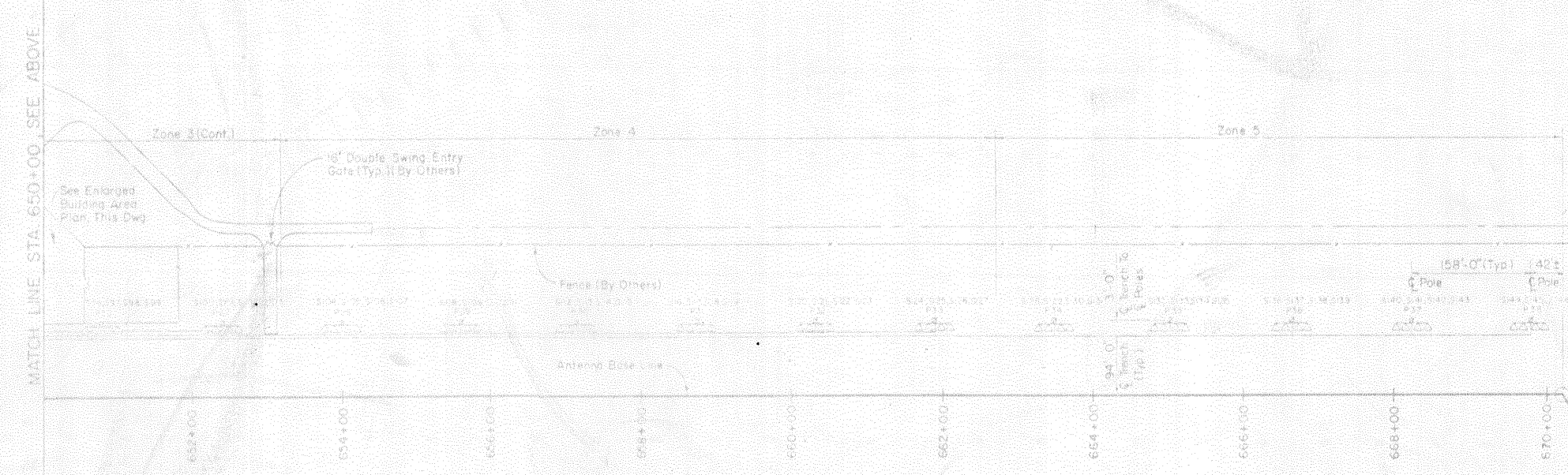
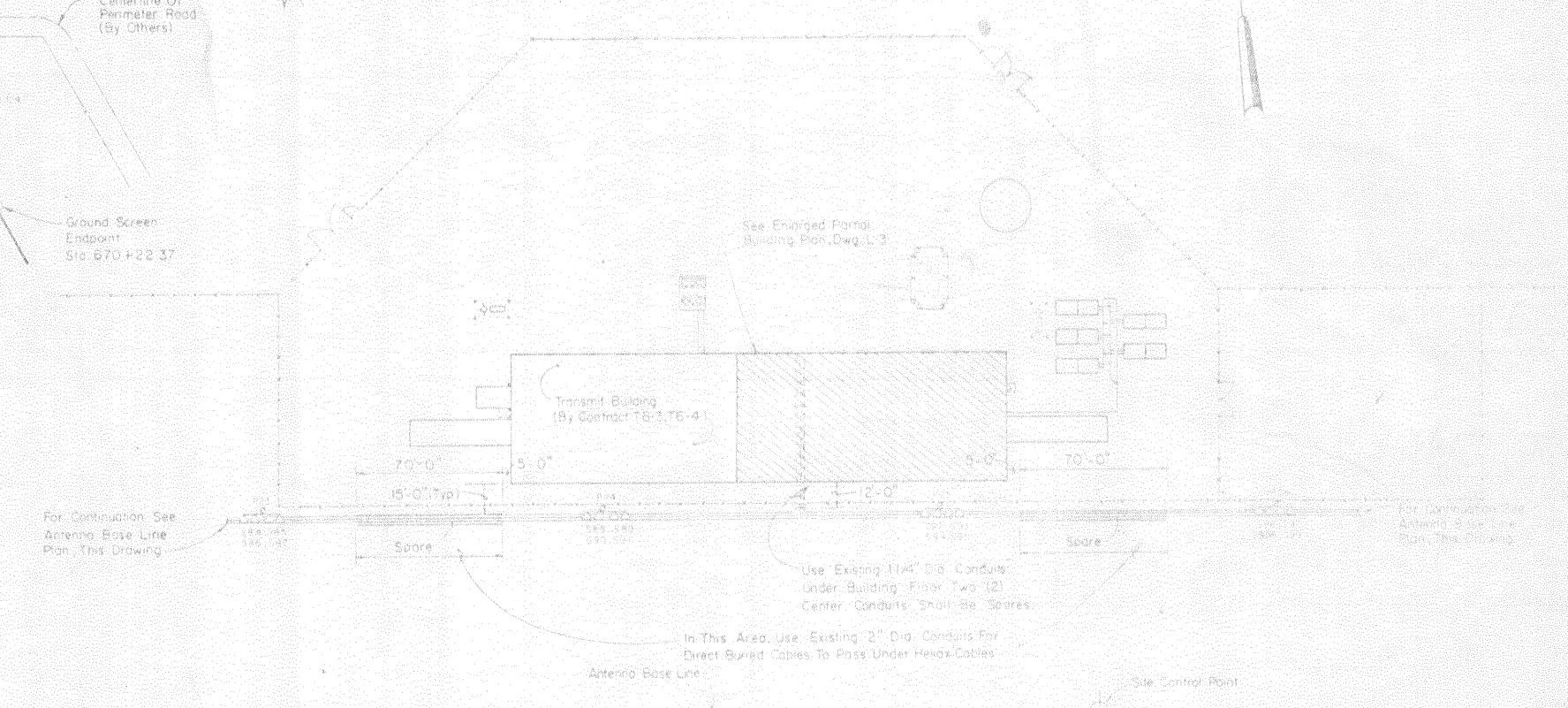


ANTENNA BASE LINE PLAN  
Scale 1/2" = 1'-0"



ANTENNA BASE LINE PLAN  
Scale 1/2" = 1'-0"



ENLARGED BUILDING AREA PLAN  
Scale 1/4" = 1'-0"

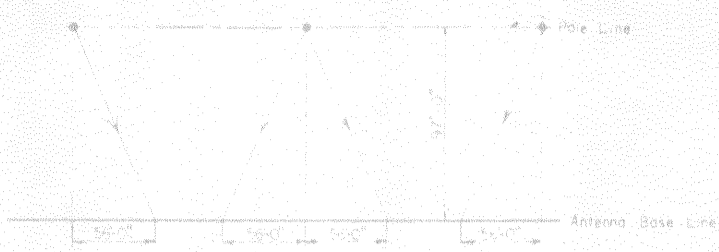
- NOTES:
1. ALL DIMENSIONS SHALL BE FIELD VERIFIED BEFORE INSTALLATION.
  2. CABLE MARKERS SHALL BE PLACED OVER THE DIRECT BURIED CABLES AT INTERVALS NOT EXCEEDING 200' IN DISTANCE.



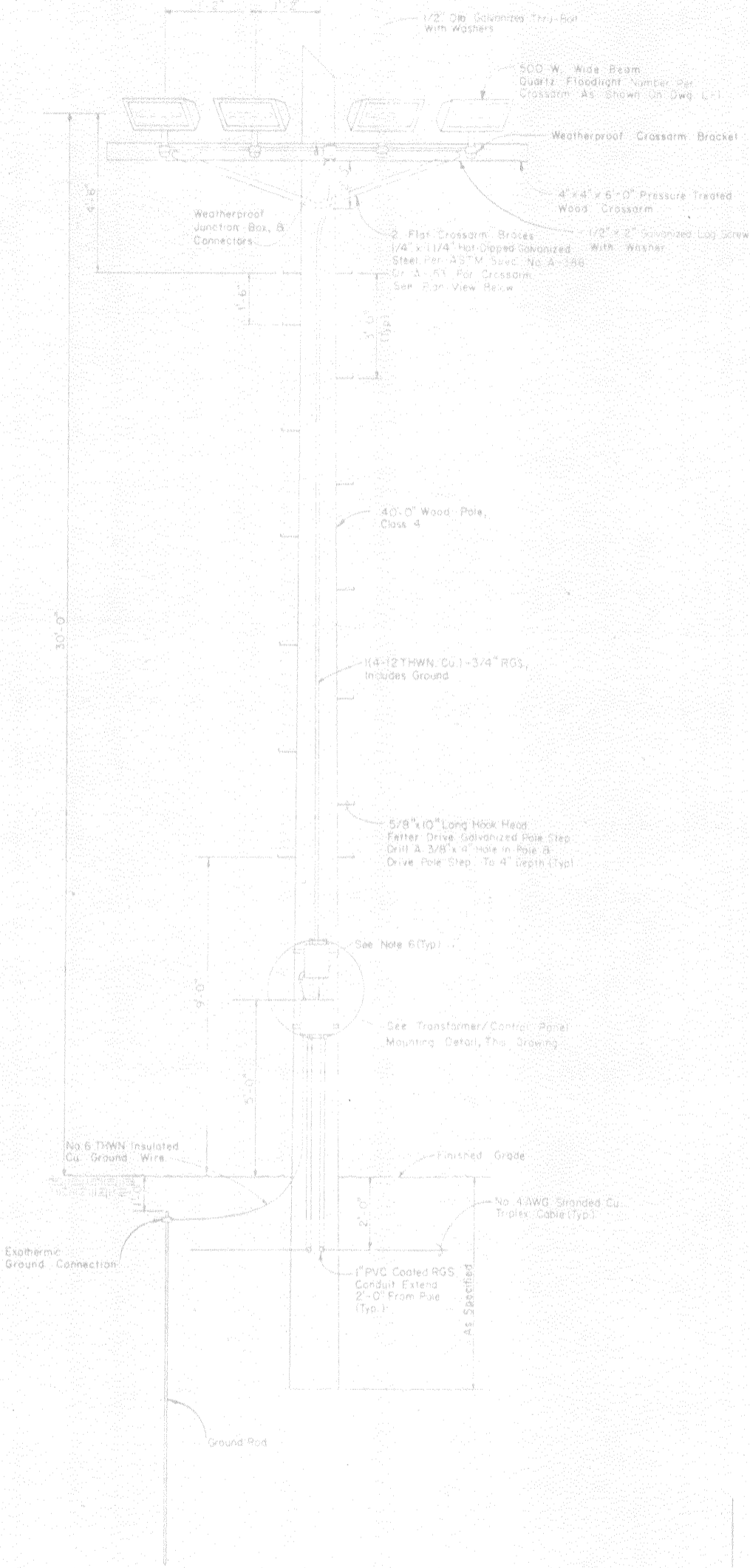
	PROJECT NO. 10-174 DATE: 10-1-1947 DRAWN BY: [Name] CHECKED BY: [Name]	GENERAL ELECTRIC AN/SPS-17 SECTOR TRANSMIT FAC CONTRACT NO.
	DATE: 30 NOV 1947 SHEET NO. 1 OF 1 E 03539	<b>ANTENNA LINE PLAN</b>

REVISION -

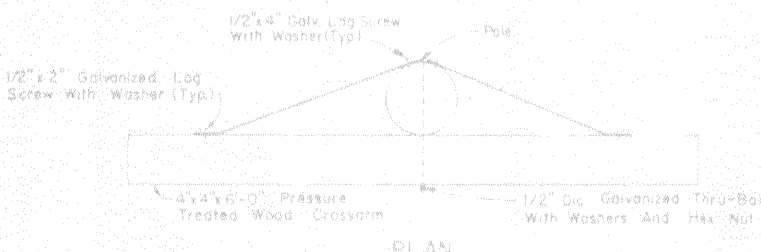




**HORIZONTAL AIMING ANGLE**  
Not To Scale

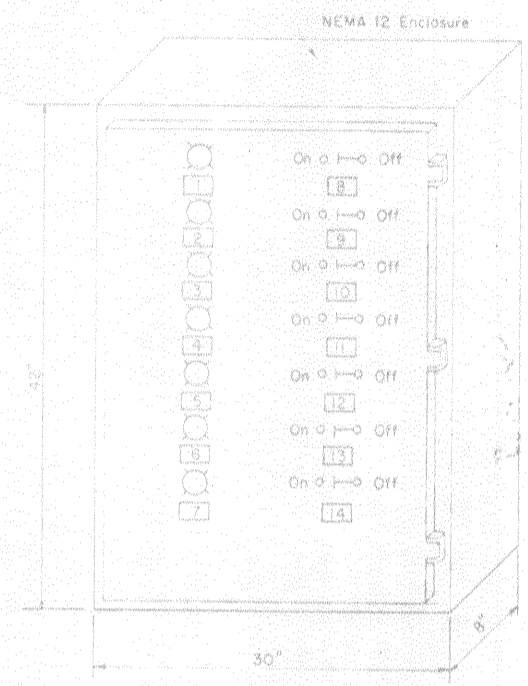


**ELEVATION**



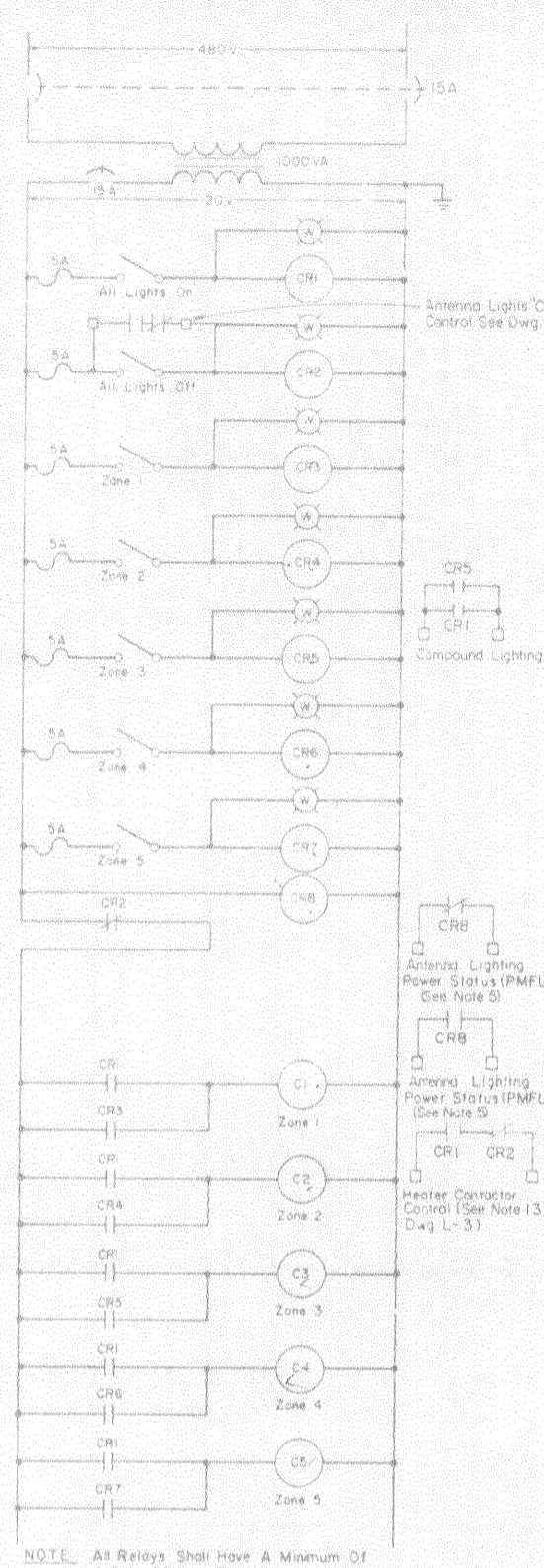
**PLAN**

**POLE DETAIL**  
Not To Scale



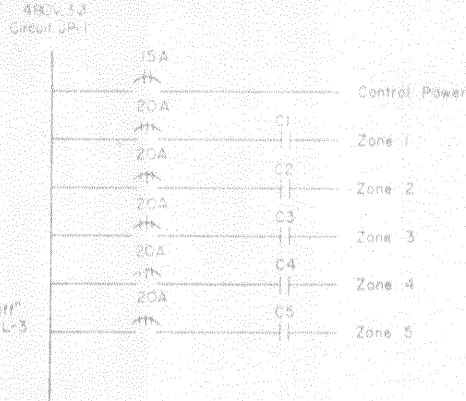
**ANTENNA LIGHTING CONTACTOR PANEL UNIT 320-2**  
Not To Scale

- LEGEND FOR CONTACTOR PANEL**
1. ALL LIGHTS ON
  2. ALL LIGHTS OFF
  3. ZONE 1 LIGHTS ON
  4. ZONE 2 LIGHTS ON
  5. ZONE 3 LIGHTS ON
  6. ZONE 4 LIGHTS ON
  7. ZONE 5 LIGHTS ON
  8. ALL LIGHTS ON
  9. ALL LIGHTS OFF
  10. ZONE 1
  11. ZONE 2
  12. ZONE 3
  13. ZONE 4
  14. ZONE 5

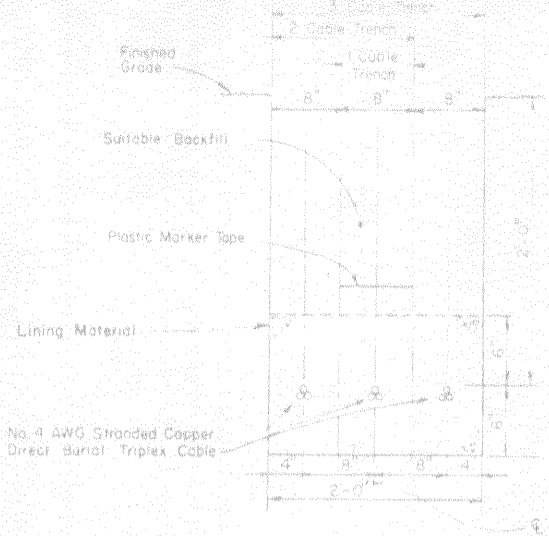


**ANTENNA LIGHTING ELEMENTARY DIAGRAM UNIT 320-2**

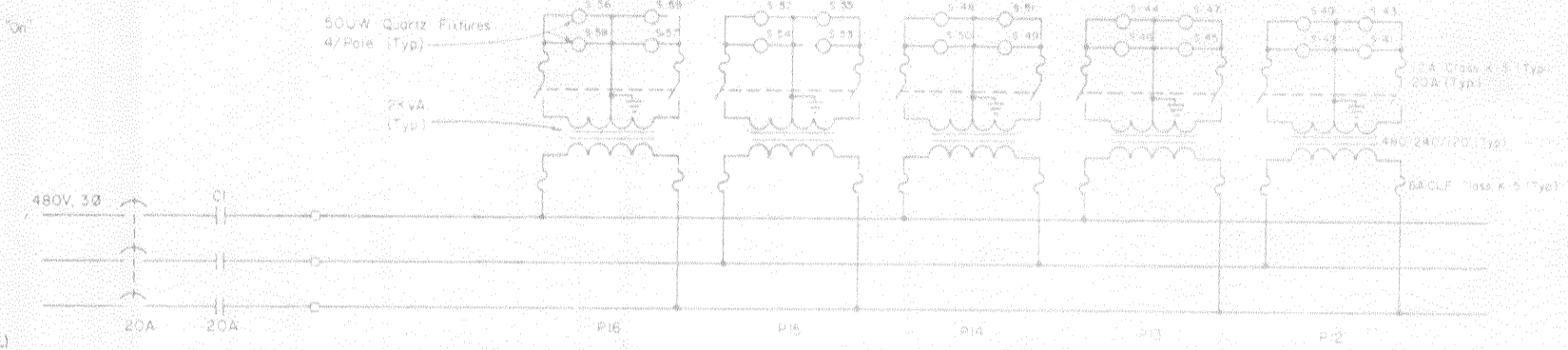
**NOTE:** All Relays Shall Have A Minimum Of 4 Sets Of Aux. Field Reversible Contacts (Two N.O., Two C.)



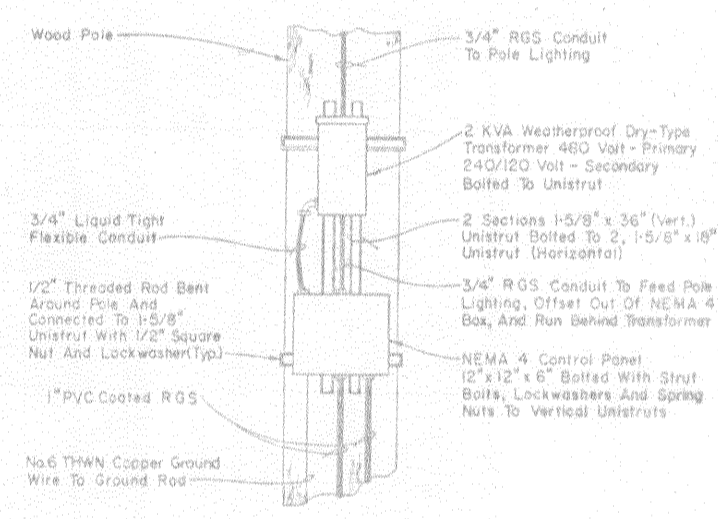
**ANTENNA LIGHTING PANEL 320-2 SINGLE LINE DIAGRAM**



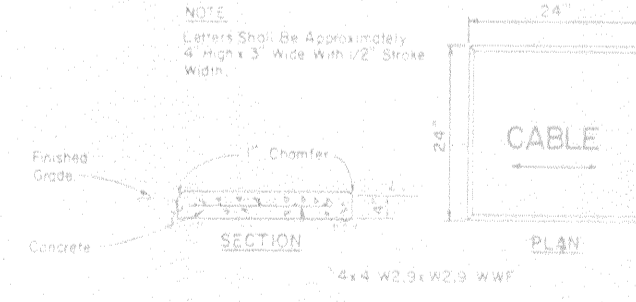
**CABLE TRENCHING DETAIL**  
Not To Scale



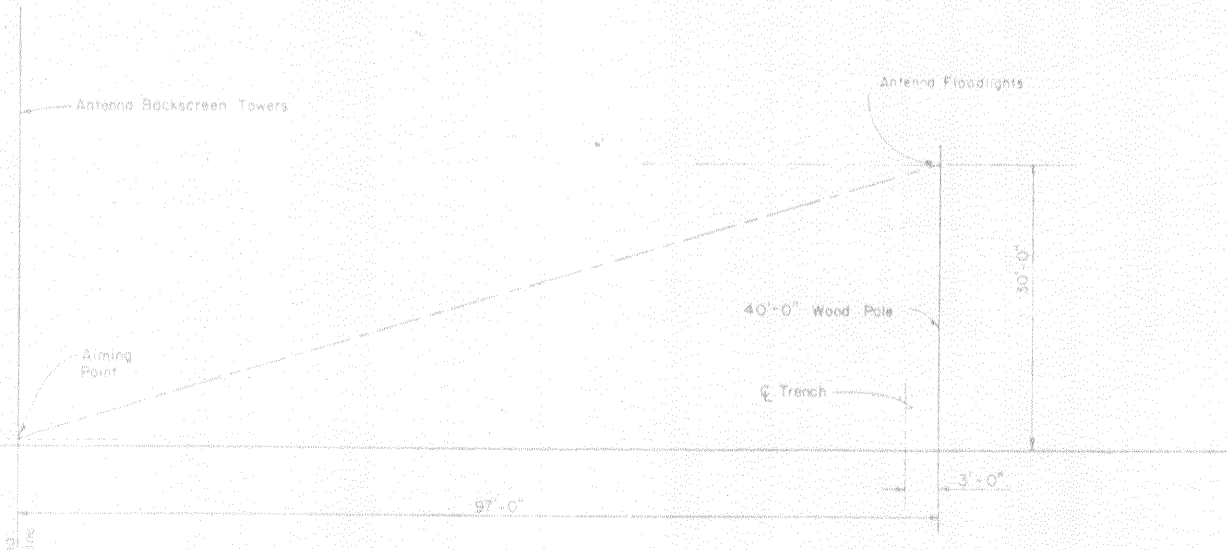
**ZONE 1 ANTENNA LIGHTING WIRING DIAGRAM**  
(Zone 2-5 Same As Zone 1 Wiring Diagram)



**TRANSFORMER/CONTROL PANEL MOUNTING DETAIL**  
Not To Scale



**CABLE MARKER DETAIL**  
Not To Scale



**ANTENNA SECURITY LIGHTING ELEVATION**

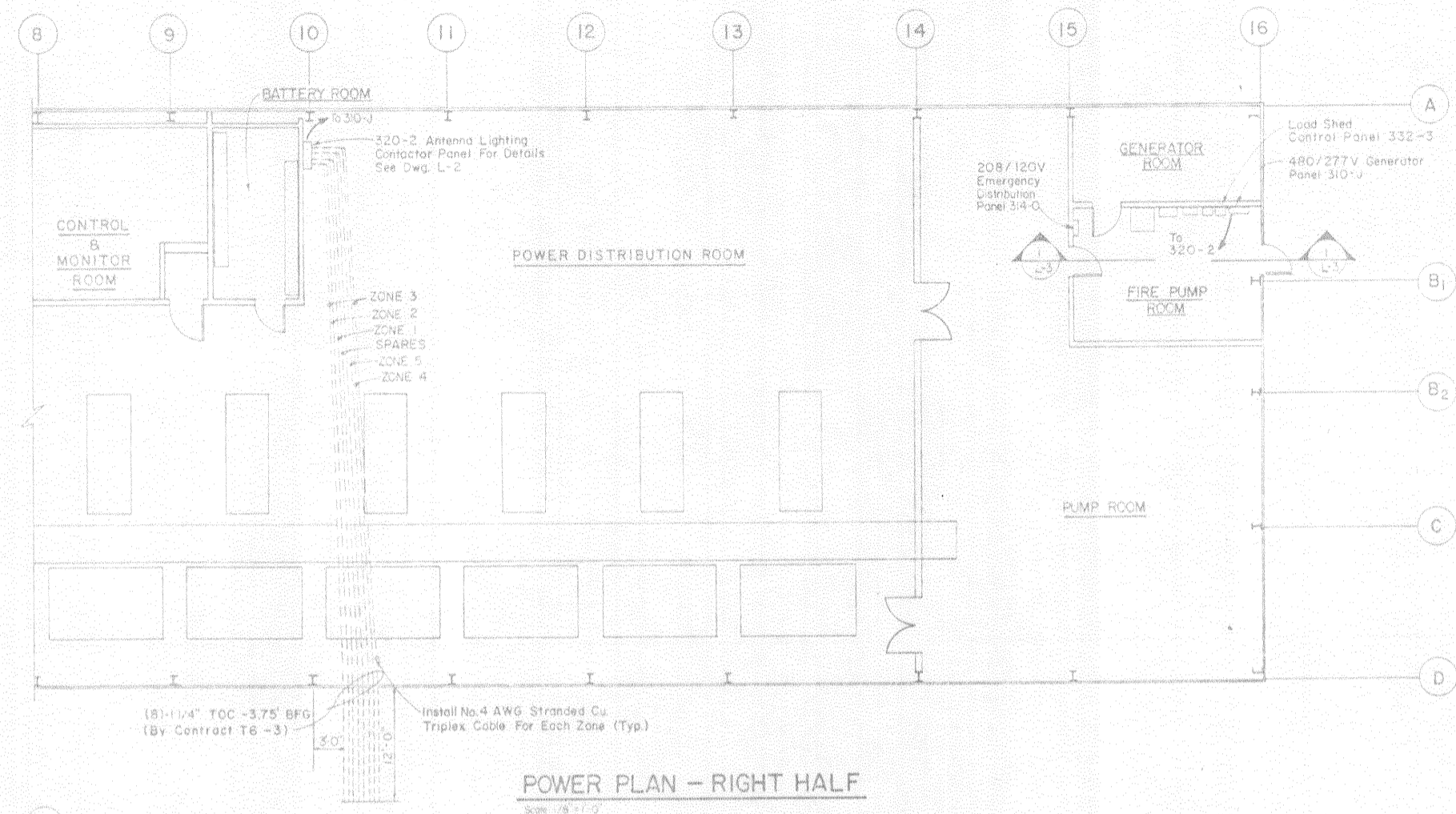
- NOTES:**
1. ANTENNA LIGHTING POLES SHALL BE SET IN ALIGNED HOLES, 4 INCHES (MINIMUM) GREATER IN DIAMETER THAN DIAMETER OF POLE. POLES SHALL BE SET PLUMB AND BACKFILLED WITH GRANULAR MATERIAL AND TAMPED IN 8-INCH LIFTS.
  2. SAW CROSS-ARM IS DRAWN TO NOMINAL DIMENSIONS. DRESSED CROSS-ARM SHALL BE A MINIMUM OF 3-1/2 INCHES BY 3-1/2 INCHES IN CROSS SECTION.
  3. CROSS-ARM SHALL BE OF SUCH SPECIES AND GRADE SO AS TO HAVE A MINIMUM ALLOWABLE TENSILE STRESS OF 700 PSI IN ACCORDANCE WITH THE MANUFACTURER'S DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, LATEST EDITION, FOR VISUALLY GRADED LUMBER.
  4. CROSS-ARM PIECES SHALL BE TREATED IN ACCORDANCE WITH AMERICAN WOOD PRESERVER'S ASSOCIATION (AWPA) STANDARD C-2 FOR ABOVE GROUND CONTACT TREATED LUMBER SHALL BE GRADED PER IN ACCORDANCE WITH AWPA STANDARD C-14.
  5. CONNECT THE NORMALLY OPEN CONTACTS OF CR-6 TO THE EXISTING 120VAC WIRE TWISTED PAIR AT PANEL 120VAC LOCATION. THE TWISTED PAIR IS CONNECTED TO TERMINALS 279 AND 280 OF THE PML PANEL, ALL OF WHICH IS EXISTING BY CONTRACT 764. CR-8 NORMALLY CLOSED CONTACTS IS FOR FUTURE RINGPOLES AND IS TO BE LEFT UNCONNECTED.
  6. ALL ABOVE-GRADE EXTERIOR CONDUITS SHALL HAVE A THUMB AND BETTS OR IN NOMENCLATURE BLEND OF COLLECTOR COPPER WITH JUST AND CORROSION INHIBITORS APPLIED TO ALL JOINTS AND CONNECTION POINTS.

REVISION - 0

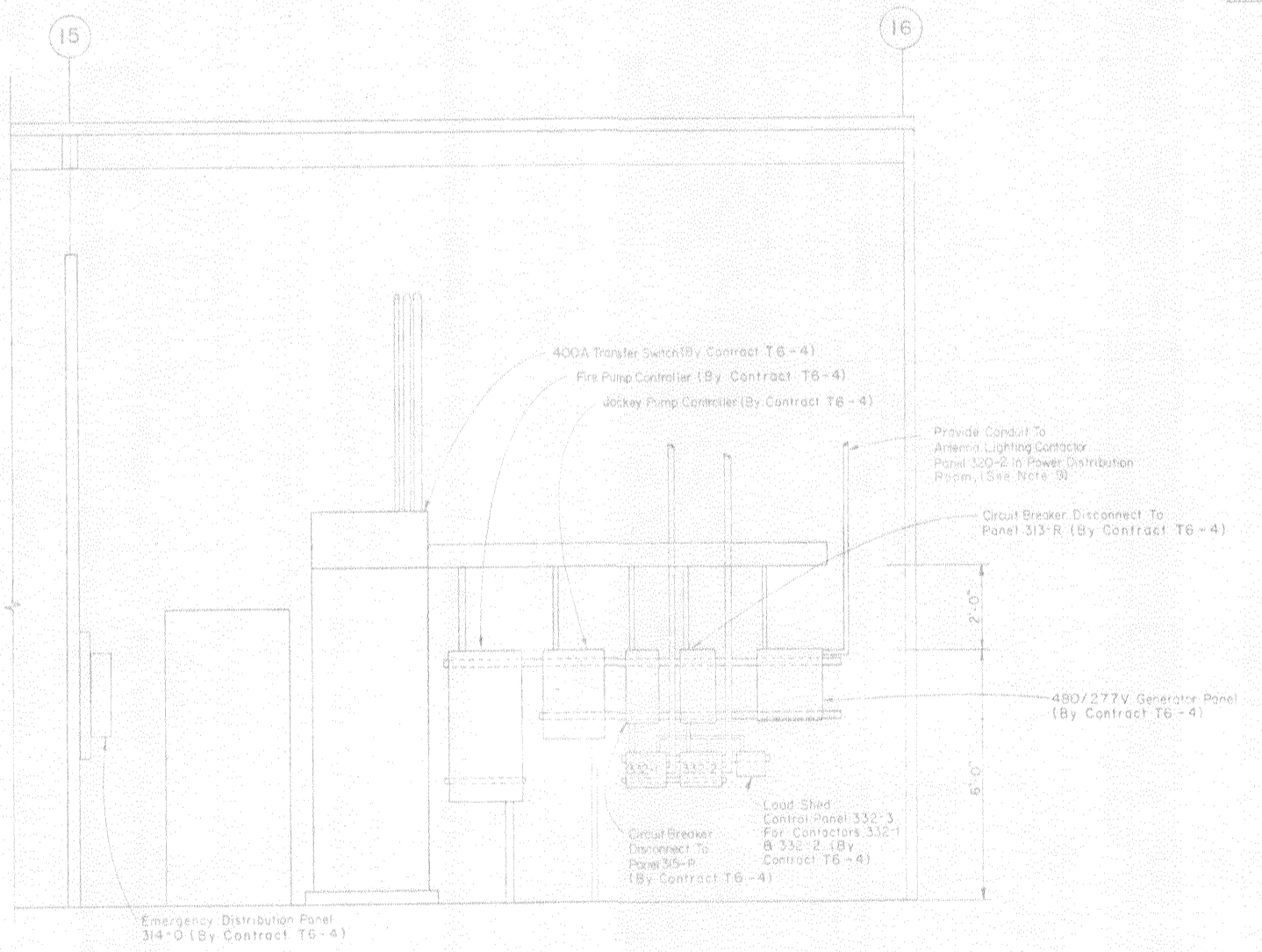
	PROJECT: AN/FRS-118 CONTRACT: T-5 DATE: 30 NOV, 1987	GENERAL ELECTRIC AN/FRS-118 SECTOR 6 TRANSMIT FAC CONTRACT T-5 <b>ANTENNA LIGHTING DETAIL</b>
	SIZE: 11x17 CODE: 03538 DATE: 30 NOV, 1987	Calcepinos & Baine CONSULTING ENGINEERS 115 W. 41st St. NEW YORK, N.Y. 10018



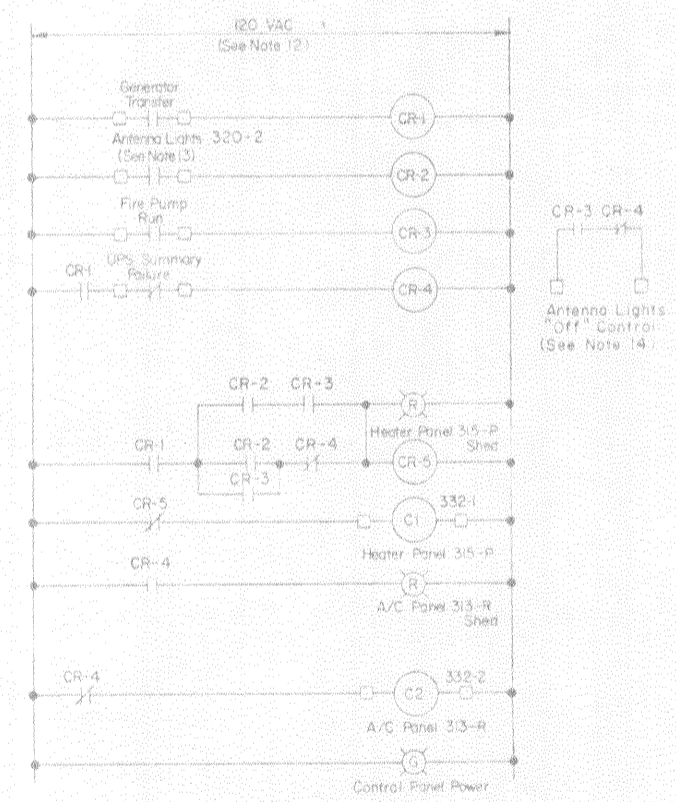
REVISIONS	



**POWER PLAN - RIGHT HALF**  
Scale: 1/8" = 1'-0"



**SECTION 1 L-3**  
Scale: 1/2" = 1'-0"



**LOAD SHED CONTROL PANEL 332-3 CONTROL DIAGRAM**  
See Section. This Drawing For Location Of Control Panel 332-3 (Panel & Rels.) By Contract T6-4

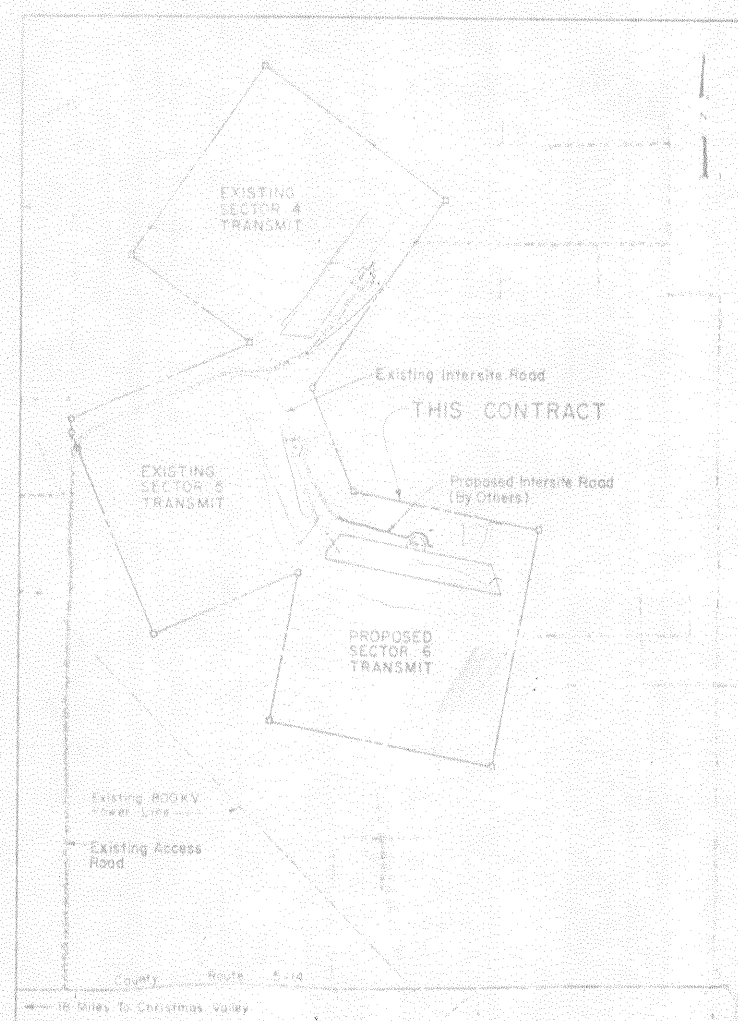
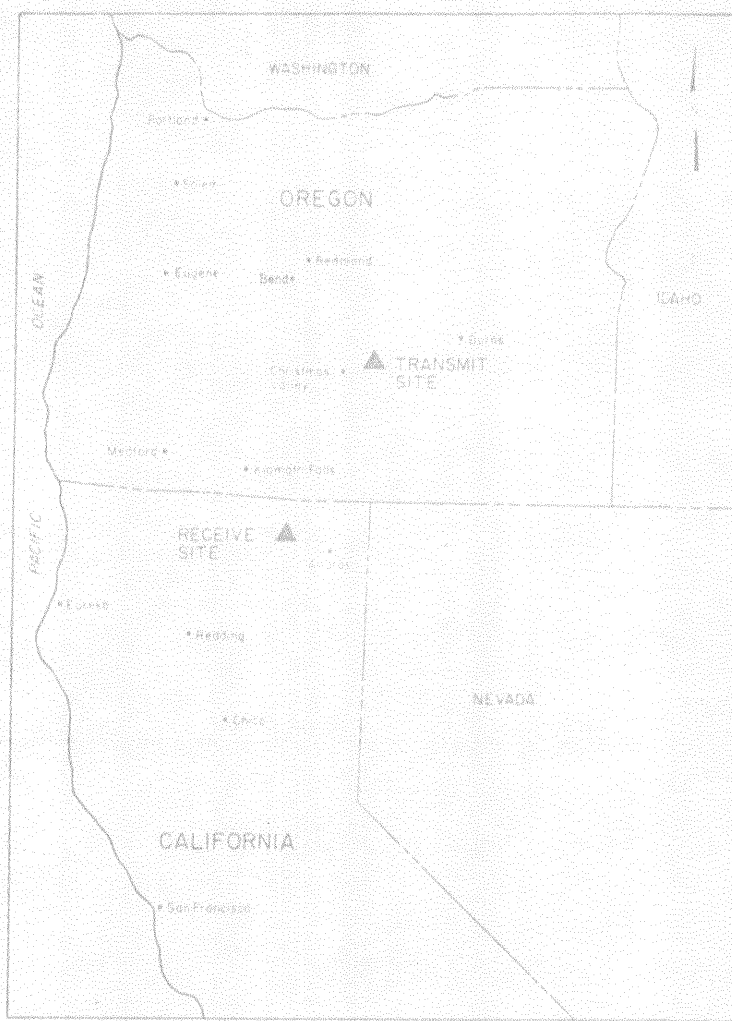
**ELECTRICAL NOTES**

1. ALL ELECTRICAL WORK SHALL CONFORM TO ALL LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
2. ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURERS.
3. TYPES OF SPECIFIED MANUFACTURERS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS' INSTALLED INSTRUCTIONS AND/OR MANUFACTURERS' REPRESENTATIVES' DIRECTIONS.
4. ALL CONDUITS SHALL BE EMT UNLESS OTHERWISE SHOWN, 3/4" MINIMUM FOR ALL CONDUIT.
5. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
6. ALL EQUIPMENT SHALL BE LOCATED APPROXIMATELY AS SHOWN.
7. ALL CONDUITS BURIED IN GROUND SHALL BE 1/2" PVC COATED RIGID GALVANIZED STEEL, UNLESS OTHERWISE SHOWN.
8. THE CONTRACTOR SHALL PROVIDE RACEWAYS, WIRING AND CONNECTIONS FOR ALL INTERLOCKS AND CONTROL CIRCUITS. SHOW CONDUITS ON SHOP DRAWING CONDUIT LAYOUT.
9. CONTRACTOR TO RUN 480V, 3 PHASE POWER CIRCUIT (4-2 AWG CU THW, 1-1/2" DIA) FROM PROVIDED ANTENNA LIGHTING CONTACTOR PANEL 320-2 TO CONTACTOR T6-4 DISTRIBUTION PANEL 310-U (CONDUIT 1, CONDUIT 3P-1).
10. ANY CONDUIT RUN THROUGH BATTERY ROOM SHALL BE PVC COATED RIGID GALVANIZED STEEL.
11. CONTRACTOR TO PROVIDE INSULATED WIRINGS AT TERMINATIONS OF ALL EXISTING BURIED CONDUIT USED.
12. CONTROL POWER IS ON CIRCUIT 4, CONDUIT 3P-4 OF DISTRIBUTION PANEL 314-0. TEST POWER PLAN-RIGHT-HALF.
13. THE ANTENNA LIGHTS W.L.C. CONTACT IS IN UNIT 320-2, DRAWING L-2. CONTRACT T6-3 TO RUN 2-12 AWG THW, CU, 1/4" R.G.S. CONDUIT FROM ANTENNA LIGHTING CONTACTOR PANEL 320-2 TO CONTACTOR CONTROL PANEL 332-3.
14. ANTENNA LIGHTS "OFF" CONTACTS PROVIDED BY CONTRACT T6-4. CONTRACT T6-5 SHALL RUN 2-NO. 12 AWG CU THW 1/4" R FROM 332-3 TO 320-2 AND CONNECT INTO ANTENNA LIGHTING OFF CIRCUIT.
15. ANY GAPS AROUND CONDUIT PENETRATIONS THROUGH THE INTERIOR WALLS OF THE CONTROL & MONITOR ROOM AND THE FIRE PUMP ROOM SHALL BE SEALED WITH FIRE RATED SEALANT TO MAINTAIN THE RFI RATINGS OF THE WALLS. (1 HOUR AND 2 HOUR RESPECTIVELY).

REVISION - 0

	CONTRACT NUMBER: 86-0-0174 DWG. DATE: 2 JULY, 1987 DRAWN: [Name] ENGR: [Name] CHECKED: [Name] ISSUED: 30 NOV, 1987	<b>GENERAL ELECTRIC</b> AN/FP5-11B SECTOR 6 TRANSMIT FACILITY CONTRACT T6-5 <b>ANTENNA LIGHT BUILDING PLAN</b>
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 1024.308, DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.	<b>Calderwood &amp; Stone</b> CONSULTING ENGINEERS 1000 10th Ave. S.W. ALBUQUERQUE, N.M. 87102





LOCATION PLANS  
Not To Scale

CONTRACT DRAWINGS  
 AN/FPS-118  
 WEST COAST RADAR SYSTEM  
 SECTOR 6 TRANSMIT SITE  
**CONTRACT T6-4**  
**FACILITY COMPLETION**

OVER THE HORIZON  
 BACKSCATTER OPERATIONAL  
 RADAR SYSTEM

LAKE COUNTY, OREGON

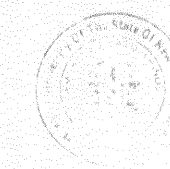
JULY 2, 1987  
 REVISED NOVEMBER 30, 1987

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3	T6 G-4	SITE PLAN
4	T6 G-5	COMPOUND AREA GRADING PLAN & SECTION
5	T6 G-6	COMPOUND AREA GRADING SECTIONS & DETAILS
6	T6 G-7	EXTERIOR SANITARY PLAN & DETAILS
7	T6 A-4	EQUIPMENT LAYOUT
8	T6 A-5	FLOOR PLAN - LEFT HALF
9	T6 A-6	FLOOR PLAN - RIGHT HALF
10	T6 A-7	BUILDING SECTIONS
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12	T6 A-9	ARCHITECTURAL DETAILS
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19	T6 E-4	ONE-LINE DIAGRAMS
20	T6 E-5	ONE-LINE DIAGRAMS
21	T6 E-6	ONE-LINE DIAGRAMS
22	T6 E-7	ONE-LINE DIAGRAMS
23	T6 E-8	ONE-LINE DIAGRAMS
24	T6 E-9	LIGHTING & RECEPTACLE PLANS
25	T6 E-10	COMMUNICATIONS & GROUNDING PLANS
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29	T6 E-14	PHYL PLAN & INTERCONNECTION DIAGRAM
30	T6 E-15	PHYL CONTACT SCHEDULES
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33	T6 E-18	CONTROL DIAGRAMS
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54	T6 M-20	COMPRESSED AIR, NITROGEN & PLUMBING PLAN - LEFT HALF
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56	T6 M-22	COMPRESSED AIR & NITROGEN DETAILS
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58	T6 P-1	PLUMBING DETAILS

DEPARTMENT OF THE AIR FORCE  
 ELECTRONIC SYSTEMS DIVISION (ESD)  
 HANSCOM A.F.B.  
 MASSACHUSETTS, 01731

GENERAL ELECTRIC COMPANY  
 OVER THE HORIZON PROGRAMS DEPARTMENT  
 SYRACUSE, NEW YORK 13221



**CS** Calocerinos & Spina  
 CONSULTING ENGINEERS  
 Liverpool, New York 13088



REVISIONS		
NO.	DESCRIPTION	DATE

### GENERAL SYMBOLS LIST

SYMBOL	DESCRIPTION
	LOCATION NUMBER (TYPE)
	LOCATION NUMBER
	LAST NUMBER AND LETTER FROM DRAWING NO.
	ELEVATION SYMBOL
	SECTION SYMBOL
	BORING LOCATION
	TEST PIT LOCATION
	PROPOSED FINISHED CONTOURS
	EXISTING CONTOURS
	DRAINAGE STAKE OR DITCH
	FENCE (BY OTHERS)
	EXISTING UTILITIES (LETTER INDICATES TYPE)
	PROPOSED UTILITIES (LETTER INDICATES TYPE)
	WELL WITH PROTECTIVE BOLLARDS
	ELEVATION
	ABOVE FINISHED FLOOR
	ABOVE RAISED FLOOR
	BELOW RAISED FLOOR
	BELOW FINISHED FLOOR
	BELOW FINISHED GRADE
	ABOVE FINISHED GRADE
	STRUCTURAL LINE
	CENTER LINE
	STATION
	ON CENTER
	DIAMETER

### ELECTRICAL/COMMUNICATIONS

SYMBOL	DESCRIPTION
	PROPOSED CONDUIT EXPOSED OR CONCEALED IN WALL, CEILING, FLOOR, AND UNDERGROUND
	EXISTING CONDUIT UNDERGROUND
	TOP OF CONDUIT
	ELECTRICAL METALLIC TUBING
	RIGID GALVANIZED STEEL CONDUIT
	ARROW INDICATES POWER NUMBER INDICATES CIRCUIT NUMBER LETTER INDICATES CIRCUIT TYPE TR indicates receptacle circuit LS indicates lighting circuit LF indicates power circuit LETTER INDICATES PANEL DESIGNATION (REFER TO RESPECTIVE ONE-LINE DIAGRAMS)
	1/2" - 2 TUBE SURFACE MOUNTED ACRYLIC LENS FLUORESCENT FIXTURE
	1/2" - 2 TUBE CHAIN SUSPENDED OR SURFACE MOUNTED INDUSTRIAL FLUORESCENT FIXTURE
	EMERGENCY LIGHTING UNIT, WITH BATTERY BACKUP
	REMOTE EMERGENCY LIGHT HEAD WITH 25W INCANDESCENT LAMP
	WALL MOUNTED, 100W. MERCURY VAPOR OUTDOOR FIXTURE
	EMERGENCY EXIT LIGHT WITH BATTERY BACKUP, ARROW INDICATES DIRECTION TO EXIT
	POLE MOUNTED, 400W. MERCURY VAPOR OUTDOOR FIXTURE
	WIDE BEAM QUARTZ FLOODLIGHT
	WOOD POLE WITH INDICATED NUMBER OF QUARTZ FLOODLIGHTS
	HUMIDITY SENSOR
	TELEPHONE OUTLET BOX
	NIGHT BELL
	COMMUNICATION SYSTEM JUNCTION BOX
	EXOTHERMIC WELD
	SPECIAL PURPOSE RECEPTACLE
	120V DUPLEX RECEPTACLE UNDER RAISED FLOOR
	120V DUPLEX RECEPTACLE
	120V DUPLEX RECEPTACLE FLUSH-MOUNTED IN RAISED FLOOR
	120V GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	DOUBLE 120V DUPLEX RECEPTABLES
	EMERGENCY PUSHBUTTON STATION
	PUSHBUTTON
	SINGLE POLE SWITCH
	MANUAL MOTOR STARTER
	THREE-WAY SWITCH
	DENTLESS WEATHERPROOF COVER
	TERMINAL BLOCK
	JUNCTION BOX
	THERMOSTAT
	ELAPSED TIME METER
	TRANSFER SWITCH
	BATTERY
	PRESSURE SWITCH
	DISCONNECT SWITCH AND NUMBER OF POLES
	CIRCUIT BREAKER AND NUMBER OF POLES
	CONTACTS (NORMALLY OPEN)
	CONTACTS (NORMALLY CLOSED)
	OVERLOAD
	CONNECTION POINT
	DISTRIBUTION PANEL (SURFACE MOUNTED, NUMBER INDICATES EQUIPMENT UNIT NUMBER)
	FUSE
	TRANSFORMER
	THREE PHASE UNIT HEATER
	SINGLE PHASE UNIT HEATER
	GROUND ROD
	GROUNDING WYE SYSTEM
	FLOOD LIGHT (LETTER INDICATES COLOR)
	ROTATING MACHINERY
	CONTROL RELAY
	CONTACTOR (M INDICATES MOTOR CONTACTOR)
	ELECTRO-PNEUMATIC (E.P.) SWITCH

### MECHANICAL/PLUMBING SYMBOLS LIST

SYMBOL	DESCRIPTION
	VALVE (TYPE NOT SPECIFIED)
	GATE VALVE
	GATE VALVE (NORMALLY OPEN)
	GATE VALVE (NORMALLY CLOSED)
	BALL VALVE
	GLOBE VALVE
	CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)
	CAPPED VENT VALVE
	PNEUMATICALLY OPERATED VALVE
	FLOW CONTROL VALVE
	ORIFICE PLATE FLOW METER
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	LIQUID LEVEL SENSOR
	AIR SEPARATOR
	TRANSMITTER COOLING WATER FILTER
	DEMINERALIZER OR DEOXIDIZER VESSEL
	PLATE AND FRAME HEAT EXCHANGER
	CENTRIFUGAL CIRCULATOR PUMP
	AUTOMATIC AIR VENT VALVE
	PRESSURE TRANSDUCER
	TEMPERATURE TRANSDUCER
	BIMETAL THERMOMETER, 5" DIA., 30"-240" RANGE
	PRESSURE GAUGE, 4-1/2" DIA., 0-30 P.S.I.G. WITH STOPCOCK
	CROSS SECTION OF PIPE
	REDUCER
	ECCENTRIC REDUCER
	FLANGED CONNECTION
	TEE OR ELBOW INTO THE PLANE OF PAPER
	TEE OR ELBOW AWAY FROM THE PLANE OF PAPER
	TEE OR ELBOW PARALLEL TO THE PLANE OF PAPER "S" INDICATES SHORT RADIUS ELBOW
	CAP
	SUPPLY OR INTAKE DUCT
	RETURN OR EXHAUST DUCT
	SQUARE ELBOW WITH TURNING VANES
	AIR DUCT INSULATION
	SUPPLY GRILLE OR REGISTER IN PLAN
	FLEXIBLE CANVAS DUCT CONNECTION
	VOLUME DAMPER IN PLAN OR ELEVATION, NUMBER IDENTIFIES DAMPER MOTOR
	MOTORIZED DAMPER, CLOSED POSITION
	MOTORIZED DAMPER, OPEN POSITION
	MOTORIZED DAMPER, PARTIALLY OPEN POSITION
	MANUAL VOLUME DAMPER
	ROOF VENTILATOR
	FILTER SECTION
	CENTRIFUGAL VENTILATOR
	UNIT HEATER (ARROW SHOWS DIRECTION OF AIR FLOW)
	THERMOSTAT

### MECHANICAL/PLUMBING SYMBOLS LIST

SYMBOL	DESCRIPTION
	BACKDRAFT DAMPER
	CONTROL DAMPER
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	MANUAL BALANCING DAMPER
	TRAIL WITTER DAMPER
	AIR FILTER
	LOUVER
	AIR INLET/OUTLET (REGISTER)
	PIPE ANCHOR
	PIPE SUPPORT
	CAST IRON
	NORMALLY OPEN
	NORMALLY CLOSED
	WATER CLOSET
	LAVATORY
	DRINKING FOUNTAIN
	MOP BASIN
	DOUBLE CHECK VALVE
	VENT THROUGH ROOF
	SANITARY DRAINAGE
	HOSE BIBB
	LUBRICATOR (COMPRESSED AIR)
	COMPRESSED AIR PIPING
	NITROGEN PIPING
	NON-POTABLE COLD WATER
	POTABLE COLD WATER
	HOT WATER
	GLYCOL PIPING
	VENT PIPING
	INDIRECT WASTE PIPING
	DRAIN AND CAP
	TRAP
	UNION CONNECTION
	CLEANOUT
	FLOOR DRAIN WITH TRAP (LETTER DESIGNATES TYPE)
	DECK PLATE CLEANOUT
	EXTERIOR CLEANOUT
	RISER (FROM LEFT TO RIGHT)
	PIPING SLOPES DOWNWARD
	DROP TEE
	VENT THROUGH ROOF
	PRESSURE RELIEF VALVE (PLAN)
	PRESSURE RELIEF VALVE (ELEVATION)
	ADJUSTABLE PRESSURE REGULATOR

### ARCHITECTURAL/STRUCTURAL SYMBOLS LIST

SYMBOL	DESCRIPTION
	CERAMIC TILE
	CONCRETE
	CONCRETE (REINFORCED)
	CONCRETE BLOCK
	EARTH
	INSULATION (LOOSE OR BLANKET)
	INSULATION (RIGID)
	LUMBER (FINISHED GRADE)
	DRYWALL
	DRYWALL AND METAL STUDS (PLAN)
	DRYWALL AND METAL STUDS (ELEVATION OR SECTION)
	WIRE MESH PARTITION (ELEVATION)
	WIRE MESH PARTITION (PLAN)
	STRUCTURAL STEEL (SECTION)
	GRANULAR MATERIAL
	ACOUSTIC CEILING TILE & PANELS
	1/2" METAL SCREENING (ELEVATION)
	ROLLER
	WALL LAVATORY
	DRINKING FOUNTAIN
	COVER OVER ADJUSTABLE FLOOR REGISTER
	ROOFING ON SLOPE
	ROOF TYPE
	WALL TYPE
	CEILING TYPE
	COLUMN
	SUPPORT COLUMN
	SUPPORT CHANNEL
	PANEL
	ANCHOR BOLT
	EXPANSION JOINT
	STEELING (PLAN & SECTION)
	ALL WALL SYMBOLS, SEE ALSO STEEL CONSTRUCTION MANUAL FOR EXPLANATION
	LOWER OR DOOR FRAME OPENING
	WELD WIRE FABRIC
	TOP AND BOTTOM
	EACH WAY

### FIRE PROTECTION SYMBOLS LIST

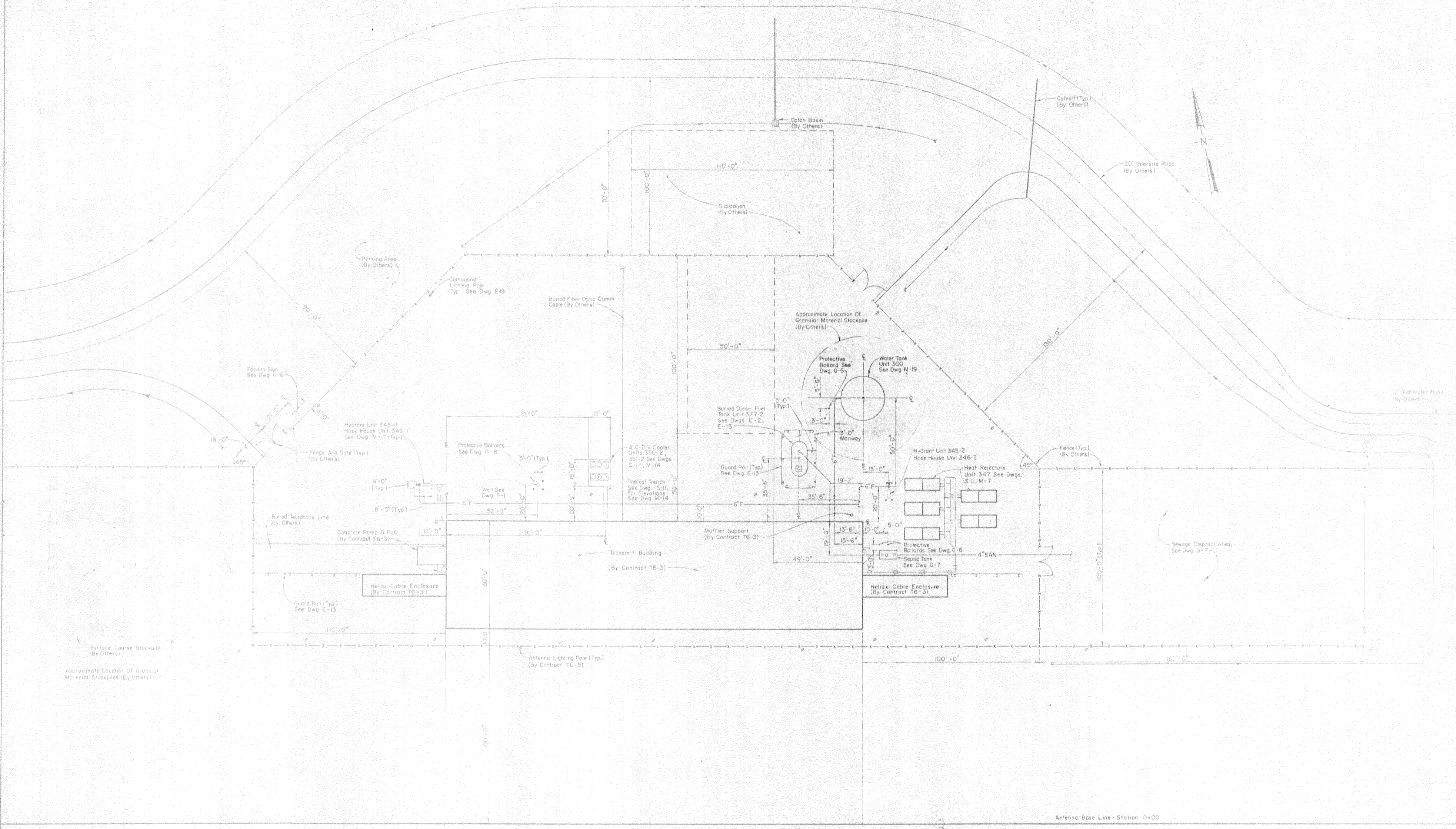
SYMBOL	DESCRIPTION
	UNDERGROUND FIRE PIPING
	THRUST BLOCK
	GATE VALVE AND VALVE BOX
	POST INDICATOR VALVE
	HYDRANT & HOSE HOUSE WITH PROTECTIVE BOLLARDS
	FIRE DEPARTMENT SIAMESE CONNECTION
	RISER
	UPRIGHT SPRINKLER
	UPRIGHT SPRINKLER ON RISER NIPPLE
	PENDANT SPRINKLER ON DROP NIPPLE
	DRY PENDANT SPRINKLER ON DROP NIPPLE
	SIDEWALL SPRINKLER HEAD
	FLOW METER
	WATER MOTOR GONG
	FIRE ALARM BELL
	FIRE ALARM BELL WITH LIGHT
	SMOKE DETECTOR
	DROPPED CEILING SMOKE DETECTOR
	SMOKE DETECTOR BELOW RAISED FLOOR
	DUCT DETECTOR
	RATE OF RISE HEAT DETECTOR
	DROPPED CEILING RATE OF RISE HEAT DETECTOR
	MANUAL ALARM STATION
	MANUAL HALON STATION
	HALON ABORT SWITCH
	HALON ALARM HORN/LIGHT
	MAIN/RESERVE HALON SELECTOR SWITCH
	HALON DISCHARGE LIGHT/SIGNAGE
	HALON DISCHARGE NOZZLE
	HALON PIPING
	FIRE ALARM CONTROL PANEL
	HALON CONTROL PANEL
	ALARM ANNUNCIATOR PANEL
	DOOR ALARM PANEL
	SWINGING DOOR MAGNETIC CONTACTS
	DOUBLE DOOR MAGNETIC CONTACTS
	10# ABC DRY CHEMICAL FIRE EXTINGUISHER
	9# HALON 1211 FIRE EXTINGUISHER
	DUCTILE IRON
	DROP NIPPLE
	RISER NIPPLE
	HALON DETECTION ZONE (TYPICAL)

REVISION - 0

	DWG. NO. 03538 DATE 2 JULY 1987 DRAWN CHECKED DESIGNED ISSUED 30 NOV 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>SYMBOLS LIST</b>	
	E 03538 T6 G-3	DATE NOV 30, 1987 SCALE NONE FILE NO. 03538	2



NO.	DESCRIPTION	DATE



**SITE PLAN**  
Scale 1" = 20'

- NOTES:
1. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK DETAILED ON THIS DRAWING UNLESS SPECIFICALLY SHOWN AS (BY OTHERS).
  2. CONTRACTOR SHALL REMOVE ALL SPOIL MATERIALS TO AN ON-SITE DISPOSAL AREA DESIGNATED BY THE OWNER.
  3. ALL DIMENSIONS ORIGINATING TO AND FROM BUILDING ARE REFERENCED TO THE BUILDING STRUCTURAL LINE, WHICH IS THE INSIDE FACE OF THE BUILDING SIDING.
  4. ELEVATIONS ARE REFERENCED TO U.S.G.S. DATUM.

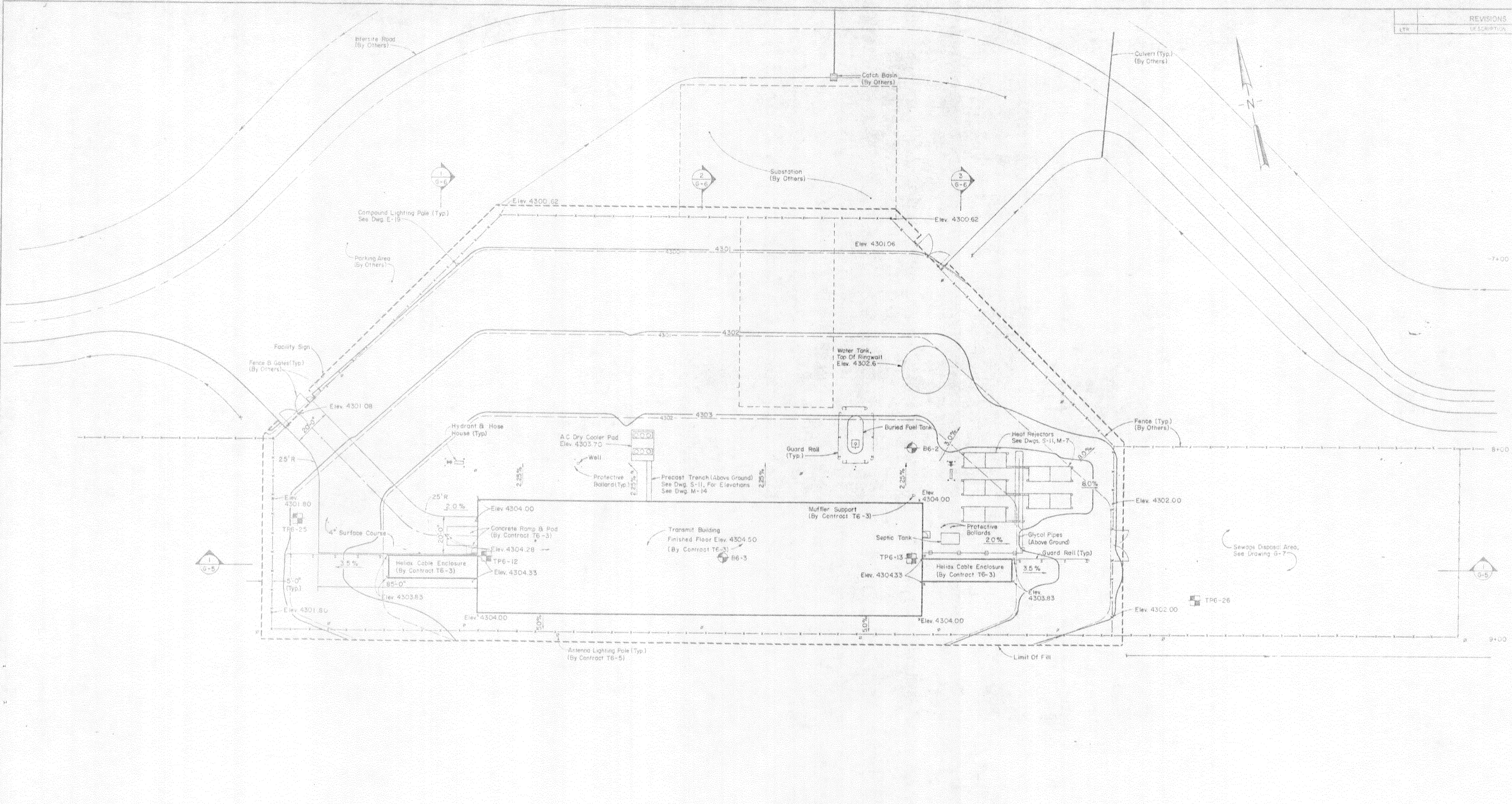


	PLAN NO. 110228-86-C-074 DATE: 27 FEBRUARY, 1987 DESIGNER: ENGINEER: CHECKED: DATE: 30 NOV. 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>SITE PLAN</b>
	SITE EGRESS IDENTIFICATION: E 03538 T6 G-4	PROJECT NO. 110228-86 DRAWING NO. 110228-86-C-074 SHEET NO. 1 OF 1

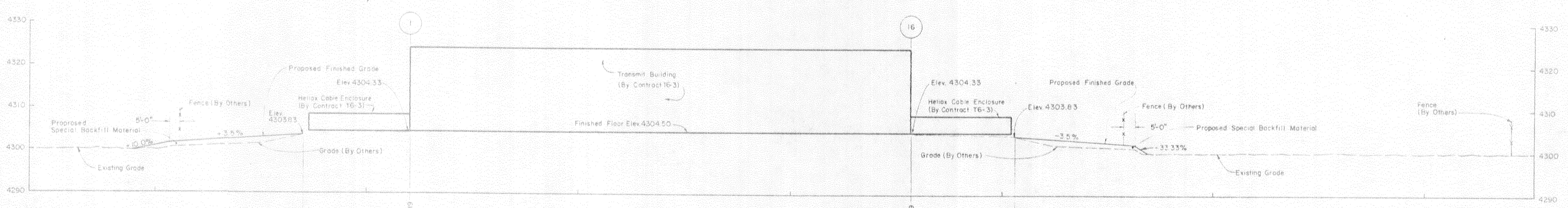
REVISION - 0



REVISIONS	
NO.	DESCRIPTION



**COMPOUND AREA GRADING PLAN**  
Scale: 1" = 20'



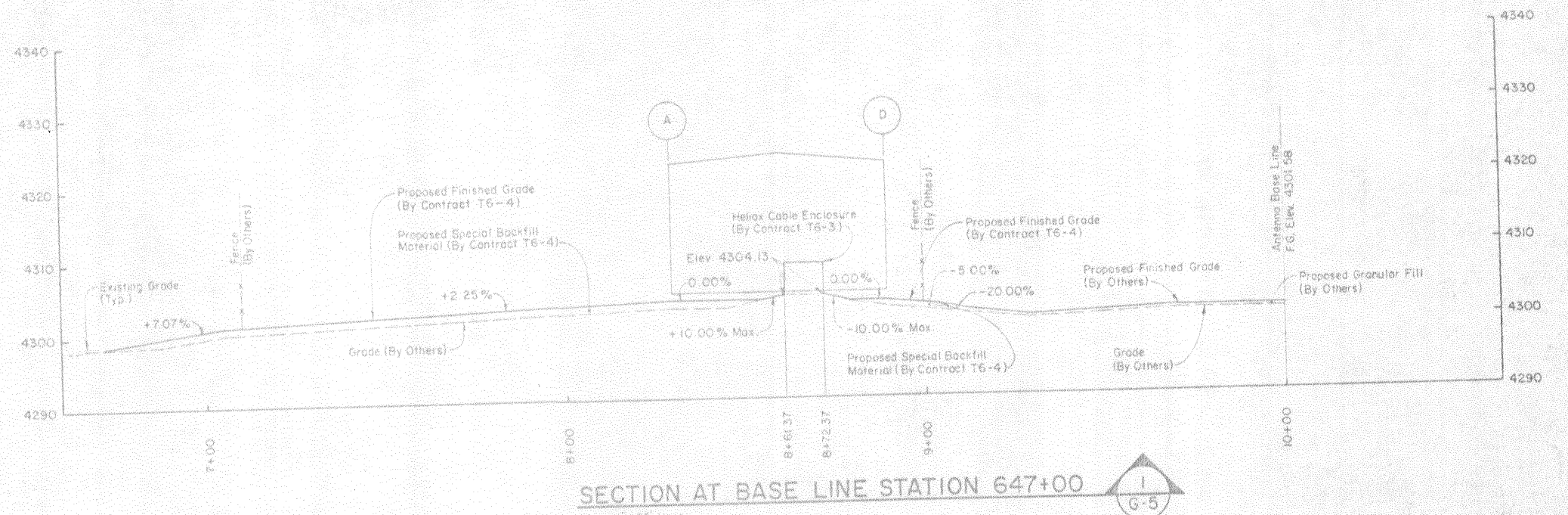
**SECTION AT BORE SIGHT STATION 8+65**  
Scale: 1" = 20' Horiz.  
1" = 10' Vert.

- NOTES:**
- ELEVATIONS ARE REFERENCED TO U.S.G.S. DATUM.
  - BUILDING S.L. REFERS TO THE BUILDING STRUCTURAL LINE WHICH IS THE INTERIOR FACE OF THE BUILDING SIDING.
  - FINISHED GRADE SHALL HAVE A MINIMUM SLOPE OF 2% WITHIN 30 FEET OF THE BUILDING.
  - THIS CONTRACT TO PLACE APPROXIMATELY 1'-0" SPECIAL BACKFILL MATERIAL TO THE LIMITS OF FILL SHOWN.
  - THIS CONTRACT TO PLACE APPROXIMATELY 4" OF SURFACE COARSE MATERIAL OVER 8" OF SPECIAL BACKFILL IN AREA SHADED.

