

**PRIVATE SEWER**

**DOUBLE SCALE**  
**GENERAL NOTES:**

1. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
2. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.
3. NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
4. GRADES TO WHICH THIS IMPROVEMENT IS TO BE CONSTRUCTED ARE SHOWN ON PLANS AND PROFILES GRADE POINTS FOR TOP OF CURBS, CENTER LINE OF STREETS, OR CENTER LINE OF ALLEYS ARE SHOWN BY CIRCLES ON PROFILES. AT ALL POINTS BETWEEN MARKED POINTS THE GRADE SHALL BE ESTABLISHED SO AS TO CONFORM TO A STRAIGHT LINE DRAWN BETWEEN SAID DESIGNATED POINTS.
5. THE PRIVATE ENGINEER SHALL FURNISH THE COUNTY ENGINEER WITH GRADE SHEETS AND STATIONING FOR ALL HOUSE LATERALS AND 12" OR 18" BRANCHES AND SHALL PROVIDE BASES FOR THEM AT THEIR PROPER LOCATIONS WITH STATIONING PLAINLY MARKED. ALL HOUSE LATERALS SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT AT RIGHT ANGLES FROM THE MAIN LINE SEWER EXCEPT AS SHOWN ON THE PLANS. HOUSE LATERALS FROM CHIMNEYS SHALL NOT HAVE AN ANGLE OF LESS THAN 45° WITH THE MAIN LINE SEWER. ANY CHANGE IN ALIGNMENT SHALL BE REQUESTED BY WRITING BY THE PRIVATE ENGINEER.
6. THE PRIVATE ENGINEER SHALL FURNISH THE HOUSE LATERAL DEPTH AT THE PROPERTY LINE BELOW THE TOP OF CURB ELEVATION FOR EACH HOUSE LATERAL ON THE GRADE SHEET.
7. BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A PERMIT TO EXCAVATE IN COUNTY STREETS FROM THE L.A. COUNTY ROAD DEPT., DISTRICT OFFICE NO. 3 AND PAY A FEE TO THE COUNTY ENGINEER, 9150 EAST IMPERIAL HIGHWAY, DOWNY, CALIFORNIA, OR THE MALIBU REGIONAL OFFICE TO COVER THE COST OF CONSTRUCTION INSPECTION AND THE FEE TO BE PAID BY THE CONTRACTOR IN A STATE HIGHWAY DISTRICT OFFICE, DIVISION OF HIGHWAY, 130 SOUTH SPRING STREET, LOS ANGELES, CALIFORNIA.
8. APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THE PROJECT. THIS NOTE APPLIES TO ALL PAGES.
9. REFER TO SECTION 7-18.4.3 OF THE STANDARD SPECIFICATIONS, REGARDING SAFETY ORDS.
10. MANHOLE COORDINATES PER CALIFORNIA ZONE 7 SYSTEM.
11. PRIOR TO ISSUANCE OF THE REQUIRED SEWER CONSTRUCTION PERMIT BY THE COUNTY ENGINEER, THE CONTRACTOR SHALL OBTAIN A PERMIT TO EXCAVATE FROM THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY.

PROFILE, ALIGNMENT AND GRADE OF  
**SANITARY SEWERS** PAGE 1  
TO BE CONSTRUCTED IN  
**TRACT NO. 30887**  
**PRIVATE CONTRACT NO. 9024**

W.S. 92  
3 SHEETS, 6 PAGES  
SCALE: VERT. 1"=8'  
HORIZ. 1"=60'  
JANUARY, 1974  
PREPARED IN THE OFFICES OF  
HIGHLAND ENGINEERS  
14724 VENTURA BLVD., SUITE 60C  
SHERMAN OAKS, CA 91403  
BY *Paul K. Kraske*  
REG. C. E. No. 15429

REVISION NO. 2 JULY 24, 1974  
ADDITION OF CHIMNEYS AS SHOWN ON PAGE 4, AND THE ADDITION OF HOUSE LATERALS ON PAGE 2.  
APPROVED: *Shirley Jones* 19166  
MALIBU REGIONAL OFFICE RE. NO.

REVISION No. 1 JUNE 6, 1974  
REVISED 8" V.C.P. ALIGNMENT BETWEEN STATIONS 0+00 AND 0+92.45 AND JOIN EXISTING WET M.H. PER S-13 AS SHOWN ON PAGE 2.  
APPROVED: *Shirley Jones* 19166  
MALIBU REGIONAL OFFICE RE. NO.

