

A G E N D A

JAMES CITY COUNTY BOARD OF SUPERVISORS

WORK SESSION

July 25, 2006

4:00 P.M.

A. CALL TO ORDER

B. ROLL CALL

C. BOARD DISCUSSIONS

1. New Town Update
2. King William Reservoir Update

D. CLOSED SESSION

1. County Administrator's Annual Evaluation

E. ADJOURNMENT

072506bosws.age

James City County Board of Supervisors Work Session

New Town Update

July 25, 2006

Presentation Topics

- 1. History of Approvals**
- 2. Comparison of 1997 Master Plan and 2006 Status**
 - Design**
 - Land Uses**
- 3. Civic Spaces**
- 4. Affordable Housing**
- 5. Parking**
- 6. Transportation**
 - Pedestrians**
 - Vehicles**
- 7. Stormwater Management**

A	Single Family
B	Two/Three/Four Family
C	Two Story Townhouses and Apartments
D	Three Story Townhouses and Apartments
E	Commercial
F	Wholesale and Warehouses
G	Office
H	Industrial
I	Institutional and Public
J	Common Open Space
M	Mixed Use Structures

NOTE: Uses listed in assumed order of their proportion within each Master Plan Section and mixed use structure.

**New Town
Plan**

Architect:
Corgan, Nelson & Partners
111 West 42nd Street
New York, New York 10036

Consultants:
AES Consulting Engineers
1201 Old Town Road, Suite 1
Westland, VA 22181

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Legend

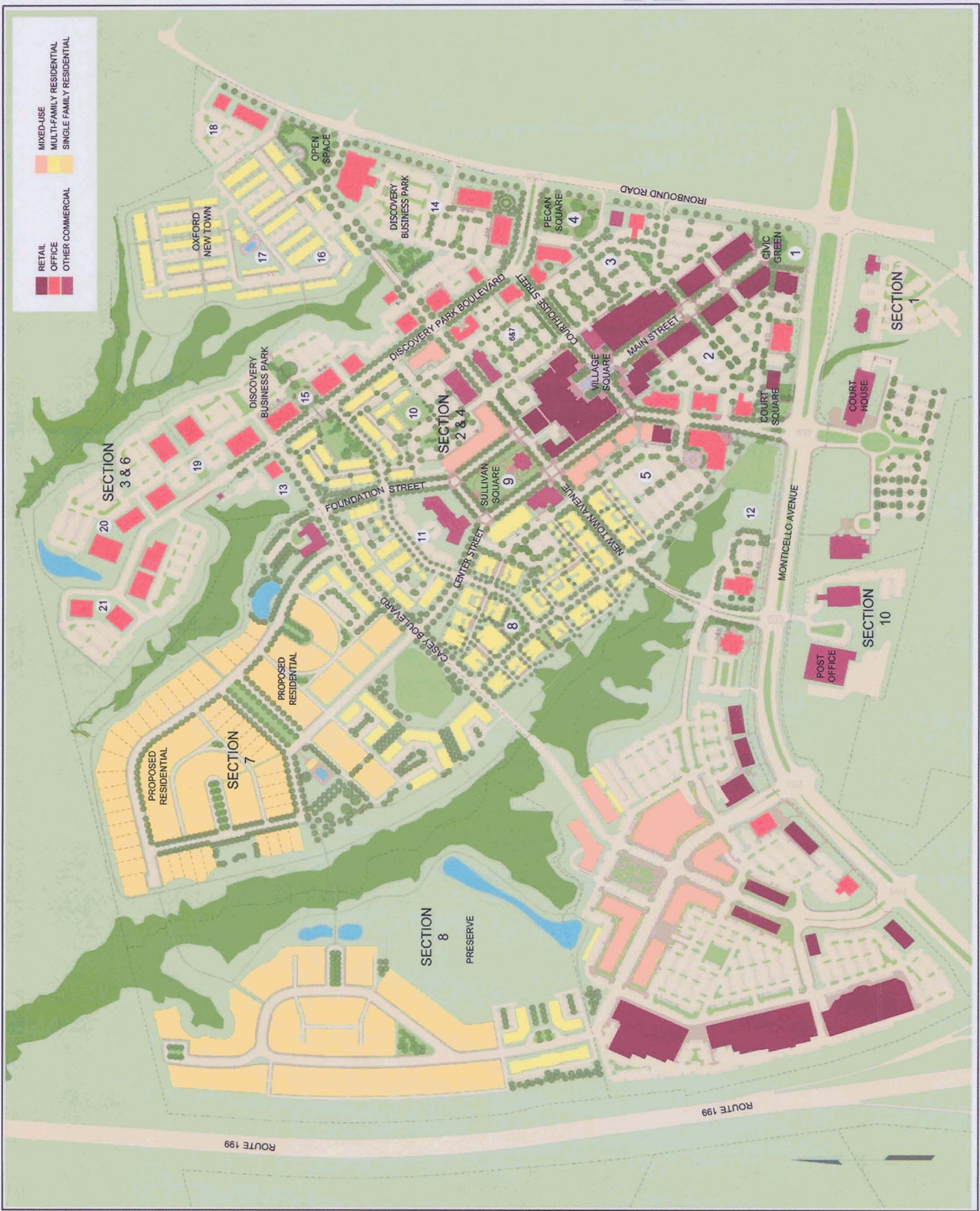
- Marine Photo Section Boundary
- Street Curb (curb and property)
- Wetlands
- Open Space (see PG 62/63)

