



SITE & BUILDING ASSESSMENT

**CCSD WEST BROAD STREET CAMPUS
1573 WEST BROAD STREET
ATHENS, GA 30606
LPBC 218032**

**TIME: 10:30 AM
TEMPERATURE: 84°
WEATHER: SUNNY
DATE: SEPTEMBER 4, 2018**

**PRESENT AT JOBSITE: JOHN GILBREATH; CLARKE COUNTY SCHOOL DISTRICT
BECKY POPE; LINDSAY POPE BRAYFIELD CLIFFORD
ROBBY TIEMAN; LPBC
MATT TANNER; BREEDLOVE LAND PLANNING**

FROM: ROBBY TIEMAN; LPBC

**DISTRIBUTION: BARRY SPURLOCK: SPURLOCK & ASSOCIATES
ATTENDEES
FILE NO.: LPBC 218032-11**

Comprehensive Summary

The property and site encompassed by West Broad, Minor, Campbell Lane, and Paris Streets contains three building structures, all which were observed and surveyed to be proposed for rehabilitation and re-use for CCSD's Early Childhood Education program. The school system is currently not occupying the site, but a local garden/market is using the site for a small garden and community events. A small adjacent parcel on Campbell Lane is also available and is currently being used for (paved) parking.

Three existing structures on the site are in need of repairs- each one requiring different scopes of work. The major concern of any building is the structural capacity and if the building is suitable for use. Although they may look in fair condition and not appear to have major issues, today's building codes require designs that are much more in depth than in the 1950's. The current 2012 Building Code would require a substantial amount of repairs to all structures, pending a comprehensive structural analysis. Only the Minor Street building is recommended for saving due to the historic significance and wood structure would be cost effective for restoration. The Campbell Lane and West Broad buildings are recommended to be demolished so the space can be used for new structures and/or site improvements. The amount of work, required by code (IBC, NFPA, ADA, Energy), to bring those two facilities up to CCSD's needs are cost prohibitive. Neither are equipped with a central HVAC system, which will not fit in the available above-ceiling spaces.

Existing utilities, lack of a storm water management/water quality treatment, and ADA code compliance are of major concern. Utility materials (terra-cotta, cast iron, galvanized pipe, Romex wire, etc.) dating back to the 1930's are outdated, undersized, and are in need of replacement. In 1958, the last building on the campus was built, which did not require addressing storm water or treating water quality. Due to the size of the site, underground storm water management will most likely be the best option to meet current land disturbance codes. Accessing the building with the natural sloping site will be a challenge- handicap parking and accessibility will need to be addressed as they are currently not in compliance. Off-street parking will also be required in addition to what is already available.

Rehabilitation and restoration to the Minor Street building are recommended for reuse. Although this structure is not listed on the historical registry, design and building materials should be integrated throughout to keep the character and essence of its original 1939 construction. A newly renovated Minor Street building could be used as a community type occupancy offering gathering spaces / support offices. Other functions could include a Parent Information Center (P.I.C.) and a health clinic.

Demolition of the Campbell Lane and West Broad buildings will provide opportunities to further develop the site for its proposed use. The existing garden will also need to be completely relocated due to the requirements for early childhood education space needs. A new classroom building for 200 children, offices, bathrooms, kitchen, and dining area will be part of the new building program. Site improvements listed previously to accommodate these facilities will require full usage of the property, pending a schematic site plan. New bus loading, service drive, and a parent drop-off and pick-up zone will be required for the proposed use. A new outside play area, as required by the design guidelines, will also need to be provided. Buffering the traffic and noise levels at West Broad Street will be necessary to avoid distractions and safety concerns.

In summary, the proposed project to expand CCSD's early childhood education program and develop a community building to the West Broad campus has an enormous amount of potential. The age of the utilities and natural characteristics of the site offer a unique challenge for new construction. Being able to salvage a historical building for reuse as well as providing educational opportunities for young children would help revitalize the Rock Springs neighborhood with a spark for improvement and bring a sense of presence that appears to be lost in the area.

Property: 3.31 acres of developed property + separate 0.37-acre parking lot

(see Attachment A - Site Survey)

- Parcel # 122D1 B001, zoned G
- The site is currently not being used by CCSD
 - The eastern half of the site is currently being rented by the West Broad Farmer's Market, formerly the school playground area
- Plazas created in between the building serve as gathering spaces for the community and for special events
- The location of the campus is the "threshold" to Athens via West Broad Street corridor
- The site has no storm water management system currently in place
- The site has minimal parking opportunities
 - Parking on Minor Street is to be angled (31 existing spaces)
- The natural slope of the site offers challenges for handicap accessibility
- West Broad Street generates heavy traffic and noise
- Existing site utilities are outdated and are in need of replacement
 - Terra cota and cast iron sanitary sewer piping (corroded)
 - Galvanized water piping (under sized)
 - Power



Site (North is up)



Site (West is up)



Site (South is up)



Courtyard looking West



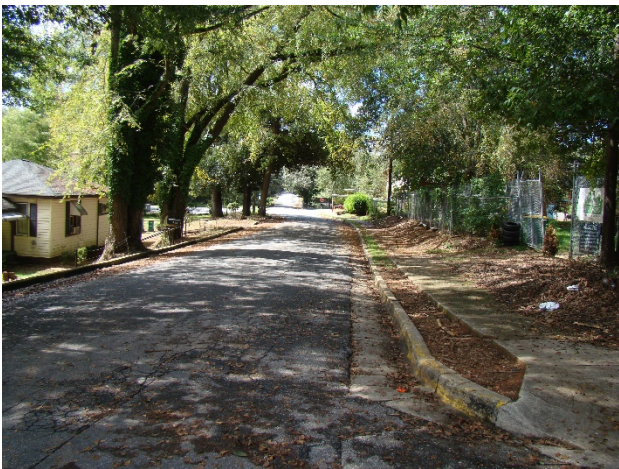
Courtyard looking North



Rear parking area off Campbell Lane



Side parking area @ Minor Street



Campbell Lane looking West



West Broad Street looking West

Minor Street Building: 10,700+/- square feet, one story, 1939 ,1948 Addition (see Attachment B – Minor St. Bldg. & Campbell Ln. Bldg. Structural Inspection)

Original Use:

-First African-American school building in Athens

Survey:

Division 02: Existing Conditions

- Verify asbestos (abatement as required)
- Selective demolition
- No ADA access to building from public way (modify entrances as required)

Division 03: Concrete

-?

Division 04: Masonry

- Protect & point-up existing exterior brick veneer (as required)

Division 05: Metals

- Reinforce existing wood structure (as required in structural report)
- New guard/handrails (as required)

Division 06: Wood, Plastics, & Composites

- Salvage interior woodwork (bead board wainscot w/ cap, wood base/cap)
- Repair existing structural framing, per report
- Replace frieze board @ roof trim

Division 07: Thermal & Moisture Protection

- Replace wood diaphragm (exterior walls and roof) with new plywood sheathing, ice/water shield, asphalt shingles
- Replace exterior sealant joints
- Replace exterior roof trim, gutters, downspouts
- Add roof insulation to meet Energy Code
- Add insulation to exterior walls to meet Energy Code
- Add moisture barrier @ crawl space

Division 08: Openings

- Replace all exterior doors (as required for Life Safety Code)
- Replace exterior windows (to match historical period of building, Energy Code)
- Replace interior doors (as required for new design)

Division 09: Finishes

- Replace floor finishes
- Replace (gyp. bd.) ceiling under roof trusses
- Repaint (remove lead paint)
- New metal stud/gyp bd walls (as required for new design)
- Existing load-bearing Corridor walls to remain

Division 10: Specialties

- New signage
- New toilet accessories
- New visual display boards
- New flagpole
- New protective covers connecting adjacent spaces
- New toilet compartments

Division 11: Equipment

- New projection screens
- New display cases

Division 12: Furnishings

- New window treatments

Division 21: Sprinkler

- New automatic fire sprinkler system
- New FDC and PRV (as required by ACC)

Division 22: Plumbing

- Replace all piping and fixtures (existing galvanized pipe not usable)
- Replace sanitary sewer piping

Division 23: HVAC

- Add new system (VRF, WSHP's) with DDC controls

Division 26: Electrical

- Replace all equipment/devices (existing is sub-fed from W. Broad St. Building)

Division 27: Communications

- Replace all equipment/devices

Division 31: Earthwork

- Modify as required for building access
- Site clearing (as required)

Division 32: Exterior improvements

- New stairs/ramps/walks (as required for ADA)- existing riser heights vary
- New landscaping
- New paving for parking, drop off and pickup (as required)

Division 33: Utilities

- Replace all piping and utilities (outdated and undersized)
- New storm water management and water quality systems

Suggestion:

- Existing building is in fair condition that would require rehabilitation that would be cost effective for re-use
- Housing early childhood learning in this type structure is not ideal
- Community Room, clinic, offices, restrooms are a suitable use



West Broad Street façade/entry



Minor Street façade/entry



Plaza façade @ courtyard



Plaza façade @ courtyard



Corridor



Wood roof framing above ceiling

Campbell Lane Building: 14,400+/- square feet, two story, 1958 (see Attachments B – Minor St. Bldg. & Campbell Ln. Bldg. Structural Inspection; C – Campbell Lane Building Drawings)

Original Use:

-10 classroom building

Survey:

Division 02: Existing Conditions

- Verify asbestos (abatement as required)
- Selective demolition (down to existing structural steel and concrete floors)

Division 03: Concrete

- Repair cast-in-place concrete floors (as required) with new steel pl. (saw-cut in)
- Existing floor adhesive is emulsifying through seams

Division 04: Masonry

- Existing exterior walls do not meet the building code and must be rebuilt (wind)

Division 05: Metals

- Existing structural steel to remain
- New guard/handrails (as required)
- Replace metal roof deck

Division 06: Wood, Plastics, & Composites

- Replace existing millwork

Division 07: Thermal & Moisture Protection

- Replace roof assembly (insulation, cover board, membrane), if structure allows

Division 08: Openings

- Replace all openings (doors/windows) with new wall construction
- Replace all door finish hardware

Division 09: Finishes

- Replace floor finishes
- Replace all ceilings
- Repaint
- New metal stud/gyp bd walls (as required for new design)

Division 10: Specialties

- New signage
- New toilet accessories
- New visual display boards
- New flagpole
- New protective covers connecting adjacent spaces
- New toilet compartments

Division 11: Equipment

- New projection screens

Division 12: Furnishings

- New window treatments

Division 21: Sprinkler

- New automatic fire sprinkler system (salvage existing branch piping?)
- New FDC and PRV (as required by ACC)

Division 22: Plumbing

- Replace all piping and fixtures (existing galvanized pipe not usable)
- Replace all sanitary sewer piping

Division 23: HVAC

- Add new system (VRF, WSHP's) with controls
- Remove existing radiators & associated piping
- Remove existing RTU's

Division 26: Electrical

- Replace all equipment/devices

Division 27: Communications

- Replace all equipment/devices

Division 31: Earthwork

- Modify as required for building access
- Site clearing (as required)

Division 32: Exterior improvements

- New stairs/ramps/walks (as required for ADA)
- New landscaping
- New paving for parking, drop off and pickup (as required)

Division 33: Utilities

- Replace all piping and utilities (outdated and undersized)
- New storm water management and water quality systems

Suggestion:

-Existing building is in poor condition that would require major rehabilitation that would not be cost effective for re-use

- The extensive modification/renovation to the existing structure would only salvage the structural steel. The floor to floor height would not change, leaving the ceiling heights as shown on Attachment C as required for new HVAC systems.



Campbell Lane façade/entry



Plaza façade @ courtyard



Campbell Lane façade/loading



Plaza façade @ canopy/building connection



Classroom, typical



Stair, typical

West Broad Street Building: 7,700+/- square feet, one story, 1954 (see Attachment D – West Broad St. Bldg. Drawings)

Original Use:

- Cafetorium/kitchen addition that served as the on-site dining hall for students
- 4 existing classrooms

Survey:

- Existing building is in poor condition that would require extensive rehabilitation that would not be cost effective for re-use

Suggestion:

- Demolish building for new site improvements/building construction



West Broad façade/entry



Plaza façade



Classroom, typical

GaDOE Design requirements (see Attachment E – GaDOE Design Guidelines):

- 750 square feet (min.) or 35 S.F./child
 - Up to 23 Pre-K children = 805 S.F. (min.)
- Self-contained toilets
 - Two separate toilet rooms (one male; one female)
 - Two adjacent classrooms can share

Head Start Design requirements (see Attachments F – Head Start Design Guidelines; G – Head Start Design Guidelines):

- 35 S.F./child
 - Up to 17 Head Start children = 595 S.F. (min.)

End of Field Report
Attachments

END OF REPORT

ATTACHMENT B:
MINOR STREET BLDG. &
CAMPBELL LN BLDG.
STRUCTURAL INSPECTION

**Structural Inspection
of
Clarke County School District
Future Administrative Office Complex
Athens, GA**

Prepared for:
SP Design Group
5191 Columbus Road
Macon, GA 31206

Prepared by:
Pi-Tech, Inc.
P.O. Box 6631
Macon, GA 31208-6631
Phone: (478)743-5600

STRUCTURAL DESIGN BY
PI-TECH, INC.

February 17, 2016



1.0 Introduction

This report contains the findings of a visual structural inspection of two buildings (Building A and Building B) that may be used as part of a new Clarke County School District administrative office complex in Athens, GA. The inspection was conducted to determine the type and condition of the building's structural systems (i.e. floor, load bearing walls, roof, etc.). Structural deficiencies that require repair were identified. The inspection should not be considered an exhaustive inspection of each and every structural component since wall, floor and ceiling coverings prevented a visual inspection of all elements.

2.0 Methodology

The visual inspection of the buildings was conducted on January 29, 2016. Our inspection of Building A included the foundation walls, masonry piers and first floor framing as viewed from the crawlspace, and the roof framing as viewed from the attic. The building's perimeter brick veneer was inspected from ground level on the exterior. No existing structural plans were available for our use on Building A.

Our inspection of Building B included the steel column and beam framing for the first floor, second floor and roof. The building's perimeter brick wall was inspected from ground level on the exterior. Existing structural plans were available for our use on Building B. The structural plans are accurate where inspected at typical locations except that an elevator and mechanical room have been added to one end of the building.

3.0 Condition Assessment of Building A (Minor Street Building)

Building A is a one story wood framed building that faces Minor St. The building is believed to have been constructed in the 1920's. The end closest to West Broad Street is an addition. The major structural systems of Building A were inspected for damage and overall condition. These systems include the wood floor framing, perimeter and interior masonry piers, and the wood framed roof system. This section describes the structural systems. The attached, existing condition floor plans (Figure 1), contain notes that locate damage that will need to be repaired. Directions (front, back, left and right) used in the report for Building A are with respect to a person standing on Minor St. and facing the building.

3.1 First Floor Framing

The first floor framing consists of wood floor joists spanning primarily front to back that bear on the perimeter and interior masonry pier and wood girder lines. The only deviation from this is a reinforced concrete floor over the old boiler room. Extensive damage was noted to the first floor wood joists, wood girders and wood floor deck. This damage is most likely the result of the poor drainage on the back side of the building.

The damage consisted of wood rot (Photo A1), termite damage (Photo A2) and mold (Photo A3). See Figure 1 for the location of the damaged wood joists and girders. The damage also extends into the wood floor deck. It appears this damage has been present for some time as a steel beam drop sill with pipe jack supports is present in the crawlspace along the back of the building (Photo A4). Several repairs have been

attempted by adding dry stacked masonry and wood piers (Photo A5) or by splicing joists (Photo A6). The required repairs will include deck replacement, reinforcement via “sistering” of new wood members to existing joists, replacement of joists at some locations and installation of properly constructed drop sills. A drop sill consists of a wood or steel beam installed hard under the existing floor joists. The wood beam is supported by CMU piers and concrete footings.

We also noted what appeared to be asbestos insulation on a pipe that runs along the back wall of the building (Photo A7). We recommend that this be checked by a certified inspection company and abated if necessary.

3.2 Roof Framing

The roof is a hip roof system. The rafters and hip beams are supported on the exterior walls and in the interior by knee walls and wood trusses. The knee walls are supported by wood attic floor joists and interior load bearing stud walls. The trusses are supported by load bearing stud walls. The condition of the roof framing visible in the attic is in general in good and no significant structural repair work will be needed. The one exception is the outlookers around the perimeter of the building. Many of these are rotted and have rotated (Photos A8 and A9). See Figure 1 for the location of the damage noted in the attic.

4.0 Condition Assessment of Building B (Campbell Lane Building)

Building B is a two story structural steel framed building that faces Campbell Ln. (Photo B1). The major structural systems of Building B were inspected for damage and overall condition. These systems include the floor framing, beams, columns, and the roof system. This section describes the structural systems. The attached, existing condition floor plans (Figures 2 and 3), contain notes that locate damage that will need to be repaired. Directions (front, back, left and right) used in the report are with respect to a person standing on Campbell Ln. and facing the building.

4.1 First Floor Framing

The first floor of Building B is a concrete slab on grade. The vinyl tile finish prevented a complete inspection of the slab, but no noticeable defects were observed.

Steel columns on the first level support the second floor beams. The visible portions of the columns are in good condition. The second floor beams are welded directly to the columns, and the welds appear to be in good condition.

4.2 Second Floor Framing

The second floor framing consists of steel beams with steel bulb tee sub-purlins framing across the top of the beams. The sub-purlins support a form board and concrete floor slab. Most of the concrete floor slab could not be viewed due to the vinyl tile finish. There was a slight slope in the floor and some cracking of the vinyl tile around the elevator door (Photo B2). No significant repair work of the second floor framing is expected.

Steel columns on the second level support the roof beams. The roof beams are welded directly to the columns. The columns and welds appear to be in good condition.

4.3 Roof System

The roof is a flat roof system. Bulb tee sub-purlins span across the top of the roof beams and support the roof materials. The roof materials are not indicated on the existing structural drawings and could not be viewed since there is no roof access. Two skylights are located in the roof. The condition of the visible roof framing is good and no significant structural repair work will be needed. There is no evidence that any roof leaks or water intrusion has damaged the main structural members.

4.4 Masonry Walls & Foundation

The exterior non load bearing walls of the building are composed of multi-wythe brick. The exterior walls are in good condition. No cracks were observed from the outside of the walls and no significant structural repair work is anticipated for the walls.

A small diagonal crack was noted in the brick wall in the interior of the stair landing on the left side of the building (Photo B3).

The interior non load bearing Concrete Masonry Unit (CMU) walls appear to be in good condition. The connections of the CMU walls to the primary structure are hidden and could not be observed. These connections are not detailed on the existing structural drawings. It appears that the building was not designed with a "lateral bracing system" as today's design would detail. If the CMU walls are tied to the columns and beams and provide lateral load resistance, the current building code allows for removal of the walls provided that the building's total lateral bracing capacity is not reduced by more than 10%. A detailed analysis of the building's lateral bracing capacity would be required to determine the exact amount of wall that could be removed.

4.5 Ancillary Structures

The steel members of the covered stoops on the left and right sides of the building, the covered entrance on the front of the building and the two covered walkways in the back of the building exhibit mild corrosion (Photo B4). The steel members will need to be cleaned and painted. No indications of structural problems were noted.

The elevator doors were locked closed, so a complete inspection of the elevator was not possible.

The mechanical room is constructed with a concrete slab-on-grade, CMU walls with brick veneer and a metal roof deck on steel joists. No indications of structural problems were noted with the mechanical room.

Several of the handrails around the stairs and elevator are loose and should be repaired (Photo B5).

5.0 Photos



Photo A1

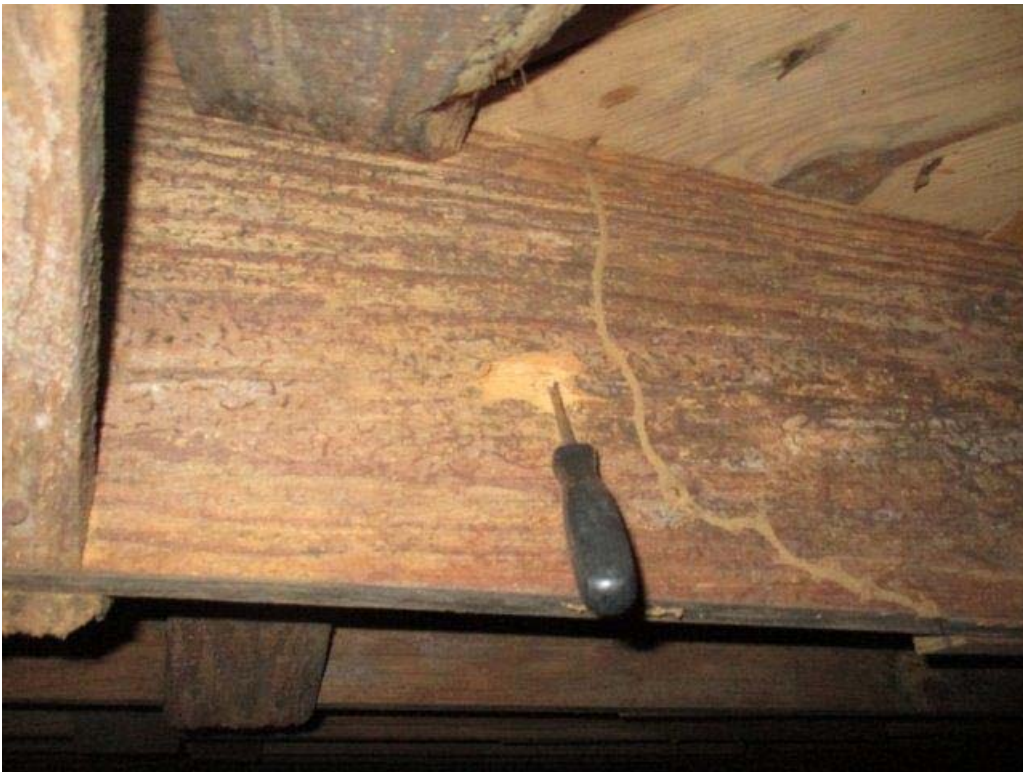


Photo A2



Photo A3

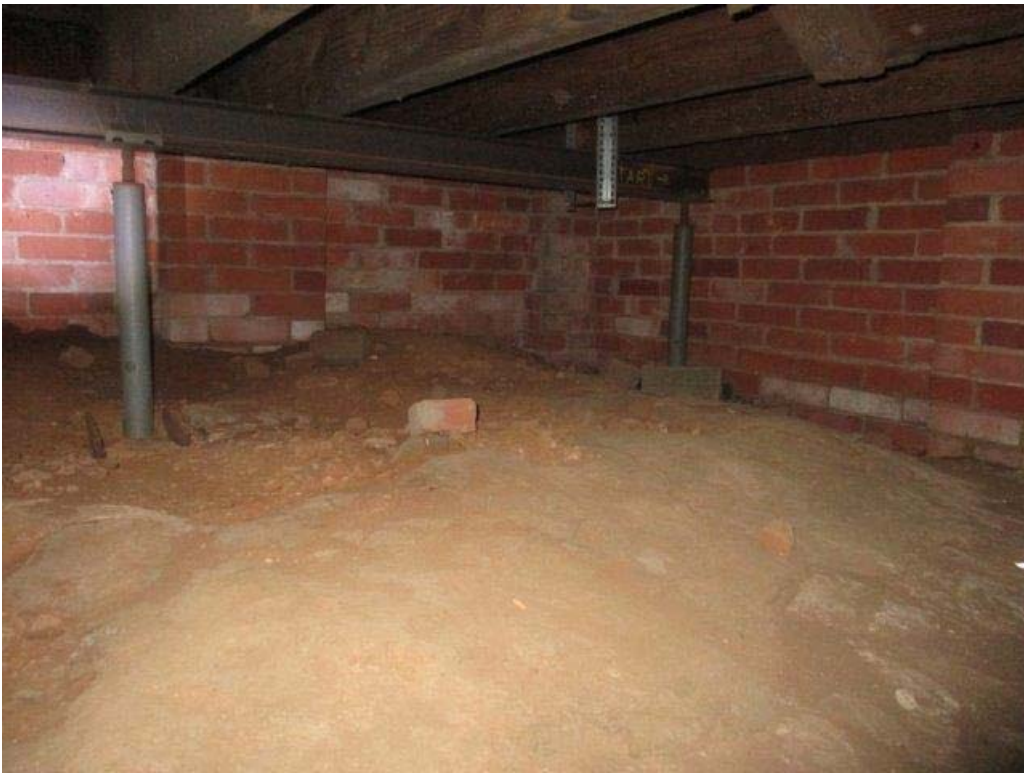


Photo A4



Photo A5



Photo A6



Photo A7



Photo A8



Photo A9



Photo B1



Photo B2



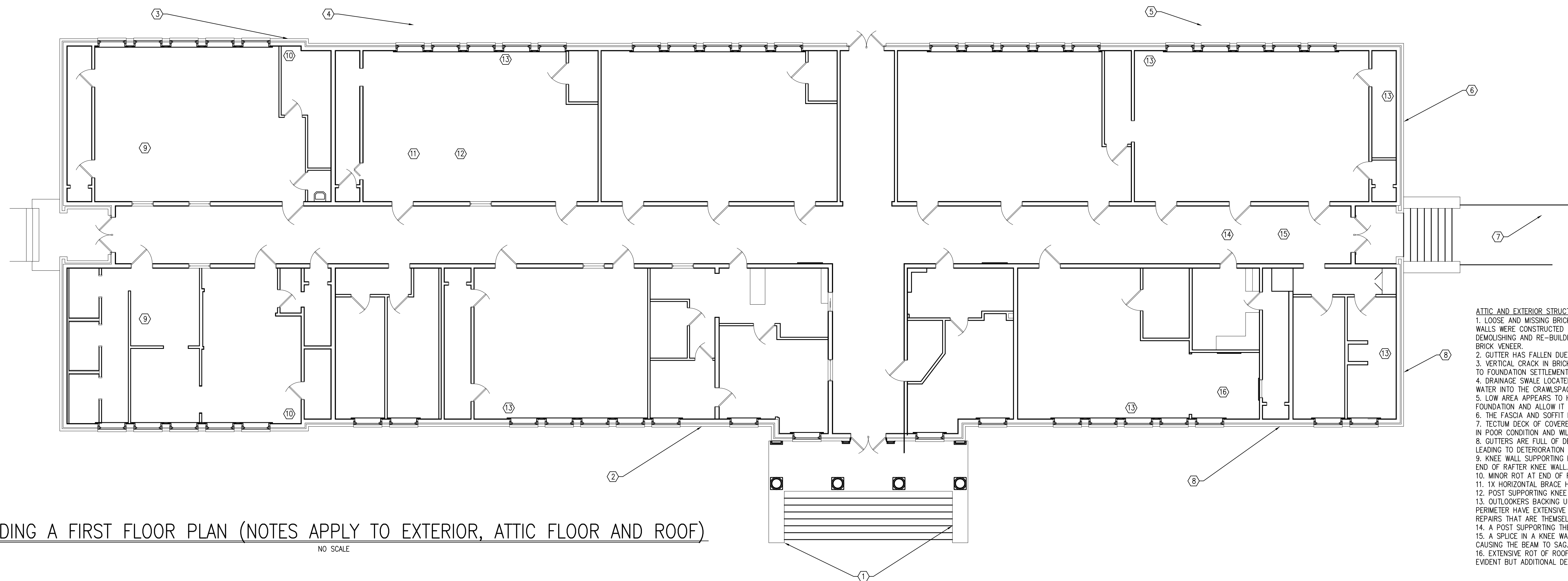
Photo B3



Photo B4



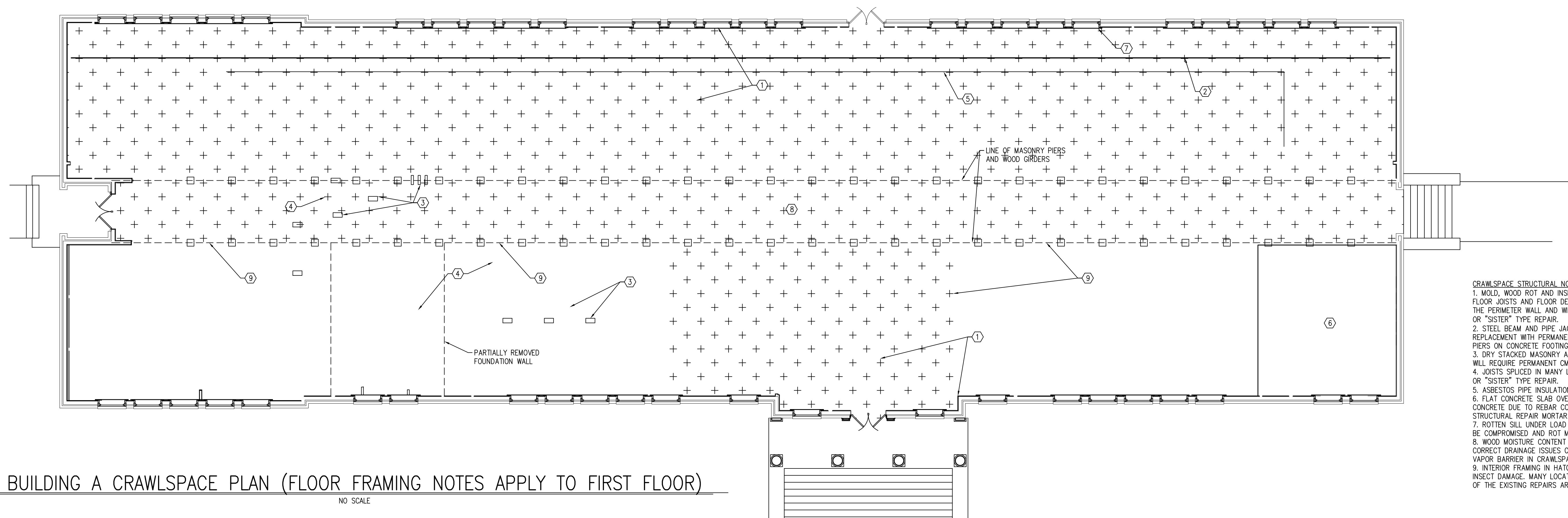
Photo B5



BUILDING A FIRST FLOOR PLAN (NOTES APPLY TO EXTERIOR, ATTIC FLOOR AND ROOF)

NO SCALE

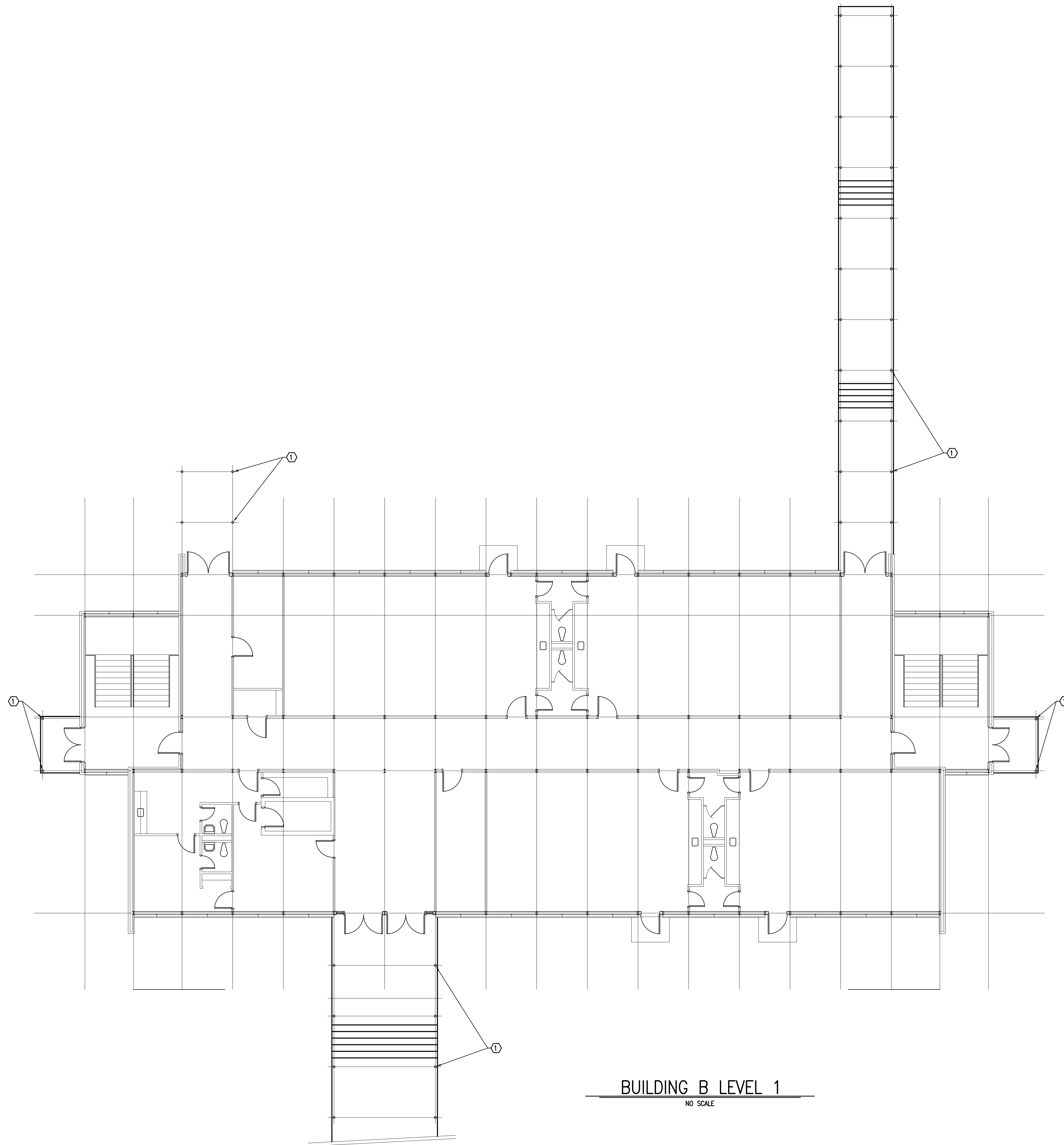
- ATTIC AND EXTERIOR STRUCTURAL NOTES (SEE #'S ON PLAN FOR LOCATION)
1. LOOSE AND MISSING BRICK FROM WALLS ALONG STEPS. WALLS WERE CONSTRUCTED WITHOUT CMU BACKUP. RECOMMEND DEMOLISHING AND RE-BUILDING WITH CMU BACKUP FOR THE BRICK VENEER.
 2. GUTTER HAS FALLEN DUE TO ROTTEN FASCIA AND SOFFIT.
 3. VERTICAL CRACK IN BRICK VENEER. DOES NOT APPEAR TO BE DUE TO FOUNDATION SETTLEMENT. REPAIR BY REPOINTING.
 4. DRAINAGE SWALE LOCATED NEAR THE BUILDING MAY BE SENDING WATER INTO THE CRAWLSPACE.
 5. LOW AREA APPEARS TO HOLD WATER AROUND THE BUILDING FOUNDATION AND ALLOW IT TO FLOW INTO THE CRAWLSPACE.
 6. THE FASCIA AND SOFFIT IS ROTTEN.
 7. TECTUM DECK OF COVERED WALK CONNECTING BLDG. A AND B IS IN POOR CONDITION AND WILL NEED TO BE DEMOLISHED OR REPLACED.
 8. GUTTERS ARE FULL OF DEBRIS CAUSING OVERFLOWS THAT ARE LEADING TO DETERIORATION OF THE BRICK VENEER BELOW.
 9. KNEE WALL SUPPORTING RAFTERS HAS SAGGED. ADD POST AT END OF RAFTER KNEE WALL.
 10. MINOR ROT AT END OF ROOF VALLEY BEAM.
 11. 1X HORIZONTAL BRACE HAS BUCKLED.
 12. POST SUPPORTING KNEE WALL HAS ROTATED.
 13. OUTLOOKERS BACKING UP SOFFIT AND FASCIA AROUND THE BLDG. PERIMETER HAVE EXTENSIVE ROT AND HAVE ROTATED. MANY HAVE PRIOR REPAIRS THAT ARE THEMSELVES IN NEED OF REPAIR.
 14. A POST SUPPORTING THE RIDGE HAS BUCKLED.
 15. A SPLICE IN A KNEE WALL BEAM IS NOT PROPERLY SUPPORTED CAUSING THE BEAM TO SAG.
 16. EXTENSIVE ROT OF ROOF DECK IN THIS AREA. PATCH REPAIRS ARE EVIDENT BUT ADDITIONAL DECK REPLACEMENT WILL BE NECESSARY.



BUILDING A CRAWLSPACE PLAN (FLOOR FRAMING NOTES APPLY TO FIRST FLOOR)

NO SCALE

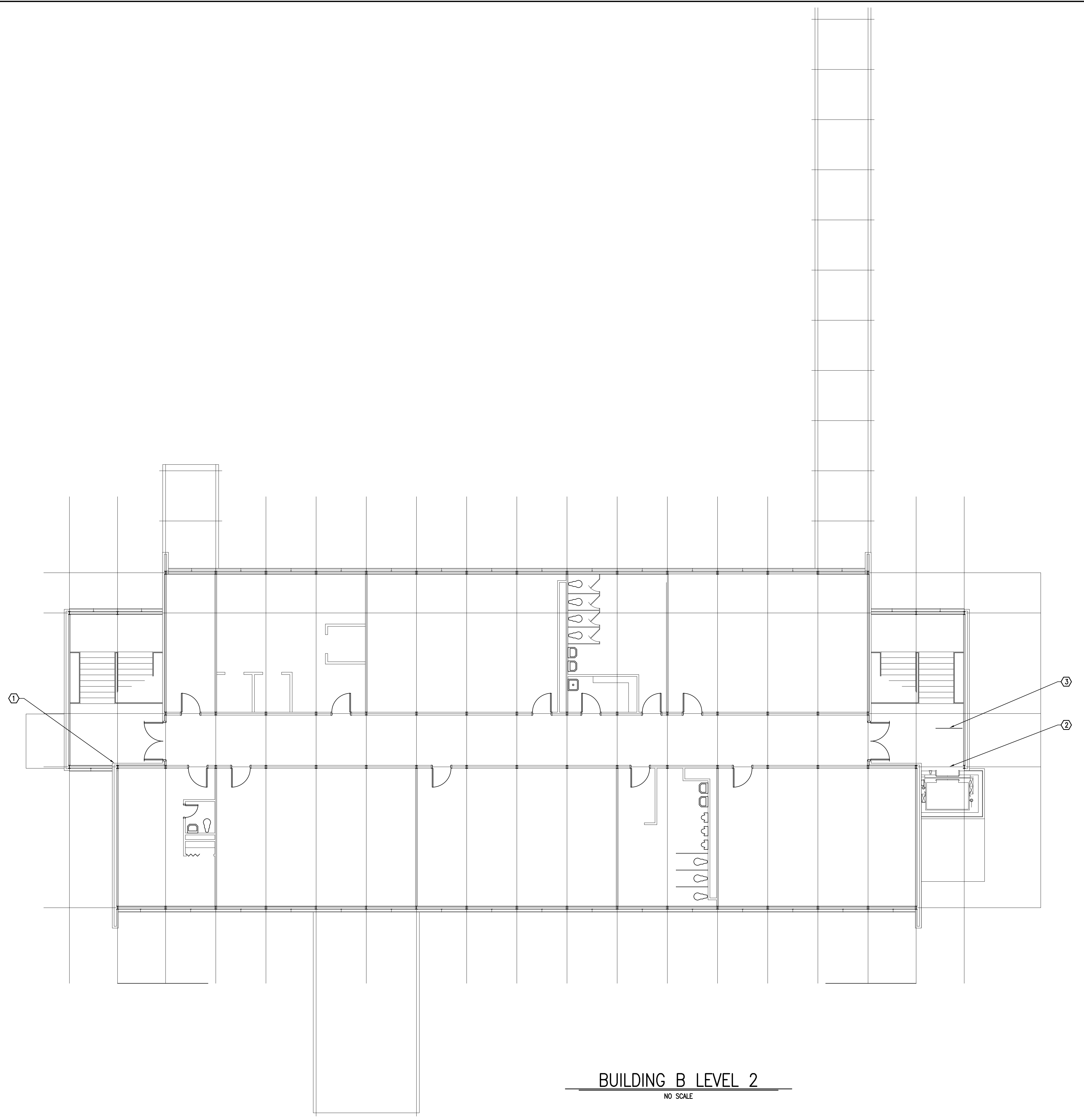
- CRAWLSPACE STRUCTURAL NOTES (SEE #'S ON PLAN FOR LOCATION)
1. MOLD, WOOD ROT AND INSECT DAMAGE PRESENT ON FLOOR JOISTS AND FLOOR DECK ALONG MAJORITY OF THE PERIMETER WALL AND WILL REQUIRE REPLACEMENT OR "SISTER" TYPE REPAIR.
 2. STEEL BEAM AND PIPE JACKS BELOW JOISTS WILL REQUIRE REPLACEMENT WITH PERMANENT DROP BEAM AND CMU PIERS ON CONCRETE FOOTINGS.
 3. DRY STACKED MASONRY AND WOOD PIERS IN MANY LOCATIONS WILL REQUIRE PERMANENT CMU PIERS ON CONCRETE FOOTINGS.
 4. JOISTS SPLICED IN MANY LOCATIONS WILL REQUIRE REPLACEMENT OR "SISTER" TYPE REPAIR.
 5. ASBESTOS PIPE INSULATION WILL REQUIRE REMOVAL.
 6. FLAT CONCRETE SLAB OVER MECHANICAL ROOM. SOME SPALLING CONCRETE DUE TO REBAR CORROSION. REPAIR WITH NON-SAG STRUCTURAL REPAIR MORTAR.
 7. ROTTEN SILL UNDER LOAD BEARING WALL. STUD SUPPORT MAY BE COMPROMISED AND ROT MAY EXTEND TO BASE OF STUDS.
 8. WOOD MOISTURE CONTENT AT 20% THROUGHOUT CRAWLSPACE. CORRECT DRAINAGE ISSUES ON EXTERIOR OF BUILDING AND INSTALL VAPOR BARRIER IN CRAWLSPACE.
 9. INTERIOR FRAMING IN HATCH AREA HAS EXTENSIVE ROT AND INSECT DAMAGE. MANY LOCATIONS HAVE EXISTING REPAIRS. MANY OF THE EXISTING REPAIRS ARE INADEQUATE.



STRUCTURAL NOTES (SEE #'S ON PLAN FOR LOCATION)
 1. MINOR CORROSION AT EXTERIOR STEEL STOOP OR COVERED WALKWAY WILL REQUIRE CLEANING AND REPAINTING.

BUILDING B LEVEL 1
 NO SCALE

FIGURE 2



STRUCTURAL NOTES (SEE #S ON PLAN FOR LOCATION)
1. SMALL DIAGONAL CRACK IN BRICK WALL REQUIRE
MINOR REPAIRS
2. SLOPE IN CONCRETE FLOOR AND CRACKS IN VINYL TILE
3. LOOSE HANDRAIL NEAR ELEVATOR WILL REQUIRE
REATTACHMENT

BUILDING B LEVEL 2
NO SCALE

FIGURE 3

AECK ASSOCIATES
110 Peachtree Street, N.W.
Atlanta 3, Georgia

CHANGE ORDER NO. 1
4 May 1958
JOB NO. 705-1

Clarke County Board of Education
Attn: Mr. Sam W. Wood
Box 1119
Athens, Georgia

Re: Change Order No. 1, Addition to Broad Street Elementary School, Athens, Georgia

The changes hereinafter described are applicable to the contract for the construction of Addition to Broad Street Elementary School, Athens, Georgia, executed by and between the Clarke County Board of Education, Owner, and Mathis Construction Co., Contractor, dated 26 February 1958.

Description of the Changes:

Item 5(a) Add 1/2" of crushed stone 1/2" to 2" diameter under slab of Classroom Wing.
Requested by Owner.
Amount: Addition \$ 689.00

Item 5(b) Addition of 4 Skydomes over corridor to Classroom Wing in locations shown on attached sketch.
Requested by Owner.
Amount: Addition \$ 372.90

Total \$ 1,061.90

Summary of Adjusted Contract Prices:

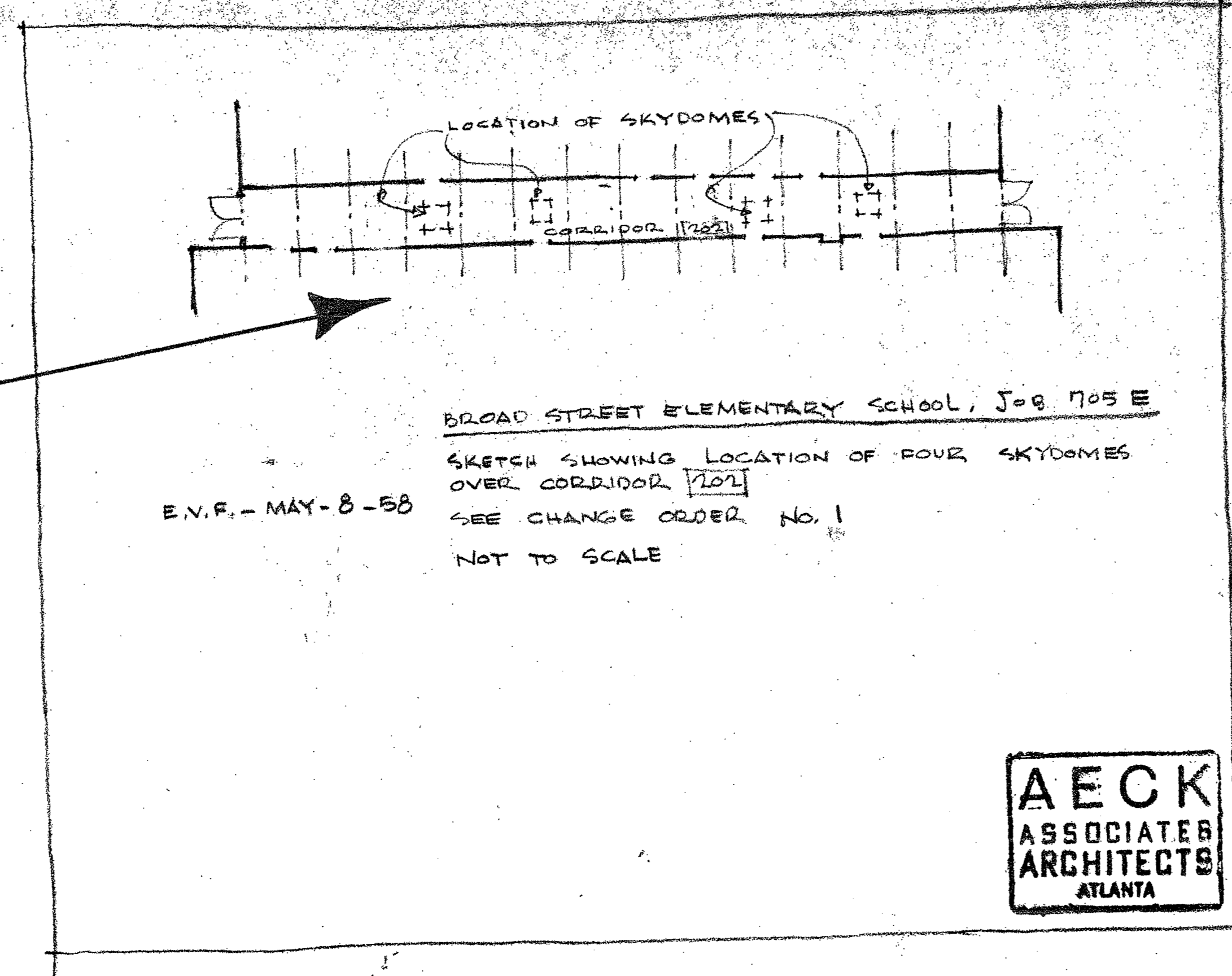
Original Contract Sum	\$128,581.90
This Change Order No. 1 - Addition	1,061.90
Total Current Adjusted Contract Price	\$129,643.82

RECOMMENDED FOR OWNER'S ACCEPTANCE: AECK ASSOCIATES, SUPERVISING ARCHITECTS
By: *Frank B. Lucas*
MATHIS CONSTRUCTION CO., CONTRACTOR

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

1 Page Only
SSH/vm



AECK ASSOCIATES ARCHITECTS ATLANTA

AECK ASSOCIATES
110 Peachtree Street, N.W.
Atlanta 3, Georgia

CHANGE ORDER NO. 2
25 August 1958
JOB NO. 705-1

Clarke County Board of Education
Attn: Mr. Sam W. Wood
Box 1119
Athens, Georgia

Re: Change Order No. 2, Addition to Broad Street Elementary School, Athens, Georgia

The changes hereinafter described are applicable to the contract for the construction of Addition to Broad Street Elementary School, Athens, Georgia, executed by and between the Clarke County Board of Education, Owner, and Mathis Construction Co., Contractor, dated 26 February 1958.

Description of the Changes:

Change Base through-out building from a painted base to a 1/2" Cove Rubber Tile Base, approximately 2875 L. Feet.
Amount: Addition \$575.00
Requested by Owner

Summary of Adjusted Contract Prices:

Original Contract Sum	\$128,581.90
Change Order No. 1 - Addition	1,061.92
Previously Adjusted Contract Price	\$129,643.82
This Change Order No. 2 - Addition	575.00
Total Current Adjusted Contract Price	\$130,218.82

RECOMMENDED FOR OWNER'S ACCEPTANCE: AECK ASSOCIATES, SUPERVISING ARCHITECTS
By: *Frank B. Lucas*
MATHIS CONSTRUCTION CO., CONTRACTOR

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

1 Page Only
SS/vz

AECK ASSOCIATES, ARCHITECTS
110 Peachtree Street, N.W.
Atlanta 3, Georgia

CHANGE ORDER NO. 3
23 September 1958
JOB NO. 705-1

Clarke County Board of Education
Attn: Mr. Sam W. Wood
Box 1119
Athens, Georgia

Re: Change Order No. 3, Addition to Broad Street Elementary School, Athens, Georgia

The changes hereinafter described are applicable to the contract for the construction of Addition to Broad Street Elementary School, Athens, Georgia, executed by and between the Clarke County Board of Education, Owner, and Mathis Construction Co., Contractor, dated 26 February 1958.

Description of the Changes:

Extra resulting from difference between lump sum allowed under contract and actual cost of approved hardware. ADD \$ 270.70

Reason for the Changes:

\$2500.00 was set up as: lump sum for finished hardware. The hardware installed cost \$2,770.70, including 6% Sales Tax.
Change requested by the Architect:

Summary of Adjusted Contract Prices:

Original Contract Sum	\$128,581.90
Change Order No. 1 Addition	1,061.92
Change Order No. 2 Addition	575.00
Previously Adjusted Contract Price	\$130,218.82
This Change Order No. 3 - Addition	270.70
TOTAL CURRENT ADJUSTED CONTRACT PRICE:	\$130,489.52

RECOMMENDED FOR OWNER'S ACCEPTANCE: AECK ASSOCIATES, SUPERVISING ARCHITECTS
By: *Frank B. Lucas*
MATHIS CONSTRUCTION CO., CONTRACTOR

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

1 Page only
Enclosure: Breakdown

AECK ASSOCIATES, ARCHITECTS
110 Peachtree Street, N.W.
Atlanta 3, Georgia

CHANGE ORDER NO. 4
24 November 1958
JOB NO. 705-2

Clarke County Board of Education
Attn: Mr. Sam W. Wood
Box 1119
Athens, Georgia

Re: Change Order No. 4, Addition to Broad Street Elementary School, Athens, Georgia

The changes hereinafter described are applicable to the contract for the construction of Addition to Broad Street Elementary School, Athens, Georgia, executed by and between the Clarke County Board of Education, Owner, and Mathis Construction Co., Contractor, dated 26 February 1958.

Description of the Changes: Item No. 1

Furnish and install three (3) Concrete Catch Basins and covers as detailed on Dwg. P-1. (NOTE: No overhead or profit included ADD \$243.28 in this figure).
Reason for the Changes: These Catch Basins were shown on Dwg. A-1 and P-1, but were not covered in the specifications.
Change requested by Contractor.

SUMMARY OF ADJUSTED CONTRACT PRICE:

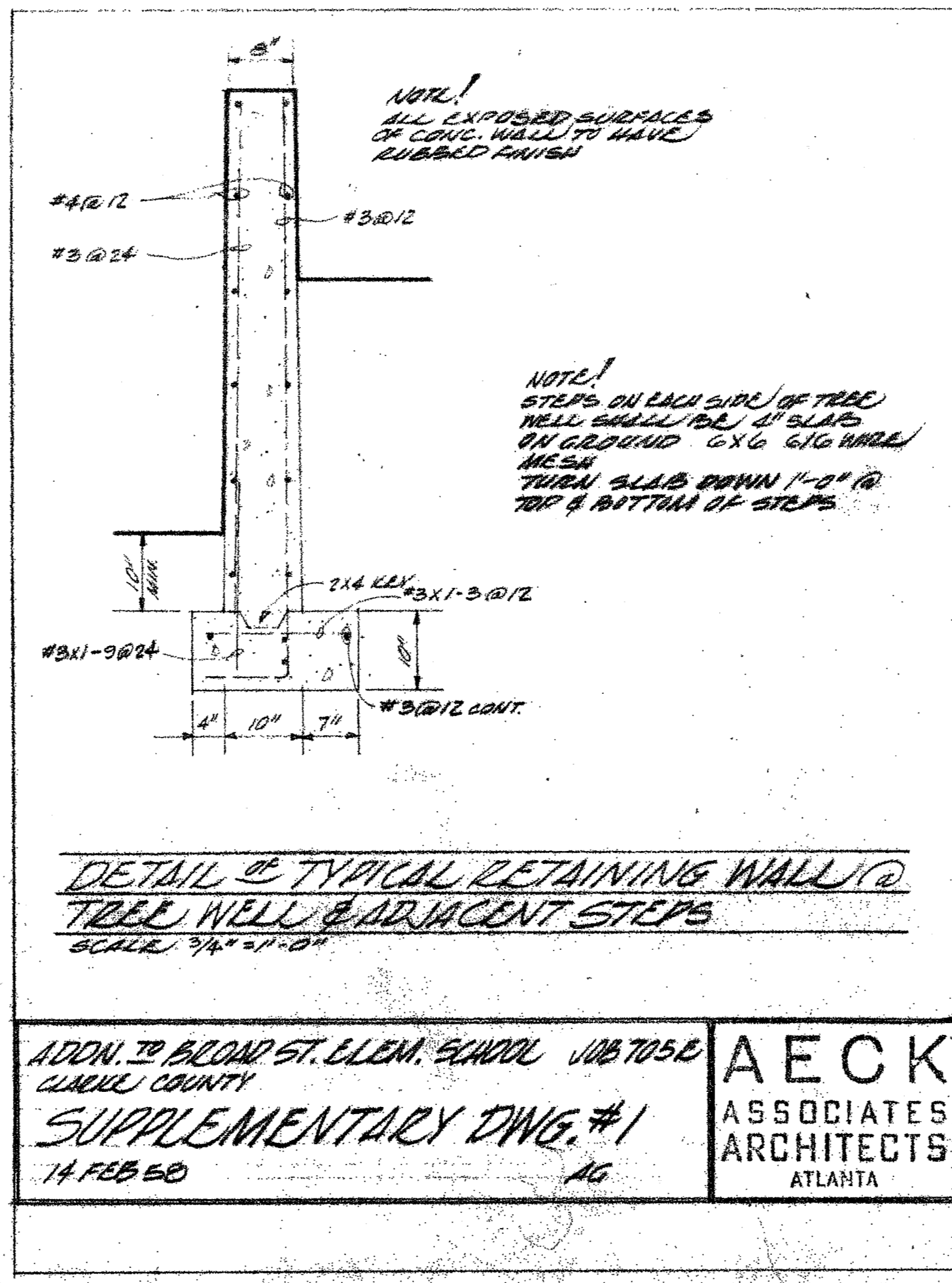
Original Contract Sum	\$128,581.90
Change Order No. 1 Addition	1,061.92
Change Order No. 2 Addition	575.00
Change Order No. 3 Addition	270.70
Previously Adjusted Contract Prices	\$130,489.52
This Change Order No. 4 - Addition	243.28
TOTAL CURRENT ADJUSTED CONTRACT PRICE:	\$130,732.80

RECOMMENDED FOR OWNER'S ACCEPTANCE: AECK ASSOCIATES, SUPERVISING ARCHITECTS
By: *W. S. Kullback*
MATHIS CONSTRUCTION CO., CONTRACTOR

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

APPROVED AND AGREED: _____
By: _____
CLARKE COUNTY BOARD OF EDUCATION

1 Page only
Enclosure: Contractor's cost breakdown.



ADDN. TO BROAD ST. ELEM. SCHOOL JOB NO. 705-2
CLARKE COUNTY
SUPPLEMENTARY DWG. #1
14 FEB 59
AG

AECK ASSOCIATES ARCHITECTS ATLANTA

"As-Is" Dwg.

CHANGE ORDERS & SUPPLEMENTARY DWGS.

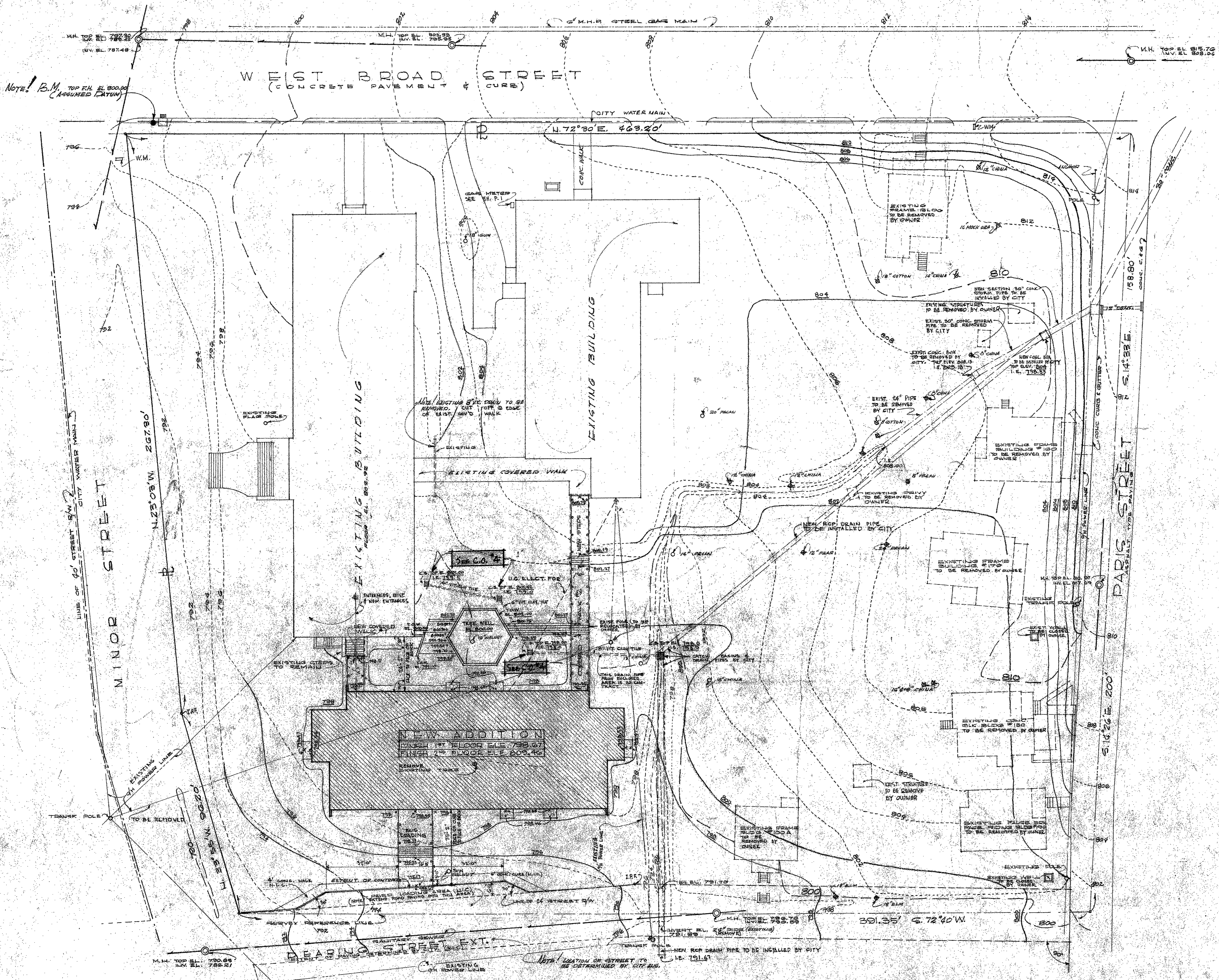
ADDITION TO BROAD STREET ELEM. SCHOOL
CLARKE CO. BOARD OF EDUCATION - ATHENS, GA.

AECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

NOV. 25 1958

BROAD STREET ELEMENTARY SCHOOL.

CLARKE COUNTY BOARD OF EDUCATION - ATHENS, GEORGIA



GENERAL NOTES

- 1- CONC. CURBS & PAVING ARE NOT IN CONTRACT (N.I.C.)
- 2- SEE SPECS FOR USUR BORING INFORMATION
- 3- SEE SPECS FOR REMOVAL OF TREES
- 4- NO WORK BEYOND E LINE IS INCLUDED IN CONTRACT
- 5- THE OWNER SHALL REMOVE ALL EXISTING BUILDINGS & OTHER STRUCTURES LOCATED IN THE AREA EAST OF PARIS STREET PRIOR TO THE CONTRACTORS BEGINNING WORK
- 6- THE CITY IS TO REMOVE ALL EXISTING SEWER DIPS & JUNCTION BOXES EAST OF THE SCHOOL BUILDING (EXIST & NEW) & WEST OF PARIS STREET. INSTALL NEW DRAIN PIPES, JUNCTION BOX & CATCH BASIN AS SHOWN & REPAIR TRENCHES TO FACILITATE GRADING PRIOR TO THE CONTRACTORS GRADING WORK IN THAT AREA. ALL WORK BY CITY IS NOT IN CONTRACT. CALL IN CONTRACT CATCH BASINS & DRAIN PIPES CONSIST OF THOSE OCCURRING WITHIN THE AREA ENCLOSED BY THE NEW ADDITION & THE EXTENSIONS & CONNECTION OF THIS ENCLOSED AREA DRAIN PIPE TO THE CATCH BASIN INSTALLED BY THE CITY.
7. SEE DWG. P.1 FOR MECHANICAL WORK. SITE PLAN.

LEGEND

	EXISTING CONTOURS
	FINISHED CONTOURS
	PROPERTY LINE
	EXISTING BUILDING
	NEW BUILDING
	EXISTING TREES & POLES
	TREE TO BE REMOVED

DETAIL REFERENCE SYMBOL

	DETAIL NUMBER
	SHEET NUMBER

COMPLETE SET OF DRAWINGS

- A-1 THRU A-3 - ARCHITECTURAL
- D-1 THRU D-3 - ARCHITECTURAL DETAILS
- G-1 THRU G-3 - STRUCTURAL
- H-1 THRU H-1 - HEATING
- P-1 THRU P-2 - PLUMBING
- E-1 THRU E-2 - ELECTRICAL
- TOTAL = 14 SHEETS COMPLETE

SET NUMBER **A-1**

SITE PLAN

ADDITION TO BROAD STREET ELEM. SCHOOL
CLARKE CO. BOARD OF EDUCATION

AECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

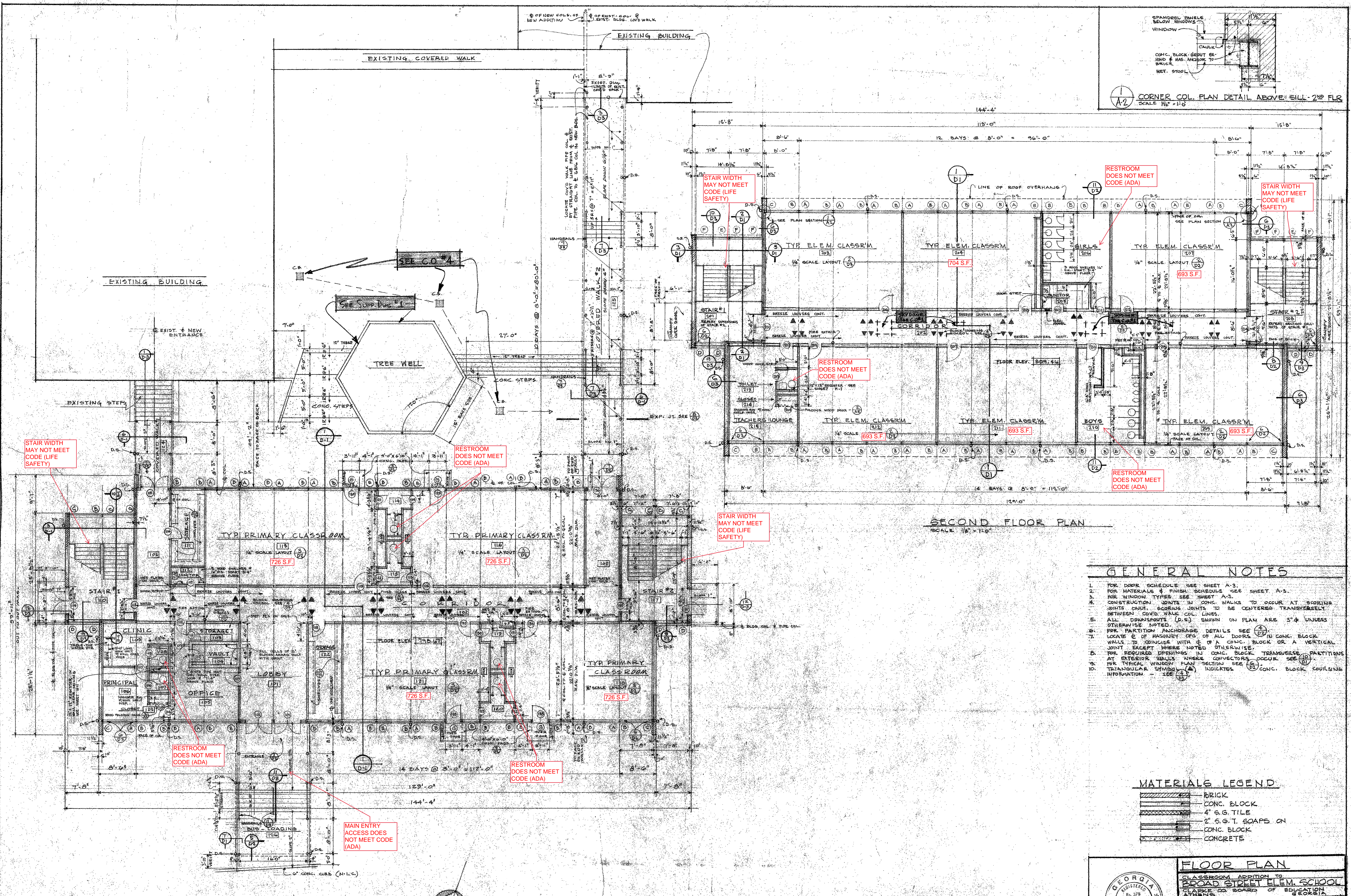
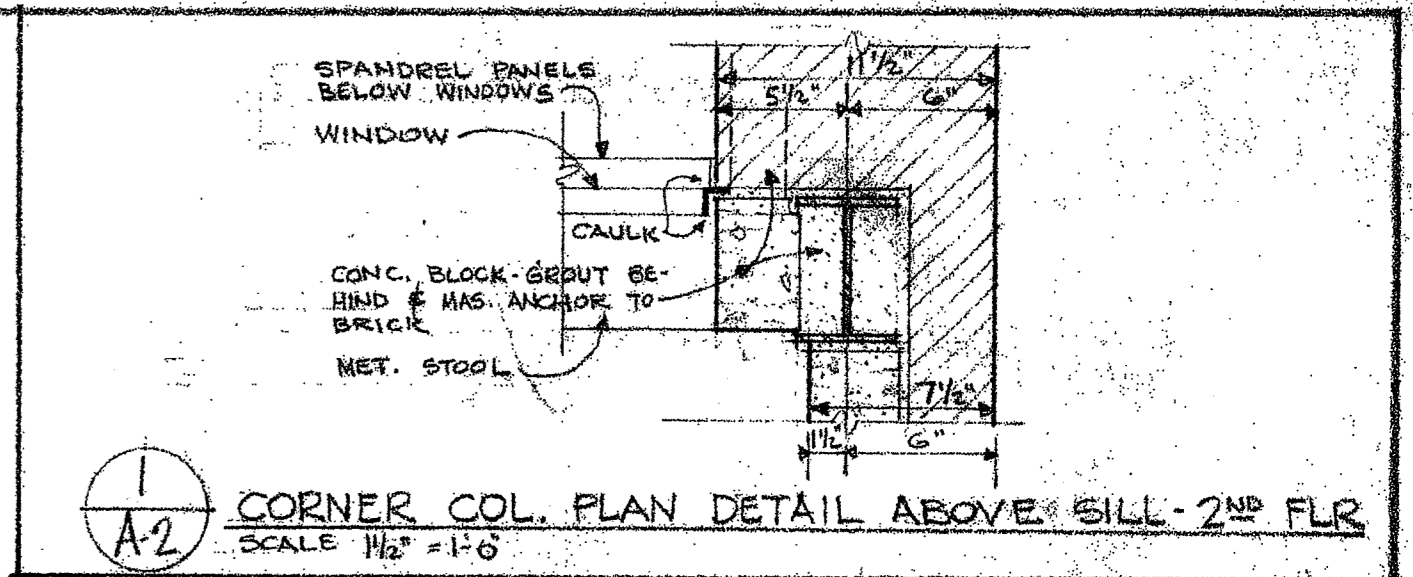
REGISTERED PROFESSIONAL ARCHITECTS
NO. 375
RICHARD L. ACK

JOB NO. 705-E
SHEET NO. A-1
DATE: 15 JAN. 1957

SITE PLAN
SCALE: 1/4" = 20'-0"

NOTE: SURVEY & TOPOGRAPHICAL SURVEY BY C.E. ROBERTS, REG. ENGR. NO. 872, SURVEY DATED JULY 22, 1957, CERTIFIED BY LETTER DATED OCT. 4, 1957





STAIR WIDTH MAY NOT MEET CODE (LIFE SAFETY)

RESTROOM DOES NOT MEET CODE (ADA)

STAIR WIDTH MAY NOT MEET CODE (LIFE SAFETY)

RESTROOM DOES NOT MEET CODE (ADA)

RESTROOM DOES NOT MEET CODE (ADA)

MAIN ENTRY ACCESS DOES NOT MEET CODE (ADA)

STAIR WIDTH MAY NOT MEET CODE (LIFE SAFETY)

RESTROOM DOES NOT MEET CODE (ADA)

RESTROOM DOES NOT MEET CODE (ADA)

STAIR WIDTH MAY NOT MEET CODE (LIFE SAFETY)

SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"

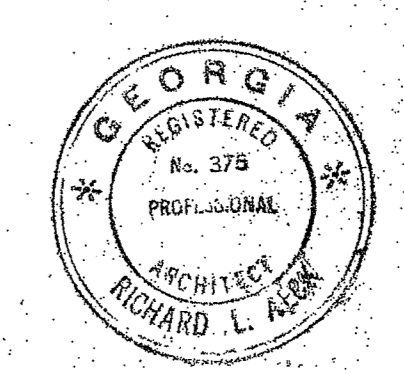
FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

GENERAL NOTES

1. FOR DOOR SCHEDULES SEE SHEET A-3.
2. FOR MATERIALS & FINISH SCHEDULES SEE SHEET A-5.
3. FOR WINDOW TYPES SEE SHEET A-5.
4. CONSTRUCTION JOINTS IN CONC. WALLS TO OCCUR AT SCORING JOINTS ONLY. SCORING JOINTS TO BE CENTERED TRANSVERSELY BETWEEN CONVD. WALK COL. LINES.
5. ALL DIMENSIONS (D.S.) SHOWN ON PLAN ARE S.F. UNLESS OTHERWISE NOTED.
6. PFR. PARTITION ANCHORAGE DETAILS SEE (D-2).
7. LOCATE E. OF MASONRY CFS. OF ALL DOORS IN CONC. BLOCK WALLS TO CORRESPOND WITH E. OF A CONC. BLOCK OR A VERTICAL JOINT EXCEPT WHERE NOTED OTHERWISE.
8. FOR REQUIRED OPENINGS IN CONC. BLOCK TRANSVERSE PARTITIONS AT EXTERIOR WALLS WHERE CONVICTORS OCCUR SEE (D-1).
9. FOR TYPICAL WINDOW PLAN SECTION SEE (D-1).
10. TRIANGULAR SYMBOL (▲) INDICATES CONC. BLOCK COURSE INFORMATION - SEE (D-1).

MATERIALS LEGEND

- BRICK
- CONC. BLOCK
- 4" G.G. TILE
- 2" G.G.T. SOAPS ON CONC. BLOCK
- CONCRETE



FLOOR PLAN
CLASSROOM ADDITION TO BROAD STREET ELEM. SCHOOL
CLASKE CO. BOARD OF EDUCATION
ATHENS, GA.

AECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

ODDSON WILLIAMS ARCHITECTS
WILLIAMS ARCHITECTS
15 JAMES ST. SE
ATLANTA, GA. 30334

JOB NO. 705-E
SHEET NO. A-2
DATE 11/15/88
BY R.L.A.

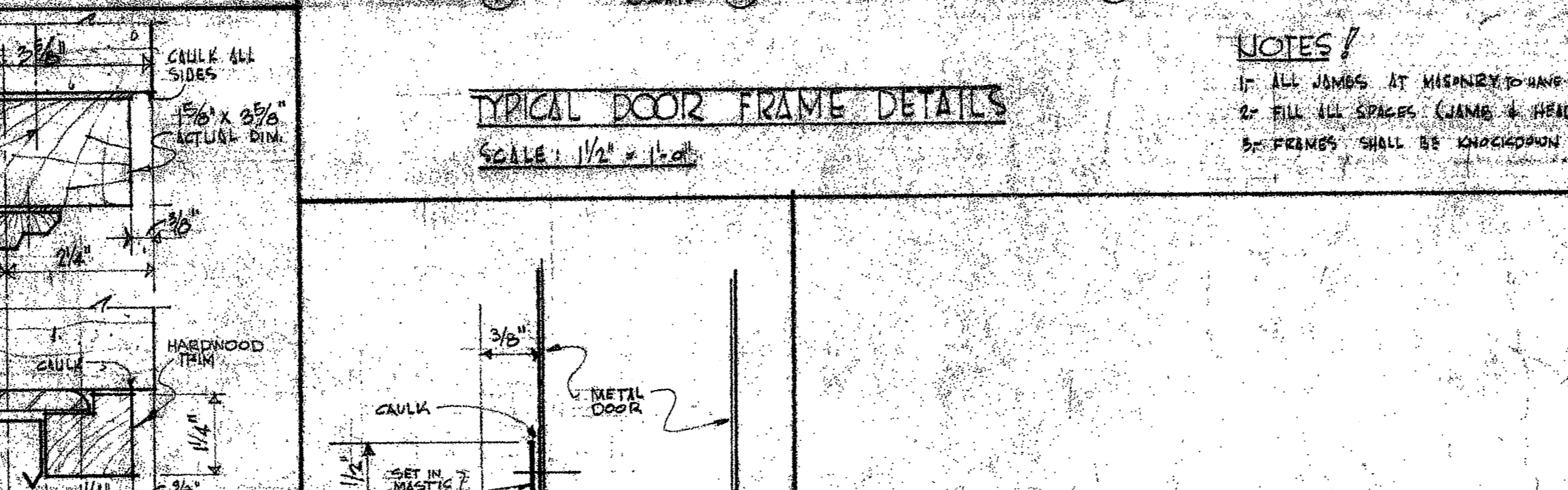
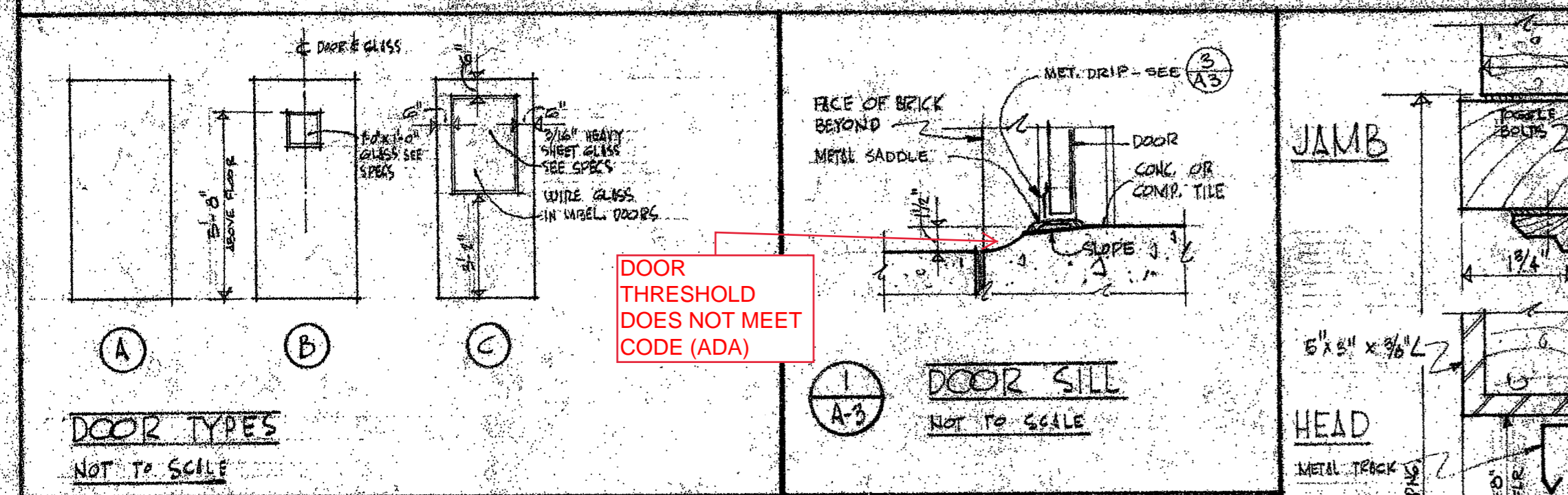
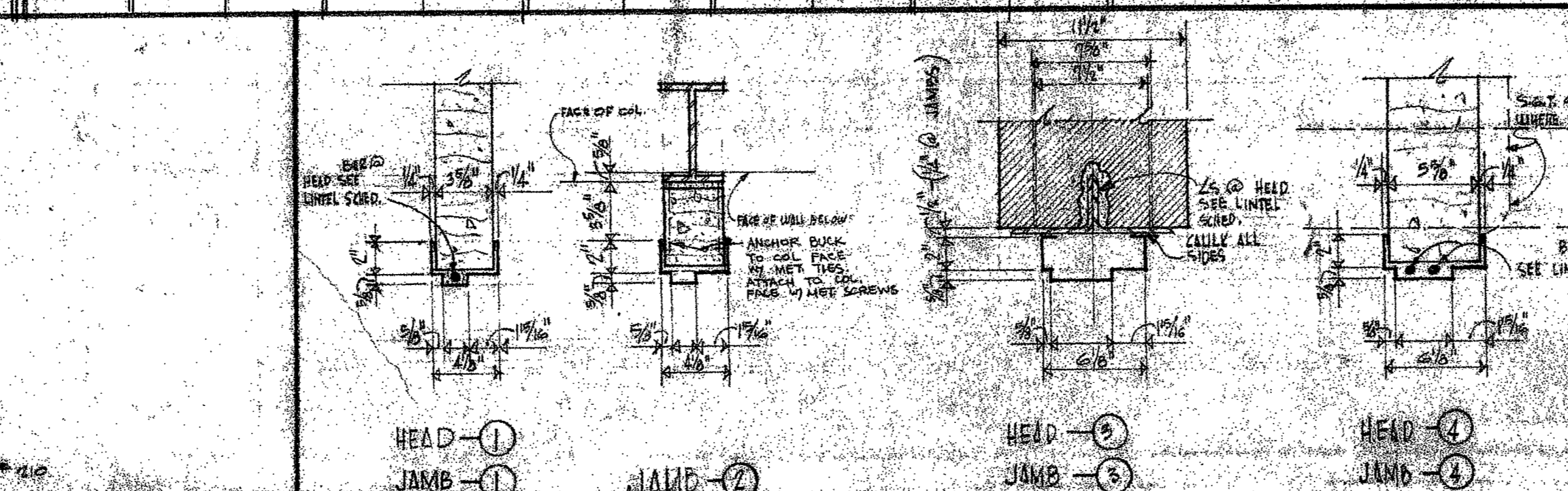
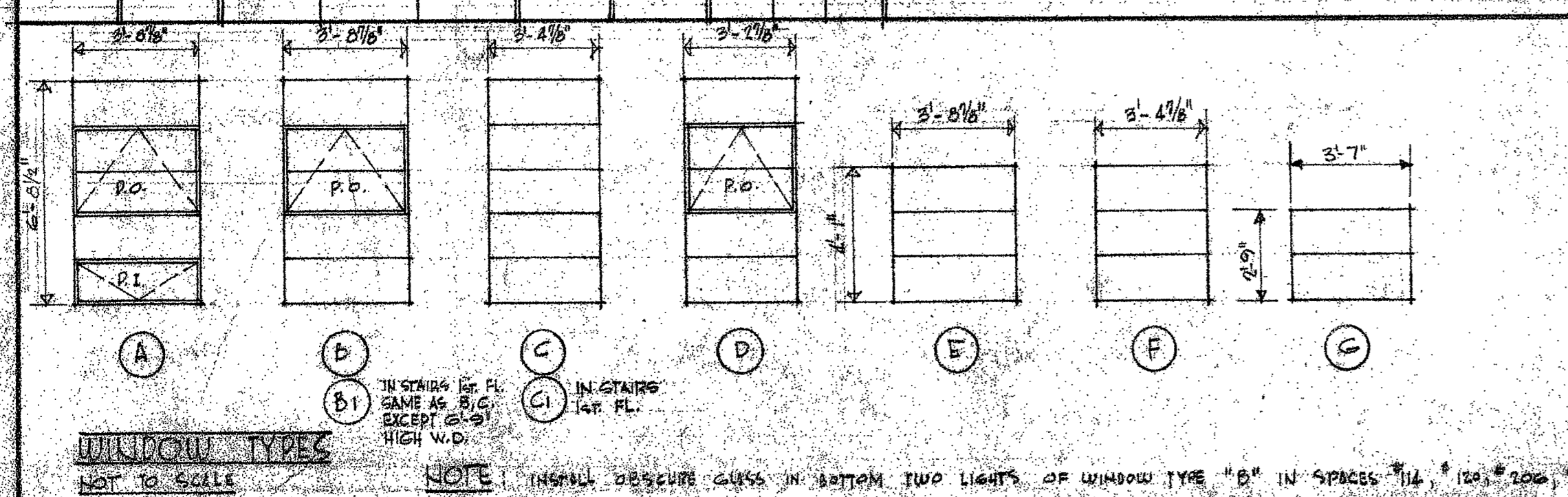
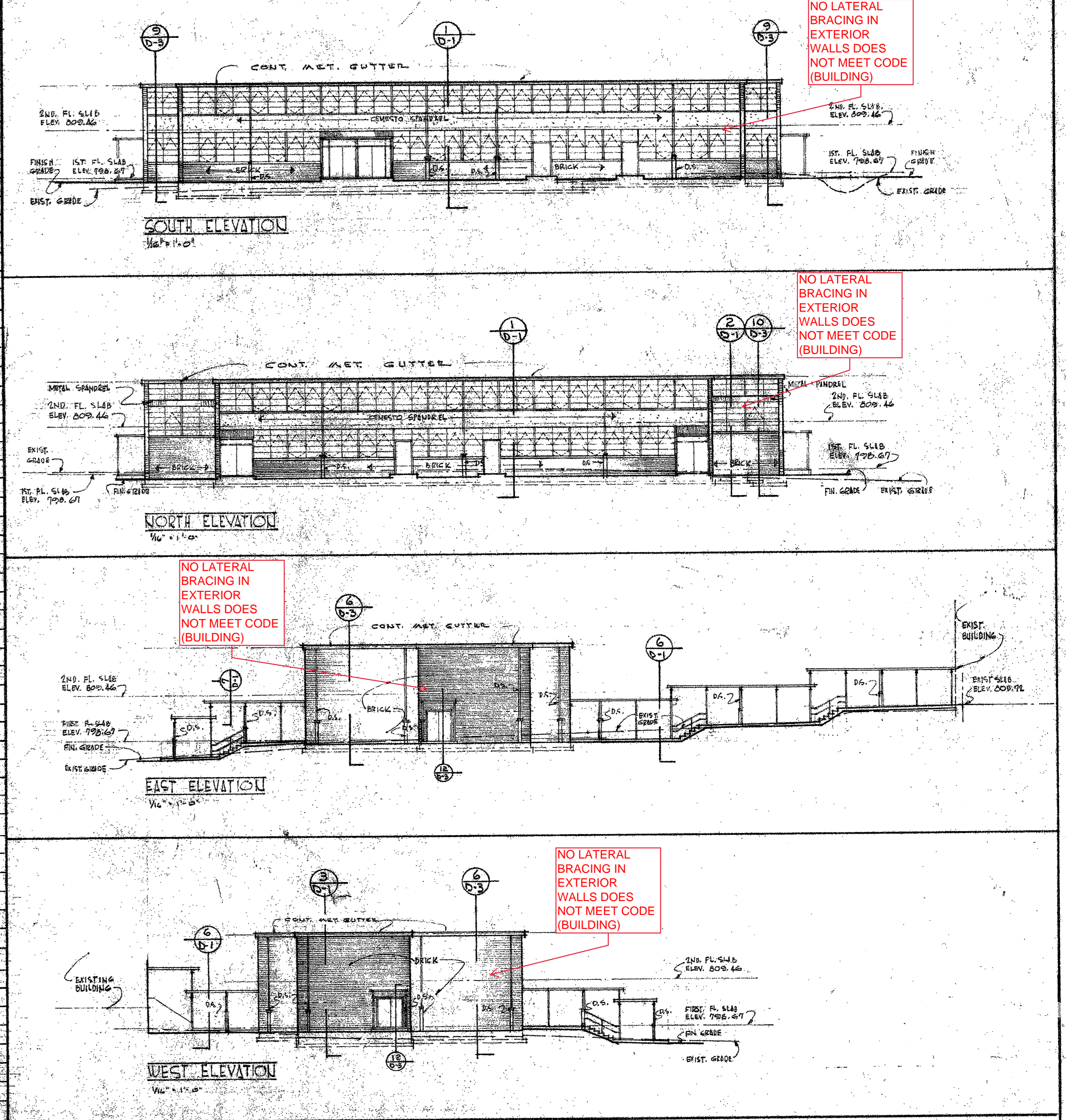
HUDSON-SHEFFER NOV 25 1988

DOOR SCHEDULE

DOOR NO.	TYPE	SIZE			CORE	MATERIAL	DETAILS			REMARKS
		WIDTH	HEIGHT	THICKNESS			SWELL	JAMB	HEAD	
101	A	3'-0"	7'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD
102	A	3'-0"	7'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD
103	B	3'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
104	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
105	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	WOOD FOLDING DOOR
106	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	CUT 2" OFF BOTTOM OF DOOR
107	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
108	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	CUT 2" OFF BOTTOM OF DOOR
109	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
110	A	3'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	"B" LABEL (VAULT)
111	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
112	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
113	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	"B" LABEL, WIRE GLASS
114	A	3'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD
115	C	3'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD
116	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
117	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
118	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
119	B	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
120	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	METAL THRESHOLD
121	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
122	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
123	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
124	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
125	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	METAL THRESHOLD
126	B	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
127	B	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
128	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	METAL THRESHOLD
129	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
130	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
131	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
132	A	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
133	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	METAL THRESHOLD
134	B	2'-0"	6'-0"	1 1/4"	HOLLOW	WOOD	1	1	1	
135	C	2'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	"C" LABEL, WIRE GLASS
136	A	3'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD
137	A	3'-0"	6'-0"	1 1/4"	HOLLOW	METAL	3	3	3	PLIIC HARDWARE, REMOVABLE MULL., MET. THRESHOLD

MATERIAL & FINISH SCHEDULE

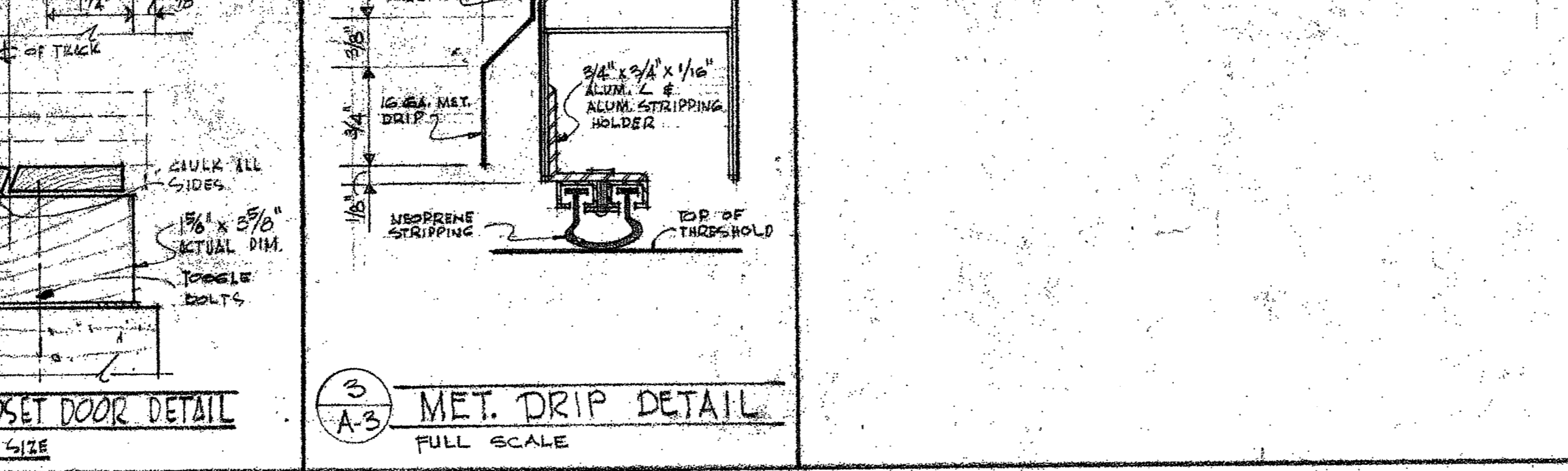
SPACE NO.	FLOOR	BASE		WAINSCOT		WALLS		CEILING		REMARKS
		MAT'L	FIN.	MAT'L	FIN.	MAT'L	FIN.	MAT'L	FIN.	
101	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	
102	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	
103	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
104	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	VAULT
105	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	
106	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	
107	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL
108	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	
109	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
110	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES & WOOD STRIP
111	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
112	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES & WOOD STRIP
113	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
114	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
115	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
116	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
117	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
118	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
119	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
120	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
121	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
122	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
123	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
124	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
125	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
126	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
127	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
128	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
129	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
130	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
131	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
132	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
133	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
134	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
135	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
136	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES
137	1ST	CONCR. TILE	WAX	PAINT	PAINT	NONE	NONE	CONC. BRICK/FLAT PAINT	DECK WAT. FLAT PAINT	ENAMEL ON WOOD SHELVES



LOOSE LINTEL SCHEDULE FOR OPENINGS

WALLS	SPACING	REMARKS
4\"/>		

BAR DETAIL



GEORGIA REGISTERED ARCHITECT

A ECK ASSOCIATES ARCHITECTS ATLANTA

ONE FORTY PEACHTREE

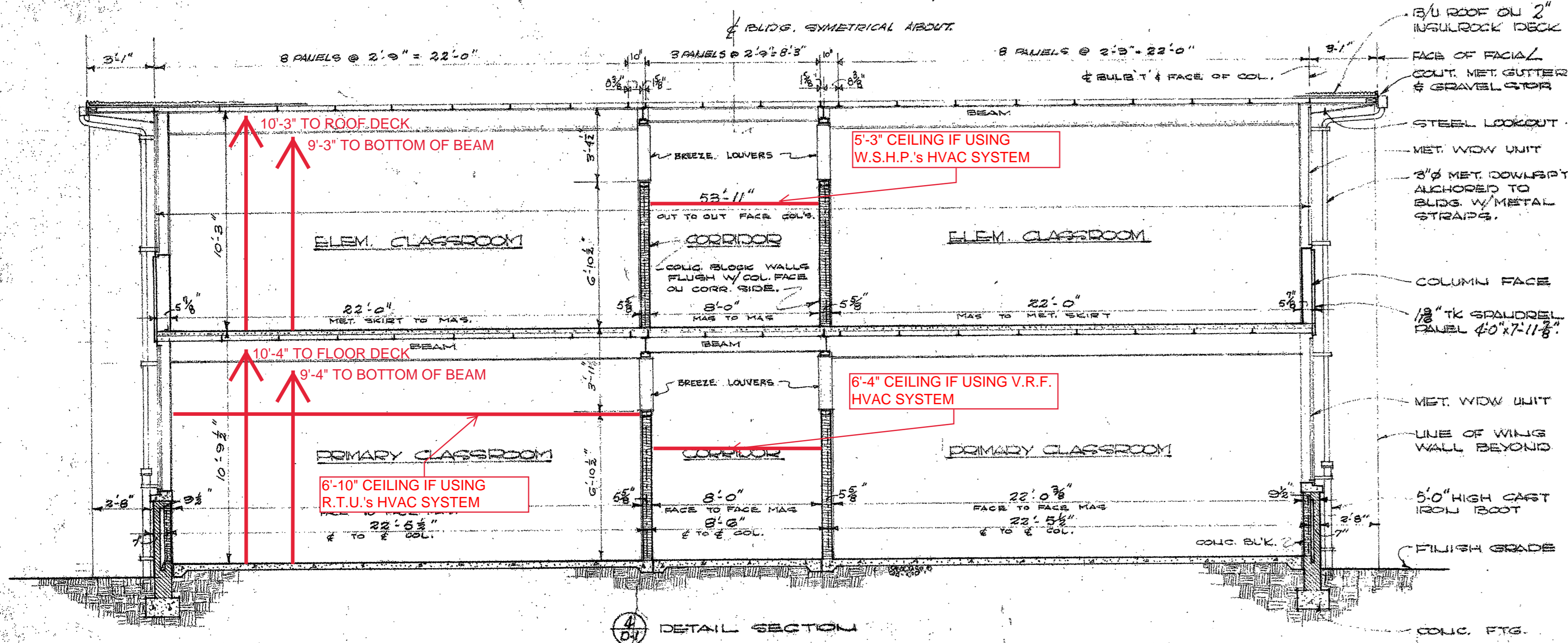
HUDSON - SHEFFER ASSOCIATE ARCHITECTS

NOV 25

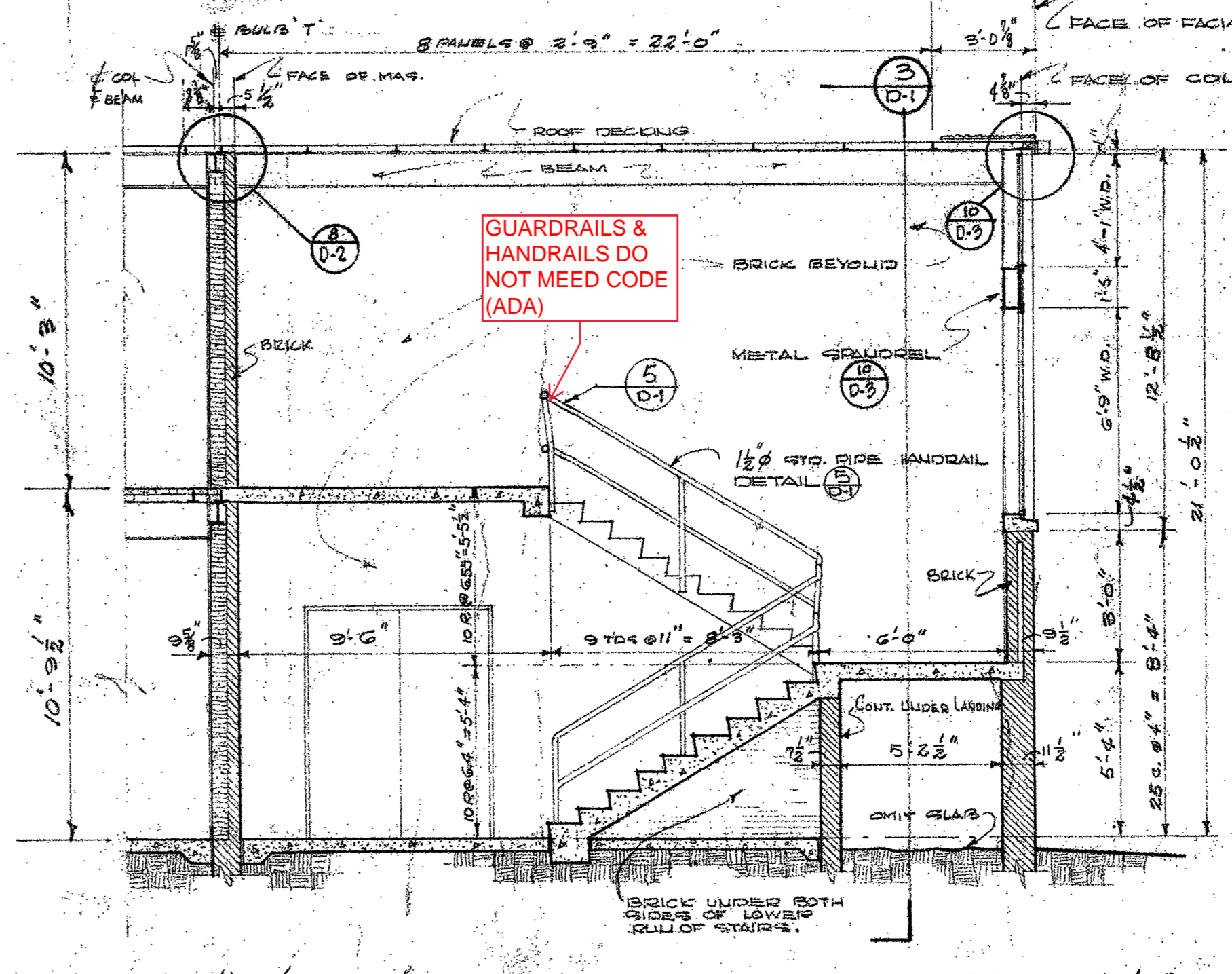
PROJECT: CLASSROOM ADDITION TO BROAD STREET ELEM. SCHOOL

