

INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY'S WORLD



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November 8, 2012

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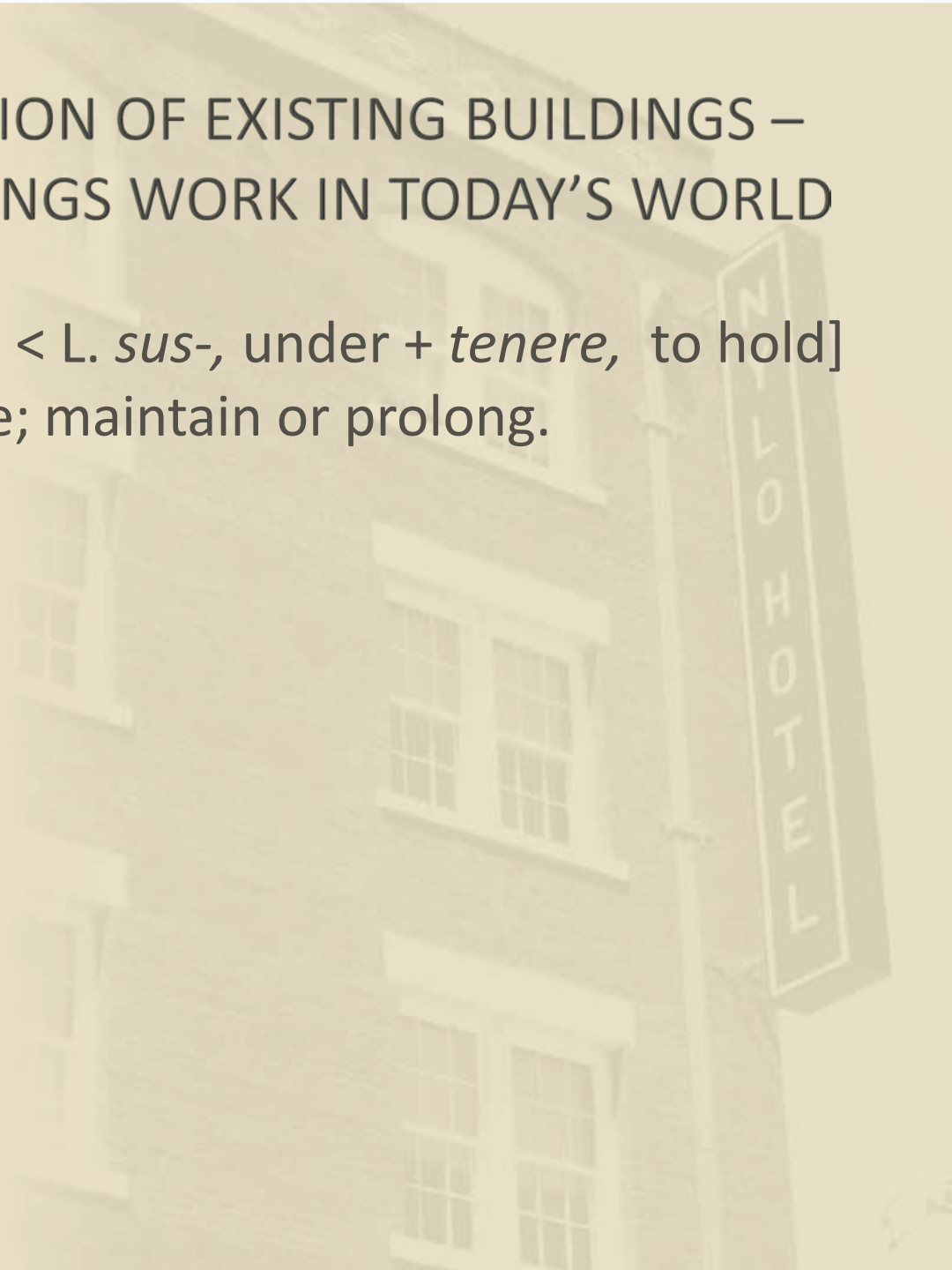
OUTLINE

- ▣ Sustainability
- ▣ USGBC and the LEED Rating System
- ▣ Adaptive Reuse
- ▣ Case Studies



INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

- ▣ sus-tain (sə stän') *vt.* [< L. *sus-*, under + *tenere*, to hold]
 1. to keep in existence; maintain or prolong.



INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

- ▣ United States Green Building Council (USGBC) founded in 1993
- ▣ Non-profit trade organization that promotes sustainability in how buildings are designed, built and operated
- ▣ Established the LEED rating system in 2000
- ▣ LEED rating system provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions

INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

Step 1 - Choose a rating system based on construction type

Determine which construction type the project falls into. Be sure to consider the building in its entirety or the complete interior space.

Many projects will be undergoing construction work that does not fall neatly under one construction type definition (such as 'major renovation' or 'interior fit-out'). It is the project team's responsibility in this case to make a reasonable determination on which definition best fits their project. A strict application of each definition is not required.

Complete Construction



These rating systems are appropriate for buildings that are undergoing new construction or major renovation (or gut rehab, for low- and mid-rise residential) and a complete interior fit-out. There are five rating systems in this category.

Core and Shell Construction



This rating system is appropriate for buildings that are undergoing new construction or major renovation on its exterior shell and core mechanical, electrical, and plumbing units but NOT a complete interior fit-out. There is only one rating system in this category.

Commercial Interior Construction



This rating system is appropriate for commercial Interior spaces that are undergoing a complete interior fit-out of at least 60% of the certifying gross floor area. There are two rating systems in this category.

Existing Buildings: Limited Construction



This rating system is appropriate for existing buildings undergoing improvement work or little to no construction. There is only one rating system in this category.

INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

LEED for New Construction and Major Renovations (v2009)



SUSTAINABLE SITES

POSSIBLE: 26

Code	Description	Requirement	Points
SSp1	Construction activity pollution prevention	REQUIRED	1
SSc1	Site selection		1
SSc2	Development density and community connectivity		5
SSc3	Brownfield redevelopment		1
SSc4.1	Alternative transportation - public transportation access		6
SSc4.2	Alternative transportation - bicycle storage and changing rooms		1
SSc4.3	Alternative transportation - low-emitting and fuel-efficient vehicles		3
SSc4.4	Alternative transportation - parking capacity		2
SSc5.1	Site development - protect or restore habitat		1
SSc5.2	Site development - maximize open space		1
SSc6.1	Stormwater design - quantity control		1
SSc6.2	Stormwater design - quality control		1
SSc7.1	Heat island effect - nonroof		1
SSc7.2	Heat island effect - roof		1
SSc8	Light pollution reduction		1



WATER EFFICIENCY

POSSIBLE: 10

Code	Description	Requirement	Points
WEp1	Water use reduction	REQUIRED	1
WEc1	Water efficient landscaping		4
WEc2	Innovative wastewater technologies		2
WEc3	Water use reduction		4



ENERGY & ATMOSPHERE

POSSIBLE: 35

Code	Description	Requirement	Points
EAp1	Fundamental commissioning of building energy systems	REQUIRED	1
EAp2	Minimum energy performance	REQUIRED	1
EAp3	Fundamental refrigerant Mgmt	REQUIRED	1
EAc1	Optimize energy performance		19
EAc2	On-site renewable energy		7
EAc3	Enhanced commissioning		2
EAc4	Enhanced refrigerant Mgmt		2
EAc5	Measurement and verification		3
EAc6	Green power		2



MATERIAL & RESOURCES

POSSIBLE: 14

Code	Description	Requirement	Points
MRp1	Storage and collection of recyclables	REQUIRED	1
MRC1.1	Building reuse - maintain existing walls, floors and roof		3
MRC1.2	Building reuse - maintain interior nonstructural elements		1
MRC2	Construction waste Mgmt		2
MRC3	Materials reuse		2
MRC4	Recycled content		2



