General Notes

PAVING AND DRAINAGE

1. Topographic, information provided by -.Robert M. Angas Associates

2. Geotechnical soil borings for the project were taken by -Universal Engineering Services, per their project no.- 0930.0800069.0000 Report no. 674909.

3. All work shall be performed in a safe manner. All safety rules and guidelines of O.S.H.A. shall be followed. The contractor shall be wholly responsible for any injuries to his employees and any damage to private property or persons during the course of this project.

4. The contractor shall be responsible for visiting the job site prior to preparing the bid for the purpose of familiartzation with the nature and extent of the work and local conditions, whether surface or subsurface, which may affect the work to be performed, and the equipment, labor and materials required. Failure to do so will not relieve the contractor of complete performance under this contract. The contractor is also urged to take color photographs along and within the project limits to record existing conditions prior to construction and to aid in the resolving of possible future complaints that may occur due to the construction activity relative to the project.

5. The contractor shall review the geotechnical report regarding possible unsuitable materials on the site.

6. For boundary, roadway and building geometry, please refer to engineering site plans. It is the contractor's responsibility to verify that the dimensions shown on the architectural plans agree with the dimensions shown on the engineering site plan. If any dimensions do not agree, the architect, engineer and owner shall be notified and the dimensions adjusted prior to construction commencement.

7. The contractor will engage an independent testing laboratory to perform material and soil testing in accordance with the city or county and state requirements and in agreement with the recommendations outlined in the geotechnical investigation report. This shall include density tests in all pavement areas and building pads and in all utility trenches located in pavement areas. Prior to placement of limerock, the project geotechnical engineer shall make recommendation for the placement of underdrain.

8. Asphalt shall be spread only where the limerock base has been previously prepared, is intact, firm, clear of debris, properly cured, dry and has passed density testing. The asphalt shall not be spread unless all weather conditions are suitable for the paving process.

9. The contractor is responsible for providing a smooth asphalt coarse layer, uniform texture and shape with positive cross-drainage to gutters or swales. Ponding (bird baths), rutting, uneven asphalt, roller marks, tire marks, foot prints, spllied fuel, foreign materials or deficient pavement thickness in the asphalt will not be accepted.

10. All work performed within public rights-of way shall comply with the requirements of the authorities having jurisdiction.

11. The contractor shall coordinate all work within public rights-of way with their respective governing agency for maintenance of traffic and the means and methods of construction and repairs.

12. The contractor shall be responsible for obtaining all necessary construction permits and Insurance requirements for the project including: coverage under federal and state NPDES permits, governing city or county and state right-of-way and/or easements permits, and permits associated with the clearing and demolition activity.

13. "AS-BUILT" drawings are required to be signed and sealed by a Florida Registered Land Surveyor. Therefore it shall be the contractor's responsibility to engage (employ) a Land Surveyor registered in the state of Florida for the preparation, field locations, certification and submittal of "AS-BUILT" drawings in accordance with the current standards as established by governing local and state agencies. It is the contractor's responsibility to process the "AS-BUILT" drawings for approval.

14. The project contractor shall coordinate their construction activity with other contractors in multi-phased projects or projects where common right-of-way or infrastructure improvements are to occur. In the event of any conflicts whatsoever, the contractor shall notify the engineer and owner prior to proceeding with construction.

15. All areas to be filled shall be cleared and grubbed in accordance with local governing agency requirements and shall be filled with clean structural fill compacted and tested in accordance with the geotechnical investigation report.

16. The contractor is responsible for protection of all survey and property monuments. If a monument is disturbed, the contractor shall engage the surveyor of record to reinstall the monument(s).

17. The contractor is responsible for proper off-site disposal of all debris resulting from construction site.

18. The contractor shall remove all excess suitable and unsuitable material from the site unless directed otherwise by the engineer or owner.

