City of Margate
DEVELOPMENT REVIEW COMMITTEE
Application for Special Exception (new construction)

5790 Margate Blvd., Margate, FL 33063
954-972-6454

Submittal Date (official use): 06-01-15 A10:08 RCVD

Project Name	Cumberland Farms - Atlantic Boulevard & US 441
Address	5485 West Atlantic Boulevard, Margate, FL 33063
Acreage	1.60
Folio Number	4841 36 06 0010 / 484136060018 / 484231170013
Existing Use	Commercial - Walgreens Pharmacy
Legal Description	MARGATE REALTY NO 1 42-42 B & LAKEWOOD COMMERCIAL 120-27 B
	POR OF 42-42B & POR TRACT A OF 120-27B DESC AS:COMM SWLY COR OF

DRC # 06-15-03

Paid: $1,000.00

Describe proposal/request in detail, including non-residential square footage and/or number of dwelling units

- 4,996 SF Convenience Store with fuel pumps
-
-

Agent/Contact Name	Michael Troxell
Address	1000 Corporate Drive Suite 250, Fort Lauderdale, FL 33334
Phone Number	954-202-7000
Fax Number	954-202-7070
Email Address	mtroxell@thomaseg.com

Property Owner Name	LAKEWOOD RETAIL LLC
Address	2851 JOHN ST SUITE 1, MARKHAM ON CA L3R 5R7
Phone Number	561-578-8700
Fax Number	
Email Address	JWpreston@nadg.com

OWNER'S AFFIDAVIT: I certify that I am the owner of record for the above referenced property and give authorization to file this petition. I understand that I, or a representative on my behalf, must be present at the DRC meeting. I further understand that my petition will be subject to the regulations of Chapter 16½ of the Margate City Code.

Property Owner's Signature

Date 5/22/15

City of Margate
*** CUSTOMER RECEIPT ***

Batch ID: CONEILL 6/01/15 00 Receipt no: 122805

Type	SvcCd	Description	Amount
EQ	ECDV	MISCELLANEOUS	
	Qty	1.00	$1000.00

METRO GROUP DEVELOPMENT II,
LLC
500 ABBEY COURT
ALPHARETTA, GA 30004
RE:SPECIAL EXCEPTION
NEW CONSTRUCTION
CUMBERLAND FARMS
5485 W ATLANTIC BLVD
954-202-7000

Tender detail

CK Ref#:	1915	$1000.00
Total tendered:		$1000.00
Total payment:		$1000.00

Trans date: 6/01/15 Time: 14:19:27

HAVE A GREAT DAY!

STORMWATER MANAGEMENT REPORT

for

Cumberland Farms – Atlantic Blvd. & 441
Lakewood Plaza

Margate, FL

Prepared for:

Cumberland Farms, Inc.

Prepared by

THOMAS
ENGINEERING GROUP

1000 Corporate Drive, Suite 250
Ft. Lauderdale, FL 33334
954-202-7000

MICHAEL A. TROXELL
LICENSE
No 50572
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Michael A. Troxell, P.E.
Florida Professional Engineer License No. 50572

May 23, 2015

The purpose of this report is to provide drainage calculations and supporting documentation for the design of the storm water management system which shall serve the proposed Cumberland Farms convenience store in Lakewood Plaza in Margate, Florida.

Lakewood Plaza is located on the northeast corner of the intersection of S.R. 7 (US 441) and Atlantic Boulevard (S.R. 814) in Margate, Florida. This property is under the existing SFWMD permit #06-03360-P issued on October 26, 2001, and Broward County Surface Water Management License SWM2001-181-2, both of which have received modifications over the years. Per the original SFWMD permit, the following data applies:

Control Elevation:	7.00 NGVD (5.44 NAVD)
Finished Floors:	13.50 NGVD (11.94 NAVD)

Based on the current FEMA flood maps the site falls within the 0.2 percent Annual Chance Flood Hazard Zone that does not have a critical flood elevation.

The site is currently occupied by a 14,447 square foot Walgreens store. The project proposes to demolish the existing building and parking lot in order to construct the proposed 4,996 square foot Cumberland Farms convenience store with fueling pumps. The site currently has 458 linear feet of exfiltration trench connected to the drainage system for the entire Lakewood Plaza. The project proposes to utilize the existing exfiltration trench and drainage structures. Segments of the existing trench will be removed in order to install new structures, and to avoid conflict with the proposed gas lines leading from the underground tanks to the pumps. The loss of 92 linear feet of existing trench will be accounted for by the installation of 92 linear feet of new exfiltration trench. The total length of trench within the affected area will not change.

Stage-storage calculations for above ground storage volumes were performed for the existing and proposed conditions. Based on the Pre versus Post stage storage calculations the site will provide 0.51 acre-feet of additional storage at Elevation 12.0 NAVD. The significant gain in storage can be attributed to the reduction in the size of the on-site building. Water quality for the shopping plaza is already provided by the existing drainage system.

A pre vs. post comparison was performed for the affected area. The following table contains the on-site land use breakdown:

	Existing		Proposed	
Use:	**Area (acres)**	**Percent**	**Area (acres)**	**Percent**
Building	0.332	18.2	0.115	6.3
Pavement	1.32	72.4	1.361	74.7
Pervious	0.171	9.4	0.347	19.0
Total:	1.823	100	1.823	100

A comparison of the pre vs. post stage storage volumes can be found in the following calculations. No flood routings for the 25-year 3-Day and 100-year 3-Day storms have been provided since the proposed site exceeds the required storage requirements demonstrated in the pre versus post stage storage calculations.

Based on the results, we believe the proposed construction of the Cumberland Farms complies with all applicable design criteria and the existing permits and we recommend that the project be approved for construction.

THOMAS ENGINEERING GROUP
1000 Corporate Drive, Ft. Lauderdale, FL 33334
Tel: 954-202-7000
Fax: 954-202-7070

Date:	**5/21/2015**
Project:	**Cumberland Farms - Margate**
Project No:	**F140147**
Calculated By:	*MK*
Checked By:	*MAT*

PROPOSED DRAINAGE CALCULATIONS

Design Criteria:

Estimated Seasonal High Water Level: 5.50 NAVD

Proposed Acreages

Lake Areas (A_L):	0	sf	or	0.000	ac
Roof Areas (A_R):	4,996	sf	or	0.115	ac
Paved Areas (A_P):	59,274	sf	or	1.361	ac
Green Areas (A_G):	15,125	sf	or	0.347	ac
Total (A_T):	79,395	sf	or	1.823	ac

Date: 1/29/2015
Project: Cumberland Farms - Margate
Project No: F140147

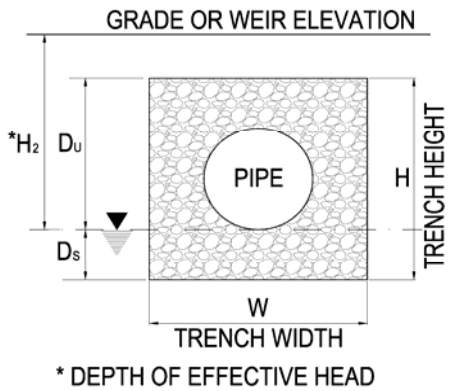
Exfiltration Trench Calculations

K-Value:

Test Hole #	(cfs/ft^2/ft hd)
1	1.30E-05
K_{AVG}	1.30E-05

Trench:

Water Table
Elev. 5.50



Elev. 9.85 (Grade or Weir)

Elev. 8.10 (Top of Trench)

Elev. 3.50 (Bottom of Trench)

K =	1.30E-05	cfs/ft^2 - ft head
H_2 =	4.35	ft
W =	5.00	ft
D_u =	2.60	ft
D_s =	2.00	ft
H = Du + Ds =	4.60	ft

1) Compute Provided Trench Volume:

L = 458 feet

V = L x (K(H2W + 2H2Du - Du^2 + 2H2Ds) + (1.39 x 10^-4)Wdu)

V = 1.16 ac-in or 0.10 ac-ft

THOMAS ENGINEERING GROUP

Date: 1/29/2015
Project: Cumberland Farms - Margate
Project No: F140147

EXISTING STAGE\STORAGE AREA CALCULATION

Prop. Grades	10.70	11.30	12.00						
	10.00	9.82	10.80						

Stage	Landscape Area	Pavement Area	Sidewalk/ Concrete						Building	Total Site
	Area 0.171	Area 1.085	Area 0.235	Area	Area 0.000	Area 0.000	Area 0.000	Area 0.000	Area 0.33	1.823
	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	0.000 (ac.-ft.)	
8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
10.50	0.03	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
11.00	0.11	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63
11.50	0.20	1.02	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.26
12.00	0.28	1.56	0.14	0.00	0.00	0.00	0.00	0.00	0.00	1.99

THOMAS ENGINEERING GROUP

Date: 5/21/2015
Project: Cumberland Farms - Margate
Project No: F140147

PROPOSED STAGE\STORAGE AREA CALCULATION

Prop. Grades: 10.50 / 9.50; 11.45 / 9.85; 12.00 / 10.00

Stage	Landscape Area Area 0.347 0.000 (ac.-ft.)	Pavement Area Area 1.225 0.000 (ac.-ft.)	Sidewalk/ Concrete Area 0.136 0.009 (ac.-ft.)	Area 0.000 (ac.-ft.)	Area 0.000 (ac.-ft.)	Area 0.005 (ac.-ft.)	Area 0.000 0.000 (ac.-ft.)	Area 0.000 0.000 (ac.-ft.)	Building Area 0.11 0.000 (ac.-ft.)	Total Site 1.823
8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
10.50	0.17	0.16	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.35
11.00	0.35	0.51	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.89
11.50	0.52	1.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	1.65
12.00	0.69	1.65	0.15	0.00	0.00	0.00	0.00	0.00	0.00	2.49

Date: 5/21/2015
Project: Cumberland Farms - Margate
Project No: F140147

PRE VS. POST STAGE\STORAGE VOLUME COMPARISON

Stage	Existing Stage-Storage (ac.-ft.)	Proposed Stage-Storage (ac.-ft.)	Volume Increase (ac.-ft.)
8.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00
9.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00
10.00	0.01	0.05	0.04
10.50	0.20	0.35	0.15
11.00	0.63	0.89	0.27
11.50	1.26	1.65	0.38
12.00	1.99	2.49	0.51

SITE DEVELOPMENT DRAWINGS FOR:

Cumberland FARMS

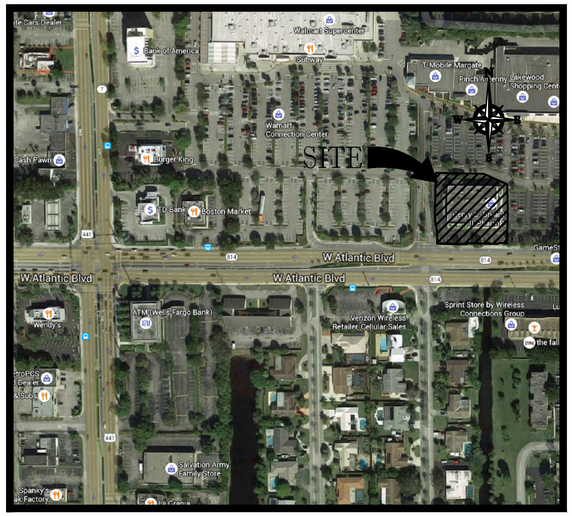
5485 WEST ATLANTIC BOULEVARD,

MARGATE, BROWARD COUNTY, FL

SECTION 36, TOWNSHIP 48S, RANGE 41E

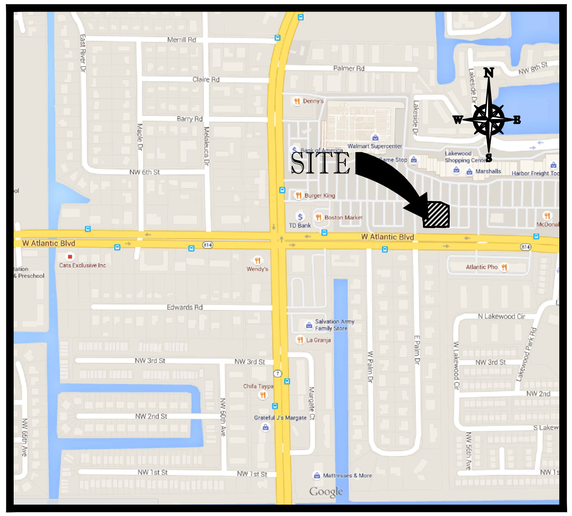
LOCATION MAP

1"=200'



VICINITY MAP

1"=500'



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PROJECT TEAM

CIVIL ENGINEER
THOMAS ENGINEERING GROUP
MICHAEL TROXELL, P.E.
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
PH 954.202.7000

SURVEYOR
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5381 NOB HILL ROAD
SUNRISE, FL 33351
PH 954.572.1777

ARCHITECT
ALLEVATO ARCHITECTS, INC.
JAMES OWENS
31 HAYWARD STREET
FRANKLIN, MA 02038
PH 508.528.0770

LANDSCAPE ARCHITECT
THOMAS ENGINEERING GROUP
MICHAEL GROSSWIRTH
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FORT LAUDERDALE, FL 33334
PH 954.202.7000

SITE LIGHTING
RED LEONARD ASSOCIATES
5630 BRIDGETOWN RD, STE 2
CINCINNATI, OH 45248
513.574.9500

PREPARED BY

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
RADICE III
1000 CORPORATE DRIVE, SUITE 250
FT. LAUDERDALE, FL. 33334
PH: (954) 202-7000
FX: (954) 202-7070
www.ThomasEngineeringGroup.com

LEGAL DESCRIPTION:

A PORTION OF TRACT 'A', 'LAKEWOOD COMMERCIAL', ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 120, PAGE 27, AND A PORTION OF THE SHOPPING CENTER, 'MARGATE REALTY No. 1', ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 42, PAGE 42, BOTH OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA.

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1000 CORPORATE DR. SUITE 250 FT. LAUDERDALE, FL 33334 P: 954-202-7000
4950 W. KENNEDY BLVD. SUITE 600 TAMPA, FL 33609 P: 813-379-4100
125 W INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503

THE INFORMATION, DESIGN, AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR USED FOR ANY PURPOSE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THOMAS ENGINEERING GROUP, LLC. ONLY APPROVED, SIGNED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION.

REVISIONS:

REV:	DATE:	COMMENT:	BY:

KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-COVER

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

COVER SHEET

SHEET NUMBER:

CFG01.0

Printed on: Wednesday, May 27, 2015, 11:34 AM by Maxwell Kaplan

GENERAL NOTES

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE CONFORMANCE TO THESE REQUIREMENTS BY ALL SUBCONTRACTORS.

1. THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:

- BOUNDARY & TOPOGRAPHIC SURVEY - PULICE LAND SURVEYORS, INC.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE.

2. ALL HANDICAPPED PARKING SPACES SHALL BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. SEC. 12101 ET SEQ. AND 42 U.S.C. SEC. 4151 ET SEQ.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THIS PROJECT IS TO BE CONSTRUCTED.

3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES. CONTRACTOR SHALL HAVE COPIES OF ALL PERMITS AND PPROVALS ON SITE AT ALL TIMES.

4. THE OWNER/CONTRACTOR SHALL BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

5. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE REQUIREMENTS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES HAVING JURISDICTION OVER THIS PROJECT.

6. THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF ANY SUCH DISCREPANCY BETWEEN THE GEOTECHNICAL REPORTS AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.

7. THE BOUNDARY & TOPOGRAPHIC SURVEY PREPARED BY PULICE LAND SURVEYORS, INC., SHALL BE CONSIDERED A PART OF THESE PLANS.

8. THESE PLANS ARE BASED ON INFORMATION PROVIDED TO THOMAS ENGINEERING GROUP BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND NOTIFY THOMAS ENGINEERING GROUP IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.

9. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO THE GIVING OF SUCH NOTIFICATION AND THE ENGINEER'S WRITTEN AUTHORIZATION OF SUCH ADDITIONAL WORK.

10. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL/BUILDING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY LOCATIONS.

11. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE SITE PLAN AND LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER, ARCHITECT AND SITE ENGINEER OF ANY DISCREPANCIES.

12. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GOVERNMENTAL AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT.

13. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT AND CONTIGUOUS STRUCTURES.

14. THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING THE APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, ETC. WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA.

15. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY SHALL RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE EXISTING CONDITIONS, AND IN CONFORMANCE WITH APPLICABLE CODES. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.

16. ALL CONCRETE SHALL HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.

17. THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS / MEANS FOR COMPLETION OF THE WORK DEPICTED NEITHER ON THESE PLANS, NOR FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

18. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY NOR HAS THE ENGINEER OF RECORD BEEN RETAINED FOR SUCH PURPOSES.

19. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME THOMAS ENGINEERING GROUP, AND ITS SUB-CONSULTANTS AS ADDITIONAL NAMED INSURERS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH THOMAS ENGINEERING GROUP WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCEMENT AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS THOMAS ENGINEERING GROUP AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS.

20. THOMAS ENGINEERING GROUP WILL REVIEW AND APPROVE OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THOMAS ENGINEERING GROUP'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT THOMAS ENGINEERING GROUP HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THOMAS ENGINEERING GROUP WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO ITS ATTENTION, IN WRITING, BY THE CONTRACTOR. THOMAS ENGINEERING GROUP WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

21. NEITHER THE PROFESSIONAL ACTIVITIES OF THOMAS ENGINEERING GROUP, NOR THE PRESENCE OF THOMAS ENGINEERING GROUP OR ITS EMPLOYEES AND SUB-CONSULTANTS AT A CONSTRUCTION / PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THOMAS ENGINEERING GROUP AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THOMAS ENGINEERING GROUP SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE.

22. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER FOR SUCH DEVIATIONS, CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS RELATED TO SAME.

23. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM SHOULD BE INCLUDED IN THE CONTRACTOR'S PRICE.

24. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CORRECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.

25. CONTRACTOR SHALL CONFIRM ADA ACCESSIBILITY PRIOR TO INSTALLING FINISHING COURSES OF SIDEWALKS AND PARKING AREAS.

26. UPON THE RECEIPT OF THE "NOTICE TO PROCEED", THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD AND ARRANGE A RECONSTRUCTION CONFERENCE TO INCLUDE ALL INVOLVED GOVERNMENTAL AGENCIES, UTILITY OWNERS, THE OWNER AND THE ENGINEER OF RECORD.

27. ALL UTILITY EASEMENTS TO BE SECURED PRIOR TO CONSTRUCTION (IF REQUIRED) PRIOR TO CERTIFICATE OF OCCUPANCY. (THESE EASEMENTS SHALL BE SKETCHED, DESCRIBED, AND RECORDED AT THE SOLE COST OF THE CONTRACTOR).

28. CONTRACTOR SHALL PROVIDE MINIMUM 48 HOUR NOTICE TO ENGINEER AND APPLICABLE AGENCIES FOR SCHEDULING INSPECTIONS.

29. PRIOR TO THEIR CONSTRUCTION OR INSTALLATION, SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER OF RECORD AND CITY OF MARGATE FOR THE FOLLOWING: DRAINAGE PIPES, CATCH BASINS, FIRE HYDRANTS, VALVES, AND ALL REQUIRED ACCESSORIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL OTHER AGENCY APPROVALS IF REQUIRED.

30. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.

31. MAINTENANCE OF TRAFFIC IN THE PUBLIC RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH M.U.T.C.D. AND APPROVED BY TOWN OF DAVIE AND BROWARD COUNTY WHERE APPLICABLE PRIOR TO IMPLEMENTATION.

32. ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAYS OR WALKWAYS SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.

33. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE THE BE LEFT OPEN DURING NIGHTTIME HOURS WITHOUT EXPRESS PERMISSION FROM THE CITY OF WESTON.

34. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR FOR ANY NECESSARY CONSTRUCTION, PAVEMENT MARKING AND SIGNAGE OR ANY PEDESTRIAN SIGNALIZATION AND/OR SIGNAL MODIFICATION TO ACCOMMODATE AN ALTERNATE SAFE WALK ROUTE. ALL RESTORED TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY'S TRAFFIC ENGINEERING STANDARDS.

SANITARY SEWER NOTES:

A. GENERAL:
1. DISTANCE AND LENGTHS SHOWN ON PLANS REFERENCE THE CENTER OF STRUCTURES.

B. MATERIALS:
1. ALL PVC SEWER PIPE AND FITTINGS SHALL BE NON-PRESSURE POLYVINYL CHLORIDE (PVC) PIPE CONFORMING TO ASTM D 3034, SDR 26, WITH PUSH-ON RUBBER GASKET JOINTS. (24" SHALL BE DR-25)
2. DUCTILE IRON PIPE (DIP) SHALL BE CEMENT OR POLYLINED INSIDE AND SHALL HAVE A COAL TAR EPOXY COATING. MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C151/A21.51-86 OR LATEST REVISION. MINIMUM WALL THICKNESS CLASS 52 (4"-12") & CLASS 51 (14"-20") (UNLESS OTHERWISE SPECIFIED).
3. ALL FITTINGS AND ACCESSORIES SHALL BE AS MANUFACTURED OR SUPPLIED BY THE PIPE MANUFACTURER OR APPROVED EQUAL.

C. INSTALLATION:
1. PIPE AND FITTINGS:
a. SEWER PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, AND THE UNI-BELL PLASTICS PIPE ASSOCIATION'S 'RECOMMENDED PRACTICE FOR THE INSTALLATION OF PVC SEWER PIPE".
b. D.I.P. SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-93 OR LATEST REVISION.
c. BEDDING AND INITIAL BACKFILL (12 INCHES) OVER SEWER MAINS AND SERVICES SHALL BE SAND WITH NO ROCK LARGER THAN 1" IN DIAMETER. PEA ROCK OR 3/4 " WASHED ROCK WILL BE USED IN WATER OR WHERE UNSUITABLE BEDDING EXISTS AT THE DISCRETION OF BROWARD COUNTY. ALL OTHER FILL SHALL NOT HAVE ROCK LARGER THAN 6" IN DIAMETER.

3. SERVICE:
a. MINIMUM SLOPE OF ALL SERVICE LINES SHALL BE AS INDICATED IN THE FLORIDA BUILDING CODE.
b. SERVICE LATERALS SHALL TERMINATE AT A DEPTH 30" BELOW FINISHED GRADE OR AS INDICATED ON PLUMBING PLAN.
c. EACH SERVICE CONNECTION SHALL BE PLUGGED WATER-TIGHT WITH AN APPROVED PLUG.
d. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x4" TREATED STAKE PAINTED RED, EXTENDING 18"(MIN) ABOVE GRADE.
e. CONTRACTOR SHALL ROUGH IN RISER TO 1 FOOT ABOVE FINISHED GRADE AND PLUG. AT PROJECT COMPLETION, CUT BACK TO FINISHED GRADE.
f. CONNECTION OF SERVICES TO BUILDING'S PLUMBING SHALL BE COORDINATED WITH THE CITY'S BUILDING AND ZONING DEPARTMENT, PLUMBING SECTION.

D. TESTING:
1. AFTER CONSTRUCTION OF THE SEWER SYSTEM, THE ENGINEER MAY REQUIRE A VISUAL INFILTRATION AND/OR EXFILTRATION TEST TO BE PERFORMED ON THE ENTIRE SYSTEM OR ANY PART THEREOF.
2. AN AIR TEST MAY BE SUBSTITUTED FOR THE WATER EXFILTRATION TEST, UPON APPROVAL OF THE ENGINEER.
3. MANHOLE LEAKAGE TEST SHALL NOT EXCEED FOUR GALLONS PER DAY PER UNIT. NO VISIBLE LEAKAGE ALLOWED.
4. SEWER PIPE LEAKAGE ALLOWABLE SHALL NOT EXCEED 150 GALLONS PER DAY PER INCH DIAMETER PER MILE IN ATWO HOUR TEST PERIOD FOR ANY SECTION TESTED. NO VISIBLE LEAKAGE SHALL BE ALLOWED AND ALL LINES SHALL BE T.V. INSPECTED.
5. SANITARY SEWER SHALL BE TELEVISED AND LAMPED AT DEVELOPER'S EXPENSE, PRIOR TO FINAL ACCEPTANCE. OWNER / CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES PRIOR TO CERTIFICATION TO ANY AGENCY.
6. VISIBLE INFILTRATION LEAKAGE INTO MANHOLES AND SEWER PIPE SHALL NOT BE PERMITTED.

WATER DISTRIBUTION AND/OR SANITARY SEWER FORCE MAIN SYSTEM

A. GENERAL:
1. NO CONNECTIONS TO THE EXISTING LINES SHALL BE MADE UNTIL PRESSURE TESTS, FOR THE WATER AND SEWER FORCE MAINS, AND BACTERIOLOGICAL TESTS HAVE BEEN PERFORMED AND THE SYSTEM IS ACCEPTABLE TO THE CITY OF MARGATE UTILITIES DEPARTMENT AND THE CITY OF MARGATE WATER & SEWER DEPARTMENT.
2. BEDDING AND INITIAL BACKFILL FOR MAINS SHALL BE SAND WITH NO ROCKS LARGER THAN 1" IN DIAMETER
3. USE "DETECTO' TAPE ON ALL PVC MAINS (18" ABOVE), AND USE "NON-DETECTO" TAPE ON ALL D.I.P. MAINS (18" ABOVE).
4. A THREE (3) FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN WATER MAINS AND OBSTRUCTIONS (I.E. CATCH BASINS, POWER POLES, ETC.). FIVE (5) FOOT OF SEPARATION IS REQUIRED BETWEEN WATER MAINS AND TREES.

B. MATERIALS:
1. DUCTILE IRON PIPE (DIP) SHALL BE CLASS 52 UP TO 12" SIZE & CLASS 51 FOR 14" AND LARGER WITH INTERIOR CEMENT LINING AND BITUMINOUS COATED OUTSIDE. WATER MAIN & EPOXY LINED & COATED FOR SEWER MAIN MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C151/A21.51-91 OR LATEST REVISION. THE PIPE SHALL WITHSTAND A WORKING PRESSURE OF 350 PSI. THE JOINTS SHALL BE BELL AND SPIGOT PUSH-ON TYPE UNLESS OTHERWISE NOTED ON THE PLANS.
2. ALL PVC MAINS SHALL BE SERIES 1120, CLASS 150 (DR 18) PRESSURE PIPE CONFORMING TO ANSI/AWWA C900-89 OR LATEST REVISION, AND SHALL HAVE PUSH-ON JOINTS, AND IRON PIPE O.D. (PVC ON-SITE ONLY)
3. FITTINGS FOR MAINS 4" AND LARGER SHALL BE DUCTILE IRON MECHANICAL JOINT CONFORMING TO ANSI/AWWA C110/A21.10-93 OR LATEST REVISION, COMPLETE WITH GLANDS, GASKETS, BOLTS AND NUTS. ALL FITTINGS SHALL BE CEMENT LINED AND SEAL COATED WITH THE SAME MATERIALS AS THE PIPE & USE MEGALUG SERIES 1100 RESTRAINED JOINT ADAPTERS.
4. VALVES SHALL BE GATE VALVES, IRON BODY, FULLY RESILIENT SEAT BRONZED MOUNTED NON-RISING STEM, RATED AT 200 PSI AND CONFORMING TO ANSI/AWWA C509-87 OR LATEST REVISION, AND SHALL HAVE MECHANICAL JOINTS.
a. GATE VALVES 4" AND LARGER SHALL BE MUELLER A-2360-20, RESILIENT SEATED GATE VALVES SHALL BE AMERICAN 500/2500 LINE OR CLOW F-6100, CONFORMING TO ANSI/AWWA C509-87.
b. TAPPING VALVES SHALL BE MUELLER H667 OR APPROVED EQUAL..
c. GATE VALVES 3" OR LESS SHALL BE NIBCO T-133 OR T-136 WITH MALLEABLE HAND WHEELS. NO SUBSTITUTIONS ALLOWED.
5. TAPPING SLEEVES SHALL BE MUELLER H615 OR APPROVED EQUAL PER BROWARD COUNTY.
6. VALVE BOXES SHALL BE TYLER/UNION 461-S OR APPROVED EQUAL PER BROWARD COUNTY.
7. RETAINER GLANDS SHALL CONFORM TO ANSI/AWWA C111/A21.11-90 OR LATEST REVISION. ALL GLANDS SHALL BE MANUFACTURED FROM DUCTILE IRON AS LISTED BY UNDERWRITERS LABORATORIES FOR 250 PSI MINIMUM WATER PRESSURE RATING. CLOW CORPORATION MODEL F-1058 OR STANDARD FIRE PROTECTION EQUIPMENT COMPANY OR APPROVED EQUAL.
8. DRESSER COUPLINGS SHALL BE REGULAR BLACK COUPLINGS WITH PLAIN GASKETS FOR GALVANIZED STEEL PIPE. THEY SHALL BE DRESSER STYLE 90. NO SUBSTITUTIONS ALLOWED.
9. FIRE HYDRANTS SHALL HAVE A 5 1/4 " MAIN VALVE OPENING, PUMPER NOZZLE THE SHALL BE 18" FROM FINISH GRADE. ALL HYDRANTS TO BE INSTALLED WITH ANCHORING TEE AND CONTROL VALVE. FIRE HYDRANT SHALL COMPLY WITH ANSI/AWWA C502-85 (OR LATEST REVISION). HYDRANTS SHALL BE KENNEDY GUARDIAN K-81-4 OR APPROVED EQUAL. BLUE REFLECTIVE PAVEMENT MARKER REQUIRED IN CENTER OF NEAREST DRIVING LANE FOR FIRE HYDRANTS.

C. SERVICE CONNECTION:
1. CORPORATION STOPS SHALL BE MANUFACTURED OF BRASS ALLOY IN ACCORDANCE WITH ASTM B-62 WITH THREADED ENDS, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.
2. CURB STOPS SHALL BE MUELLER OR APPROVED EQUAL.
3. METER STOPS SHALL BE 90 ° LOCK WING TYPE AND SHALL BE OF BRONZE CONSTRUCTION IN ACCORDANCE WITH ASTM B-62. METER STOPS SHALL BE CLOSED BOTTOM DESIGN AND RESILIENT "O" RING SEALED AGAINST EXTERNAL LEAKAGE AT THE TOP. STOPS SHALL BE EQUIPPED WITH A METER COUPLING NUT ON THE OUTLET SIDES, AS MANUFACTURED BY MUELLER OR APPROVED EQUAL.
4. SERVICE PIPING SHALL BE TYPE 'K' DRAWN COPPER.

