

General Notes

These notes apply to all drawings unless otherwise shown or noted. All dimensions shall be verified by the Contractors before starting construction. Details and dimensions of existing construction shall be verified at the site by the contractor. Features of construction shown are typical, and they shall apply generally for all similar conditions. Soils report for this project was prepared by:

Contractor shall make himself familiar with the Soil Report and satisfy all requirements and follow all recommendations stated therein.

Definitions

Engineer - ALLIED ENGINEERS, INC. designated representative.

Design Criteria

Applicable Code	1987 UBC
For precast concrete, see Sheet No.	
Cast-in-place concrete	F'c=4,000 psi @ 28 days
Reinforcing, grade 60-ASTM-A615	Fy=60,000 psi
Welded wire fabric (WWF) ASTM-A185	Fy=70,000 psi
Soil bearing pressure	F Soil
Concrete unit weight	150 pcf
Wind load less than 30'	13.52 psf of projected area
Deck live load	50 psf
Roof live load	16 psf
Seismic load	Zone 4

Concrete Notes

- Cast-in-place concrete
1. Applicable Specifications
 - a) 1987 UBC requirements for reinforced concrete.
 2. Materials
 - a) Portland cement: Shall conform to ASTM designations C150 for Type II cement, use single approved standard brand throughout work.
 - b) Concrete aggregates: Shall conform to ASTM designation C33 for hardrock concrete.
 - c) Water: Shall be clean and free from deleterious amounts of acid, alkalis or organic materials.
 - d) Curing compounds: Shall conform to the requirements of ASTM C309.
 - e) Non-shrink grout: Shall be pre-mixed, high strength, flowable grout which does not shrink as it cures.
 - f) Reinforcing Steel Bars: Shall conform to ASTM A615 Grade 60.
 - g) Welded wire fabric: Shall conform to ASTM A497.
 - h) Bar Support: Shall conform to CRSI Manual of Standard Practice and shall be Class A.
 - i) Ties: Shall be of black annealed wire, gauge 16 or heavier.
 3. Mix Design
 - a) Proportioning of ingredients shall conform to ACI 211, subject to the following:
 - b) Maximum water-cement ratio to be 0.45.
 - c) Minimum cement contents as follows:

Course Aggregate No.	lb per cu ft
467 (1-1/2 in. maximum)	517
57 (1 in. maximum) or 57 (3/4 in. maximum)	564
 - d) Air content
 - a) Air content (as determined in accordance with ASTM C231 or C173 shall be:
 - 5- 1 percent for coarse aggregate size No. 467.
 - 6- 1 percent for coarse aggregate size No. 57 or No. 67.
 - e) Slump
 - a) Slump (as determined in accordance with ASTM C231 or C173) shall be:
 - 1 in. minimum.
 - 3 in. maximum for footings, caissons, substructure walls.
 - 4 in. maximum for slabs, beams reinforced walls, columns.
 4. Workmanship
 - a) Formwork
 - 1) Construction of forms

The forms shall be smooth, mortar-tight, true to the required lines and grade, and of sufficient strength to resist springing out of shape during the placing and vibrating of concrete. All dirt, chips, sawdust, and other foreign matter shall be completely removed before concrete is placed. Forms temporarily used shall be thoroughly cleaned of all dirt, mortar, and foreign matter before being used. Before concrete or rebar is placed in forms, all inside surfaces of the forms shall be thoroughly coated with an approved form sealer. The form sealer shall be of high penetrating quality leaving no film on the surface of the forms that can be absorbed by the concrete or be incompatible with concrete paint.
 - 2) Stripping of forms
 - a) Forms shall be removed in such manner as to insure the complete safety of the structure.
 - b) Formwork for beam soffits and slabs and other parts that support the weight of concrete, shall remain in place until the concrete has reached its specified 28-day strength, with a minimum of 14 days elapsed before form removal.
 - b) Reinforcing Steel
 - 1) Fabrication: Shall be in accordance with the details shown on drawings. Details and fabrication of reinforcing steel not specifically shown shall be similar to details shown on drawings.
 - 2) Bending of all reinforcing bars shall conform to typical bend details on the drawings and shall be accomplished without heating of the bars and by method which does not injure the reinforcement. No field bending will be permitted without engineers permission.
 - 3) Steel reinforcement shall be accurately placed and shall be supported and secured against displacement by the use of adequate and proper supporting and spacing devices, tie wires, etc., so that it will remain in its correct location in the finished work. No supporting devices shall be used that will impede the flow of concrete.
 - 4) Where not shown otherwise on the plans, the minimum concrete coverage for steel reinforcement shall be as follows:

Where concrete is deposited against ground 3".

Concrete in forms exposed to earth 1-1/2".

The clear spacing between parallel bars shall not be less than 1-1/2 times the nominal diameter of the maximum size aggregate, and in no case less than 1-1/2 inches, except at splices which may be wired together.
 - Concrete
 - 1) All cement used in preparation of concrete shall be Type II ASTM C150 Specifications. All concrete shall have minimum 28

- day compressive strength of: 4,000 psi.
- 2) All concrete shall be placed, finished and cured, and all other pertinent construction practices shall be in accordance with the Specifications for Structural Concrete for Buildings (ACI-301-72), hereby made a part of these specifications.
 - 3) In addition to the requirements of ACI 301-72, the following shall maintain: Concrete shall be placed so that:
 - a) A uniform appearance of surfaces will be obtained.
 - b) The concrete will be free of all rock pockets, honeycombs and voids.
 - c) Deposit as nearly as practical in its final position.
 - d) Deposit in walls in approximately 18 inch layers, proceeding at a uniform rate.
 - 4) Do not deposit or place concrete until all forms, reinforcing steel, embedded materials and construction joints have been inspected by the engineer and accepted in advance within the entire extent of the pour.
 - 5) The subgrade must be moist when the concrete is placed for floor slabs to prevent excessive loss of water from the concrete mix.
 - 6) Employ as many vibrators and tampers as necessary to insure the desired results. Minimum: One per each 20 cubic yards of concrete placed per hour. Vibrators shall function a minimum frequency of 3600 cycles per minute when submerged in concrete. Supplement by forking and spading along the surfaces of the forms and between reinforcing whenever flow is restricted.
 - 7) Eliminate the following practices:
 - a) Pushing of concrete with vibrator.
 - b) External vibration of forms.
 - c) Allowing vibrator to vibrate against reinforcing steel where steel projects into green concrete.
 - d) Allowing vibrator to vibrate contact faces on forms.
 - 8) Slab Finishing Tolerance Class A 1/8" in 10'.
 - a) Curing
 - 1) General: Freshly deposited concrete shall be protected from premature drying and excessively hot or cold temperatures and shall be maintained with minimal moisture loss at a relatively constant temperature for the period of time necessary for the hydration of the cement and proper hardening of the concrete.
 - 2) Initial curing: Initial curing shall immediately follow the finishing operation. Concrete shall be kept continuously moist at least overnight. One of the following materials or methods shall be used:
 - Ponding or continuous sprinkling.
 - Absorbent mat or fabric kept continuously wet.
 - Waterproof paper conform to ASTM C171.
 - Curing compounds conforming to "Specifications for Liquid Membrane Forming Compounds for Curing Concrete" ASTM C309. Such compounds shall be applied in accordance with the recommendations of the manufacturer and shall not be used on any surfaces against which additional concrete or other cementitious finishing materials are to be bonded, nor on surfaces on which curing is prohibited by the project specifications.
 - 3) Final Curing: Immediately following the initial curing and before the concrete has dried, additional curing shall be accomplished by one of the following methods:
 - Continuing the method used in initial curing.
 - Waterproof paper conforming to Specifications for Waterproof Paper for Curing Concrete (ASTM C171).
 - 4) Duration of Curing: The final curing shall continue until the cumulative number of days or fractions thereof, not necessarily consecutive during which temperature of the air in contact with the concrete is above 50F, has totaled 7 days. If high-early strength concrete has been used, the final curing shall continue for a total of 3 days. Rapid drying at the end of the curing period shall be prevented.
 - 5) Form surfaces: Steel forms heated by the sun and all wood forms in contact with the concrete during the final curing period shall be kept wet. If forms are to be removed during the curing period, one of the above curing materials or methods shall be employed immediately. Such curing shall be continued for the remainder of the curing period.
 - e) Construction Joints
 - 1) Joints not shown on the drawing shall be so made and located as to least impair the strength of the structural element and shall be approved by the Engineers. Concrete for foundation between construction joints shall be placed in one continuous operation.
 - 2) The surfaces of all concrete at all joints shall be thoroughly cleaned and all laitance removed by sand blasting. In preparation for the next pour, the joints shall be dampened, thoroughly, without leaving standing water.
 - f) Imbedded Items
 - 1) All sleeves, inserts, anchors, and imbedded items required for adjoining work or for its support shall be placed prior to concreting. Imbedded items shall be positioned accurately and supported against displacement. Voids in sleeves, inserts and anchor bolt slots shall be filled temporarily with a readily removable material to prevent entry of concrete into the voids.
 - 2) All anchor bolts, nuts and washers in Aerobic Reactors and Chlorine contact shall be stainless steel.
 - g) Grouting Column Bases
 - 1) The grout shall be mixed and placed in strict accordance with manufacturer's instructions.
 - 2) Care shall be taken in the grouting to insure that there are no voids or air pockets, and that there is full bearing between the base plates and the grout.
 - h) Patching
 - 1) Within 3 (three) days after stripping formwork, all surface defects such as rock pockets, honeycombs, foreign materials, cracks and form tie holes shall be filled and patched as required by the Engineer.
 - 2) Areas to be patched shall have all loose material removed and shall be thoroughly wetted for at least 6 inches entirely surrounding the patch. Patching shall be prepared which shall consist of 1 part cement and 3 parts sand. Water in the mix shall be kept to a minimum. Grout shall not be retempered by adding water. Grout shall be compacted thoroughly into place using hammer with flat ended tool or other method approved by the Engineer and screeded to match adjacent surfaces in texture and pattern.
 - 3) Form tie hole shall be filled solidly with grout. For holes passing entirely through walls, a plunger type "grease gun" other suitable device shall be used to completely grout fill holes.

- 1) Concrete Testing

All concrete must meet the called out requirements for a minimum 28 day compressive strength.

All concrete cylinders will be molded and tested for strength by a representative of the owner. Four cylinders for each test set shall be molded. Two shall be tested at seven (7) days and two at twenty-eight (28) days. The contractor will furnish all concrete required for molding of the cylinders and in cases where cylinders are stored at the site, place shall be provided for their protection.
 - 2) Defective Concrete

All defective concrete shall be subject to removal and replacement by the contractor at his expense.
- Carpentry Notes**
- 1) Applicable Specifications
 - a) 1987 UBC
 - 2) Materials
 - a) Framing Lumber

Studs	No. 1 D.F.
Rafters	No. 2 D.F.
Columns	No. 1 D.F.
Headers	No. 1 D.F.
Joist	No. 1 D.F.
Blocking	No. 2 D.F.
Beams	No. 1 D.F.
 - b) Plywood

Structural I EXT-APA (appearance as required)
 - c) Wood Sills

No. 1 D.F. Pressure treated in conformance with AWPB CP-2.
 - d) Building Paper

15 lb/100 S.F. Asphalt Saturated in conformance with ASTM 0226.
 - e) Hardware

Bolts and Nuts	ASTM A-307 galvanized
Lag Bolts	FF-B-56 galvanized
Washers	Malleable iron-galvanized
Nails	FF-N-105 common galvanized
Connectors	KC "Superspeed" Simpson "Strong Tie" - galvanized or epoxy coated. Subject to prior approval of the Engineer.
 - 3) Workmanship
 - a) Sills

Sills shall be minimum 3" thick @ structural plywood sheathed nailed and 2" thick elsewhere. Sills shall be anchored with minimum 5/8 x 9" bolts spaced not over 48" o/c. There shall be minimum of 2 bolts in each stick with a bolt within 9" of each end of each stick and 9" from each side of posts 6 x 8 and larger. Sill bolts shall be placed such that they will not interfere with the full bearing of studs, post, rafters and beams. There shall be no sill splice under any post of mullion. Where notches for pipes etc. exceed 1/3 the width of the sill, place a bolt within 9" of each side of notch. Bolted sills shall be bedded in 1:2 cement mortar 1/2" thick. Do not drypack after sill is in place.
 - b) Blocking and Bridging

Provide as follows:

2" solid blocking between joist and rafters over supports. 2x3 (min) cross bridging between joists and rafters, not over 8'0" nor more than 8'0" from support.

Solid 2" full depth blocking @ plywood joint may be used in lieu of cross bridging. Horizontal solid blocking @ plywood joint shall be placed @ mid-height of studs or so spaced that unbraced length of stud shall not exceed 8'0".
 - c) General

Where joists or studs parallel concrete, fasten with min. 5/8" x 8" bolts @ not over 32" o/c unless otherwise shown. Double top plates of exterior walls shall not be cut to lap the top plates of intersecting walls, except @ exterior wall corners or as shown on the drawings. Lag screws shall be screwed (not driven) into place. Drill holes same diameter and depth as shank, then drill holes same diameter as @ base of thread for the threaded portion. Use plate washer as required for same size bolt. Machine bolts shall have a shank diameter within 1/64" of that specified. Bolt holes in wood shall be 1/32" oversize. Provide stud cut washers under head end and nut where bearing against wood; cut washers under nut where bearing is against steel. Washers will not be required under head of carriage bolts. Length of thread shall be such that not more than 1/2" of thread bears against wood. All nuts shall be tightened when placed and retightened at completion of the job or immediately before closing with finish construction. Bolt holes in wood members, including glulam shall be drilled on the job site. Where steel side plates are used for connection, the plate shall be used as a template.
 - d) Plywood

All plywood sheathing structurally shall extend continuously behind all chalk, tack boards and other finish. When it is to be plastered, plywood shall be protected by an unbroken layer of moisture tight paper.

Plywood joints shall be backed by a single common member. The edge of the plywood sheet shall lap minimum of 3/4" with the backing member. In general, sheets shall be 4'x8'. Use 1987 UBC recommendations for plywood sheets layout at shear walls and roof diaphragms. All horizontal joints shall be backed with 2" solid blocking between studs. Joint backing between rafters shall be 2x4 minimum vertical blocking flush with top of rafter.
 - e) Minimum Permissible Nailing

(Unless shown otherwise on the drawings)

Where nails tend to split wood, nail holes shall be subdrilled.

CONNECTION	NAILING
1. Joist to sill or girder, toenail	3-8d
2. Bridging to joist, toenail each end	2-8d
3. 1"x6" subfloor or less to each joist, face nail	2-8d
4. Wider than 1"x6" subfloor to each joist, face nail	3-8d
5. 2" subfloor to joist or girder, blind and face nail	2-16d
6. Sole plate to joist or blocking, face nail	16d @ 16" o/c
7. Top plate to stud, end nail	2-16d
8. Stud in sole plate	4-8d, toenail or 2-16d, end nail
9. Doubled studs, face nail	16d @ 24" O/c
10. Double top plates, face nail	16d @ 16" o/c
11. Top plates, laps and intersections, face nail	2-16d
12. Continuous header, two pieces	16d @ 16" o/c along each edge
13. Ceiling joists to plate, toenail	3-8d
14. Continuous header to stud, toenail	4-8d
15. Ceiling joists, laps over partitions, face nail	3-16d
16. Ceiling joists to parallel rafters, face nail	3-16d
17. Rafter to plate, toenail	3-8d

18. 1" brace to each stud and plate face nail
 19. 1"x8" sheathing or less to each bearing face nail
 20. Wider than 1"x8" sheathing to each bearing face nail
 21. Built-up corner studs
 - 16d @ 24" o/c
 - 20d @ 32" o/c at top and bottom and staggered
 - 2-20d @ ends and at each splice
 - 2-16d @ each bearing
 23. 2" planks
 24. Particleboard:5
 - Wall Sheathing (to framing)
 - 3/8"-1/2"
 - 5/8"-3/4"
 25. Plywood:5
 - Subfloor, roof and wall sheathing (to framing)
 - 1/2" and less
 - 5/8"-3/4"
 - 7/8"-1"
 - 1 1/8"-1 1/4"
 - Combination Subfloor-underlayment (to framing):
 - 3/4" and less
 - 7/8"-1"
 - 1 1/8"-1 1/4"
 26. Panel Siding (to framing)
 - 1/2" or less
 - 5/8"
 27. Fiberboard Sheathing:7
 - 1/2"
- | | |
|-------------|-------------|
| 6d3 | 6d3 |
| 8d3 | 8d3 |
| 10d3 or 8d4 | 10d3 or 8d4 |
| 6d4 | 6d4 |
| 8d4 | 8d4 |
| 10d3 or 8d4 | 10d3 or 8d4 |
| 6d6 | 6d6 |
| 8d6 | 8d6 |
| No. 11 ga.8 | No. 11 ga.8 |
| 6d3 | 6d3 |
| No. 16 ga.9 | No. 16 ga.9 |
| 8d3 | 8d3 |
| no. 16 ga.9 | no. 16 ga.9 |
1. Common or box nails may be used except where otherwise stated.
 2. Common or deformed shank.
 3. Common.
 4. Deformed shank.
 5. Nails spaced at 6 inches on center at edges. 12 inches at intermediate supports (10 inches at intermediate supports for floors), except 6 inches at all supports where spans are 48 inches or more. For nailing of plywood diaphragms and shear walls refer to Section 2514(c). Nails for wall sheathing may be common, box or casing.
 6. Corrosion resistant siding and casing nails.
 7. Fasteners spaced 3 inches on center at exterior edges and 6 incenter at intermediate supports.
 8. Galvanized roofing nails with 7/16 inch diameter head and 1 1/2 inch length for 1/2 inch sheathing and 1 3/4 inch for 25/32 inch sheathing.
 9. Galvanized staple with 7/16 inch crown and 1 1/8 inch length for 1/2 inch sheathing and 1 1/2 inch length for 25/32 inch sheathing.

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.



WALLACE LAKE ESTATES CONSTRUCTION NOTES

SCALE	NONE	D	
DRAWN	RLK	W	
CHECKED		G	
APPROVED		NO.	
		DATE	12/11/87
		JOB NO.	07070

G-02 OF

PROCESS DESIGN CRITERIA

INFLUENT CHARACTERISTICS

FLOWRATE—AVERAGE DAILY FLOW (gpd)	40,000
BOD5 (mg/l)	125
BOD LOADING (lbs/day)	41.7
SS (mg/l)	100

FLOW EQUALIZATION

CAPACITY (gal)	16,500
DIMENSIONS (ft)	21.67'X12'X8.5'
PUMPS	
TYPE	Submersible
NUMBER	2
CAPACITY	36 @ 20' TDH
BLOWER	
TYPE	Positive Displacement
NUMBER	1
CAPACITY (cfm)	30 @ 6 psi

AEROBIC TOWERS (PARALLEL FIRST STAGE)

MEDIA	
TYPE	Crossflow
QUANTITY (cu ft)	1,400
SURFACE AREA (sq ft/cu ft)	42

AEROBIC REACTORS

STAGES	3
DIMENSIONS (ft)	7'-6" Dia. X 8' High
RECIRCULATION RATIO	
1st STAGE TOWERS (2)	4.5
2nd, 3rd STAGE TOWERS	2.25
HYDRAULIC LOADING (gpm/sq ft)	1.4

PUMPS

TYPE	Centrifugal
NUMBER	4
CAPACITY (gpm)	62 @ 28' TDH

SECONDARY CLARIFICATION

TANKS	
NUMBER	3
CAPACITY (gal)	4,200
SURFACE AREA (sq ft)	68
OVERFLOW RATE (gpd/sq ft)	588
DIMENSIONS (ft)	4'X17'X8.25'

SLUDGE REMOVAL

TYPE	Suction
PUMPS	Airlift

CHEMICAL FEED SYSTEMS

ALUM	
MAXIMUM CONCENTRATION (mg/l)	10
FEED RATE (gpd)	6
PUMP TYPE	
PUMP TYPE	Positive Displacement

FILTRATION

FILTERS	
TYPE	Pressure
NUMBER	2
FILTRATION RATE (gpm/sq ft)	5
TOTAL FILTER SURFACE AREA (sq ft)	14
BACKWASH RATE (gpm/sq ft)	15
FILTER DIAMETER (ft)	3
FILTER FEED PUMPS	
TYPE	Turbine
NUMBER	2
CAPACITY (gpm)	35 @ 180' TDH
BACKWASH FLOW REGULATOR	
TYPE	Variable Orifice
NUMBER	1
CAPACITY (gpm)	106

DISINFECTION

SODIUM HYPOCHLORITE ADDITION	
MAX. CHLORINE CONCENTRATION (mg/l)	15
FEED RATE (gpd)	8
MIXER	Inline, Static
DETENTION TIME (min)	120
STORAGE TANK CAPACITY (gal)	500

FLOW MEASUREMENT

TYPE	Paddlewheel
NUMBER	1

SLUDGE STORAGE

SLUDGE GENERATION	
RATE (lbs sludge/lbs BOD)	0.6
QUANTITY (lbs/day-dry)	23
SLUDGE STORAGE	
CAPACITY (gal)	5,500
DIMENSIONS (ft)	4'X21.67'X8.25'

AUXILIARY POWER

POWER RATING (KW)	30
FUEL SOURCE	Propane
TRANSFER SWITCH	Automatic
COOLANT	Water

EFFLUENT QUALITY

BOD5 (mg/l)	10
SS (mg/l)	10
COLIFORM (MPN/100ml)	<2.2

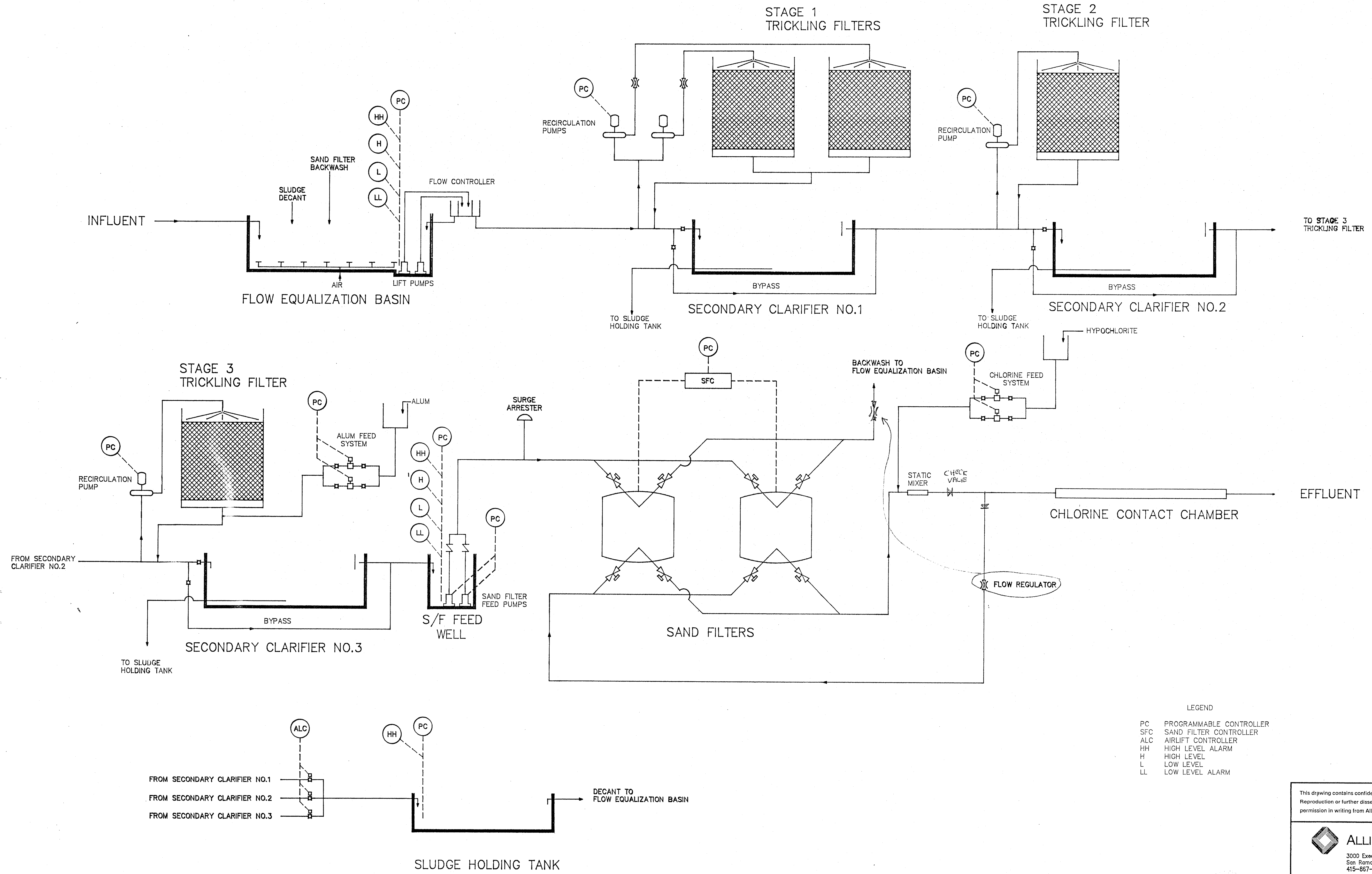
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

 **ALLIED ENGINEERS, INC.**
 3000 Executive Parkway, Suite 112
 San Ramon, California 94583
 415-867-4646

WALLACE LAKE ESTATES

DESIGN CRITERIA

SCALE	NONE	DWG		
DRAWN	RED	NO.	G-03	OF
CHECKED				
APPROVED	DATE	12/24/87	JOB NO.	07070



- LEGEND
- PC PROGRAMMABLE CONTROLLER
 - SFC SAND FILTER CONTROLLER
 - ALC AIRLIFT CONTROLLER
 - HH HIGH LEVEL ALARM
 - H HIGH LEVEL
 - L LOW LEVEL
 - LL LOW LEVEL ALARM

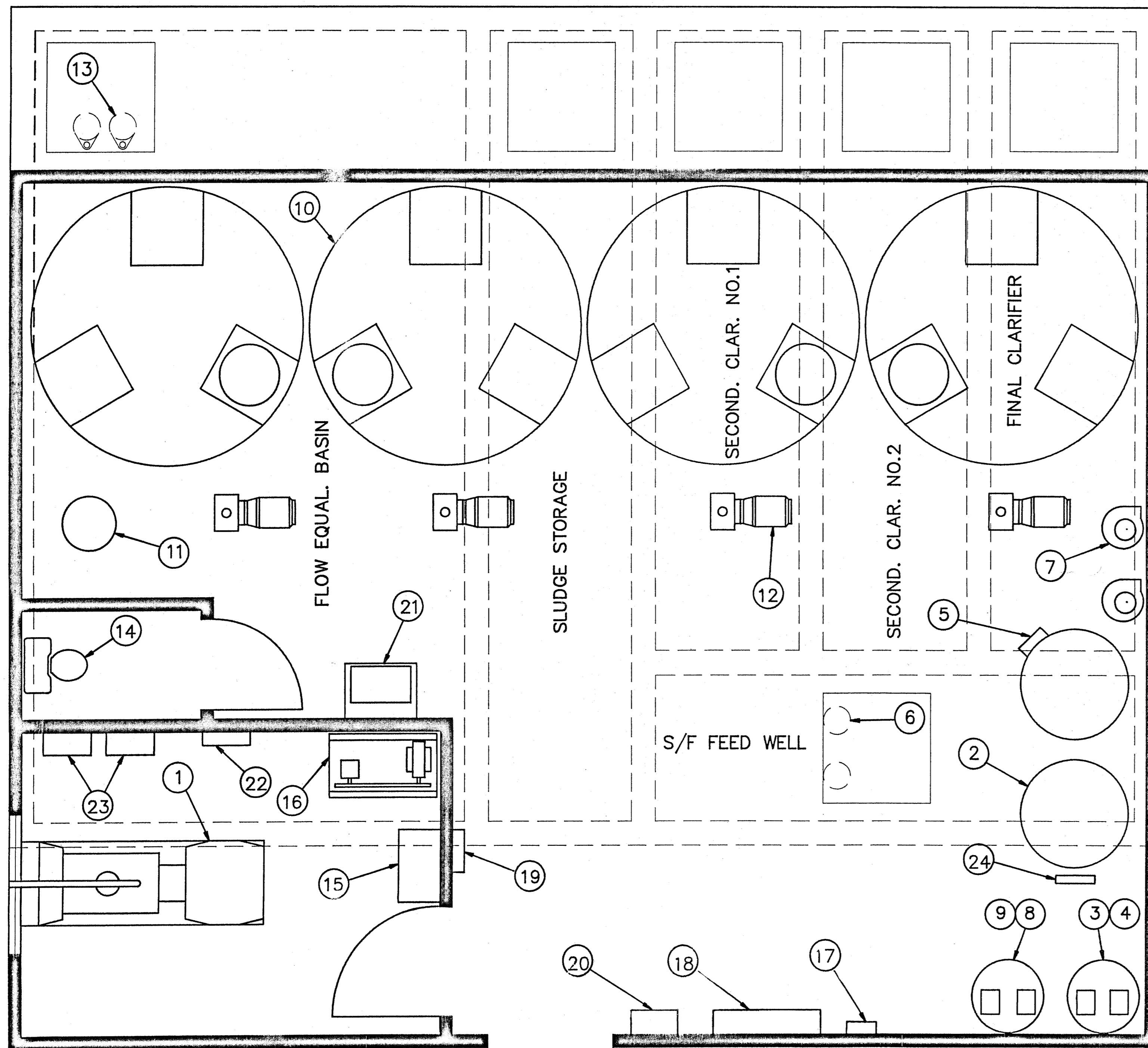
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
 3000 Executive Parkway, Suite 112
 San Ramon, California 94583
 415-867-4646

WALLACE LAKE ESTATES
PROCESS & INSTR. DIAGRAM


SCALE	NONE	DWG	G-04	OF
DRAWN	RED	NO.		
CHECKED		DATE	12/24/87	JOB NO. 07070
APPROVED				

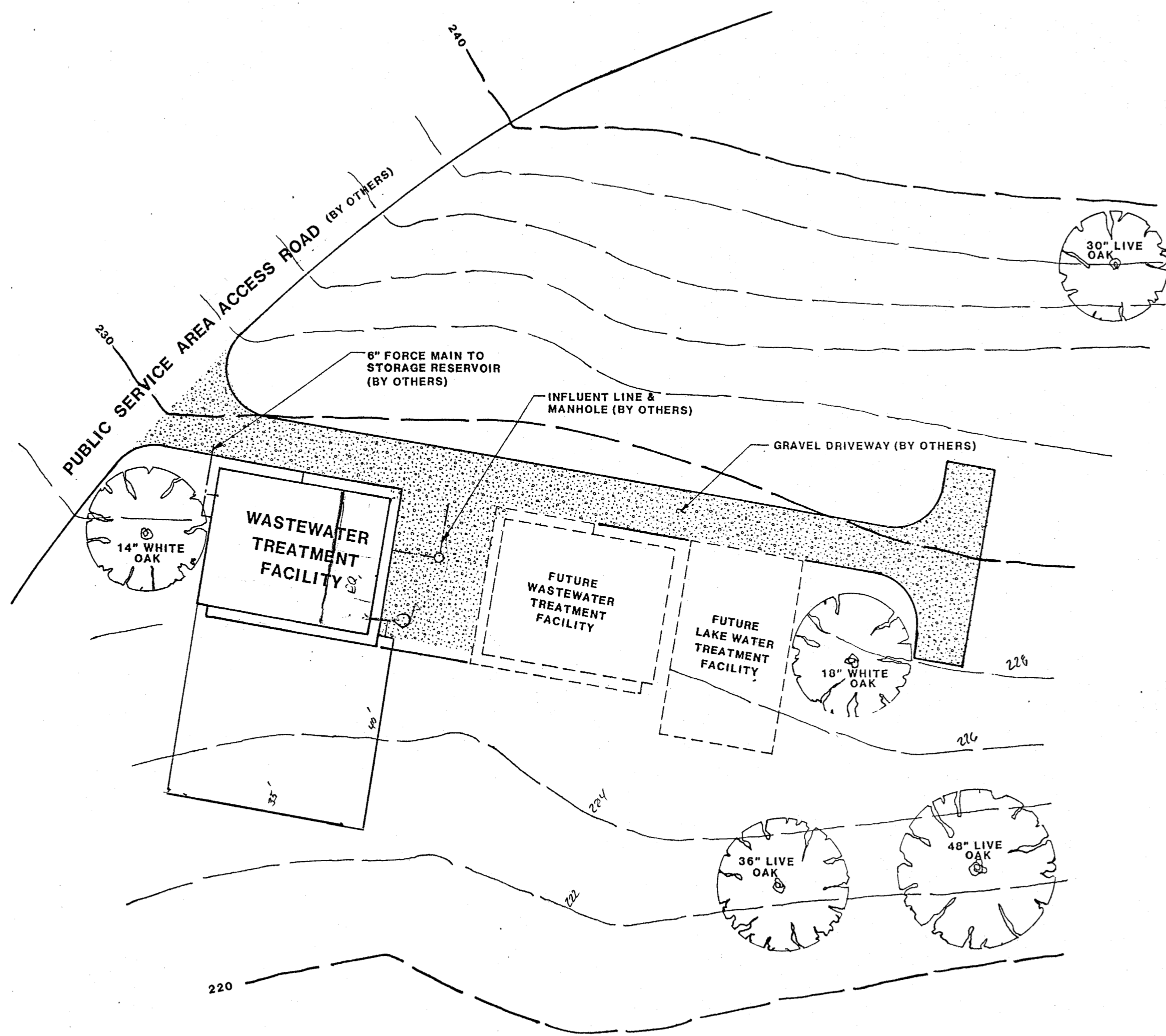
28' x 32' x 8'
41,000



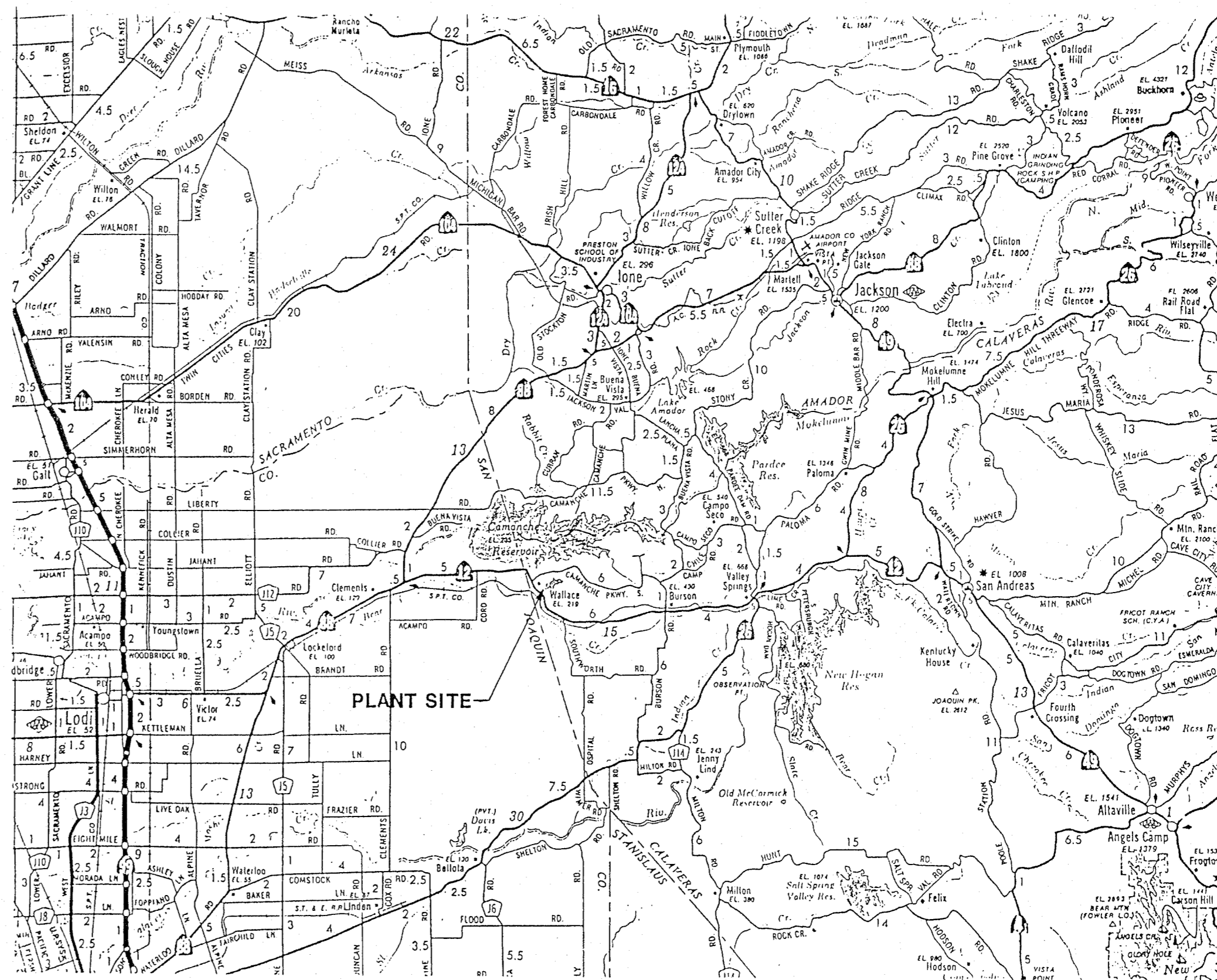
PLAN VIEW
1/2"=1'-0"

ITEM	QTY.	DESCRIPTION
1	1	AUXILIARY POWER
2	2	PRESSURE DUAL MEDIA FILTER
3	1	CHLORINE STORAGE & CONTAINMENT
4	2	CHLORINE FEED PUMP
5	1	PRESSURE FILTER CONTROLLER
6	2	FILTER FEED PUMP
7	1	BIO-AIR BLOWER
8	2	ALUM FEED PUMP
9	1	ALUM RESERVOIR
10	4	AEROBIC REACTOR
11	1	FLOW CONTROLLER
12	4	RECIRCULATION PUMP
13	2	LIFT PUMP
14	1	WATER CLOSET
15	1	AUX. POWER TRANSFER SWITCH
16	1	FLOW EQUAL. BLOWER
17	1	EFFLUENT FLOW MONITOR
18	1	PLANT CONTROLLER
19	1	PANEL "A"
20	1	PANEL "B"
21	1	UTILITY SINK
22	1	AIRLIFT CONTROL VALVES
23	2	SANDFILTER COMPRESSOR
24	1	FLOW SENSOR
25		
26		
27		

A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
<p>This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.</p>		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-967-4646		
WALLACE LAKE ESTATES EQUIPMENT LAYOUT		
SCALE	NOTED	D
DRAWN	RLK	W
CHECKED		G
APPROVED	DATE	NO.
	6/7/88	
		G-05-A OF
		JOB NO. 07070



SITE PLAN
1"=20'-0"



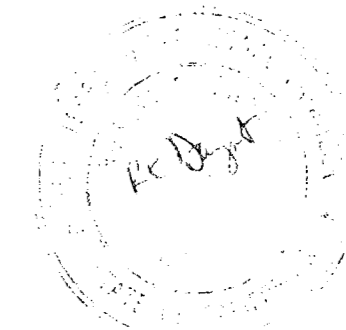
AREA MAP
NONE

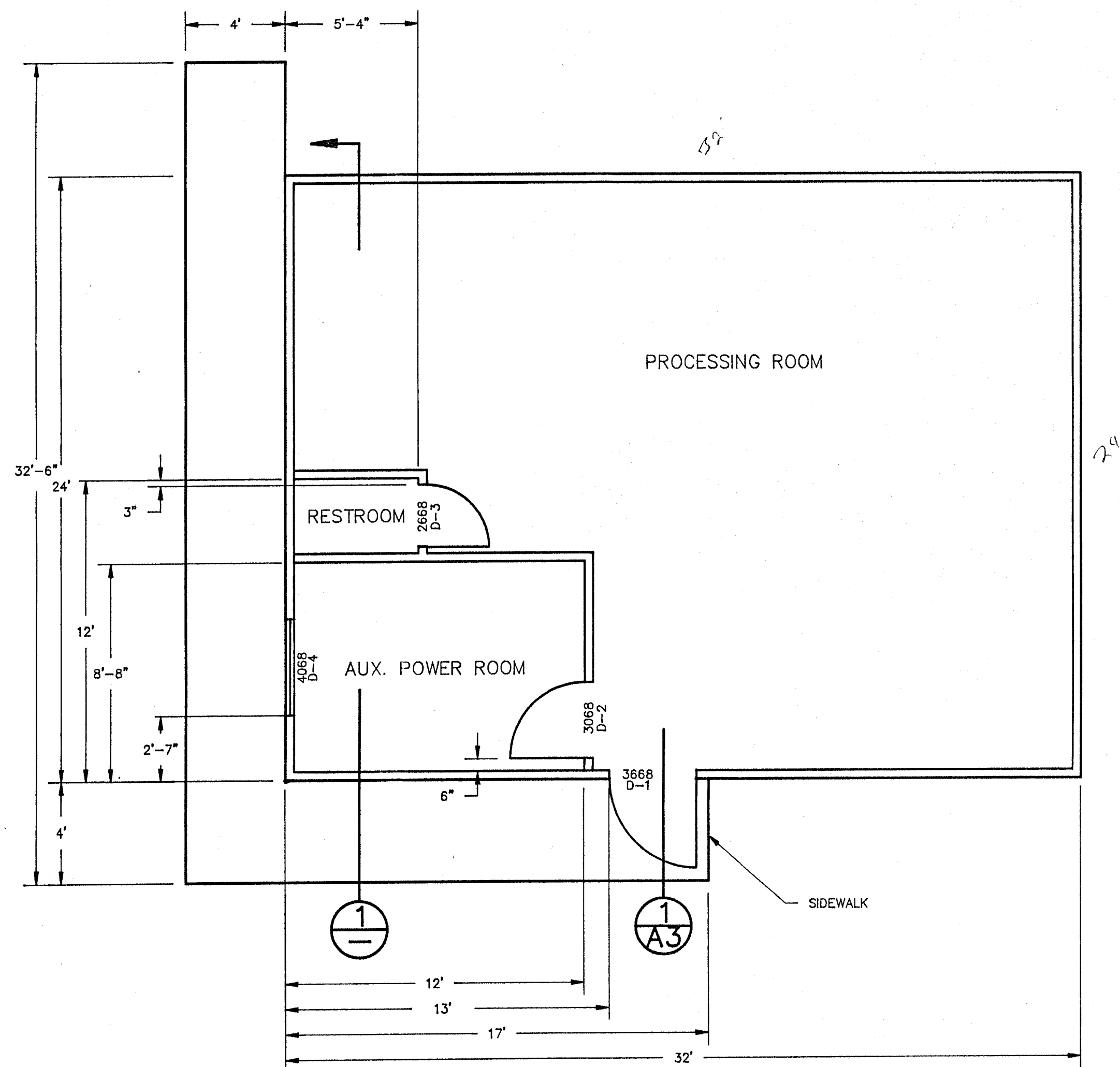
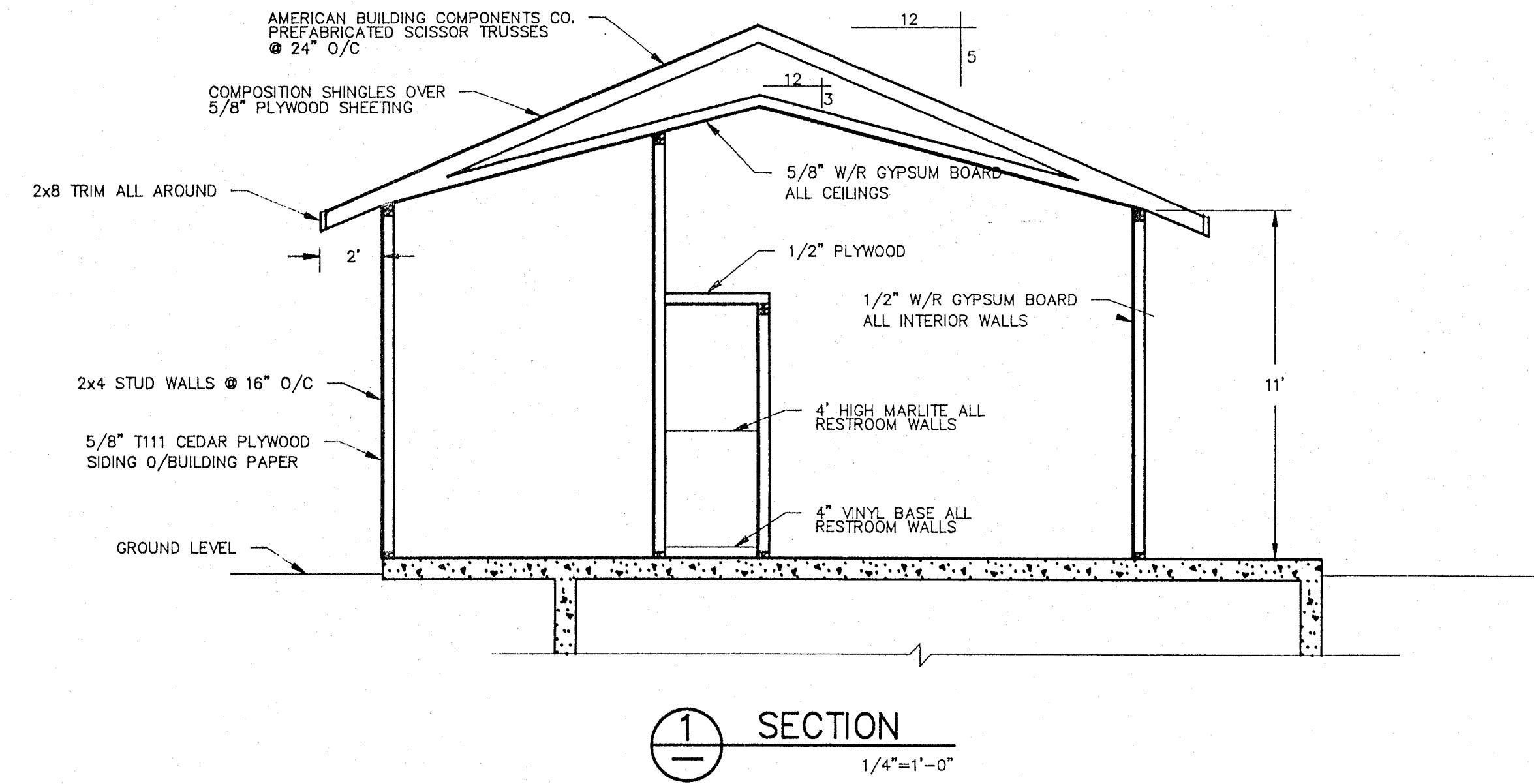
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.


ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-667-4646

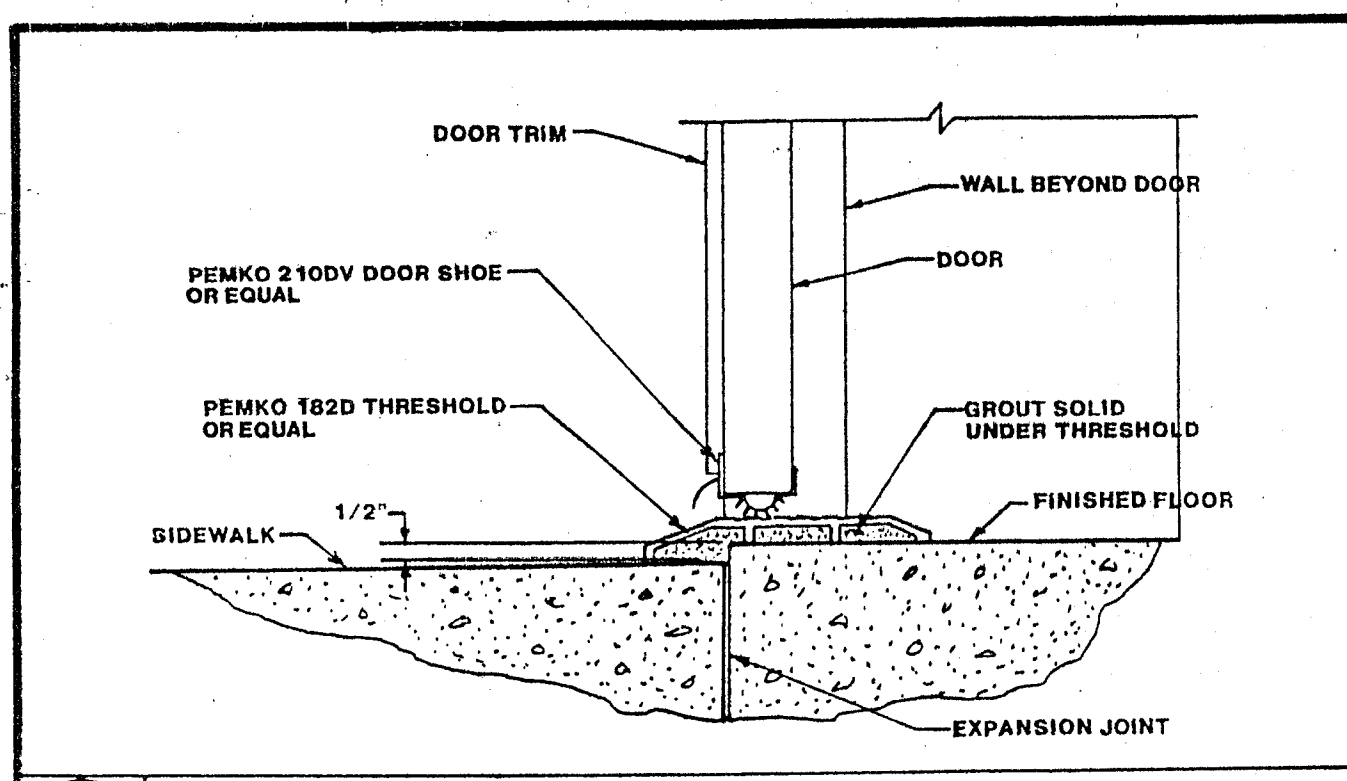
WALLACE LAKE ESTATES
SITE PLAN

SCALE	NOTED	D		
DRAWN	RLK	W		
CHECKED		G	A-01	OF
APPROVED	DATE	NO.		
	1/13/88	JOB NO.	07076	

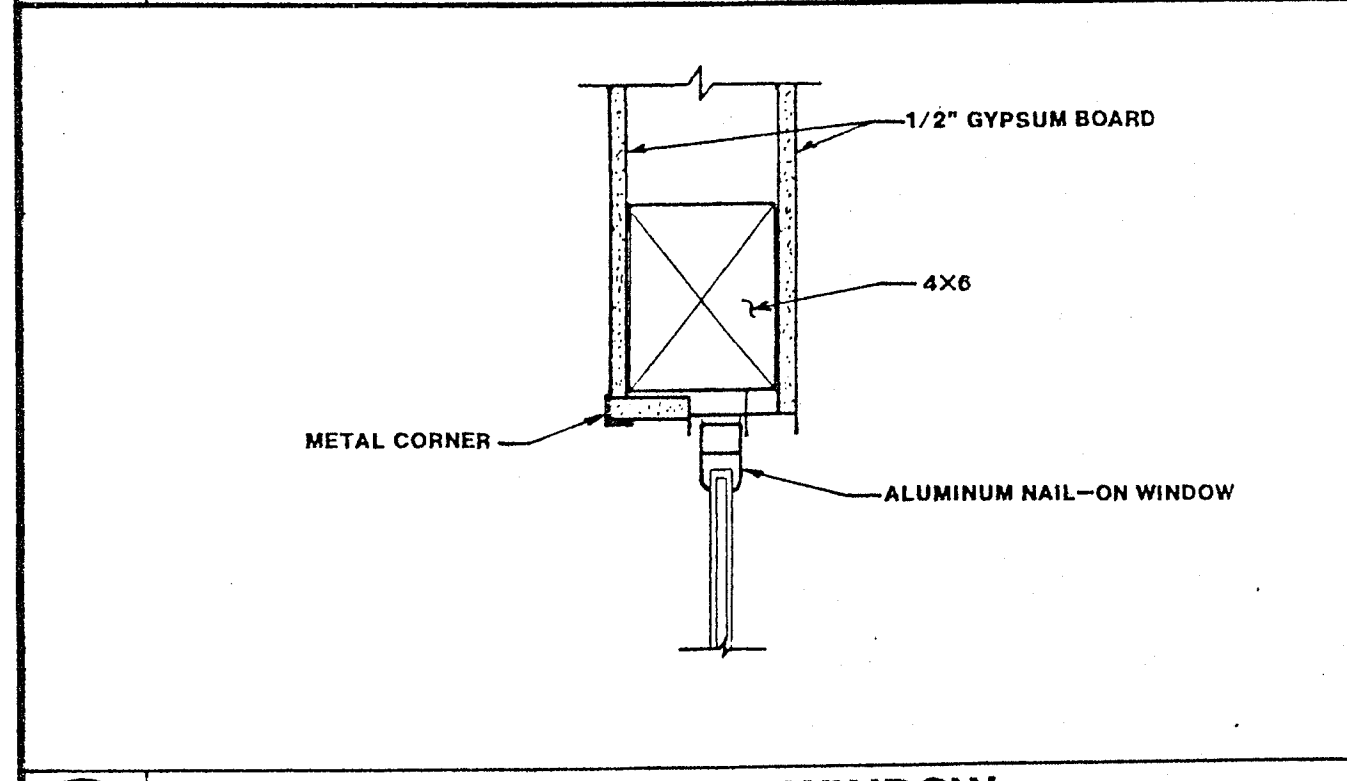




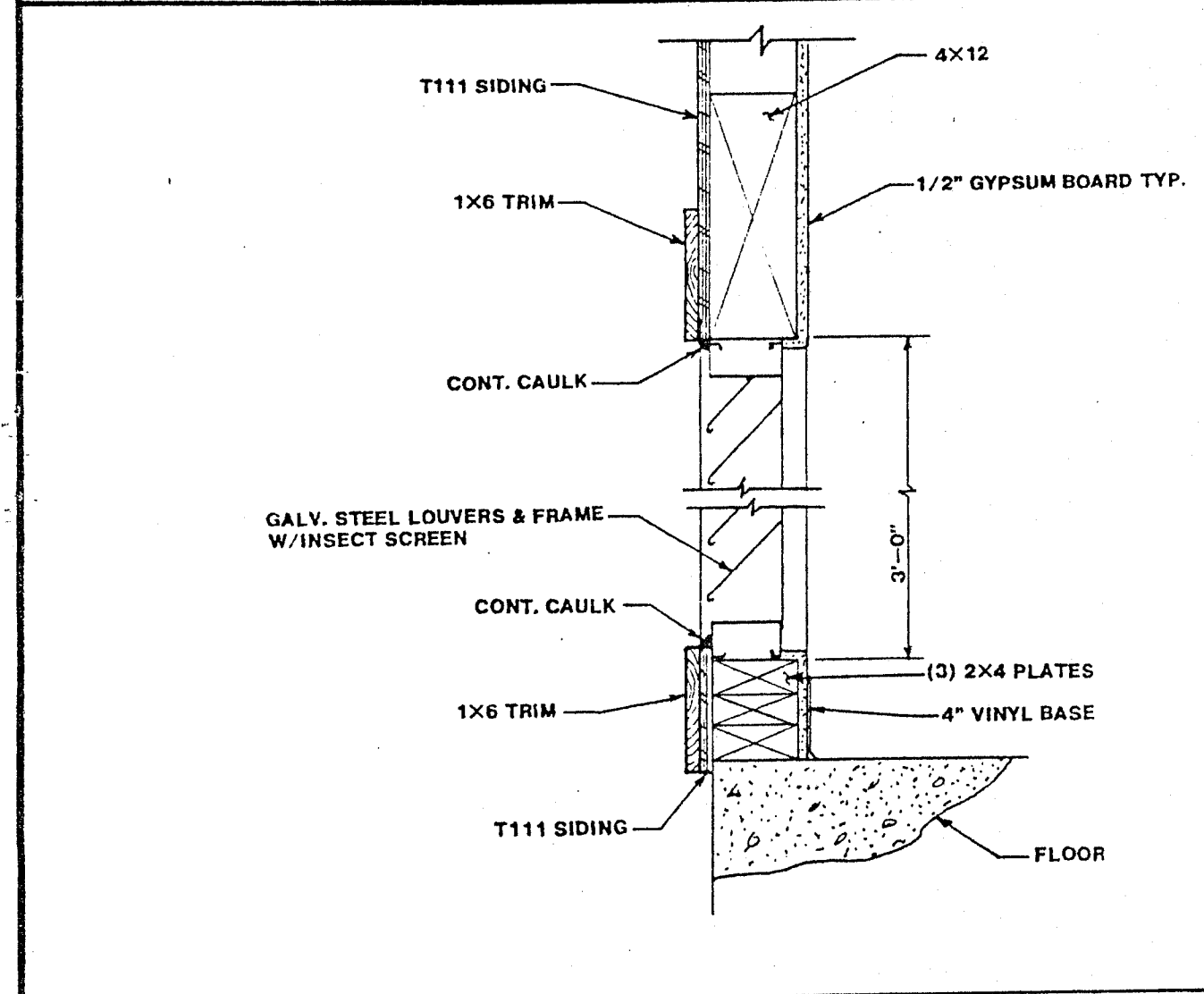
CHG.	DATE	DESCRIPTION
A	9/18/90	REDRAWN TO AS-BUILT CONDITION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
FLOOR PLAN		
SCALE	NOTED	D. W. G.
DRAWN	RLK	A-02-A
CHECKED		
APPROVED	DATE	1/15/88
	JOB NO.	07070



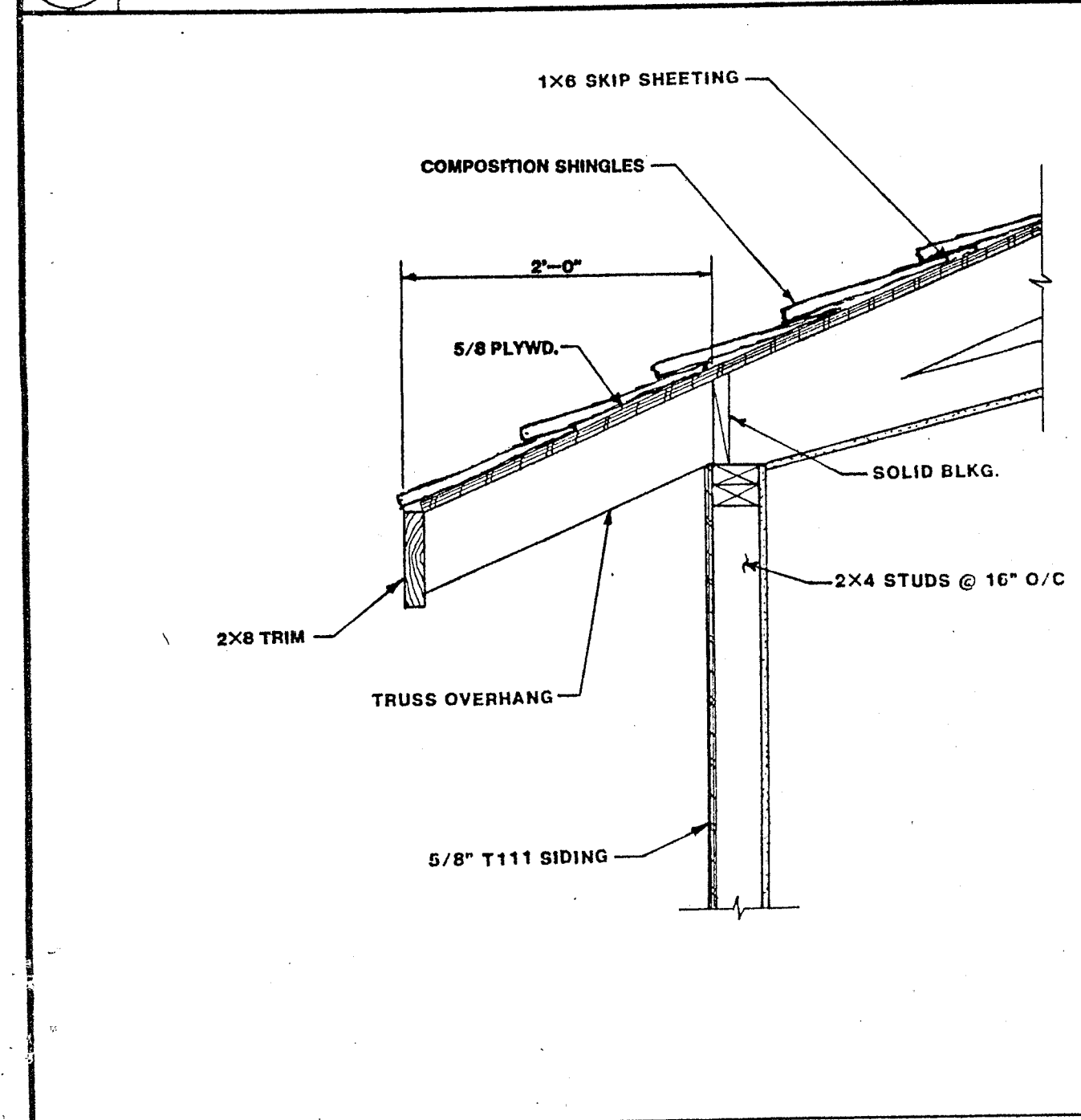
1
A2 TYP. EXTERIOR THRESHOLD 3"=1'-0"



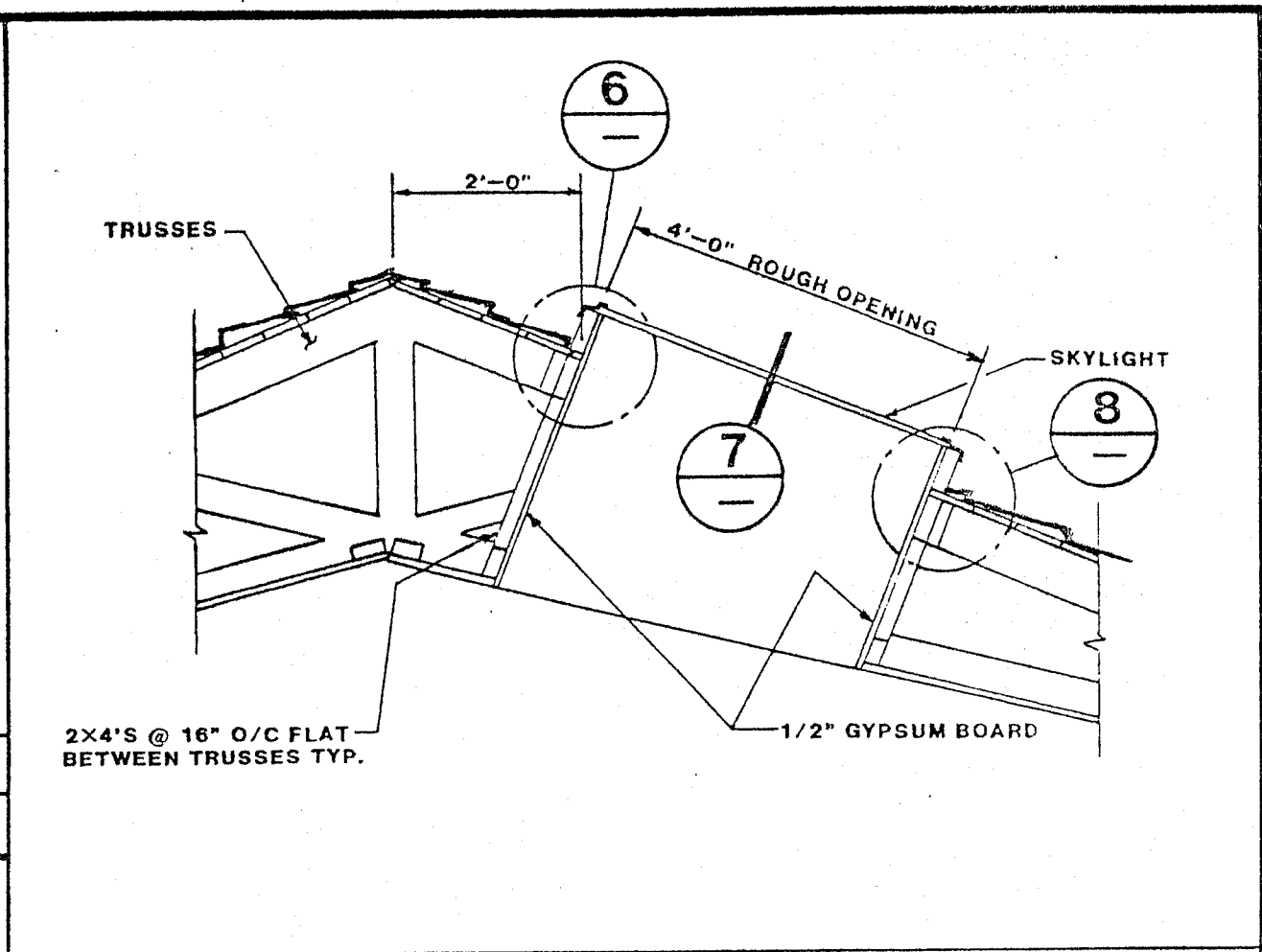
2
A2 TYP. INTERIOR WINDOW 3"=1'-0"



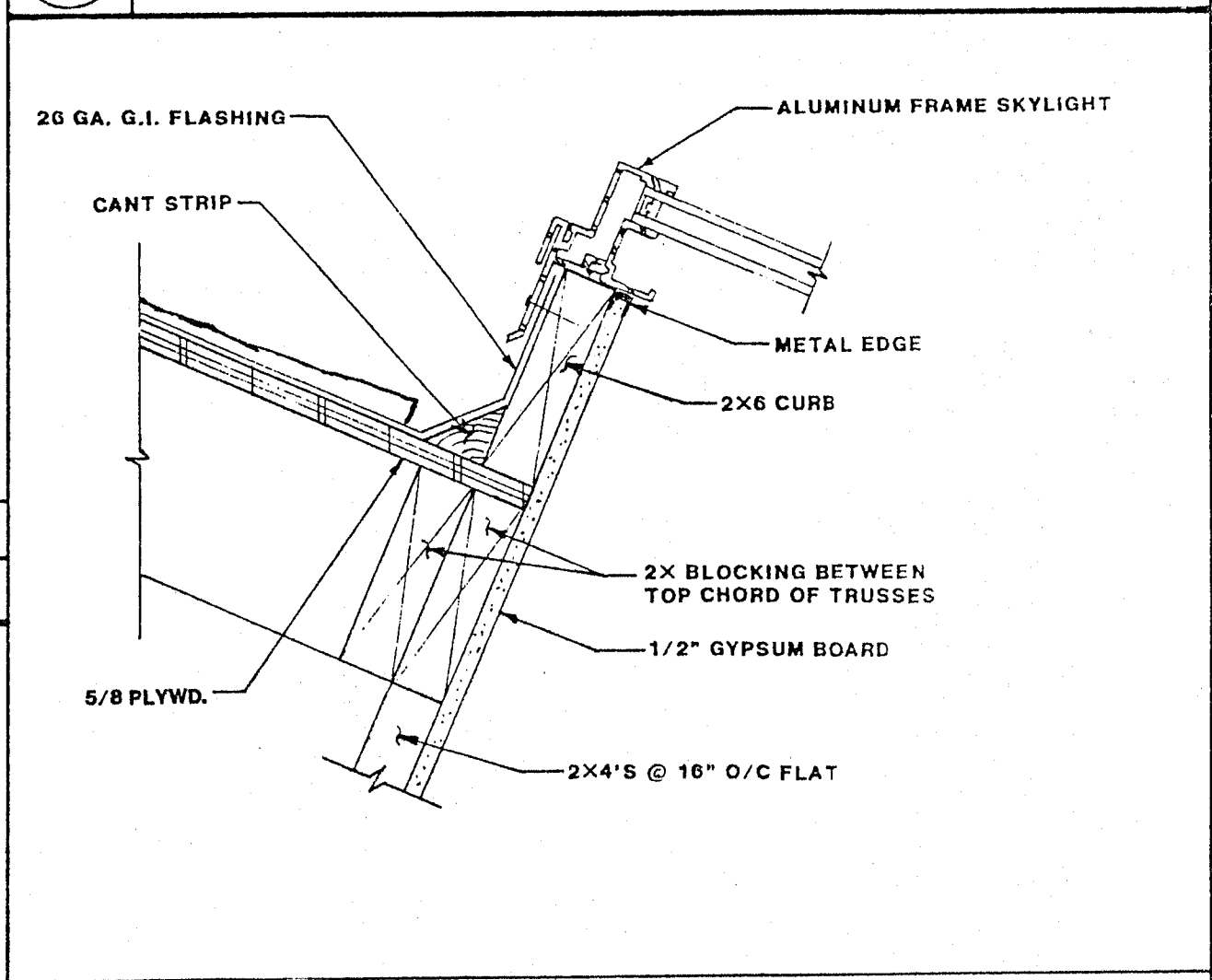
3
A4 LOUVER SECTION 1 1/2"=1'-0"



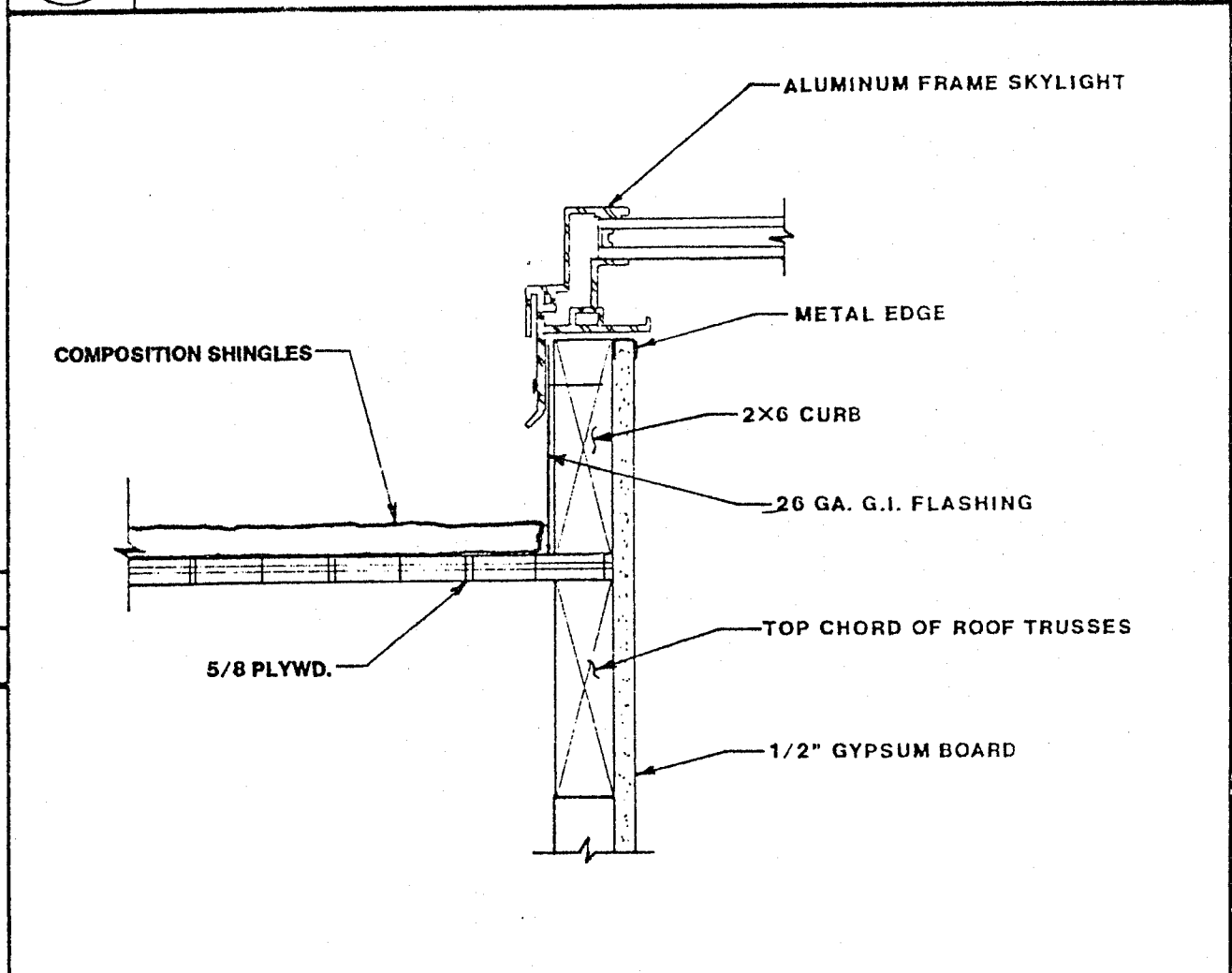
4
A4 TYP. OVERHANG 1"=1'-0"



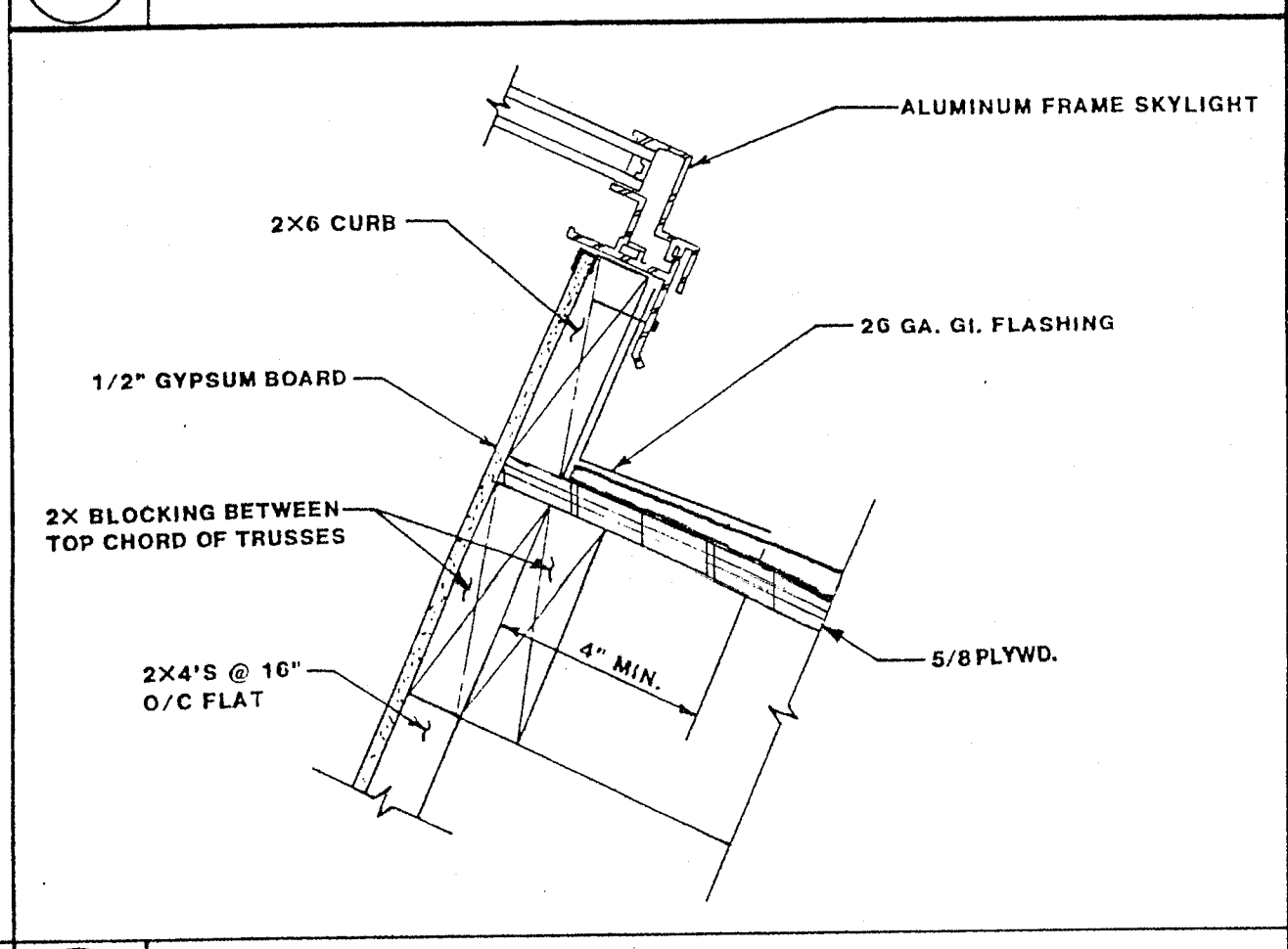
5
A4 SKYLIGHT SECTION 1/2"=1'-0"



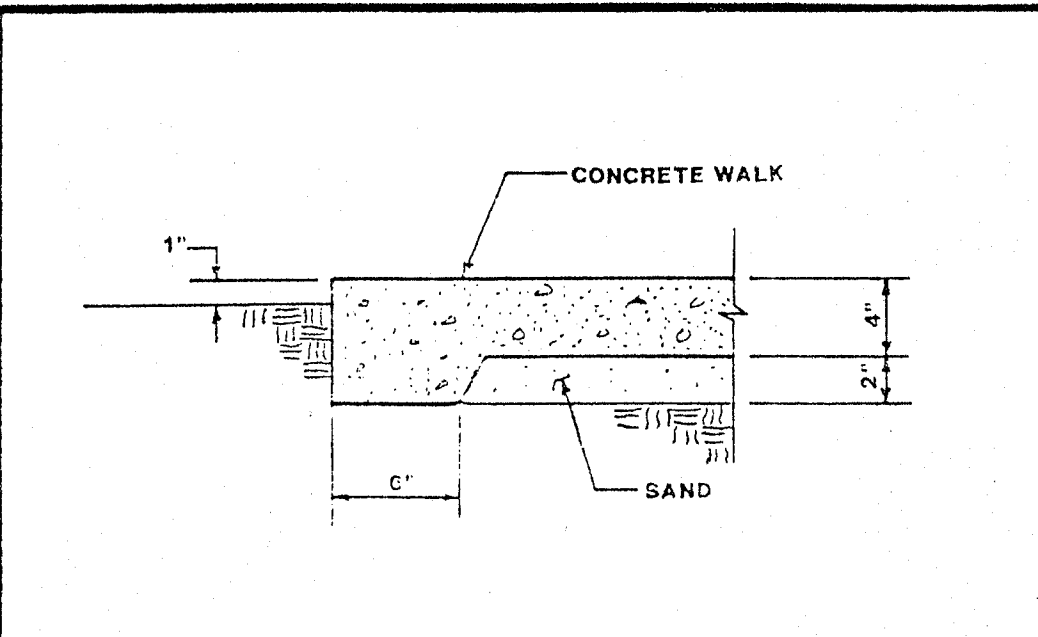
6
SKYLIGHT CURB 3"=1'-0"



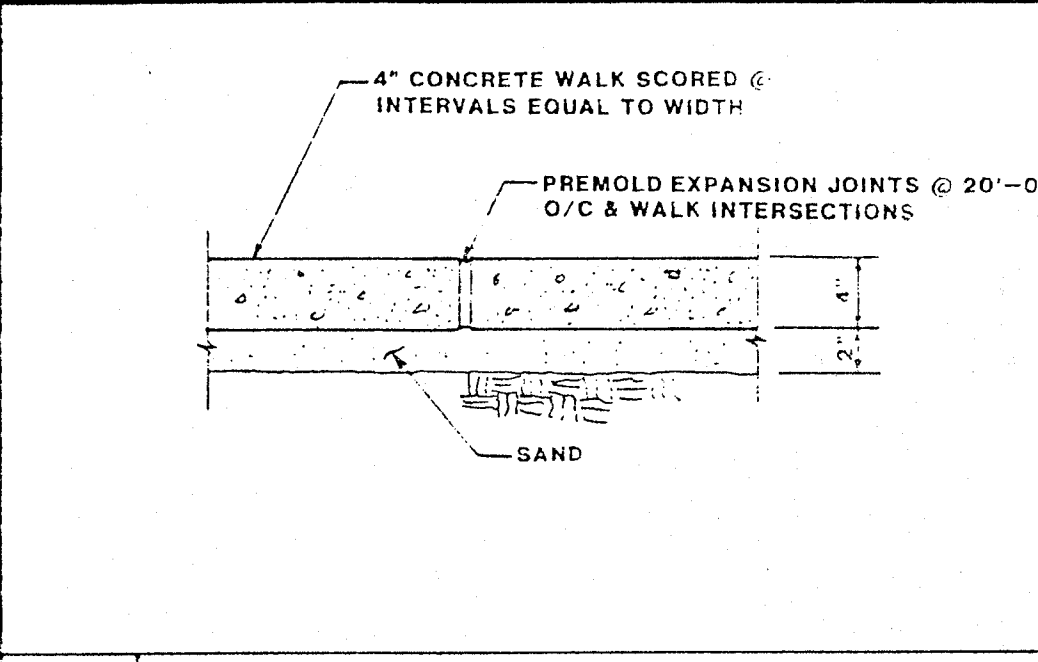
7
SKYLIGHT CURB 3"=1'-0"



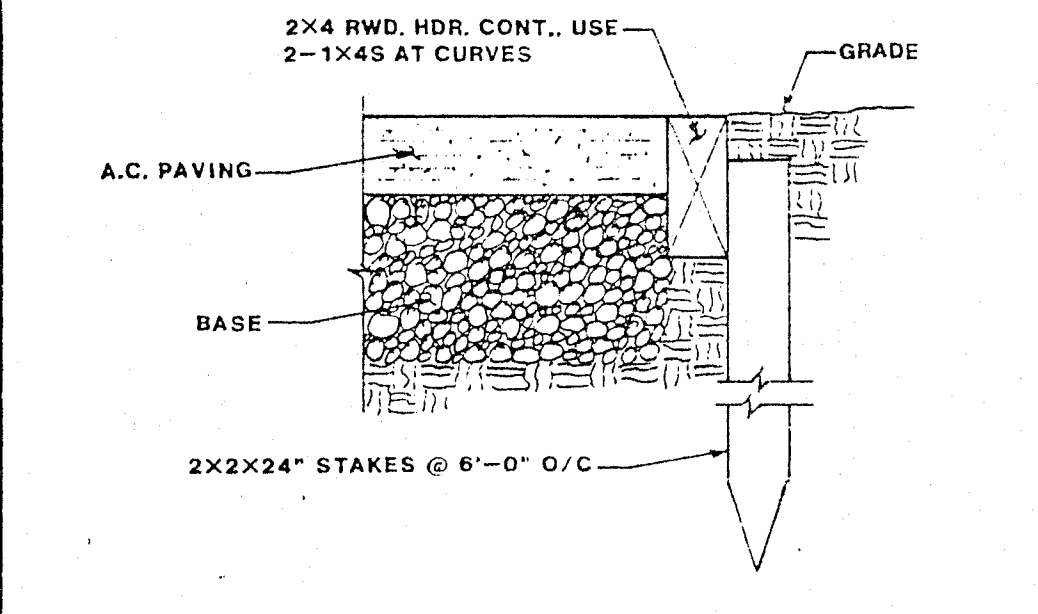
8
SKYLIGHT CURB 3"=1'-0"



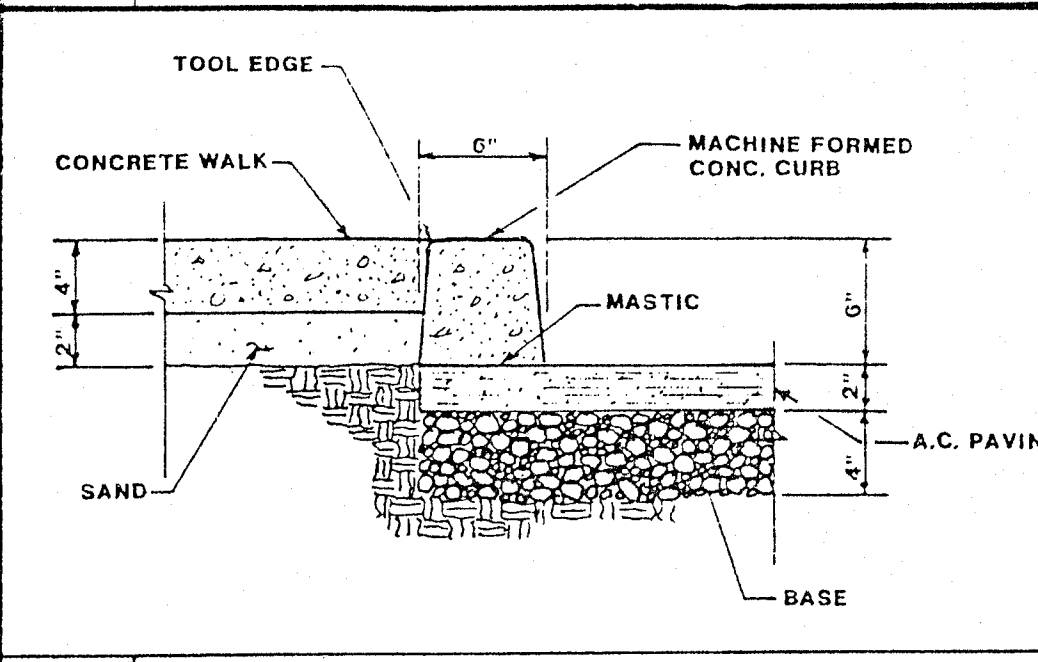
9
A1 TYP. SIDEWALK 1 1/2"=1'-0"



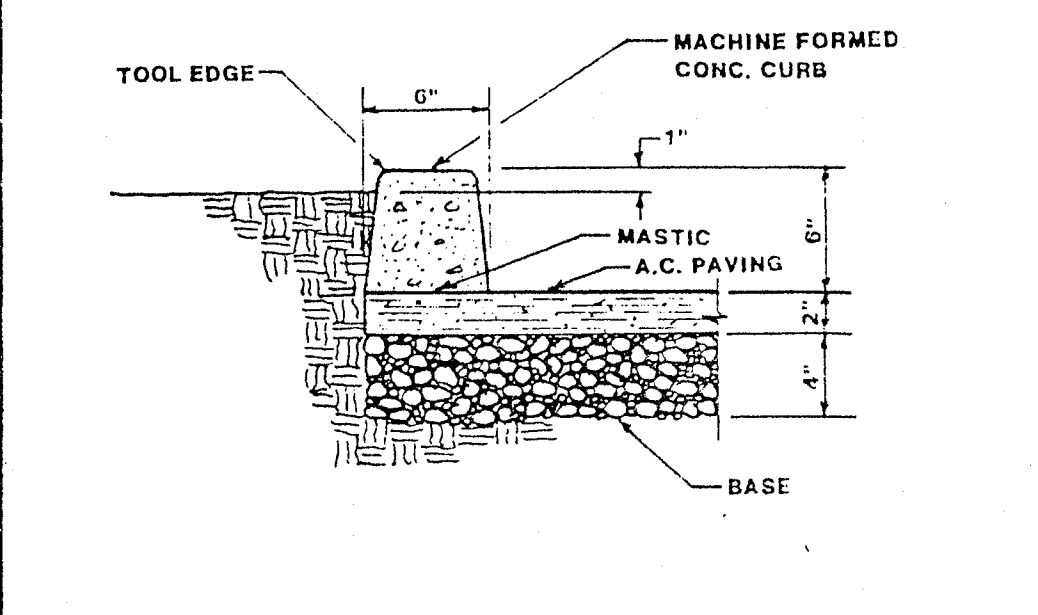
10
A1 TYP. SIDEWALK EXP. JOINT 1 1/2"=1'-0"



