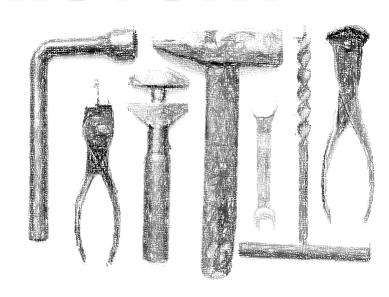
HARNESSING HISTORY

Restoration through Modern Technologies and Traditional Techniques





Kirksey



Kirksey





















Learning Objectives:

- 1. Sustainable / energy efficient design and strategies of the early 20th century
- 2. Tools for assessing envelope, and structural conditions of historic buildings
- 3. Energy modeling and building simulation tools (WUFI, solar and CFDs)
- 4. The power of drawings as a communication tool, finding the best way to communicate



HARNESSING HISTORY

Restoration through Modern Technologies and Traditional Techniques

WHY ARE WE HERE Learning from old traditions

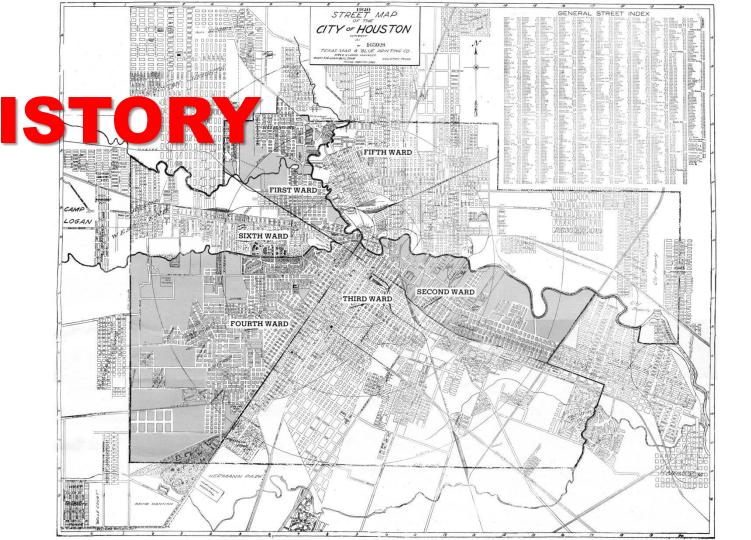
RESTORE A BUILDING IN HOUSTON

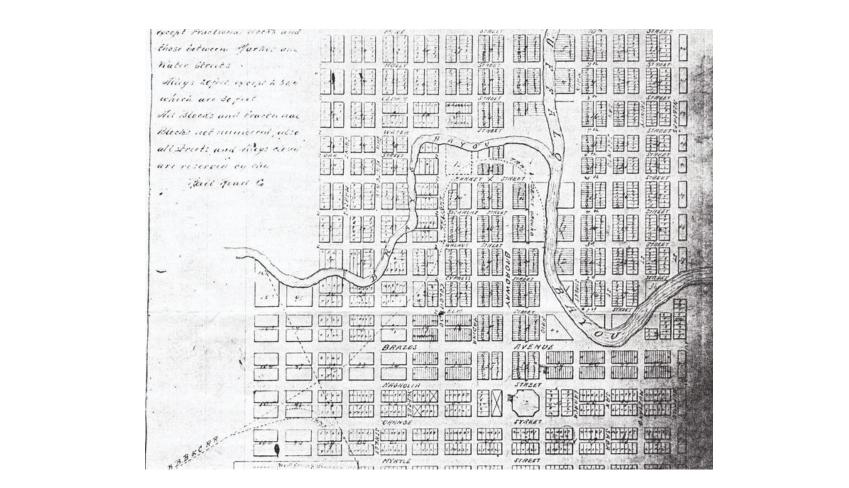
UNDERSTAND HOW WE BUILT FOR THIS CLIMATE AND
THIS REGION

WHY ARE WE HERE Applying Modern Technology

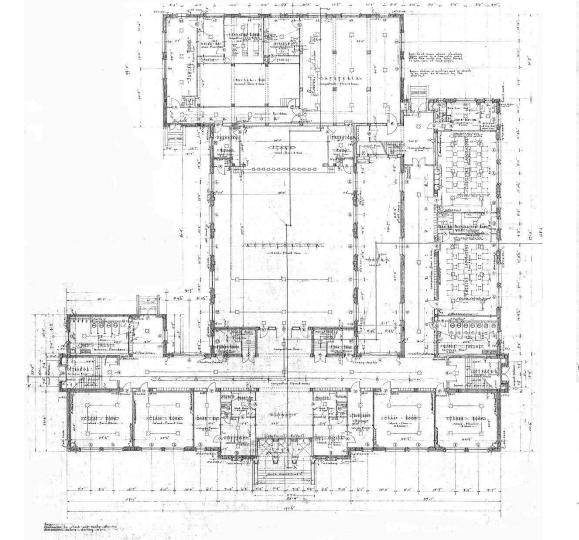
EVALUATE A 91 YEAR OLD BUILDING, WHILE MEASURING ITS ENERGY PERFORMANCE WITH MODERN TOOLS

SIMULATE AND CONSTRUCT A MODERN DESIGN INTO THAT BUILDING











World's Lowest Priced Touring Car with Sliding Gear Transmission

52 WEEKS TO PAY!

No Equal in Value Buyers are flocking to Overland for two reasons—to save morely and to get more quality and sound value for their more!

Here is a cur that makes system in gastle, more comprisely. The could interest priced terring or coint dailing our transcribing, and that sare consensions, and that sare consensions, and that sare consensions, and that sare consensions, and the same consensions, and the same consensions of the con

Abundant gross—quick; syste-way—a hangle frame—a wear adie of towill Rie-lyb-den-um sted—hig, sel besten- um or sted—hig, sel besten- um or string byt segure desenda-ting byt segure desenda-nting byt segure desenda-ting byt segure desenda-

You can buy your Overland out of your income with a small down payment—and have 52 weeks to pay the balance!