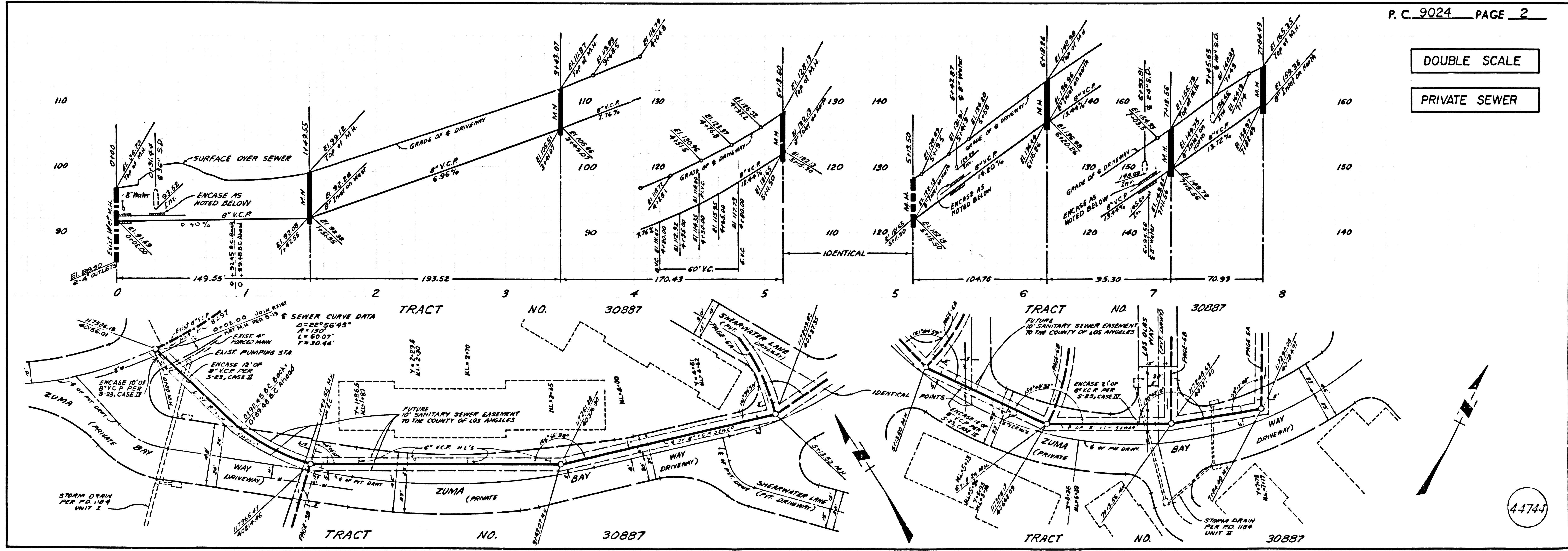
**CONSTRUCTION NOTES:**

1. WORK SHALL BE CONSTRUCTED ACCORDING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1973 EDITION) AND COUNTY ENGINEER SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWERS DATED MARCH 14, 1974, AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.
2. THE CONTRACTOR SHALL NOTIFY THE DESIGN DIVISION BY TELEPHONE, 974-7283, AT LEAST TWENTY-FOUR HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
3. HOUSE LATERALS TO BE CONSTRUCTED WITH INVERTS AT PROPERTY LINE 8 FEET BELOW CURB GRADE WHERE NOTED.
4. WPE OR THE BRANCHES MAY BE USED FOR CONNECTIONS TO MAINLINE SEWERS EXCEPT AS NOTED.
5. ALL STRUCTURES SHALL BE EITHER BRICK MANHOLES OR 12" OR PRECAST CONCRETE MANHOLES PER S-13, EXCEPT AS NOTED.
6. PROVIDE STAKES ON THE PROPERTY LINE OR PROPERTY LINES PRODUCED AT RIGHT ANGLES TO THE SEWER LINE AT THE CENTER LINE OF EACH MANHOLE.
7. MANHOLES SHALL BE CONSTRUCTED TO BE 6 INCHES ABOVE FINISHED GRADE, AND LEVEL WITH FINISHED GRADE AT THE POINT OF INTERFERENCE.
8. VERTICAL CURVE DATA SHALL BE SHOWN ON THE PLANS OR 12" PRECAST CONCRETE MANHOLES PER S-13, EXCEPT AS NOTED.
9. IF A POWER POLE IS WITHIN THREE FEET OF THE SEWER, THE SEWER SHALL BE ENCASED, PER S-13, CASE II, TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
10. IF DURING THE COURSE OF CONSTRUCTION IT IS DETERMINED THAT THERE IS LESS THAN FOUR FEET OF COVER OVER THE TOP OF A MAIN LINE OR HOUSE LATERAL V.C.P. SEWER WHICH IS NOT INDICATED ON THE PLANS, THE PIPE SHALL BE ENCASED PER S-13, CASE II UNLESS OTHERWISE APPROVED BY THE COUNTY ENGINEER.
11. ALL JOINTS BETWEEN CAST IRON PIPE AND VITRIFIED CLAY PIPE SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "C" OR "D", WITH BURNING IF NECESSARY PER STANDARD SPECIFICATIONS, SECTION 206.2.
12. ALLWORKS TO BE TESTED FOR LEAKAGE PER SECTION 206.4-4 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
13. RESURFACE ALL TRENCHES WITHIN PAVED AREAS TO MEET L.A. COUNTY ROAD DEPT. OF CALIFORNIA STATE HIGHWAY REQUIREMENTS IN ACCORDANCE WITH PERMITS.
14. FULL COMPLIANCE WITH SECTION 206.3.3 OF THE SPECIAL PROVISIONS WILL BE REQUIRED FOR BACKFILL IN STREETS. CERTIFICATION OF BACKFILL COMPACTION AND SAND FORTWYMENTS BY A QUALIFIED, REGISTERED TESTING LABORATORY SHALL BE PROVIDED BY THE PERMITTEE PRIOR TO THE ISSUANCE OF A CERTIFICATE OF PARTIAL ACCEPTANCE.
15. HOUSE LATERALS TO BE CONSTRUCTED AT 1/4" RISE PER FOOT EXCEPT WHERE NOTED.

THE FOLLOWING LATEST REVISED STANDARD PLANS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER SHALL APPLY IN THE CONSTRUCTION OF THIS PROJECT:

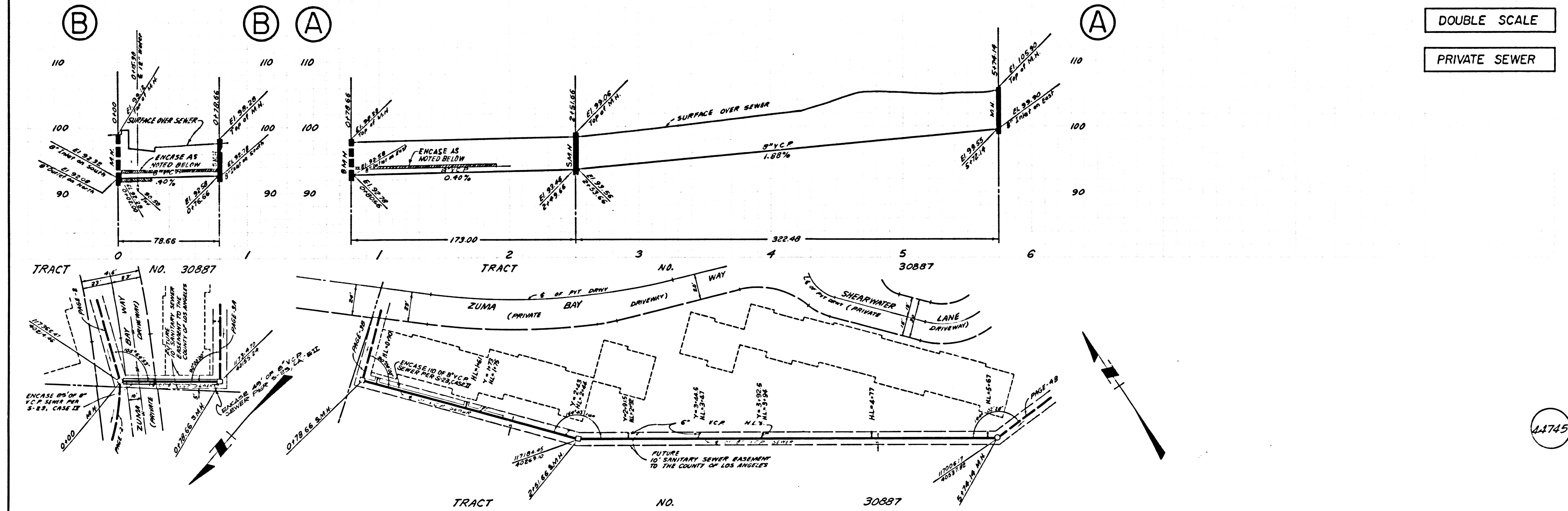
LEGEND	NO.
MINIMUM PUBLIC SAFETY REQUIREMENTS	S-1
BRICK MANHOLE	S-2
STANDARD MANHOLE STEP	S-17
ENCASING FOR SEWER PIPE	S-21
CRADLING AND ENCASEMENT	S-23
WPE OR THE SUPPORT	S-24
ALLOWABLE TRENCH WIDTHS	S-25
LOCKING MANHOLE FRAME AND COVER	S-26
NON-REINFORCED PRECAST CONCRETE MANHOLE	S-27
ANCHOR BLOCK	S-24
EROSION PROTECTION IN STEEP SLOPES	S-24
PRECAST CONCRETE SHALLOW MANHOLE	S-27
PRECAST CONCRETE MANHOLE FRAME & COVER	S-28
BREAKING INTO EXISTING BRICK OR PRECAST CONC. M.H.	S-15
CHIMNEY PIPE & BASE	S-27

HARVEY T. BRANDT, COUNTY ENGINEER  
APPROVED: *Shirley Jones* 5-16-74  
REGIONAL ENGINEER (S-13)  
CHECKED: *Shirley Jones* 5-16-74  
DATE  
NO. C.E. NO. 19166  
MALIBU - BLDG. DIST. - 9.2 - J.N. 0250.02



