Leon County

Board of County Commissioners

301 South Monroe Street, Tallahassee, Florida 32301
(850) 606-5302 www.leoncountyfl.gov

Purchasing Division
1800-3 Blair Stone Road
Tallahassee, Florida 32308
(850) 606-1600

June 2, 2010

RE: Bid Title: Construction of Leon County Public Library Eastside Branch
Bid No: BC-06-08-10-33
Opening Date: Tuesday, June 8, 2010 at 2:00 PM

ADDENDUM #3

Dear Vendor:

This letter serves as Addendum #3 for the above referenced project.

1. Attached is a questions and answers document for your consideration.

2. The attached Addendum #3, 43 pages, from the Architect shall be added to the bid documents as stated therein.

3. The electrical transformer for this project is 3-phase 277/480 Volts and the City only provides single phase electric service to projects without additional costs; therefore, contractors will need to include in their bid prices the requisite costs of a 3-phase power. In addition, the Letter of Agreement (LOA) expires in February 2011, and therefore the noted electrical transformer work will need to be completed on or before December 31, 2010, to permit close-out.

Acknowledgment of this addendum is required as part of your bid submittal. Failure to acknowledge this addendum may result in rejection of your bid.

Should you have any questions, feel free to call me at (850) 606-1600.

Sincerely,

Wendi Sellers

Wendi Sellers
Contract Manager

Question 1. Beginning on 3 of10, Water Resources Engineering, who is the "Developer" the documents are referring to?

Answer: As stated in the LOA, the word "Developer" refers to "Leon County".

Question 2. Referencing 8 of 10, Water Resources Engineering, who is responsible for furnishing and installing the following?

Line item 4a, the lift station

Line item 4b, 6" force main

Line item 4c, 2 sanitary manholes

Line item 4d, 8" pvc sanitary line

Answer: As stated in the LOA, the County is the party responsible for installing the Water Resources components (consisting of the lift station, force main, sanitary manholes, and pvc sanitary sewer line). It was noted at the Pre-Bid conference that the only component of the LOA that is applicable to the Eastside Branch Library project shall be the electrical distribution component (specifically to consist of the utility supply through new transformer), as detailed on pages 1-3 of the LOA.

JOHNSON PETERSON Architects

Date: June 02, 2010
To: John Ward
Construction Manager
Leon County Facilities Management

Project Name: Leon County Library
Eastside Branch

Addendum #3

From: Johnson Peterson Architects, Inc.
Copied: John Ward, Construction Manager Leon County Facilities Management
Douglas Barkley & Barry Pujol , Barkley Engineering
Homer Ooten, Ooten and Associates
Roger Walsh, R. E. Walsh Engineering, Inc.
Peter Okonkwo, Spectra Engineering

Modifications to Project Manual:

Architectural:

APM1: ***Reference 08443, Part 2 Products, 2.01 A. –*** *YKK is an acceptable manufacturer.*

Mechanical:

MPM1: ***Reference 15900, Part 1 General, 1.6 A. –*** *Trane is an acceptable manufacturer.*

MPM2: ***Reference 15900, Part 1 General, 1.6 A. –*** *Siemens Industry is an acceptable manufacturer.*

MPM3: ***Reference 15671, Part 2 Products, 2.05 Lines 15, 16, 17, 18 & 19. –*** *Delete lines.*

MPM4: ***Reference 15878, Part 1 General, Manufactures. -*** *Greenheck, EHPrice & Lindab are acceptable manufacturers.*

MPM5: ***Reference 15860, Part 1 General, Manufactures. -*** *Greenheck, EHPrice & Lindab are acceptable manufacturers.*

MPM6: ***Reference 15820, Part 1 General, Manufactures. -*** *Greenheck, EHPrice & Lindab are acceptable manufacturers.*

MPM7: ***Reference 15840, Part 1 General, Manufactures. -*** *Greenheck, EHPrice & Lindab are acceptable manufacturers.*

MPM8: ***Reference Mechanical Specifications. -*** *Greenheck, EHPrice & Lindab are acceptable manufacturers for exhaust fans and fittings.*

Electrical:

EPM1: ***Reference 26 00 00, Part 1 General, Drawings, line 28. –*** *Replace "bed" with "be".*

JOHNSON PETERSON Architects, Inc
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FL #AAC001215

EPM2: ***Reference 26 05 19, Part 1 General, Color Coding, line 10. –*** *Replace "grounded conductor" with "conductors."*

EPM3: ***Reference 26 27 26, Part 1 General, Occupancy Switches, line 27. –*** *Replace "acrylic" with "high impact nylon".*

EPM4: ***Reference 26 27 26, Part 1 General, Clock Systems, line 23. –*** *Add "Franklin" as an alternate manufacturer.*

EPM5: ***Reference 26 00 00, Part 1 General, Scope of Work, line 28, 29 & 46. –*** *The furnishing and installation of all electrical items shown on the drawings or herein specified, unless shown or specified otherwise including but not limited to those listed: 5 KW Photovoltaic Solar System. Additionally, Note 3 on Sheet E3.1 states; Install photovoltaic (PV) solar panels on the roof to supply 5 KW of generated power @ 208/120 volts, single phase. Basis of Design is Sunpower by One World Sustainable, Inc. IAW Specifications Section 26 31 00. Substitutions are considered if submitted for review to the Engineer at least 10 days prior to receipt of bids (IAW Spec 26 00 00-5, lines 6-22).*

EPM5: ***Reference 26 31 00, Installer Qualifications, Shop Drawings and Product Data. –*** *Installation Details will be provided by the installer.*

Landscape:

LPM1: ***Reference 02900 Landscape Work. –*** *02900 Landscape Work Technical Specification has been added. See attachment.*

LPM2: ***Reference 02810 Underground Irrigation System. –*** *02810 Underground Irrigation System Technical Specification has been added. See attachment.*

Modification to Drawings:

Architectural:

Note: Architectural Sheet A5.3 is not yet updated. Drawings will be revised and resubmitted when a General Contractor is selected.

A1: ***Reference Architectural Sheet A5.3. –*** *Opening 102A and 102B shall have rim exit devices.*

A2: ***Reference Architectural Sheet A5.3. –*** *Opening 104A and 105 shall have keyed lock with "Storeroom" function.*

A3: ***Reference Architectural Sheet A5.3. –*** *Opening 106A and 106B shall have keyed locks with "Corridor with Deadbolt" function, and have door closers, thresholds, and weatherstripping to match other exterior doors.*

A4: ***Reference Architectural Sheet A5.3. –*** *Opening 107A shall use Hardware Set #1 except for drip edge, cylinder, and threshold. Room shall not have a keyed lock.*

A5: ***Reference Architectural Sheet A5.3. –*** *Opening 107B shall have a closer and a keyed lock with "Corridor with Deadbolt" function.*

A6: ***Reference Architectural Sheet A5.3. –*** *Opening 107D shall have a keyed lock with "Storeroom" function. Right hand reverse leaf shall be active leaf with cylinder, and left hand reverse leaf shall be inactive with dummy handle.*

A7: ***Reference Architectural Sheet A5.3. –*** *Opening 108 shall have a keyed lock with "Storeroom" function. Right hand reverse leaf shall be active leaf with cylinder, and left hand reverse leaf shall be inactive with dummy handle.*

A8: ***Reference Architectural Sheet A5.3. –*** *Opening 109 shall have a keyed lock with "Office" function.*

A9: ***Reference Architectural Sheet A5.3. –*** *Opening 111A shall have a door closer and a card reader.* For all doors with a card reader: the card reader controls the door's locking mechanism, and the door shall have a manual override/backup. Card reader to be provided by owner. Contractor to coordinate electrician, door hardware supplier/installer, and card reader supplier/installer.

A10: ***Reference Architectural Sheet A5.3. –*** *Opening 111B shall have a concealed vertical rod exit device. See note "A9" above for information on card readers.*

A11: ***Reference Architectural Sheet A5.3. –*** *Opening 112 shall have a door closer and a card reader - see note "A9."*

A12: ***Reference Architectural Sheet A5.3. –*** *Opening 115 shall have a keyed lock with a "Storeroom" function.*

A13: ***Reference Architectural Sheet A5.3. –*** *Opening 118A shall have a closer, threshold, weatherstripping, and a card reader – see note "A9."*

A14: ***Reference Architectural Sheet A5.3. –*** *Opening 118B shall have a card reader – see note "A9."*

A15: ***Reference Architectural Sheet A5.3. –*** *Opening 119A shall have a keyed lock with a "Storeroom" function.*

A16: ***Reference Architectural Sheet A5.3. –*** *Opening 119B shall have a keyed lock with a "Storeroom" function.*

A17: ***Reference Architectural Sheet A1.1. –*** *Room 119A walls have been modified to show 6" metal stud walls.*

Structural:

S1: ***Reference Structural Sheet S-1.1. –*** *Column lines 3, 5, 9, 10, 11, 12, 13, 15 and 16 have been modified to show CP designations. See attachment.*

S1: ***Reference Structural Sheet S-1.1, S-1.2, S-1.3, S-1.4, S-1.5 & S-1.6. –*** *Drawing shave been modified to shown the scale. See attachment.*

Civil:

C1: ***Reference Civil Sheets C5.0-R. –*** *Florida Gas Transmission Construction and Specification Notes. See attachment.*

C2: ***Reference Civil Sheets C7.0-R. –*** *The size of the concrete parking has been modified. See attachement.*

Landscape:

L1: ***Reference Landscape Sheets L1.0, L1.1, L2.0 & L2.1. –*** *Modifications have been made on these sheets. See revision clouds. See Attachment.*

L2: ***Reference Landscape Sheets L1.2 & L1.3. –*** *Landscape sheet have been added. See attachment.*

Electrical:

E1: ***Reference Electrical Sheet E1.0. –*** *Lighting Fixture Schedule; Fixture F. Replace Sheet "E1.1" with "E1.2." Add "ELECTRICAL NOTES" above "APPLICABLE ELECTRICAL CODES AND SPECIFICATIONS." See attachment.*

E2: ***Reference Electrical Sheet E1.1. -*** *Sheet E1.1, Electrical Site Plan, changed as follows: Add Scale: 1" = 50" – 0". Add note at COT Underground Primary Power note to "Coordinate IAW Note 5 on Sheet E1.0." Add Underground Conduits for Telephone and Cable TV, IAW Detail at C/D Board on Sheet E1.0. See attachment.*

E3: ***Reference Electrical Sheet E2.0. -*** *Add clarifications pertaining to the switchbank information and the Lighting Control System. See attachment.*

E4: ***Reference Electrical Sheet E3.0. -*** *In Electrical Room 119A, add a smoke detector above the Fire Alarm Control Panel. See attachment.*

E5: ***Reference Electrical Sheet E3.3. -*** *Switchbank 1: Change circuits for one switch. See attachment.*

E6: ***Reference Electrical Sheet E2.0 & E2.1. – Clarification -*** *The switch banks are actually control stations as part of the Intelligent Lighting Control (ILC) System shown on Sheet E2.1. All such controls fit into one 4-gang recessed box. Local contact for the ILC system specified is Jeff Crisp, 850-422-3600. Further, see Lighting Control Notes on Sheet E2.0.*

E7: ***Reference Electrical Sheet E1.1 & E2.0. – Clarification -*** *Circuiting Home Run Directions are in "Circuiting Notes" on Sheet E2.0 and Note 4 on Sheet E1.1.*

E8: ***Reference Electrical Sheet E3.1. –*** *Change 18 PV Solar Panels to 16 panels. As a matter of information, 305 watt panels by Sunpower are available. Supplier contact person with OneWorld Sustainable, Inc. in Savannah, GA is Keith Freeman at 912-236-1322.*

E9: ***Reference Electrical Sheet E3.1. –*** *Change "2 strings of 9 X 305w" to "2 strings of 8 X 305w"*

E10: ***Reference Electrical Sheet E1.1. – Clarification -*** *C.O.T. Electrical Service is to be by overhead line to a power pole in the easement on the east side of Pedrick Road. C.O.T will provide a three-phase transformer for this service, since the service is justified by the three-phase chiller. This contractor will have to provide conduit up the power pole to a weather head and the transformer pad IAW C.O.T. specifications. The transformer and overhead service are to be set "in place" on or before December 22, 2010 in order to avoid interference with utility improvements along Pedrick Road.*

SECTION 02900 - LANDSCAPE WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes provisions for the following items:

1. Protecting existing trees to remain.
2. New cabbage palm trees.
3. New trees.
2. New shrubs.
3. New ground cover.
4. Soil amendments.
5. Mulching.
6. Initial maintenance of landscape materials.

B. Related Sections: The following sections contain requirements that relate to this Section.

1. Protection of existing vegetation is specified in Division 2, Section 02110 - Site Clearing.
2. Excavation, filling, and rough grading required for establishing elevations shown on drawings is specified in Division 2, Section 02220 - Earthwork.
3. Sodding is specified in Division 2, Section 02485A – Sodding.
4. Automatic underground sprinkler system is specified in Division 2, Section 02810 - Underground Irrigation System.

1.3 QUALITY ASSURANCE

A. Subcontract landscape work to a single firm specializing in landscape work with not less than five (5) years of successful experience and knowledge of plant materials and techniques of the north region of Florida. The Contractor may be required to submit evidence of these qualifications. The Landscape Architect and the Owners Representative (OR) may reject Contractors who cannot show evidence of these qualifications.

B. Quality Control: Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials. Comply with standards and specifications indicated in the following publications:

1. Florida Department of Agriculture, "Grades and Standards for Nursery Plants", latest edition.
2. U.S. Department of Agriculture (USDA) Soil Conservation Service, National Soil Survey Center: "Soil Survey Laboratory Methods Manual, Investigations Report No. 42, Version 3".

C. Do not make substitutions. If specified landscape material is not obtainable in Florida, submit proof of non-availability to the Landscape Architect and OR together with proposal for use of equivalent material. All deviations from the project documents must be in writing and written approval given.

D. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

E. Topsoil: Application of topsoil will not be required for this project.

F. Trees, Shrubs and Other Plants: Provide shrubs, and other plants of quantity, size, genus, species, and variety shown and scheduled for landscape work. Plant quantities shown in the Plant Schedule are for the convenience of the Contractor. In the event of a discrepancy between the drawings and the Plant Schedule, the drawings shall prevail. Provide healthy, vigorous stock, grown in a recognized nursery in the north Florida/south Alabama/south Georgia region, in accordance with good horticultural practice and free of disease, insects, eggs, larvae, and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.

G. Label at least one plant of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.

H. Where formal arrangements or consecutive order of trees or shrubs are shown, select stock for uniform height and spread, label with number to assure symmetry in planting.

I. Inspection: The Landscape Architect and OR may inspect plant materials either at place of growth or at site before planting, for compliance with requirements for genus, species, variety, size, and quality. The Landscape Architect and OR retains right to further inspect plant materials for size and condition of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected plant materials immediately from project site.

J. Soil Testing: To qualify for acceptance to move into the planting phase, the Contractor must test the existing soils and fill material for pH, moisture retention, and percentage of organic material. This information will be given to the Landscape Architect and OR along with soil amendment product information and samples for final approval on soil amendment usage. Proceeding with any planting, grassing, or seeding without written approval will be considered a violation of the specifications and soil materials shall be removed from the site at the expense of the Contractor.

1.4 SUBMITTALS

A. Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

1. Plant and Material Certifications:

   a. Certificates of inspection as required by governmental authorities.
   b. Manufacturers or vendor's certified analysis for soil amendments and fertilizer materials.
   c. Label data substantiating that plant materials and other items comply with specified requirements. Refer to paragraph 1.3 QUALITY ASSURANCE.
   d. Mulch sample labeled to indicate producer, source species and source location. Provide one-quarter (1/4) cubic foot in sealed container.

2. Test Reports: Test existing and imported soil according to USDA Soil Survey Investigation Report No. 1. See PART 2 of this specification for information required.

3. Plant Installation Schedule: Proposed Plant Installation Schedule, indicating dates for each type of landscape work during normal seasons for such work in area of site. Correlate with specified maintenance periods to provide maintenance from date of substantial completion. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.

4. Maintenance Instructions: Three (3) sets of typewritten instructions, each in a binder, recommending procedures to be established by Owner for maintenance of landscape work for one full year. Submit prior to expiration of required maintenance period(s) or prior to Final Acceptance and submittal of Request for Final Payment, whichever comes first.

1.5 DELIVERY, STORAGE AND HANDLING

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.

B. Plant materials: Provide container grown plant materials, as specified in the drawings. Do not prune prior to delivery unless otherwise approved by the Landscape Architect or OR. Do not bend or bind-tie shrubs in such manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during delivery. Do not drop plant materials during delivery.

C. Deliver plants after preparations for planting have been completed and plant immediately. If planting is delayed more than 6 hours after delivery, set plant materials in shade, protect from weather and mechanical damage, and keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture.

D. Do not remove container-grown stock from containers until planting time.

1.6 JOB CONDITIONS

A. Utilities: Determine location of underground utilities and perform work in a manner, which will avoid possible damage. Hand excavate as required. Maintain grade stakes set by others until parties concerned mutually agree upon removal.

B. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, contaminated soil, adverse drainage conditions, or obstructions, notify the Landscape Architect or the OR for approval to continue before planting.

1.7 SEQUENCING AND SCHEDULING:

A. Planting Time: Proceed with, and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.

B. Install new plant materials only after underground irrigation system is substantially complete and operational.

C. Install plant materials during normal planting seasons for each type of plant material required.

D. Correlate planting with specified maintenance periods to provide maintenance from date of substantial completion.

E. Coordination with Lawns: Plant shrubs and ground covers after final grades are established and prior to planting of lawns, unless otherwise acceptable to the Landscape Architect or the OR. If planting of shrubs and ground covers occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

1.8 SPECIAL PROJECT WARRANTY

A. Warranty lawns through specified lawn maintenance period, and until final acceptance.

B. Warranty plant materials, except lawns, for a period of ONE (1) YEAR after date of Final Completion, against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Contractor's control. Relocated trees and other relocated plant materials shall be included in this warranty.

C. Remove and replace plant materials found to be dead or in unhealthy condition as determined by the Landscape Architect and/or the OR during the warranty period. Replacement sizes shall be equal to or exceed the size of plant material as originally relocated or installed as new plant material. Make replacements during growth season following end of the warranty period. Replace plant materials that are in doubtful condition at end of the warranty period, unless, in opinion of the Landscape Architect and/or the OR, it is advisable to extend warranty period for a full growing season.

D. Another warranty inspection will be conducted at end of the extended warranty period, if any, to determine acceptance or rejection. Only one replacement (per tree, shrub or plant) will be required at end of the warranty period, except for losses or replacements due to failure to comply with specified requirements.

PART 2 – PRODUCTS

2.1 SOIL AMENDMENTS

A. Aluminum Sulfate: Commercial grade.

B. Biostimulants: Dry soluble yucca plant extract from *Yucca schidigera*, soluble sea kelp extract from *Ascophylum nodosum*, and humic acid composed primarily of Leonardite humates.

C. Bonemeal: Commercial, raw, finely ground containing 4 percent nitrogen and 20 percent phosphoric acid.

D. Lime: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve.

E. Manure: Well-rotted, unleached stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials and containing no chemicals or ingredients harmful to plants.

F. Mycorrhizal Fungi Inoculum: Endomycorrhizal fungi (live spores of Vesicular-Arbuscular [VA]

fungi to include *Entrephospora columbiana*, *Glomus etunicatum*, *Glomus clarum* and *Glomus sp*.) and ectomycorrhizal fungi (live spores of *Pisolithus tinctorius*) superstrains inoculant as manufactured by Plant Health Care, Inc. or approved equal.

G. Peat Humus: Finely divided domestic peat or solid waste compost, so completely decomposed and free of fibers that its biological identity is lost. Provide in granular form, free of hard lumps and with pH range suitable for intended use.

H. Superabsorbent Polymer: Cross linked polyacrylamide copolymer, particle size 1.0 mm to 1.5 mm, maximum 5%< 1.0mm, less than 5% soluble, absorption rate of 330-400 times in distilled water, fade resistance of hard crystals shall be firm to touch with no more than very slight softness. Polymer shall be non-toxic. Certificate of analysis must certify that the free acrylamide monomer level is less than 0.5%. Polymer shall be manufactured by Terrasorb or approved equal.

I. Super phosphate: Composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than 20 percent available phosphoric acid.

J. Mulch: Organic mulch free from deleterious materials, including seeds, and suitable for top dressing of trees, shrubs, and other plant materials, and consists of one of the following:

1. Pine straw
2. Ground or shredded pine bark
3. Wood chips

Cypress mulch will not be considered an acceptable mulch material unless acceptable certified evidence that mulch is a by-product of the lumber manufacturing process is submitted for approval by the Landscape Architect and the OR.

K. Commercial Fertilizer: Complete fertilizer of neutral character, with some elements derived from organic sources and containing following percentages of available plant nutrients:

1. For shrubs, provide slow-release fertilizer with not less than 20 percent total nitrogen, 10 percent available phosphoric acid and 5 percent soluble potash.
2. For groundcover plant beds, provide fertilizer with not less than 6 percent total nitrogen, 6 percent available phosphoric acid and 6 percent soluble potash. Wildflower planting areas will not receive fertilizer.
3. For lawns, provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 sq. ft. of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium or a formulation recommended in writing by the local USDA Soil Conservation Service Agent or the local IFAS Horticultural or Soils Technician/Agent, <u>whichever is greater</u>. Provide nitrogen in a form that will be available to lawn during initial period of growth. At least 50 percent of nitrogen to be in organic form and contain no less than 3 percent water-insoluble nitrogen. <u>For the purpose of bidding, assume 6 percent nitrogen, 6 percent phosphorus and 6 percent potash by weight.</u>

2.2 PLANT MATERIALS

A. Quality: Provide plant materials of size, genus, species, and variety shown and scheduled for landscape work that comply with the standards for ‘Florida No. 1’ or better as specified in the Florida Department of Agriculture and Consumer Services publication titled "Grades and Standards for Nursery Plants” as published in 1998 or as amended. Label at least one of each plant species or variety with a securely attached waterproof tag bearing a legible designation of both the botanical and common name of the plant.

2.3 GRASS MATERIALS

A. Sod: Provide strongly rooted sod, not less than 2 years old, and contain no visible broadleaf weeds when viewed from a standing position and shall be visibly consistent with no obvious patches of foreign grasses. In no case may the total amount of foreign grasses or weeds exceed 2% of the total vegetative component of the sod. Machine cut to pad size. Provide only sod capable of vigorous growth and development when planted (viable, not dormant).

B. Provide sod of uniform pad sizes with maximum 5 percent deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10 percent of pad will be rejected.

C. Provide sods composed principally of 'Centipedegrass' (Eremuchola ophiuroides).

2.4 GROUND COVER

A. Provide plants established and well rooted in removable containers or integral peat pots and with not less than minimum number and length of runners required by ANSI Z60.1-1990 for the pot size shown or listed.

2.5 MISCELLANEOUS LANDSCAPE MATERIALS

A. Anti-Desiccant: Emulsion type, film-forming agent designed to permit transpiration, but retard excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix in accordance with manufacturer's instructions.

B. Stakes: Provide steel stakes, plastic stabilizing disks and rubber supports as manufactured by Lawson Landscape Products, Martinsville, IN 46151, 800/833-5323, or approved equal.

C. Gravel Mulch: Cleaned water-worn river gravel or crushed stone, graded from 1-1/2 " maximum to 1/2" minimum.

PART 3 - EXECUTION

3.1 PREPARATION - GENERAL:

A. Lay out individual plant materials locations and areas for multiple plantings. Stake locations and outline areas and secure Landscape Architect and/or OR acceptance before start of planting work. Make minor adjustments as may be required.

B. NOTE: Spacing requirements also applies to minimum distance away from hard surfaces. See Plant Schedule(s) and detail drawings.

3.2 PREPARATION OF PLANTING SOIL

A. Before mixing, clean native soil of roots, plants, sods, stones clay lumps and other extraneous materials that may be harmful or toxic to plant growth.

B. Mix specified soil amendments and fertilizers with native soil and at rates specified. A soil test will have to be made in order to adjust the pH with lime or sulfur for lawn areas, groundcover beds and annual flowering plant beds. Delay mixing of fertilizer if planting will not follow

placement of planting soil within a few days.

C. "Schedule of Planting Soil Mixture Requirements" is attached at end of this section.

D. For pit and trench type backfill, mix planting soils prior to backfilling, and stockpile at site.

E. For planting beds and lawns, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting. Wildflower beds shall not have plant bed soil mix incorporated.

F. Apply phosphoric acid fertilizer (other than that constituting a portion of complete fertilizers) directly to subgrade before applying planting soil and tilling.

3.3 PREPARATION FOR PLANTING LAWN

A. Loosen subgrade of lawn areas to a minimum depth of 8 inches. Remove stones measuring over 1-1/2 inches in any dimension. Remove sticks, roots, rubbish and other extraneous matter. Adjust subgrade elevation to meet lines, grades and elevations required after light rolling, natural settlement and sod placement. (Sod level to be below all adjacent hard surfaces to insure proper drainage.) Limit preparation to areas that will be planted promptly after preparation.

B. Place superphosphate at a rate for bidding purposes of 5 pounds per 1000 square foot. Place a complete fertilizer at a rate for bidding purposes of 16 pounds per 1000 square foot. Evenly distribute the superphosphate and the complete fertilizer over entire area and cross-disc into the soil to a depth of 4 – 6 inches.

C. Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows: Till to a depth of not less than 6 inches. Apply soil amendments and initial fertilizers as specified. Remove high areas and fill in depressions. Till soil to a homogenous mixture of fine texture, free of lumps, clods, stones, roots and other extraneous matter.

D. Prior to preparation of unchanged areas, remove existing vegetation and turf not noted to remain. Dispose of such material outside of Owner's property. Do not turn existing vegetation over into soil being prepared for lawns.

E. Allow for sod thickness in areas to be sodded.

F. Delay application of fertilizer if lawn planting will not follow within a few days.

G. “Schedule of Planting Soil Mixture Requirements" indicating required rate of fertilizer application, is attached at end of this section.

H. Fine grade lawn areas to smooth even surface with loose, uniformly fine texture. Roll, rake and drag lawn areas, remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas which can be planted immediately after grading.

I. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

J. Restore lawn areas to specified condition, if eroded or otherwise disturbed, after fine grading and prior to planting.

3.4 PREPARATION OF GROUNDCOVER PLANTING BEDS

A. Dig beds not less than 8 inches deep and mix with specified soil amendments and fertilizers.

B. Limit preparation of beds to areas which will be planted promptly or unless directed otherwise by the Landscape Architect and the OR.

3.5 EXCAVATION FOR TREES AND SHRUBS

A. Excavate pits, beds, and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage. Loosen hard subsoil in bottom of excavation. Excavation of planting pits should be in a square fashion to prevent the chance of roots circling the planting pit and girdling.

B. Allow for 3-inch thick setting layer of planting soil mixture.

C. For container-grown stock, excavate as specified in the planting details on drawings, adjusted to size of container width and depth.

D. Fill excavations for trees and shrubs with water and allow water to percolate out prior to planting.

3.6 PLANTING SHRUBS: Refer to the planting details to supplement the information below.

A. Set container grown plant on layer of compacted planting soil mixture, plumb and locate in center of pit or trench with top of ball at same elevation as adjacent finished landscape grades. Remove containers by cutting containers on 2 sides, if necessary, with an approved container cutter. When set, place additional backfill around base and sides of ball and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3-full, water thoroughly and after the water is drained, place 1 Agriform tablet or equal for every 1 gallon container plant, place 3 equally spaced tablets for 3 gallon material, and for any larger container use 1 tablet for each 1/2" of trunk plus 1 for the hole, equally spaced 3 minimum. (For multiple trunks the diameter measurements will be cumulative).

B. The root ball of certain plants may be "butterflied" to ensure that roots will grow out into the soil. The butterfly method involves making two (2) vertical cuts from the bottom up 1/5 of the root ball dividing that lower section of the root ball into four (4) equal sections. The cuts are made in the center of the bottom of the ball and the root mass is spread or flattened.

C. Depress planting pit to allow for mulching. Depressed dish to be the same diameter as planting pit. See details on drawings for width and height.

D. Mulch pits, trenches, and planted areas. Provide not less than following thickness of mulch, and work into top of backfill and finish level with adjacent finish grades.

E. Provide 3 inches thickness of mulch.

F. Apply anti-desiccant, using power sprayer, to provide an adequate film over trunks, branches, stems, twigs and foliage.

G. If trees are moved when in full-leaf, spray with anti-desiccant before moving and spray again 2 weeks after planting.

H. Prune, thin out, and shape trees and shrubs in accordance with standard horticultural practice.

Prune trees to retain required height and spread. Unless otherwise directed by the Landscape Architect or OR, do not cut tree leaders, and remove only injured or dead branches from trees, if any. Prune shrubs to retain natural character, only if necessary. Do not prune to achieve a formal clipped hedge appearance.

I. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

J. Guy and stake trees immediately after planting, as indicated on planting details.

3.7 SODDING NEW LAWNS

A. Lay sod within 24 hours from time of stripping. Do not plant dormant sod.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work top dressing (clean weed-free sifted soil or sand) into minor cracks between pieces of sod. Remove excess top dressing to avoid smothering adjacent grass. Top dressing may be required at no additional cost to the Owner if deemed necessary by the Landscape Architect.

C. Anchor sod on slopes greater than 1:5 with wood pegs to prevent slippage.

D. Lay sod on slopes equal to or greater than 1:3.

E. Lay sod in swale bottoms and side slopes.

G. Water sod thoroughly with a fine spray immediately after planting.

H. Water newly planted lawn areas and keep moist until new grass is established.

3.8 SEEDING NEW LAWN:

A. Seed the areas disturbed by construction and not otherwise noted to be sodded on the Drawings or herein.

B. Sow seeds at the rate of eight (8) pounds per one thousand (1000) square feet. Sow one-half the seed in one direction and the remainder at right angles to the first sowing. Cover seed with soil to an average depth of one-half inch using a spike-tooth harrow, cultipacker or other device. Apply mulch after seeding. Mulch shall be normally dry mulch. Dry mulch shall be straw or hay consisting of oat, rye and wheat straw, or of pangola, peanut, coastal Bermuda or Bahiagrass hay. Mulching shall be two (2) inches (loose thickness) uniformly applied over the seeded area. Secure mulch by crimping with a serrated disc, using twine or netting, or other Landscape Architect and/or OR approved method.

C. If hydroseeding is utilized mix the seed, fertilizer and mulch in water to produce a homogeneous slurry and then uniformly apply it under pressure.

D. Immediately after seeding, firm the entire area except for slopes in excess of 3:1 with a roller. If a cultipacker-type seeder or hydroseeding is used, rolling is optional.

E. Erosion Control Material: Install on slopes if grade is 3:1 or greater and not noted for sodding or planting with ground cover.

F. Protection: Protect seeded areas from traffic and other use by erecting barricades and placing

signs.

3.9 PLANTING GROUND COVERS:

A. Space plants as indicated on the Planting Schedule.

B. Dig holes large enough to allow for spreading of roots and backfill with planting soil. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soils.

C. Mulch areas between plants placing mulch not less than 3 inches thick.

3.10 MAINTENANCE:

A. Begin maintenance immediately after planting.

B. Maintain trees, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting saucers. Repair stake supports and reset trees, palms, and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Treat as necessary to keep trees and shrubs free of insects and disease. Maintain trees, shrubs and other plants until final acceptance, but in no case, less than sixty (60) days after Final Completion.

C. Maintain lawns by watering to provide an equivalent of 1-1/2" water per week minimum, fertilizing, weeding, mowing not less than every two weeks, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas. Maintain lawns for not less than the period stated below and longer as required to establish an acceptable lawn.

1. Seeded lawns, not less than sixty (60) days after Final Completion. If seeded in fall and not given full 60 days of maintenance, or if determined not acceptable at that time, continue maintenance through the following spring until acceptable lawn is established.

2. Sodded lawns, not less than thirty (30) days after Final Completion.

3.11 CLEAN UP AND PROTECTION:

A. During landscape work, keep pavements clean and work area in an orderly condition on a daily basis.

B. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair or replace damaged landscape work as directed. Upon completion of the plantings, all excess soil, stones and debris that have not previously been cleared shall be removed.

3.12 INSPECTION AND ACCEPTANCE:

A. When landscape work is completed, including maintenance, the Contractor should notify the Landscape Architect or OR in writing. The Landscape Architect or OR will then make an inspection to determine acceptability.

B. Landscape work may be inspected for acceptance in portions as agreeable to the Landscape Architect and/or the OR provided each portion of work offered for inspection is complete, including maintenance.

C. When inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until re-inspected by the Landscape Architect and/or the OR and found to be acceptable. Remove rejected plants and materials promptly from project site at no cost to the Owner.

3.13 SCHEDULE OF PLANTING SOIL MIXTURE REQUIREMENTS:

A. For groundcover and planting beds, provide not less than the following quantities of specified materials:

1. One (1) part of loose peat humus or solid waste compost to two (2) parts of in-situ native soil by volume.
2. Twenty (20) pounds of commercial time-released fertilizer (6-6-6) per 1000 sqaure feet.

B. For backfill for trees and shrubs, provide specified materials in not less than the following quantities:

1. One (1) three (3) ounce packet of prepared MycorTree Tree Saver Transplant mix as produced by Plant Health Care, Inc., Bradenton, FL 34282, 800-227-6728, or approved equal, per one inch caliper tree or one three gallon shrub or three one gallon shrubs.

2. 1 part of loose peat humus or solid waste compost to 3 parts of in-situ native soil by volume – for shrubs only.
3. Required Agriform tablets required in Commercial Fertilizer section. THIS ITEM SHALL BE TURNED OVER TO THE OWNER FOR INSTALLATION AT A LATER DATE.