MATERIAL & RESOURCES

CONTINUED

Code	Description	Points
MRC5	Regional materials	2
MRC6	Rapidly renewable materials	1
MRC7	Certified wood	1



INDOOR ENVIRONMENTAL QUALITY

POSSIBLE: 15

Code	Description	Requirement	Points
EQp1	Minimum IAQ performance	REQUIRED	1
EQp2	Environmental Tobacco Smoke (ETS) control	REQUIRED	1
EQc1	Outdoor air delivery monitoring		1
EQc2	Increased ventilation		1
EQc3.1	Construction IAQ Mgmt plan - during construction		1
EQc3.2	Construction IAQ Mgmt plan - before occupancy		1
EQc4.1	Low-emitting materials - adhesives and sealants		1
EQc4.2	Low-emitting materials - paints and coatings		1
EQc4.3	Low-emitting materials - flooring systems		1
EQc4.4	Low-emitting materials - composite wood and agrifiber products		1
EQc5	Indoor chemical and pollutant source control		1
EQc6.1	Controllability of systems - lighting		1
EQc6.2	Controllability of systems - thermal comfort		1
EQc7.1	Thermal comfort - design		1
EQc7.2	Thermal comfort - verification		1
EQc8.1	Daylight and views - daylight		1
EQc8.2	Daylight and views - views		1



INNOVATION

POSSIBLE: 6

Code	Description	Points
IDc1	Innovation in design	5
IDc2	LEED Accredited Professional	1



REGIONAL PRIORITY

POSSIBLE: 4

Code	Description	Points
RPc1	Regional priority	4

TOTAL

110

40-49 Points	50-59 Points	60-79 Points	80+ Points
CERTIFIED	SILVER	GOLD	PLATINUM

INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

- ▣ ICRI provides building owners with valuable guidance in repairing or upgrading the structural framework of their buildings for continued or new uses



INTERNATIONAL
CONCRETE REPAIR
INSTITUTE

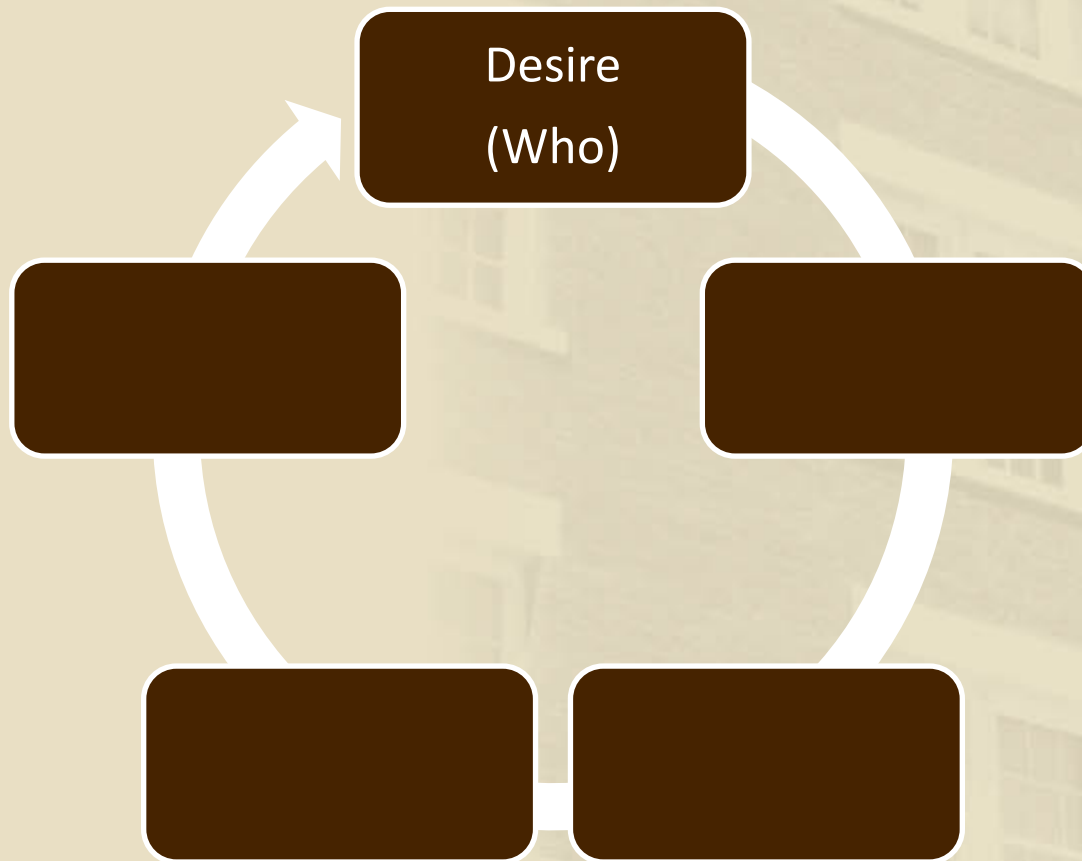
INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

▣ Adaptive Reuse

- Process of reusing an existing building or site for a purpose other than which it was built or designed for.
- Assists with land conservation
- Reduces urban sprawl
- Reduces environmental impact of the building process
- Reduces blight of vacant, unmaintained, or damaged sites or buildings
- Brownfield reclamation
- **Sustainable** option for reclamation of sites and buildings

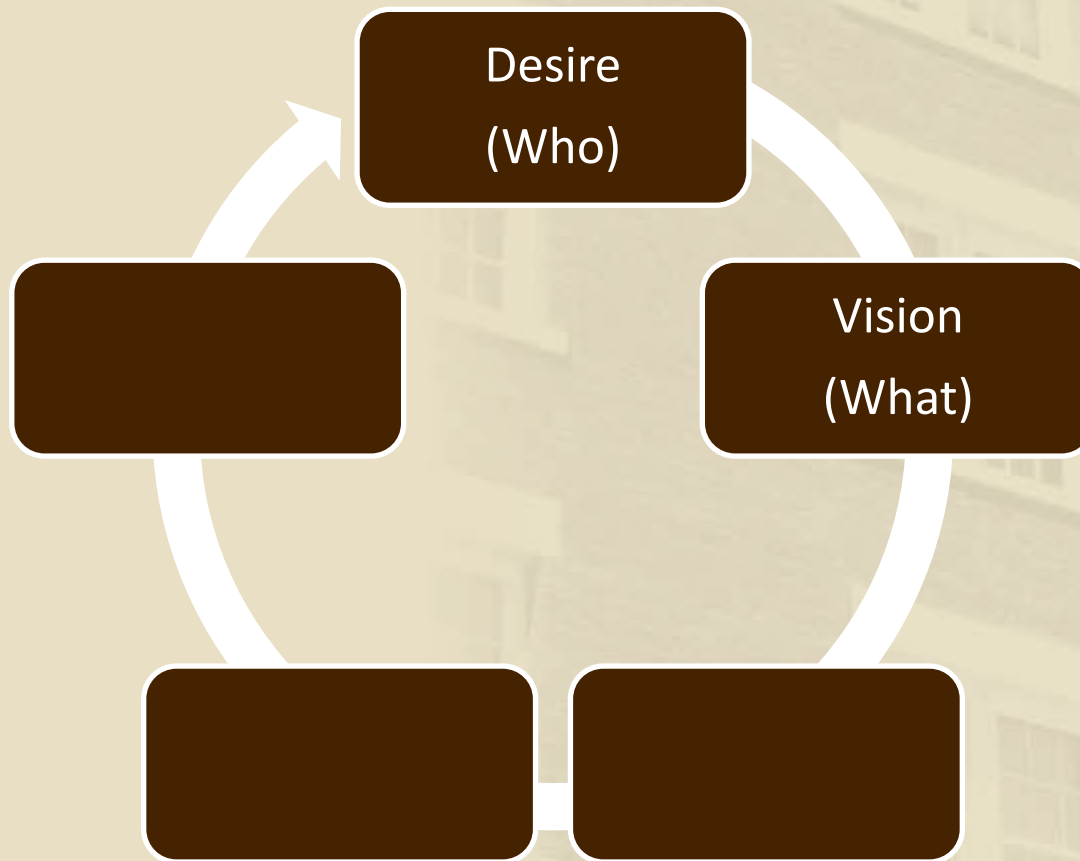
INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

- ▣ Adaptive Reuse - What does it take?