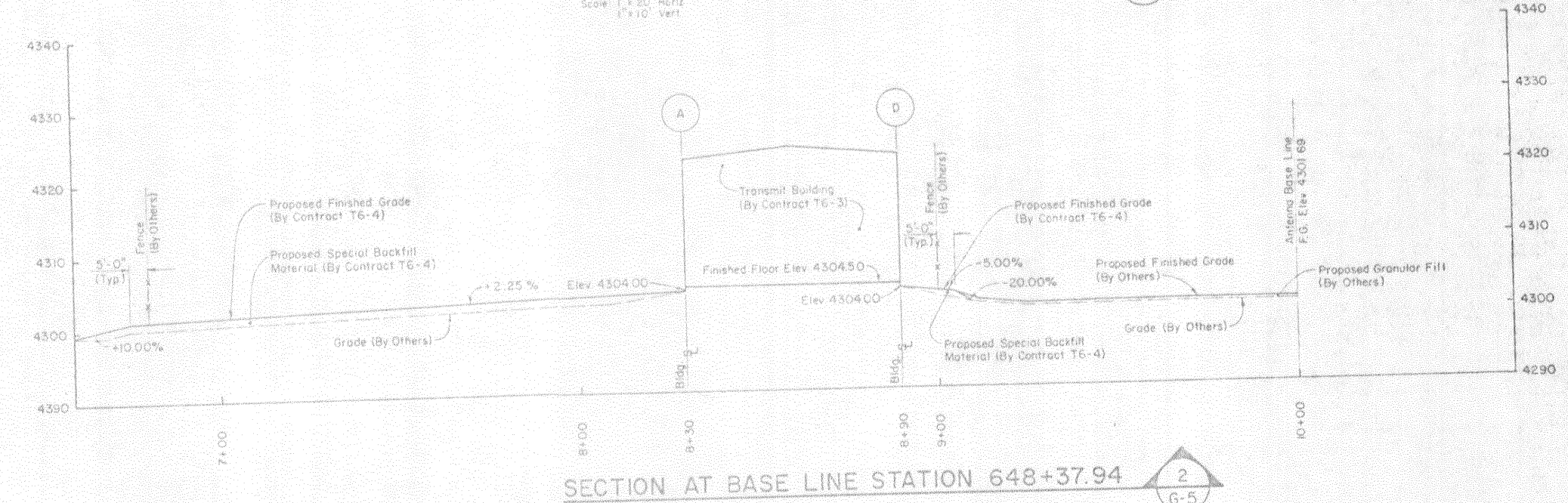


	CONTRACT NO. T19628-R6-C-0174 DATE OF TAKING: 2 JULY, 1987 DRAWN: [Blank] CHECKED: [Blank] ISSUED: 30 NOV, 1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>COMPOUND AREA GRADING          PLAN &amp; SECTION</b>
	SIZE: E 03536 CODE IDENT NO: T6 DRAWING NO: G-5	DATE: NOV 30, 1987 SCALE: AS SHOWN FILE NO: 438.005

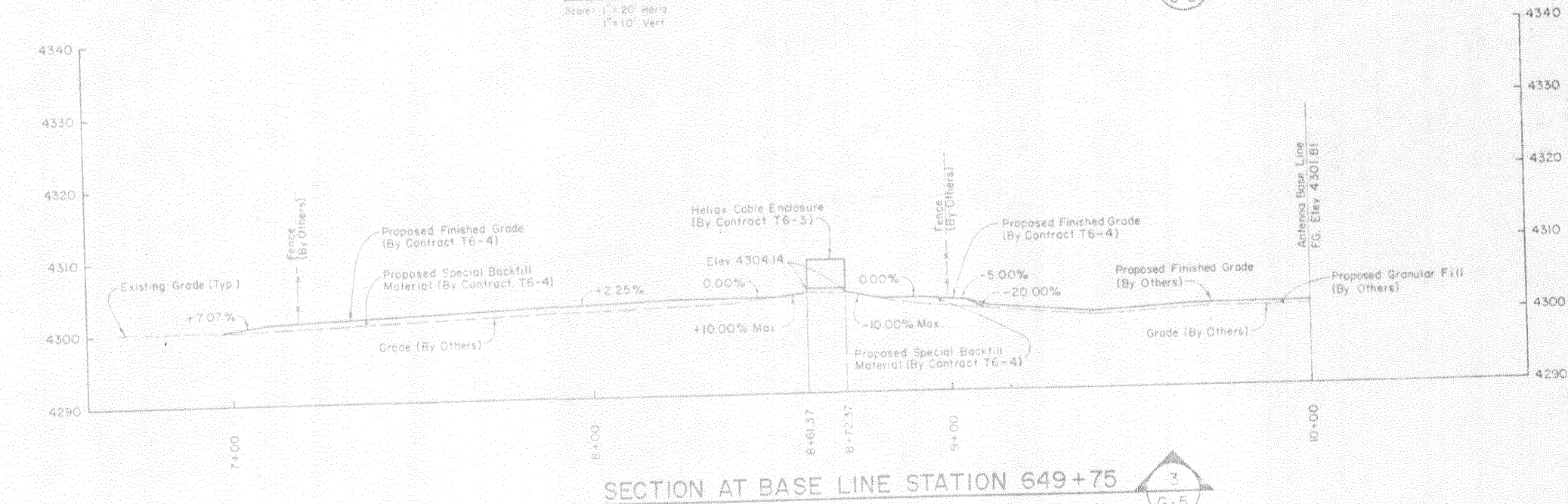




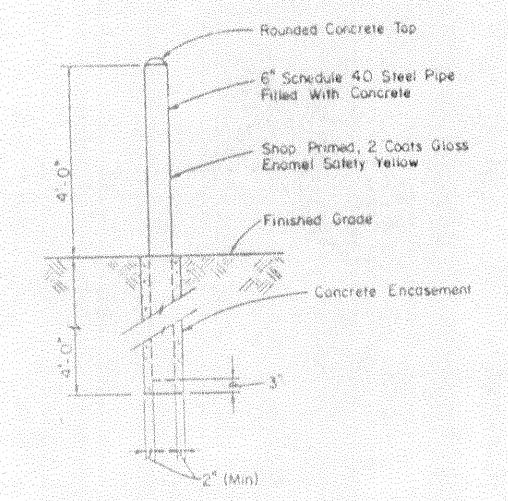
SECTION AT BASE LINE STATION 647+00  
Scale: 1" = 20' Horiz  
1" = 10' Vert



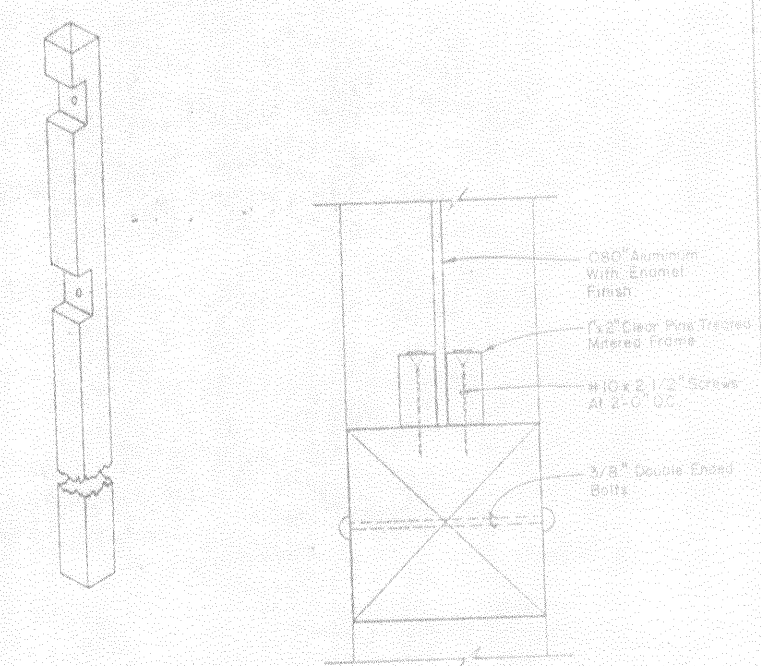
SECTION AT BASE LINE STATION 648+37.94  
Scale: 1" = 20' Horiz  
1" = 10' Vert



SECTION AT BASE LINE STATION 649+75  
Scale: 1" = 20' Horiz  
1" = 10' Vert

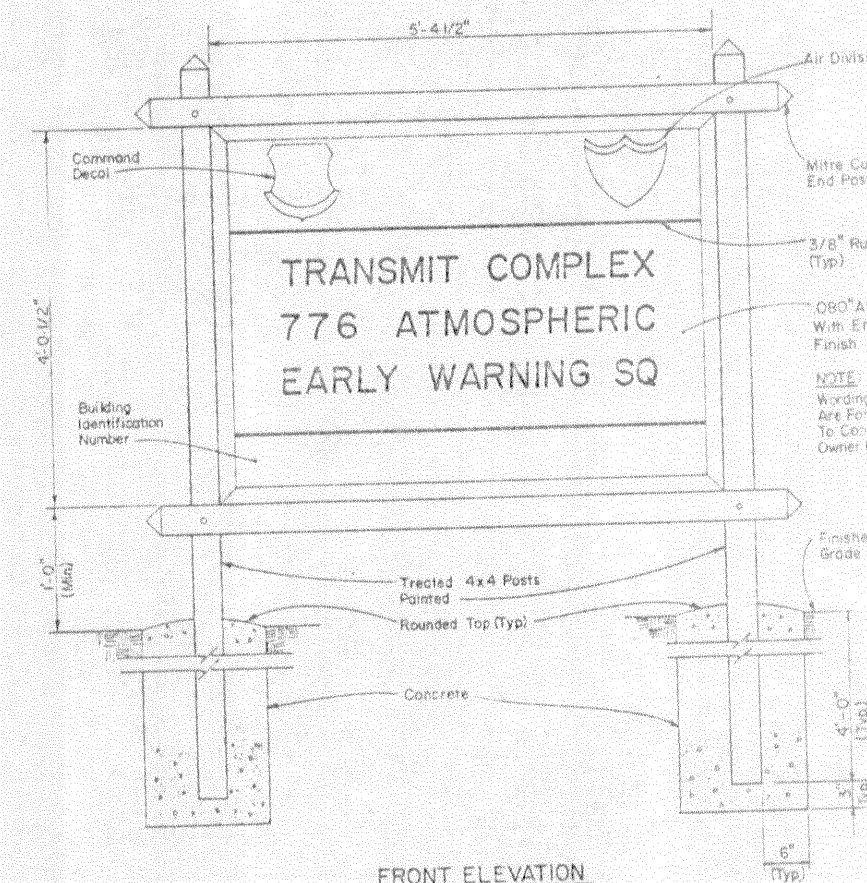


PROTECTIVE BOLLARD DETAIL  
Scale: 1/2" = 1'-0"

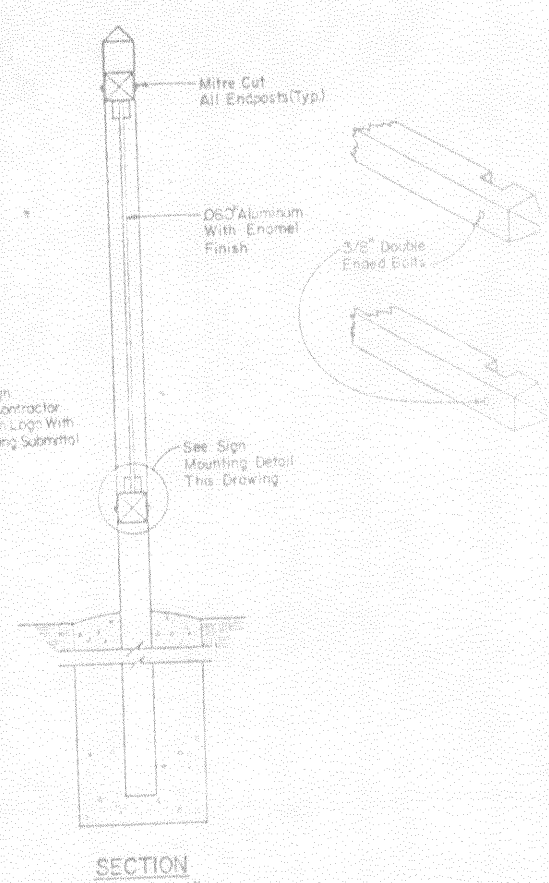


FRAMING DETAIL  
Not To Scale

SIGN MOUNTING DETAIL  
Not To Scale



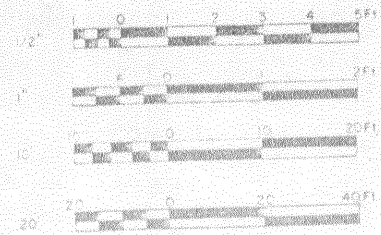
FRONT ELEVATION  
Scale: 1" = 1'-0"



SECTION  
Scale: 1" = 1'-0"

FACILITY SIGN DETAIL

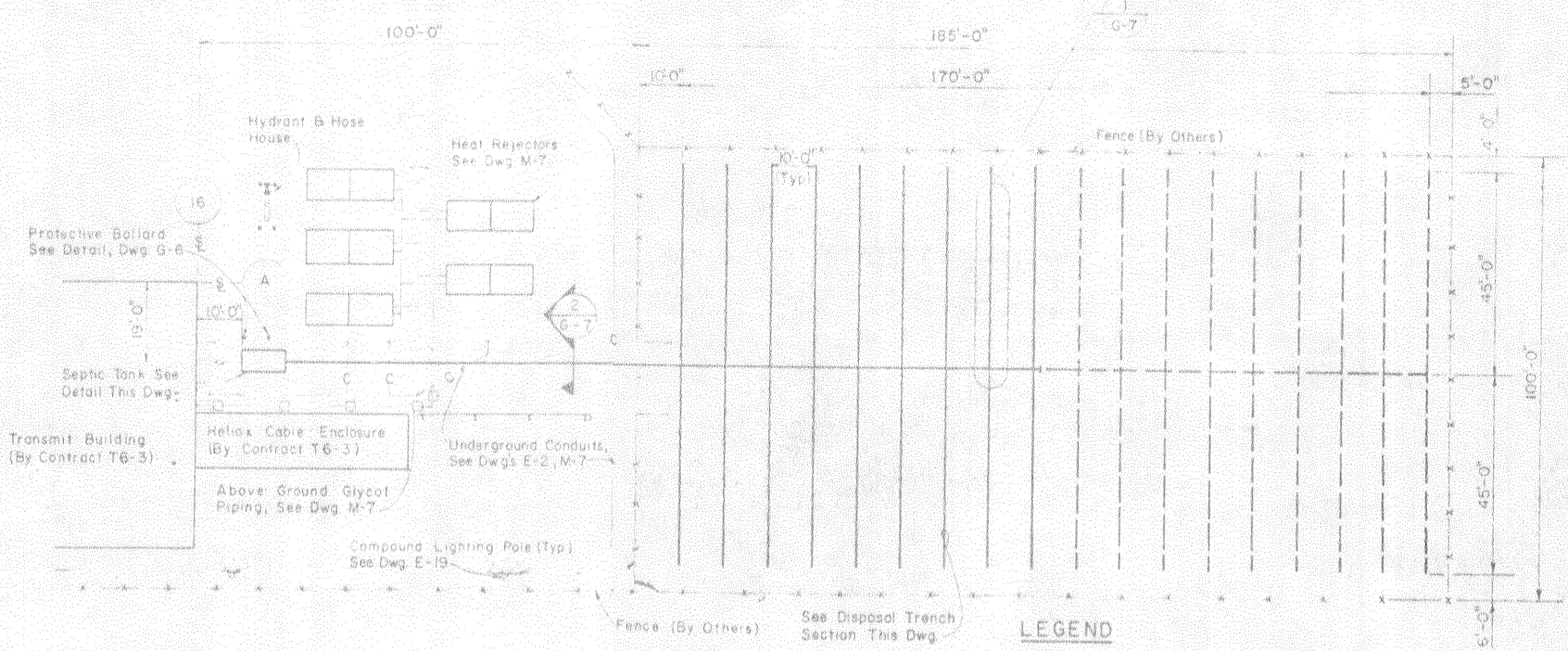
REVISION - 0



	CONTRACT NO. E 03538-96-00074 DATE 2 JULY 1997 DRAWN ENGR CHECKED ISSUED 30 NOV 1997	GENERAL ELECTRIC AN/FPS-116 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>COMPOUND AREA GRADING</b> <b>SECTIONS &amp; DETAILS</b>	SIZE CODE IDENT NO. WORKING NO. E 03538 T6 G-6
	NO ALTERATION PERMITTED UNLESS EXCEPT AS PROVIDED UNDER SECTION 7009 SUB DIVISION 5 OF THE NEW YORK STATE EDUCATION LAW		DATE: NOV 20 1997 DESIGNED BY: [Signature] DRAWN BY: [Signature]



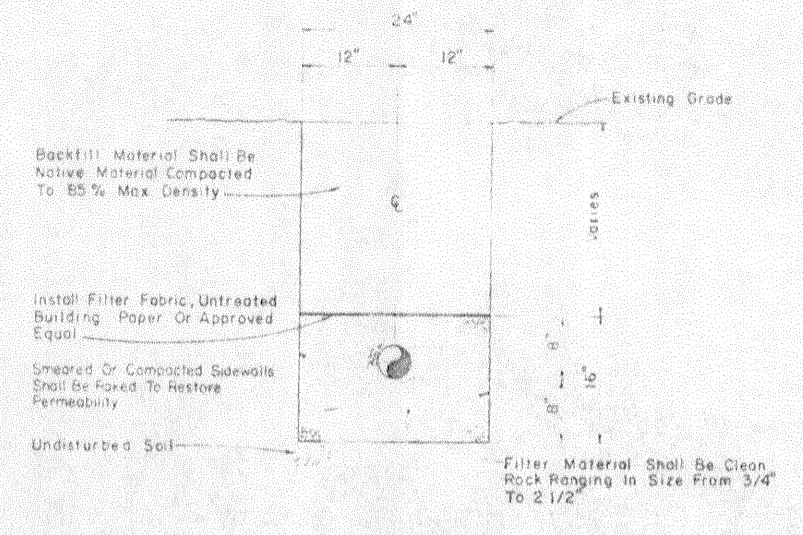
REVISIONS	
NO.	DATE



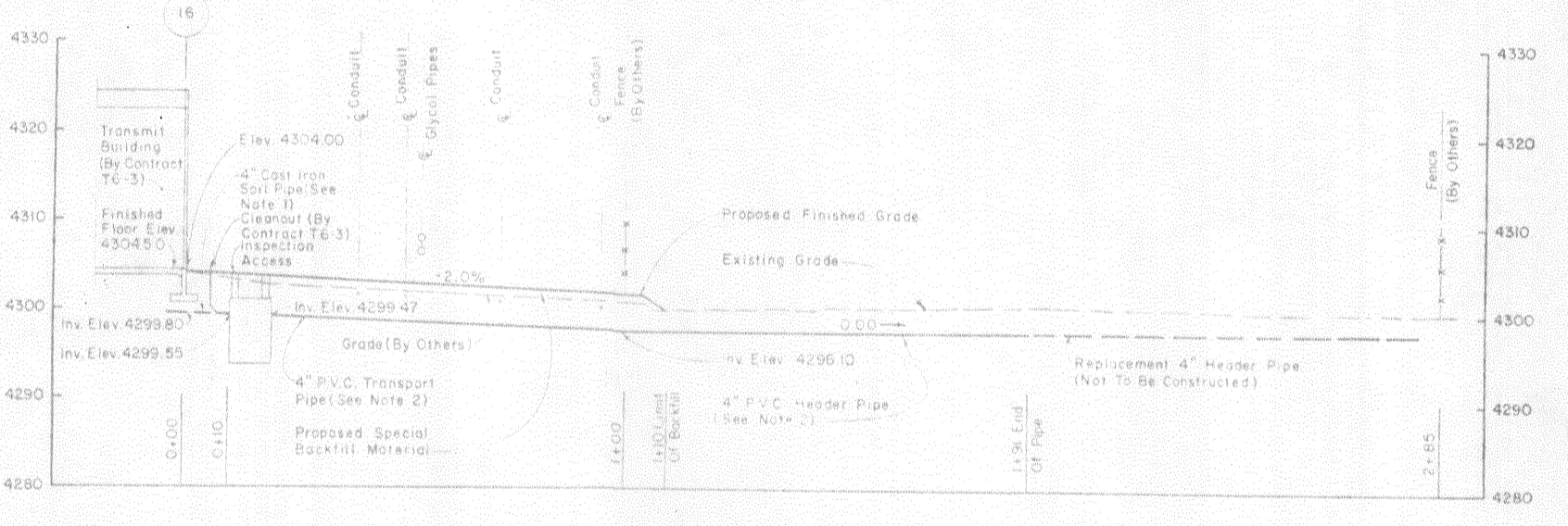
**PLAN**  
Scale: 1/8" = 1'-0"

**LEGEND**

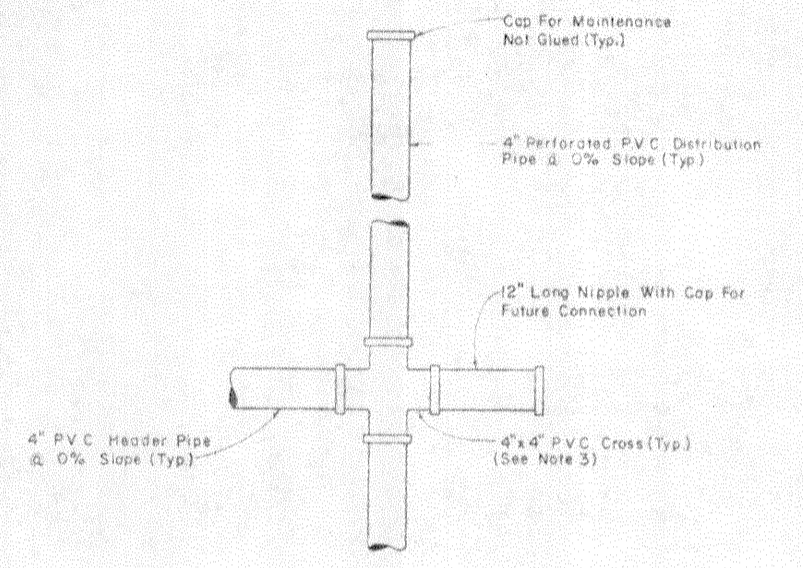
- - - By Contract T6-3
- This Contract
- ▨ Seeded Area (See Note 4)
- - - Designated Replacement Absorption Field Area (Not To Be Constructed)



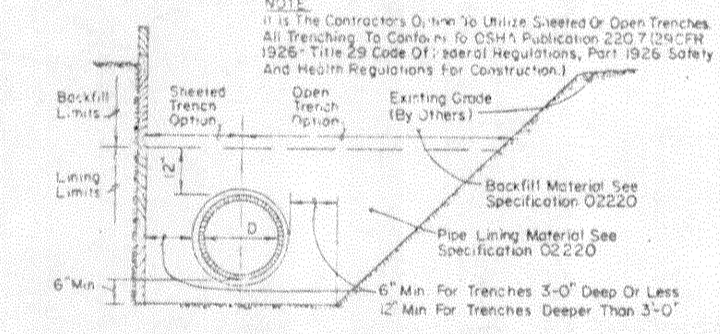
**DISPOSAL TRENCH SECTION**  
Not To Scale



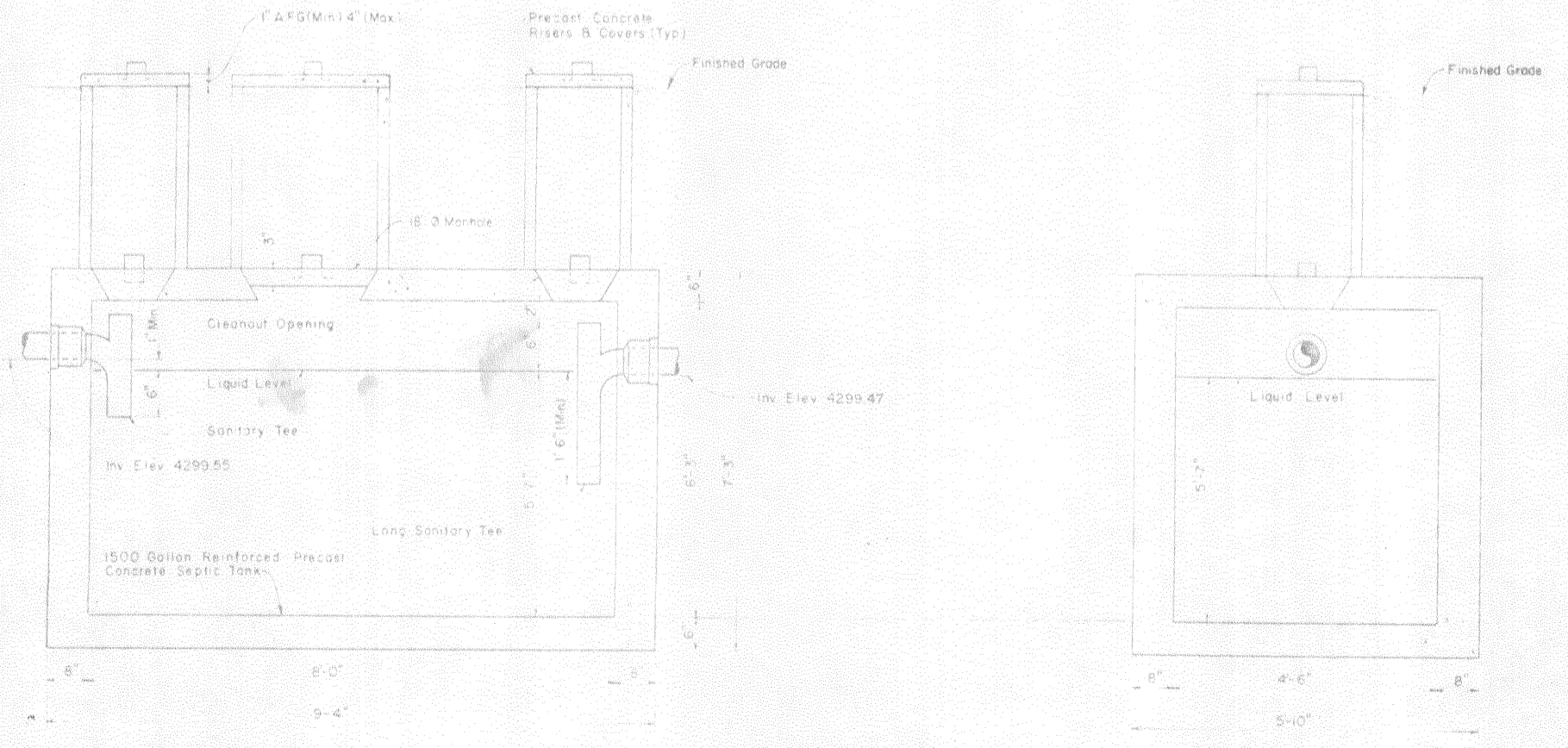
**PROFILE**  
Scale: 1/8" = 1'-0"



**DETAIL 1**  
Not To Scale

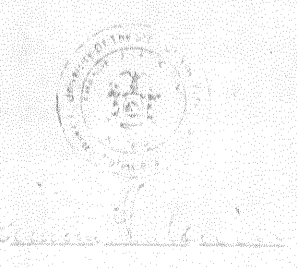


**TYPICAL TRENCH SECTION**  
Not To Scale



**SEPTIC TANK DETAIL**  
Not To Scale

- GENERAL NOTES:**
- THE BUILDING SEWER SHUTOFF BY CONTRACT T6-3 CONSISTS OF 4" CAST IRON SOIL PIPE EXTENDING TO 18" FROM BUILDING STRUCTURAL LINE TO AND TERMINATING WITH A 4" PLUG. THE SHUTOFF IS MARKED BY AN EOC STAKE. THE CONTRACTOR SHALL VERIFY THE ENDING INVERT AND ADJUST SEPTIC TANK GRADE ACCORDINGLY.
  - TRANSPORT PIPE AND HEADER PIPE SHALL BE EMBEDDED AND BACKFILLED IN ACCORDANCE WITH SPECIFICATION SECTION 02220.
  - IN LIEU OF 4" CROSSES, CONTRACTOR MAY USE 2" PVC TEES FOR CONNECTION OF DISTRIBUTION LINES TO HEADER PIPE. IF TEES ARE USED, THE DISTANCE BETWEEN STAGGERED LATERALS SHALL BE KEPT TO A MINIMUM AND THE 10" CENTER-TO-CENTER DISTANCE BETWEEN ADJACENT DISPOSAL TRENCHES SHALL BE MAINTAINED.
  - IN ADDITION TO THE AREA SHOWN TO BE SEED, THE CONTRACTOR SHALL PREPARE AND SEED ALL OTHER AREAS DISTURBED BY HIS OPERATION.
  - REFER TO SPECIFICATION SECTION 15375, "SEWAGE DISPOSAL SYSTEM" FOR WORK SHOWN ON THIS DRAWING.



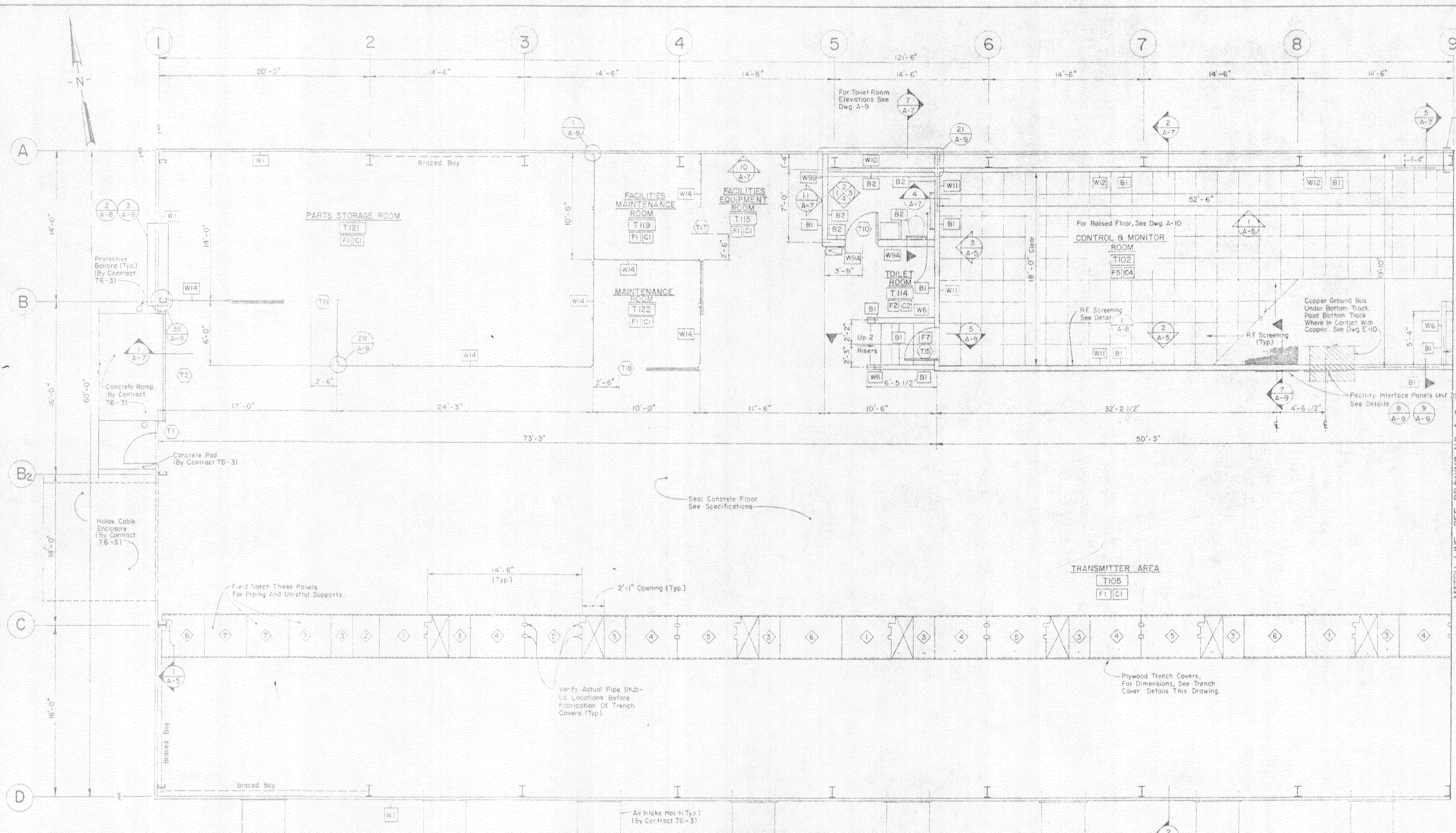
CONTRACT NO. F5628-R6-C-0174 DATE OF DRAWING 3 JULY 1987 DRAWN ENGR CHECKED DATED 30 NOV 1987	<b>GENERAL ELECTRIC</b> AN/FPS-11B SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>EXTERIOR SANITARY          PLAN &amp; DETAILS</b>
SIZE E 03538	SHEET NO. T6 G-7



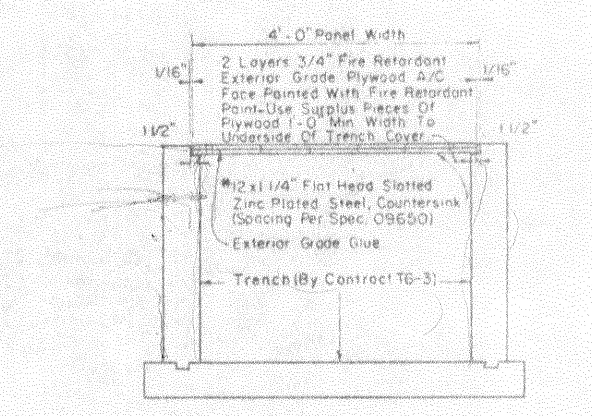




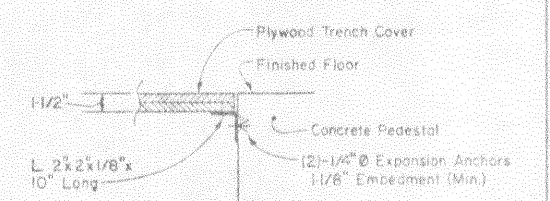
NO.	REVISIONS	DESCRIPTION



MATCH LINE - SEE DRAWING NO. A-6



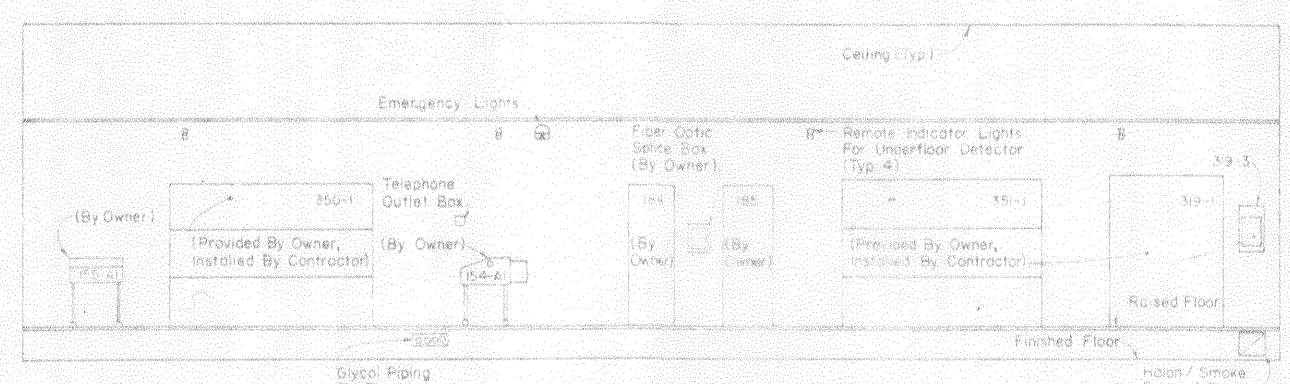
**PLYWOOD TRENCH COVER DETAIL**  
Scale: 3/4" = 1'-0"



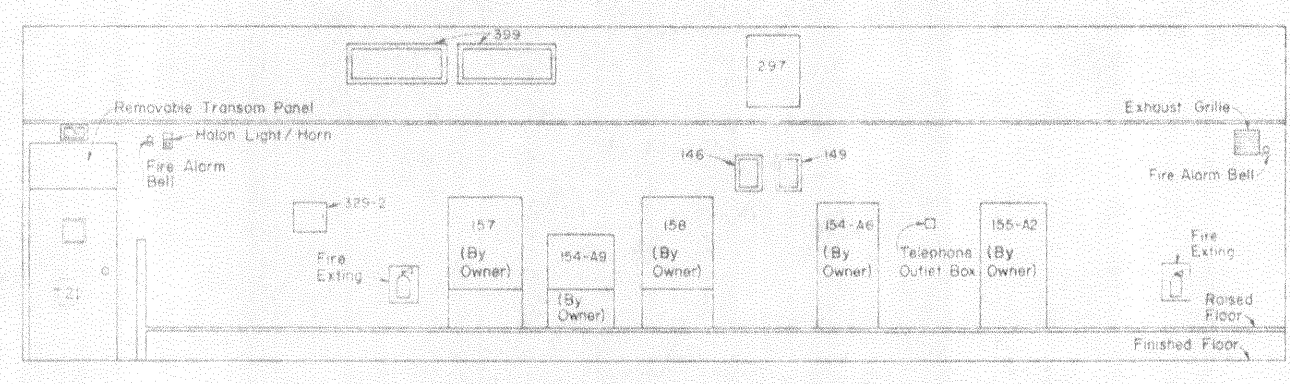
**SECTION I-A-5**  
Scale: 1/2" = 1'-0"

- GENERAL NOTES:**
- INTERIOR WALL CENTERLINE SHOWN DENOTES CENTERLINE OF WALL STUD, NOT NECESSARILY CENTERLINE OF WALL THICKNESS.
  - THE CONTROL & MONITOR ROOM MUST BE THOROUGHLY SEALED TO PREVENT LOSS OF HALON AFTER DISCHARGE.

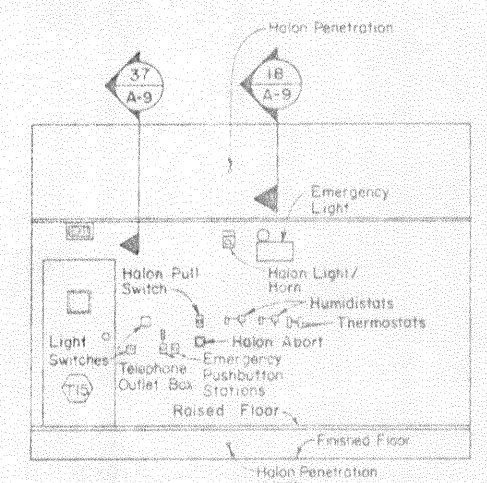
**FLOOR PLAN - LEFT HALF**  
Scale: 1/4" = 1'-0"



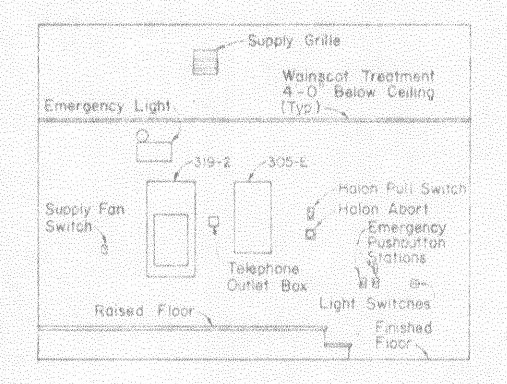
**C&M ROOM ELEVATION 1**  
Scale: 1/4" = 1'-0"



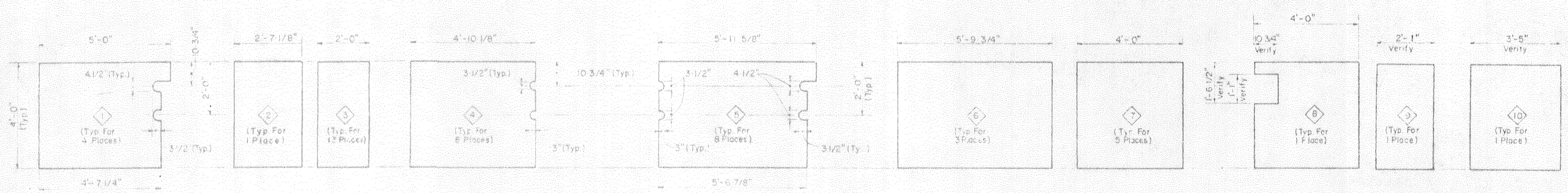
**C&M ROOM ELEVATION 2**  
Scale: 1/4" = 1'-0"



**C&M ROOM ELEVATION 3**  
Scale: 1/4" = 1'-0"



**C&M ROOM ELEVATION 4**  
Scale: 1/4" = 1'-0"



**TRENCH COVER DETAILS**  
Scale: 1/4" = 1'-0"

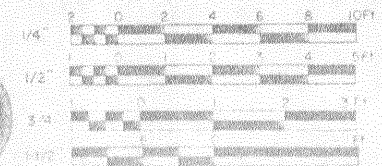
NOTE:  
Rounded Ends of Pipe Cuts  
Shall Be True Circular Arcs.



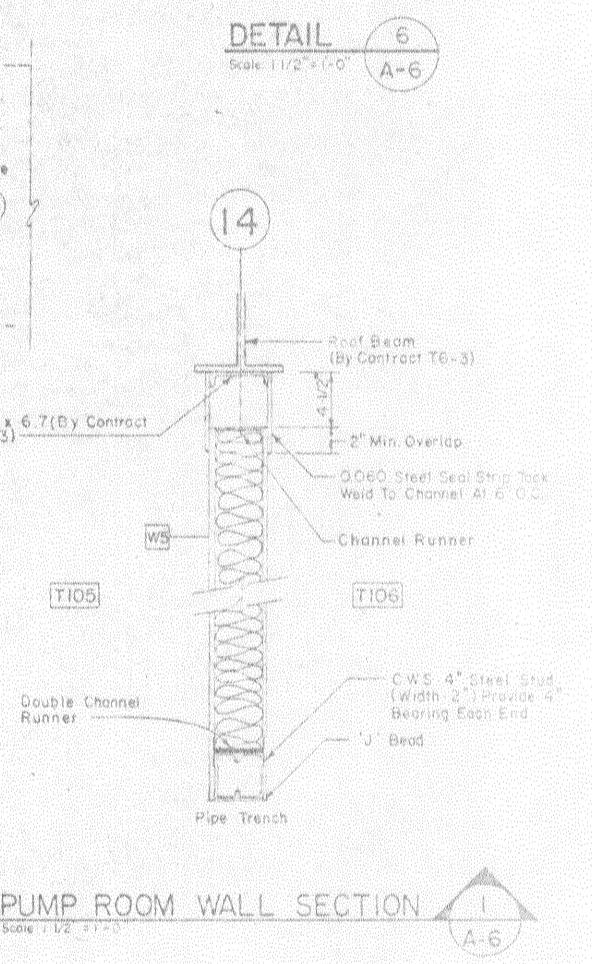
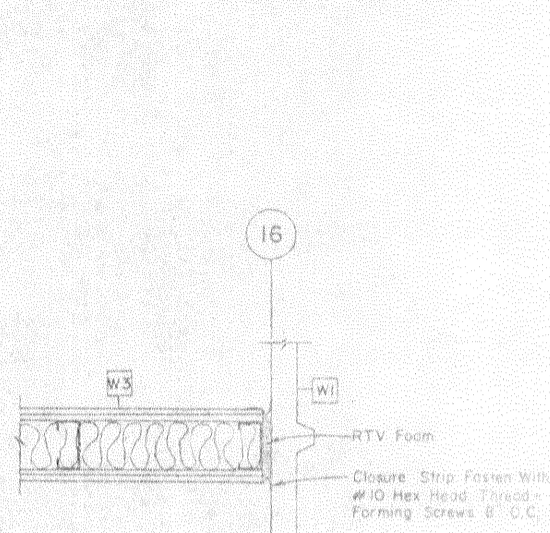
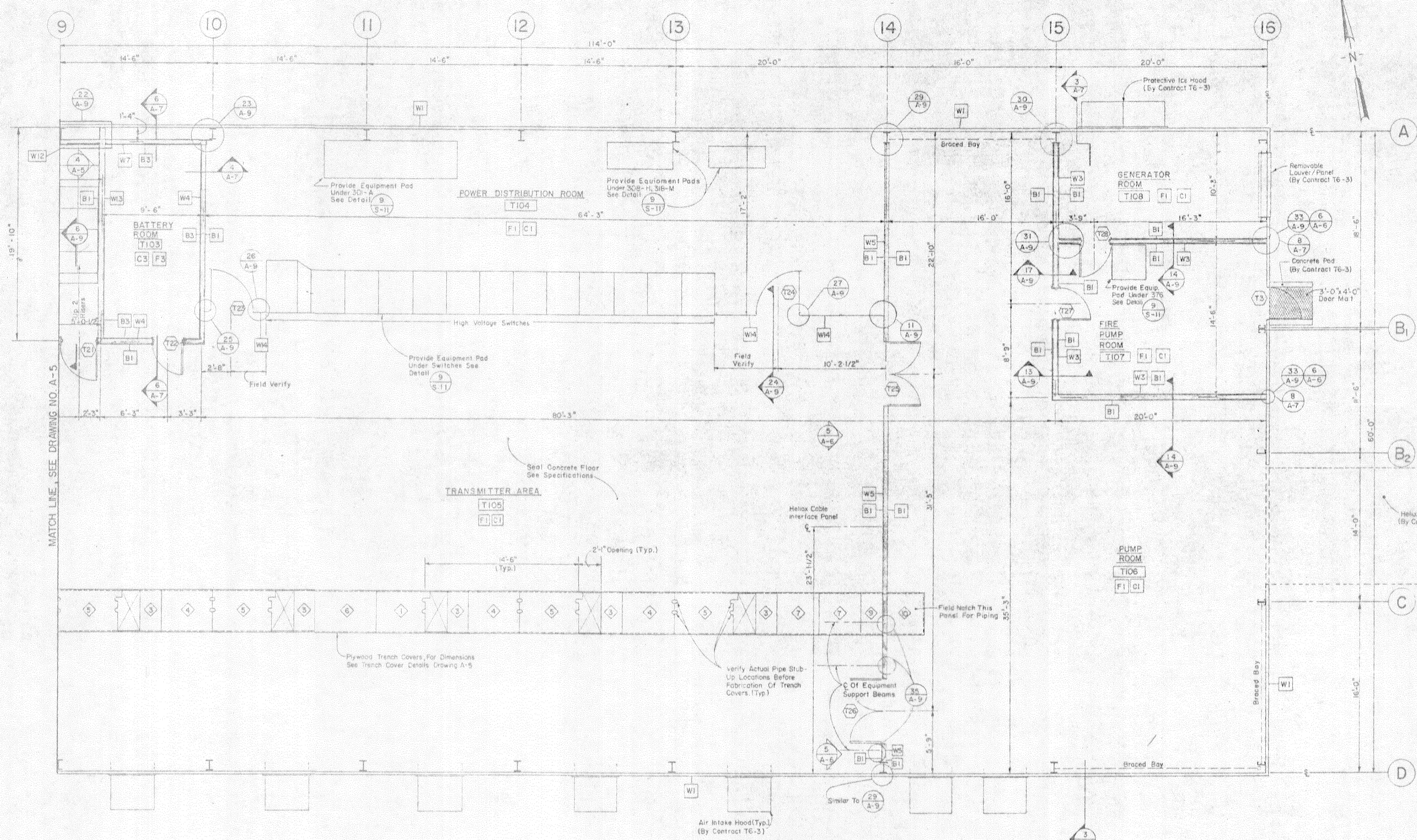
**KEY PLAN**

	CONT. NO. F19628-86-C-074 DATE OF DRAWING 2 JULY, 1987 DRAWN ENGR. CHECKED ISSUED 30 NOV., 1987	<b>GENERAL ELECTRIC</b> ESC. DRAWING T-118 ANY/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>FLOOR PLAN - LEFT HALF</b>	SIZE E 03538 T6 A-5
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2009 SUB-D DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	<b>G. S. GARDNER &amp; SONS</b> CONSULTING ENGINEERS Larchmont, New York 10588	DATE NOV. 30, 1987 SCALE AS SHOWN FILE NO. 828-009

REVISION-0



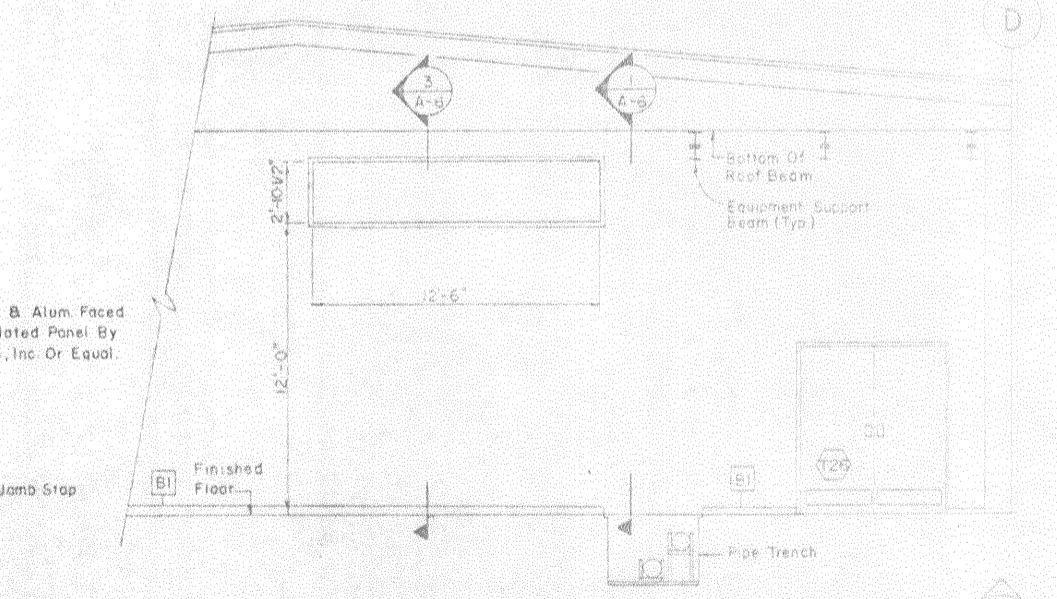
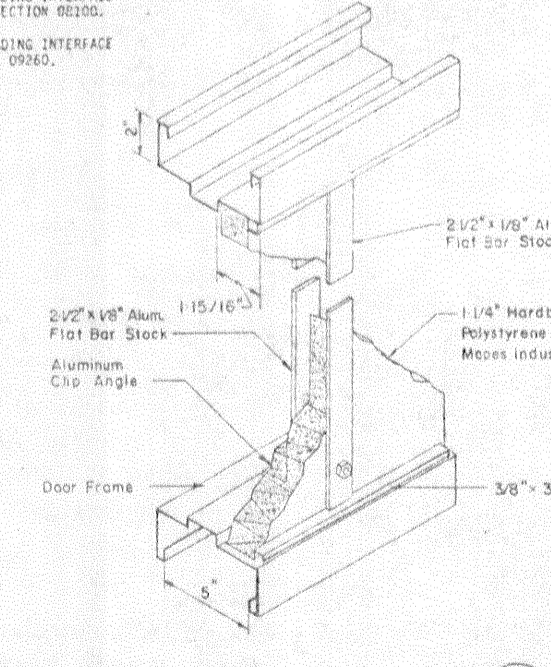
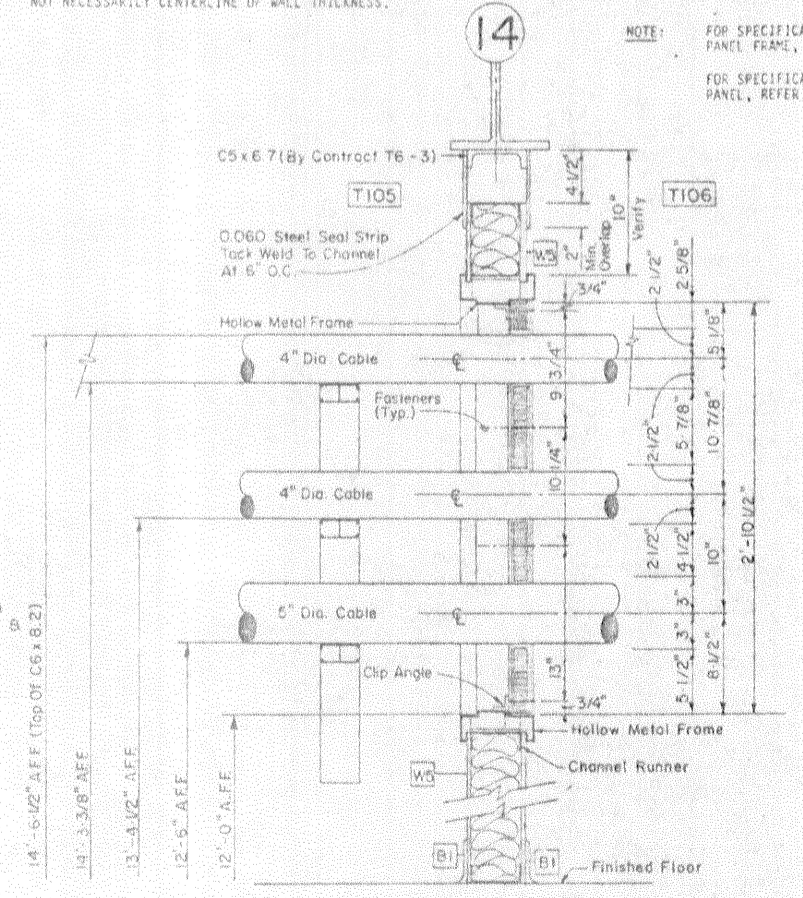
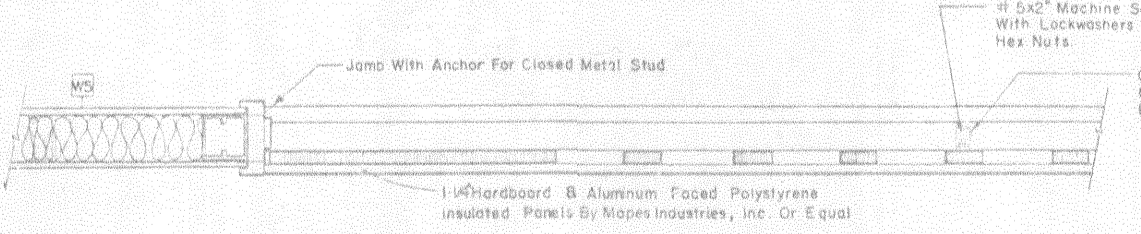
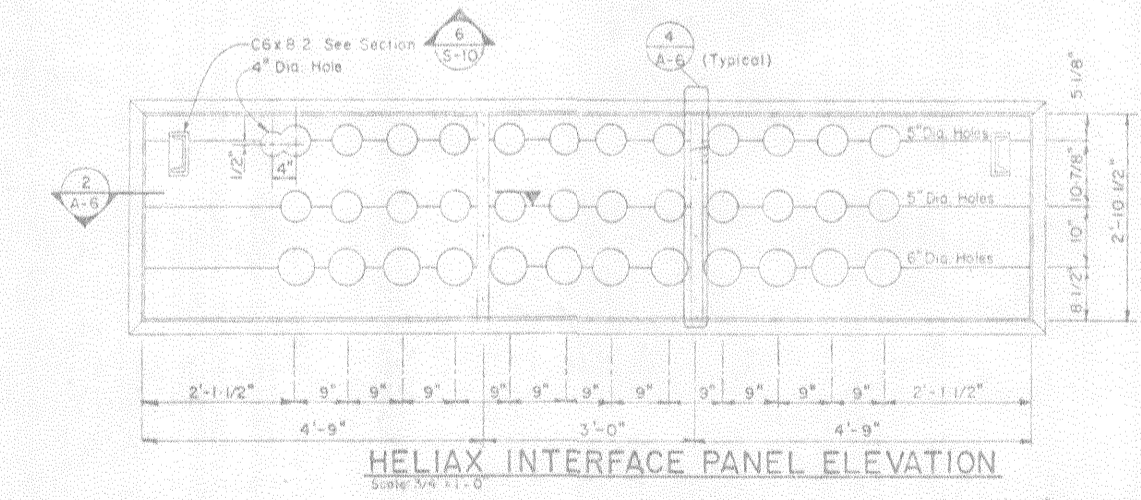




FLOOR PLAN-RIGHT HALF  
Scale: 1/4" = 1'-0"

INTERIOR WALL CENTERLINE DENOTES CENTERLINE OF WALL STUD.  
NOT NECESSARILY CENTERLINE OF WALL THICKNESS.

NOTE: FOR SPECIFICATION REGARDING INTERFACE PANEL FRAME, REFER TO SECTION 091200.  
FOR SPECIFICATION REGARDING INTERFACE PANEL, REFER TO SECTION 09260.



HORIZONTAL SECTION THROUGH HELIX CABLE INTERFACE PANEL  
Scale: 1 1/2" = 1'-0"

SECTION THROUGH PUMP ROOM WALL INTERFACE PANEL  
Scale: 1 1/2" = 1'-0"

PANEL INTERSECTION DETAIL  
Scale: 3" = 1'-0"

PUMP ROOM WALL ELEVATION AT HELIX CABLE INTERFACE  
Scale: 1/4" = 1'-0"

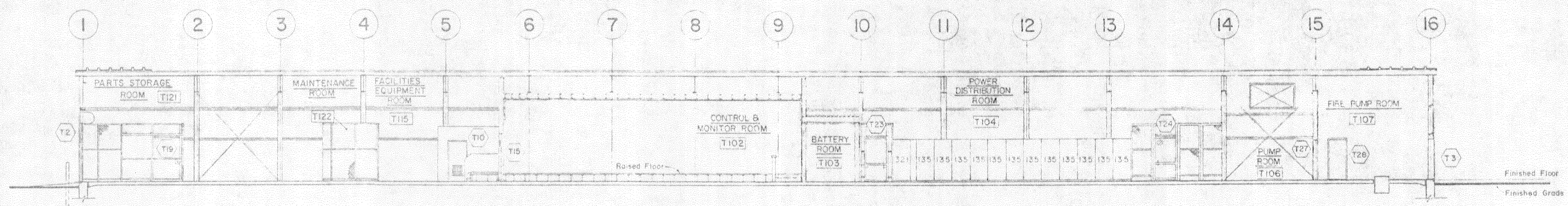


	CONTRACT NO. 4-19628-96-C-D174	GENERAL ELECTRIC
	DWG. DATE: 2 JULY, 1987	AN/PPS-118
	DRAWN: [Signature]	SECTOR 6 TRANSMIT FACILITY
	ENGR: [Signature]	CONTRACT T6-4
CHECKED: [Signature]		<b>FLOOR PLAN-RIGHT HALF</b>
ISSUED: 30 NOV. 1987		SIZE: 30" x 42" (1:1)
NO ALTERATION PERMITTED WITHOUT WRITTEN PERMISSION OF THE NEW YORK STATE EDUCATION LAW		DATE: NOV. 30, 1987

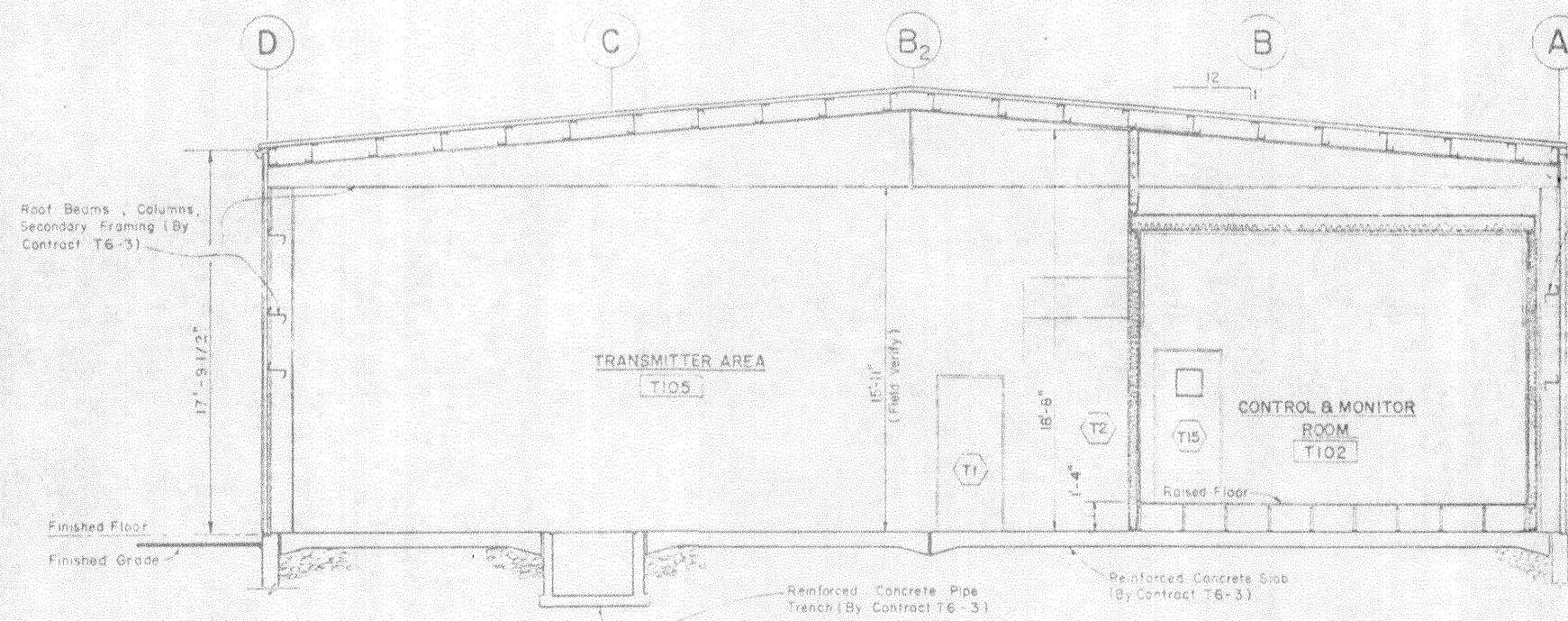
REVISION - 0



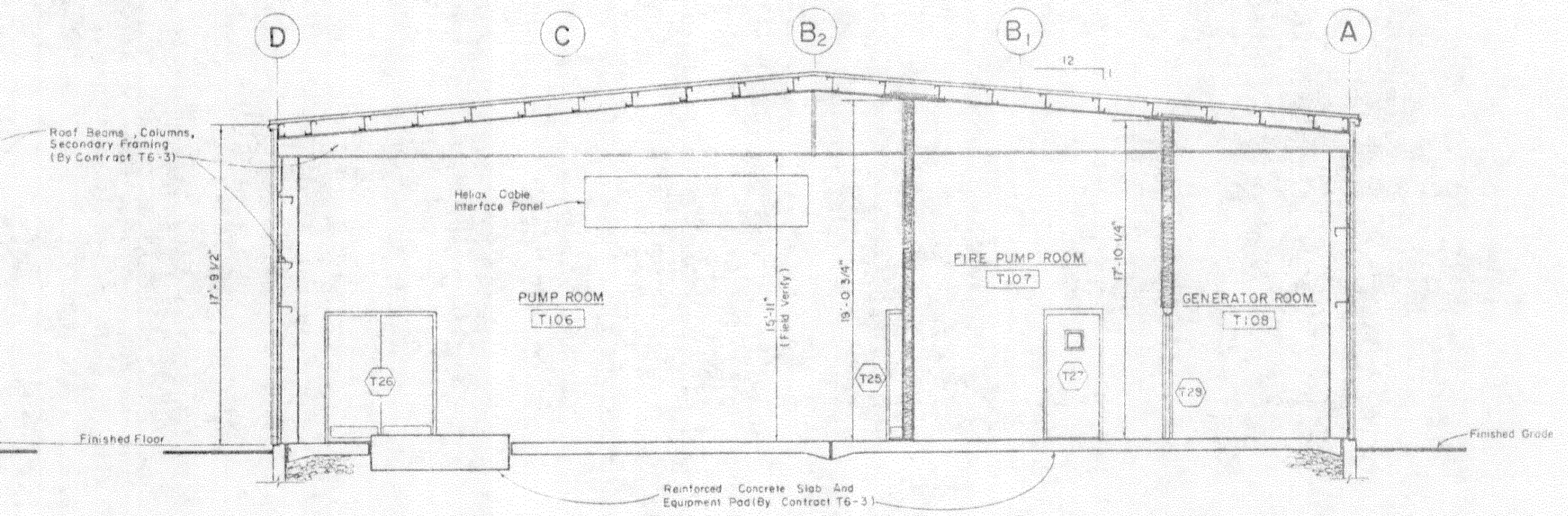
NO.	REVISIONS	DESCRIPTION
1		



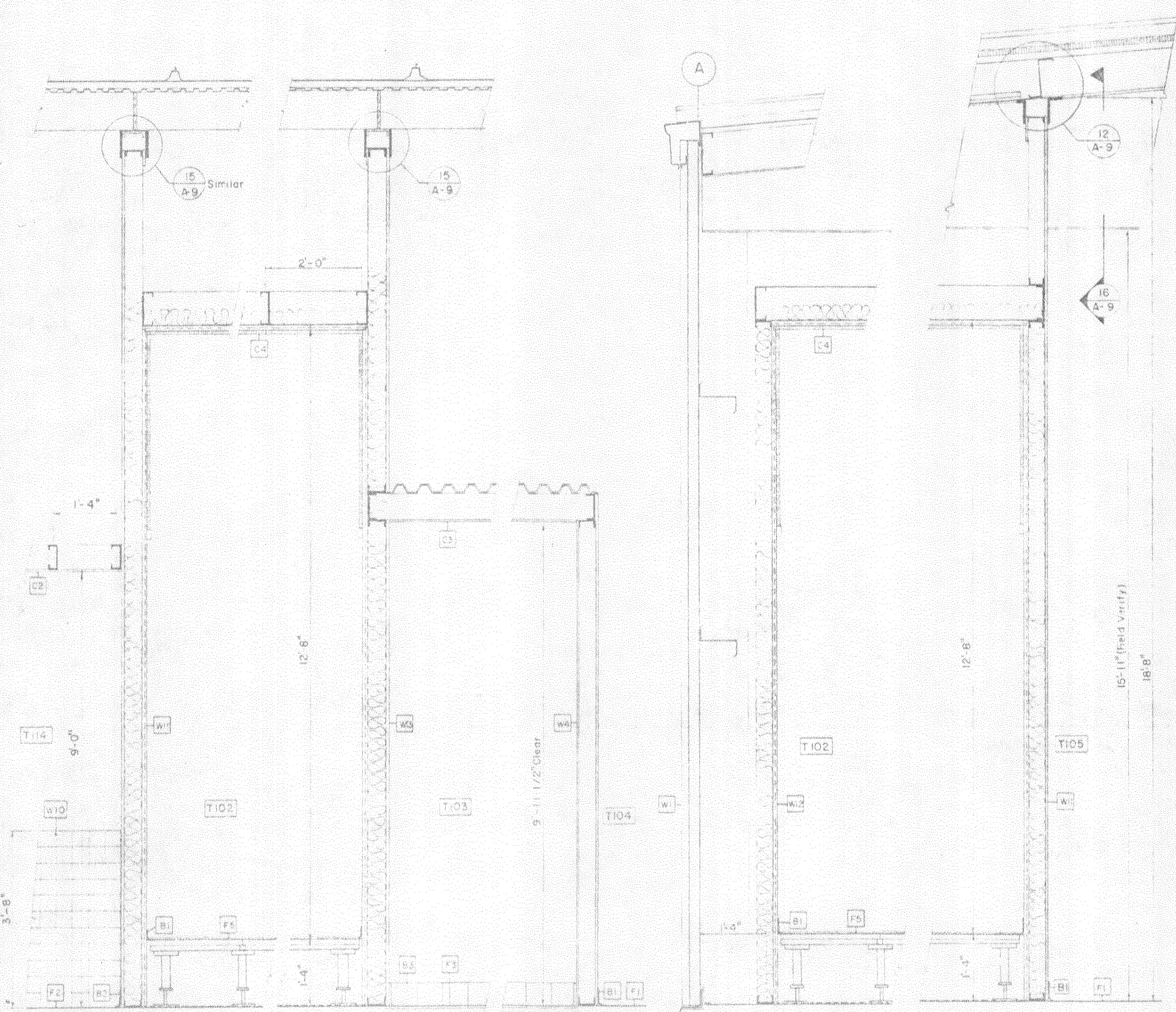
LONGITUDINAL BUILDING SECTION  
Scale: 1/8" = 1'-0"



CROSS SECTION 2  
Scale: 1/4" = 1'-0"

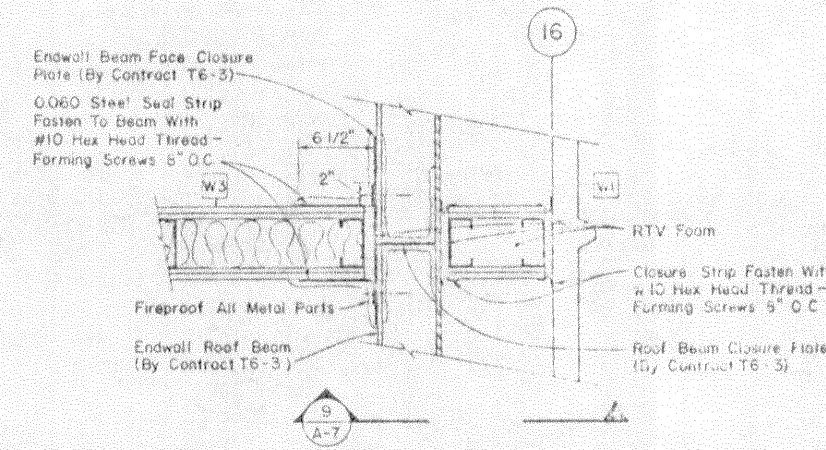


CROSS SECTION 3  
Scale: 1/4" = 1'-0"

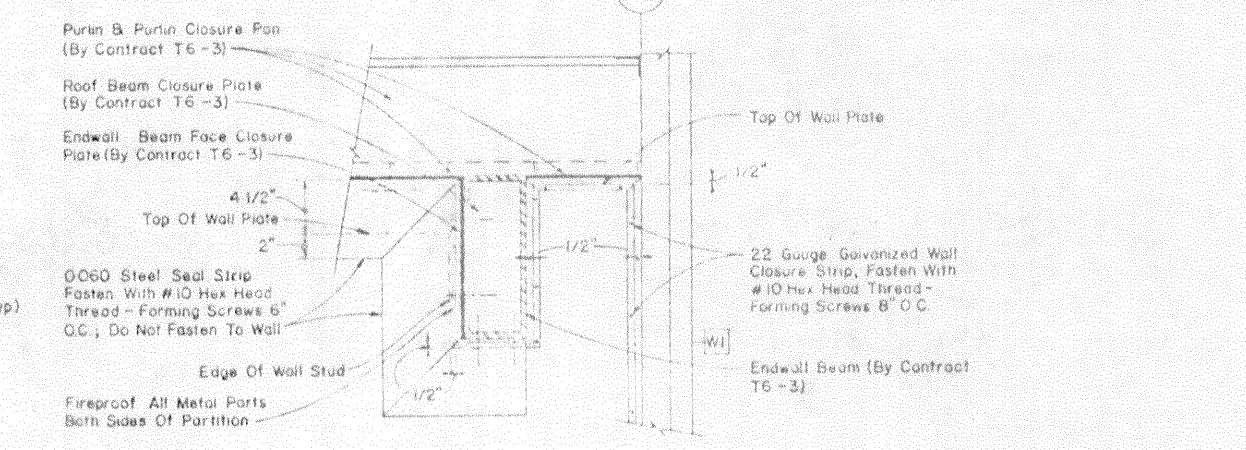


WALL SECTION 4  
Scale: 3/4" = 1'-0"

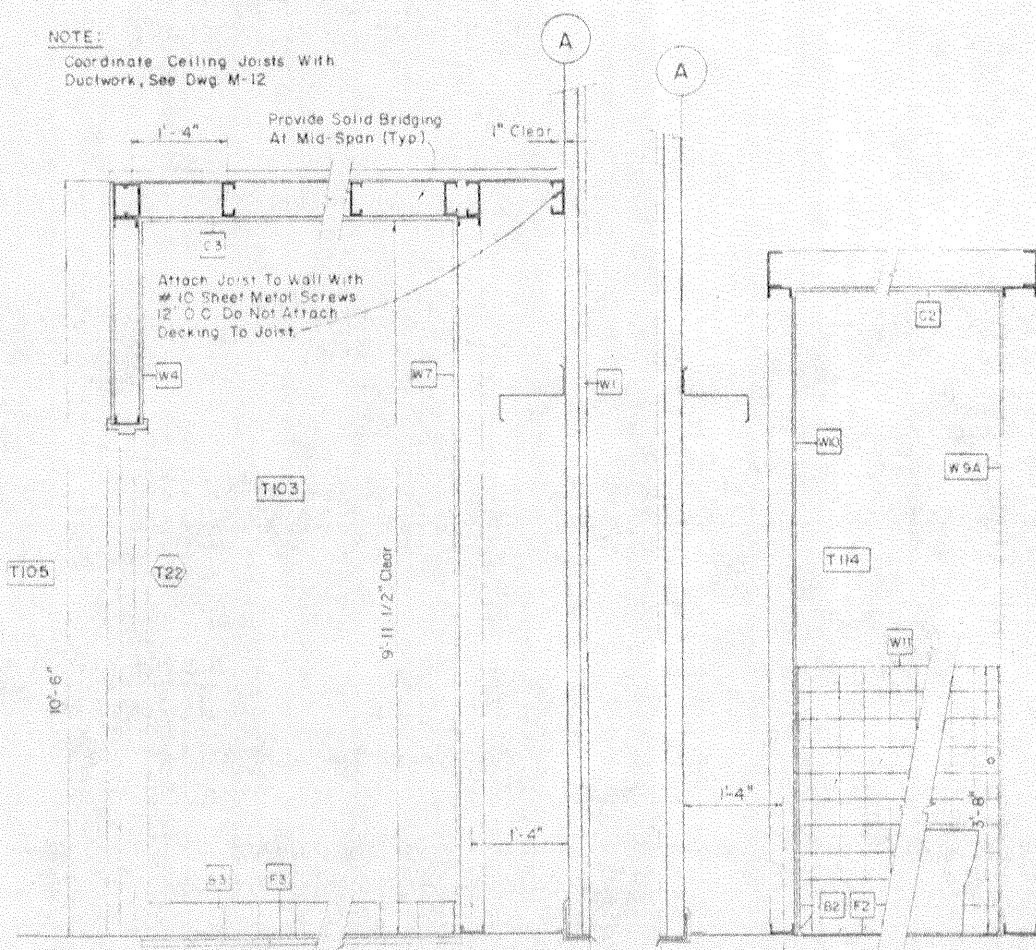
WALL SECTION 5  
Scale: 3/4" = 1'-0"



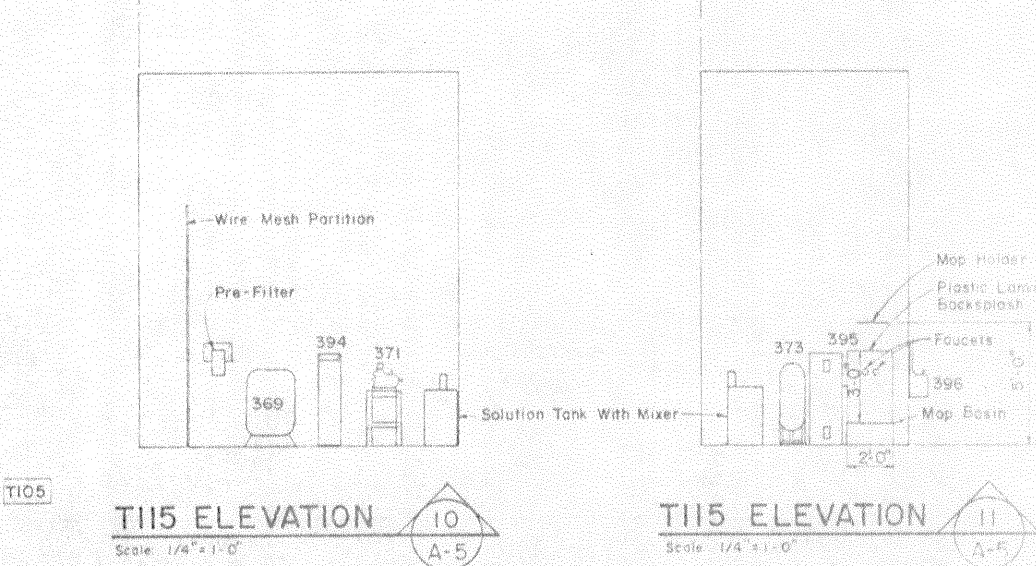
ENDWALL ROOF BEAM DETAIL  
Scale: 1/2" = 1'-0"



SECTION 9  
Scale: 1/2" = 1'-0"



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



TI15 ELEVATION 10  
Scale: 1/4" = 1'-0"

TI15 ELEVATION 11  
Scale: 1/4" = 1'-0"

NOTE:  
Coordinate Ceiling Joists With Ductwork, See Dwg. M-12  
Provide Solid Bridging At Mid-Span (Typ.)

		<b>GENERAL ELECTRIC</b> CONSULTING ENGINEERS 1000 PARK AVENUE NEW YORK, N.Y. 10022	
CONT. NO. F10828-R6-C-0174 DATE OF DRAWING: 2 JULY, 1987 DRAWN: [ ] ENGR: [ ] CHECKED: [ ] ISSUED: 30 NOV., 1987		<b>AN/FPS-118</b> SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>BUILDING SECTIONS</b> SIZE: 03538 T6 A-7 DATE: NOV. 30, 1987 SO. E. AE. DRAWN FILE NO. 458-006	
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7709 SUBSECTION 2 OF THE NEW YORK STATE EDUCATION LAW			



# SCHEDULES

REVISIONS	
NO.	DESCRIPTION

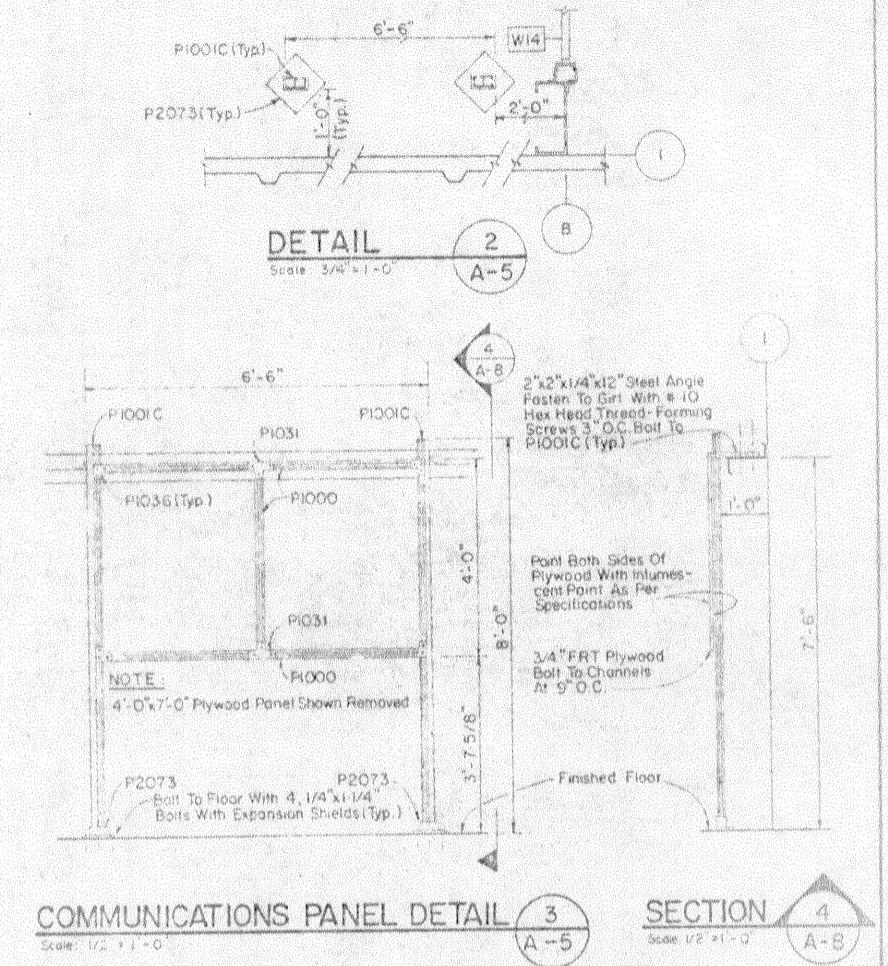
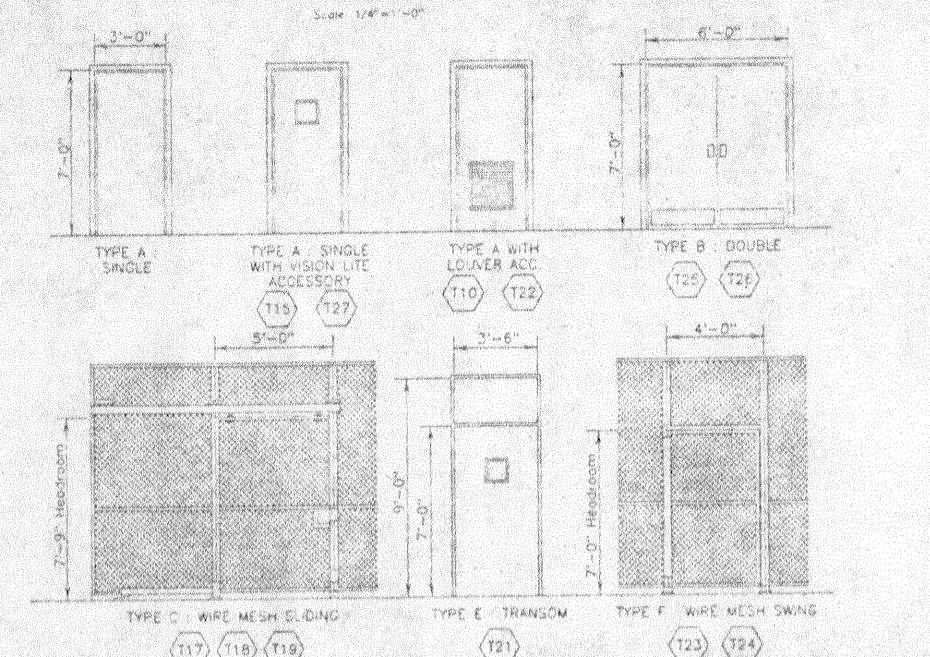
## DOOR SCHEDULE

## HARDWARE SCHEDULE

## DOOR TYPES

NOTE: REFER TO DRAWINGS A-8 FOR HELIX CABLE INTERFACE PANEL FRAME DETAILS.

Door Number	REMARKS: ① Provide Hardware On Each Leaf ② Cypher Lock	Contract Number	SIZE (Inches)	TYPE						MATERIAL	FINISH	ACCESS	FRAME	FINISH	BUTTS	LOCKSETS	SURFACE HDWE.	EXTERIOR HDWE.
				A	B	C	D	E	F									
T1	Exterior	Transmitter Area	70-3															
T2	Exterior	Transmitter Area	16-3															
T3	Exterior	Fire Pump Room	16-3															
T10	Transmitter Area	Toilet Room	16-4	1-3/4														
T15	Transmitter Area	Control And Monitor Room	16-4	1-3/4						1-1/2								
T17	Transmitter Area	Facilities Maintenance Room	16-4	1-1/2														
T18	Transmitter Area	Maintenance Room	16-4	1-1/2														
T19	Transmitter Area	Parts Storage Room	16-4	1-1/2														
T21	Transmitter Area	Control And Monitor Room	16-4	1-3/4						1-1/2								
T22	Transmitter Area	Battery Room	16-4	1-3/4														
T23	Transmitter Area	Power Distribution Room	16-4	1-3/4														
T24	Transmitter Area	Power Distribution Room	16-4	1-1/4														
T25	Transmitter Area	Pump Room	16-4	1-3/4														
T26	Transmitter Area	Pump Room	16-4	1-3/4														
T27	Pump Room	Fire Pump Room	16-4	1-3/4						1-1/2								
T28	Fire Pump Room	Generation Room	16-4	1-3/4						1-1/2								



## DOOR DETAILS : DOOR : (T10)

## TYPICAL

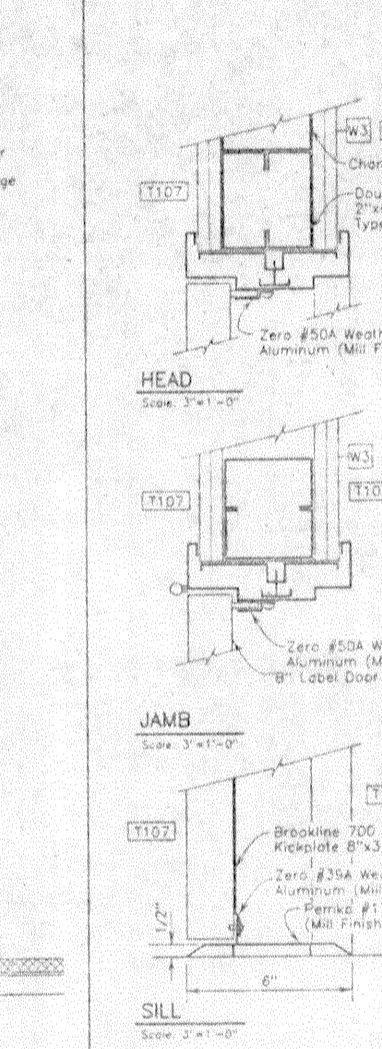
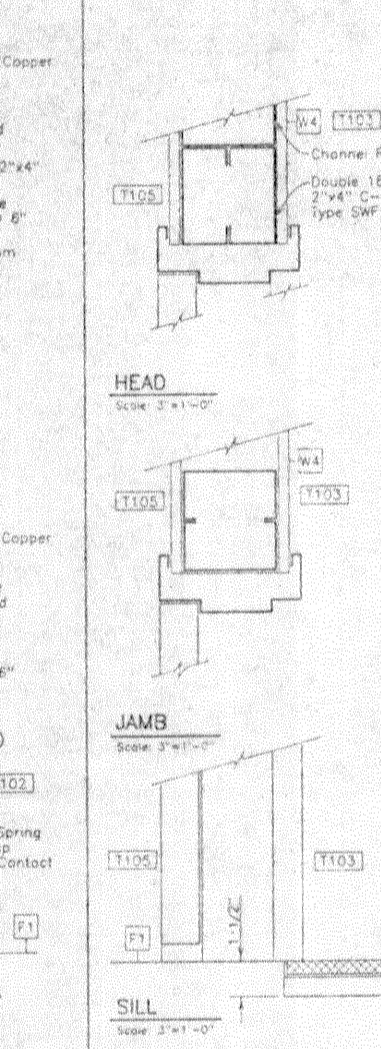
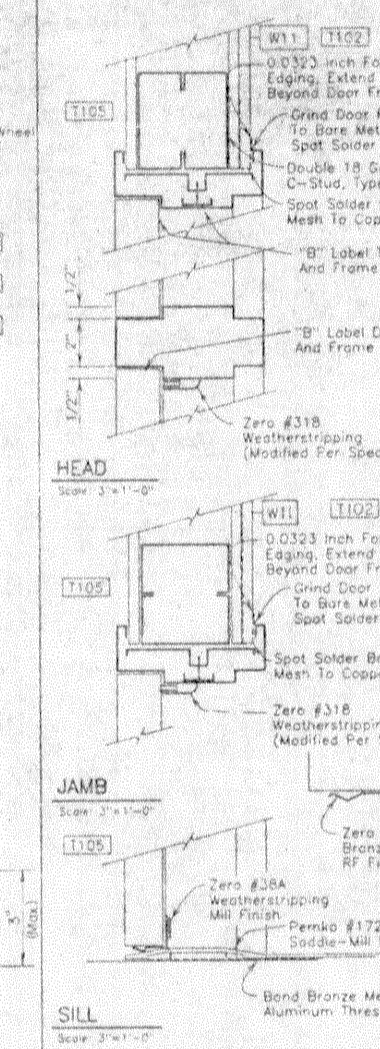
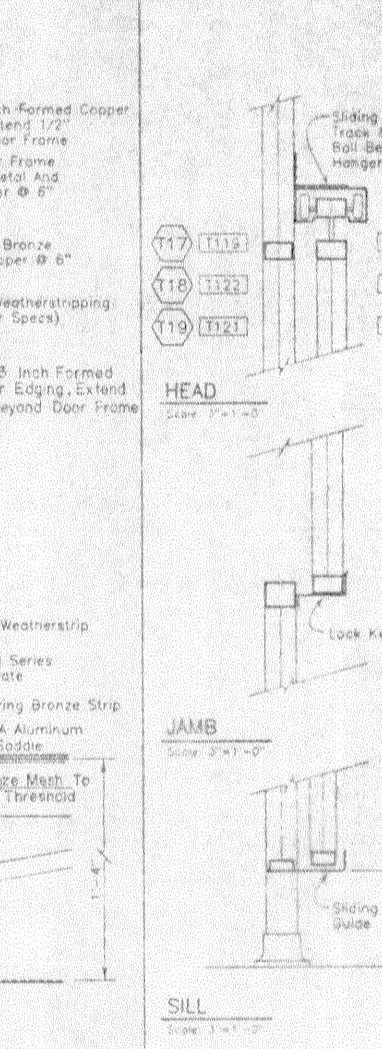
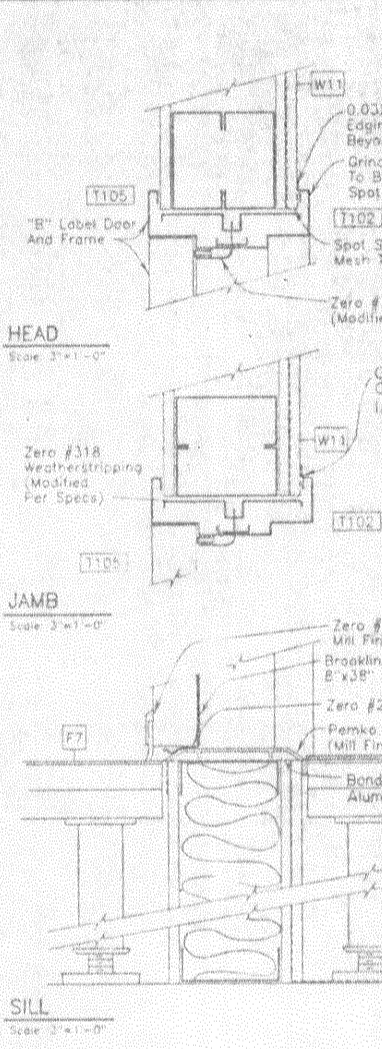
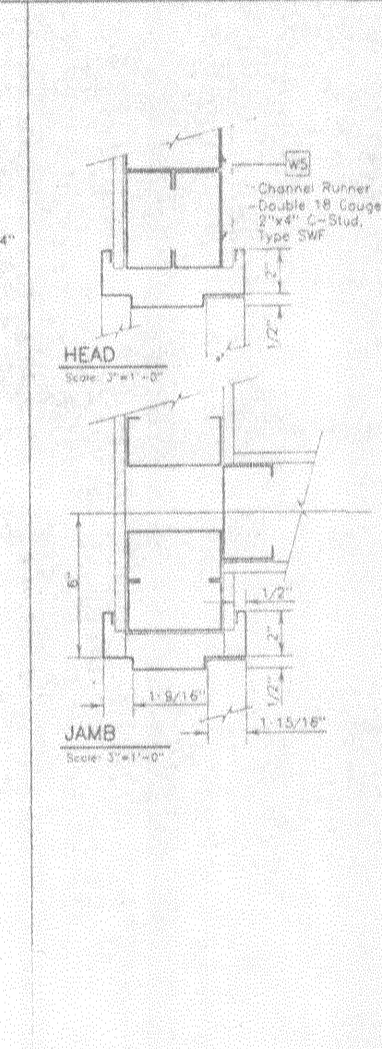
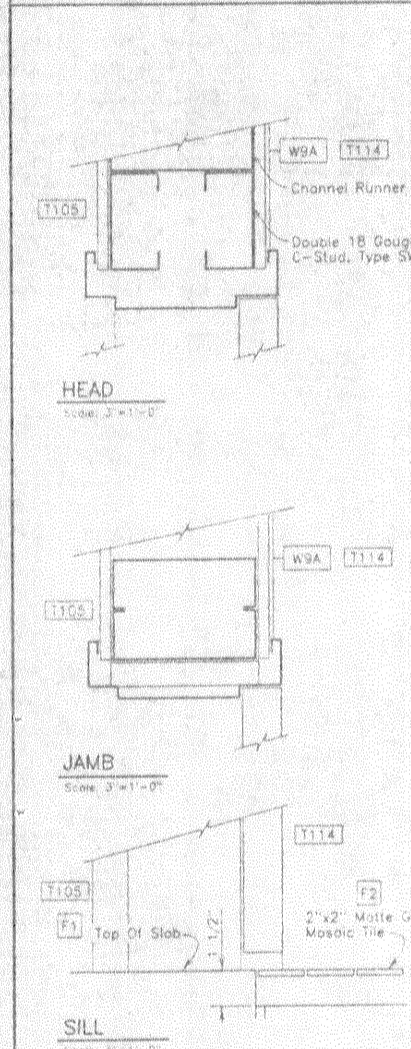
## DOOR : (T15)

## DOORS : (T17, T18, T19)

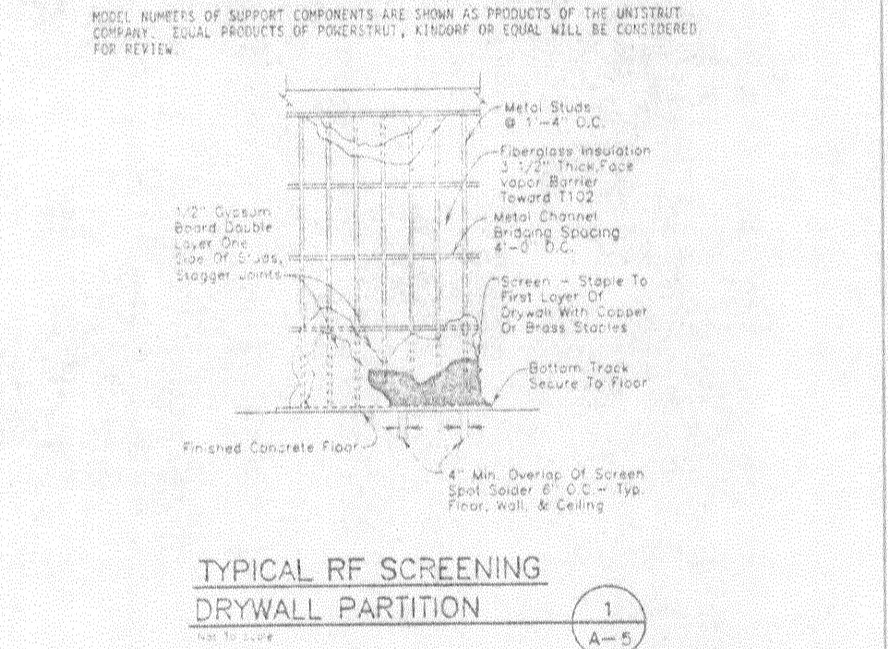
## DOOR : (T21)

## DOOR : (T22)

## DOOR : (T28)



## COMMUNICATIONS PANEL DETAIL 3 SECTION 4



## WALL SCHEDULE :

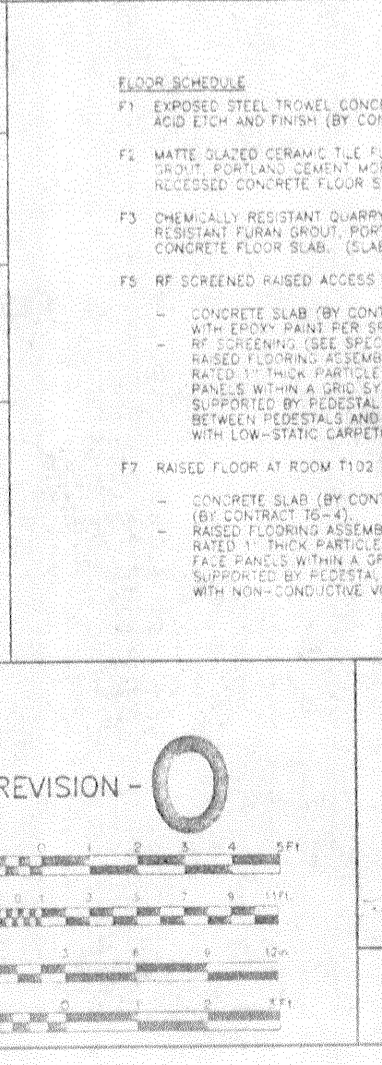
## CEILING SCHEDULE:

## FLOOR & BASE SCHEDULES :

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
FACTORY INSULATED EXTERIOR WALL PANEL, MAXIMUM U VALUE .05 (BY CONTRACT T6-3).	FULL-HEIGHT FIRE-RATED PARTITION, 12 GAUGE, 4" METAL STUDS PLACED 1'-4" O.C. TWO LAYERS DRYWALL EACH SIDE. EXTEND WALLS TO THE UNDERSIDE OF ROOF SYSTEM. PROVIDE EXPANSION CLOSURE STRIPS AT WALL INTERSECTIONS AS DETAIL. PROVIDE 3-1/2" FIBERGLASS BATT INSULATION UNFACED BETWEEN ALL METAL STUDS. FIRE RATING TWO (2) HOURS.	BATTERY ROOM PARTITION: ONE LAYER DRYWALL EACH SIDE. EXTEND STUDS TO 10'-0" A.F.F. EXTEND BATTERY ROOM DRYWALL 10'-0" A.F.F. TO JOISTS. EXTEND OUTER DRYWALL 10'-0" A.F.F. TO TOP OF JOISTS.	FULL-HEIGHT DRYWALL PARTITION, SINGLE LAYER DRYWALL BOTH SIDES, 12 GAUGE 4" METAL STUDS PLACED 1'-4" O.C. EXTEND DRYWALL TO UNDERSIDE OF ROOF CLOSURE STRIP. PROVIDE 3-1/2" FIBERGLASS BATT INSULATION UNFACED BETWEEN ALL METAL STUDS.	PARTIAL HEIGHT PARTITION, ONE LAYER DRYWALL EACH SIDE. EXTEND STUDS 3'-0" A.F.F. AT LANDING. FASTEN 5/4" X 6" OAK TOP RAIL TO TOP METAL CHANNEL.	FURRED PARTITION, ONE LAYER DRYWALL ONE SIDE. EXTEND DRYWALL TO 10'-0" A.F.F. TO JOIST LINE.	WATER RESISTANT DRYWALL PARTITION, 18 GAUGE, 6" METAL STUDS PLACED 1'-4" O.C. EXTEND ONE LAYER 1/2" WATER RESISTANT DRYWALL TO BOTTOM OF JOISTS WITH 3-1/2" CERAMIC TILE WAINSCOT. ON T110 SIDE, SINGLE LAYER DRYWALL, EXTEND TO 9'-6" A.F.F. TO TOP OF JOISTS.	WATER RESISTANT DRYWALL PARTITION, EXTEND WALL TO 10'-0" A.F.F.	WATER RESISTANT DRYWALL PARTITION, EXTEND WALL TO 10'-0" A.F.F. EXTEND ONE LAYER 1/2" WATER RESISTANT DRYWALL TO BOTTOM OF JOISTS WITH 3-1/2" CERAMIC TILE WAINSCOT. ON T110 SIDE, SINGLE LAYER DRYWALL, EXTEND TO 9'-6" A.F.F. TO TOP OF JOISTS.	WATER RESISTANT DRYWALL FURRED PARTITION, EXTEND WALL TO 10'-0" A.F.F. EXTEND ONE LAYER 1/2" WATER RESISTANT DRYWALL ON ROOM T114 SIDE, WITH 3-1/2" CERAMIC TILE WAINSCOT.