DATE: 15 JAN 58

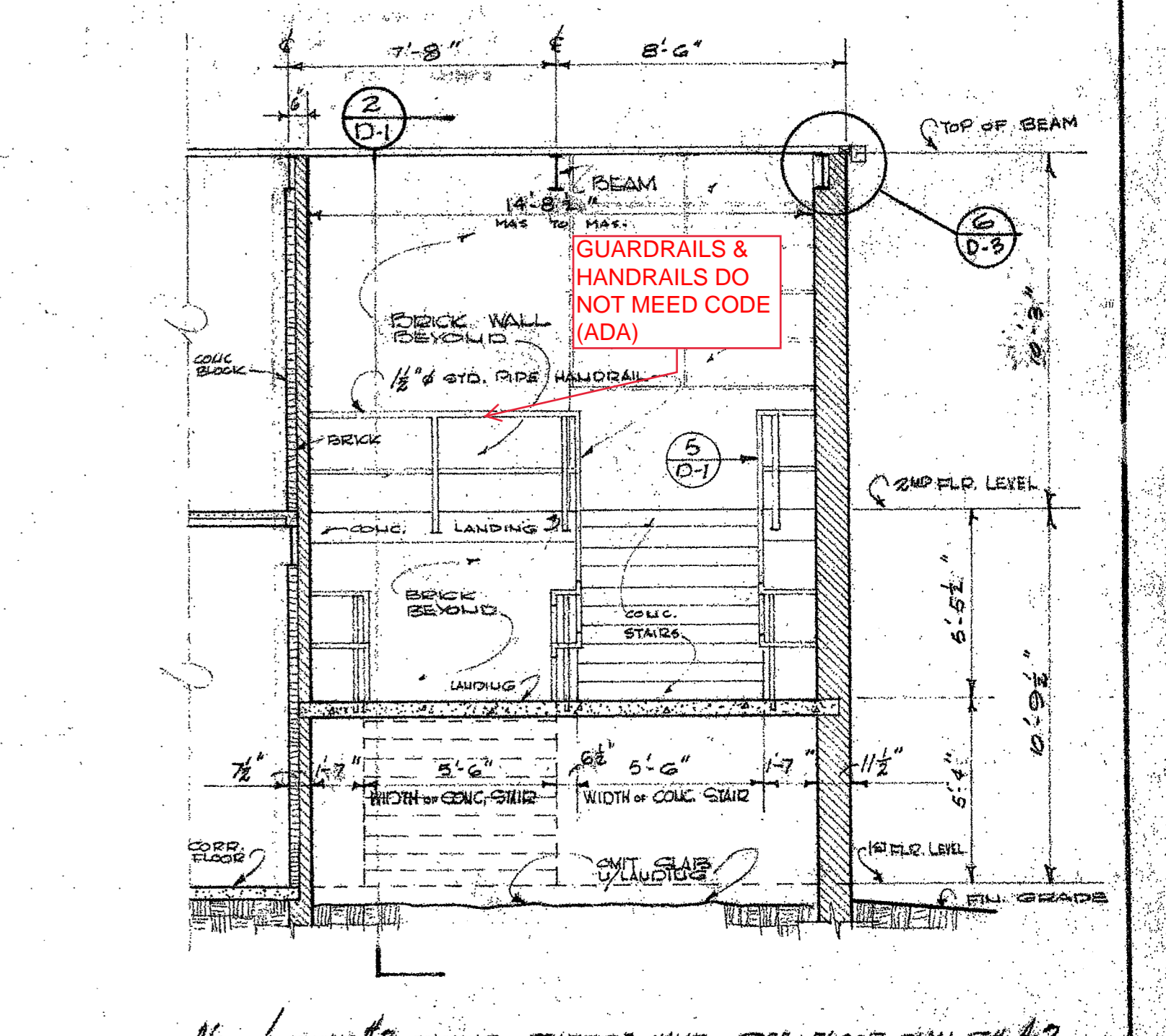
SHEET NO. A-3



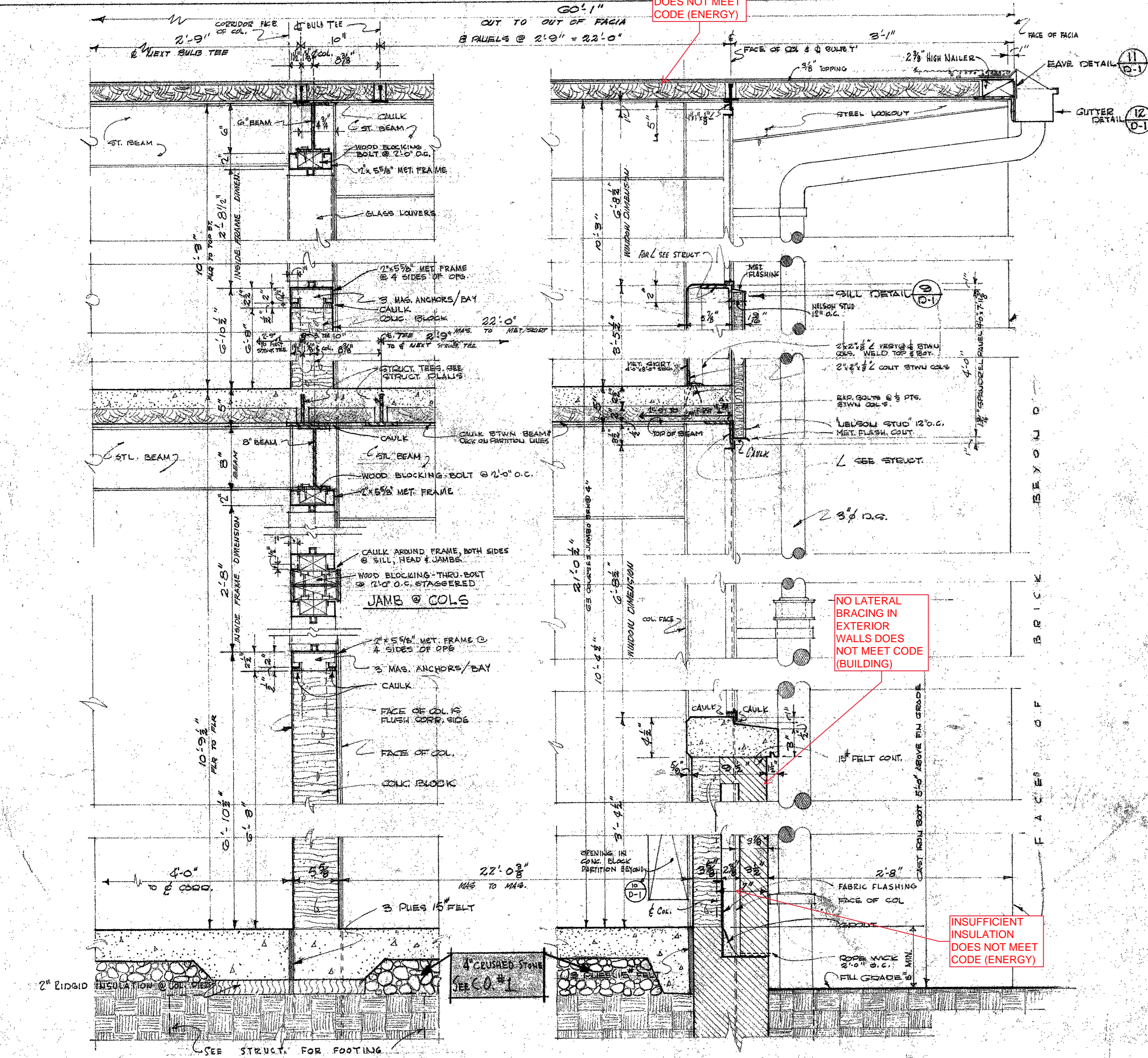
1 D-1 TRANSVERSE SECTION
SCALE: 1/8" = 1'-0"



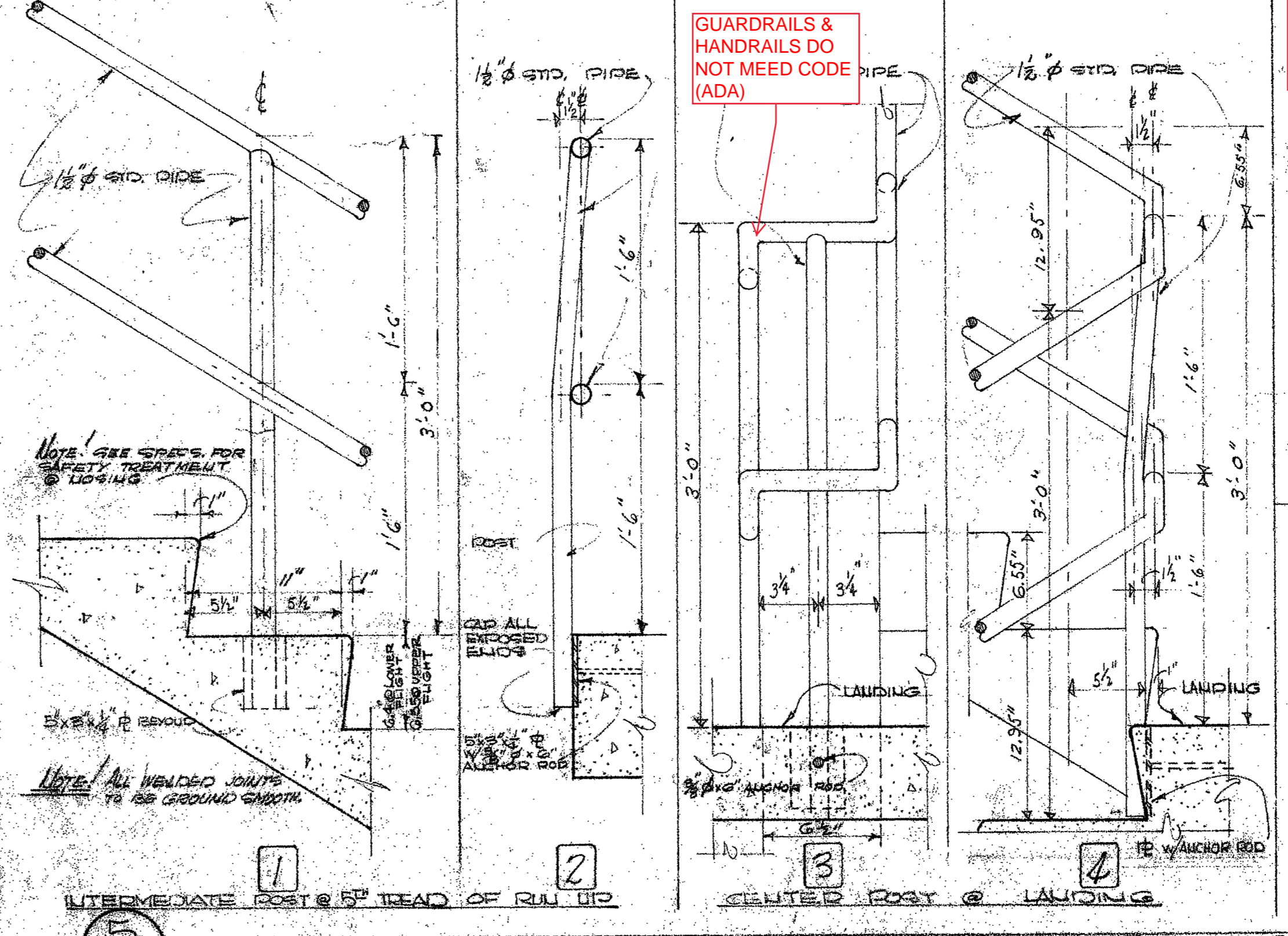
2 D-1 NORTH - SOUTH SECTION THRU STAIR #1
SCALE: 1/8" = 1'-0"



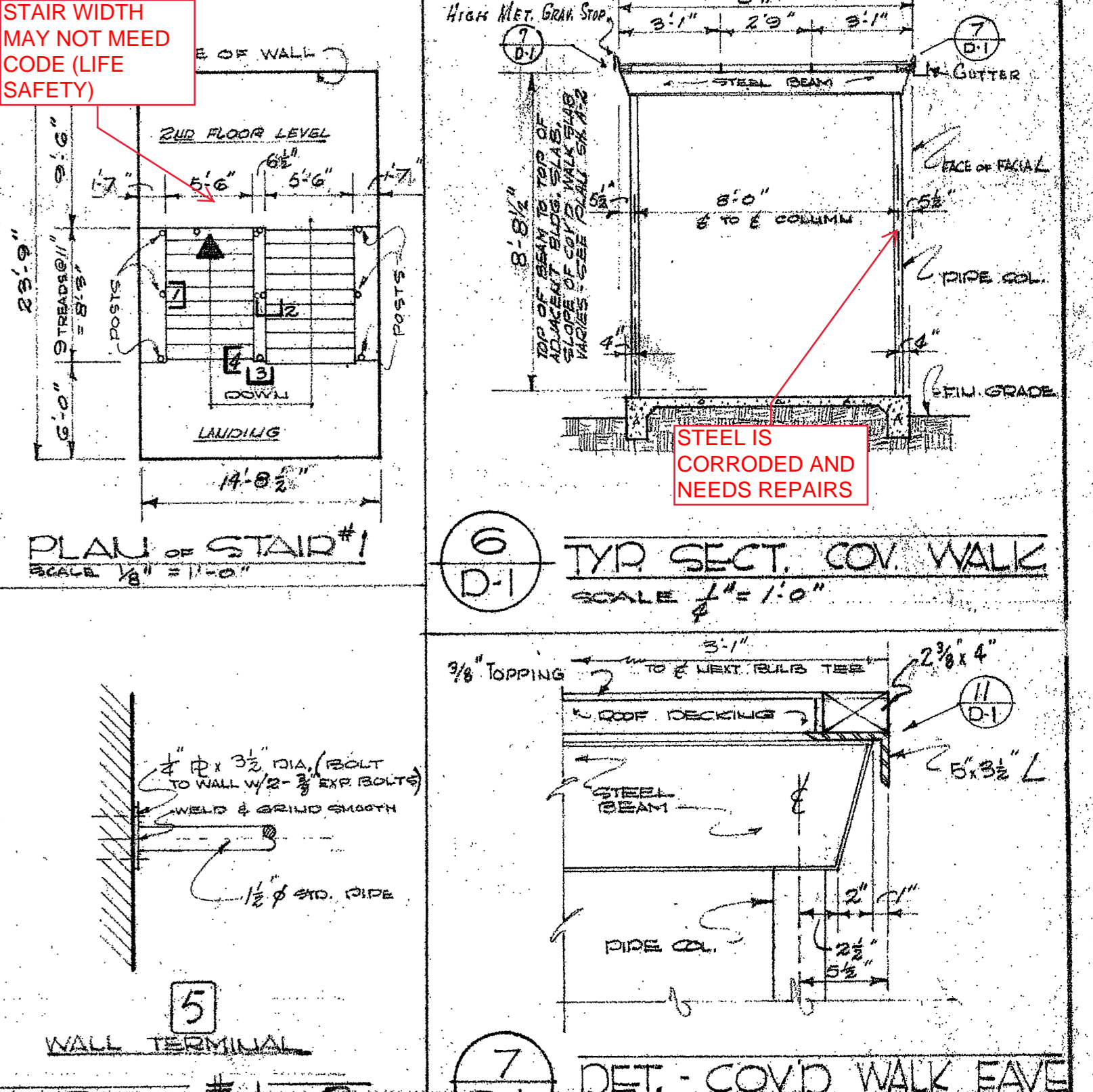
3 D-1 EAST - WEST SECTION THRU STAIR #2
SCALE: 1/8" = 1'-0"



4 D-1 DETAIL TRANSVERSE SECTION
SCALE: 1/8" = 1'-0"

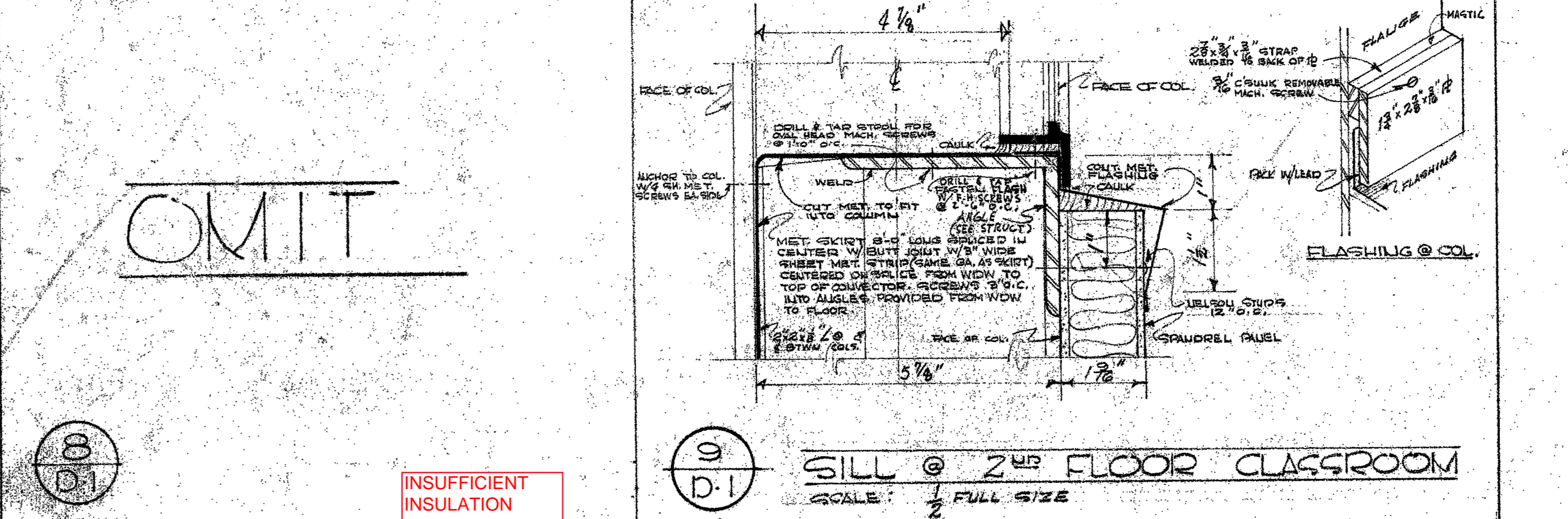


5 D-1 TYPICAL HANDRAIL DETAILS FOR STAIRS #1 & 2
SCALE: 1/8" = 1'-0"

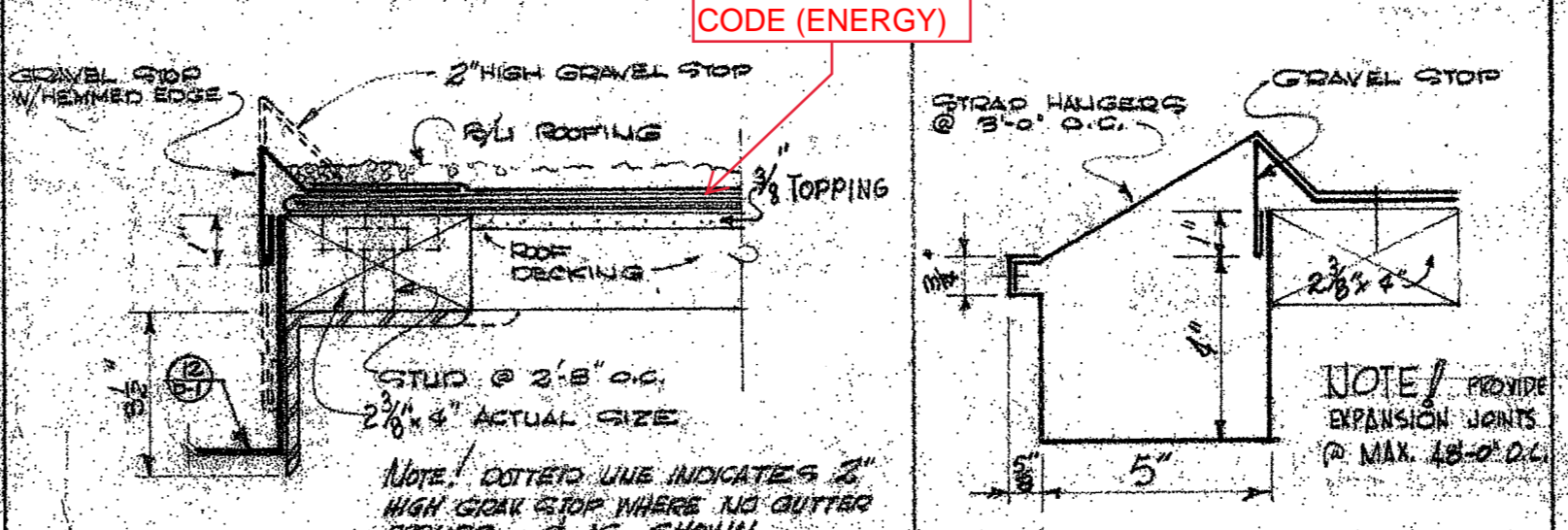


6 D-1 TYP. SECT. COV. WALK
SCALE: 1/8" = 1'-0"

7 D-1 DET. - COV. WALK EAVE
SCALE: 1/8" = 1'-0"

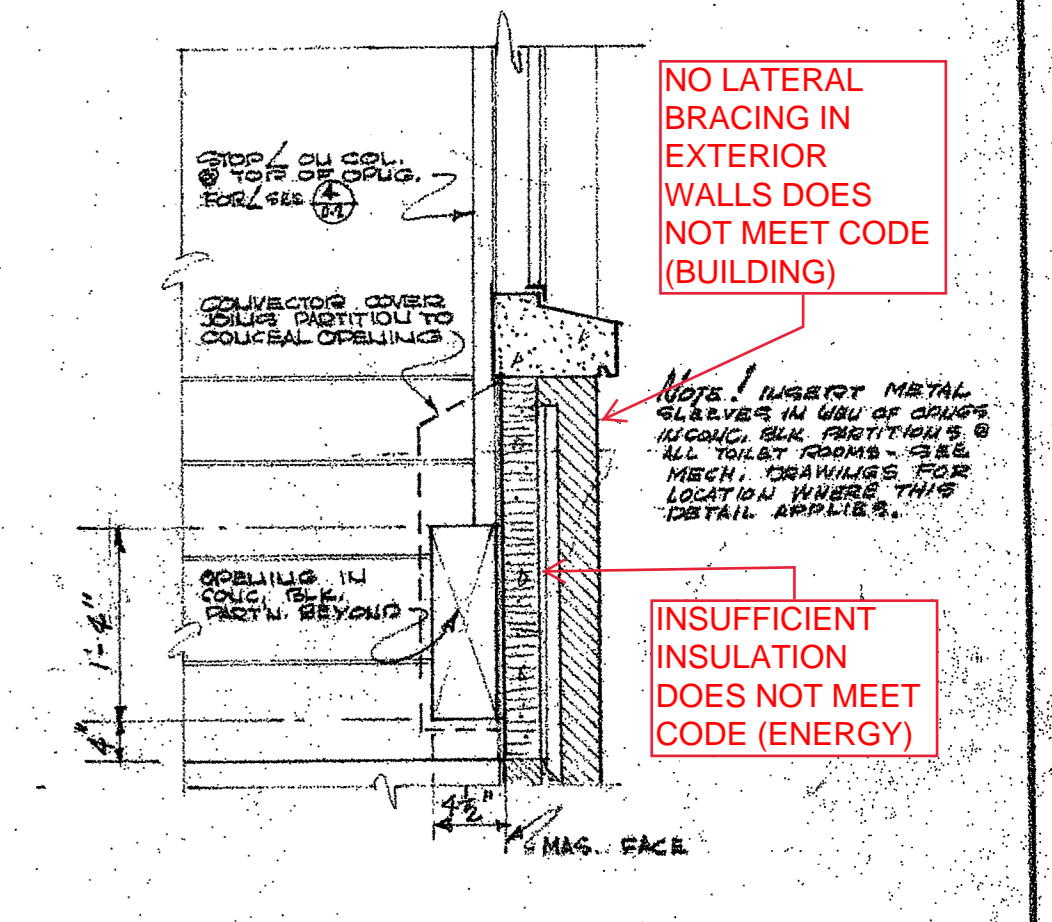


9 D-1 SILL @ 2ND FLOOR CLASSROOM
SCALE: 1/2" FULL SIZE



11 D-1 EAVE DETAIL
SCALE: 3/8" = 1'-0"

12 D-1 METAL GUTTER
SCALE: 3/8" = 1'-0"



10 D-1 OPENING IN CONC. BLK. PART OF EXT. WALL WHERE COLLECTORS OCCUR
SCALE: 1/8" = 1'-0"

SECTIONS & DETAILS

CLASSROOM ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK COUNTY BOARD OF EDUCATION
ATHENS, GEORGIA

A/E/C/K
ASSOCIATES
ARCHITECTS
ATLANTA

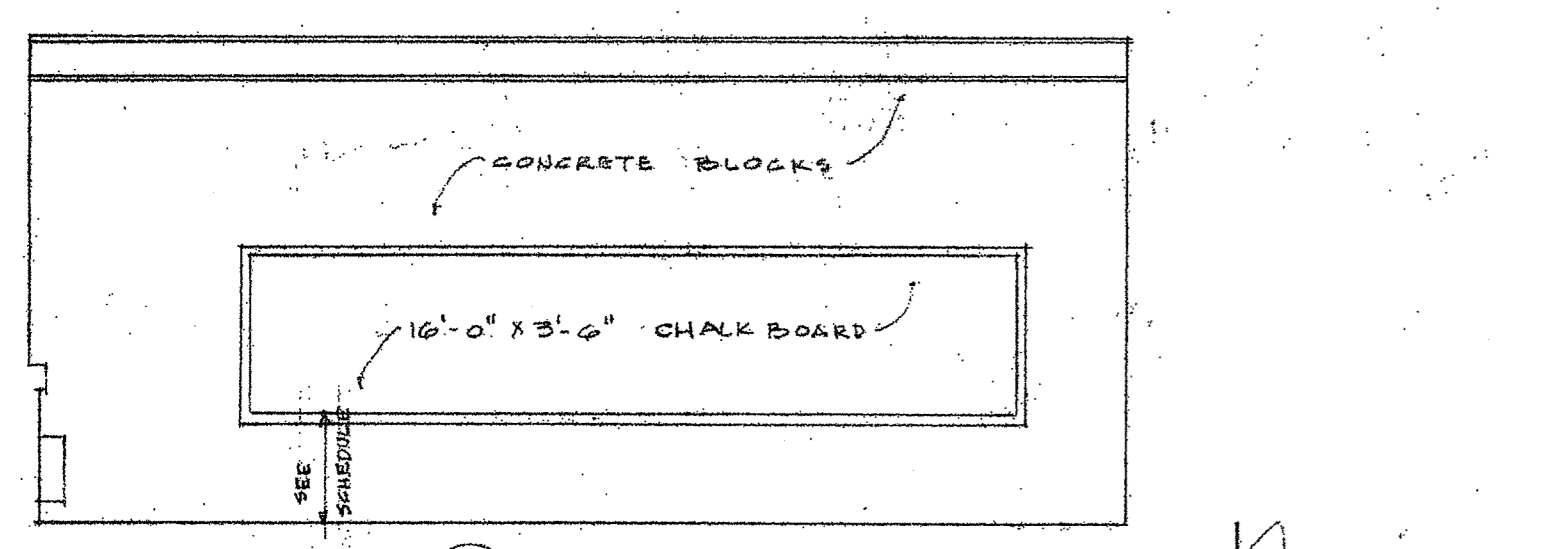
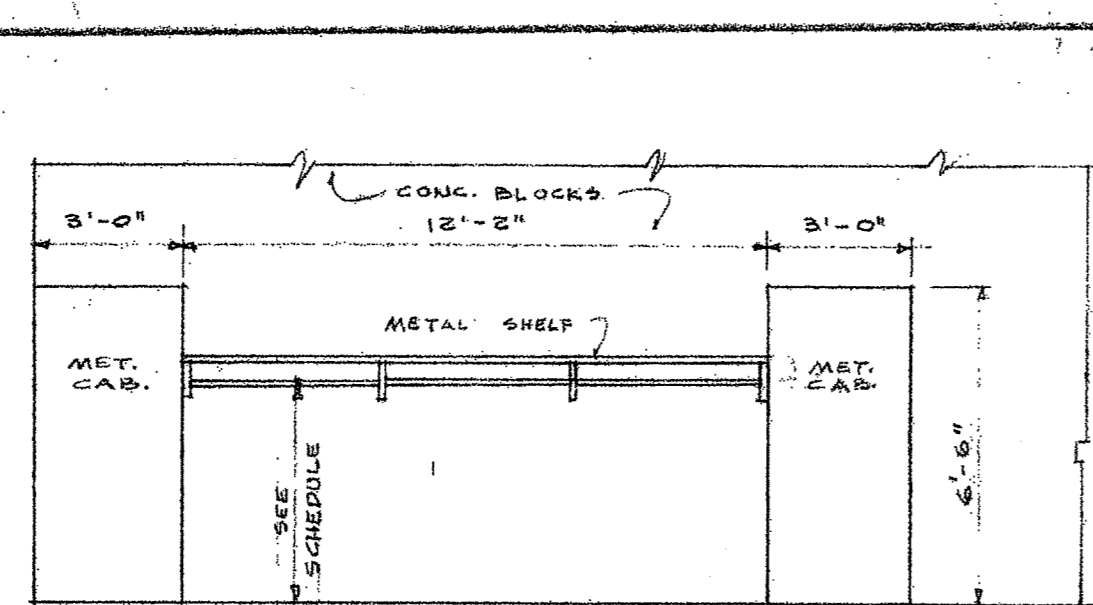
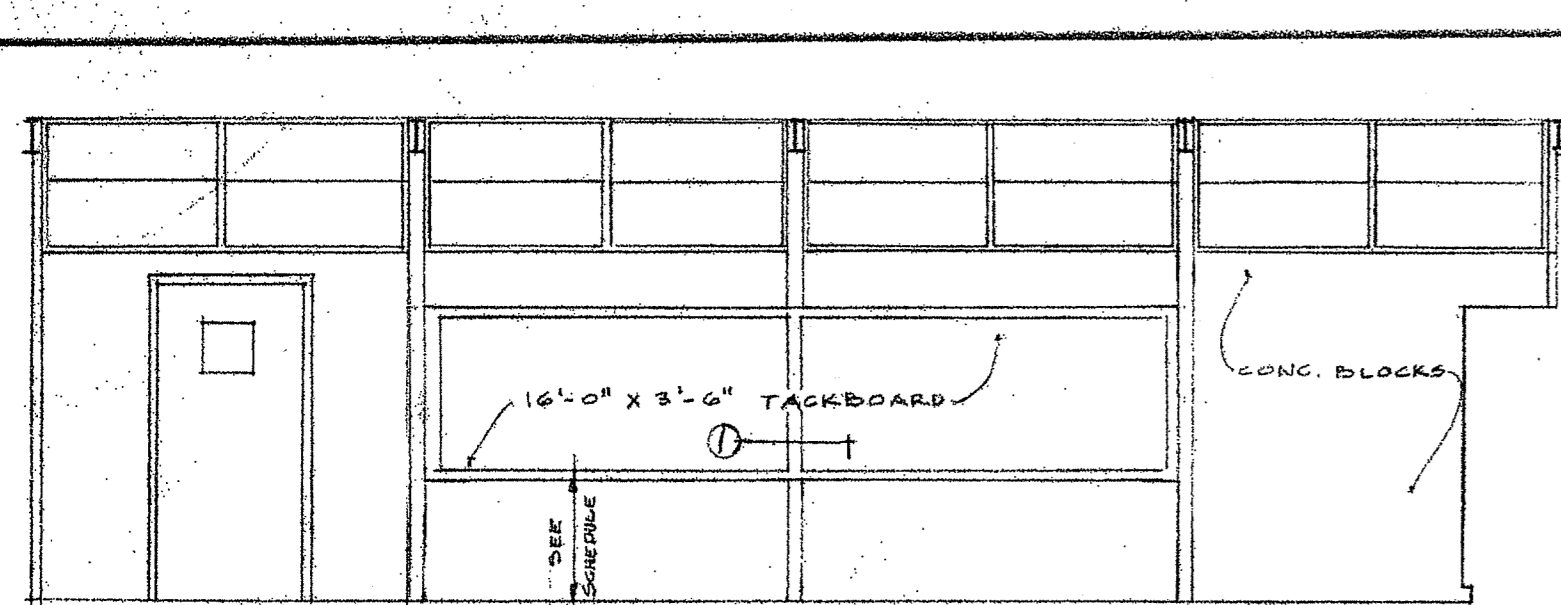
ONE FORTY PEACHTREE

HUDSON - SHEFFER
ASSOCIATE ARCHITECTS

GEORGIA REGISTERED ARCHITECT NO. 375 RICHARD L. HENK

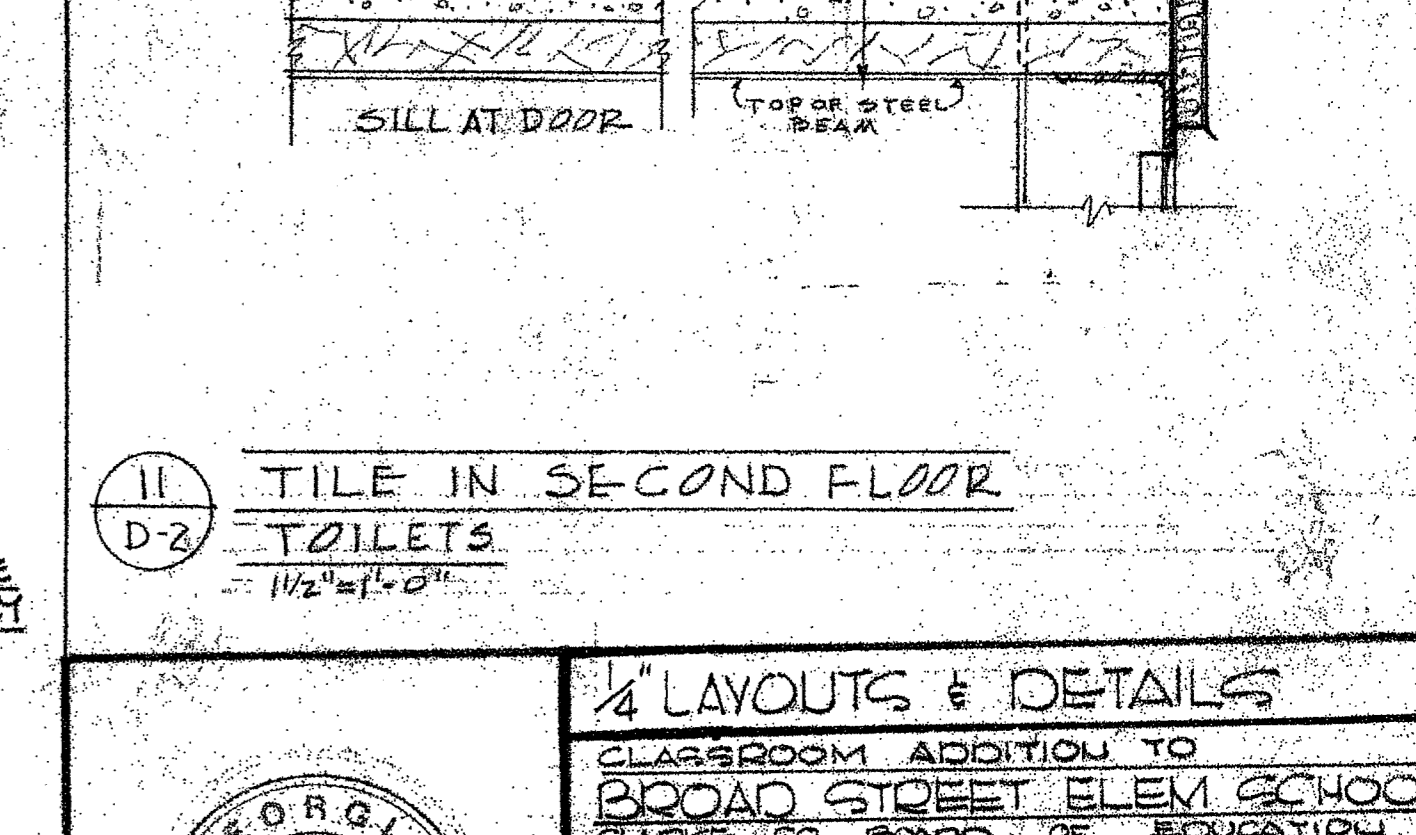
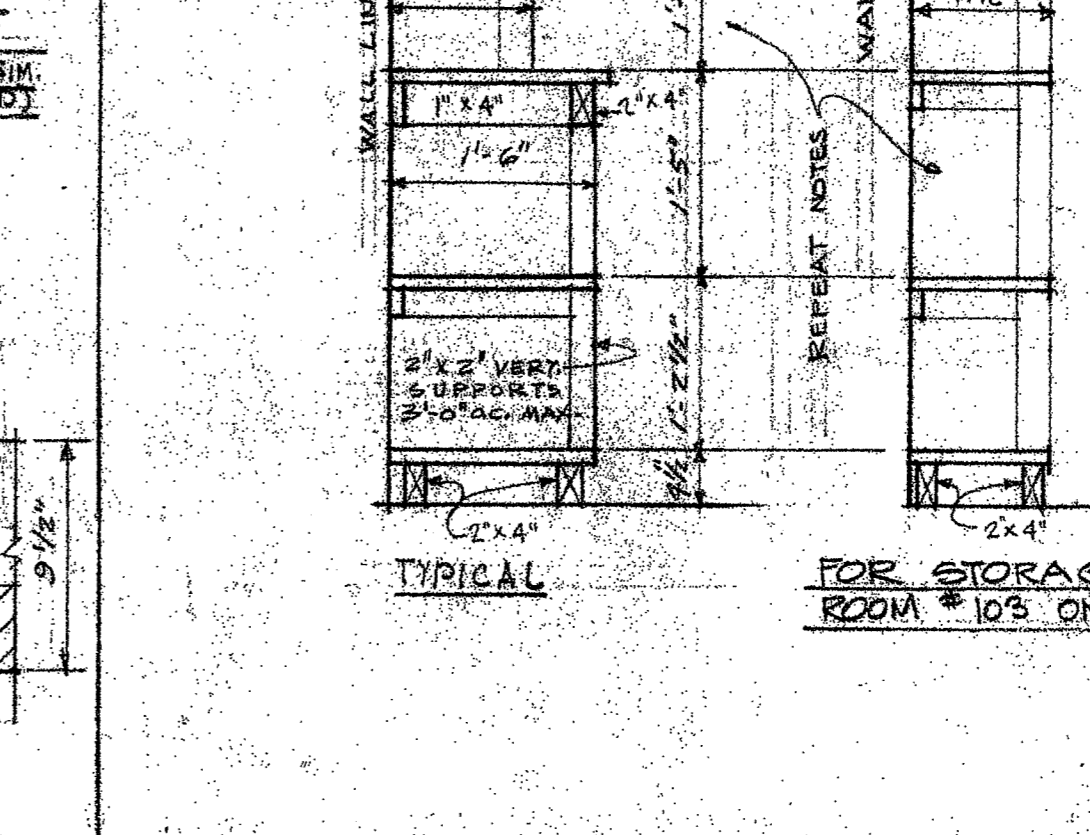
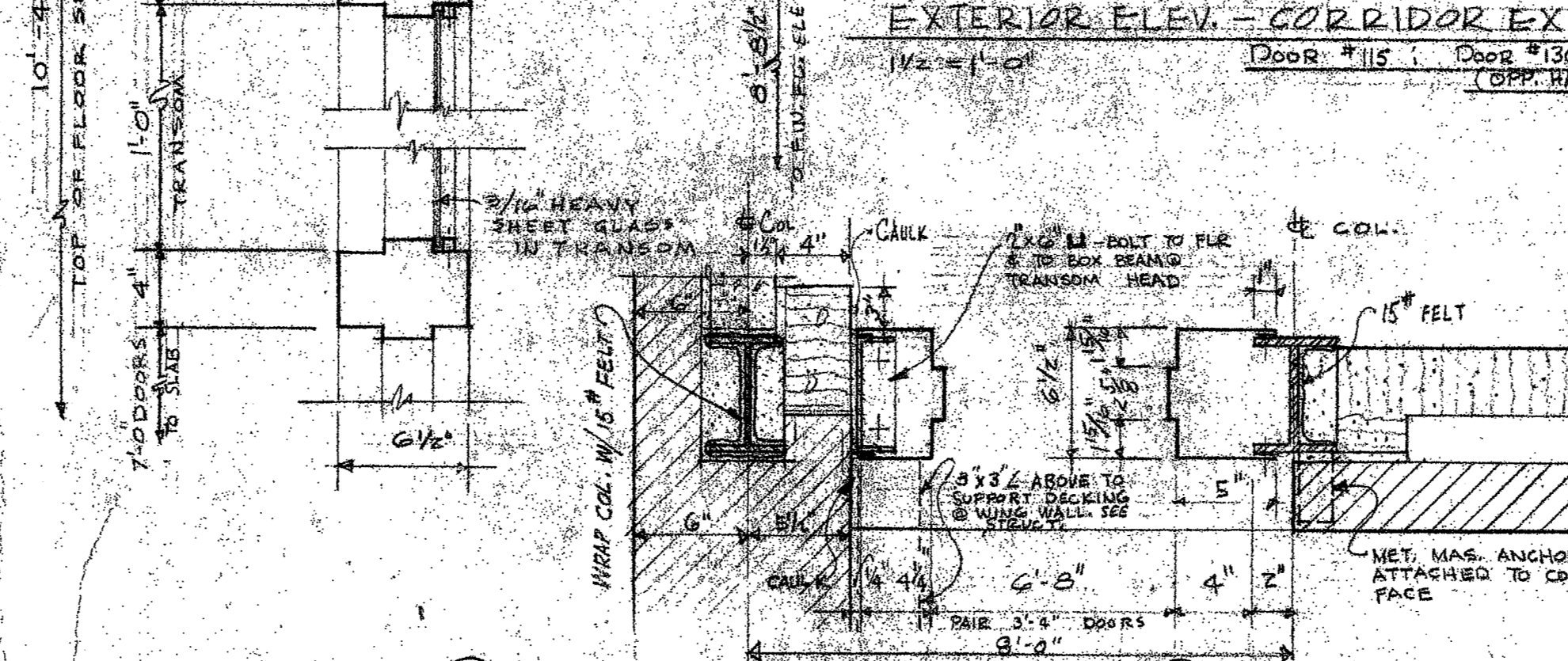
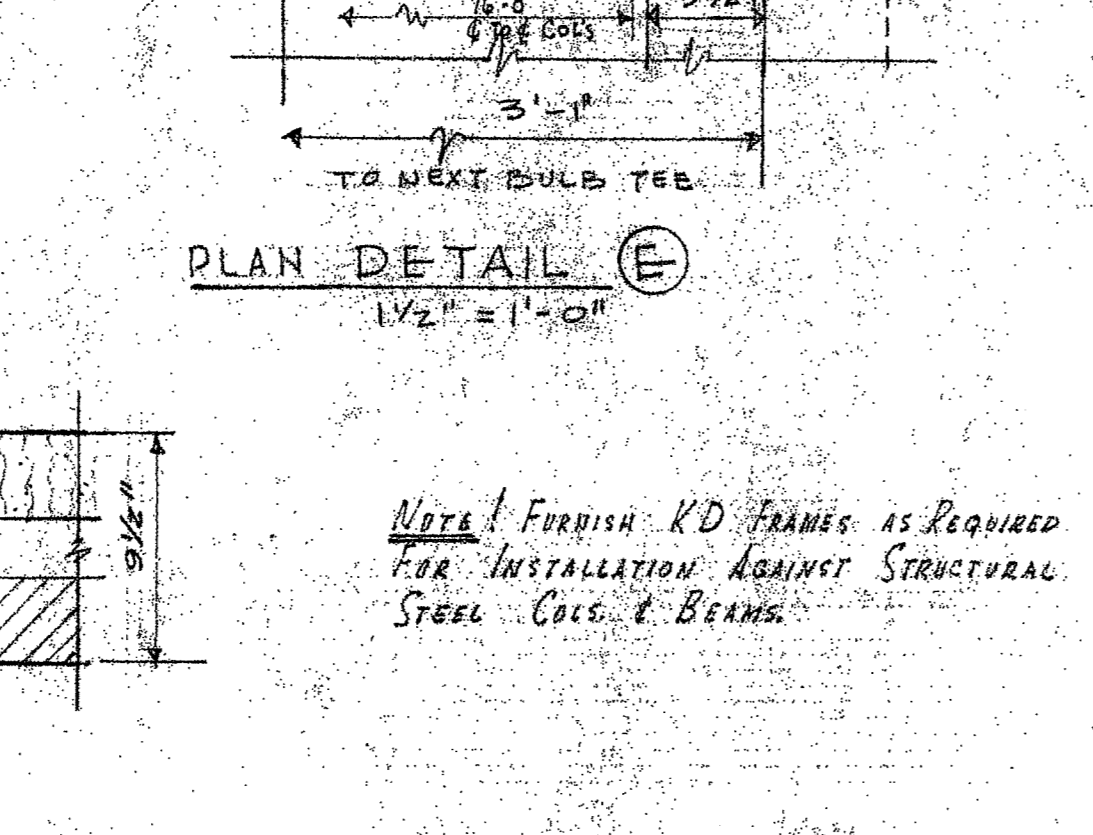
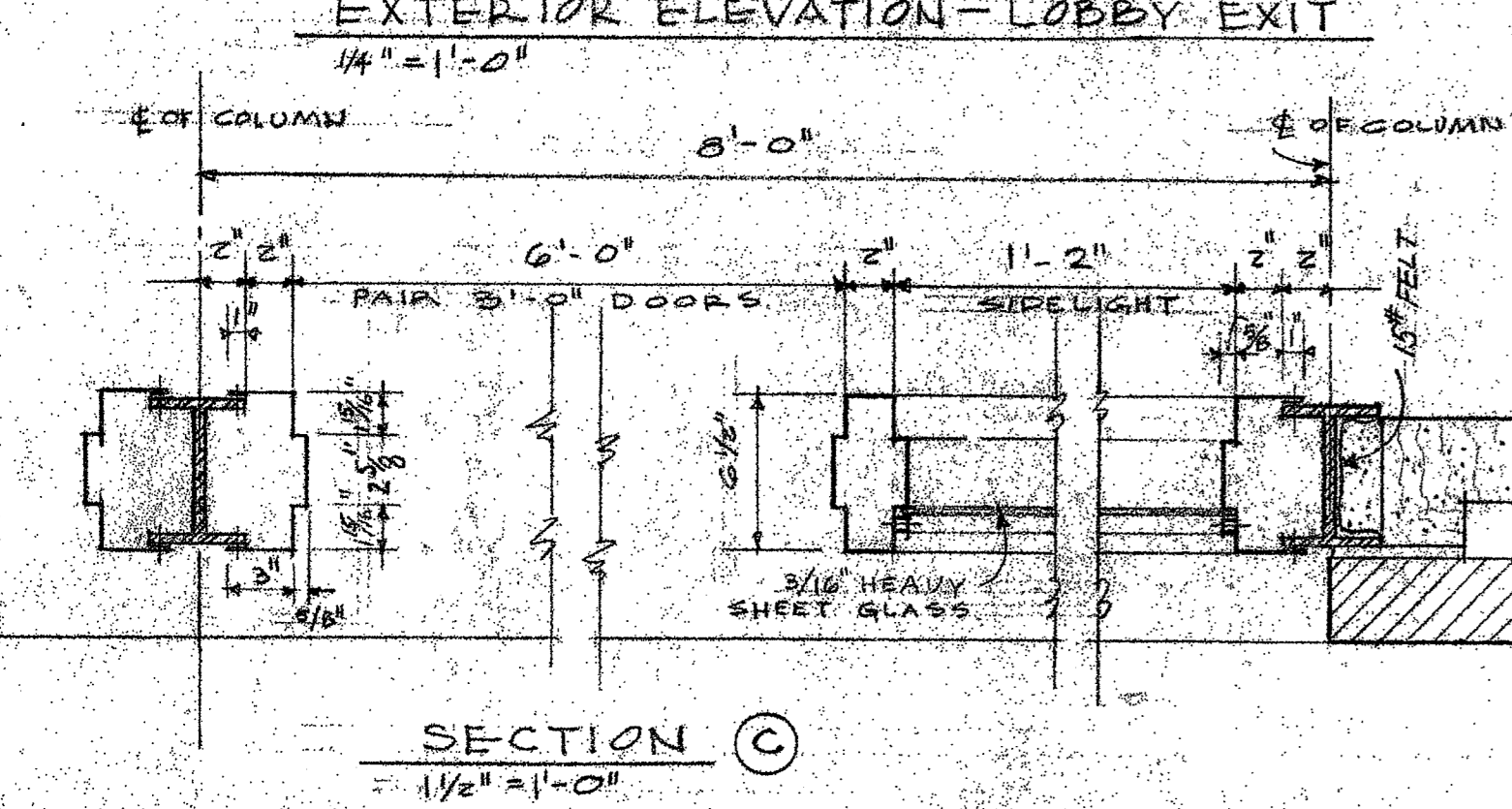
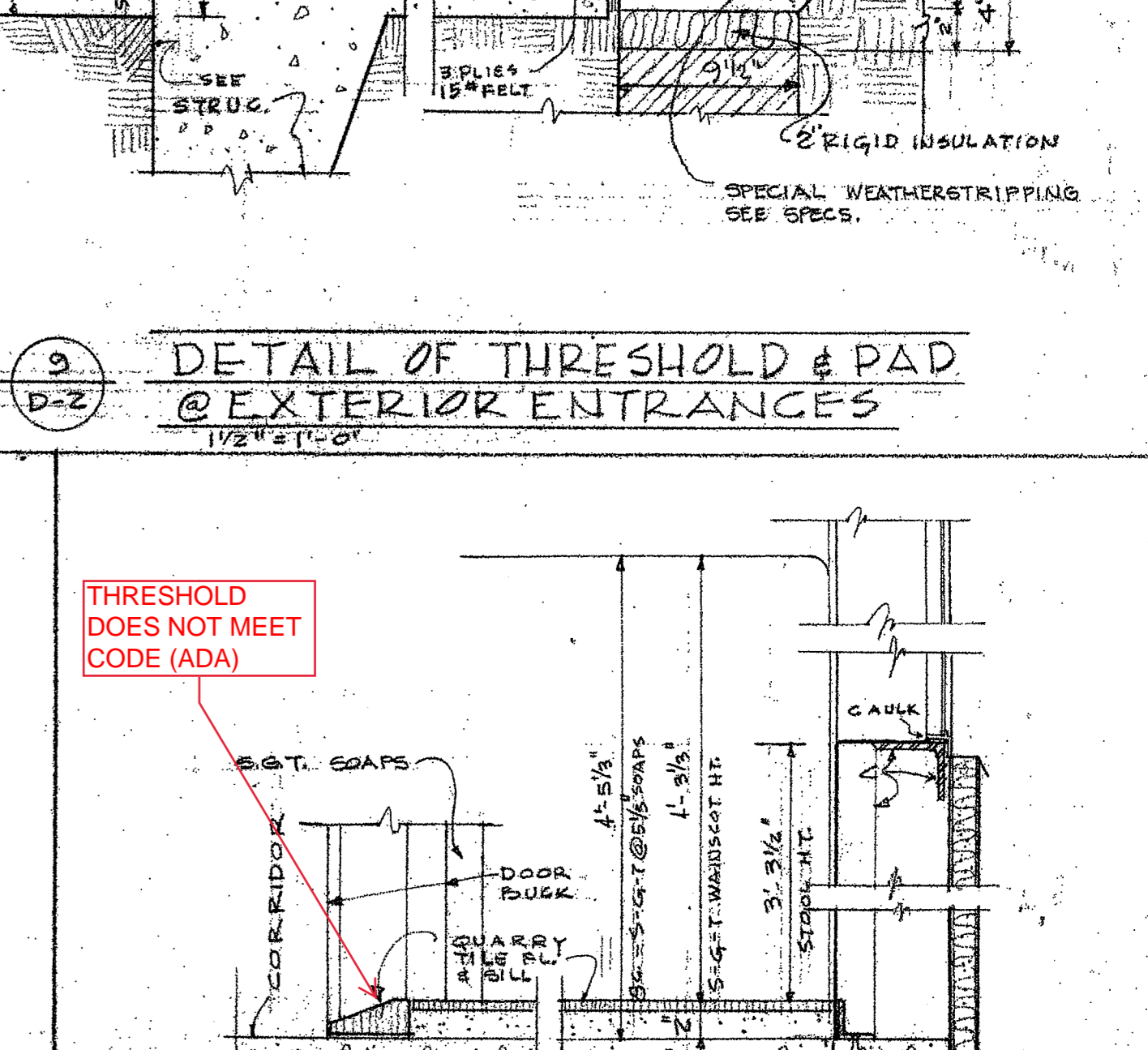
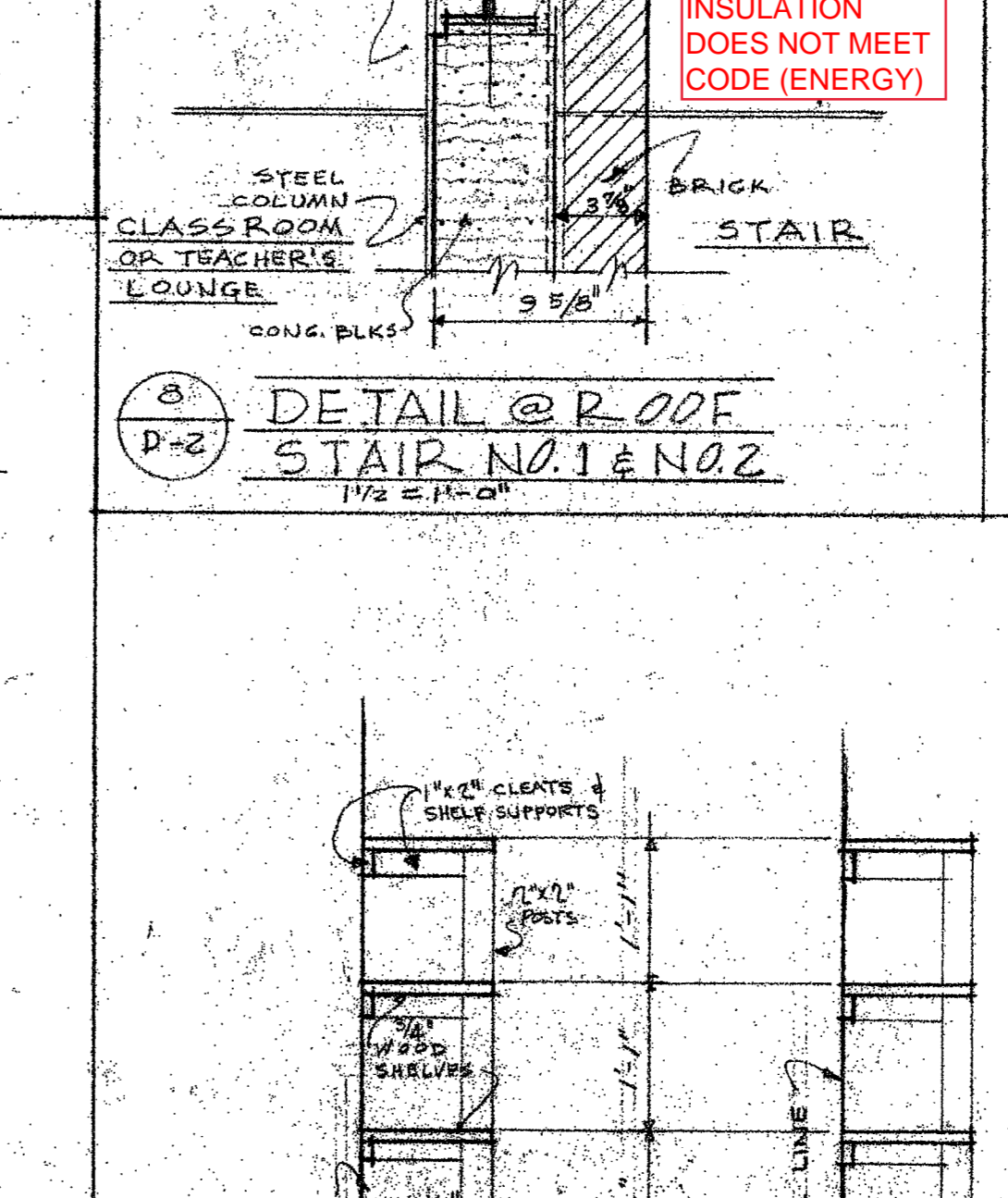
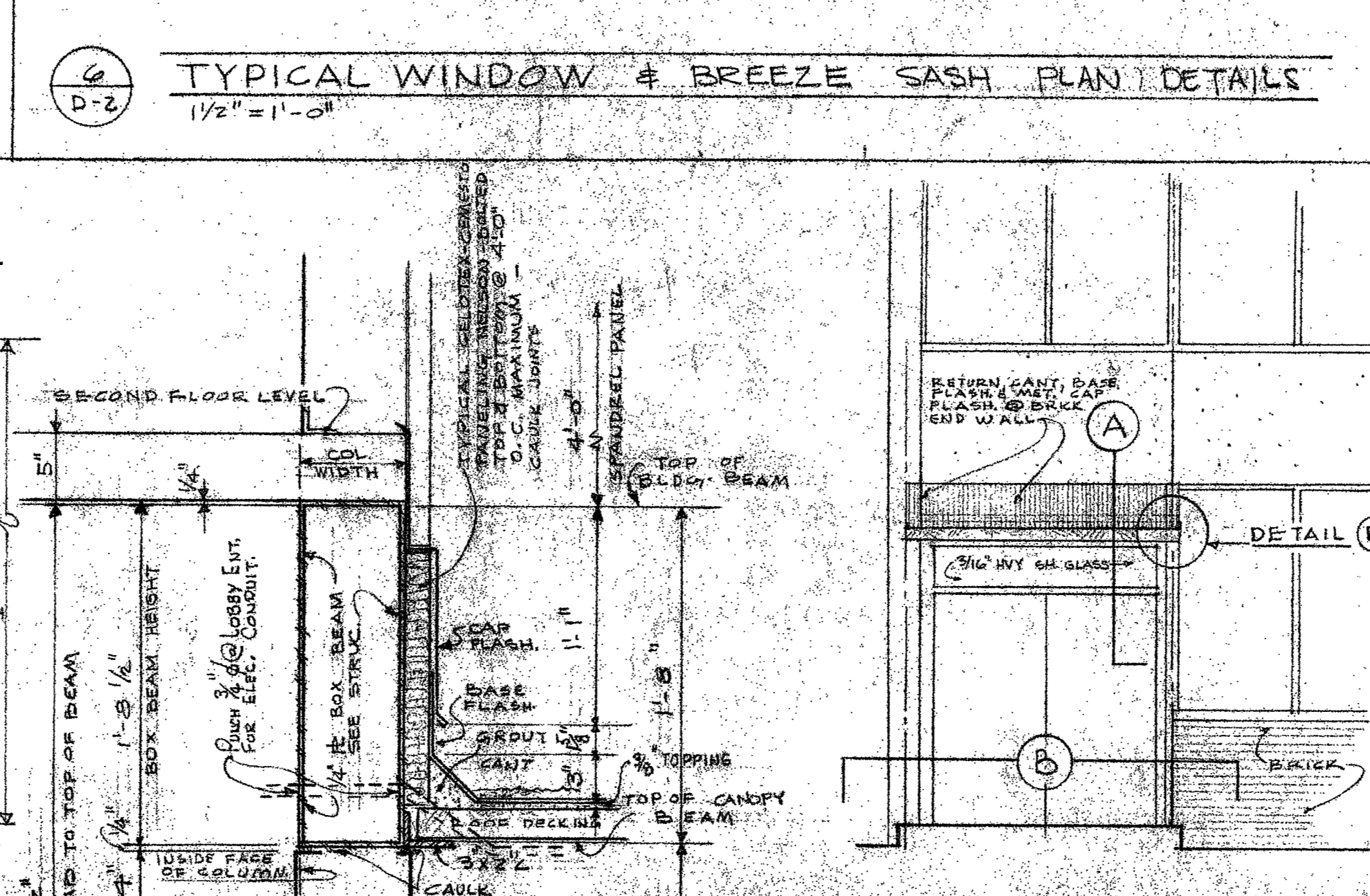
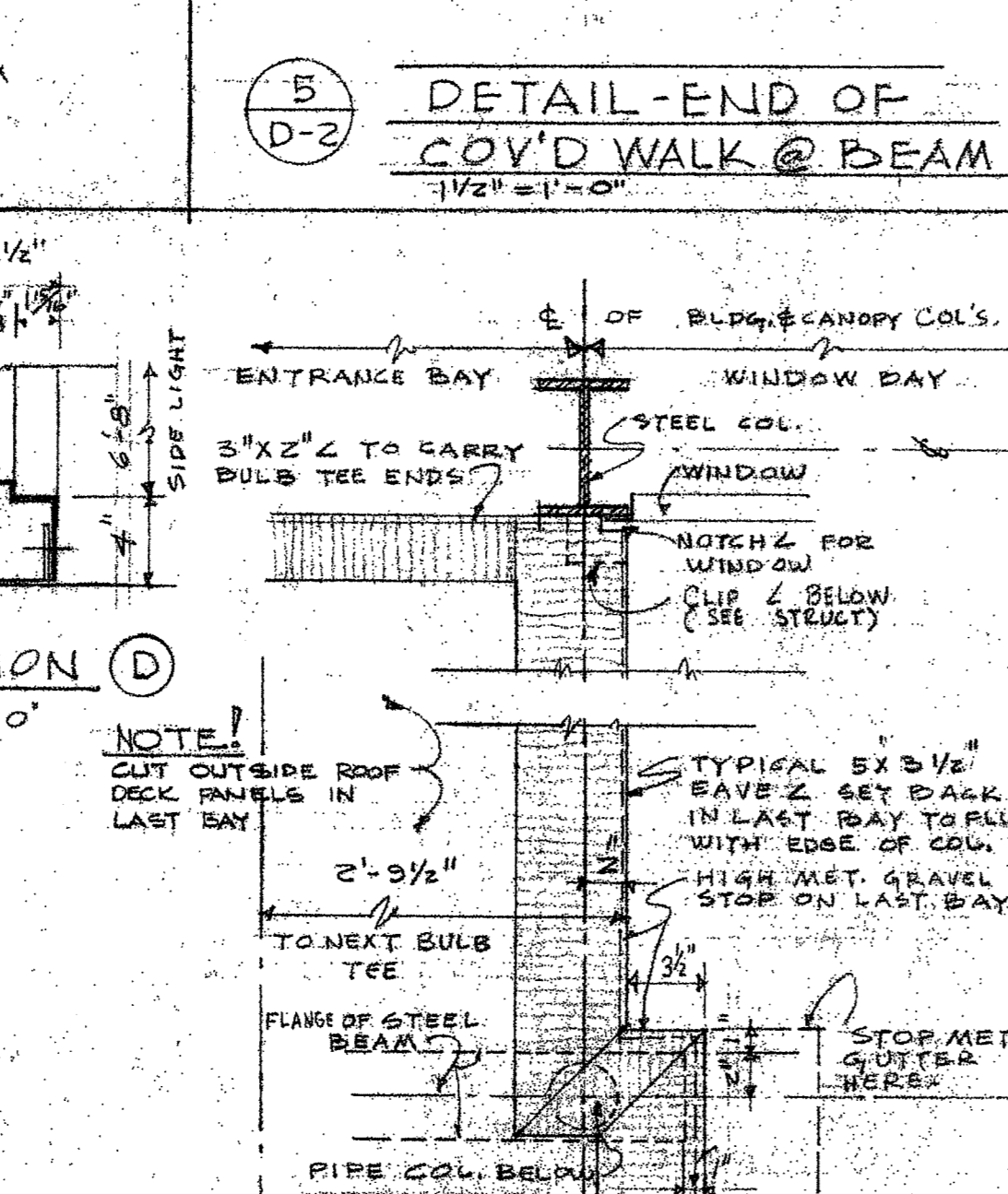
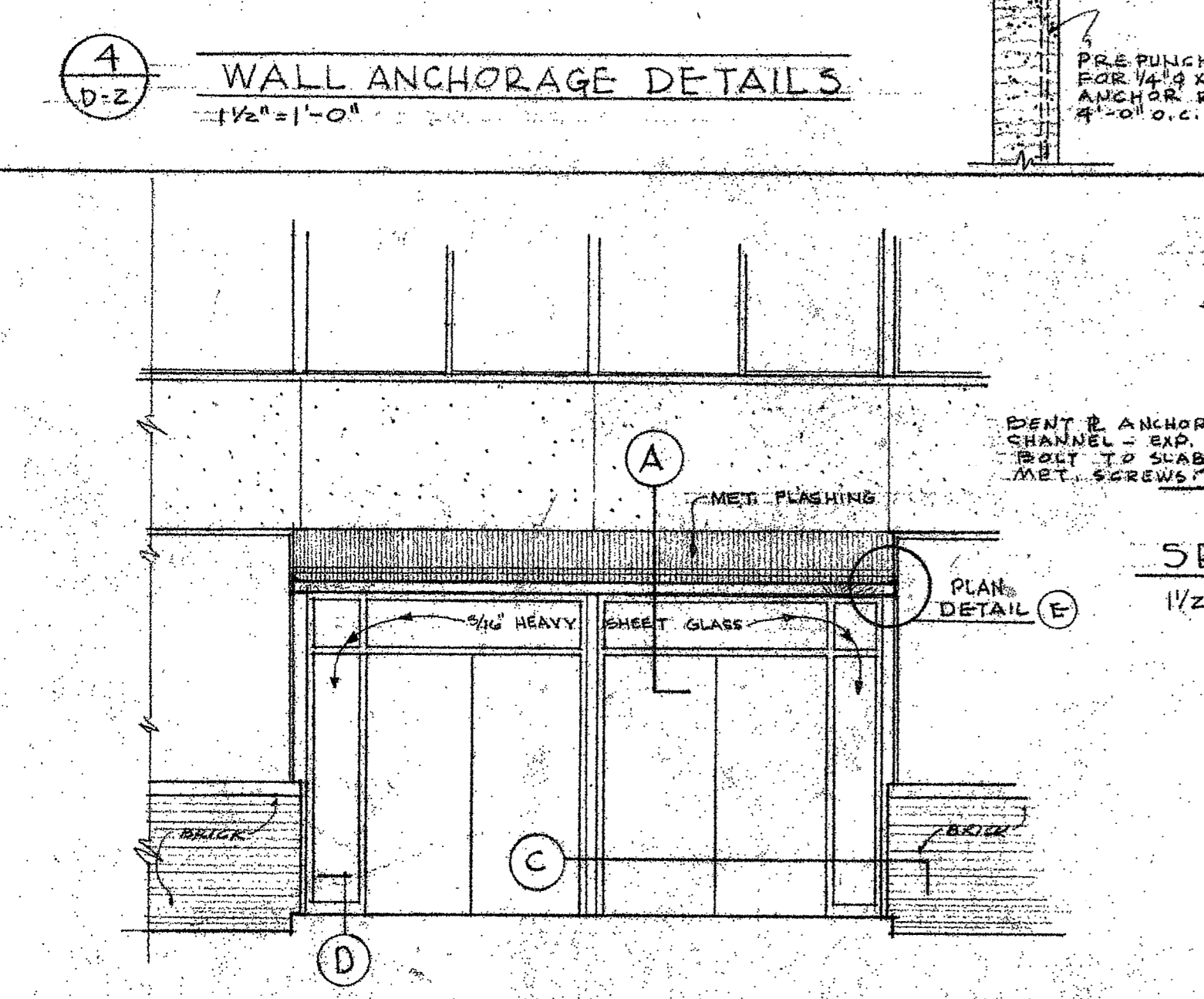
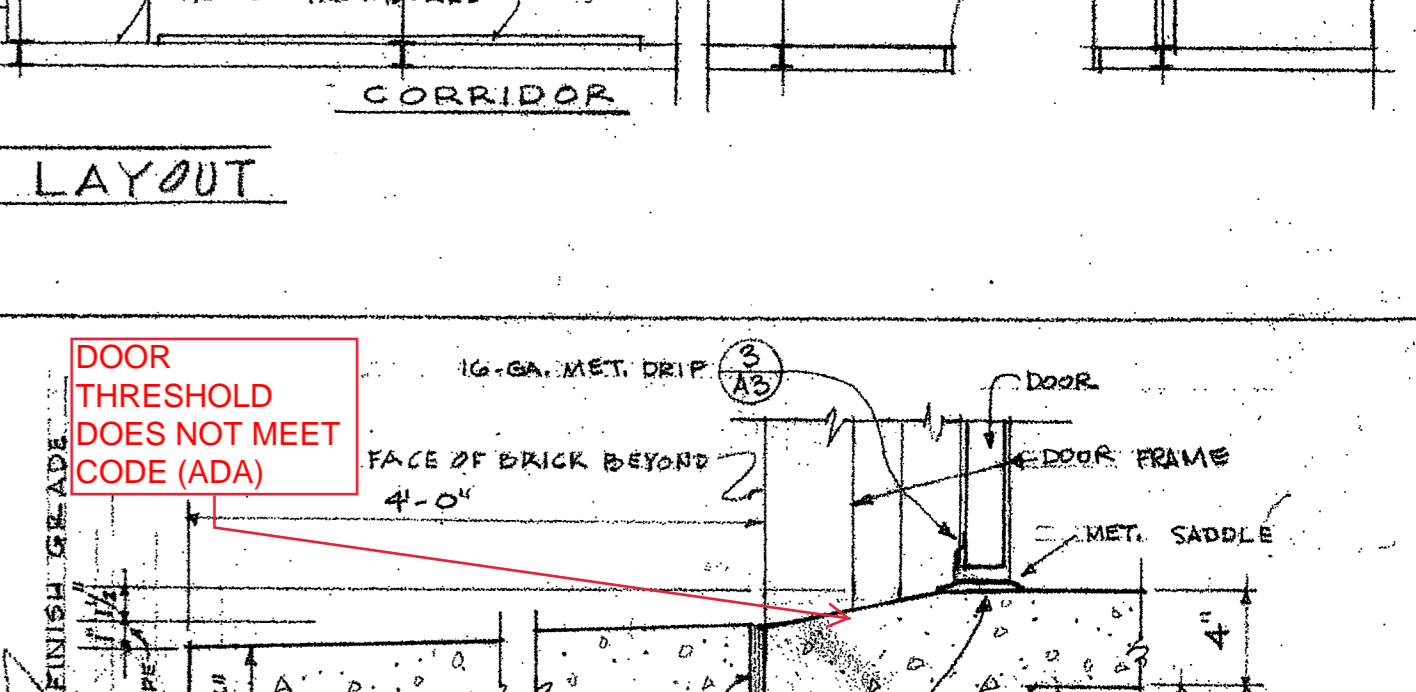
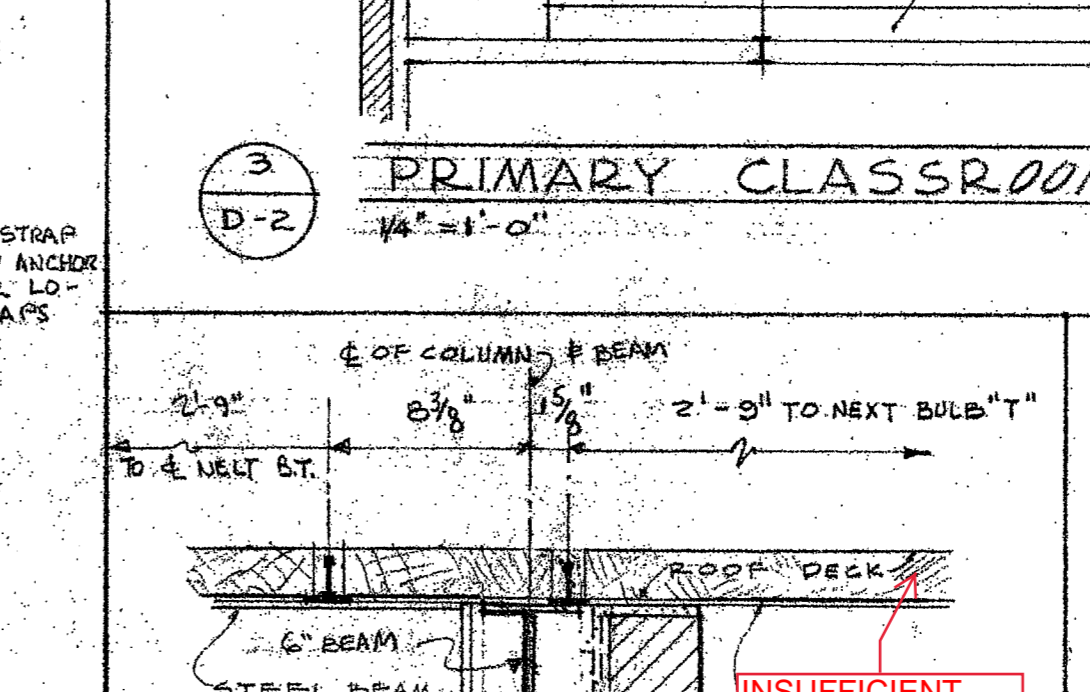
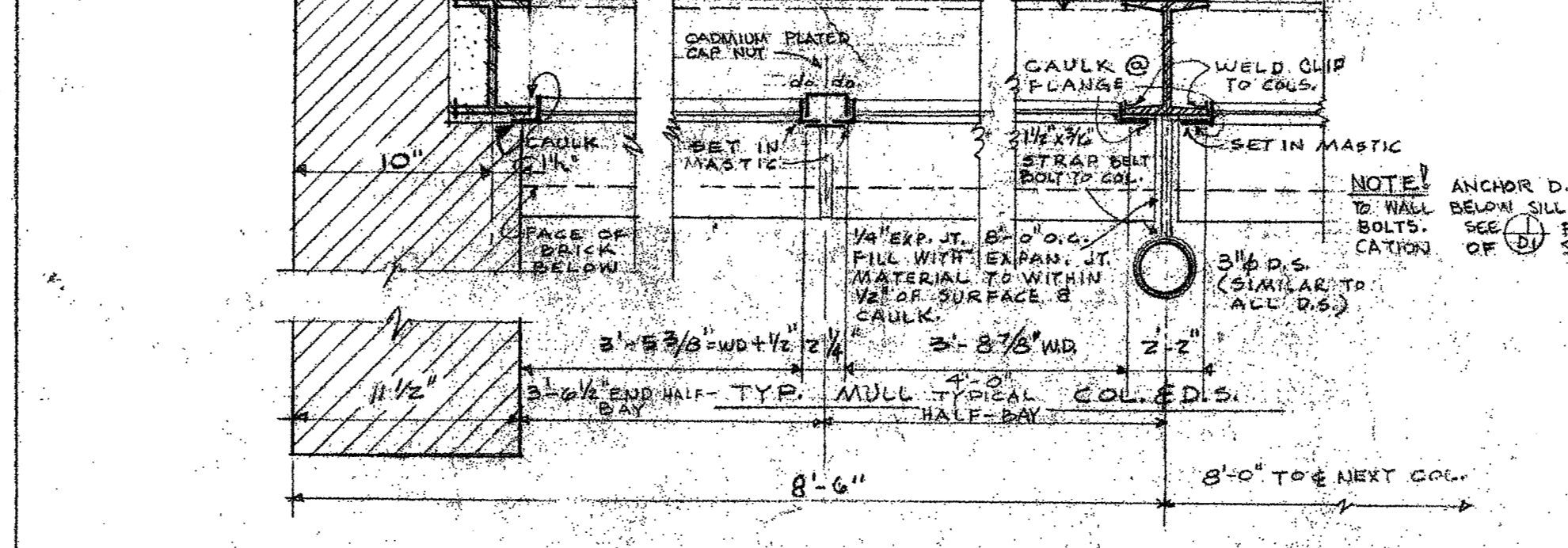
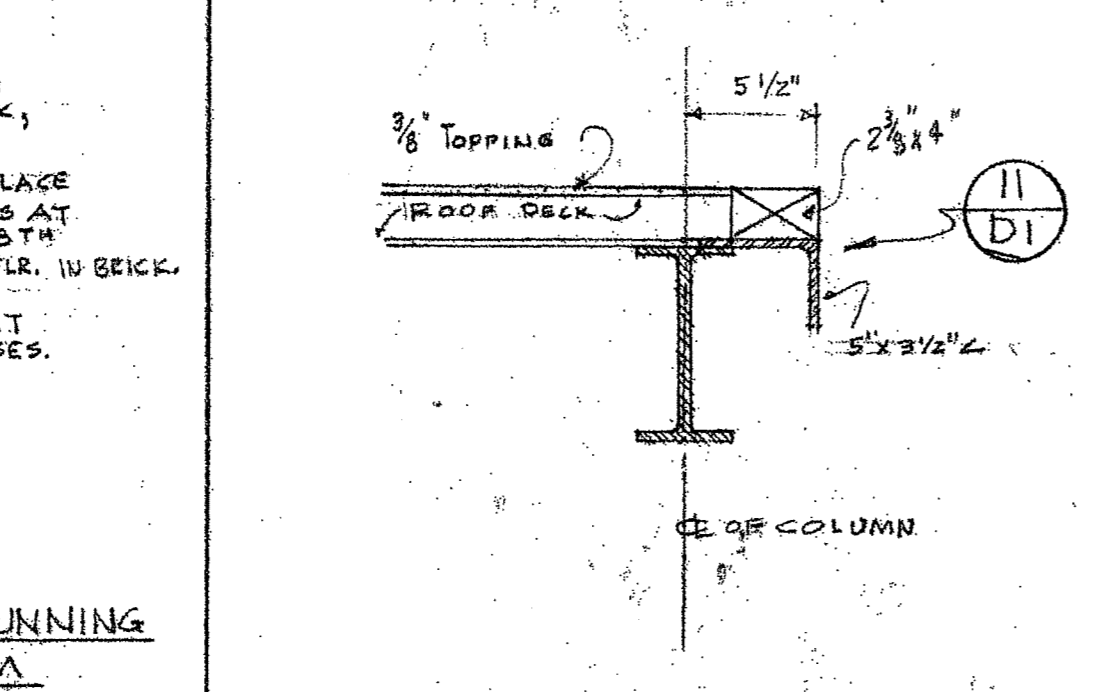
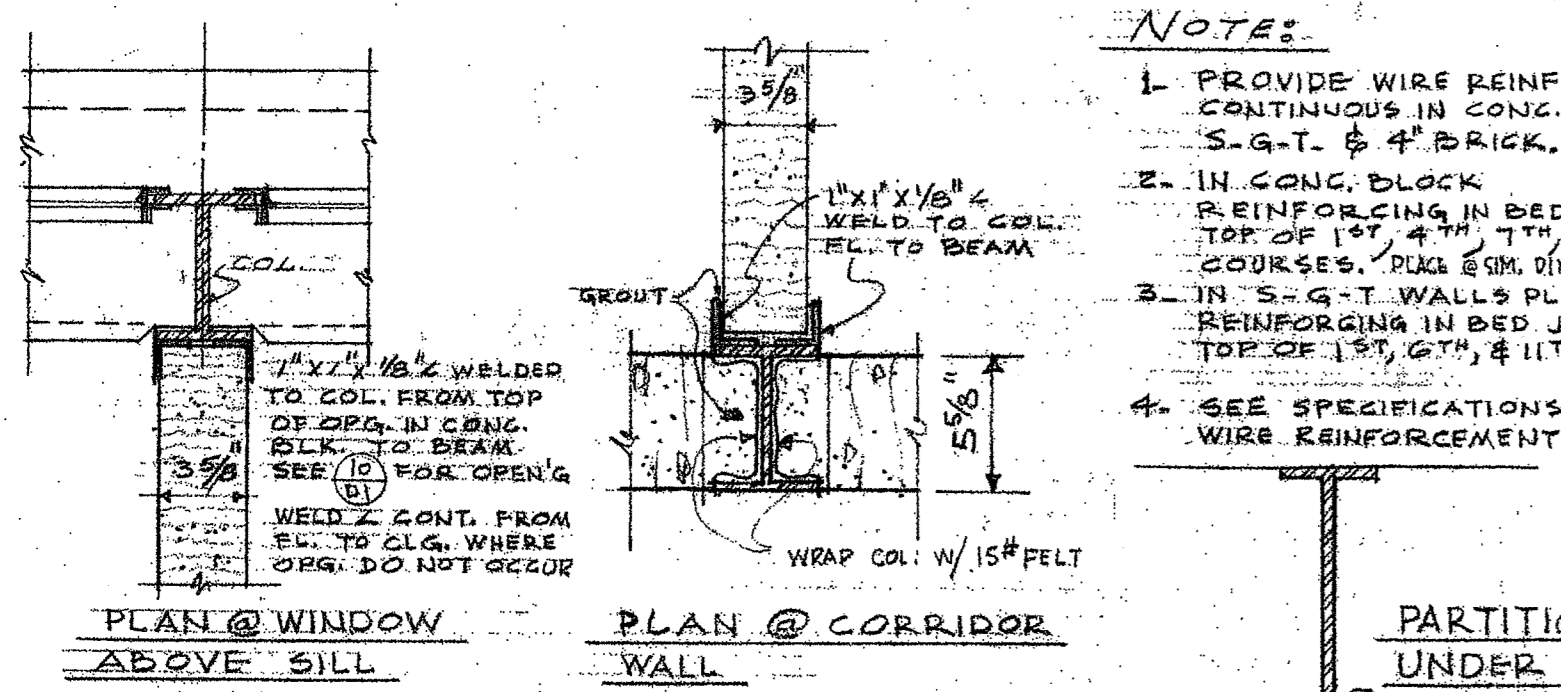
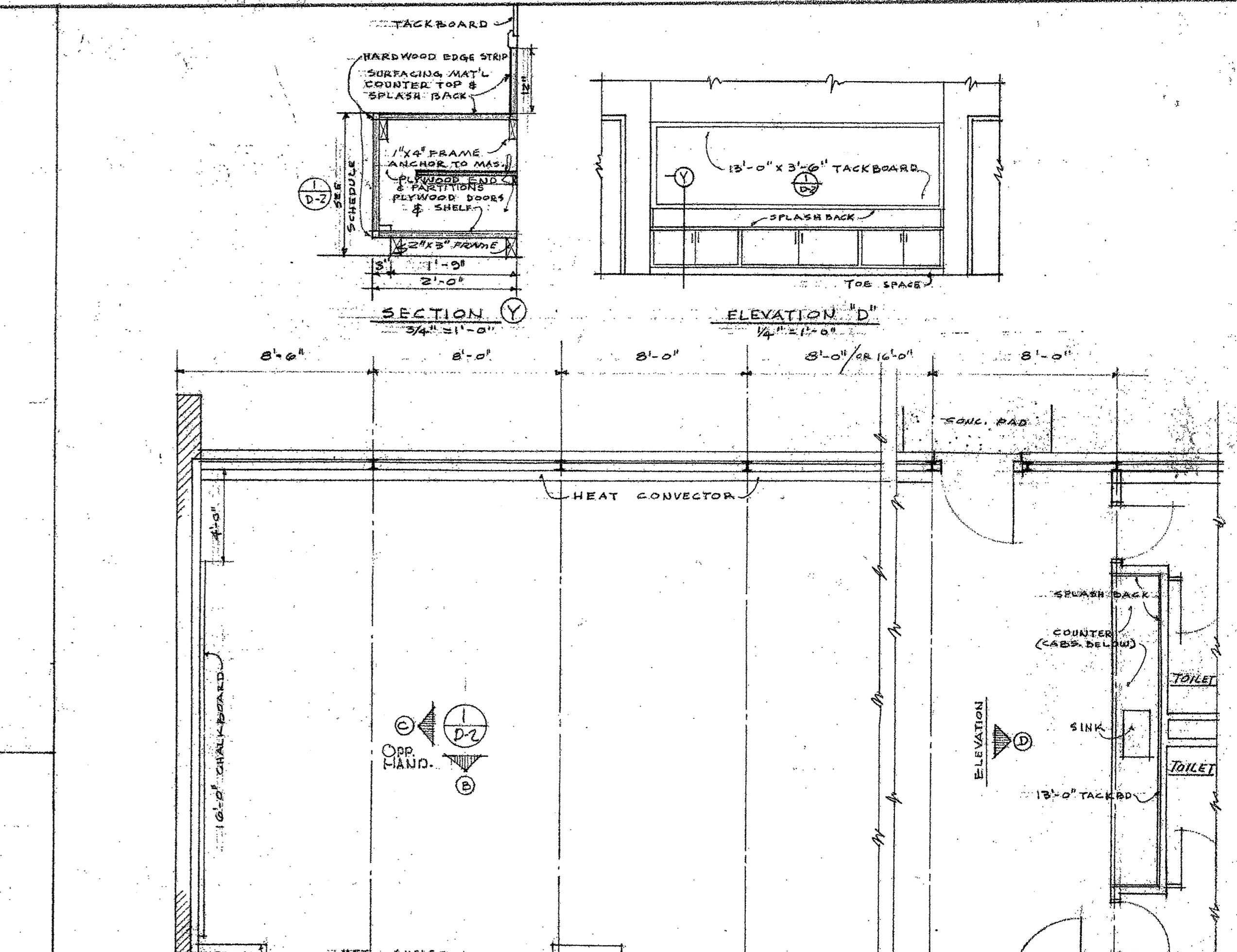
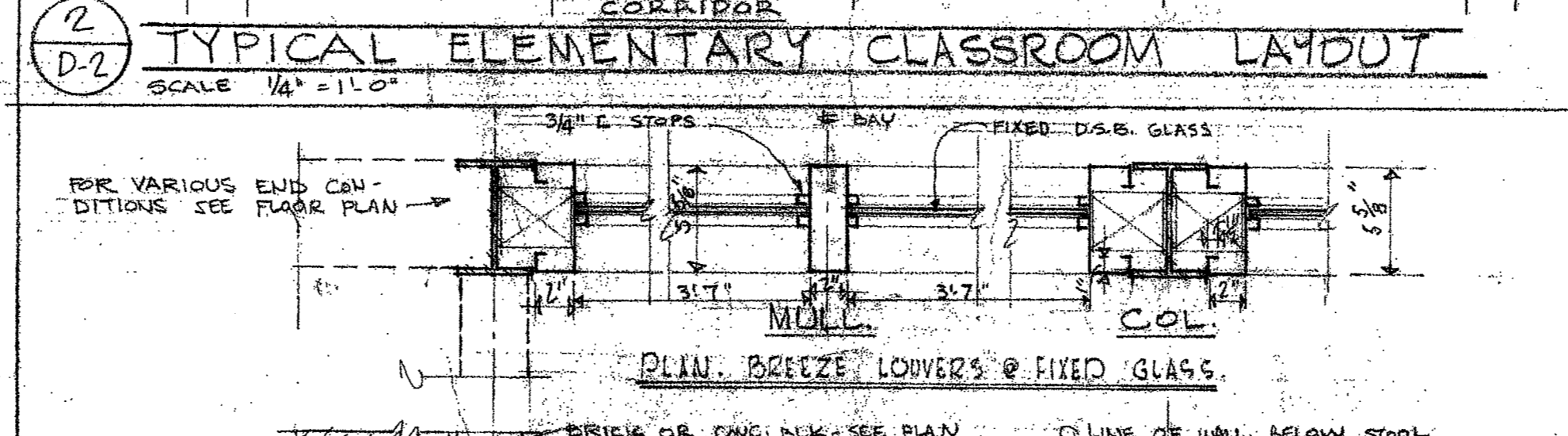
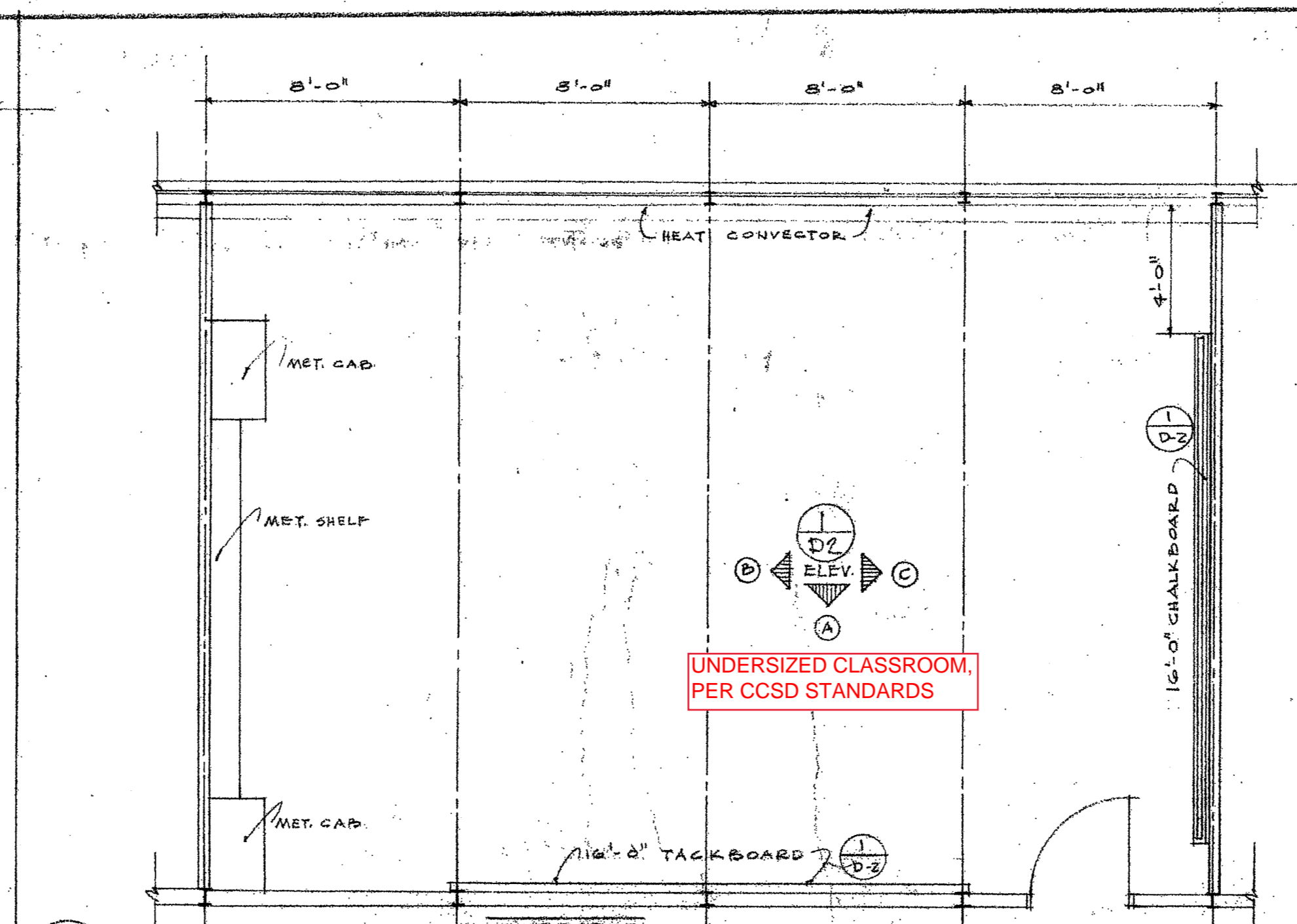
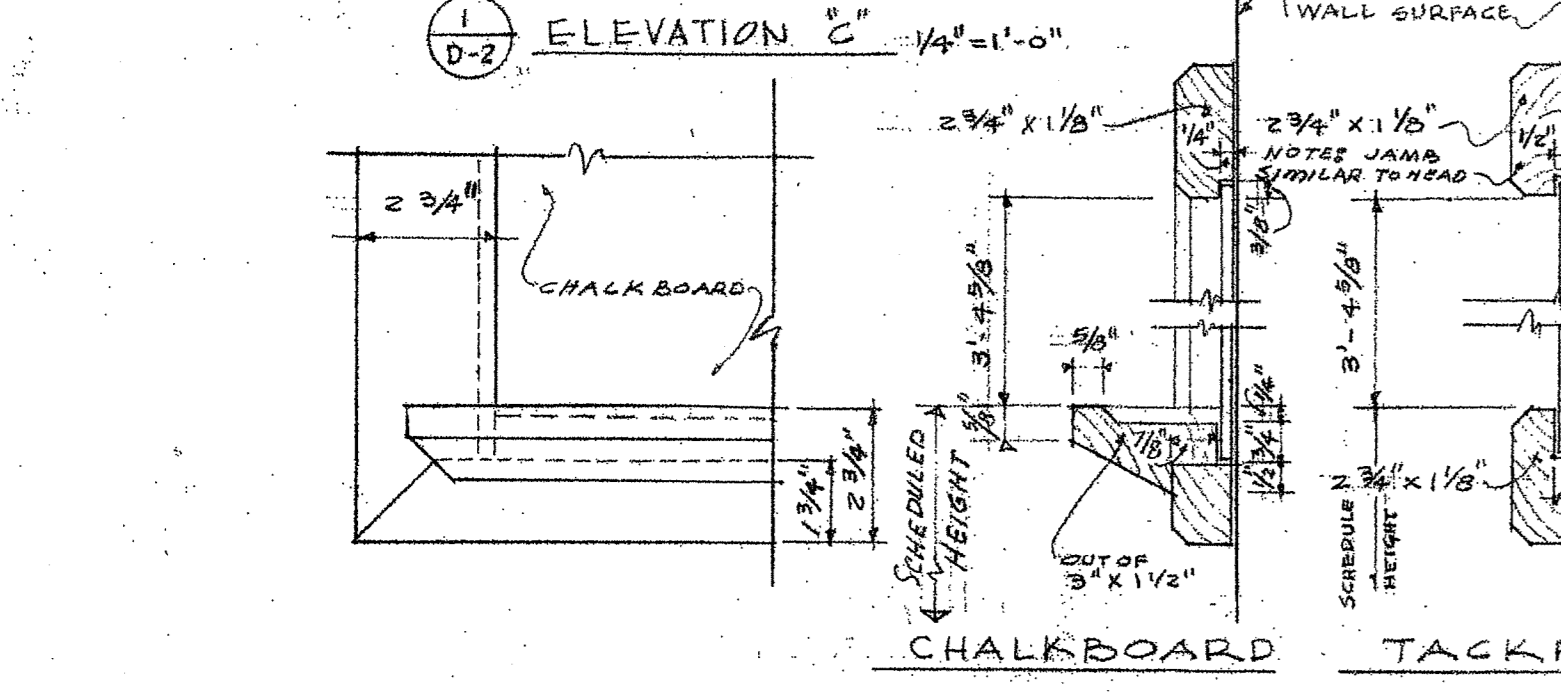
WELLS SHEETS ARCHITECTS SHEET NO. D-1

15 JAN 88 DATE



GRADE	COAT ROD	TACK BOARD & CHALKBOARD	WORK COUNTER
PRIMARY 1-2 & 3	3'-10"	24" - 25" - 26"	24"
ELEMENTARY 4-5 & 6	4'-5"	27" - 28" - 29"	28"

VARY SPECIFIC HEIGHTS OF PRIMARY & ELEMENTARY CLASSROOM EQUIPMENT WITH OWNER & ARCHITECT.