Master Plan

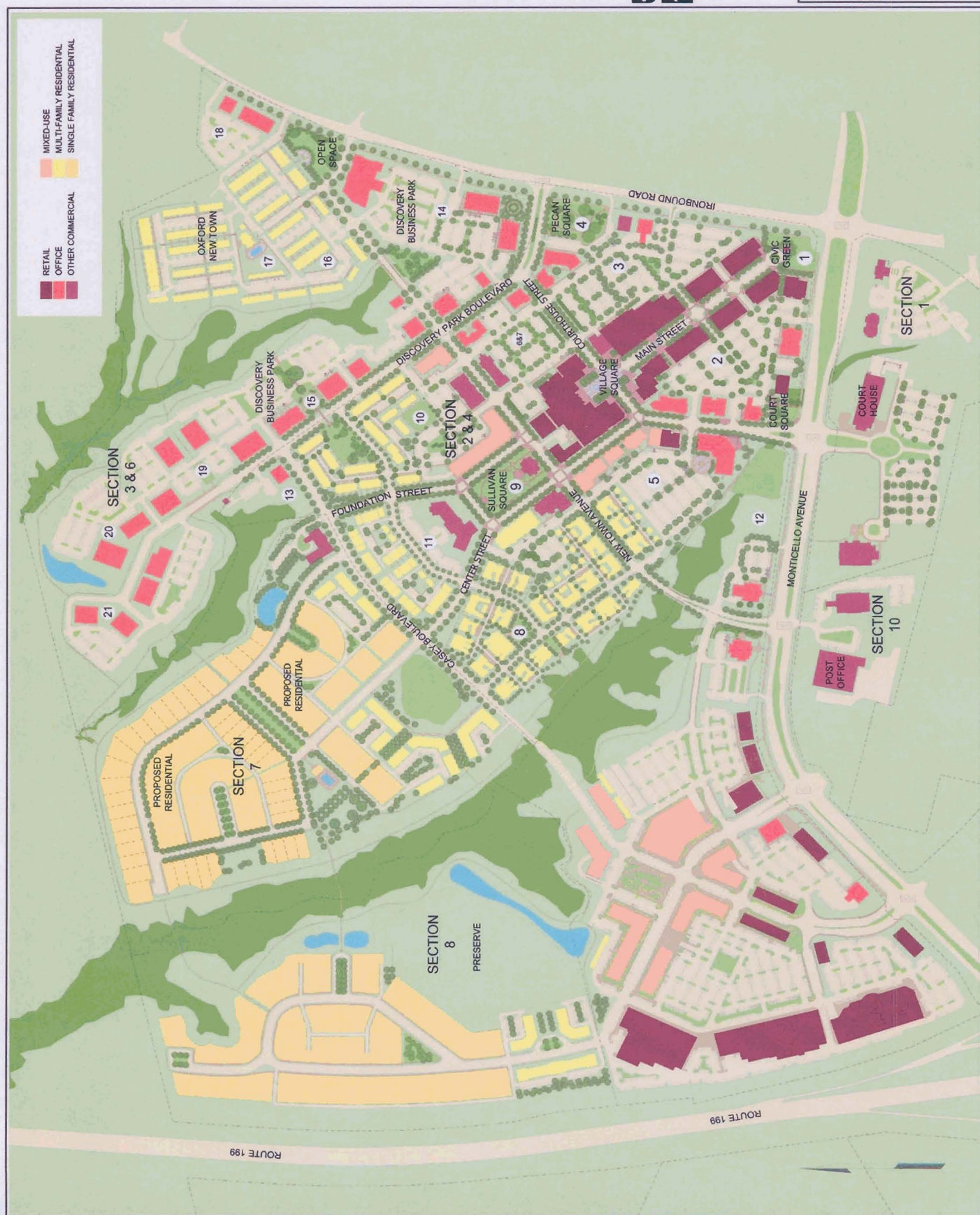
722 654 722

History of New Town

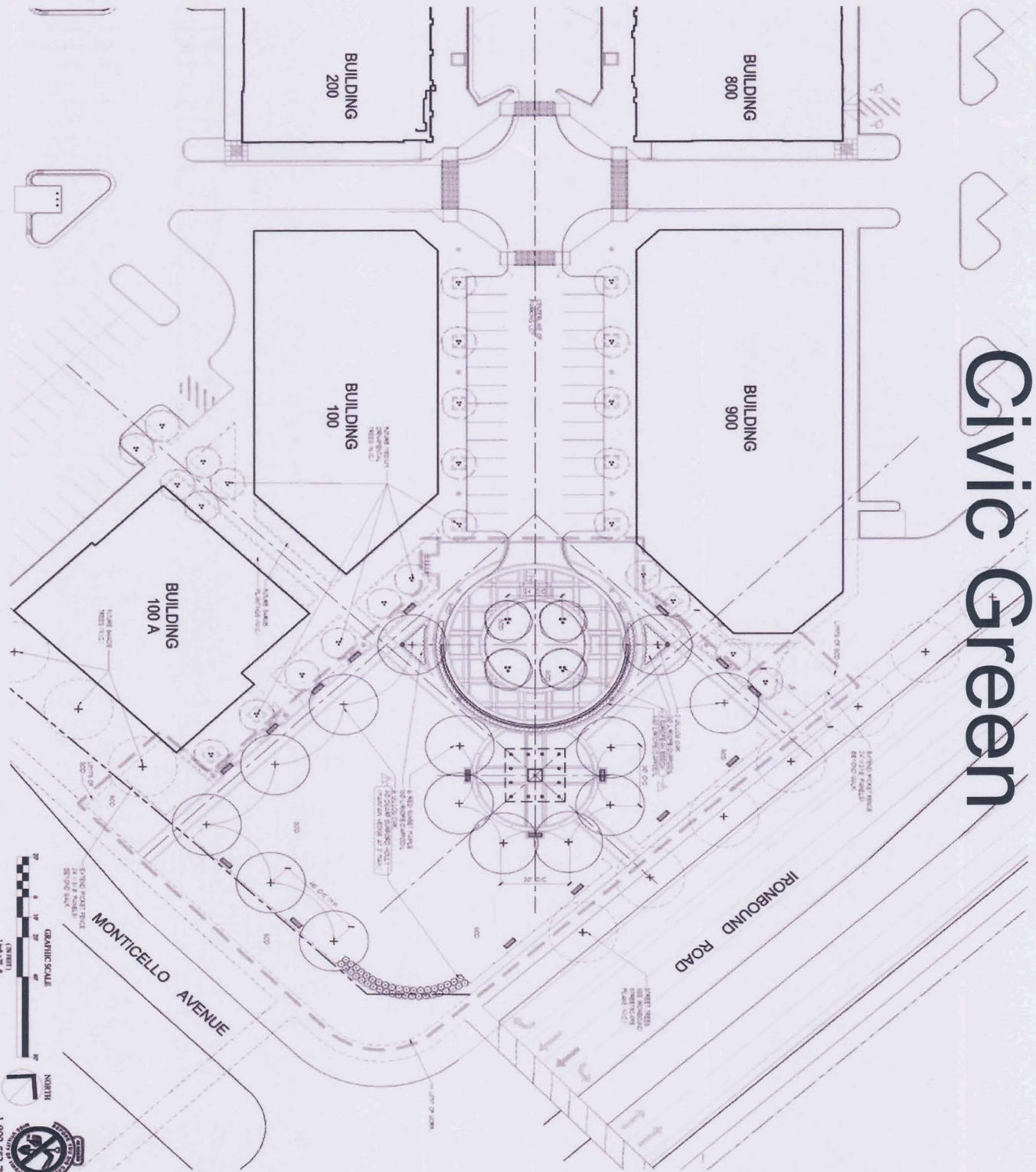
- **Casey Property – New Town Master Plan approved in 1997. Driving force for all subsequent rezonings.**
- **622 total acres (375 east side & 247 west side)**
- **1997 rezoning: A-1 to R-8, with proffers; Section 1 to MU**
- **Sections 9 & 10 were owned by others and a majority remained M-1 (not part of the 1997 rezoning). Small portion of Section 9 was rezoned to R-8, with proffers**
- **Significant design guidelines for entire property**



New Town Districts	1997 Master Plan Density	Actual or Projected Density
Town Center Sections 2 & 4	725,000 SF Non-Residential	624,000 SF Non-Residential
	525 Housing Units	342 Housing Units
Office District Sections 3 & 6	440,000 SF Non-Residential	450,000 SF Non-Residential
	150 Housing Units	265 Housing Units
Gateway Commercial Section 9	450,000 SF Non-Residential	446,000 SF Non-Residential
(+ tower site w/ 100,000 SF)	50 Housing Units	215 Housing Units
Residential District Section 7 & 8	62,300 SF Non-Residential	12,000 SF Non-Residential
	596 Housing Units	400 Housing Units
Southern Civic District Section 1	218,000 SF Non-Residential	181,000 SF Non-Residential
Total	1,895,300 SF Non-Residential	1,713,000 SF Non-Residential
	1,321 Housing Units	1,222 Housing Units



Civic Green



HIGGINS & GERSTENMAIER
 1001 Piedmont Avenue
 Richmond, Virginia 23220
 Tel: (804) 781-1400
 Fax: (804) 781-1401
 Email: info@higginson.com