"Calfornia fi

Grove's Tasteless chill T

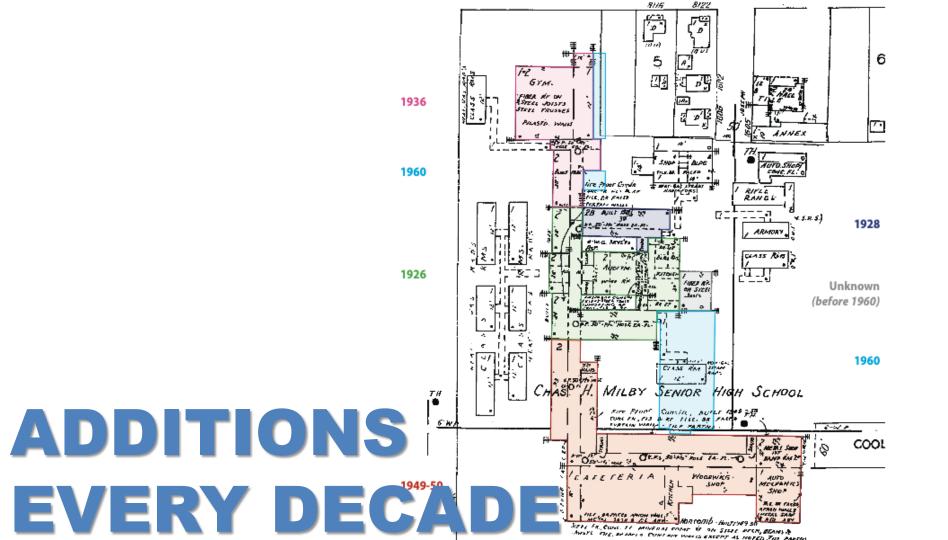
ALL-STEEL Willys-Knight Overland Sales Co.

(incorporated)

is made for that purpose; is contains just Blood needs, IRON and QUININS, in a for the most debtuck aspains, it the malarial gorms, Purifies and Enri Blood and prepares the Blood to withstand of Sumpars, You can soon feel its Stree Lautsportful Effect. 60; per bottle.

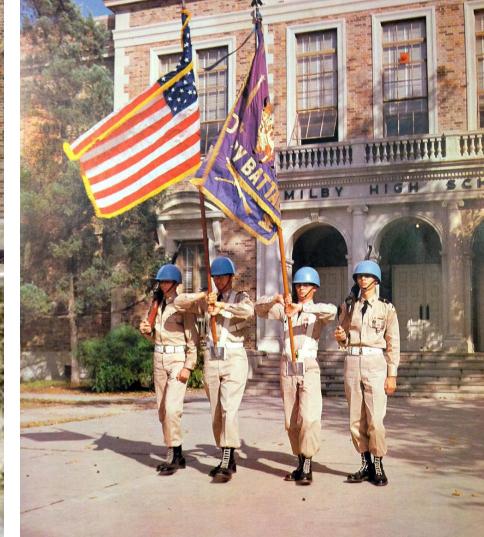
Whenever You Meed General Strengthening Take Grove's

HARRI		
	Addition to Harrisburg High School Harrisburg Texas.	
SHEET NO.	LOUIS A GLOVER ARCHITECT. HOUSTON TEXAS.	103 NO 611-27











design concept









first tool Original

HARRISBURG INDEPENDENT SCHOOL DISTRICT.

ADDITION TO HARRISBURG HIGH SCHOOL

H RRISE RC E S

INCET LOUIS A GLOVER NO.

ARCHITECT.

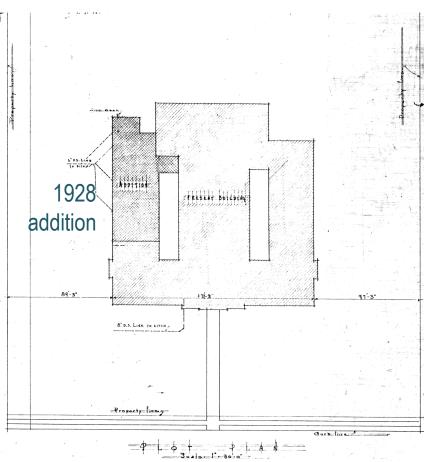
HOUSTON TEXAS.

6.11.27.