C1	C2	C3	C4
EXPOSED UNDERSIDE OF ROOF LINER PANEL (BY CONTRACT T6-3).	INTERIOR DRYWALL, CEILING-ONE LAYER 1/2" WATER RESISTANT DRYWALL FASTENED TO 18 GAUGE 6" STEEL JOISTS AT 1'-4" O.C. WITH SOLID BRIDGING AT MIDSPAN. DIMENSION TO BOTTOM OF JOISTS TO BE 9'-0".	BATTERY ROOM CEILING - INTERIOR DRYWALL CEILING AND STEEL DECK, ONE LAYER 1/2" TYPE X DRYWALL, FASTENED TO 18 GAUGE 6" STEEL JOISTS AT 1'-4" O.C. BOTTOM OF JOISTS 3'-0" A.F.F. SOLID BRIDGING AT MID SPAN, PROVIDE A 22 GAUGE, 1 1/2" DEEP STEEL DECK ABOVE JOISTS (SEE SPECIFICATION 0926) SPOT WELD 8" O.C. CLEAN AND TOUCH UP PRIMER.	FIRE RATED INTERIOR RF SCREENED CEILING WITH ACOUSTIC TILE. (FIRE RATING ONE (1) HOUR). - EXTEND STUDS TO UNDERSIDE OF METAL JOIST CLOSURE CHANNEL AT 14'-0" A.F.F. - PROVIDE 3-1/2" FIBERGLASS INSULATION WITH KRAFT VAPOR BARRIER BETWEEN ALL METAL STUDS, FACE VAPOR BARRIER TOWARD ROOM T102. - EXTEND FIRST LAYER DRYWALL TO UNDERSIDE OF CEILING JOISTS. - INSTALL RF SCREENING (SEE SPECIFICATION 13760). - EXTEND SECOND LAYER OF DRYWALL TO UNDERSIDE OF CEILING. - PROVIDE WALL ACOUSTICAL TREATMENT. (SEE SPECIFICATION 09513).

F1	F2	F3	F4	F5	F6	F7
EXPOSED STEEL TROWEL CONCRETE FLOOR SLAB (BY CONTRACT T6-3), ACID ETCH AND FINISH (BY CONTRACT T6-4).	MATTE GLAZED CERAMIC TILE FLOOR, 2" X 4" TILES, WATERPROOF GROUT, PORTLAND CEMENT MORTAR BED, RECESSED CONCRETE FLOOR SLAB (BY CONTRACT T6-3).	CHEMICALLY RESISTANT QUARRY TILE FLOOR, 6" X 6" 1/2" TILES, CHEMICALLY RESISTANT FURAN GROUT, PORTLAND CEMENT MORTAR BED, RECESSED CONCRETE FLOOR SLAB (BY CONTRACT T6-3).	RF SCREENED RAISED ACCESS FLOORING ON CONCRETE SLAB. - CONCRETE SLAB (BY CONTRACT T6-3) FINISHED AND SEALED WITH EPOXY PAINT PER SPECIFICATIONS (BY CONTRACT T6-4). - RF SCREENING (SEE SPECIFICATION 13760). - RAISED FLOORING ASSEMBLY - 2'-0" X 2'-0" COMPUTER ROOM RACKS WITH THICK PARTICLE BOARD AND STEEL LAMINATE FACE PANELS WITHIN A GRID SYSTEM OF STEEL STRINGERS SUPPORTED BY PEDIESTALS ASSEMBLED WITH ISOLATING GASKETS WITH LOW-STATIC CARPETING.	CONCRETE SLAB (BY CONTRACT T6-3) FINISHED AND SEALED WITH EPOXY PAINT PER SPECIFICATIONS (BY CONTRACT T6-4). - RF SCREENING (SEE SPECIFICATION 13760). - RAISED FLOORING ASSEMBLY - 2'-0" X 2'-0" COMPUTER ROOM RACKS WITH THICK PARTICLE BOARD AND STEEL LAMINATE FACE PANELS WITHIN A GRID SYSTEM OF STEEL STRINGERS SUPPORTED BY PEDIESTALS ASSEMBLED WITH ISOLATING GASKETS WITH LOW-STATIC CARPETING.	CONCRETE SLAB (BY CONTRACT T6-3) FINISHED AND SEALED WITH EPOXY PAINT PER SPECIFICATIONS (BY CONTRACT T6-4). - RF SCREENING (SEE SPECIFICATION 13760). - RAISED FLOORING ASSEMBLY - 2'-0" X 2'-0" COMPUTER ROOM RACKS WITH THICK PARTICLE BOARD AND STEEL LAMINATE FACE PANELS WITHIN A GRID SYSTEM OF STEEL STRINGERS SUPPORTED BY PEDIESTALS ASSEMBLED WITH ISOLATING GASKETS WITH LOW-STATIC CARPETING.	RAISED FLOOR AT ROOM T102 ENTRANCE. - CONCRETE SLAB (BY CONTRACT T6-3), ACID ETCH AND FINISH (BY CONTRACT T6-4). - RF SCREENING (SEE SPECIFICATION 13760). - RAISED FLOORING ASSEMBLY - 2'-0" X 2'-0" COMPUTER ROOM RACKS WITH THICK PARTICLE BOARD AND STEEL LAMINATE FACE PANELS WITHIN A GRID SYSTEM OF STEEL STRINGERS SUPPORTED BY PEDIESTALS ASSEMBLED WITH ISOLATING GASKETS WITH LOW-STATIC CARPETING.



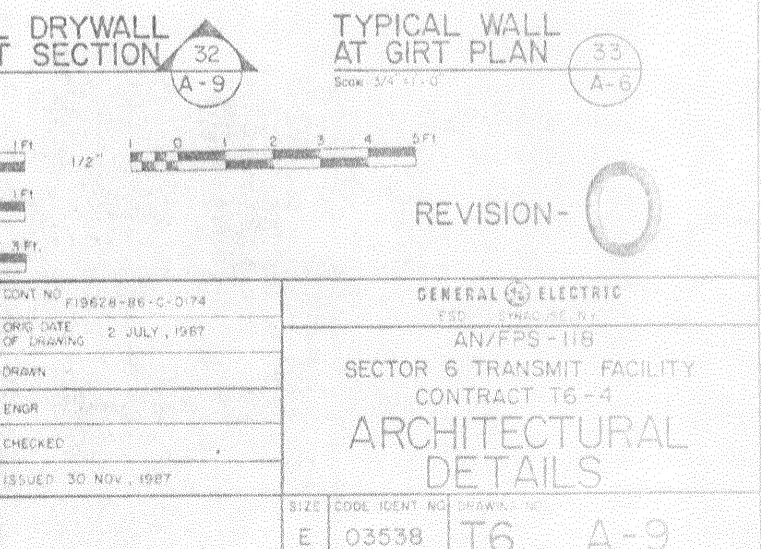
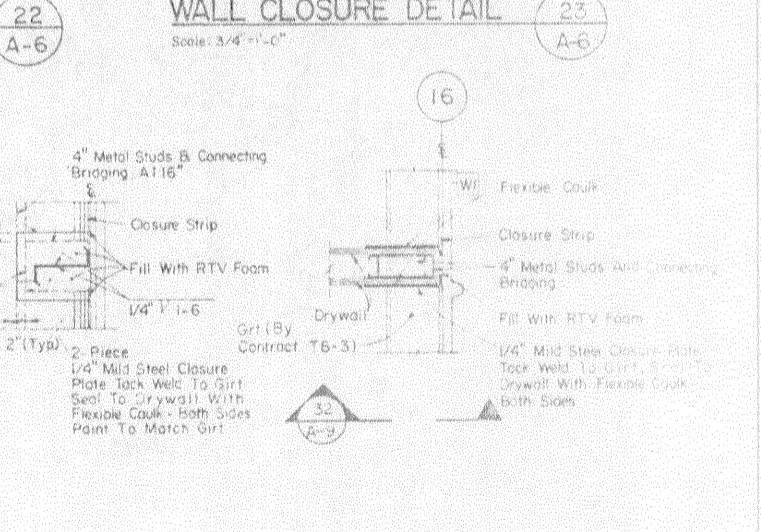
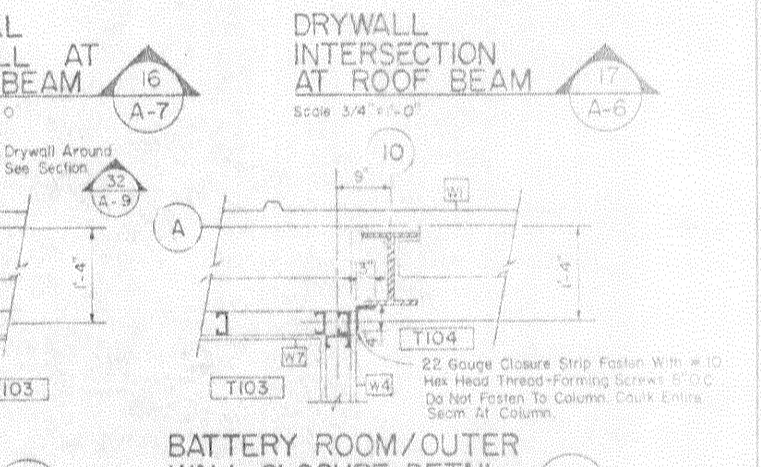
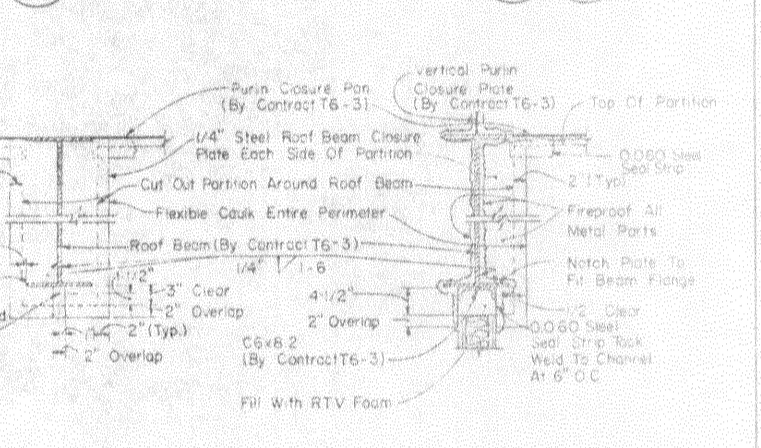
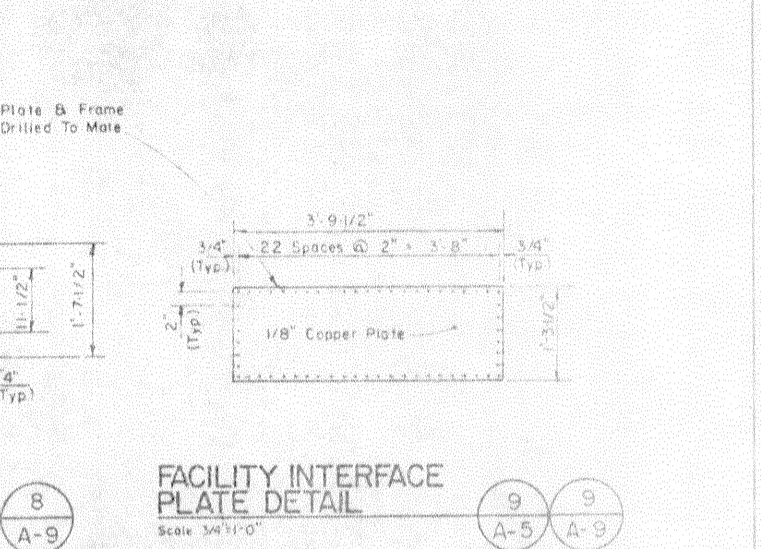
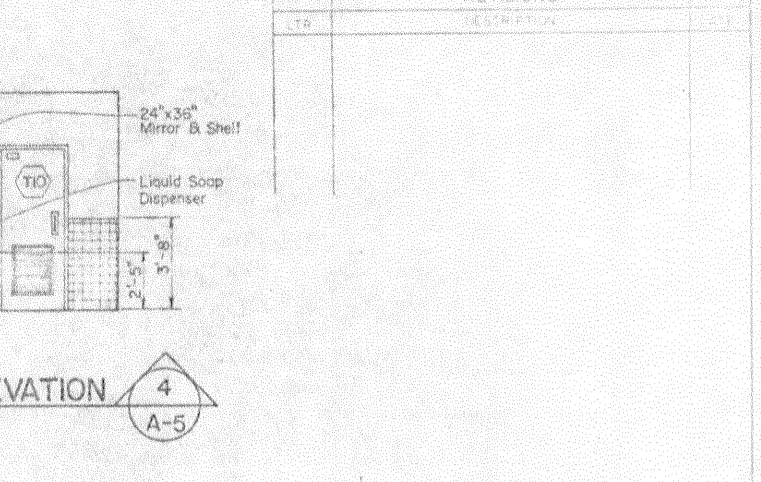
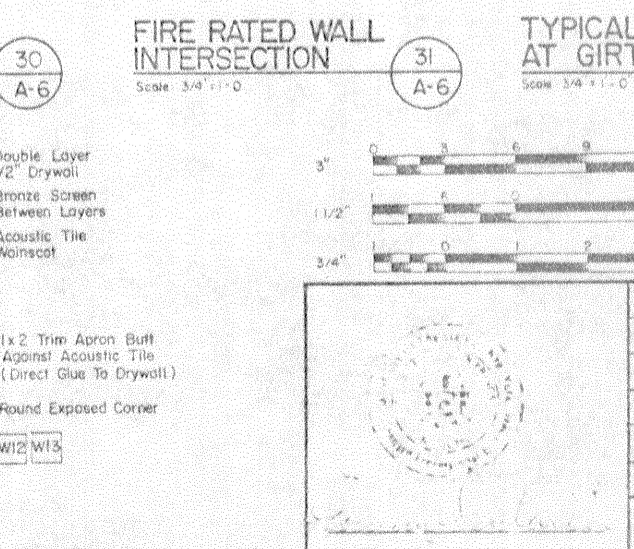
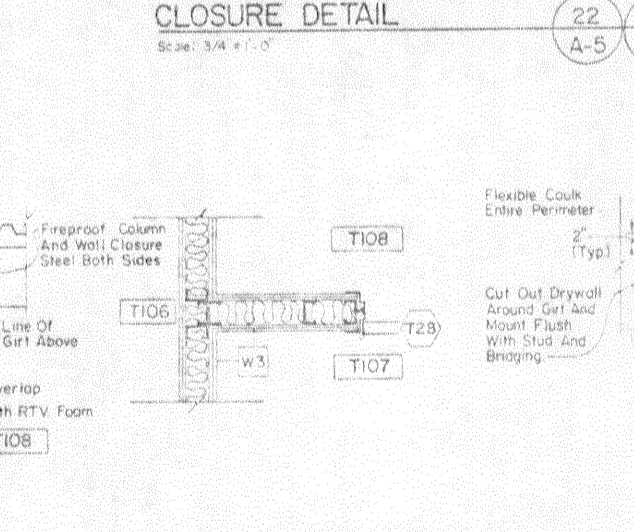
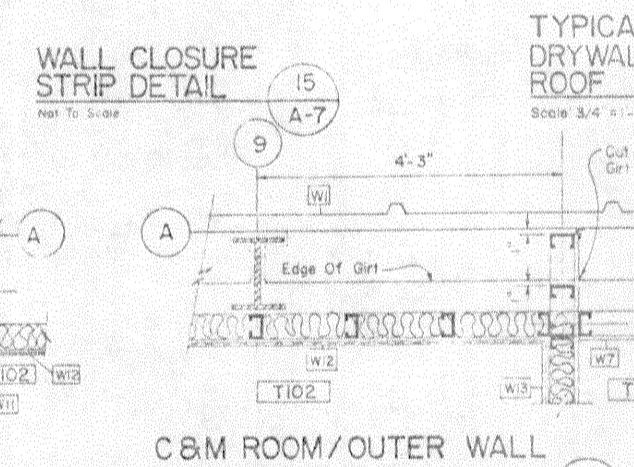
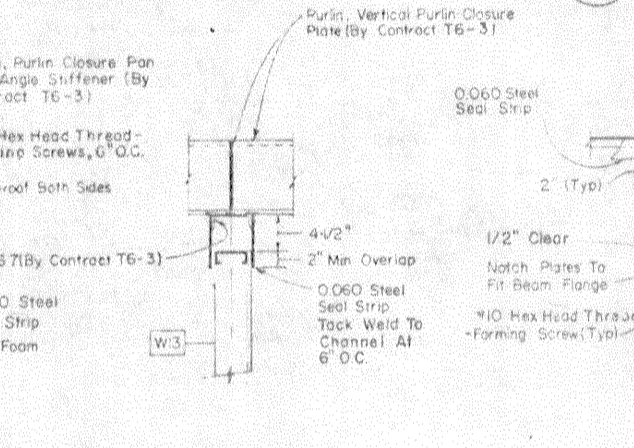
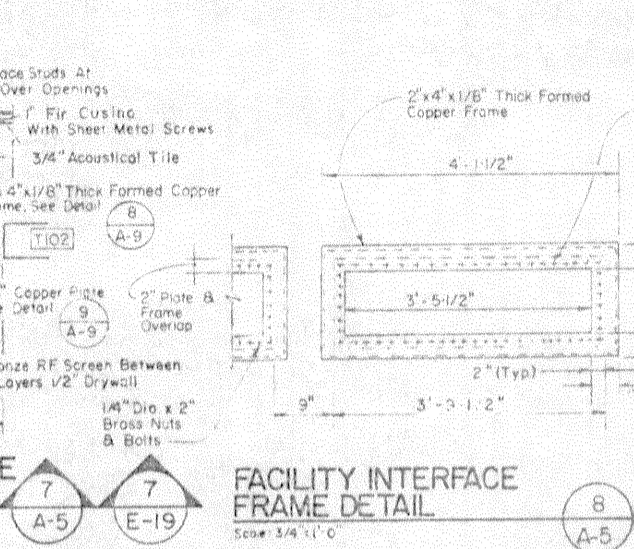
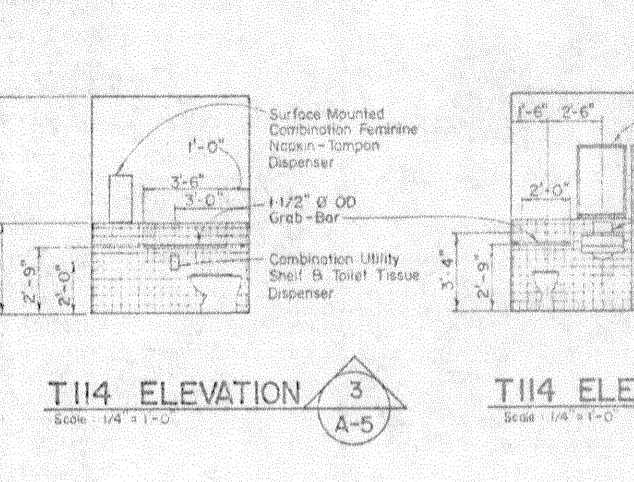
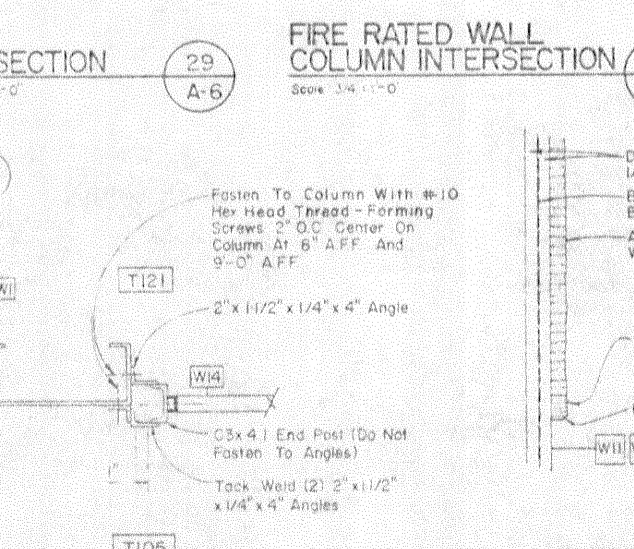
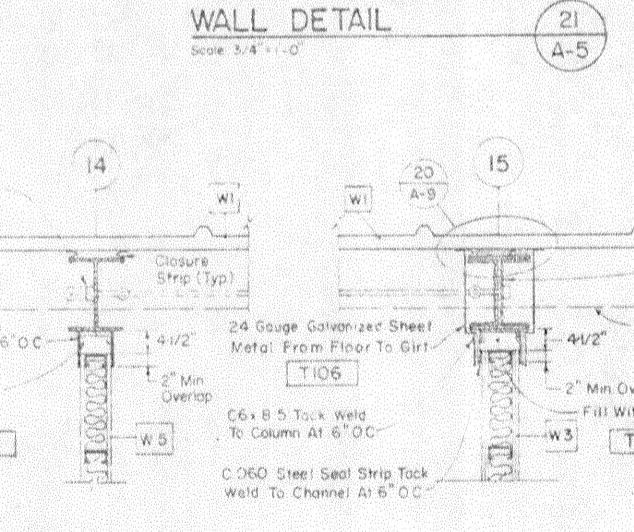
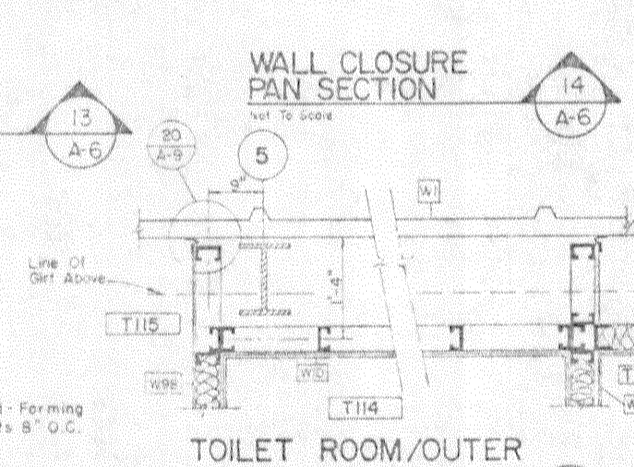
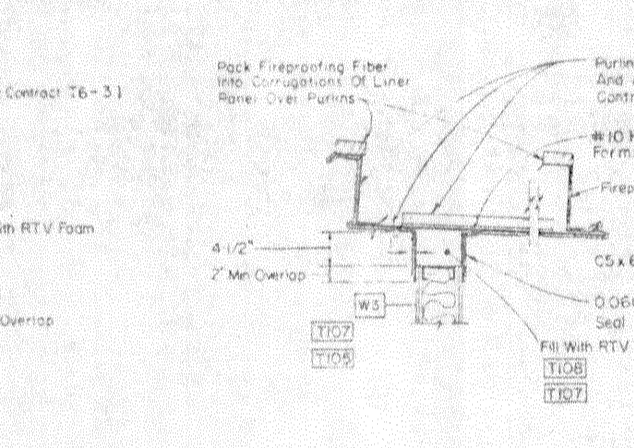
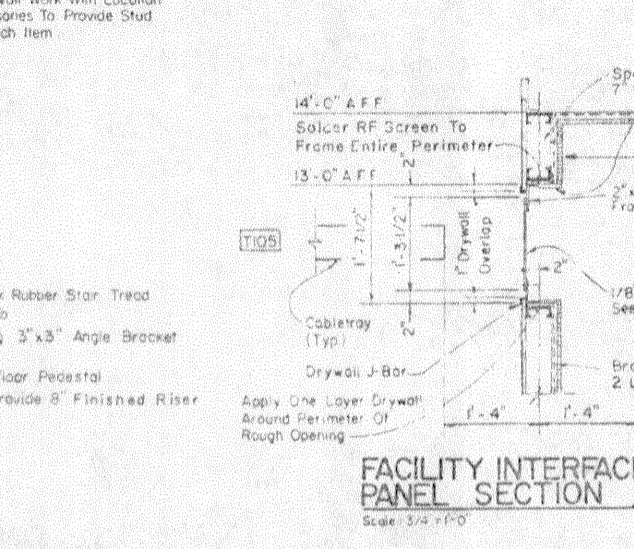
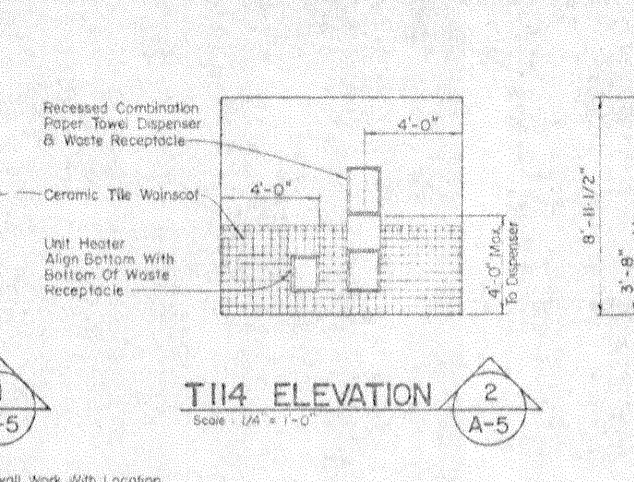
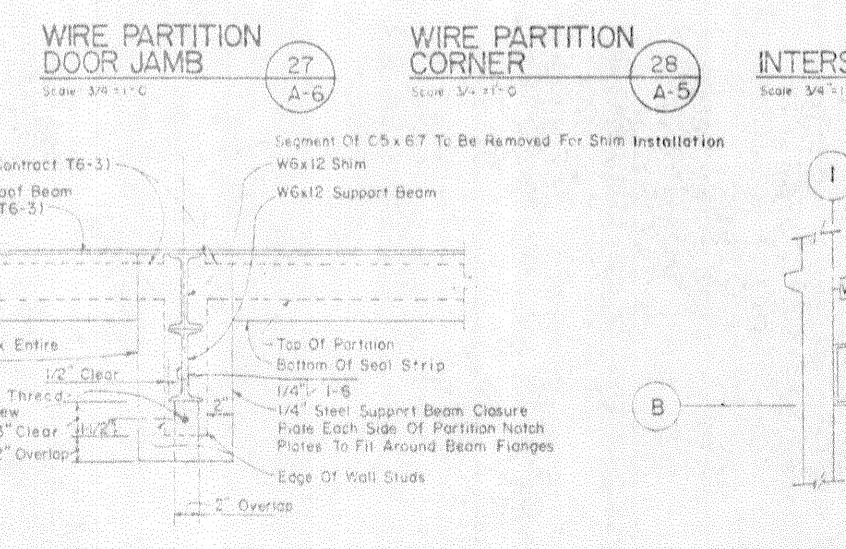
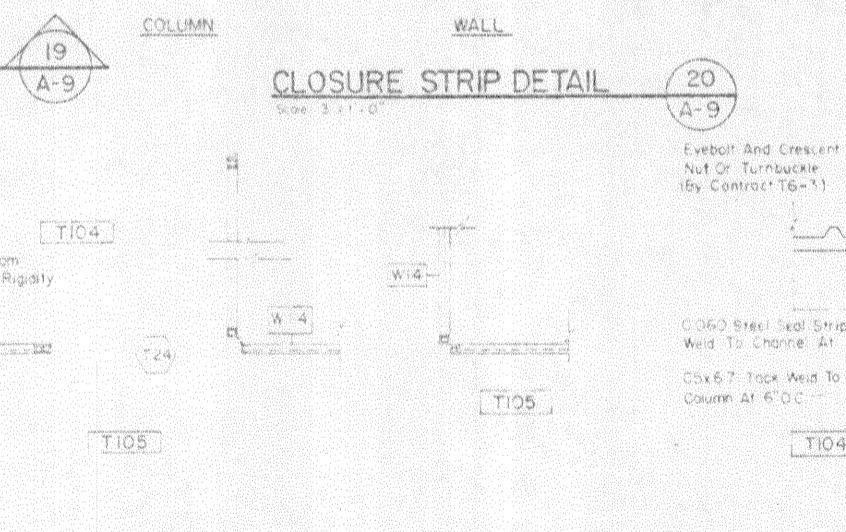
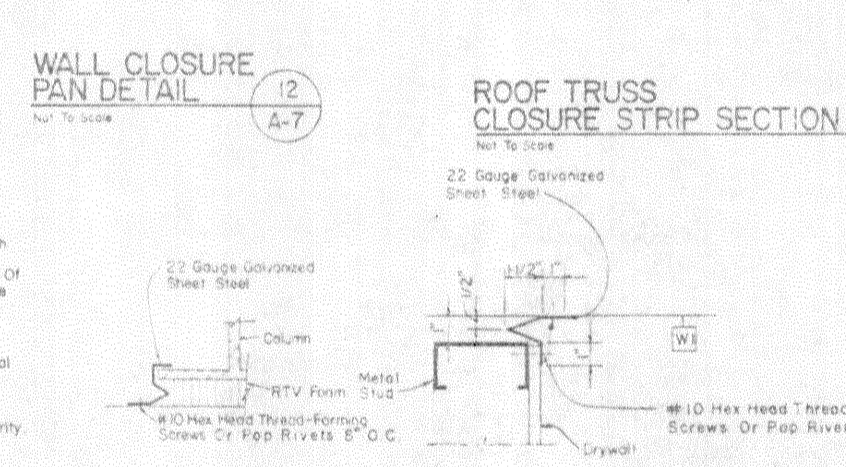
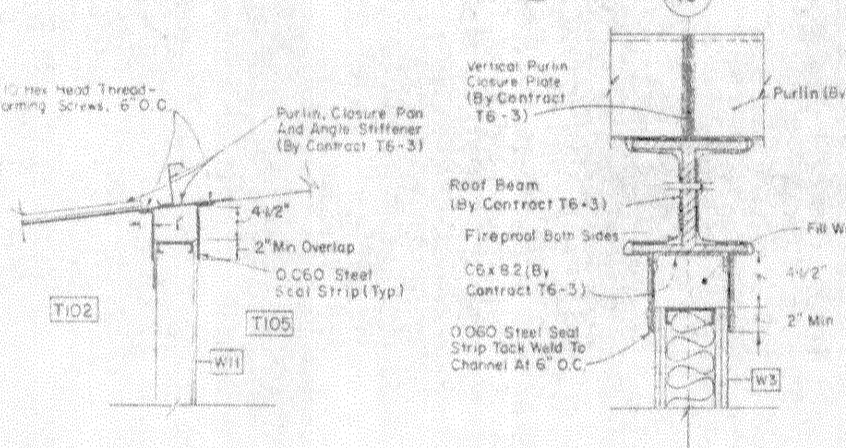
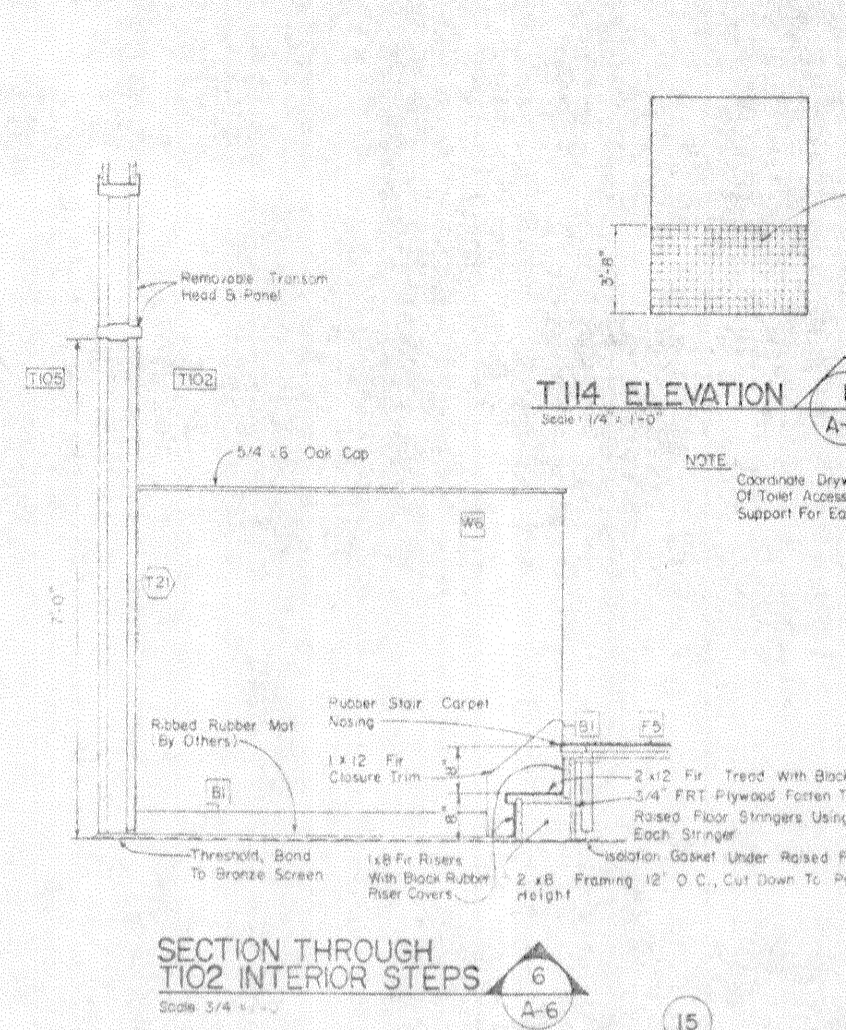
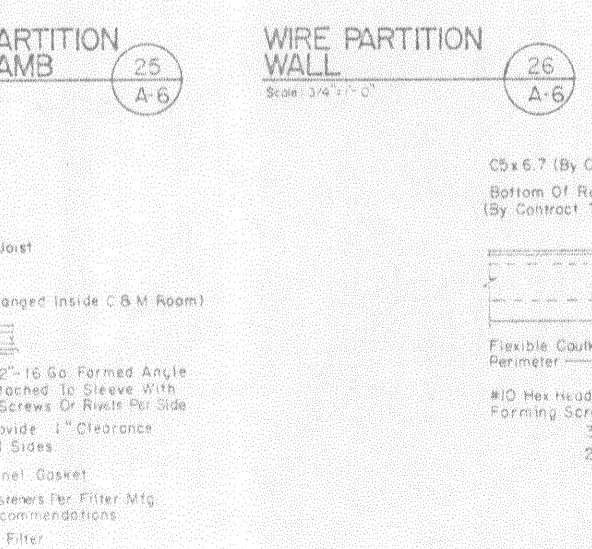
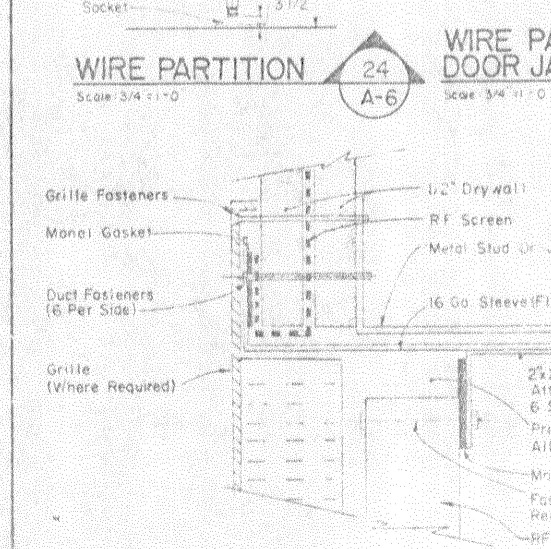
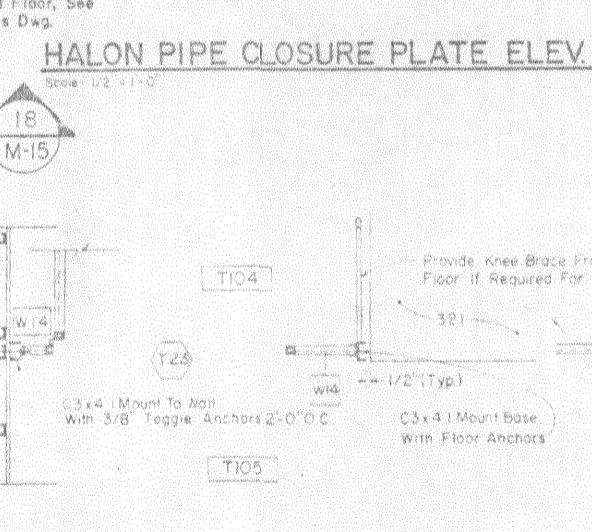
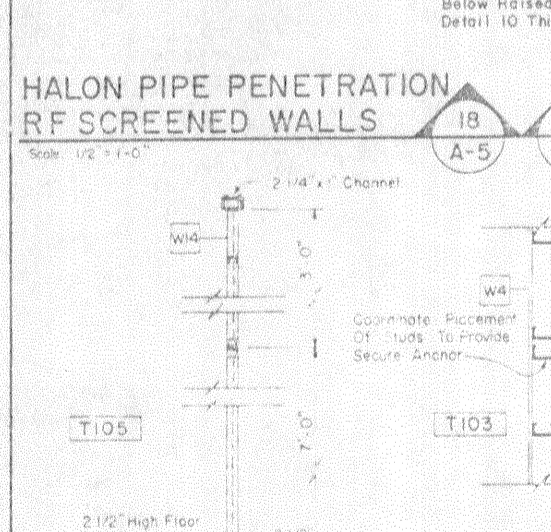
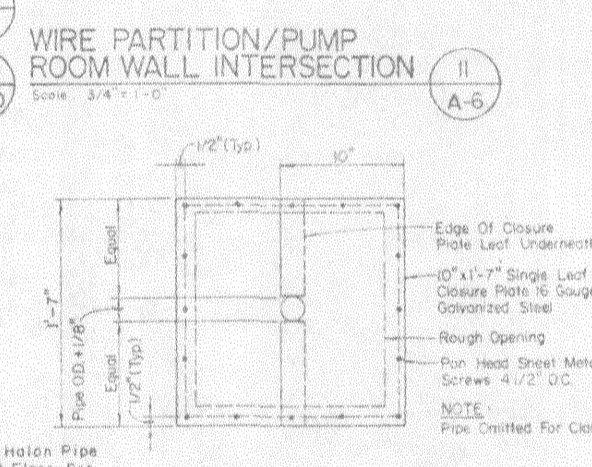
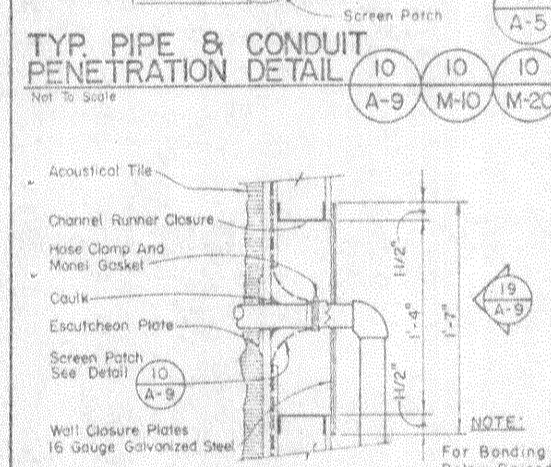
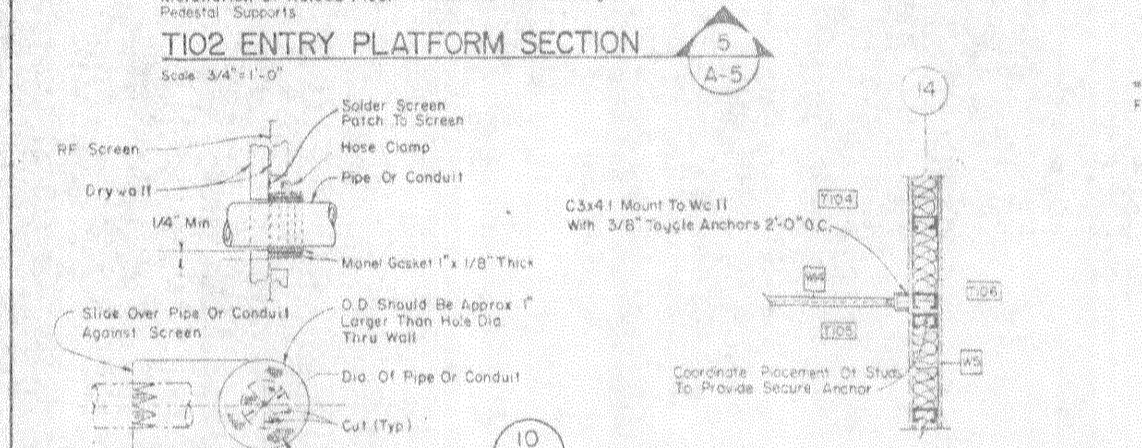
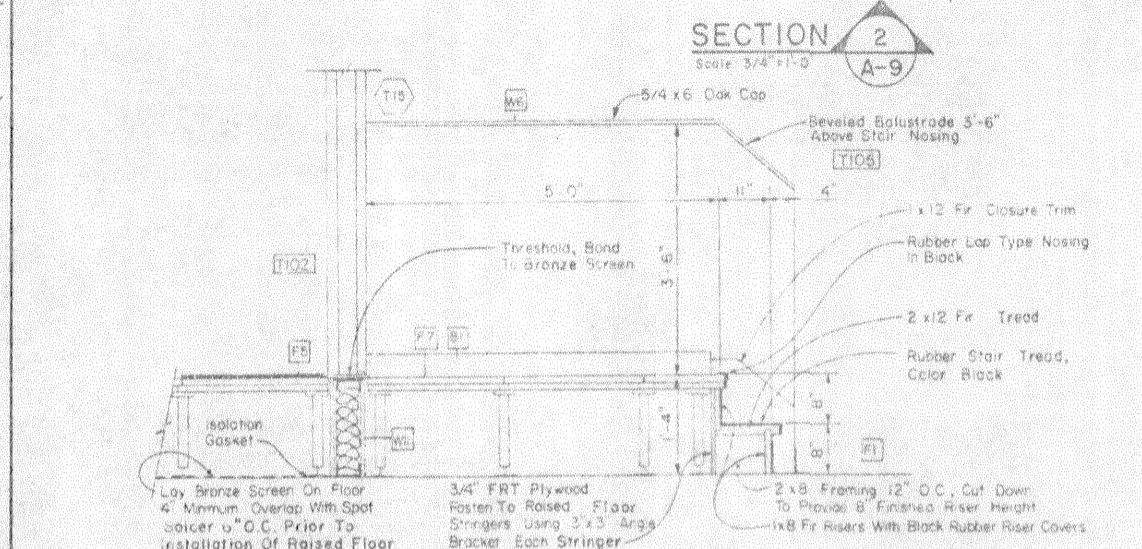
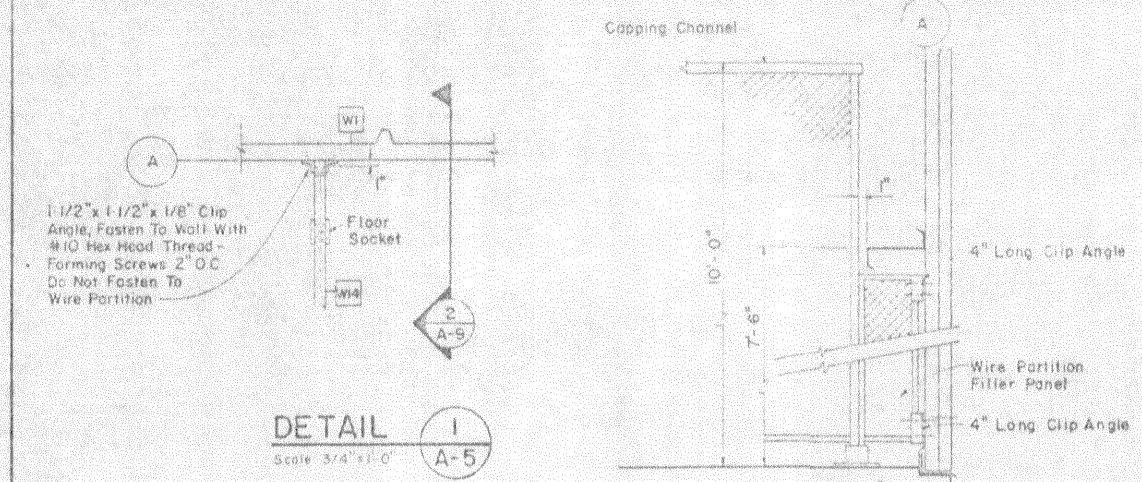
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DATE: 2 JULY 1987	SCALE: AS SHOWN	NO. 03538	T6
ISSUE: 30 NOV 1987	SCALE: AS SHOWN	NO. 03538	T6
DATE: NOV 30 1987	SCALE: AS SHOWN	NO. 03538	T6
DATE: NOV 30 1987	SCALE: AS SHOWN	NO. 03538	T6
DATE: NOV 30 1987	SCALE: AS SHOWN	NO. 03538	T6

## SCHEDULES & DETAILS

NO.	DESCRIPTION



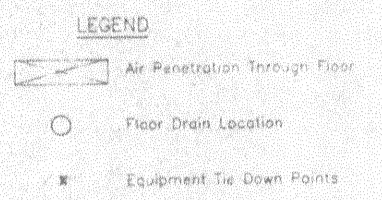
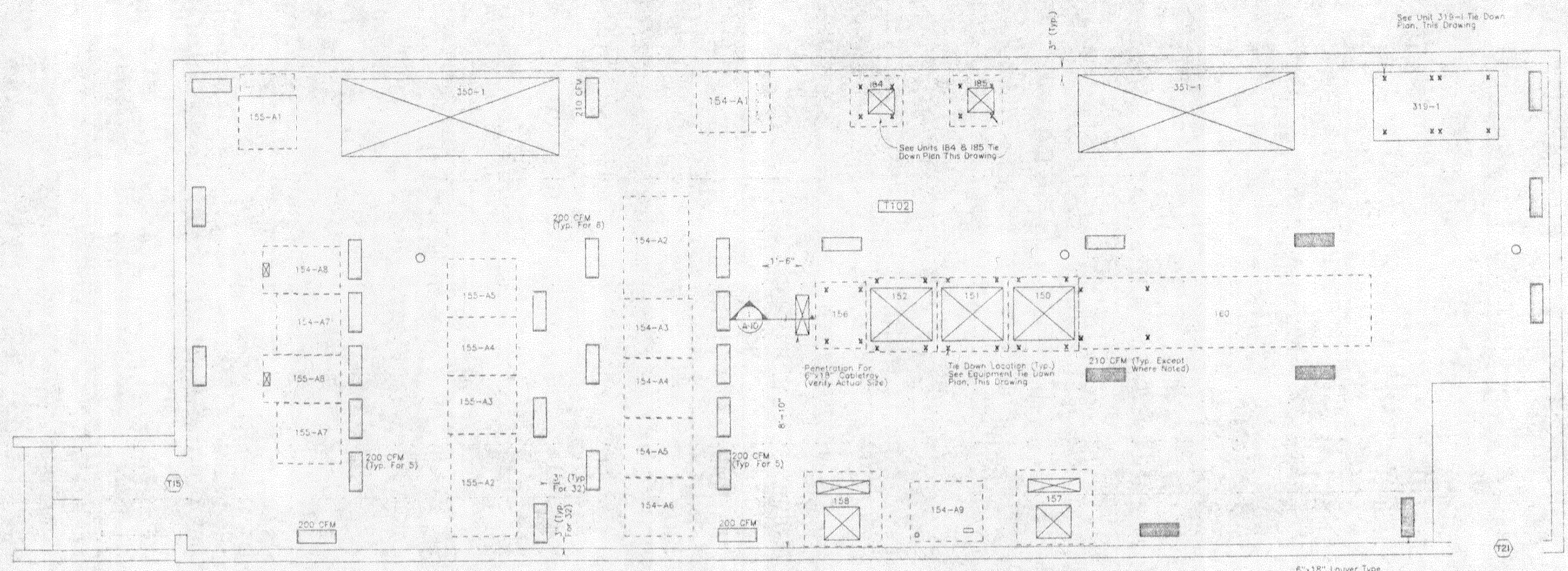
REVISIONS	
178	REVISION



<b>REVISION -</b> 	
SOFT NO. F19628-BE-C-074 ORIG. DATE: 2 JULY, 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV., 1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>ARCHITECTURAL DETAILS</b> E 03538 T6 A-9
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7204 SUB-DIVISION 2 OF THE NEW YORK STATE LOCALITY LAW	<b>Calcepinna &amp; Sons</b> CONSULTING ENGINEERS LIVERPOOL, NEW YORK 13088 DATE: NOV 30, 1987 SCALE: AS SHOWN PLOT NO.: 476-500



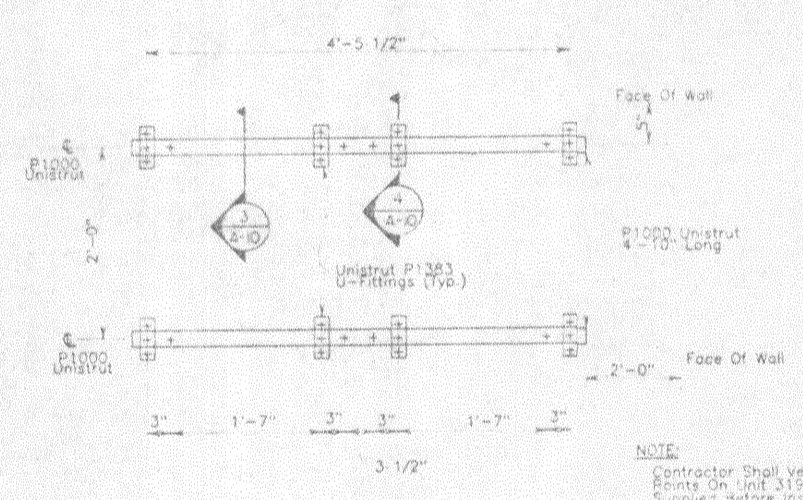
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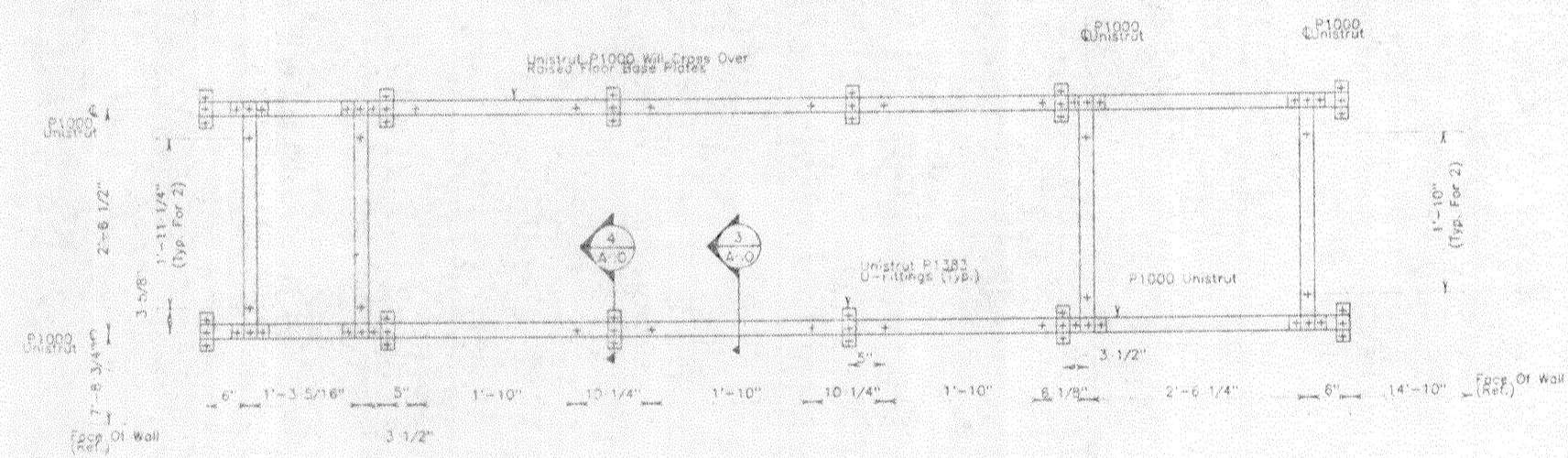
- NOTES:**
- THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL WORK DETAILED ON THIS DRAWING WITH THE FOLLOWING EXCEPTIONS:
    - 1.1 AIR PENETRATIONS THROUGH FLOOR ARE FOR REFERENCE ONLY. ALL PENETRATIONS EXCEPT FOR AIR CONDITIONER UNIT OPENINGS, FLOOR REGISTER OPENINGS AND CABLETRAY OPENINGS SHALL BE FIELD CUT BY THE OWNER. (VERIFY ACTUAL DIMENSIONS OF ITEMS BEFORE CUTTING).
    - 1.2 INSTALLATION OF RADAR EQUIPMENT (DASHED) SHALL BE PERFORMED BY OWNER.
  - THE CONTRACTOR SHALL PROVIDE EQUIPMENT HOLD DOWN CHANNELS AND HARDWARE AS SHOWN.
  - THE CONTRACTOR SHALL CUT FLOOR FOR STAND MOUNTED HVAC UNITS. UNITS SHALL BE ISOLATED FROM BALANCE OF FLOOR.
  - CONTRACTOR TO CUT FLOOR PANELS 3/8" CLEAR OF ACU AND INSTALL A 5/16" THICK BY 3/4" WIDE STRIP OF ADHESIVE APPLIED CLOSED CELL FOAM TO THE ACU STAND.
  - THE CONTRACTOR SHALL PROVIDE AND INSTALL UNISTRUT TO FLOOR SURFACE AND RETURN REMAINING NECESSARY HARDWARE TO OWNER FOR EQUIPMENT TIE DOWN.
  - FLOOR REGISTERS SHALL BE PROVIDED AND INSTALLED BY DIVISION 10. AIR BALANCING SHALL BE BY DIVISION 15.
  - MODEL NUMBERS OF EQUIPMENT SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNISTRUT COMPANY. EQUAL PRODUCTS OF POKERSTRET, KINDORF OR EQUAL WILL BE CONSIDERED FOR REVIEW.
  - WALL MOUNTED EQUIPMENT NOT SHOWN ON THIS PLAN. FOR LOCATIONS OF WALL MOUNTED EQUIPMENT SEE DRAWINGS A-4, A-5.

TOTAL AIR FLOW DIRECT TO EQUIPMENT	2,950
20% ALLOWANCE FOR LEAKAGE THROUGH CABLE OPENINGS	1,610
TOTAL REGISTER AIR FLOW	14 X 210 = 2,940
TOTAL AIR FLOW THIS ROOM	18 X 200 = 3,600

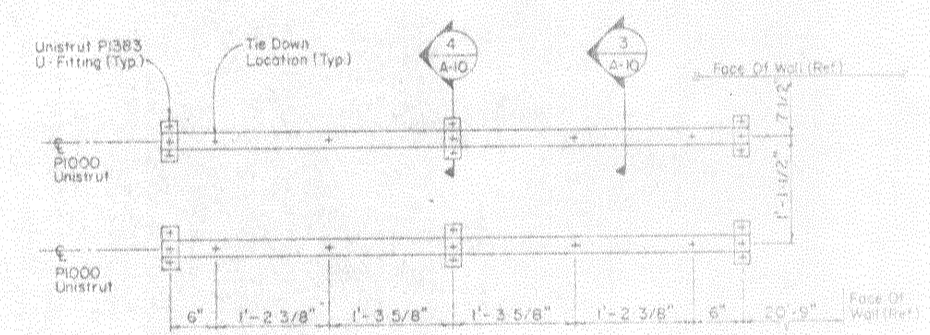
**CONTROL AND MONITOR ROOM PLAN**  
Scale: 1/2" = 1'-0"



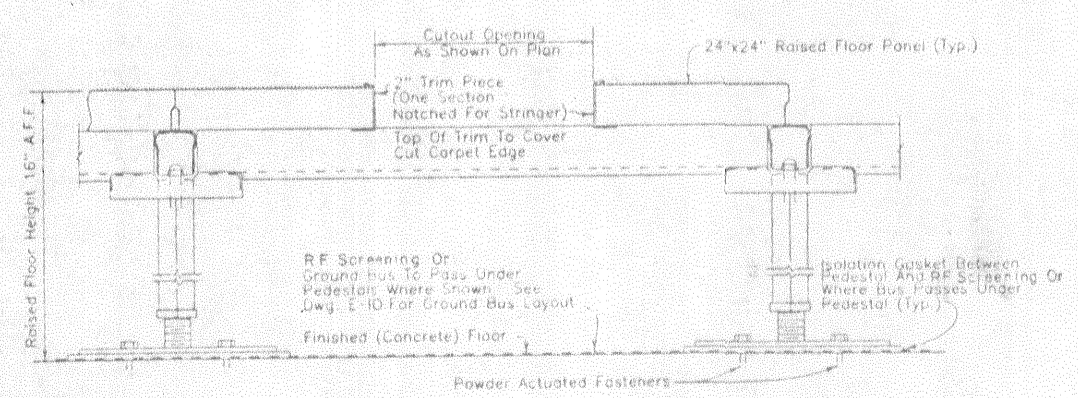
**UNIT 319-1 TIE DOWN PLAN**  
Scale: 1" = 1'-0"



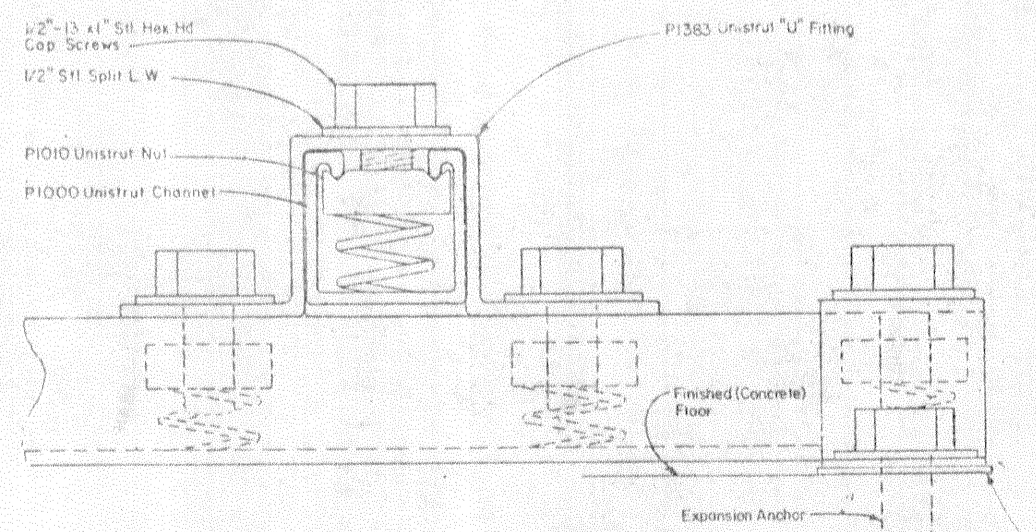
**EQUIPMENT TIE DOWN PLAN**  
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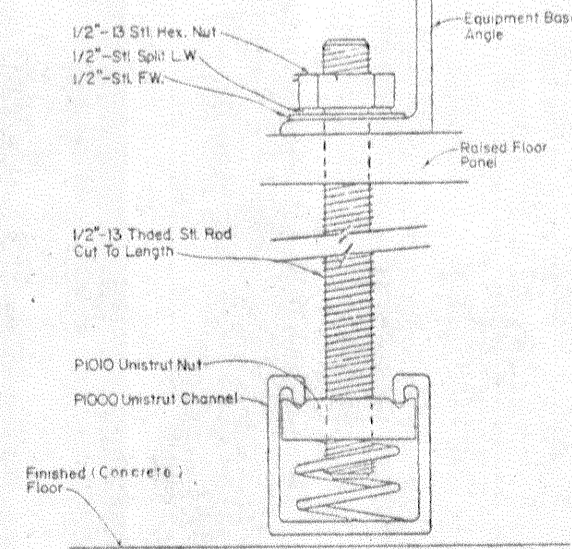
**UNITS 184 & 185 TIE DOWN PLAN**  
Scale: 1" = 1'-0"



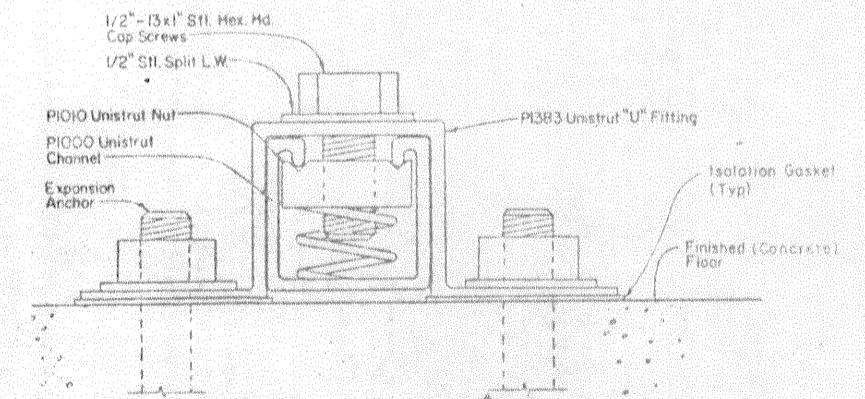
**RAISED FLOOR SUPPORT SECTION**  
Not To Scale



**ELEVATION**  
Not To Scale



**SECTION 3**  
Not To Scale



**SECTION 4**  
Not To Scale

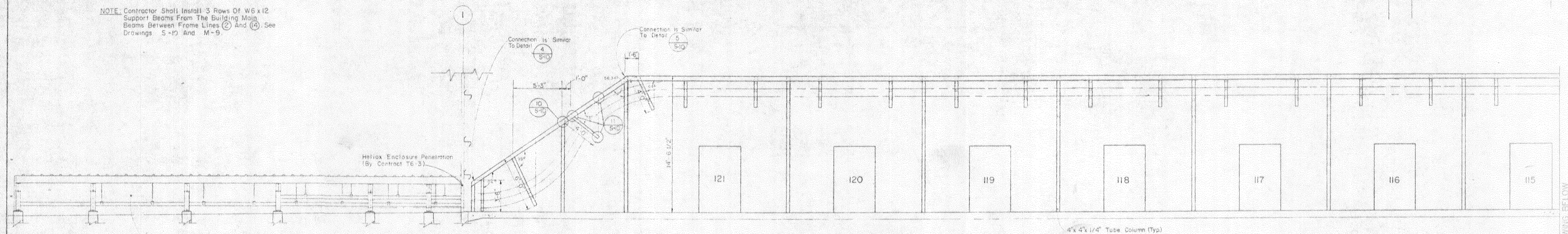
REVISION - 0

	DATE OF DRAWING: 2 JULY, 1987 DRAWN: CHECKED: ISSUED: 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>RAISED FLOOR PLAN &amp; DETAILS</b>
	E 03538 T6 A-10	DATE: NOV 1987 SCALE: AS SHOWN SHEET NO.: 13

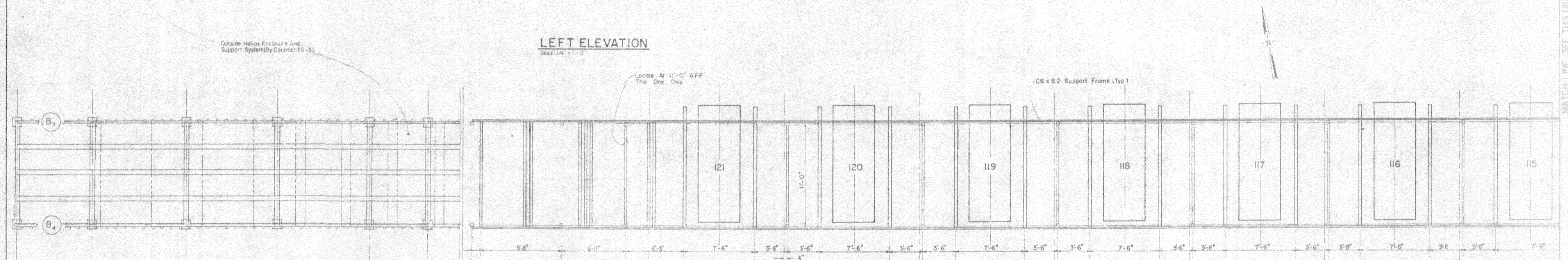


REVISIONS	
NO.	DESCRIPTION
1	ISSUED

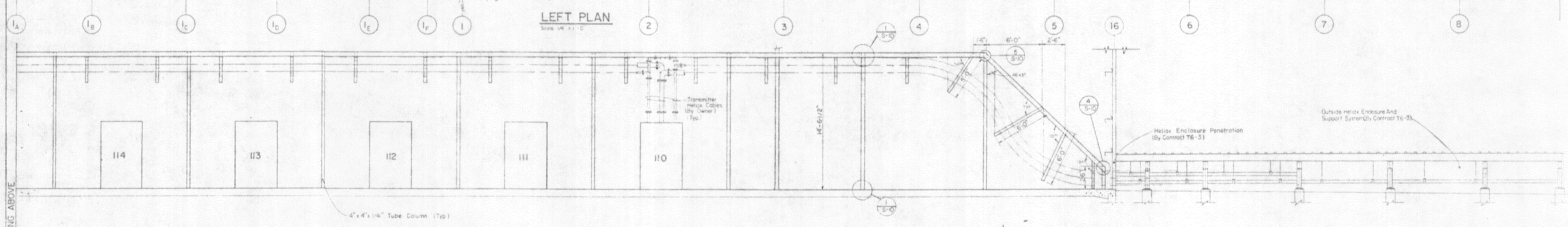
NOTE: Contractor Shall Install 3 Rows Of W6 x 12 Support Beams From The Building Main Beams Between Frame Lines 2 And 14. See Drawings S-10 And M-9



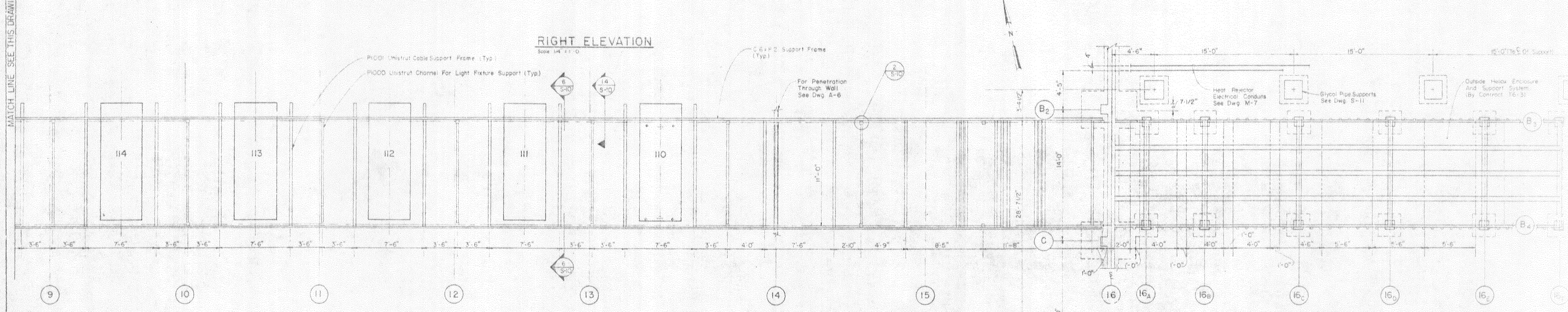
**LEFT ELEVATION**  
Scale 1/4" = 1'-0"



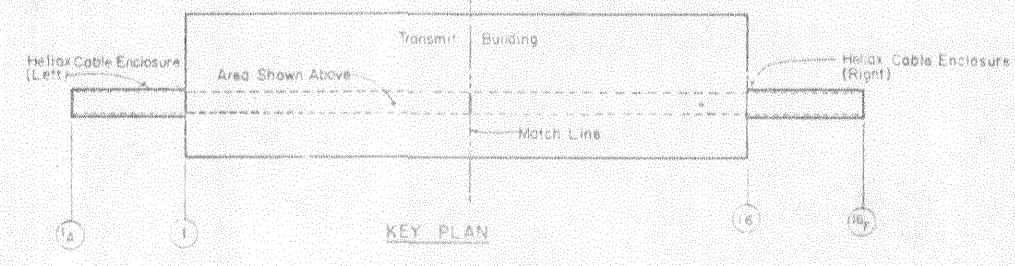
**LEFT PLAN**  
Scale 1/4" = 1'-0"



**RIGHT ELEVATION**  
Scale 1/4" = 1'-0"



**RIGHT PLAN**  
Scale 1/4" = 1'-0"



NOTE:  
1. MODEL NUMBERS OF CABLE SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNISTRUT COMPANY. EQUAL PRODUCTS OF POWERSTRUT, KINDORF OR EQUAL WILL BE CONSIDERED FOR REVIEW.



REVISION - 0

	DRAWN: <i>[Signature]</i> ENGR: <i>[Signature]</i> CHECKED: <i>[Signature]</i> ISSUED: 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-116 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>HELIX SUPPORT          PLANS &amp; ELEVATIONS</b>	DATE: NOV 30, 1987 SCALE: AS SHOWN FILE NO: 456789
	NO ALTERATION IS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7259 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW		SIZE: E CODE: 03538 IDENT: T6 NO: S-9

MATCH LINE SEE THIS DRAWING ABOVE

MATCH LINE SEE THIS DRAWING BELOW

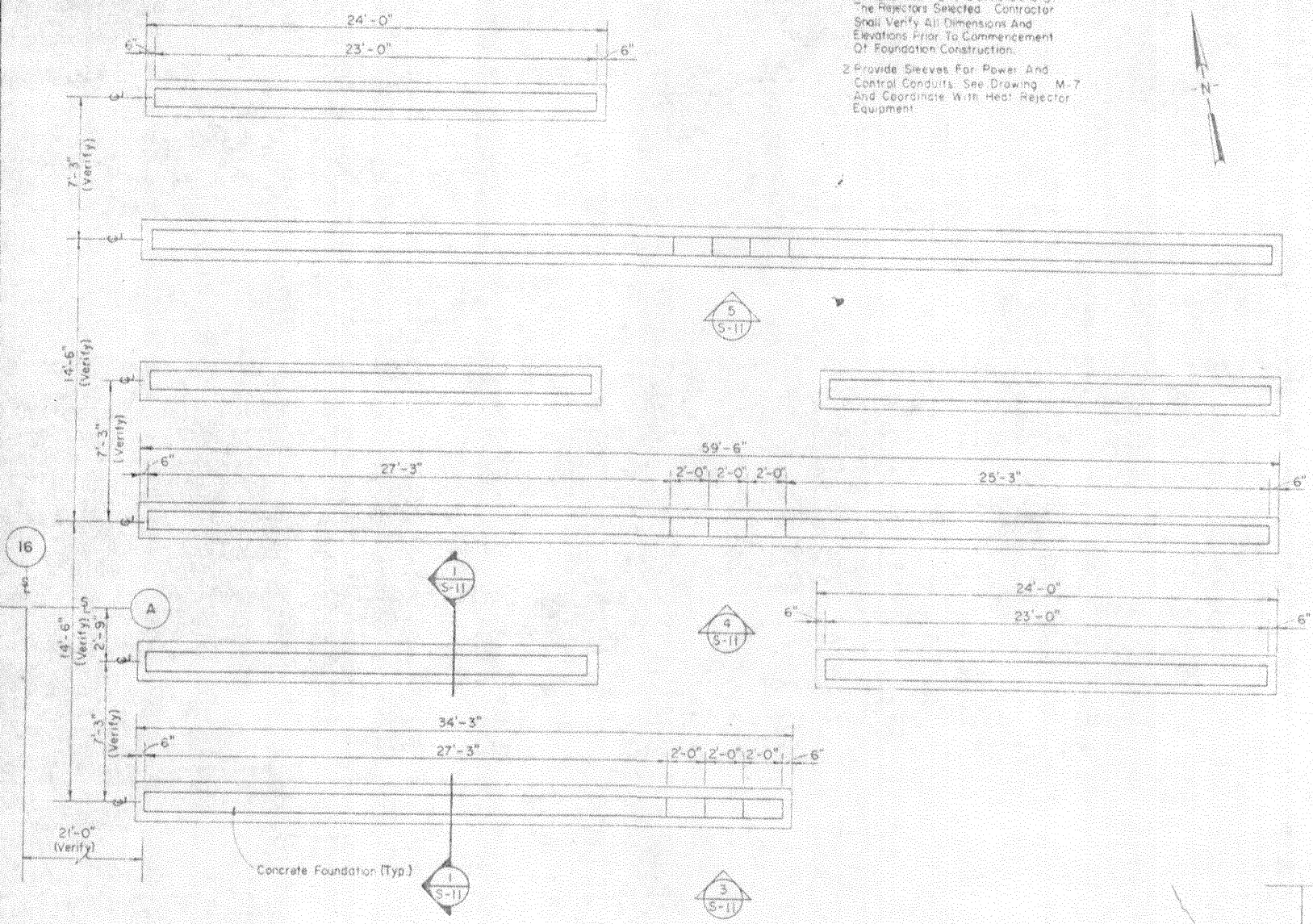




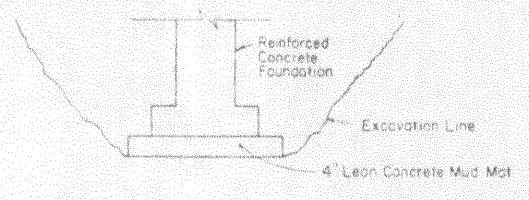


NO.	REVISIONS	DATE

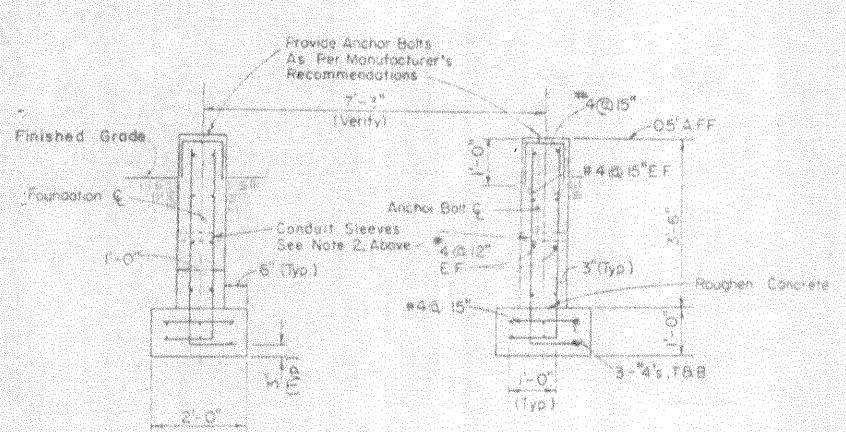
**NOTES:**  
 1 Heat Rejector Foundation Dimensions Are Dependent On The Dimensions Of The Rejector Selected. Contractor Shall Verify All Dimensions And Elevations Prior To Commencement Of Foundation Construction.  
 2 Provide Sleeves For Power And Control Conduits. See Drawing M-7 And Coordinate With Heat Rejector Equipment.