CIVIC GREEN NEW TOWN

Monticello Avenue & Ironbound Road
 James City County, Virginia

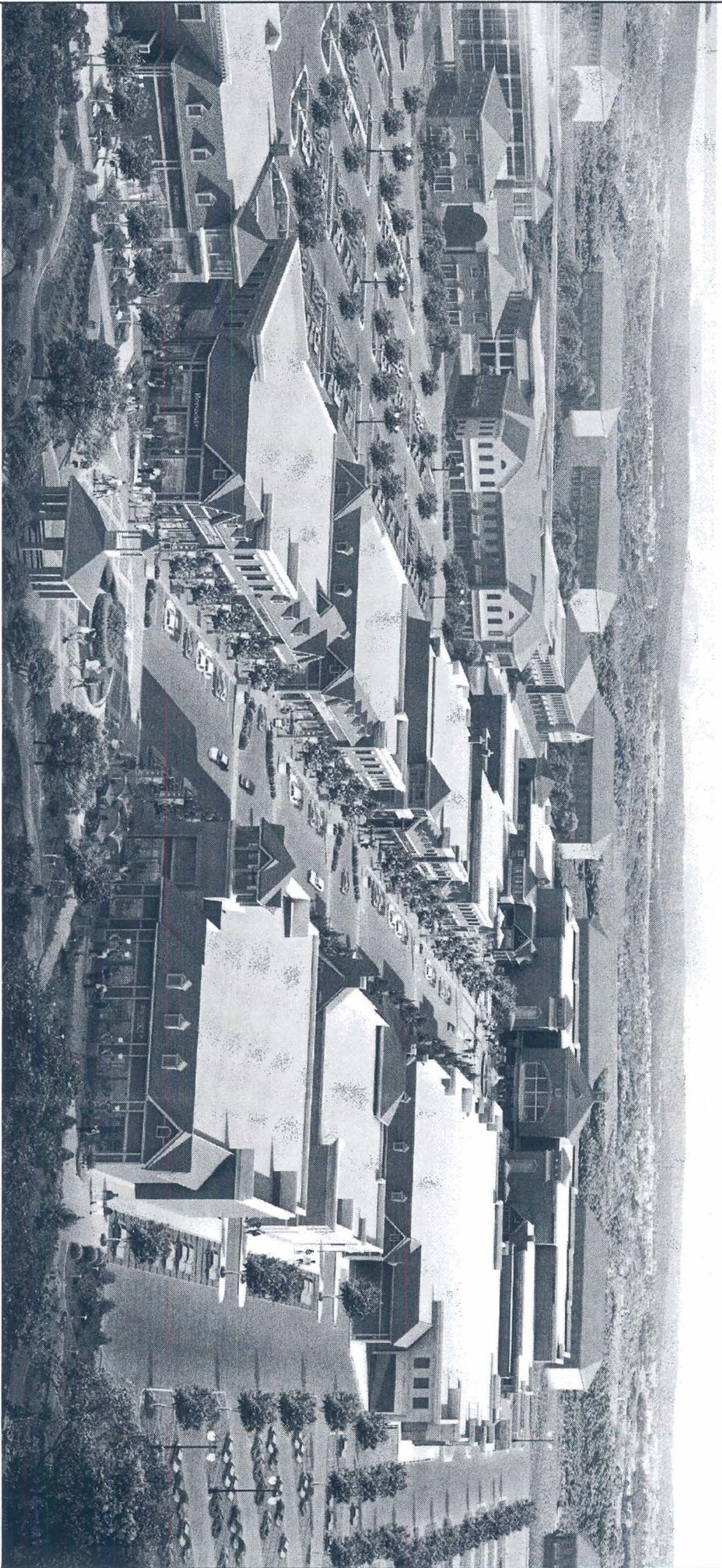
SHEET TITLE PLANTING PLAN

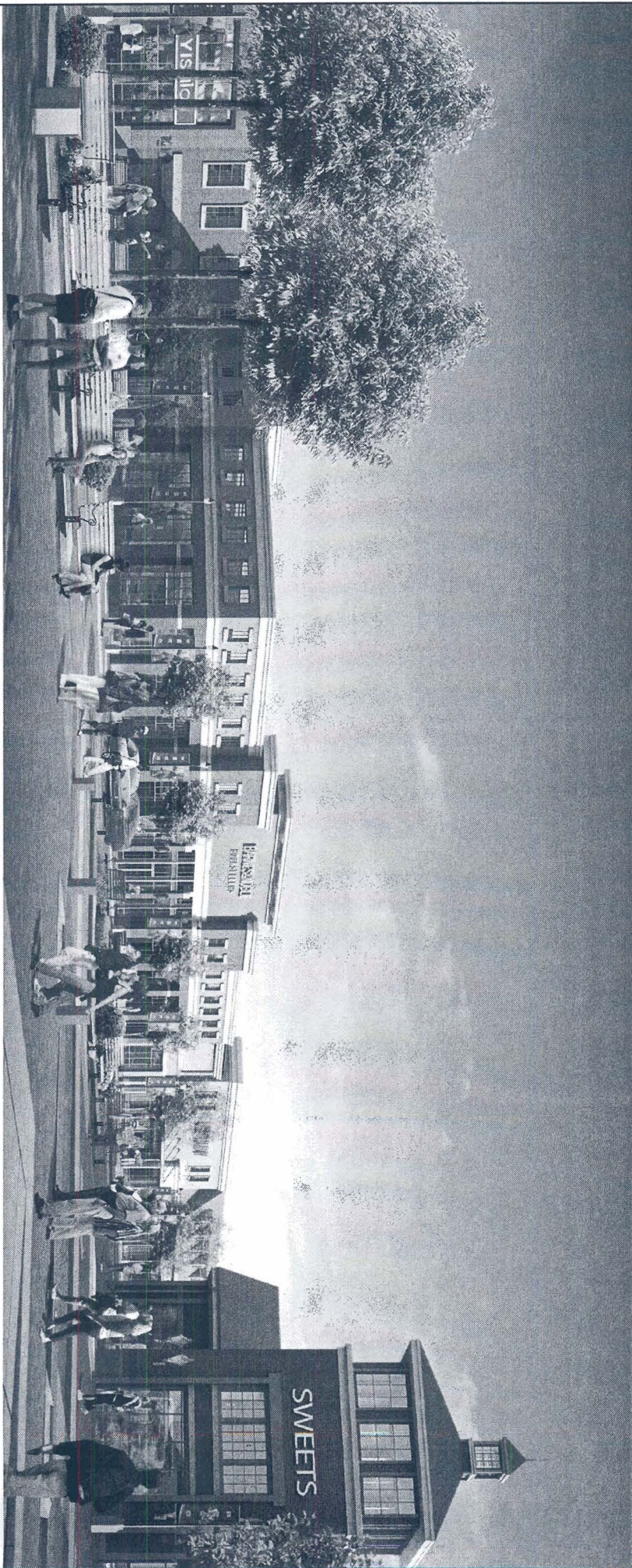
DESIGNED BY: LCR
 DRAWN BY: JCL, LCR
 CHECKED BY:
 DATE: AUGUST 11, 2005
 PROJECT NO.: 0204-1
 REVISIONS:
 NO. DATE DESCRIPTION
 1 4-1-05 Additional tree annotations

SHEET NUMBER 6 OF 7
L-3.1

ISSUE FOR REVIEW
 100% CONSTR. DOC.







