

# 2010 Outlook for U.S. Construction Activity

Webcast - October 29, 2010

**Robert Murray**

*V.P., Economic Affairs  
McGraw-Hill Construction*

**Kim Kennedy**

*Manager of Forecasting  
McGraw-Hill Construction*

# Agenda

- U.S. Construction Market Indicators and Sectors
- The Environment -- Macroeconomic Picture
- Single Family Housing and Multifamily Housing
- Commercial Buildings
- Institutional Buildings, plus Mfg. Bldgs.
- Public Works and Electric Utilities
- Total Construction
- Points of Perspective – The Construction Cycle

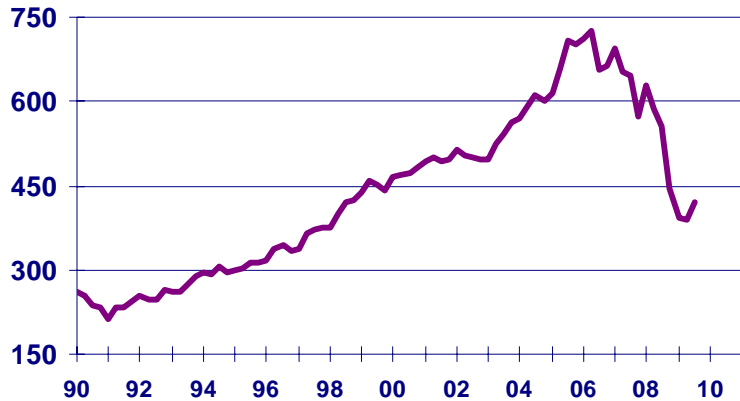
# U.S. Construction Market Indicators

*The decline for Total Construction has grown steeper in 2009.*

## M-H Construction Starts

Billions of Dollars

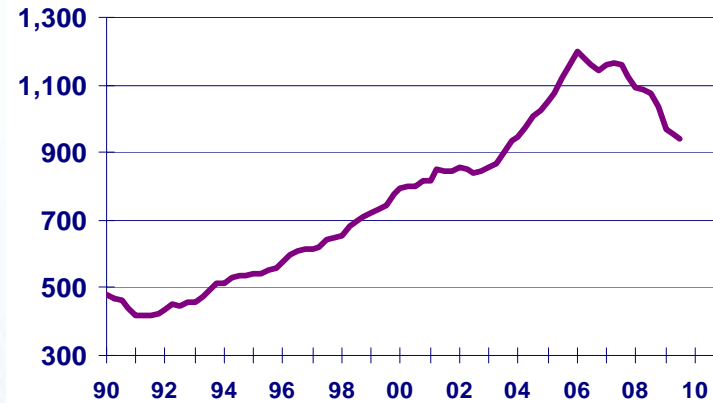
<u>2008</u>	<u>2009</u>
-13%	-25%



## Construction Put in Place

Billions of Dollars

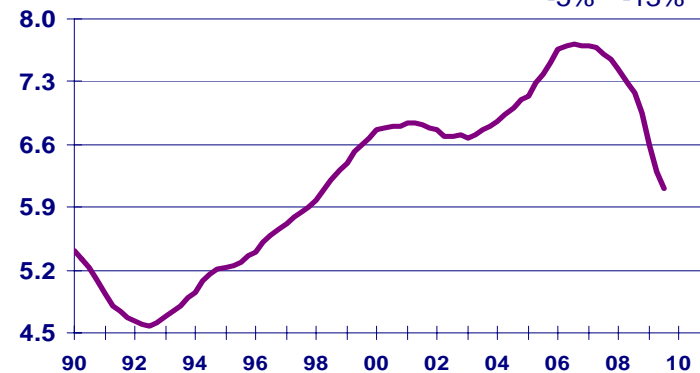
<u>2008</u>	<u>2009</u>
-7%	-12%



## Construction Employment

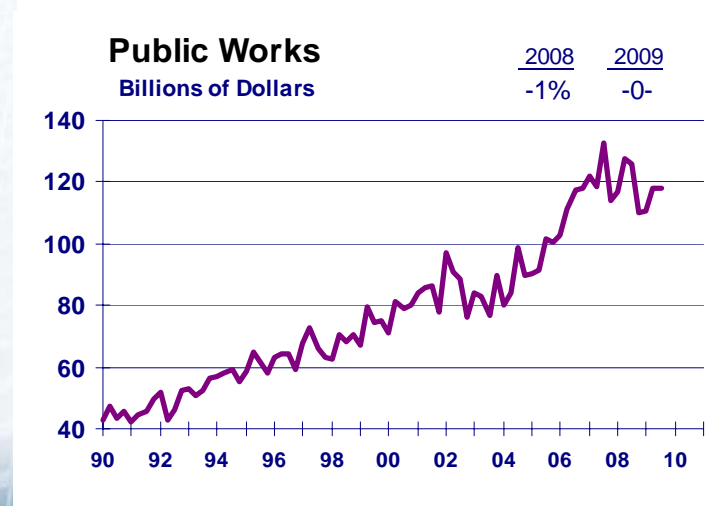
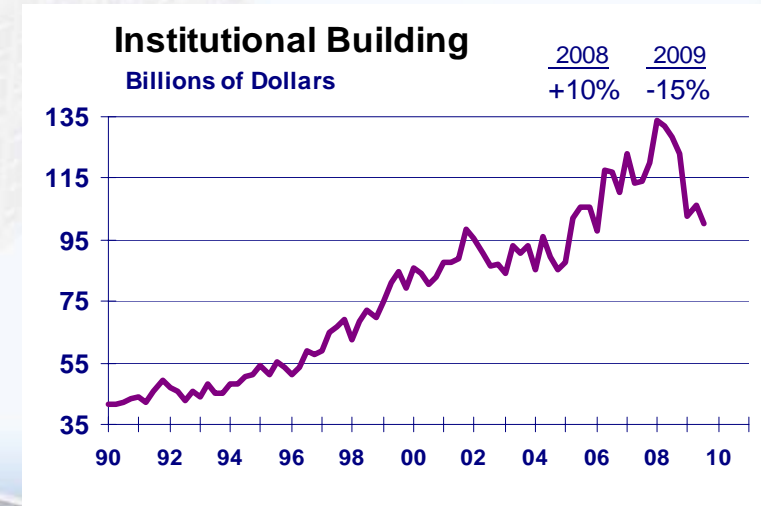
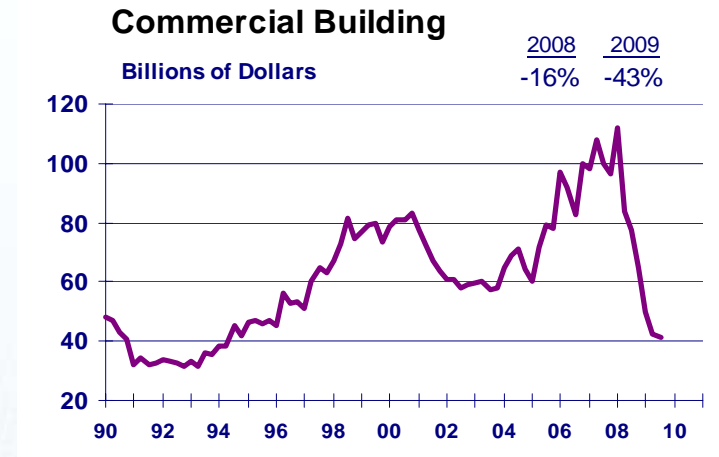
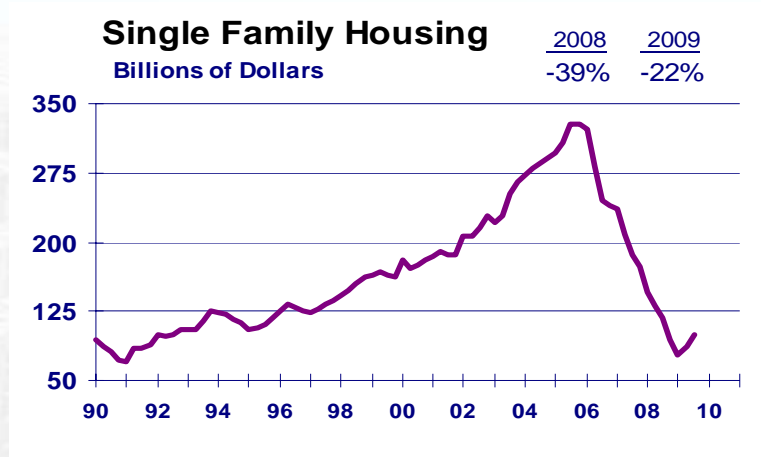
Millions of Workers

<u>2008</u>	<u>2009</u>
-5%	-13%



# Major U.S. Construction Sectors (Starts)

*Single Family Housing at bottom; Commercial Building still in steep decline; Institutional Bldg. heading down; Public Works set to turn up.*

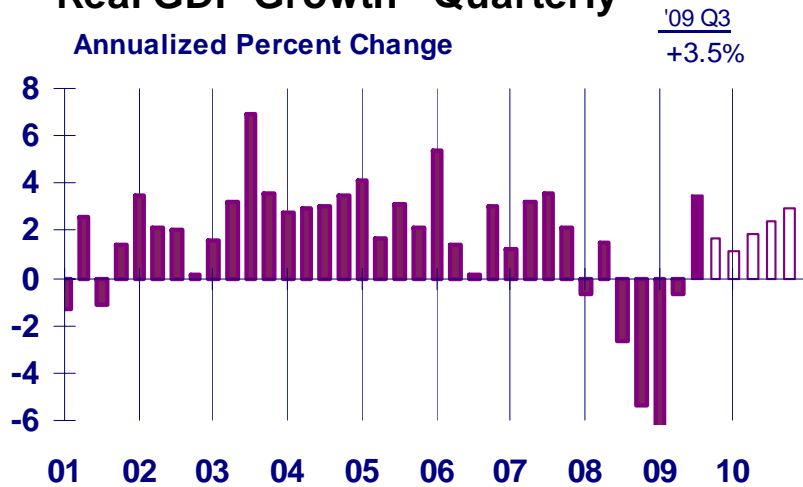


# U.S. Macroeconomic Picture

*The U.S. has been in recession since Dec. 2007. Recovery now emerging.*

## Real GDP Growth - Quarterly

Annualized Percent Change



## GDP Pattern:

### History

<u>2007</u>	<u>2008</u>
+2.1%	+0.4%

### Forecast

<u>2009</u>	<u>2010</u>
-2.5%	+1.8%

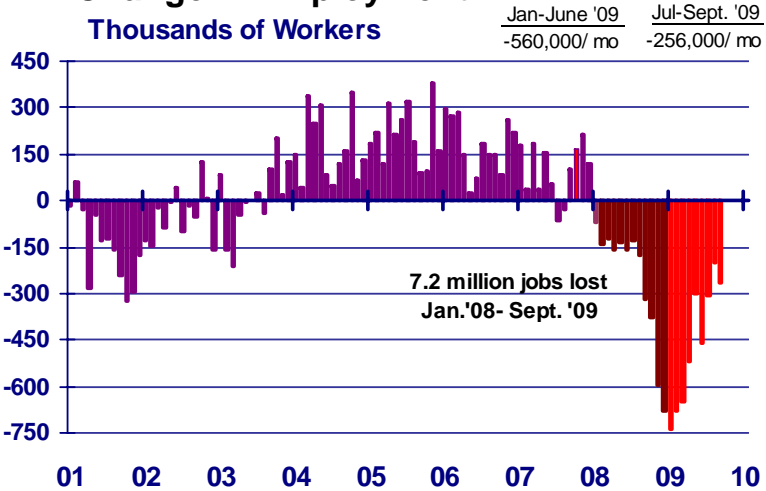
What shape will the recovery be?