D. INSTALLATION:
1. GENERAL:
CONNECTION OF ALL NEW SYSTEMS TO EXISTING MAINS SHALL BE DONE BY USING ONE OF THE FOLLOWING METHODS:
a. METHOD A PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A REDUCED SIZE TEMPORARY CONNECTION BETWEEN THE EXISTING MAIN AND THE NEW ONE.
b. METHOD B PER BROWARD COUNTY PUBLIC HEALTH UNIT STANDARDS, WHICH INVOLVES A DIRECT CONNECTION BETWEEN THE NEW AND EXISTING MAINS USING TWO GATE VALVES SEPARATED BY A SLEEVE WITH A VENT PIPE.
c. METHOD C APPROVED BY BROWARD COUNTY PUBLIC HEALTH UNIT, WHICH INVOLVES A TAP WITH ONE GATE VALVE REQUIRING DISINFECTION OF THE NEW SYSTEM PRIOR TO CONDUCTING THE PRESSURE TEST.

2.BEDDING:
BEDDING AND INITIAL BACKFILL (12 INCHES ABOVE PIPE) FOR All PIPE SHALL BE SAND WITH NO ROCK LARGER THAN 1" IN DIAMETER. PEA ROCK OR 3/4 " WASHED ROCK WILL BE USED IN WATER OR WHERE UNSUITABLE BEDDING EXISTS AT THE DISCRETION OF BROWARD COUNTY. ALL OTHER FILL SHALL NOT HAVE ROCK LARGER THAN 6" IN DIAMETER.

3. PVC PIPE:
a. PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE UNI-BELL PLASTIC PIPE ASSOCIATION'S GUIDE FOR INSTALLATION OF PVC PRESSURE PIPE FOR MUNICIPAL WATER DISTRIBUTION SYSTEMS.
b. PVC PIPE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER
c. DETECTOR TAPE SHALL BE INSTALLED THE FULL LENGTH OF ALL PVC MAINS APPROXIMATELY 18" ABOVE THE PIPE, COLOR SIDE UP.
d. ALL WATER MAIN PIPE, INCLUDING FITTINGS SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER, IN ACCORDANCE WITH F.A.C. 62-555.320(21) (B) (3).

4. DUCTILE PIPE:
a. D.I.P. SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C600-99 OR LATEST REVISION.
b. D.I.P. SHALL BE INSTALLED WITH A MINIMUM OF 30" COVER.
c. "NON-DETECTOR" TAPE SHALL BE INSTALLED THE FULL LENGTH OF ALL D.I.P. MAINS APPROXIMATELY 18" ABOVE THE MAIN COLOR SIDE UP

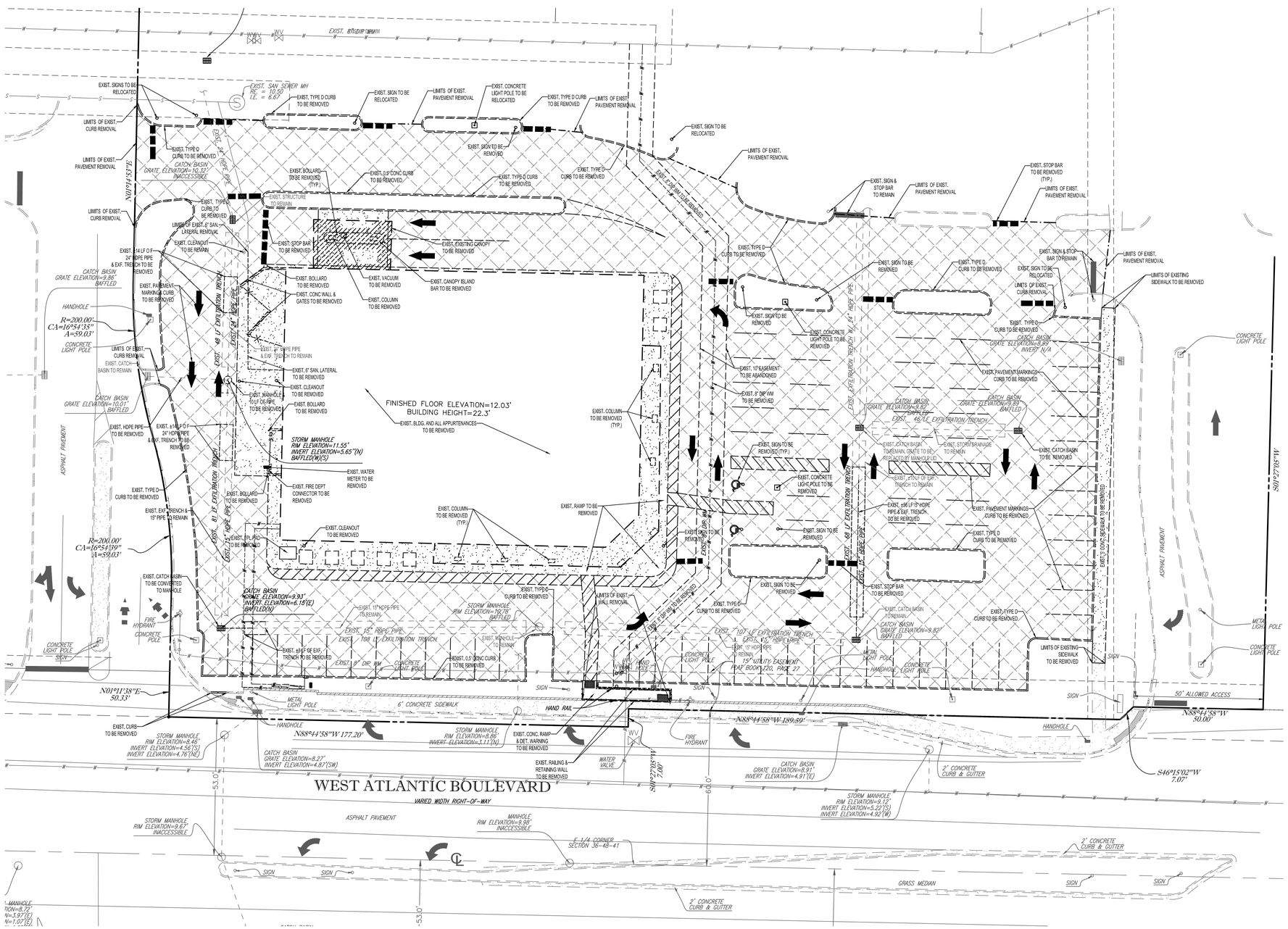
5. VALVES:
a. ALL VALVES SHALL BE INSTALLED WITH ADJUSTABLE CAST IRON VALVE BOXES WITH THE WORD "WATER" OR "SEWER" CAST IN THE COVER. A BRASS DISK INDICATING, SIZE, TYPE, KIND & OPERATOR INSTRUCTIONS SHALL BE INSTALLED ADJACENT TO VALVE BOX.
b. MAIN VALVES SHALL BE LOCATED ON AN EXTENSION OF THE RIGHT-OF-WAY LINE UNLESS DIMENSIONED OTHERWISE.
c. MAIN VALVES SHALL BE INSTALLED AWAY FROM PARKING AREAS. IF THIS IS UNAVOIDABLE, PROPER MEASURES SHALL BE TAKEN TO AVOID THE PARKING OF VEHICLES OVER THE VALVES. HYDRANT VALVES SHALL BE INSTALLED AS CLOSE TO THE MAIN AS POSSIBLE. VALVES LOCATED IN NON-PAVED AREAS OR IN PARKING STALLS REQUIRE A REFLECTIVE PAVEMENT MARKER ON THE CENTER OF THE NEAREST LANE OF ROAD PAVEMENT. WHITE REFLECTORS FOR THE WATER MAIN VALVES, GREEN REFLECTORS FOR FORCE MAIN VALVES. (I.THE DISTANCE FROM THE TOP OF THE VALVE ACTUATOR NUT TO FINAL GRADE SHALL BE A MINIMUM OF 12 INCHES AND A MAXIMUM OF 18 INCHES.

6.SERVICE:
a. COVER OVER SERVICE LINES SHALL BE 18" MINIMUM, 36" MAXIMUM BELOW FINISHED GRADE AND 36" UNDER PAVEMENT.
b. SERVICES UP TO 2" SHALL BE TYPE "K" COPPER PER BROWARD COUNTY.
c. METER STOPS SHALL HAVE 8" TO 10" COVER AS REQUIRED FOR PROPER METER/BOX INSTALLATION.
d. WATER SERVICES UNDER PAVEMENT SHALL BE ENCASED IN A SCHEDULE 80 PVC SLEEVE FOR THE FULL LENGTH OF THE PAVEMENT AND FOR 2' BEYOND THE EDGE. SLEEVE DIAMETER SHALL BE TWICE THE DIAMETER OF THE SERVICE PIPE.
e. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2"x4" TREATED STAKE. PAINTED BLUE EXTENDING 18" (MINIMUM) ABOVE GRADE UNLESS INDICATED OTHERWISE.

E. TESTING
1. BEFORE ANY PHYSICAL CONNECTIONS TO THE EXISTING WATER MAINS ARE MADE, THE COMPLETE WATER SYSTEM SHALL BE PRESSURE TESTED AND DISINFECTED.HYDROSTATIC TESTING OF NEW MAINS SHALL BE PERFORMED AT A MINIMUM STARTING PRESSURE OF 150 PSI FOR TWO HOURS IN ACCORDANCE WITH ANSI/AWWA C600-05 OR LATEST REVISION, THE PRESSURE TEST SHALL NOT VARY MORE THAN ±5 P.S.I. DURING THE TEST.
2. THE PRESSURE TEST SHALL BE WITNESSED BY A REPRESENTATIVE OF CITY OF MARGATE AND THE ENGINEER OF RECORD.
3. BEFORE ACCEPTANCE FOR OPERATION, THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE ANSI/AWWA C651-05; 150 PSI MINIMUM STARTING TEST PRESSURE, WITH BACTERIOLOGICAL SAMPLES APPROVED BY THE BROWARD COUNTY PUBLIC HEALTH DEPARTMENT.
4. SAMPLING POINTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN ON THE PLANS.IF NOT SPECIFIED, SAMPLING POINTS SHALL BE PROVIDED AT INTERVALS OF 1200' MAXIMUM FOR LINES GREATER THAN 1200' IN LENGTH.PROVIDE A MINIMUM OF TWO SAMPLING POINTS FOR ALL OTHER TEST SEGMENTS. SAMPLE POINTS MUST BE APPROVED BY BROWARD COUNTY PUBLIC HEALTH DEPARTMENT.
5. THE ALLOWABLE LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR AS DETERMINED BY THE FORMULA:

$$L = \frac{S\,D\,P^{0.5}}{148000}$$

IN WHICH:
L EQUALS THE ALLOWABLE LEAKAGE IN GALLONS PER



CONTRACTOR SHALL REFER TO LANDSCAPE PLANS FOR TREE REMOVAL/RELOCATION.

20 10 5 0 20
1"= 20'

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W E
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DEMOLITION NOTES:

1. THIS PLAN REFERENCES DOCUMENTS AND INFORMATION BY:
   PULICE LAND SURVEYORS, INC
   5381 NOB HILL ROAD
   SUNRISE, FLORIDA 33351
   DATED: 4/8/2015
2. THOMAS ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION.
3. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AS WELL AS ALL FEDERAL, STATE AND LOCAL REGULATIONS. ANY DISCREPANCIES OR DEVIATIONS SHALL BE IDENTIFIED BY THE CONTRACTOR TO THOMAS ENGINEERING GROUP, LLC IN WRITING FOR RESOLUTION PRIOR TO INITIATION OF SITE ACTIVITY.
4. PRIOR TO STARTING ANY DEMOLITION CONTRACTOR IS RESPONSIBLE FOR/TO:
   A. THE CONTRACTOR SHALL OBTAIN A SUNSHINE STATE ONE CALL LOCATION CERTIFICATION PRIOR TO ANY EXCAVATION OR DEMOLITION. THE NUMBER IS 1-800-432-4770.
   B. ENSURING COPIES OF ALL PERMITS AND APPROVALS MUST BE MAINTAINED ON SITE AND AVAILABLE FOR REVIEW.
   C. INSTALLING THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
   D. LOCATE/CAP ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE.
   E. PROTECTING AND MAINTAINING IN OPERATION, ALL ACTIVE SYSTEM THAT ARE NOT BEING REMOVED DURING ALL DEMOLITION ACTIVITIES.
   F. FAMILIARIZING THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION REQUIRED FOR THE PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
   G. COORDINATION WITH UTILITY COMPANIES REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS MAY BE REQUIRED TO MINIMIZE THE IMPACT ON THE AFFECTED PARTIES.
   H. A COMPLETE INSPECTION OF CONTAMINANTS BY A LICENSED ENVIRONMENTAL TESTING AGENCY, OF ALL BUILDINGS AND/OR STRUCTURES TO BE REMOVED. SAME SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL REGULATIONS. ANY/ALL CONTAMINANTS SHALL BE REMOVED AND DISPOSED OF BY A FEDERALLY LICENSED CONTRACTOR IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. ALL ENVIRONMENTAL WORK INCLUDING HAZARDOUS MATERIAL, SOILS, ASBESTOS, OR OTHER REFERENCED OR IMPLIED HEREIN IS THE SOLE RESPONSIBILITY OF THE OWNER'S ENVIRONMENTAL CONSULTANT. THE FIRM OR ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE.
5. SAFETY OR SUPERVISION. CONTRACTOR IS TO PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, FOLLOWING ALL THE OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY. THE CONTRACTOR SHALL PROVIDE ALL THE "MEANS AND METHODS" NECESSARY.
6. TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE DEMOLITION CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS OF DAMAGE TO ALL ITEMS THAT ARE TO REMAIN AS A RESULT OF HIS ACTIVITIES. ALL REPAIRS SHALL USE NEW MATERIAL. THE REPAIRS SHALL RESTORE THE ITEM TO THE PRE-DEMOLITION CONDITION.
7. IN THE ABSENCE OF SPECIFICATIONS, THE CONTRACTOR SHALL PERFORM EARTH MOVEMENT ACTIVITIES, DEMOLITION AND REMOVAL OF ALL FOUNDATION WALLS, FOOTINGS, AND OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE IN ACCORDANCE WITH DIRECTION BY OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.
8. EXPLOSIVES SHALL NOT BE USED WITHOUT PRIOR WRITTEN CONSENT OF BOTH THE OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES. ALL THE REQUIRED PERMITS AND EXPLOSIVE CONTROL MEASURES THAT ARE REQUIRED BY THE FEDERAL, STATE, AND LOCAL GOVERNMENTS SHALL BE IN PLACE PRIOR TO STARTING AN EXPLOSIVE PROGRAM. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES.
9. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH: THE "MANUAL ON UNIFORM TRAFFIC CONTROL," AS WELL AS FEDERAL, STATE, AND LOCAL REGULATIONS WHEN DEMOLITION RELATED ACTIVITIES IMPACT ROADWAYS OR ROADWAY RIGHTS - OF - WAY.
10. CONDUCT DEMOLITION ACTIVITIES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND OTHER ADJACENT FACILITIES. STREET CLOSURE PERMITS MUST BE RECEIVED FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY.
11. DEMOLITION ACTIVITIES AND EQUIPMENT SHALL NOT USE AREAS OUTSIDE THE DEFINED PROPERTY LINE WITHOUT WRITTEN PERMISSION OF THE OWNER, AND/OR APPROPRIATE GOVERNMENT AGENCY.
12. USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS. AFTER THE DEMOLITION IS COMPLETE, ADJACENT STRUCTURES AND IMPROVEMENTS SHALL BE CLEANED OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION.
13. CONTRACTOR IS RESPONSIBLE TO SAFEGUARD SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF UNAUTHORIZED PERSONS AT ANY TIME.
14. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING ITEMS/CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL METHODS AND MEANS ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE.
15. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION WASTES AND DEBRIS (SOLID WASTE) SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL CITY, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES.

HATCH LEGEND

EXISTING CONCRETE & SIDEWALK TO BE REMOVED

EXISTING CONCRETE & SIDEWALK TO BE REMOVED

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4950 W. KENNEDY BLVD. SUITE 600 TAMPA, FL 33609 P: 813-370-4100
125 W INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-DEMOLITION PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

CFG03.0

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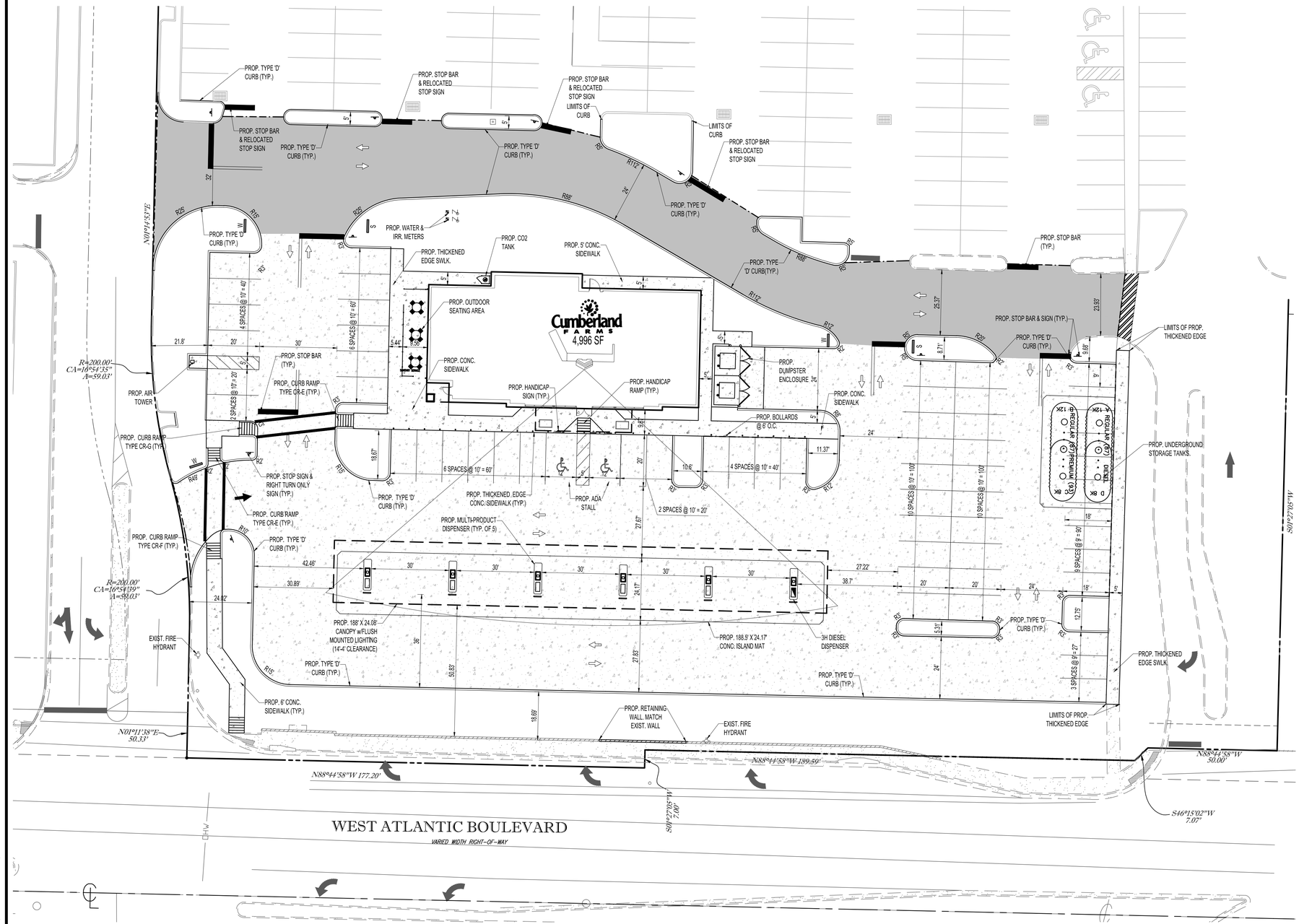

20 10 5 0 20
1"= 20'

N W E S

SITE DATA

OWNER: LAKEWOOD RETAIL LLC
2851 JOHN STREET SUITE 1
MARKHAM CANADA, ON L3R 5R7

TAX MAP ID#: 4841-36-06-0010
4841-36-06-0018
4842-31-17-0013
4842-31-17-0014

TOTAL AREA: 604,046 SF 13.87 AC

FEMA FLOOD ZONE: ZONE X PER FLOOD PANEL 1200470355H (EFFECTIVE 8/18/2014)

LAND USE INFORMATION:
CURRENT USE: COMMERCIAL-WALGREENS
PROPOSED USE: CONVENIENCE STORE WITH FUEL PUMPS
FUTURE LAND USE DESIGNATION: COMMERCIAL
ZONING DESIGNATION: TOC-C TRANSIENT ORIENTED CORRIDOR DISTRICT

TYPE OF CONSTRUCTION:
AFFECTED SITE AREA: 79,395. S.F 1.82 AC.
FLOOR AREA (S.F.): 4,996. S.F. 0.11 AC.

DIMENSION REGULATIONS:	REQUIRED	PROPOSED
AFFECTED AREA:		
FRONT SETBACK - SOUTH (FEET):	25'	131.9'
MAX. BLDG COVERAGE (PERCENT):	40%	6.29%
MIN. LANDSCAPE AREA (PERCENT):	15%	19.0%
MAX. HEIGHT (FEET):	66'	30'-4"

AFFECTED SITE AREA:

	EXISTING			PROPOSED			CHANGE	
IMPERVIOUS:	S.F.	ACRES	%	S.F.	ACRES	%	S.F.	ACRES
BUILDING	14,447	0.33	18.2%	4,996	0.11	6.3%	(-)9,451	(-)0.22
PAVEMENT	47,264	1.09	59.5%	53,341	1.22	67.2%	(+)6,077	(+)0.14
SIDEWALK/CURB	10,247	0.24	12.9%	5,933	0.13	7.5%	(-)4,314	(-)0.10
TOTAL	71,958	1.65	90.6%	64,270	1.47	81.0%	(-)7,688	(-)0.18
PERVIOUS:	7,437	0.17	0.09%	15,125	0.35	19.0%	(+)7,688	(+)0.18
TOTAL	79,395	1.82	100.0%	79,395	1.82	100.0%	0	0

PARKING DATA

REQUIRED:

USE	AREA	RATIO	AMOUNT
CONVENIENCE STORE	4,996 S.F.	1 SPACE/ 300 S.F.	17 SPACES

PROVIDED:

TYPE	AMOUNT
STANDARD SPACES (MIN. 9' X 18')	57
ACCESSIBLE SPACES (MIN. 12' X 18')	2
TOTAL SPACES	59

LOADING ZONE:
LESS THAN 10,000 S.F. - NO LOADING SPACE REQUIRED

LANDSCAPE BUFFERS:

	REQUIRED	PROVIDED
FRONT - SOUTH:	10'	18'
SIDE CORNER - WEST:	5'	N/A
SIDE CORNER - EAST:	5'	N/A
REAR - NORTH:	5'	N/A

HATCH LEGEND / KEY

PROPOSED CONCRETE PAVEMENT

EXISTING CONCRETE SIDEWALK TO REMAIN

PROPOSED ASPHALT PAVEMENT

"SEE YOU SOON" DIRECTIONAL SIGN (TO BE PERMITTED SEPARATELY) (TYP.)

"WELCOME" DIRECTIONAL SIGN (TO BE PERMITTED SEPARATELY) (TYP.)

DIRECTIONAL FLOW ARROW

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REV:	DATE:	COMMENT:	BY:

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-SITE PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

CFG04.0

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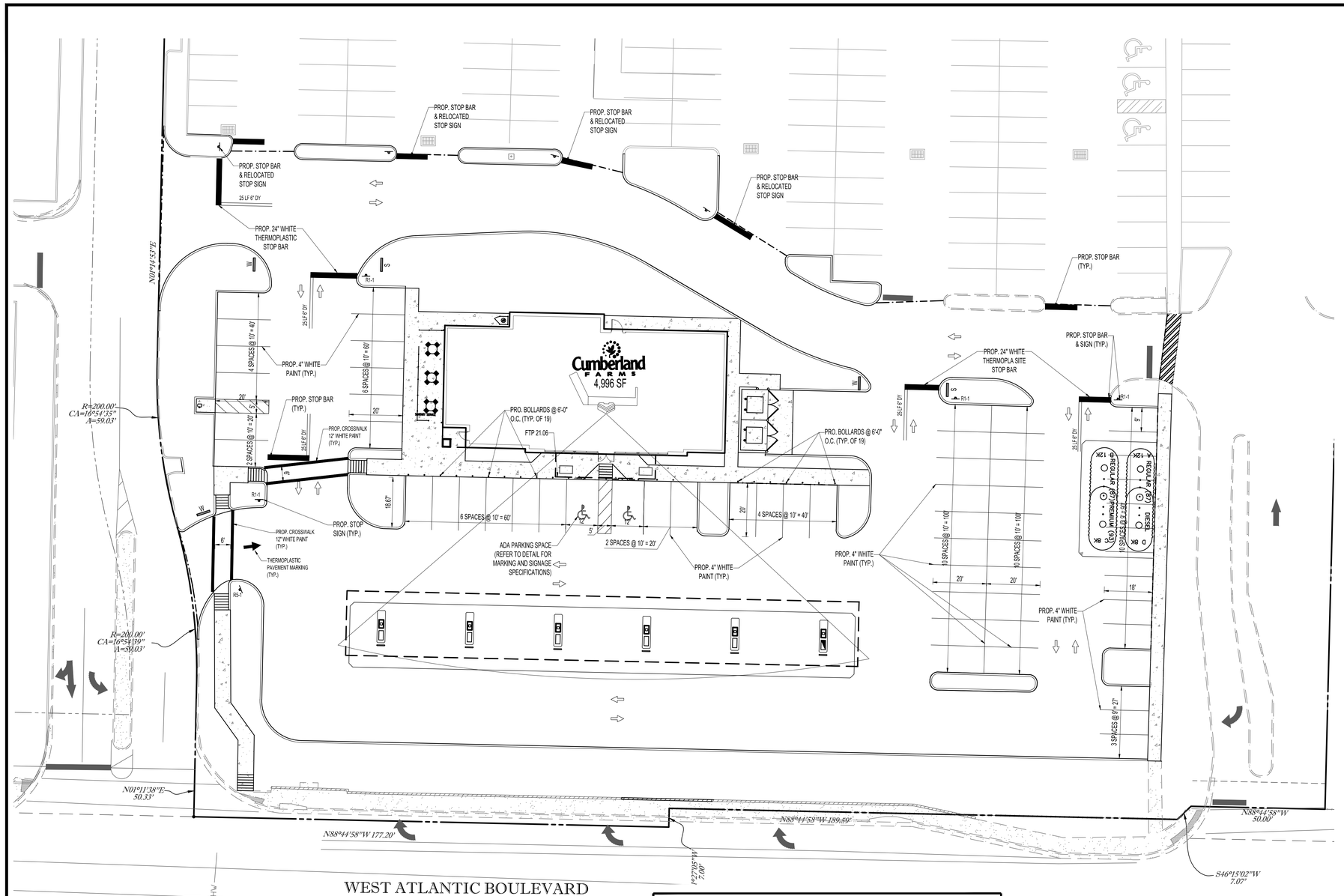
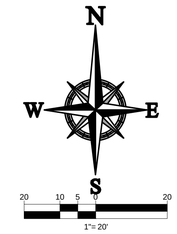
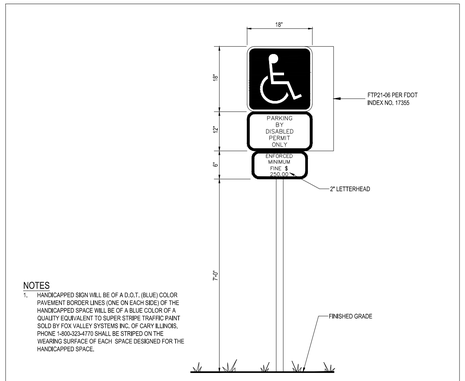




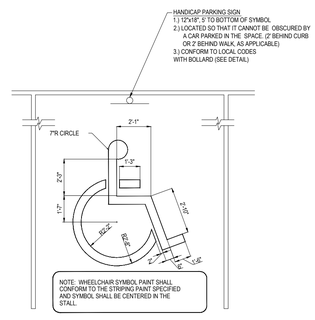


NOTES

1. HANDICAPPED SIGN WILL BE OF A D.O.T. (BLUE) COLOR. PAVEMENT BORDER LINES (ONE ON EACH SIDE) OF THE HANDICAPPED SPACE WILL BE OF A BLUE COLOR OF A QUALITY EQUIVALENT TO SUPER STRIPE TRAFFIC PAINT SOLD BY FOX VALLEY SYSTEMS INC. OF CARY ILLINOIS, PHONE 1-800-323-4770. SHALL BE STRIPED ON THE WEARING SURFACE OF EACH SPACE DESIGNED FOR THE HANDICAPPED SPACE.

5 ACCESSIBLE PARKING SIGN

SCALE: NONE

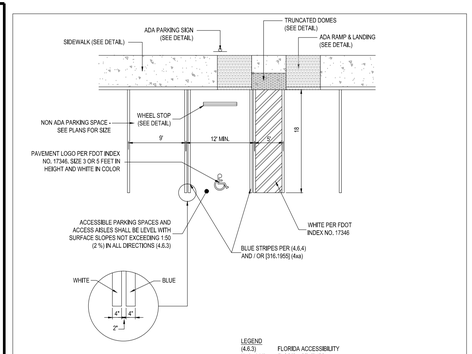


NOTE:

ALL PAVEMENT STRIPING AND MARKINGS SHALL CONSIST OF CHLORINATED RUBBER PAINT APPLIED TO A DRY SURFACE WHEN THE TEMPERATURE IS GREATER THAN 40°F. PAINT SHALL BE APPLIED AT A MINIMUM OF 0.015" (15 MIL) FILM THICKNESS

ADA ACCESIBLE PARKING STALL PAINTING DETAIL

N.T.S.