7 DETAILS - CORRIDOR & LOBBY EXIT
SCALE AS SHOWN

SECTION A
1/2" = 1'-0"

SECTION B
1/2" = 1'-0"

10 TYPICAL SHELVING DETAILS
3/4" = 1'-0"

11 TILE IN SECOND FLOOR TOILETS
1/2" = 1'-0"

1/4 LAYOUTS & DETAILS
CLASSROOM ADDITION TO
ROAD STREET ELEM SCHOOL
CLAYTON CO. BOARD OF EDUCATION
ATLANTA, GEORGIA

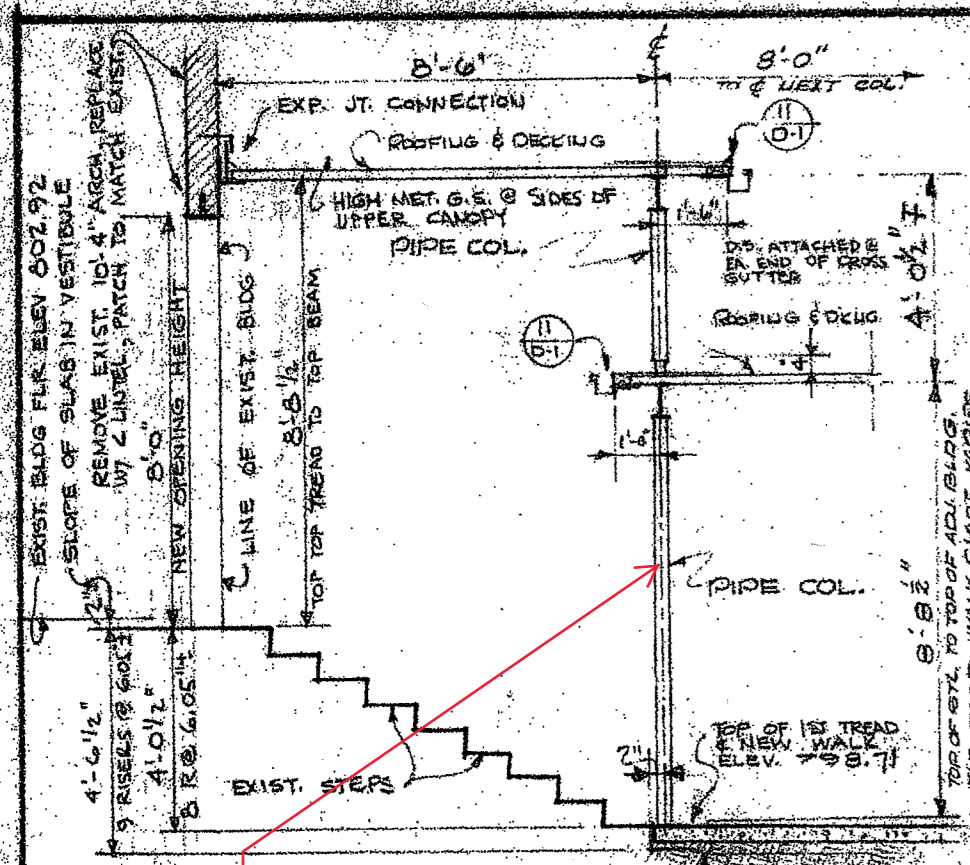
AECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

HUDSON - SHEPHERD ASSOCIATE ARCHITECTS

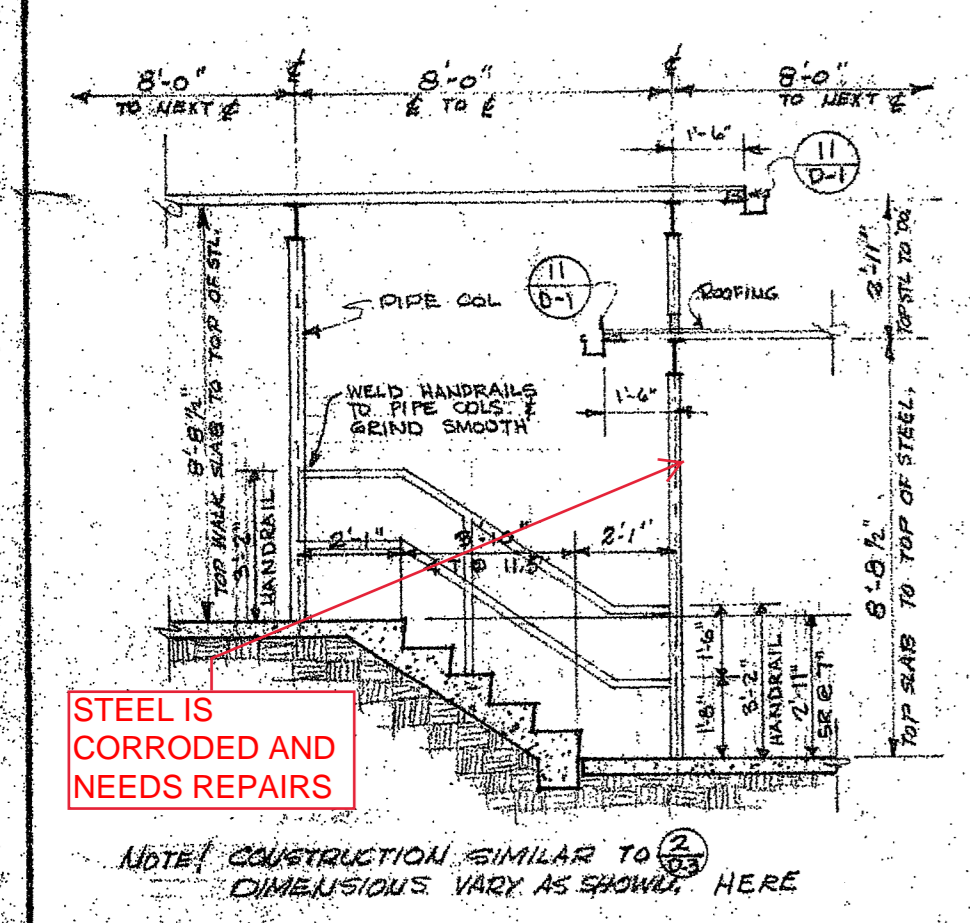
REGISTERED PROFESSIONAL ARCHITECT
GEORGIA ARCHITECTS BOARD
NO. 375
RICHARD A. HUDSON

DOOR NO. 105 ONLY
JOB NO. 105-E
WILLIS GIBBS
16 JAN 98
DATE

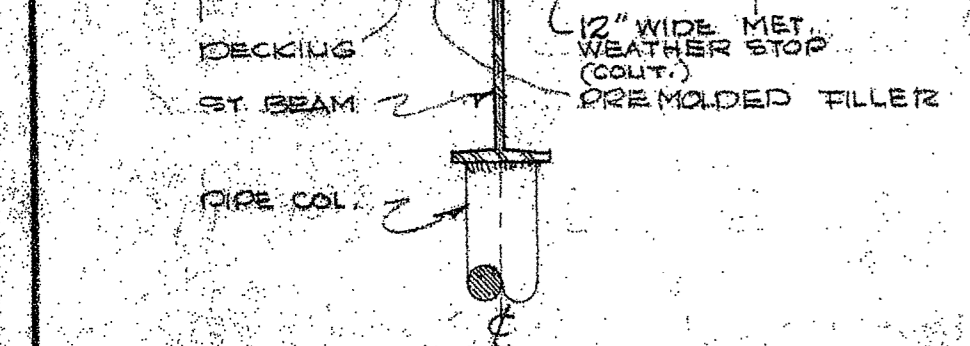
DATE 16 JAN 98



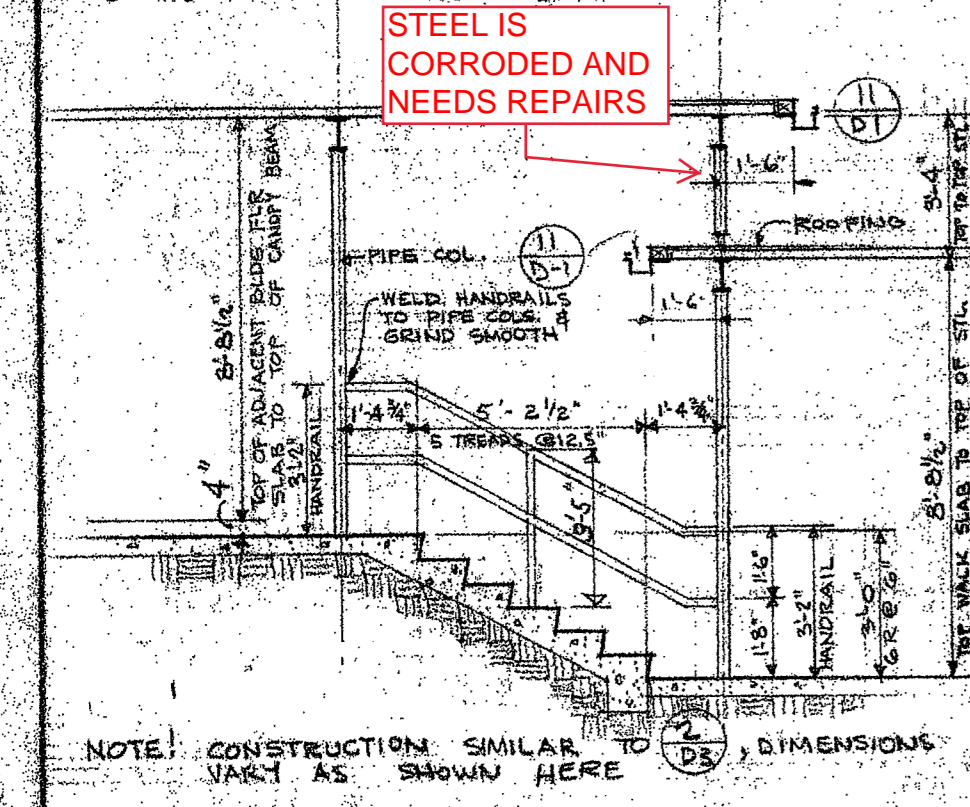
SECTION D-3 THROUGH STEPS @ COVERED WALK #1
SCALE 1/2" = 1'-0"



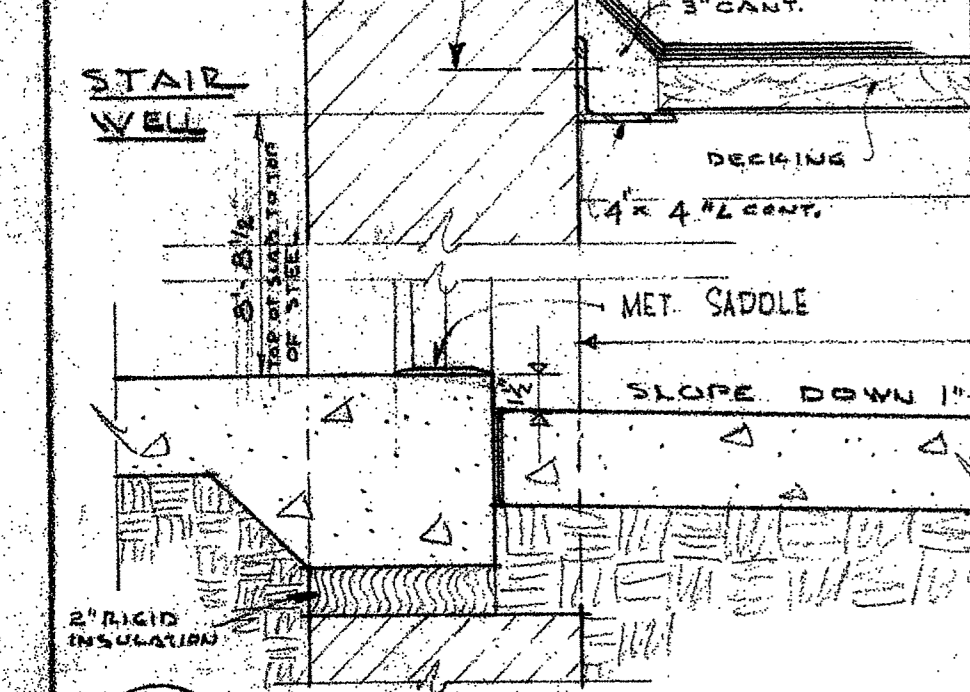
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SCALE 1/2" = 1'-0"



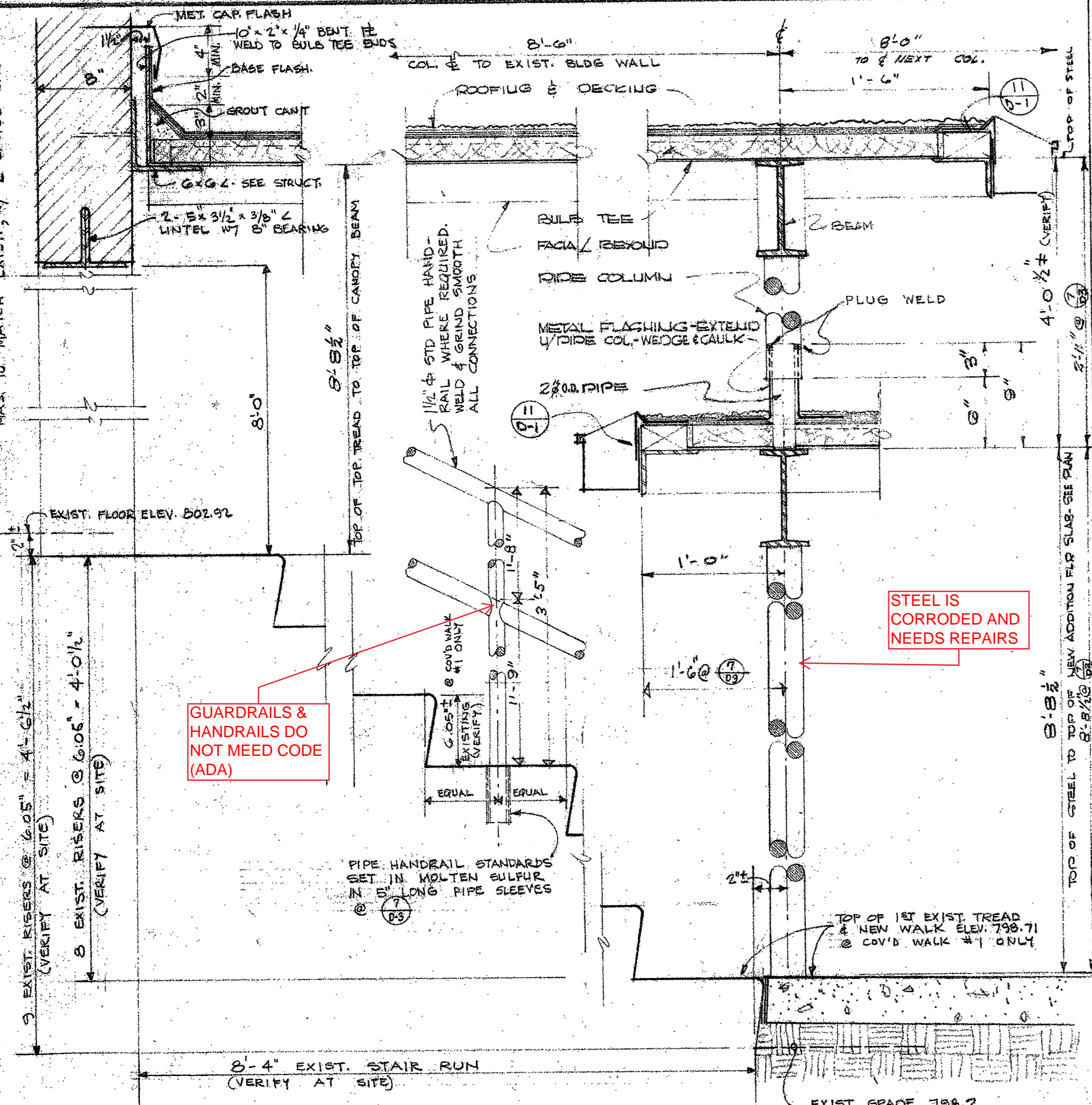
SECTION D-3 THROUGH STEPS @ COVERED WALK #1
SCALE 1/2" = 1'-0"



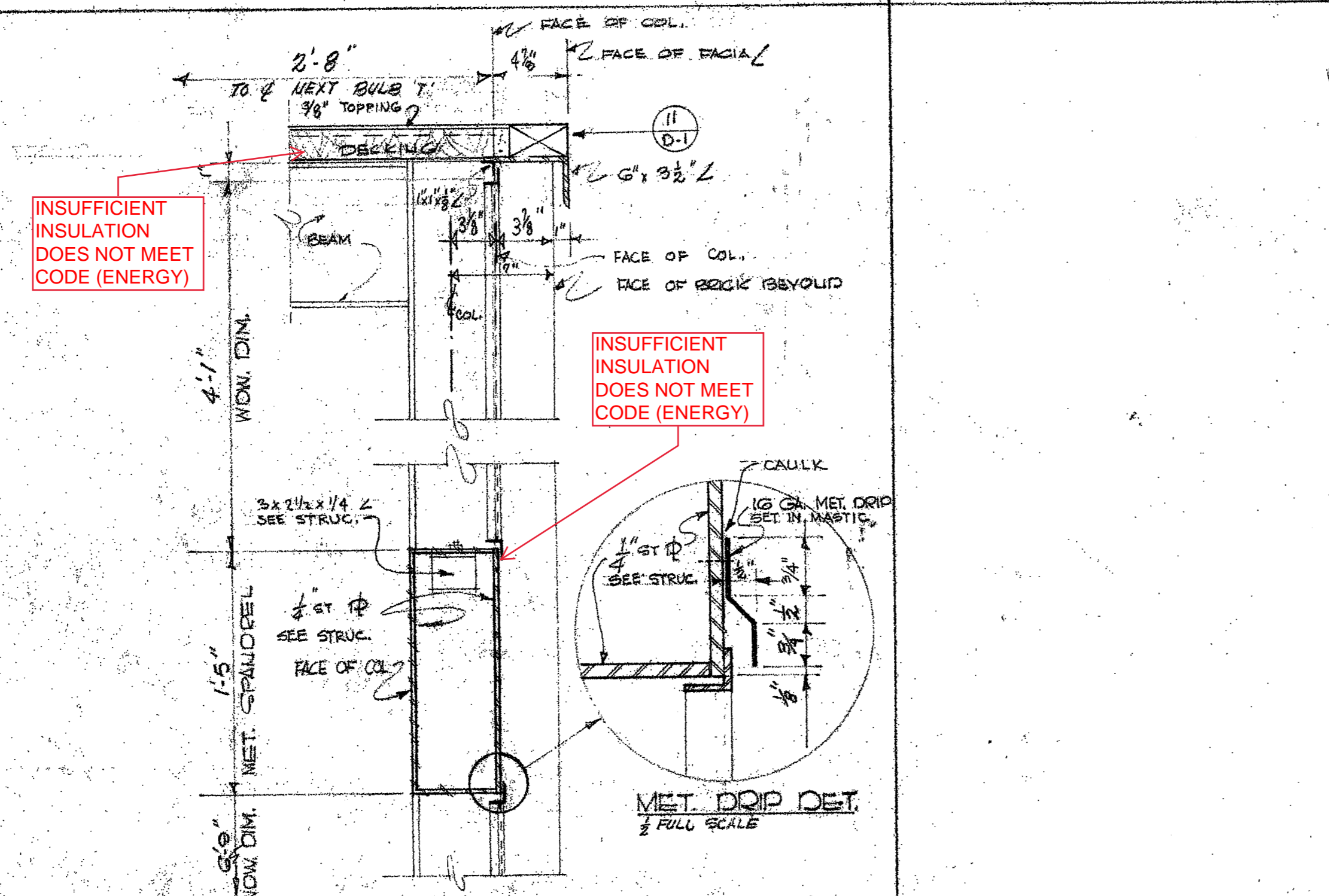
SECTION D-3 THROUGH STEPS IN BUS-LOADING WALK
SCALE 1/2" = 1'-0"



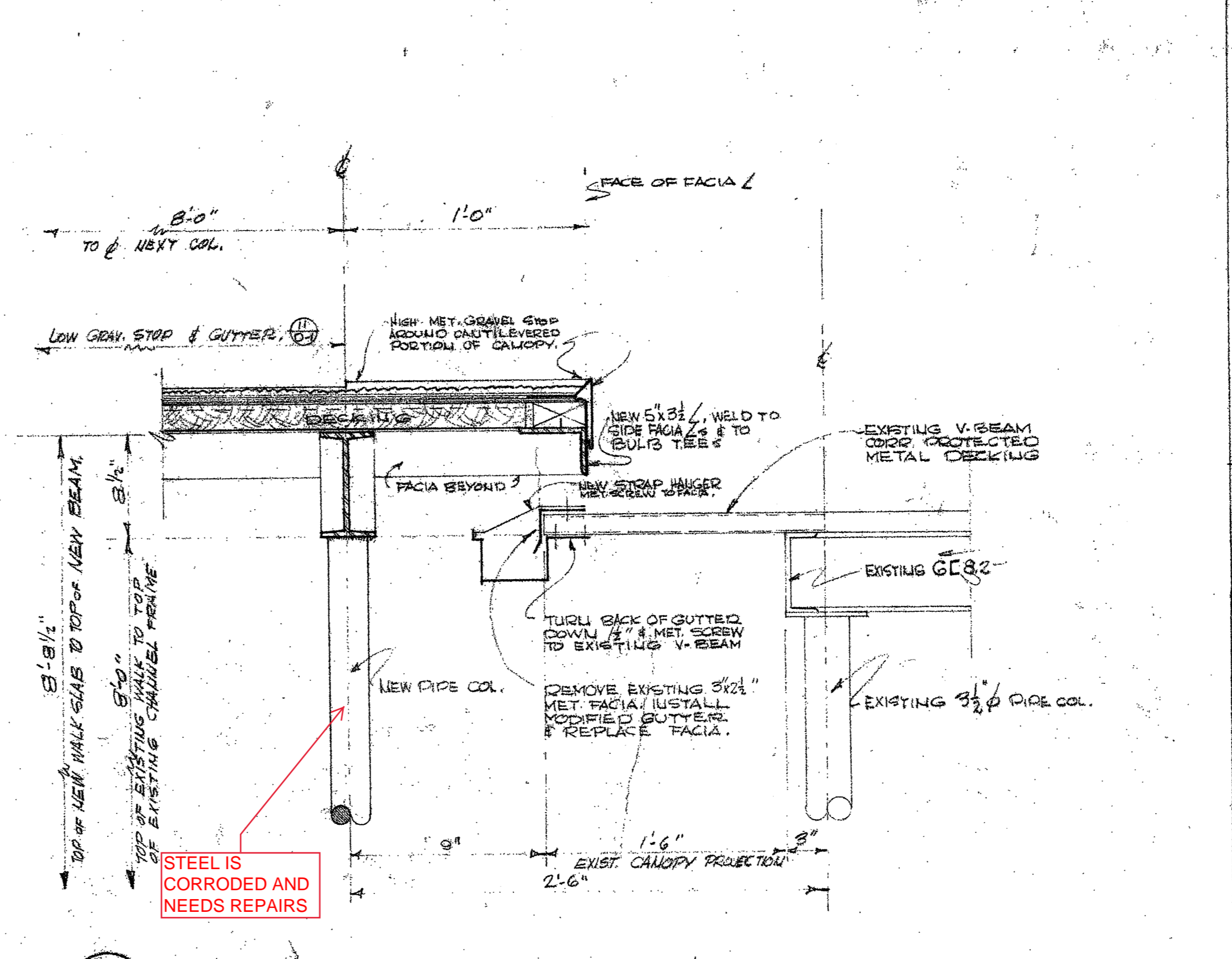
DETAIL SECTION D-3 THROUGH CANOPY @ DOORS NOS. 114 & 137
SCALE 1/2" = 1'-0"



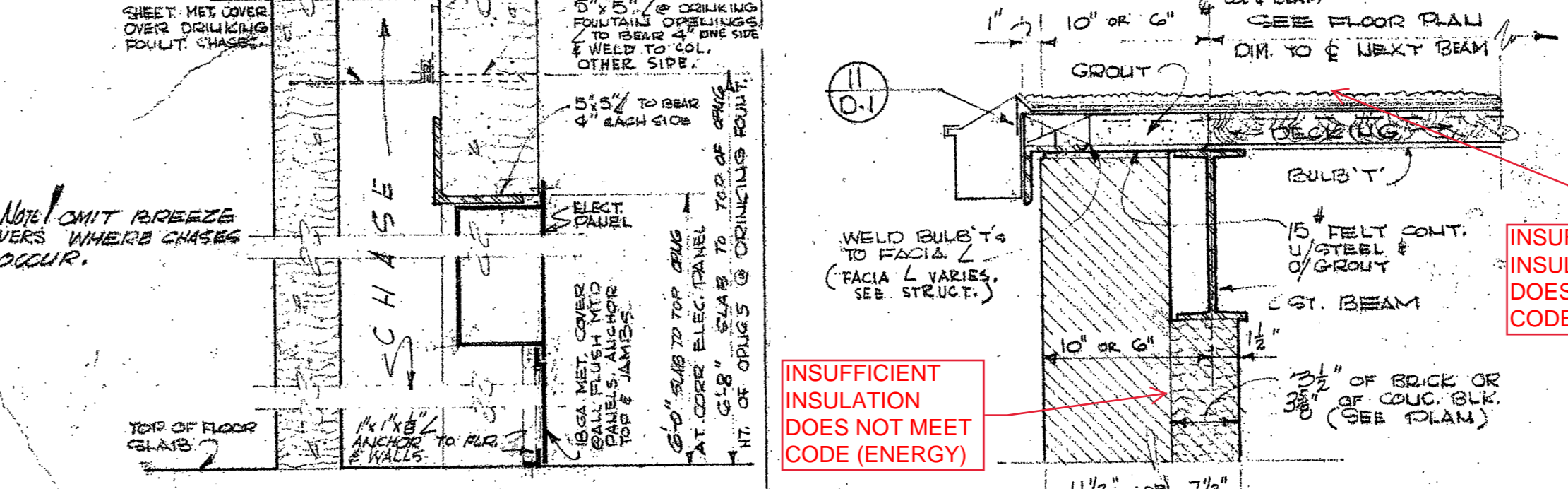
DETAIL SECTION D-3 THROUGH STEPS @ COVERED WALK #1
SCALE 1/2" = 1'-0"



SECTION D-3 THROUGH NORTH STAIR WALL EAVE & MET. SPANDEL
SCALE 1/4" = 1'-0"



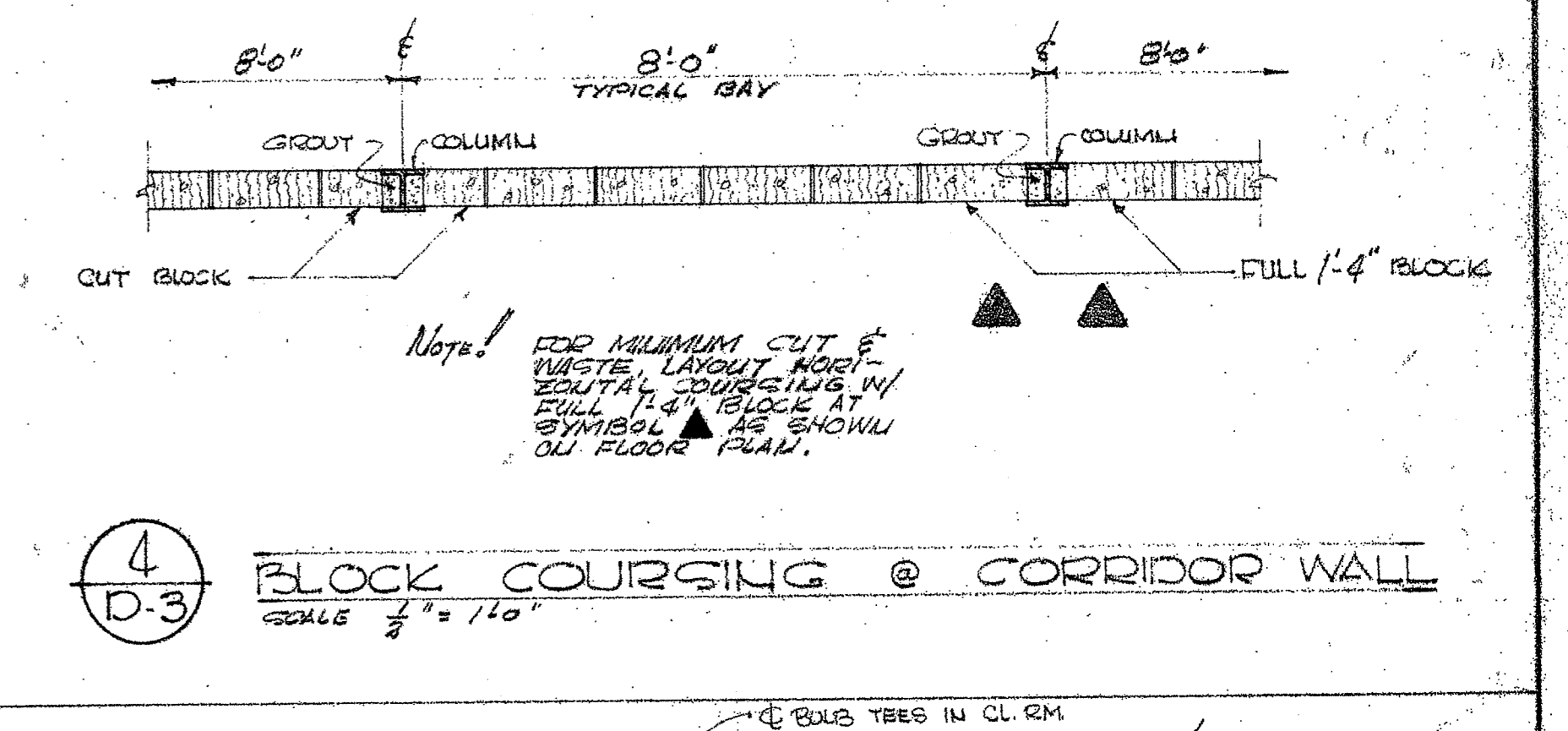
DETAIL SECTION D-3 - COVE WALL #2 CONNECTION TO EXIST. WALK
SCALE 1/2" = 1'-0"



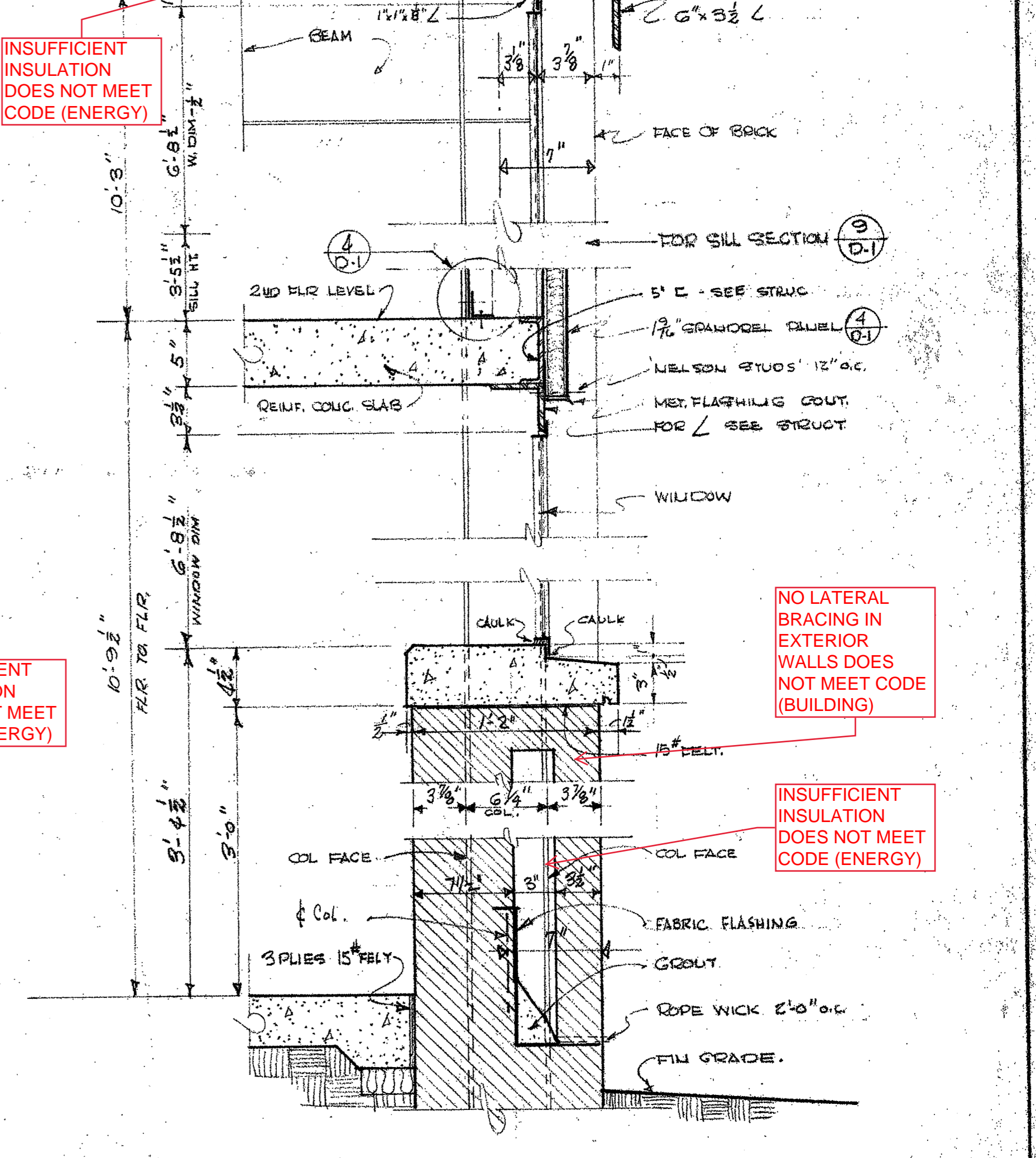
DETAIL D-3 - CORRIDOR WALL CHASE
SCALE 1/2" = 1'-0"



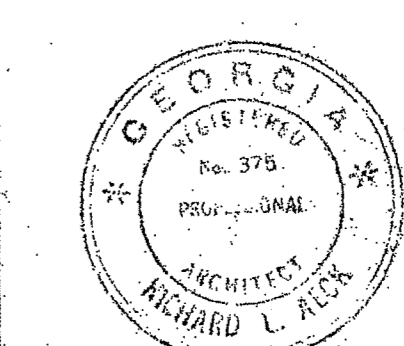
TYP. EAVE D-3 @ END WALL
SCALE 1/2" = 1'-0"



BLOCK COURSING @ CORRIDOR WALL
SCALE 1/2" = 1'-0"



SECTION D-3 THROUGH SOUTH STAIR WALL
SCALE 1/2" = 1'-0"



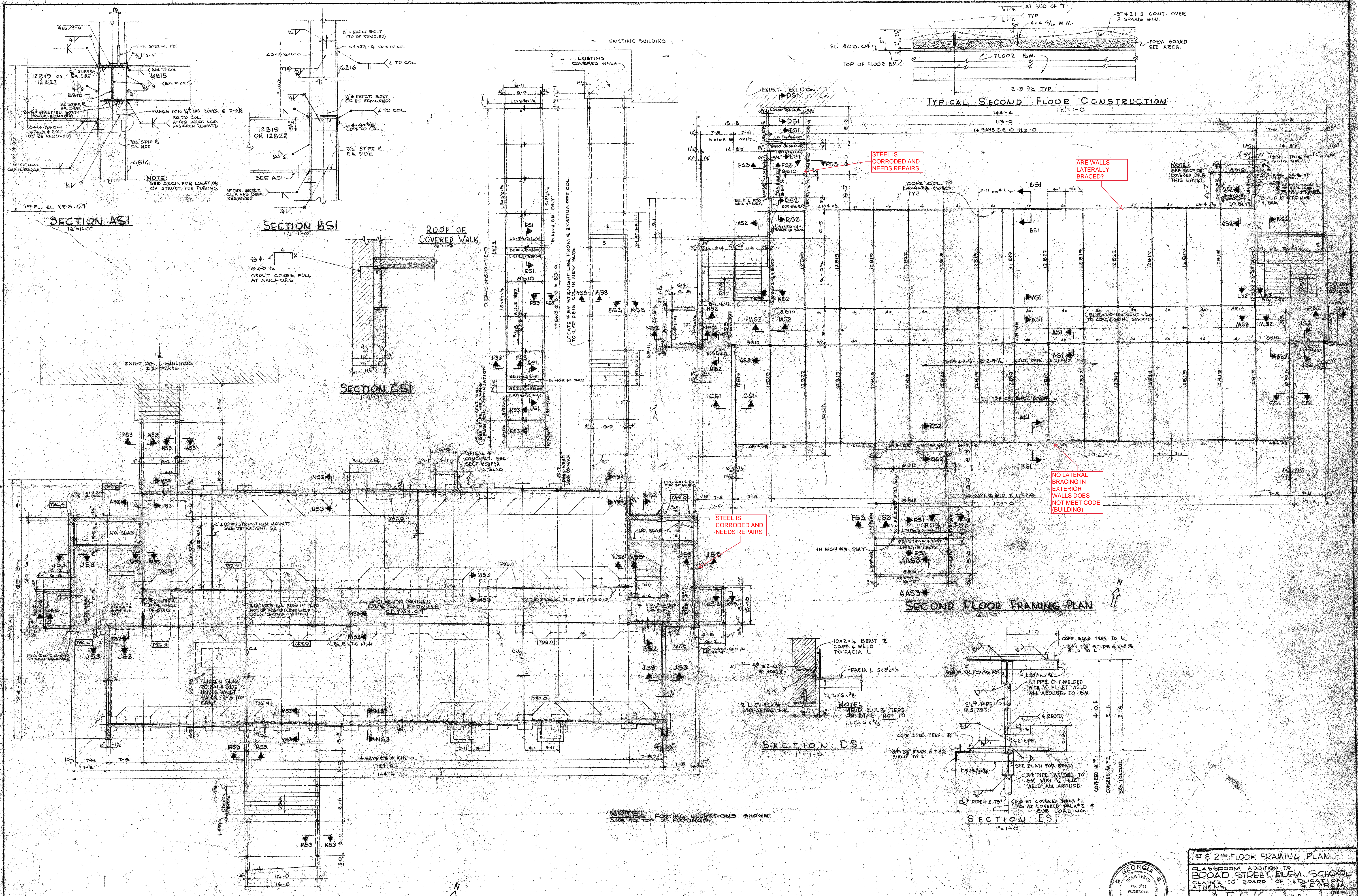
DETAILS & SECTIONS
CLASSROOM ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK COUNTY BOARD OF EDUCATION
ATHENS, GEORGIA

A.E.C.K. ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

WELLS ARCHITECTS
15 3rd FLOOR
DATE: 11/25/89

JOB NO. 705-E
SHEET NO. D-3

HUDSON-SHEPHER ASSOCIATE ARCHITECTS NOV 25 1989



1st & 2nd FLOOR FRAMING PLAN
 CLASSROOM ADDITION TO
 BROAD STREET ELEM. SCHOOL
 CLARKE CO BOARD OF EDUCATION
 ATLANTA, GA

AECK ASSOCIATES ARCHITECTS ATLANTA
 ONE FORTY PEACHTREE

MORRIS, BOEHMIG & TINDEL
 INCORPORATED
 STRUCTURAL AND CONSULTING ENGINEERS

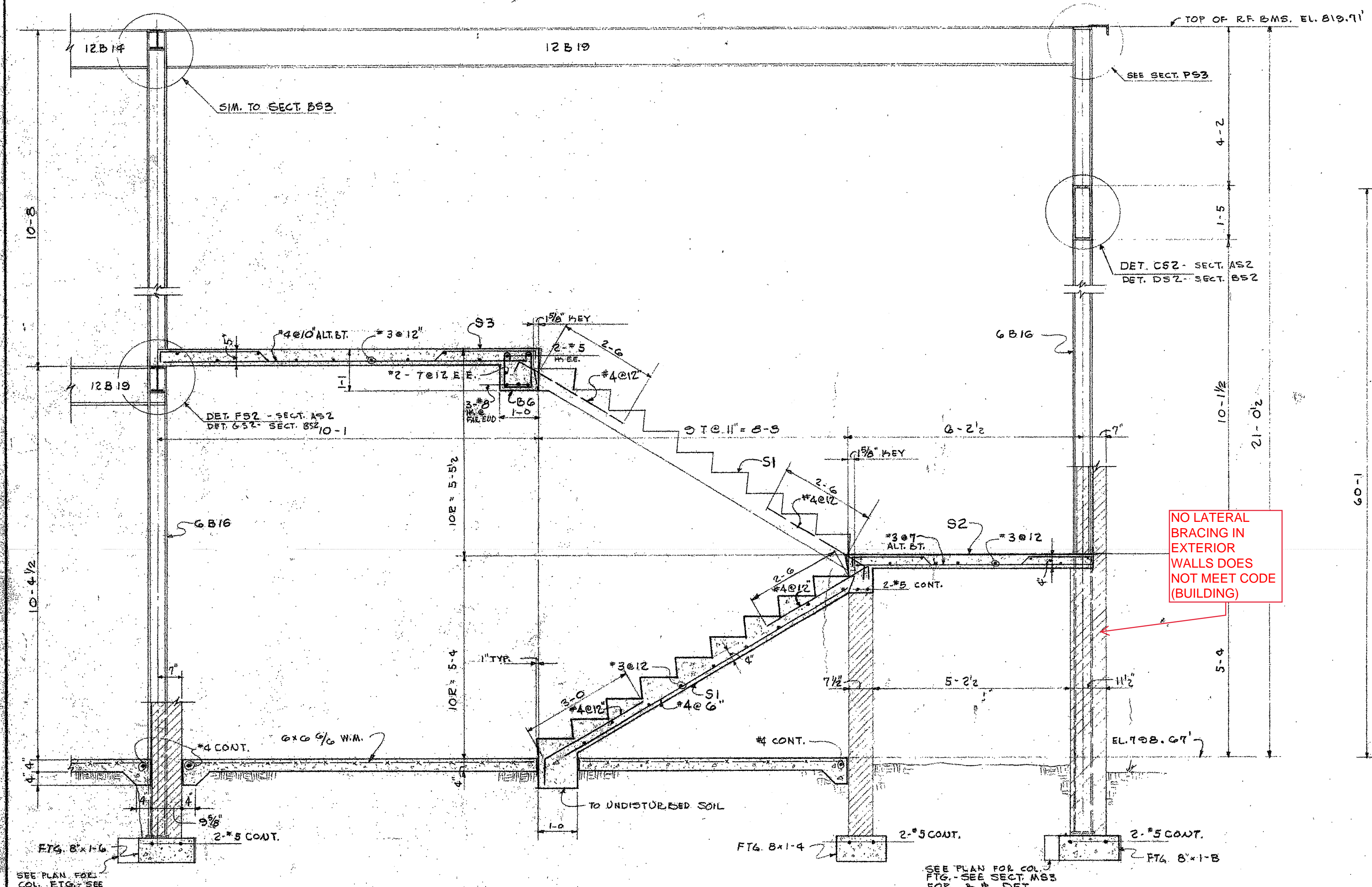
W.D.J. 105-F
 R.L.K. 105-F
 SHEET NO. 51

HUDSON-SHEPHERD ASSOCIATE ARCHITECTS
 NOV 25 1958

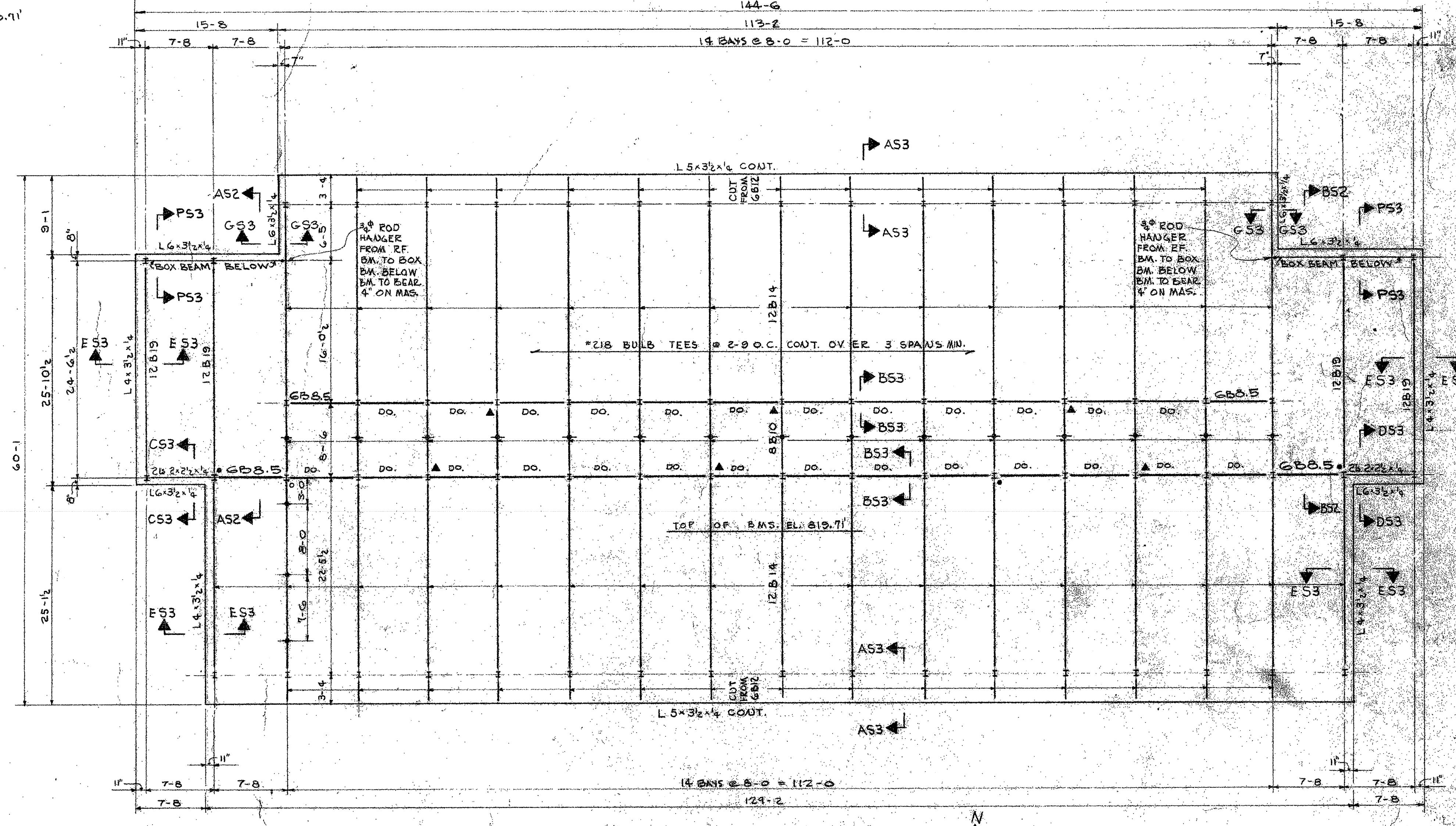
NOTE:

- MITRE WELD & GRIND SMOOTH FACIA @ CORNERS
- WHERE SPLICES ARE REQ'D IN FACIA & SPLICE AT SUPPORT, WELD & GRIND SMOOTH.
- SEE SHT. 55 FOR TYP. FRAMING AT OPAS IN ROOF.
- SEE ARCH. DWGS. FOR LOCATION OF ROOF OPAS.
- SEE ARCH. DWGS. FOR LOCATION OF BULB TEES.

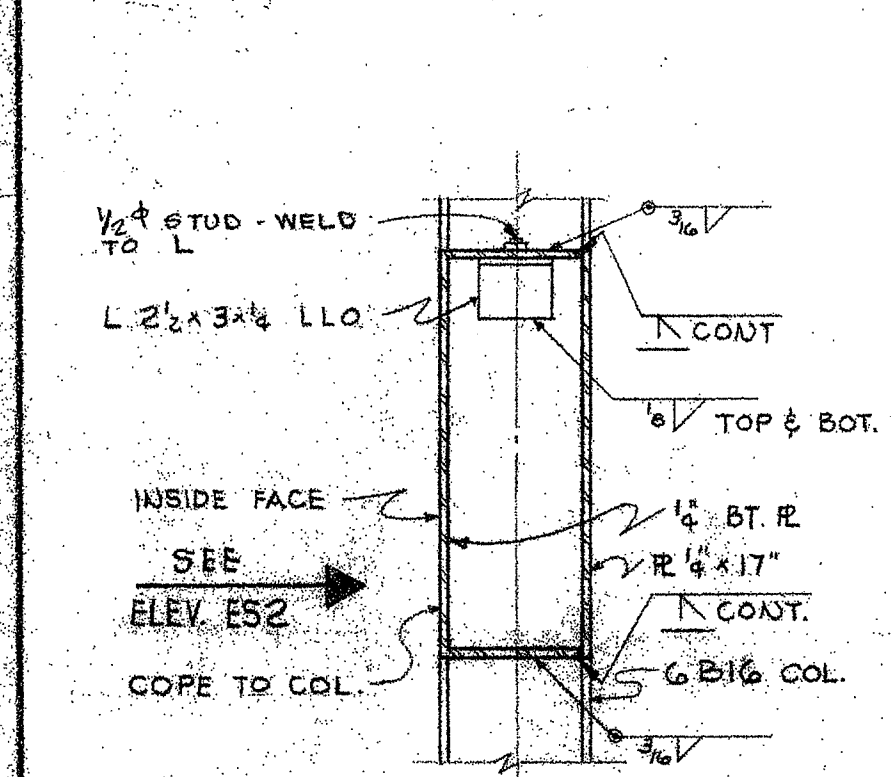
WHERE HOLES ARE EXPOSED BY THE REMOVAL OF ERECTION BOLTS, FILL WITH WELD & GRIND SMOOTH. SEE ARCH. DWGS. FOR LOCATION OF STRUCT. TEE PURLINS & PARTITION ANCHORS TO BE FASTENED TO STRUCT. STL.



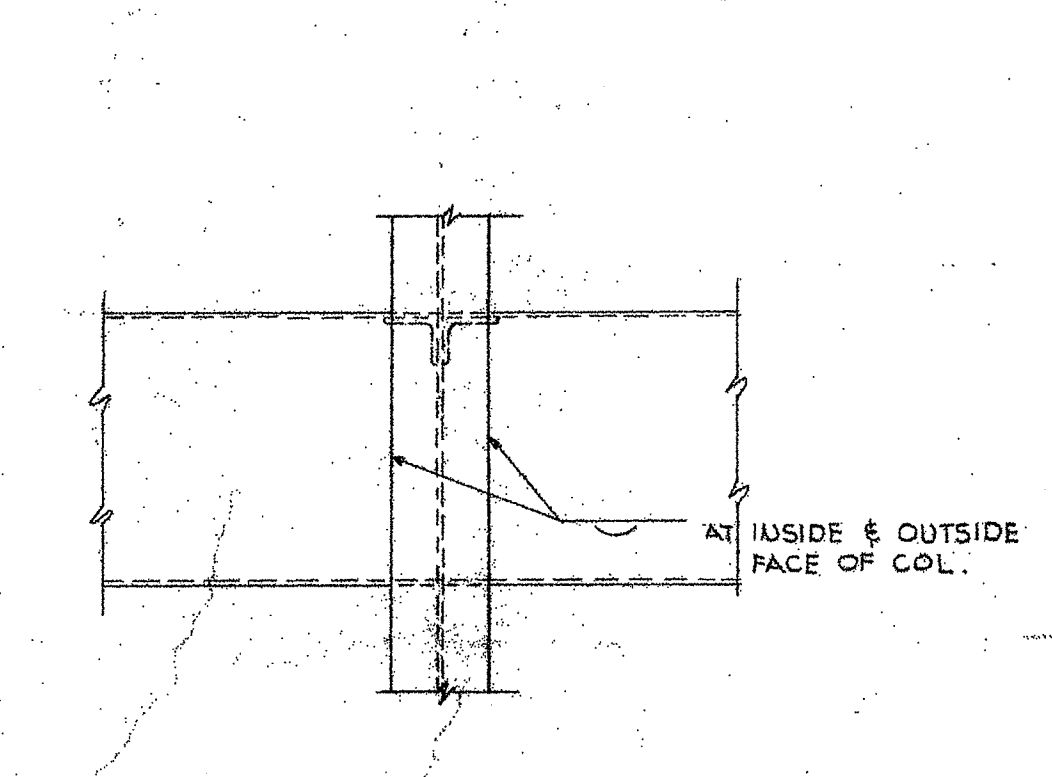
SECTION AS2
SECTION BS2 OPP HAND
1/2" = 1'-0"



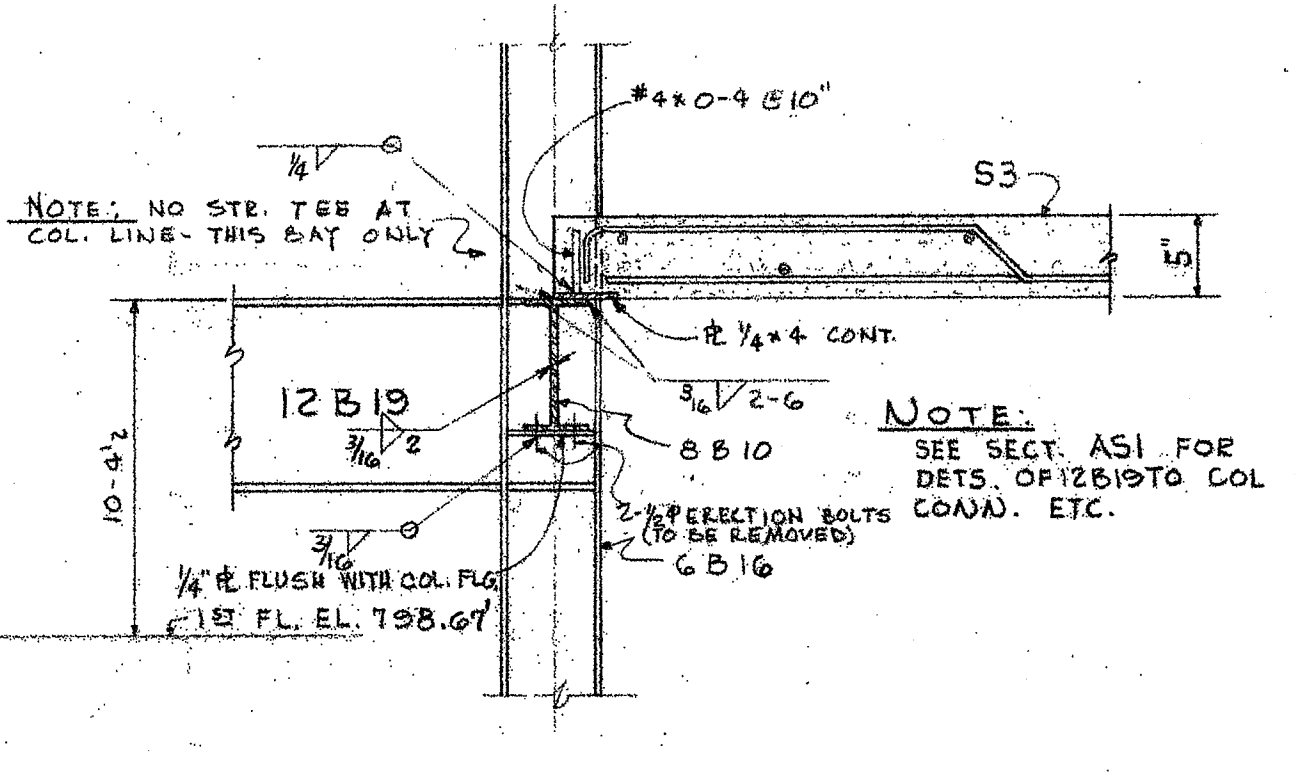
ROOF FRAMING PLAN
1/8" = 1'-0"



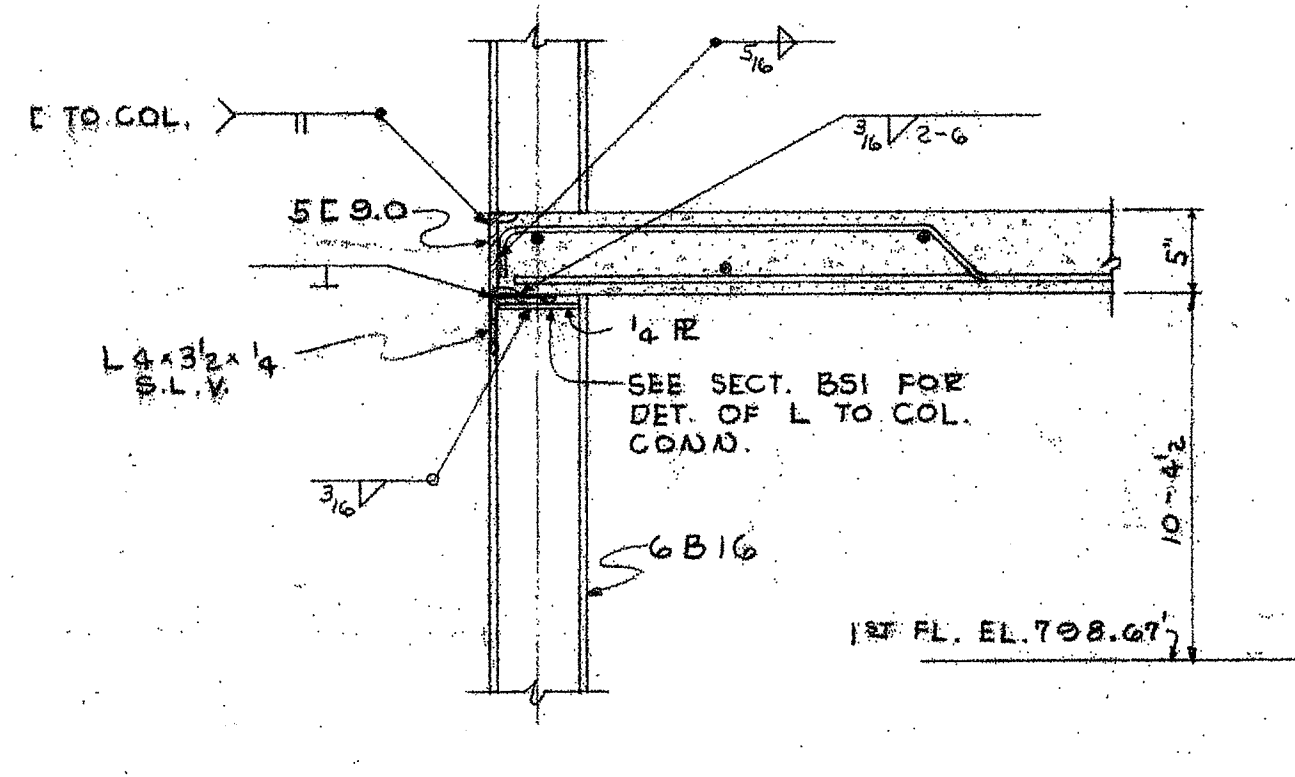
DETAIL CS2
DETAIL DS2 OPP HAND
1/2" = 1'-0"



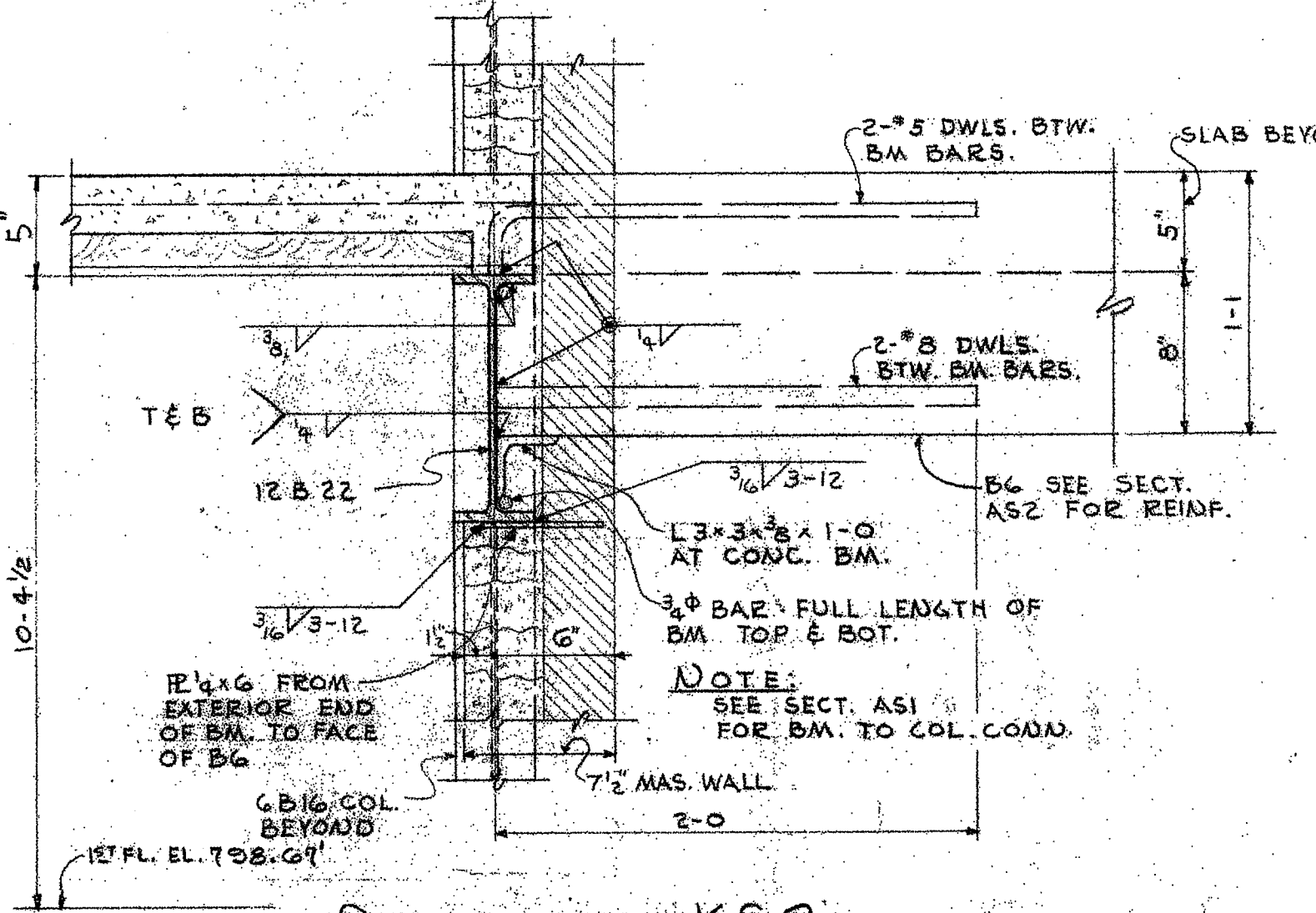
ELEVATION ES2
1" = 1'-0"



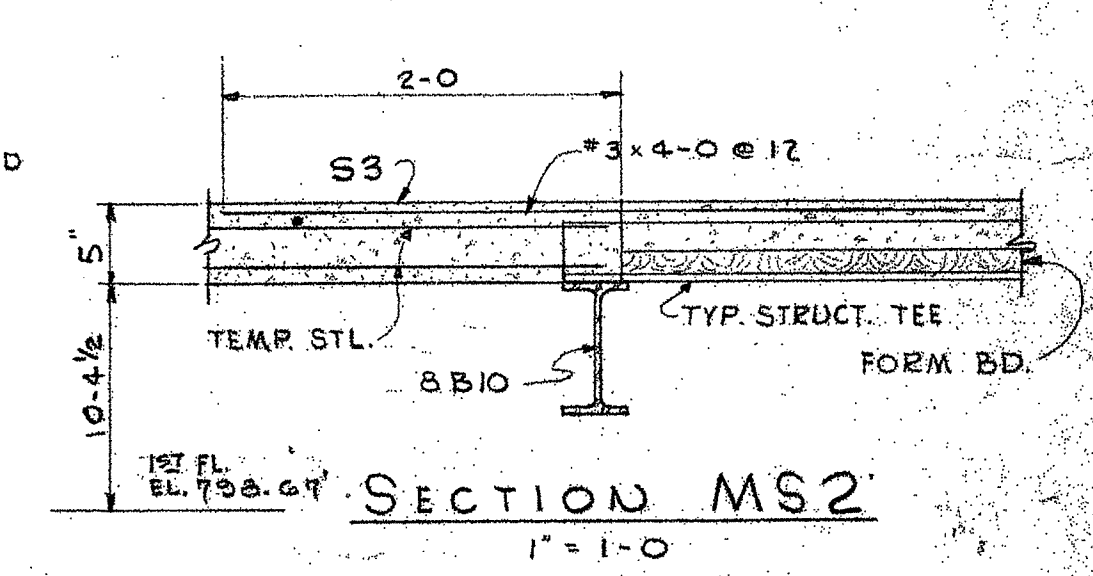
DETAIL FS2
DETAIL GS2 (OPP. HAND)
1" = 1'-0"



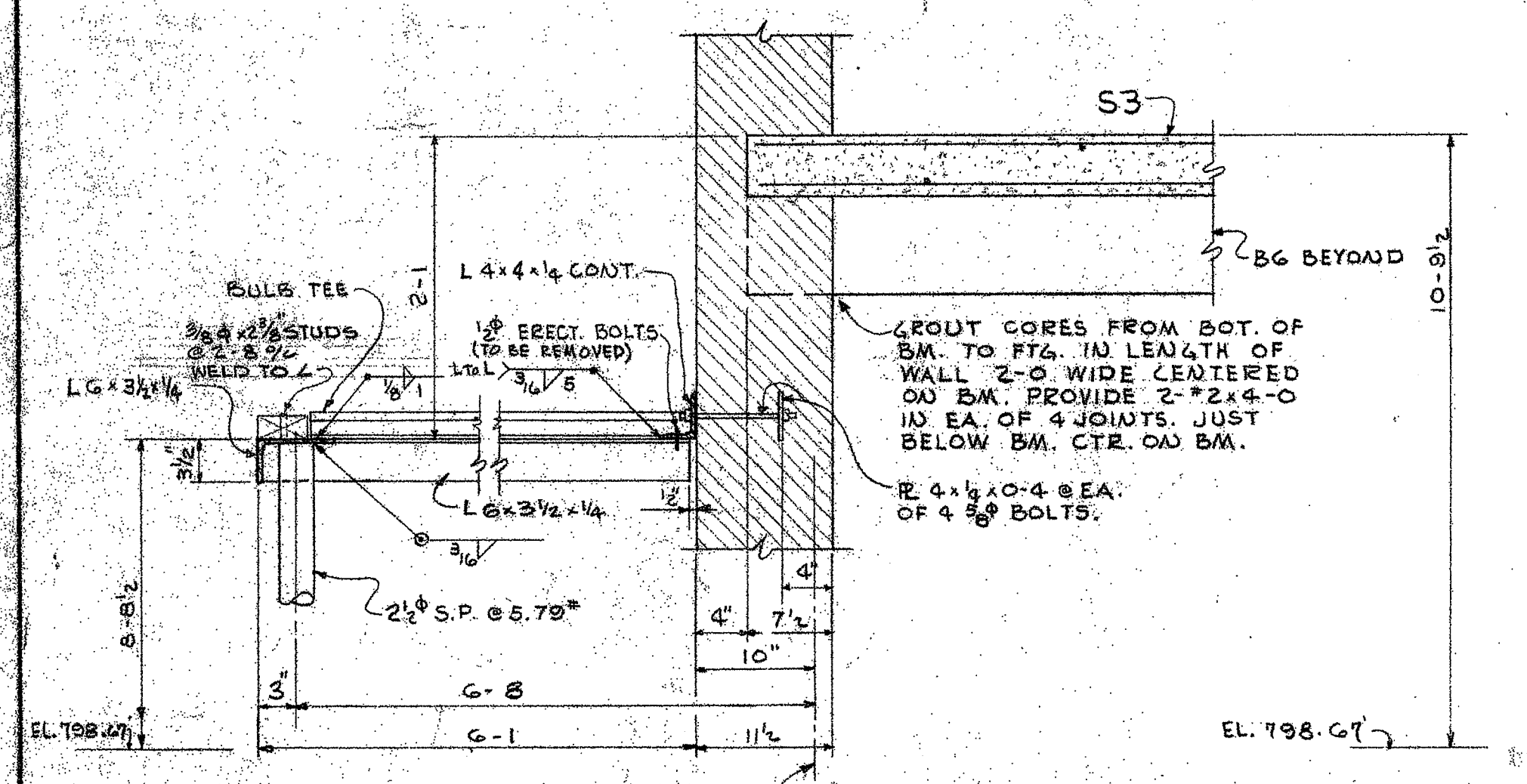
SECTION HS2
SECTION JS2 OPP. HAND
1" = 1'-0"



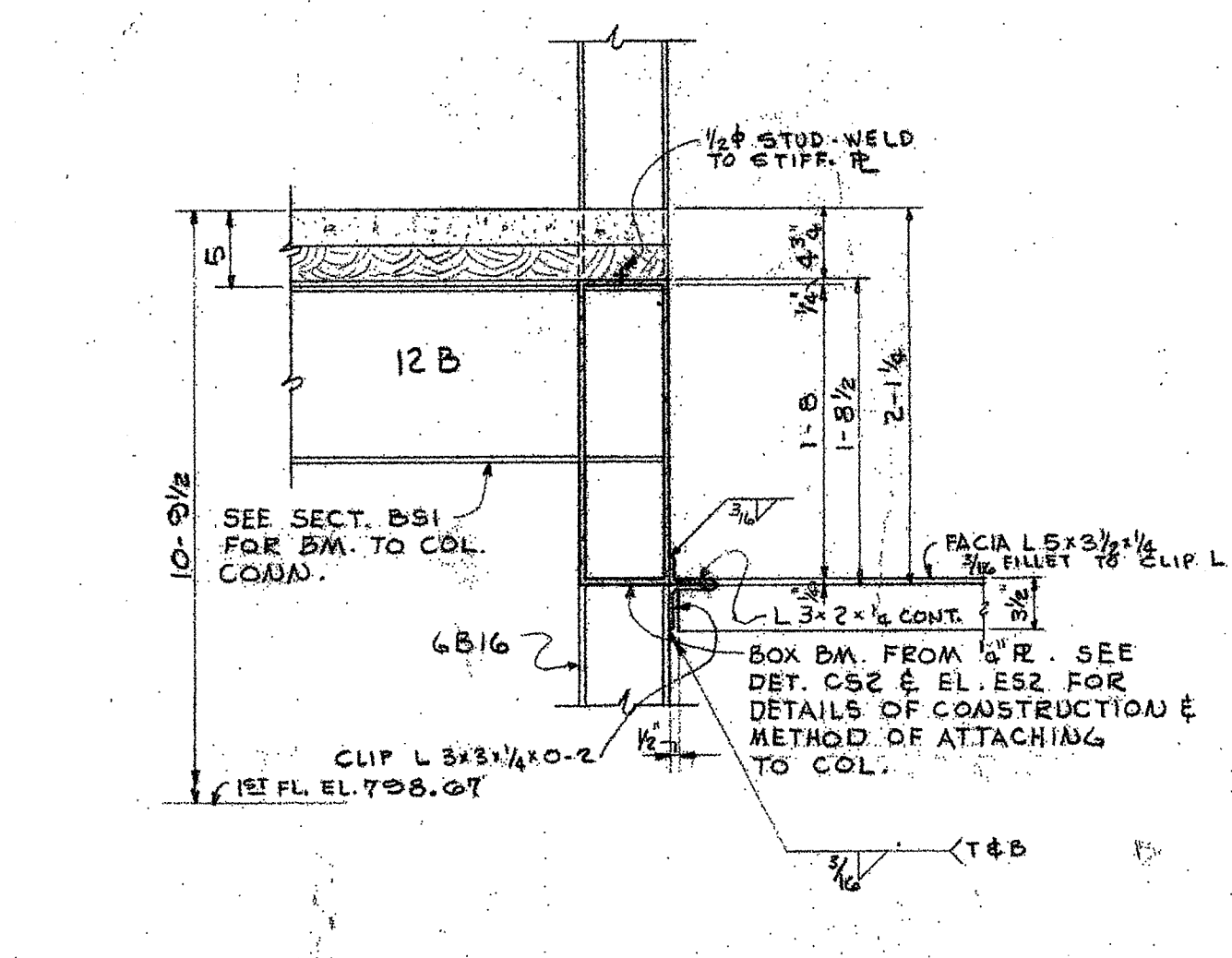
SECTION KS2
SECTION LS2 OPP. HAND
1 1/2" = 1'-0"



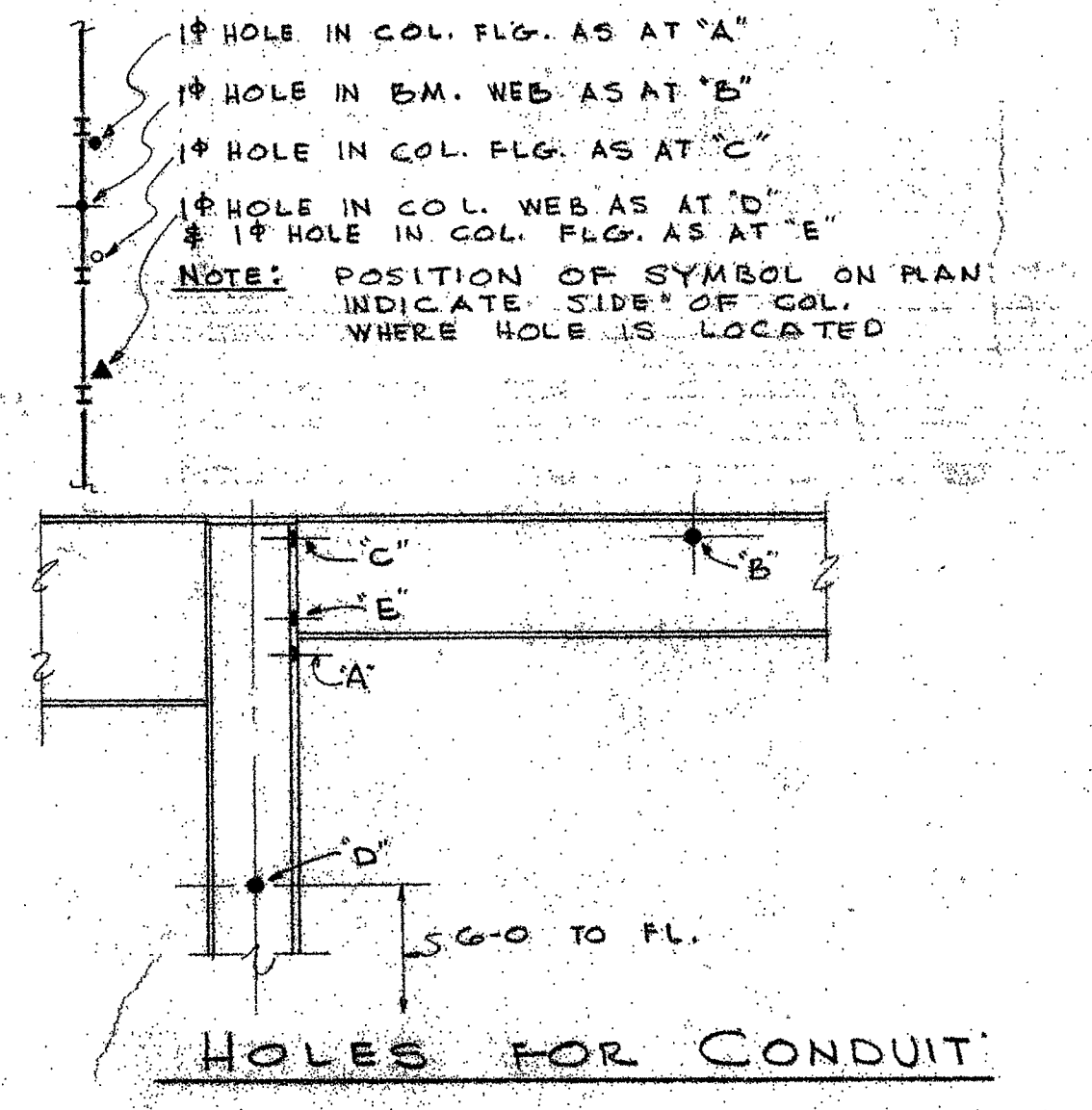
SECTION MS2
1" = 1'-0"



SECTION NS2
SECTION PS2 OPP. HAND
1" = 1'-0"



SECTION QS2
SECTION RS2 OPP. HAND
1" = 1'-0"



HOLES FOR CONDUIT

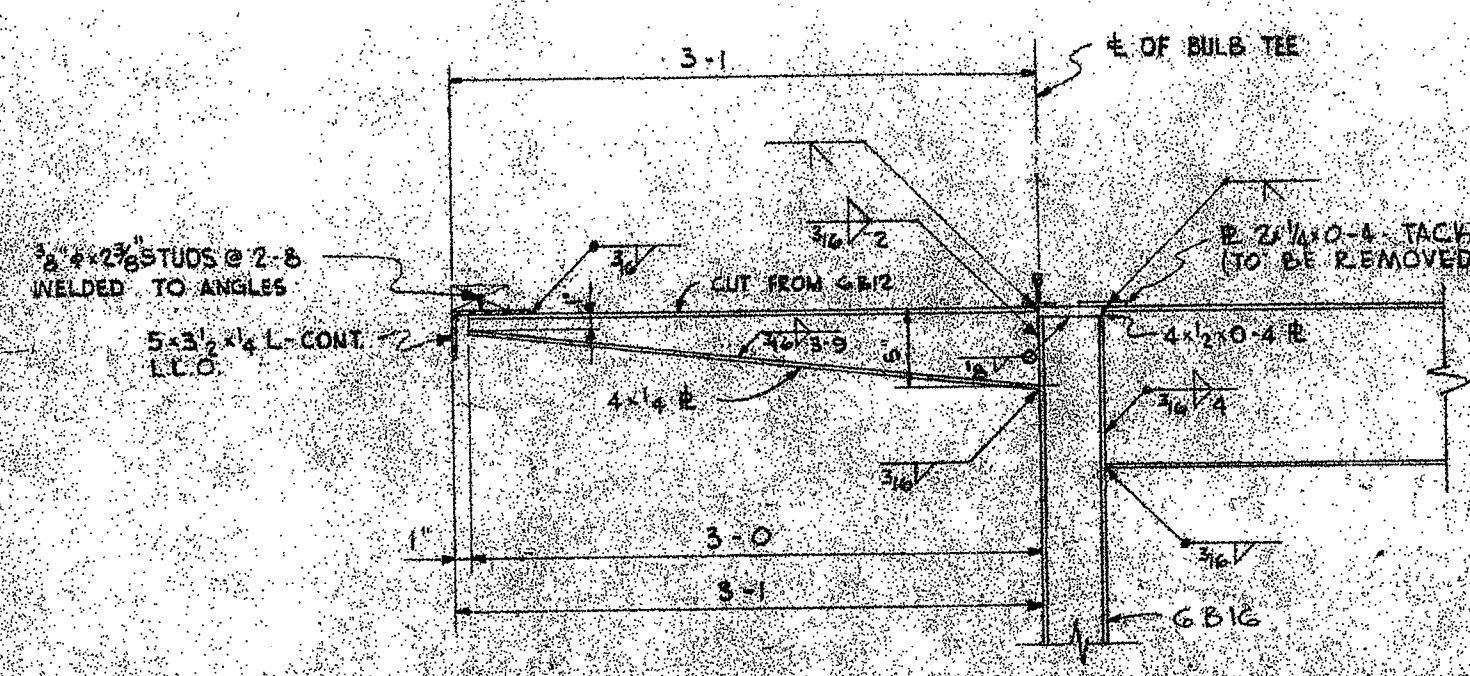


ROOF FRAMING PLAN
CLASSROOM ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK COUNTY BOARD OF EDUCATION
ATHENS, GEORGIA

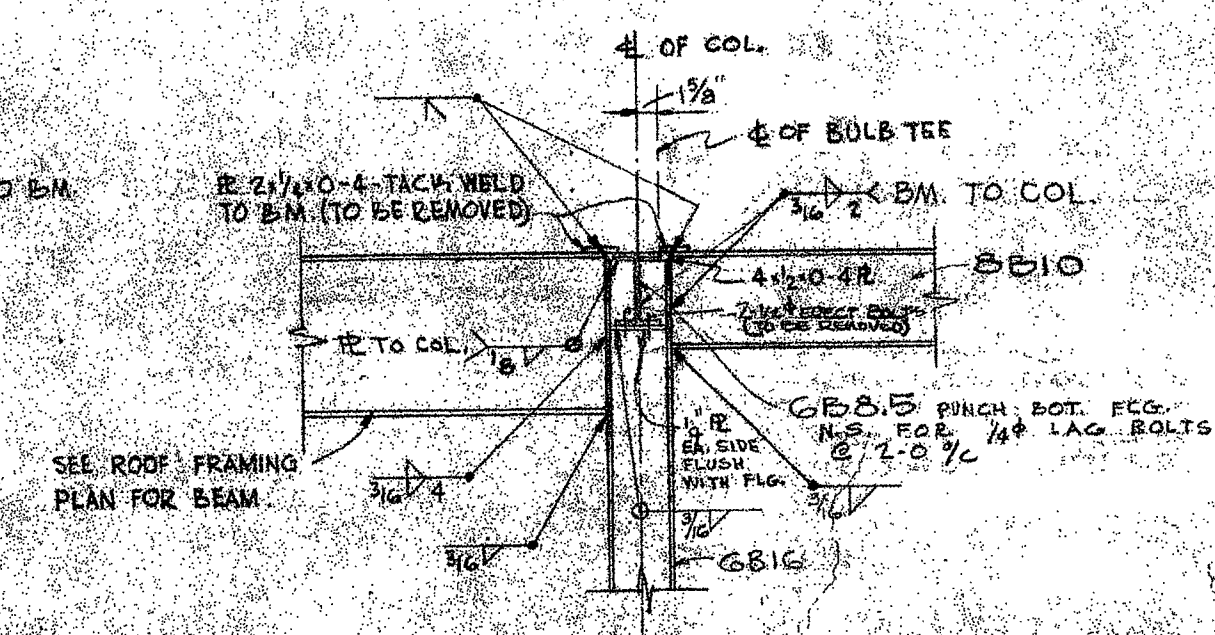
A ECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

MORRIS, BOEHNING & TINDEL INCORPORATED
STRUCTURAL AND CONSULTING ENGINEERS

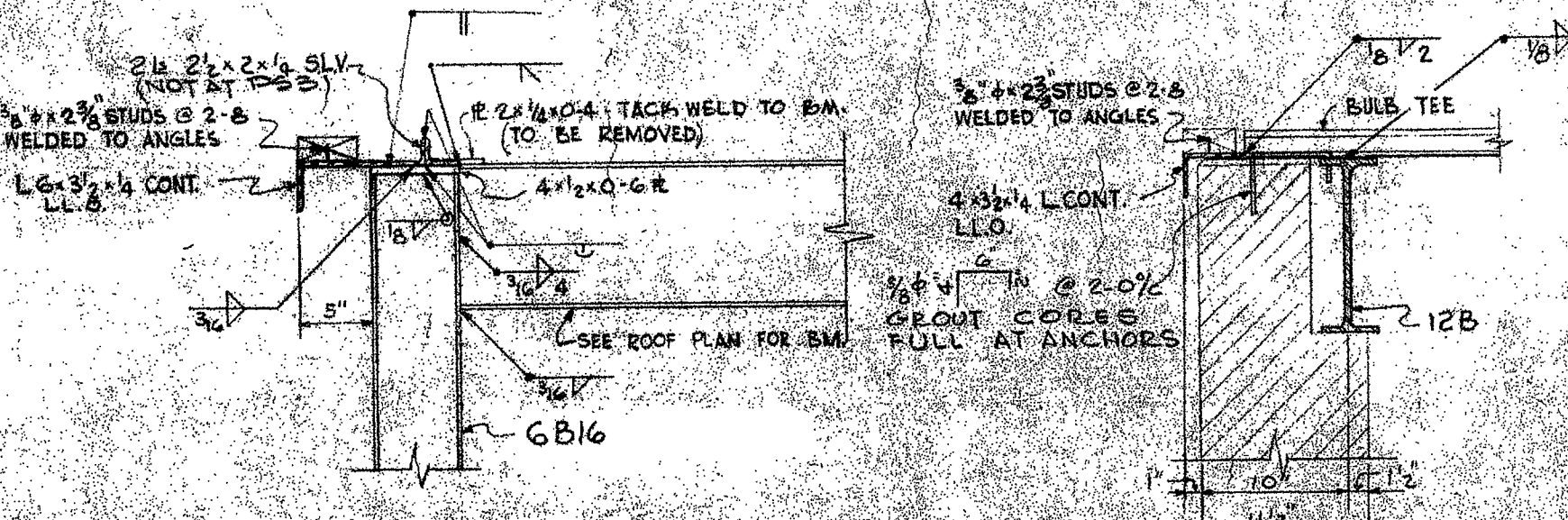
NOV 25 1958



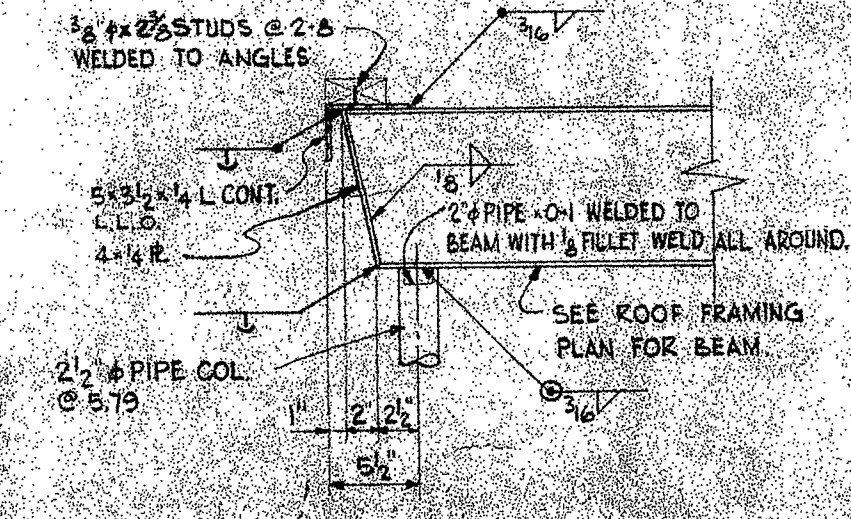
SECTION AS3
1"=1'-0"



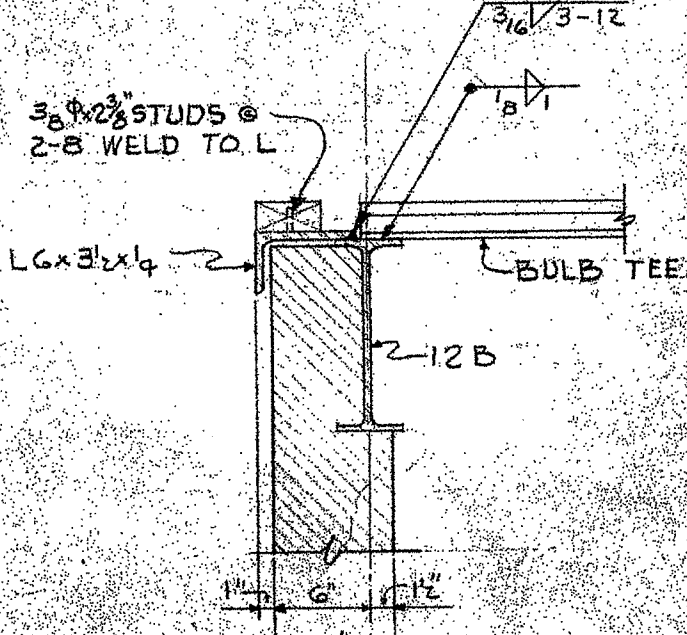
SECTION BS3
1"=1'-0"



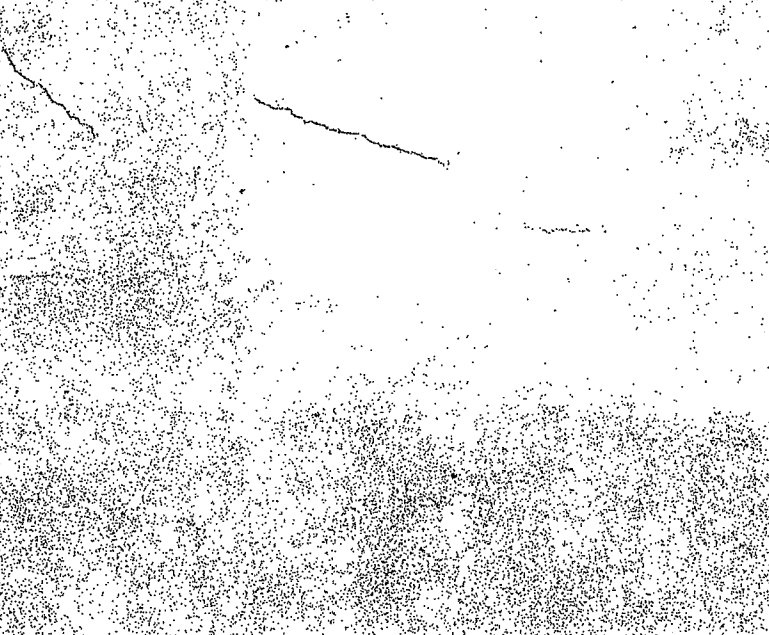
SECTION CS3
SECTION DS3 OPP. HAND
SECTION PS3 AS NOTED
1"=1'-0"



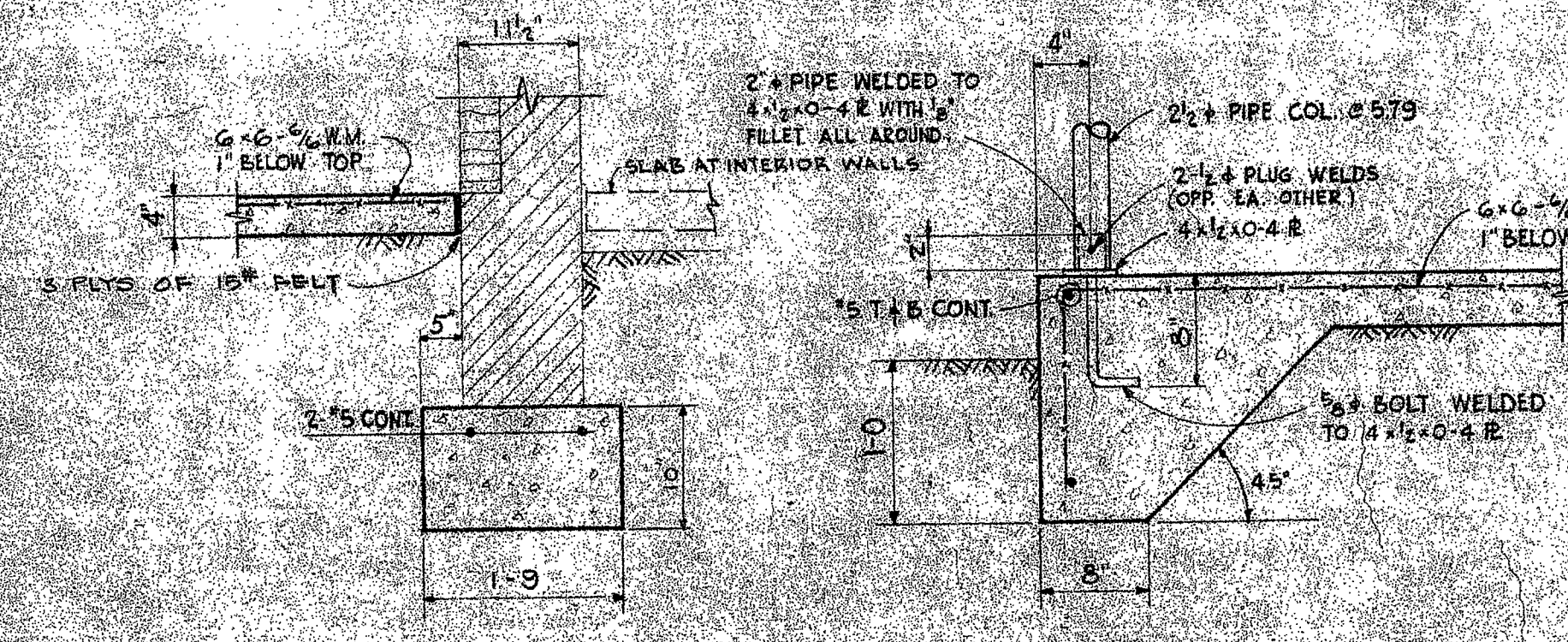
SECTION ES3
1"=1'-0"



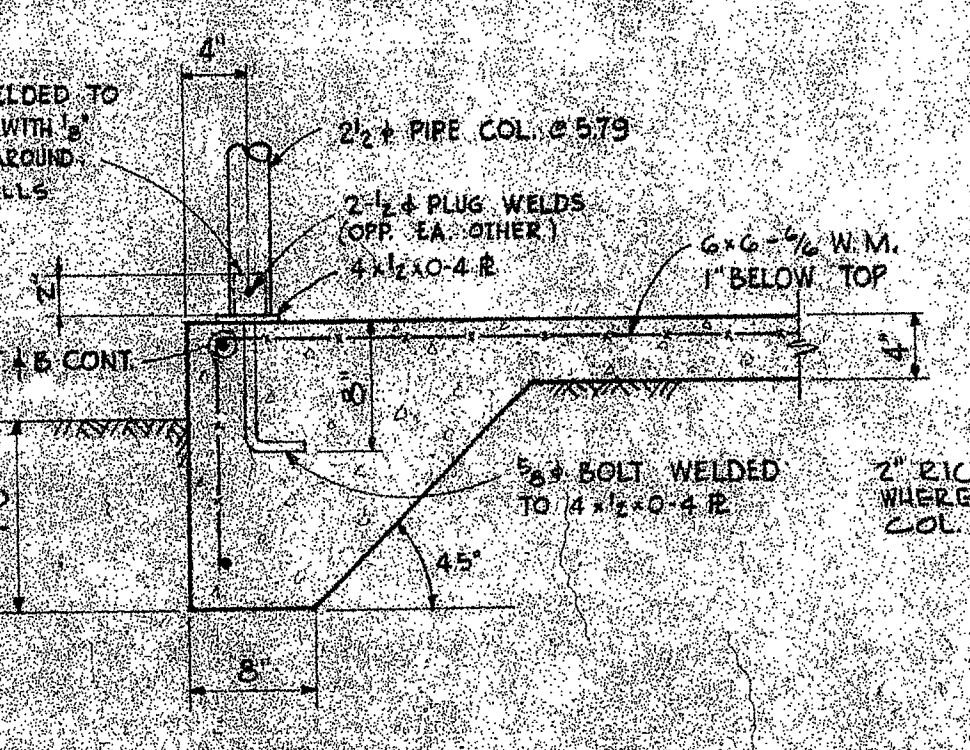
SECTION FS3
1"=1'-0"



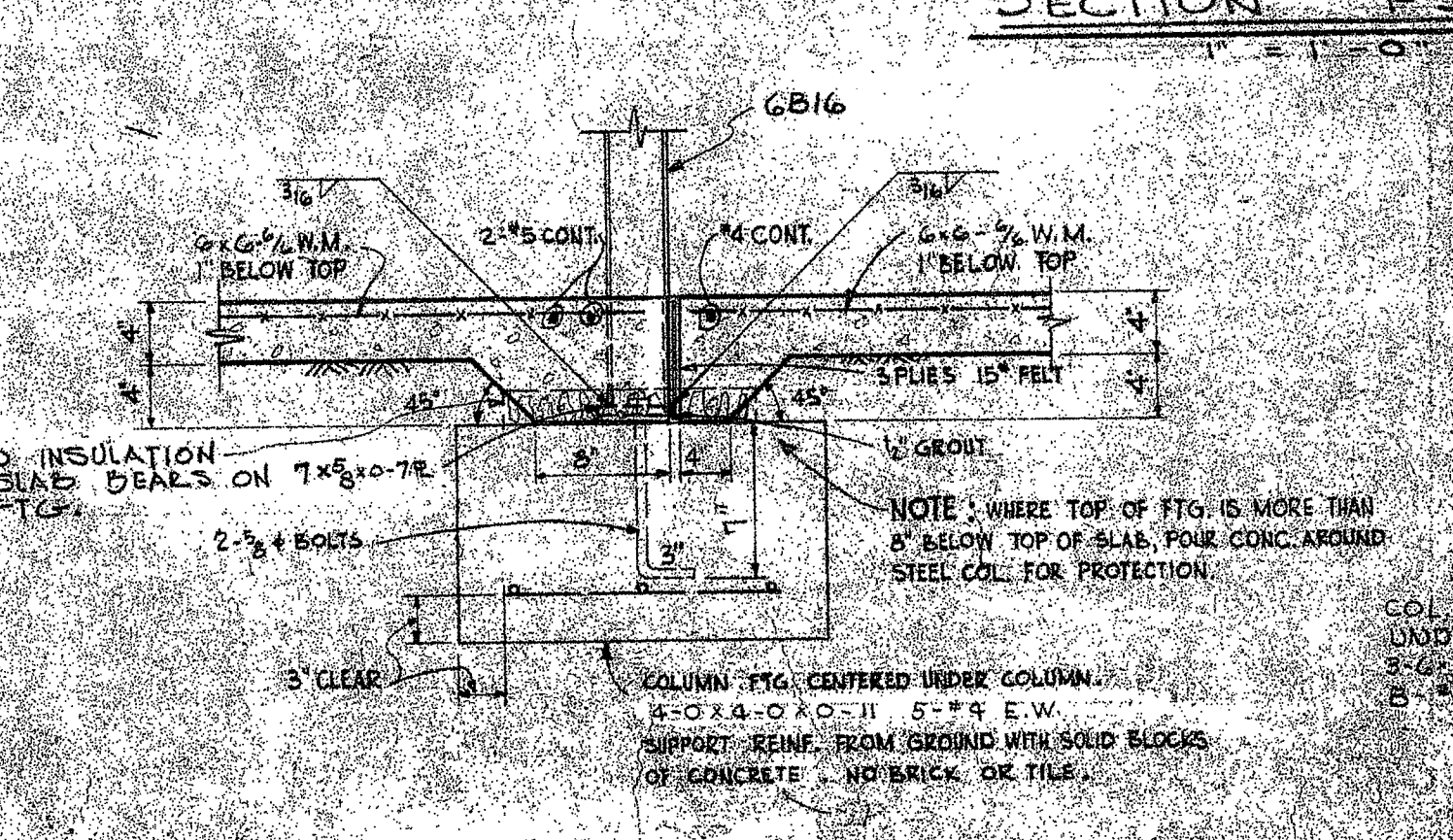
SECTION GS3
1"=1'-0"



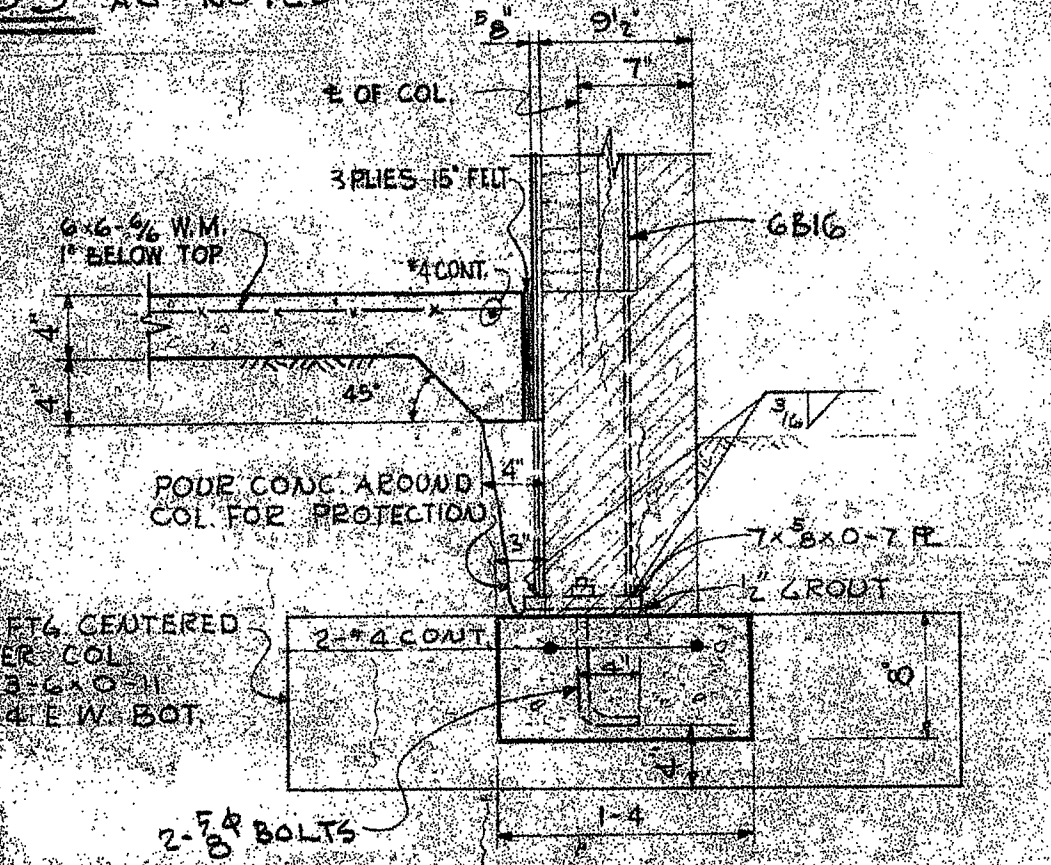
SECTION JS3
1"=1'-0"



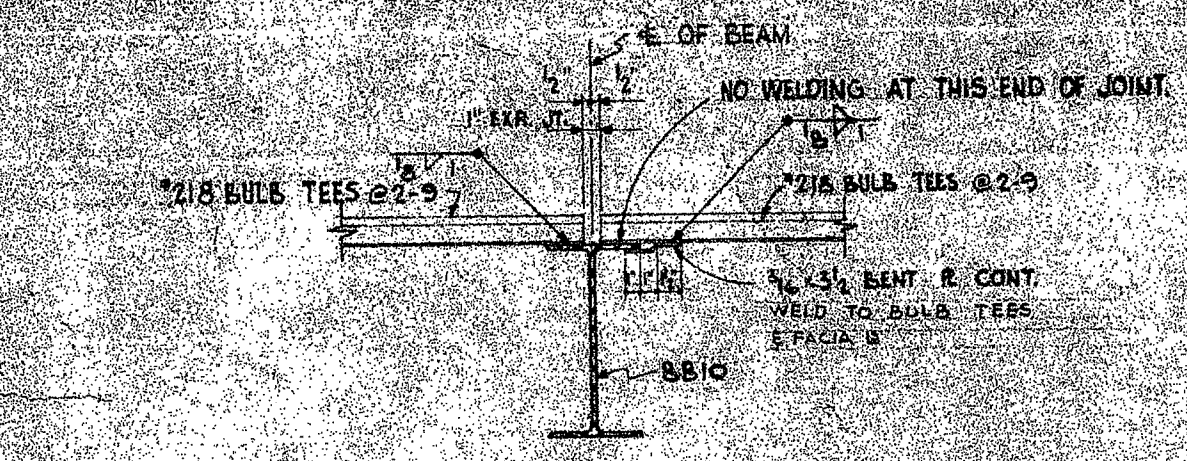
SECTION KS3
1"=1'-0"



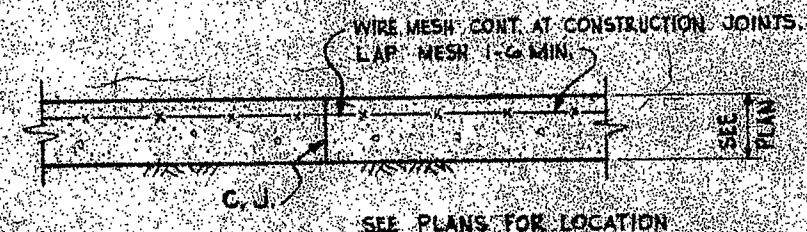
SECTION MS3
1"=1'-0"



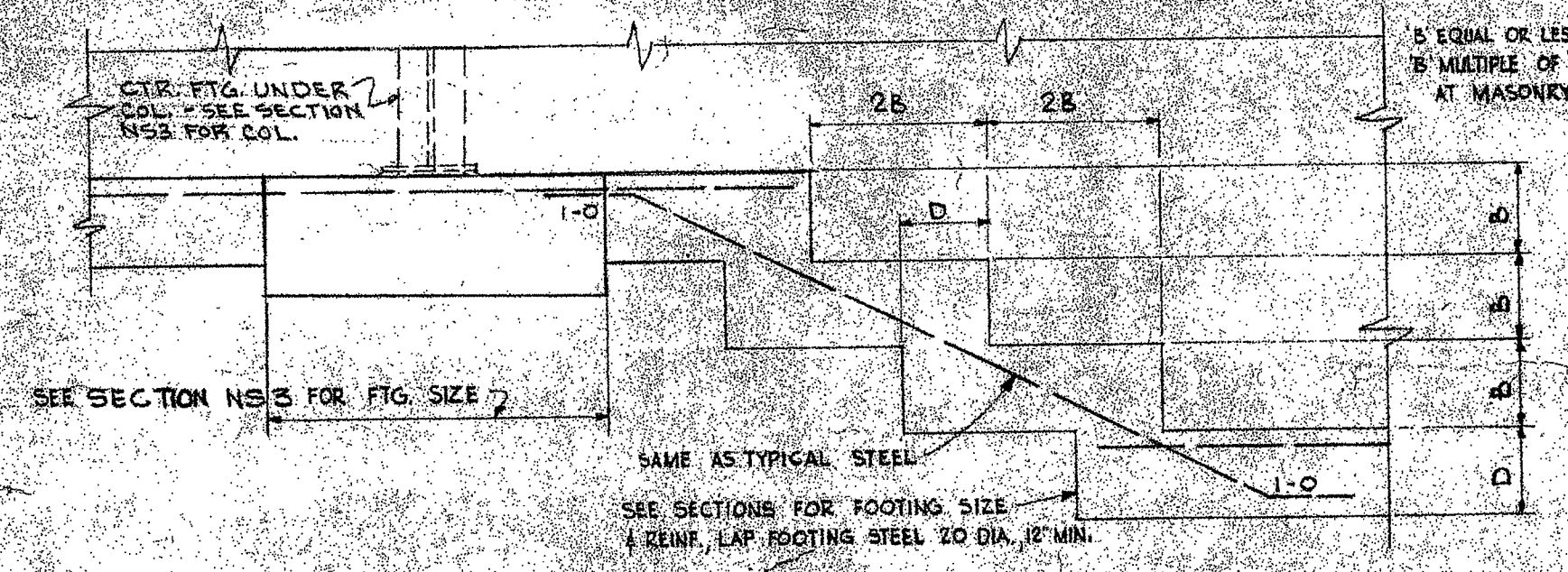
SECTION NS3
1"=1'-0"



