

VC & UAB at the Fort Fisher State Historic Site

June 17, 2022

Project Name

CM Clarification #2

Date: June 17, 2022

Project: **Visitor Center & Underwater Archaeology Building
At the Fort Fisher State Historic Site**

The following items modify, add to or delete from the contract documents, plans, specifications and bid manual dated May 25, 2022, for this project. Acknowledge receipt of this CM Clarification in your proposal. Failure to do so may result in the disqualification of your bid. Wherein this Clarification varies or is in conflict with the Contract Documents, the requirements of this Clarification shall govern. In all other particulars, the requirements of the original Project Manual and Contract Documents, including any previous Addenda or Clarifications, shall govern.

This clarification consists of 17 items, 02 attachments, 06 sheets (8.5x11) and 30 sheets (24 x 36)

GENERAL and CLARIFICATION:

Item 01: Additional Approved Bidders

The following companies have been added as approved Bidders:

BP-05A Structural Steel	Metal Crafters of Wayne County
BP-21A Fire Suppression	Odyssey Fire, LLC
BP-31A Site Turnkey	M&W Land Improvement

Item 02: Addendum #1

Addendum #1, dated June 10, has been issued thru SmartBid; please review and incorporate these amendments in your Base Bid proposal as necessary
Please acknowledge this Addendum and all CM Clarifications issued to date on your Bid Form

Item 03: BP-02B Demolition & Abatement

Existing Visitor Center original (circa 1964) and renovation (circa 1998) drawings are transmitted via this CM Clarification as "For Information Only" and are **not** to be incorporated as part of the Contract Documents

Item 04: Scope Clarification---BP-03A Concrete

RFI inquiry: Is a board finish in Stair #2 required?

CM Response: No; exposed interior walls will be painted which would obscure the effects of a board finish

RFI inquiry: Please confirm if a corrosion inhibitor is required; not referenced in specs or drawings

CM Response: Not required

Item 05: Scope Clarification---BP-07B Spray Foam & BP-09A Drywall

CM Response: **Bid Scopes & Bid Forms** will be revised and issued under separate CM Clarification to reflect recently added Bid Alternate for a fluid-applied air barrier with rigid insulation
Air barrier system will be under BP-07B; rigid insulation will be under BP-09A

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Item 06: Scope Clarification---BP-07C Roofing

RFI inquiry: LW Cellular Insulating Concrete Fill Spec 035216.13-2.3.C Mix Design: Strength requirement of 2000 psi cannot be met; most LWIC Fills are 200-400 psi. We believe the compressive strength is a "mis-type". Please review and confirm

CM Response: Provide a specified manufacturer's mix design with a wet cast minimum density of 38 pcf and a compressive strength range of 300 to 400 psi

RFI inquiry: Details A1 & A2/AE312, C5 & D5/AE511 & B3/AE512 do not show pour stops at the steel deck areas; please advise

CM Response: Perimeter wood nailers appear to serve as a pour stop; if insufficient, condition will be addressed post-bid

Item 07: Scope Clarification---BP-07C Roofing, BP-05A Steel & 7B Spray Foam

RFI inquiry: Detail D3/AE512, which trade has the bent plate and transition membrane?

CM Response: BP-05A has bent plate (Scope Item 8.a.15); BP-07B has the transition membrane as part of the air barrier system

Item 08: Scope Clarification---BP-07C Roofing & BP-09A Drywall

RFI inquiry: Detail D4/AE510, which trade has the plywood on inside of parapet, the metal framing and batt insulation?

CM Response: BP-07C has plywood; BP-09A has metal framing & batt insulation

Item 09: Scope Clarification---BP-08B Overhead Coiling Doors

RFI inquiry: Spec 083323-2.3.F.2: Door curtain slat gasket seals are not available on the specified product; please review and advise

CM Response: Requirement may be deleted

RFI inquiry: Spec 083323-2.2: Requirements for Design Wind Load, Operability and Impact Resistance appear to be in conflict as all three requirements cannot be met simultaneously; please review and advise

CM Response: Impact resistance is preferred over operability

Item 10: Scope Clarification---BP-09A Metal Framing & Drywall

RFI inquiry: There are several references to T&G wood siding at the UAB; please confirm locations

CM Response: Delete references to T&G wood siding regarding the UAB

RFI inquiry: Please advise which trade is responsible for the air barrier membrane in Detail A3/AE512 and similar others

CM Response: BP-07B Spray Foam has this scope as it is responsible for the air barrier system

RFI inquiry: Reference Details D1 & D2/AE511, which trade is responsible for the aluminum flashing and prefinished brake metal closure

CM Response: BP-09A, Scope Items 7.a.xix & 7.a.xxviii

RFI inquiry: Please advise which trade is responsible for the composite girts behind the ACM panels

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CM Response: BP-09A

RFI inquiry: Detail B2/AE510, please advise which trade installs the rigid insulation

CM Response: BP-09A as the insulation is integral with the break metal installation

RFI inquiry: Please advise if wood blocking will be required at Details 1,2,3,9,12,13 & 14/AE712 similar to other details on AE712 & AE711

CM Response: Yes

RFI inquiry: Please advise if the UAB structural frame/columns is to be GWB wrapped

CM Response: Encasing or wrapping columns is not required

RFI inquiry: Please advise if furring & GWB are required in UAB Dry Archival Storage U107 and UAB Electrical U125

CM Response: Yes

RFI inquiry: **UAB:** Please advise if furring, GWB and/or plywood are required on the interior-side of exterior PEMB walls in Wet Archival Storage U123, Mechanical U127 & Boat/Equip Storage U120

CM Response: Not required based upon a review of elevations, sections and details

RFI inquiry: **UAB:** Please advise if 3/4" plywood should be installed on the exterior (south) wall to 8' AFF to match the three walls in Workshop U118

CM Response: YES

Item 11: Scope Clarification---BP-09C Acoustical Ceilings

RFI inquiry: Scope Item 6.a.xiv indicates delegated-design responsibilities; please clarify where required

CM Response: Delete this scope item; there are no delegated-design requirements

Item 12: Scope Clarification---BP-12B Casework

CM Response: Lab Fume Hoods Spec 115313-2.1.A: BMC Manufacturing has been approved for this project

CM Response: Wood Lab Casework Spec 123553-2.1.A: Leonard Peterson has been approved for this project

RFI inquiry: Plastic Laminate Faced Architectural Cabinets Spec 064116-2.1.F.3--Edge Tape: Spec calls for min 0.018 in/0.45 mm PVC edge tape; please confirm 1mm edge tape is acceptable for cabinet body, door/drawer & leading shelf edges

CM Response: 1mm edge tape is acceptable

RFI inquiry: Plastic Laminate Faced Architectural Cabinets Spec 064116-2.2 Wood Materials: Please confirm the required laminate substrate, MDF or preferred Industrial Strength Particleboard

CM Response: ISP is an acceptable substrate

RFI inquiry: Plastic Laminate Faced Architectural Cabinets Spec 064116-2.3.E -- Cabinet Hardware & Accessories: Specified metal shelf rest does not have a hold-down feature; recommend polycarbonate shelf clip which has hold-down clip. Please

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review and advise.

CM Response: Recommendation is acceptable

RFI inquiry: Plastic Laminate Faced Architectural Cabinets Spec 064116-2.3.G -- Door Locks: Specified lock is an expensive, surface-mounted deadbolt lock; please advise if a standard disc tumbler lock can be substituted as a more cost-effective alternate solution? Please advise where locks are required on doors and/or drawers

CM Response: Proposed alternate solution is acceptable

RFI inquiry: Spec 123553.19 Wood Lab Casework & Drawing AE403U: Drawing AE403U indicates plastic Laminate base cabinets which appears in conflict with Spec 123553.19. Please confirm which cabinet material is to be provided

CM Response: Provide base cabinets according to Section 123553.19

Item 13: Scope Clarification---BP-22A Plumbing

RFI inquiry: Domestic Water Piping Spec 221116-1.3: Can Viega ProPress fittings be used in lieu of solder-joints fittings?

CM Response: No, solder-joints as specified will be required

Item 14: Scope Clarification---BP-23A HVAC / Mechanical

RFI inquiry: Air-Cooled, Scroll Water Chillers, Spec 236423.13-1.7.1 Warranty: Please define warranty coverage requirements (i.e., whole unit parts, labor, compressor, etc.)

CM Response: Entire unit: one-year parts and labor; Compressor: five years parts

RFI inquiry: Metal Duct Spec 233113: Spec outlines single-wall round and square duct; Detail B1/M501 refers to double-wall round duct. Please confirm all duct is single-wall (hidden or exposed to view) with size & shape (square or round) as indicated on drawings

CM Response: All exposed round supply ductwork downstream of CAV/VAV boxes does not require double-wall ductwork. Concealed ductwork shall be externally insulated as required per contract documents.

RFI inquiry: Duct Work Pressure Classes: Bidder could not find the pressure classes for duct work. Please provide or confirm as follows: Duct work to be 2" wg, except supply duct between unit & terminal boxes, which is 3" wg.

CM Response: Comply with specification section 233113 Metal Ducts, 3.3 Duct Sealing, in accordance with SMACNA duct sealing standards.

Item 15: Scope Clarification---BP-26A Electrical

RFI inquiry: Drawing E-002E (UG Conduit & Cable Schedule) and EP-601 (Panel Schedule R3, circuits 36,38,40&42), Conduit size: The conductor requirements outlined in these schedules appear to exceed NEC requirements for conduit fill in a 1" conduit. A 1" conduit is limited to 3 #3 conductors, leaving no fill space for the equipment ground required; Circuits R3:36 & 38 overfill a 1" conduit. Please advise if additional 1" conduits should be added or the conduit size increased

CM Response: Refer to wire size changes in Addendum #1
Conduit sizes on EP601 in Panel R3 circuits 36,38,40 & 42 will be revised in Addendum #2 to be 1-1/4"
Conduit ID 1 in Underground Conduit and Cable Schedule on E-002E will be

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revised in Addendum #2 to be 1-1/4" (run two circuits in each conduit out to site pedestals)

RFI inquiry: Drawing EP-601 (Panel Schedule R3, circuits 36 & 38), conductor size: Circuits R3:40 & 42 are indicated as #3 conductors while circuits R3:36 & 38 are #4 even though the length of conductors is much longer. Please review and advise if conductors for Circuits R3:36 & 38 should be upsized to #3.

CM Response: Yes, Panel R3 circuits 36,38 will be revised to #3 wire

RFI inquiry: Drawing EP-601 (Panel Schedule R3, circuit 41), conductor size: Circuit R3:41 conductors are #4; however, this circuit appears to be the longest run. Please advise if conductors should be upsized to #3.

CM Response: Yes, Panel R3 circuit 41 will be revised to #3 wire

RFI inquiry: Drawing ES102 (AD-01, #18): Key Note 5 appears incorrect on the duct bank going to E&F (copy error); please amend as required

CM Response: The two Key Note 5 tags on duct bank labeled D1/E-002E will be removed

RFI inquiry: EL601 Lighting Fixture Schedule--Emergency Wall Lights: There are no LED emergency wall lights indicated on EL101 & EL102; fixture type (similar to UAB U-E4) is not listed for VC; please advise if this fixture type is required for VC and amend drawings as necessary

CM Response: Emergency power source for half-shaded egress fixtures and exit signs in the VC is lighting inverter panel INV. Refer to riser diagram and key note 13 on sheet EP701. Egress fixtures and exit signs in the UAB are specified with batteries.

Item 16: Scope Clarification---BP-31B Special Foundations

RFI inquiry: Drawing S-002, ACP Note #4: 1) Please confirm location of all tension piles and 2) Please clarify if 9.7T lateral load is ultimate load or service (allowable) load

CM Response: Locations of tension piles will be identified in upcoming Addendum
Pile capacities are service level

RFI inquiry: Drawing S-501, Typical ACP Reinforcing Diagram: Diagram indicates dowels to be placed in corrugated tubes; please advise if extending full-length tension bar and tension plate embedded into the cap is an acceptable alternative

CM Response: The use of full-length tension bars with or without plates can be used

RFI inquiry: Auger Cast Grout Piles, Spec 316316-2.2, Steel Reinforcement: Spec calls for single bar reinforcing to be A722 high-strength threaded with couplers; please advise if A615 Grade 60 deformed bars are acceptable per delegated design in lieu of specified

CM Response: A615 Grade 60 deformed bars can be used

RFI inquiry: Auger Cast Grout Piles, Spec 316316-2.3, Concrete Materials: Spec calls for fine aggregate to be 100% passing No.8 sieve; this is not typical and generally not available in batch plants. Please advise if this requirement can be waived or modified.

CM Response: Specification can be amended to suit the particular requirements of the delegated design engineer

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RFI inquiry: Auger Cast Grout Piles, Spec 316316-2.5, Grout Mixtures: Spec indicates minimum compressive strength is 5000 psi. Since grout strength should be determined by delegated-design engineer, please advise if this strength requirement be deleted or amended.

CM Response: Specification can be amended to suit the particular requirements of the delegated-design engineer

RFI inquiry: Please confirm if all pile caps have same top elevation

CM Response: Confirmed; all pile caps have a top elevation of -8'-0"

Item 17: **Scope Clarification---BP-32C Landscaping**

RFI inquiry: **Alternate #1:** Please further define requirements for sod around sally port and tunnel entrances

CM Response: Provide 5' wide strip; intent is to stabilize soils immediately above and around entrances until natural vegetation and grasses take hold

End of CM Clarification No. 2

HWY R.O.W.

U.S. HWY 421

HWY R.O.W.

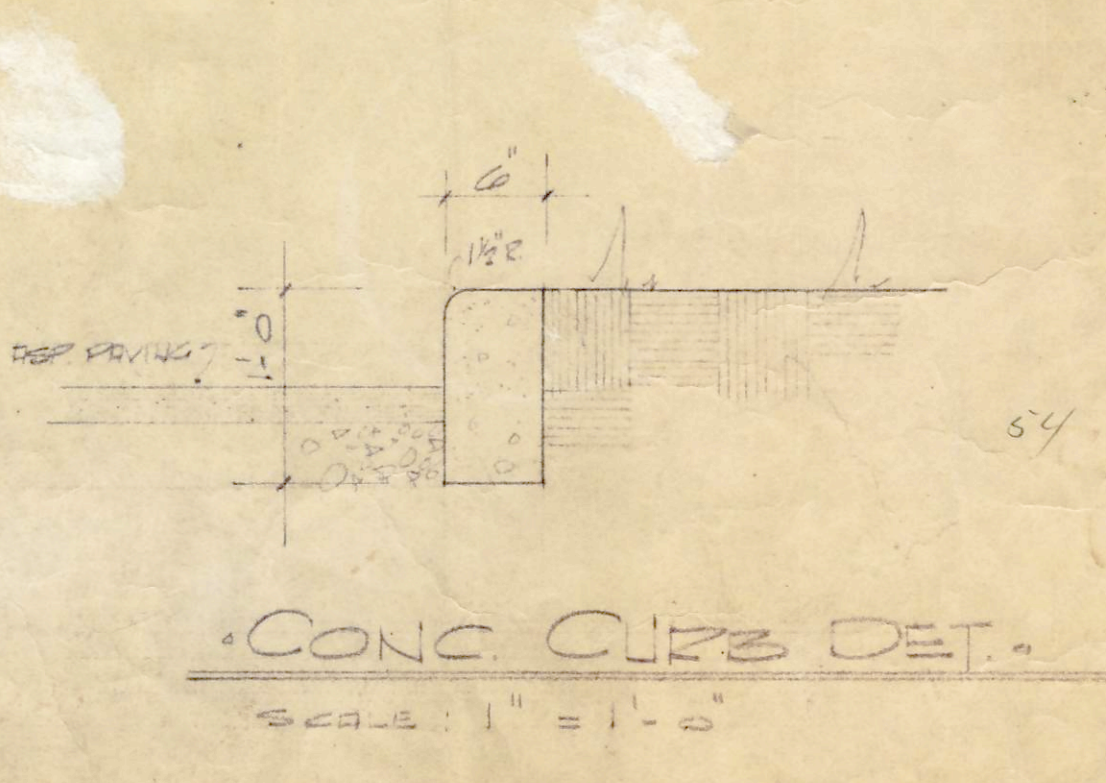
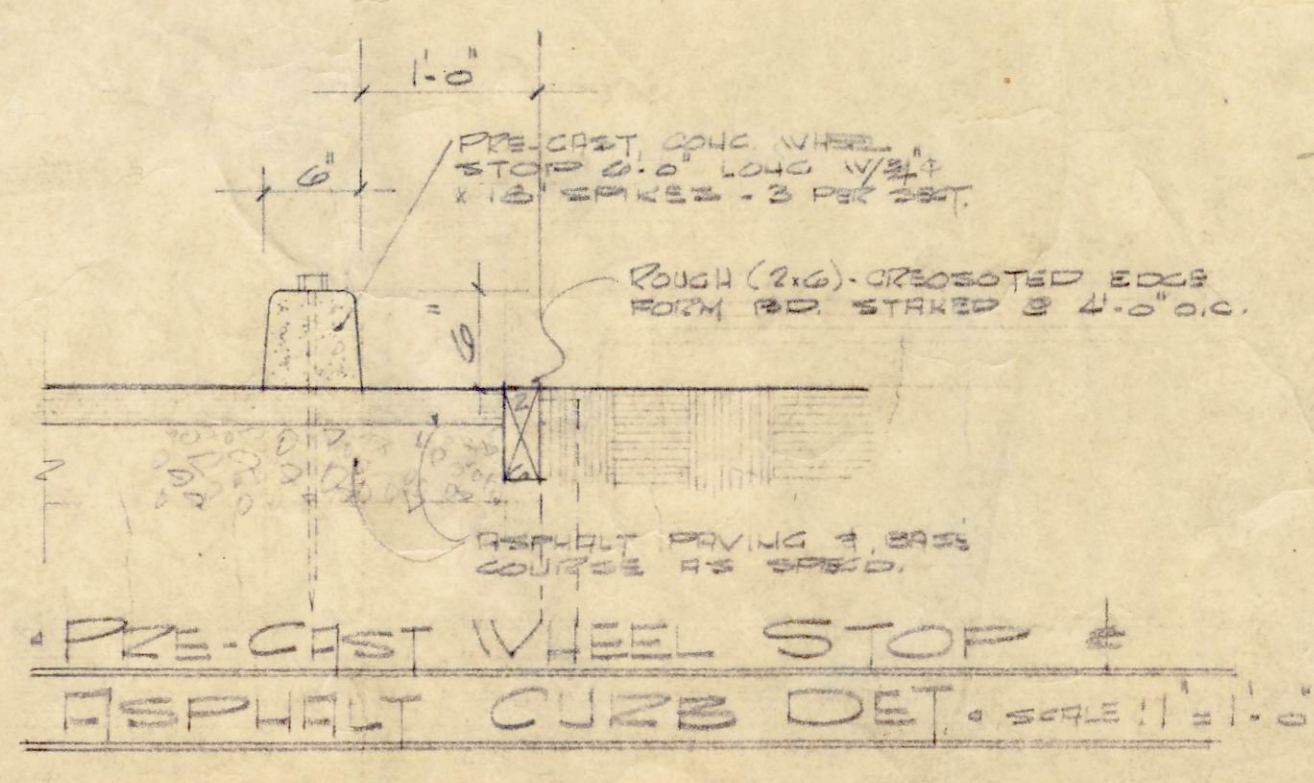
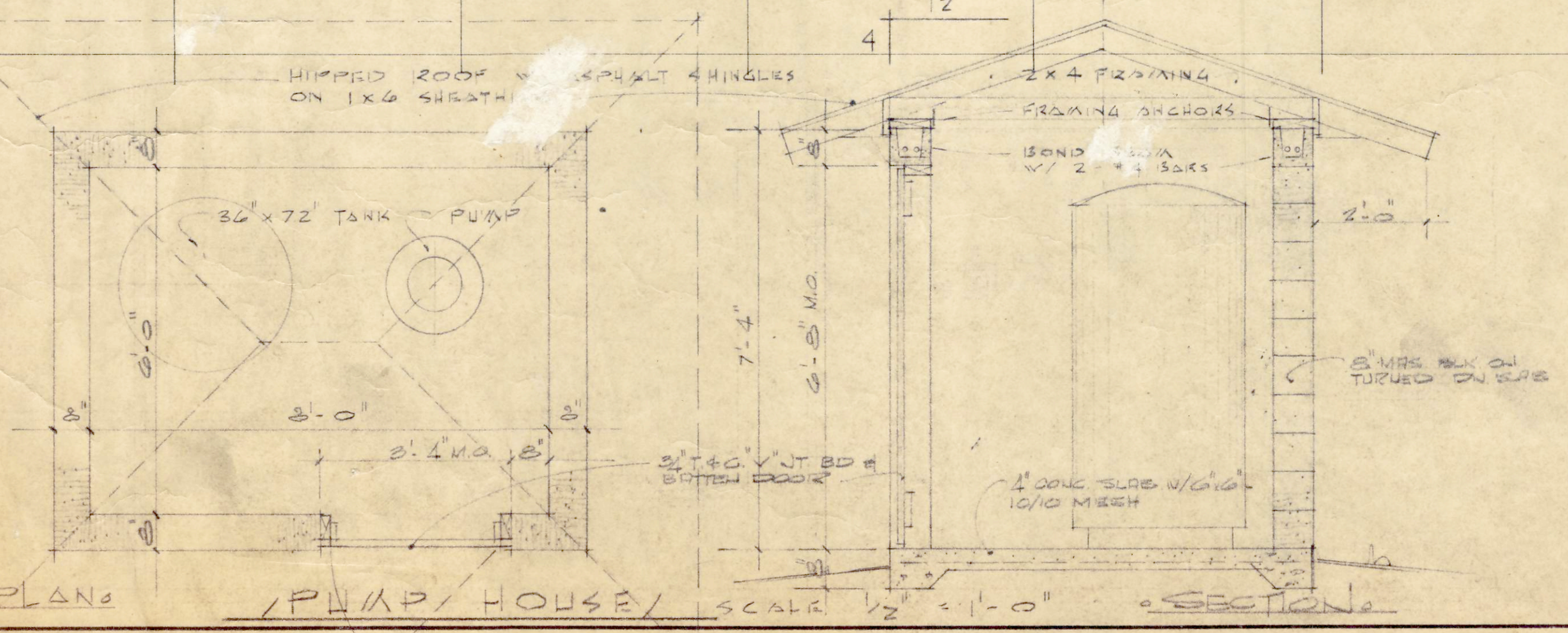
23 SPACES @ 9'-0" = 207'
NOTE: 36' PARKING SPACE TO HAVE
6' PRECAST CONC WHEEL STOP
42 REQ'D.

ALT. G-3 - [SHOWN SHADED]
INSTALL PAVING, CURBS, WHEEL STOPS
& PARKING LINES - SEE SPACES DIV. 48
GRADING & BASE COURSE WORK
IN BASE BID.

SITE PLAN - PROJECT AREA

SCALE 1" = 20'

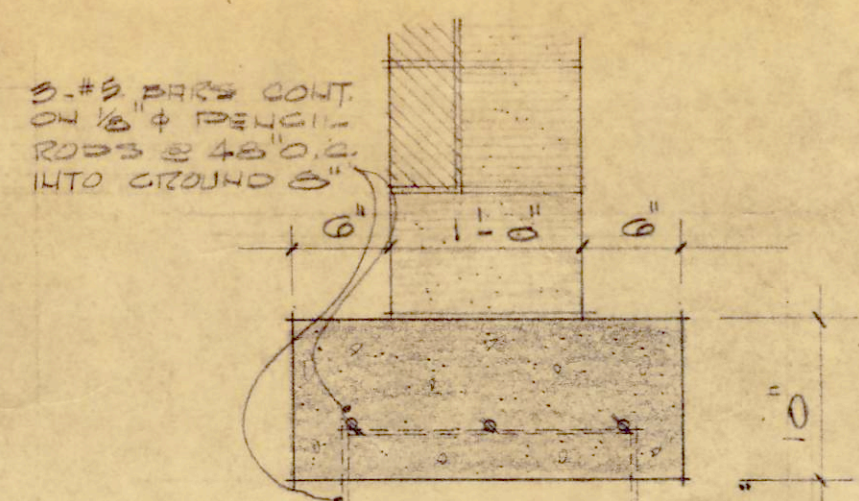
▢ FINISH GRADE SYMBOL
= INDICATES CONC. CURB



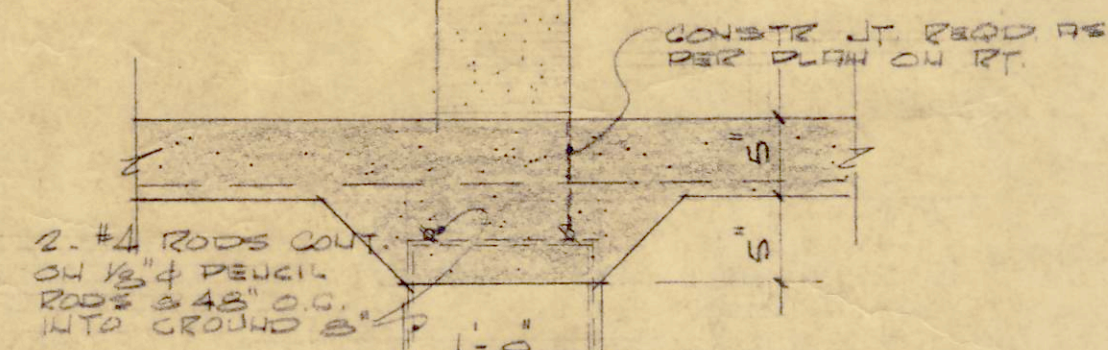
MUSEUM CENTER

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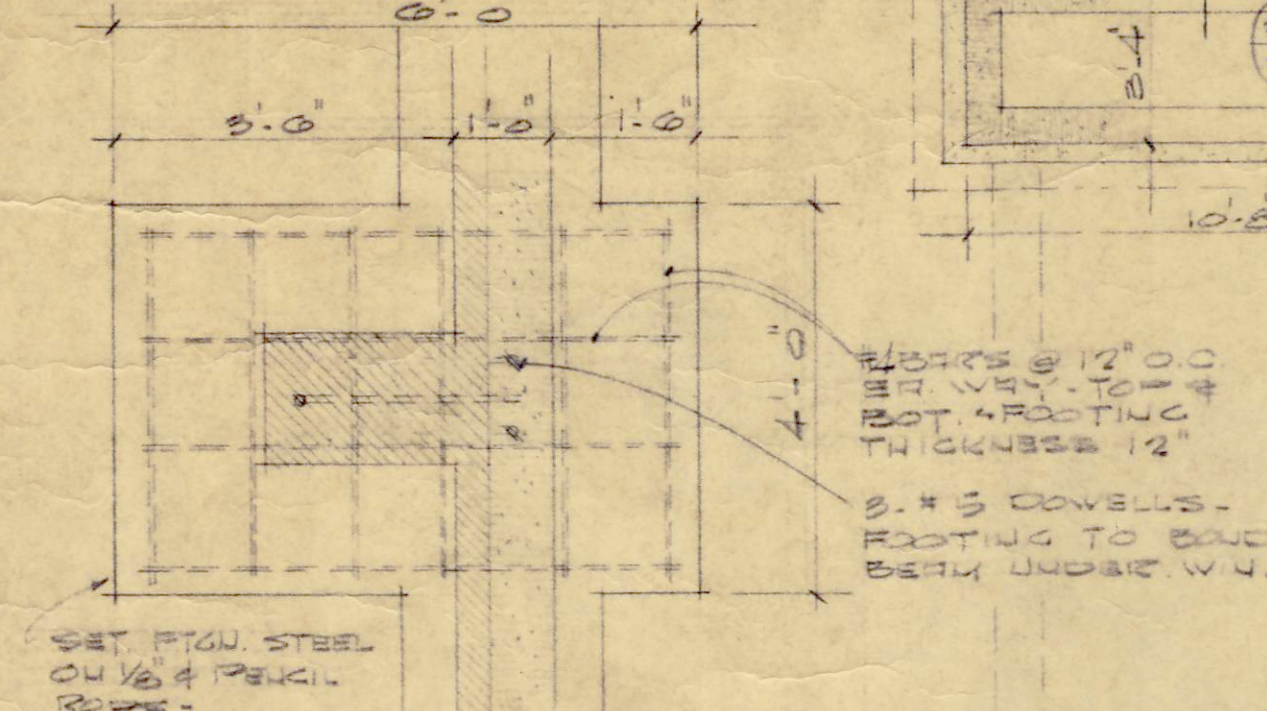
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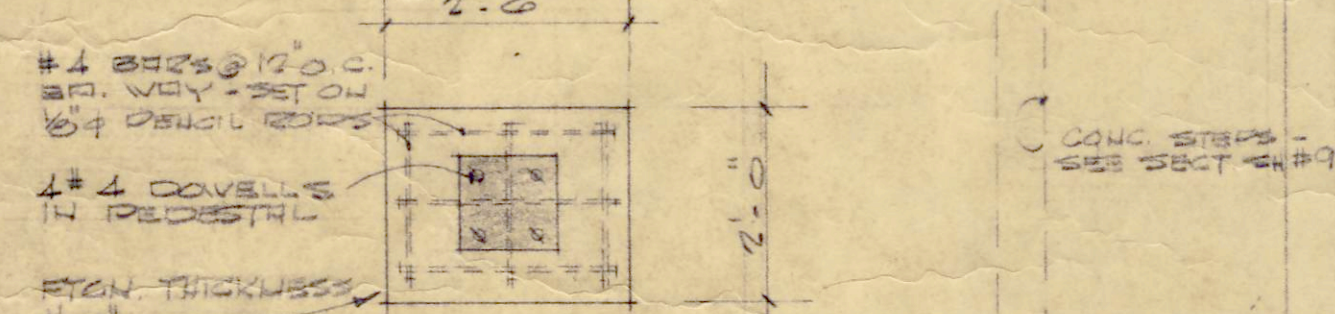
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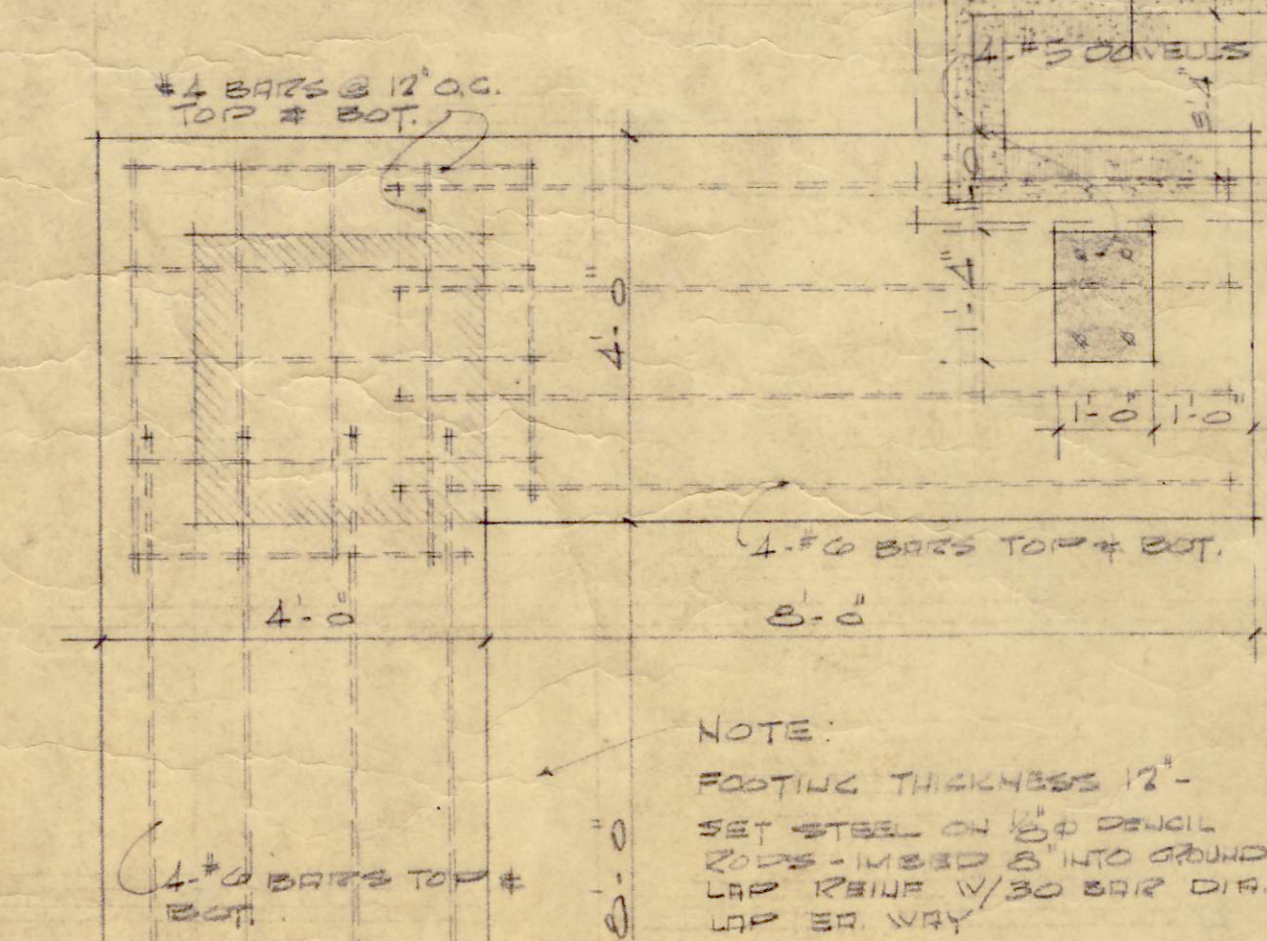
2. SPREAD FTON



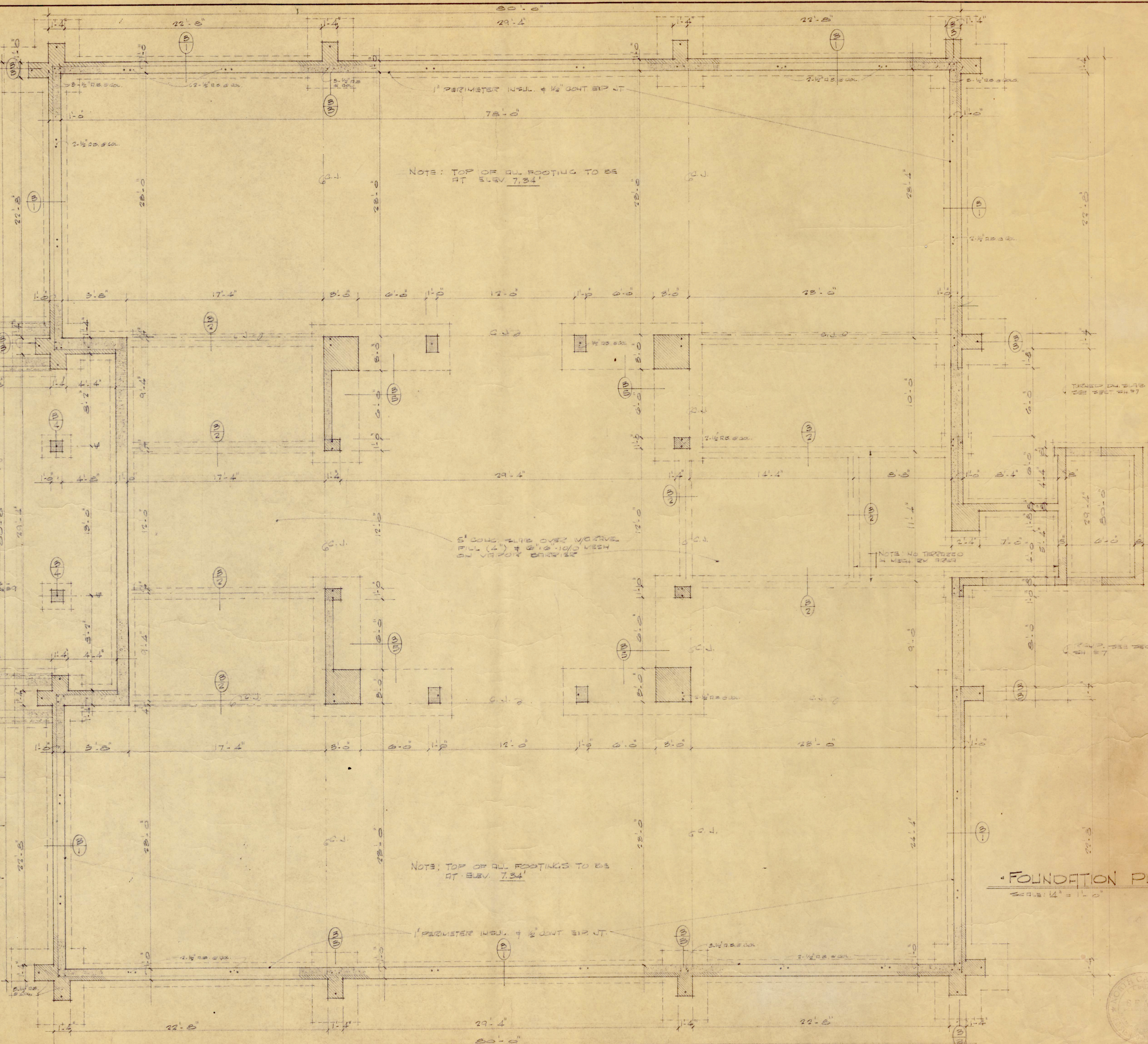
3. BUTTRESS FTON



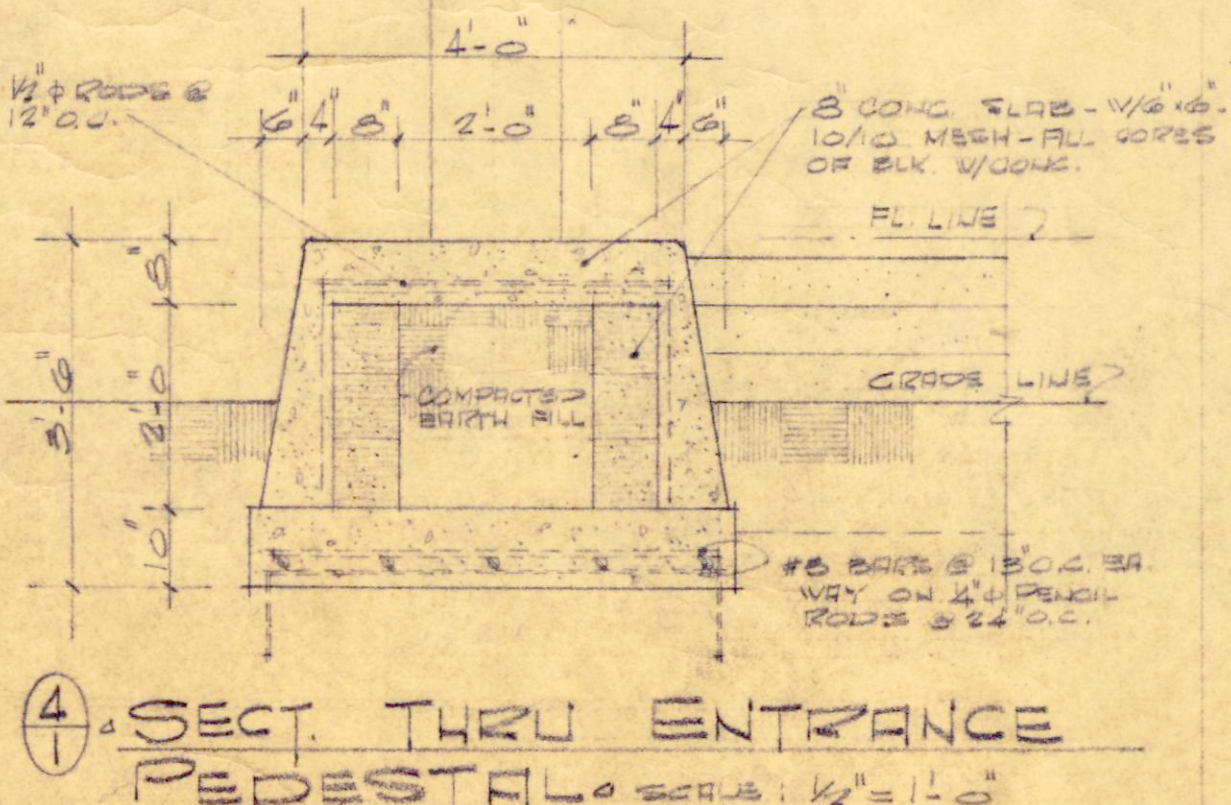
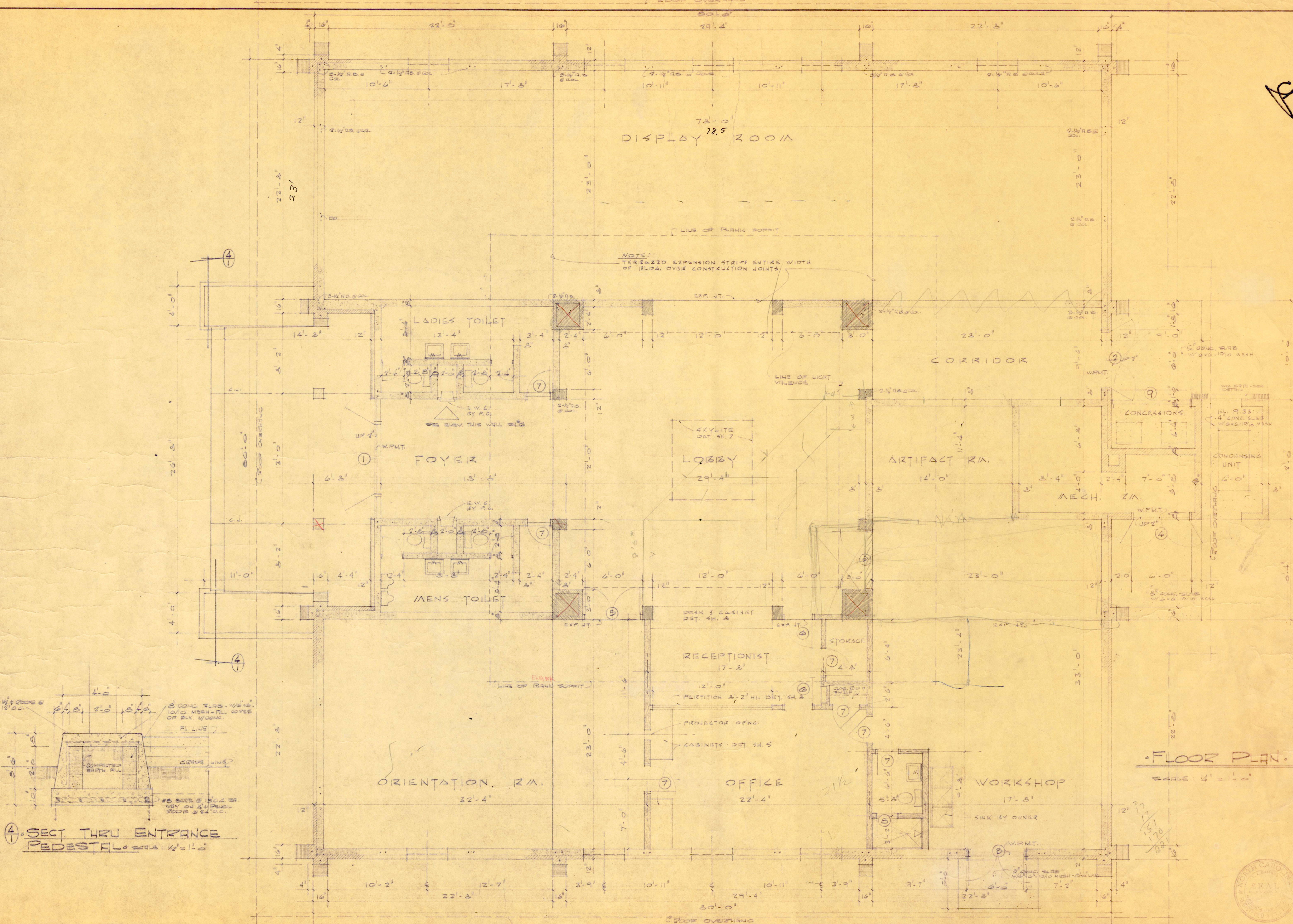
4. COL. FTON



5. INTERIOR COL. FTON



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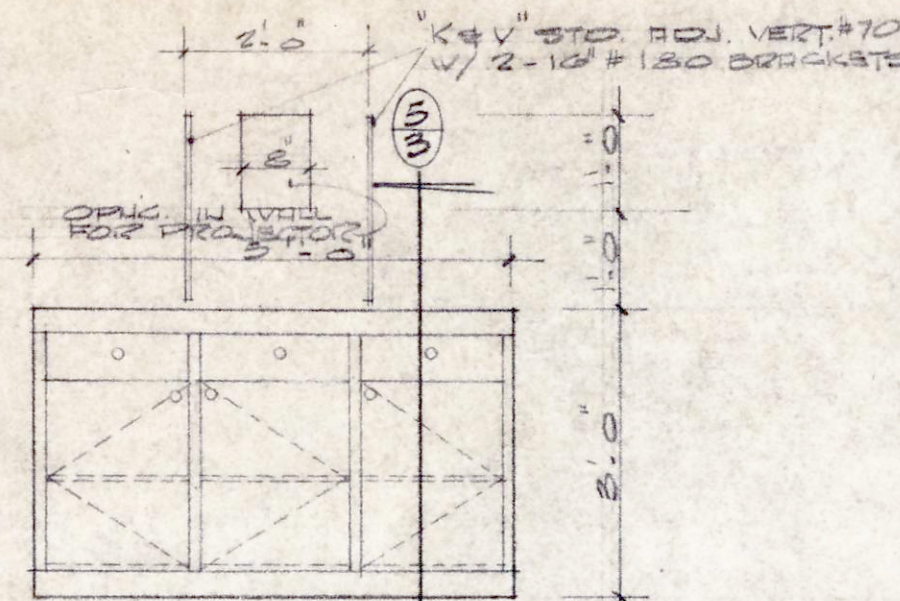
FLOOR PLAN

SCALE: 1" = 4'-0"

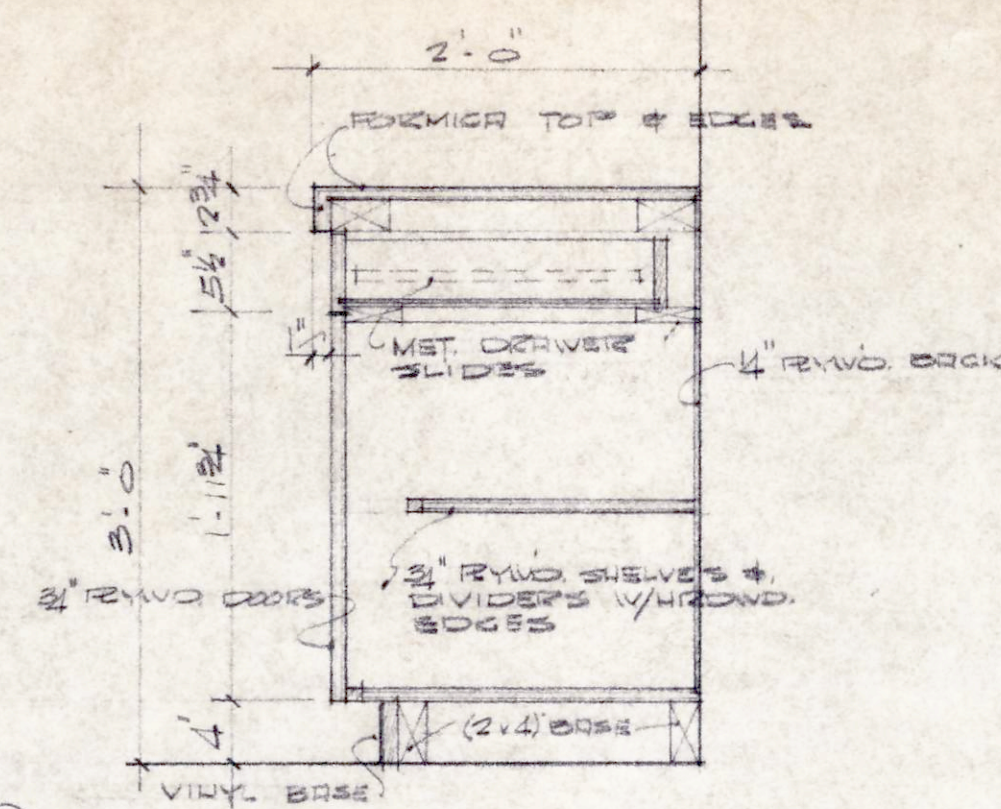
VISITOR CENTER MUSEUM
FOR FISHES
500 S. 1ST ST.
WILMINGTON, N.C.