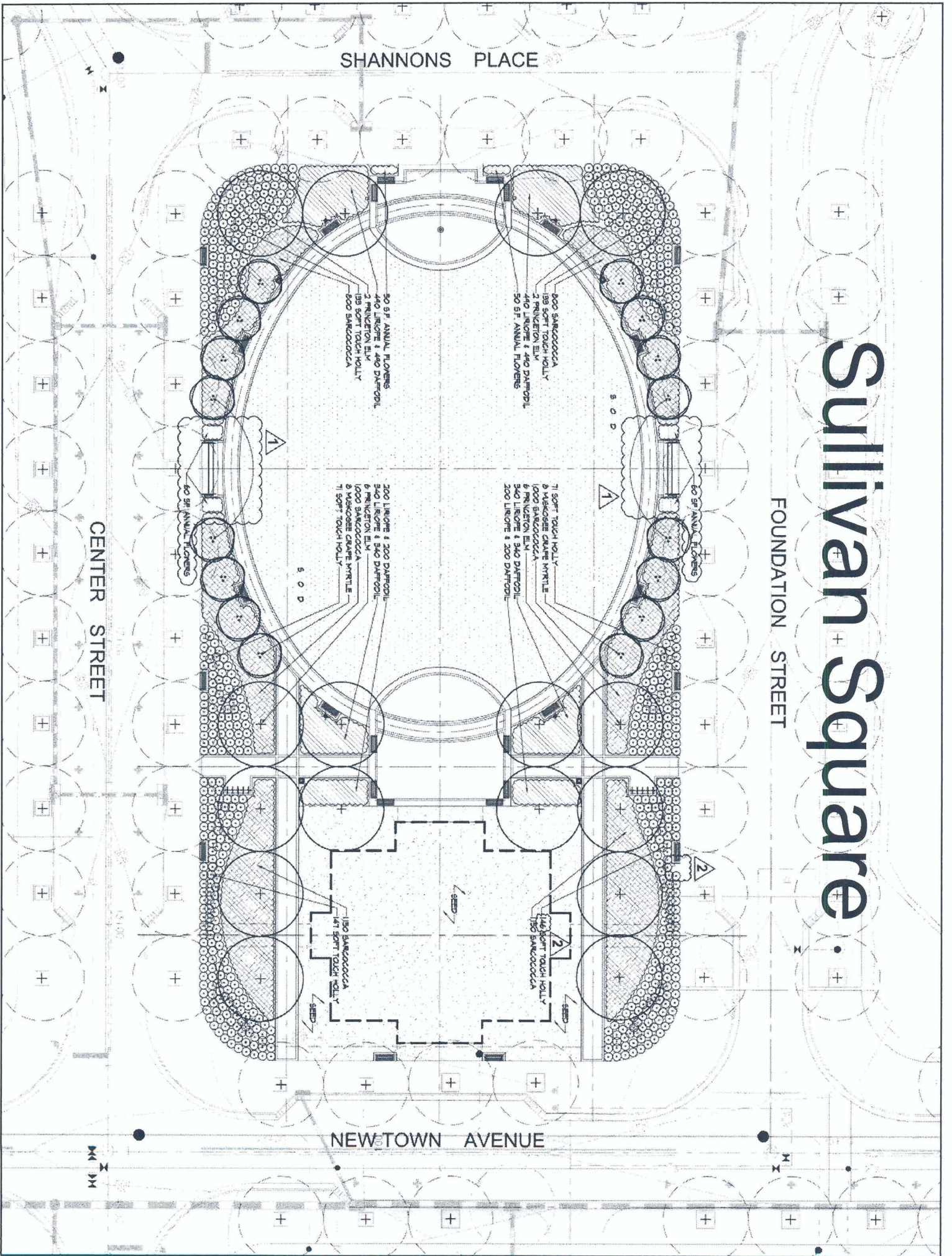
Sullivan Square

FOUNDATION STREET

SHANNONS PLACE

NEW TOWN AVENUE

CENTER STREET



Affordable Housing

Town Center Sections 2 & 4:	40 units	
22 Carriage & Cottage	Under construction	
15 Townhouses	1st half 2007	
3 Lofts	Complete	
Office District Section 3 & 6:	0 units	
Gateway Commercial Section 9:	7 units	2007 - 2008
Residential District Section 7 & 8:	28 units	2007 - 2009
Total	75 units	

Parking

Shared parking in Sections 2 & 4

- Reserved spaces (residents, banks, offices)
- Reviewed every quarter by the DRC
- 2,090 parking spaces constructed
- 3,400 would be required by ordinance without shared parking (60% more)

- Limited shared parking in Sections 3 & 6

Pedestrian Facilities

4 bus stops and shelters proffered for East side of New Town

- Bike lanes currently on New Town Avenue, Casey Blvd. and Discovery Park Avenue
- Interior sidewalks
- Crosswalks across Monticello Avenue
- Pedestrian and bike facilities on Ironbound and Monticello

Transportation

- Updated traffic study is required with each subsequent rezoning
- Compare current traffic situations vs. 1997 study and update appropriately
- Most recent update – Section 9 rezoning

Stormwater Management Master Plan

Current version approved December 22, 2004.

