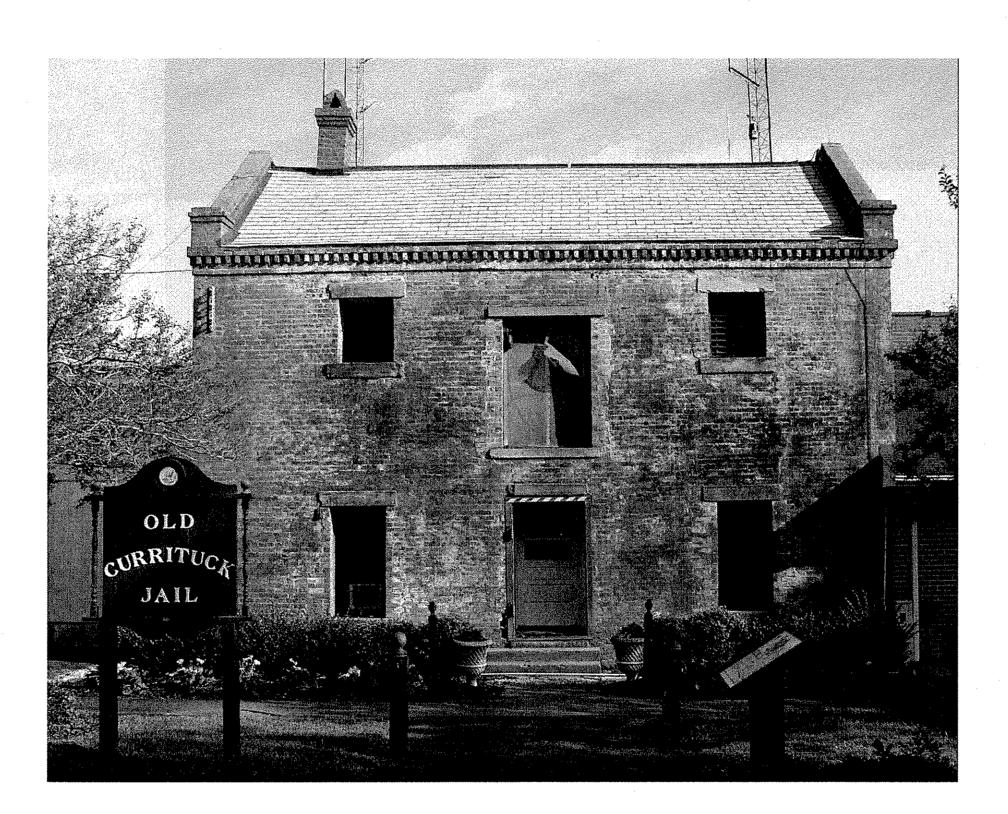
# OLD CURRITUCK JAIL AND COURTHOUSE RESTORATION PHASE ONE

500-046

Currituck County, North Carolina





# 6 FEBRUARY 2013

# SHEET INDEX

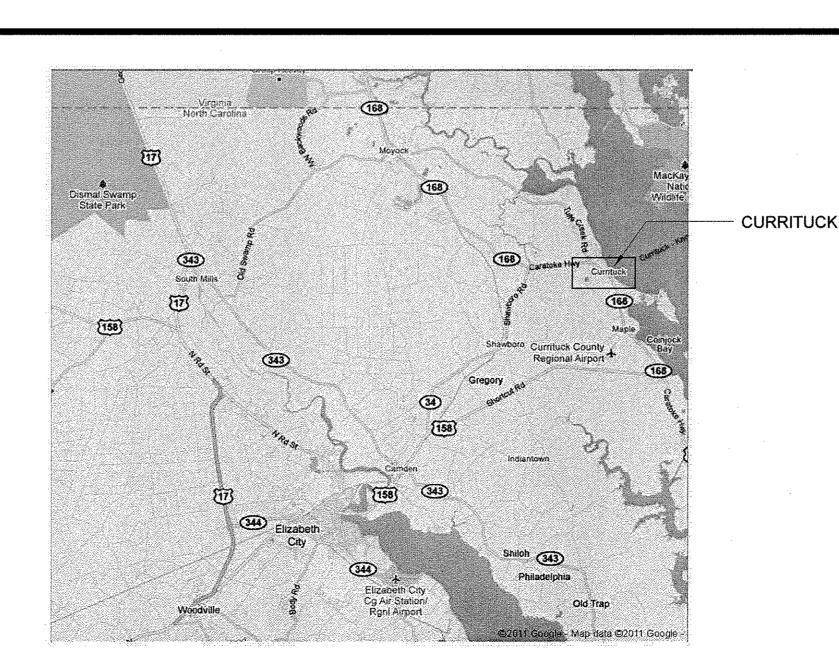
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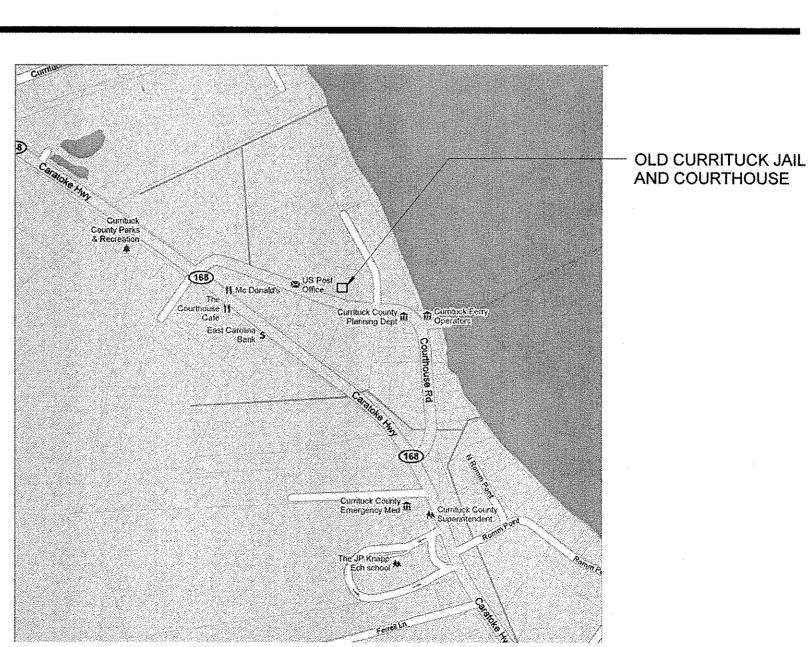
S103

L100 SITE PLAN
D100 DEMOLITION
A100 FLOOR PLANS
A101 ROOF PLAN AND DETAILS
A200 ELEVATIONS
A500 DOOR & WINDOW DETAILS
S101 STRUCTURAL DRAWING PLAN
S102 STRUCTURAL ELEVATIONS

STRUCTURAL DETAILS

**BUILDING CODE SUMMARY** 





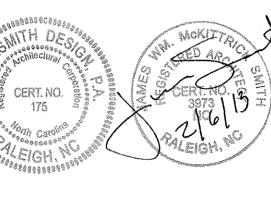
HagerSmith DESIGN PA

Architecture Landscape Architecture Planning Interior Design

PO Box1308
300 South Dawson Street
Raleigh, North Carolina 27602
Fax. 919.828.4050
www.bagersmith.com

919 821 5547

21.5547 © Copyri



#### APPENDIX B **BUILDING CODE SUMMARY** FOR ALL COMMERCIAL PROJECTS

(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOV	VNHOUSES)
Down the a the Call and a date and be it will be made and a	T 2\

	53 COURTHOUSE ROAD, C	CURRITUCK, NC 27929		<del></del>
Proposed Use:		Al Diago	# (252)222 2075	-
Owner or Autho Owned By:		Phone Private	#(252)323-2075	<b></b>
			bend Giaco	<del></del> .
	PROFESSIONAL: _James V		LICENSE # TELEPHONE #	
DESIGNER Architectural Civil	FIRM HagerSmith Design, PA	James W. M. Smith	3973 (919)821-554	17. jsmith@
Electrical Fire Alarm			<u> </u>	
Plumbing			and the second s	····
Mechanical Sprinkler-Stand	pipe		(-)	
Structural	Lysaght and Associates, PA s>5' High	Charles Lysaght	7929 (919)833-049	95,
		Angular Angular Angular Angular an Angular Angular Angular Angular Angular Angular Angular Angular Angular Ang	and the latest and the first the collection of the project and assessment of the project and the collection of the project and t	toroge .
	NOF CODE: 2012  w Construction X Renovat	ion (Existing Bldg) 🔲 Upf	it: Alteration	_
பில	w Constituction XI Renoval	ion (existing ibid) Li Opt	Anteration	
BUILDING DA'	ΓA	A managan na ana ana ana ana kataman na baka di ana ana ana ana ana ana ana ana ana an		
Construction T	ype: IA IB		🗖 Ш-А 💢 Ш-В	
	☐ IV ☐ V-A Mixed construction			
Spriuklers:	No ☐ Yes ☐	NFPA 13	☐ NFPA 13D	
Standpipes:	No ☐ Yes Class ☐	I DII DIII DW	et Dry	
Fire District: Ruilding Heigh	No Yes	of Stories   This in the		
ounding rieiga Mezzanine:	R: _24_ Feet2Number of	or sportes in commune ber		
High Rise: Gross Building	No Yes Central Re	eference Sheet # (if provided)	and any financial financial of the contract of	
LOOR	Existing (sqft)	NEW (SQFT)	SUB-TOTAL	
s <sup>th</sup> Floor 5 <sup>th</sup> Floor	······································			····
4 <sup>th</sup> Floor				<del></del>
3 <sup>rd</sup> Floor 2 <sup>nd</sup> Floor	647		647	<del></del>
Mezzanine	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	······································		<del></del> -
l <sup>st</sup> Floor	647		647	
Basement				<del></del>
TOTAL	120/		120/	
TOTAL  NC Administration	1294 on and Enforcement		1294 <b>2</b> 9	
., ., ., ., .,				
NC Administratio	on and Enforcement	se are listed on the Nationa	29	
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NC Administration  Curritu  Historio	on and Enforcement  ick County Jail and Courthou		29 al Register of	·
NC Administration  Curritu  Historio	on and Enforcement  ick County Jail and Courthou c Places and qualify as histor		29 al Register of	
NC Administration  Curritu  Historio	on and Enforcement  ick County Jail and Courthou c Places and qualify as histor	ric structures under NCSBC	al Register of Section 3407	·
NC Administration  Curritu  Historio	on and Enforcement  ick County Jail and Courthou c Places and qualify as histor c Buildings	ric structures under NCSBC	al Register of Section 3407	ABLE
NC Administration Curritu Historio Historio	on and Enforcement ick County Jail and Courthou c Places and qualify as histor c Buildings	ric structures under NCSBC	al Register of Section 3407	ABLE
Curritu Historic Historic Primary Occup	ick County Jail and Courthou c Places and qualify as histor c Buildings  Assembly  Buildings	ALLOWABLE AREA  A-1  For A-2  Factory-Industrial	ILDING WILL NOT BE OCCUPIALLOWING WORK    X   A-3	ABLE
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Curritu Historic Historic Primary Occup	ck County Jail and Courthouce Places and qualify as historic Buildings  Assembly  Bancy:  Banc	ALLOWABLE AREA  A-1	ILDING WILL NOT BE OCCUPIALLOWING WORK    X   A-3	ABLE
Primary Occup	nand Enforcement  ack County Jail and Courthou c Places and qualify as histor c Buildings  Assembly siness Educational Bittutional I-3 Use Condition ercantile Residential orage S-1 Edity and Miscellaneous Par	ALLOWABLE AREA  A-1	ILDING WILL NOT BE OCCUPIALLOWING WORK    X   A-3	ABLE
Primary Occup  Bu Historic  Primary Occup  Bu Historic  Uti Secondary Occ	ck County Jail and Courthou c Places and qualify as historic Buildings  Assembly Sistemation Below Below Buildings  Assembly Sistemation Below Buildings Below Buildings  Assembly Buildings Below Buildings B	ALLOWABLE AREA FOR ALLOWABLE AREA FOR A-1 A-2 Factory-Industrial H-2 I-3 I-2 I-3 I-2 I-3 R-1 R-2 I-R R-1 I-R I-R R	Register of Section 3407  ILDING WILL NOT BE OCCUPIALLOWING WORK    X  A-3	ABLE
Primary Occup	ck County Jail and Courthoute Places and qualify as historic Buildings    Assembly	ALLOWABLE AREA  ALLOWABLE AREA  A-1	Register of   Section 3407   Secti	ABLE
Primary Occup  Bu Historic  Primary Occup  Historic  Primary Occup  Uti Secondary Occupa  Mixed Occupan	ck County Jail and Courthou c Places and qualify as historic Buildings    Assembly	ALLOWABLE AREA  A-1 For A-2 Factory-Industrial H-2 I-3 I-2 R-1 R-1 R-2 R-1 R-1 R-1 R-2 R-1	Register of   Section 3407   Secti	ABLE
Primary Occup  Bu Historic  Primary Occup  Historic  Bu Historic  Bu Uti Secondary Occupan Mixed Occupan The	ck County Jail and Courthou c Places and qualify as historic Buildings    Assembly	ALLOWABLE AREA  A-1 For H-3 Factory-Industrial H-2 F-3 F-4 R-1 R-1 R-2 R-1 R-1 R-2 R-1 R-1 R-2 R-1 R-2 R-1 R-1 R-1 R-2 R-1 R-1 R-1 R-2 R-1 R-1 R-1 R-2 R-1 R-1 R-2 R-1 R-1 R-1 R-2 R-1 R-1 R-1 R-2 R-1	Al Register of Section 3407    Comparison of	ABLE
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Primary Occup  Bu Historic  Primary Occup  Historic  Bu Historic  Store  Secondary Occupan  Mixed Occupan  Insecondary Occupan  Control  C	ck County Jail and Courthoute Places and qualify as historic Buildings    Assembly	ALLOWABLE AREA    A-1	Al Register of Section 3407    Comparison of	ABLE
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Primary Occup  Bu Historic  Primary Occup  Bu Historic  Store  Store  Special Occupan  No The lim core  Sepecial Occupan  Actur  Actur  Curritu  Historic  Bu Historic  Bu Historic  Actur  Curritu  Historic  Bu His	ck County Jail and Courthou c Places and qualify as historic Buildings    Assembly	ALLOWABLE AREA    A-1	Al Register of Section 3407    Comparison of the ratios of the actual floor are not exceed 1.	

