom of the pavement should be separated from the seasonal high groundwater level by at least 12 Inches.

We recommend undercutting clayey soils to a depth of 24 inches below the bottom of the base course in accordance with FDOT index 500. Based on review of the FDOT Rigid Pavement Design Manual and provided that the site is prepared as recommended in this report, we recommend using the minimum design shown in Table 6 for concrete pavements.

Table 6 Minimum Concrete Pavement Thickness

Maximum Traffic Loading	Minimum Pavement Thickness	Maximum Control Joint Spacing	Recommended Saw Cut Depth
up to 300,000 E_{18}SAL	6 inches	12 feet x 12 feet	2 inches

For loading conditions greater than those presented in Table 3, we recommend that you have a complete pavement design performed based on projected traffic data.

We recommend using concrete with a minimum 28-day compressive strength of at least 4000 pounds per square inch. Layout of the saw cut control joints should form square panels, and the depth of Saw cut joints should be made to a depth of ⅓ of the concrete slab thickness.

We recommend allowing UES to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

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

Specimens should be obtained to verify the compressive strength of the pavement concrete at least every 50 cubic yards, or at least once for each day's placement, whichever is greater.

4.5.6 Construction Traffic

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

4.5.7 Site Preparation for the New Pavement Areas

Following is a list of our recommended site preparation procedures to prepare the new pavement areas for the proposed construction.

1. Strip the pavement areas of any roots, vegetation, old pavements and base courses, debris, organics, etc. Stripping should be performed at least 3 feet beyond pavement edges. We recommend that the stripped surface be observed and probed by representative of UES.

2. Following site clearing, grubbing and rough grading, the pavement areas should be proof-rolled using a large, fully loaded rubber-tired vehicle (dump truck) or similar equipment. Proof-rolling will help locate any surficial zones of especially loose or soft or unsuitable soils not encountered in the soil test borings, and should help provide more uniformity in the sandy subsurface soil profile. Unusual or unanticipated conditions identified during this process must be immediately brought to the attention of the UES Geotechnical Engineer. Field density testing is not required during proof-rolling operations

3. Within the pavement areas, compact the exposed soils to at least 98 percent of the Modified Proctor test maximum dry density (AASHTO T-180) to a depth of at least 1 foot below the stripped surface and full depth of fill, or at least 2 feet below the bottom of base course (or concrete pavement) level, whichever is greater.

   Please note that the surficial soils within the proposed pavement areas may contain varying quantities of silt and clay. These silty/clayey soils tend to readily hold moisture and may require more stringent compactive efforts than clean fine sands.

4. Soil density testing to verify the uniformity of compactive efforts should be performed at a frequency of at least one (1) test for every 5,000 square feet per foot of compacted soil, or at a minimum of two test locations, whichever is greater.

5. Prior to the placement of the base course within the asphaltic pavement areas, stabilize the subgrade to a depth of 12 inches to provide a stable and firm surface so that the base course can be properly and uniformly placed. The subgrade should be compacted to at least 98 percent of the Modified Proctor maximum dry density (AASHTO T-180).

4.6 BUILDING SITE PREPARATION

We recommend normal, good practice site preparation procedures. These procedures include: stripping of the project site of existing vegetation and topsoil, compacting the subgrade and placing necessary fill or backfill to grade with engineered fill. The structural borings indicated that clay was present to depths of less than 10 feet below existing grades beneath the building footprint. **We recommend 4-foot auger borings and penetrometer probes are performed in the proposed footings excavations, and building pad area to determine if undercutting of clayey material will be needed.** We recommend that the bottom of all footings be probed to confirm the suitability of the bearing soils. A more detailed synopsis of this work is as follows:

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

2. If required, perform remedial dewatering prior to any earthwork operations. Dewatering systems should not be decommissioned until the excavation is backfilled two feet above the groundwater level at the time of construction. Further, the site should always be graded to prohibit ponding of stormwater runoff.

3. Strip the proposed construction limits of all grass, roots, topsoil, and other deleterious materials within 5 feet beyond the perimeter of the proposed structure and pavement areas. Expect typical stripping at this site to depths of 6 to 12 inches. Deeper clearing and grubbing depths may be encountered in heavily vegetated areas. Also all utilities, foundation and other below grade structures should be removed and the excavations backfilled as described below.

4. Following site clearing, grubbing and rough grading, the same project areas should be proof-rolled using a large, fully loaded rubber-tired vehicle (dump truck) or similar equipment. Proof-rolling will help locate any surficial zones of especially loose or soft or unsuitable soils not encountered in the soil test borings, and should help provide more uniformity in the sandy subsurface soil profile. Unusual or unanticipated conditions identified during this process must be immediately brought to the attention of the UES Geotechnical Engineer. Field density testing is not required during proof-rolling operations.

5. Weak subgrade soils identified during proof-rolling operations should be excavated and removed from the site, and replaced with granular fill soils. We recommend that the bottom of all footings be probed to confirm the suitability of the bearing soils. Granular soils used for this purpose should meet the material and placement specifications outlined below.

6. Excavate and/or fill the site to achieve the proposed grades. Stockpile the surficial sandy soils for use as fill. **Perform hand auger borings or cone penetrometer probes in the footings excavations, and building pad areas to investigate for clayey soils. If encountered, clays should be removed to a minimum of 4 feet below the bottom of the footings/floor slabs.** The recommended separation can be achieved either by undercutting the material or raising the site grades.

7. The over-excavated areas should be backfilled with a compacted, low permeability, non-plastic engineered fill material. This fill material should consist of poorly draining, silty sand or clayey sand with between 15% to 30% material passing the No. 200 sieve, a Liquid Limit (LL) value less than 30, and a Plasticity Index (PI) value less than 15. Special compaction equipment (i.e. Sheepsfoot Roller) and strict moisture control may be required to achieve the minimum compaction specifications. Loose lift thicknesses of 8 inches or less are recommended. *If the recommended low permeability backfill soils are not available, then the surface of the undercut needs to be sloped at least 5 percent and a network of underdrains installed at the base of the fill to capture and discharge water from the fill mass.* The underdrain system should discharge to a suitable point well away from, and down gradient of the foundations.

8. Subgrade compaction operations should be implemented with a compactor of appropriate size. Compaction operations should be run until an in-place soil density of 95 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of 2 feet below the final subgrade, or foundation bearing elevations, whichever is greater. A cone penetrometer should be used to verify the depth of the improvement. If necessary to achieve the recommended soil compaction at depth, the entire project area may be undercut, the exposed subgrade soils compacted, and then the areas backfilled using 6-inch lifts to final subgrade elevation.

9. Compaction operations should extend to the limits of the cleared/grubbed project areas. Compaction of the existing, near-surface sandy soils will provide for uniformity of foundation/slab settlements and improve the soils' bearing capacity conditions. Typically, the soils should exhibit moisture contents within ± 2 percent of the modified Proctor optimum moisture content during compaction. A minimum of eight (8) complete coverages (in perpendicular directions) should be made in the building area with a vibratory roller to improve the uniformity and increase the density of the underlying sandy soils. It should be anticipated that moisture will need to be added to the subgrade in order to achieve the required compaction.

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

11. Test the subgrade for compaction at a frequency of not less than one test per 2,500 square feet in the building areas, or a minimum of three test locations per structure, whichever is greater.

12. Place fill material, as required. Offsite fill material to be used in areas other than undercut areas should contain less than 10 percent passing the No. 200 sieve. Place backfill and fill in uniform 10- to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the modified Proctor maximum dry density. Verification testing should be performed prior to the next lift being placed.

13. Additionally, we recommend that every other column footing, and every 50 lineal feet of wall footing be tested for compaction. Footings should be visually inspected and probed with a cone penetrometer to verify stability.

4.6 DRAINAGE MEASURES

Due to the presence of near surface clays it is important that any construction design incorporate factors to minimize water seepage around the proposed foundations. The design factors should include undercutting around the perimeter of the structures, positive drainage such that surface water flows away from the structures, installation of an underdrain system, gutters should be tied into the drainage system, the use of drought tolerant landscaping, and limiting irrigation around the structures. Trees should not be located within 25 feet of the structures.

4.7 MISCELLANEOUS ISSUES:

Sidewalks and other flatwork founded on the clay soils may be subject to upward and downward movement from shrink/swell activity. Liberal use of crack control joints should help to minimize this impact. Alternatively, flexible construction, such as pavers, could be considered.

Some tree roots from mature trees will likely not penetrate the clay soils and will tend to grow on top of these clays, seeking moisture from the surface and sandier soils above the clays. The roots can heave sidewalks, driveways, and even foundation and slabs. The roots that do penetrate the clays will de-hydrate them in a localized area and cause the clay soils to shrink. We recommend that this be taken into account when selecting the types of vegetation planted, as well as, the proximity to the potentially affected surface improvements. Trees should be not planted and existing trees should be removed to a minimum distance of 25 feet from the building footprints. Utility connections to the structure should be designed and installed with flexible connections to accommodate the expected differential movement.

4.8 CONSTRUCTION RELATED SERVICES

We recommend the Owner retain Universal Engineering Sciences to perform construction materials tests and observations on this project. Field tests and observations include verification of foundation subgrades by performing quality assurance tests on the placement of compacted structural fill and pavement courses. We can also provide concrete testing, pavement section testing, and general construction observation services.

The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost-effective manner.