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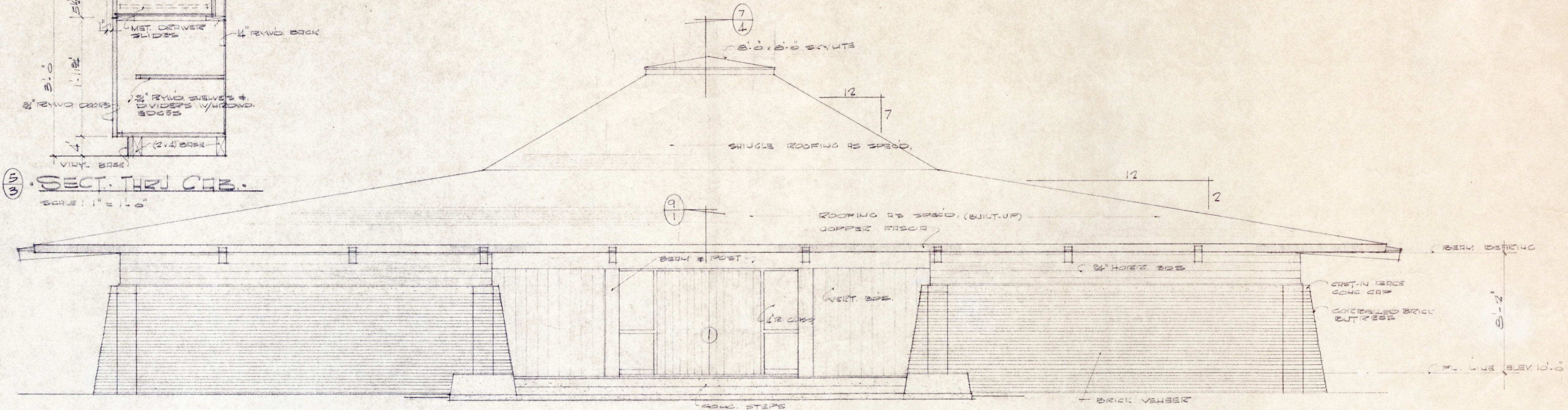
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DATE: 10/1/68
SHEET NO. 4



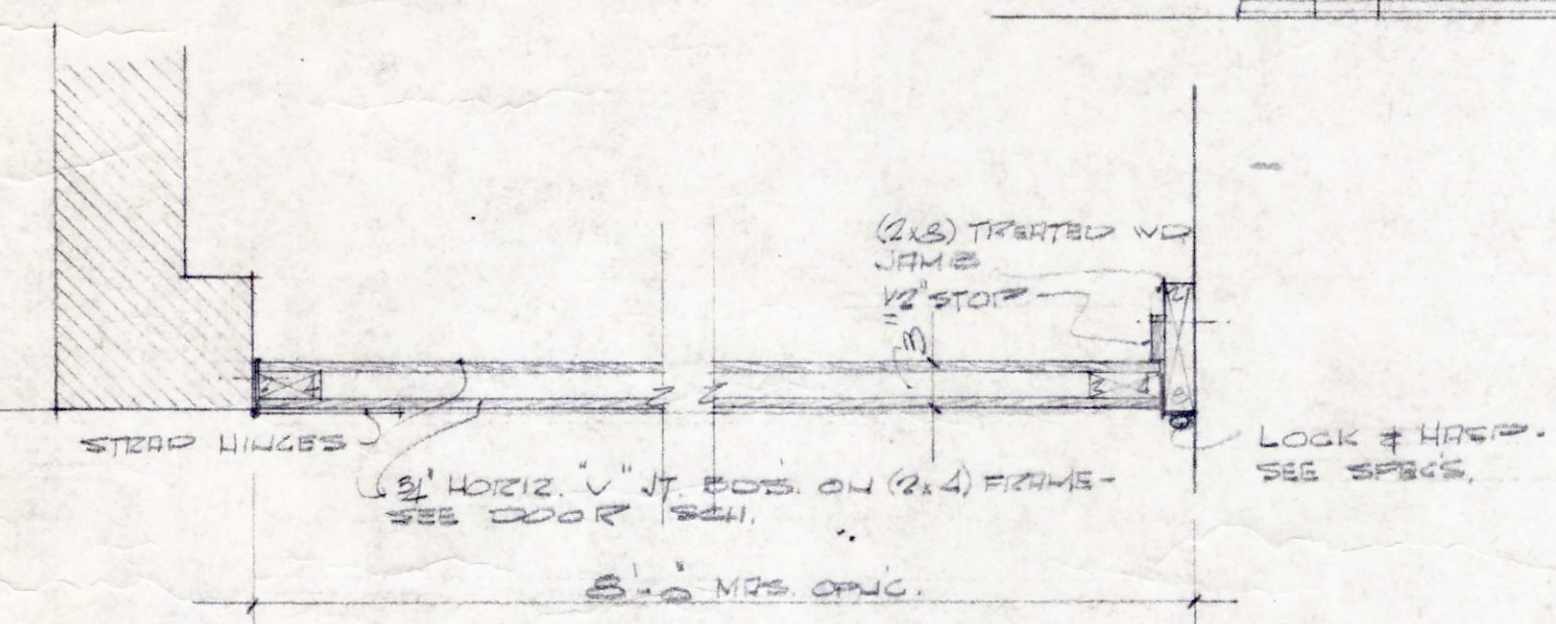
5/2 ELEV. CAB. IN OFFICE.
(OTHER CAB. SIM. REVERSE)
SCALE: 1/4" = 1'-0"



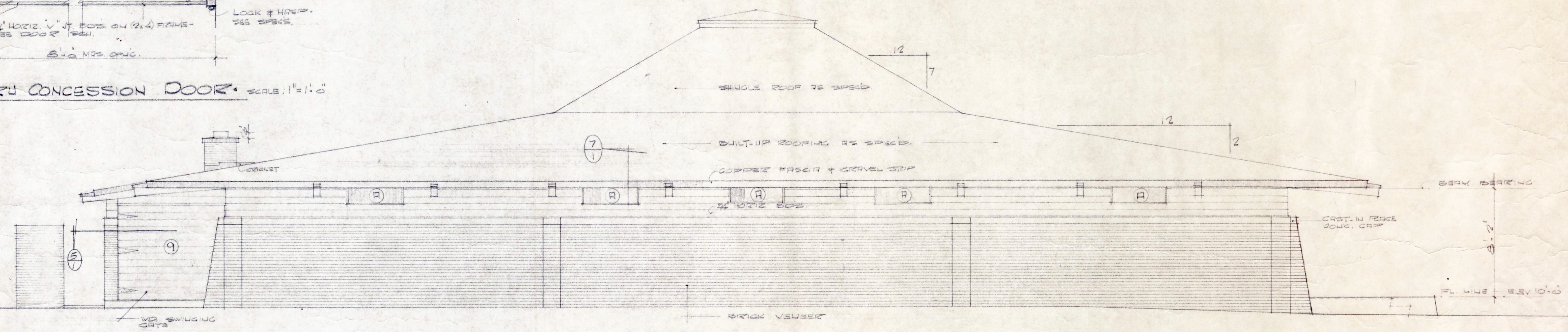
5/3 SECT. THRU CAB.
SCALE: 1" = 1'-0"



FRONT ELEVATION SCALE: 1/4" = 1'-0"



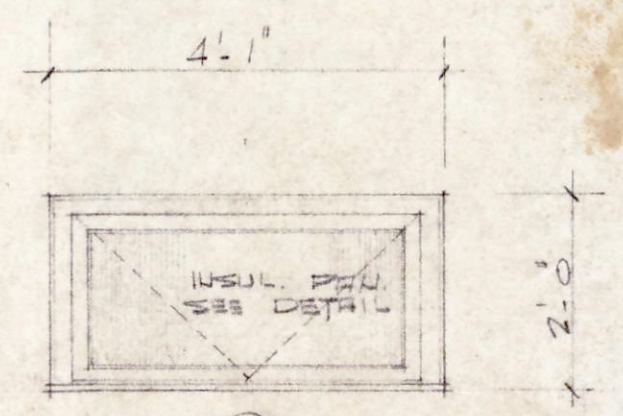
5 SECT. THRU CONCESSION DOOR SCALE: 1" = 1'-0"



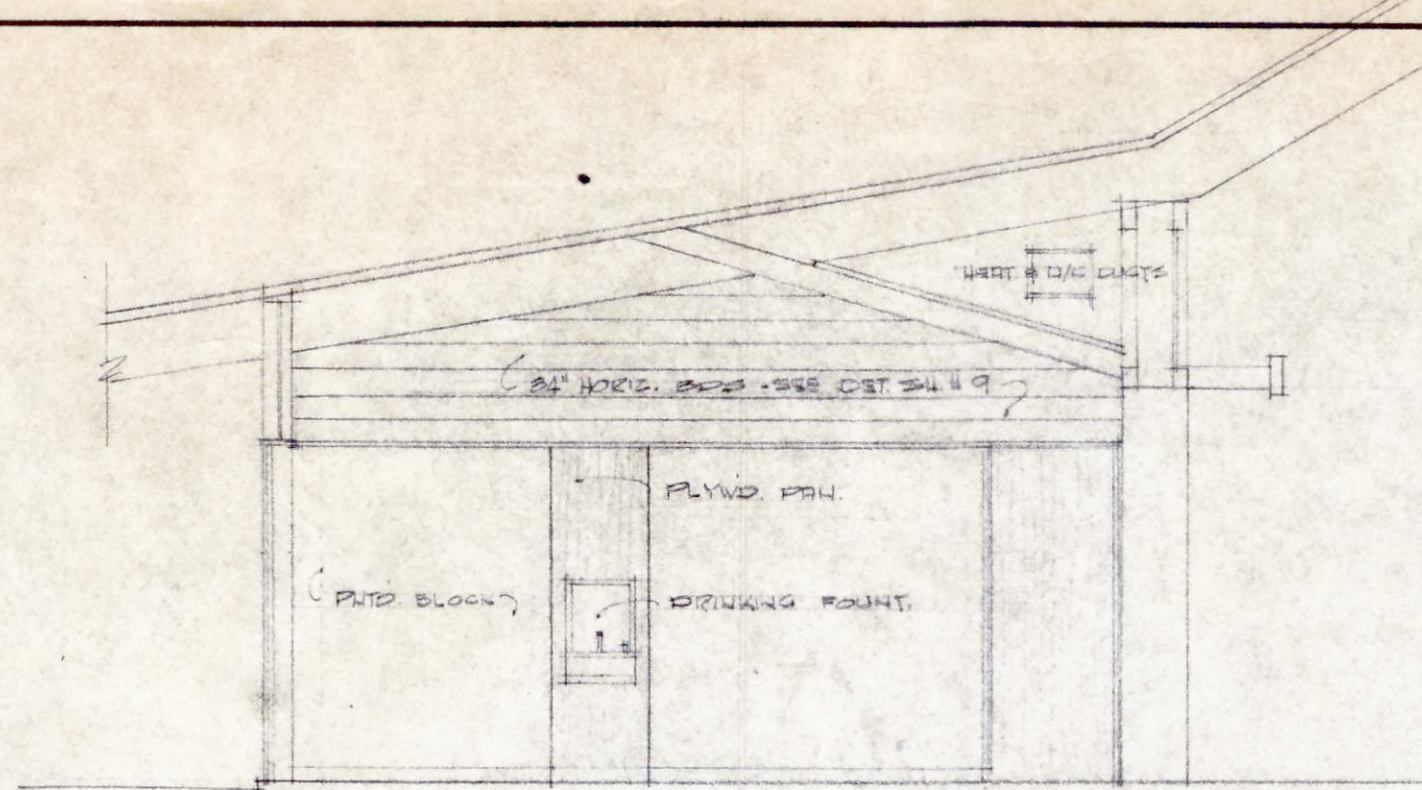
LEFT SIDE ELEVATION SCALE: 1/4" = 1'-0"

ROOM	FLOOR	BASE	WALLS	CEILING	REMARKS
AREA	TERRAZED	CONC. TILE	MRS. BLOCK	WOOD DECK	
FOYER	DO	DO	MRS. BLOCK, WOOD PANEL, & BRICK	DO	
LOBBY	DO	DO	MRS. BLOCK & BRICK	DO	
DISPLAY ROOM	DO	DO	MRS. BLOCK & BRICK	DO	
CORRIDOR	DO	DO	MRS. BLOCK & WOOD PANEL	DO	
ORIENTATION ROOM	DO	DO	MRS. BLOCK & WOOD PANEL	DO	
RECEPTIONIST	DO	WOOD	WOOD PANEL	DO	
OFFICE	DO	DO	WOOD PANEL & BRICK	DO	
STAIR & GLOB.	DO	DO	3/4" PLYWOOD	DO	
WORKSHOP	DO	DO	3/4" PLYWOOD (BR) & MRS. BLOCK	DO	
ARTIFACT ROOM	DO	DO	MRS. BLOCK	DO	
MESH. ROOM	DO	DO	DO	DO	
MENS' TOILET	TERRAZED	CONC. TILE	CONC. ENAMEL SPRAY ON BRICK, & BRICK	DO	
LADIES' TOILET	DO	DO	DO	DO	
WORKSHOP TOILET	DO	DO	CONC. ENAMEL SPRAY ON BRICK, & BRICK	DO	
CONCESSIONS	DO	DO	CONC. ENAMEL SPRAY ON BRICK, & BRICK	DO	

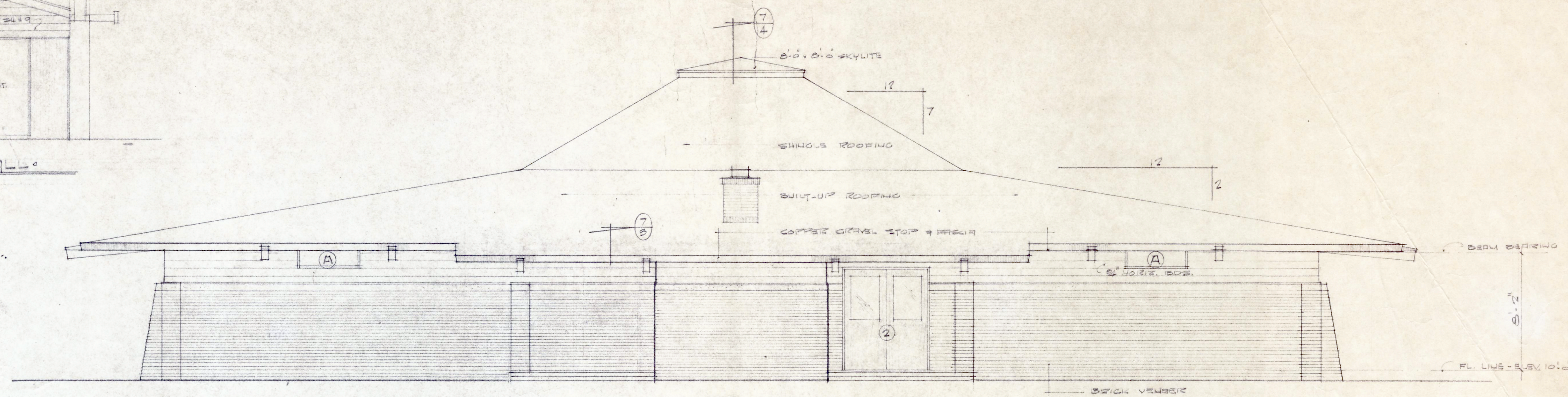
WINDOW SCHEDULE SCALE: 1/4" = 1'-0"



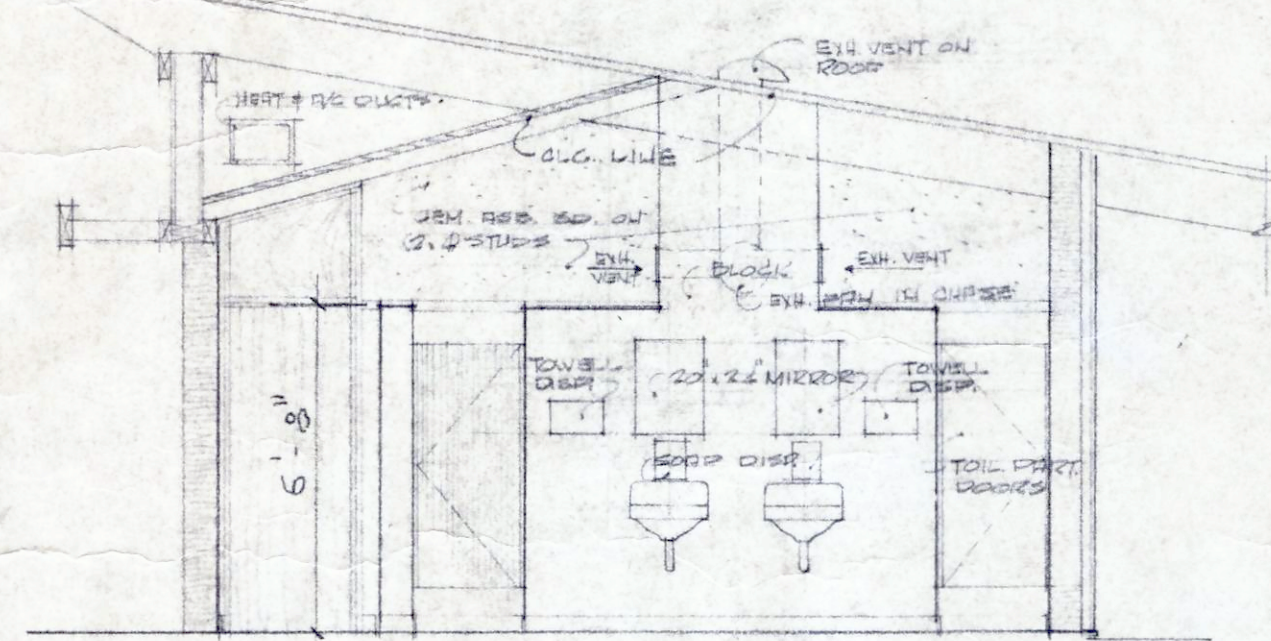
WIN. SIM. TO 'ANDERSON WINDOW' RESIDENT. HOPPER UNIT # 415- SCREENED W/NO GLAZING. INSUL. PAN. SEE DETAIL. SH #7



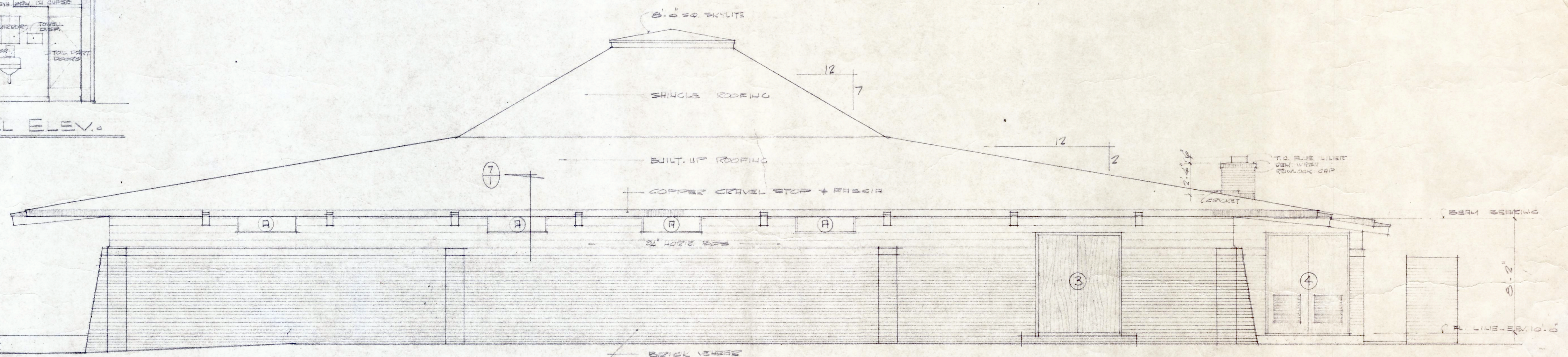
ELEV. - FOYER WALL
SCALE: 4" = 1'-0"



REAR ELEVATION SCALE: 4" = 1'-0"



TYP. TOILET WALL ELEV.
SCALE: 4" = 1'-0"



RIGHT SIDE ELEVATION SCALE: 4" = 1'-0"

<p>1</p>	<p>2</p>	<p>3</p>	<p>4</p>	<p>5</p>	<p>6</p>	<p>7</p>	<p>8</p>	<p>9</p>
<p>PAIR 8'-0" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING - SEE DET. 1/19</p>	<p>PAIR 2'-10" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING - 2 1/2" x 3 1/2" GLASS</p>	<p>PAIR 2'-10" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>PAIR 2'-10" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>PAIR 2'-10" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>2'-0" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>2'-0" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>2'-0" x 6'-6" 3/4" WD. FLUSH W/PLYWOOD FRAMING</p>	<p>7'-11" x 7'-0" 3/4" WD. DRIVING GATE - SEE DET. CH. NO. 2</p>

GRAPHIC DOOR SCHEDULE SCALE: 4" = 1'-0"

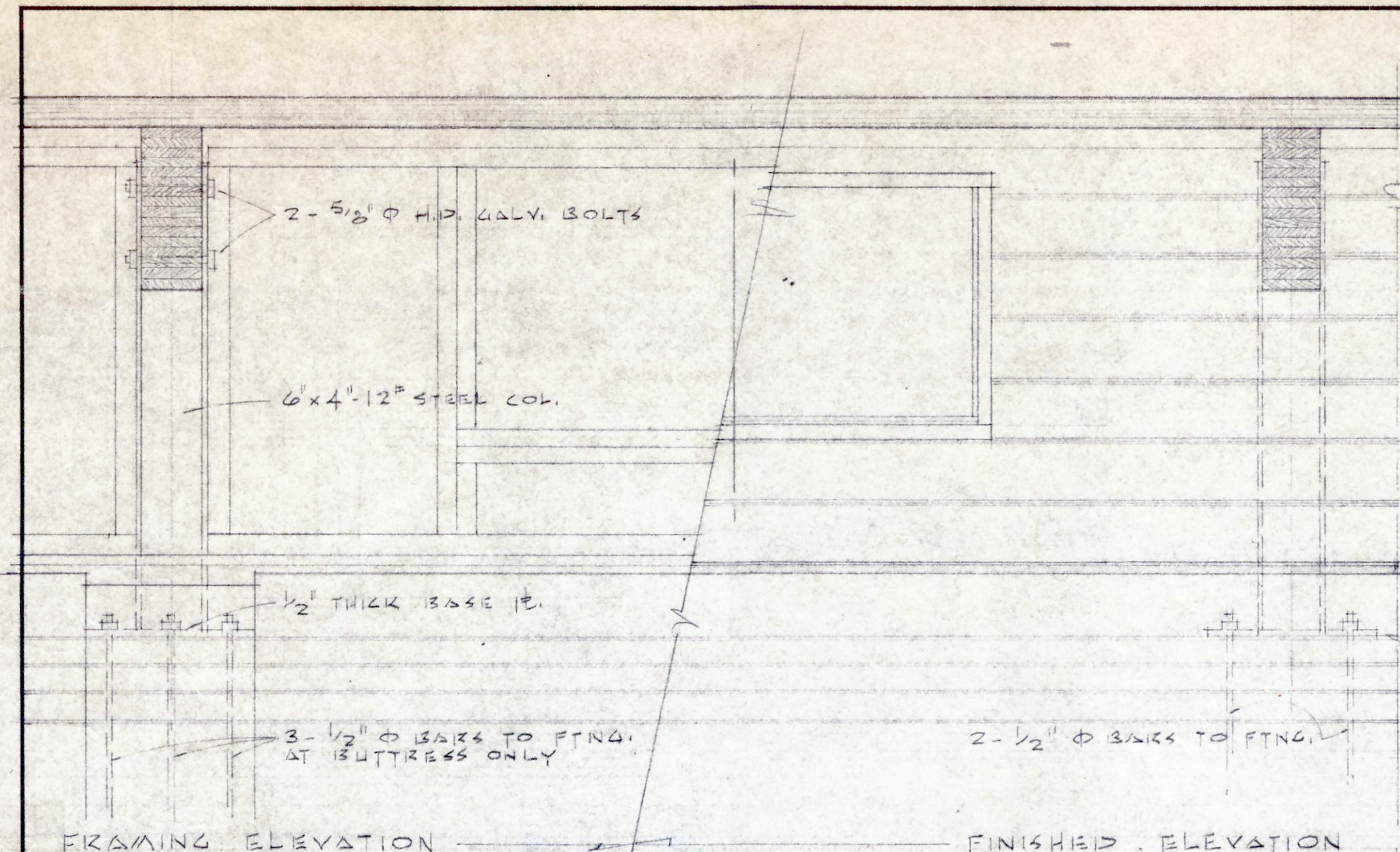
ALL WORK TO BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE BUILDING, AND THE DRAWINGS SHALL BE USED IN CONNECTION WITH THE SPECIFICATIONS.

NOTES
1. ALL WORK TO BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE BUILDING, AND THE DRAWINGS SHALL BE USED IN CONNECTION WITH THE SPECIFICATIONS.
2. ALL WORK TO BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE CONSTRUCTION OF THE BUILDING, AND THE DRAWINGS SHALL BE USED IN CONNECTION WITH THE SPECIFICATIONS.

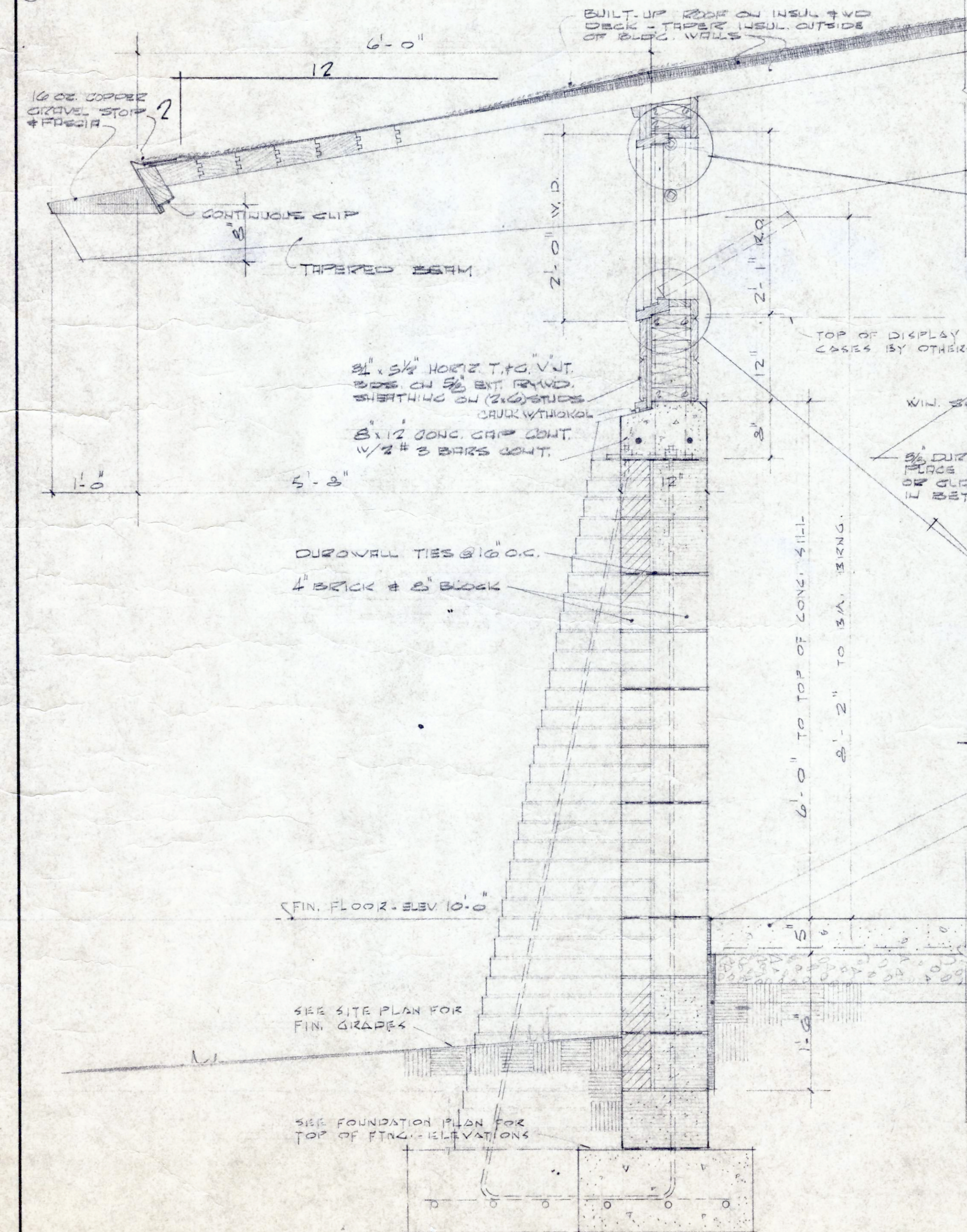
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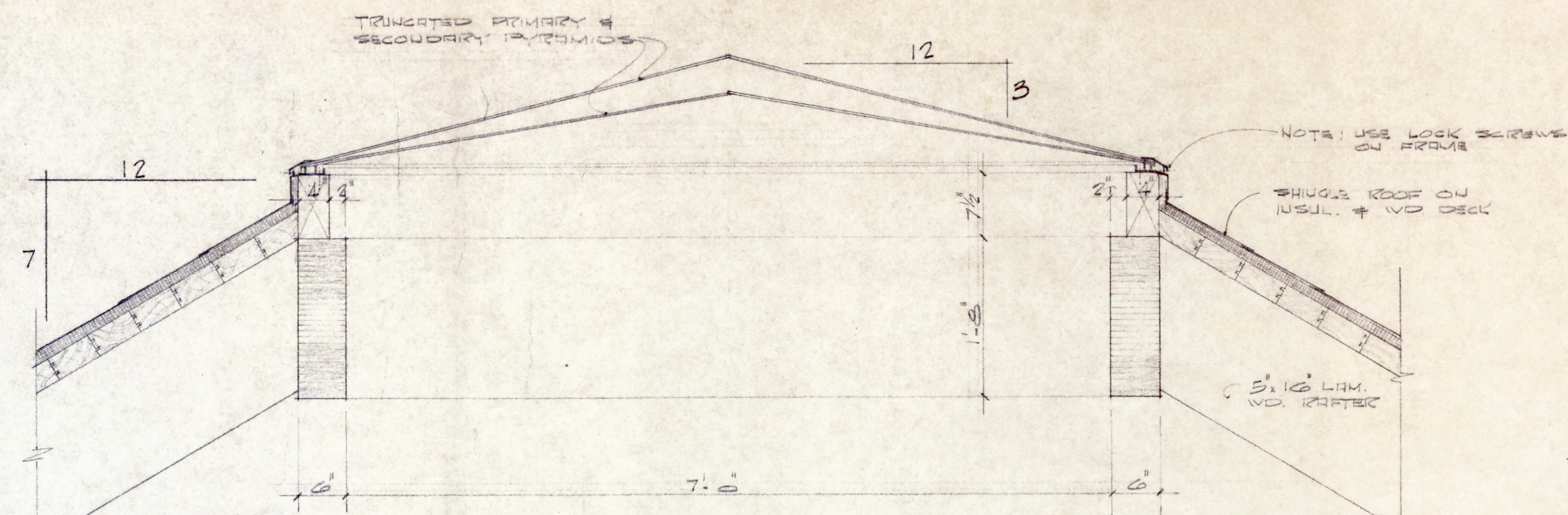




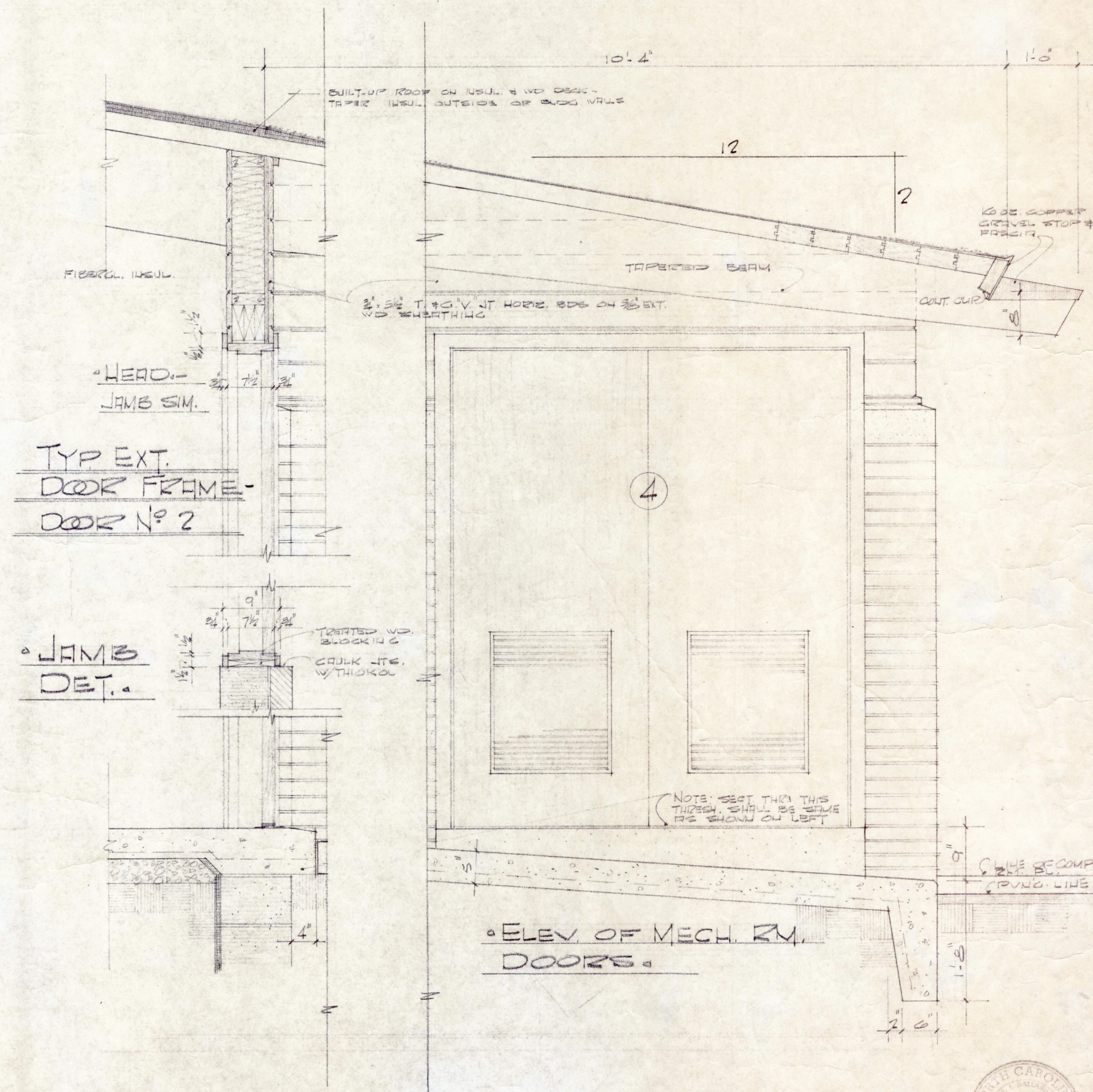
FRAMING ELEVATION FINISHED ELEVATION
 7 TYPICAL BEAM & COLUMN AT EXTERIOR WALL
 2 SCALE 1" = 1'-0"



7 TYPICAL EXT. WALL SECT. SCALE 1" = 1'-0"



7/4 SECT. THRU SKYLITE SCALE 1" = 1'-0"



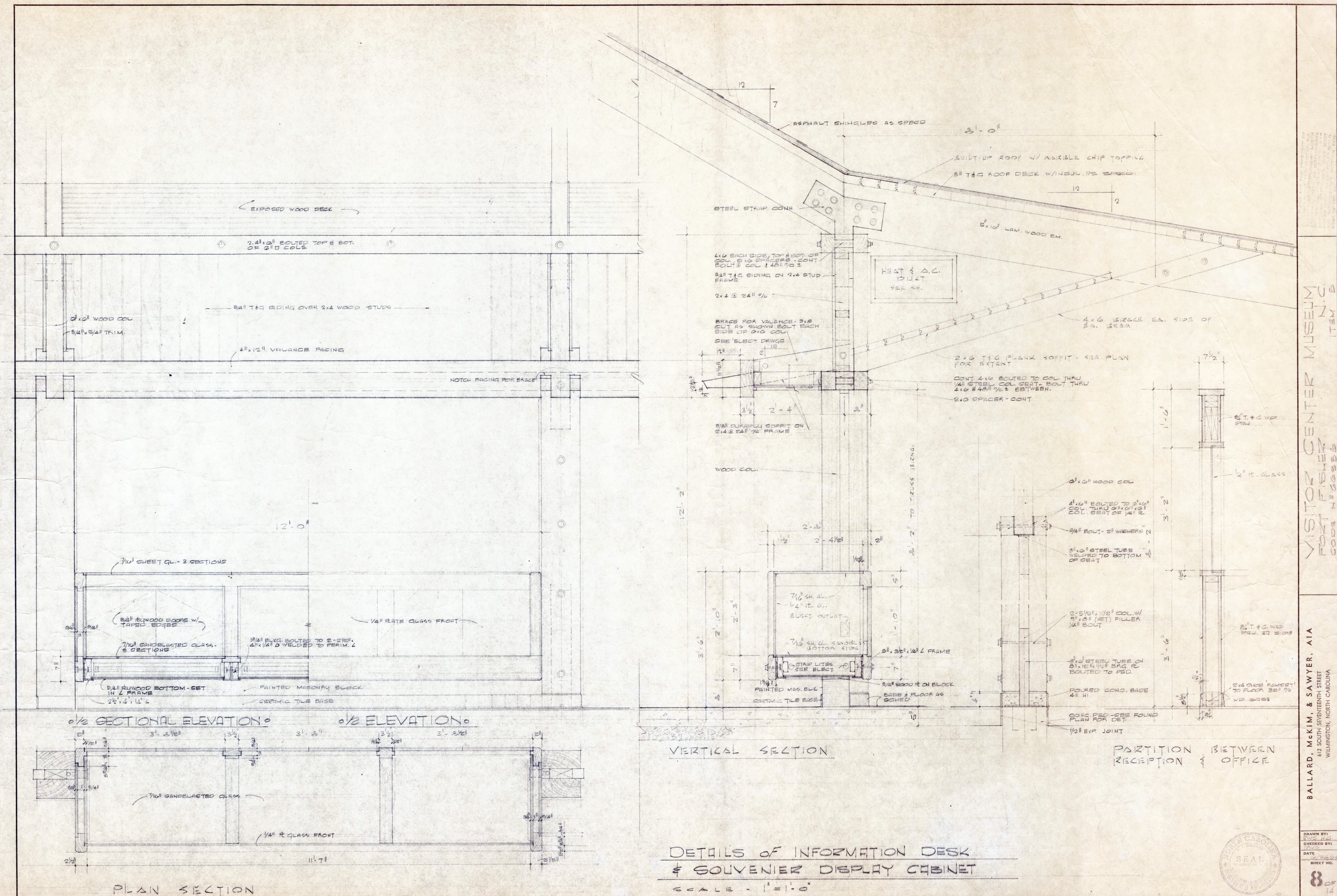
7/5 SECT. THRU EXTENDED CANOPY SCALE 1" = 1'-0"

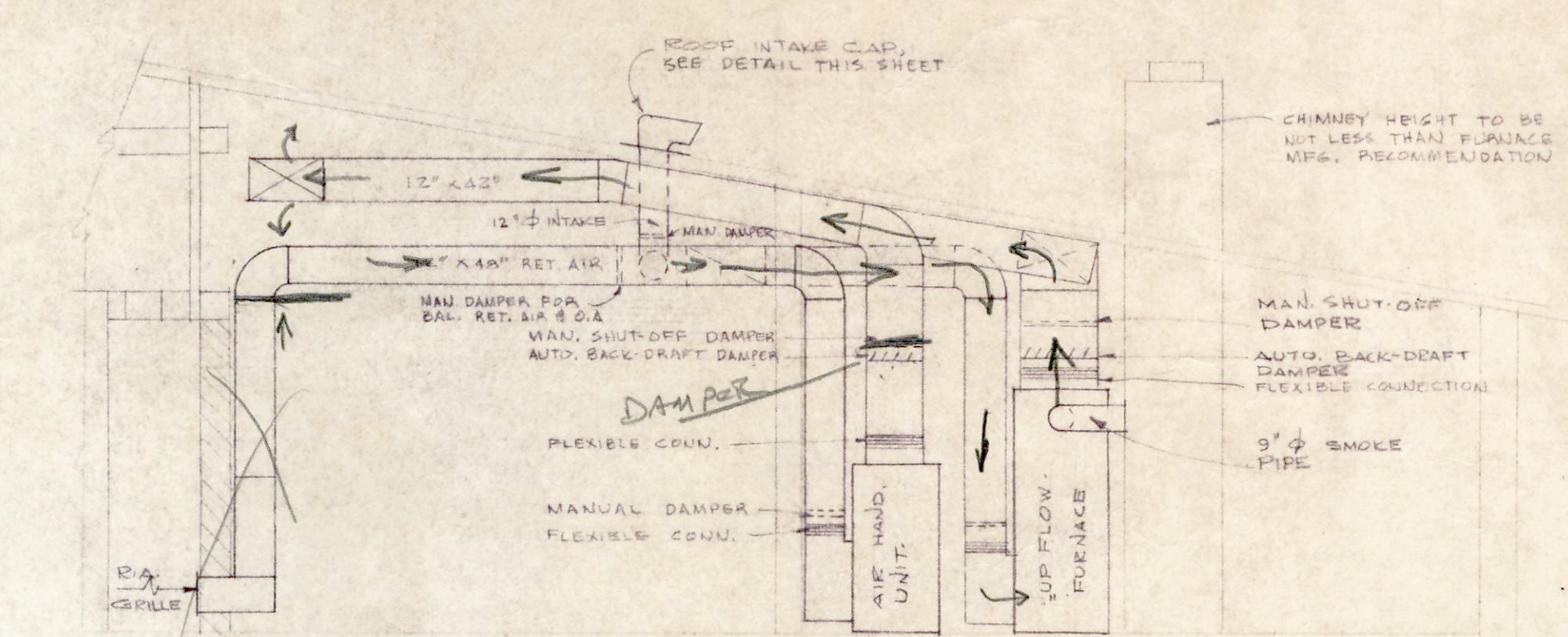
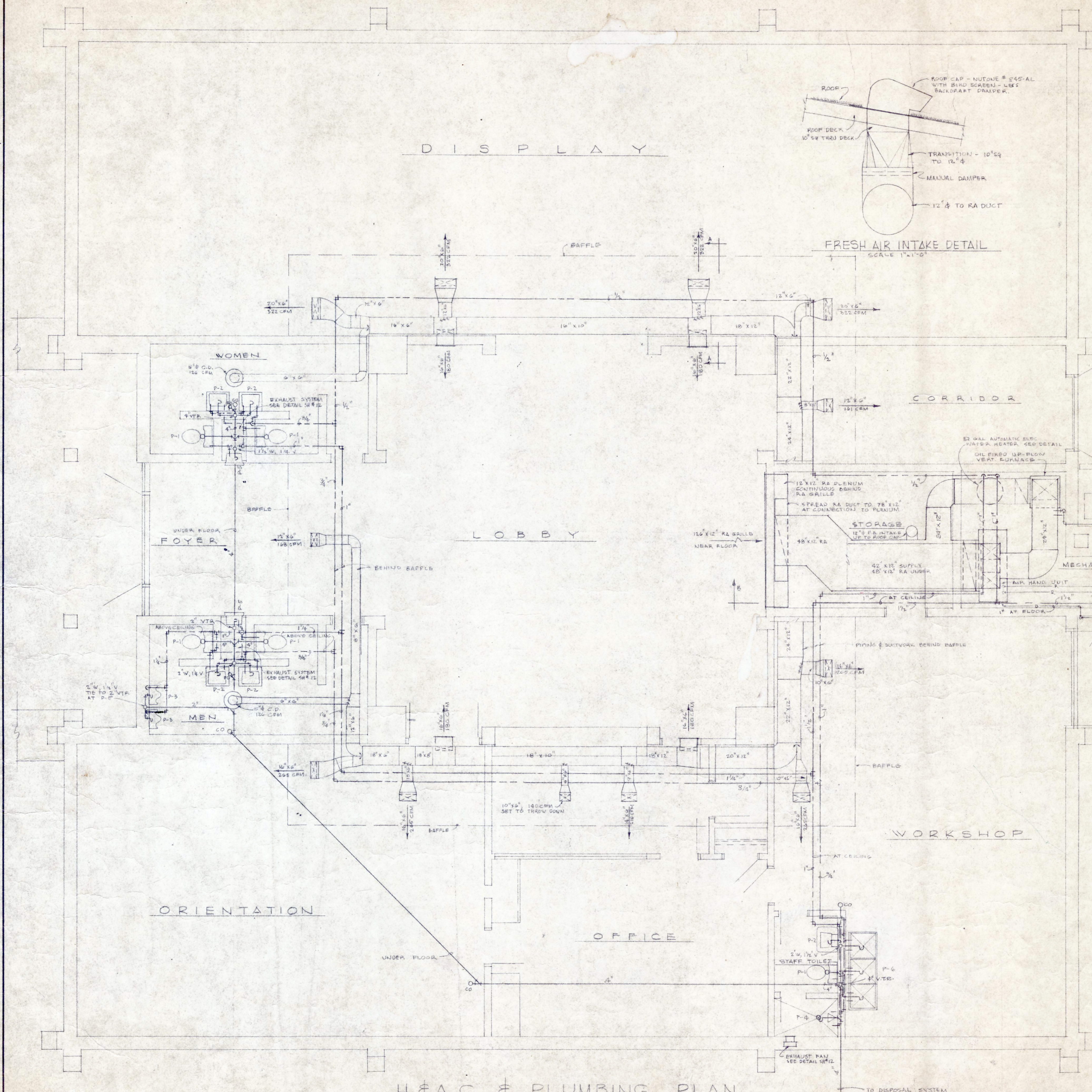
VICTOR CENTER
 FORT FLETCHER
 CODE NO. 60335

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 612 SOUTH SEVENTEENTH STREET
 WILMINGTON, NORTH CAROLINA

DRAWN BY:
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 DATE:
 SHEET NO.

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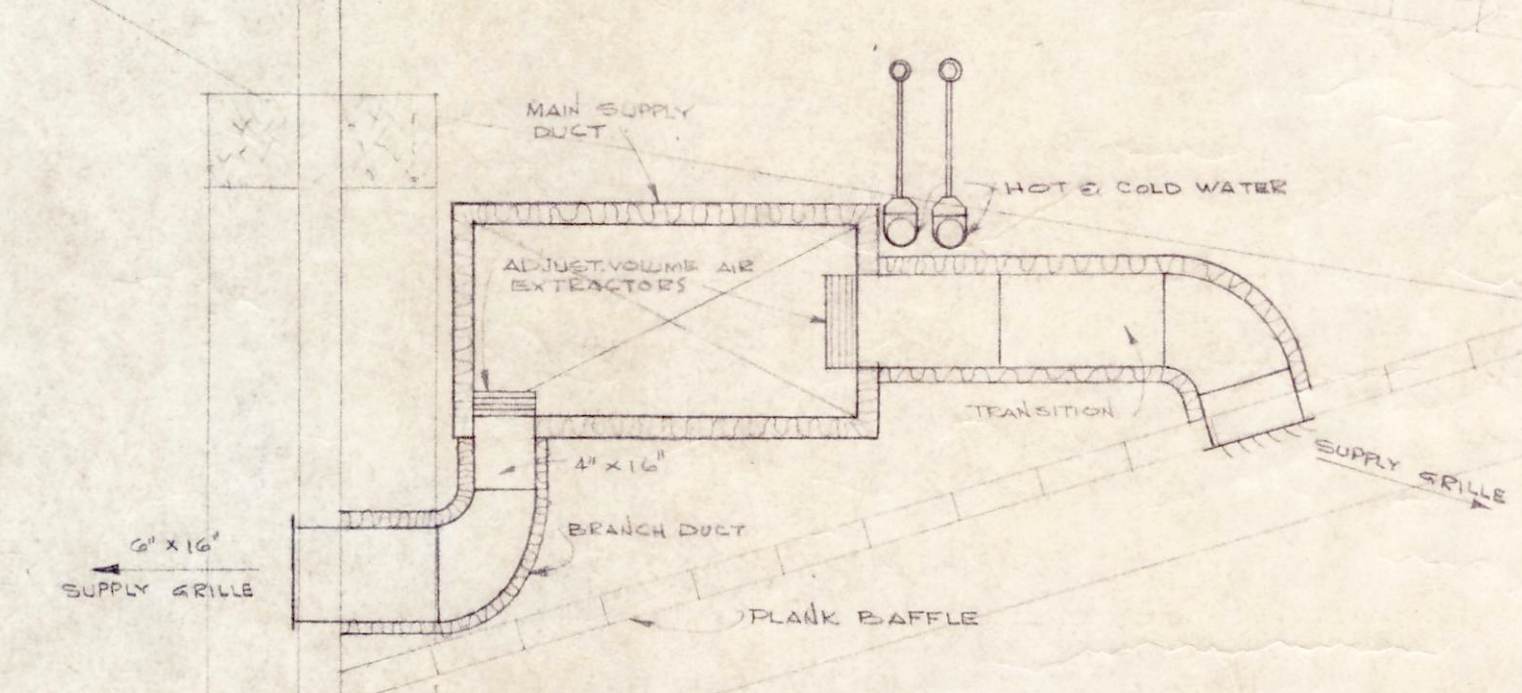


- EQUIPMENT SCHEDULE**
1. UPFLOW FURNACE - 150,000 BTU/HR MIN. OUTPUT AT 80% EFF., 2250 CFM @ 1" EXT. S.P., OIL FIRED, 115V, 200V, 1Ø, LENOX CH-168, WITH 1/4 HP FAN DRIVE.
 2. AIR HANDLING UNIT - 4000 CFM @ 4" EXT. S.P., 100,000 BTU/HR SENSIBLE, 117,191 BTU/HR TOTAL COOLING, 50°F DB 57°F WB SAT. AIR, LENOX CBI-135V.
 3. CONDENSING UNIT - 10 TON NOMINAL CAPACITY, AIR COOLED, 115° COND. TEMP, 95°F AIR TEMP, TOP AIR EXHAUST, 240V, 50 HZ, 3Ø, LENOX HSB-165V.
 4. MAIN TOILET EXHAUST FAN - CENTRIFUGAL TYPE, 300 CFM @ 1/2" S.P., 1140 RPM, 115V, 60V, 1Ø, 1/2 LG. NO. B12.