							District Control of the Control of the
STORY NO.	DESCRIPTION AND USE	(a) bldgarea	(B) TABLE 503 <sup>5</sup>	(C) AREA FOR	(D) AREA FOR	(E) ALLOWABLE	(F) MAXIMUM
		PER STORY	AREA	open space	SPRINKLER	AREA OR	BUILDING
		(ACTUAL)		INCREASE	INCREASE.2	UNLIMITED	AREA"
One	A-3	647	6,000	4500		10,500	21,000
Two	A-3	647	6,000	4500	-	10,500	American superior sup

c. Ratio (F/P) = .63 (F/P)
d. W=Minimum width of public way = 60 (W)
e. Percent of frontage increase I<sub>f</sub>= 100 [F/P - 0.25] x W/30 = .75 (%)

<sup>2</sup> The sprinkler increase per Section 506.3 is as follows:

a. Multi-story building I<sub>s</sub> = 200 percent

b. Single story building I<sub>s</sub> = 300 percent

<sup>3</sup> Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507.1, 507.2, 507.3, 507.5); Group A motion picture (507.8), Malls (402.6); and H-2 aircraft paint hangers (507.6).

<sup>4</sup> Maximum Building Area = total number of stories in the building x E but not greater than 3 x E.

<sup>5</sup> The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers

must comply with 412.1.2.

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ALLOWABLE HEIGHT BUILDING WILL NOT BE OCCUPIABLE FOLLOWING WORK

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type	3	Type _IIIB	
Building Height in Feet	Feet55	Feet = H + 20' =	24'	
Building Height in Stories	Stories 2	Stories + 1 =	Stories 2	

FIRE PROTECTION REQUIREMENTS BUILDING WILL NOT BE OCCUPIABLE Life Safety Plan Sheet #, if Provided \_\_\_\_ FOLLOWING WORK

	BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	PROVIDED (W/ * REDUCTION)	DETAIL# AND SHEET#	DESIGN# FOR RATED ASSEMBLY	DESIGN# FOR RATED PENETRATION	DESIGN# FOR RATED JOINTS
rsmith.com	Structural frame, including columns, girders, trusses							
	Bearing walls		<i>i</i>					
	Exterior					-		
	North	>30	2	2				
	East	<10	2	2				
	West	<10	2	2				
	South	>30	2	2				,
	Interior							
	Nonbearing walls and partitions  Exterior							
	North	N/A						<del></del>
	East	N/A						
	West	N/A	<u> </u>					
	South	N/A						
	Interior							
	Floor construction Including supporting beams and joists	0	0	0				
	Roof construction Including supporting beams and joists	0	0	0				
	Shafts - Exit	N/A						
	Shafts - Other	N/A	l .					
	Corridor Separation	N/A						
	Occupancy Separation	N/A	1					
	Party/Fire Wall Separation	N/A						
	Smoke Barrier Separation	N/A	\$ 1.00 m					, 11/14/11/11/11
	Tenant Separation	N/A	:					

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### LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting:	[X] No 🔲 Yes
Exit Signs:	[X] No 🔲 Yes
Fire Alarm:	X No ☐ Yes
Smoke Detection Systems:	[X] No Yes
Panic Hardware:	[X] No [] Yes

EXIT REQUIREMENTS BUILDING WILL NOT BE OCCUPIABLE FOLLOWING WORK NUMBER AND ARRANGEMENT OF EXTIS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM* NUMBER OF EXITS		TRAVEL DISTA	ARRANGEMENT MEANS OF EGRESS <sup>13</sup> (SECTION 1004.1)		
	REQUIRED	SHOWN ONFLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1994.2.4)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS

EXIT WIDTH

1 Corridor dead ends (Section 1004 3.2.3)
2 Single exits (Table 1005.2.2)
3 Common Path of Travel (Section 1004.2.5)

USE GROUP

ORSPACE

DESCRIPTION

BUILDING WILL NOT BE OCCUPIABLE FOLLOWING WORK

EXITWIDTH(in)<sup>2,3,4,5,6</sup> AREA AREA 1 EGRESS WIDTH REQUIRED WIDTH ACTUAL WIDTH PER PER OCCUPANT (SECTION 1003.2.3) SHOWN ON PLANS (TABLE 1003 2.3) (a+b) x c OCCUPANT (TABLE 1003-2-2-2) STAIR LEVEL STAIR LEVEL STAIR LEVEL

See Table 1003.2.2.2 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)

<sup>2</sup> Minimum stairway width (Section 1003.3.3); min. corridor width (Section 1004.3.2.2); min. door width (Section 1003.3.1) Minimum width of exit passageway (Section 1005.3.3)

The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section

<sup>6</sup> Assembly occupancies (Section 1008)

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STRUCTURAL DESIGN SEE GENERAL STRUCTURAL NOTES DESIGN LOADS: ON SHEET S103 Mezzanine \_\_\_100\_\_\_\_ psi Basic Wind Speed 110 mph (ASCE-7-98) Exposure Category C\_ Wind Base Shears (for MWFRS) Vx = Vy = \_\_\_\_\_ SEISMIC DESIGN CATEGORY A Compliance with Section 1616.4 only? SEISMIC DESIGN CATEGORY B, C, & D Provide the following Seismic Design Parameters: Seismic Use Group Seismic Use Group

Spectral Response Acceleration S<sub>MS</sub> %g S<sub>MI</sub> %g Site Classification Basic structural system (check one) Bearing Wall \_\_Dual w/Special Moment Frame Building Frame
Moment Frame Dual w/Intermediate R/C or Special Steel Inverted Pendulum Seismic base shear  $V_X = V_{\bar{X}} =$ Analysis Procedure Simplified Equivalent Lateral Force Modal Architectural, Mechanical, Components anchored? LATERAL DESIGN CONTROL; Earthquake Wind SOIL BEARING CAPACITIES: Field Test (provide copy of test report)\_ Presumptive Bearing capacity Pile size, type, and capacity PLUMBING FIXTURE REQUIREMENTS EXISTING RESTROOMS ARE LOCATED IN ADJACENT COURTHOUSE ACCESSIBLE PARKING RECULAR WITH 5' VAN SPACES WITH 8' ACCESSIBLE **NC Administration and Enforcement** SPECIAL APPROVALS Special approval: (Local Jurisdiction, Department of Insurance, SBCCI, ICC, etc., describe below)

N/A EXISTING BUILDING ENERGY SUMMARY WILL NOT BE OCCUPIABLE ENERGY REQUIREMENTS: The following data shall be considered minimum and any special attribute required to meet the energy code shall. also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget. THERMAL ENVELOPE Method of Compliance:

☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Description of assembly U-Value of total assembly R-Value of insulation Skylights in each assembly U-Value of skylight total square footage of skylights in each assembly Exterior Walls (each assembly) Description of assembly U-Value of total assembly R-Value of insulation Openings (windows or doors with glazing) U-Value of assembly shading coefficient. projection factor low e required, if applicable Door R-Values

Roof/ceiling Assembly (each assembly)

Walls adjacent to unconditioned space (each assembly) Description of assembly U-Value of total assembly R-Value of insulation Openings (windows or doors with glazing)

U-Value of assembly Low e required, if applicable Door R-Values Walls below grade (each assembly)

Description of assembly U-Value of total assembly R-Value of insulation NC Administration and Enforcement

Floors slab on grade Description of assembly U-Value of total assembly

Floors over unconditioned space (each assembly)

Description of assembly

U-Value of total assembly

R-Value of insulation

R-Value of insulation. Horizontal/vertical requirement slab heated

ELECTRICAL SUMMARY

N/A EXISTING BUILDING NO CURRENT ELECTRICAL

Method of Compliance: ☐ Prescriptive Performance

☐ Energy Cost Budget

Lighting schedule

ELECTRICAL SYSTEM AND EQUIPMENT

lamp type required in fixture number of lamps in fixture ballast type used in the fixture number of ballasts in fixture total wattage per fixture total interior wattage specified vs allowed

total exterior wattage specified vs allowed

Equipment schedules with motors (not used for mechanical systems)

motor horsepower number of phases minimum efficiency

motor type

# of poles

MECHANICAL SUMMARY N/A EXISTING BUILDING NO CURRENT MECHANICAL MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Method of Compliance 

Thermal Zone

winter dry bulb summer dry bulb

Interior design conditions winter dry bulb summer dry bulb

relative humidity

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**Building cooling load** 

**Mechanical Spacing Conditioning System** Unitary description of unit

heating efficiency cooling efficiency heat output of unit cooling output of unit

Boiler total boiler output. If oversized, state reason. total chiller capacity. If oversized, state reason.

List equipment efficiencies

Equipment schedules with motors (mechanical systems)