11
A1 TYP. SCREED 3"=1'-0"



12
A1 CURB AT SIDEWALK 1 1/2"=1'-0"



13
A1 CURB AT LANDSCAPING 1 1/2"=1'-0"

FINISH SCHEDULE

ROOM NAME	FLOOR FLR.	WALLS BASE	CEILING		REMARKS
			FINISH	HEIGHT	
PROCESSING ROOM	F1	W2	C1	VARIES	
AUXILIARY POWER ROOM	F1	W2	C1	VARIES	
RESTROOM	F1	B1	W1	C1	8'

FINISHES

F = FLOOR	B = BASE	W = WALLS	C = CEILING
F1		W1	W2
		W1	W2
		W2	
	B1		C1

EXPOSED CONCRETE, CLEAR SEALED
4" WHITE VINYL
PAINTED DRYWALL W/4" HIGH MARLITE
PAINTED DRYWALL
PAINTED DRYWALL

DOOR SCHEDULE

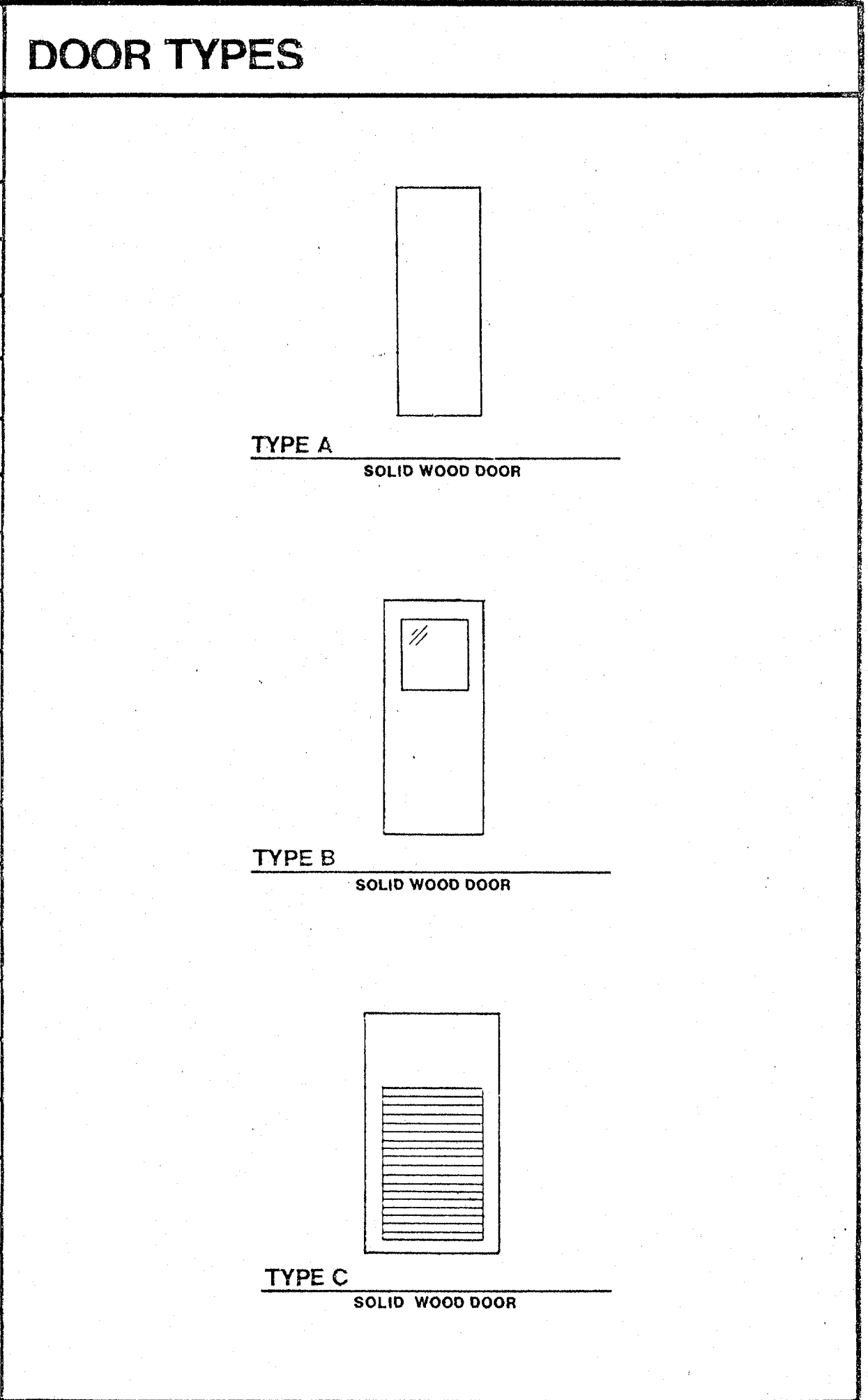
NO.	SIZE			TYPE	MATERIAL	FINISH	DETAILS			REMARKS
	W	H	T				HEAD	JAMB	SILL	
1	36	68	1 3/4"	B	METAL	PAINT			1	A3
2	30	68	1 3/4"	B	METAL	PAINT				
3	26	68	1 3/4"	A	METAL	PAINT				
4	40	68	1 3/4"	C	METAL	PAINT			1	A3

WINDOW SCHEDULE

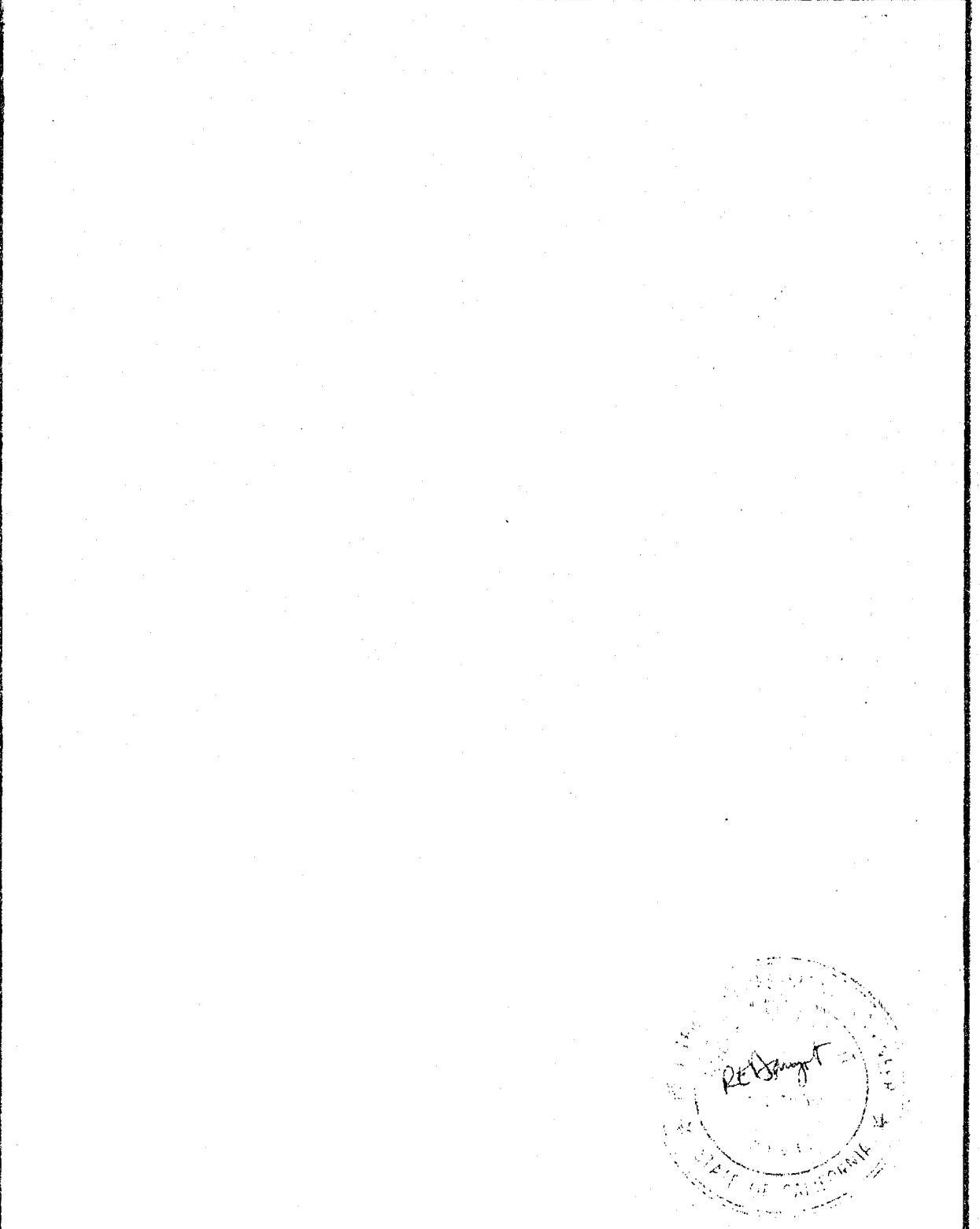
NO.	SIZE			TYPE	MATERIAL	FINISH	DETAILS			REMARKS
	W	H	T				HEAD	JAMB	SILL	

SYMBOLS

	STUD WALL		FENCE
	SHIM SPACE		
	STRUCTURAL WOOD (CONT.)		
	FINISH WOOD		
	PLYWOOD		
	CONCRETE		
	A.C. PAVING		



WINDOW TYPES



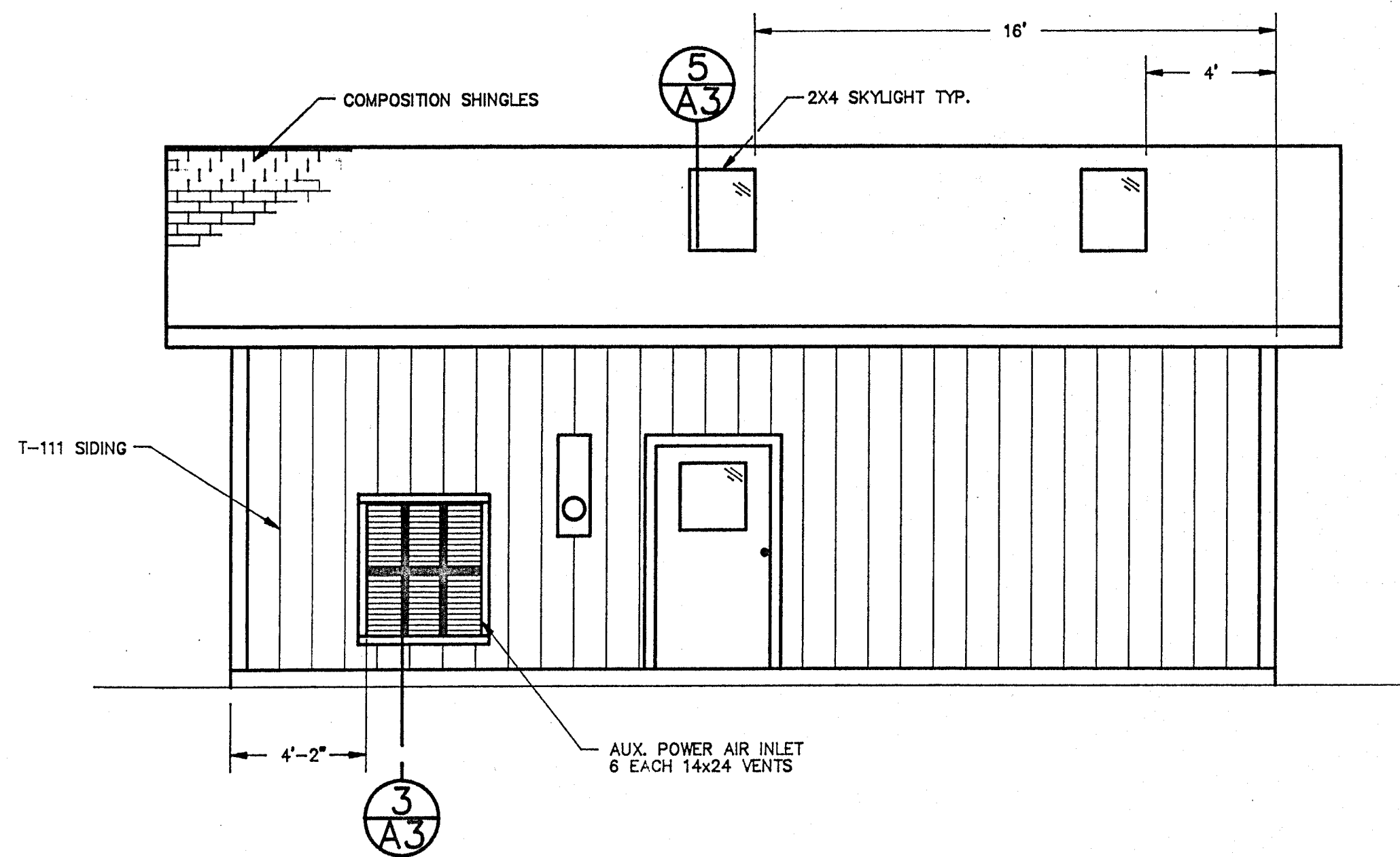
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-867-4646

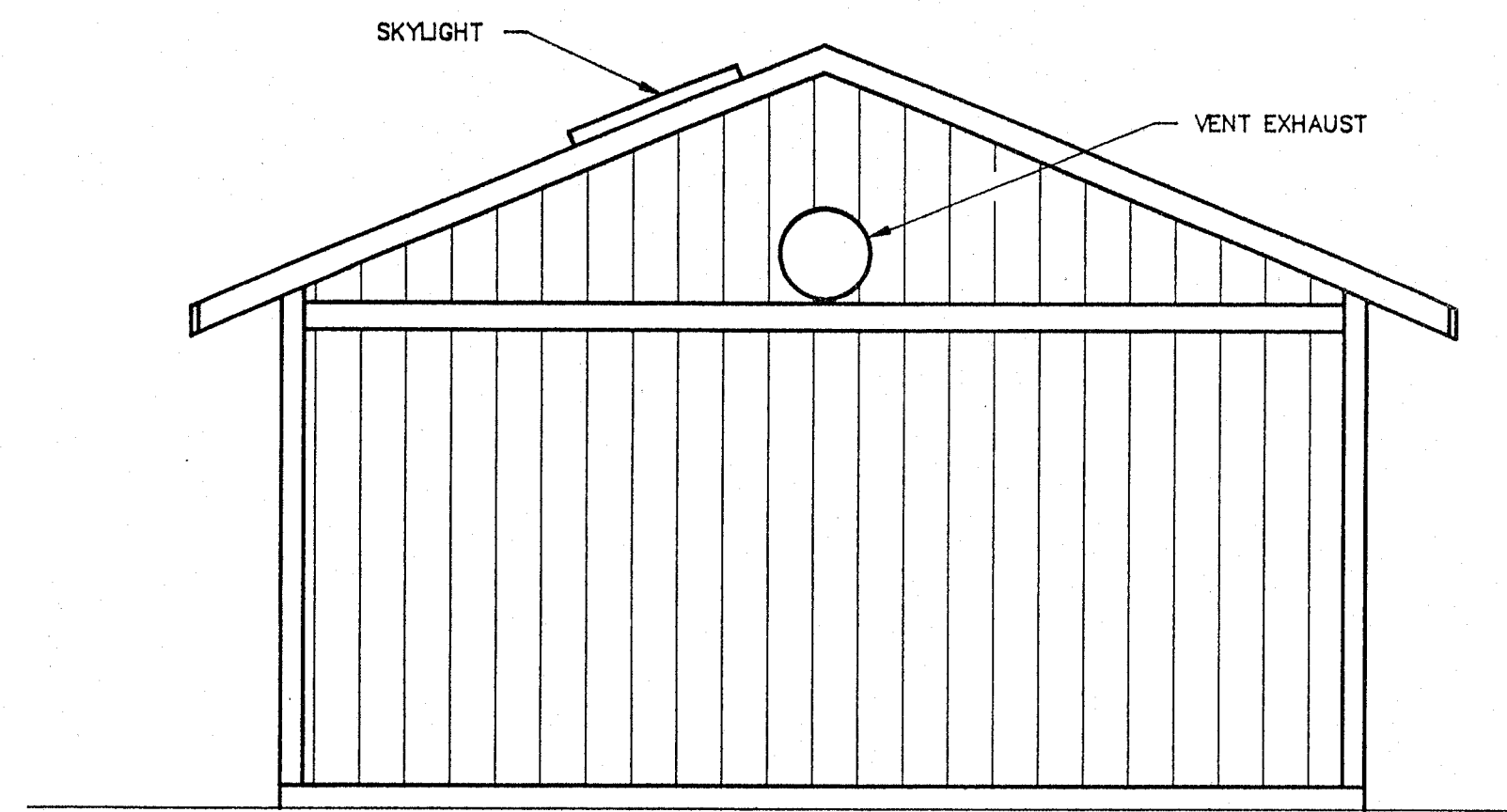
WALLACE LAKE ESTATES
SCHEDULES & DETAILS

SCALE: NONE DRAWN: RLK CHECKED: NO. APPROVED: DATE: 12/11/87 JOB NO. 07070

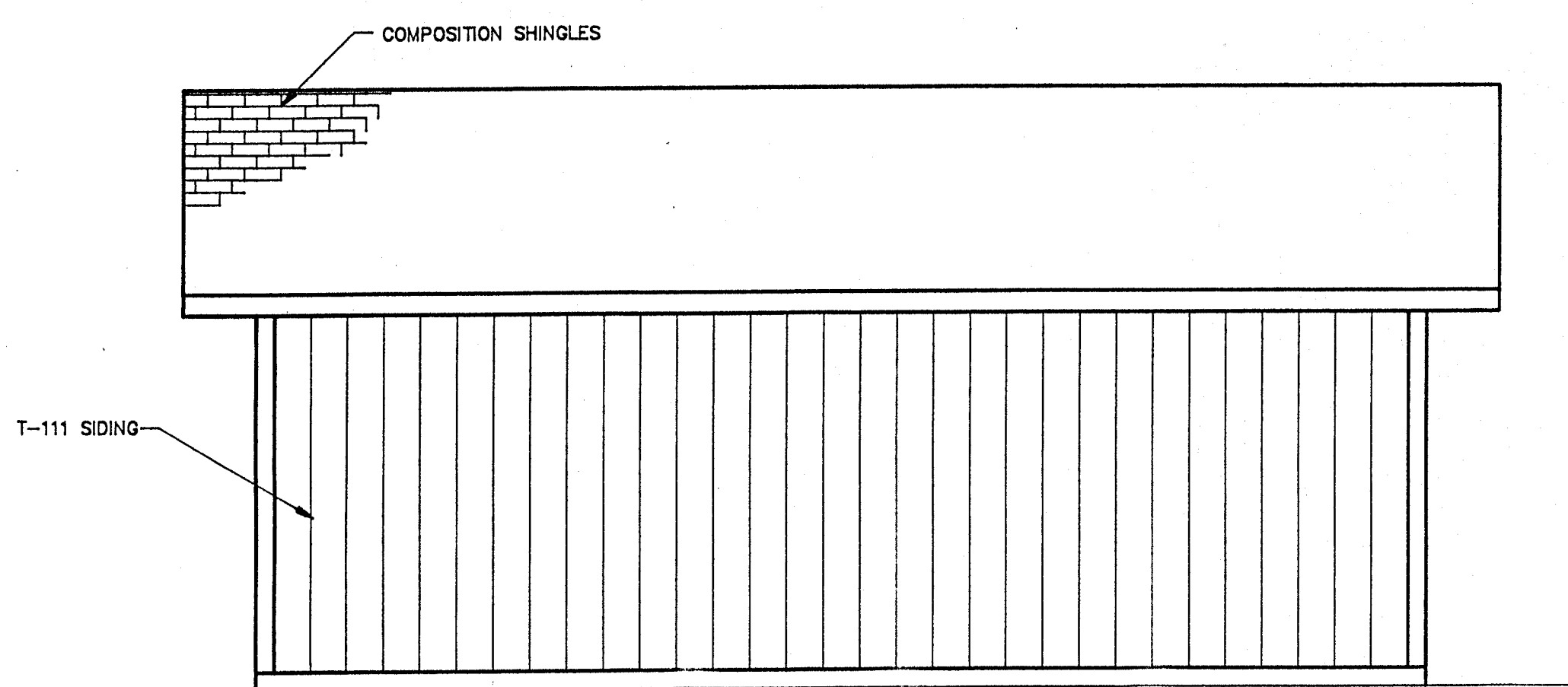
DWG NO. **A-03** OF



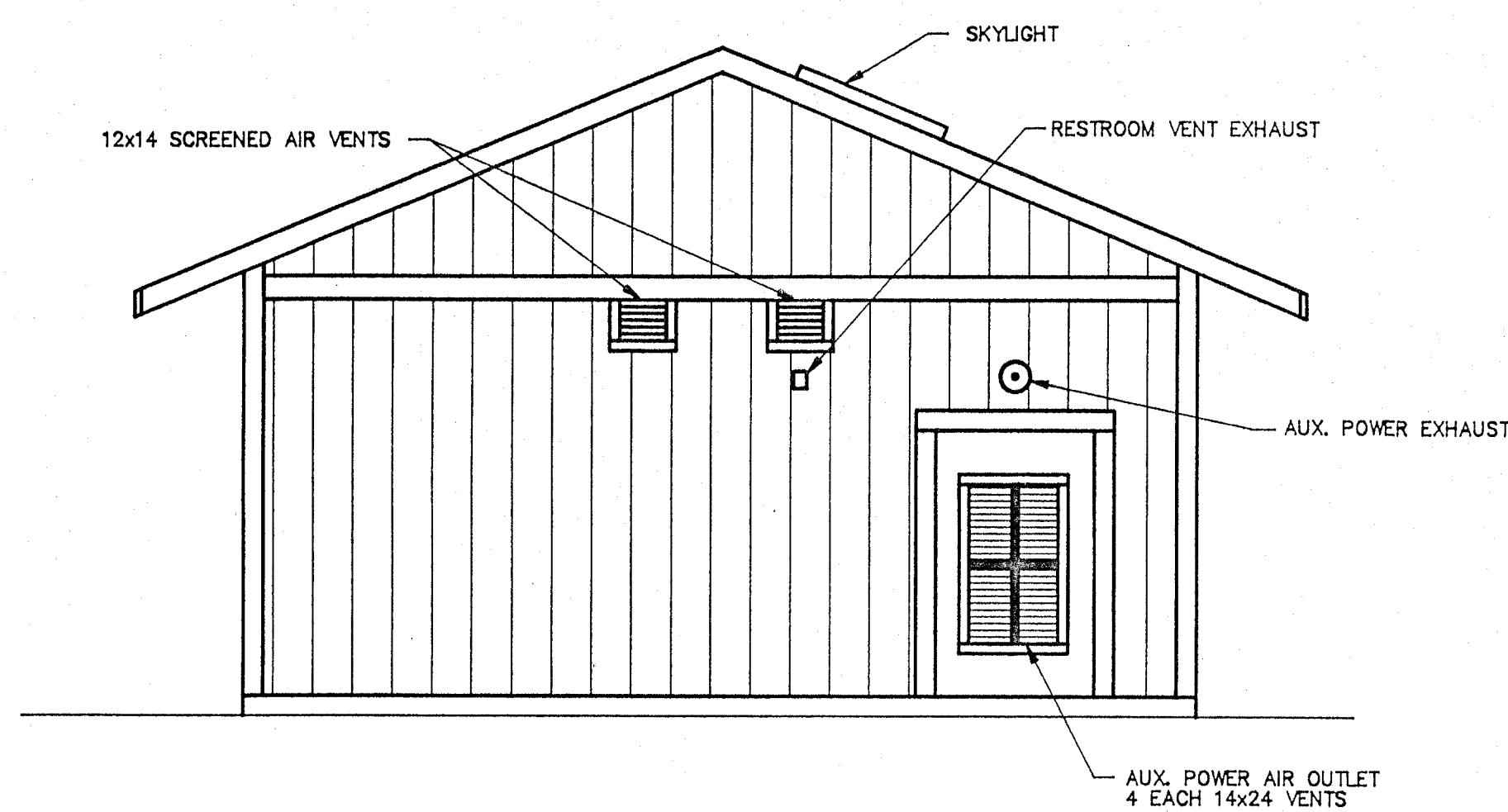
NORTH ELEVATION




WEST ELEVATION

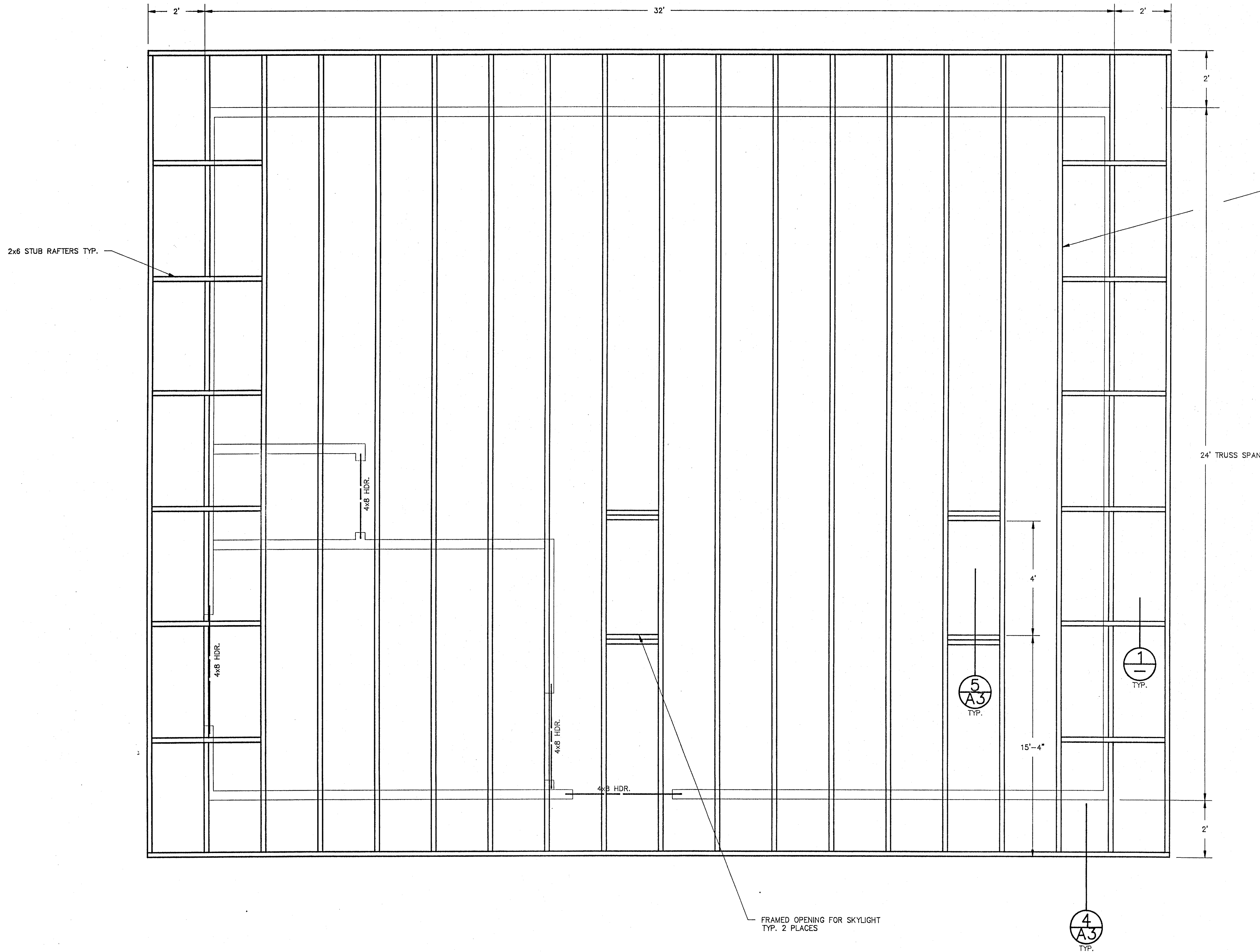


SOUTH ELEVATION

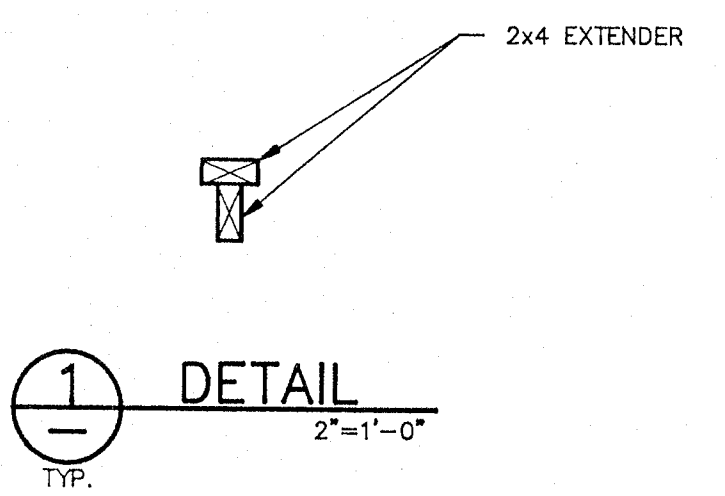


EAST ELEVATION


A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
ELEVATIONS		
SCALE	1/4"=1'-0"	D
DRAWN	RLK	W
CHECKED		G
APPROVED	DATE	NO.
	1/15/88	A-04-A
	JOB NO. 07070	OF

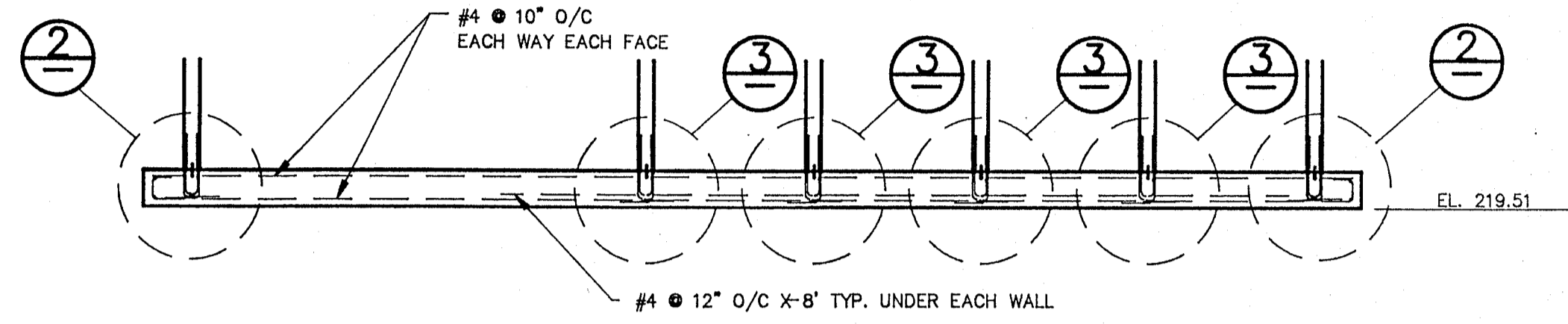


PREFABRICATED, PREENGINEERED WOOD SCISSOR TRUSSES • 24" O/C MAX.
W/5:12 PITCHED TOP CHORD & 3: PITCHED BOTTOM CHORD.

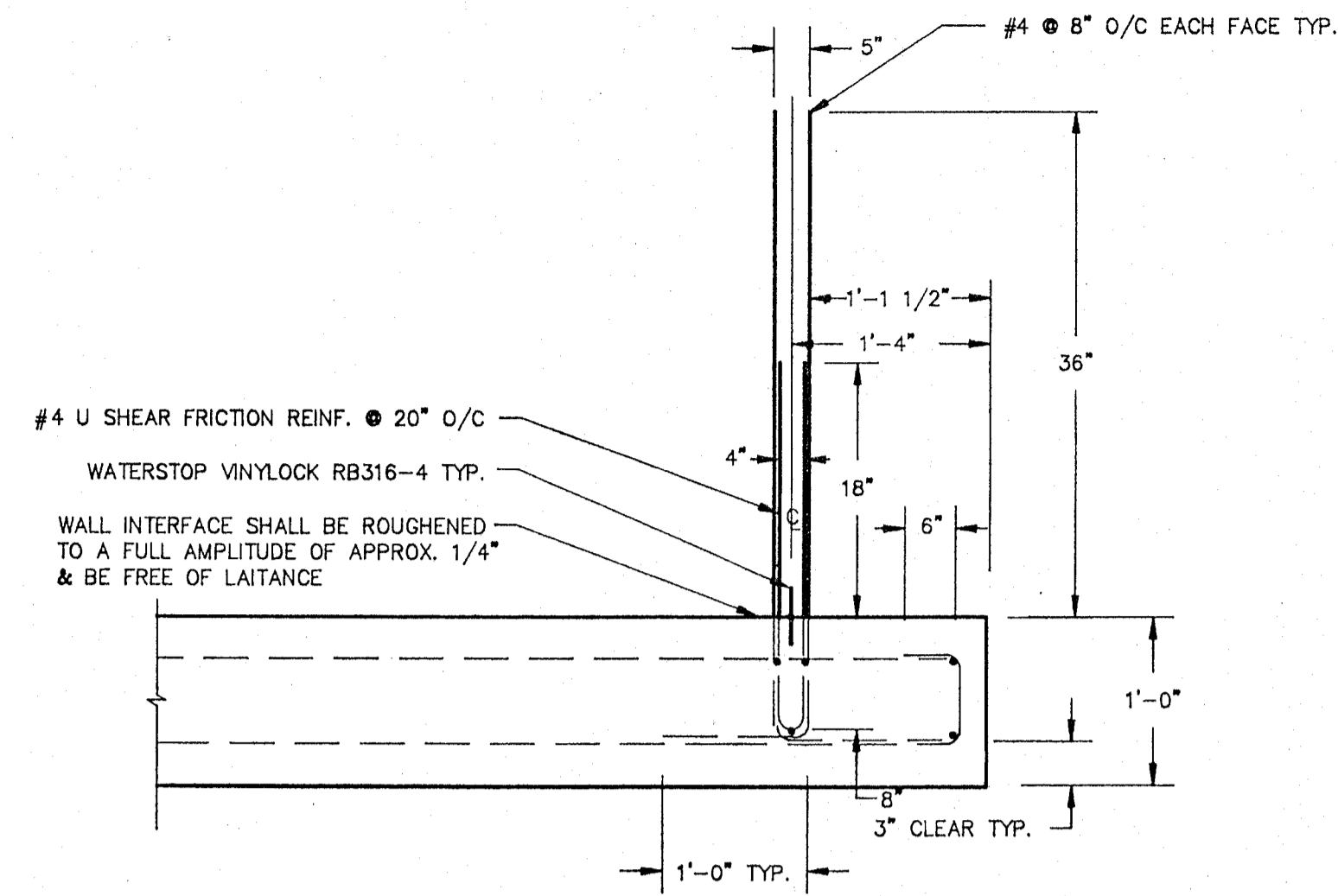


ROOF FRAMING PLAN
1/2"=1'-0"

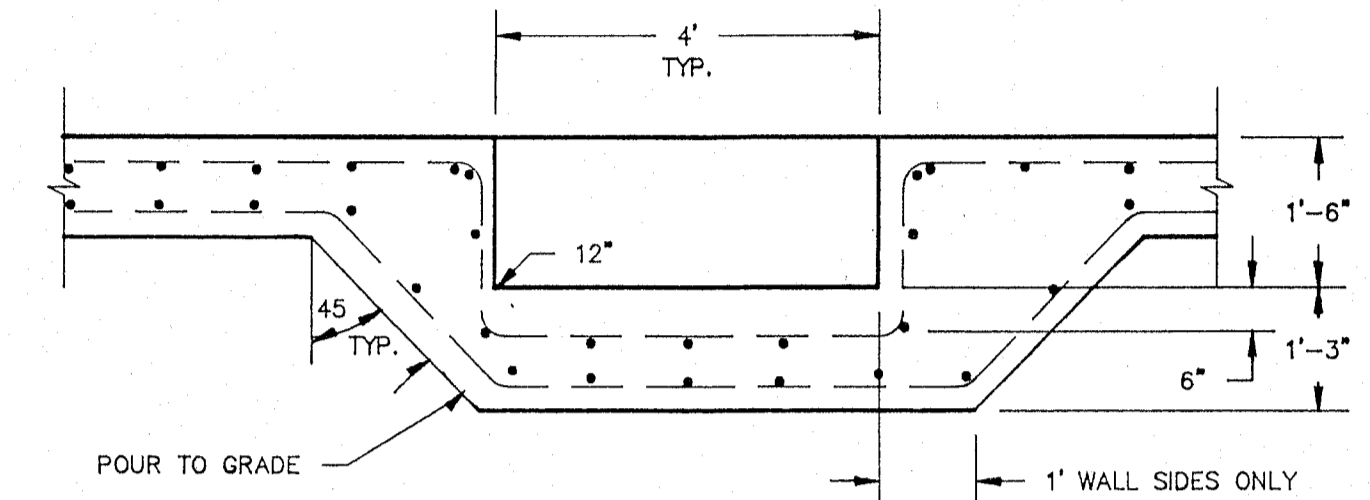
A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
ROOF FRAMING PLAN		
SCALE	NOTED	DWG
DRAWN	RLK	A-05-A
CHECKED	NO.	OF
APPROVED	DATE	JOB NO.
	12/24/87	07070



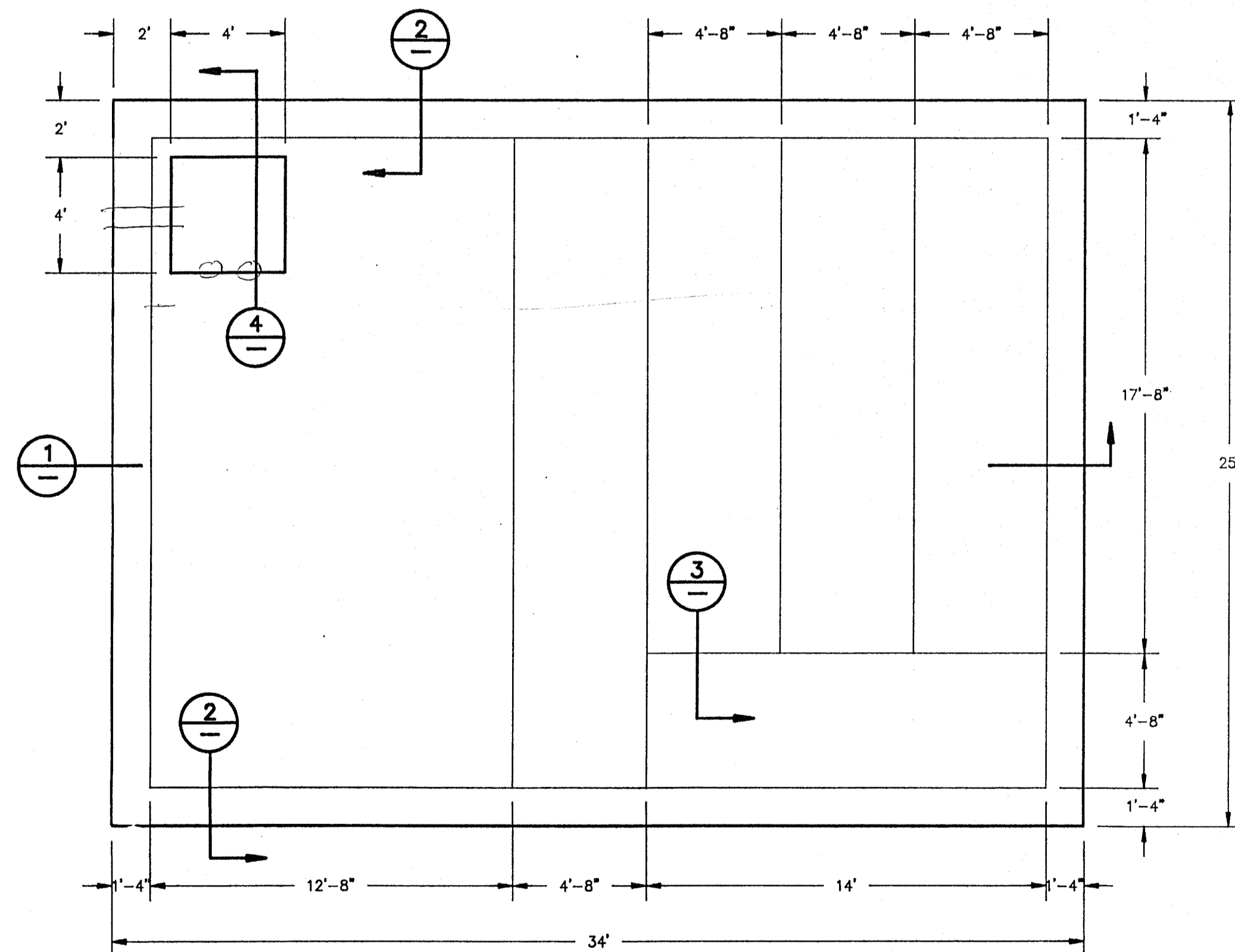
SECTION
1/4"=1'-0"



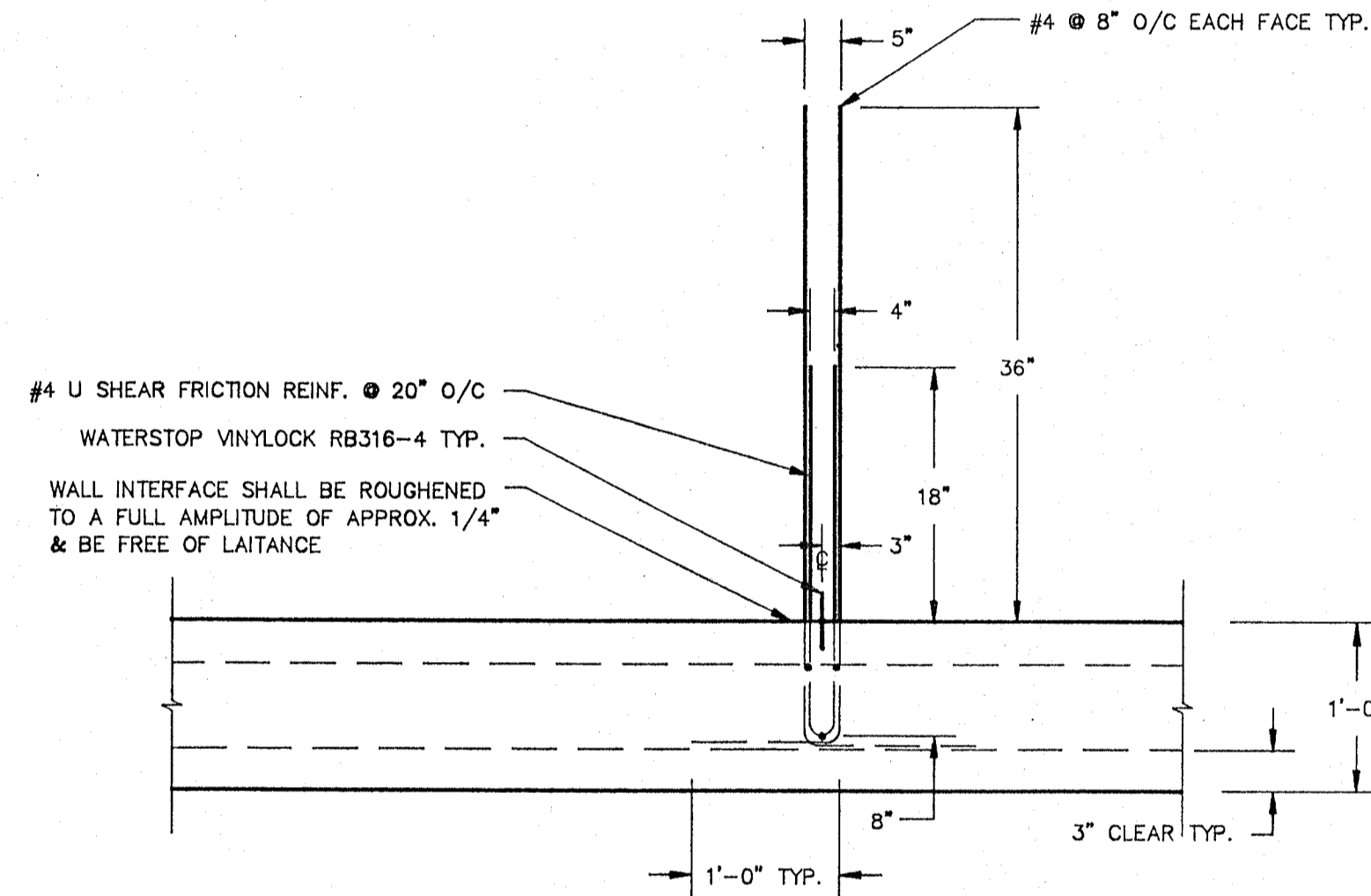
DETAIL
1"=1'-0"