C. For lawn areas, provide not less than the following quantities of specified materials:

1. Five (5) pounds of colloidal phosphate (superphosphate) per 1000 sq. ft.
2. Sixteen (16) pounds of commercial fertilizer per 1000 sq. ft.
3. Quantity of lime or sulfur to provide a healthy medium for optimum grass growth.

END OF SECTION 02900

SECTION 02810 - UNDERGROUND IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DESCRIPTION OF WORK

A. The extent of new underground irrigation system, drip irrigation and temporary irrigation zones is shown on drawings, but generally involves permanent and temporary irrigation for two (2) distinct Vegetation Management Plan (VMP) zones. VMP Zone 1 generally consists of connecting the new two (2) inch main irrigation line to the new potable water supply source one (1) inch irrigation meter and backflow preventer assembly (both provided under the civil work) and providing and installing the following new irrigation equipment: one (1) new multi-zone controller; manual and automatic valves; a rain switch; quick-connect valves; pop-up spray sprinklers with fixed and adjustable spray nozzles; drip irrigation piping, emitters, and appurtenances; temporary irrigation equipment and temporary tree watering bags, to provide sufficient irrigation coverage for all new landscape materials.

Irrigation of VMP Zone 2 Reforestation plant materials will be temporary. The General Contractor shall be responsible for providing the method, materials, labor, transportation, tools and appurtenances for irrigating the new plant materials for a period of not less that six (6) months or less, should establishment of plant materials be demonstrable, such that the plants are thriving and does not display wilting when water is not provided over a seven (7) day period..

B. Refer to Division-16 sections for electrical service for controller(s).

1.3 PRECONSTRUCTION SITE REVIEW

A. The Contractor shall schedule an on-site pre-construction conference with the Landscape Architect and the Owner's Representative (OR) prior to beginning installation of the new irrigation system and equipment. The Contractor shall be responsible for coordinating his work with all other parties involved with the project in order to prevent unnecessary complication during the installation of this work.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Provide irrigation system(s) as complete unit(s) produced by a single acceptable manufacturer for all equipment. Multiple manufacturer's products may be combined as a complete unit provided evidence of compatibility is submitted for review and approved by the Landscape Architect and the OR.

B. Contractor Qualifications: The system shall be installed and modified by an experienced firm, regularly engaged in irrigation installation. Contractor shall have a minimum of five (5) years of successful experience with installations. The Contractor can be asked to submit evidence of these qualifications. The Landscape Architect and the OR may reject contractors who cannot show evidence of these qualifications.

C. The Contractor shall employ only competent workmen for the execution of this work and all such work shall be performed under the direct supervision of an experienced superintendent.

1.5 SUBMITTALS

A. The Contractor shall be responsible for submitting the following:

B. Product Data: Submit manufacturer's technical data and installation instructions for all new irrigation system equipment, materials and components.

C. Permits: The Contractor shall bear the expense of and procure all permits, certificates and licenses required by law for the execution of the work. The Contractor shall comply with all Federal, State and local laws, ordinances or rules and regulations relating to the performance of the work.

D. Submit shop drawing(s) on reproducible media (vellum or mylar) and digital (PDF format in Arch D size) for pop-up spray, drip and temporary irrigation systems including plan layout and details illustrating location and type of sprinklers, valves, piping circuits, controller location, well, and appurtenances.

E. As-Built Drawings: During the course of the installation, the Contractor shall record all changes made to the irrigation system during installation. Changes shall be carefully drawn in red line on a print of the irrigation system drawing. Upon completion of the installation, the information marked this red line drawing shall be used to update the Shop Drawing. Upon completion of updating the drawing, it shall be given to the Landscape Architect for review and approval. The Landscape Architect shall deliver the approved drawing(s) to the OR for use as an As-Built irrigation drawing in both paper and digital formats. Contractor and Installer's name, address and telephone number and date of installation must be shown on drawing.

G. After the irrigation system is installed and approved, the OR and Leon County maintenance personnel shall be instructed in the complete operation and maintenance of the system by the Contractor. The Contractor shall furnish five (5) copies of an Irrigation System Management Manual prepared by the system installer. Each manual shall be in a labeled three-ring binder and contain one copy of the approved product data, approved Shop Drawings, approved As-Built Drawing(s), and complete operation and maintenance instructions for the irrigation system.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the work include, but are not limited to, the following:

1. Ametek
2. Can-Tex Industries
3. Carson Industries, Inc.
4. Eslon Thermoplastics
5. Glen-Hilton Products, Inc.
6. Hunter Industries
7. Hydrodyne Products, Inc.
8. Irritrol Irrigation

9. Nelson
10. Philips Industries, Inc.
11. Rain Bird Sprinkler Mfg. Corp.
12. The Toro Co., Irrigation Div.
13. Systematic Irrigation Controls, Inc.

2.2 MATERIALS

A. Pressure Pipe (between the meter/backflow preventer assembly, and manual and solenoid valves): Comply with following:

1. Rigid polyvinyl chloride (PVC) SDR pressure rated Schedule 40 plastic pipe; Type 1, compound per ASTM D-1785; NSF approved; plain end pipe per ASTM D-2241, bell end pipe per ASTM D-2672; marked per ASTM D-2241.

2. Galvanized steel pipe, ASTM A-120, Schedule 40.

C. Non-Pressure Pipe (downstream from solenoid valve): Comply with following:

1. Rigid polyvinyl chloride (PVC) SDR pressure rated Class 160 plastic pipe; Type 1, Grade 1 compound per ASTM D-1784; NSF approved; plain end pipe per ASTM D-2241, bell end pipe per ASTM D-2672; marked per ASTM D-2241.

2. Polyethylene (PE) plastic pipe, virgin linear, low-density polyethylene resin with nominal sized internal diameter as required, rated to 50 p.s.i. operating pressure at 100 degrees Fahrenheit (F).

D. Pipe Fittings: Comply with following:

1. For PVC plastic pipe, Schedule 40, Type 1, Grade 1 per ASTM D-1784; NSF Approved, conforming to ASTM D-1784 for material and ASTM D-2466 for dimensions for socket and threaded fittings. ASTM D-2564 solvent cement.

2. For PE pipe and PVC/PE female compression on locking ring fittings and adapters with ASTM D 2564 solvent cement.

3. For PE pipe with locking ring to secure polyethylene base over an insert barbed fitting, do not use solvent cement.

4. For PE pipe, insert barbed fittings shall be constructed of molded, ultraviolet-resistant, black colored, plastic having a nominal inside dimension (ID) of .57” and an average thickness of0.18”. Each fitting shall have a minimum of two ridges or barbs per outlet. All fittings shall be of one manufacturer and shall be available in one of the following end configurations:

   a. Barbed insert fittings.
   b. Male pipe threads (MPT) with barbed insert fittings.
   c. Female pipe threads (FPT) with barbed insert fittings.

5. For galvanized steel pipe, ANSI B16.3 galvanized malleable-iron screwed fittings.

E. Risers: Rigid polyvinyl chloride (PVC) Schedule 80 plastic pipe; Type 1, Grade 1 compound per ASTM D-1784; grey pigment color, NSF approved; nominal pipe threads, physical dimensions; tolerances and markings per ASTM D-1785.

F. Pipe Sleeves: All crossings under paved areas for irrigation water lines shall be Schedule 40

PVC pipe conforming to ASTM D 1785.

G. Flexible Pipe: Flexible pipe for sprinklers in lawn shall be flexible thick-walled PE pipe or approved equal.

H. Valves: Manufacturer's standard, type and size indicated, and as follows:

I. Manual Circuit and By-Pass Valves: Cast plastic ball valves with female threaded ends.

J. Check Valves:

1. Provide in-line or in-head sprinkler check valves for individual heads which could allow circuit drainage due to low-spot location.

K. Valve Box and Cover: Molded thermoplastic, 6-1/2" deep x 16" length x 10-1/4" inside dimensions or of size required to adequately enclose system components below grade, with evergreen color locking cover, marked "Control Valve", equal to Ametek Model No. VB-12 or approved equal.

L. Valve Pit and Cover: Molded thermoplastic 10" deep x 8" inside diameter with evergreen color cover, equal to Ametek Model No. VP-10 or approved equal.

M. Drainage Backfill: Cleaned gravel or crushed stone, graded from 1" diameter maximum to 1/4" diameter minimum.

N. Sprinkler Heads: Manufacturer’s standard unit designed to provide uniform coverage over entire area of spray shown on drawings at available water pressure, as follows:

1. Pop-Up Spray: Fixed and variable arc pattern nozzle, with and without screw-type flow adjustment and stainless steel retraction spring.

2. Pop-Up Rotary Spray: Gear drive, full circle and adjustable part circle type.

3. Shrub Adapter: Fixed and variable arc pattern nozzle, with and without screw-type flow adjustment.

4. Stream Spray: Fixed pattern nozzle, with screw-type flow adjustment.

5. Flood Bubbler: Fixed pattern nozzle, with screw-type flow adjustment.

O. Stainless Steel Clamps: Tubing clamps shall be constructed of 304 AISI stainless steel and shall be one “ear” type. This “ear” shall be capable of being pinched with a pinching tool to secure the tubing around barbed insert fitting. Interior clamp wall shall be smooth to prevent crimping or pinching of tubing. Wall thickness of clamps shall be 0.0236” with an overall band width of 1/’4”. Properly secured clamps shall be capable of withstanding a maximum operating pressure of 441 psi.

P. Rain Sensor: Adjustable sensing device for rainfall events between 1/8" and 1" utilizing hygroscopic discs to activate a switch which interrupts circuit to solenoid valves via the common ground wire. Housing shall be constructed of ultraviolet stabilized engineering thermoplastic. Mounting bracket shall be aluminum two-piece, adjustable. Switch shall be U.L. listed, 10.1 amps, 1/4 H.P. at 125/250 VAC. Five (5) year warranty required.

Q. Drip Irrigation:

R. Tree Watering Bags:

PART 3 - EXECUTION

SYSTEM DESIGN

3.1 SYSTEM CAPACITY AND DESIGN PRESSURE

A. System shall provide a volume of suitable water at the pressure necessary to operate the irrigation zones, as produced by the existing and/or new well-source irrigation water supply system and at last head in largest circuit. New irrigation zones sizing may need to be adjusted due to a lack of information concerning the existing well's capability.

B. Location of Spray Heads: Design location is approximate. Piping shown on plans is diagrammatically routed for clarity. Make approved minor adjustments as necessary to avoid plantings and other obstructions. Layout may be modified, if necessary to obtain coverage, to suit manufacturer's standard heads. Do not decrease number of heads indicated unless reduction approved by the Landscape Architect and the OR.

C. Minimum Water Coverage:

1. Turf areas, 100%
2. Other planting areas, 85%

D. Contractor shall be responsible for verification at the site of all conditions and dimensions shown on the plans prior to commencement of work.

3.2 TRENCHING AND BACKFILLING

A. General: Excavate straight and true with bottom uniformly sloped to low points. Protect existing lawns and plantings where indicated. Remove and replant as necessary to complete installation. Replace damaged lawn areas and plants with new to match existing.

B. Trench Depth: Excavate trenches of sufficient depth to provide the minimum cover from finish grade, unless otherwise indicated.

C. Minimum Cover: Provide following minimum cover over top of installed piping:

1. PVC main line piping, 16".
2. Lateral lines to sprinkler heads, 12".
3. PVC pipe sleeves, 16".
4. Emitter tubing, 4" minimum and 6" maximum.

D. Backfill: Backfill with clean material from excavation. Remove organic material as well as rocks and debris larger than 1" diameter. Place acceptable backfill material in 6" lifts, compact each lift. After placement of piping, connection to rigid PVC supply, initial system flushing and installation of the line, backfilling can begin. Fill remainder of trenches and/or in the case of over-excavation, place shovels of soil on piping to hold lines in place as indicated on the plans. Bring soil up top finish grade and remove any rocks larger than 1" during final grading and contouring. Compact backfill by hand to a minimum of 90% relative compaction. Maintain adequate soil moisture levels as needed to achieve the required compaction requirement.

E. Pavements: Schedule 40 PVC sleeves for PVC pipe shall be placed where indicated or where needed prior to new asphalt or concrete pavement placement. Coordinate with paving

contractor. Where existing or new pavements must be cut to install irrigation system, cut smoothly to straight line 6" wider than trench.

1. Excavate trench to required depth and width.
2. Remove cutout pavement and excavated material from site.
3. At walkways, jack piping under paving material, if possible.
4. Backfill with dry sand fill material, placing in 6-inch lifts. See Civil specifications for backfill and compaction requirements for soils under pavements.
5. Repair or replace pavement cuts with equivalent materials and finishes.

3.3 INSTALLATION

A. General: Unless otherwise indicated, comply with requirements of Uniform Plumbing Code and applicable local and state codes.

B. Connection of controllers to 120 Volt AC electrical supply and provision of necessary electrical equipment and equipment noted herein, is the responsibility of the Contractor per applicable Division 16 Sections.

C. Electric Solenoid-Operated Plastic Valve: Provide union on downstream side.

D. Piping: Lay pipe on solid sub-base, uniformly sloped without humps or depressions. Install PVC and PE pipe in dry weather when temperature is above 40 degrees Fahrenheit (4 degrees Centigrade) in strict accordance with manufacturer's instructions. Allow joints to cure at least 24 hours at temperature above 40 degrees Fahrenheit (4 degrees Centigrade) before testing, unless otherwise recommended by piping manufacturer.

E. Sprinkler Heads: Flush circuit lines with full head of water and install heads after hydrostatic test is completed.

1. Install lawn sprinklers at manufacturer's recommended heights or as specified on the drawings or herein.
2. Install shrubbery heads at heights indicated on the drawings or as required herein.
3. Locate part-circle heads to maintain a minimum distance of 4" from walls and 2" from other boundaries, or built objects, such as walks, curbs or drives unless otherwise indicated.
4. Install drip emitter tubing per manufacturer standards.

F. Barbed Fittings: Connect flexible tubing to barbed fittings by pushing on and over both barbs all the way until the tubing has seated against another piece of tubing or has butted against another portion of the barbed fitting. For water pressures in excess of the 45 psi maximum, use stainless steel clamps.

G. Pipe Clamping: When operating pressure exceeds 45 psi, stainless steel pipe clamps shall be used. Slip clamps over tubing before slipping tubing over insert of barbed fitting. Place clamp between the first and second ridge of the barbed fitting and crimp the “ear” of the clamp tightly. Crimp the “ear” twice to ensure proper seating.

3.4 TESTING

A. General: Notify Landscape Architect and OR in writing when testing will be conducted. Conduct tests in presence of the Landscape Architect and the OR.

B. Hydrostatic Test: Test all valves and water piping to a hydrostatic pressure of not less than 100 pounds per square inch before backfilling trenches. Piping may be tested in sections to

expedite work. Remove and repair piping, connections and valves that do not pass hydrostatic testing.

C. Controller Charts: Upon completion of “As-Built” drawings, prepare controller chart. Indicate in the chart each zone area of coverage and valve location. This chart shall be reduced to a size that will fit within the utility basket or a pocket within the pump enclosure, or shall be posted adjacent to the controller on the enclosure wall. The reduction shall be a black and white copy that is hermetically sealed between two 20-mil pieces of clear heat-sealed plastic.

D. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place and sprinkler heads adjusted to final position.

E. Demonstrate to Landscape Architect and the OR that system meets coverage requirements and that automatic control (controllers and solenoid valves) functions properly.
Coverage requirements are based on operation of one circuit at a time.

F. After completion of grading, planting, seeding or sodding, mulching and rolling of grass areas, carefully adjust lawn sprinkler heads so they will be flush with or not more than 1/2" above finish grade or elevation indicated.

3.5 WARRANTIES AND GUARANTEES

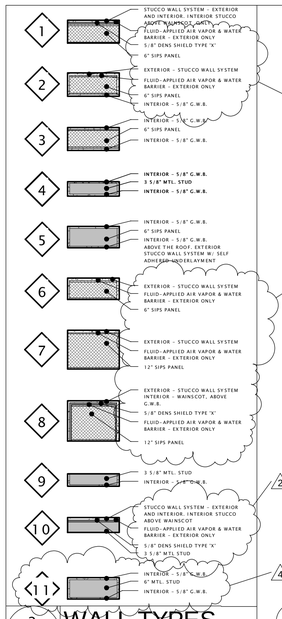
A. The new irrigation system components shall be guaranteed against defective materials for a period equal to the manufacturer’s warranties for materials, but warranty period for materials and defective workmanship shall be ONE (1) year from the date of Final Completion.

3.6 FINAL ACCEPTANCE

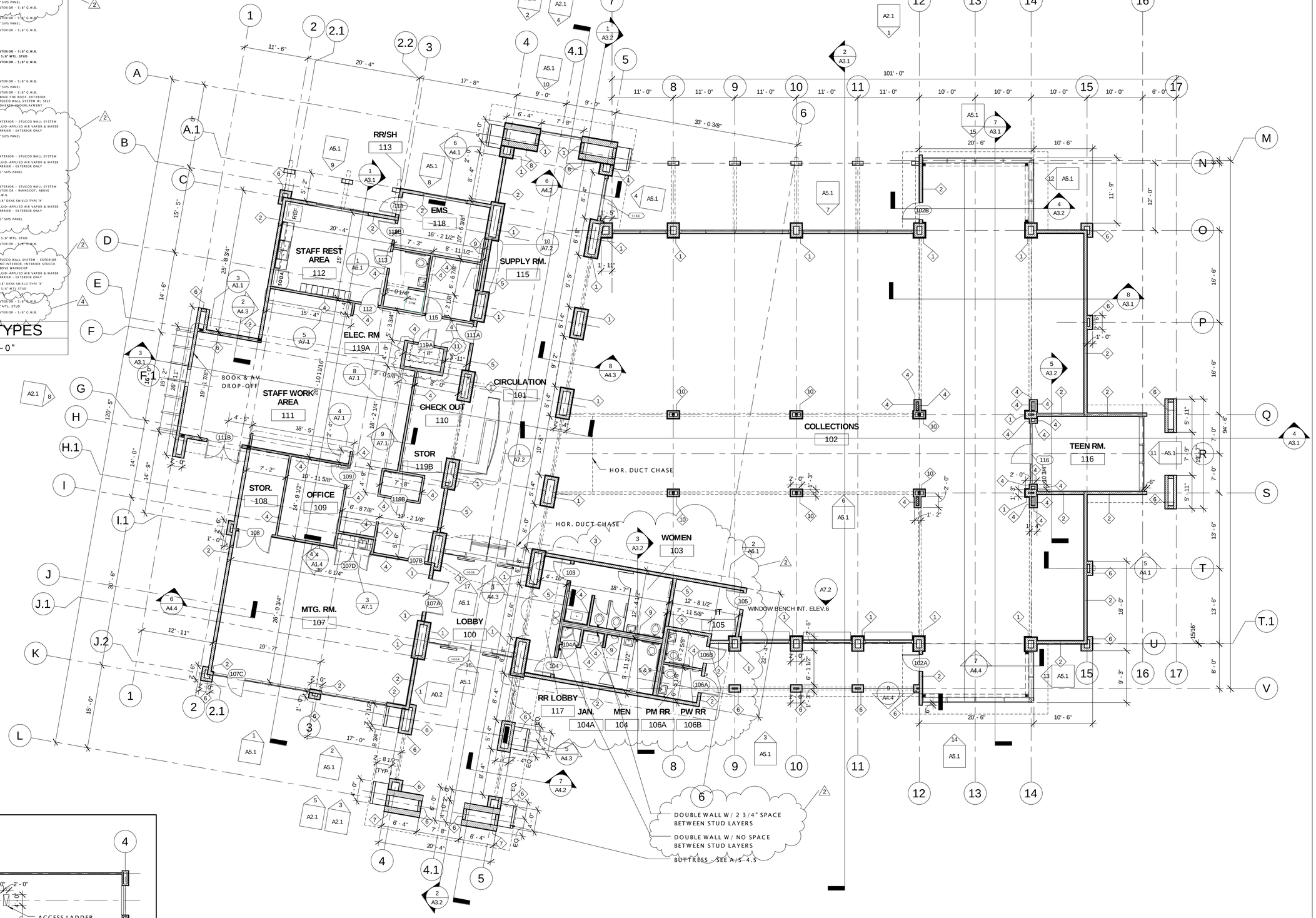
A. Prior to Final Acceptance of the irrigation system, the following documents shall be submitted and approved:

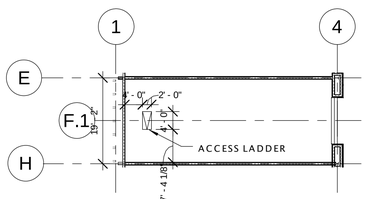
1. Final walk-through and correction of any Punch List items.
2. Completion of and acceptance of “As-Built” drawings.
3. Acceptance of zone charts and placement in the controller enclosure.
4. Turn over any required spare parts and maintenance or adjustment tools, keys, and other submittals as required or previously noted.
5. Permits.
6. Warranties and guarantees in written format.

END OF SECTION 02810



2 / A1.1 **WALL TYPES** 1/2" = 1'-0"





3 / A1.1 **MEZZANINE** 1/16" = 1'-0"

1 / A1.1 **FLOOR PLAN - SEE STRUCTURAL FOR LAYOUT** 1/8" = 1'-0"

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JPA – PM DOUG SHULER
dshuler@jparchitects.com

DRAWN	PHASE	CHECK	DATE
DSHULER	DD	JOHNSON	07.20.09
DSHULER	50%CD	JOHNSON	09.22.09
DSHULER	80%CD	JOHNSON	11.25.09
DSHULER	100%CDR	JOHNSON	01.11.10
DSHULER	100%CD	JOHNSON	02.24.10

REVISIONS

#	DATE	COMMENTS
1	04/22/10	LEON COUNTY COMMENTS
2	05/19/10	ADDENDUM #1
3	05/25/10	ADDENDUM #2
4	06/02/10	ADDENDUM #3

LEON COUNTY – EASTSIDE BRANCH LIBRARY

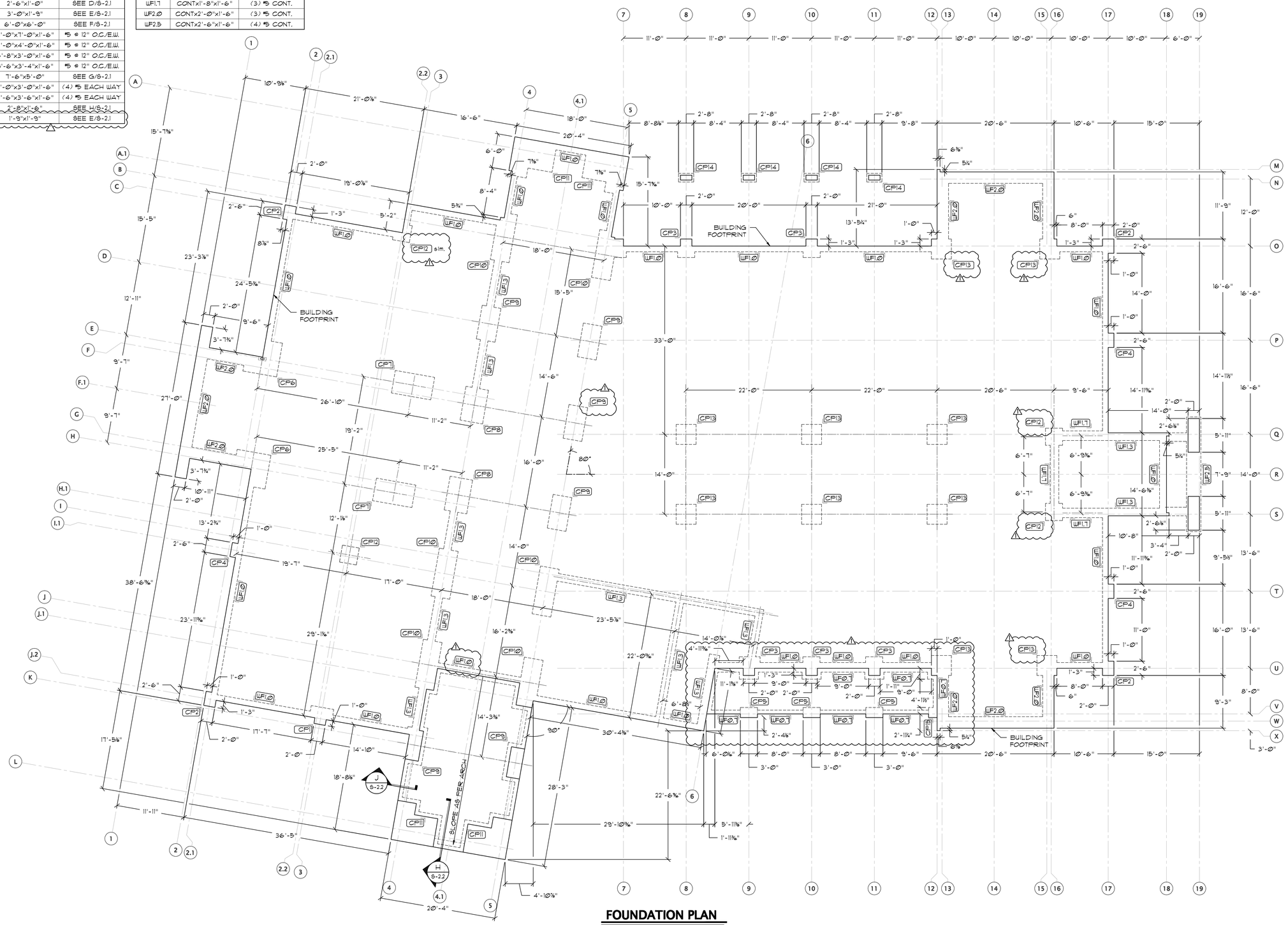
100% CONSTRUCTION DOCUMENTS

FLOOR PLAN

A1.1

COLUMN PAD FOOTING SCHEDULE		
MARK	DIMENSIONS	REINFORCMENT
CP1	2'-Ø"x4'-Ø"	SEE A/S-2.1
CP2	2'-6"x2'-Ø"	SEE B/S-2.1
CP3	3'-Ø"x2'-Ø"	SEE C/S-2.1
CP4	2'-6"x1'-Ø"	SEE D/S-2.1
CP5	3'-Ø"x1'-9"	SEE E/S-2.1
CP6	6'-Ø"x6'-Ø"	SEE F/S-2.1
CP7	4'-Ø"x7'-Ø"x1'-6"	#5 @ 12" O.C./E.W.
CP8	6'-Ø"x4'-Ø"x1'-6"	#5 @ 12" O.C./E.W.
CP9	6'-8"x3'-Ø"x1'-6"	#5 @ 12" O.C./E.W.
CP10	8'-6"x3'-4"x1'-6"	#5 @ 12" O.C./E.W.
CP11	7'-6"x5'-Ø"	SEE G/S-2.1
CP12	3'-Ø"x3'-Ø"x1'-6"	(4) #5 EACH WAY
CP13	3'-6"x3'-6"x1'-6"	(4) #5 EACH WAY
CP14	2'-8"x1'-6"	SEE H/S-2.1
CP15	1'-9"x1'-9"	SEE E/S-2.1

WALL FOOTING (CONTINUOUS) SCHEDULE		
MARK	DIMENSIONS	REINFORCMENT
WF0.7	CONTxØ'-8"x1'-Ø"	(1) #5 CONT.
WF1.Ø	CONTx1'-Ø"x1'-6"	(2) #5 CONT.
WF1.3	CONTx1'-4"x1'-Ø"	(3) #5 CONT.
WF1.7	CONTx1'-8"x1'-6"	(3) #5 CONT.
WF2.Ø	CONTx2'-Ø"x1'-6"	(3) #5 CONT.
WF2.5	CONTx2'-6"x1'-6"	(4) #5 CONT.



FOUNDATION PLAN
SCALE 1/8"=1'-0"

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DRAWN	PHASE	CHECK	DATE
GMC	DD	D.BARKLEY	7-20-09
GMC	50% CD	D.BARKLEY	9-22-09
GRS	80% CD	D.BARKLEY	11-25-09
GRS	100% CDR	D.BARKLEY	01-11-10
GRS	100% CD	D.BARKLEY	02-24-10

REVISIONS

#	DATE	COMMENTS
1	05-28-10	ADDENDUM #3

LEON COUNTY EASTSIDE BRANCH LIBRARY

100% CONSTRUCTION DOCUMENTS

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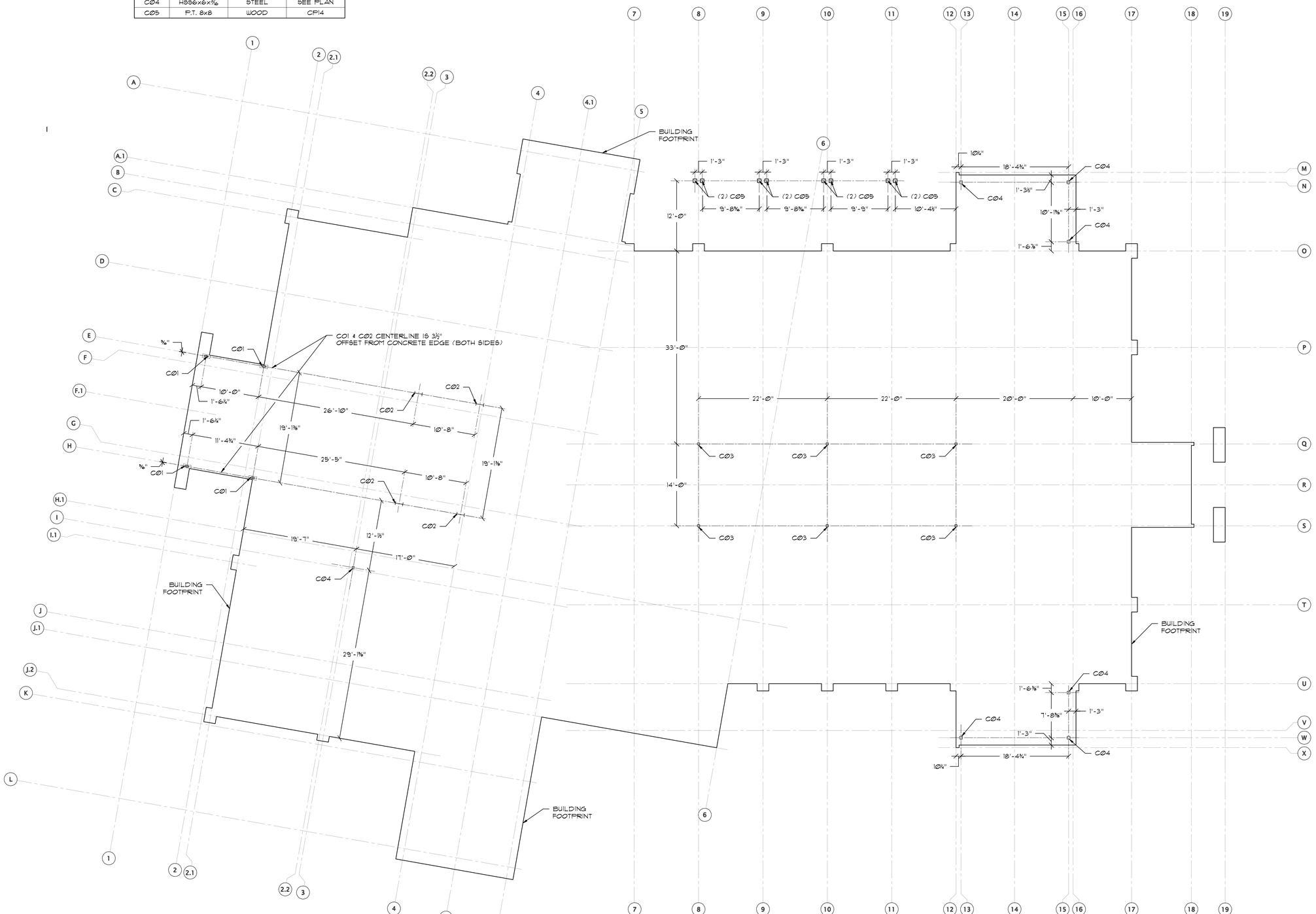
FAX 850-297-0697
BCEI #08-00863

Douglas R. Barkley M.S., P.E.
FL PE. # 49090

FOUNDATION PLAN

S-1.1

COLUMN SCHEDULE			
MARK	COLUMN SIZE	MATERIAL	COLUMN PAD
C01	HSS8x4x5/16	STEEL	SEE PLAN
C02	W16x40	STEEL	SEE PLAN
C03	HSS5x5x5/16	STEEL	CP13
C04	HSS6x6x5/16	STEEL	SEE PLAN
C05	P.T. 8x8	WOOD	CP14



STEEL LAYOUT & MEZZANINE PLAN

SCALE 1/8"=1'-0"