4 ACCESSIBLE PARKING SPACE - ADA COMPLIANT

SCALE: NONE

S "SEE YOU SOON" DIRECTIONAL SIGN (BY SEPARATE PERMIT)

W "WELCOME" DIRECTIONAL SIGN (BY SEPERATE PERMIT)

PAINTED DIRECTION ARROW

TRAFFIC FLOW ARROW (FOR REF. ONLY)

LEGEND

R1-1	STOP SIGN (30" x 30")
R3-5R	RIGHT TURN ONLY
R5-1	DO NOT ENTER
R6-1	ONE WAY
FTP 21-06	ACCESSIBLE PARKING
*	THERMOPLASTIC

NOTE:

1) ALL STRIPING AND SIGNAGE SHALL MEET THE M.U.T.C.D. LATEST EDITION.

2) ALL PAVEMENT MARKINGS AND SIGNING DAMAGED DURING CONSTRUCTION, SHALL BE RESTORED.

THOMAS ENGINEERING GROUP

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PROJECT No.:	F140147
DRAWN BY:	EM
CHECKED BY:	MGD
CAD I.D.:	F140147-PMS

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP

RADICE III
1000 CORPORATE DRIVE, SUITE 250
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MICHAEL A. TROXELL

PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

PAVEMENT MARKING & SIGNAGE PLAN

SHEET NUMBER:

CFG04.1

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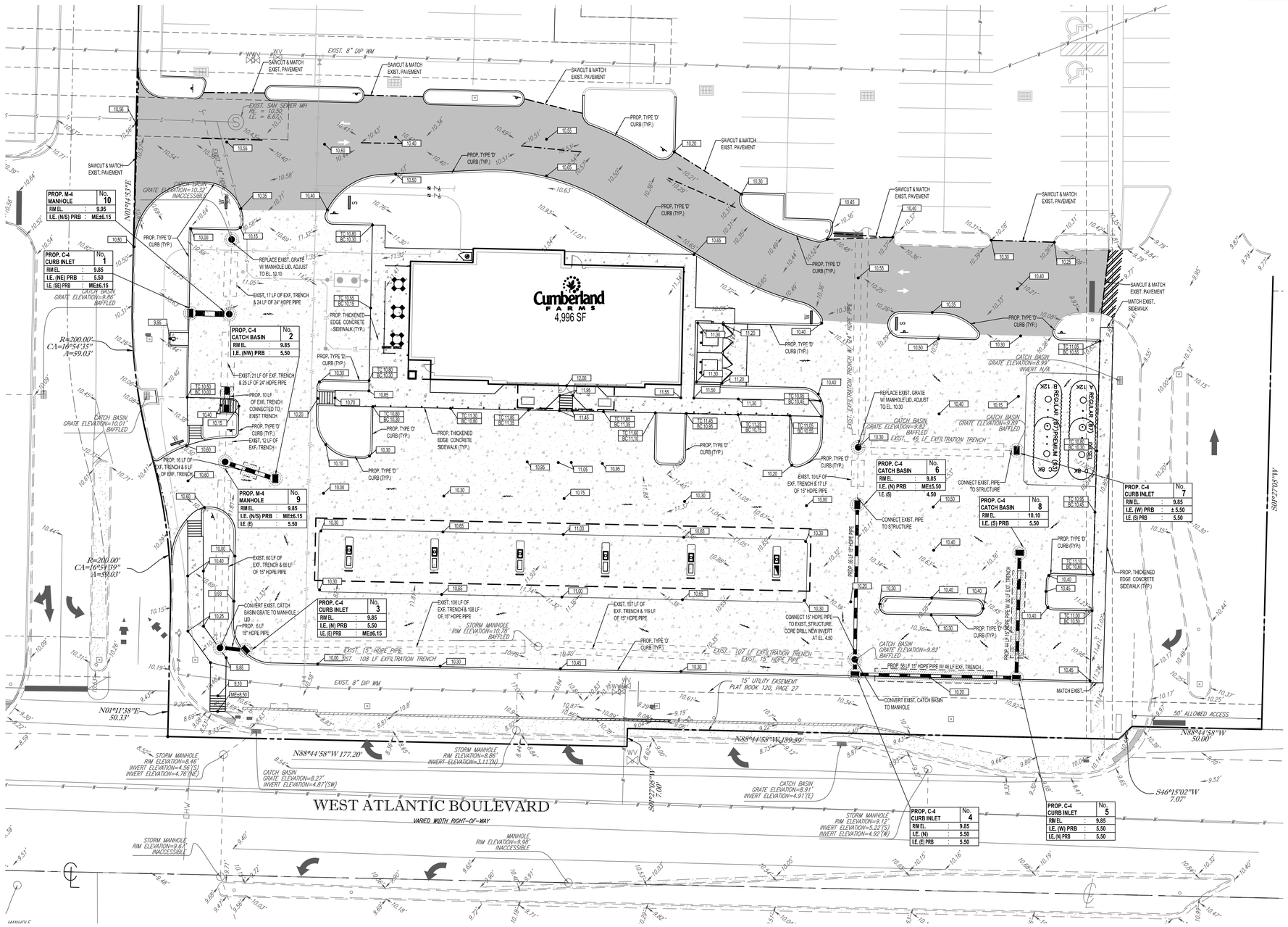
DATUM NOTE:
ALL ELEVATIONS SHOW HEREON ARE IN FEET AND ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD). ADD 1.56 TO CONVERT TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD).



CONSTRUCTION NOTES:

1. CONTRACTOR TO SAW-CUT AT ALL LOCATIONS OF REMOVAL OF EXISTING CONC. SIDEWALK, CONC. CURB AND ASPHALT UNLESS OTHERWISE NOTED. ALL BASE AND SUBASE MATERIAL SHALL BE REMOVED WITHIN THE PROPOSED LANDSCAPED AREA.
2. CONTRACTOR TO MATCH EXIST. GRADES AND TO CONSTRUCT A SMOOTH TRANSITION FROM EXISTING FACILITIES TO PROPOSED.
3. CONTRACTOR TO REMOVE ALL CONSTRUCTION DEBRIS FROM CONSTRUCTION SITE AND DISPOSE PER LOCAL ORDINANCES.
4. CONTRACTOR TO ENSURE ALL CONSTRUCTION IS IN ACCORDANCE WITH CITY DESIGN STANDARDS.
5. CONTRACTOR TO SOD ALL DISTURBED AREAS, SODDING INCLUDES MAINTAINING SLOPE AND SOD UNTIL COMPLETION AND ACCEPTANCE OF THE TOTAL PROJECT OR GROWTH IS ESTABLISHED WHICHEVER COMES LAST.
6. ALL EXISTING TRAFFIC SIGNS DISTURBED DURING CONSTRUCTION SHALL BE REINSTALLED WHERE APPLICABLE BY THE CONTRACTOR.
7. THESE PLANS REFLECT CONDITIONS KNOWN DURING PLAN DEVELOPMENT. IN THE EVENT THAT ACTUAL PHYSICAL CONDITIONS PREVENT THE APPLICATION OF THESE STANDARDS OR THE PROGRESSION OF THE WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED AREA.
8. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, STORM DRAINS, UTILITIES, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES DUE TO HIS/HER CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
9. NOTIFY SUNSHINE STATE ONE CALL (1-800-432-4770) PRIOR TO CONSTRUCTION.
10. PROJECT BASED ON DESIGN SURVEY PREPARED BY OTHERS. DURATION OF CONSTRUCTION IN ACCORDANCE WITH FDOT STANDARD INDEX NO. 600.
11. THE CONTRACTOR SHALL NOT ENCROACH ONTO PRIVATE PROPERTY WITHOUT EASEMENTS NECESSARY FOR COMPLETION OF THE WORK.
12. THE EXISTING UNDERGROUND UTILITIES SHOWN ARE PER ABOVE GROUND SURVEY DATA AND UTILITY AS-BUILT DATA. THIS INFORMATION DOES NOT WARRANT EXACT SIZE AND LOCATION OF THE UTILITIES. ALSO, THERE MAY BE ADDITIONAL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION THAT MAY BE AFFECTED. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROTECTING EXISTING UTILITIES DURING THE COURSE OF CONSTRUCTION.
13. PLEASE SEE MEP PLANS FOR CONTINUATION OF ROOF LEADERS.
14. 2.0% MAXIMUM SLOPE ON HANDICAP SPACES AND ADA ACCESS WAYS.
15. ALL SIDEWALKS SHOULD HAVE A MAXIMUM CROSS SLOPE OF 2.0%
16. PRB = POLLUTANT RETARDANT BAFFLE (SEE STANDARD DETAIL SHEET C-10).
17. ALL GRADE SHOTS ARE TO BE EDGE OF PAVEMENT (EOP) UNLESS OTHERWISE NOTED.
18. ALL ELEVATIONS ARE BASED ON REFERENCE DATUM NAVD 1988. ADD 1.56 TO CONVERT TO NGVD 1929.
19. CONTRACTOR TO CLEAN THE EXISTING STORM SYSTEM AND COORDINATE THE INSPECTION WITH CITY OF MARGATE AND THOMAS ENGINEERING GROUP
20. CITY OF PALM BAY SHALL BE NOTIFIED SEVEN (7) WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
21. ALL DRY DETENTION AREAS TO BE SOD.

HATCH LEGEND

PROPOSED ASPHALT PAVEMENT

EXISTING CONCRETE

PROPOSED CONCRETE

PAVING, GRADING & DRAINAGE LEGEND

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
W	UNDERGROUND WATER LINE	W
	UNDERGROUND ELECTRIC LINE	E
	UNDERGROUND TELEPHONE LINE	T
	STORM SEWER	
S	SANITARY SEWER MAIN	
OH	OVERHEAD WIRE	
t ot	OVERHEAD TRAFFIC WIRE	
	SANITARY SEWER LATERAL	SL SL
(S)	SANITARY MANHOLE	
(D)	STORM MANHOLE	
	CATCH BASIN	
	WATER METER	
○	CLEAN OUT	
	GRADE SPOT SHOT (BOTTOM ELEVATION IF AT CURB)	XXX
XXX	TOP OF CURB BOTTOM OF CURB	TC XXX BC XXX

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-PGD PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

GRADING & DRAINAGE PLAN

SHEET NUMBER:

CFG05.0

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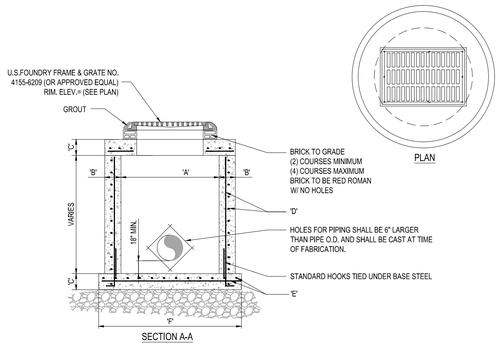
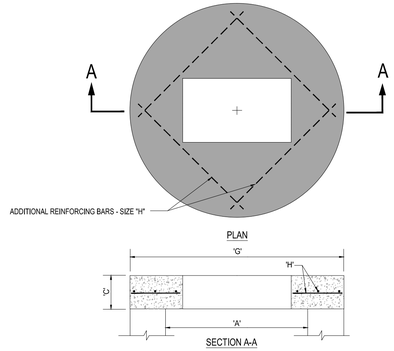


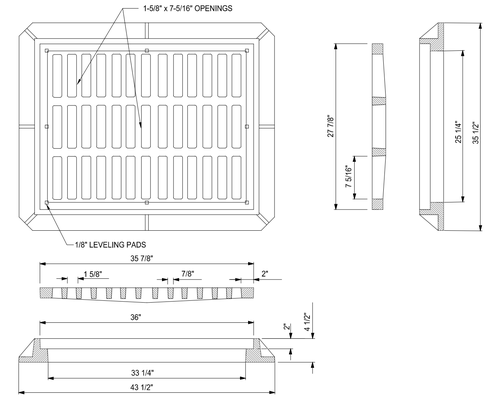
TYPE	"A"	"B"	"C"	"D"	"E"	"F"
C-4	4'-0" Ø	8"	8"	# 4 @ 12" C.C.E.W.	# 4 @ 12" C.C.E.W.	6'-4" Ø
C-5	5'-0" Ø	8"	8"	# 5 @ 12" C.C.E.W.	# 5 @ 12" C.C.E.W.	7'-4" Ø
C-6	6'-0" Ø	8"	8"	# 5 @ 12" C.C.E.W.	# 5 @ 6" C.C.E.W.	8'-4" Ø
C-7	7'-0" Ø	8"	8"	# 5 @ 12" C.C.E.W.	# 5 @ 6" C.C.E.W.	9'-4" Ø
C-8	8'-0" Ø	10"	10"	2- W.W.M. w/ # 4 @ 12" C.C. VERT	# 5 @ 6" C.C.E.W.	10'-8" Ø

1 PRECAST CIRCULAR CATCH BASIN
SCALE: NONE



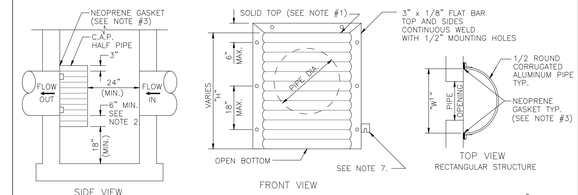
TYPE	"A"	"C"	"G"	"H"
C-4	4'-0" Ø	8"	5'-4" Ø	# 4 @ 6" C.C.E.W.
C-5	5'-0" Ø	8"	6'-4" Ø	# 5 @ 8" C.C.E.W.
C-6	6'-0" Ø	8"	7'-4" Ø	# 5 @ 6" C.C.E.W.
C-7	7'-0" Ø	8"	8'-4" Ø	# 5 @ 6" C.C.E.W.
C-8	8'-0" Ø	10"	9'-8" Ø	# 5 @ 6" C.C.E.W.

2 PRECAST CONCRETE-TOP SLAB
SCALE: NONE



NOTE:
1. GRATE TO BE TYPE U.S.F. No. 4155-6209

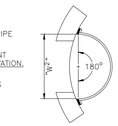
3 FRAME AND GRATE DETAIL
SCALE: NONE



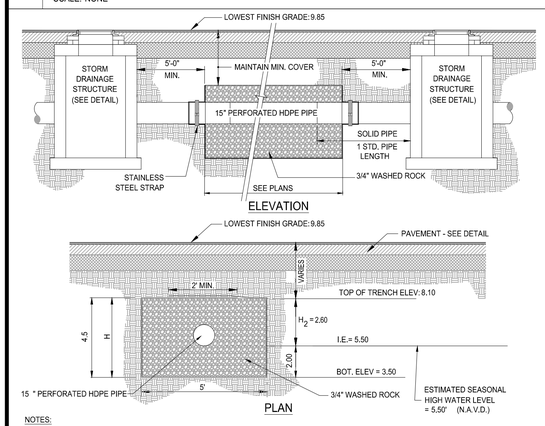
PIPE DIA.	W[1] (IN)	W[2] (IN)	T (GAUGE)	H (IN)
15"	21"	21"	16	VARIES
18"	24"	24"	16	VARIES
21"	30"	30"	16	VARIES
24"	30"	36"	16	VARIES
30"	36"	42"	14	VARIES
36"	42"	48"	14	VARIES
42"	48"	54"	14	VARIES
48"	54"	60"	14	VARIES
54"	60"	66"	14	VARIES

1. RECTANGULAR STRUCTURE
2. ROUND STRUCTURE

NOTES:
1. ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE OPENING AT THE TOP.
2. THE BOTTOM ELEVATION OF THE POLLUTION RETARDANT BAFFLE MUST BE AT LEAST 6" BELOW CONTROL ELEVATION.
3. NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1" x 2") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL BAFFLES.
4. POLLUTION RETARDANT BAFFLE TO BE FASTENED IN PLACE WITH 3/8"x4" STAINLESS STEEL "RED HEADS", OR APPROVED EQUAL.
5. ALL EXFILTRATION TRENCHES SHALL HAVE A POLLUTION RETARDANT BAFFLE AT EACH CONNECTION POINT TO A STRUCTURE.
6. FIBERGLASS BAFFLES ARE NOT PERMITTED.
7. MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.

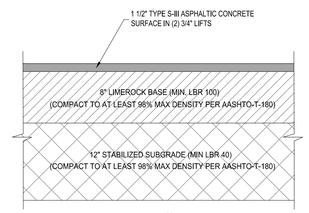


4 POLLUTION RETARDENT BAFFLE DETAIL
SCALE: NONE

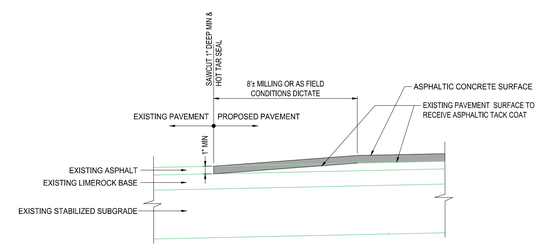


NOTES:
1. PIPES SHALL CONNECT TO ADDITIONAL CATCH BASINS AS REQUIRED.
2. BALLAST ROCK SHALL CONSIST OF 3/4" WASHED ROCK AND BE FROM FRESH WATER WASHED FREE OF DELETERIOUS MATTER.
3. TRENCH TO BE LINED WITH AMOCO PROPEX 4545 OR APPROVED EQUIVALENT TYPE FILTER FABRIC. OVERLAP TRENCH LINING MATERIAL A MINIMUM OF 2' AT TOP OF TRENCH. CLOSE ENDS AND STRAP AROUND PIPE.
4. IN AREAS OVER TRENCH WHERE THE FULL ROADWAY SECTION CANNOT BE CONSTRUCTED, THE AREA ABOVE THE TRENCH SHALL CONSIST ENTIRELY OF LIMEROCK BASE (LBR100).

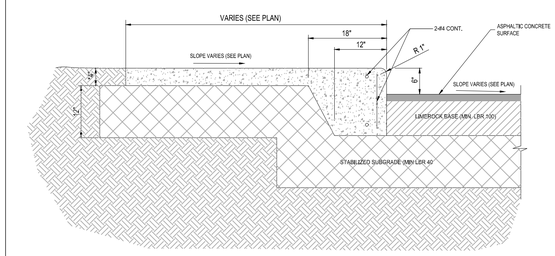
5 EXFILTRATION TRENCH DETAIL
SCALE: NONE



6 ASPHALTIC CONCRETE PAVEMENT DETAIL
SCALE: NONE



7 PAVEMENT SAWCUT/MILLING DETAIL
NONE



8 THICKENED EDGE SIDEWALK DETAIL
SCALE: NONE

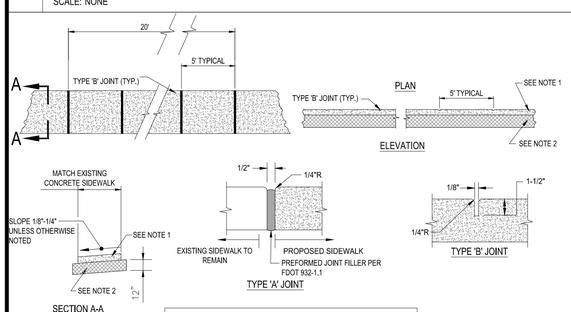
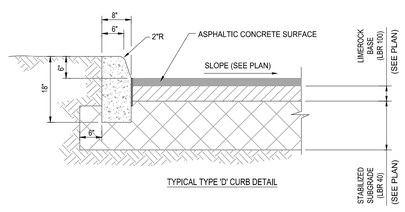


TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
'A'	AT CONNECTION BETWEEN NEW AND EXISTING SIDEWALK
'B'	5 FEET CENTER TO CENTER ON SIDEWALKS.

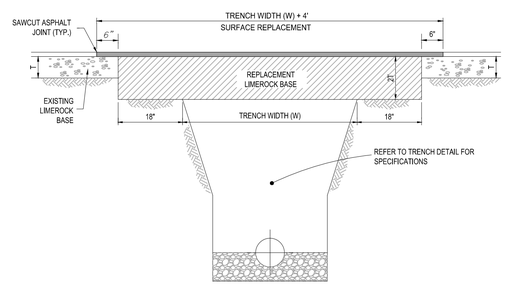
NOTES:
1. SIDEWALK SHALL BE 4" THICK EXCEPT IN DRIVEWAYS WHERE THE THICKNESS SHALL BE 6".
2. SUBGRADE BELOW SIDEWALK SHALL BE COMPACTED TO 98% OF MAX. DENSITY PER A.A.S.H.T.O. T-180. (12" THICKNESS)
3. CONCRETE STRENGTH SHALL BE MIN. 3000 PSI @ 28 DAYS.
4. SIDEWALK REMOVAL & REPLACEMENTS TO CONSIST OF FULL FLAGS.
5. PROVIDE EXPANSION JOINT (TYPE 'A') AT CONNECTIONS BETWEEN NEW AND EXISTING SIDEWALK.

9 SIDEWALK DETAILS
SCALE: NONE



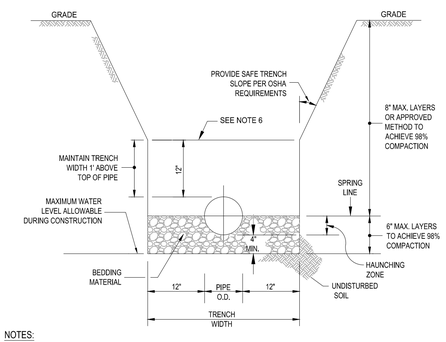
SEE ARCHITECTURAL PLANS FOR CURBING ADJACENT TO BUILDING

10 TYPE 'D' CURB
SCALE: NONE



NOTES:
1. REPLACED BASE MATERIAL OVER TRENCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE, MINIMUM 8", MAXIMUM 18".
2. BASE MATERIAL SHALL BE PLACED IN 6" MAXIMUM (LOOSE MEASUREMENT) LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO 98% OF MAXIMUM DENSITY, PER AASHTO T-180.
3. SUBGRADE MATERIAL SHALL BE GRANULAR AND ANGULAR AND SHALL HAVE A MINIMUM LBR OF 40.
4. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED PARALLEL TO OR PERPENDICULAR TO THE ROADWAY.
5. SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED.
6. SURFACE MATERIAL SHALL BE CONSISTENT WITH THE SURROUNDING SURFACE (MINIMUM 1" THICKNESS).
7. BASE MATERIAL SHALL HAVE A MINIMUM LBR OF 100 AND A MINIMUM CARBONATE CONTENT OF 70% (60% FOR LOCAL STREETS).
8. IF THE TRENCH IS FILLED TEMPORARILY, IT SHALL BE COVERED WITH A 2" ASPHALTIC CONCRETE PATCH TO KEEP THE FILL MATERIAL FROM RAVELING UNTIL REPLACED WITH A PERMANENT PATCH.

14 PAVEMENT RESTORATION DETAIL
SCALE: NONE



NOTES:
1. WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED MEANS OF CONSTRUCTION.
2. BEDDING MATERIAL SHALL CONSIST OF WELL GRADED ASTM C33 #67 ROCK (3/4" TO No.4) AND BE PLACED TO SPRING LINE OF PIPE.
3. BACKFILL MATERIAL SHALL BE FREE OF MUCK, STUMPS, ROOTS, ROCKS OR OTHER MATERIAL UNACCEPTABLE TO ENGINEER.
4. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
5. REFER TO SPECIFICATIONS FOR EXCAVATION IN MUCK OR OTHER UNSUITABLE MATERIAL.
6. COMPACTION PERCENTAGES SHOWN REFER TO AASHTO T-180.
7. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL (WITHIN 12" OF TOP OF PIPE).
8. THOROUGHLY WORK IN AND TAMP THE BEDDING MATERIAL IN THE HAUNCHING ZONE BEFORE PLACING AND COMPACTING REMAINDER OF BACKFILL.

15 TRENCH DETAIL
SCALE: NONE

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-PGD DETAILS

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

GRADING & DRAINAGE DETAILS

SHEET NUMBER:

CFG05.1

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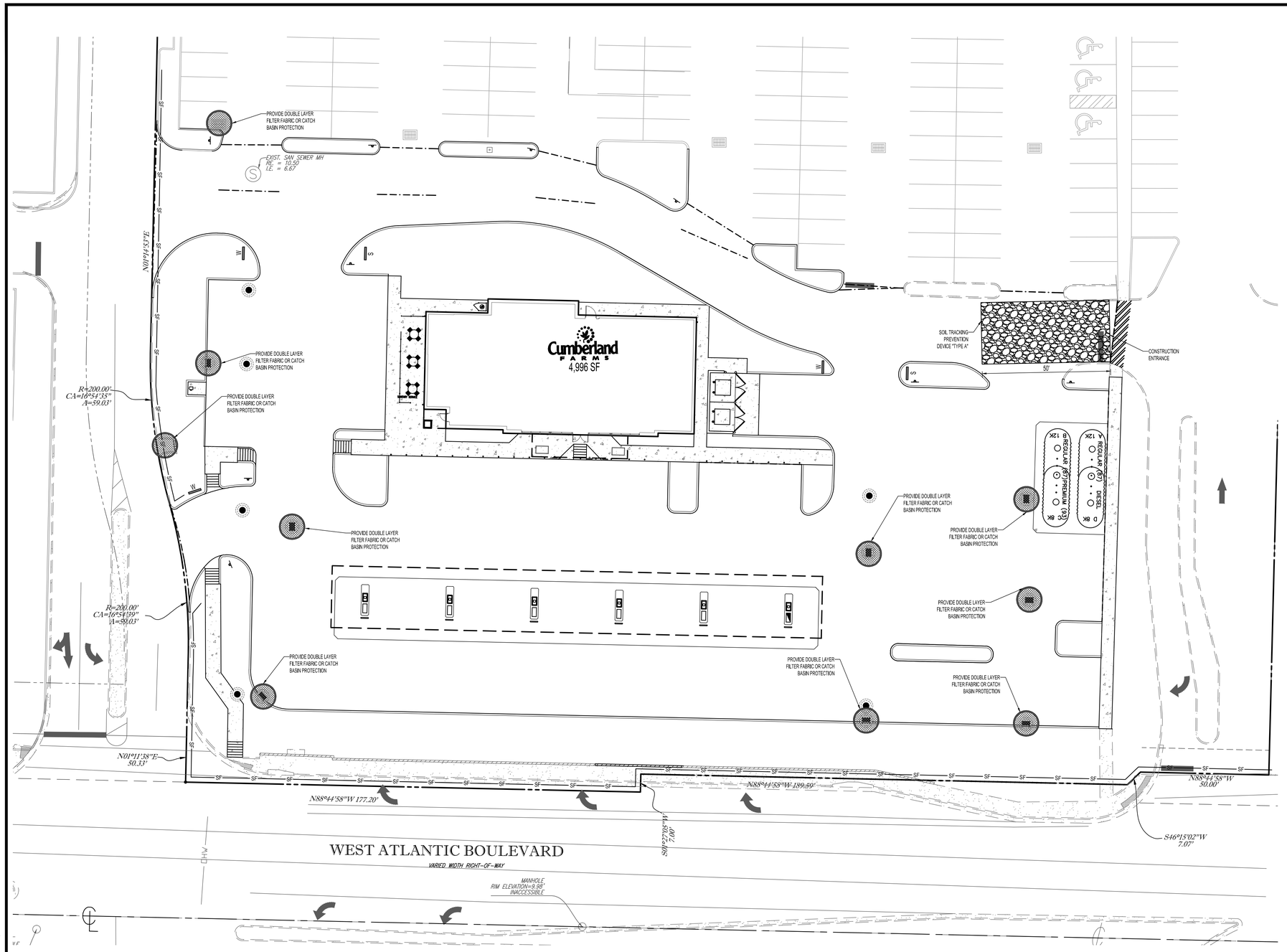
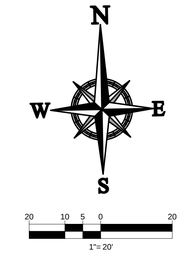
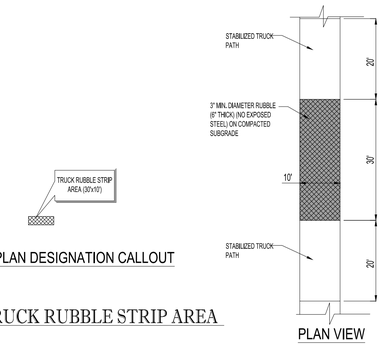


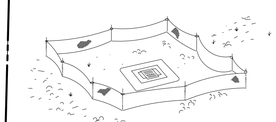




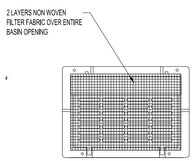
PLAN DESIGNATION CALLOUT

TRUCK RUBBLE STRIP AREA

PLAN VIEW

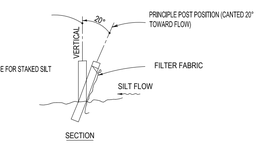


SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS.



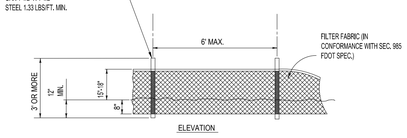
CATCH BASIN FABRIC

NOTE:
SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.).



SECTION

POST OPTIONS: WOOD 2-1/2" MIN Ø
WOOD 2"X 4"
OAK 1-1/2" X 1-1/2"
STEEL 1.33 LBS/FT. MIN.



ELEVATION

SILT FENCE DETAIL

NOTES:

1.) SILT FENCE TO BE CONSTRUCTED WHEREVER OFFSITE AREAS ARE LOWER THAN ADJACENT ONSITE ELEVATIONS.

2.) CATCH BASIN FABRIC TO BE PLACED ON AREA INLETS SUBJECT TO SEDIMENTATION FROM THIS PROJECT.

3.) ALL EROSION CONTROL DEVICES SUCH AS RUBBLE STRIPS, SILT FENCE AND OTHER BMPS SHALL BE INSTALLED PRIOR. TO CONSTRUCTION.