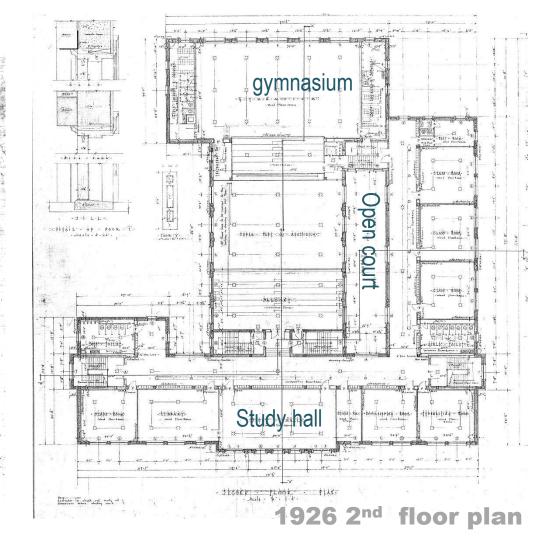
EXISTING PLANS



EXISTING PLANS



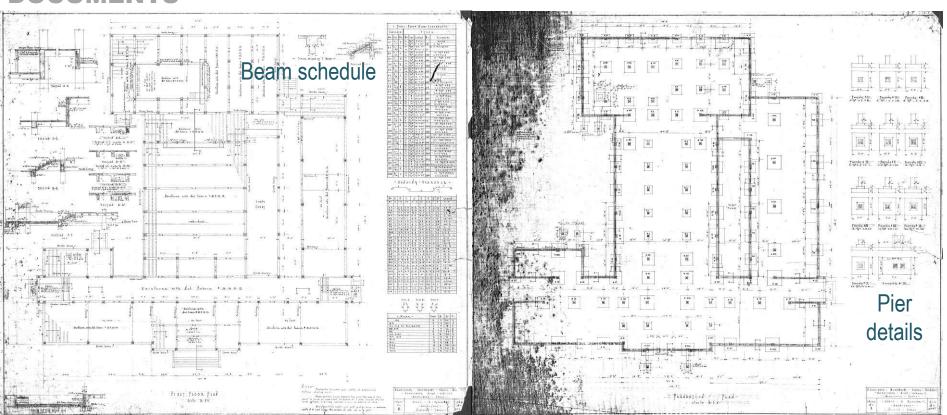
1928 Addition site plan





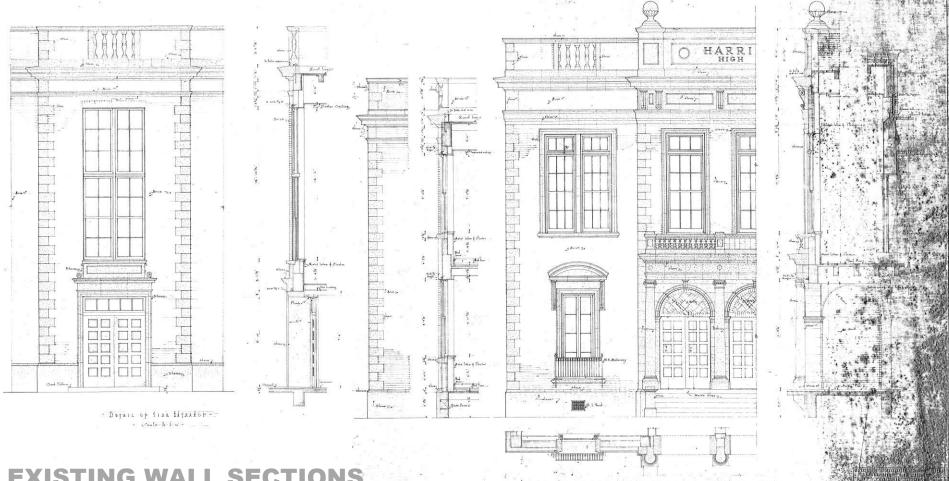


EXISTING STRUCTURAL DOCUMENTS



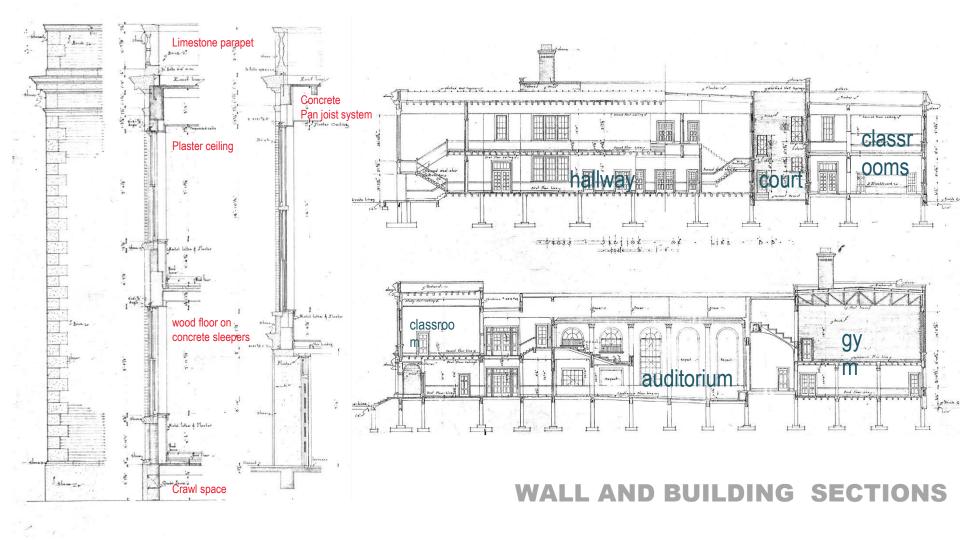
Structural Frame

Foundation Plan



Carrier Lating of the

EXISTING WALL SECTIONS





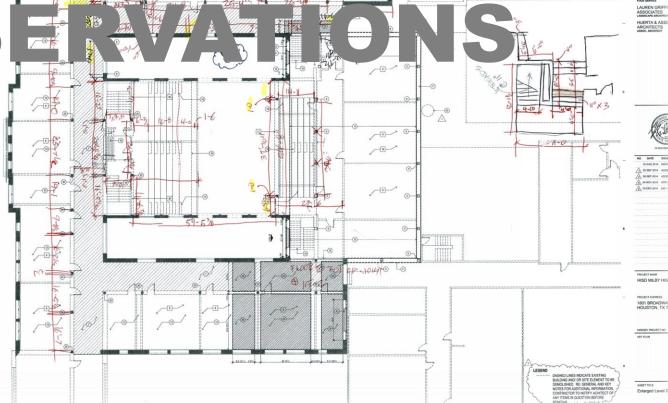




second tool Assessments

Visual, Structural, Analysis





MANA VANUE

6909 Portwest Drive Houston Texas 77024 713 850 9600 kirksey.com

PROJECT TEAM MATRIX STRUCTURAL ENGINEER JONES / DBR

OTHON CNIL ENGINEER

FDP FOCO SERVICE LAUREN GRIFFITH ASSOCIATES

HUERTA & ASSOCIATES
ARCHITECTS
ASSOC ARCHITECT



A DESEPTION ACCOUNTS A DESEPTION ADDENDUM A 24 NOV 2014 CPR 2

PROJECT NAME HISD MILBY HIGH SCHOOL

1601 BROADWAY HOUSTON, TX 77012

Enlarged Level 2 Demolition

EXISTING STRUCTURAL VERIFICATION:















EXISTING
BALCONY
SEATING
WAS A
MYSTERY











WHAT'S BEHIND THIS WALL?