**V or U or L or W ?**  
(Probably U-shaped.)

# U.S. Macroeconomic Picture

*The employment declines are slowing, but they're still present.*

**Change in Employment**  
Thousands of Workers



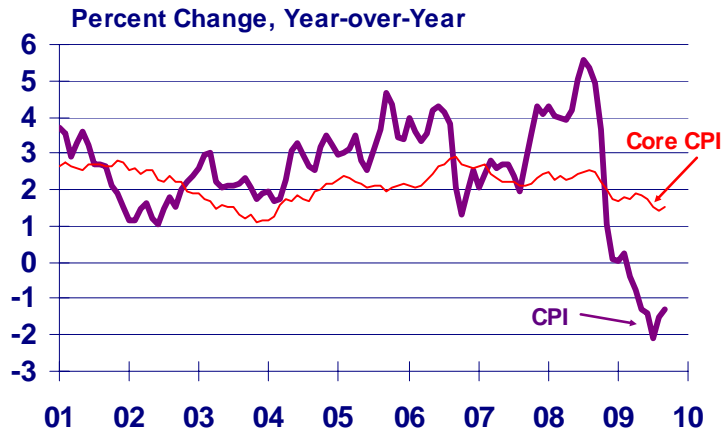
**Unemployment Rate**



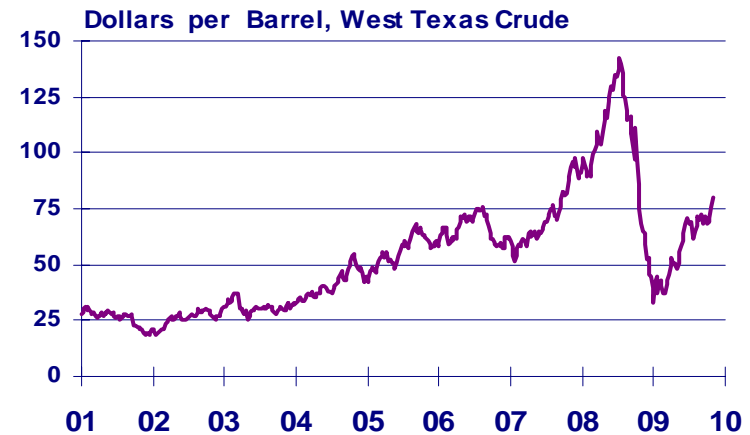
# U.S. Macroeconomic Picture

*Inflation overall has retreated; energy prices stabilizing for now.*

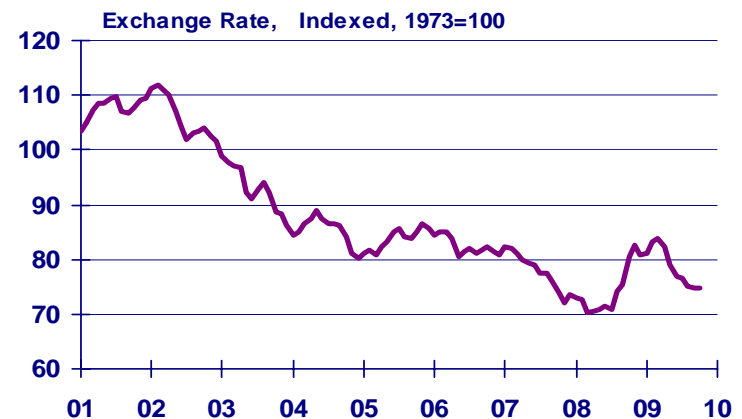
## Consumer Price Index



## Price of Oil



## U.S. Dollar vs. Major Currencies

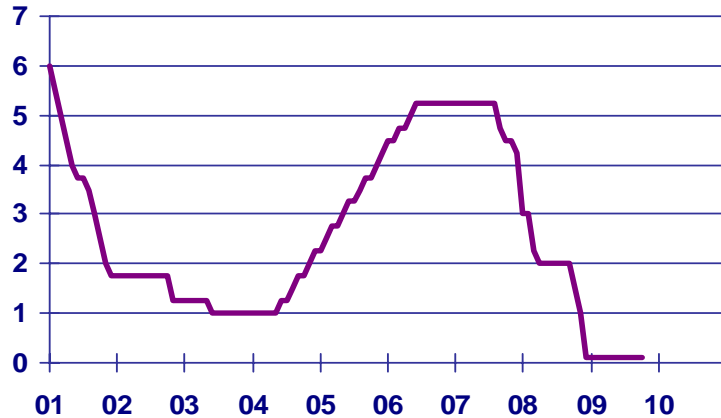


# U.S. Macroeconomic Picture

*Short-term rates very low; long term rates seem to have leveled off.*

## Monetary Policy

Federal Funds Rate, Percent



## 10-Year Treasury Bill

Percent



**Since Dec. 2008, the federal funds funds rate target set at 0% to .25%.**

**Numerous steps taken to improve liquidity taken by Federal Reserve over the course of 2008 and 2009.**

# U.S. Macroeconomic Picture

## → Stimulus Act: American Recovery and Reinvestment Act of 2009

- Enacted on February 17. Cost : \$787 billion.
- Approx. \$130 billion in construction-related spending, for 2009-2011
- Transportation
  - Highways: \$27.5 billion
  - Transit: \$8.4 billion
  - Rail: \$9.3 billion

Includes \$1.3 billion for Amtrak; \$8 billion for high-speed rail
- Environment
  - EPA clean water and drinking water SRF's: \$6 billion
  - Corps of Engineers: \$4.6 billion
  - DOE environmental cleanup: \$6 billion
  - EPA cleanup, including Superfund, \$1.2 billion
- Energy
  - Electricity grid: \$11 billion; "Smart-grid" investment: \$4.5 billion
  - Renewable energy loan guarantees: \$6 billion
  - Tax credits for renewable energy projects

# U.S. Macroeconomic Picture

## → Stimulus Act, continued

### ▪ Buildings

- **GSA federal buildings: \$5.6 billion**
  - \$750 million to construct/ renovate federal bldgs. and courthouses
  - \$300 million to construct/ renovate land ports of entry
  - \$4.5 billion for energy-efficiency upgrades
- **DOD restoration, modernization of facilities: \$4.2 billion**
- **Veterans Administration: \$1.3 billion for hospital upgrades**
- **HUD - public housing capital fund: \$4 billion**
  - redevelopment of abandoned, foreclosed properties: \$2 billion
  - community development block grants: \$1 billion

# U.S. Macroeconomic Picture

## → Stimulus Act, continued

### ▪ Build America Bonds (BABs)

- To be issued in 2009 and 2010 by state/ localities for capital expenditures
- States/ localities can receive 35% reimbursement by the federal gov't. for their interest costs; or, bond investors can receive a 35% tax credit.
- Use picking up – New Jersey Turnpike Authority sold \$1.4 billion in Build America Bonds during April to support agency's \$7 billion capital program (10 years).

### ▪ Buy American” Provisions

- No stimulus funds can be used on a project “unless all of the iron, steel, and manufactured goods used in the project are produced in the United States.”
- Exceptions – Buy American section “shall be applied in a manner consistent with United States obligations under international agreements.”

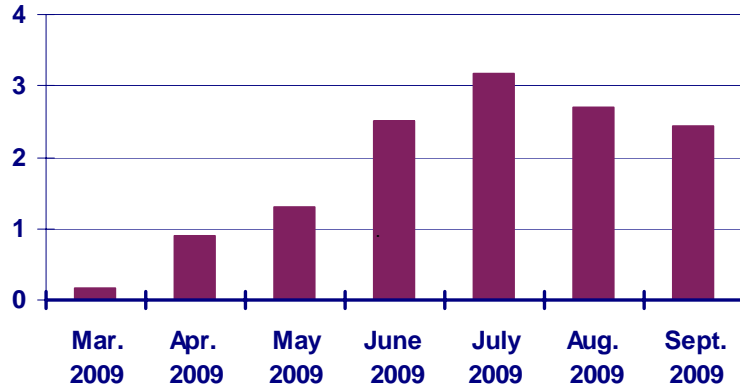
# U.S. Macroeconomic Picture

## Impact of stimulus funding, so far

Projects reaching the construction start stage in the McGraw-Hill Construction start database.

### Public Works and Electric Utilities

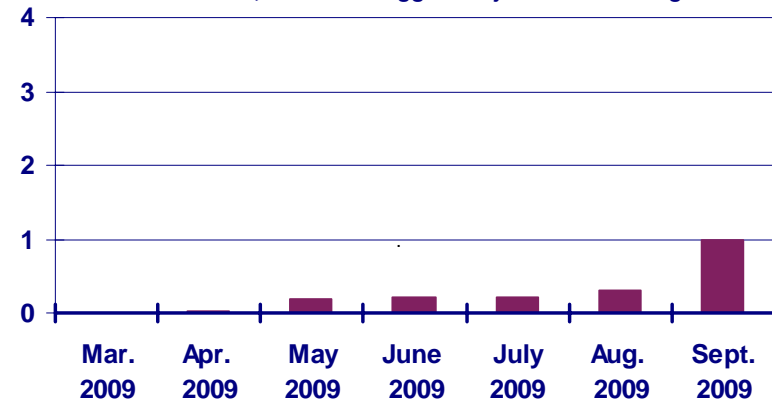
*Billions of Dollars, Stimulus Tagged Projects at Start Stage*



General Accounting Office – as of Sept. 1, states had obligated \$18 billion of the ARRA highway aid.

### General Building Types - Institutional, etc.

*Billions of Dollars, Stimulus Tagged Projects at Start Stage*



General Services Administration – in July it awarded contracts totaling nearly \$1.1 billion for projects involving about 120 buildings.

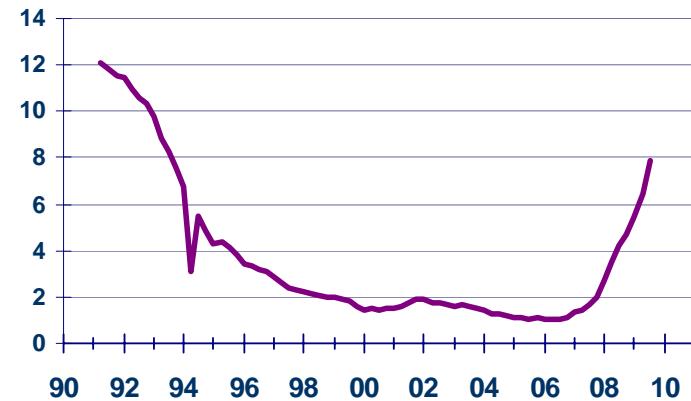
# U.S. Macroeconomic Picture

*Tighter lending standards are a major constraint for 2009 and 2010.  
Modest “plus” - rate of tightening now settling back.*