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REV:	DATE:	COMMENT:	BY:

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PROJECT No.:	F140147
DRAWN BY:	EM
CHECKED BY:	MGD
CAD I.D.:	F140147-EROSION CONTROL PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
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FORT LAUDERDALE, FL 33334
PH: (954) 202-7000
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

EROSION & SEDIMENTATION CONTROL PLAN

SHEET NUMBER:

CFG06.0

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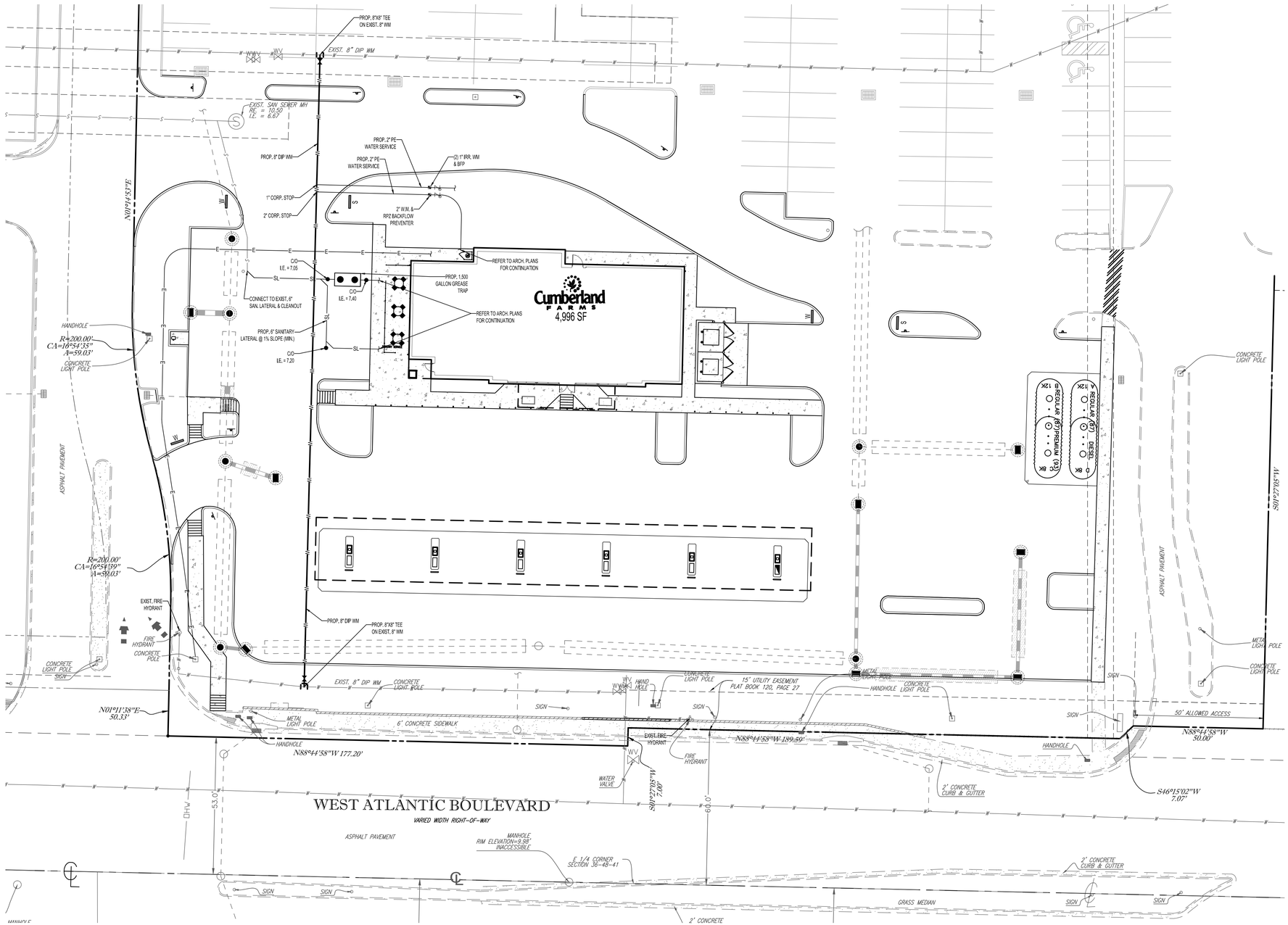

UTILITY LEGEND

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
W	UNDERGROUND WATER LINE	W
	UNDERGROUND ELECTRIC LINE	E
	UNDERGROUND TELEPHONE LINE	T
	SANITARY LATERAL	SL SL
FM	SANITARY FORCE MAIN	
	STORM SEWER	
S	SANITARY SEWER MAIN	
	HYDRANT	
OH OH OH	OVERHEAD WIRES	
E OT	OVERHEAD TRAFFIC WIRE	
Ⓢ	SANITARY MANHOLE	
Ⓓ	STORM MANHOLE	
	CATCH BASIN	
	WATER METER	
	CLEAN OUT	
	LIGHT POLE	

NOTES:

1. ALL ELEVATIONS ARE BASED ON REFERENCE NAVD 1988. ADD 1.56 TO CONVERT TO NGVD.

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DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-UTILITY PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

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May 26, 2015
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UTILITY PLAN

SHEET NUMBER:

CFG07.0

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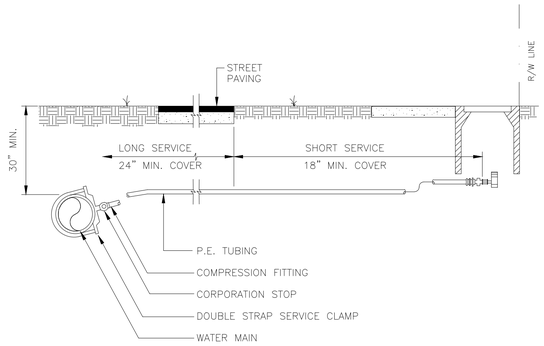


NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED NOT LESS THAN 18" ON CENTER.
2. ALL TAPS INTO WATER MAINS REQUIRE A SERVICE CLAMP.
3. SERVICE PIPE SHALL BE SAME SIZE AS THE WATER METER USED EXEPT THAT NO SERVICE PIPE SHALL BE SMALLER THAN 1".
4. APPROVED TYPE COPPER TUBING MAY BE USED IN PLACE OF PLASTIC.
5. FOR 1" SERVICE LINES, THE MINIMUM RADIUS SHALL BE 14" FOR 1 1/2" OR 2" SERVICE LINES, THE MINIMUM RADIUS SHALL BE 21"

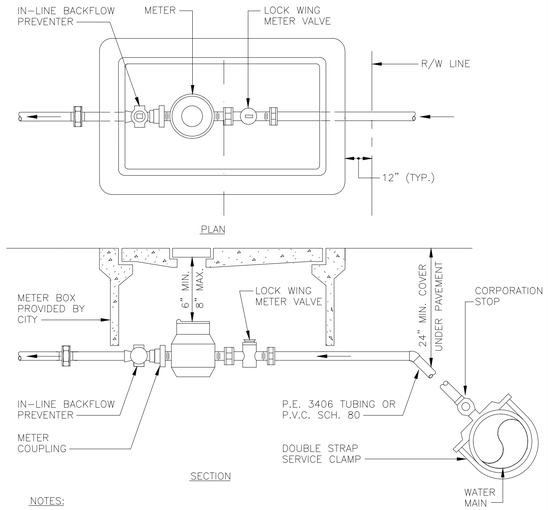
DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

CITY OF MARGATE
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

WATER SERVICE CONNECTION

SD-1



NOTES:

1. LOCATE BOX 12" OUTSIDE OF STREET R/W LINE.
2. CITY RESPONSIBILITY ENDS AT CUSTOMER SIDE OF METER.
3. METERS UP TO 2" SHALL BE FURNISHED AND INSTALLED BY CITY. (ALL OTHER WORK BY CUSTOMER)
4. MINIMUM RADIUS OF TUBING CURVE SHALL BE 14".

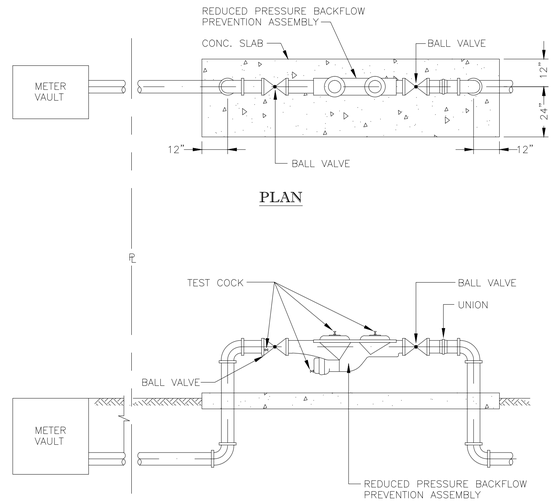
DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

CITY OF MARGATE
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

METER INSTALLATION FOR UP TO 1" METER

SD-2



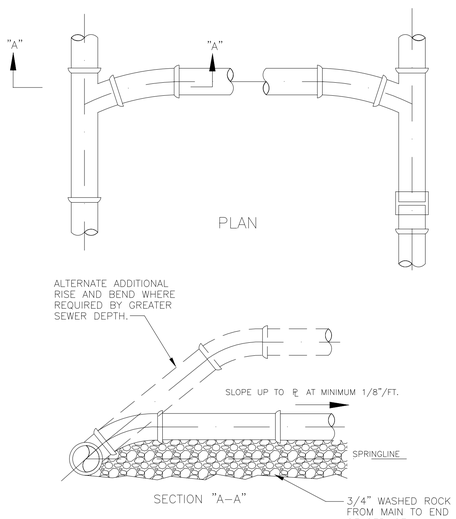
DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

CITY OF MARGATE
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

RPBP FOR METERED POTABLE WATER SERVICE SIZES 3/4" THRU 2"

SD-9c



NOTES:

1. SINGLE SERVICE CONNECTIONS SHALL USE 6" PIPE AND FITTINGS.
2. DOUBLE SERVICE CONNECTIONS SHALL USE 6" PIPE AND FITTINGS.
3. USE RISER CONNECTION WHEN INV. OF SEWER IS MORE THAN 7'-0" DEEP.

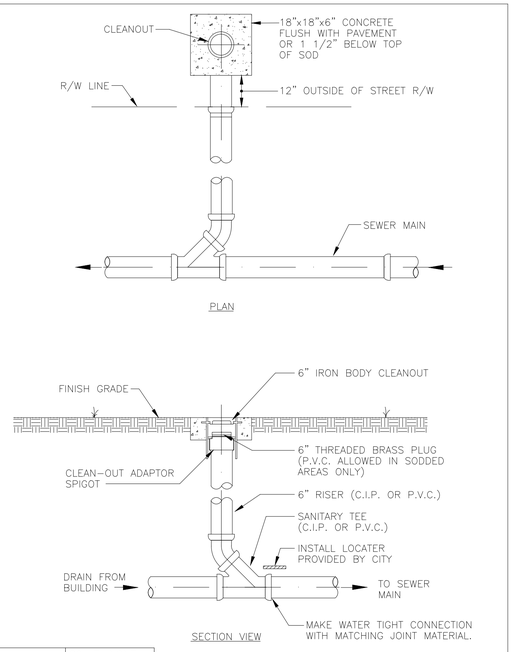
DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

CITY OF MARGATE
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

WYE SERVICE CONNECTION

SD-12



DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

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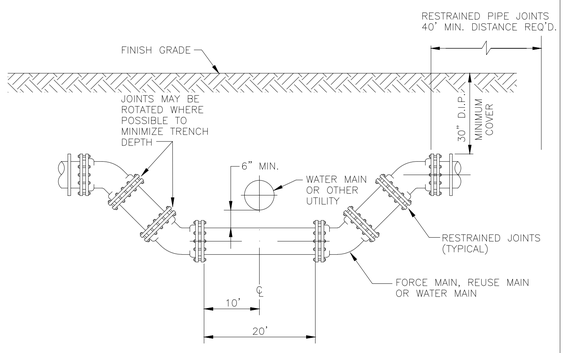
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

BUILDING CONNECTION DETAIL

SD-13



NOTE:

WHEREVER POSSIBLE DEFLECTION OF THE PIPE WILL BE USED TO AVOID EXISTING OBSTRUCTIONS. THIS CROSSING SHALL BE USED ONLY WHEN ORDERED BY THE ENGINEER.

DRAWN BY: JJW	SCALE: NONE
APPROVED BY:	REV. FEB. 2002

CITY OF MARGATE
DEPT. OF ENVIRONMENTAL & ENGINEERING SERVICES

STANDARD WATER AND SEWER DETAILS

SPECIAL UTILITY CROSSING

SD-21

THOMAS ENGINEERING GROUP
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THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

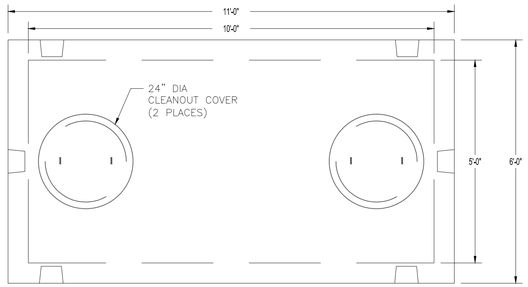
SHEET TITLE:

UTILITY DETAILS

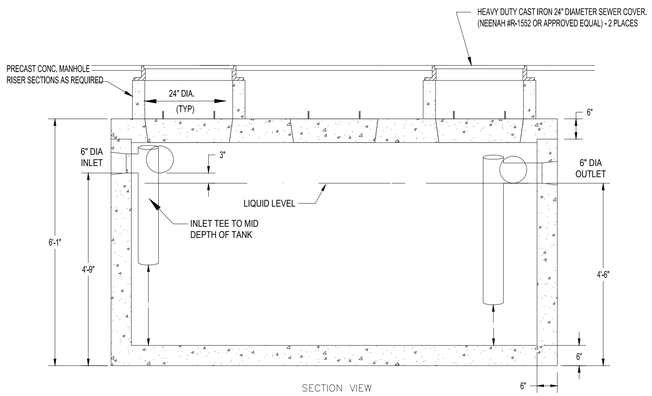
SHEET NUMBER:

CFG07.1

Printed on Wednesday, May 27, 2015, 10:34 AM by Maxwell Kaplan
J:\PROJECTS\F140147-LAKEWOOD PLAZA\DESIGN\CIVIL\PLAN DATA\DWG\F140147-UTILITY DETAILS ------ LAYOUT: CFG07.1-UTILITY DETAILS



PLAN VIEW



SECTION VIEW

NOTES:

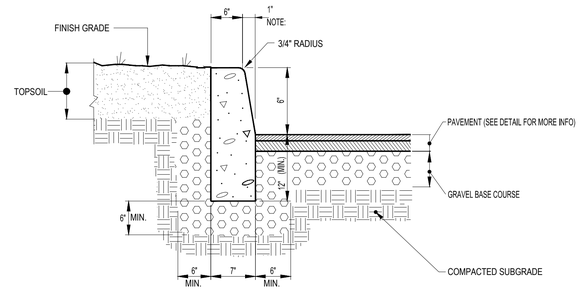
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. FINAL DESIGN OF GREASE TRAP TO MEET ALL LOCAL AND STATE REQUIREMENTS.
3. ALL REINFORCEMENT PER ASTM C1227-93.
4. DESIGNED FOR H-20 LOADING.
5. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
6. TEES AND BAFFLES SOLD SEPARATELY.
7. GREASE TRAP AS MANUFACTURED BY SHEA CONCRETE PRODUCTS OR APPROVED EQUAL.
8. CONTRACTOR TO PROVIDE DESIGN ENGINEER SHOP DRAWINGS PRIOR TO CONSTRUCTION.

	WEIGHT
SHEA ITEM NO. TK-M1500C	22,840#

COMMERCIAL LINE TANK
1500 GALLON MONOLITHIC

1,500 GALLON GREASE TRAP DETAIL

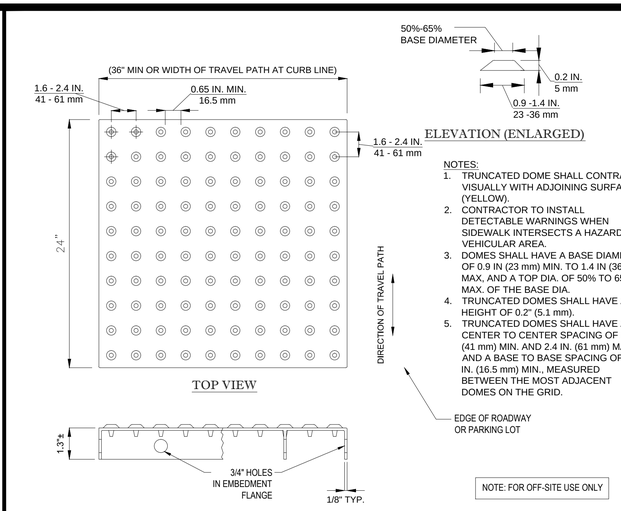
N.T.S.



-CURB SHALL CONSIST OF 4,000 PSI AIR ENTRAINED CONCRETE. EXPOSED EDGES TO HAVE RUBBED FINISH AND SURFACE SHALL BE TREATED WITH A CONCRETE PENETRANT / SEALER.
-THE ENDS OF CURB SECTIONS SHALL BE CHAMFERED 3/4 INCH.
-THE CORNERS OF CURB SECTIONS SHALL MATCH THE ADJACENT CURB IN SIZE, COLOR AND FINISH.
-CURB, CURB CORNERS OR EDGING SHALL BE FITTED TOGETHER AS CLOSELY AS POSSIBLE.
-EXPANSION JOINTS SHALL BE INSTALLED AT A MAXIMUM OF TWENTY FEET (20') ON CENTER USING PREFORMED EXPANSION JOINT FILLER HAVING A THICKNESS OF 1/2 INCH.

CONCRETE CURB DETAIL

N.T.S.



NOTES:

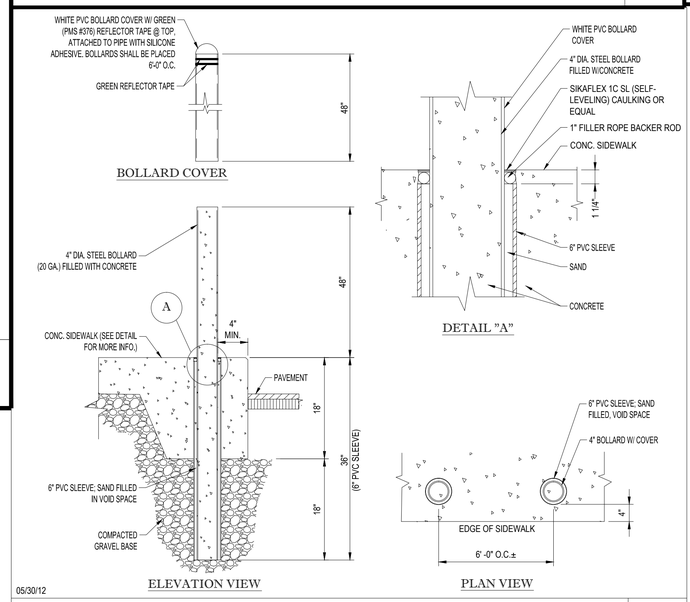
1. TRUNCATED DOME SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES (YELLOW).
2. CONTRACTOR TO INSTALL DETECTABLE WARNINGS WHEN SIDEWALK INTERSECTS A HAZARDOUS VEHICULAR AREA.
3. DOMES SHALL HAVE A BASE DIAMETER OF 0.9 IN (23 mm) MIN. TO 1.4 IN (36 mm) MAX, AND A TOP DIA. OF 50% TO 65% MAX. OF THE BASE DIA.
4. TRUNCATED DOMES SHALL HAVE A HEIGHT OF 0.2" (5.1 mm).
5. TRUNCATED DOMES SHALL HAVE A CENTER TO CENTER SPACING OF 1.6 IN (41 mm) MIN. AND 2.4 IN. (61 mm) MAX. AND A BASE TO BASE SPACING OF 0.65 IN. (16.5 mm) MIN., MEASURED BETWEEN THE MOST ADJACENT DOMES ON THE GRID.

NOTE: FOR OFF-SITE USE ONLY

NOTE TO DESIGNER:
IF A WALK CROSSES OR ADJOINS A VEHICULAR WAY WHERE THE WALKING SURFACE AND PAVEMENT ARE NOT SEPARATED BY CURBS, RAILING OR OTHER ELEMENTS, THE BOUNDARY BETWEEN THE AREA SHALL BE DEFINED BY A CONTINUOUS DETECTABLE WARNING WHICH IS MIN. 36" WIDE (ADA ACCESSIBLE GUIDELINES) AND MIN. 24" DEPTH.

CAST-IN-PLACE DETECTABLE WARNING

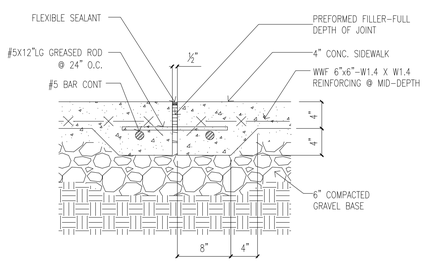
N.T.S.



05/30/12

BOLLARD SET IN CONCRETE WALK

N.T.S.



NOTE:
- CONTROL JOINTS @ 20'-0" O.C. MAX. REFER TO PLAN
- BROOM FINISH WITH TWO COATS SEALING/CURING COMPOUND.

DETAIL @ SIDEWALK EXPANSION JOINT

N.T.S.

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PROJECT No.:	F140147
DRAWN BY:	EM
CHECKED BY:	MGD
CAD I.D.:	F140147-SITE DETAILS

PROJECT:

LAKEWOOD PLAZA
FOR
Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

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May 26, 2015
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FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
CFG09.0

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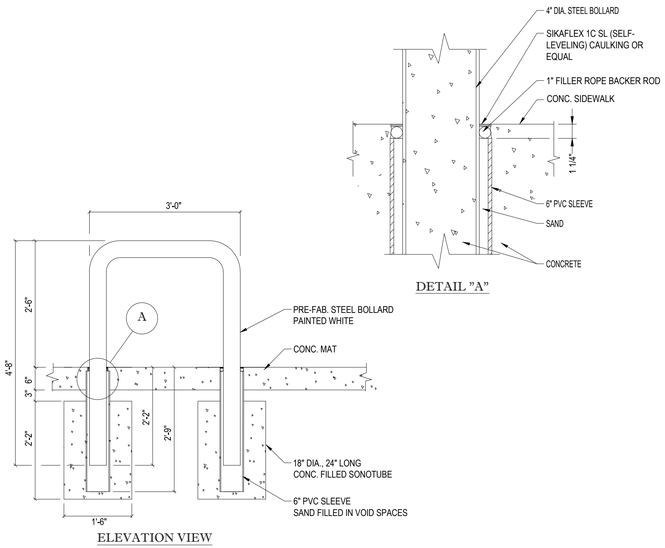
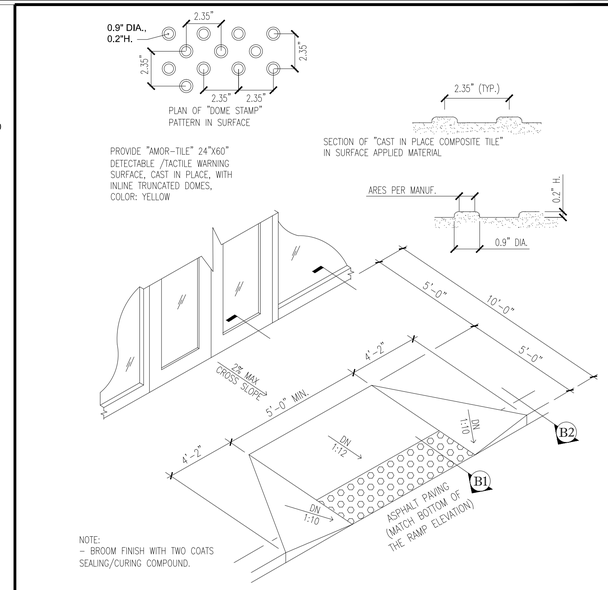
J:\JOBS\F140147 LAKEWOOD PLAZA\ENTITLEMENTS\F140147-SITE PLAN ENTITLEMENTS\F140147-SITE DETAILS ------JAMPOS CFG09.0 CONSTRUCTION DETAILS



"U" BOLLARD SET IN CONCRETE NEW CONSTRUCTION

N.T.S.

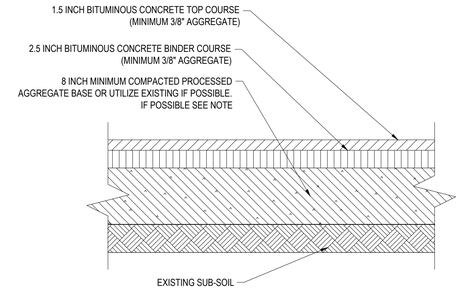


NOTE:
– BROOM FINISH WITH TWO COATS SEALING/CURING COMPOUND.

ADA ACCESSIBLE RAMP DETAIL @ STOREFRONT

N.T.S.

NOTE:
FINAL CONCRETE AND PAVING DESIGNS SHALL BE SPECIFIED IN GEOTECHINCAL REPORT TO BE PROVIDED BY CUMBERLAND FARMS. IN ABSENCE OF A GEOTECHNICAL REPORT, CUMBERLAND FARMS SHALL APPROVE FINAL PAVEMENT AND MATERIALS SPECIFICATION, PRIOR TO CONSTRUCTION.



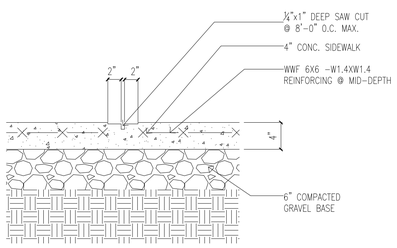
NOTES:
1. THE SOIL MUST HAVE A MOISTURE CONTENT DRY OF OPTIMUM AS DETERMINED BY THE MOISTURE-DENSITY RELATIONSHIP TEST METHOD ASTM D1557.

2. THE SOIL CAN BE COMPACTED TO 98% OF THE MAXIMUM STANDARD PROCTOR DENSITY AS DETERMINED BY THE MOISTURE-DENSITY RELATIONSHIP TEST METHOD ASTM D698.

3. THE SOIL SHALL NOT BE USED IF THE MATERIAL CONTAINS ORGANIC MATTER, RUBBLE, DEBRIS OR ANY OTHER DELETERIOUS MATERIAL.

TYPICAL PAVEMENT SECTION

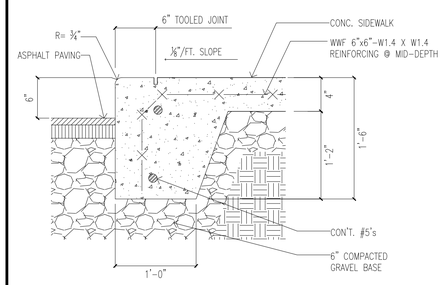
N.T.S.



NOTE:
– TOOL JOINT SPACING REFER TO PLAN
– BROOM FINISH WITH TWO COATS SEALING/CURING COMPOUND.

DETAIL @ SIDEWALK CONTROL JOINT

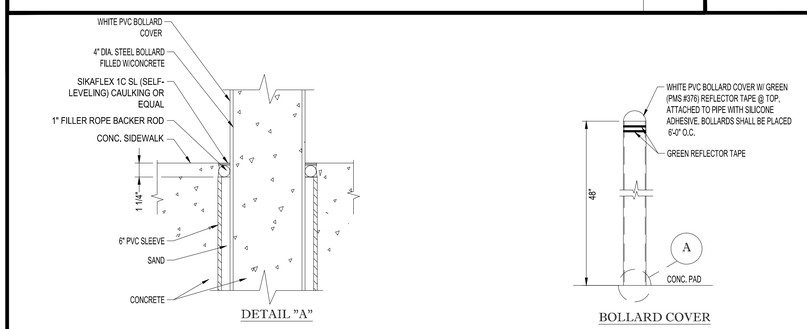
N.T.S.

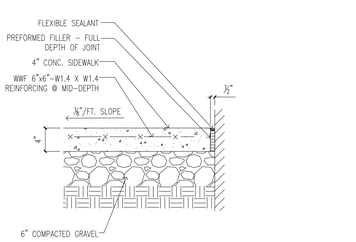


NOTE:
– BROOM FINISH WITH TWO COATS SEALING/CURING COMPOUND.

DETAIL @ SIDEWALK & CURB

N.T.S.

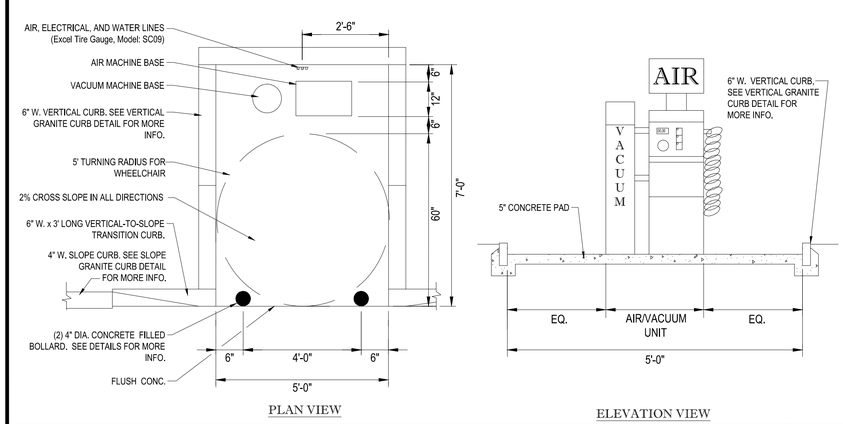




NOTE:
– BROOM FINISH WITH TWO COATS SEALING/CURING COMPOUND.

DETAIL @ SIDEWALK / BLD. WALL

N.T.S.



CFI AIR MACHINE DETAIL

N.T.S.