motor horsepower number of phases minimum efficiency

motor type

# of poles

NC Administration and Enforcement

PROJECT 500-046

**OLD CURRITUCK JAIL AND** COURTHOUSE RESTORATION PHASE ONE

HagerSmith

**DESIGN PA** 

Landscape Architecture

300 South Dawson Street Raleigh, North Carolina 27602

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Architecture

Interior Design

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Fax. 919.828.4050

919.821.5547

ASSOCIATES / CONSULTANTS

LYSAGHT AND ASSOCIATES, PA

STRUCTURAL ENGINEERS

120 ST. MARY'S STREET

FIRM LICENSE #C-0621

RALEIGH, NC 27605

P. 919/833-0495

www.hagersmith.com

Planning

Currituck County, North Carolina

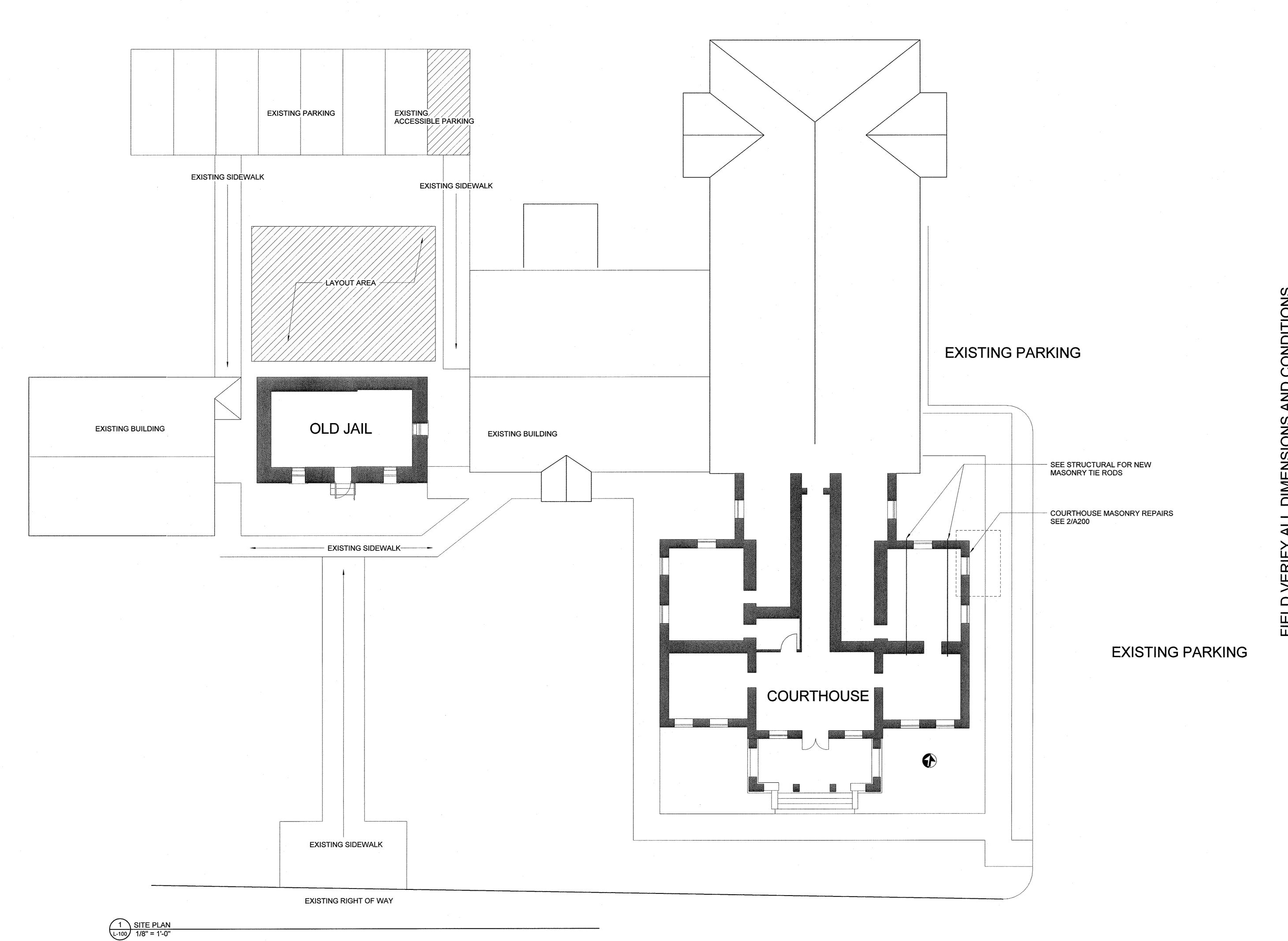
**BUILDING CODE SUMMARY** 

REVISIONS NUMBER DESCRIPTION DATE

DRAWNBY DRB

CHECKED BY Checker DATE ISSUED 2/6/13

1 \ 2012 BUILDING DATA SUMMARY





Architecture Landscape Architecture Planning Interior Design

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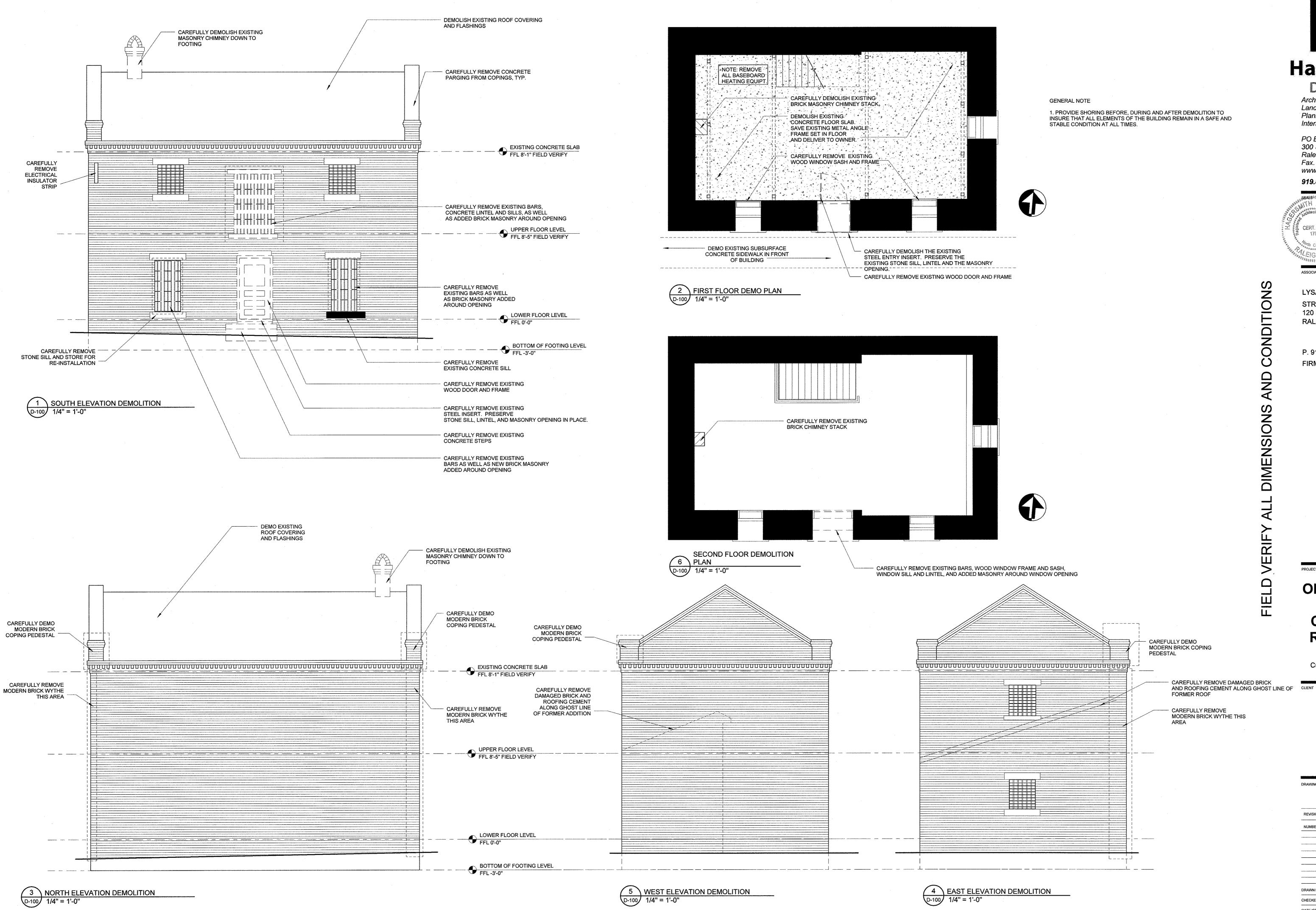
PROJECT 500-046

**OLD CURRITUCK JAIL AND** COURTHOUSE RESTORATION PHASE ONE
Currituck County, North Carolina

SITE PLAN

NUMBER DESCRIPTION L-100

CHECKED BY Checker DATE ISSUED 2/6/13



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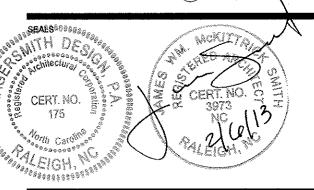
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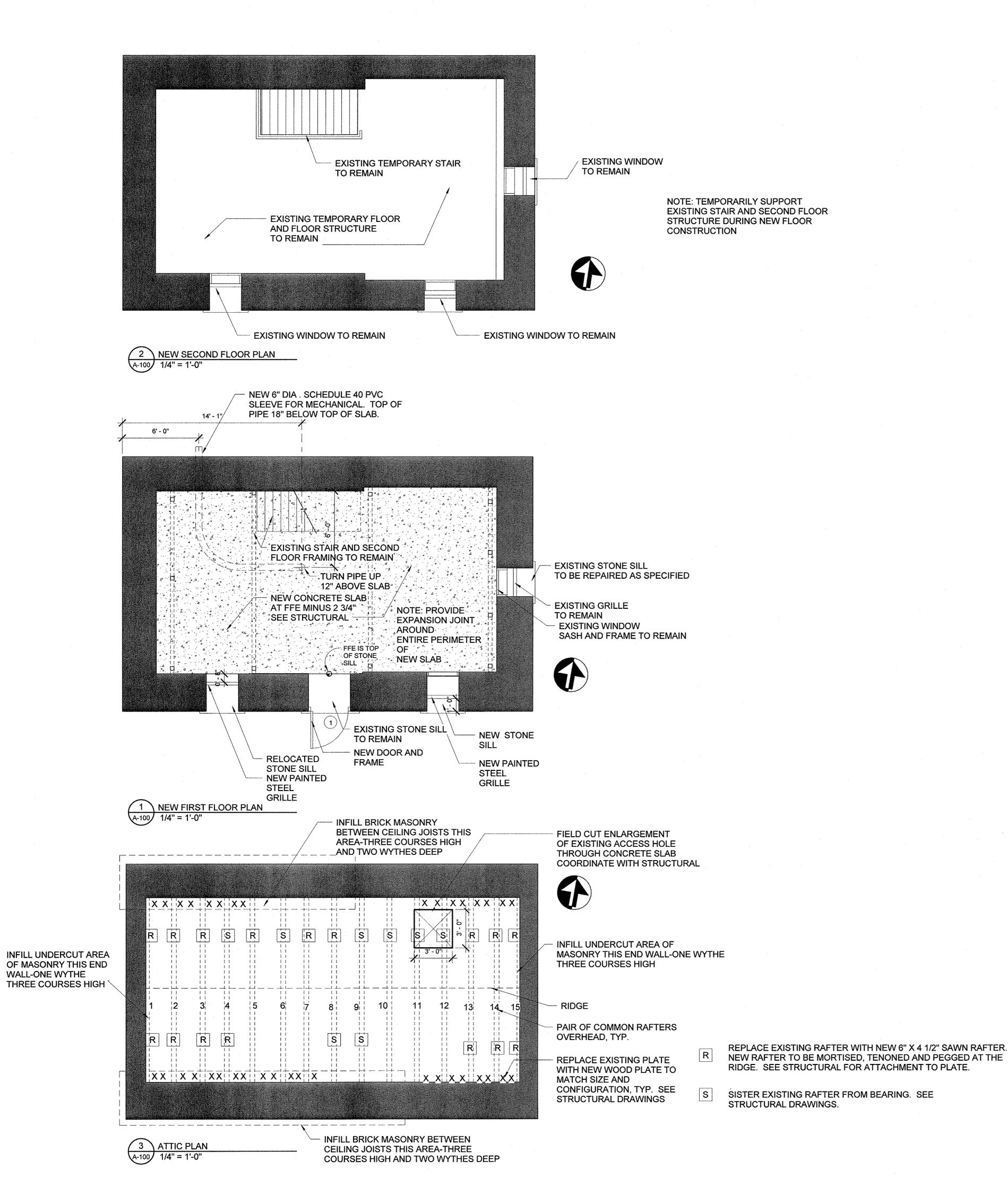
PROJECT 500-046

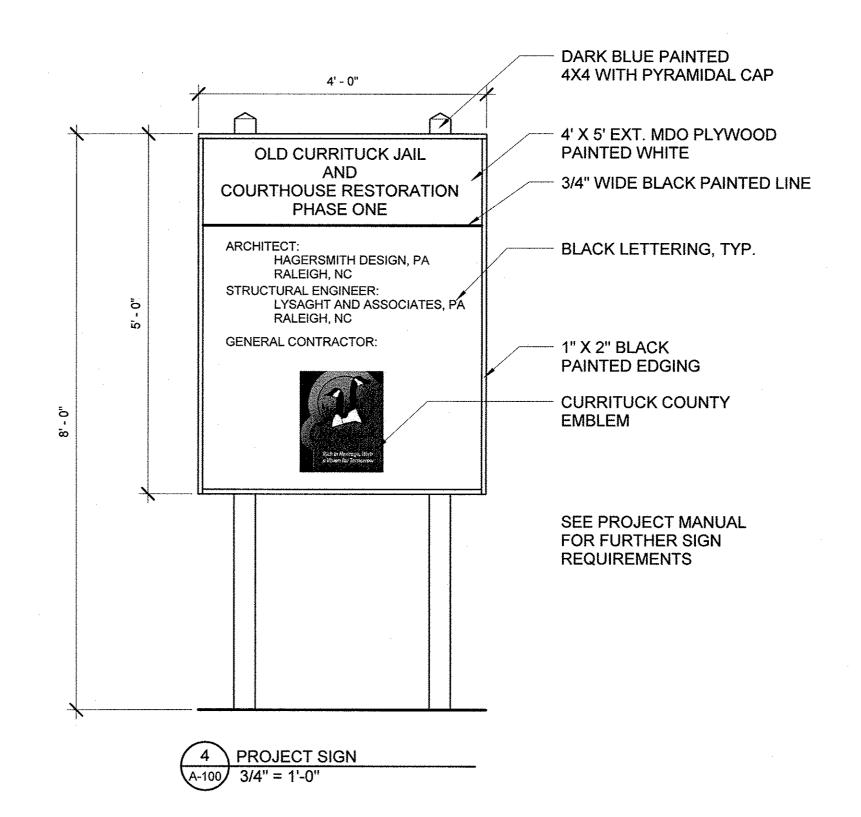
OLD CURRITUCK
JAIL AND
COURTHOUSE
RESTORATION
PHASE ONE
Currituck County, North Carolina