**Survey of Bank Lending Officers**  
Percent Reporting Tighter Lending Standards --  
**Commercial Real Estate Loans**



**Delinquency Rate, Percent**  
**Commercial Real Estate Loans**



**Numerous instances of tight credit affecting large projects, such as**

**Echelon Resort in Las Vegas**

**Atlantic Yards in Brooklyn**

**Chicago Spire**

**World Trade Center Towers 2, 3**

**A few emerging signs of “improvement” ...**

**Wash. DC – 1101 K St.**

**Boston – Russia Wharf project**

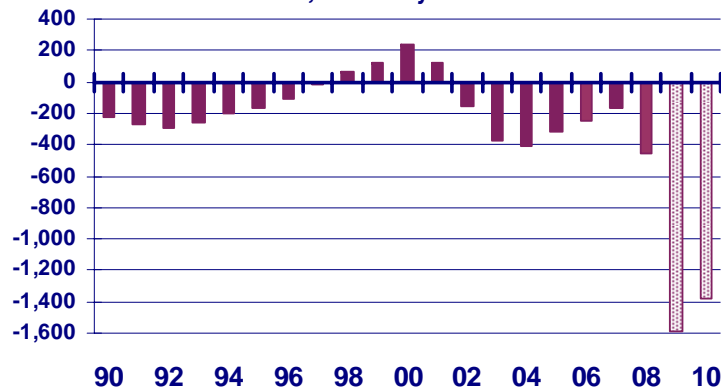
# U.S. Macroeconomic Picture

*Federal budget – \$455 billion deficit for fiscal 2008, more in 2009.*

*Not much negative impact on near term appropriations.*

## Federal Budget Surplus/ Deficit

*Billions of Dollars, CBO Projections*



## Fiscal 2009 Appropriations

- **U.S. military Base Realignment Account gets 18% hike.**
- Omnibus Bill signed March 11
- Federal-aid highway program, down 1%
- Mass transit, up 8%
- Airport Improve. Grants, flat
- Corps of Engineers, down 6%
- EPA Water Infrastructure, up 1%
- Federal Buildings Construction, +144%
- Federal Buildings renovations, down 4%

## Fiscal 2010 Appropriations

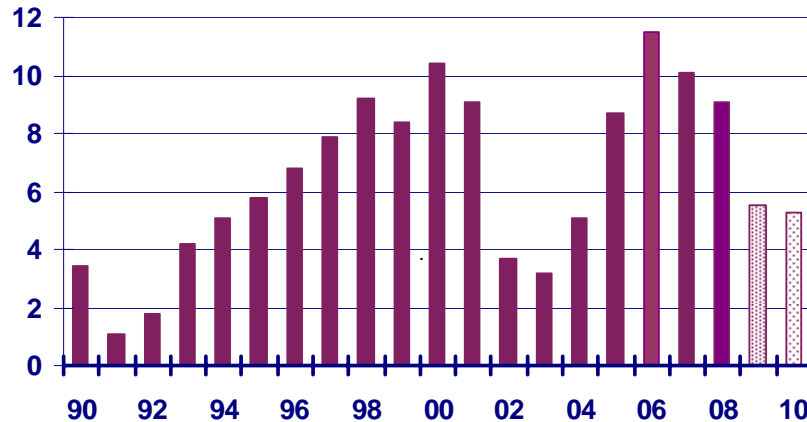
- Not yet passed
- Highways, up 1%
- Potential winners - high-speed rail, EPA water infrastructure
- Base Realignment and Closure account – likely to be reduced.

# U.S. Macroeconomic Picture

*Numerous bond measures passed, but state fiscal health has weakened.*

## State & Local Governments

*Year-End Balance, Percent of Expenditures*



### November 2007 Elections

- Texas – numerous school construction measures passed.

### November 2008 Elections

- California – voters approved \$10 bil. measure for high-speed rail line, a \$1 billion measure for children's hospitals, and Los Angeles voters approved a \$7 billion measure for school construction.

**Numerous states facing large budget gaps for Fiscal Year 2010, including -**

**California  
New York  
Illinois  
New Jersey  
Florida**

**Also – 20 states have implemented cuts to K-12 education, 6 states proposing cuts  
28 states have implemented cuts to public colleges and universities.**

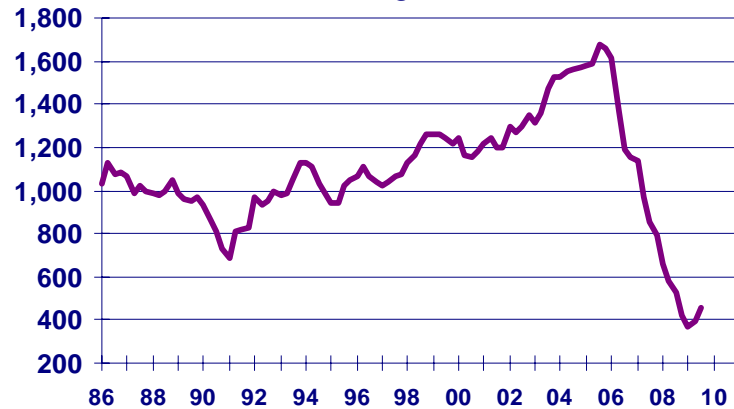
Source: Center on Budget and Policy Priorities

# U.S. Single Family Housing

*Construction has reached bottom. Home prices beginning to stabilize.*

## Single Family Housing

Thousands of Dwelling Units



## Home Sales -- New and Existing Homes

Millions -- New homes, left scale; Existing homes, right scale



## Single Family Housing Starts

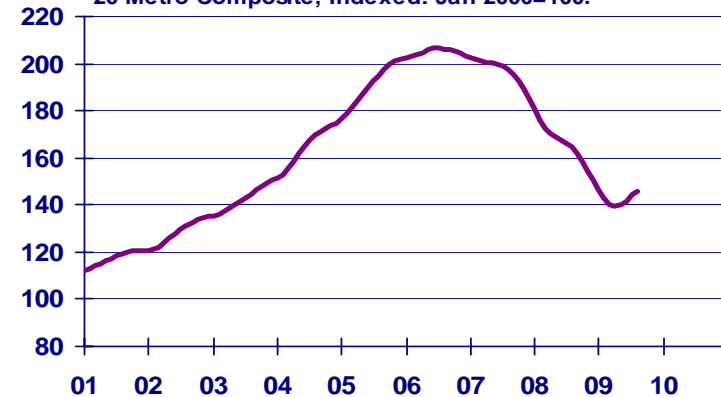
**2007** .937 million units **-30%**

**2008** .549 million units **-41%**

**2009** .430 million units **-22%**

## S&P Case Shiller Home Price Index

20-Metro Composite, Indexed: Jan 2000=100.



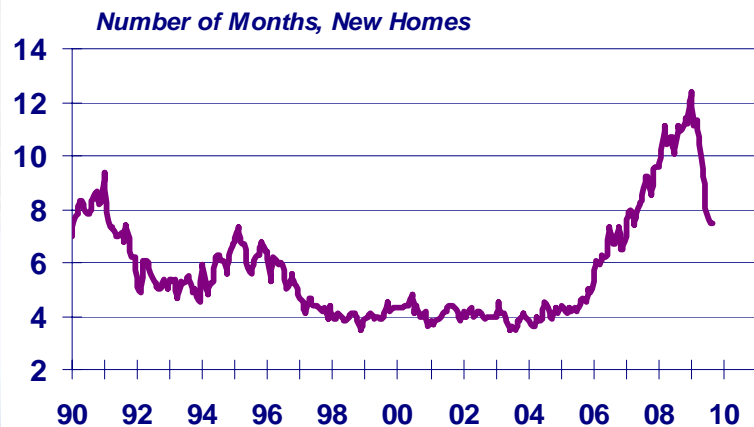
# U.S. Single Family Housing

*Pluses – low mortgage rates, inventories easing. Construction edging upward.*

**Mortgage Rates - Weekly**



**Supply of Single Family Housing**



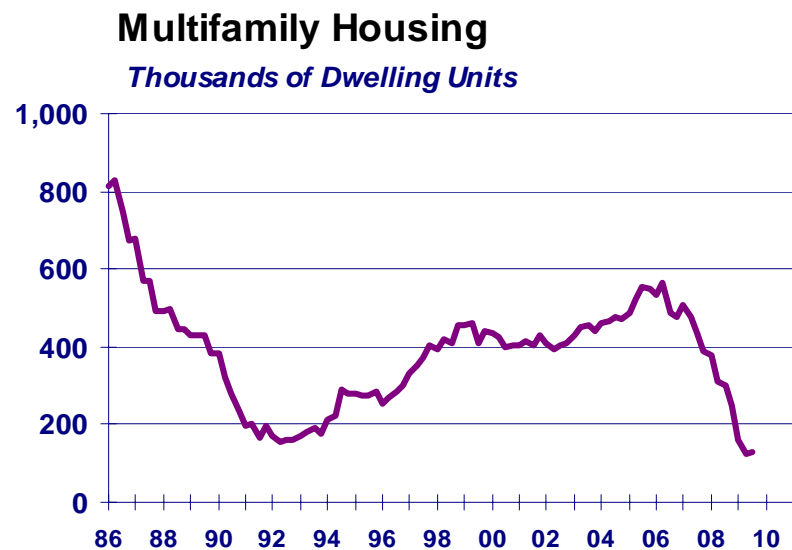
- Mortgage rates now very low.
- Steps taken to improve funds available for mortgages.
- 2009 Federal Housing Rescue Plan  
Also – efforts to limit foreclosures taken at state level.
- First-time homebuyers – \$8,000 tax credit.
- Inventories settling back.

**Single Family Housing Starts**

**2010 .560 million units +30%**

# U.S. Multifamily Housing

*Construction decline accelerated in 2008-2009.*



- Comprised of both apartments and condominiums.
- Helped by push for downtown redevelopment. Demographics supportive, especially from empty-nesters.
- Was attractive investment target, less so now – due to mounting concern about over-building of condos and diminished credit availability.
- Benefits from stimulus bill, via HUD?  
May 5 – HUD announced guidelines for \$980 million directed at community level. block grants

## Multifamily Housing

<b>2007</b>	<b>452,000 units</b>	<b>-12%</b>
<b>2008</b>	<b>310,000 units</b>	<b>-32%</b>
<b>2009</b>	<b>140,000 units</b>	<b>-55%</b>
<b>2010</b>	<b>160,000 units</b>	<b>+14%</b>

# U.S. Multifamily Housing

<u>Value</u> <u>\$ Millions</u>	<u>Dwelling</u> <u>Units</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> <u>Year: Mo</u>
300.0	306	Lakeview High-Rise Condo Tower (39-story)	Chicago	IL	2009:07
198.5	524	Monaco Residential Towers	Jersey City	NJ	2009:02
125.0	337	Tower 111	New York	NY	2009:05
106.2	86	Ritz Carlton Condo Tower	Chicago	IL	2009:09
102.2	318	Whiteman AFB Family Housing	Whiteman AFB	MO	2009:07
97.7	480	St Ann's Development Project	Bronx	NY	2009:08
83.9	333	2200 Penn Ave Office	Washington	DC	2009:08
68.9	75	Apartment Building	New York	NY	2009:07
60.5	156	Apartment Building	New York	NY	2009:09
59.5	187	Stayton at Museum Way Retirement Community	Fort Worth	TX	2009:03
55.9	299	Penrose Square Apartments	Arlington	VA	2009:04
50.0	416	Celebration Senior Living (Active Adult)	Kissimmee	FL	2009:03
49.0	405	Centennial Bluffs Lifestyle Community	Oak Ridge	TN	2009:01
46.9	325	880 Glenwood Apartments	Atlanta	GA	2009:07