19. All existing trees to remain shall be preserved and protected per COJ Landscape and Tree Protection Regulations.

20. Burning of trees, brush and other material shall be approved, permitted and coordinated with the governing city or county. The contractor is responsible for obtaining this permit.

21. The location of existing utilities, structures and improvements shown on the site engineering drawings are based on limited information and may not have been field verified.These locations are approximate.The contractor shall notify the respective utility owners and field verify locations of existing utilities and other improvements prior to commencing any construction. If the locations shown on the plans are contrary to the actual locations, the contractor shall notify the owner and engineer of the discrepancy. The discrepancy should be resolved prior to continuing with construction.

22. The contractor shall exercise extreme caution when working in areas near existing utilities and improvements and shall be responsible for and shall repair or pay for all damages to existing utilities or other improvements.

23. Prior to commencement of any construction, the contractor shall verify all grades, inverts and type of material of existing utilities to which a connection is proposed.

24. The contractor shall submit shop drawings to the engineer and local governing agency/FDOT (if required) on all materials, for review and approval, prior to purchase or construction of any utility or stormwater system.

25. All pipe lengths are scaled dimensions. All drainage structures shall be constructed to conform with typical sections and details as shown on the paving and drainage details sheet and in accordance with the FDOT standards and specifications (latest revision) and shall be constructed to conform with curbing, property lines and low points as shown on the plans.

26. The contractor shall insure that all drainage structures, pipes, etc. are clean and functioning properly at the time of acceptance.

27. All drainage structures in paved areas shall have traffic bearing grates.

28. All drainage pipe joints are to be completely wrapped at the outside joint with either a woven or non-woven filter fabric.

29. All inverts in drainage structures are to be precast or brick with a layer of mortar between each layer of brick, or redi-mix concrete with #57 stone.

30. Unsuitable materials under water pipe, sewer pipe, storm pipe or any structures shall be removed and replaced with structural backfill and properly compacted.

31. The contractor's 24 hour emergency contact phone number must be posted and clearly visible at the site.

32. Construct min. 20' underdrain stubouts each way of all storm inlets within pavement.

WATER AND SEWER NOTES

1. It is the contractor's responsibility to construct the water and sewer systems in accordance with the latest JEA and FDEP requirements. The systems are to be operable as intended.

2. These engineering plans may or may not show all/any of the required bends, fittings, restraining joints, etc. Any and all required bends, fittings, restraining joints, etc. shall be part of the contractor's original bid. Change orders will not be approved for vertical or horizontal conflicts with existing or proposed utilities or drainage systems.

3. All underground utilities must be installed prior to preparation of sub-grade and pavement.

4. An underground utility contractor licensed under the provisions of Chapter 489, Florida Statues, shall accomplish all water and sewer construction.

5. The contractor shall provide to the engineer as-builts prepared by a Registered Land Surveyor for this project. The as-builts shall show the vertical separation between water mains and storm or sanitary mains. The contractor shall coordinate as-built approval with JEA. All as-builts shall be per JEA Specifications Section 501.

6. Water and sewer pipes, minimum cover, 30"- all lines, 36" - under pavement or service road crossings.

7. Fittings for water mains shall be ductile iron, with mechanical restrained joints. Mechanical joint restraints shall conform to AWWA C509.

8. Where pressure mains are terminated and all fittings shall be installed with restrained joints in accordance with JEA standards.

9. All taps shall be made with a factory tap machine. Tapping sleeve and saddle must be pressure tested up to 150 PSI for 15 minutes and witnessed by the JEA inspector before a tap is made.

10. Valves shall be per JEA approved standards, Gate valves shall be resilient seat type.

11. Fire Hydrants shall meet JEA standards and shall be primed and painted "Traffic Yellow".

12. All water mains shall be pressure and leakage tested at 150 PSI for 2 hours in accordance with AWWA C600 standards and JEA requirements. No connection to the existing potable water system will be allowed until all proposed water lines have been pressure tested, disinfected and cleared for service. Contractor shall notify JEA at least 24 hours in advance of any scheduled hydraulic pressure test.