DEMOLITION

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NUMBER D	ESCRIPTION	DATI

DATE ISSUED 2/6/13



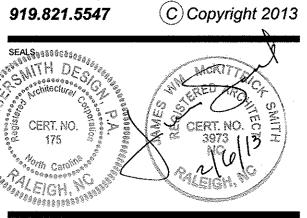


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**DIMENSIONS** 

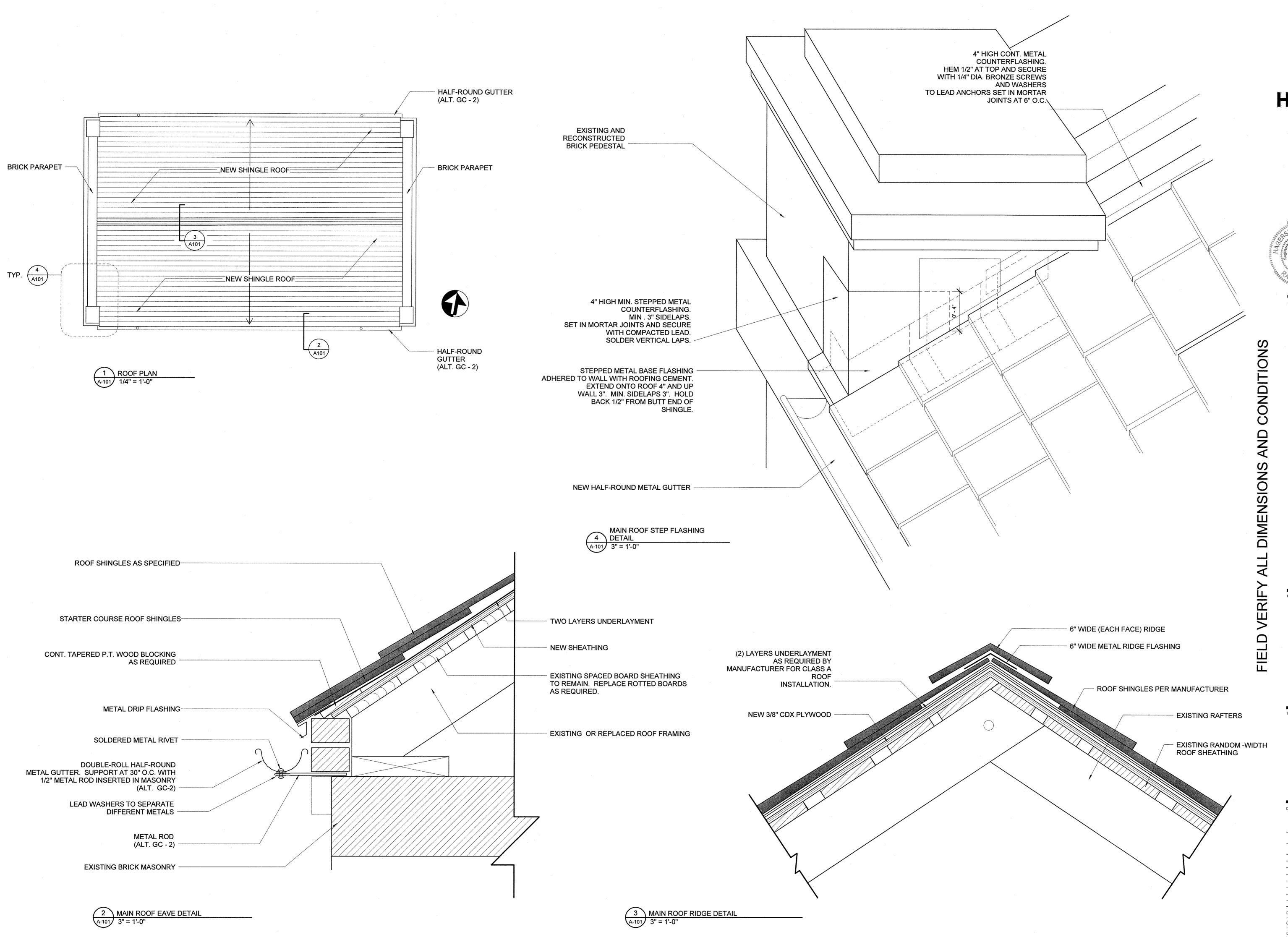
FIELD

# OLD CURRITUCK JAIL AND COURTHOUSE **RESTORATION** PHASE ONE

Currituck County, North Carolina

DRAWING T	FLOOR PL	ANS
REVISIONS	S .	
NUMBER	DESCRIPTION	DAT
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DATE ISSUED 2/6/13

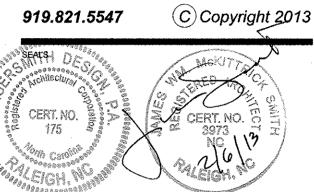




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OLD CURRITUCK **JAIL AND** COURTHOUSE **RESTORATION** PHASE ONE

Currituck County, North Carolina

ROOF PLAN AND DETAILS

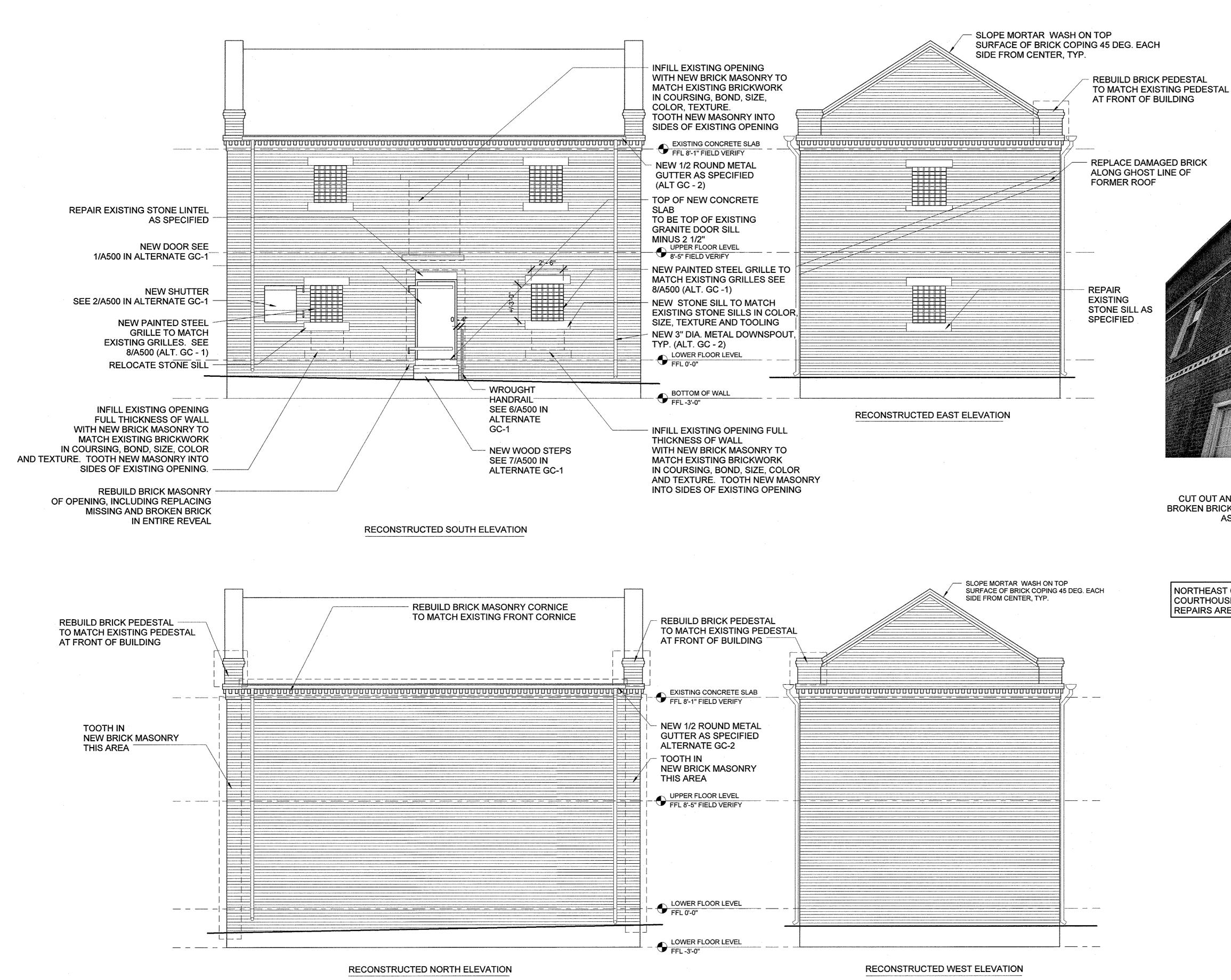
REVISIONS NUMBER DESCRIPTION DRAWN BY DRB

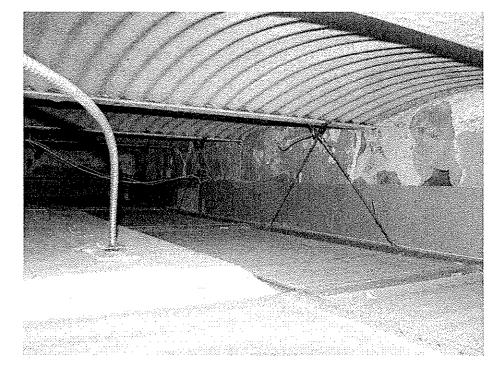
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CHECKED BY DRB DATE ISSUED 2/6/13

#### **GENERAL MASONRY REPAIR NOTES:**

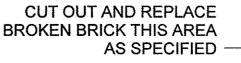
- 1. CUT OUT AND REPLACE BRICK THAT ARE CRACKED ON JAIL AND COURTHOUSE.
- 2. REPLACE MISSING BRICK AT JAIL
- 3. WHERE ORIGINAL BRICK HAVE BEEN REPLACED WITH MODERN BRICK AT JAIL.
- CUT OUT AND REPLACE BRICK. 4. FILL SMALL HOLES IN BRICK AT JAIL AS SPECIFIED. WHERE SECTIONS OF BRICK
- HAVE BEEN REPLACED WITH MORTAR, REPLACE ENTIRE BRICK.
- 5. REPOINT ALL EMPTY OR CRUMBLING MORTAR JOINTS OF JAIL AS SPECIFIED. 6. REPAIR DAMAGED STONE LINTELS AND SILLS OF JAIL AS SPECIFIED.
- 7. PROVIDE 45 DEG. SLOPED MORTAR WASH ON TOP SURFACE OF CORNICE PROJECTIONS AND COPINGS OF JAIL.
- 8. ALT. GC 3) AT COMPLETION OF MASONRY REPAIRS, PROVIDE WASH COATING AS SPECIFIED ON ALL EXTERIOR BRICK MASONRY ON JAIL. DO NOT COAT STONE.