- LEGEND**
- COLD WATER PIPING
 - HOT WATER PIPING
 - HOT WATER RADIANT
 - WASTE PIPING
 - FUEL PIPING
 - REPAIR PIPING
 - TANK VENT PIPING
 - COND. DRAIN PIPING

550 GAL. U.S. OIL TANK
SEE DETAIL SHEET #1-2

*Tom Cullen
Tile worker Heat and Air
343-1234*



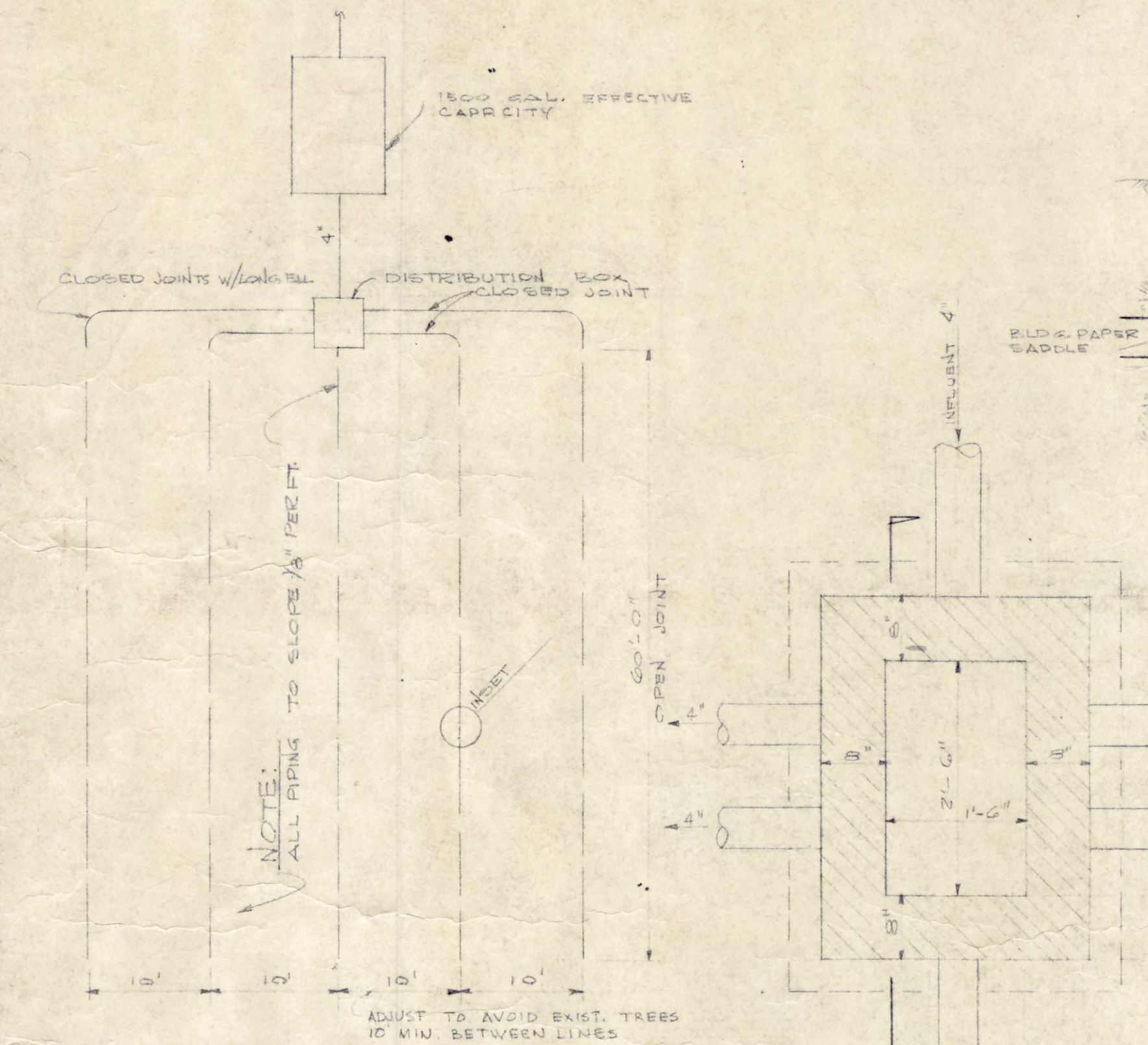
- LOAD SUMMARY**
- SUMMER DESIGN CONDITIONS
OUTSIDE 92°F DB, 82°F FWB
INSIDE 78°F DB, 56°F FWB
CALCULATED LOAD 100,244 BTU/HR SENSIBLE, 117,191 BTU/HR TOTAL
WINTER DESIGN CONDITIONS
OUTSIDE 15°F, INSIDE 75°F
CALCULATED LOAD 130,345 BTU/HR

HENRY VON OESSEN
& ASSOCIATES
CONSULTING ENGINEERS
WILMINGTON, N. C.
FILE NO. 1172

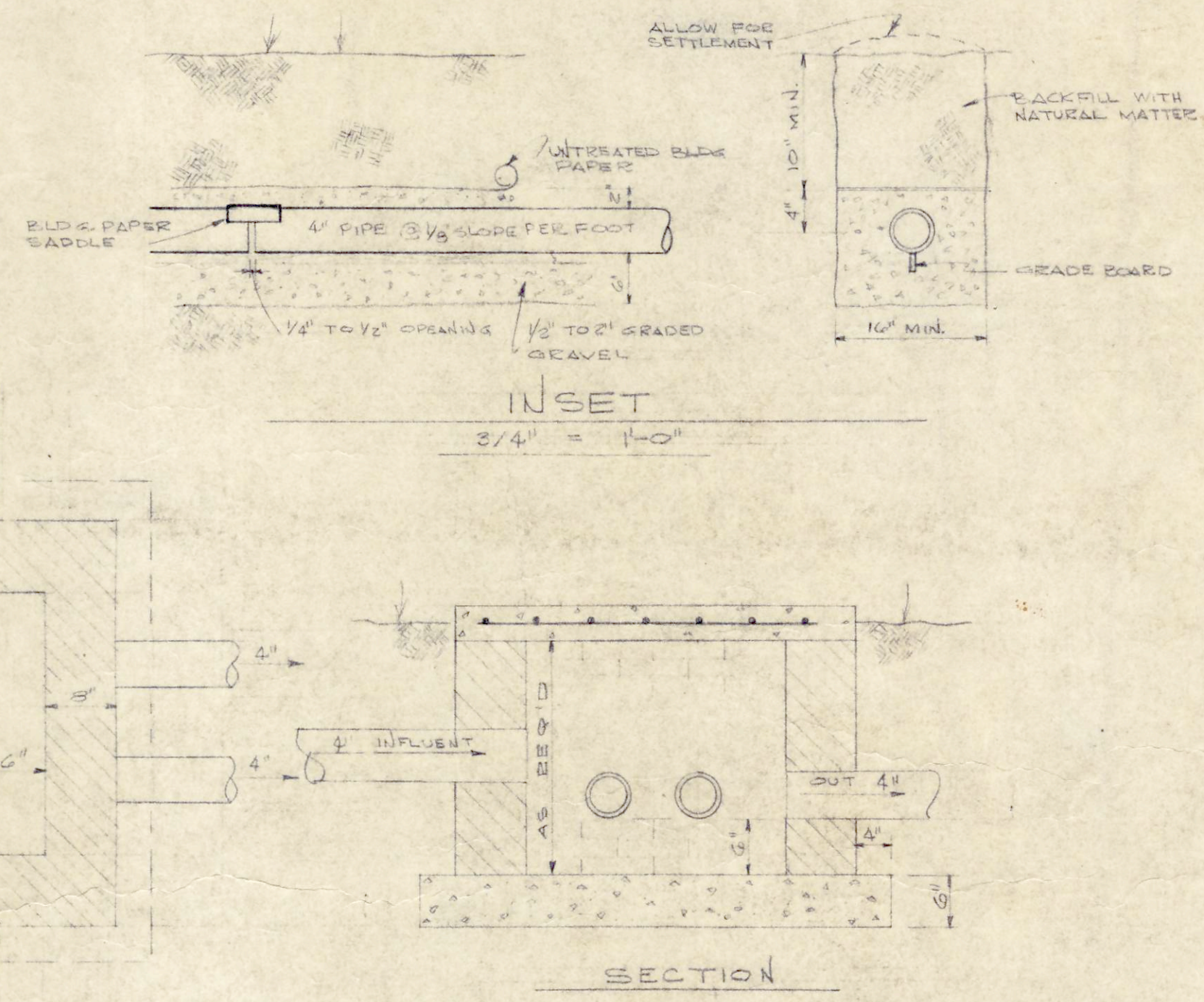
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BALLARD, McKIM, & SAWYER, AIA
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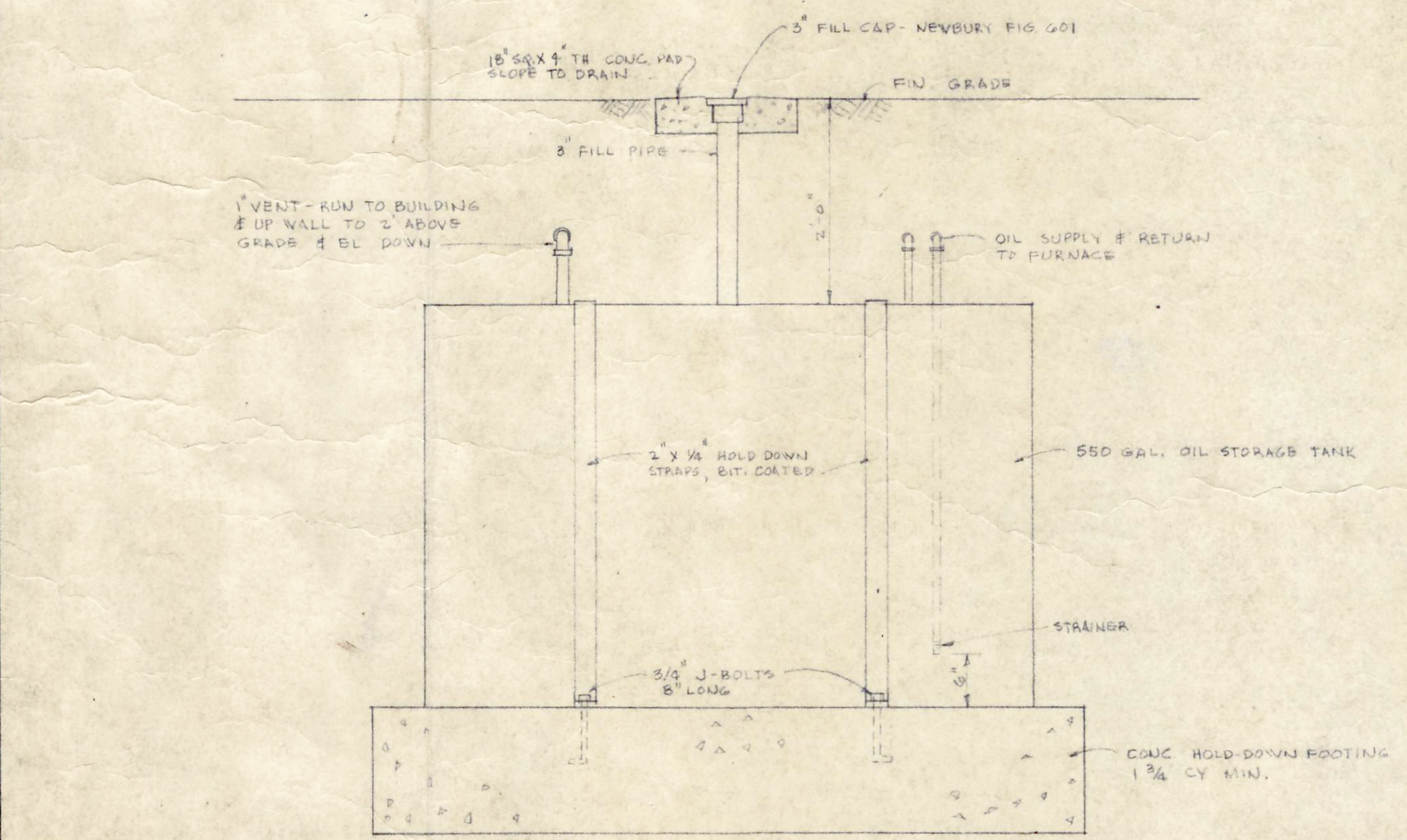
PLUMBING FIXTURE SCHEDULE					
SYMBOL	DESCRIPTION	PIPE SIZE		REMARKS	
		WASTE	WATER		
P-1	WATER CLOSET	4"	1/2"		
P-2	LAVATORY	1 1/2"	1/2"	1/2"	
P-3	URNIAL	2"	1"		
P-4	SHOWER	2"	1/2"	1/2"	
P-5	ELEC. WATER CLOSET	1 1/4"	1/2"		FLOOR DRAIN WASTE
P-6	TRIPLE SINK	1 1/2"	1/2"	1/2"	



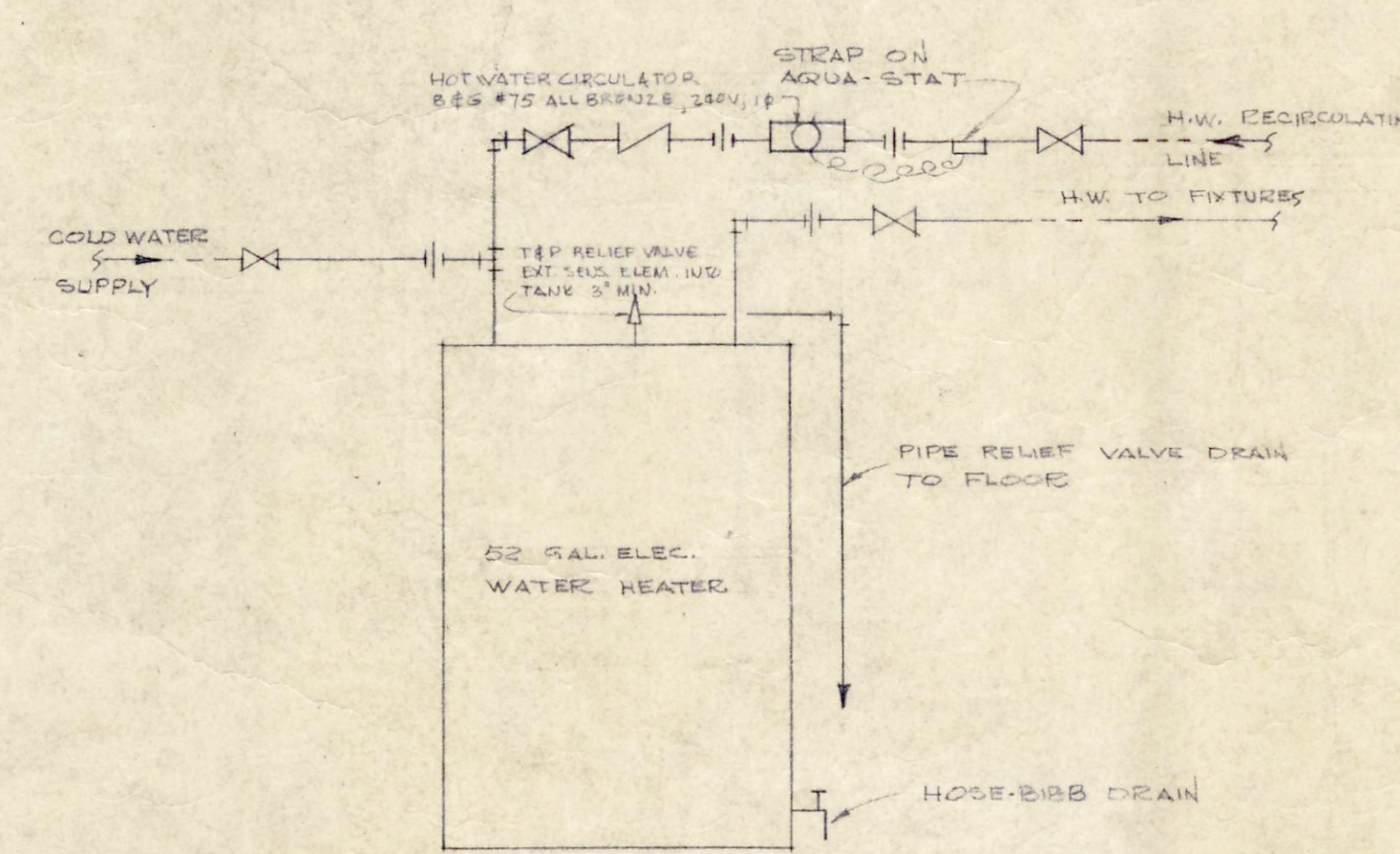
TILE FIELD
SCALE 1"=10'



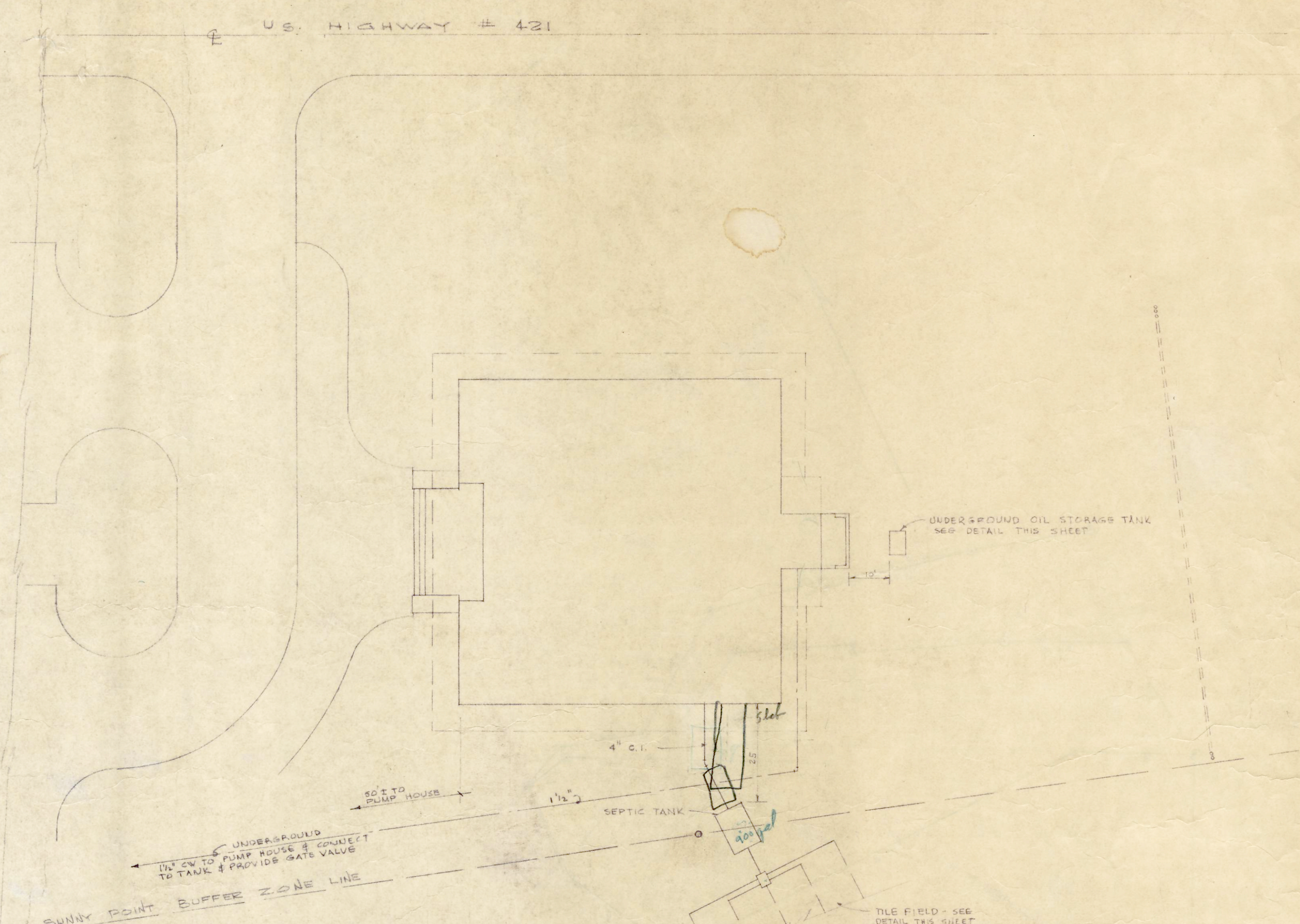
DISTRIBUTION BOX DETAIL
3/4"=1'-0"



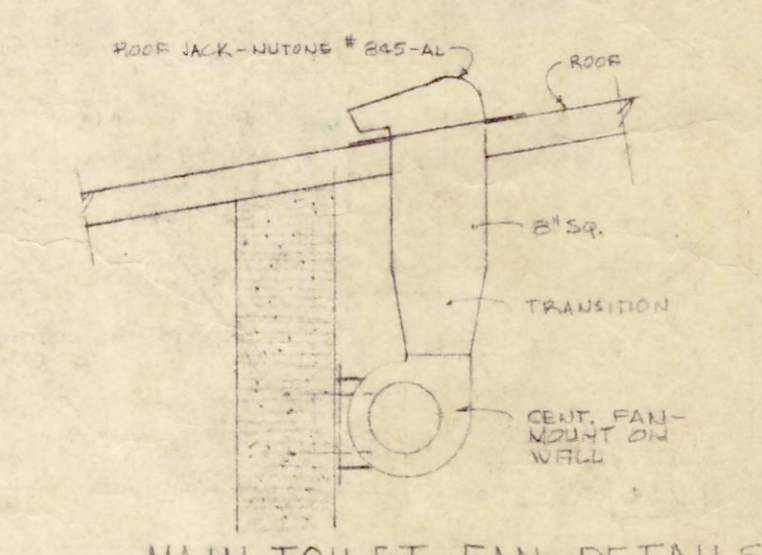
UNDERGROUND OIL TANK DETAIL
SCALE 3/4"=1'-0"



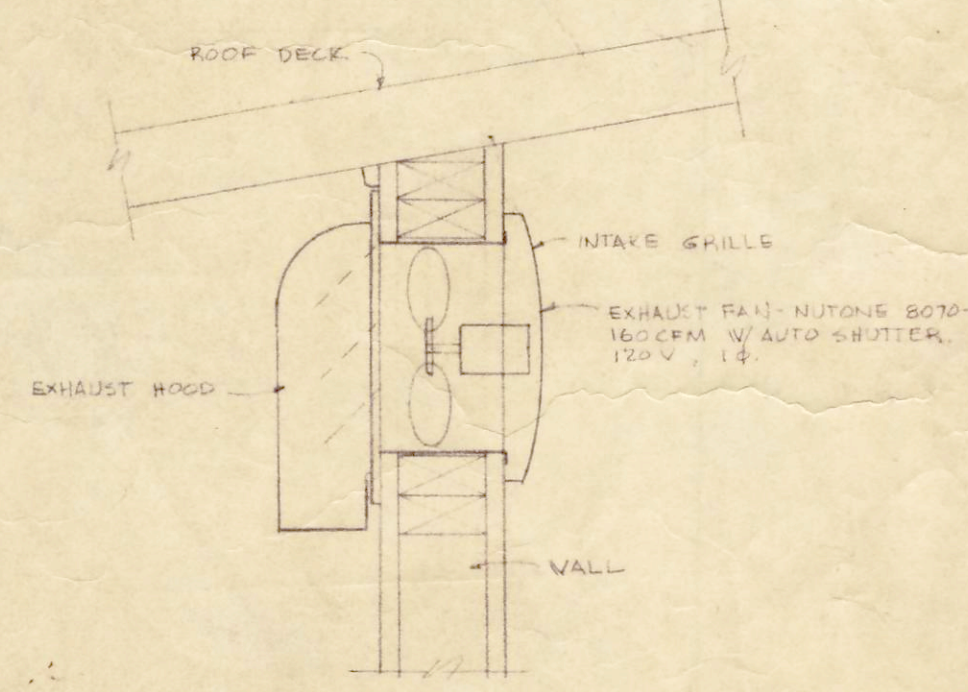
HOT WATER HEATER DETAIL
SCHEMATIC



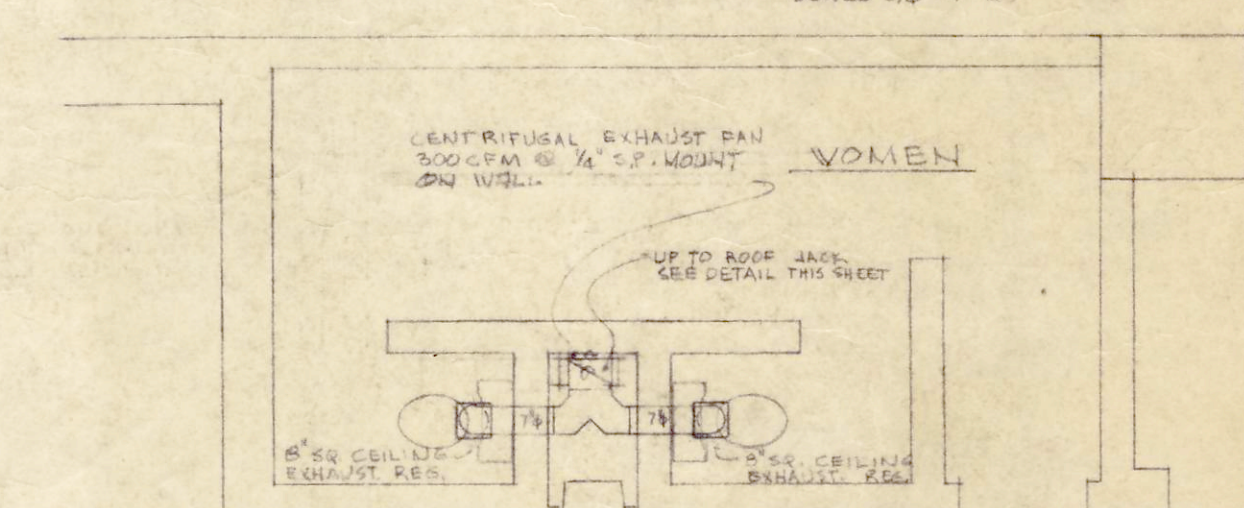
MECHANICAL SITE PLAN
1"=20'-0"



MAIN TOILET FAN DETAILS
SCALE 3/4"=1'-0"



STAFF TOILET EXHAUST-FAN
SCALE 1/2"=1'-0"

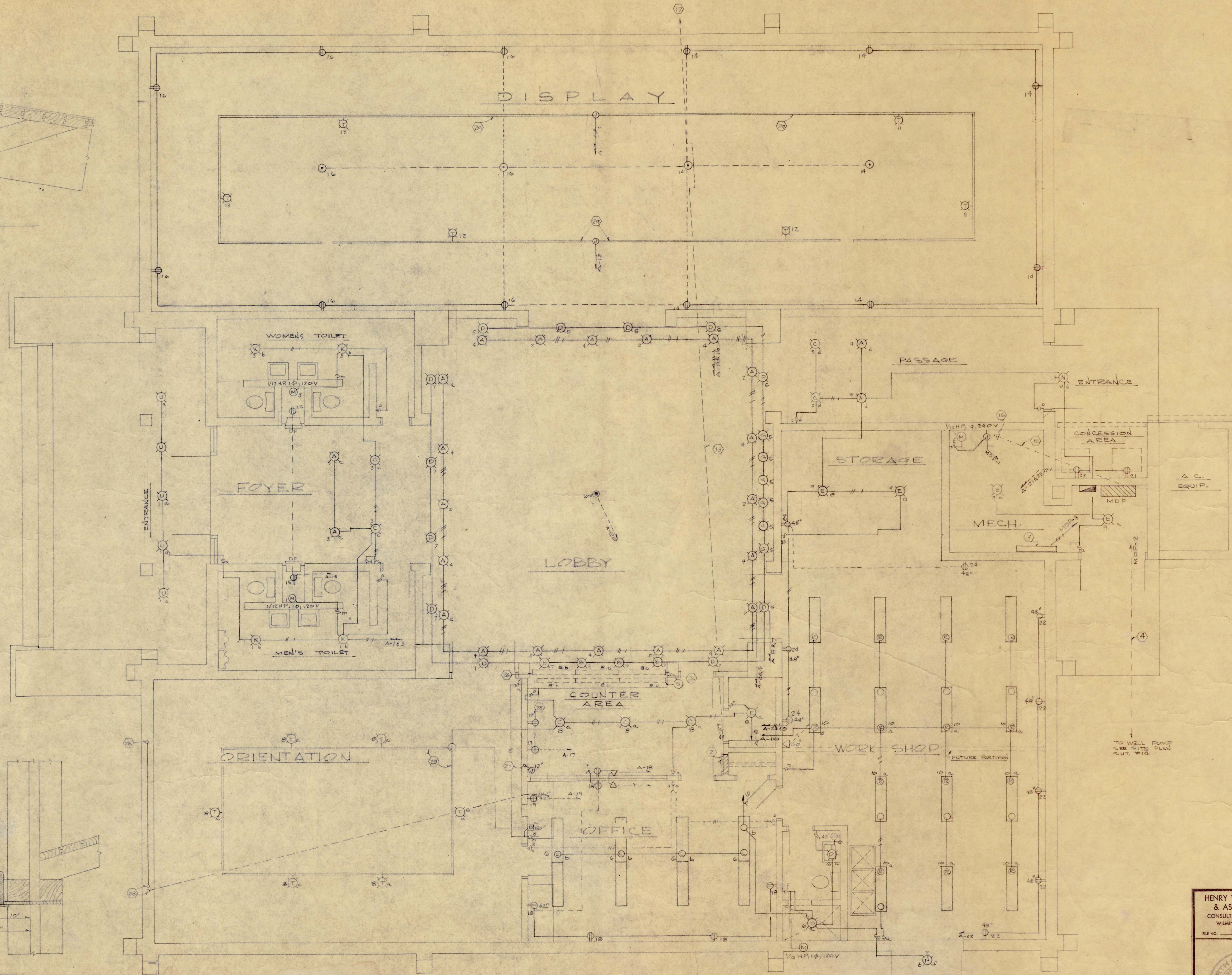
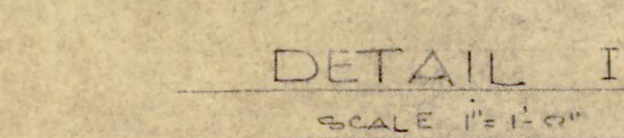
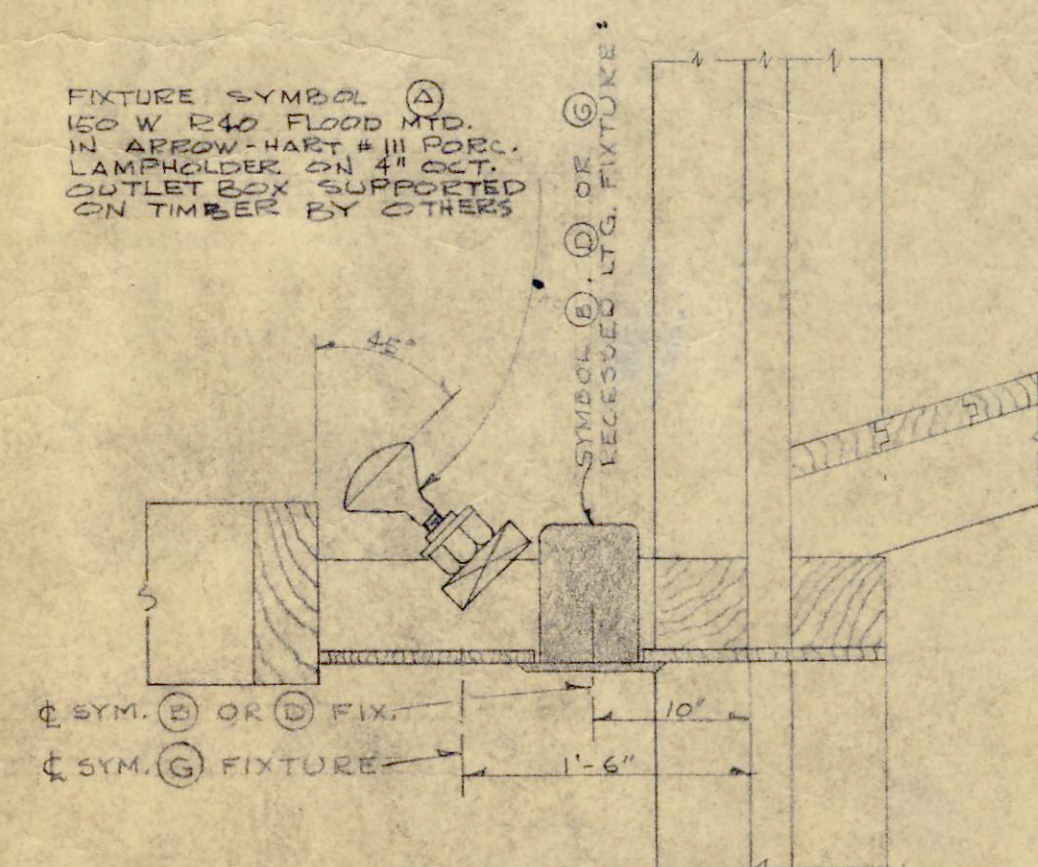
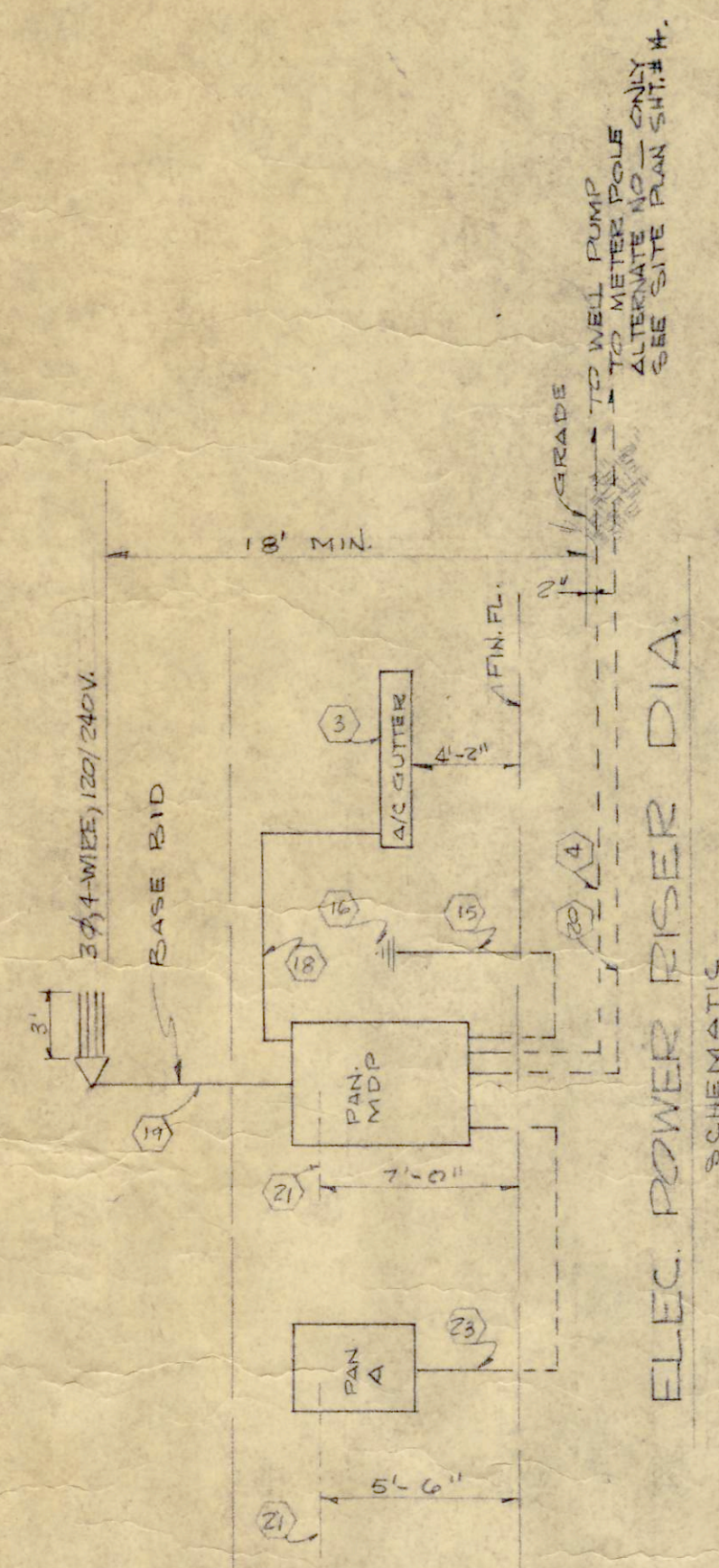
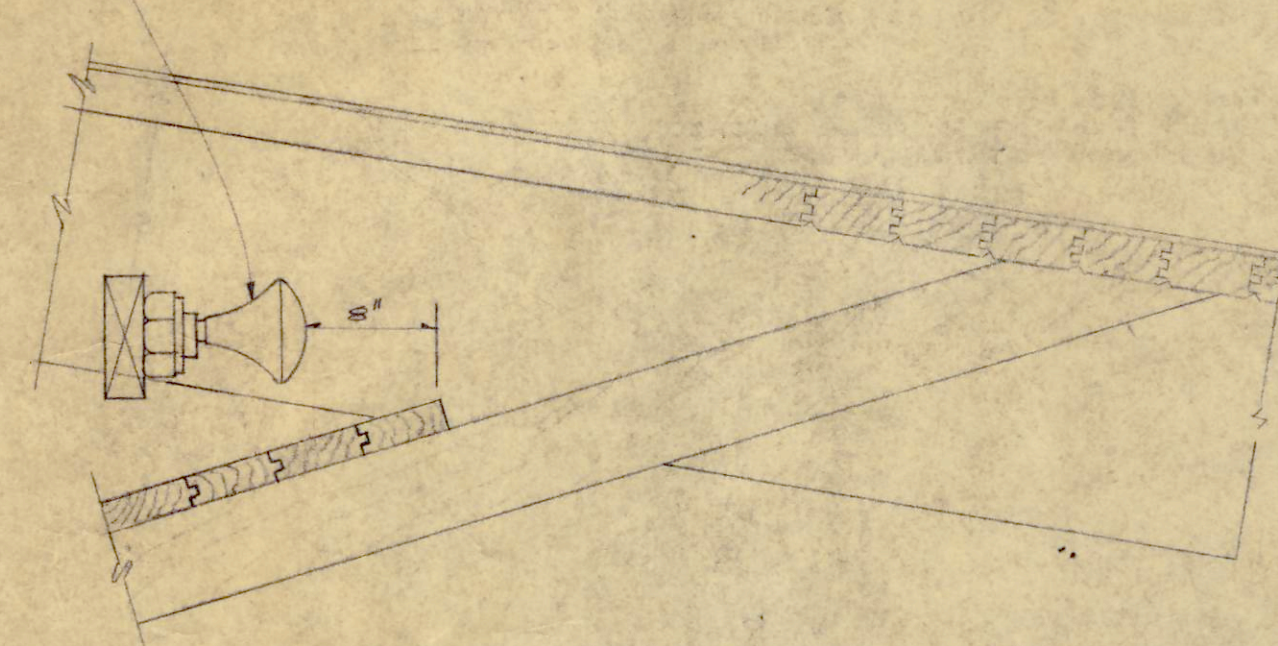
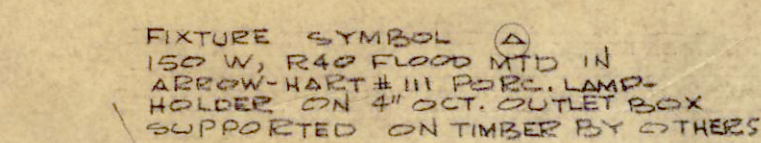


MAIN TOILET EXHAUST SYSTEM
SCALE 1/4"=1'-0"

HENRY VON OESSEN
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WILMINGTON, N. C.

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CHECKED BY J.V.O.
DATE 12-1-64
SHEET NO. 12

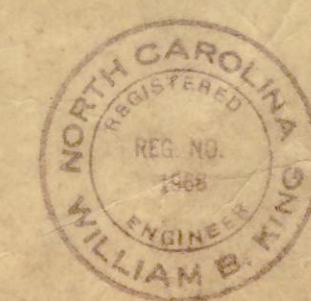
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812 SOUTH SEVENTEENTH STREET
WILMINGTON, NORTH CAROLINA

[illegible]

BALLARD, McKIM, & SAWYER, AIA
612 SOUTH SEVENTEENTH STREET

HENRY VON OESSEN
& ASSOCIATES
CONSULTING ENGINEERS
WILMINGTON, N. C.
FILE NO. 112

FILE NO. 100-10100



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J. N.
CHECKED BY:
W. B. K.
DATE
6-24-64
SHEET NO.

13

PANEL MDP, 3/8, 4 WIRE 120/240V, S/N BAR, LUGS ONLY, 400A MAINS, SWITCH AND FUSE TYPE, SURF. MTD. TYPE FOP										
CIR. NO.	CONNECTED TO	WATTS LOAD	PHASE			HI-LEG	BR. SWITCH	NO. WIRES	COND. SIZE	TYPE
			A	B	C					
1	ELEC. HOT WATER HEATER & CIRCULATOR PUMP	2500	1250		1250	30	15	2	2#10TW	3/4"
2	WELL PUMP MOTOR (2 HP MAX.)	2880	1440		1440	30	70.0	3	3#12TW/N	3/4"
3	A/C WIRING CUTTER	19,900	6633	6633	6634	100	FUSETRON 3	3#12TW	1 1/2"	
4	SPARE					100	NONE	3		
5	PANEL A	32,660	16,220	16,440		200	150	2	2#2/0 & 1#1 TW	1 1/2"
	TOTAL CONNECTED	57,940	28,540	28,674	9324					
NOTE:										
1. PROVIDE THIS PANEL WITH AN AUXILIARY COPPER GROUNDING BAR SECURELY AND PERMANENTLY ATTACHED TO THE CABINET AND PROPERLY IDENTIFIED WITH GREEN MARKING. THIS AUXILIARY GROUNDING BAR SHALL BE PROVIDED WITH A MINIMUM OF 8 BONDING SCREWS AND/OR LUGS FOR #10 THROUGH #4 CONDUCTORS.										

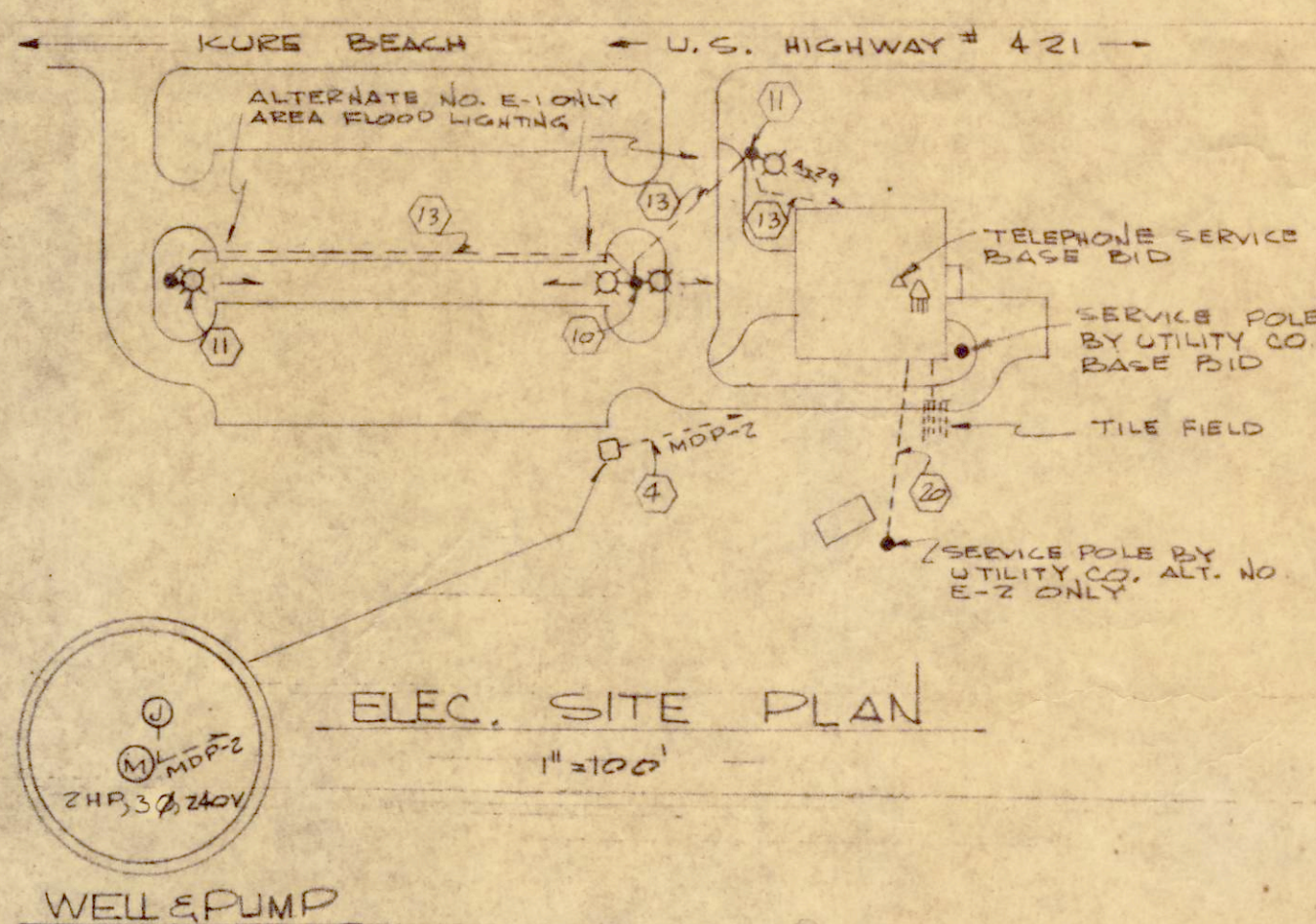
PANEL A, 1/8, 3-WIRE 120/240V, S/N BAR, LUGS ONLY, 225A MAINS, CIR. BKR. TYPE, FLUSH MTD. TYPE NQ08										
CIR. NO.	CONNECTED TO	WATTS LOAD	PHASE			CIR. BKR.	NO. WIRES	COND. SIZE	TYPE	SIZE
			A	B	C					
1	LTS. EXTERIOR ENT., MEN'S TOILET & VENT. FAN TOILET	1400	1400			Q LAG 1	20	2#12TW	3/4"	
2	DOVE LTS. (UP) LOBBY	1500	1500			Q LAG 1	20	2#12TW	3/4"	
3	LTS. WOMEN'S TOILET, FOYER AND VENT. FAN WOMEN'S TOILET	1250		1250		Q LAG 1	20	2#12TW	3/4"	
4	DOVE LTS. (UP) LOBBY	1500	1500			Q LAG 1	20	2#12TW	3/4"	
5	LTS. DOORWAYS, SEATS, AND WALL WASHERS	1350	1350			Q LAG 1	20	2#12TW	3/4"	
6	LTS. OFFICE AND WORKSHOP TOILET AND TOILET RECEPT.	1430	1430			Q LAG 1	20	2#12TW	3/4"	
7	LTS. DOORWAYS, SEATS, AND COUNTER	1200		1200		Q LAG 1	20	2#12TW	3/4"	
8	LTS. COUNTER AREAS AND AUDITORIUM	1750		1750		Q LAG 1	20	2#12TW	3/4"	
9	LTS. PASSAGE, REAR ENT. WORKSHOP ENT. AND MECH. EQUIPMENT ROOM, AND WORKSHOP STORAGE	1200	1200			Q LAG 1	20	2#12TW	3/4"	
10	LTS. WORKSHOP	1400	1400			Q LAG 1	20	2#12TW	3/4"	
11	LTS. DISPLAY AREA	1800		1800		Q LAG 1	20	2#12TW	3/4"	
12	LTS. DISPLAY AREA	1800		1800		Q LAG 1	20	2#12TW	3/4"	
13	LTS. DISPLAY AREA	1800	1800			Q LAG 1	20	2#12TW	3/4"	
14	RECEPTS. DISPLAY AREA	(6) 1440	1440			Q LAG 1	20	2#12TW	3/4"	
15	RECEPTS. FOYER (EDF)	(2) 1000		1000		Q LAG 1	20	2#12TW	3/4"	
16	RECEPTS. DISPLAY AREA	(8) 1440		1440		Q LAG 1	20	2#12TW	3/4"	
17	RECEPTS. COUNTER AREA (P.A. SYSTEM)	(4) 720	720			Q LAG 1	20	2#12TW	3/4"	
18	RECEPTS. COUNTER AREA AND OFFICE	(6) 1080	1080			Q LAG 1	20	2#12TW	3/4"	
19	RECEPTS. OFFICE (PICTURE PROJECTOR)	(1) 1800		1800		Q LAG 1	20	2#12TW	3/4"	
20	RECEPTS. LOBBY	(1) 180		180		Q LAG 1	20	2#12TW	3/4"	
21	RECEPTS. CONCESSION AREA	(1) 500	500			Q LAG 1	20	2#12TW	3/4"	
22	RECEPTS. WORKSHOP	(5) 900	900			Q LAG 1	20	2#12TW	3/4"	
23	RECEPTS. CONCESSION AREA	(1) 500		500		Q LAG 1	20	2#12TW	3/4"	
24	RECEPTS. WORKSHOP	(4) 720		720		Q LAG 1	20	2#12TW	3/4"	
25	SPACE ONLY					Q LAG 1				
26	SPACE ONLY					Q LAG 1				
27	SPACE ONLY					Q LAG 1				
28	SPACE ONLY					Q LAG 1				
29	EXTERIOR FLOODLIGHTS	3000	1500	1500		Q LAG 2	20	2#10TW/N	3/4"	
30	SPACE ONLY					Q LAG 2				
	TOTAL CONNECTED LOAD	32,660	16,220	16,440						
NOTE:										
1. CIRCUIT BREAKERS IN THIS PANEL SHALL BE RATED 120/240V.										
2. PROVIDE THIS PANEL WITH AN AUXILIARY COPPER GROUNDING BAR SECURELY AND PERMANENTLY ATTACHED TO THE CABINET AND PROPERLY IDENTIFIED WITH GREEN MARKING. THIS AUXILIARY GROUND BAR SHALL BE PROVIDED WITH A MINIMUM OF 6 BONDING SCREWS FOR #10 CONDUCTORS.										

SYMBOL	NOTES	DESCRIPTION
①	SEE DETAIL 1 FOR MTD. IN COVE.	
②	INSTALL PANEL A INSIDE CABINET PROVIDED BY OTHERS, SEE ARCH. DWG.	
③	6" W X 6" H X 1/2" L GALVANIZED SHEET STEEL WIRING CUTTER W/SCREW FASTENED COVER, FOR A/C EQUIPMENT AND FURNACE	
④	3#12 TW/N & 1#12 TW (GREEN) BOND-3/4" PVC CONDUIT. GROUND BONDING CONDUCTOR AT SWITCH AND PANEL MDP.	
⑤	DELETED	
⑥	DELETED	
⑦	DELETED	
⑧	DELETED	
⑨	DELETED	
⑩	TWO STONCO #CLD-3650, MOGUL BASE, W.P., LAMP HOLDERS MTD. ON STONCO #19-A SPLICE BOX ATTACHED TO TOP OF GENERAL ELECTRIC, 25 FT. LIGHT-DUTY, STEEL, HINGED POLE #35-110734-02. CONTRACTOR SHALL FURNISH AND DELIVER TO OWNER ONE LOWERING WINCH AND CHAIN. CONTRACTOR SHALL ALSO FURNISH AND INSTALL CONCRETE MTD. BASE AND ANCHOR BOLTS, AND TWO, 230V, 750W MOGUL BASE, SELF-BALLASTED MERCURY LAMP RADIANT LAMP CORPORATION #750/R6098/FL. THE POLE SHALL BE PAINTED WITH ONE COAT OF "RUSTOLUM" AND TWO COATS OF WEATHERPROOF ALUMINUM PAINT JUST PRIOR TO ERECTION.	
⑪	ONE STONCO #CLD-3650, MOGUL BASE, W.P., LAMP HOLDER MTD. ON STONCO #22 SPLICE BOX ATTACHED TO TOP OF GENERAL ELECTRIC, 25 FT. LIGHT-DUTY, STEEL, HINGED POLE #35-110734-02. CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE MTD. BASE AND ANCHOR BOLTS AND ONE, 230V, 750W, MOGUL BASE, SELF-BALLASTED, MERCURY LAMP, RADIANT LAMP CORPORATION #750/R6098/FL. THE POLE SHALL BE PAINTED WITH ONE COAT OF "RUSTOLUM" AND TWO COATS OF WEATHERPROOF ALUMINUM PAINT JUST PRIOR TO ERECTION.	