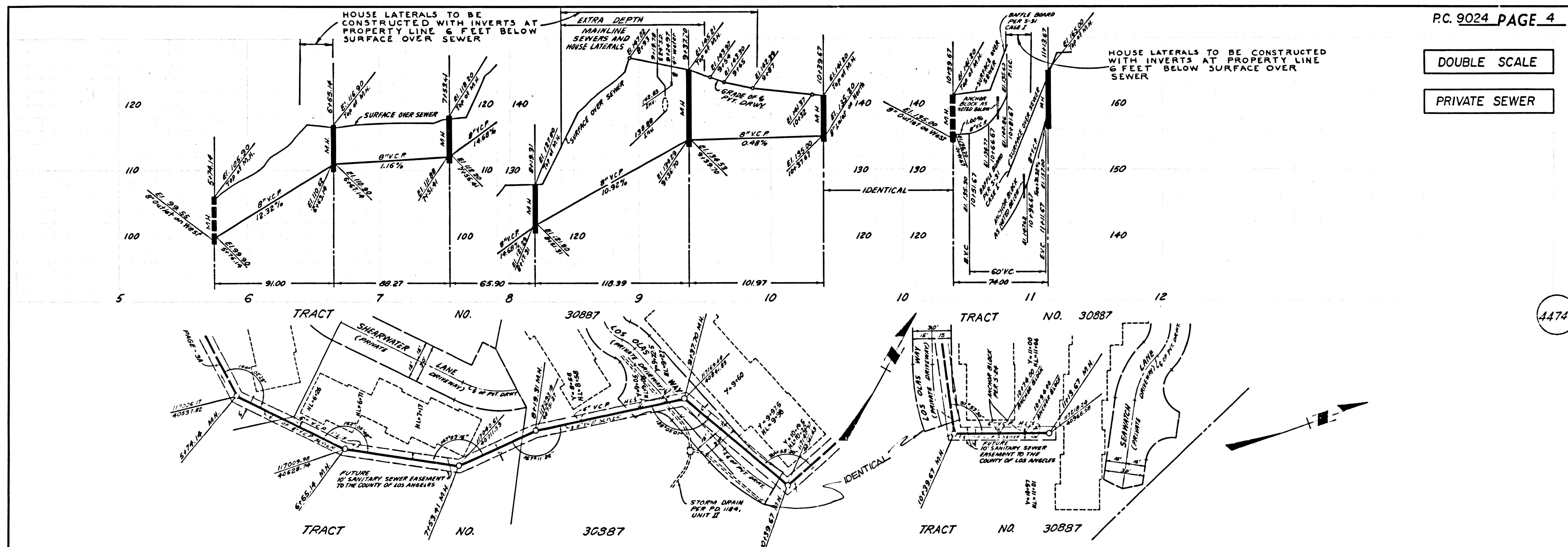
DOUBLE SCALE

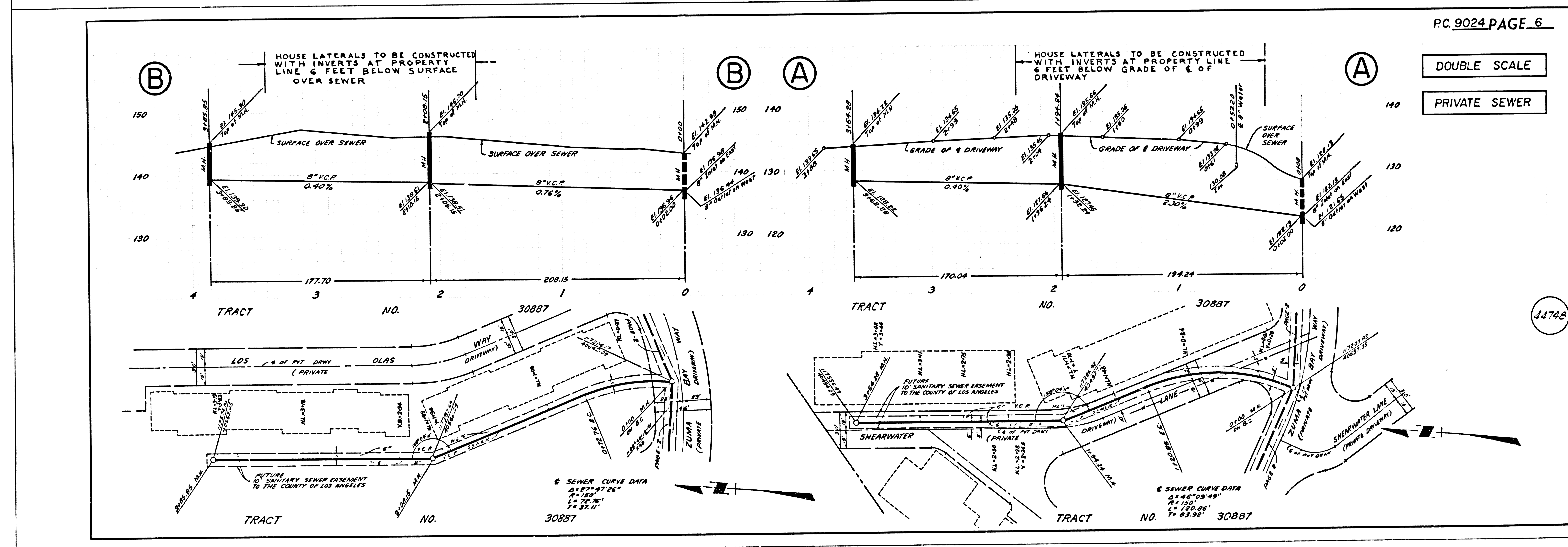
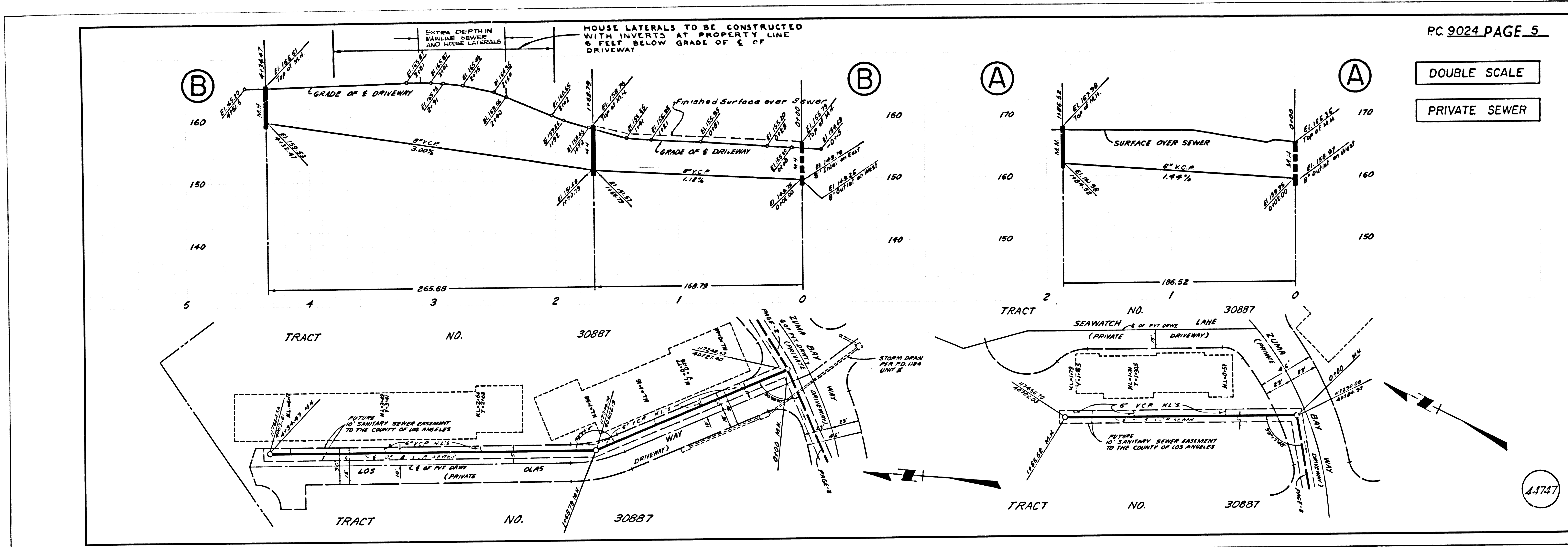
PRIVATE SEWER