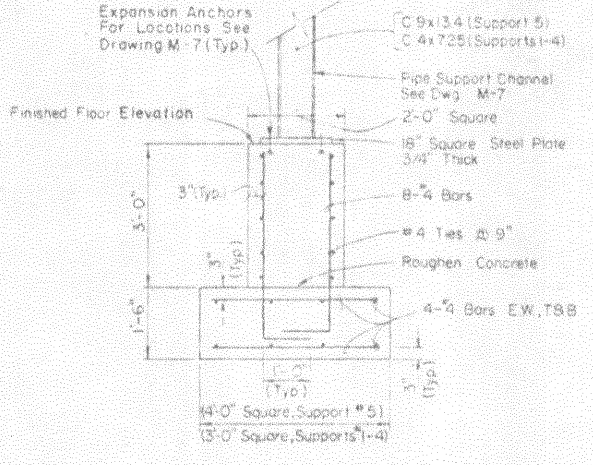
**FOUNDATION PLAN**  
**TRANSMITTER HEAT REJECTORS**  
 Scale 1/4" = 1'-0"



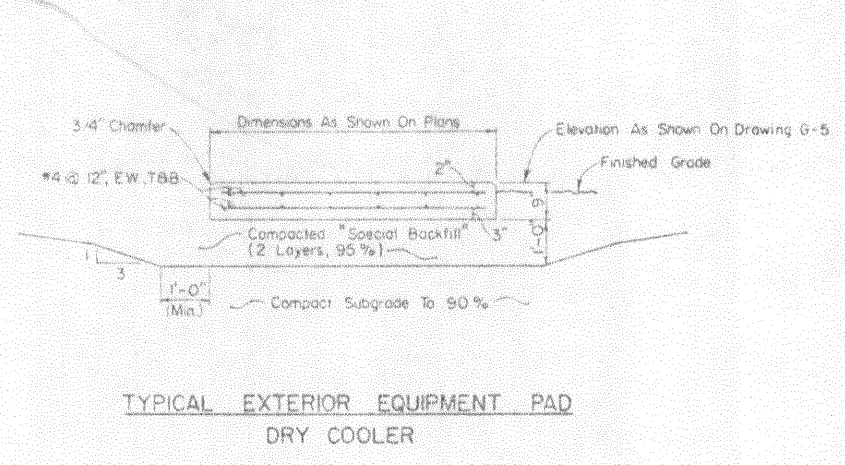
**TYPICAL MUD MAT DETAIL**  
 Scale 1/2" = 1'-0"



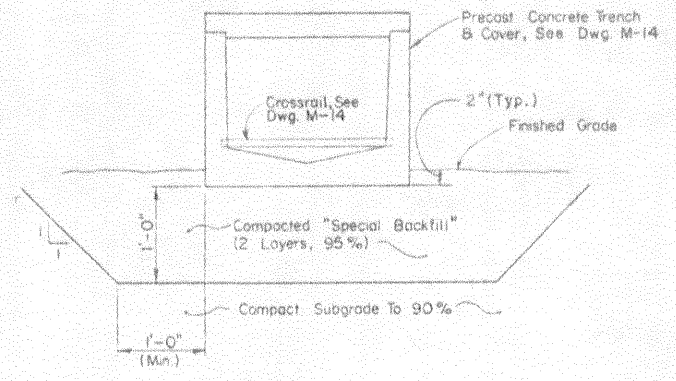
**SECTION 1**  
 Scale 1/2" = 1'-0"  
 S-11



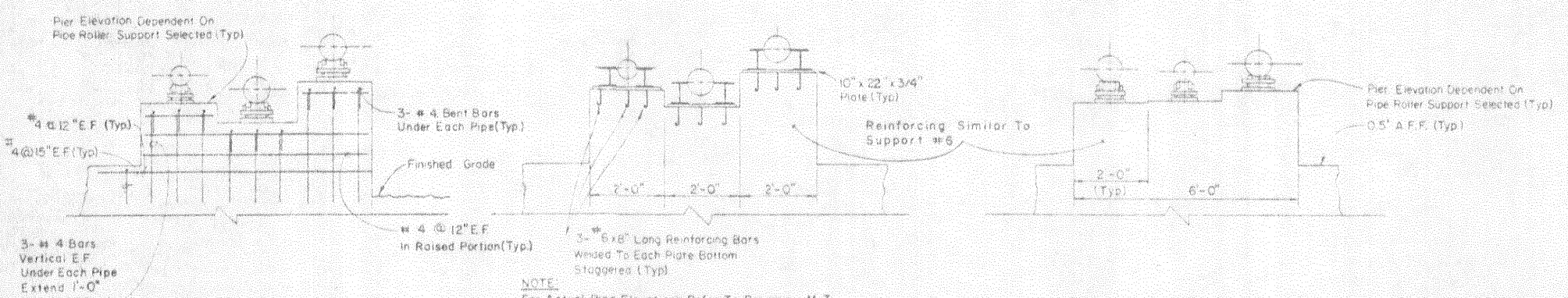
**SECTION 2**  
 Scale 1/2" = 1'-0"  
 M-7



**DETAIL 7**  
 Scale 1/2" = 1'-0"  
 M-14



**DETAIL 8**  
 Scale 1" = 1'-0"  
 M-14

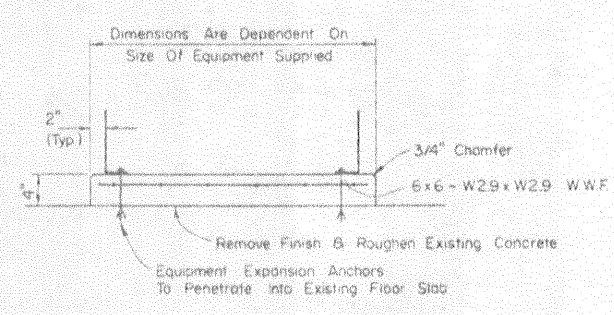


**PIPE SUPPORT (6) ELEVATION**  
 Scale 1/2" = 1'-0"  
 S-11

**PIPE ANCHOR ELEVATION**  
 Scale 1/2" = 1'-0"  
 S-11

**PIPE SUPPORT (7) ELEVATION**  
 Scale 1/2" = 1'-0"  
 S-11

**NOTES:**  
 1 Provide 1/4" x 1" Preformed Or Sawcut Joints Coincident With Floor Slab Joints Under Housekeeping Pad And Fill With 2 Component Polysulfide Based Joint Sealant.  
 2 Coordinate Location Of Pads With Electrical Work.



**TYPICAL HOUSEKEEPING PAD**  
 Scale 1" = 1'-0"

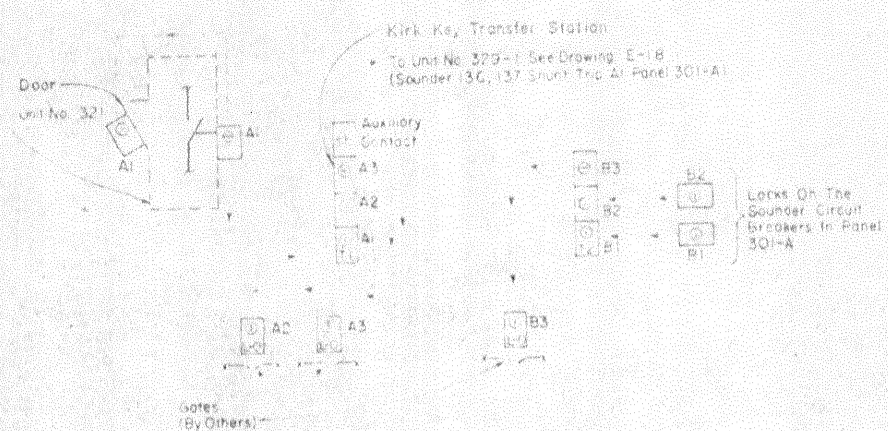
**DETAIL 9**  
 Scale 1" = 1'-0"  
 A-6 E-12

REVISION - 0

	CONT. NO. 19828-BE-C-0174 DWG. DATE 2 JULY, 1987 DRAWN ENGR CHECKED ISSUED 30 NOV, 1987	<b>GENERAL ELECTRIC</b> AN/FPS-11B SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>EQUIPMENT PADS</b>
	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 S-11	DATE NOV 30, 1987 SCALE AS SHOWN FILE NO. 458205

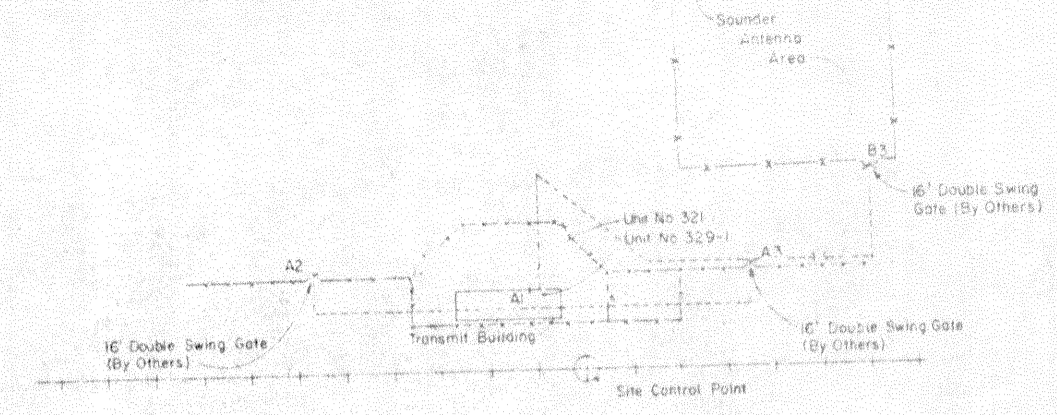
NO ALTERATION PERMITTED HEREIN EXCEPT AS PROVIDED UNDER SECTION 2099 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.



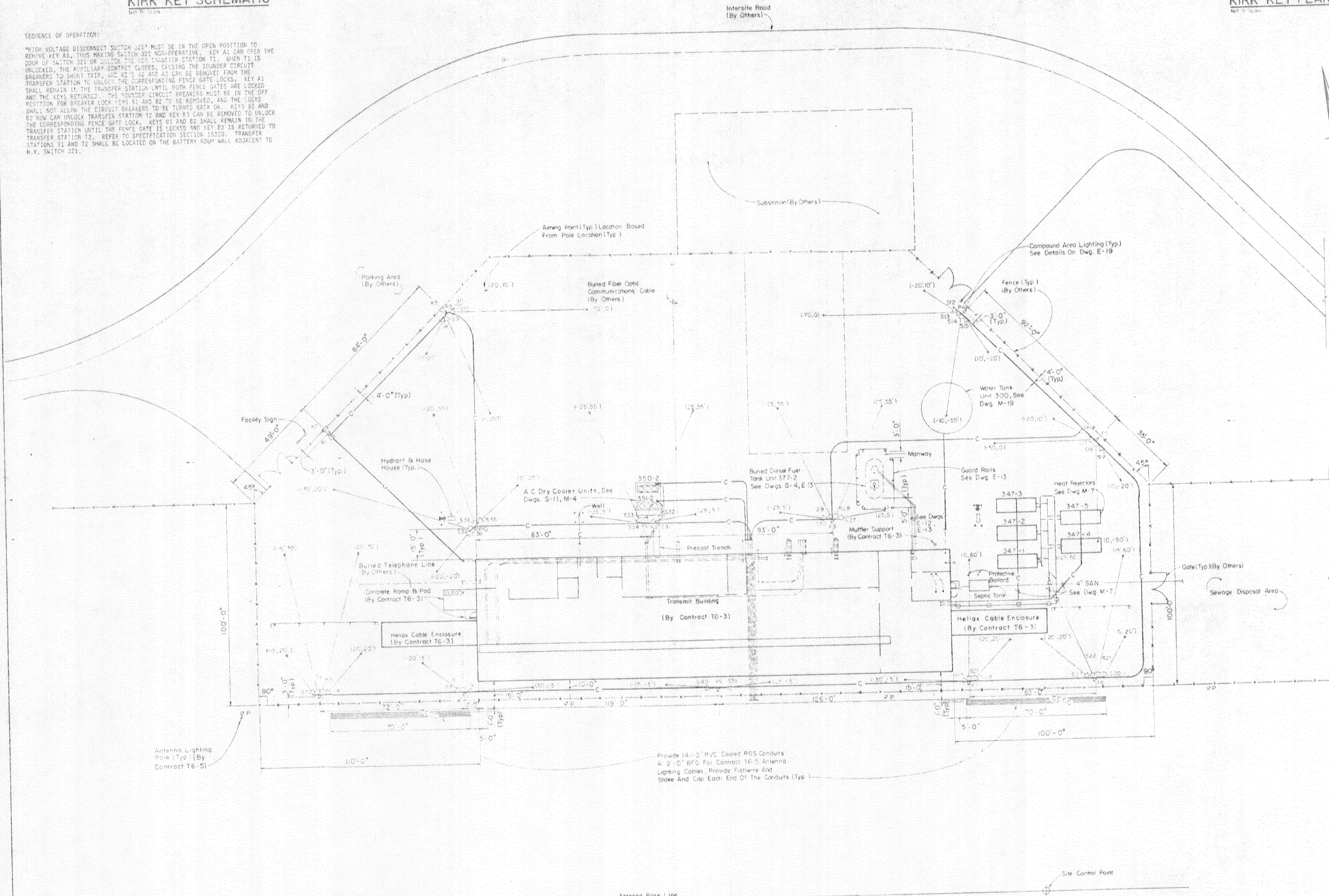


**KIRK KEY SCHEMATIC**  
1/16" = 1'-0"

**SEQUENCE OF OPERATION:**  
 \*HIGH VOLTAGE DISCONNECT SWITCH 321\* MUST BE IN THE OPEN POSITION TO REMOVE KEY A1, THUS MAKING SWITCH 302 NON-OPERATIVE. KEY A1 CAN OPEN THE DOOR OF SWITCH 302 OR SWITCH 303. TRANSFER STATION T1, WHEN T1 IS UNLOCKED, THE AUXILIARY CONTACT CLOSURES, CAUSING THE SOUNDER CIRCUIT BREAKERS TO SHUNT TRIP, AND KEYS B1 AND B2 CAN BE REMOVED FROM THE TRANSFER STATION TO UNLOCK THE CORRESPONDING FENCE GATE LOCKS. KEY A1 SHALL REMAIN IN THE TRANSFER STATION UNTIL BOTH FENCE GATES ARE LOCKED AND THE KEYS RETURNED. THE SOUNDER CIRCUIT BREAKERS MUST BE IN THE OFF POSITION FOR BREAKER LOCK KEYS B1 AND B2 TO BE REMOVED, AND THE KEYS SHALL NOT ALLOW THE CIRCUIT BREAKERS TO BE TURNED BACK ON. KEYS B1 AND B2 NOW CAN UNLOCK TRANSFER STATION T2 AND KEY B3 CAN BE REMOVED TO UNLOCK THE CORRESPONDING FENCE GATE LOCK. KEYS B1 AND B2 SHALL REMAIN IN THE TRANSFER STATION UNTIL THE FENCE GATE IS LOCKED AND KEY B3 IS RETURNED TO STATIONS T1 AND T2. REFER TO SPECIFICATION SECTION 16323. TRANSFER STATION T2 AND T2 SHALL BE LOCATED ON THE BATTERY ROOM WALL ADJACENT TO H.V. SWITCH 321.

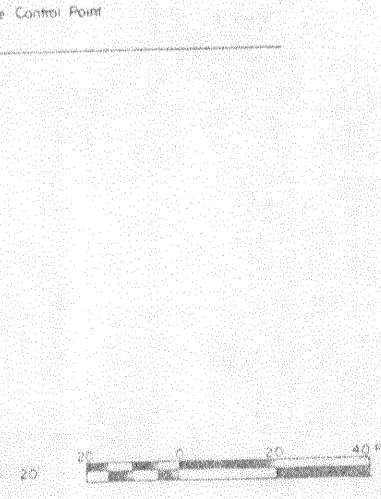


**KIRK KEY PLAN**  
1/16" = 1'-0"



**SITE PLAN**  
1/16" = 1'-0"

- GENERAL ELECTRICAL NOTES:**
1. THE CONTRACTOR INTERFACE AT THE SUPPLY SYSTEM IS AT THE LUGS OF THE HIGH-VOLTAGE MAIN SWITCH 321 FOR THE 12,470 VOLT SERVICE AND AT THE CABLE LIMITERS OF THE 208/120 VOLT SWITCHBOARD 301-A AND 480/277 VOLT SWITCHBOARD 308-B.
  2. ELECTRICAL SYMBOLS ARE DETAILED ON DRAWING G-3.
  3. ALL ELECTRICAL WORK SHALL CONFORM TO ALL LOCAL AND STATE CODES, NFPA STANDARDS AND NATIONAL ELECTRICAL CODE, (WHERE APPLICABLE).
  4. ELECTRICAL CHARACTERISTICS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURERS.
  5. ITEMS OF SPECIFIC MANUFACTURERS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS' PRINTED INSTRUCTIONS AND/OR MANUFACTURERS' REPRESENTATIVES' DIRECTIONS.
  6. (DELETED).
  7. THE CONTRACTOR SHALL GROUND ALL SERVICE ENTRANCES USING CONDUCTORS PROVIDED BY CONTRACT T6-3.
  8. ALL CONDUITS SHALL BE EMT UNLESS OTHERWISE SHOWN OR NOTED. 3/4" MINIMUM FOR ALL CONDUIT UNLESS OTHERWISE SHOWN.
  9. MOUNT RECEPTACLES AT HEIGHTS INDICATED ON DRAWING E-9 OR AS NOTED.
  10. PROVIDE INTERNAL TELEPHONE SYSTEM CONDUITS AND FISH WIRE AS SHOWN ON DRAWING E-10.
  11. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
  12. THE CONTRACTOR SHALL MAKE ALL ELECTRICAL CONNECTIONS TO EQUIPMENT AS SHOWN OR SPECIFIED.
  13. ALL EQUIPMENT SHALL BE LOCATED APPROXIMATELY AS SHOWN.
  14. ALL CONDUITS BURIED IN GROUND SHALL BE 1/2" PVC COATED RIGID GALVANIZED STEEL. SEE DWG. E-19 FOR TRENCH DETAIL.
  15. HIGH EFFICIENCY ELECTRIC MOTORS SHALL BE USED FOR ALL SIZES AND TYPES, WHICH ARE COMMERCIALY AVAILABLE. SEE SPECIFICATION 16161.
  16. EMERGENCY SHUTDOWN - HALON PROTECTED AREA. SEE CONTROL DIAGRAM ON DRAWING E-18.
  17. EMERGENCY SHUTDOWN - TRANSMITTER SYSTEM. SEE CONTROL DIAGRAM ON DRAWING E-19.
  18. SEE DRAWING E-10 FOR CEM ROOM GROUNDING & BONDING.
  19. FOR CONDUIT PENETRATIONS INTO SCREENED ROOM, SEE DETAILS ON DRAWING E-9.
  20. ALL ABOVE GRADE EXTERIOR CONDUITS SHALL HAVE A THINUS AND BETTS EP-16 IMPREGATED BATH OF COLLOIDAL COPPER WITH RUST AND CORROSION INHIBITORS APPLIED TO ALL COUPLINGS AND CONNECTION POINTS.
  21. THE CONTRACTOR SHALL PROVIDE RACEWAYS, WIRING AND CONNECTIONS FOR ALL INTERLOCKS AND CONTROL CONDUITS. SHOW CONDUITS ON SHOP DRAWING CONDUIT LAYOUT.
  22. UNDER SLAB CONDUITS FROM 6" A.F.F., TO 7'-0" OUTSIDE THE STRUCTURAL LINE, ARE BY CONTRACT T6-3.
  23. ALL DIMENSIONS ORIGINATING TO AND FROM THE BUILDING ARE REFERENCE TO THE BUILDING STRUCTURAL LINE WHICH IS THE INSIDE FACE OF THE BUILDING SIDING.
  24. NO CONDUITS SHALL BE INSTALLED IN THE ACCESSIBLE SPACE BETWEEN THE CONTROL & MONITOR ROOM CEILING AND THE ROOF.



REVISION - 0

	PROJECT NO. 1174 DATE 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV 1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>ELECTRICAL SITE PLAN</b>
	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 E-2	DATE NOV 30 1987 SCALE AS SHOWN FILE NO. 658025

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 1709 SUB DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

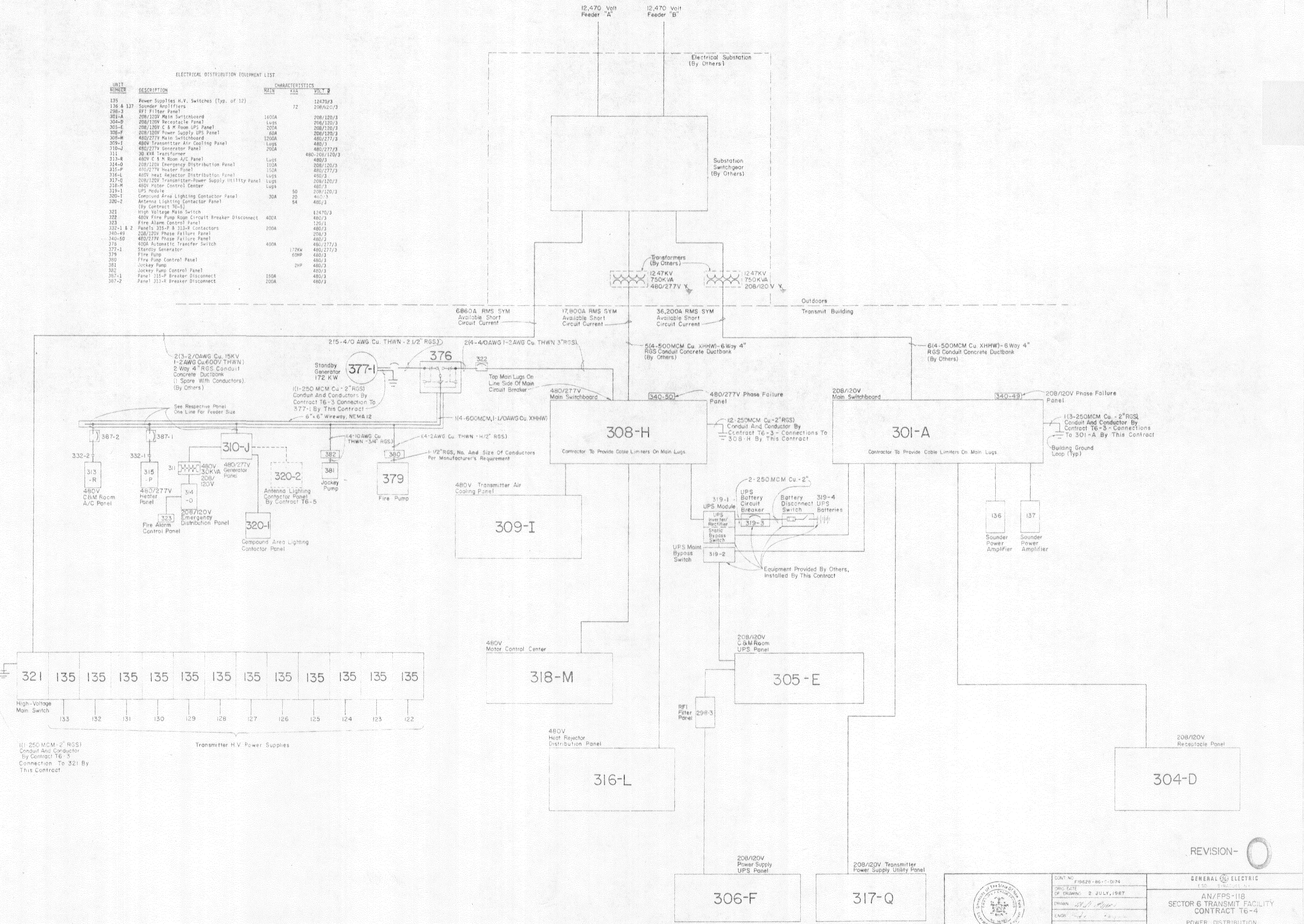
**Calceonnes & Sons**  
 CONSULTING ENGINEERS  
 17



NO.	REVISIONS

ELECTRICAL DISTRIBUTION EQUIPMENT LIST

UNIT NUMBER	DESCRIPTION	RATN	KVA	VOLTS
135	Power Supplies H.V. Switches (Typ. of 12)	72	12470/3	208/120/3
136 & 137	Sounder Amplifiers			
208-3	RFI Filter Panel			
301-A	208/120V Main Switchboard	1600A	208/120/3	
304-D	208/120V Receptacle Panel	Lugs	208/120/3	
305-E	208/120V C & M Room UPS Panel	200A	208/120/3	
306-F	208/120V Power Supply UPS Panel	60A	208/120/3	
308-H	480/277V Main Switchboard	1200A	480/277/3	
309-I	480V Transmitter Air Cooling Panel	Lugs	480/3	
310-J	480/277V Generator Panel	200A	480/277/3	
311	30 KVA Transformer		480-208/120/3	
311-R	480V C & M Room A/C Panel	Lugs	480/3	
314-O	208/120V Emergency Distribution Panel	100A	208/120/3	
315-P	480/277V Heater Panel	150A	480/277/3	
316-L	480V Heat Rejector Distribution Panel	Lugs	480/3	
317-Q	208/120V Transmitter-Power Supply Utility Panel	Lugs	208/120/3	
318-M	480V Motor Control Center	Lugs	480/3	
319-1	UPS Module	50	208/120/3	
320-1	Compound Area Lighting Contactor Panel	30A	20	480/3
320-2	Antenna Lighting Contactor Panel (By Contract T6-4)	54	480/3	
321	High Voltage Main Switch		12470/3	
322	480V Fire Pump Room Circuit Breaker Disconnect	400A	480/3	
323	Fire Alarm Control Panel		120/1	
332-1 & 2	Panel 315-P & 315-R Contactors	200A	480/3	
340-49	208/120V Phase Failure Panel		208/3	
340-50	480/277V Phase Failure Panel		480/3	
376	400A Automatic Transfer Switch	400A	480/277/3	
377-1	Standby Generator	172KW	480/277/3	
379	Fire Pump	60HP	480/3	
380	Fire Pump Control Panel		480/3	
381	Jockey Pump	2HP	480/3	
382	Jockey Pump Control Panel		480/3	
387-1	Panel 315-P Breaker Disconnect	150A	480/3	
387-2	Panel 315-R Breaker Disconnect	200A	480/3	



POWER DISTRIBUTION BLOCK DIAGRAM

REVISION- 0

	CONT. NO. F19628-86-C-0174 DATE OF DRAWING: 2 JULY, 1987 DRAWN: [Signature] ENGR: [Signature] CHECKED: [Signature] ISSUED: 30 NOV, 1987	GENERAL ELECTRIC E.S.D. 5142005-11 AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 POWER DISTRIBUTION <b>BLOCK DIAGRAM</b>
	SIZE: E CODE IDENT NO: 03538 DRAWING NO: T6 SHEET NO: E-3	DATE: NOV 30, 1987 SCALE: NONE FILE NO: 588 008
	NO ALTERATION PERMITTED HEREIN EXCEPT AS PROVIDED UNDER SECTION 2004 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.	
	Calcepinas & Spina CONSULTING ENGINEERS LICENSE NO. 1004-13008	







Circuit Protective Devices	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits			Remarks	Load	
			Equipment Furnished & Installed & Connected By The Contractor	Equipment Furnished By Others, Installed & Connected By The Contractor	Equipment Furnished & Installed By Others, Connected By The Contractor	Conduit No.	Conductor No.	Conduit Size			
100A Main Fuse Only	MLO		480V Feeder From Distribution Panel 308-H			HP-4	4	2	1-1/2"	Includes Ground	200A MCB
15A		1	Transmitter Cooling Fan Unit 349-1			IP-1	4	12	3/4"	Includes Ground	90A
15A		2	Transmitter Cooling Fan Unit 349-2			IP-2	4	12	3/4"	Includes Ground	45A
15A		7	Transmitter Cooling Fan Unit 349-3			IP-7	4	12	3/4"	Includes Ground	15A
15A		8	Transmitter Cooling Fan Unit 349-4			IP-8	4	12	3/4"	Includes Ground	20A
15A		13	Transmitter Cooling Fan Unit 349-5			IP-13	4	12	3/4"	Includes Ground	20A
15A		14	Transmitter Cooling Fan Unit 349-6			IP-14	4	12	3/4"	Includes Ground	20A
15A		19	Transmitter Cooling Fan Unit 349-7			IP-19	4	12	3/4"	Includes Ground	20A
15A		20	Transmitter Cooling Fan Unit 349-8			IP-20	4	12	3/4"	Includes Ground	20A
15A		25	Transmitter Cooling Fan Unit 349-9			IP-25	4	12	3/4"	Includes Ground	20A
15A		26	Transmitter Cooling Fan Unit 349-10			IP-26	4	12	3/4"	Includes Ground	20A
15A		31	Transmitter Cooling Fan Unit 349-11			IP-31	4	12	3/4"	Includes Ground	20A
15A		32	Transmitter Cooling Fan Unit 349-12			IP-32	4	12	3/4"	Includes Ground	20A
15A		37	Provide Spare								20A
			Space								20A

480V DISTRIBUTION PANEL 316-L

Circuit Protective Devices	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits			Remarks	Load	
			Equipment Furnished & Installed & Connected By The Contractor	Equipment Furnished By Others, Installed & Connected By The Contractor	Equipment Furnished & Installed By Others, Connected By The Contractor	Conduit No.	Conductor No.	Conduit Size			
200A Main Fuse Only	MLO		480V Feeder From Distribution Panel 308-H			HP-2	3	1	250 MCM 1/0	3"	Ground
25A		1	Heat Relector 347-1 Cooling Fan A			LP-1	4	10	3/4"	Includes Ground	10 HP
25A		2	Heat Relector 347-1 Cooling Fan B			LP-2	4	10	3/4"	Includes Ground	10 HP
25A		7	Heat Relector 347-2 Cooling Fan A			LP-7	4	10	3/4"	Includes Ground	10 HP
25A		8	Heat Relector 347-2 Cooling Fan B			LP-8	4	10	3/4"	Includes Ground	10 HP
25A		13	Heat Relector 347-3 Cooling Fan A			LP-13	4	10	3/4"	Includes Ground	10 HP
25A		14	Heat Relector 347-3 Cooling Fan B			LP-14	4	10	3/4"	Includes Ground	10 HP
25A		19	Heat Relector 347-4 Cooling Fan A			LP-19	4	10	3/4"	Includes Ground	10 HP
25A		20	Heat Relector 347-4 Cooling Fan B			LP-20	4	10	3/4"	Includes Ground	10 HP
25A		25	Heat Relector 347-5 Cooling Fan A			LP-25	4	10	3/4"	Includes Ground	10 HP
25A		26	Heat Relector 347-5 Cooling Fan B			LP-26	4	10	3/4"	Includes Ground	10 HP
20A		31	Pump Room Heat Relector Control Panel Unit 324			LP-31	3	1	3/4"	Includes Ground	16 KW
25A		32	Pump Room Water Tank Boiler 337 Circulating Pump 338			LP-32	4	10	3/4"	Includes Ground	16 KW
			Provide Spare								20A
			Space								20A

Circuit Protective Devices	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits			Remarks	Load	
			Equipment Furnished & Installed & Connected By The Contractor	Equipment Furnished By Others, Installed & Connected By The Contractor	Equipment Furnished & Installed By Others, Connected By The Contractor	Conduit No.	Conductor No.	Conduit Size			
200A MCB	MLO		Tap Off Feeder From Transfer Switch 376, 480/277V			JP-A	5	4/0	2 1/2"	Includes Ground & Neutral	
90A		1	Contract T6-4 To Provide Circuit Breaker Only For Contract T6-5 Antenna Lighting Contactor Panel 32Q-2			JP-1	4	2	1 1/2"	Includes Ground	14 KW (Future)
45A		2	Feeder To Primary Of Transformer 311, 480V			JP-2	4	6	1"	Includes Ground	30 kVA
15A		7	Compound Lighting Contactor Panel 32Q-1, 480V			JP-7	4	8	3/4"	Includes Ground	20 KW
20A		8	Generator Room Exhaust Fan 354-8			JP-8	4	12	3/4"	Includes Ground	1/2 HP
20A		13	Well Pump 370-2			JP-13	4	12	3/4"	Includes Ground	5 HP
20A		14	Lighting Fixtures, T102 Emergency Light: E-8, E-9			JP-14	3	12	3/4"	Includes Ground & Neutral	3220 VA
20A		16	Lighting Fixtures, T105, T114, T115 T118, T121, T122, Emergency Lights: E-1, E-2			JP-16	3	12	3/4"	Includes Ground & Neutral	3623 VA
20A		18	Outdoor Building Lights: G-1, G-2, G-3 Parking Lot Lights: K-1, W-2, K-3			JP-18	3	12	3/4"	Includes Ground & Neutral	1240 VA
20A		19	Lighting Fixtures, T105 Emergency Lights: E-4, E-5			JP-19	3	12	3/4"	Includes Ground & Neutral	4140 VA
20A		20	Lighting Fixtures, T103, T104, T106 T107, T108, Emergency Lights: E-6, E-7, E-10, E-11, E-12			JP-20	3	12	3/4"	Includes Ground & Neutral	4032 VA
20A		21	Lighting Fixtures, T105 Emergency Light: E-3			JP-21	3	12	3/4"	Includes Ground & Neutral	3360 VA
20A		23	Provide Spare								20A
20A		24	Provide Spare								20A
20A		25	Provide Spare								20A
20A		26	Provide Spare								20A
20A		27	Provide Spare								20A
			Space								20A

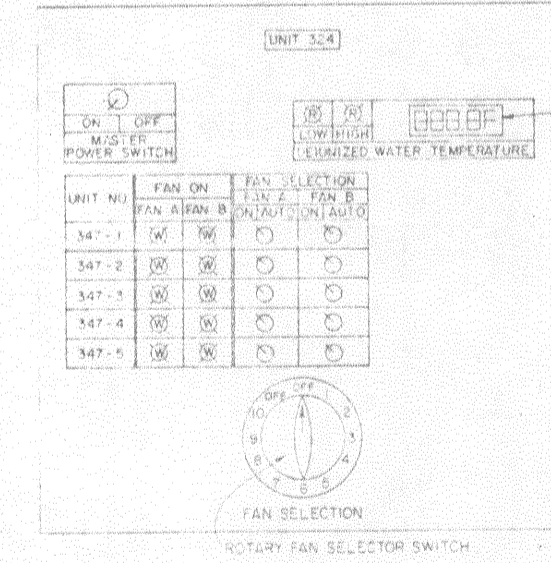
\* Conduit Sizes Noted Are Minimum Sizes Allowable Up To The Point Of Connections To The Equipment Served. The Contractor May Use Larger Conduits And Combine Circuits As Long As The Requirements Of The NEC Are Met.

See Heat Relector Control Diagram, Drawing E-12 For Information On Control And Signal Wiring Occupying The Same Conduits

1	2
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41	42



- NOTES:
1. Pilot Lights For "Fan Running" Shall Be Installed And Wired To Terminal Straps For Field Connection To Auxiliary "Motor Run" Contacts In The Heat Relector/Fan Motor Starters.
  2. For Wiring Schematic, See Dwg. E-12.

HEAT RELECTOR CONTROL PANEL UNIT 324

REVISION-0

GENERAL ELECTRIC

AN/FPS-118

SECTOR 6 TRANSMIT FACILITY

CONTRACT T6-4

DISTRIBUTION PANELS 309-I, 310-J, 316-L

ONE-LINE DIAGRAMS

DATE: NOV 1987

ISSUED: 30 NOV, 1987

E 03538 T6 E-5

20



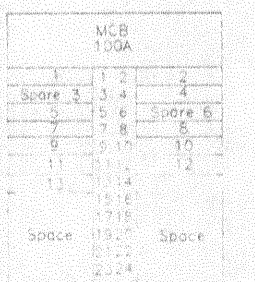
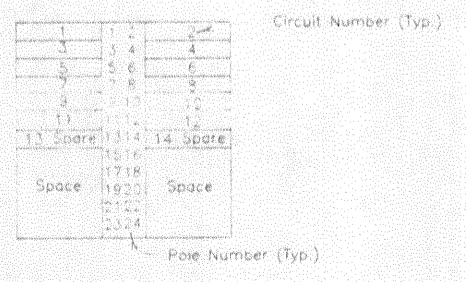
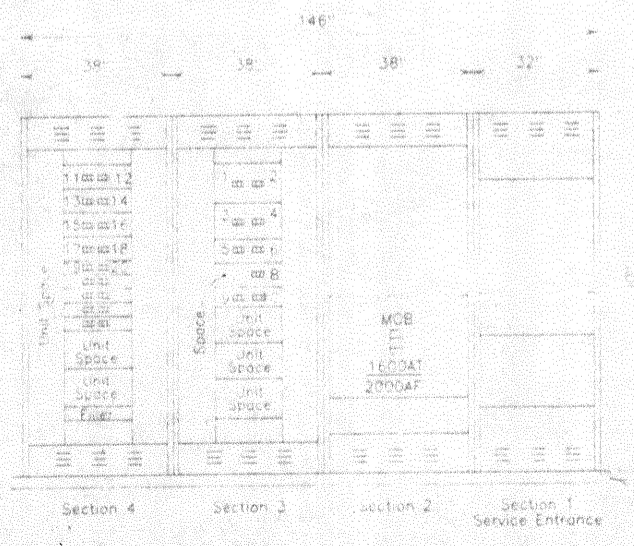
Total Connected Load		208/120V SWITCHBOARD 301-A		Total Connected Load		208/120V DISTRIBUTION PANEL 317-Q		Pole Spaces											
400.0 KVA				12 KVA				24											
Estimated Demand KW		1266.7 KW		Estimated Demand KW		10.6 KW		Short Circuit Bracing & Interrupting Capacity											
								42,000 Amp RMS Short Circuit Current											
								Main Rating											
								100 Amps											
Circuit Protective Devices Bar/Case	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits		Remarks	Load	Circuit Protective Devices Bar/Case	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits		Remarks	Load
			Equipment Furnished, Installed & Connected By The Contractor	Equipment Furnished By Others, Installed & Connected By The Contractor	Equipment Furnished & Installed By Others, Connected By The Contractor	Conduit No.	Conductor No.						Conductor Size	Conduit No.	Conductor No.	Conductor Size			
1600 GFI	MCB								100A Main Logic Only	MCB									
300A	Kirk Lock Shunt Trip	1	Contractor Shall Provide 36" Of Additional Conductor For Owner Connection At Unit		Substation For 208/120V (Future)	AP-2		(Future) See Chap. E-3	74 KVA	15A	1	100A Feeder From Switchboard 301-A, 208/120V	AP-5	5	2	1-1/2"	Includes Ground & Neutral	1000VA	
300A	Kirk Lock Shunt Trip	2	Contractor Shall Provide 36" Of Additional Conductor For Owner Connection At Unit		Sounder Power Amplifier Unit 136, 208/120V	AP-1	5	250 MCM	74 KVA	15A	1	Transmitter 121 & Power Supply 133 Light & Receptacles	AP-3	3	12	2"	Includes Ground & Neutral	1000VA	
300A	Kirk Lock Shunt Trip	3	Contractor Shall Provide 36" Of Additional Conductor For Owner Connection At Unit		Sounder Power Amplifier Unit 137, 208/120V	AP-2	5	250 MCM	74 KVA	15A	2	Transmitter 120 & Power Supply 132 Light & Receptacles	AP-4	3	12	2"	Includes Ground & Neutral	1000VA	
200A	Shunt Trip	3		UPS Module 318-1, 208/120V		AP-3	5	4/0 2-1/2"	(50KVA) Redundant Supply	15A	3	Transmitter 119 & Power Supply 131 Light & Receptacles	AP-5	3	12	2"	Includes Ground & Neutral	1000VA	
200A	Shunt Trip	4		UPS Module Maintenance Bypass Switch, 319-2, 208/120V		AP-4	5	4/0 2-1/2"	(50KVA) Redundant Supply	10A	4	Transmitter 118 & Power Supply 130 Light & Receptacles	AP-6	3	12	2"	Includes Ground & Neutral	1000VA	
100A	Shunt Trip	5		208/120V Receptacle Panel 304-D		AP-5	5	2 1-1/2"	Includes Ground & Neutral	15A	5	Transmitter 117 & Power Supply 129 Light & Receptacles	AP-7	3	12	2"	Includes Ground & Neutral	1000VA	
100A	Shunt Trip	6		Feeder To Transmitter/Power Supply 208/120V Distribution Panel 317-Q		AP-6	5	2 1-1/2"	Includes Ground & Neutral	15A	6	Transmitter 116 & Power Supply 128 Light & Receptacles	AP-8	3	12	2"	Includes Ground & Neutral	1000VA	
	Space									15A	7	Transmitter 115 & Power Supply 127 Light & Receptacles	AP-9	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	8			Power Supply Unit 133, 208/120V Supply	FP-3	5	1 2"	Includes Ground & Neutral	15KVA	8	Transmitter 114 & Power Supply 126 Light & Receptacles	AP-10	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	9			Power Supply Unit 132, 208/120V Supply	FP-4	5	1 2"	Includes Ground & Neutral	15KVA	9	Transmitter 113 & Power Supply 125 Light & Receptacles	AP-11	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	10			Power Supply Unit 131, 208/120V Supply	FP-5	5	1 2"	Includes Ground & Neutral	15KVA	10	Transmitter 112 & Power Supply 124 Light & Receptacles	AP-12	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	11			Power Supply Unit 130, 208/120V Supply	FP-6	5	1 2"	Includes Ground & Neutral	15KVA	11	Transmitter 111 & Power Supply 123 Light & Receptacles	AP-13	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	12			Power Supply Unit 129, 208/120V Supply	FP-7	5	1 2"	Includes Ground & Neutral	15KVA	12	Transmitter 110 & Power Supply 122 Light & Receptacles	AP-14	3	12	2"	Includes Ground & Neutral	1000VA	
60A	Shunt Trip	13			Power Supply Unit 128, 208/120V Supply	FP-8	5	1 2"	Includes Ground & Neutral	15KVA	13	Provide Spare							
60A	Shunt Trip	14			Power Supply Unit 127, 208/120V Supply	FP-9	5	1 2"	Includes Ground & Neutral	15KVA	14	Provide Spare							
60A	Shunt Trip	15			Power Supply Unit 126, 208/120V Supply	FP-10	5	1 2"	Includes Ground & Neutral	15KVA		Space							
60A	Shunt Trip	16			Power Supply Unit 125, 208/120V Supply	FP-11	5	1 2"	Includes Ground & Neutral	15KVA									
60A	Shunt Trip	17			Power Supply Unit 124, 208/120V Supply	FP-12	5	1 2"	Includes Ground & Neutral	15KVA									
60A	Shunt Trip	18			Power Supply Unit 123, 208/120V Supply	FP-13	5	1 2"	Includes Ground & Neutral	15KVA									
60A	Shunt Trip	19			Power Supply Unit 122, 208/120V Supply	FP-14	5	1 2"	Includes Ground & Neutral	15KVA									
15A		20		Enclosure For 325-2 By This Contract	Substation Control 208/120V Voltage Monitor At Unit 326-2	SC-18	3	12 3/4"	Includes Ground & Neutral	15A	2	Halon Control Panel 392	OP-2	3	12	3/4"	Includes Ground & Neutral	240VA	
	Space									15A	3	Provide Spare							
										15A	4	Contacts 332-1 & 332-2 Control Panel 332-3	OP-4	3	12	3/4"	Includes Ground & Neutral	200VA	
										15A	5	Cypher Lock 325-2 & Emergency Shutdown Panels 325-1, 2	OP-5	3	12	3/4"	Includes Ground & Neutral	1000 VA	
										15A	6	Provide Spare							
										15A	7	Exit Light Type H Fixtures	OP-7	3	12	3/4"	Includes Ground & Neutral	150VA	
										10A	8	Day Tank Leak Detector Monitor 193	OP-8	3	12	3/4"	Includes Ground & Neutral	1/3 HP 200VA	
										10A	9	Day Tank 186 Generator Battery Charger Unit 383	OP-9	3	12	3/4"	Includes Ground & Neutral	200VA	
										15A	10	Alarm Annunciator Panel 333-2	OP-10	3	12	3/4"	Includes Ground & Neutral	200VA	
										10A	11	Building Generator Receptacles	OP-11	3	12	3/4"	Includes Ground & Neutral	1800VA	
										15A	12	Supply Fan 351-4 Damper Motors 356-7 & 8	OP-12	3	12	3/4"	Includes Ground & Neutral	1/4 HP	
										20A	13	Exhaust Fan 354-4, Damper Motor 356-18, Supply Fan 353-5, Damper Motors 356-19 & 20	OP-13	3	12	3/4"	Includes Ground & Neutral	1/4 HP (Ea.)	
												Space							
												Space							
												Space							

### 208/120V DISTRIBUTION PANEL 314-0

Total Connected Load		208/120V DISTRIBUTION PANEL 314-0		Pole Spaces	
5.9 KVA				24	
Estimated Demand KW		4.5 KW		Short Circuit Bracing & Interrupting Capacity	
				10,000 Amp RMS Short Circuit Current	
				Main Rating	
				100 Amps	
100A MCB	MCB				
100A MCB	MCB				
20A	Fire Alarm Control Panel Unit 323				
15A	Halon Control Panel 392				
	Provide Spare				
	Contacts 332-1 & 332-2 Control Panel 332-3				
	Cypher Lock 325-2 & Emergency Shutdown Panels 325-1, 2				
	Provide Spare				
	Exit Light Type H Fixtures				
	Day Tank Leak Detector Monitor 193				
	Day Tank 186 Generator Battery Charger Unit 383				
	Alarm Annunciator Panel 333-2				
	Building Generator Receptacles				
	Supply Fan 351-4 Damper Motors 356-7 & 8				
	Exhaust Fan 354-4, Damper Motor 356-18, Supply Fan 353-5, Damper Motors 356-19 & 20				
	Space				
	Space				
	Space				

See One-Line Diagrams For Panels 301-A And 317-Q For Information On Additional Conductors Occupying These Conduits

Conduit Sizes Noted Are Minimum Sizes Allowable Up To The Point Of Connections To The Equipment Served. The Contractor May Use Larger Conduits And Combine Circuits As Long As The Requirements Of The NEC Are Met.



208/120V SWITCHBOARD 301-A

208/120V DISTRIBUTION PANEL 317-Q

208/120V DISTRIBUTION PANEL 314-0

See One-Line Diagrams For Panels 301-A And 308-F For Information On Additional Conductors Occupying These Conduits.

REVISION-0

	CONT. NO. F 19628-BE-C-0174 DATE OF DRAWING 2 JULY 1987 DRAWN ENCR. CHECKED ISSUED 30 NOV. 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT TG-4 DISTRIBUTION PANELS 301-A, 314-0, 317-Q <b>ONE-LINE DIAGRAMS</b>
	E 03538 T6 E-6	SCALE NONE DATE NOV. 30, 1987 SCALE NONE DATE NOV. 30, 1987







Total Connected Load		24.8 kVA	208/120V DISTRIBUTION PANEL 304-D			Pole Spaces		42			
Estimated Demand KW		20.9 KW				Short Circuit Rating & Interrupting Capacity	10,000 Amps RMS Short Circuit Current				
						Mains Rating	100 Amps				
Circuit Protective Devices	Equipment in Distribution Panel By Contractor	Circuit No.	Equipment Remote From Distribution Panel			Power And Control Conduits		Remarks	Load		
			Equipment Furnished, Installed & Connected By The Contractor	Equipment Furnished By Others, Installed & Connected By The Contractor	Equipment Furnished & Installed by Others, Connected By The Contractor	Conduit No.	Conductor Size			Conduit Size	
100A Main Lugs Only		M-0	100A, 208/120V, Fed'd From Switchboard 301-A			AP-5	5	2	1 1/2"	Includes Ground & Neutral	
20A		1	Toilet Facilities Equipment Room Receptacles			DR-1	3	12	3/4"	Includes Ground & Neutral	1440 VA
20A		2	Parts Storage Room Receptacles			DR-2	3	12	3/4"	Includes Ground & Neutral	360 VA
20A		3	Parts Storage Room And Sounder Area Receptacles			DR-3	3	12	3/4"	Includes Ground & Neutral	1440 VA
20A		4	Power Supply Area Receptacles			DR-4	3	12	3/4"	Includes Ground & Neutral	2160 VA
20A		5	Transmitter Area Receptacles			DR-5	3	12	3/4"	Includes Ground & Neutral	1620 VA
20A		6	Power Distribution Room Receptacles			DR-6	3	12	3/4"	Includes Ground & Neutral	1980 VA
20A		7	Battery Room Receptacles Exhaust Fan 304-5			DR-7	3	12	3/4"	Includes Ground & Neutral	540 VA 1/4 HP
20A		8	Generator & Fire Pump Room Receptacles			DR-8	3	12	3/4"	Includes Ground & Neutral	1800 VA
20A		9	Pump Room Receptacles, Dissolved Oxygen Monitor Unit 359, Sump Pump Unit 389, Desulfizer Unit 367 Quality Lights			DR-9	3	12	3/4"	Includes Ground & Neutral	1620 VA
20A		10	Pump Room Receptacles, Nitrogen Humidity Sensor 340-1B			DR-10	3	12	3/4"	Includes Ground & Neutral	1440 VA
20A		11	Maintenance Room And Transmitter Area Receptacles			DR-11	3	12	3/4"	Includes Ground & Neutral	1080 VA
20A		12	Provide Spare								
20A		13	Provide Spare								
20A		14	Control & Monitor Room Receptacles			DR-14	3	12	3/4"	Includes Ground & Neutral	1980 VA
20A		15	Toilet Room Exhaust Fan 304-6			DR-15	3	12	3/4"	Includes Ground & Neutral	1412 HP
20A		16	Provide Spare								
30A		17	Water Heater Unit 395			DR-17	3	8	3/4"	Includes Ground	4500 VA
20A		18	Air Dyer Unit 378-1			DR-18	3	12	3/4"	Includes Ground & Neutral	1180 VA
20A		20	Air Dyer Unit 378-2			DR-20	3	12	3/4"	Includes Ground & Neutral	1180 VA
15A		21	D.I. Water/Glycol Pump Control Panel 360, Miscellaneous Controls			DR-21	3	12	3/4"	Includes Ground & Neutral	200 VA
20A		22	Provide Spare								
15A		23	D.I. Water Resistivity Meter Unit 340-40 Dissolved Oxygen Monitor 359			DR-23	3	12	3/4"	Includes Ground & Neutral	100 VA
20A		24	Toilet Room Unit Heater 352-10			DR-24	3	12	3/4"	Includes Ground	500 W
20A		25	Generator Unit 377-1 Water Heater			DR-25	3	12	3/4"	Includes Ground	2500 VA
30A		28	HVPS Area Special Receptacles, L14-30R			DR-28	4	10	3/4"	Includes Ground & Neutral	540 VA
20A		29	Provide Spare								
20A		31	Provide Spare								
			Space								
			Space								
			Space								


Conduit Sizes Noted Are Minimum Sizes Allowable Up To The Point Of Connections To The Equipment Served. The Contractor May Use Larger Conduits And Combine Circuits As Long As The Requirements Of The NEC Are Met.

1	2	2
3	3	4
5	6	6
7	8	8
9	9	10
11	11	12
13	13	14
15	15	18
17	18	20
21	21	22
23	24	24
25	25	28
29	30	30
31	31	32
33	34	34
36	36	36
38	38	38
39	39	39
41	41	41

208/277V DISTRIBUTION PANEL 304-D

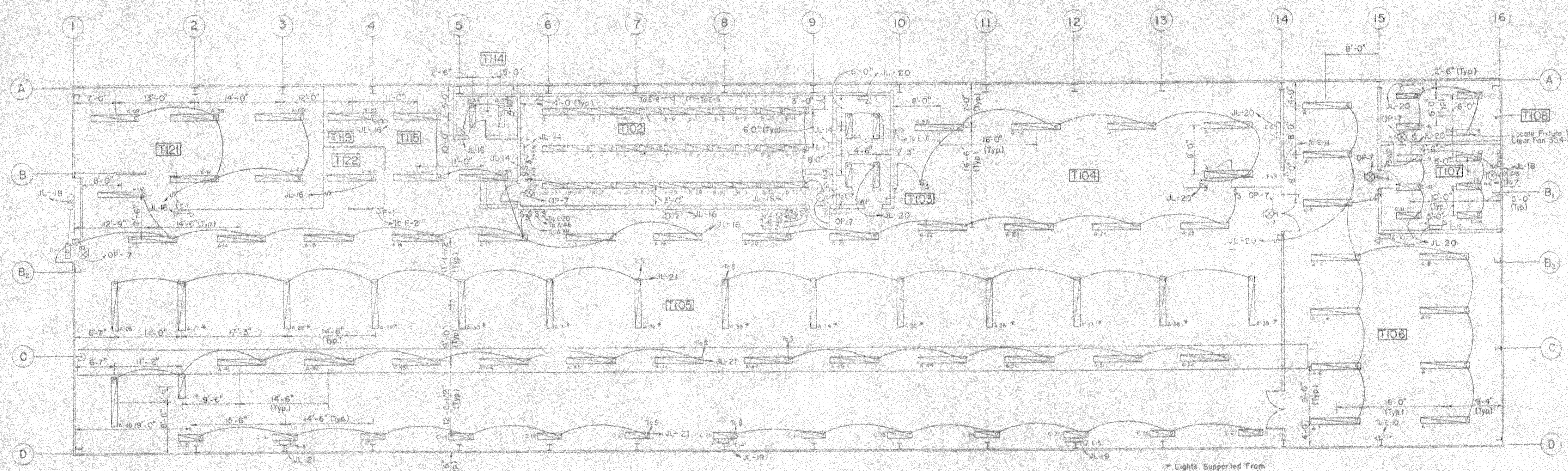
REVISIONS		
DATE	DESCRIPTION	BY
12/1/87	ADDED UNIT 259 TO 304-D CIRCUIT 25	12/1/87

REVISION- 1

	DATE OF DRAWING: 2 JULY, 1987 DRAWN: ENGR: CHECKED: J. W. [Signature] ISSUED: 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 DISTRIBUTION PANEL 304-D <b>ONE-LINE DIAGRAMS</b>
	SHEET NO. E-8 DATE: NOV 30, 1987 SCALE: NONE FILE NO: 458 005	SHEET NO. T6 DATE: NOV 30, 1987 SCALE: NONE FILE NO: 458 005



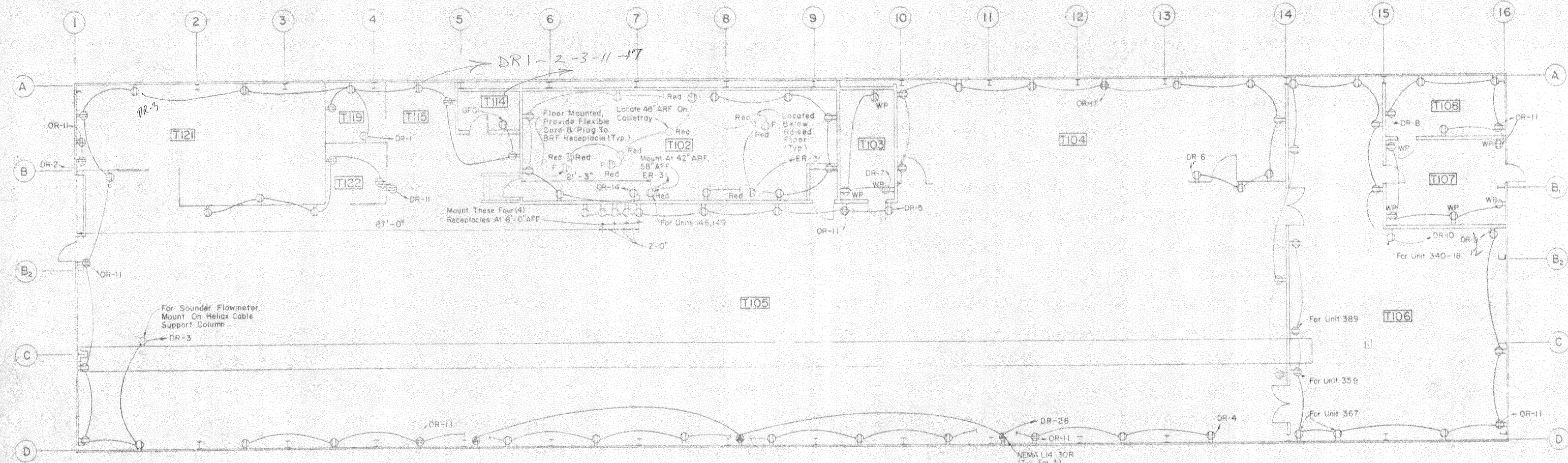
REVISIONS	DESCRIPTION



**LIGHTING PLAN**  
Scale: 1/8" = 1'-0"

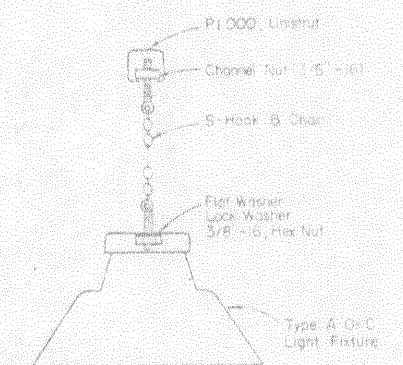
Number Of Fixture	Mounting Heights
A-1 Thru A-4, A-6 Thru A-26, A-40, A-53 Thru A-67, C-5 Thru C-28	10'-0" AFF
C-1 Thru C-4	Surface
A-27 Thru A-39, B A-5	10'-0" AFF Removable W/Locking Receptacle & G. Whp.
A-41 Thru A-52	9'-0" AFF

Fixture Symbol	Design Manufacturer & Model No.	Number & Type Of Lenses	Volts	Mounting	Remarks
A	Keene, Model No. SFT 296 See Note 1	(2) F96T12/CW/RS/W/M	277V	Suspended W/S Hook & Chain, A.F.F. As Shown	Energy Saving Ballast, In-Line Fusing
B	Keene, Model No. TF15VB240	(2) F40T12/CW/RS/W/M	277V	Surface	Energy Saving Ballast, In-Line Fusing
C	Keene, Model No. SFT 240 See Note 2	(2) F40T12/CW/RS/W/M	277V	Suspended W/S Hook & Chain, A.F.F. As Shown	Energy Saving Ballast, In-Line Fusing
D	See Specs, Emergency Lights	See Specs	120-277V	Wall, 8'-0" A.R.F. Or A.F.F.	---
E	Keene, Model No. 313-100MM-ME-VP-PC-FS	(1) 100W Mercury Vapor, A-23	277V	Wall Mount 12'-0" A.F.F.	Multi-Tap Ballast 100/200/240/277V, Instant Start, Long Life, Limon Vapor Photo Cell Control
F	See Specs, Exit Lights	See Specs	120V	Wall, 8'-0" A.R.F. A.F.F. Or As Shown	---
G	Crouse Hinds, QBD 500W	(1) 500W Quartz 0500 T3/CL	120V	See Dwg. E-15	Crossarm Bracket, Crossarm Width: 14 1/8"
H	Crouse Hinds, MVD-4HCW-MT-PC-3F-VS-QD Wood Pole Bracket 105-NH	(1) 400W Mercury Vapor	277V	See Mount W/ Bracket At 3'-0" A.F.F. See Dwg. E-2	Multi-Tap Ballast 100/200/240/277V, Instant Start, Long Life, Limon Vapor Photo Cell Control



**RECEPTACLE PLAN**  
Scale: 1/8" = 1'-0"

- NOTES:
- For Fixtures W/\* Add Cat. No. CPB For 6' Whp And NEMA L7-15F Locking Plug
  - For Light Fixtures in Battery Room, T103 Fixtures Shall Be Surface Mounted Add Cat. No. A15B For Wire Guards

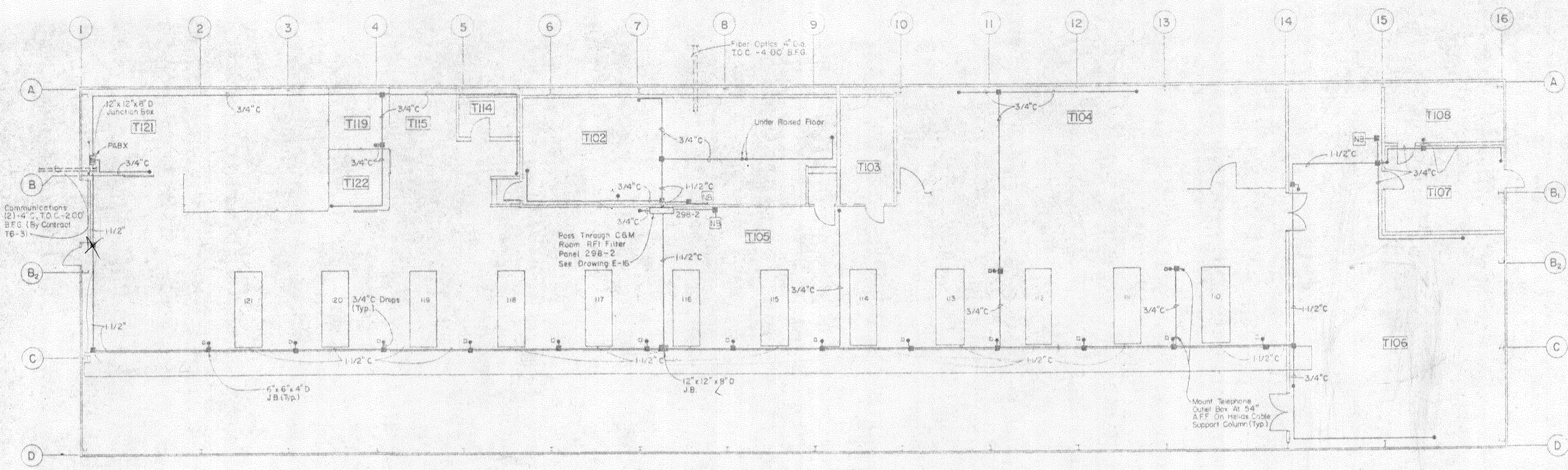


**FLUORESCENT FIXTURE DETAIL**  
Not To Scale

- NOTES:
- ALL WIRING IN ROOMS T109 AND T107 SHALL BE IN R.G.S. CONDUIT OR LIQUID TIGHT FLEXIBLE CONDUIT TO MEET NFPA STANDARDS. R.G.S. CONDUIT IN ROOM T103 SHALL BE PVC COATED. ALL CONNECTIONS SHALL BE WATER TIGHT WITH WEATHERPROOF COVERS FOR ALL RECEPTABLES AND SWITCHES.
  - ALL DIMENSIONS SHOWN ARE TO THE CENTERLINES OF LIGHTS AND TO THE INSIDE OF EXTERIOR WALLS.
  - FIELD LOCATE ROOM T106 LIGHTING SO AS NOT TO INTERFERE WITH MECHANICAL PIPING, FANS, ETC.
  - MOUNT RECEPTABLES IN ROOM T102 AT 18" AFF, 34" AFF, UNLESS OTHERWISE SHOWN.
  - MOUNT RECEPTABLES IN ALL OTHER AREAS AT 48" A.F.F. UNLESS OTHERWISE SHOWN.
  - COORDINATE RECEPTACLE LOCATIONS IN ROOM T102 WITH EQUIPMENT LOCATIONS SHOWN ON ROOM ELEVATIONS DRAWING A-5.
  - MODEL NUMBERS OF LIGHT SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNISTRUT COMPANY. EQUAL PRODUCTS OF POWERSTRUT, KINDORF, OR EQUAL WILL BE CONSIDERED FOR REVIEW.

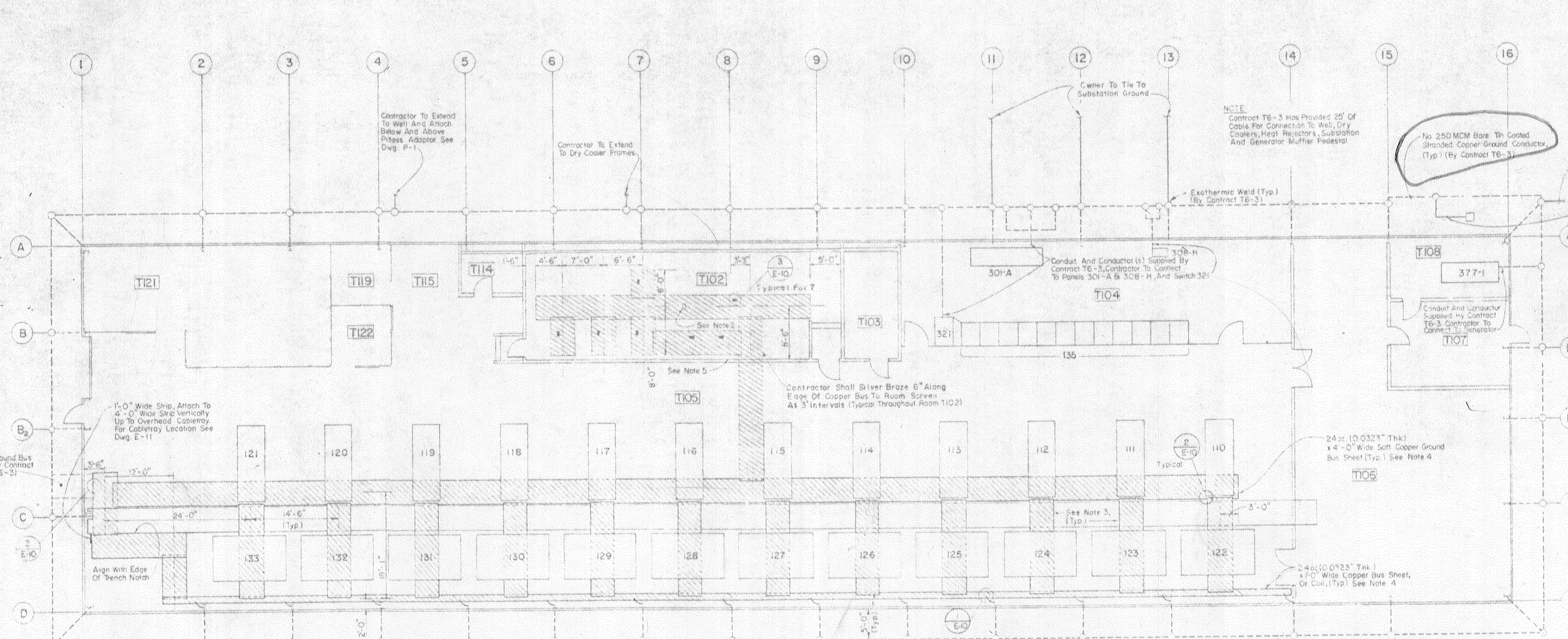
	CONT. NO. F10328-64-C-074 DATE OF DRAWING 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV. 1987	<b>GENERAL ELECTRIC</b> AN/FPS-11B SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>LIGHTING &amp; RECEPTACLE PLANS</b>	SIZE CODE IDENT NO. E 03538 T6 E-9
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	Calderwoods & Spina CONSULTING ENGINEERS Longmeadow, New York 12095	DATE: May 20, 1987 SCALE: AS SHOWN PLOT NO. 886-100





COMMUNICATIONS PLAN  
Scale: 1/8" = 1'-0"

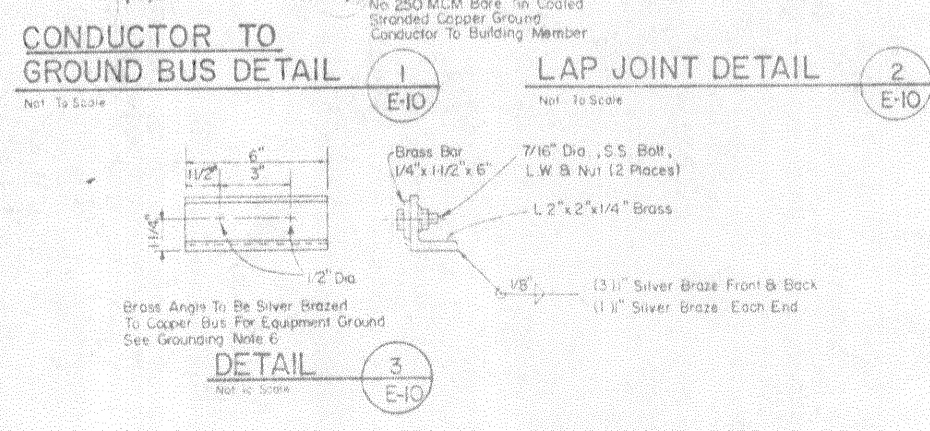
- COMMUNICATIONS PLAN NOTES:
- SEE SYMBOLS LIST ON DRAWING G-3.
  - THE CONTRACTOR SHALL INSTALL CONDUITS, JUNCTION BOXES AND OUTLET BOXES AS SHOWN FOR THE TELEPHONE SYSTEM.
  - THE PABX, CONNECTIONS, NIGHT BELLS, PHONE JACKS, AND ALL WIRING, CONNECTIONS ETC. SHALL BE PROVIDED AND INSTALLED BY OTHERS.
  - LOCATIONS SHOWN FOR OUTLET BOXES ARE APPROXIMATE ONLY. FINAL LOCATIONS FOR TELEPHONE AND NIGHT BELL SHALL BE COORDINATED WITH THE SITE ENGINEER.
  - ALL CONDUITS SHALL BE EMT EXCEPT IN ROOM T107, WHERE RBS CONDUIT SHALL BE USED. SIZE SHALL BE 3/4" DIAMETER UNLESS OTHERWISE NOTED. ALL CONDUITS SHALL BE PROVIDED WITH PULL WIRES.
  - ALL CONDUITS SHALL BE LABELED "TELEPHONE" IN ACCORDANCE WITH SPECIFICATION SECTION 16010.
  - CONDUITS ENTERING RF SCREENED ROOM T102 SHALL BE BONDED TO THE RF SCREENING. SEE DETAIL 10 ON DRAWING A-9.
  - IN ROOM T102, ALL HORIZONTAL CONDUIT RUNS SHALL BE BELOW THE RAISED FLOOR AND VERTICAL RUNS SHALL BE SURFACE MOUNTED ON INTERIOR WALLS. SEE DRAWING A-5 FOR TELEPHONE OUTLET BOX LOCATIONS RELATIVE TO ROOM T102 EQUIPMENT.
  - OUTLET BOXES FOR TELEPHONES AND NIGHT BELLS SHALL BE APPLIQUÉ 45-3/4" OR EQUAL.
  - TELEPHONE OUTLET BOXES SHALL BE MOUNTED 64" AFF OR AFR EXCEPT WHERE UNDERFLOOR OUTLETS ARE NOTED IN ROOM T102.
  - NIGHT BELL OUTLET BOXES SHALL BE MOUNTED 8'-0" AFF.



GROUNDING PLAN  
Scale: 1/8" = 1'-0"

Will this Not As An ANTENNA?  
WHY NOT A SMALL BREAK SO WE DON'T HAVE COMPLETE LOOP?  
EXOTHERMIC - HOT, QUICK WELD w/ A FILLER FLOX, METAL.

- ATTACHMENT OF GROUNDING CONDUCTORS TO THE UNDERWRIRING (FOR EXTENSION AND CONNECTION TO EQUIPMENT BY THIS CONTRACT).
- ALL OTHER WORK DETAILED FOR THE GROUNDING SYSTEM SHALL BE PROVIDED BY THIS CONTRACT.
- BOLT A 6" WIDE STRIP OF GROUND BUS TO THE VERTICAL CABLE TRAY AND SILVER BRAZE THE STRIP TO THE FLOOR GROUND BUS, SIMILAR TO DETAIL 6, THIS DRAWING. SEE DRAWINGS A-10 AND L-11 FOR LOCATION OF CABLETRAY.
  - THE GROUND BUS SHALL BE FORMED TO GO DOWN INTO THE PIPE TRENCH AND NOT CONFLICT WITH THE TRANSMITTER COOLING PIPE OR TRENCH COVERS. BEFORE INSTALLING GROUND BUS, PAINT ALL DISSIMILAR METAL ITEMS WHICH BUSHWORK WILL OCCUR.
  - INSTALL ALL GROUND BUS USING METALSET-44 OR EPOXY RESIN BETWEEN GROUND BUS AND CONCRETE FLOOR.
  - AT 10 FT. INTERVALS AROUND THE PERIMETER OF THE C & M ROOM, T102, CONNECT A NO. 10 AWG COPPER STRANDED CONDUCTOR TO THE FLOOR SYSTEM STRINGERS USING A SUITABLE LUG AND MACHINE SCREW IN A TRENCH HOLE IN THE BOTTOM OF THE STRINGER. SOLDER ONE INCH OF THE OTHER END OF THE NO. 10 AWG CONDUCTOR TO THE ROOM SCREEN.
  - SPECIFIC LOCATIONS FOR EQUIPMENT GROUNDING CLIPS IN ROOM T102 SHALL BE COORDINATED WITH THE SITE ENGINEER AND SHALL BE DIMENSIONED ON AS-BUILT DRAWINGS.

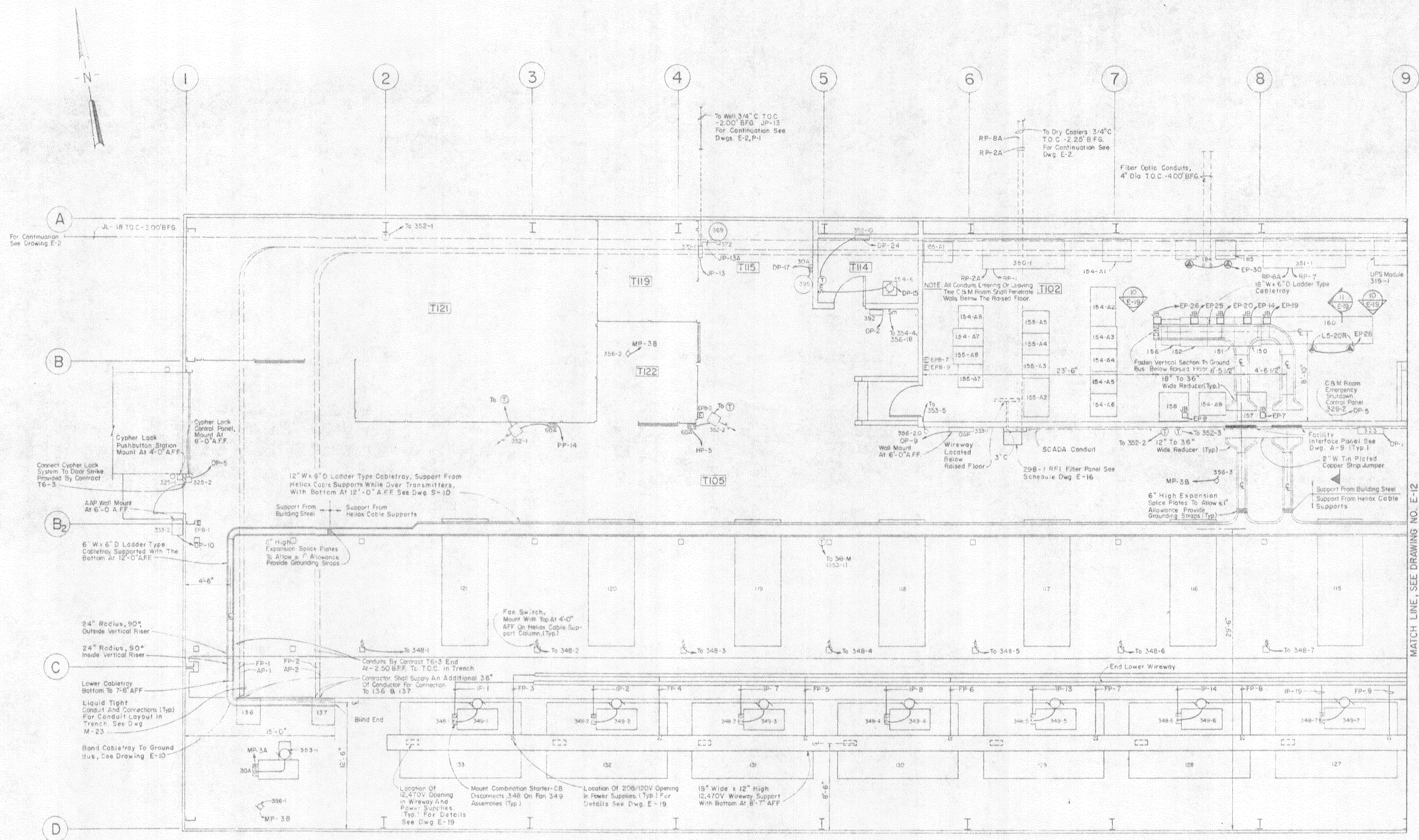


CONDUCTOR TO GROUND BUS DETAIL (1)  
LAP JOINT DETAIL (2)

	CONT NO: F19928-B6-C-0174 DATE: 2 JULY, 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV, 1987	<b>GENERAL ELECTRIC</b> ESD - PRODUCT NY AN/FPS-118 SECTOR G TRANSMIT FACILITY CONTRACT T6-4 <b>COMMUNICATIONS AND GROUNDING PLANS</b>
	SIZE: CODE IDENT NO: DRAWING NO: E 03538 T6 E-10	DATE: NOV 30, 1987 PRICE: \$5,900.00 COST NO: 458,000

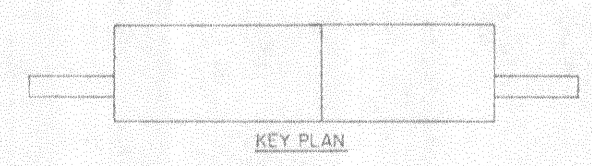


NO.	REVISIONS	DATE



**POWER PLAN - LEFT HALF**  
Scale: 1/4" = 1'-0"

MATCH LINE - SEE DRAWING NO. E-12



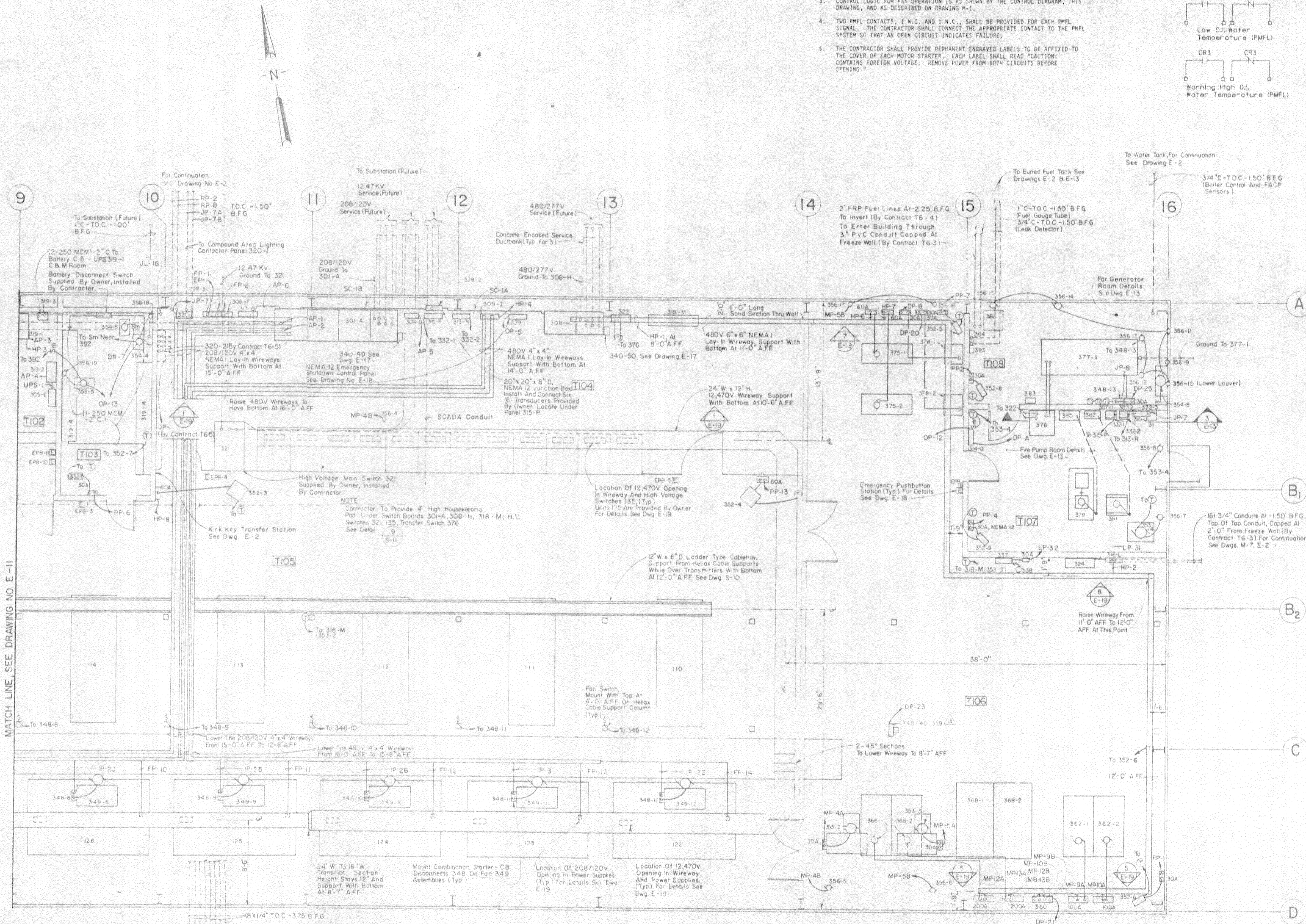
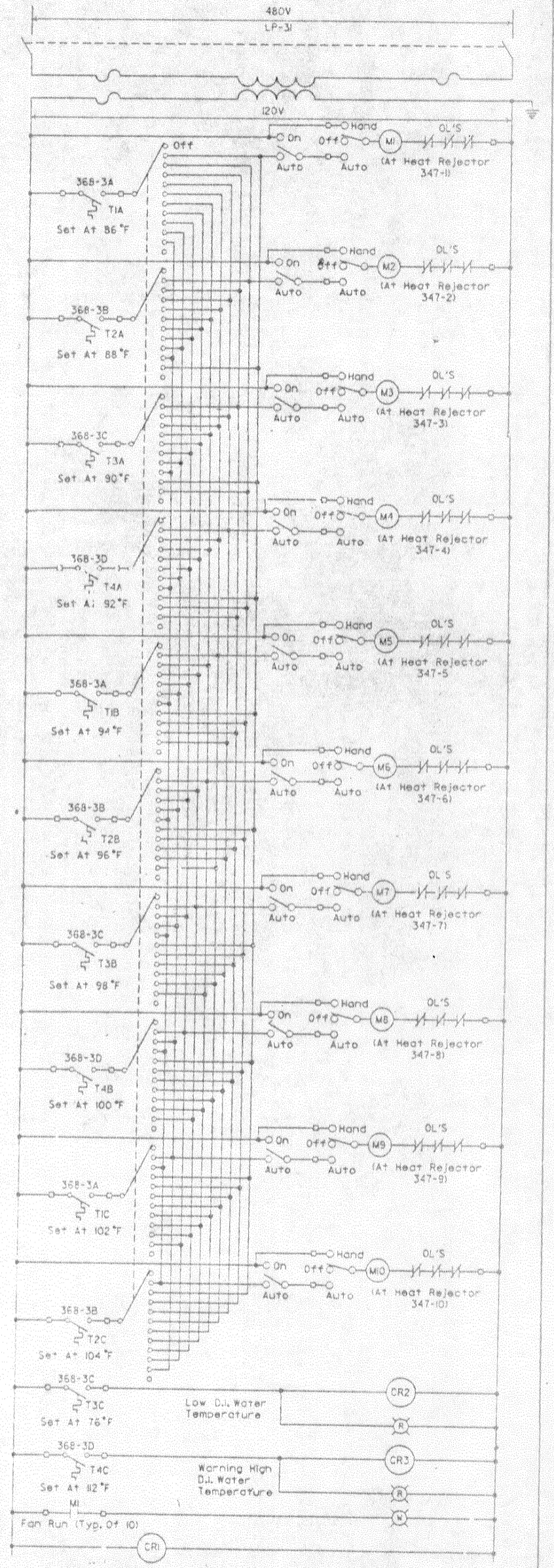
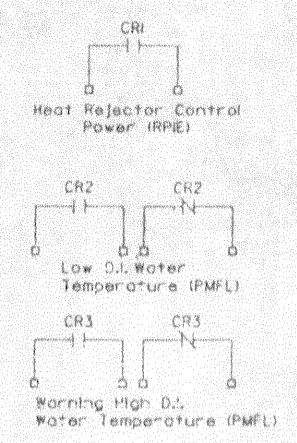
REVISION- 0

	CONT. NO. F1902B-86-C-0174 DATE OF DRAWING 2 JULY, 1987 DRAWN ENGR CHECKED SIGNED 30 NOV, 1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>POWER PLAN - LEFT HALF</b>	
	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 E-11	DATE NOV. 30, 1987 SCALE 1/4" = 1'-0" FILE NO. 458-000	26
	NO ALTERATION PERMITTED HEREON, EXCEPT AS PROVIDED UNDER SECTION 2308 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.		
	Calcepinos & Spina CONSULTING ENGINEERS 100 West 11th Street New York, New York 10011		



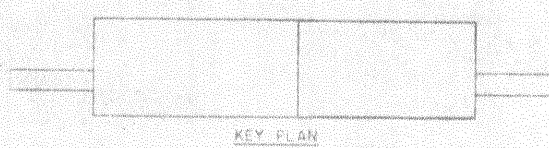
REVISIONS	
1	ADDED UNIT 356 (ECONOMY 4-1)

- HEAT REJECTOR CONTROL SEQUENCE AND NOTES**
- HEAT REJECTORS SHALL BE PROVIDED WITH INDIVIDUAL STARTER/DISCONNECTS (PROVIDED BY OWNER, INSTALLED BY CONTRACTOR).
  - A HAND-OFF-AUTO SWITCH SHALL BE MOUNTED ON THE FACE OF EACH STARTER. IN THE AUTO MODE, A CONTROL SIGNAL FROM HEAT REJECTOR CONTROL PANEL 324 WIRING TO THE STARTER MOTOR CONTACTOR, SHALL OPERATE EACH HEAT REJECTOR FAN. A CONTACT FROM EACH STARTER SHALL BE WIRED TO THE FAN RUN LIGHT ON PANEL 324.
  - CONTROL LOGIC FOR FAN OPERATION IS AS SHOWN BY THE CONTROL DIAGRAM, THIS DRAWING, AND AS DESCRIBED ON DRAWING M-1.
  - TWO PFML CONTACTS, 1 N.O. AND 1 N.C., SHALL BE PROVIDED FOR EACH PFML SIGNAL. THE CONTRACTOR SHALL CONNECT THE APPROPRIATE CONTACT TO THE PFML SYSTEM SO THAT AN OPEN CIRCUIT INDICATES FAILURE.
  - THE CONTRACTOR SHALL PROVIDE PERMANENT ENGRAVED LABELS TO BE AFFIXED TO THE COVER OF EACH MOTOR STARTER. EACH LABEL SHALL READ "CAUTION: CONTAINS FOREIGN VOLTAGE. REMOVE POWER FROM BOTH CIRCUITS BEFORE OPERATING."