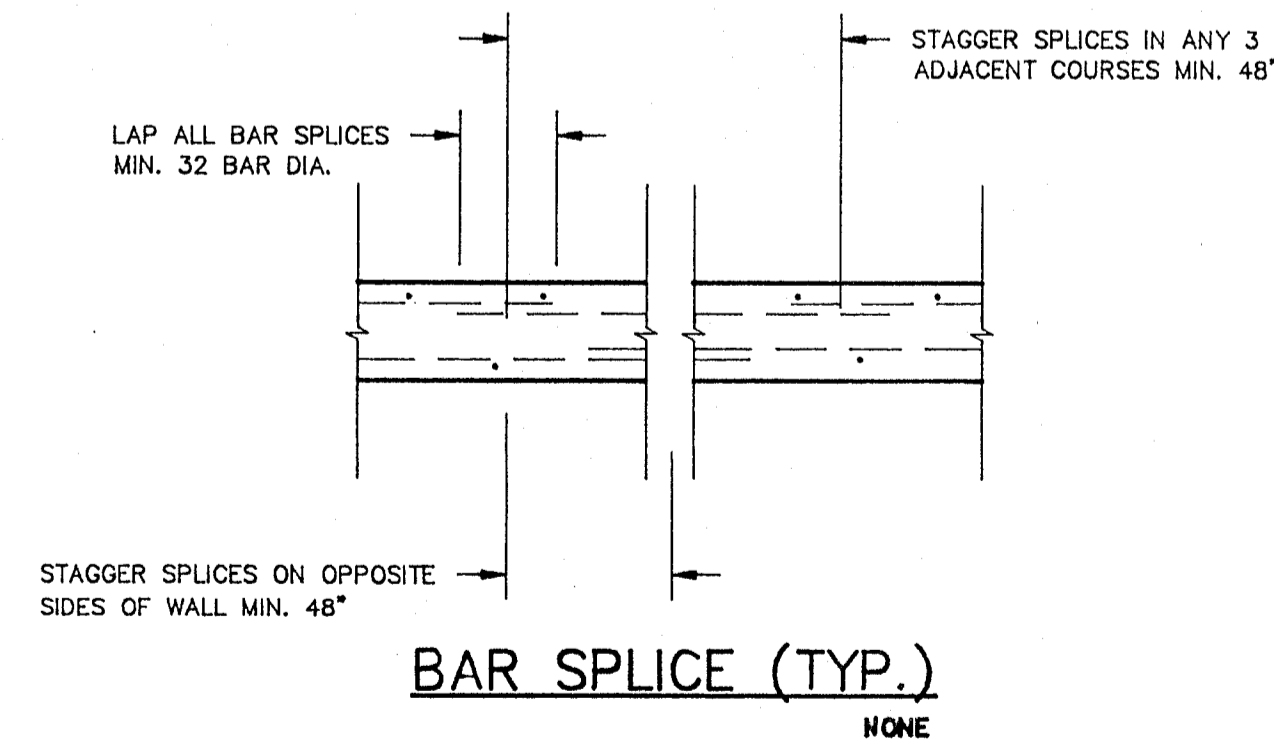
DETAIL
1/2"=1'-0"




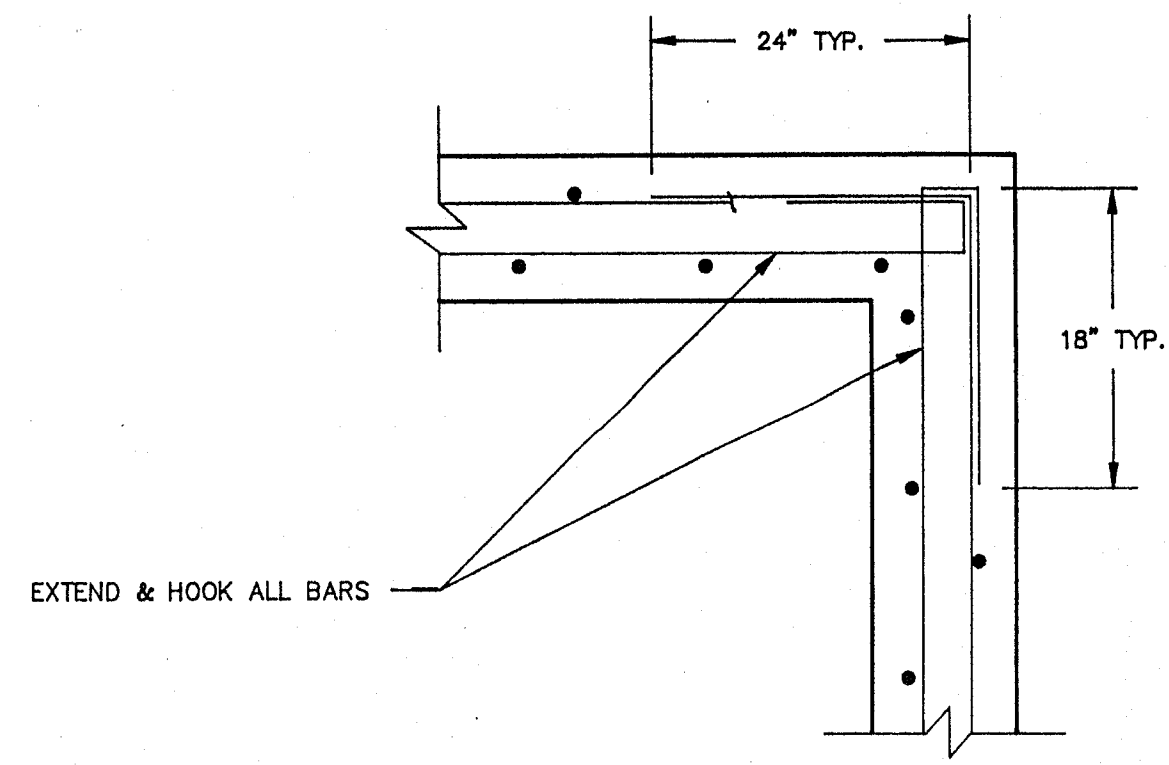
PLAN VIEW
1/4"=1'-0"



DETAIL
1"=1'-0"

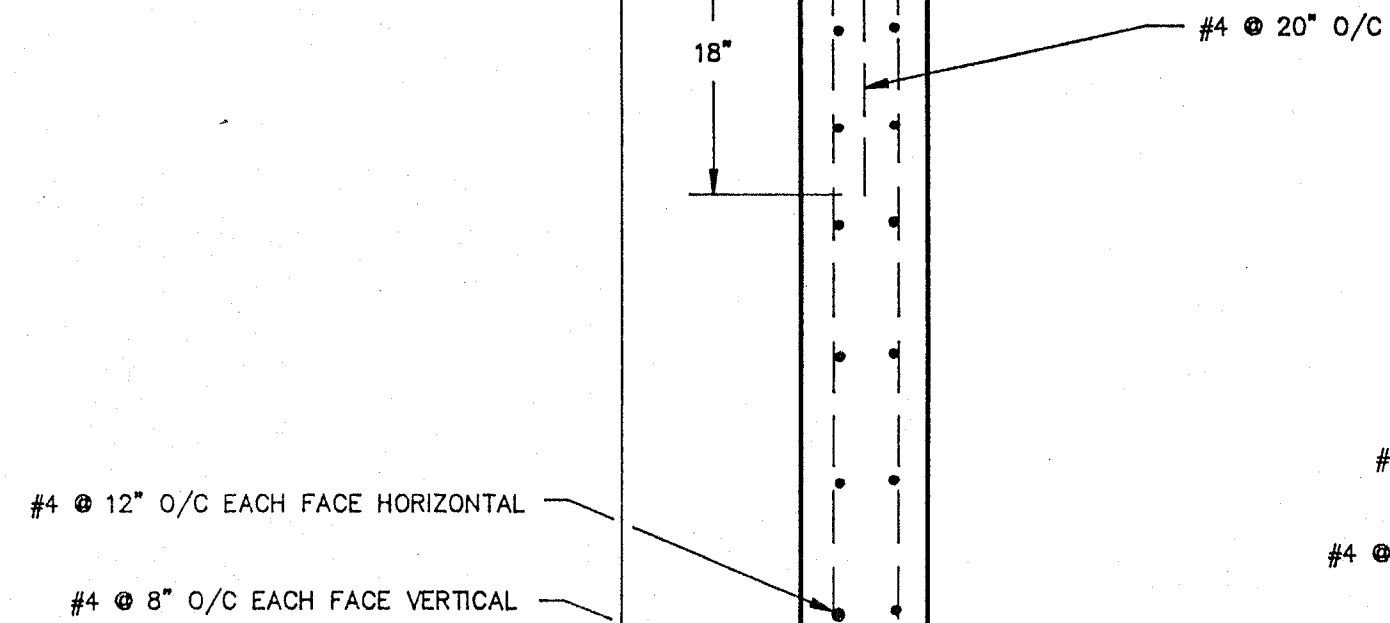


CHG.	DATE	DESCRIPTION
A	9/18/90	REDRAWN TO AS-BUILT CONDITION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
FOUNDATION PLAN		
SCALE	NOTED	DWG
DRAWN	RLK	NO.
CHECKED		
APPROVED	DATE	JOB NO.
	12/24/87	07070



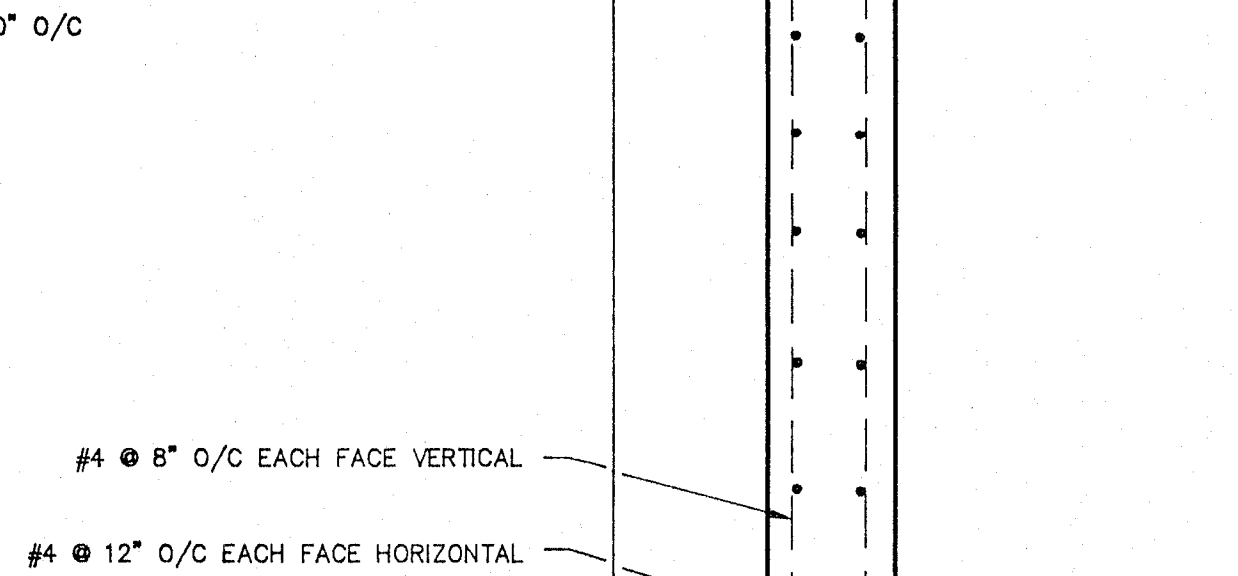
WALL CORNER (TYP.)
NONE

INTERFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE APPROX. 1/4\"/>



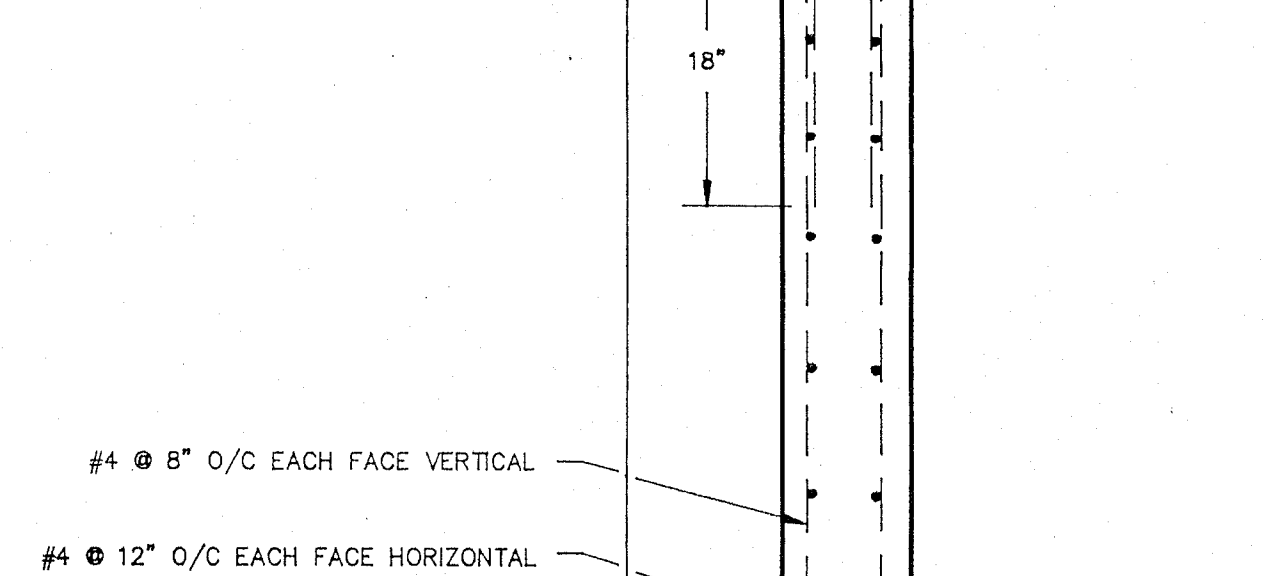
SECTION 1
1\"/>

INTERFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE APPROX. 1/4\"/>

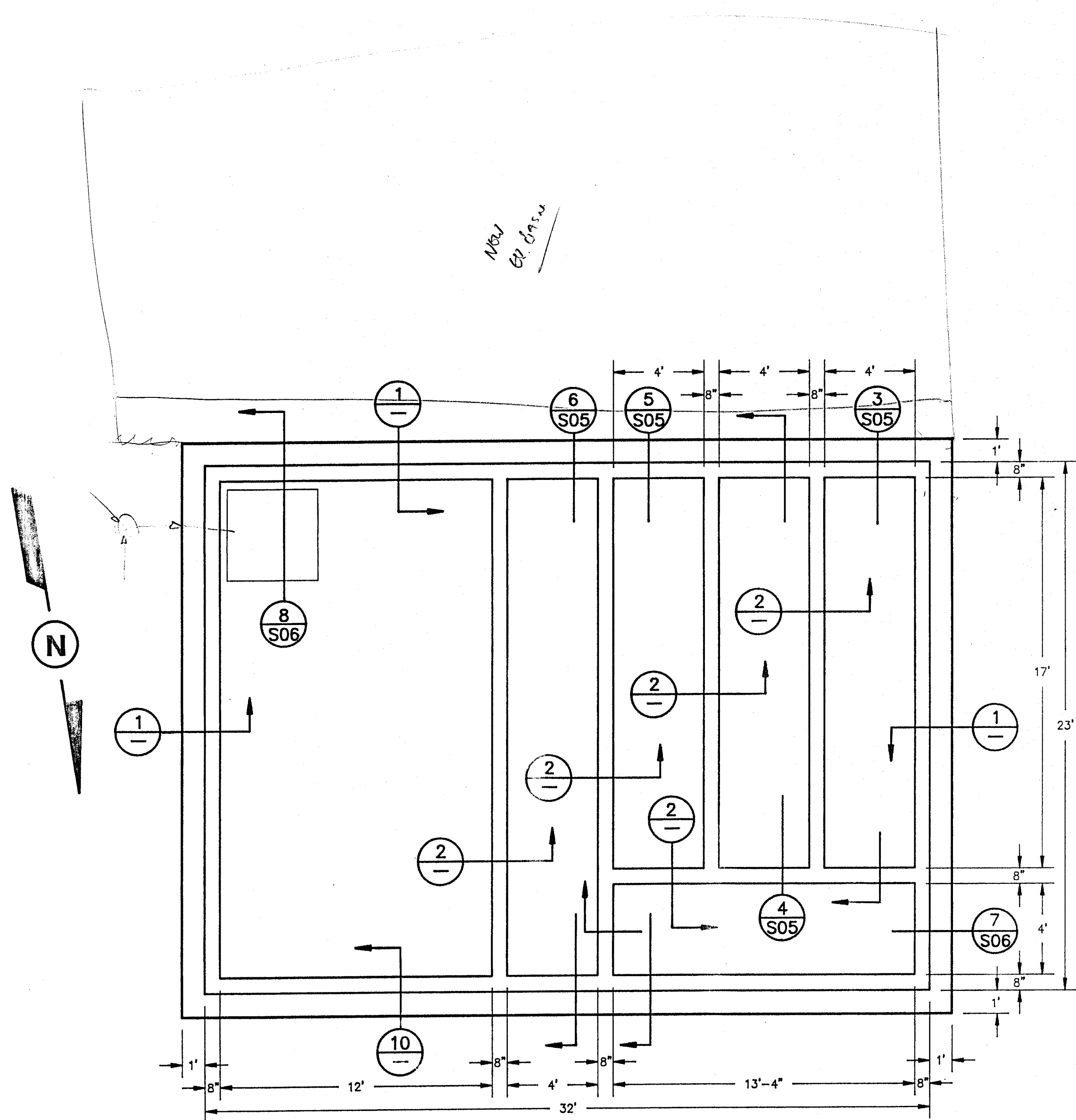


SECTION 2
1\"/>

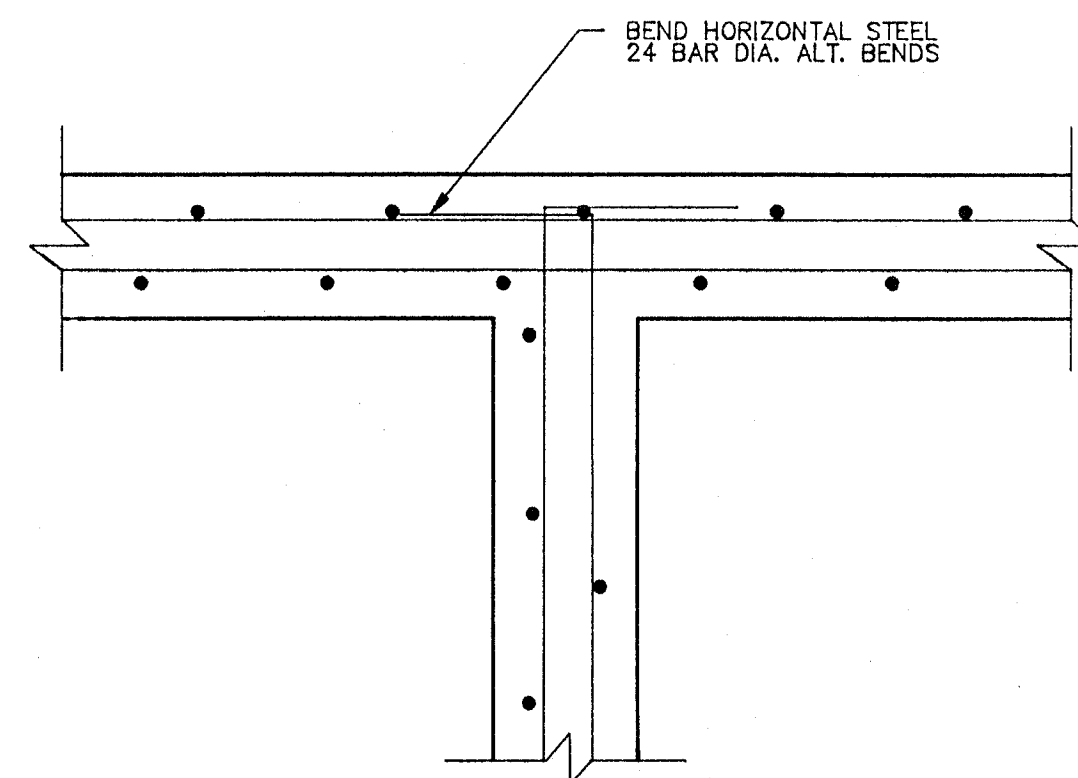
INTERFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE APPROX. 1/4\"/>



SECTION 10
1\"/>



PLAN VIEW
1/4\"/>



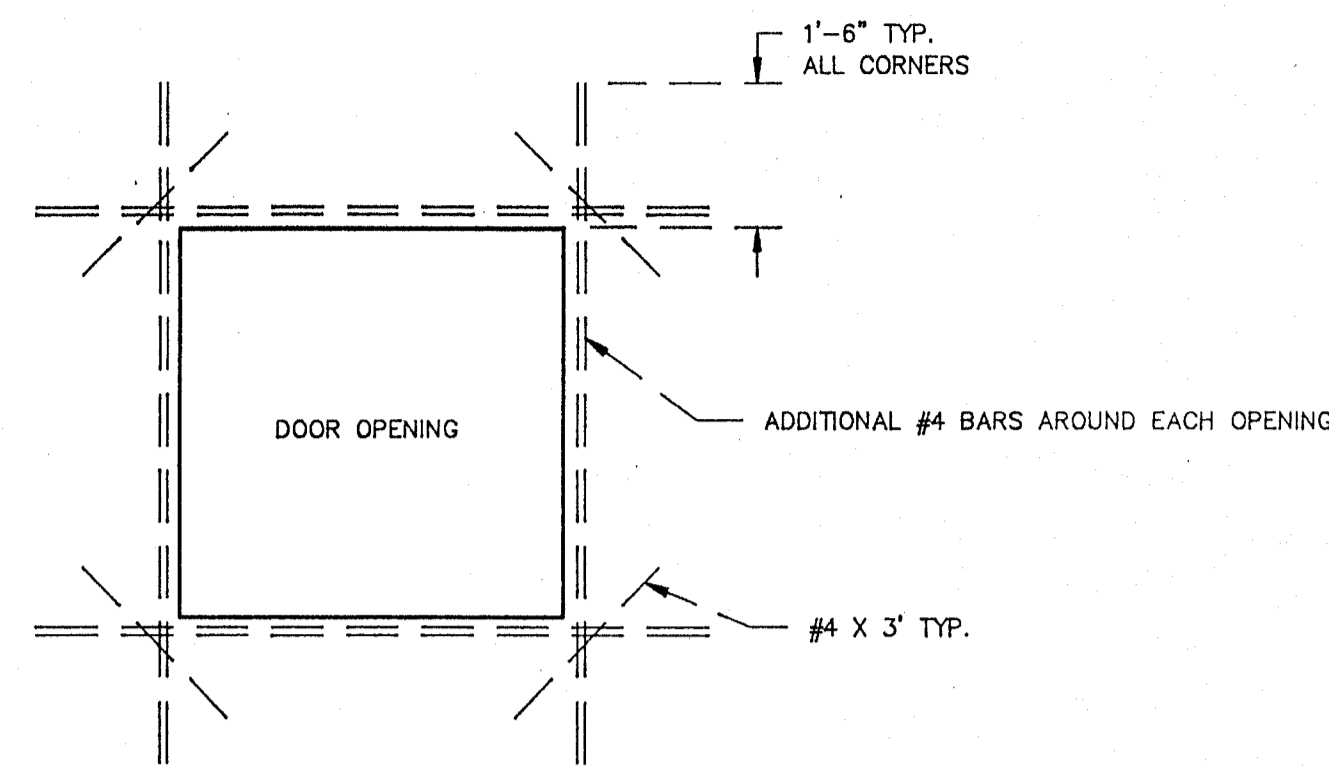
TEE INTERSECTION (TYP.)
NONE

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

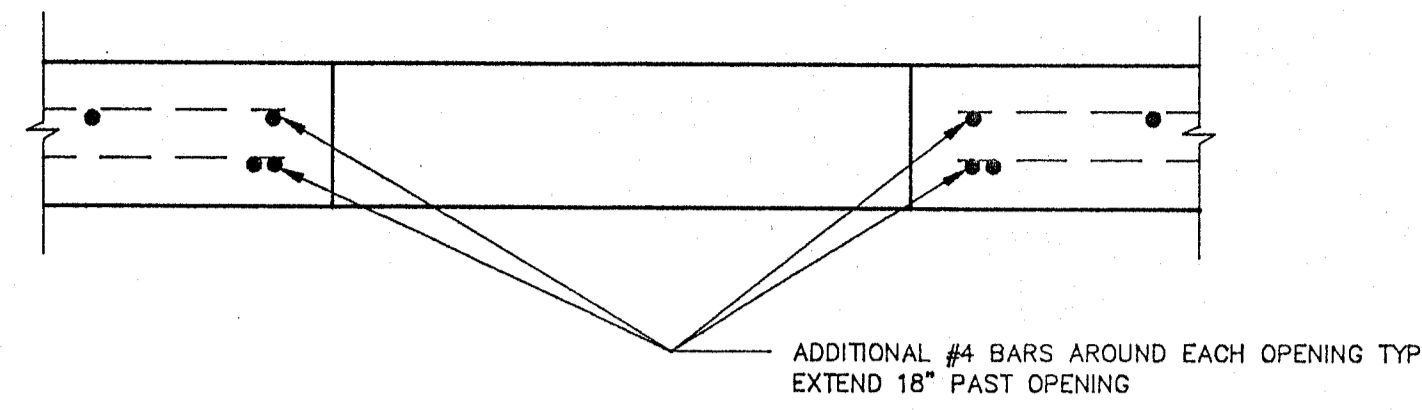
ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-567-4646

**WALLACE LAKE ESTATES
BASEWALL PLAN**

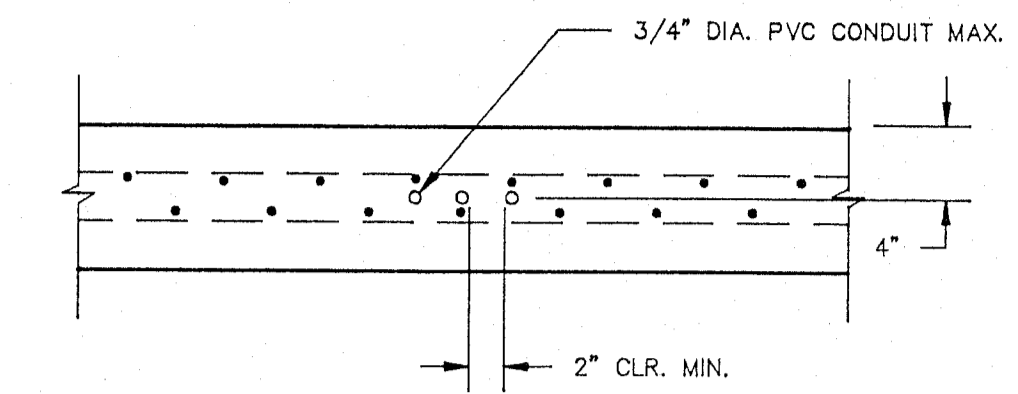
SCALE NOTED	D	S-02	OF
DRAWN RLK	W		
CHECKED	G		
APPROVED	NO.		
DATE	1/15/88	JOB NO. 07070	



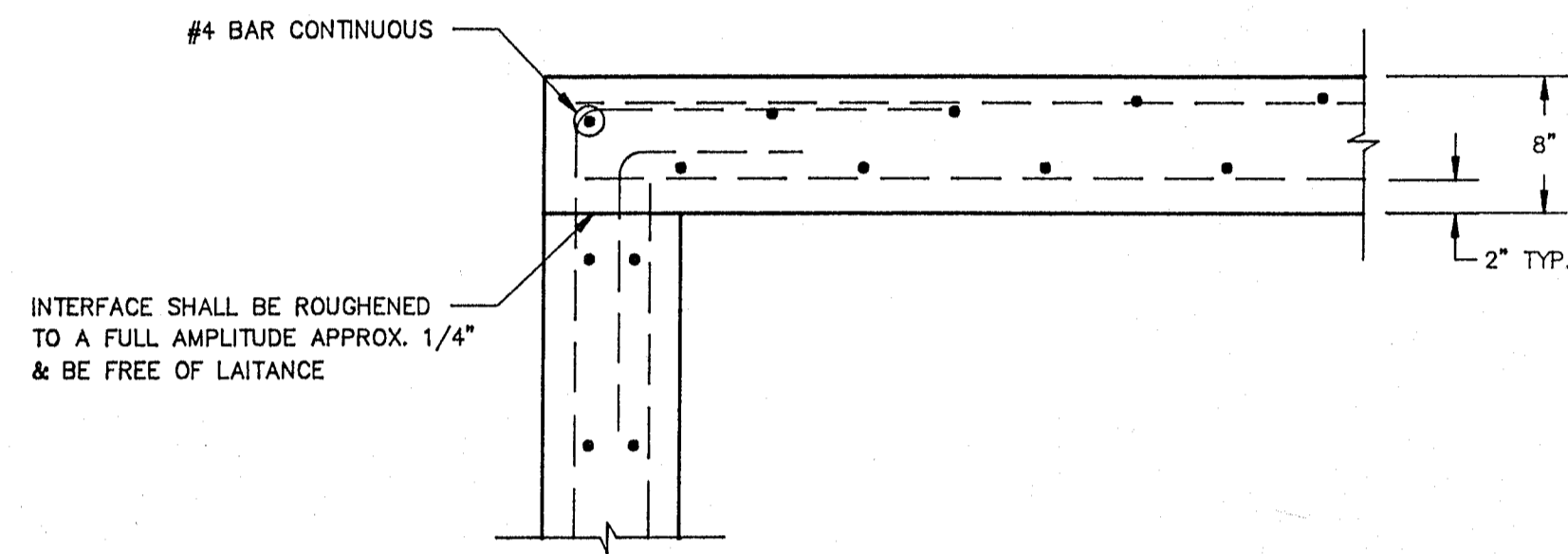
TYP. DOOR OPENING REBAR DETAIL
NONE



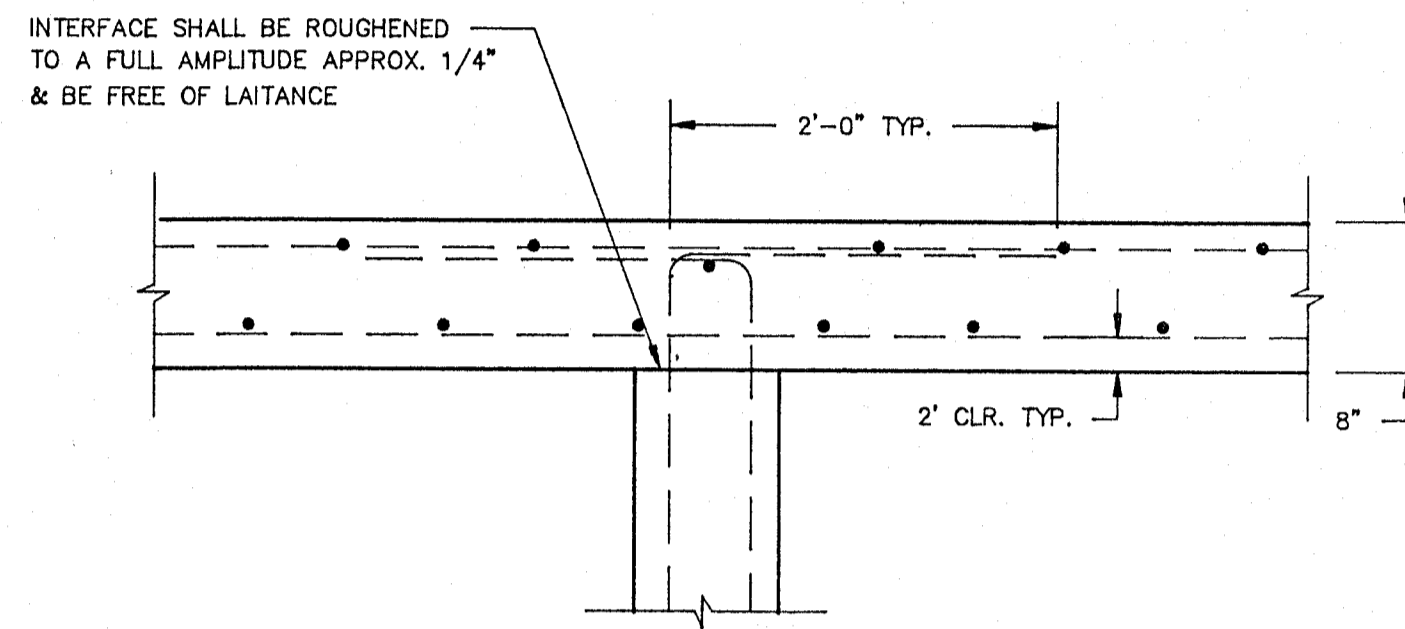
DOOR OPENING (TYP.)
NONE



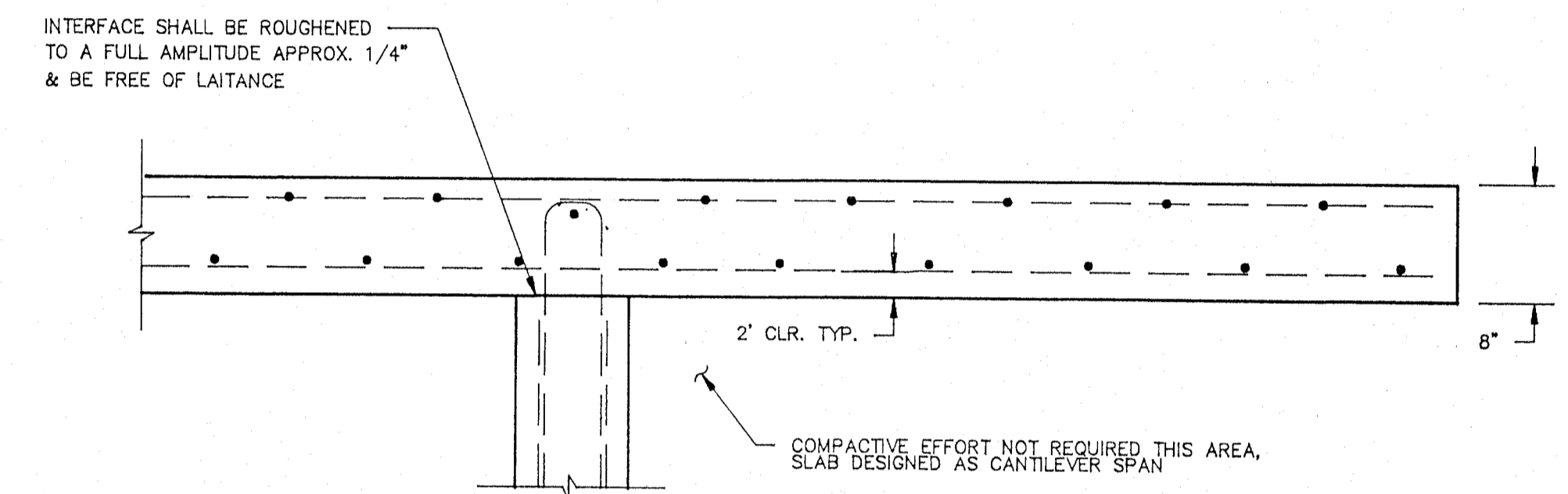
CONDUIT EMBEDMENT (TYP.)
1"=1'-0"



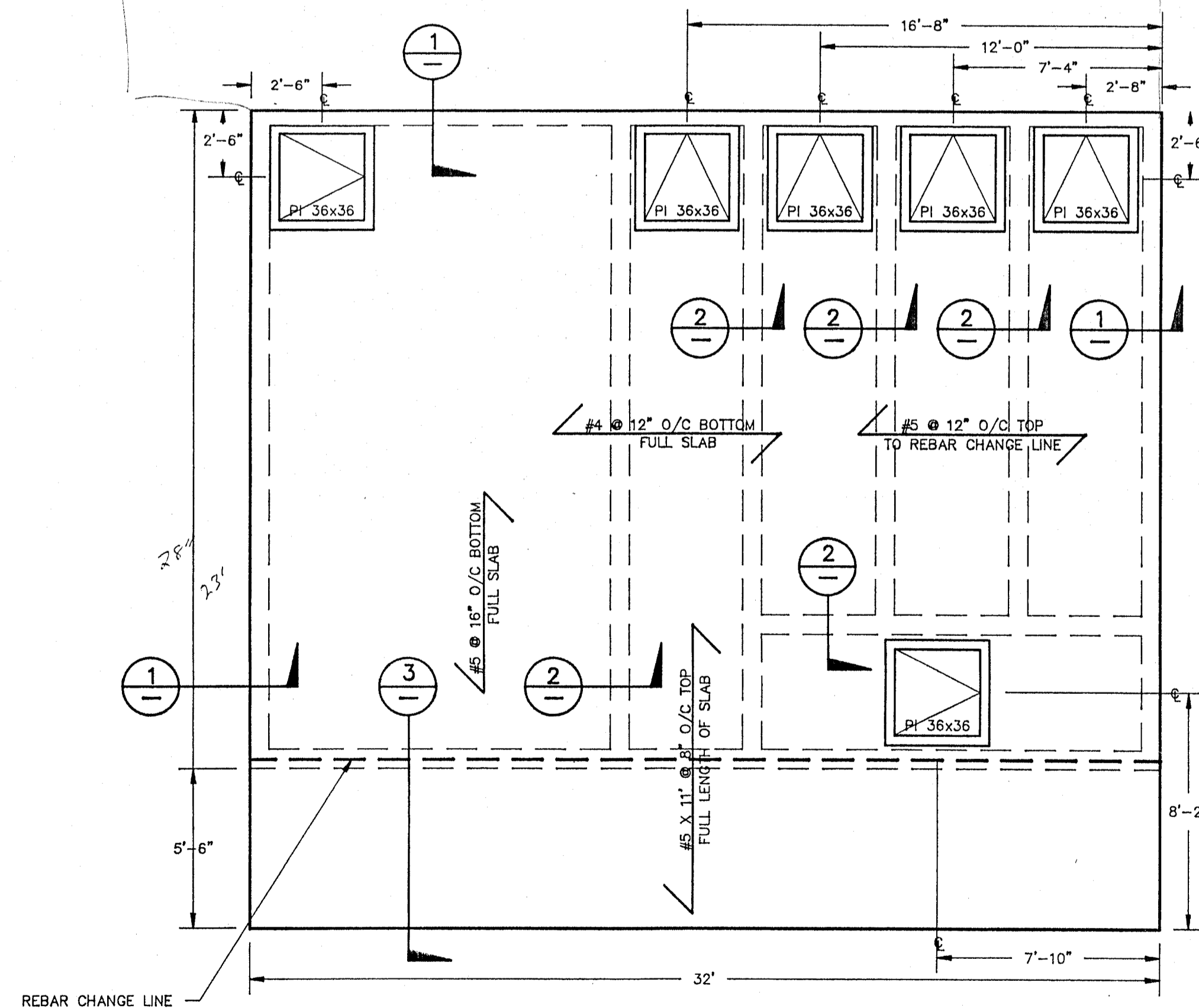
1 SECTION
1"=1'-0"



2 SECTION (SEE PLAN FOR REINFORCING LAYOUT)
1"=1'-0"



3 SECTION (SEE PLAN FOR REINFORCING LAYOUT)
1"=1'-0"



PLAN VIEW
1/4"=1'-0"

3/4" BUILDING ANCHOR BOLTS REQUIRED ON 4' CENTERS, AT EACH CORNER AND EACH SIDE OF ALL OPENINGS WITH A MINIMUM EMBEDMENT OF 7".