5.0 REPORT LIMITATIONS

This Report has been prepared for the exclusive use of Clay Electric Cooperative, and other members of the Design/Construction Team for the specific project discussed in this Report. This Report has been prepared in accordance with generally accepted local geotechnical engineering practices; no other warranty is expressed or implied.

During the early stages of most construction projects, geotechnical issues not addressed in this report may arise. Because of the natural limitations inherent in working with the subsurface, it is not possible for a geotechnical engineer to predict and address all possible problems. An ASFE publication, "Important Information About Your Geotechnical Engineering Report" appears in Appendix B, and will help explain the nature of geotechnical issues. Further, we present documents in Appendix: Constraints and Restrictions, to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

DESIGN LOADS:

BUILDING CODE: 2007 EDITION OF FLORIDA BLDG. CODE WITH 2009 SUPPLEMENT.

SPECIAL INSPECTION REQUIREMENTS: YES, IT IS A THRESHOLD BUILDING

DESIGN WIND LOADING CRITERIA:

CODE: ASCE 7-05
BASE WIND SPEED (PER WIND SPEED MAP OF CITRUS COUNTY) = 120 MPH (3 SEC. GUST)
DESIGN BASE WIND SPEED (PER OWNER'S REQUEST TO WITHSTAND CATEGORY III HURICANE, WHICH IS BASIC WIND SPEED + 40) = 160 MPH (3 SEC. GUST)
IMPORTANCE FACTOR = 1.0
EXPOSURE CATEGORY "C"
INTERNAL PRESS. COEFF. = +/-0.18
BUILDING ENCLOSURE CATEGORY = ENCLOSED

WINDBORNE DEBRIS REGION - COMPONENT AND CLADDING DESIGN:

REFER TO COMPONENT AND CLADDING TABLES FOR DESIGN PRESSURES.
PROVIDE MISSILE IMPACT RESISTANT GLAZING THROUGHOUT. EVIDENCE SHALL BE SUBMITTED WHICH DOCUMENTS THAT THE GLAZING AND OTHER STRUCTURES WHICH ENCLOSE OPENINGS IN THE BUILDING ENVELOPE (DOORS, WINDOWS, LOUVERS, STOREFRONTS, CURTAINWALLS, SKYLIGHTS, ETC.) HAVE BEEN TESTED SUCCESSFULLY IN ACCORDANCE WITH SSTD 12-99 FOR LARGE MISSILE PENETRATION RESISTANCE.

GRAVITY DESIGN LOADS:

DEAD LOADS:

ROOF:
STRUCTURE: 30 PSF

LIVE LOADS:

ROOF:
MIN. = 20 PSF

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
REPORT NO.:	949986
PAGE:	A-2

PROJECT: CLAY ELECTRIC DISTRICT OFFICE
SW S.R. 47
LAKE CITY, COLUMBIA COUNTY, FLORIDA

CLIENT: CLAY ELECTRIC COOPERATIVE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-1** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft):

WATER TABLE (ft): NE

DATE OF READING: NA

EST. WSWT (ft):

DATE STARTED: 3/8/12

DATE FINISHED: 3/8/12

DRILLED BY: M. BOATRIGHT

TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./DAY)	ORG. CONT. (%)
0						Tan fine SAND, with silt [SP-SM]						
						Orange and gray silty clayey SAND [SM-SC]						
						Orange and gray sandy CLAY [CH]						
5						Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
REPORT NO.:	949986
PAGE:	A-3

PROJECT: CLAY ELECTRIC DISTRICT OFFICE
SW S.R. 47
LAKE CITY, COLUMBIA COUNTY, FLORIDA

CLIENT: CLAY ELECTRIC COOPERATIVE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-2** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft): DATE STARTED: 3/8/12

WATER TABLE (ft): NE DATE FINISHED: 3/8/12

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Tan fine SAND, with silt [SP-SM]						
						Orange and gray silty clayey SAND [SM-SC]						
5						Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
REPORT NO.:	949986
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LAKE CITY, COLUMBIA COUNTY, FLORIDA

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LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-3** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft): DATE STARTED: 3/8/12

WATER TABLE (ft): NE DATE FINISHED: 3/8/12

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0	X					Brown fine SAND, with silt [SP-SM]						
	X					Tan fine SAND, with silt [SP-SM]						
	X											
5	X					Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
REPORT NO.:	949986
PAGE:	A-5

PROJECT: CLAY ELECTRIC DISTRICT OFFICE
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CLIENT: CLAY ELECTRIC COOPERATIVE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-4** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft): DATE STARTED: 3/8/12

WATER TABLE (ft): NE DATE FINISHED: 3/8/12

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Brown fine SAND, with silt [SP-SM]						
						Tan fine SAND, with silt [SP-SM]						
5						Orange silty clayey SAND [SM-SC]						
						Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
REPORT NO.:	949986
PAGE:	A-6

PROJECT: CLAY ELECTRIC DISTRICT OFFICE
SW S.R. 47
LAKE CITY, COLUMBIA COUNTY, FLORIDA

CLIENT: CLAY ELECTRIC COOPERATIVE, INC.

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-5** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft):

WATER TABLE (ft): NE

DATE OF READING: NA

EST. WSWT (ft):

DATE STARTED: 3/8/12

DATE FINISHED: 3/8/12

DRILLED BY: M. BOATRIGHT

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0	X					Brown fine SAND, with silt [SP-SM]						
	X					Tan fine SAND, with silt [SP-SM]						
	X					Orange silty clayey SAND [SM-SC]						
5	X					Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
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PAGE:	A-7

PROJECT: CLAY ELECTRIC DISTRICT OFFICE
SW S.R. 47
LAKE CITY, COLUMBIA COUNTY, FLORIDA

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LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-6** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft): DATE STARTED: 3/8/12

WATER TABLE (ft): NE DATE FINISHED: 3/8/12

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

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0						Brown fine SAND, with silt [SP-SM]						
						Orange silty clayey SAND [SM-SC]						
5						Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
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PAGE:	A-8

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BORING NO: **A-7** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft): DATE STARTED: 3/8/12

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0						Brown fine SAND, with silt [SP-SM]						
						Tan fine SAND, with silt [SP-SM]						
5						Orange and gray silty clayey SAND [SM-SC]						
						Boring Terminated at 6'						

UNIVERSAL ENGINEERING SCIENCES
BORING LOG

PROJECT NO.:	0230.1100024.0000
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PROJECT: CLAY ELECTRIC DISTRICT OFFICE
SW S.R. 47
LAKE CITY, COLUMBIA COUNTY, FLORIDA

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LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **A-8** SHEET: 1 of 1

SECTION: 18 TOWNSHIP: 4S RANGE: 17E

GS ELEVATION(ft):

WATER TABLE (ft): NE

DATE OF READING: NA

EST. WSWT (ft):

DATE STARTED: 3/8/12

DATE FINISHED: 3/8/12

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DEPTH (FT.)	SAMPLE	BLOWS PER 6" INCREMENT	N VALUE	W.T.	SYMBOL	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS LL	ATTERBERG LIMITS PI	K (FT./ DAY)	ORG. CONT. (%)
0						Brown fine SAND, with silt [SP-SM]						
						Tan to orange SAND, with silt [SP-SM]						
						Orange and gray silty clayey SAND [SM-SC]						
5						Boring Terminated at 6'						

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

GENERAL PERMIT

PERMITTEE:
CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

PERMIT NUMBER: ERP12-0032
DATE ISSUED: 03/27/2012
DATE EXPIRES: 03/27/2015
COUNTY: COLUMBIA
TRS: S18/T4S/R17E

PROJECT: CLAY ELECTRIC COOPERATIVE OFFICE - LAKE CITY

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

CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

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

Construction and operation of a surfacewater management system serving 3.73 acres of impervious surface on a total project area of 30.46 acres in a manner consistent with the application package submitted by Eng, Denman & Associates, Inc., certified on March 5, 2012.

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

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

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

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

Standard Conditions for All General Permits:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Approved by _____ Date Approved 3/27/12
District Staff

_____ _____
Clerk Asst. Executive Director

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

NOTICE OF RIGHTS

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

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

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

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

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

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

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

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

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

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

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

CERTIFICATE OF SERVICE

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

CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

At 4:00 p.m. this 28 day of March, 2012.

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

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

cc: File Number: ERP12-0032

SECTION C

AS-BUILT CERTIFICATION
(TO BE COMPLETED BY A PROFESSIONAL ENGINEER)

I hereby certify that all components of the surfacewater management system authorized under permit number _____, issued _____ ___, for _____ in _____ County have been built in substantial conformance with the permitted plans and design.

It is further stated that the permittee has been furnished with instructions as to how the system is to be operated and maintained.

_____
Signature of Engineer

_____
Name and Florida Registration Number (Please print or type)

_____
Date Certification Made

_____
Company Name

_____
Mailing Address

_____
City, State, Zip Code

_____
Phone Number

Project visited for final (As-built) inspection on: _____

Minor Field Changes: _____

_____

_____

_____

[AFFIX SEAL]

ADDENDUM NUMBER ONE

February 17, 2012

Clay Electric Cooperative, Inc.
New District Office - Project Number 11-1300
Lake City, FL
(3702.060)

Brame Architects
606 Northeast First Street
Gainesville, FL 32601
Phone (352) 372-0425
FAX (352) 372-0427

TO:	All bidders of record, persons, plan rooms and agencies who have received Drawings and Specifications. **NOTE: It is the responsibility of all General Contractors to notify their subcontractors and suppliers of all addendum changes, clarifications and/or additions to the Specifications and Drawings.**
PURPOSE:	To make certain changes, clarifications and/or additions to the Specifications and Drawings. Items refer to that portion of the Specifications or Drawings where item is discussed or shown. This listing is to establish the intent of the necessary modifications to the Documents and should not be considered an exhaustive listing of the locations or extent of these changes.
ACKNOWLEDGMENT:	All Contractors submitting Proposals on this work shall acknowledge receipt of the Addendum by inserting the number and date in their Proposals.