# U.S. Multifamily Housing

## Multifamily Housing Top 10 Metros -- ranked by new dwelling units

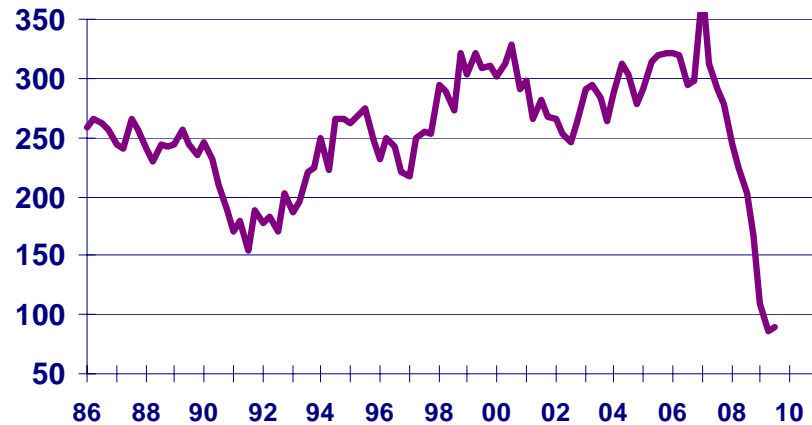
<u>Year 2008,</u>	<u>%ch 08/07</u>	<u>Year 2009 ytd</u>	<u>%ch 09/08</u>
1. New York	-0-	1. New York	-71%
2. Dallas-Ft.Worth	-1%	2. Dallas-Ft,Worth	-71%
3. Washington DC	-26%	3. Seattle	-56%
4. Atlanta	-30%	4. Houston	-68%
5. Houston	-38%	5. Chicago	-51%
6. Los Angeles	-40%	6. Washington DC	-73%
7. Chicago	-58%	7. Salt Lake City	+17%
8. Phoenix	-37%	8. Charlotte	-40%
9. Seattle	-48%	9. Miami	-56%
10. Austin TX	-23%	10. Boston	-49%
11. Miami	-56%	30. Las Vegas	-73%
19. Las Vegas	-62%		

# U.S. Commercial Bldgs. -- Stores

*Construction in 2007 at all-time high; now in sharp retreat..*

## Stores and Shopping Centers

*Millions of Square Feet*



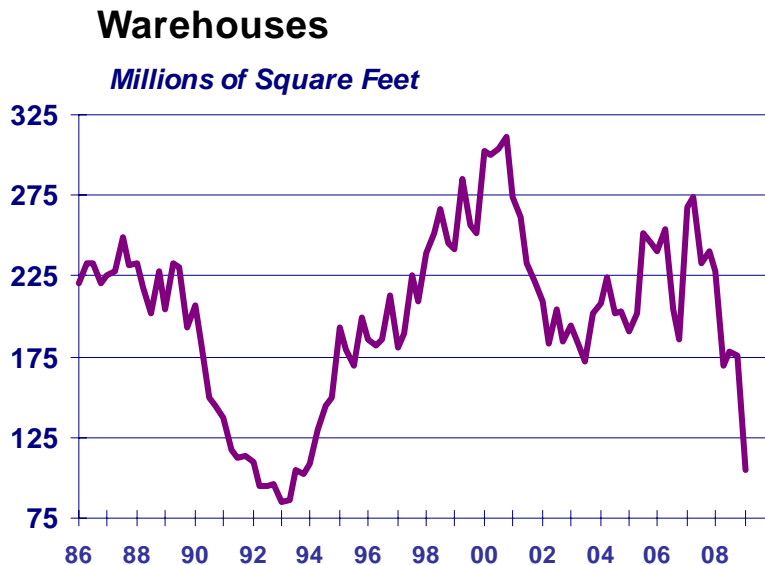
- Derived demand from housing market – definitely true on upside of cycle; now true on downside of cycle.
- Impact of slowing retail sales – reduced store openings, store closings.
- U.S. consumer expected to remain cautious in near term.

## Store Construction

<b>2007</b>	<b>314 msf</b>	<b>+2%</b>
<b>2008</b>	<b>209 msf</b>	<b>-33%</b>
<b>2009</b>	<b>100 msf</b>	<b>-52%</b>
<b>2010</b>	<b>95 msf</b>	<b>-5%</b>

# U.S. Commercial Bldgs.-- Warehouses

*Construction peaked in 2007; now heading down.*



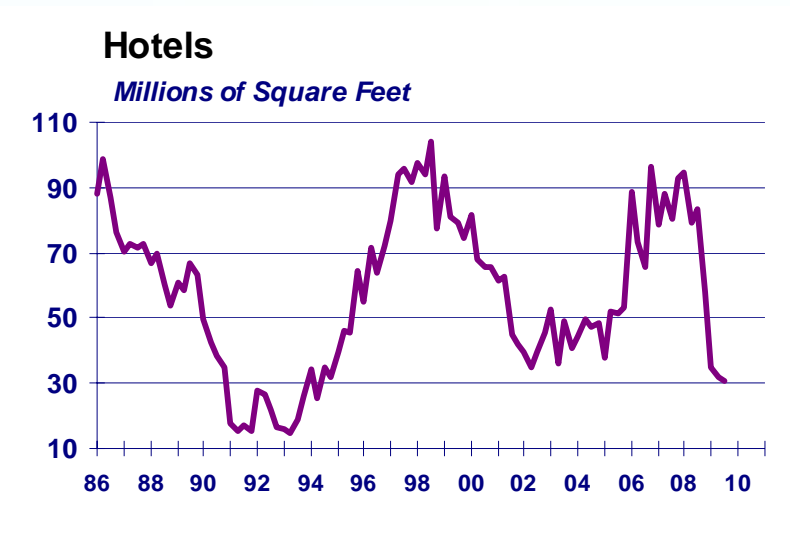
- Slow economy now having Impact on construction.
- Vacancy rates now moving up. 2009Q3 reported at 12.9%, after bottoming at 9.5% in 2006 Q3.
- Some larger regional facilities still being built by major retailers.
- Continued need for updated facilities to handle improved inventory management practices, but may have to wait until after 2009.

## Warehouses

<b>2007</b>	<b>255 msf</b>	<b>+15%</b>
<b>2008</b>	<b>189 msf</b>	<b>-26%</b>
<b>2009</b>	<b>73 msf</b>	<b>-61%</b>
<b>2010</b>	<b>70 msf</b>	<b>-4%</b>

# U.S. Commercial Bldgs.-- Hotels

*Construction soared 2006-2007, mild retreat in 2008, plunge in 2009.*



- **Negatives:**

Weak economy,  
Reduced business travel  
hotel/casino overbuilding

- **Industry financials sliding:**

Revenue Per Available Room  
(Smith Travel Research)

2005	+8.5%
2006	+7.5%
2007	+5.8%
2008	-1.9%
2009	-17.0 (estimated)

## Hotels

2007	85 msf	+5%
2008	79 msf	-7%
2009	35 msf	-56%
2010	30 msf	-14%

# U.S. Commercial Bldgs.-- Hotels

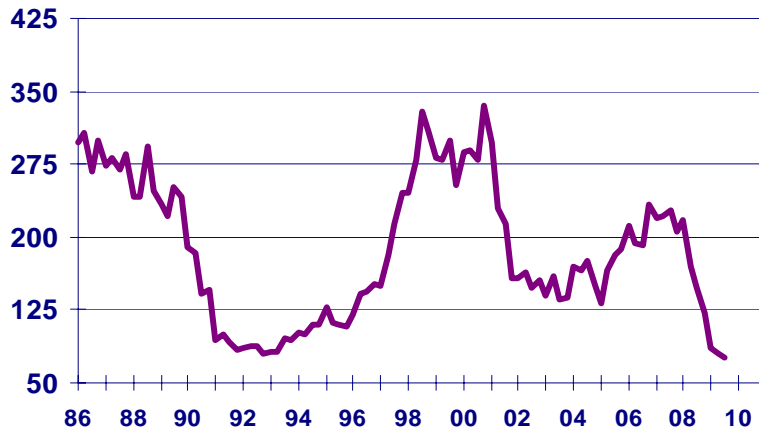
<u>Value</u> <u>\$ Millions</u>	<u>Sq.Ft.</u> <u>Thous.</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> <u>Year: Mo</u>
224.5	350	Thunder Valley Hotel	Lincoln	CA	2009:04
222.8	1,200	Disney Hawaii Resort at Ko Olina	Kapolei	HI	2009:01
75.0	100	Coeur d'alene Casino Resort Expansion	Worley	ID	2009:08
60.0	170	Valley View Casino Hotel	Valley Center	CA	2009:04
50.0	0	Marriott Resort Hotel Renovation	Lihue	HI	2009:07
40.0	0	OHANA Islander Waikiki Renovation	Honolulu	HI	2009:01
33.5	241	Embassy Suites Hotel (Design/Build)	Houston	TX	2009:06
30.0	165	Embassy Suites-Restaurant	Elizabeth	NJ	2009:07
25.0	150	Tri-State Racetrack & Gaming Center Hotel Pool	Nitro	WV	2009:09
20.0	0	Sheraton Boston Hotel North Tower Room Renovation	Boston	MA	2009:01
20.0	75	Springhill Suites Ashburn/Dulles North	Ashburn	VA	2009:03
20.0	0	Fairfield Inn (Renov Marriott Ctyard)	Indianapolis	IN	2009:05
20.0	0	Marriott Hotel Union Station (renov Hyatt Regency)	Saint Louis	MO	2009:05
20.0	0	Sheraton Atlanta (Renovations)	Atlanta	GA	2009:08

# U.S. Commercial Bldgs. -- Offices

*Construction upturn was measured this time, however...*

## Office Buildings

*Millions of Square Feet*



- Tight credit conditions causing more and more projects to be deferred.
- Market fundamentals – rents and vacancies – deteriorating in difficult economic climate.
- Longer term prospects – Some improvement, but will take several years.

## Office construction

<b>2007</b>	<b>219 msf</b>	<b>+5%</b>
<b>2008</b>	<b>165 msf</b>	<b>-25%</b>
<b>2009</b>	<b>80 msf</b>	<b>-51%</b>
<b>2010</b>	<b>73 msf</b>	<b>-9%</b>

# U.S. Commercial Bldgs. -- Offices

<u>Value</u> <u>\$ Millions</u>	<u>Sq.Ft.</u> <u>Thous.</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> <u>Year: Mo</u>
922.0	1,700	US Army Washington Headquarters Service	Alexandria	VA	2009:02
500.0	500	Apple Data Center (Catawba County NC)- Phased	Maiden	NC	2009:08
347.2	722	International Gem Tower Office	New York	NY	2009:05
315.0	719	Military Dept Investigation Agencies	Quantico	VA	2009:02
311.0	605	Gotham Center (Mixed-Use Development)	Long Island City	NY	2009:01
260.0	0	Pentagon Renovation Wedges 2 thru 5	Arlington	VA	2009:03
170.0	637	Office Building	Long Island City	NY	2009:07
150.0	180	Yahoo Data Center (Phases1 &2)	Lockport	NY	2009:09
133.0	255	San Francisco PUC Admin Bldg	San Francisco	CA	2009:08
129.7	450	2200 Penn Ave Office	Washington	DC	2009:08
110.0	390	BRAC NCR Relocation Admin Facility	Andrews Air Force	MD	2009:08
104.7	400	Westinghouse Electric Company Corporate Hdqtrs.	Cranberry Twp	PA	2009:02
101.1	565	Amazon Block Boren Ave Mixed Use Building	Seattle	WA	2009:06
91.9	315	New Blue Cross Blue Shield Headquarters Bldg	Omaha	NE	2009:02