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

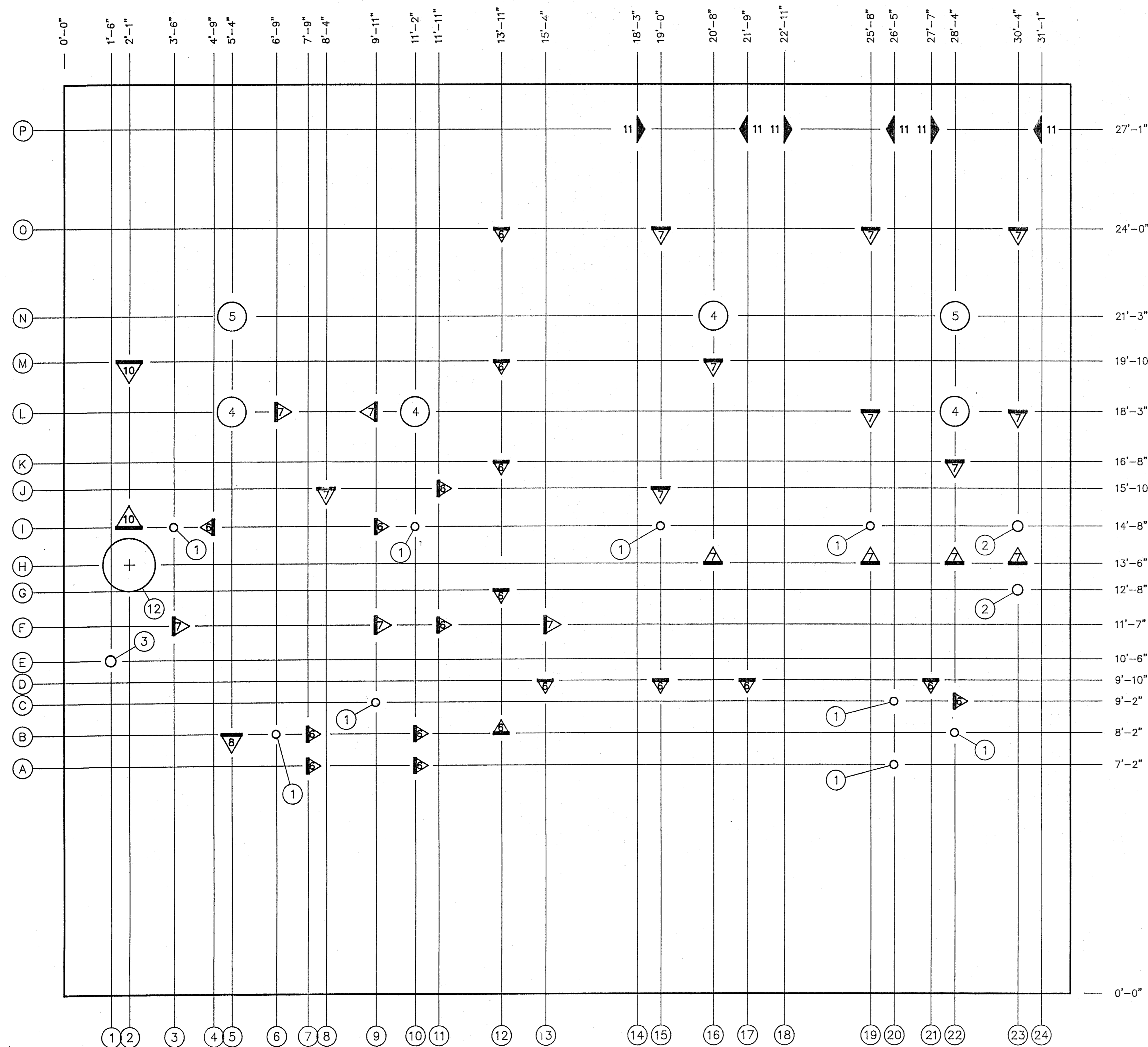
ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-867-4646

WALLACE LAKE ESTATES

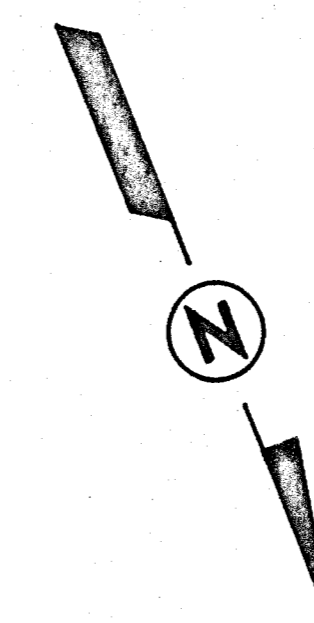
DECKING PLAN

SCALE	NOTED	D	S-03	OF
DRAWN	RLK	W		
CHECKED	NO.	G		
APPROVED	DATE	6/3/88		

LIST OF MATERIALS		
#	QTY	DESCRIPTION
1	9	3" x 8" PENETRATION, PVC
2	2	4" x 8" PENETRATION, PVC
3	4	6" FLANGED DRAIN PENETRATION, PVC
4	2	6" FLANGED AIR PENETRATION, PVC
5	1	4" CLOSET FLANGE, ABS
6	18	6"x5"x1/2" SUPPORT INSERT, PVC
7	18	7"x6"x1/2" SUPPORT INSERT, PVC
8	1	8"x7"x3/4" PENETRATION, PVC
10	2	10"x9"x1/2" SUPPORT INSERT, PVC
11	6	10"x3"SIDEX1/2" SUPPORT INSERT, PVC
12	1	18"Ø x 8" SDR35 COUPLING, PVC



PLAN VIEW



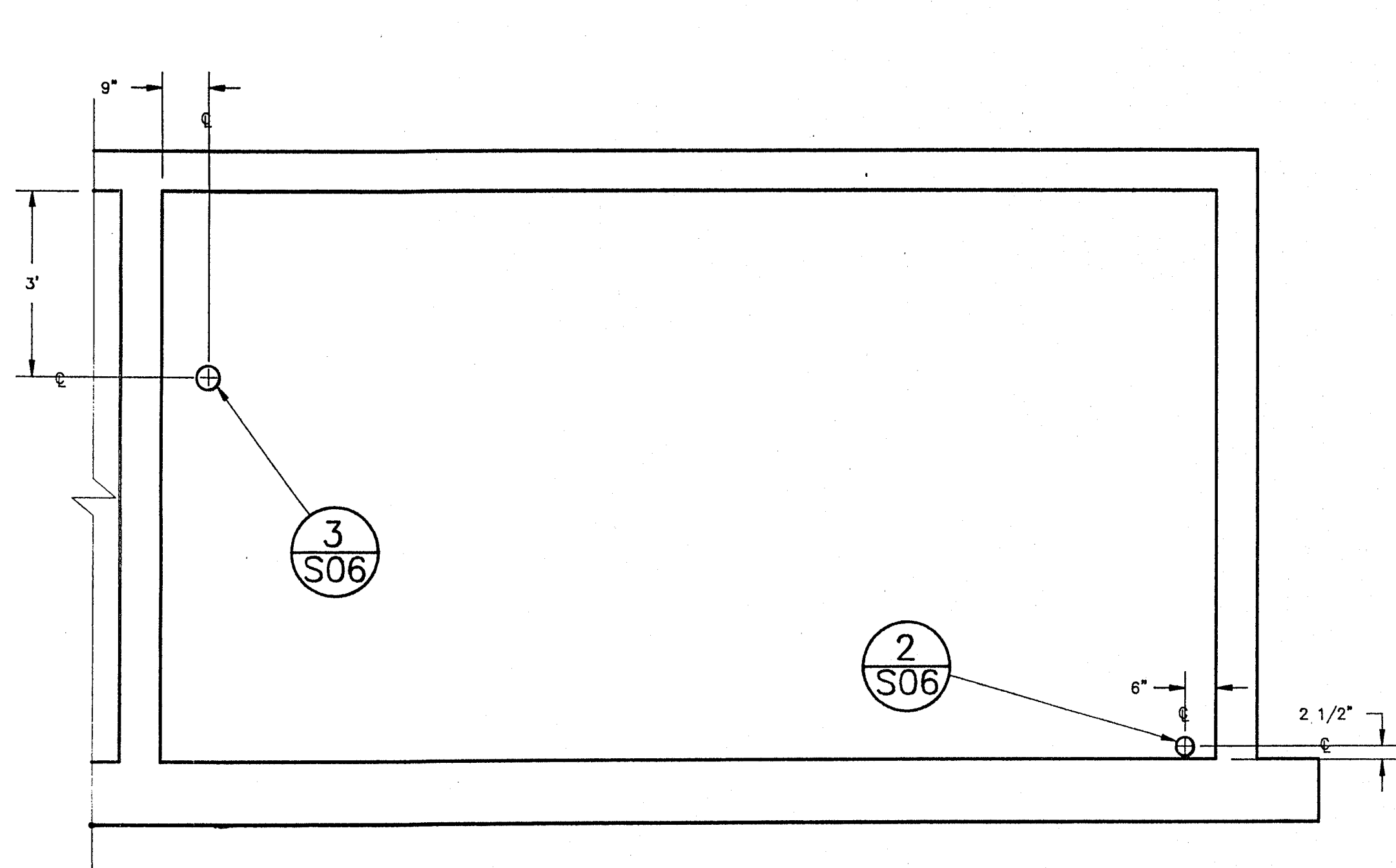
CHG.	DATE	DESCRIPTION
A	9/18/90	REDRAWN TO AS-BUILT CONDITION

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

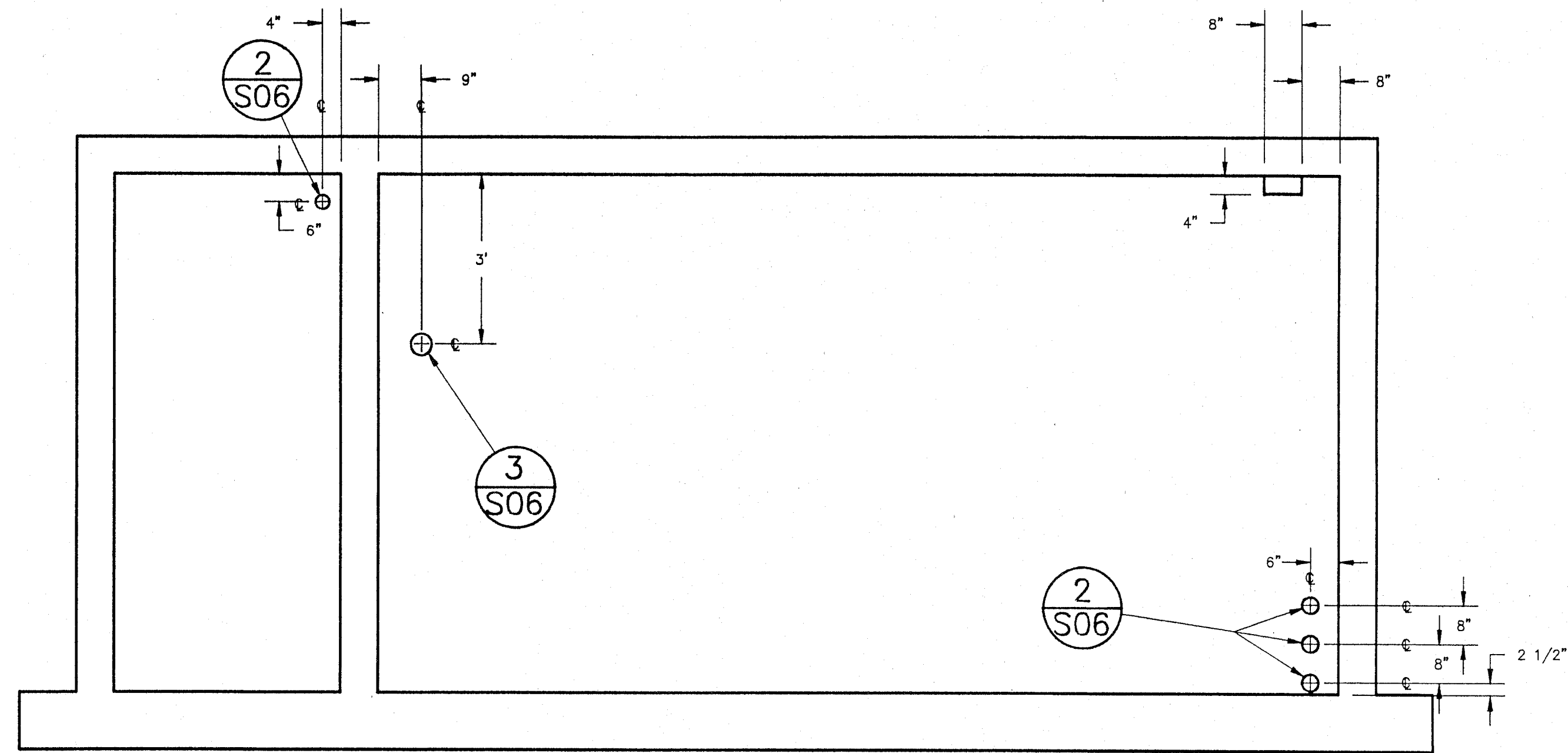
ALLIED ENGINEERS, INC.
 3000 Executive Parkway, Suite 112
 San Ramon, California 94583
 415-867-4646

WALLACE LAKE ESTATES
DECK PENETRATIONS

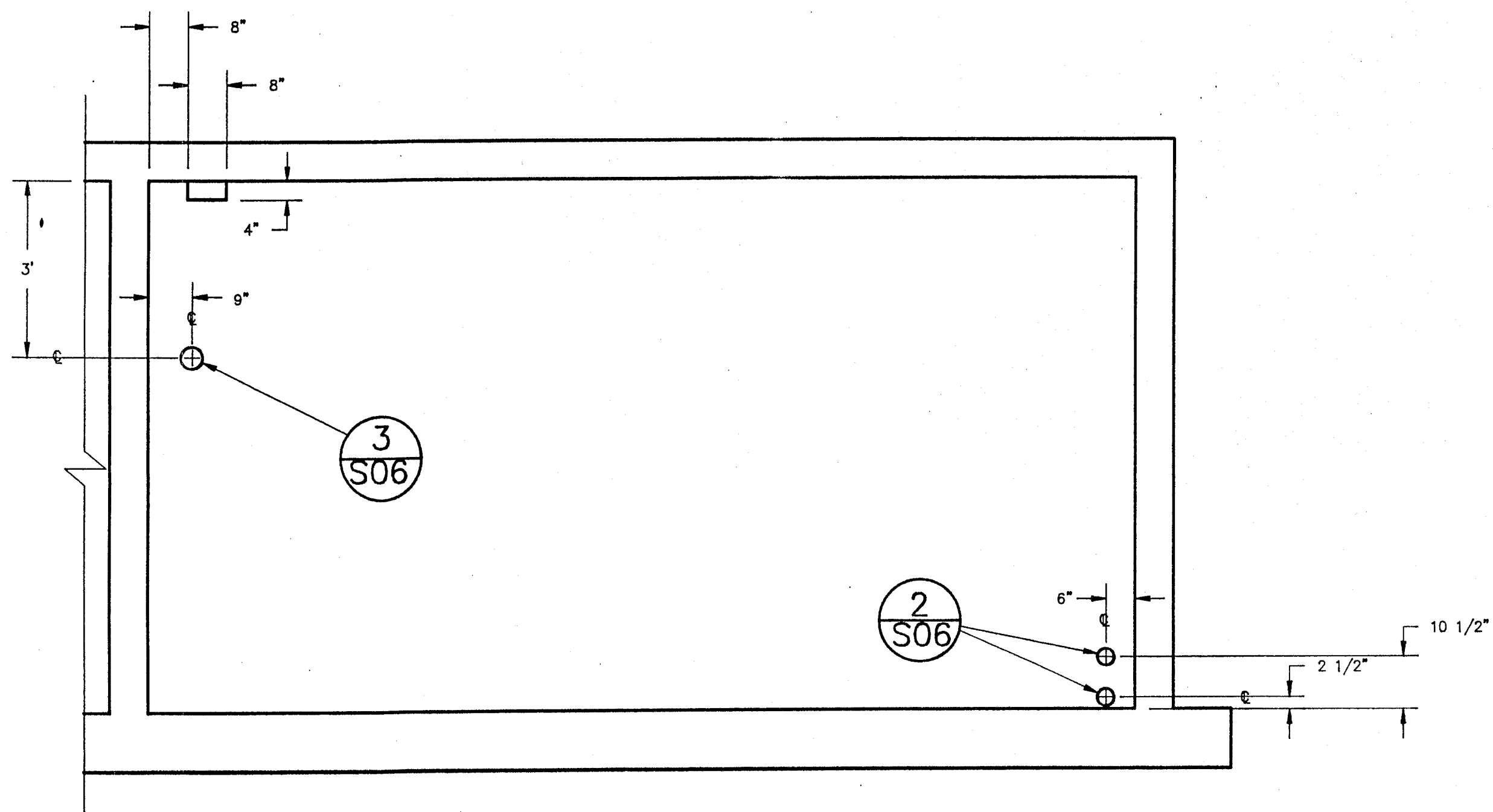
SCALE	1/2"=1'	D	S-04-A	OF
DRAWN	RCH	W		
CHECKED		G	NO.	
APPROVED	DATE	1/14/88	JOB NO.	07070



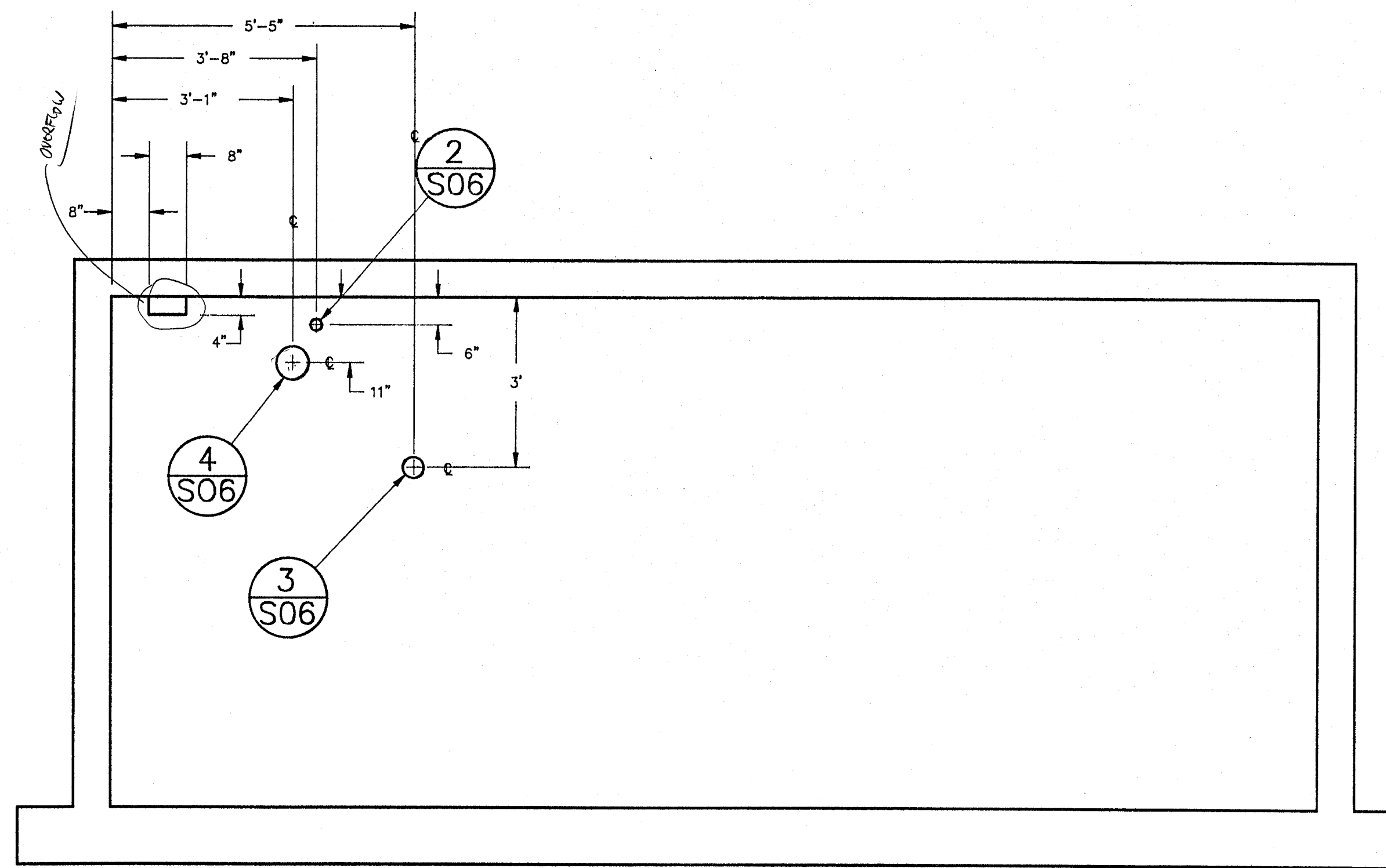
3 SECTION
S02 1/2"=1'-0"




5 SECTION
S02 1/2"=1'-0"

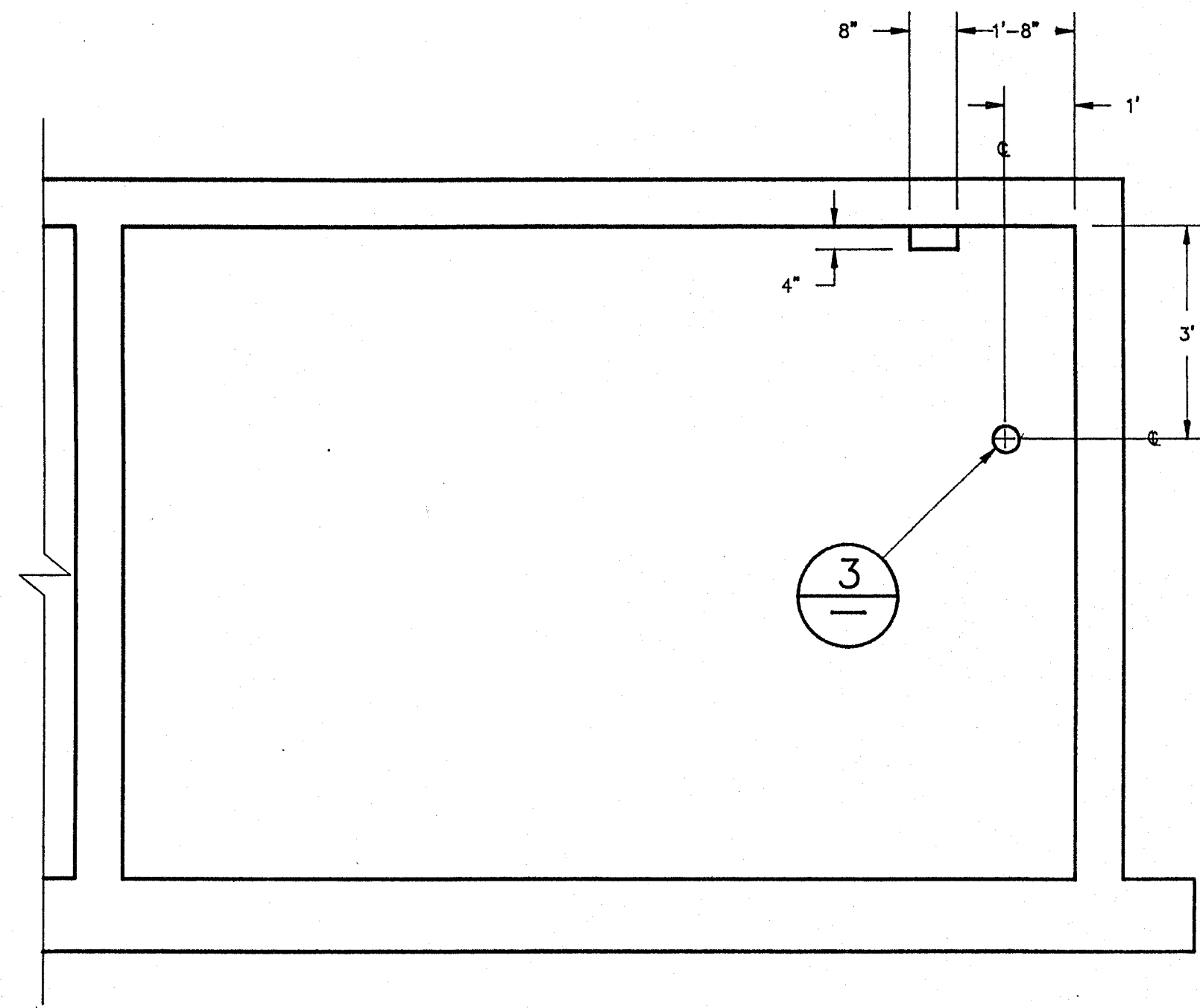


4 SECTION
S02 1/2"=1'-0"

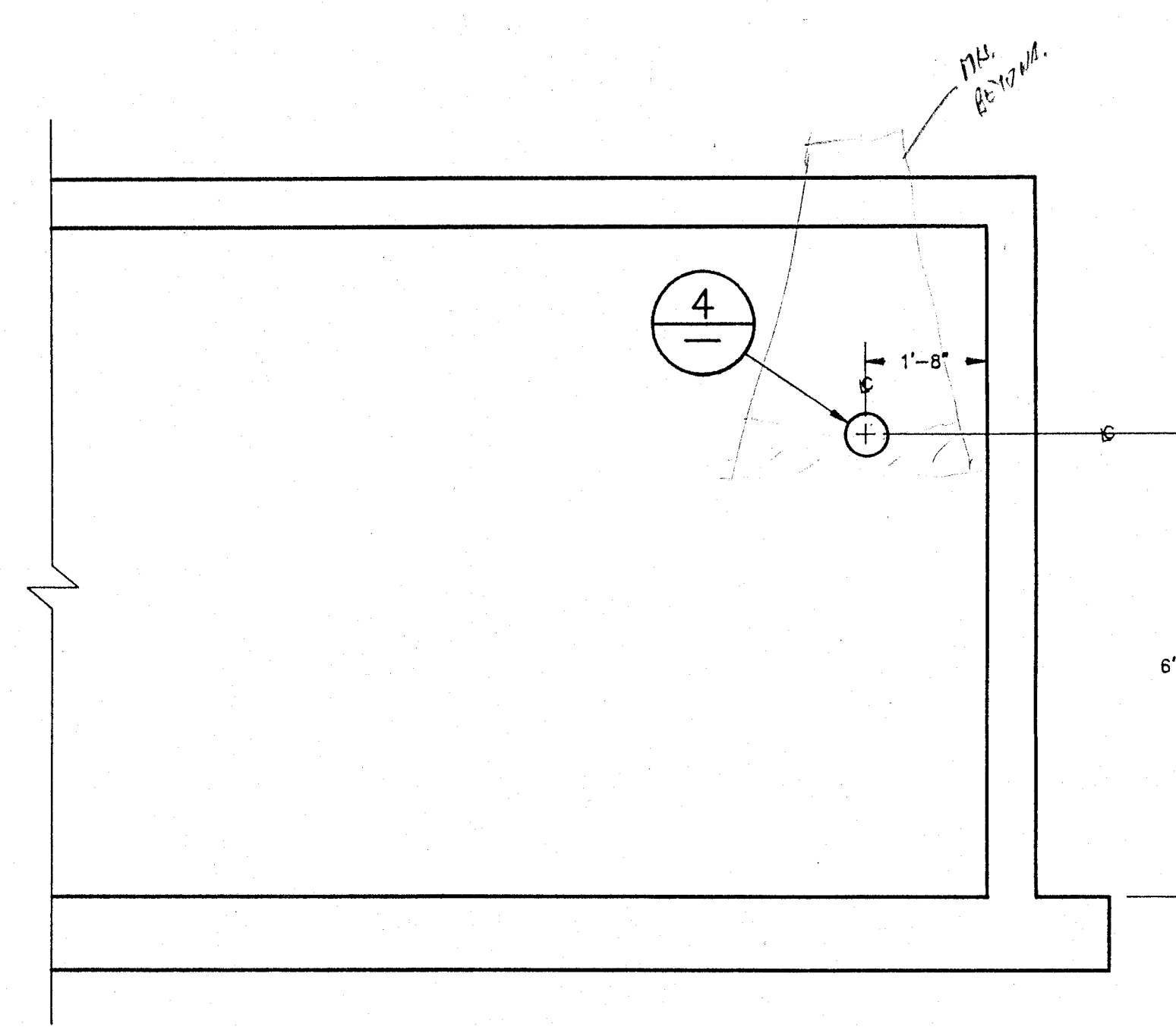


6 SECTION
S02 1/2"=1'-0"

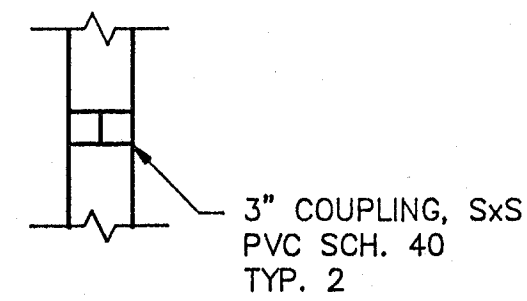
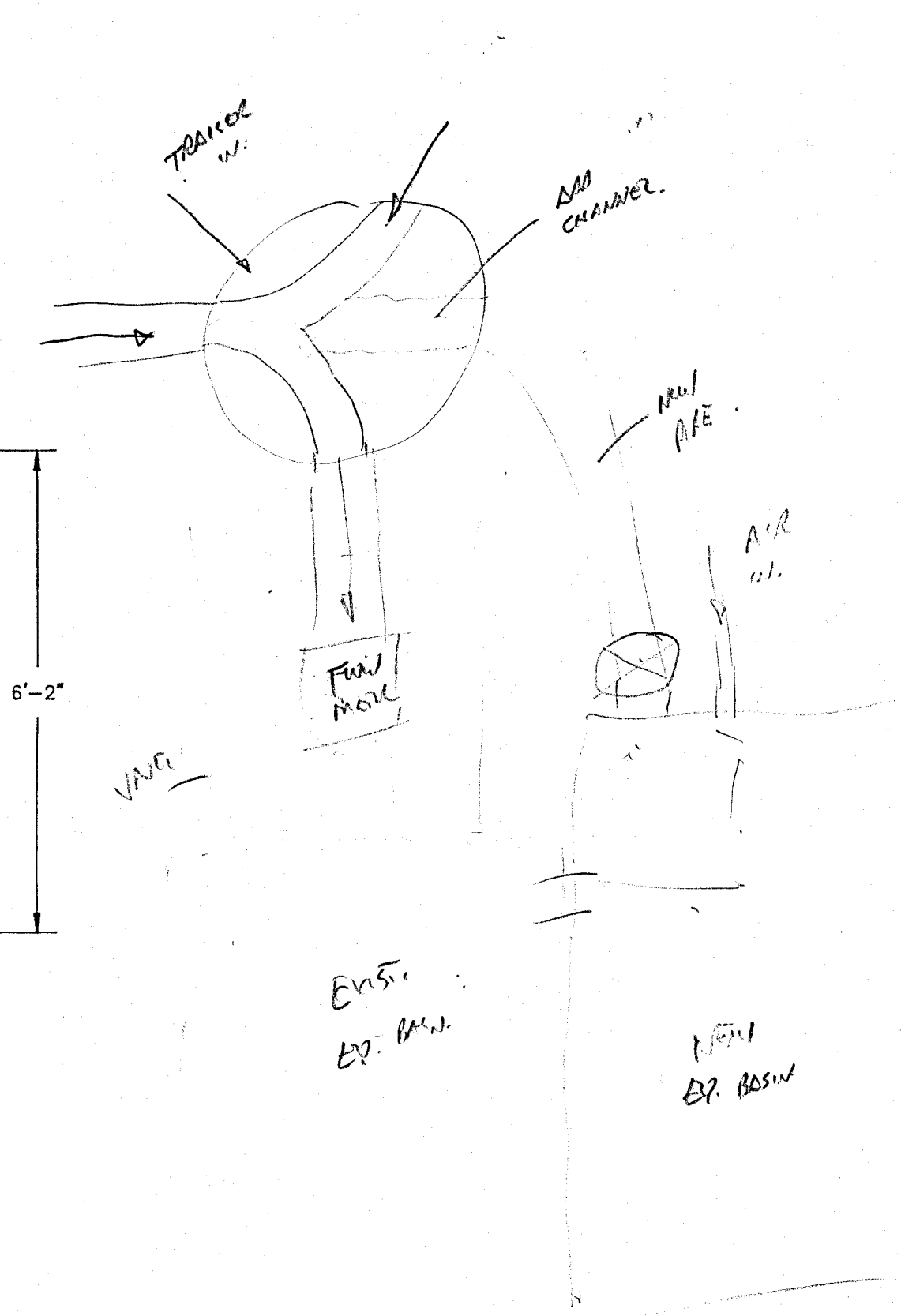
A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
WALL PENETRATIONS		
SCALE	NOTED	D W G
DRAWN	RCH	NO.
CHECKED		
APPROVED	DATE	1/14/88 JOB NO. 07070
		S-05-A
		OF



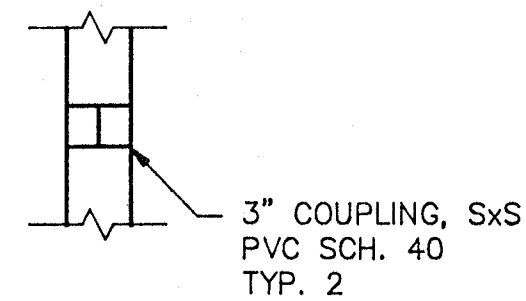
7 SECTION
S02 1/2"=1'-0"



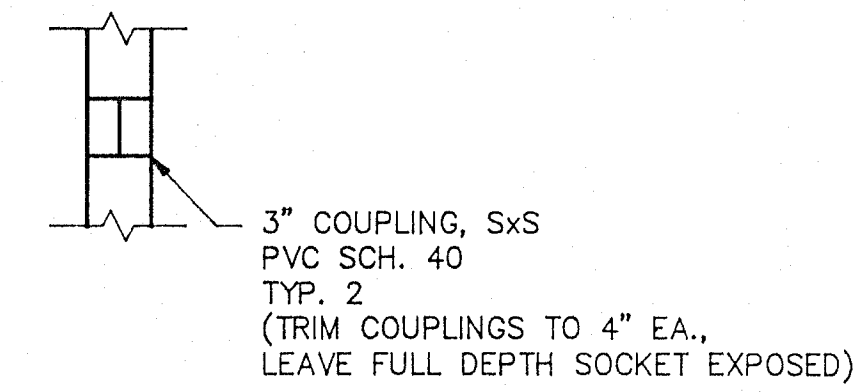
8 SECTION
S02 1/2"=1'-0"




2 3" SxS
1/2"=1'-0"



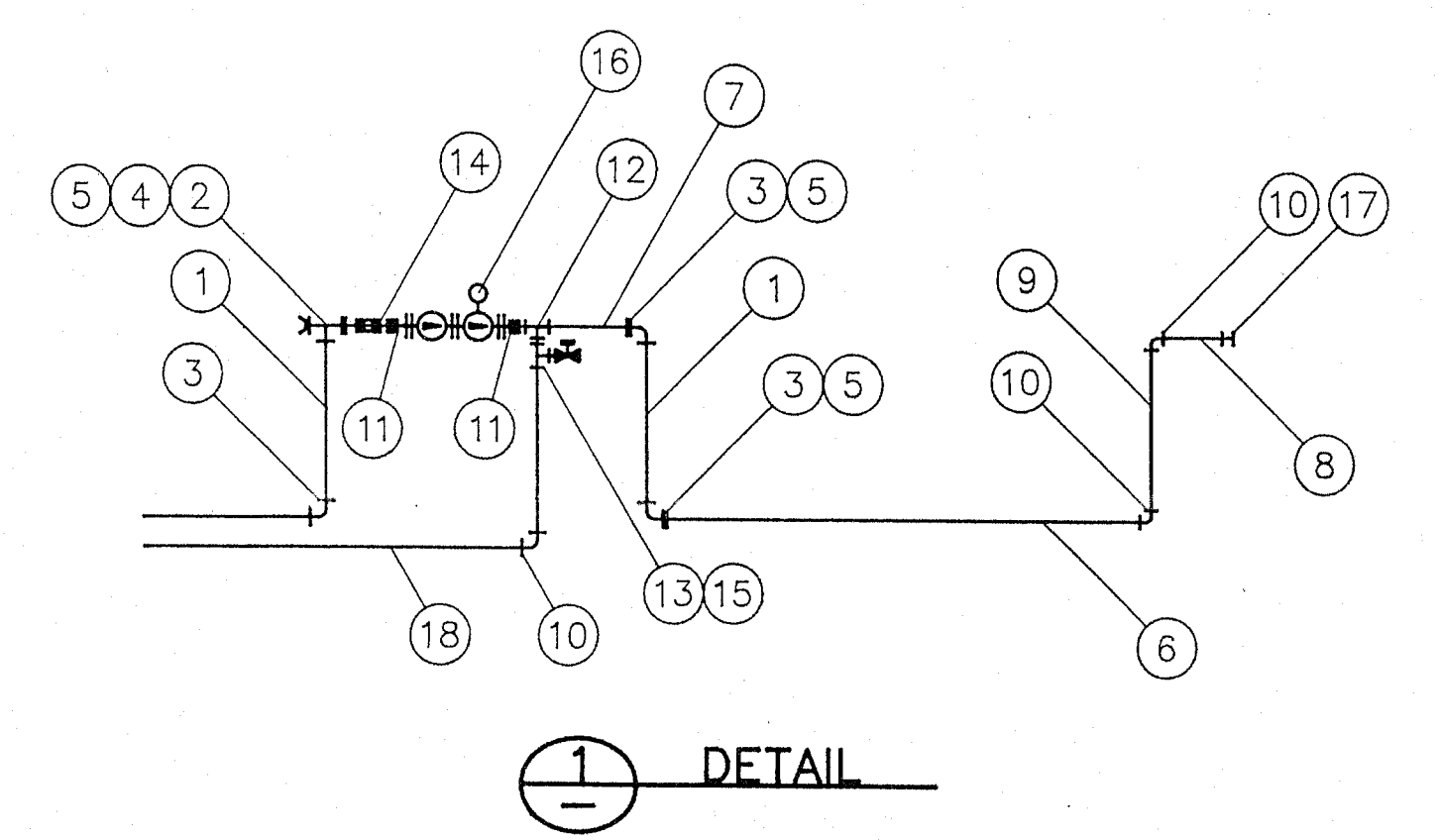
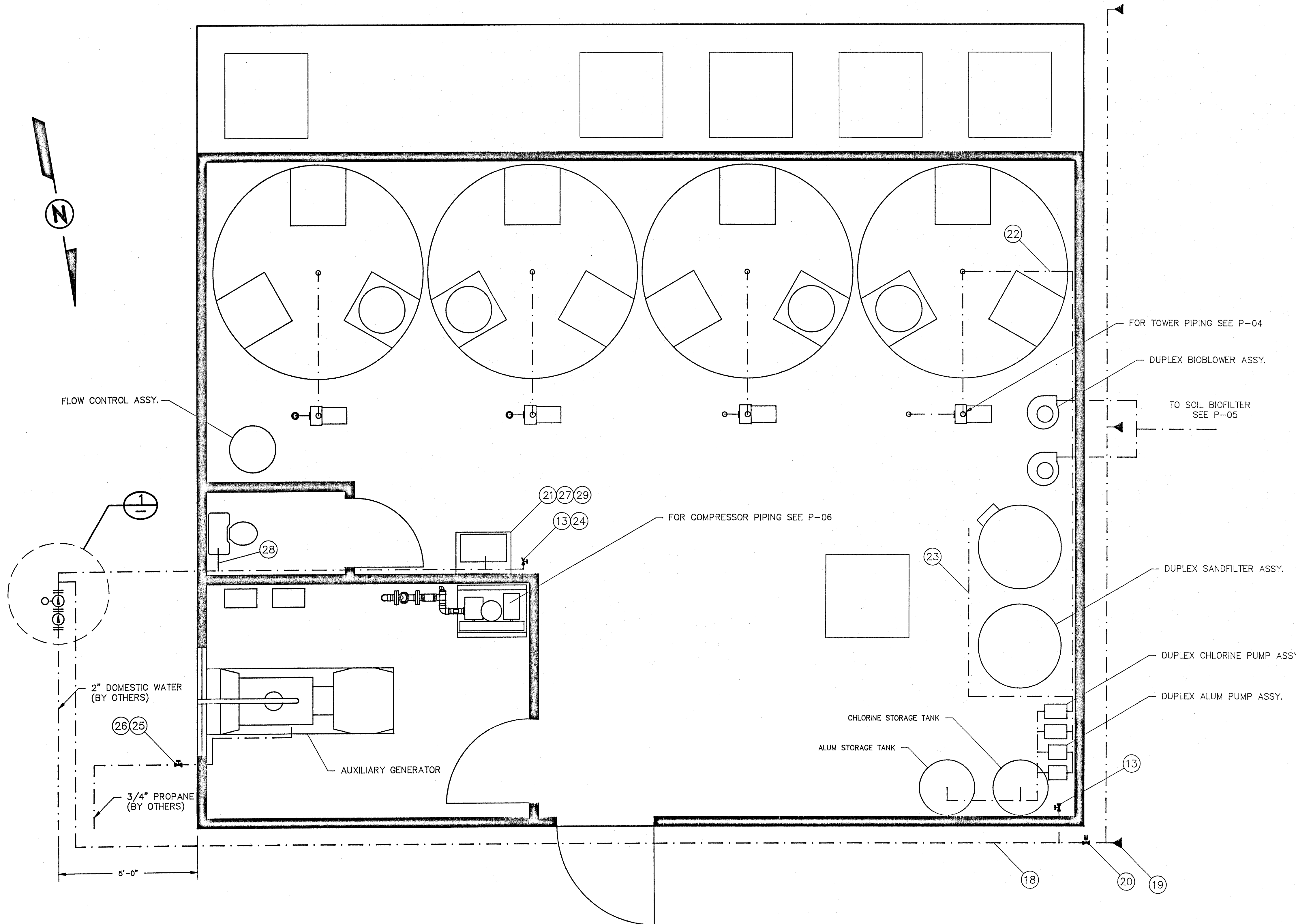
3 4" SxS
1/2"=1'-0"



4 6" SxS
1/2"=1'-0"

A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
WALL PENETRATIONS		
SCALE	NOTED	DWG
DRAWN	RCH	G
CHECKED	NO.	
APPROVED	DATE	
	1/14/88	JOB NO. 07070
S-06-A		OF

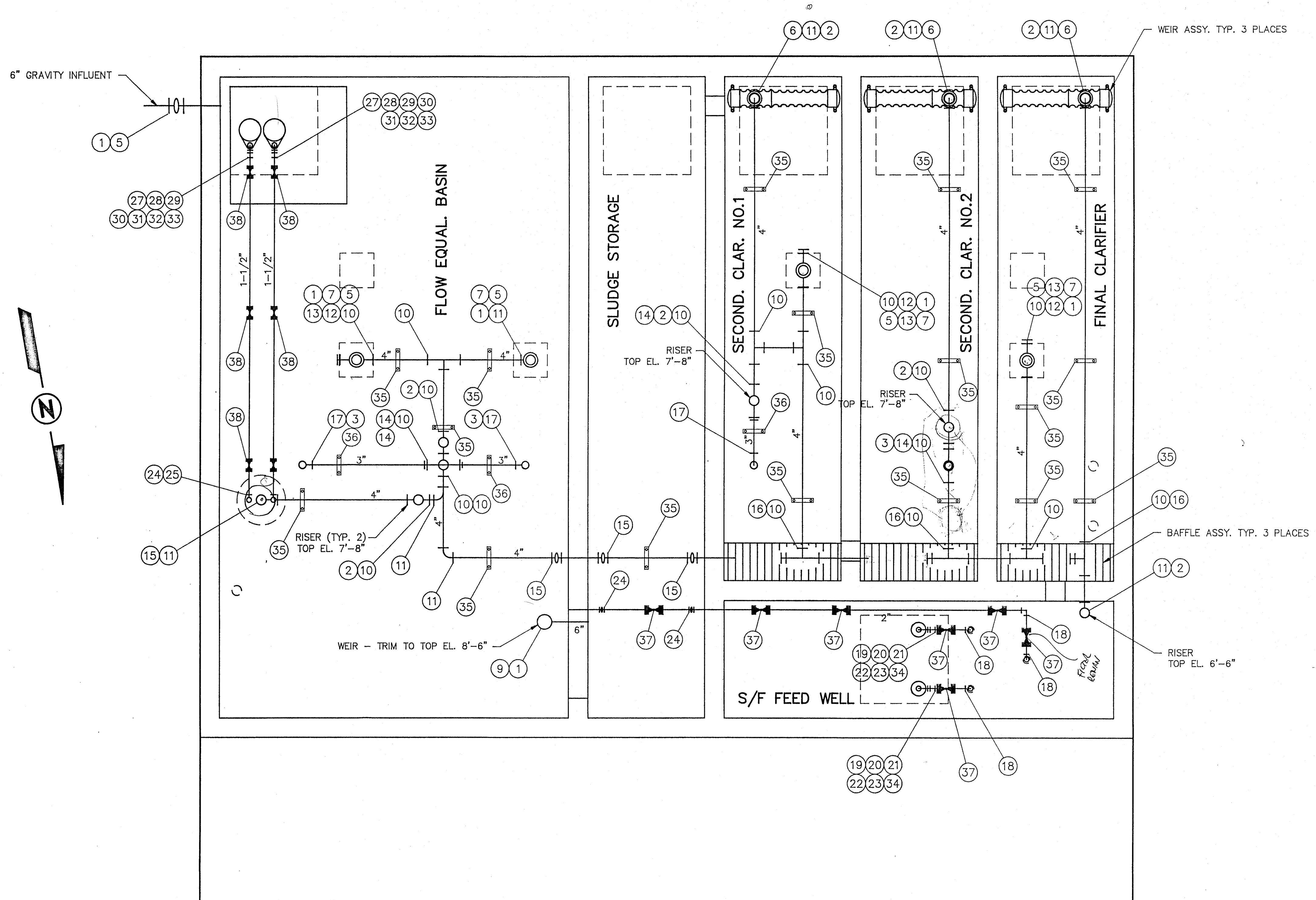
LIST OF MATERIALS		
#	QTY	DESCRIPTION
1	1	2"x24" PIPE GALV
2	1	2" TEE GALV
3	4	2" 90° ELL GALV
4	1	2" PLUG GALV
5	3	2x3/4 BUSHING GALV
6	1	3/4"x8" PIPE GALV
7	1	3/4"x12" NIPPLE GALV
8	1	3/4"x8" NIPPLE GALV
9	1	3/4"x24" PIPE GALV
10	3	3/4" 90° ELL GALV
11	2	3/4" UNION GALV
12	1	3/4" TEE GALV
13	3	3/4" HOSE BIB BRASS
14	1	3/4" GLOBE VALVE BRASS
15	5	3/4" CLOSE NIPPLE GALV
16	1	3/4" RP BACKFLOW PREVENTER
17	1	3/4" COUPLING GALV
18	A/R	3/4" PIPE GALV
19	3	SPRAY NOZZLE
20	1	IRRIGATION VALVE ASSY.
21	1	UTILITY SINK
22	A/R	1/4" TYGON TUBING (ALUM)
23	A/R	1/4" "BEV-A-LINE" TUBING (HYPOCHLORITE)
24	A/R	3/4" PIPE PVC 80
25	1	3/4" GAS SHUTOFF VALVE
26	A/R	3/4" BLACK IRON PIPE
27	1	1/2" FLEX LAVATORY CONNECTOR
28	1	1/2" FLEX TOILET CONNECTOR
29	1	1-1/2" P-TRAP, ABS DWV



PLAN VIEW
1/2"=1'-0"

A	9/25/90	REDRAWN TO AS-BUILT CONDITION
CHG	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
ABOVE DECK PLUMBING		
SCALE NOTED	DWG	P-01-A OF
DRAWN RCH	G	
CHECKED	NO.	
APPROVED	DATE	9/25/90 JOB NO. 07070

LIST OF MATERIALS	
#	QTY DESCRIPTION
1	16' 6" PIPE, PVC 40
2	120' 4" PIPE, PVC 40
3	26' 3" PIPE, PVC 40
4	44' 2" PIPE, PVC 40
5	5 6" FLEX COUPLING
6	3 6x4 FLEX COUPLING
7	4 6x4 REDUCER, PVC DWV
8	
9	1 6" 90 ELL, PVC SCH 40
10	17 4" 2-WAY CLEANOUT, PVC DWV
11	8 4" DOUBLE 45 ELL, PVC DWV
12	3 4" CLEANOUT ADAPTER, PVC DWV SPGXTHD
13	3 4" PLUG, PVC DWV THD
14	4 4x3 BUSHING, SPGXH, PVC DWV
15	4 4" FLEX COUPLING
16	3 4" FLEX CAP
17	3 3" DOUBLE 45 ELL, PVC DWV
18	4 2" 90 ELL, PVC 40 SOC
19	2 2" 90 ELL, PVC 40 SxT
20	2 2" FEMALE ADAPTER, PVC 40
21	2 2" FEMALE Q/D x MPT, NYGLASS
22	2 2" MALE Q/D x MPT, NYGLASS
23	2 2" MALE ADAPTER PVC 40
24	2 2" FLEX COUPLING
25	2 1-1/2" 90 ELL, PVC 40 SOC
26	2 1-1/2" MALE ADAPTER, PVC 40
27	2 1-1/2" 90 ELL, PVC 40 SxT
28	2 1-1/2" ADAPTER, MPTxHOSE, NYGLASS
29	2 1-1/2" FEMALE Q/D x HOSE, NYGLASS
30	2 1-1/2" MALE Q/D x MPT, NYGLASS
31	15' 1-1/2" HOSE, SPIRAFLEX 2700
32	24' 1-1/2" PIPE, PVC 40
33	2 LIFT PUMP
34	2 SAND FILTER FEED PUMP
35	17 4" PIPE HANGER ASSY.
36	3 3" PIPE HANGER ASSY.
37	7 2" PIPE HANGER ASSY.
38	6 1-1/2" PIPE HANGER ASSY.