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-SITE DETAILS

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

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May 26, 2015
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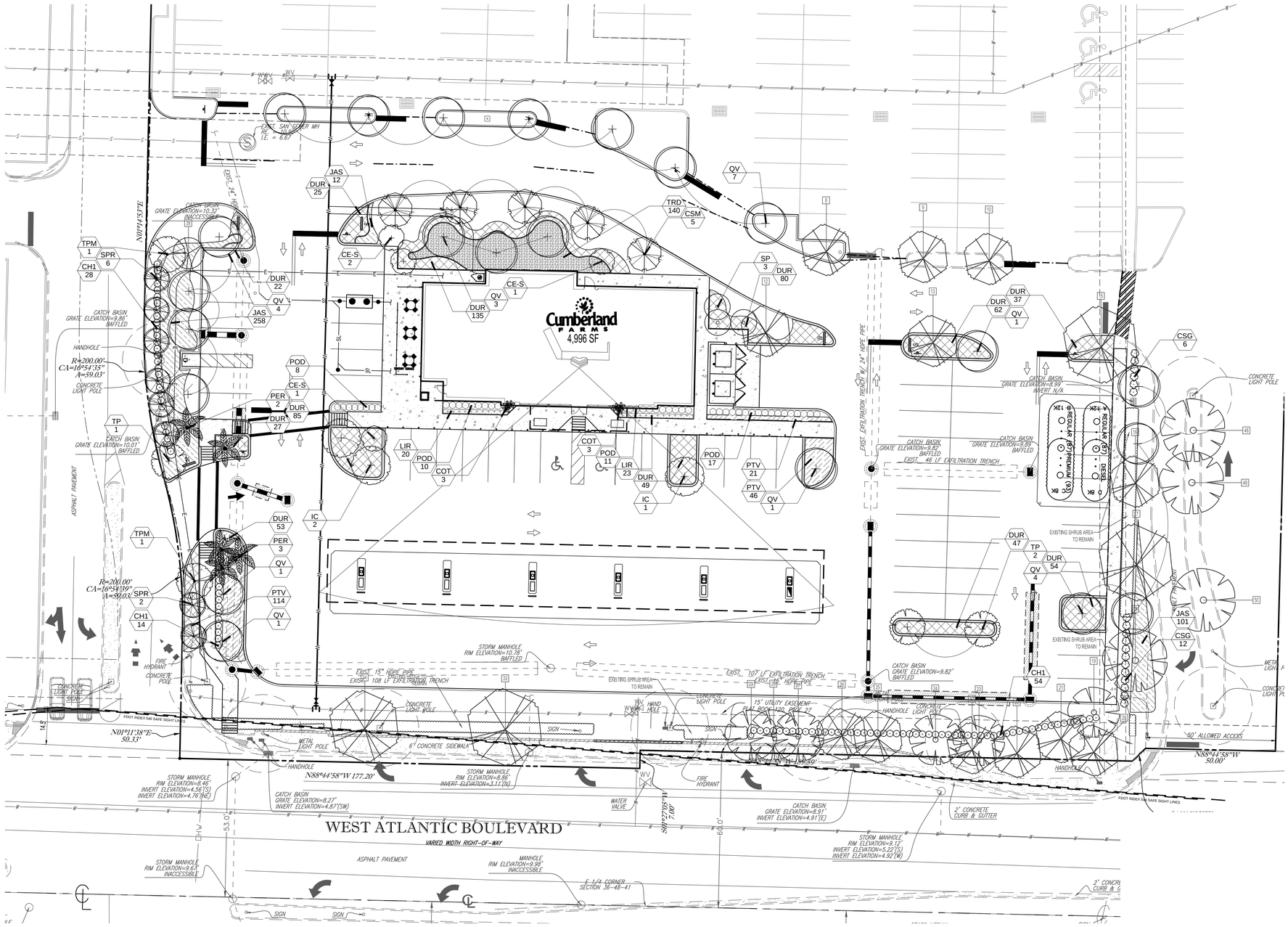

LANDSCAPE MATERIALS PLANTED ADJACENT TO CURBING SHALL BE PLANTED 3' BACK FROM FACE OF CURBS.

ALL TREES TO BE PLACED A MINIMUM OF 5' FROM UNDERGROUND UTILITIES.

GROUND COVERS SHALL BE PLANTED WITH A MINIMUM OF 75% COVERAGE, WITH 100% COVERAGE OCCURRING WITHIN 3 MONTHS OF INSTALLATION.

ALL MECHANICAL EQUIPMENT, BACKFLOW PREVENTERS, DUMPSTER ENCLOSURES, A/C UNITS, ETC., SHALL BE SCREENED IN ADDITION TO THE MINIMUM LANDSCAPE REQUIREMENTS.

PLEASE REFER TO SHEET L-03 FOR LANDSCAPE PLANTING DETAILS AND SHEETL-04 FOR GENERAL PLANTING NOTES.

ALL PLANTINGS SHALL BE PROPERLY FERTILIZED AT THE TIME OF INSTALLATION WITH AT LEAST A MINIMUM OF 25% ORGANIC 6-6-6 WITH TRACE ELEMENTS OR BETTER FERTILIZER. SEE GENERAL LANDSCAPE NOTES, SHEET L-04)

ALL TREES AND PALMS PLANTED SHALL BE SECURELY GUYED, BRACED, AND/OR STAKED AT THE TIME OF PLANTING UNTIL ESTABLISHMENT. ALL STABILIZATION SYSTEMS SHALL BE CLEARLY MARKED (FLAGGING, PAINTED, ETC.) TO PREVENT HAZARDS.

N
W E
S

20 10 5 0 20
1"= 20'

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PROJECT No.: F140147
DRAWN BY: RJK
CHECKED BY: MDG
CAD I.D.: LANDSCAPE PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

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MICHAEL D. GROSSWIRTH
REGISTERED LANDSCAPE ARCHITECT
May 27, 2015
FLORIDA LICENSE No. 6666871
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

LANDSCAPE PLAN

SHEET NUMBER:

CFG08.0

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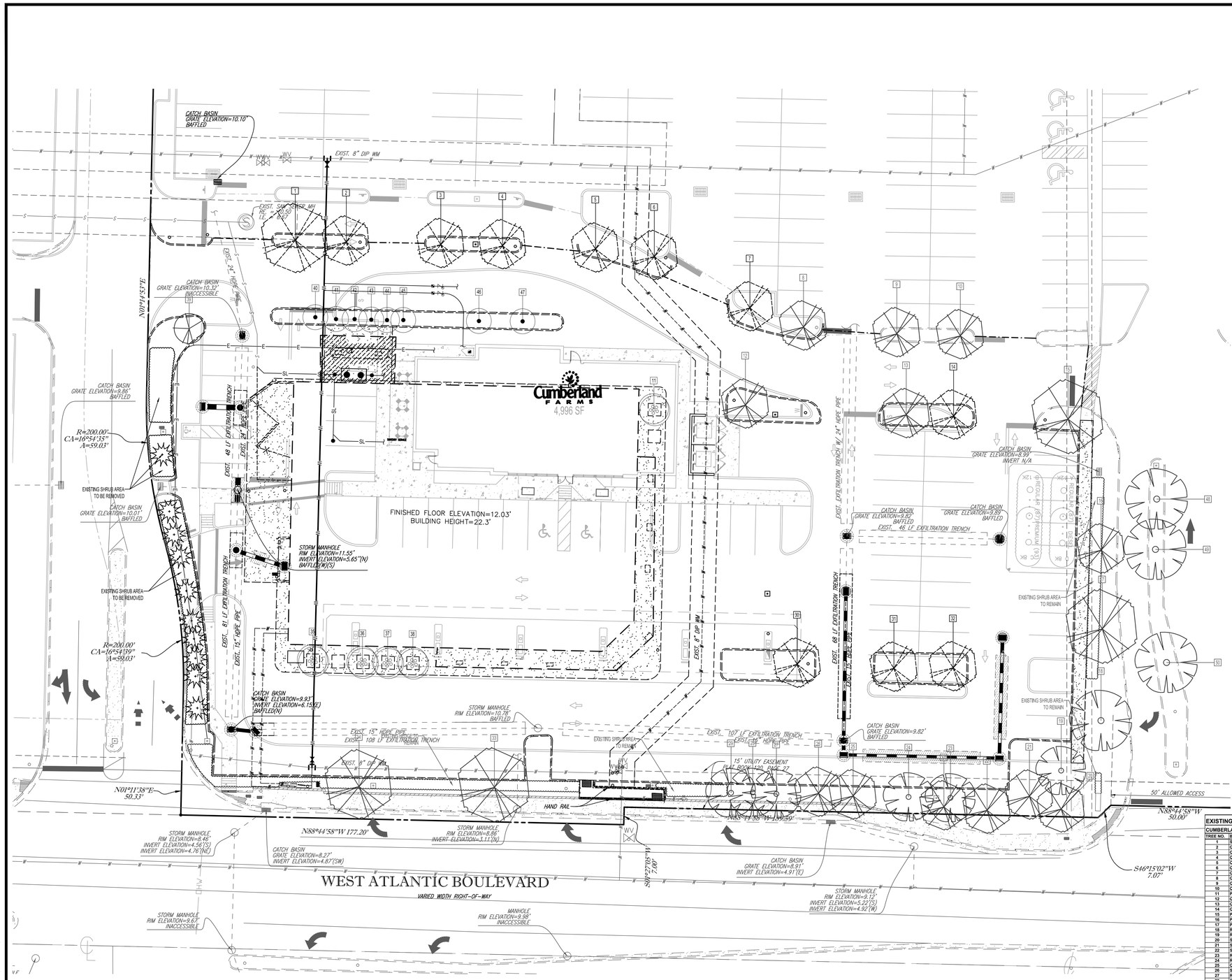

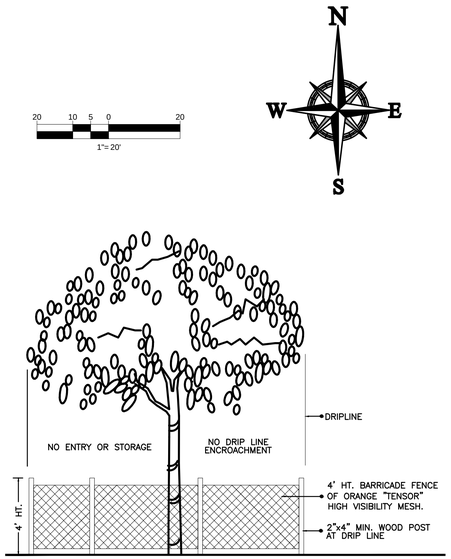

TREE PRESERVATION BARRICADE FENCING DETAIL

N.T.S.

TREE RELOCATION PROCEDURAL SPECIFICATION

Tree, Palm, Shrub and other Plant Transplanting/Relocating Detail – Recommended Notes:

The American National Standard for Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices (Transplanting) ANSI A300(Part 6)–2005 must be adhered to in its entirety for all relocating/transplanting of trees and shrubs. ANSI A300 (Part 6)–2005 includes the following:

60– Transplanting Standards
61 – Normative References
62 – Definitions
63 – Transplanting Practices

The transplanting objectives shall be established prior to beginning the operation. These objectives may be presented in a report format for permitting purposes.

A feasibility and suitability assessment shall be conducted prior to recommending transplanting. Specifications for transplanting should be based on the assessment. See the Checklist in Annex A of ANSI A300 (Part6)–2005. This assessment may be presented in a report format for permitting purposes.

EXISTING TREE DISPOSITION CHART

CUMBERLAND FARM - MARGATE, FL

TREE NO.	BOTANICAL NAME	COMMON NAME	HT	SPR	DBH	CONDITION	DISPOSITION	CANOPY AREA (s.f.)	NOTES
1	Swietania mahagoni	Mahogany	24	26	18	70%	remove	530.66	
2	Quercus virginiana	Live Oak	15	12	5	70%	remove	113.04	
3	Quercus virginiana	Live Oak	16	14	8	70%	remove	153.86	
4	Quercus virginiana	Live Oak	14	12	8	70%	remove	113.04	
5	Quercus virginiana	Live Oak	14	12	5.5	70%	remove	113.04	
6	Quercus virginiana	Live Oak	14	10	6	70%	remove	78.5	
7	Quercus virginiana	Live Oak	14	14	7	70%	remove	153.86	
8	Quercus virginiana	Live Oak	10	8	6	70%	REMAIN	50.24	
9	Quercus virginiana	Live Oak	12	10	5.5	70%	REMAIN	78.5	
10	Quercus virginiana	Live Oak	8	10	5.5	70%	REMAIN	78.5	
11	Ptychosperma elegans	Alexander Palm	22	14	14	70%	Relocate	153.86	Triple Trunk
12	Quercus virginiana	Live Oak	22	20	10	70%	REMAIN	314	
13	Quercus virginiana	Live Oak	16	12	6	70%	REMAIN	113.04	
14	Quercus virginiana	Live Oak	10	8	8	70%	remove	50.24	
15	Pongamia pinnata	Pongam Tree	22	30	12	70%	REMAIN	706.5	EXOTIC
16	Pongamia pinnata	Pongam Tree	15	22	16	70%	REMAIN	379.94	EXOTIC
17	Pongamia pinnata	Pongam Tree	26	34	40	70%	REMAIN	907.46	EXOTIC
18	Roystonea elata	Royal Palm	45	20	14	70%	REMAIN	314	
19	Roystonea elata	Royal Palm	40	18	16	70%	REMAIN	254.34	
20	Swietania mahagoni	Mahogany	35	36	24	70%	REMAIN	1017.36	
21	Swietania mahagoni	Mahogany	36	29	16	70%	REMAIN	615.44	
22	Swietania mahagoni	Mahogany	28	24	14	70%	REMAIN	452.16	
23	Roystonea elata	Royal Palm	36	16	15	50%	remove	200.96	
24	Roystonea elata	Royal Palm	38	18	16	70%	REMAIN	254.34	
25	Quercus virginiana	Live Oak	28	26	18	70%	REMAIN	530.66	
26	Swietania mahagoni	Mahogany	26	22	10	70%	REMAIN	379.94	
27	Roystonea elata	Royal Palm	38	12	16	70%	REMAIN	113.04	
28	Roystonea elata	Royal Palm	34	14	16	70%	REMAIN	153.86	
29	Roystonea elata	Royal Palm	36	16	18	70%	REMAIN	200.96	
30	Quercus virginiana	Live Oak	16	14	8	70%	remove	153.86	
31	Quercus virginiana	Live Oak	16	14	8	70%	remove	153.86	
32	Quercus virginiana	Live Oak	18	18	9	70%	remove	254.34	
33	Swietania mahagoni	Mahogany	28	30	18	70%	REMAIN	706.5	
34	Swietania mahagoni	Mahogany	24	24	10	70%	REMAIN	452.16	
35	Ptychosperma elegans	Alexander Palm	24	12	11	70%	Relocate	113.04	Double Trunk
36	Ptychosperma elegans	Alexander Palm	22	12	11	70%	Relocate	113.04	Double Trunk
37	Ptychosperma elegans	Alexander Palm	16	10	15	60%	Relocate	78.5	Triple Trunk
38	Ptychosperma elegans	Alexander Palm	20	14	10	70%	Relocate	153.86	Double Trunk
39	Tabebuia pallida	Pink Trumpet Tree	14	10	8	70%	REMAIN	78.5	
40	Sabal palmetto	Cabbage palm	18	8	14	70%	Relocate	50.24	
41	Sabal palmetto	Cabbage palm	18	8	14	70%	Relocate	50.24	
42	Sabal palmetto	Cabbage palm	20	10	16	70%	Relocate	78.5	
43	Sabal palmetto	Cabbage palm	20	10	14	60%	Relocate	78.5	
44	Sabal palmetto	Cabbage palm	20	10	12	70%	Relocate	78.5	
45	Sabal palmetto	Cabbage palm	20	9	12	70%	Relocate	63.585	
46	Sabal palmetto	Cabbage palm	20	8	14	60%	Relocate	50.24	
47	Sabal palmetto	Cabbage palm	20	9	14	70%	Relocate	63.585	
48	Roystonea elata	Royal Palm	40	16	12	70%	REMAIN	200.96	
49	Roystonea elata	Royal Palm	40	16	12	70%	REMAIN	200.96	
50	Roystonea elata	Royal Palm	45	20	14	70%	REMAIN	314	
51	Swietania mahagoni	Mahogany	24	18	8	70%	REMAIN	254.34	
							TOTAL APPLICABLE CANOPY ON SITE:	12,316.65	
							TOTAL APPLICABLE CANOPY TO BE REMOVED:	2,069.26	
							TOTAL NUMBER OF REQUIRED REPLACEMENT TREES (AT 1/300 sq.ft. of CANOPY):	7	

VALUATIONS BASED ON FAC 14-40 REPLACEMENT COST METHOD
TREE REPLACEMENTS AS PER MARGATE CODE OF ORDINANCE ARTICLE II, SECTION 23-20

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
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PROJECT No.: F140147
DRAWN BY: RJK
CHECKED BY: MDG
CAD I.D.: TREE DISPOSITION PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
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MICHAEL D. GROSSWIRTH
REGISTERED LANDSCAPE ARCHITECT
May 27, 2015
FLORIDA LICENSE No. 6666B71
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

TREE DISPOSITION PLAN

SHEET NUMBER:

CFG08.1

Printed on Wednesday, May 27, 2015, 11:36 AM by Meweh Kaplan. LANDSCAPE\TREE DISPOSITION PLAN\LANDSCAPE\CFG08.1 TREE DISPOSITION PLAN

PLANT SCHEDULE

TREES	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	CAL/DBH	HEIGHT	SPREAD	NATIVE	XERIC		REMARKS
CE-S	4	Silver Button Wood	Conocarpus erectus sericeus	B & B	2"	10` Ht	4-5`	Yes	High		4` CT
IC	3	Dahoon Holly	Ilex cassine	B & B	2.5"	16` Ht	5-6`	Yes	High		6` CT
QV	22	Southern Live Oak	Quercus virginiana	B & B	2.5"	16` Ht	5-6`	Yes	High		6` CT
SP	3	Cabbage Palmetto	Sabal palmetto	B & B		18-22` oa	10`	Yes	High		
TP	3	Pink Tabebuia	Tabebuia pallida	B & B	3"	16` Ht	5-6`	No	High		6` CT
MITIGATION TREES	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	CAL/DBH	HEIGHT	SPREAD	NATIVE	XERIC		REMARKS
CSM	5	Orange Geiger Tree	Cordia sebestena	B & B	2.5"	12` Ht	6`	Yes	High		4` CT
TPM	2	Pink Tabebuia	Tabebuia pallida	B & B	3"	16` Ht	6`	No	High		6` CT
RELOCATED TREES	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	CAL/DBH	HEIGHT	SPREAD	NATIVE	XERIC		REMARKS
PER	5	Alexander Palm	Ptychosperma elegans	NA	Varies	varies	varies	Yes	Medium		
SPR	8	Cabbage Palmetto	Sabal palmetto	B & B		18-22` oa	10`	Yes	Medium		
SHRUBS	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	SPACING	HEIGHT	SPREAD	NATIVE	XERIC		REMARKS
CH1	96	Red Tip Cocoplum	Chrysobalanus icaco `Red Tip`	NA	30"	36"	36"	Yes	High		Full to base
COT	6	Black Magic Ti Plant	Cordyline terminalis `Black Magic`	NA	As Shown	30"	24"	No	High		3 plants per pot
CSG	18	Small-Leaf Clusia	Clusia guttifera	NA	36"	30"	36"	Yes	High		
POD	46	Shrubby Yew	Podocarpus macrophyllus maki	NA	30"	48"	30"	No	Medium		24"x24"
SHRUB AREAS	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	SPACING	HEIGHT	SPREAD	NATIVE	XERIC	SPACING	REMARKS
DUR	676	Sky Flower	Duranta repens `Dwarf Golden`	n/a	24"	16-18"	16-18"	Yes	High	24" o.c.	Full
JAS	371	Southern Wax Jasmine	Jasminum simplicifolium	n/a	24"	18"	18"	No	Medium	24" o.c.	Full to base
PTV	181	Variegated Mock Orange	Pittosporum tobira `Variegata`	n/a	24"	18"	20"	No	High	24" o.c.	
TRD	140	Fakahatchee Grass	Tripsacum dactyloides	n/a	24"	30"	18"	Yes	High	30" o.c.	Full to base
GROUND COVERS	QTY	COMMON NAME	BOTANICAL NAME	SPECIFICATIONS	SPACING	HEIGHT	SPREAD	NATIVE	XERIC	SPACING	REMARKS
LIR	43	Lily Turf	Liriope muscari	n/a	18"	12-14"	10-12"	No	High	18" o.c.	Full clumps

ALL SOD TO BE STENOTAPHRUM SECUNDATUM, V. FLORITAM, ST. AUGUSTINE SOLID SOD, UNLESS OTHERWISE NOTES. CONTRACTOR SHALL REPAIR/REPLACE ANY EXISTING SOD DAMAGED DURING CONSTRUCTION TO PRE-CONSTRUCTION CONDITION. SOD & MULCH QUANTITY TAKE-OFF BY CONTRACTOR.

LANDSCAPE CODE COMPLIANCE CHART

CITY OF MARGATE CODE OF ORDINANCES

CUMBERLAND FARMS - LAKEWOOD

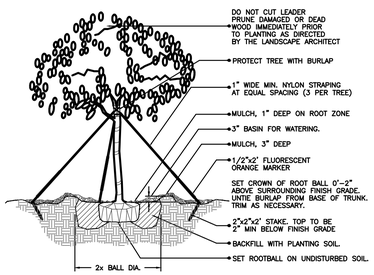
TOTAL PARCEL AREA: 64,464 sq.ft. (1.48 ACRES)
TOTAL LANDSCAPE SPACE: 26,614 sq.ft. (.59 ACRES; 41.3%)

CHAPTER 23: ARTICLE I

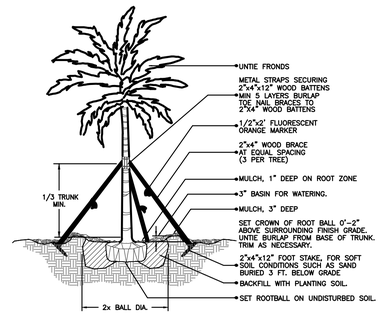
Sec. 23-5. MATERIALS, INSTALLATION AND IRRIGATION REQUIREMENTS:
Trees Shall be Minimum 10' ht., 4' spread, 2" dbh
Palms (6' c.t.) may be Counted 3:1 for Trees
Shrubs Shall be a Minimum 2' ht. after planting, 3 ft. o.c.

	REQUIRED	PROVIDED
SEC. 23-6 B. LANDSCAPING ABUTTING RIGHT-OF-WAY		
1a..: 1 Tree/40 l.f. - ROW of 80' or Greater (376.64 l.f.)	10 TREES	10 TREES*
24" ht. Hedge		EXISTING
1b.: 50% of width covered by shrubs or ground cover (10' R/O/W Buffer)	5'	EXCEEDS
SEC 23-8. PARKING AREA INTERIOR LANDSCAPING		
a.: 20 sq.ft. of Interior Landscaping/Parking Space (60 pkg. spaces)	1200 sq.ft.	9,068.52 sq.ft.
b.: 1 Tree/200 sq.ft. of Interior Landscaping (9,068.52 sq.ft +/-)	46 TREES	46 TREES**
5 Shrubs/200 sq.ft. of Interior Landscaping	227 SHRUBS	1640 SHRUBS
c.: 30% maximum sod within interior landscape area (9,068.52 sq.ft x .30)	2721 sq.ft. max.	2292 sq.ft.
MITIGATION TREES: 12' ht, 2" cal.	7 TREES	7 TREES
TOTAL TREES	63 TREES	63 TREES
TOTAL SHRUBS	227 SHRUBS	1640 SHRUBS
50% NATIVE TREES	32 TREES	37 TREES (88%)
50% NATIVE SHRUBS	114 SHRUBS	969 SHRUBS (59%)

**INCLUDES 9 EXISTING TREES, 13 RELOCATED PALMS, & 3 PROPOSED PALMS *INCLUDES 8 EXISTING TREES & 6 EXISTING PALMS



(2" cal. and over)
LARGE TREE PLANTING DETAIL
N.T.S.



LARGE PALM PLANTING DETAIL
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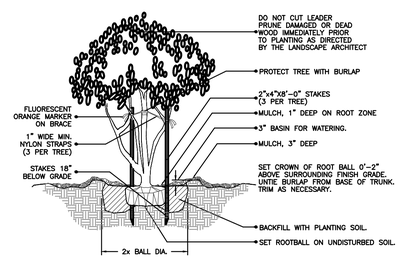

MULTI- TRUNK AND SMALL TREE
(2" cal. and under) PLANTING DETAIL
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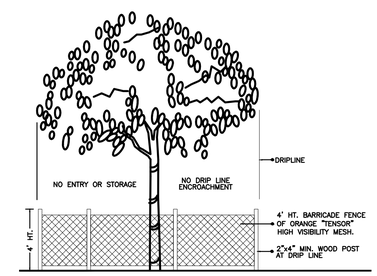
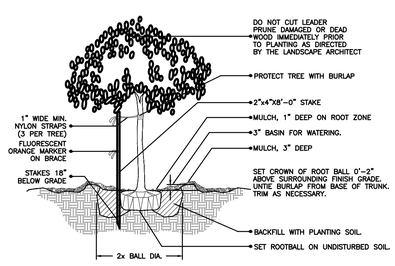
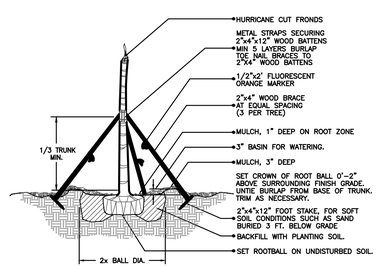


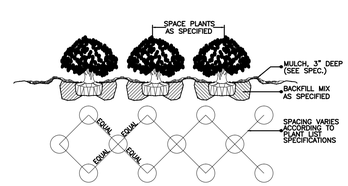
TREE PRESERVATION
BARRICADE FENCING DETAIL
N.T.S.



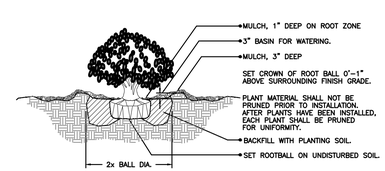
(2" cal. and under)
SMALL TREE PLANTING DETAIL
N.T.S.



CIGARED SABAL
PALM PLANTING DETAIL
N.T.S.



SHRUB / GROUNDCOVER
SPACING / PLANTING DETAIL
N.T.S.



SHRUB PLANTING DETAIL
N.T.S.

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MICHAEL D. GROSSWIRTH
REGISTERED LANDSCAPE ARCHITECT
May 27, 2015
FLORIDA LICENSE No. 6666871
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

LANDSCAPE NOTES & DETAILS

SHEET NUMBER:

CFG08.2

Printed on Wednesday, May 27, 2015, 11:36 AM by Maxwell Kaplan, ...\LANDSCAPE\LANDSCAPE PLAN ------ LAYOUT: CFG08.2 LANDSCAPE NOTES & DETAILS

LANDSCAPE GENERAL NOTES

A. SCOPE OF WORK

1. THE WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.

2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL PLANTING AREAS OF THIS CONTRACT UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

B. PROTECTION OF EXISTING STRUCTURES

1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, AND OTHER ITEMS OF CONSTRUCTION AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THIS CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.

C. PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS, EXISTING OR OTHERWISE, CAUSED BY CARELESS OPERATION OF EQUIPMENT, STOCKPILING OF MATERIALS, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP—LINE OR THE SPILLING OF OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP—LINE.

2. NO MATERIALS SHALL BE BURNED WHERE THE HEAT WILL DAMAGE ANY PLANT. TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY PERCENT (20%) PER INCH OVER FOUR INCHES (4") CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES, OR AS MAY BE REQUIRED BY THE REGULATING GOVERNMENT AGENCY, WHICHEVER IS GREATER. CALIPER SHALL BE MEASURED AT BREAST HEIGHT OR FOUR FEET (4) ABOVE SURROUNDING GROUND.

D. MATERIALS

1. SUBMITTALS: GENERAL SAMPLES OF PLANTING MATERIALS AS LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL ON THE SITE OR AS OTHERWISE DETERMINED BY THE OWNER. UPON APPROVAL OF SAMPLES, DELIVERY OF MATERIALS MAY BEGIN.
MATERIALS SAMPLE SUBMITTALS
MULCH ONE (1) CUBIC FOOT
TOPSOIL ONE (1) CUBIC FOOT
PLANTS ONE (1) REPRESENTATIVE SAMPLE OF EACH VARIETY

2. PLANT MATERIALS
a) GENERAL: PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. NOMENCLATURE SHALL CONFORM TO STANDARDIZED PLANT NAMES, 1942 EDITION. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH "GRADES AND STANDARDS FOR NURSERY PLANTS" PARTS I AND II, LATEST EDITION PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA NO. 1 AS AN ABSOLUTE MINIMUM UNLESS OTHERWISE SUPERCEDED BY A FLORIDA FANCY DESIGNATION, AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE FRESHLY DUG, SOUND, HEALTHY, VIGOROUS, WELL—BRANCHED AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE. AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE BRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE OWNER.

b) MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE TOP OF ROOTBALL (TRUNK FLARE) AND/OR ACROSS THE AVERAGE SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.

c) INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER. FOR QUALITY, SIZE, AND VARIETY. SUCH PRELIMINARY APPROVAL SHALL NOT SUPERCEDE THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF BALLS OR ROOTS, LATENT DEFECTS OR INJURIES, PRESENCE OF INSECTS, AND OTHER CONDITIONS THAT MAY HAVE OCCURRED SINCE THE NURSERY INSPECTION. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

d) AMENDED PLANTING SOIL. PLANTING SOIL FOR USE IN BACK FILLING PLANTING HOLES SHALL BE FORTY PERCENT (40%) TOPSOIL AND SIXTY PERCENT (60%) SAND AND BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER, WITHOUT MIXTURE OF SUBSOIL MATERIALS, AND OBTAINED FROM A WELL—DRAINED, ARABLE SITE. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND SHALL BE FREE FROM HEAVY CLAY, COARSE SAND, STONES, LIME, LUMPS, PLANTS, ROOTS OR OTHER FOREIGN MATERIALS, OR NOXIOUS WEEDS. IT SHALL NOT CONTAIN TOXIC SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. PH RANGE SHALL BE 5.0 TO 7.0 INCLUSIVE.

e) SAND SHALL BE CLEAN, WELL DRAINING NATIVE SAND, IF REQUESTED, CONTRACTOR SHALL, AT ANY TIME AND AT NO COST TO OWNER SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR USE UNDER THIS CONTRACT FOR APPROVAL BY OWNER.