REFERENCE PHOTO OF CAVITY BETWEEN SUSPENDED ACOUSTICAL TILE CEILING AND SECOND FLOOR VAULTING - AREA WHERE TIE ROD IS TO BE RUN FROM LEFT TO RIGHT





NORTHEAST CORNER OF HISTORIC COURTHOUSE WHERE MASONRY REPAIRS ARE REQUIRED





**COURTHOUSE MASONRY** 2 \ REPAIRS

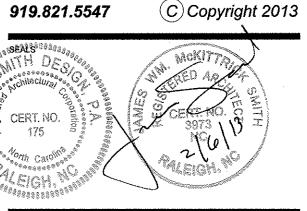


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P. 919/833-0495 FIRM LICENSE #C-0621

RALEIGH, NC 27605

PROJECT 500-046

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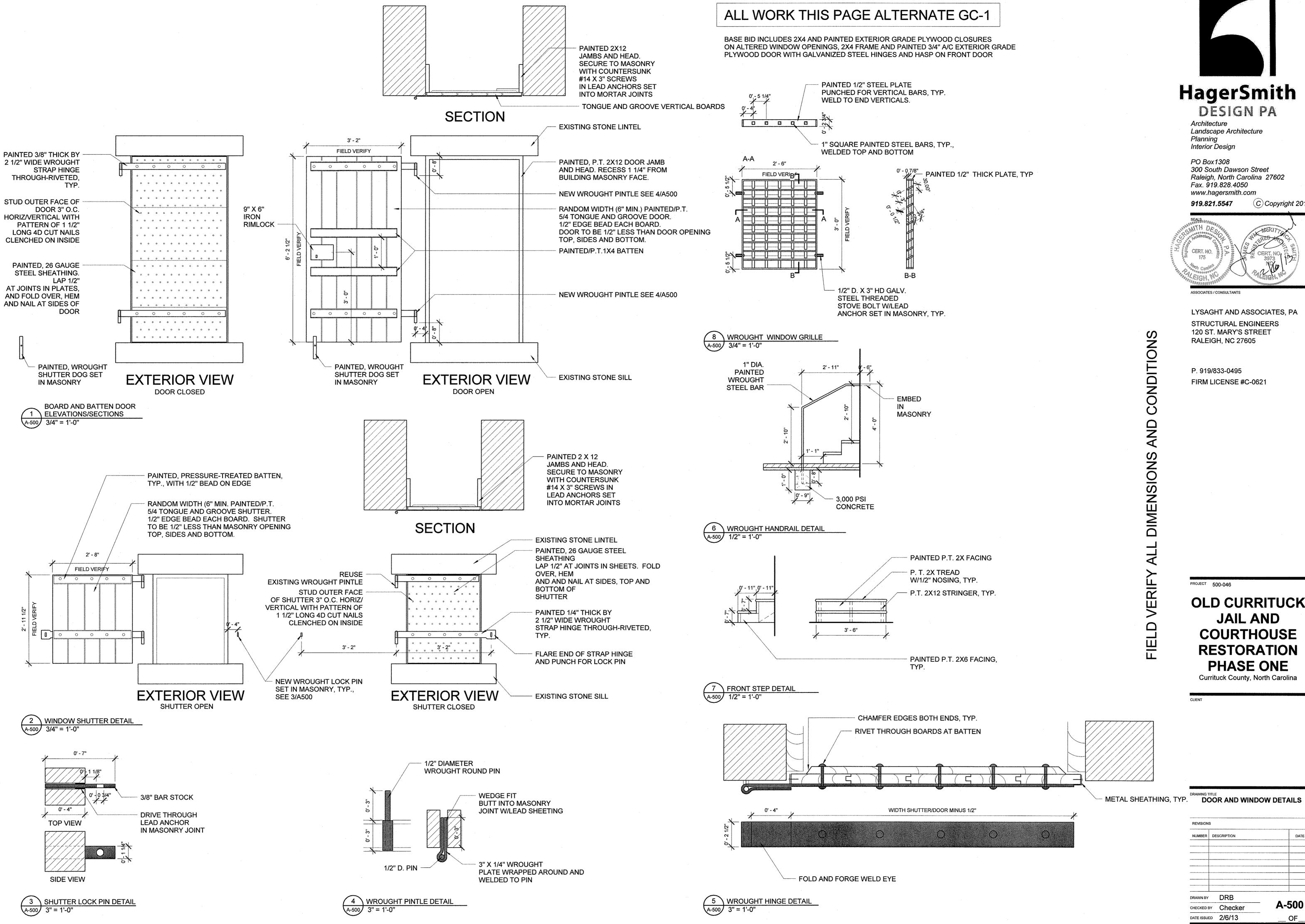
# **OLD CURRITUCK JAIL AND** COURTHOUSE **RESTORATION** PHASE ONE

Currituck County, North Carolina

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REVISIONS	<b>}</b>	-
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DATE ISSUED 2/6/13

1 NEW ELEVATIONS A-200 1/4" = 1'-0"



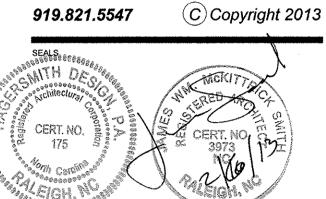
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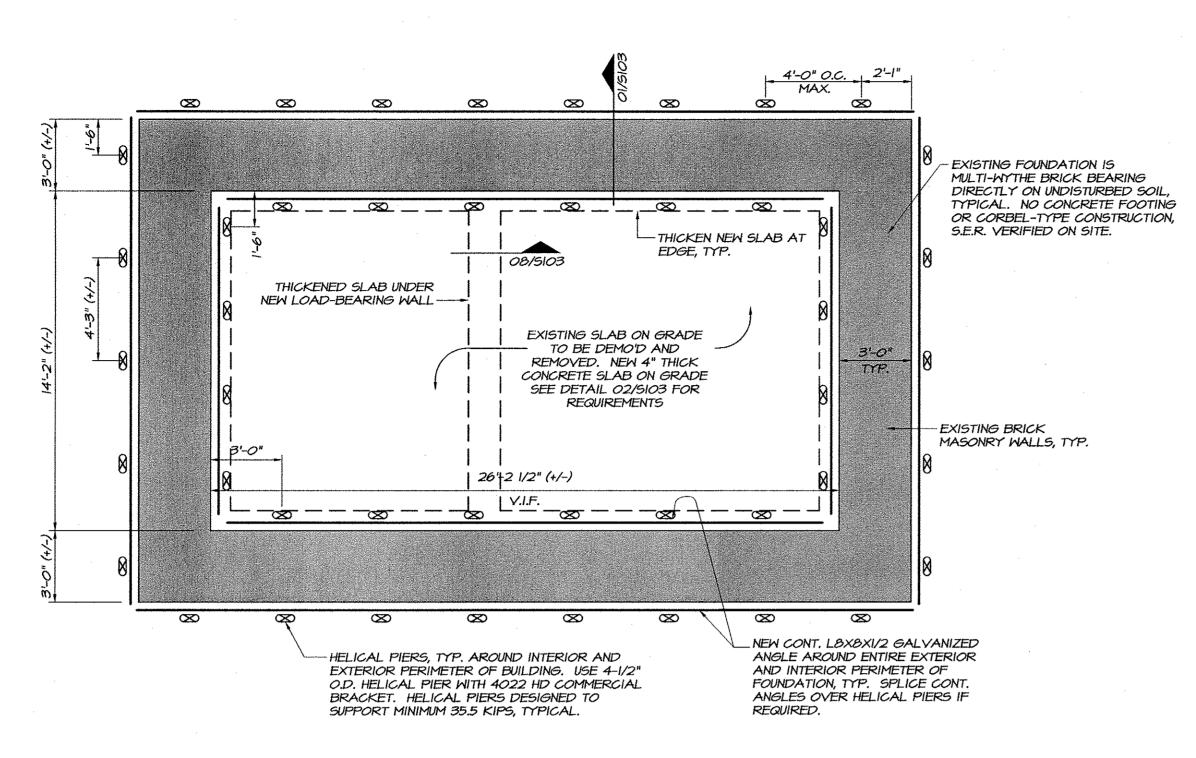
P. 919/833-0495 FIRM LICENSE #C-0621

PROJECT 500-046

**OLD CURRITUCK JAIL AND** COURTHOUSE **RESTORATION** PHASE ONE

Currituck County, North Carolina

REVISIONS NUMBER DESCRIPTION DRAWN BY DRB A-500 CHECKED BY Checker DATE ISSUED 2/6/13



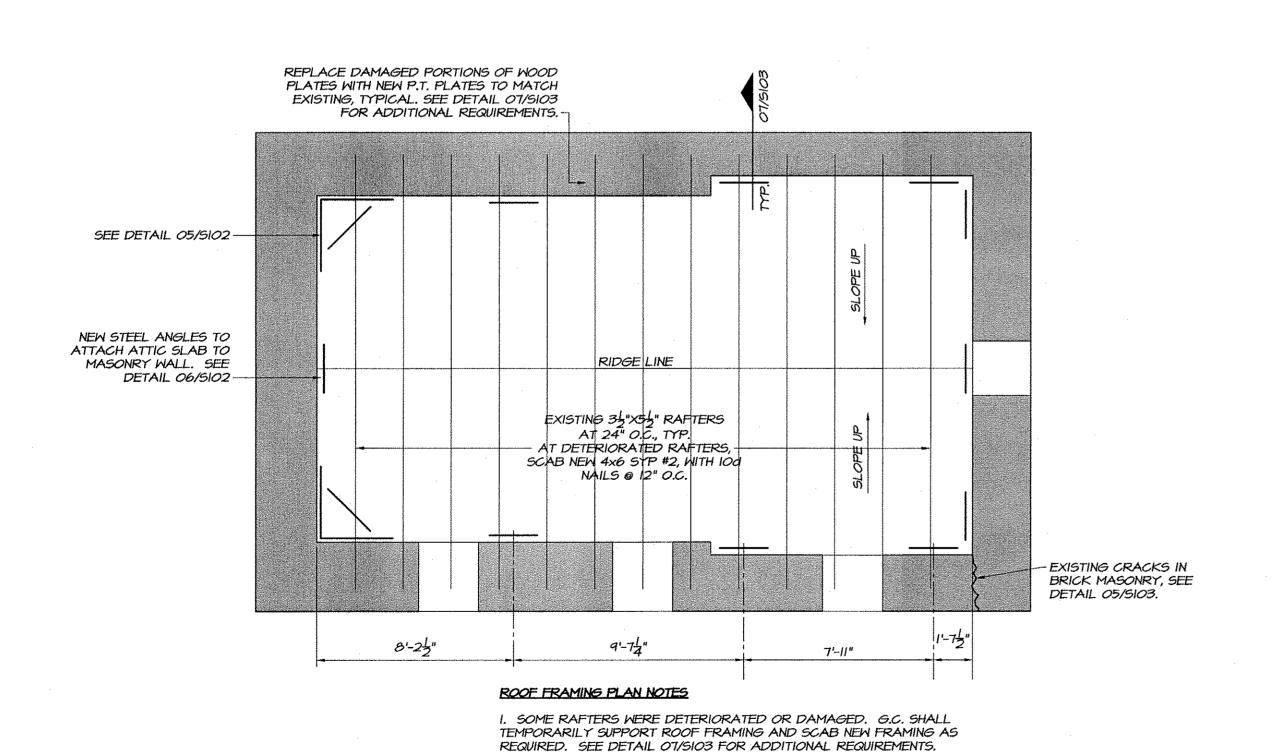
#### FOUNDATION PLAN NOTES

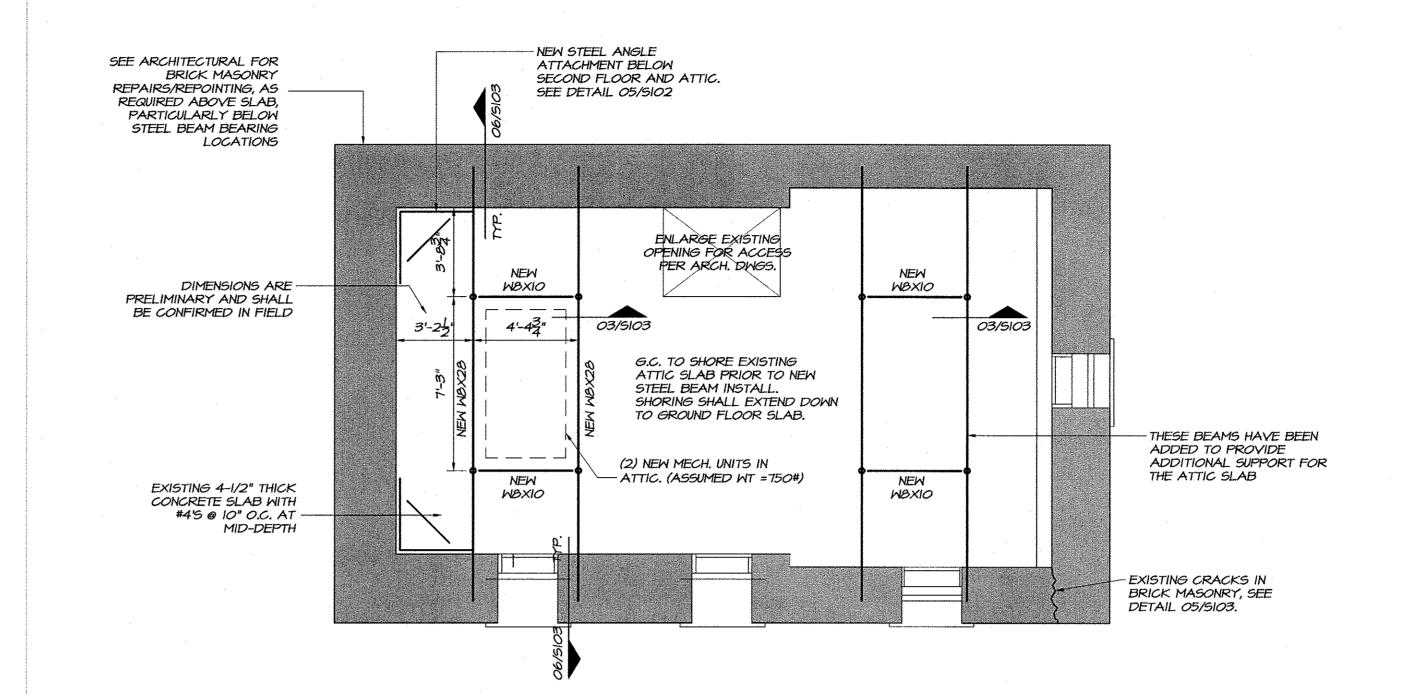
I. NEW HELICAL PIERS SHALL BE INSTALLED ON EXTERIOR OF WALL FIRST. DURING INSTALLATION, IF ADDITIONAL CRACKING, MORTAR DETERIORATION, OR DAMAGE IS NOTED BELOW GRADE, CONTACT S.E.R. FOR REVIEW.