PLAN VIEW
1/2"=1'-0"

CHG	DATE	DESCRIPTION
A	9/25/90	REDRAWN TO AS-BUILT CONDITION

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-867-4646

WALLACE LAKE ESATES
PROCESS PLUMBING

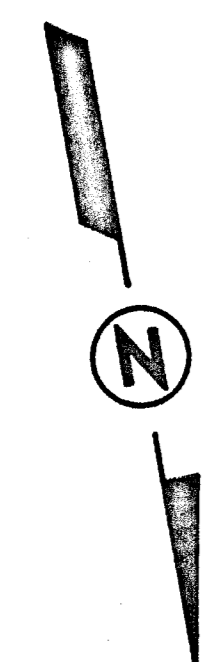
SCALE	NOTED	D	W	G	OF
DRAWN	RCH				
CHECKED	NO.				
APPROVED	DATE	9/25/90	JOB NO.	07070	

P-02-A

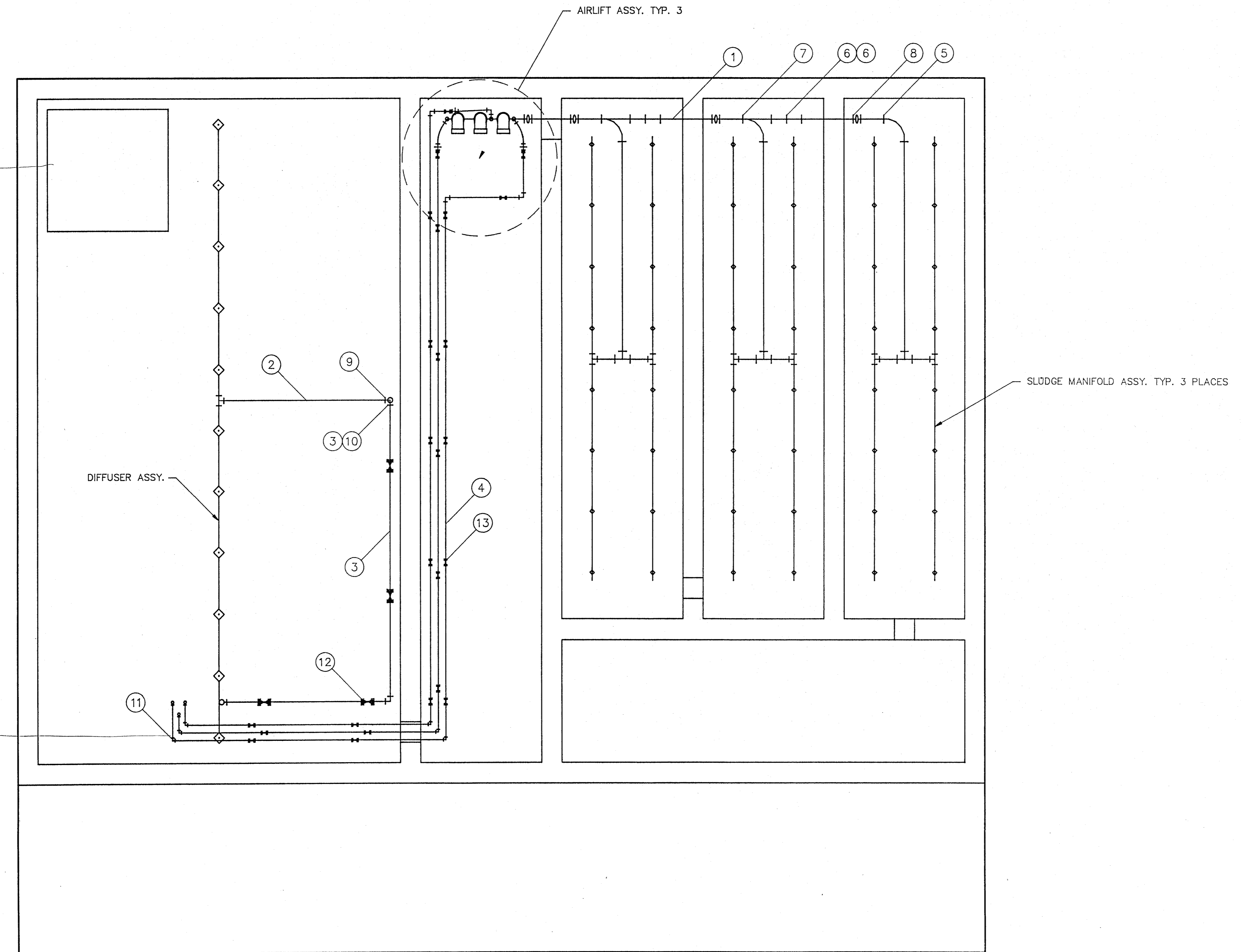
LIST OF MATERIALS

#	QTY	DESCRIPTION
1	34'	3" PIPE PVC 40
2	6'	2" PIPE PVC 40
3	30'	2" PIPE CPVC 80
4	100'	3/4" PIPE PVC 40
5	1	3" 1/4 BEND PVC DWV HxH
6	4	3" 1/8 BEND PVC DWV HxH
7	2	3" SAN TEE PVC DWV HxHxH
8	4	3" FLEX COUPLING
9	1	90 ELL PVC 40 SOC
10	3	2" 90 ELL CPVC 80 SOC
11	12	3/4" 90 ELL PVC 40 SOC
12	4	2" PIPE HANGER
13	25	3/4" PIPE HANGER
14	3	3/4" FEMALE ADAPTER PVC 40

NOTES:
 1. FOR PIPE HANGER DETAILS SEE P-08
 2. CENTER MANIFOLDS IN TANKS



SCHEDULE 40 STD.



PLAN VIEW
 1/2"=1'-0"

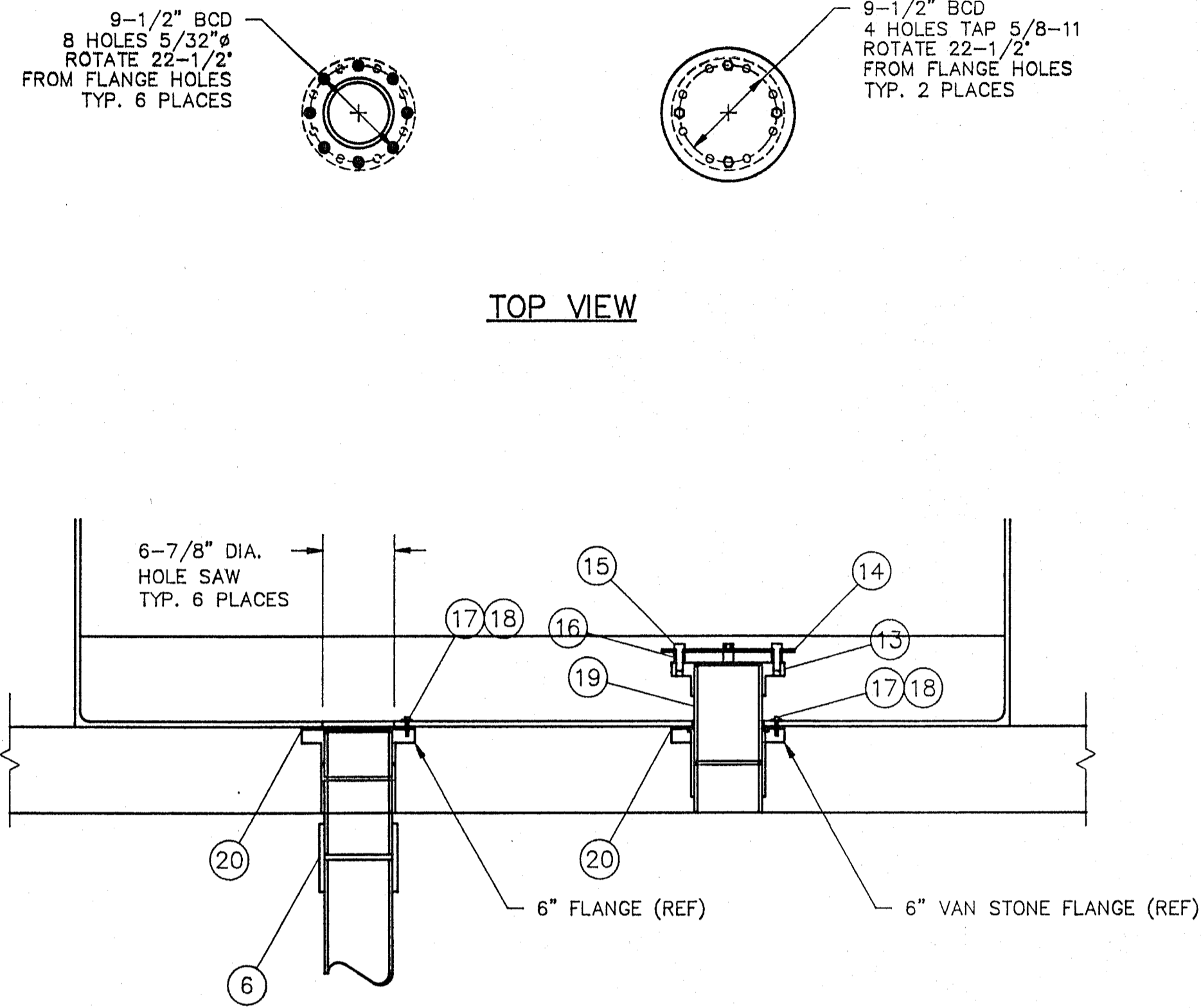
CHG	DATE	DESCRIPTION
A	9/25/90	REDRAWN TO AS-BUILT CONDITION

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
 3000 Executive Parkway, Suite 112
 San Ramon, California 94583
 415-867-4646

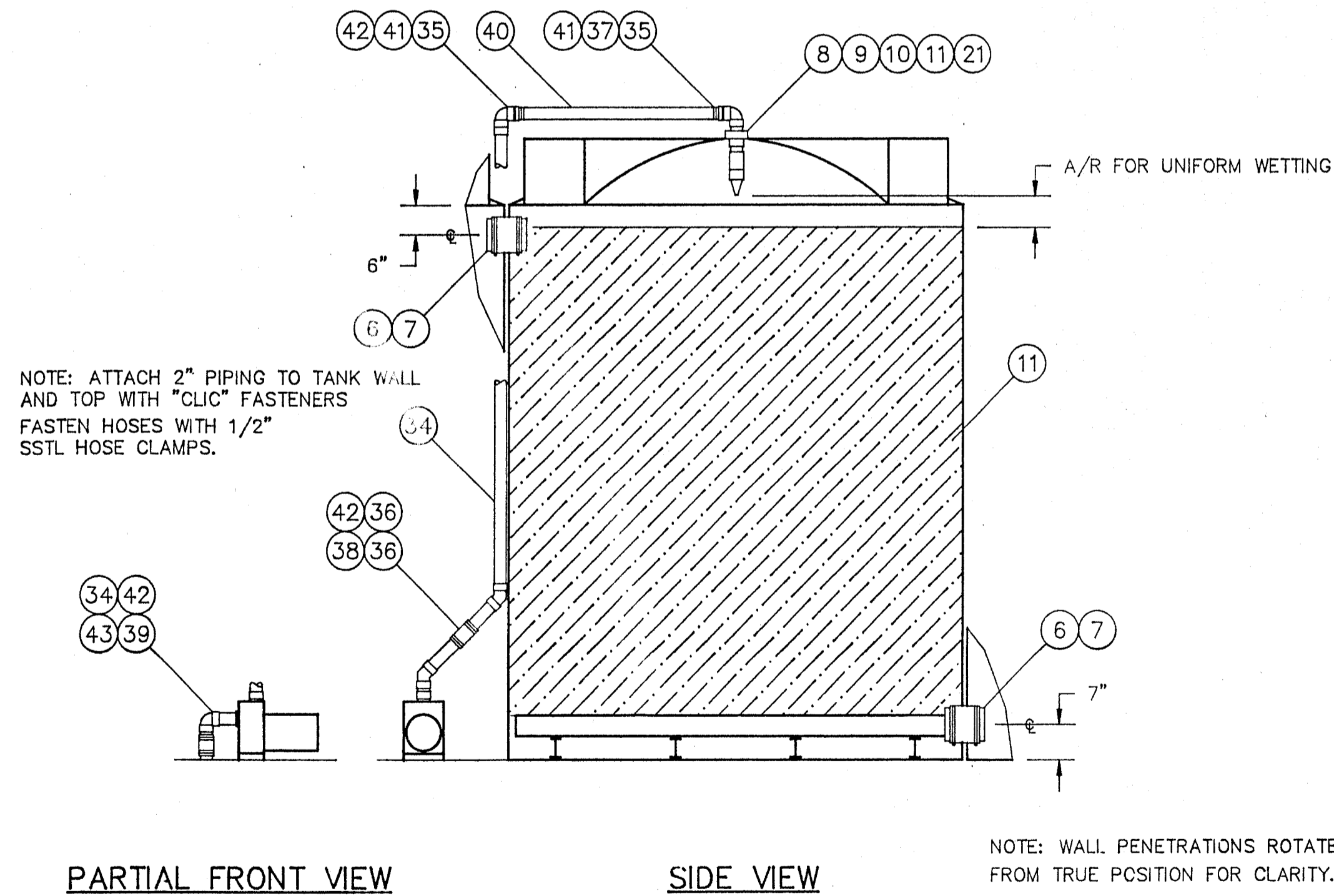
WALLACE LAKE ESTATES
MANIFOLD PLUMBING

SCALE NOTED	DWG	NO.	P-03-A	OF
DRAWN RCH	NO.			
CHECKED	DATE	9/25/90	JOB NO.	07070
APPROVED				



TANK FLOOR PENETRATIONS

SCALE: 1"=1'-0"

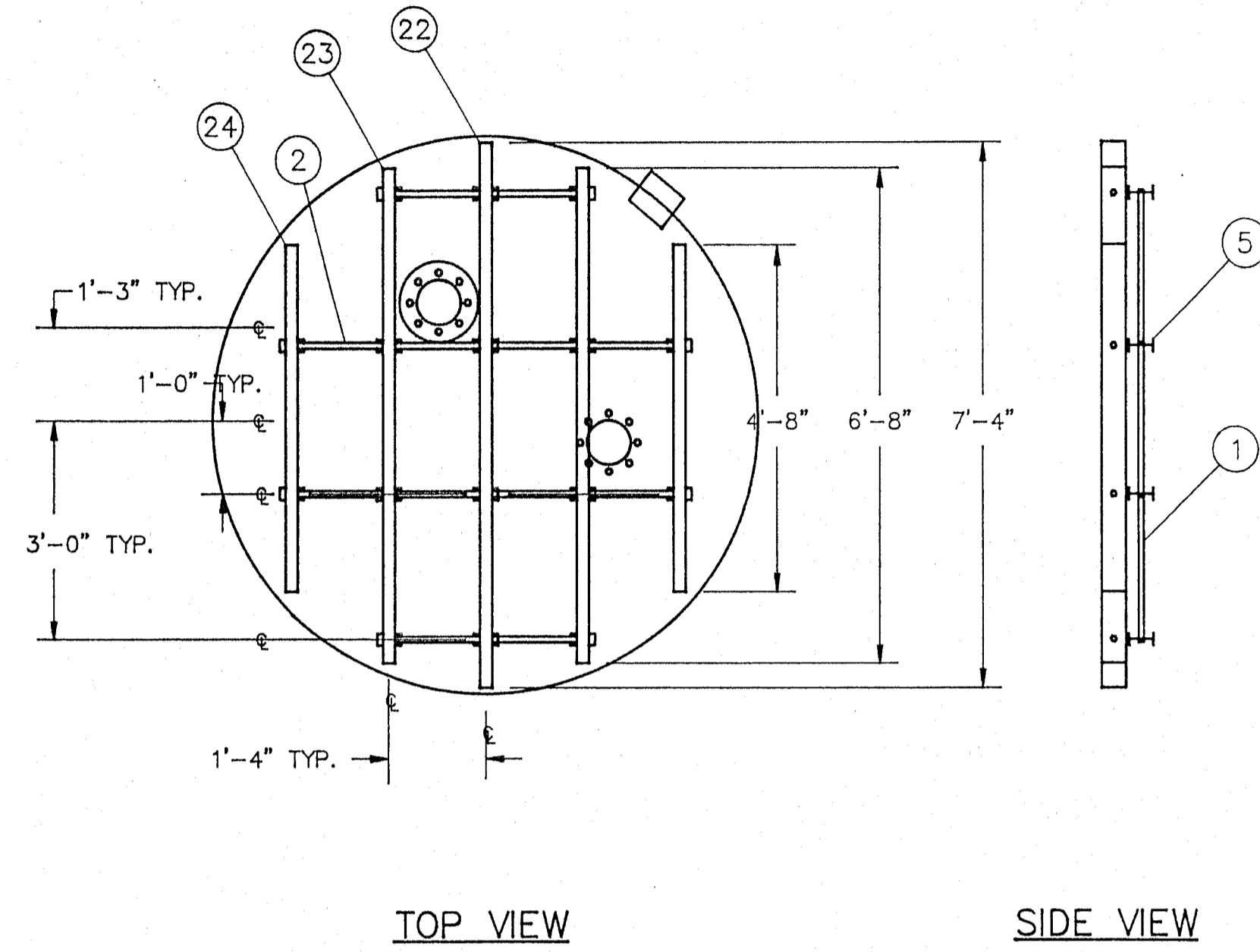


PARTIAL FRONT VIEW

SIDE VIEW

COMPONENT INSTALLATION

SCALE: 1/2"=1'-0"



TOP VIEW

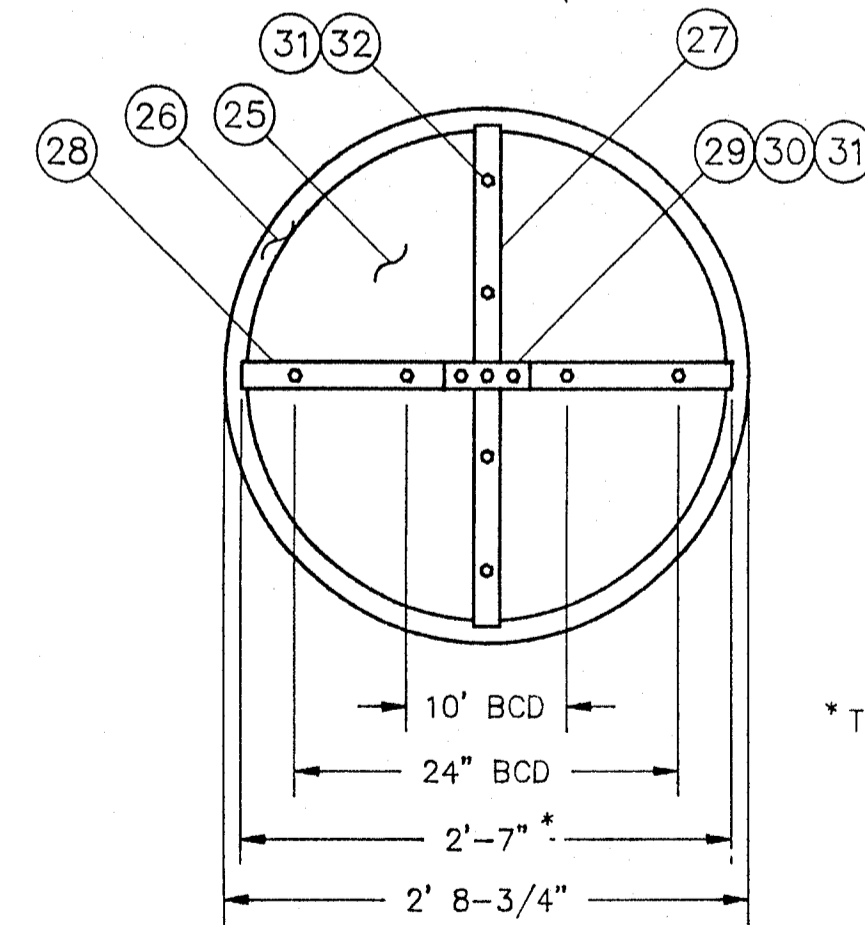
SIDE VIEW

MEDIA SUPPORT STRUCTURE

SCALE: 1/2"=1'-0"

NOTES:

1. SEAL CUT ENDS OF BEAMS WITH SPRAY SEALANT BEFORE ASSY.
2. SEAL HOLES AND LOCK STUDS AND BOLTS WITH SPRAY SEALANT AT INSTALLATION.
3. ATTACH PIPE SPACERS TO I-BEAMS WITH 5/8-11 THREADED 2" F/G STUDS OR 1" NYLON BOLTS, A/R
4. LOCATE SUPPORTS AND BEAM SPACER PIPES SYMMETRICALLY ABOUT ARRAY CENTER.
5. TAP ENDS OF SPACER PIPES 5/8-11x1" DP.
6. ROTATE ASSY. TO CLEAR FLOOR PENETRATIONS.



COVER FABRICATION

SCALE: 1"=1'-0"

NOTES:

1. JOIN F/G CHANNEL FRAMING PIECES WITH F/G CONNECTOR PLATE, F/G CHANNEL NUTS (3), AND 1/2-13x1" NYLON BOLTS (3).
2. FASTEN FRAMING PIECES TO LID WITH 1/2-13x1" NYLON BOLTS (8).
3. CEMENT GASKET TO LID.

* TRIM A/R FOR SLIP FIT IN HATCH

LIST OF MATERIALS		
#	QTY	DESCRIPTION
1	44	1/2"x23-3/4" PVC 80 THD ENDS 5/8-11
2	48	1/2"x15-3/4" PVC 80 THD ENDS 5/8-11
3	56	5/8-11x1 NYLON BOLT
4	56	5/8-11x2" F/G ALL THREAD ROD
5	64	2x4x1/4x4" LG. F/G I-BEAM
6	7	6" FLEX COUPLING
7	3	6"x8" NIPPLE, PVC 40
8	4	2" TANK ADAPTER PVC
9	4	2" COUPLING PVC 40
10	4	1-1/2" SPRAY NOZZLE
11	4	1-1/2" HALF NIPPLE PVC 80
12	32	LAYERS BIODEK MEDIA, 7'-4" DIA x 1" THICK
13	2	6" FLANGE, PVC SOC
14	2	13" DIA. x 1/4" PVC, DRILL 5/8 4 PLCS.
15	8	5/8-11x2 NYLON BOLT
16	8	3/4" PVC 80 PIPE x 1" LG.
17	48	#14x1-1/2 PHP TRUSS HD SMS, SSSL
18	48	#14 FENDER WASHER, SSSL
19	2	4"x9" LG. PIPE PVC 40
20	6	11"O.D.x6-1/2"L.D.x3/8" GASKET
21	4	2x1-1/2 BUSHING, SxT
22	4	2x4x1/4x7'-4" F/G I-BEAM
23	8	2x4x1/4x6'-8" F/G I-BEAM
24	8	2x4x1/4x4'-8" F/G I-BEAM
25	4	3/8"x32-3/4" POLYPROPYLENE
26	6	11"O.D.x6-1/2"L.D.x3/8" GASKET
27	4	1-5/8"x31" F/G CHANNEL
28	8	1-5/8"x14-11/16" F/G CHANNEL
29	4	F/G CHANNEL STRAIGHT CONNECTOR
30	12	1/2" F/G CHANNEL NUT
31	44	1/2-13x1" NYLON BOLT
32	32	1/2-13 NYLON NUT
33	4	1/2"x1"x9" SILICONE FOAM GASKET
34	60'	2" PIPE PVC 40
35	8	2" 90° ELL PVC 40 THD
36	8	2" 45 ELL PVC 40
37	4	2" CLOSE NIPPLE PVC
38	4	2-3/8" RADIATOR HOSE COUPLING
39	4	2" FERNCO COUPLING
40	12'	2" HOSE
41	4	2"MPTXHOSE BARB
42	8	2" MALE ADAPTER
43	4	2" 90° ELL PVC 40 SOC

CHG	DATE	DESCRIPTION
A	9/25/90	REDRAWN TO AS-BUILT CONDITION

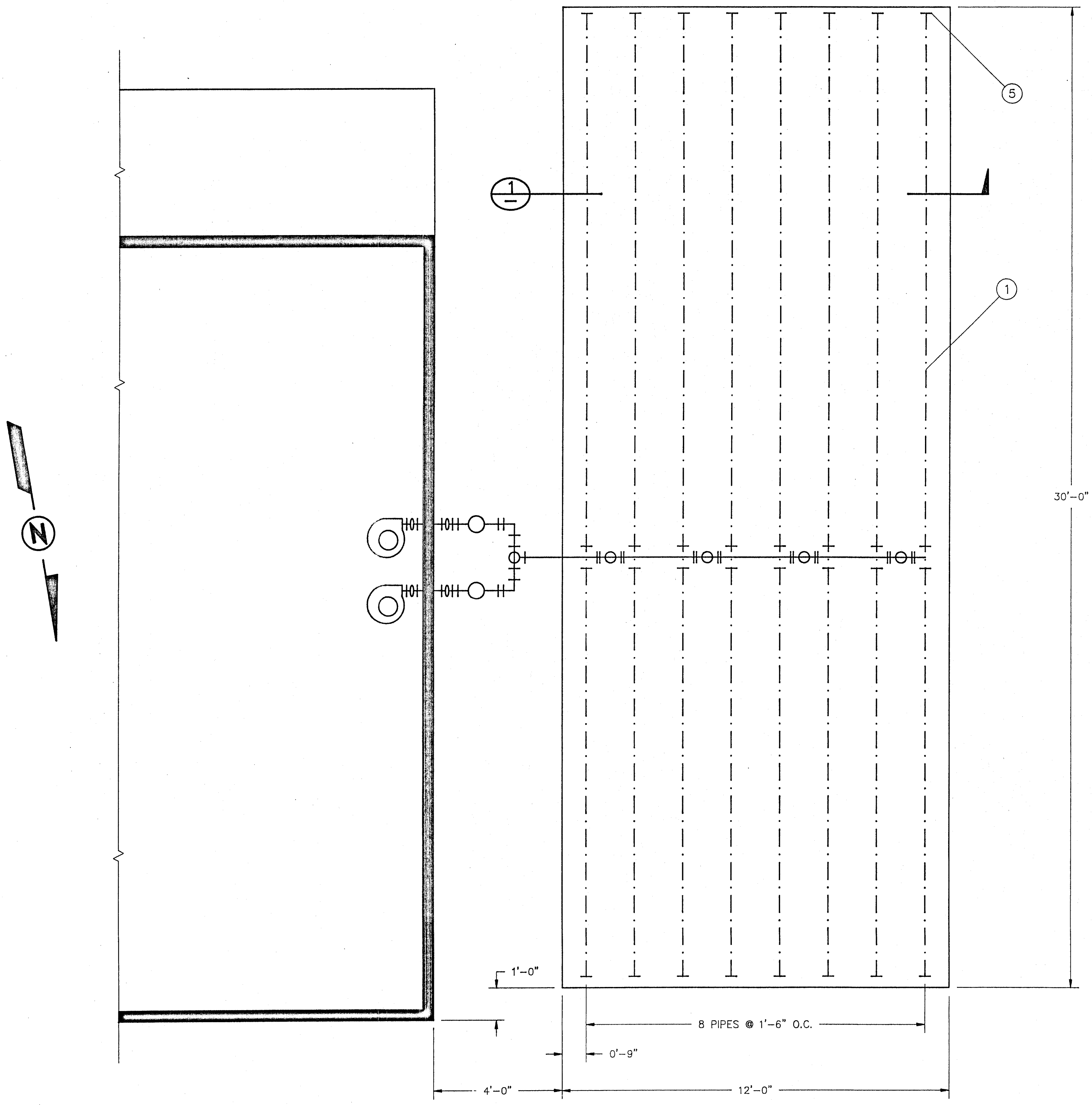
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-867-4646

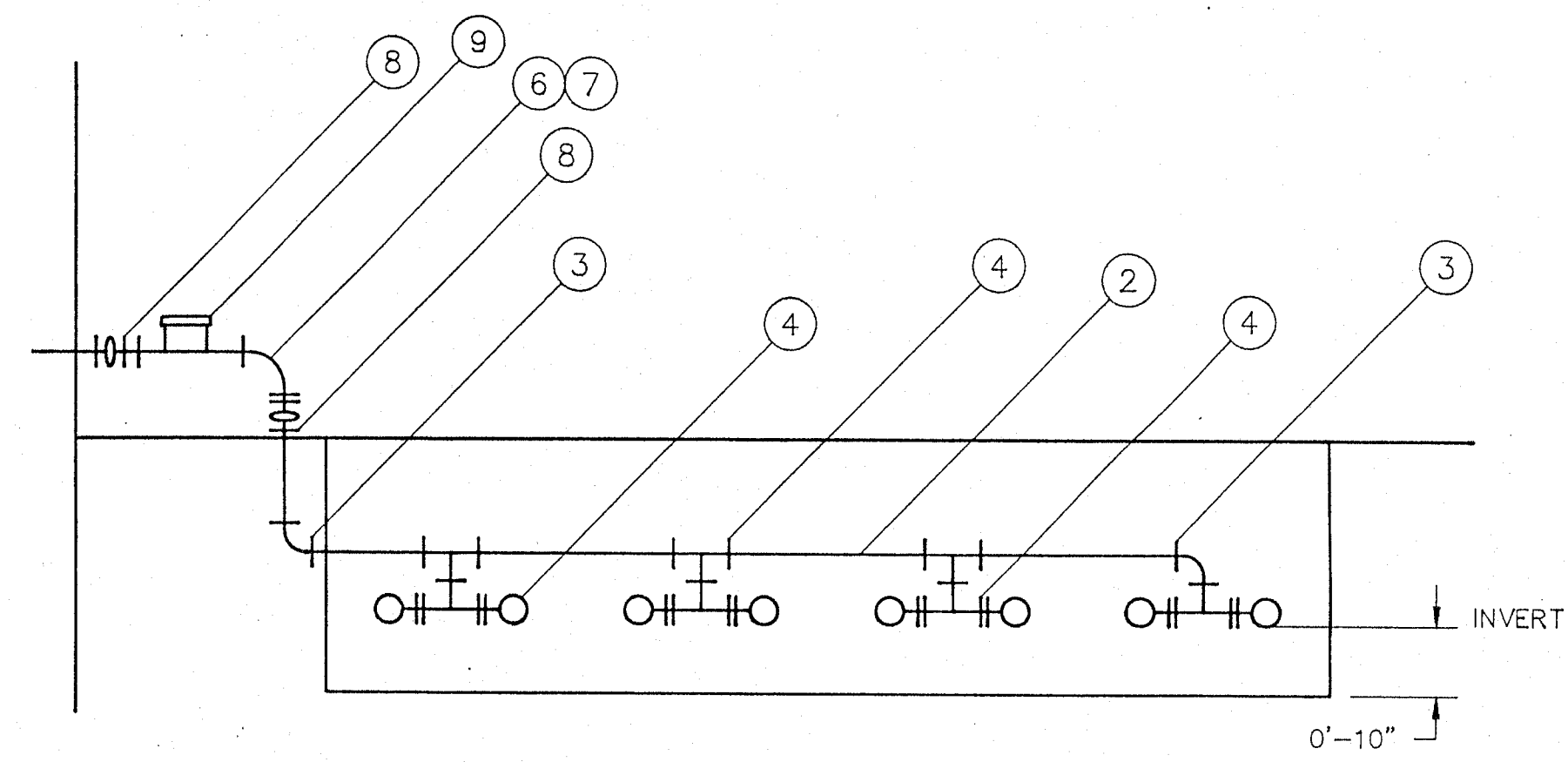
WALLACE LAKE ESTATES
TRICKLING FILTERS

SCALE	NOTED	DWG	P-04-A	OF
DRAWN	RCH			
CHECKED		NO.		
APPROVED	DATE	9/25/90	JOB NO.	07070

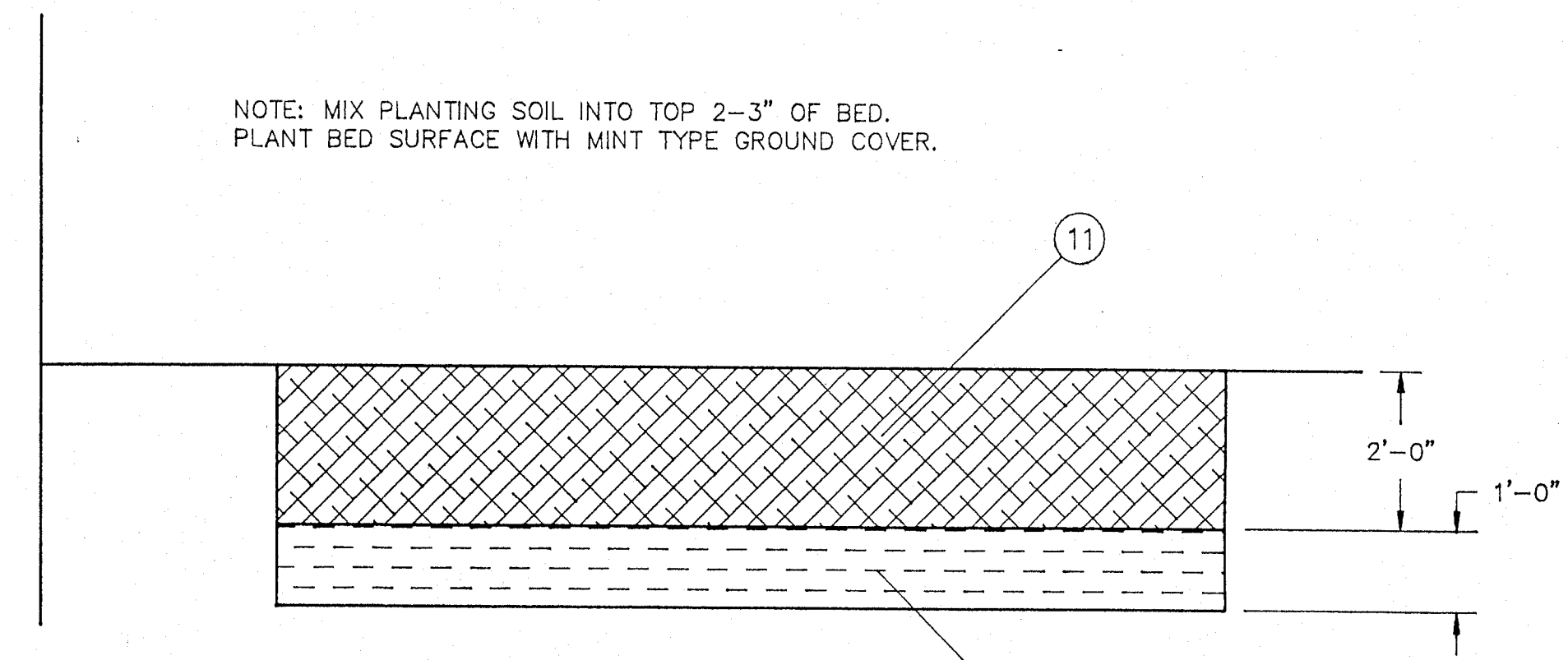
LIST OF MATERIALS		
#	QTY	DESCRIPTION
1	240'	4" NDS SMOOTH PERFORATED PIPE
2	60'	4" NDS SMOOTH NON-PERFORATED PIPE
3	4	4" NDS 1/4 BEND
4	34	4" NDS TEE
5	16	4" NDS CAP
6	2	4" 1/4 BEND ABS
7	8'	4" ABS DWV PIPE
8	4	1056-44 FERNCO COUPLING
9	2	4" NDS CHECK VALVE ABS
10	13	C.Y. 1" DRAIN ROCK
11	27	C.Y. BIOSOIL MIX