SYMBOL	NOTES	DESCRIPTION
⑫	DELETED	
⑬	2#10TW/N & 1#10TW (GREEN) BOND 3/4" PVC CONDUIT. ATTACH BONDING CONDUCTOR SECURELY TO EACH STEEL LT. POLE & TO CABINET AT PANEL A.	
⑭	DELETED	
⑮	1#1/0 TW (GREEN) 1" CONDUIT.	
⑯	GROUND TO COLD WATER PIPE WITH APPROVED GROUNDING CLAMP, RACEWAY CONTAINING GROUNDING CONDUCTOR SHALL BE GROUNDED AT SAME POINT	
	ALSO, GROUNDING POINT SHALL BE VISIBLE AND ACCESSABLE UPON COMPLETION OF CONSTRUCTION.	
⑰	TO FIRST FLOODLIGHT, SEE ELEC. SITE PLAN. ELEC. ALTERNATE E-1 ONLY.	
⑱	3#1 & 1#3 TW 1 1/2" CONDUIT.	
⑲	2#300 MCM & 2 # 4/0 TW/N-2 1/2" CONDUIT. MAST TYPE SERVICE ENTRANCE.	
⑳	2#350 MCM AND 2#250MCM "VULKENE" INSULATION AND 1#2 TW (GREEN) BONDING CONDUCTOR - 3" PVC CONDUIT. ALTERNATE E-2 ONLY.	
㉑	CENTER LINE OF TOP CIRCUIT BREAKER, OR SWITCH, OPERATING HANDLE.	
㉒	DELETED	
㉓	2#2/0 & 1#1 TW 1 1/2" CONDUIT.	
㉔	SEE DETAIL 11 FOR MTD. AND LOCATION	
㉕	EXTEND TO TWO DUPLEX RECEPTACLES MTD. INSIDE AT EACH END OF DISPLAY CASE.	
㉖	MT. DUPLEX RECEPTACLE INSIDE DISPLAY CASE HERE.	
㉗	EXTEND EMPTY 3/4" CONDUIT UP WALL INTO DUCT SPACE AND TERMINATE FOR FUTURE P.A. SYSTEM.	
㉘	EXTEND EMPTY 3/4" CONDUIT UP MASONRY WALL AND TERMINATE INSIDE STUD WALL FOR FUTURE MOTION PICTURE PROJECTOR SPEAKER CIRCUIT.	
㉙	LIGHTOLIER LITESPAR TRACK SURFACE MTD. AGAINST UNDERSIDE OF ROOF DECK AND DUCT SPACE, INSTALLED IN CONTINUOUS LENGTHS.	
	WHERE TRACK CROSSES ROOF RAFTER NOTCH RAFTER TO CLEAR TRACK 1/4" ON ALL THREE SIDES.	

SYMBOL	LEGEND	DESCRIPTION
⊗	OVERHEAD OUTLET. SEE FIXTURE SCHEDULE. "A" INDICATES SWITCH CONTROLLING.	
□	PENDENT MT. FLUORESCENT FIXTURE, SEE FIXTURE SCHEDULE.	
⊕	SINGLE POLE FLUSH SWITCH, 15A, 120/277 AC ONLY, ARROW-HART #1891-SL W/ BELL ELECTRIC WOOD VENEERED COVER PLATES. "A" INDICATES OUTLETS CONTROLLED. MTD. HT. 50" UNLESS OTHERWISE NOTED.	
⊕	3-WAY FLUSH SWITCH, 15A, 120/277 AC ONLY, ARROW-HART #1893-SL W/BELL ELECTRIC WOOD VENEERED COVER PLATES. MTD. HT. 50" UNLESS OTHERWISE NOTED.	
⊕	DUPLEX GROUNDING RECEPTACLE, 15A, 125V, ARROW-HART #5262, W #98101 BROWN STEEL PLATE. MTD. HT. 12" UNLESS OTHERWISE NOTED.	
⊕	SINGLE GROUNDING RECEPTACLE, 15A, 125V, ARROW-HART #5261, W #98091 BROWN STEEL PLATE. MTD. HT. 12" UNLESS OTHERWISE NOTED.	
⊕	FLUSH FLOOR DUPLEX GROUNDING RECEPTACLE, 15A, 125V, LEW ELECTRIC FITTINGS COMPANY #632 DFB.	
⊕	FLUSH WALL TELEPHONE OUTLET W/BELL ELECTRIC WOOD VENEERED COVER PLATE. MTD. HT. 12" UNLESS OTHERWISE NOTED.	
⊕	FLUSH MTD. DIMMER CONTROL, AUTOTRANSFORMER TYPE, 1/8, 1800W, SUPERIOR #WBD 1800-KQ-P18G	
⊕	MOTOR DISCONNECT SWITCH W/THERMAL OVERLOAD RELAY, SQUARE D, CLASS 2510, TYPE AF-18.	
⊕	MOTOR, HP, PHASE AND VOLTAGE INDICATED.	
⊕	SYMBOL FOR SPECIAL NOTE, SEE NOTES.	
---	RACEWAY CONCEALED IN WALLS, CEILINGS, COVE, OR ROOF DECK.	
---	RACEWAY CONCEALED IN FLOOR, OR BELOW GRADE. ALL RACEWAYS PLACED IN CONCRETE FLOORS SHALL BE LOCATED IN SLAB ABOVE VAPOR BARRIER OR ENGAGED IN 2" CONCRETE IF LOCATED BELOW VAPOR BARRIER.	
---	3/4" EMPTY TELEPHONE CONDUIT.	
---	EXTEND RACEWAY TO PANEL, OR CABINET, INDICATED AND CONNECT CONDUCTORS TO CIRCUITS INDICATED.	
---	ELECTRICAL DISTRIBUTION PANEL, SEE PANEL SCHEDULE.	
---	SURFACE MTD. TELEPHONE CABINET, 18" W X 24" H X 6" D WITH INSULATING BACK BOARD.	
⊕	FLUSH JUNCTION BOX.	

SYM.	MAX. WATTS	NO. SIZE LAMPS	DESCRIPTION	MANUFACTURER	MTG. HGT.	REMARKS
A	150	150W R-40 FLOOD	PORC. LAMP HOLDER MTD. ON OUTLET BOX	ARROW-HART #111	SEE DET. #1 & 11	
B	75	75W R-30 SPOT	ROUND RECESSED, 2" APERTURE, SAT. WHT. FIN.	VIRIDEN #V-122 TRIM	SEE DET. #11	
C	150	150W R-40 FLOOD	ROUND, RECESSED, OPEN, SAT. WHT. FIN.	VIRIDEN #V-122 TRIM	RECESSED	
D	150	150W R-40 FLOOD	ROUND, RECESSED, LOUVERED, SAT. WHITE FIN.	VIRIDEN #V-122 TRIM	SEE DET. #11	
E	100	100W IF	PROC. LAMP HOLDER	ARROW-HART #111	ON CEILING	
F	75	75W R-30 FLOOD	RECESSED, EYEBALL, LOUVERED, SAT. WHT. FIN.	VIRIDEN #V-122 TRIM	SEE DET. #11	
G	200	1 - 200W IF	SQ. RECESSED, FRESNEL LENS	VIRIDEN #V-122 TRIM	RECESSED	
H	100	4-F40T12 CW/RS	8 FT. LOUVERED, FLUOR., PEND. MTD.	LITHONIA #81-SD-240-M	8'-0" ABV. F.F.	
I	100	100W IF	CST. AL. BKT. LT. WHT. GLASS GLOBE	VIRIDEN #V-7010	ABV. DOOR	
J	100	100W IF	WHT. PORC. BASE W/WHT. GLASS GLOBE	ALABAX #AL-2301	ON CEILING	
K	100	100W IF	WHT. PORC. BKT. W/WHT. GLASS GLOBE	ALABAX #AL-2303	6" ABV. MIRROR	
L	100	2-F40T12 CW/RS	INDUSTRIAL FLUOR. 48", W/REFLECTOR	QUAKER CITY ELEC. #2401DXR	8'-0" ABV. F.F.	
M	50	1-F40T12 CW/RS	SINGLE-TUBE STRIP LT., FLUOR.	QUAKER CITY ELEC. #S140-R	SEE REMARKS	MTD. UNDER BOTTOM OF COUNTER
N	150	150W R-40 SPOT	DEMOUNTABLE TRACK FLOODLIGHT	LIGHTOLIER #7538	ON TRACK	
O	150	150W R-40 FLOOD	BULLET, CAST AL., AL. FIN.	MOLDCAST #M-130	ON BEAM	SEE ARCH. DWG.



VISITOR CENTER MUSEUM
FORT FISHER
CODE NO. 66335

BALLARD, McKIM, & SAWYER, AIA
612 SOUTH SEVENTEENTH STREET
WILMINGTON, NORTH CAROLINA

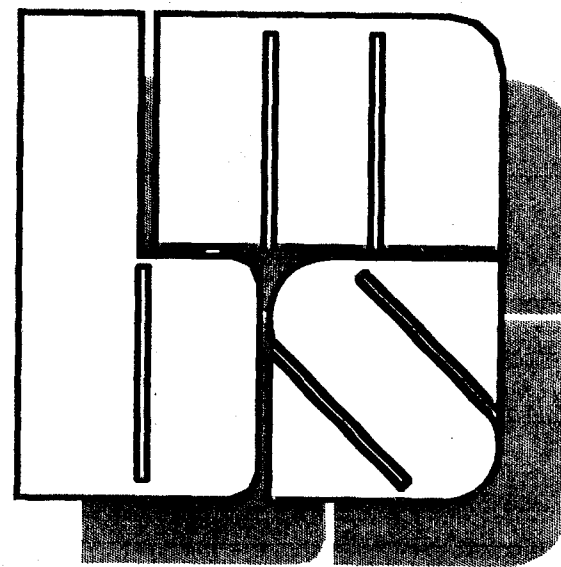
HENRY VON OESSEN
& ASSOCIATES
CONSULTING ENGINEERS
WILMINGTON, N. C.
FILE NO. 1112



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J.N.
CHECKED BY:
W.D.
DATE:
8-21-64
SHEET NO.

A.D.A. AND CODE RENOVATIONS: VISITOR CENTER MUSEUM @ FORT FISHER NEW HANOVER COUNTY, NORTH CAROLINA

CODE 49614 ITEM 4627 ID #4896144627A



BMS Architects, PC

514 Market Street PO Box 3667
Wilmington, North Carolina 28406
Phone (910) 762-2621

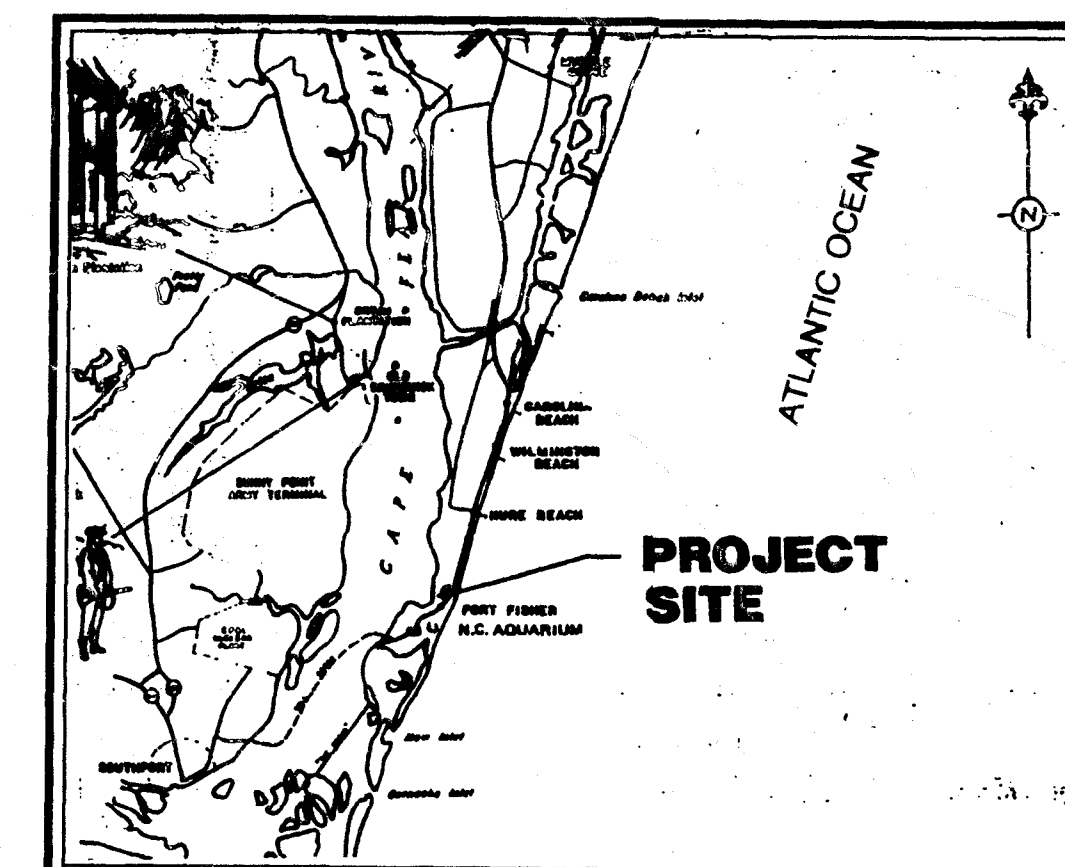
Structural:
McFadyen / O'Briant Engineers
Wilmington, North Carolina
(910) 791-4000

Plumbing and Mechanical:
McFadyen / O'Briant Engineers
Wilmington, North Carolina
(910) 791-4000

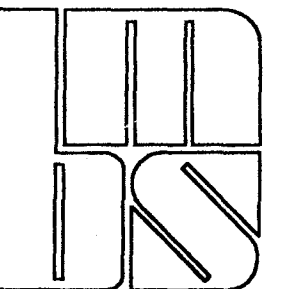
Electrical:
McFadyen / O'Briant Engineers
Wilmington, North Carolina
(910) 791-4000

BUILDING DATA				
Name/Project: A.D.A. and Code Renovations: Fort Fisher Visitor's Center Museum Address: Federal Point Township Proposed Use: Fort Fisher Visitor's Center Museum Owner/Contact/Person: Barbara Hoppe (910) 459-5538 Code Enforcement Jurisdiction: The North Carolina State Construction Office				
DESIGNER OF RECORD				
Discipline:	Name	Firm	License #	Telephone
Architectural:	George C. Hemingway	BMS Architects, PC	7487	(910) 792-2621
Structural:	Rob O'Briant	McFadyen/O'Briant	10123	(910) 791-4000
Plumbing:	Jim Benson	McFadyen/O'Briant	10592	" "
Mechanical:	Jim Benson	McFadyen/O'Briant	10592	" "
Electrical:	Duncan McFadyen	McFadyen/O'Briant	8433	" "
Fire Alarm:	Duncan McFadyen	McFadyen/O'Briant	8433	" "
BUILDING DATA				
Occupancy: () Assembly-small () Business () Educational () Merchandise () Hazardous () Factory-Industrial () Institutional (Unrestrained) () Institutional (Restrained Use Condition) () Residential () Storage				
Mixed Occupancy: No Separation: NA				
Construction Type: I () II () III () IV (P) IV (UP) () V (P) V (UP) () VI (P) () VI (UP) (x)				
Sprinkled: No				
Fire District: No				
Building Height: 23'-4" Number of Stories: 1				
Mezzanine: No				
High Rise: No				
Gross Building Area: 6,240 Existing Sq. Ft. 850 New Sq. Ft.				
Total Gross Area: 6,990 Total Sq. Ft.				
Area Increase: Yes, per 503.3.2 I = 428/100(432/432-0.25) I = 100%				
Total Allowable Area = 10,000 Sq. Ft.				
FIRE RESISTANCE RATINGS				
Exterior Non-Bearing Walls:	Required Hourly Rating	Detail No. & Sheet No.	% of Wall Opening	Design # for Rated Assembly
North (over 30')	NC			
East (20' - 30')	NC			
South (over 30')	NC			
Interior Walls:	Required Hourly Rating	Detail No. & Sheet No.	Design No. for rated Penetrations	Design # for Rated Assembly
Non-Bearing:	NC			
Exit Access:	NA			
Horizontal Exit:	NA			
Ceiling/Floor/Assembly:				
Beams Supporting One Level:	0			
Columns Supporting 1 Level:	0			
Columns Supporting More Than 1 Level:	0			
Ceiling/Roof Assembly:	NA			
Vertical Shafts:	0			
Chases P.E.M.	0			
Mixed Occupancy Separation	N/A			
Tenant Separation	N/A			
*see PME & F Sheets For Penetration System Numbers				
LIFE SAFETY SYSTEM:				
Emergency Lighting and Exit Signs: Yes				
Fire Alarm and Smoke Detection Systems: Yes				
Panic Hardware: Yes				
EXIT REQUIREMENTS:				
Dead end limit - maximum condition: 20 feet				
Travel distance to exit maximum condition: 250 feet				
Number of Exits:				
Number/doors provided 7, number of doors required 2				
Total square foot of floor Sq. Ft. divided by net sq.ft. per occupancy = total number of people on floor				
DESIGN LOADS: SEE S1.0 - STRUCTURAL NOTES				
Roof Live Load:				
Wind:				
Floor:				
Snow:				
Lateral design Control: (Wind, seismic, other)				
Method of Resistance:				
SOIL BEARING CAPACITIES: SEE S1.0 STRUCTURAL NOTES				
Field Test (provide copy of test report): (request for proposal sent, waiting on response)				
Presumptive Bearing Capacity: psf				
Pile size, type and capacity: psf				
PARKING SPACES: All parking is existing (102 spaces w/2 Handicapped) Handicap Spaces: provided (13' wide and R7-8 sign) Special approval by Department of Insurance or by Local Jurisdiction, describe below: NA				
* (SEE ENGINEERING DWGS FOR THE INFO. LISTED BELOW)				
THERMAL ENVELOPE:				
Method of Compliance: Prescriptive Performance Energy Cost Budget				
Roof/Ceiling Assembly (each assembly)				
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 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:				
Walls adjacent to unconditioned space (each assembly)				
Description of Assembly:				
U-Value of 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:				
Floors over unconditioned space (each assembly)				
Description of Assembly:				
U-Value of Total Assembly:				
R-Value of Insulation:				
Floors slab on grade:				
Description of Assembly:				
U-Value of Total Assembly:				
R-Value of Insulation:				
Horizontal / Vertical Requirement:				
Slab heated:				
ELECTRICAL SYSTEM AND EQUIPMENT: SEE E1.0				
Method of Compliance: Prescriptive Performance Energy Cost Budget				
Provide a standard riser diagram which indicates designated points for check metering.				
Provide a standard panel schedule description which identifies different end-use loads.				
Lighting Schedule				
Lamp type required in fixture:				
Number of lamps in fixture:				
Ballast type used in 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 SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT SEE M1.0				
Method of Compliance: Prescriptive Energy Cost Budget				
Thermal Zone: II				
Exterior design conditions:				
Winter dry bulb:				
Summer dry bulb:				
Relative Humidity:				
Building Heat Load:				
Building Cooling Load:				
Mechanical Space 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:				
Chiller:				
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				

INDEX OF DRAWINGS	
CS	Cover Sheet
A1.0	Site Plan
A1.1	Existing Floor Plan
A1.2	Demolition Floor Plan
A1.3	New Floor Plan
A1.4	Reflected Ceiling Plan and Roof Plan
A2.0	Building Elevations
A2.1	Building Sections
A3.0	Room Finish Schedule
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A4.0	Wall Sections
A5.0	Casework
S1.0	Foundation and Framing Plan
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P1.0	Plumbing Demolition Plan
P2.0	New Plumbing Plan
M1.0	Mechanical Demolition Plan
M2.0	New Mechanical Plan
M3.0	Sections and Diagrams
E1.0	General and Demolition Notes
E2.0	Riser Diagrams
E3.0	Demolition Plan
E4.0	New Electrical Plan
E5.0	Lighting plan



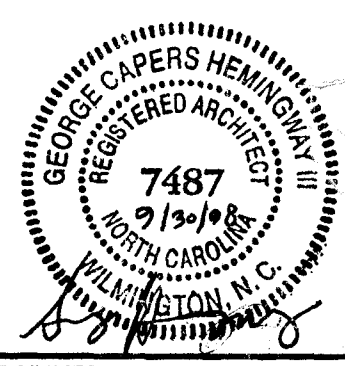
VICINITY MAP



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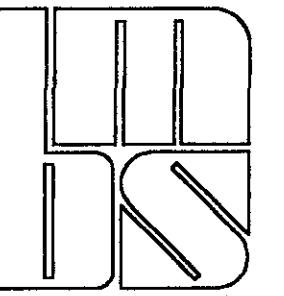
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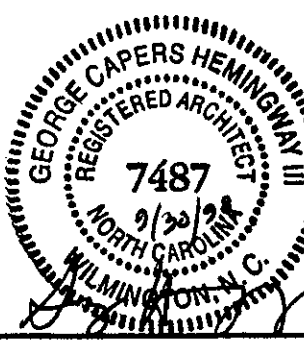
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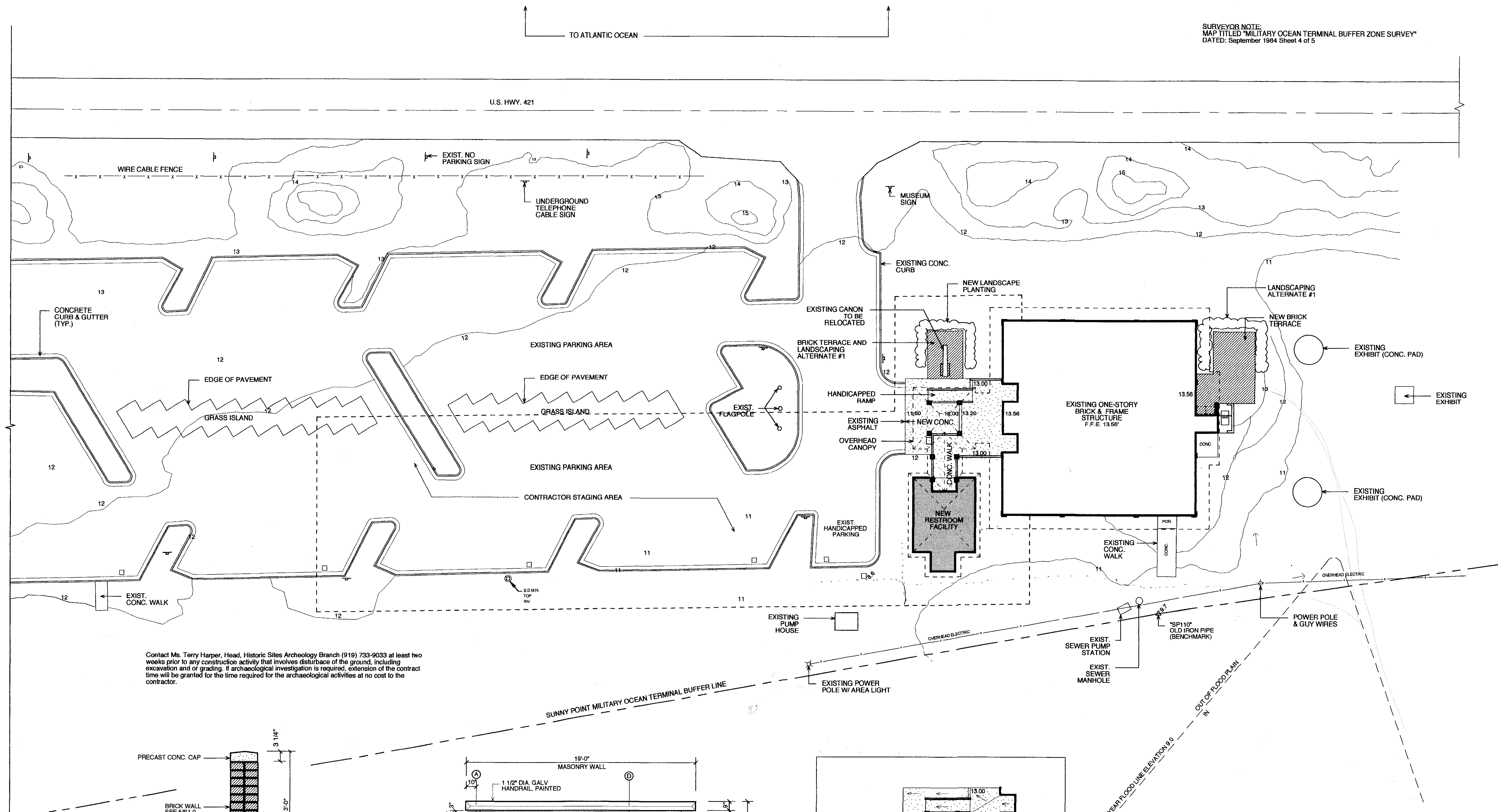
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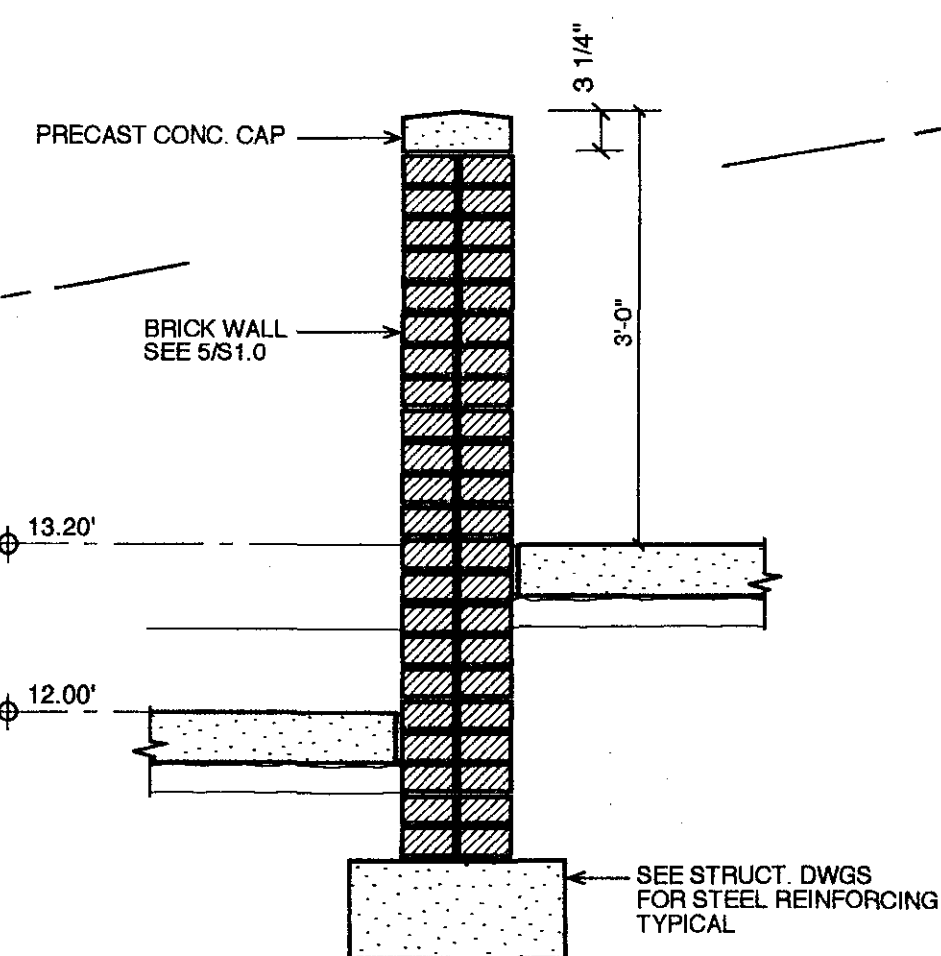
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A1.0

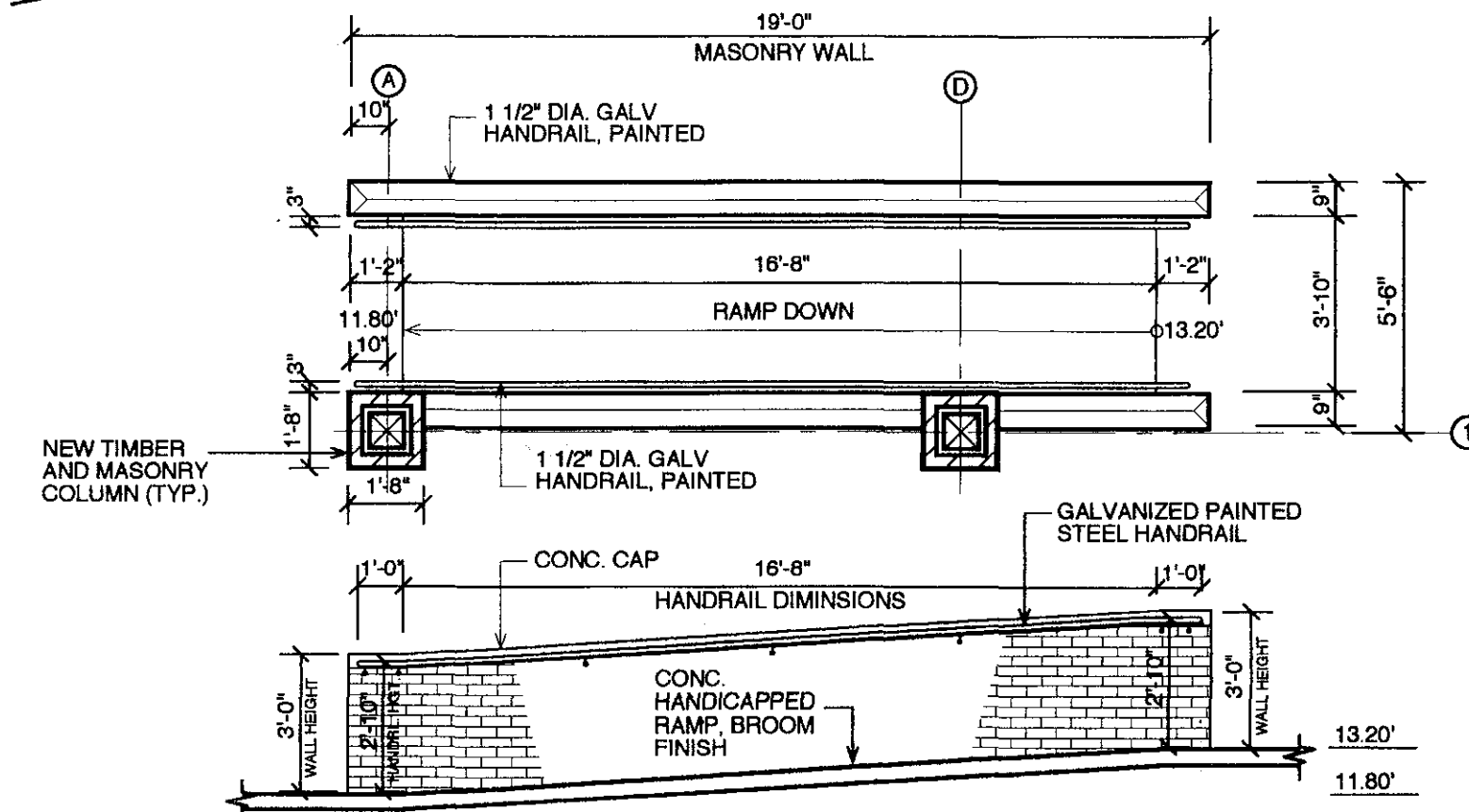
SURVEYOR NOTE:
MAP TITLED "MILITARY OCEAN TERMINAL BUFFER ZONE SURVEY"
DATED: September 1984 Sheet 4 of 5



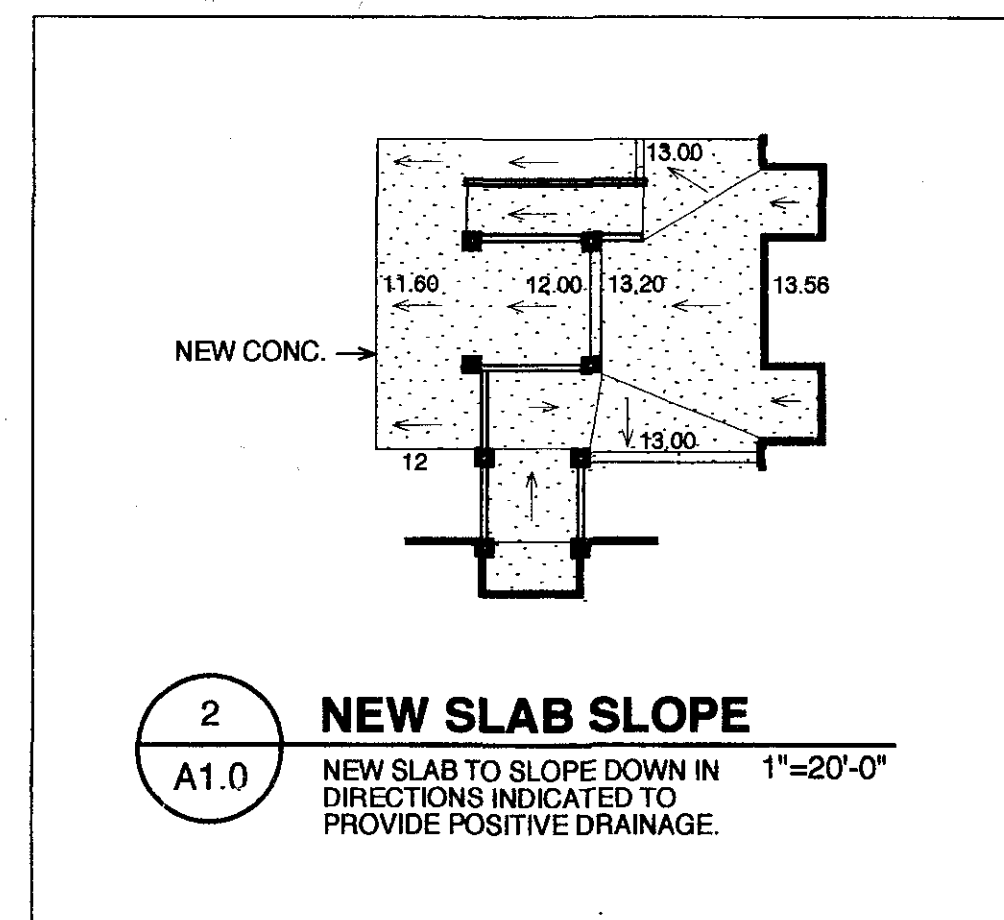
Contact Ms. Terry Harper, Head, Historic Sites Archeology Branch (919) 733-9033 at least two weeks prior to any construction activity that involves disturbance of the ground, including excavation and/or grading. If archaeological investigation is required, extension of the contract time will be granted for the time required for the archaeological activities at no cost to the contractor.



4 SECTION @ PORCH WALL
1/4"=1'-0"



3 SECTION @ HANDICAP. RAMP
1/4"=1'-0"



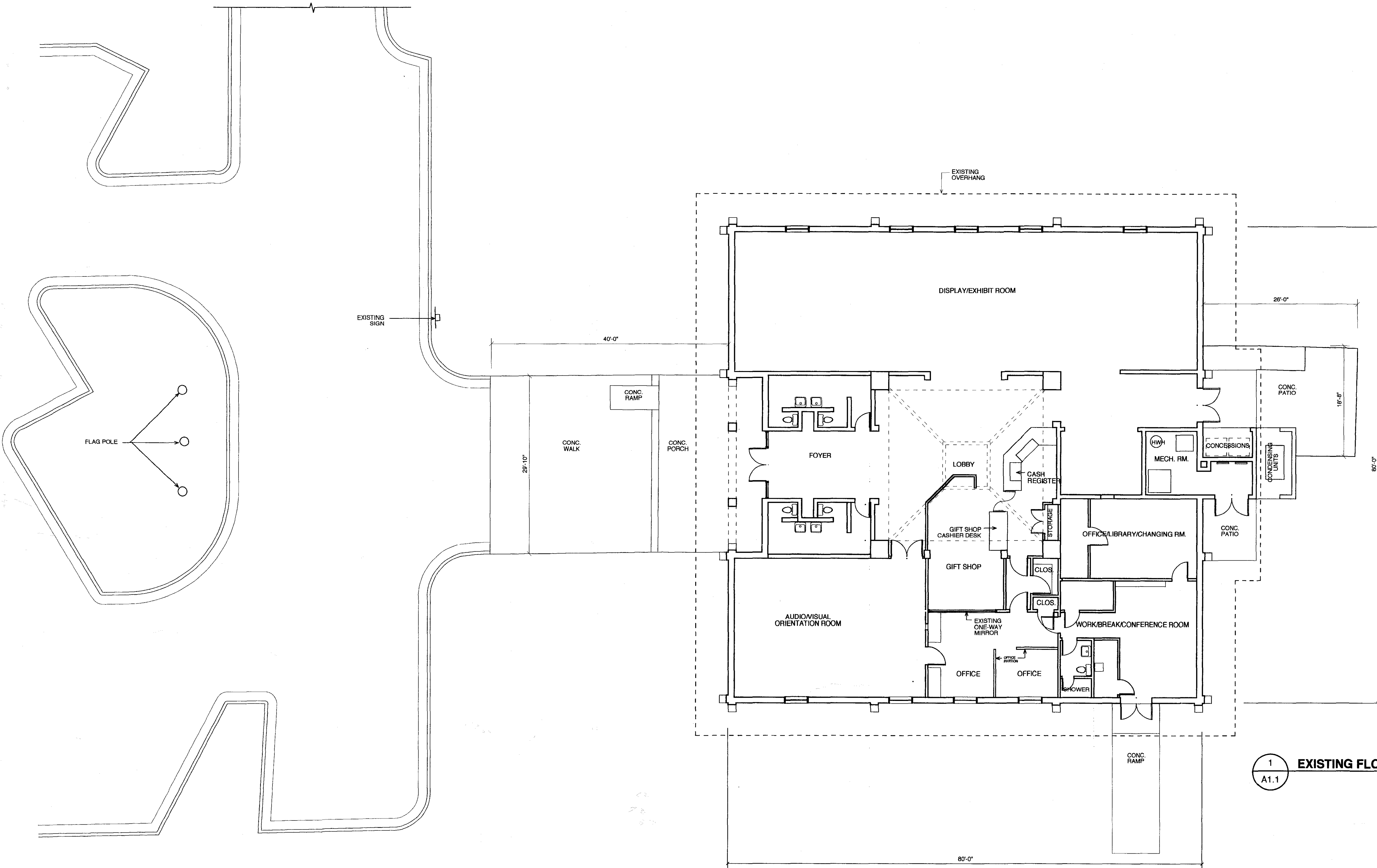
2 NEW SLAB SLOPE
1"=20'-0"

1 SITE PLAN
1"=20'-0"

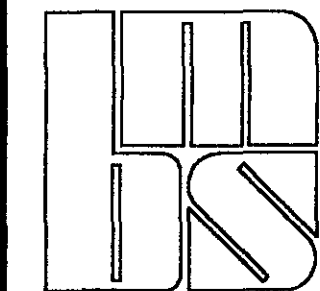
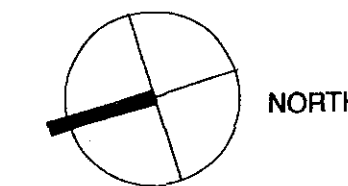
SITE PLAN INFORMATION TAKEN FROM
SURVEY PROVIDED BY:
Sherwin D. Cribb
N.C. Reg. Land Surveyor No. L-1099
Wilmington, N.C. 28412

SURVEYOR NOTE:
100 YEAR FLOOD LINE SKETCHED FROM
FLOOD INSURANCE RATE MAP COMMUNITY
PANEL 3701680126 E REVISED SEPT. 3, 1992

BENCHMARK:
TOP OF OLD IRON PIPE
ELEVATION 9.69



1
A1.1 EXISTING FLOOR PLAN
1/8"=1'-0"



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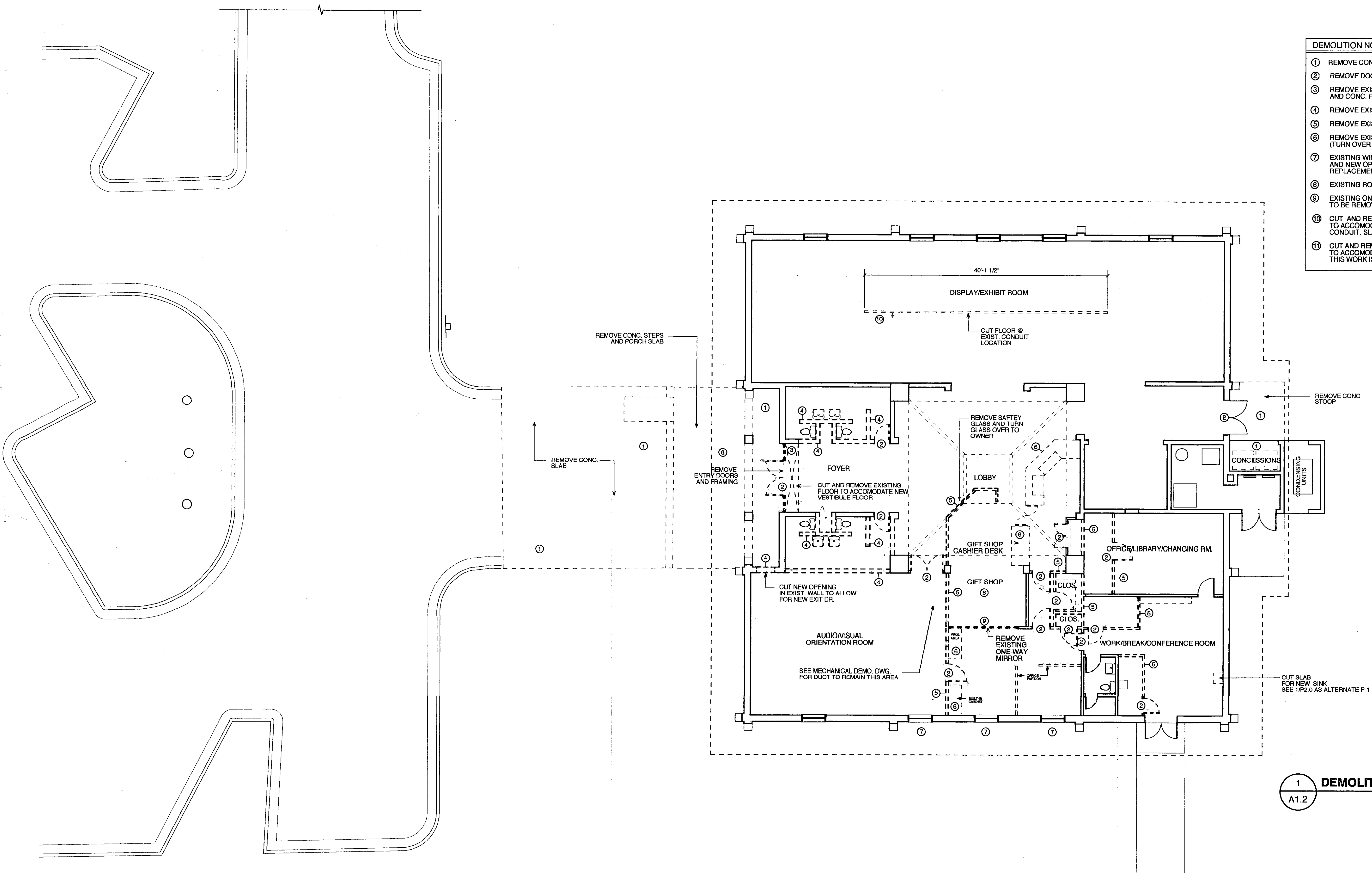
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- DEMOLITION NOTES**
- ① REMOVE CONC. SLAB
 - ② REMOVE DOOR AND FRAME
 - ③ REMOVE EXISTING TERRAZO AND CONC. FLOOR
 - ④ REMOVE EXISTING CMU WALL
 - ⑤ REMOVE EXISTING WOOD STUD WALL
 - ⑥ REMOVE EXISTING CASEWORK (TURN OVER TO OWNER)
 - ⑦ EXISTING WINDOW TO BE REMOVED AND NEW OPENING TO BE CUT FOR REPLACEMENT WINDOW
 - ⑧ EXISTING ROOF DECKING TO BE REMOVED
 - ⑨ EXISTING ONE-WAY MIRROR TO BE REMOVED
 - ⑩ CUT AND REMOVE EXISTING FLOOR SLAB TO ACCOMMODATE NEW ELECTRICAL CONDUIT. SLAB TO REFINISHED.
 - ⑪ CUT AND REMOVE EXISTING FLOOR TO ACCOMMODATE NEW PLUMBING. THIS WORK IS PART OF ALTERNATE P-1

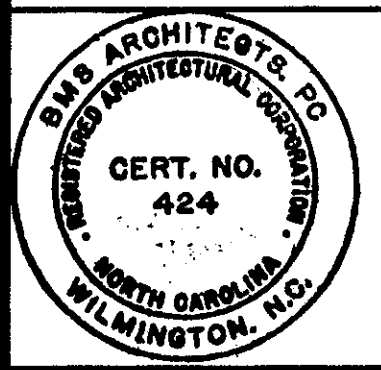
1 DEMOLITION FLOOR PLAN
A1.2
1/8"=1'-0"



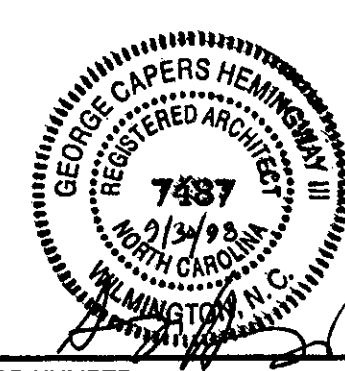
===== WALLS AND ITEMS SHOWN DASHED ARE TO BE REMOVED

SEE P1.0, M1.0, AND E1.0 FOR ADDITIONAL DEMOLITION INFORMATION

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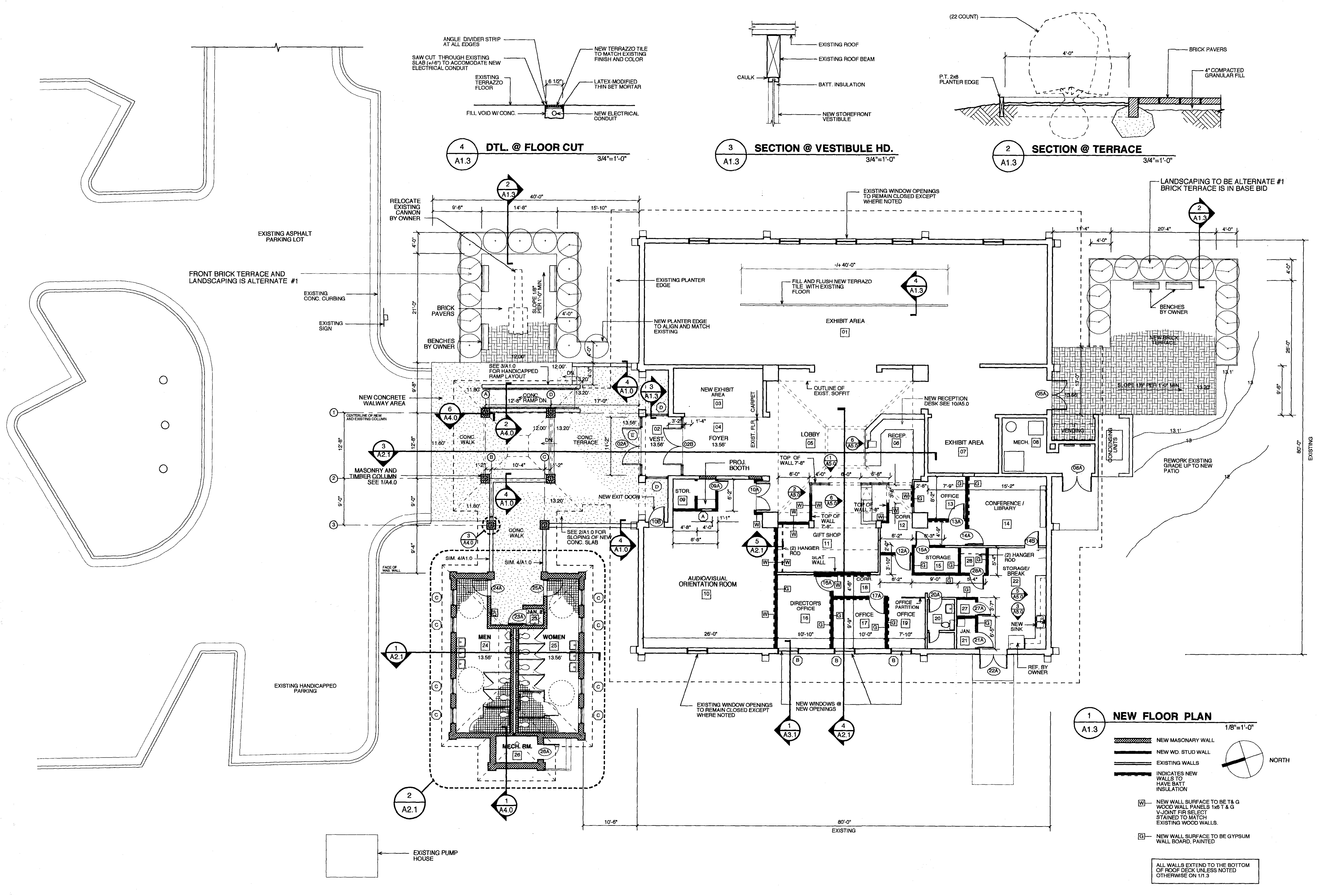
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A1.2