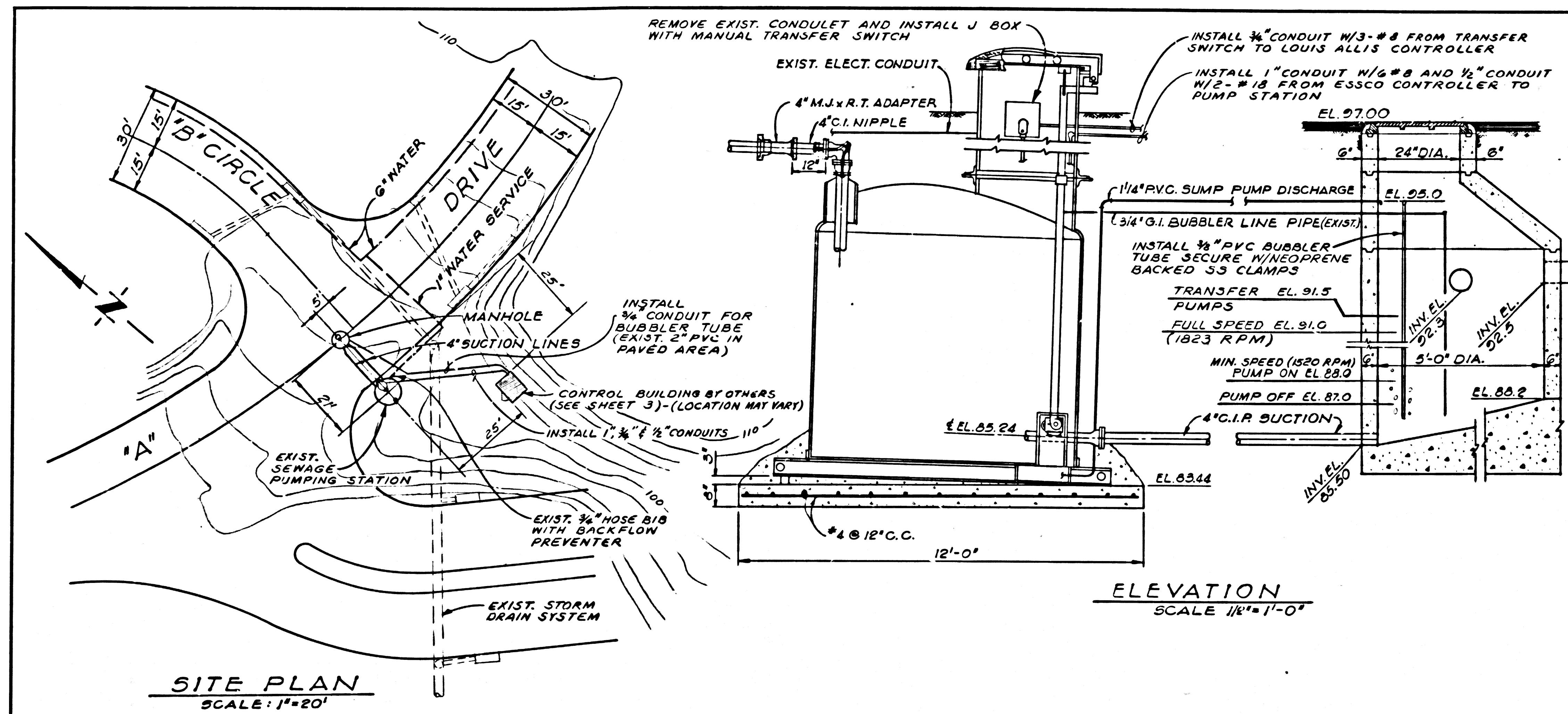


DOUBLE SCALE

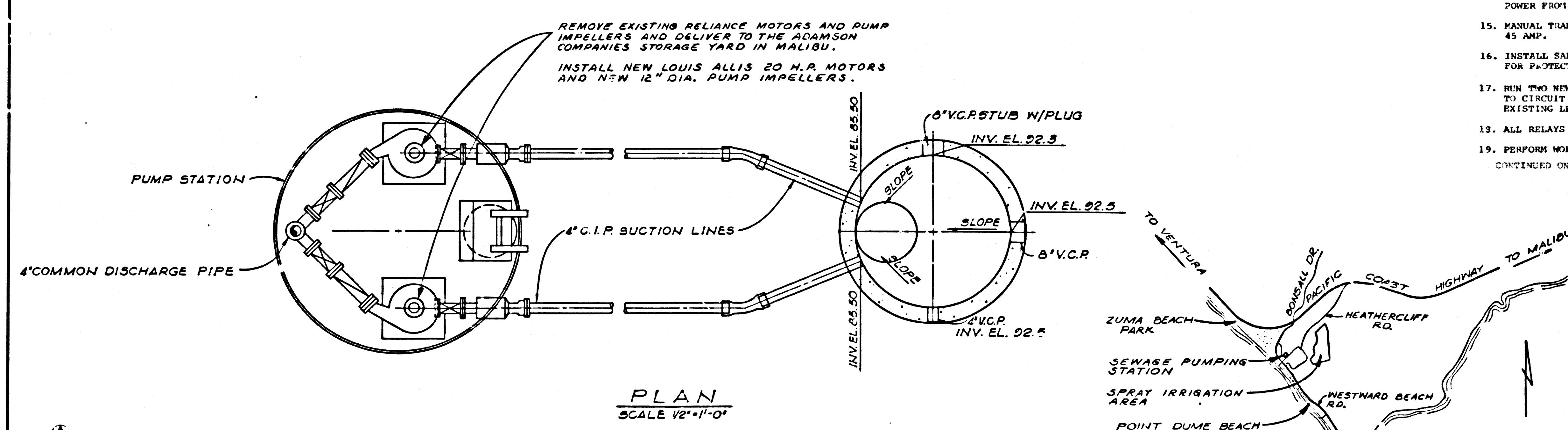
PRIVATE SEWER







- NOTES**
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE OF CALIFORNIA AND COUNTY OF LOS ANGELES CODES AND SHALL BE ACCEPTABLE TO THE COUNTY ENGINEER. DEVIATIONS IN THE PLANS OR SPECIFICATIONS SHALL BE BY PERMISSION TO VIOLATE THESE CODES OF APPLICABLES AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY WORK WHICH IS NOT ACCEPTED.
  - MATERIALS SHALL BE NEW AND SHALL BE LISTED AND APPROVED BY UNDERWRITERS' LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL HERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, STATE OF CALIFORNIA AND ALL GOVERNING BODIES HAVING JURISDICTION.
  - INSTALLATION OF MATERIALS AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, INSTRUCTIONS, INDUSTRY STANDARDS, AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
  - PROVIDE ALL MOUNTING FACILITIES REQUIRED FOR PROPERLY SECURING OR HANGING FIXTURES, EQUIPMENT AND OUTLETS. PROVIDE ALL SLEEVES, INSERTS, EXPANSION JOINTS, VIBRATION FITTINGS, ETC., REQUIRED.
  - PROVIDE ADEQUATE STORAGE FACILITIES AND PROTECT ALL WORK, MATERIALS AND EQUIPMENT FROM DAMAGE DURING PROGRESS OF WORK. REPLACE ALL DAMAGED OR DEFECTIVE WORK, MATERIALS AND EQUIPMENT WITHOUT ADDITIONAL COST TO THE OWNER.
  - PROVIDE TRENCHING, BACK-FILLING AND CONDUCTION FOR THE UNDERGROUND ELECTRICAL CONDUITS.
  - ALL CUTTING AND PATCHING OF THE CONSTRUCTION WORK REQUIRED FOR THE PROPER INSTALLATION OF ELECTRICAL WORK. ALL PATCHING SHALL BE OF FAIR MATERIAL, WORKMANSHIP AND FINISH AS EXISTING AND SHALL MATCH SURROUNDING WORK TO THE SATISFACTION OF THE ENGINEER.
  - CONDUIT SHALL BE RIGID STEEL AND SHALL HAVE UL LABEL, ZINC COATED EXTERIOR AND ZINC OR ENAMEL INTERIOR. FITTINGS FOR RIGID CONDUIT SHALL BE TRENCH STEEL OR MALLEABLE IRON, ZINC COATED.
  - CONDUIT AND FITTINGS INSTALLED UNDERGROUND SHALL BE BONDED PVC COATED (40 FT) CONDUIT AND FITTINGS SHALL BE EQUAL TO OCCUPANTAL COATING COMPANY LOCAL-40 PVC COATED CONDUIT AND CONDUIT FITTINGS.
  - FLEXIBLE CONDUIT SHALL HAVE UL LABEL AND ZINC COATED EXTERIOR AND INTERIOR. FITTINGS FOR FLEXIBLE CONDUIT SHALL BE "JAKE" TYPE "B" SET SCREW CONNECTORS ARE NOT APPROVED. FLEXIBLE CONDUIT SHALL BE REALTIVE TYPE U.S.A. WITH AUSTIN SERIES "ST" OR PYLE-NATIONAL SERIES "CT" CONNECTORS.