- NOTES:**
- BATTERY ROOM NOTES:
    - BATTERY BACS, INTERCONNECTION BATTERY CABLES (EXCEPT FOR AISLE CROSSING CABLE), BATTERIES AND BATTERY DISCONNECT SHALL BE SUPPLIED BY THE OWNER AND INSTALLED BY THE CONTRACTOR PER MANUFACTURER'S REQUIREMENTS.
    - THE CONTRACTOR SHALL SUPPLY AND INSTALL THE AISLE CROSSING BATTERY CABLE AND ALL OTHER UPS CABLES.
    - THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION.
    - ALL CONDUITS AND FITTINGS IN BATTERY ROOM SHALL BE PVC COATED RIGID GALVANIZED STEEL.
  - CONDUITS SHOWN DASHED ARE PROVIDED BY CONTRACT T6-3 TO 7'-0" AWAY FROM BUILDING STRUCTURAL LINES UNLESS OTHERWISE SHOWN.
  - ALL WIRING IN ROOMS T103 AND T107 SHALL BE IN P.V.C. CONDUIT OR LIQUID TIGHT RIGID CONDUIT TO MEET NFPA STANDARDS. P.V.C. CONDUIT IN ROOM T103 SHALL BE PVC COATED. ALL CONDUITS SHALL BE WATER-TIGHT WITH WEATHERPROOF COVERS FOR ALL RECEPTACLES AND SWITCHES.

**POWER PLAN - RIGHT HALF**  
Scale: 1/4" = 1'-0"

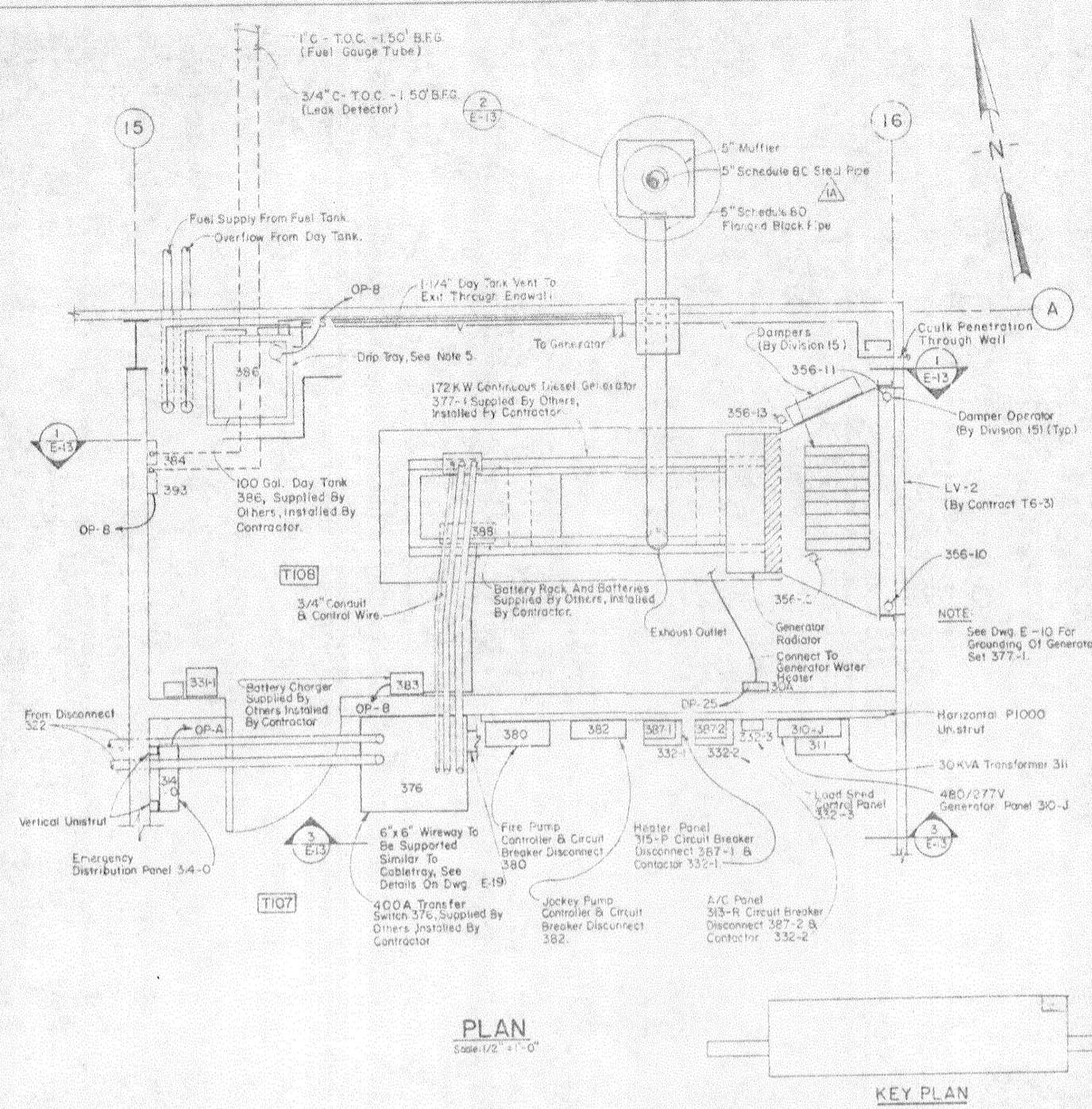


**REVISION -**

	CONT. NO. F19628-86-C-074 DATE OF DRAWING 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV 1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>POWER PLAN - RIGHT HALF</b>	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 E-12
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2004 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW		DATE NOV 23, 1987 SCALE AS SHOWN FILE NO. 458.005	SHEET NO. 27

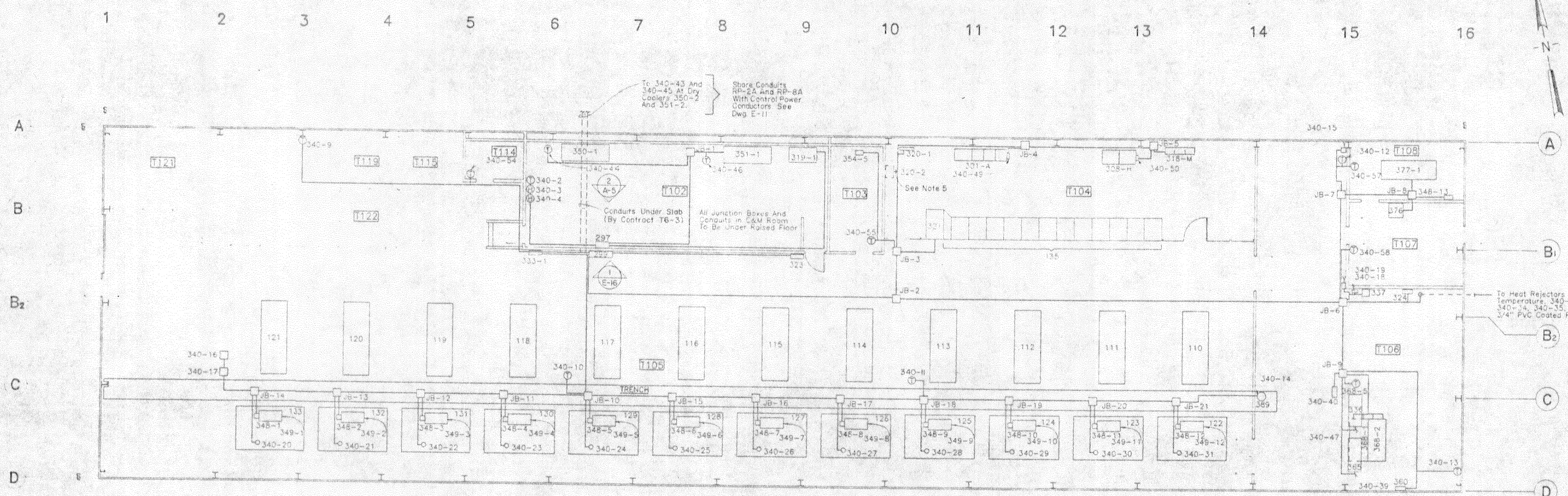


REVISIONS		
1	A & C	CHANGED PIPE AND MUFFLER SIZE FROM 6" TO 5" (CONR T6-4)
2	B	DELETED 5" TO 6" ADAPTER AND CHANGED PIPE SIZE FROM 6" TO 5" (CONR T6-4)
3	D & E	MOVED DRAIN PLUG LOCATION AND DELETED ACCESS HOLE (CONR T6-4)
4	F	CHANGED DRAIN HOLE SIZE FROM 4" TO 3" DIAMETER (CONR T6-4)
5	G	CHANGED PIPE AND KEEP HOLE SIZE ON BASE DETAIL (CONR T6-4)





REVISIONS	
NO.	DESCRIPTION



PLAN  
Scale 1/8" = 1'-0"

### PMFL TERMINAL BOX "A" CONDUIT ROUTING TREE

(76 Of 110 Terminals Assigned)

TERMINAL BOARD/JUNCTION BOX	CONDUIT END POINT (No. Of Assigned Pairs, No. Of Spare Twisted Pairs)
TB - "A"	JB-1 (4 Pairs, 12 Spare Pairs)
(Unit 297)	Unit 319-1 (14, 5)
	Unit 340-2 (1, 0)
	Unit 340-3 (1, 0)
	Unit 340-4 (1, 0)
JB-1	Unit 350-1 (3, 5)
(2 Spare Pairs)	Unit 340-44 (1, 0)
	Unit 351-1 (1, 5)
	Unit 340-46 (1, 0)

### PMFL TERMINAL BOX "B" CONDUIT ROUTING TREE

(306 Of 360 Terminals Assigned)

TERMINAL BOARD/JUNCTION BOX	CONDUIT END POINT (No. Of Assigned Pairs, No. Of Spare Twisted Pairs)
TB - "B"	JB-2 (5 Pairs, 23 Spare Pairs)
(Unit 299)	Unit 340-43 (1, 1)
	Unit 340-45 (1, 1)
	Unit 340-54 (1, 0)
	Unit 340-9 (1, 0)
	Unit 333-1 (4, 0)
	Unit 323 (50, 8)
JB-2	JB-3 (13, 6)
	Unit 340-6 (37, 18)
	JB-4 (9, 3)
	Unit 320-1 (1, 0)
	Unit 320-2 (1, 0) (Future)
	Unit 321 (1, 0)
	Unit 340-55 (1, 0)
	Unit 354-5 (1, 0)
JB-4	JB-5 (8, 3)
	Unit 340-49 (1, 0)
JB-5	Unit 340-50 (1, 0)
	Unit 318-M (7, 3)
JB-6	JB-7 (11, 6)
(2 Spare Pairs)	JB-9 (13, 6)
	Unit 337 (3, 1)
	Unit 340-16 (1, 0)
	Unit 340-19 (1, 0)
	Unit 324 (2, 3)
	Unit 340-32 (1, 0)
	Unit 340-33 (1, 0)
	Unit 340-34 (1, 0)
	Unit 340-35 (1, 0)
	Unit 340-36 (1, 0)
	Unit 340-58 (1, 0)

TERMINAL BOARD/JUNCTION BOX	CONDUIT END POINT (No. Of Assigned Pairs, No. Of Spare Twisted Pairs)
JB-7	JB-8 (8, 5)
	Unit 340-15 (1, 0)
	Unit 340-12 (1, 0)
	Unit 340-57 (1, 0)
	Unit 348-13 (1, 0)
	Unit 376 (5, 4)
	Unit 377-1 (2, 0)
	Unit 368-5 (1, 0)
	Unit 340-40 (1, 0)
	Unit 340-39 (1, 0)
	Unit 340-47 (1, 0)
	Unit 340-13 (1, 0)
	Unit 360 (4, 4)
	Unit 368-1 (2, 0)
	Unit 368-2 (2, 0)
JB-10	JB-11 (10, 1)
	JB-12 (16, 2)
	Unit 340-10 (1, 0)
	Unit 340-24 (1, 0)
	Unit 348-5 (1, 0)
JB-11	JB-12 (8, 1)
	Unit 340-12 (1, 0)
	Unit 348-4 (1, 0)
JB-12	JB-13 (6, 1)
	Unit 340-22 (1, 0)
	Unit 348-3 (1, 0)
JB-13	JB-14 (4, 1)
	Unit 340-21 (1, 0)
	Unit 348-2 (1, 0)
JB-14	Unit 340-16 (1, 0)
	Unit 340-17 (1, 0)
	Unit 340-20 (1, 0)
	Unit 348-1 (1, 0)

### PMFL SENSOR SCHEDULE

SENSOR UNIT	DESCRIPTION	SENS. UNIT	DESCRIPTION
318-M	4EDV Motor Control Center	340-29	D.I. Water Level Below Minimum
319-1	UPS Module	340-40	D.I. Water Resistivity Below Minimum
320-1	Compound Area Lighting Contactor Panel	340-43	Dry Cooler 350-2 Glycol Level
320-2	Antenna Lighting Contactor Panel (Future)	340-44	A/C 350-1 Return Glycol Over Temperature
321	High Voltage Main Switch Phase Failure	340-45	Dry Cooler 351-2 Glycol Level
323	Fire Alarm Control Panel	340-46	A/C 351-1 Return Glycol Over Temperature
324	Heat Rejector Control Panel	340-47	Unit 336 Glycol Level Sensor
333-1	Door Alarm Panel	340-48	Water Tank Low Temperature
337	Water Tank Boiler	340-49	20S/120V Phase Failure
340-2	C & M Room Over/Under Temperature	340-50	480/277V Phase Failure
340-3	C & M Room Over Humidity	340-51	Water Tank Low Level
340-4	C & M Room Under Humidity	340-54	Toilet Room Over/Under Temperature
340-9	Parts Storage Room Over/Under Temperature	340-55	Battery Room Over/Under Temperature
340-10	Transmitter Area Over/Under Temperature	340-57	Generator Room Over/Under Temperature
340-11	Transmitter Area Over/Under Temperature	340-58	Fire Pump Room Over/Under Temperature
340-12	Air Compressor Area Over/Under Temperature	348-1	Unit 121/132 Ventilation Failure
340-13	Pump Room Over/Under Temperature	348-2	Unit 120/132 Ventilation Failure
340-14	High Water In Trench	348-3	Unit 119/131 Ventilation Failure
340-15	Lag Air Compressor Required	348-4	Unit 118/130 Ventilation Failure
340-16	Low Compressor Air Manifold Pressure	348-5	Unit 117/129 Ventilation Failure
340-17	Low Nitrogen Pressure	348-6	Unit 116/128 Ventilation Failure
340-18	High Nitrogen Humidity	348-7	Unit 115/127 Ventilation Failure
340-19	High Nitrogen Flow	348-8	Unit 114/126 Ventilation Failure
340-20	Unit 121/132 High Filter Pressure Drop	348-9	Unit 113/125 Ventilation Failure
340-21	Unit 120/132 High Filter Pressure Drop	348-10	Unit 112/124 Ventilation Failure
340-22	Unit 119/131 High Filter Pressure Drop	348-11	Unit 111/123 Ventilation Failure
340-23	Unit 118/130 High Filter Pressure Drop	348-12	Unit 110/122 Ventilation Failure
340-24	Unit 117/129 High Filter Pressure Drop	348-13	Unit 354-5 Exhaust Fan Failure
340-25	Unit 116/128 High Filter Pressure Drop	350-1	Air Conditioner Unit Monitor
340-26	Unit 115/127 High Filter Pressure Drop	351-1	Air Conditioner Unit Monitor
340-27	Unit 114/126 High Filter Pressure Drop	354-5	Unit 354-5 Exhaust Fan Failure
340-28	Unit 113/125 High Filter Pressure Drop	360	D.I. Water/Glycol Pump Control Panel
340-29	Unit 112/124 High Filter Pressure Drop	365-1	Heat Exchanger Valve Tamper Switches
340-30	Unit 111/123 High Filter Pressure Drop	366-2	Heat Exchanger Valve Tamper Switches
340-31	Unit 110/122 High Filter Pressure Drop	368-1	High D.I. Water Temperature Alarm
340-32	Heat Rejector 347-1 Over Temperature	376	Automatic Transfer Switch
340-33	Heat Rejector 347-2 Over Temperature	377-1	Standby Generator Status
340-34	Heat Rejector 347-3 Over Temperature		
340-35	Heat Rejector 347-4 Over Temperature		
340-36	Heat Rejector 347-5 Over Temperature		

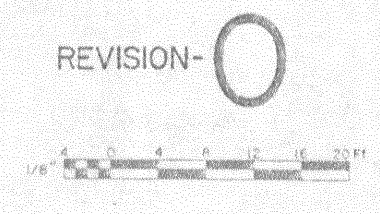
#### CONDUIT SIZE SCHEDULE (See Note 4)

NO. OF WIRE PAIRS ENCLOSED	SIZE OF CONDUIT (INCHES)
1-11	3/4"
12-18	1"
19-44	1-1/2"
45-73	2"
74+	3"

#### JUNCTION BOX SCHEDULE

JUNCTION BOX	MINIMUM SIZE (IN X H X D INCHES)
1	8 X 6 X 4
2	12 X 10 X 6
3	12 X 10 X 6
4	8 X 6 X 4
5	14 X 10 X 6
6	12 X 10 X 6
7	12 X 10 X 6
8	12 X 10 X 6
9	12 X 10 X 6
10	12 X 10 X 6
11	8 X 6 X 4
12	8 X 6 X 4
13	8 X 6 X 4
14	8 X 6 X 4
15	8 X 6 X 4
16	8 X 6 X 4
17	8 X 6 X 4
18	8 X 6 X 4
19	8 X 6 X 4
20	8 X 6 X 4
21	8 X 6 X 4

- NOTES:
- ALL TWISTED PAIR SHALL BE NO. 20 COPPER CONDUCTORS AND SHALL HAVE A POLYETHYLENE INSULATION OF NOT LESS THAN 10 MILS IN THICKNESS AND THE PAIR SHALL HAVE AN OVERALL PVC JACKET OF NOT LESS THAN 25 MILS IN THICKNESS.
  - TERMINAL STRIPS SHALL BE PROVIDED AND USED FOR TERMINATING SPARE PAIRS AND FOR MAKING ANY SPICES IN JUNCTION BOXES. (SEE ADDITIONAL TERMINALS REQUIRED FOR SPARES AND SPICES. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 20 TERMINALS ON A TERMINAL STRIP IN EACH JUNCTION BOX.)
  - THE CONTRACTOR SHALL NEATLY BUNDLE, TIE, AND TAG ALL TWISTED PAIRS AS THEY ENTER AND LEAVE JUNCTION BOXES OR EQUIPMENT.
  - CONDUIT SIZES SHOWN IN SCHEDULE ARE FOR CABLE AS IDENTIFIED BY NOTE 1 WITH AN OVERALL DIAMETER OF 0.5 INCHES. IF CABLE WITH GREATER OVERALL DIAMETER IS USED, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING CONDUIT AND JUNCTION BOXES OF SUFFICIENT SIZE TO KEEP CONDUIT FILL BELOW 40 PERCENT AND TO PROVIDE ADEQUATE ROOM FOR SPICES, TERMINATIONS, AND EXTRA TERMINALS.
  - CONTRACTOR SHALL INSTALL CONDUIT TO 6'-0" A.F.F. AT THE LOCATION SHOWN FOR ANTENNA LIGHTING CONTACTOR PANELS 320-2 AND PUL. PNF. 347-5 AS INDICATED, LEAVING 10'-0" OF EACH PAIR NEATLY COILED AND TIE AT THE END OF THE CONDUIT FOR FUTURE USE.



	DWT NO. 11928-86-0174 DATE OF DRAWING 2 JULY, 1987 DRAWN ENGR CHECKED DATE 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>PMFL PLAN AND INTERCONNECTION DIAGRAM</b>
	E 03538 T6 E-14	DATE NOV 30, 1987 SCALE AS SHOWN FILE NO. 43525

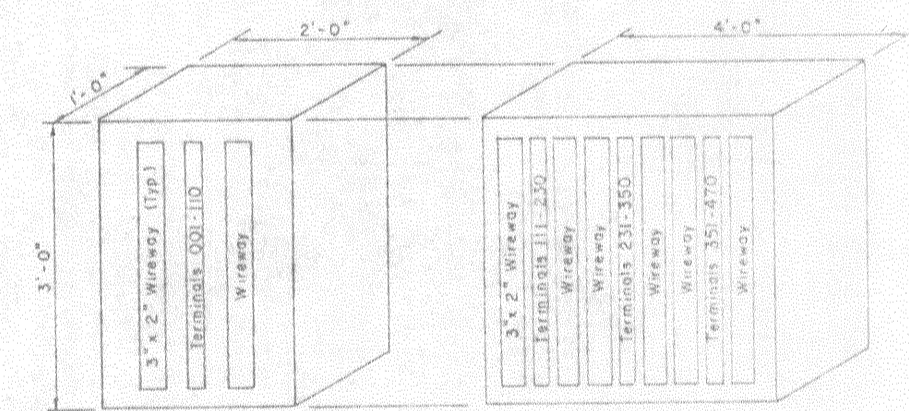


PMFL TERM. BOX "A" CONTACT SCHED.

CONTACT	DESCRIPTION	SENSOR NUMBER	REMARKS
001-000			20 Spare Terminals
021-022	UPS Module Status	319-1	Dry Contacts at UPS Module
023-024	UPS Module Blown Fuse	319-1	Dry Contacts at UPS Module
025-026	UPS Module Input Line Loss	319-1	Dry Contacts at UPS Module
027-028	UPS Module By-Passed	319-1	Dry Contacts at UPS Module
029-030	UPS Module Output Undervoltage	319-1	Dry Contacts at UPS Module
031-032	UPS Module Output Overvoltage	319-1	Dry Contacts at UPS Module
033-034	UPS Module Overload	319-1	Dry Contacts at UPS Module
035-036	UPS Module Low Battery	319-1	Dry Contacts at UPS Module
037-038	UPS Module High DC Voltage	319-1	Dry Contacts at UPS Module
039-040	UPS Module Over Temperature	319-1	Dry Contacts at UPS Module
041-042	UPS Module Static Switch Failure	319-1	Dry Contacts at UPS Module
043-044	UPS Module Static Switch Status	319-1	Dry Contacts at UPS Module
045-046	UPS Module Battery Breaker Status	319-1	Dry Contacts at UPS Module
047-048	UPS Module Battery Discharging/Utility Power	319-1	Dry Contacts at UPS Module
049-058		319-1	5 Spare Twisted Pairs
059-060	CM Room Over/Under Temperature	340-2	Setpoints: 73°F/67°F
061-062			2 Spare Terminals
063-064	CM Room Over Humidity	340-3	Setpoint: 60% RH
065-066	CM Room Under Humidity	340-4	Setpoint: 40% RH
067-068			2 Spare Terminals
069-070	Unit 351-1 A/C Unit Monitor	351-1	Contacts From Air Conditioning Unit
071-074			4 Spare Terminals
075-076	Unit 351-1 Return Glycol Over Temperature	340-46	Setpoint: 120°F
077-086		351-1	5 Spare Twisted Pairs
087-088	Unit 350-1 A/C Unit Monitor	350-1	Contacts From Air Conditioning Unit
089-092			4 Spare Terminals
093-094	Unit 350-1 Return Glycol Over Temperature	340-44	Setpoint: 120°F
095-104		350-1	5 Spare Twisted Pairs
105-108		JB-1	2 Spare Twisted Pairs
109-110			2 Spare Terminals

PMFL TERMINAL BOX "B" CONTACT SCHEDULE

CONTACT	DESCRIPTION	SENSOR NUMBER	REMARKS	CONTACT	DESCRIPTION	SENSOR NUMBER	REMARKS	CONTACT	DESCRIPTION	SENSOR NUMBER	REMARKS
111-112	Building Entry Primary Power Status	333-1	Dry Contacts at Door Alarm Panel	242-244	Unit 113/128 High Filter Pressure Drop	340-28	Setpoint: 0.95" Differential Pressure Switch	289-390	Low Compressed Air Manifold Pressure	340-16	Setpoint: 30 PSI
113-114	Building Entry Backup Power Status	333-1	Dry Contacts at Door Alarm Panel	245-246	Unit 112/124 Ventilation Failure	340-10	Dry Contacts at Motor Starter	391-392	Air Compressor Area Over/Under Temperature	340-12	Setpoints: 103°F/65°F
115-116	Building Entry Bypass	333-1	Dry Contacts at Door Alarm Panel	247-248	Unit 112/124 High Filter Pressure Drop	340-29	Setpoint: 0.95" Differential Pressure Switch	393-394	Low Nitrogen Pressure	340-17	Setpoint: 6 PSI
117-118	Building Entry Alarm	333-1	Dry Contacts at Door Alarm Panel	249-250	Unit 111/123 Ventilation Failure	340-11	Dry Contacts at Motor Starter	395-396	High Nitrogen Humidity	340-18	
119-120	Unit 351-2 Glycol Level Below Minimum	340-45	Level Switch at Expansion Tank	251-252	Unit 111/123 High Filter Pressure Drop	340-30	Setpoint: 0.95" Differential Pressure Switch	397-398	High Nitrogen Flow	340-19	Setpoint: 10 SCFH
121-122		340-45	1 Spare Twisted Pair	253-254	Unit 110/122 Ventilation Failure	340-12	Dry Contacts at Motor Starter	399-400		JB-8	1 Spare Twisted Pair
123-124	Unit 350-2 Glycol Level Below Minimum	340-43	Level Switch at Expansion Tank	255-256	Unit 110/122 High Filter Pressure Drop	340-31	Setpoint: 0.95" Differential Pressure Switch	401-402	Water Tank Heat Power Failure	337	Dry Contacts From Auxiliary Relay Located at Boiler
125-126		340-43	1 Spare Twisted Pair	257-258	Transmitter Area Over/Under Temperature	340-10	Setpoints: 103°F/65°F	403-404	Water Tank Emergency Heat	337	Dry Contacts From Auxiliary Relay Located at Boiler
127-128		JB-14	1 Spare Twisted Pair	259-260	Transmitter Area Over/Under Temperature	340-11	Setpoints: 103°F/65°F	405-406	Water Tank Emergency Heat Pump Run	337	Dry Contacts From Auxiliary Relay Located at Boiler
129-132		JB-3	2 Spare Twisted Pairs	261-262	High Water in Trench	340-14	In Trench Sump Basin, 6" Off Floor of Basin	407-408	Pump Room Over/Under Temperature	340-13	Setpoints: 103°F/65°F
133-134	Fire Alarm Primary Power Failure	323	Dry Contacts at Fire Alarm Control Panel	263-268				409-410	Toilet Room Over/Under Temperature	340-54	Setpoints: 103°F/65°F
135-136		323	1 Spare Twisted Pair	269-270				411-412	Generator Room Over/Under Temperature	340-57	Setpoints: 103°F/65°F
137-138	Fire System Master Alarm	323	Dry Contacts at Fire Alarm Control Panel	271-272				413-414	Fire Pump Room Over/Under Temperature	340-58	Setpoints: 103°F/65°F
139-140	Fire System Trouble	323	Dry Contacts at Fire Alarm Control Panel	273-274	11.47 KV Phase Failure Detection	321	Dry Contacts at Unit 301	415-416		337	1 Spare Twisted Pair
141-142	First Alarm Trip, Helon, CM Room	323	Dry Contacts at Fire Alarm Control Panel	275-276	400/277V Phase Failure Detection	340-50	Dry Contacts at Phase Failure Detection Panel	417-418	Unit 354-8 Exhaust Fan Failure	340-13	Dry Contacts at Motor Starter
143-144	Second Alarm Trip, Helon, CM Room	323	Dry Contacts at Fire Alarm Control Panel	277-278	200/120V Phase Failure Detection	340-49	Dry Contacts at Phase Failure Detection Panel	419-420	Unit 354-5 Exhaust Fan Failure	334-5	Dry Contacts From Auxiliary Relay Located Near Fan
145-146	First Alarm Trip, Sprinkler	323	Dry Contacts at Fire Alarm Control Panel	279-280	Antenna Lighting Power Status (Future)	320-2	Dry Contacts at Antenna Lighting Contactor Panel (Future)	421-422	Unit 368-1 Heat Exchanger D.I. Valve Tamper	368-1	Two Supervisory Valve Switches, Wired in Parallel (N.C.) or Series (N.C.)
147-148	Second Alarm Trip, Sprinkler	323	Dry Contacts at Fire Alarm Control Panel	281-282	Unit 353-1 Supply Fan Failure	318-M	Dry Contacts at MCC	423-424	Unit 368-1 Heat Exchanger Glycol Valve Tamper	368-1	Two Supervisory Valve Switches, Wired in Parallel (N.C.) or Series (N.C.)
149-150	Manual Pull Station	323	Dry Contacts at Fire Alarm Control Panel	283-284	Unit 353-2 Supply Fan Failure	318-M	Dry Contacts at MCC	425-426	Unit 368-2 Heat Exchanger D.I. Valve Tamper	368-2	Two Supervisory Valve Switches, Wired in Parallel (N.C.) or Series (N.C.)
151-152	Zone Discharge, Helon, CM Room	323	Dry Contacts at Fire Alarm Control Panel	285-286	Unit 353-3 Supply Fan Failure	318-M	Dry Contacts at MCC	427-428	Unit 368-2 Heat Exchanger Glycol Valve Tamper	368-2	Two Supervisory Valve Switches, Wired in Parallel (N.C.) or Series (N.C.)
153-154	Helon Trouble, CM Room	323	Dry Contacts at Fire Alarm Control Panel	287-290				429-430	High D.I. Water Temperature Alarm	368-6	Setpoint: 125°F
155-162		323	4 Spare Twisted Pairs	291-292	Unit 366-1 D.I. Water Pump Run	318-M	Dry Contacts at MCC	431-470			40 Spare Terminals
163-164	Primary Helon Tank Selected, CM Room	323	Dry Contacts at Selector Switch Via FACP	293-294	Unit 366-2 D.I. Water Pump Run	318-M	Dry Contacts at MCC				
165-166	Backup Helon Tank Selected, CM Room	323	Dry Contacts at Selector Switch Via FACP	295-296	Unit 362-1 Glycol Pump Run	318-M	Dry Contacts at MCC				
167-168	Pressure Loss Sprinkler System	323	Dry Contacts at Fire Alarm Control Panel	297-298	Unit 362-2 Glycol Pump Run	318-M	Dry Contacts at MCC				
169-170	Flow Sprinkler System	323	Dry Contacts at Fire Alarm Control Panel	299-300	Battery Room Over/Under Temperature	340-68	Setpoints: 103°F/65°F				
171-172	Jockey Pump Power Failure	323	Dry Contacts at Fire Alarm Control Panel	301-302							
173-174	Fire Pump Power Failure	323	Dry Contacts at Fire Alarm Control Panel	303-304	Toilet Room Over/Under Temperature	240-54	Setpoints: 103°F/65°F				
175-176	First Alarm Trip Trans/Power Supply #110/122	323	Dry Contacts at Fire Alarm Control Panel	305-306	Parts Storage Room Over/Under Temperature	340-9	Setpoints: 103°F/65°F				
177-178	First Alarm Trip Trans/Power Supply #111/123	323	Dry Contacts at Fire Alarm Control Panel	307-308	Compound Lighting Power Status	320-1	Dry Contacts at Compound Area Lighting Contactor Panel				
179-180	First Alarm Trip Trans/Power Supply #112/124	323	Dry Contacts at Fire Alarm Control Panel	309-310	D.I. Water Level Below Minimum	340-39	Level Switch at Compression Tank				
181-182	First Alarm Trip Trans/Power Supply #113/125	323	Dry Contacts at Fire Alarm Control Panel	311-312	D.I. Water Activity Below Minimum	340-40	Setpoint: 0.5 MOHMS, Dry Contacts at Resistivity Meter				
183-184	First Alarm Trip Trans/Power Supply #114/126	323	Dry Contacts at Fire Alarm Control Panel	313-316							
185-186	First Alarm Trip Trans/Power Supply #115/127	323	Dry Contacts at Fire Alarm Control Panel	317-318	Unit 326 Glycol Level Below Minimum	340-47	Level Switch at Expansion Tank				
187-188	First Alarm Trip Trans/Power Supply #116/128	323	Dry Contacts at Fire Alarm Control Panel	319-320	Low D.I. Loop Temperature	324	Dry Contacts at Heat Rejector Control Panel, By Contractor				
189-190	First Alarm Trip Trans/Power Supply #117/129	323	Dry Contacts at Fire Alarm Control Panel	321-322	Warning D.I. Loop High Temperature	324	Dry Contacts at Heat Rejector Control Panel, By Contractor				
191-192	First Alarm Trip Trans/Power Supply #118/130	323	Dry Contacts at Fire Alarm Control Panel	323-328							
193-194	First Alarm Trip Trans/Power Supply #119/131	323	Dry Contacts at Fire Alarm Control Panel	329-330	Unit 347-1 Over Temperature	340-32	Setpoint: 115°F				
195-196	First Alarm Trip Trans/Power Supply #120/132	323	Dry Contacts at Fire Alarm Control Panel	331-332	Unit 347-2 Over Temperature	340-33	Setpoint: 115°F				
197-198	First Alarm Trip Trans/Power Supply #121/133	323	Dry Contacts at Fire Alarm Control Panel	333-334	Unit 347-3 Over Temperature	340-34	Setpoint: 115°F				
199-200	Water Tank Low Level 340-51	323	Dry Contacts at Fire Alarm Control Panel	335-336	Unit 347-4 Over Temperature	340-35	Setpoint: 115°F				
201-202	Water Tank Low Temperature 340-40	323	Setpoints: 40°F Dry Contacts at Fire Alarm Control Panel	337-338	Unit 347-5 Over Temperature	340-36	Setpoint: 115°F				
203-208		323	3 Spare Twisted Pairs	339-340	Unit 366-1 D.I. Pump Failure	360	Dry Contacts at Pump Control Panel				
209-210	Unit 121/133 Ventilation Failure	340-1	Dry Contacts at Motor Starter	341-342	Unit 366-2 D.I. Pump Failure	360	Dry Contacts at Pump Control Panel				
211-212	Unit 121/133 High Filter Pressure Drop	340-20	Setpoint: 0.95" Differential Pressure Switch	343-344	Unit 362-1 Glycol Pump Failure	360	Dry Contacts at Pump Control Panel				
213-214	Unit 120/132 Ventilation Failure	340-2	Dry Contacts at Motor Starter	345-346	Unit 362-2 Glycol Pump Failure	360	Dry Contacts at Pump Control Panel				
215-216	Unit 120/132 High Filter Pressure Drop	340-21	Setpoints: 0.95" Differential Pressure Switch	347-354							
217-218	Unit 119/131 Ventilation Failure	340-3	Dry Contacts at Motor Starter	355-358							
219-220	Unit 119/131 High Filter Pressure Drop	340-22	Setpoint: 0.95" Differential Pressure Switch	359-364							
221-222	Unit 118/130 Ventilation Failure	340-4	Dry Contacts at Motor Starter	365-366	Transfer Switch Prime Power	376	Dry Contacts at Transfer Switch				
223-224	Unit 118/130 High Filter Pressure Drop	340-23	Setpoints: 0.95" Differential Pressure Switch	367-368	Transfer Switch Emergency Power	376	Dry Contacts at Transfer Switch				
225-226	Unit 117/129 Ventilation Failure	340-5	Dry Contacts at Motor Starter	369-370	Transfer Switch Prime Power Bypass	376	Dry Contacts at Transfer Switch				
227-228	Unit 117/129 High Filter Pressure Drop	340-24	Setpoints: 0.95" Differential Pressure Switch	371-372	Transfer Switch Emergency Power Bypass	376	Dry Contacts at Transfer Switch				
229-230	Unit 116/128 Ventilation Failure	340-6	Dry Contacts at Motor Starter	373-374	Transfer Switch Emergency Generator Test Start	376	Dry Contacts at Transfer Switch				
231-232	Unit 116/128 High Filter Pressure Drop	340-25	Setpoints: 0.95" Differential Pressure Switch	375-376	Emergency Generator Failure	377-1	Dry Contacts at Generator Panel				
233-234	Unit 115/127 Ventilation Failure	340-7	Dry Contacts at Motor Starter	377-378	Emergency Generator Running	377-1	Dry Contacts at Generator Panel				
235-236	Unit 115/127 High Filter Pressure Drop	340-26	Setpoint: 0.95" Differential Pressure Switch	379-386							
237-238	Unit 114/126 Ventilation Failure	340-8	Dry Contacts at Motor Starter	387-388	Lag Air Compressor Required	340-15	Setpoint: 70 PSI				
239-240	Unit 114/126 High Filter Pressure Drop	340-27	Setpoints: 0.95" Differential Pressure Switch								
241-242	Unit 113/125 Ventilation Failure	340-9	Dry Contacts at Motor Starter								



BOX "A" UNIT 297  
BOX "B" UNIT 299  
PMFL TERMINAL BOXES  
Not To Scale

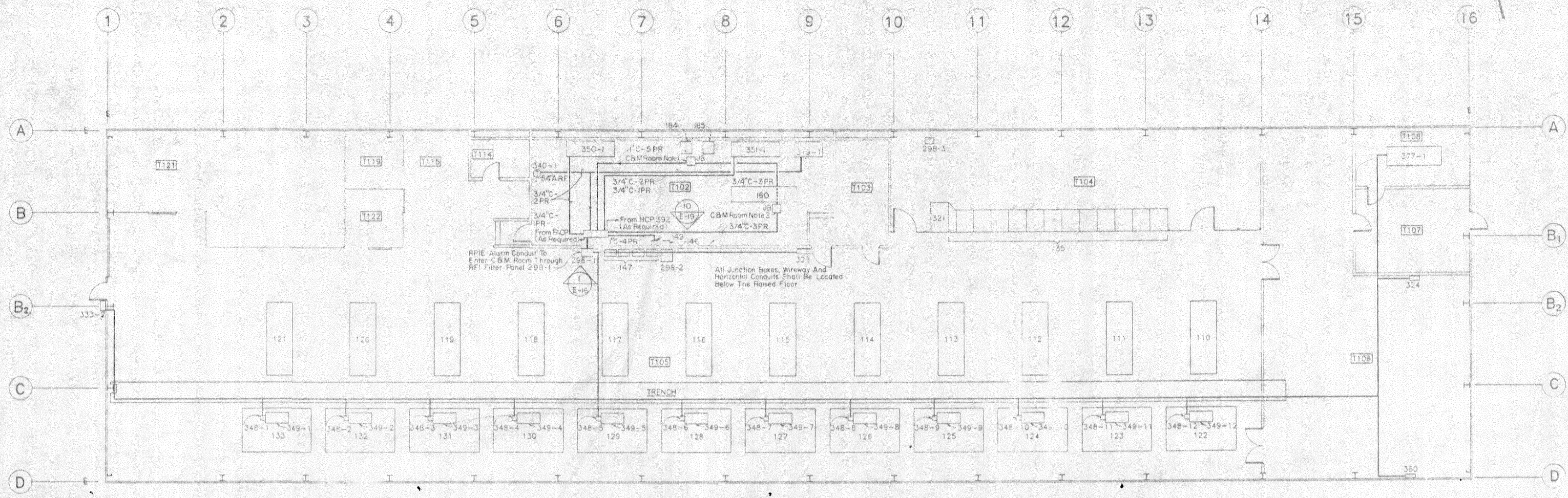
NOTE:  
THE PMFL CONTACTS, L.N.O. AND J.N.C. ARE TO BE PROVIDED FOR EACH SIGNAL. THE CONTRACTOR SHALL CONNECT THE APPROPRIATE CONTACT TO THE PMFL SYSTEM SO THAT AN OPEN CIRCUIT INDICATES FAILURE.

REVISION - 0

	CONT. NO. F19628-B6-C-D174 DATE OF DRAWING: 2 JULY, 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>PMFL CONTACT SCHEDULES</b>	DATE: NOV 30 1987 SCALE: NONE P.L. N. 458.008	
	SIZE: E CODE IDENT NO: 03538 T6 E-15	DATE: NOV 30 1987 SCALE: NONE P.L. N. 458.008		30
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION FOUR AND DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			30
	Calceiras & Spina ELECTRICAL ENGINEERS 100 W. 42nd St., 15th Fl. New York, N.Y. 10018			30



REVISIONS	
1	REVISION



**RFPI MASTER ALARM CONTACT SCHEDULE**

MONITORING POINT	DESCRIPTION
FACP - UNIT 323	N.O. CONTACT FOR FIRE SYSTEM MASTER ALARM
FACP - UNIT 323	N.O. CONTACT FOR FIRE SYSTEM TROUBLE
D.I. WATER/VELOC. PUMP CONTROL PANEL - UNIT 340	N.O. CONTACT OFF C83 FOR PUMP 340-1
D.I. WATER/VELOC. PUMP CONTROL PANEL - UNIT 340	N.O. CONTACT OFF C84 FOR PUMP 340-2
D.I. WATER/VELOC. PUMP CONTROL PANEL - UNIT 340	N.O. CONTACT OFF C85 FOR PUMP 340-1
D.I. WATER/VELOC. PUMP CONTROL PANEL - UNIT 340	N.O. CONTACT OFF C86 FOR PUMP 340-2
UPS - UNIT 319-1	N.O. CONTACT FOR UPS TROUBLE
TRANSMITTER COOLING FANS - UNITS 349-1 TO 349-12	N.C. CONTACT OFF C81 IN MOTOR STARTERS 349-1 TO 349-12
OVER TEMPERATURE C & M ROOM - UNIT 340-1	N.O. CONTACT OFF SENSOR 340-1
GENERATOR - UNIT 377-1	N.O. CONTACT FOR GENERATOR FAILURE
HEAT REJECTOR CONTROL PANEL - UNIT 324	N.O. CONTACT FOR HEAT REJECTOR CONTROL FAILURE

**CONTROL & MONITOR ROOM NOTES**

- CONTRACTOR SHALL PROVIDE A 12" x 12" x 4" JUNCTION BOX BENEATH A READILY ACCESSIBLE RAISED FLOOR PANEL NEAR UNIT 184. JUNCTION BOX SHALL CONTAIN A 30 TERMINAL STRIP. ALL PAIRS SHALL BE TERMINATED AND LABELED AS FOLLOWS:
 

TERMINALS	SIGNAL NAME	DESCRIPTION
1-2	RFPI MASTER ALARM	FROM FACP UNIT 323-2
3-4	DOOR MASTER ALARM	FROM FACP UNIT 323-1
5-6	FIRE MASTER ALARM	FROM FACP UNIT 323
7-8	FIRE MASTER TROUBLE	FROM FACP UNIT 323
9-10	GENERATOR RUNNING	FROM GENERATOR UNIT 377-1
11-14	SUBSTATION EMERGENCY SHUTDOWN (SPARE)	FROM SUBSTATION
- CONTRACTOR SHALL PROVIDE A 12" x 12" x 4" JUNCTION BOX BENEATH A READILY ACCESSIBLE RAISED FLOOR PANEL NEAR UNIT 184 AND FROM THE SUBSTATION. WIRE FILTER PANEL 298-2 SHALL HAVE 16 COILS OF CONDUCTOR LEFT AT THE JUNCTION BOX. WIRE PAIRS FOR THE SUBSTATION MONITOR (2 PAIRS) SHALL PASS THROUGH THIS JUNCTION BOX.
- CONDUIT SIZES SHOWN IN THE CONTROL & MONITOR ROOM ARE BASED ON A CABLE OUTSIDE DIAMETER OF 0.75" AND CONDUIT FILL NOT EXCEEDING 40 PERCENT. IF THE CONTRACTOR USES LARGER CABLE OR DIFFERENT CABLE ROUTING, HE WILL BE RESPONSIBLE TO REVISE CONDUIT SIZE TO MAINTAIN CONDUIT FILL LESS THAN 40 PERCENT.

- NOTES:**
- ALL CONTACTS FOR THE RFPI MASTER ALARM SYSTEM SHALL BE WIRED IN PARALLEL TO THE ALARM ANNUNCIATOR PANEL, UNIT 333-2, FOR RFPI MASTER ALARM SIGNALING. ALL CONDUCTORS SHALL BE NO. 12 AWG THHN OR THWN EXCEPT WHERE PASSING THROUGH RFPI FILTER PANEL 298-1 AND IN THE C & M ROOM, WHERE NO. 16 AWG STRANDED, SHIELDED, TWISTED PAIRS SHALL BE USED. (SEE FILTER PANEL SCHEDULE THIS DRAWING).
  - THE ALARM ANNUNCIATOR PANEL SHALL PROVIDE CONTACT CLOSURE FOR SIGNALING SECTOR 6 RFPI MASTER ALARM TO SECTOR 4 VIA THE FIBER OPTIC COMMUNICATIONS LINK. CONTRACTOR SHALL PROVIDE CONDUCTORS FROM THESE CONTACTS INTO THE CONTROL & MONITOR ROOM AS INDICATED IN THE CONTROL & MONITOR ROOM NOTES THIS DRAWING.

**PLAN**  
Scale 1/8" = 1'-0"

**RFPI FILTER PANELS**

UNIT NO.	DESCRIPTION	LOCATION (SEE DWG. A-4)
298-1	Signal, Control, C & M Room (See Schedule Below)	Transmitter Area (T108)
298-2	Communications, C & M Room (See Schedule Below)	Transmitter Area (T105)
298-3	Panel 300-F Power (4-50A 208/120V)	Power Distribution Room (T104)

**RFPI FILTER PANEL 298-1**  
SIGNAL, CONTROL, CONDUCTORS INTO CONTROL & MONITOR ROOM

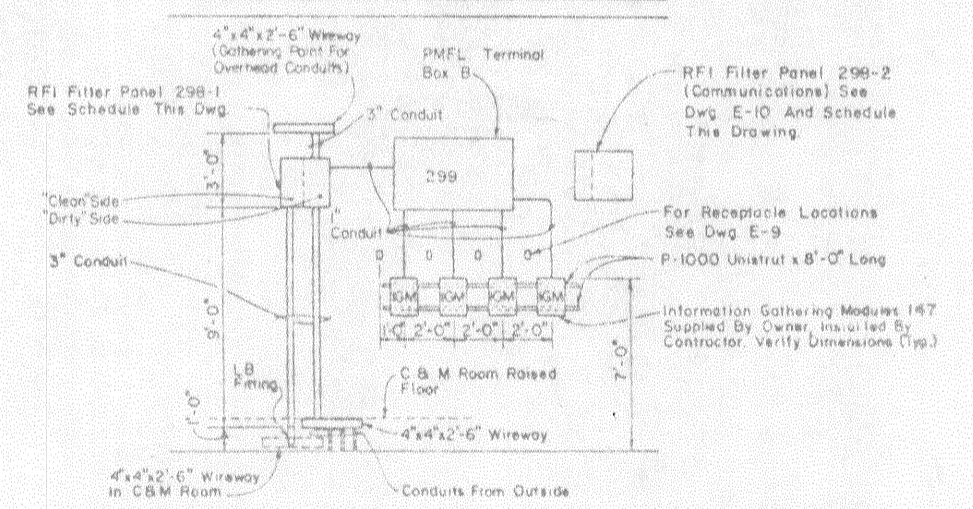
FROM (OUTSIDE)	TO (INSIDE)	# PAIRS	REMARKS
Halon Control Panel 392	Detectors, Manual Pulls, Abort Switches, Horns/Lights, Emergency Shutdown Control Panel, Etc.	Per Contractor	24 VDC
FACP 323	Fire Alarm Bells	Per Contractor	24 VDC
Substation	Fiber Optic Multiplexers 184 & 185	2	Substation Monitoring
Substation	Fiber Optic Multiplexers 184 & 185 Via Maintenance Console 160	1	Emergency Shutdown
A.C. Dry Coolers 250-2 and 351-2	A.C. Units 350-1 and 351-1	4 (Verify)	24 VDC, Use 3 Amp Fuses for Dry Cooler CFI Circuit
Alarm Annunciator Panel 333-2	Over/Under Temperature Thermostat, 340-1 and UPS Module 319-1	1	24 VDC RFPI Master Alarm Input Signal, Sector 6
DM's 147 (4 Ea)	Site Master B Unit 349	4	"Door Master Alarm" Signal to Sector 4
Door Alarm Panel 333-1	Fiber Optic Multiplexers 184 & 185	1	"Fire System Master Alarm" and "Fire System Master Trouble" Signals to Sector 4
FACP 323	Fiber Optic Multiplexers 184 & 185	2	"Fire System Master Alarm" and "Fire System Master Trouble" Signals to Sector 4
Generator 377-1	Fiber Optic Multiplexers 184 & 185	1	"Generator Running" Signal to Sector 4
Alarm Annunciator Panel 333-2	Fiber Optic Multiplexers 184 & 185	1	24 VDC, Sector 6 RFPI Master Alarm to Sector 4

ALL WIRES PASSING THROUGH RFPI FILTER PANEL 298-1 SHALL BE NO. 16 AWG STRANDED, SHIELDED, TWISTED PAIRS. SHIELDS SHALL BE BONDED TO THE FILTER PANEL ENCLOSURE.

**RFPI FILTER PANEL 298-2**  
COMMUNICATIONS CONDUCTORS INTO CONTROL & MONITOR ROOM

FROM (OUTSIDE)	TO (INSIDE)	# WIRES	REMARKS
Telephone System	Telephones	6	High Impedance #22 AWG

(SEE DRAWING E-10 FOR COMMUNICATIONS PLAN)



**ELEVATION**  
Scale 1/8" = 1'-0"

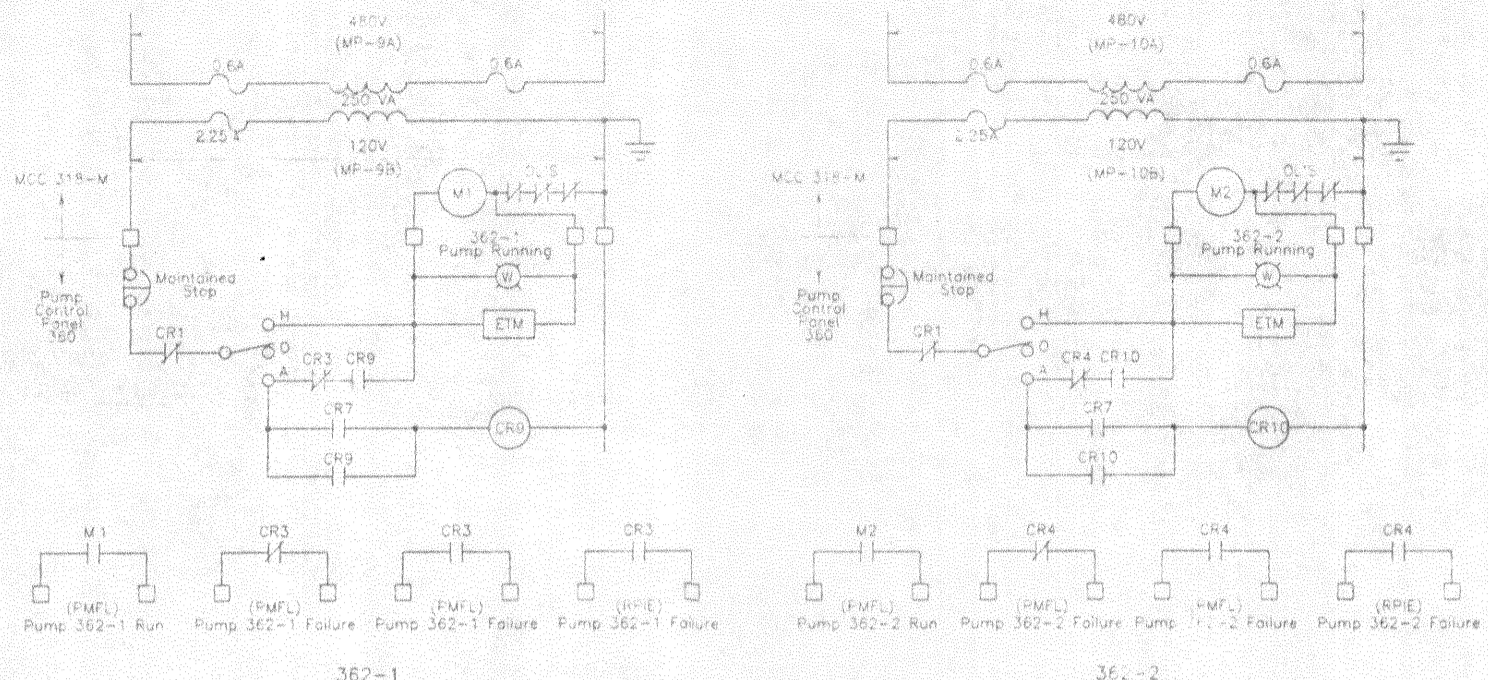
- NOTE:**
- MODEL NUMBERS OF ELECTRICAL PANEL SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNITED COMPANY, EQUAL PRODUCTS OF POWERSTRUT, KINSEOP OR EQUAL WILL BE CONSIDERED FOR REPLACEMENT.

REVISION - 0

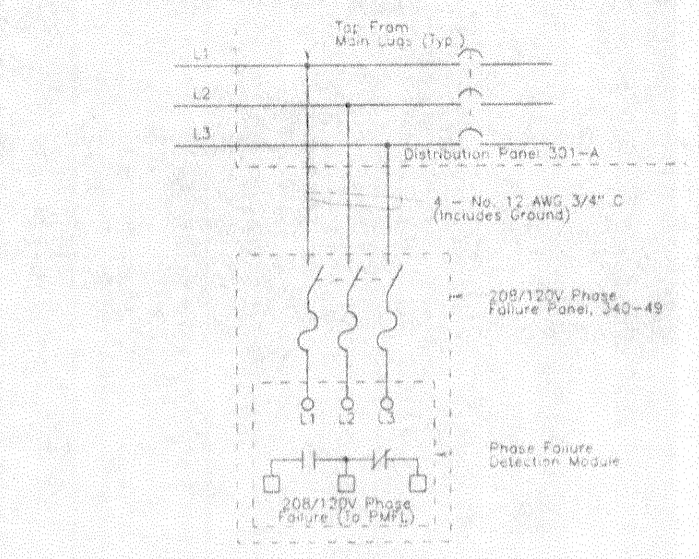
	DIV. NO. 75624-86-00-74 DATE OF DRAWING 2 JULY, 1987 DRAWN ENGR CHECKED ISSUED 30 NOV, 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 RFPI MASTER ALARM/RFI FILTER PLAN & SCHEDULES		
	SHEET NO. E 03538 DRAWING NO. T6 E-16	DATE NOV 30, 1987 SCALE AS SHOWN SHEET NO. 31		
	NO ALTERATION PERMITTED WITHOUT WRITTEN AUTHORITY OF THE NEW YORK STATE EDUCATION DEPARTMENT		DATE NOV 30, 1987 SCALE AS SHOWN SHEET NO. 31	
	NO ALTERATION PERMITTED WITHOUT WRITTEN AUTHORITY OF THE NEW YORK STATE EDUCATION DEPARTMENT		DATE NOV 30, 1987 SCALE AS SHOWN SHEET NO. 31	



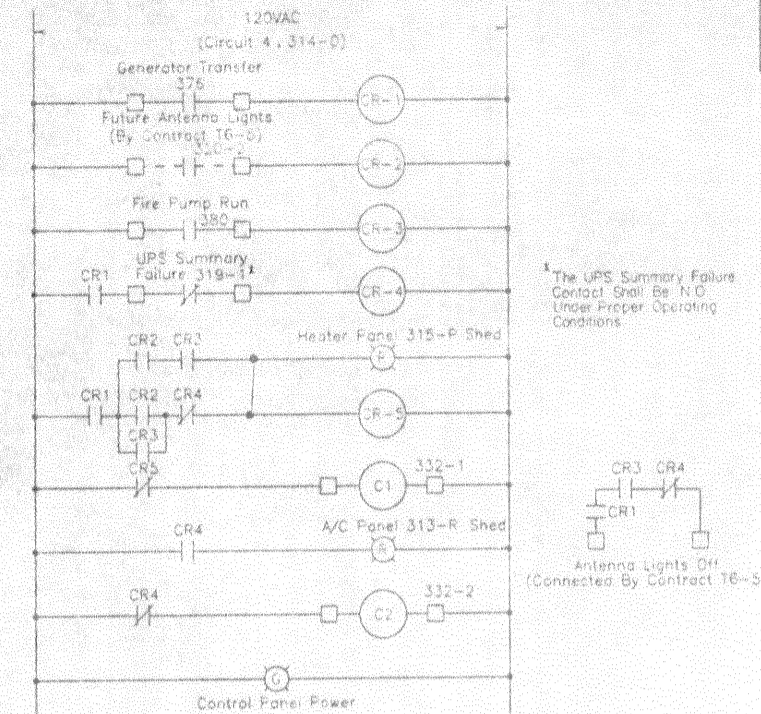
REVISIONS	
NO.	DESCRIPTION
1	REVISED



**GLYCOL PUMP CONTROL DIAGRAMS**  
Relays, Switches And Pilot Lights Are Located In Panel 360

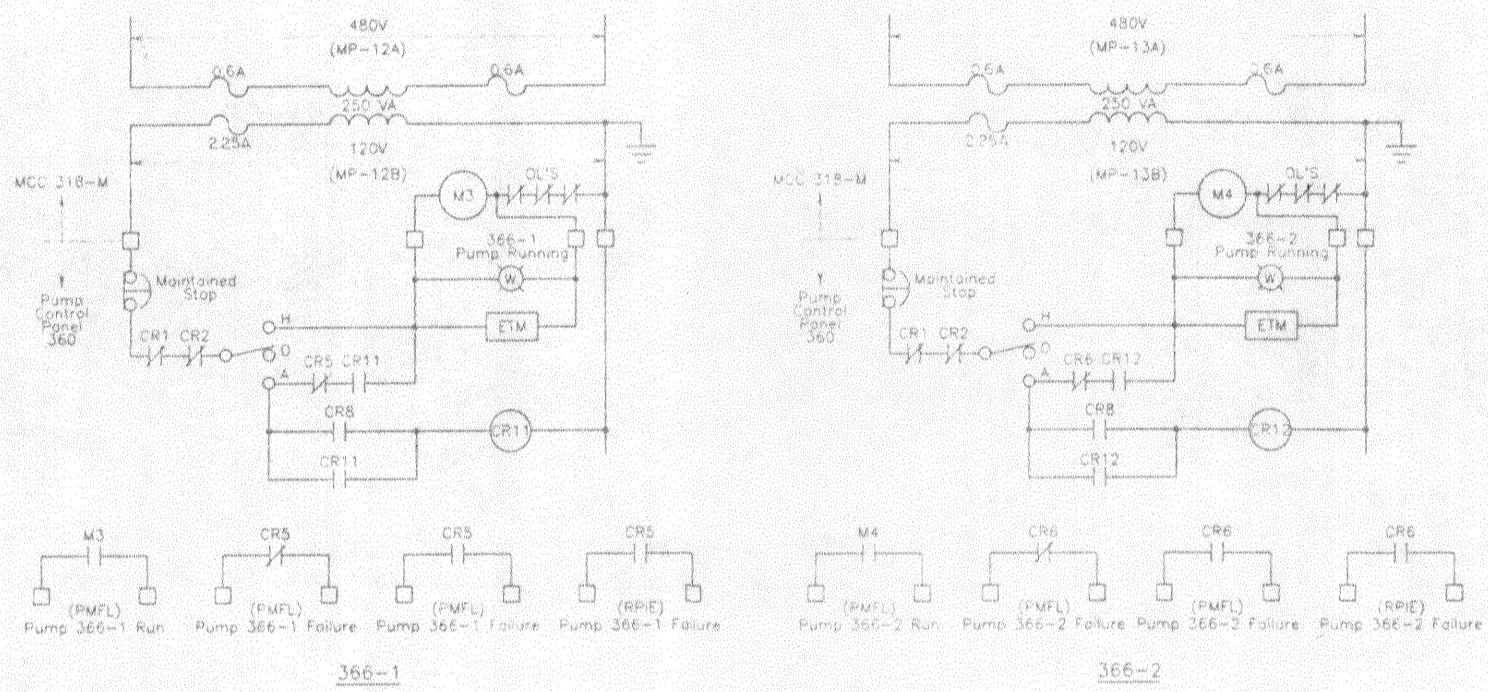


**208/120V PHASE FAILURE PANEL 340-49**  
See Drawing E-17 For Location Of Control Panel 332-3

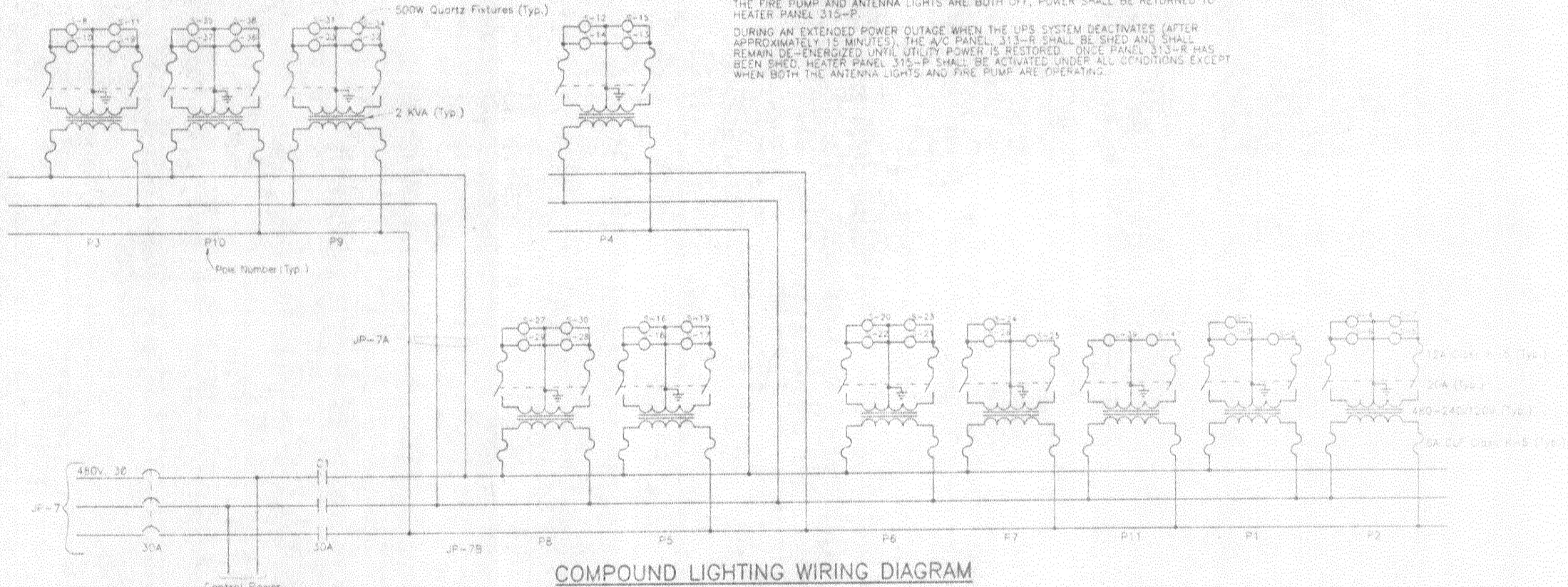


**LOAD SHED CONTROL PANEL 332-3 CONTROL DIAGRAM**  
See Drawing E-17 For Location Of Control Panel 332-3

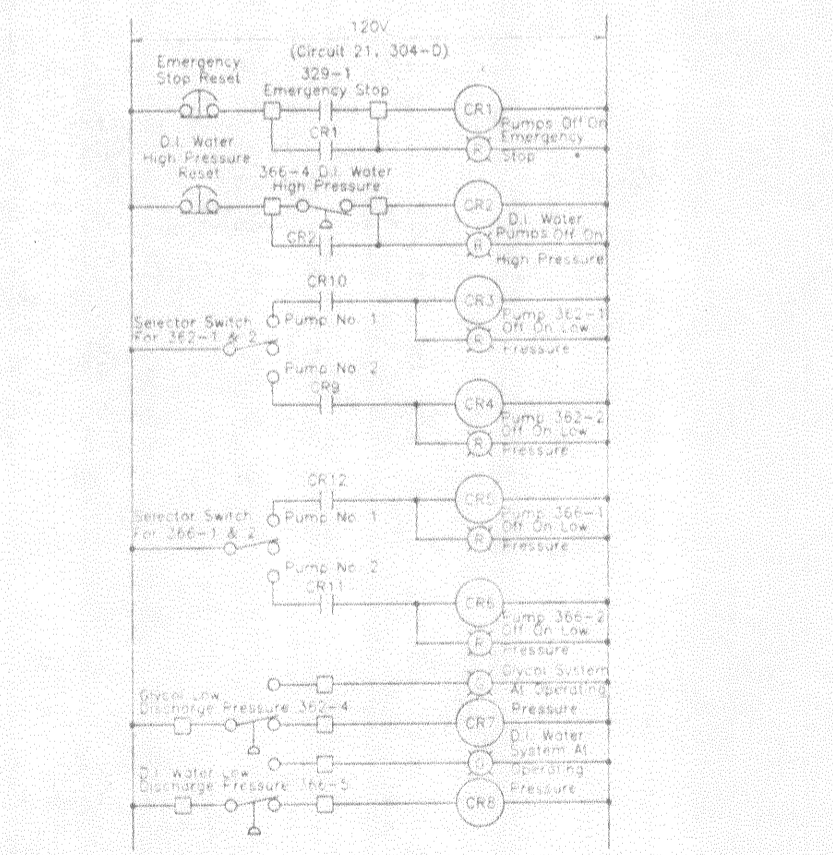
**SEQUENCE OF OPERATION - LOAD SHED CONTROL PANEL 332-3**  
THE FUNCTION OF THE STANDBY POWER LOAD CONTROL SYSTEM IS TO PROVIDE STANDBY POWER TO LOADS ON A PRIORITY BASIS.  
CONTACTORS 332-1 AND 332-2 SHALL BE CONTROLLED FROM A NEMA 12 CONTROL ENCLOSURE LOCATED ADJACENT TO THE CONTACTORS AS SHOWN ON DRAWING E-13. THE ENCLOSURE COVER SHALL INCLUDE A CONTROL PANEL POWER LIGHT, HEATER PANEL 315-P SHED LIGHT, AND A/C PANEL 313-R SHED LIGHT AND APPROPRIATE ENGRAVED NAMEPLATES.  
THE ENCLOSURE SHALL CONTAIN CONTROL RELAYS AND APPURTENANCES AS SHOWN AND SPECIFIED TO PROVIDE THE FOLLOWING SEQUENCE:  
UNDER EMERGENCY CONDITIONS WITH BUILDING LOSS OF UTILITY POWER AND THE GENERATOR ON IF THE UPS SYSTEM IS STILL ABLE TO PROVIDE POWER TO CRITICAL LOADS AND EITHER THE FIRE PUMP STARTS OR THE ANTENNA LIGHTS ARE TURNED ON THE HEATER PANEL 315-P SHALL BE SHED BY DE-ENERGIZING CONTACTOR 332-1. WHEN THE FIRE PUMP AND ANTENNA LIGHTS ARE BOTH OFF, POWER SHALL BE RETURNED TO HEATER PANEL 315-P.  
DURING AN EXTENDED POWER OUTAGE WHEN THE UPS SYSTEM DEACTIVATES (AFTER APPROXIMATELY 15 MINUTES), THE A/C PANEL 313-R SHALL BE SHED AND SHALL REMAIN DE-ENERGIZED UNTIL UTILITY POWER IS RESTORED. ONCE PANEL 313-R HAS BEEN SHED, HEATER PANEL 315-P SHALL BE ACTIVATED UNDER ALL CONDITIONS EXCEPT WHEN BOTH THE ANTENNA LIGHTS AND FIRE PUMP ARE OPERATING.



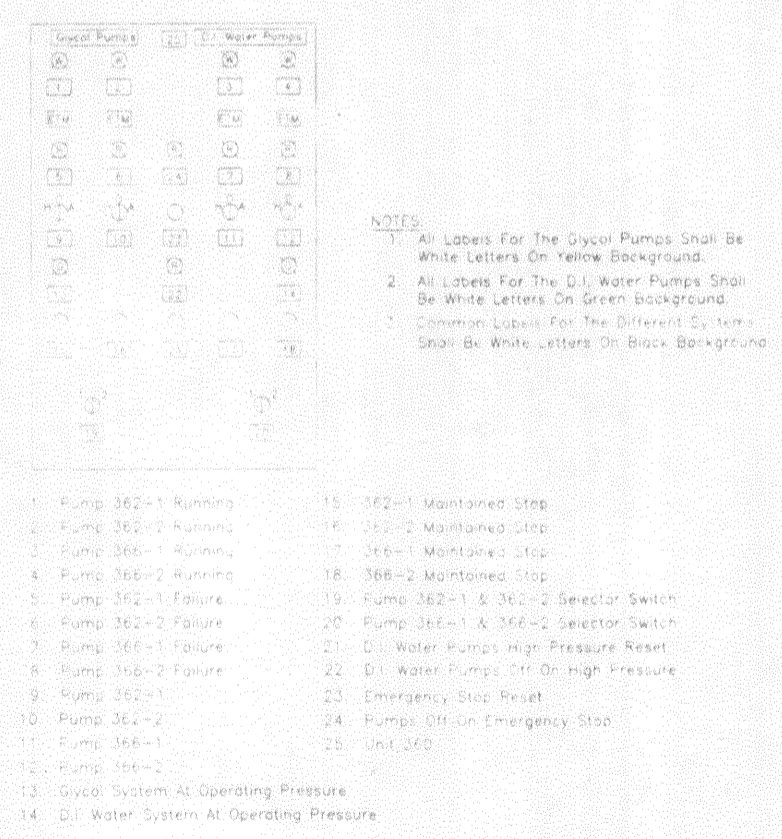
**D.I. WATER PUMP CONTROL DIAGRAMS**  
Relays, Switches And Pilot Lights Are Located In Panel 360



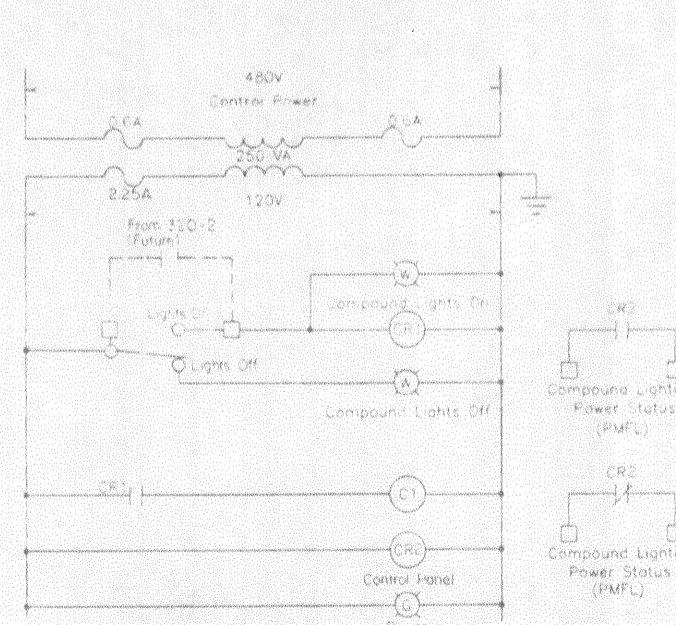
**COMPOUND LIGHTING WIRING DIAGRAM**



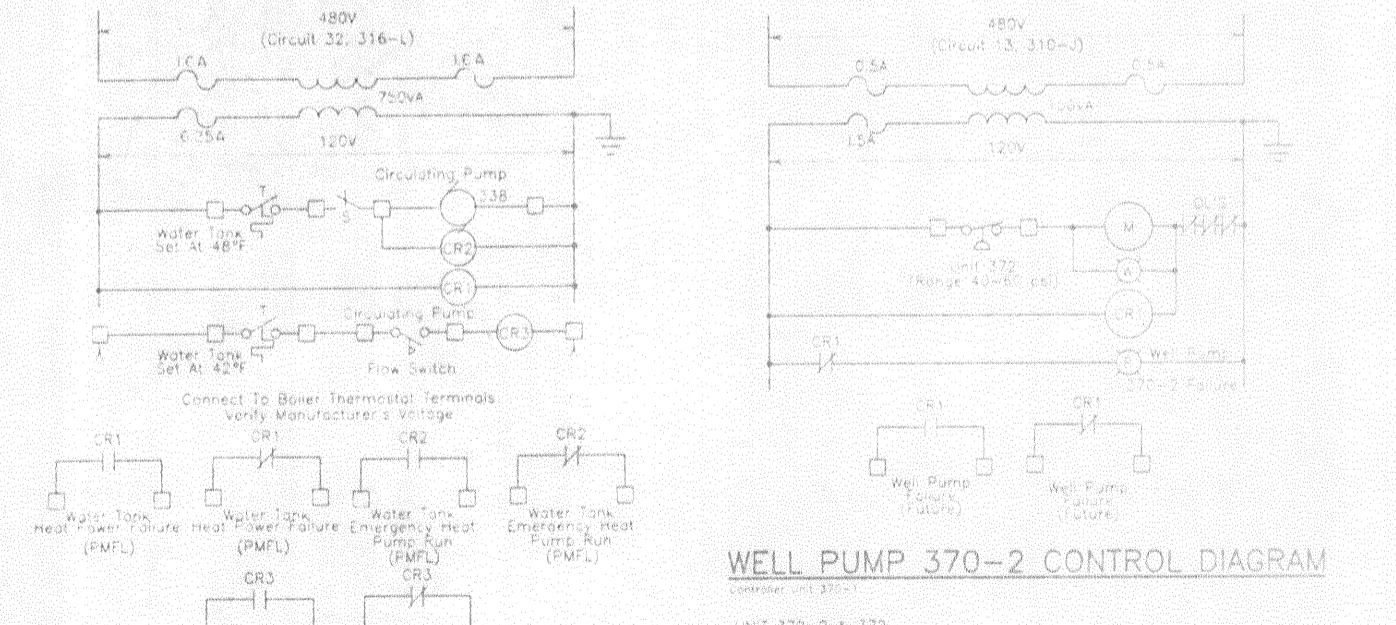
**D.I. WATER/GLYCOL PUMP MISCELLANEOUS CONTROLS**  
Relays, Switches, Lights And Control Relays Are Located In Panel 360



**D.I. WATER/GLYCOL PUMP CONTROL PANEL 360**



**COMPOUND AREA LIGHTING CONTACTOR PANEL 320-1 CONTROL DIAGRAM**  
Relays, Switches, Lights And Control Relays Are Located In Panel 360

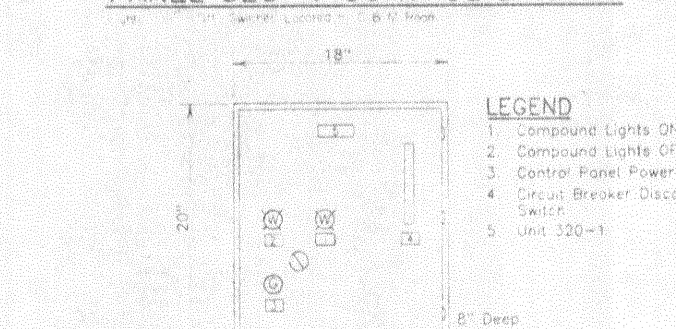


**WATER TANK BOILER CONTROLS**  
Unit 370-2 & 372  
Control Sequence  
Pressure Switch 372, Located In The Incoming Water Line Shall Cycle Well Pump 370-2

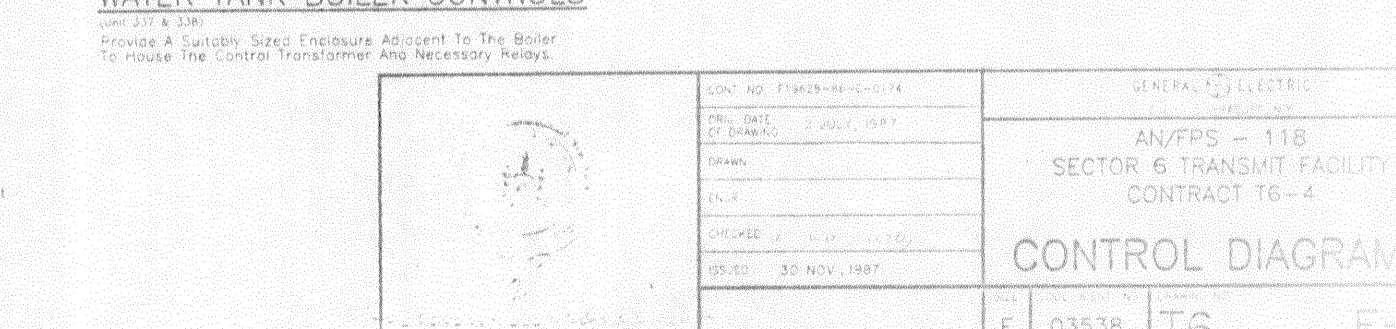
**WELL PUMP 370-2 CONTROL DIAGRAM**  
Control Unit 370-1

**D.I. WATER/GLYCOL PUMP SEQUENCE OF OPERATION:**  
THE D.I. WATER AND GLYCOL PUMPS SHALL BE CONTROLLED FROM A NEMA 12 CONTROL ENCLOSURE LOCATED ADJACENT TO THE PUMPS. THE ENCLOSURE COVER SHALL INCLUDE A CONTROL PANEL POWER LIGHT, TIME METER, AND STOP AND RESET PUSH BUTTON. THE ENCLOSURE SHALL CONTAIN ALL CONTROL RELAYS AND APPURTENANCES AS SHOWN OR SPECIFIED.  
EACH PUMP SHALL HAVE A DEDICATED HAND-OFF-AUTO SWITCH.  
A PUMP OPERATED IN THE "HAND" MODE SHALL BE ON UNDER ALL CIRCUMSTANCES EXCEPT OVERLOAD TRIP, EMERGENCY SHUTDOWN OR HIGH PRESSURE SHUTDOWN (HIGH PRESSURE SHUTDOWN APPLIES ONLY TO THE D.I. WATER PUMPS).  
IN THE "OFF" MODE A PUMP SHALL BE COMPLETELY DISABLED.  
IN THE "AUTO" MODE, PUMP OPERATION SHALL BE LEAD/FOLLOW WITH AUTOMATIC START-UP OF THE LEAD PUMP UPON LOSS OF PRESSURE IN THE PUMP DISCHARGE MANIFOLD AND AUTOMATIC SHUTDOWN OF ALL PUMPS IN CASE OF EMERGENCY SHUTDOWN OR HIGH PRESSURE SHUTDOWN (HIGH PRESSURE SHUTDOWN APPLIES ONLY TO D.I. WATER PUMPS).