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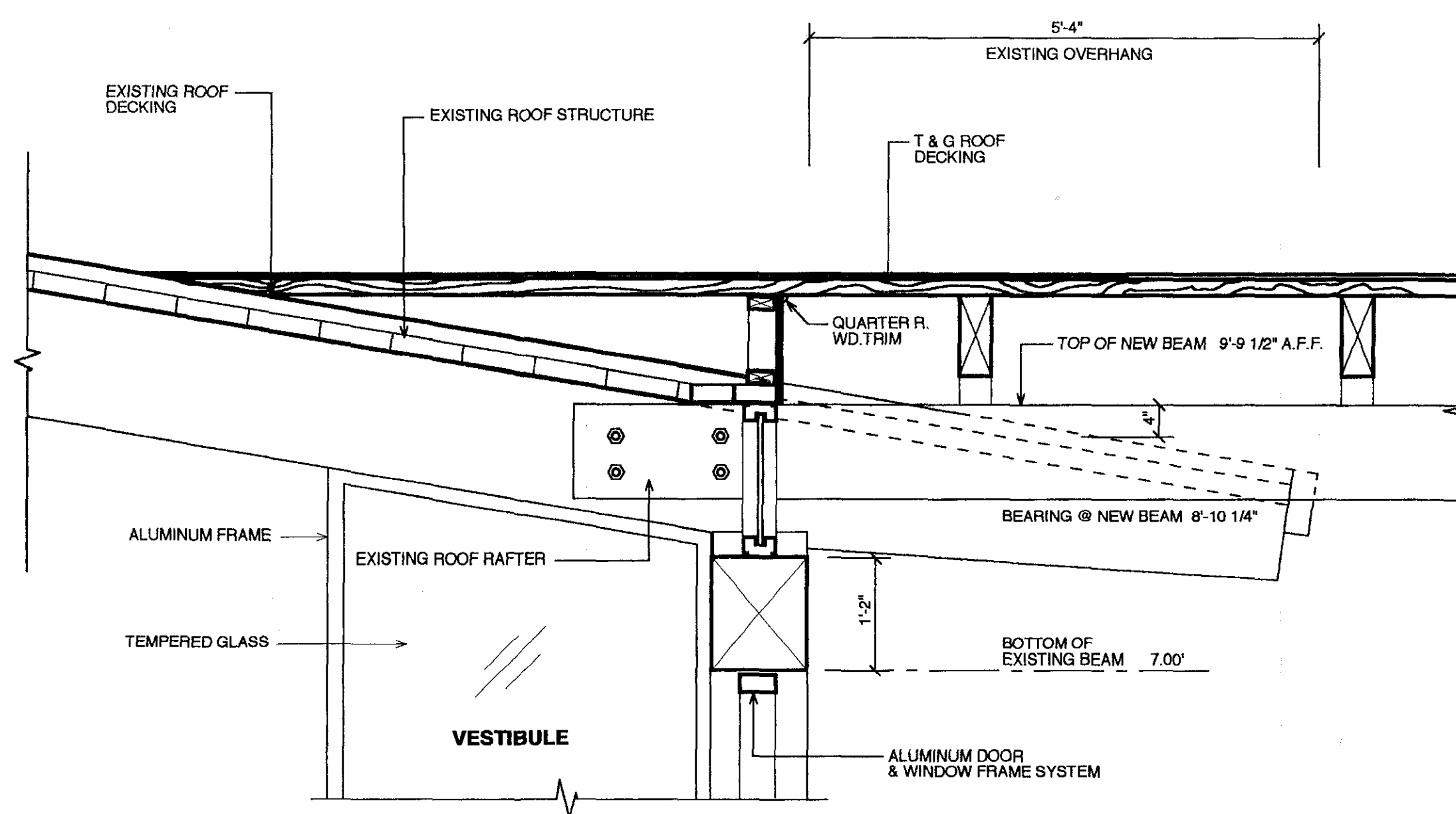
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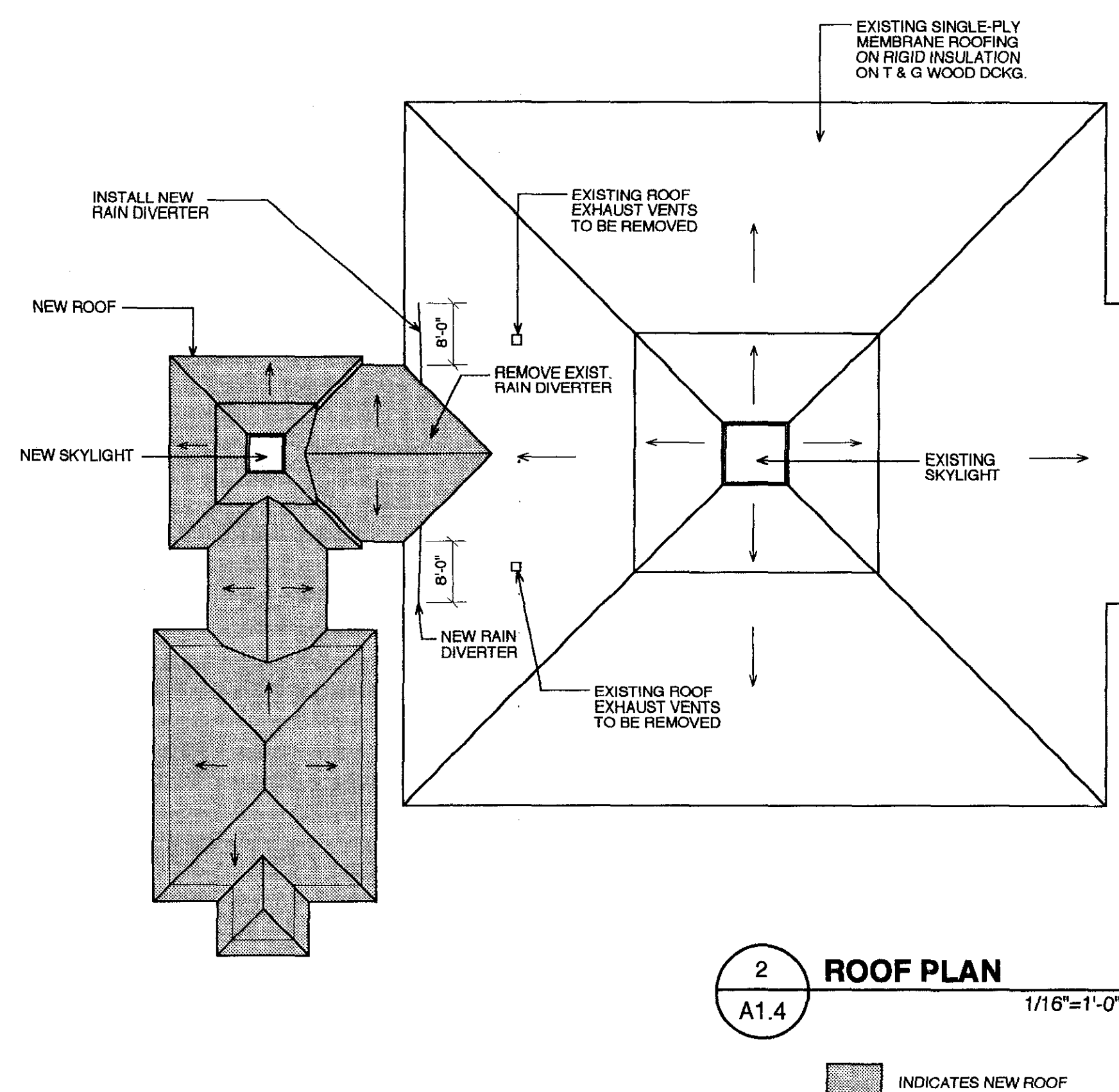
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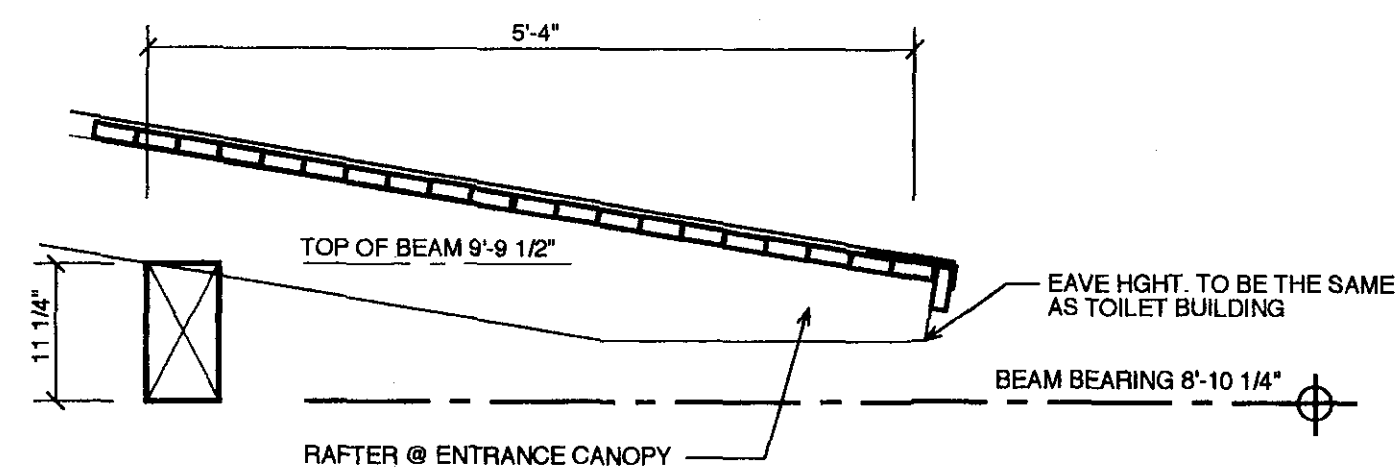
A1.3



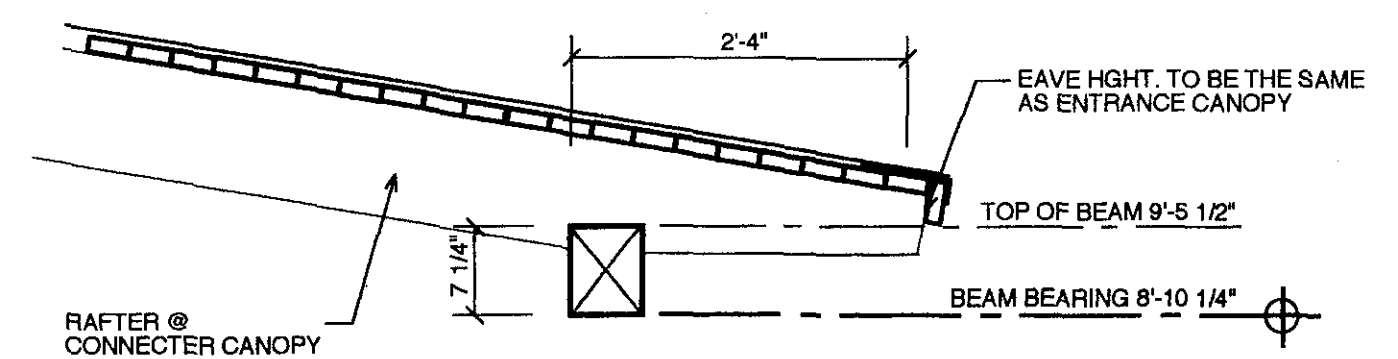
3
A1.4
NEW CANOPY TO EXISTING BUILDING CONNECTION
3/4"=1'-0"



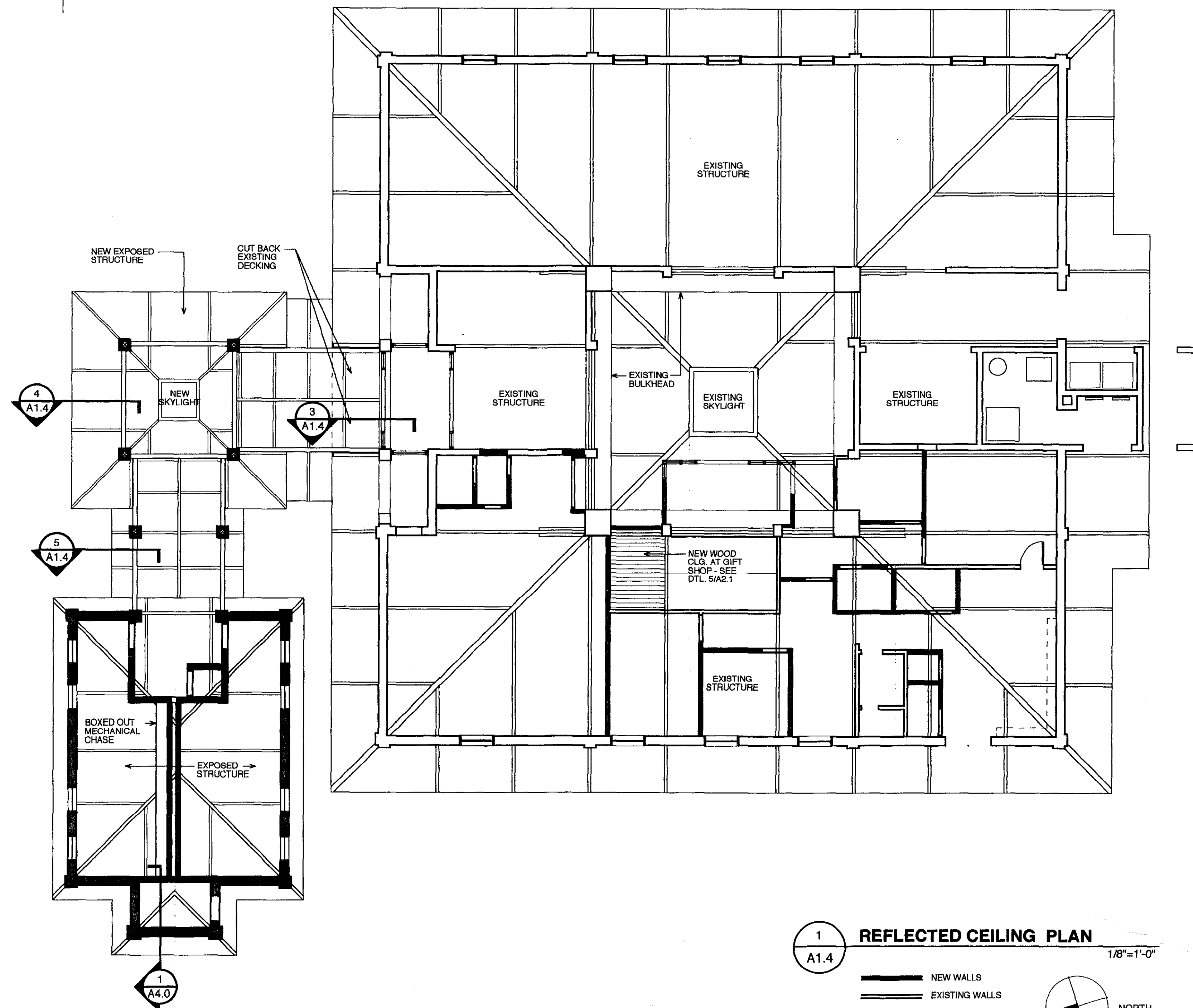
2
A1.4
ROOF PLAN
1/16"=1'-0"
INDICATES NEW ROOF



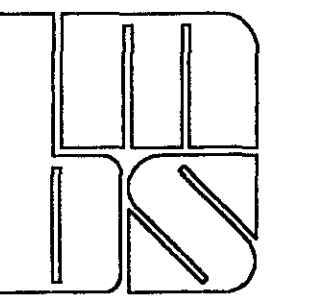
4
A1.4
ENTRANCE CANOPY BEARING HGHTS.
3/4"=1'-0"



5
A1.4
ENTRANCE CANOPY BEARING HGHTS.
3/4"=1'-0"



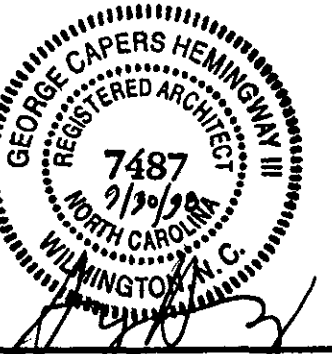
1
A1.4
REFLECTED CEILING PLAN
1/8"=1'-0"
NEW WALLS
EXISTING WALLS
SEE E5.0 FOR NEW LIGHTING LAYOUT
NORTH



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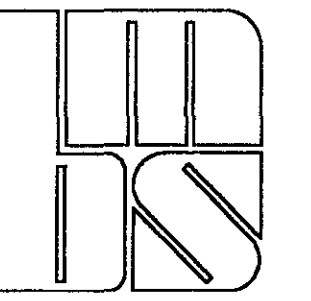
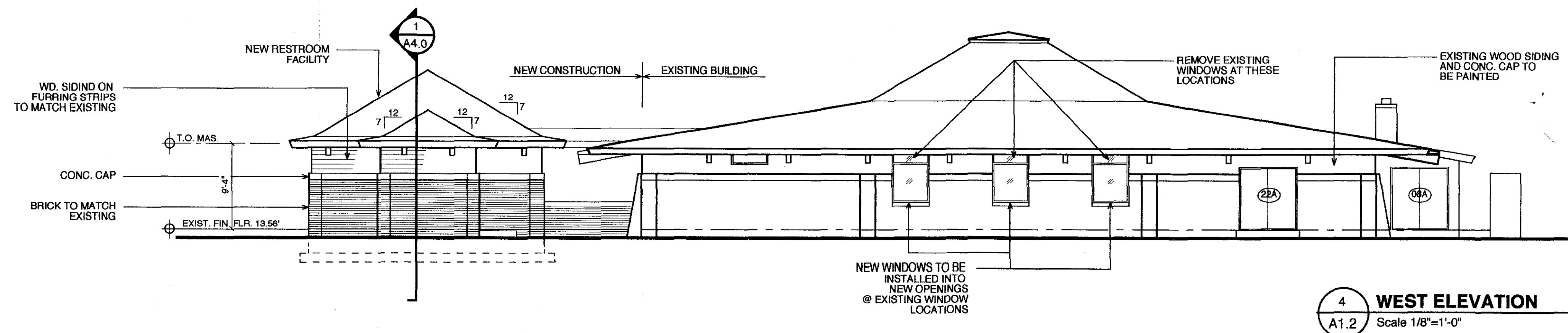
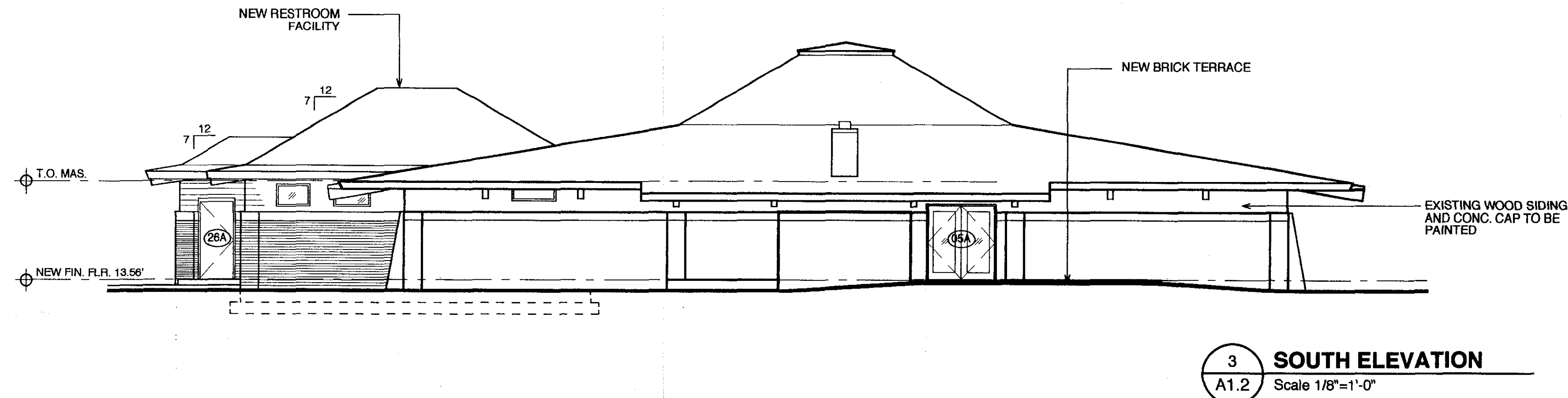
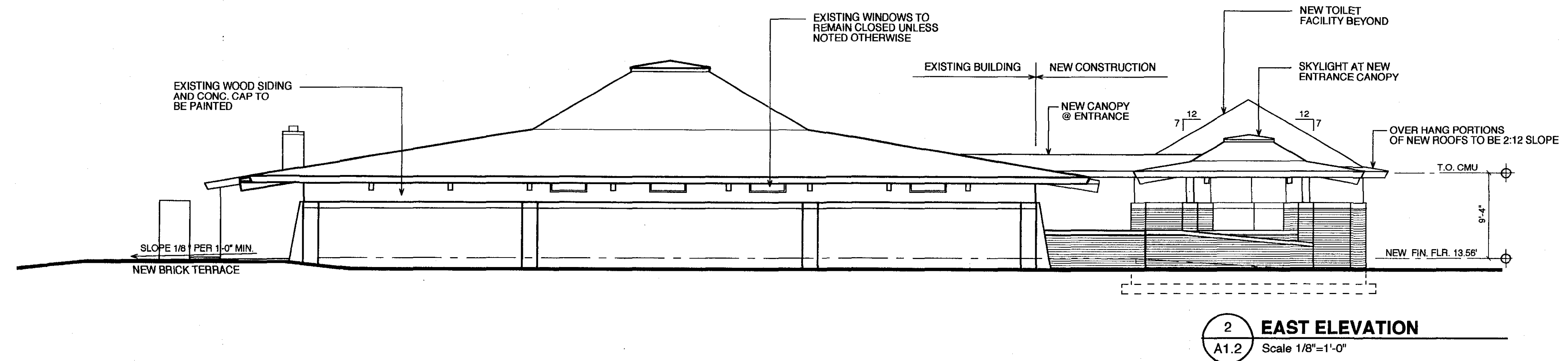
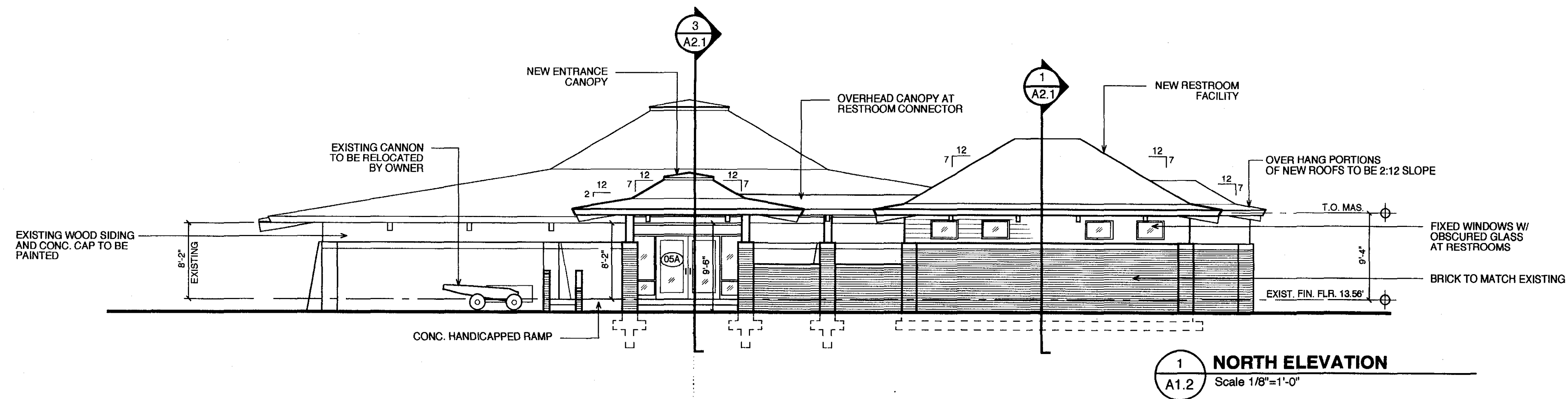
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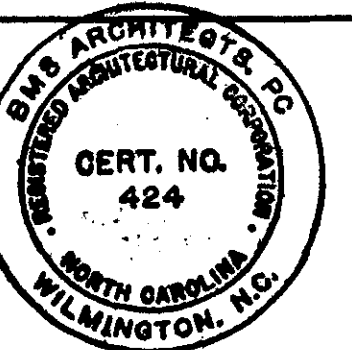
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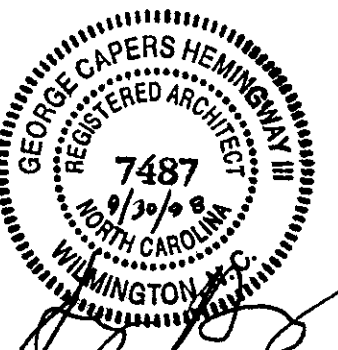
A1.4



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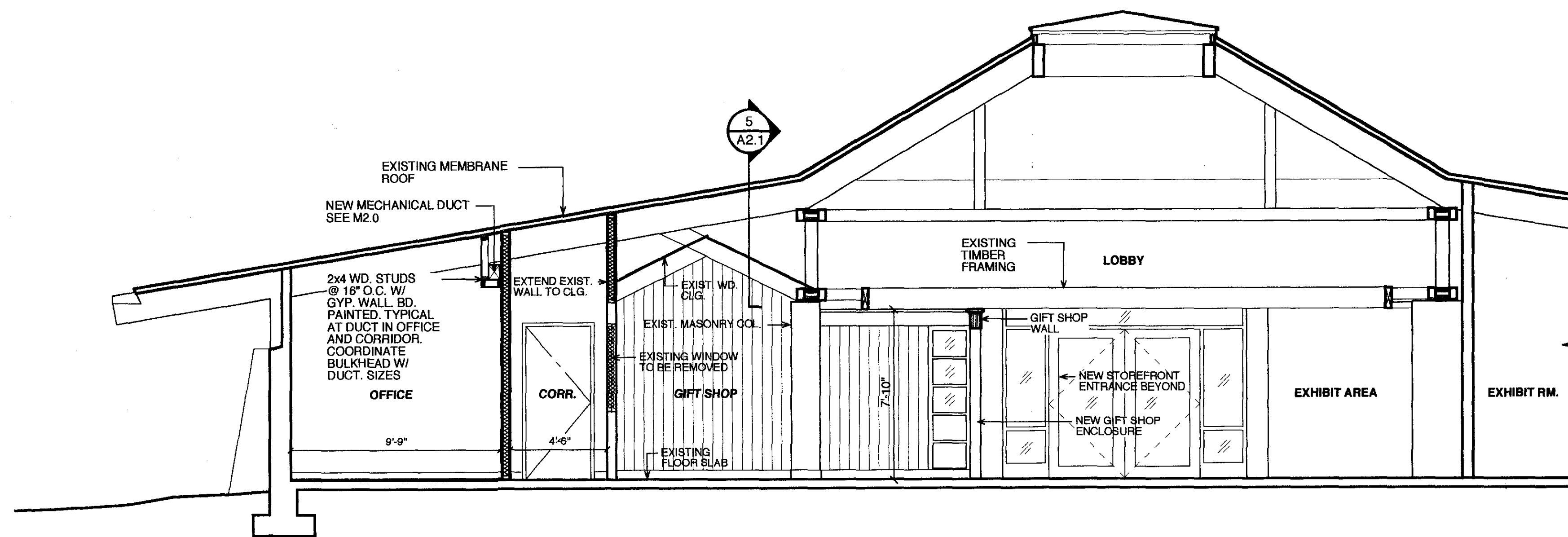
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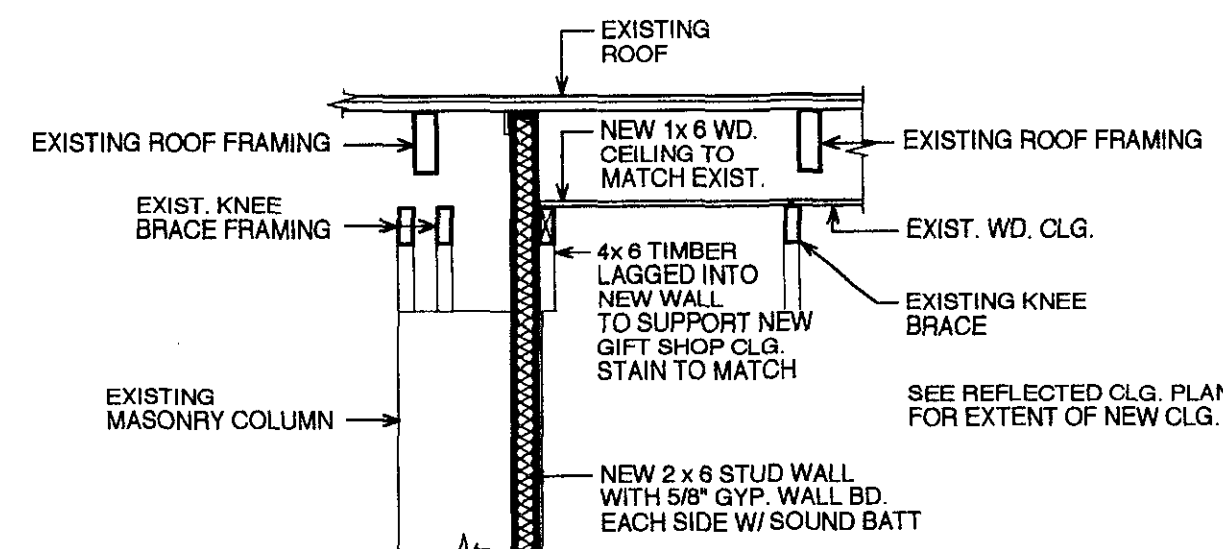
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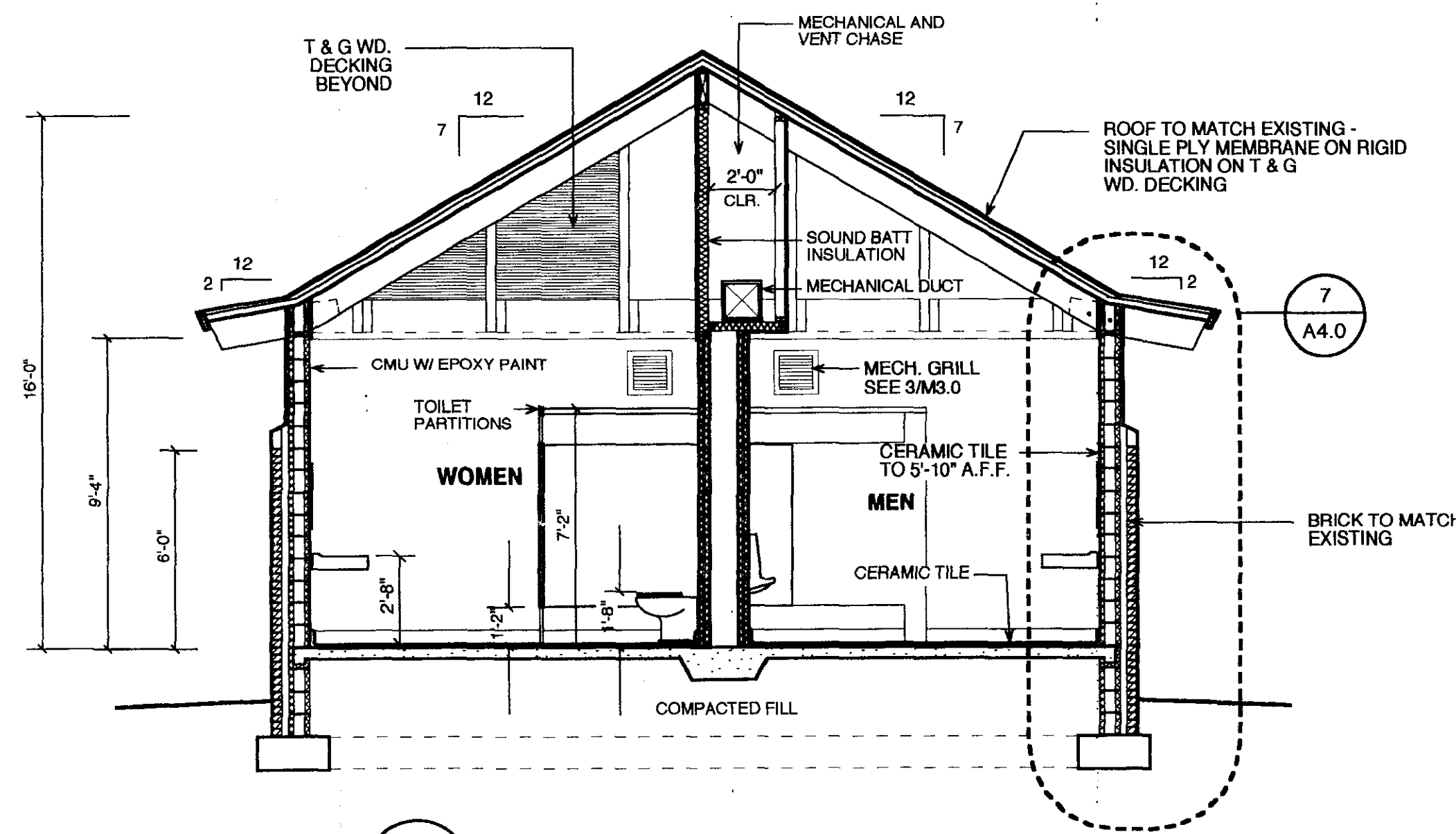
A2.0



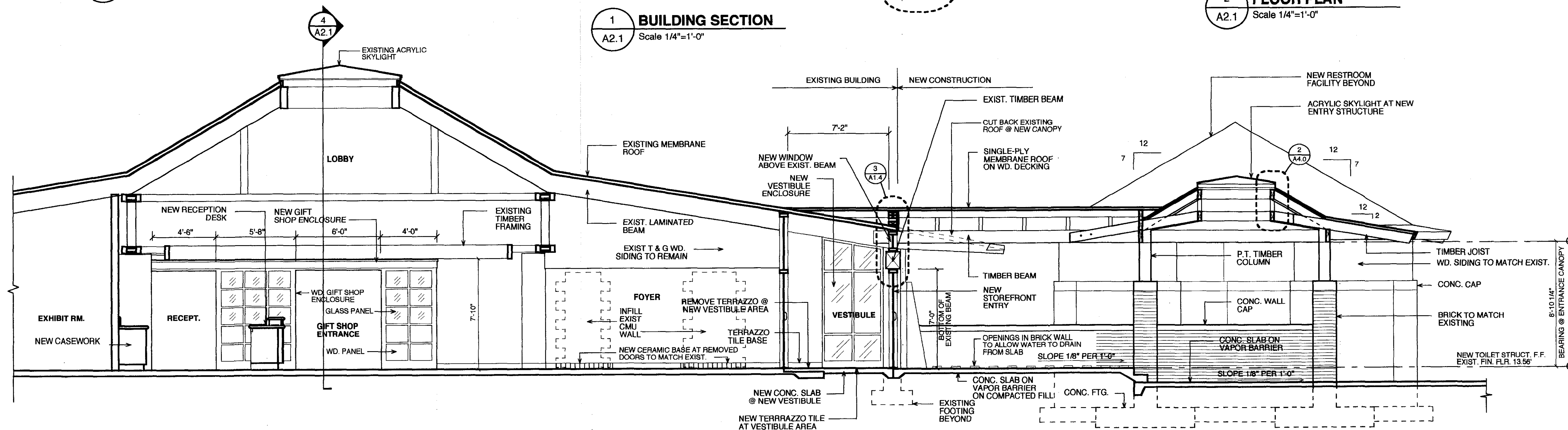
4 BUILDING SECTION
A2.1 Scale 1/4"=1'-0"



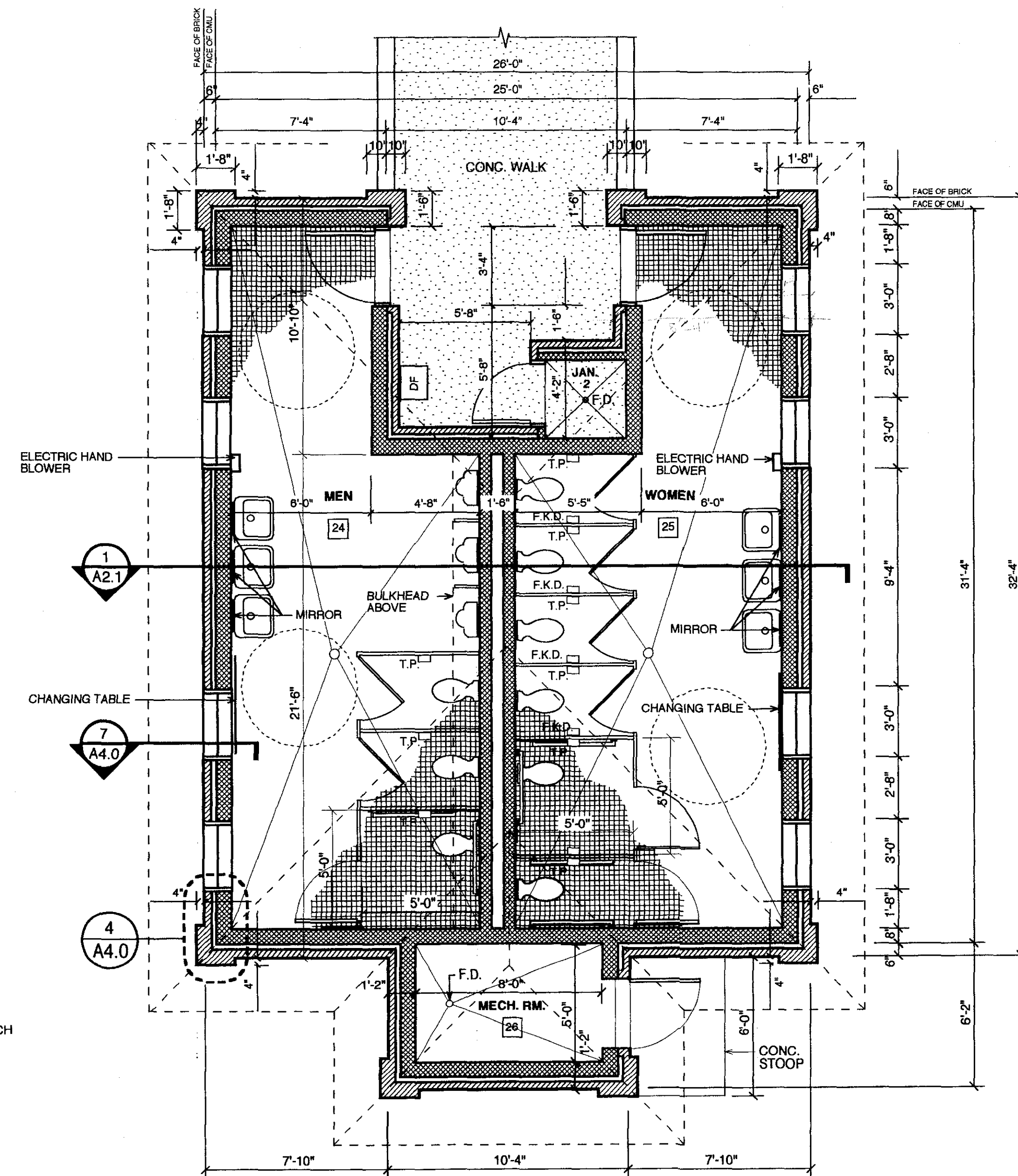
5 BUILDING SECTION
A2.1 Scale 1/4"=1'-0"



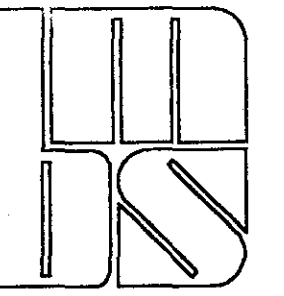
1 BUILDING SECTION
A2.1 Scale 1/4"=1'-0"



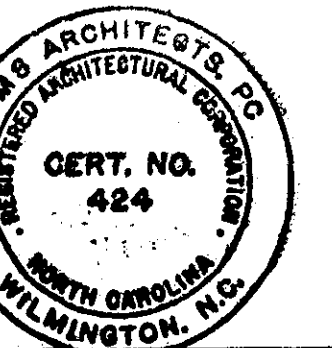
3 BUILDING SECTION
A2.1 Scale 1/4"=1'-0"



2 FLOOR PLAN
A2.1 Scale 1/4"=1'-0"



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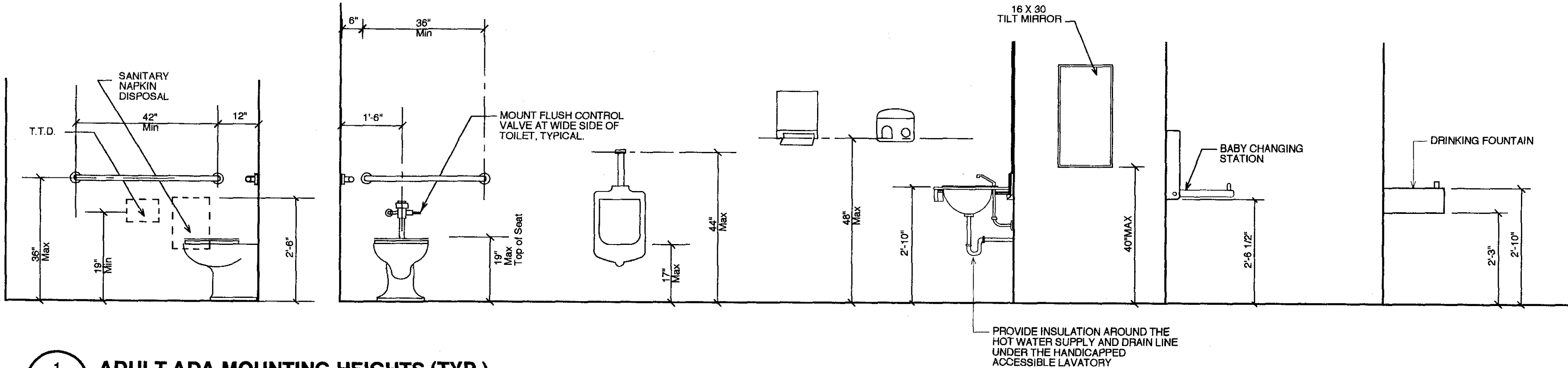
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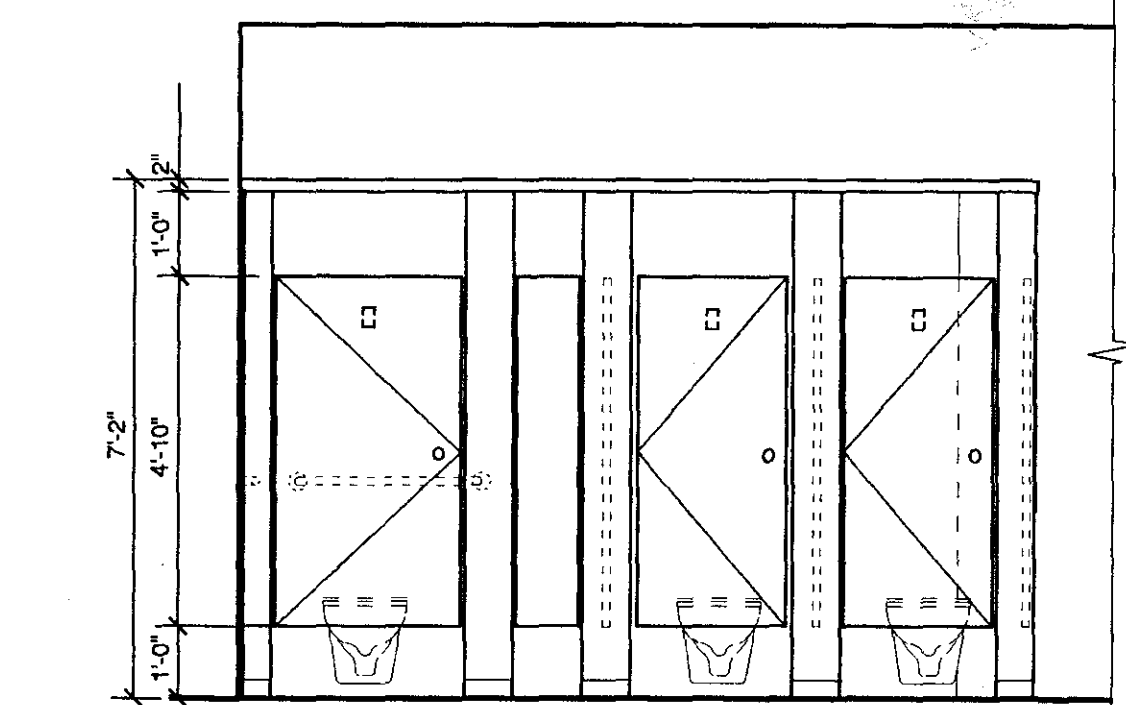
FINISH SCHEDULE																	
RM. NO.	ROOM NAME	WALL FINISHES SIMILAR TO NORTH WALL UNLESS NOTED OTHERWISE															
		FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING		CEILING HT.	REMARKS
		EXIST.	NEW	EXIST.	NEW	EXIST.	NEW	EXIST.	NEW	EXIST.	NEW	EXIST.	NEW	EXIST.	NEW		
01	EXHIBIT AREA	EXIST.		EXIST.		EXIST.										EXISTING	REPAIR SAW CUT TO MATCH EXISTING FLOOR
02	VESTIBULE		TERR. T.		TERR. T.		STOREFRONT										
03	EXHIBIT AREA		CARPET		CER. T.	PT.											CLEAN AND REPAIR WALL SURFACE PRIOR TO PAINTING
04	FOYER	EXIST.		EXIST.		PAINT		PAINT		PAINT		PAINT	CMU/PAINT				
05	LOBBY			EXIST.	WD.	PT.						WD. PAN.					
06	RECEPTION			EXIST.		EXIST.											NEW INFORMATION DESK AND STORAGE CASEWORK
07	EXHIBIT AREA			EXIST.		EXIST.											
08	MECHANICAL RM.			EXIST.		EXIST.											
09	STORAGE		CARPET		RUBBER	PT.											CLEAN AND REPAIR WALL SURFACE PRIOR TO PAINTING
10	AUDIO/VIS. ORIENT. RM.		CARPET	EXIST.	WD.	PT.						WD. PAN.					
11	GIFT SHOP		CARPET		WD.		WD. PAN.		WD. PAN.			WD. PAN.					
12	CORR.	EXIST.			WD.	PT.	G.W.B. - PT.					G.W.B. - PT.					
13	OFFICE		CARPET		WD.	PT.	G.W.B. - PT.					G.W.B. - PT.					
14	CONFERENCE RM.		CARPET		WD.		G.W.B. - PT.										
15	STORAGE	EXIST.			RUBBER		G.W.B. - PT.										
16	DIRECTOR'S OFFICE		CARPET	EXIST.	WD.		G.W.B. - PT.										
17	OFFICE		CARPET		WD.		G.W.B. - PT.										
18	CORR.	EXIST.			WD.	PT.											
19	OFFICE		CARPET		WD.		G.W.B. - PT.										
20	TOILET	EXIST.				PT.			M.R.G.W.B.			M.R.G.W.B.					
21	JAN.	EXIST.				PT.											
22	STORAGE/BREAK	EXIST.					G.W.B. - PT.	PAINT				G.W.B. - PT.					
23	JAN.		CONC.		CER. T.		CMU-PT.							EXPD. T & G DCKNG.	VARIES		
24	MEN'S TOILET		CER. T.		CER. T.		CER. T./CMU							EXPD. T & G DCKNG.	VARIES		CERAMIC TILE TO 5'-10" A.F.F./CMU TO BE PAINTED
25	WOMEN'S TOILET		CER. T.		CER. T.		CER. T./CMU							EXPD. T & G DCKNG.	VARIES		CERAMIC TILE TO 5'-10" A.F.F./CMU TO BE PAINTED
26	MECHANICAL RM.		CONC.		NA		CMU-PT.							EXPD. T & G DCKNG.	VARIES		
27	CLOSET	EXIST.												EXISTING		EXISTING	
28	CLOSET	EXIST.												EXISTING		EXISTING	

NOTE: WHERE MATERIALS ARE LISTED IN BOTH NEW AND EXISTING AREAS, EXISTING IS TO REMAIN AND NEW PORTIONS OF WALL TO RECEIVE AS INDICATED.

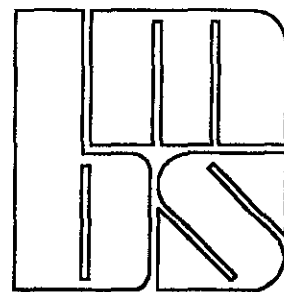
FINISH SCHEDULE LEGEND	
G.W.B.	GYPSUM WALL BOARD
TERR. T.	TERRAZZO TILE
EXPD.	EXPOSED
CER.	CERAMIC TILE
CMU.	CONCRETE MASONRY UNIT
CONC.	CONCRETE
T & G DCKNG.	TONGUE & GROOVE DECKING
PT.	PAINT
NA	NOT APPLICABLE
WD. PAN.	1 x 6 FIR, T & G V-JOINT SELECT, STAIN TO MATCH EXIST.