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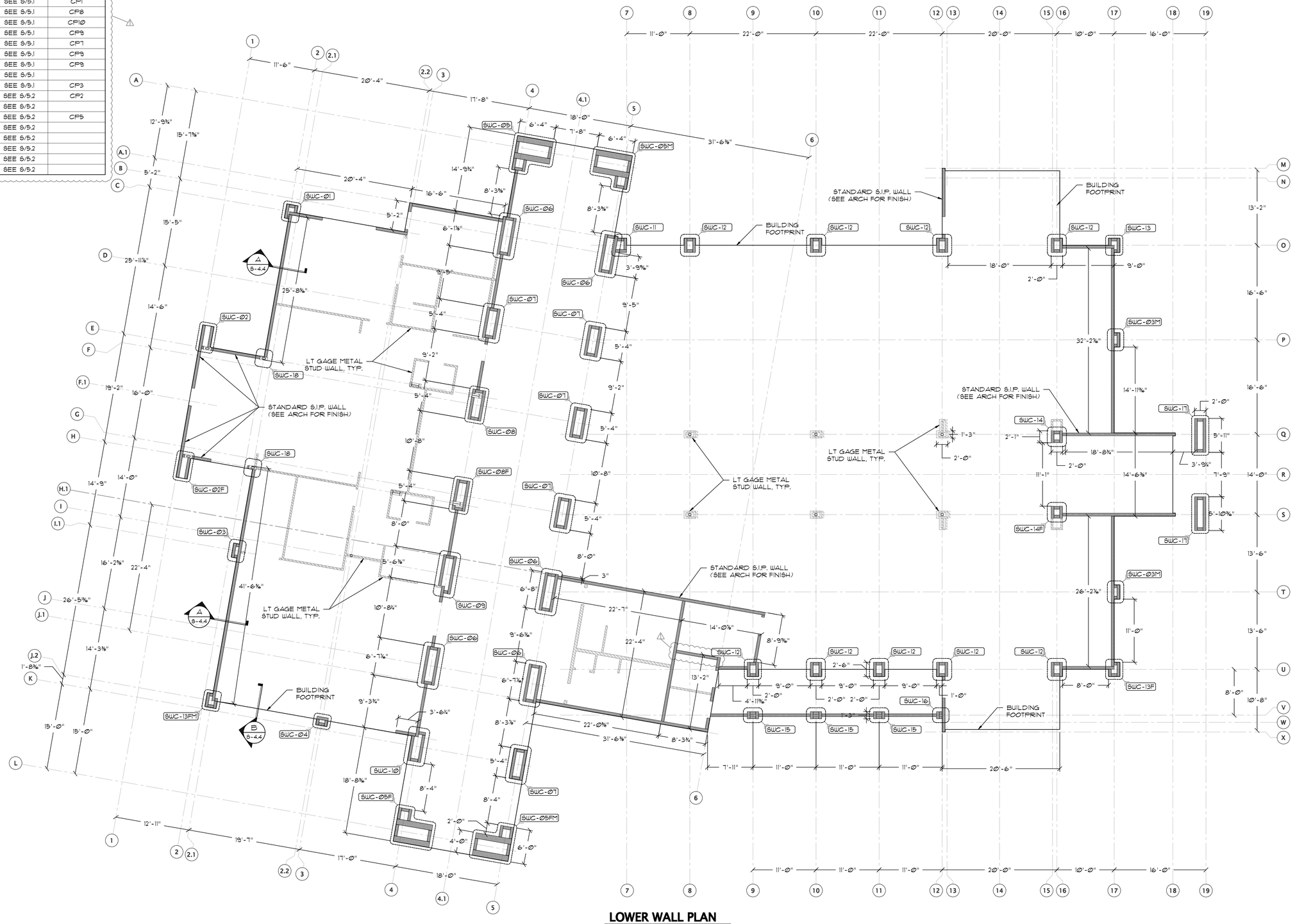
STEEL LAYOUT & MEZZANINE PLAN

S-1.2

S.I.P. WALL CONFIGURATION SCHEDULE		
MARK	COLUMN SIZE	COLUMN PAD
SWC-01	SEE S/S.1	CP2 (SIMILAR)
SWC-02	SEE S/S.1	
SWC-03	SEE S/S.1	CP4
SWC-04	SEE S/S.1	CP1
SWC-05	SEE S/S.1	CP8
SWC-06	SEE S/S.1	CP10
SWC-07	SEE S/S.1	CP9
SWC-08	SEE S/S.1	CP7
SWC-09	SEE S/S.1	CP9
SWC-10	SEE S/S.1	CP9
SWC-11	SEE S/S.1	
SWC-12	SEE S/S.1	CP3
SWC-13	SEE S/S.2	CP2
SWC-14	SEE S/S.2	
SWC-15	SEE S/S.2	CP5
SWC-16	SEE S/S.2	
SWC-17	SEE S/S.2	
SWC-18	SEE S/S.2	
SWC-19	SEE S/S.2	
SWC-20	SEE S/S.2	



LOWER WALL PLAN

SCALE 1/8"=1'-0"

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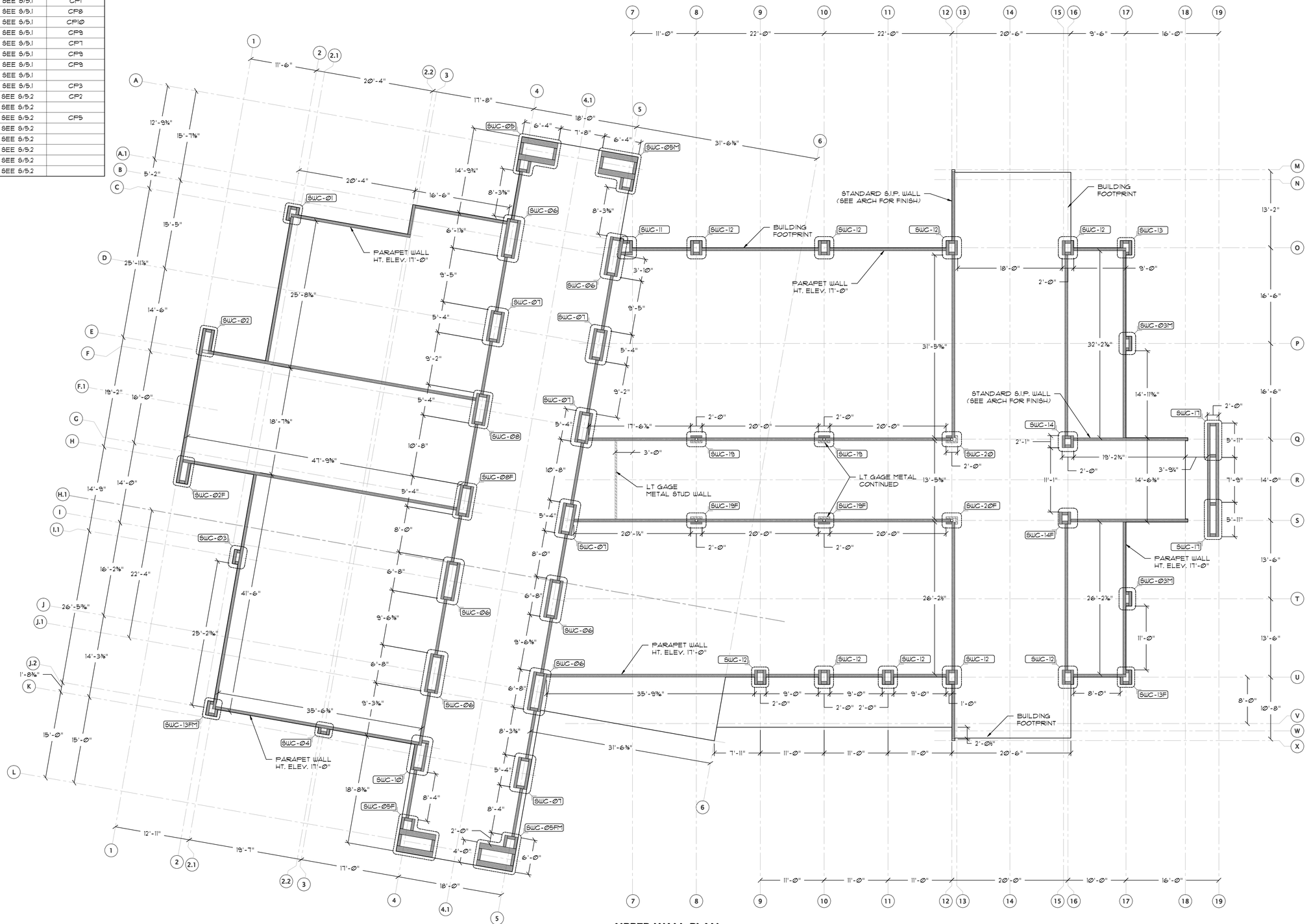
FL PE. # 49090

LOWER WALL PLAN

S-1.3

S.I.P. WALL CONFIGURATION SCHEDULE		
MARK	COLUMN SIZE	COLUMN PAD
SWC-01	SEE S/5.1	CP2 (SIMILAR)
SWC-02	SEE S/5.1	
SWC-03	SEE S/5.1	CP4
SWC-04	SEE S/5.1	CP1
SWC-05	SEE S/5.1	CP8
SWC-06	SEE S/5.1	CP10
SWC-07	SEE S/5.1	CP9
SWC-08	SEE S/5.1	CP7
SWC-09	SEE S/5.1	CP9
SWC-10	SEE S/5.1	CP9
SWC-11	SEE S/5.1	
SWC-12	SEE S/5.1	CP3
SWC-13	SEE S/5.2	CP2
SWC-14	SEE S/5.2	
SWC-15	SEE S/5.2	CP5
SWC-16	SEE S/5.2	
SWC-17	SEE S/5.2	
SWC-18	SEE S/5.2	
SWC-19	SEE S/5.2	
SWC-20	SEE S/5.2	



UPPER WALL PLAN

SCALE 1/8"=1'-0"

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GRS	100% CD	D.BARKLEY	02-24-10

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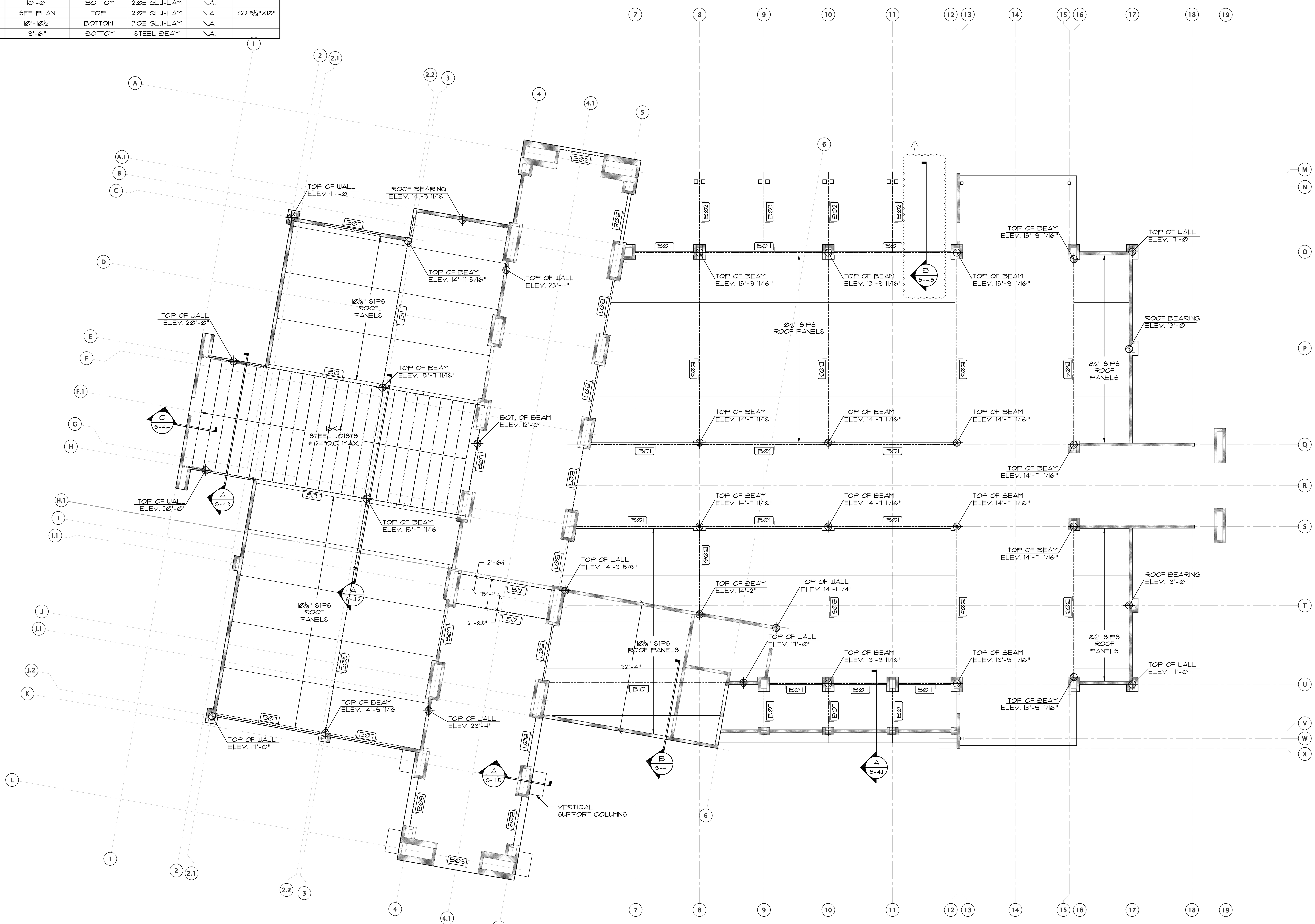
UPPER WALL PLAN

S-1.4

BEAM SCHEDULE						
MARK	SIZE	ELEVATION	TOP / BOTTOM	TYPE	FLITCH PL	REMARKS
B01	5¼"x14"	10'-0"	BOTTOM	2.0E GLU-LAM	N.A.	
B02	8x8	11'-9"	TOP	DIMENSIONAL	N.A.	P.T.
B03	14"x18"	SEE PLAN	TOP	2.0E GLU-LAM	1" STEEL	(2) 7"x18"
B04	14"x18"	SEE PLAN	TOP	2.0E GLU-LAM	½" STEEL	(2) 7"x18"
B05	14"x18"	SEE PLAN	TOP	2.0E GLU-LAM	N.A.	(2) 7"x18"
B06	5¼"x14"	SEE PLAN	TOP	2.0E GLU-LAM	N.A.	
B07	5¼"x12"	10'-0"	BOTTOM	2.0E GLU-LAM	N.A.	
B08	5¼"x12"	14'-6"	BOTTOM	2.0E GLU-LAM	N.A.	
B09	5¼"x12"	16'-0"	BOTTOM	2.0E GLU-LAM	N.A.	
B10	5¼"x18"	10'-0"	BOTTOM	2.0E GLU-LAM	N.A.	
B11	10½"x18"	SEE PLAN	TOP	2.0E GLU-LAM	N.A.	(2) 5¼"X18"
B12	3½"x24"	10'-10¼"	BOTTOM	2.0E GLU-LAM	N.A.	
B13	W21x57	9'-6"	BOTTOM	STEEL BEAM	N.A.	



LOWER WALL PLAN

SCALE 1/8"=1'-0'

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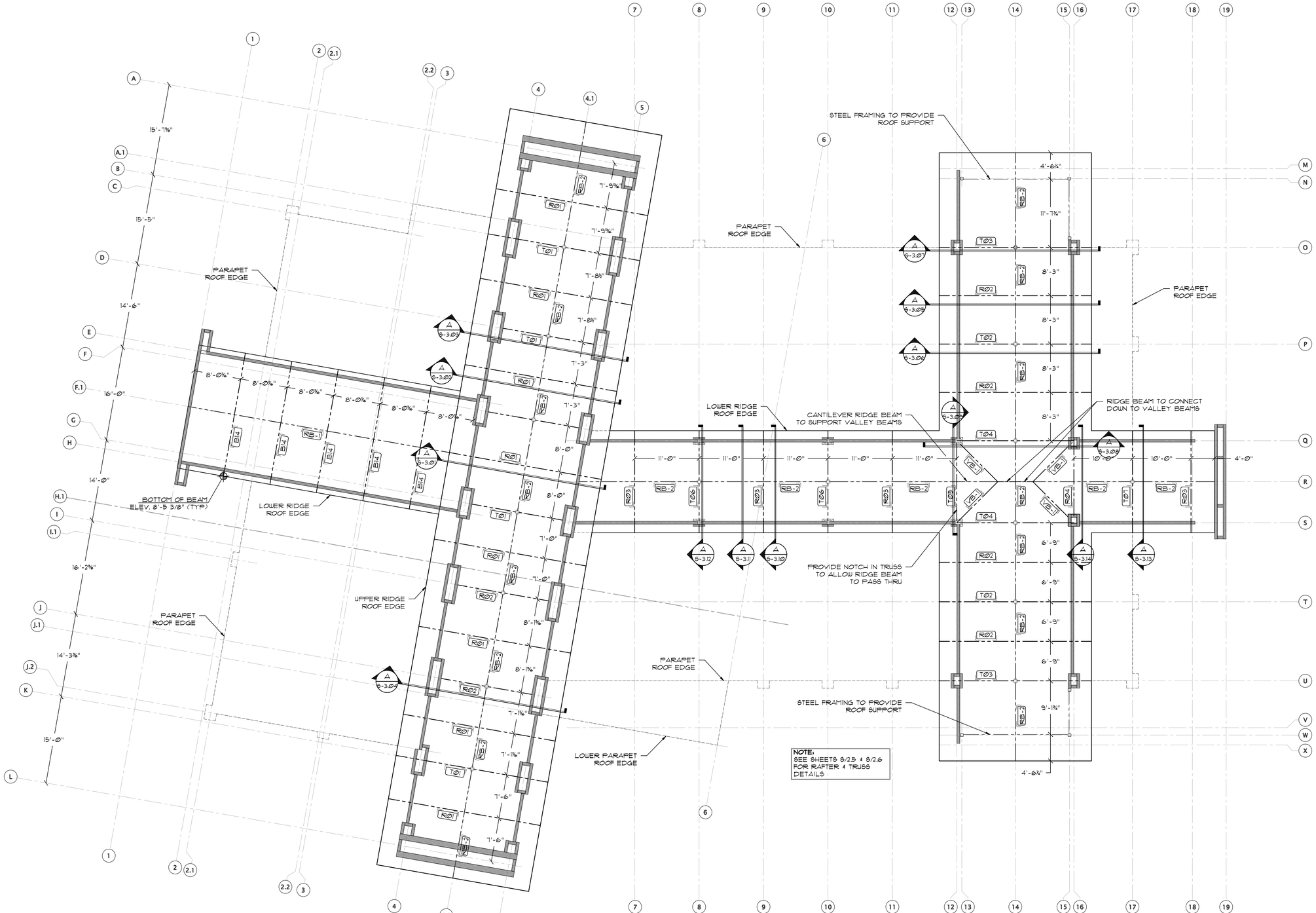
LOWER ROOF FRAMING PLAN

S-1.5

UPPER ROOF BEAM SCHEDULE			
MARK	SIZE	TYPE	REMARKS
B14	5¼"x12"	2.0E GLU-LAM	BOTTOM OF BEAM = 8'-5⅜"
RB-1	5¼"x12"	2.0E GLU-LAM	RIDGE BEAM
RB-2	5¼"x14"	2.0E GLU-LAM	RIDGE BEAM
VB-1	5¼"x14"	2.0E GLU-LAM	VALLEY BEAM



UPPER ROOF FRAMING PLAN

SCALE 1/8"=1'-0"

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UPPER ROOF FRAMING PLAN

S-1.6

SEWER FLOW CALCULATIONS

BUILDING (EASTSIDE BRANCH LIBRARY)

TOTAL ESTIMATED EMPLOYEES = 10 STAFF

TOTAL ESTIMATED NUMBER OF LIBRARY USE = 150 PEOPLE

AVERAGE FLOW BASED ON 60 GPCD

TOTAL AVERAGE DAILY FLOW = 160 X 60 = 9,600 GPD

PEAK HOUR FLOW (BASED ON 300% AND 18 HOURS USE) = 1,600 GALLONS

WATER DEMAND FLOW CALCULATIONS

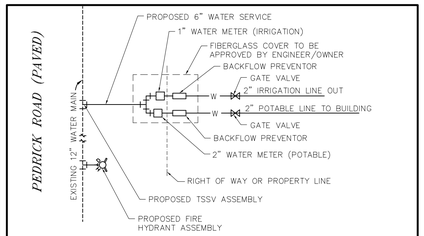
NUMBER OF SERVICE CONNECTION = 1

AVERAGE ESTIMATED NUMBER OF PEOPLE = 160

AVERAGE DAILY WATER DEMAND = 70 GPCD (BRANCH LIBRARY)

TOTAL DAILY WATER DEMAND FOR SERVICE CONNECTION = 11,200 GPD

TOTAL MAXIMUM DAY WATER DEMAND = 16,800 GPD (150% MULTIPLIER)



WATER METER DETAIL

NOTE: CONTRACTOR TO CONTACT CITY OF TALLAHASSEE WATER DEPARTMENT FOR LOCATION AND COORDINATION OF WATER METERS PRIOR TO INSTALLING WATER LINES.

FIRE FLOW CALCULATIONS

CONSTRUCTION FACTOR = $Ci = 18F(Ai)^{0.5}$
$Ci = 18(1.5)(13,200)^{0.5} = 3,102.10$
CONSTRUCTION CLASS1 (FRAME) F=1.5
EFFECTIVE AREA= 13,200 S.F.
EXPOSURE FACTOR $(1+(X+P)i)$
$(1+(X+P)i) = (1+(0.10+0) = 1.10$
OCCUPANCY FACTOR (C-3 COMBUSTIBLE) = 1.0
NEEDED FIRE FLOW = $(Ci)(Oi)(X+P)i$
NFF = 3,102.10 x 1.0 x 1.10 = 3,412.31
NFF = 3,412.31 ROUND NEAREST 500 GPM = 3,500 GPM

F = CONSTRUCTION CLASS COEFFICIENT	F =	1.50
Ai = EFFECTIVE AREA IN S.F.	Ai =	13,200
Ci = CONSTRUCTION FACTOR	Ci =	3,102.10
Xi = EXPOSURE FACTOR	Xi =	1.10
Pi = COMMUNICATION FACTOR	Pi =	0.00
Oi = OCCUPANCY FACTOR	Oi =	1.00

NOTE:
REQUIRED FIREFLOW PROVIDED BY TWO HYDRANTS: ONE EXISTING AND ONE PROPOSED. BOTH ARE AT 2,000 GPM = 4,000 GPM.

UTILITY NOTES:

1. MINIMUM GROUND COVER OVER WATER MAINS TO BE 36"
MINIMUM GROUND COVER OVER SANITARY SEWER TO BE 36"
MINIMUM GROUND COVER OVER GAS LINES TO BE 36"
2. WATER AND SEWER LINES SHALL MAINTAIN A HORIZONTAL SEPARATION OF 10', OR A VERTICAL OF 18". WHEN THIS IS NOT POSSIBLE CONCRETE ENCASEMENT OF PIPE FOR A DISTANCE OF 10' EACH SIDE OF THE SEWER MAIN SHALL BE USED, IN LIEU OF THE CONCRETE ENCASEMENT, DUCTILE IRON PIPE MAY BE MAINTAINED WITH ALL OTHER UTILITIES.
3. WHERE REQUIRED, WATER MAINS MAY BE DEFLECTED TO PROVIDE 12" MIN. HORIZONTAL CLEARANCE BETWEEN MAIN, STORM STRUCTURE, AND DRAIN.
4. NOTIFY THE OWNER AND THE ENGINEERS 72 HOURS PRIOR TO MAKING ALL CONNECTIONS TO EXISTING WATER MAINS.
5. BACTERIOLOGICAL SAMPLING PERFORMED BY THE CONTRACTOR.
6. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION IN CASE OF CONFLICTS OF NEW CONSTRUCTION WITH EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY ENGINEER TO RESOLVE SUCH CONFLICTS PRIOR TO CONTINUING CONSTRUCTION.
7. SEALED MANHOLE COVER TO BE USED FOR MANHOLES IN PAVED ROAD SUFACE. COLD TAR EPOXY TO BE APPLIED INSIDE AND OUTSIDE OF CONCRETE MANHOLES. MANHOLES IN NON-PAVED AREAS SUSCEPTABLE TO WATER INFLOW SHALL HAVE A SEALED MANHOLE COVER AND BE ELEVATED 6"-12" ABOVE SURROUNDING SURFACE.
8. LIGHTING SHALL BE DIRECTED TO NOT SHINE ON OFF-SITE RESIDENTIAL PROPERTIES. THE LIGHTING PLAN SHALL CLEARLY IDENTIFY THAT THE PROPOSED LIGHT FIXTURES ARE DESIGNED WITH RECESSED BULBS AND/OR FILTERS. THE HEIGHT OF LIGHT FIXTURES IN THE PARKING AREA SHOULD NOT EXCEED 18 FEET FROM GRADE.

FIRE DEPARTMENT NOTES:

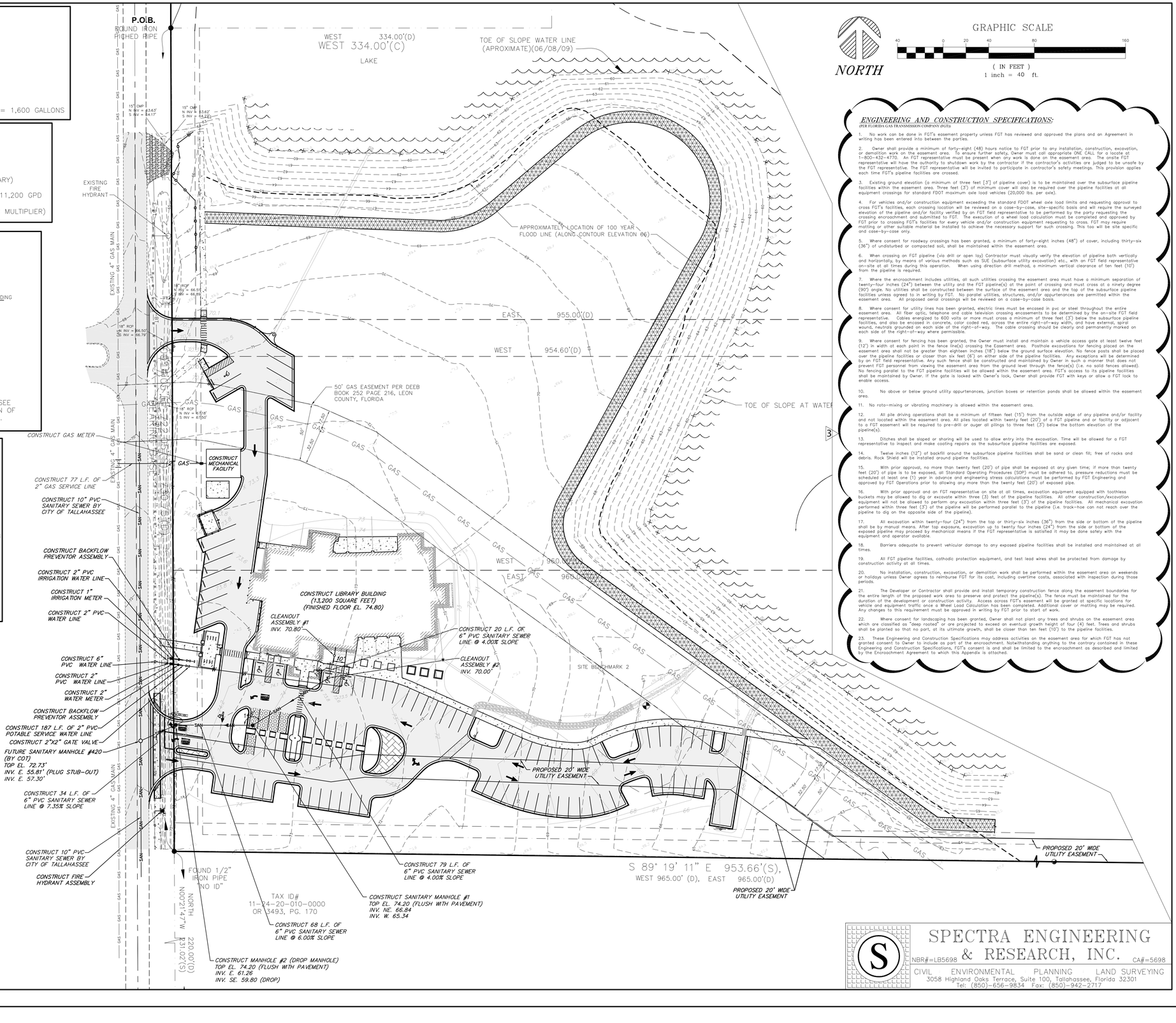
DEPTH OF FIRE MAIN PIPING (TO TOP OF PIPE):

36" MINIMUM UNDER DRIVING SURFACES
30" MINIMUM UNDER NON-DRIVING SURFACES

FIRE MAIN PIPING SHALL NOT BE COVERED UNTIL INSPECTED BY THE TALLAHASSEE FIRE DEPARTMENT.

FIRE HYDRANTS SHALL BE A MINIMUM OF 18" ABOVE GRADE MEASURED TO THE STEAMER NOZZLE.

STEAMER NOZZLE TO FACE ROADWAY OR NEAREST POINT OF FIRE DEPARTMENT APPARATUS ACCESSIBILITY WHEN PLACED IN SERVICE.



NORTH

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

ENGINEERING AND CONSTRUCTION SPECIFICATIONS:

(FGT FLORIDA GAS TRANSMISSION COMPANY (FGT))

1. No work can be done in FGT's easement property unless FGT has reviewed and approved the plans and an Agreement in writing has been entered into between the parties.

2. Owner shall provide a minimum of forty-eight (48) hours notice to FGT prior to any installation, construction, excavation, or demolition work on the easement area. To ensure further safety, Owner must call appropriate ONE CALL for a locate at 1-800-432-4770. An FGT representative must be present when any work is done on the easement area. The onsite FGT representative will have the authority to shutdown work by the contractor if the contractor's activities are judged to be unsafe by the FGT representative. The FGT representative will be invited to participate in contractor's safety meetings. This provision applies each time FGT's pipeline facilities are crossed.

3. Existing ground elevation (a minimum of three feet [3'] of pipeline cover) is to be maintained over the subsurface pipeline facilities within the easement area. Three feet (3') of minimum cover will also be required over the pipeline facilities at all equipment crossings for standard FDOT maximum axle load vehicles (20,000 lbs. per axle).

4. For vehicles and/or construction equipment exceeding the standard FDOT wheel axle load limits and requesting approval to cross FGT's facilities, each crossing location will be reviewed on a case-by-case, site-specific basis and will require the surveyed elevation of the pipeline and/or facility verified by an FGT field representative to be performed by the party requesting the crossing encroachment and submitted to FGT. The execution of a wheel load calculation must be completed and approved by FGT prior to crossing FGT's facilities for every vehicle and/or construction equipment requesting to cross. FGT may require matting or other suitable material be installed to achieve the necessary support for such crossing. This too will be site specific and case-by-case only.

5. Where consent for roadway crossings has been granted, a minimum of forty-eight inches (48") of cover, including thirty-six (36") of undisturbed or compacted soil, shall be maintained within the easement area.

6. When crossing an FGT pipeline (via drill or open lay) Contractor must visually verify the elevation of pipeline both vertically and horizontally, by means of various methods such as SUE (subsurface utility excavation) etc., with an FGT field representative on-site at all times during this operation. When using direction drill method, a minimum vertical clearance of ten feet (10') from the pipeline is required.

7. Where the encroachment includes utilities, all such utilities crossing the easement area must have a minimum separation of twenty-four inches (24") between the utility and the FGT pipeline(s) at the point of crossing and must cross at a nearly degree (90°) angle. No utilities shall be constructed between the surface of the easement area and the top of the subsurface pipeline facilities unless agreed to in writing by FGT. No parallel utilities, structures, and/or appurtenances are permitted within the easement area. All proposed aerial crossings will be reviewed on a case-by-case basis.

8. Where consent for utility lines has been granted, electric lines must be encased in pvc or steel throughout the entire easement area. All fiber optic, telephone and cable television crossing easements to be determined by the on-site FGT field representative. Cables energized to 600 volts or more must cross a minimum of three feet (3') below the subsurface pipeline facilities, and also be encased in concrete, color coded red, across the entire right-of-way width, and have internal, spiral wound, neutrals grounded on each side of the right-of-way. The cable crossing should be clearly and permanently marked on each side of the right-of-way where permissible.

9. Where consent for fencing has been granted, the Owner must install and maintain a vehicle access gate at least twelve feet (12') in width at each point in the fence line(s) crossing the Easement area. Posthole excavations for fencing placed on the easement area shall not be greater than eighteen inches (18") below the ground surface elevation. No fence posts shall be placed over the pipeline facilities or closer than six feet (6') on either side of the pipeline facilities. Any exceptions will be determined by an FGT field representative. Any such fence shall be constructed and maintained by Owner in such a manner that does not prevent FGT personnel from viewing the easement area from the ground level through the fence(s) (i.e. no solid fences allowed). No fencing parallel to the FGT pipeline facilities will be allowed within the easement area. FGT's access to its pipeline facilities shall be maintained by Owner. If the gate is locked with Owner's lock, Owner shall provide FGT with keys or allow a FGT lock to enable access.

10. No above or below ground utility appurtenances, junction boxes or retention ponds shall be allowed within the easement area.

11. No roto-mixing or vibrating machinery is allowed within the easement area.

12. All pile driving operations shall be a minimum of fifteen feet (15') from the outside edge of any pipeline and/or facility and not located within the easement area. All piles located within twenty feet (20') of a FGT pipeline and or facility or adjacent to a FGT easement will be required to pre-drill or auger all pilings to three feet (3') below the bottom elevation of the pipeline(s).

13. Ditches shall be sloped or shoring will be used to allow entry into the excavation. Time will be allowed for a FGT representative to inspect and make coating repairs as the subsurface pipeline facilities are exposed.

14. Twelve inches (12") of backfill around the subsurface pipeline facilities shall be sand or clean fill; free of rocks and debris. Rock Shield will be installed around pipeline facilities.

15. With prior approval, no more than twenty feet (20') of pipe shall be exposed at any given time; if more than twenty feet (20') of pipe is to be exposed, all Standard Operating Procedures (SOP) must be adhered to, pressure reductions must be scheduled at least one (1) year in advance and engineering stress calculations must be performed by FGT Engineering and approved by FGT Operations prior to allowing any more than the twenty feet (20') of exposed pipe.

16. With prior approval and an FGT representative on site at all times, excavation equipment equipped with toothless buckets may be allowed to dig or excavate within three (3) feet of the pipeline facilities. All other construction/excavation equipment will not be allowed to perform any excavation within three feet (3') of the pipeline facilities. All mechanical excavation performed within three feet (3') of the pipeline will be performed parallel to the pipeline (i.e. track-hoe can not reach over the pipeline to dig on the opposite side of the pipeline).