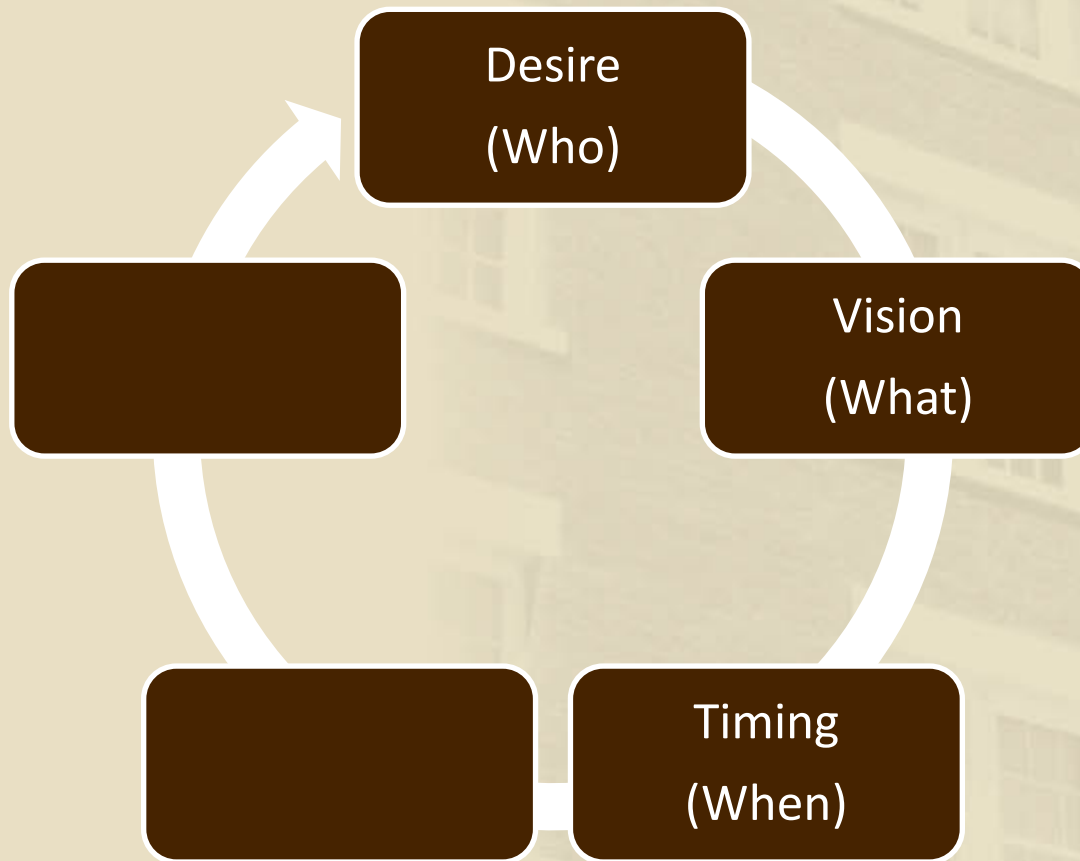
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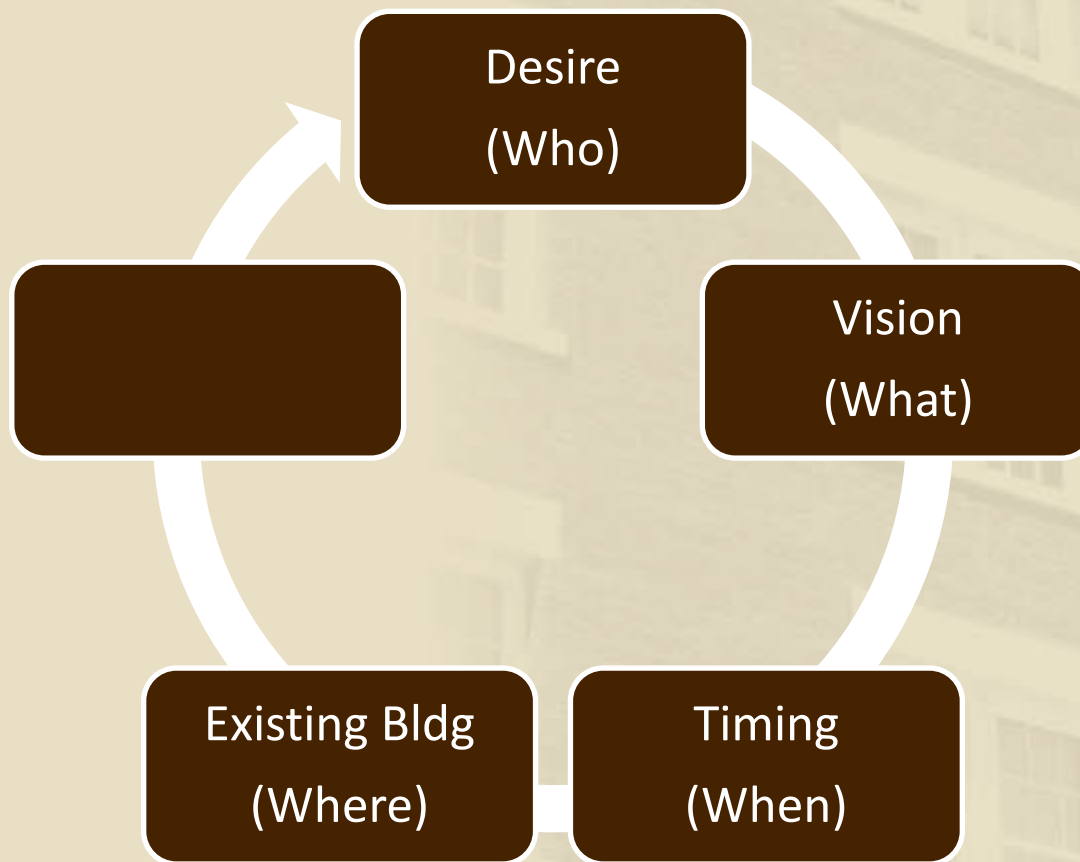
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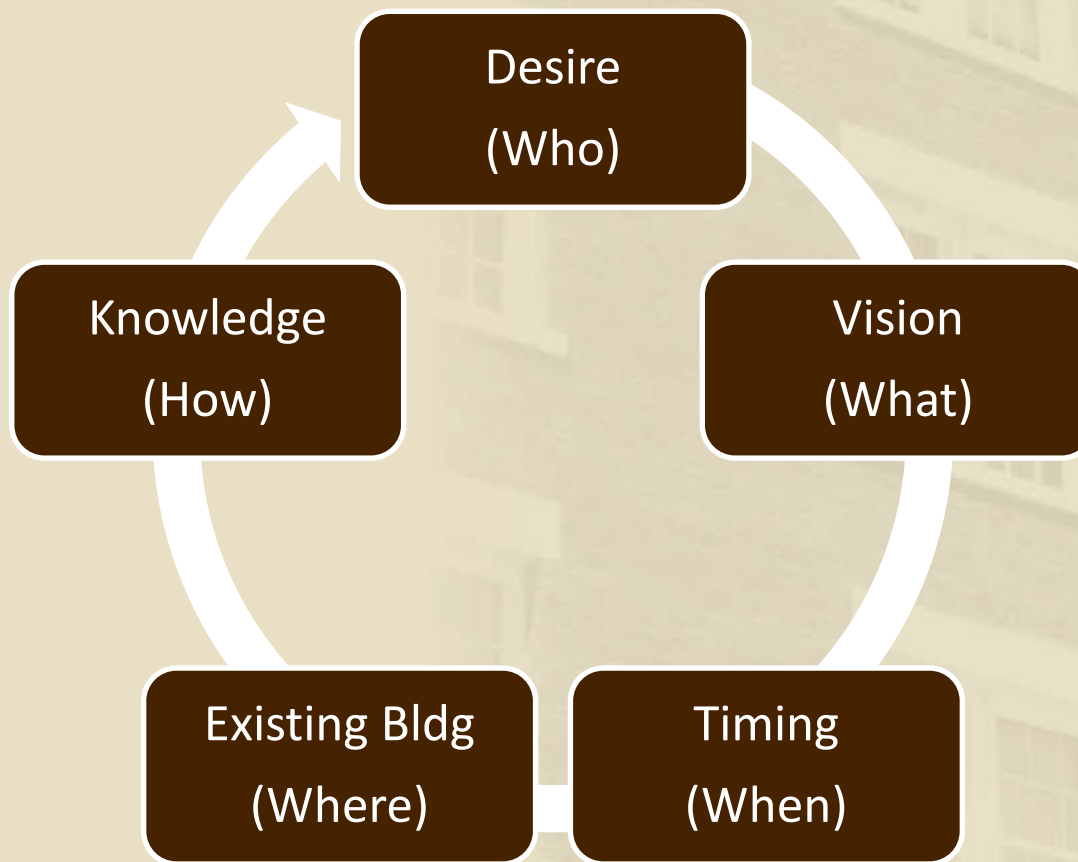
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INNOVATIVE ADAPTATION OF EXISTING BUILDINGS – MAKING OLDER BUILDINGS WORK IN TODAY’S WORLD