1 ADULT ADA MOUNTING HEIGHTS (TYP.)
A3.0 1/2" = 1'-0"



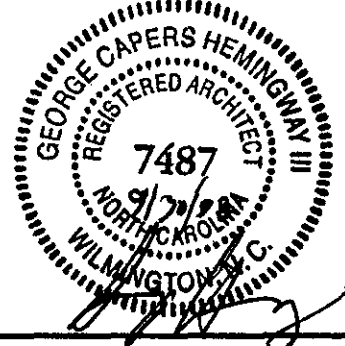
2 TYPICAL OVERHEAD BRACED TOILET PARTITION ELEVATION- MOUNTING HEIGHTS
A3.0 3/8" = 1'-0"



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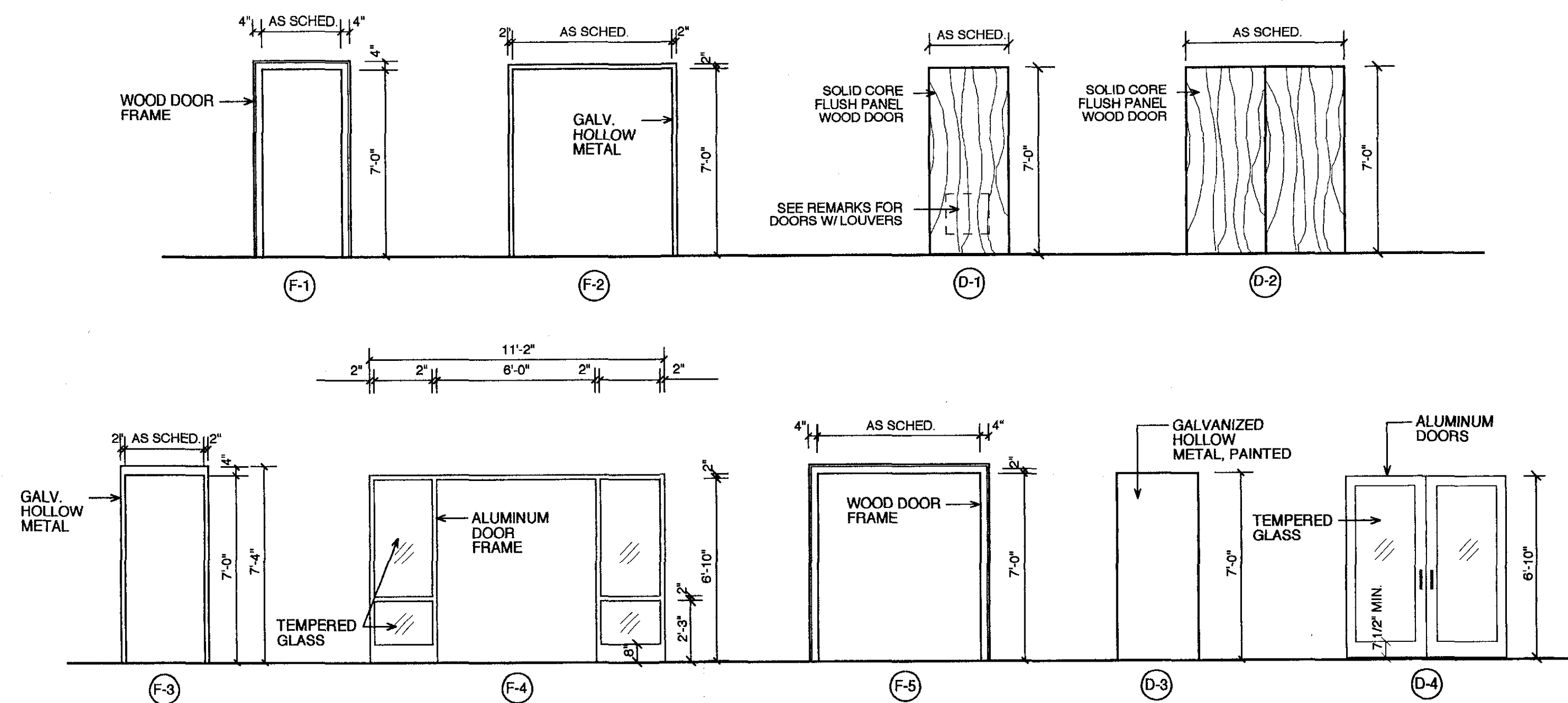


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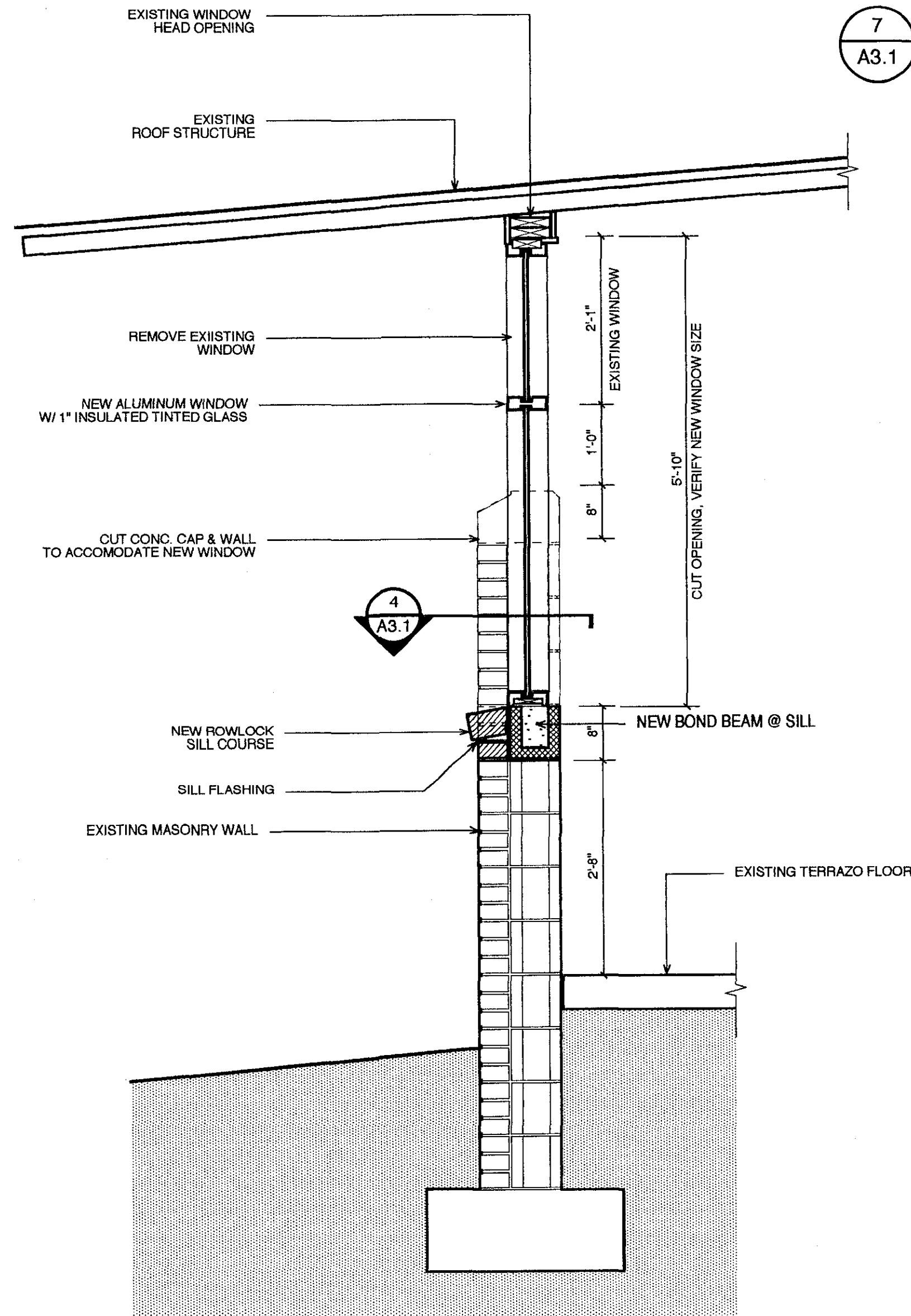


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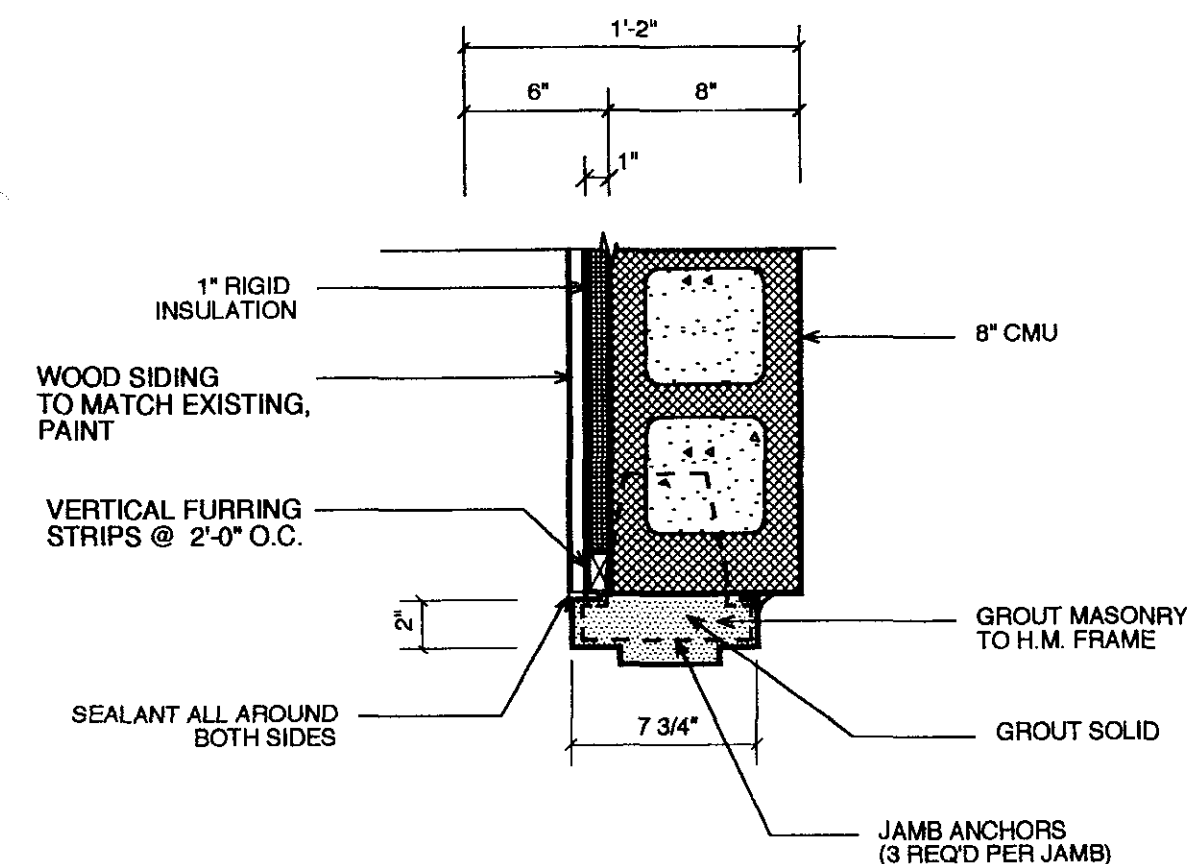
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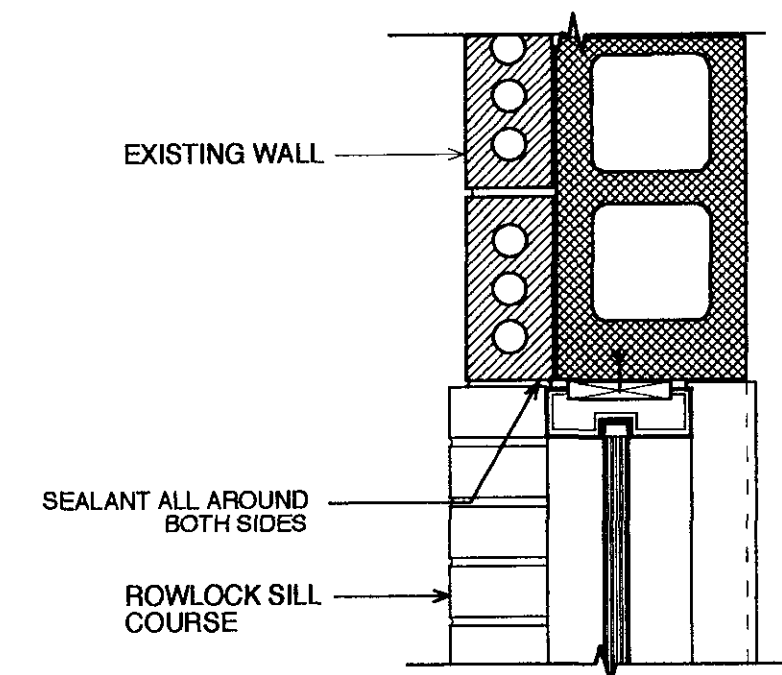
7 DOOR ELEVATIONS
A3.1 Scale 1/4"=1'-0"



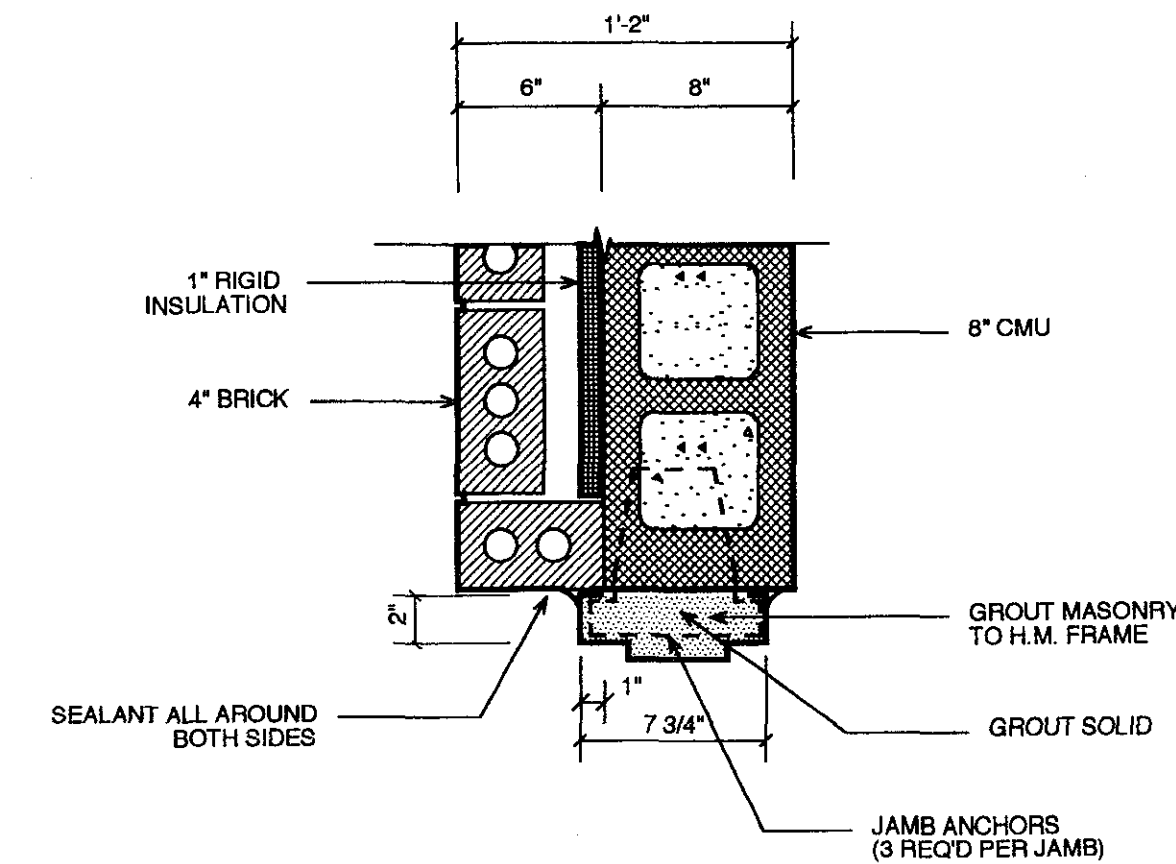
1 WALL SECT. @ NEW WINDOWS
A3.1 Scale 1 1/2"=1'-0"



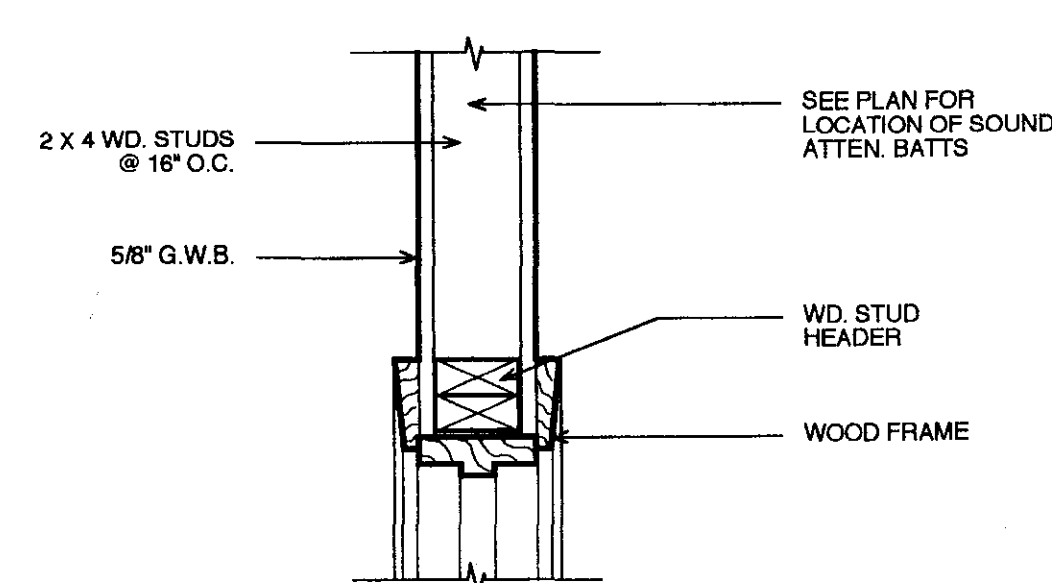
2 JAMB DETAIL
A3.1 Scale 1 1/2"=1'-0"



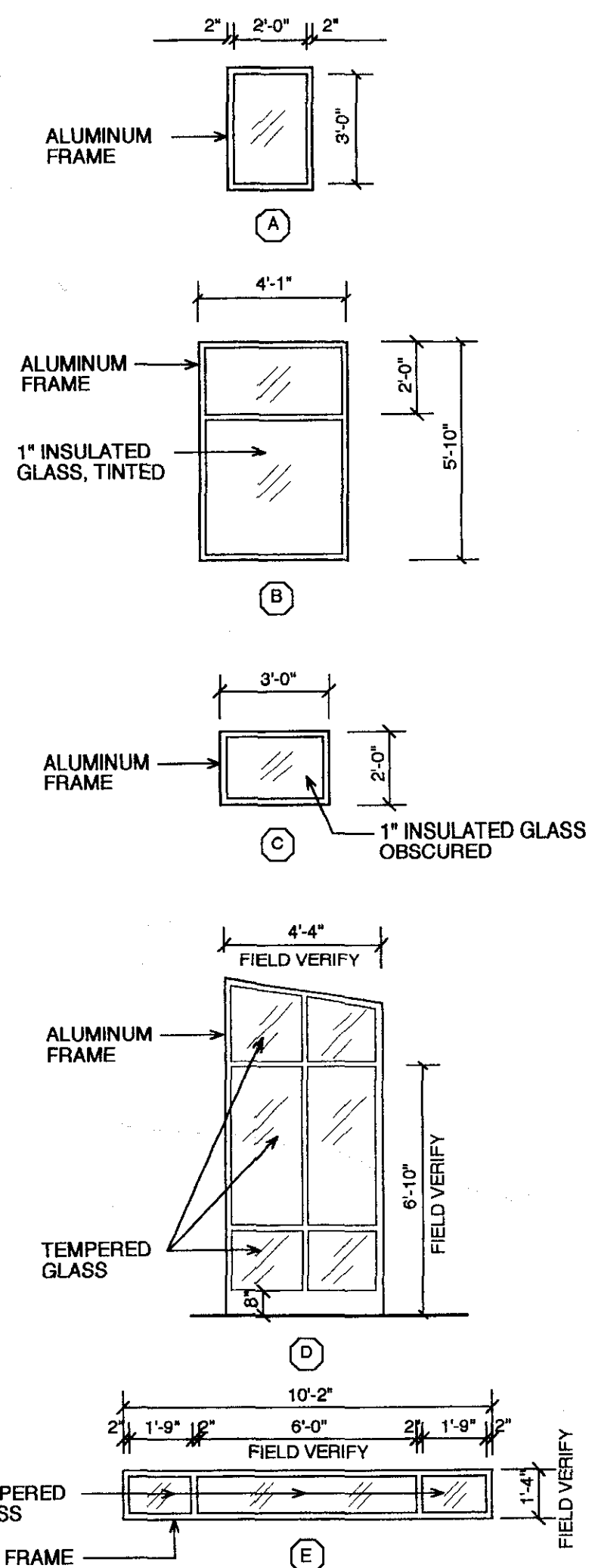
4 JAMB DETAIL
A3.1 Scale 1 1/2"=1'-0"



3 JAMB DETAIL
A3.1 Scale 1 1/2"=1'-0"



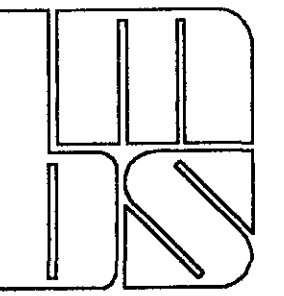
5 HEAD/JAMB DETAIL
A3.1 Scale 1 1/2"=1'-0"



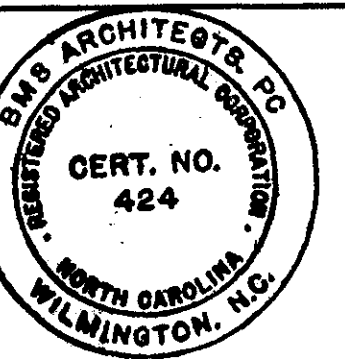
6 WINDOW ELEVATIONS
A3.1 Scale 1/4"=1'-0"

DOOR SCHEDULE

NO.	SIZE: WxHxT	DOOR TYPE	DOOR ELEV.	FRAME ELEV.	FRAME TYPE	HEAD/JAMB DET.	HWDR.	DOOR FINISH	GLAZING	REMARKS
02A	3'-0" x 6'-10" x 1 3/4" (PR.)	ALUM. STRFRNT.	D-4	F-4	ALUM.	3/A1.3	1	PREFINISH	5/8" INSUL.	VERIFY EXISTING OPENING
02B	3'-0" x 6'-10" x 1 3/4" (PR.)	ALUM. STRFRNT.	D-4	F-4	ALUM.	3/A1.3	1	PREFINISH	5/8" INSUL.	VERIFY EXISTING OPENING
05A	3'-0" x 7'-0" x 1 3/4"	ALUM. STRFRNT.	D-4	F-2	ALUM.	3/A1.3	1	PREFINISH	5/8" INSUL.	VERIFY EXISTING OPENING
08A	3'-0" x 7'-0" x 1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	2	PAINT		CLEAN AND PAINT
09A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	4	PREFINISH		
10A	3'-0" x 7'-0" x 1 3/4"	WD.	D-2	F-5	WD.	5/A3.1	8	PREFINISH		
10B	3'-0" x 7'-0" x 1 3/4"	GALV. HM.	D-4	F-3	GALV. HM.	3/A3.1	9	PAINT		
12A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	6	PREFINISH		
13A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	6	PREFINISH		
14A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	5	PREFINISH		
14B	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	5	PREFINISH		
15A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	4	PREFINISH		
16A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	6	PREFINISH		
17A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	6	PREFINISH		
20A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	3	PREFINISH		
21A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	5	PREFINISH		
22A	3'-0" x 7'-0" x 1 3/4"	EXIST.	EXIST.	EXIST.	EXIST.	EXIST.	2	PAINT		CLEAN AND PAINT
23A	3'-0" x 7'-0" x 1 3/4"	GALV. HM.	D-3	F-3	GALV. HM.	3/A3.1	4	PAINT		
24A	3'-0" x 7'-0" x 1 3/4"	GALV. HM.	D-3	F-3	GALV. HM.	3/A3.1	7	PAINT		
25A	3'-0" x 7'-0" x 1 3/4"	GALV. HM.	D-3	F-3	GALV. HM.	3/A3.1	7	PAINT		
26A	3'-0" x 7'-0" x 1 3/4"	GALV. HM.	D-3	F-3	GALV. HM.	3/A3.1	4	PAINT		
27A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	5	PREFINISH		
28A	3'-0" x 7'-0" x 1 3/4"	WD.	D-1	F-1	WD.	5/A3.1	5	PREFINISH		



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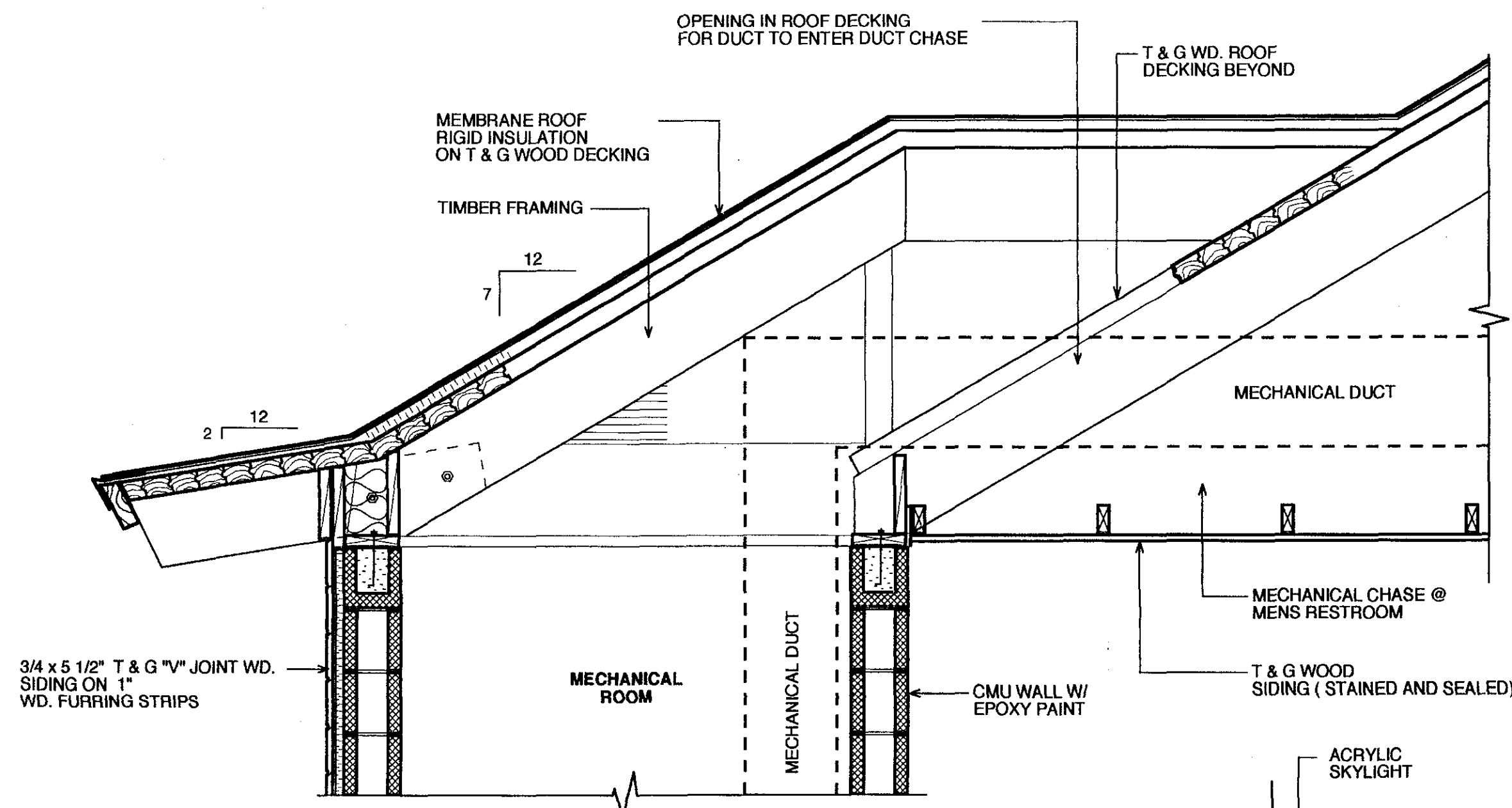
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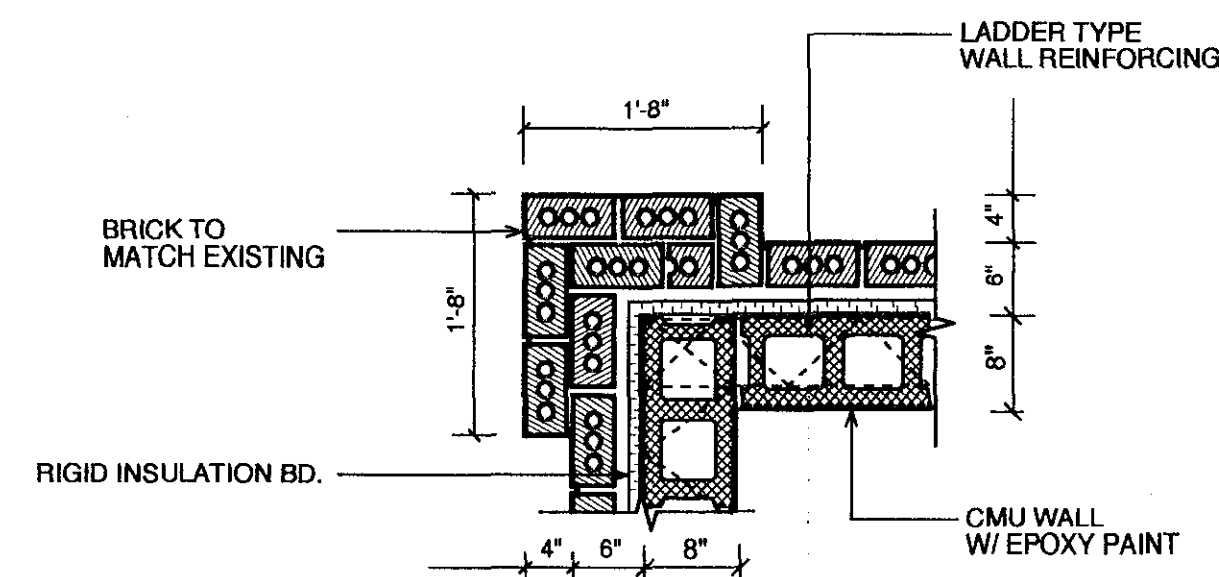
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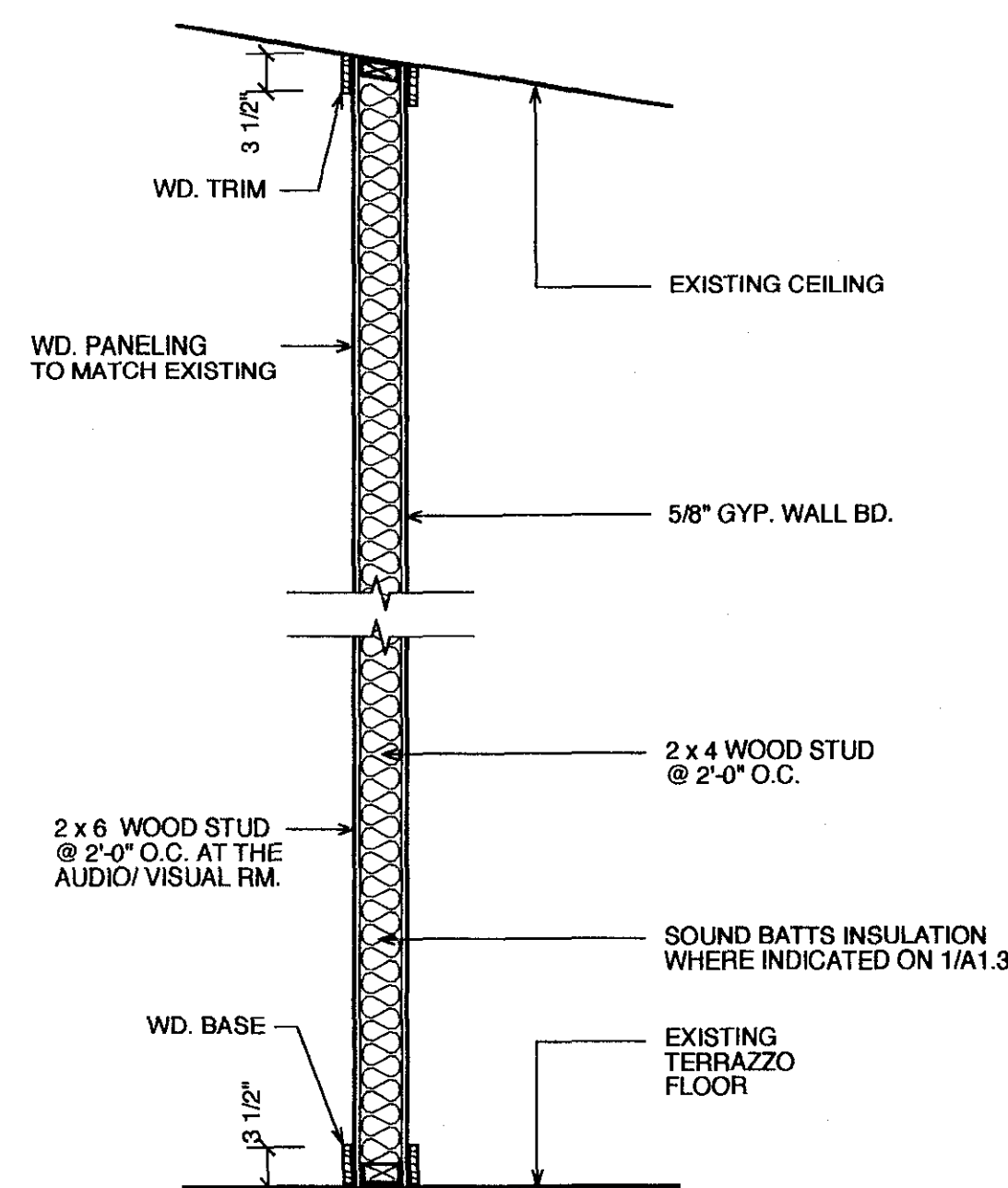
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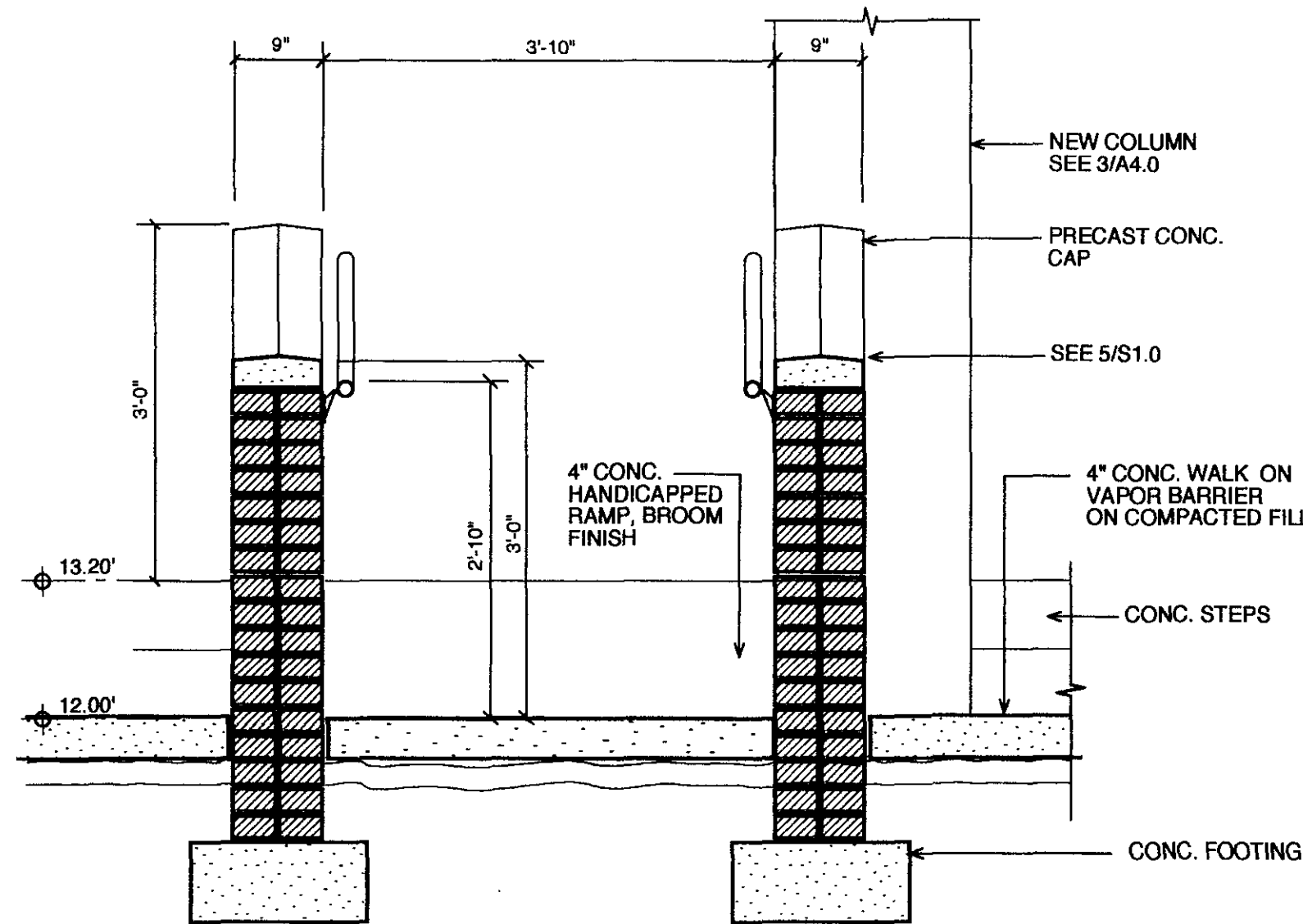
1 SECTION @ MECH. RM.
A4.0 Scale 3/4"=1'-0"



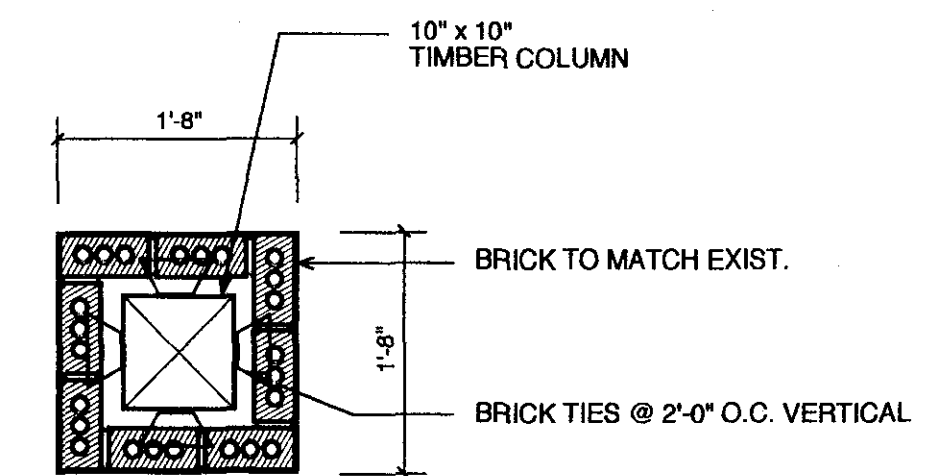
4 PLAN @ CORNER
A4.0 Scale 3/4"=1'-0"



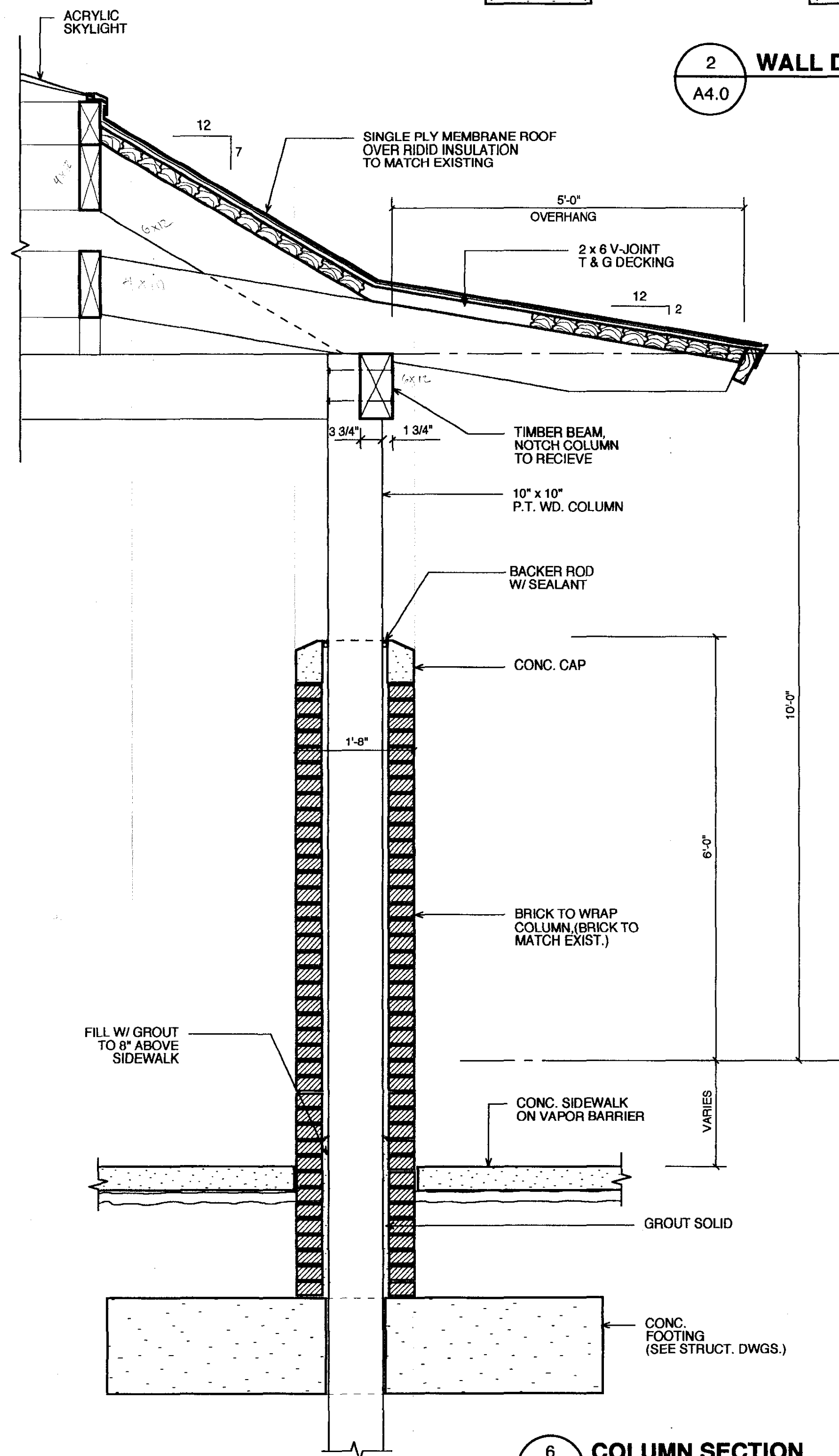
5 WALL SECTION
A4.0 Scale 3/4"=1'-0"



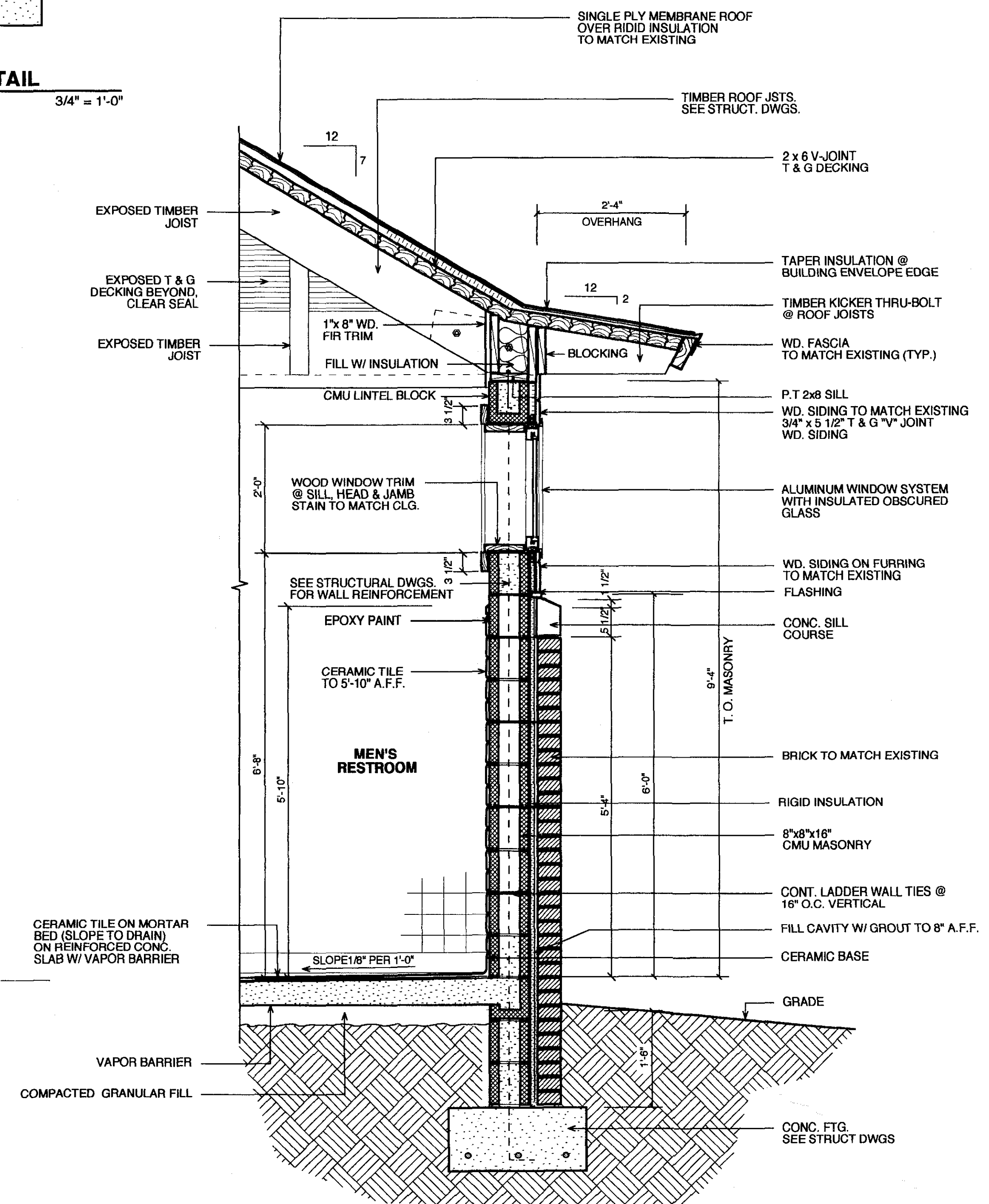
2 WALL DETAIL
A4.0 Scale 3/4"=1'-0"



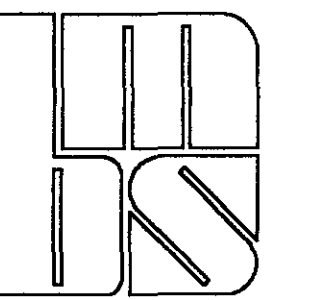
3 PLAN @ COLUMN
A4.0 Scale 3/4"=1'-0"



6 COLUMN SECTION
A4.0 Scale 3/4"=1'-0"



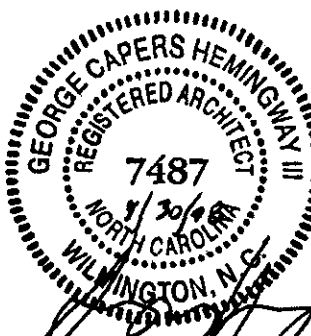
7 WALL SECTION
A4.0 Scale 3/4"=1'-0"



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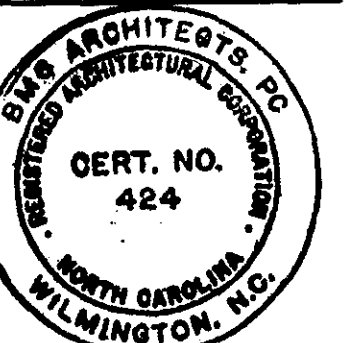
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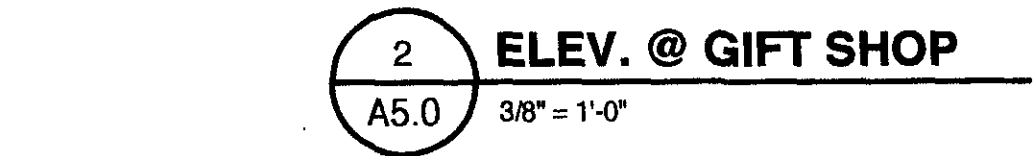
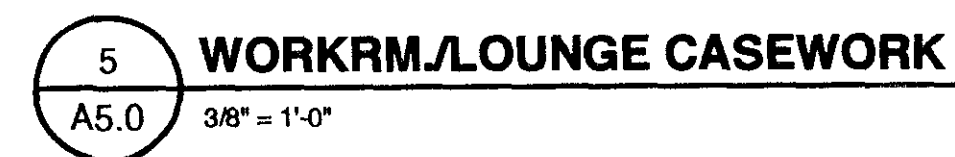
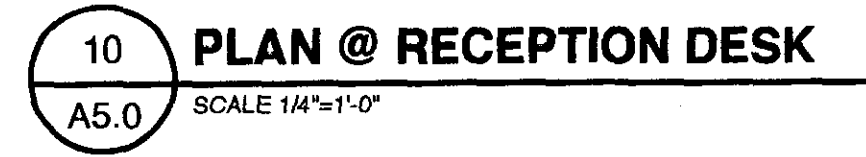
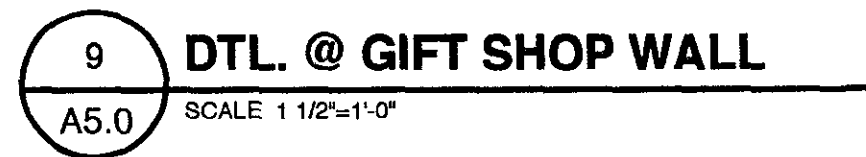