  - OUTLET AND JUNCTION BOXES SHALL BE CONDUIT-BINDING, APPLETON OR NATIONAL CAST IRON WITH THERMO-CAST RUBBER.
  - JUNCTION BOXES SHALL BE INSTALLED WHERE REQUIRED FOR CONSTRUCTION OR BY CODE, AND SHALL BE SIZED AS REQUIRED BY CODE.
  - ALL CONDUIT SYSTEMS AND SYSTEM CONDUCTORS SHALL BE PERMANENTLY AND EFFECTIVELY GROUNDING. SIZE AND TYPE OF GROUNDING CONDUCTORS AND BONDING JUNCTIONS SHALL BE AS REQUIRED BY THE STATE OF CALIFORNIA ELECTRICAL SAFETY ORDERS AND LOCAL ORDINANCES, BUT IN NO INSTANCE SMALLER THAN NO. 8 AWG.
  - INSTALL MANUAL TRANSFER SWITCH INSIDE ENTRANCE TO TRANSFER ROOMING POWER FROM EXISTING PANEL TO NEW LOUIS ALLIS CONTROLLER.
  - MANUAL TRANSFER SWITCH SHALL BE AMERICAN SOLENOID CO. NO. C41222-E-0091, 45 AMP.
  - INSTALL SAFETY SWITCHES OR DOOR INTERLOCKS ON EXISTING PANEL AS REQUIRED FOR PROTECTION FROM 115 V POWER.
  - RUN TWO NEW LEADS FROM EXISTING JUNCTION BOX (AHEAD OF TRANSFER SWITCH) TO CIRCUIT BREAKER FOR TRANSFORMER IN EXISTING S & L PANEL. DISCONNECT EXISTING LEADS FROM EXISTING MAIN BREAKERS.
  - ALL RELAYS SHALL BE MACHINED TOOL RELAYS.
  - PERFORM WORK SO THAT ONE PUMP IS IN OPERATION AT ALL TIMES.
- CONTINUED ON SHEET 2



**BENCH MARK No. 48-121 (DUME' POINT L-108)**  
PACIFIC COAST HWY. & HEATHERCLIFF RD ON NORTH SIDE OF HWY. ABOUT 240' EAST OF ROAD, 38.6' NELY OF 3 1/2" T. IN NLY CORNER OF HWY. DIVIDER STRIP & 26.6' ELY. OF P.N.R. #1035794E  
ADJ. EL. 200.553 (1944)  
DATUM - U.S.C. & G.S. DUME' POINT L-108-RE 329-1950  
REF. F.B. #1369 D.103

PRIVATE CONTRACT NO. 9024-B

J. N.

COUNTY OF LOS ANGELES, CALIFORNIA  
HARVEY T. BRANDT COUNTY ENGINEER

CHECKED BY: *Ryan G. Cantor* C21276  
10-17-74

APPROVED BY: *Ken L. Mullen* 10/17/74  
HEAD, DESIGN BRANCH DATE

LOS ANGELES COUNTY HEALTH DEPARTMENT

APPROVED BY: *Paul R. Whiteley*  
HEALTH OFFICER DATE

ZUMA BAY ASSOCIATES  
LOS ANGELES, CALIFORNIA

**MODIFICATIONS TO  
SEWAGE PUMPING STATION**

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

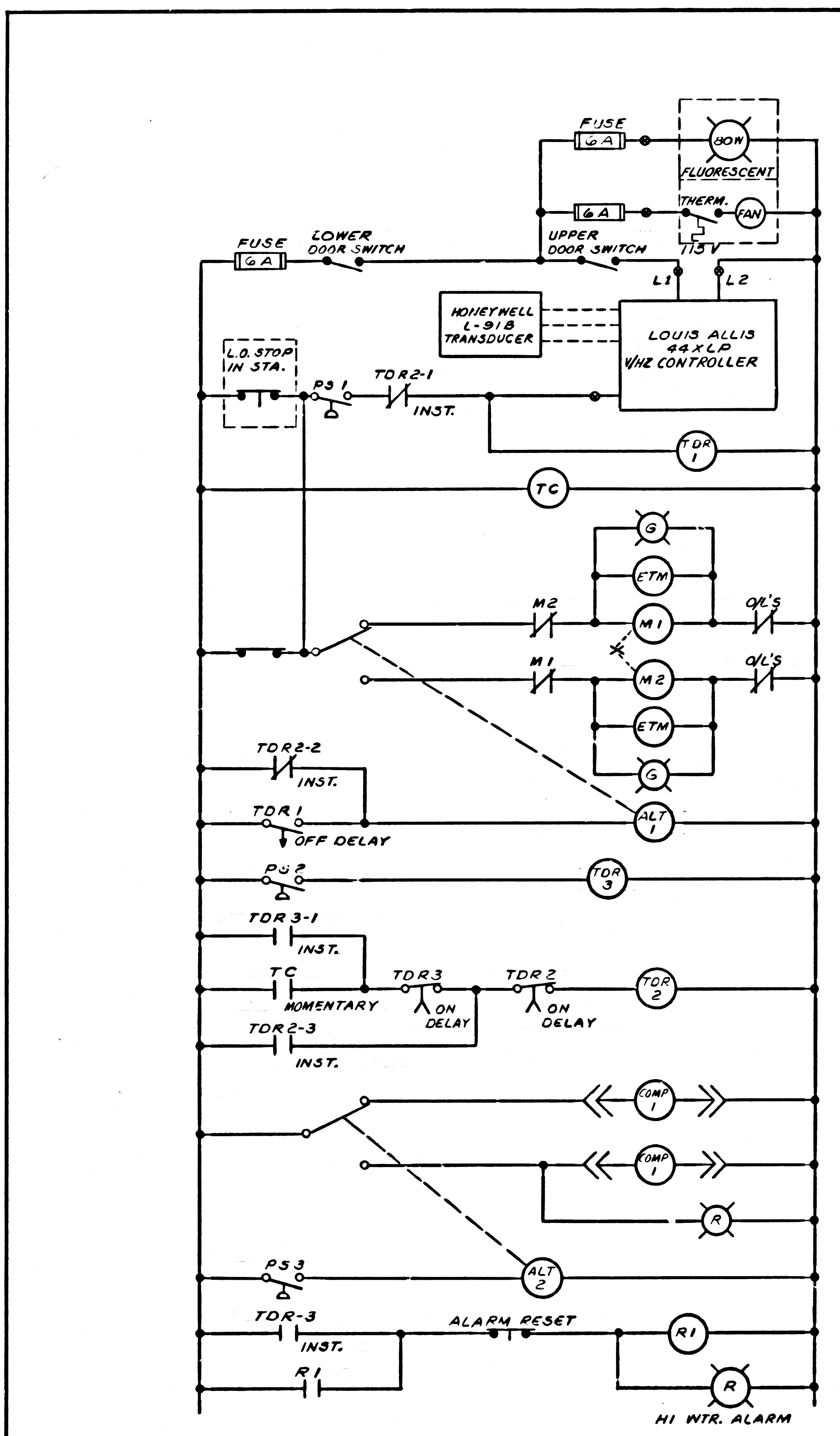
DESIGNED: L.B.M.  
DRAWN: J.M.C.  
CHECKED: L.B.M.