2. ANGLE SHALL BE INSTALLED SNUG UP AGAINST EXISTING BRICK. NON-SHRINK GROUT MAY BE USED IF GAPS ARE ENCOUNTERED.

3. AT CORNER LOCATIONS, ANGLES DO NOT NEED TO BE WELDED TOGETHER.

JAIL FOUNDATION PLAN 1/4" SCALE





JAIL ATTIC FRAMING PLAN

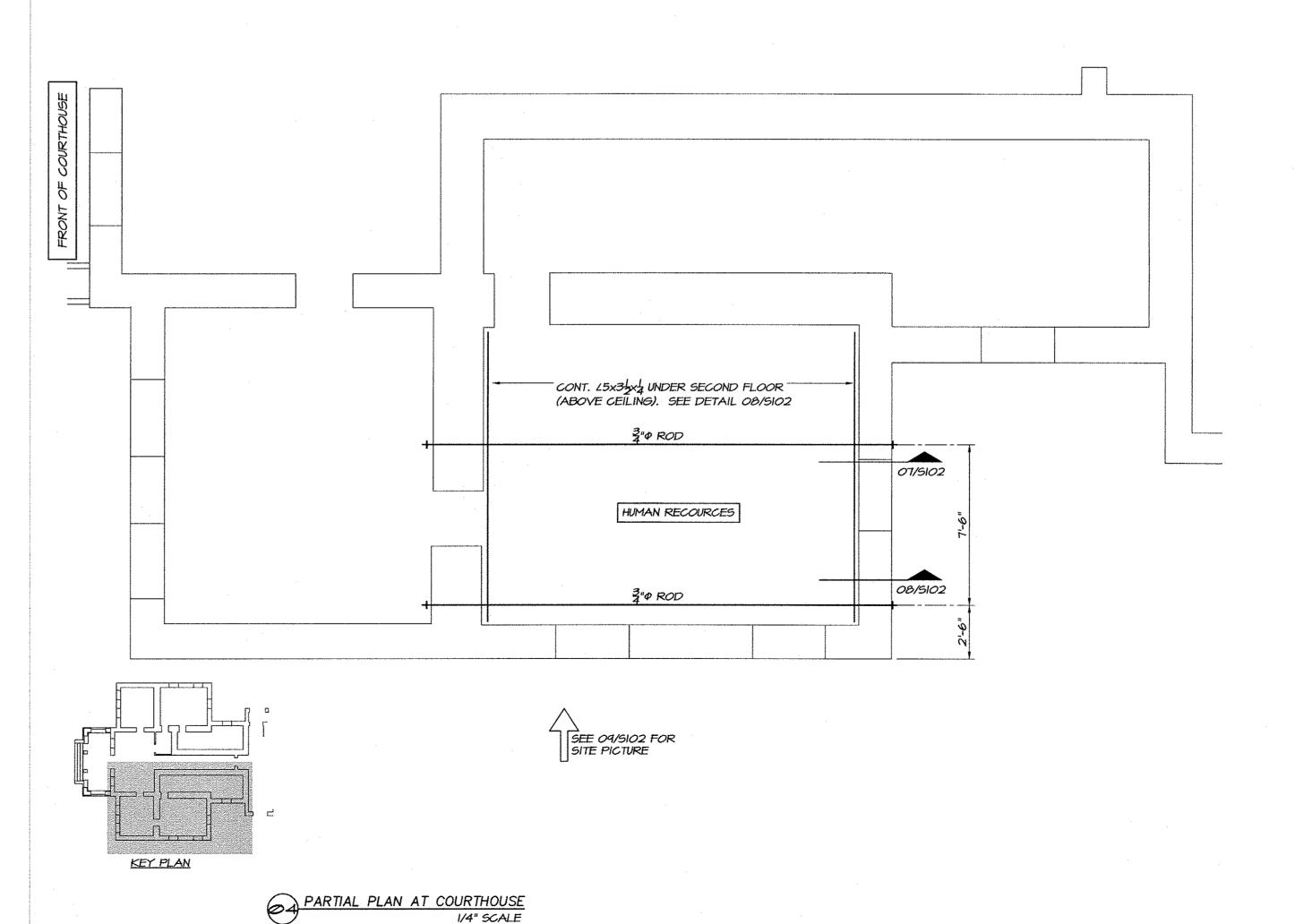
#### ATTIC FRAMING PLAN NOTES

I. G.C. SHALL TEMPORARILY SUPPORT EXISTING ATTIC SLAB PRIOR TO STARTING ANY DEMOLITION OR RENOVATION.

2. IF ANY EXISTING SLAB REINFORCEMENT IS ENCOUNTERED DURING DEMO, STOP DEMO, FILL HOLES WITH NON-SHRINK GROUT, AND MOVE ANCHORS AS REQUIRED TO BYPASS REINFORCING.

3. G.C. SHALL FIELD VERIFY DEPTH RESTRICTIONS AT MASONRY WALL PRIOR TO ORDERING STEEL. G.C. SHALL ALSO FIELD VERIFY EXACT DIMENSION FOR STEEL SHOP DRAWINGS. G.C. SHALL NOTIFY S.E.R. OF ACTUAL FIELD DIMENSIONS FOR AS-BUILT STRUCTURAL DRAWINGS.

4. REMOVE AND REPLACE ANY DAMAGED OR DETERIORATED TIMBER. REPLACE WITH SAME DEPTH AND WIDTH TIMBER, SYP No. 2. FOR ALL TIMBER IN CONTACT WITH MASONRY, USE PRESSURE TREATED, TYPICAL.



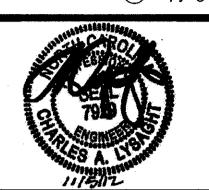
1/4" SCALE



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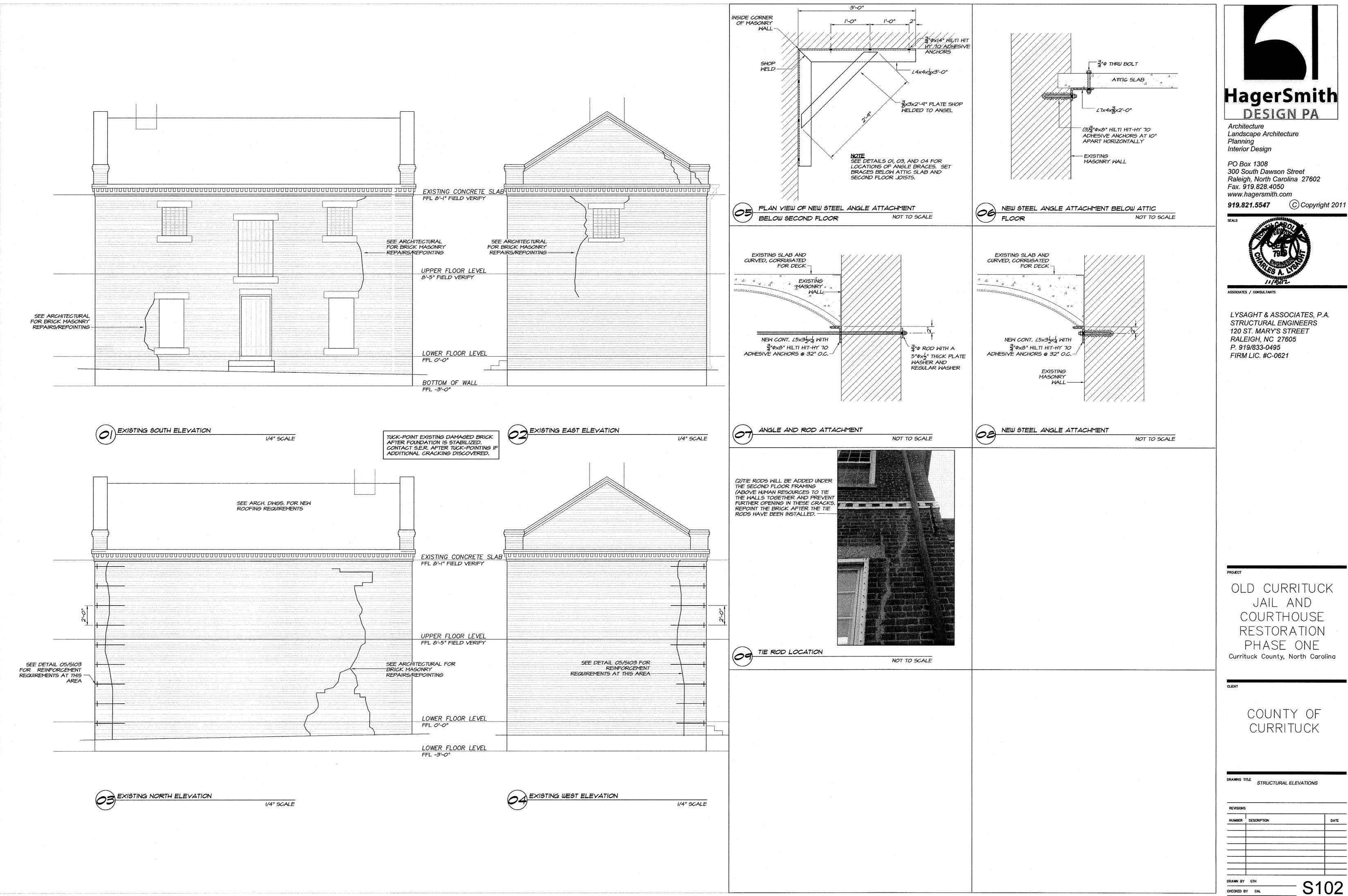
LYSAGHT & ASSOCIATES, P.A. STRUCTURAL ENGINEERS 120 ST. MARY'S STREET RALEIGH, NC 27605 P. 919/833-0495 FIRM LIC. #C-0621

OLD CURRITUCK JAIL AND COURTHOUSE RESTORATION PHASE ONE Currituck County, North Carolina

COUNTY OF CURRITUCK

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REVISIONS		<del> </del>	
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HagerSmith DESIGN PA

#### GENERAL STRUCTURAL NOTES

THESE DRAWINGS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF LYSAGHT & ASSOCIATES, P.A., FOR USE SOLELY WITH THIS PROJECT AND SHALL NOT BE REPRODUCED FOR OTHER PURPOSES.

THE PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE PROJECT STRUCTURAL ENGINEER-OF-RECORD (SER) WHO BEARS LEGAL RESPONSIBILITY FOR THE PERFORMANCE OF THE STRUCTURAL FRAMING RELATING TO PUBLIC HEALTH, SAFETY AND WELFARE. NO OTHER PARTY WHETHER OR NOT A PROFESSIONAL ENGINEER, MAY COMPLETE, CORRECT, REVISE. DELETE OR ADD TO THESE CONSTRUCTION DOCUMENTS OR PERFORM INSPECTIONS OF THE WORK WITHOUT THE WRITTEN PERMISSION OF THE

WHENEVER EXISTING CONSTRUCTION IS RENOVATED THERE WILL ALWAYS BE SOME COSMETIC DEFECTS DUE TO THE AGE OF THE BUILDING THAT WON'T BE CORRECTED DURING THE RENOVATION. THESE DEFECTS INCLUDE SAGGING FLOORS, MINOR CRACKS IN MASONRY WALLS, CRACKS IN SHEETROCK OR PLASTER THAT IS LEFT IN PLACE, ETC. THIS IS TO BE EXPECTED BY THE OWNER UNLESS OTHERWISE NOTED ON THE DRAWINGS. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH JOB SPECIFICATIONS,

AND OTHER DRAWINGS. SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL FOR ALL

CONTRACTOR SHALL VERIFY ALL CONDITIONS IN THE FIELD AND TAKE ALL NECESSARY FIELD MEASUREMENTS.

SIMILAR CONDITIONS.