THE FOLLOWING NORMAL PUMP START-UP SEQUENCE APPLIES TO BOTH THE D.I. WATER AND GLYCOL PUMPS:  
WITH THE LEAD PUMP SELECTOR SWITCH AND THE HAND-OFF-AUTO SWITCH FOR THE LEAD PUMP BOTH IN THE "OFF" POSITION, THE HAND-OFF-AUTO SWITCH FOR THE LEAD PUMP SHALL BE TURNED TO THE "AUTO" POSITION AND THAT PUMP WILL IMMEDIATELY START. WHEN NORMAL DISCHARGE PRESSURE HAS BEEN REACHED, THE SYSTEM AT OPERATING PRESSURE LIGHT WILL COME ON AND THE LEAD PUMP'S "HAND-OFF-AUTO" SWITCH CAN BE TURNED TO THE "AUTO" POSITION AND THE LEAD PUMP SELECTOR SWITCH CAN BE TURNED TO SELECT THE PUMP WHICH IS ALREADY OPERATING.  
THE AUTOMATIC CHANGEOVER SEQUENCE SHALL THEN BE AS FOLLOWS:  
IF DURING AUTOMATIC OPERATION, THE PUMP DISCHARGE MANIFOLD LOSES PRESSURE THE LEAD PUMP WILL BE STARTED AND THE LEAD PUMP WILL IMMEDIATELY SHUT DOWN. THE LEAD PUMP WILL CONTINUE TO RUN UNTIL MANUALLY TURNED OFF OR UNTIL SHUTDOWN BY OVERLOAD FAILURE OR BY THE EMERGENCY SHUTDOWN SYSTEM. ALL INDICATIONS OF PUMP FAILURE WILL BE SENT TO THE FMI, SYSTEM AND RPI MASTER ALARM SYSTEM.  
THE HIGH PRESSURE SHUTDOWN SEQUENCE SHALL BE AS FOLLOWS (APPLIES TO D.I. WATER PUMPS ONLY):  
IF HIGH PRESSURE IS SENSED IN THE D.I. WATER SUPPLY LINE TO THE TRANSMITTER, BOTH D.I. WATER PUMPS WILL BE AUTOMATICALLY SHUTDOWN. RESET SHALL BE MANUAL ONLY.



**COMPOUND LIGHTING PANEL 320-1**



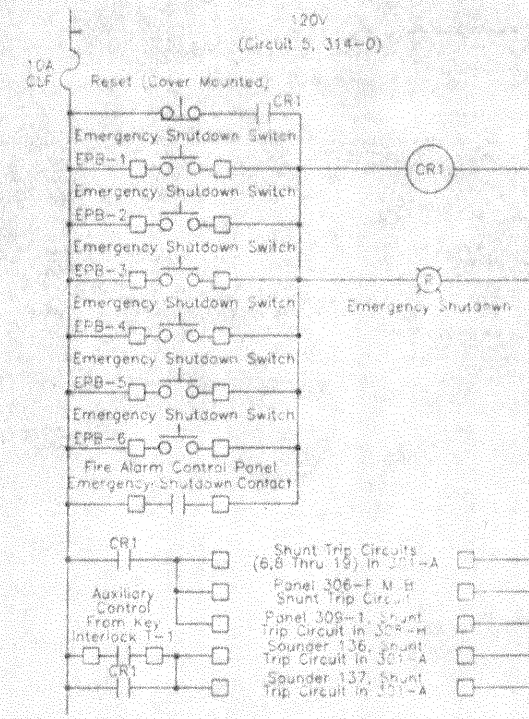
**WELL PUMP 370-2 CONTROL DIAGRAM**  
Control Unit 370-1

**WATER TANK BOILER CONTROLS**  
Unit 370-2 & 372  
Control Sequence  
Pressure Switch 372, Located In The Incoming Water Line Shall Cycle Well Pump 370-2

**COMPOUND LIGHTING PANEL 320-1**

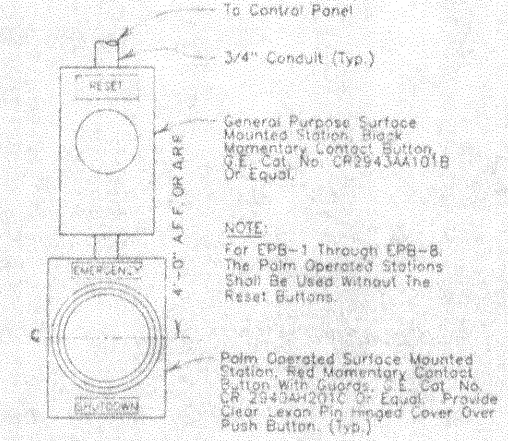
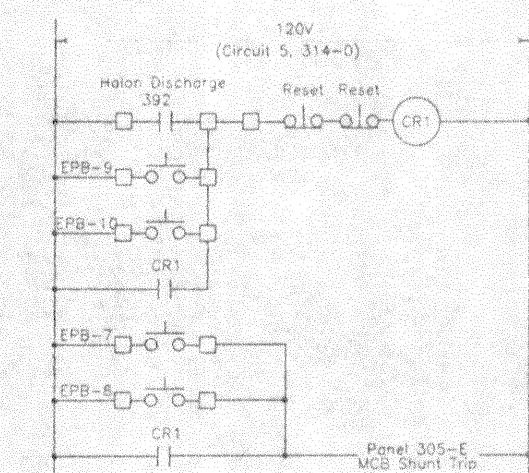
CONT. NO. F19829-646-0174 DATE OF DRAWING 2 JULY 1987 DRAWN IN CHARGE CHECKED ISSUED 30 NOV 1987	GENERAL ELECTRIC AN/FPS - 118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>CONTROL DIAGRAMS</b> E 03538 T6 E-17 32
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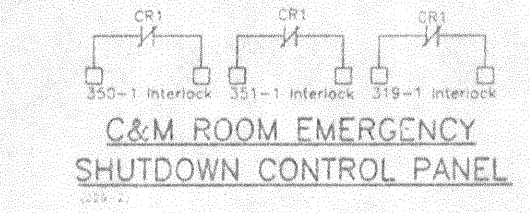


EMERGENCY SHUTDOWN CONTROL PANELS  
CONTROL SEQUENCE:  
TRANSMITTER  
UPON THE CLOSING OF AN EMERGENCY SHUTDOWN SWITCH (EPB-1 TO EPB-6) OR THE CLOSING OF THE FIRE ALARM CONTROL PANEL CONTACT, THE POWER SUPPLY DISTRIBUTION CIRCUITS PANEL 301-A, THE POWER SUPPLY UPS PANEL 306-F, THE 480V TRANSFORMER AIR COOLING PANEL 309-1, THE GROUND FEEDER CIRCUIT BREAKERS IN 301-A AND THE 480V TRANSFORMER FEEDERS SHALL BE SHUNT TRIPPED AND A REMOTE CONTACT TO THE WATER AND GYDOL PUMP CONTROL PANEL 360 SHALL INTERRUPT THE CONTROL CIRCUITS, TURNING THE PUMPS OFF. THE RESET BUTTON SHALL BE LOCATED ON THE EMERGENCY SHUTDOWN CONTROL PANEL 301-A. AN ADDITIONAL RESET BUTTON FOR THE PUMPS IS LOCATED ON CONTROL PANEL 360.  
C&M ROOM  
UPON ACTUATION OF ONE OF THE C&M ROOM EMERGENCY PUSHBUTTONS (EPB-9 OR EPB-10) OR DISCHARGE OF THE HALON SYSTEM, SHUNT TRIPPING OF THE UPS DISTRIBUTION PANEL 301-B WILL OCCUR AND INTERLOCKS WILL SHUT DOWN THE C&M ROOM AIR CONDITIONERS 300-1 AND 301-1, AND UPS MODULE 319-1. IN ADDITION, ACTUATION OF ONE OF THE TECH-2 INHERENT EMERGENCY PUSHBUTTONS (EPB-7 OR EPB-8) WILL SHUNT TRIP THE UPS DISTRIBUTION PANEL 301-B AND UPS MODULE 319-1, BUT WILL NOT AFFECT THE C&M ROOM AIR CONDITIONING.

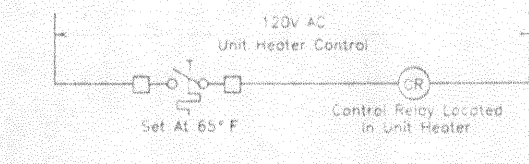
TRANSMITTER EMERGENCY SHUTDOWN CONTROL DIAGRAM (329-1)



EMERGENCY PUSHBUTTON STATION DETAIL (EPB-9 THROUGH EPB-8, SIMILAR)

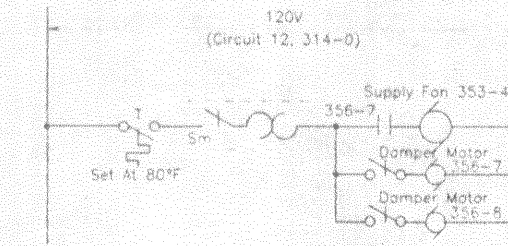


C&M ROOM EMERGENCY SHUTDOWN CONTROL PANEL (329-2)



UNIT HEATER CONTROL DIAGRAM

UNITS 352-1 TO 352-10  
CONTROL SEQUENCE:  
EACH UNIT HEATER SHALL BE CONTROLLED BY A 120 VOLT HEATING THERMOSTAT LOCATED AS SHOWN ON THE DRAWINGS. UNIT HEATERS SHALL INCLUDE INTEGRAL CONTROL RELAYS OR CONTACTORS FOR CONNECTION OF THE 120 VOLT THERMOSTAT.



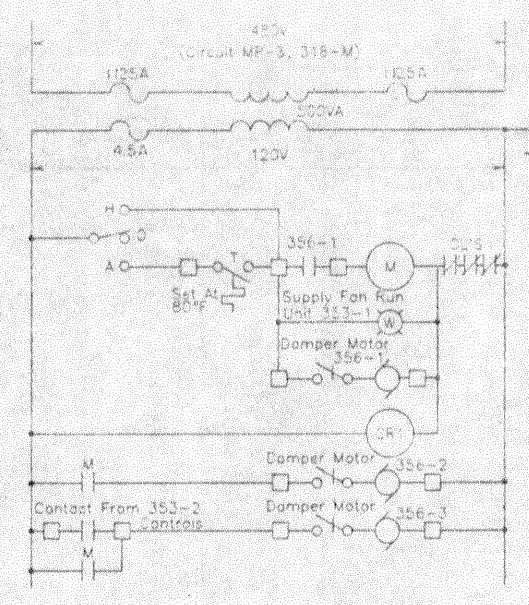
UNIT 353-4 SUPPLY FAN CONTROL DIAGRAM

UNITS 353-4, 356-2, 359-8  
CONTROL SEQUENCE:  
A LINE VOLTAGE THERMOSTAT SHALL OPERATE THE SUPPLY FAN AND DAMPER MOTORS. UPON POWER FAILURE, THE DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION. A CONTACT FROM DAMPER MOTOR 356-7 SHALL BE IN THE POWER SUPPLY TO THE FAN TO ALLOW THE DAMPER TO FULLY OPEN PRIOR TO ACTIVATION OF THE FAN.

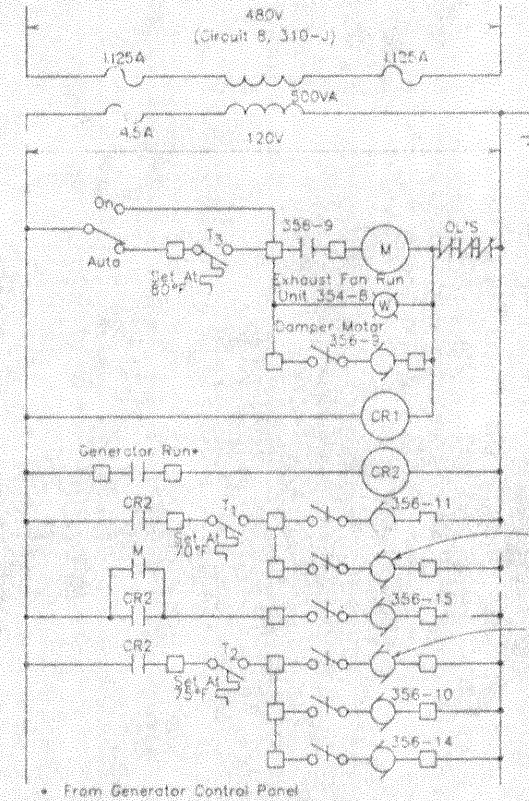


TOILET EXHAUST FAN 354-6 CONTROL DIAGRAM

UNIT 354-6  
CONTROL SEQUENCE:  
A MANUAL MOTOR STARTER SWITCH, LOCATED AS SHOWN ON THE POWER PLAN SHALL OPERATE THE FAN ON AN AS NEEDED BASIS.

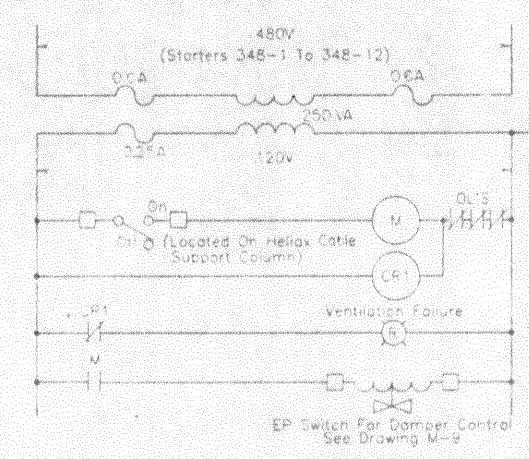


UNIT 353-1 SUPPLY FAN CONTROL DIAGRAM (M.G. 318-M)



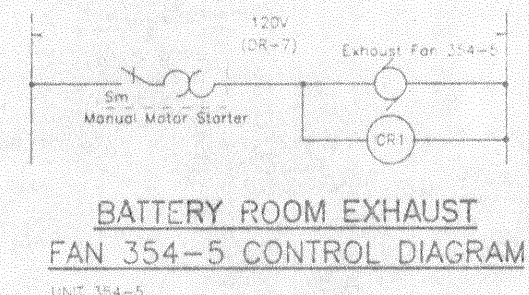
GENERATOR ROOM EXHAUST FAN 354-8 CONTROL DIAGRAM (UNIT 349-10)

UNITS 354-8, 356-9, 356-10, 356-11, 356-12, 356-13, 356-14, 356-15  
CONTROL SEQUENCE:  
WITH THE ON-AUTO SWITCH LOCATED ON THE STARTER IN THE ON POSITION, THE FAN AND DAMPER MOTORS 356-9 AND 356-15 SHALL OPERATE.  
IN THE AUTO POSITION, THERMOSTAT T3 SHALL ACTIVATE THE FAN AND DAMPER MOTORS 356-9 AND 356-15 FOR SUMMER COOLING.  
ALSO, THERMOSTATS T1 AND T2 AND A GENERATOR RUN CONTACT SHALL OPERATE THE DAMPER MOTORS 356-10, 356-11, 356-12, 356-13 AND 356-14 WHEN THE GENERATOR IS IN OPERATION TO DISPERSE AIR FROM THE RADIATOR INTO THE ROOM OR OUTSIDE AS NECESSARY TO MAINTAIN ROOM TEMPERATURE. REGARDLESS OF ROOM TEMPERATURE, THE GENERATOR RUN CONTACT ALSO CONTROLS DAMPER MOTOR 356-15 FOR COMBUSTION AIR.



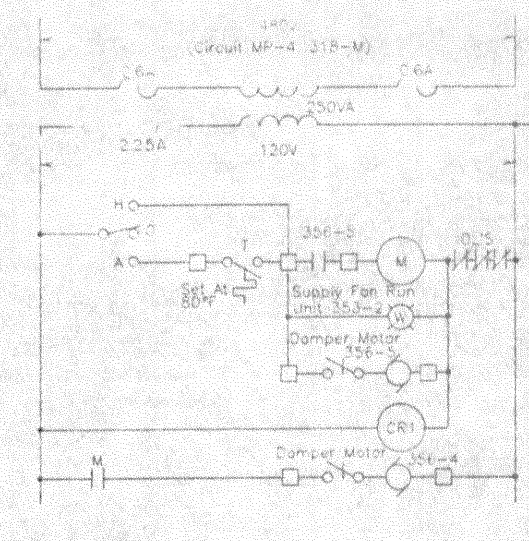
UNITS 349-1 TO 349-12 TRANSMITTER VENTILATION CONTROL DIAGRAM

UNITS 349-1 THROUGH 349-12  
CONTROL SEQUENCE:  
A WALL SWITCH, LOCATED ON THE HELIX SUPPORT COLUMN ADJACENT TO THE TRANSMITTERS SHALL OPERATE THE VENTILATION FANS.



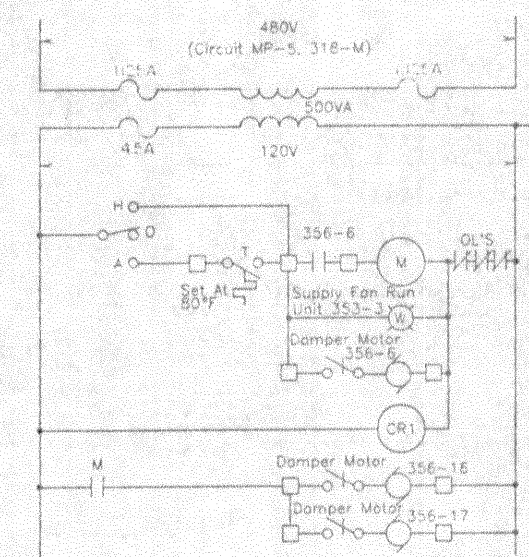
BATTERY ROOM EXHAUST FAN 354-5 CONTROL DIAGRAM (UNIT 354-5)

CONTROL SEQUENCE:  
A MANUAL MOTOR STARTER SWITCH, LOCATED AT THE FAN, SHALL OPERATE THE FAN. THE FAN SHALL OPERATE CONTINUOUSLY UNTIL A SIGNAL SHALL BE SENT TO THE PML SYSTEM WHENEVER THE FAN LOSES POWER.



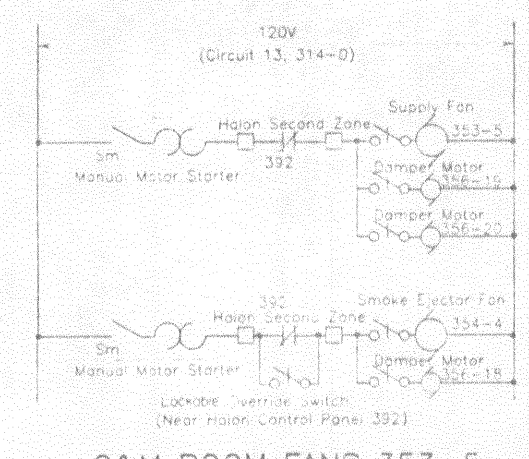
UNIT 353-2 SUPPLY FAN CONTROL DIAGRAM (M.G. 318-M)

UNITS 353-1 TO 353-3, 356-1 TO 356-6, 356-16 AND 356-17  
CONTROL SEQUENCE:  
A HAND-OFF-AUTO SWITCH, LOCATED IN MCC 318-M SHALL OPERATE THE FANS AND DAMPER MOTORS.  
IN THE AUTO MODE, A LINE VOLTAGE THERMOSTAT SHALL OPERATE EACH SUPPLY FAN AND THE ASSOCIATED DAMPERS. A CONTACT FROM THE DAMPER MOTOR ON THE SUCTION SIDE OF THE FAN SHALL ALLOW THE DAMPER TO FULLY OPEN PRIOR TO ACTIVATION OF THE SUPPLY FAN. UPON POWER FAILURE, ALL DAMPER MOTORS SHALL SPRING TO THE CLOSED POSITION.  
DAMPER MOTOR 356-3 SHALL OPERATE WHENEVER FAN 353-1 AND/OR 353-2 OPERATE.



UNIT 353-3 SUPPLY FAN CONTROL DIAGRAM (M.G. 318-M)

NOTE:  
Two PIMFL Contacts, 1 N.O. and 1 N.C. Are To Be Provided For Each PIMFL Signal. The Controller Shall Connect The Appropriate Contact To The PIMFL System So That An Open Circuit Indicates Failure.



C&M ROOM FANS 353-5 & 354-4 CONTROL DIAGRAMS

UNITS 353-5, 354-4, 356-16, 356-19, 356-20  
CONTROL SEQUENCE:  
MANUAL MOTOR STARTERS, LOCATED AS SHOWN ON THE POWER PLAN SHALL OPERATE THE FANS AND DAMPER MOTORS. UPON POWER FAILURE, THE DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION. UPON INITIATION OF THE SECOND HALON FIRE DETECTION ZONE, POWER TO THE FANS AND DAMPER MOTORS SHALL BE INTERRUPTED. POWER TO FAN 354-4 AND DAMPER MOTOR 356-18 SHALL BE RESTORABLE BY MANUALLY CLOSING A LOCKABLE OVERRIDE SWITCH LOCATED NEAR CONTROL PANEL 392.

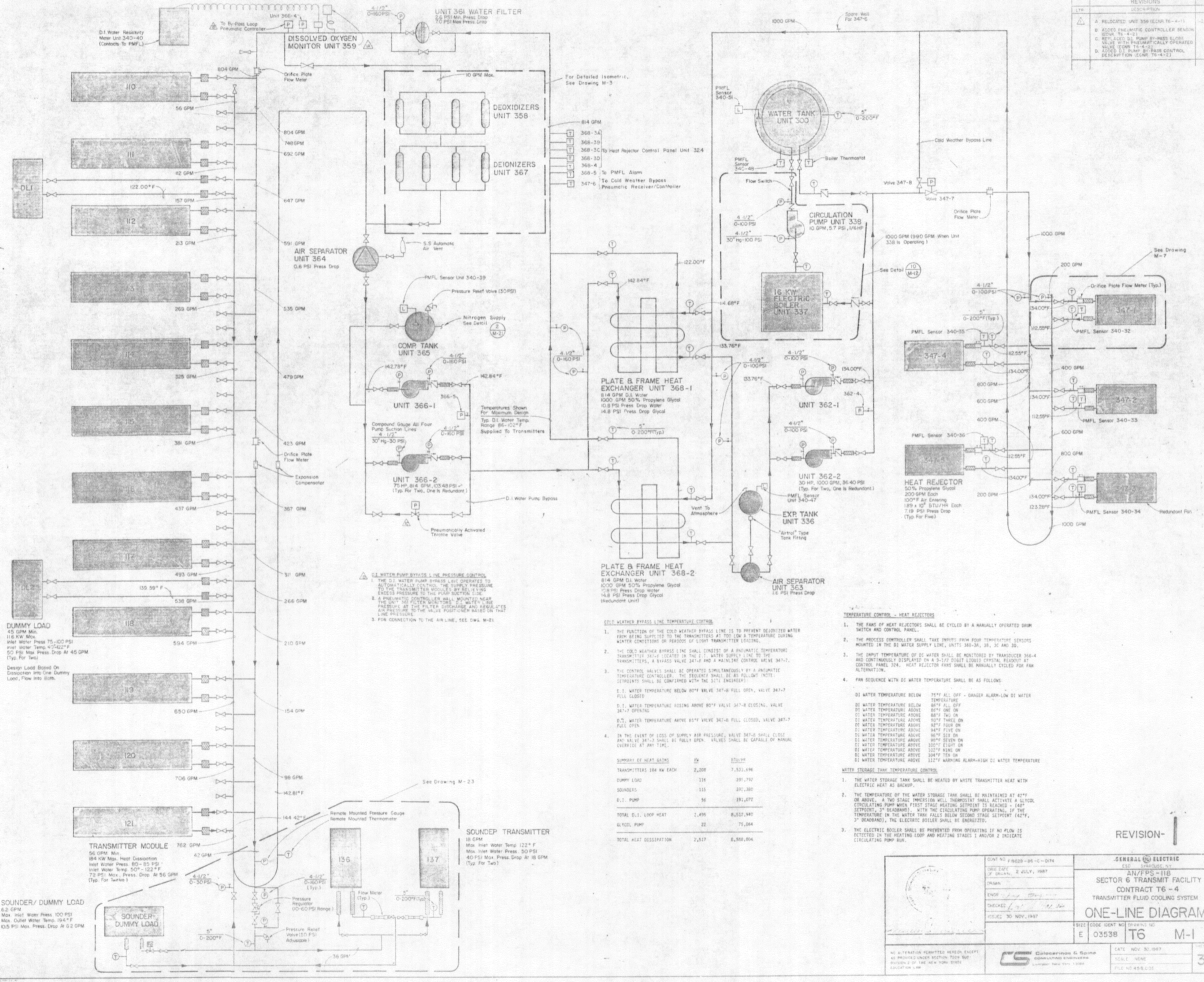
COND NO	F18038-00-0114	GENERAL ELECTRIC
DATE OF DRAWING	2 JULY 1987	AN/FPS-118
PROJECT		SECTOR 6 TRANSMIT FACILITY
CONTRACT		CONTRACT T6-4
ISSUED	30 NOV 1987	CONTROL DIAGRAMS
REV	E 03538	T6 E-18
DATE	NOV 20 1987	33







REV.	DESCRIPTION	DATE
A	RELOCATED UNIT 359 (ECON T6-4-1)	12-1-87
B	ADDED PNEUMATIC CONTROLLER SENSOR (ECON T6-4-2)	
C	REPLACED DI PUMP BY-PASS GLOBE VALVE WITH PNEUMATICALLY OPERATED VALVE (ECON T6-4-2)	
D	ADDED DI PUMP BY-PASS CONTROL DESCRIPTION (ECON T6-4-2)	



**DI WATER PUMP BY-PASS LINE PRESSURE CONTROL**

- THE DI WATER PUMP BY-PASS LINE OPERATES TO AUTOMATICALLY CONTROL THE SUPPLY PRESSURE TO THE TRANSMITTER MODULES BY RELIEVING EXCESS PRESSURE TO THE PUMP SUCTION SIDE.
- A PNEUMATIC CONTROLLER WILL MOUNTED NEAR THE UNIT AND FILTER MONITORS DI WATER LINE PRESSURE AT THE FILTER DISCHARGE AND REGULATES AIR PRESSURE TO THE VALVE POSITIONER BASED ON THAT LINE PRESSURE.
- FOR CONNECTION TO THE AIR LINE, SEE DWS M-21.

**COLD WEATHER BY-PASS LINE TEMPERATURE CONTROL**

- THE FUNCTION OF THE COLD WEATHER BY-PASS LINE IS TO PREVENT DEIONIZED WATER FROM BEING SUPPLIED TO THE TRANSMITTERS AT TOO LOW A TEMPERATURE DURING WINTER CONDITIONS OR PERIODS OF LIGHT TRANSMITTER LOADING.
- THE COLD WEATHER BY-PASS LINE SHALL CONSIST OF A PNEUMATIC TEMPERATURE TRANSDUCER 347-6 LOCATED IN THE DI WATER SUPPLY LINE TO THE TRANSMITTERS, A BY-PASS VALVE 347-8 AND A MAINLINE CONTROL VALVE 347-7.
- THE CONTROL VALVES SHALL BE OPERATED SIMULTANEOUSLY BY A PNEUMATIC TEMPERATURE CONTROLLER. THE SEQUENCE SHALL BE AS FOLLOWS (NOTE: SETPOINTS SHALL BE CONFIRMED WITH THE SITE ENGINEER):
  - DI WATER TEMPERATURE BELOW 80°F VALVE 347-8 FULL OPEN, VALVE 347-7 FULL CLOSED
  - DI WATER TEMPERATURE RISING ABOVE 80°F VALVE 347-8 CLOSING, VALVE 347-7 OPENING
  - DI WATER TEMPERATURE ABOVE 85°F VALVE 347-8 FULL CLOSED, VALVE 347-7 FULL OPEN
- IN THE EVENT OF LOSS OF SUPPLY AIR PRESSURE, VALVE 347-8 SHALL CLOSE AND VALVE 347-7 SHALL BE FULLY OPEN. VALVES SHALL BE CAPABLE OF MANUAL OVERRIDE AT ANY TIME.

	KW	Btu/HR
SUMMARY OF HEAT GAINS		
TRANSMITTERS 184 KW EACH	2,308	7,533,696
DUMMY LOAD	116	395,792
SOUNDERS	115	392,380
DI WATER PUMP	56	191,072
TOTAL DI WATER LOOP HEAT	2,495	8,512,940
GLYCOL PUMP	22	75,064
TOTAL HEAT DISSIPATION	2,517	8,588,004

**TEMPERATURE CONTROL - HEAT REJECTORS**

- THE FANS OF HEAT REJECTORS SHALL BE CYCLED BY A MANUALLY OPERATED DRUM SWITCH AND CONTROL PANEL.
- THE PROCESS CONTROLLER SHALL TAKE INPUTS FROM FOUR TEMPERATURE SENSORS MOUNTED IN THE DI WATER SUPPLY LINE, UNITS 368-3A, 38, 3C AND 3D.
- THE INPUT TEMPERATURE OF DI WATER SHALL BE MONITORED BY TRANSDUCER 366-4 AND CONTINUOUSLY DISPLAYED ON A 3-1/2 DIGIT LIQUID CRYSTAL DISPLAY AT CONTROL PANEL 324. HEAT REJECTOR FANS SHALL BE MANUALLY CYCLED FOR FAN ALTERNATION.
- FAN SEQUENCE WITH DI WATER TEMPERATURE SHALL BE AS FOLLOWS:

DI WATER TEMPERATURE BELOW 75°F ALL OFF - DANGER ALARM-LOW DI WATER TEMPERATURE

DI WATER TEMPERATURE BELOW 80°F ALL OFF

DI WATER TEMPERATURE ABOVE 80°F ONE ON

DI WATER TEMPERATURE ABOVE 88°F TWO ON

DI WATER TEMPERATURE ABOVE 90°F THREE ON

DI WATER TEMPERATURE ABOVE 92°F FOUR ON

DI WATER TEMPERATURE ABOVE 94°F FIVE ON

DI WATER TEMPERATURE ABOVE 96°F SIX ON

DI WATER TEMPERATURE ABOVE 98°F SEVEN ON

DI WATER TEMPERATURE ABOVE 100°F EIGHT ON

DI WATER TEMPERATURE ABOVE 102°F NINE ON

DI WATER TEMPERATURE ABOVE 104°F TEN ON

DI WATER TEMPERATURE ABOVE 112°F WARNING ALARM-HIGH DI WATER TEMPERATURE

**WATER STORAGE TANK TEMPERATURE CONTROL**

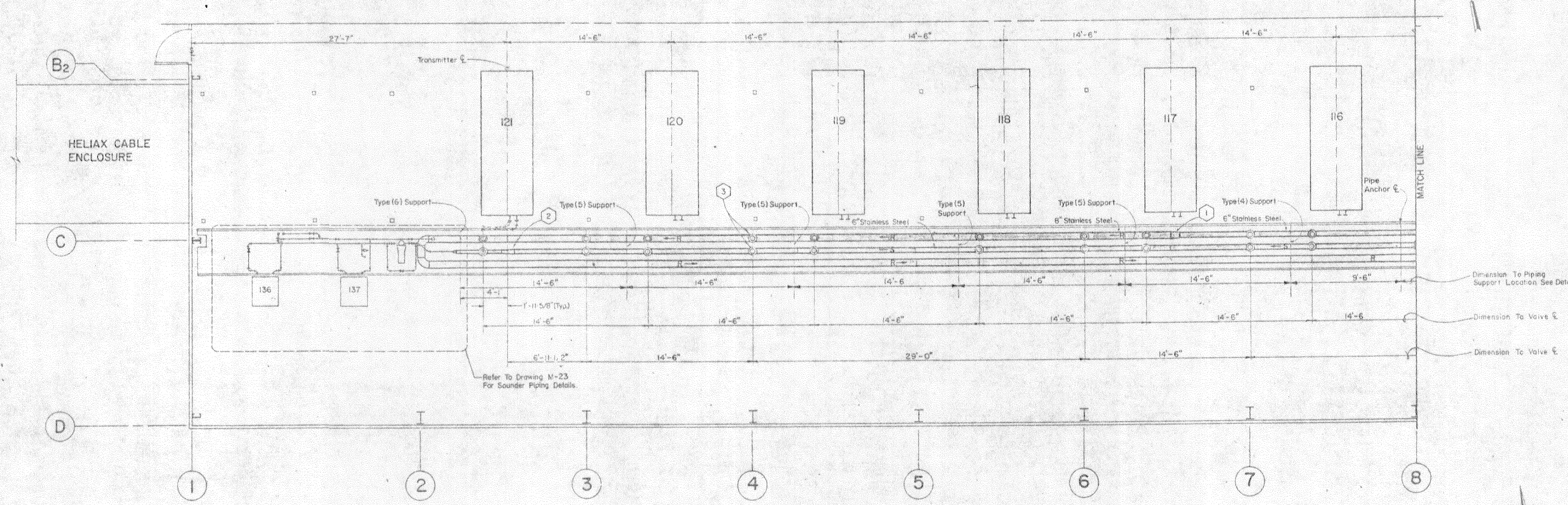
- THE WATER STORAGE TANK SHALL BE HEATED BY WASTE TRANSMITTER HEAT WITH ELECTRIC HEAT AS BACKUP.
- THE TEMPERATURE OF THE WATER STORAGE TANK SHALL BE MAINTAINED AT 42°F OR ABOVE. A TWO STAGE IMMERSION WELL THERMOSTAT SHALL ACTIVATE A GLYCOL CIRCULATING PUMP WHEN FIRST STAGE HEATING SETPOINT IS REACHED + (48° SETPOINT, 3° DEADBAND), WITH THE CIRCULATING PUMP OPERATING, IF THE TEMPERATURE IN THE WATER TANK FALLS BELOW SECOND STAGE SETPOINT (42°F, 3° DEADBAND), THE ELECTRIC BOILER SHALL BE ENERGIZED.
- THE ELECTRIC BOILER SHALL BE PREVENTED FROM OPERATING IF NO FLOW IS DETECTED IN THE HEATING LOOP AND HEATING STAGES 1 AND/OR 2 INDICATE CIRCULATING PUMP RUN.

REVISION- 1

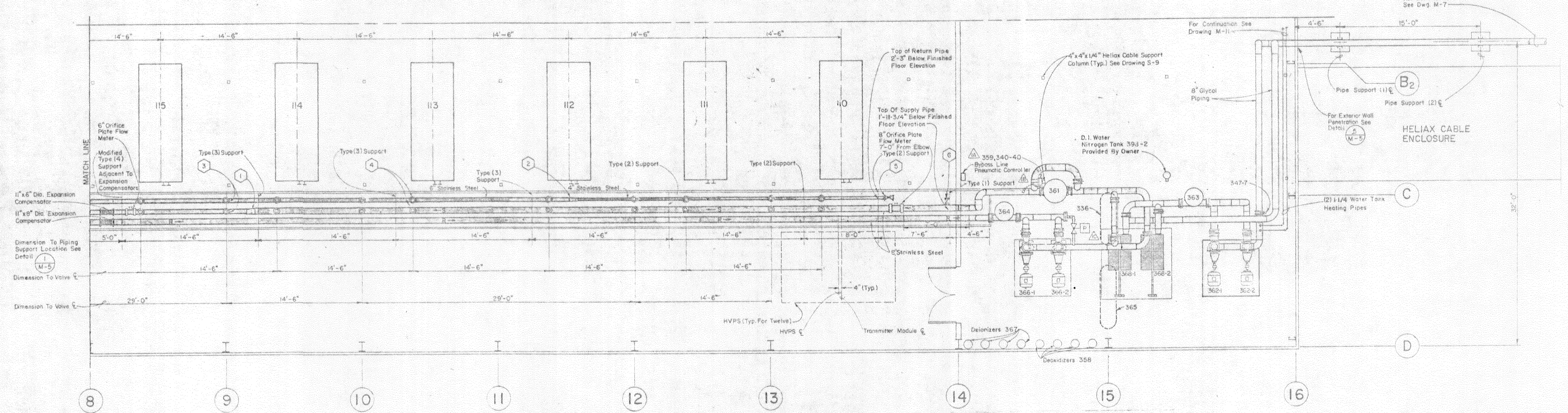
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	<b>ONE-LINE DIAGRAM</b>			
	SIZE CODE IDENT NO DRAWING NO E 03538 T6 M-1	DATE NOV 30, 1987 SCALE NONE FILE NO 498.03E	<b>35</b>	
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7009 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			



REV	DESCRIPTION	DATE
A	RELOCATED UNIT 359 (CDNR T6-4-1)	12-86
B	ADDED PNEUMATIC CONTROLLER (CDNR T6-4-2)	
C	RELEASED 1/2" WATER BYPASS GLOBE VALVE WITH PNEUMATICALLY ACTIVATED VALVE (CDNR T6-4-3)	



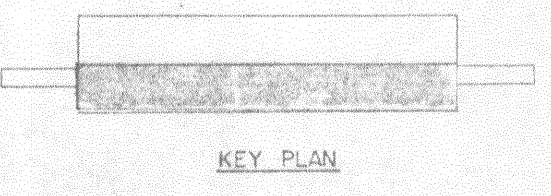
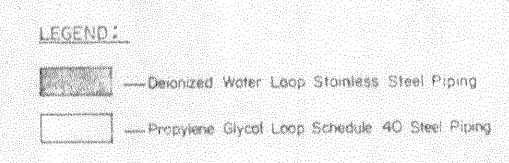
**PARTIAL PLAN - LEFT HALF**  
Scale: 1/4" = 1'-0"



**PARTIAL PLAN - RIGHT HALF**  
Scale: 1/4" = 1'-0"

- GENERAL NOTES:**
- THE TRANSMITTERS AND HIGH VOLTAGE POWER SUPPLIES WILL BE INSTALLED BY OTHERS DURING OR AFTER THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL ENSURE CLEAR SPACE IS MAINTAINED FOR EQUIPMENT INSTALLATION.
  - TOP FLANGES OF ALL MAIN PIPING SHALL BE MAINTAINED BELOW THE TRENCH COVERS. DUMMY LOAD TAPS AND TRANSMITTER TAKEOFF PIPING SHALL BE REMOVED BY THE CONTRACTOR AFTER SYSTEM FLOW AND PRESSURE TEST TO FACILITATE TRANSMITTER AND POWER SUPPLY INSTALLATION.
  - SEE DRAWING M-8 FOR TYPICAL TRANSMITTER, HIGH VOLTAGE POWER SUPPLY CONFIGURATION.
  - THIS DRAWING IS THE CONTROL DRAWING FOR TRANSMITTER PLACEMENT. POWER SUPPLIES ARE PLACED WITH REFERENCE TO RESPECTIVE TRANSMITTER.
  - PIPING SHALL BE INSTALLED TO MAINTAIN UNIFORM PITCH UPWARDS IN THE DIRECTION OF FLOW APPROXIMATELY .005 IN/FT. FOR SUPPLY AND .004 IN./FT. FOR RETURN.
  - FOR PIPE SUPPORT DETAILS AND DIMENSIONS, SEE DRAWING M-5.
  - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND PIPING ELEVATIONS PRIOR TO CONSTRUCTION.
  - PROVIDE 1" DRAIN VALVES ON DOWNSTREAM, BOTTOM SIDE OF PIPE, NEXT TO RETURN LINE ECCENTRIC REDUCERS.
  - CUMULATIVE TOLERANCE ON SUPPLY AND RETURN TAPS TO BE  $\pm 1/8"$ . THIS TOLERANCE IS REQUIRED TO ASSURE CLEARANCE BETWEEN CONTRACTOR INSTALLED PIPING AND OWNER INSTALLED TRANSMITTER EQUIPMENT WHEN PIPING UNDERGOES THERMAL AND PRESSURE EXPANSION.
  - AS A MINIMUM, FLANGED JOINTS SHALL BE PROVIDED AS SHOWN. TO EASE INSTALLATION, ADDITIONAL FLANGED JOINTS MAY BE ADDED AT CONTRACTOR'S DISCRETION, WITH THE CONCURRENCE OF THE SITE ENGINEER.

- SPECIAL NOTES**
- 8" x 6" (316 S.S.) ECCENTRIC REDUCER, ALIGN TOP OF PIPING.
  - 6" x 4" (316 S.S.) ECCENTRIC REDUCER, ALIGN TOP OF PIPING.
  - 3" FLANGED DUMMY LOAD COOLING WATER CONNECTION (TYP.).
  - 3" FLANGED TRANSMITTER COOLING WATER CONNECTION (TYP.).
  - 4" RETURN LINE DUMP VALVE, RETURN LINE LOW POINT.
  - 8" SUPPLY LINE DUMP VALVE, SUPPLY LINE LOW POINT.

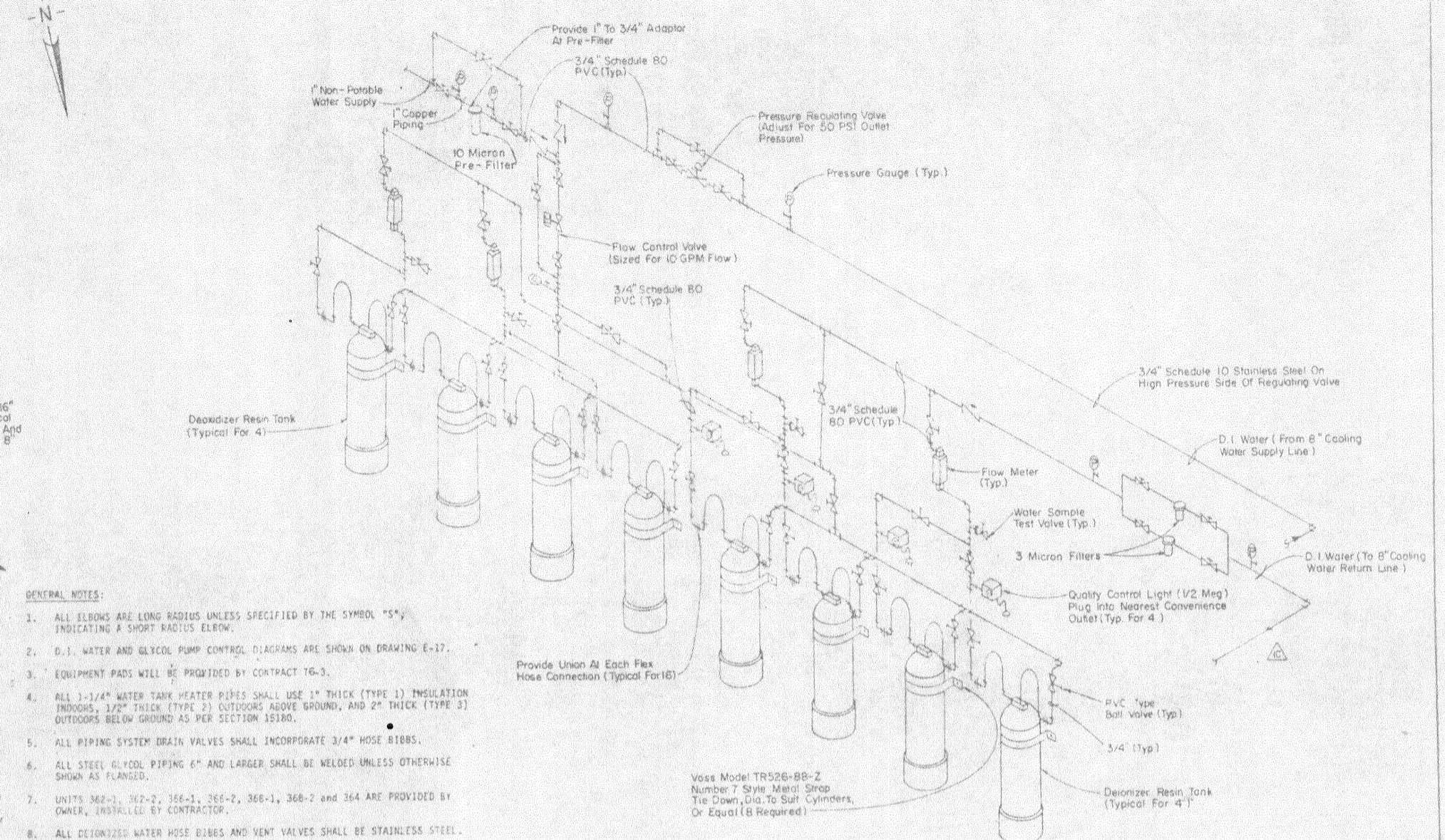
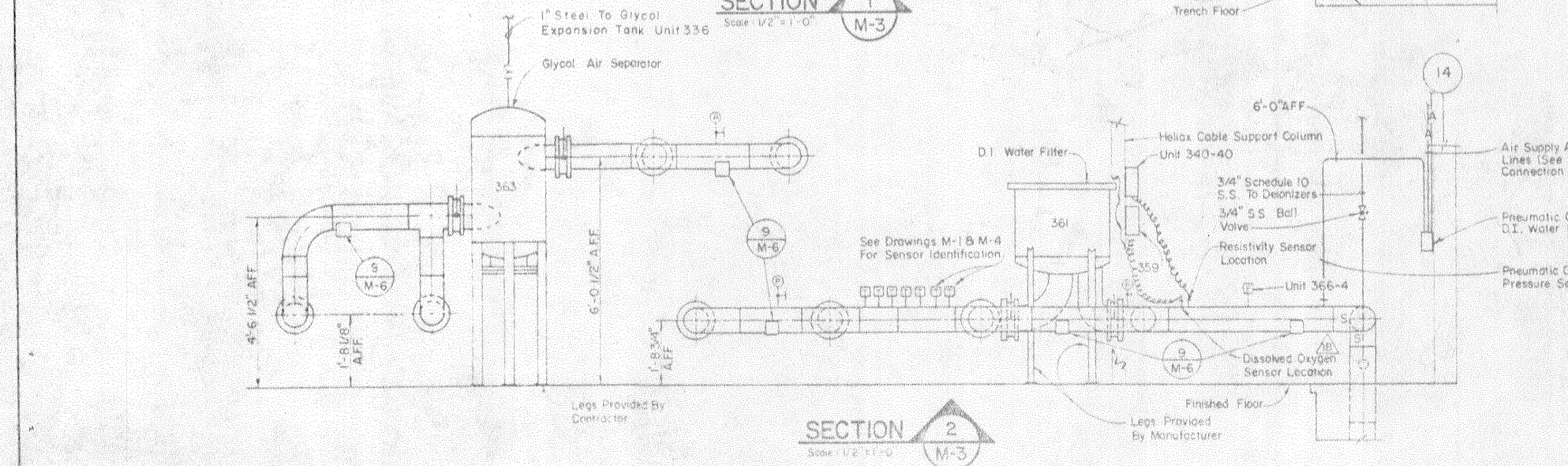
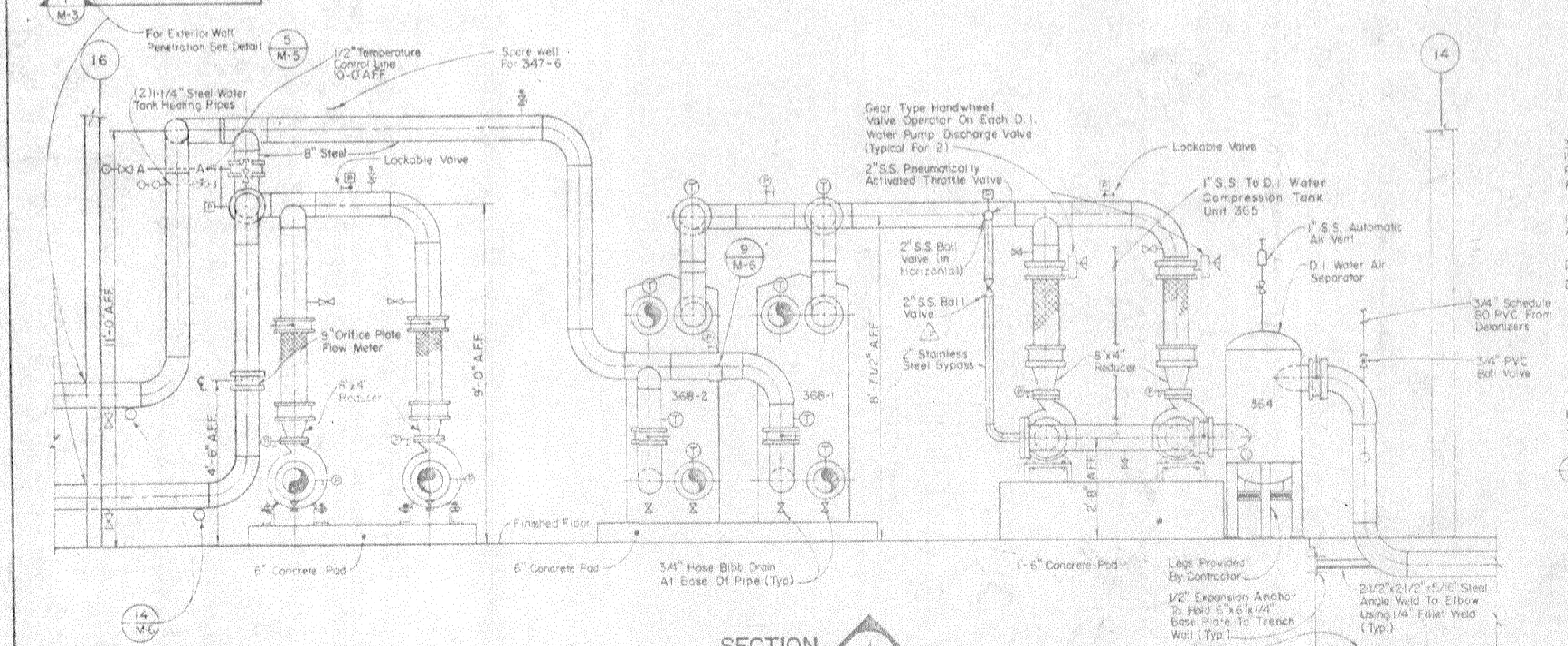
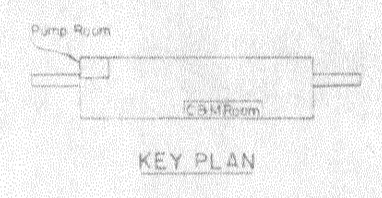
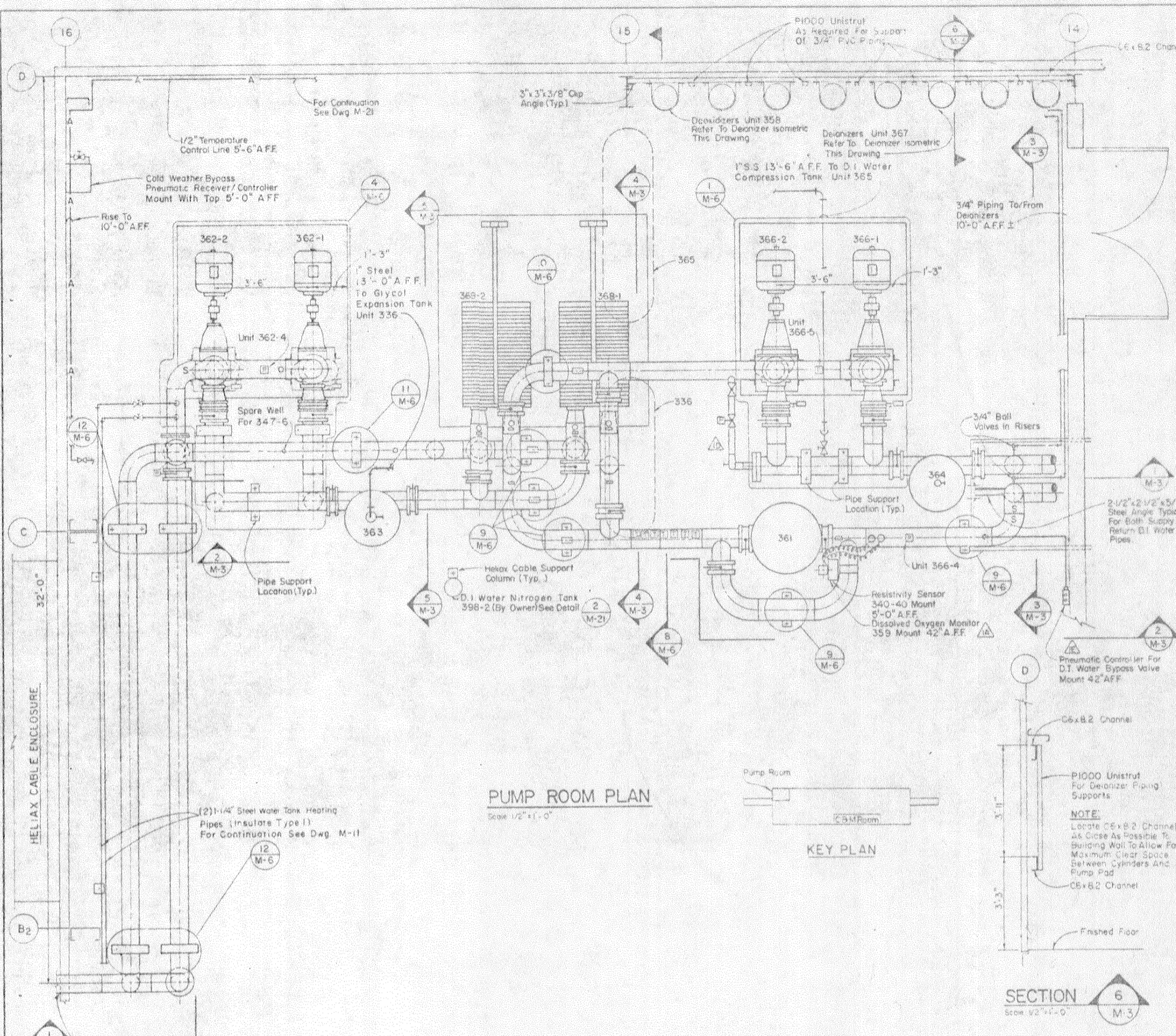


REVISION- 1

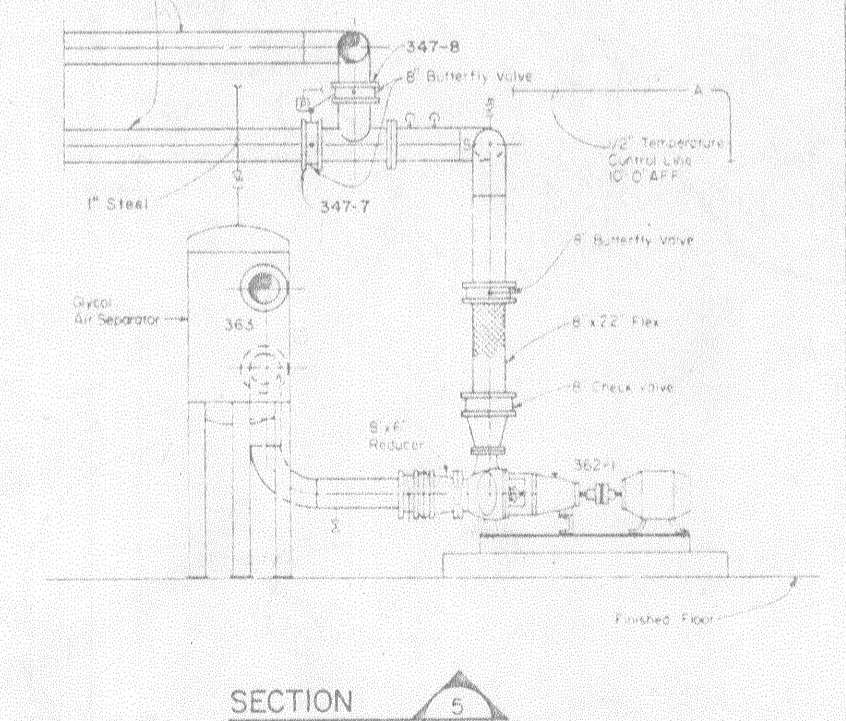
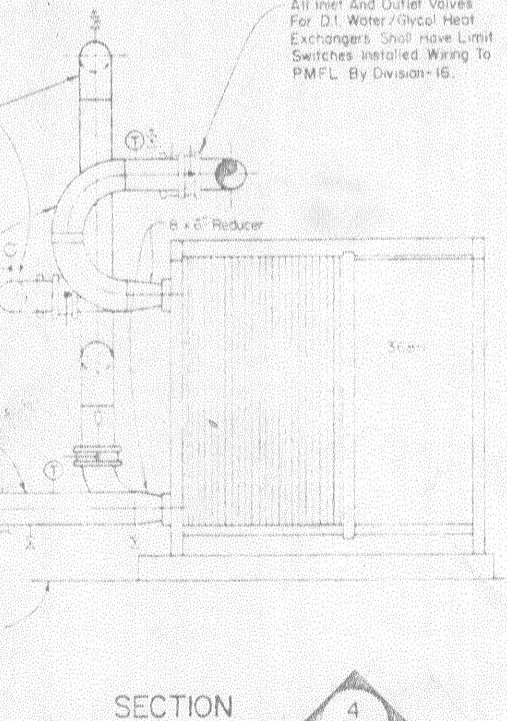
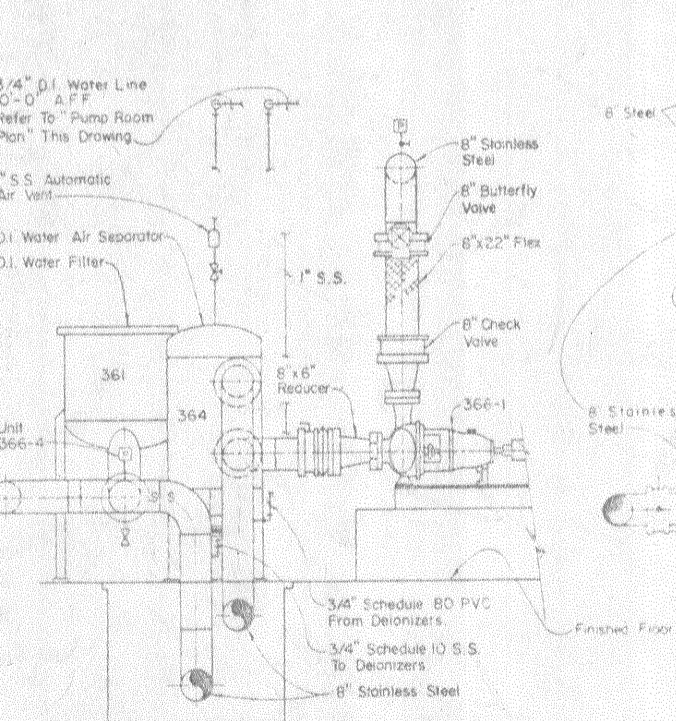
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	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	Calcesterhaus & Spina CONSULTING ENGINEERS LIVERPOOL, NEW YORK 13088	DATE NOV 30, 1987 SCALE AS SHOWN FILE NO 458005	36



REVISIONS		
NO.	DESCRIPTION	DATE
1	A-C RELOCATED UNIT 359 (3 PLACES) (EQUIP T6-4-1)	12-7-86
2	B&F REPLACE BYPASS GLOBE VALVE WITH PNEUMATICALLY OPERATED VALVE (EQUIP T6-4-2)	
3	E&G ADDED PNEUMATIC CONTROLLER (EQUIP T6-4-2)	



- GENERAL NOTES:**
1. ALL ELBOWS ARE LONG RADII UNLESS SPECIFIED BY THE SYMBOL "S", INDICATING A SHORT RADII ELBOW.
  2. D.I. WATER AND GLYCOL PUMP CONTROL DIAGRAMS ARE SHOWN ON DRAWING E-17.
  3. EQUIPMENT PADS WILL BE PROVIDED BY CONTRACT 76-3.
  4. ALL 3/4" WATER TANK HEATER PIPES SHALL USE 1" THICK (TYPE 1) INSULATION INDOORS, 1/2" THICK (TYPE 2) OUTDOORS ABOVE GROUND, AND 2" THICK (TYPE 3) OUTDOORS BELOW GROUND AS PER SECTION 15180.
  5. ALL PIPING SYSTEM DRAIN VALVES SHALL INCORPORATE 3/4" HOSE BIBBS.
  6. ALL STEEL GLYCOL PIPING 6" AND LARGER SHALL BE WELDED UNLESS OTHERWISE SHOWN AS FLANGED.
  7. UNITS 362-1, 362-2, 366-1, 366-2, 366-3, 366-4 and 364 ARE PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
  8. ALL DEIONIZED WATER HOSE BIBBS AND VENT VALVES SHALL BE STAINLESS STEEL.
  9. PIPE SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS - REFER TO SECTION 16790.
  10. D.I. WATER FILTER AND GLYCOL AIR SEPARATOR LEG LENGTHS SHALL BE VERIFIED AND ADJUSTED ACCORDINGLY DEPENDING ON ACTUAL EQUIPMENT SUPPLIED.
  11. ANCHOR D.I. WATER FILTER AND AIR SEPARATORS USING 1/2" EXPANSION ANCHORS WITH A 4-1/2" EMBEDMENT.
  12. PROVIDE SUPERVISORY SWITCHES ON THE HEAT EXCHANGER VALVES. CONNECTIONS TO THE PMS SYSTEM SHALL BE BY DIVISION 16.
  13. AS A MINIMUM, FLANGED JOINTS SHALL BE PROVIDED AS SHOWN, TO EASE INSTALLATION, ADDITIONAL FLANGED JOINTS MAY BE ADDED AT THE CONTRACTOR'S DISCRETION, WITH THE CONCURRENCE OF THE SITE ENGINEER.
  14. FOR LOCATIONS OF THE GLYCOL EXPANSION TANK AND D.I. WATER COMPRESSION TANK, REFER TO DRAWING M-6.
  15. MODEL NUMBER OF PIPE & TANK SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNISTRUT COMPANY - EQUAL PRODUCTS OF EQUIVALENT KIND OR OF EQUAL WILL BE CONSIDERED FOR REVIEW.

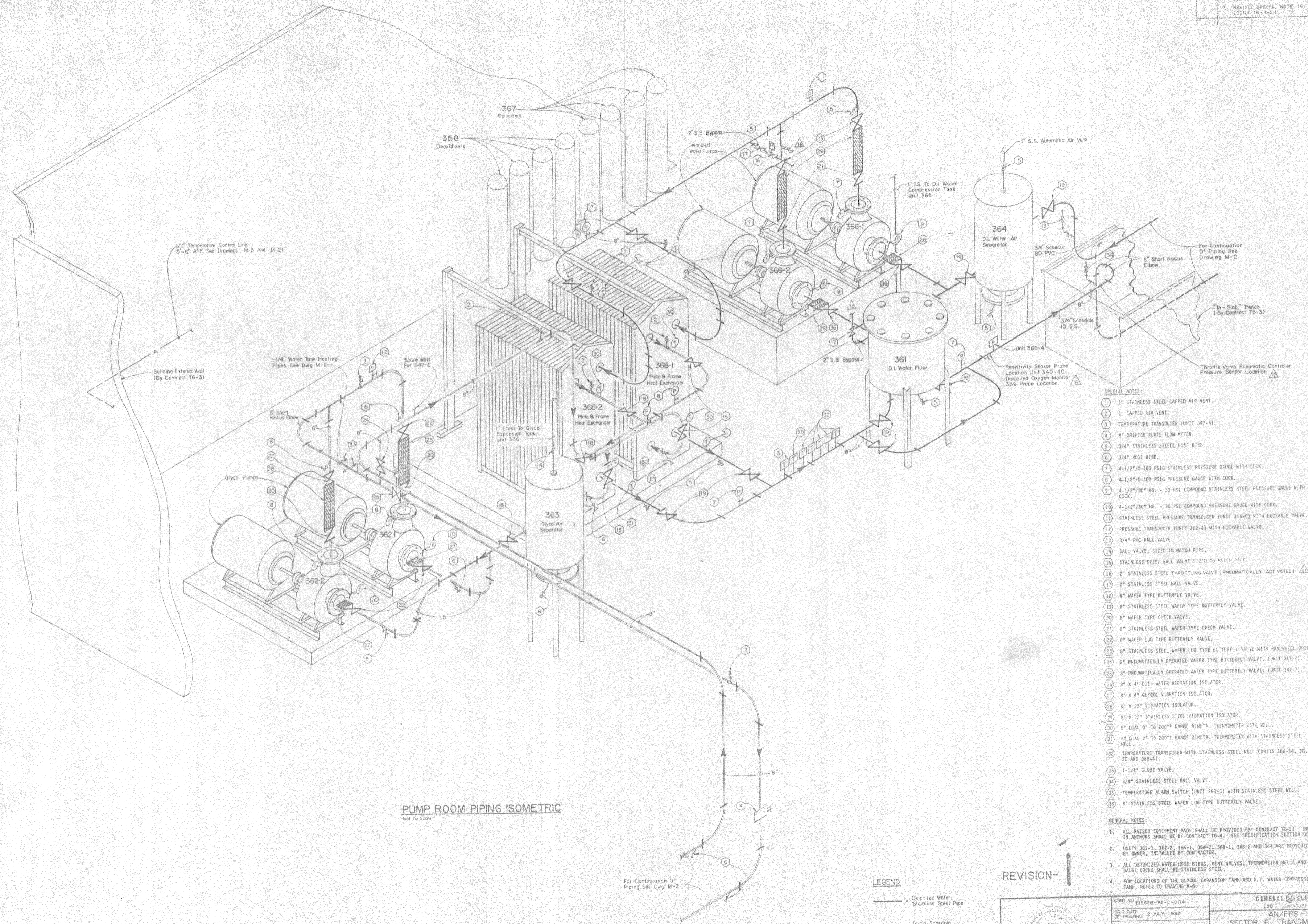


REVISION -

	CONTRACT NO. F19028-118-C-0174 DATE OF DRAWING: 2 JULY, 1987 DRAWN BY: [Name] ENGR BY: [Name] CHECKED BY: [Name] ISSUED: 30 NOV, 1987	<b>GENERAL ELECTRIC</b> DESIGNED BY <b>AN/FPS-118</b> <b>SECTOR 6 TRANSMIT FACILITY</b> <b>CONTRACT T6-4</b> <b>TRANSMITTER FLUID COOLING SYSTEM</b> <b>PUMP ROOM</b> <b>PLAN &amp; SECTIONS</b>
	SIZE: CODE IDENT NO. [Code] E 03538 T6 M-3	DATE: NOV 30, 1987 SCALE: AS SHOWN FILE NO. 428-305



REV	DESCRIPTION	DATE
A	ADDED UNIT 359 (ECHR T6-4-1)	11-27-88
B	REPLACED GLOBE VALVE WITH PNEUMATICALLY OPERATED THROTTLING VALVE (ECHR T6-4-2)	
D	ADDED PNEUMATIC CONTROLLER SENSOR (ECHR T6-4-2)	
E	REVISED SPECIAL NOTE 16 (ECHR T6-4-2)	



**PUMP ROOM PIPING ISOMETRIC**  
Not To Scale

- SPECIAL NOTES:**
- 1" STAINLESS STEEL CAPPED AIR VENT.
  - 1" CAPPED AIR VENT.
  - TEMPERATURE TRANSDUCER (UNIT 347-6).
  - 8" ORIFICE PLATE FLOW METER.
  - 3/4" STAINLESS STEEL HOSE BIBB.
  - 3/4" HOSE BIBB.
  - 4-1/2"/0-100 PSIG STAINLESS PRESSURE GAUGE WITH COCK.
  - 4-1/2"/0-100 PSIG PRESSURE GAUGE WITH COCK.
  - 4-1/2"/30" HG. - 30 PSI COMPOUND STAINLESS STEEL PRESSURE GAUGE WITH COCK.
  - 4-1/2"/30" HG. - 30 PSI COMPOUND PRESSURE GAUGE WITH COCK.
  - STAINLESS STEEL PRESSURE TRANSDUCER (UNIT 366-6) WITH LOCKABLE VALVE.
  - PRESSURE TRANSDUCER (UNIT 362-4) WITH LOCKABLE VALVE.
  - 3/4" PVC BALL VALVE.
  - GALL VALVE, SIZED TO MATCH PIPE.
  - STAINLESS STEEL BALL VALVE SIZED TO MATCH PIPE.
  - 2" STAINLESS STEEL THROTTLING VALVE (PNEUMATICALLY ACTIVATED)
  - 2" STAINLESS STEEL BALL VALVE.
  - 8" WAFER TYPE BUTTERFLY VALVE.
  - 8" STAINLESS STEEL WAFER TYPE BUTTERFLY VALVE.
  - 8" WAFER TYPE CHECK VALVE.
  - 8" STAINLESS STEEL WAFER TYPE CHECK VALVE.
  - 8" WAFER LUG TYPE BUTTERFLY VALVE.
  - 8" STAINLESS STEEL WAFER LUG TYPE BUTTERFLY VALVE WITH HANDWHEEL OPERATOR.
  - 8" PNEUMATICALLY OPERATED WAFER TYPE BUTTERFLY VALVE. (UNIT 347-8).
  - 8" PNEUMATICALLY OPERATED WAFER TYPE BUTTERFLY VALVE. (UNIT 347-7).
  - 8" X 4" D.I. WATER VIBRATION ISOLATOR.
  - 8" X 4" GLYCOL VIBRATION ISOLATOR.
  - 8" X 22" VIBRATION ISOLATOR.
  - 8" X 22" STAINLESS STEEL VIBRATION ISOLATOR.
  - 5" DIAL 0" TO 200°F RANGE BIMETAL THERMOMETER WITH WELL.
  - 5" DIAL 0" TO 200°F RANGE BIMETAL THERMOMETER WITH STAINLESS STEEL WELL.
  - TEMPERATURE TRANSDUCER WITH STAINLESS STEEL WELL (UNITS 366-3A, 3B, 3C, 3D AND 368-4).
  - 1-1/4" GLOBE VALVE.
  - 3/4" STAINLESS STEEL BALL VALVE.
  - TEMPERATURE ALARM SWITCH (UNIT 368-5) WITH STAINLESS STEEL WELL.
  - 8" STAINLESS STEEL WAFER LUG TYPE BUTTERFLY VALVE.
- GENERAL NOTES:**
- ALL RAISED EQUIPMENT PADS SHALL BE PROVIDED BY CONTRACT T6-3). DRILLED IN ANCHORS SHALL BE BY CONTRACT T6-4. SEE SPECIFICATION SECTION 0560.
  - UNITS 362-1, 362-2, 366-1, 366-2, 368-1, 368-2 AND 364 ARE PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
  - ALL DETONIZED WATER HOSE BIBBS, VENT VALVES, THERMOMETER WELLS AND GAUGE COCKS SHALL BE STAINLESS STEEL.
  - FOR LOCATIONS OF THE GLYCOL EXPANSION TANK AND D.I. WATER COMPRESSION TANK, REFER TO DRAWING M-5.