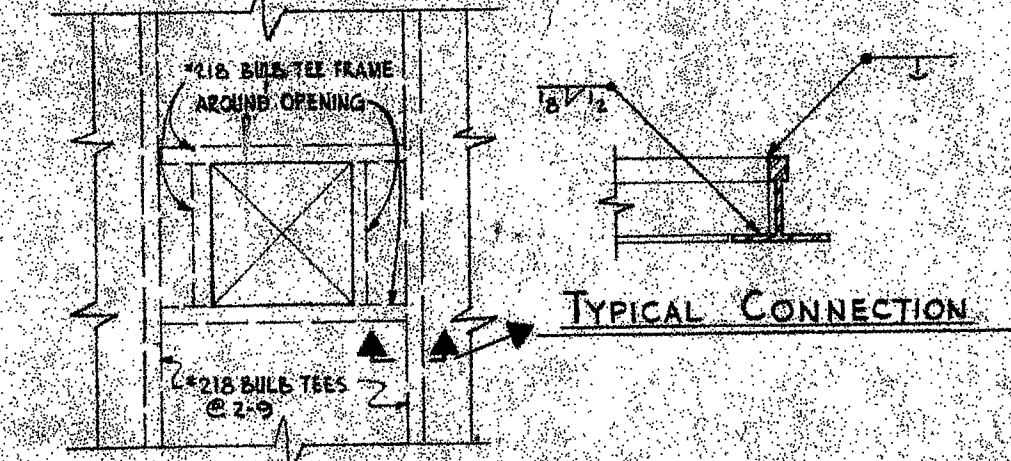
SECTION RS3
1"=1'-0"



TYPICAL CONSTRUCTION JOINT IN SLABS ON GROUND

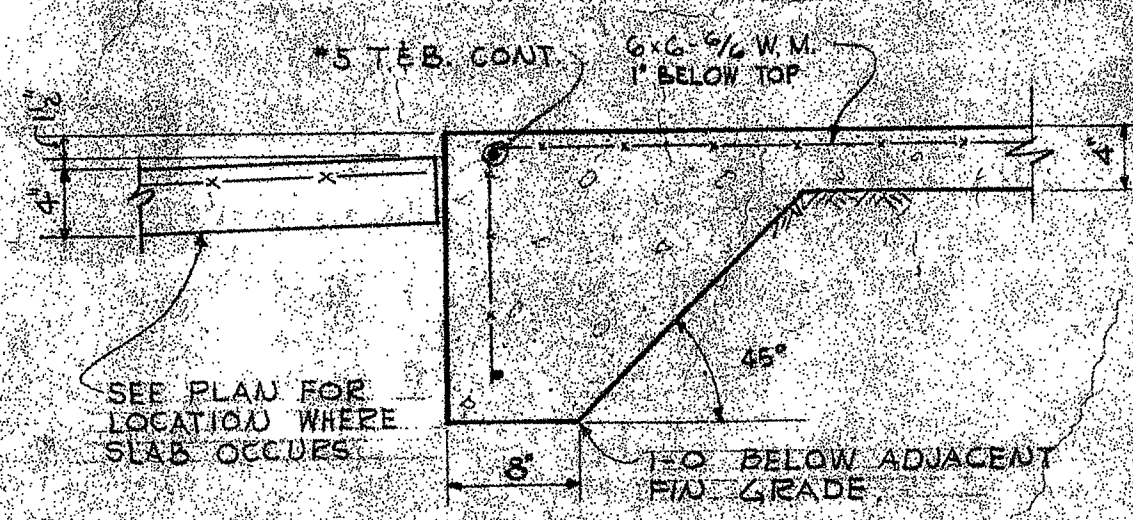


STANDARD FOOTING DETAILS

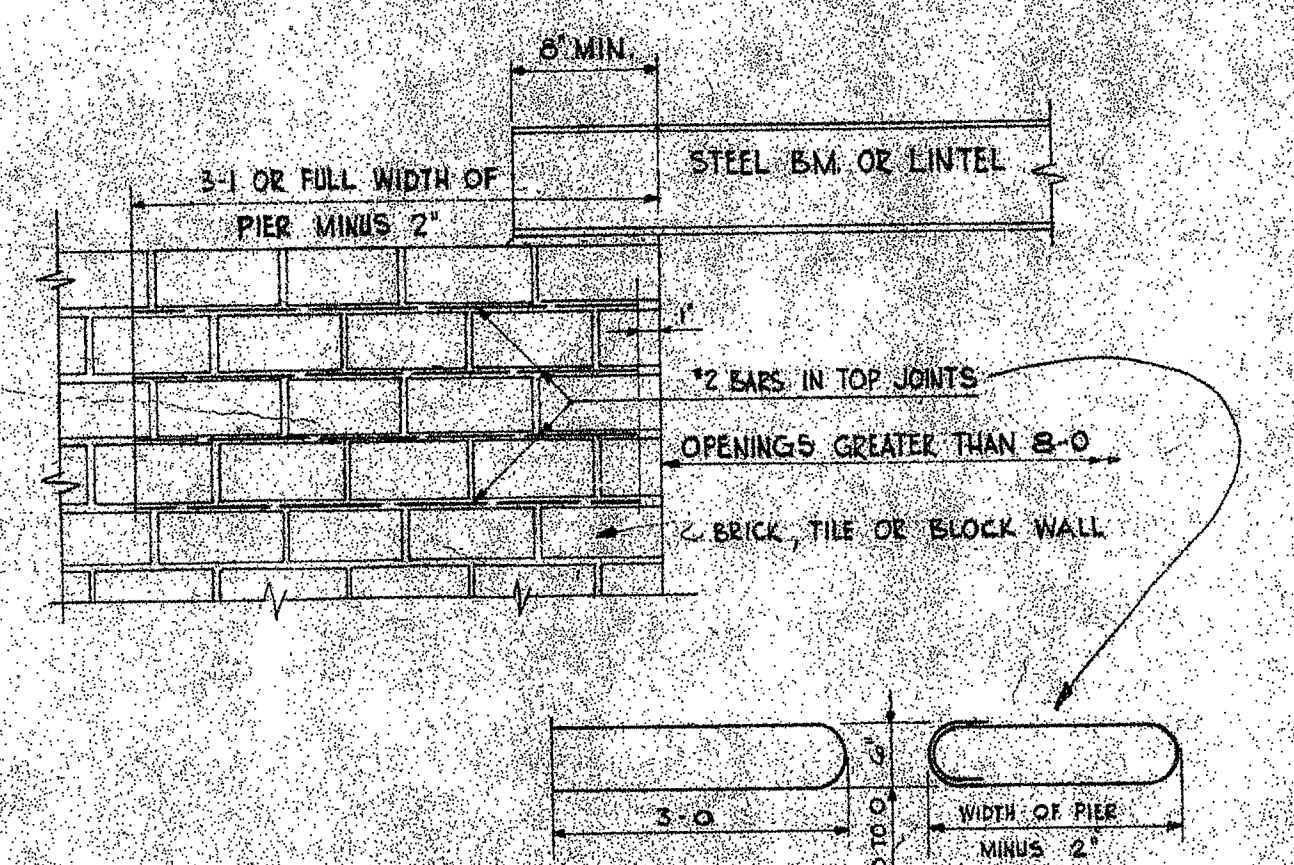


TYPICAL CONNECTION

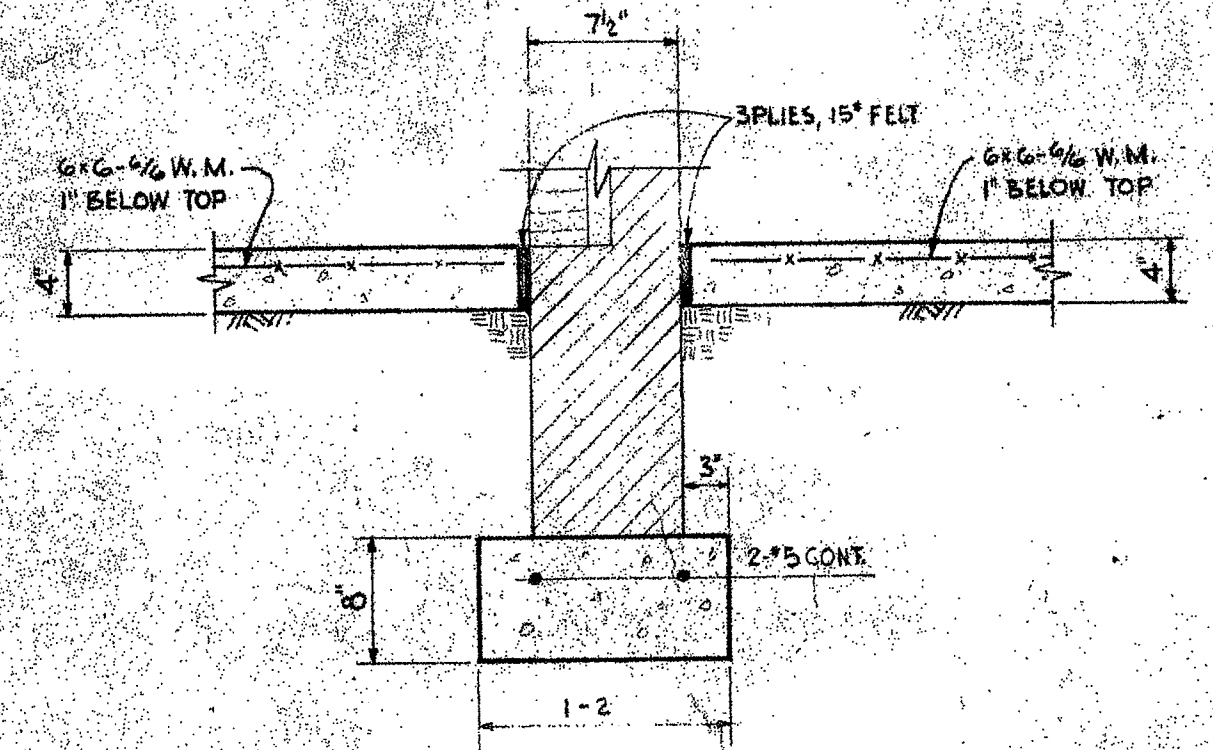
NOTE: THIS DETAIL SHALL APPLY WHERE THE DIMENSION OF THE OPENING PERPENDICULAR TO THE BULB TEE SPAN IS NOT GREATER THAN 2'-0\"/>



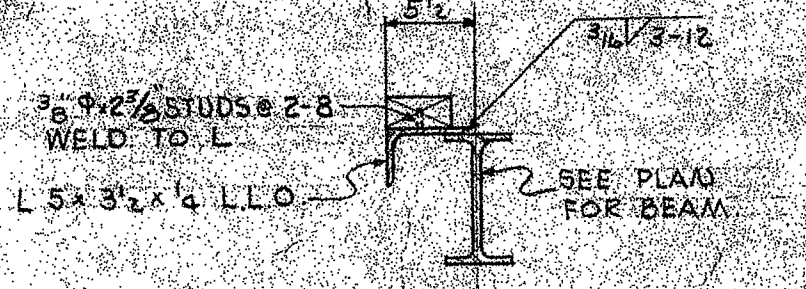
SECTION YS3
1"=1'-0"



DETAIL WHERE STEEL MEMBERS BEAR ON END OF MASONRY WALLS



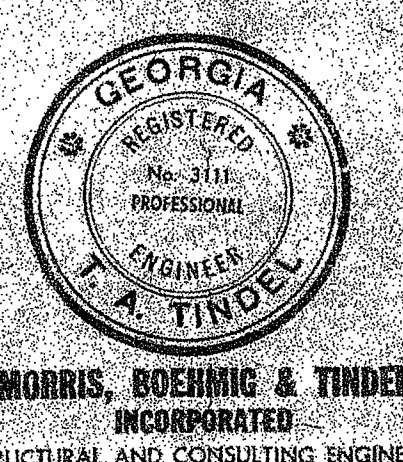
SECTION WS3
1"=1'-0"



SECTION AAS3
1"=1'-0"

GENERAL NOTES

- THESE NOTES SHALL APPLY EXCEPT WHERE OTHERWISE INDICATED BY DRAWINGS OR SPECIFICATIONS.
- WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE OR SIMILAR CONDITIONS, EVEN THOUGH NOT SPECIALLY MARKED ON THE PLANS.
- FOOTINGS - IF AFTER EXCAVATION THE CONDITION OF THE SOIL INDICATES A SAFE BEARING CAPACITY LESS THAN THAT SHOWN UNDER UNIT STRESSES, THE ARCHITECT SHALL BE NOTIFIED AND FOOTINGS RE-SIZED, IF NECESSARY. ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL. COLUMN AND WALL FOOTINGS TO BE Poured MONOLITHIC WITH ADJACENT FOOTINGS AT THE SAME ELEVATION UNLESS STEPPED FOOTINGS, WHERE USED TO BE AS SHOWN ON STANDARD FOOTING DETAIL.
- REINFORCED CONCRETE - REINFORCING STEEL STRESS AND CONCRETE STRENGTH TO BE AS SHOWN UNDER UNIT STRESSES. REINFORCING STEEL TO BE SHOP-FABRICATED. ALL DETAILING FABRICATION AND PLACING OF REINFORCING STEEL INCLUDING COLUMN SPICES AND TIE BARS, STANDARD HOOPS AND BAR BENDS AND ACCESSORY SIZE, NUMBER AND LOCATION, ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. ALL DIMENSIONS NECESSARY FOR CHECKING SHOP DRAWINGS SHALL BE SHOWN ON SHOP DRAWINGS. ALL DETAILS AND NOTES APPEARING OR REFERRED TO ON CONTRACT DRAWINGS AND GIVING INFORMATION FOR THE PLACING OF REINFORCING STEEL SHALL BE SHOWN ALSO ON THE SHOP DRAWINGS, SO THAT THE STEEL SETTER CAN PLACE REINFORCING PROPERLY WITHOUT REFERENCE TO OTHER DRAWINGS OR NOTES. SHOP DRAWINGS WILL NOT BE APPROVED WITH OUT SUCH INFORMATION.
- STRUCTURAL STEEL - DETAILING, FABRICATION AND ERECTION TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STEEL CONSTRUCTION MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION. SHOP DRAWINGS TO SHOW COMPLETE WELDING INFORMATION, BOTH SHOP AND FIELD, USING A.W.S. SYMBOLS, WHERE WELDED CONNECTIONS ARE NOT DETAILED ON THE CONTRACT DRAWINGS, THE WELDING SHALL BE EQUIVALENT IN STRENGTH TO A STANDARD BOLTED OR RIVETED CONNECTION FOR THE SIZE OF MEMBER. SHOP DRAWINGS FOR STRUCTURAL STEEL AND BULB TEE SUB-FURNISH SHALL CONTAIN COMPLETE INFORMATION FOR FABRICATION, CHECKING, INSTALLATION AND ALL FACIA ANGLES TO BE MITERED AT CORNERS AND WELDED ALL AROUND. G-ROUND SMOOTH FINISH.
- BULB TEE SUB-FURNISH TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EACH TEE SHALL BE WELDED AT EACH SUPPORT WITH THE EQUIVALENT OF 1/4\"/>



SECTIONS - NOTES - DETAILS

CLASSROOM ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK COUNTY BOARD OF EDUCATION
ATHEPS

A E C K
ASSOCIATES
ARCHITECTS
ATLANTA

NE FORTY PEACHTREE

DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: [Date]

MORRIS, BOEHNING & TINDEL
INCORPORATED
STRUCTURAL AND CONSULTING ENGINEERS

HUDSON - SHEFFER NOV 25 1959

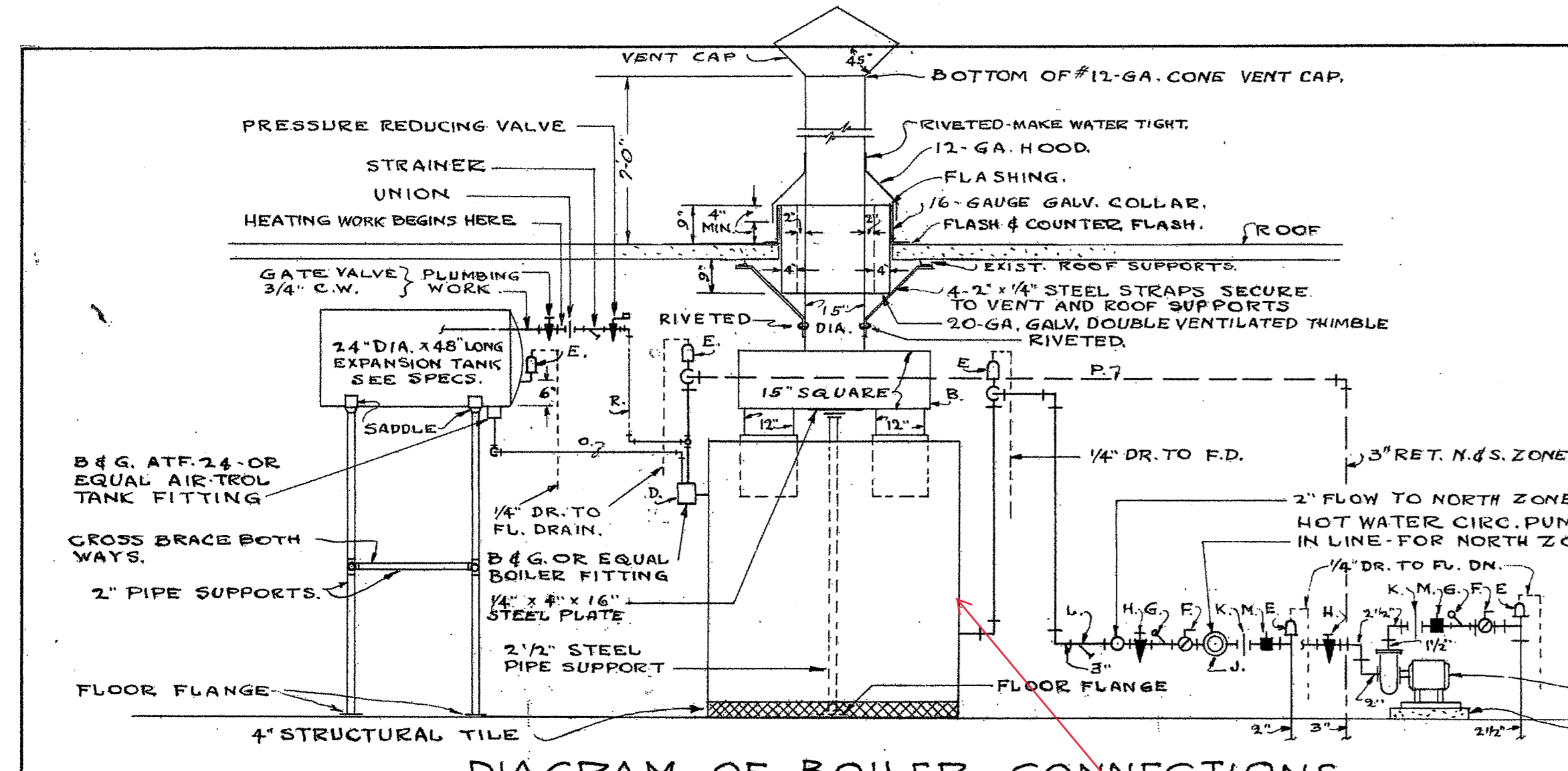
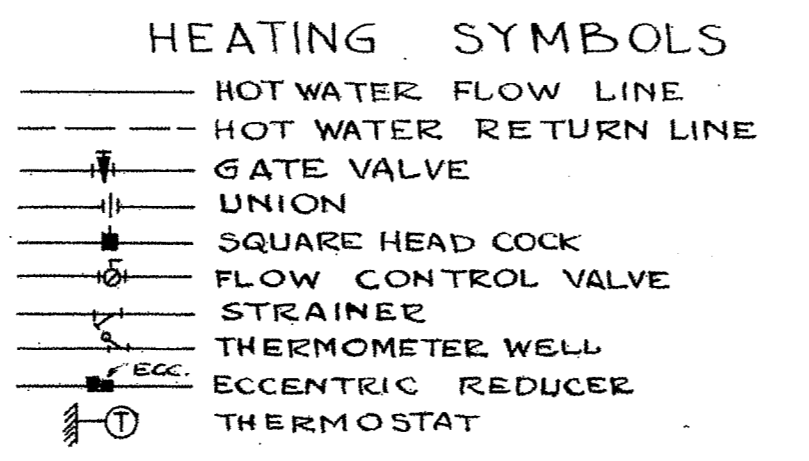
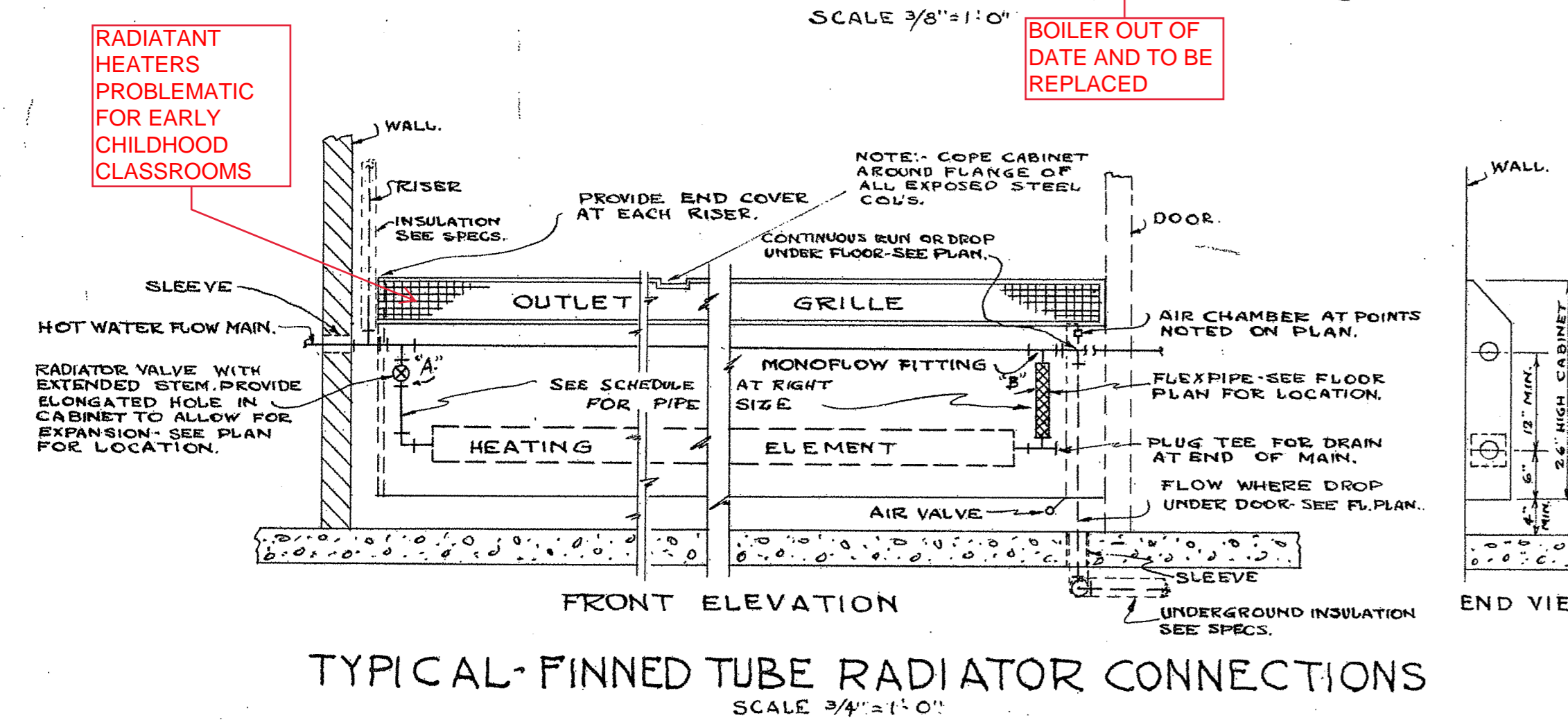


DIAGRAM OF BOILER CONNECTIONS
SCALE 3/8"=1'-0"

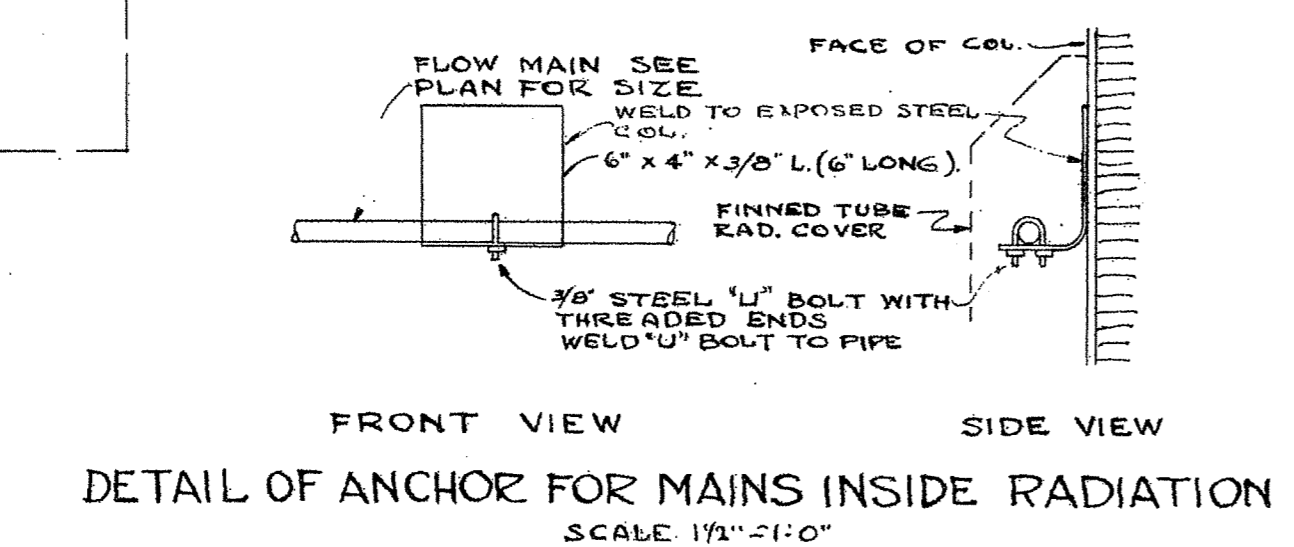


SCHEDULE FOR CONNECTIONS TO WALL FIN RADIATION.

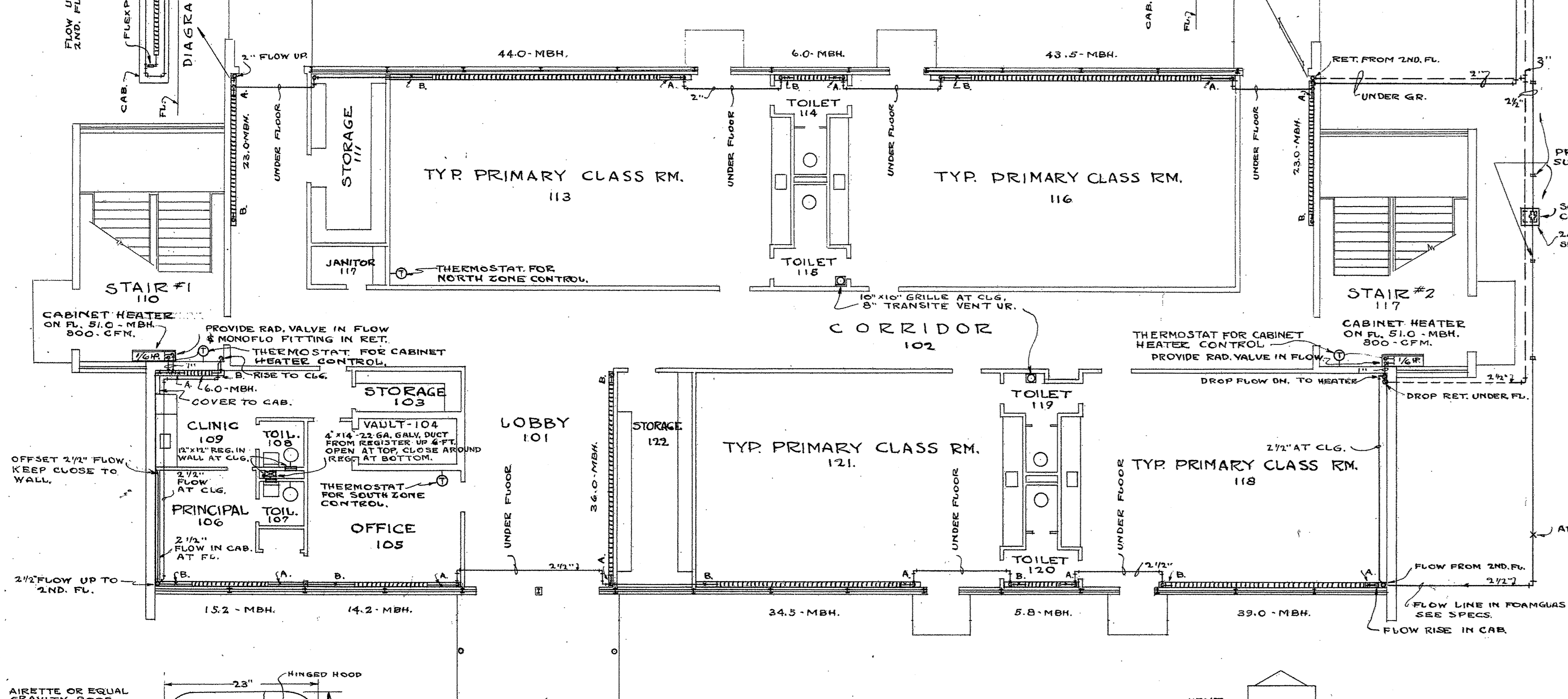
PIPE SIZE	CAPACITY IN MBH.
3/8"	0 TO 7.5
1/2"	7.6 TO 13.7
3/4"	13.8 TO 30.0
1"	31 TO 37.0
1 1/4"	38 AND UP



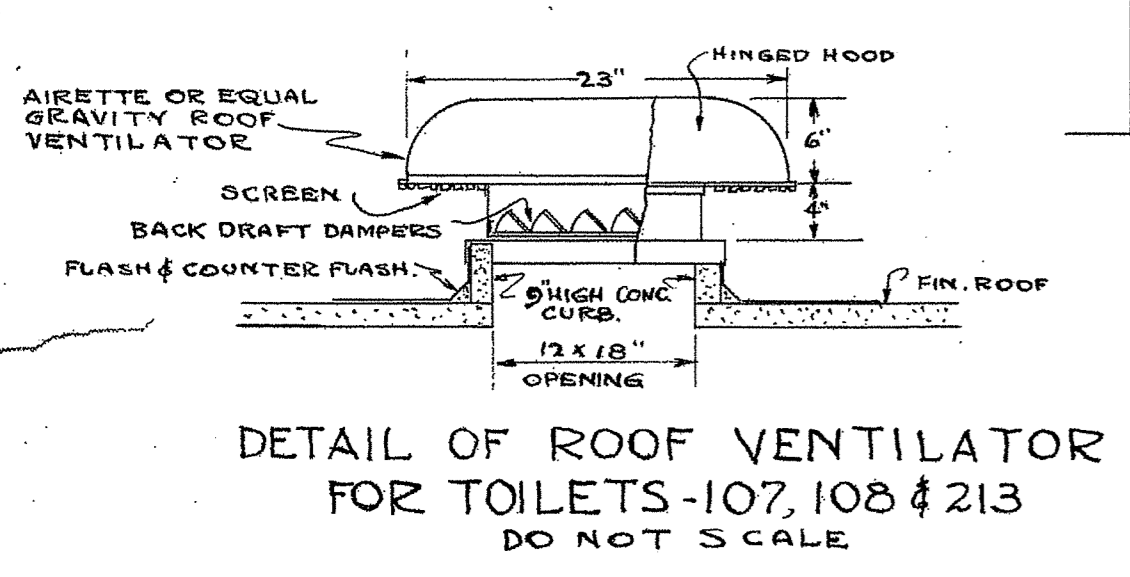
TYPICAL FINNED TUBE RADIATOR CONNECTIONS
SCALE 3/4"=1'-0"



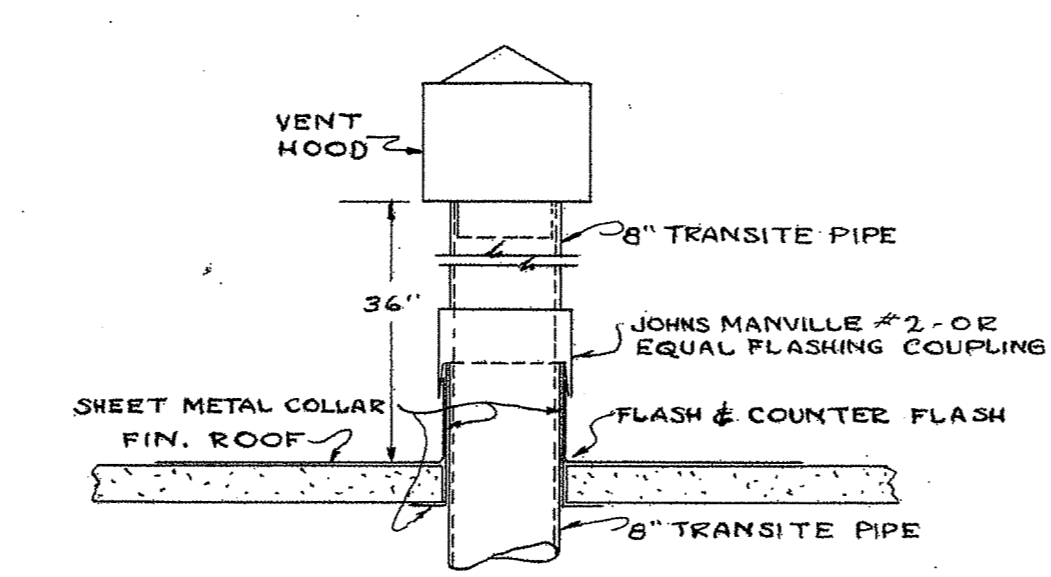
DETAIL OF ANCHOR FOR MAINS INSIDE RADIATION
SCALE 1 1/2"=1'-0"



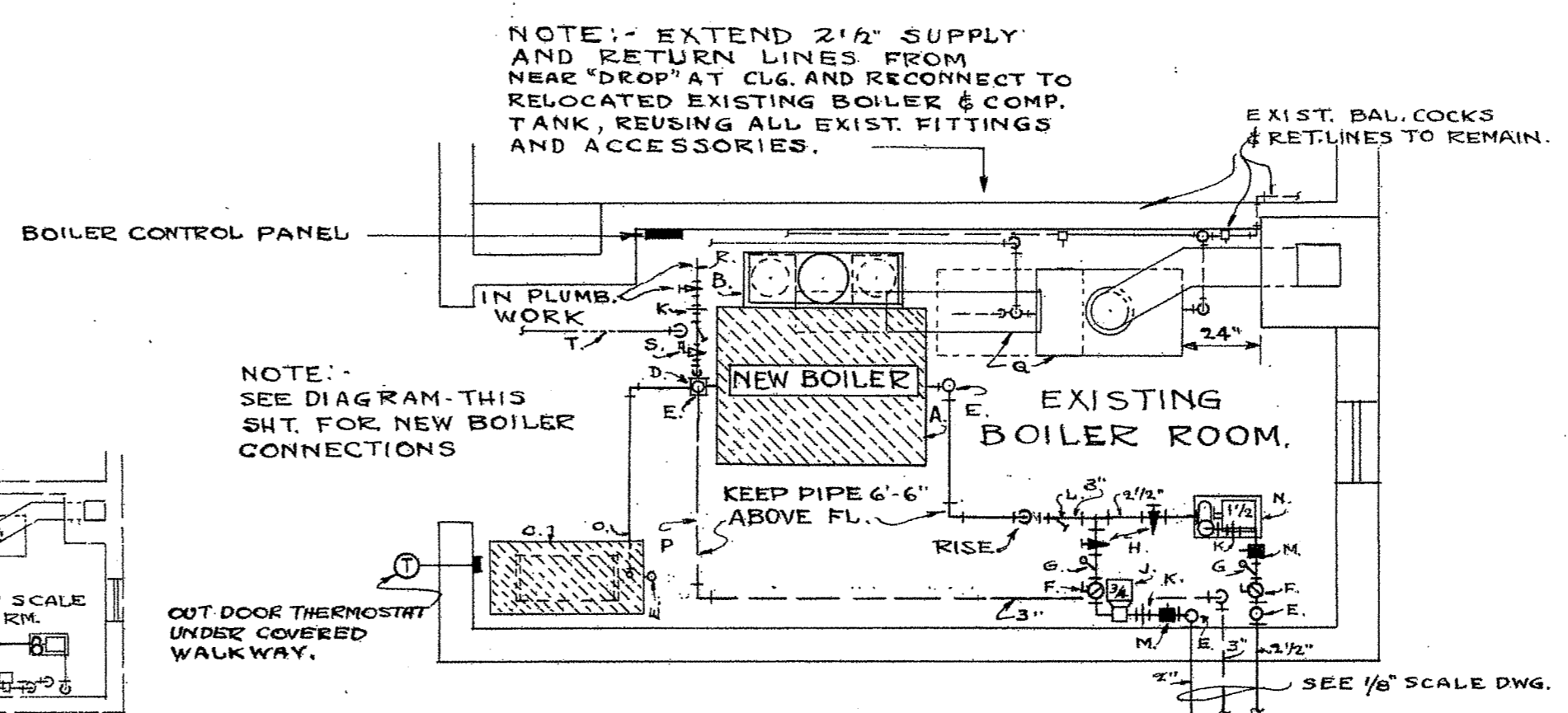
FIRST FLOOR PLAN
SCALE 1/8"=1'-0"



DETAIL OF ROOF VENTILATOR FOR TOILETS 107, 108 & 213
DO NOT SCALE

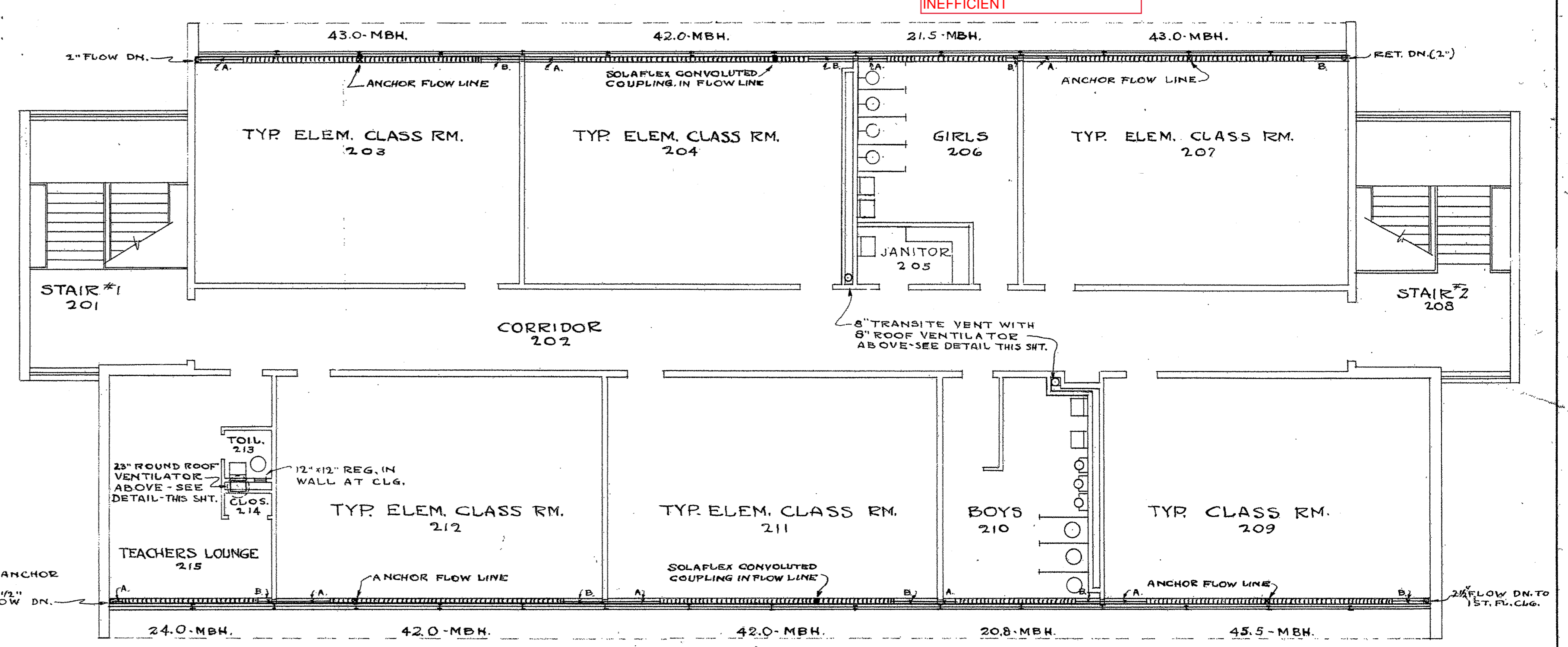


DETAIL OF ROOF VENTILATOR FOR TOILETS 115 & 119
SCALE 3/4"=1'-0"



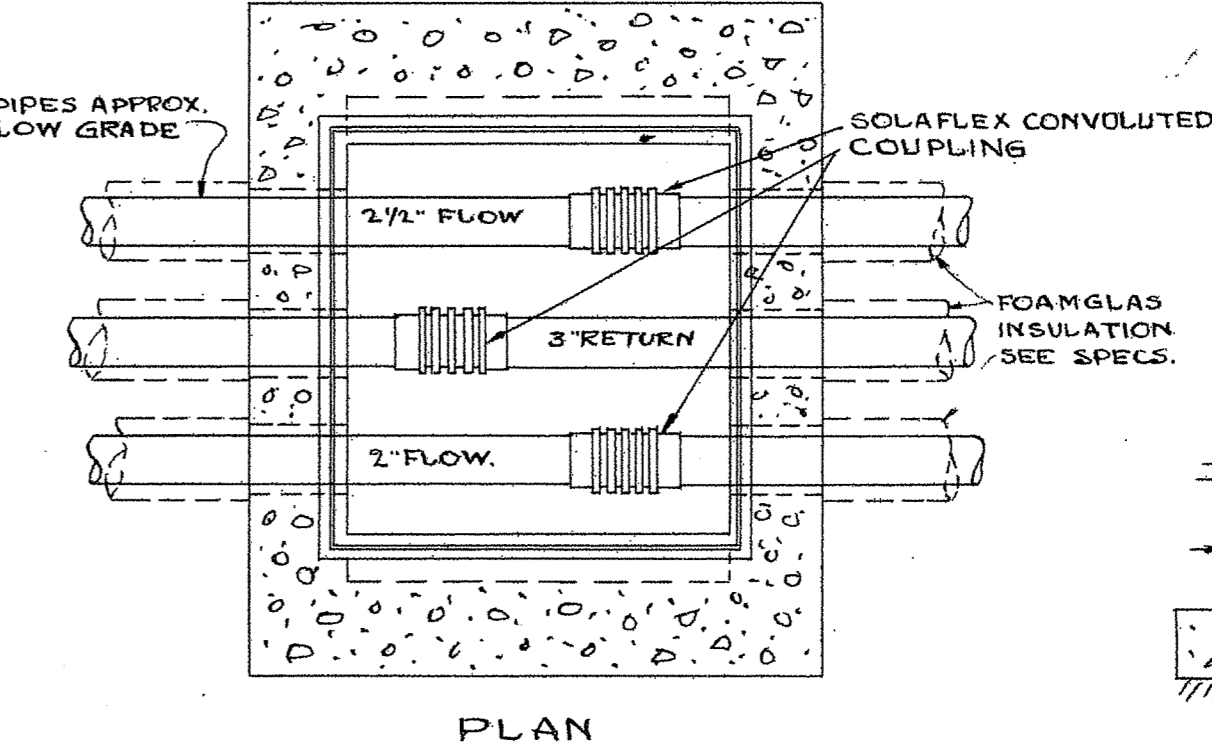
PLAN OF BOILER ROOM
SCALE 1/4"=1'-0"

- BOILER ROOM LEGEND
- A- GAS FIRED HOT WATER BOILER - SEE SPECS.
 - B- BOILER BREACHING - SEE BOILER DIAGRAM.
 - C- EXPANSION TANK - SEE BOILER DIAGRAM.
 - D- BOILER FITTING - SEE DIAGRAM.
 - E- AUTO-AIR VENT VALVE.
 - F- FLOW CONTROL VALVE.
 - G- THERMOMETER WELL.
 - H- GATE VALVE.
 - J- HOT WATER CIRC. PUMP FOR NORTH ZONE - 3.5 G.P.M. 2 1/2 FT. HD. (3/4 HP). NEW.
 - K- UNION.
 - L- STRAINER.
 - M- SQUARE HEAD COCK.
 - N- HOT WATER CIRC. PUMP FOR SOUTH ZONE - 5.29 G.P.M. 3.5 FT. HD. (1 1/2 HP). NEW.
 - O- 1" EXPANSION LINE.
 - P- BOILER RETURN HEADER.
 - Q- EXIST. BOILER & COMPRESSION TANK IN NEW LOCATION.
 - R- 3/4" C.W. LINE. CONNECT TO EXISTING C.W. LINE.
 - S- PRESSURE REDUCING VALVE.
 - T- GAS SERVICE - SEE SPECS.

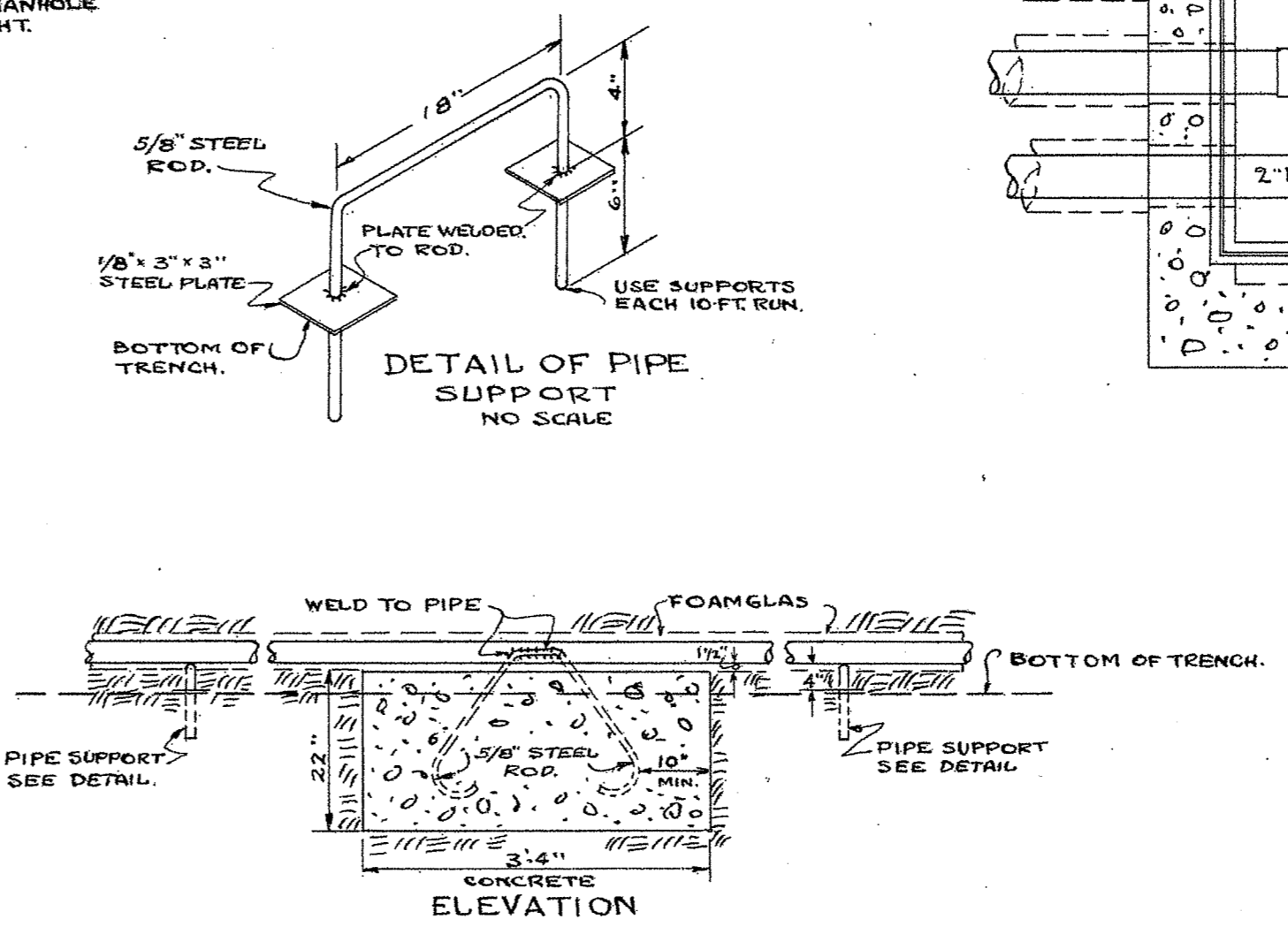


SECOND FLOOR PLAN
SCALE 1/8"=1'-0"

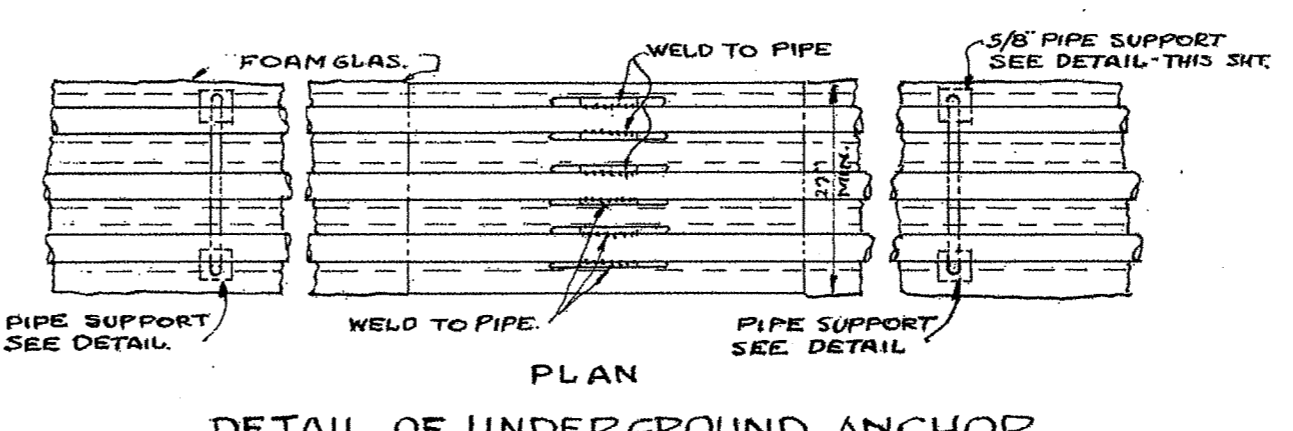
SHOP DRAWING NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED FOR:
1- BOILERS AND CONTROLS.
2- WALL FINN RADIATION.
3- HOT WATER HEATING SPECIALTIES.
4- HOT WATER CIRCULATING PUMPS.
5- CABINET HEATER.



DETAIL OF MANHOLE FOR UNDERGROUND PIPE
SCALE 1"=1'-0"



DETAIL OF PIPE SUPPORT
SCALE 1/2"=1'-0"



DETAIL OF UNDERGROUND ANCHOR
SCALE 1/2"=1'-0"

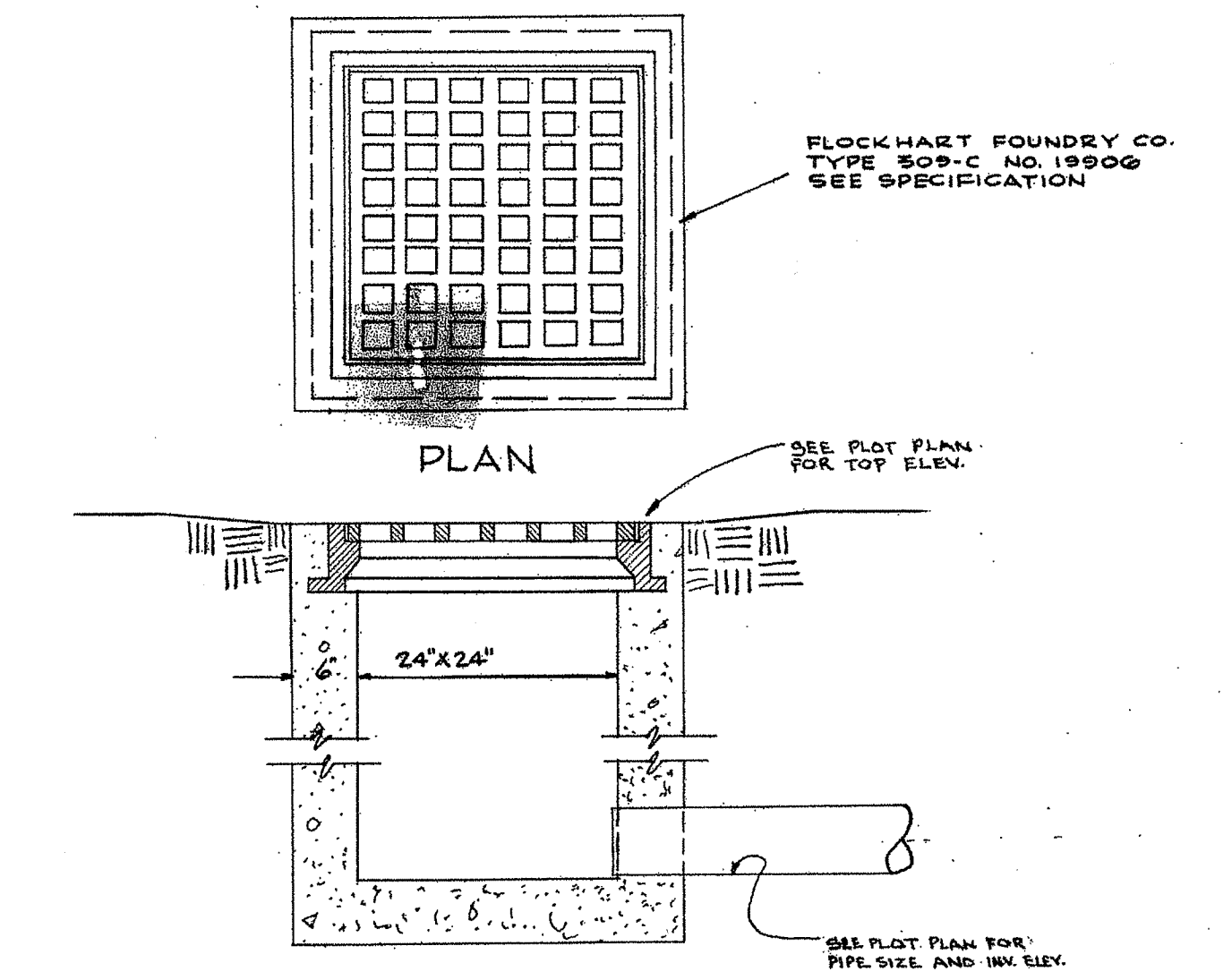
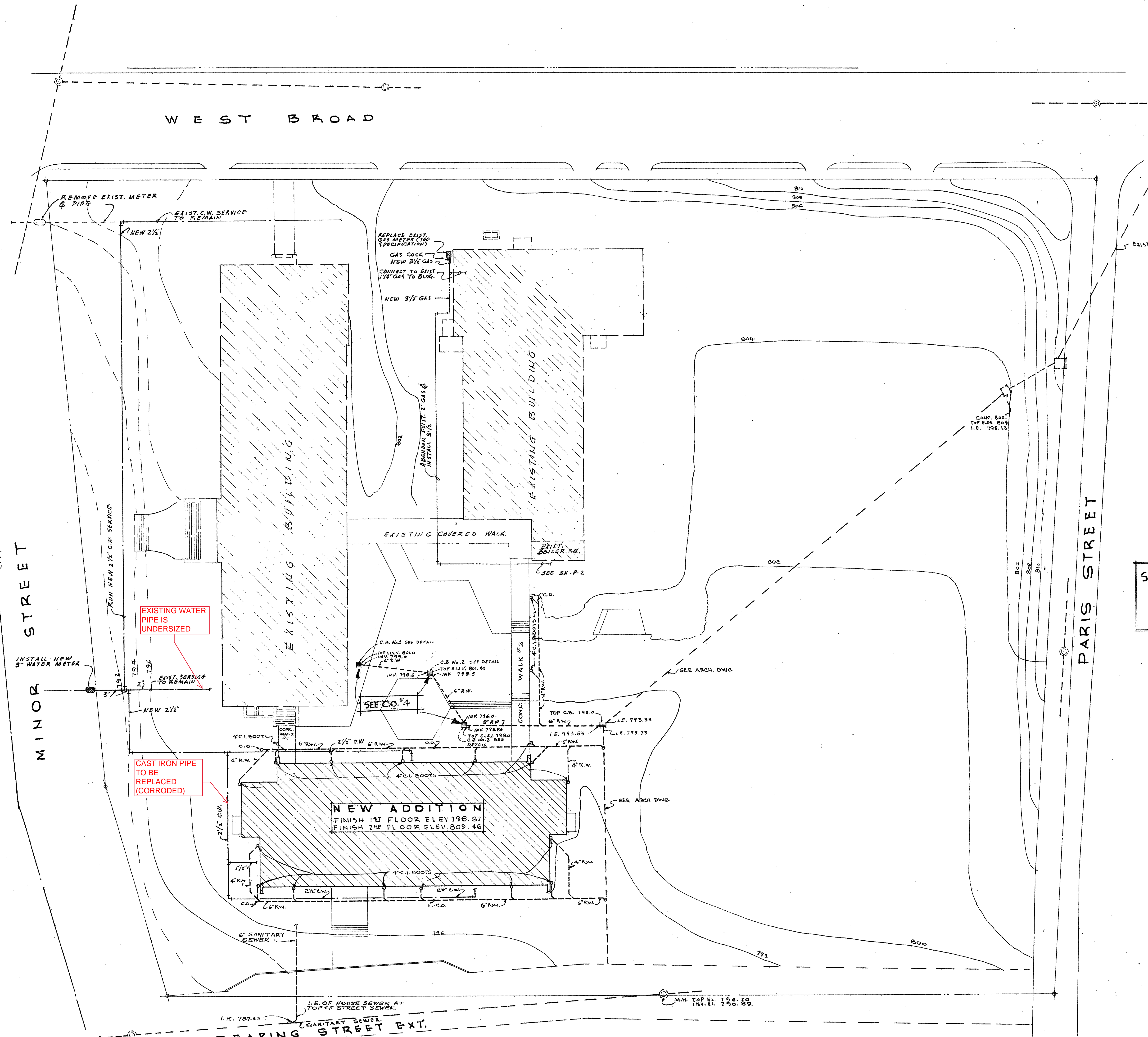
HEATING-FLOOR & PART PLAN-DETAILS

ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK CO. BOARD OF EDUCATION
ATHENS

P.B.S.	705-E
G.R.D.	141
15 Jan 59	

NEWCOMB & BOYD
CONSULTING ENGINEERS
1205 SPRING STREET, N. W.
ATLANTA, GEORGIA

NOV 8 5 1958



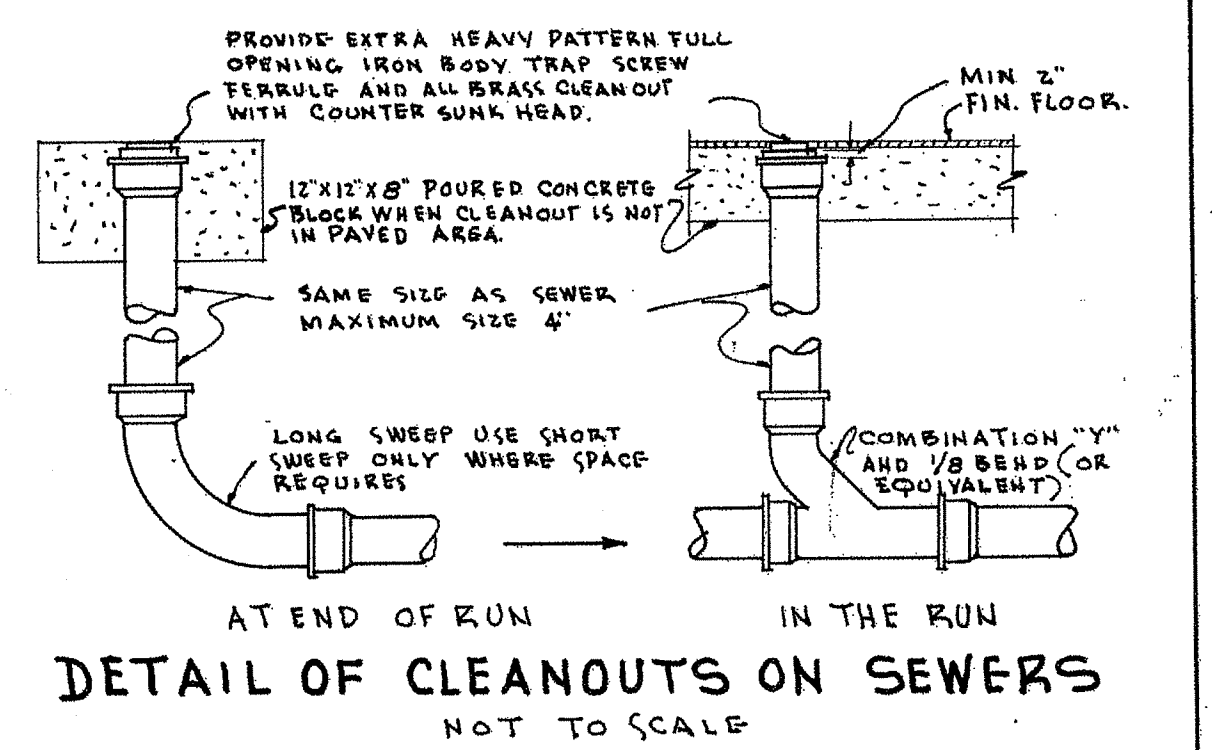
DETAIL OF CATCH BASIN
SCALE 3/4" = 1'-0"

SYMBOL	FIXTURE	WASTE	C.W.	H.W.
1	WATER CLOSET (15")	4"	1 1/4"	-
2	WATER CLOSET (15")	4"	1 1/4"	-
3	URINAL	2"	3/4"	-
4	LAVATORY	2"	1/2"	-
5	SINK	2"	1/2"	-
6	LAVATORY	2"	1/2"	1/2"
7	DRINKING FOUNTAIN	2"	1/2"	-
8	SERVICE SINK	2"	1/2"	-
9	SINK (CAB.)	2"	1/2"	1/2"
10	WATER CLOSET (WALL HUNG)	4"	1 1/4"	-

SYMBOLS

- SOIL OR WASTE LINE ABOVE FLOOR OR GROUND
- SOIL OR WASTE LINE BELOW FLOOR OR GROUND
- VENT LINE
- C.W. COLD WATER LINE
- H.W. HOT WATER LINE
- GAS LINE
- GATE VALVE
- CLEAN OUT EXTENDED UP TO GRADE OR FIN. FL.
- GAS OUT-OF-FLOOR DRAIN
- T.R. THROUGH ROOF
- S.C. SILL COCK
- C.I. CAST IRON
- FIXTURE NUMBERS (SEE SPECIFICATION)
- RIM 15" SETTING HEIGHT OF FIXTURE TO TOP OF RIM.
- A.C. AIR CHAMBER
- R.W. RAIN WATER

SHOP DRAWING TO BE SUBMITTED
(SEE SPECIFICATION)
1. PLUMBING FIXTURES
2. WATER HEATER.



DETAIL OF CLEANOUTS ON SEWERS
NOT TO SCALE

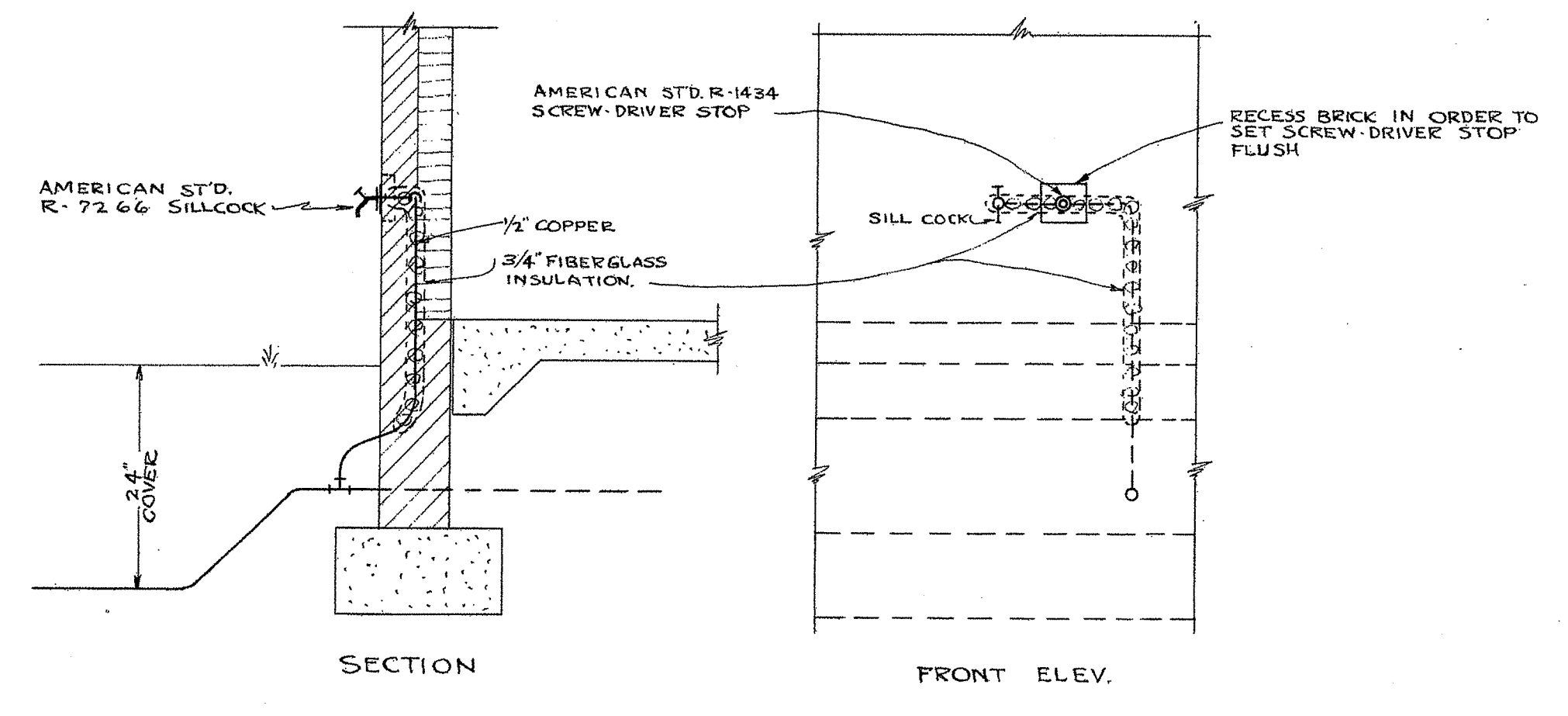
SITE PLAN
SCALE 1" = 20'-0"

PLUMBING-PLOT PLAN & DETAILS

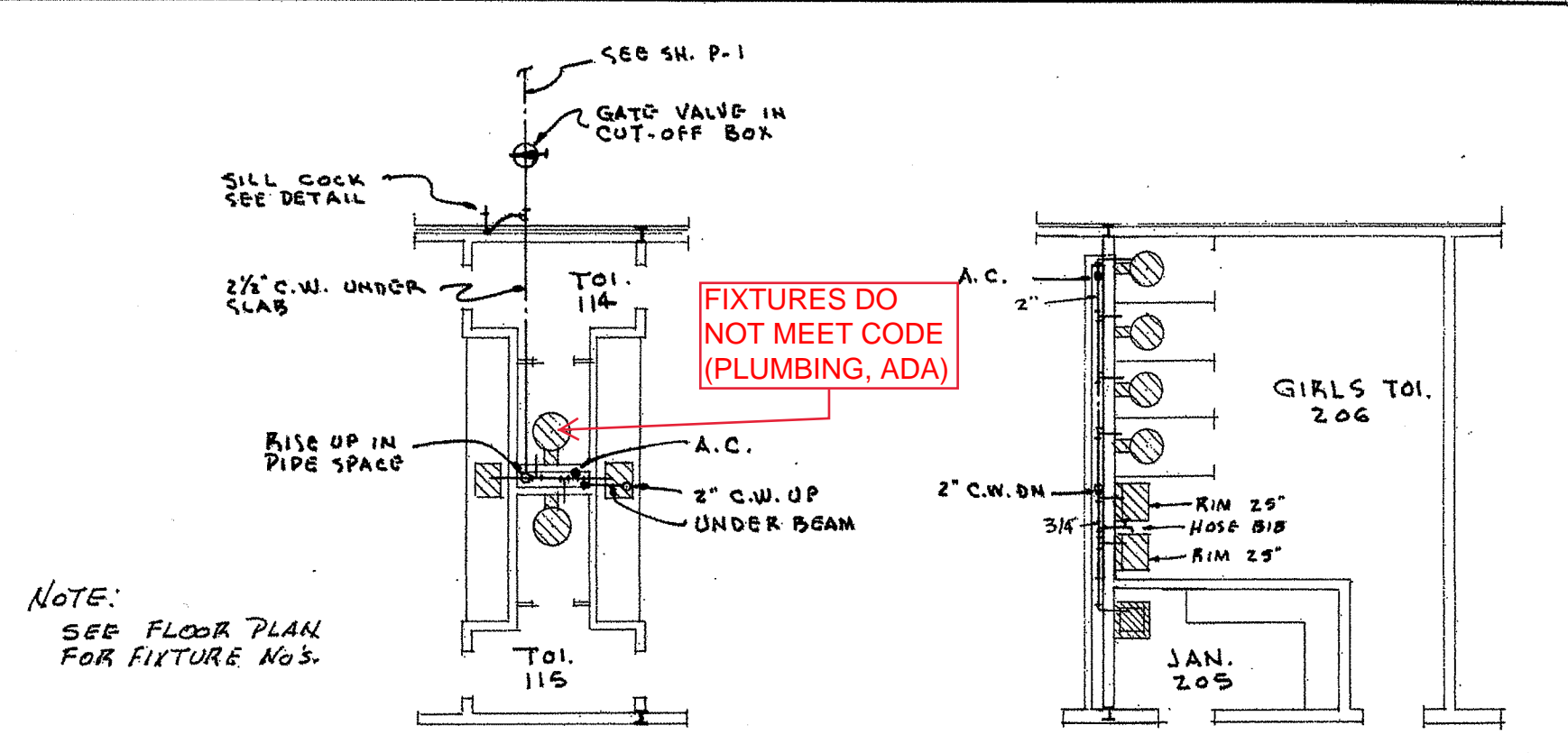
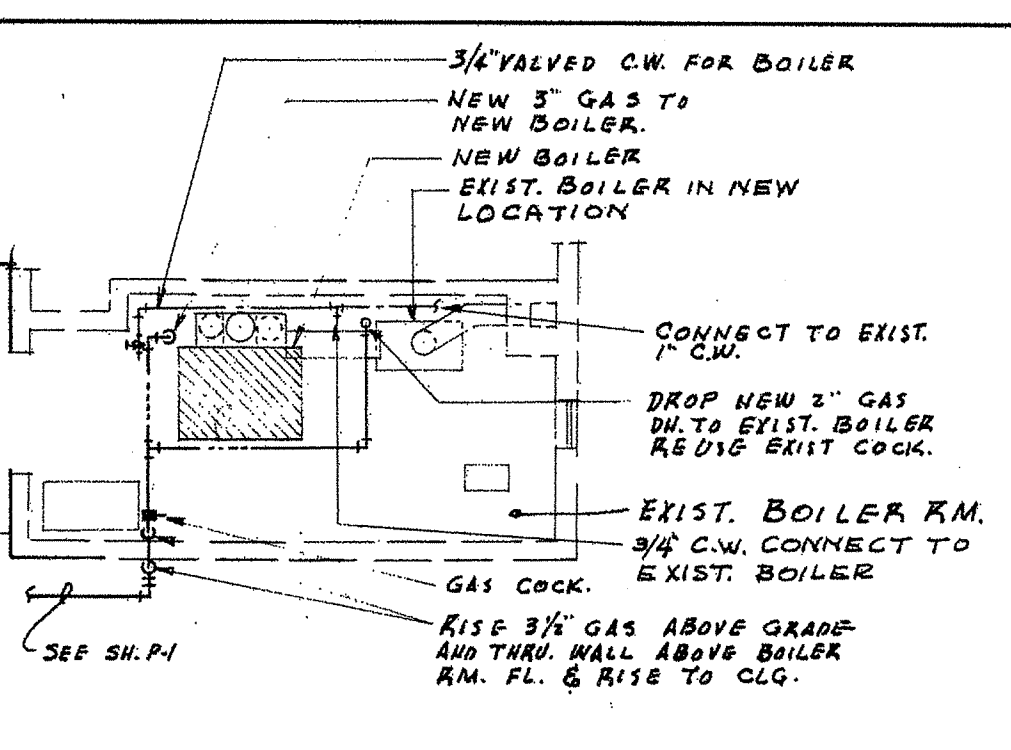
ADDITION TO BROAD STREET ELEM. SCHOOL
CLARKE CO. BOARD OF EDUCATION
ATHENS, GEORGIA

D.B.LEE 705-E
G.R.D.
15 JAN 59
2

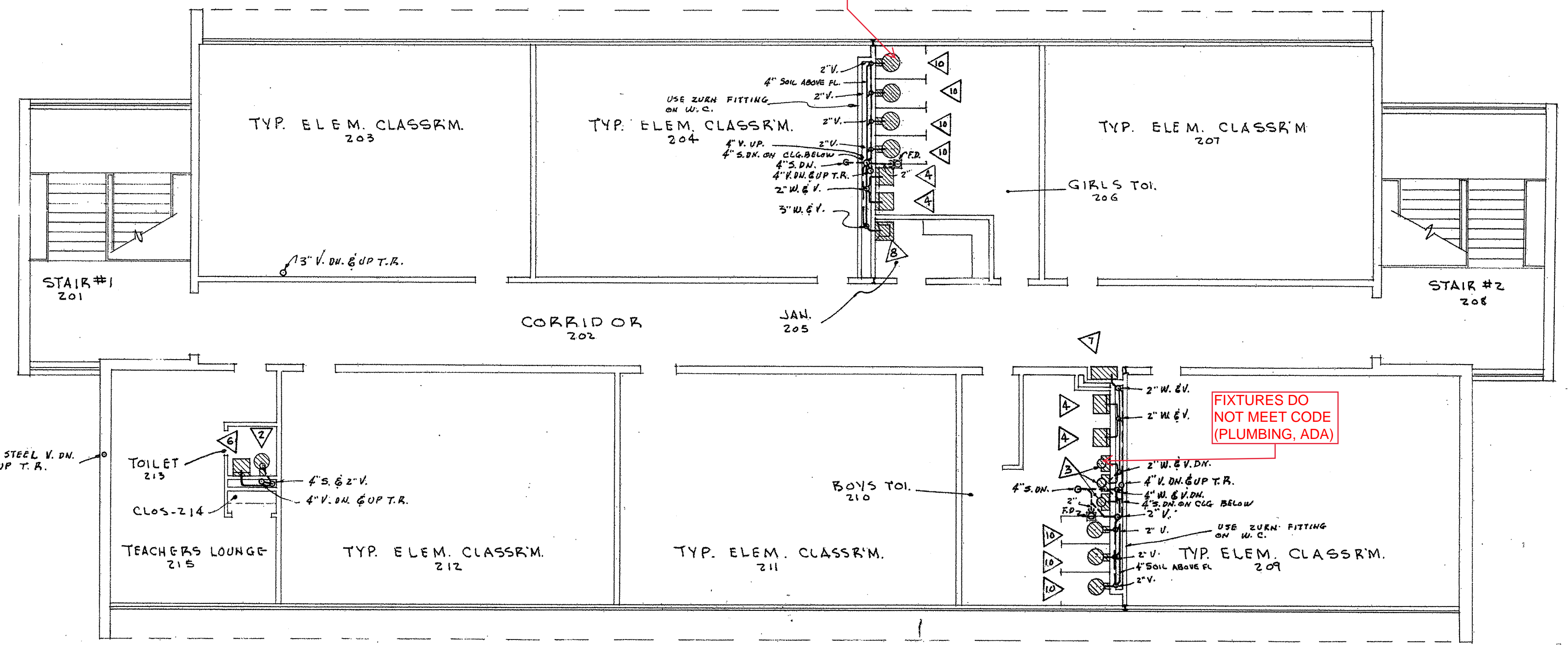
NEWCOMB & BOYD
CONSULTING ENGINEERS
1205 SPRING STREET, N. W.
ATLANTA, GEORGIA



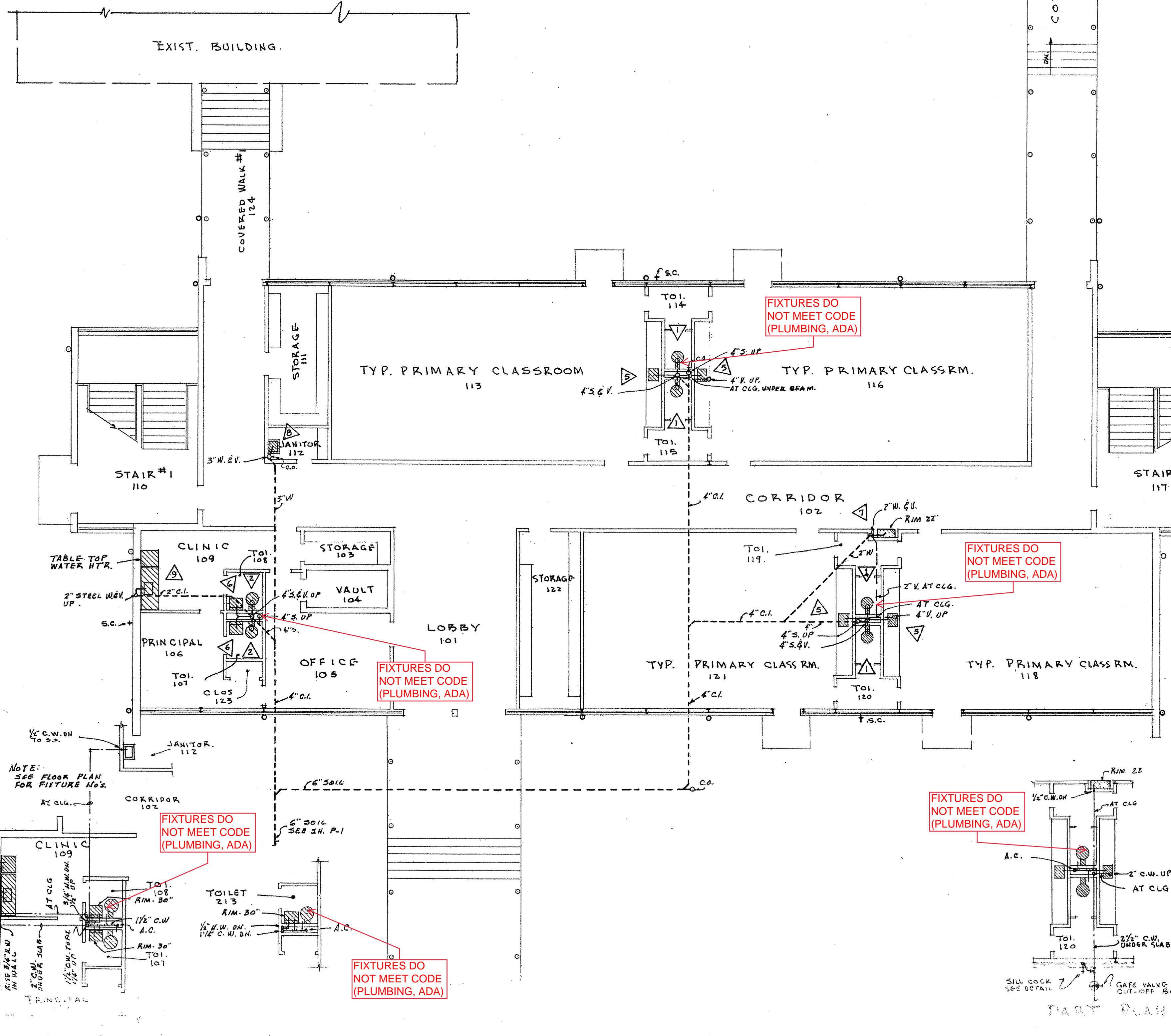
SILL COCK CONNECTION
SCALE 3/4" = 1'-0"



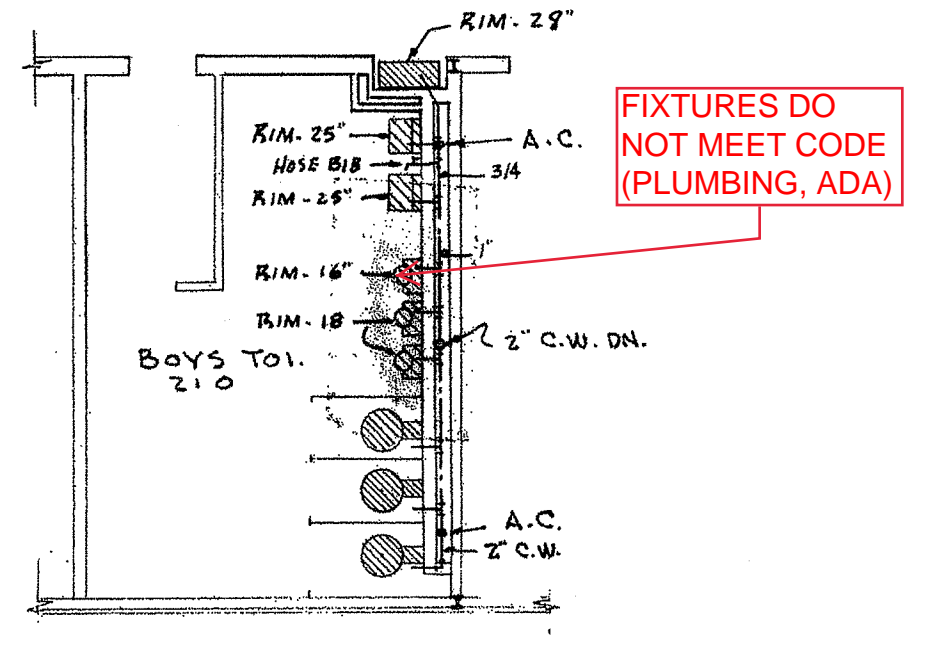
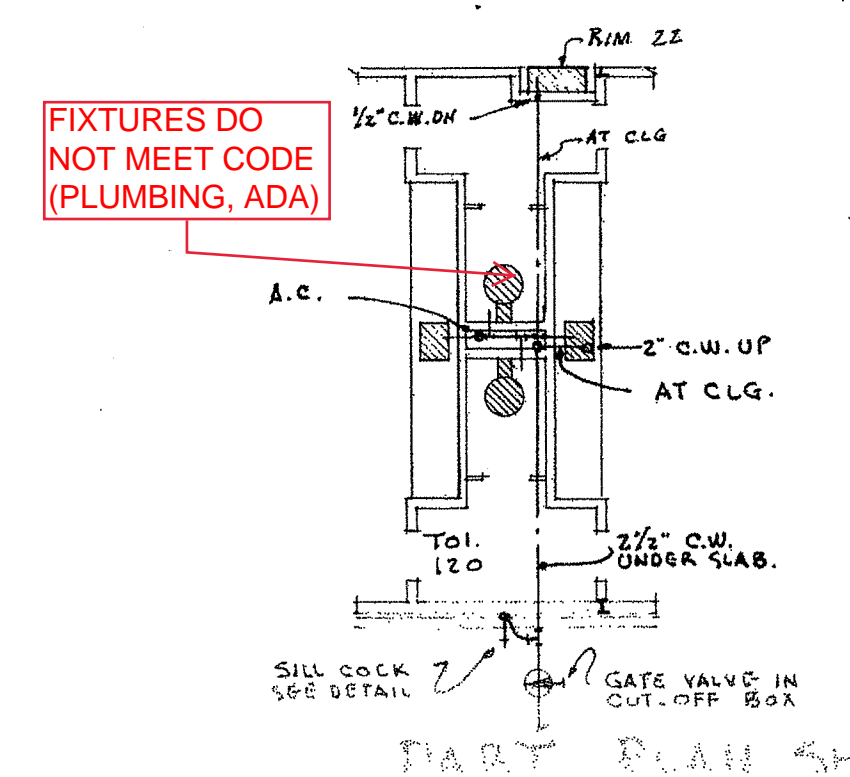
PART PLAN SHOWING WATER PIPING
1/8" SCALE



SECOND FLOOR PLAN
SCALE 1/8" = 1'-0"



FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

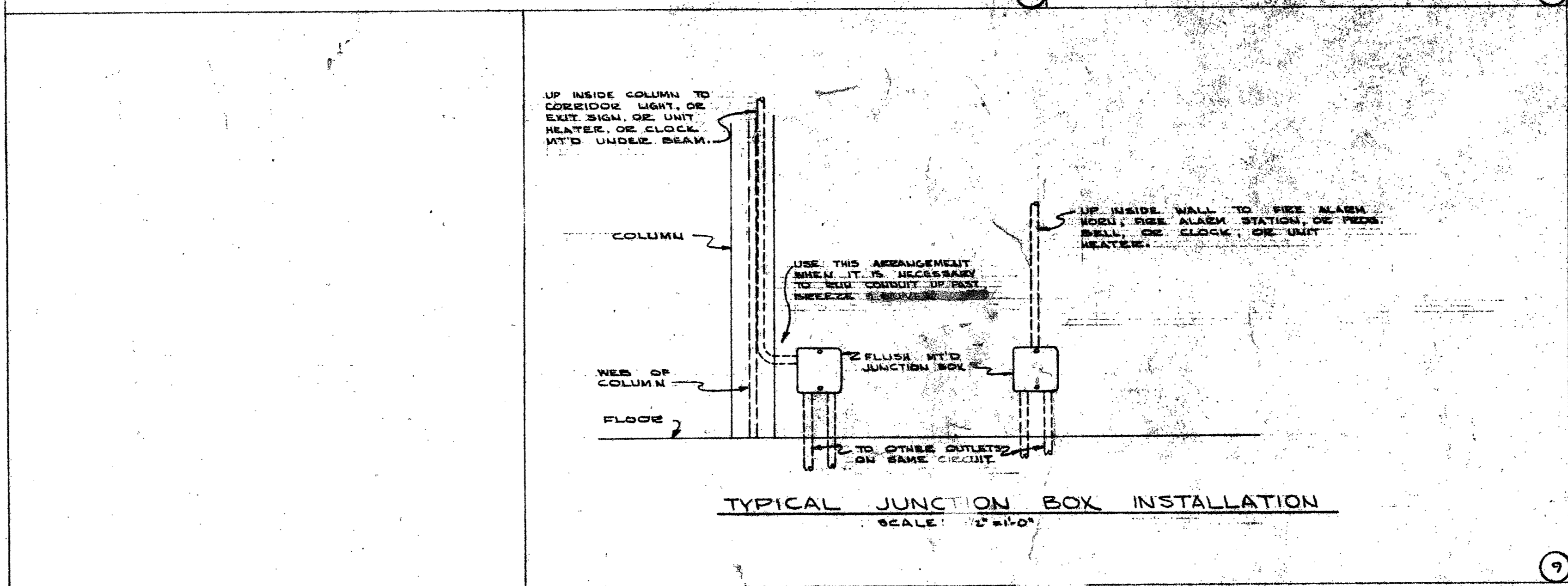
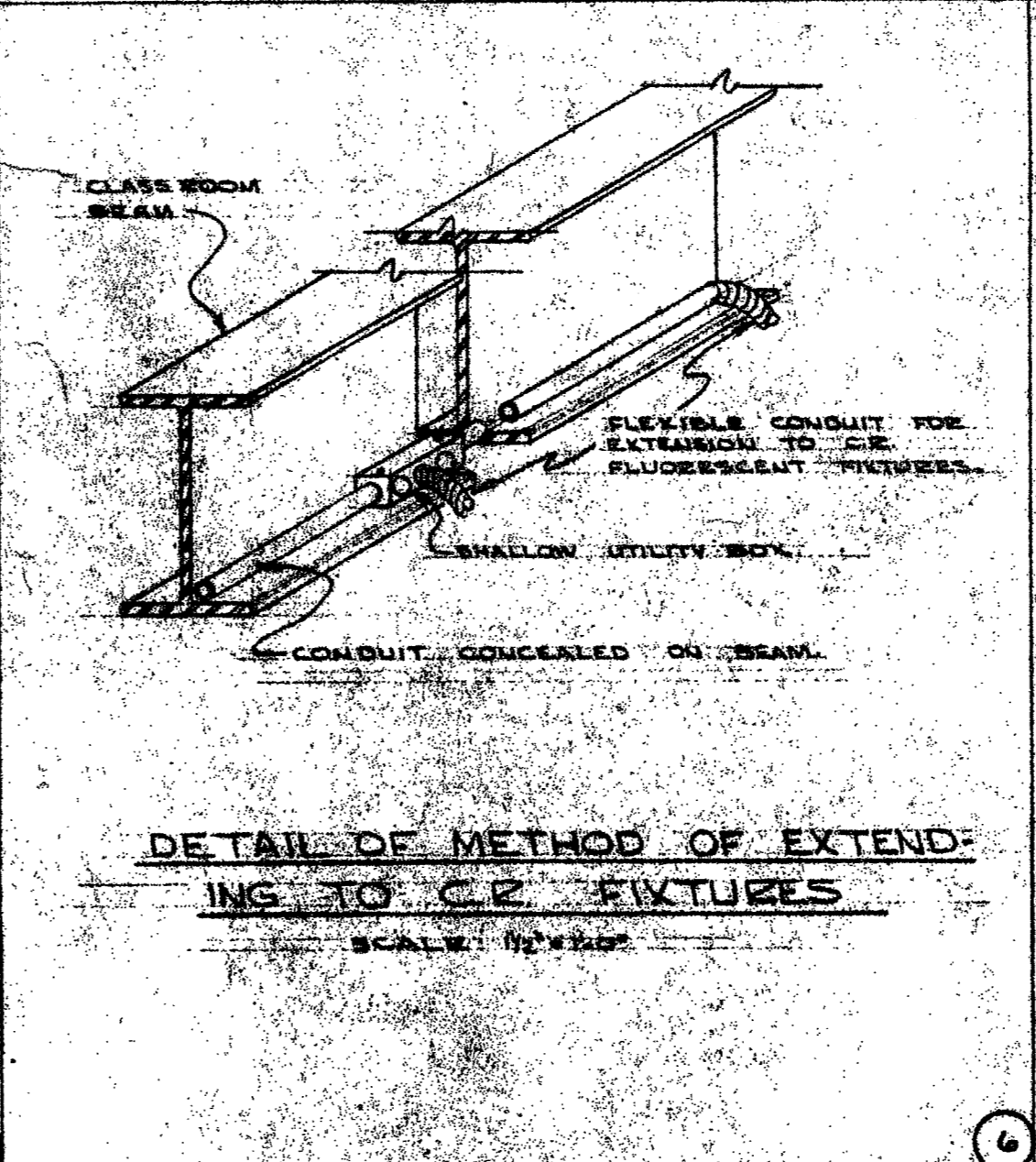
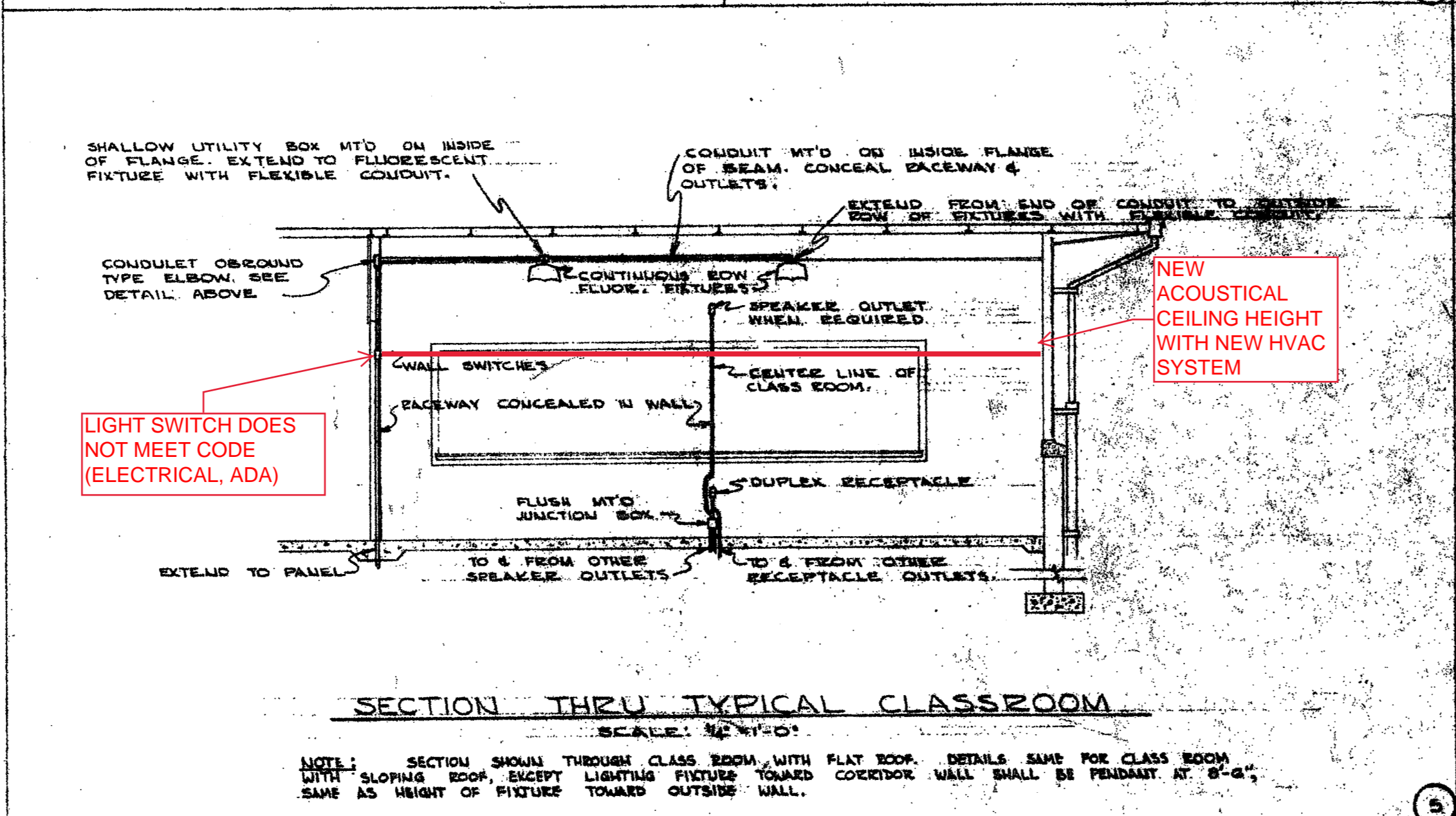
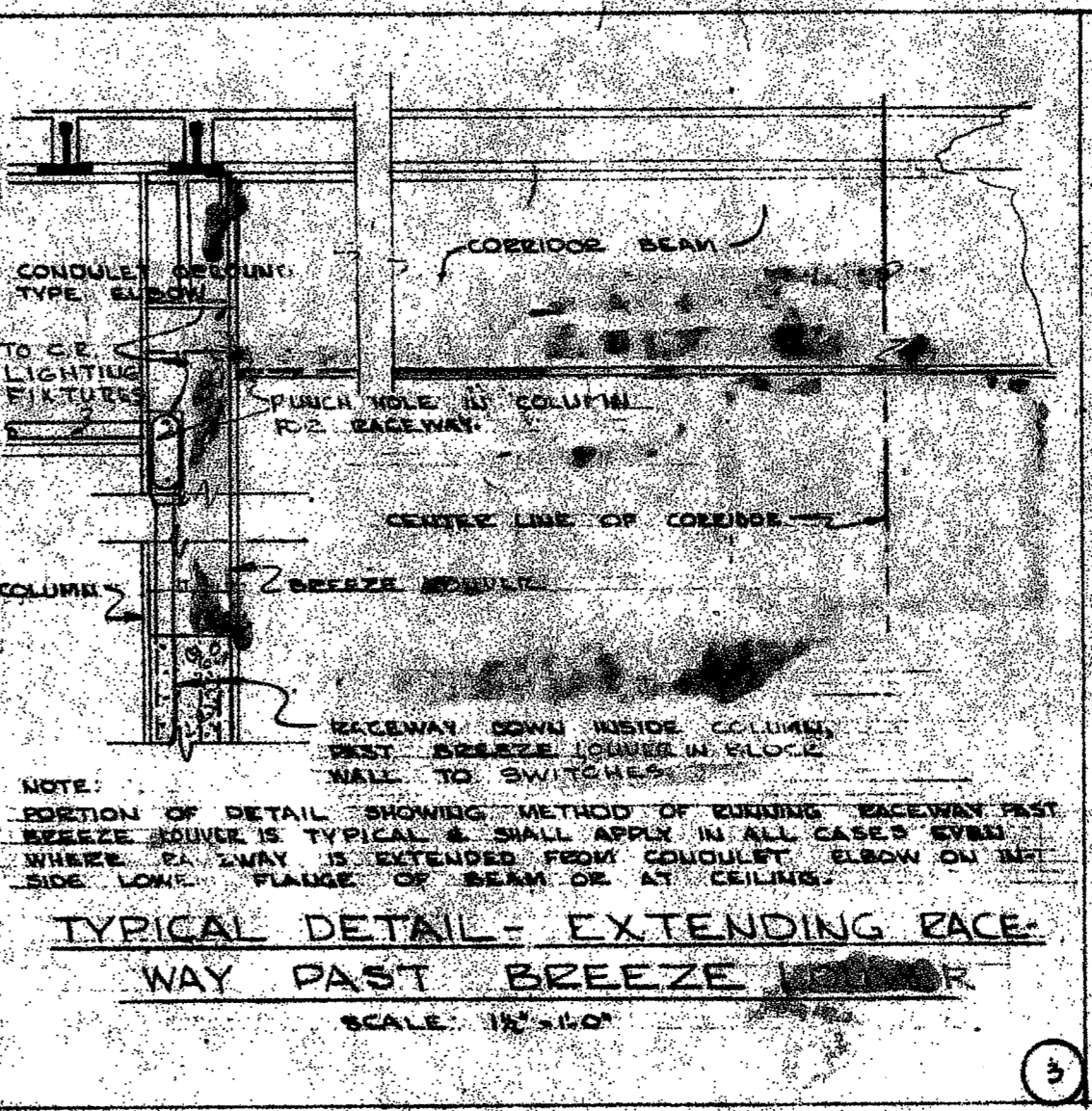
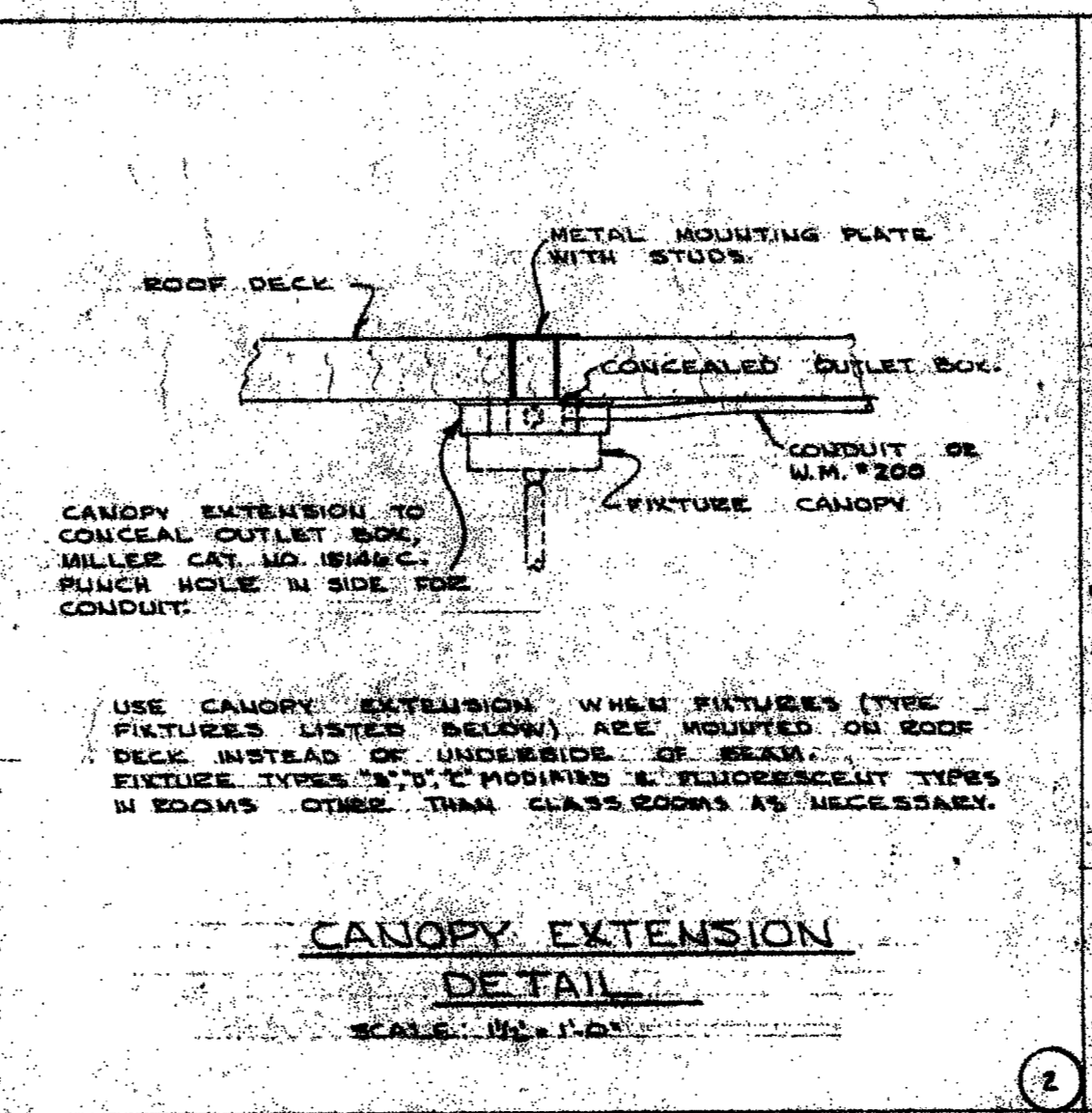
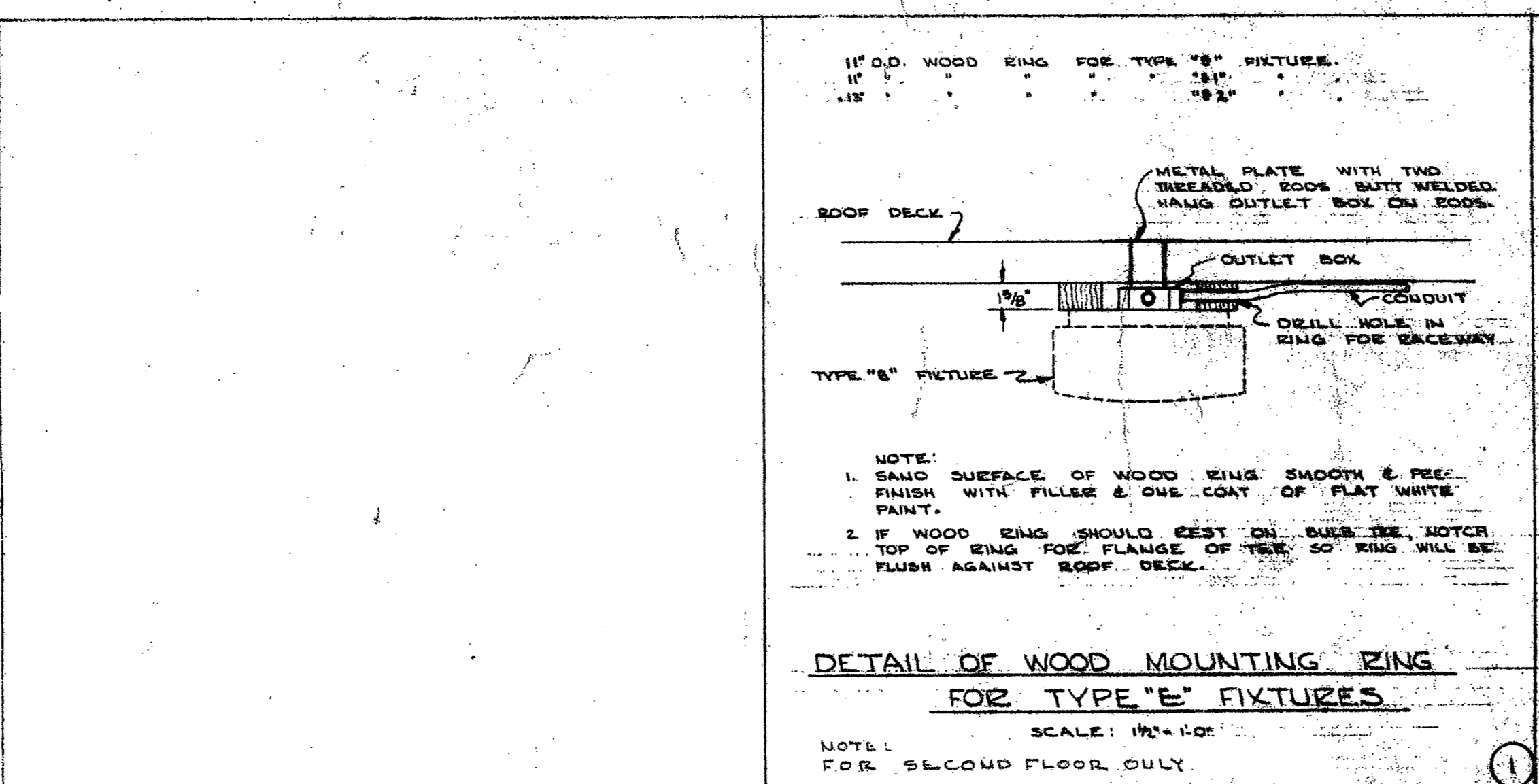


PART PLAN SHOWING WATER PIPING

PLUMBING-FLOOR & PART PLAN-DETAILS
ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARKE CO. BOARD OF EDUCATION
ATHENS, GEORGIA

NEWCOMB & BOYD
CONSULTING ENGINEERS
1205 SPRING STREET, N. W.
ATLANTA, GEORGIA

SYMBOL	LEGEND
○	CEILING INCANDESCENT OUTLET.
□	CEILING FLUORESCENT OUTLET.
○	WALL MOUNTED OUTLET.
⊕	OUTLET ON EMERGENCY SYSTEM.
⊗	EXIT SIGN OUTLET, CEILING MOUNTED.
⊗	EXIT SIGN OUTLET, WALL MOUNTED.
⊙	CLOCK OUTLET M ⊙ MASTER CLOCK.
⊕	SPEAKER OUTLET WTD AT 8'-0" UNLESS NOTED.
⊕	DUPLEX RECEPTACLE OUTLET.
⊕	POLARIZED RECEPTACLE OUTLET.
⊕	UTILITY BOX.
⊕	WALL MTD JUNCTION BOX ⊕ CEILING MTD.
⊕	MOTOR, H.P. INDICATED.
⊕	UNIT HEATER.
⊕	MOTORIZED VALVE.
⊕	DISCONNECT SWITCH.
⊕	MOTOR CONTROLLER.
⊕	PROGRAM BELL.
⊕	FIRE ALARM HORN.
⊕	FIRE ALARM STATION.
⊕	LIGHTING PANEL.
⊕	PUBLIC ADDRESS TERMINAL CABINET.
⊕	THERMOSTAT OUTLET & WALL SWITCH.
⊕	CONDUIT TEE
⊕	WALL SWITCH 3S 2WAY 24 AWAY
⊕	KEY OPERATED WALL SWITCH.
⊕	TELEPHONE OUTLET.
⊕	WEATHER HEAD & SERVICE BACK.
⊕	RACEWAY CONCEALED IN WALLS OR CEILING.
⊕	RACEWAY CONCEALED IN FLOOR.
⊕	EXPOSED RACEWAY.
⊕	WIREMOLD.
⊕	FLOOR RECEPTACLE OUTLET
⊕	FLOOR TELEPHONE OUTLET
⊕	PROGRAM BELL PUSHBUTTON STATION



- GENERAL NOTES:
- WHERE SPEAKERS & DUPLEX RECEPTACLES ARE SHOWN ADJACENT, THEY BOTH SHALL BE MTD ON & OF C.E.
 - WHERE TWO OR MORE CONDUITS ARE SHOWN ON DRAWINGS AS TERMINATING IN SPEAKER OUTLET, CLOCK OUTLET, FA HORN, PROGRAM BELL OR WHERE THREE OR MORE CONDUITS TERMINATE IN ONE WALL SWITCH, INSTALL A FLUSH MTD JUNCTION BOX DIRECTLY BENEATH THAT OUTLET (6" ABOVE FL) AND EXTEND TO OUTLET WITH SINGLE CONDUIT.
 - ALL CORRIDOR LIGHTING FIXTURES SHALL BE TYPE "E" UNLESS NOTED OTHERWISE.
 - ALL DISCONNECT SWITCHES SHALL BE TYPE "E" UNLESS NOTED OTHERWISE.