17. All excavation within twenty-four (24") from the top or thirty-six inches (36") from the side or bottom of the pipeline shall be by manual means. After top exposure, excavation up to twenty four inches (24") from the side or bottom of the exposed pipeline may proceed by mechanical means if the FGT representative is satisfied it may be done safely with the equipment and operator available.

18. Barriers adequate to prevent vehicular damage to any exposed pipeline facilities shall be installed and maintained at all times.

19. All FGT pipeline facilities, cathodic protection equipment, and test lead wires shall be protected from damage by construction activity at all times.

20. No installation, construction, excavation, or demolition work shall be performed within the easement area on weekends or holidays unless Owner agrees to reimburse FGT for its cost, including overtime costs, associated with inspection during those periods.

21. The Developer or Contractor shall provide and install temporary construction fence along the easement boundaries for the entire length of the proposed work area to preserve and protect the pipeline(s). The fence must be maintained for the duration of the development or construction activity. Access across FGT's easement will be granted at specific locations for vehicle and equipment traffic once a Wheel Load Calculation has been completed. Additional cover or matting may be required. Any changes to this requirement must be approved in writing by FGT prior to start of work.

22. Where consent for landscaping has been granted, Owner shall not plant any trees and shrubs on the easement area which are classified as "deep rooted" or are projected to exceed an eventual growth height of four (4) feet. Trees and shrubs shall be planted so that no part, at its ultimate growth, shall be closer than ten feet (10') to the pipeline facilities.

23. These Engineering and Construction Specifications may address activities on the easement area for which FGT has not granted consent to Owner to include as part of the encroachment. Notwithstanding anything to the contrary contained in these Engineering and Construction Specifications, FGT's consent is and shall be limited to the encroachment as described and limited by the Encroachment Agreement to which this Appendix is attached.

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REG# AA001215
JPA PROJECT #0614.001
JPA – PM DOUG SHULER
dshuler@jparchitects.com

DRAWN	PHASE	CHECK	DATE
Author	ASD	JOHNSON	05/28/09
T.W.	80% CD	PCO	11/25/09
T.W.	100% CD	PCO	01/15/10
T.W.	BID DOC	PCO	03/24/10

REVISIONS

#	DATE	COMMENTS
1	1-4-10	11-18-09 DRC COMMENTS
1	3-29-10	GROWTH MANAGEMENT
2	4-13-10	CITY UTILITIES DEPARTMENT COMMENTS
3	5-27-10	FLORIDA GAS TRANSMISSION NOTES

LEON COUNTY BRANCH LIBRARY – EASTSIDE LIBRARY

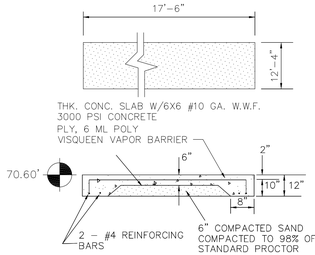
BID DOCUMENT

UTILITIES PLAN

THIS PLAN IS NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY THE ENGINEER OF RECORD.

PETER C. OKONKWO, P.E. DATED
FLA. REGISTRATION NO. 51459

C5.0-R

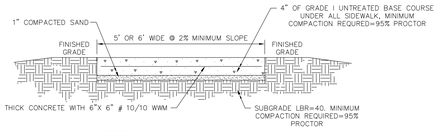


SECTION A-A

CONCRETE DUMPSTER PAD DETAIL

N.T.S.

(THIS DETAIL SHOULD BE COOR. WITH ARCH SHEET A0.0)

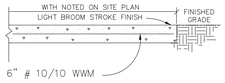


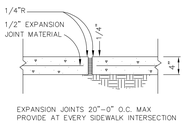
NOTES:

1. EDGE SIDEWALK WITH 3/8" RADIUS EDGING TOOL. ROUND EDGES AT EXPANSION JOINTS TO A RADIUS OF 3/8".
2. USE FINE HAIR BROOM TO FINISH WALKS ON GRADES UNDER 6% OVER 6% USE ROUGH HAIR BROOM.
3. CONCRETE SHALL BE A MINIMUM OF 3000 PSI.

TYPICAL SIDEWALK DETAIL

N.T.S.

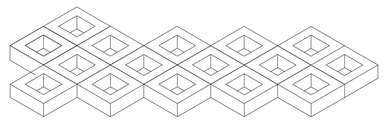




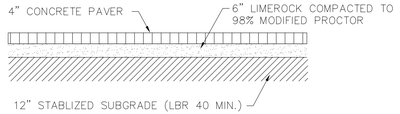
WALK SECTION — NOTES: WALK SLOPE VARIES, SEE PLAN. — EXPANSION JOINT

SIDEWALK DETAIL

N.T.S.

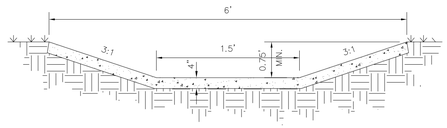


Concrete Pavers (NTS)
Center of pavers to be filled with fins grade soil/sand



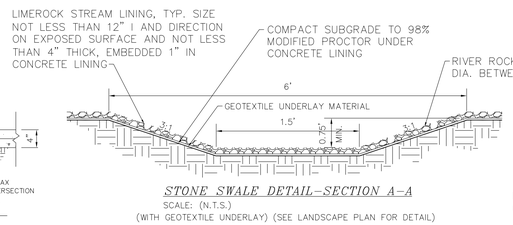
TYPICAL CONCRETE "PAVERS SECTION

SCALE: NTS



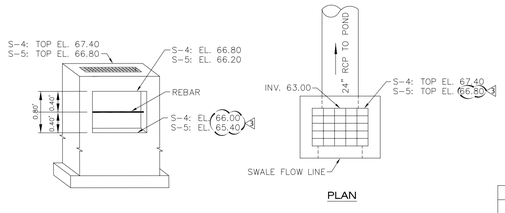
CONCRETE SWALE DETAIL-SECTION B-B

SCALE: (N.T.S.)

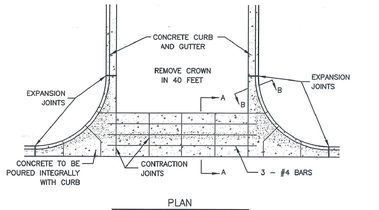


STONE SWALE DETAIL-SECTION A-A

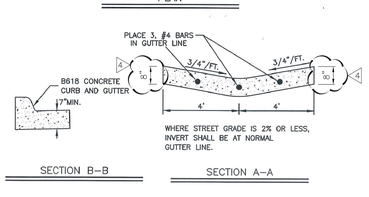
SCALE: (N.T.S.)
(WITH GEOTEXTILE UNDERLAY) (SEE LANDSCAPE PLAN FOR DETAIL)



TYPE E INLET DETAIL FOR STRUCTURES S-4 & S-5, SHEETS C4.0 & C4.1



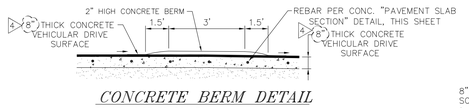
PLAN



SECTION B-B — SECTION A-A

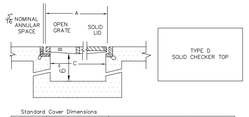
CONCRETE PAVEMENT DRIVEWAY AND CROSS PAN

N.T.S.



CONCRETE BERM DETAIL

SCALE: (NOT TO SCALE)
SHEET C3.0-R

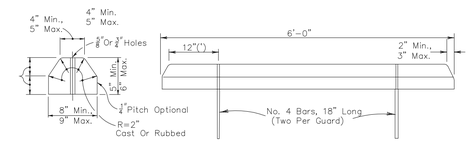


Standard Cover Dimensions

Catalog No.	Dimensions in inches A	B	C	Weight per lineal foot (without frame) Type A	Type D	Type E	Type P	Frame
R-4991-JX	29	1.5	27	71	79	74	74	–	12

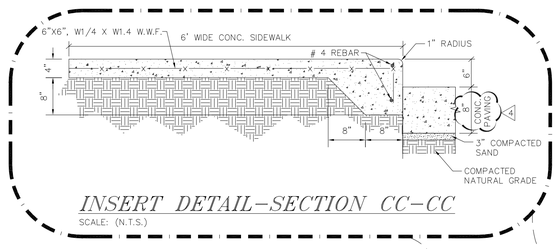
NEENAH R-4991 JX
TRENCH FRAMES WITH GRATED OR SOLID COVERS
NOT TO SCALE

TRENCH DRAIN DETAIL/NOTES



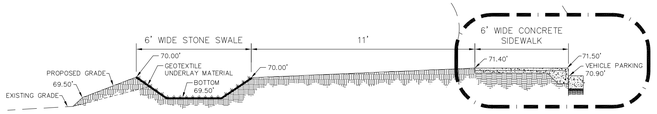
CONCRETE BUMPER GUARD

N.T.S.
(SEE FDOT INDEX 300, CURRENT EDITION)



INSERT DETAIL-SECTION CC-CC

SCALE: (N.T.S.)

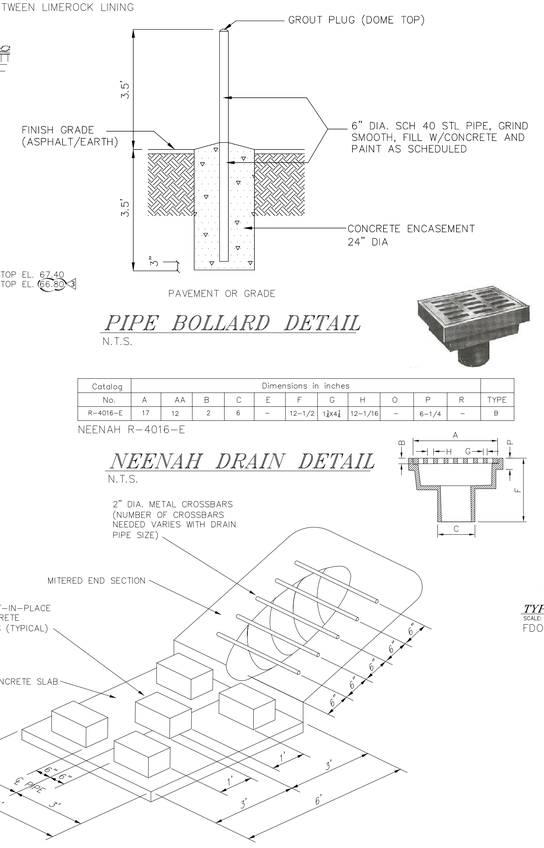


SECTION C-C

SCALE: (N.T.S.)

INSERT CC-CC ABOVE

N.T.S.



PIPE BOLLARD DETAIL

N.T.S.

Catalog No.	Dimensions in inches A	AA	B	C	E	F	G	H	O	P	R	TYPE
R-4016-E	17	12	2	6	–	12-1/2	1⅞x4¼	12-1/16	–	6-1/4	–	B

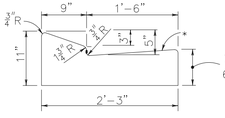
NEENAH R-4016-E

NEENAH DRAIN DETAIL

N.T.S.

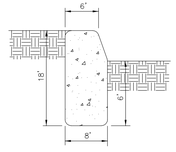
MITERED END SECTION WITH ENERGY DISSIPATOR

NOT TO SCALE



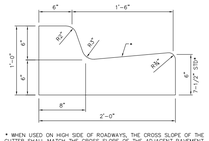
TYPE "E" CURB DETAIL

SCALE: N.T.S.
FDOT INDEX 300, 2009 EDITION



TYPICAL HEADER CURB

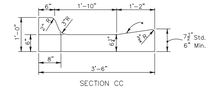
SCALE: NTS
FDOT INDEX 300



* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

TYPICAL TYPE 'F' CURB & GUTTER DETAIL

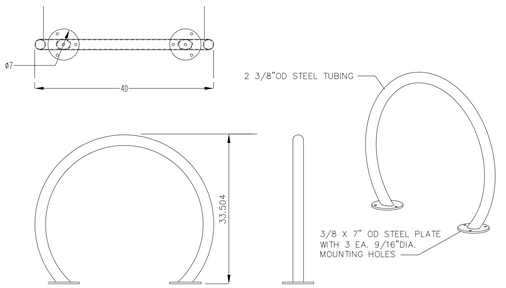
SCALE: NOT TO SCALE
FDOT INDEX 300

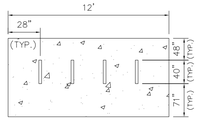


SECTION CC

VALLEY GUTTER

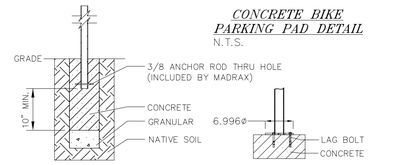
N.T.S.
FDOT INDEX 300





CONCRETE BIKE PARKING PAD DETAIL

N.T.S.

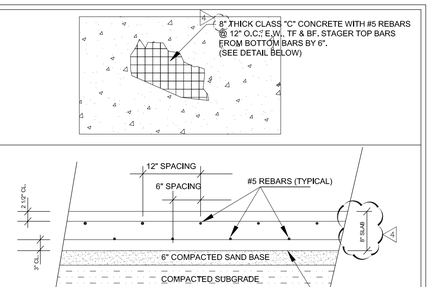


1. INSTALL BIKE RACKS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. CONSULTANT TO SELECT COLOR(FINISH), SEE MANUFACTURER'S SPECIFICATIONS.
3. SEE SITE PLAN FOR LOCATION OR CONSULT OWNER.

BICYCLE PARKING RACK DETAIL

PRODUCT: ORN-2-IG(SF)
DESCRIPTION: ORION BIKE RACK 2 3/8"OD TUBING
2 BIKE, SURFACE OR IN GROUND MOUNT

MADRAX
A DIVISION OF TRILARY, INC.
1080 UNIEK DRIVE
WAUNAKEE, WI 53597
P(800) 448-7931, P(608) 849-1080
F(608) 849-1081
WWW.MADRAX.COM



CONCRETE PAVEMENT SLAB SECTION NTS

EARTHWORK
1. CONCRETE SHALL BE PLACES AS SOON AS PRACTICAL AFTER SOIL PREPARATION AND COMPACTION SO AS NOT TO ALLOW THE ELEMENTS OR CONSTRUCTION ACTIVITY TO DISTURB THE PREPARED AREA.
2. UNDER NO CIRCUMSTANCES WILL DIGGING, TUNNELING OR TRENCHING BE ALLOWED AT OR NEAR ANY CONCRETE STRUCTURE WHICH MIGHT ACT TO UNDERMINE THE STRUCTURE.

CONCRETE
1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION ACI RECOMMENDATIONS
2. ALL CONCRETE SHALL BE DESIGNED TO SECURE A STRENGTH OF 4000 PSI AT 28 DAYS IN SLABS
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 60 (Fy=60KSI)
4. ALL CONCRETE SHALL BE CONSOLIDATED BY USE OF A MECHANICAL VIBRATOR OTHER MEANS APPROVED BY THE ENGINEER.
5. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINES IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENT FOR REINFORCES CONRET," ACI 318-02 AND THE "MANUALS OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315 LATEST EDITION.
6. ALL BARS SPLICES AND DOWELS SHALL LAP 30 BAR DIAMETERS (MIN.) UNLESS REQUIRED OTHERWISE BY CODE
7. ALL HORIZONTAL BARS IN FOOTINGS AND WALLS SHALL BE LAPPED AT CORNER.
8. PROVIDE ALL JOINTS (EXPANSION, CONSTRUCTION, TRANSVERSE, ETC) SHALL BE IN ACCORDANCE WITH FDOT INDEX NO. 305, DESIGN STANDARDS, 2009 EDITION.

CONCRETE PAVEMENT SECTION

SPECTRA ENGINEERING & RESEARCH, INC.
NBR#=LB5698 CA#=5698
CIVIL ENVIRONMENTAL PLANNING LAND SURVEYING
3058 Highland Oaks Terrace, Suite 100, Tallahassee, Florida 32301
Tel: (850)-656-9834 Fax: (850)-942-2717

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ARCHITECTS
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T.W.	BID DOC	PCO	03/24/10

REVISIONS

#	DATE	COMMENTS
1	3-29-10	GROWTH MANAGEMENT
2	4-07-10	GROWTH MANAGEMENT 4.6.10 COMMENTS
3	5-17-10	GROWTH MANAGEMENT 5.5.10 COMMENTS
4	6-02-10	ADDENDUM NUMBER 3

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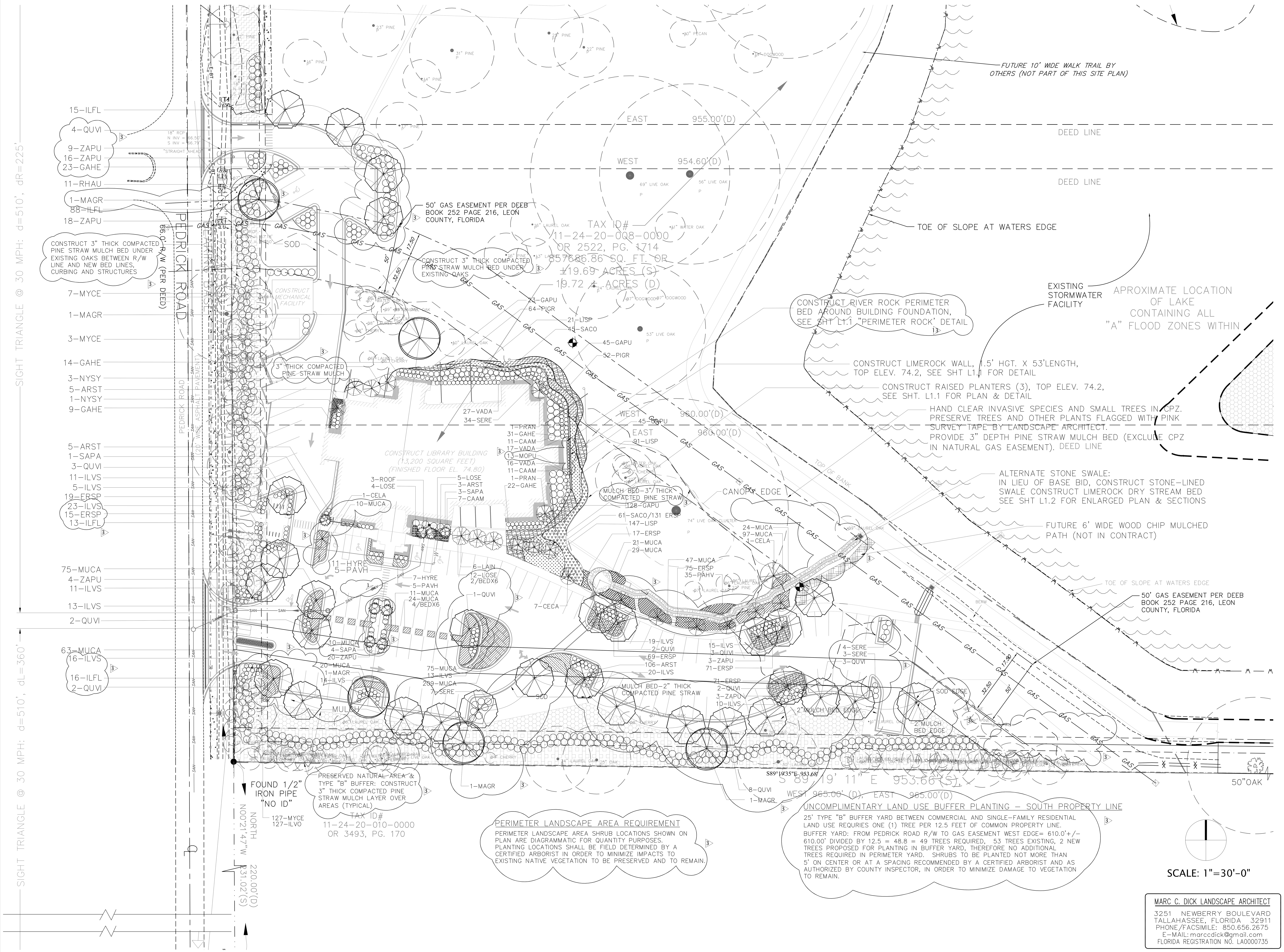
BID DOCUMENT

MISCELLANEOUS DETAILS

THIS PLAN IS NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY THE ENGINEER OF RECORD.

PETER C. OKONKWO, P.E. DATED
FLA. REGISTRATION NO. 51459

C7.0-R



15-ILFL
4-QUVI
9-ZAPU
16-ZAPU
23-GAHE
11-RHAU
1-MAGR
88-ILFL
18-ZAPU
CONSTRUCT 3" THICK COMPACTED PINE STRAW MULCH BED UNDER EXISTING OAKS BETWEEN R/W LINE AND NEW BED LINES, CURBING AND STRUCTURES
7-MYCE
1-MAGR
3-MYCE
14-GAHE
3-NYSY
5-ARST
1-NYSY
9-GAHE
5-ARST
1-SAPA
3-QUVI
11-ILVS
5-ILVS
19-ERSP
23-ILVS
15-ERSP
13-ILFL
75-MUCA
4-ZAPU
11-ILVS
13-ILVS
2-QUVI
63-MUCA
16-ILVS
16-ILFL
2-QUVI
SIGHT TRIANGLE @ 30 MPH: d=510', dR=225'
SIGHT TRIANGLE @ 30 MPH: d=510', dL=360'
PEDRICK ROAD
66.0' R/W (PER DEED)
50' GAS EASEMENT PER DEEB BOOK 252 PAGE 216, LEON COUNTY, FLORIDA
CONSTRUCT 3" THICK COMPACTED PINE STRAW MULCH BED UNDER EXISTING OAKS
TAX ID# 11-24-20-008-0000 OR 2522, PG. 1714 857686.86 SQ. FT. OR 19.69 ACRES (S) 19.72 ± ACRES (D)
EAST 955.00'(D)
WEST 954.60'(D)
DEED LINE
DEED LINE
FUTURE 10' WIDE WALK TRAIL BY OTHERS (NOT PART OF THIS SITE PLAN)
TOE OF SLOPE AT WATERS EDGE
EXISTING STORMWATER FACILITY
APROXIMATE LOCATION OF LAKE CONTAINING ALL "A" FLOOD ZONES WITHIN
CONSTRUCT RIVER ROCK PERIMETER BED AROUND BUILDING FOUNDATION, SEE SHT L1.1 "PERIMETER ROCK" DETAIL
CONSTRUCT LIMEROCK WALL, 1.5' HGT. X 53'LENGTH, TOP ELEV. 74.2, SEE SHT L1.1 FOR DETAIL
CONSTRUCT RAISED PLANTERS (3), TOP ELEV. 74.2, SEE SHT. L1.1 FOR PLAN & DETAIL
HAND CLEAR INVASIVE SPECIES AND SMALL TREES IN CPZ. PRESERVE TREES AND OTHER PLANTS FLAGGED WITH PINK SURVEY TAPE BY LANDSCAPE ARCHITECT. PROVIDE 3" DEPTH PINE STRAW MULCH BED (EXCLUDE CPZ IN NATURAL GAS EASEMENT).
DEED LINE
ALTERNATE STONE SWALE: IN LIEU OF BASE BID, CONSTRUCT STONE-LINED SWALE CONSTRUCT LIMEROCK DRY STREAM BED SEE SHT L1.2 FOR ENLARGED PLAN & SECTIONS
FUTURE 6' WIDE WOOD CHIP MULCHED PATH (NOT IN CONTRACT)
CANOPY EDGE
50' GAS EASEMENT PER DEEB BOOK 252 PAGE 216, LEON COUNTY, FLORIDA
23-GAPU
64-PIGR
21-LISP
45-SACO
45-GAPU
52-PIGR
3" THICK COMPACTED PINE STRAW MULCH
27-VADA
34-SERE
45-GAPU
91-LISP
WEST 960.00'(D)
EAST 960.00'(D)
1-PRAN
31-GAHE
11-CAAM
17-VADA
13-MOPU
16-VADA
11-CAAM
1-PRAN
22-GAHE
CONSTRUCT LIBRARY BUILDING (13,200 SQUARE FEET) (FINISHED FLOOR EL. 74.80)
3-ROOF
4-LOSE
1-CELA
10-MUCA
5-LOSE
3-ARST
3-SAPA
7-CAAM
MULCH BED-3" THICK COMPACTED PINE STRAW
128-GAPU
61-SACO/131 ERSP
147-LISP
17-ERSP
21-MUCA
29-MUCA
24-MUCA
97-MUCA
1-CELA
47-MUCA
75-ERSP
35-PAHV
11-HYRE
5-PAVH
7-HYRE
5-PAVH
11-MUCA
24-MUCA
4/BEDX6
6-LAIN
12-LOSE
2/BEDX6
1-QUVI
7-CECA
10-MUCA
4-SAPA
20-ZAPU
20-MUCA
1-MAGR
14-ILVS
75-MUCA
13-ILVS
209-MUCA
7-SERE
19-ILVS
2-QUVI
69-ERSP
106-ARST
20-ILVS
15-ILVS
3-QUVI
3-ZAPU
71-ERSP
4-SERE
3-SERE
3-QUVI
MULCH BED-2" THICK COMPACTED PINE STRAW
71-ERSP
2-QUVI
3-ZAPU
10-ILVS
2" MULCH BED EDGE
SOD EDGE
2" MULCH BED EDGE
SOD
TOE OF SLOPE AT WATERS EDGE
PRESERVED NATURAL AREA & TYPE "B" BUFFER: CONSTRUCT 3" THICK COMPACTED PINE STRAW MULCH LAYER OVER AREAS (TYPICAL)
1-MAGR
FOUND 1/2" IRON PIPE "NO ID"
127-MYCE
127-ILVO
TAX ID# 11-24-20-010-0000 OR 3493, PG. 170
NORTH N00°21'4.7"W 220.00'(D) 231.02'(S)
S89°19'35"E 953.68'
S 89°19' 11" E 953.66'(S)
WEST 965.00'(D) EAST 965.00'(D)
8-QUVI
1-MAGR
50"OAK
PERIMETER LANDSCAPE AREA REQUIREMENT
PERIMETER LANDSCAPE AREA SHRUB LOCATIONS SHOWN ON PLAN ARE DIAGRAMMATIC FOR QUANTITY PURPOSES. PLANTING LOCATIONS SHALL BE FIELD DETERMINED BY A CERTIFIED ARBORIST IN ORDER TO MINIMIZE IMPACTS TO EXISTING NATIVE VEGETATION TO BE PRESERVED AND TO REMAIN.
UNCOMPLIMENTARY LAND USE BUFFER PLANTING - SOUTH PROPERTY LINE
25' TYPE "B" BUFFER YARD BETWEEN COMMERCIAL AND SINGLE-FAMILY RESIDENTIAL LAND USE REQUIRES ONE (1) TREE PER 12.5 FEET OF COMMON PROPERTY LINE. BUFFER YARD: FROM PEDRICK ROAD R/W TO GAS EASEMENT WEST EDGE= 610.0'+/- 610.00' DIVIDED BY 12.5 = 48.8 = 49 TREES REQUIRED. 53 TREES EXISTING, 2 NEW TREES PROPOSED FOR PLANTING IN BUFFER YARD, THEREFORE NO ADDITIONAL TREES REQUIRED IN PERIMETER YARD. SHRUBS TO BE PLANTED NOT MORE THAN 5' ON CENTER OR AT A SPACING RECOMMENDED BY A CERTIFIED ARBORIST AND AS AUTHORIZED BY COUNTY INSPECTOR, IN ORDER TO MINIMIZE DAMAGE TO VEGETATION TO REMAIN.
SCALE: 1"=30'-0"

MARC C. DICK LANDSCAPE ARCHITECT
3251 NEWBERRY BOULEVARD
TALLAHASSEE, FLORIDA 32911
PHONE/FACSIMILE: 850.656.2675
E-MAIL: marccdick@gmail.com
FLORIDA REGISTRATION NO. LA0000735

JOHNSON PETERSON ARCHITECTS

930 THOMASVILLE RD. STE. 1

TALLAHASSEE, FL 32303

850.224.9700 VOICE

850.224.9797 FAX

www.jparchitects.com

REG# AA001215

JPA PROJECT #0614.001

JPA - PM DOUG SHULER
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DRAWN	PHASE	CHECK	DATE
MDICK	DD	M DICK	03.31.10
MDICK	BD	M DICK	04.24.10

REVISIONS

#	DATE	COMMENTS
1	5-28-10	GROWTH MANAGEMENT 5.5.10 COMMENTS & LANDSCAPE/SITE SHADE REVISIONS

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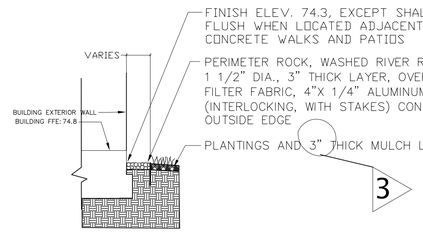
BID DOCUMENTS

LANDSCAPE PLAN

THIS PLAN IS NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY THE LANDSCAPE ARCHITECT OF RECORD.

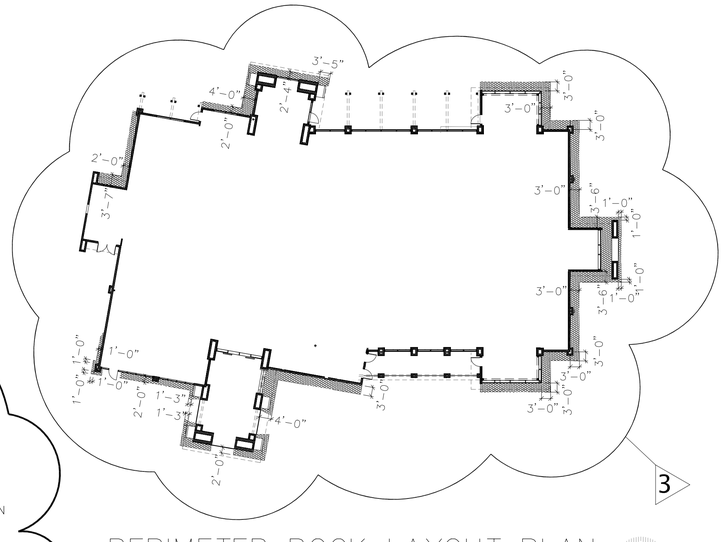
MARC C. DICK, RLA DATED
FLA. REGISTRATION NO. LA0000735

L1.0-R



PERIMETER ROCK DETAIL

NOT TO SCALE



PERIMETER ROCK LAYOUT PLAN

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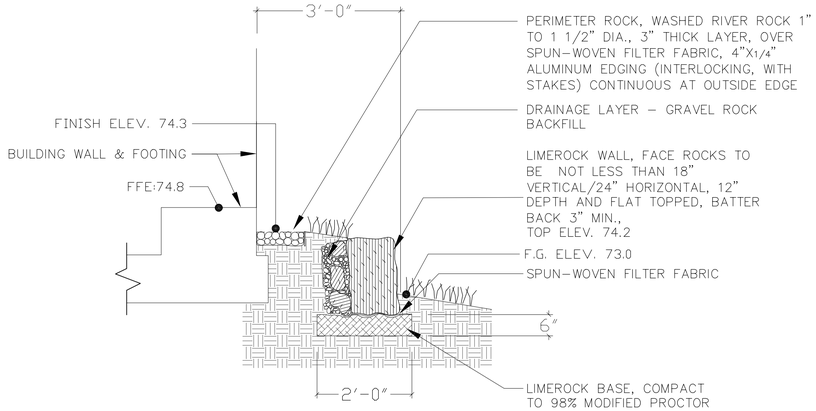
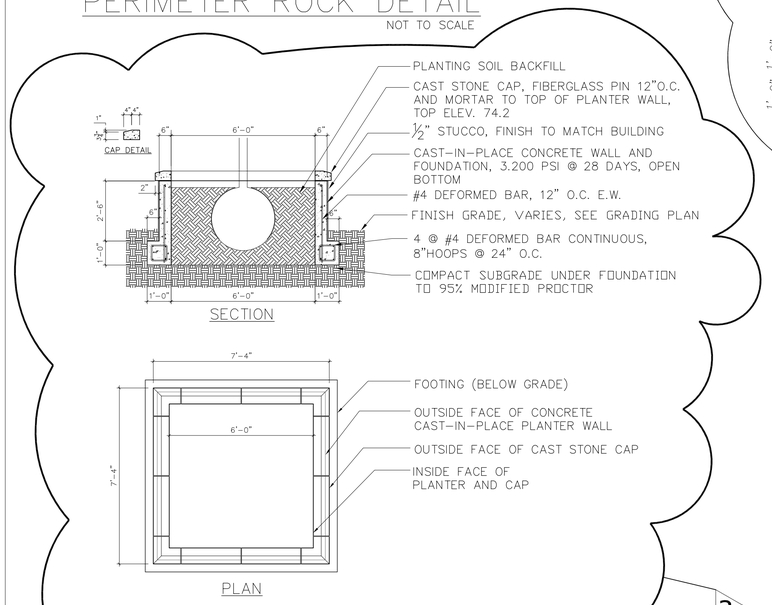


LIMEROCK WALL SECTION

N.T.S.