13. Chlorination test (AWWA C651) and the original bacteriological report shall be submitted to the engineer of record and JEA.

14. The sewer lines shall be television (TV) inspected and the alignment between manholes checked by laser beams or other suitable means. TV inspection of all sewer lines shall be in the upstream direction.

15. Contractor shall provide a JEA approved reduced pressure zone (PRZ) backflow preventer for all commercial and industrial applications.

16. In addition to the specifications and details provided for this contract, the JEA Water and Sewer Standards Manual shall also become a part of the contract and shall be used for any items not covered. It shall be the contractor's responsibility to obtain a set of standard details and specifications from JEA. The most recent issue of the JEA Water and Sewer Standards Manual is January 1, 2005 with amendments issued April 2006 and February 2007.

17. The contractors 24 hour emergency contact phone number shall be posted and clearly visible at the site.

18. All new water and sewer taps to be performed by utility contractor or licensed plumber shall be scheduled through the JEA inspector.

19. A tap application fee is required and shall be paid @ 515 N. Laura St. 1st floor. This must be accomplished prior to connection to the JEA's sewer collection system or water distribution system. In addition, water and sewer capacity fees will be required at time of meter application. Fees will be based on total number of plumbing fixture units shown or listed on building plans.

20. A pre-construction conference is required and shall be scheduled through the JEA plan reviewer for this project.

21. All water and sewer construction materials shall be in conformance with the latest JEA approved materials manual for water and sewer.

22. All potable PVC pipe 3 inches in diameter or less shall be listed as NSF-pw and shall be marked in accordance to standards on the pipe.

23. The requirements for separation of water mains to gravity sewers, sewage force mains and reclaimed water mains are described on JEA Standard Details W-10 and W-11.

24. In the case where solvent contamination is found in the trench, work shall be stopped and the proper authorities notified. With the approval of the JEA and/or Florida Department of Environmental Protection, ductile iron pipe, fittings and approved solvent resistant gasket material shall be used in the contaminated area. The ductile iron pipe shall extend at least 100 ft beyond any discovered solvent.

25. The contractor shall install any additional air release valves at changes in elevation of 2 ft. due to actual field conditions or conflicts not identified on these design plans.

26. All force mains shall be pressure and leakage tested at 150 psi for 2 hours in accordance with AWWA C600 standards and JEA requirements.

27. For parallel main installation, horizontal separation between water mains and sewer (force main, gravity and storm) shall be 10' feet minimum.

28. The contractor shall review the building plumbing plans to confirm the location and elevation of all of the building services.

29. Bacteriological samples shall be taken at all locations indicated and on all services 40 feet in length or longer.

30. All water main pipe 4" and larger shall be PVC (DR-25) and shall be blue in color.

31. All force main pipe shall be PVC (DR-18) and shall be green in color. HDPE force main shall be (DR-11).

32. All work within the FDOT right-of-way shall be performed per FDOT utility permit for this project. The contractor shall coordinate all work in this area with the FDOT and the JEA inspectors.

33. The contractor shall install the force main as close as possible to the grades shown on the plans to avoid an excessive number of dips and high points.

EROSION AND SEDIMENT CONTROL

1. These plans indicate the minimum erosion and sediment control measures required for this project. For additional information on sediment and erosion control, refer to "Florida Development Manual A Guide to Sound Land and Water Management" from the State of Florida Department of Environmental Protection (FDEP) Chapter 6. Contractor shall provide erosion protection and turbidity control as required to ensure conformance to state and federal water quality standards and may need to install additional controls to conform to agencies requirements. If a water quality violation occurs, the contractor shall be wholly responsible for all damage and all costs, which may include legal fees, consultant fees, construction costs and fines.