SCALE AS NOTED

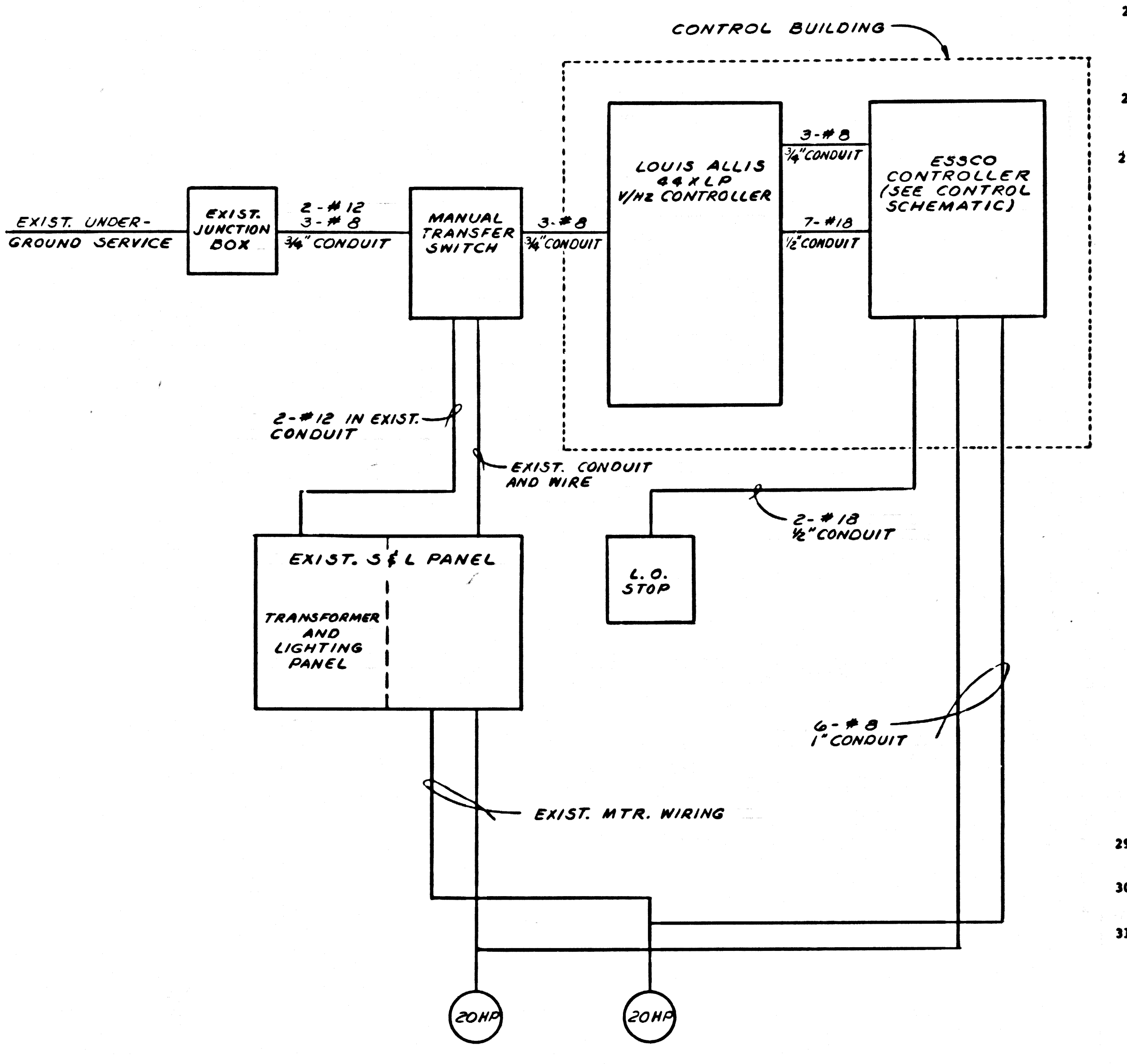
15,328 3-18-74

KIM KENNETH I. MULLEN  
CONSULTING ENGINEERS, INC.  
130 W. DUARTE RD. ARCADIA, CALIF.  
(213) 446-2112

SHEET 1 OF 4



**CONTROL SCHEMATIC**



**SINGLE LINE DIAGRAM**

- NOTES (CONTINUED FROM SHEET 1)
20. ELEVATIONS ARE IN FEET ABOVE U.S.C. & G.S. SEA LEVEL DATUM OF 1929.
  21. NO REVISIONS SHALL BE MADE IN THESE PLANS WITHOUT THE APPROVAL OF THE COUNTY ENGINEER.
  22. NO REPRESENTATIVE OF THE COUNTY ENGINEER WILL SURVEY OR LAY OUT ANY PORTION OF THE WORK.
  23. BEFORE WORK CAN BE STARTED, THE CONTRACTOR MUST OBTAIN A CONSTRUCTION PERMIT FROM THE COUNTY ENGINEER AND PAY A FEE TO THE COUNTY ENGINEER MALIBU REGIONAL OFFICE TO COVER THE COST OF CONSTRUCTION INSPECTION AND RECORD PLANS.
  24. APPROVAL OF THIS PLAN BY THE COUNTY OF LOS ANGELES DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OF OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE, OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
  25. REFER TO SECTION 7-10.4.1 OF THE STANDARD SPECIFICATIONS REGARDING SAFETY ORDERS.
  26. WORK SHALL BE CONSTRUCTED ACCORDING TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (1973 EDITION WITH 1974 SUPPLEMENT) AND COUNTY ENGINEER SPECIAL PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWERS DATED MARCH 1, 1974, AND SHALL BE PROSECUTED ONLY IN THE PRESENCE OF THE COUNTY ENGINEER.
  27. THE CONTRACTOR SHALL NOTIFY THE DESIGN DIVISION BY TELEPHONE, (213) 974-7281, AT LEAST TWENTY-FOUR HOURS BEFORE STARTING ANY WORK UNDER THIS CONTRACT.
  28. THE VARIABLE SPEED POWER UNIT SHALL BE A COMPLETELY SOLID STATE CONVERTER WHICH WILL TRANSFORM 480 VOLTS, THREE PHASE, 60 HERTZ INPUT POWER INTO VARIABLE VOLTAGE, ADJUSTABLE FREQUENCY, THREE PHASE OUTPUT OF SUITABLE CAPACITY AND WAVEFORM TO CONTROL THE SPEED OF A NEMA B DESIGN AC MOTOR WITH 1.15 SERVICE FACTOR THROUGHOUT A STEPLESS SPEED RANGE OF 40% TO 110% RPM, UNDER VARIABLE TORQUE LOAD ON A CONTINUOUS BASIS. HARMONIC CONTENT OF THE WAVEFORM APPLIED TO THE MOTOR SHALL BE 5% OR LESS OF THE FUNDAMENTAL RMS VALUE UNDER ALL CONDITIONS, TO MINIMIZE MOTOR HEATING. THE CONVERTER SHALL BE OF THE CURRENT REGULATED, CONTROLLED RECTIFIER/SELF-COMMUTATING INVERTER TYPE AND SHALL INCLUDE THESE FEATURES FOR SELF PROTECTION AND RELIABLE AUTOMATIC OPERATION:
    - A. CURRENT LIMIT, ADJUSTABLE TO 100% OF MOTOR FULL LOAD CURRENT, TO SAFELY LIMIT CURRENT UNDER ANY FAULT CONDITION TO INVERTER AND/OR MOTOR INCLUDING SHORT CIRCUIT.
    - B. INSTANTANEOUS STATIC OVERVOLTAGE AND OVERCURRENT TRIP CIRCUIT.
    - C. UNDERVOLTAGE TRIP FOR NON-MOMENTARY POWER OR PHASE LOSS.
    - D. POWER MODULE THERMAL SWITCH FOR SEMICONDUCTOR PROTECTION.