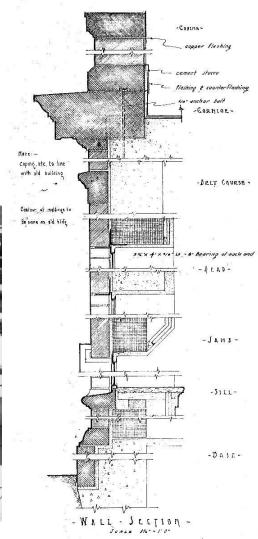




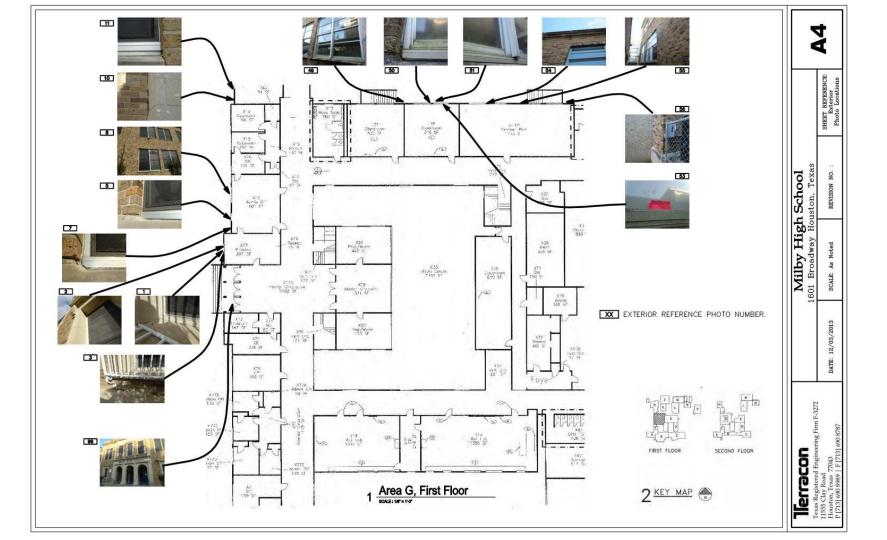
ENVELOPE ASSESMENT





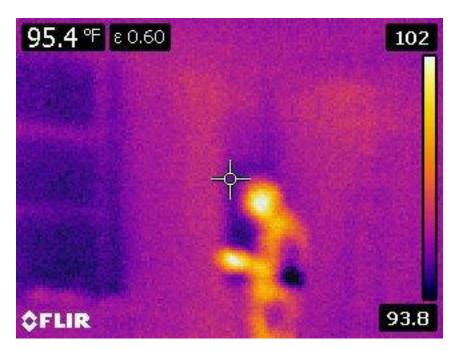








THERMAL IMAGING

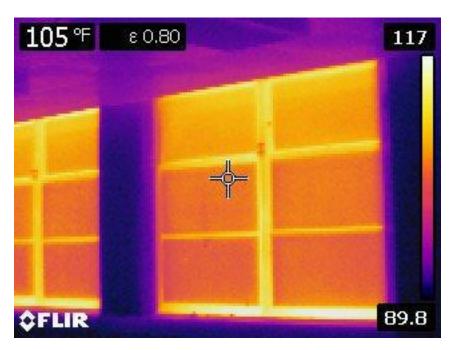








SKYLIGHTS AT COURT





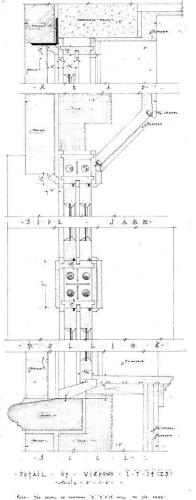
WINDOWS @ WEST FACING CLASSROOMS



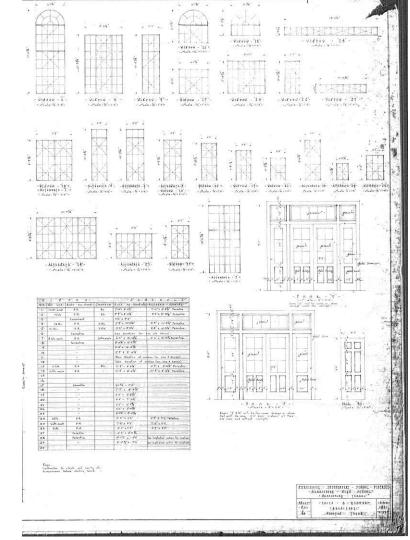
ORIGINAL WINDOWS

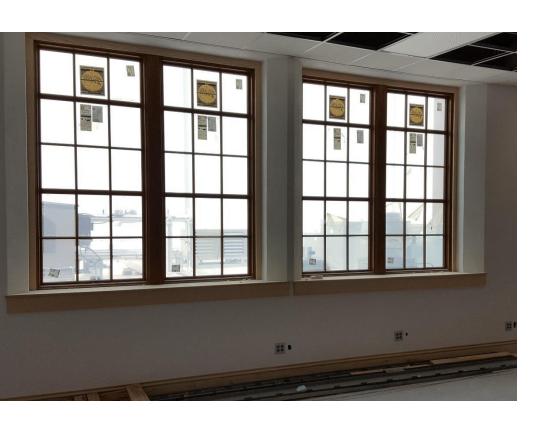


EXISTING WINDOWS











THE NEW WINDOWS

fourth tool Building Simulation 4 VIIELLS W.U.F.I. | SOLAR IMAGING | CFD



(see Appendix for more details)

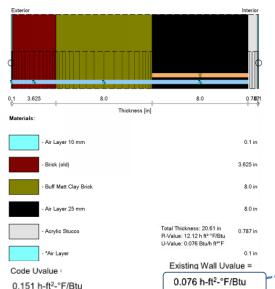
SIMULATION INPUTS

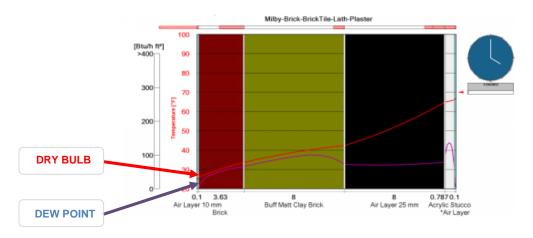
All simulations are done for North Wall becasuse its the worst case scenario for moisture transfer.

Materials:

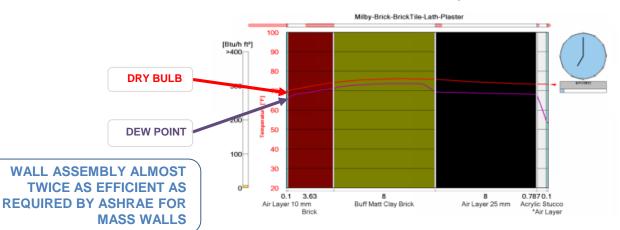
Brick is modeled with a leak to allow 1% fraction of Driving Rain.