LANDSCAPE PLANTER

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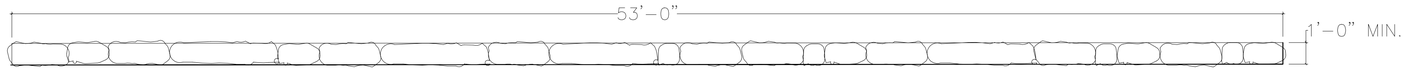
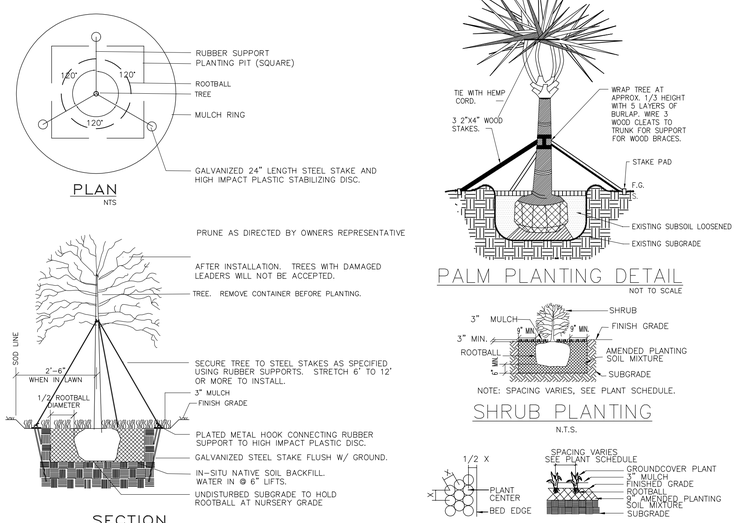


LIMEROCK WALL PLAN

N.T.S.



TREE PLANTING DETAIL

NOT TO SCALE

PALM PLANTING DETAIL

NOT TO SCALE

NOTE: SPACING VARIES, SEE PLANT SCHEDULE.

SHRUB PLANTING

N.T.S.

GROUNDCOVER PLANTING

N.T.S.

LANDSCAPE NOTES

1. ALL PLANT MATERIALS SHALL CONFORM TO STANDARDS FOR "FLORIDA NO. 1" OR BETTER, AS SPECIFIED IN GRADES AND STANDARDS FOR NURSERY PLANTS , Second Edition (2/98) PLI#97T-05 STATE OF FLORIDA, DEPT. OF AGRICULTURE AND CONSUMER SERVICES, TALLAHASSEE, FLORIDA. LABEL AT LEAST ONE OF EACH PLANT SPECIES OR VARIETY WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

2. FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANT MATERIAL INSTALLATION. EVERY POSSIBLE SAFEGUARD SHALL BE TAKEN TO PROTECT BUILDING SURFACES, PAVED SURFACES, EQUIPMENT AND FURNISHINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE OR INJURY TO PERSON OR PROPERTY WHICH MAY OCCUR AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE IN THE EXECUTION OF THE WORK.

3. STAKE PLANT LOCATIONS PRIOR TO INSTALLATION TO DETERMINE COVERAGE AND SPACING. LOCATIONS SHALL BE ADJUSTED ON SITE TO AVOID CONFLICT WITH UNDERGROUND UTILITIES AND OTHER SITE FEATURES. UPON APPROVAL OF LOCATIONS BY OWNER'S REPRESENTATIVE AND/OR THE LANDSCAPE ARCHITECT, INSTALL PLANT MATERIALS. THE CONTRACTOR SHALL COORDINATE WITH WATER AVAILABILITY REGARDING TIMING OF THE INSTALLATION OF PLANT MATERIALS.

4. PLANT QUANTITIES SHOWN IN THE PLANT SCHEDULE ARE FOR THE CONVENIENCE OF THE CONTRACTOR. IN THE EVENT OF A DISCREPANCY BETWEEN THE DRAWING AND THE SCHEDULE, THE DRAWING SHALL PREVAIL.

5. PLANTING SOIL MIXTURE FOR SHRUBS & GROUNDCOVERS: 1 PART BY VOLUME LOOSE DOMESTIC PEAT HUMUS OR SOLID WASTE COMPOST, 4 PARTS BY VOLUME IN-SITU NATIVE SOIL AND 2 POUNDS STARTER FERTILIZER PER CUBIC YARD OF MIX. TREES SHALL BE PLANTED IN IN-SITU NATIVE SOIL.

6. STARTER FERTILIZER SHALL BE 6-6-6, 100% ORGANIC, WITH MINOR ELEMENTS. THIS FERTILIZER SHALL HAVE 40-50% OF ITS TOTAL NITROGEN IN A WATER-INSOLUBLE FORM.

7. PLANT FERTILIZER, OTHER THAN STARTER FERTILIZER, SHALL BE 'AGRIFORM' BRAND 21 GRAM TABLETS, SLOW-RELEASE FERTILIZER (20-10-5 ANALYSIS) WITH MINOR ELEMENTS. APPLICATION RATES SHALL BE PER MANUFACTURER'S RECOMMENDATIONS. DO NOT PROVIDE THIS FERTILIZER FOR TREES.

8. SOD FERTILIZER SHALL BE 6-6-6 ANALYSIS, COMPLETE WITH MINOR ELEMENTS. APPLICATION RATE SHALL PROVIDE A MINIMUM OF 1 POUND OF NITROGEN PER 1,000 SQUARE FEET OF LAWN AREA.

9. PLANT MATERIAL INSTALLATION TO BE IN A SOUND WORKMANSHIP-LIKE MANNER ACCORDING TO ACCEPTED GOOD PLANTING PRACTICES.

10. PLANTING AREA FINISH GRADE TO BE 2" BELOW ADJACENT SIDEWALK OR PAVEMENT ELEVATION PRIOR TO MULCH OR SOD INSTALLATION.

11. ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION AND NOT OTHERWISE NOTED FOR PLANTING ON THE LANDSCAPE PLAN ARE TO BE SODDED.

12. ALL PLANTS BEDS AND TREE PLANTING PITS SHALL BE MULCHED WITH A 3" LAYER (MINIMUM) OF MELALUCA WOOD MULCH, OR OTHER OWNER'S REPRESENTATIVE APPROVED MULCH MATERIAL.

13. SEE SPECIFICATION SECTION 02480 – LANDSCAPING FOR ADDITIONAL LANDSCAPE WORK REQUIREMENTS.

14. ALL PLANTS AND TREES SHALL BE PLANTED AT NURSERY GRADE OR SLIGHTLY HIGHER, BUT IN NO CASE SHALL PLANTS BE PLANTED HIGHER THAN 1" ABOVE NURSERY GRADE.

15. PROVIDE NEW 2" IRRIGATION MAIN (SCH. 40 PVC) W/ QUICK COUPLING VALVES FOR MANUAL WATERING OF NEW PLANT MATERIALS. IRRIGATION SOURCE SHALL BE A NEW 1" METER & 2" POTABLE WATER MAIN.

PLANT SCHEDULE

KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE / SPACING	CLASSIFICATION
CANOPY TREES					
MAGR	5	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	14' HGT. MIN., 3" CAL. MINIMUM	NATIVE/DROUGHT
QUVI	31	QUERCUS VIRGINIANA	LIVE OAKS	12' HGT. MIN., 2" CAL. MINIMUM	NATIVE/DROUGHT
UNDERSTORY & ACCENT TREES					
CECA	7	CELTIS CANADENSIS	RED BUD	45 GAL., 12' HGT. 2" CAL MIN./AS SHOWN	NATIVE/DROUGHT
CELA	2	CELTIS LAEVIGATA	SUGARBERRY	45 CAL., 12' HGT. 2" CAL MIN./AS SHOWN	NATIVE/DROUGHT
ILVO	127	ILEX VOMITORIA	YAUPON	8 HGT. X 36" SPREAD MIN./5' O.C.	NATIVE/DROUGHT
LAIN	6	LAGERSTROEMIA INDICA 'MUSKOGEE'	MUSKOGEE CRAPE MYRTLE	12'HGT. MIN.,3 TRUNKS@2" CAL. MIN.,FIELD GROW	EXOTIC/DROUGHT
NYSY	4	NYSSA SYLVATICA	SOUR GUM	45 GAL., 12' HGT.. 2" CAL. MIN.,/AS SHOWN	NATIVE/DROUGHT
PRAN	2	PRUNUS ANGUSTIFOLIA	CHICKASAW PLUM	12' HGT., 2" CAL. MIN./AS SHOWN	NATIVE/DROUGHT
SAPA	8	SABAL PALMETTO	CABBAGE PALM	FIELD GROWN, B.R., 10'-20' HGTS./AS SHOWN	NATIVE/DROUGHT
SHRUBS					
CAAM	29	CALLICARPA AMERICANA	BEAUTYBERRY	7 GAL., 30" HGT. X 30" SPREAD MIN./5'O.C.	NATIVE/DROUGHT
GAHE	99	GARBERIA HETEROPHYLLA	GARBERIA	3 GAL., 24" HGT. X 18" SPREAD MIN. /3' O.C.	NATIVE/DROUGHT
HYRE	18	HYPERICUM REDUCTUM	ST. JOHNS WORT/SCRUB WORT	3 GAL., 24" HGT. X 12" SPREAD MIN. /3' O.C.	NATIVE/DROUGHT
ILFL	152	ILLICIUM FLORIDANUM	FLORIDA ANISE	3 GAL., 24"-30" HGT. / 3' O.C.	NATIVE/DROUGHT
ILVS	160	ILEX VOMITORIA 'STOKES DWARF'	'STOKES DWARF' YAUPON	3 GAL., 24" HGT. X 24" SPREAD MIN. /3' O.C.	NATIVE-HYBRID/DROUGHT
MYCE	137	MYRICA CERIFERA	WAX MYRTLE	7 GAL., 5' HGT. /5' O.C.	NATIVE/DROUGHT
RHAU	11	RHODODENDRON AUSTRINUM	FLORIDA AZALEA	3 GAL., 24"-36' HGT. / 3' O.C.	NATIVE/DROUGHT
ROOF	3	ROSEMARY OFFICIANALIS	ROSEMARY	1 GAL., 12" HGT. X 12" SPREAD MIN., 4' O.C.	NATIVE/DROUGHT
SERE	48	SERENOA REPENS	SAW PALMETTO	3 GAL., 12" HGT. X 12" SPREAD MIN., 4' O.C.	NATIVE/DROUGHT
VADA	60	VACCINIUM DARROWI	BLUEBERRY	1 GAL., 12" HGT. X 12" SPREAD MIN., 3' O.C.	NATIVE/DROUGHT
GROUNDCOVERS/ANNUALS/PERENNIALS					
GAPU	241	GAILLARDIA PULCHELLA	INDIAN BLANKETFLOWER	1 GAL., 6"-8" HEIGHT / 24" O.C.	NATIVE/DROUGHT
LISP	259	LIATRIS SPICATA	BLAZING STAR	1 GAL., 18" HGT., FULL / 24" O.C.	NATIVE/DROUGHT
LOSE	21	LONICIERA SEMPERVIRENS	CORAL HONEYSUCKLE	3 GAL., 16" HGT., 8 FRONDS MIN. / 3' O.C.	NATIVE/DROUGHT
MOPU	13	MONARDA PUNCTATA	DOTTED HORSEMINT	QUART, 12" HGT. X 12" SPREAD MIN., 2' O.C.	NATIVE/DROUGHT
PIGR	116	PITYOPSIS GRAMINIFOLIA	SILKLEAF GOLDENASTER	1 GAL., 6"-8" HEIGHT / 24" O.C.	NATIVE/DROUGHT
SACO	106	SALVIA COCCINEA	RED SAGE	1 GAL., 18" HGT., FULL / 24" O.C.	NATIVE/DROUGHT
ZAPU	73	ZAMIA PUMILA	COONTIE	3 GAL., 16" HGT., 8 FRONDS MIN. / 3' O.C.	NATIVE/DROUGHT
GRASSES					
ARST	119	ARISTIDA STRICTA	WIREGRASS	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT
ERSP	468	ERAGROSTIS SPECTABILIS	PURPLE LOVEGRASS	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT
MUCA	605	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS/HAIRGRASS	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT
PAVH	35	PANICUM VIRGATUM 'HEAVY METAL'	SWITCHGRASS 'HEAVYMETAL'	1 GAL., 12" HGT. X 12" SPREAD MIN. / 3' O.C.	NATIVE/DROUGHT
SOD	**	EREMUCHLOA OPHIUROIDES	CENTIPEDEGRASS	SOLID SOD, FULL COVERAGE REQUIRED	EXOTIC/DROUGHT

** GENERAL CONTRACTOR HAS RESPONSIBILITY FOR PROVIDING SOD IN ALL AREAS OF SITE DISTURBANCE AND NOT OTHERWISE NOTED IN THE PLANS FOR PLANTINGS, MULCH OR INORGANIC GROUNDCOVER.

MULCH PINE BARK OR HARDWOOD MULCH 3" LAYER, CYPRESS MULCH NOT APPROVED.
PINE STRAW MULCH 3" LAYER IN WILDFLOWER AND PRESERVE AREAS, AT A MINIMUM.
WASHED RIVER ROCK MULCH (3" LAYER) OVER FILTER FABRIC AROUND BUILIDNG PERIMETER.

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DRAWN	PHASE	CHECK	DATE
MDICK	PD	M DICK	03.31.10
MDICK	BD	M DICK	04.24.10

REVISIONS

#	DATE	COMMENTS
1	5-28-10	PLANT SCHEDULE, STONE SWALE, PERIMETER ROCK LAYOUT PLAN, PLANTER REV.

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BID DOCUMENTS

LANDSCAPE DETAILS, PLANT SCHEDULE & NOTES

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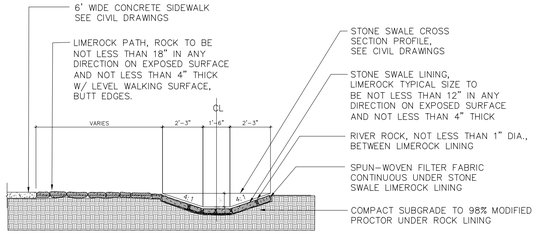
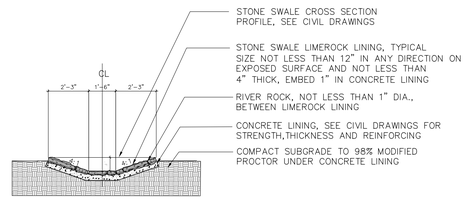
MARC C. DICK, RLA — DATED
FLA. REGISTRATION NO. LA0000735

L1.1-R



STONE SWALE – TYPICAL SECTION

NOT TO SCALE



STONE SWALE – CONCRETE LINED SECTION

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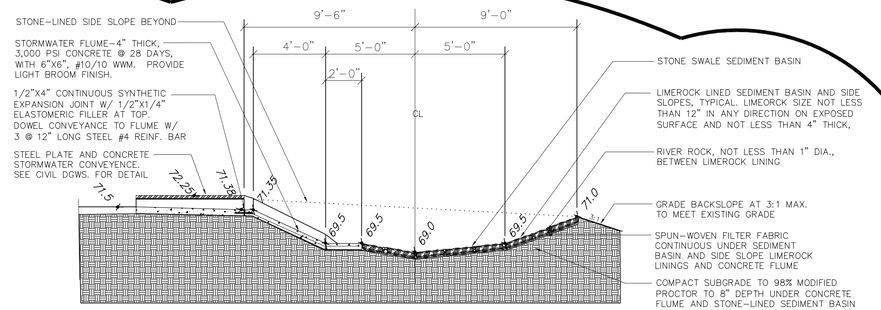

STONE SWALE – SEDIMENT BASIN SECTION

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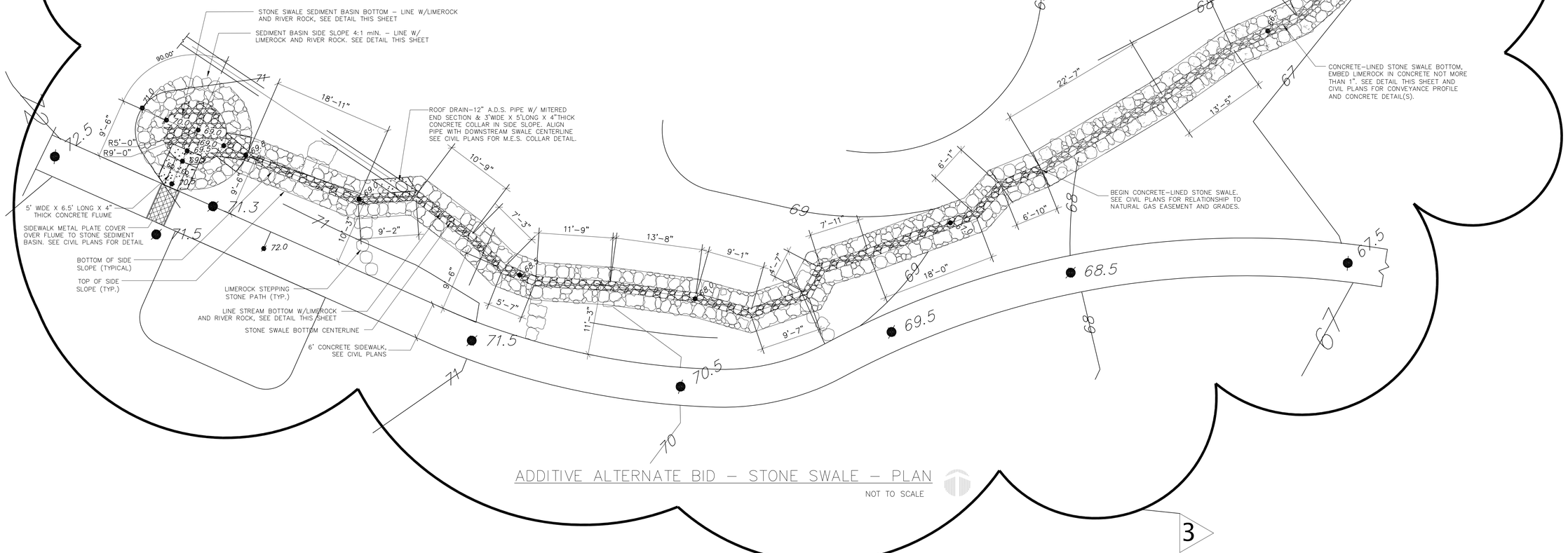

ADDITIVE ALTERNATE BID – STONE SWALE – PLAN

NOT TO SCALE

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MDICK	BD	M DICK	04.24.10

REVISIONS

#	DATE	COMMENTS
1	5-28-10	DELETED TREE CREDITS/DEBITS, ADDED ADD.ALT.-STONE SWALE & DETAILS.

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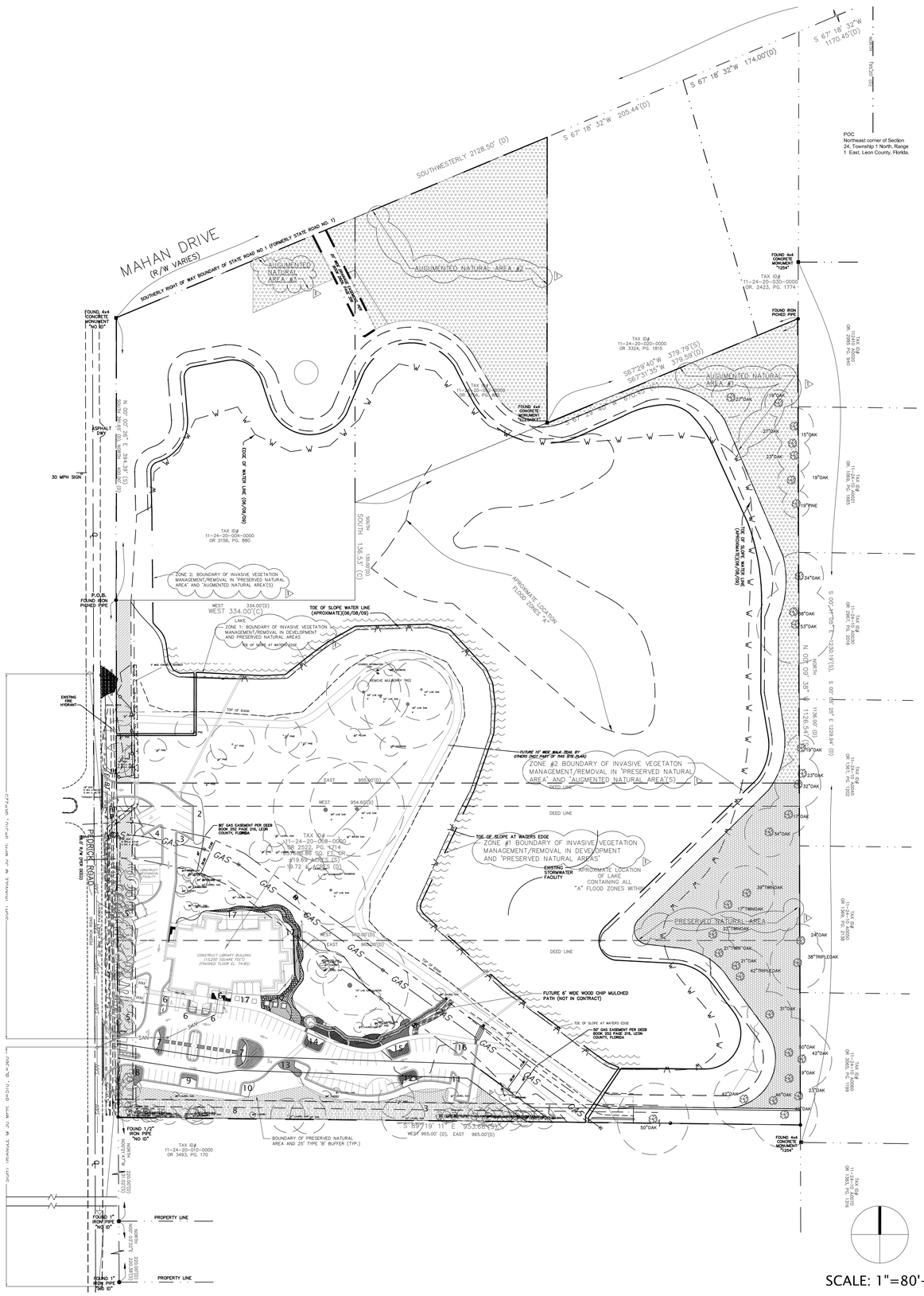
BID DOCUMENTS

ADDITIVE ALTERNATE– STONE SWALE PLAN & DETAILS

L1.2-R



REFORESTATION PLANT SCHEDULE

QUANTITIES/AREA #1	#2	#3	TOTAL	SCIENTIFIC NAME	COMMON NAME	SIZE / SPACING	CLASSIFICATION
				CANOPY TREES			
6	10	1	17	QUERCUS FALCATA	SOUTHERN RED OAK	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
4	10	1	15	QUERCUS VIRGINIANA	LIVE OAK	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
				UNDERSTORY & ACCENT TREES			
3	10	2	15	CELTIS LAEVIGATA	SUGARBERRY	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
4	8	1	13	ILEX VOMITORIA	YAUPON	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
5	10	1	16	NYSSA SYLVATICA	SOUR GUM	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
4	15	1	20	PRUNUS ANGUSTIFOLIA	CHICKASAW PLUM	5 GAL., 5' HGT. MINIMUM	NATIVE/DROUGHT
26	63	7	TOTAL TREES PER AREA				
				SHRUBS			
3	4	1	8	CALLICARPA AMERICANA	BEAUTYBERRY	7 GAL., 30" HGT. X 30" SPREAD MIN./5'O.C.	NATIVE/DROUGHT
3	4	0	7	ILLICIUM FLORIDANUM	FLORIDA ANISE	3 GAL., 24"-30" HGT. / 3' O.C.	NATIVE/DROUGHT
4	8	1	13	MYRICA CERIFERA	WAX MYRTLE	3 GAL., 18" HGT.MIN.X15" SPD.MIN./AS DIRECTED	NATIVE/DROUGHT
4	8	1	13	VIBURNUM RUFIDULUM	RUSTY BLACKHAW	3 GAL., 18" HGT.MIN.X15" SPD.MIN./AS DIRECTED	NATIVE/DROUGHT
4	8	1	13	RHUS COPALLINA	SHINING SUMAC		NATIVE/DROUGHT
18	32	4	TOTAL SHRUBS PER AREA				
				GROUNDCOVERS/ANNUALS/PERENNIALS			
364	616	69	1,094	MONARDA PUNCTATA	DOTTED HORSEMINT	QUART, 12" HGT. X 12" SPREAD MIN., 2' O.C.	NATIVE/DROUGHT
820	1386	156	2,362	RUELLIA CAROLINIENSIS	WILD PETUNIA	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT
820	1386	156	2,362	SALVIA LYRATA	LYRELEAF SAGE	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT
820	1386	156	2,362	TRIDENS FLAVUS	PURPLETOP GREASEGRASS	4 INCH POT, FULL / 24" O.C.	NATIVE/DROUGHT

AREA #1 GROUNDCOVER PLANT TOTAL QUANTITY BASED ON PLANTING 30% OF AUGMENTED NATURAL AREA OF 11,365 SQ.FT. @ TRIANGULAR SPACING.
AREA #2 GROUNDCOVER PLANT TOTAL QUANTITY BASED ON PLANTING 30% OF AUGMENTED NATURAL AREA OF 19,0200 SQ.FT. @ TRIANGULAR SPACING.
AREA #3 GROUNDCOVER PLANT TOTAL QUANTITY BASED ON PLANTING 30% OF AUGMENTED NATURAL AREA OF 2,163 SQ.FT. @ TRIANGULAR SPACING.

PROVIDE AND INSTALL PINE STRAW MULCH AS A 3" COMPACTED LAYER OVER A FIVE (5) FOOT DIAMETER AREA AROUND EACH TREE AND SHRUB PLANTED, AND OVER ALL EXPOSED EARTH NOT OTHERWISE MULCHED BY TREE AND SHRUB PLANTINGS.

INSTALLED PLANTS SHALL BE WATERED UPON INSTALLATION AND THEREAFTER UNTIL NEW GROWTH IS EVIDENCED. REPLACE PLANTS THAT DIE WITHIN SIX (6) MONTHS OF FIRST INSTALLATION.

ZONE #1
INVASIVE VEGETATION MANAGEMENT/REMOVAL
REFORESTATION IN 'PRESERVED NATURAL AREA'

1. PRESERVED NATURAL AREA REVEGETATION CALCULATION:
   PRESERVED NATURAL AREA = 18,448.72 SQ. FT. = 0.43 AC.
   0.43 AC. x 40 TREES/AC. REQ'D= 16.94= 17 TREES REQ'D.
   PRESERVED NATIVE TREES (SURVEYED) EXIST WITHIN THE AREA EXCEDES THE NUMBER OF TREES REQUIRED, THEREFORE, NO ADDTIONAL REFORESTATION VEGETATION WILL BE PROVIDED.
   IN ADDTION, THE NEW VEGETATION REQUIRED IN THE 25' TYPE 'B' BUFFER WITHIN THE PRESERVED NATURAL AREA WILL EXCEED THE REFORESTATION SHRUBS REQUIRED, THEREFORE NO REFORESTAION SHRUBS WILL BE PROVIDED. SEE 'EASTSIDE LIBRARY TREES TABULATION TABLE' IN CIVIL DRAWINGS FOR REFORESTATION CALCULATION THAT DETERMINED NO REFORESTATION TREE PLANTING REQUIRED.

ZONE #2
INVASIVE VEGETATION MANAGEMENT/REMOVAL REFORESTATION IN 'PRESERVED NATURAL AREA' AND 'AUGMENTED NATURAL AREA'

1. PRESERVED NATURAL AREA REVEGETATION CALCULATION:
   PRESERVED NATURAL AREA = 49,072.82 SQ. FT. = 1.13 AC.
   1.13 AC. x 40 TREES/AC. REQ'D= 45.2= 46 TREES REQ'D.
   FIFTEEN (15) PRESERVED NATIVE TREES (SURVEYED) EXIST WITHIN THE AREA.
   46 TREES REQ'D MINUS 15 TREES EXISTING=31 TREES REQ'D
   INVASIVE VEGETATION REMOVAL WILL NOT EXPOSE A SIGNIFICANT AMOUNT OF BARE GROUND. UPON REMOVAL OF INVASIVE VEGETATION, A SIGNIFICANT GROWTH OF EXISTING UNSURVEYED NATIVE TREES, SHRUBS AND GROUNDCOVERS IS ANTICIPATED, THEREFORE NO SUPPLEMENTAL NEW NATIVE VEGETATION PLANTING AS MITIGATION IS PROPOSED IN THIS AREA. SEE 'EASTSIDE LIBRARY TREES TABULATION TABLE' IN CIVIL DRAWINGS FOR REFORESTATION CALCULATION THAT DETERMINED NO REFORESTATION TREE PLANTING REQUIRED.

2. AUGMENTED NATURAL AREA REVEGETATION CALCULATION:

   A. AUGMENTED NATURAL AREA #1 = 37,884.09 SQ. FT.
      37,884.09 SQ. FT. DIVIDED BY 43,560 SQ.FT./AC.=0.87 AC.
      0.87 AC. x 40 TREES/AC. REQ'D= 34.78= 35 TREES REQ'D.
      NINE (9) PRESERVED NATIVE TREES (SURVEYED) EXIST WITHIN THE AREA.
      35 TREES REQ'D MINUS 9 TREES EXISTING=26 TREES REQ'D
      UNDOCUMENTED NATIVE TREES, SHRUBS AND GROUNDCOVERS EXIST WITHIN THE AREA. THEREFORE, THE GENERAL CONTRACTOR SHALL BID REVEGETATION ON THE BASIS OF 26 TREES, 18 SHRUBS AND XX GROUNDCOVER PLANTS TO BE INSTALLED.
      FINAL QUANTITIES OF PLANTINGS MAY BE REDUCED BY CHANGE ORDER IN THE EVENT EXISTING NATIVE VEGETATION REMAINS IN THE AREA TO, EITHER PARTIALLY OR FULLY, SATIFY THE REFORESTATION REQUIREMENTS.

   B. AUGMENTED NATURAL AREA #2 = 63,390.99 SQ. FT.
      63,390.99 SQ.FT. DIVIDED BY 43,560 SQ.FT/AC.= 1.57 AC.
      1.57 AC. X 40 TREES/AC. REQUIRED=62.8= 63 TREES REQ'D.
      UNDOCUMENTED NATIVE TREES, SHRUBS AND GROUNDCOVERS EXIST WITHIN THE AREA. THEREFORE, THE GENERAL CONTRACTOR SHALL BID REVEGETATION ON THE BASIS OF 63 TREES, 32 SHRUBS AND XX GROUNDCOVER PLANTS TO BE INSTALLED.
      FINAL QUANTITIES OF PLANTINGS MAY BE REDUCED BY CHANGE ORDER IN THE EVENT EXISTING NATIVE VEGETATION REMAINS IN THE AREA TO, EITHER PARTIALLY OR FULLY, SATIFY THE REFORESTATION REQUIREMENTS.

   C. AUGMENTED NATURAL AREA #3 = 7,210.39 SQ. FT.
      7,210.39 SQ.FT. DIVIDED BY 43,560 SQ.FT./AC. = 0.17 AC.
      0.17 AC. X 40 TREES/AC. REQ'D= 6.80 = 7 TREES REQ'D.
      UNDOCUMENTED NATIVE TREES, SHRUBS AND GROUNDCOVERS EXIST WITHIN THE AREA. THEREFORE, THE GENERAL CONTRACTOR SHALL BID REVEGETATION ON THE BASIS OF 7 TREES, 4 SHRUBS AND XX GROUNDCOVER PLANTS TO BE INSTALLED.
      FINAL QUANTITIES OF PLANTINGS MAY BE REDUCED BY CHANGE ORDER IN THE EVENT EXISTING NATIVE VEGETATION REMAINS IN THE AREA TO, EITHER PARTIALLY OR FULLY, SATISFY THE REFORESTATION REQUIREMENTS.

3. SEE PLANTING SCHEDULE ON THIS SHEET FOR REFORESTATION MATERIALS SPECIFICATIONS. TREE, SHRUB AND GROUNDCOVER PLANTING LOCATIONS SHALL BE DIRECTED BY A GROWTH AND ENVIRONMENTAL MANAGEMENT REPRESENTATIVE OR DESIGNEE.