    - E. FAST ACTING INPUT FUSES FOR SUB-CYCLE FAULT CLEARING.
    - F. LINE VOLTAGE TRANSIENT SUPPRESSION NETWORK.
    - G. CONVERTER FAULT DETECTION CIRCUIT TO INITIATE ALARM AND AUTOMATICALLY TRANSFER THE MOTOR TO CONSTANT SPEED OPERATION, DESIGNED TO PREVENT MISDANCE OPERATION.
    - H. ISOLATED POWER AND SIGNAL CIRCUITS.
    - I. SOFT STARTING, LESS THAN 100% OF FULL LOAD CURRENT.
    - J. SIZED TO OPERATE WITHIN 1.0 SERVICE FACTOR RATING UNDER ALL CONTINUOUS AND MOMENTARY LOAD CONDITIONS.
  29. THE CONVERTER SHALL BE DESIGNED TO ACCEPT A SPEED SIGNAL FROM A PRESSURE OPERATED POTENTIOMETER IN AN AUTOMATIC SPEED CONTROL MODE OR FROM AN LITERAL MANUAL POTENTIOMETER WHEN THE MANUAL MODE IS SELECTED BY DOOR MOUNTED SWITCH. THE SELECTED SPEED SIGNAL SHALL CONTROL THE MOTOR SPEED BETWEEN THE ADJUSTABLE MINIMUM AND MAXIMUM SPEED SETTINGS. THE TOTAL SPEED SIGNAL SHALL FOLLOW A LINEAR TIME RAMP WHICH IS ADJUSTABLE FROM 4-20 SECONDS TO PROVIDE ACCELERATION AND DECELERATION CONTROL. A CIRCUIT BREAKER SHALL BE PROVIDED TO DISCONNECT THE CONVERTER FROM ALL POWER AND THE CONVERTER SHALL BE SERVICED WITHIN THE ENCLOSURE TO REDUCE THE DANGER OF POWER OFF SERVICING WHILE THE REMAINDER OF THE CONTROL SYSTEM IS IN OPERATION. THE CONVERTER SHALL BE CAPABLE OF OPERATION AND DECELERATION CONTROLLINGLY AT 110% OF RATED SPEED WITHIN 1.0 SERVICE FACTOR RATING.
  30. VARIABLE SPEED UNIT SHALL BE MODEL 44KLD VHS CONTROLLER MANUFACTURED BY LOUIS ALLIS.
  31. THE VARIABLE SPEED CONTROLLER SHALL VARY THE FLOW CAPACITY TO MATCH INCOMING FLOW THROUGHOUT A RANGE OF 50 TO 147 GPM.
  32. FIELD TESTS OF VARIABLE SPEED CONTROL AND FUNDING EQUIPMENT IS REQUIRED TO DEMONSTRATE THAT THE ABOVE REQUIREMENT IS MET.
  33. THE PUMP DRIVE MOTORS SHALL BE SIZED TO BE WITHIN THEIR RATED LOAD UNDER THE SPECIFIED HEAD AND FLOW CONDITIONS. THE TWO IDENTICAL MOTORS SHALL BE AC SQUARE FRAME INDUCTION MOTORS OF NEMA B DESIGN, RATED TO HP, AT 1740 RPM SYNCHRONOUS SPEED IN 400C AMBIENT, FOR OPERATION ON CONVENTIONAL 480 VAC, 3 PHASE, 60 HERTZ POWER. THE MOTORS SHALL BE CLASS B INSULATED, AND CAPABLE OF AND NAMEPLATED FOR 1.15 SERVICE FACTOR, AND SHALL INCLUDE THERMOSTATS EMBEDDED IN 2 PHASES OF THE STATOR WINDING. THE MOTOR SHALL BE VERTICAL B-BASE WITH NORMAL THRUST SOLID SHAFT, OPEN DRIP-PROOF, CAST IRON CONSTRUCTION. THE MOTOR FRAME SHALL BE THE STANDARD, NEW ASSIGNED FRAME SIZE SUPPLIED FOR CONSTANT SPEED USE ON FULL VOLTAGE, FIXED FREQUENCY LINE POWER. THE MOTORS SHALL BE EQUAL TO THE EXISTING RELIANCE MOTORS AND SHALL BE SUITABLE FOR DRIVING THE EXISTING SMITH AND LOVELESS PUMPS. THE MOTORS SHALL BE LOUIS ALLIS FRAMEWORK OR APPROVED EQUAL.