CMU is modeled with a crack to allow 5ACH air transfer.

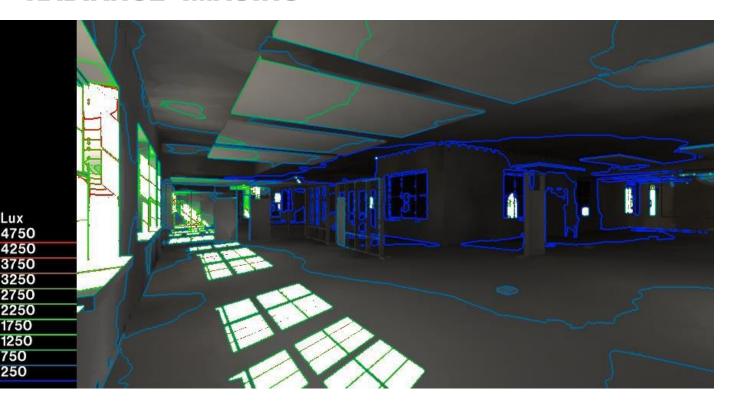








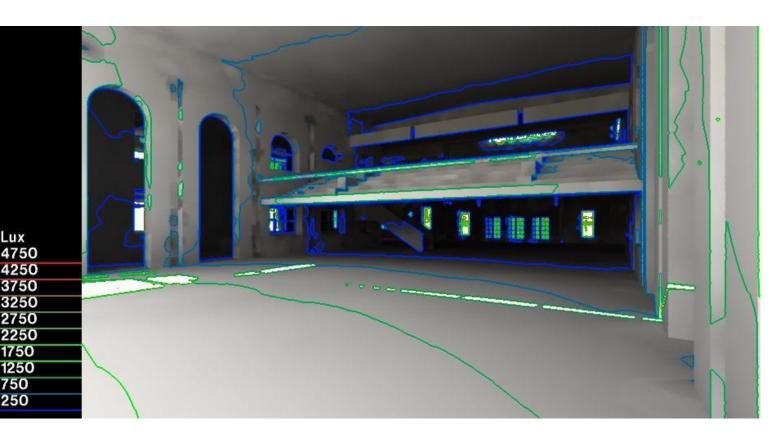
RADIANCE IMAGING







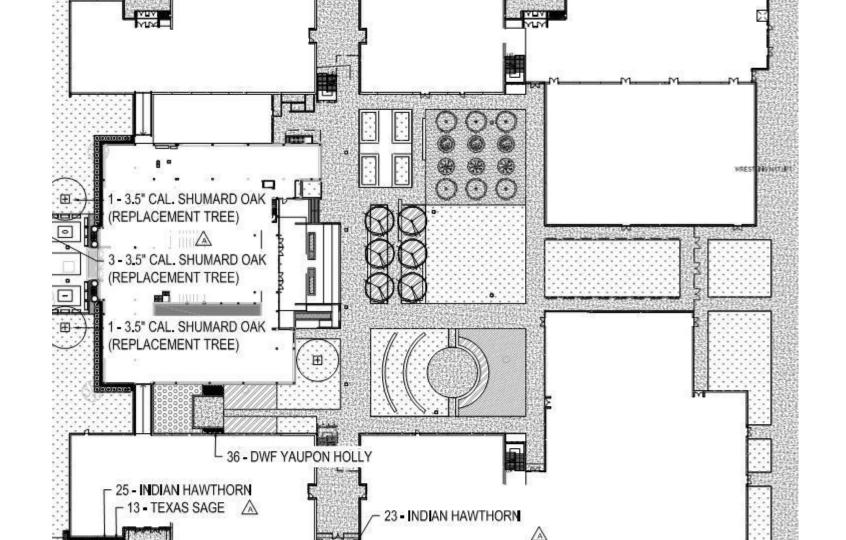
RADIANCE IMAGING

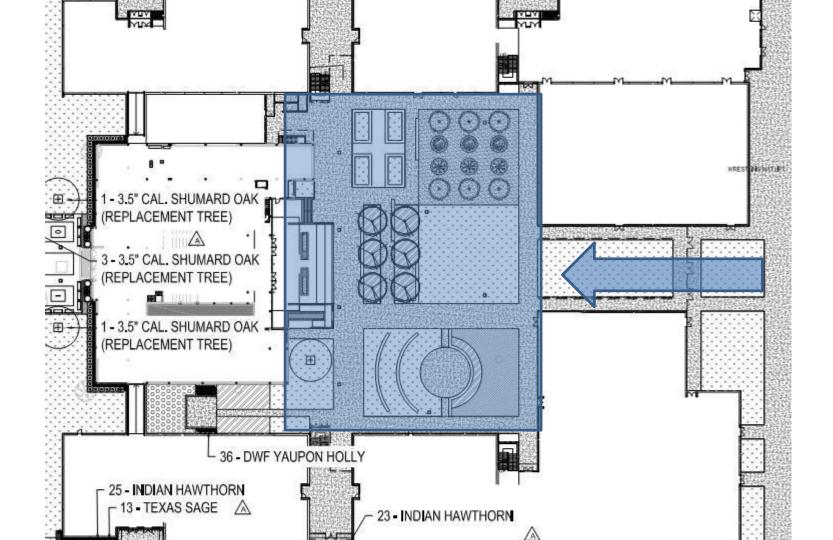


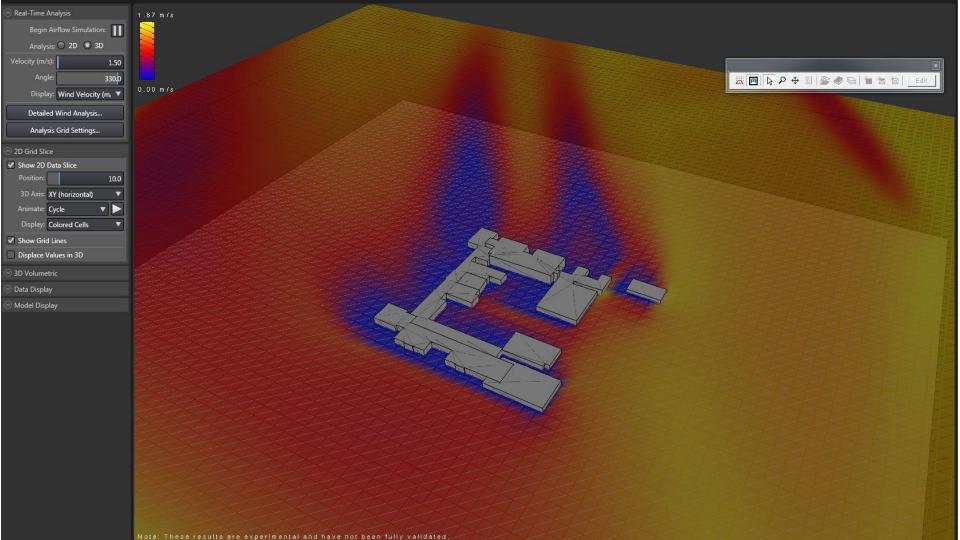
East Facing – FIRST FLOOR DINING COMMONS