# U.S. Commercial Bldgs. -- Offices

## Office Construction

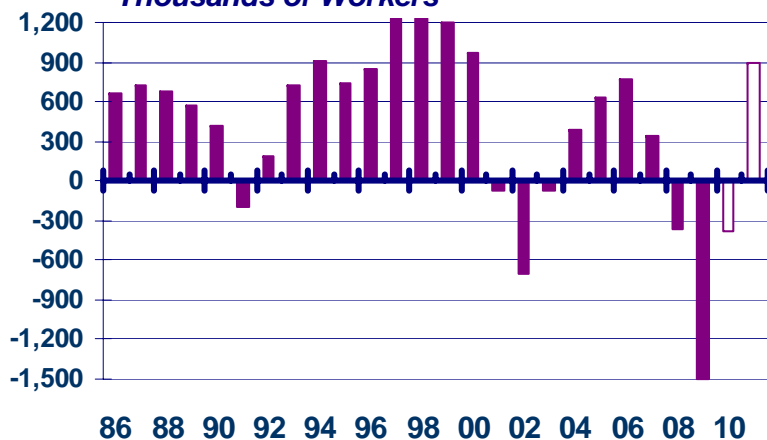
### Top 10 Metros -- ranked by new square feet

<u>Year 2008,</u>	<u>%ch 08/07</u>	<u>Year 2009 ytd,</u>	<u>%ch 09/08</u>
1. New York	+70%	1. Washington DC	-32%
2. Washington DC	-1%	2. New York n DC	-70%
3. Houston	+45%	3. Seattle	-42%
4. Dallas-Ft.Worth	-21%	4. Houston	-77%
5. Atlanta	-39%	5. Baltimore	-15%
6. Phoenix	-53%	6. Dallas-Ft. Worth	-75%
7. Seattle	-15%	7. Tampa	-31%
8. Boston	+56%	8. Chicago	-50%
9. Baltimore	+50%	9. Miami	-63%
10. Chicago	-61%	10. Denver	-44%

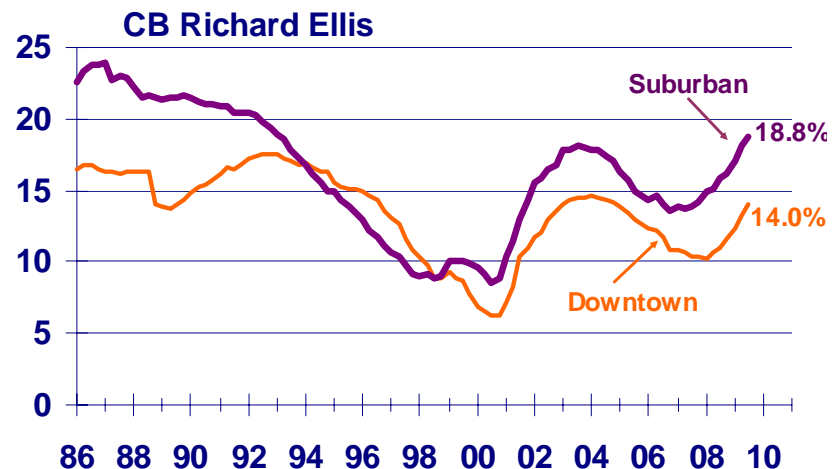
# U.S. Commercial Buildings

*Office building factors point towards difficult 2010.*

**Change in Office Employment**  
*Thousands of Workers*



**U.S. Office Vacancy Rates**



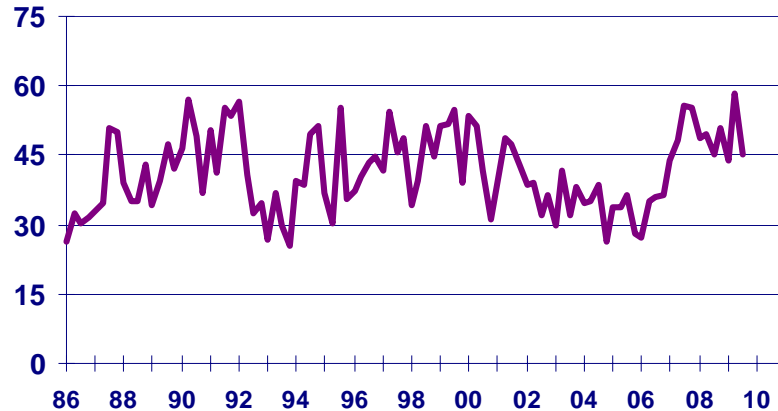
- Overbuilding is less than in past cycles.
- But – cutbacks in office employment now affecting market fundamentals more severely.

# U.S. Institutional Buildings

*Public Buildings had strong 2007-2008; should stay close in 2009-2010.*

## Public Buildings

Millions of Square Feet



	2009
Detention Facilities	-9%
Armories/Military	-20%
Courthouses	+61%
Police/Fire Stations	-16%
Post Offices	-66%
<b>Total Public</b>	<b>2007 +51%</b>
	<b>2008 -4%</b>
	<b>2009 -3%</b>
	<b>2010 +8%</b>

## GSA Stimulus List

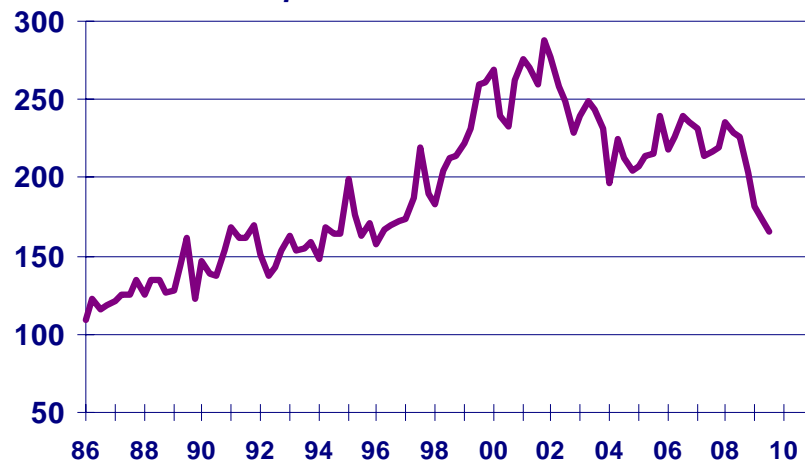
- New federal construction, including ports of entry, courthouses.
  - Examples:
    - \$223 million to consolidate St. Elizabeth Campus in Wash. DC
- Full and partial building modernization. Examples:
  - \$226 million for Commerce Dept. headquarters in Wash. DC
  - \$121 million for 50 United Nations Plaza in San Francisco CA
- Green building “limited scope” projects

# U.S. Institutional -- Educational Bldgs.

*School construction losing momentum.*

## Educational Buildings

Millions of Square Feet



## Educational Buildings

<b>2007</b>	<b>220 msf</b>	<b>-4%</b>
<b>2008</b>	<b>224 msf</b>	<b>+1%</b>
<b>2009</b>	<b>172 msf</b>	<b>-23%</b>
<b>2010</b>	<b>158 msf</b>	<b>-8%</b>

**2008**      **2009ytd**

<b>Primary, Jr. Highs</b>	<b>-5%</b>	<b>-30%</b>
<b>High Schools</b>	<b>+10%</b>	<b>-28%</b>
<b>Colleges/Univ.</b>	<b>+1%</b>	<b>-22%</b>
<b>Libraries</b>	<b>-15%</b>	<b>-20%</b>
<b>Laboratories</b>	<b>-18%</b>	<b>+9%</b>
<b>Museums</b>	<b>+18%</b>	<b>-26%</b>
<b>Comm. Colleges</b>	<b>+11%</b>	<b>-25%</b>
<b>Vocational Schools</b>	<b>+36%</b>	<b>-12%</b>

- Numerous states in recent years have passed school construction bond measures, especially California and Texas.
- Major universities increased capital spending plans – but, now under re-evaluation.

# U.S. Institutional – Educational Bldgs.

<u>Value</u> <u>\$ Millions</u>	<u>Sq.Ft.</u> <u>Thous.</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> <u>Year: Mo</u>
499.9	735	USAMRIID Replacement Project	Frederick	MD	2009:08
381.1	390	CUNY Advanced Science Research Center (Ph 1)	New York	NY	2009:06
225.0	375	Mount Sinai School of Medicine Research Bldg	New York	NY	2009:06
209.2	370	Knight Management Center (Grad. Sch. of Business)	Palo Alto	CA	2009:03
192.5	392	National Light Source 2 Ring Building	Upton	NY	2009:04
135.8	200	Bell Tower Development Proj. (Genomic Science Bldg)	Chapel Hill	NC	2009:08
111.1	190	Sorenson Molecular Biotechnology Bldg	Salt Lake City	UT	2009:06
102.0	500	CT2 East Electronic Research Center	Aberdeen Prov. Gr.	MD	2009:08
100.0	0	Morse College (Renovations)	New Haven	CT	2009:05
100.0	216	Dental Sciences Complex (Phase II)	Chapel Hill	NC	2009:06
96.6	160	South Texas Research Facility	San Antonio	TX	2009:02
96.0	280	Imaging Research Building	Chapel Hill	NC	2009:06
88.5	400	DeKalb High School w/Gym	De Kalb	IL	2009:06
87.7	172	Naperville Central High School (Addition/Renovation)	Naperville	IL	2009:06

# U.S. Institutional -- Educational Bldgs.

## Educational Buildings

### Top 10 States -- ranked by sq. ft. of new starts

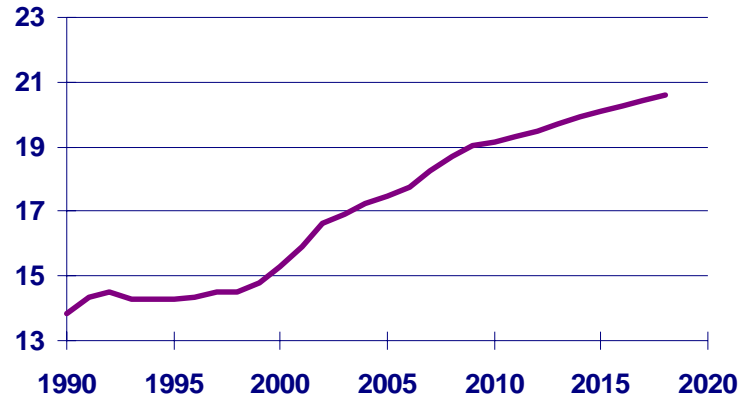
<u>Year 2008,</u>	<u>%ch 08/07</u>	<u>Year 2009 ytd,</u>	<u>%ch 09/08</u>
1. Texas	+25%	1. Texas	-32%
2. California	+22%	2. Florida	-28%
3. Georgia	-6%	3. California	-42%
4. Florida	-29%	4. Ohio	-3%
5. Pennsylvania	+18%	5. Georgia	-45%
6. Ohio	+3%	6. Pennsylvania	-30%
7. North Carolina	+6%	7. North Carolina	-33%
8. South Carolina	+61%	8. New York	+20%
9. Illinois	-9%	9. Illinois	-17%
10. Alabama	+48%	10. Virginia	+8%