SPECIFICATIONS: Make the following changes and/or additions:

SECTION 01100 – SUMMARY

Item 1 Page 01100-2, PART 1 – GENERAL, 1.5 WORK UNDER OTHER CONTRACTS, B.1, delete this item in its entirety and substitute the following in its place:

1. A separate contract will be awarded for the complete furnishing and installation of the Fueling Facility.

SECTION 02821 – CHAIN-LINK FENCES AND GATES

Item 2 Page 02821-2, PART 1 – GENERAL, 1.5 PERFORMANCE REQUIREMENTS, B.3, change the Gate Height to 10'-0".

Item 3 Page 02821-3, PART 2 – PRODUCTS, 2.3 SWING GATES, A.1, change the Gate Leaf Width to be "as indicated on the Drawings".

Item 4 Page 02821-3, PART 2 – PRODUCTS, 2.3 SWING GATES, A.2, change the Gate Fabric Height to 120 inches (3,048 mm) or less.

SECTION 04810 – UNIT MASONRY ASSEMBLIES

Item 5 Page 04810-5, PART 2 – PRODUCTS, 2.2 CONCRETE MASONRY UNITS (CMUs), C.5, change Colors to read: Manufacturer's standard.

SECTION 07411 – METAL ROOF PANELS

Item 6 Page 07411-6, PART 2 – PRODUCTS, 2.4 STANDING-SEAM METAL ROOF PANELS, B.1, Basis-of-Design Product, revise to read "…Merchant & Evans; Zip-Lok…"

Item 7 Page 07411-6, PART 2 – PRODUCTS, 2.4 STANDING-SEAM METAL ROOF PANELS, B.1, Basis-of-Design Product, revise the manufacturer's product list to read as follows:

a. Fabral; Powerseam
b. Imetco; TwinLok
c. The Garland Company; R-Mer Loc

Item 8 Page 07411-6, PART 2 – PRODUCTS, 2.4 STANDING-SEAM METAL ROOF PANELS, B.1, Basis-of-Design Product, add the following at the end of the list:

d. PAC-CLAD Petersen Aluminum; Tite-Lok Plus

Item 9 Page 07411-6, PART 2 – PRODUCTS, 2.4 STANDING-SEAM METAL ROOF PANELS, B.6, change the Panel Height to 2 inches (50.8 mm).

SECTION 08411 – ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

Item 10 Page 08411-6, PART 2 – PRODUCTS, 2.5 ENTRANCE DOOR SYSTEM, B, add the following at the end of this paragraph: Contractor has the option of substituting storefront manufacturer's standard finish hardware of same type, quantity and finish as listed in respective Hardware Sets in Section 08710 – DOOR HARDWARE.

SECTION 08710 – DOOR HARDWARE

Item 11 Page 08710-16, PART 3 – EXECUTION, 3.6 DOOR HARDWARE SETS, HW SET: 02, delete Door Number 117A from this set.

Item 12 Page 08710-17, PART 3 – EXECUTION, 3.6 DOOR HARDWARE SETS, HW SET: 05, add Door Number 117A to this set.

DRAWINGS: Make the following changes and/or additions:

SHEET A1.1

Item 13 FLOOR PLAN, for the symbol "TV" indicated in this plan, the Owner will be responsible for providing and installing Television Brackets. Contractor shall coordinate with the Owner to provide 2X WD Blocking in required locations to facilitate the Owner's installation of TV Brackets at a later date.

Item 14 FLOOR PLAN, delete all references to "DOCK LEVELER". A dock leveler will not be a part of this project.

SHEET A2.1

Item 15 ALUM STOREFRONT WINDOW TYPES, Window Type B, delete reference to "ALUM STOREFRONT FRAME". This window shall be steel framed.

SHEET A2.2

Item 16 WINDOW HEAD / CMU WALL 4B/A2.2, delete this detail in its entirety and substitute in its place with that indicated on the attached drawing SK-1A, TELLER WINDOW HEAD / CMU WALL 4B/A2.2, dated 02/17/12.

Item 17 WINDOW JAMB / CMU WALL 4D/A2.2, delete this detail in its entirety and substitute in its place with that indicated on the attached drawing SK-1C, WINDOW JAMB / CMU WALL 4D/A2.2, dated 02/17/12.

Item 18 WINDOW SILL / CMU WALL 4G/A2.2, delete this detail in its entirety and substitute in its place with that indicated on the attached drawing SK-1B, TELLER WINDOW SILL / CMU WALL 4G/A2.2, dated 02/17/12.

SHEET A3.1

Item 19 SOUTH ELEVATION, add designation for one (1) additional dock bumper. Dock bumper layout shall match that indicated on SHEET A4.1, BUILDING SECTION 1D/a4.1.

Item 20 SOUTH ELEVATION, delete reference to "DOCK LEVELER". A dock leveler will not be a part of this project.

SHEET A4.5

Item 21 WALL SECTION THRU DRIVE-THRU 6G/A4.5, replace this Section with that indicated on the attached drawing SK-2, WALL SECTION THRU DRIVE-THRU 6G/A4.5, dated 02/17/12.

SHEET A6.1

Item 22 REFLECTED CEILING PLAN, general: Warehouse 141 is to receive Fiber Cement Soffit Board ceiling. All exterior soffits are to receive ¾" Cement Plaster on Metal Lath.

Item 23 REFLECTED CEILING PLAN, add additional cement plaster (stucco) control joint locations as indicated on the attached drawings SK-3 and SK-4, dated 02/17/12.

Item 24 GENERAL CEILING NOTES, add note "F" as follows:

F. PROVIDE BLOCKING AND BACKUP AS REQUIRED AT STUCCO CONTROL JOINT AND EXPANSION JOINT LOCATIONS.

SHEET S2.3

Item 25 ROOF TRUSS PROFILES CONTINUED 1G/S2.3, T8 – TRUSS, delete reference to "STL. BEAM". This truss shall be a cantilever truss.

SHEET E0.2

Item 26 ELECTRICAL SITE PLAN, Replace sheet E0.2 with the attached sheet E0.2 revision dated February 16, 2012

SHEET E3.1

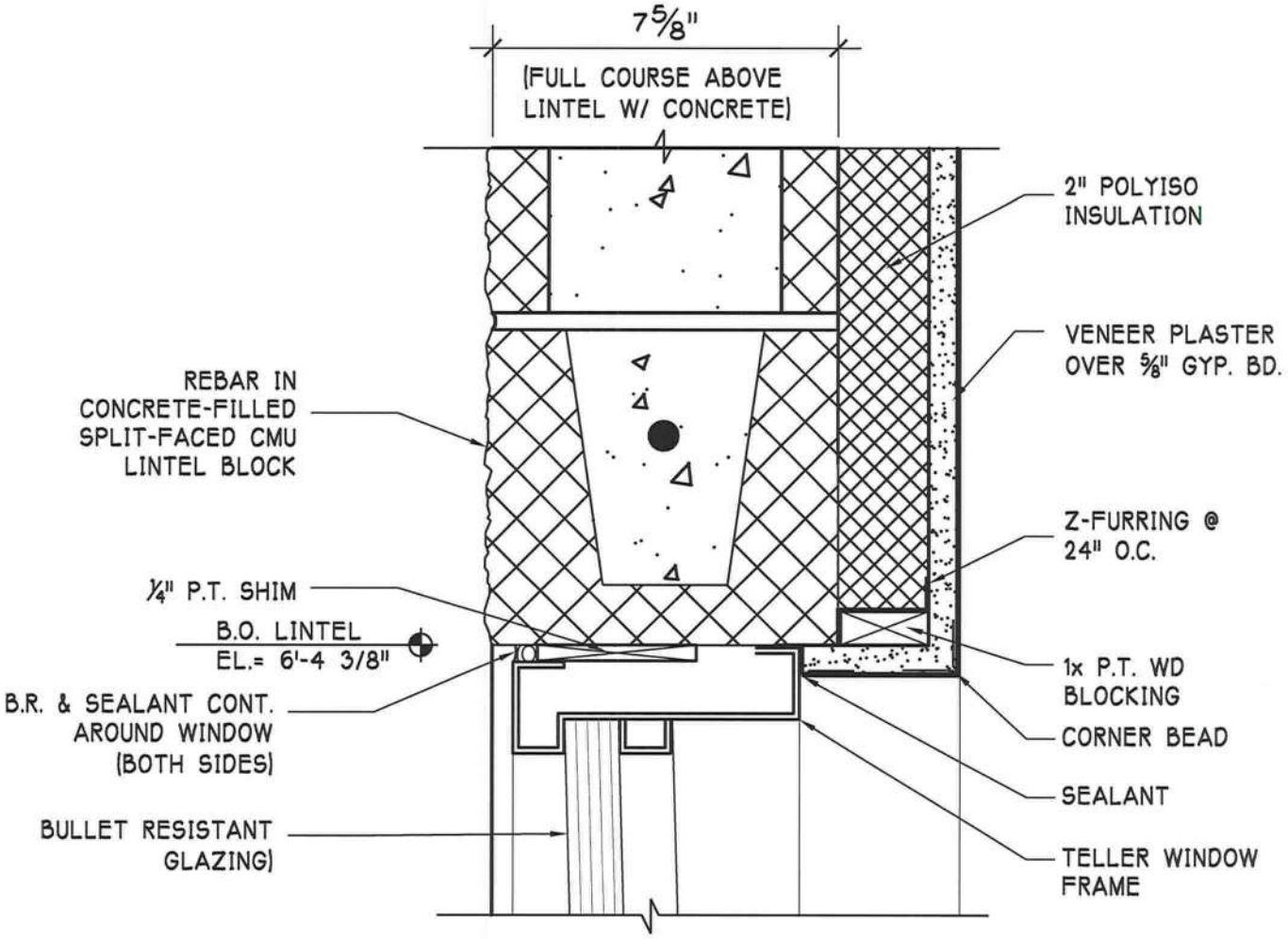
Item 27 ELECTRICAL SCHEDULES, Replace sheet E3.1 with the attached sheet E3.1 revision dated February 16, 2012

SHEET T0.2

Item 28 TELCOM SITE PLAN, Revise sheet T0.2 as indicated on the attached 8 ½ x 11 sheet T0.2a dated February 16, 2012.