THE CONTRACTOR, BEFORE STARTING ANY WORK, SHALL CHECK ALL DIMENSIONS GIVEN ON THE STRUCTURAL DRAWINGS, RELATING TO GRID LINES, COLUMN AND WALL LOCATIONS, STRUCTURAL AND FINISHED FLOOR ELEVATIONS, MEMBER SIZES. ETC., WITH THE ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS IF ANY DISCREPANCY IS NOTICED, IT SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER AND WORK SHALL NOT COMMENCE UNTIL INSTRUCTIONS ARE RECEIVED FROM THE ENGINEER.

THE CONTRACTOR SHALL SEEK INSTRUCTION FROM THE ENGINEER FOR ANY DIMENSION NOT GIVEN OR OBTAINABLE FROM THE DRAWINGS. THE CONTRACTOR SHALL NOT USE SCALE TO OBTAIN OR VERIFY ANY DIMENSION SHOWN ON THESE DRAWINGS.

REBAR, fu

FOR PURPOSES OF THESE NOTES, ASSUMPTION SHALL BE DEFINED AS " TO BELIEVE, THINK OR SUPPOSE A CONDITION TO BE TRUE." AN ASSUMPTION CANNOT BE CONFIRMED BY THE STRUCTURAL ENGINEER BECAUSE IT IS BEYOND HIS SCOPE OF SERVICES AND/OR EXPERTISE. IF THE CLIENT REQUIRES CONFIRMATION OF AN ASSUMPTION, THEN ANOTHER EXPERT MUST DO THE NECESSARY CALCULATIONS AND/OR TESTING.

THE FOLLOWING ASSUMPTIONS HAVE BEEN MADE REGARDING THE STRENGTHS OF THE VARIOUS EXISTING STRUCTURAL COMPONENTS.

ALLOWABLE SOIL BEARING PRESSURE CONCRETE, F'c

4. MASONRY COMPRESSIVE STRENGH, F'cm

2000 PSF 3000 PSI 40000 PSI 750 PSI

#### SCOPE OF STRUCTURAL ENGINEERING SERVICES

LYSAGHT & ASSOCIATES HAS PERFORMED THE STRUCTURAL DESIGN AND PREPARED THE STRUCTURAL WORKING DRAWINGS FOR THIS RENOVATION. "CONSTRUCTION REVIEW" SERVICES ARE ALSO A PART OF OUR CONTRACT. THE CONTRACTOR MUST NOTIFY THE STRUCTURAL ENGINEER AT THE FOLLOWING STAGES OF CONSTRUCTION FOR A FIELD REVIEW OF THE WORK:

- AFTER COMPLETION OF THE STRUCTURAL SYSTEM, BEFORE INTERIOR FINISHES ARE INSTALLED.
- 2. AT ANY STAGE OF CONSTRUCTION WHEN DESIGN OR CONSTRUCTION PROBLEMS ARE ENCOUNTERED.

A "CONSTRUCTION REVIEW REPORT" WILL BE SENT TO THE CONTRACTOR AND THE ARCHITECT FOLLOWING EACH FIELD TRIP.

THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR THE DESIGN OF THE THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR ANY SECONDARY STRUCTURAL AND NON-STRUCTURAL SYSTEMS NOT SHOWN ON THE STRUCTURAL

THE STRUCTURAL ENGINEER HAS NOT DONE A SUBSURFACE INVESTIGATION (HE IS NOT A SOILS SPECIALIST). THE FOUNDATION DESIGN IS BASED UPON AN ASSUMED ALLOWABLE BEARING PRESSURE AS SHOWN IN THE "FOUNDATION" STRUCTURAL NOTES, THIS ALLOWABLE BEARING PRESSURE MUST BE VERIFIED BY THE CONTRACTOR OR OWNER. IF PROBLEMS ARE ENCOUNTERED, A SOILS ENGINEER SHOULD BE RETAINED TO EVALUATE THE CONDITIONS AND RECOMMEND THE APPROPRIATE FOUNDATION SYSTEM.

THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL HE BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FIELD MEASUREMENTS AND THE VERIFICATION OF FIELD DIMENSIONS ARE NOT PART OF LYSAGHT & ASSOCIATES' RESPONSIBILITY. THE CONTRACTOR MUST CHECK ALL (ASSUMED) EXISTING CONDITIONS SHOWN ON THESE DRAWINGS FOR ACCURACY AND NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.

#### **ABBREVIATIONS**

AB ANCHOR BOLT AFF ABOVE FINISH FLOOR B/B BACK TO BACK

BOD BOTTOM OF DECK C/C CENTER TO CENTER CJ CONTROL OR CONSTRUCTION JOINT IN SLAB

E.I. EXPANSION JOINT EOS EDGE OF SLAB

EW EACH WAY

FF FINISH FLOOR FFE FINISH FLOOR ELEVATION

LVL LAMINATED VENEER LUMBER MCJ MASONRY CONTROL JOINT NTS NOT TO SCALE

OC ON CENTER SER STRUCTURAL ENGINEER-OF-RECORD

TOF TOP OF FOOTING TOS TOP OF STEEL

TOJ TOP OF JOIST UNO UNLESS NOTED OTHERWISE

VIF VERIFY IN FIELD W.P. WORK POINT

WWF WELDED WIRE FABRIC

NORTH CAROLINA STATE BUILDING CODE, 2009 EDITION

## DESIGN DATA

SECTION 1617.5

FLOOR LIVE LOAD	100	P
ROOF DEAD LOAD ROOF COLLATERAL LOAD ROOF LIVE LOAD	20 5 20	P
GROUND SNOW LOAD FLAT ROOF SNOW LOAD SNOW EXPOSURE FACTOR SNOW LOAD IMPORTANCE FACTOR THERMAL FACTOR	15 15 1.0 1.0	P
RAIN ON SNOW SURCHARGE	5	P

BASIC WIND SPEED (3-SECOND GUST)

WIND IMPORTANCE FACTOR WIND EXPOSURE BUILDING FRAME SYSTEM WITH INTERMEDIATE REINFORCED MASONRY SHEAR WALLS. SIMPLIFIED ANALYSIS PROCEDURE PER

110 MPH

#### BUILDING CODE REQUIREMENTS FOR EXISTING BUILDINGS

SECTION 3403.1 OF THE BUILDING CODE STATES: "ADDITIONS OR ALTERATIONS TO ANY BUILDING OR STRUCTURE SHALL CONFORM WITH THE REQUIREMENTS OF THE CODE FOR NEW CONSTRUCTION PORTIONS OF THE STRUCTURE NOT ALTERED AND NOT AFFECTED BY THE ALTERATION ARE NOT REQUIRED TO COMPLY WITH THE CODE REQUIREMENTS FOR A NEW STRUCTURE."

SECTION 3403.2 OF THE BUILDING CODE STATES: "ADDITIONS OR ALTERATIONS TO AN EXISTING STRUCTURE SHALL NOT INCREASE THE FORCE IN ANY STRUCTURAL ELEMENT BY MORE THAN 5 PERCENT, UNLESS THE INCREASED FORCES ON THE ELEMENT ARE STILL IN COMPLIANCE WITH THE CODE FOR NEW STRUCTURES, NOR SHALL THE STRENGTH OF ANY STRUCTURAL ELEMENT BE DECREASED TO LESS THAN THAT REQUIRED BY THIS CODE FOR NEW STRUCTURES. WHERE REPAIRS ARE MADE TO STRUCTURAL ELEMENTS OF AN EXISTING BUILDING, AND UNCOVERED STRUCTURAL ELEMENTS ARE FOUND TO BE UNSOUND OR OTHERWISE STRUCTURALLY DEFICIENT, SUCH ELEMENTS SHALL BE MADE TO CONFORM TO THE REQUIREMENTS FOR NEW STRUCTURES."

SECTION 3403.2.1 OF THE BUILDING CODE STATES: "WHERE AN EXISTING STRUCTURE HERETOFORE IS ALTERED OR REPAIRED, THE MINIMUM DESIGN LOADS FOR THE STRUCTURE SHALL BE THE LOADS APPLICABLE AT THE TIME OF ERECTION, PROVIDED THAT PUBLIC SAFETY IS NOT ENDANGERED

#### THESE CODE PROVISIONS HAVE BEEN INTERPRETED AS FOLLOWS:

I. THE BUILDING IS EXEMPT FROM A WIND OR SEISMIC ANALYSIS BECAUSE THE MAIN WIND (SEISMIC) FORCE RESISTING SYSTEM WILL NOT BE ALTERED

2. ALL EXISTING GRAVITY ELEMENTS MUST BE CHECKED FOR DESIGN LOADS SHOWN ABOVE AND REINFORCED AS NECESSARY.

3. ALL DEFECTIVE STRUCTURAL ELEMENTS MUST BE REPAIRED OR REPLACED.

THE EXISTING BRICK MASONRY FOUNDATION WALL APPEARED TO BE CONSTRUCTED ON UNDISTURBED SOIL. BASED ON MASONRY WALL CRACKS, REINFORCEMENT OF EXISTING FOUNDATION IS REQUIRED.

NEW SLAB ON GRADE SHALL BE FOUNDED ON STABLE NATURAL SOIL OR CONTROLLED COMPACTED FILL.

ALL EW FILL SHALL BE PLACED IN 8" MAXIMUM LOOSE LIFTS AND SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM D-698 (STANDARD PROCTOR METHOD). THIS REQUIREMENT SHALL BE INCREASED TO 98 PERCENT OF ASTM D-698 IN THE FINAL FOOT BENEATH FLOOR SLABS AND PAVEMENTS.

THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.

WHEN TOP OR SUBSOILS ARE EXPANSIVE, COMPRESSIBLE OR SHIFTING, SUCH SOILS SHALL BE REMOVED TO A DEPTH AND WIDTH SUFFICIENT TO ASSURE STABLE MOISTURE CONTENT IN EACH ACTIVE ZONE AND SHALL NOT

#### CONCRETE

CONCRETE SHALL BE PROPORTIONED, MIXED AND PLACED IN ACCORDANCE WITH ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE," AND ACI 301, " SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." ANY ADMIXTURES MUST BE APPROVED BY THE STRUCTURAL ENGINEER.

MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS FOLLOWS:

SLABS-ON-GRADE TOPPING SLABS

USE WATER REDUCING ADMIXTURES TO REDUCE WATER, INCREASE WORKABILITY AND DECREASE SHRINKAGE CRACKS. USE A MID-RANGE WATER REDUCING ADMIXTURE FOR SLABS AND A HIGH RANGE WATER REDUCING ADMIXTURE FOR POURED CONCRETE WALLS.

4000

4000

CRACK CONTROL JOINTS SHALL BE PLACED IN SLABS ON GRADE AT A MAXIMUM SPACING OF 12' UNLESS NOTED OTHERWISE.

#### SLAB-ON-GRADE CONSTRUCTION

PLACE FLOOR SLAB ON A WELL COMPACTED BASE. THE SUBGRADE SHALL BE GRANULAR, NON-EXPANSIVE SOIL (THAT IS, WITHOUT CLAY), WHICH HAS BEEN COMPACTED TO AT LEAST 95% AND VERIFIED BY ON-SITE TESTING.

SUPPORT THE 6 X 6 - W2.I X W2.I WELDED WIRE MESH AS REQUIRED TO INSURE THAT IT WILL BE LOCATED I" FROM THE TOP OF SLAB.

CONCRETE STRENGTH SHALL BE 4000 PSI AT 28 DAYS. USE A WATER REDUCING ADMIXTURE TO REDUCE WATER, INCREASE WORKABILITY AND DECREASE SHRINKAGE CRACKS.

USE 6% AIR ENTRAINMENT ON EXTERIOR SLABS. DO NOT USE AIR ENTRAINMENT ON INTERIOR SLABS (3% MAXIMUM AIR ENTRAINMENT).

THE CONTROL JOINT SPACING SHALL BE APPROXIMATELY 12' FOR A 4" THICK SLAB. PLACE CONTROL JOINTS TO AVOID REENTRANT CORNERS. MAKE SAWCUTS TO FORM WEAKEN PLANE CONTROL JOINTS AS SOON AS

LIGHTLY DAMPEN THE SUBGRADE BEFORE PLACING CONCRETE TO PREVENT THE SUBGRADE FROM ABSORBING WATER FROM CONCRETE MIX. APPLY WATER AT NEARLY THE SAME RATE IT SOAKS INTO THE SUBGRADE SURFACE.

STEEL TROWEL THE CONCRETE TO A SHINY FINISH WHICH RESULTS IN A HARD, DENSE SURFACE.

#### BRICK MASONRY

NEW BRICK MASONRY SHALL BE OF A QUALITY AT LEAST EQUAL TO THAT REQUIRED BY ASTM SPECIFICATIONS (C62). THE GRADE OF UNITS MUST BE 3,000 PSI (MAX AND MIN).