# U.S. Institutional Buildings

*Projected student enrollments support more school construction long-term.*

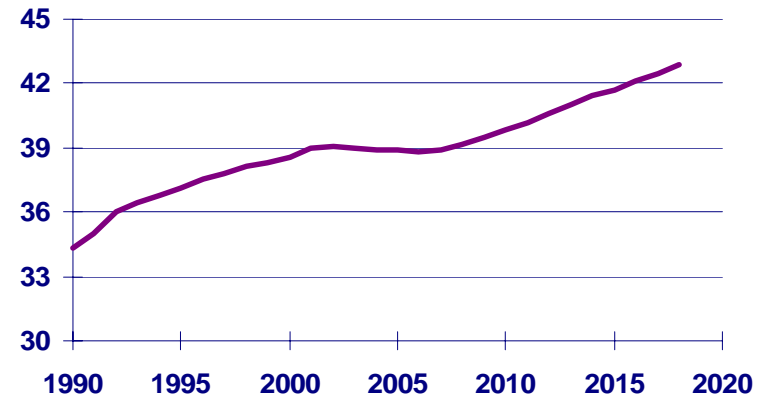
### Higher Education Enrollments

*Millions of Students*



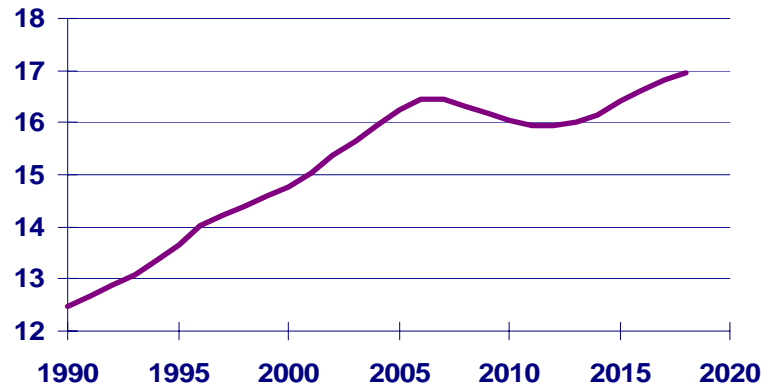
### Student Enrollments, Grades K-8

*Millions of Students*



### Student Enrollments, Grades 9-12

*Millions of Students*

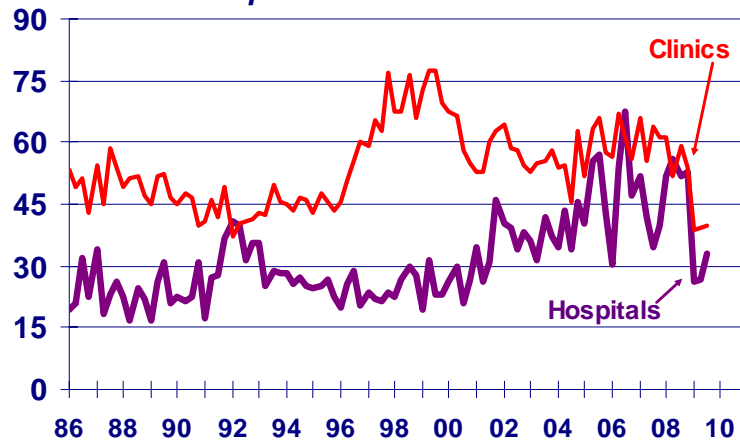


# U.S. Institutional -- Healthcare Buildings

*Reached new high in 2008, sharp decline in 2009.*

## Healthcare Facilities

Millions of Square Feet



	<u>2008</u>	<u>2009ytd</u>
Clinics/ Nursing Homes	-8%	-33%
Hospitals	+26%	-44%

- Hospital chains hard-hit by tight credit conditions.
- Debate over healthcare reform creates near-term uncertainty.
- Sector still supported by –  
Ongoing need to replace aging facilities  
Growth of elderly population.
- U.S. military Veterans Admin. projects will help to ease some of the near-term slowdown.

## Healthcare Facilities

2007	104 msf	-6%
2008	110 msf	+6%
2009	70 msf	-36%
2010	72 msf	+3%

# U.S. Institutional – Healthcare Buildings

<u>Value</u> <u>\$ Millions</u>	<u>Sq.Ft.</u> <u>Thous.</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> <u>Year: Mo</u>
590.0	1,000	Kaiser Oakland Replacement Hospital Phase 2	Oakland	CA	2009:07
430.0	483	Kaiser Permanente Hospital	Fontana	CA	2009:03
425.0	434	Kaiser Hospital	Anaheim	CA	2009:07
364.9	790	Las Vegas VA Medical Center Ph IV	N Las Vegas	NV	2009:01
350.0	900	Parkview Health Center Complex	Fort Wayne	IN	2009:04
334.7	738	San Antonio Military Medical Center	San Antonio	TX	2009:07
300.0	750	Benjamin Russell Hospital for Children	Birmingham	AL	2009:07
246.0	600	Baystate Medical Center Hospital Of The Future	Springfield	MA	2009:08
220.0	276	Cook Childrens Hospital (Expansion)	Fort Worth	TX	2009:06
220.0	600	Oregon State Hospital Replacement - Salem Site	Salem	OR	2009:07
218.0	425	DMH Psychiatric Facility	Worcester	MA	2009:03
208.0	230	Eden Medical Hospital Replacement	Castro Valley	CA	2009:09
160.0	450	Global Vascular Institute	Buffalo	NY	2009:09
159.6	630	Florida Hospital Patient Tower-ER Bed Addn	Orlando	FL	2009:05

# U.S. Institutional – Healthcare Bldgs.

## Healthcare Buildings

### Top 10 States -- ranked by sq. ft. of new starts

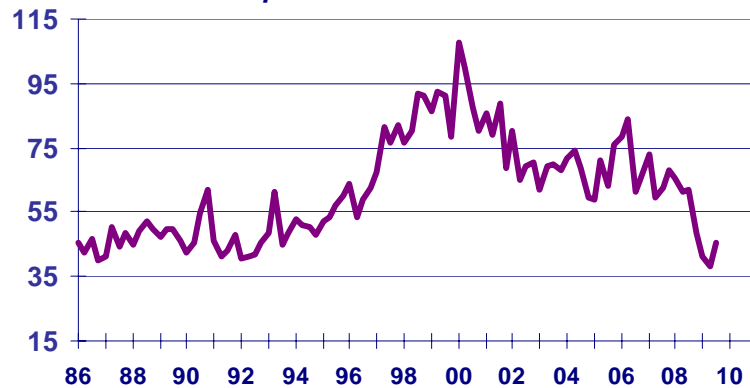
<u>Year 2008,</u>	<u>%ch 08/07</u>	<u>Year 2009 ytd,</u>	<u>%ch 09/08</u>
1. Texas	+57%	1. Texas	-34%
2. Illinois	+110%	2. Florida	+15%
3. Ohio	+25%	3. California	-2%
4. California	-34%	4. Illinois	-55%
5. Florida	-26%	5. Indiana	-21%
6. Virginia	+125%	6. North Carolina	-26%
7. New York	+89%	7. Missouri	+70%
8. Tennessee	+74%	8. New York	-54%
9. Maryland	+103%	9. Massachusetts	+111%
10. Wisconsin	+40%	10. Georgia	-37%

# U.S. Institutional Buildings

*Amusement/Recreational and Churches still declining.*

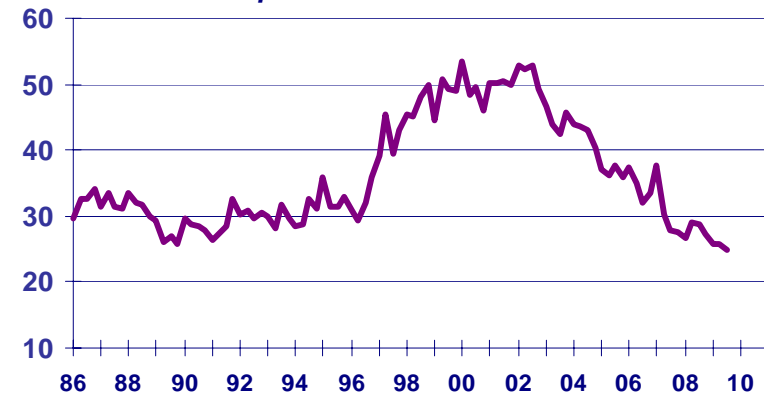
## Amusement & Rec. Buildings

Millions of Square Feet



## Religious Buildings

Millions of Square Feet



### Amusement & Rec. 2008

Convention Centers	+17%
Sports Arenas	+55%
Theaters	-32%
<u>Other (inc. theme parks)</u>	<u>-13%</u>

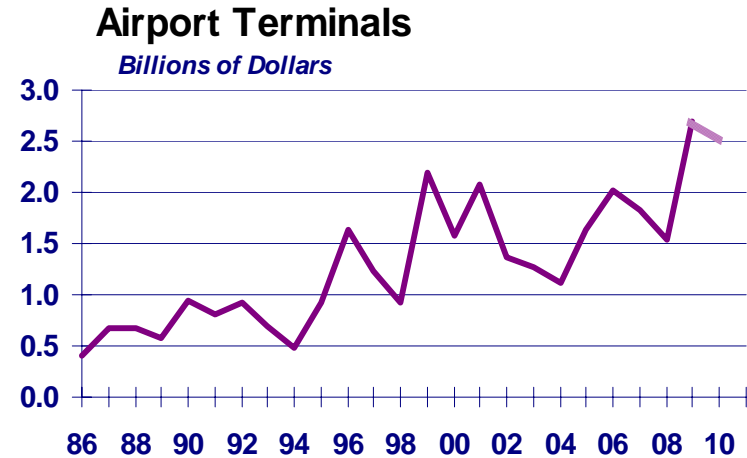
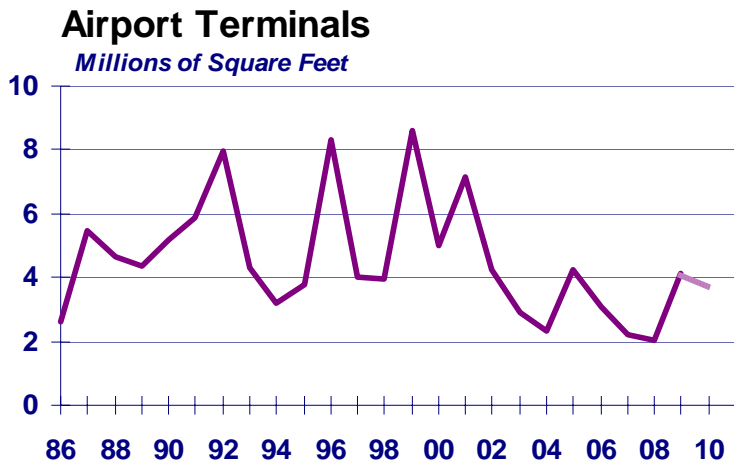
<b>Total Amuse. &amp; Rec.</b>	<b>2007</b>	<b>-9%</b>
	<b>2008</b>	<b>-10%</b>
	<b>2009</b>	<b>-29%</b>
	<b>2010</b>	<b>-4%</b>

### Religious Buildings

<b>2007</b>	<b>34 msf</b>	<b>-6%</b>
<b>2008</b>	<b>31 msf</b>	<b>-10%</b>
<b>2009</b>	<b>27 msf</b>	<b>-12%</b>
<b>2010</b>	<b>26 msf</b>	<b>-3%</b>

# U.S. Institutional Buildings

*Airport terminal work has picked up in 2009;  
Expected to stay close to improved activity in 2010.*



## Airport Terminals

<b>2007</b>	<b>2.2 msf</b>	<b>-28%</b>
<b>2008</b>	<b>2.0 msf</b>	<b>-8%</b>
<b>2009</b>	<b>4.1 msf</b>	<b>+103%</b>
<b>2010</b>	<b>3.7 msf</b>	<b>-10%</b>