CHARLES F. HOWE
ELECTRICAL ENGINEER
1100 CANTON ST. S.W.
ATLANTA, GA.



ELECTRICAL - DETAILS

ADDITION TO BROAD STREET ELEM. SCHOOL

CLARK CO. BOARD OF EDUCATION
ATLANTA, GEORGIA

AECK ASSOCIATES ARCHITECTS
ATLANTA
ONE FORTY BEACH DRIVE

HUDSON SHEFFER
ASSOCIATE ARCHITECTS

DATE: 7-5-71
BY: [Signature]
CHECKED: [Signature]
SCALE: 1/4" = 1'-0"

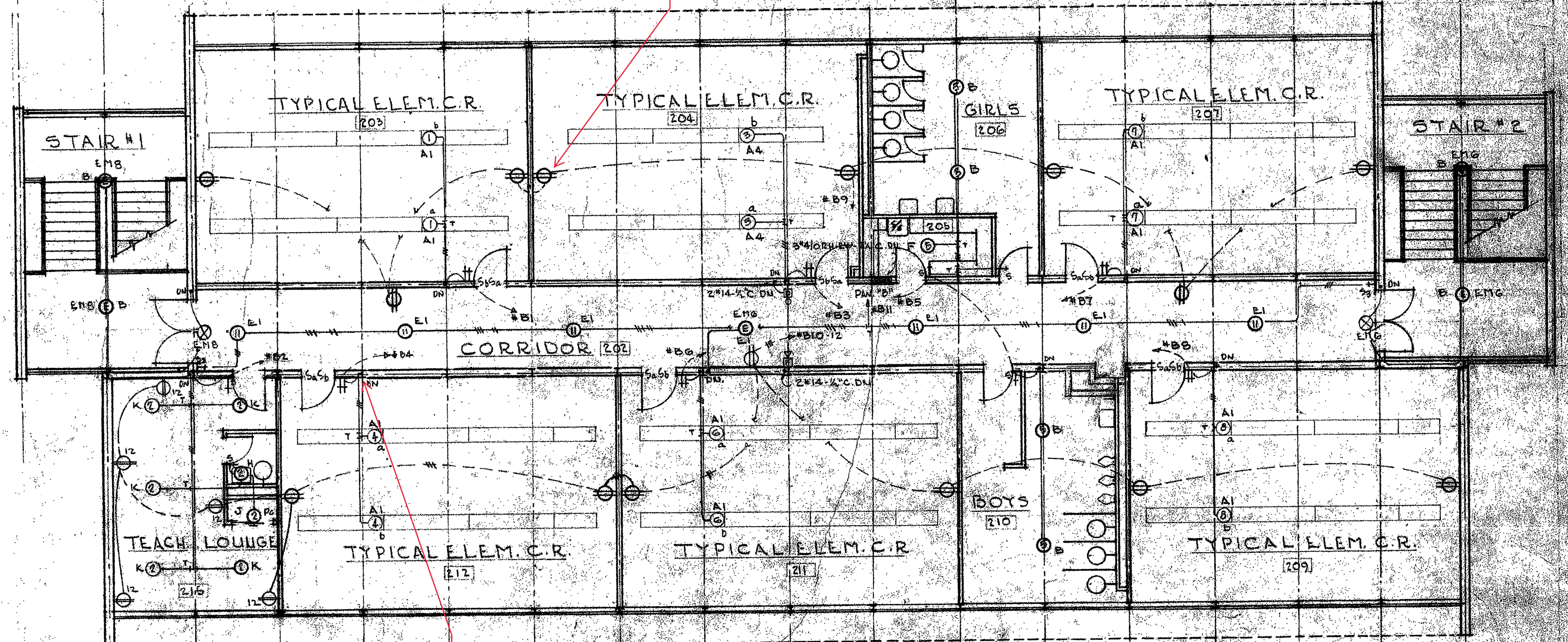
EXISTING POWER SERVICE IS UNDERSIZED AND OUTDATED

QUANTITY OF RECEPTACLES DOES NOT MEET BUILDING CODE (ELECTRICAL)

MOUNTING HEIGHT OF LIGHT SWITCHES DOES NOT MEET CODE (ADA)

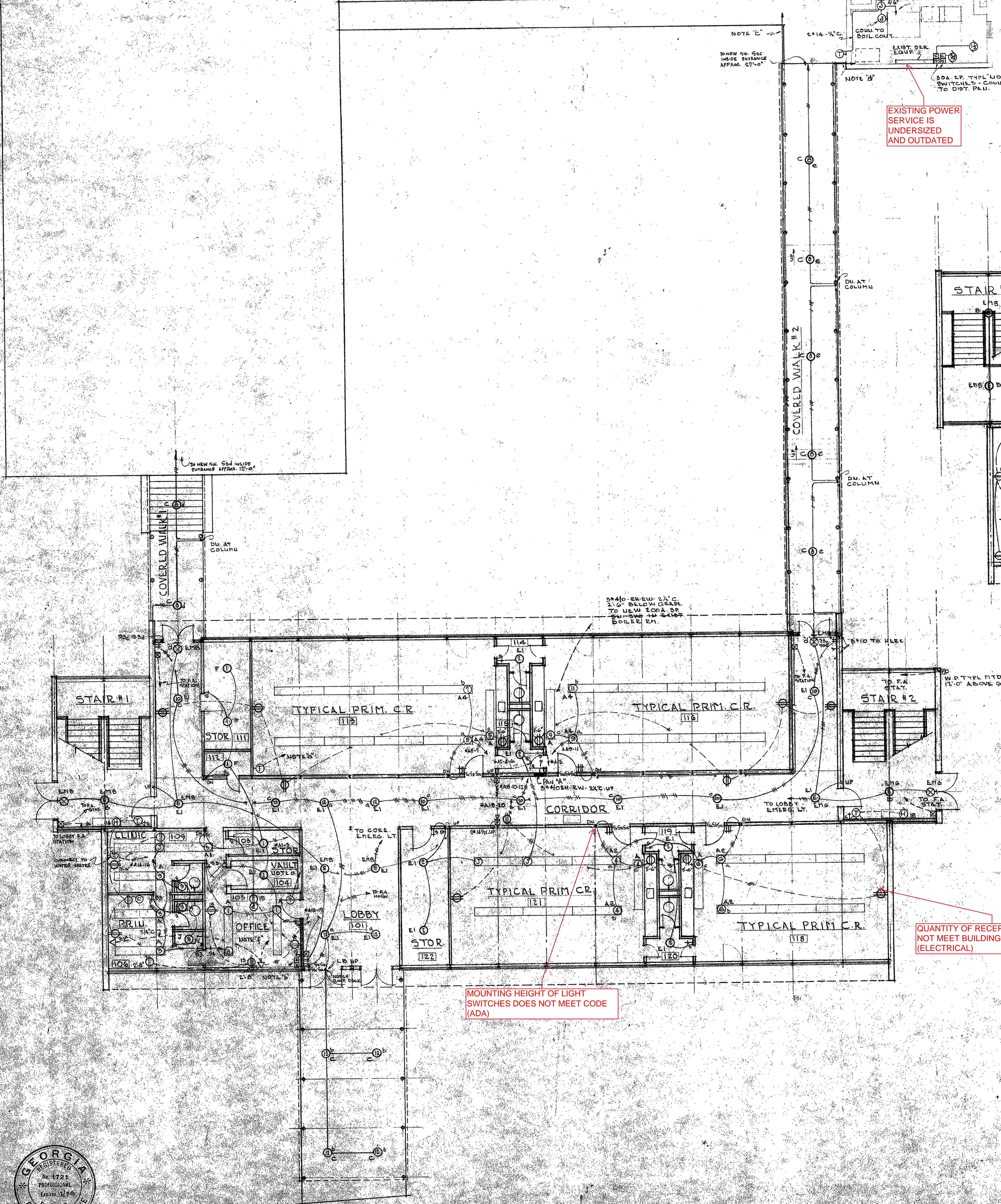
QUANTITY OF RECEPTACLES DOES NOT MEET BUILDING CODE (ELECTRICAL)

MOUNTING HEIGHT OF LIGHT SWITCHES DOES NOT MEET CODE (ADA)



SECOND FLOOR PLAN
1/8" = 1'-0"

- NOTES:
- 2 #14-4" C. to heating control panel in existing Boiler Room.
 - Fire Alarm Test Switch and Program Bell push button stations 4 #14-1/2" C. to Lobby Fire Alarm Station.
 - 2 #14-1/2" C. to existing circuit #2-2 at Fire Alarm Station just inside entrance - 2 #14-1/2" C. to Program Bell approximately 17'-0" inside entrance.
 - Circuit #116-2-3 #10-3/4" C. to spare circuits in Emergency Lighting Panel. Replace existing 5 circuit panel with similar type B circuit panel and re-connect circuits.
 - Raceways in the ceiling of the first floor may be run in concrete fill. If structural steel base, where raceways cross structural steel ceiling tabs, in Second Floor slab, notch tabs to accept raceways and provide a minimum cover of concrete 1" above raceways. Notch directly over duct only.



FIRST FLOOR PLAN
1/8" = 1'-0"



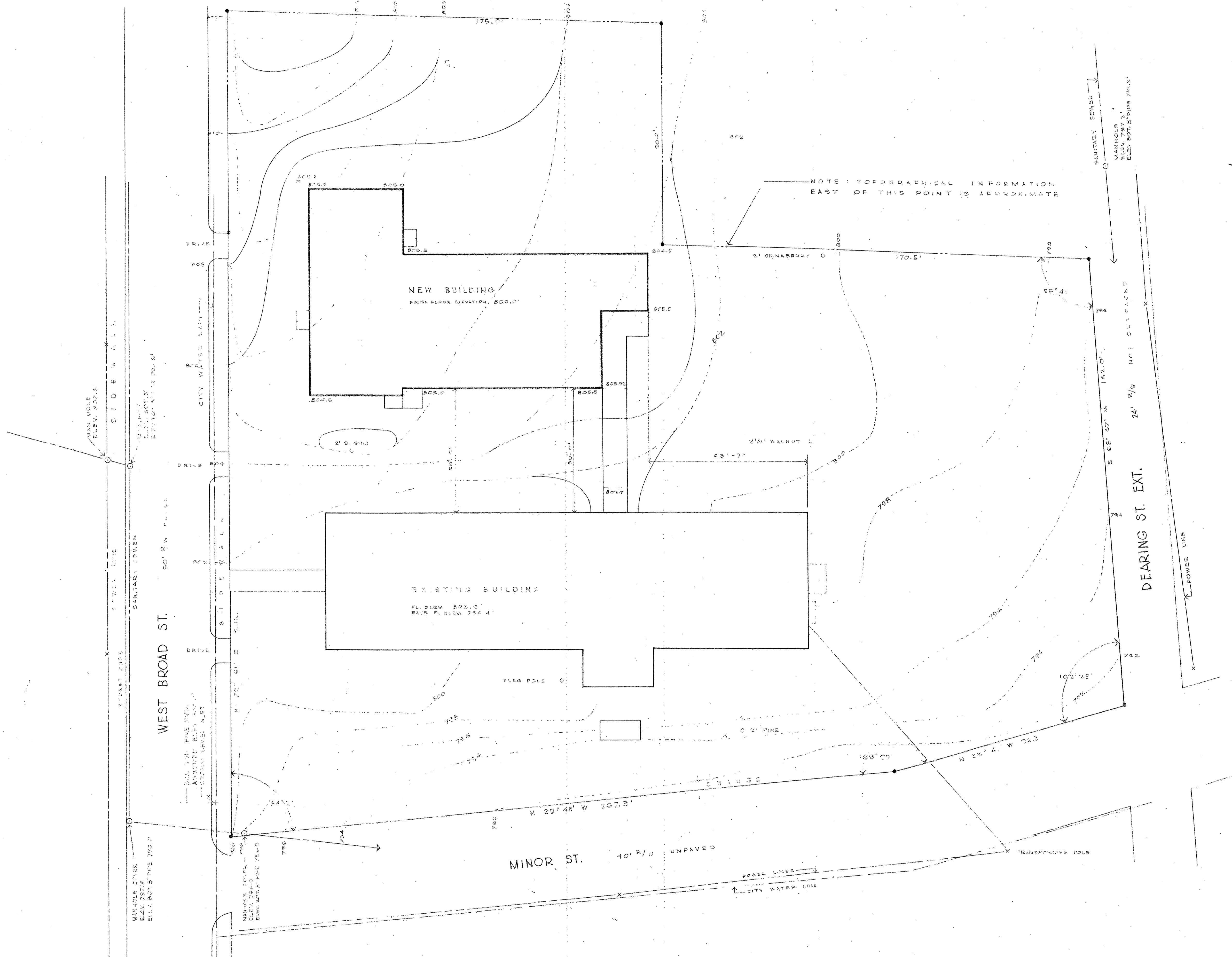
CHARLES F. HOWE
ELECTRICAL ENGINEER
ATLANTA, GEORGIA

FLOOR PLAN - ELECTRICAL
ADDITION TO
BROAD STREET ELEM. SCHOOL
CLARK COUNTY BOARD OF EDUCATION
ATLANTA, GEORGIA

A ECK ASSOCIATES ARCHITECTS ATLANTA
ONE FORTY PEACHTREE

HUDSON-SHEPPER ASSOCIATE ARCHITECTS

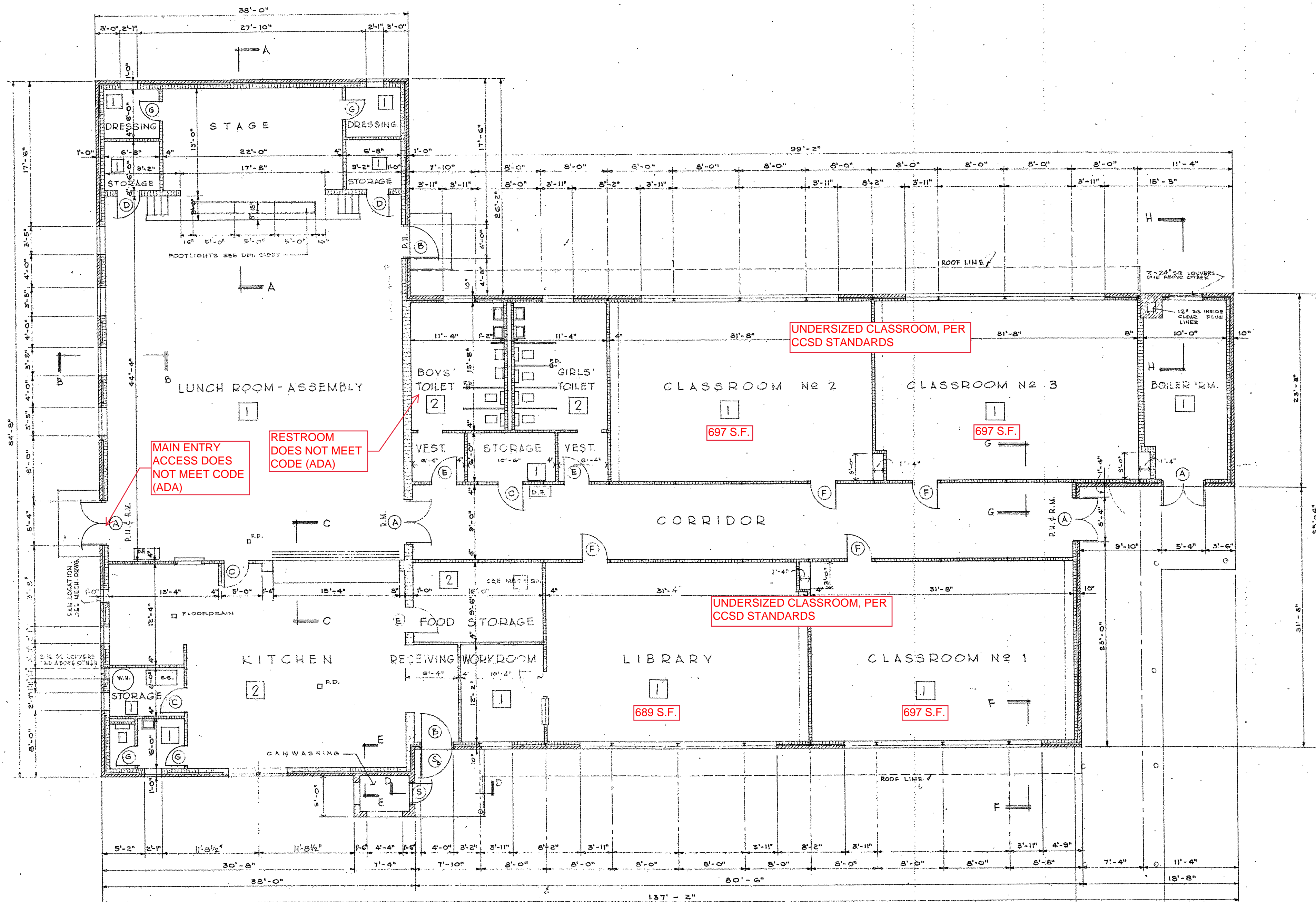
HOWE 12/28/88	HOWE 12/28/88	HOWE 12/28/88	HOWE 12/28/88
EP	EP	EP	EP



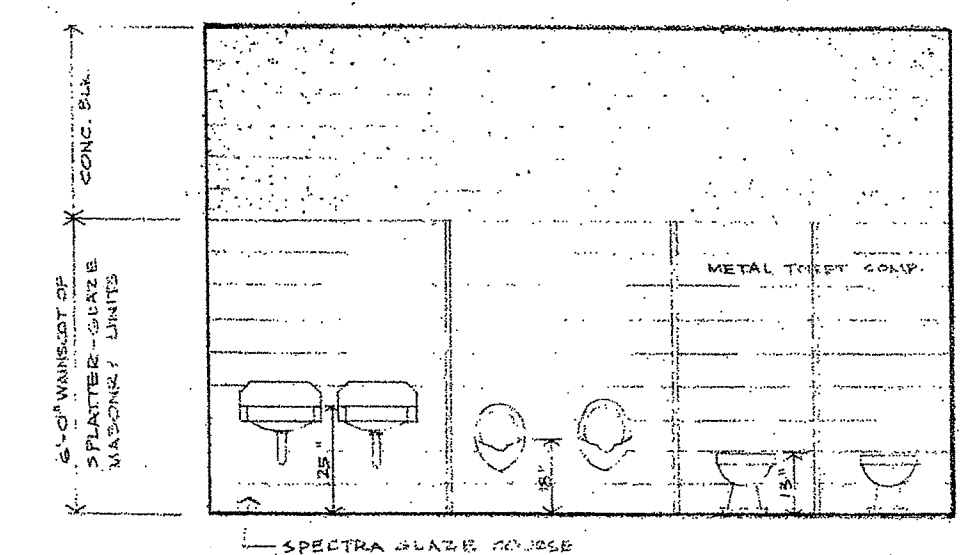
SITE PLAN
SCALE: 1" = 20'

IMPROVEMENT NO. 50-3

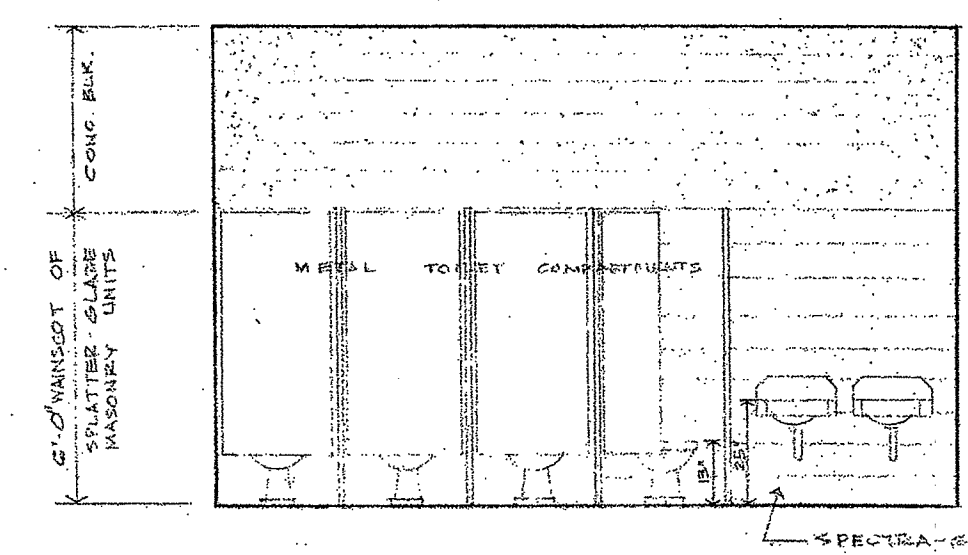
ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA	COMM. NO. 5408
HEERY AND HEERY ARCHITECTS C. WILMER HEERY, A.I.A. G.A. REGISTRATION NO. 2231, NO. 385 GEORGE T. HEERY, A.I.A. G.A. REGISTRATION NO. 297	DATE 25 SEPT 1964
ATHENS, GA. AND ATLANTA, GA.	DRAWN BY GFR.
ISSUED AT 1722 PEACHTREE ST. NW ATLANTA, GEORGIA	CHECKED BY GTH
	SHEET NO. 1
	SHEETS 1



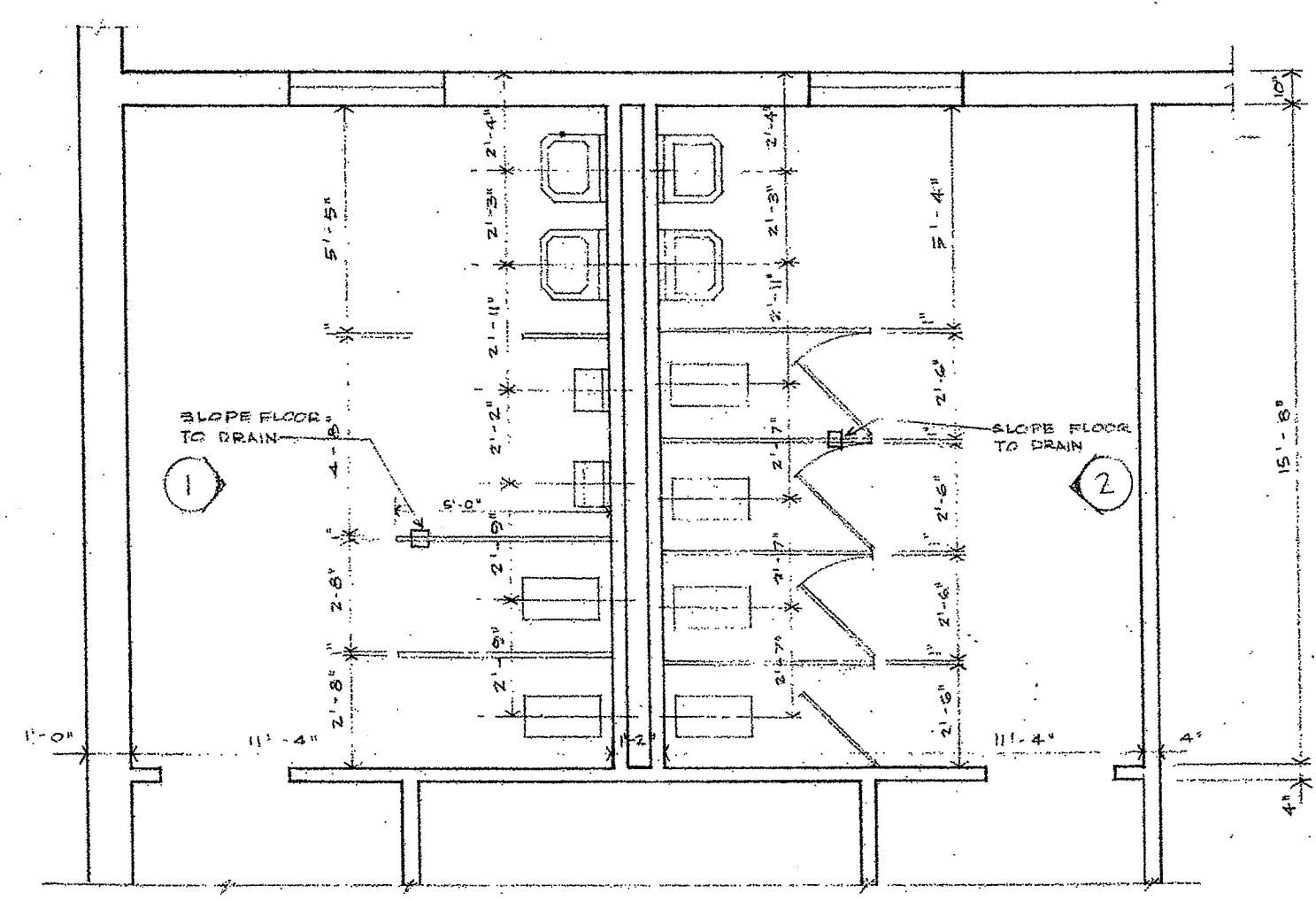
FLOOR PLAN
SCALE: 1/8" = 1'-0"



ELEVATION ①
SCALE: 1/4" = 1'-0"



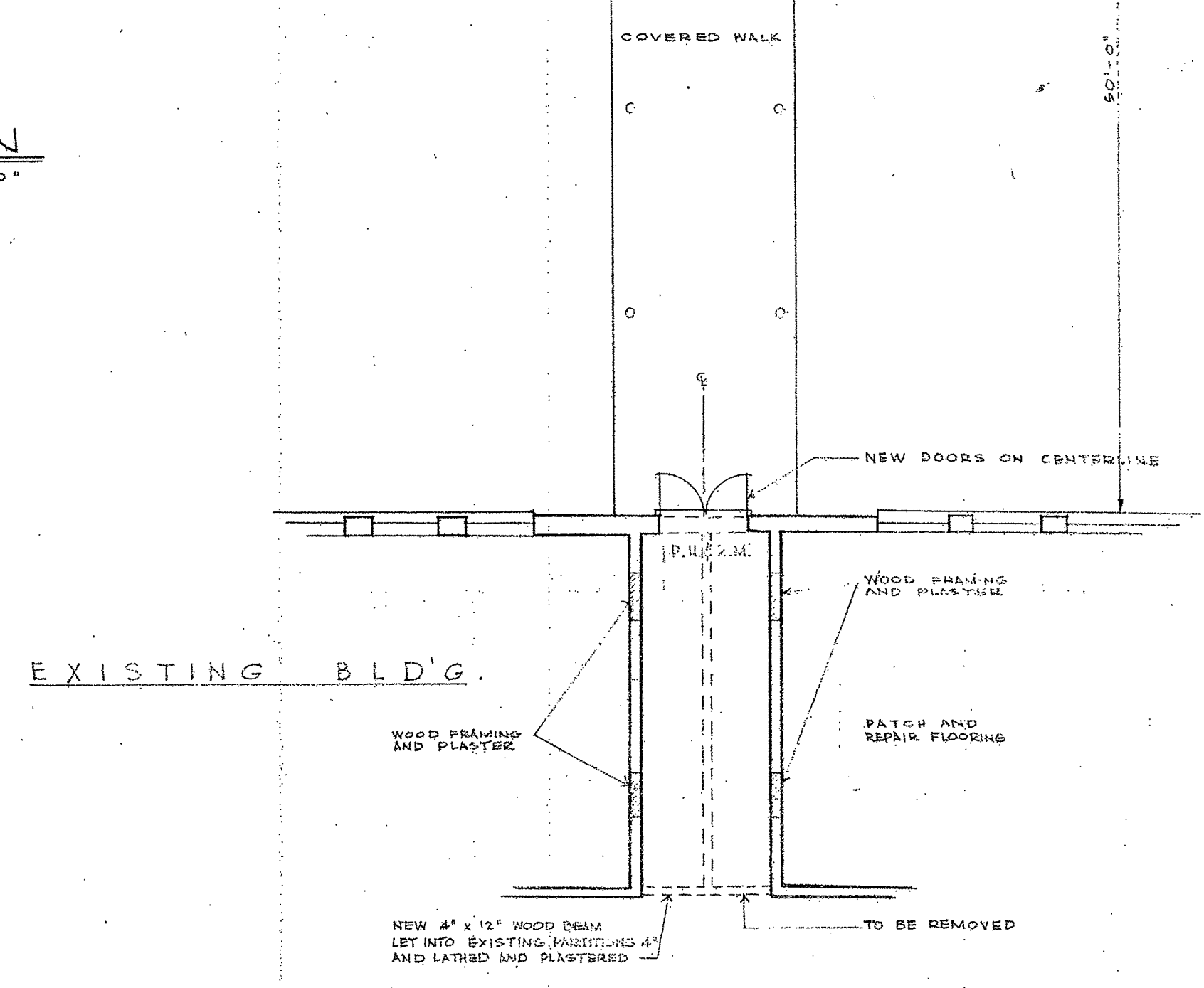
ELEVATION ②
SCALE: 1/4" = 1'-0"



TOILET NO 1
SCALE: 1/4" = 1'-0"

TOILET NO 2
SCALE: 1/4" = 1'-0"

FINISH SCHEDULE					
FINISH TYPE	FLOOR	BASE	WAINSCOT	WALLS	CEILING
①	ASPHALT TILE	ASPHALT TILE	NONE	PAINTED CONC. BLOCK	EXPOSED ROOF DECK
②	STEEL TRVL CONC. W/ HARDENER	SPECTRA-GLAZE	6'-0" SPATTER-GLAZE	DO	DO



FLOOR PLAN
TOILET ROOMS

ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL
ATHENS PUBLIC SCHOOLS
ATHENS, GEORGIA

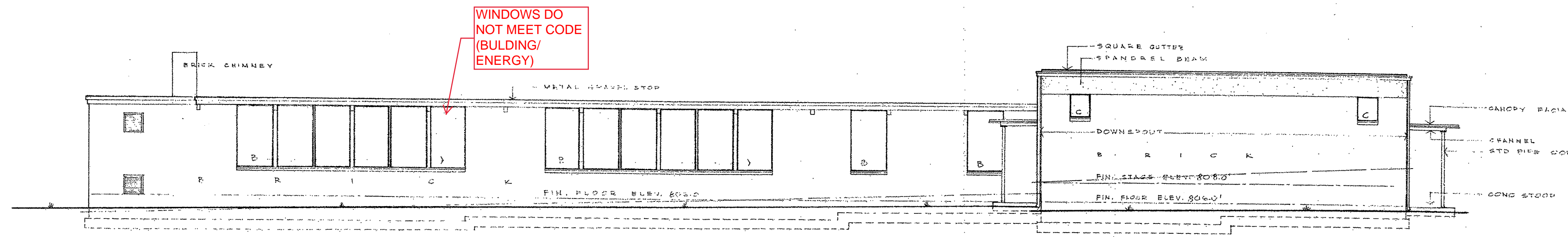
COMM. NO. 5408
DATE 25 SEPT 1954
DRAWN BY GTH GFR
CHECKED BY GTH

HEERY AND HEERY ARCHITECTS
C. WILMER HEERY, A.I.A.
GEORGE T. HEERY, A.I.A.
ATHENS, GA. AND ATLANTA, GA.

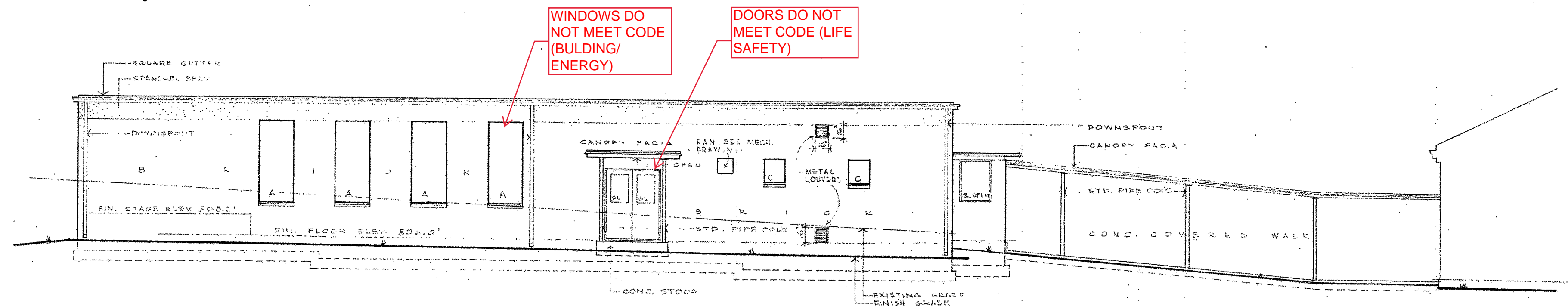
ISSUED AT 1722 PEACHTREE ST. N.W. ATLANTA, GEORGIA

SHEET NO. 2

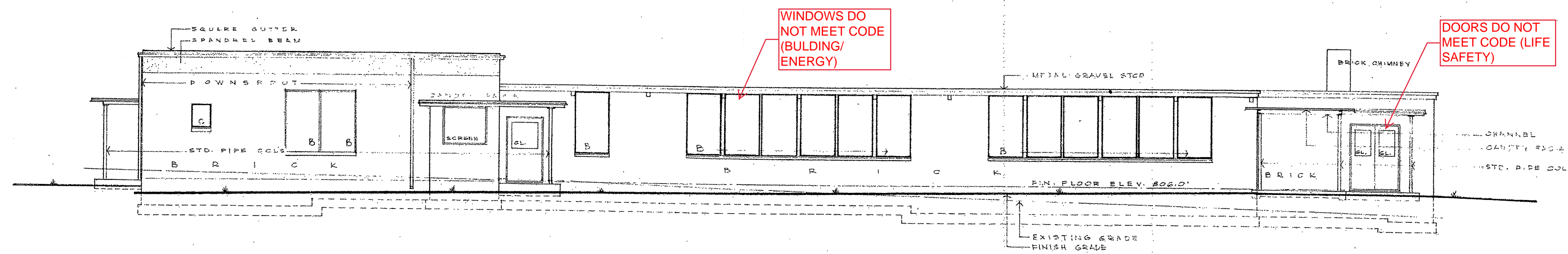
George T. Heery



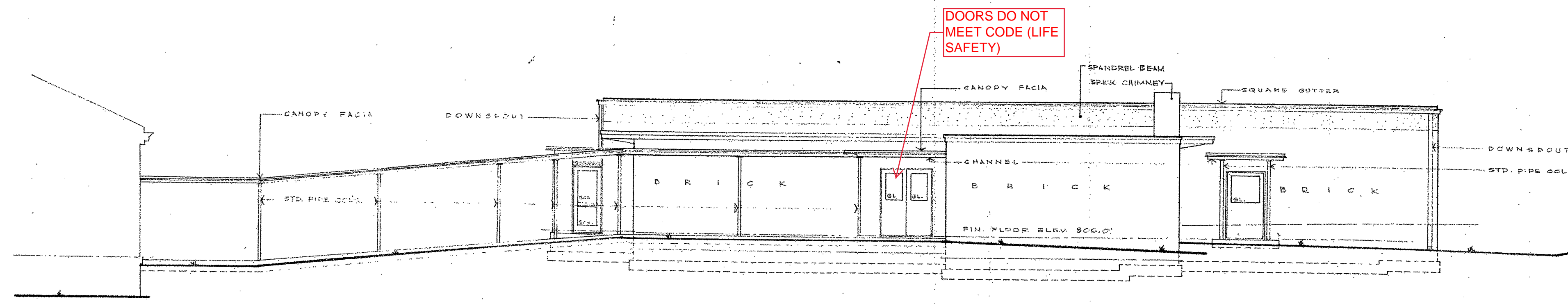
EAST ELEVATION
SCALE: 1/8" = 1'-0"



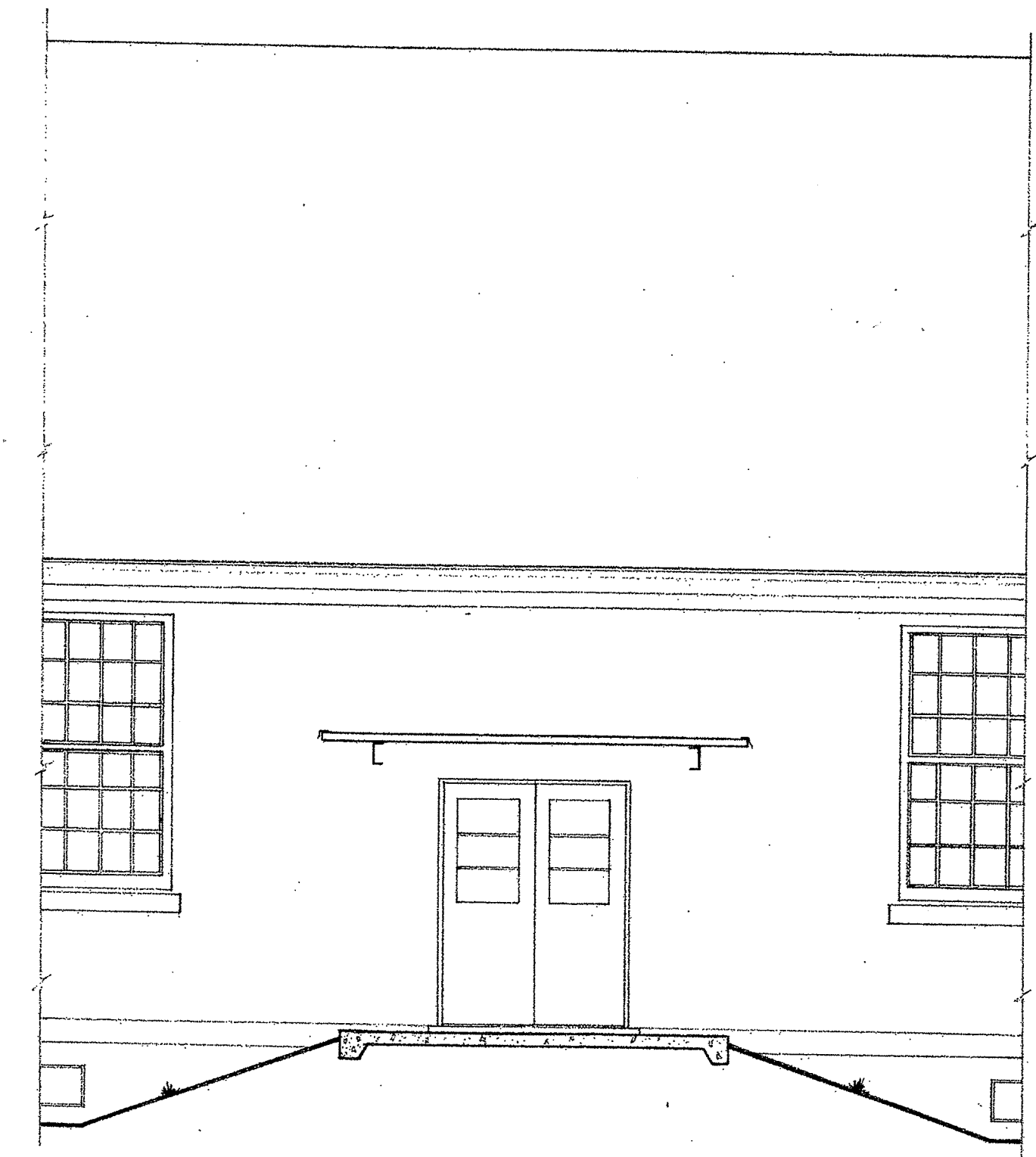
NORTH ELEVATION
SCALE: 1/8" = 1'-0"



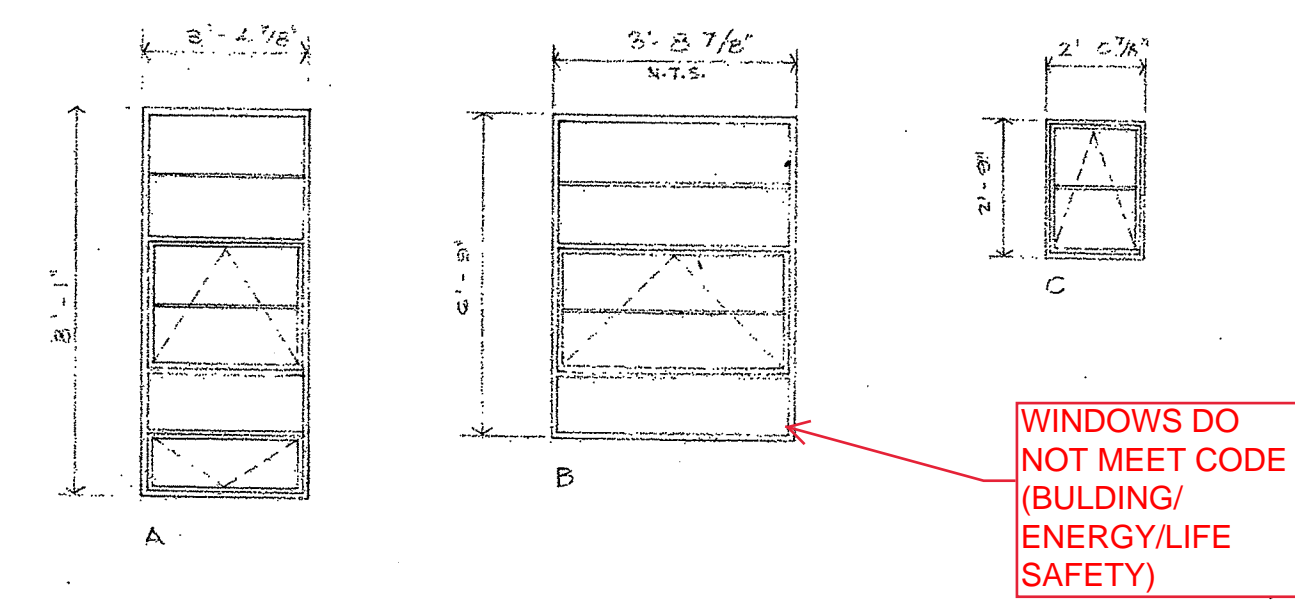
WEST ELEVATION
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



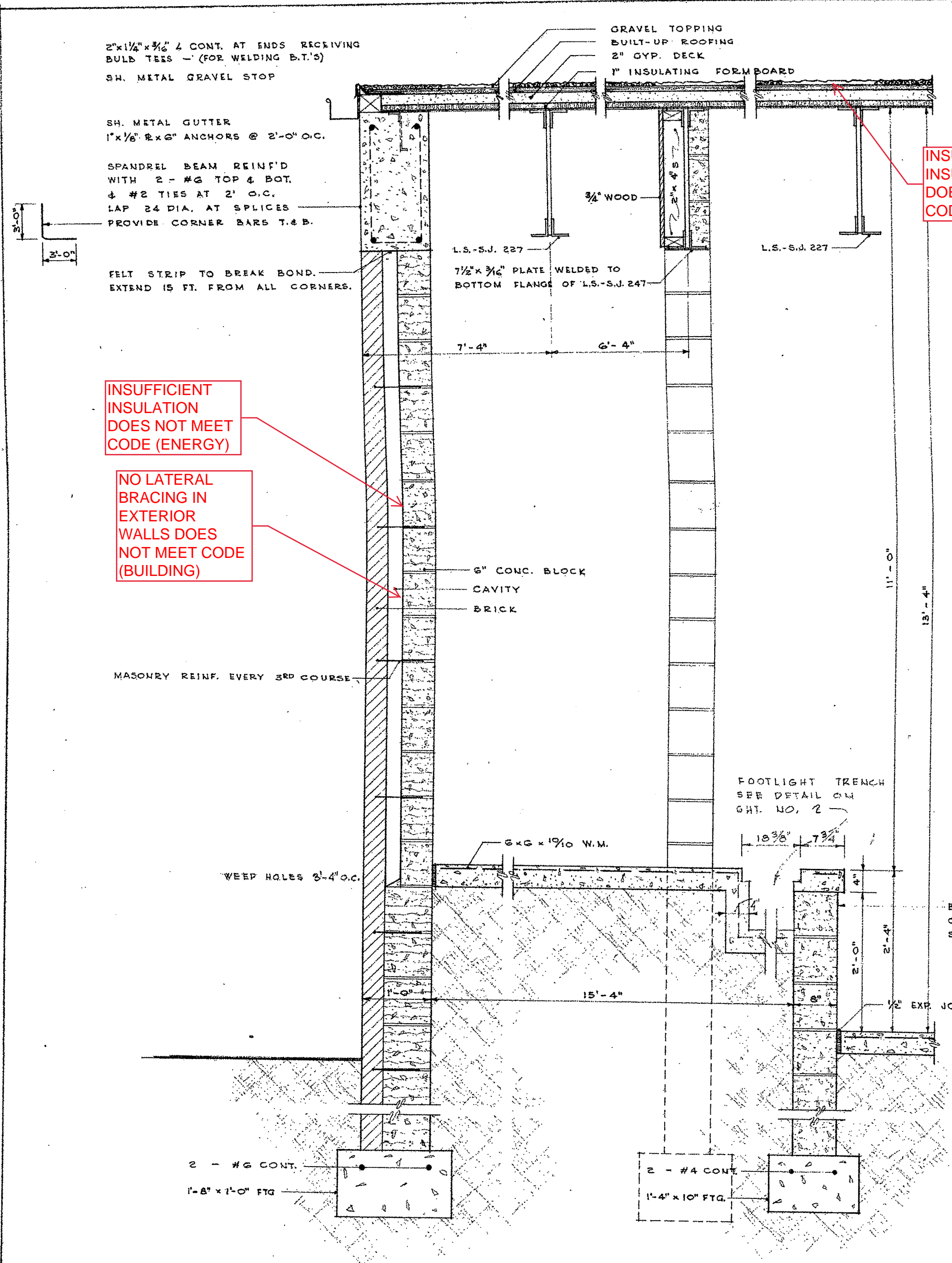
PARTIAL ELEVATION
SCALE: 1/4" = 1'-0"



WINDOW SCHEDULE
SCALE: 1/4" = 1'-0"
NOTE: SCREENS FOR OPERATING VENTS IN KITCHEN, LUNCHROOM AND KITCHEN TOILETS

ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA	COMM. NO. 9408 DATE 25 SEPT 1954
HEERY AND HEERY ARCHITECTS C. WILMER HEERY, A.I.A. GEORGE T. HEERY, A.I.A. GA. REGISTRATION CERT. NO. 305 GA. REGISTRATION CERT. NO. 297 ATHENS, GA. AND ATLANTA, GA.	DRAWN BY GFR REJS CHECKED BY GTH THIS DRAWING AND ITS REPRODUCTIONS ARE THE PROPERTY OF THE ARCHITECTS.
ISSUED AT 1722 PEACHTREE ST. N.W. ATLANTA, GEORGIA	SHEET NO. 3

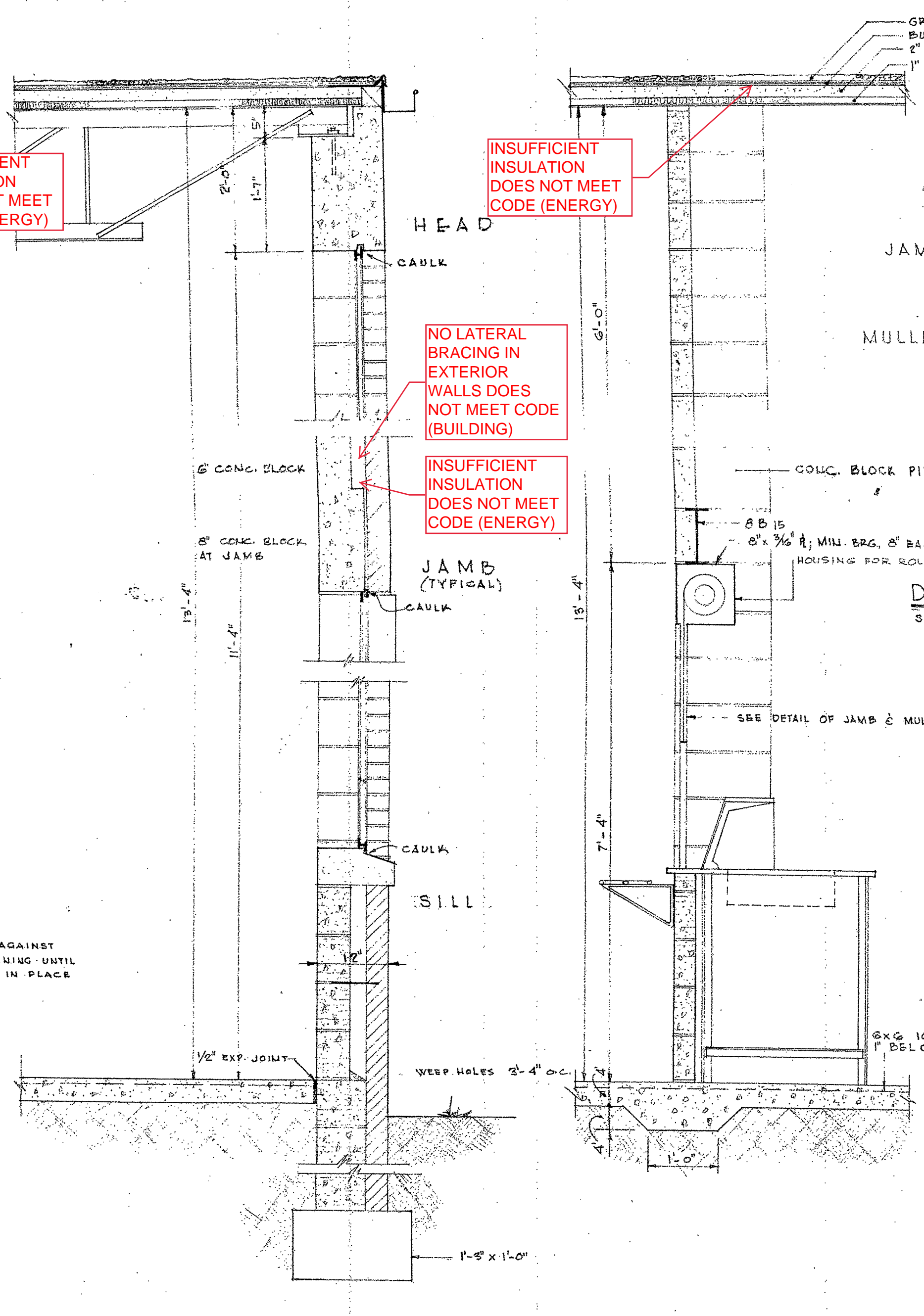
George T. Heery



INSUFFICIENT INSULATION DOES NOT MEET CODE (ENERGY)

INSUFFICIENT INSULATION DOES NOT MEET CODE (ENERGY)

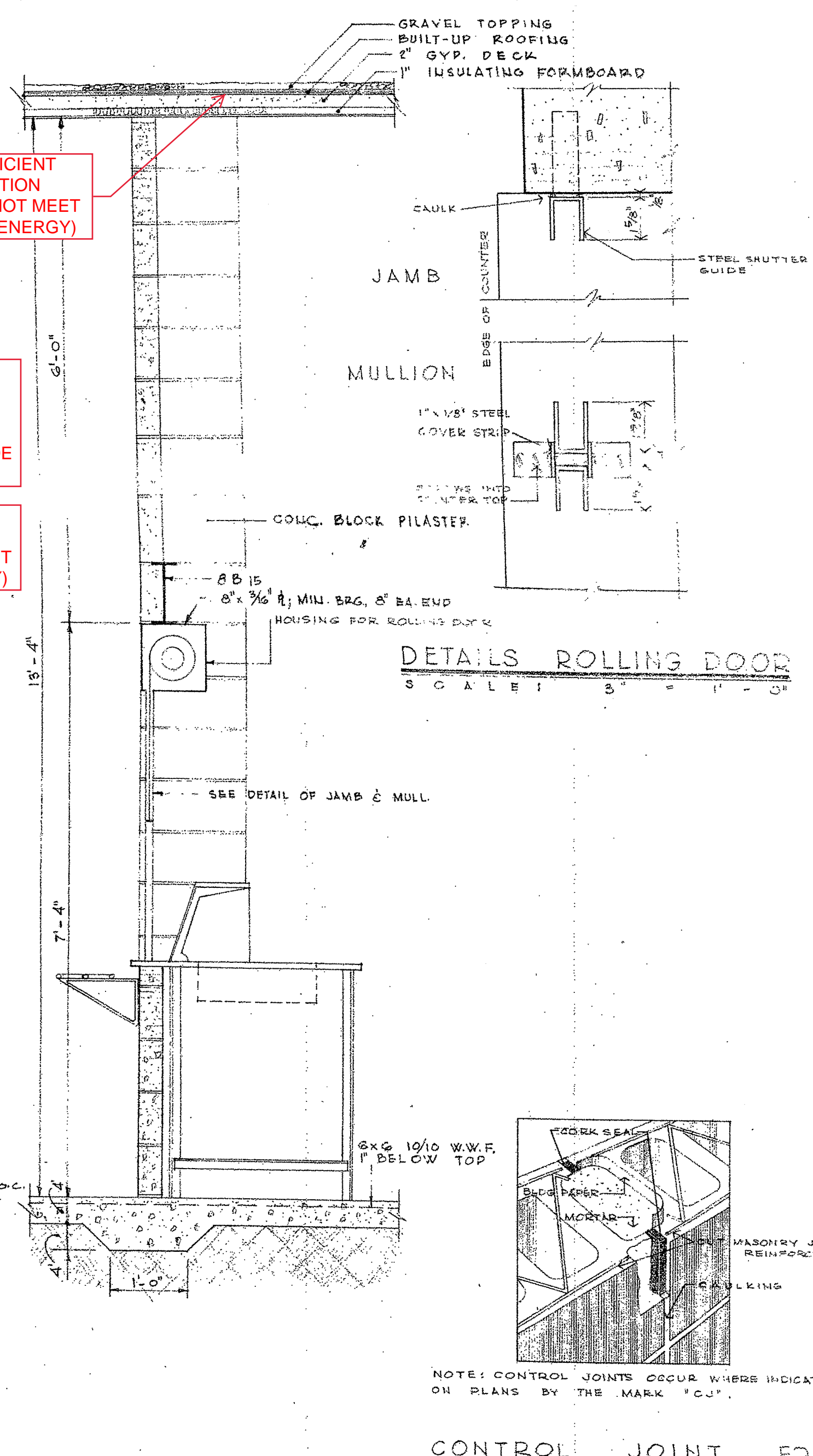
NO LATERAL BRACING IN EXTERIOR WALLS DOES NOT MEET CODE (BUILDING)



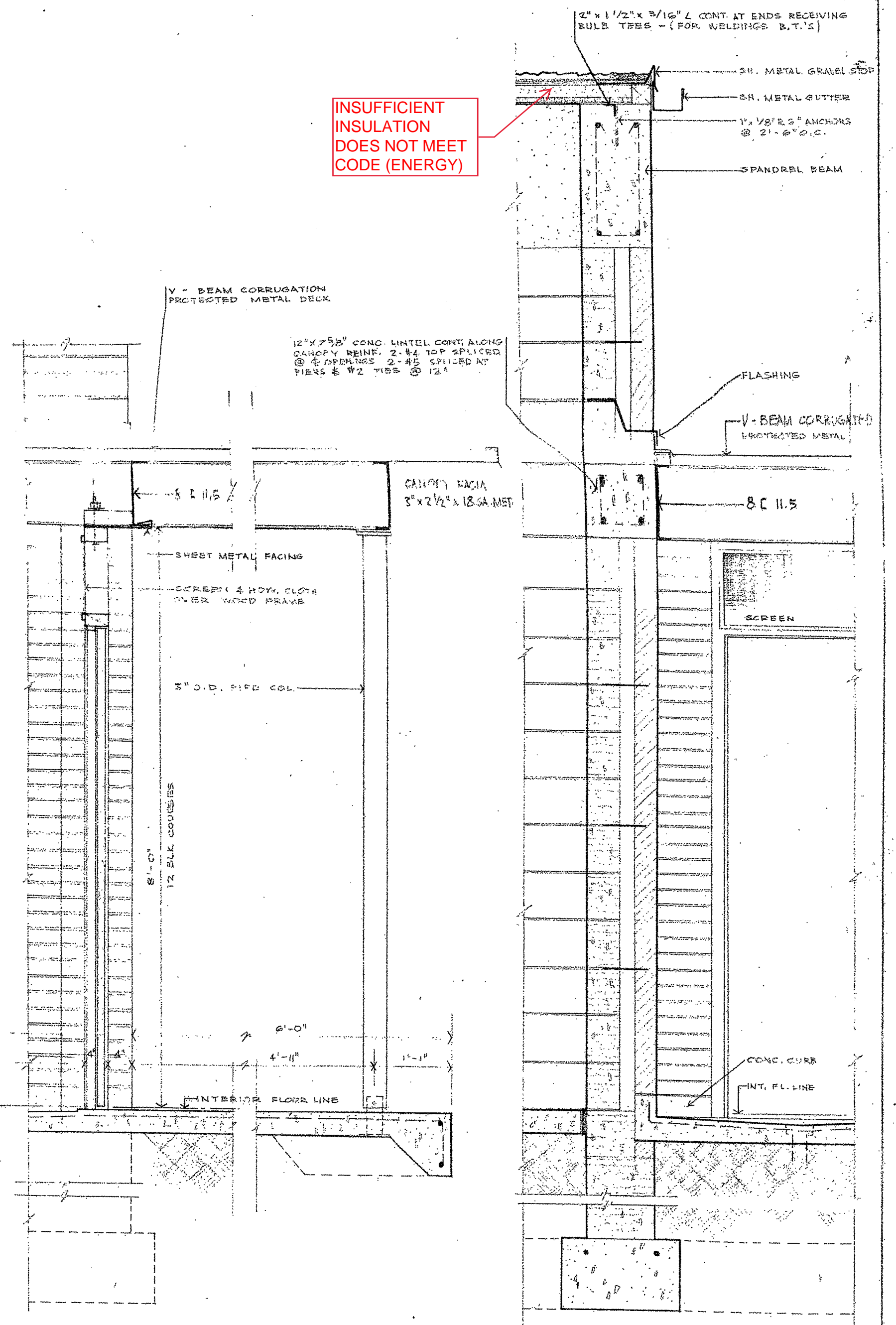
INSUFFICIENT INSULATION DOES NOT MEET CODE (ENERGY)

NO LATERAL BRACING IN EXTERIOR WALLS DOES NOT MEET CODE (BUILDING)

INSUFFICIENT INSULATION DOES NOT MEET CODE (ENERGY)



CONTROL JOINT FOR CONCRETE BLOCKS

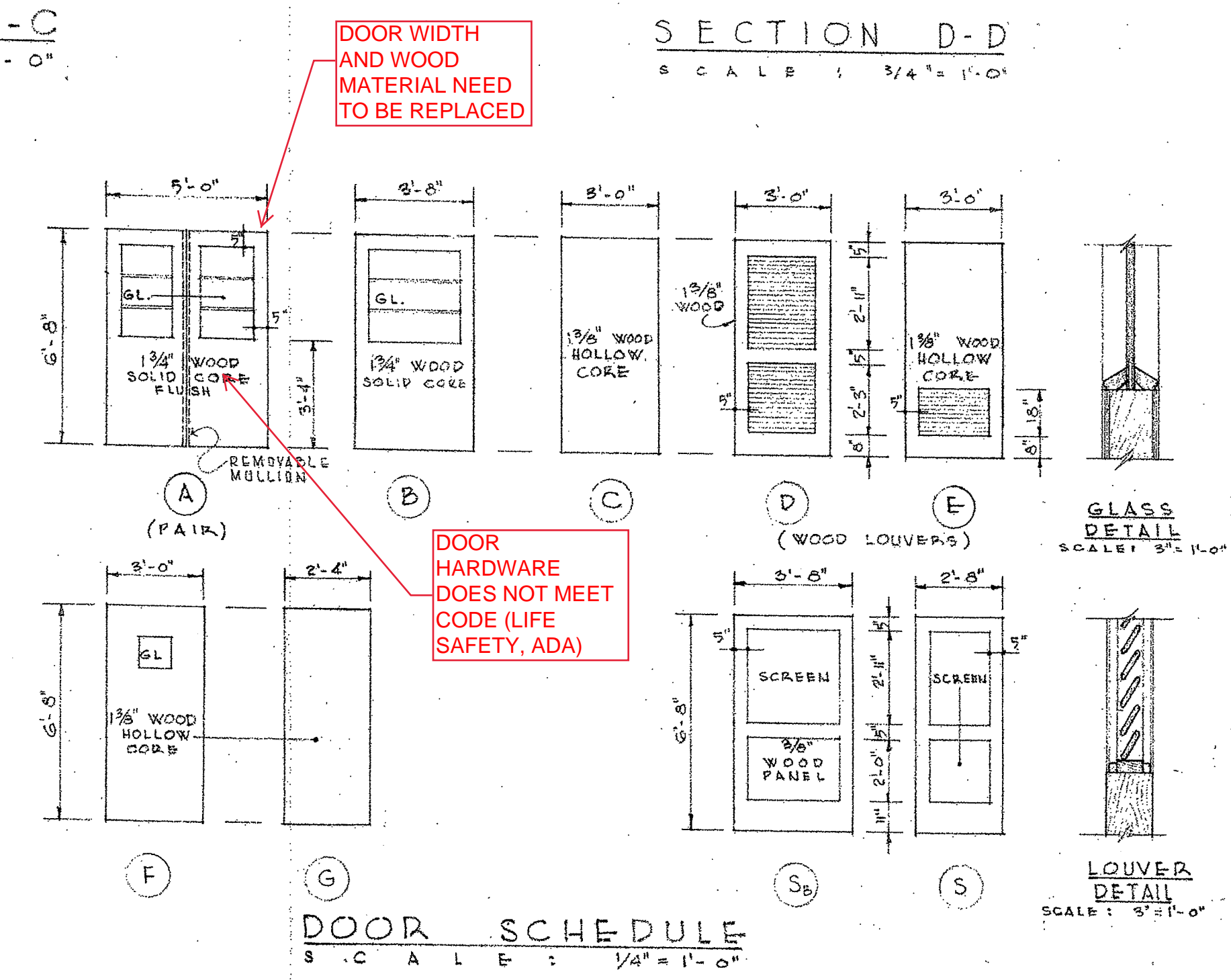
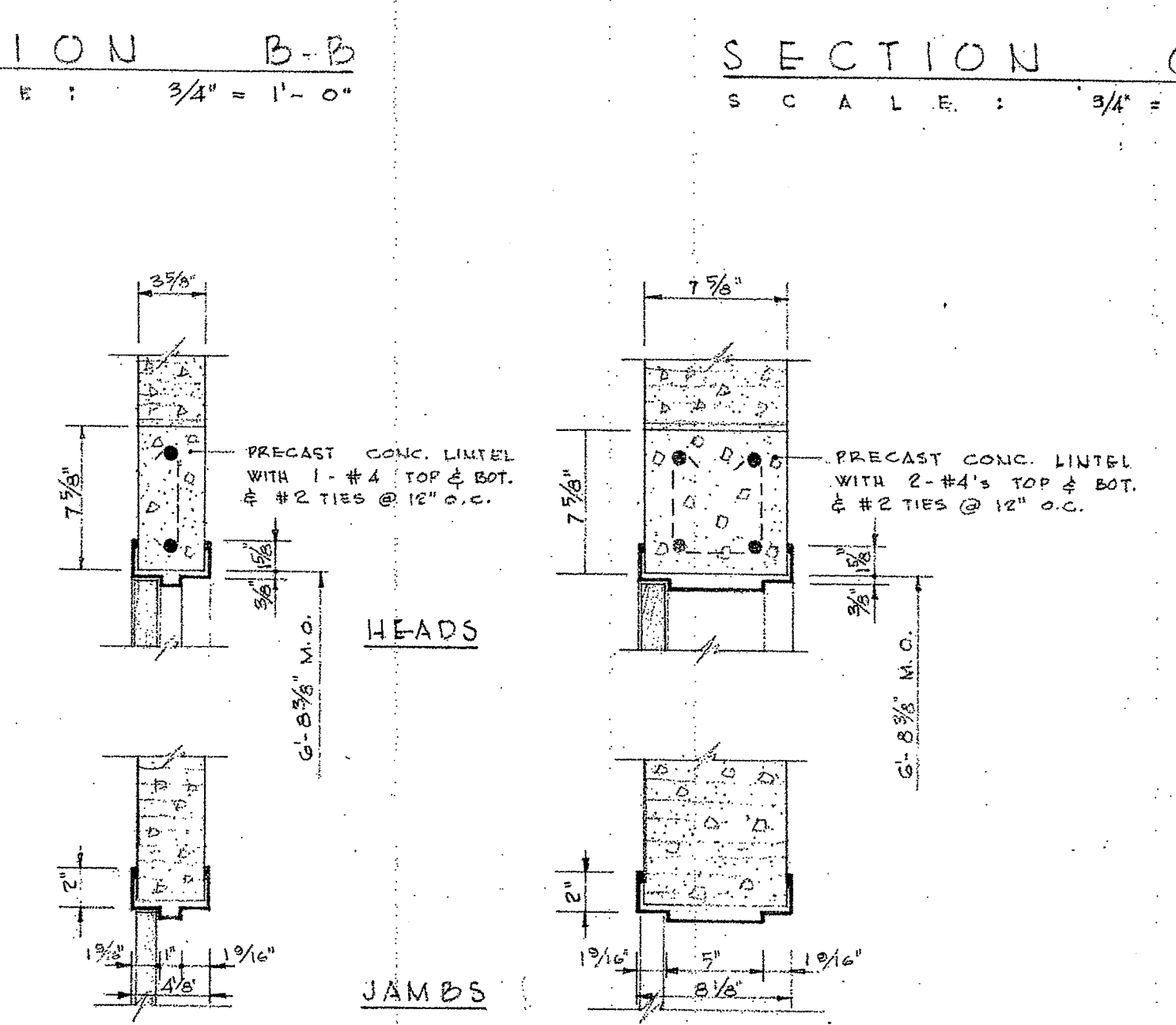
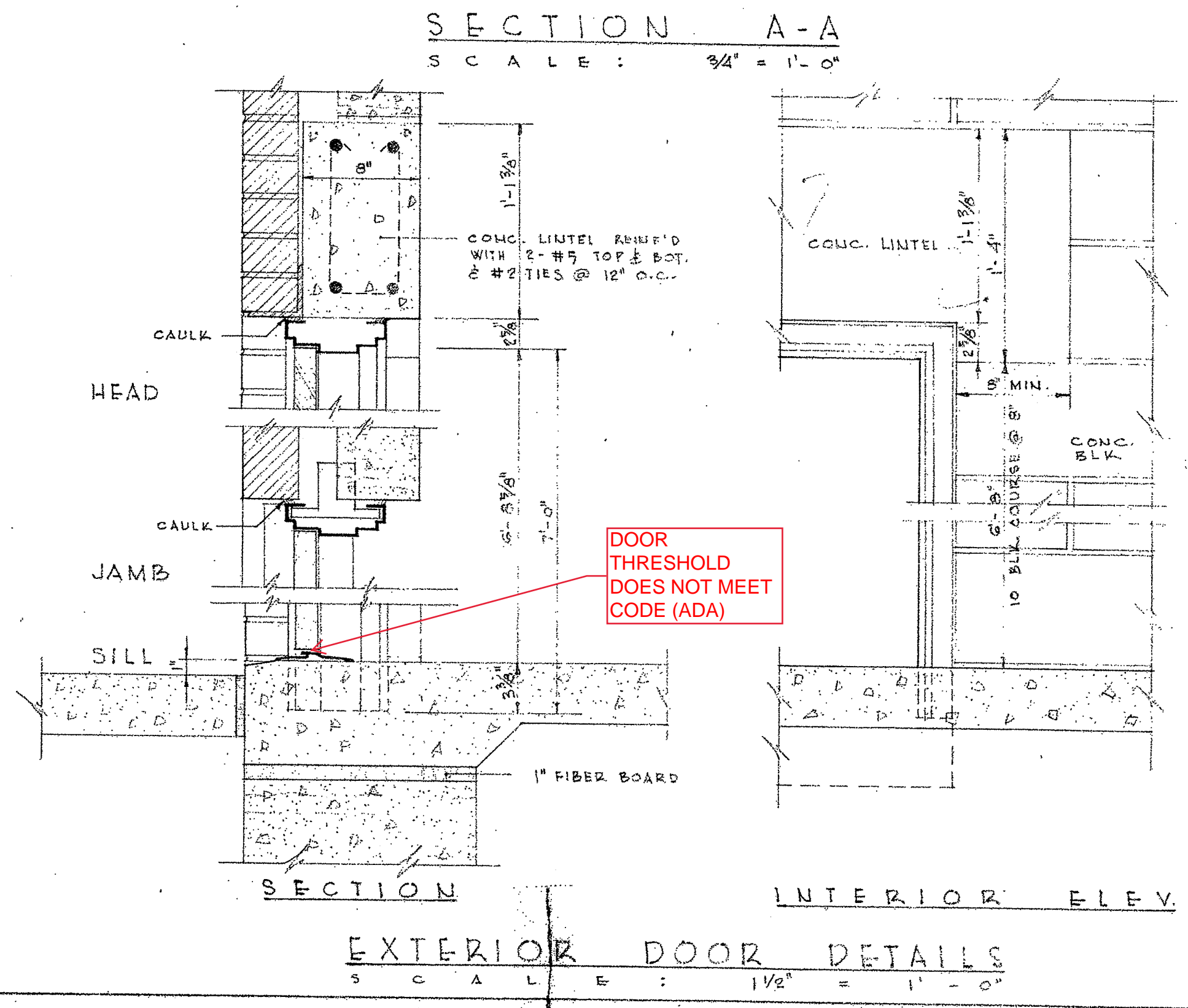


INSUFFICIENT INSULATION DOES NOT MEET CODE (ENERGY)

DOOR WIDTH AND WOOD MATERIAL NEED TO BE REPLACED

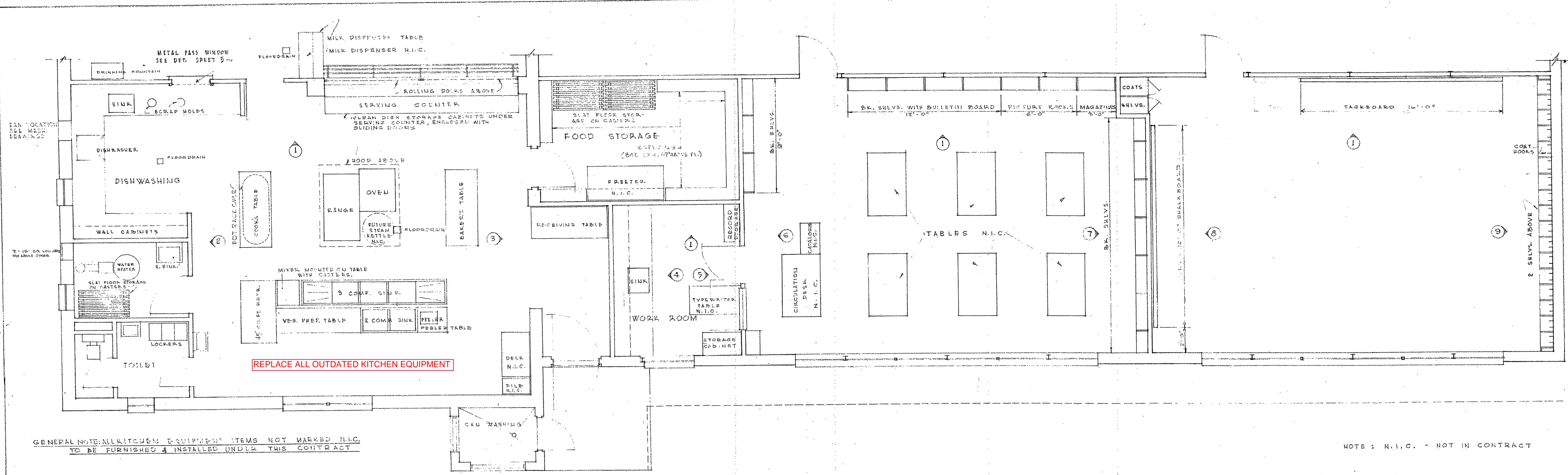
DOOR HARDWARE DOES NOT MEET CODE (LIFE SAFETY, ADA)

DOOR THRESHOLD DOES NOT MEET CODE (ADA)



DETAILS DOOR SCHEDULE

ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA	CONV. NO. 5408
	DATE 25 SEPT 1954
HEERY AND HEERY ARCHITECTS	DRAWN BY GFR GTH
C. WILMER HEERY, A.I.A. G.A. REGISTRATION CERT. NO. 305	CHECKED BY GTH
GEORGE T. HEERY, A.I.A. G.A. REGISTRATION CERT. NO. 797	
ATHENS, GA. AND ATLANTA, GA.	
ISSUED AT	SHEET NO. 4
1722 PEACHTREE ST. N.W. ATLANTA, GEORGIA	OF 11 SHEETS



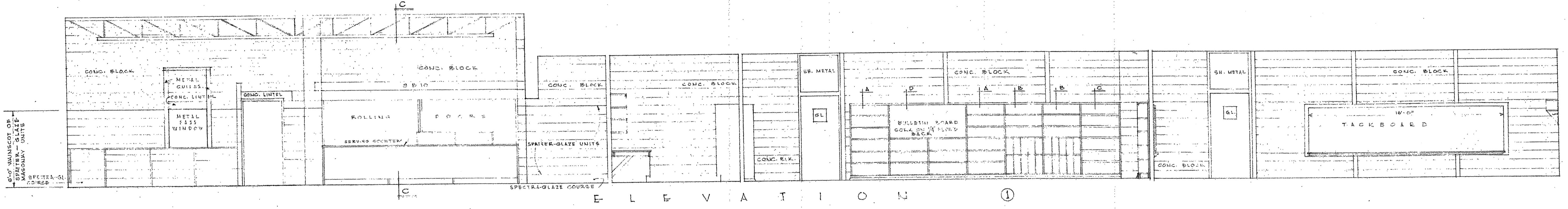
GENERAL NOTE: ALL KITCHEN EQUIPMENT ITEMS NOT MARKED N.I.C. TO BE FURNISHED & INSTALLED UNDER THIS CONTRACT

NOTE: N.I.C. - NOT IN CONTRACT

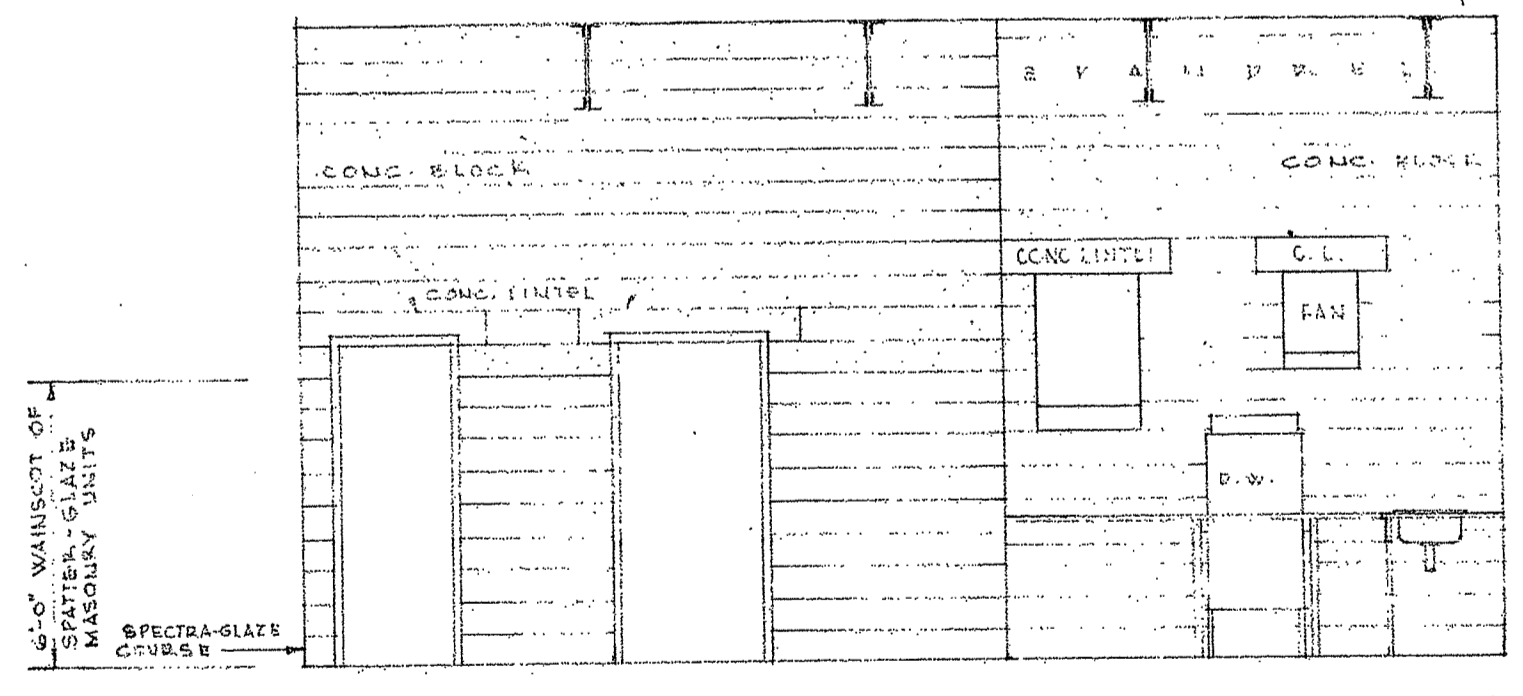
KITCHEN EQUIP. PLAN

LIBRARY

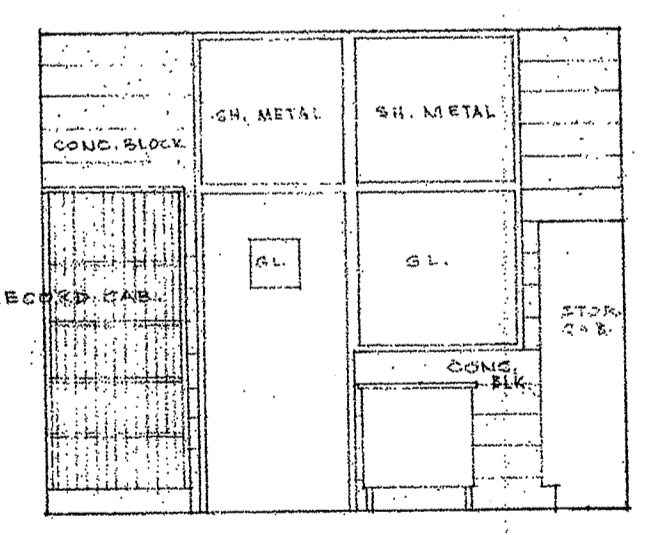
TYPICAL CLASSROOM



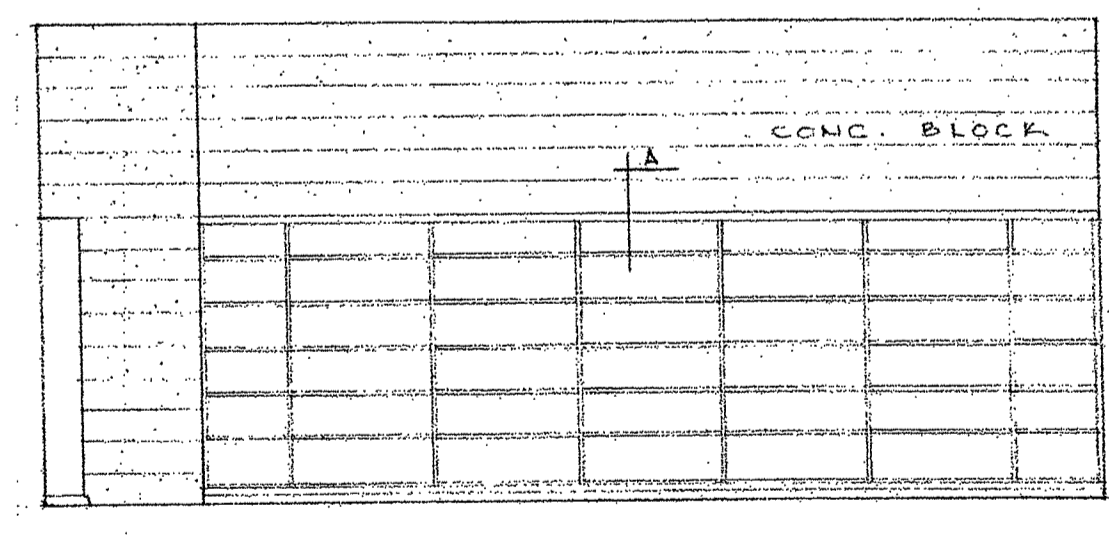
ELEVATION 1



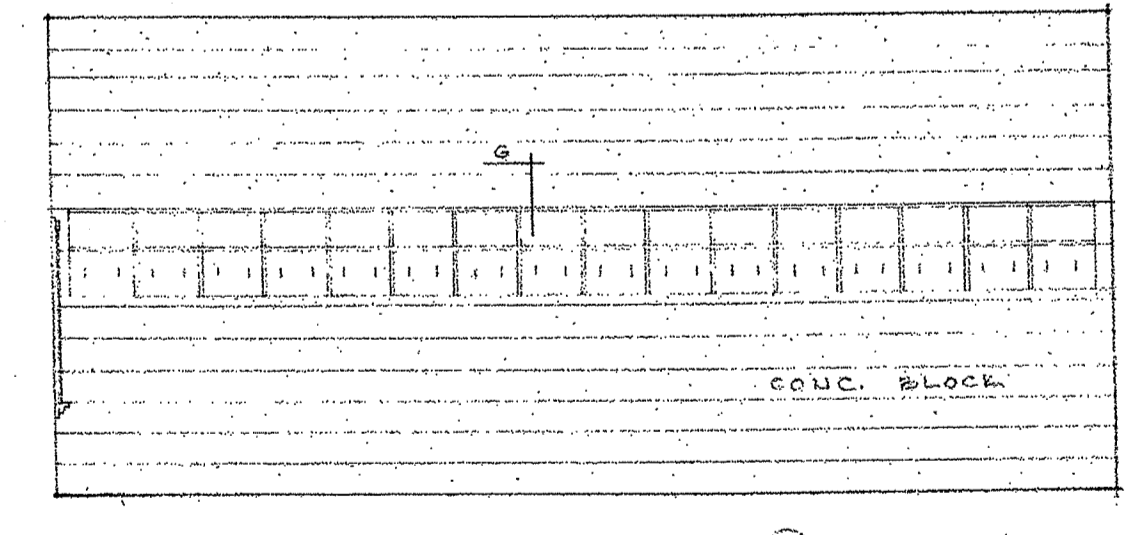
ELEV. 2



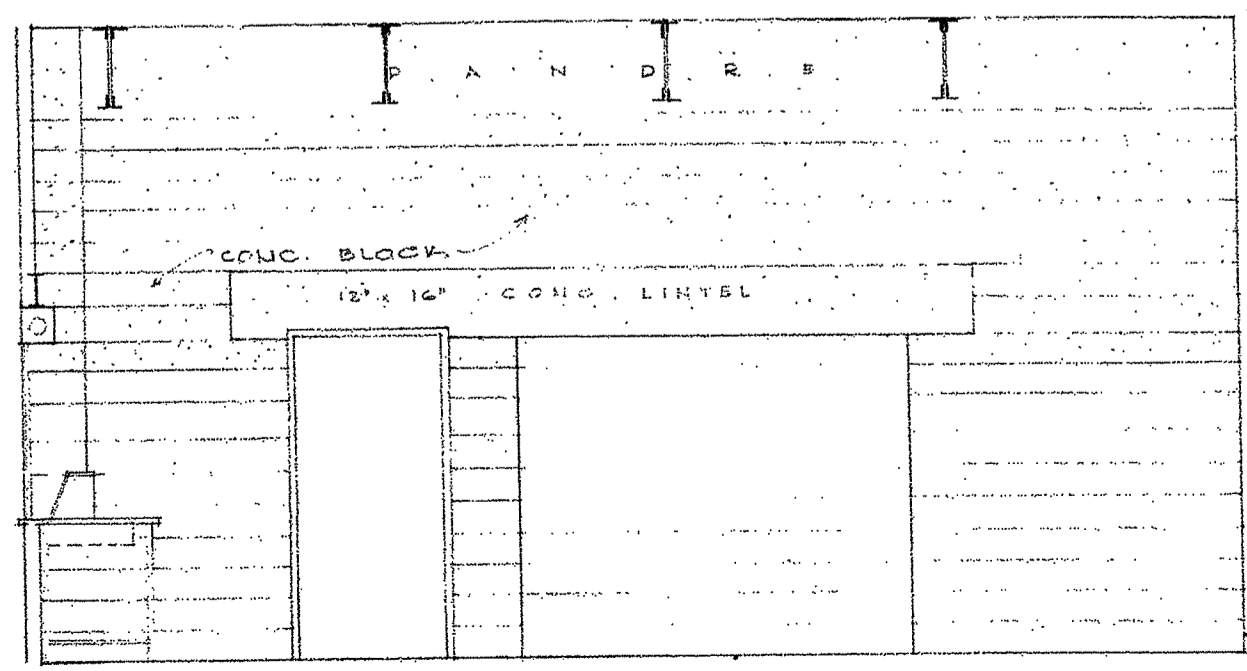
ELEV. 3



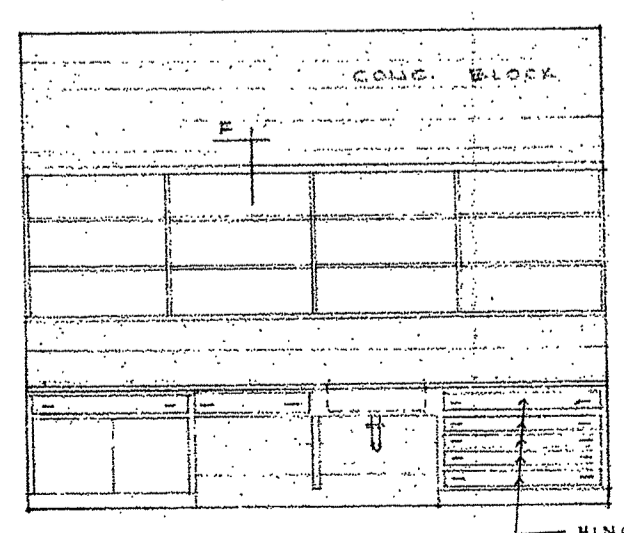
ELEV. 4



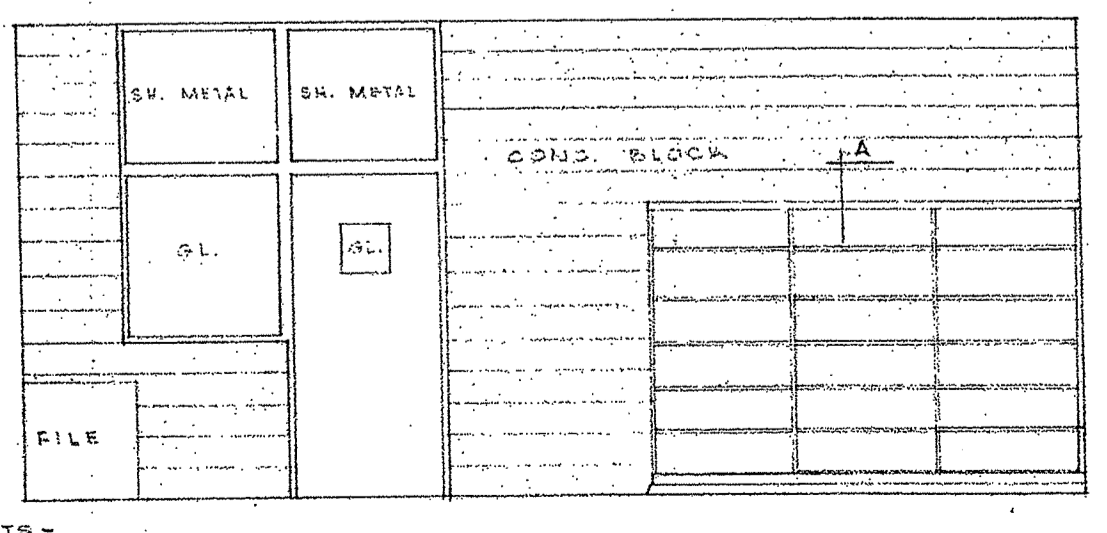
ELEV. 5



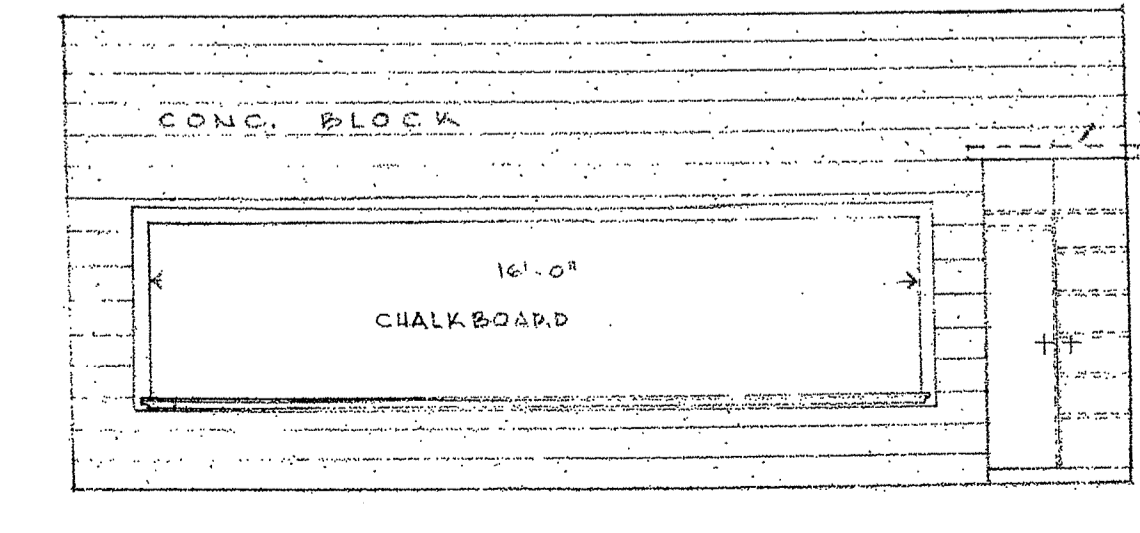
ELEV. 6



ELEV. 7



ELEV. 8



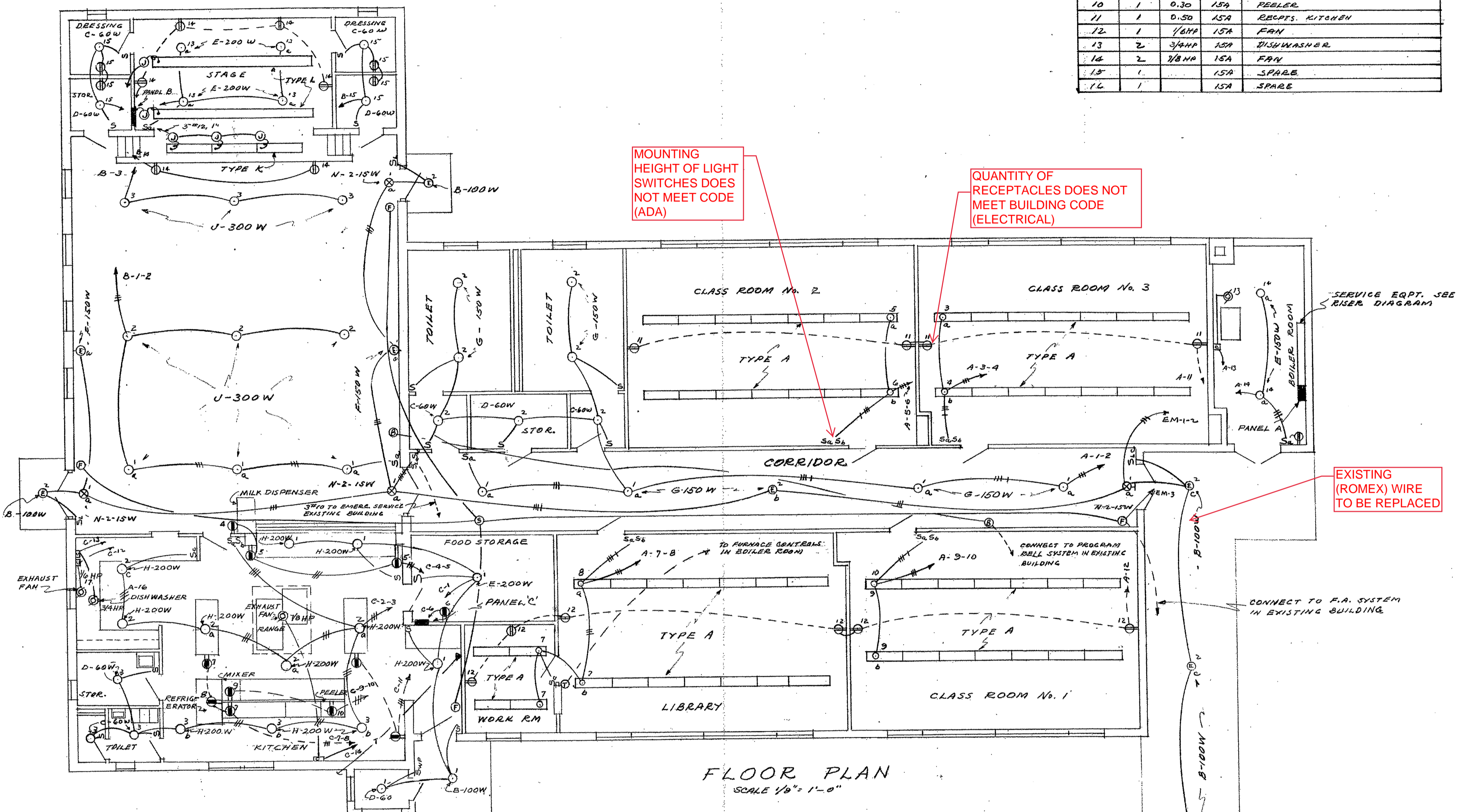
ELEV. 9

NOTE: SEE SHEET NO. 5 FOR CASE DETAILS

ADDITIONS TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS, GEORGIA
HEERY AND HEERY ARCHITECTS
 C. WILMER HEERY, A.I.A.
 GEORGE T. HEERY, A.I.A.
 1722 PEACHTREE ST. NW ATLANTA, GEORGIA

COMM. NO. 5402
 DATE 25 SEPT 1954
 DRAWN BY GTH
 CHECKED BY GTH
 SHEET NO. 6 OF 11 SHEETS

George Heery



FLOOR PLAN
SCALE 1/8" = 1'-0"

SCHEDULE PANELBOARD C

CIRCUIT NUMBER	CONDUCTORS	LOAD	REMARKS
1	1	1.00	15A LIGHTS KITCHEN - STOR.
2	1	1.00	15A LIGHTS KITCHEN
3	1	0.20	15A LIGHTS KITCHEN
4	1	0.50	15A MILK COOLER
5	1	0.50	15A RECP'S KITCHEN
6	1	0.50	15A FREEZER
7	1	0.50	15A RECP'S KITCHEN
8	1	0.50	15A REFRIGERATOR
9	1	0.30	15A MIKER
10	1	0.30	15A PEELER
11	1	0.50	15A RECP'S KITCHEN
12	1	1/4 HP	15A FAN
13	2	3/4 HP	15A DISHWASHER
14	2	3/4 HP	15A FAN
15	1	1.5A	15A SPARE
16	1	1.5A	15A SPARE

SCHEDULE PANELBOARD B

CIRCUIT NUMBER	CONDUCTORS	LOAD	REMARKS
1	1	0.90	15A LIGHTS - LUNCH RM
2	1	0.90	15A LIGHTS - LUNCH RM
3	1	0.90	15A LIGHTS - LUNCH RM
4	1	1.20	15A FOOTLIGHTS - REP
5	1	1.20	15A FOOTLIGHTS - WHITE
6	1	1.20	15A FOOTLIGHTS - BLUE
7	1	1.20	15A BORDERLIGHTS - RED
8	1	1.20	15A BORDERLIGHTS - WHITE
9	1	1.20	15A BORDERLIGHTS - BLUE
10	1	1.20	15A BORDERLIGHTS - RED
11	1	1.20	15A BORDERLIGHTS - WHITE
12	1	1.20	15A BORDERLIGHTS - BLUE
13	1	0.80	15A LIGHTS - STAGE
14	1	0.80	15A RECP'S - STAGE
15	1	0.80	15A LTS. RECP'S DR.
16	1	0.80	15A LTS. RECP'S DR.
17	1	0.50	15A RECP'S - LUNCH RM
18	1	1.5A	15A SPARE
19	1	1.5A	15A SPARE
20	1	1.5A	15A SPARE

SCHEDULE PANELBOARD A

CIRCUIT NUMBER	CONDUCTORS	LOAD	REMARKS
1	1	0.60	15A LTS. CORRIDOR
2	1	0.30	15A LTS. TOILETS
3	1	0.70	15A LTS. CR. No 3
4	1	0.70	15A LTS. CR. No 2
5	1	0.70	15A LTS. CR. No 1
6	1	0.70	15A LTS. CR. No 2
7	1	0.70	15A LTS. LIBRARY
8	1	0.70	15A LTS. LIBRARY
9	1	0.70	15A LTS. CR. No 1
10	1	0.70	15A LTS. CR. No 1
11	1	0.60	15A RECP'S CR. No 1 & 2
12	1	0.90	15A RECP'S CR. No 3 & 4
13	2	3/4 HP	15A PUMP
14	1	0.5	15A LTS. BOILER ROOM
15	1	1.5A	
16	1	1.5A	

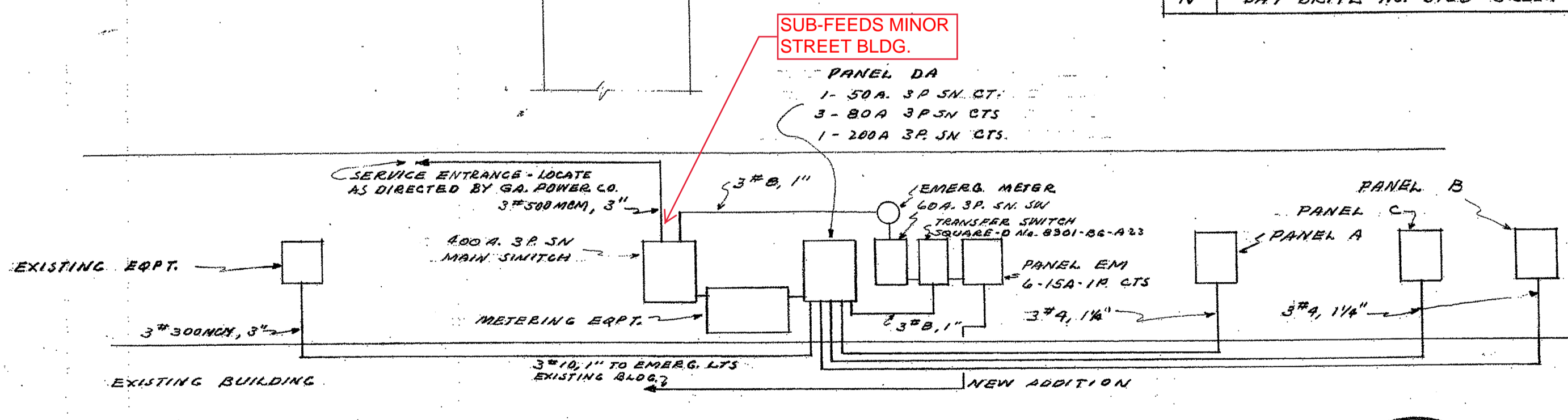
- LEGEND**
- CEILING OUTLET & FLUORESCENT FIXTURE
 - CEILING OUTLET & INCANDESCENT FIXTURE
 - WALL OUTLET & FIXTURE
 - CEILING OUTLET & FIXTURE - EGRESS LIGHTING
 - WALL OUTLET & FIXTURE - EGRESS LIGHTING
 - CEILING OUTLET & EXIT SIGN
 - WALL OUTLET & EXIT SIGN
 - DUPLEX CONVENIENCE OUTLET - EQUAL TO HUBBELL No. 9535.
 - DUPLEX CONVENIENCE OUTLET - EQUAL TO HUBBELL No. 5262
 - PROGRAM BELL MOUNT
 - CLOCK OUTLET - EQUAL TO HUBBELL No. 7707 MOUNT
 - FIRE ALARM STATION - MOUNT
 - UNIT HEATER
 - JUNCTION BOX
 - FIRE ALARM SIGNAL HORN
 - THERMOSTAT
 - OUTSIDE PROGRAM BELL MOUNT 10' HIGH
 - MOTOR HP AS INDICATED
 - MOTOR CONTROLLER
 - SINGLE POLE WALL SWITCH MOUNT 6' HIGH
 - SINGLE POLE WALL SWITCH KEY OPERATED MOUNT 6' HIGH
 - SIGNAL SYSTEM PUSH BUTTON MOUNT 4' HIGH
 - TELEPHONE OUTLET
 - PANELBOARD
 - WIRING RUN CONCEALED IN WALLS AND/OR CEILING
 - WIRING RUN CONCEALED IN FLOOR OR BELOW GRADE.
 - TELEPHONE RACEWAY

A-1-2 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUITS 1 AND 2 TO PANEL A. NUMERAL AND LOWER CASE LETTER ADJACENT TO OUTLET INDICATE CIRCUIT CONNECTION AND SWITCH DESIGNATION RESPECTIVELY. B-150 W INDICATES TYPE B FIXTURE WITH 150 WATT LAMP. UNLESS NOTED OTHERWISE, MARKS ACROSS RACEWAY RUNS INDICATE THE NUMBER OF No. 12 CONDUCTORS. NO MARKS INDICATE TWO No. 12 CONDUCTORS.