PLAN VIEW

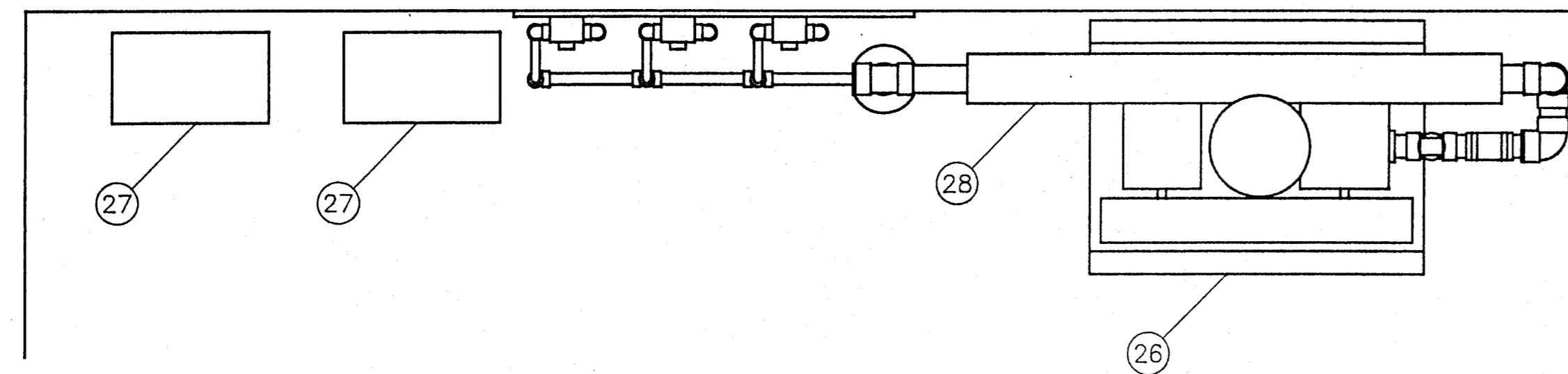


SECTION 1-1

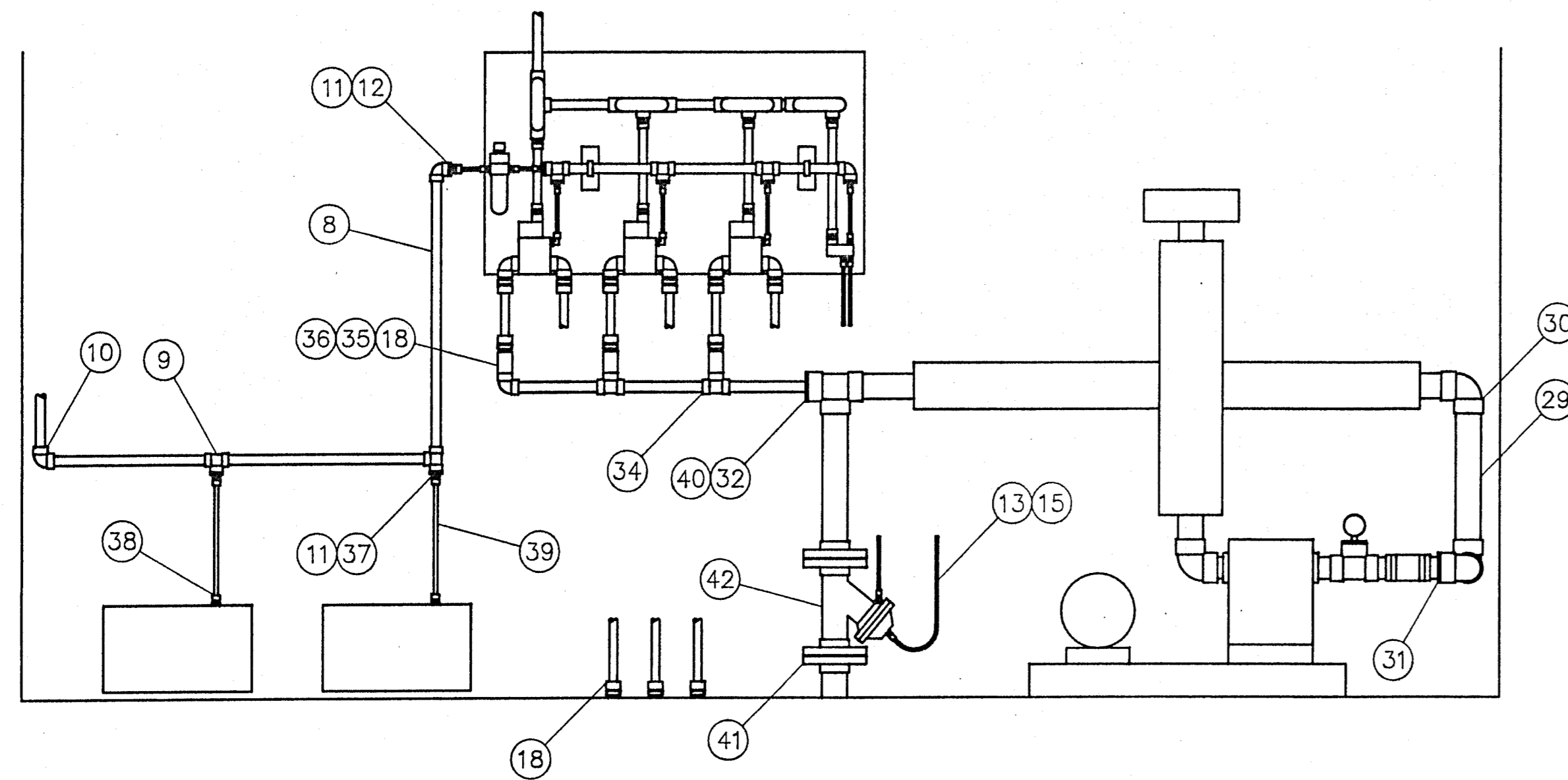


FILL DETAIL

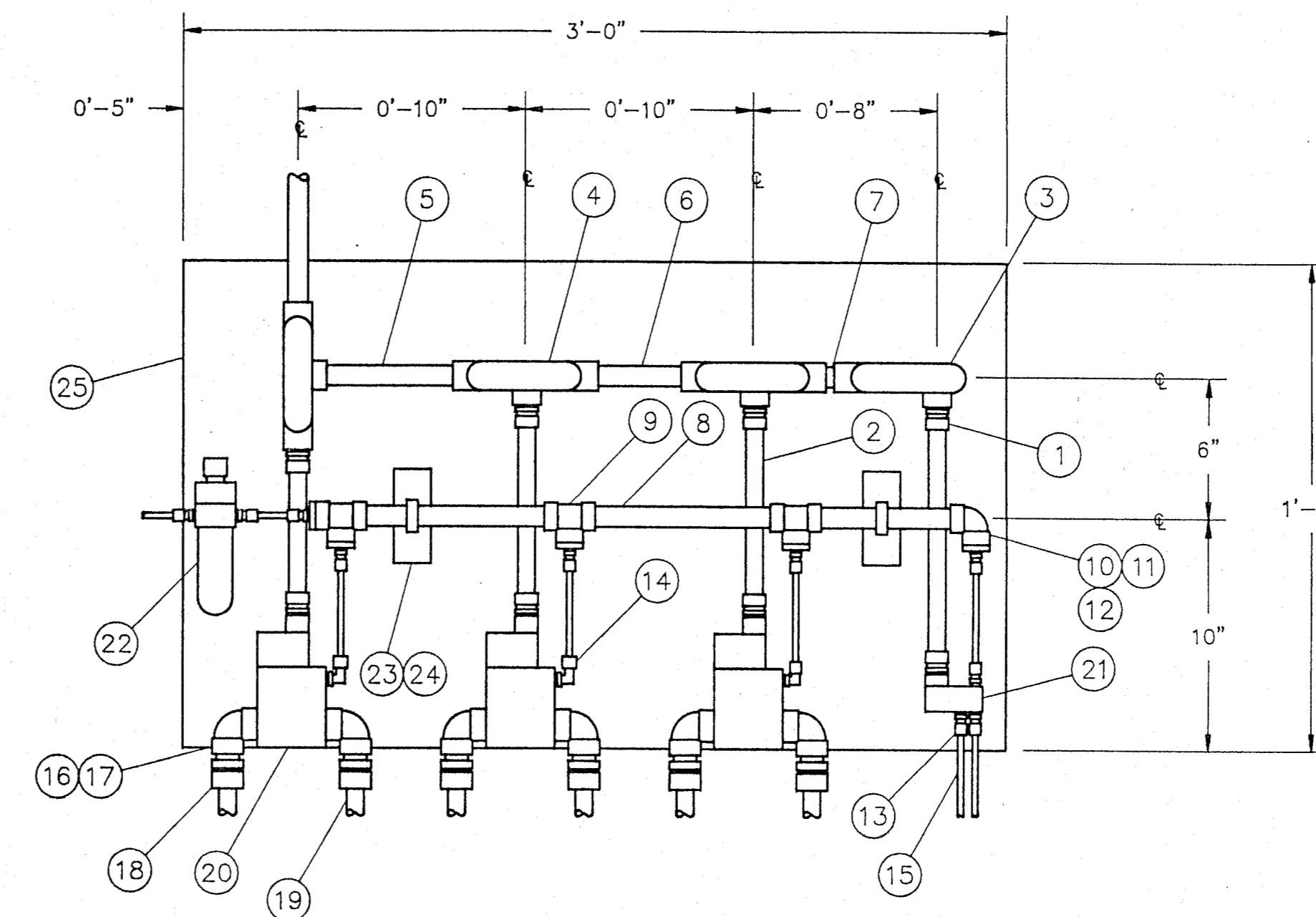
A	9/25/90	REDRAWN TO AS-BUILT CONDITION
CHG	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
SOIL BIOFILTER		
SCALE	1/2"=1'-0"	DWG
DRAWN	RCH	NO.
CHECKED		
APPROVED	DATE	9/25/90 JOB NO. 07070
		P-05-A OF



TOP VIEW



FRONT VIEW
1"=1'-0"



PANEL DETAIL
1"=6"

LIST OF MATERIALS		
#	QTY	DESCRIPTION
1	8	1/2MPTx1/2 LIQUID TITE STRAIGHT
2	3'	1/2" LIQUID TITE FLEX CONDUIT
3	1	1/2" CONDUIT ELL
4	3	1/2" CONDUIT TEE
5	1	1/2"x7" GALV NIPPLE
6	1	1/2"x5" GALV NIPPLE
7	1	1/2"x2" GALV NIPPLE
8	A/R	1/2" PIPE PVC 40
9	5	1/2" TEE PVC 40 SOC
10	3	1/2" 90 ELL PVC 40 SOC
11	7	1/2x3/8 BUSHING PVC 40 SxT
12	6	3/8MPTx1/4TUBE STRAIGHT PP
13	5	1/4MPTx1/4TUBE STRAIGHT BRASS
14	3	1/4MPTx1/4TUBE 90 BRASS
15	A/R	1/4" TUBING POLYPRO
16	6	3/4" CLOSE NIPPLE CPVC
17	6	3/4" 90 ELL CPVC THD
18	12	3/4MPTx3/4TUBE STRAIGHT PP
19	A/R	3/4" TUBING POLYPRO
20	3	3/4" 2-WAY PILOT SOLENOID VALVE
21	1	1/4" 3-WAY SOLENOID VALVE
22	1	1/4" 0-100 PSI FILTER/REGULATOR
23	2	1-5/8x4" FRP CHANNEL STRUT
24	2	1/2" PIPE STRAP POLYPRO
25	1	5/8" PLYWOOD PANEL
26	1	30 CFM 6 PSI BLOWER
27	1	100 PSI COMPRESSOR
28	1	2"x4" FINNED PIPE RADIATOR
29	3'	2" PIPE CPVC 80
30	4	2" 90 ELL CPVC 80 SOC
31	1	2x1-1/2 BUSHING CPVC 80 SPGxT
32	1	2x3/4 BUSHING CPVC 80 SPGxS
33	3'	3/4" PIPE CPVC 80
34	2	3/4" TEE CPVC 80 SOC
35	1	3/4" 90 ELL CPVC 80 SOC
36	3	3/4" FEMALE ADAPTER CPVC 80
37	2	3/8MPTx3/8TUBE STRAIGHT PP
38	2	1/4MPTx3/8TUBE STRAIGHT BRASS
39	A/R	3/8" TUBING POLYPRO
40	1	2" TEE CPVC 80 SOC
41	2	2" VAN STONE FLANGE CPVC SOC
42	1	2" DIAPHRAGM VALVE FRP

CHG	DATE	DESCRIPTION
A	9/25/90	REDRAWN TO AS-BUILT CONDITION

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-857-4646

**WALLACE LAKE ESTATES
COMPRESSOR PLUMBING**

SCALE	NOTED	D	W	G	NO.	OF
					P-06-A	
DRAWN	RCH					
CHECKED						
APPROVED	DATE	9/25/90	JOB NO.	07070		

SYMBOL LIST	
	FLUORESCENT CEILING MOUNTED LIGHT FIXTURE; LETTER REFERS TO SWITCH LEG, MOUNTED HEIGHT +8' U.O.N.
	INCANDESCENT OR H.I.D., BRACKET OR WALL MOUNT FIXTURE; LETTER REFERS TO SWITCH LEG; MOUNTED HEIGHT +8' U.O.N.
	INCANDESCENT FLOODLIGHT, BRACKET OR WALL MOUNT, SWIVEL SOCKET; LETTER REFERS TO SWITCH LEG; MOUNTING HEIGHT +8' U.O.N.
	FIXTURE TYPE, NUMBER OF LAMPS & WATTAGE PER LAMP. (SEE FIXTURE SCHEDULE FOR DESCRIPTION.)
	DUPLEX CONVENIENCE OUTLET, +24" ABOVE FIN. FL. U.O.N.
	DOUBLE DUPLEX CONVENIENCE OUTLET, +24" ABOVE FIN. FL. U.O.N.
	SINGLE POLE TOGGLE SWITCH, MOUNTING HEIGHT +48" U.O.N.
	THERMOSTAT.
	TERMINAL CABINET OR AS INDICATED.
	TEE CONDULET.
	JUNCTION BOX, NUMBERED FOR IDENTIFICATION.
	TELEPHONE OUTLET.
	UNFUSED DISCONNECT SWITCH, SIZE AS REQUIRED BY CODE.
	FUSED DISCONNECT SWITCH, SIZE AS REQUIRED BY CODE.
	MAGNETIC MOTOR STARTER, OVERLOAD ELEMENTS AS REQUIRED BY SPECIFIC DEVICE.
	MANUAL MOTOR STARTER, OVERLOAD ELEMENTS AS REQUIRED BY SPECIFIC DEVICE.
	ELECTRIC MOTOR, HORSEPOWER SHOWN.
	PRESSURE SWITCH.
	FLOAT SWITCH.
	OTHER SENSING SWITCH.
	CONDUIT HOMERUN TO PANELBOARD, OR AS INDICATED, 3/4" MINIMUM SIZE, U.O.N.
	CONDUIT STUB.
	FLEXIBLE CONDUIT OR CORD CONNECTION.
	SHEET NOTES.
	CONDUIT.
	FUTURE.
	EMPTY CONDUIT WITH PULL CORD.
	UNDERGROUND.
	UNLESS OTHERWISE NOTED.
	WEATHERPROOF.
	COIL, STARTER OR RELAY.
	INDICATOR LIGHT (G-GREEN, R-RED).
	NORMALLY OPEN CONTACT (N/O).
	NORMALLY CLOSED CONTACT (N/C).
	PUSHBUTTON.
	SELECTOR SWITCH.
	DISCONNECT SWITCH.
	FUSE.

SYMBOL LIST	
	FLOAT SWITCH (N/O).
	PRESSURE SWITCH (N/O).
	AIRFLOW SWITCH (N/O).
	LOCATED IN FIELD.
	TERMINAL POINT ON PROGRAMMABLE CONTROLLER.
	TERMINAL BLOCK OR POINT IN STARTER.
	TERMINAL BLOCK OR POINT IN PANEL.
	SCREW TERMINAL ON A DEVICE.
	MOTOR STARTER OR RELAY.
	MOTOR DISCONNECT SWITCH.

GENERAL NOTES

- ALL WORK SHALL BE DONE IN COMPLIANCE WITH THE PUBLISHED EDITIONS OF THE NATIONAL ELECTRIC CODE (NFPA 70), 1990.
- ELECTRICAL CONTRACTOR SHALL VERIFY ALL MECH. EQUIPMENT TYPES, MOTOR SIZES, AND CONTROL WIRING REQUIREMENTS WITH MECH. CONTRACTOR, MECH. EQUIPMENT SUPPLIER, OR MANUFACTURER. THE PLANS INDICATE APPROXIMATE LOCATIONS OF ALL MOTORS, INSTRUMENTS AND DEVICES; EXACT LOCATION SHALL BE ESTABLISHED BEFORE CONDUIT IS INSTALLED.
- ALL CONDUIT CONNECTIONS OF FIELD-MOUNTED DEVICES AND MOTORS SHALL BE ACCOMPLISHED WITH APPROPRIATE FLEXIBLE CONDUIT WITH A UNION AT THE END NEAREST THE DEVICE OR MOTOR.
- MINIMUM CONDUIT SIZE SHALL BE 3/4" EXCEPT FOR OVERHEAD RUNS TO LIGHT FIXTURES AND FLEXIBLE CONDUIT, WHICH MAY BE 1/2". EXTERIOR CONDUIT BELOW +8' OR IN EXPOSED LOCATIONS SHALL BE RIGID METALLIC WITH THREADED OR WEATHERPROOF FITTINGS AND CAST METAL J-BOXES.
- ALL CONDUITS ENTERING OR LEAVING THE PROCESS TANKS SHALL BE SEALED USING THE EQUIVALENT OF A CROUSE-HINDS EYS SEAL INSTALLED WITH THREADED CONNECTIONS AND SEALED PER MANUFACTURER'S RECOMMENDATIONS. ALL CONDUIT PENETRATIONS THROUGH CONCRETE SLABS SHALL USE RIGID CONDUIT; COORDINATE LOCATIONS AND INSTALLATION WITH GENERAL AND CONCRETE CONTRACTORS. EXPLOSION-PROOF JUNCTION BOXES SHALL BE USED TO TERMINATE THE SUBMERSIBLE PUMP AND FLOAT-SWITCH CORDS INSIDE THEIR RESPECTIVE TANKS.
- MOUNTING HEIGHTS SHOWN (I.E. +52") ARE FROM FINISHED FLOOR TO NOTED REFERENCE POINT. ALL MOUNTING HEIGHTS SHALL BE AS SHOWN ON SYMBOL LIST UNLESS OTHERWISE NOTED ON DRAWINGS. INSTRUMENT METERS AND DISPLAYS SHALL BE MOUNTED BETWEEN +54" AND 66".
- MINIMUM WIRE SIZES SHALL BE #12AWG FOR POWER CIRCUITS, #14AWG FOR 120V CONTROL CIRCUITS WHICH ARE NOT FUSED, AND #16AWG FOR 24VDC CONTROL CIRCUITS AND 120V CONTROL CIRCUITS FUSED AT 10 AMPS OR LESS. ALL WIRE SHALL BE STRANDED COPPER AND A GROUND WIRE SHALL BE RUN IN ALL POWER CONDUITS. WIRES FOR 24VDC CIRCUITS SHALL BE RUN IN SEPARATE CONDUITS FROM WIRES FOR AC POWER OR CONTROL CIRCUITS.
- CIRCUIT BREAKERS MARKED WITH AN "L" SHALL HAVE A LOCKING ADAPTER WHICH WILL ALLOW THE BREAKER TO BE PADLOCKED IN THE OFF POSITION, OR THE PANEL DOOR OF THE RESPECTIVE PANEL SHALL BE LOCKABLE.

PANEL-A		VOLTAGE: 120/240V, 3-PHASE				MAINS: 125A CB		
SERVICE	LOAD		CB	BLK BLU ORN	CB	LOAD		SERVICE
	HP/KW	AMPS				AMPS	HP/KW	
T/F FEED PUMP-1	1.5	4.6	15	1-2	15	7.8	2	EQ. BASIN BLOWER
T/F FEED PUMP-2	1.5	4.6	15	3-4	15	10	3	S/F FEED PUMP-1
T/F FEED PUMP-3	1.5	4.6	15	5-6	15	10	3	S/F FEED PUMP-2
T/F FEED PUMP-4	1.5	4.6	15	7-8	70			PANEL-B
				9-10	15			SPARE
				11-12				
				13-14				
				15-16				
				17-18				
				19-20				
				21-22				
				23-24				
				25-26				
				27-28				
				29-30				

TYPE: Q0430M125 FEEDER: 1/0 THWN, #6 N & G

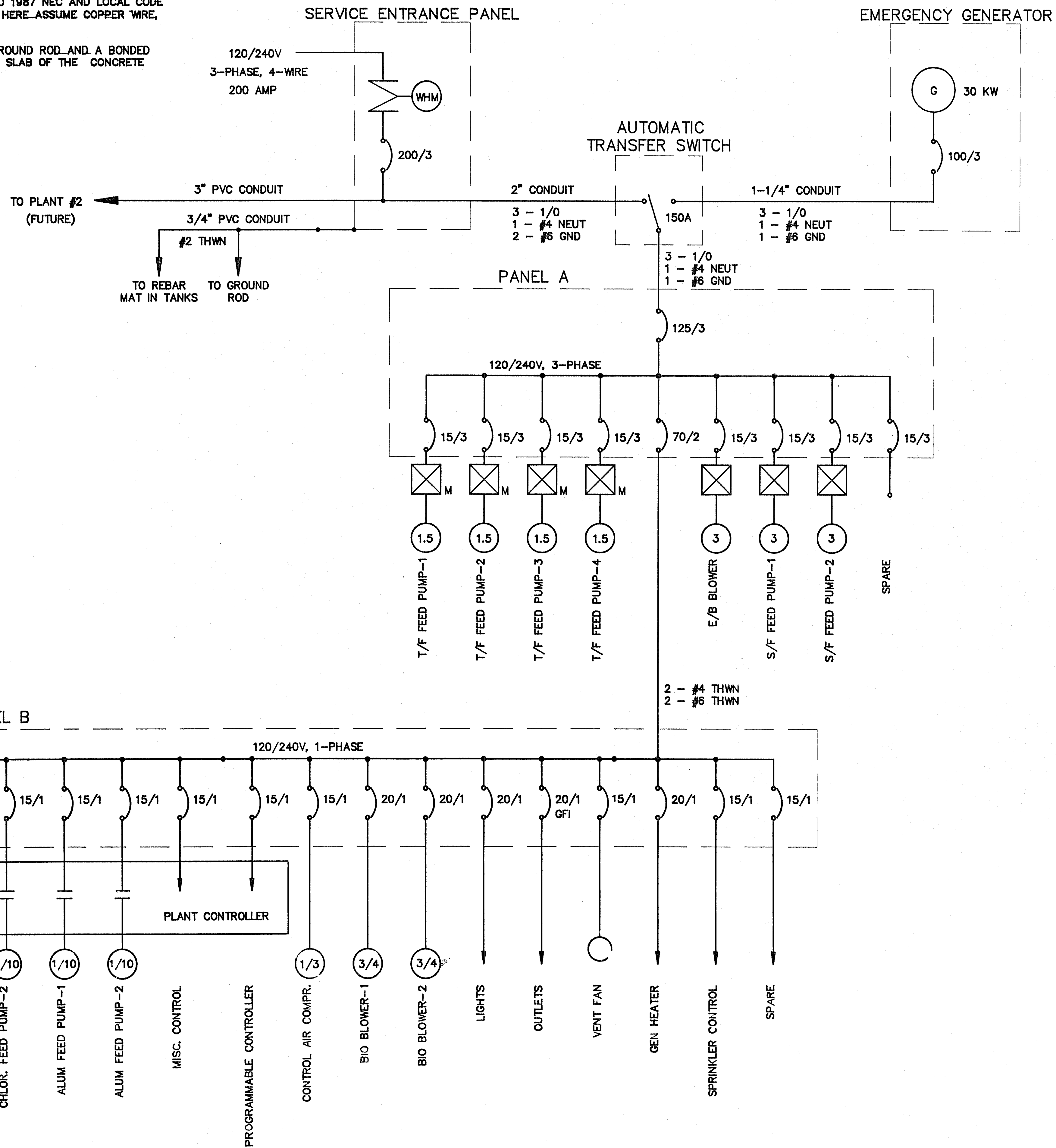
PANEL -B		VOLTAGE: 120/240V, 1-PH				MAINS: 150A LUGS ONLY		
SERVICE	LOAD		CB	BLK BLU	CB	LOAD		SERVICE
	HP/KW	AMPS				AMPS	HP/KW	
E/B LIFT PUMP-1	BLK	1/2	11.6	15	1-2	15	3	PROG. CONTROLLER
E/B LIFT PUMP-2	BLU	1/2	11.6	15	3-4	20	12	LIGHTS
ALUM FEED PUMP-1	BLK	1/10	3.0	15	5-6	15	4	MISC. CONTROL
ALUM FEED PUMP-2	BLU	1/10	3.0	15	7-8	20GF	5	OUTLETS
CHLOR. FEED PUMP-1	BLK	1/10	3.0	15	9-10	15		SPARE
CHLOR. FEED PUMP-2	BLU	1/10	3.0	15	11-12	15		SPARE
BIO BLOWER-1	BLK	3/4	13.8	20	13-14	15	2	SPRINKLER CONTROLLER
BIO BLOWER-2	BLU	3/4	13.8	20	15-16	20	10	GEN BLOCK HEATER
VENT FAN	BLK	1/5	5.0	15	17-18	15		
CONTROL AIR COMPR.	BLU	1/3	7.2	15	19-20			
					21-22			
					23-24			
					25-26			
					27-28			
					29-30			

TYPE: Q030L150 FEEDER: #4 THWN, #6 N & G

A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
SCHEDULES, SYMBOLS & NOTES		
SCALE	NONE	DWG
DRAWN	RLK	G
CHECKED	BVR	NO.
APPROVED	DATE	12/24/87 JOB NO. 07070
		E-01-A
		OF

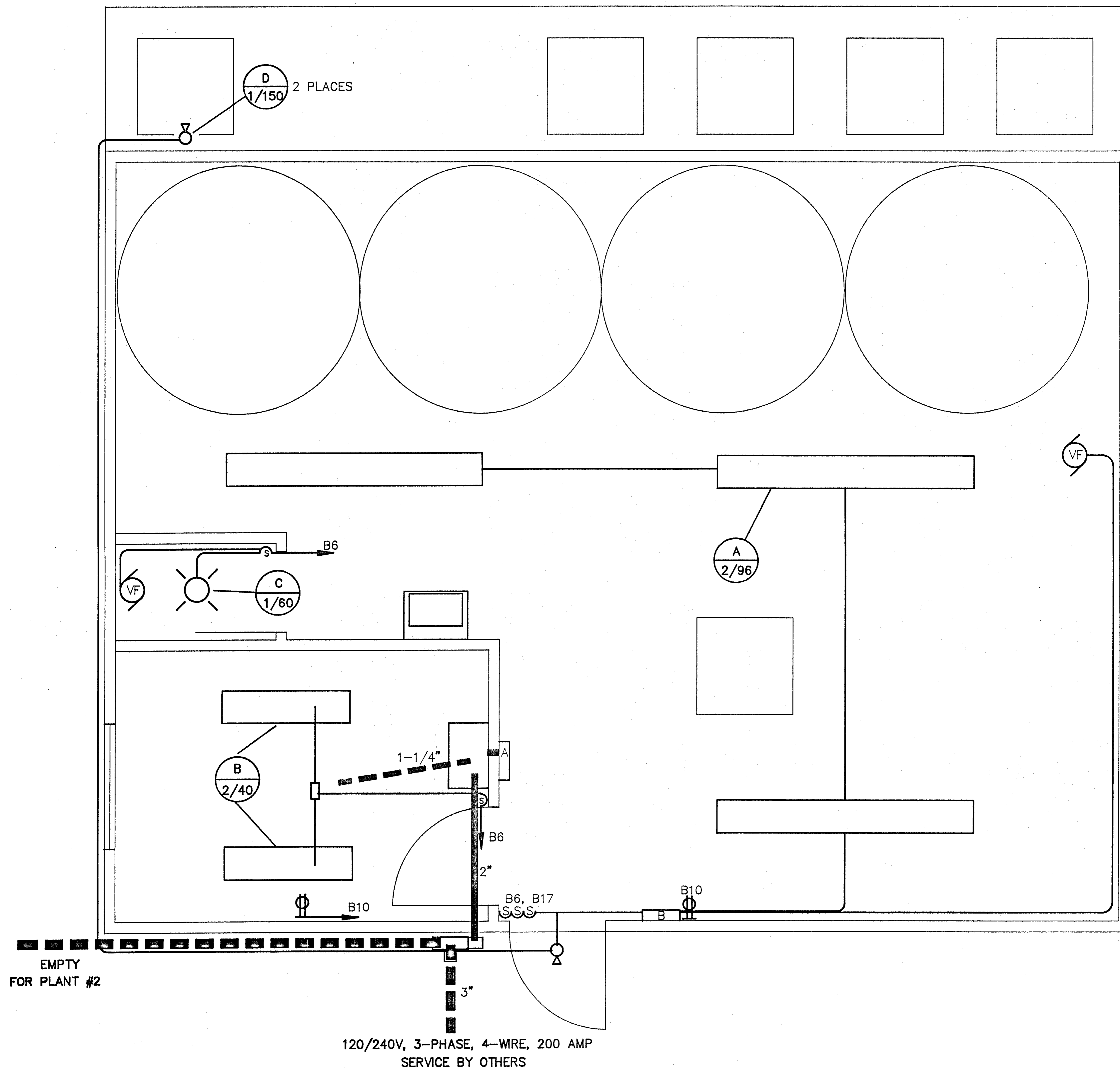
NOTES: ALL WIRING RUNS SHALL BE SIZED ACCORDING TO 1987 NEC AND LOCAL CODE REQUIREMENTS, CONDUIT AND WIRE SIZES NOTED HERE. ASSUME COPPER WIRE, THWN INSULATION, AND 104°F MAXIMUM AMBIENT.

THE GROUNDING SYSTEM SHALL CONSIST OF A GROUND ROD AND A BONDED CONNECTION TO THE REBAR MAT IN THE BOTTOM SLAB OF THE CONCRETE TANKS (UFER GROUND).



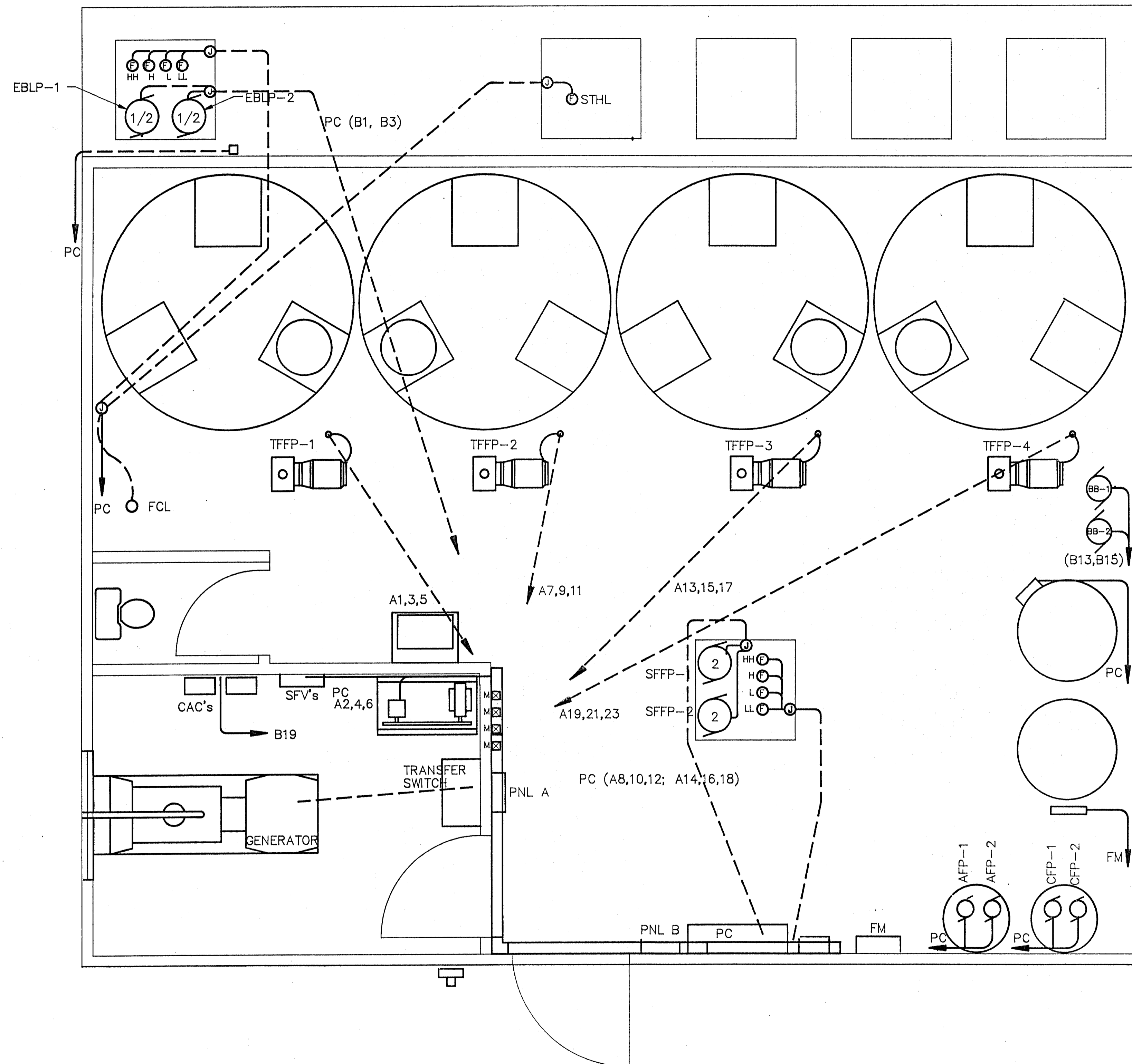
A	9/18/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-857-4646		
WALLACE LAKE ESTATES		
ONLINE DRAWING		
SCALE	NONE	DWG
DRAWN	RLK	NO.
CHECKED	BVR	NO.
APPROVED	DATE	JOB NO.
	12/24/87	07070


E-02-A OF



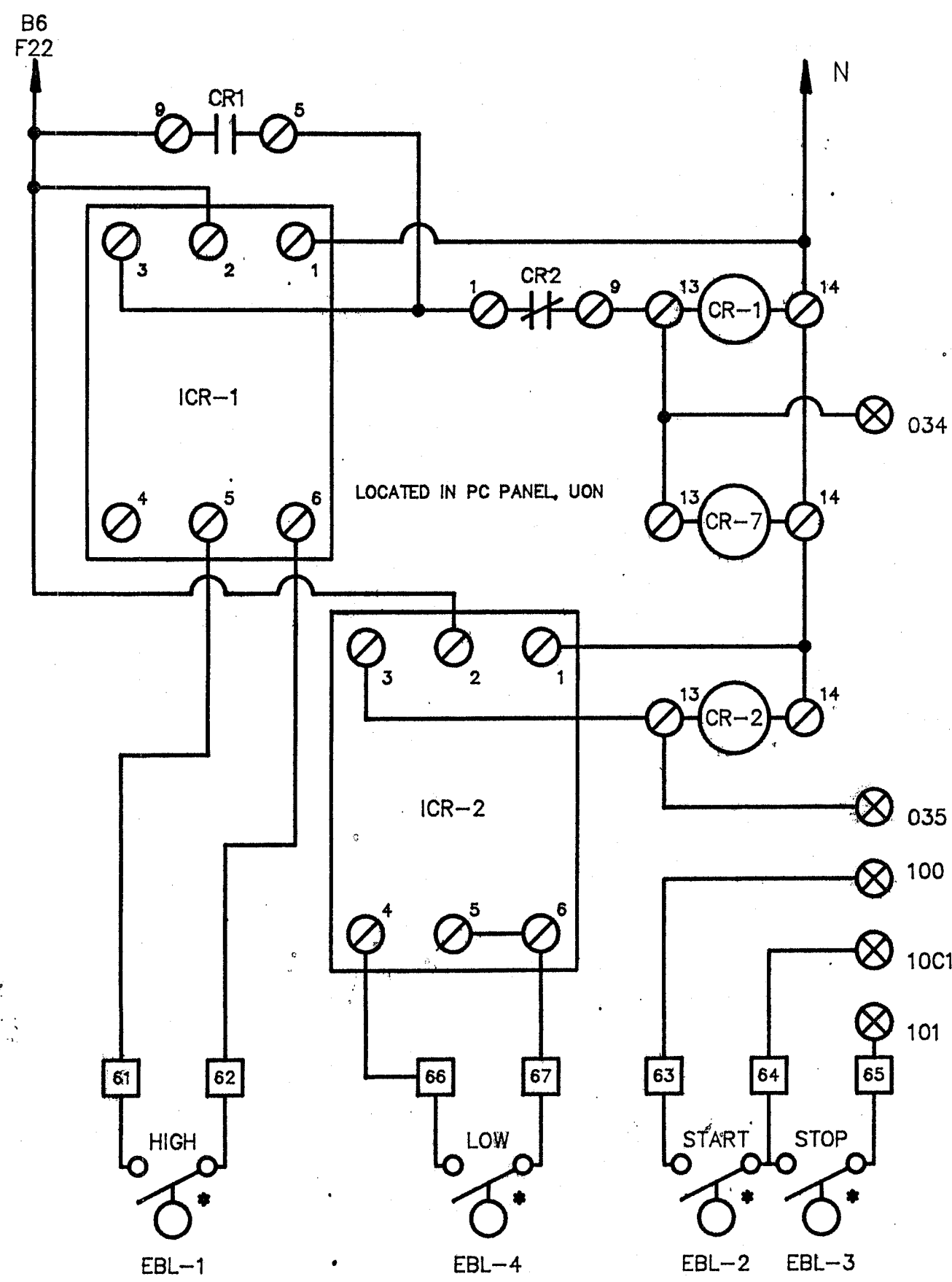
- LAMP SCHEDULE
- | | |
|---|--------------|
| A. INDUSTRIAL FLOURESCENT FIXTURE, OPEN REFLECTOR, CHAIN MOUNTED; TWO-TUBE, 8', RAPID-START, 120V | 2-F96T12CW |
| B. INDUSTRIAL FLOURESCENT FIXTURE, OPEN REFLECTOR, CHAIN MOUNTED, TWO-TUBE, 4', RAPID-START, 120V | 2-F40RSCW |
| C. INTERIOR CEILING MOUNTED FIXTURE WITH SINGLE BULB, 120V | 1-60W |
| D. EXTERIOR WALLMOUNT FIXTURE, WITH FLOOD LAMP, 120V | 1-150W/PAR38 |

A	9/20/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. <small>3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646</small>		
WALLACE LAKE ESTATES		
POWER & LIGHTING PLAN		
SCALE	NONE	DWG NO.
DRAWN	RLK	E-03-A
CHECKED	BVR	OF
APPROVED	DATE	1/5/88 JOB NO. 07070

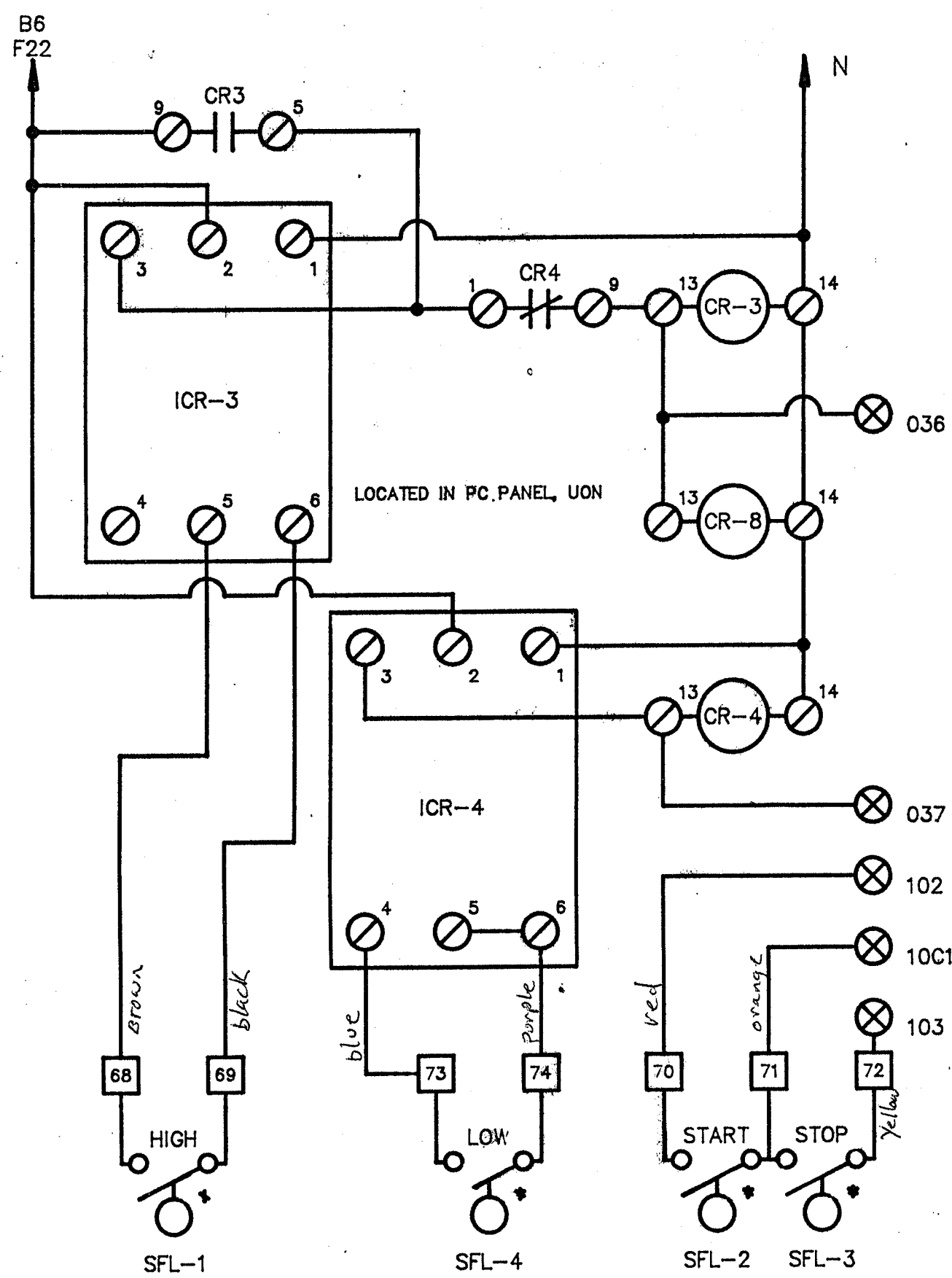


CHG.	DATE	DESCRIPTION
A	9/20/90	REDRAWN TO AS-BUILT CONDITION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
 ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-6646		
WALLACE LAKE ESTATES		
EQUIPMENT & SIGNAL PLAN		
SCALE	NONE	D
DRAWN	RLK	W
CHECKED	BVR	G
APPROVED	DATE	NO.
	1/5/88	
	JOB NO.	07070