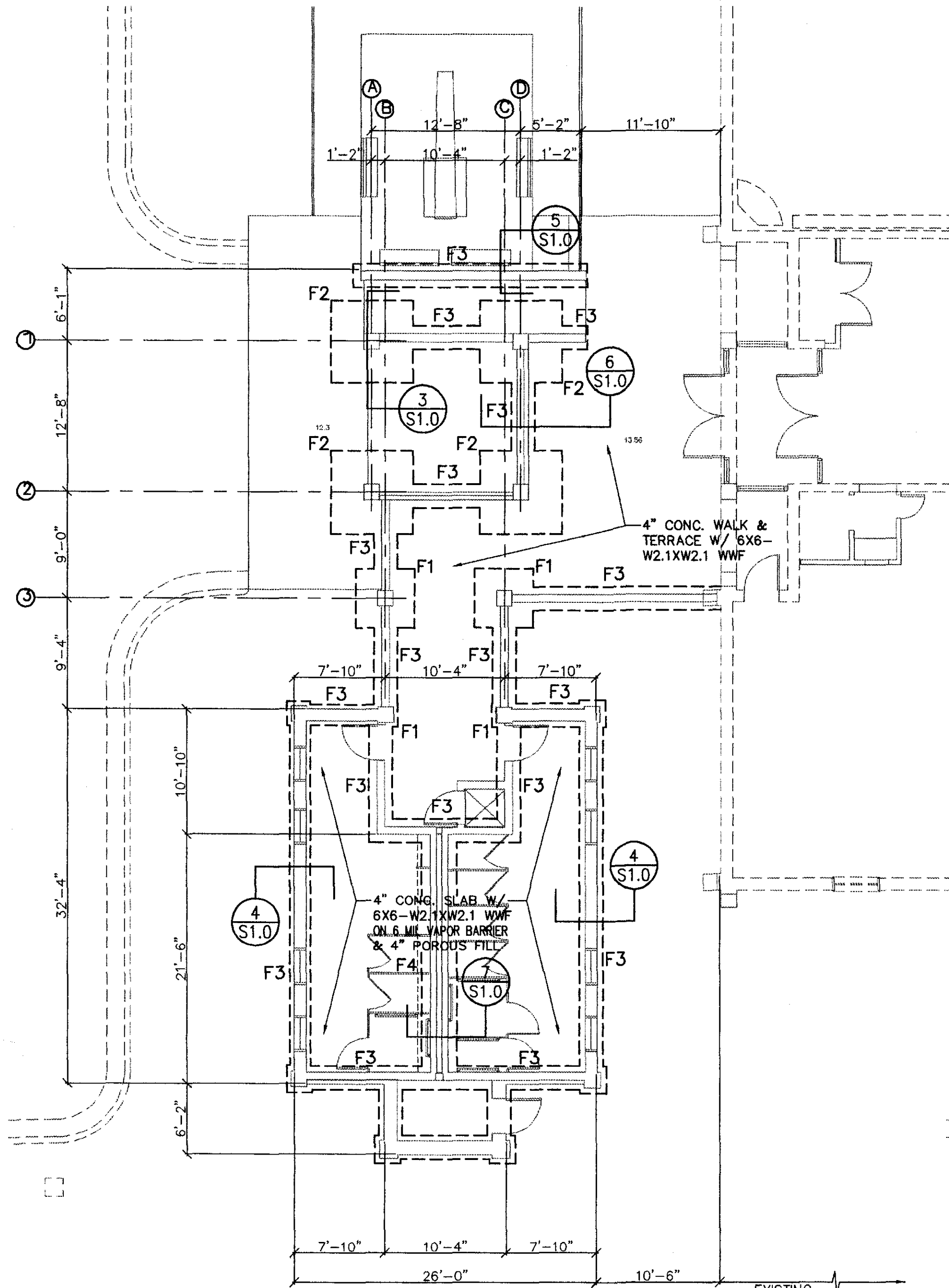
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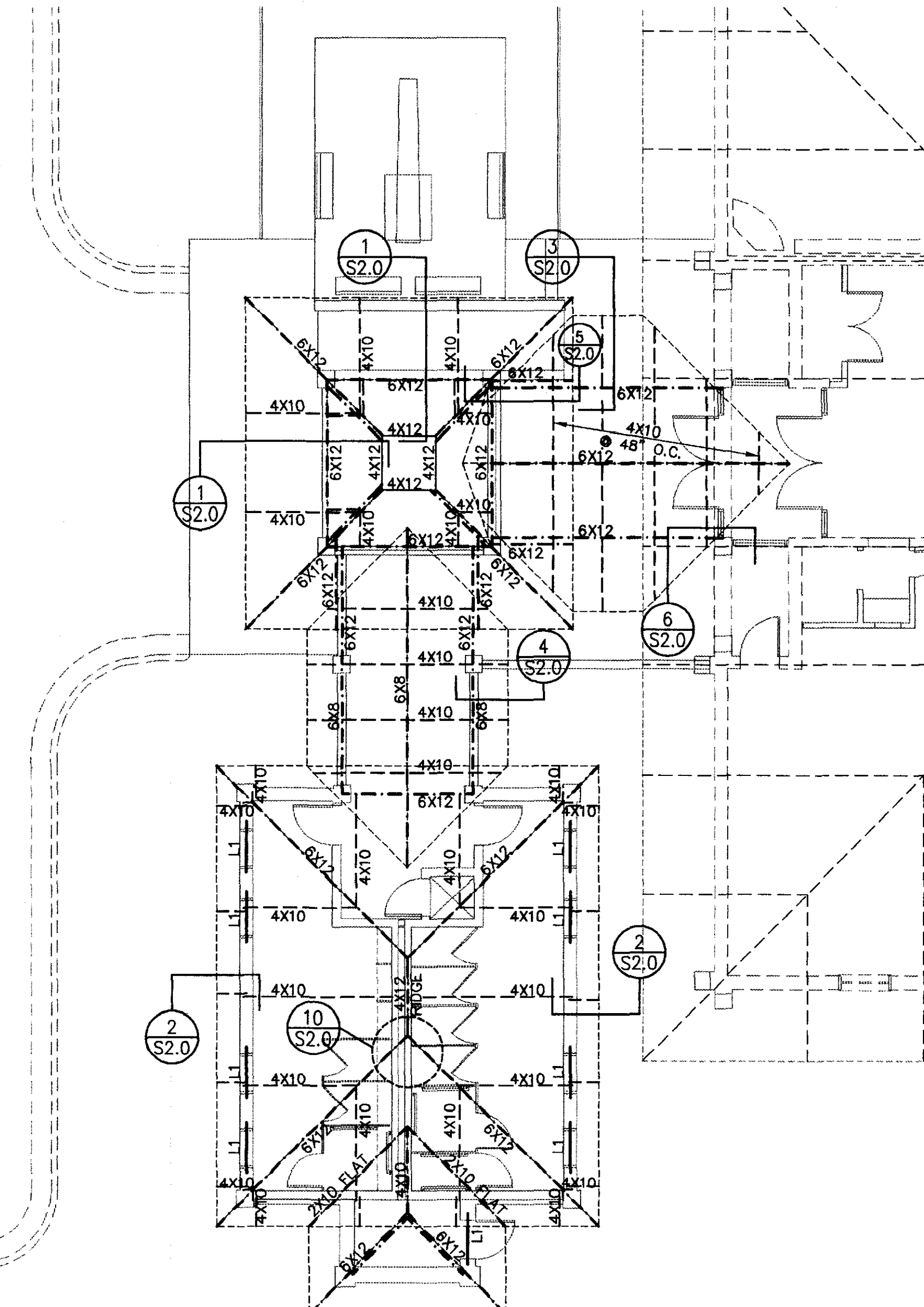
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A5.0

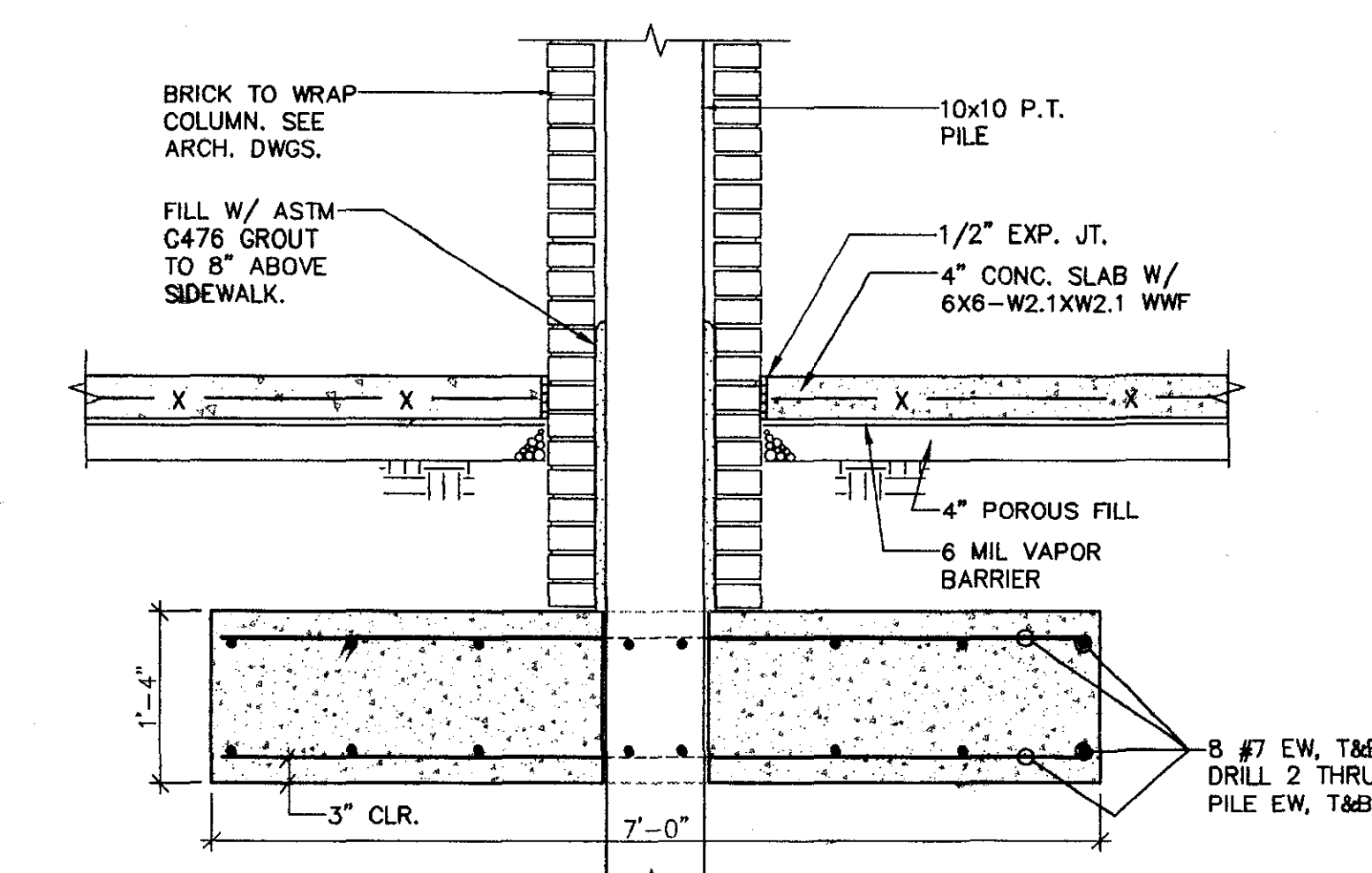




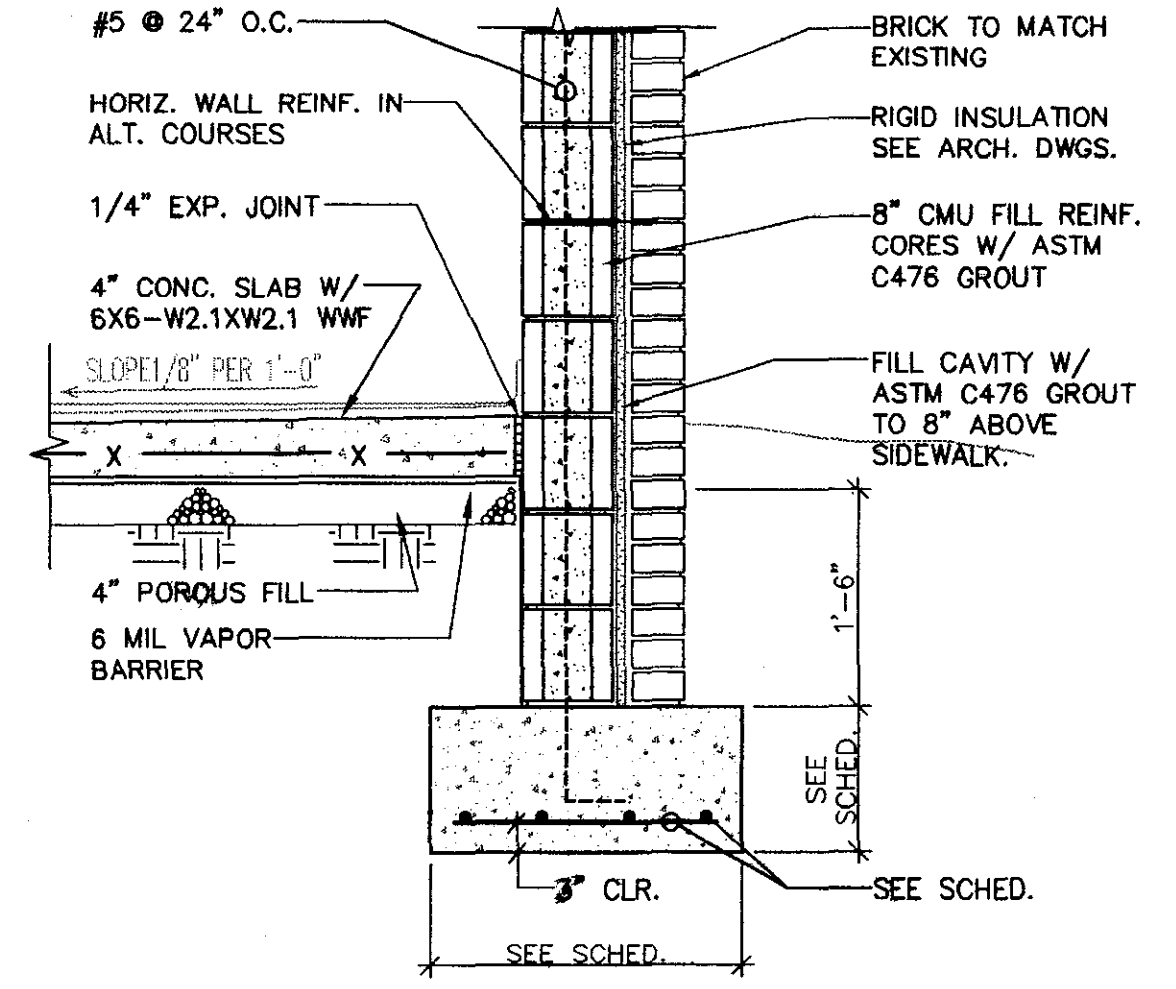
1 FOUNDATION PLAN
S1.0 1/8"=1'-0"



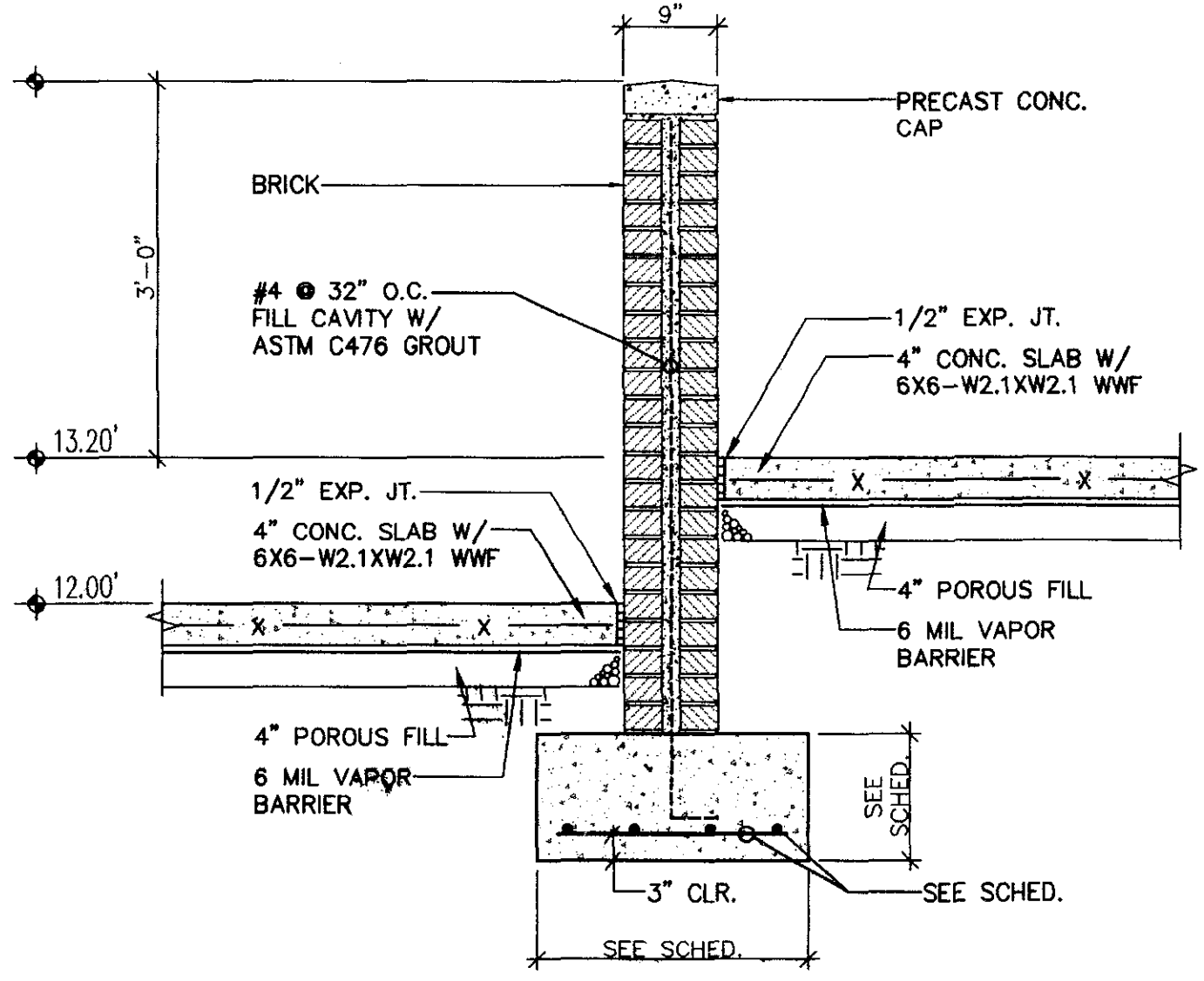
2 ROOF FRAMING PLAN
S2.0 1/8"=1'-0"



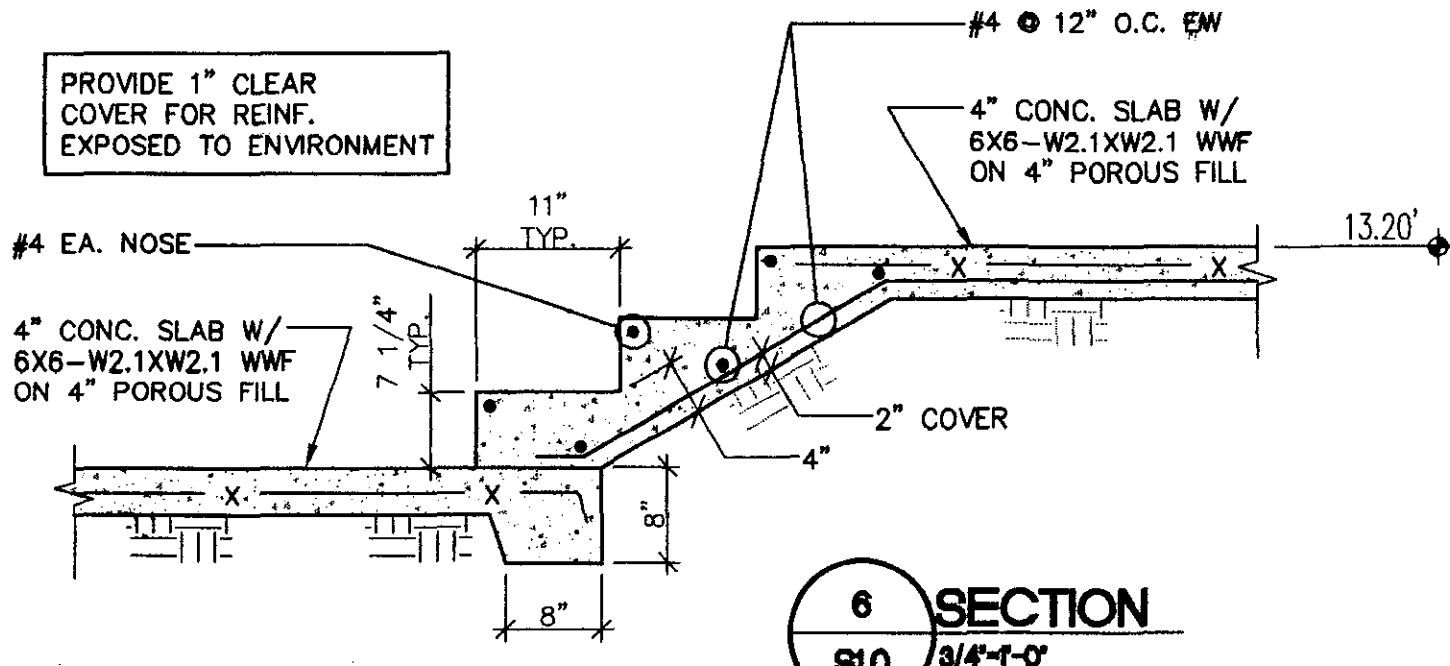
3 SECTION
S1.0 3/4"=1'-0"



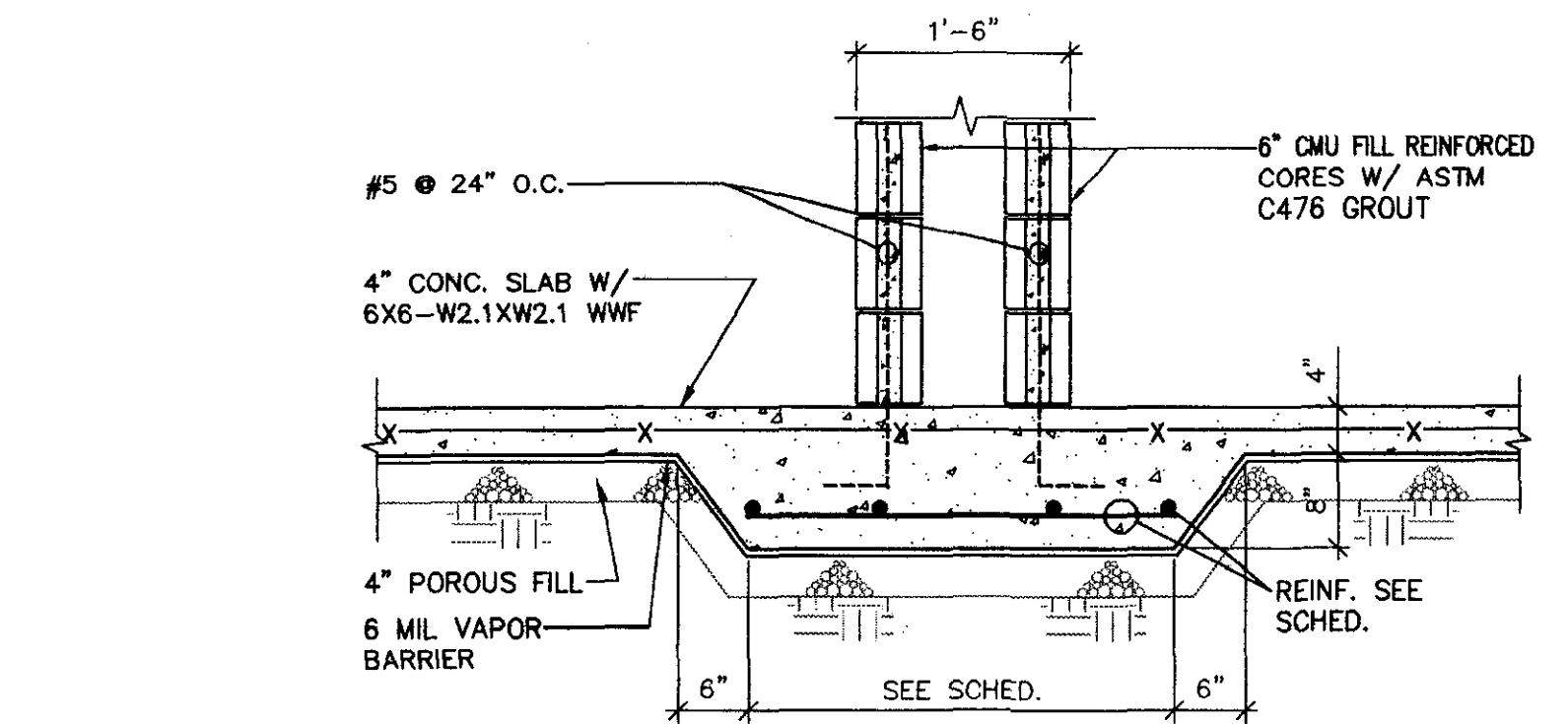
4 SECTION
S1.0 3/4"=1'-0"



5 SECTION
S1.0 3/4"=1'-0"



6 SECTION
S1.0 3/4"=1'-0"



7 SECTION
S1.0 3/4"=1'-0"

LINTEL SCHEDULE	
SECTION	DESCRIPTION
L1	8"x8" CMU LINTEL BLOCK W 2 #5 CONT. IN BOTTOM. FILL W/ CONC MASONRY OPEN. TO 3'-4"

FOOTING SCHEDULE				
MARK	F1	F2	F3	F4
SIZE	5'-0" x 5'-0"	7'-0" x 7'-0"	2'-0" x CONT.	3'-0" x CONT.
DEPTH	1'-0"	1'-4"	1'-0"	1'-0"
REINF EW	6 #6 EW T&B	8 #7 EW T&B	3 #5 CONT. #4 @ 12" O.C. TRANS.	4 #5 CONT. #4 @ 12" O.C. TRANS.

Design Loads:

Roof live load: 20 psf
Wind: Zone 110 mph Importance Factor: 1.05
ASCE 7-93 Exposure: D

Floor: 100 psf
Snow: 10 psf

Lateral design control:
Calculated Wind Base Shears (for MWFRS)
Wind
Vx= 26,950#
Vy= 21,900#
B
Av= 0.075
Aa= 0.075
SHEG= 1
SPG= B
S= 1.0
Bearing wall
Rx= 3.5
Ry= 3.5
Cdx= 3
Cdy= 3
H= NL
V= 6,100#

Seismic Performance Category
Effective peak velocity-related acceleration
Peak Acceleration coefficient
Seismic Hazard Exposure Group
Seismic Performance Group
Site coefficient
Basic structural system
Response modification factor

Deflection amplification factor

Building Height limit, feet
Seismic base shear

Soil Bearing Capacity:

Field Test 2000 psf

STRUCTURAL NOTES

GENERAL NOTES

- CONTRACTOR VERIFY ALL DIMENSIONS AND CONDITIONS; CONFIRM WITH ARCH. DRAWINGS.
- CONSTRUCTION SHALL FOLLOW NORTH CAROLINA STATE BUILDING CODE.
- SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS IN STRUCTURE NOT SHOWN ON STRUCTURAL DRAWINGS.
- CONTRACTOR RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL MEMBERS, WALLS, AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION.
- ALL REFERENCED STANDARDS REFER TO LATEST EDITION.

PILING

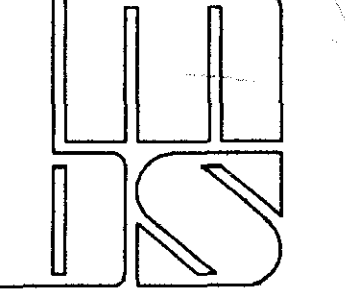
- PILING SHALL BE 10x10 DOUGLAS FIR OR SOUTHERN YELLOW PINE (SP1B), FRICTION PILES CONFORMING TO ASTM D-25.
- TREAT PILES WITH WATER-BORNE PRESERVATIVE (CCA) IN ACCORDANCE WITH AWPA C1 AND C3 FOR MARINE PILES TO A MINIMUM RETENTION OF 0.80 POUNDS PER CUBIC-FT.
- MINIMUM PENETRATION SHALL BE 10 FEET UNLESS SHOWN OTHERWISE ON THE PLANS.

FOUNDATION

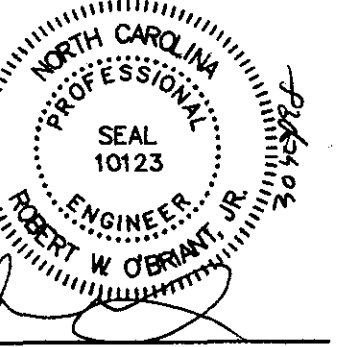
- BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 1'-6" MINIMUM BELOW FINISH GRADE.
- REMOVE TOPSOIL, ORGANICS, SOFT CLAY, AND OTHER UNSUITABLE MATERIALS UNDER ALL FLOOR SLABS, FOOTINGS, AND 5'-0" BEYOND BUILDING WALLS. AFTER THE SITE HAS BEEN STRIPPED, THE SITE SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER TO DETERMINE THE EXTENT OF THE UNSUITABLE MATERIALS TO BE REMOVED. BACKFILL ALL UNDERCUT AREAS WITH FILL AS INDICATED IN THE SPECIFICATIONS. COMPACT IN 8-INCH LAYERS TO A MINIMUM OF 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ALL LAYERS UP TO THE UPPER ONE FOOT. FILL TO BE PLACED WITHIN 12 INCHES OF THE DESIGN GRADE ELEVATION IS TO BE COMPACTED TO 98 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT. THE MOISTURE CONTENT OF FILL SOILS SHALL NOT VARY MORE THAN 2 PERCENT ABOVE OR BELOW THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698).

REINFORCED CONCRETE

- STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 AND SHALL HAVE 3000 PSI COMPRESSIVE STRENGTH IN 28 DAYS.
- AGGREGATES SHALL BE CLEAN AND WELL-GRADED MAXIMUM SIZE 3/4". CONCRETE COMPRESSIVE TESTS SHALL CONFORM TO ASTM C39.
- USE REGULAR WEIGHT CONCRETE FOR ALL STRUCTURAL MEMBERS (145 PCF MIN.).
- USE ASTM A-615 GR. 60 FOR ALL REINFORCING STEEL. FOR CONCRETE FOOTINGS AND MASONRY WALLS. USE ASTM A185 WWF REINFORCING FOR CONCRETE SLABS. LAP CONTINUOUS REINFORCING 30 BAR DIAMETERS.
- ALL REINFORCEMENT SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED AND FIRMLY TIED IN PLACE WITH BAR SUPPORTS AND SPACERS IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 301 AND ACI 318.
- MAXIMUM PERMISSIBLE SLUMP - 5" UNLESS NOTED OTHERWISE.



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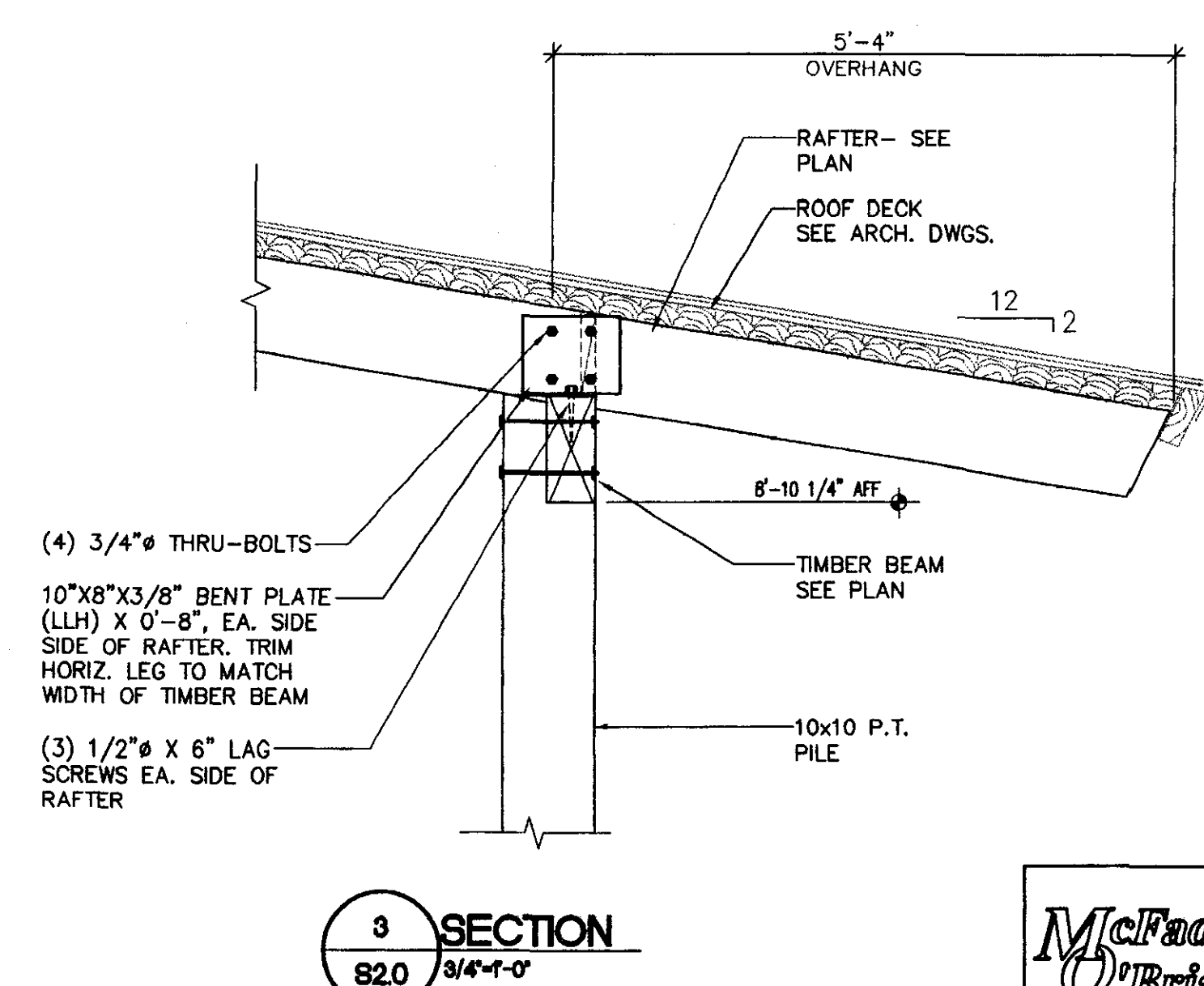
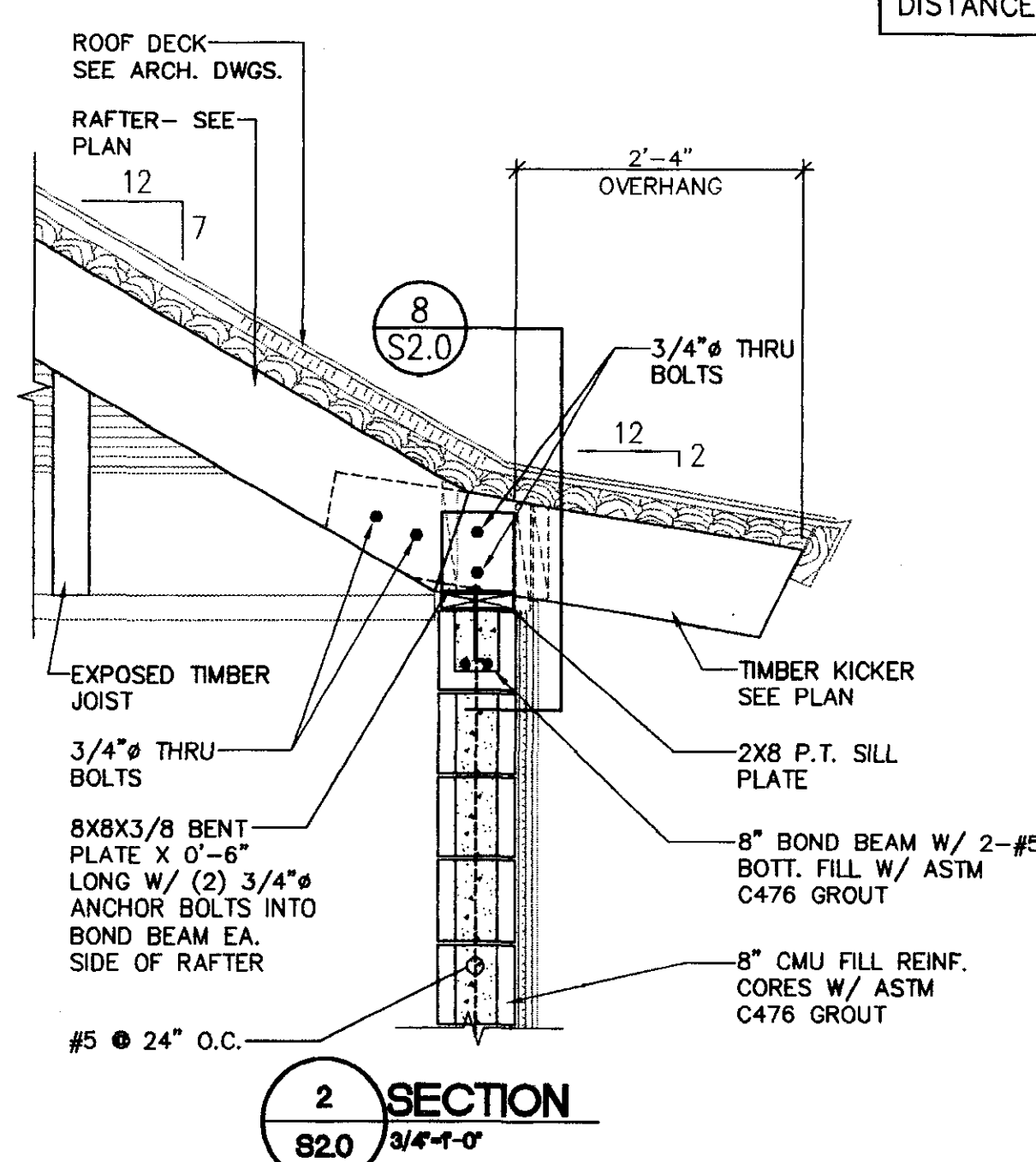
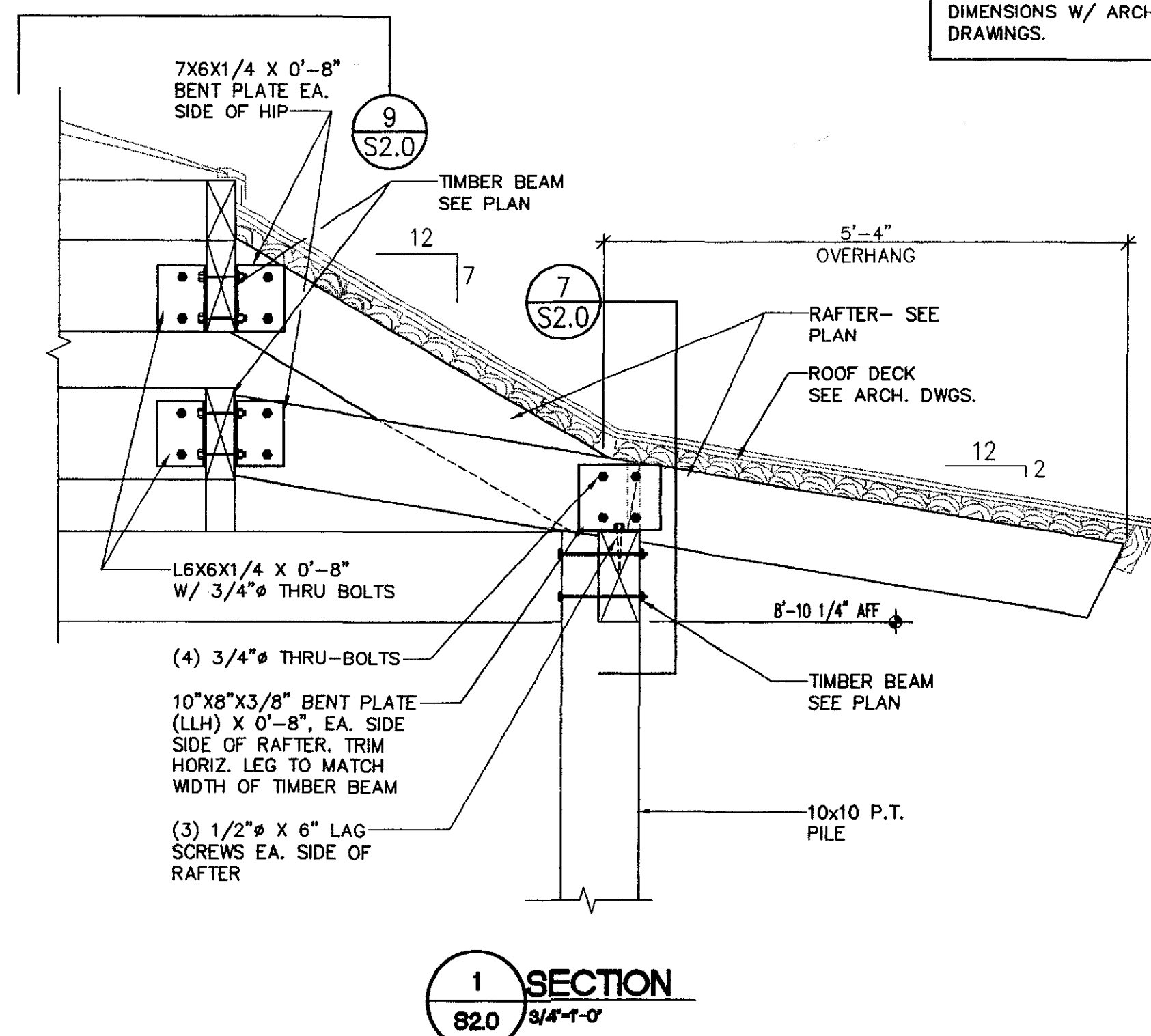
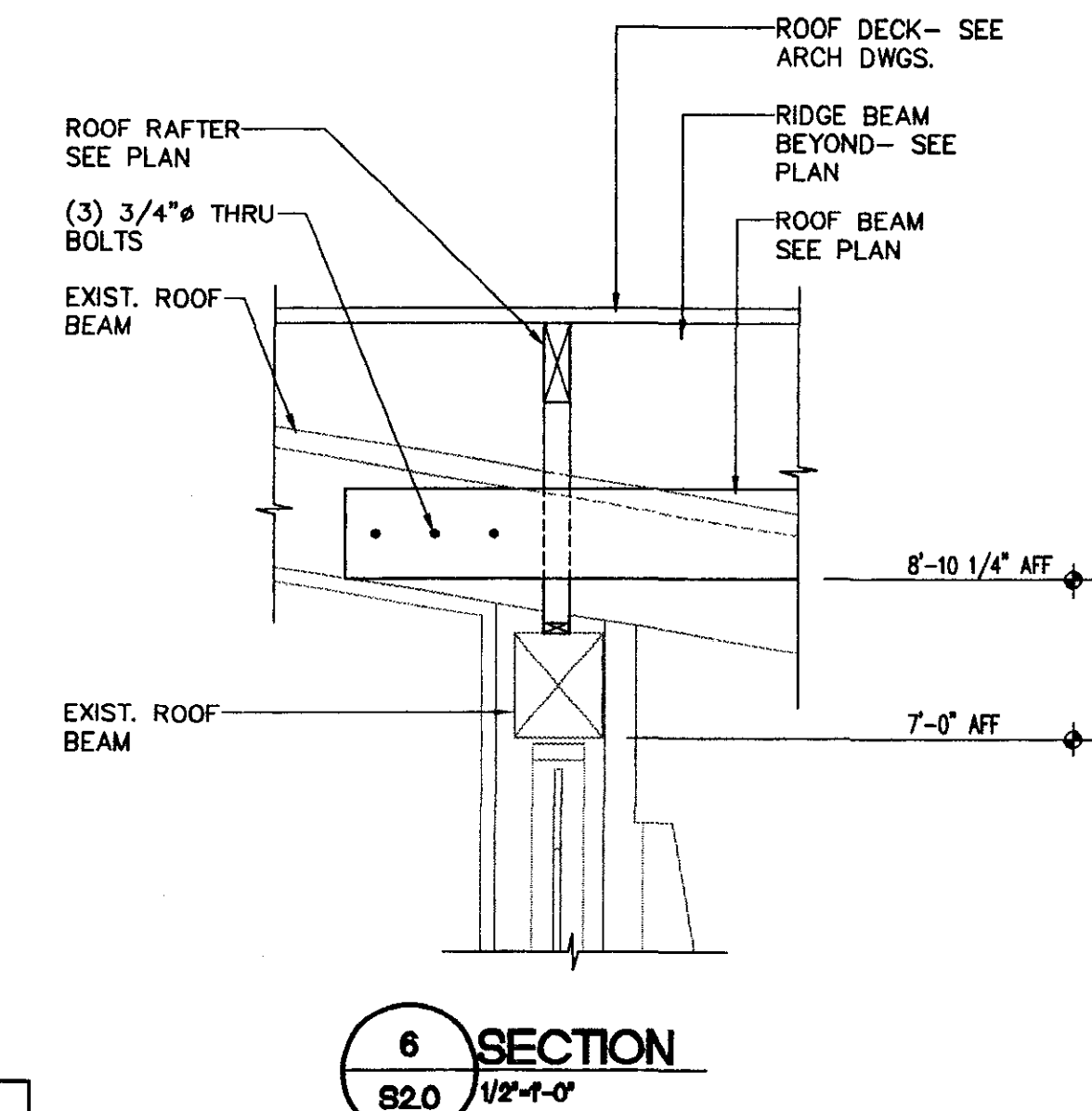
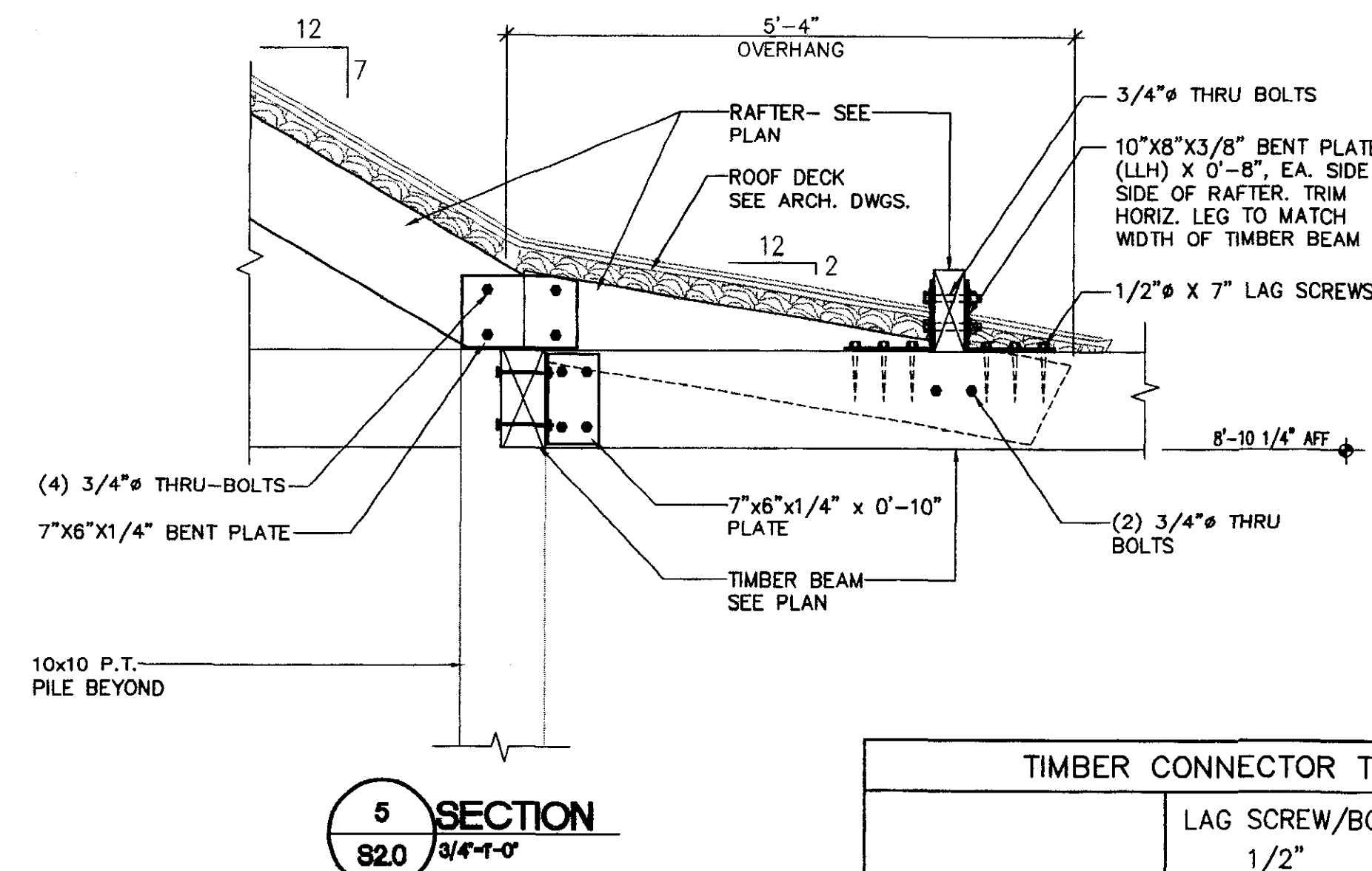
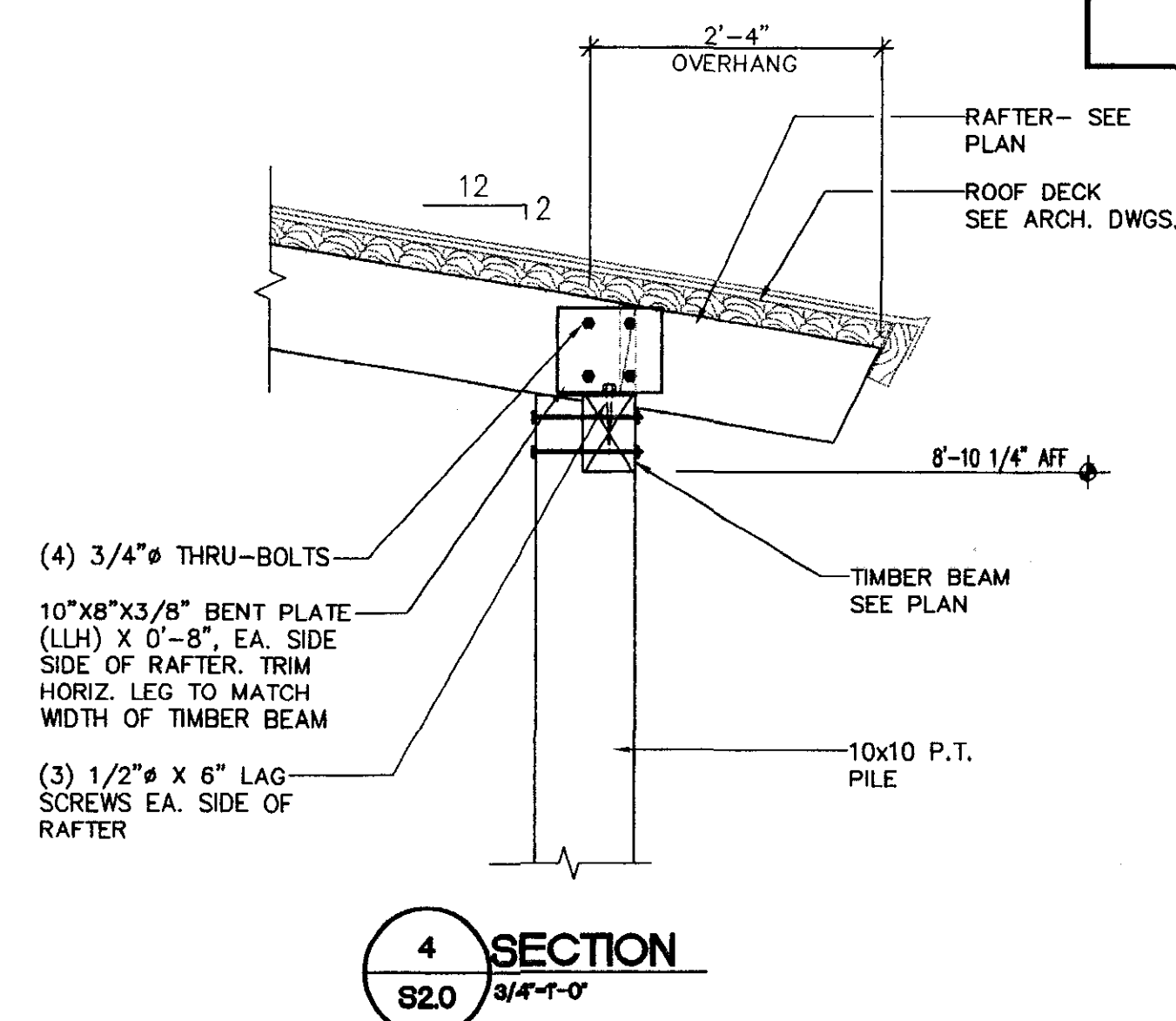
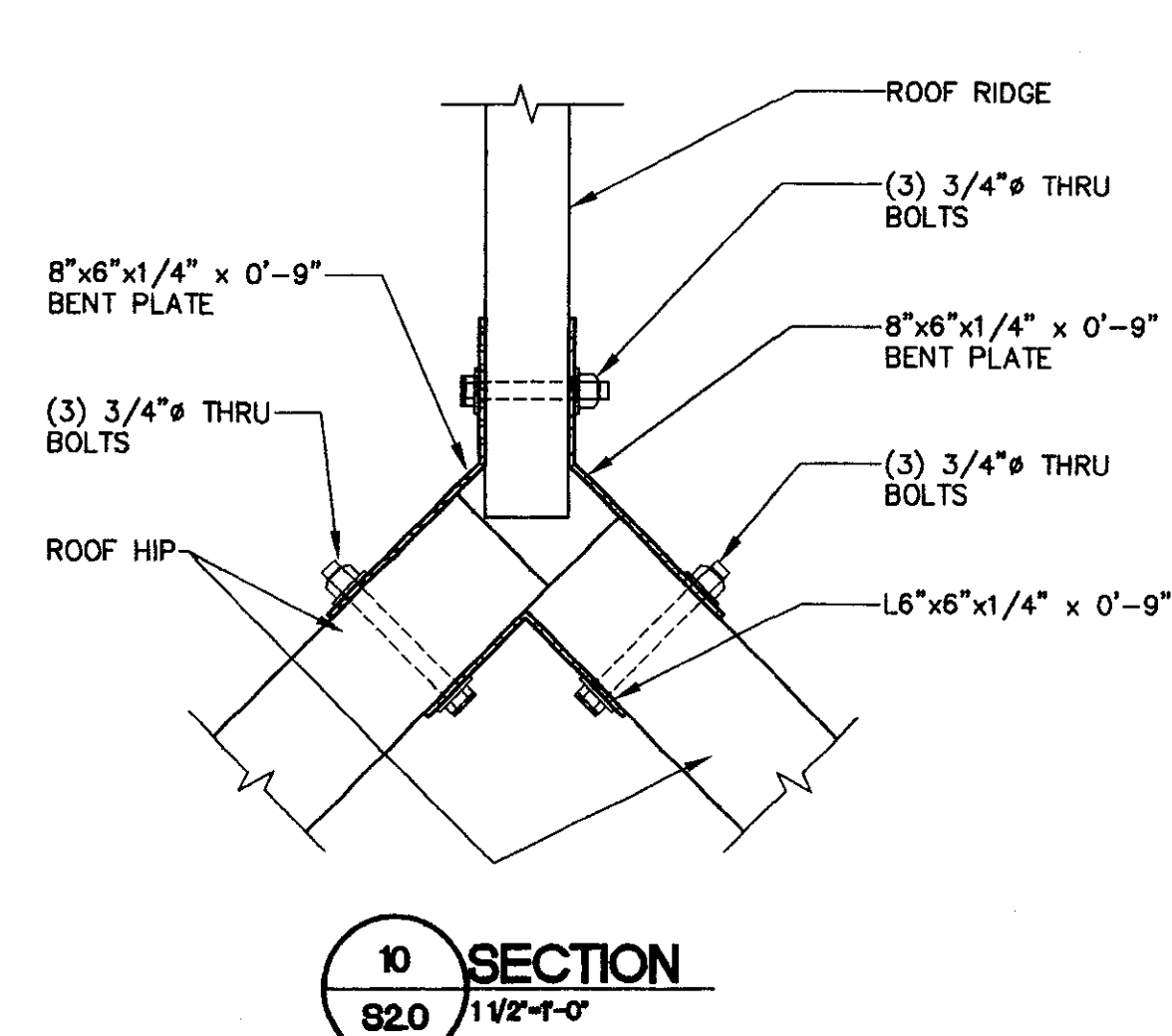
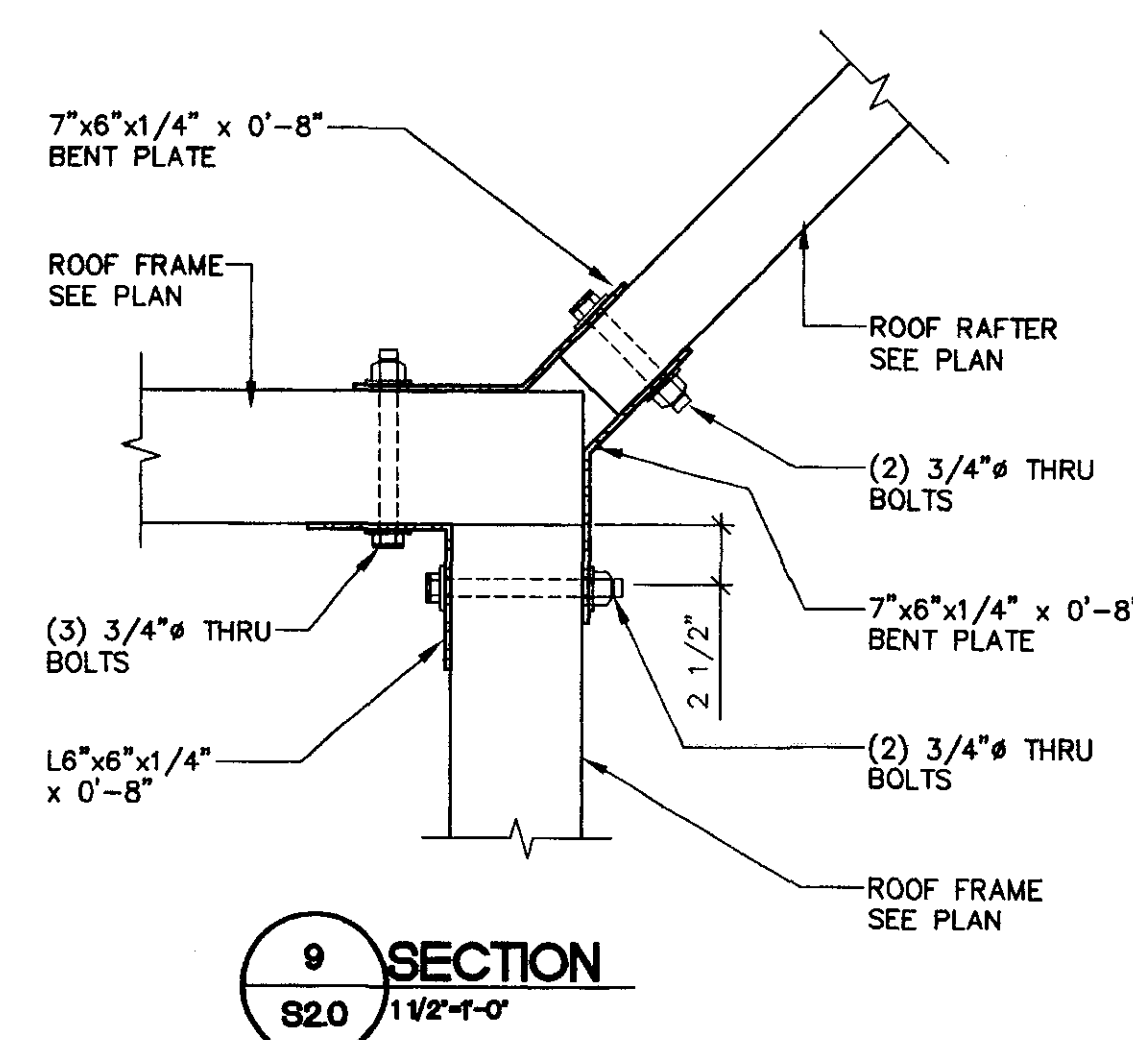
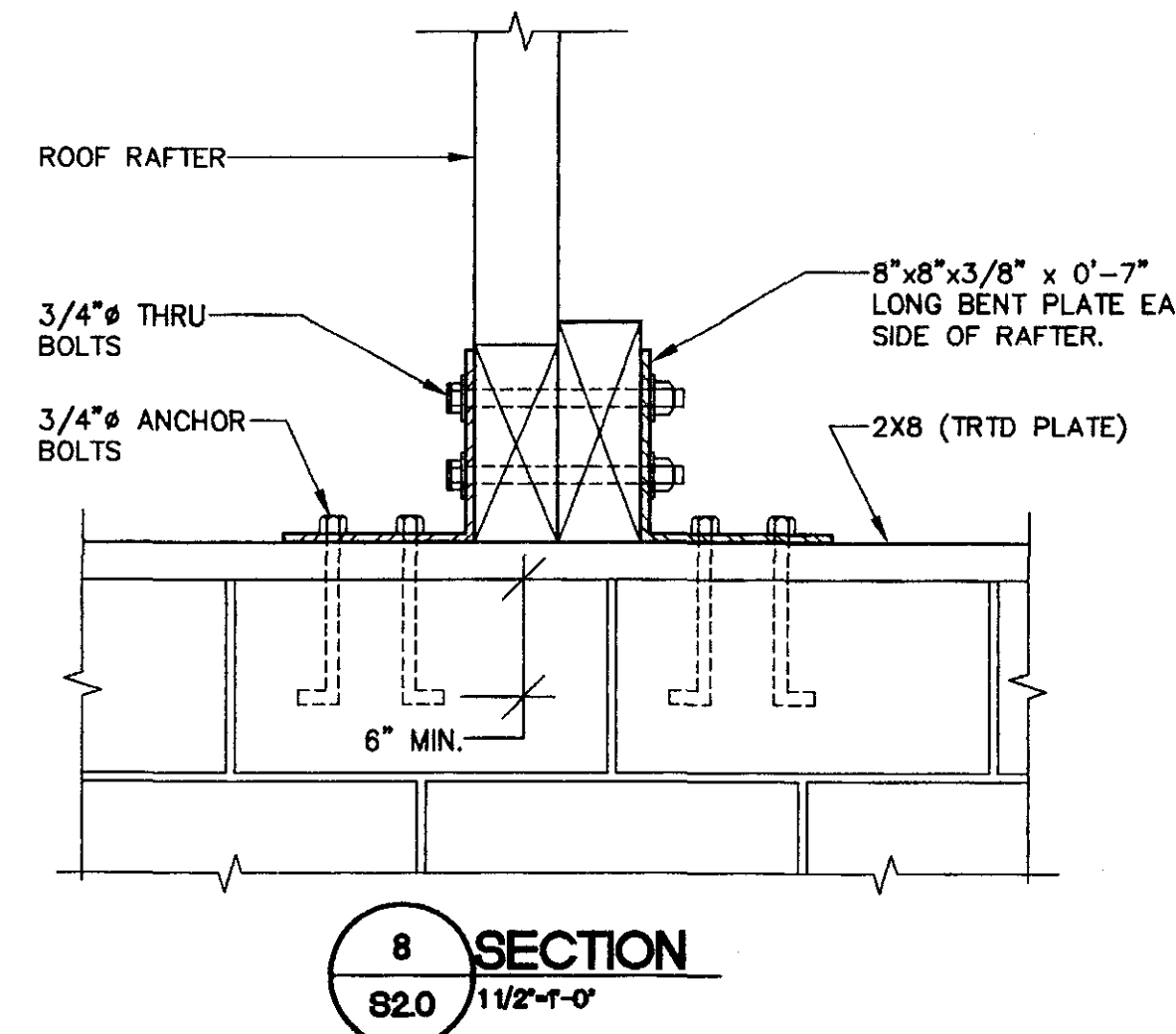
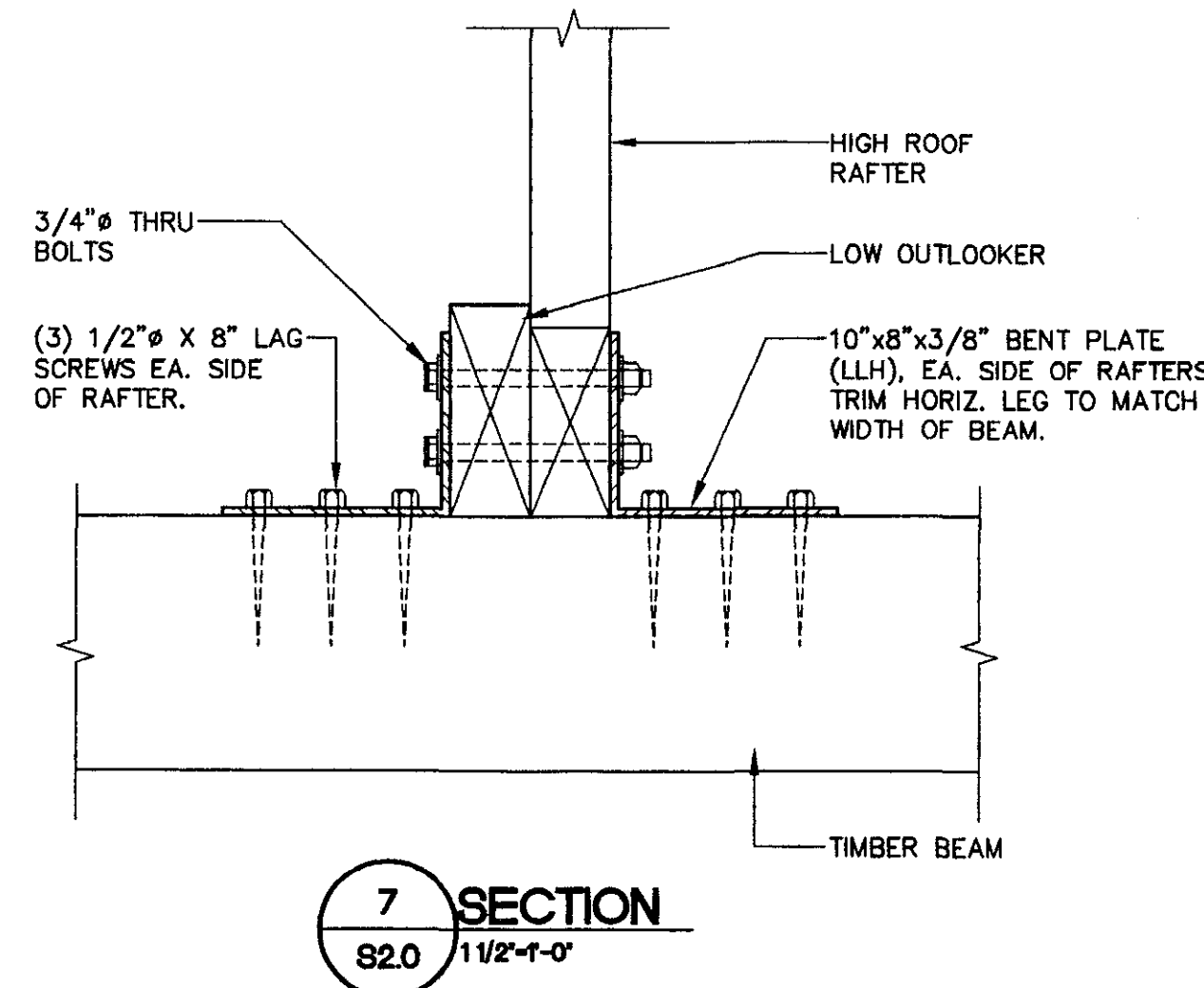
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CODE 49614 ITEM 4627 ID #489614627A