NOTE: PROVIDE WIRING TO ALL FURNACE CONTROLS. SEE MECHANICAL DRAWINGS FOR WIRING DIAGRAM.

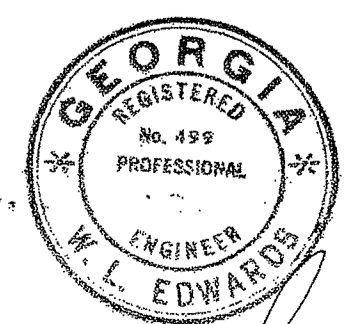
LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MOUNTING	LAMP
A	CURTIS No. 1690 RAPID START - 45" x 45" LENGTH x 3" B'STRM	CEILING	60 WATT
B	PERFECLITE No. C-33	CEILING	100 WATT
C	SOLAR No. 3434	CEILING	60 WATT
D	HART & HEGEMAN No. 860	CEILING	60 WATT
E	BENJAMIN No. 5643	CEILING	200 WATT
F	GUTH No. A1645	WALL	150 WATT
G	SOLAR No. 3436	CEILING	2-75W
H	BENJAMIN No. 26302	CEILING	200 WATT
J	PERFECLITE No. 0816	CEILING	200 WATT
K	FOOTLIGHTS HUB No. 41623	FLOOR	180 WATT
L	BORDERLIGHTS HUB No. 21930	SUSPENDED	180 WATT
M	CROUSE HINDS No. 1706 MOUNTED IN C CONDUIT	HUBS 1980	60 WATT
N	DAY-BRITE No. 3106 GREEN	RECESSED	2-45 WATT



RISER DIAGRAM
NOT TO SCALE

ELECTRICAL

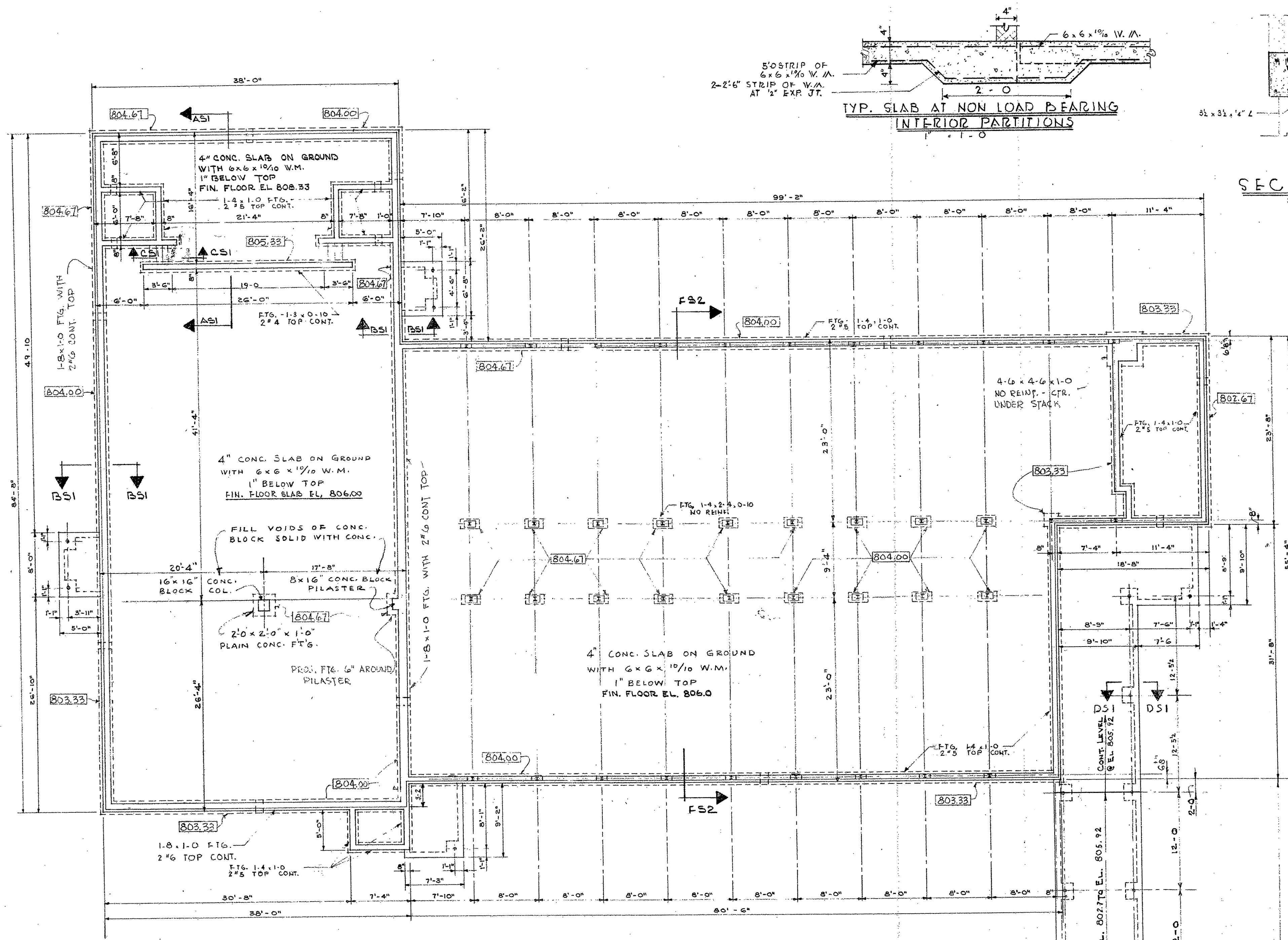


ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA

HEERY AND HEERY ARCHITECTS
C. WILMER HEERY, A.I.A.
G.A. REGISTRATION CERT. NO. 108
GEORGE T. HEERY, A.I.A.
G.A. REGISTRATION CERT. NO. 797
ATHENS, GA. AND ATLANTA, GA.

ISSUED AT 1722 PEACHTREE ST. NW ATLANTA, GEORGIA

COMM. NO. 3408
DATE 9-25-54
DRAWN BY WLE
CHECKED BY WLE
THIS DRAWING AND ITS REPRODUCTIONS ARE THE PROPERTY OF THE ARCHITECTS
SHEET NO. E-1



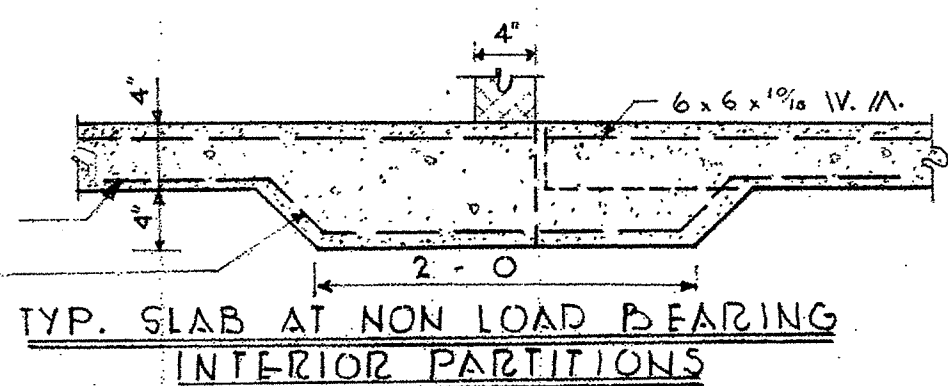
FOUNDATION & FLOOR FRAMING PLAN
SCALE 1/8" = 1'-0"

GENERAL NOTES

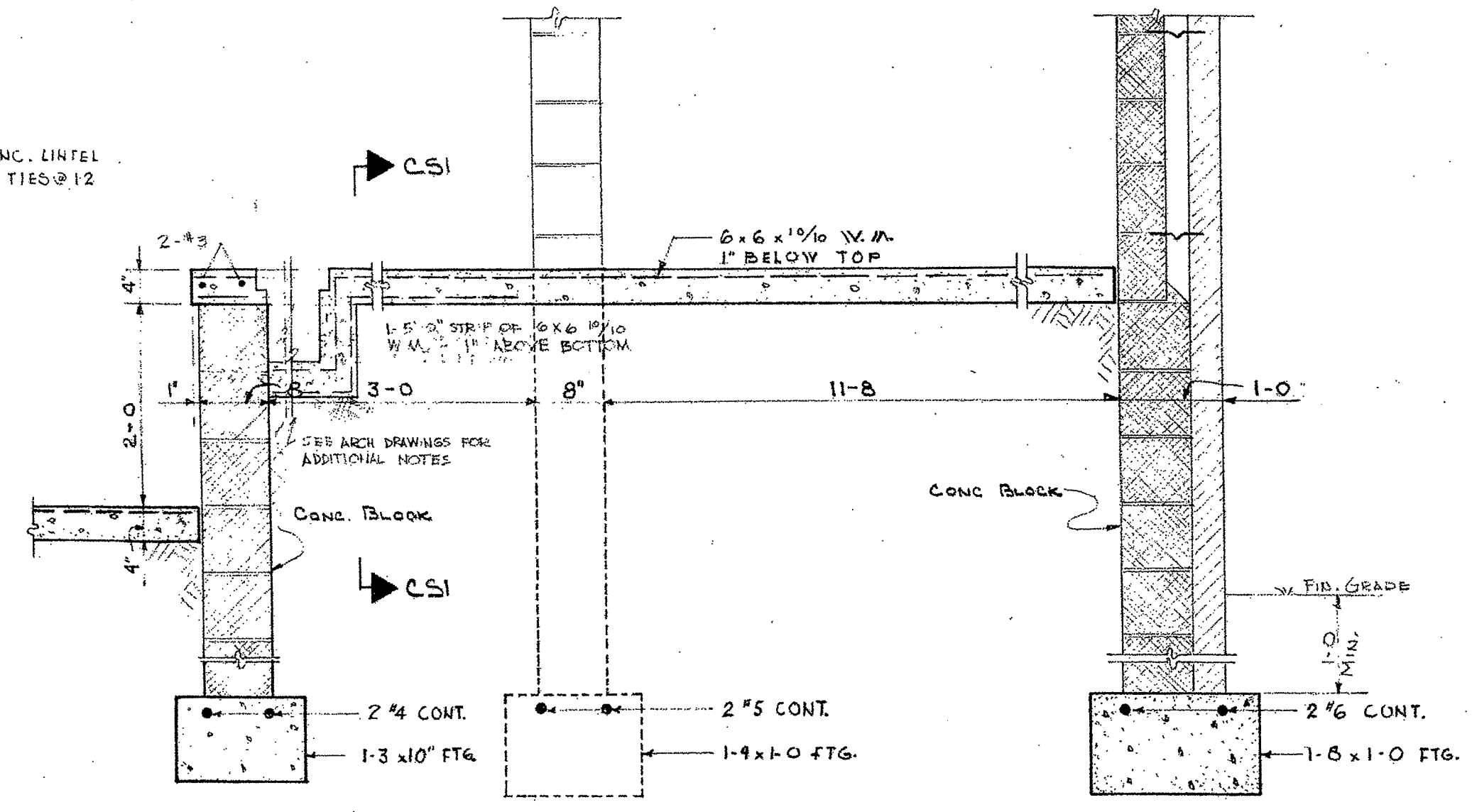
- ELEVATIONS INDICATED THUS [ELEVATION] ARE TO TOP OF FOOTING AND ARE FOR BID PURPOSES ONLY. ALL FOOTINGS SHALL BE 1'-0" MIN. BELOW EXISTING OR FINISH GRADE WHICHEVER IS LOWER.
- FOOTING SIZES GIVEN ARE MINIMUM. IF THE CONDITION OF THE SOIL AND TOPOGRAPHY PERMIT AND UPON THE APPROVAL OF THE ARCHITECT MECHANICAL EARTH TRENCING EQUIPMENT MAY BE USED FOR CONTINUOUS WALL FOOTINGS. INTERIOR FOOTINGS IN THE CLASSROOM AREA MAY FOLLOW THE ABOVE WITH BULKHEADS FORMING ENDS OF FOOTINGS.
- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE A.C.I. RECOMMENDATIONS UNLESS OTHERWISE INDICATED ON DRAWINGS AND IN THE SPECIFICATIONS.
- IN THE ERECTING OF STRUCTURAL STEEL, ALL SEATS, ERECTION ANGLES, ETC. USED SHALL BE REMOVED AND EXPOSED HOLES PLUG WELDED AND GROUND SMOOTH. CONTRACTOR SHALL BRACE ALL STRUCTURAL STEEL AGAINST WIND UNTIL ALL MASONRY WALLS ARE IN PLACE. THE INSIDE PORTION OF ALL EXTERIOR CAVITY WALLS SHALL BUT FIRMLY INTO STEEL COLUMNS. BASE RS. AND ANCHOR BOLTS SHALL BE ENCASED WITH CONCRETE FOR PROTECTION.
- ALL BUILD-UP SUB-FLOORING TO BE WELDED TO ROOF BEAMS AND EXTERIOR RECEIVING ANGLES WITH 2" OF 1/2" FILLET WELD (1" EA. SIDE)
- FILL OCCURRING UNDER FLOOR SLABS, SHALL BE FREE OF WOOD, BRICK BATS, SLABS OF STONE AND OTHER DEBRIS. FILL TO BE MOIST (NOT WET), PLACED IN MAX. OF 6" LAYERS, AND THOROUGHLY TAMPED. UNBALANCED FILL (ON EACH SIDE OF WALLS) SHALL NOT EXCEED 3'-0", UNLESS WALL IS BRACED AGAINST OVERTURNING OR FULL WALL LOAD IS IN PLACE.

DESIGN NOTES

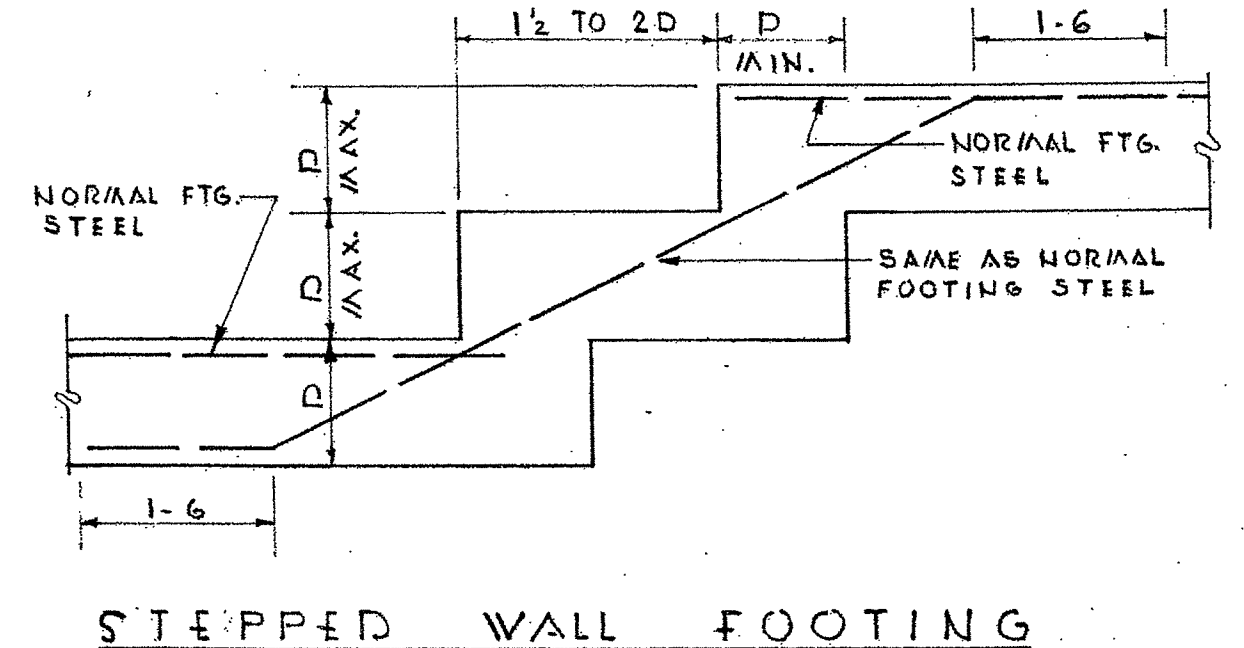
- FOR DIMENSIONS OR ADDITIONAL INFORMATION NOT SHOWN ON THESE DRAWINGS SEE THE ARCHITECTURAL DRAWINGS AND THE SPECIFICATIONS.
- ALL SHOP DRAWINGS SHALL SHOW ALL NECESSARY SECTIONS AND DIMENSIONS FOR CHECKING AND PLACING (OR ERECTING). STRUCTURAL STEEL SHOP DRAWINGS SHALL SHOW ALL SHOP AND FIELD YELDS & CONNECTIONS.
- CONCRETE 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS, EXCEPT FLOOR SLABS ON GROUND WHICH SHALL BE 2500 P.S.I. AT 28 DAYS.
- REINFORCING STEEL 20000 P.S.I. TENSILE STRENGTH. ALL REINFORCING TO BE INTERMEDIATE GRADE.
- STRUCTURAL STEEL 20000 P.S.I. TENSILE STRENGTH.
- STEEL JOINT TO BE IN ACCORDANCE WITH THE STEEL JOINT INSTITUTE.
- SOIL BEARING 1/2 TONS/SQ. FOOT. IF AFTER EXCAVATION FOR THE FOOTINGS IS MADE, THE CONDITION OF THE SOIL INDICATES A SAFE BEARING VALUE OF LESS THAN THE ABOVE, THE ARCHITECT SHALL BE INFORMED SO THAT THE FOOTINGS MAY BE REDESIGNED ACCORDINGLY. ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL.
- ADDITIONAL INFORMATION SEE SPECIFICATIONS.



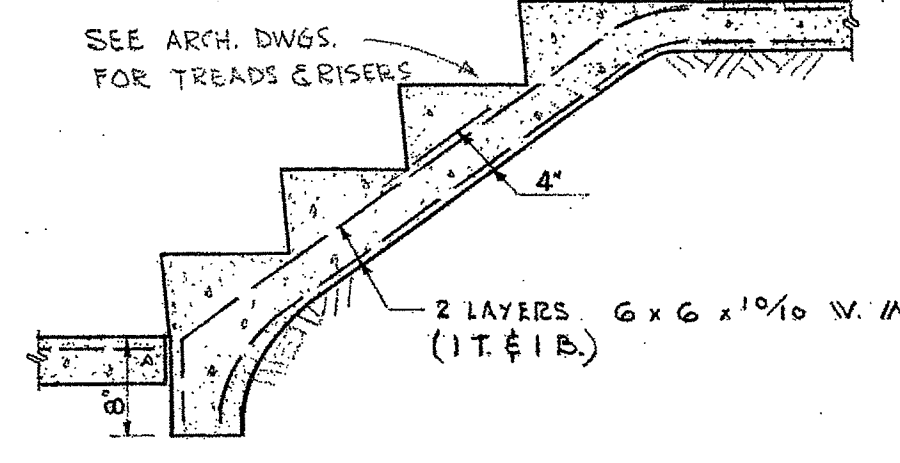
SECTION FS1
SCALE 3/4" = 1'-0"



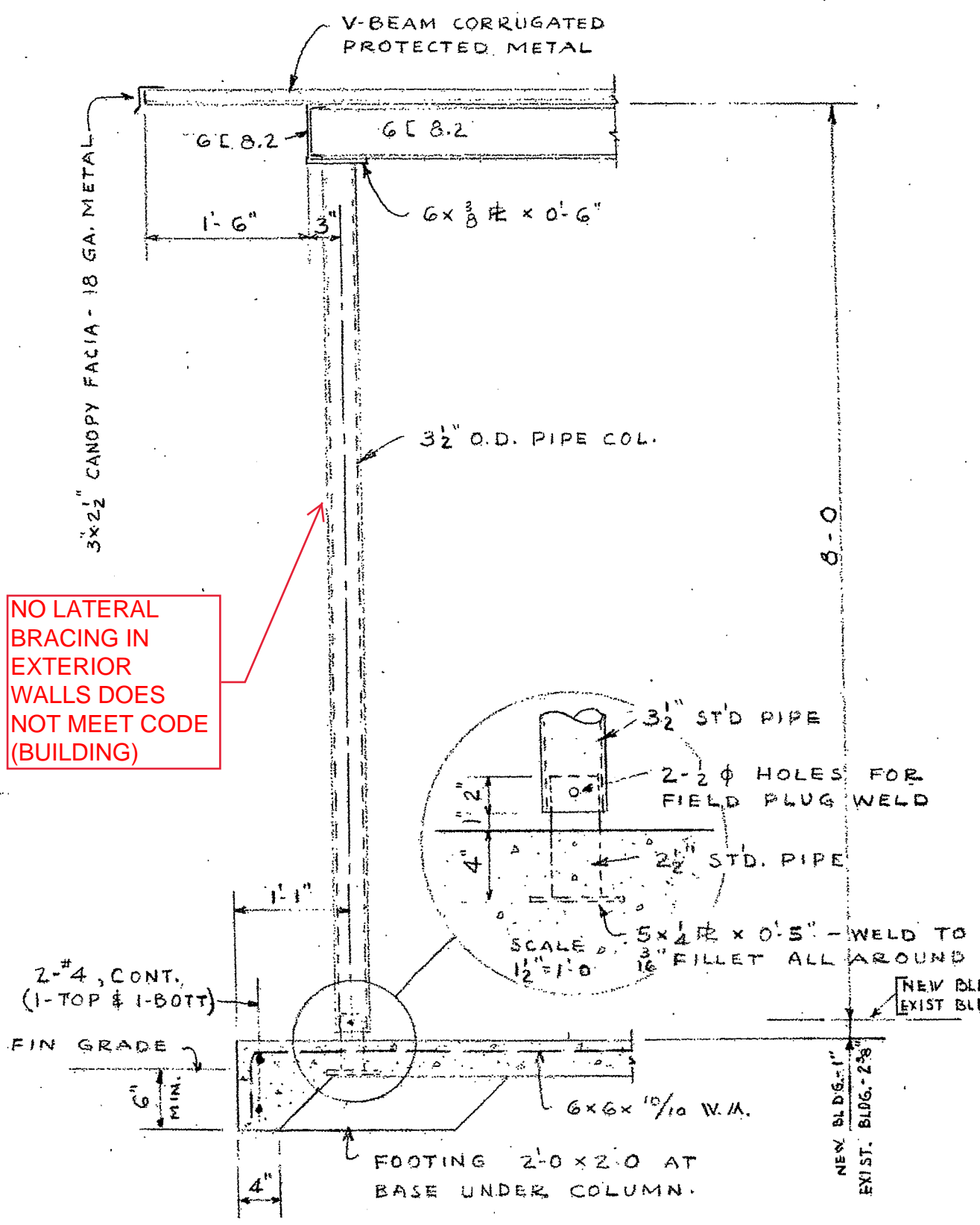
SECTION ASI
SCALE 3/4" = 1'-0"



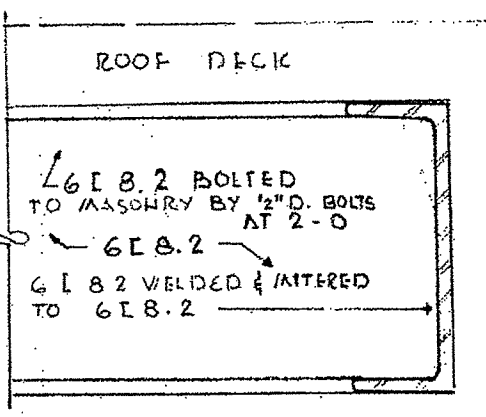
STEPPED WALL FOOTING



SECTION CS1
SCALE 3/4" = 1'-0"

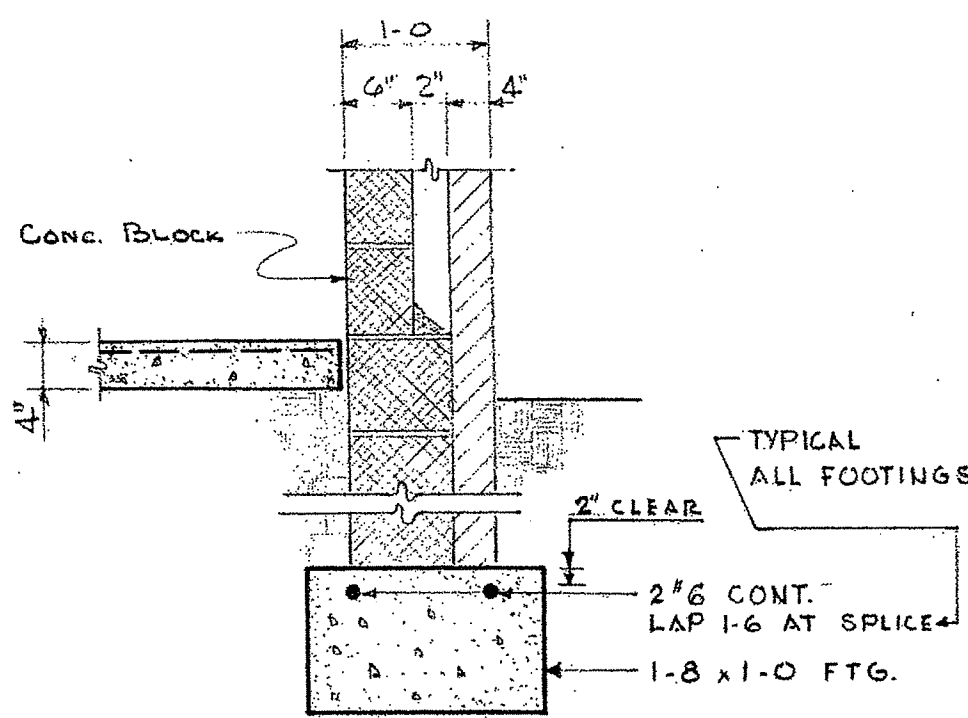


SECTION DS1
SCALE 3/4" = 1'-0"

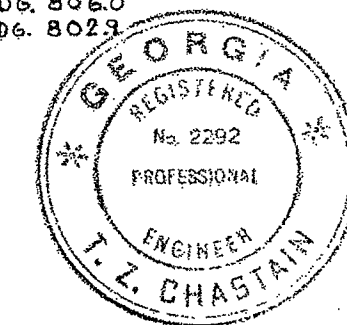


SECTION ES1
SCALE 3/4" = 1'-0"

NO LATERAL BRACING IN EXTERIOR WALLS DOES NOT MEET CODE (BUILDING)

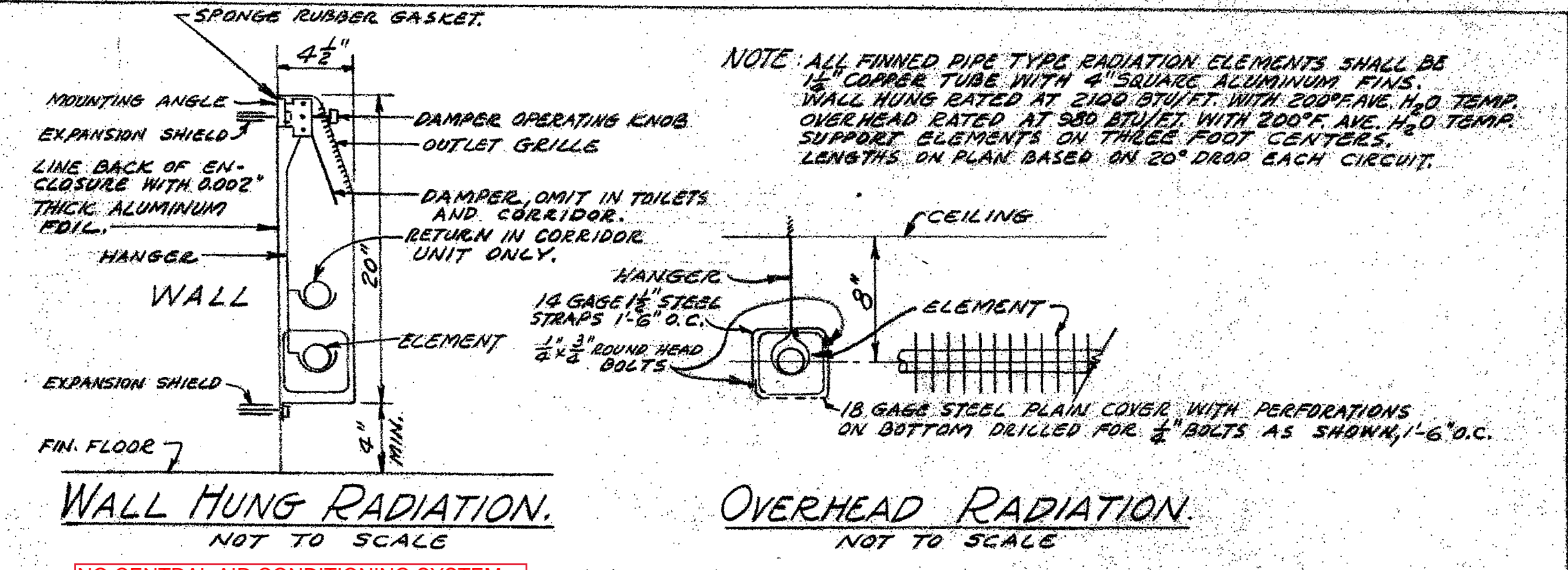
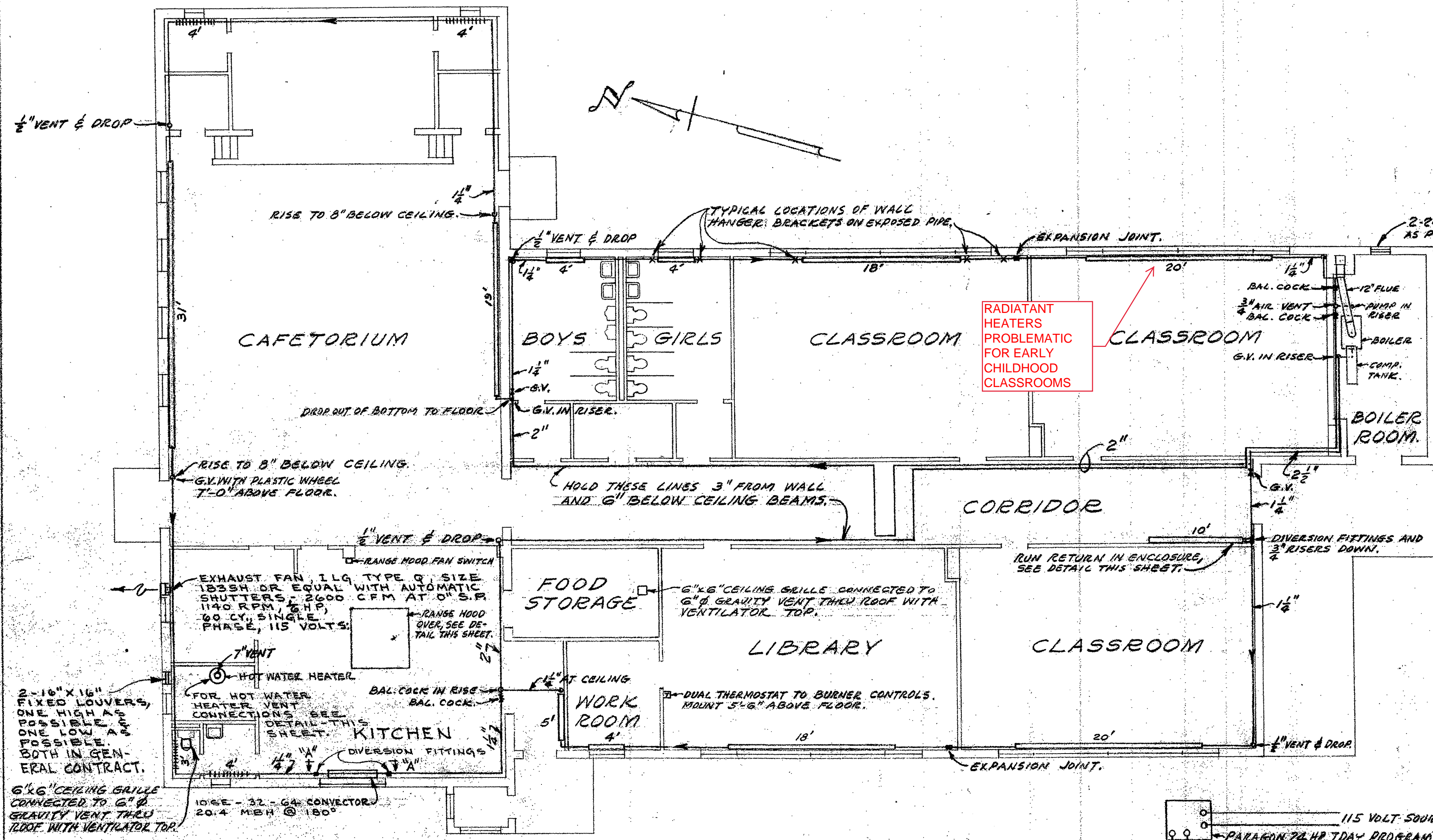


SECTION BS1
SCALE 3/4" = 1'-0"



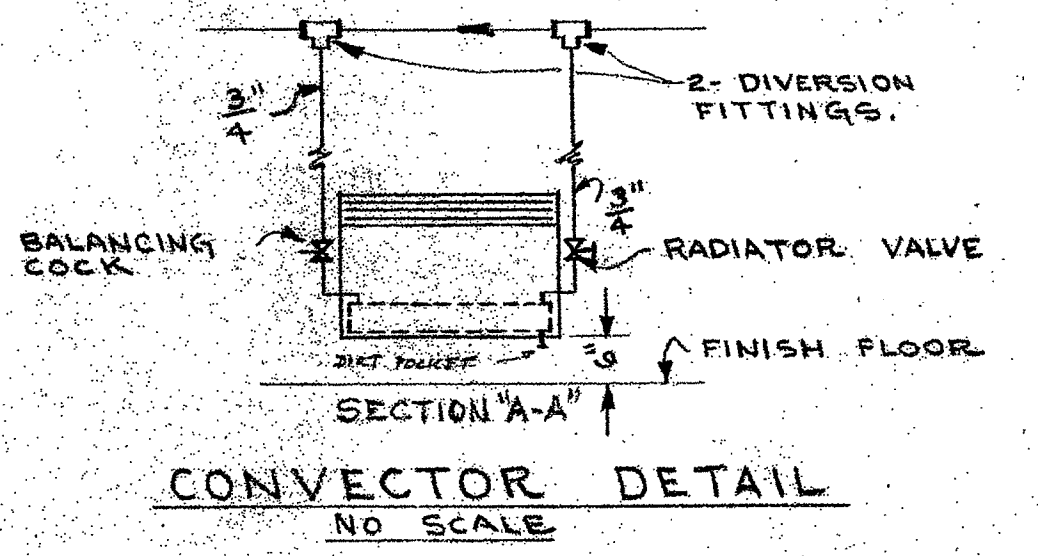
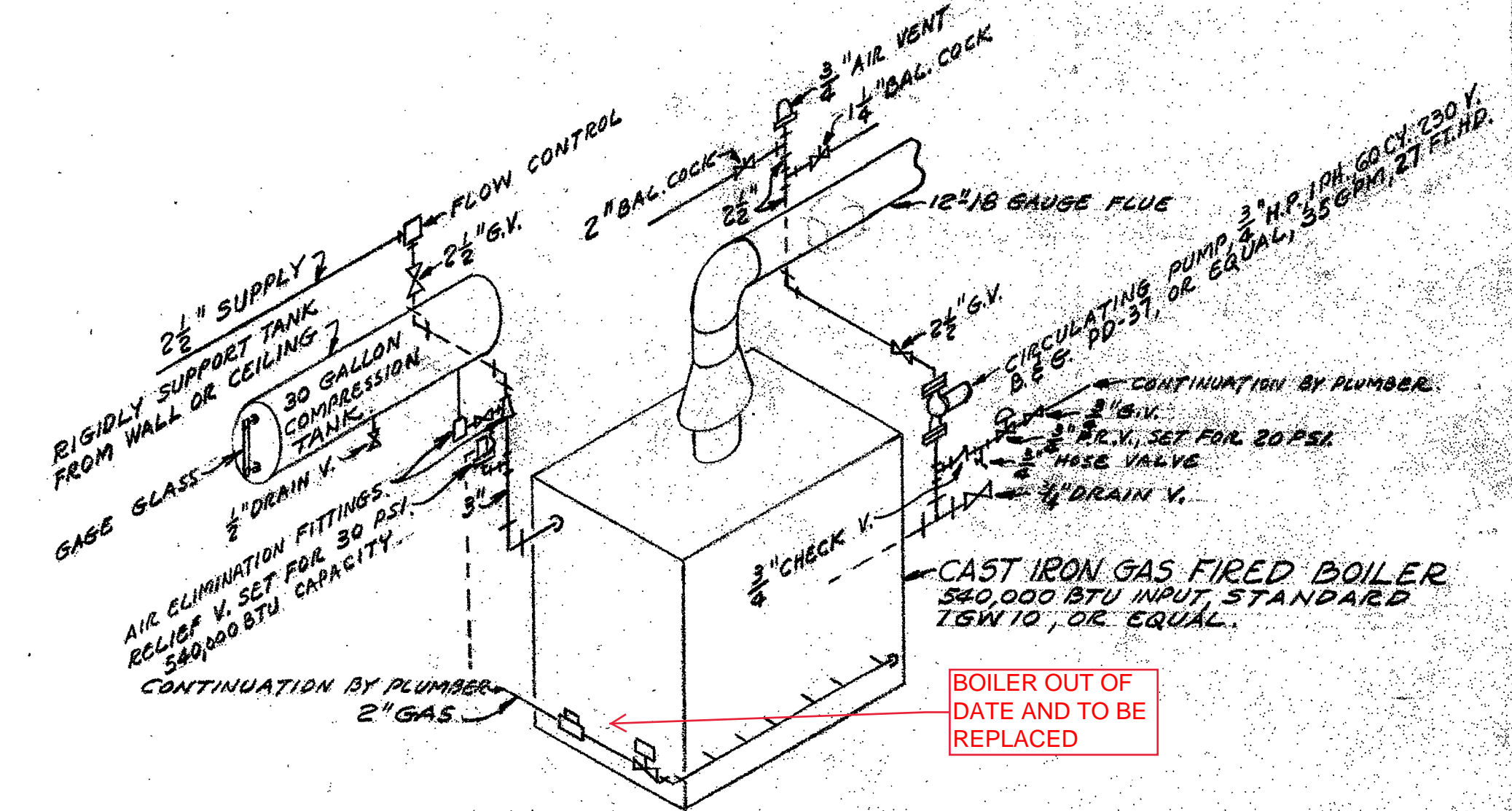
T. Z. CHASTAIN
CONSULTING STRUCTURAL ENGINEER
411 HENRY GRADY BLDG.
ATLANTA, GEORGIA

ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL 891	5460	DATE	0-25-54
ATLANTA PUBLIC SCHOOLS		DRAWN BY	R.H.G. & R.B.B.
ATLANTA, GEORGIA		CHECKED BY	T.Z.C.
HEERY AND HEERY ARCHITECTS		THIS DRAWING AND ALL REPRODUCTIONS ARE THE PROPERTY OF THE ARCHITECTS. SHEET NO. 1 OF 1 SHEETS	
C. WILMER HEERY, A.I.A. REGISTERED PROFESSIONAL ENGINEER ATLANTA, GEORGIA		1722 DEACON DR. S.W. ATLANTA, GEORGIA	

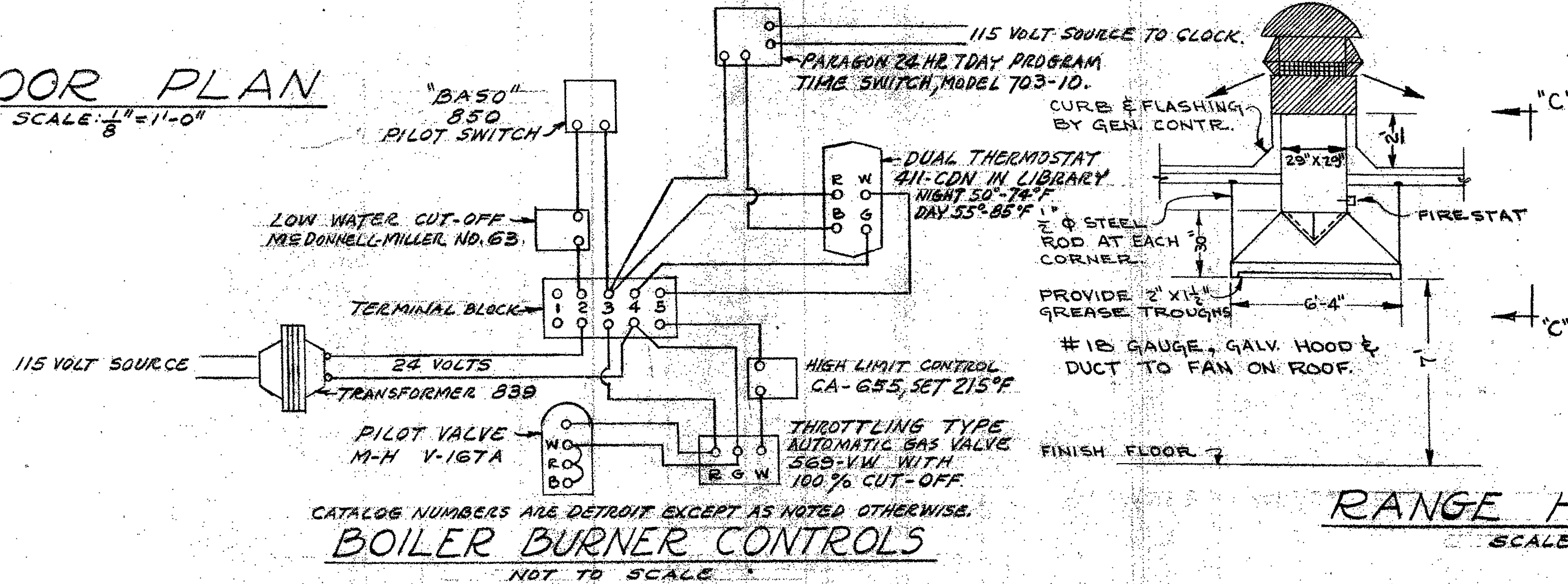


NO CENTRAL AIR CONDITIONING SYSTEM (RADIANT HEAT ONLY)

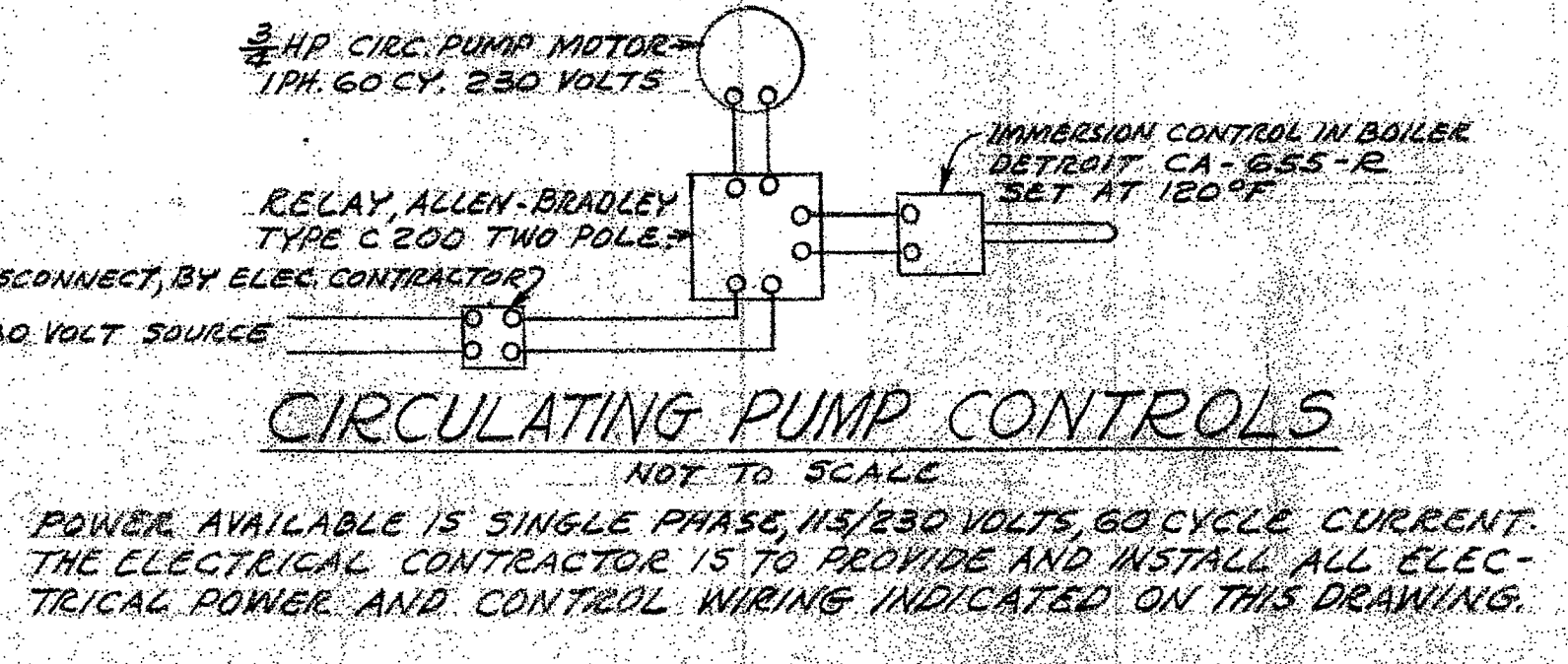
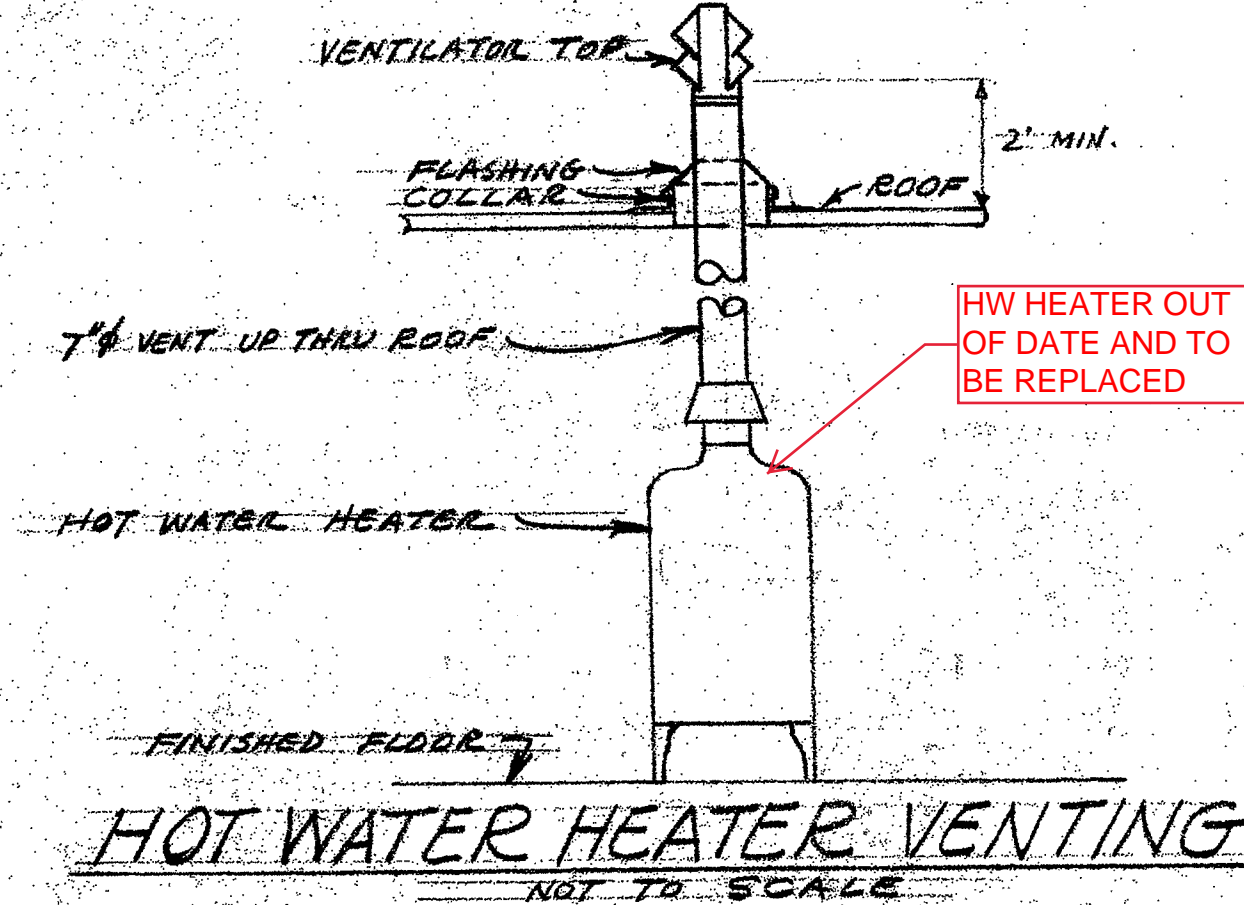
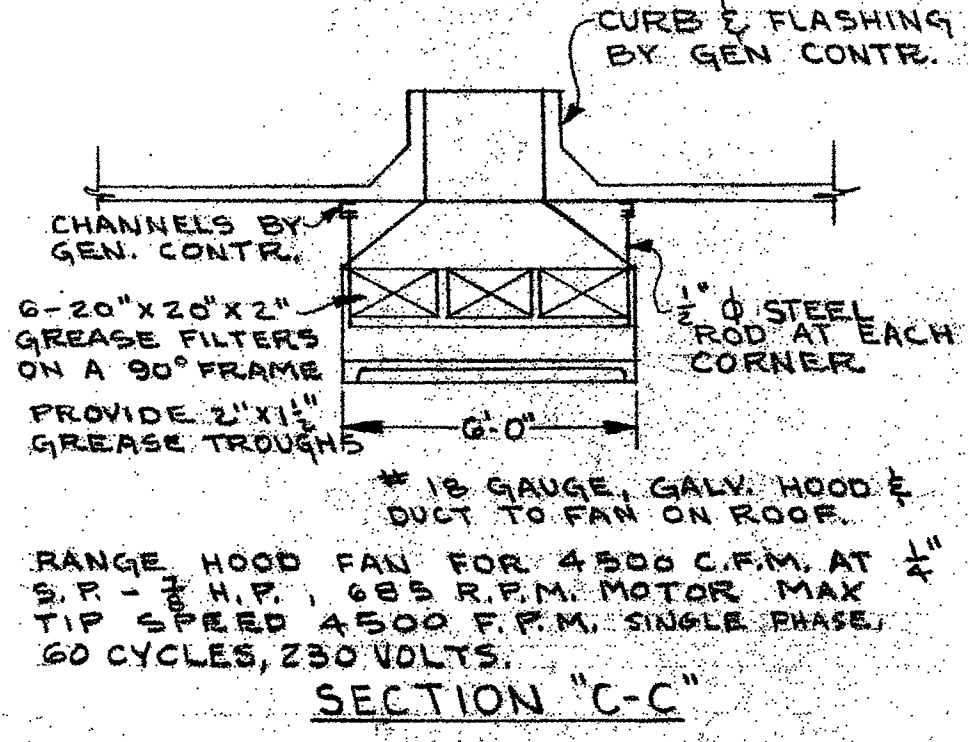
NO CENTRAL AIR CONDITIONING SYSTEM (RADIANT HEAT ONLY)



FLOOR PLAN
SCALE: 1/8" = 1'-0"

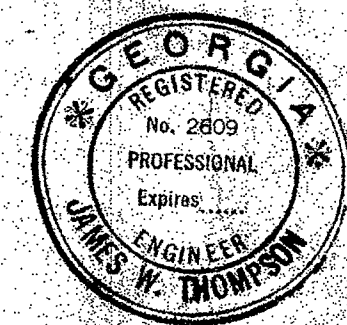


RANGE HOOD DETAIL
SCALE: 1/2" = 1'-0"



POWER AVAILABLE IS SINGLE PHASE, 115/230 VOLTS, 60 CYCLE CURRENT. THE ELECTRICAL CONTRACTOR IS TO PROVIDE AND INSTALL ALL ELECTRICAL POWER AND CONTROL WIRING INDICATED ON THIS DRAWING.

J. W. AUSTIN, JR.
CONSULTING ENGINEER
ATLANTA, GA.
J. W. THOMPSON - ASSOCIATE

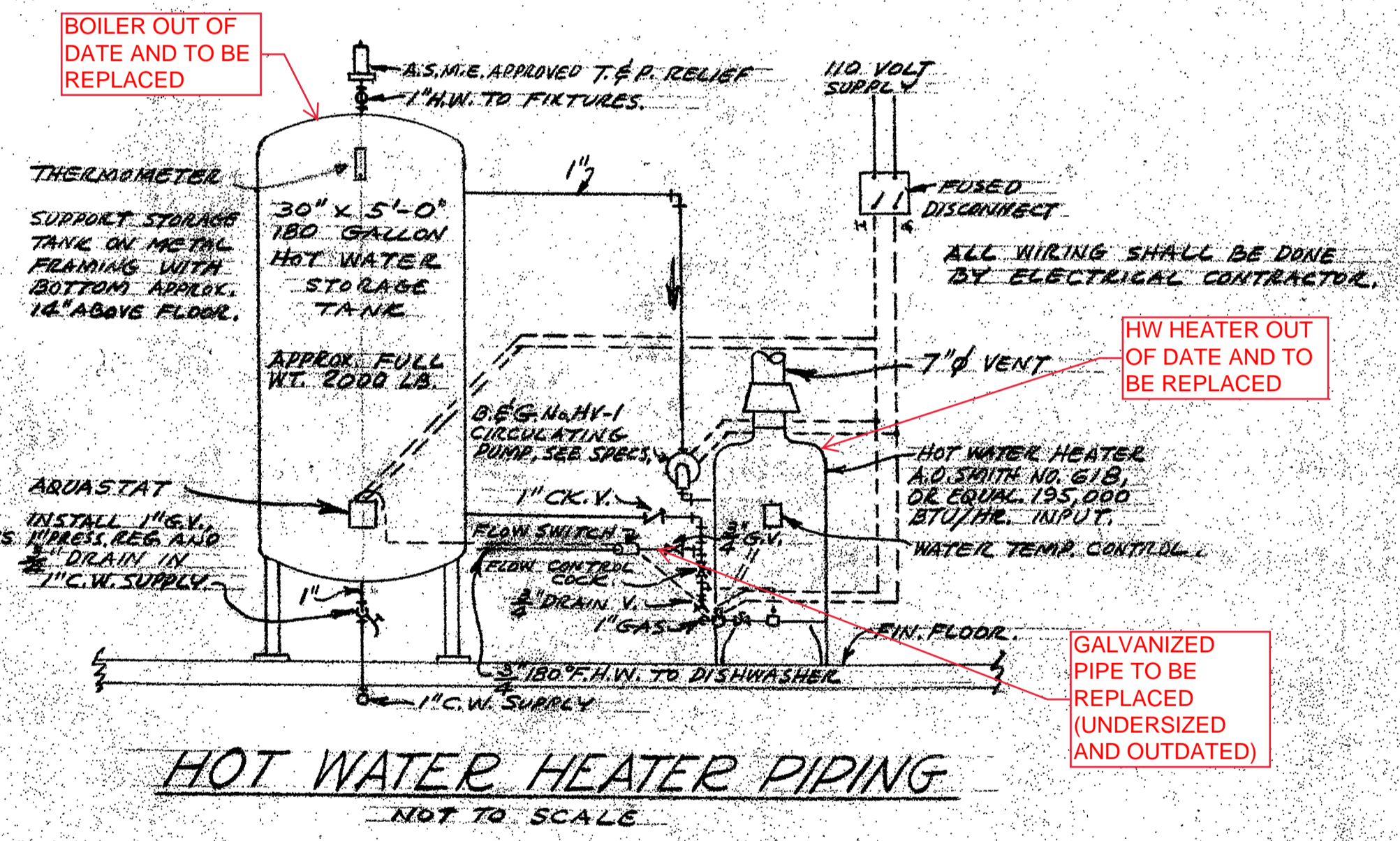
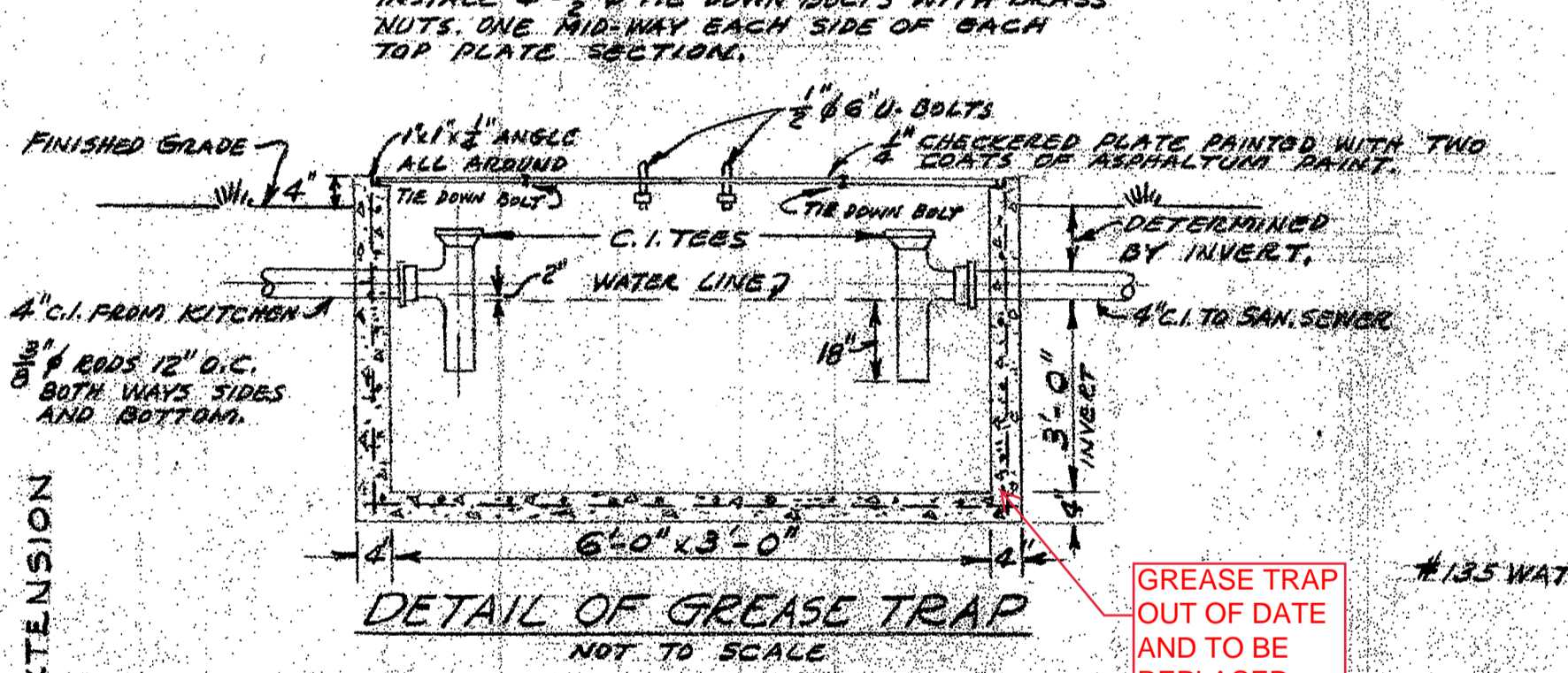
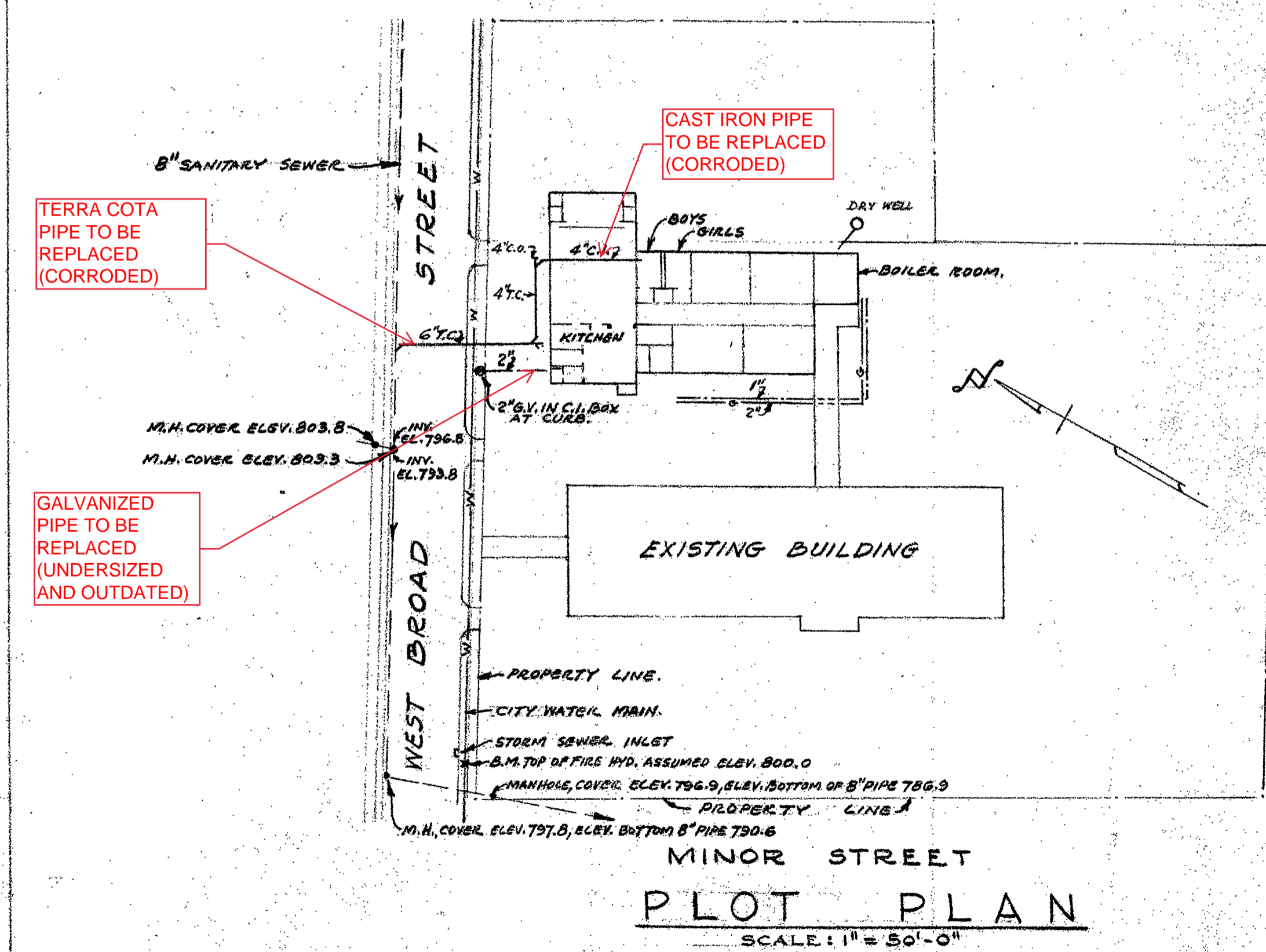
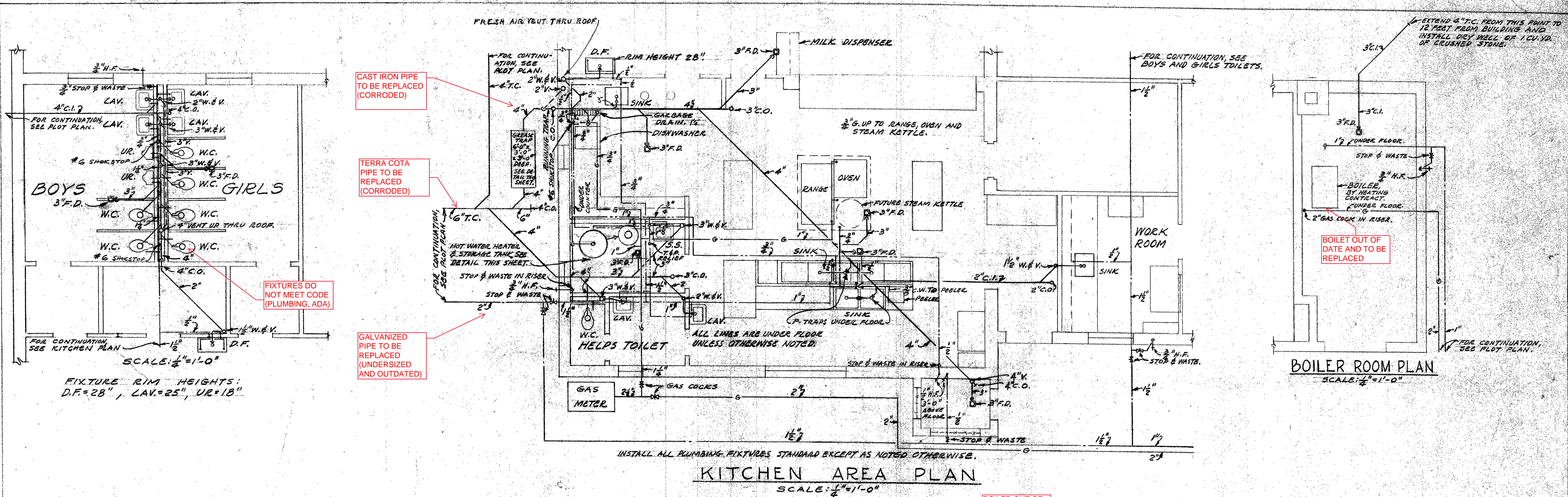


ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA

COMM. NO. 8408
DATE 25 SEPT 1954
DRAWN BY J. W. T.
CHECKED BY G. T. H.
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SHEET NO. H-1
OF SHEET

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C. WILMER HEERY, A. J. A.
G.A. REGISTRATION CERT. NO. 308
GEORGE T. HEERY, A. J. A.
G.A. REGISTRATION CERT. NO. 797
ATHENS, GA. AND ATLANTA, GA.

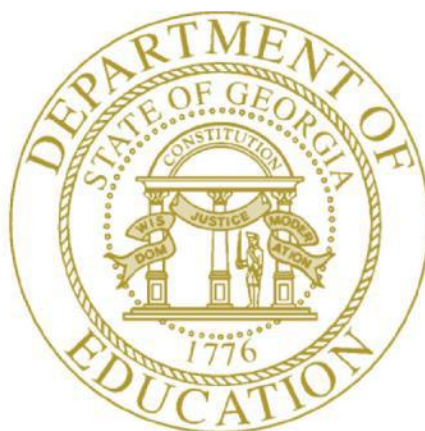
ISSUED AT 1722 PEACHTREE ST. N.W. ATLANTA, GEORGIA



J. W. AUSTIN, JR.
CONSULTING ENGINEER
ATLANTA, GA.
J. W. THOMPSON - ASSOCIATE

REGISTERED PROFESSIONAL ENGINEER
NO. 2609
EXPIRES ...
JAMES W. THOMPSON
1418

ADDITION TO W. BROAD ST. ELEMENTARY SCHOOL ATHENS PUBLIC SCHOOLS ATHENS, GEORGIA	COMM. NO. B408
HEERY AND HEERY ARCHITECTS C. WILMER HEERY A.I.A. GA. REGISTRATION CERT. NO. 109 GEORGE T. HEERY A.I.A. GA. REGISTRATION CERT. NO. 117 ATHENS, GA. AND ATLANTA, GA.	DATE 26 SEPT 1954 DRAWN BY J. N. T. CHECKED BY G. T. H. THIS DRAWING AND ITS REVISIONS ARE THE PROPERTY OF THE ARCHITECTS. SHEET NO. P1 OF SHEET



Dr. John D. Barge, State School Superintendent
“Making Education Work for All Georgians”

**Guideline for Square Footage Requirements for Educational
Facilities**

160-5-4-.16 (a) 4

Educational Facility Site, Construction, and Reimbursement

**Georgia Department of Education
Facilities Services Unit**

Effective Date: 05-30-12

Guideline for Square Footage Requirements for Educational Facilities

The Georgia Department of Education encourages all school systems to explore the best practices for all building projects that are the most cost effective and implement proven concepts to create educational facilities that promote creativity and productivity for both the student and staff in all of Georgia's public schools.

I. NEW EDUCATIONAL FACILITY REQUIREMENTS

Total square footage for new educational facilities is determined by formula as provided below. The number of instructional units (IU) will determine the total square footage needed for new educational facilities. All required spaces must be designed to meet the minimum size requirements from the space construction budget.

<u>New Educational Facility Formula:</u>	<u>Square Footage Budget</u>
Elementary School Facilities	1,800 x I.U. = Construction Budget*
Middle School Facilities	2,250 x I.U. = Construction Budget*
High School Facilities	2,850 x I.U. = Construction Budget*

*If Music, Art, and/or Physical Education are not included in the program, S.F. and funding calculations will be reduced accordingly.

II. SPACE REQUIREMENTS FOR INSTRUCTIONAL AND SUPPORT AREAS

All square footages shown below are net, computed by using inside dimensions of room; square footage of support spaces (including interior partition thickness) in suites (Art, Music, Science, Vocational, Media, ROTC, Theater, Physical Education, and Kitchen) may be included when computing the square footage of the suite. Examples of support spaces are: storage room, office, kiln, etc.

Classroom

1. **Existing** instructional units (IUs) (including labs, but excluding media) are approvable with up to a ten percent reduction in the square footage required. If the classroom space is modified, then it must meet current square footage requirements. Any core area space that is modified must meet the minimum square footage requirements.
2. **New IUs must meet net square footage requirements (total inside square footage for instructional units). Designs that allow more efficient or multiple uses of spaces will be considered upon request of a school system.**

3. Grades		Minimum Square Footage
K-3	(Each primary classroom shall have a work counter (a minimum of 8 lineal feet) with sink and gooseneck faucet.	750
4-8		660
9-12		600

4. Special education-IUs have the same square footage requirements as the regular classroom for that grade level. A special education classroom may be subdivided into smaller rooms as long as there is adequate space as defined in GaDOE Rule IDDF (14) 160-7-7-.14 Personnel, Facilities, and Caseloads.

5. Special Education Family Living Center 1,200
A kitchen and restroom for instructional purposes must be included.

Corridors

The minimum clear width of corridors shall be 8 feet when serving 2 or more IUs. Corridors, where lockers will be installed, shall be a minimum clear width of 9 feet if the lockers are on one side only. If there are to be lockers on both sides, the corridor must be at least 10 feet wide.

When a corridor serves 10 or more IUs, add 1 more foot to the base clear width and adjust with 1 additional foot for each width of lockers that is located in the corridor. Major high school facility corridors serving 12 or more IUs shall be at least 12feet wide with an additional foot added for each width of lockers to be located in the corridor.

Where pilasters, lockers, and other structures protrude into the corridor, the clear width of the corridor shall be established based on the narrowest width of that corridor.

RESERVE OFFICERS TRAINING CORP

	Sq. Ft. with range	Sq. Ft. without range
1. Range, Storage, Administration and one Classroom	3,600	2,000
2. Range, Storage, Administration and two Classrooms	4,400	2,800
3. Range, Storage, Administration and three Classrooms	5,200	3,600

THEATER

A maximum of 1,500 square feet may be developed for drama when it is included in the instructional program according to the following:

1. Excess units may be modified in existing facilities.
2. Total square footage for new facilities is determined by formula. All required spaces must be designed to meet the minimum size requirements from the space construction budget.

DANCE

1,200 square feet

PHYSICAL EDUCATION

SQUARE FOOTAGE

Elementary School

5,000-8,000*

Middle School

16,000**

High School

22,000***

Space such as corridors and restrooms that serve the rest of the building are not considered as part of the gym.

Auxiliary Gym

No minimum

The square footage in an auxiliary gym cannot be used as part of the square footage requirement for the physical education square footage requirements listed above.

* 5,000 S.F. for one instructor; 8,000 S.F. for more than one instructor (FTE must be 900 or more for the state to participate in an 8,000 S.F. PE facility).

** 1,000 S.F. of the recommended amount is for athletics; therefore, 1,000 S.F. is ineligible for state funding.

***3,000 S.F. of recommended amount is for athletics; therefore 3,000 S.F. is ineligible for state funding.

DRIVERS EDUCATION

1,600

FOOD SERVICE

1. Formula for Cafeteria:

Elementary = Total FTE divided by 3.15 multiplied by 10
(FTE x 3.174)

Middle and High = Total FTE divided by 3.15 multiplied by 12
(FTE x 3.809)

2. Kitchen and all support areas for food service:

FTE	SQUARE FOOTAGE
Up to 525	1,600
526-788	2,000
789-1,050	2,400
1,051-1,313	3,000
1,314-1,575	3,500
1,576-2,100	4,000
2101 ⁺	4,200

Total square footage for new facilities is determined by formula. All required spaces with adequate size must be designed from the space budget.

ADMINISTRATION UNIT

Minimum administration facilities shall include: Reception space, administrators offices, counseling (reception and office), storage for school records, storage for supplies, clinic, teachers' work rooms, and toilets.

TOILETS

Minimum Plumbing Fixture Requirements for School Battery Toilet Rooms

No. of Pupils each sex	GIRLS						BOYS								
	Grades K-5		Grades 6-8		Grades 9-12		Grades K-5			Grades 6-8			Grades 9-12		
	WC	Lav	WC	Lav	WC	Lav	WC	U	Lav	WC	U	Lav	WC	U	Lav
50*	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
60	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
70	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2
80	3	2	3	2	3	2	2	3	2	2	2	2	2	2	2
90	4	2	3	2	3	2	3	3	2	2	3	2	2	2	2
100	4	2	3	2	3	2	3	3	2	3	3	2	2	2	2
110	4	2	4	2	4	2	3	4	2	3	3	2	2	2	2
120	5	2	4	2	4	2	3	4	2	3	4	2	3	3	2
130	5	2	5	2	4	2	4	4	2	3	4	2	3	3	2
140	6	2	5	2	4	2	4	4	2	4	4	2	3	3	2
150	6	3	6	3	5	2	4	4	3	4	4	2	3	3	2
160	6	3	6	3	5	2	4	5	3	4	4	2	3	3	2
170	7	3	6	3	5	2	4	5	3	4	4	2	3	3	2
180	7	3	6	3	5	2	5	5	3	4	4	3	3	3	2
190	8	3	7	3	6	2	5	5	3	4	5	3	4	4	2
200	8	3	7	3	6	2	5	6	3	5	5	3	4	4	2
210	8	4	7	3	6	2	5	6	4	5	5	3	4	4	2

Each building must have adequate toilet fixtures for the student population of that building. Unisex toilets are not permissible except for ADA compliance, in special education classrooms, and CTAE labs.

K-8 – Toilet locations must be on the floor and wing of the supported IUs and must be adequate for that student population.

9-12 – Toilets must be located on the same floor and be adequate for the student population housed on that floor.

*Minimum student battery toilet.

The maximum number of students of either sex to be served by a single battery toilet, shall be 210 students.

Batteries with more fixtures than shown on the chart shall not be calculated to determine the required number of fixtures for a facility.

Number of fixtures for students' toilet rooms:

For elementary educational facility, student toilet rooms shall be sized at 20 students per classroom in the area considered. If self-contained classrooms are in the area, deduct 20 students for each such classroom.

For self-contained primary classrooms, provide two separate toilet rooms (each with one lavatory and one water closet) one for males and one for females. Two adjacent classrooms may share a pair of toilet rooms.

For high schools and middle school facilities, student toilet rooms shall be sized at 25 students per instructional unit.

All toilet rooms:

The privacy of student toilet rooms shall be protected with adequate privacy screening. (Wash fountains and/or lavatories may be located in a corridor recess without privacy screening provided that at least one operational lavatory with privacy screening is located inside the toilet room.)

Provide partitions between all toilet stall areas. Provide doors for all toilet stalls.

Toilet rooms having two or more human waste fixtures shall be provided with a floor drain and hose bibb.

Separate toilet fixtures and facilities shall be provided for each sex.

Number of drinking fountains:

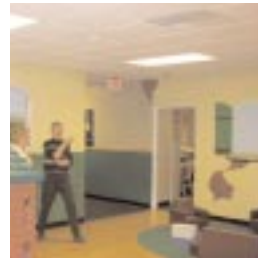
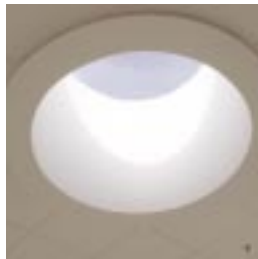
At least two fountain heads shall be provided in each facility.

At least one fountain head shall be provided for every 100 elementary students, or 125 middle or high school students, in the area to be served. Fountains shall be exclusive of playground fountains, lunchroom fountains, or other special purpose fountains.

The Clarke County School District's Early Learning Center proposed for the West Broad Street Campus will include children ages 3-4.

Head Start Design Guide

A Guide for Building a Head Start Facility



US Department of Health and Human Services
Administration for Children and Families
Administration on Children, Youth and Families
Head Start Bureau

2.1 Program Goals and Objectives

An important goal of all Head Start programs is to offer the community an opportunity for quality child care services and programs in locally owned or controlled spaces. The Head Start center design must meet the needs of children, their parents, classroom personnel, service personnel, and administrators.

To achieve these objectives, HSB recommends that planners take the following steps:

- Support the care of children by creating environments that allow staff to focus their efforts on nurturing and caring for children. **The design should provide features that encourage strong, positive relationships between staff and children.**
- **Create an environment that comfortably accommodates the needs of staff in order to attract and retain highly qualified people.**
- Design centers that are pleasing and will enhance the involvement of families and the children’s caregivers in the center.
- **Respond to local cultures, climate, and regional preferences in designing the center.** Seek and consider the goals of parents, the sponsoring agency, and the governing board of directors.
- Create a center environment that attests to Head Start’s high level of commitment to providing appropriate, well-planned and beautiful environments for children of the community. **The appearance and functional arrangement of the center should enhance the center’s assets.**

- Design “through the eyes of a child” with sensitivity to children’s scale. Consider how the children will use the space, what they will see from their perspective, and what kind of experience they will have in the environment.
- Provide an intriguing environment with features and literal “themes” that reflect the community and its culture. For example, tribal Head



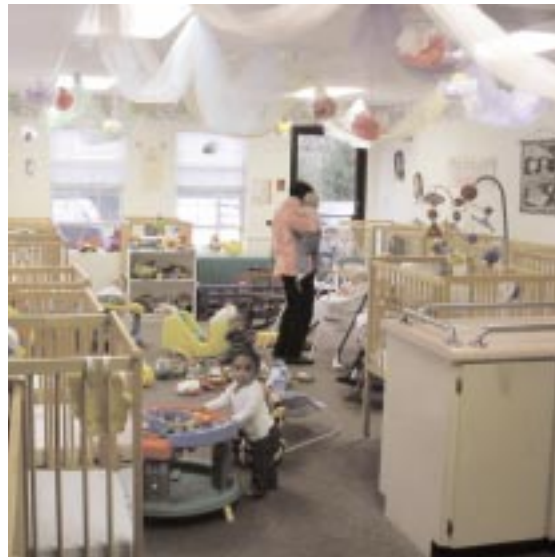
Start programs may provide language activities, legends, and dance activities, use traditional symbols for their wall decorations, or use traditional colors, songs, and music during their “circle” activities.

- **Size the classroom to accommodate recommended group sizes and adult-to-child ratios.** The design should use space efficiently and incorporate features such as strategically situated storage.
- Provide durable and cost effective materials and design details. Designers should consider the intense use a center receives and should be particularly sensitive to the life cycle cost of materials.

- Establish a distinctly child-oriented environment within a controlled facility. The impression created by the design should be the antithesis of a typical institutional setting. The center should “feel like home” for the child.



- Create an accessible center for the disabled, staff, parents and children and emphasize cost effectiveness. Refer to *Appendix A* for accessibility requirements.
- Provide a healthful indoor and outdoor environment.



2.2 Process

Through experience with design and construction, the Head Start Bureau has learned that grantee or delegate involvement during initial planning at the beginning of the design process is a valuable investment that can ensure an excellent and cost effective result.





The process starts with planning and pre-design stages and continues through the design concept. The early stages of design, leading up to the concept, form the foundation for functional design.



A well-designed center requires an array of functional and aesthetic requirements in a relatively small space and must satisfy a wide range of customers. Therefore, the design process for new construction or major center renovation/ expansions should begin with a high level of communication.



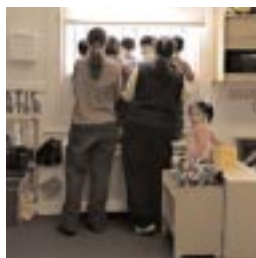
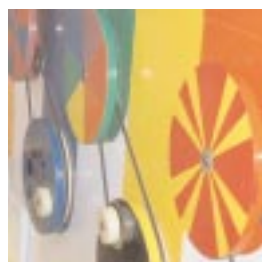
To accommodate this need, the Head Start Bureau recommends that projects start with a “design workshop.” The design workshop also can be associated with a partnering session, which can be highly effective in clarifying roles and responsibilities. For example, the partnering session can result in a written charter

signed by attendees who commit themselves to taking clearly defined collaborative steps.

2.3 Standards

Best practice suggests that Head Start center design comply with the following guidelines:

- Uniform Federal Accessibility Standards (UFAS) and Americans with Disabilities Act (ADA). The design must accommodate children and adults with disabilities. (Refer to Accessibility Standards in *Appendix A*.)
- Historic Preservation Act. Modification of historic buildings or buildings deemed eligible for the National Register of Historic Places must follow specific guidelines. The guidelines affect a structure with the following characteristics:
 - At least fifty years old (or will be when the renovation is completed).
 - Deemed to be exemplary of a particular style.
 - Historically significant in terms of events related to the building.
 - Comprehensive Procurement Guideline (CPG), US EPA, Office of Solid Waste and Emergency Response. Through this document, EPA designates items that must contain recycled content when purchased by federal, state, and local agencies, or by government contractors using appropriated federal funds. Under E.O. 13101 EPA is required to update the CPG every 2 years.
- The Energy Policy Act of 1992. The center design should minimize energy use. It should use the life-cycle costing methodology in estimating and comparing investment decisions involving capital and operating costs. Mechanical systems and introduction of



Chapter 3

Adults and Children in the Center

When designing a Head Start center, it is important to

accommodate the needs of children, parents, teachers,

visitors, administrators, and service personnel. This

chapter describes how and why adults and children use

Head Start centers and the needs of each group.

The center environment should be comfortable, nurturing, and allow adults to care for children in settings designed primarily for use by children. Metric/English conversions are included in *Appendix D*. The activities of groups of children categorized by age are included in the chapter for design purposes.

3.1 Parents

The designers of Head Start centers should keep in mind the needs of busy parents and caregivers who bring children to



Head Start centers. The design should provide a setting that supports a community of center users and serves the needs of the children and their families. Designers can respond to these needs by addressing the following:

- Temporary parking arrangements for drop-off and pickup.
- Ease of navigating corridors for people pushing strollers and buggies (angled corners are an aid).
- Stroller storage.
- A clearly visible bulletin board.
- Mail boxes for parents.
- A central, relaxed place for parents to meet and talk to other parents and staff.
- Spaces that accommodate several children and adults who wish to remove or need assistance removing outer garments.
- Private space for parents and teachers to conference.
- Adequate refrigerator space to store formula and food.
- The need for parents and caregivers to visit the center while dropping off children, spending time with them in classrooms, on the playground, and picking them up. Parents and caregivers also may

eat lunch at the center with the children, meet with teachers and staff, socialize with other adults, and participate in center activities, organizations, and programs. Some adults enjoy the center because it offers friendly human contact that may not be available in their work environment .

- Parents who bring children to Head Start may accompany them to the classroom and help the children remove and store outdoor clothing. They may bring infants in strollers. They also may leave messages for teachers and receive messages from them, usually at one location designed specifically for that purpose. They may linger to spend time with the child or to talk to the teacher before departing. The entry, reception, and classroom cubby areas should provide a social setting for the parents, without disrupting the flow of activity in the classrooms. Nursing mothers who visit the center to feed their infants need a private, quiet area for that purpose.
- Information may be posted for the parents on a bulletin board, which typically will be located along the entrance path.
- Finally, parents and other adult caregivers are encouraged to participate in volunteer activities at the center, such as serving on committees or boards, participating in fund-raising activities, assisting with field trips, and offering classroom assistance. Center design should offer space for their involvement and for meetings between adults with storage for their belongings.

3.2 Teachers

Teachers care for and supervise children. In a Head Start program, they promote learning and developmental activities through a curriculum designed for learning. Curriculum activities occur in classrooms, play yards, multiple-purpose spaces, and on excursions outside the center.

Teachers are responsible for children while at the center. They greet them and their families or caregivers when they arrive. Teachers prepare curriculum materials and projects for children and confer with parents and administrators. To help them prepare, teachers need time away from their classrooms. A lounge, which doubles as a workroom, can meet this need. Teachers also need adequate storage areas, not only for curriculum materials and supplies, but also to secure their personal possessions. The teacher has a demanding job that requires focus on the children. Because highly organized spaces are required, designing a center can be challenging. The design can facilitate the needs of teachers for organized space by providing the following:

- Ample elevated wall hung storage (above children's level but also located to avoid the possibility of adults striking their heads) designed to avoid the possibility of items inadvertently falling on children below.
- Elevated electrical outlets for equipment such as audio devices. (There also should be CD and tape storage.) Locations should comply with local code and licensing agencies.
- Planning and designing the center so that

the location of outlets is convenient to elevated electronic equipment.

- Conveniently located, accessible adult toilet(s), complying with ADAAG.
- Convenient storage for teachers' outer garments and locked space to store personal belongings.
- A comfortable and private place to confer with parents.
- A resource room for orderly visible storage of teaching materials and equipment.
- A comfortable lounge that teachers can use for breaks, lunches, and to prepare teaching plans and materials.
- Adequate shelving or counter space for teachers to display teaching materials.
- An area for displaying children's art projects at their eye level.



3.3 Administration

The Administrator also referred to as director, center director, executive director, CEO, coordinator, or site supervisor is responsible for managing the center, supervising the teaching staff, and communicating with parents, boards of directors and the ACF regional offices. In small centers, the administrator also may assume a teaching role for part of the day. In large centers, the director usually will have a secretary or assistant to help with the administrative workload.



The needs of the center administrator may be met by providing the following:

- Optimal visibility of those approaching and entering the facility.
- Locked space for personal belongings.
- An office with room for a desk, an office chair, at least two visitor chairs, filing cabinets, space for equipment (unless it is placed elsewhere) including a personal computer, printer, copier and fax machine.
- Center personnel, including the administrator, should be consulted during design for their input about workflow, filing, and equipment needs. This *Guide* will assist designers in making informed judgments about center staff requests.

3.4 Service Personnel

Centers require food, laundry, janitorial service, delivery, waste and refuse removal, and general maintenance services. The design must provide space and controlled access for those performing these services.

Some centers use catered food services while others have an in-house preparation kitchen with heavy-duty equipment and a cooking staff.

Infants and toddlers generally use disposable diapers provided by parents. All soiled diapers are to be contained and processed separately from other waste and linens. Facilities should provide space for these tasks.

The needs of the service personnel can be expedited by the following:



- Adequate locked space in a well-located closet for cleaning materials.
- Space for easy supply delivery.
- Facilities that are efficiently designed for waste disposal.
- Spaces and containers that accommodate recycling.
- Adequate counter space and efficient kitchen arrangements that support easy transit of food to classrooms or other places designed for eating.
- Adequate refrigerator space.



- Generous, deep, three-compartment sinks, gooseneck faucets with spray attachments, and disposals in kitchens.
- Finish materials and building design features that are easy to clean with minimal use of cleaning materials.
- Design that offers protection from the potential health and indoor air quality impacts of cleaning and maintenance activities.

3.5 Children

Head Start and Early Head Start children who are in center based programs may spend up to of nine hours or more per day at the center. For most of their day, children remain at the facility. There are occasions when the children leave the center on field trips with teachers and center vol-

unteers. Best practice suggests the center promote a child's optimal development by providing safe, interesting, and appropriate environments that allow the children to engage in developmentally appropriate activities.

Children's needs often correspond to their ages. Although each child develops according to his or her unique pattern, children can be characterized as belonging to general age categories of development. Each age group has a different set of needs. To meet these needs, the space designed for each age group will have different characteristics.



The following three age groupings will be referenced throughout the *Guide*. In many centers, actual age ranges of groups overlap. In some centers, children may be grouped in mixed-age classrooms.

Age ranges follow:

- Early Head Start Infants (birth to 18 months)
- Early Head Start Toddlers (18 to 36 months)
 - Toddler subgroups:
 - EHS Younger toddlers (18 to 24 months)
 - EHS Older toddlers (24 to 36 months)
- **Head Start pre-school age children (3 to 5 years old)**

3.5.1 Early Head Start—Infants

The infant classroom should be warm and nurturing in character. Ideally, the classroom environment should provide opportunities for infants to enjoy activities throughout the day. Typically, infant groups will be comprised of no more than eight infants cared for by two teachers, on a 4:1 ratio. In Head Start centers, infants are brought to their classroom by their parents or caregiver.

Storage is an important consideration in the infant area. Clothing and supplies, usually carried in a diaper bag, are stored in each infant's cubby. Diapers and wipes are stored in separate compartments and within easy reach at the diapering area. Strollers or tote bags are stored on pegs or rods in storage areas. Formula and breast milk are kept

refrigerated and clearly marked with the name of the infant and date.



Spaces designed for infants are used for a variety of activities. Sleeping areas should be separate from areas of greater activity. Each infant will have a unique sleeping schedule. As they mature, their sleep needs decrease from the frequent naps of young infancy to a few naps at regular times during the day. Besides sleeping, infants will be playing, eating, cuddling, and nursing.

Since most infants have not begun toilet training, frequent diaper changes are needed. A teacher with an infant at the diaper-changing table needs to maintain visibility of all other infants. The design and location of changing tables should enable visible connection between teachers and other infants.





access to their teachers for security and comfort. One highly recommended functional and nurturing feature is a simple series of three to four low risers (not necessarily built-in) that several toddlers at a time can occupy. This arrangement also provides excellent seating for adults while they interact with several children when reading them a story, for example.

Toddlers accompanied by their teachers will spend time in their outdoor play space. This should be apart from but not visually or acoustically separated from play spaces for older children. The outdoor space offers many opportunities for activities, such as cruising, climbing, and manipulative play involving materials such as sand and water. Toddlers may take part in activities in a multiple-purpose area.

Toddlers and their teachers, may go on excursions for more exploration and interaction. Older toddlers may walk hand-in-hand with their teachers.