- ▣ Adaptive Reuse - What does it take?



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Collin County Courthouse
- ▣ Completed in 1874



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Unreinforced cut stone with limestone rubble infill
- ▣ Multi-wythe brick
- ▣ Steel with concrete deck



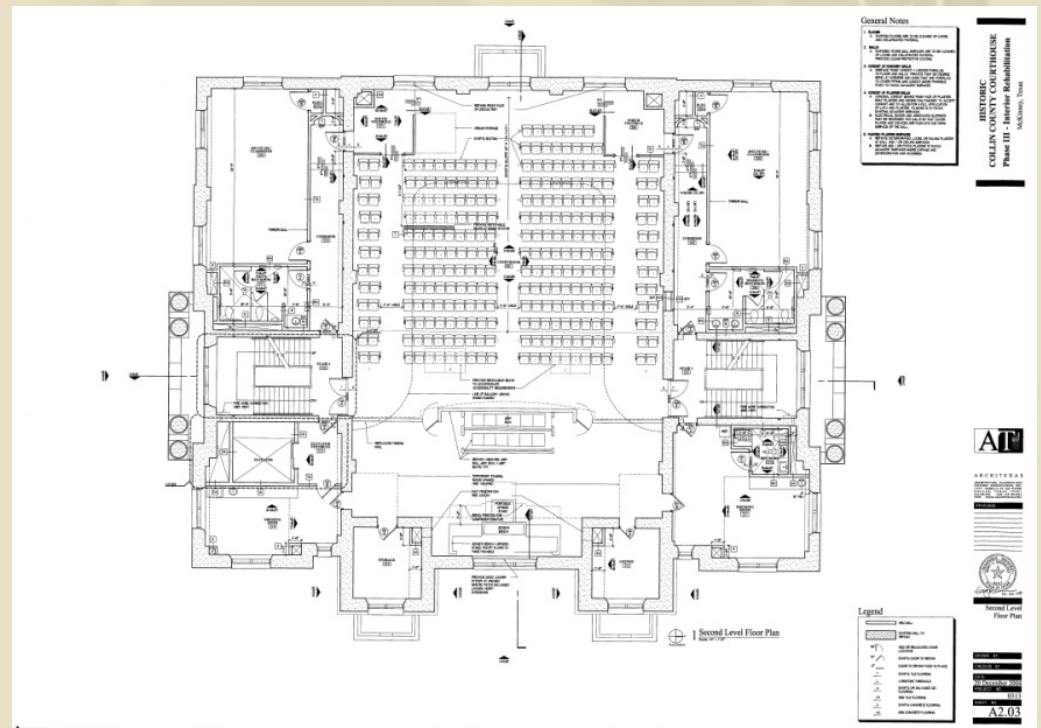
MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Expanded/renovated 1927; 23,000 SF



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ❑ Vacated in 1979 and given to the City of McKinney
- ❑ McKinney Quality of Life Board commissioned Historic Structure Report and Renovation Master Plan in 1998
- ❑ Programming completed in 2003
- ❑ Construction commenced in 2004



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Exterior restored to 1927 configuration
- ▣ Restore Second Floor, two-story courtroom space



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Provide removable stage platform



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Flexible meeting rooms
- ▣ Gallery space for Historical Society



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Renovations completed in 2006
- ▣ \$8.2 million
 - \$1 M from Collin County
 - \$500k City of McKinney
 - Balance from McKinney Community Development Corporation
- ▣ Multi-purpose community arts facility operated by the City of McKinney



MCKINNEY PERFORMING ARTS CENTER, MCKINNEY, TX

- ▣ Citation Award of Honor, Downtown Revitalization, Texas Society of Architects
- ▣ Honorable Mention Award, International Downtown Association
- ▣ Awarded Best Renovation Project, Texas Construction



WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ▣ Constructed in 1921 on inner city lake
- ▣ 5,100 SF Filtration Building
- ▣ Two 75' x 300' Sedimentation Basins
- ▣ Removed from service in 1964



WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ▣ Reinforced concrete foundation and floor
- ▣ Load-bearing masonry walls
- ▣ Steel framed roof over filter gallery; reinforced concrete roof at two-story portion



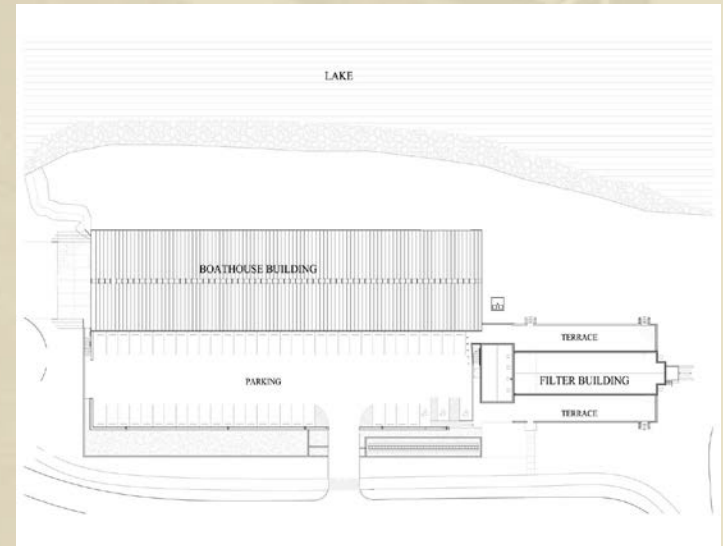
WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ❑ White Rock Boathouse, Inc. formed in 2003
- ❑ Non-profit organization that promotes youth and community rowing activities needed boat storage space and training facilities
- ❑ City restrictions would not allow new construction at historic lake
- ❑ 2004 agreement with City of Dallas to reclaim the abandoned facility



WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- In 2007, White Rock Boathouse, Inc., raised \$2.5 million in contributed funds
- One Sedimentation Basin that had been filled in was excavated
- New slab, new roof, toilet facilities, and overhead doors were installed to serve as the boathouse



WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ▣ Second Sedimentation Basin that had been filled in became the parking lot
- ▣ Filtration Building renovated into a multi-purpose meeting facility



WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ▣ Geothermal air exchange system utilizes underground chambers of the Filtration Building
- ▣ Removed concrete wall blocks stacked to provide exterior platform seating



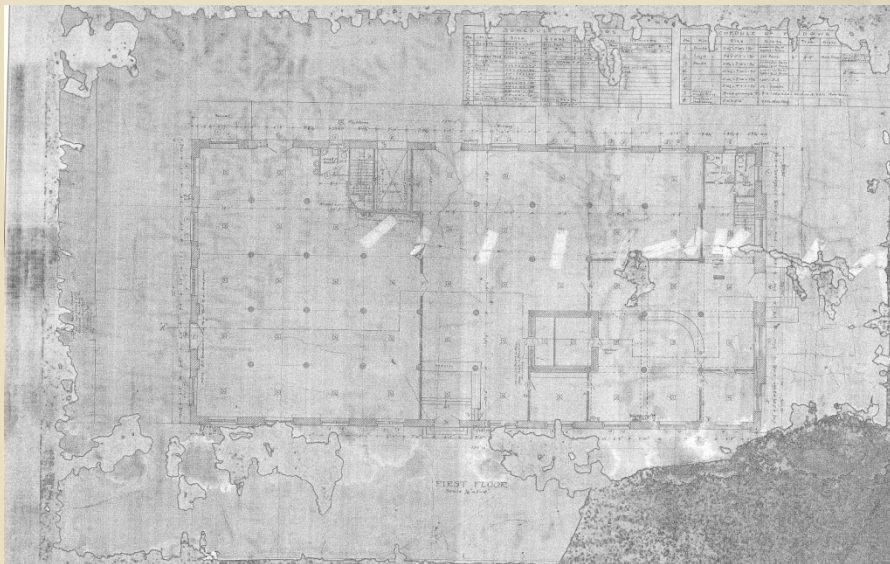
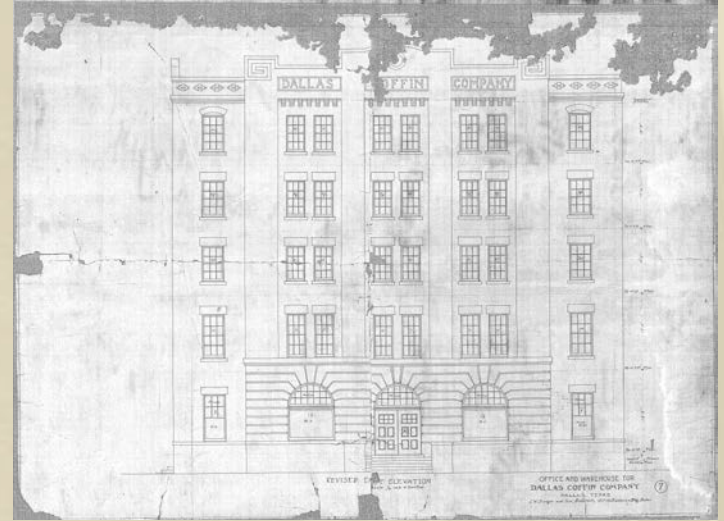
WHITE ROCK FILTER BUILDING AND BASIN REHAB/REUSE, DALLAS, TX

- ▣ Award recognition by American Institute of Architects, Texas Historical Commission, and Preservation Dallas



NYLO Hotel, Dallas, TX

- Constructed in 1911 as the Dallas Coffin Company Office and Warehouse



NYLO Hotel, Dallas, TX

- ▣ Five-story building
- ▣ Approximately 9,000 SF per floor
- ▣ Adjacent to Cotton Belt rail line
- ▣ Reportedly, offices never close
- ▣ Available to ship anywhere, day or night
- ▣ “Most complete range of coffins”



NYLO Hotel, Dallas, TX

- ▣ Several different tenants between 1950 and 1960
- ▣ Adjacent Sears Roebuck catalog warehouse took over in 1960
- ▣ Annex Building housed Supply Department
- ▣ Sears' catalog department closed in 1987
- ▣ Local group purchased property in 2005
- ▣ 76-room hotel



NYLO Hotel, Dallas, TX

- ▣ Funding:
 - New market tax credits
 - Local tax abatement
 - Tax Increment Financing (TIF)
 - Historic tax credits
 - EB-5
 - Private



NYLO Hotel, Dallas, TX

- ▣ Reinforced concrete columns and slabs
- ▣ Load-bearing masonry walls



NYLO HOTEL

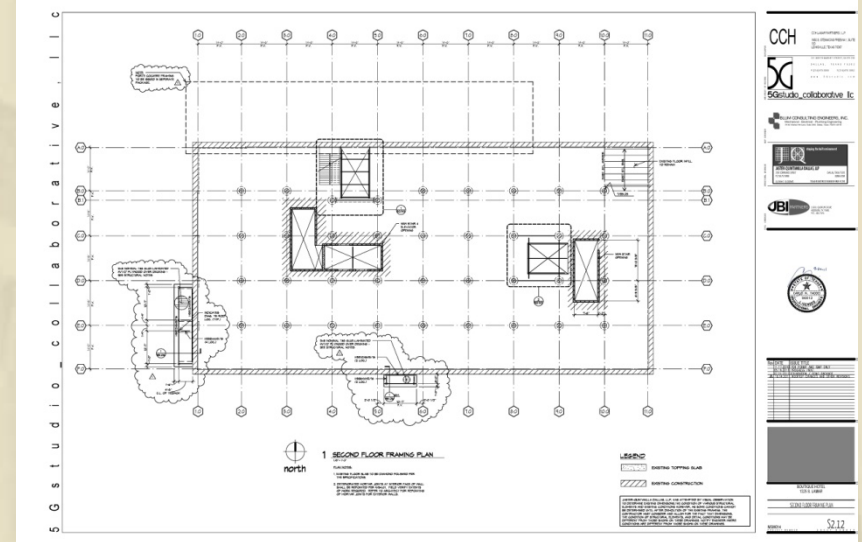
NYLO Hotel, Dallas, TX

- ▣ Minimal original plans
- ▣ Scans of structure inconclusive
- ▣ Load-testing performed



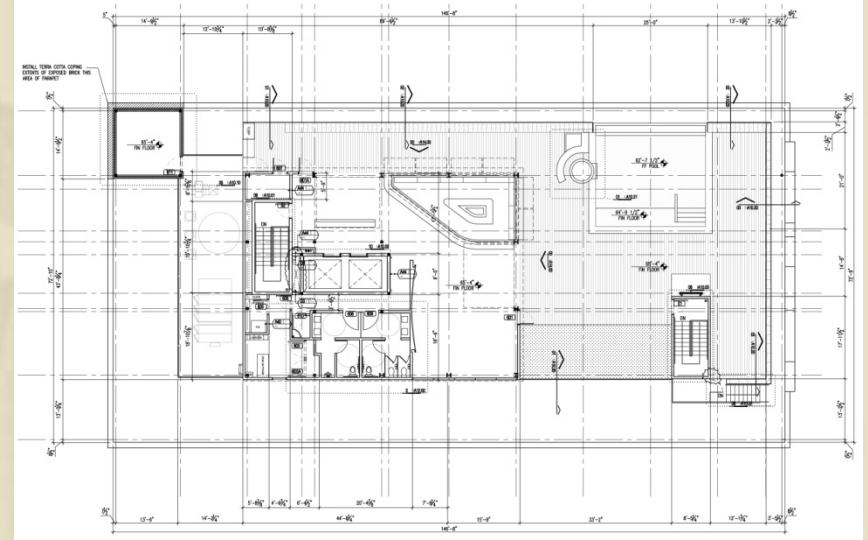
NYLO Hotel, Dallas, TX

- ▣ New elevator and stair openings
- ▣ Load-bearing CMU
- ▣ CFRP reinforcement



NYLO Hotel, Dallas, TX

- ▣ 5,000 SF rooftop deck
 - Pool
 - 2,700 SF conditioned patio and bar
 - 3,900 gallon cistern