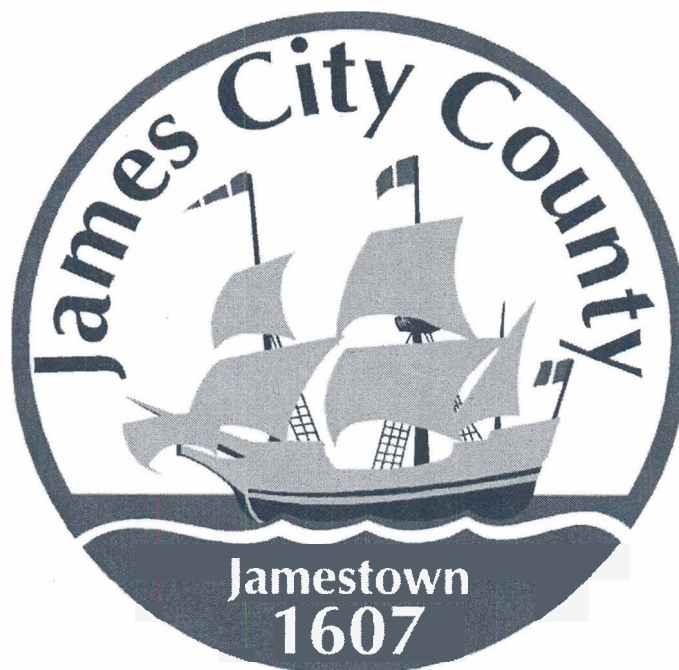
- The plan addresses both water quality and channel protection requirements by providing:
- 13 Structural BMP Facilities that control 297 acres of development
 - 7 wet pond facilities
 - 6 dry pond facilities
- Preservation of 58 acres of Natural Open Space
- Low Impact Development (LID) Measures to be provided for 17 acres of development
 - Measures to include bioretention, engineered swales, level spreaders, and open drainage systems

Chesapeake Bay Ordinance Compliance

- No onsite streams were classified as perennial prior to the January 1, 2004, Ordinance revisions
- Perennial Stream Determination confirmed March 15, 2004, affecting two onsite streams
- Because of vesting issue, Variable Width Buffer developed for project site with:
 - Minimum 50-foot buffer around perennial streams
 - Minimum 25-foot buffer around intermittent streams
 - Variable buffer length and area exceed extent and pollutant removal performance of perennial stream RPA buffer

Powhatan Creek Watershed Management Plan

- New Town located in subwatershed 208 of Powhatan Creek
- Priorities of Plan accomplished in New Town
 - RPA extension areas
 - Priority Conservation Area C-24, Small Whorled Pegonia population planned to be preserved in Section 8
 - Priority Conservation Area C-25, Virginia Least Trillium, preserved in Variable Width Buffer
 - Parallel Piping concept to stormwater ponds instead of direct discharge to onsite streams
 - Special Stormwater Criteria addressed through the Master Stormwater Management Plan
 - Stormwater recharge provided onsite through BMPs that allow for infiltration such as bioretention, infiltration trenches



James City County Water Supply

Board of Supervisors

July 25, 2006

JCSA

JCSA Description

Largest Utility in VA totally dependent on groundwater

- 4.3 Million Gallons Per Day (MGD) (2005)
- 350 Miles of Water Lines
- 17,600 Customers
- 800 - 1,000 New Customers per year
- 200,000 gallons per day/ per year increase in demand
I.E. 4.3 MGD-05 4.5 MGD- 06
- 9.0 MGD Permit