NEW MORTAR SHALL BE OF A QUALITY AT LEAST EQUAL TO THAT REQUIRED BY ASTM "STANDARD SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY" (C270). USE TYPE "N" MORTAR.

#### EXPANSION AND EPOXY ANCHORS

THE CONTRACTOR MAY SELECT THE BRAND(S) OF ANCHORS TO USE ON THIS PROJECT, BUT THE ANCHORS MUST MEET THE MINIMUM LOAD REQUIREMENTS SHOWN IN THE TABLES BELOW. NOTE THAT THESE LOADING REQUIREMENTS ARE BASED UPON MINIMUM EDGE AND SPACING DISTANCES. IF A SMALLER EDGE OR SPACING DIMENSION IS SHOWN ON THE STRUCTURAL DRAWINGS, THE STRUCTURAL ENGINEER WILL HAVE USED A "LOAD ADJUSTMENT FACTOR" ON THE ANCHOR TO ACCOUNT FOR THE REDUCED DIMENSION.

EDOW A	NCHORS IN CON	CDETE			
SIZE	EMBED	SHEAR	TENSION	EDGE DIST	SPAC
1/2"	6 1/2"	1935#	3755#	8"	9"
5/8"	7 1/2"	<i>302</i> 5#	<i>5870</i> #	10"	10"
3/4"	10"	4335#	8455#	14"	14"
EPOXY A	NCHORS IN MULT	I-WYTHE BRICK	<		
SIZE	EMBED	SHEAR	TENSION	EDGE DIST	SPAC
1/2"	10"	930#	1270#	16"	8"
5/8"	10"	1355#	1285#	16"	8"
3/4"	13"	1800#	2100#	16"	8"

#### SOLID WOOD FRAMING, HEADERS AND PLYWOOD

ALL SOLID WOOD FRAMING SHALL COMPLY WITH THE NATIONAL FOREST PRODUCTS ASSOCIATION "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION."

NEW INTERIOR STUD FRAMING SHALL BE THE GRADE AND SPECIES SHOWN ON THE STRUCTURAL DRAWINGS.

ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE NORTH CAROLINA STATE BUILDING CODE.

#### STRUCTURAL STEEL

FABRICATE AND ERECT ALL NEW STRUCTURAL STEEL IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL OF BUILDINGS," WHERE THE MATERIAL USED CONSISTS OF PLATES, SHAPES OR

THE STEEL USED SHALL HAVE THE FOLLOWING MINIMUM YIELD STRESS:

STRUCTURAL STEEL WIDE FLANGE STRUCTURAL PIPE COLUMNS STRUCTURAL TUBE COLUMNS MISCELLANEOUS SHAPES, BARS AND PLATES

35 KSI 46 KSI

BEAMS AND LINTELS SHALL BEAR ON 8" MINIMUM OF MASONRY UNLESS OTHERWISE NOTED.

USE 3/4" DIAMETER A-325 BOLTS FOR ALL STEEL TO STEEL CONNECTIONS U.N.O. BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION U.N.O. THE SNUG TIGHT CONDITION IS DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES OF A CONNECTION ARE IN FIRM CONTACT.

USE A36 STEEL FOR ALL ANCHOR BOLTS U.N.O.

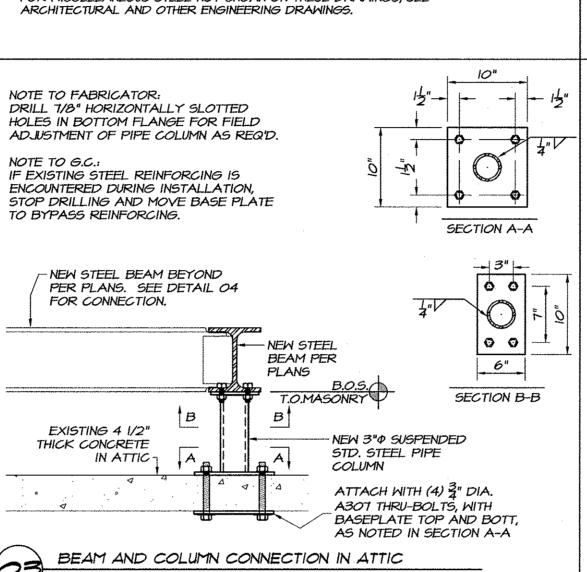
USE E-70 ELECTRODES FOR ALL SHOP AND FIELD WELDING.

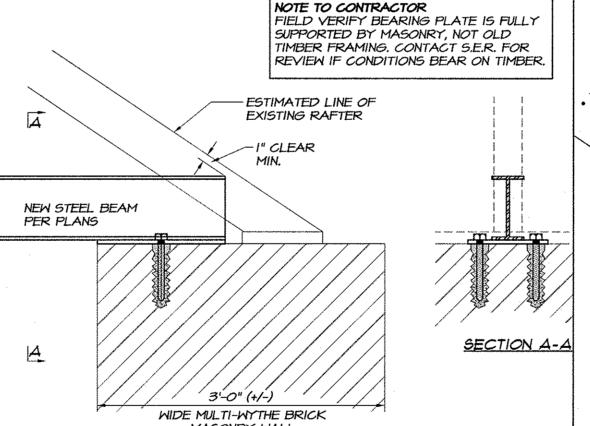
THE STEEL FABRICATOR SHALL DESIGN ALL STEEL TO STEEL CONNECTIONS FOR THE REACTIONS SHOWN ON THE DRAWINGS USING STANDARD CONNECTION DETAILS AS ILLUSTRATED. HOWEVER, CONNECTIONS FOR WIDE FLANGE BEAMS SHALL HAVE THE FOLLOWING MINIMUM ROWS OF BOLTS:

WB, WIO, WIZ BEAMS WI4, WI6 BEAMS

(2) ROWS OF BOLTS (3) ROWS OF BOLTS

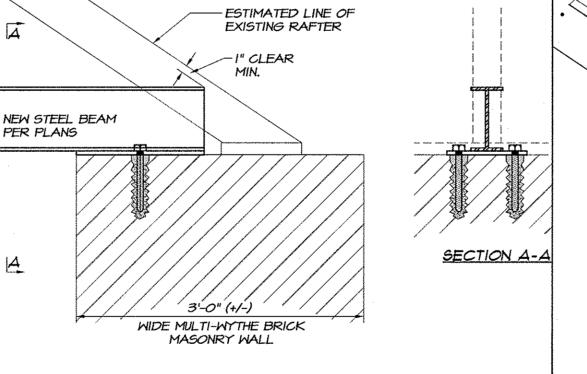
FOR MISCELLANEOUS STEEL NOT SHOWN ON THESE DRAWINGS, SEE





NEW STEEL BEAM BEARING

\_ 4" SLAB ON GRADE, SEE 01/5103



NOT TO SCALE

NOT TO SCALE

NOT TO SCALE

- CENTER LINE OF

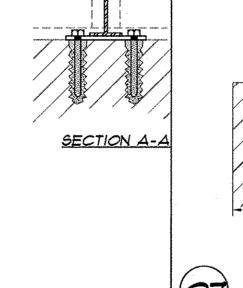
FUTURE LOAD BEARING WALL

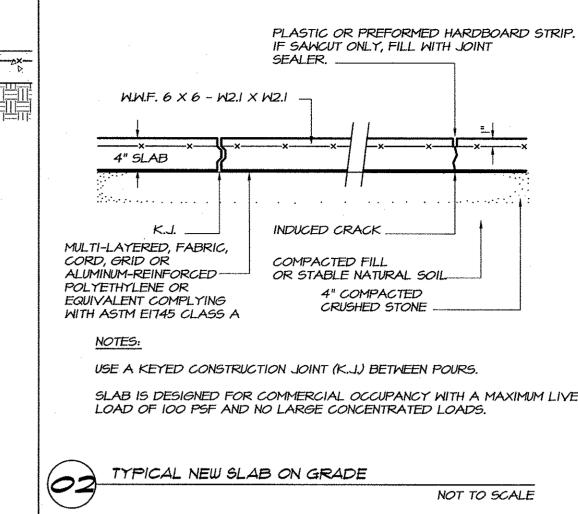
1'-4" W.

THE THICKENED SLAB MUST REST ON FIRM UNDISTURBED, OR COMPACTED, SOIL.

REINFORCE THE THICKENED SLAB WITH (3) #5 CONTINUOUS BARS, TYPICAL.

THICKENED SLAB . LOAD BRNG WALL







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Architecture

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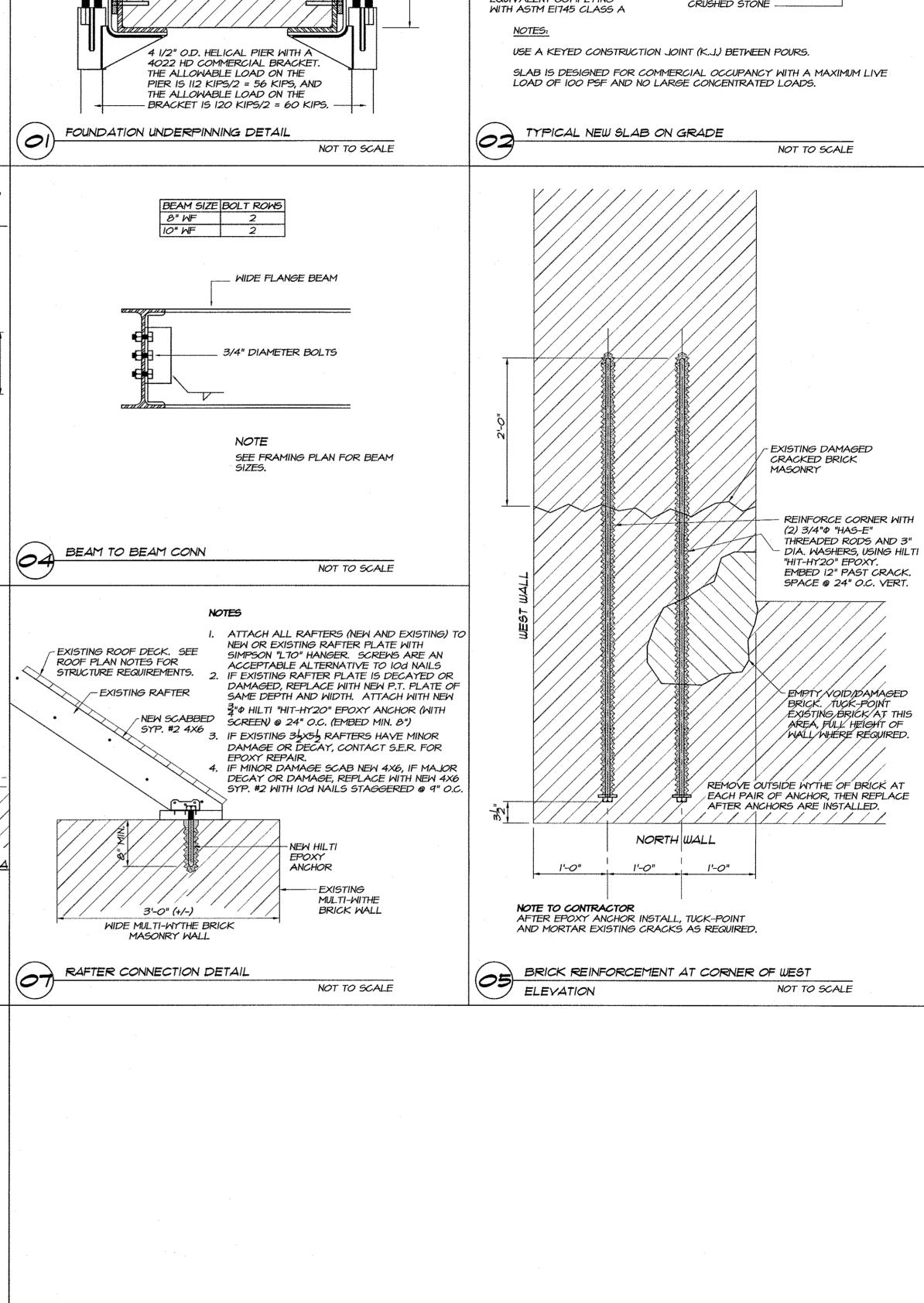
Landscape Architecture

300 South Dawson Street

Raleigh, North Carolina 27602

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DATE ISSUE	ED 10.31.2012	 <u>_</u> 3_0F_3



EXISTING SLAB ON GRADE WILL BE DEMO'D.

DEEP X 8" WIDE, AND

CONT. REBAR'S

REINFORCE WITH (2) #5 /

TURN-DOWN NEW SLAB 12"

EXISTING PERIMETER

APPROXIMATELY 32"

WALL VARIES IN

THICKNESS FROM

EXISTING GRADE

TO 36". —