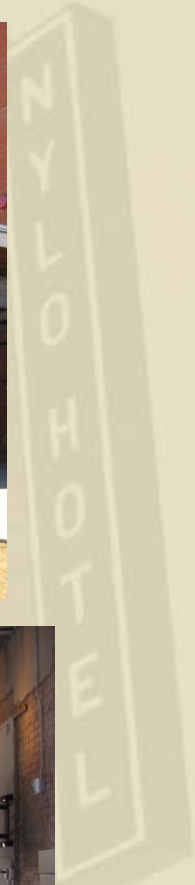


NYLO Hotel, Dallas, TX

- ▣ 5,000 SF rooftop deck
 - Pool
 - 2,700 SF conditioned patio and bar
 - 3,900 gallon cistern



NYLO Hotel, Dallas, TX



NYLO Hotel, Dallas, TX

- ▣ Sustainable features:
 - Brownfield (asbestos)
 - Close to public transportation
 - High albedo roof
 - Rainwater collection system for site irrigation
 - Low-E film added to windows
 - Energy management system for guestrooms
 - Greywater from staff sinks and showers used to flush toilets in staff restrooms



NYLO Hotel, Dallas, TX

- ▣ Sustainable features (continued):
 - Limited use of virgin materials
 - Extensive use of local materials
 - 75% demolition and construction debris diverted from landfill via recycling
 - Low-emitting, Green Label Plus products used
 - 99% occupied spaces have outdoor views
 - LEED Gold Certification

PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ First six floors completed in 1926
- ▣ Remaining five floors added in 1929
- ▣ Opened as Lubbock Hotel
- ▣ Tallest building in Lubbock until 1955
- ▣ Reinforced concrete frame



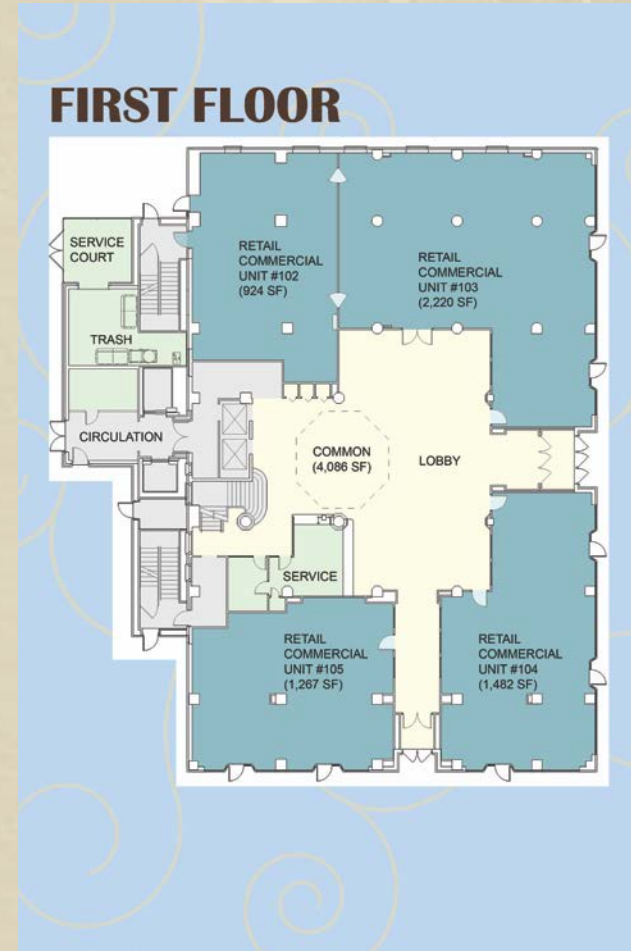
PIONEER CONDOMINIUMS, LUBBOCK, TX

- ❑ Pioneer Retirement Home closed for renovation in 1994; never re-opened
- ❑ Purchased by McDougal Construction Co. in 2005
- ❑ \$10 million conversion to condominiums, with some retail and office space



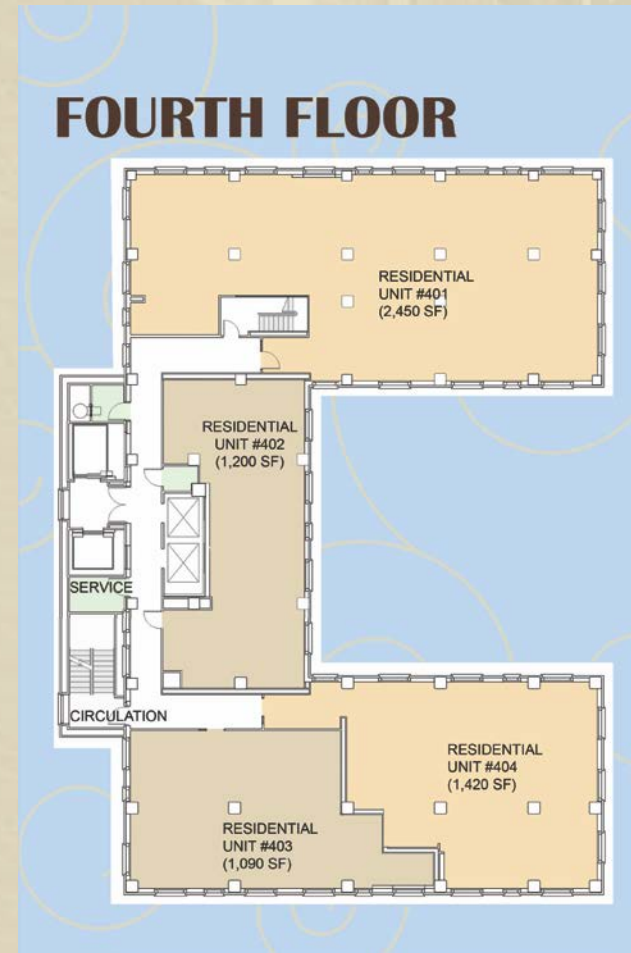
PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Lower three floors to house office / retail / meeting space



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Lower three floors to house office / retail / meeting space
- ▣ Residential units on upper floors



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Several areas required repair



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Portions of the structure required reinforcement
 - CFRP
 - ▣ Positive
 - ▣ Negative
 - ▣ Shear



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Portions of the structure required reinforcement
 - CFRP
 - Reinforced bonded topping
 - Steel framing



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Final cost – approx. \$10 million
- ▣ Funding - private



PIONEER CONDOMINIUMS, LUBBOCK, TX

- ▣ Final cost – approx. \$10 million
- ▣ Funding - private



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Completed in 1926 as part of Santa Fe Railway's four-building warehouse complex
- ▣ Warehouse Terminal #2 - reinforced concrete frame with multi-wythe brick exterior walls
- ▣ 10 stories plus Penthouse
- ▣ Approximately 300,000 SF