E. WATER

1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN AN ADEQUATE GROWTH OF PLANTS AND SHALL NOT CONTAIN HARMFUL NATURAL OR MAN—MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SUCH SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

F. COMMERCIAL FERTILIZER

1. COMMERCIAL FERTILIZER SHALL BE A COMPLETE FORMULA, IT SHALL BE UNIFORM IN COMPOSITION, DRY AND FREE FLOWING. THIS FERTILIZER SHALL BE DELIVERED TO THE SITE IN THE ORIGINAL UNOPENED CONTAINERS, EACH BEARING THE MANUFACTURER'S GUARANTEED STATEMENT OF ANALYSIS.

FIFTY PERCENT (50%) OF THE NITROGEN SHALL BE DELIVERED FROM NATURAL ORGANIC SOURCES. THE FOLLOWING FERTILIZERS SHALL BE USED AND APPLIED AT RATES AS SUGGESTED BY MANUFACTURER'S SPECIFICATIONS:

1. SHRUBS AND TREES — MILORGANITE, OR APPROVED EQUAL
2. ANNUALS AND GROUNDCOVERS — OSMOCOTE/SIERRA BLEND 14—14—14
3. SOD — 8—8—8

IN ADDITION TO SURFACE APPLIED FERTILIZERS, ALL CONTAINER GROWN AND FIELD GROWN PLANT MATERIAL SHALL RECEIVE "AGRIFORM" PLANTING TABLETS 24—10—5 FORMULA, 21 GRAM OR EQUAL. THESE TABLETS SHALL BE PLACED AT THE RATE AND DEPTH SPECIFIED BY MANUFACTURER.

G. MULCH

1. MULCH SHALL BE FROM SHREDDED WOOD DERIVED FROM MELALEUCA OR OTHER INVASIVE TREE SPECIES AND SHALL BE STERILIZED TO EFFECTIVELY ELIMINATE ALL SEEDS, SPORES, ETC. AND RENDER THEM BARREN.

2. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE INCHES (3").

3. MULCH SHALL BE GRADE 'B' SHREDDED, AND SHALL BE APPLIED EVENLY AND SMOOTH TO PLANTED AREAS.

4. NO RED OR COLORED MULCH SHALL BE ACCEPTED UNLESS SPECIFIED ACCORDINGLY. NO CYPRESS MULCH SHALL BE USED.

H. DIGGING AND HANDLING

1. PROTECT ROOT SYSTEMS OR ROOTBALLS OF PLANTS AT ALL TIMES FROM SUN AND DRYING WINDS, WATER EROSION, AND OTHER HARMFUL CRITERIA AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT BREAKING AND DRYING OUT DURING LOADING, TRANSIT, AND UNLOADING/PLANTING. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO SITE SHALL BE SPRAYED WITH AN ANTITRANSPIRANT PRODUCT ("WILTPRUF" OR EQUAL) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.

2. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS, AND IN ACCORDANCE WITH "GRADES AND STANDARDS FOR NURSERY PLANTS" FLORIDA PUBLICATION. NO PLANT WITH A ROOTBALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS BALLED AND BURLAPPED OR CONTAINER GROWN SHALL NOT BE HANDLED BY STEMS.

3. PLANTS MARKED "BR" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. THE ROOTS SHALL NOT BE CUT WITHIN THE MINIMUM SPREAD SPECIFIED IN THE PLANT LIST. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT IN MOVING AND PRIOR TO PLANTING.

4. PROTECTION OF PALMS (IF APPLICABLE): ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS BY "GRADES AND STANDARDS FOR NURSERY PLANTS" FLORIDA PUBLICATION. PRUNING PRACTICED OTHER THAN MINIMAL PRUNING OF FRONDS, PRIMARILY TO REACH A "CLEAR TRUNK" SPECIFICATION, MAY CONSTITUTE REJECTION, OR ALL PALMS SUBJECTED TO SUCH PRACTICE. LIKEWISE EXCESSIVE PRUNING OR "SHAVING" OF ROOTBALLS TO MEET "CLEAR TRUNK" CRITERIA MAY CONSTITUTE REJECTION ONSITE. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL ON THE NEWLY TILLED PLANTING BEDS FOR GENERAL NUTRIENT DISBURSEMENT. MASS PLANTING BED IS NOW READY TO RECEIVE HOLES FOR NEW PLANTS. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

14. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE LANDSCAPE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. TREES SHALL USE ARBORTIE AS PER DETAIL SHEET. PALMS SHALL USE WOOD BRACING PER DETAIL SHEET.

15. MULCHING: PROVIDE A THREE INCH (3") MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUNCOVER AND VINE BED AND TREE PIT (FOR TREES AND PALMS, MIN. THREE INCH (3') FROM EDGE OF TRUNKS). – UNLESS OTHER REQUIRED BY LOCAL CODES AND SPECIFIED AS SUCH.

16. SYSTEMIC HERBICIDE WEED CONTROL ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER OR THEIR DESIGNEE, A SYSTEMIC HERBICIDE SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. AFTER MULCH HAS BEEN APPLIED TO PLANTING BEDS AND TREE RINGS, TREAT ALL MULCHED AREAS WITH AN APPROVED PRE—EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER.

0. LAWN SODDING

STENOTAPHRUM SECUNDATUM, V. 'FLORITAM' UNLESS OTHERWISE NOTED. (ST. AUGUSTINE SOLID SOD).
1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING.
COMPLETE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A GRASS LAWN ACCEPTABLE TO THE OWNER AND GOVERNING AGENCIES.
2. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, ROOTS, AND DEBRIS, AND THE SOIL BROUGHT TO AN EVEN PREPARED GRADE TO ALLOW FOR SOIL PREPARATION BELOW.

3. SOIL PREPARATION: PREPARE LOOSE BED FOUR INCHES (4") DEEP. APPLY FERTILIZER AT A RATE OF TWENTY (20) POUNDS PER ONE THOUSAND (1000) SQUARE FEET. FERTILIZER SHALL BE UNIFORMAL AND COMMERCIAL BROADCAST SPREADERS. MIX FERTILIZER THOROUGHLY WITH THE SOIL TO A DEPTH OF THREE INCHES (3"). HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY TO PREPARE FOR SOD INSTALLATION.

4. SODDING: THE CONTRACTOR SHALL SOD ALL PERVIOUS AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS TO CREATE A UNIFORM, NEW TURF BLANKET FOR THE SITE.

a) THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETY TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND, SOD PANELS SHALL BE LAID TIGHTLY TOGETHER TO MAKE A SOLID, SODDED LAWN AREA.

b) SOD SHALL BE LAID IN ROWS. WITH EVERY OTHER ROW STAGGERED HALFWAY BETWEEN THE NEXT TO INSURE NO CONTINUOUS STACKED JOINTS. SEW JOINTS OF SOD TO INSURE A TIGHT FIT AT JOINTS.

c) SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. ADJACENT TO BUILDINGS, A FOUR INCH (4") STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR THIS PURPOSES, AND THEN THOROUGHLY IRRIGATED TO THOROUGHLY MOISTEN THE SOIL BENEATH. IF, IN THE OPINION OF THE OWNER, TOP—DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND AS APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN.

5. DURING DELIVERY, PRIOR TO AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE INSTALLED DURING THE DAY OF ITS ARRIVAL.

6. LAWN MAINTENANCE:

a) WITHIN THE SITE, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE—SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS UNTIL CERTIFICATION OF ACCEPTABILITY BY OWNER OR AS IN THE ORIGINAL WORK SCOPE AND PROCESS (INCLUDING REGRADING, IF NECESSARY).

b) WATER EVERY DAY FOR FOURTEEN (14) SUCCESSIVE DAYS, THEN WATER THREE (3) TIMES PER WEEK (AT EVEN INTERVALS) UNTIL FULLY ESTABLISHED OR UNTIL AUTOMATIC IRRIGATION SYSTEM IS FULLY OPERATIONAL AND PROGRAMMED ACCORDINGLY. COORDINATE WATERING SCHEDULE WITH NATURAL RAINFALL. RAINFALL EVENTS IN DURATION OF TWENTY (20) MINUTES OR MORE THAT PRODUCE MORE THAN A HALF INCH (1/2") OF PRECIPITATION WILL NEGATE THE NEED FOR WATERING THE FOLLOWING DAY IF PREVIOUSLY SCHEDULED. ALL WATERING SHALL BE OF SUFFICIENT QUANTITY TO WET OR RESTORE WATER TO A DEPTH OF FOUR INCHES (4").

P. CLEANUP

1. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

Q. PLANT MATERIAL MAINTENANCE

1. ALL PLANTS AND PLANTING MATERIALS INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE—STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER OR OWNER'S DESIGNEE. MAINTENANCE AFTER THE CERTIFICATION OF ACCEPTABILITY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS IN THIS SECTION. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE TO COVER LANDSCAPE AND IRRIGATION MAINTENANCE FOR A PERIOD OF NINETY (90) CALENDAR DAYS COMMENCING AFTER ACCEPTANCE (SEE NEXT SECTION).

R. MAINTENANCE (ALTERNATE BID ITEM)

1. CONTRACTORS ARE REQUESTED TO PROVIDE A BID ESTIMATE FOR LANDSCAPE AND IRRIGATION MAINTENANCE FOLLOWING THE INITIAL 90—DAY MAINTENANCE PERIOD ON A COST PER MONTH BASIS.

S. GUARANTEE

1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER OR OWNER'S DESIGNEE.

2. THE LIFE AND SATISFACTORY CONDITION OF ALL SOD INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED BY THE CONTRACTOR FOR A MINIMUM OF NINETY (90) CALENDAR DAYS, COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNERS OR OWNER'S DESIGNEE.

3. REPLACEMENT: ANY PLANT NOT IN A HEALTHY, THRIVING GROWING CONDITION SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. SHOULD THE OWNER ELECT, TREES AND PALMS MAY BE GIVEN A PERIOD OF NINETY (90) DAYS BEFORE REMOVAL TO ALLOW THE CONTRACTOR TO RESURRECT THE TREE OR PALM IN QUESTION AND BRING IT TO A THRIVING, HEALTHY CONDITION. ALL REPLACEMENTS SHALL BE PLANTS OF LIKE KIND, CONDITION AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED, PLANTED, AND MULCHED AS SPECIFIED WITHIN THESE SPECIFICATIONS, AT NO ADDITIONAL COST TO THE OWNER. ANY REPAIRS FROM THIS REPLACEMENT MATERIAL SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY. REPLACEMENT MATERIAL SHALL BE GUARANTEED TO A ONE (1) YEAR PERIOD FROM THE DAY OF REPLACEMENT ACCEPTANCE BY THE OWNER. SHOULD REPLACEMENT MATERIAL FAIL WITHIN THE GUARANTEE PERIOD, OWNER MAY OPT FOR A CREDIT OF THE MONETARY AMOUNT FOR THE REPLACEMENT MATERIALS, AT A RATE OF THE ORIGINAL CONTRACT BID RATE, IN LIEU OF AN ADDITIONAL REPLACEMENT.

4. IN THE EVENT THE OWNER ELECTS NOT TO CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE (AND IRRIGATION) MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER OR THEIR DESIGNEE, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH OF ITEMS UNDER REPLACEMENT WARRANTY. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

T. FINAL INSPECTION AND ACCEPTANCE OF WORK

1. FINAL INSPECTION BY OWNER OR THEIR DESIGNEE AT THE END OF THE GUARANTEE PERIOD SHALL INCLUDE PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY PLANTS NOT MEETING THE CRITERIA OF HEALTHY, VIGOROUS, AND THRIVING AT THIS TIME, AND THAT HAVE NOT ALREADY BEEN REPLACED PREVIOUSLY UNDER SAID WARRANTY, SHALL BE SUBJECT TO THE SAME ONE (1) YEAR GUARANTEE (OR AS SPECIFIED BY THE OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

U. GRADING & DRAINAGE NOTES

1. PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "DIG SAFE" NOTIFICATION PROCEDURES PROMOTED BY THE RESPECTIVE UTILITY COMPANIES IN FLORIDA, CALL FLORIDA SUNSHINE AT 811.

2. CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDINGS AT ALL TOP AND BOTTOM OF SLOPES.

3. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE—EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE OWNER PRIOR TO CONTINUING WORK.

4. WHERE NEW PAVING OR EARTHWORK MEETS EXISTING PAVING OR EARTHWORK, SMOOTHLY BLEND LINE AND GRADE OF EXISTING WITH NEW. WHERE EXISTING VEGETATION IS TO REMAIN, MEET EXISTING GRADES; DO NOT FILL ABOVE BASAL FLARE OF EXISTING TREES.

V. UTILITY PLAN NOTES

1. CONTRACTOR SHALL INSTALL SCHEDULE 40 PVC CONDUIT (SLEEVES) FOR ALL IRRIGATION PIPING UNDER ALL PAVEMENT AREAS TO CONNECT ALL LANDSCAPE AREAS.

W. SITE PREPARATION

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MEET THE OWNER AND IDENTIFY TREES AND SHRUBS WHICH ARE TO BE PROTECTED AS WELL AS THOSE WHICH ARE TO BE REMOVED. DO NO CLEARING WITHOUT A CLEAR UNDERSTANDING OF EXISTING CONDITIONS TO BE PRESERVED.

2. TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED BY THE INSTALLATION OF FENCING AT THE DRIP LINE OR AS DIRECTED BY THE OWNER (SEE LANDSCAPE DETAIL SHEET). PROTECTIVE FENCING SHALL BE INSTALLED PRIOR TO CONSTRUCTION. PROTECTIVE FENCING SHALL BE SUFFICIENT TO PREVENT CONSTRUCTION EQUIPMENT FROM COMPACTING SOIL AT THE ROOT ZONE AND DAMAGING TRUNKS AND BRANCHES.

3. IF, IN ORDER TO PERFORM EXCAVATION WORK, IT SHOULD BECOME NECESSARY TO CUT ROOTS OF PLANTS TO BE SAVED, SUCH ROOTS SHOULD BE CUT NEATLY WITH A SMOOTH CLEAN CUT BY A SHARP SAW, COVERED WITH BURLAP AND KEPT MOIST UNTIL ROOTS ARE BACK FILLED. TEARS OR JAGGED CUTS TO ROOTS ARE UNACCEPTABLE.

4. TREE AND SHRUB REMOVAL SHALL INCLUDE THE FILLING, CUTTING, GRUBBING OUT OF ENTIRE ROOT SYSTEMS AND SATISFACTORY OFF—SITE DISPOSAL OF ALL TREES, SHRUBS, STUMPS, VEGETATIVE AND EXTRANEOUS DEBRIS PRODUCED BY THE REMOVAL OPERATIONS.

5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE INSIDE AND OUTSIDE THE LIMITS OF CONSTRUCTION DUE TO HIS CONTRACT OPERATIONS.

6. ALL REFUSE, DEBRIS, UNSUITABLE MATERIALS AND MISCELLANEOUS MATERIALS TO BE REMOVED FROM THE SITE AND DISPOSED OF OFF—SITE BY CONTRACTOR.

7. ALL INVASIVE EXOTIC VEGETATION SHALL BE DISPOSED OF OR TREATED AS PER THE LOCAL OR REGIONAL GOVERNING AUTHORITIES, REQUIREMENTS OR RECOMMENDATIONS.

X. ROOT CONTROL BARRIER

1. ROOT CONTROL PRODUCT SHALL BE A BIOLOGICAL BARRIER PRODUCT. PRODUCT SHALL BE 810—BARRIER ROOT CONTROL SYSTEM, AS MANUFACTURED BY BBA FIBERWEB/REEMAY, INC. AND DISTRIBUTED BY HORT ENTERPRISES, INC.
HORT ENTERPRISES, INC.
P.O. BOX 2449
POMPANO BEACH, FL 33061
1—800—995—4678

2. PRODUCT SHALL BE A BIOLOGICAL BARRIER UTILIZING LIME—RELEASE CAPSULES INTEGRATED INTO A GEOTEXTILE FABRIC. ACTIVE HERBICIDE SHALL BE TRIFLURALIN, AND MINIMUM TIME RELEASE OF EFFECTIVE PRODUCT SHALL BE 1—5 YEARS IN THE MOST ADVERSE CONDITIONS FOR SUCH A PRODUCT.

3. PRODUCT SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS FOR ROOT CONTROL SYSTEMS.

4. USE PRODUCT WHERE TREES ARE WITHIN EIGHT FEET (8') OR LESS OF HARDSCAPE SURFACES INCLUDING CURBS, SIDEWALKS, STEPS, AND ROADWAYS.

5. SPECIFY 1 9.5' WIDTH OPTION.

6. WHERE CONDITIONS REQUIRE PRODUCT AS SET FORTH IN NO. 4 ABOVE, USE PRODUCT AT LEAST TEN FEET (10') IN EITHER DIRECTION FROM THE CENTER OF TRUNK ALONG LINEAR FEATURES SUCH AS CURBS, WALKWAYS, ETC. THE INTENT OF THIS SPECIFICATION IS TO PROVIDE A ROOT CONTROL SYSTEM WHERE ROOTS WOULD LIKELY CAUSE PHYSICAL DAMAGE TO ADJACENT HARDSCAPE SURFACES, FOUNDATIONS, OR OTHER ELEMENTS THAT MAY RECEIVE DAMAGE FROM ROOT SYSTEMS OF TREES.

7. SEE WWW.BIOBARRIER.COM FOR ADDITIONAL INFORMATION AND PRODUCT SPECIFICATION.

Y. IRRIGATION

1. CONTRACTOR TO PROVIDE AN IRRIGATION DESIGN FOR BOTH LAWN AND BED AREAS. DESIGN TO BE SUBMITTED TO PROJECT LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL. CONTRACTOR TO VERIFY STATIC PRESSURE PRIOR TO DESIGN. CONTRACTOR IS RESPONSIBLE FOR ANY PRESSURE REDUCING DEVICES REQUIRED TO MEET PRESSURE REQUIREMENTS. SYSTEM DESIGN TO SHOW ALL VALVES, PIPING, HEADS, BACKFLOW PREVENTION, METERS, AND CONTROLLERS. ALL SLEEVES IN PAVEMENT AREAS MUST BE SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BACKFLOW PREVENTION DEVICE INSTALLATION AND PERMITTING. CONTRACTOR SHALL NOT INSTALL IRRIGATION IN RIGHT—OF—WAY UNLESS REQUIRED BY CITY. NETAFIM DRIP IRRIGATION TO BE INSTALLED IMMEDIATELY AROUND BUILDING TO PREVENT WATER SPRAY ON BUILDING, WALKS, AND WINDOWS. NETAFIM PIPING TO BE BURIED JUST BENEATH SOIL SURFACE AND COVERED INSTALLED BY AN OWNER APPROVED CONTACTOR.

2. DESIGNED SYSTEM SHALL CONSIST OF AN AUTOMATIC, UNDERGROUND IRRIGATION SYSTEM PROVIDING 100% COVERAGE WITH 100% OVERLAP, AND CONTAINING A RAIN SENSOR INSTALLED BY AN OWNER APPROVED CONTACTOR. THIS SYSTEM SHALL BE INSTALLED AND OPERATIONAL WITHIN TEN (10) DAYS OF THE INITIAL LANDSCAPE INSTALLATION.

SITE NOTES

1. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE OWNER PRIOR TO STARTING WORK.

GENERAL PLANTING NOTES

1. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THIS DRAWING.

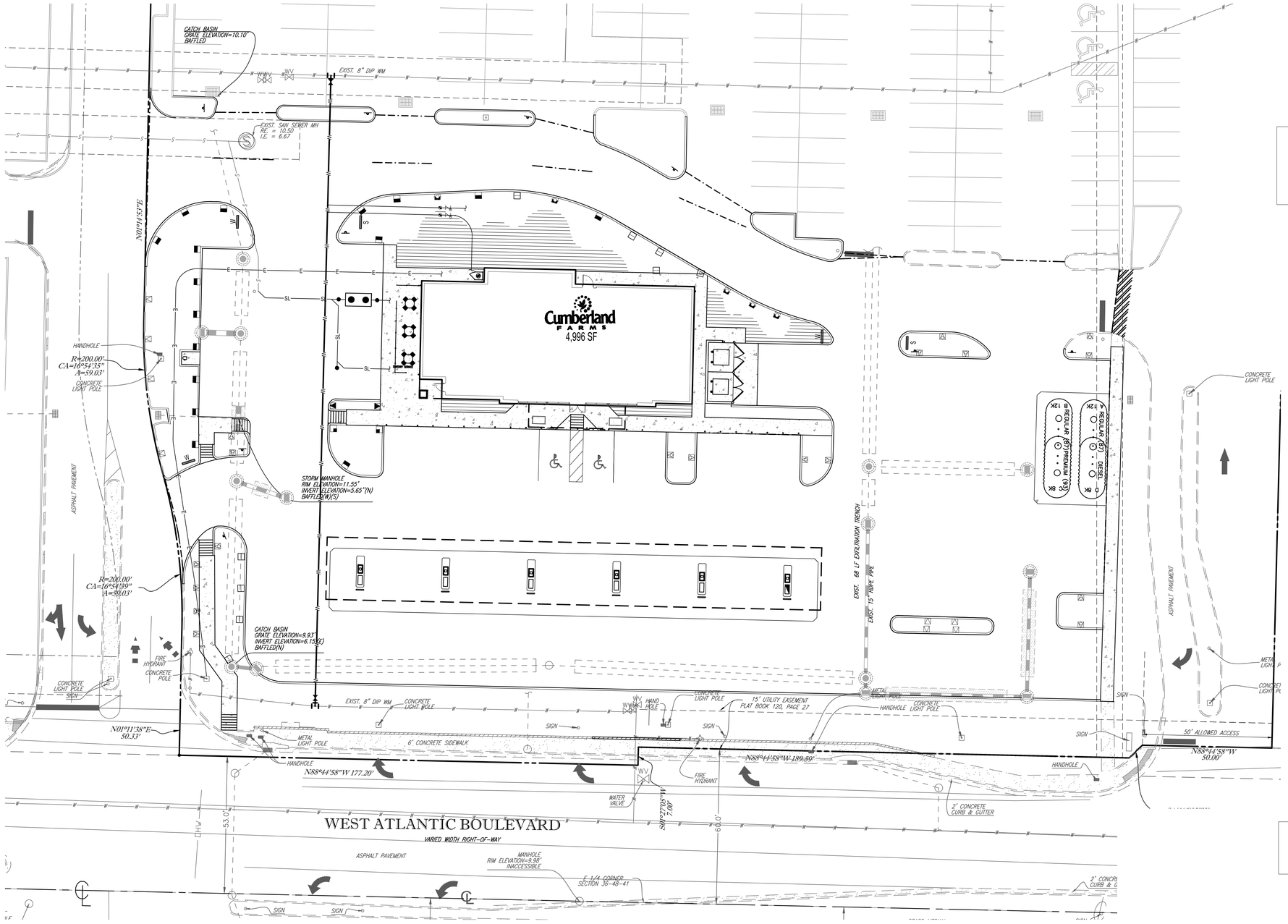
2. ALL BIODEGRADABLE BURLAP SHALL BE UNTIED AND PULLED DOWN TO EXPOSE THE TOP 1/3 OF THE BALL. WIRE BASKETS AND OTHER NON—BIODEGRADABLE MATERIALS ATTACHED TO PLANTS SHALL BE REMOVED PRIOR TO PLANTING. CARE SHALL BE TAKEN NOT TO BREAK OR DISTURB ROOT BALL OF PLANTS.

3. ALL PLANTS SHALL BE WATERED BY HAND IN SUFFICIENT QUANTITIES TO THOROUGHLY WET ENTIRE ROOT SYSTEM IMMEDIATELY AFTER PLANTING.

4. PLANTS SHALL BE GUARANTEED TO A PERIOD OF ONE (1) YEAR AFTER ACCEPTANCE OF THE PROJECT AND SHALL BE VIGOROUS AND THRIVING AT THE END OF THE GUARANTEE PERIOD SEE SECTIONS S, GUARANTEE FOR MORE DETAILS.

5. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE OWNER.

6. CONTRACTOR SHALL FAMILIARIZE HIMHER SELF WITH THE LIMITS OF WORK AND EXISTING CONDITIONS AND VERIFY ALL INFORMATION. IF DISCREPANCIES EXIST, CONTRACTOR SHALL NOTIFY OWNER OR OWNER'S D



ALL NEW IRRIGATION HEADS SHOWN SHALL BE INCORPORATED INTO EXISTING IRRIGATION SYSTEM WITH THE NEAREST IRRIGATION ZONE ABLE TO ACCOMMODATE THE ADDITIONAL GPM. CONTRACTOR TO VERIFY CAPACITY AND EQUIPMENT IN THE FIELD.

PLEASE REFER TO SHEET CFG08.5 FOR PROPOSED IRRIGATION SCHEDULES AND NOTES AND SHEET CFG08.6 FOR IRRIGATION DETAILS.

N
W E
S

20 10 5 0 20
1"= 20'

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DRAWN BY: RJK
CHECKED BY: MDG
CAD I.D.: IRRIGATION PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

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MICHAEL D. GROSSWIRTH
REGISTERED LANDSCAPE ARCHITECT
May 27, 2015
FLORIDA LICENSE No. 6666871
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

SHEET TITLE:

IRRIGATION PLAN

SHEET NUMBER:

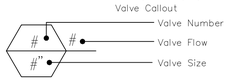
CFG08.4

Printed on: Wednesday, May 27, 2015, 11:38 AM by Maxwell Kaplan

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
EST LCS RCS CST SST	Rain Bird 1806-PRS 15 Strip Series Turf Spray 6" popup with pressure regulator.	10	30
SST	Rain Bird 1806-PRS 15 Strip Series Turf Spray 6" popup with pressure regulator.	18	30
Q T H F	Rain Bird 1806-PRS 10 Series MPR Turf Spray 6" popup with pressure regulator.	5	30
Q T H TT TQ F	Rain Bird 1806-PRS 12 Series MPR Turf Spray 6" popup with pressure regulator.	8	30
Q T H TT TQ F	Rain Bird 1806-PRS 15 Series MPR Turf Spray 6" popup with pressure regulator.	18	30
4 6 8 10 12 15 18	Rain Bird 1806-PRS ADJ Turf Spray 6" popup with pressure regulator.	1	30

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Area to Receive Dripline Netafim TLCV6-18(18) Landscape Dripperline with 0.6gph emitters at 18"o.c. (2.2 lph @ 0.45 m) with check valve, pressure compensation, 14.7psi min. to 50psi max. (1 to 3.5 bar). Dripperline laterals spaced at 18" (0.46 m) apart, with emitters offset for triangular pattern.	2,016 s.f.



NOTE A:
POINTS OF CONNECTION SHALL BE FROM EXISTING IRRIGATION SYSTEM. VERIFY THE ACTUAL LOCATION, SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

NOTE B:
CONTROLLER IS EXISTING. CONTRACTOR TO VERIFY CONDITION AND FINAL LOCATION OF CONTROLLER AND ELECTRICAL POC SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE C:
MAINLINE AND RELATED EQUIPMENT SHOWN WITHIN PAVING FOR CLARITY ONLY, ACTUAL MAINLINE AND RELATED EQUIPMENT LOCATION TO BE WITHIN PLANTERS AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES TYP.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, ETC. VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN PAVING FOR CLARITY ONLY, ACTUAL LOCATION TO BE WITHIN PLANTER. BUBBLERS SHALL BE ALIGNED WITH TREES AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE BACKFLOW PREVENTER AND THE AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. CONTRACTOR IS TO PROVIDE AN ADDITIONAL PILOT WIRE FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. THOMAS ENGINEERING GROUP RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.
14. CONTRACTOR TO RECERTIFY EXISTING PUMP AND PVB IF APPLICABLE.

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www.ThomasEngineeringGroup.com

MICHAEL D. GROSSWIRTH
REGISTERED LANDSCAPE ARCHITECT
May 27, 2015
FLORIDA LICENSE No. 6666871
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

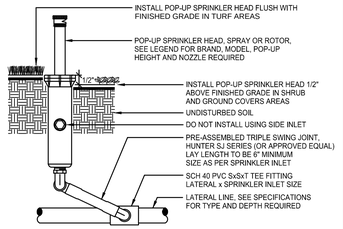
SHEET TITLE:

IRRIGATION NOTES

SHEET NUMBER:

CFG08.5

Printed on Wednesday, May 27, 2015, 11:36 AM by Maxwell Kaplan
J:\PROJ\F140147 LAKEWOOD PLAZA\DWG\LANDSCAPE\IRRIGATION PLAN ------>LAYOUT CFG08.5 IRIGATION NOTES & DETAILS



SECTION VIEW - N.T.S.
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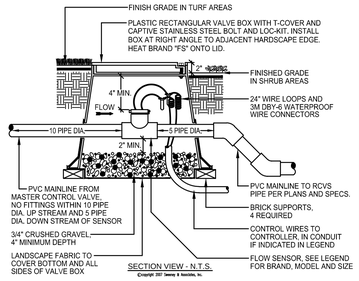
NOTE:
INSTALL SPRINKLER HEADS 6" FROM PAVING EDGE IN SHRUB AND GROUND COVER AREAS.
INSTALL SPRINKLER HEADS 12" FROM THE FACE OF BUILDING WALLS OR WINDOWS.
INSTALL SPRINKLER HEADS 4" FROM PAVING EDGE IN TURF AREAS.

INSTALL SPRINKLER HEADS PLUMB. ADJUST SPRAYS OR NOZZLE STREAM TO COVER LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.