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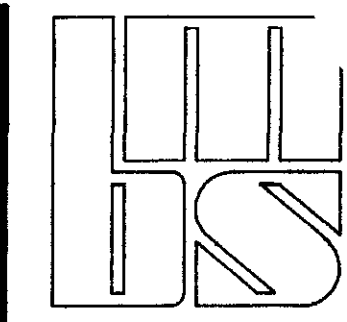
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WILMINGTON, NORTH CAROLINA 28406
TELEPHONE 910/791-4000 FAX 910/791-5266
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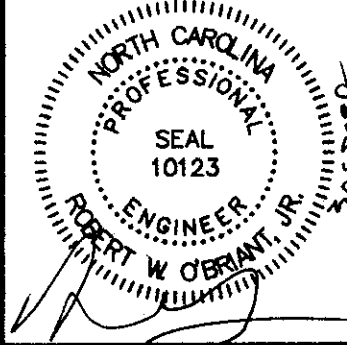
NOTE: SEE TIMBER CONNECTION TABLE FOR MINIMUM EDGE DISTANCE, MINIMUM END DISTANCE & CENTER-TO-CENTER DISTANCES FOR BOLTS AND LAG SCREWS.

VERIFY ALL OVERHANG DIMENSIONS W/ ARCH. DRAWINGS.

TIMBER CONNECTOR TABLE		
	LAG SCREW/BOLT SIZE	
	1/2"	3/4"
EDGE DISTANCE	2"	3"
END DISTANCE	3 1/2"	5 1/4"
CENTER-TO-CENTER DISTANCE	2 1/2"	3 3/4"



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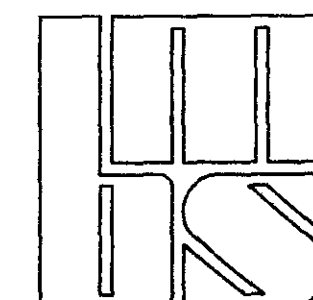
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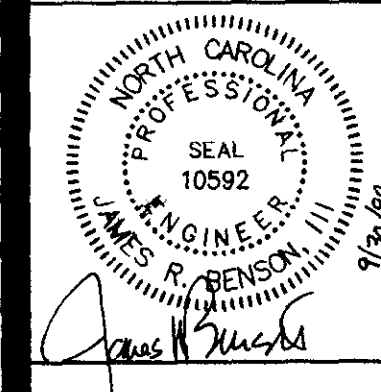
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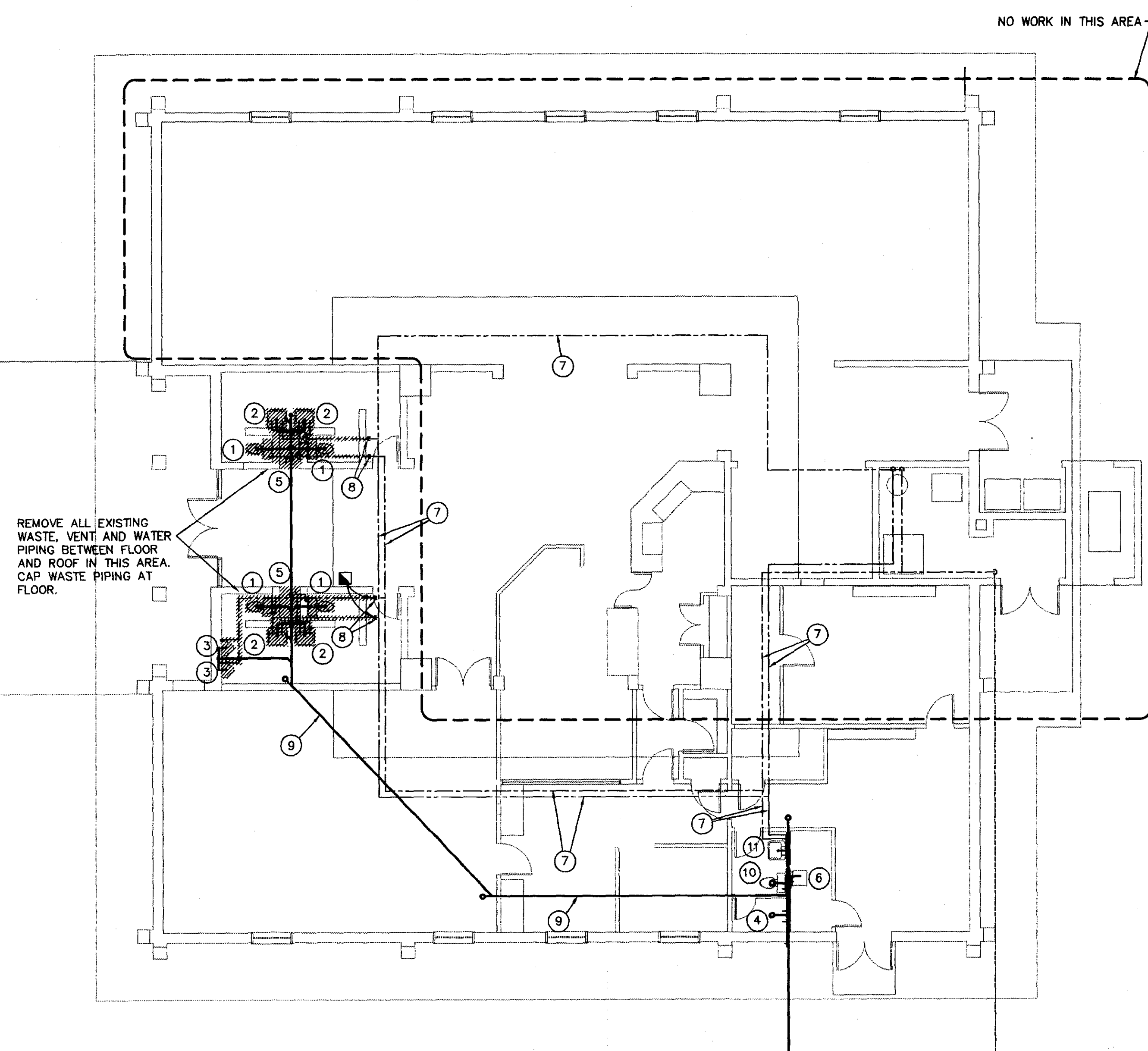


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LEGEND	
----	COLD WATER PIPING
----	HOT WATER PIPING
----	HOT WATER RETURN PIPING
----	WASTE PIPING
----	VENT PIPING
(P1)	FIXTURE SYMBOL- SEE SCHEDULE & SPECS.
VTR	VENT THRU ROOF
FCO	FLOOR CLEANOUT
WCO	WALL CLEANOUT
COG	CLEANOUT ON GRADE
AFG	ABOVE FINISH GRADE
AFF	ABOVE FINISH FLOOR
+	CONNECT NEW TO EXISTING
■	TERMINATE DEMOLITION
X	GATE VALVE
⊗	GLOBE VALVE
⌋	CHECK VALVE
⌋	HOSE BIBB/WALL HYDRANT
	UNION
+	STRAINER
////	REMOVE EXISTING

DEMOLITION KEYED NOTES

- ① WATER CLOSET - REMOVE.
- ② LAVATORY - REMOVE.
- ③ URINAL - REMOVE.
- ④ SHOWER - TO REMAIN.
- ⑤ ELECTRIC WATER COOLER - REMOVE.
- ⑥ SERVICE SINK - TO REMAIN.
- ⑦ DOMESTIC WATER MAIN PIPING- TO REMAIN.
- ⑧ DOMESTIC WATER BRANCH PIPING - CAP NEAR MAIN.
- ⑨ WASTE PIPING BELOW FLOOR- ABANDON IN PLACE.
- ⑩ WATER CLOSET - TO REMAIN.
- ⑪ LAVATORY - TO REMAIN.



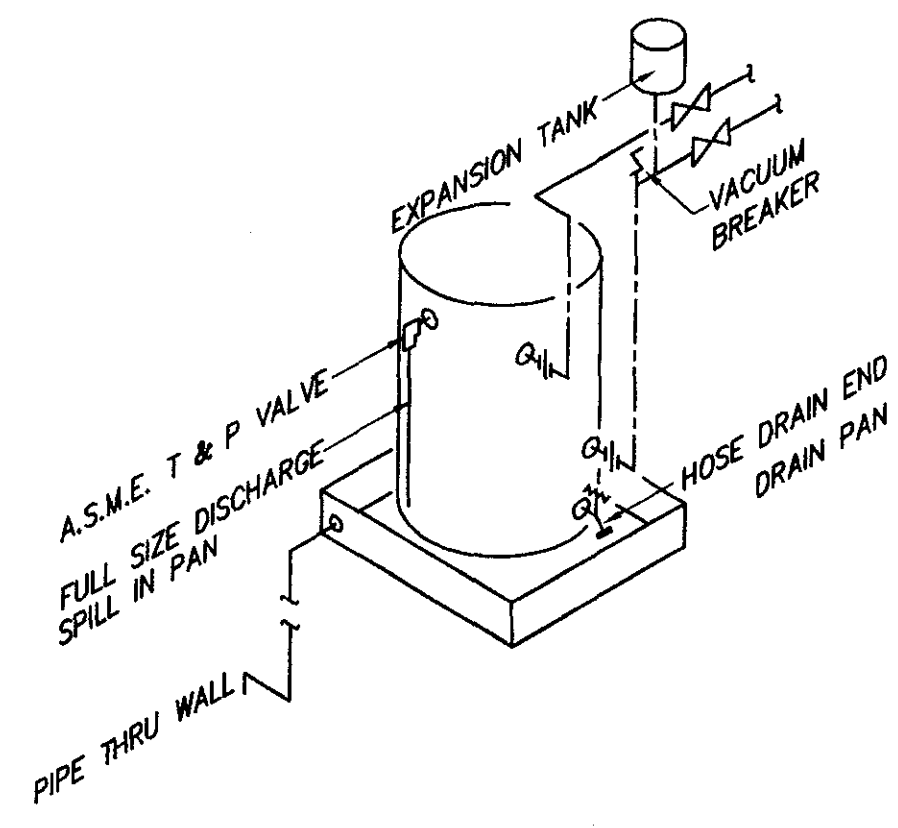
1 PLUMBING DEMOLITION PLAN
P1.0 1/8"=1'-0"

EXISTING
MANHOLE

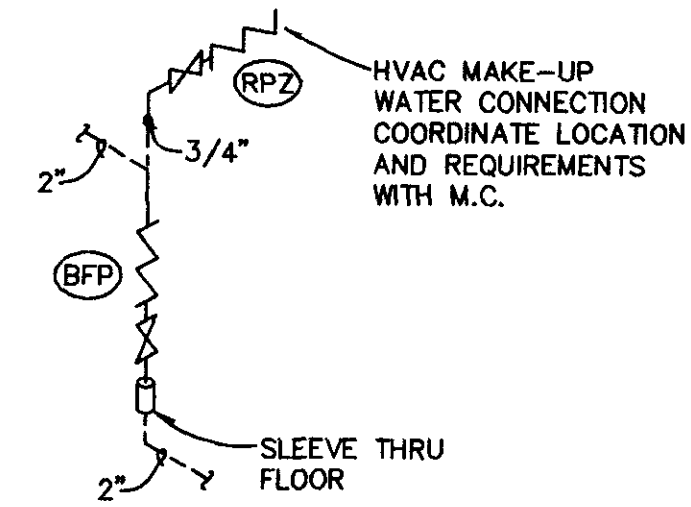
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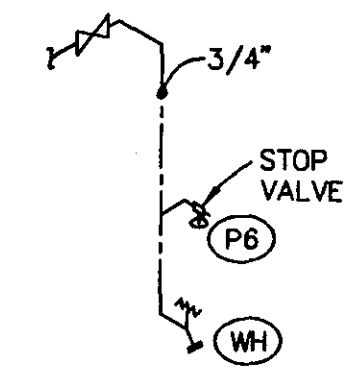
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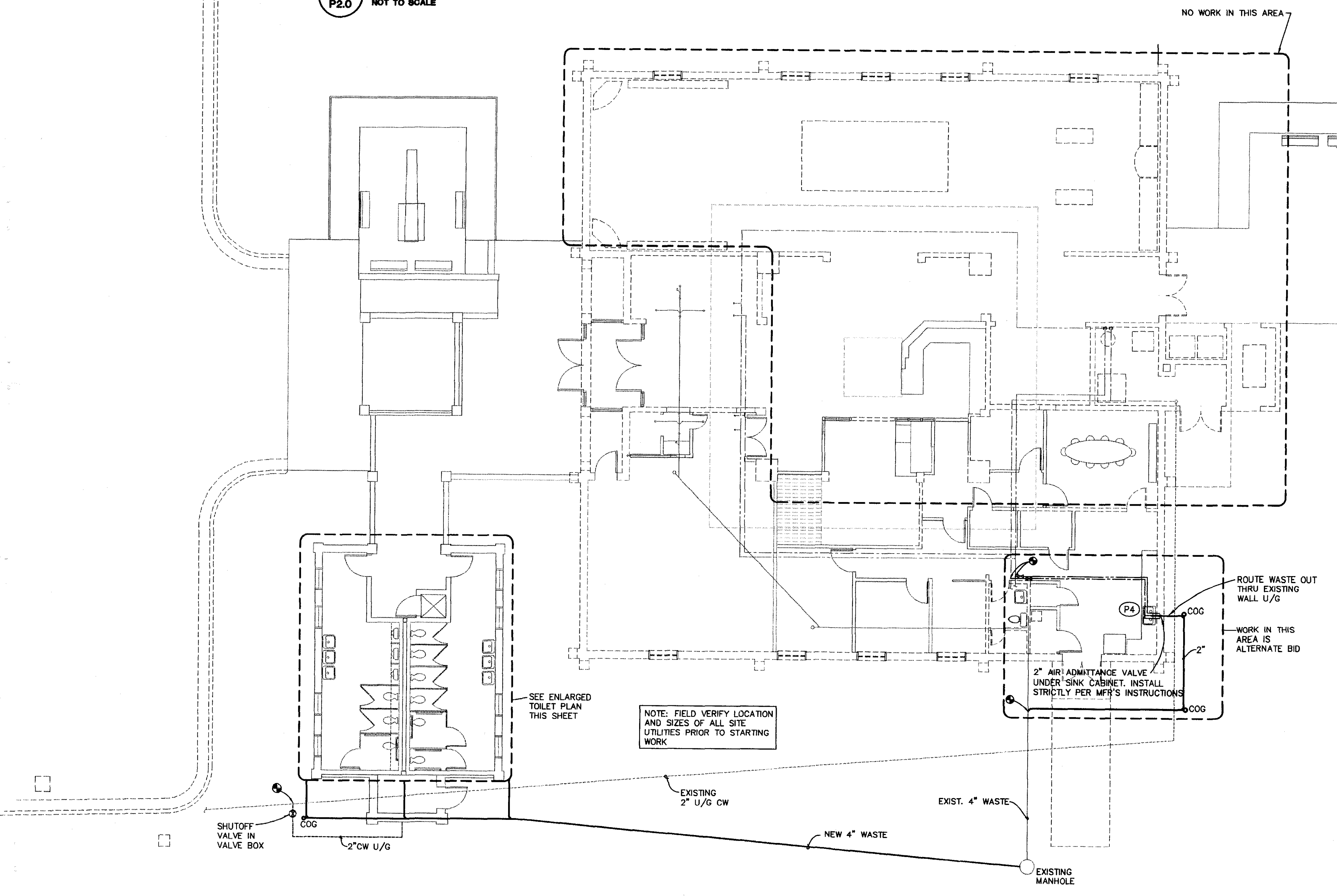
3 WATER HEATER DETAIL
P2.0 NOT TO SCALE



4 WATER RISER DETAIL
P2.0 NOT TO SCALE

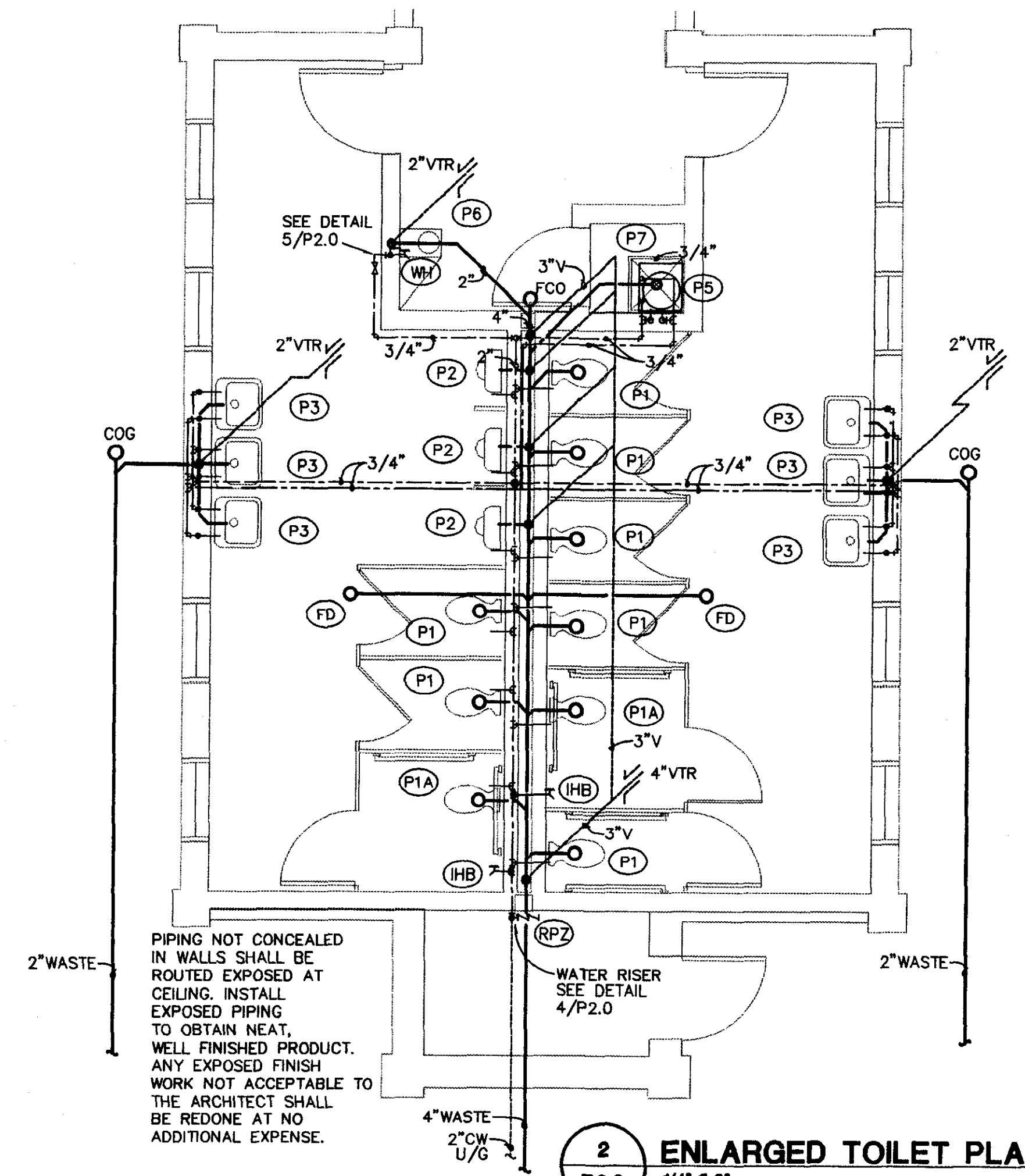


5 FOUNTAIN DRAIN DETAIL
P2.0 NOT TO SCALE



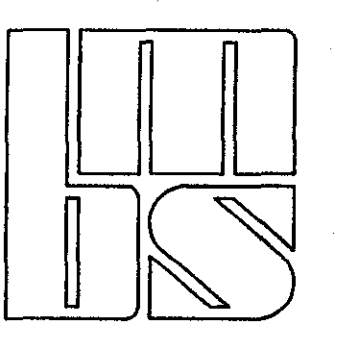
1 PLUMBING NEW WORK PLAN
P2.0 1/8"=1'-0"

MARK	FIXTURE	PIPE SIZE				REMARKS
		WASTE	VENT	CW	HW	
P1	FLOOR MOUNT PRESS. ASSIST WATER CLOSET	3"	2"	1/2"	-	w/ CENTER PUSHBUTTON ACTUATOR- AMERICAN STANDARD 2292.203 OFLC SEAT-OLSONITE #95
P1A	FLOOR MOUNT PRESS. ASSIST WATER CLOSET ADA	3"	2"	1/2"	-	w/ CENTER PUSHBUTTON ACTUATOR- AMERICAN STANDARD 2168.128 OFLC SEAT-OLSONITE #95
P2	WALL HUNG FLUSH VALVE URINAL	2"	2"	3/4"	-	AMERICAN STANDARD 6541.132 FLUSH VALVE- SLOAN 186-1 ADA MOUNTING WHERE REQUIRED
P3	WALL HUNG LAVATORY	2"	2"	1/2"	1/2"	AMERICAN STANDARD 0356.015 8" O.C. FAUCET w/ LEVER HANDLES, GRID STRAINER- CAMBRIDGE 23T254 ADA MOUNTING WHERE REQUIRED
P4	DOUBLE COMP. S.S. COUNTERTOP SINK	2"	2"	1/2"	1/2"	33"x19"x7.5"- ELKAY LR 3319 w/ CRUMBCUP STRAINER LK-35 SWING SPOUT FAUCET w/ SPRAY, LEVER HANDLES- CAMBRIDGE 27T1134
P5	ELECTRIC WATER HEATER	-	-	3/4"	3/4"	10 GAL. 1650W @120V/1Ø- STATE PV-10-10MS-K EXPANSION TANK- 1.96 GAL. STATE ETC-2X
P6	S.S. DRINKING FOUNTAIN ADA	2"	2"	1/2"	-	STERN WILLIAMS BF-5040
P7	TERRAZO MOP BASIN	2"	2"	1/2"	1/2"	STERN WILLIAMS MTB 2424 WALL FAUCET- T-10-VB HOSE AND WALL HOOK- T-35 MOP HANGER- T-40
WH	WALL HYDRANT	-	-	3/4"	-	BACKFLOW PROTECTED, NON-FREEZE, w/ REMOVABLE TEE HANDLE- WOODFORD 67
IHB	INTERIOR HOSE BIBB	-	-	1/2"	-	CHROME PLATED, BACKFLOW PROTECTED, w/ REMOVABLE TEE HANDLE- WOODFORD 26CP
BFP	DOUBLE CHECK BACKFLOW PREVENTER	-	-	2"	-	WATTS 007
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER	-	-	3/4"	-	WATTS 009
FD	FLOOR DRAIN	3"	2"	-	-	6" DIA. NICKEL ALLOY TOP JOSAM 30003

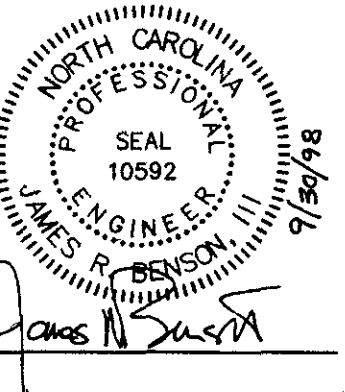


2 ENLARGED TOILET PLAN
P2.0 1/4"=1'-0"

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DEMOLITION NOTES

1. ALL MECHANICAL DEMOLITION SHALL BE COORDINATED WITH THE OWNER AND GENERAL CONTRACTOR SO AS TO MINIMIZE DISRUPTION OF THE OWNER'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE OF THE GENERAL CONTRACTOR.

SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK.

2. THE MECHANICAL CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR CONTRACT WORK REQUIREMENTS AND SHALL PERFORM DEMOLITION AS INDICATED AND/OR REQUIRED. REMOVE ALL MECHANICAL FIXTURES, ACCESSORIES, EQUIPMENT, PIPING, HANGERS, ETC. MADE OBSOLETE BY ALTERATIONS INDICATED ON THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN. HOWEVER, THE MECHANICAL CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE ARCHITECT/ENGINEER OR OWNER. SURVEY THE AFFECTED AREAS PRIOR TO SUBMITTING A BID.

3. PROTECT EXISTING MECHANICAL WORK TO REMAIN AND MODIFY/EXTEND AS REQUIRED BY NEW WORK.

4. UNLESS SPECIFICALLY REQUESTED BY THE OWNER, ALL DEMOLISHED MECHANICAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

5. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.

6. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT/ENGINEER FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, PIPING, EQUIPMENT, DIMENSIONS, POINTS OF ACCESS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.

7. SEE "GENERAL NOTES" AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

GENERAL NOTES

1. THE MECHANICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.

2. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING MECHANICAL SYSTEMS AND THE EXISTING BUILDING. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT SHOWN ON THE DRAWINGS.

3. COMPARE MECHANICAL DRAWINGS WITH ACTUAL FIELD CONDITIONS TO INSURE THAT COMPLETE, OPERABLE SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS ARE OBTAINED AT THE COMPLETION OF WORK. NOTIFY ARCHITECT/ENGINEER OF ANY CONFLICTS PRIOR TO STARTING WORK.

4. COORDINATE CONSTRUCTION SCHEDULE TO MAINTAIN OWNER'S BENEFICIAL USE OF THE EXISTING BUILDING THROUGHOUT CONSTRUCTION. ALL SERVICE INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER AND SHALL BE STRUCTURED TO MINIMIZE DISRUPTION OF OWNER'S OPERATIONS.

5. ESTABLISH EXACT LOCATIONS OF MECHANICAL DUCTS, PIPING AND EQUIPMENT PRIOR TO STARTING WORK. COORDINATE WITH OTHER CONTRACTORS. ADVISE ARCHITECT/ENGINEER OF CONFLICTS BEFORE INSTALLATION OF WORK. SEE SPECIFICATIONS SECTION 15500 FOR ADDITIONAL DETAIL REGARDING COORDINATION WITH OTHER CONTRACTORS.

6. PROVIDE ACCESS AND SERVICE CLEARANCE BY FOR ALL ITEMS OF MECHANICAL EQUIPMENT AS REQUIRED BY CODE OR AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

7. COORDINATE GAS AND ELECTRICAL SERVICES FOR MECHANICAL EQUIPMENT WITH PLUMBING AND ELECTRICAL CONTRACTORS.

8. THESE DRAWINGS ARE COMPILED BY THE ARCHITECT/ENGINEER FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, PIPING, EQUIPMENT, DIMENSIONS, POINTS OF ACCESS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.

9. SEE "DEMOLITION NOTES" AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

MECHANICAL LEGEND

O/A OUTSIDE AIR

S/A SUPPLY AIR

R/A RETURN AIR

Ⓢ THERMOSTAT

Ⓢ EMERGENCY FAN STOP SWITCH

BRANCH DUCT CONNECTION- PROVIDE
ADJ. AIR EXTRACTOR IN S/A DUCT
REGISTER AND DIFFUSER MARK
SEE SCHEDULE

CEILING SUPPLY AIR
DIFFUSER

CEILING RETURN AIR
REGISTER

MANUAL VOLUME DAMPER

HPWS HEAT PUMP WATER SUPPLY

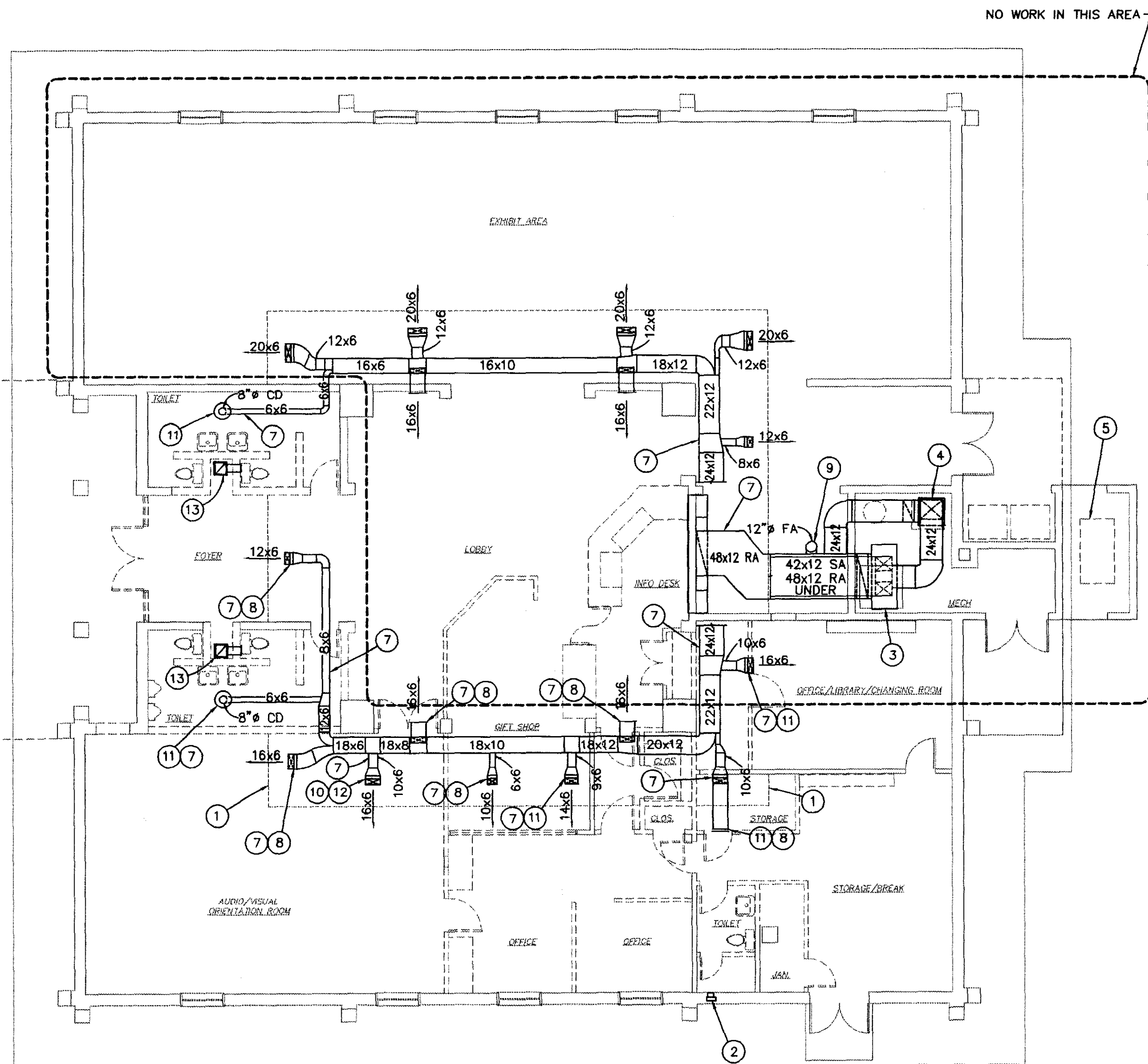
HPWR HEAT PUMP WATER RETURN

HCWS HOT/CHILLED WATER SUPPLY

HCWR HOT CHILLED WATER RETURN

DEMOLITION KEYED NOTES

- 1 WOOD PLANK BAFFLE - TO REMAIN
- 2 EXHAUST FAN - TO REMAIN
- 3 AIR HANDLING UNIT - TO REMAIN
- 4 FURNACE - TO REMAIN
- 5 AIR COOLED CONDENSING UNIT - TO REMAIN
- 6 UNDERGROUND FUEL OIL TANK - TO REMAIN
- 7 A/C DUCT - TO REMAIN
- 8 REGISTER OR DIFFUSER - TO REMAIN
- 9 FRESH AIR INTAKE - TO REMAIN
- 10 A/C DUCT - REMOVE
- 11 REGISTER OR DIFFUSER - REMOVE
- 12 REGISTER OR DIFFUSER - REMOVE & RELOCATE
- 13 EXHAUST DUCT THRU ROOF- REMOVE.



1 MECHANICAL DEMOLITION PLAN
M1.0 1/8"=1'-0"

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE

Prescriptive ☒ Energy Cost Budget ☐

Thermal Zone II

Exterior design conditions
winter dry bulb 23°F
summer dry bulb 93°F

Interior design conditions
winter dry bulb 70°F
summer dry bulb 75°F
relative humidity 50%

Building heating load 22 MBH* *NEW TOILET FACILITY ONLY

Building cooling load 2.5 TONS*

Mechanical Spacing Conditioning System

Unitary
description of unit SEE SCHEDULE THIS SHEET
heating efficiency 4.0 COP (HI-TEMP), MIN.
cooling efficiency 14.0 EER (HI-TEMP), MIN.
heat output of unit SEE SCHEDULE THIS SHEET
cooling output of unit SEE SCHEDULE THIS SHEET

boiler
total boiler output. If oversized, state reason. N/A
chiller
total chiller capacity. If oversized, state reason. N/A

List equipment efficiencies

Equipment schedules with motors (mechanical systems)
motor horsepower N/A
number of phases
minimum efficiency
motor type
of poles

DESIGNER STATEMENT:

To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina State Building Code, Volume X-Energy.

SIGNED: *James R. Benson, III*

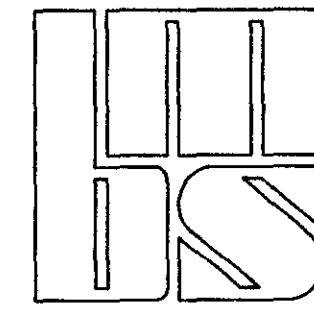
NAME: JAMES R. BENSON, III

TITLE: MECHANICAL ENGINEER

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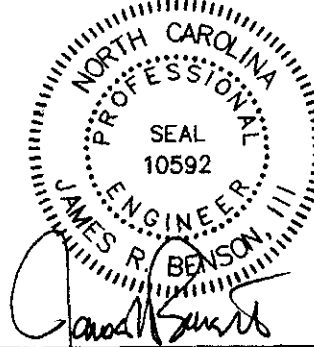
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