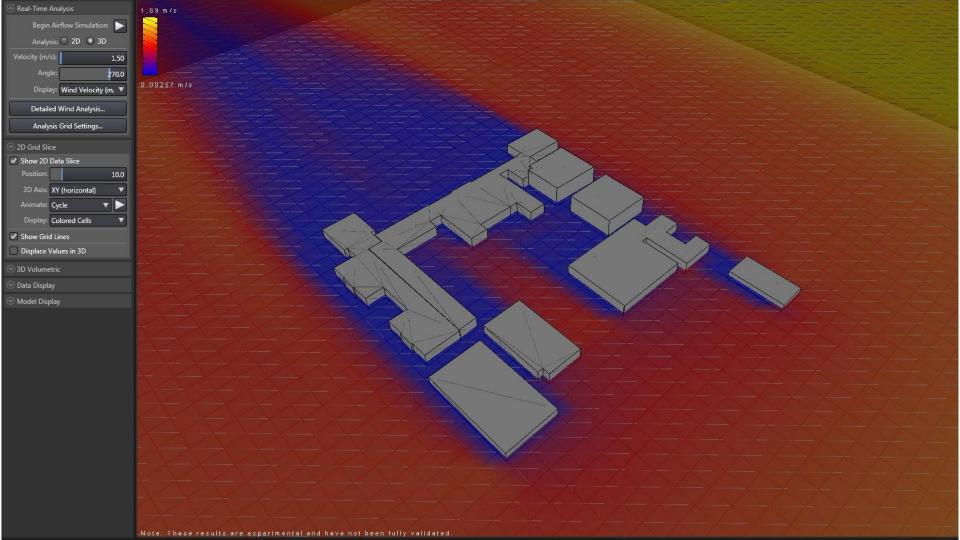


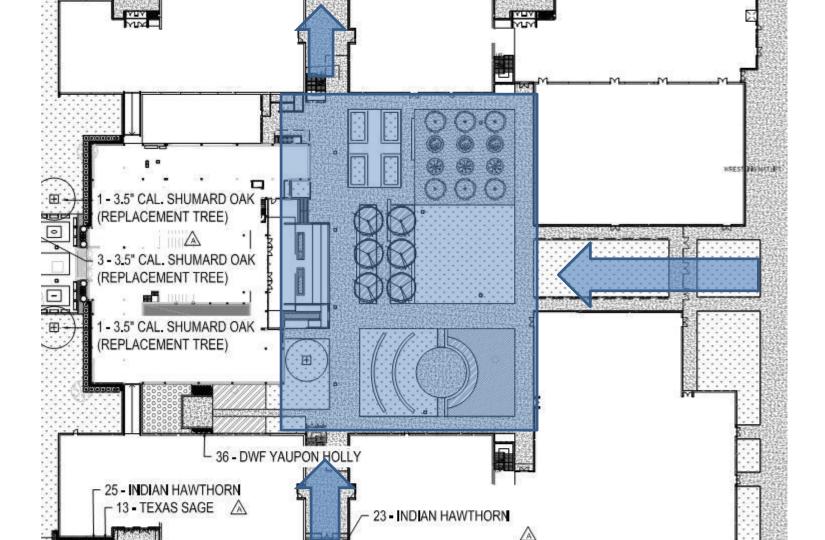














fifth tool

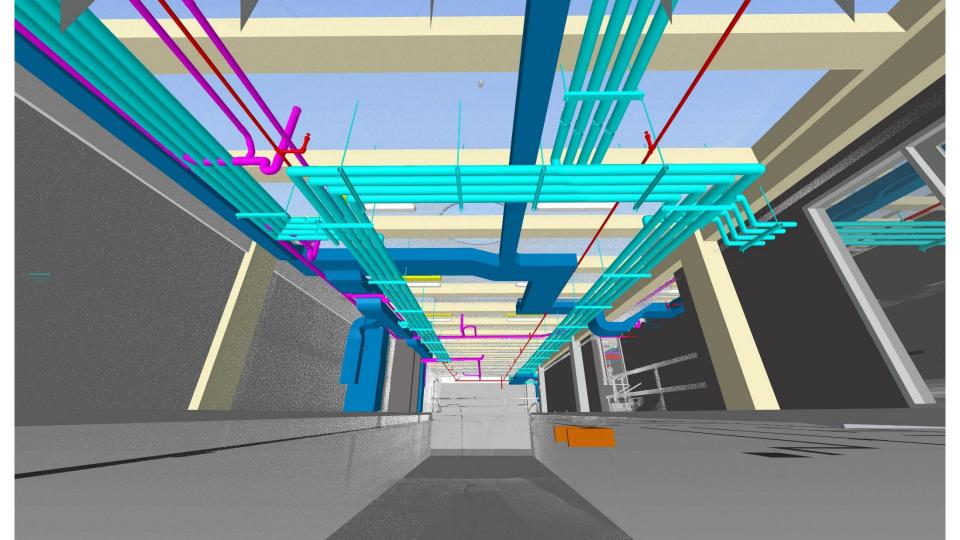
Construction tools Autodesk NAVISWORKS

CLASH DETECTION | LASER SCAN









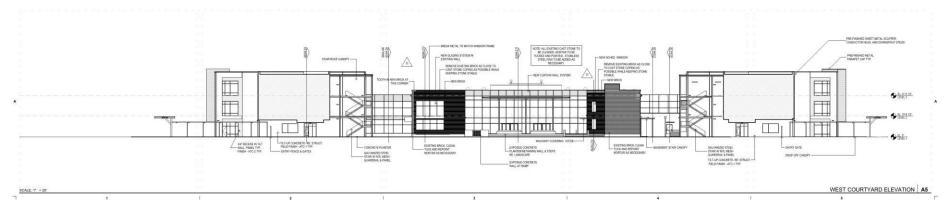


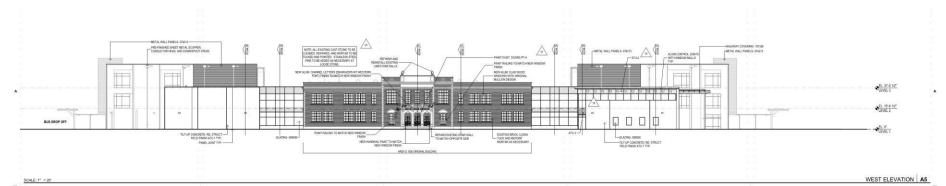
sixth tool

Constructio tools

DRAWING AND COMMUNICATION

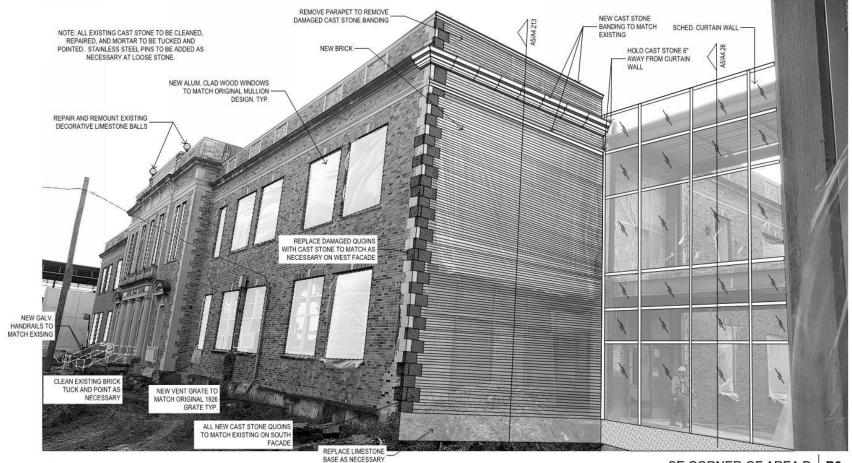
TYPICAL CONSTRUCTION DOCUMENTS





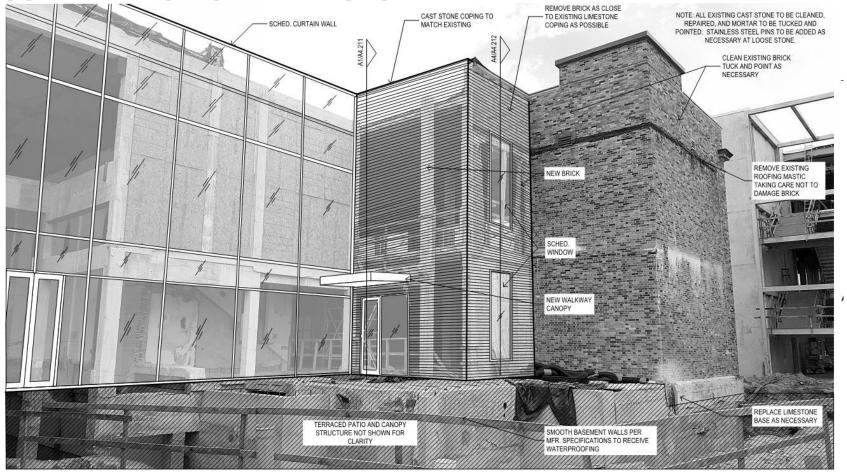
EXTERIOR ELEVATIONS

DOCUMENTATION OVER IMAGES



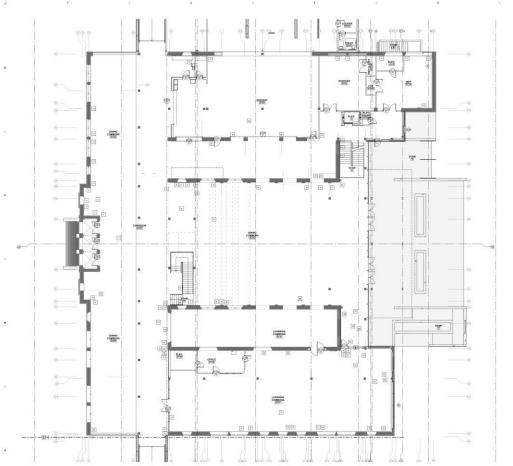


DOCUMENTATION OVER IMAGES









INTERIOR KEYED NOTES

- PATCH AND REPAIR ALL PLASTER SURFACES PROVIDE LINEORM FINISH (PTD)
- PROVIDE NEW PLASTER WALL ASSEMBLY AT ALL AREAS THAT ARE
 TOO LARGE TO PATCH
- REPAIR AND RE-FINISH EXISTING TERRAZZO TO REMAIN
- PROVIDE NEW WOOD (1X) CROWN (PTD)
- SAND AND REPAIR ANY EXISTING WOOD TRIM AND / OR SILL-REPLACE WITH NEW WOOD TRIM TO MATCH EXISTING
- REMOVE EXTRA CUT METAL LATHE, PROVIDE A STRAIGHT CUT LINE FOR NEW PLASTER EDGE. AND EXISTING WOOD BASE/TRIM UNTIL FINISH HAS A DISTRESSED
- SAME DAST ING WICKERS HAVE THREE SANDING WYA.
 POLYURATHANE SEALER). PROVIDE WOOD BASETRIM TO MATCH
 EXISTING WOOD BASETRIM WHERE MISSING.
- REMOVE EXISTING WOOD CROWN AT TOP OF PLASTER WALLS TO PREPARE FOR NEW CROWN, REAS/AR.22
- PROVIDE "L" TYPE TERMINATION JOINT STRIP AT TERAZZO TRANSITION
- PROVIDE SCHED, FINISH
- PATCH AND REPAIR ALL DAMAGED CONCRETE BEAMS/COLUMNS (ii) OUT EXISTING BRICK TO ALLOW FOR NEW STACKED BRICK WALL