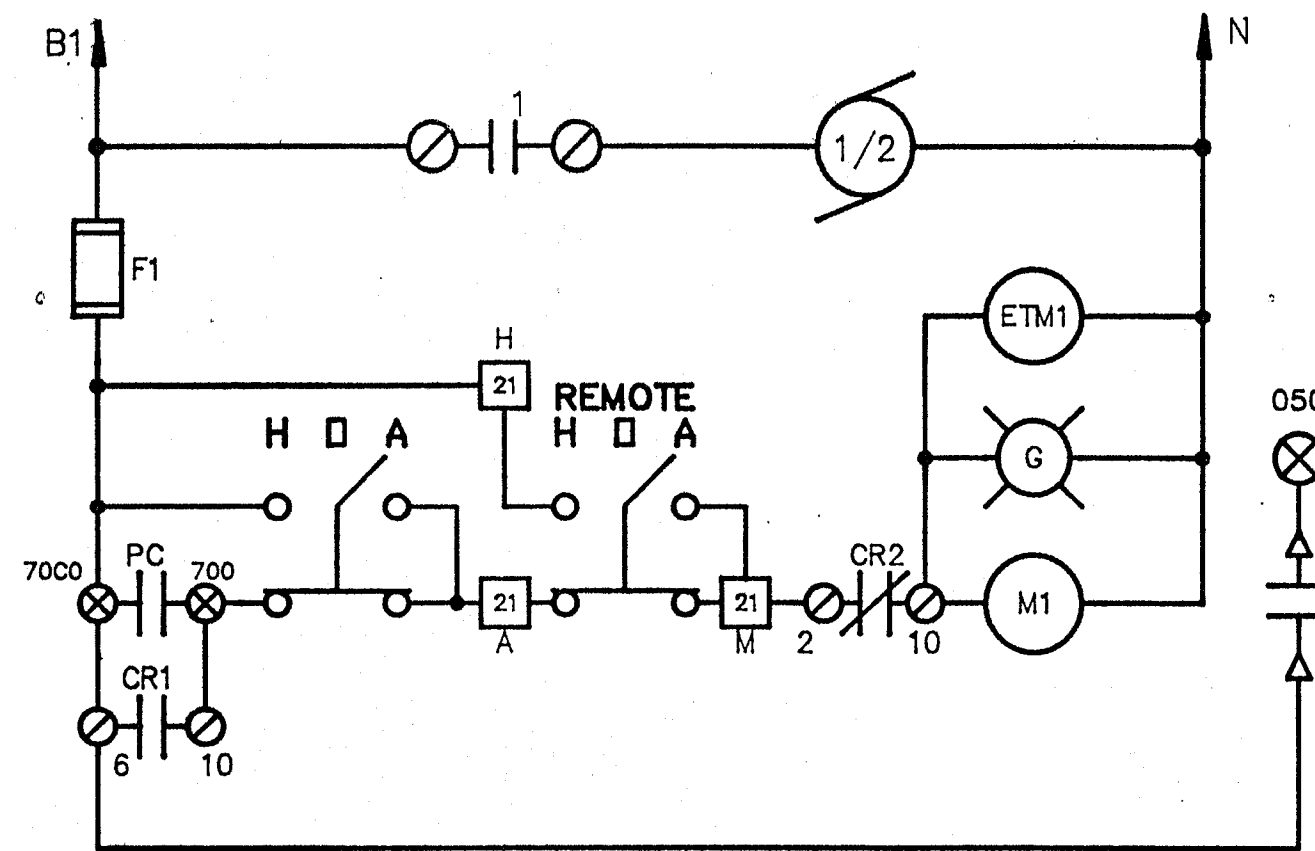
E-04-A OF



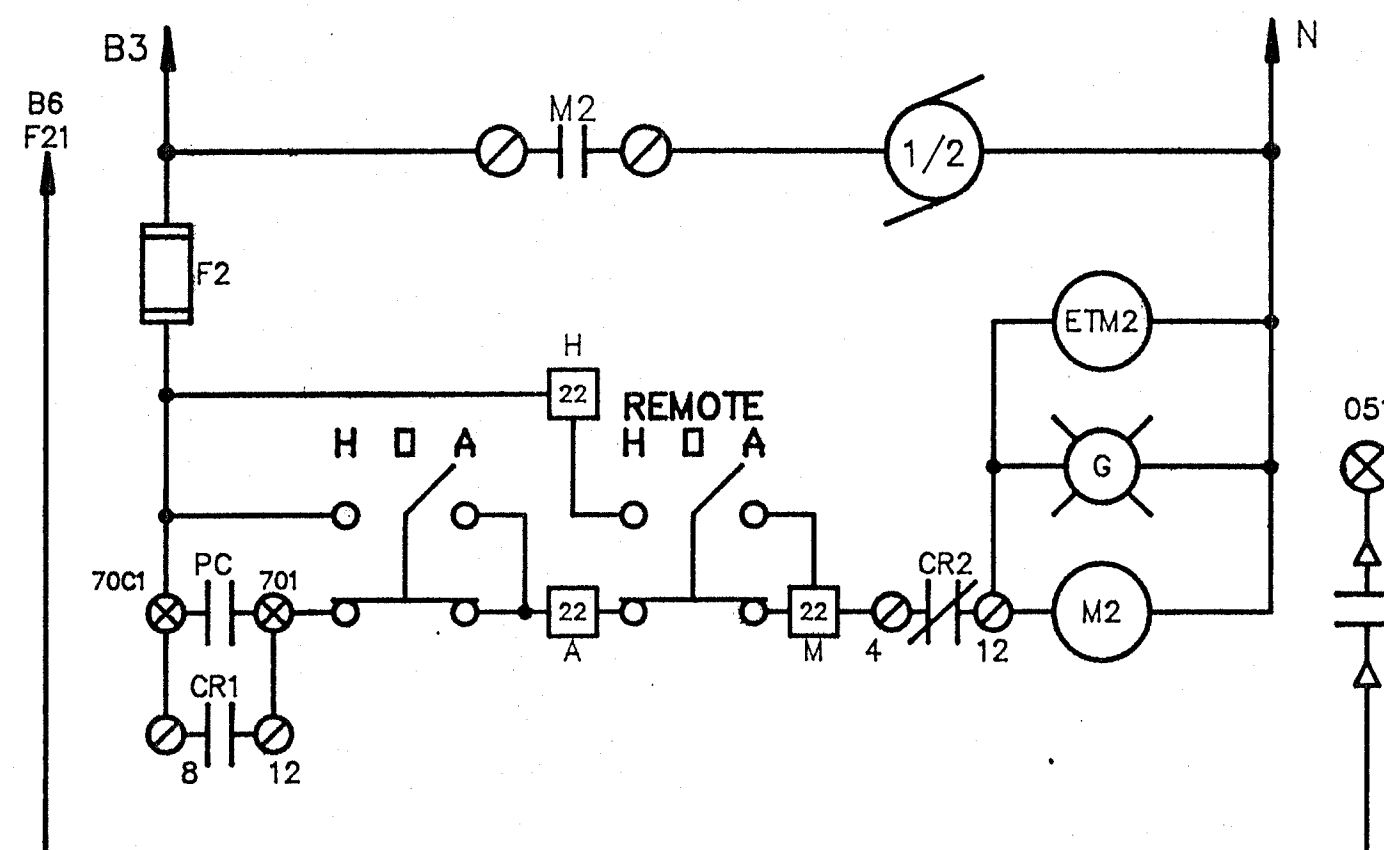
EQUILIZATION BASIN LEVEL CIRCUIT



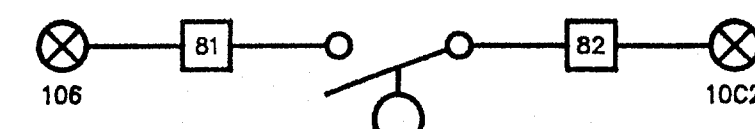
SANDFILTER FEEDWELL LEVEL CIRCUIT



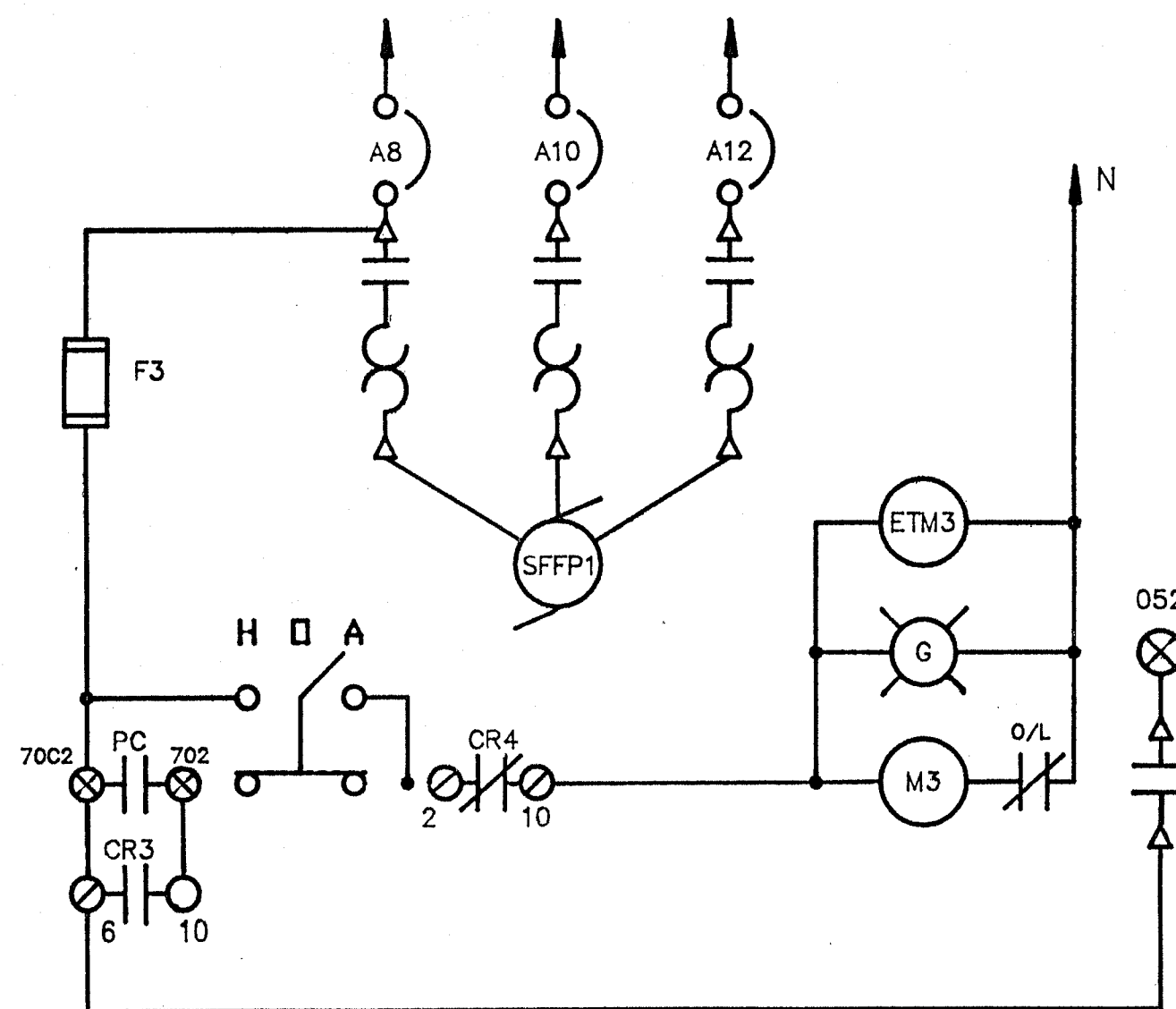
EQUILIZATION BASIN LIFT PUMP-1



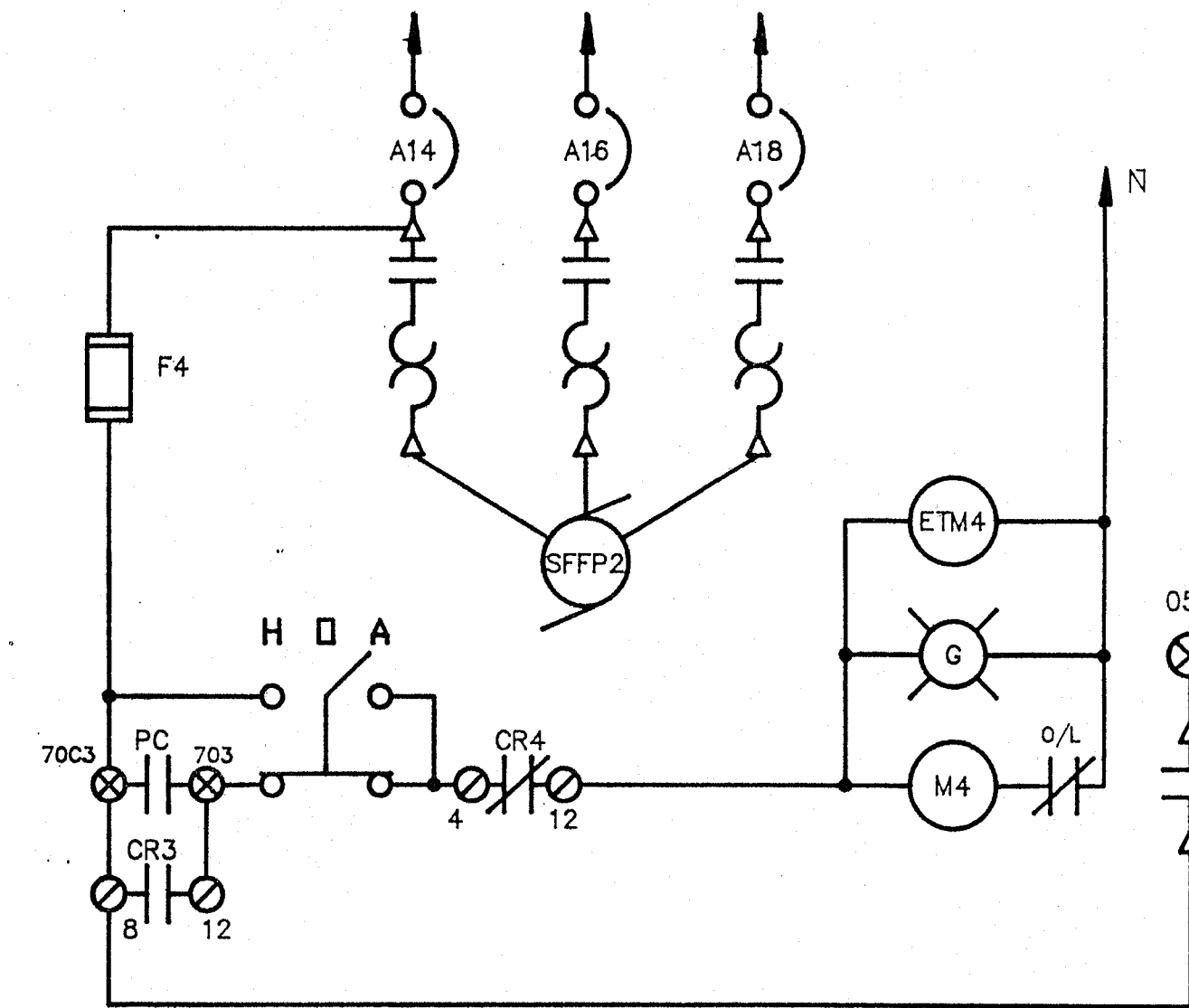
EQUILIZATION BASIN LIFT PUMP-2



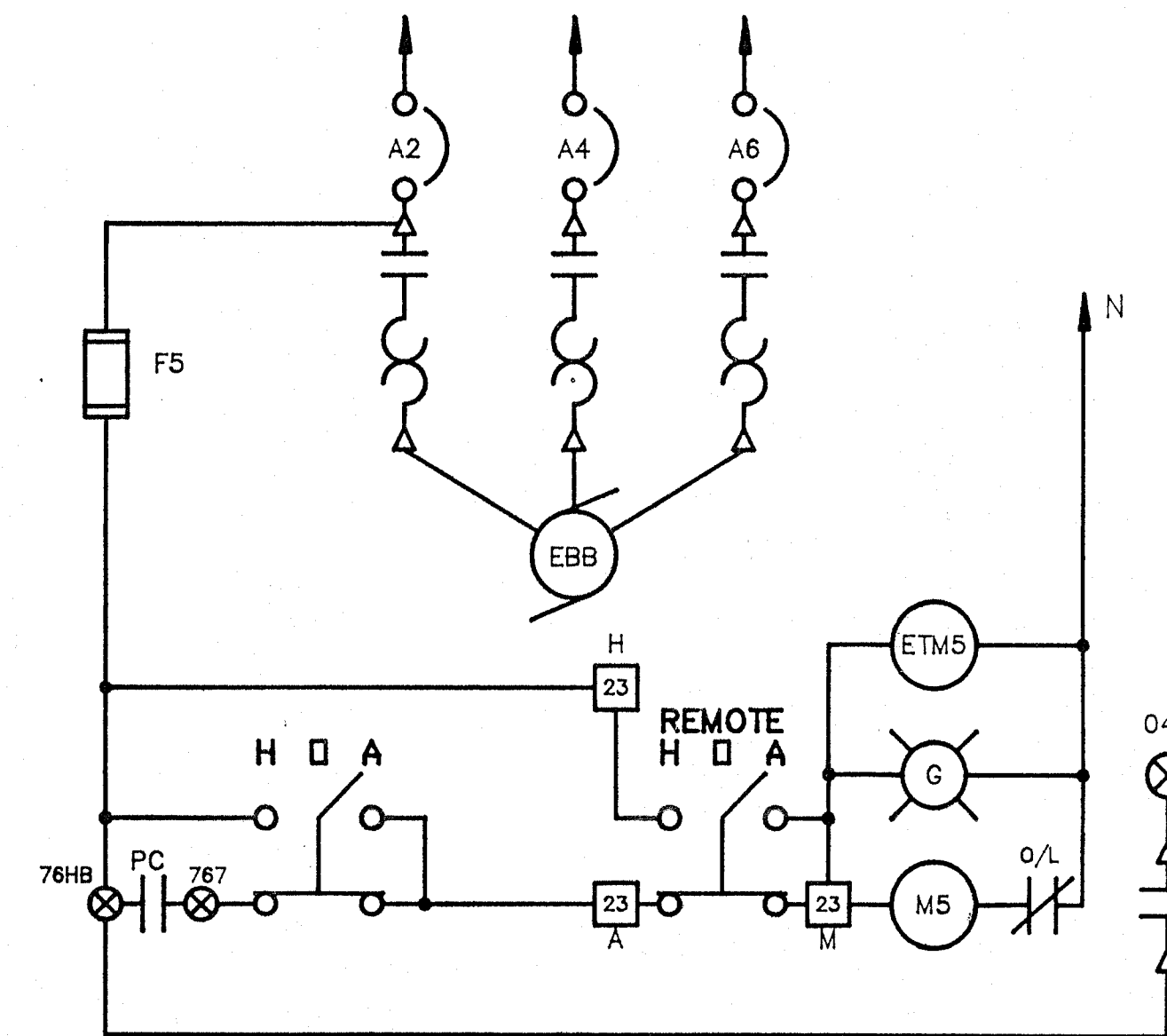
FLOW CONTROLLER LEVEL



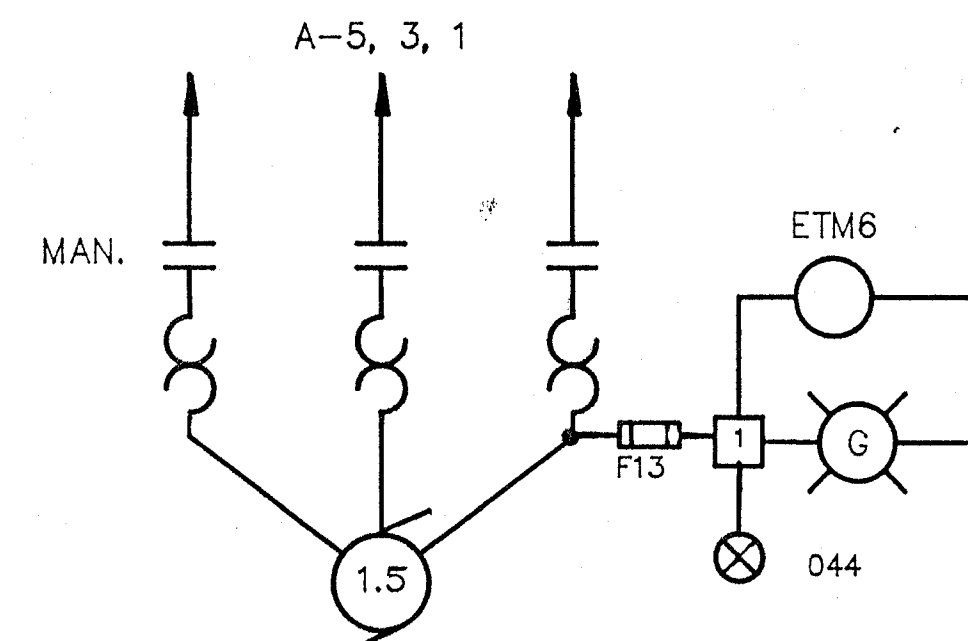
S/F FEED PUMP-1



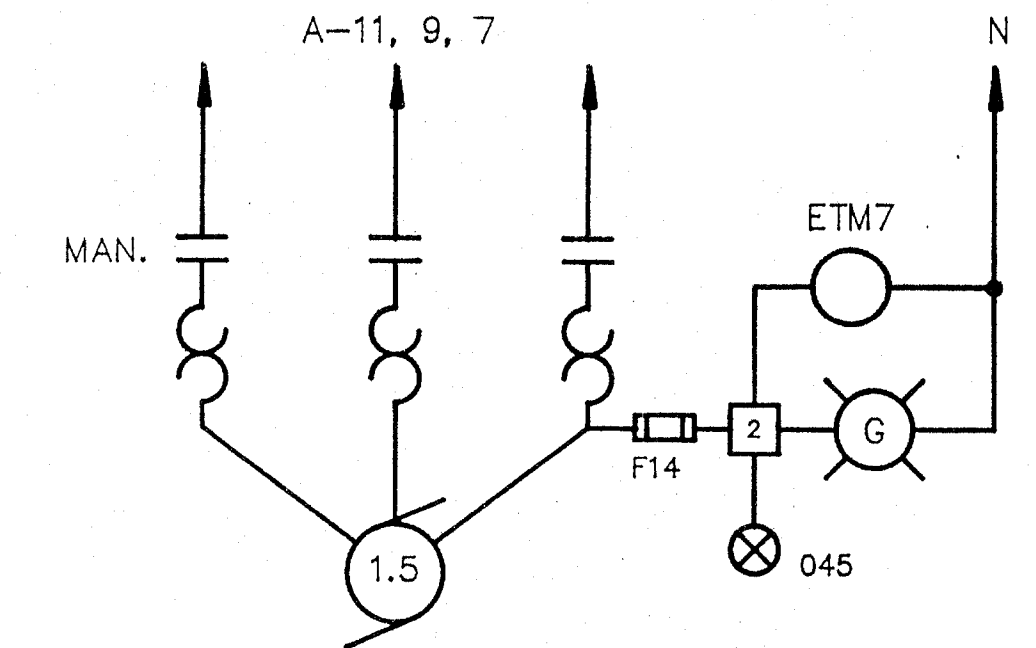
S/F FEED PUMP-2



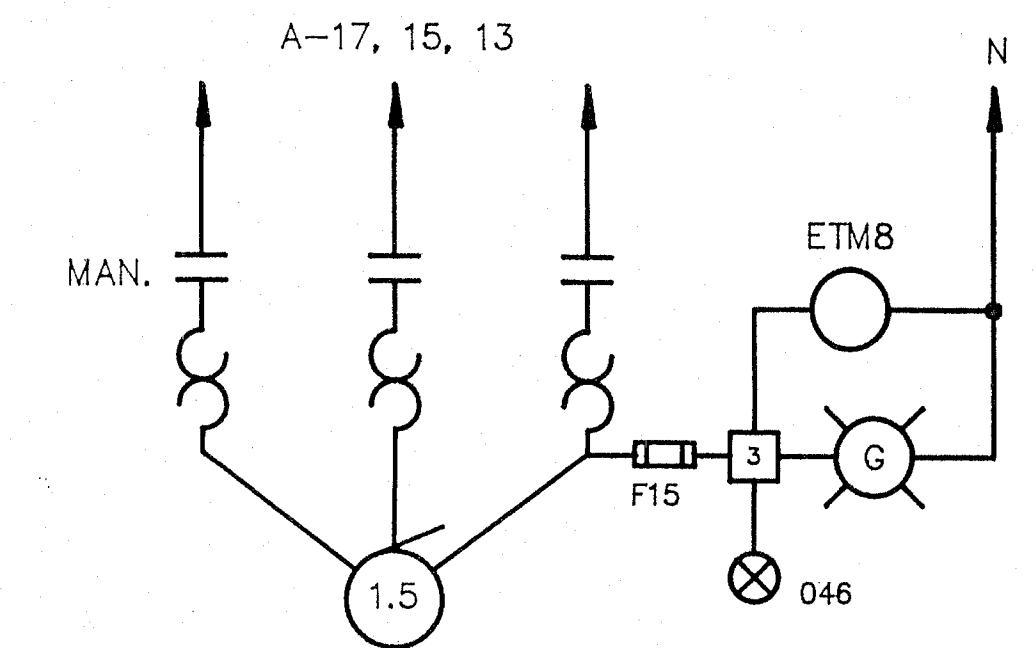
EQUILIZATION BASIN BLOWER



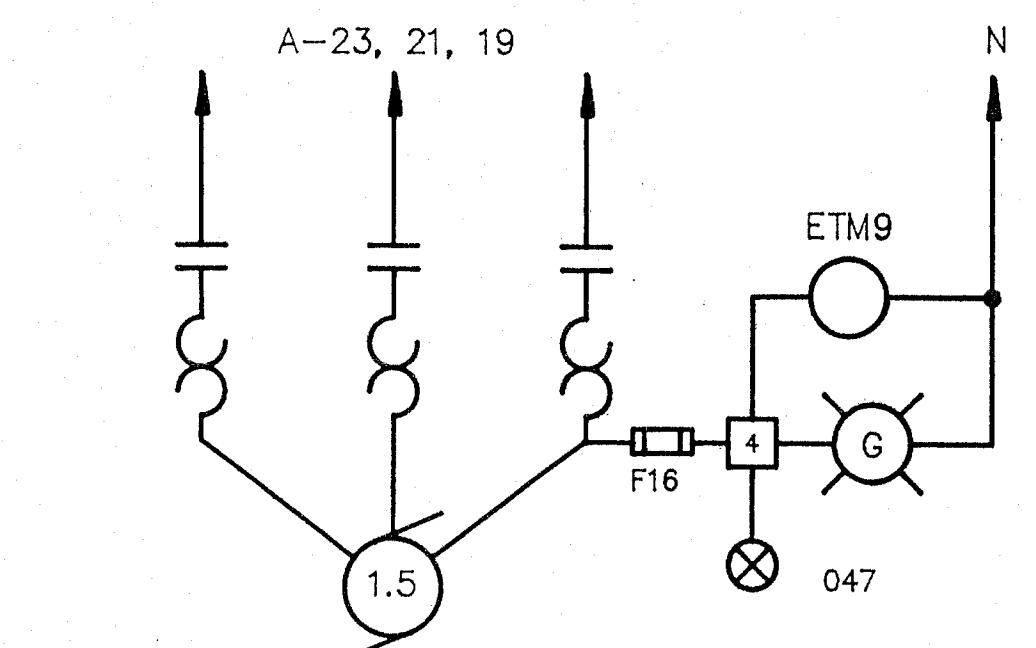
I/F FEED PUMP-1



I/F FEED PUMP-2

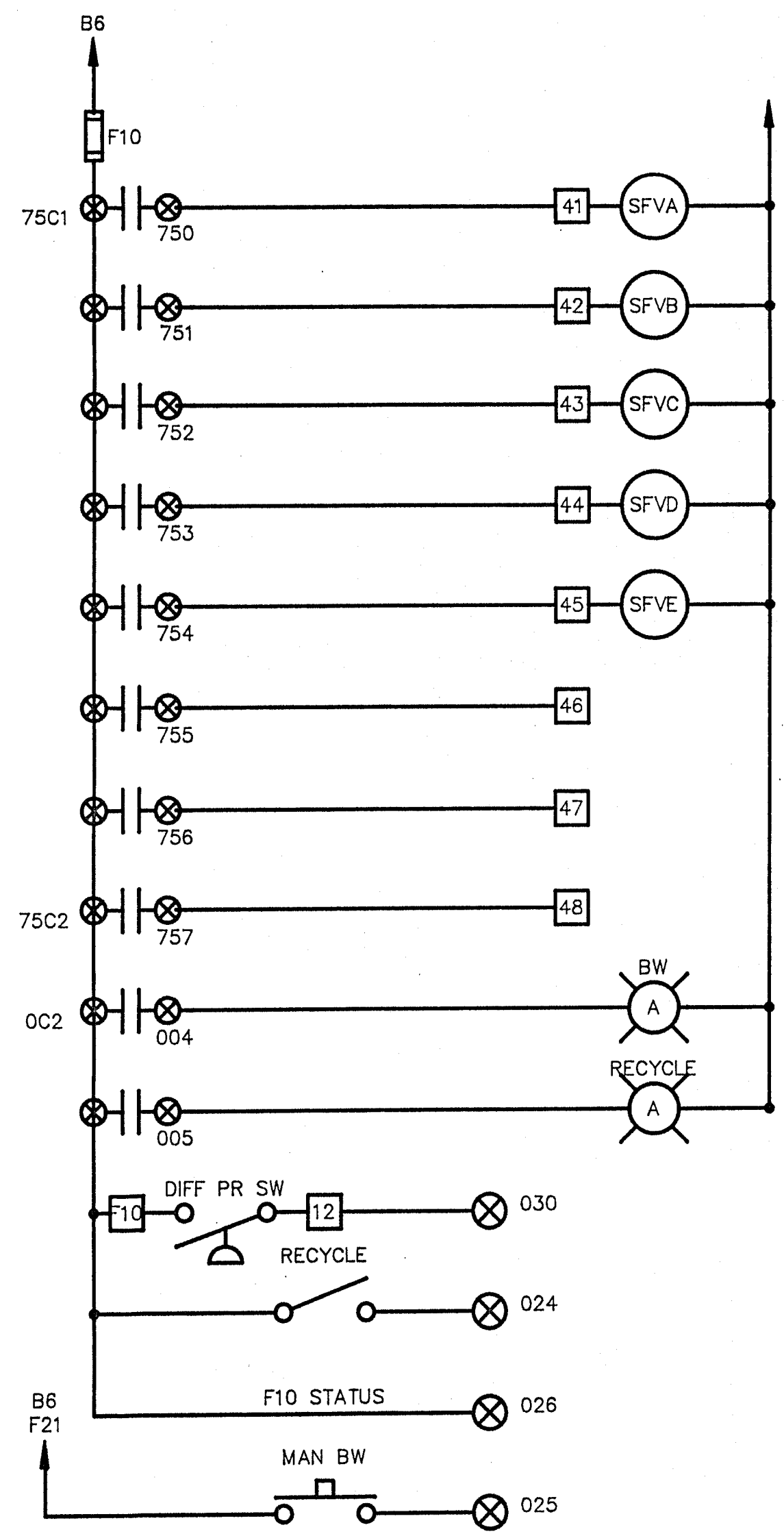


I/F FEED PUMP-3

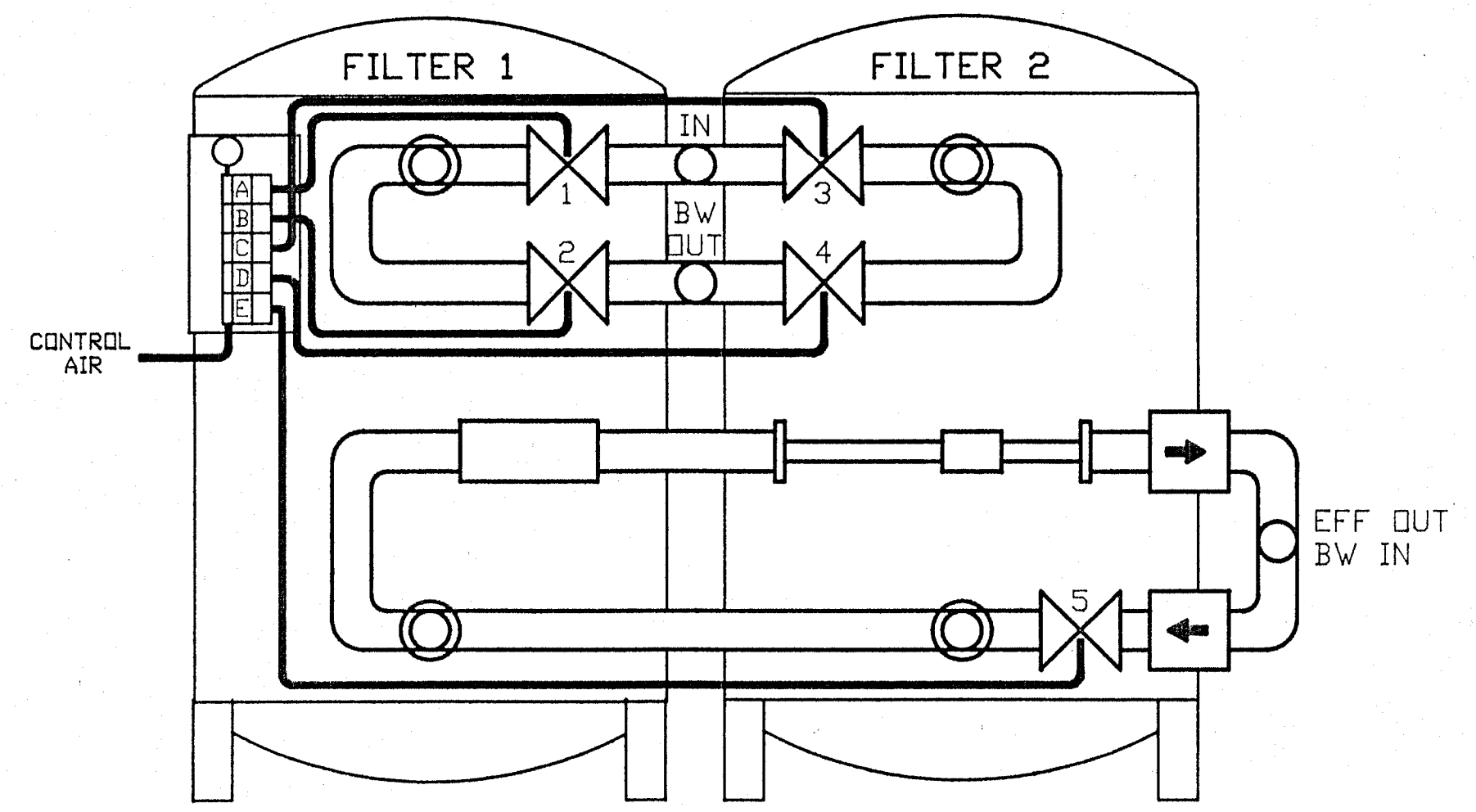


I/F FEED PUMP-4

A	9/20/90	REDRAWN TO AS-BUILT CONDITION
CHG.	DATE	DESCRIPTION
This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.		
ALLIED ENGINEERS, INC. 3000 Executive Parkway, Suite 112 San Ramon, California 94583 415-867-4646		
WALLACE LAKE ESTATES		
CONTROL DIAGRAMS		
SCALE	NONE	D W
DRAWN	RLK	G
CHECKED	BVR	NO.
APPROVED	DATE	JOB NO.
	12/24/87	07070



SANDFILTER CONTROL



STEP	F1	F2	DIAPHRAGM V *					SOLENOID V *
			1	2	3	4	5	
			A	B	C	D	E	
0	ACTIVE	STANDBY	X					
1	B'WASH	ACTIVE		X	X		X	
2	STANDBY	ACTIVE			X			
3	ACTIVE	B'WASH	X			X	X	
RECYCLE			X	X	X	X		

* ALL VALVES ARE NORMALLY CLOSED

SANDFILTER CONTROL VALVES

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
 3000 Executive Parkway, Suite 112
 San Ramon, California 94583
 415-867-4646

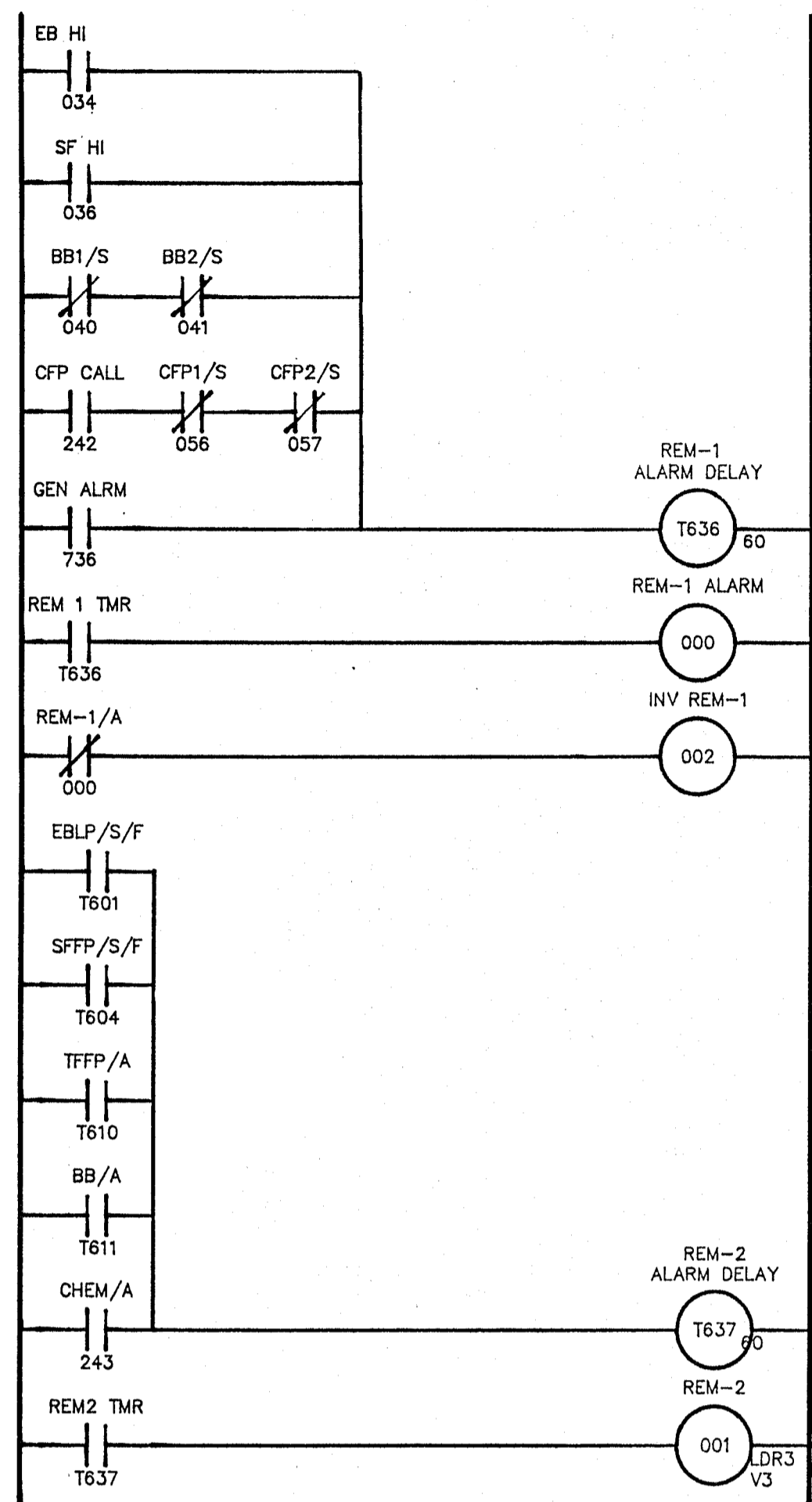
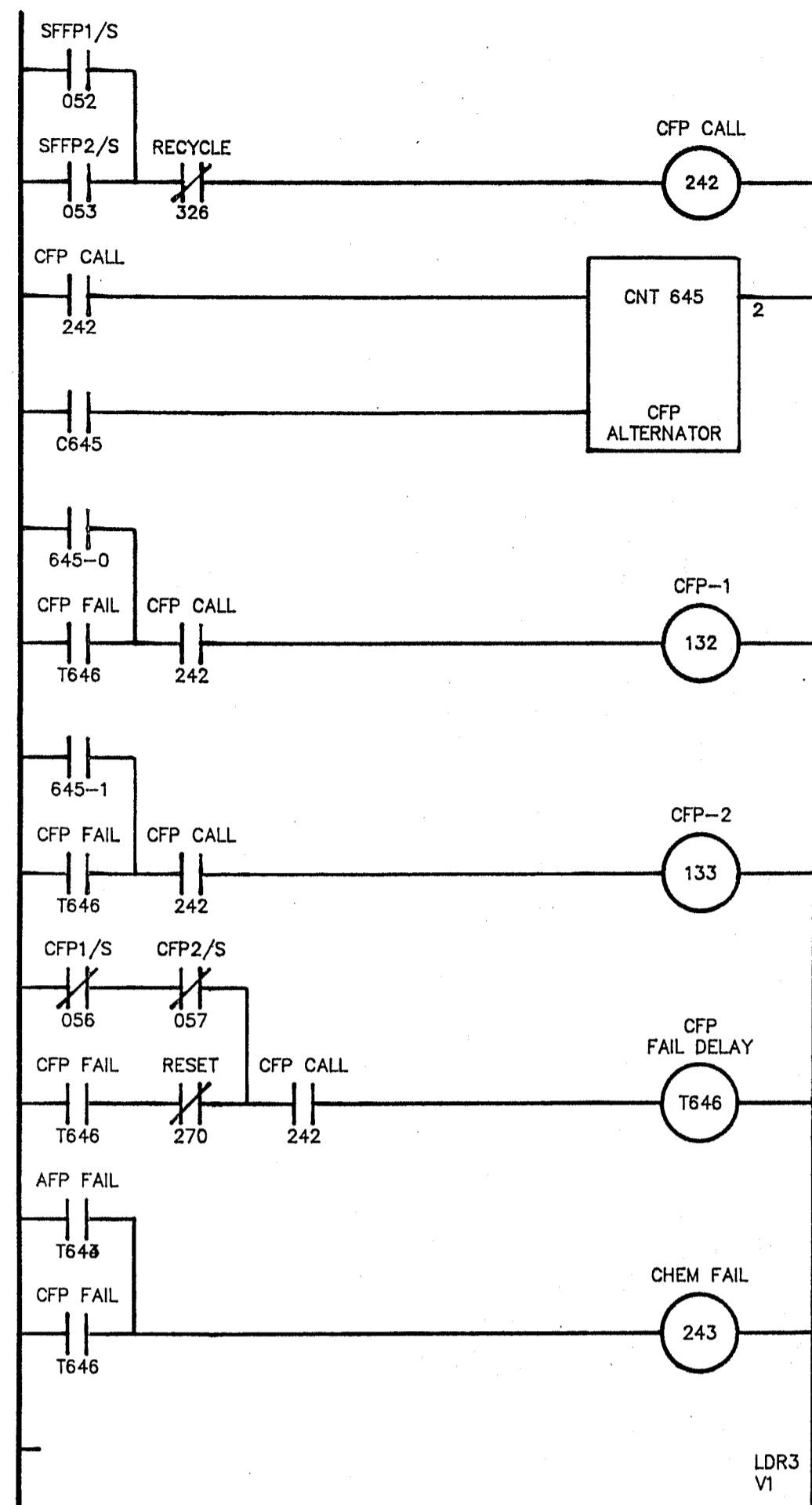
WALLACE LAKE ESTATES

CONTROL DIAGRAMS

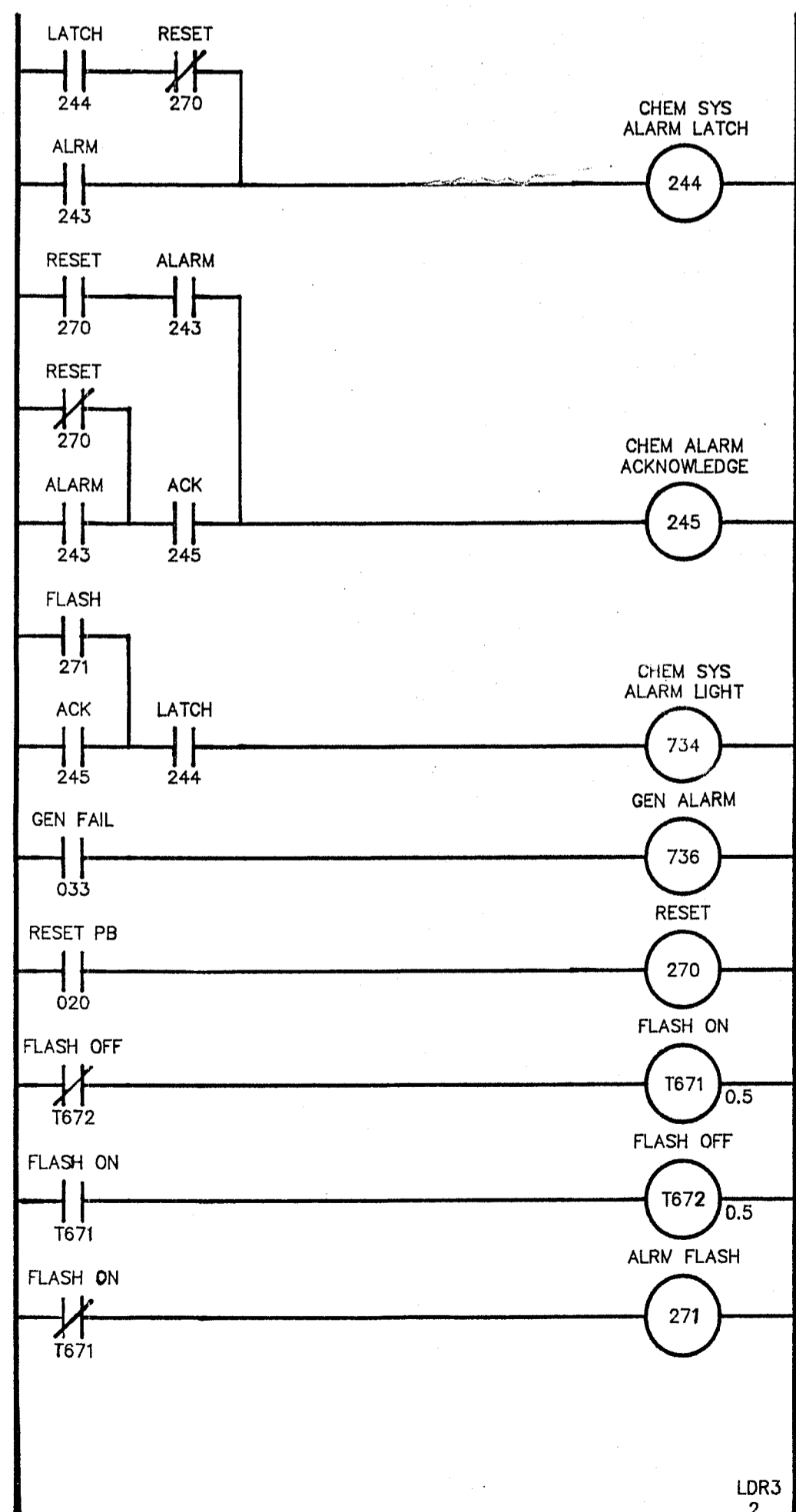
SCALE	NONE	D		
DRAWN	BVR	W		
CHECKED		G		
APPROVED		N.		
		NO.		
		DATE	9/20/90	
		JOB NO.	07070	

E-07

OF



END



LDR3
2

This drawing contains confidential information belonging to Allied Engineers, Inc. Reproduction or further dissemination of the contents in whole or in part requires permission in writing from Allied Engineers, Inc.

ALLIED ENGINEERS, INC.
3000 Executive Parkway, Suite 112
San Ramon, California 94583
415-867-4646

WALLACE LAKE ESTATES
LADDER LOGIC DIAGRAMS

SCALE	NONE	D		
DRAWN	BVR	W		
CHECKED		G		
APPROVED		NO.	E-10	OF
	DATE	9/20/90	JOB NO.	07070