13 MGD System Capacity

\$30 Million Water Supply Improvements since 1997

JCSA

Concerns

- Parcels/ Density of Development

- Peak Demands

6.0 MGD

Peak Month

8.0 MGD

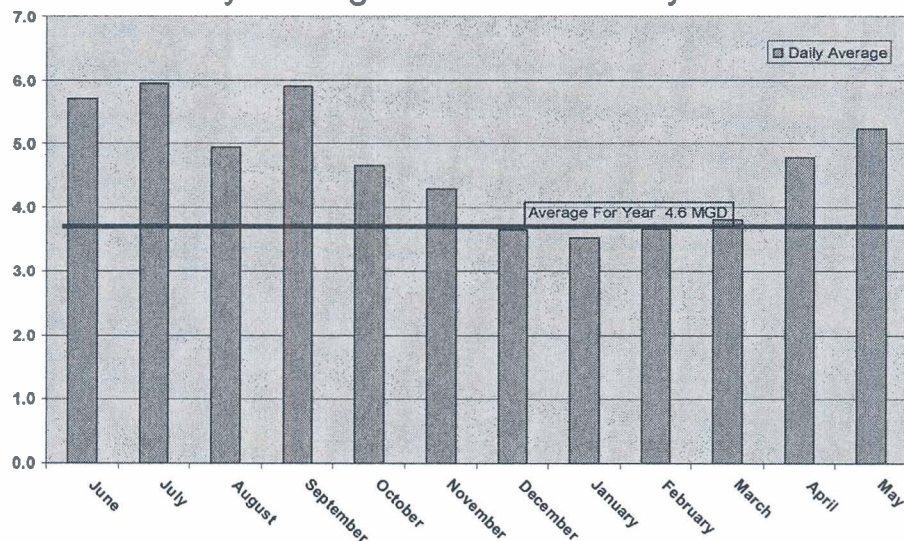
Peak Day

12-13 MGD

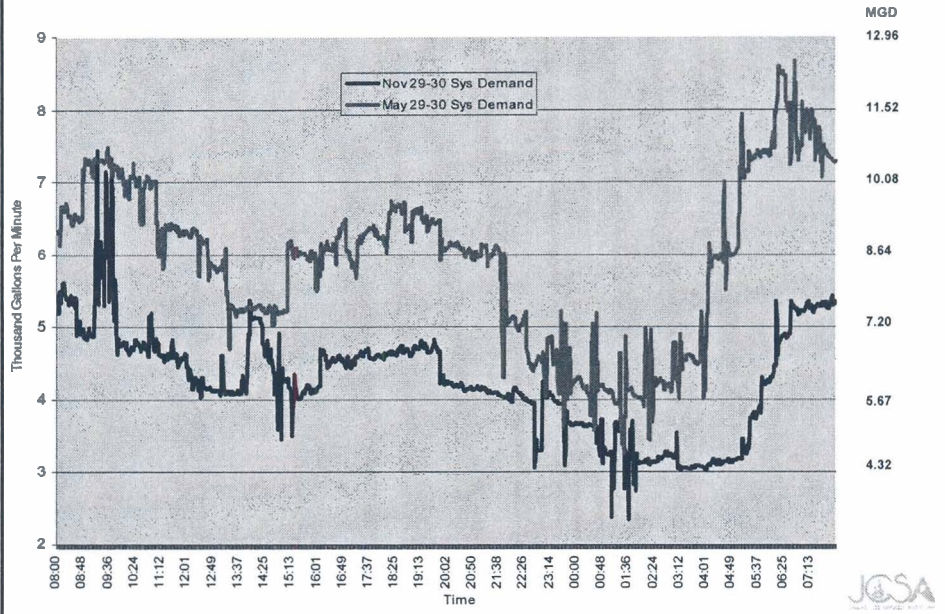
Peak Hour



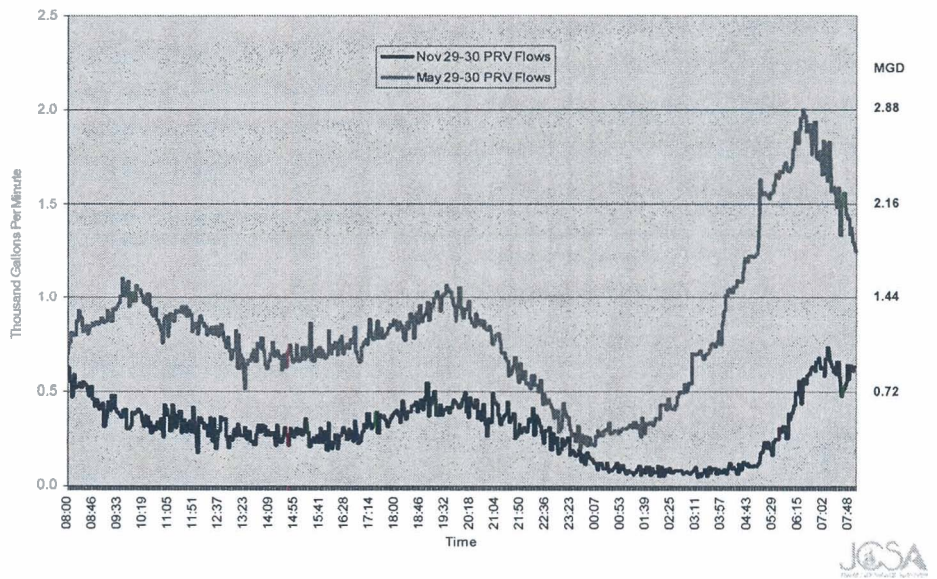
JCSA Central System
Daily Averages June 2005- May 2006



24 Hour Demand Comparison



24 Hour PRV Flow Comparison Jamestown Rd/ Rte 5 (West of Jamestown High School)

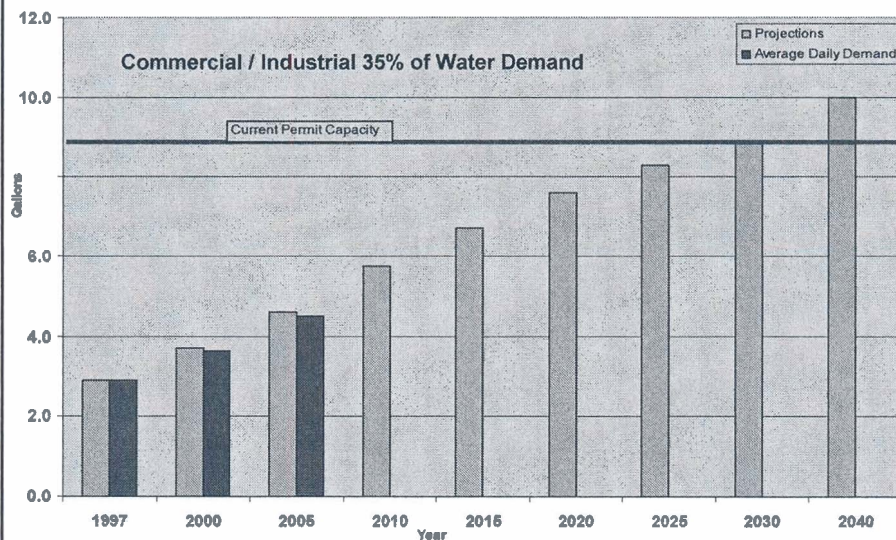


Water Supply History

1979	First Water Supply Plan
1980's	Ware Creek Reservoir
1993 - present	Regional Raw Water Study Group- King William Reservoir (KWR)
1993 / 1998	Update Water Master Plan
1997 - present	Water Supply Improvements: Five Forks R.O. Facility Ewell Hall Ford's Colony Ironbound Kristiansand Olde Towne Road Pottery Season's Trace
2005	Corp of Engineers Approval of KWR



JCSA Central System Gallons Per Day Demand Projections



Options	Costs	Per MGD	Concerns
2nd Groundwater Treatment Plant 5.0 MGD	\$25-30 Million	\$5-6 Million	Permits
Surface Water Treatment York River 8.0 MGD	\$60 Million	\$7-8 Million	Permits
King William Reservoir 20.0 MGD	\$250 Million	\$12.5 Million (Untreated Water)	Costs
Transfer JCSA to Newport News Water Works			-Loss of Control of H2O System -Land Use

JCSA

King William Reservoir

- 12 Billion Gallons Capacity
- 1600 Acre Pool
- 20 MGD Capacity – Safe Yield
- \$225 Million/ \$25 Million Permitting
- JCC/JCSA 2-4 MGD