END OF ADDENDUM NUMBER ONE

F:\3702060\ADD-01.doc



TELLER WINDOW HEAD / CMU WALL

SCALE: 3" = 1'-0"

4B
A2.2

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

NEW DISTRICT OFFICE

Clay Electric Cooperative, Inc.

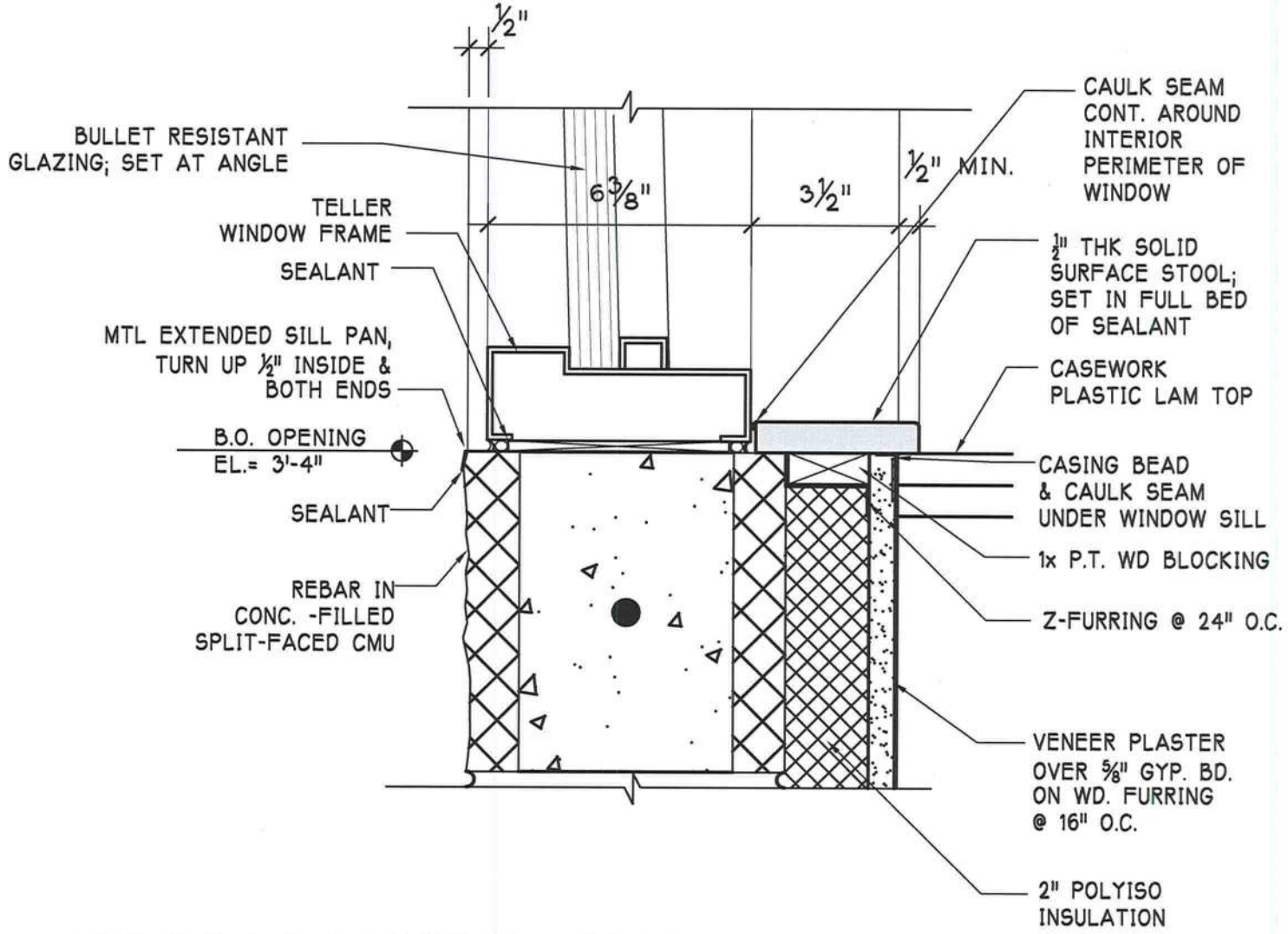
1659 SW State Road 47 Lake City, Florida

A Touchstone Energy® Cooperative

DRAWN MDR	CAD 3702.060/CD CLAY – SK-1
CHECKED DH	REVISION
DATE 2/17/12	

FILE NO. 3702060

DRAWING SK-1A



TELLER WINDOW SILL / CMU WALL

SCALE: 3" = 1'-0"

4G / A2.2

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
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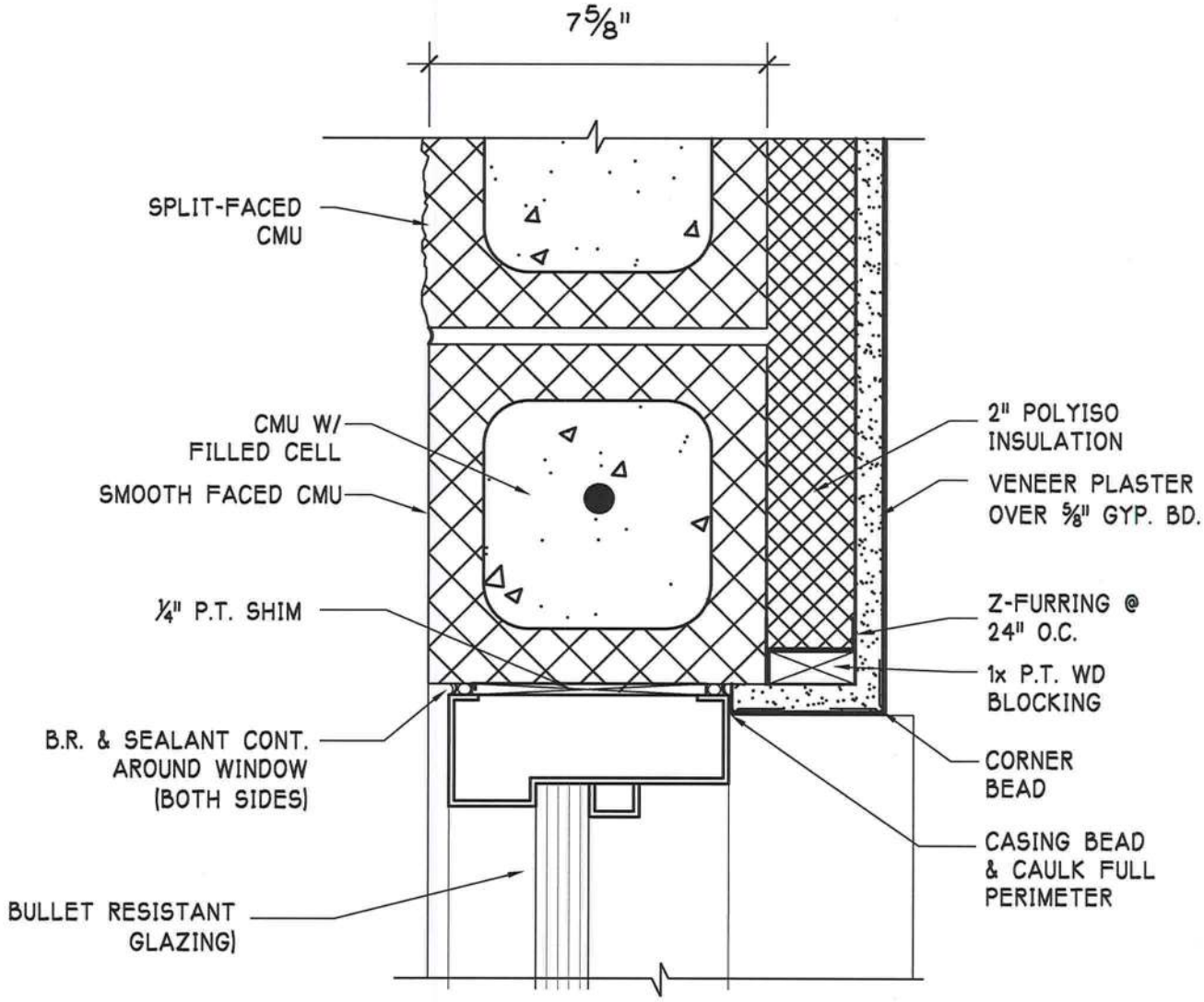
CERT. NO. AA C000071