**LEGEND**

- Deionized Water, Stainless Steel Pipe
- Glycol, Schedule 40 Steel Pipe

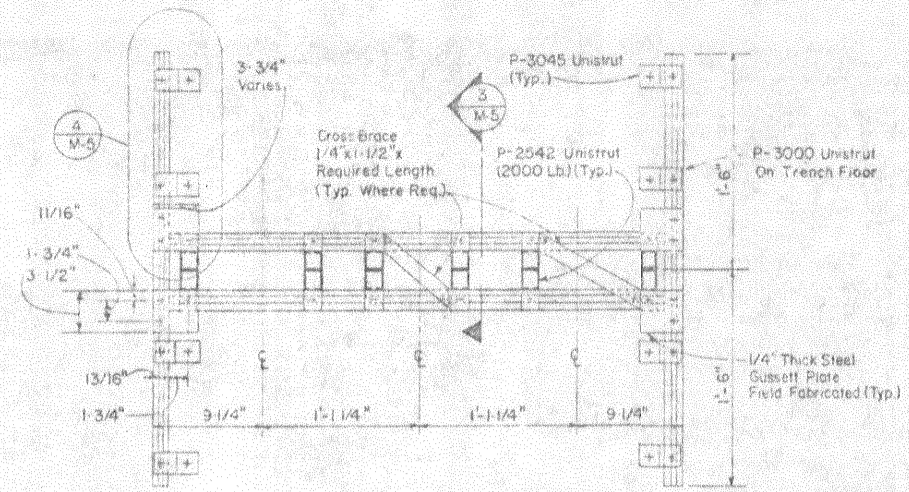
REVISION-1

	CONT. NO. 19R628-RE-C-0174 ORIG. DATE OF DRAWING 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV, 1987	<b>GENERAL ELECTRIC</b> ESO SYRACUSE, NY AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 TRANSMITTER FLUID COOLING SYSTEM <b>PUMP ROOM PIPING ISOMETRIC</b>
	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 M-4	DATE NOV. 30, 1987 SCALE NOT TO SCALE FILE NO. 458,005

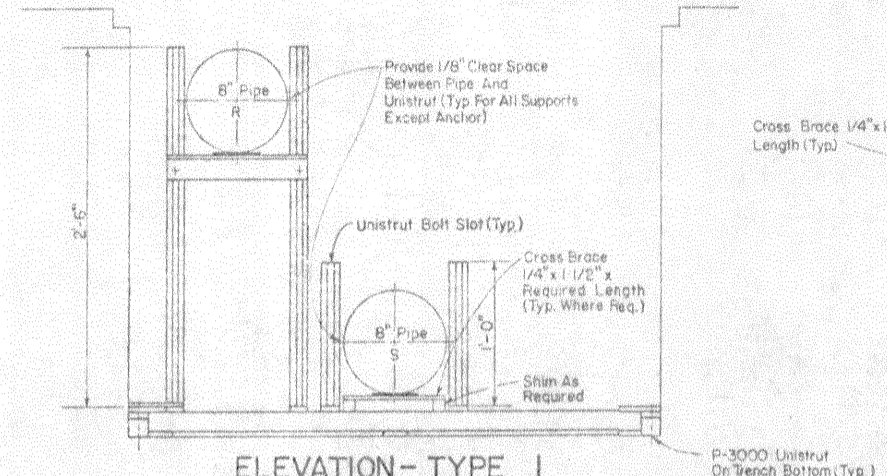
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7009 SUB-DIVISION 5 OF THE NEW YORK STATE EDUCATION LAW

**Calceiras & Spina**  
 LICENSED PROFESSIONAL ENGINEERS  
 License No. 13068

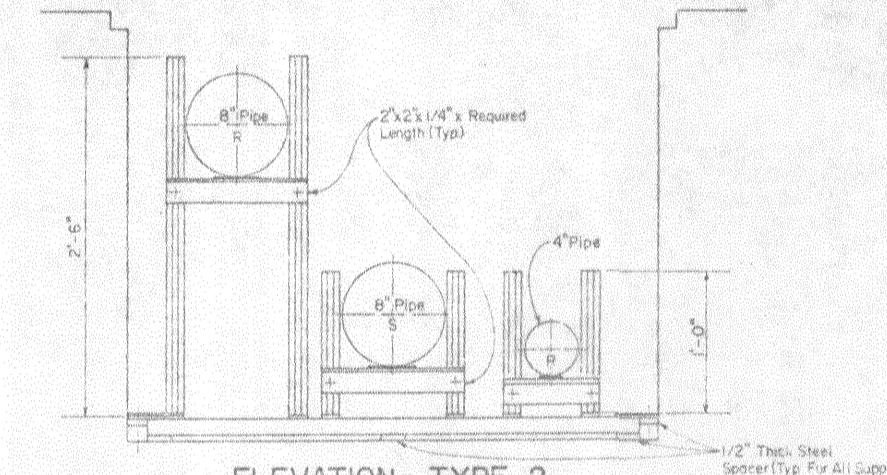




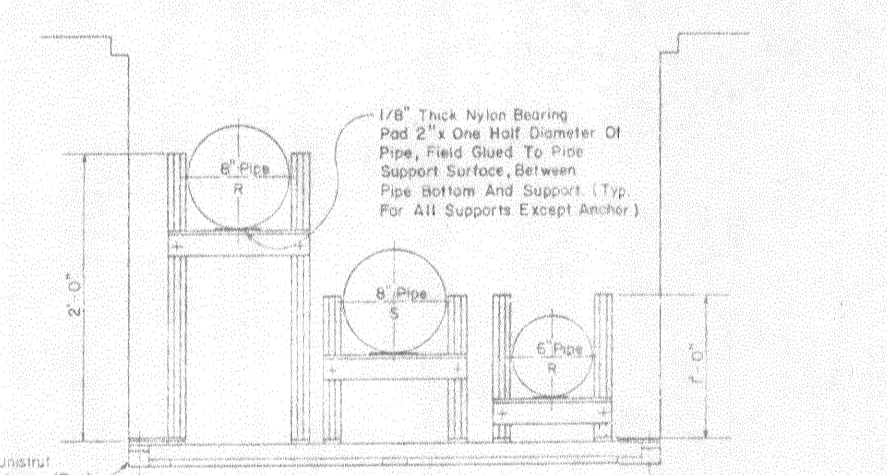
PLAN - (ALL TYPES)



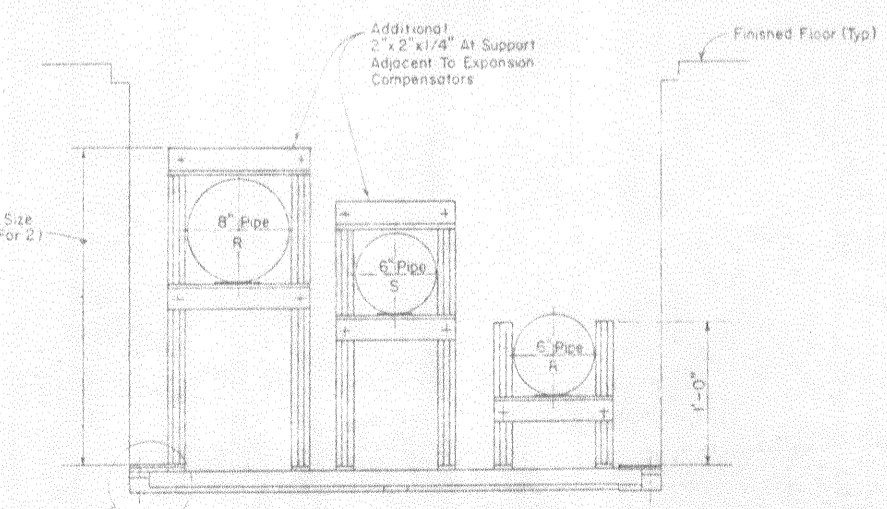
ELEVATION - TYPE 1  
(Typical For One)



ELEVATION - TYPE 2  
(Typical For Three)

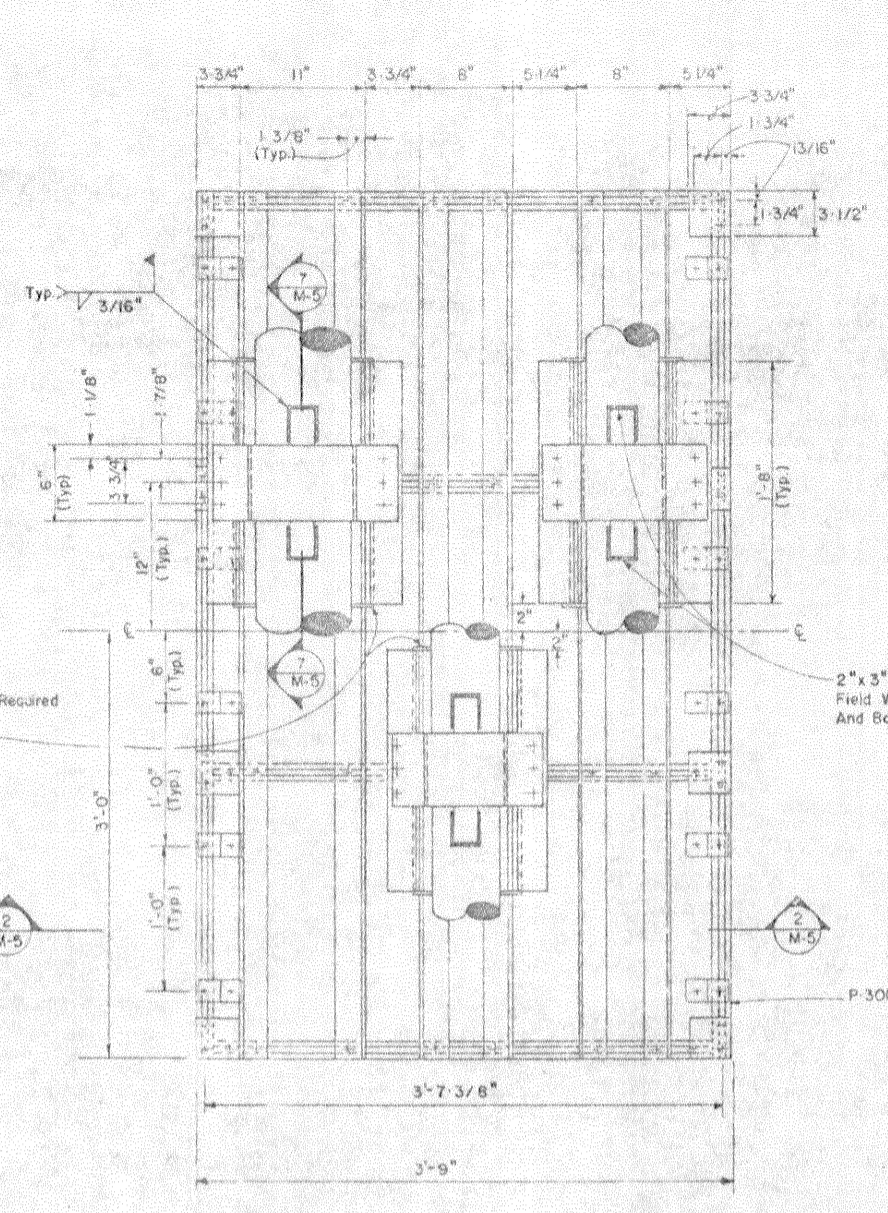


ELEVATION - TYPE 3  
(Typical For Three)

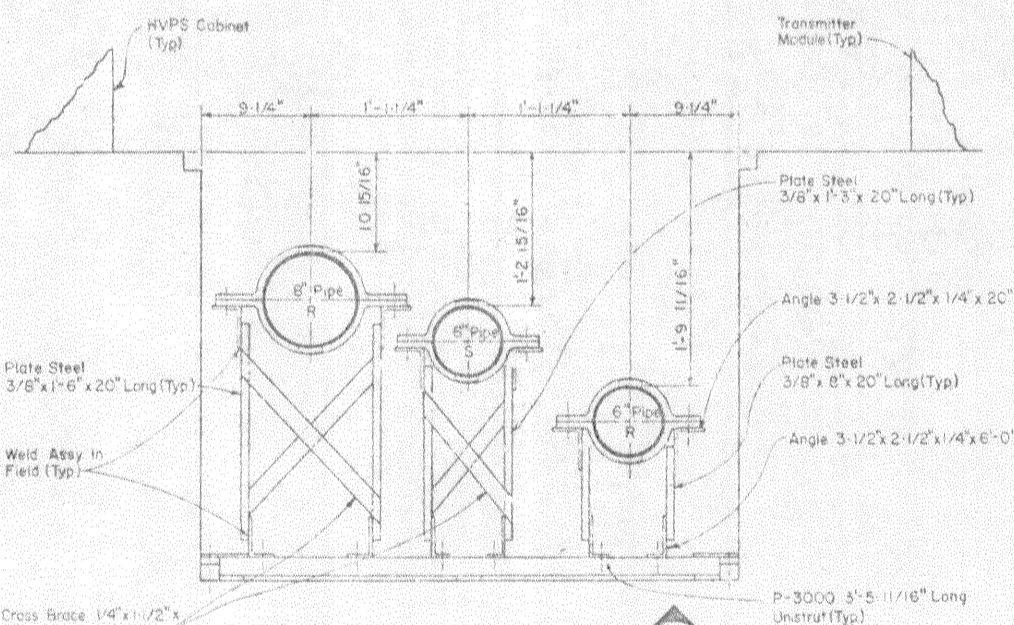


ELEVATION - TYPE 4  
(Typical For Two)

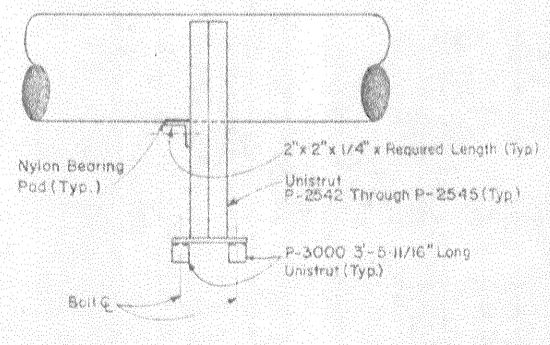
TRENCH PIPE SUPPORTS DETAIL  
Scale: 1 1/2" = 1'-0"



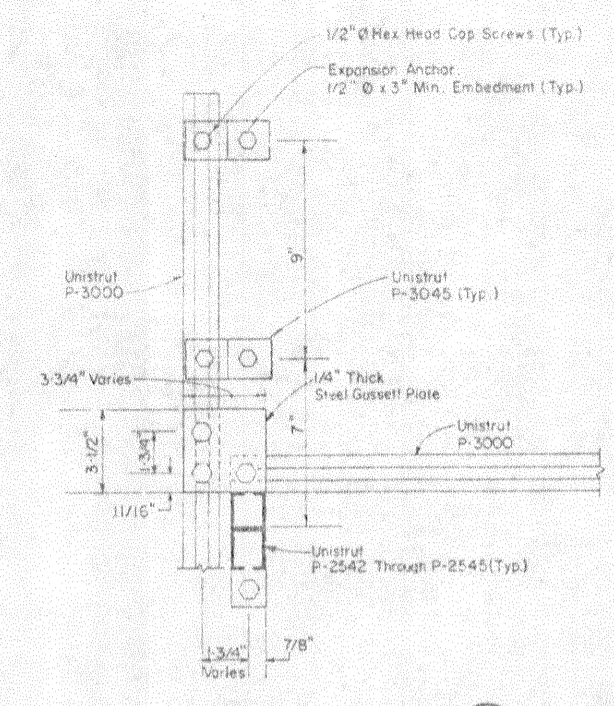
PIPE ANCHOR PLAN  
Scale: 1 1/2" = 1'-0"



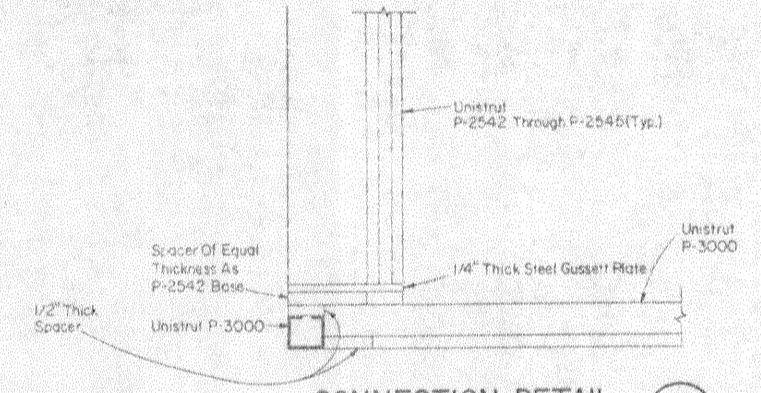
PIPE ANCHOR SECTION  
Scale: 1 1/2" = 1'-0"



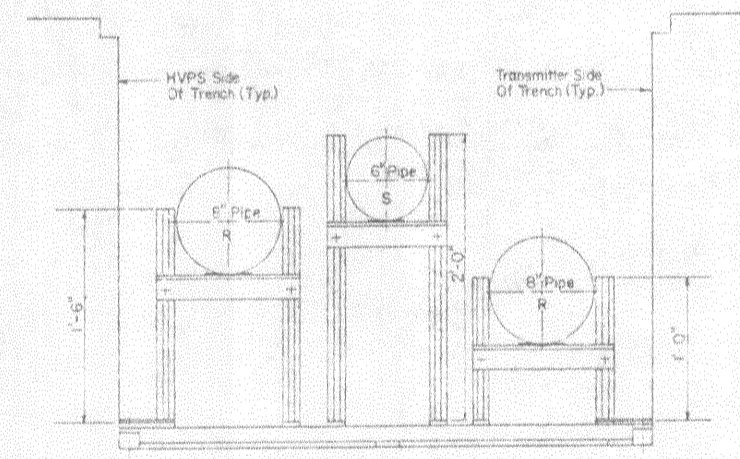
SECTION 3  
Scale: 1 1/2" = 1'-0"



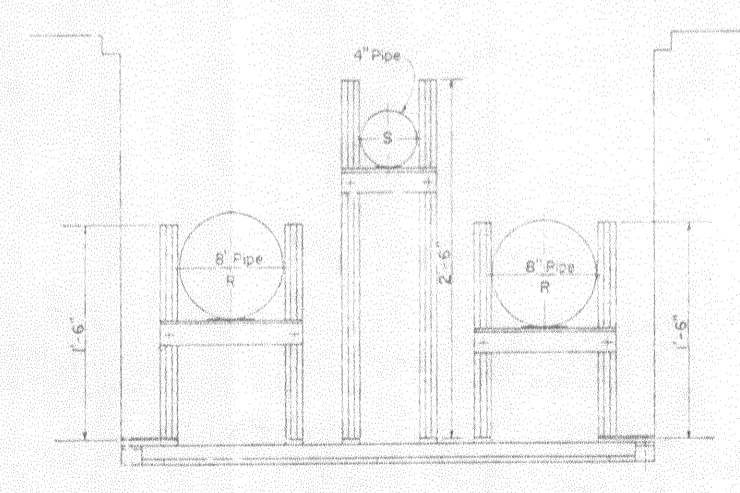
CONNECTION DETAIL 4  
Scale: 3" = 1'-0"



CONNECTION DETAIL 6  
Scale: 3" = 1'-0"

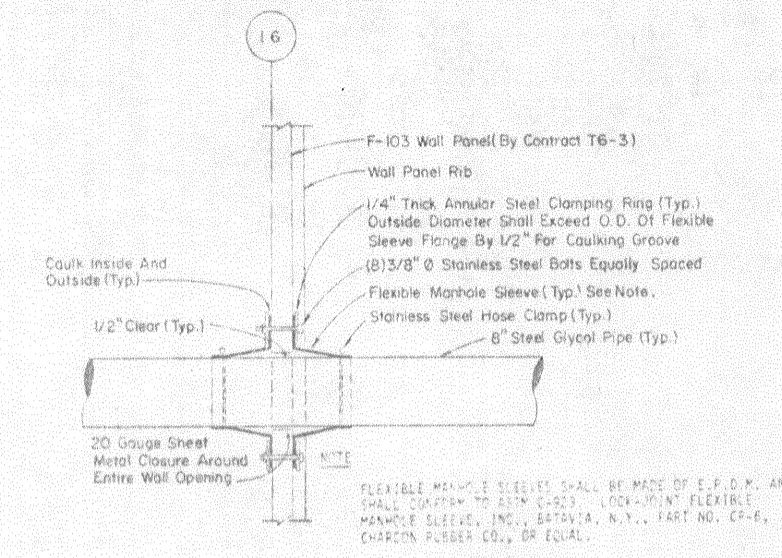


ELEVATION - TYPE 5  
(Typical For Four)

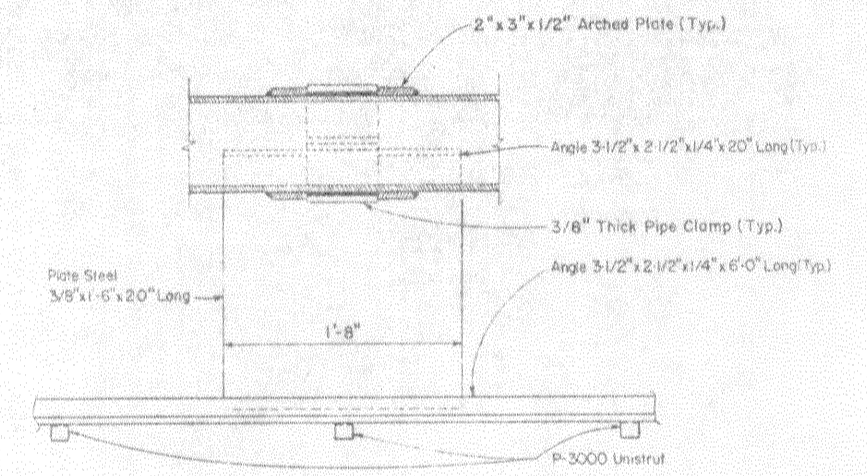


ELEVATION - TYPE 6  
(Typical For Two)

TRENCH PIPE SUPPORTS DETAIL  
Scale: 1 1/2" = 1'-0"



GLYCOL PIPE PENETRATION DETAIL  
Scale: 1" = 1'-0"



PIPE ANCHOR SECTION 7  
Scale: 1 1/2" = 1'-0"

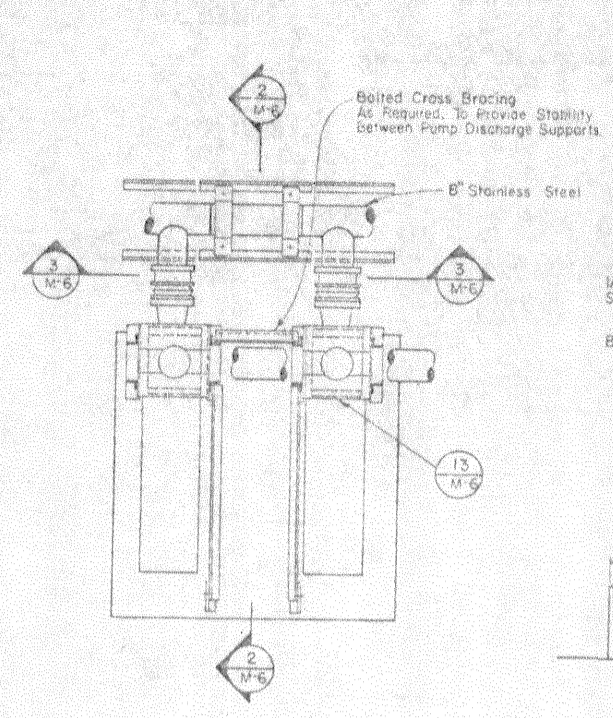
- GENERAL NOTES:
1. ALL BOLTED MEMBERS SHALL USE 1/2" N.C. BOLTS.
  2. ALL PIPE ELEVATIONS SHOWN THAT ARE REFERENCED TO FINISHED FLOOR ARE NOMINAL.
  3. FOR ACTUAL PIPING ELEVATIONS THROUGH ENTIRE TRENCH LENGTH, SEE DRAWING M-2.
  4. WELD SIZES OF PIPE SUPPORT MEMBERS ARE SHOWN FOR THE PURPOSES OF THE CONTRACT DOCUMENTS. EQUAL PROPORTIONS OF POWERWELD, HINDCOYER, OR ALL WELLS BE OBTAINED FOR REVIEW.
  5. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
  6. THE SYMBOLS "R" AND "S" REFER TO RETURN AND SUPPLY PIPING, RESPECTIVELY.

REVISION - 0

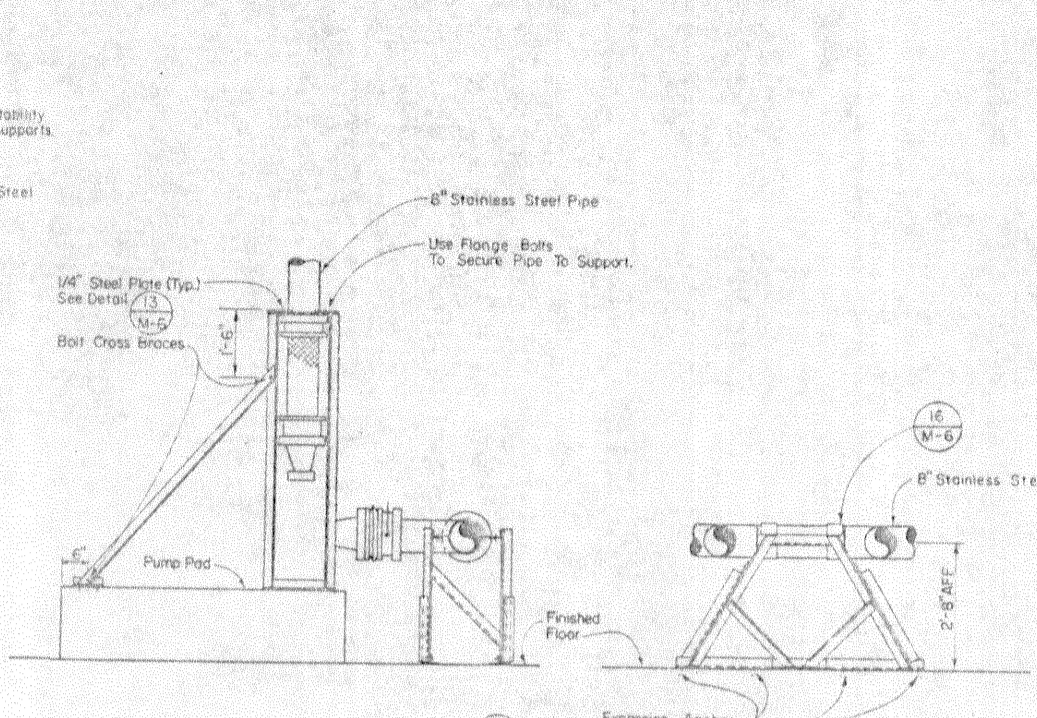
	DRAWING NO. F19628-86-C-0174 DATE OF DRAWING: 2 JULY, 1987 DESIGNER: ENGINEER: CHECKED: ISSUED: 30 NOV, 1987	GENERAL ELECTRIC 1100 AVENUE OF THE AMERICAS NEW YORK, N.Y. 10019 AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 TRANSMITTER FLUID COOLING SYSTEM
	PIPING SUPPORT DETAILS SIZE: CODE IDENT NO: DRAWING NO: E 03538 T6 M-5	
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7009, SUBSECTION B OF THE NEW YORK STATE EDUCATION LAW	DATE: NOV 30, 1987 SCALE: AS SHOWN FILE NO: 496.002	39



NO.	DESCRIPTION
1	REVISIONS
2	17/02/1987

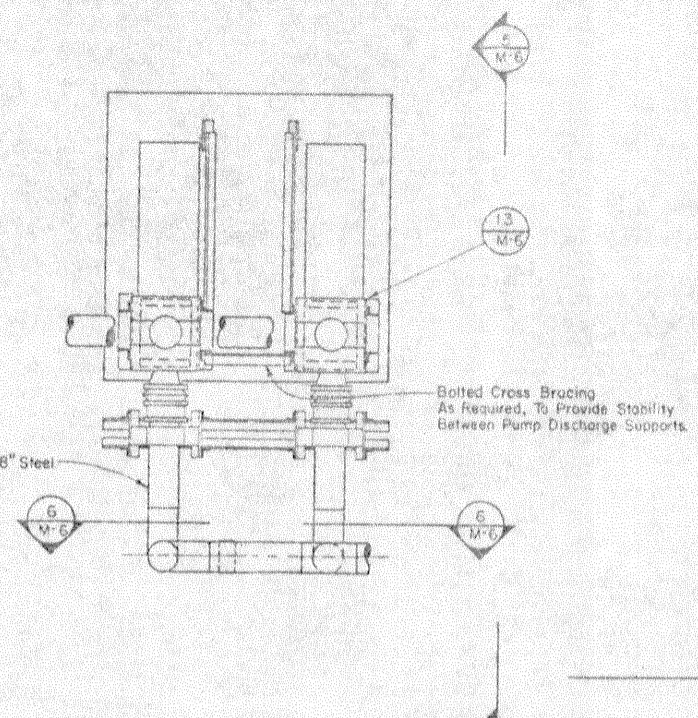


DETAIL 1  
Scale: 1/2" = 1'-0"  
M-3

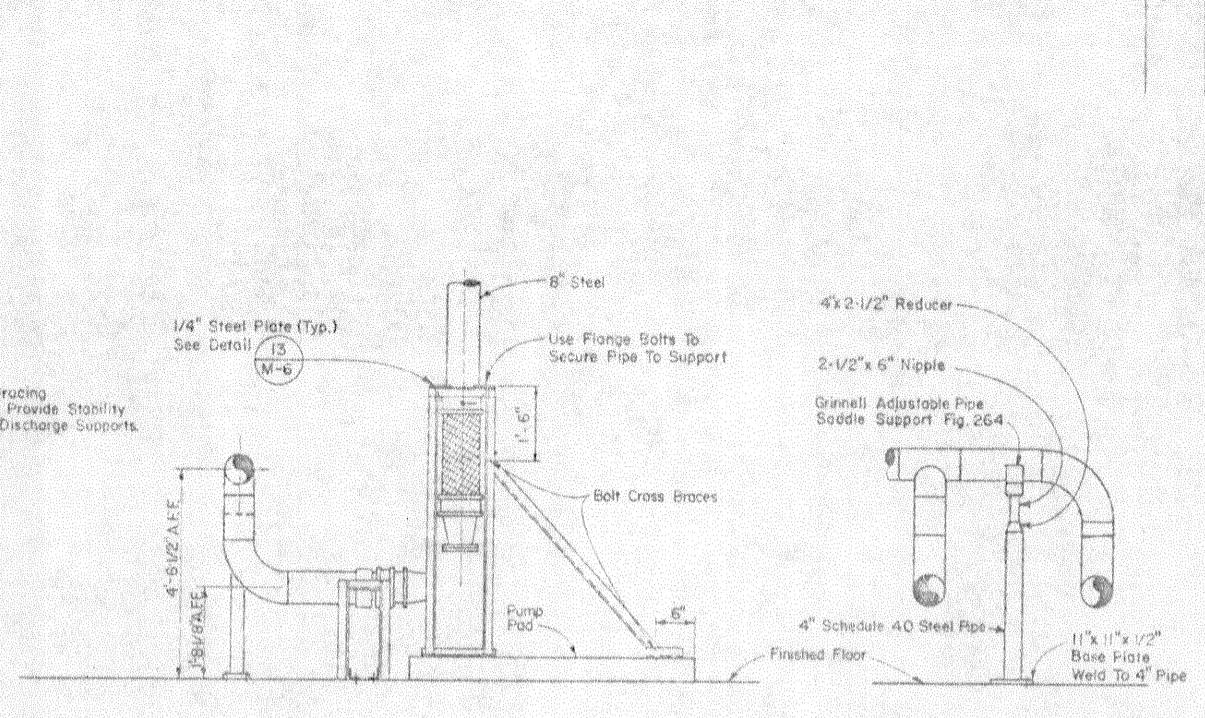


SECTION 2  
Scale: 1/2" = 1'-0"  
M-6

SECTION 3  
Scale: 1/2" = 1'-0"  
M-6

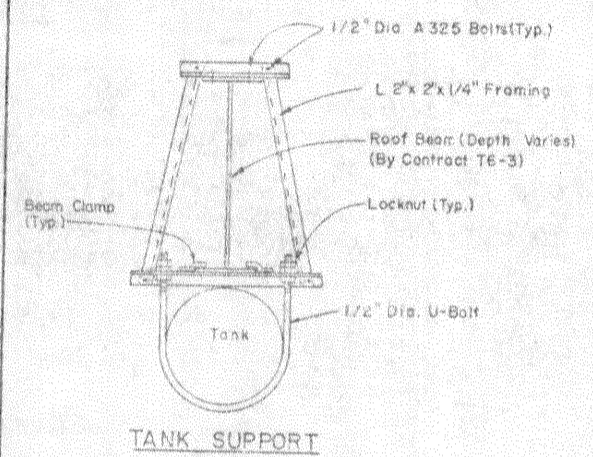


DETAIL 4  
Scale: 1/2" = 1'-0"  
M-3

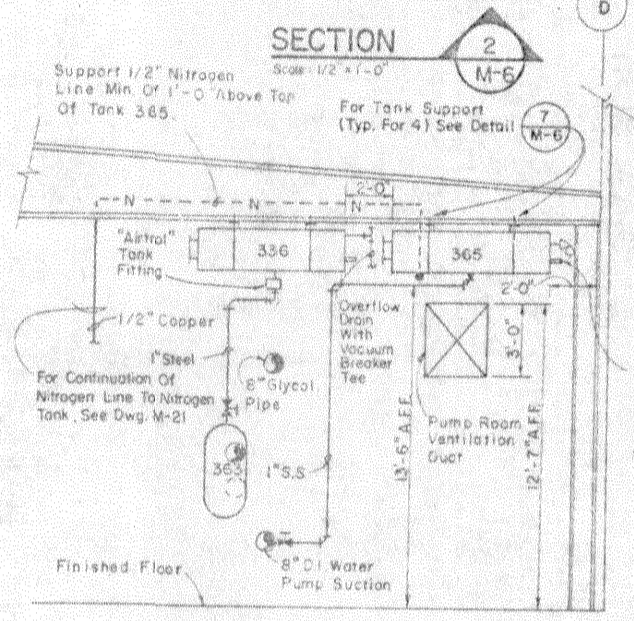


SECTION 5  
Scale: 1/2" = 1'-0"  
M-6

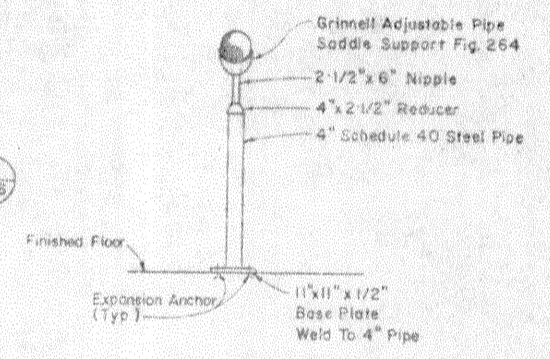
SECTION 6  
Scale: 1/2" = 1'-0"  
M-6



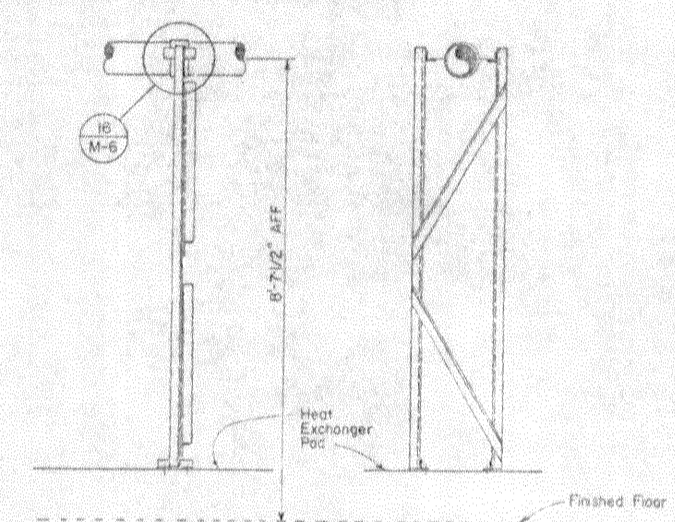
TANK SUPPORT



SECTION 7  
Scale: 1/4" = 1'-0"  
M-3 M-11



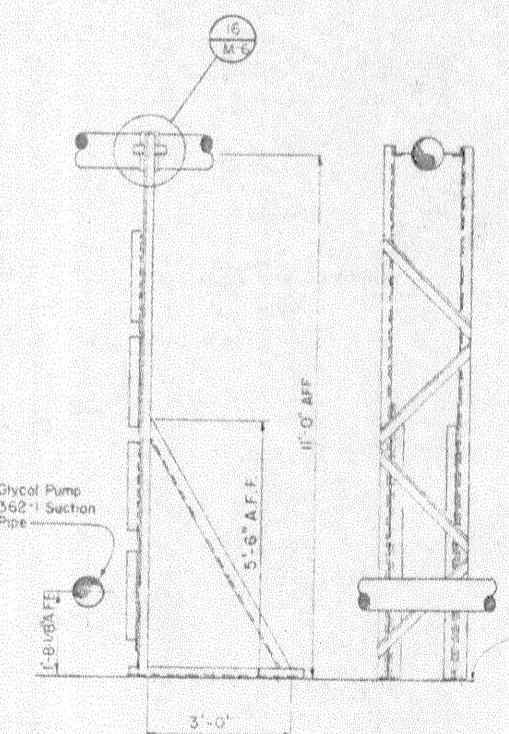
DETAIL 9  
Scale: 1/2" = 1'-0"  
M-3



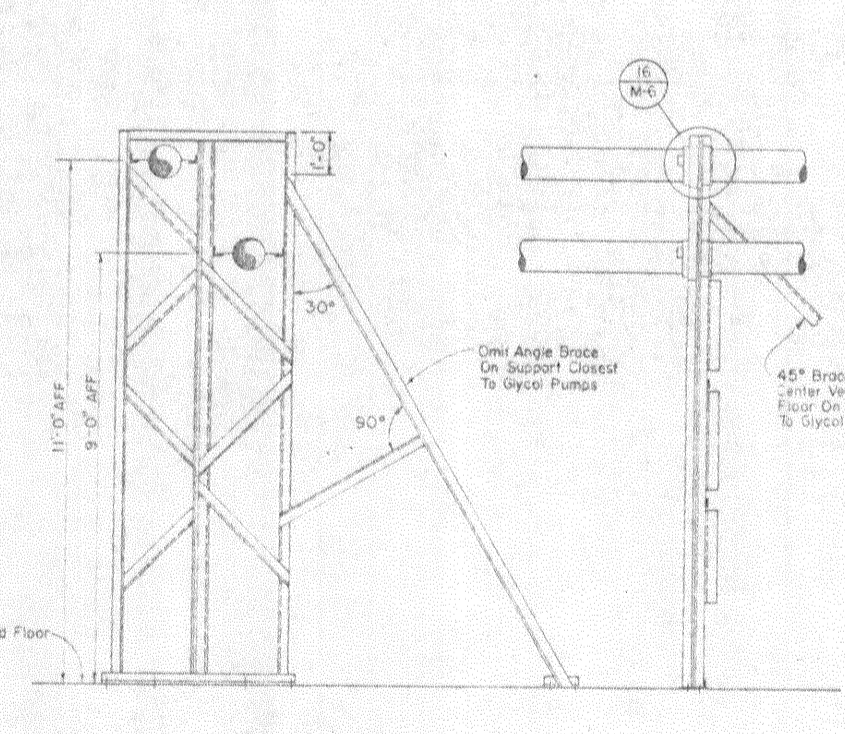
SECTION 10  
Scale: 1/2" = 1'-0"  
M-3

- NOTES:
1. USE 2-1/2" X 2-1/2" X 1/4" STEEL PLATE FOR ALL PIPE SUPPORTS, UNLESS OTHERWISE SHOWN.
  2. USE 1/2" EXPANSION ANCHORS WITH ALL PENETRATIONS, UNLESS OTHERWISE SHOWN.
  3. SUPPORT AND EQUIPMENT SHALL BE SET ON 30' CEMENT AND PLASTS UNLESS OTHERWISE SHOWN.
  4. ALL STEEL ANGLE JOINTS TO BE WELDED UNLESS OTHERWISE SHOWN.
  5. ALL STEEL SUPPORT STRUCTURES TO BE PAINTED PER TO SPECIFICATION SECTION 0500.
  6. PIPE SUPPORTS SHALL BE CONSTRUCTED USING 1/4" FILED WELD, TANK ELECTRODES.
  7. ALL PIPE SUPPORTS SHALL BE FIELD PAINTED AND SHALL HAVE DIMENSIONS VERIFIED BY 30' TO 30'.

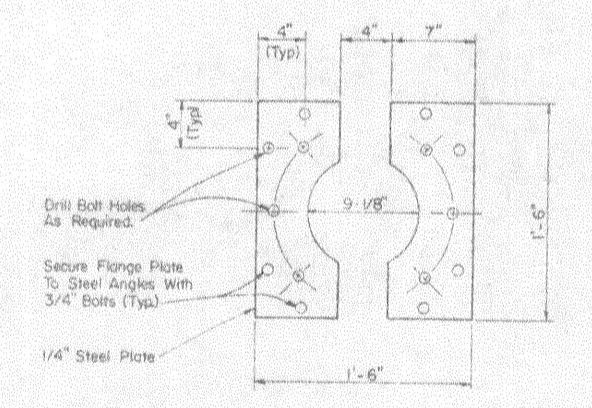
DETAIL 7  
Scale: 3/4" = 1'-0"  
M-6



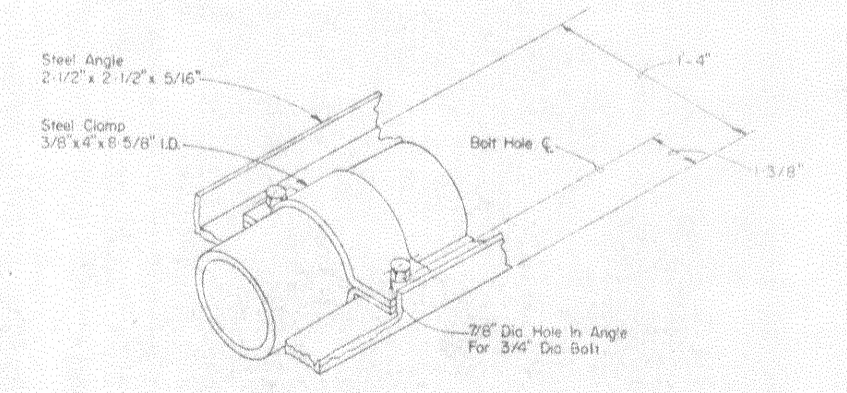
DETAIL 11  
Scale: 1/2" = 1'-0"  
M-3



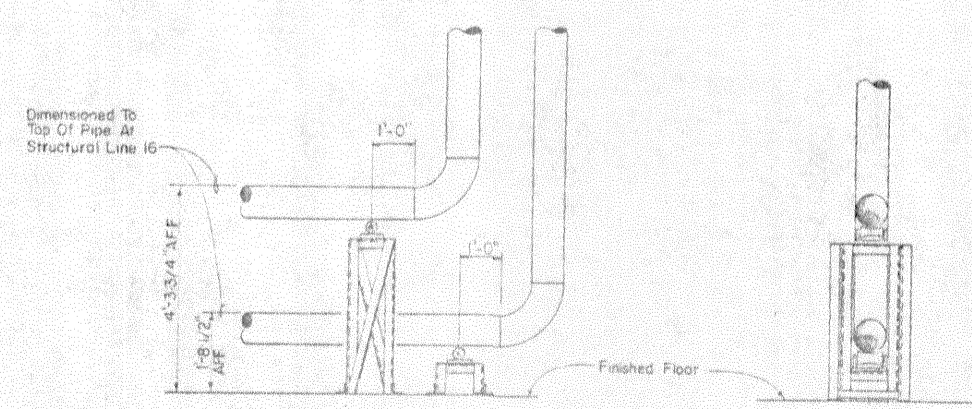
DETAIL 12  
Scale: 1/2" = 1'-0"  
M-3



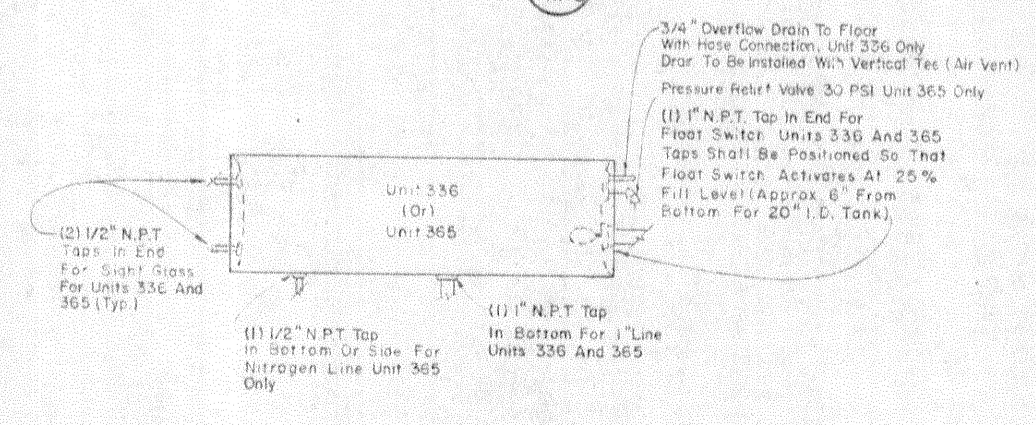
FLANGE PLATE DETAIL 13  
Scale: 1-1/2" = 1'-0"  
M-6



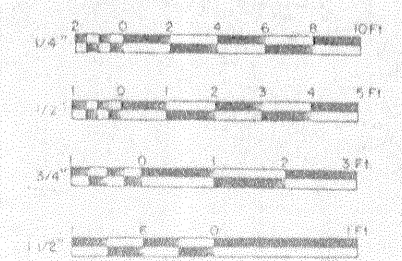
HORIZONTAL CLAMP DETAIL (TYP) 16  
Not To Scale  
M-6 M-7



DETAIL 14  
Scale: 1/2" = 1'-0"  
M-3



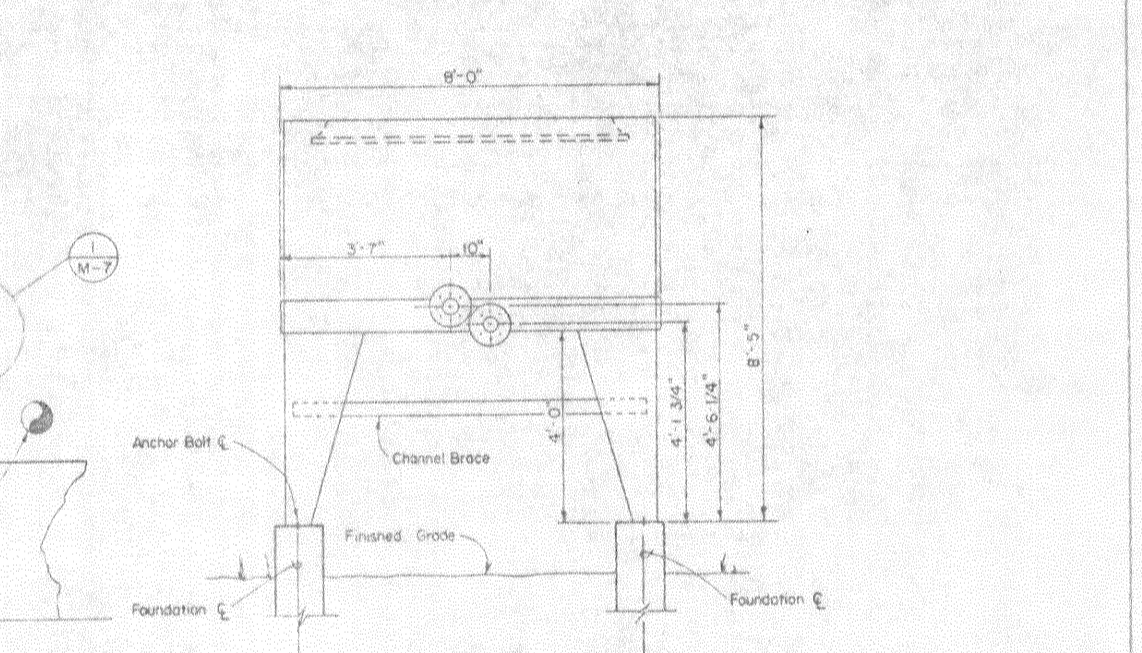
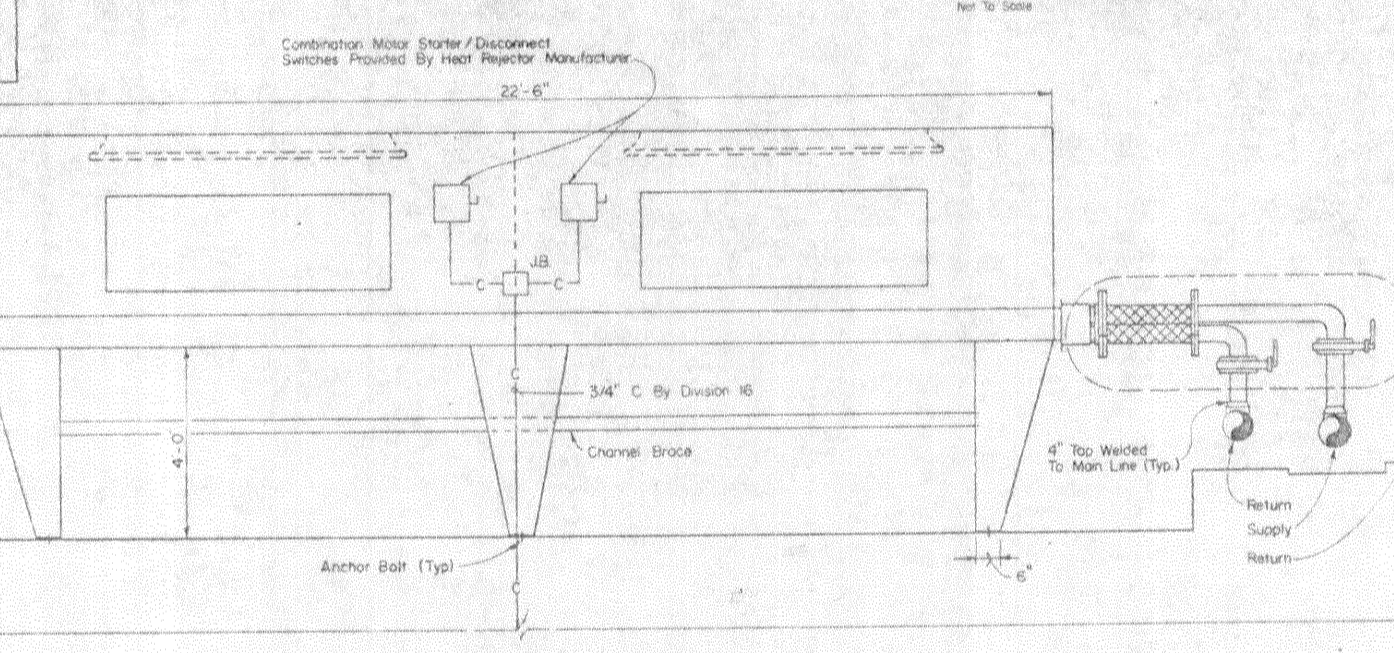
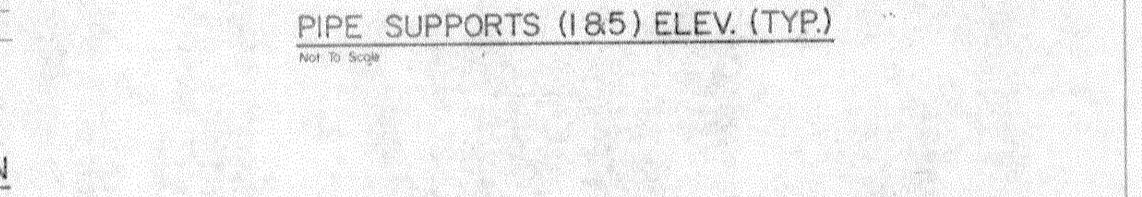
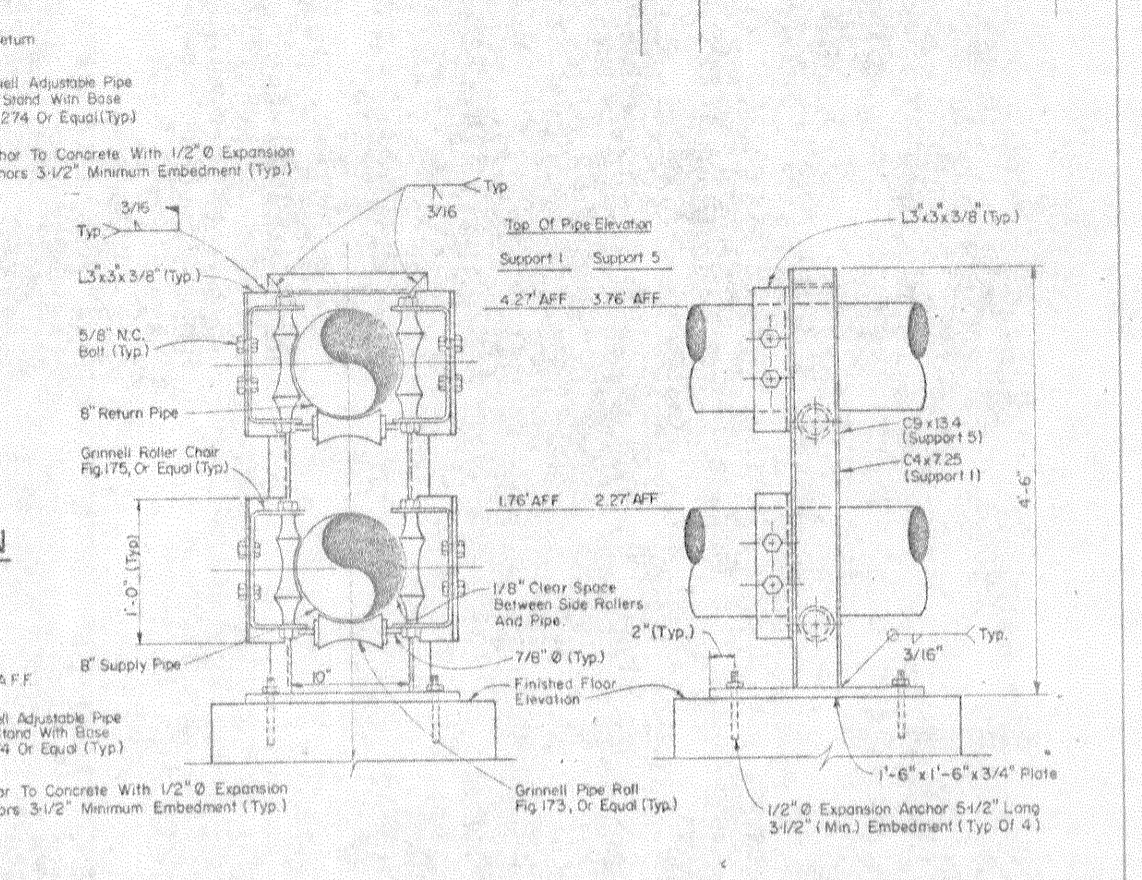
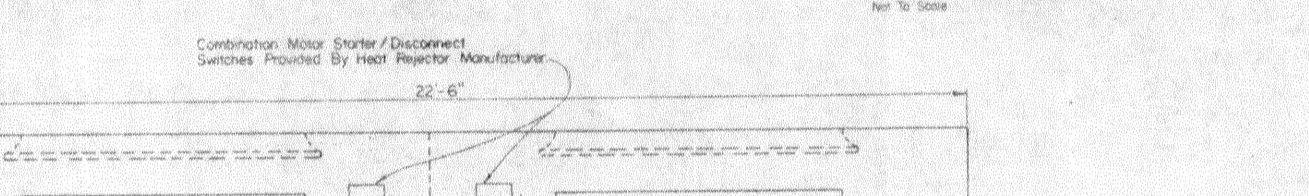
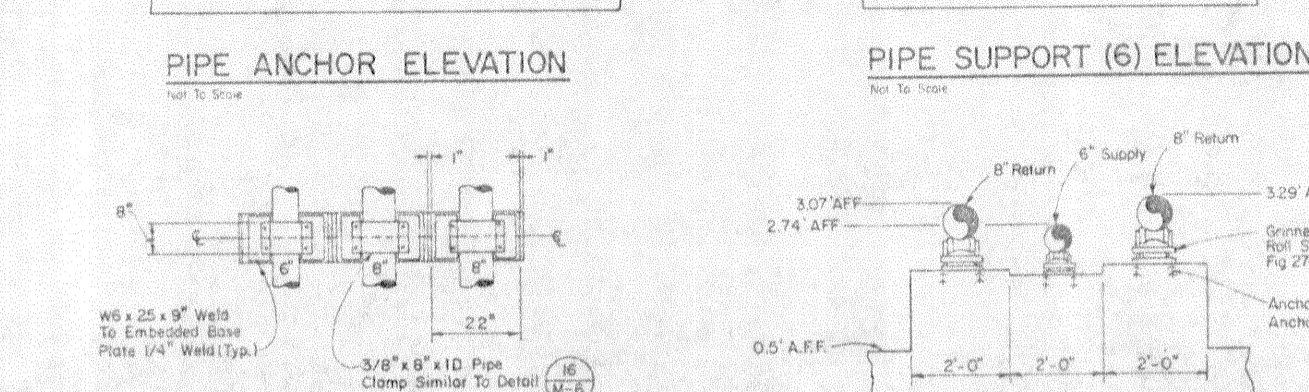
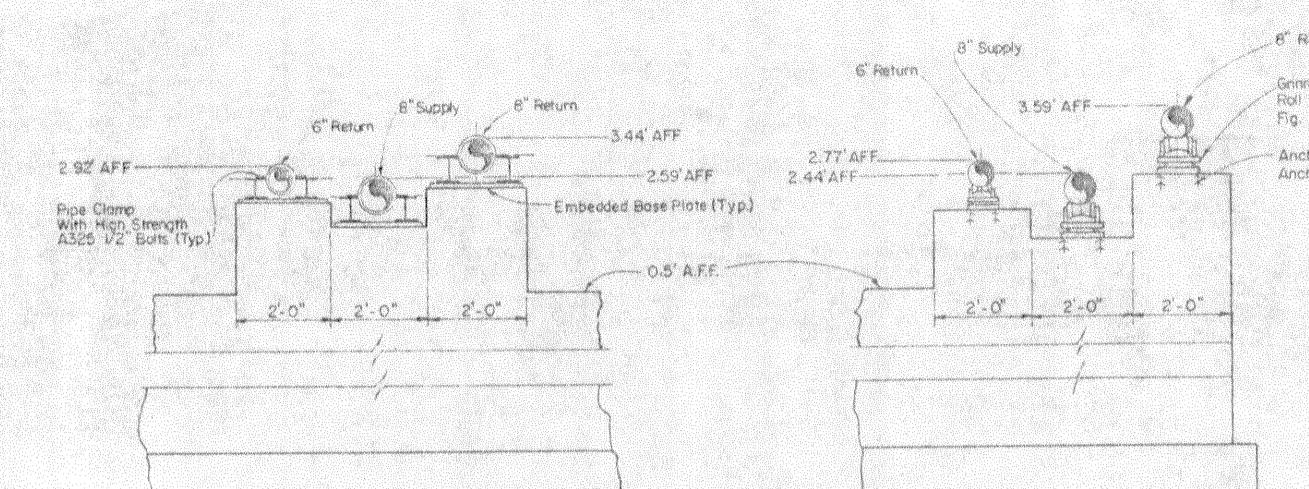
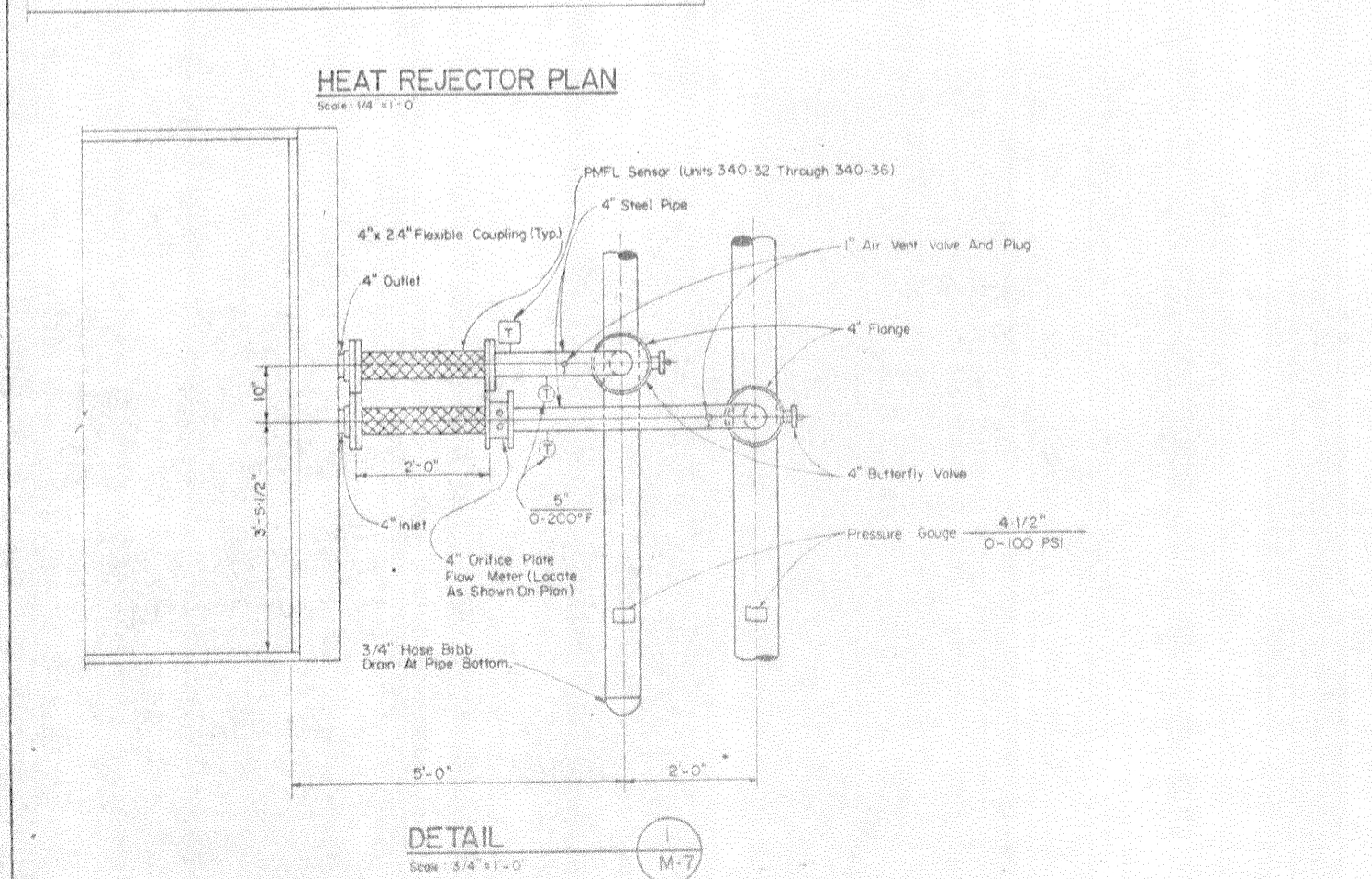
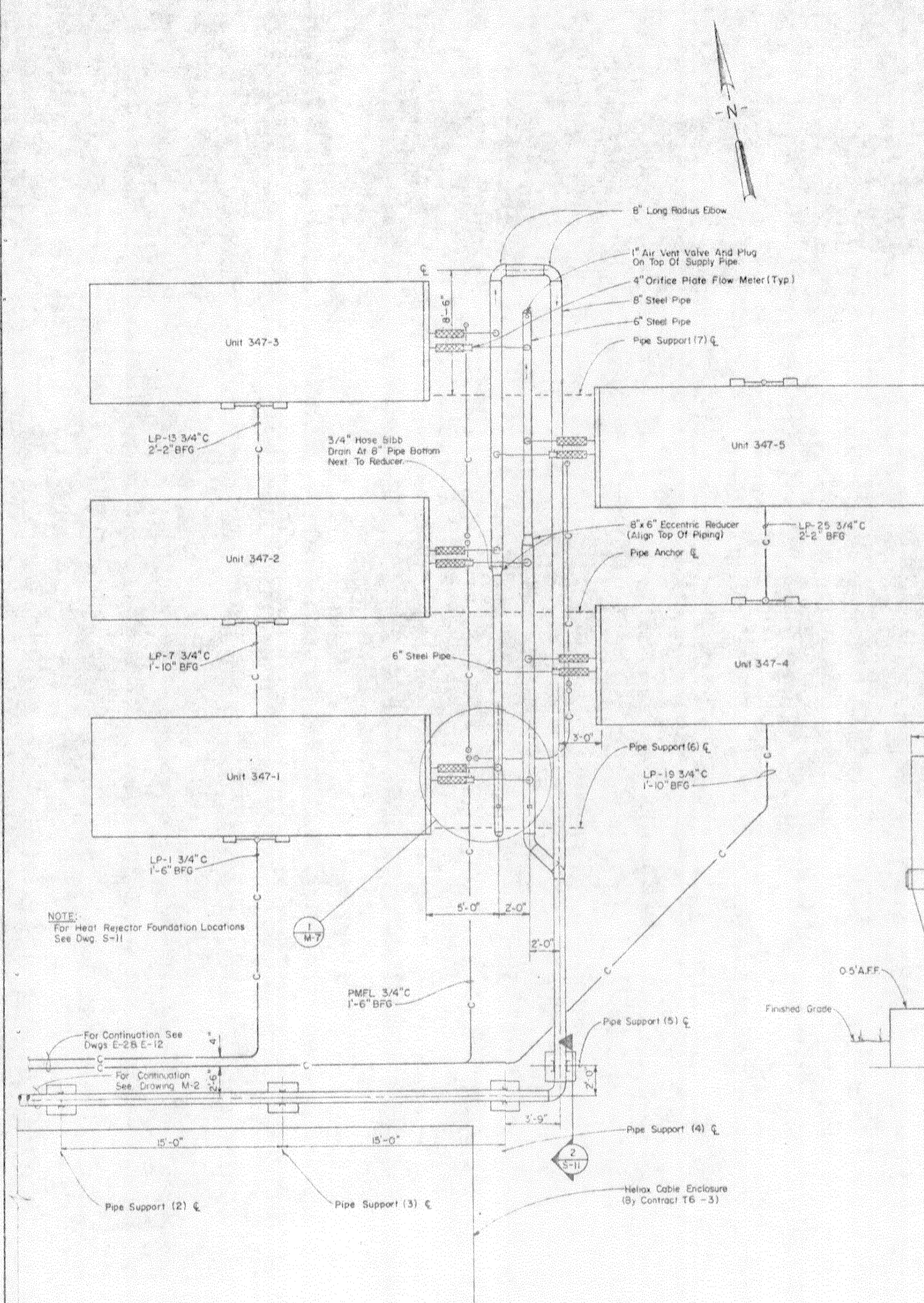
DETAIL 15  
Not To Scale  
M-6



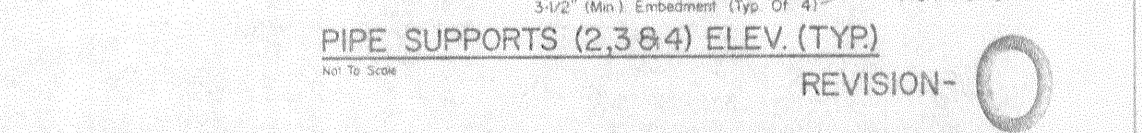
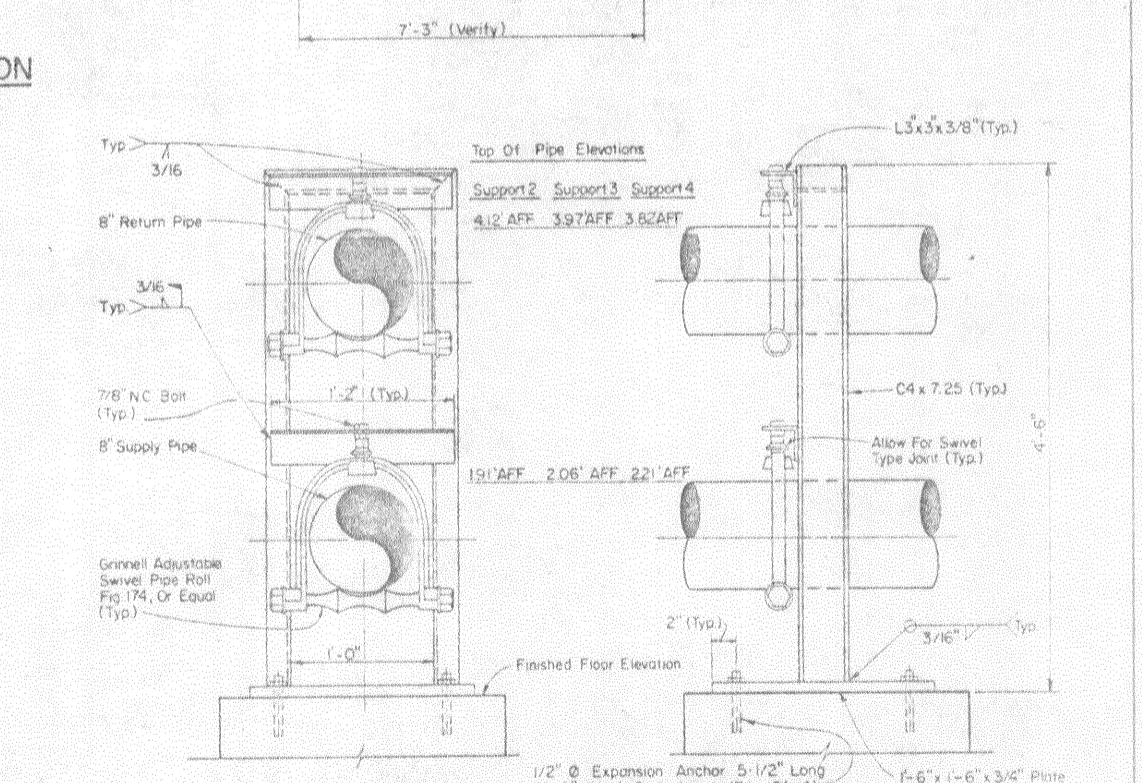
	DRAWING NO. FIG26-M-6-C-0176 DATE 2 JULY, 1987 DRAWN ENGR CHECKED ISSUED 30 NOV, 1987	<b>GENERAL ELECTRIC</b> ESD SYSTEMS DIV. AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 TRANSMITTER FLUID COOLING SYSTEM <b>PUMP ROOM</b> <b>PIPING SUPPORTS</b>	SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 M-6
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 72 OF SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW	CONSULTING ENGINEERS 100 WEST 30th STREET NEW YORK, N.Y. 10018 PHONE: 212-850-8000	DATE NOV 20, 1987 SCALE 1/2" = 1'-0" FILE NO. 408-005



REV.	DESCRIPTION	DATE



- GENERAL NOTES:**
- HEAT REJECTORS ARE PROVIDED BY OWNER, INSTALLED BY CONTRACTOR.
  - FOR HEAT REJECTOR AND PIPE SUPPORT FOUNDATION DETAILS REFER TO DRAWING S-11.
  - VERIFY HEAT REJECTOR DIMENSIONS PRIOR TO CONSTRUCTION OF FOUNDATIONS.
  - ANCHOR BOLTS SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SHALL BE CAST INTO THE HEAT REJECTOR FOUNDATIONS.
  - ALL PIPE ELEVATIONS ARE BASED ON A SLOPE OF 3/8" PER FOOT UPWARDS IN THE DIRECTION OF FLOW AND SHALL BE ADJUSTED ACCORDINGLY DEPENDING ON FINAL FOUNDATION DIMENSIONS.
  - PIPE SUPPORT 6 AND 7 FOUNDATION ELEVATIONS ARE DEPENDENT ON PIPE ROLL STAND SELECTED AND MAY VARY ACCORDINGLY.
  - ELEVATIONS FOLLOWED BY "AFF" REFER TO ELEVATION ABOVE FINISHED FLOOR.
  - ELEVATIONS FOLLOWED BY "BFG" REFER TO ELEVATION BELOW FINISHED GRADE.
  - AS A MINIMUM, FLANGED JOINTS SHALL BE PROVIDED AS SHOWN TO EASE INSTALLATION. ADDITIONAL FLANGED JOINTS MAY BE ADDED AT CONTRACTOR'S DISCRETION, WITH CONCURRENCE OF THE SITE ENGINEER.

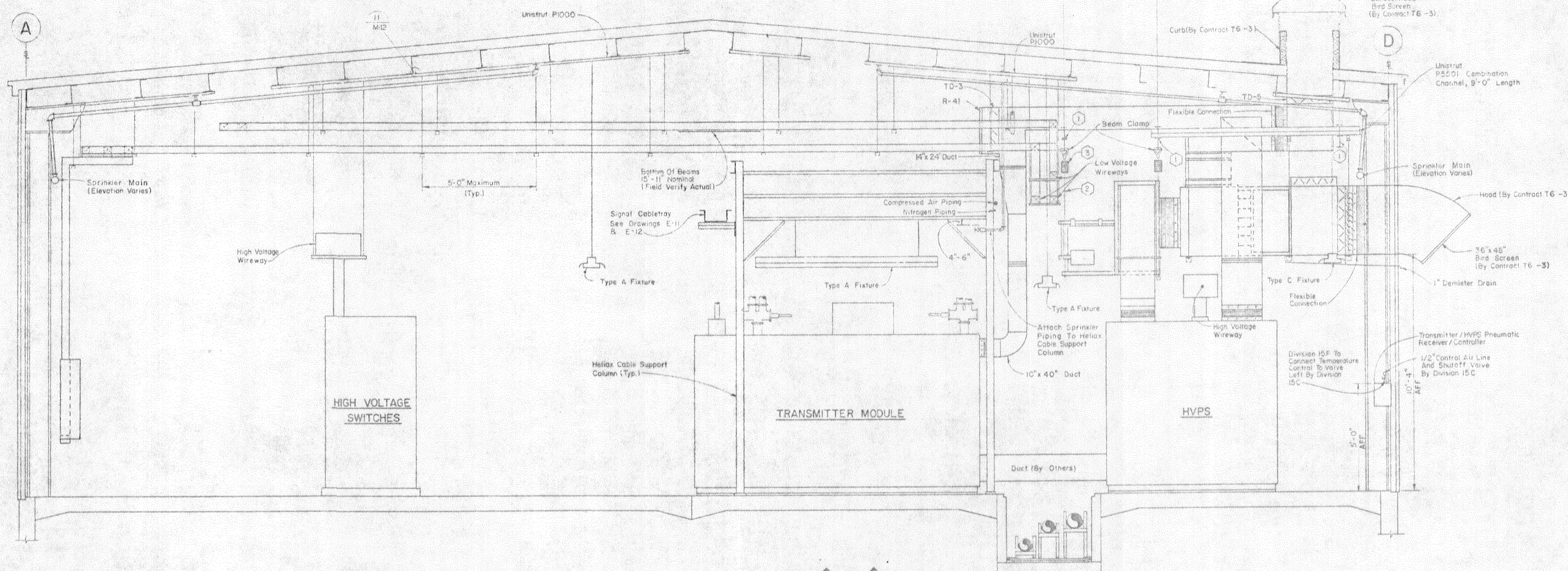


	DRAWING NO. F18628-B6-C-0174 DATE OF DRAWING 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV, 1987	<b>GENERAL ELECTRIC</b> ESSEX, NEW YORK <b>AN/FPS-11B</b> <b>SECTOR 6 TRANSMIT FACILITY</b> <b>CONTRACT T6-4</b> <b>TRANSMITTER FLUID COOLING SYSTEM</b> <b>HEAT REJECTOR</b> <b>PLAN &amp; DETAILS</b>
	SCALE: AS SHOWN FILE NO. 458.000	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-7







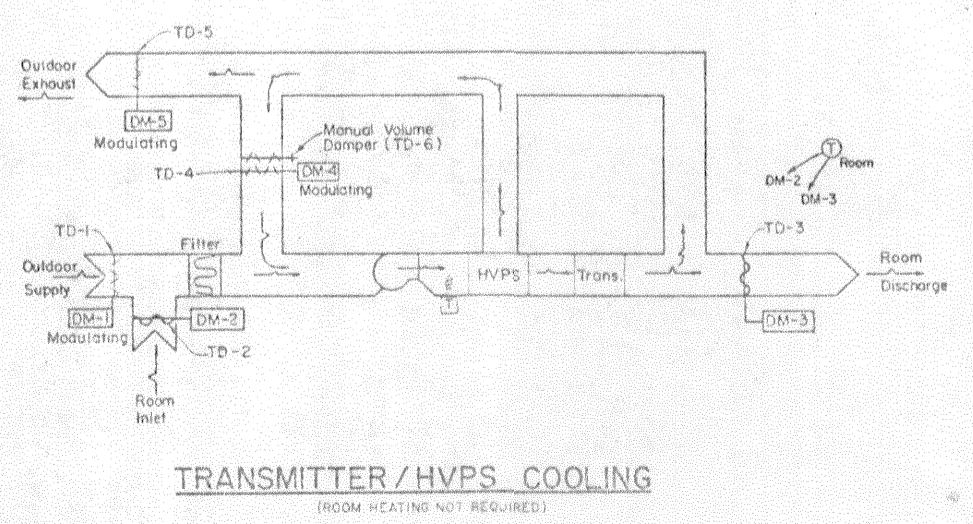


BUILDING SECTION  
SECTION 1-11 1-16

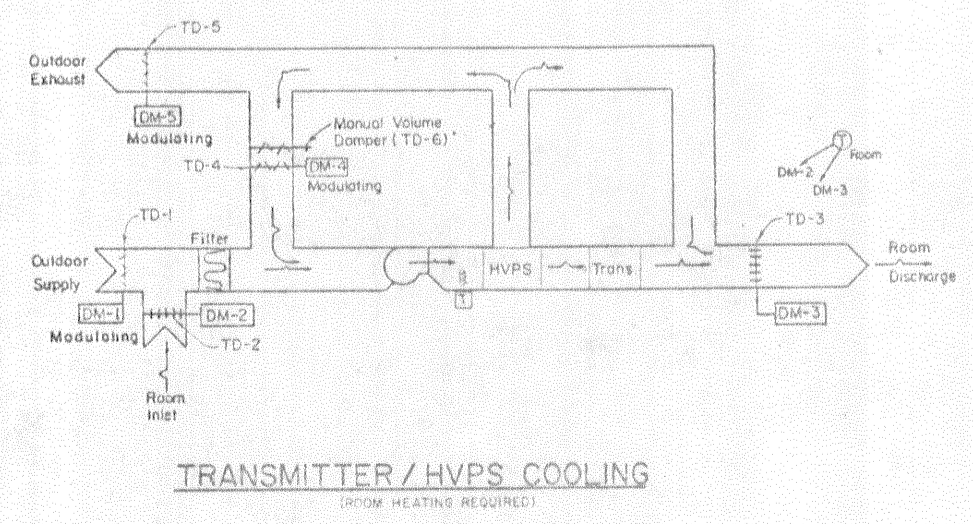
- TRANSMITTER/HVPS VENTILATION CONTROL:**
- IN THE DE-ENERGIZED (FAN OFF) CONDITION, ALL SUPPLY PRESSURE SHALL BE BLEED OFF FROM ALL DAMPER OPERATORS. THEIR POSITIONS SHALL BE AS FOLLOWS:  
 DM-1 - OUTSIDE AIR INTAKE - CLOSED  
 DM-2 - INSIDE AIR INTAKE - CLOSED  
 DM-3 - INSIDE AIR DISCHARGE - CLOSED  
 DM-4 - RECIRCULATED AIR - OPEN  
 DM-5 - OUTSIDE AIR DISCHARGE - CLOSED
  - WHEN THE FAN IS ENERGIZED, A 24V VOLT E/P SWITCH CONTROLLED BY THE FAN MOTOR STARTER SHALL ENABLE CONTROL OPERATION. SEE DRAWING E-18.
  - DAMPERS DM-1, DM-4 AND DM-5 SHALL BE OPERATED BY A MIXED AIR CONTROLLER. ON STARTUP, DAMPER DM-4 SHALL REMAIN OPEN AND DM-1 AND DM-5 SHALL REMAIN CLOSED. MIXED AIR TEMPERATURE SHALL BE SENSSED BY A PNEUMATIC AVERAGING ELEMENT MIXED AIR CONTROLLER LOCATED AT THE FAN DISCHARGE. THE CONTROLLER SHALL MAINTAIN MIXED AIR CONDITION ENTERING THE TRANSMITTER/HVPS AT 70°F OR OUTSIDE AMBIENT TEMPERATURE, WHICHEVER IS GREATER (SETPOINT 60°F-85°F ADJUSTABLE) BY MODULATING OPEN DAMPER MOTORS DM-1 AND DM-5 AND MODULATING CLOSED DAMPER DM-4 UPON HEAT RISE.
  - DAMPERS DM-2 AND DM-3 SHALL OPERATE TO PROVIDE HEAT RECOVERED FROM THE TRANSMITTERS TO THE BUILDING ON CALL FOR HEATING. A PNEUMATIC HEATING TYPE ROOM THERMOSTAT LOCATED ON A CABLE RACK COLUMN ADJACENT TO THE RESPECTIVE TRANSMITTER SHALL MODULATE DAMPERS DM-2 AND DM-3 OPEN TO MAINTAIN SPACE SETPOINT 70°F (50°-90°F ADJUSTABLE). (IN RESPONSE, DAMPERS DM-1, DM-5 AND DM-4 SHALL MODULATE TO MAINTAIN MIXED AIR SETPOINT TEMPERATURE. THIS FUNCTION OCCURS THROUGH THE PROPORTIONAL RESET CONTROLLER). ROOM TEMPERATURE CONTROL SHALL BE INDEPENDENT OF TRANSMITTER TEMPERATURE CONTROL SYSTEM.
  - SEE DRAWING M-8 FOR LOCATION OF DAMPERS AND DAMPER MOTORS USED FOR THE TRANSMITTERS/HVPS VENTILATION SYSTEM.

- SPECIAL NOTES:**
- WE X 12 BETWEEN BUILDING FRAMES. TYPICAL FOR FRAMES 2 THROUGH 14. SEE DRAWING S-10 FOR MOUNTING DETAILS. BEAM LOCATIONS SHOWN ARE FOR BARRY FANS. CONTRACTOR SHALL LOCATE BEAMS TO MATCH FANS SELECTED.
  - 3/8" THREADED ROD.
  - MASON INDUSTRIES SPRING HANGERS HS-A-200, OR EQUAL (TYP. FOR 4).

- GENERAL NOTES:**
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL WORK DETAILED ON THIS DRAWING WITH THE FOLLOWING EXCEPTIONS:  
 1.1 TRANSMITTER MODULE.  
 1.2 HIGH VOLTAGE POWER SUPPLY.  
 1.3 DUCT CONNECTING HIGH VOLTAGE POWER SUPPLIES & TRANSMITTERS WHICH IS SPECIFICALLY SHOWN AS BY OTHERS.  
 1.4 HELIAX CABLES. CABLES TO BE INSTALLED BY OTHERS ON SUPPORTS PROVIDED BY CONTRACTOR DURING THIS CONTRACT. CONTRACTOR TO PROVIDE TUBE COLUMN, CHANNEL AND UNISTRUT CABLE SUPPORT SYSTEM.
  - THE TRANSMITTERS AND HIGH VOLTAGE POWER SUPPLIES WILL BE INSTALLED BY OTHERS DURING UP AFTER THE WORK OF THIS CONTRACT. THE CONTRACTOR SHALL ENSURE CLEAR SPACE IS MAINTAINED FOR EQUIPMENT INSTALLATION.
  - MODEL NUMBERS OF EQUIPMENT HANGING SPECIALTIES ARE SHOWN FOR THE PRODUCTS OF THE UNISTRUT COMPANY. EQUAL PRODUCTS OF POKERSTRUT, KINDORF OR EQUAL WILL BE CONSIDERED FOR REVIEW.
  - ALL DUCTWORK FROM THE INTAKE HOODS TO THE VENTILATION FANS SHALL BE THOROUGHLY SEALED. ALL SEAMS SHALL BE WATERTIGHT, INCLUDING CONNECTIONS TO HOODS AND FAN HOUSINGS.