INVASIVE/EXOTIC VEGETATION CONTROL NOTES

1. THE VEGETATION MANAGEMENT PLAN (VMP) PERMIT CONSISTS OF TWO (2) DOCUMENTS, THE LEON COUNTY GROWTH & ENVIRONMENTAL MANAGEMENT DEVELOPED AND APPROVED 'EASTSIDE LIBRARY VEGETATION MANAGEMENT PLAN PERMIT NO. LEM ' CONSISTING OF TWO (2) PAGES AND ONE DRAWING (LEON COUNTY-EASTSIDE BRANCH LIBRARY CONSTRUCTION PLAN SHEET L1.3-R TITLED 'VEGETATION MANAGEMENT PLAN'), ALSO KNOWN AS THE 'PERMIT DRAWING'. THE PERMIT DRAWING DENOTES THE DIVISION OF THE PROPOSED VEGETATION MANAGEMENT ACTIVITY INTO TWO (2) ZONES. "ZONE #1" IS THE PROPOSED DEVELOPMENT AREA FOR THE LIBRARY AND ASSOCIATED SITE IMPROVEMENTS AND IS PRIMARILY THE AREA SOUTH AND WEST OF THE EXISTING STORMWATER MANAGEMENT POND. "ZONE #2" IS THE BALANCE OF THE SITE, PRIMARILY NORTH AND EAST OF THE EXISTING STORMWATER MANAGEMENT POND. BOTH AREAS INCLUDE THE RESPECTIVE ADJACENT POND SHORELINE.
2. INVASIVE SPECIES CONTROL CONTRACTOR SHALL VISIT THE SITE TO BECOME INFORMED OF THE LOCATIONS, QUANTITIES AND SIZES OF VEGETATION SPECIES TO BE CONTROLLED OR REMOVED, PRIOR TO SUBMITTAL OF A COST PROPOSAL TO PERFORM THE WORK NOTED HEREIN AND IN THE APPROVED VMP ATTACHED TO THE PERMIT DRAWING (SHEET L1.3-R). ESTIMATION OF THE VOLUME OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. PRIOR TO APPLICATION OF HERBICIDES AND OTHER INVASIVE/EXOTIC TREATMENT /REMOVAL ACTIVITIES, POST SIGNS ADJACENT TO PUBLIC USE AREAS AND PRIVATE PROPERTY TWENTY-FOUR (24) HOURS IN ADVANCE OF EACH TREATMENT ACTIVITY TO NOTIFY CITIZENS ABOUT THE PENDING ACTIVITY. INSTALL SIGNAGE IN CLEARLY OBSERVABLE LOCATIONS AND WITH TEXT SIZED TO BE LEGIBLE FROM A DISTANCE OF TWENTY (20) FEET.
4. BEGIN MANAGEMENT IN ALL NATURAL AREAS, BUFFER AREAS, AND LANDSCAPE AREAS AS IDENTIFIED ON THE APPROVED PERMIT PLAN AND DRAWINGS AND CONSISTENT WITH THE APPROVED VEGETATION MANAGEMENT PLAN (VMP) ATTACHED TO THE PERMIT PLAN AND DRAWINGS.
   A. CUT TREES AND LARGE WOODY SHRUBS, REDUCE TO MULCH ON SITE (CONTAINERIZE MULCH TO PREVENT SEED AND VIABLE PLANT MATERIAL FROM RE-GROWING OR SPROUTING ON SITE). TREAT STUMPS AS SPECIFIED IN VMP TABLE.
   B. TREAT ALL SMALLER SHRUB AND HERBACEOUS VEGETATION AS SPECIFIED IN THE VMP TABLE.
   C. PULL SEEDLINGS BY HAND.
5. MONITOR SITE NOT LESS THAN ONCE PER WEEK FOR A MINIMUM OF TWO (2) MONTHS AFTER INITIAL TREATMENT. COORDINATE REQUIREMENTS FOR SECOND CONTROL/TREATMENT WITH JILL WEISMAN (LEON COUNTY GROWTH & ENVIRONMENTAL MANAGEMENT, 850.606.1376).
6. CONDUCT A SECOND CONTROL/TREATMENT (LATE SUMMER IDEAL).
7. TWO WEEKS AFTER SECOND TREATMENT (LONGER IF RECOMMENDED BY ANY APPLIED HERBICIDE EXPOSURE LIMITATION INSTRUCTIONS), PLANT ADDITIONAL TREES, SHRUBS AND GROUNDCOVER TO MEET REQUIRED PLANTING DENSITIES AS SPECIFIED IN PLANS.
8. NEW TREES, SHRUBS AND GROUNDCOVERS ARE PROPOSED FOR BOTH AREA #1 AND #2. AREA #2 PLANTINGS ARE FOR THE PURPOSE OF "REFORESTATION" IN "AUGMENTED NATURAL AREA"(S) AND THE ADAJCENT STORMWATER POND RIPARIAN ZONE. TO MINIMIZE DAMAGE TO EXISTING NATIVE VEGETATION TO REMAIN, LOCATIONS OF NEW VEGETATION SHALL BE DETERMINED IN FIELD BY A CERTIFIED ARBORIST IN THE EMPLOY OR UNDER SUBCONTACT TO THE GENERAL CONTRACTOR.
9. REMOVE POSTED HERBICIDE APPLICATION SIGNS ONCE POTENTIAL EXPOSURE TO APPLIED HERBICIDES IS MINIMAL.
10. CONTACT LEON COUNTY GROWTH & ENVIRONMENTAL MANAGEMENT FOR INTERPRETATION AND/OR CLARIFICATION OF THESE NOTES.

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DRAWN	PHASE	CHECK	DATE
MDICK	BD	M DICK	03.31.10
MDICK	ADD#1	M DICK	05.18.10

REVISIONS

#	DATE	COMMENTS
1	5-28-10	GROWTH MANAGEMENT 5.5.10 COMMENTS; REFOREST. PLANT SCHEDULE, CALCS., NOTES; ADDENDUM 3

LEON COUNTY - EASTSIDE BRANCH LIBRARY

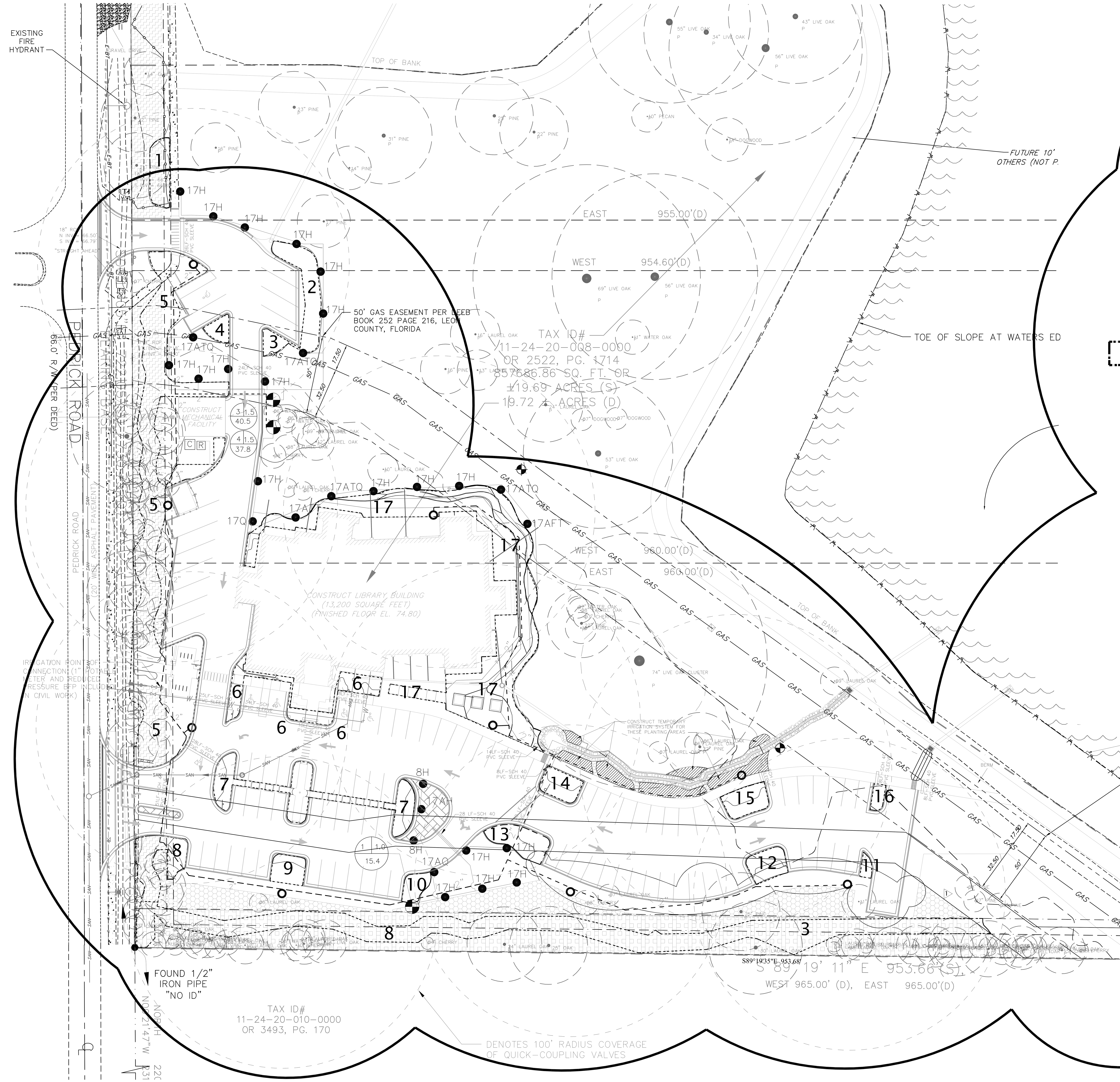
BID DOCUMENTS

VEGETATION MANAGEMENT PLAN

THIS PLAN IS NOT VALID FOR CONSTRUCTION UNLESS SIGNED AND SEALED BY THE LANDSCAPE ARCHITECT OF RECORD.

MARC C. DICK, RLA DATED
FLA. REGISTRATION NO. LA0000735

L1.3-R



IRRIGATION LEGEND

Symbol	Description
●	NEW HUNTER MODEL NO. INST-06, 6" POP-UP SPRAY SPRINKLER BODY. SEE NOZZLE SCHEDULE.
■	NEW HUNTER BUBBLER/STREAM NOZZLES ON RISER, SEE NOZZLE SCHEDULE. RISER HEIGHT AS NECESSARY.
▲ 1.0	NEW HUNTER PGP POP-UP ROTARY SPRINKLER, HEIGHT AS NECESSARY FOR COVERAGE, SEE NOZZLE SCHEDULE.
○	NEW HUNTER QUICK-COUPLER VALVE W/STANDARD COVER PROVIDE 3 @ 1" FEMALE SINGLE LUG COUPLER KEY & HOSE SWIVEL
	NEW IRRIGATION LATERAL PIPE, CLASS 200 PVC, SIZE AS NOTED OR REQUIRED
	NEW MAIN OR LATERAL PIPE PVC CAP
	NEW 2" IRRIGATION MAIN PIPE, SCH. 40 PVC
1" 2"	POINT OF PIPE MATERIAL AND/OR SIZE CHANGE
	NEW PIPE SLEEVE, SCH.40 PVC, SIZE AS NOTED OR REQUIRED
C	NEW CONTROLLER, HUNTER MODEL ICC-800M (8 STATIONS) WITH LOCKING STAINLESS STEEL CABINET. LOCATE INSIDE MECHANICAL EQUIPMENT ENCLOSURE. MOUNT TO UNI-STRUT BOLTED BETWEEN 3" DIA. GALV. SCH 40 STEEL PIPE POSTS. EMBED PIPES IN CONCRETE.
	NEW HUNTER PGV-151 PLASTIC SOLENOID OPERATED ELECTRIC VALVE.
	NEW 2" BRONZE GATE VALVE
R	NEW RAIN SWITCH, MINI-CLIK II OR APPROVED EQUAL.
3	DENOTES AREA TO BE IRRIGATED BY DRIP IRRIGATION. CONTRACTOR TO PROVIDE DESIGN/LAYOUT, SHOP DRAWINGS, PRODUCT DATA SHEETS AND OPERATION/MAINTENANCE MAUNAL FOR OWNER'S REPRESENTATIVE APPROVAL OF PROPOSED SYSTEM AND MATERIALS.

ZONE KEY

ZONE NUMBER (X) — VALVE SIZE (X) — GALLONS PER MINUTE (X.X)

GENERAL NOTES

1. SEE SHEET L2.1 FOR IRRIGATION NOTES/SPECIFICATIONS.
2. SEE SHEET L1.0 FOR LANDSCAPE PLAN.
3. SEE ARCHITECTURAL PLANS FOR BUILDING INFORMATION.
4. SEE CIVIL PLANS FOR SITE IMPROVEMENT INFORMATION.
5. PLANTED LANDSCAPE AREAS TO BE IRRIGATED VIA POTABLE WATER.
6. NUMBERED AREAS (SEE DASHED BOUNDARIES) SHALL BE DRIP IRRIGATED,
7. TURF/SOD AREAS SHALL BE VIA POP-UP SPRAY.
8. QUICK-COUPLING VALVES SHALL BE SPACED NOT MORE THAN 100' APART.
9. IRRIGATION OF REFORESTATION PLANT MATERIALS IN "AUGMENTED NATURAL AREAS" SHALL BE IRRIGATED BY THE REFORESTATION CONTRACTOR UNDER THE BASE BID.
10. IRRIGATION BASE BID TO INCLUDE POINT OF CONNECTION, 2" BALL VALVES, 2" MAIN LINE, QUICK-COUPLING VALVES, AND FOUR (4) 1" KEYS W/ SINGLE STAINLESS STEEL LUG AND 1" FEMALE NPT X ¾" MALE HOSE SWIVEL.
11. ADDITIVE ALTERNATE BID "A" TO INCLUDE TEMPORARY IRRIGATION FOR ALL PLANTED AREAS AROUND THE LIBRARY SITE. cONTACTOR SHALL DETERMINE METHODS AND MATERIALS.
12. ADDITIVE ALTERNATE BID "B" TO INCLUDE DRIP IRRIGATION AND POP-UP SPRAY IRRIGATION, AND TEMPORARY IRRIGATION AROUND THE STONE SWALE FOR ALL PLANTED AREAS AROUND THE LIBRARY SITE.

50 SCALE: 1"=30'-0"

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DRAWN	PHASE	CHECK	DATE
MDICK	DD	M DICK	03.26.10
MDICK	PD	M DICK	03.31.10
MDICK	BD	M DICK	04.24.10

REVISIONS

#	DATE	COMMENTS
1	4-21-10	RELOCATION OF DUMPSTER AREA PER CLIENT
2	5-28-10	ADDENDUM 3: IRRIGATION MODS. DUE TO VEG. REDUCTION

LEON COUNTY – EASTSIDE BRANCH LIBRARY

BID DOCUMENTS

IRRIGATION PLAN

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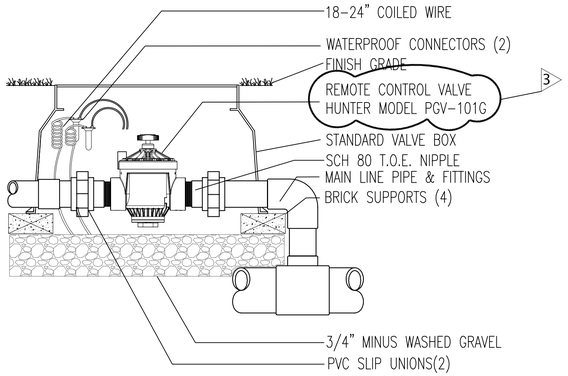
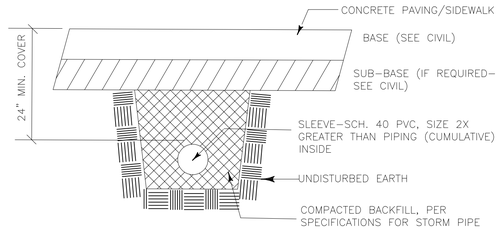
MARC C. DICK, RLA DATED
FLA. REGISTRATION NO. LA0000735

L2.0-R



A PGV GLOBE VALVE

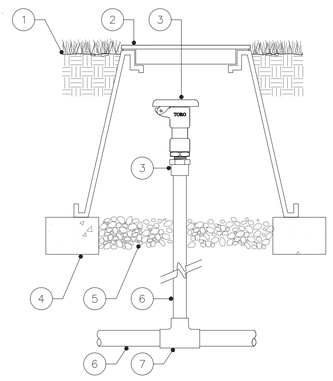
NOT TO SCALE



NOTE: CONDUIT ENDS MUST EXTEND A MINIMUM OF 1'– 0" FROM EDGE OF PAVEMENT OR SIDEWALK. MARK LOCATION OF EACH CONDUIT END WITH A CHISLED OR SAW–CUT AND 1" X 3" BLUE PAINTED MARK ON TOP OF PAVEMENT OR SIDEWALK ABOVE. PROVIDE PIPE ENDS WITH SLIP FIT CAPS. (DO NOT GLUE CAPS)

D CROSSING SLEEVE

NOT TO SCALE



SECTION/ELEVATION

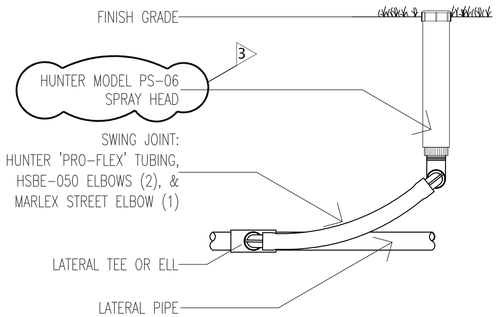
1. FINISHED GRADE
2. VALVE BOX & COVER
3. 1" QUICK COUPLING VALVE
4. CONTINUOUS BRICK SUPPORTS
5. GRAVEL (1 CU. FT.)
6. PVC MAIN LINE SEE SPECS. FOR DEPTH
7. PVC TEE OR ELBOW (TYP.)

NOTES:

SEE PLANS, LEGEND AND SPECIFICATIONS FOR ADDITIONAL INSTALLATION NOTES.

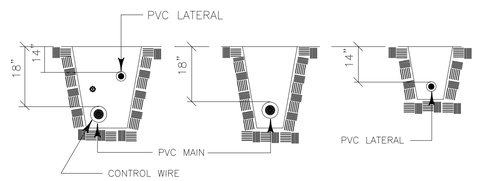
F QUICK COUPLING VALVE

NOT TO SCALE



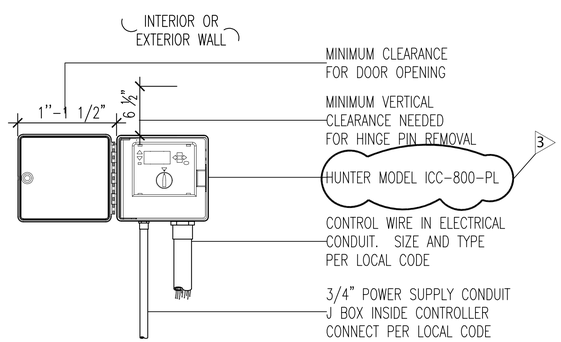
B PS–06 SPRAY HEAD

NOT TO SCALE



D PIPE TRENCHING

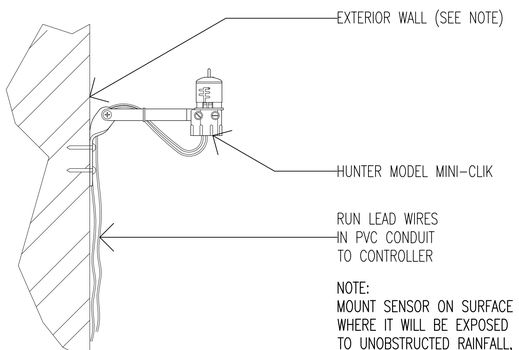
NOT TO SCALE



NOTE
MOUNT CONTROLLER WITH LCD SCREEN AT EYE LEVEL. CONTROLLER SHALL BE HARD–WIRED TO GROUNDED 110 or 220 VAC SOURCE.

C ICC–PL CONTROLLER

NOT TO SCALE



NOTE:
MOUNT SENSOR ON SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY.

E MINI–CLIK

NOT TO SCALE

3

NOZZLE SCHEDULE (HUNTER)

NOZZLE	PSI	GPM	RADIUS	PATTERN
PRO–SPRAY				
17H	30	2.40	17'	270
17Q	30	1.20	17'	90
15F	30	3.72	15'	360
15H	30	1.86	15'	180
15Q	30	0.93	15'	90
12F	30	2.65	12'	360
12H	30	1.31	12'	180
12Q	30	0.63	12'	90
10F	30	1.62	10'	360
10H	30	0.82	10'	180
10Q	30	0.39	10'	90
8F	30	0.95	12'	360
8H	30	0.48	12'	180
8Q	30	0.24	12'	90
ADJUSTABLE SPRAY				
17AF	30	4.80	17'	360
17ATQ	30	3.60	17'	270
17AFT	30	3.20	17'	240
17AH	30	2.40	17'	180
17ATT	30	1.60	17'	120
17AQ	30	1.20	17'	90
17AE	30	0.60	17'	45
15AF	30	3.72	15'	360
15ATQ	30	2.79	15'	270
15AFT	30	2.48	15'	240
15AH	30	1.86	15'	180
15ATT	30	1.24	15'	120
15AQ	30	0.93	15'	90
15AE	30	0.47	15'	45
12AF	30	2.52	12'	360
12ATQ	30	1.89	12'	270
12AFT	30	1.68	12'	240
12AH	30	1.26	12'	180
12ATT	30	0.84	12'	120
12AQ	30	0.63	12'	90
12AE	30	0.32	12'	45
10AF	30	1.96	10'	360
10ATQ	30	1.47	10'	270
10AFT	30	1.31	10'	240
10AH	30	0.98	10'	180
10ATT	30	0.65	10'	120
10AQ	30	0.49	10'	90
10AE	30	0.25	10'	45
8AF	30	1.96	8'	360
8ATQ	30	1.47	8'	270
8AFT	30	1.31	8'	240
8AH	30	0.98	8'	180
8ATT	30	0.65	8'	120
8AQ	30	0.49	8'	90
8AE	30	0.25	8'	45

IRRIGATION NOTES:

1. IRRIGATION SYSTEM INSTALLATION SHALL COMPLY WITH APPLICABLE CODES.

2. VERIFY ALL CONDITIONS AND DIMENSIONS SHOWN ON THE PLANS AT THE SITE PRIOR TO COMMENCEMENT OF WORK UNDER THIS CONTRACT. CONTRACTOR SHALL COORDINATE IRRIGATION SYSTEM INSTALLATION AND LOCATION WITH ALL UNDERGROUND UTILITIES. SEE CIVIL, MECHANICAL , ELECTRICAL, FIRE PROTECTION, STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR PERTINENT INFORMATION.

3. SEE SPECIFICATIONS SECTION 02810–IRRIGATION SYSTEM FOR TECHNICAL REQUIREMENTS. CONTRACTOR SHALL HAVE A WORK SUPERVISOR ON SITE DURING THE WORK WHO IS THOROUGHLY FAMILIAR WITH THE SPECIFICATIONS AND WITH THE DRAWINGS.

4. ELECTRICAL POWER AND HOOK–UPS FOR CONTROLLER TO BE PROVIDED BY ELECTRICAL CONTRACTOR.

5. PIPING SHOWN ON PLAN IS DIAGRAMMATICALLY ROUTED FOR CLARITY. ADJUST ROUTE TO AVOID CONFLICT WITH PLANTINGS AND OTHER IMPROVEMENTS. DESIGN MODIFICATIONS MAY BE MADE ONLY AS NECESSARY TO MEET FIELD CONDITIONS AND ONLY AS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

6. MAIN LINES SHALL BE POLYVINYL CHLORIDE SDR–21 CLASS 200 BELLED END SOLVENT WELD PIPE. LAY PIPE LOOSELY. SOLVENT WELD WITH PVC CEMENT PER PIPE MANUFACTURER'S RECOMMENDATIONS, EXCEPT WHERE THREADED JOINTS AND/OR FITTINGS ARE REQUIRED.

7. LATERAL LINES (FROM MAIN LINE TO ZONE VALVE AND FROM ZONE VALVE TO HEADS) SHALL BE POLYVINYL CHLORIDE SDR–21 CLASS 160 BELLED END SOLVENT WELD PIPE. LAY PIPE LOOSELY. SOLVENT WELD WITH PVC SOLVENT CEMENT PER PIPE MANUFACTURER'S RECOMMENDATIONS, EXCEPT WHERE THREADED JOINTS AND/OR FITTINGS ARE REQUIRED.

8. FLEXIBLE POLYETHYTLENE PIPE LATERALS SHALL BE USED FOR ALL POP–UP SPRINKLERS IN LAWN AREAS AND IN LANDSCAPE AREAS ADJACENT TO VEHICULAR USE AREAS IF NOT PROTECTED BY CURBING OR TIRE BLOCKS.

9. RISERS SHALL BE SCHEDULE 40 PVC PIPE. PAINT ALL RISERS WITH PVC COMPATIBLE FLAT FINISH DARK BROWN COLOR PAINT FROM 3" BELOW FINISH GRADE TO SPRINKLER BASE. RISERS ABOVE GRADE SHALL BE SECURELY STAKED WITH A SINGLE #4 REINFORCING BAR AND TWO STAINLESS STEEL HOSE CLAMPS OR APPROVED EQUAL. REINFORCING BAR SHALL BE DRIVEN A MINIMUM OF 18" INTO THE SUBGRADE AND SHALL BE TERMINATED 3" BELOW THE BOTTOM OF THE SPRINKLER HEAD OR NOZZLE ADAPTER

10. PIPE SHALL BE SIZED IN STRICT ACCORDANCE WITH THE FOLLOWING SCHEDULE, EXCEPT AS OTHER WISE NOTED ON THE DRAWINGS:

	SHRUB RISERS & FLEX LATERALS ONLY
1/2"	
3/4"	0 – 10 G.P.M.
1"	10 – 20 G.P.M.
1 –1/4"	20 – 30 G.P.M.
1 –1/2"	30 – 40 G.P.M.
2"	40 – 60 G.P.M.
2 – 1/2"	60 – 85 G.P.M.
3"	85 – 140 G.P.M.
4"	140 – 210 G.P.M.

11. CONNECTION OF RISERS TO LATERALS OR SUPPLY LINES AND HEADS SHALL BE MADE WITH THREADED FITTINGS.

12. SWING JOINTS OR "FUNNY PIPE" SHALL BE USED FOR LAWN AREA SPRINKLER HEADS.

13. SWING JOINTS SHALL BE SCHEDULE 80 PVC (PRESSURE RATED AT 150 PSI PER ASTM D 3139) WITH THREE–WAY MOTION AND THREADED CONNECTIONS.

14. INSTALLED HEIGHT OF SPRINKLER HEADS AND SHRUB ADAPTER RISERS SHALL BE ADJUSTED AFTER PLANTINGS COMPLETED.

15. SPRINKLER HEAD AND ELECTRIC VALVE MODEL NUMBERS ARE 'TORO' BRAND. HUNTER AND RAINBIRD ARE APPROVED EQUALS. OTHER BRANDS ARE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT.

16. ALL IRRIGATION MAINS SHALL BE BURIED A MINIMUM OF 16" BELOW GRADE.

17. ALL IRRIGATION LATERALS SHALL BE BURIED A MINIMUM OF 12" BELOW GRADE.

18. PROVIDE AND INSTALL SCHEDULE 40 PVC SLEEVES WHERE INDICATED ON PLAN FOR NEW IRRIGATION WATER MAIN, LATERALS AND CONTROL WIRE CONDUITS TO BE COVERED BY PAVING AND SIDEWALKS. SLEEVE OVERT SHALL BE AT 24" MINIMUM DEPTH BELOW FINISH GRADE. IRRIGATION SLEEVE NOMINAL DIAMETER SHALL BE 2" GREATER THAN NOMINAL DIAMETER OF IRRIGATION LINE(S) WITHIN OR OF NOMINAL DIAMETER AS SPECIFIED ON THE PLAN, WHICHEVER IS GREATER. INSTALLER SHALL COORDINATE PLACEMENT OF SLEEVES WITH GENERAL CONTRACTOR. COMPACT BACKFILL AS PER SPECIFICATIONS FOR EARTHWORK AND/OR PAVING.

19. CONTROL WIRING NOT SHOWN. TAPE AND BUNDLE CONTROL WIRING AT TEN (10) FOOT INTERVALS. TIE A LOOSE TWENTY (20) INCH LOOP IN ALL WIRING CHANGES OF DIRECTION GREATER THAN THIRTY (30 DEGREES. UNTIE LOOPS AFTER ALL CONNECTIONS HAVE BEEN MADE AND PRIOR TO BACKFILLING. INSTALL CONTROL WIRING UNDER IRRIGATION MAIN PIPING.

20. PLASTIC VALVE BOXES SHALL HAVE LATCHING COVER WITH TEXT "CONTROL VALVE" MOLDED INTO COVER. PROVIDE 2" OF PEA GRAVEL IN BOTTOM. VALVE BOTTOM MUST BE 1" ABOVE GRAVEL. SUPPORT VALVE BOX WITH ONE (1) FULL SIZE BRICK AT EACH BASE CORNER

21. PLASTIC VALVE PITS SHALL HAVE "TWIST LOCK" COVERS WITH TEXT "CONTROL VALVE" MOLDED INTO COVER. PROVIDE 2" OF PEA GRAVEL IN BOTTOM. VALVE BOTTOM MUST BE 1" ABOVE GRAVEL. SUPPORT PIT SLEEVE WITH THREE (3) FULL SIZE BRICKS EQUALLY SPACED AT BASE.

22. SINGLE VALVES SHALL BE INSTALLED IN 10" DIAMETER X 11 1/2" HEIGHT PLASTIC VALVE PITS. GANGED OR MULTIPLE VALVES SHALL BE INSTALLED IN 20" LENGTH X 14" WIDE X 12" DEEP PLASTIC VALVE BOXES. PROVIDE 2" THICK PEA GRAVEL LAYER IN BOTTOM. VALVE BOTTOM MUST BE 1" ABOVE GRAVEL.

23. THE SYSTEM SHALL BE TESTED, CHECKED, BALANCED, INSPECTED AND FULLY OPERATIONAL BEFORE PLANTING THE LANDSCAPE MATERIALS.

24. MAINTENANCE INSTRUCTIONS: CONTRACTOR SHALL INSTRUCT THE OWNER'S MAINTENANCE PERSONNEL IN THE COMPLETE OPERATION AND MAINTENANCE OF THE SYSTEM. CONTRACTOR SHALL FURNISH THREE (3) COPIES OF THE IRRIGATION SYSTEM MANAGEMENT MANUAL. EACH MANUAL SHALL BE IN A LABELED THREE–RING BINDER AND CONTAIN ONE COPY EACH OF THE APPROVED PRODUCT DATA, APPROVED AS–BUILT DRAWING(S) AND COMPLETE OPERATION AND MAINTENANCE INSTRUCTIONS. THIS MATERIAL MUST BE PROVIDED BY THE CONTRACTOR, APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT, AND ACCEPTED BY THE OWNER BEFORE THE REQUEST FOR FINAL PAYMENT WILL BE APPROVED BY THE LANDSCAPE ARCHITECT.

25. WARRANTY: ALL MATERIALS AND LABOR SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF TWELVE (12) MONTHS AFTER FINAL ACCEPTANCE. THE CONTRACTOR SHALL MAINTAIN THE SYSTEM FOR TWELVE (12) MONTHS AFTER FINAL ACCEPTANCE FOR PROPER OPERATION AND SHALL ADJUST THE SYSTEM AS NECESSARY TO PROVIDE THE COVERAGE OF PLANT MATERIALS AS REQUIRED.

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DRAWN	PHASE	CHECK	DATE
MDICK	PD	M DICK	03.31.10
MDICK	BD	M DICK	03.31.10

REVISIONS

#	DATE	COMMENTS
1	5–28–10	NOZZLE SCHEDULE, SPRINKLER MODEL #, VALVE #, CONTROLLER #

LEON COUNTY – EASTSIDE BRANCH LIBRARY

BID DOCUMENT

IRRIGTION NOTES, DETAILS AND SCHEDULES

L2.1

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	PENDANT-HUNG, SURFACE, RECESSED, OR WALL-MOUNTED FLUORESCENT FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE AND MOUNTING. CROSS-HATCH INDICATES FIXTURE WITH BODINE BATTERY TO PROVIDE 90 MINUTES OF BACKUP POWER.
	INCANDESCENT, FLUORESCENT, OR HID FIXTURE. SEE LIGHTING FIXTURE SCHEDULE FOR TYPE AND MOUNTING. CROSS-HATCH INDICATES FIXTURE WITH BODINE BATTERY TO PROVIDE 90 MINUTES OF BACKUP POWER.
	ILLUMINATED EXIT SIGN (IES). SEE LIGHTING FIXTURE SCHEDULE.
S S_M	FLUSH-MOUNTED SINGLE POLE SWITCH. MOUNT AT 48" AFF. INSTALL WITHIN 4" OF DOOR FRAME, ON LOCK-SET SIDE. SUBSCRIPT M = MOTION-OPERATED OCCUPANCY SWITCH.
OS	CEILING-MOUNTED OCCUPANCY DETECTOR TO SIGNAL THE LIGHTING CONTROL SYSTEM THAT THE SPACE IS BEING OCCUPIED. PER SPECIFICATIONS SECTION 26 27 26.
G WP	FLUSH-MOUNTED CONVENIENCE RECEPTACLE WITH GROUND, NEMA 5-20. MOUNT AT 18" AFF OR AS NOTED. (WP = WEATHERPROOF, G = CONNECTED TO GND. FAULT INTERRUPT CKT.).
	DUPLEX RECEPTACLE, 48" A.F.F. OR 6" ABOVE COUNTER. TURN HORIZONTAL.
	DOUBLE DUPLEX RECESSED RECEPTACLE, WITH GROUND, NEMA 5-20. RECESS AT 18" AFF OR AS NOTED.
	FLUSH FLOOR-MOUNTED DOUBLE DUPLEX RECEPTACLE, WITH GROUND. NEMA 5-20.
C	COMMUNICATION/DATA (C/D) OUTLET. CENTER AT 18" A.F.F. AND 6" ABOVE COUNTER, UNLESS OTHERWISE NOTED. RECESS STANDARD DEVICE, 3/4" CONDUIT WITH PULL LINE TO 6" ABOVE CEILING. TURN INTO CEILING CAVITY TOWARD C/D BOARD IN IT ROOM 105. PROVIDE END BUSHINGS. C/D CONDUCTORS TO BE "BY OTHERS." C = 6" ABOVE COUNTER.
	RECESSED IN-FLOOR COMBINATION DUPLEX RECEPTACLE AND C/D OUTLET. WIREMOLD RFB4 WITH APPROPRIATE CARPET OR TILE RING.
	FLUSH FLOOR-MOUNTED C/D OUTLET. PROVIDE 3/4" C. WITH PULL LINE TO ACCESS POINT AT C/D BACKBOARD IN IT ROOM 105. C/D CONDUCTORS "BY OTHERS."
	SYNCHRONOUS PRE-WIRED CLOCK OUTLET, WITH SIGNAL FROM CENTRAL CLOCK SYSTEM PANEL IN ELECT. ROOM 119A. MOUNT RECESSED AT 90" AFF.
TV	CABLE TV OUTLET TO BE WIRED BY OTHERS. RECESS AT 80" AFF UNLESS NOTED OTHERWISE. PROVIDE DEVICE BOX WITH CONCEALED 3/4" CONDUIT (W/PULL LINE) TO 6" ABOVE CEILING FOR FUTURE WIRING "BY OTHERS." PROVIDE END BUSHINGS. IN ADDITION, INSTALL A RECESSED RECEPTACLE ADJACENT TO THE TV OUTLET. SERVE FROM CIRCUIT AS NOTED.
	EXHAUST FAN. SEE MECHANICAL PLANS.
J	J-BOX TO SERVE PURPOSE SHOWN ON PLANS.
	DISCONNECT SWITCH. SIZED AND NUMBER OF POLES AS SHOWN OR TO CONTROL CONNECTED LOAD IN ACCORDANCE WITH NEC. SWITCH TO BE QUICK-MAKE, QUICK-BREAK TYPE IAW SPECS. NEMA 3R FOR EXTERIOR.
PC	PHOTOCELL CONTROL FOR LIGHTING. ALR-AT-15. INSTALL AT ROOF LEVEL, FACING NORTH.
T	ELECTRONIC TIMER, 7-DAY PROGRAMMABLE WITH BATTERY BACK-UP. INTERMATIC MODEL. INSTALL AT 5'-6" AFF, ADJACENT TO PANEL SERVING LOAD.
	COMBINATION MOTOR STARTER. BASIS OF DESIGN IS SQUARE D CLASS 8502. NEMA SIZE, NEMA TYPE, AND VOLTAGE/PHASE AS SHOWN OF DRAWINGS. E.C. TO PROVIDE AND INSTALL.
FCP	FIRE ALARM CONTROL PANEL (FCP). MOUNT AT 5'-0" AFF TO TOP. SEE FIRE ALARM RISER DIAGRAM ON SHEET E3.2.
FAAP	FIRE ALARM ANNUNCIATOR PANEL. RECESS MOUNT AT 5'-0" AFF TO TOP.
P	MANUAL PULL STATION (P). FLUSH MOUNT AT 44" AFF.
	FIRE ALARM SPEAKER/STROBE (SS) COMBINATION. RECESS AT 80" AFF TO BOTTOM OF DEVICE. MINIMUM CANDELA RATING AS SHOWN ON PLANS.
	FIRE ALARM STROBE ONLY (SO). RECESS AT 80" AFF TO BOTTOM OF DEVICE. MINIMUM CANDELA RATING AS SHOWN ON PLANS.
	CEILING MOUNTED HEAT DETECTOR (HD).
	CEILING MOUNTED SMOKE DETECTOR (SD).
	DUCT-MOUNTED SMOKE DETECTOR (DD). (REQUIRED IN AHU). PROVIDED BY MECHANICAL CONTRACTOR INSTALLED AND WIRED TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR.
	ELECTRICAL PANEL, PER SPECIFICATIONS. BRANCH CIRCUITS MAY BE 10,000 AMPS RMS. SEE PANEL SCHEDULES.
C/D	COMMUNICATIONS/DATA (C/D) BACKBOARD. SEE DETAIL, THIS SHEET.
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER (TVSS), LIEBERT MODEL PER DETAIL, SHEET E3.2.
	SOLAR TUBE-FOR DAYLIGHT HARVESTING. NO POWER REQUIREMENT. SEE ARCHITECTURAL SPECS.
PS	PHOTO DAYLIGHT SENSOR, WALL OR CEILING MOUNTED, PER BASIS OF DESIGN SPECIFICATIONS ON SHEET E2.1.