NEW DISTRICT OFFICE
1659 SW State Road 47 Lake City, Florida

Clay Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

DRAWN MDR	CAD 3702.060/CD CLAY – SK-1
CHECKED DH	REVISION
DATE 2/17/12	

FILE NO. 3702060
DRAWING SK-1B



WINDOW JAMB / CMU WALL

SCALE: 3" = 1'-0"

4D
A2.2

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

NEW DISTRICT OFFICE
1659 SW State Road 47 Lake City, Florida

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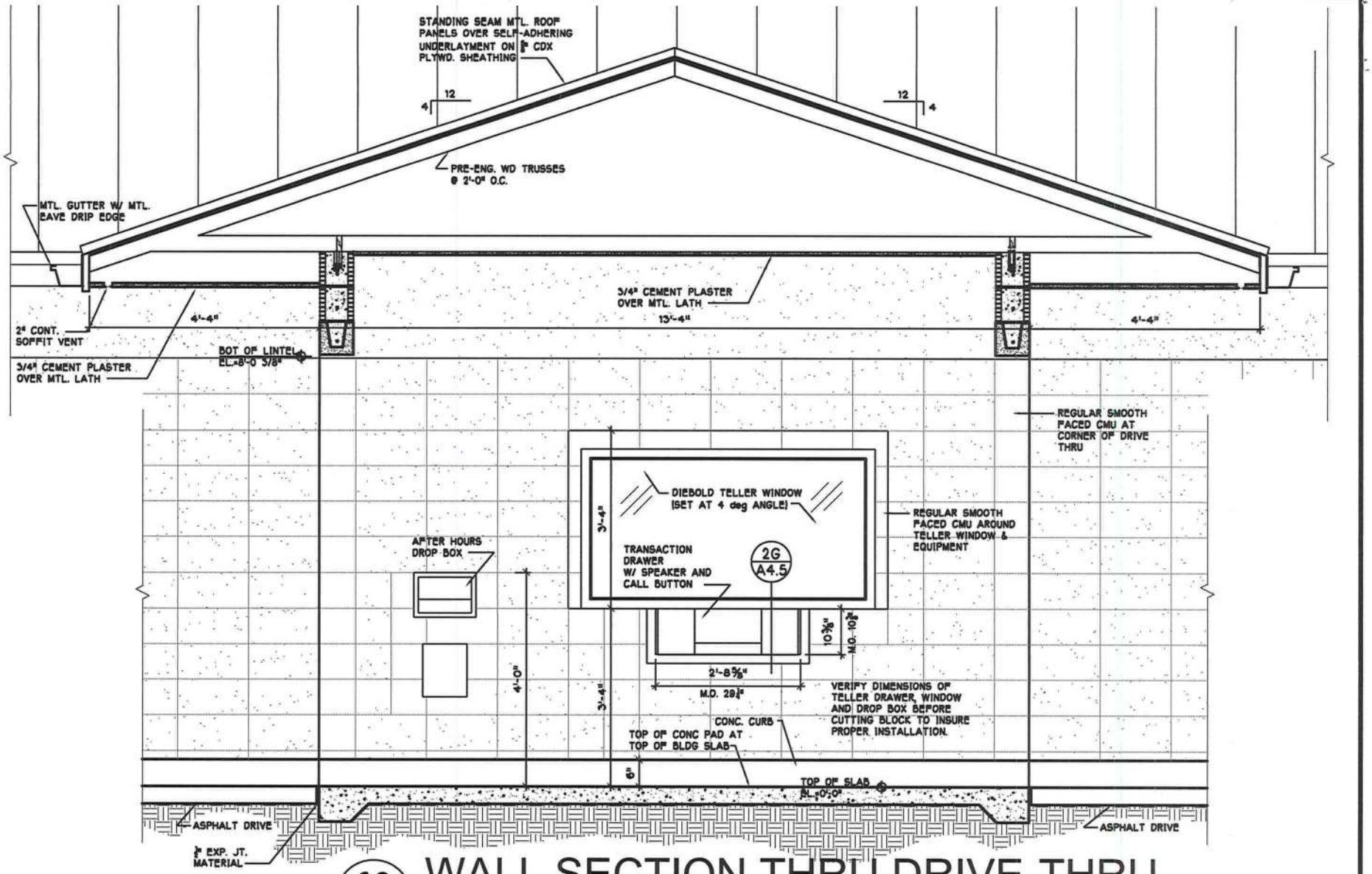
A Touchstone Energy® Cooperative

DRAWN MDR	CAD 3702.060/CD CLAY – SK-1
CHECKED DH	REVISION
DATE 2/17/12	

FILE NO. 3702060
DRAWING SK-1C



6G / A4.5 WALL SECTION THRU DRIVE-THRU

SCALE: 3/4"=1'-0"

CUSTOMER SERVICE ITEMS:

1 - CUSTOMER SERVICE TELLER WINDOW EQUAL TO DIEBOLD PRE-ASSEMBLED FIXED WINDOW 023415-000A; CLEAR ANODIZED; Economy; Level 3 (R.O. 65¾"W x 36¾" H) WINDOW TO INCLUDE SHADE WITH WORD "CLOSED" IN 4" VINYL LETTERS
2 - TRANSACTION DRAWER EQUAL TO DIEBOLD 121-36 W/ CALL BUTTON; MANUAL; LEVEL 3; CLEAR ANODIZED AND DIEBOLD 816 AUDIO ONE ON ONE AUDIO CONTROL MODULE
3 - DROP BOX EQUAL TO DIEBOLD 163-33; 24-HR ENVELOPE DEPOSITORY; STAINLESS STEEL FINISH; PROVIDE A S.S. CHUTE TO A LOCKABLE ENVELOPE STORAGE BOX (163-32); ALSO PROVIDE A SEPARATE EXTERIOR ENVELOPE STORAGE BOX.

ALL ITEMS ARE TO BE PROVIDED BY AND INSTALLED BY GENERAL CONTRACTOR.

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

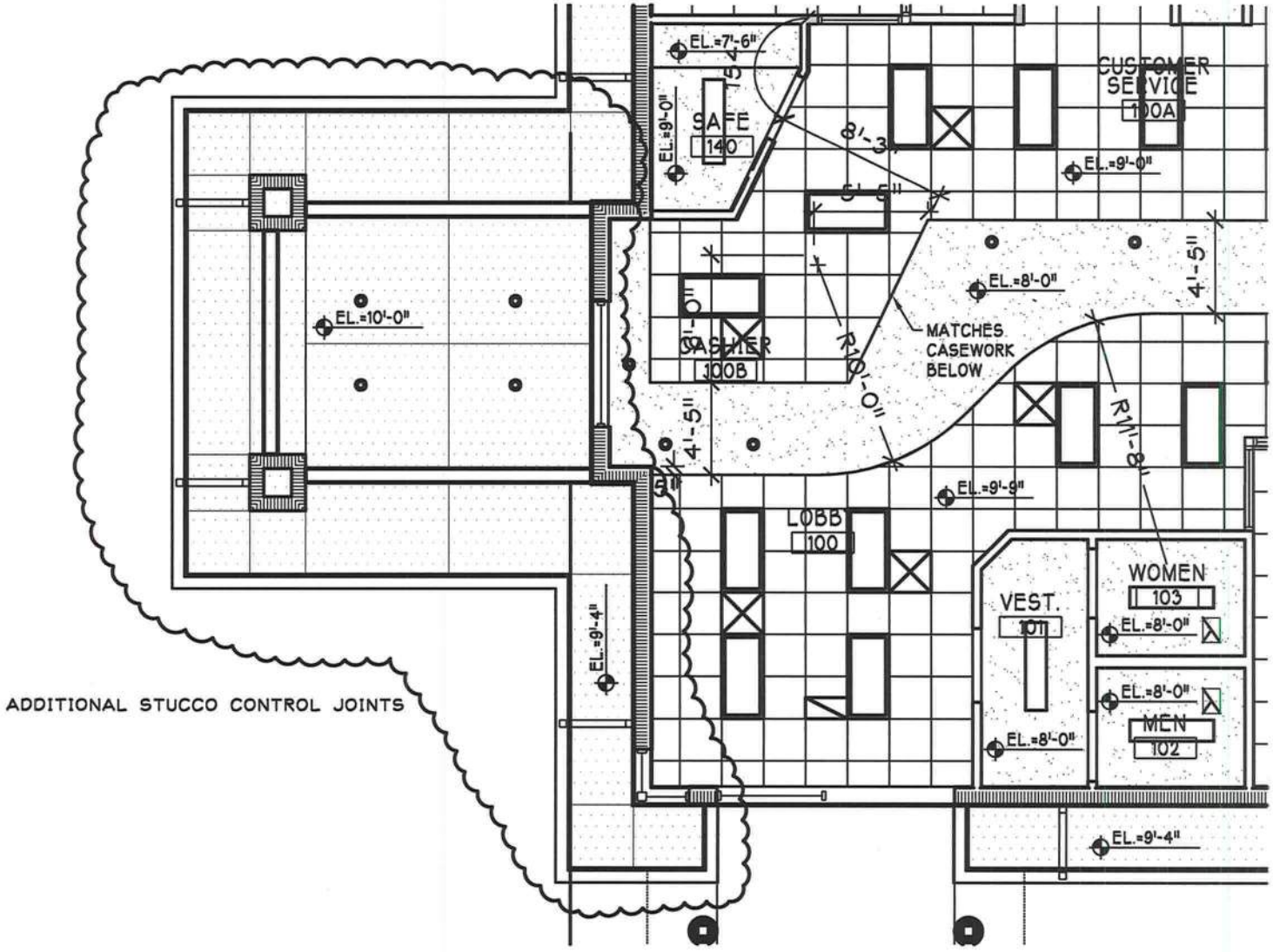
NEW DISTRICT OFFICE

Clay Electric Cooperative, Inc.