## Airport Terminals

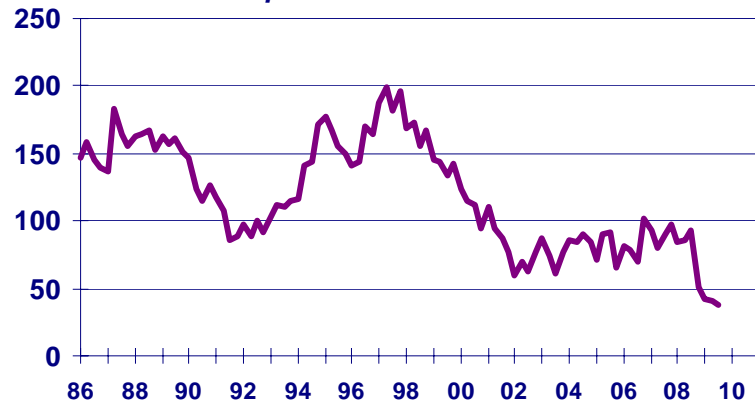
<b>2007</b>	<b>\$2.0 bil.</b>	<b>-9%</b>
<b>2008</b>	<b>\$1.8 bil.</b>	<b>-16%</b>
<b>2009</b>	<b>\$1.4 bil.</b>	<b>+77%</b>
<b>2010</b>	<b>\$1.6 bil.</b>	<b>-7%</b>

# U.S. Manufacturing Buildings

*Plant construction in sq. ft. sliding; surge in dollars reversing.*

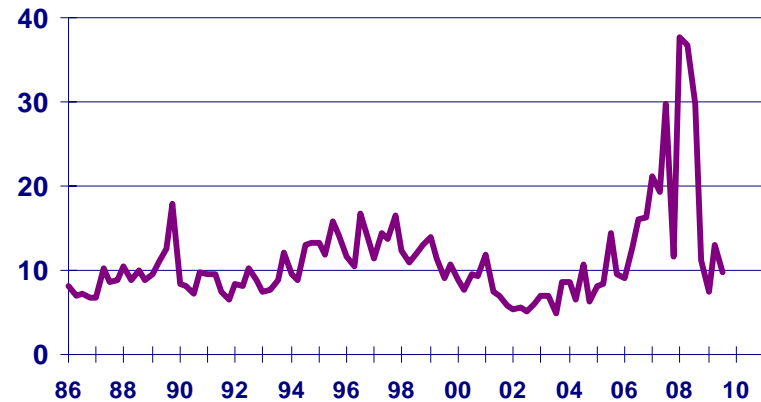
## Manufacturing Buildings

*Millions of Square Feet*



## Manufacturing Buildings

*Billions of Dollars*



## Manufacturing Buildings

<b>2007</b>	<b>90 msf</b>	<b>+9%</b>
<b>2008</b>	<b>79 msf</b>	<b>-13%</b>
<b>2009</b>	<b>40 msf</b>	<b>-49%</b>
<b>2010</b>	<b>39 msf</b>	<b>-3%</b>

## Manufacturing Buildings

<b>2007</b>	<b>\$20.4 bil.</b>	<b>+51%</b>
<b>2008</b>	<b>\$28.9 bil.</b>	<b>+41%</b>
<b>2009</b>	<b>\$10.9 bil.</b>	<b>-62%</b>
<b>2010</b>	<b>\$ 9.4 bil.</b>	<b>-14%</b>

Surge of ethanol plants in 2006-2007

Huge refinery additions in 2008

# U.S. Manufacturing Buildings

<u>Value</u> \$ Millions	<u>Sq.Ft.</u> Thous.	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date</u> Year: Mo
1,000.0	0	American Centrifuge Plant (Uranium Enrichment)	Piketon	OH	2009:04
676.0	883	Global Foundries Fab 2, Module 1	Malta	NY	2009:06
600.0	0	Century Plant (extract CO2 from natural gas)	Fort Stockton	TX	2009:05
600.0	0	Intel Prefab 32 Bldg (Int/Ext) Renovations	Chandler	AZ	2009:09
500.0	0	Coke Oven Battery w/Pushing Emission Control -Ph 1	Clairton	PA	2009:01
500.0	0	Intel Fab 11X (Int/Ext) Renovations	Rio Rancho	NM	2009:08
366.5	600	Solyndra - Fab 2 Photovoltaic Panel Mfg Plant	Fremont	CA	2009:09
181.5	330	Nuclear Reactor Manufacturing Facility	Newport News	VA	2009:09
180.0	0	Terra Industries Nitrogen Manufacturing Plant	Woodward	OK	2009:05
175.0	404	Vestas Blade Manufacturing Facility & Admin. Bldg	Brighton	CO	2009:01
126.0	0	Tyson Renewable Fuel Plant	Geismar	LA	2009:01
110.0	250	Vestas Nacelle Assembly Factory	Brighton	CO	2009:04
100.0	600	Spirit AeroSystems Design & Manufacturing Facility	Kinston	NC	2009:01
91.0	550	Dr Pepper Snapple Production/Distribution Center	Victorville	CA	2009:03

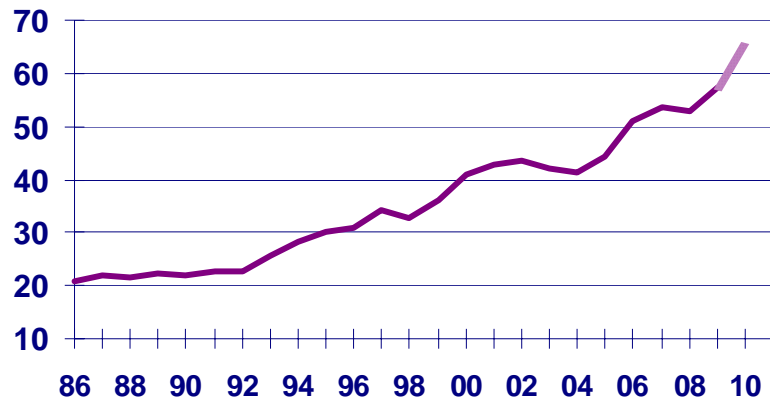
# U.S. Public Works -- Highways & Bridges

*Highways and bridges slipped back in 2008;*

*Stimulus funds starting to lift construction in 2009, more in 2010.*

## Highways and Bridges

*Billions of Dollars*



- Fiscal 2009 appropriations – essentially status quo funding.
- Congress supplied \$8 billion to Highway Trust Fund in Sept. '08. Another \$7 billion in Sept. '09.
- Large boost in 2009 coming from stimulus bill -- \$26.7 billion. Half of stimulus funding designated by June 30. All states met requirement. Remaining half must be designated by March 2010. "Use or lose it." GAO - \$18 billion obligated by Sept. 1
- This year and next – debate over new transportation bill to replace SAFETEA-LU.

## Highways, Bridges

<b>2007</b>	<b>\$53.6 billion</b>	<b>+5%</b>
<b>2008</b>	<b>\$52.9 billion</b>	<b>-1%</b>
<b>2009</b>	<b>\$57.3 billion</b>	<b>+8%</b>
<b>2010</b>	<b>\$64.7 billion</b>	<b>+13%</b>

# U.S. Public Works -- Highways & Bridges

## Highways and Bridges

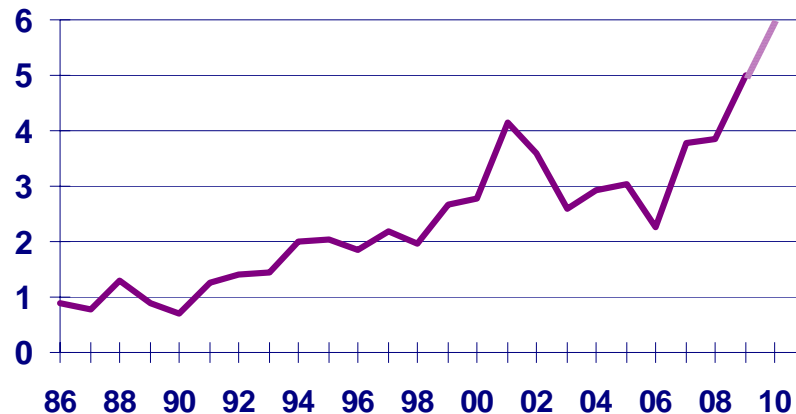
### Top 10 States -- ranked by dollars of new starts

<u>Year 2008, %ch 08/07</u>	<u>Year 2009 ytd %ch 09/08</u>
1. California -9%	1. Texas +31%
2. Texas -20%	2. California -20%
3. Pennsylvania +32%	3. Pennsylvania +12%
4. New York -11%	4. Illinois +2%
5. Illinois +13%	5. New York +3%
6. Florida -36%	6. Florida -2%
7. Louisiana +49%	7. Ohio +3%
8. Ohio +4%	8. New Jersey +40%
9. Virginia +131%	9. Indiana +26%
10. New Jersey +31%	10. Louisiana -32%

# U.S. Public Works – Mass Transit

*Mass transit work has also been on upward track, set to grow further.*

Mass Transit - Rail, Rail Terminals,  
Billions of Dollars Rail Tunnels



## Mass Transit Starts

2007	\$3.8 billion	+66%
2008	\$3.9 billion	+3%
2009	\$5.0 billion	+29%
2010	\$5.9 billion	+18%

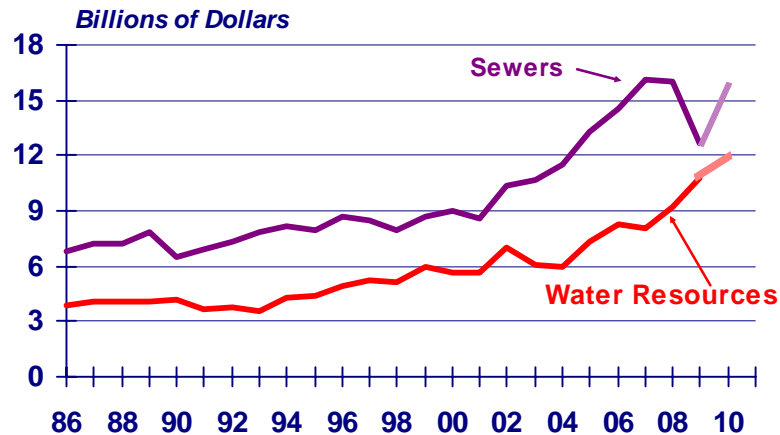
- Federal funding will rise under stimulus bill.
- New York City area in recent years has seen start of major projects, including:
  - Second Avenue subway line
  - No. 7 subway line extension
  - Now – start of \$8.7 billion rail tunnel connecting New Jersey and Manhattan
- In 2009, Dulles Corridor MetroRail Project (\$1.6 billion) started.
- High-speed rail in California – includes planned line from Sacramento to southern CA.