JCSA

King William Reservoir Water & Sewer Rate Projection

Rates w/o King William Revenue Requirements												
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Debt Service - GTF Stops 2019												
Unit Cost Rate (per 1,000 gallons)	\$2.71	\$2.70	\$2.69	\$2.68	\$2.67	\$2.66	\$2.65	\$2.64	\$2.63	\$2.63	\$2.19	\$2.20
Percent Change		0%	0%	0%	0%	0%	0%	0%	0%	0%	-17%	0%
Scenario 1												
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Debt Service - KWR (\$4.6M/30 yr @ 5.2%) Starts 2008												
Debt Service - GTF Stops 2019												
KWR 20% Project Cost Sharing Starts 2008	\$584,385	\$721,775	\$1,103,324	\$1,824,953	\$2,183,157	\$2,782,442	\$2,800,842	\$2,805,642	\$2,810,442	\$2,817,442	\$2,838,442	\$2,843,642
KWR Treatment (\$0.87 per 1,000 gallons) Starts 2012												
Unit Cost Rate (per 1,000 gallons)	\$3.18	\$3.21	\$3.36	\$3.64	\$4.02	\$4.20	\$4.14	\$4.07	\$4.01	\$4.17	\$4.11	\$3.60
Percent Change		1%	5%	8%	10%	4%	-1%	-2%	-1%	4%	-1%	-12%
Scenario 2												
2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Debt Service - KWR (\$4.6M/30 yr @ 5.2%) Starts 2008												
Debt Service - GTF Stops 2019												
KWR 20% Project Cost Sharing Starts 2008	\$584,385	\$721,775	\$1,103,324	\$1,824,953	\$2,183,157	\$2,782,442	\$2,800,842	\$2,805,642	\$2,810,442	\$2,817,442	\$2,838,442	\$2,843,642
KWR Treatment (\$0.87 per 1,000 gallons) Starts 2012												
Unit Cost Rate (per 1,000 gallons)	\$2.88	\$2.86	\$2.84	\$2.82	\$3.08	\$3.05	\$3.03	\$3.01	\$2.98	\$3.19	\$3.16	\$2.69
Percent Change		-1%	-1%	-1%	9%	-1%	-1%	-1%	-1%	7%	-1%	-15%
KWR 20% Project Cost Sharing Starts 2008	\$584,385	\$721,775	\$1,103,324	\$1,824,953	\$2,183,157	\$2,782,442	\$2,800,842	\$2,805,642	\$2,810,442	\$2,817,442	\$2,838,442	\$2,843,642
Proposed to be paid for with Connection Fees												
Water Connection fee per bathroom fixture	\$300.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00	\$500.00
		67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Recommendation

- Purchase 4 MGD from King William Reservoir
- Develop / Execute Agreement By December 31, 2006
- Treatment from Newport News Water Works
- Increase Connection Fees to pay Capital Loss
 - * Formal Development Contribution Policy ? \$2500/ single family home

Plan

Water Connection @ Mounts Bay

2010 Phase I- Rte 199 to Jamestown Rd Corridor
2015 - 2020 Phase 2- Lightfoot Interconnect

Issues

Mixing Ground /Surface Water
Chlorine/ Chloramines
Distribution



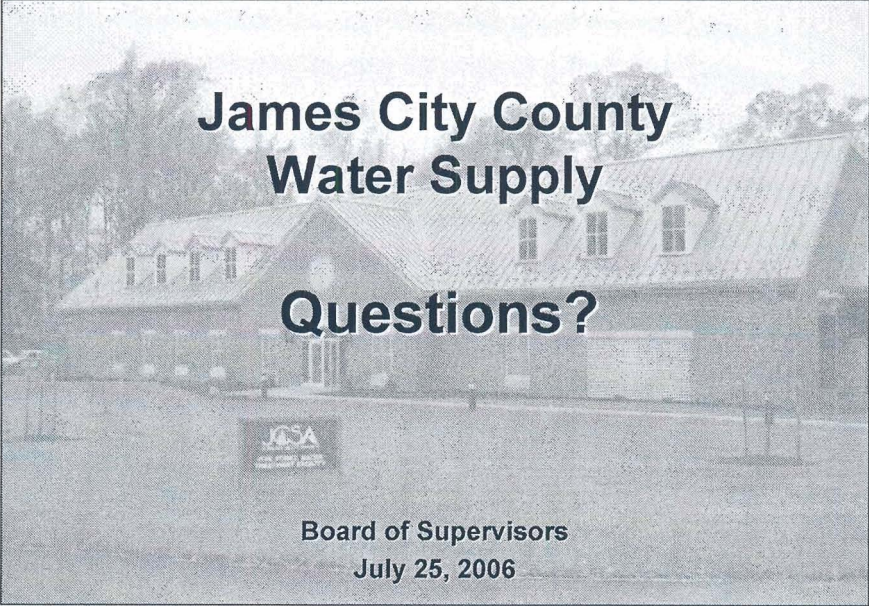
Unknowns

- Costs of Internal Hydraulic Improvements \$?
- Costs to convert Chlorine to Chloramines
- DEPARTMENT OF ENVIRONMENTAL QUALITY-
GROUNDWATER WITHDRAWAL PERMITS
- Costs of King William Reservoir
- Meeting Connection Fee Projections



State Water Plan

- Senate Bill 1221
 - Ensure adequate / safe water supply
 - Protect / preserve Virginia water resources
 - Encourage alternative water sources
- Local & Regional Plans
 - Schedule > 35,000 Nov. 2008
 - Regional Plans Nov. 2011
- Address
 - Existing water supply & use
 - Needs & Assessment 30-50 years
 - Water Demand Management
 - Public Hearing
- Local Plans
 - Evolves to State Plan – 2012 - 2015



James City County Water Supply Questions?

Board of Supervisors
July 25, 2006