3.5.4 Head Start—Pre-School Children

Head Start or pre-school children are expanding their vocabulary, developing language, enhancing small and large muscle coordination, and

learning complex cognitive/social skills. This group may consist of as many as 18 to 20 children (with a teacher, an aide and a parent volunteer) busily pursuing all recommended activities available for their age group. Their environment should be safe, durable, and interesting without being over-stimulating.



The children arrive at the classroom with their parents or caregivers or on the school bus. After storing their outdoor clothing and personal items, they begin their day. The Head Start classroom should include large, bright, unrestricted spaces, as well as intimate, quiet areas outfitted with soft materials.

Head Start children usually need a nap or quiet time. This normally occurs in the classroom on cots or mats that are stored appropriately when not in use. The design and sizes of classrooms to accommodate stored items such as cots and mats should be carefully considered.



Children at this age are actively exploring their environment; exercising large muscles by running, jumping, galloping, riding wheeled toys, and engaging in dramatic play. Because they have become more independent, the children tend to initiate their own activity by accessing appropriate materials and are interested in displaying their own work.

Other activities for this age group include music, painting, puzzles, block play, and storytelling. Children are involved in art projects, manipulative play, simple food preparation, elementary math, problem solving, science, and gardening.

The ideal Head Start classroom will include large architecturally unrestricted available space that teachers and children can divide into smaller learning environments. The number of children in the group and the type of activities in which they are involved will affect the requirements of this space.

Head Start children will enjoy time in an outdoor play space and in a

multiple-purpose space. They will participate in many of the same activities in the play space as they pursue in the classroom.



Children also go on field trips outside the center, either walking with their teachers or using transport.

4.1 Design Implications of Program Standards

The Head Start standards criteria are stated in ten broad categories, each having a primary goal. Citations of the minimum goals and discussion of the general design implications follow. The design criteria in the *Guide* should achieve or exceed the Head Start standards.

4.1.1 Interactions Among Staff and Children

GOAL: Proper organization of the space ensures that the full program of activities can be accomplished. Successful programs take place with high-quality interactions between children and staff. *Refer to 45 CFR §1304.53(a).*

Successful design allows teachers and children to interact verbally and non-verbally in large and small groups. Classroom space should not be crowded with material and equipment that is used occasionally such as cots and mats. Ideally, classroom size should be sufficient so that this equipment can be stored out of sight. Classrooms should include low tables, several interest areas, and space for teachers to communicate individually with children. If there is adequate space, tables and counters that put children face-to-face can encourage social interaction.

All rooms should have comfortable seating for adults. The design should include chairs and may include hammocks and built-in benches. Window seats can be particularly inviting for adult-child interaction. Space for glider chairs can be included in infant rooms to offer soothing motion for infants and comfortable seating for teachers and visiting parents. The design of the glider chairs should prevent fingers from being trapped in moving parts.

4.1.2 Facilities and Learning

GOAL: The physical environment and facilities must be conducive to learning and reflect the different stages of development of each child.

Making facilities welcoming, accessible, comfortable and safe for all children, including those with disabilities, ensures their full participation in Head Start.



Best practice indicates that classrooms should have sufficient space, equipment, and storage to support a developmentally appropriate curriculum.

Classrooms must be configured to allow circulation to each area while minimizing disturbances to other children engaged in an

activity. Well-located storage is vital for ease of circulation and supervision. The center should have child-accessible displays of curriculum materials, either on built-in open shelving at the child's height or on movable, open, child-scale shelving units. The design should support a balance of the following activities:

- Indoor and outdoor
- Quiet and active
- Individual and group

- Large and small motor activity
- Child and staff initiated activity

Best practice includes unencumbered wall space at the child's level that promotes interesting room arrangements and displays. There also is a need for flexible space and easily changeable furniture arrangements.

4.1.3 Staff-Parent Interaction

GOAL: Parents must be invited to become actively involved in the development of the program and in the approach to child development and education. Refer to 45 CFR § 1304.21 (a) (2).

Best practice indicates that the center should provide adequate areas for private consultation between teachers and parents. A reception area for check-in and check-out is advisable. Space in the classroom should be adequate to accommodate parent visits. Bulletin boards for parent notices are worthwhile.

4.1.4 Skilled Staff and Center Design

GOAL: Head Start programs must comply with section 648A of the Head Start Act and any subsequent amendments regarding the qualifications of classroom teachers. Refer to 45 CFR §1306.21.

The quality of a center's design can play an important role in attracting and retaining skilled staff who spend so much of their time in classrooms. A prop-

erly designed center can improve staff attitude, reduce stress, and ease the workload of the teachers. It also can integrate appropriate acoustical treatment and separation of active and quiet areas to reduce noise levels. In an Early Head Start classroom, strategic arrangement of the diapering areas allows teachers to supervise other children and makes the staff's job easier.

Classroom features ought to make performing teachers' tasks easier. Conference space should be adequate for staff training sessions and regular staff meetings. A separate lounge can provide staff members with a quiet break area and should include ample storage space for resources, equipment, and lockable storage space.

4.1.5 Administration and Space

GOAL: The program is administered in accordance with the Head Start Program Performance Standards and addresses the needs of children, parents, staff, and visitors.

The location of the director's office space should facilitate frequent contact with the children, parents, and staff. Space should be available for parent orientation sessions, workspace, and file storage to support administrative tasks. Office space should be arranged to ensure available storage and equipment should be placed conveniently.

4.1.6 Staffing and Classroom Space

GOAL: Staffing is in accordance with the Head Start Program Performance Standards to meet the needs of children and promote their physical, social, emotional, and cognitive development. *Refer to 45 CFR §1306.32 (a)(1-12)*

Classrooms size must allow for an optimal supervision ratio between staff and children. Head Start Performance Standards establish the permissible staff-child ratios and group sizes:

PREDOMINANT AGE OF CHILDREN IN THE CLASS

Ages	Class Size
4 and 5 year olds	Program average of 17-20 children enrolled per class. No more than 20 children enrolled in any class
4 and 5 year olds in double session	Program average of 15-17 children enrolled per class. No more than 17 children enrolled in any class.
3 year olds	Program average of 15-17 children enrolled per class. No more than 17 children enrolled in any class.
3 year olds in double session	Program average of 13-15 children enrolled per class in these classes. No more than 15 children enrolled in any class.

Head Start classes must be staffed by a teacher and an aide or two teachers and, when possible, a volunteer. For Head Start, a maximum staff-to-child ratio of 1:10 with class sizes of fewer than 20 children; Early Head Start staff ratios are 1:4. However, EHS group sizes are limited to 8 children. Head Start centers also must comply with local licensing and zoning regulations.

4.1.7 Physical Environment

GOAL: Grantee and delegate agencies must provide appropriate space for all program activities. *Refer to 45 CFR §1304.53(a)(2) and 3404.53 (a)(10) and 45 CFR §1308.4.*

The physical environment not only supports the operational quality of a center and affects the behavior and development of children, but also the efficient functioning and sense of well-being of adult caregivers. A pleasant functional environment influences the way caregivers react to children and also will have a positive effect on children who are receptive to their environment.

The ideal environment is intriguing, rich, and challenging to children but is not over-stimulating. **It is rich in subtle visual and tactile experience, incorporating natural elements as much as possible. Best practice indicates that the center must**



have sufficient activity space, storage, and curriculum materials for all children including those with disabilities. Both outdoor and indoor space must be provided for activities featuring quiet and active play areas.

4.1.8 Health and Safety

GOAL: A safety inspection must be conducted to ensure that each facility's space, light, ventilation, heat, and other physical elements are consistent with the health, safety, and developmental needs of children. *Refer to 45 CFR §1304.53 (a) (10).*

The center's design must comply with the requirements of the Head Start Program Performance Standards. The center also must comply with state and local codes and their applicable standards. The center design should facilitate both teacher supervision and ease of maintenance. Design details should take into account the fact that centers must be cleaned frequently. **Properly designed, well-located toilet and hand-washing facilities are essential. Lockable storage should be provided for all cleaning materials in each classroom, kitchen, and laundry area.**

There should be formal consultations with local fire officials to determine appropriate fire drill practices and procedures.

4.1.9 Nutrition and Meal Service

GOAL: Grantee and delegate agencies must ensure that nutritional services in center-based settings contribute to the development and socialization of enrolled children. *Refer to 45 CFR §1304.23.*

The center design should provide ample space for storing and preparing food. Space requirements depend on whether food is catered or prepared on site. (Usually food is prepared on site.)



Food service facilities should accommodate the serving of nutritious meals and maintain the highest quality of food. Best practice indicates that special accommodations should be provided for infant feeding and nursing.

4.1.10 Record Storage

GOAL: Grantee and delegate agencies must establish and maintain efficient and effective record-keeping systems to provide accurate and timely information regarding children, families, and staff. They must ensure appropriate confidentiality of this information. *Refer to 45 CFR §1304.51(g).*

Space should be supplied for filing and storing records, observations, case studies, and other reports.

5.1 Criteria for Center Location

The location of the Head Start center is critical to a child's safety, well being, and quality of care. Best practice indicates that location requirements can be grouped according to the following broad facility categories of mandatory and recommended criteria: **available useable space, environment, safety, security, and accessibility.** For further technical information on these categories, refer to Chapter 10 of this document.



5.2 Construction and Renovation Terms



*See APPENDIX F:
TERMS USED FOR
CONSTRUCTION
AND
RENOVATION
PROJECTS*

5.3 Overall Space Requirements

Interior: The Head Start Performance Standards, 45 CFR 1304.53(a)(5), provide that centers must have at least 35 square feet of available usable indoor space per child. This footage is exclusive of bathrooms, halls, kitchen, staff rooms, and storage places. (It should be noted that this is a minimum standard.)



Exterior: The Head Start Performance Standards, 45 CFR 1304.53(a)(5), provide that there must be at least 75 square feet of usable outdoor play space per child.

Best Practice:

The outdoor play space should be divided, with each outdoor area having no dimension less than 8.1 feet and a minimum size not less than 1,205 square feet. At least 50 percent of the outdoor play space must be exposed to sunlight at any given time during hours of operation.

There must be shade in the outdoor play space provided by planting, gazebos, umbrellas or other similar elements offering. When play space cannot meet these criteria, the center should provide access to



alternate play areas for developing large-muscle skills. This alternate area may include, but is not limited to, an open courtyard or an outdoor space, such as a nearby public park, if permitted by state, tribal, and local licensing requirements.

In areas of the country with particularly rainy weather (for instance, the Northwest), it is desirable to provide covered areas, such as generous porches, for exterior play. Interior multipurpose space is particularly valuable in areas of the country with inclement winter weather but it should not be considered a substitute for exterior play space.



See Chapter 6, Section 6.2.2, for a full discussion of parking requirements.

5.4 Environmental Quality

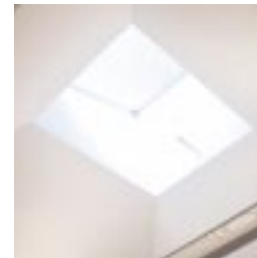
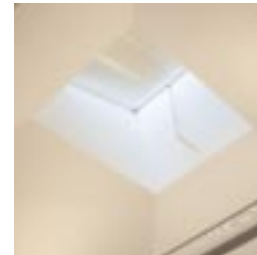
Best Practice:

- Natural lighting is an important feature of nurturing and quality environments for children. Natural light should be the primary source of light in classroom spaces in Head Start centers. Total natural lighting would be ideal. Designers should face classroom space south, if possible, so that children benefit from the light throughout the day. Absence of natural light should be a prime consideration when contemplating relocating an existing center.
- Classrooms without windows should have full spectrum, indirect lighting as described in Chapter 10, Section 10.9, of this *Guide* and, if possible, a variety of light sources.
- Minimum quality design requires that classrooms have window space to the exterior area not less than 8 percent of the floor area.
- Since artificial light cannot substitute for the quality of natural light, if



artificial lighting is needed, it should include a variety of fixture and lighting types with high color rendition. See Chapter 10 for artificial light requirements.

- Classroom and facility designers should use natural lighting from at least two directions. Window seats also are effective in maximizing the effects of natural light.
- Design for good indoor air quality uses low- or non-toxic finishes (see Chapter 9), acceptable ventilation levels, and careful system design (see Section 10.8.2 in Chapter 10).
 - Studies suggest that indoor plants may improve indoor air quality by filtering pollutants from the air. Indoor plants also create a more “home-like” atmosphere and may positively affect the behavior and well-being of both adults and children.
- The center should not be located near noisy areas, such as major highways, street intersections, railroad lines, or under airport flight paths. If proximity to high levels of noise is unavoidable, acoustical control measures are necessary, as discussed in Chapter 10, Section 10.5.
- Maximum acceptable noise levels depend on the area around the center and whether or not the sound is continuous or intermittent. Children and infants are particularly sensitive to unexpected or inter-



mittent loud noise. See Chapter 10, Section 10.5 for guidelines on maximum acceptable noise levels.

- The center should not be exposed to fumes or dust from industrial operations and vehicles, furnace and incinerator exhaust, mists from cooling towers, or other similar pollutants. Avoid placing centers near



exhausts from food processing and waste handling operations, loading docks, or similar sources of unpleasant odors.

- Ideally, the site should have desirable natural features, such as trees, south-facing slopes, and views of natural or man-made vistas.
- The selected location should allow outdoor play yard orientation appropriate for local

climatic conditions.

- The building structure should comply with area limitations, mixed-use separation, and construction requirements in state, tribal, or local codes and other applicable standards.
- Ideally, the center location should provide direct at-grade exit with a minimum of two means of egress from each floor if the center is located on two floors.
- The center should be located away from hazardous conditions or sites. This includes contaminants from hazardous materials such as lead and PCBs. The site, including the playground, should be certified as free of these contaminants before design begins.
- The location should meet criteria to prevent exposure to Legionella Pneumophila.

- The location must allow for the safe arrival and departure of children.
- The location must be free of hazards, including fountains, wells, open pools, unprotected ledges, drop-offs and cliffs, and dangerous equipment. Play areas must not have open drainage ditches or openings to storm sewer systems.
- The location must be free of rodents, hazardous insects, vermin, and toxic plants.
- The center should have operable windows that allow ventilation. Awning and hopper windows below head level on the exterior or interior of the building should not be used.
- Consider proposed major future construction projects within the building and adjacent to the site. If possible, avoid these locations because of extended disruptive high noise levels and poor air quality.

5.5 Security

Best Practice:

- The location must meet requirements established by state and local building and licensing codes.
- The center location must be readily identifiable and accessible to emergency response personnel.



- The location must allow for secure exits and entrances. Normally, movement should be restricted through one secured main entrance and perhaps an additional secured service entry for kitchen and other bulk supply deliveries.

- Provide maximum visibility of entry points from inside the center.
- Ideally, the location should be a defensible space with a secure perimeter and controlled access.



5.6 Approach and Access

Best Practice:

- If possible, the center location should be within walking distance of public transportation. Bicyclists and persons using mass transit need safe approaches to the building which do not endanger child or adult pedestrians.
- The center's layout must accommodate adults with disabilities. The center must comply with the UFAS (Uniform Federal Accessibility Standards) and ADA (Americans with Disabilities Act). Where there is real or apparent conflict, the center must comply with the more stringent of the two standards.
- The play yard should be directly accessible from the building or as close to it as practical. If the site cannot support a play yard, consider using a public or a private park within walking distance.
- The center should not be close to busy streets and intersections. Otherwise, the designer should devise mitigation measures, such as bollards, to lessen the effect of congestion and to increase safety, especially at playgrounds near busy intersections. Intersections where traffic is heavy require particular attention.
- The center location should provide ease of short-term, drop-off

parking for parents and buses as children arrive and depart. Sufficient short-term parking spaces are needed for parents. This parking should be as close to the center as possible.

- Ideally, classrooms should have direct access to the play yard.

5.7 Historic Preservation

The decision to locate a center in a National Historic Building must take into consideration the historic preservation. If located in a historic building, any renovation activities or changes in the building must be in compliance with all federal and state regulations in close coordination with the State Historic Preservation Office (SHPO) or tribal organization. Play space location also is a vital consideration in assessing the effect of the center location on historic structures or neighborhoods.



5.8 Space for Children Classrooms

A classroom is the area that contains each group of children and their teacher(s). Classrooms may be separated by full partitions or full (floor to ceiling) walls or non-permanent barriers that allow controlled visual or acoustical connections to other groups. However, best practice indicates that at least one interior viewing panel at children's height should be located both adjacent to corridors and between classrooms, where possible. The classrooms themselves should be as open as possible allowing for supervision and the accumulation of natural light. Classrooms should be flexible enough to adjust to variable demographics and to allow program adjustments to serve a fluctuating demand for Head Start services. Adequate space is necessary for storing children's and teachers' personal items, curriculum materials, supplies, and equipment.

Common Spaces

Spaces shared by more than one group are included in this category. The designer should be aware that the children spend long hours of the day away from their own homes and the center becomes their home away from

home. A common area that feels like the core of the center is an excellent organizing concept that will dispel an institutional feeling, especially if it is developed as a friendly environment. This may simply be an area of circulation that provides a stopping place and allows social interaction. However, it should not be the



multi-purpose room. Circulation through the multi-purpose room has proved to be an undesirable design feature.

Other common areas may consist of one or more of the following: multi-purpose areas, large motor activity areas, meeting/gathering areas, and separate sick bays, if required to meet local licensing requirements.

Play Spaces

Play spaces are outdoor extensions of the classrooms providing many of the same opportunities as indoor spaces.

They should provide for a variety of developmentally appropriate activities and include storage for curriculum equipment as well as

wheeled toys, tricycles, and wagons. Spending time on the playground is undoubtedly the preferred activity of children. Therefore, to the greatest extent possible, the design should incorporate ease of access to the play spaces.



5.9 Space for Adults

Parent Spaces

Spaces within the center that are used by parents include the entry, reception/living room area, conference room, and the classroom (for observing, visiting, conferring with teachers, and feeding infants). Parents should have direct access to a lavatory. A lactation area, preferably near the nap area, should be provided to offer privacy for nursing mothers. This need not be an enclosed room or even a partitioned area.

Staff Spaces

Spaces designed for use by teachers and directors may include the resource room, the classroom and play spaces, the entry and reception areas, offices, conference and lounge, resource storage, and adult lavatories.

Service Spaces

Spaces allocated for service and support to the center include the kitchen and food storage, laundry, janitor's closet, and the electrical/mechanical and telephone equipment room.

6.1 Concepts for Site Design

The conceptual site design for Head Start centers must be integrated into the design of the overall site to include the movement of vehicles and pedestrians, parking, entry and service points, and constructed or landscape features, such as porches, decks, fences, and shrubs. The site should meet general site design principles and should include specific details on orientation, grading of landscape forms, aesthetics, construction, plant selection, lighting, signage, and amenities.

Before site or playground selection, the soil should be tested for dangerous contaminants such as lead and PCBs. After development, the site should be monitored periodically under the direction of the environmental safety staff to ensure that it does not become contaminated, especially by lead. This is particularly important in urban areas or where there are large numbers of automobiles or nearby industrial facilities. Any old structure located near a playground should be checked for lead or other hazards.

Five conceptual areas of site design relating to Head Start centers include:

- Entry and Circulation
- Parking
- Service
- Safety and security
- Outdoor play space



6.1.1 Context

The designer should consider the building in the context of the existing site and should design to enhance that site. Examples of context and exterior design include culturally sensitive art and play activities, colors and textures that reflect regional and community orientation, and games that promote and reflect nationality.



6.2 Entry and Circulation

The standards for entrances, parking, service, and security are addressed below.

6.2.1 Entry Approach

The center design should include a feature, such as a porch, as a welcome to those arriving and as a transition from the outside. The transition porch could be combined with a covered walkway (recommended for all climates) and connect with short-term parking. The walk-



way would protect arriving children and parents from inclement weather.

Space should be provided at exit doors to ensure that doors can completely open without obstruction. Drop-off areas should be arranged so that a



child and adult may exit a vehicle from the pedestrian side and proceed directly to the center without crossing in front of traffic, or in front of or behind vehicles.

Ideally, the center entrance should be separate from both the main entrances to the building and from the service area entrances.

6.2.2 Parking

Short-term parking should be provided for adults bringing children to the center.

Most often, parents or caregivers bring their children into the center to “sign in” and later “sign out.” Parking spaces are needed to allow time for adults and caregivers who drop off children to have brief conversations with teachers.

Short-term parking for the center should be separated from other tenant parking and located as close to the center as possible. The arrangement should minimize the risk to pedestrians and allow vehicles to move safely. Parking should be located away from busy intersections or vehicle circulation routes. The parking arrangement should never force children or persons in wheelchairs to move behind parked cars. Walkways in front of vehicles must be protected by tire guards, bollards, or other means to prevent any portion of a vehicle from advancing into the walkway.

At least one parking space, typically for the center director's use but also for emergency use, should be provided as near to the center entrance as possible. One service parking space in front of the center is desirable for local mail or package deliveries.

Ideally, an unobstructed line of sight should be provided between the interior of the center director's office through the center entrance and into the short-term parking area.

Employee parking spaces should be as close to the center as possible for ease of access and for safety. This is particularly important in winter



months when staff members may leave the center after dark. Staff parking should be provided for 80 percent of employees at peak capacity. As in any other work place, staff may choose to travel to work using a variety of means. Features to assist those choosing to commute via bicycle, public transportation or carpool should be provided to serve at least 5 percent of the adults

occupying the building. These features may include secure bicycle parking, safe walkways to bus or metro stops, and designated preferred parking spaces for carpools.

Parking should include spaces for staff vans as well as for vans for the handicapped. Van accessible parking spaces must be wide. Parking for staff and visitors who are disabled should be located close to the center

6.2.3 Service

Centers that occupy part of an existing building may make use of that building's dock space and service access or provide its own service access (although a completely separate dock may not be necessary). In a stand-alone center, service access will be important, but a dock may not be necessary.

The service access for sanitation removal and for food and supply delivery should be separate from short-term and staff parking. Likewise, a sanitation dumpster should have private access away from parking and play spaces.

The ventilation system design should ensure that emissions from vehicles at the service entry cannot permeate the indoor air of the Head Start center.

6.2.4 Security

The security of the center is a prime area of concern in establishing a site.

Centers should be separated from public areas by buffer zones and



barriers such as fences or screens particularly in high-security-risk areas. Buffer zones can be created with open turf areas or with rows

of trees, perimeter hedges, berms, or any combination of these elements.

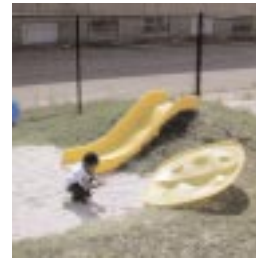


Buffer zones are useful because they offer the center staff the opportunity to observe individuals as they approach the center. In addition, they help shield children from unwanted wind, noise,

and other disruptions. The center location and local conditions may necessitate the use of fences and screens to block the view of the exterior. These should be designed to enhance the relationship of the center to its neighboring buildings and their residents.

6.3 Concepts for Play Space Design

The activity spaces in play yards are largely determined by the outdoor play space's architectural landscape features. Individual play spaces



should provide for a range of developmentally appropriate activities for social, emotional, intellectual, and physical development. All play spaces should be designed according to the guidelines in the most recent edition of the Handbook for Public Playground Safety by the Consumer Product Safety Commission.



Best practice indicates that outdoor play spaces should serve as extensions of classroom spaces, especially where a temperate climate allows children and staff to move easily in and out of the exterior space. To the greatest extent possible, outdoor play spaces should be integrated into the overall design of the

center. Separate play spaces are necessary for Head Start and Early Head Start.

Some states require a separate play space for infants and toddlers. Even without such complete separation, individual play areas can be developed to serve each of the following age classifications

- Infants
- Toddlers
- Head Start children (ages 3-5)

Within each age-appropriate play space, spaces should be developed to support and promote each of the following activities:

- Sand/water play
- Dramatic play
- Large muscle play (climbing and playing on toys with wheels)

In addition, equipment storage should be directly accessible from play spaces. It is important to consider installing walk-off mats at every entry point from the play yard to the building, especially for the Early Head Start children.

Additional information on play spaces and play equipment may be obtained from any of the following sources:

- US Product Safety Commission, Child Care Center Design Guide
- The latest ASTM F1487-01-F15.29 Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use
- The latest ASTM F1292-99 Standard Specification for Impact Attenuation of Surface Systems under and around playground equipment
- The latest ASTM F1951-99 Standard Specification for the determination of accessibility of surface systems under and around playground equipment
- The latest ASTM F2049-00 Guide for Fences/Barriers for Public, Commercial and Multi-Family Residential Use Outdoor Play Areas
- American Society for Testing and Materials (ASTM)
100 Bar Harbour Drive
West Conshohocken, PA 19428-2959
(610) 832-9585, Fax: (610) 832-9555
- 36 CFR Part 1191 The Americans with Disabilities Act (ADA)
- Architectural and Barrier Compliance - latest of all applicable Sections
- Architectural and Transportation Barriers Compliance Board
1331 F Street, NW., suite 1000
Washington, DC 20004-1111
(202) 272-5434 extension 139 (voice); (202) 272-5449 (TTY)

6.4.1 Location

Activity areas within the play yard should be placed near elements that serve as a point of reference by both children and teachers as they move throughout the different play spaces. Entrance points, transition and staging areas, storage facilities, seating areas, overhead structures, trees, gathering areas, and larger play structures may all function as points of reference or landmarks within play spaces.

6.4.2 Separation

Circulation paths, barriers, screens, structures, play equipment, plant-



ings, landscape forms, grade changes, and open buffer areas may define specific play spaces. Separation of play spaces should be subtle, allowing some visual, audible, or physical connections.

A 3-ft. evergreen shrub or picket fence with rounded

corners are appropriate for separating infant/toddler play yards from preschool areas.

6.4.3 Transitional Areas

Linkage of interior and exterior spaces with transitional areas, such as decks or open vestibules is appropriate and allows for blending



these environments.

They also may function as a point of departure or staging area for play yard excursions.



6.4.4 Porches and Decks

Porches are desirable outdoor play areas where weather is problematic. Porches and decks can be used for shade to avoid heat, sun, and rain. In areas with moderate year-round temperatures, porches and decks can be used throughout the year.

Porches provide the nurturing environment and serve as a transition to natural elements. They are substantially less expensive than interior, conditioned, or finished space. If west-facing glass is required, a connected covered porch at least 7 feet wide will significantly reduce the air conditioning load in the classroom and the center.

6.4.5 Shade

Approximately half of the play space should be shaded, and the other half of the play space should be exposed to direct sunlight. Levels of exposed direct sunlight may be measured at noon on the Summer Solstice

(June 21st). The following solar declension Web site is a useful resource:

<http://www.usc.edu/dept/architecture/mbs/tools/vrsolar/index.html>

6.4.6 Circulation

Circulation within play spaces should allow movement throughout the various areas. Dedicated pathways and routes suitable for wheeled toys should be provided. A circulation pathway 60 inches wide at a minimum provides the primary element that ties the play yard together. These pathways should be wide enough to accommodate movement of wheeled vehicles in both directions (unless movement is restricted to one direction).

The play yard should have a minimum of two access points, one from the classroom and one from the play yard to outside the site. The access point from the play yard to outside the site



should allow for retrieval of play equipment.

The design should accommodate the movement of maintenance equipment into the play yard and allow an emergency exit. All access points should be controlled and readily visible for security purposes.

The design of the playground should accommodate the movement of disabled children and adults through the play yard.

6.4.7 Site Furniture

It is advisable to provide child seating in a shaded area of the play space with views of other areas. Children should be able to talk with each other or their teachers in a relaxed fashion or enjoy a story group. Tables and chairs, a bench, or a picnic table will allow children and visiting parents to eat their lunches or snacks or to occupy themselves with drawing and other activities.

Easels for open-air painting are desirable and can improve the appearance of centers. There should be adequate approach and fall zones for equipment and furniture, as prescribed by the current edition of Handbook for Public Playground Safety, issued by the Consumer Product Safety Commission.

Wood treated with pentachlorophenol or creosote should not be used on the site.

6.4.8 Storage

Storage areas and containers should be uniquely marked and easily recognized to indicate their use. Storage bins provide an opportunity

for children to learn organization and cooperation skills and acquire a sense of responsibility by learning to return toys and tools to the correct storage areas.



There should be visibility and ventilation into storage areas. Exterior storage should have

locks that operate on the exterior but can be released from inside.

6.5 Types of Outdoor Play Spaces

6.5.1 Sand and Water

Facilities offering sand and water play allow children to pretend and to project their ideas using those elements. Sand and water play should be accessible to children to encourage their imaginations, play, and social skills.



Sand and water tables should have play surfaces at children's height allowing them to dip out a portion of sand or water onto a stable surface. It is valuable to allow play space and storage for props such as spoons, shovels, pails, plastic toys, containers, and buckets, as these add to the quality of play experiences.



It is wise to provide a hose connection for water play and for filling wading pools that is accessible. It also is desirable to emphasize the source of the water in the design, since it is such an important part of the play yard.

In particularly warm areas, there will be a need for a child-scaled drinking fountain on the playground. This should be discussed during the design phase.

6.5.2 Dramatic Play

Children often use many different areas of the play yard as stage settings for dramatic play. Good design will offer many opportunities for children to engage in role-playing and make-believe activities.

Playhouse structures should have seating, adequate play areas, and storage for a wide variety of props, such as boards, scrap lumber, dress-up clothes, cooking utensils, tarpaulins, banners, signs, and other items that

support high quality dramatic play. The dramatic play area should be adjacent to and incorporate paths and parking areas for wheeled toys. Level changes greatly enhance the quality of dramatic play.

6.5.3 Large Motor Play



Large motor play areas support the physical development of children. These areas offer opportunities for climbing and riding wheeled toys, as well as running, jumping, sliding, and balancing. Fixed equipment, such as superstructure play pieces and slides, encourage children to explore the limits of their physical

abilities by offering varying levels of difficulty and challenge. Berms that create small hills provide challenges, and are cost effective



additions. They also provide visual interest and can help add a connection to nature.

The degree of difficulty, challenge, or risk must be obvious to children involved in any given activity. Hidden or unforeseen risks are dangerous and can result in injuries

Small berms and hills, large rocks, stumps, trees and bushes not only provide settings and obstacles for children to climb over, jump on, dodge around, or hide behind but also present challenges. Playing with wheeled toys, such as tricycles and wagons, helps develop coordination and physical strength. The large space required for these activities and the boisterous character of this play dictate that this area be established away

from more quiet areas. Local licensing authorities should be consulted as early as possible in order to avoid design misinterpretations.

Play areas should be made accessible to children with disabilities. The proposed rules are quite complex, and the designer should consult with playground equipment manufacturers and refer to the Web site: www.access-board.gov/

6.7 Specific Site Technical Criteria

6.7.1 Fences and Enclosures

These best practices should guide the play yard design:

- Play yards must be enclosed with a fence or shrubs to define play space, allow ease of supervision, and provide security and protection from unauthorized individuals. Since fence design and shrubs are visible elements in the center, they should be attractive elements.

Chain link fencing is discouraged; however, if used, it should be dark and vinyl-coated (not green). Exposed galvanized wire is not appropriate because it has an institutional look. The fence can have no sharp exposed connections accessible to children. Note: A/E to reference

ASTM fence standards (F2049-00).

- Bollards, raised planters or other devices should be used to keep automobiles from veering into the play yard area.
- The height, transparency or opaqueness of the fence will depend on the location



and environmental conditions.

- Spaces between fence pickets should be between 3.4 and 9 inches wide to prevent children's heads from becoming trapped. There should be no openings between 0.3 inch and 1 inch wide. Refer to the most recent edition of the Handbook for Public Playground Safety of the Consumer Product Safety Commission (CPSC).
- A 6-foot-high fence should enclose the play yard. Also acceptable is a shorter fence with plantings or landscape features that are positioned so that an adult can not reach over the fence.
- When the play yard is adjacent to hazardous areas such as busy roadways or a high-security-risk neighborhood, an 8-foot-high fence is recommended. Views from the play yard should be screened by either plants or other suitable alternatives.
- The fence bottom should be no higher than 3 inches above the ground. Exposed fence bottoms should have a smooth finish.
- Wood fences should have a smooth finish, be splinter-free and guaranteed to be non-toxic.
- Gates should be self-closing and latching. Children's fingers should be protected from pinching or being crushed on gate hinges. Ideally, each play yard should have a vehicle gate as a service entrance.



control pests using the least toxic methods feasible. Use alternate, less toxic termite prevention systems rather than chemical soil treatment for wood-framed buildings. Where soil treatment is determined to be necessary, use less toxic chemicals than chlorpyrifos

(“Dursban”), which is currently being phased out by the EPA.

Consider the following advice about plant materials:

- Plants should be used to introduce nature to the play yard environment.
- The center atmosphere is enlivened by the color, texture, sound, and motion of plant materials.
- Observation of plant growth is beneficial to children.
- Plant materials that change with the seasons are desirable. Visual barriers, screens, and shade and wind protection can be created using plant materials with or instead of man-made structures.
- Plant materials should be used to define interesting play areas.

6.7.3 Dimensions and Clearances

Best practice indicates that centers should be designed with the following guidelines in mind:

- **Main entrance pathways should be 6 to 8 feet wide.** All pathways must provide adequate clearance as prescribed by the UFAS and ADA standards. **Pathway slopes should be no greater than 1:20 and should include handrails.**
- Platforms, stairs, handrails on stairs, guardrails, and protective barriers on platforms should comply with requirements in the latest edition of the *Handbook for Public Playground Safety of the CPSC*. The height of platforms and the age group using the platform will determine when a guardrail or protective barrier is required. Guardrails may be used on platforms at lower heights, while protective barriers should be provided on higher platforms.
- Handrails should be provided to accommodate the intended age group including adults on all stairs. For children, heights will range between 20 and 36 inches above the leading edge of the tread. In certain instances, it may be necessary to have dual railings mounted at different heights.
- **Guardrails should be provided for infants and toddlers on all platforms higher than 12 inches above adjacent surfaces. Guardrails must be provided for Head Start-age children on all platforms greater than 20 inches above adjacent surfaces. The top of the guardrail must be 30 inches above the platform. The guardrail should not have openings between 3.4 and 9 inches to avoid the possibility of head entrapment.**

There should be no openings in the fence between 0.3 and 1 inch wide to prevent finger entrapments.

- Protective barriers should be provided for all children on all platforms more than 30 inches above adjacent surfaces. The protective barrier should be 30 inches above the platform with no openings larger than 3 inches and no horizontal footholds.
- Maximum platform height for infants is 18 inches above the adjacent floor level.
- Maximum platform height for toddlers is 36 inches above the adjacent floor level.
- Maximum platform height for Head Start children is 4.5 feet above the adjacent floor level.
- Pathways under trees and constructed elements must have at least 6.7 feet of headroom.
- There must be a fall zone with a resilient surface under all climbing and moving fixed play equipment, as specified in the current



CPSC and local licensing criteria. Typically, a minimum 6-foot radius is required. The criteria for resilient surfaces are discussed below.

- There should be a 6-foot radius clear approach zone to all play equipment not including the fall zone. No tricycle path should run through a fall zone.

6.7.4 Shading

At least half of the play yard should be exposed to sunlight during the morning and afternoon hours when it is in use.

The degree of shade depends on local climatic conditions. Shade areas, including porches, gazebos, and other structures, should provide a minimum shaded area of 6 feet in all directions. Shade may be provided by trees, exterior screened rooms, park shelters and structures, awnings, and umbrellas.

6.7.5 Play Yard Surfaces

A variety of ground surface texture is required on a playground. Surfaces for play yards are based on their physical properties and are categorized into three general types: resilient, hard, and grass/turf.

6.7.6 Resilient Surfaces

Resilient surfaces reduce the impact from falls and should be used in specific equipment areas referred to as fall zones. Refer to ASTM F-355, *Shock Absorbing Properties of Playing Surface Systems and Materials* and the most recent publication of the CPSC's *Handbook for Public Playground Safety*,

7.1 General Information

Spaces within the center can be separated into three major types: 1) the classroom and common use areas for children; 2) the staff areas for teachers and administrators; and 3) the service areas for servicing the center.

The entries to the center and main circulation pathways unify these areas. Descriptions for each space type are as follows. See Chapter 9 for finish recommendations.

7.1.1 Entry and Circulation

The entry includes the transition space, vestibule, and reception area where parents, teachers, children, and visitors enter the facility. The main circulation provides pathways between discreet functional spaces.



7.1.2 Staff Areas

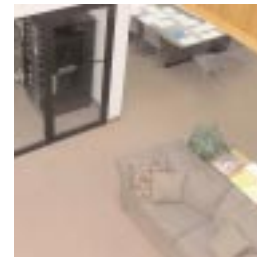
Staff areas include the director's office, assistant or secretary's work space, staff lounge and work area, staff toilet, parent/teacher conference area, and central resource storage.

7.1.3 Classrooms

Classrooms for infants, toddlers, and Head Start children are specific to the group using the space. Best practice indicates that these classrooms must have a variety of spaces to support the children's care and developmentally appropriate activities.



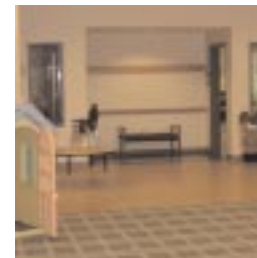
Architecturally defined spaces within classrooms include the entrance,



cubby storage, classroom and teacher storage, diapering station and storage, toileting and hand washing, sleeping, nursing, and food preparation. The classroom should have an art sink, raised areas, and loft areas (though these level changes need not be built in), and open, architecturally unrestricted areas.

7.1.4 Common Areas

The center may have additional space in a centrally located area for use by children, teachers, and parents. A beneficial by-product of a Head Start center is a stronger sense of community among those using the center.



The center may include a multiple-purpose space. The multiple-purpose space may be used as a meeting area and as a large-motor-activity area. Best practice indicates that if no adequate outdoor play yard space is available or climate is not conducive to outdoor play during significant portions of the year, an indoor large-motor-activity area should be provided. If either portable or permanent lofts are to be located in this room, appropriate protective surfacing should be provided for the highest unprotected deck. (Ref: ASTM-F1292-99)

Unless local licensing requires a separate sick bay, the area should be near the center director's office. A sick child must wait here until he is picked up by his parent. (See Chapter 10 for ventilation requirements.)



7.1.5 Service Areas

The center requires space for services including food, laundry, janitorial, and service dock/entrance.

7.1.6 Entrance and Circulation



These spaces should provide a safe and convenient arrival and departure site. The main entry is vital to creating a friendly impression for children and a non-threatening transition from parents' care to staff care.

Certain features help promote a successful transition:

- An entrance door glazed with safety glass provides full visibility for children and adults.
- Entryway visibility of classrooms and interesting displays for children can help to ensure a smooth transition at arrival time.
- A reception desk that allows children to see the adult staffing reception, if one is required. (Typically centers with a population of 74 or more might have a reception desk to monitor access to the center.) The reception desk should be simple not a high counter. Note that the need for a reception desk should be discussed during design development because this feature is often underutilized in existing centers.
- The main entrance should be in close proximity to an adult lavatory for use by parents and staff.

Other points of entry for the facility include service entry access to the play yards and the classrooms. The main entry should include an exterior transition area, or a covered bench for good-byes, shoe-tying and other child/parent interactions. Ideally, the entry that conforms to ADA dimension requirements would include a vestibule for energy conservation and a reception area. Secondary entries should have transition areas but do not require thermal vestibules. Depending on the climate, porches or mudrooms can serve this purpose. In spaces that are difficult to monitor, fire egress doors should be alarmed.

7.1.7 Exterior Transition Spaces

Rough textured ground surfaces combined with landscaping that keeps soil and foliage away from the entry path are appropriate in these areas. Ground materials and landscaping leading to the building entry should be designed to minimize the potential for tracking soil and water into the building.

All exterior entries used by children should have transition spaces with a bench and a covered area of at least 22.5 square feet. The covered area may be a roof, canopy, or trellis. Transition

spaces are important in creating a comfortable environment and integrating the exterior and the interior. These spaces allow children to adjust to the changes between interior and exterior light levels and temperatures.

A transition space also may serve as a mud room or may provide an area for children in the outdoor environment.

Elements extending from the building, such as porches, verandas,



canopies, or arcades, can create successful transition spaces and in warm climates can be used as program areas.

7.1.8 Vestibule

Provide views of the short-term-parking area from the entry vestibule and design the windows with low sills so that children can look through the windows. Vestibules should consist of two sets of doors to provide energy conservation. The doors must be arranged to permit use by those in wheelchairs. There should be a flush-mounted walk-off mat to prevent tracking of water and soil into the center. The entrance may need security devices. This equipment should be non-intrusive and have a non-threatening appearance. Refer to Chapter 10 for more information on technical requirements. In areas with snow and ice, a roof overhang or canopy should be installed to ensure that the exit is readily accessible at all times.

7.1.9 Reception

A reception area should be located immediately inside the entry. It should be warm, bright, and welcoming. The reception area connects the entrance to the main circulation pathways of the center. Parents escort children to the classroom from this location.

A small reception table at desk height may be provided in large centers. It can serve as a sign-in facility or a spot for parent/teacher mailboxes. A counter, which is typically simpler and less expensive than a reception desk, may serve these functions. A child should be able to see the adult

behind the desk. Furnishings in the reception area may include a sofa, chair, end table, and coffee table.

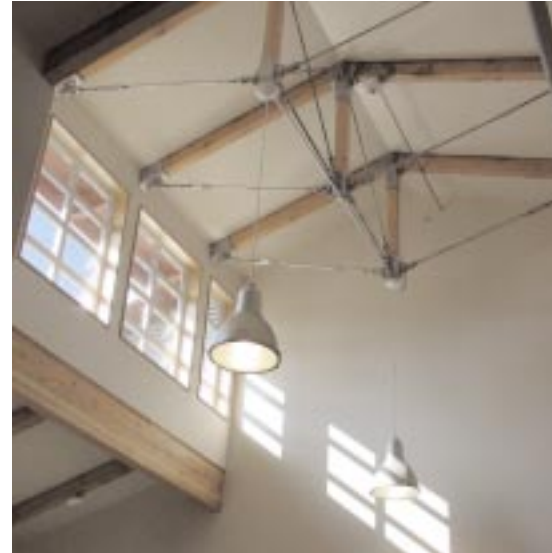
The design team should select durable finishes (Chapter 9) that have an informal, comfortable appearance and should establish a warm, inviting feeling through use of color, soft seating, plants, and artwork. Recommended finishes include a carpeted floor and a washable durable wall finish. Cut-pile carpet has proven less durable than looped pile. Oriental-style patterned rugs may be associated with a home environment. All rugs in the center should have non-slip backing.

7.1.10 Main Circulation

A center includes two types of circulation paths: the main circulation connecting the various classrooms and major spaces of the center path, and the internal circulation patterns within those spaces. Circulation within classrooms will be discussed in the classroom section of this chapter.

The main circulation path serves as a community space as well as a pathway. The circulation space should not be utilitarian in character. Instead, it should be a street or a gallery with stopping and queuing areas along the way. There should be an opportunity for important social interaction along the circulation path. It is a space to meet other children and parents, a vantage point to see into classrooms, and an exhibition space for children's art.

The designer should strive to limit the floor space devoted to pure



building circulation. There should be at least one accessible drinking fountain in the corridor. It is advisable to avoid the institutional appearance that is created by long, undeviating, double-loaded corridors with doors to rooms on both sides.

When it is not feasible to vary the layout of the circulation corridor, consider adopting the following design strategies to deemphasize the impression long corridors make:

- **Lighting:** The designer can introduce artificial lighting. Instead of the dead-center placement of fluorescent lights in corridor ceilings, add strategically placed wall washing lights or natural light through skylights. Putting a window, glazed door, or skylight at the end of a corridor is advisable.
- **Floor Pattern:** Using patterns can create a strong sense of place for children and when skillfully used will diminish the impression of long, double-loaded corridors. Large pattern repeats are often effective

for de-emphasizing the tunnel appearance of double-loaded corridors. Patterns that are not symmetrically arranged or that emphasize functional areas, such as entrances to classrooms, are an effective means to achieve the same end.

- Color: The designer should use color to visually alter the dimensions of otherwise institutional looking double-loaded corridors. Care should be taken in choosing the colors. Some think that bright colors may over-stimulate a child. However, since some cultures and com-

munities use colors as a means of identity, color is an important local decision.

Children gain a sense of orientation when they can see the entrance to their classroom and recognize landmarks, such as displays, common areas, and other design features.

Teachers and children

require clear views between the classroom and circulation areas at their viewing levels.



The main circulation path should be designed to serve as a primary means of regular and emergency egress. Through judicious arrangement, the designer should strive to reduce the area devoted to purely utilitarian circulation. No more than 30 percent (some design suggests no more than 20 to 25 percent) of the Occupiable Floor Area (OFA) within a facility should be used for primary circulation and service areas, unless the center location is irregular. The Occupiable Floor Area (OFA) allowance includes circulation within the classroom.

Outside corners in the circulation pathways should be eliminated as much as possible. Angled or curved corners can facilitate cart and stroller traffic and may decrease the possibility of injury.

Recommended finishes for major circulation paths include impervious surfaces at the floor and at wainscot height, paint above wainscot height, and safety glass in windows along the corridor.

7.1.11 Staff Spaces

Staff areas usually include the following spaces:

- Director's office
- Assistant's or secretary's work space
- Parent/teacher conference area
- Area for family workers and health staff to work and interact with parents.
- Staff lounge and work area

- Staff toilet
- Central resource storage

Spaces used by the staff, particularly teachers, should be easily accessible from the main circulation area.

7.1.12 Director's Office

The director will normally perform deskwork and interviews in his/her office. The director may use this space to meet with parents, staff members, children, or other visitors and to conduct parent interviews. Larger centers may have an assistant or secretary who works closely with and shares duties with the director. Space for this staff member should be located near the director's office.

Place this office in a quiet space, next to the reception area and accessible to visitors. To supervise properly, the director's office must have excellent views of the main entry, the reception area, and as many classrooms as possible.

The director's office should be comfortable with a carpeted floor and washable wall surfaces. There should be adequate lighting with task lighting components and acoustical separation of at least 45 STC from the children's active areas.

Furnishings probably would include a desk and chair, two guest chairs, filing cabinets, a coat rack, shelving for books and resources, and lockable storage cabinets or a closet for personal belongings and first aid items.

The director's office requires a telephone and may have security video monitors. There should be adequate power supply to accommodate a personal computer, printer, and a fax machine. A copier and video equipment also may be stored here.

7.1.13 Parent/Teacher Conference Room

Parent/teacher conferences and meetings between staff members normally require space. This space should be located in a private area, adjacent either to the director's office or the staff lounge. It should have data connect cables and jacks.

The conference space should be comfortable, pleasant, and quiet. Furnishings should include a conference table and seating for a suggested minimum of six, shelving for books, and a notice/bulletin board. Lighting should be dimmable so that video tapes may be viewed.

7.1.14 Staff Lounge

The staff may use this space as both a retreat and a workroom. They may relax and eat here, plan curricula, and prepare classroom materials. The lounge may contain a cot or sofa and should be located near the adult lavatory and central resource storage area. This space requires visual and acoustical separation from children's areas but should be easily accessible to the staff.

The lounge should be comfortable, pleasant, and soothing. It should contain a counter with a microwave, a sink, an under-counter refrigerator, and

cabinets. The flooring at the counter area should be impervious. All base cabinets should have childproof hardware. Recommended furnishings include a table with four chairs, a small sofa, and storage cabinets, some of which lock.

The workroom should have adequate space and power connections for telephone, computer, video equipment, and laminating and copy machines (unless they are in the director's office). The machines should be isolated in an alcove for better control of noise. There also should be space on the counter for a butcher paper holder and an art waxer (a piece of equipment that allows children's art to be hung without tape or pins).

7.1.15 Staff Lavatory

A center must provide at least one adult lavatory, although two, at either end of the center are recommended. Two adult lavatories improve the center's functioning because this enables teachers to be out of classrooms for shorter periods.

Adult lavatories in the center must meet all UFAS and ADA code requirements. **Lavatories should be accessible from the reception area and staff lounge.** Recommended finishes include impervious flooring such as linoleum and painted walls above an impervious wainscot. One adult lavatory should be located in or near the infant and young toddler classroom areas. Electronic faucets are advisable in adult lavatories.

7.1.16 Central Resource Storage

The director and teachers may use a centrally located resource room for bulk storage of curricula materials and supplies and for storage of resource tapes, books, and audio/video equipment. The central resource storage is not a substitute for small-scale storage within the classroom. This storage is typically wall-mounted cabinets in the classrooms. The base of these securely anchored cabinets must be no lower than 4.5 feet above the finished floor below.

The storage room should have open shelving, lockable, closed-door storage, and filing cabinets. If space permits, a work counter and a counter-height stool may be provided.

7.2 General Concepts for Classroom Design

Children spend most of their day in the classroom. Classrooms afford facilities for care and opportunities for developmentally appropriate activities. Parents typically drop off and pick up children in the classroom, and adults may visit during the day or help as classroom volunteers.

7.2.1 Classroom Areas

The classroom design includes functional areas defined by furniture arrangements and constructed elements that vary depending on the age of the children in the class. To maximize the space devoted to these important functions, the circulation between entrance and exits should be as direct as possible. It is appropriate to position tables and work surfaces adjacent to circulation areas, while retaining corners and floor areas for more protected and nurturing activities.



Ideally, classroom areas should be designed or arranged to fit four or five children and one adult. There also should be a group gathering area. Areas located in alcoves can allow children to be by themselves or in small groups. Classrooms should be equipped with convenient bins for recycling waste paper and other items.

Major classroom elements, such as plumbing connections, risers or case goods secured in place for safety reasons will remain fixed.

Children and their teachers may modify the remaining space to create areas for their activities. The classrooms should provide flexibility for these activities.



Manufactured cubbies anchored to full partitions have been found to be more cost-effective than built-in types. The designer should ensure that the classroom space can accommodate the manufactured cubbies. It is wise to prevent an excess of

children's personal items in and around cubbies that would affect the order and function of the classroom. The cubbies could be arranged to form a cloakroom, an entrance alcove, or a transition area with openings facing away from the main classroom.



Children should have opportunities for diverse activities in the classroom. Lofts offer an opportunity for exploration; however, built-in lofts

are not recommended. Low shelves and partitions should be secured to prevent tipping if they are used to separate use areas.

A well-equipped classroom for particular age groups should have the following areas:

Infant Classroom

- Entrance
- Cubby storage
- Classroom and teacher storage
- Adult lavatory within the classroom (preferable) but no more than 33

feet from the infant classroom entry

- Diapering station and storage
- Sleeping/crib area
- Nursing area
- Eating/table area
- Food preparation area
- Open activity and crawling area for play and development



Young Toddler Classroom

- Entrance
- Cubby storage
- Classroom and teacher storage
- Adult lavatory within 10 meters of entry
- Diapering station and storage
- Children's toilets and sinks
- Eating/table area
- Food preparation area
- Open activity area for play and development
- Area with level change (three risers minimum)
- Cot storage



Older Toddler Classroom

- Entrance
- Cubby storage
- Classroom and teacher storage
- Children's toilets and sinks (one sink at toilet exit is preferable to avoid congestion)
- Eating/table area
- Art sink
- Area with level change (three risers minimum)
- Open, unrestricted activity area
- Water fountain
- Cot storage

Head Start Classroom

- Entrance
- Cubby storage
- A classroom for three-year old children requires a small diaper changing area
- Classroom and teacher storage
- Children's toilets and sinks (one sink at toilet exit preferable to avoid congestion)
- Eating/table area
- Art sink
- Water play area
- Drinking fountain

- Loft area (not built in)
- Area with level change (three risers minimum)
- Open, unrestricted activity area
- Block area (64 square feet minimum) located away from main circulation
- Cot storage

Separate male/female child-sized toilets should comply with ADAAG and with UFAS. If this is a problem, the designers should insure that the doors are low enough (59 inches max.) to allow adult supervision.

If windows are installed, they should be located to allow adult supervision of the classroom.

The proper zoning of classrooms is critical to the success of the center. The designer and users should consult at length.

General classroom design principles include the following:

- Discreet functional areas need to be included in the design of the classroom even though they may be created primarily with furniture.
- Noisy and active areas need to be away from quiet areas.
- The circulation from equipment such as slides should flow away from activity centers.
- Block play is an essential activity and areas must be provided where blocks can remain in position for more than a day and be protected

from main circulation pathways and active play.

- Do not crowd the space with more tables than necessary for mealtime. and avoid excessive distance between tables. Rectangular tables should be arranged with 3.25 feet of clear space between them.

7.2.2 Classroom Location

To receive the maximum access to natural light, classrooms should be located along the exterior perimeter of the building. If not possible, the classroom should be located near areas that are along an exterior wall with windows.

Where possible, classrooms should have direct access to a central circulation system and direct access to play yards. They should be close to common use spaces.

7.2.3 Classroom Size

Design classrooms to accommodate the number of children for each age group. The Head Start Program Performance Standards and local licensing requirements must be referenced. Infants and young toddlers must have classrooms separate from other age groups. The design should allow for future expansion in all centers.

7.2.4 Separation of Spaces

Solid or glazed partitions at full height, doors, casework, cabinets, panels, and railings can be used for separation.

Three types of separation must be considered:

- Acoustical separation
- Visual separation
- Physical separation

The following aspects of separation should be considered when designing the classroom spaces:

- Groups or classrooms of children must be physically separated from each other.
- Sound transmission between classrooms should be controlled



with not less than 34 STC partitions,

although complete acoustical separation is not suggested.

- High noise levels



from adjoining classroom spaces can negatively affect class activities.

- Small, strategically placed windows between classrooms are recommended to offer children a view of other classroom activities. Placement of windows should not interfere with potential placement of classroom furniture. Install at least one window at child and adult levels.

Provide partial height enclosure for fixed elements in the following areas: food preparation, children's toilet and hand washing, and the rear of cubbies. Food preparation and toileting/diapering areas must be separated to reduce the chance that a caregiver could inadvertently spread germs. Partitions with vision panels can be used effectively to separate these areas while allowing supervision.

Provide complete enclosure for teacher storage within the classroom and complete enclosure for the adult toilets.

7.3 Scale

The design of a nurturing classroom must reflect the designers' appreciation of children's scale, including the size of individual spaces within the classroom and the scale of furnishings. (Refer to Table 7.3 showing Physical Dimensions of Children.).

While areas of high ceilings in a classroom may be desirable, height must be modified in spaces that the child perceives as too high to have a residential character (for example, 85 percent of the room is over 11 feet high).

Consider using pendant lighting or ceiling fans hung no lower than 7.5 feet above the occupied floor area below. Pendant task lighting over fixed elements may hang as low as 5.5 feet as long as headroom is not required for passage. Choose fans to improve air flow and energy efficiency with rotation that can be reversed. Aside from the obvious mechanical and lighting enhancements that these strategies provide, they also help tailor spaces to children's spatial perceptions. In addition, this provides the opportunity to hang banners and create trellis ceilings over activity

Table 7.3 — PHYSICAL DIMENSIONS OF CHILDREN

The following dimensions are stated in inches and represent averages. Metric measures have been converted to English equivalents using the conversions in *Appendix D*.

AGE IN YEARS	BIRTH	.5	1.0	2.0	3.0	4.0	5.0
BODY LENGTH	20.0	26.4	30.0	34.4	38.0	41.6	45.7
HEAD LENGTH	4.9	5.9	6.9	7.5	7.7	7.8	7.9
HEAD WIDTH	3.8	4.7	5.2	5.5	5.6	5.7	5.7
HEAD CIRCUMFERENCE	21.9	17.3	18.6	19.6	19.6	19.9	20.1
TRUNK LENGTH	8.3	11.6	12.6	13.6	14.3	15.0	15.3
SHOULDER WIDTH	5.9	7.0	8.0	8.8	9.3	9.7	10.0
CHEST CIRCUMFERENCE	13.0	17.2	18.7	20	20.5	20.8	21.7
ABDOMINAL CIRCUMFERENCE	N/A	16.1	17.5	18.2	8.5	20.3	20.4
PELVIC WIDTH	4.6	4.6	5.1	5.7	6.2	6.3	7.3
ARM LENGTH	7.6	10.0	12.0	14.6	6.4	16.7	19.8
HAND LENGTH	N/A	N/A	3.8	4.2	4.7	4.9	5.0
HAND WIDTH	1.4	1.6	1.7	1.9	2.0	2.0	2.2
LEG AND THIGH LENGTH	6.6	8.2	9.6	12.2	14.6	17.2	22.9
SITTING HEIGHT	N/A	17.6	19.2	21.2	22.5	23.5	24.5
KNEE WIDTH	1.5	N/A	2.5	2.6	2.7	2.7	2.7
WEIGHT IN POUNDS	7.5	16.7	22.0	28.0	32.0	38.0	43.0
KNEE PIVOT TO FLOOR	N/A	N/A	N/A	9.6	10.4	11.3	12.5
KNEE WIDTH	1.5	N/A	2.5	2.6	2.7	2.7	2.7

Source: Anita R. Olds, Ph.D., Architectural Prototype Document, Commonwealth of Massachusetts, 1987; Diffrient, N., Tilley, A.R., and Bardagly, J.C., *Humanscale 1/2/3 Manual*, Cambridge: MIT Press, 1974; Society of Automotive Engineers, Inc., *Anthropometry of U.S. Infants & Children*, Michigan: 1975.

areas. It is important to ensure that they do not interfere with the function of the sprinkler system.

The height of windowsills and counters depends upon the age of the children using the space. Leave 1.5 feet beneath windowsills (measured to the classroom finish floor) so that furniture and equipment can be placed easily along exterior walls. Storefront-type windows starting at the finished floor are not desirable.

Any furnishings and equipment for children should be child-scaled. Countertop height and reach depth should provide children with the opportunities to use them unassisted.

Consideration should be given to the adults using the space. Center design should be both adult and child friendly. Not all elements should be reduced in scale. Door locks, light switches, fire alarm pull stations, and other functional elements should retain adult scale and be mounted at standard heights. Food preparation, storage and service spaces, and other areas of the center used primarily by adults should remain at standard scale.

Furnishings that adults use should be adult scale. Some items may have a double function for both children and adults.

In placing electrical/telecommunication or security equipment, ensure that cords and wires are not placed within reach of children.

7.4 Architectural Form

The architectural form of the classroom should create an appropriate setting for a child. It should convey a definite sense of place while preserving optimal flexibility. The majority of the space should be free of constructed elements, and furniture arrangements should be used to create required functional areas.

The following guidance applies to architectural form:

- Vary ceiling heights to define areas, disperse light, and create interest. Higher ceiling heights often encourage greater activity levels. Lower ceilings support quiet activities. The probability of higher construction costs must be considered in determining the extent of ceiling variation.
- Vary floor levels to create riser lofts and low platforms. Sunken areas also are effective. The designer should be aware that permanent,



7.5 Classroom Component Areas

7.5.1 Classroom Entrances

Each classroom should have a distinct and welcoming entrance that meets all emergency exit requirements. A second classroom entrance to the main circulation path or to play yards should be considered for egress depending on center configuration. Place the classroom entrance along a wall leaving corners available for activity areas. Entrances should allow views from the main circulation area into classrooms. There should be a sign-in counter (with storage below) near the classroom door at approximately 845 millimeters above the finished floor.

7.5.2 Cubby Storage Area

Children typically store their outdoor clothing and personal belongings in a cubby alcove when they arrive in the classroom. Designers should be aware that children may again need their outdoor clothing during the day. Parents may linger in the cubby alcove spending time with their children or with teachers or other parents. The design of the cubby area must consider this activity so bottlenecks do not occur. Cubbies should be arranged in a cloak room so as not to take up valuable classroom wall space.

Cubby storage areas should include the following features:

- Open-front cubbies scaled to child size, one for each child in the classroom, and secured to the floor and wall to prevent tipping accidents.
- A three foot clear area in front of the cubbies to ensure easy access.

- Seating which may be integrated with the cubby for either adult or child use, such as a bench.
- A parent bulletin board and mail box may also be located in the reception area.

The size and type of cubby storage may vary according to the age group in the classroom. It is wise to include a shelf for child safety seats, if space allows. If the cubbies are purchased, the designer should ensure that the dimensions fit the classroom space and design.

7.5.3 Infant and Young Toddler Cubbies

Infants and young toddlers need storage for diaper bags, clothing, and supplies. Typically, these purchased cubbies are about 1 foot wide, 1 foot deep and 1.5 feet high. The bench in the infant area should be about 1.2 feet above floor level so parents can sit comfortably while removing or putting on their children's outdoor clothing.

Parents may wish to leave collapsible strollers or other child-carrying equipment at the center during the day. Rods for this purpose should be provided in this storage area or near the reception area. Provide 9 to 12 inches of rod length for every five children and install rods approximately 4.5 to 5 feet above the floor. If a double storage rod is needed, install the top rod about 7 feet above the floor and the bottom rod about 3.5 feet above the floor. Provide a retaining rail to keep the lower end of the strollers in place.

7.5.4 Older Toddler and Head Start Children's Cubbies

Older toddlers and Head Start children need to store bulkier outdoor clothing in their cubbies. Satchels and backpacks may be stored on hooks. These cubbies should be a minimum of 1 foot wide, 1 foot deep, and 3 to 4 feet high. Two hooks are needed in each compartment for hanging garments. A shelf should be included for boxes, boots, or extra shoes. The bench in this area should be about 10 inches high for children to sit comfortably while preparing for outdoor activity.

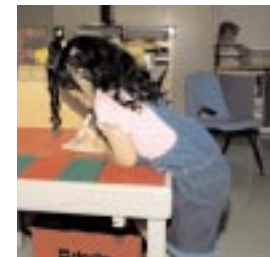
7.5.5 Open Activity Area

Each classroom should have an open, unrestricted activity area, clear of constructed elements. Teachers and children are the architects of this space and should be able to adjust and alter this flexible area in response to their needs and activities. This can be accomplished through the use of elements such as curricula equipment and materials, moveable panels and demountable walls, fabrics, furniture such as seating or shelving, and display racks. The required space allotment for this area is described in Chapter 5, Section 5.8.

Requirements for activities occurring within this space will vary according to the age of children. Play activities may involve:

- Discovery, including sand and water play
- Large motor activity
- Art/Music/Dramatic play
- Reading/listening
- Manipulation of small puzzles and finger toys

- Block building
- Woodworking
- Science, including nature study
- Math



It is wise to locate an open activity area within the classroom to take full advantage of natural light.

Arrange the fixed elements along inside walls to reduce bottlenecks and maximize use of natural light in the space. The design should encourage traffic pathways minimizing disruption and avoiding areas of activity. Offset walls or partition patterns will allow more intimate areas for children but not obstruct teachers' views of the activity area. Corner areas providing natural boundaries can set apart an activity area.

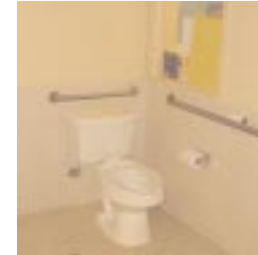
dry marker boards or chalkboards. Install impervious floor coverings with sealed seams and a floor drain in this area.

Including a built-in counter with a configuration that allows children to face each other during activities is advisable. A shatterproof mirror above the counter is a desirable feature.

7.7.2 Toilets and Sinks

The following plumbing requirements are for areas devoted to toddlers and Head Start children:

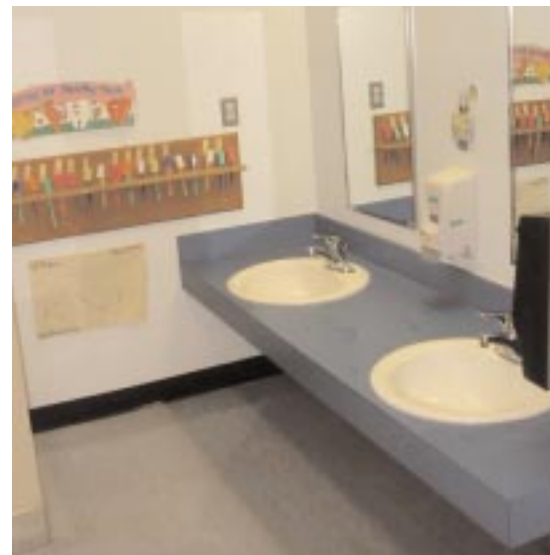
- A minimum of two toilets in the center but not less than one toilet and two child-height hand-washing sinks. Include one lavatory and one drinking fountain for every 10 children. Two classrooms may share one toilet area.
- Toddlers: Two adult sinks at a minimum, one for diapering in the toddler room and one for use near food preparation.
- Head Start: One adult sink and one or two hand-washing sinks for every 10-20 children and one connection for water play.
- Toilet areas may be used by both girls and boys and may be partially screened. If doors are provided, they should not lock. This offers some privacy but allows adult supervision. Toilet areas are to have gates or half doors at entrances and may have child-height partitioning between toilets. As with all full-height doors, these elements should have hinge protection so that children's hands and fingers are not accidentally pinched.



- An adult toilet should be located outside the older toddler and Head Start classrooms and either in or near infant and

young toddler classrooms.

- Classroom toilets should be placed toward the interior perimeter to leave the exterior free for access to natural light and views. They should be constructed as part of the fixed elements and, where possible, should share plumbing walls with other areas requiring plumbing connections.



The toilet area should be physically separated from food preparation and eating areas and partially screened from the view of remaining spaces. Hand-washing sinks may be located within the toilet area but are best placed in the classroom on a wall

adjacent to the toilet area to facilitate supervision and reduce congestion in the toilet area.

- Toilets are to be child-size for toddlers. Larger toilets may be chosen for Head Start children. They must be accessible to children with special needs.
- Toddler and Head Start toilet areas should have durable, water-resistant finishes and bright, cheerful lighting. Recommended flooring includes ceramic tile with an integral cove base and a ceramic tile wainscot to 3 feet above the floor with a painted wall above.

Following are suggested features for the toilet area:

- For toddlers, a toilet seat height of approximately 11 inches including the seat. Head Start children who are four to five years old may use adult-size toilets.
- A floor drain.
- A toilet tissue dispenser next to toilet.
- Exhaust ventilation.

Recommended features for the hand-washing sink include:

- A sink mounted 22 inches above the floor and counters 16 to 22 inches deep allow children to reach controls. Junior-height wash fountains also may be used with a washbasin rim height of approximately 25 inches.

- The hot water temperature should be controlled to a maximum of 109.4° F. Hot water heaters should be placed where they are not accessible to children.
- Soap dispensers should be at each sink.
- One paper towel dispenser per sink area. Metered roll dispensers are preferred with one at each sink area. The dispenser should not have a serrated edge. Even though rolled goods are usually more economical and environmentally sensitive, note that children often waste rolled goods because they lack the coordination to tear rolled paper easily.
- One freestanding pedal-operated waste receptacle per sink area. Metal receptacles should not have sharp edges.

- Moveable waste receptacles.
- Safety mirrors mounted at child height.



7.7.3 Diapering Station and Storage Areas

A diapering station and diaper storage area are needed in each classroom serving infants or toddlers. Locate this area in an easily accessible, central location, but apart from food preparation and eating areas. Orient the diapering station so that a teacher can maintain visual supervision of the other children while diapering a baby or toddler, and the children can see the teacher. This component should be constructed as part of the fixed elements within the classroom and designed to maximize use of the existing plumbing connections.

The diapering station and storage area consists of a changing table, counter-top with sink, waste bin, and upper storage cabinets for diapers and other

supplies. All equipment and storage needed for this area must be easily cleaned, non-porous, and accessible to the teacher at the changing table. The teacher should not move away from the child being diapered.

The diapering station should be designed to reduce possible trans-



mission of blood-borne pathogens. The table should be easily sanitized or sterilized, and all material contaminated with feces should be stored safely and hygienically in sealed receptacles.

Specific equipment at the diaper station should include:

- Changing table with an impervious surface. The top surface should be at least 2.8 feet above the floor. There must be a safety device on either side of the baby, such as a tubular rail to provide side restraint 3 inches above the surface of the mat. Since mats are typically 1 inch thick, the top of the rail should be approximately 4 inches above the surface of the changing table. The table should be 2 feet wide and 3.3 feet long. It should have a waterproof covered pad. Check with local licensing for possible additional requirements.
- Hand washing sink with sloped sides and within reach of the changing table. It should have hands-free or wrist-blade faucet controls. Diaper sinks should not have gooseneck faucets because this type causes more splashing than standard faucets.
- Paper towel, soap, and rubber glove dispensers within reach of the teacher at the changing table.
- Open compartmentalized upper cabinets approximately 9 inches wide, 9 inches high, and 12 inches deep.
- Waste storage for disposable diapers must be in a waterproof, washable container with a disposable plastic liner. The waste storage must be covered with an airtight lid and must be within reach of the teacher at the changing table and must be operable without utilizing both

hands. A pedal-operated waste container may be used and should be placed under the counter out of reach of children. If both cloth and disposable diapers are used, separate containers must be provided.

- Movable or retractable steps are necessary to help toddlers up onto the changing table. Steps are particularly helpful for caregivers who may be challenged by excessive lifting.
- Exhaust ventilation free from drafts would be ideal. A separate zone or a ceiling-mounted unit heater may be provided at the changing table to maintain a temperature warmer than the rest of the classroom. Recommended finishes include impervious flooring and millwork, countertops, and a wall splash. Wall surfaces adjacent to the changing table should have impervious finishes. Finishes must be unaffected by disinfectants used to clean the changing table surface.

7.7.4 Sleeping and Napping Areas

Special areas for sleeping are provided in infant rooms and often in young toddler rooms. Infant sleeping areas should be quiet and pleasant and located in a space within the classroom where infants can sleep according to their individual schedules. Teachers must have visual and acoustical access to this area at all times. It is best to locate sleeping areas away from active areas.

Installation of walls or half walls and glass in the nap area is not advisable as this may mean the nap area will be designated as a separate sleeping area. Some licensing authorities might require a teacher to be stationed in the nap room. Allow ample space for one crib per infant, placed 36 inches apart. Recommended finishes include carpeted floor and painted walls

above an impervious wainscot and washable, glossy paint, or another washable surface. It is important to use dimmable lighting. Window treatments can be used to control direct sunlight through exterior windows.

Provide a crib for each infant and young toddler. One of every four cribs should be an evacuation crib that is especially constructed for this purpose. It should be equipped with 4-inch wheels and capable of holding and transporting up to five infants. The evacuation crib(s) should be placed closest to the emergency exit point and must be capable of easily passing through a 3-foot-wide door.

Sleeping areas should be equipped with smoke detectors. Recommended fire safety requirements for children's sleeping rooms can be found in Section 10.1, Chapter 10.

Older toddler and Head Start classrooms generally will not have space allocated for a sleeping area but will provide napping cots that can be stored within the classroom when not in use. A few cribs may be needed in a toddler classroom.

7.7.5 Nursing and Lactation Areas

A quiet, semi-private area in the infant classroom may be provided for a mother to visit and nurse her infant or for lactation. Locate this space near the sleeping area with some visual separation from the other areas of the classroom and privacy from the circulation pathways. This space should be located near a sink and be as comfortable as possible. It should

have adjacent counter space and a carpeted floor. Include at least one comfortable chair.

7.7.6 Food Preparation

Children usually eat in their classrooms with teachers. A food preparation area should be provided in infant and young toddler classrooms for storing and heating bottles and for preparing foods.

It is advisable to locate infant and young toddler food preparation areas near fixed elements within the classroom. The area should be adjacent to the eating/table area and separated from the diapering station, toilet, and hand-washing areas. Placing food preparation areas near activity areas provides teachers with clear views of the classroom. No food preparation area should be located under sewer or drainpipes concealed in the ceiling.

The food preparation areas in classrooms may include the following heavy-duty items:

- Upper and lower washable cabinet storage: HSB recommends providing childproof latches or locks to prevent child access to any storage within reach
- Counter area: It is wise to provide an adult-scale impervious counter, at least 8 feet long with a back splash. The top of the counter should be 2.8 feet high. Drawer and door pulls should be non-projecting types. Hinges should be heavy duty and durable because they receive intensive use. One cabinet should be lockable.

- A sink with a single-lever faucet, spray hose, and garbage disposal. The hot water temperature should be limited to 109.4°F.
- A bottle warmer
- A refrigerator providing a minimum of 8 cubic feet of refrigerator storage and a lockable box in each refrigerator for storing medication.
- Finishes include impervious flooring and a gloss-painted wall above an impervious wainscot. Plastic laminate finishes include laminate countertop, cabinet face, and back splash. Use post-formed counters with integral coves and bullnose. Ceiling tile should have washable facing.

7.7.7 Eating/Table Area

Meal and snack times in the classroom are opportunities for children and their teachers and visiting adults to enjoy social interaction in small groups, such as the family would at home. A parent may join the child at the table to share lunch. Usually, this area is part of the open, unrestricted portion of the classroom and is used for other activities during the day.

Small infants are held during bottle-feeding, while older infants who are able to sit may be placed in a low high chair while being fed soft foods. Traditional high chairs are not recommended because of the risk of falling and tipping and the reduced opportunity for social interaction.



Provide low stools for the teachers to sit on while feeding older infants. Provide a gliding chair or other comfortable chair for a teacher to sit in while bottle-feeding. Locate the infant eating space near the food preparation area, away from the open, unrestricted area where other children may be moving about. Young toddlers may be seated together at the same low table. Rectangular tables make better use of space than round tables.

Locate eating/table areas for older children in a central location away from toilet areas and in a pleasant area with natural light and items of interest, such as plants. For toddlers and older children, the eating/table area can be part of the general activity space.

Children older than infancy need movable chairs and tables built at the appropriate scale for their eating area. Storable tables may be used so the room can accommodate other activities. Each toddler and Head Start classroom should provide a separate, drinking fountain, preferably in the eating area. Mount the drinking fountain at 1.8 feet above the floor in a central location on a plumbing wall for toddlers. For Head Start children in general areas, the fountain should be mounted at 2.6 feet above the floor.

Recommended finishes for the eating/table areas include sheet vinyl flooring and a vinyl wall covering or a high-gloss, washable painted wall.

7.7.8 Child-Accessible Display

Shelving placed low to the floor allows children to see available curriculum materials and make selections. These materials may include books, art supplies and equipment, manipulative toys, large or small blocks, pull or push toys, and dramatic play materials. HSB suggests using open shelving approximately 16 inches deep by 30 inches high for this purpose.

Small items requiring further organization can be placed on this shelving in containers, such as plastic tubs or wire or wicker baskets. Shelving can be built-in millwork or freestanding movable units. Where appropriate, open shelving should be considered to create an open feeling in the classroom. If shelf backing is used, it should be attractive and useful. For instance, it may be mirrored with non-breakable reflective material.

Movable units lend greater flexibility, though they should be equipped with locking casters. A combination of built-in and freestanding units offer the best design solution. Some state, tribal, and local codes may require these units to be fixed to the floor.

7.7.9 Classroom and Teacher Storage

It is essential for classroom design to include adequate storage for the items required for a quality program. Inadequate storage conveys a cluttered, chaotic, or shoddy impression. Plan storage for cots, strolling equipment, curriculum materials, and supplies. Use of doors on storage areas should be minimized, because doors can cause finger entrapment and create a greater possibility of an accident occurring.

Any necessary door should have full-vision panels and the hardware to allow a trapped child to exit when the door is locked from the outside. Alcoves without doors can be used for storing stackable cots.

Provide some lockable storage in the classroom but ensure that some cabinets are situated to limit a child's access. Provide one lockable cabinet in each group of cabinets. This storage area is necessary for storing classroom equipment, materials, and supplies. Hooks and pegboards can be used to provide easy storage of aprons and small equipment.

Other storage may include overhead cabinets or shelves in food preparation areas. A lockable cabinet should be located above children's reach for storage of items such as medications, cleaning products, and other restricted items. Medications also may be stored in the refrigerator or food preparation area in a locked container.

7.7.10 Teacher Storage

Some lockable storage should be provided in the classroom for teachers to store outdoor clothing and other personal belongings. This storage may be provided in the storage area or in cabinets intended for the teacher's use. It should include a closet with a rod for hanging coats as well as shelving installed above the rod.



7.7.11 Multi-Purpose and Motor Activity Spaces

If space is available, HSB suggests providing a versatile, large, indoor open area for activities. A multipurpose space is especially important when large-muscle activity typically occurring on a playground must take place indoors because of poor climate. This indoor space also can be used for group gatherings or meetings.

Note that use of multi-purpose space should never be considered an adequate permanent substitute for playing outdoors.

Play equipment should be considered carefully to ensure that it can be used within the confines of an enclosed room. Such a room may have features, such as sprinklers and pendant-hung lighting fixtures, which must be protected from damage. Windows are not as important a feature in multipurpose spaces as they are in classrooms. However, natural lighting from non-breakable skylights is highly desirable and energy efficient.

It is wise to include movable partitions and a carpeted raised area for dramatic play in the multipurpose space. Furthermore, locating the multipurpose room near the kitchen and including a pass-through can increase the versatility of the space.

HSB suggests providing the following architectural features and equipment for multipurpose areas:

- High ceilings.
- Acoustical treatment on walls and ceilings and consideration of acoustical separation between the multipurpose room and adjoining rooms.
- Impervious flooring. If carpeted areas are desired to provide soft areas, non-slip area rugs should be used.
- A hard, durable, washable surface as a wall finish.
- Play equipment.
- Protective resilient surfaces in fall zones.
- Hard-surface pathways for wheeled toys.
- Storage for equipment and supplies.

7.7.12 Sick Bay

The sick bay which is required in some states, is used to temporarily isolate ill children until they can be taken home. Typically, if state licensing allows, a sick child waits on a cot in an alcove adjacent to the center director's office rather than in seclusion. If the sick bay is a separate space, locate it adjacent to the director's office or other program staff offices for uninterrupted supervision.

The sick bay should be near a toilet and include a cot or bed with a night-light. This area should have simple, pleasant finishes that are easy to clean and lockable storage for first aid supplies. A bookshelf for the storage of books and toys is appropriate, and a view of the exterior is recommended.

7.7.13 Service Spaces

Spaces for service areas such as the kitchen, laundry, the janitor's closet, and a telephone equipment room should be located at the rear of the facility near the service entrance and separate from children's activities. These service areas should not be accessible to children with the exception of the kitchen.

Major food staging and serving activities should be centralized in a kitchen area. The kitchen should be near the Head Start classroom.

Locating the multipurpose area near the kitchen makes it easier for children to use that space to work on cooking activities. This arrangement also provides an area for group lunches and other gatherings that may need kitchen access.

7.7.14 Kitchen

The type of food service provided to the center affects the scope and size of the kitchen area. HSB does not recommend any standards, codes, or requirements for full commercial kitchens with deep-fat fryers, ventilation hoods, and similar equipment. If the center includes a kitchen of this type, a food service specialist should be consulted as part of design services.

It is desirable to install a kitchen with heavy-duty equipment that can function primarily as a warming area for food or snacks and a staging area for receiving catered meals. Large centers may have two kitchen areas. The architect-engineer should not design a commercial kitchen on a scale that may trigger the need for sophisticated venting and hood-mounted fire suppression equipment. Especially in existing buildings, this type of commercial kitchen could force expensive modifications that could affect other sections of the building. For instance, in a multi-story building, this type of kitchen may require openings through several floors as well as through the roof to accommodate a vent duct.

The kitchen should be accessible to service personnel, staff, and other adults. For safety reasons, children will not be allowed in this space unless



escorted by an adult. The kitchen should be in a central location with access to the service entrance near the multi-purpose area and separate from the classrooms.

Suggested components include:

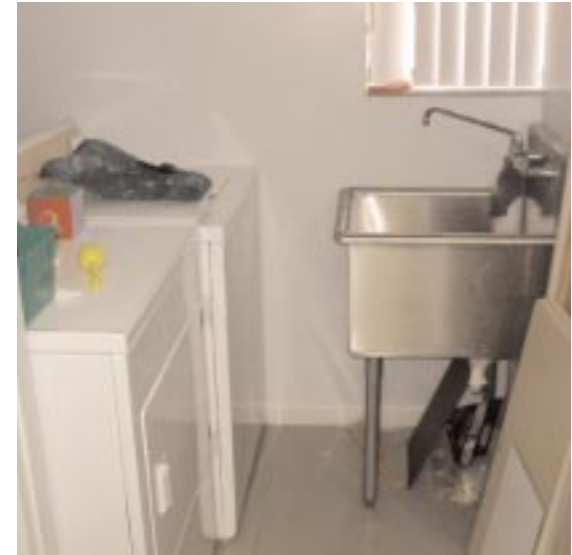
- A stainless steel, three-compartment, deep sink with required plumbing and hot and cold water connections located near the dishwasher and include a gooseneck faucet.
- A separate hand-washing sink.
- A garbage disposal with plumbing connections.
- A floor drain.
- A heavy duty, commercial-type dishwasher.
- A commercial-type refrigerator with storage at or below 39.2°F and freezer storage at or below -0.4°F. (Many centers will require two refrigerators and one or two commercial freezers. This issue should be clarified during initial design meetings.)
- A microwave oven (but not for warming formula or baby food).
- A convection oven and range.
- A range.
- Adequate deep counter space (2-foot minimum).
- Closed storage for dry food, equipment, and supplies on wire metal shelves.
- A recycling bin.
- Commercial style kitchen equipment with washable finishes such as stainless steel.

- A dietitian corner with a telephone.
- Ample, easily washed metal cabinets with accessible interior shelving.
- Stainless steel countertops and washable, seamless wall surfaces made for kitchens.
- An impervious, durable, easily cleaned floor finish.
- A washable ceiling finish.
- Space for two or more stainless steel food carts
- Adequate lighting, ventilation, and clearances .
- Locked storage for hazardous materials.
- Clean, dry, well-ventilated storage off the floor for food not requiring refrigeration.
- Shelving in kitchen areas that is not exposed wood. Metal wire shelving is the best choice for this purpose.
- Storage for all utensils and equipment off the floor in clean, dry, closed spaces.
- Food storage, preparation, and service areas placed in areas without sewage or drainpipes above.
- Ample electrical outlets out of children’s reach with ground-fault interruption (GFI) in wet areas.

7.7.15 Laundry

Laundry rooms should only be accessible to adults. They should be located near the infant/toddler classrooms and convenient to food service areas. For acoustical purposes and to ensure adult-controlled access, the laundry rooms should be away from children’s areas and have lockable doors that can be opened from inside.

Ideally, the laundry rooms should be close to exterior walls to minimize the run of the dryer exhaust vent to the exterior. Note that dryer exhausts contain combustible lint which can present a fire hazard when the exhaust is excessive. Dryers must be vented separately and not combined with other building exhaust systems.



Recommended equipment includes:

- A heavy-duty residential style washer and dryer.
- Large centers may require additional equipment.
- An electrical power outlet, venting, plumbing connections, floor drain, deep sink, and millwork with closed, and lockable storage.
- A dishwasher to wash toys that are often soiled by children, if space and budget allow.
- A counter for folding clothes and lockable wall cabinets for storage.

7.7.16 Janitor's Closet

Service personnel and staff use this space for storing janitorial supplies and equipment which should include a mop sink with plumbing connections and storage for pails, mops, vacuums, and related cleaning supplies and equipment. The door should have a lock, which can be opened from

the inside without a key and lockable cabinets for cleaning supplies. Provide exhaust ventilation. Special fire safety and ventilation requirements can be found in Chapter 10.



Though isolated from children's activity areas, janitor's closets and maintenance facilities should be designed for the convenience of the

cleaning and maintenance staff.

To protect indoor air quality from the potential impact of cleaning and maintenance activities, the following should be considered:

- Fully enclosed areas with separate outside exhaust;
- No air recirculation ;
- Negative pressure where chemical use occurs, as described in LEED Version 2.0; and
- Automatic chemical mixing dispensers to assure correct dilutions of cleaning materials.

7.7.17 Service Entrance

A key-access service entrance is needed by service personnel to deliver food and supplies and for trash removal. This entrance should be accessible to maintenance and kitchen staff. Locate the entrance next to service areas and away from the front entry and children's activity areas.

7.8 Mechanical/Electrical Telephone Equipment

Except when they are freestanding buildings, centers typically will be provided with mechanical service by a central plant. In freestanding buildings, interior space should be provided for mechanical or rooftop equipment.

When deciding to use rooftop equipment careful consideration should be given to the additional maintenance and roof support needed and the type of structural engineering that this configuration entails. This caution is particularly applicable to regions of the country with significant precipitation. HSB suggests using equipment and systems that will have long-term operating and maintenance costs that are low.

Space for telephone service should be centrally located and separate from the children's areas. Although a dedicated telephone closet is not always necessary, if one is provided, it should have a lockable door not accessible by children, but which can be opened from the inside. Finishes may include painted walls and sealed concrete for the floor.

7.9 Design Features to Avoid

A short list of undesirable center features follows. The list is not exhaustive:

- Excessive areas of fixed carpet.
- Sinks that are not deep enough.
- Inaccessible shelving.
- Excessive space devoted to lavatories such as separate areas for each classroom instead of shared areas. If separate lavatories are provided, ADA-mandated wheelchair clearances must be included in each room and this is not an economical use of space.
- Cubbies that line up facing the classroom waste precious classroom wall space and create a chaotic visual impression.
- Solid interior doors that do not allow supervision.
- Inadequate or improper storage creating crowded chaotic-looking classroom environments. Note that large central storage rooms will not solve a center's storage problems. Instead, wall-mounted cabinets and closets close to children's activity areas in the classroom are essential.
- Diapering areas that face walls and do not allow supervision.
- Ceiling-mounted institutional troffer-type fluorescent light fixtures typical of office space that have no dimmers and poor color rendition. This type of poor lighting is often accompanied by a lack of adequate task lighting.
- Using 90-degree or acute-angled walls where an obtuse angle would be safer and easier to negotiate.

- Windows mounted too high for children's use or without risers to allow accessing the view.
- Long dead-end corridors do not maximize efficiency. Corridors that must be lengthy because of site configuration need areas available for stopping, queuing, and socializing.
- Inadequate natural light.
- Misuse of color. This includes over-stimulating, overly-bright, or dark and oppressive wall colors. Since these mistakes usually result from relying on small sample color chips, color choice should be based on large samples.

10.1 Fire Protection, Safety and Environmental Issues

10.1.1 Compliance

The majority of the fire protection, environmental, and safety requirements are contained in numerous national codes and standards. Compliance with the most stringent national or state codes and standards is mandatory.

10.1.2 National Codes and Standards

For new construction and renovation projects, HSB requires compliance with the nationally recognized model building codes or with state building codes, whichever is more stringent. However, for all new construction and renovation projects, the exit requirements of the National Fire Protection Association (NFPA) Life Safety Code must be met instead of exit requirements of the national model building code. See section 10.1.3.

10.1.3 Means of Exit

The exit requirements of the NFPA Life Safety Code shall be used instead of the requirements in the national model building code.

Special requirements for Head Start centers using the Life Safety Code include:

Each center shall have at least two means of exit through protected corridors with the required fire separations. The center should have at least one door leading directly to the outside, and two exits for each floor unless local codes require another arrangement.

Mount panic hardware on exit doors a maximum of 3 feet above the finished floor or as required by local codes.

Provide both audible and visual fire alarm signals. In addition to fire alarms sounding in the center, any fire emergency should be announced on the central building panel or a 24-hour manned security post. See the most current editions of NFPA 72 Chapter 5 and UL 1971 for requirements on audible and visible alarms.

No common path of travel shall exceed 75 feet.

The distance between any room door intended as an exit access and an exit shall not exceed 100 feet.

The distance between any point in a room and an exit shall not exceed 150 feet.

The distance between any point in a room and an exit shall not exceed 150 feet.

Each classroom and activity room shall be provided with one direct exit to the outside if at all possible in Head Start buildings.

Center doors shall be arranged so that they open readily from the exit side whenever the center is occupied. Locks shall not require the use of a key, a tool, or special knowledge or effort for operation from the exit side. All

locking arrangements shall meet the requirements of the latest edition of the NFPA Life Safety Code if local codes do not require other arrangements.

Every effort shall be made to locate the entire center on the ground level (level of exit) along either an outside wall with window access to the exterior or a courtyard with window access. Centers adjacent to a courtyard should have approved fire exit out of the courtyard to an area of safety. If portions of the center are located on the floor above the level of exit, only Head Start children should be housed there. In no instance shall any portion of the center be located higher than the floor above the level of exit. The center should not be located below an exit, unless the entire building is fitted for sprinklers, and the local fire authority approves the arrangement. All arrangements should ensure safe exit in the event of fire.

Head Start centers should be separated from other occupancies depending on the fire gradient of the adjacent occupancy. In no case should the separation be less than a minimum of a one-hour fire-resistant-rated wall with doors having a fire protection rating of not less than 20 minutes. A fire detection, alarm, and communications system should be installed in all centers that meet the requirements of the NFPA Standards No. 70, NEC, NFPA 72, Standard for the Installation, Maintenance, and Use of Protective Signaling Systems, NFPA 72E, Standard on Automatic Fire Detector. The design should comply with local and state fire safety requirements. In the event of conflict, the more stringent requirements should apply.

Adjacent hazardous areas, e.g., a boiler room without sprinklers, shall be separated from the center by a minimum two-hour fire-resistant-rated wall with self-closing doors and a fire protection rating of not less than 90 minutes.

Adjacent hazardous areas, e.g., a boiler room with sprinklers should be separated from the center by a minimum one-hour fire-resistant-rated wall with self-closing doors and a fire protection rating of not less than 45 minutes.

The center should be protected by an approved supervised automatic system using quick-response sprinkler heads throughout. Sprinklers should have guards in areas such as multipurpose rooms where there may be ball-throwing activities.

An approved supervised smoke detection system should be located in the sleeping and napping areas of the center. Smoke detectors should be installed in all areas of the center, especially in unoccupied areas including closets and closed space. This provision increases flexibility, since it allows the location of sleeping and napping areas that require smoke detection to be changed.

When screened operable windows are used, window guards should be installed to protect children from falling through the screens.

10.2 Security

Additional safety issues can affect space planning. HSB suggests treating the perimeter of the building and play yards as a controlled filter with only one primary means of public access and exit. All other service and emergency exit points should be controlled with access limited to authorized individuals.

Recommendations:

The entry approach should be visible by center staff located inside.

Position the reception area adjacent to the entry and director's office.

Buildings should be covered by security personnel.

The design should ensure that a child is unable to leave the center without the knowledge of the staff. For instance, the designer should avoid placing operable windows near a public sidewalk and be mindful of the ability of children to open exit doors.

Keeping children safe within the center, safeguarding them from outside intruders, and protecting them from hazards to the fullest extent possible is the purpose of security measures. HSB recommends that systems include equipment, electrical power, and a conduit to protect electrical cables and wires, as required. All security alarms should report either to an alarm system or to a central monitoring station or to both as an audible and visual alarm signal. Security equipment may include a perimeter secu-

rity alarm system, video surveillance for entrance doors and vestibules, and an announcement system for main entrance doors.

The following should be provided:

- A video camera at the entry/exit doors is recommended when the center entrance cannot be seen by the building security staff or if a security risk assessment prescribes video monitoring at the entrance.
- Announcement at the entry door
- An electronic security system, including alarms, cameras and hardware. Monitors should be at the director's office and should have covers to conform to the ADA requirement to lower mounting heights for fire pulls and duress alarms while also minimizing children's access to them.
- A keypad at the entry door for authorized entry to the center without relying on other staff for assistance or monitoring and suitable for use by the disabled.
- Alarms at all entry points and delayed alarm locks at exit doors. Exit doors not intended for children's use should be equipped with electronic magnetic locks.
- Duress alarms if prescribed by a security risk assessment.
- Audible and visible emergency alarm signals.

10.3 Accessibility

The site as well as the access to and within the center should comply with the most stringent of the current edition of the Uniform Federal Accessibility Standards (UFAS), the final rules of the Americans with Disabilities Act Accessibility Guidelines (ADAAG), and local accessibility codes. The designer should ensure that there is an accessible route to all ground-level play areas. Refer to *Appendix A*.

Head Start design teams may wish to examine the standards for buildings and facilities that contain child care facilities. The standards were issued on January 13, 1998, and include scoping and technical requirements for accessibility to and within such buildings. The standards are available via the Internet at www.access-board.gov/rules/child.htm or from the Department of Justice.

Pertinent standards for children with disabilities follow:

- Forward and side reach: Maximum high reach should be 35 inches and minimum low reach should be 20 inches.
 - If space is available slope and rise: 1:16 to 1:20 is preferred; the maximum should be 1:12.
 - Curbs should have cuts that comply with UFAS requirements.
 - Drinking fountain controls should be front or side operable, and the spout should be a maximum of 29.5 inches above the finished floor. Knee clearance space should be 16 inches above the finished floor, 18 inches deep, and 30 inches wide.
 - At least one side bar and one grab bar should be provided in an accessible location in the children's toilet areas. Follow the most recent requirements established by ADAAG.
- Passage width: The minimum clear width of aisles and corridors for children's wheelchairs is 3 feet with a passing space of 5 feet provided at least every 200 feet.
 - Minimum door width: 2.7 feet wide with a 5-foot-deep landing area in front of all ramps, gates, and doors. Doors through which evacuation cribs must pass to reach an exit should have a minimum width of 3 feet.

10.4 Historic Preservation

If a center is housed in a building included in or eligible for inclusion in the National Register of Historical Places (NRHP), or if the center or its playground is within visible, close proximity to such a building, the center design should retain, respond to, and respect the use and character of the historic structure(s). State historic preservation officers must be contacted if changes are contemplated to historic structures.

Work on historic buildings, structures, or properties should comply with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Structures* (current edition) and the *Fire Safety Retrofitting in Historic Buildings* (August 1989) jointly written by the Advisory Council on Historic Preservation and the General Services Administration.

10.5 Acoustics

Acoustical concerns include (1) controlling exterior noise entering the space; (2) modulating and controlling the transfer of interior noise generated within the space; and (3) controlling the transfer of noise between the center and adjacent tenants.

10.5.1 Control of Exterior Noise

Minimizing exterior noise is typically required only when the center is adjacent to or near airport flight paths, major highways, or busy rail lines.

If proximity to high levels of noise is unavoidable, acoustical measures may be necessary. Maximum acceptable noise levels depend on which area of the center is subject to the noise and whether the sound is continuous or intermittent. Suggested maximum acceptable noise levels at the center's exterior follow:

Outdoor play yards:

- Continuous: 70 dBA
- Intermittent: 80 dBA

Centers with sleeping and quiet areas placed next to outside walls:

- Continuous: 60 dBA
- Intermittent: 65 dBA

Centers with sleeping and quiet areas protected by and not located along outside walls:

- Continuous: 65 dBA
- Intermittent: 70 dBA

If noise exceeds these levels, acoustical treatment may be necessary. Under these circumstances, HSB recommends the following:

- Window and door glazing should be acoustically laminated glass with an STC rating of 35 to 45 with an air space of 2 to 4 inches. (Conventional double-glazing and thermal glazing are not effective in this case.)
- Exterior doors should be high-quality commercial doors with an STC rating of 30.
- Sound-rated doors are an acceptable but more costly solution.

10.5.2 Modulating Interior Noise Generated within the Space

In addition to standard commercial construction, other provisions are necessary to ensure sound control within a center:

- Acoustical ceiling tile should be installed throughout the center except in service areas.
- Either non-slip throw rugs or permanently installed carpet should be used in appropriate spaces. Carpet may be particularly effective in noisy narrow corridors.

- Acoustical panels should be installed where appropriate.
- Baffles, banners, and fabrics should be considered in the design to help absorb sound generated within a center.

10.5.3 Controlling the Transfer of Noise Inside the Space

Maintaining low noise levels in sleeping, napping and quiet areas is important.

The following methods can be used:

- Extend interior partitions to the structure above the ceiling. Partitions may be single-layer gypsum wallboard and should have cavity insulation and be completely caulked at the top and bottom.
- Use solid-core doors for openings into noisy areas.
- Use fabrics and baffles to absorb sound.
- Provide acoustical baffles in all ductwork that penetrates sound-attenuating partitions.
- Avoid back-to-back electrical outlet boxes.

The Clarke County School District's Early Learning Center proposed for the West Broad Street Campus will include children ages 3-4.

Caring for Our Children:



National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, Third Edition

A Joint Collaborative Project of

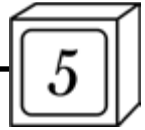
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5.1 Overall Requirements

5.1.1 General Location, Layout, and Construction of the Facility

STANDARD 5.1.1.1: Location of Center

A center should not be located in a private residence unless that portion of the residence is used exclusively for the care of children during the hours of operation.

RATIONALE: Centers in these standards are generally defined as “providing care and education for any number of children in a non-residential setting or thirteen or more children in any setting.” When there are a large number of children in care who may span the age groups of infants, toddlers, preschool, and school-age children, special sanitation and design are needed to protect children from injury and prevent transmission of disease. Undivided attention must be given to these purposes during child care operations.

COMMENTS: The portion of a private residence used as a child care facility is variable and unique to each specific situation. If other people will be using the private residence during the child care facility’s hours of operation, then the caregiver/teacher must arrange the residence so that the activities of these people do not occur in the area designated for child care.

TYPE OF FACILITY: Center

RELATED STANDARDS:

Standard 5.1.1.9: Unrelated Business in a Child Care Area

STANDARD 5.1.1.2: Inspection of Buildings

Newly constructed, renovated, remodeled, or altered buildings should be inspected by a public inspector to assure compliance with applicable building and fire codes before the building can be made accessible to children.

RATIONALE: Building codes are designed to ensure that a building is safe for occupants. Environmental health recommendations are designed to ensure the building and property are free of health hazards for children and workers.

COMMENTS: Any building not used for child care for a period of time should be inspected for compliance with applicable building and fire codes. Review of environmental health hazards by county or city public health environmental offices can help to meet safety requirements.

TYPE OF FACILITY: Center

RELATED STANDARDS:

Standard 5.1.1.3: Compliance with Fire Prevention Code

STANDARD 5.1.1.3: Compliance with Fire Prevention Code

Every twelve months, the child care facility should obtain written documentation to submit to the regulatory licensing authority that the facility complies with a state-approved or nationally recognized Fire Prevention Code. If available, this

documentation should be obtained from a fire prevention official with jurisdiction where the facility is located. Where fire safety inspections or a Fire Prevention Code applicable to child care centers is not available from local authorities, the facility should arrange for a fire safety inspection by an inspector who is qualified to conduct such inspections using the National Fire Protection Association’s *NFPA 101: Life Safety Code*.

RATIONALE: Regular fire safety checks by trained officials will ensure that a child care facility continues to meet all applicable fire safety codes. *NFPA 101: Life Safety Code* addresses child care facilities in two chapters devoted exclusively to this occupancy – chapter 16, “New Day-Care Occupancies” and chapter 17, “Existing Day-Care Occupancies” (1).

TYPE OF FACILITY: Center

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.1.4: Accessibility of Facility

The facility should be accessible for children and adults with disabilities, in accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA). Accessibility includes access to buildings, toilets, sinks, drinking fountains, outdoor play areas, meal and snack areas, and all classroom and therapy areas.

RATIONALE: Accessibility has been detailed in full, in Section 504 of the Rehabilitation Act of 1973. It is also a key component of the ADA, barring discrimination against anyone with a disability.

COMMENTS: Any facility accepting children with motor disabilities must be accessible to all children served. Small family home caregivers/teachers may be limited in their ability to serve such children, but are not precluded from doing so if there is a reasonable degree of compliance with this standard. Accommodation of adaptive equipment for all children should be made to ensure access to all activities of the care setting. Access to public and most private facilities is a key to the implementation of the ADA. If toilet learning/training is a relevant activity, the facility may be required to provide adapted toilet equipment.

For more information on requirements regarding accessibility, consult the *Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)*, available at <http://www.access-board.gov/adaag/html/adaag.htm>, and the U.S. Access Board’s play area accessibility guidelines at <http://www.access-board.gov/play/guide/intro.htm>.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.4.1.7: Toilet Learning/Training Equipment

Standard 5.4.6.2: Space for Therapy Services

Standard 6.2.1.2: Play Equipment and Surfaces Meet ADA Requirements

STANDARD 5.1.1.6: Structurally Sound Facility

Every exterior wall, roof, and foundation should be structurally sound, weather-tight, and water-tight to ensure protection from weather and natural disasters.

Every interior floor, wall, and ceiling should be structurally sound and should be finished in accordance with local building codes to control exposure of the occupants to levels of toxic fumes, dust, and mold.

RATIONALE: Both the design of structures and the lack of maintenance can lead to exposure of children to physical injury, mold, dust, pests, and toxic materials (1).

COMMENTS: Child care operations sometimes use older buildings or buildings designed for purposes other than child care.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.1.2: Inspection of Buildings

Standard 5.1.1.5: Environmental Audit of Site Location

Standard 5.7.0.7: Structure Maintenance

REFERENCES:

1. Whole Building Design Guide Secure/Safe Committee. 2010. Ensure occupant safety and health. National Institute of Building Sciences. http://www.wbdg.org/design/ensure_health.php.