# U.S. Public Works -- Environmental

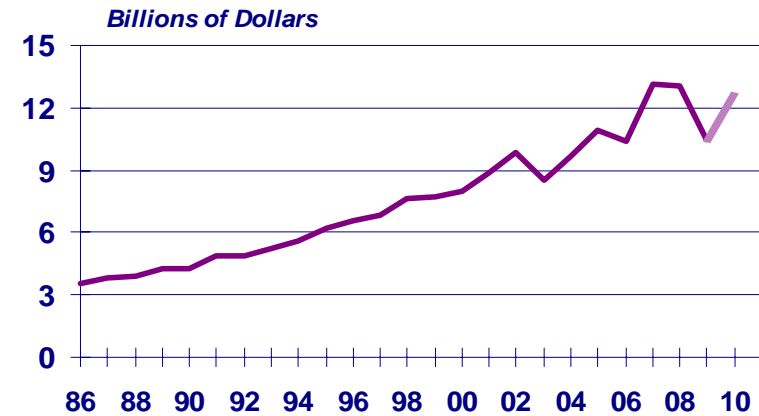
*Environmental public works slowed in 2008-2009.*

*In 2010, stimulus funding should help lift construction.*

## Sewers, Dams/ Water Resources



## Water Supply Systems



## Environmental Public Works

<b>2007</b>	<b>\$37.3 billion</b>	<b>+12%</b>
<b>2008</b>	<b>\$38.2 billion</b>	<b>+2%</b>
<b>2009</b>	<b>\$34.0 billion</b>	<b>-11%</b>
<b>2010</b>	<b>\$40.2 billion</b>	<b>+18%</b>

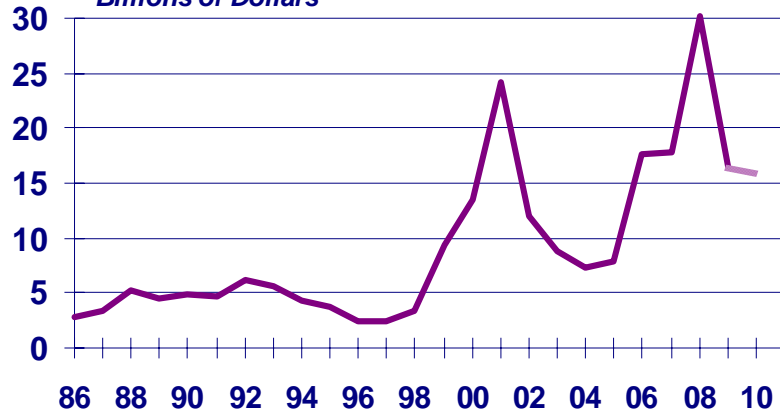
- Projects generally take longer to reach construction start stage compared to transportation work.
- Various “gap” analyses point to aging infrastructure, and how current funding is coming up short.

# U.S. Electric Utilities

*New electric utility starts retreating after 2008 peak.*

## Electric Utilities

*Billions of Dollars*



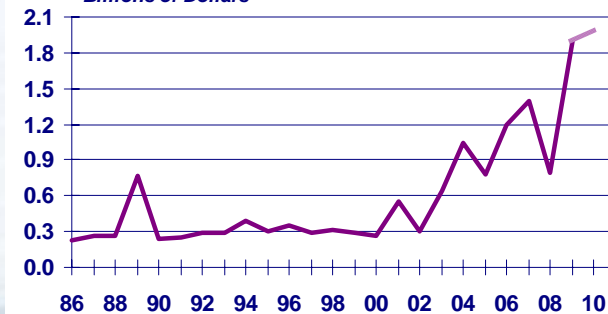
- **Energy Bills** -- tax incentives for oil and gas production, electric utilities, transmission lines, etc. Extended with financial rescue package.
- Capacity utilization had climbed to 86% for full year 2007; has since retreated to 79% (August '09).
- Stimulus bill should provide boost -- incentives for alternative sources of electricity generation. Also, push for "smart grid."

## Electric Utilities

<b>2007</b>	<b>\$17.8 billion</b>	<b>+1%</b>
<b>2008</b>	<b>\$30.2 billion</b>	<b>+70%</b>
<b>2009</b>	<b>\$16.5 billion</b>	<b>-45%</b>
<b>2010</b>	<b>\$16.0 billion</b>	<b>-3%</b>

## Power Lines

*Billions of Dollars*



# U.S. Electric Utilities

<u>Value \$ Millions</u>	<i>Large Projects</i>	<u>City</u>	<u>State</u>	<u>Start Date Year: Mo</u>
1,500.0	John W Turk Jr Coal Fueled Power Plant	Fulton	AR	2009:01
864.0	West County Energy Ctr. Nat.Gas Power Plant Ph 3	Palm Beach	FL	2009:02
619.0	580 MW Bear Garden Power Station	New Canton	VA	2009:06
600.0	Coolidge Generating Plant	Coolidge	AZ	2009:08
500.0	PSNH Scrubber Facility & WWTP	Bow	NH	2009:02
476.0	Martin Solar 75 MW Solar Thermal Steam Gen. Facility	Indiantown	FL	2009:02
440.0	Wind Turbine Electricity Generating Plant	Not Available	IA	2009:02
300.0	Papalote Creek 180 MW Wind Farm	Taft	TX	2009:02
300.0	Natural Gas Fired Combined Cycle Plant Unit 4	Kissimmee	FL	2009:04
250.0	PrairieWinds Wind Power Plant	Minot	ND	2009:08
233.6	Wind Farm	Wellsboro	PA	2009:08
200.0	Desoto Next Generation Solar Energy Center	Not Available	FL	2009:03
200.0	Crane Creek Wind Farm	Riceville	IA	2009:05
170.0	Beech Ridge Wind Farm - Phase 1	Rupert	WV	2009:04

# U.S. Total Construction Starts for 2009-2010

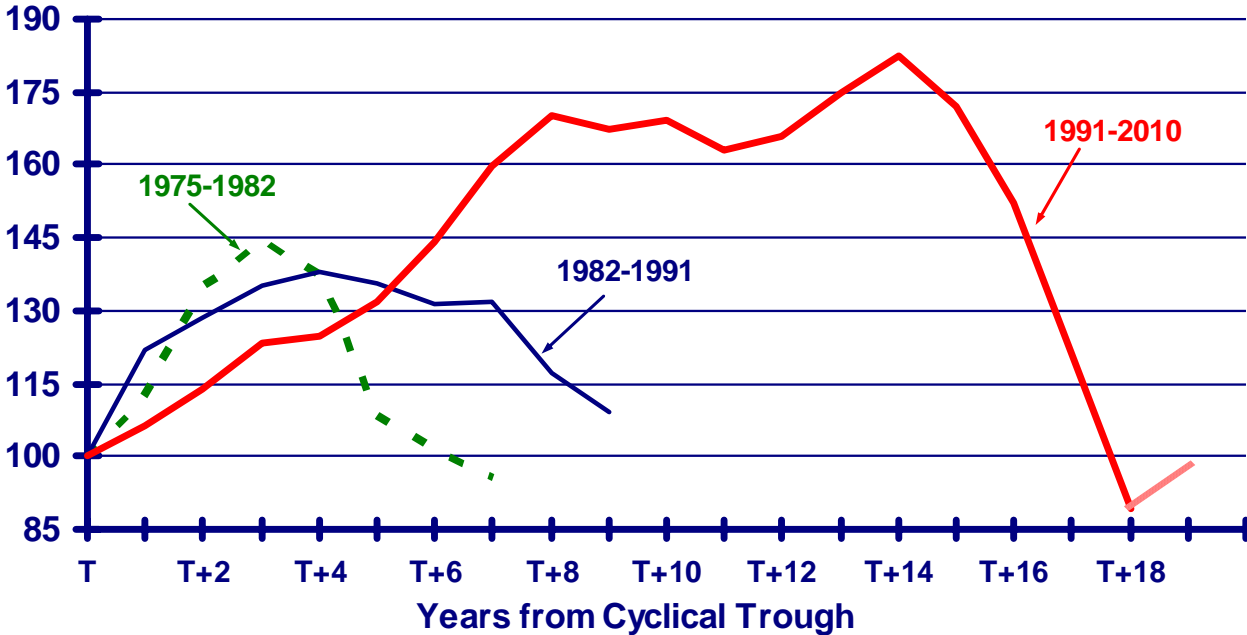
*Billions of Dollars*

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>
<b>Total Construction</b>	<b>689.6</b> +3%	<b>640.9</b> -7%	<b>554.9</b> -13%	<b>418.9</b> -25%	<b>466.2</b> +11%
<b>Single Family Housing</b>	<b>272.4</b> -14%	<b>201.2</b> -26%	<b>122.4</b> -39%	<b>95.3</b> -22%	<b>126.2</b> +32%
<b>Multifamily Housing</b>	<b>69.8</b> +2%	<b>61.4</b> -12%	<b>39.7</b> -35%	<b>18.2</b> -54%	<b>21.1</b> +16%
<b>Commercial Bldgs.</b>	<b>93.0</b> +29%	<b>100.8</b> +8%	<b>84.5</b> -16%	<b>48.2</b> -43%	<b>46.1</b> -4%
<b>Institutional Bldgs.</b>	<b>110.7</b> +11%	<b>117.6</b> +6%	<b>129.3</b> +10%	<b>110.2</b> -15%	<b>111.1</b> +1%
<b>Manufacturing Bldgs.</b>	<b>13.5</b> +33%	<b>20.4</b> +51%	<b>28.9</b> +41%	<b>10.9</b> -62%	<b>9.4</b> -14%
<b>Public Works</b>	<b>112.4</b> +17%	<b>121.7</b> +8%	<b>120.0</b> -1%	<b>119.7</b> -0-	<b>136.3</b> +14%
<b>Electric Utilities</b>	<b>17.7</b> +125%	<b>17.8</b> +1%	<b>30.2</b> +70%	<b>16.5</b> -45%	<b>16.0</b> -3%

# Points of Perspective – U.S. Construction

## Total Construction Activity by Cycle

Cyclical Trough (T) = 100, Based on Constant 2000 Dollars

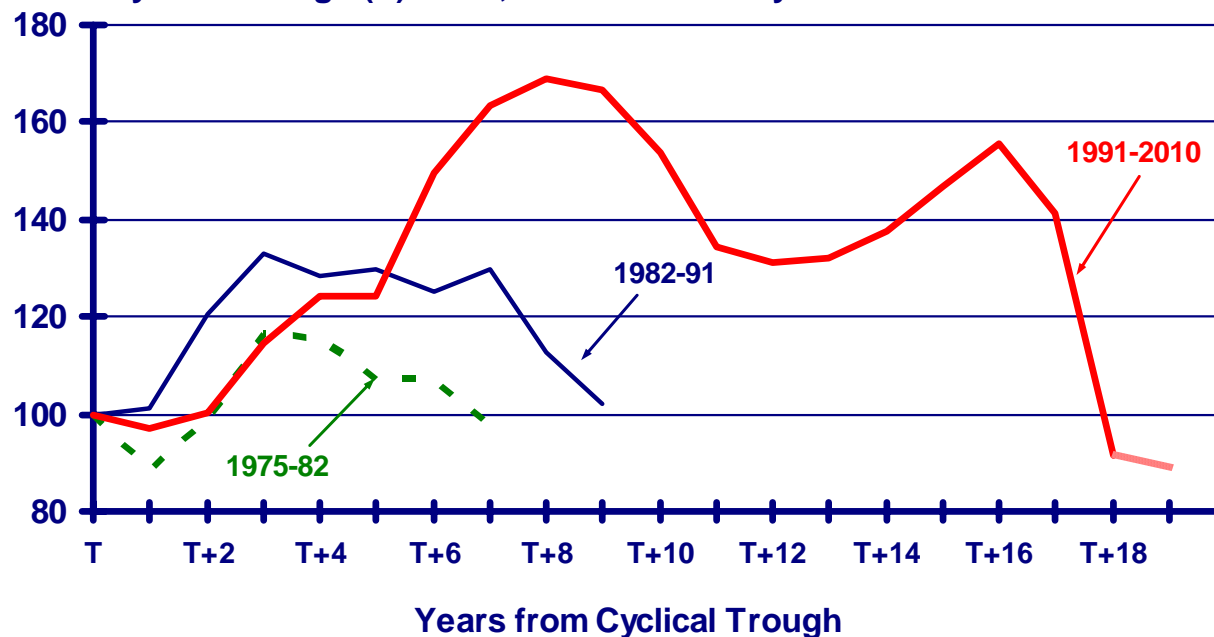


# Points of Perspective – U.S. Construction

## Nonresidential Building by Cycle

Based on Constant Dollars

Cyclical Trough (T) = 100, as determined by Total Construction



# outlook2010

Industry  
Forecast  
and  
Trends

## Executive Conference



[construction.com](http://construction.com)

**McGraw Hill  
CONSTRUCTION**