1659 SW State Road 47 Lake City, Florida

A Touchstone Energy® Cooperative

DRAWN	MDR
CHECKED	DH
DATE	2/17/12
CAD	3702.060/CD CLAY – SK-2
REVISION	
FILE NO.	3702060
DRAWING	SK-2



PARTIAL REFLECTED CEILING PLAN

SCALE: 1/8"=1'-0"

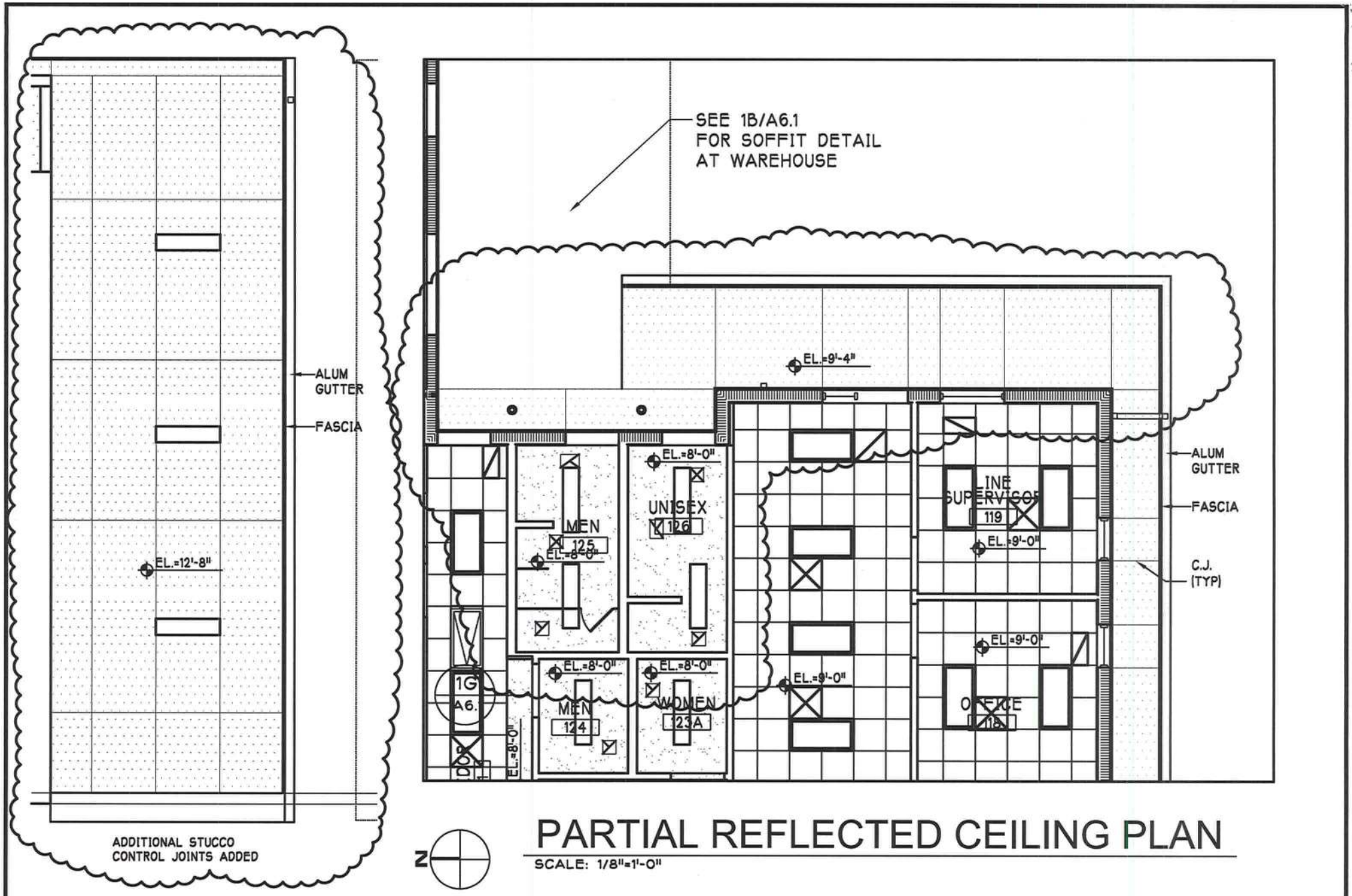
Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

NEW DISTRICT OFFICE

1659 SW State Road 47 Lake City, Florida

Clay Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

DRAWN	MDR
CHECKED	DH
DATE	2/17/12
CAD	3702.060/CD CLAY – SK-3
REVISION	
FILE NO.	3702060
DRAWING	SK-3



PARTIAL REFLECTED CEILING PLAN

SCALE: 1/8"=1'-0"

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

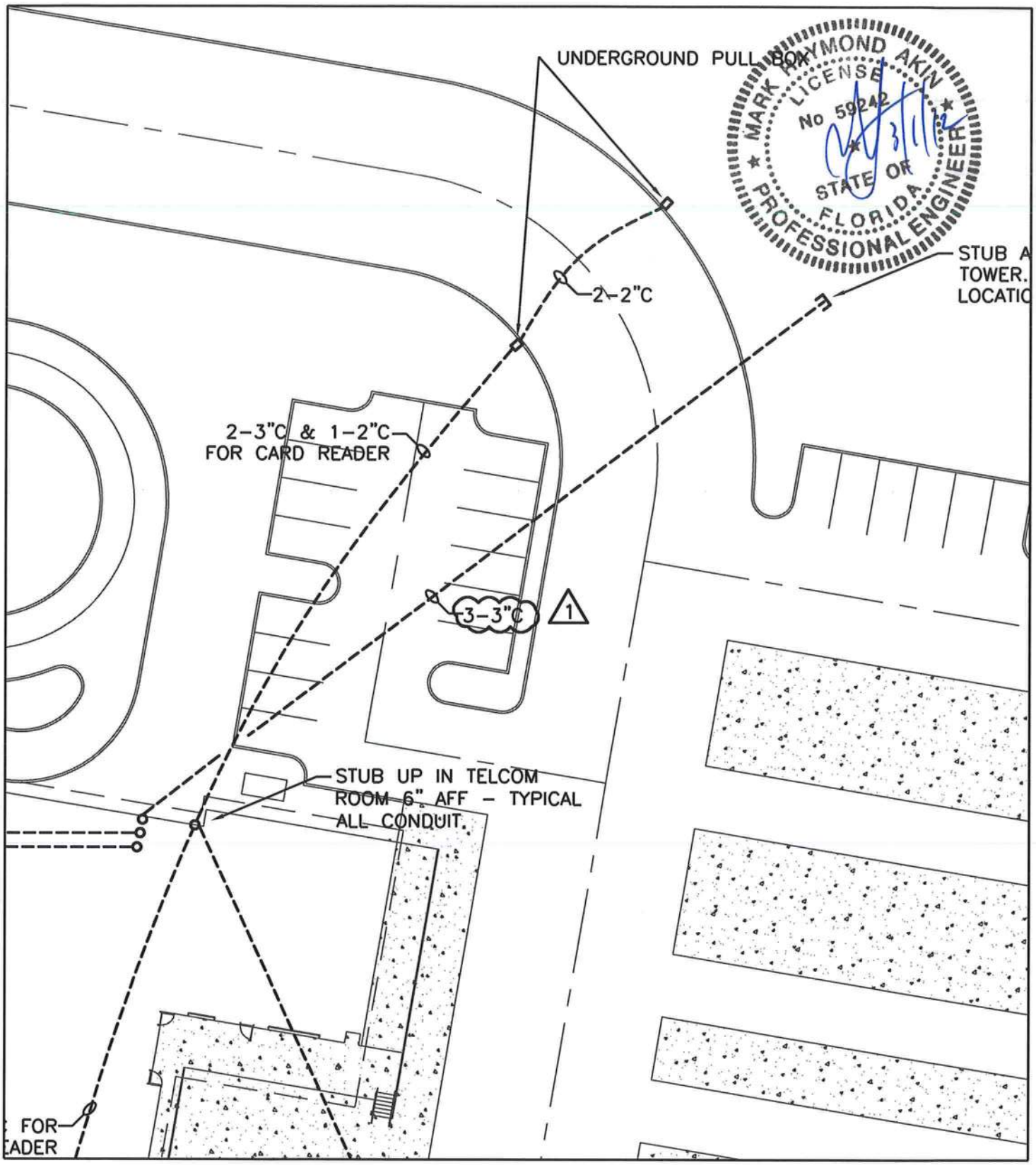
NEW DISTRICT OFFICE

1659 SW State Road 47 Lake City, Florida

Clay Electric Cooperative, Inc.
A Touchstone Energy® Cooperative

DRAWN MDR	CAD 3702.060/CD CLAY – SK-3
CHECKED DH	REVISION
DATE 2/17/12	

FILE NO. 3702060
DRAWING SK-4



MARK RAYMOND AKIN
LICENSE
No 59242
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
3/1/12