- PER DETAIL C3/48.12 CUT TERRAZZO BASE, REPLACE WITH WOOD BASE ONLY WHERE NOTED.
- REMOVE RUST / SAND / PRIME AND PAINT STEEL FRAMES AND BRICK LINTELS
- CLEAN AND DEBUR BRICK / STRUCT CLAY TILE AND CONCRETE
 COLUMNS / BEAMS
- PROVIDE NEW WOOD SILLS @ MISSING WINDOWS TO MATCH EXISTING
- (I) INFILL W SPECIFIED BRICK AS NEEDED
- REMOVE PORTION OF PLASTER WALL AND UNCOVER THE EXISTING WINDOWSTO MATCH THE EXISTING WINDOW CONSTTONS
- PROVIDE SPECIFIED UNDERLAYMENT AT THE SLAB AREA AS NEEDED.
- TOOTH IN NEW BRICK AS NEEDED PER DETAIL CHAIL 12
- CLEAN WINDOW, REPLACE IF DAWAGED, ADD OPAQUE WINDOW FILM-
- PROVIDE TRIM AT WINDOW PER DETAIL CS/49.22

GENERAL NOTES

- ALL VOICS IN FLOOR STRUCTURE ARE TO BE FILLED TO MATCH EXISTING LEVEL AND PREPARED TO RECEIVE NEW SCHEDULED FLOOR FINISH.
- ALL BROKEN GLASS IN EXTERIOR AND INTERIOR WINDOWS IS TO BE REPLACED.
- ALL INTERIOR WALLS AND TRIM SHOULD BE PREPARED TO RECEIVE NEW PAINT. EXISTING PRINSHES SHOULD BE REMOVED IN A MANNER AS NOT TO DAMAGE EXISTING WALLS AND TRIM.
- ANY WOOD SILLS NOT SHOWN IN DOCUMENTS ARE TO BE SANDED
- ANY DAMAGE TO PLASTER WALLS NOT SHOWN IN DOCUMENTS SHOULD BE REPAIRED TO MATCH EXISTING.
- ALL FLOOR TRANSITIONS FROM NEW TO EXISTING TO RECEIVE A TRANSITION STRIP AND TO MATCH EXISTING FINISHED FLOOR.
- ALL NEW STRUCTURAL STEEL AND LINTELS TO BE PRIMED AND
- ALL EXISTING BRICK AND CLAY TILE SHOULD BE CLEANED AND