2. Forty-eight (48) hours prior to commencement of construction the contractor shall submit a " Notice of Intent" to the EPA in accordance with the NPDES rules and regulations

3. Prior to commencement of the construction and excavation activities, the contractor shall perform groundwater testing in accordance with the Environmental Protection Agency Federal Register, Page 42739, Part 1A3 to determine pertroleum contamination levels. The contractor shall be responsible for obtaining the NPDES permit, if required in order to discharge any groundwater encountered during construction and for dewatering operations.

4. The contractor is responsible for following the best erosion and sediment control practices as outlined in the plans and specifications and the St. Johns River Water Management District specifications and criteria.

5. The contractor is responsible for following the best management erosion and sediment control practices as outlined in the plans, specifications and the applicable water management district permit.

6. Erosion and sediment control barriers shall be placed adjacent to all wetland areas where there is potential for downstream water quality degradation.

7. Any discharge from de-watering activity shall be filtered and conveyed to the outfall in a manner which prevents erosion and transportation of suspended solids to the receiving outfall.

8. Dewatering pumps shall not exceed the capacity of that which requires a consumptive use permit from the governing water management district.

9. If dewatering capacity requires a consumptive use permit (C.U.P.), it shall be the contractors responsibility to obtain the permit through the St. Johns River Water Management District.

10. The contractor shall be responsible for establishing a permanent stand of SOD and/or grass per FDOT / City or County standards and meeting the NPDES final stabilization requirements.

11. All disturbed areas shall be grassed, fertilized, mulched and maintained until a permanent vegetative cover is established.

12. Sod shall be placed in areas which may require immediate erosion protection to ensure water quality standards are maintained.

13. All disturbed areas to be stabilized through compaction, silt screens, hay bales and grassing. All fill slopes 3:1 or steeper to receive staked solid sod.

14. All excavations and earthwork shall be done in a manner to minimize water turbidity and pollution. Discharge shall be controlled and rerouted through hay filters, siltation diapers and sumps. The contractor shall be responsible for the prevention, correction, control and abatement of erosion and water pollution in accordance with Chapter 17-3, Florida Administrative Code.

15. Additional on-site protection must be provided to ensure that silt is not permitted to leave the project confines due to unforseen conditions or accidents.

16. Wire mesh shall be laid over the top drop inlet so that the wire extends a minimum of 1 foot beyond each side of the inlet structure. Hardware cloth or comparable wire mesh with 1/2-inch openings shall be used. If more than one strip of mesh is necessary, the strips shall be overlapped. FDOT no. 1 coarse aggregate shall be placed over the wire mesh as indicated on detail. The depth of stone shall be at least 12 inches over the entire inlet opening. The stone shall extend beyond the inlet opening at least 18 inches on all sides. If the stone filter becomes clogged with sediment so that it no longer adequetely performs its function, the stones must be pulled away from the inlet, cleaned and replaced.

17. Bales shall be either wire-bound or string-tied with the bindings oriented around the sides rather than along the top and bottom of the bales. Bales shall be placed lengthwise in single row surrounding the inlet, with the ends of adjacent bales pressed together.

18. The filter barrier shall be entrenched and back filled. A trench shall be excavated around the inlet and width of a bale to a minimum depth of four inches. After the bales are staked, theexcavated soil shall be back filled and compacted against the filter barrier. Each bale shall be securely anchored and held in place by at least two 2" x 2" minimum wooden stakes or two #5 minimum rebars at least 3 feet driven through the bale. The first stake in each baleshall be driven toward the previously laid bale to force the bales together.. Loose straw should be wedged between bales to prevent water from entering between bales.

19. Close attention shall be paid to the repair of damaged bales, end runs and undercutting beneath bales.

20. Necessary repairs to barriers or replacement of bales shall be accomplished promptly.

21. Any sediment deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

22. All erosion control devices shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. Any required repairs shall be made immediately.

23. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly.

24. Sediment deposits should be removed after each rainfall. They must be removed when the level of deposition reaches approximately one- half the height of the barrier.

25. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one-half the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

26. The contractor is responsible for removing silt from site if not reusable on-site and assuring plan alignment and grade in all ditches and swales at completion of construction.

27. The site contractor is responsible for removing the temporary erosion and sediment control devices after completion of construction and only when areas have been stabilized.

28. All dewatering, erosion, and sediment control devices to remain in place until completion of construction and shall be removed only when areas have been stabilized.

29. The contractor is responsible for the removal of any sediment that leaves the site and changes any downstream conditions by raising channel bottoms and/or clogging outfall culverts.

30. Contractor shall insure that all drainage structures, pipes, etc., are cleaned out and working properly at time of acceptance.

31. The contractor shall pay for any water quality control violations from any agency that results in fines being assessed to the owner because of the contractor's failure to eliminate turbid runoff from leaving the site and raising background levels above existing background level.

Safe Digging is no Accident
Always Call 811 Before Digging

811
Sunshine State
ONE CALL
of Florida

Legend

	Manhole
	Curb Inlet
	Inlet
	Mitered End Section
	Fire Hydrant
	Water Meter
	Backflow Preventer
	Valve
	Sewer Service
	Cased Pipe
	Right-of-way Line
	Lot Line
	Boundary Line
	Centerline
13+00	Stationing
	Sign
	Street Sign
	Fence
	Gate
	Silt Fence
25	Contour Line
	Curb and Gutter
	Curb
	Drainage Divide
	Wetland
	Flow Arrow
	Handicapped Parking
	Tc Path

Abbreviations

PC	Point of Curvature	DA	Drainage Area
PT	Point of Tangency	LP	Low Point
PRC	Point of Reverse Curve	HP	High Point
PCC	Point of Compound Curve	NG	Natural Grade
PI	Point of Intersection	S.	Slope
PVI	Point of Vertical Intersection	PVC	Polyvinyl Chloride
VC PVI	Vertical Curve Point of Vertical Intersection	RCP	Reinforced Concrete Pipe
RP	Radius Point	ERCP	Elliptical Reinforced Concrete Pipe
R	Radius	DIP	Ductile Iron Pipe
A	Arc Length	VCP	Vetrified Clay Pipe
T	Tangent Length	HDPE	High Density Polyethylene Pipe
C	Chord Length	MES	Mitered End Section
CB	Chord Bearing	EMES	Elliptical Mitered End Section
STA.	Station	TOB	Top of Bank
RT	Right	NWL	Normal Water Level
LT	Left	GB	Grade Break
VC	Vertical Curve	BOT	Bottom
MH	Manhole	INV.	Invert
CI	Curb Inlet	EL.	Elevation
CS	Control Structure	Ac.	Acre(s)
CO	Clean Out	N.T.S.	Not to Scale
YD	Yard Drain	BOC	Back of Curb
YP	Yard Drain Pipe	EOP	Edge of Pavement
DP	Roof Drain Pipe	F.F.	Finished Floor Elevation
ST	Structure	N/A	Not Applicable
P	Pipe	AB	As Built
GV	Gate Valve	DN	Down
MJ	Mechanical Joint	EX.	Existing
RJ	Restrained Joint	LF	Linear Feet
FJ	Flanged Joint	R/W	Right-of-Way

No.	Date	REVISIONS	Initials
1	02/05/2010	Per Walgreens Review Comments	ARA

Professional Engineer

GENERAL NOTES, LEGEND AND ABBREVIATIONS

Walgreens
Jacksonville, Florida
SWC Fouraker Rd & Normandy Blvd
Store No. 13450

DO NOT SCALE THIS DRAWING - DIMENSIONS AND NOTES TAKE PREFERENCE

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Scale:	N / A
Project Manager:	DGT
Designer:	-
Drawn by:	-
Certificate of Authorization:	7298

Key Map

Project No.:	08140.07
Date:	November 2009
Sheet No.:	C0.2

NOT RELEASED FOR CONSTRUCTION

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