N

TELCOM SITE PLAN

SCALE: 3/8" = 1'-0"

MOSES & ASSOCIATES

MOSES ▪ LEBO ▪ AKIN ▪ BROOKS ▪ FRASIER

INTELLIGENT BUILDING SYSTEMS ENGINEERING

▪ 2209 NW 40th Terrace, Suite A ▪ Gainesville, FL 32605 ▪ FL License EB-0003097 ▪ v 352.372.1911 ▪ f 352.372.0186 ▪ www.moses-eng.com ▪

TITLE

CLAY ELECTRIC
NEW DISTRICT OFFICE
LAKE CITY, FL

DATE	02/16/12
M&A JOB #	11238
SHEET	T0.2a

ADDENDUM NUMBER TWO

February 20, 2012

Clay Electric Cooperative, Inc.
New District Office - Project Number 11-1300
Lake City, FL
(3702.060)

3/5/12

Brame Architects
606 Northeast First Street
Gainesville, FL 32601
Phone (352) 372-0425
FAX (352) 372-0427

TO: All bidders of record, persons, plan rooms and agencies who have received Drawings and Specifications. **NOTE: It is the responsibility of all General Contractors to notify their subcontractors and suppliers of all addendum changes, clarifications and/or additions to the Specifications and Drawings.**

PURPOSE: To make certain changes, clarifications and/or additions to the Specifications and Drawings. Items refer to that portion of the Specifications or Drawings where item is discussed or shown. This listing is to establish the intent of the necessary modifications to the Documents and should not be considered an exhaustive listing of the locations or extent of these changes.

ACKNOWLEDGMENT: All Contractors submitting Proposals on this work shall acknowledge receipt of the Addendum by inserting the number and date in their Proposals.

SPECIFICATIONS: Make the following changes and/or additions:

SECTION L – CONTRACT SPECIFICAITONS & DRAWINGS

At the listing under the Drawings heading make the following changes:

Item 1 Change sheet number C5.20 to be sheet C5.10.

Item 2 Change the original sheet number C5.20 to be sheet 5.30.

Item 3 After sheet number LS-1 add the following:

IR-1 IRRIGATION PLAN
IR-2 IRRIGATION PLAN

DRAWINGS: Make the following changes and/or additions:

SHEETS A0.0

INDEX OF DRAWINGS

Item 4 Change sheet number C5.20 to be sheet C5.10.

Item 5 Change the original sheet number C5.20 to be sheet 5.30.

Item 6 After sheet number LS-1 add the following:

IR-1 IRRIGATION PLAN
IR-2 IRRIGATION PLAN

SHEETS C0.00, C0.10, C1.00, C2.00, C3.00, C3.10, C3.20, C4.00, C4.10, C5.00, C6.00, C6.10, C6.20, C6.30, C6.40

Item 7 All of these sheets are being re-issued with a Revision 1 date of 2/10/12. The revised sheets are available as indicated in the email that transmitted this Addendum No. Two.

SHEETS C5.20 AND C5.30

Item 8 These two sheets are being re-issued with new numbers (C5.10 and C5.20 respectively) with a Revision 1 date of 2/10/12. The revised sheets are available as indicated in the email that transmitted this Addendum No. Two.

SHEET LS-1

Item 9 This sheet is being re-issued with a Revision date of 2/20/12. The revised sheet is available as indicated in the email that transmitted this Addendum No. Two.

SHEETS IR-1 & IR-2

Item 10 These two new sheets are being issued, with a revision date of 2/20/12. The revised sheets are available as indicated in the email that transmitted this Addendum No. Two.

SHEET A2.1

ALUM. STOREFONT WINDOW TYPES

Item 11 TYPE G, change the jamb detail reference from 7C/A2.3 to SIM. 2G/A2.3.

Item 12 TYPE I, change the jamb detail reference from 7C/A2.3 to 5E/A2.3

Item 13 DOOR SCHEDULE, at Door 125 add the following in the DOOR NO. column on both the left and right side of the Schedule ",141D". The intent of this item is to advise that 141D is the same as door 125.

SHEET A4.6

Item 14 Detail 6g/A4.6,BUILDING SIGN ELEVATION, add the following note to describe the lower portion of the sign where there is lettering "A Touchstone Energy Cooperative":

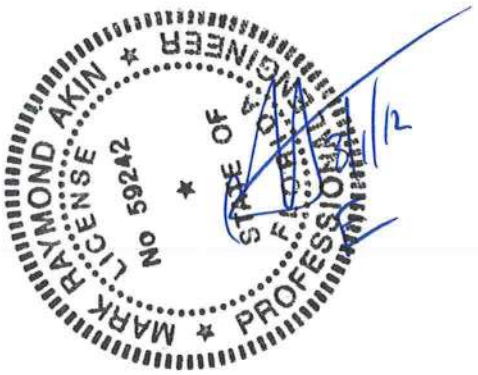
"THIS PORTION OF THE SIGN IS TO BE NOMINAL ¼" ALUMINUM PLATE 8.5" HIGH X 5'-9" LONG, SPACED OFF THE MAIN SIGN A DISTANCE OF 2" USING AN ALUMINUM CHANNEL OR OTHER SIMILAR DEVICE (NO EXPOSED FASTENERS). THE LETTERS AND LOGO TO BE VINYL DIE CUT; LOGO TO CONSIST OF 4 COLORED ITEMS (RED, BLUE, GREEN, DEEP YELLOW). AN ELECTRONIC GRAPHIC FILE OF THE LOGO WILL BE PROVIDED."

SHEET A5.46

Item 15 INTERIOR ELEVATION for METER READERS 128, at elevations 1 and 3 add the shelf above the countertop as indicated in detail 7C/A5.4. (Note, as indicated in elevation 2, there is no shelf above the countertop due to the adjacent window.)

SHEET E0.2

Item 16 ELECTRICAL SITE PLAN, revise as shown in the attached supplemental drawing E0.2a dated February 20, 2012.



END OF ADDENDUM NUMBER TWO

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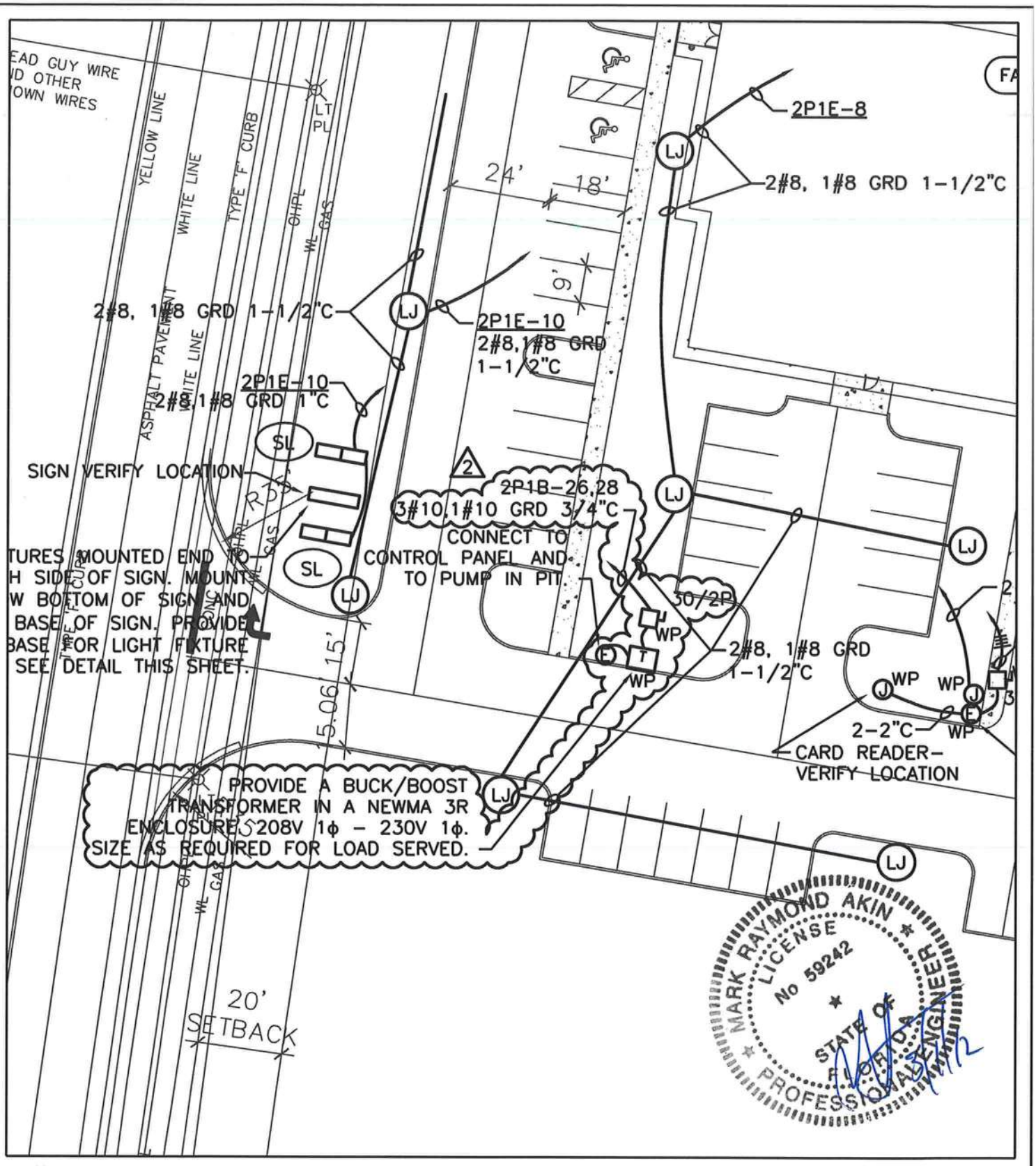