NOTE: FIRE ALARM CONTRACTOR SHALL SUBMIT FOR A SEPARATE FIRE ALARM SYSTEM PERMIT.

LIGHTING FIXTURE SCHEDULE

SYMBOL	MFGR. & MODEL OR APPROVED EQUAL (SEE NOTE 6)	LAMPS (SEE NOTE 1) TYPE	NO.	WATTS	VOLTS	MOUNTING	REMARKS
A	PRUDENTIAL LIGHTING APA-TRO-SD-WD-TMW-1T5-08'-TMW-X1-STPDIM	T5	1	28	277	PENDANT AT 9'-0" AFF	GENERAL STACKS
B	DAYBRITE 2STG-232-D-UNV-1/2-EB101-LPT841HL	T8	2	32	277	RECESSED 2x4	OFFICES
B3	DAYBRITE 2STG-332-D-UNV-1/3-EB101-LPT841HL	T8	3	32	277	RECESSED 2x4	WORK AREAS
C	EDISON PRICE LLSM-VR-277	CFL	2	13	277	SURFACE	JAN. CLOSET, SHOWER
D	BETA CALCO 32-5160-SUL1-MB	PL LED	2 1	40 8.4	277	WALL, AT 7'-10" AFF	SEE NOTE 4
D1	BETA CALCO 32-5160-MB	PL	2	40	277	WALL, AT 7'-10" AFF	SEE NOTE 4
E	LUMINIS W1250S-F157-277-BZT-EM42	CFL	1	57	277	PENDANT AT 15' AFF TO BOTTOM	SEE NOTE 7
F	GARDCO RL-1-3-85LA-NW-UNV-BZT	LED	1	85	277	POLE MOUNTED 15' AFG	SEE DETAIL ON SHEET E1.2
G	BEGA 2413P	CFL	1	42	277	7'-10" AFF	EXTERIOR
H	LEDALITE 9464-G1-ST-H-154-S-2-E	T5	1	54HO	277	RECESSED 6" X 4'	INDOOR TOILETS
J	MORLITE CE89-4'-2T8-EB101S-A-SS-UNV	T8	2	32	277	SURFACE	PUBLIC TOILETS
K	D. M. LIGHTING 4700-WA-ELB-277-BRONZE-WL	PL	2	13	277	8' AFG	BOOK DROP BOTTOM LENS
L	DAYBRITE 2-TUBE STRIP PENDANT WITH WIRE CAGE	T8	2	32	277	PENDANT AT 8'-6" AFF	MEZZANINE
M	TIVOLI CLL-SF-20-WW-12/CLL-08-AD-UC-75-1-6-12D	LED	44	0.75	277	BUILT INTO CHECK OUT COUNTER	TRANSFORMER NEEDED
N	LUMINIS W606 F 157-277-BZT-FS-PAA412	CFL	1	57	277	POST-MOUNTED 12' AFG	SEE DETAIL ON SHEET E1.2
P	CAPRI CM6-L-11-18F-840-277-H65	LED	1	18	277	RECESSED	CAN
R	INSIGHT LIGHTING TEL 12-40K-30-CES-4-2-TN/RPS-96-24-WET	LED	1	48	277	CANTILEVER TO SHINE DOWN	EXTERIOR COMM. PLAQUE LGT.
S	B-K LIGHTING MD-LED-350-F-BZP-1A	LED	1	3	277	RECESSED IN CONCRETE	SEE NOTE 5
T3 T6	LUMINAIRE AEL 36/72 LED-277-FP-BKH-OCC	LED	1	3' - 24 6' - 54	277	SEE NOTE 8	T3 = 36" T6 = 72"
U	ALKCO ARIS-41-40-277-PRL-HWC	LED	INCL.	25	277	UNDERCABINET	
W	B-K LIGHTING DS-LED-E23-MFL-BZP-11-A	LED	INCL.	8	120	GROUND	SIGNAGE AT STREET XF NEEDED
	CHLORIDE CN-6-RC-BR-½-IC	LED	1	3	277	SEE NOTE 2	SEE NOTE 3

LIGHTING FIXTURE NOTES:

1. ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH ENERGY EFFICIENT LAMPS AND ELECTRONIC BALLASTS. THD SHALL NOT EXCEED 10 PERCENT. LAMPS SHALL BE T5 OR T8 4100 K. BALLASTS SHALL BE HIGH PERFORMANCE, INSTANT START MAGNETEK, OR EQUAL.

2. PROVIDE CEILING MOUNT, SURFACE MOUNT OR ABOVE DOOR. PROVIDE SINGLE OR DOUBLE FACE AS SHOWN, WITH APPROPRIATE L/R ARROW, AS SHOWN. EXIT LIGHTING FIXTURES MOUNTED ABOVE DOORS SHALL BE AT 4" ABOVE DOOR FRAME TO BOTTOM OF FIXTURE..

3. ILLUMINATED EXIT SIGNS (IES) SHALL BE SERVED FROM THE CIRCUIT SERVING THE LIGHTING FIXTURES IN THE ROOM WHERE THE EMERGENCY FIXTURE IS LOCATED, WITH NO SWITCH. IES FIXTURES SHALL HAVE BATTERY AND CHARGER.

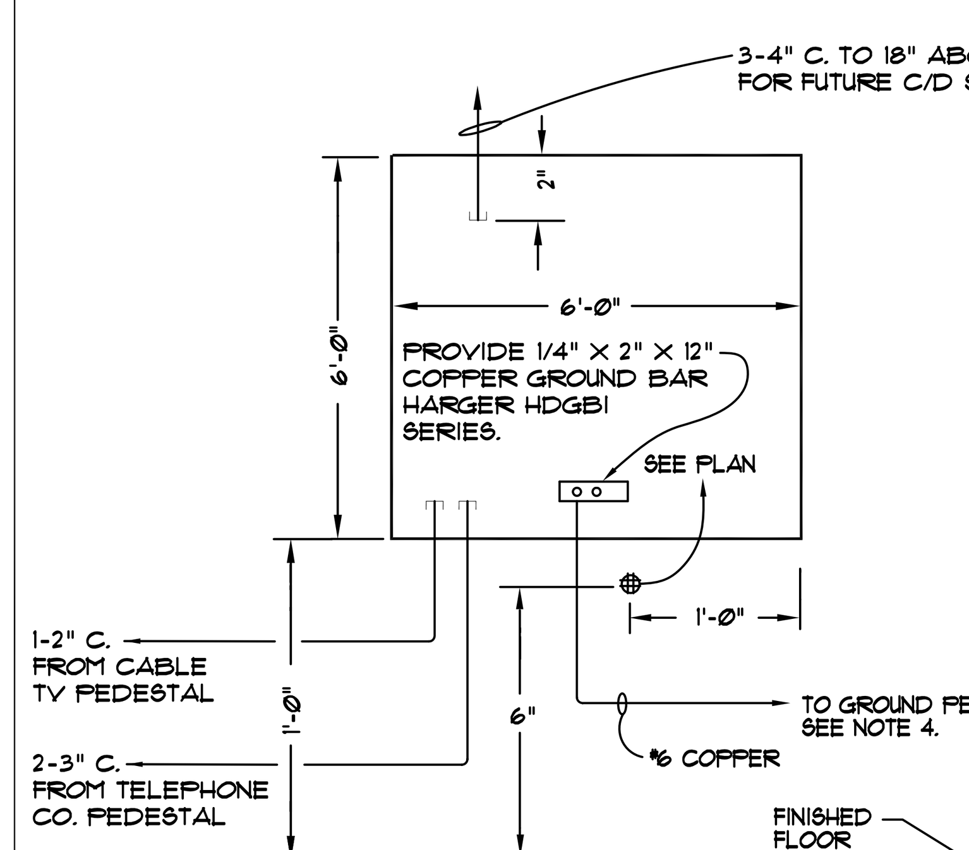
4. SCONCE D1 IN MAIN CIRCULATION CORRIDORS AND TEEN ROOM, CONSISTS OF 2-40 W. PL LAMPS, AND NO "UP" LIGHTS.

5. TYPE S FIXTURE SHALL BE RECESSED IN THE CONCRETE SIDEWALK (SOUTH SIDE) AND PORCH (NORTH SIDE). RECESS WITHIN 1" OF THE EDGE OF THE CONCRETE. FACTORY-MADE TRANSFORMER REQUIRED TO POWER ALL 17 TYPE S FIXTURES.

6. REQUESTS FOR APPROVAL OF SUBSTITUTES SHALL BE SUBMITTED TO THE ENGINEER A MINIMUM OF 10 DAYS PRIOR TO BID OPENING.

7. MAIN ENTRY, SOUTH. PROVIDE BATTERY AND CHARGER WITH CAPABILITY TO LIGHT THE FIXTURES FOR 90 MINUTES OF EGRESS LIGHTING.

8. INCLUDES FACTORY-MADE MOTION SENSOR TO TURN FIXTURE "ON" AND TIMED "OFF" IN 10 MINUTES.



NOTES:

1. 3/4" EXTERIOR PLYWOOD.

2. PAINT WITH FLASH-PROOF, THREE COATS GRAY ENAMEL, FRONT, BACK, AND EDGES.

3. DOUBLE DUPLEX OUTLET, (120 VOLT), AS SHOWN. SERVE FROM DEDICATED 20/1 BREAKER AS SHOWN.

4. PROVIDE #6 AWG. GROUND TO GROUND SYSTEM, PER N.E.C. ALL GROUNDING SYSTEMS SHALL BE BONDED TOGETHER. THIS INCLUDES GROUND BUS IN ELECTRICAL PANELS, TELEPHONE GROUND, UNDERGROUND METALLIC PIPING SYSTEMS ENTERING BUILDING, AND DRIVEN GROUND RODS.

COMMUNICATIONS/DATA (C/D) BACKBOARD DETAIL

N.T.S. IN IT ROOM 105

ELECTRICAL NOTES: APPLICABLE ELECTRICAL CODES AND SPECIFICATIONS

1. ALL WIRING SHALL BE IN ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE (WITH 2009 SUPPLEMENTS), 2008 EDITION OF NFPA 70, THE NATIONAL ELECTRICAL CODE, THE 2007 EDITION OF THE FLORIDA FIRE PREVENTION CODE, THE 2002 EDITION OF NFPA 72, NATIONAL FIRE ALARM CODE, AND THE ELECTRICAL SPECIFICATIONS AS FOLLOWS:

26 00 00	ELECTRICAL GENERAL REQUIREMENTS	8
26 05 19	CONDUCTORS (600 VOLTS)	3
26 05 26	GROUNDING	3
26 05 33	RACEWAYS AND BOXES	5
26 05 34	RACEWAY SYSTEMS	2
26 24 00	PANELBOARDS AND DISCONNECT SWITCHES	5
26 27 26	WIRING DEVICES	3
26 31 00	PHOTOVOLTAIC SYSTEM	2
26 41 00	LIGHTNING PROTECTION SYSTEM	3
26 50 00	LIGHTING FIXTURES	2
26 60 00	MULTIPLEX FIRE ALARM SYSTEM	4

2. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING PERMITS FOR THIS CONSTRUCTION AND FOR SCHEDULING APPROPRIATE INSPECTIONS DURING CONSTRUCTION WITH ALL AUTHORITIES HAVING JURISDICTION (AHJ).

3. THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR TO COMPLETE THE ELECTRICAL LIGHTING AND POWER SYSTEMS HEREIN SPECIFIED. ALL WORK SHALL BE CAREFULLY DONE BY CAPABLE, EXPERIENCED ELECTRICIANS. ALL ITEMS SHOWN ARE NEW AND SHALL BE PROVIDED BY THE CONTRACTOR, UNLESS SPECIFICALLY STATED OTHERWISE.

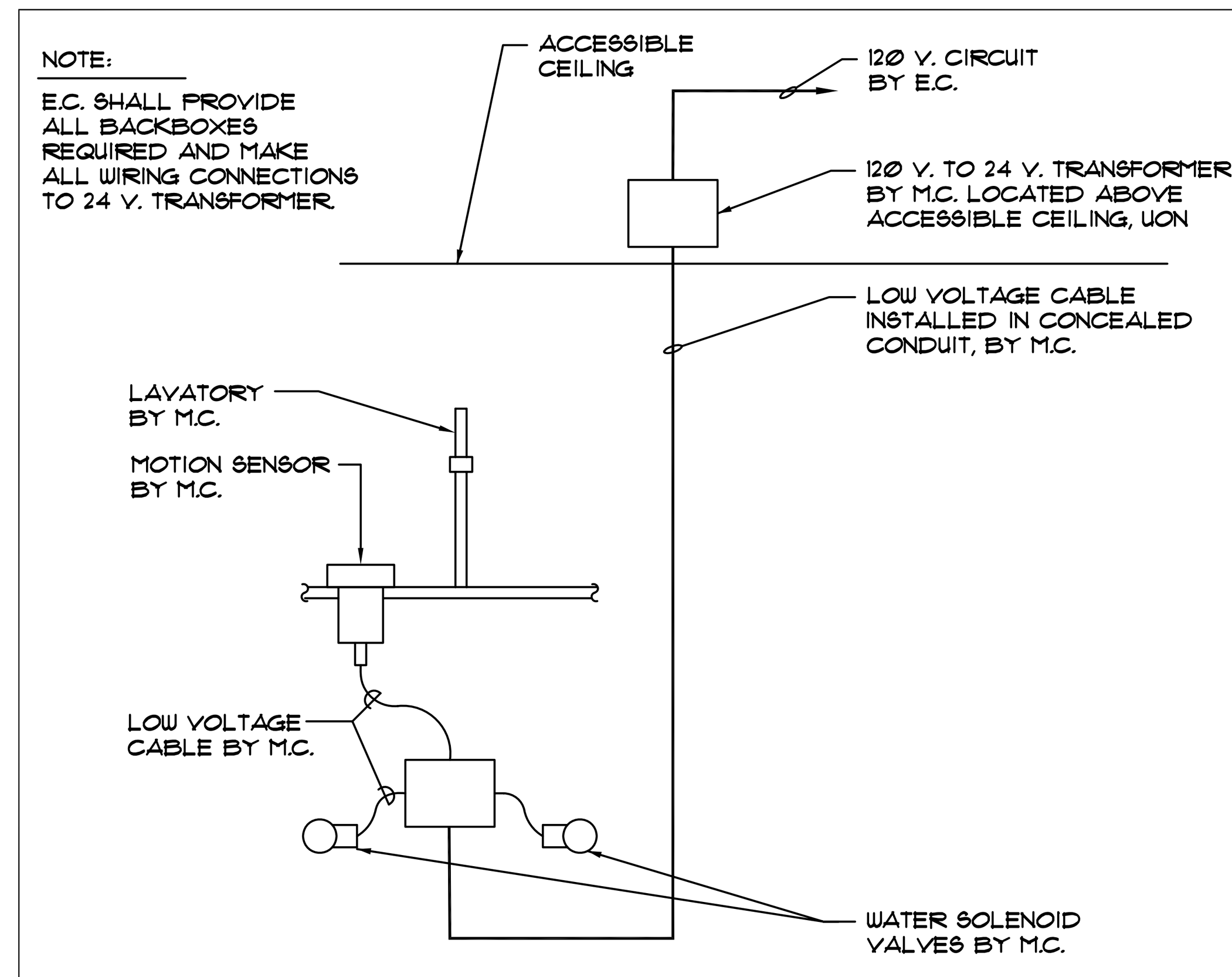
4. IT IS THE INTENTION OF THE DRAWINGS TO FULLY COVER ALL WORK AND MATERIALS FOR A COMPLETE FIRST CLASS ELECTRICAL INSTALLATION. ANY DEVICES SUCH AS PULL BOXES USUALLY EMPLOYED IN THIS CLASS OF WORK, THOUGH NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, BUT MAY BE REQUIRED FOR THE SATISFACTORY COMPLETION OF THE WORK, SHALL BE FURNISHED AND INSTALLED AS PART OF THE CONTRACTOR'S TOTAL WORK.

5. THE CONTRACTOR SHALL CONTACT THE CITY OF TALLAHASSEE (C.O.T.) ELECTRICAL UTILITY DEPARTMENT PRIOR TO COMMENCING WORK, IN ORDER TO DETERMINE COSTS ASSOCIATED WITH THE ELECTRICAL SERVICE. ALL SUCH COSTS ARE TO BE COVERED BY THE CONTRACTOR. C.O.T. CONTACT PERSON IS TINA DROSE AT 850-891-5031.

6. DUE TO THE PRESENCE OF A SECONDARY SOURCE OF GENERATED POWER (PHOTOVOLTAIC SOLAR SYSTEM), THE UTILITY PROVIDER (C.O.T. ELECTRICAL UTILITY DEPARTMENT) REQUIRES THE COMPLETION OF AN AGREEMENT WITH THE OWNER AS PART OF THE PERMIT PROCESS. THE C.O.T. REPRESENTATIVE IS TOM GILLMAN AT 850-891-6122.

7. ELECTRICAL CONTRACTOR SHALL CONTACT THE LOCAL TELEPHONE CO. (CENTURY LINK) REGARDING INSTALLATION OF TELEPHONE MAINS AND C/D BACKBOARD. LOCAL CENTURY LINK CONTACT PERSON IS JEANNE FOGLEMAN AT 850-599-1631.

8. ELECTRICAL CONTRACTOR SHALL CONTACT THE LOCAL CABLE TV SERVICE PROVIDER AND SHALL ARRANGE TO PROVIDE CABLE TV SERVICE TO THE C/D BACKBOARD. COORDINATE THIS SERVICE WITH THE OWNER AND CABLE TV SERVICE PROVIDER. CONTACT PERSON FOR CABLE TV IS IRVING JENKINS AT 850-574-4060.



TYPICAL MOTION SENSOR LAVATORY WIRING DIAGRAM

N.T.S.

INDEX OF ELECTRICAL SHEETS

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E1.1	ELECTRICAL SITE PLAN
E1.2	SITE LIGHTING PLAN WITH PHOTOMETRICS
E2.0	ELECTRICAL LIGHTING PLAN
E2.1	LIGHTING CONTROL DIAGRAM
E3.0	ELECTRICAL POWER PLAN
E3.1	PARTIAL POWER PLAN - HVAC AND PV SOLAR EQUIPMENT
E3.2	ELECTRICAL RISER DIAGRAMS
E3.3	ELECTRICAL PANEL SCHEDULES

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DRAWN	PHASE	CHECK	DATE
HAO/YMO	DD	HAO	07/20/09
HAO/YMO	50 % CD	HAO	09/22/09
HAO/YMO	80 % CD	HAO	11/25/09
HAO/YMO	100 % CDR	HAO	01/11/10
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ELECTRICAL LEGEND, DETAILS, AND LIGHTING FIXTURE SCHEDULE

E1.0

PANEL SCHEDULE

PANEL M1 — 480/277 V., 3 PH., 4 W — 225 AMP MAIN — 225 AMP FRAME — 10,000 A.I.C.

EQUIPMENT SERVED	CKT. BREAKER TRIP	CKT. BREAKER POLE	CKT. BREAKER WIRE	KVA/PHASE A	KVA/PHASE B	KVA/PHASE C	CKT. NO.	CKT. NO.	KVA/PHASE A	KVA/PHASE B	KVA/PHASE C	CKT. BREAKER TRIP	CKT. BREAKER POLE	CKT. BREAKER WIRE	EQUIPMENT SERVED
SPACE							1	2							SPACE
							3	4							
							5	6							
							7	8							
							9	10							
							11	12							
							13	14							
							15	16							
							17	18							
TRANSFORMER (3 KVA)	15	3	4#12	.2			19	20							
—	—	—	—		.2		21	22							
—	—	—	—				23	24							
PANEL M2	200	3	4#4/0	48.1			25	26							
—	—	—	—		44.4		27	28		.4		15	1	2#10	SITE LIGHTS "N"
—	—	—	—			40.0	29	30			.4				"F"
CHILLER	60	3	3#6	12.9			31	32	.4			15	3	3#12	HOT WATER PUMP
—	—	—	—		12.9		33	34		.4		—	—	—	—
—	—	—	—			12.9	35	36			.4	—	—	—	—
TVSS	30	3	4#10				37	38	.8			15	3	3#12	CHILLED WATER PUMP
—	—	—	—				39	40		.8		—	—	—	—
—	—	—	—				41	42			.8	—	—	—	—

	A	B	C
CONNECTED KVA	62.4	59.1	55.5

TOTAL CONNECTED LOAD: 177.0 KVA 213 AMPS
DEMAND LOAD: 111.0 KVA 134 AMPS

LOCATION: FREE-STANDING SUPPORT, MECHANICAL EQUIPMENT YARD

TYPE: NEMA 3R, SURFACE BOTTOM FED

NOTES: THIS SHEET ONLY

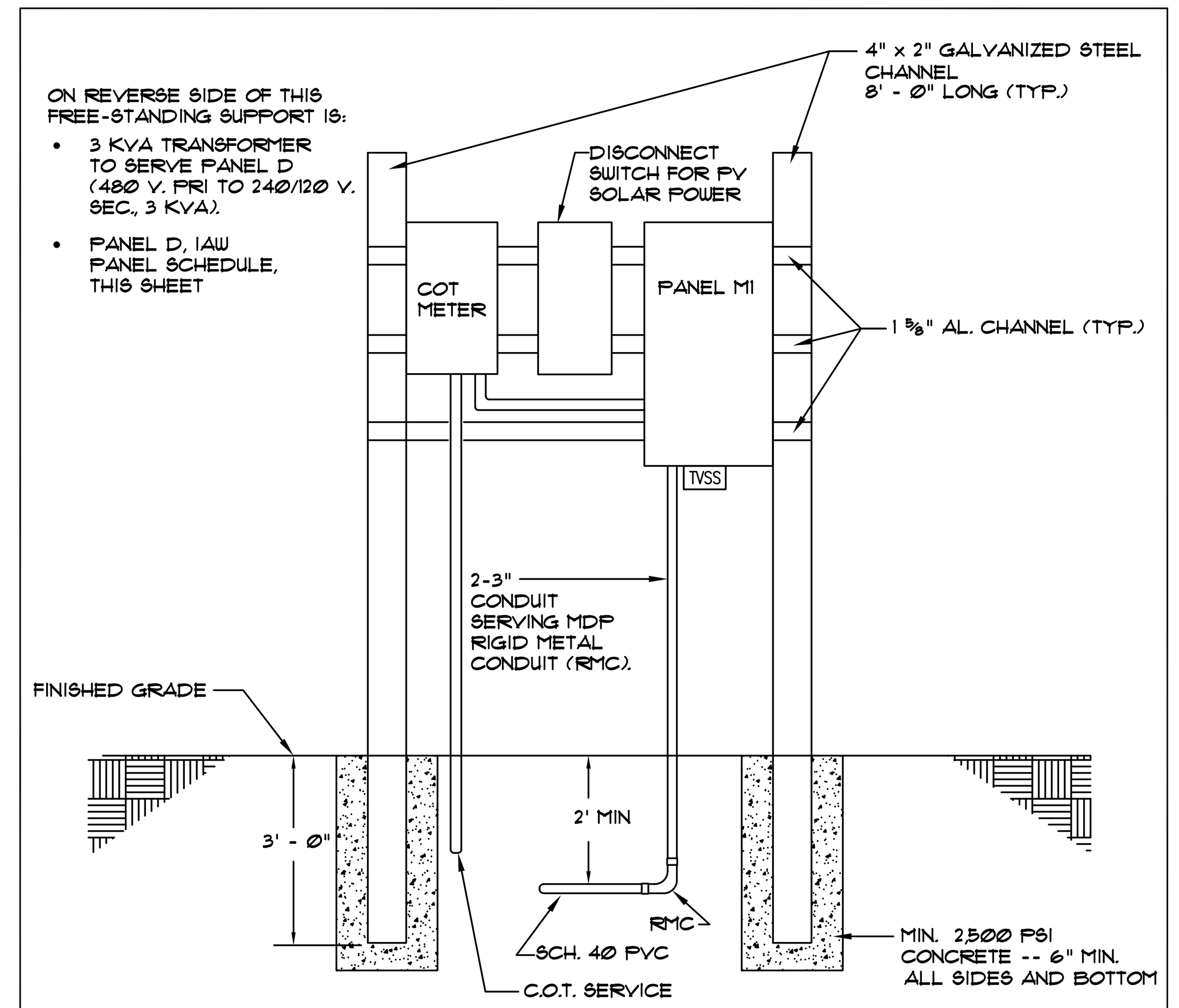
1. PANEL M1 (480/277 V., 3 PH.) IS THE MAIN SERVICE PANEL FOR THIS FACILITY. SEE PANEL SCHEDULE M1, THIS SHEET.

2. THE 1½ HP CHILLED WATER PUMP AND THE ¾ HP HOT WATER PUMP EACH REQUIRES A NEMA SIZE 0, NEMA 4X, SQUARE D CLASS 8502 COMBINATION MOTOR STARTER, OR APPROVED EQUAL.

3. THE CHILLER (38.6 KW) HAS ITS FACTORY-INSTALLED INTEGRAL DISCONNECT AND CIRCUIT OVER CURRENT PROTECTION INCLUDED.

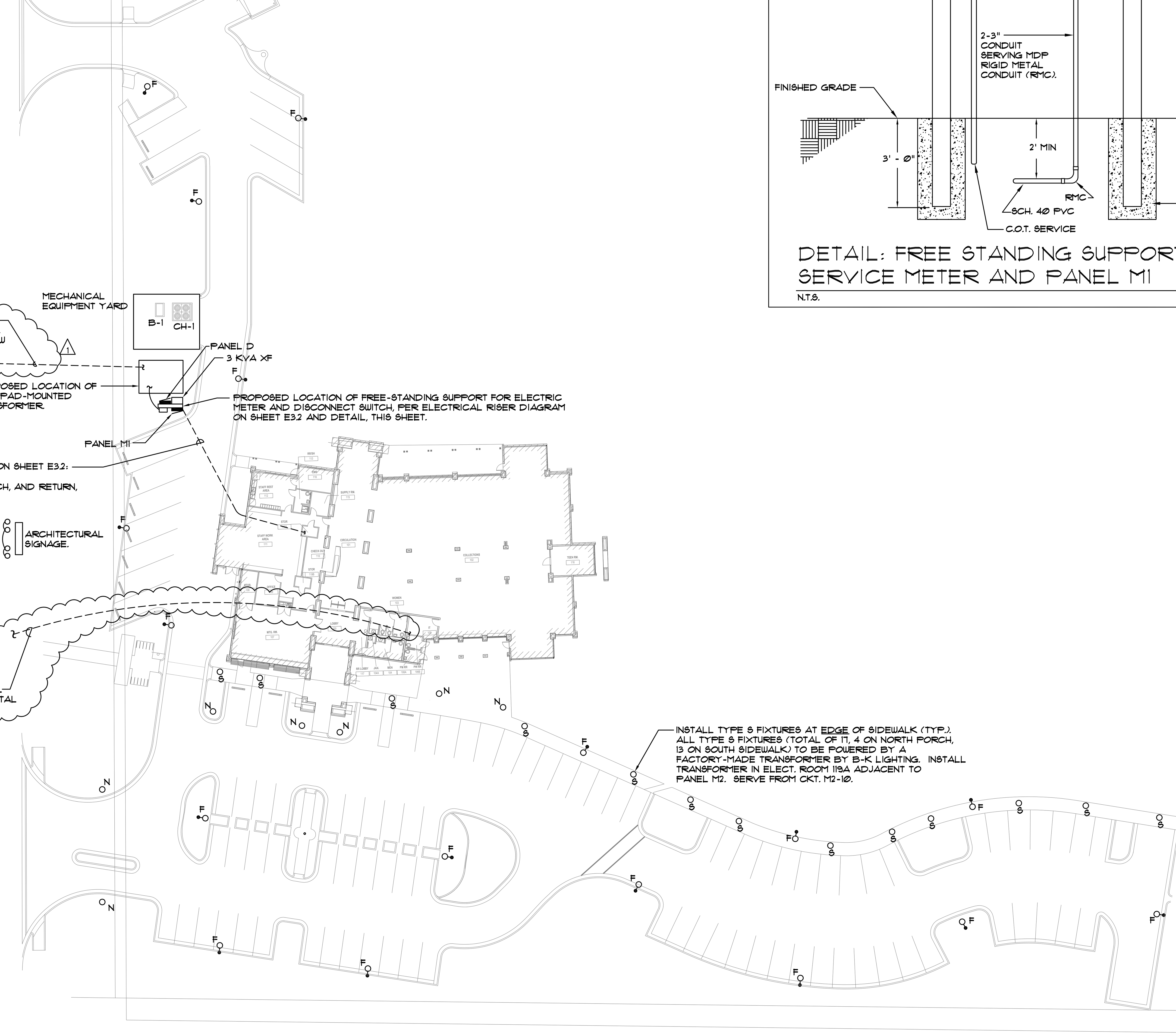
4. SERVE THE SITE LIGHTS FROM TWO 15/1 BREAKERS IN PANEL M1 AS SHOWN. SERVE 17 TYPE F FIXTURES FROM CKT. M1-30 AND 7 TYPE N FIXTURES FROM CKT. M1-28.

5. SERVE 3 KVA TRANSFORMER, THEN TO PANEL D. SERVE 120 V. LOADS AS FOLLOWS:
   20/1 IGNITION CONTROL AND CIRCUIT FOR MECHANICAL EQUIPMENT YARD
   20/1 FOR WP/GFI CONVENIENCE RECEPTACLE AT PANEL D.



DETAIL: FREE STANDING SUPPORT FOR COT SERVICE METER AND PANEL M1

N.T.S.



ELECTRICAL SITE PLAN
SCALE: 1"=30'-0"

PANEL SCHEDULE

PANEL D — 240/120 V., 1 PH., 3 W — 15 AMP MAIN — 100 AMP FRAME — 10,000 A.I.C.