A POP-UP SPRINKLER



SECTION VIEW - N.T.S.
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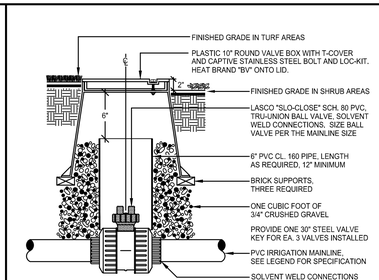
NOTE:
USE STANDARD OPENINGS PROVIDED IN VALVE BOX FOR PIPE, DO NOT CUT BOX.

USE SCH 80 PVC 45 DEGREE ELLS TO ACHIEVE MAINLINE DEPTH AS REQUIRED.

C FLOW SENSOR



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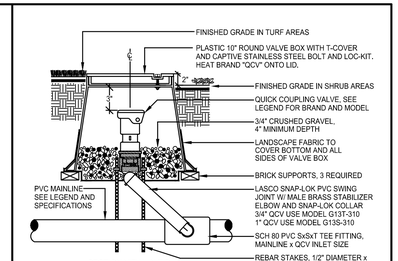
D BALL VALVE



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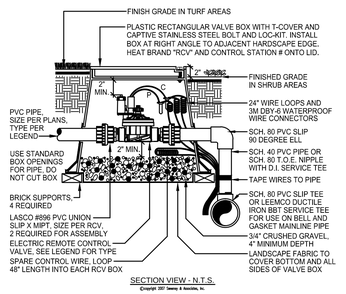
NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.

E QUICK COUPLER VALVE



SECTION VIEW - N.T.S.
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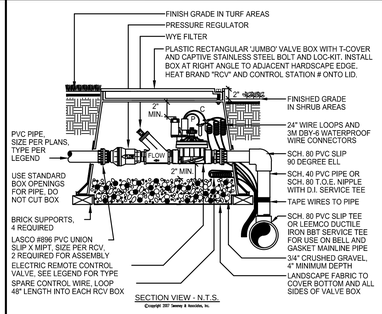
F REMOTE CONTROL VALVE



SECTION VIEW - N.T.S.
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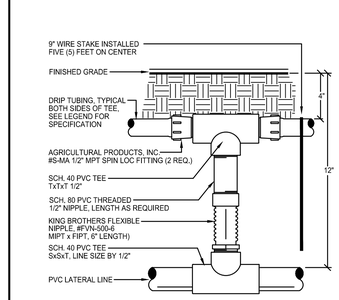
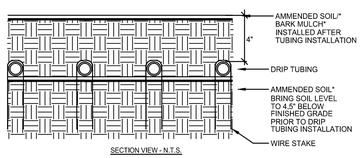
G DRIP RCV ASSEMBLY



SECTION VIEW

I GROUND ROD INSTALLTION

J DRIPLINE TUBING



SECTION VIEW - N.T.S.

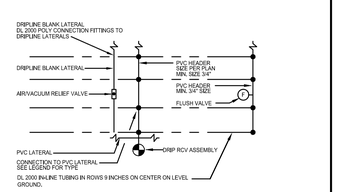
RECOMMENDED INSTALLATION: * AS PER LANDSCAPE DRAWINGS

TO INSURE EVEN PARALLEL AND LEVEL TUBING ROWS IT IS RECOMMENDED THAT THE SOIL LEVEL IN THE PLANTER AREAS BE BROUGHT TO 4.5" BELOW FINISHED GRADE AND PROPERLY COMPACTED AS PER THE LANDSCAPED DRAWINGS PRIOR TO THE INSTALLATION OF THE TUBING.

INSTALL TUBING AS INDICATED ON THESE DRAWINGS AND SECURE TO GRADE USING WIRE HOOP STAKES AT 5 FEET ON CENTER SPACING.

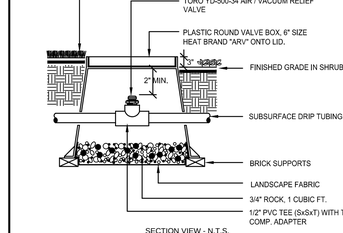
BACKFILL FINAL 4.5" OF SOIL/BARK MULCH OVER THE TUBING AFTER INSTALLATION OF THE TUBING AND OBSERVATION BY THE OWNER'S AUTHORIZED REPRESENTATIVE.

K DRIPLINE CONNECTION(SECTION)



INSTALL DRIP FLUSH VALVE PER DETAIL AT THE END OF EACH TUBING SECTION PER PLAN
INSTALL AIR RELIEF VALVES PER DETAIL, AT HIGH POINTS OF EACH TUBING SECTION PER PLAN.
RUN AIR/VACUUM RELIEF BLANK TUBING LATERAL ALONG HIGH POINT OF MOUND OR BERM.
ATTACH ALL IN-LINE DRIP TUBING TO BLANK LATERAL. MORE THAN TWO RELIEF VALVES MAY NEED TO BE INSTALLED PER SECTION

L DRIPLINE CONNECTION(PLAN)



SECTION VIEW - N.T.S.
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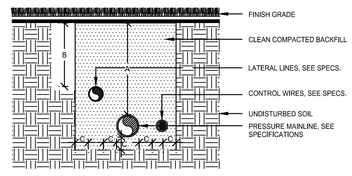
N DRIP AIR RELIEF VALVE



SECTION VIEW - N.T.S.
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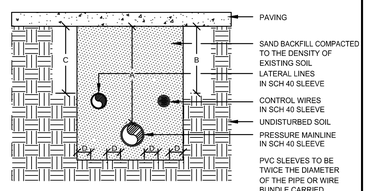
DIMENSION	A	B	C
1/2" TO 2-1/2" IN SIZE	18"	12"	4"
3" TO 6" IN SIZE	24"		4"

O PIPE INSTALLATION



SECTION VIEW - N.T.S.
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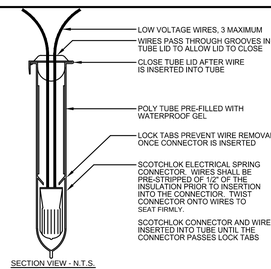
DIMENSION	A	B	C	D
1 1/2" TO 6" IN SIZE	36"	24"	24"	4"

P SLEEVE INSTALLATION



SECTION VIEW - N.T.S.
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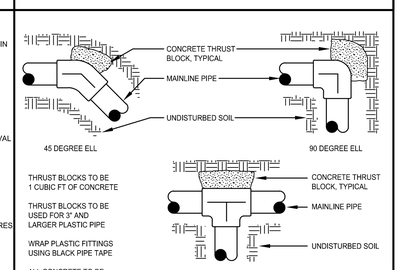
NOTE:
WIRE CONNECTOR SHALL BE A 3M DBY-6 DIRECT BURY SPLICE KIT.

KIT SHALL INCLUDE A SCOTCHLOK Y SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PREFILLED WITH GEL.

DIRECT BURY SPLICE KIT SHALL BE USED TO ELECTRICALLY CONNECT 2 - 3 #14 OR 2 #12 PRE-STRIPPED COPPER WIRES. LARGER WIRES OR GREATER QUANTITIES OF WIRES SHALL REQUIRE A LARGER APPROVED WIRE CONNECTION.

Q WIRE CONNECTION



SECTION VIEW - N.T.S.

R THRUST BLOCKING

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1000 CORPORATE DR. SUITE 250 FT. LAUDERDALE, FL 33334 P: 954-202-7000
4950 W. KENNEDY BLVD. SUITE 600 TAMPA, FL 33609 P: 813-379-4100
125 W INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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PROJECT No.:	F140147
DRAWN BY:	RJK
CHECKED BY:	MDG
CAD I.D.:	IRRIGATION PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
FORT LAUDERDALE, FL 33334
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FLORIDA LICENSE No. 6666871
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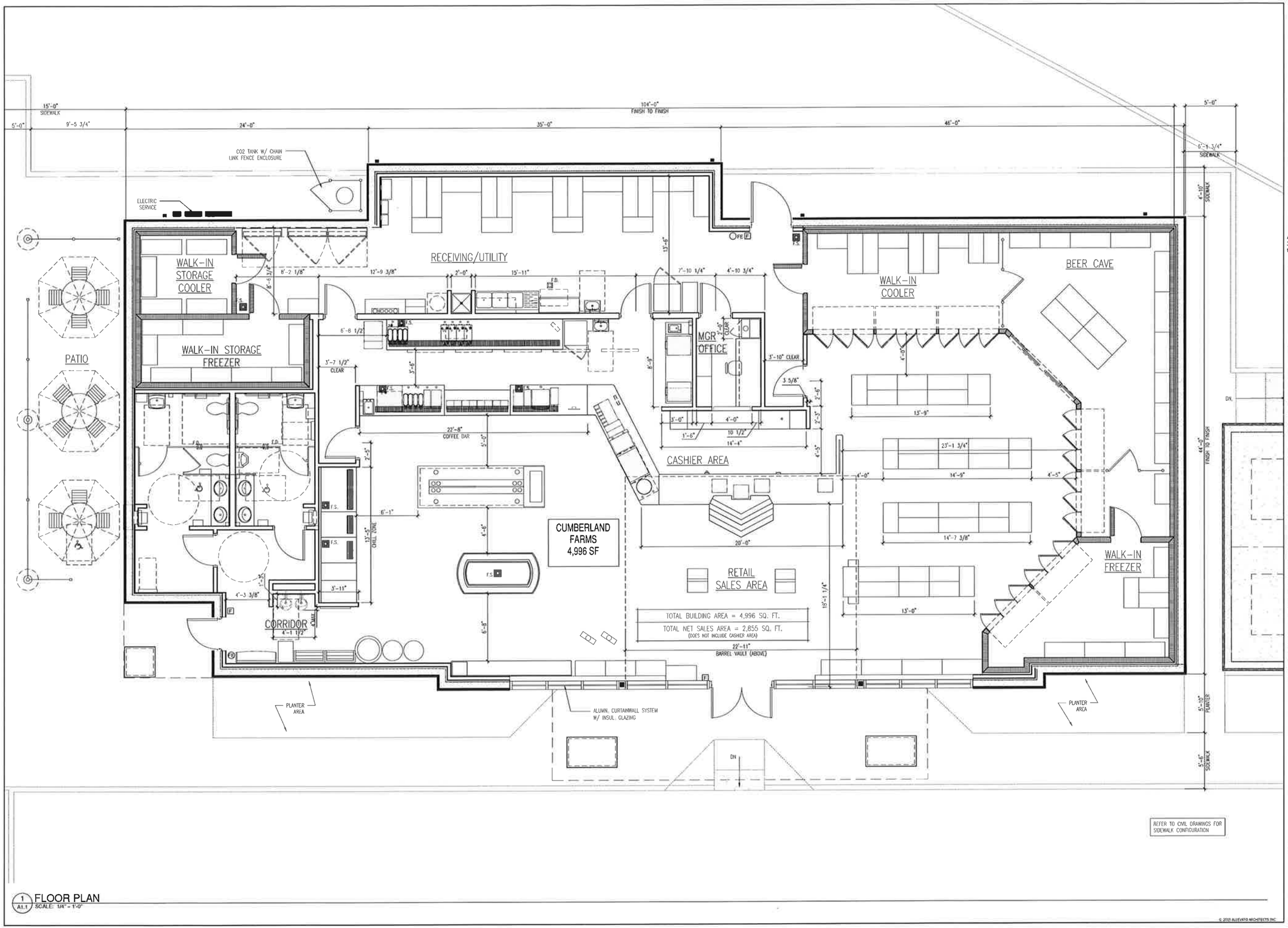
SHEET TITLE:
IRRIGATION DETAILS

SHEET NUMBER:
CFG08.6

Printed on Wednesday, May 27, 2015, 11:37 AM by Maxwell Kaplan, J:\LANDSCAPE\IRRIGATION PLAN\LAKEWOOD CFG08.6 IRRIGATION DETAILS



1 A1.1 FLOOR PLAN
SCALE: 1/4" = 1'-0"

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Project Title
New Construction:

Cumberland FARMS

Store #TBD
VSH # TBD
Oracle #FL8215

Atlantic & 441 St
MARGATE, FL 33063

Owner

Cumberland Farms, Inc.
100 Crossing Blvd
Framingham, MA 01702
tel 508 270 1400

Architect

ALLEVATO

Allevato Architects Inc
31 Hayward Street, Franklin MA 02038
tel 508 528 0770 fax 508 528 9454

Seal

James Owens
FL #97371

Consultant

Revisions

No.	Date	Issued for
	05/20/15	SD SUBMISSION

Key Plan

Title
FLOOR PLAN

Date: 05/20/15

Drawing No.

A1.1

Project No. 1500.10

FINISH SCHEDULE

ANNO #	DESC.	MANUFACTURER	MODEL	COLOR	NOTES
EIFS-1	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS SW7035 AESTHETIC WHITE	COLOR MATCH TO SHERWIN WILLIAMS AESTHETIC WHITE.
EIFS-2	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS SW6546 CLOUD NINE	PROVIDE SCARF JOINTS ON ALL EXTERIOR SYNTHETIC WOOD TRIM. GC TO PUTTY ALL NAIL HOLES & PAINT ALL SYNTHETIC WOOD TRIM & PANELS.
EIFS-3	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS (M43x57 (YELLOW BASE) SATIN FINISH	FORMULA: OZ 32 64 128 W1 WHITE = 40 1 - G2 NEW GREEN = 26 - 1 Y3 DEEP GOLD = 11 - 1
CS-1	CULTURED STONE	OWENS CORNING CULTURED STONE, LLC	CSV-2026 SOUTHERN LEDGESTONE	FOG	INSTALL DRYSTACK ONLY
GU-1	ALUMINUM GUTTER SYSTEM	HICKMAN	0.05 ALUM.	WHITE	PROVIDE ALL ACCESSORIES REQ'D FOR A COMPLETE CONTINUOUS INSTALLATION, INSTALL PER MFG INSTRUCTIONS, ENSURE SEALED, WATERTIGHT CORNER CONNECTIONS, FLASH & SEAL TO DOWNSPOUTS AS REQ'D.
MTL-1	METAL COPING				

WALL SIGNAGE SPECIFICATION

CUSTOM FABRICATED
INTERNALLY ILLUMINATED SIGN BOX

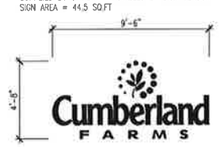
SUPPLIED BY OWNER – INSTALLED BY SIGN VENDOR
SIGN AREA = 59.6 SQ.FT

4 A3.1 FRONT WALL SIGNAGE DETAIL
SCALE: 1/4"=1'-0"

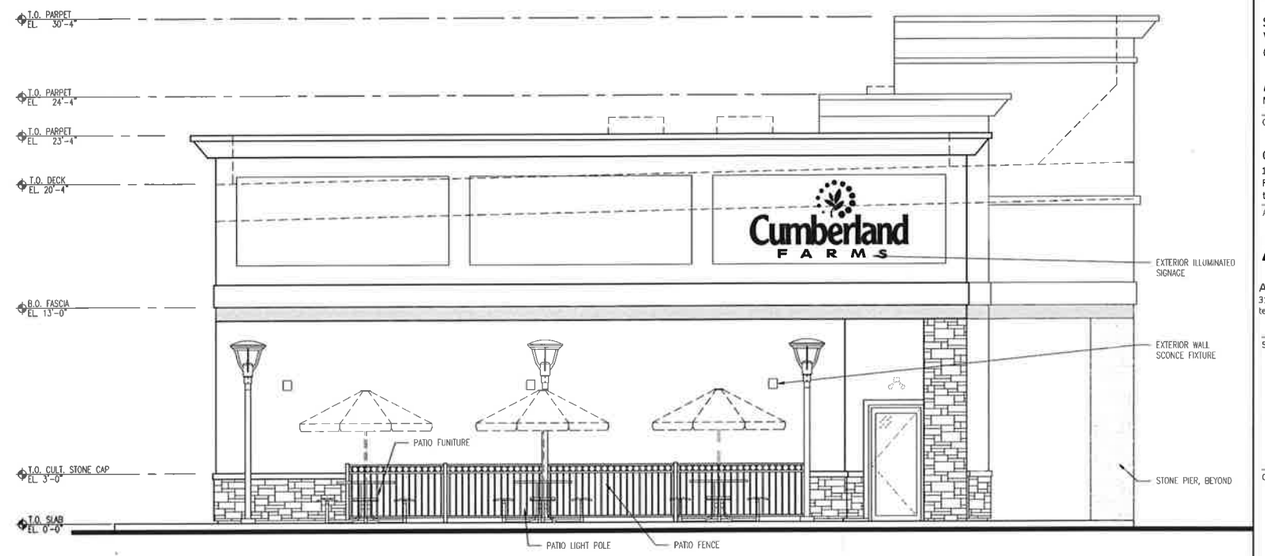
WALL SIGNAGE SPECIFICATION

CUSTOM FABRICATED
INTERNALLY ILLUMINATED SIGN BOX

SUPPLIED BY OWNER – INSTALLED BY SIGN VENDOR
SIGN AREA = 44.5 SQ.FT



3 A3.1 SIDE WALL SIGNAGE DETAIL
SCALE: 1/4"=1'-0"



2 A3.1 LEFT SIDE ELEVATION
SCALE: 1/4"=1'-0"

1 A3.1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

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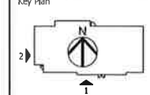


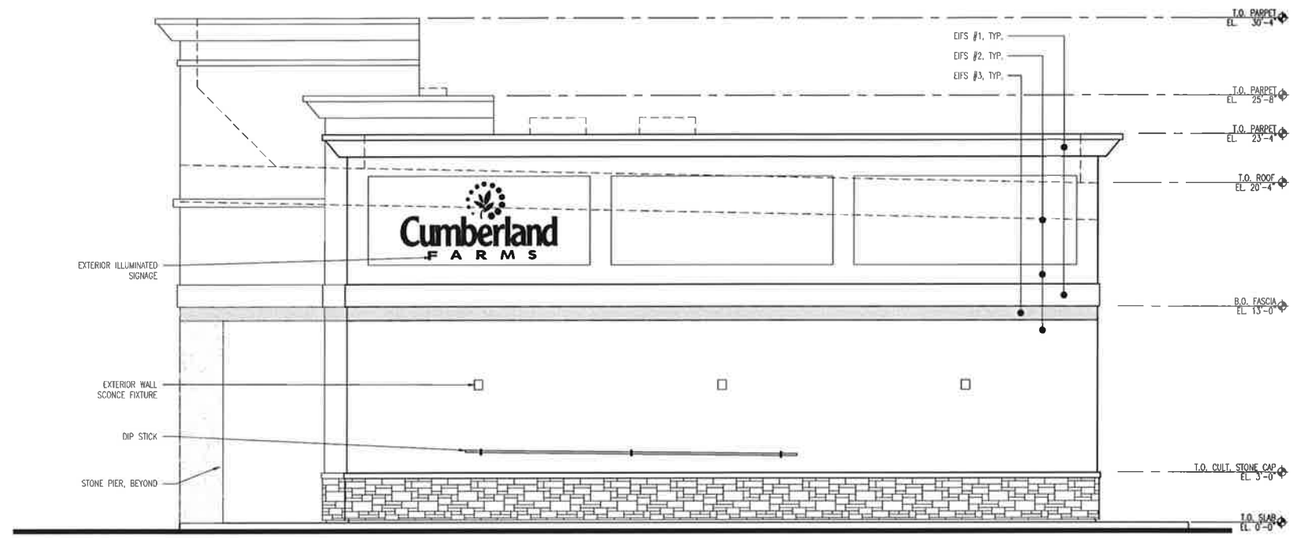
Title
EXTERIOR ELEVATIONS

Date: 05/20/15

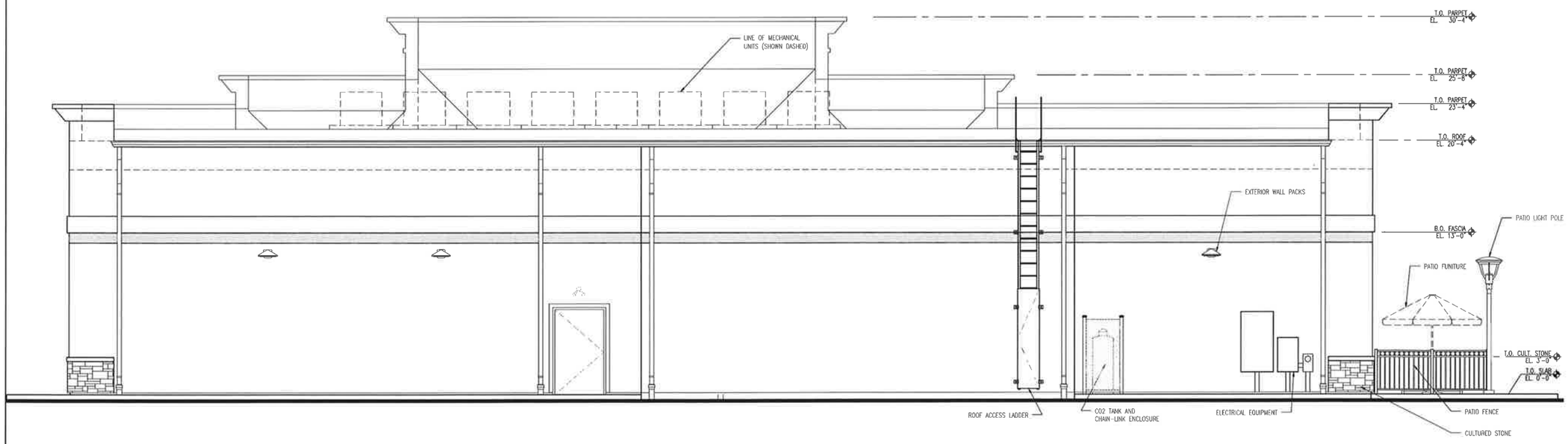
Drawing No.

A3.1

Project No. 1500.10



2 A3.2 RIGHT SIDE ELEVATION
SCALE: 1/4"=1'-0"



1 A3.2 REAR ELEVATION
SCALE: 1/4" = 1'-0"

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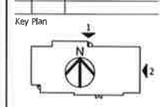
	05/20/15	SD SUBMISSION

Key Plan



Title

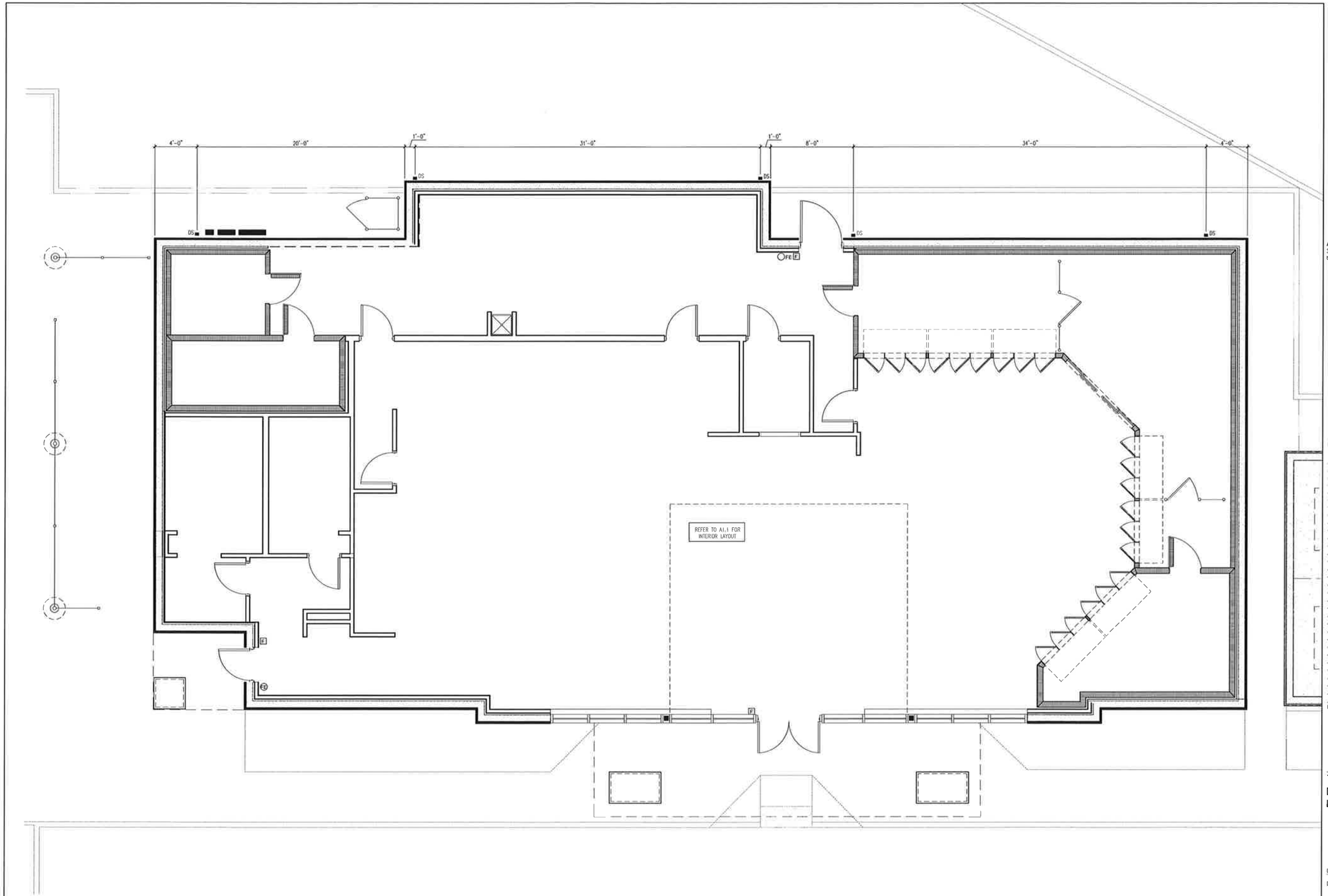
EXTERIOR ELEVATIONS

Date: 05/20/15

Drawing No.

A3.2

Project No. 1500.10



1 DS1.1 DOWNSPOUT LOCATION PLAN
SCALE: 1/4" = 1'-0"

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FL #97371

Consultant

Revisions

No.	Date	Issued for
	05/20/15	SD SUBMISSION

Key Plan

Title

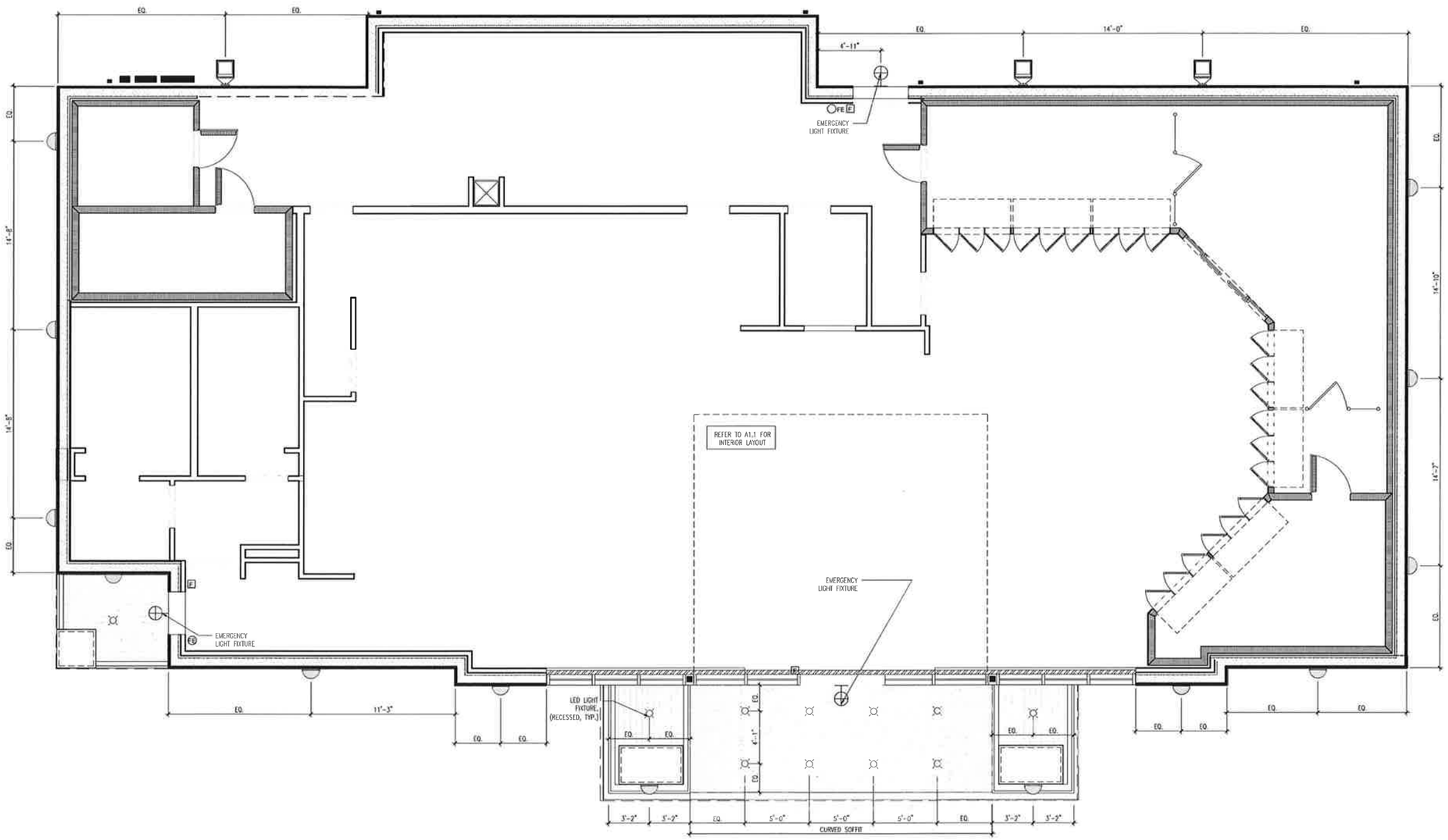
DOWNSPOUT LOCATION PLAN

Date: 05/20/15

Drawing No.