N

ELECTRICAL SITE PLAN

SCALE: 1" = 30'

MOSES & ASSOCIATES

MOSES ■ LEBO ■ AKIN ■ BROOKS ■ FRASIER

INTELLIGENT BUILDING SYSTEMS ENGINEERING

■ 2209 NW 40th Terrace, Suite A ■ Gainesville, FL 32605 ■ FL License EB-0003097 ■ v 352.372.1911 ■ f 352.372.0186 ■ www.moses-eng.com ■

TITLE

CLAY ELECTRIC
NEW DISTRICT OFFICE
LAKE CITY, FL

DATE	02/20/12
M&A JOB #	11238
SHEET	E0.2a

ADDENDUM NUMBER THREE

February 21, 2012

Clay Electric Cooperative, Inc.
New District Office - Project Number 11-1300
Lake City, FL
(3702.060)

Brame Architects
606 Northeast First Street
Gainesville, FL 32601
Phone (352) 372-0425
FAX (352) 372-0427

TO:	All bidders of record, persons, plan rooms and agencies who have received Drawings and Specifications. **NOTE: It is the responsibility of all General Contractors to notify their subcontractors and suppliers of all addendum changes, clarifications and/or additions to the Specifications and Drawings.**
PURPOSE:	To make certain changes, clarifications and/or additions to the Specifications and Drawings. Items refer to that portion of the Specifications or Drawings where item is discussed or shown. This listing is to establish the intent of the necessary modifications to the Documents and should not be considered an exhaustive l isting of the locations or extent of these changes.
ACKNOWLEDGMENT:	All Contractors submitting Proposals on this work shall acknowledge receipt of the Addendum by inserting the number and date in their Proposals.

Make the following changes and/or additions:

OWNER'S INVITATION TO BID DATED FEBRUARY 8, 2012

Item 1 Change the bid date to read Friday, February 24, 2012 at 2 p.m.

DRAWINGS: Make the following changes and/or additions:

SHEET A1.1

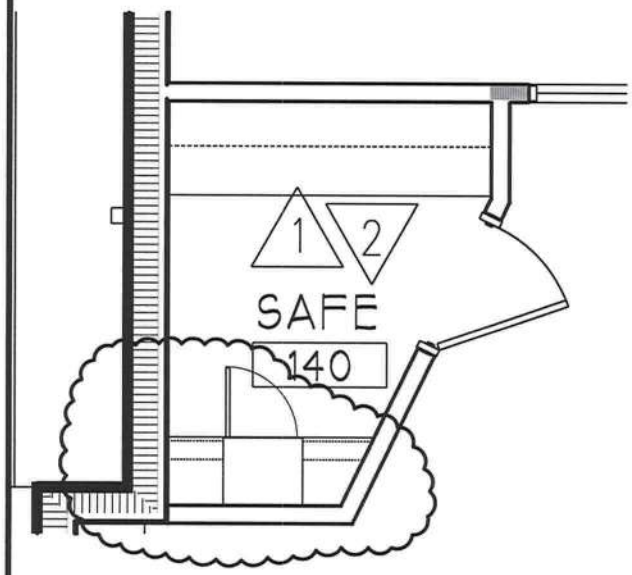
Item 2 FLOOR PLAN, Safe 140, revise as indicated on the Drawing SK-5, PARTIAL FLOOR PLAN, dated 02/21/12.

SHEET A5.1

Item 3 INTERIOR ELEVATIONS, Safe 104, revise Elevation 2 as indicated on the attached Drawing SK-5, dated 02/21/12.

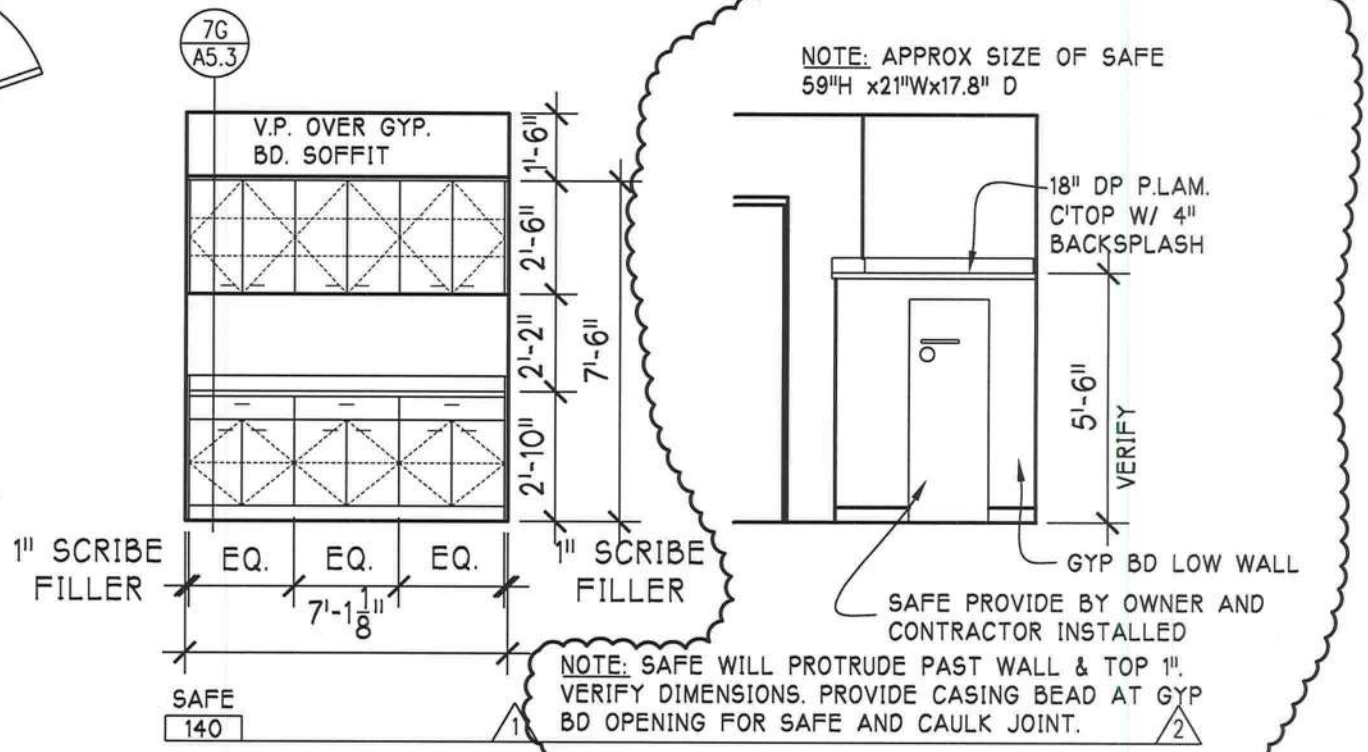
END OF ADDENDUM NUMBER THREE

F:\3702060\ADD-03.doc



PARTIAL FLOOR PLAN

SCALE: 1/4"=1'-0"



INTERIOR ELEVATIONS

SCALE: 1/4"=1'-0"

ADD INTERIOR ELEVATION CHANGE TO SHEET A5.1

Brame Architects
606 N.E. First Street
Gainesville, FL 32601
(352) 372-0425
FAX (352) 372-0427
CERT. NO. AA C000071

NEW DISTRICT OFFICE

Clay Electric Cooperative, Inc.

1659 SW State Road 47 Lake City, Florida

A Touchstone Energy® Cooperative

DRAWN	MDR
CHECKED	DH
DATE	2/21/12
CAD	3702.060/CD CLAY - SK-5
REVISION	
FILE NO.	3702060
DRAWING	SK-5

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

GENERAL PERMIT

PERMITTEE:
CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

PERMIT NUMBER: ERP12-0032
DATE ISSUED: 03/27/2012
DATE EXPIRES: 03/27/2015
COUNTY: COLUMBIA
TRS: S18/T4S/R17E

PROJECT: CLAY ELECTRIC COOPERATIVE OFFICE - LAKE CITY

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

CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

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

Construction and operation of a surfacewater management system serving 3.73 acres of impervious surface on a total project area of 30.46 acres in a manner consistent with the application package submitted by Eng, Denman & Associates, Inc., certified on March 5, 2012.

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

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

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

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

Standard Conditions for All General Permits:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Approved by _____ Date Approved 3/27/12
District Staff

_____ _____
Clerk Asst. Executive Director

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

NOTICE OF RIGHTS

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

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

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

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

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

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

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

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

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

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

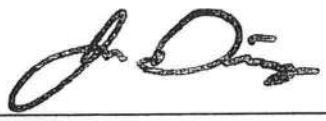
11. Failure to observe the relevant time frames for filing a petition for judicial review, or for Commission review, will result in waiver of the right to review.

CERTIFICATE OF SERVICE

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

CLAY ELECTRIC COOPERATIVE, INC.
PO BOX 308
KEYSTONE HEIGHTS, FL 32656

At 4:00 p.m. this 28 day of March, 2012.



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

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

cc: File Number: ERP12-0032