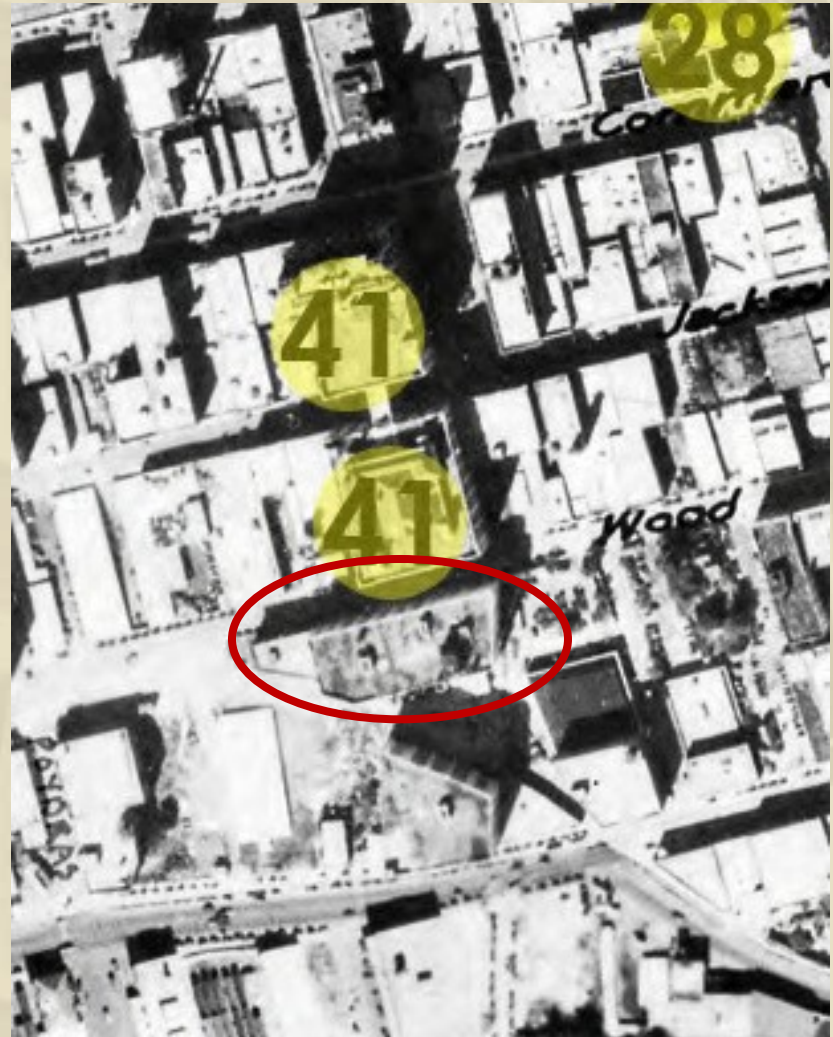
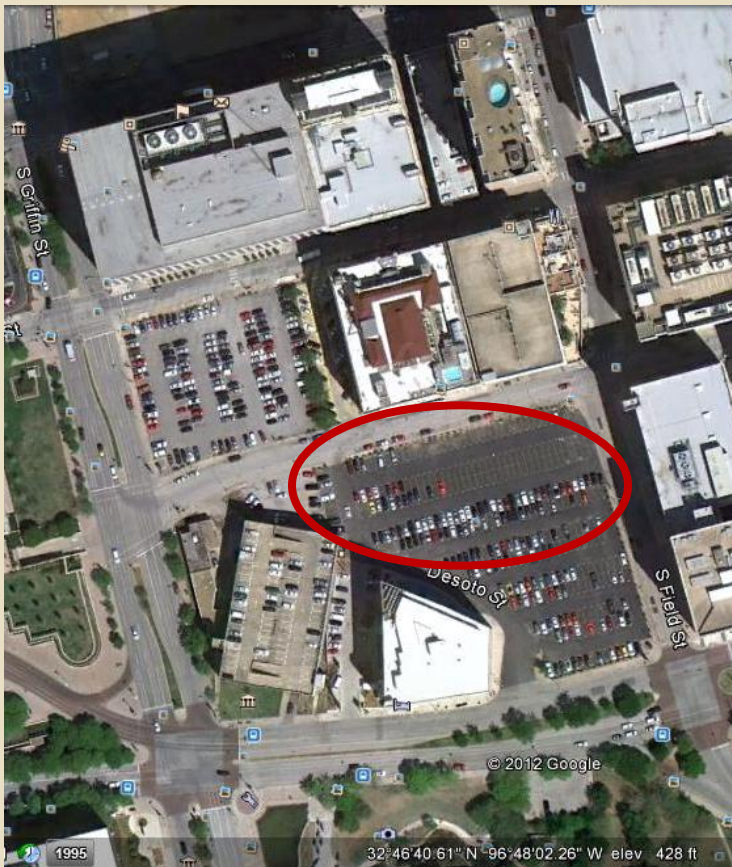
SOCO URBAN LOFTS, DALLAS, TX

- University Club located in penthouse
- WFAA Radio later used penthouse as their studios from 1941 to 1961



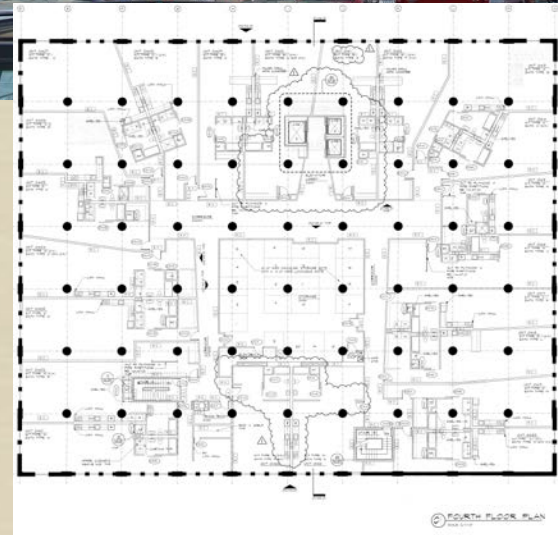
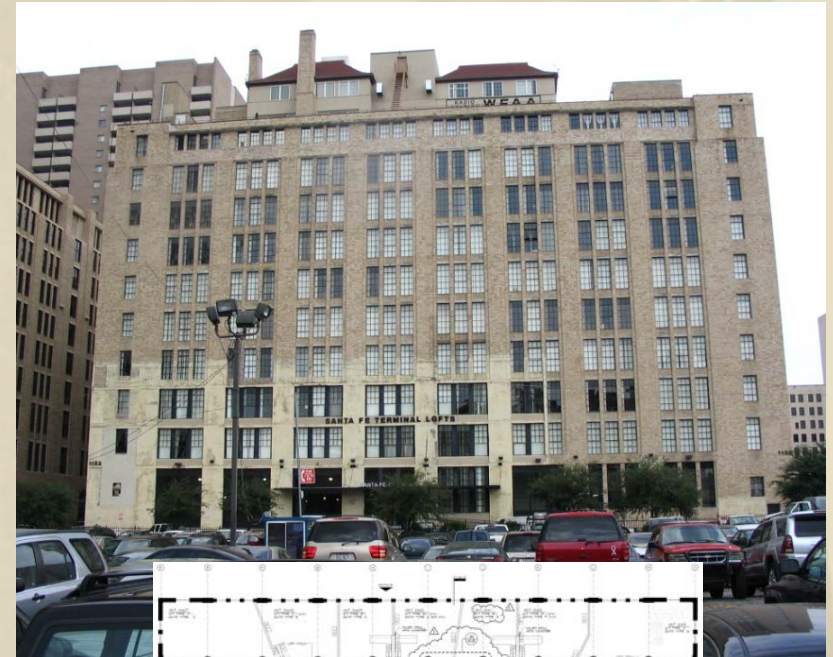
SOCO URBAN LOFTS, DALLAS, TX