- ANY DAMAGE TO PLASTER MOLD AND CORNICE IS TO BE REPAIRED TO MATCH EXISTING IF DETAIL IS NOT PROVIDED ELSEWHERE IN
- ALL PHOTO SHEETS ARE NOT TO SCALE. THEY EXPLAIN THE INTENT OF THE WORK IN EACH AREA.

6909 Portwest Drive

Houston Texas 77024 713 850 9600 kirksey.com

DOO DOTTO NA JONES / DBR

OTHON OWLENGMEER FDP FOOD SERVICE

LAUREN GRIFFITH ASSOCIATES HUERTA & ASSOCIATES ARCHITECTS ASSOC ARCHITECT



NO.	DATE	16916
	14 NOV 2014	1894E FOR PERMIT
A	20 JAN 2015	COH COMMENTS
4	16 MAR 2015	COH COMMENTS
8	21.APR 2016	COH COMMENTS
	30 APR 25/15	ISSUE FOR CONSTRUCT
A	15 MAY 2015	COH COMMENTS
A	20 SBAY 2015	A51 006
A	EQ JUN 2015	ASI 108
4	11.AIN 2016	AEI 009
4	23.68 2015	ASI 910
8	04 AUG 2015	CPR 015
A	11 869 2016	CPR 018
A	14-007-2015	CPR 012
A	03/MOV 2015	ASI 014
A,	15 NOV 2018	CPR 06 RT
A.	02/00/2015	ASI 916

HISD MILBY HIGH SCHOOL

1601 BROADWAY HOUSTON, TX 77012























































Interior Photos

A8.31





PHOTO 79 D2 8044











JONES / DBR

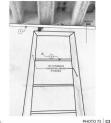
kirksey.com

OTHON ONLENGNEER LAUREN GRIFFITH ASSOCIATES

HUERTA & ASSOCIATES ARCHITECTS ASSOC ARCHITECT











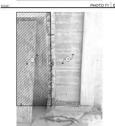














PROJECTHAME
HISD MILBY HIGH SCHO











PHOTO 65 A1 SCA







PHOTO 61 A5

SHEET HANGER A8.33

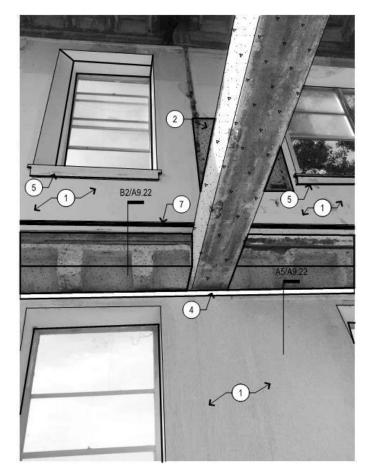




PHOTO 70 **B1**

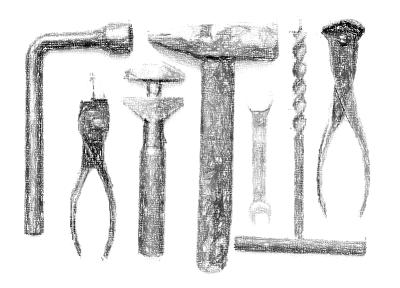
HARNESSING HISTORY

RESTORATION
THROUGH
MODERN
TECHNOLOGIES
AND TRADITIONAL
TECHNIQUES





THANK YOU



ARCHITECTURE