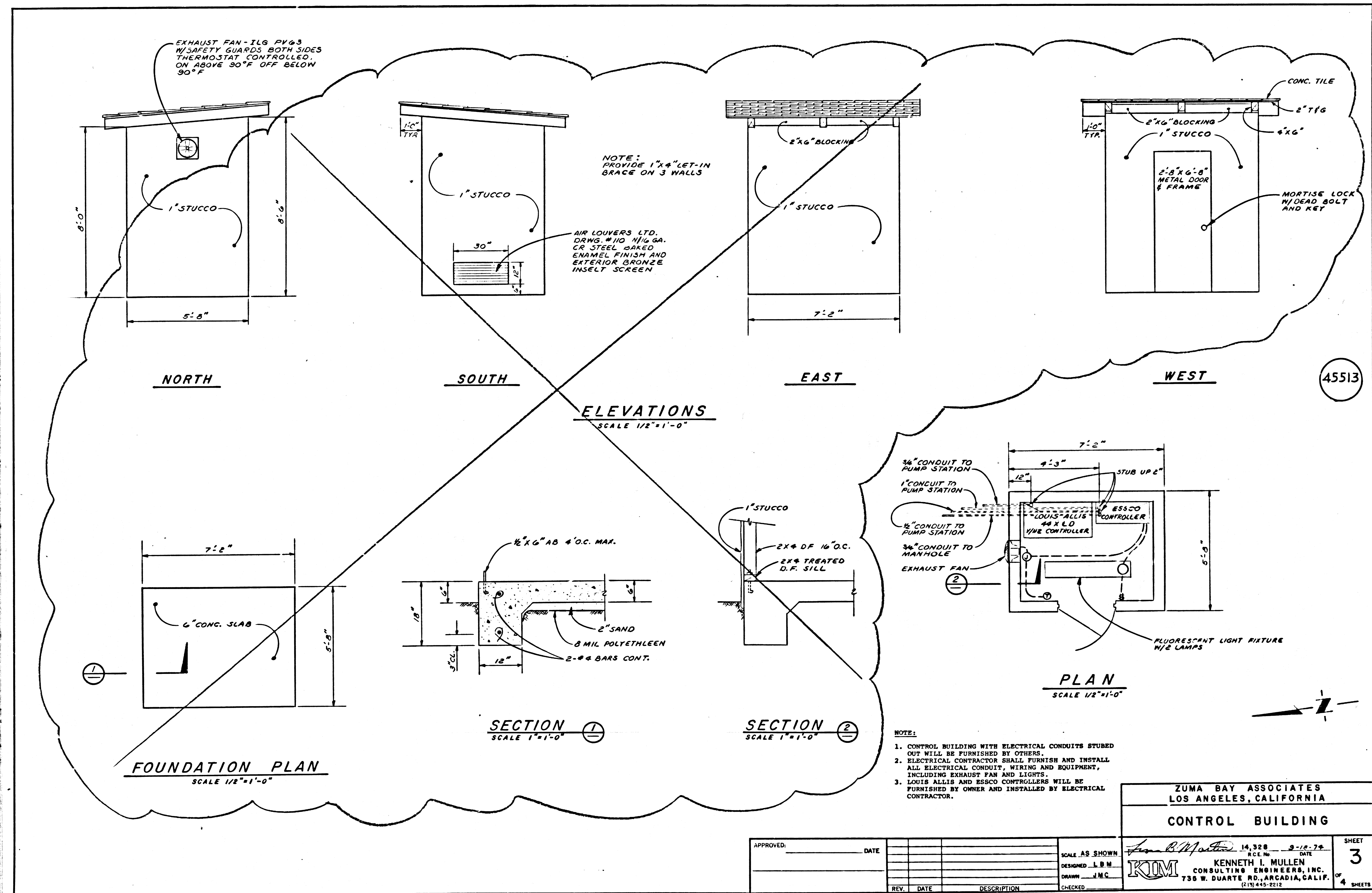
45512

ZUMA BAY ASSOCIATES  
LOS ANGELES, CALIFORNIA  
MODIFICATIONS TO  
SEWAGE PUMPING STATION

APPROVED: _____	DATE _____
SCALE: NONE	DATE: 10-30-78
DESIGNED: L.B.M.	DATE: 2-18-78
DRAWN: J.M.C.	DATE: _____
CHECKED: _____	DATE: _____

KIM CONSULTING ENGINEERS, INC.  
735 W. QUARTER ST., ANAHEIM, CALIF.  
(714) 442-2212

SHEET 2 OF 4 SHEETS



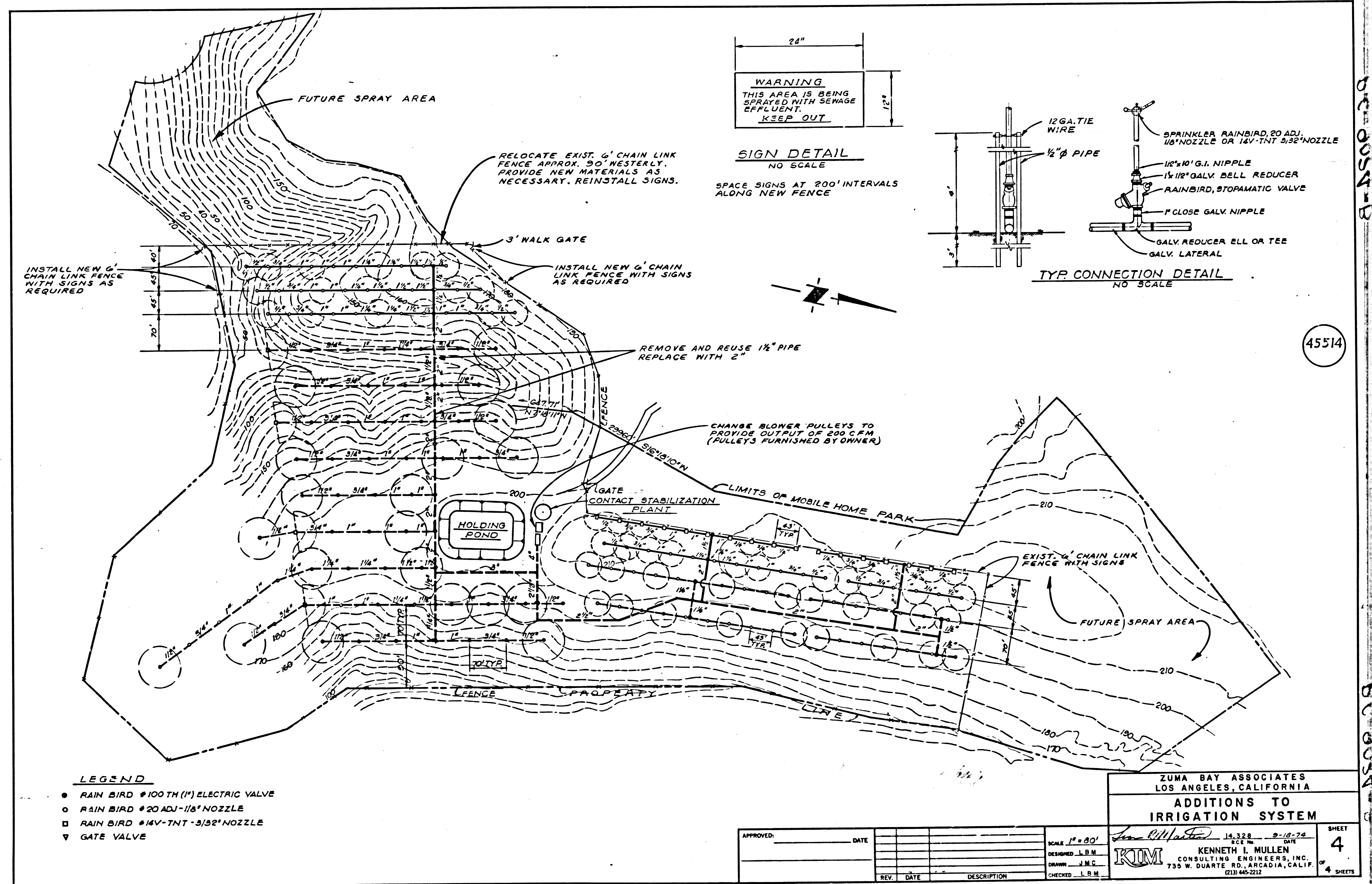
45513

- NOTE:
- CONTROL BUILDING WITH ELECTRICAL CONDUITS STURED OUT WILL BE FURNISHED BY OTHERS.
  - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL CONDUIT, WIRING AND EQUIPMENT, INCLUDING EXHAUST FAN AND LIGHTS.
  - LOUIS ALLEN AND ESSCO CONTROLLERS WILL BE FURNISHED BY OWNER AND INSTALLED BY ELECTRICAL CONTRACTOR.

ZUMA BAY ASSOCIATES  
LOS ANGELES, CALIFORNIA  
CONTROL BUILDING

APPROVED:	DATE:	SCALE AS SHOWN:	14,328	DATE:	9-18-78
		DESIGNED:	L.B.M.	BY:	KENNETH L. MULLEN
		DRAWN:	J.M.C.	FOR:	KOM CONSULTING ENGINEERS, INC.
		CHECKED:		ADDRESS:	735 W. DUARTE RD., ARCADIA, CALIF. (910) 445-5212

SHEET 3 OF 4 SHEETS



D.C. 054-B

45514

D.C. 054-A

44 40

22 17 11 8 1/2

8 1/2 11 17 22

70 44