STANDARD 5.1.1.7: Use of Basements and Below Grade Areas

Finished basements or areas that are partially below grade may be used for children who independently ambulate and who are two years of age or older, if the space is in compliance with applicable building and fire codes. Environmental health factors may be reviewed with county or city public health departments.

RATIONALE: Basement and partially below grade areas can be quite habitable and should be usable as long as building, fire safety (1), and environmental quality is satisfactory.

COMMENTS: To “independently ambulate” means that children are able to walk from place to place with or without the use of assistive devices.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.1.8: Buildings of Wood Frame Construction

Standard 5.1.2.1: Space Required Per Child

Standard 5.1.2.2: Floor Space Beneath Low Ceiling Heights

Standard 5.1.4.1: Alternate Exits and Emergency Shelter

Standard 5.1.4.2: Evacuation of Children with Special Health Care Needs and Children with Disabilities

Standard 5.2.1.1: Fresh Air

Standard 5.2.2.1: Levels of Illumination

Standard 5.2.9.4: Radon Concentrations

Standard 5.2.9.5: Carbon Monoxide Detectors

Standard 5.2.9.6: Preventing Exposure to Asbestos or Other Friable Materials

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.1.8: Buildings of Wood Frame Construction

Infants and toddlers should be housed and cared for only on the ground floor in buildings of wood frame construction. Preschool-age and school-age children should be able to use floors other than the ground floor in a building of wood construction if the building has required exits and care is provided in:

- a) A daylight-lit basement with exits that are no more than a half flight high;
- b) A tri-level facility with half flights of stairs;
- c) A facility that is protected throughout by an automatic sprinkler system, which has its exit stairs enclosed by minimum one-hour fire barriers with openings in those barriers protected by minimum one-hour fire doors;
- d) Any door encountered along the egress route should be easy for caregivers/teachers and older preschool-age children to open.

RATIONALE: Fire and building safety experts recommend that children be permitted above ground level only in buildings of wood construction with certain exceptions (1).

COMMENTS: Infants and toddlers should always be on the main floor with access directly to the outdoors. Doors along the egress route need to be easy to open. Consult local or state fire safety codes and child care licensing laws for restrictions on floor occupancy by age groups.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.1.7: Use of Basements and Below Grade Areas

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.1.9: Unrelated Business in a Child Care Area

Child care areas should not be used for any business or purpose unrelated to providing child care when children are present in these areas.

If unrelated business is conducted in child care areas when the child care facility is not in operation, activities associated with such business should not leave any residue in the air or on the surfaces, or leave behind materials or equipment, that could be harmful to children.

RATIONALE: Some activities that leave a harmful residue are smoking, ammunition reloading, soldering, woodworking, and welding (1). Examples of materials or equipment that could be harmful are small screws, nails, and electric tools with sharp blades. Child care requires child-oriented, child-safe areas where the child’s needs are primary.

COMMENTS: Employers should inform caregivers/teachers about harmful residues or equipment that may potentially remain from unrelated business activity so that such residues or equipment can be removed.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.1.11: Separation of Operations from Child Care Areas
 Standard 5.2.1.5: Ventilation of Recently Carpeted or Paneled Areas
 Standard 5.2.9.1: Use and Storage of Toxic Substances
 Standard 5.2.9.3: Informing Staff Regarding Presence of Toxic Substances
 Standard 5.2.9.10: Prohibition of Poisonous Plants
 Standard 5.2.9.15: Construction and Remodeling During Hours of Operation
 Standard 5.7.0.2: Removal of Hazards from Outdoor Areas
 Standard 5.7.0.4: Inaccessibility of Hazardous Equipment

REFERENCES:

1. U.S. Environmental Protection Agency, U.S. Consumer Product Safety Commission. 2010. The inside story: A guide to indoor air quality. <http://www.epa.gov/iaq/pubs/insidest.html>.

STANDARD 5.1.1.10: Office Space

Office space separate from child care areas should be provided for administration and staff in centers. Children should not have access to this area unless they are supervised by staff.

RATIONALE: For the efficient and effective operation of a center, office areas where activities incompatible with the care of young children are conducted should be separate from child care areas. These office areas can be expected to contain supplies, equipment and records/documents that should not be accessible to children. Office staff should be free from the distractions of child care (1,2).

COMMENTS: Child care staff should have access to an area that is separate from the child care areas where they can meet personal needs such as a break room, adult bathroom, resource library, etc.

TYPE OF FACILITY: Center

REFERENCES:

1. National Association for the Education of Young Children (NAEYC). 1977. *Planning environments for young children*. Washington, DC: NAEYC.
 2. Murph, J. R., S. D. Palmer, D. Glassy, eds. 2005. *Health in child care: A manual for health professionals*. 4th ed. Elk Grove Village, IL: American Academy of Pediatrics.

STANDARD 5.1.1.11: Separation of Operations from Child Care Areas

Rooms or spaces that are used for the following activities or operations should be separated from the child care areas and the egress route should not pass through such spaces:

- Commercial-type kitchen;
- Boiler, maintenance shop;
- Janitor closet and storage areas for cleaning products, pesticides, and other chemicals;
- Laundry and laundering supplies;

- Woodworking shop;
- Flammable or combustible storage;
- Painting operation;
- Rooms that are used for any purpose involving the presence of toxic substances;
- Area for medication storage.

Areas that have combustibles should be protected by fire-resistant barriers. The egress route and the fire-resistant separation should be approved by the appropriate regulatory agencies responsible for building and fire inspections. In small and large family child care homes, a fire-resistant separation should not be required where the food preparation kitchen contains only a domestic cooking range and the preparation of food does not result in smoke or grease-laden vapors escaping into indoor areas. Where separation is provided between the egress route and the hazardous area, it should be safe to use such route, but egress should not require passage through the hazardous area.

RATIONALE: Hazards and toxic substances must be kept separate in a locked closet or room from space used for child care to prevent children's and staff members' exposure to injury (1).

Cleaning agents must be inaccessible to children (out of reach and behind locked doors). Food preparation surfaces must be separate from diaper changing areas including sinks for handwashing. Children must be restricted from access to the stove when cooking surfaces are hot.

COMMENTS: In small family child care homes, mixed use of rooms is common (2). Some combined use of space for food preparation, storage of cleaning equipment and household tools, laundry, and diaper changing requires that each space within a room be defined according to its purpose and that exposure of children to hazards be controlled. Food preparation should be separate from all exposure to possible cross-contamination.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.
 2. Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.

STANDARD 5.1.1.12: Multiple Use of Rooms

Playing, eating, and napping may occur in the same area (exclusive of diaper changing areas, toilet rooms, kitchens, hallways, and closets), provided that:

- The room is of sufficient size to have a defined area for each of the activities allowed there at the time the activity is under way;
- The room meets other building requirements;
- Programming is such that use of the room for one purpose does not interfere with use of the room for other purposes.

RATIONALE: Except for toilet and diaper changing areas, which must have no other use, the use of common space

for different activities for children facilitates close supervision of a group of children, some of whom may be involved simultaneously in more than one of the activities listed in the standard (1).

COMMENTS: Compliance is measured by direct observation.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Olds, A. 2001. Zoning a group room. In *Child care design guide*, 137-65. New York: McGraw-Hill.

5.1.2 Space per Child

STANDARD 5.1.2.1: Space Required per Child

In general, the designated area for children's activities should contain a minimum of forty-two square feet of usable floor space per child. A usable floor space of fifty square feet per child is preferred.

This excludes floor area that is used for:

- a) Circulation (e.g., walkways around the activity area);
- b) Classroom support (e.g., staff work areas and activity equipment storage that may be adjacent to the activity area);
- c) Furniture (e.g., bookcases, sofas, lofts, block corners, tables and chairs);
- d) Center support (e.g., administrative office, washrooms, etc.)

Usable, indoor floor space for the children's activity area depends on the design and layout of the child care facility, and whether there is an opportunity and space for outdoor activities.

RATIONALE: Numerous studies have explored child care space requirements that are necessary to:

- a) Provide an environment that is highly functional for program delivery and to encourage strong, positive staff-to-child relationships;
- b) Accommodate the recommended group size and staff-to-child ratio; and
- c) Efficiently use space and incorporate ease of supervision.
- d) Recommendations from research studies range between forty-two to fifty-four square feet per child (1).

Studies have shown that the quality of the physical designed environment of early child care centers is related to children's cognitive, social, and emotional development (e.g., size, density, privacy, well-defined activity settings, modified open-plan space, a variety of technical design features and the quality of outdoor play spaces). In addition to meeting the needs of children, caregivers/teachers require space to implement programs and facilitate interactions with children.

A review of the literature indicates that in the past ten years, there has been growing research and study into how the

physical design of child care settings affects child development. Historically, a standard of thirty-five square feet was used. Recommendations from research studies range between forty-two to fifty-four square feet per child. Comments from researchers indicate that other factors must also be considered when assessing the context of usable floor space for child care activities (1,5-8).

Although each child's development is unique to that child, age groups are often used to categorize developmental needs. To meet these needs, the use of activity space for each age group will be inherently different.

Child behavior tends to be more constructive when sufficient space is organized to promote developmentally appropriate skills. Crowding has been shown to be associated with increased risk of developing upper respiratory infections (2). Also, having sufficient space will reduce the risk of injury from simultaneous activities.

Children with special health care needs may require more space than typically developing children (1).

COMMENTS: The usable floor space for children's activities in this standard refers to indoor space that is used as the primary play space. Consideration should also be given to the presence or absence of secondary indoor play space that might be shared between programs as well as to outdoor play space.

Staff-child ratios (i.e., the number of staff required per number of children) should also be taken into account since staff consumes floor area space as well as children. Group size for various age groups should also be considered. Since groups of infants are smaller than groups of preschoolers, "infant and toddler rooms tend to be small, while preschool and school-age rooms are a bit generous at full capacity" (1). Infant and toddler rooms often dedicate a considerable amount of inflexible space to cribs and diaper changing areas. Sufficient space to accommodate these activities, space for adult seating to care for infants, and space for safe mobility of infants and toddlers requires that the per child square foot requirements are applied for their areas also.

Square footage estimates should only be intended as guidelines. Especially in child care facilities with fewer than fifty children, "plugging in" the square footage into a formula to calculate space required usually does not work (1).

It is important to keep in mind that state licensing regulations specify minimum space requirements and that they must be legally adhered to. Such requirements vary from state to state (3). For Federal child care centers, the U.S. General Services Administration's (GSA) child care design standards require a minimum of forty-eight and one-half square feet per child in the classroom (4).

Although providing adequate space for implementing a program of activities that meets the developmental needs of children is important in providing quality child care, how that space is actually used is likely more critical (8). It has been observed that child care facilities operating in older buildings with less than ideal space can still deliver quality child

care programs to meet the needs of children. Nevertheless, the amount of activity space required per child should take the known research into consideration.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standards 1.1.1.1-1.1.1.3: Ratios and Supervision
Standard 2.1.2.3: Space and Activity to Support Learning of Infants and Toddlers
Standard 2.1.4.2: Space for School-Age Activity

REFERENCES:

1. Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.
2. Fleming, D. W., S. L. Cochi, A. W. Hightower, et al. 1987. Childhood upper respiratory tract infections: To what degree is incidence affected by daycare attendance? *Pediatrics* 79:55-60.
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STANDARD 5.1.2.2: Floor Space Beneath Low Ceiling Heights

In a room where the entire ceiling height is less than seven and a half feet above the floor, the floor area should not be counted in determining compliance with the space requirements specified in Standard 5.1.2.1.

In a room where the ceiling is at different levels at least two-thirds of the usable floor area should have a ceiling height of at least seven and one-half feet and one-third of the usable floor area should have a ceiling height of greater than six feet eight inches. Floor areas beneath ceiling heights less than six-feet eight-inches tall should not be considered (1).

RATIONALE: Ceiling height must be adequate for caregivers/teachers to supervise and reach children who require assistance.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.2.1: Space Required Per Child

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.2.3: Areas for School-Age Children

When school-age children are in care for periods that exceed two hours before or after school, a separate area away from areas for younger children should be available for school-age children to do homework. Areas used for this purpose should, in addition to meeting the other facility standards have:

- a) Table space;
- b) Chairs;
- c) Adequate ventilation;
- d) Lighting of 40 to 50 foot-candles in the room;
- e) Lighting of 50 to 100 foot-candles on the surface used as a desk (1).

RATIONALE: School-age children need a quiet space for reading and to do homework so they are not forced to work against the demands for attention that younger children pose. In family child care homes such an area might be within the same room and separated by a room dividing arrangement of furniture.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.2.1: Space Required Per Child
Standard 5.2.1.1: Fresh Air
Standard 5.2.1.2: Indoor Temperatures
Standard 5.2.2.1: Levels of Illumination

REFERENCES:

1. American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE), American Institute of Architects, Illuminating Engineering Society of North America, U.S. Green Building Council, U.S. Department of Energy. 2008. *Advanced energy design guide for K-12 school buildings*, 148. Atlanta, GA: ASHRAE.

5.1.3 Openings

STANDARD 5.1.3.1: Weather-Tightness and Water-Tightness of Openings

Each window, exterior door, and basement or cellar hatchway should be weather-tight and water-tight when closed.

RATIONALE: Children's environments must be protected from exposure to moisture, dust, and temperature extremes.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.1.3.2: Possibility of Exit from Windows

All windows in areas used by children under five years of age should be constructed, adapted, or adjusted to limit the exit opening accessible to children to less than four inches, or be otherwise protected with guards that prevent exit by a child, but that do not block outdoor light. Where such



degrees). Attachment should use screws rather than glue for a stronger, more durable connection.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Moseley, G. 2008. Closing the door on finger injuries. *Doors and Hardware* 72:38-41.

STANDARD 5.1.3.6: Directional Swing of Indoor Doors

Doors, other than exit stair enclosure doors, from a building area with fewer than fifty persons should swing in the direction of most frequent travel. Doors from a building area with more than fifty persons and exit stair enclosure doors should swing in the direction of egress travel (the path for going out). An exception is that boiler room doors should swing into the room.

RATIONALE: Proper door swings provide easy, quick passage and prevent injuries. Boiler room doors should swing inward to help contain explosions.

The *NFPA 101: Life Safety Code* from the National Fire Protection Association (NFPA), and the model building codes in wide use throughout the United States, require that doors serving an area with fifty or more persons swing in the direction of egress travel (1). This is important because large numbers of persons might push against each other leaving those up against a door without the ability to step back and allow the door to swing back into the room.

COMMENTS: Doors in homes usually open inward. The requirement for door swing may be addressed in local building codes.

TYPE OF FACILITY: Center

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

5.1.4 Exits

STANDARD 5.1.4.1: Alternate Exits and Emergency Shelter

Each building or structure, new or old, should be provided with a minimum of two exits, at different sides of the building or home, leading to an open space at ground level. If the basement in a small family child care home is being used, one exit must lead directly to the outside. Exits should be unobstructed, allowing occupants to escape to an outside door or exit stair enclosure in case of fire or other emergency. Each floor above or below ground level used for child care should have at least two unobstructed exits that lead to an open area at ground level and thereafter to an area that meets safety requirements for a child care indoor or outdoor area. Children should remain there until their parents/guardians can pick them up, if reentry into the facility is not possible.

Entrance and exit routes should be reviewed and approved by the applicable fire inspector. Exiting should meet all the requirements of the current edition of the *NFPA 101: Life Safety Code* from the National Fire Protection Association (NFPA).

RATIONALE: Unobstructed exit routes are essential for prompt evacuation. The purpose of having two ways to exit when child care is provided on a floor above or below ground level is to ensure an alternative exit if fire blocks one exit (1).

COMMENTS: Using an outdoor playground as a safe place to exit to may not always be possible. Where the playground is fully surrounded by fencing, it is important that a gate that staff is trained, authorized, and equipped to open, be provided to permit travel away from the building should fire expose children and staff to radiant heat and smoke. Some authorities will permit a fenced area with sufficient accumulation space at least fifty feet from the building to serve in lieu of a gated opening. Some child care facilities do not have a playground located adjacent to the child care building and use local parks as the playground site. Access to these parks may require crossing a street at an intersection with a crosswalk. This would normally be considered safe, especially in areas of low traffic; however, when sirens go off, a route that otherwise may be considered safe becomes chaotic and dangerous. During evacuation or an emergency, children, as well as staff, become excited and may run into the street when the playground is not fenced or immediately adjacent to the center (1).

In the event of a fire, staff members and children should be able to get at least fifty feet away from the building or structure. If the children cannot return to their usual building, a suitable shelter containing all items necessary for child care must be available where the children can safely remain until their parents/guardians come for them. An evacuation plan should take into consideration all available open areas to which staff and children can safely retreat in an emergency (1).

For information about the *NFPA 101: Life Safety Code*, contact the NFPA.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.4.6: Labeled Emergency Exits
Standard 5.1.4.7: Access to Exits

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.4.2: Evacuation of Children with Special Health Care Needs and Children with Disabilities

In facilities that include children who have physical disabilities or other developmental disabilities, all exits and steps necessary for evacuation should have ramps approved by the local building inspector and be clearly marked or identi-

fied. Children who have ambulatory difficulty, mobility limitations or impairments, use wheelchairs or other equipment that must be transported with the child (such as an oxygen ventilator) should be located on the ground floor of the facility or provisions should be made for efficient emergency evacuation to a safe sheltered area. Children who have special medical or dietary needs should have their medical equipment brought along during an evacuation.

RATIONALE: The facility must meet building code standards for the community and also the requirements under the Americans with Disabilities Act (ADA) and their access guidelines (1). All children must be able to exit the building quickly in case of emergency. Locating children in wheelchairs or those with special equipment on the ground floor may eliminate the need for transporting these children down the stairs during an emergency evacuation. In buildings where the ground floor cannot be used for such children, arrangements must be made to move children to a safe location, such as a fire tower stairwell, during an emergency exit. Children with diabetes, asthma, or special medical diets may need medication or special foods brought along during an evacuation.

COMMENTS: Assuring physical access to a facility also requires that a means of evacuation meeting safety standards for exit accommodates any children with special health care needs in care.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 1.1.1.3: Ratios for Facilities Serving Children with Special Health Care Needs and Disabilities
Standard 5.1.1.4 Accessibility of Facility
Standard 5.1.1.8 Buildings of Wood Frame Construction

REFERENCES:

1. U.S. Architectural and Transportation Barriers Compliance Board (Access Board). 2002. *Americans with disabilities act accessibility guidelines for buildings and facilities (ADAAG)*. <http://www.access-board.gov/adaag/ADAAG.pdf>.

STANDARD 5.1.4.3: Path of Egress

The minimum width of any path of egress should be thirty-six inches. An exception is that doors should provide a minimum clear width of thirty-two inches. The width of doors should accommodate wheelchairs and the needs of individuals with physical disabilities.

Where exits are not immediately accessible from an open floor area, safe and continuous passageways, aisles, or corridors leading to every exit should be maintained and should be arranged to provide access for each occupant to at least two exits by separate ways of travel. Doorways, exit access paths, passageways, corridors and exits should be kept free of materials, furniture, equipment and debris to allow unobstructed egress travel from inside the child care facility to the outside.

RATIONALE: Unobstructed access to exits is essential to prompt evacuation (1). The hallways and door openings must be wide enough to permit easy exit in an emergency.

The actual exit is the enclosed stair or the actual door to the outside; doors from most rooms and the travel along a corridor are considered exit access or the path of egress. The *NFPA 101: Life Safety Code* from the National Fire Protection Association (NFPA) permits the usual thirty-six inches minimum to be reduced to a clear opening of thirty-two inches for doors (1). This is consistent with *Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)* as it affords enough width for a person in a wheelchair to maneuver through the door opening (2).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.
2. U.S. Architectural and Transportation Barriers Compliance Board (Access Board). 2002. *Americans with disabilities act accessibility guidelines for buildings and facilities (ADAAG)*. <http://www.access-board.gov/adaag/ADAAG.pdf>.

STANDARD 5.1.4.4: Locks

In centers, no door should have a lock or fastening device that prevents free egress from the interior. Free egress means that building occupants, without the use of a tool, key or special knowledge are able to operate the door, under all lighting conditions, using not more than one releasing operation. In all child care facilities, all door hardware in areas that school-age children use should be within the reach of the children. In centers, doors serving areas with more than 100 occupants should be permitted to be latched only if provided with panic hardware (latch release hardware that can be opened by pressure in the direction of travel).

In large or small family child day care homes, a double-cylinder deadbolt lock which requires a key to unlock the door from the inside should not be permitted on any door along the escape path from any child care except the exterior door, and then only if the key required to unlock the door is kept hanging at the door.

If emergency exits lead to potentially unsafe areas for children (such as a busy street), alarms or other signaling devices should be installed on these exit doors to alert the staff in case a child attempts to leave. An alarm or signaling system should also be in place in the case of a child with special behavior support needs who poses a risk for running out of a room or building.

RATIONALE: Children, as well as staff members, must be able to evacuate a building in the event of a fire or other emergency. Nevertheless, the caregiver/teacher must assure security from intruders and from unsupervised use of the exit by children.

COMMENTS: Double-cylinder deadbolt locks that require a key to unlock the door from the inside are often installed in private homes for added security. In such situations, these dead bolt locks should be present only on exterior doors and should be left in the unlocked position during the hours of child care operation. Locks that prevent opening from the outside, but can be opened without a key from the

inside should be used for security during hours of child care operation. Double cylinder deadbolt locks should not be used on interior doors, such as closets, bathrooms, storage rooms, and bedrooms (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.4.5: Closet Door Latches

Closet doors accessible to children should have an internal release for any latch so a child inside the closet can open the door.

RATIONALE: Closet doors that can be opened from the inside prevent entrapment (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.4.6: Labeled Emergency Exits

In centers, required exits should be clearly identified and visible at all times during operation of the child care facility. The exits for egress should be arranged or marked so the path to safety outside is unmistakable.

RATIONALE: As soon as children can learn to recognize exit signs and pathway markings, they will benefit from having these paths of egress clearly marked. Adults who come into the building as visitors need these markings to direct them as well (1).

TYPE OF FACILITY: Center

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.4.7: Access to Exits

Each room of a child care facility should be provided with direct access to:

- a) An exit to the outside; or
- b) A corridor or hallway providing direct access to an exit to the outside.

Where it is necessary to pass through an adjacent room for access to a corridor or exit, any doors providing passage to and through such room should not be latched or locked, or otherwise barricaded, to prevent access.

No obstructions should be placed in the corridors or passageways leading to the exits.

RATIONALE: A room that requires exit through another room to get to an exit path can entrap its occupants when there is a fire or emergency condition if passage can be impeded by a barrier or door that is latched (1).

An obstruction in the path of exit can lead to entrapment, especially in an emergency situation where groups of people may be exiting together.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life Safety Code*. 2009 ed. Quincy, MA: NFPA.

5.1.5 Steps and Stairs

STANDARD 5.1.5.1: Balusters

Protective handrails and guardrails should have balusters/spindles at intervals of less than three and a half inches or have sufficient protective material to prevent a three and a half inch sphere from passing through if caring for children two years and over. If caring for children under the age of two years, balusters/spindles should be spaced at intervals less than two and three-eighths inches or have sufficient protective material to prevent a sphere with a diameter of two and three-eighths inches from passing through.

RATIONALE: A child's head may be small enough to be entrapped in a space more than three and a half inches wide (1). Infants and young toddlers may crawl or play close to railings around stairs. Because they may have access to railings, it is recommended to follow the same recommendation for the spacing of balusters/spindles for stair railings as the slats on a crib.

COMMENTS: Building codes vary from state to state and many regulations for balusters/spindles do not meet the recommendations for intervals less than three and a half inches. Some building codes are for intervals of four inches or greater. Because of this discrepancy and the expense of adding balusters/spindles, using a protective material may be the only option. Recommendations as stated above should be considered for remodeling or new construction.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>.

STANDARD 5.1.5.2: Handrails

Handrails should be provided on both sides of stairways, be securely attached to the walls or stairs, and at a maximum height of thirty-eight inches.

The outside diameter of handrails should be between one and one-quarter inches and two inches.

When railings are installed on the side of stairs open to a stairwell, access to the stairwell should be prevented by a barrier so a child cannot use the railings as a ladder to jump or fall into the stairwell.

RATIONALE: Model codes, including the National Fire Protection Association's *NFPA 101: Life Safety Code*, require

handrails to be mounted in the height range of thirty-four to thirty-eight inches (1). Such handrails are equally usable by children. The stair researcher, Jake Pauls, has filmed small children effectively using handrails mounted as high as thirty-eight inches. This comes naturally to the children because they are used to reaching up to take an adult's hand while walking. There is no justification for forcing the center or home to incur the added expense of installing a second set of handrails closer to the floor.

Railings on both sides ensure a readily available handhold (whether right handed or left handed) in the event of a fall down the stairs. When handrails are installed to allow children a handhold, the stairwell should be designed so the railing does not provide the child with a ladder to climb.

COMMENTS: Open stairwells can be enclosed with rigid vertical materials to prevent children from climbing and falling over the rail. Handrails are for purposes of providing a graspable rail for help in arresting falls on stairs. Guards are for purposes of preventing falls over an open side where there is more than thirty inches vertical distance to fall.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.6.6: Guardrails and Protective Barriers

REFERENCES:

1. National Fire Protection Association (NFPA). 2009. *NFPA 101: Life safety code*. 2009 ed. Quincy, MA: NFPA.

STANDARD 5.1.5.3: Landings

Landings should be provided beyond each interior and exterior door that opens onto a stairway. Landing width should not be less than the width of stairway it serves and must be at least the width of stairway in direction of travel, but need not be more than forty-eight inches. When fully open, the door should not project more than seven inches into the landing. Dimensions (length and width) of the landing are equal to or greater than the width of the door.

RATIONALE: Landings are necessary to accommodate the swing of the door without pushing the person on the stairway into a precarious position while trying to leave the stairway (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. International Code Council (ICC). 2009. *2009 international building code*. Washington, DC: ICC.

STANDARD 5.1.5.4: Guards at Stairway Access Openings

Securely installed, effective guards (such as gates) should be provided at the top and bottom of each open stairway in facilities where infants and toddlers are in care. Gates should have latching devices that adults (but not children) can open easily in an emergency. "Pressure gates" or accordion gates should not be used. Gate design should not aid in climbing. Gates at the top of stairways should be

hardware mounted (e.g., to the wall) for stability. Basement stairways should be shut off from the main floor level by a full door. This door should be self-closing and should be kept locked to entry when the basement is not in use. No door should be locked to prohibit exit at any time.

RATIONALE: Falls down stairs and escape upstairs can injure infants and toddlers. A gate with a difficult opening device can cause entrapment in an emergency (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.1.6.6: Guardrails and Protective Barriers

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). Old accordion style baby gates are dangerous. <http://www.cpsc.gov/CPSPUB/PUBS/5085.pdf>.

5.1.6 Exterior Areas

Note to Reader: See Chapter 6 for Outdoor Play Area Requirements

STANDARD 5.1.6.1: Designated Walkways, Bike Routes, and Drop-Off and Pick-Up Points

Safe pedestrian crosswalks, drop-off and pick-up points, and bike routes in the vicinity of the facility should be identified, written in the facility's procedures, and communicated to all children, parents/guardians, and staff. Parking for drop-off and pick-up should not require street-side removal of children from a vehicle.

RATIONALE: In 2008, one-fifth (20%) of all children between the ages of five and nine who were killed in traffic crashes were pedestrians (1). Identification and communication of safe routes practices may reduce the potential of injuries resulting from children darting into traffic (2). Providing bike route information may encourage the use of this health-promoting, economical, and environmentally friendly mode of transportation.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 6.5.2.1: Drop-Off and Pick-Up

REFERENCES:

1. U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA). 2008. *Traffic Safety Facts 2008: Pedestrians*. Washington, DC: NHTSA. <http://www-nrd.nhtsa.dot.gov/Pubs/811163.PDF>.
2. U.S. General Services Administration (GSA). 2003. *Child care center design guide*. New York: GSA Public Buildings Service, Office of Child Care. <http://www.gsa.gov/graphics/pbs/designguidesmall.pdf>.

STANDARD 5.1.6.2: Construction and Maintenance of Walkways

Inside and outside stairs, ramps, porches, and other walkways to the structure should be constructed for safe use as required by the local building code and should be

signals may be necessary to ensure proper application of devices.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

5.4 Space and Equipment in Designated Areas

5.4.1 Toilet and Handwashing Areas

STANDARD 5.4.1.1: General Requirements for Toilet and Handwashing Areas

Clean toilet and handwashing facilities should be located in the best place to meet the developmental needs of children.

For infant areas, toilets and handwashing facilities are for adult rather than child use. They should be located within the infant area to reduce staff absence.

For toddler areas, toilet and handwashing facilities should be located in or adjacent to the toddler rooms.

For preschool and school-age children, toilet and handwashing facilities should be located near the entrance to the group room and near the entrance to the playground. If both entrances are close to each other, then only one set of toilet and handwashing facilities is needed.

RATIONALE: Young children have poor bowel and bladder control and cannot wait long when they have to use the toilet (1). Young children must be able to get to toilet facilities quickly. Staff must have easy access to hand washing facilities to wash their hands at the times when it is appropriate and still maintain supervision of the children.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.2.2.3: Assisting Children with Hand Hygiene

REFERENCES:

1. Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.

STANDARD 5.4.1.2: Location of Toilets and Privacy Issues

Toilets should be located in rooms separate from those used for cooking or eating. If toilets are not on the same floor as the child care area and not within sight or hearing of a caregiver/teacher, an adult should accompany children younger than five years of age to and from the toilet area. In centers, males and females who are six years of age and older should have separate and private toilet facilities. Younger children who request privacy and have shown capability to use toilet facilities properly should be given permission to use separate and private toilet facilities.

RATIONALE: It is important to prevent contamination of food and to eliminate unpleasant odors from the food areas.

Supervision and assistance are necessary for young children. Although cultures differ in privacy needs, sex-separated toileting among people who are not relatives is the norm for adults. Children should be allowed the opportunity to practice modesty when independent toileting behavior is well-established in the majority of the group. By six years of age, most children can use the toilet by themselves (1).

COMMENTS: Compliance is monitored by observation.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 2.4.1.3: Gender and Body Awareness

REFERENCES:

1. Shelov, S. P., R. E. Hannemann, eds. 1998. *Caring for your baby and young child: Birth to age 5*. 2nd ed. Elk Grove Village, IL: American Academy of Pediatrics.

STANDARD 5.4.1.3: Ability to Open Toilet Room Doors

Children should be able to easily open every toilet room door from the inside, and caregivers/teachers should be able to easily open toilet room doors from the outside if adult assistance is required.

RATIONALE: Doors that can be opened easily will prevent entrapment.

COMMENTS: Inside latches that children can easily manage will allow the child to ensure privacy when using the toilet. The latch or lock available for use, must be of a type that the staff can easily open from the outside in case a child requires adult assistance.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.4.1.4: Preventing Entry to Toilet Rooms by Infants and Toddlers

Toilet rooms should have barriers that prevent entry by infants and toddlers who are unattended. Infants and toddlers should be supervised by sight and sound at all times.

RATIONALE: Infants and toddlers can drown in toilet bowls, play in the toilet, have contact with contaminated items or surfaces, or otherwise engage in potentially injurious behavior if they are not supervised in toilet rooms.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.4.1.5: Chemical Toilets

Chemical toilets should not be used in child care facilities unless they are provided as a temporary measure in the event that the facility's normal plumbed toilets are not functioning. Constant supervision should be required for young children using a chemical toilet. In the event that chemical toilets may be required on a temporary basis, the caregiver/teacher should seek approval for use from the regulatory health agency.

RATIONALE: Chemical toilets can pose a safety hazard to young children. Young children climbing on the toilet seat could fall through the opening and into the chemical that is contained in the waste receptacle.

COMMENTS: A chemical toilet is a toilet consisting of a seat or bowl attached to a container holding a chemical solution that changes waste into sludge (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Dictionary.com. 2000. Chemical toilets. *The American heritage dictionary of the English language*. 4th ed. [http://dictionary.reference.com/browse/chemical toilets](http://dictionary.reference.com/browse/chemical%20toilets).

STANDARD 5.4.1.6: Ratios of Toilets, Urinals, and Hand Sinks to Children

Toilets and hand sinks should be easily accessible to children and facilitate adult supervision. The number of toilets and hand sinks should be subject to the following minimums:

- a) Toddlers:
 - 1) If each group size is less than ten children, provide one sink and one toilet per group.
- b) Preschool-age children:
 - 1) If each group size is less than ten children, provide one sink and one toilet per group;
 - 2) If each group size is between ten to sixteen children, provide two sinks and two flush toilets for each group.
- c) School-age children:
 - 1) If each group size is less than ten children, provide one sink and one toilet per group;
 - 2) If each group size is between ten to twenty children, provide two sinks and two toilets per group. Provide separation of male and female toilets.

For toddlers and preschoolers, the maximum toilet height should be eleven inches, and maximum height for hand sinks should be twenty-two inches. Urinals should not exceed 30% of the total required toilet fixtures and should be used by one child at a time. For school-age children, standard height toilet, urinal, and hand sink fixtures are appropriate.

Non-flushing equipment in toilet learning/training should not be counted as toilets in the toilet:child ratio.

RATIONALE: The environment can become contaminated more easily with multiple simultaneous users of urinals, because at least one of the children must assume an off-center position in relationship to the fixture during voiding.

Young children use the toilet frequently and cannot wait long when they have to use the toilet. The ratio of 1:10 is based on best professional experience of early childhood educators who are facility operators (1). This ratio also limits the group that will be sharing facilities (and infections).

COMMENTS: The ratios of toilets and hand sinks to children provided above takes into consideration the maximum

group size specified under Standard 1.1.1.2. Local building codes also dictate toilet and sink requirements based on number of children utilizing them.

State licensing regulations have often applied a ratio of 1:10 for toddlers and preschool children, and 1:15 for school-age children. The ratios used in this standard correspond to the maximum group sizes for each age group specified in Standard 1.1.1.2.

A ratio of one toilet to every ten children may not be sufficient if only one toilet is accessible to each group of ten, so a minimum of two toilets per group is preferable when the group size approaches ten. However, a large toilet room with many toilets used by several groups is less desirable than several small toilet rooms assigned to specific groups, because of the opportunities such a large room offers for transmitting infectious disease agents.

When providing bathroom fixtures for a mixed group of preschool and school-age children, requiring a school-age child to use bathroom fixtures designed for preschoolers may negatively impact the self-esteem of the school-age child.

TYPE OF FACILITY: Center; Large Family Child Care Home

RELATED STANDARDS:

Standard 1.1.1.2: Ratios for Large Family Child Care Homes and Centers

REFERENCES:

1. Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.

STANDARD 5.4.1.7: Toilet Learning/Training Equipment

Equipment used for toilet learning/training should be provided for children who are learning to use the toilet. Child-sized toilets or safe and cleanable step aids and modified toilet seats (where adult-sized toilets are present) should be used in facilities. Non-flushing toilets (i.e., potty chairs) should be strongly discouraged.

If child-sized toilets, step aids, or modified toilet seats cannot be used, non-flushing toilets (potty chairs) meeting the following criteria should be provided for toddlers, preschoolers, and children with disabilities who require them. Potty chairs should be:

- a) Easily cleaned and disinfected;
- b) Used only in a bathroom area;
- c) Used over a surface that is impervious to moisture;
- d) Out of reach of toilets or other potty chairs;
- e) Cleaned and disinfected after each use in a sink used only for cleaning and disinfecting potty chairs.

Equipment used for toilet learning/training should be accessible to children only under direct supervision.

The sink used to clean and disinfect the potty chair should also be cleaned and disinfected after each use.

RATIONALE: Child-sized toilets that are flushable, steps, and modified toilet seats provide for easier use and maintenance. Sanitary handling of potty chairs is difficult. Flushable toilets are superior to any type of device that exposes

the staff to contact with feces or urine. Many infectious diseases can be prevented through appropriate hygiene and disinfection methods. Surveys of environmental surfaces in child care settings have demonstrated evidence of fecal contamination (1). Fecal contamination has been used to gauge the adequacy of disinfection and hygiene.

COMMENTS: If potty chairs are used, they should be constructed of plastic or similar nonporous synthetic products. Wooden potty chairs should not be used, even if the surface is coated with a finish. The finished surface of wooden potty chairs is not durable and, therefore, may become difficult to wash and disinfect effectively.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Gorski, P. A. 1999. Toilet training guidelines: Day care providers—the role of the day care provider in toilet training. *Pediatrics* 103:1367-68.

STANDARD 5.4.1.8: Cleaning and Disinfecting Toileting Equipment

Utility gloves and equipment designated for cleaning and disinfecting toilet learning/training equipment and flush toilets should be used for each cleaning and should not be used for other cleaning purposes. Utility gloves should be washed with soapy water and dried after each use.

RATIONALE: Contamination of hands and equipment in a child care room has played a role in the transmission of disease (1,2).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Appendix D: Gloving

Appendix J: Selecting an Appropriate Sanitizer or Disinfectant

Appendix K: Routine Schedule for Cleaning, Sanitizing, and Disinfecting

REFERENCES:

1. Churchill, R. B., L. K. Pickering. 1997. Infection control challenges in child-care centers. *Infect Dis Clin North Am* 11:347-65.

2. Van, R., A. L. Morrow, R. R. Reves, L. K. Pickering. 1991. Environmental contamination in child day-care centers. *Am J Epidemiol* 133:460-70.

STANDARD 5.4.1.9: Waste Receptacles in the Child Care Facility and in Child Care Facility Toilet Room(s)

Waste receptacles in the facility should be kept clean, in good repair, and emptied daily. Toilet rooms should have at least one plastic-lined waste receptacle with a foot-pedal operated lid.

RATIONALE: This practice prevents the spread of disease and filth. In toilet rooms, users may need to dispose of waste that is contaminated with body fluids. Sanitary disposal of this material requires a lidded container that does not have to be handled to be opened.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.2.8.1: Integrated Pest Management

Standards 5.4.1.1-5.4.1.9: Toilets and Toilet Learning/Training Equipment

Standard 5.4.2.4: Use, Location, and Setup of Diaper Changing Areas

STANDARD 5.4.1.10: Handwashing Sinks

A handwashing sink should be accessible without barriers (such as doors) to each child care area. In areas for infants, toddlers, and preschoolers, the sink should be located so the caregiver/teacher may visually supervise the group of children while carrying out routine handwashing or having children wash their hands. Sinks should be placed at the child's height or be equipped with a stable step platform to make the sink available to children. If a platform is used, it should have slip-proof steps and platform surface. Also, each sink should be equipped so that the user has access to:

- a) Water, at a temperature at least 60°F and no hotter than 120°F;
- b) A foot-pedal operated, electric-eye operated, open, self-closing, slow-closing, or metering faucet that provides a flow of water for at least thirty seconds without the need to reactivate the faucet;
- c) A supply of hand-cleansing non-antibacterial, unscented liquid soap;
- d) Disposable single-use cloth or paper towels or a heated-air hand-drying device with heat guards to prevent contact with surfaces that get hotter than 120°F.

A steam tap or a water tap that provides hot water that is hotter than 120°F may not be used at a handwashing sink.

RATIONALE: Transmission of many infectious diseases can be prevented through handwashing (1). To facilitate routine handwashing at the many appropriate times, sinks must be close at hand and permit caregivers/teachers to provide continuous supervision while they wash their hands. The location, access, and supporting supplies to enable adequate handwashing are important to the successful integration of this key routine. Foot-pedaled operated or electric-eye operated handwashing sinks and liquid soap dispensers are preferable because they minimize hand contamination during and after handwashing. The flow of water must continue long enough for the user to wet the skin surface, get soap, lather for at least twenty seconds, and rinse completely.

Comfortably warm water helps to release soil from hand surfaces and provides comfort for the person who is washing the hands. When the water is too cold or too hot for comfort, the person is less likely to wet and rinse long enough to lather and wash off soil. Having a steam tap or a super-heated hot water tap available at a handwashing sink poses a significant risk of scald burns.

COMMENTS: Shared access to soap and disposable towels at more than one sink is acceptable if the location

of these is fully accessible to each person. There is no evidence that antibacterial soap reduces the incidence of illness among children in child care.

TYPE OF FACILITY: Center

RELATED STANDARDS:

Standard 4.8.0.4: Food Preparation Sinks
Standard 4.8.0.5: Handwashing Sink Separate from Food Zones
Standard 5.2.1.14: Water Heating Devices and Temperatures Allowed

REFERENCES:

1. Centers for Disease Control and Prevention (CDC). Wash your hands. <http://www.cdc.gov/features/handwashing/>.

STANDARD 5.4.1.11: Prohibited Uses of Handwashing Sinks

Handwashing sinks should not be used for rinsing soiled clothing, for cleaning equipment that is used for toileting, or for the disposal of any waste water used in cleaning the facility.

RATIONALE: The sink used to wash/rinse soiled clothing or equipment used for toileting becomes contaminated during this process and can be a source of transmission of disease to those who wash their hands in that sink (1).

TYPE OF FACILITY: Center; Large Family Child Care Home

REFERENCES:

1. Laborde, D. J., K. A. Weigle, D. J. Weber, J. B. Kotch. 1993. Effect of fecal contamination on the diarrheal illness rates in day-care centers. *Am J Epidemiol* 138:243-55.

STANDARD 5.4.1.12: Mop Sinks

Centers with more than thirty children should have a mop sink. Large and small family child care homes should have a means of obtaining clean water for mopping and disposing of it in a toilet or in a sink used only for such purposes.

RATIONALE: Handwashing and food preparation sinks must not be contaminated by wastewater. Contamination of hands, toys, and equipment in the room plays a role in the transmission of diseases in child care settings (1,2).

COMMENTS: Mop sinks are installed on the floor, similar to a shower pan, and are usually located in janitor's closets or laundry facilities.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 4.8.0.4: Food Preparation Sinks
Standard 4.8.0.5: Handwashing Sink Separate from Food Zones
Standard 5.2.6.9: Handwashing Sink Using Portable Water Supply

REFERENCES:

1. Churchill, R. B., L. K. Pickering. 1997. Infection control challenges in child-care centers. *Infect Dis Clin North Am* 11:347-65.
2. Van, R., A. L. Morrow, R. R. Reves, L. K. Pickering. 1991. Environmental contamination in child day-care centers. *Am J Epidemiol* 133:460-70.

5.4.2 Diaper Changing Areas

STANDARD 5.4.2.1: Diaper Changing Tables

The facility should have at least one diaper changing table per infant group or toddler group to allow sufficient time for changing diapers and for cleaning and sanitizing between children. Diaper changing tables and sinks should be used only by the children in the group whose routine care is provided together throughout their time in child care. The facility should not permit shared use of diaper changing tables and sinks by more than one group.

RATIONALE: Diaper changing requires time, as does cleaning the changing surfaces. When caregivers/teachers from different groups use the same diaper changing surface, disease spreads more easily from group to group. Child care facilities should not put the diaper changing tables and sinks in a buffer zone between two classrooms, because doing so effectively joins the groups from the perspective of cross-contamination.

TYPE OF FACILITY: Center; Large Family Child Care Home

RELATED STANDARDS:

Standards 1.1.1.1-1.1.1.2: Supervision According to Group Size
Standard 5.4.2.4: Use, Location, and Setup of Diaper Changing Areas

STANDARD 5.4.2.2: Handwashing Sinks for Diaper Changing Areas in Centers

Handwashing sinks in centers should be provided within arm's reach of the caregiver/teacher to diaper changing tables and toilets. A minimum of one handwashing sink should be available for every two changing tables. Where infants and toddlers are in care, sinks and diaper changing tables should be assigned for use to a specific group of children and used only by children and adults who are in the assigned group as defined by Standard 5.4.2.1. Handwashing sinks should not be used for bathing or removing smeared fecal material.

RATIONALE: Sinks must be close to where the diapering takes place to avoid transfer of contaminants to other surfaces en route to washing the hands of staff and children. Having sinks close by will help prevent the spread of contaminants and disease.

When sinks are shared by multiple groups, cross-contamination occurs. Many child care centers put the diaper changing tables and sinks in a buffer zone between two classrooms, effectively joining the groups through cross-contamination.

COMMENTS: Shared access to soap and disposable towels at more than one sink is acceptable if the location of these is fully accessible to each person.

TYPE OF FACILITY: Center

RELATED STANDARDS:

Standard 5.4.2.1: Diaper Changing Tables
Standard 5.4.2.4: Use, Location, and Setup of Diaper Changing Areas

- c) Be at a convenient height for use by caregivers/ teachers (between twenty-eight and thirty-two inches high);
- d) Be equipped with railings or barriers that extend at least six inches above the change surface.

RATIONALE: This standard is designed to prevent disease transmission and falls and to provide safety measures during diapering. Commercial diaper change tables vary as much as ten inches in height. Many standard-height thirty-six inch counters are used as the diaper change area. When a railing or barrier is attached, shorter staff members cannot change diapers without standing on a step.

Back injury is a common occupational injury for caregivers/ teachers (3,5). Using changing tables that are sized for caregiver/teacher comfort and convenience can help prevent back injury (1,3-4). Railings of two inches or less in height have been observed in some diaper change areas and when combined with a moisture-impervious diaper changing pad approximately one inch thick, render the railing ineffective. A change table height of twenty-eight inches to thirty-two inches (standard table height) plus a six-inch barrier will reduce back strain on staff members and provide a safe barrier to prevent children from falling off the changing table.

Data from the U.S. Consumer Product Safety Commission (CPSC) show that falls are a serious hazard associated with infant changing tables (2). Safety straps on changing tables are provided to prevent falls but they trap soil and they are not easily disinfected. Therefore, diaper changing tables should not have safety straps.

COMMENTS: An impervious surface is defined as a smooth surface that does not absorb liquid or retain soil. While changing a child, the adult must hold onto the child at all times.

The activity of diaper changing presents an opportunity for adult interaction with the child whose diaper is being changed.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Aronson, S. S. 1999. The ideal diaper changing station. *Child Care Info Exch* 130:92.
2. U.S. Consumer Product Safety Commission (CPSC). 1997. *The safe nursery*. Washington, DC: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/202.pdf>.
3. ASTM International. 2008. ASTM F2388-08. *Baby changing tables for domestic use*. West Conshohocken, PA: ASTM.
4. Gratz, R., A. Claffey, P. King, G. Scheuer. 2002. The physical demands and ergonomics of working with young children. *Early Child Devel Care* 172:531-37.
5. Fiene, R. 2002. *13 indicators of quality child care: Research update*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. <http://aspe.hhs.gov/hsp/ccquality-ind02/>.

STANDARD 5.4.2.6: Maintenance of Changing Tables

Changing tables should be nonporous, kept in good repair, and cleaned and disinfected after each use to remove visible soil and germs.

RATIONALE: Many infectious diseases can be prevented through appropriate cleaning and disinfection procedures. It is difficult, if not impossible, to disinfect porous surfaces, broken edges, and surfaces that cannot be completely cleaned. Bacterial cultures of environmental surfaces in child care facilities have shown fecal contamination, which has been used to gauge the adequacy of sanitation and hygiene measures practiced at the facility (1).

One study has demonstrated that “diapering, handwashing, and food preparation equipment that is specifically designed to reduce the spread of infectious agents significantly reduced diarrheal illness among the children and absence as a result of illness among staff in out-of-home child care centers” (2).

COMMENTS: Caregivers/teachers should be reminded that many disinfectants leave residues that can cause skin irritation or other symptoms. Caregivers/teachers should always follow the manufacturer’s instructions for preparation and use.

A U.S. Environmental Protection Agency (EPA)-registered product labeled for use as a disinfectant suitable for the surface material should be used to disinfect the changing table after use. Some bleach products are EPA-registered disinfectants.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Appendix J: Selecting an Appropriate Sanitizer or Disinfectant
Appendix K: Routine Schedule for Cleaning, Sanitizing, and Disinfecting

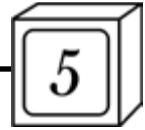
REFERENCES:

1. Pickering, L. K., C. J. Baker, D. W. Kimberlin, S. S. Long, eds. 2009. *Red Book: 2009 report of the Committee on Infectious Diseases*. Elk Grove Village, IL: American Academy of Pediatrics.
2. Kotch, J. B., P. Isbell, D. J. Weber, V. Nguyen, E. Gunn, S. Fowlkes, J. Virk, J. Allen. 2007. Hand-washing and diapering equipment reduces disease among children in out-of-home child care centers. *Pediatrics* 120: e29-e36.

5.4.3 Bathtubs and Showers

STANDARD 5.4.3.1: Ratio and Location of Bathtubs and Showers

The facility should have one bathtub or shower for every six children receiving overnight care. If the facility is caring for infants, it should have age-appropriate bathing facilities for them. Bathtubs and showers, when required or used as part of the daily program, should be located within the facility or in an approved building immediately adjacent to it.



RATIONALE: A sufficient number of age-appropriate bathing tubs and showers must be available to permit separate bathing for every child.

COMMENTS: Assuming that each bath takes ten to fifteen minutes, a ratio of one tub to six children with time to wash the tub between children means that bathing would require about one and one-half hours.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.4.3.2: Safety of Bathtubs and Showers

All bathing facilities should have a conveniently located grab bar that is mounted at a height appropriate for a child to use. Nonskid surfaces should be provided in all tubs and showers. Bathtubs should be equipped with a mechanism to guarantee that drains are kept open at all times, except during supervised use. Water temperature should not exceed 120°F and anti-scald devices should be permanently installed in the faucet and shower head.

RATIONALE: Falls in tubs are a well-documented source of injury according to the National Electronic Injury Surveillance System (NEISS) data collected by the U.S. Consumer Product Safety Commission (CPSC) (2). Grab bars and nonslip surfaces reduce this risk (2). Drowning and falls in bathtubs are also a significant cause of injury for young children and children with disabilities (1,2). An open drain will prevent a pool of water from forming if a child turns on a water faucet and, therefore, will prevent a potential drowning situation. Bathtub water comprises the leading cause of scalds for young children (2). Water heated to temperatures greater than 120°F takes less than thirty seconds to burn the skin (2).

COMMENTS: Various inexpensive devices to check water temperature are available at stores and on the Internet.

TYPE OF FACILITY: Center

REFERENCES:

- Gipson, K. 2009. *Submersions related to non-pool and non-spa products, 2008 report*. Washington, DC: CPSC. <http://www.cpsc.gov/library/FOIA/FOIA09/OS/nonpools2008.pdf>.
- D'Souza, A. L., N. G. Nelson, L. B. McKenzie. 2009. Pediatric burn injuries treated in US emergency departments between 1990 and 2006. *Pediatrics* 124:1424-30.

5.4.4 Laundry Area

STANDARD 5.4.4.1: Laundry Service and Equipment

Centers should have a mechanical washing machine and dryer on site or should contract with a laundry service. Where laundry equipment is used in a large or small family child care home (or the large or small family home caregiver/teacher uses an off-site laundry facility), the equipment should comply with Standard 5.4.4.2.

RATIONALE: Bedding and towels that are not thoroughly cleaned pose a health threat to users of these items.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.4.4.2: Location of Laundry Equipment and Water Temperature for Laundering

STANDARD 5.4.4.2: Location of Laundry Equipment and Water Temperature for Laundering

Laundry equipment should be located in an area separate from the kitchen and child care areas and inaccessible to children. The water temperature for the laundry should be maintained above 140°F unless one of the following conditions exists:

- The product labeled by the manufacturer as a sanitizer is applied according to the manufacturer's instructions, in which case the temperature should be as specified by the manufacturer of the product;
- A dryer is used that the manufacturer attests heats the clothes above 140°F;
- The clothes are completely ironed (1).

Dryers should be vented to the outside. Dryer hoses and vent connections should be checked periodically for proper alignment and connection. Lint must be removed with each use and periodically cleaned from the hose to avoid fires. If a commercial laundry service is used, its performance should meet or exceed the requirements listed above.

RATIONALE: Chemical sanitizers are temperature-dependent. Ironing or heating the clothing above 140°F will sanitize. Bent dryer hoses can cause lint to catch in dryers, which is a potential fire hazard. Disconnected dryer hoses will vent lint, dust, and particles indoors, which may cause respiratory problems.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.4.4.1: Laundry Service and Equipment

REFERENCES:

- Witt, C. S., J. Warden. 1971. Can home laundries stop the spread of bacteria in clothing? *Textile Chemist Colorist* 3:55-57.

5.4.5 Sleep and Rest Areas

STANDARD 5.4.5.1: Sleeping Equipment and Supplies

Facilities should have an individual crib, cot, sleeping bag, bed, mat, or pad that has not been recalled for each child who spends more than four hours a day at the facility. No child should simultaneously share a crib, bed, or bedding with another child. Facilities should ensure that toddler beds are in compliance with the current U.S. Consumer Product Safety Commission (CPSC) and ASTM safety standards (1). Clean linens should be provided for each child. Beds and bedding should be washed between uses if used by different children. Regardless of age group, bed linens should not be used as rest equipment in place of cots, beds, pads, or

similar approved equipment. Bed linens used under children on cots, cribs, futons, and playpens should be tight-fitting. Sheets for an adult bed should not be used on a crib mattress. See Standard 5.4.5.2 for crib specifications.

When pads are used, they should be enclosed in washable covers and should be long enough so the child's head or feet do not rest off the pad. Mats and cots should be made with a waterproof material that can be easily washed and sanitized. Plastic bags or loose plastic material should never be used as a covering.

No child should sleep on a bare, uncovered surface. Seasonally appropriate covering, such as sheets, sleep garments, or blankets that are sufficient to maintain adequate warmth, should be available and should be used by each child below school-age. Pillows, blankets, and sleep positioners should not be used with infants. If pillows are used by toddlers and older children, pillows should have removable cases that can be laundered, be assigned to a child, and used by that child only while s/he is enrolled in the facility. Each child's pillow, blanket, sheet, and any special sleep item should be stored separately from those of other children.

Pads and sleeping bags should not be placed directly on any floor that is cooler than 65°F when children are resting. Cribs, cots, sleeping bags, beds, mats, or pads in/on which children are sleeping should be placed at least three feet apart. If the room used for sleeping cannot accommodate three feet of spacing between children, it is recommended for caregivers/teachers to space children as far as possible from one another and/or alternate children head to feet. Screens used to separate sleeping children are not recommended because screens can affect supervision, interfere with immediate access to a child, and could potentially injure a child if pushed over on a child. If unoccupied sleep equipment is used to separate sleeping children, the arrangement of such equipment should permit the staff to observe and have immediate access to each child. The ends of cribs do not suffice as screens to separate sleeping children.

The sleeping surfaces of one child's rest equipment should not come in contact with the sleeping surfaces of another child's rest equipment during storage.

Caregivers/teachers should never use strings to hang any object, such as a mobile, or a toy or a diaper bag, on or near the crib where a child could become caught in it and strangle.

Infant monitors and their cords and other electrical cords should never be placed in the crib or sleeping equipment.

Crib mattresses should fit snugly and be made specifically for the size crib in which they are placed. Infants should not be placed on an inflatable mattress due to potential of entrapment or suffocation.

RATIONALE: Separate sleeping and resting, even for siblings, reduces the spread of disease from one child to another.

Droplet transmission occurs when droplets containing microorganisms generated from an infected person, primarily during coughing, sneezing, or talking are propelled a short distance (three feet) and deposited on the conjunctivae, nasal mucosa, or mouth (2).

Because respiratory infections are transmitted by large droplets of respiratory secretions, a minimum distance of three feet should be maintained between cots, cribs, sleeping bags, beds, mats, or pads used for resting or sleeping (2). A space of three feet between cribs, cots, sleeping bags, beds, mats, or pads will also provide access by the staff to a child in case of emergency. If the facility uses screens to separate the children, their use must not hinder observation of children by staff or access to children in an emergency.

Lice infestation, scabies, and ringworm are among the most common infectious diseases in child care. These diseases are transmitted by direct person-to-person contact. Ringworm is transmitted by the sharing of personal articles such as combs, brushes, towels, clothing, and bedding. Prohibiting the sharing of personal articles helps prevent the spread of these diseases.

The use of tight-fitting bed linens prevents suffocation and strangling. Adult bed sheets can become loose and entangle an infant (3).

From time to time, children drool, spit up, or spread other body fluids on their sleeping surfaces. Using cleanable, waterproof, nonabsorbent rest equipment enables the staff to wash and sanitize the sleeping surfaces. Plastic bags may not be used to cover rest and sleep surfaces/equipment because they contribute to suffocation if the material clings to the child's face.

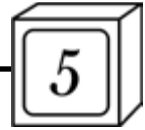
Canvas cots are not recommended for infants and toddlers. The end caps require constant replacement and the cots are a cutting/pinching hazard when end caps are not in place. A variety of cots are made with washable sleeping surfaces that are designed to be safe for children.

COMMENTS: Although children freely interact and can contaminate each other while awake, reducing the transmission of infectious disease agents on large airborne droplets during sleep periods will reduce the dose of such agents to which the child is exposed overall. In small family child care homes, the caregiver/teacher should consider the home to be a business during child care hours and is expected to abide by regulatory expectations that may not apply outside of child care hours. Therefore, child siblings related to the caregiver/teacher may not sleep in the same bed during the hours of operation.

Caregivers/teachers may ask parents/guardians to provide bedding that will be sent home for washing at least weekly or sooner if soiled.

Pillows are not required for older children.

Many caregivers/teachers find that placing children in alternate positions so that one child's head is across from the other's feet reduces interaction and promotes settling during



rest periods. This positioning may be beneficial in reducing transmission of infectious agents as well.

The use of solid crib ends as barriers between sleeping children can serve as a barrier if they are three feet away from each other (2).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.1.4.1: Safe Sleep Practices and SIDS/Suffocation Risk Reduction

Standard 3.4.6.1: Strangulation Hazards

Standard 5.4.5.2: Cribs

Standard 9.2.4.5: Emergency and Evacuation Drills/Exercises Policy

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2011. CPSC approves new mandatory standard for toddler beds. <http://www.cpsc.gov/cpscpub/prerelease/prhtml11/11199.html>.

2. Pickering, L. K., C. J. Baker, D. W. Kimberlin, S. S. Long, eds. 2009. *Red book: 2009 report of the Committee on Infectious Diseases*, 153. Elk Grove Village, IL: American Academy of Pediatrics.

3. American Academy of Pediatrics. 2010. Ages and stages: A parent's guide to safe sleep. Healthy Children. <http://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/A-Parents-Guide-to-Safe-Sleep.aspx>.

STANDARD 5.4.5.2: Cribs

Facilities should check each crib before its purchase and use to ensure that it is in compliance with the current U.S. Consumer Product Safety Commission (CPSC) and ASTM safety standards.

Recalled or "second-hand" cribs should not be used or stored in the facility. When it is determined that a crib is no longer safe for use in the facility, it should be dismantled and disposed of appropriately.

Staff should only use cribs for sleep purposes and should ensure that each crib is a safe sleep environment. No child of any age should be placed in a crib for a time-out or for disciplinary reasons. When an infant becomes large enough or mobile enough to reach crib latches or potentially climb out of a crib, they should be transitioned to a different sleeping environment (such as a cot or sleeping mat).

Each crib should be identified by brand, type, and/or product number and relevant product information should be kept on file (with the same identification information) as long as the crib is used or stored in the facility.

Staff should inspect each crib before each use to ensure that hardware is tightened and that there are not any safety hazards. If a screw or bolt cannot be tightened securely, or there are missing or broken screws, bolts, or mattress support hangers, the crib should not be used.

Safety standards document that cribs used in facilities should be made of wood, metal, or plastic. Crib slats should be spaced no more than two and three-eighths inches apart, with a firm mattress that is fitted so that no more than two fingers can fit between the mattress and the crib side in the lowest position. The minimum height from the top of the

mattress to the top of the crib rail should be twenty inches in the highest position. Cribs with drop sides should not be used. The crib should not have corner post extensions (over one-sixteenth inch). The crib should have no cutout openings in the head board or footboard structure in which a child's head could become entrapped. The mattress support system should not be easily dislodged from any point of the crib by an upward force from underneath the crib. All cribs should meet the ASTM F1169-10a Standard Consumer Safety Specification for Full-Size Baby Cribs, F406-10b Standard Consumer Safety Specification for Non-Full-Size Baby Cribs/Play Yards, or the CPSC 16 CFR 1219, 1220, and 1500 – Safety Standards for Full-Size Baby Cribs and Non-Full-Size Baby Cribs; Final Rule.

Cribs should be placed away from window blinds or draperies.

As soon as a child can stand up, the mattress should be adjusted to its lowest position. Once a child can climb out of his/her crib, the child should be moved to a bed. Children should never be kept in their crib by placing, tying, or wedging various fabric, mesh, or other strong coverings over the top of the crib.

Cribs intended for evacuation purpose should be of a design and have wheels that are suitable for carrying up to five non-ambulatory children less than two years of age to a designated evacuation area. This crib should be used for evacuation in the event of fire or other emergency. The crib should be easily moveable and should be able to fit through the designated fire exit.

RATIONALE: Standards have been developed to define crib safety, and staff should make sure that cribs used in the facility meet these standards to protect children and prevent injuries or death (1-3). Significant changes to the ATSM and CPSC standards for cribs were published in December 2010. As of June 28, 2011 all cribs being manufactured, sold or leased must meet the new stringent requirements. Effective December 28, 2012 all cribs being used in early care and education facilities including family child care homes must also meet these standards. For the most current information about these new standards please go to <http://www.cpsc.gov/info/cribs/index.html>.

More infants die every year in incidents involving cribs than with any other nursery product (4). Children have become trapped or have strangled because their head or neck became caught in a gap between slats that was too wide or between the mattress and crib side.

An infant can suffocate if its head or body becomes wedged between the mattress and the crib sides (6).

Corner posts present a potential for clothing entanglement and strangulation (5). Asphyxial crib deaths from wedging the head or neck in parts of the crib and hanging by a necklace or clothing over a corner post have been well-documented (6).

Children who are thirty-five inches or taller in height have outgrown a crib and should not use a crib for sleeping (4). Turning a crib into a cage (covering over the crib) is not a

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.4.5.1: Sleeping Equipment and Supplies
Standard 5.4.5.2: Cribs

REFERENCES:

1. Pickering, L. K., C. J. Baker, D. W. Kimberlin, S. S. Long, eds. 2009. *Red book: 2009 report of the Committee on Infectious Diseases*, 153. Elk Grove Village, IL: American Academy of Pediatrics.
2. National Resource Center for Health and Safety in Child Care and Early Education (NRC). 2010. NRC Website. Individual states' child care licensure regulations. <http://nrckids.org/STATES/states.htm>.

STANDARD 5.4.5.4: Futons

Child-sized futons should be used only if they meet the following requirements:

- a) Not on a frame;
- b) Easily cleanable;
- c) Encased in a tight-fitting waterproof cover;
- d) Meet all other standards on sleep and rest areas (Section 5.4.5).

RATIONALE: Frames pose an entrapment hazard. Futons that are easy to clean can be kept sanitary. Supervision is necessary to maintain adequate spacing of futons and ensure that bedding is not shared, thereby reducing transmission of infectious diseases and keeping children out of traffic areas.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.4.5.5: Bunk Beds

Children younger than six years of age should not use the upper levels of double-deck beds (or "bunk beds"). Bunk beds must conform to the U.S. Consumer Product Safety Commission (CPSC) Facts Document #071, Bunk Beds and the ASTM F1427-07 Standard Consumer Safety Specification for Bunk Beds (1).

RATIONALE: Falls and entrapment between mattress and guardrails, bed structure and wall, or between slats from bunk beds are a well-documented cause of injury in young children (1).

COMMENTS: Consult the CPSC, the manufacturer's label, or the consumer safety information provided by the American Furniture Manufacturer's Association (AFMA) for advice. Check the ASTM Website, <http://www.astm.org>, for up to date Standards.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. ASTM International. ASTM F1427-07: *Standard consumer safety specification for bunk beds*. West Conshohocken, PA: ASTM International.

5.4.6 Space for Children Who Are Ill, Injured, or Need Special Therapies

STANDARD 5.4.6.1: Space for Children Who Are Ill

Each facility should have a separate room or designated area within a room for the temporary or ongoing care of a child who needs to be separated from the group because of injury or illness. This room or area should be located so the child may be supervised and may be within the child's usual child care room. Toilet and lavatory facilities should be readily accessible. If the child under care is suspected of having an infectious disease, all equipment the child uses should be cleaned and sanitized after use. This room or area may be used for other purposes when it is not needed for the separation and care of a child or if the uses do not conflict.

RATIONALE: Children who are injured or ill may need to be separated from other children to provide for rest and to minimize the spread of potential infectious disease (1). It is best practice for toilet and lavatory facilities to be readily available to permit frequent handwashing when children are well and even more so when they are ill. Proximity should provide rapid access in the event of vomiting or diarrhea to avoid contaminating the environment. Handwashing sinks should be stationed in each room not only to provide the opportunity to maintain cleanliness but also to permit the caregiver/teacher to maintain continuous supervision of the other children in care.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.6.1.1: Inclusion/Exclusion/Dismissal of Children
Standards 3.6.2.2-3.6.2.10: Care of Children Who are Ill
Standard 9.2.3.2: Content and Development of the Plan for Care of Children and Staff Who Are Ill

REFERENCES:

1. Pickering, L. K., C. J. Baker, D. W. Kimberlin, S. S. Long, eds. 2009. *Red book: 2009 report of the Committee on Infectious Diseases*, 153. Elk Grove Village, IL: American Academy of Pediatrics.

STANDARD 5.4.6.2: Space for Therapy Services

In addition to accessible classrooms, in facilities where some but fewer than fifteen children need occupational or physical therapy and some but fewer than twenty children need individual speech therapy, centers should provide a quiet, private, accessible area within the child care facility for therapy. No other activities should take place in this area at the time therapy is being provided.

Family child care homes and facilities integrating children who need therapy services should receive these services in a space that is separate and private during the time the child is receiving therapy.

Additional space may be needed for equipment according to a child's needs.

RATIONALE: Quiet, private space is necessary for physical, occupational, and speech therapies (1). Most caregivers/teachers also indicate that the other children in the facility are disrupted less if the therapies are provided in a separate area. For speech therapy, working with the child in a quiet location is especially important. Caregivers/teachers should attempt to incorporate therapeutic principles into the child's general child care activities. Doing so will achieve maximum benefit for the child receiving therapy and promote understanding on the part of the child's peers and caregivers/teachers about how to address the child's disability when the therapist is not present.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Olds, A. R. 2001. Zoning a group room. In *Child care design guide*, 137-165. New York: McGraw-Hill.

5.5 Storage Areas

Note to Reader: See Standard 3.6.3.2 for medication storage.

STANDARD 5.5.0.1: Storage and Labeling of Personal Articles

The facility should provide separate storage areas for each child's and staff member's personal articles and clothing. Personal effects and clothing should be labeled with the child's name. Bedding should be labeled with the child's full name, stored separately for each child, and not touching other children's personal items.

If children use the following items at the child care facility, those items should be stored in separate, clean containers and should be labeled with the child's full name:

- a) Individual cloth towels for bathing purposes;
- b) Toothbrushes;
- c) Washcloths;
- d) Combs and brushes.

Toothbrushes, towels, and washcloths should be allowed to dry when they are stored and not touching.

RATIONALE: This standard prevents the spread of organisms that cause disease and promotes organization of a child's personal possessions. Lice infestation, scabies, and ringworm are common infectious diseases in child care. Providing space so personal items may be stored separately helps to prevent the spread of these diseases.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.6.1.5: Sharing of Personal Articles Prohibited
Standard 3.6.3.2: Labeling, Storage, and Disposal of Medications
Standard 5.4.5.1: Sleeping Equipment and Supplies

STANDARD 5.5.0.2: Coat Hooks/Cubicles

Coat hooks should be spaced so coats will not touch each other, or individual cubicles or lockers of the child's height

should be provided for storing children's clothing and personal possessions.

RATIONALE: Ringworm is a common infectious disease in child care and can be transmitted by sharing personal articles such as combs, towels, clothing, and bedding (1). Providing space so personal items may be stored separately helps prevent the spread of disease.

COMMENTS: Whenever possible, coat hooks should not be placed at children's eye level because of potential risk of injury to eyes. Safety hooks should be used instead.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Pickering, L. K., C. J. Baker, D. W. Kimberlin, S. S. Long, eds. 2009. *Red book: 2009 report of the Committee on Infectious Diseases*, 661-662. Elk Grove Village, IL: American Academy of Pediatrics.

STANDARD 5.5.0.3: Storage of Play and Teaching Equipment and Supplies

The facility should provide and use space to store play and teaching equipment, supplies, records and files, cots, mats, and bedding. Children should not have unsupervised access to storage areas.

RATIONALE: This practice enhances safety and provides a good example of an orderly environment.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.5.0.4: Storage for Soiled and Clean Linens

Child care facilities should provide separate storage areas for soiled linen and clean linen. Children should not have unsupervised access to storage areas.

RATIONALE: This practice discourages contamination of clean areas and children from soiled and contaminated linen. Providing separate storage areas reduces fire load and helps contain fire, if spontaneous combustion occurs in soiled linens.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

STANDARD 5.5.0.5: Storage of Flammable Materials

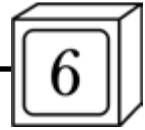
Gasoline, hand sanitizers*** in volume, and other flammable materials should be stored in a separate building, in a locked area, away from high temperatures and ignition sources***, and inaccessible to children.

RATIONALE: Flammable materials such as chemicals and cleaners account for the majority of burns to the head and face of children (1). These materials are also involved in unintentional ingestion by children.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

***Addition to Standard in second printing, August 2011





6.1 Play Area/Playground Size and Location

NOTE: The play spaces discussed in the following standards are assumed to be those at the site and thus are the facility's responsibility. Facilities that do not have on-site play areas but that use playgrounds and equipment in adjacent parks and/or schools may not be able to ensure that children in their facility are playing on equipment or in play space in absolute conformance with the standards presented here.

STANDARD 6.1.0.1: Size and Location of Outdoor Play Area

The facility or home should be equipped with an outdoor play area that directly adjoins the indoor facilities or that can be reached by a route that is free of hazards and is no farther than one-eighth mile from the facility. The playground should comprise a minimum of seventy-five square feet for each child using the playground at any one time.

The following exceptions to the space requirements should apply:

- A minimum of thirty-three square feet of accessible outdoor play space is required for each infant;
- A minimum of fifty square feet of accessible outdoor play space is required for each child from eighteen to twenty-four months of age.

There should be separated areas for play for the following ages of children:

- Ages six through twenty-three months
- Ages two to five years*
- Ages five to twelve years**

*These areas may be further sub-divided into ages two to three years and four to five years.

** These areas may be further sub-divided into grades K-1, 2-3, and 4-6.

The outdoor playground should include an open space for running that is free of other equipment (4).

RATIONALE: Play areas must be sufficient to allow freedom of movement without collisions among active children.

Providing more square feet per child may correspond to a decrease in the number of injuries associated with gross motor play equipment (1). An aggregate size of greater than 4,200 square feet that includes all of a facility's playgrounds has been associated with significantly greater levels of children's physical activity (5).

In addition, meeting proposed Americans with Disabilities Act (ADA) outdoor play area requirements for accessible routes, and developing natural, outdoor play yards with variety and shade can only be achieved if sufficient outdoor play space is provided.

The space **exceptions** are based on early childhood and playground professionals' experience (2). This follows the developmental ages used for the development of the Standards for play equipment for children.

COMMENTS: Children benefit from being outside as much as possible and it is important to provide sufficient outdoor space to accommodate the full enrollment of children (2). If a facility has less than seventy-five square feet of outdoor space per child, then the facility should augment the outdoor space by providing a large indoor play area (see Standard 6.1.0.2).

Additional space beyond the standard of seventy-five square feet per child may be required to meet ADA outdoor play area requirements, depending on the layout and terrain (3). A Certified Playground Safety Inspector (CPSI) can be utilized for guidance in assisting with outdoor play areas. To locate a CPSI, check the National Park and Recreation Association (NPRRA) registry at https://ipv.nrpa.org/CPSI_registry/.

Children may play in older children's areas if the equipment is appropriate for the youngest child present.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.1.3.1: Active Opportunities for Physical Activity
 Standard 3.1.3.2: Playing Outdoors
 Standard 3.1.3.4: Caregivers'/teachers' Encouragement of Physical Activity
 Standard 5.1.1.5: Environmental Audit of Site Location
 Standard 6.1.0.2: Size and Requirements of Indoor Play Area

REFERENCES:

- Ruth, L. C. 2008. Playground design and equipment. Whole Building Design Guide. <http://www.wbdg.org/resources/playground.php>.
- Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.
- Architectural and Transportation Barriers Compliance Board (U.S. Access Board). 2005. *Accessible play areas: A summary of accessibility guidelines for play areas*. <http://www.access-board.gov/play/guide/guide.pdf>.
- Brown, W. H., K. A. Pfeiffer, K. L. McIver, M. Dowda, C. L. Addy, R. R. Pate. 2009. Social and environmental factors associated with preschoolers' nonsedentary physical activity. *Child Devel* 80:45-58.
- Dowda, M., W. H. Brown, C. Addy, K. A. Pfeiffer, K. L. McIver, R. R. Pate. 2009. Policies and characteristics of the preschool environment and physical activity of young children. *Pediatrics* 123: e261-66.

STANDARD 6.1.0.2: Size and Requirements of Indoor Play Area

If a facility has less than seventy-five square feet of accessible outdoor space per child or provides active play space indoors for other reasons, a large indoor activity room that meets the requirement for seventy-five square feet per child may be used if it meets the following requirements:

- It provides for types of activities equivalent to those performed in an outdoor play space;
- The area is ventilated with fresh, temperate air at a minimum of five cubic feet per minute per occupant when open windows are not possible;
- The surfaces and finishes are shock-absorbing, as required for outdoor installations in Standard 6.2.3.1;



- d) The play equipment meets the requirements for outdoor installation as stated in Standards 6.2.1.3-6.2.1.6 and Standards 6.2.2.3-6.2.2.4.

There should be separated areas for play for the following ages of children:

- a) Ages six through twenty-three months
- b) Ages two to five years*
- c) Ages five to twelve years**

*These areas may be further sub-divided into ages two to three years and four to five years.

** These areas may be further sub-divided into grades K-1, 2-3, and 4-6.

RATIONALE: This standard provides facilities located in inner-city areas or areas with extreme weather with an alternative that allows gross motor play when outdoor spaces are unavailable or unusable. Indoor gross motor play must provide an experience like outdoor play, with safe and healthful environmental conditions that match the benefits of outdoor play as closely as possible. These spaces may be interior if ventilation is adequate to prevent undue concentration of organisms, odors, carbon dioxide, humidity and other substances consistent with ASHRAE's "Standard 62: Ventilation for Acceptable Indoor Air Quality." This follows the developmental ages used for the development of the Standards for play equipment for children (1,2).

COMMENTS: For days in which weather does not permit outdoor play, the facility is encouraged to provide an alternate place for gross motor activities indoors for children of all ages. This space could be a dedicated gross motor room or a gym, a large hallway, or even a classroom in which furniture has been pushed aside. The room should provide adequate space for children to do vigorous activities including running.

Qualified heating and air conditioning contractors should have a meter to measure the rate of airflow. Before indoor areas are used for gross motor activity, a heating and air conditioning contractor should be called in to make airflow measurements.

TYPE OF FACILITY: Center

RELATED STANDARDS:

Standard 3.1.3.1: Active Opportunities for Physical Activity
Standard 3.1.3.2: Playing Outdoors
Standard 3.1.3.4: Caregivers'/teachers' Encouragement of Physical Activity
Standards 6.2.1.3-6.2.2.2: Play Equipment
Standards 6.2.2.3-6.2.2.5: Location and Clearance for Outdoor Play Equipment
Standard 6.2.3.1: Surfaces for Placing Climbing Equipment

REFERENCES:

1. Olds, A. R. 2001. *Child care design guide*. New York: McGraw-Hill.
2. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpscpub/pubs/325.pdf>.

STANDARD 6.1.0.3: Rooftops as Play Areas

A rooftop used as a play area should be enclosed with a fence from four to six feet high, in accordance with local ordinance, and the bottom edge should be less than three and one-half inches from the base (1). The fence should be designed to prevent children from climbing it. An approved fire escape should lead from the roof to an open space at the ground level that meets the safety standards for outdoor play areas.

RATIONALE: Rooftop spaces used for play must have safeguards to prevent children from falling off (1).

COMMENTS: Caregivers/teachers should check with local jurisdictions on required fence heights. Jurisdictions vary between four- and six-foot fence heights.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standards 5.1.4.1-5.1.4.7: Exits
Standard 6.1.0.8: Enclosures for Outdoor Play Areas

REFERENCES:

1. ASTM International (ASTM). 2009. *Standard guide for fences/barriers for public, commercial, and multi-family residential use outdoor play areas*. ASTM F2049-09b. West Conshohocken, PA: ASTM.

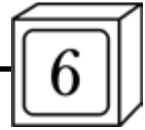
STANDARD 6.1.0.4: Elevated Play Areas

Elevated play areas that have been created using a retaining wall should have a guardrail, protective barrier, or fence running along the top of the retaining wall.

If the exposed side of the retaining wall is higher than two feet, a fence not less than six feet high should be installed. The bottom edge of the fence should be less than three and one-half inches from the base and should be designed to prevent children from climbing it. Fences should be designed so all spaces are less than three and one-half inches (1). If the height of the exposed side of the retaining wall is two feet or lower, a guardrail should be installed if caring for preschool and school-age children. The space between the bottom of the guardrail and the ground should be more than nine inches but less than or equal to twenty-three inches. For school-age children, the space between the bottom of the guardrail and the ground should be more than nine inches but less than or equal to twenty-eight inches. If caring for infants or toddlers, a protective barrier should be installed. The space between the barrier and the ground should be less than three and one-half inches and should be from four to six feet in height.

RATIONALE: Children falling from elevated play areas may suffer fatal head injuries. All spaces in fences or barriers are recommended to be less than three and one-half inches to prevent head entrapment (1,4) and climbing.

Guardrails are designed to protect against falls from elevated surfaces, but do not discourage climbing or protect against climbing through or under. Protective barriers protect against all three and provide greater protection.



Guardrails are not recommended to use for infant and toddlers; protective barriers should be used instead.

COMMENTS: If the exposed side of the retaining wall is less than two feet high, additional safety can be provided by placing shock-absorbing material at the base of the exposed side of the retaining wall. A Certified Playground Safety Inspector (CPSI) can be utilized for guidance in assisting with elevated play areas.

According to the U.S. Consumer Product Safety Commission (CPSC), guardrails are not recommended for use with infants and toddlers because they do not discourage climbing or protect against climbing under or through (1). Protective barriers are recommended for infants and toddlers because they provide better protection and protect against all three risks (1).

For a list of shock-absorbing materials, see Appendix Z, the CPSC *Public Playground Safety Handbook*, and the ASTM International (ASTM) standards “F2223-09: Standard Guide for ASTM Standards on Playground Surfacing” and “F1292-09: Standard Specification for Impact Attenuation of Surfacing Materials within the Use Zone of Playground Equipment” (2,3). To locate a CPSI, check the National Park and Recreation Association (NPR) registry at https://ipv.nrpa.org/CPSI_registry/.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 6.1.0.8: Enclosures for Outdoor Play Areas
Standard 6.2.3.1: Prohibited Surfaces for Placing Climbing Equipment
Appendix Z: Depth of Surface Materials

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>.
2. ASTM International (ASTM). 2009. *Standard guide for ASTM standards on playground surfacing*. ASTM F2223-09. West Conshohocken, PA: ASTM.
3. ASTM International (ASTM). 2009. *Standard specification for impact attenuation of surfacing materials within the use zone of playground equipment*. ASTM F1292-09. West Conshohocken, PA: ASTM.
4. ASTM International (ASTM). 2009. *Standard safety performance specification for fences/barriers for public, commercial, and multi-family residential use outdoor play areas*. ASTM F2049-09b. West Conshohocken, PA: ASTM.

STANDARD 6.1.0.5: Visibility of Outdoor Play Area

The outdoor play area should be arranged so all areas are visible to the staff and easily supervised at all times (1). When a group of children are outdoors, the child care staff member responsible for the group should be able to summon another adult without leaving the group alone or unsupervised.

RATIONALE: This arrangement promotes the prevention of injury and abuse.

COMMENTS: Compliance can be ascertained by inspection. One tool to facilitate communication among caregivers/teachers is a walkie-talkie or cell phone.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>.

STANDARD 6.1.0.6: Location of Play Areas Near Bodies of Water

Outside play areas should be free from the following bodies of water:

- a) Unfenced swimming and wading pools;
- b) Ditches;
- c) Quarries;
- d) Canals;
- e) Excavations;
- f) Fish ponds;
- g) Water retention or detention basins;
- h) Other bodies of water.

RATIONALE: Drowning is one of the leading causes of unintentional death in children one to fourteen years of age (1).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Centers for Disease Control and Prevention. 2008. Water-related injuries. <http://www.cdc.gov/HomeandRecreationalSafety/Water-Safety/>.

STANDARD 6.1.0.7: Shading of Play Area

Children should be provided shade in play areas (not just playgrounds). Shading may be provided by trees, buildings, or shade structures. Metal equipment (especially slides) should be placed in the shade (1,2). Sun exposure should be reduced by timing children’s outdoor play to take place before ten o’clock in the morning or after four o’clock in the afternoon standard time (3).

RATIONALE: The shade will provide comfort and prevent sunburn or burning because the structures or surfacing are hot. Access to sun and shade is beneficial to children while they play outdoors. Light exposure of the skin to sunlight promotes the production of vitamin D that growing children require for bone development and immune system health (8). Additionally, research shows sun may play an important role in alleviating depression. Exposure to sun is needed, but children must be protected from excessive exposure. Individuals who suffer severe childhood sunburns are at increased risk for skin cancer. Practicing sun-safe behavior during childhood is the first step in reducing the chances of getting skin cancer later in life (4). Placing metal equipment (such as slides) in the shade prevents the buildup of heat on play surfaces. Hot play surfaces can cause burns on children (5,7).

COMMENTS: A tent with sides up, awning, or other simple shelter from the sun can be available. Parents/guardians can be encouraged to supply protective clothing and age-appropriate sunscreen with written permission to apply to specified children, as necessary (6).

For more information on appropriate clothing and footwear when playing outdoors, see Standard 9.2.3.1.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 3.1.3.2: Playing Outdoors
 Standard 3.4.5.1: Sun Safety Including Sunscreen
 Standard 5.1.3.2: Appropriate Temperatures for Outdoor Play
 Standard 9.2.3.1: Policies and Practices that Promote Physical Activity

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>.
2. National Program for Playground Safety. Tips for limiting sun exposure. <http://www.playgroundsafety.org/safety/sunexposure.htm>.
3. Healthy Children. 2010. Safety and prevention: Sun safety. American Academy of Pediatrics. <http://www.healthychildren.org/english/safety-prevention/at-play/pages/Sun-Safety.aspx>.
4. U.S. Environmental Protection Agency. 2009. Sunwise kids. <http://www.epa.gov/sunwise/kids/index.html>.
5. Hendricks, C. 2005. Safe fun in the sun. Healthy Childcare Consultants. <http://www.childhealthonline.org/Safe Fun in the Sun Booklet color.pdf>.
6. California Department of Public Health. Skin cancer prevention program. <http://www.cdph.ca.gov/programs/SkinCancer/Documents/Skin-Cancer-Mission.pdf>.
7. Fiene, R. 2002. *13 indicators of quality child care: Research update*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. <http://aspe.hhs.gov/hsp/ccquality-ind02/>.

STANDARD 6.1.0.8: Enclosures for Outdoor Play Areas

The outdoor play area should be enclosed with a fence or natural barriers. Fences and barriers should not prevent the observation of children by caregivers/teachers. If a fence is used, it should conform to applicable local building codes in height and construction. Fence posts should be outside the fence where allowed by local building codes. These areas should have at least two exits, with at least one being remote from the buildings.

Gates should be equipped with self-closing and positive self-latching closure mechanisms. The latch or securing device should be high enough or of a type such that children cannot open it. The openings in the fence and gates should be no larger than three and one-half inches. The fence and gates should be constructed to discourage climbing. Play areas should be secured against inappropriate use when the facility is closed.

Wooden fences and playground structures created out of wood should be tested for chromated copper arsenate

(CCA). Wooden fences and playground structures created out of wood that is found to contain CCA should be sealed with an oil-based outdoor sealant annually.

RATIONALE: This standard helps to ensure proper supervision and protection, prevention of injuries, and control of the area (3). An effective fence is one that prevents a child from getting over, under, or through it and keeps children from leaving the fenced outdoor play area, except when supervising adults are present. Although fences are not childproof, they provide a layer of protection for children who stray from supervision. Small openings in the fence (no larger than three and one-half inches) prevent entrapment and discourage climbing (1,2). Fence posts should be on the outside of the fence to prevent injuries from children running into the posts or climbing on horizontal supports (2).

Fences that prevent the child from obtaining a proper toe hold will discourage climbing. Chain link fences allow for climbing when the links are large enough for a foothold. Children are known to scale fences with diamonds or links that are two inches wide. One-inch diamonds are less of a problem.

CCA is a wood preservative and insecticide that is made up of 22% arsenic, a known carcinogen. In 2004, CCA was phased-out for residential uses; however, older, treated wood is a still a health concern, particularly for children. For more information on CCA-treated wood products, see Standard 5.2.9.12.

COMMENTS: Picket fences with V spaces at the top of the fencing are a potential entrapment hazard.

Some fence designs have horizontal supports on the side of the fence that is outside the play area which may allow intruders to climb over the fence. Facilities should consider selecting a fence design that prevents the ability to climb on either side of the fence.

For additional information on fencing, consult the ASTM International "Standard F2049-09b: Standard Guide for Fences/Barriers for Public, Commercial, and Multi-family Residential use Outdoor Play Areas" (2).

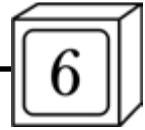
TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 5.2.9.12: Treatment of CCA Pressure-Treated Wood

REFERENCES:

1. U.S. Consumer Product Safety Commission (CPSC). 2008. *Public playground safety handbook*. Bethesda, MD: CPSC. <http://www.cpsc.gov/cpsc/pub/pubs/325.pdf>.
2. ASTM International (ASTM). 2009. *Standard guide for fences/barriers for public, commercial, and multi-family residential use outdoor play areas*. ASTM F2049-09b. West Conshohocken, PA: ASTM.
3. Fiene, R. 2002. *13 indicators of quality child care: Research update*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. <http://aspe.hhs.gov/hsp/ccquality-ind02/>.



- g) Valid pediatric CPR and first aid certificate if transporting children alone.

The driver's license number and date of expiration, vehicle insurance information, and verification of current state vehicle inspection should be on file in the facility.

The child care program should require drug testing when noncompliance with the restriction on the use of alcohol or other drugs is suspected.

RATIONALE: Driving children is a significant responsibility. Child care programs must assure that anyone who drives the children is competent to drive the vehicle being driven.

Patients treated with benzodiazepines, GABAergic compounds, or tricyclic antidepressants (TCAs) should be cautioned when driving a car. Studies have shown significant impairment after administration of these medications. Driving a car when treated with buspirone, venlafaxine, 5HT-antagonists, and SSRIs seems relatively safe (1).

COMMENTS: The driver should advise his/her primary care provider of his/her job and question whether it is safe to drive children while on medication(s) prescribed. Compliance can be measured by testing blood or urine levels for drugs. Refusal to permit such testing should preclude continued employment.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 6.5.2.5: Distractions While Driving
Standards 9.2.5.1-9.2.5.2: Transportation Policies

REFERENCES:

1. Verster, J. C., D. S. Veldhuijzen, E. R. Volkerts. 2005. Is it safe to drive a car when treated with anxiolytics? Evidence from on the road driving studies during normal traffic. *Current Psychiatry Reviews* 1:215-25.

6.5.2 Transportation Safety

STANDARD 6.5.2.1: Drop-Off and Pick-Up

The facility should have, and communicate to staff and parents/guardians, a plan for safe, supervised drop-off and pick-up points and pedestrian crosswalks in the vicinity of the facility. The plan should require drop off and pick up only at the curb or at an off-street location protected from traffic. The facility should assure that any adult who supervises drop-off and loading can see and assure that children are clear of the perimeter of all vehicles before any vehicle moves. The staff will keep an accurate attendance and time record of all children picked up and dropped off. The facility should assure that a staff member or adult parent/guardian is observing the process of dropping off and picking up children. The adult who is supervising the child should be required to stay with each child until the responsibility for that child has been accepted by the individual designated in advance to care for that child.

RATIONALE: Injuries and fatalities have occurred during the loading and unloading process, especially in situations

where vans or school buses are used to transport children. Increased supervision and interactions between adults and children promotes safety and helps children learn to be aware of their surroundings.

COMMENTS: The staff should examine the parking area and determine the safest way to drop off and pick up children (1). Plans for loading and unloading should be discussed and demonstrated with the children, families, caregivers/teachers, and drivers.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. U.S. General Services Administration (GSA). 2003. *The child care center design guide*. New York: GSA. <http://www.gsa.gov/graphics/pbs/designguidesmall.pdf>.

STANDARD 6.5.2.2: Child Passenger Safety

When children are driven in a motor vehicle other than a bus, school bus, or a bus operated by a common carrier, the following should apply:

- a) A child should be transported only if the child is restrained in developmentally appropriate car safety seat, booster seat, seat belt, or harness that is suited to the child's weight, age, and/or psychological development in accordance with state and federal laws and regulations and the child is securely fastened, according to the manufacturer's instructions, in a developmentally appropriate child restraint system.
- b) Age and size-appropriate vehicle child restraint systems should be used for children under eighty pounds and under four-feet-nine-inches tall and for all children considered too small, in accordance with state and federal laws and regulations, to fit properly in a vehicle safety belt. The child passenger restraint system must meet the federal motor vehicle safety standards contained in the Code of Federal Regulations, Title 49, Section 571.213 (especially Federal Motor Vehicle Safety Standard 213), and carry notice of such compliance.
- c) For children who are obese or overweight, it is important to find a car safety seat that fits the child properly. Caregivers/teachers should not use a car safety seat if the child weighs more than the seat's weight limit or is taller than the height limit. Caregivers/teachers should check the labels on the seat or manufacturer's instructions if they are unsure of the limits. Manufacturer's instructions that include these specifications can also be found on the manufacturer's Website.
- d) Child passenger restraint systems should be installed and used in accordance with the manufacturer's instructions and should be secured in back seats only.
- e) All children under the age of thirteen should be transported in the back seat of a car and each child not riding in an appropriate child restraint system (i.e.,

a child seat, vest, or booster seat), should have an individual lap-and-shoulder seat belt (2).

- f) For maximum safety, infants and toddlers should ride in a rear-facing orientation (i.e., facing the back of the car) until they are two years of age or until they have reached the upper limits for weight or height for the rear-facing seat, according to the manufacturer's instructions (1). Once their seat is adjusted to face forward, the child passenger must ride in a forward-facing child safety seat (either a convertible seat or a combination seat) until reaching the upper height or weight limit of the seat, in accordance with the manufacturer's instructions (10). Plans should include limiting transportation times for young infants to minimize the time that infants are sedentary in one place.
- g) A booster seat should be used when, according to the manufacturer's instructions, the child has outgrown a forward-facing child safety seat, but is still too small to safely use the vehicle seat belts (for most children this will be between four feet nine inches tall and between eight and twelve years of age) (1).
- h) Car safety seats, whether provided by the child's parents/guardians or the child care program, should be labeled with the child passenger's name and emergency contact information.
- i) Car safety seats should be replaced if they have been recalled, are past the manufacturer's "date of use" expiration date, or have been involved in a crash that meets the U.S. Department of Transportation crash severity criteria or the manufacturer's criteria for replacement of seats after a crash (3,11).
- j) The temperature of all metal parts of vehicle child restraint systems should be checked before use to prevent burns to child passengers.

If the child care program uses a vehicle that meets the definition of a school bus and the school bus has safety restraints, the following should apply:

- a) The school bus should accommodate the placement of wheelchairs with four tie-downs affixed according to the manufacturers' instructions in a forward-facing direction;
- b) The wheelchair occupant should be secured by a three-point tie restraint during transport;
- c) At all times, school buses should be ready to transport children who must ride in wheelchairs;
- d) Manufacturers' specifications should be followed to assure that safety requirements are met.

RATIONALE: According to the National Center for Health Statistics, motor vehicle crashes are the leading cause of death among children ages three to fourteen in the United States (4). Safety restraints are effective in reducing death and injury when they are used properly. The best car safety seat is one that fits in the vehicle being used, fits the child being transported, has never been in a crash, and is used correctly every time. The use of restraint devices while riding in a vehicle reduces the likelihood of any passenger

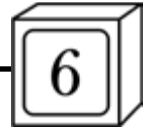
suffering serious injury or death if the vehicle is involved in a crash. The use of child safety seats reduces risk of death by 71% for children less than one year of age and by 54% for children ages one to four (4). In addition, booster seats reduce the risk of injury in a crash by 45%, compared to the use of an adult seat belt alone (5).

The safest place for all infants and children under thirteen years of age is to ride in the back seat. Head-on crashes cause the greatest number of serious injuries. A child sitting in the back seat is farthest away from the impact and less likely to be injured or killed. Additionally, new cars, trucks and vans have had air bags in the front seats for many years. Air bags inflate at speeds up to 200 mph and can injure small children who may be sitting too close to the air bag or who are positioned incorrectly in the seat. If the infant is riding in the front seat, a rapidly inflating air bag can hit the back of a rear-facing infant seat behind a baby's head and cause severe injury or death. For this reason, a rear-facing infant must NEVER be placed in the front seat of a vehicle with active passenger air bags.

Infants under one year of age have less rigid bones in the neck. If an infant is placed in a child safety seat facing forward, a collision could snap the infant's head forward, causing neck and spinal cord injuries. If an infant is placed in a child safety seat facing the rear of the car, the force of a collision is absorbed by the child restraint and spread across the infant's entire body. The rigidity of the bones in the neck, in combination with the strength of connecting ligaments, determines whether the spinal cord will remain intact in the vertebral column. Based on physiologic measures, immature and incompletely ossified bones will separate more easily than more mature vertebrae, leaving the spinal cord as the last link between the head and the torso (6). After twelve months of age, more moderate consequences seem to occur than before twelve months of age (7). However, rear-facing positioning that spreads deceleration forces over the largest possible area is an advantage at any age. Newborns seated in seat restraints or in car beds have been observed to have lower oxygen levels than when placed in cribs, as observed over a period of 120 minutes in each position (8).

As of March 1, 2010, all but three states required booster seat use for children up to as high as nine years of age. Child passenger restraints are recommended increasingly for older children. State child restraint requirements are listed by state at: <http://www.ihs.org/laws/ChildRestraint.aspx>. Booster seats are recommended for use only with both lap and shoulder belts; NEVER install a booster seat with the lap belt only. When the vehicle safety belts fit properly, the lap belt lies low and tightly across the child's upper thighs (not the abdomen) and the shoulder belt lies flat across the chest and shoulder, away from the neck and face.

COMMENTS: A Child Passenger Safety Technician may be able to help find a car safety seat that fits a larger child. Car safety seat manufacturers increasingly are making car safety seats that fit larger children. To locate a Child Passenger Safety Technician see <https://ssl13.cyzap.net/dzapps/dbzap.bin/apps/assess/webmembers/tool?pToolCode=TAB>



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RTSQL. See <http://www.healthychildren.org/English/safety-prevention/on-the-go/pages/Car-Safety-Seats-Product-Listing-2010.aspx> for a list of available car safety seats. For toddlers or young children whose behavior will not yet allow safe use of a booster seat but who are too large for a forward-facing seat with a harness, caregivers/teachers can consider using a travel vest (9).

When school buses meet current standards for the transport of school-age children, containment design features help protect children from injury, although the use of seat belts would provide additional protection. The U.S. Department of Transportation and U.S. Federal Motor Vehicle Safety standards for school buses apply only to vehicles equipped with factory-installed seat belts after 1967. To obtain the Federal Regulations, contact the Superintendent of Documents at the Government Printing Office.

Written transportation policy that is communicated to parents/guardians, staff, and all who transport children can help assure understanding of requirements/recommendations for child passenger safety as well as decisions about the value/necessity of the trip.

Car seat manufacturer's the National Highway Traffic Safety Administration (NHTSA) guidance on car seat replacement after a crash is available at <http://www.nhtsa.gov/people/injury/childps/ChildRestraints/ReUse/index.htm>.

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

RELATED STANDARDS:

Standard 2.2.0.2: Limiting Infant/Toddler Time in Crib, High Chair, Car Seat, Etc.

Standard 6.5.3.1: Passenger Vans

Standards 9.2.5.1-9.2.5.2: Transportation Policies

REFERENCES:

1. Durbin, D. R., American Academy of Pediatrics, Committee on Injury, Violence, and Poison Prevention. 2011. Policy statement: Child passenger safety. *Pediatrics* 127:788-93.
2. National Highway Traffic Safety Administration. Questions and answers about air bag safety. Safe and Sober Campaign. <http://www.nhtsa.gov/people/outreach/safesobr/12qp/airbag.html>.
3. National Highway Traffic Safety Administration. Child restraint re-use after minor crashes. <http://www.nhtsa.dot.gov/people/injury/childps/ChildRestraints/ReUse/index.htm>.
4. National Highway Traffic Safety Administration's National Center for Statistics and Analysis 2008. *Traffic safety facts, 2008, Children*. <http://www-nrd.nhtsa.dot.gov/Pubs/811157.PDF>.
5. Arbogast, K. B., J. S. Jermakian, M. J. Kallan, D. R. Durbin. 2009. Effectiveness of belt positioning booster seats: An updated assessment. *Pediatrics* 124:1281-86
6. Huelke, D. F., G. M. Mackay, A. Morris, M. Bradford. 1993. *Car crashes and non-head impact cervical spine injuries in infants and children*. Warrendale, PA: Society of Automotive Engineers.
7. Weber, K., D. Dalmotas, B. Hendrick. 1993. *Investigation of dummy response and restraint configuration factors associated with upper spinal cord injury in a forward-facing child restraint*. Warrendale, PA: Society of Automotive Engineers.
8. Cerar, L. K., C. V. Scirica, I. S. Gantar, D. Osredkar, D. Neubauer, T. B. Kinane. 2009. A comparison of respiratory patterns in healthy

term infants placed in car safety seats and beds. *Pediatrics* 124: e396-e402.

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10. American Academy of Pediatrics. 2010. Car safety seats: Information for families for 2010. <http://www.healthychildren.org/english/safety-prevention/on-the-go/pages/car-safety-seats-information-for-families-2010.aspx>.

11. Child Restraint Safety. Manufacture and expiration. <http://www.childrestraintsafety.com/manufacture-expiration.html>.

STANDARD 6.5.2.3: Child Behavior During Transportation

Children, as both passengers and pedestrians, should be instructed in safe transportation behavior using terms and concepts appropriate for their age and stage of development.

RATIONALE: Teaching passenger safety to children reduces injury from motor vehicle crashes to young children (2).

Young children need to develop skills that will aid them in assuming responsibility for their own health and safety, and these skills can be developed through health and safety education implemented during the early years (1,3). Supervision of children will help to reinforce appropriate behaviors.

COMMENTS: Examples of safe behavior training include wearing seat belts and staying in position. Curricula and materials can be obtained from state departments of transportation, the American Automobile Association (AAA), the American Academy of Pediatrics (AAP), the American Red Cross, and the National Association for the Education of Young Children (NAEYC).

TYPE OF FACILITY: Center; Large Family Child Care Home; Small Family Child Care Home

REFERENCES:

1. Lehman, G. R., E. S. Geller. 1990. Participative education for children: An effective approach to increase safety belt use. *J Appl Behav Anal* 23:219-25.
2. Windome, M. D., ed. 1997. *Injury prevention and control for children and youth*. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics.
3. Kane, W. M., K. E. Herrera. 1993. *Safety is no accident: Children's activities in injury prevention*. Santa Cruz, CA: ETR Associates.

STANDARD 6.5.2.4: Interior Temperature of Vehicles

The interior of vehicles used to transport children should be maintained at a temperature comfortable to children. When the vehicle's interior temperature exceeds 82°F and providing fresh air through open windows cannot reduce the temperature, the vehicle should be air-conditioned. When the interior temperature drops below 65°F and when children are feeling uncomfortably cold, the interior should be heated. To prevent hyperthermia, all vehicles should be locked when not in use, head counts of children should be taken after transporting to prevent a child from being left unintentionally in a vehicle, and children should never be intentionally left in a vehicle unattended.