DS1.1

Project No. 1500.10



1 L1.1 BUILDING LIGHTING PLAN
SCALE: 1/4" = 1'-0"

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Project Title
New Construction:

Cumberland FARMS

Store #TBD
VSH # TBD
Oracle #FL8215

Atlantic & 441 St
MARGATE, FL 33063

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Architect

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Seal

James Owens
FL #97371

Consultant

Revisions

No.	Date	Issued for
	05/20/15	SD SUBMISSION

Key Plan

Title

EXTERIOR BUILDING LIGHTING PLAN

Date: 05/20/15

Drawing No.

L1.1

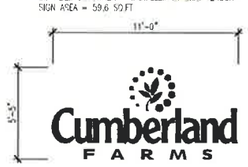
Project No. 1500.10

FINISH SCHEDULE					
ANNO #	DESC.	MANUFACTURER	MODEL	COLOR	NOTES
EIFS-1	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS SW7035 AESTHETIC WHITE	COLOR MATCH TO SHERWIN WILLIAMS AESTHETIC WHITE.
EIFS-2	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS SW6546 CLOUD NINE	PROVIDE SCARF JOINTS ON ALL EXTERIOR SYNTHETIC WOOD TRIM, GC TO PUTTY ALL NAIL HOLES & PAINT ALL SYNTHETIC WOOD TRIM & PANELS.
EIFS-3	EXTERIOR INSULATION FINISH SYSTEM	STO	-	SHERWIN WILLIAMS #44-57 (YELLOW BASE) SATIN FINISH	FORMULA: OZ 32 64 128 W1 WHITE - 40 1 - G2 NEW GREEN - 26 - 1 Y3 DEEP GOLD - 11 - 1
CS-1	CULTURED STONE	OWENS CORNING CULTURED STONE, LLC	CSV-2028 SOUTHERN LEDGESTONE	FOG	INSTALL DRYSTACK ONLY
GU-1	ALUMINUM GUTTER SYSTEM	HICKMAN	0.05 ALUM.	WHITE	PROVIDE ALL ACCESSORIES REQ'D FOR A COMPLETE CONTINUOUS INSTALLATION. INSTALL PER MFG INSTRUCTIONS. ENSURE SEALED, WATERTIGHT CORNER CONNECTIONS. FLASH & SEAL TO DOWNSPOUTS AS REQ'D.
MTL-1	METAL COPING				

WALL SIGNAGE SPECIFICATION

CUSTOM FABRICATED
INTERNALLY ILLUMINATED SIGN BOX

SUPPLIED BY OWNER – INSTALLED BY SIGN VENDOR
SIGN AREA = 59.6 SQ.FT

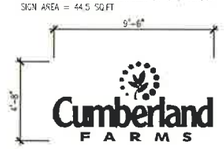


4 A3.1 FRONT WALL SIGNAGE DETAIL
SCALE: 1/4"=1'-0"

WALL SIGNAGE SPECIFICATION

CUSTOM FABRICATED
INTERNALLY ILLUMINATED SIGN BOX

SUPPLIED BY OWNER – INSTALLED BY SIGN VENDOR
SIGN AREA = 44.5 SQ.FT



3 A3.1 SIDE WALL SIGNAGE DETAIL
SCALE: 1/4"=1'-0"

2 A3.1 LEFT SIDE ELEVATION
SCALE: 1/4"=1'-0"

1 A3.1 FRONT ELEVATION
SCALE: 1/4" = 1'-0"

© 2015 ALLEVATO ARCHITECTS INC

Project Title
New Construction:

Cumberland FARMS

Store #TBD
VSH # TBD
Oracle #FL8215

Atlantic & 441 St
MARGATE, FL 33063

Owner

Cumberland Farms, Inc.
100 Crossing Blvd
Framingham, MA 01702
tel 508 270 1400

Architect

ALLEVATO

Allevato Architects Inc
31 Hayward Street, Franklin MA 02038
tel 508 528 0770 fax 508 528 9454

Seal

James Owens
FL #97371

Consultant

Revisions

No.	Date	Issued for
	05/20/15	SD SUBMISSION

Key Plan

Title
EXTERIOR ELEVATIONS

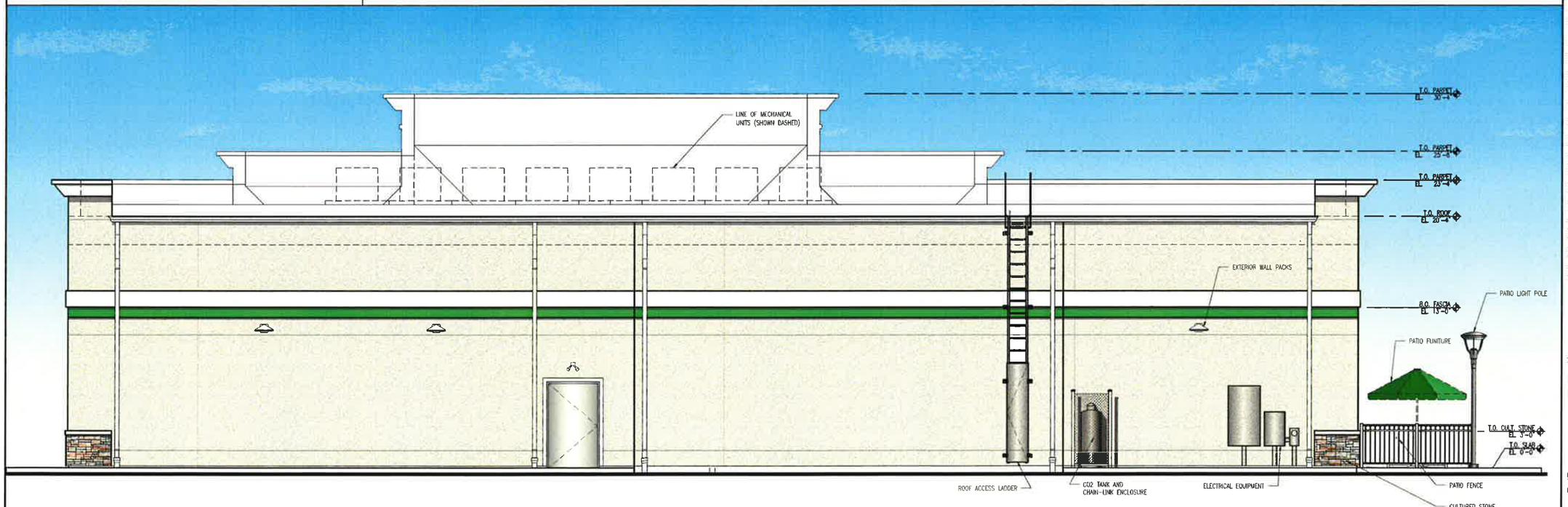
Date: 05/20/15

Drawing No.

A3.1

Project No. 1500.10

2 A3.2 RIGHT SIDE ELEVATION
SCALE: 1/4"=1'-0"



1 A3.2 REAR ELEVATION
SCALE: 1/4" = 1'-0"

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Project Title
New Construction:

Cumberland FARMS

Store #TBD
VSH # TBD
Oracle #FL8215

Atlantic & 441 St
MARGATE, FL 33063

Owner

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100 Crossing Blvd
Framingham, MA 01702
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Consultant

Revisions

No.	Date	Issued for
	05/20/15	SD SUBMISSION

Key Plan

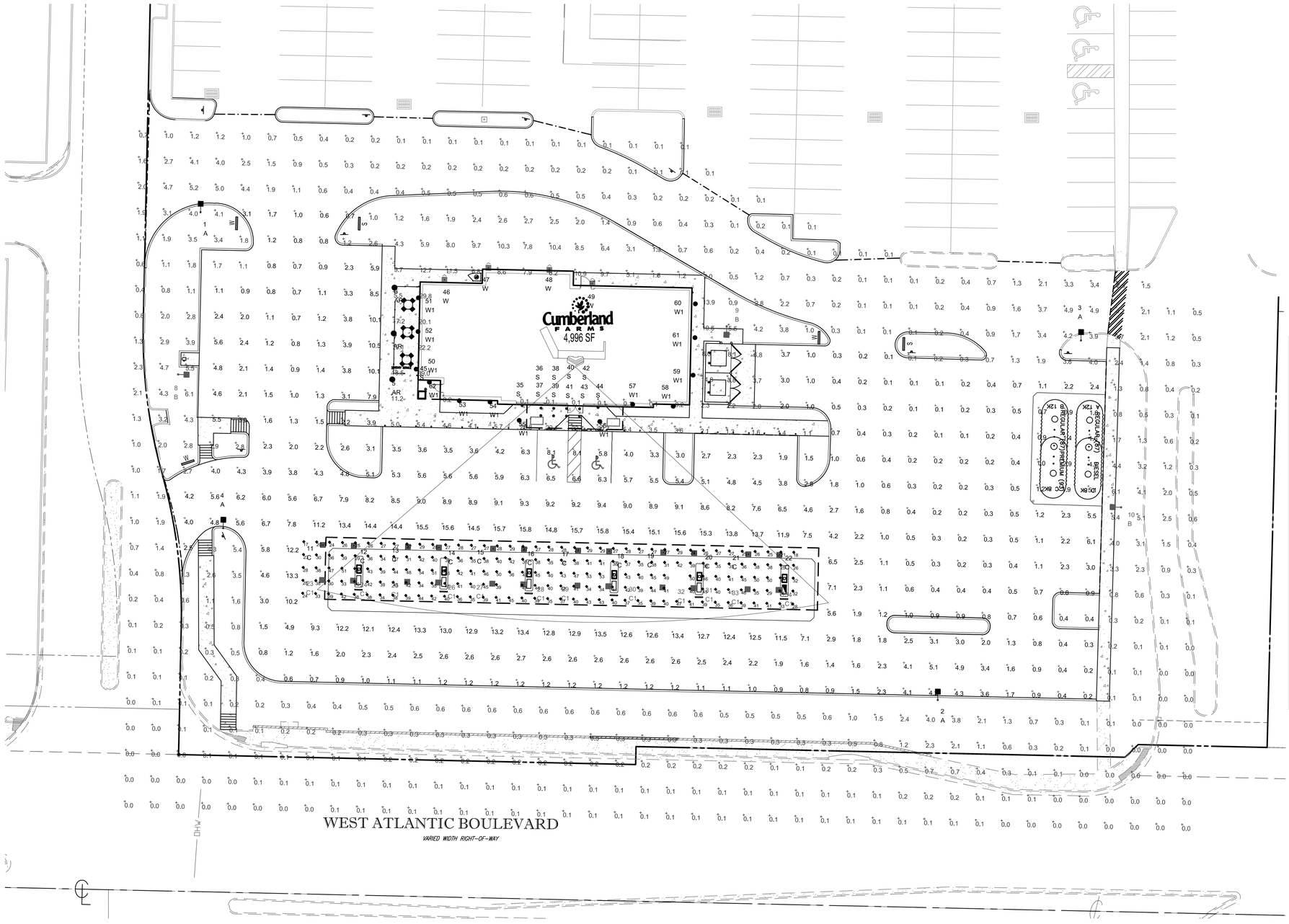
Title
EXTERIOR ELEVATIONS

Date: 05/20/15

Drawing No.

A3.2

Project No. 1500.10



LUMINAIRE LOCATION SUMMARY		
LumNo	Label	MTG. HGT.
1	A	15
2	A	15
3	A	15
4	A	15
5	AR	8
6	AR	8
7	AR	8
8	B	15
9	B	15
10	B	15
11	C	14
12	C	14
13	C	14
14	C	14
15	C	14
16	C	14
17	C	14
18	C	14
19	C	14
20	C	14
21	C	14
22	C	14
23	C1	14
24	C1	14
25	C1	14
26	C1	14
27	C1	14

LUMINAIRE LOCATION SUMMARY		
LUM NO.	LABEL	MTG. HT.
28	C1	14
29	C1	14
30	C1	14
31	C1	14
32	C1	14
33	C1	14
34	C1	14
35	S	12
36	S	16.228
37	S	16.228
38	S	16.945
39	S	16.945
40	S	16.945
41	S	16.945
42	S	16.228
43	S	16.228
44	S	12
45	S	12
46	W	10
47	W	10
48	W	10
49	W	10
50	W1	10
51	W1	10
52	W1	10
53	W1	10
54	W1	10
55	W1	10
56	W1	10
57	W1	10
58	W1	10
59	W1	10
60	W1	10
61	W1	10
62	W1	10

LUMINAIRE SCHEDULE									
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	ARR. WATTS	TOTAL WATTS	MANUFACTURER	DESCRIPTION
	4	A	SINGLE	10706	1.010	132.5	530	CREE, INC.	ARE-EDG-3M-DA-06-E-UL-XX-700-57K
	3	AR	SINGLE	7985	1.010	92	276	CREE INC.	ARE-EDR-5M-R5-04-E-UL-XX-700-57K
	3	B	SINGLE	11257	1.010	134	402	CREE INC.	ARE-EDG-4M-DA-06-E-UL-XX-700-57K
	12	C	SINGLE	12060	1.010	134	1608	CREE, INC.	CAN-304-5M-RS-06-E-UL-XX-700-57K
	12	C1	SINGLE	13696	1.010	134	1608	CREE, INC.	CAN-304-PS-RS-06-E-UL-XX-700-57K
	11	S	SINGLE	1757	1.000	19.8	217.8	Cree Lighting - Recessed Downlight	LR618L-40K-120V-A-DR +RC6 HOUSING
	4	W	SINGLE	5893	1.010	68	272	CREE, INC.	SEC-EDG-3M-WM-04-E-UL-525-X
	13	W1	UPDOWN	2500	1.010	34	442	Cree Lighting	RLA-E-S23L03XX

NOTE:
- FOOTCANDLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES
- EXCEPT FOR TYPE "AR" FIXTURES, ALL POLE MOUNTED FIXTURES ARE MOUNTED ON A 15FT POLE ATOP A CONCRETE BASE FLUSH AT GRADE.
-TYPE "AR" FIXTURE IS MOUNTED ON AN 8 FT POLE ATOP A CONCRETE BASE FLUSH AT GRADE.

CALCULATION SUMMARY					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
CANOPY	36.76	54	17	2.16	3.18
PAVED	3.85	15.8	0.1	38.50	158.00
UNDEFINED	1.79	39.0	0.0	N.A.	N.A.

THOMAS ENGINEERING GROUP
CIVIL ENGINEERS - PROJECT MANAGERS - LAND PLANNING - LANDSCAPE ARCHITECTS
1000 CORPORATE DR. SUITE 250 FT. LAUDERDALE, FL 33334 P: 954-202-7000
4950 W. KENNEDY BLVD. SUITE 600 TAMPA, FL 33609 P: 813-379-4100
125 W INDIANTOWN RD. SUITE 206 JUPITER, FL 33458 P: 561-203-7503

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REVISIONS:

REV:	DATE:	COMMENT:	BY:

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PROJECT No.: F140147
DRAWN BY: EM
CHECKED BY: MGD
CAD I.D.: F140147-LIGHTING PLAN

PROJECT:

LAKEWOOD PLAZA

FOR

Cumberland FARMS

CITY OF MARGATE
BROWARD COUNTY, FL

THOMAS ENGINEERING GROUP
RADICE III
1000 CORPORATE DRIVE, SUITE 250
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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

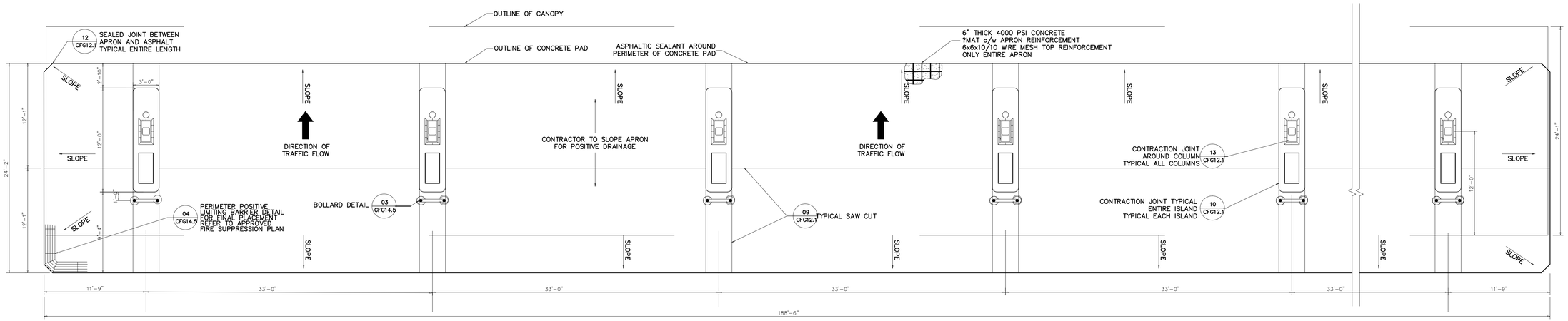
SHEET TITLE:

LIGHTING PLAN

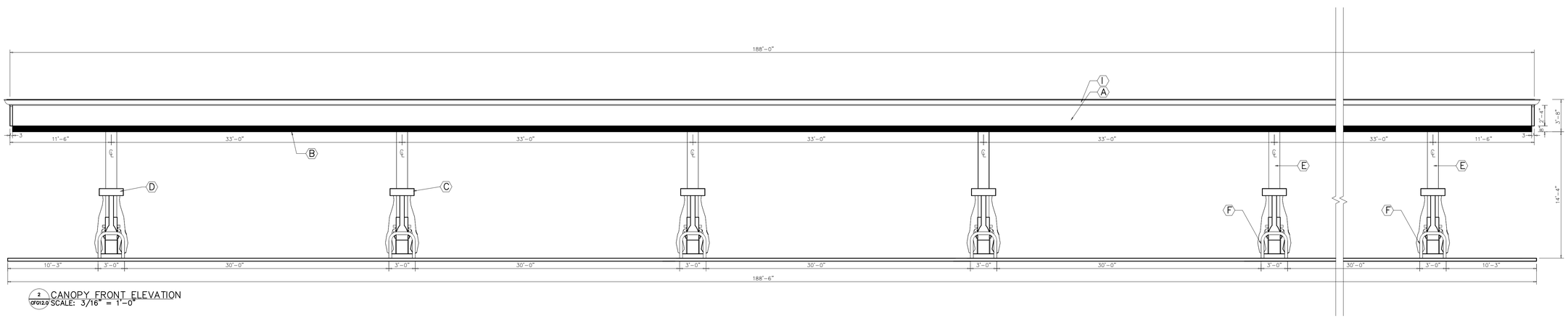
SHEET NUMBER:

CFG10.0

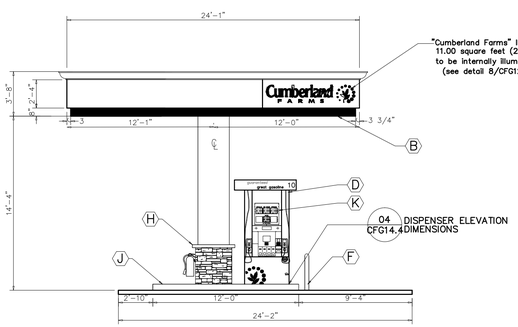
Printed on Wednesday, May 27, 2015, 10:36 AM by Maxwell Kaplan



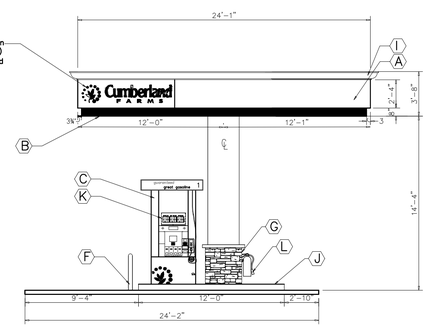
1 CFG12.0 CANOPY PLAN VIEW
SCALE: 3/16" = 1'-0"



2 CFG12.0 CANOPY FRONT ELEVATION
SCALE: 3/16" = 1'-0"



3 CFG12.0 CANOPY LEFT ELEVATION
SCALE: 3/16" = 1'-0"



4 CFG12.0 CANOPY RIGHT ELEVATION
SCALE: 3/16" = 1'-0"

NOTES:

1. COORDINATE APRON ELEVATIONS WITH CIVIL DRAWINGS AND FIELD ELEVATIONS.

2. DISPENSER SUMPS TO BE SET IN PLACE AND USED AS A FORM TO POUR CONCRETE AROUND.

3. CONCRETE SPECIFICATIONS:
–SOIL BEARING CAPACITY REQ'D: AS PER GEOTECHNICAL REPORT
–CONC. STRENGTH: 4000psi @ 28 DAYS 3% TO 7% AIR,
TROWELLED SMOOTH FINISH WITH TWO COATS SEALING/CURING COMPOUND.
–CANOPY FOOTING CONC. STRENGTH: REFER TO DRAWINGS PROVIDED BY MANUFACTURER

4. ALL EQUIPMENT INSTALLATIONS MUST COMPLY WITH MANUFACTURER'S SPECIFICATIONS.

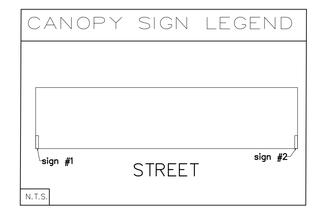
5. ALL EQUIPMENT AND CONSTRUCTION ARE NEW AND FACILITY IS TO BE ATTENDED SELF–SERVICE.

6. REFER TO CANOPY MANUFACTURERS DRAWINGS FOR SPECIFIC CANOPY FOOTING OPTIONS.

7. REFER TO CANOPY MANUFACTURERS DRAWINGS FOR ARCHITECTURAL DETAILS ON CANOPY AND COLUMNS.

8. SEE CIVIL PLANS FOR ORIENTATION ON SITE, AND FOR TRAFFIC FLOW

9. REFER TO CANOPY DETAIL SCHEDULE ON SHEET CFG12.1 FOR ADDITIONAL INFORMATION



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DRAWN BY: EM
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CAD I.D.: F140147-CANOPY

PROJECT:

LAKEWOOD PLAZA

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MICHAEL A. TROXELL
PROFESSIONAL ENGINEER
May 26, 2015
FLORIDA LICENSE No. 50572
FLORIDA BUSINESS CERT. OF AUTH. No. 27528

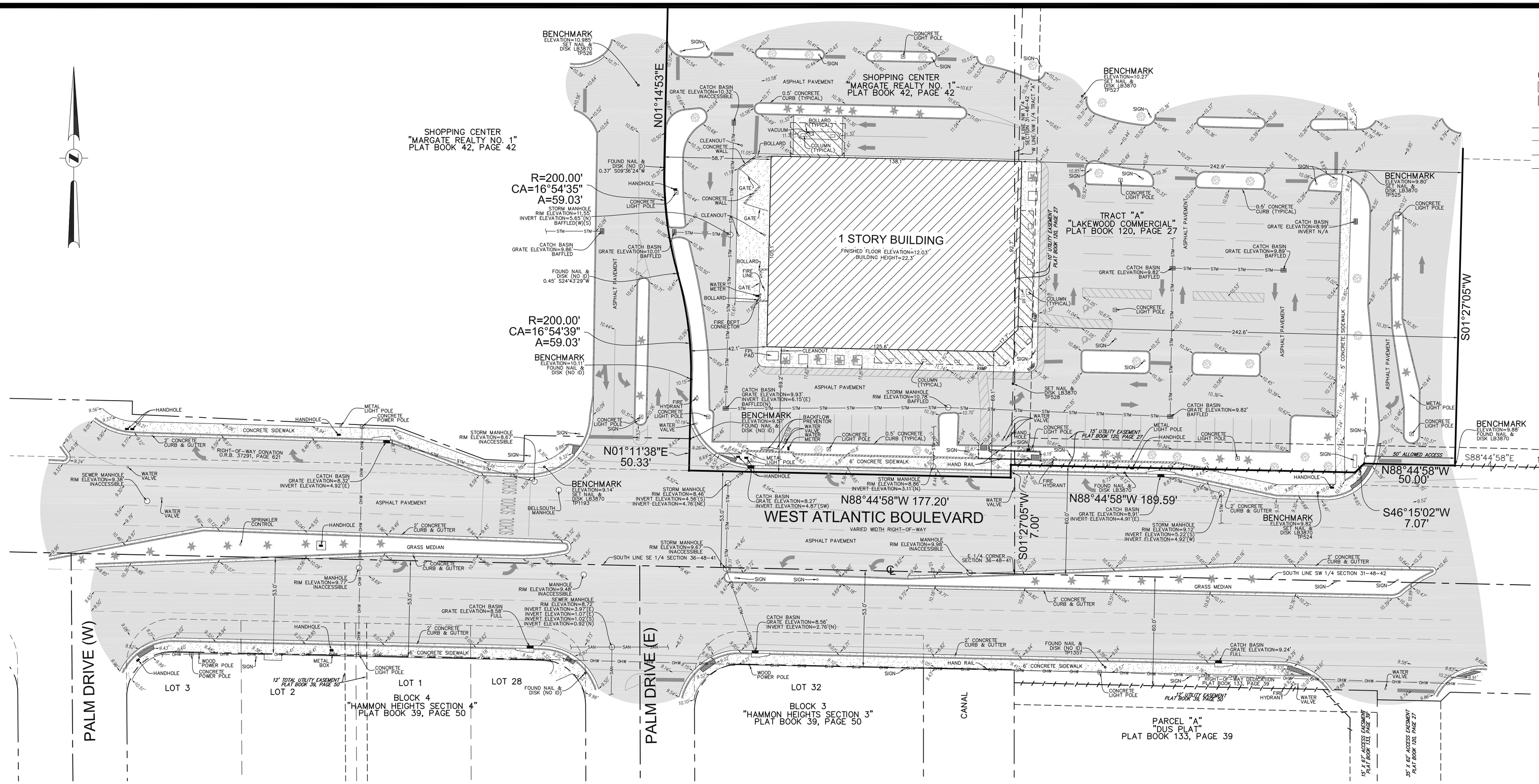
SHEET TITLE:

CANOPY ELEVATIONS

SHEET NUMBER:

CFG12.0

Printed on: Wednesday, May 27, 2015, 10:36 AM by Maxwell Kaplan
F:\PROJECTS\F140147-CANOPY-------\SITE PLAN DOCUMENTS\F140147-CANOPY-------\CFG12.0 - CANOPY ELEVATIONS



LEGEND

	CONCRETE
	ASPHALT PAVEMENT
10.00'	ELEVATION
OHW	OVERHEAD WIRES
W	UNDERGROUND WATER LINE
STM	UNDERGROUND STORM SEWER LINE
SAN	UNDERGROUND SANITARY SEWER LINE
℄	CENTERLINE
O.R.B.	OFFICIAL RECORDS BOOK
TP	TRAVERSE POINT (FOR FIELD INFORMATION ONLY)
R	RADIUS
CA	CENTRAL ANGLE
A	ARC LENGTH
FPL	FLORIDA POWER & LIGHT COMPANY

LEGAL DESCRIPTION:
A PORTION OF TRACT "A", "LAKEWOOD COMMERCIAL", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 120, PAGE 27, AND A PORTION OF THE SHOPPING CENTER, "MARGATE REALTY No. 1", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 42, PAGE 42, BOTH OF THE PUBLIC RECORDS OF BROWARD COUNTY, FLORIDA.

NOTES:
1) ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. BROWARD COUNTY BENCHMARK #1439; ELEVATION: 14.984 FEET.
2) FLOOD ZONE: X; BASE FLOOD ELEVATION: NONE; PANEL #120047 0355H; MAP DATE: 8/18/14.
3) THIS SITE LIES IN SECTIONS 31 & 36, TOWNSHIP 48 SOUTH, RANGE 42 EAST, BROWARD COUNTY, FLORIDA.
4) BEARINGS ARE BASED ON THE NORTH RIGHT-OF-WAY LINE OF W ATLANTIC BOULEVARD BEING N88°44'58"W.
5) REASONABLE EFFORTS WERE MADE REGARDING THE EXISTENCE AND THE LOCATION OF UNDERGROUND UTILITIES. THIS FIRM, HOWEVER, DOES NOT ACCEPT RESPONSIBILITY FOR THIS INFORMATION. BEFORE EXCAVATION OR CONSTRUCTION CONTACT THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION.
6) THIS SURVEY IS CERTIFIED EXCLUSIVELY TO: THOMAS ENGINEERING GROUP.
7) THE HORIZONTAL POSITIONAL ACCURACY OF WELL DEFINED IMPROVEMENTS ON THIS SURVEY IS ±0.2'. THE VERTICAL ACCURACY OF ELEVATIONS OF WELL DEFINED IMPROVEMENTS ON THIS SURVEY IS ±0.1'.
8) THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF A COMMITMENT FOR TITLE INSURANCE. ONLY PLATTED OR KNOWN EASEMENTS ARE DEPICTED HEREON.

CERTIFICATION:
I HEREBY CERTIFY: THAT THIS SKETCH OF SURVEY MEETS THE STANDARDS OF PRACTICE SET FORTH BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES ("DOACS") CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

☐JOHN F. PULICE, PROFESSIONAL SURVEYOR AND MAPPER LS2691
☐BETH BURNS, PROFESSIONAL SURVEYOR AND MAPPER LS6136
STATE OF FLORIDA

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0' 30' 60' 90'
GRAPHIC SCALE
1"=30'

NO.	REVISIONS	BY
5		
4		
3		
2		
1		

PROPOSED
CUMBERLAND FARMS SITE
5485 WEST ATLANTIC BOULEVARD
MARGATE, BROWARD COUNTY, FLORIDA 33063

TOPOGRAPHIC SURVEY

PULICE LAND SURVEYORS, INC.
5381 NOB HILL ROAD
SUNRISE, FLORIDA 33351
TELEPHONE: (954) 572-1777
FAX: (954) 572-1778
E-MAIL: surveys@pulicelandsurveyors.com
CERTIFICATE OF AUTHORIZATION LB#3870

DRAWN BY: L.S.	SCALE: 1" = 30'	FILE: THOMAS ENGINEERING GROUP
CHECKED BY: J.F.P.	SURVEY DATE:4/8/15	ORDER NO.: 58776