EQUIPMENT SERVED	CKT. BREAKER TRIP	CKT. BREAKER POLE	CKT. BREAKER WIRE	KVA/PHASE A	KVA/PHASE B	KVA/PHASE C	CKT. NO.	CKT. NO.	KVA/PHASE A	KVA/PHASE B	KVA/PHASE C	CKT. BREAKER TRIP	CKT. BREAKER POLE	CKT. BREAKER WIRE	EQUIPMENT SERVED
SPACE							1	2							SPACE
							3	4							
							5	6							
							7	8							
							9	10							
							11	12							
SPARE	20	1					13	14				20	1		SPARE
							15	16							
RCPT.			2#12		.2		17	18							
MECH. CONTROLS				.2			19	20							

	A	B	C
CONNECTED KVA	.2	.2	

TOTAL CONNECTED LOAD: 0.4 KVA 2 AMPS
DEMAND LOAD: 0.4 KVA 2 AMPS

LOCATION: FREE-STANDING SUPPORT, MECHANICAL EQUIPMENT YARD

TYPE: NEMA 3R, SURFACE BOTTOM FED

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DRAWN	PHASE	CHECK	DATE
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HAO/YMO	50 % CD	HAO	09/22/09
HAO/YMO	80 % CD	HAO	11/25/09
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ELECTRICAL SITE PLAN

E1.1

KEYNOTES:

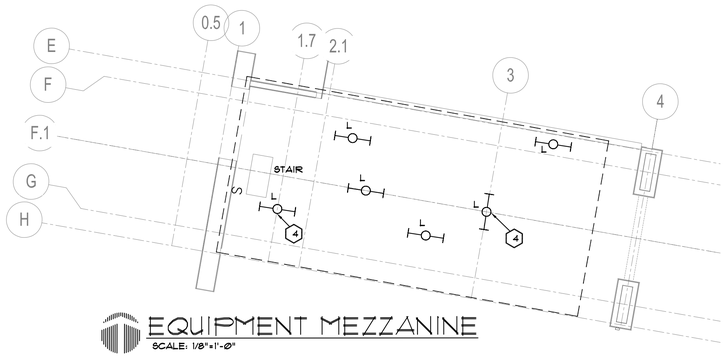
1. SWITCHBANK FOR LIGHTING CONTROLS FOR LOBBY (100), CIRCULATION (101), AND COLLECTIONS AREAS (102). SWITCHBANKS ARE LIGHTING CONTROL STATIONS, IAW ILC SYSTEM ON SHEET E2.1. ALL SUCH CONTROLS FIT INTO A 4-GANG RECESSED DEVICE BOX. RECESS AT 48" AFF TO CENTER. SEE SWITCHBANK SCHEDULE ON SHEET E3.3.
2. SWITCHBANK FOR LIGHTING CONTROLS FOR MTG ROOM (107). SWITCHBANKS ARE LIGHTING CONTROL STATIONS, IAW ILC SYSTEM ON SHEET E2.1. ALL SUCH CONTROLS FIT INTO A 4-GANG RECESSED DEVICE BOX. RECESS AT 48" AFF TO CENTER. SEE SWITCHBANK SCHEDULE ON SHEET E3.3.
3. BETA CALCO LIGHTING FIXTURE (SIMILAR TO 8.4 W. LED UPLIGHT PART OF FIXTURE D) MOUNTED ON TOP SURFACE OF DUCTWORK BRIDGE, TO SHINE UPWARD (TYP. OF 4). EACH FIXTURE TO BE LED 8.4 WATTS, 277 V.
4. PROVIDE BODINE BATTERY TO PROVIDE 90 MINUTES OF BACKUP POWER.

LIGHTING CONTROLS:

1. EXTERIOR BUILDING FIXTURES TO BE CONTROLLED BY PHOTOCELL "ON" AND TIME CLOCK "OFF" THROUGH LIGHTING CONTROL PANEL.
2. LIGHTING FIXTURES IN TOILET ROOMS (103, 104, 117, 106A, 106B, 113), IT ROOM (105) AND TEEN ROOM (116) TO BE CONTROLLED BY OCCUPANCY SENSORS.
3. LIGHTING FIXTURES IN SUPPLY/STORAGE/ELECT ROOMS (115, 119A, 119B, 108), OFFICE (109), STAFF WORK AREA (111), STAFF REST AREA (112) AND EMS (118) TO BE CONTROLLED BY OCCUPANCY SENSORS.
4. LIGHTING FIXTURES IN MTG. ROOM (107) LOBBY (100), CIRCULATION (101) AND COLLECTIONS (102) ARE TO BE CONTROLLED THRU LIGHTING CONTROL PANEL BY SWITCHBANKS IN LOCATIONS SHOWN IAW RELAY PANEL SCHEDULE ON SHEET E3.3 AND LIGHTING CONTROL SYSTEM DIAGRAM ON SHEET E2.1. LOCAL CONTACT FOR THE ILC SYSTEM IS JEFF CRISP, 850-422-3600.

CIRCUITING NOTES:

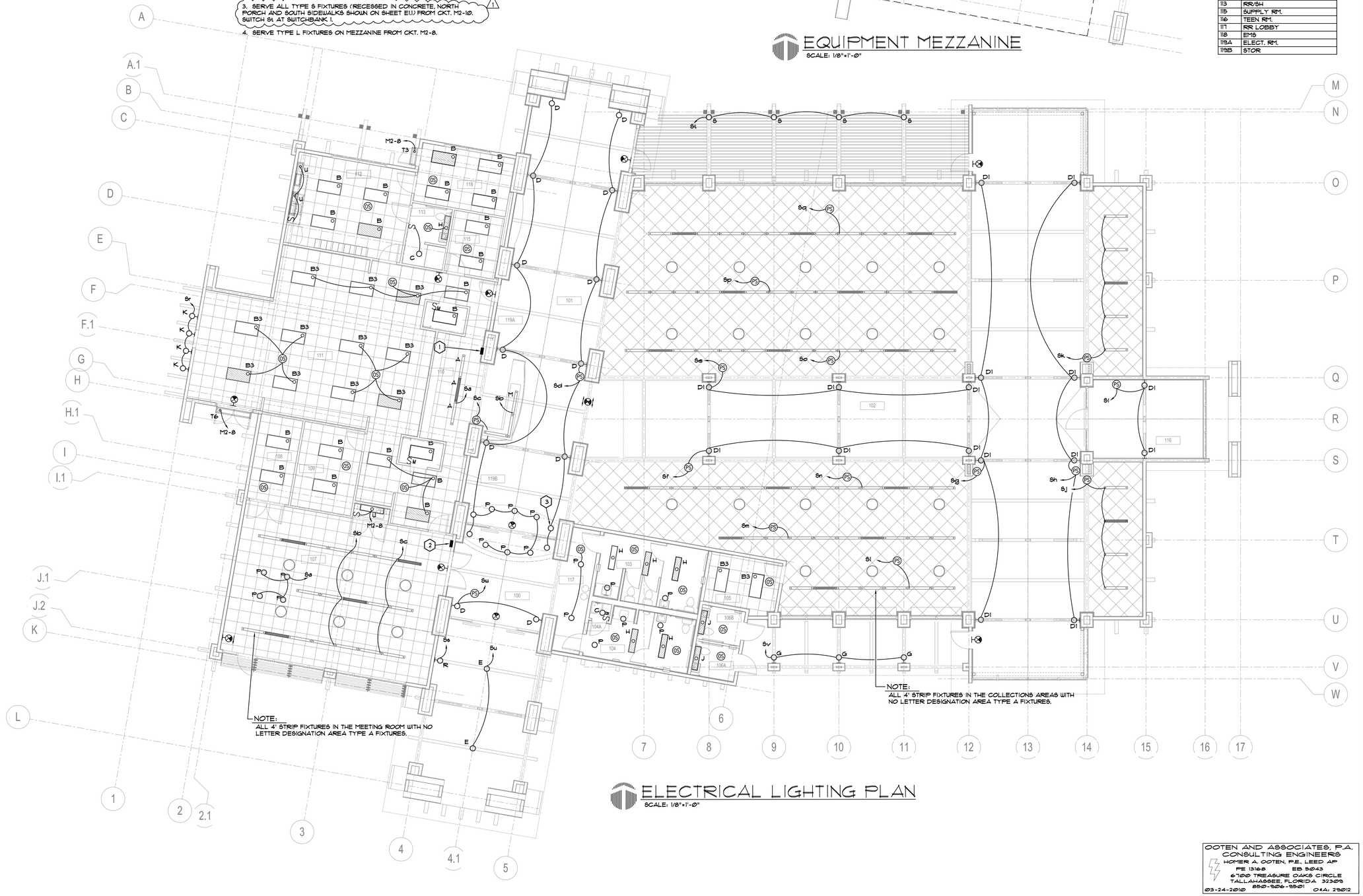
1. SERVE LIGHTING FIXTURES IN ROOMS 108, 109, 111, 119B, 119A, 112, 113, 115 AND 118 FROM CKT. M2-8. FIXTURES T3 AND T6 ARE OPERATED BY BUILT-IN PHOTOCELL.
2. SERVE LIGHTING FIXTURES IN ROOMS 117, 103, 104, 105, 106A AND 106B FROM CKT. M2-10.
3. SERVE ALL TYPE S FIXTURES (RECESSED IN CONCRETE, NORTH PORCH AND SOUTH SIDEWALKS SHOWN ON SHEET E1.1) FROM CKT. M2-10. SWITCH St AT SWITCHBANK L.
4. SERVE TYPE L FIXTURES ON MEZZANINE FROM CKT. M2-8.



EQUIPMENT MEZZANINE

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

ROOM NO.	ROOM NAME
100	LOBBY
101	CIRCULATION
102	COLLECTIONS
103	WOMEN
104	MEN
104A	JAN.
105	IT RM.
106A	FM-RR
106B	FW-RR
107	MTG. RM.
108	STOR.
109	OFFICE
110	CHECKOUT
111	STAFF WORK AREA
112	STAFF REST AREA
113	RR/SH
115	SUPPLY RM.
116	TEEN RM.
117	RR LOBBY
118	EMS
119A	ELECT. RM.
119B	STOR



ELECTRICAL LIGHTING PLAN

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

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DRAWN	PHASE	CHECK	DATE
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HAO/YMO	50 % CD	HAO	09/22/09
HAO/YMO	80 % CD	HAO	11/25/09
HAO/YMO	100 % CDR	HAO	01/11/10
HAO/YMO	100 % CD	HAO	02/24/10

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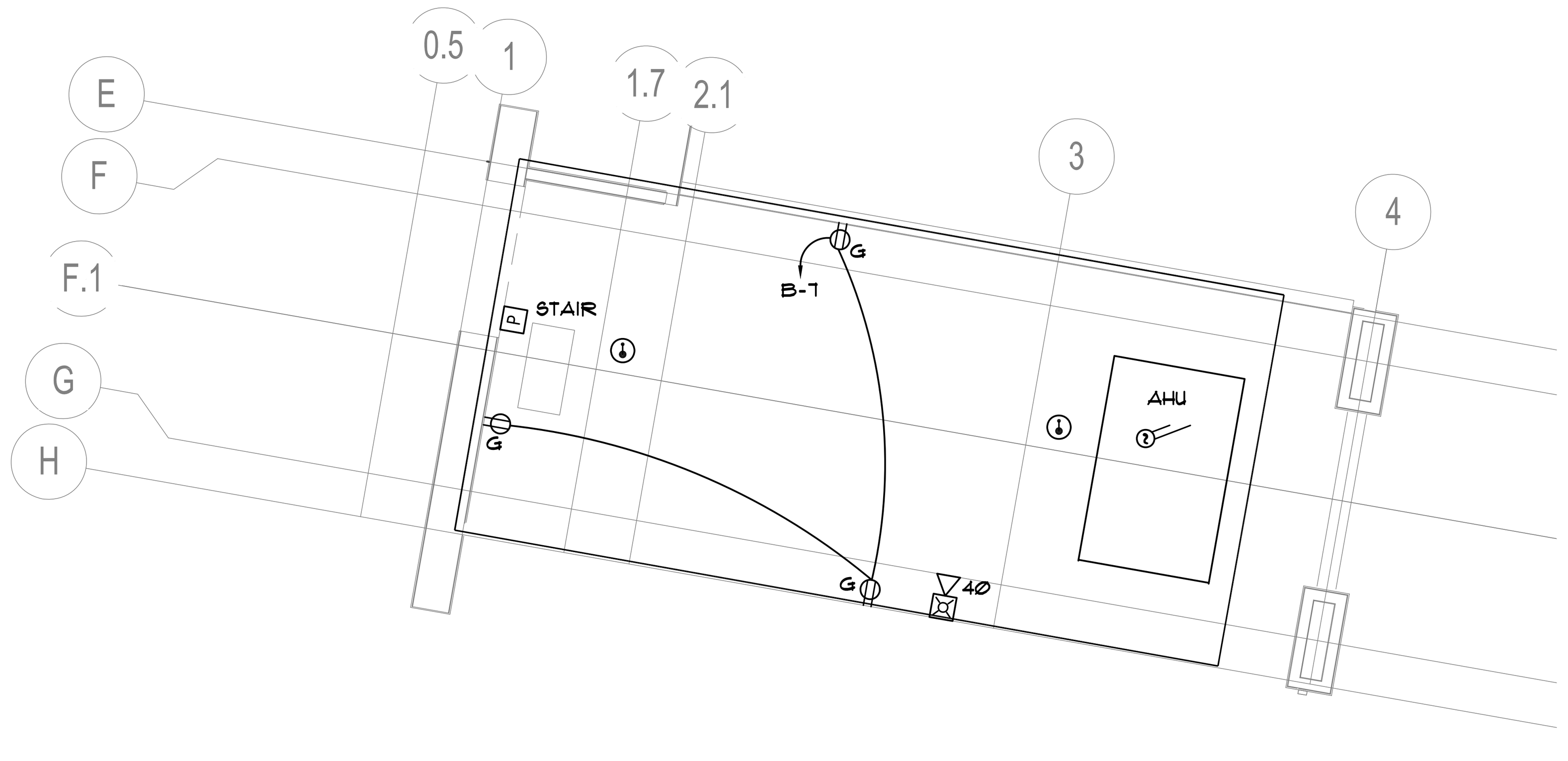
ELECTRICAL LIGHTING PLAN

E2.0

KEYNOTES:

1. FIRE ALARM CONTROL PANEL, IAW SPECIFICATIONS SECTION 26 60 00. SERVE FROM CKT. A-1.
2. C/D BACKBOARD, IAW DETAIL ON SHEET E1.0. PROVIDE 4-20/1 CIRCUITS FROM PANEL C AS SHOWN ON PANEL SCHEDULE (FOR TELEPHONE, SECURITY, CCTV AND CARD ACCESS - NIC).
3. CLOCK SYSTEM CONTROL PANEL, PER SPECIFICATION SECTION 26 27 26. SERVE FROM CKT. A-3 MOUNT AT 5'-0" AFF TO TOP.
4. WATER HEATER, 480 V., 3 PH., 18 KW WITH 30/3/NF DISCONNECT SWITCH. (TYP. OF 3). SEE PLUMBING SHEETS FOR LOCATION. SERVE FROM 30/3 BREAKER IN PANEL M2, PER PANEL SCHEDULE, SHEET E3.3.
5. EXHAUST FAN. 120 V., 100 WATTS MAX (TYP. OF 2). PROVIDE DISCONNECTING MEANS AND RELAY - CONTROLLED BY HVAC SYSTEM CONTROLS. COORDINATE WITH MECHANICAL CONTRACTOR.
6. RECESSED SWITCHBANK WITH 4 TOGGLE SWITCHES TO ENERGIZE THE SECURITY PASS-THRU DETECTOR AND THREE FOR THE EXTERIOR RECEPTACLES, ONE FOR THOSE ON THE NORTH SIDE, ONE FOR THOSE AT THE MAIN SOUTH ENTRY, AND ONE FOR THOSE NEAR THE BOOK DROP AND EMS. SERVE FROM CIRCUITS SHOWN.
7. RECESSED J-BOX FOR SECURITY PASS-THRU DETECTOR. SERVE FROM CKT. A-5, THRU A TOGGLE SWITCH AT THE CHECKOUT STATION. SEE KEYNOTE 6 ABOVE.
8. RECEPTACLE FOR REFRIGERATOR. 60" AFF. SERVE FROM CKT. A-14.
9. RECEPTACLE AT 72" AFF FOR MICROWAVE. COORDINATE EXACT LOCATION WITH OWNER'S REPRESENTATIVE. SERVE FROM CKT. A-16.
10. ELECTRIC DOOR OPERATOR J-BOX. INSTALL IAW MANUFACTURER'S INSTRUCTIONS. SERVE BOTH DOOR MOTORS FROM CKT. B-11.
11. RECESSED J-BOX AT CEILING FOR OVERHEAD PROJECTOR (BY OTHERS). SERVE FROM CKT. A-29.
12. RECESSED 8" x 8" x 3" DEEP J-BOX AT 48" AFF TO CENTER. CONNECT TO OVERHEAD PROJECTOR THROUGH 2-2" C. W/PULL LINES. ALSO PROVIDE, IN ADJACENT STANDARD J-BOX, TWO C/D OUTLETS SERVED FROM C/D BACKBOARD (¾" CONDUIT W/PULL LINE) FOR INTERFACE, BY OTHERS.
13. RECESSED J-BOX (IN CEILING) FOR MOTORIZED SCREEN. COORDINATE WITH OWNER. PROVIDE SWITCH TO OPERATE (AT 48" AFF). SERVE FROM CKT. A-31.
14. PROVIDE POWER TO SERVE A 24 V. TRANSFORMER (BY M.C.) TO OPERATE MOTION SENSOR LAVATORIES (TYPICAL OF 2), PER WIRING DIAGRAM ON SHEET E1.0. SERVE TRANSFORMER FOR RESTROOM 113 FROM, CKT. A-26. INSTALL TRANSFORMER ABOVE ACCESSIBLE CEILING IN STORAGE ROOM 115. SERVE TRANSFORMER FOR RESTROOMS 103, 104, 106A AND 106B FROM CKT. B-12. INSTALL TRANSFORMER ON THE EAST WALL (NEAR THE CEILING) IN JANITOR CLOSET 104A.
15. "HELP" BUTTON TO CAUSE BUZZER TO BUZZ WHEN THE CHECKOUT PERSON NEEDS HELP FROM OTHER STAFF. INSTALL BUZZER BUTTON UNDER COUNTER. SERVE FROM CKT. A-7. INSTALL BUZZER IN LOCATION SHOWN IN ROOM 111, AT 72" AFF.



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

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108	STOR.
109	OFFICE
110	CHECKOUT
111	STAFF WORK AREA
112	STAFF REST AREA
113	RR/SH
115	SUPPLY RM.
116	TEEN RM.
117	RR LOBBY
118	EMS
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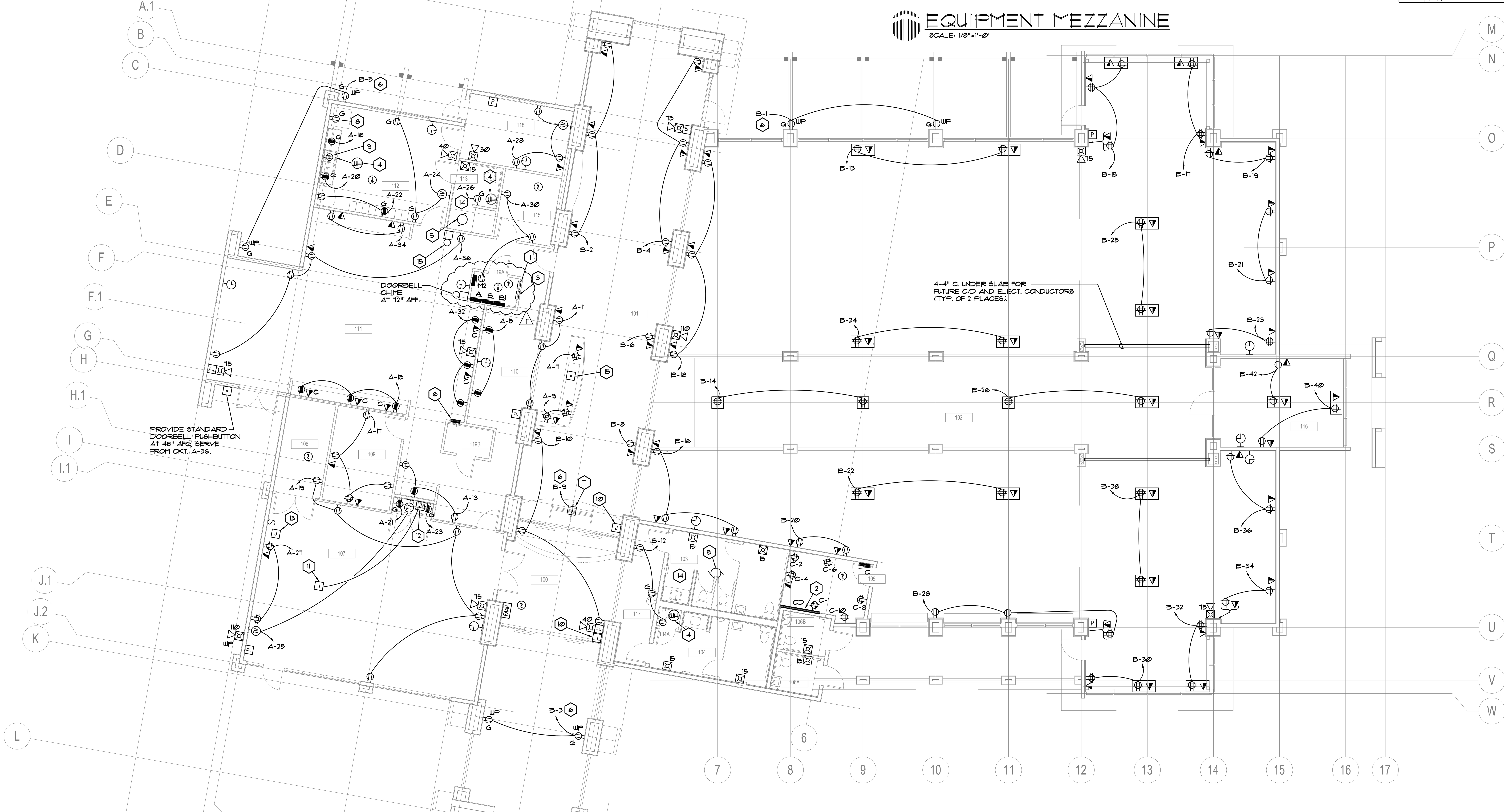

ELECTRICAL POWER PLAN
SCALE: 1/8"=1'-0"

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ELECTRICAL POWER PLAN

E3.0

PANEL SCHEDULE

PANEL **M2** — 480/277 V., 3 PH., 4 W — 200 AMP MAIN — 10,000 A.I.C. — 225 AMP FRAME

EQUIPMENT SERVED	CKT. BREAKER TRIP	POLE	WIRE	KVA/PHASE A	B	C	CKT NO.	CKT NO.	KVA/PHASE A	B	C	CKT. BREAKER TRIP	POLE	WIRE	EQUIPMENT SERVED
AHU (15 HP)	30	3	3#10	5.8			1	2	17.1			60	3	4#6	TRANSFORMER (45 KVA)
—	—	—	—		5.8		3	4		15.9		—	—	—	PANEL A
—	—	—	—			5.8	5	6			13.4	—	—	—	—
ENERGY RCVT. UNIT (11½ HP)	15	3	3#12	.8			7	8	2.8			20	1	2#12	LGTS. 108, 9, 11, 12, 13, 15, 18, 19A, B
—	—	—	—		.8		9	10		.8					LGTS. 103, 4, 5, 6A, 6B, 117
—	—	—	—			.8	11	12			1.2				LGTS. MTG RM. 107, MEZZ.
ENERGY RCVT. UNIT (11½ HP)	15	3	3#12	.8			13	14	2.8						LGTS. CIRC. 101 & STACKS
—	—	—	—		.8		15	16		2.3					LGTS. CIRC. 102 & STACKS
—	—	—	—			.8	17	18							SPARE
WATER HEATER (18 KW)	30	3	3#10	6.0			19	20							
—	—	—	—		6.0		21	22							
—	—	—	—			6.0	23	24							
WATER HEATER (18 KW)	30	3	3#10	6.0			25	26							
—	—	—	—		6.0		27	28							
—	—	—	—			6.0	29	30							
SPACE							31	32	6.0			30	3	3#10	WATER HEATER (18 KW)
							33	34		6.0		—	—	—	—
							35	36			6.0	—	—	—	—
							37	38				30	3	4#10	TVSS
							39	40				—	—	—	—
							41	42				—	—	—	—

	A	B	C
CONNECTED KVA	48.1	44.4	40.0

TOTAL CONNECTED LOAD: 132.5 KVA 160 AMPS
DEMAND LOAD: 96.3 KVA 116 AMPS

LOCATION: ELECT. ROOM 119A
TYPE: FLUSH, NEMA 1, BOTTOM FED

PANEL SCHEDULE

PANEL **A** — 208/120 V., 3 PH., 4 W — 125 AMP MAIN — 10,000 A.I.C. — 225 AMP FRAME

EQUIPMENT SERVED	CKT. BREAKER TRIP	POLE	WIRE	KVA/PHASE A	B	C	CKT NO.	CKT NO.	KVA/PHASE A	B	C	CKT. BREAKER TRIP	POLE	WIRE	EQUIPMENT SERVED
FCP ✳	20	1	2#12	.7			1	2	7.3			100	3	4#3	PANEL B
CLOCK SYSTEM ✳					.2		3	4		6.9		—	—	—	—
RCPTS., C/O 110						.4	5	6			6.3	—	—	—	—
				.4			7	8	3.4			60	3	4#6	PANEL B1
					.7		9	10		3.0		—	—	—	—
						.6	11	12			2.6	—	—	—	—
WORK AREA				.4			13	14	.7			20	1	2#12	RCPT., REFR. 112
111					.6		15	16		1.0					MW
OFFICE 109						.9	17	18			.2				COUNTER
MTG. RM. 107				.9			19	20	.2						
SVC. AREA 101					.2		21	22		.4					RCPTS.,
						.2	23	24			.4				
MTG. RM. TV 107				.4			25	26	.2						RCPT., SHOWER 113
					.7		27	28		.6					RCPTS., EMS 118
O/H PROJECTOR 107						.5	29	30			.6				STG. 115, 119A
MOTORIZED SCREEN 107				.1			31	32	.6						WORK 111
SPARE							33	34		.4					
							35	36			.7				
							37	38	1.8			60	2	3#6	PANEL C
PV SOLAR SYSTEM	40	2	3#8				39	40		1.2		—	—	—	—
							41	42				20	1		SPARE

✳PROVIDE LOCKABLE BREAKER

	A	B	C
CONNECTED KVA	17.1	15.9	13.4

TOTAL CONNECTED LOAD: 46.4 KVA 129 AMPS
DEMAND LOAD: 38.0 KVA 106 AMPS

LOCATION: ELECT. ROOM 119A
TYPE: FLUSH, NEMA 1, TOP FED

PANEL SCHEDULE

PANEL **B** — 208/120 V., 3 PH., 4 W — M.L.O. — 10,000 A.I.C. — 225 AMP FRAME

EQUIPMENT SERVED	CKT. BREAKER TRIP	POLE	WIRE	KVA/PHASE A	B	C	CKT NO.	CKT NO.	KVA/PHASE A	B	C	CKT. BREAKER TRIP	POLE	WIRE	EQUIPMENT SERVED
RCPTS., EXT. N	20	1	2#12	.4			1	2	.6			20	1	2#12	RCPTS., CIRCULATION 101
S					.4		3	4		.6					
W						.4	5	6			.2				
MEZZ.				.6			7	8	.2						
SECURITY DETECTOR ✳					.2		9	10		.6					100, 101
DOOR MOTORS ✳						.4	11	12			.6				VEST., JAN 117, 104A
RCPTS., COLLECTIONS 102				.7			13	14	.7						COLLECTIONS 102
					.1		15	16		.6					
						.7	17	18			.6				
				.7			19	20	.6						
					.7		21	22		.7					
						.7	23	24			.7				
				.7			25	26	.7						
SPARE							27	28		.7					
							29	30			.7				
							31	32	.7						
							33	34		.7					
							35	36			.7				
							37	38	.7						
							39	40		.6					TEEN RM. 116
							41	42			.6				

✳PROVIDE LOCKABLE BREAKER

	A	B	C
CONNECTED KVA	7.3	6.9	6.3

TOTAL CONNECTED LOAD: 20.5 KVA 57 AMPS
DEMAND LOAD: 16.4 KVA 46 AMPS

LOCATION: ELECT. ROOM 119A
TYPE: FLUSH, NEMA 1, TOP FED

SWITCHBANK ① CHECKOUT COUNTER

MARK	LOAD	TYPE CONTROL	CIRCUIT NO.
8a	FLUORESCENT - BEHIND COUNTER	DIMMING BALLAST	M2-14
8b	UNDERCOUNTER - BUILT INTO DESK	SWITCH	
8c	SCONCES - 101 & RECESSED CANS AT EXIT DOOR	DIMMING BALLAST	
✳8d	SCONCES - 101		
8e	SCONCES - 102, MAIN		M2-16
✳8f	SCONCES - 102, MAIN		
8g	SCONCES - 102, EAST		
✳8h	SCONCES - 102, EAST		
✳8i	SCONCES - TEEN RM. 116		
8j	FLUORESCENT - COMPUTER AREA SOUTH		
8k	FLUORESCENT - COMPUTER AREA NORTH		
8l	FLUORESCENT - SOUTH STACKS		
8m			
8n			
8o	FLUORESCENT - NORTH STACKS		M2-14
8p			
8q			
8r	BOOK DROP	PHOTOCELL	
8s	COMM. PLAQUE, SOUTH ENTRY	PHOTOCELL & TIMER	
8t	RECESSED IN CONCRETE, NORTH PORCH, SOUTH WALK	PHOTOCELL	M2-10
✳8u	PENDANT CYLINDERS, SOUTH ENTRY	PHOTO & TIMER	M2-14
8v	SOUTH PORCH AT PUBLIC TOILETS		M2-16
✳8w	SCONCES, MAIN ENTRY - 100	DIMMING BALLAST	M2-14

✳ NOTE: LIGHTING FIXTURES ON SWITCHES 8d, 8f, 8h, 8i, 8u AND 8w ARE TO BE ROUTED THROUGH A REMOTE BATTERY (LOCATED ON MECHANICAL MEZZANINE) TO PROVIDE 90 MINUTES OF EGRESS LIGHTING DURING THE FAILURE OF NORMAL POWER. BASIS OF DESIGN FOR BATTERY IS CHLORIDE SYNTHESIS ZONE INVERTER, SIZED AS FOLLOWS:

8d - 600 WATTS
8f - 300 WATTS
8h - 400 WATTS
8i - 300 WATTS
8u - 300 WATTS
8w - 300 WATTS

SWITCHBANK ② MTG. ROOM 107

MARK	LOAD	TYPE CONTROL	CIRCUIT NO.
8a	RECESSED CANS - FRONT	SWITCH	M2-12
8b	FLUORESCENT - FRONT HALF	DIMMING BALLAST	
8c	FLUORESCENT - BACK HALF	DIMMING BALLAST	

PANEL SCHEDULE

PANEL **B1** — 208/120 V., 3 PH., 4 W — M.L.O. — 10,000 A.I.C. — 150 AMP FRAME

EQUIPMENT SERVED	CKT. BREAKER TRIP	POLE	WIRE	KVA/PHASE A	B	C	CKT NO.	CKT NO.	KVA/PHASE A	B	C	CKT. BREAKER TRIP	POLE	WIRE	EQUIPMENT SERVED
VAV/FCU CONTROLS	20	1	2#12	.2			1	2	1.1			15	1	2#12	FCU-1
VAV-1	15				.5		3	4		1.1					FCU-2
2						.7	5	6			.5				FCU-3
3				.7			7	8				20			SPARE
4					.7		9	10							
5						.7	11	12							
6				.7			13	14							
7					.7		15	16							
9						.7	17	18							
11				.7			19	20							
SPARE	20	1					21	22							
							23	24							
							25	26							
							27	28							
							29	30							

	A	B	C
CONNECTED KVA	3.4	3.0	2.6

TOTAL CONNECTED LOAD: 9.0 KVA 25 AMPS
DEMAND LOAD: 9.0 KVA 25 AMPS

LOCATION: ELECT. ROOM 119A
TYPE: FLUSH, NEMA 1, TOP FED

PANEL SCHEDULE

PANEL **C** — 208/120 V., 1 PH., 3 W — M.L.O. — 10,000 A.I.C. — 100 AMP FRAME

EQUIPMENT SERVED	CKT. BREAKER TRIP	POLE	WIRE	KVA/PHASE A	B	C	CKT NO.	CKT NO.	KVA/PHASE A	B	C	CKT. BREAKER TRIP	POLE	WIRE	EQUIPMENT SERVED
RCPTS., C/D BOARD	20	1	2#12	.4			1	2	.4			20	1	2#12	RCPTS., IT ROOM 105
SECURITY (FUTURE)					.2		3	4		.4					
CCTV (FUTURE)				.2			5	6	.4						
CARD ACCESS (FUTURE)					.2		7	8		.4					
SPARE							9	10	.4						
							11	12							SPARE
							13	14							
							15	16							
							17	18							
							19	20							

	A	B	C
CONNECTED KVA	1.8	1.2	

TOTAL CONNECTED LOAD: 3.0 KVA 8 AMPS
DEMAND LOAD: 3.0 KVA 8 AMPS

LOCATION: IT ROOM 105
TYPE: FLUSH, NEMA 1, BOTTOM FED

RELAY PANEL

RELAY	CIRCUIT	VOLTAGE	DESCRIPTION	FUNCTION	SWITCHBANK & SWITCH	COMMENTS
1	M2-12	277	FLUOR. MTG. RM. FRONT HALF	DIMMING BALLAST	① 8b	MANUAL ON - PROG. OFF
2			BACK HALF		① 8c	
3	M2-14		FLUOR. BEHIND C/O COUNTER		② 8a	
4			SCONCES, CIRC. RECESSED CANS		② 8c, 8d	
5	M2-16		SCONCES, CIRC, E-W, EAST		② 8e, 8f	
6			COMPUTER AREA SOUTH		② 8g	
7			NORTH		② 8h	
8			SCONCES, TEEN RM. 116		② 8i	
9			FLUOR. SOUTH STACKS		② 8j	
10					② 8k	
11					② 8l	
12	M2-14		FLUOR. NORTH STACKS		② 8m	
13					② 8n	
14					② 8o	

NOTES:
SEE LIGHTING CONTROL SYSTEM DIAGRAM, SHEET E2.1.

LOCATION: ELECTRICAL ROOM 119A
TYPE: SURFACE

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ELECTRICAL PANEL SCHEDULES

E3.3