- Terminal Building 3 demolished in 1988



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Acquired in 1991
- ▣ 1993 – City of Dallas provided downtown housing incentives
- ▣ 1998 - Converted into 203 apartments – Santa Fe Terminal Lofts



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Rooftop pool, exercise room, community room
- ▣ Added mezzanine level underground for additional parking
- ▣ Project cost - \$17.5M
- ▣ Funding:
 - HUD 221D Mortgage
 - 49 low-income units
 - City of Dallas 2nd lien loan



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Changed to condominiums in 2004
- ▣ Renamed “SoCo Urban Lofts”



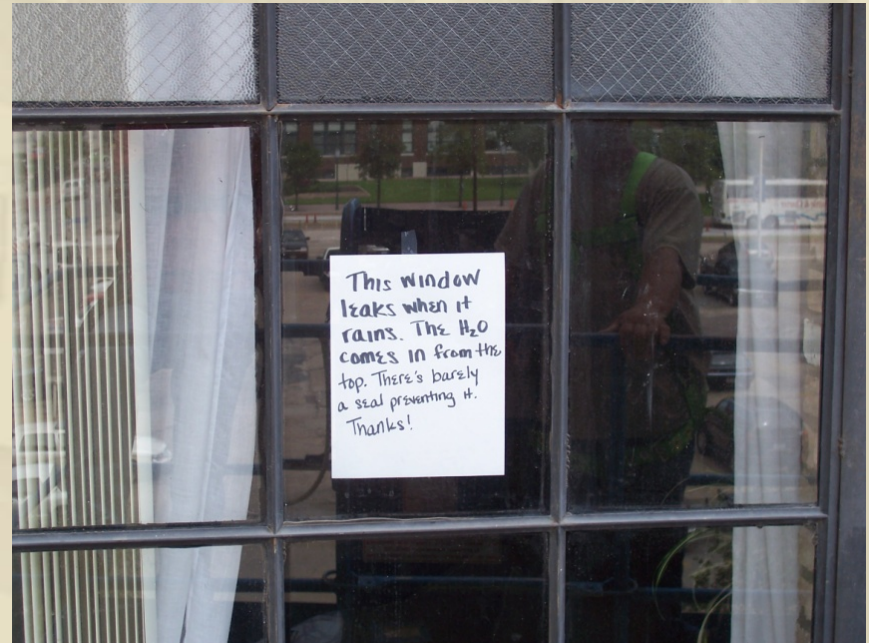
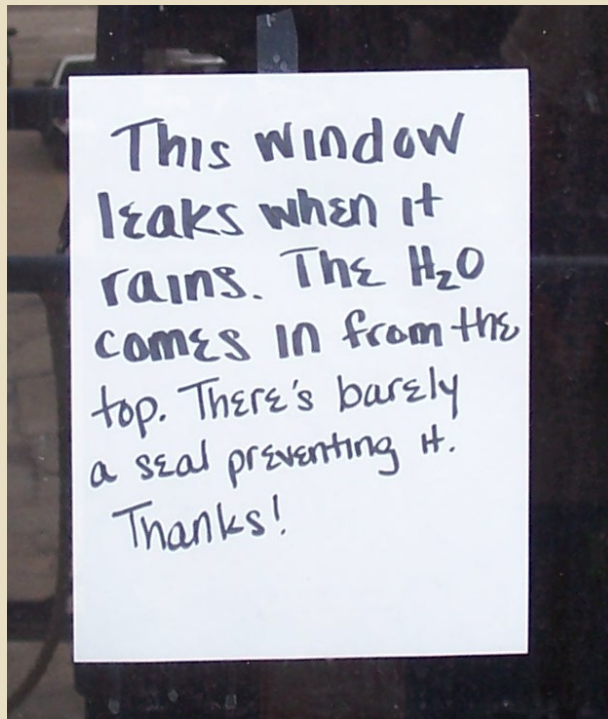
SOCO URBAN LOFTS, DALLAS, TX

- ▣ Structural and exterior envelope assessment



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Structural and exterior envelope assessment
- ▣ We had some help.....



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Agreement to postpone exterior and garage repairs until one-half units sold
- ▣ Exterior and garage repair documents started in March of 2007, completed in May, 2007
- ▣ Competitively bid



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Bid quantities specified on a Bid Schedule
- ▣ Unit Prices used to adjust final price up or down based upon actual quantities of repairs performed

SECTION 00300 - BID FORM

PROPOSAL OF _____

BIDDING SCHEDULE

BASE BID

Item No	Description	Unit	Qty	Unit Price	Amount
1	Mobilization	LS	1-Job	xxxxxxxxx	\$ _____
2	General Conditions	LS	1-Job	xxxxxxxxx	\$ _____
3	Concrete Repair @ Garage - Priority 1 Repairs	CF	102	\$ _____	\$ _____
4	Concrete Repair @ Garage - Priority 2 Repairs	CF	355	\$ _____	\$ _____
5	Pressure Inject Cracks	LF	100	\$ _____	\$ _____
6	Exterior Elevation Repairs – (North, West & South Elevations only):				
6A	Concrete Repair	CF	253	\$ _____	\$ _____
6B	Brick Pointing	LF	800	\$ _____	\$ _____
6C	Brick Replacement	each	20	\$ _____	\$ _____
6D	Helical Brick Wall Ties	each	200	\$ _____	\$ _____
6E	Seal Perimeter of Windows	LF	13,500	\$ _____	\$ _____
6F	Clean/Coat Steel Lintels	LF	500	\$ _____	\$ _____
6G	Clean/Coat Chipped/Repaired Concrete	SF	8,000	\$ _____	\$ _____
Total, Base Bid					\$ _____

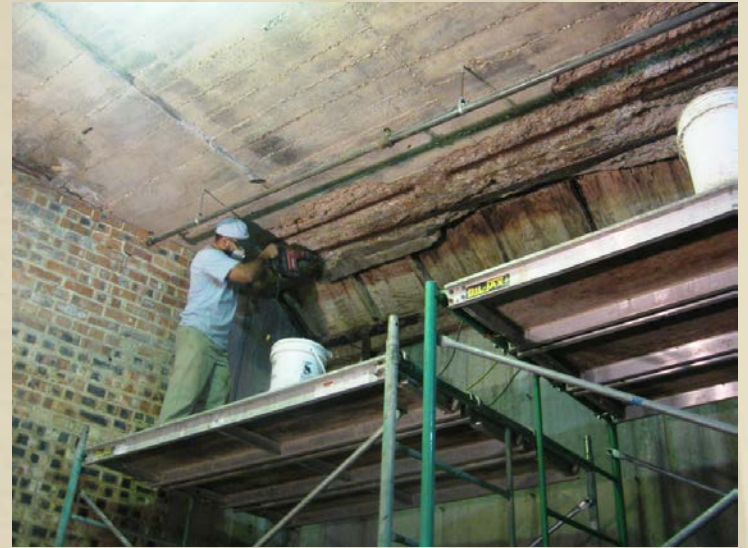
SOCO URBAN LOFTS, DALLAS, TX

- ❑ Original construction not top quality
- ❑ Urban chic
- ❑ “Kooken” brick



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Portions of underground garage extend under Jackson St. (north) & Wood Street (south)
- ▣ Extensive repairs required



SOCO URBAN LOFTS, DALLAS, TX



SOCO URBAN LOFTS, DALLAS, TX

- ▣ Exterior and garage repairs completed March, 2009
- ▣ Final cost \$426,247



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Thanks to:

ArchiTexas

City of Dallas

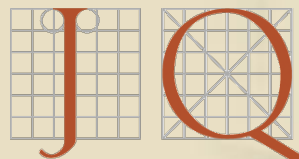
White Rock Boathouse, Inc.

Studio 5 Architecture

NYLO Hotel

McDougal Construction

Westmount Realty Capital



shaping the built environment