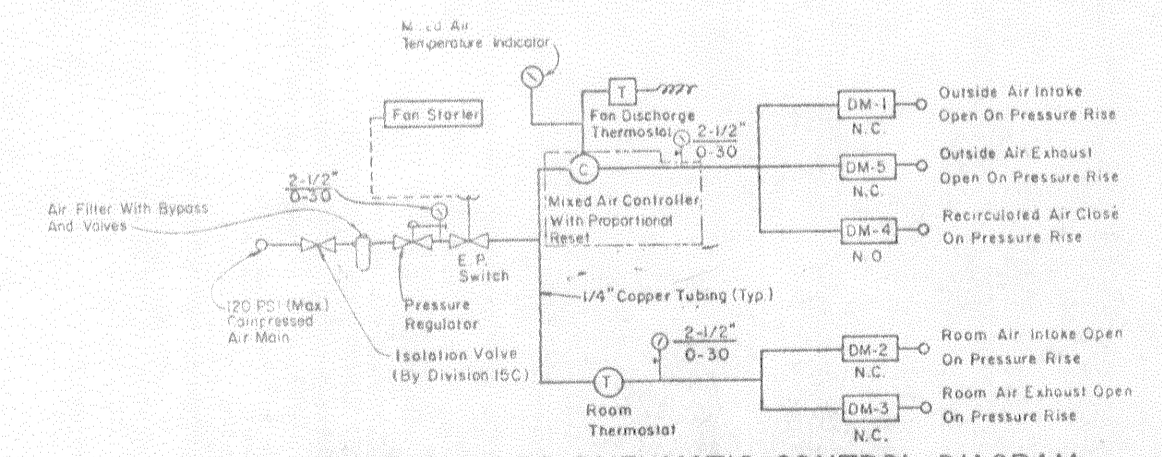


TRANSMITTER/HVPS COOLING  
(ROOM HEATING NOT REQUIRED)



TRANSMITTER/HVPS COOLING  
(ROOM HEATING REQUIRED)

- LEGEND**
- Damper Open +++++
  - Damper Closed - - - - -
  - Damper Modulating ~ ~ ~ ~ ~



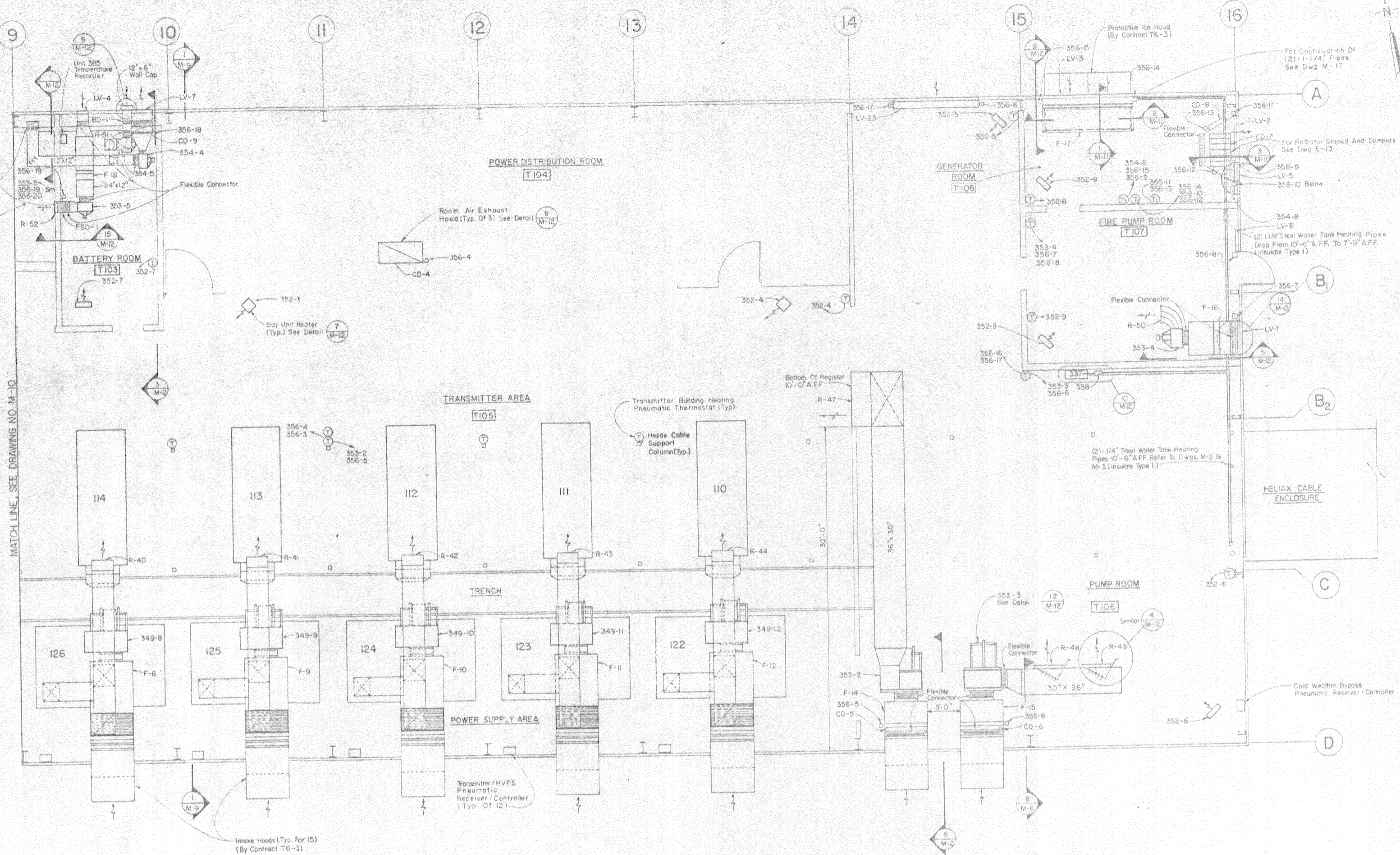
TRANSMITTER/HVPS PNEUMATIC CONTROL DIAGRAM

	DATE: 2 JULY 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV. 1987	GENERAL ELECTRIC ESC SYRACUSE NY AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 BAY SECTION & DETAILS	
	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-9	DATE: NOV 30 1987 SCALE: AS SHOWN FILE NO. 458.005	
	NO ALTERATION REQUIRED HEREIN EXCEPT AS INDICATED UNDER SECTION TITLED SUB-DIVISION 1 OF THE NEW YORK STATE EDUCATION LAW	CHALLENGER & BISHOP CONSULTING ENGINEERS 1100 N. 10TH ST. SUITE 200 YORK, PA 17403	43
	REVISION: 0		



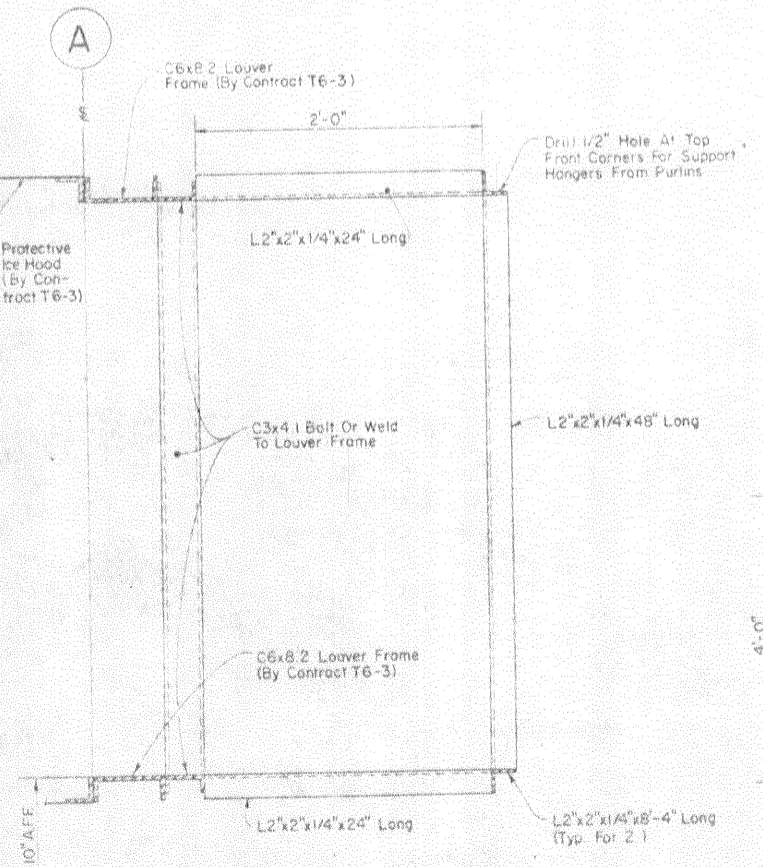




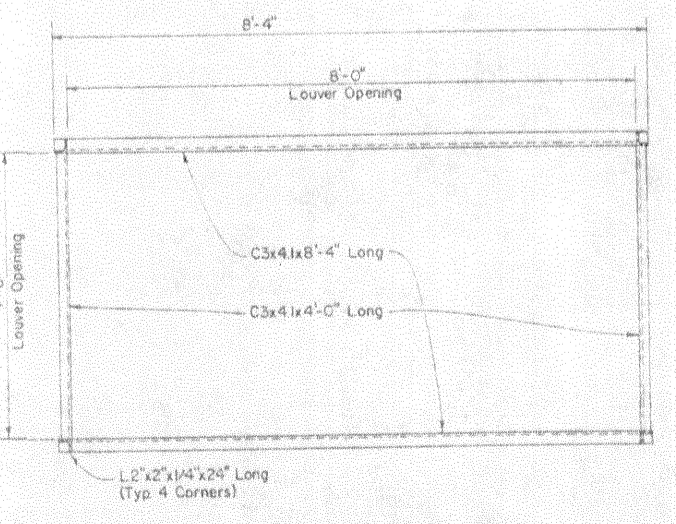


HVAC PLAN - RIGHT HALF  
Scale 1/4" = 1'-0"

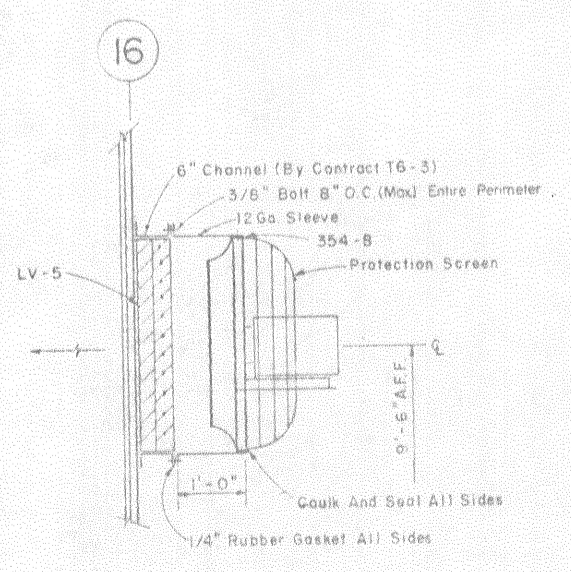
- NOTES:
- Contractor Shall Install 20 - 2x2" Holding Frames In Welded Steel Framework See Spec. 15850
  - All Welds To Be 3/16" Fillet Weld Except Where Noted.
  - Caulk All Joints Airtight



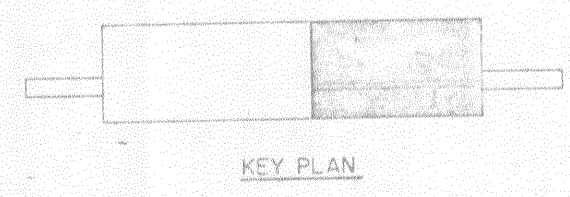
SECTION 1  
Scale 1/2" = 1'-0"  
M-11



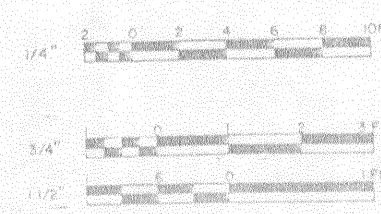
SECTION 2  
Scale 3/4" = 1'-0"  
M-11



SECTION 3  
Scale 3/4" = 1'-0"  
M-11



KEY PLAN

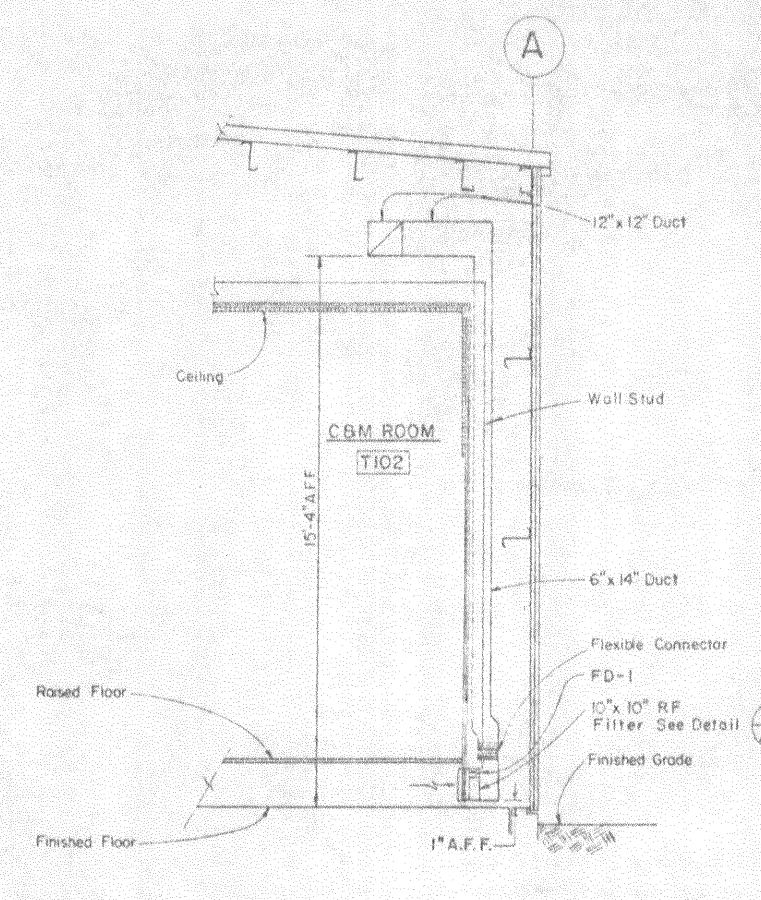


REVISION-O

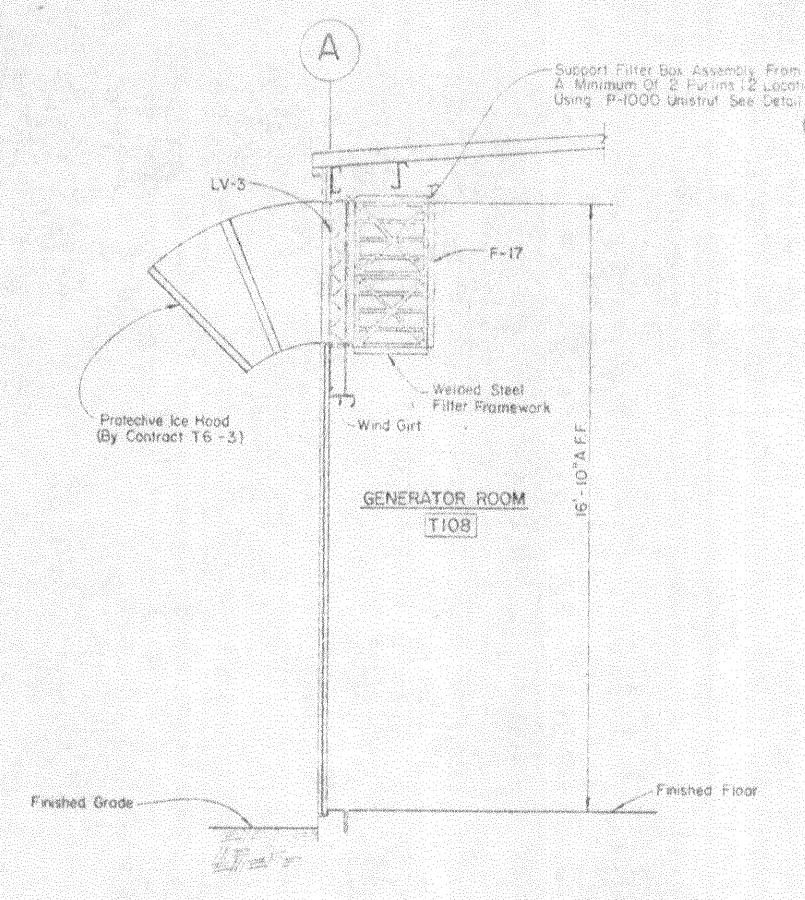
	CONTRACT NO. F19628-BG-C-074 DATE OF DRAWING 2 JULY, 1987 DRAWN BY [Signature] ENGR. [Signature] CHECKED BY [Signature] ISSUED 30 NOV, 1987	GENERAL ELECTRIC ESD, GHAUSENY AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>HVAC PLAN - RIGHT HALF</b>		SIZE CODE IDENT NO. DRAWING NO. E 03538 T6 M-11
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 1209 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW			DATE NOV. 30, 1987 SCALE AS SHOWN FILE NO. 458005
	G. Calverino & Sons CONSULTING ENGINEERS LIVERPOOL, NEW YORK 13088			SHEET NO. <b>45</b>
	REVISION-O			



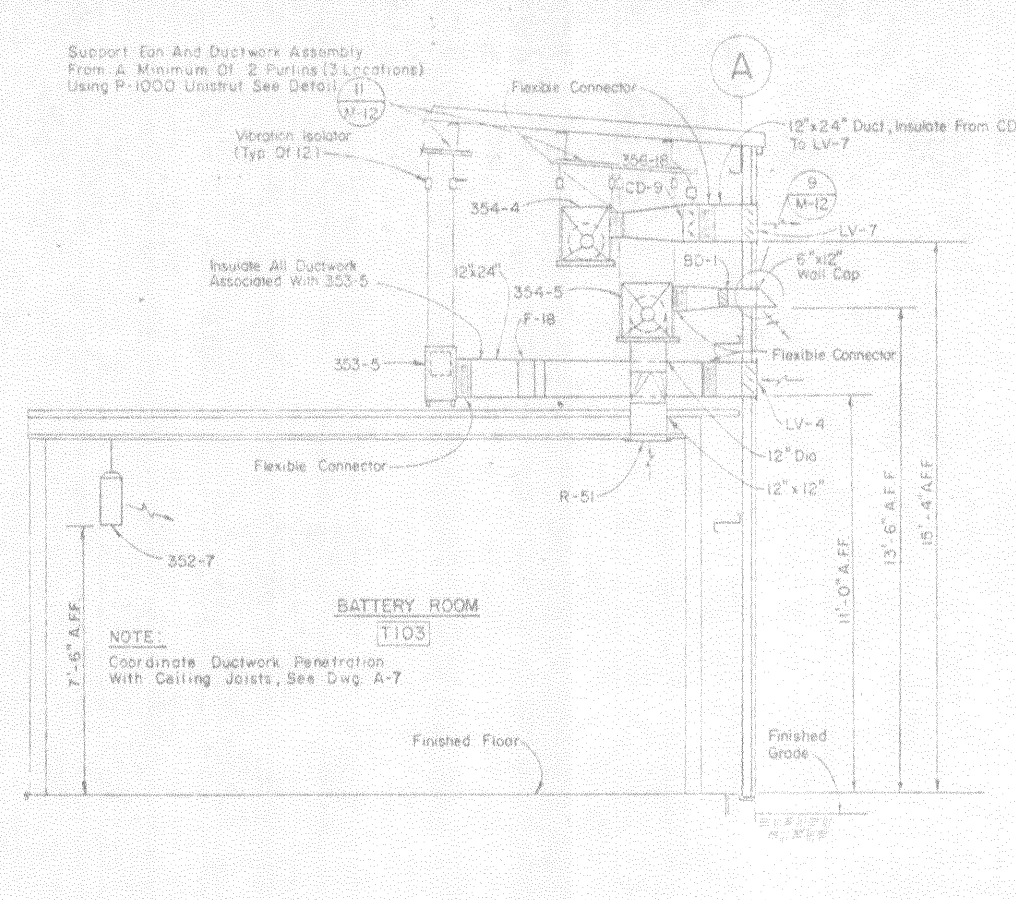
NO.	REVISIONS	DATE



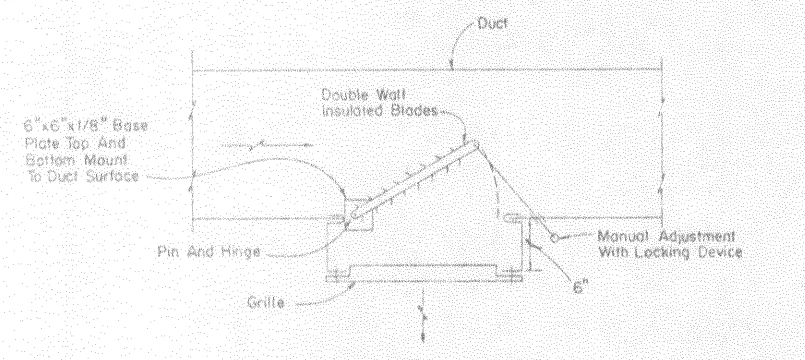
**CONTROL AND MONITOR ROOM SECTION** (1) M-11  
Scale: 3/8" = 1'-0"



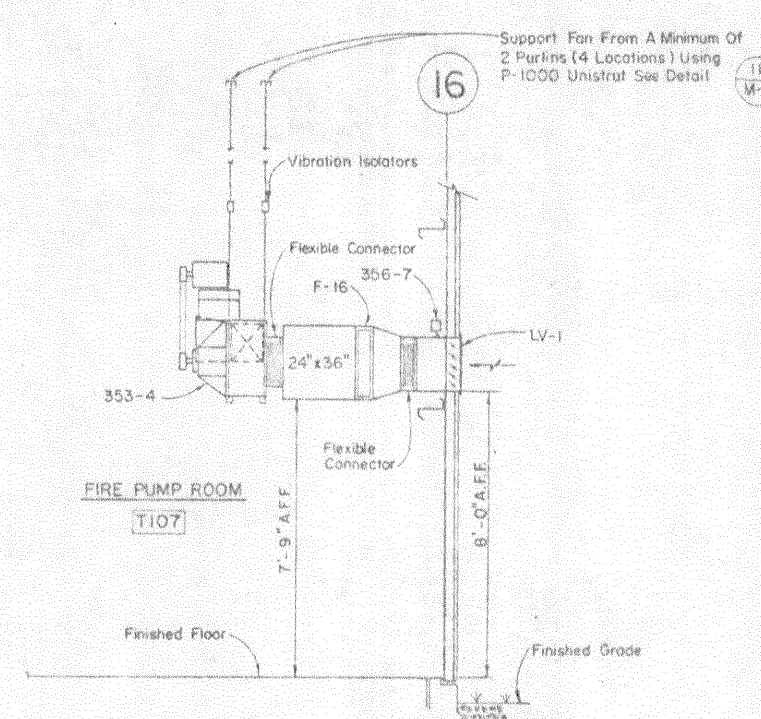
**GENERATOR ROOM SECTION** (2) M-11  
Scale: 3/8" = 1'-0"



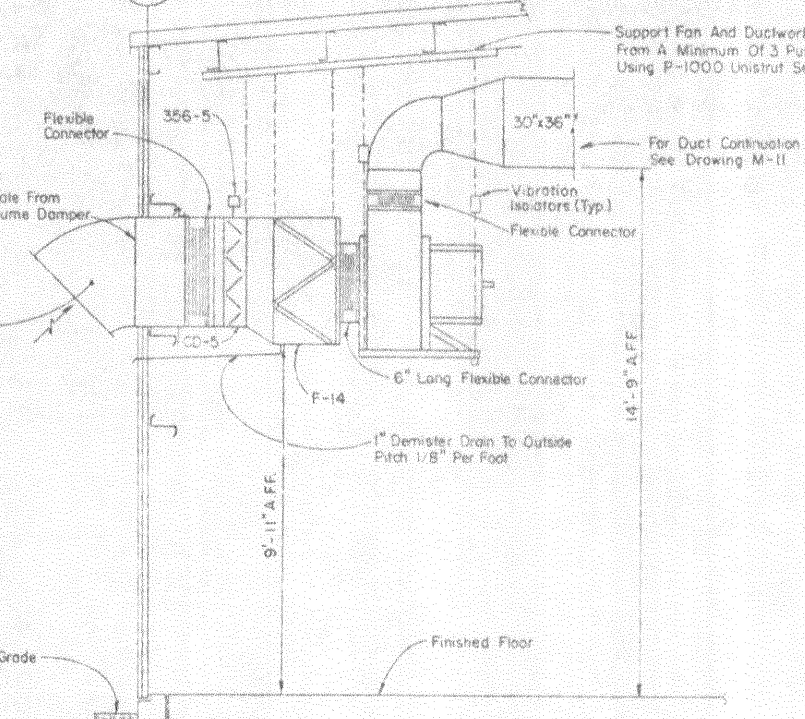
**BATTERY ROOM SECTION** (3) M-11  
Scale: 3/8" = 1'-0"



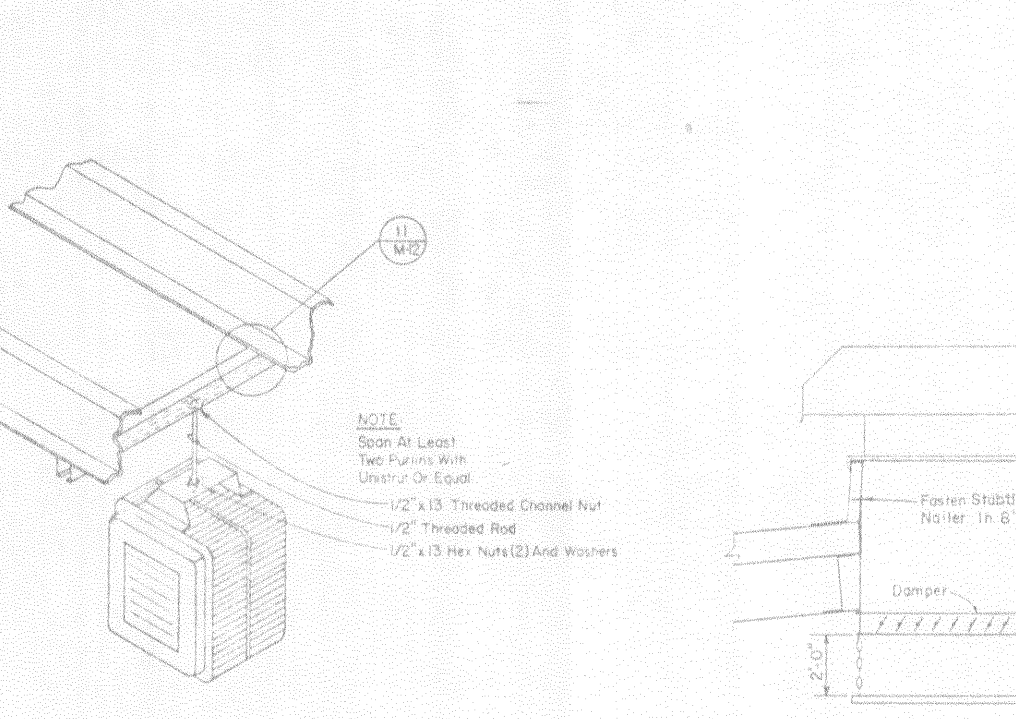
**AIR EXTRACTOR DETAIL** (4) M-10 (4) M-11  
Not To Scale



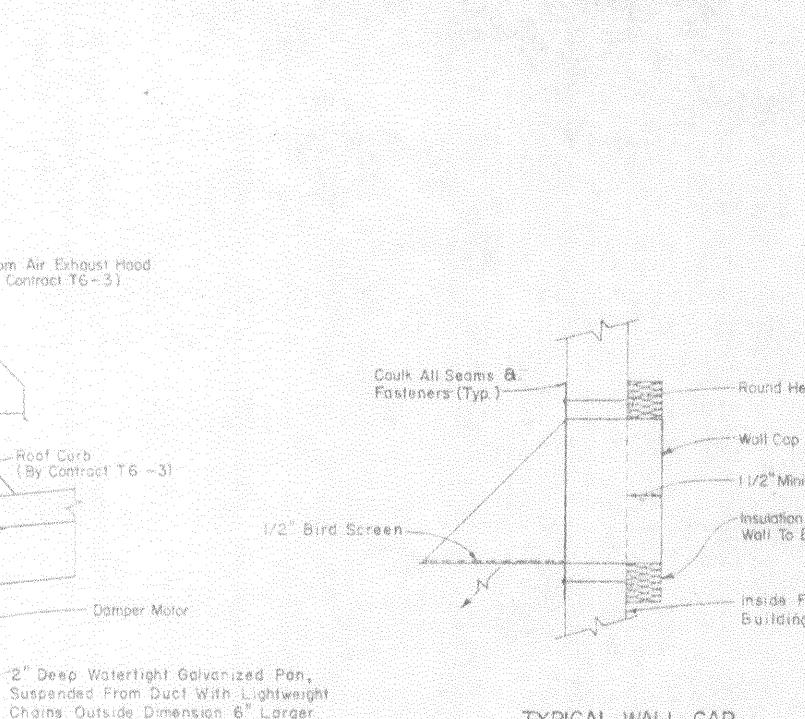
**FIRE PUMP ROOM SECTION** (5) M-11  
Scale: 3/8" = 1'-0"



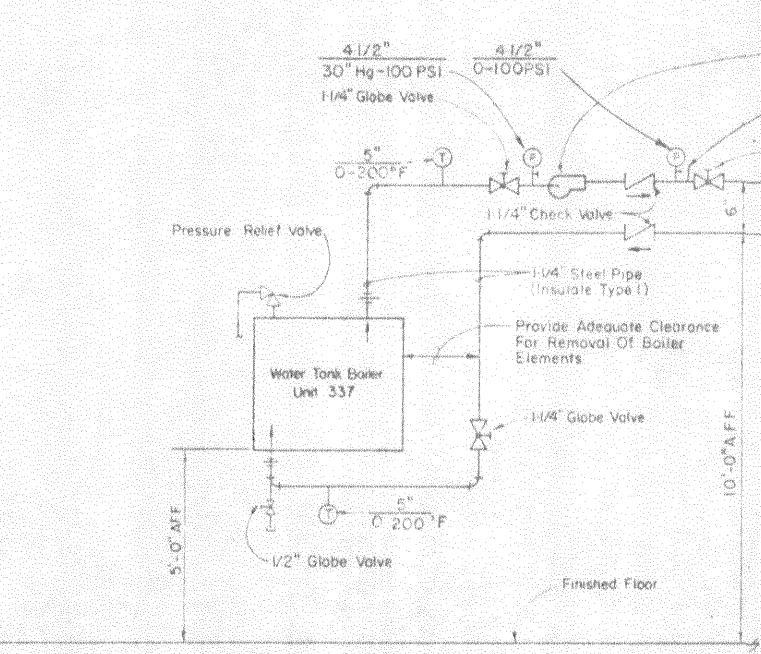
**SUPPLY FAN 353-2 SECTION** (6) M-11  
Scale: 3/8" = 1'-0" (Typical For Units 353-1, 353-3, Except Duct)



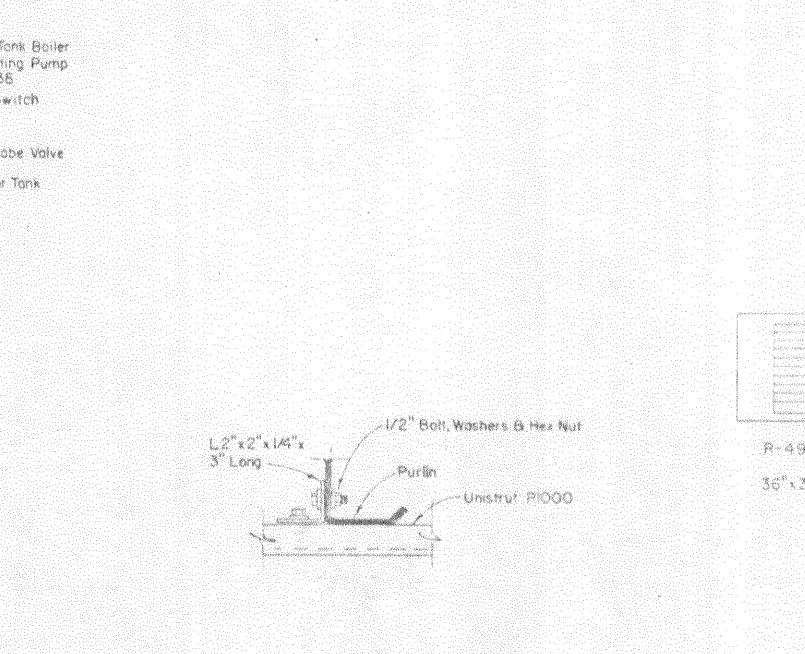
**UNIT HEATER DETAIL** (7) M-10 (7) M-11  
Not To Scale (Typical For Room Heaters)



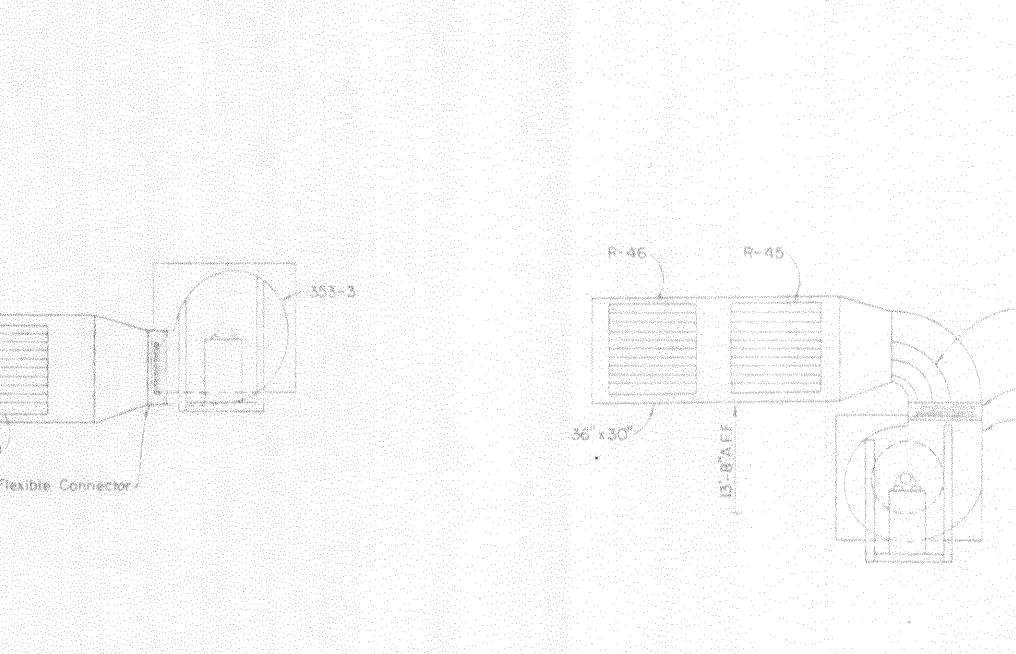
**TYPICAL WALL CAP** (9) M-10 (9) M-11 (9) M-12  
Not To Scale



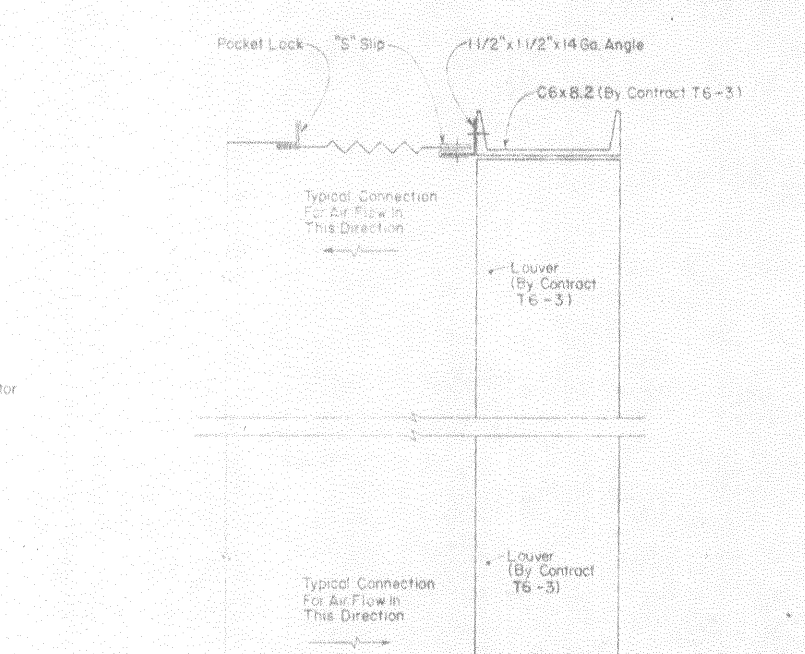
**WATER TANK BOILER DETAIL** (10) M-1 (10) M-11  
Not To Scale



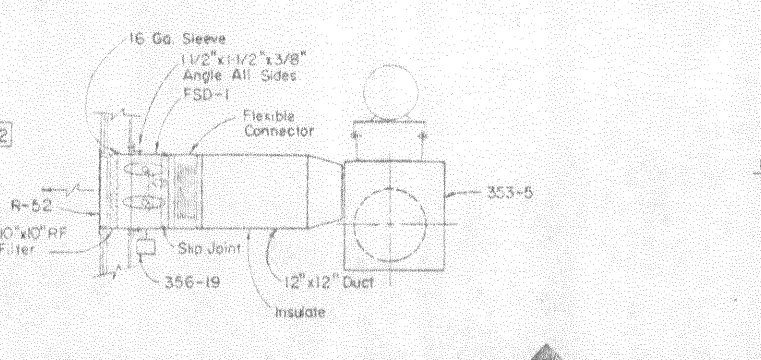
**PURLIN SUPPORT DETAIL** (11) M-9 (11) M-12  
Not To Scale



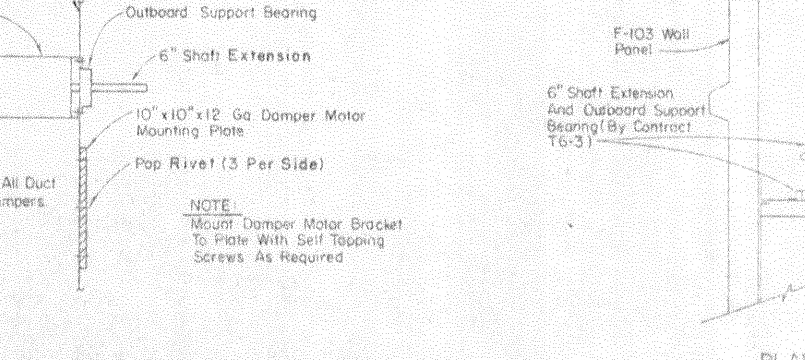
**SUPPLY FAN 353-3 DETAIL** (12) M-11  
Scale: 3/8" = 1'-0"



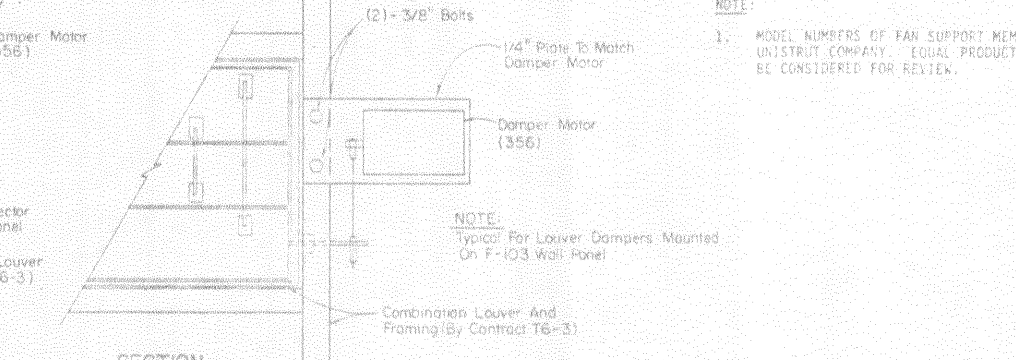
**TYPICAL LOUVER CONNECTION** (14) M-11  
Scale: 3/8" = 1'-0"



**SUPPLY FAN 353-5 SECTION** (15) M-11  
Scale: 3/8" = 1'-0"



**DAMPER MOTOR MOUNTING DETAIL** (16) M-12  
Not To Scale



**DAMPER MOTOR MOUNTING DETAIL** (17) M-12  
Not To Scale

	DRAWING NO. 119628-96-C-0174 DATE 2 JULY 1987 PROJECT AN/FPS-118 CONTRACT T6-4 TRANSMIT BUILDING	<b>GENERAL ELECTRIC</b> 680 BRUCKNER AVENUE ALBANY, N.Y. 12205	
	ENGINEER CHECKED ISSUED 30 NOV 1987	<b>HVAC DETAILS</b> CODE IDENT NO. DRAWING NO. E 03538 T6 M-12	DATE NOV 30 1987 SCALE AS SHOWN SHEET NO. 46
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2008 SUB-DIVISION 3 OF THE NEW YORK STATE EDUCATION LAW	CATERLIN & BOYNE CONSULTING ENGINEERS 100 WEST 17TH STREET NEW YORK, N.Y. 10011	FILE NO. 498.005
	REVISION-0		



LOUVER SCHEDULE									
UNIT NO.	LOCATION	TYPE	ACTUATOR NUMBER	SIZE WIDTH HEIGHT	CFM	PERCENT FREE AREA	MAXIMUM PRESSURE DROP (INCHES WG)	LOUVER PROVIDED BY CONTRACT	COMMENTS
LV-1	T107	INTAKE	356-7	36 18	1650	35	.07	T6-3	
LV-2	T108	EXHAUST	356-10 356-11	72 60	14500	51	.32	T6-3	
LV-3	T108	INTAKE	356-14 356-15	96 48	19000	78	.01	T6-3	
LV-4	T105	INTAKE	NONE	12 12	200	25	.06	T6-3	
LV-5	T108	EXHAUST	356-9	36 36	3800	45	.1	T6-3	
LV-6	T107	EXHAUST	356-8	24 24	1450	41	.09	T6-3	
LV-7	T105	EXHAUST	NONE	24 12	600	28	.11	T6-3	
LV-11	T105	INTAKE	NONE	48 36	5700	46	.168	T6-4	
LV-22	T106	EXHAUST	357-16 357-17	96 48	9100	49	.04	T6-3	

NOTE: REFER TO SPECIFICATION SECTION 13401 FOR LOUVER TYPE. ALL LOUVER ACTUATORS SHALL BE PROVIDED BY THIS CONTRACT.

FILTER SCHEDULE														
UNIT NO.	LOCATION	UNIT SERVED	PREFILTER EFF	PREFILTER SIZE	PRIMARY FILTER EFF	PRIMARY FILTER SIZE	UNIT TYPE	UNIT SIZE	UNIT HEIGHT	UNIT WIDTH	UNIT DEPTH	MAX. PRESSURE DROP TOTAL (INCHES WG)	CFM	COMMENTS
F-1	T105	349-1	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-2	T105	349-2	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-3	T105	349-3	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-4	T105	349-4	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-5	T105	349-5	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-6	T105	349-6	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-7	T105	349-7	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-8	T105	349-8	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-9	T105	349-9	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-10	T105	349-10	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-11	T105	349-11	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-12	T105	349-12	4	18x24	65	1	3	48x36	48	36	24	.69	5700	
F-13	T105	353-1	-	-	30	6	1	24x24	48	42	20	.16	8850	
F-14	T106	353-2	-	-	30	6	1	24x24	48	42	20	.16	8850	
F-15	T106	353-3	-	-	30	6	1	24x24	48	42	20	.17	9100	
F-16	T107	353-4	-	-	30	1/1	1	24x24/12x24	36	24	2	.08	1450	
F-17	T108	354-8 (AND RADIATOR FAN)	-	-	30	20	1	24x24	96	48	24	.07	19400	
F-18	T108	353-5	30	1	24x12	45	1	2	24x12	24	12	.05	700	

NOTES:  
1. FILTER F-18 PREFILTER SHALL BE A TYPE 1 FILTER.  
2. PREFILTERS FOR FILTERS F-1 THROUGH F-12 SHALL BE TYPE 4 ALUMINUM FILTERS. SEE SPECIFICATION 13401 FOR FILTER EFFICIENCY AND DUST HOLDING CAPACITY.  
3. STATIC PRESSURE IS OBTAINED FROM PRIMARY FILTER AND PREFILTER AT INITIAL CONDITIONS (CLEAN FILTER).  
4. FILTER HOUSING FOR UNIT F-17 SHALL BE FIELD FABRICATED.

DAMPER SCHEDULE									
UNIT NUMBER	AREA SERVED	WIDTH	SIZE HEIGHT	TYPE	CFM	ACTUATOR NUMBER	COMMENTS		
CD-1	T105	48	36	2	6,850	354-1			
CD-2	T105	48	24	2	5,900	356-2			
CD-3	T105	48	24	2	5,900	356-3			
CD-4	T105	48	24	2	5,900	356-4			
CD-5	T106	48	36	2	6,850	356-5			
CD-6	T106	48	36	2	9,100	356-6			
CD-7	T106	24	36	2	7,250	356-12			
CD-8	T108	24	36	2	7,250	356-13			
CD-9	T107	24	12	2	600	354-18			
FD-1	T202	12	6	4	210				
FD-2	T114	10	3-1/4	4	100				
FD-3	T102	12	12	3	600		FUSIBLE LINK		
FD-4	T102	12	12	1	200	356-19			
FD-5	T102	12	12	1	200	356-20			
TD-1	TRANSMITTER/HVPS	48	36	5		DM-1	TYPICAL OF 12		
TD-2	TRANSMITTER/HVPS	24	24	5		DM-2	TYPICAL OF 12		
TD-3	TRANSMITTER/HVPS	24	24	5		DM-3	TYPICAL OF 12		
TD-4	TRANSMITTER/HVPS	24	24	5		DM-4	TYPICAL OF 12		
TD-5	TRANSMITTER/HVPS	24	24	5		DM-5	TYPICAL OF 12		
TD-6	TRANSMITTER/HVPS	24	24	5		DM-6	TYPICAL OF 12		

REGISTER / GRILLE / DIFFUSER SCHEDULE									
UNIT NO.	LOCATION	TYPE	WIDTH	SIZE HEIGHT	CFM	MAXIMUM PRESSURE DROP (INCHES WG)	NET SIZE	DUTY	COMMENTS
R-1 THRU R-14	T102	5	6	18	210	.02	6 X 18	SUPPLY	
R-15 THRU R-22	T102	5	6	18	200	.15	6 X 18	SUPPLY	
R-23 THRU R-24	T105	2	24	24	2,500	.01	24 X 24	SUPPLY	
R-25	T105	2	30	30	4,425	.03	30 X 30	SUPPLY	
R-26	T105	2	30	30	4,425	.03	30 X 30	SUPPLY	
R-27	T105	2	60	30	6,850	.03	60 X 30	SUPPLY	
R-28	T106	2	30	30	4,425	.03	30 X 30	SUPPLY	
R-29	T106	2	30	30	4,425	.03	30 X 30	SUPPLY	
R-30	T107	2	18	18	1,450	.03	18 X 18	SUPPLY	
R-31	T103	3	12	12	210	.01	12 X 12	EXHAUST	
R-32	T102	1	12	12	200	.01	12 X 12	SUPPLY	
R-33	T103	3	12	12	200	.01	12 X 12	EXHAUST	
R-34	T105	4	12	12	700	.01	12 X 12	EXHAUST	

FAN SCHEDULE									
UNIT NO.	AREA SERVED	CAPACITY CFM	HP	VELOCITY (FPM)	PHASE	TYPE	AIR FT MIN	MAX. VELOCITY (FPM)	COMMENTS
349-1	T105	5700	1369	275	3	3	4	91'	1950
353-1	T105	8850	969	125	3	3	2	91'	2100
353-2	T106	8850	967	125	3	3	2	91'	2100
353-3	T106	9100	995	125	3	3	2	91'	2150
353-4	T107	1440	174	75	1	173	3	91'	1650
353-5	T102	200	123	50	1	174	3	91'	450
354-1	T105	600	1868	23	1	174	3	70'	1350
354-2	T107	210	989	30	1	174	3	103'	500
354-3	T114	180	170	120	1	174	3	103'	500
354-4	T108	3820	1160	150	3	172	5	103'	710

NOTE: ALL STAT. PRESSURES ARE AT STANDARD CONDITIONS.

UNIT HEATER SCHEDULE									
UNIT NO.	LOCATION	CAPACITY BTU/H	VELOCITY (FPM)	PHASE	TYPE	CFM	THROW	MOUNTING HEIGHT A.F.F.	COMMENTS
352-1	T105	25	85,200	460	3	174	2100/1600	50'	8'-0"
352-2	T105	25	85,200	480	3	174	2100/1600	50'	8'-0"
352-3	T105	20	50,200	480	3	173	1320	41'	8'-0"
352-4	T105	20	50,200	480	3	173	1320	41'	8'-0"
352-5	T106	7.5	25,600	480	3	173	610	18'	8'-0"
352-6	T106	7.5	25,600	480	3	173	610	18'	8'-0"
352-7	T105	3	10,200	277	1	173	350	12'	7'-6"
352-8	T105	3	10,200	277	1	173	350	12'	8'-0"
352-9	T107	3	10,200	277	1	173	350	12'	8'-0"
352-10	T114	1.5	5,100	208	1	170	170	11'-0"	

TEMPERATURE CONTROLS

ZONE THERMISTOR CONTROL & MONITOR ROOM  
UNITS 350-1 AND 351-1 CRITICAL AREA HVAC UNITS  
CONTROL SEQUENCE:  
THE CRITICAL AREA HVAC UNITS SHALL EACH BE CONTROLLED BY AN INDEPENDENT TEMPERATURE/HUMIDITY CONTROL SYSTEM AS FOLLOWS:  
ELECTRONIC CONTROL SYSTEM:  
- THE TEMPERATURE AND HUMIDITY CONTROLS ARE INDIVIDUALLY ADJUSTABLE TO PROVIDE 70°F ± 1° AND 45% TO 65% RELATIVE HUMIDITY MEASURED 5' ABOVE THE COMPUTER ROOM FLOOR. THERMOSTAT WILL CONTROL COMPRESSOR CYCLING AND HOT-GAS BYPASS.  
- THE CONTROL CIRCUIT IS CONFIGURED SO AS TO PROVIDE RESTART OF ANY UNIT WHICH STOPS DUE TO POWER FAILURE, AUTOMATICALLY ONCE POWER IS RESTORED. SUCH START-UP IS SEQUENTIAL SO THAT FAN, COMPRESSOR 1 AND COMPRESSOR 2 START ARE NOT SIMULTANEOUS.  
CONTRACTOR SHALL CIRCUIT CONTROL CIRCUIT INTERLOCK TO THE REMOTE RUN/STOP CONTACT. THE REMOTE CONTACT PROVIDED BY THE CONTRACTOR SHALL BE NORMALLY CLOSED AND SHALL OPEN WHEN UNIT EMERGENCY STOP IS ACTIVATED. RESETTING THIS CONTACT SHALL ENABLE THE UNIT TO AUTOMATICALLY RESTART.

VENTILATION CONTROLS

ROOM T-102, BATTERY ROOM  
UNIT 354-4 EXHAUST FAN  
CONTROL SEQUENCE:  
MANUAL MOTOR STARTER LOCATED AT EXHAUST FAN 354-4 SHALL ACTIVATE THE EXHAUST FAN CONTINUOUSLY. UPON POWER FAILURE, EXHAUST FAN SHALL SHUTDOWN AND SYSTEM BACKDRIFT DAMPERS SHALL CLOSE.  
ROOM T-114, TOILET  
UNIT 354-6 EXHAUST FAN  
CONTROL SEQUENCE:  
MANUAL MOTOR STARTER SHALL ACTIVATE THE EXHAUST FAN 354-6. UPON POWER FAILURE, EXHAUST FAN SHALL SHUTDOWN AND SYSTEM BACKDRIFT DAMPERS SHALL CLOSE.

HEATING CONTROLS

UNITS 352-1 THROUGH 352-10, ELECTRIC UNIT HEATERS  
CONTROL SEQUENCE:  
EACH UNIT HEATER SHALL BE CONTROLLED BY A 120 VOLT HEATING THERMOSTAT LOCATED AS SHOWN ON THE DRAWINGS. UNIT HEATERS SHALL INCLUDE INTEGRAL CONTROL DELAYS OR CONTACTORS FOR CONNECTIONS OF THE 120 VOLT THERMOSTAT.

UNIT 354-4, EXHAUST FAN  
CONTROL SEQUENCE:  
A MANUAL MOTOR STARTER SHALL ACTIVATE THE SHUT-HALON EXHAUST FAN UNIT 354-4 AND DAMPER MOTORS 356-18 AND 356-20. UPON POWER FAILURE, THE DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION.  
IN THE EVENT OF HALON SECOND ZONE ALARM, THE HALON CONTROL PANEL INTERLOCK SHALL INTERRUPT FAN OPERATION AND CLOSE THE TWO DAMPERS. SEE CONTROL DIAGRAM ON DRAWING E-18.

UNIT 353-5 SUPPLY FAN  
CONTROL SEQUENCE:  
A MANUAL MOTOR STARTER ACTIVATES THE SUPPLY FAN UNIT 353-5 AND ACTIVATES THE DAMPER MOTORS 356-19 AND 356-20. UPON POWER FAILURE, THE DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION.  
IN THE EVENT OF HALON SECOND ZONE ALARM, THE HALON CONTROL PANEL INTERLOCK SHALL INTERRUPT FAN OPERATION AND CLOSE THE TWO DAMPERS. SEE CONTROL DIAGRAM ON DRAWING E-18.

ROOM T-105, POWER SUPPLY AREA  
UNIT 349-1 THROUGH 349-12, TRANSMITTER AIR COOLING FANS  
CONTROL SEQUENCE:  
EACH TRANSMITTER AIR COOLING SYSTEM IS CONTROLLED BY A DEDICATED PNEUMATIC TEMPERATURE CONTROL SYSTEM. SEE DRAWING M-9.

ROOM T-104, T105 BAY AREA  
UNIT 353-1 BUILDING VENTILATION FAN  
CONTROL SEQUENCE:  
A 120 VOLT COOLING THERMOSTAT LOCATED AS SHOWN WILL ACTIVATE SUPPLY FAN 353-1 AND DAMPER MOTORS 356-1, 356-2 AND 356-3. UPON POWER FAILURE, ALL DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION. SEE CONTROL DIAGRAM ON DRAWING E-18.

UNIT 353-2 BUILDING VENTILATION FAN  
CONTROL SEQUENCE:  
A 120 VOLT COOLING THERMOSTAT LOCATED AS SHOWN WILL ACTIVATE SUPPLY FAN 353-2 AND DAMPER MOTORS 356-4, 356-5 AND 356-6 (IF NOT ALREADY ACTIVATED WITH 353-1). UPON POWER FAILURE, ALL DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION. SEE CONTROL DIAGRAM ON DRAWING E-18.

ROOM T-106, PUMP ROOM  
UNIT 353-3 SUPPLY FAN  
CONTROL SEQUENCE:  
A 120 VOLT COOLING THERMOSTAT LOCATED AS SHOWN WILL ACTIVATE SUPPLY FAN 353-3 AND DAMPER MOTORS 356-7, 356-8 AND 356-9. UPON POWER FAILURE, ALL DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION. SEE CONTROL DIAGRAM ON DRAWING E-18.

ROOM T-107, FIRE PUMP ROOM  
UNIT 353-4 SUPPLY FAN  
CONTROL SEQUENCE:  
A 120 VOLT COOLING THERMOSTAT LOCATED AS SHOWN WILL ACTIVATE THE SUPPLY FAN 353-4 AND DAMPER MOTORS 356-7 AND 356-8. UPON POWER FAILURE, ALL DAMPER MOTORS SHALL SPRING RETURN TO THE CLOSED POSITION.

ROOM T-108, GENERATOR ROOM  
UNIT 354-4 EXHAUST FAN AND DAMPER MOTORS 356-5, 356-10, 356-11, 356-12, 356-13, 356-14, 356-15  
CONTROL SEQUENCE:  
WITH THE ON-AUTO SWITCH LOCATED IN THE ON POSITION, UNIT 354-4 AND DAMPER MOTORS 356-5 & 356-10 SHALL OPERATE IN THE AUTO POSITION. THERMOSTAT T3 SHALL ACTIVATE UNIT 354-4 AND DAMPER MOTORS 356-5 & 356-10 FOR SUMMER COOLING SET POINT 90°.

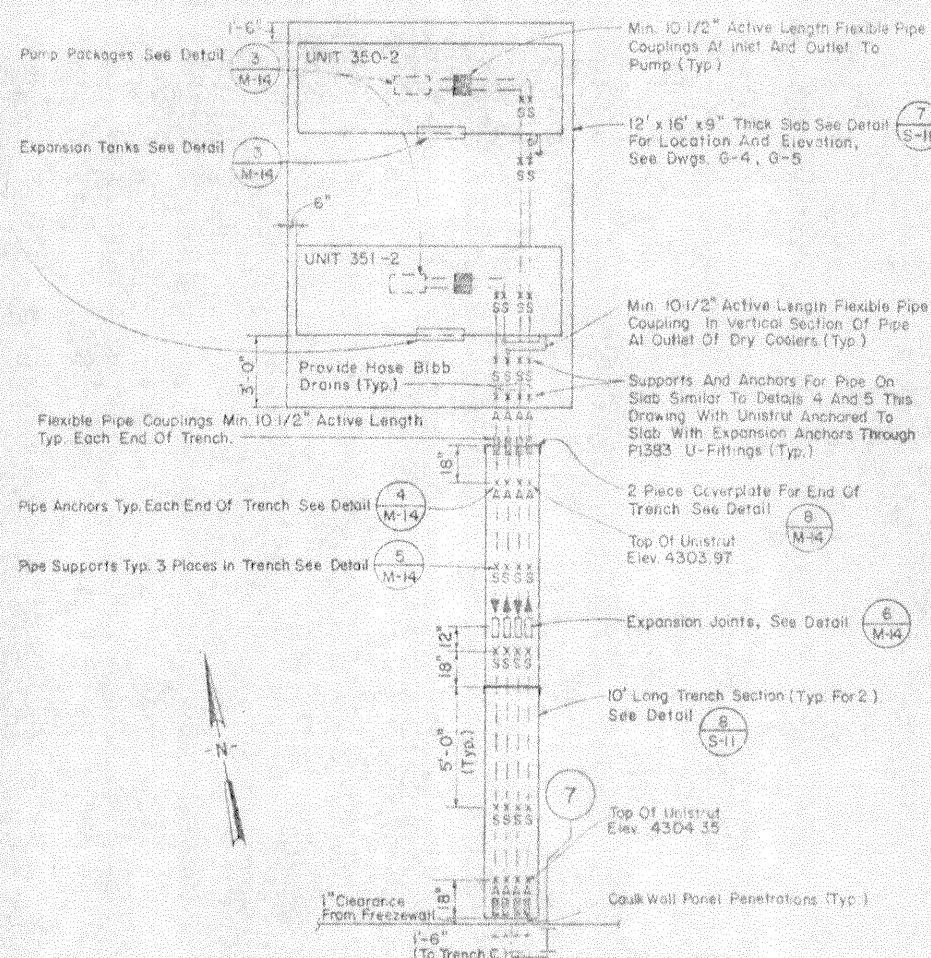
GENERATOR ROOM  
ON GENERATOR START-UP, DAMPER MOTOR 356-15 OPERATES FOR COMBUSTION AIR. THERMOSTAT T4 SHALL ACTIVATE DAMPER MOTORS 356-11 & 356-13 ON TEMPERATURE RISE ABOVE 71°. DAMPER MOTOR 356-12 IS NORMALLY OPEN. THERMOSTAT T2 SHALL ACTIVATE DAMPER MOTORS 356-10, 356-11 & 356-14 ON TEMPERATURE RISE ABOVE 70°. DAMPER MOTOR 356-12 IS NORMALLY OPEN. SEE CONTROL DIAGRAM ON DRAWING E-18.

REVISION - 0

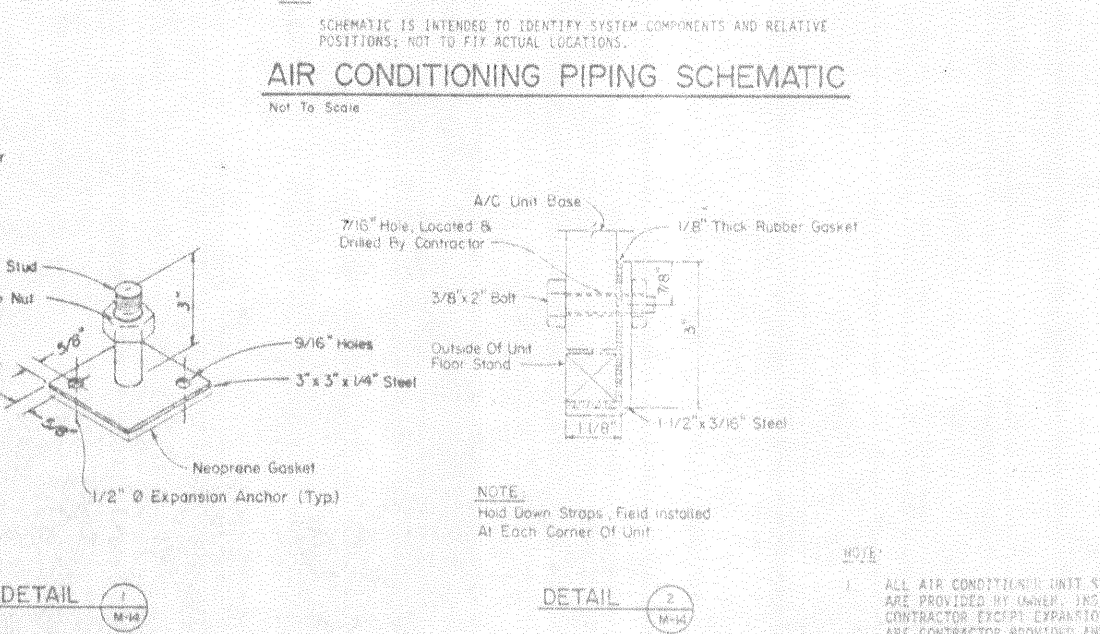
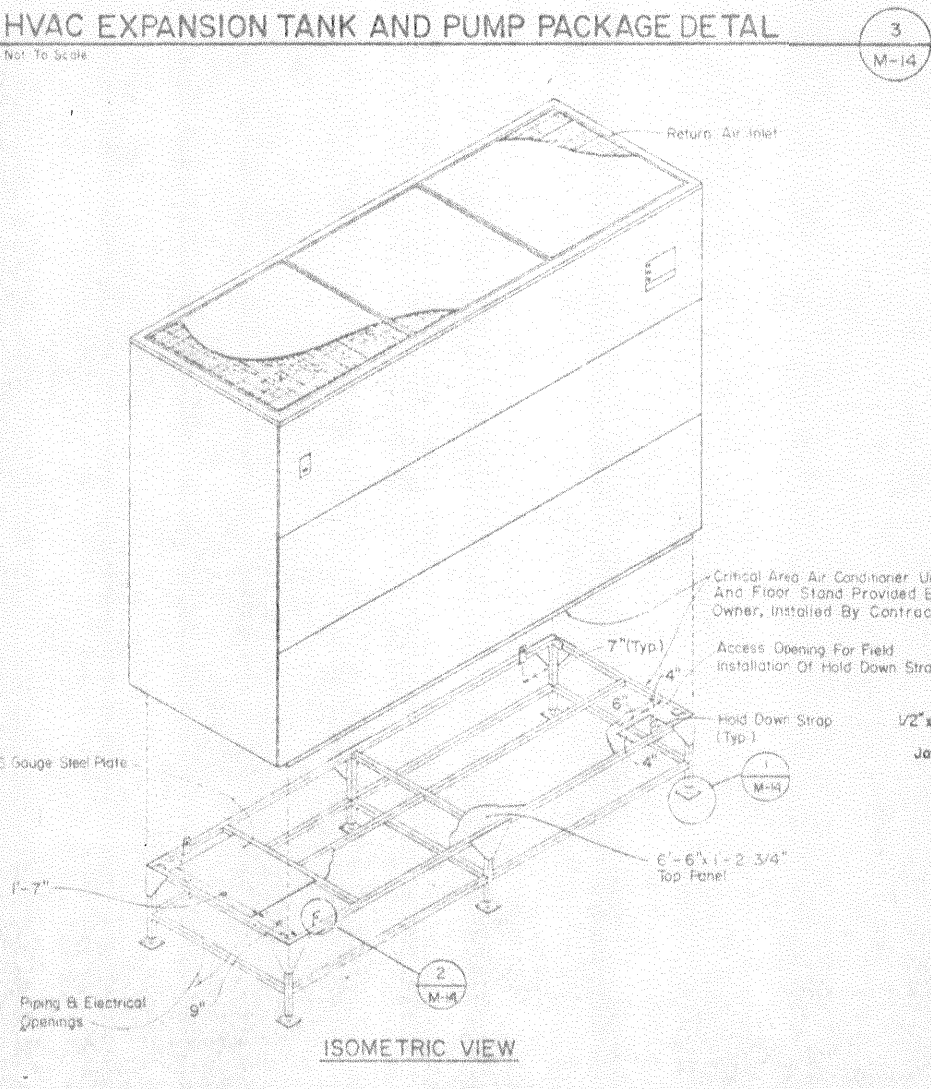
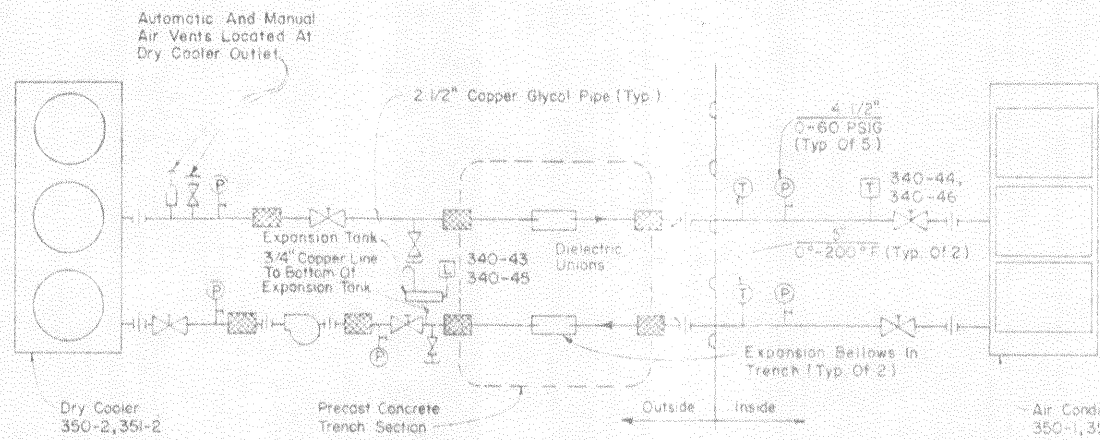
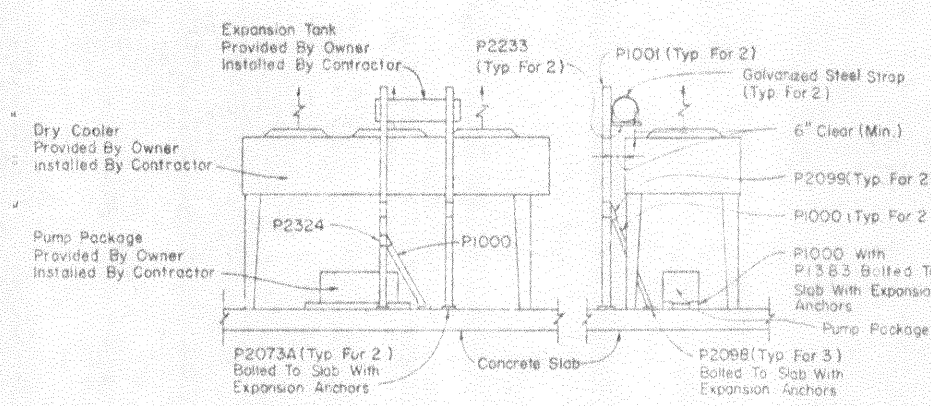
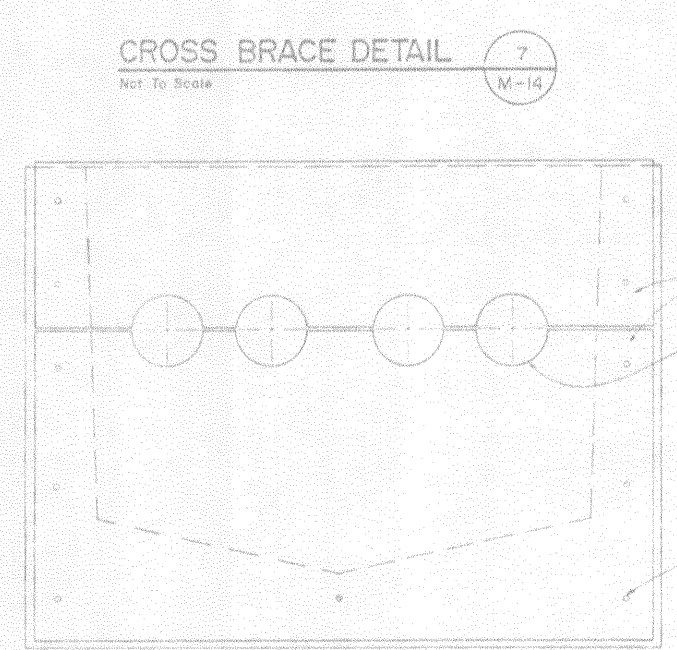
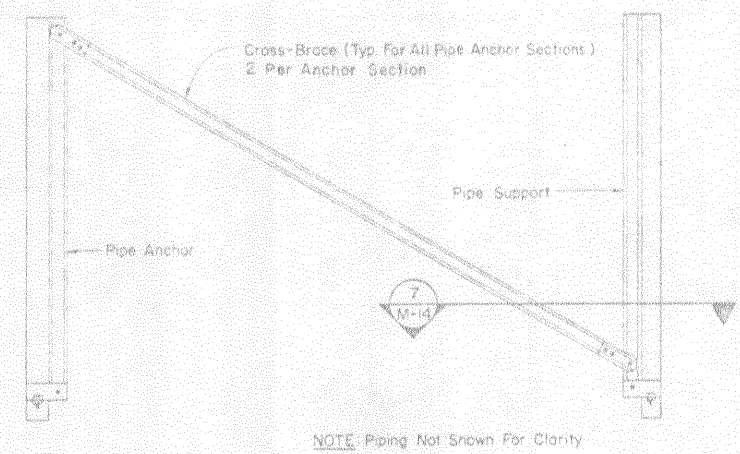
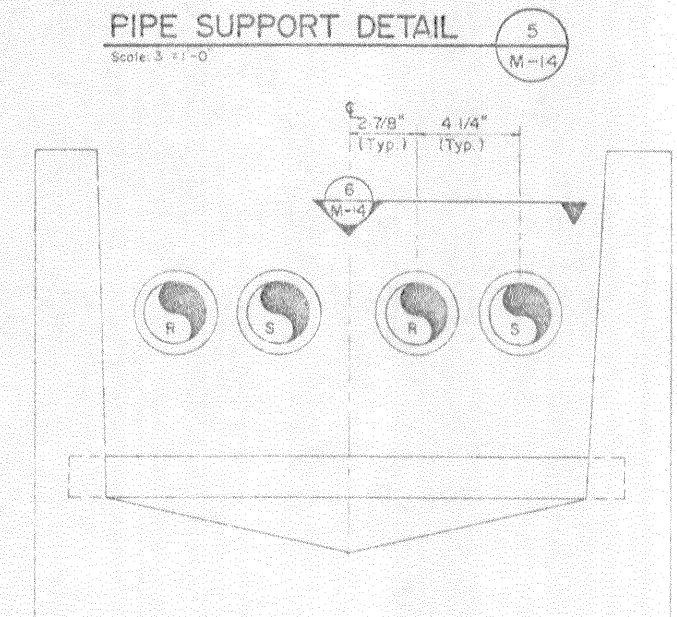
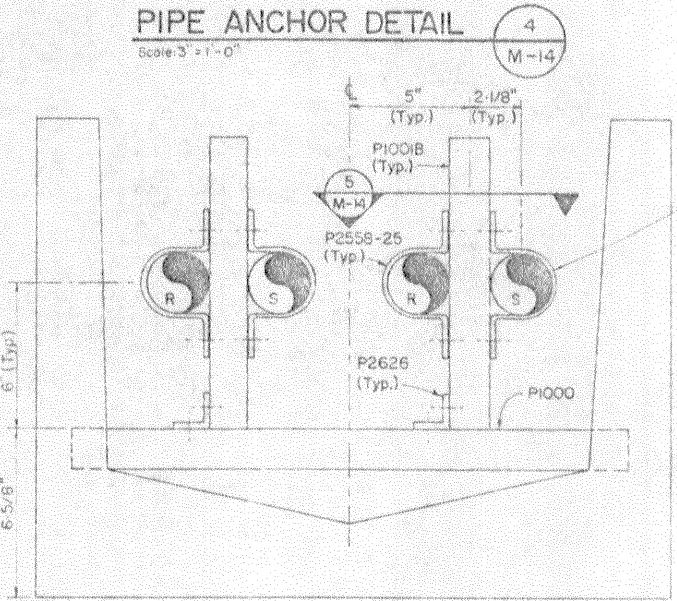
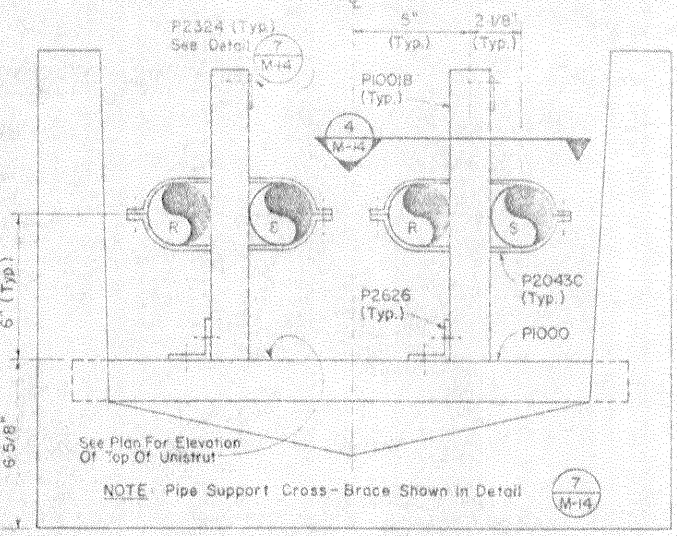
	DWT NO. F10288-66-C-0174 DATE: 2 JULY 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV. 1987	GENERAL ELECTRIC AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>HVAC SCHEDULES</b>
	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-13	DATE: NOV 30, 1987 SCALE: NONE FILE NO.: 458 005



REVISIONS	
NO.	DESCRIPTION



- NOTES:**
- FOR CLARITY, SOME PIPING COMPONENTS NOT SHOWN. SEE SCHEMATIC ON THIS DRAWING FOR COMPONENTS.
  - TRENCH SECTIONS TO BE CAST WITH EMBEDDED UNISTRUT IN CENTER OF EACH 10'-0" TRENCH SECTION. ADDITIONAL UNISTRUT TO BE CAST IN LOCATIONS SHOWN TO PROVIDE BASE FOR ADDITIONAL PIPE SUPPORTS AND PIPE ANCHORS.
  - MODEL NUMBERS OF PIPE SUPPORT COMPONENTS ARE SHOWN AS PRODUCTS OF THE UNISTRUT COMPANY. EQUAL PRODUCTS OF POWERSTRUT, KANGORF, OR EQUAL WILL BE CONSIDERED FOR REVIEW.



NOTE: ALL AIR CONDITIONING UNIT SUPPORT COMPONENTS ARE PROVIDED BY OWNER. INSTALLED BY CONTRACTOR EXCEPT EXPANSION ANCHORS, WHICH ARE CONTRACTOR PROVIDED AND INSTALLED.

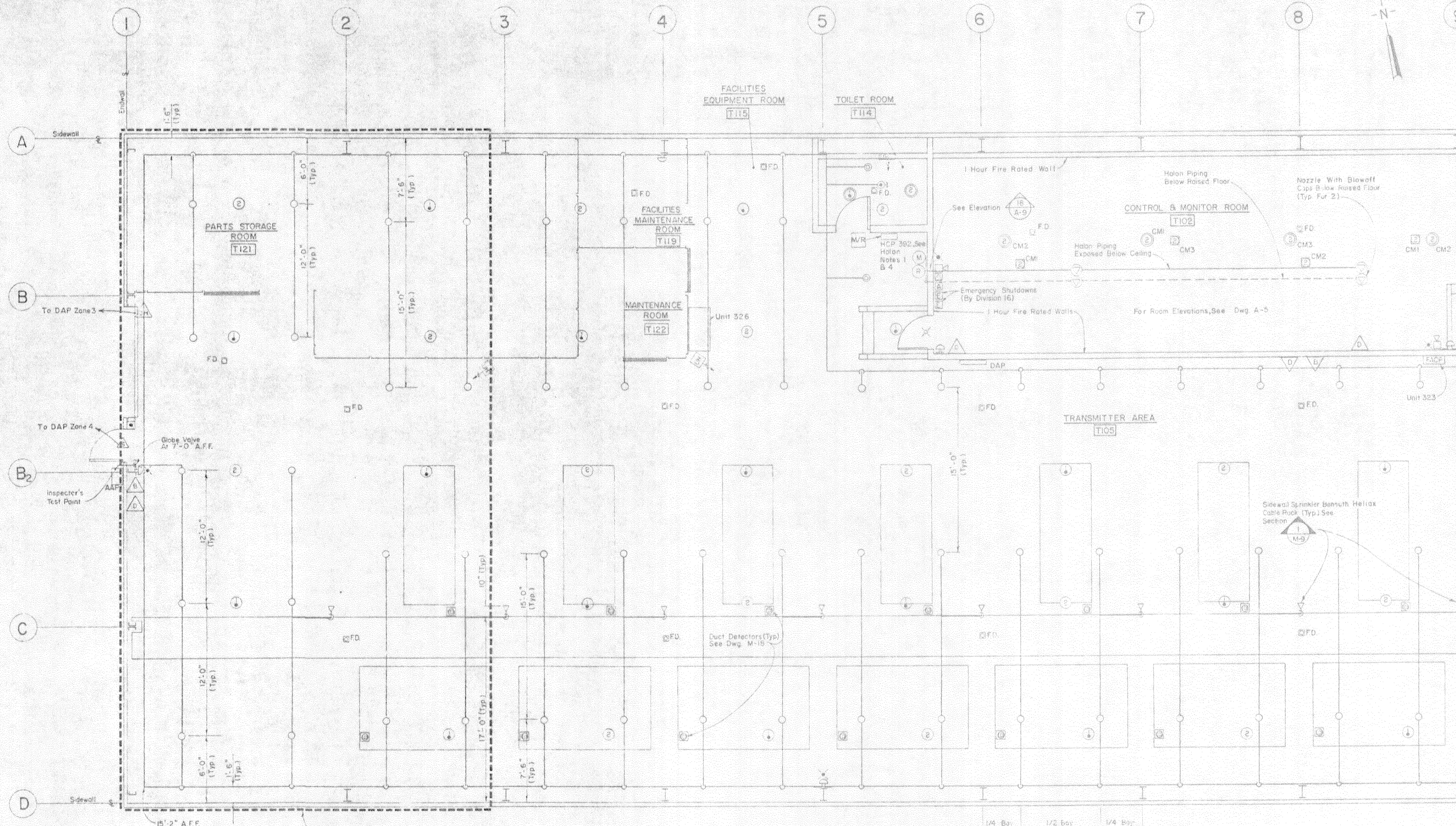


REVISION - 0

	CONT. NO. F1928-85-C-0174 DATE: 2 JULY 1987 DRAWN: ENGR: CHECKED: ISSUED: 30 NOV 1987	GENERAL ELECTRIC AM/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 CRITICAL AREA COOLING <b>HVAC DETAILS</b>	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-14
	NO ALTERATION REPORTED HEREON, EXCEPT AS PROVIDED UNDER SECTION 7109, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.	DATE: NOV 1987 SCALE: AS SHOWN FILE NO.: 1000	48



REVISIONS	
NO.	DESCRIPTION



MATCH LINE - SEE DRAWING NO. M-16

**GENERAL NOTES:**

- SEE DRAWING G-3 FOR SYMBOL LEGEND.
- SEE DRAWING M-16 FOR FIRE PROTECTION SYSTEM DESCRIPTIONS.
- THE CONTRACTOR SHALL VERIFY ALL INFORMATION CONTAINED ON THESE DRAWINGS AND SHALL BE RESPONSIBLE FOR INSTALLATION OF THESE SYSTEMS IN ACCORDANCE WITH THE SPECIFICATIONS.
- PIPE AND CONDUIT PASSING THROUGH FIRE-RATED WALLS SHALL BE SEALED TO MAINTAIN THE FIRE RESISTANCE RATING.
- NO CONDUITS OR PIPING SHALL BE INSTALLED IN THE INACCESSIBLE SPACE BETWEEN THE CONTROL & MONITOR ROOM CEILING AND THE ROOF.
- WALLS SHOWN SHADED ARE FULL-HEIGHT WALLS.
- PORTABLE FIRE EXTINGUISHERS ARE TO BE PROVIDED WHERE SHOWN.
- SEE DRAWING M-16 FOR SPRINKLER SYSTEM NOTES.
- A REMOTE ALARM INDICATOR LIGHT SHALL BE PROVIDED FOR EACH SMOKE DETECTOR WHICH IS NORMALLY CONCEALED FROM VIEW. SEE SPECIFICATION SECTIONS 16523 AND 16515.

**HALON SYSTEM NOTES:**

- ALL WIRING ENTERING THE CONTROL & MONITOR ROOM MUST PASS THROUGH RADIO FREQUENCY (RF) FILTERS PRIOR TO ENTERING THE RF-SCREENED ROOM. SEE DRAWING E-16 FOR FILTER PANEL LOCATIONS. COORDINATE THE HALON SYSTEM WIRE COUNT AND SIGNAL TYPE WITH THE RF PANEL SUPPLIER TO INSURE COMPATIBILITY.
- ALL CONDUITS ENTERING THE CONTROL & MONITOR ROOM SHALL PENETRATE THE WALLS BENEATH THE RAISED FLOOR UNDER RF FILTER PANEL CR-1 AND SHALL BE BUNDLED TO THE RF SCREENING AS SHOWN ON DETAIL 10. DWG. A-6. ALL CONDUITS AND DEVICES WITHIN THE CONTROL & MONITOR ROOM SHALL BE SURFACE MOUNTED.
- INSTALL CONDUIT FOR CEILING MOUNTED SMOKE DETECTORS IN THE C & M ROOM IMMEDIATELY ADJACENT TO THE LIGHTING CONDUIT AND LIGHTS IN ORDER TO MINIMIZE THE IMPACT ON ACOUSTICAL TILE APLINCOAT AND CEILING.
- HALON PIPING ENTERING ABOVE THE RAISED FLOOR IN THE C & M ROOM SHALL BE BUNDLED TO TWO RF SCREENING AND HAVE WALL CLASPIRE PLATES AS SHOWN ON DETAIL 11, DWG. A-6. PIPING ENTERING BELOW THE RAISED FLOOR IN THE C & M ROOM SHALL BE BUNDLED TO THE SCREENING AS SHOWN ON DETAIL 10, DWG. A-6.
- HALON CONTROL PANEL SHALL BE SURFACE MOUNTED.
- ALL CONDUITS TO THE HALON CONTROL PANEL AND ALL CONDUITS AND DEVICES WITHIN THE HALON PROTECTED ROOM SHALL BE SURFACE MOUNTED.
- SEE ALSO THE GENERAL NOTES.

**FIRE ALARM SYSTEM NOTES:**

- HALON NOTES 1 & 2 APPLY FOR ALARM BELL CIRCUITS IN THE C & M ROOM.
- SEE ALSO THE GENERAL NOTES.
- SEE DRAWING M-18 FOR DUCT DETECTOR INSTALLATION, ALARM ANNUNCIATOR PANEL SCHEDULE, DOOR ALARM SYSTEM SCHEDULE, AND FIRE ALARM SYSTEM SCHEDULE.

**PLAN - LEFT HALF**

**TYPICAL BRANCH LINE**



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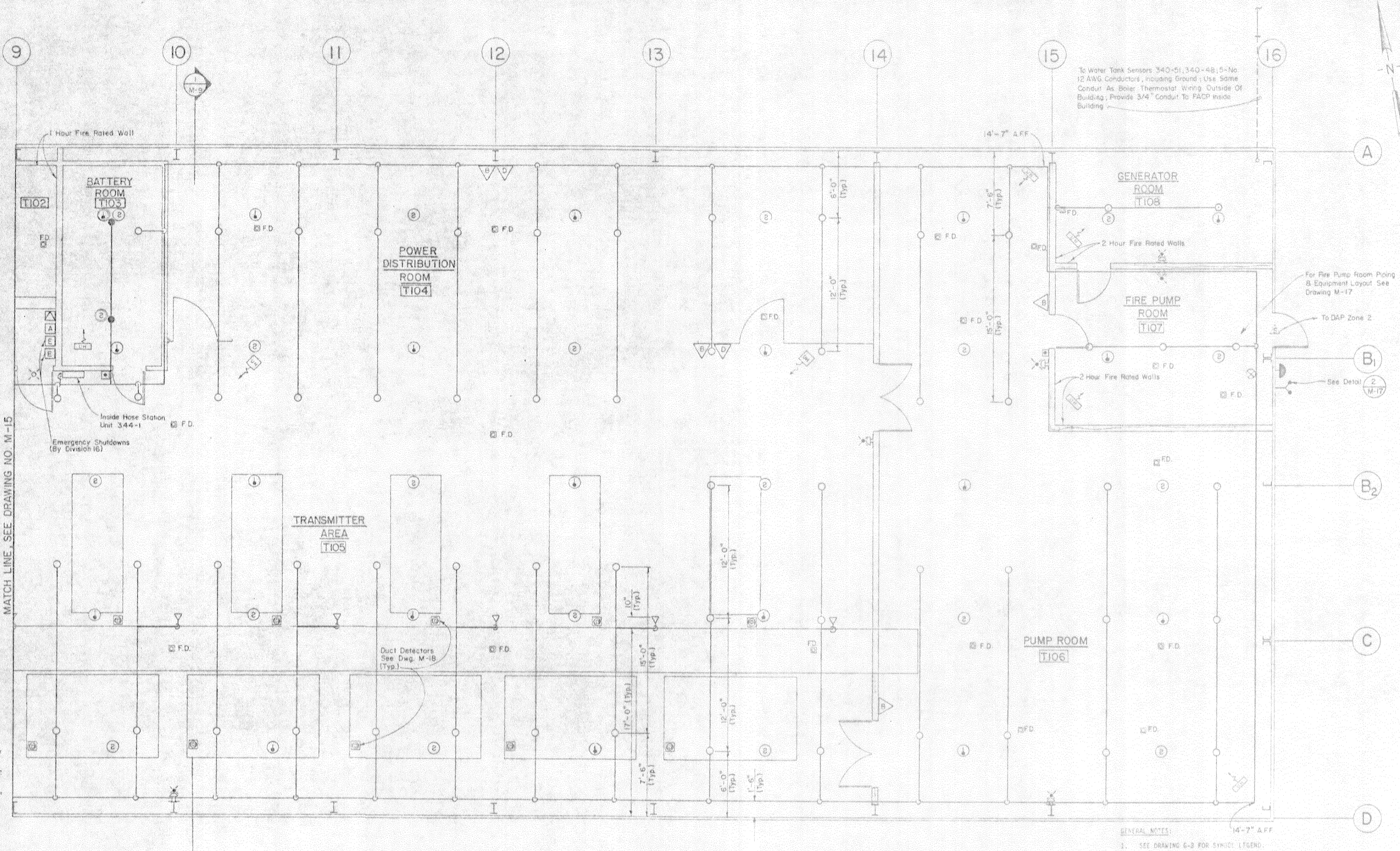
	CONTRACT NO. F19626-86-C-0174 PROJECT DATE: 2-JULY-1987 DRAWN: ENGR: CHECKED: ISSUED: 30-NOV-1987	<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>FIRE PROTECTION &amp; DOOR          ALARM PLAN-LEFT HALF</b>	
	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-15	DATE: NOV. 30, 1987 SCALE: AS SHOWN FILE NO. 458.008	SHEET NO. <b>49</b>

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7302 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

**Colonna & Boria**  
CONSULTING ENGINEERS  
100 WEST 17TH STREET, NEW YORK, N.Y. 10011



REVISIONS		
LT#	DESCRIPTION	DATE



**PLAN - RIGHT HALF**  
Scale 1/4" = 1'-0"

- GENERAL NOTES:**
- SEE DRAWING 6-3 FOR SYMBOL LEGEND.
  - THE CONTRACTOR SHALL VERIFY ALL INFORMATION CONTAINED ON THESE DRAWINGS AND SHALL BE RESPONSIBLE FOR INSTALLATION OF THESE SYSTEMS IN ACCORDANCE WITH THE SPECIFICATIONS.
  - PIPE AND CONDUIT PASSING THROUGH FIRE RATED WALLS SHALL BE SEALED TO MAINTAIN THE FIRE RESISTANCE RATING.
  - PORTABLE FIRE EXTINGUISHERS ARE TO BE PROVIDED WHERE SHOWN.
  - NO CONDUITS OR PIPING SHALL BE INSTALLED IN THE INACCESSIBLE SPACE BETWEEN THE CONTROL & MONITOR ROOM CEILING AND THE ROOF.
  - WALLS SHOWN SHADDED ARE FULL-HEIGHT WALLS.
  - SEE DRAWING M-15 FOR HALON SYSTEM NOTES.
  - SEE DRAWING K-17 FOR YARD PIPING NOTES.

- SPRINKLER SYSTEM NOTES:**
- SPRINKLER CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF OTHER TRADES.
  - SPRINKLERS SHALL BE LOCATED PER THE REQUIREMENTS OF NFPA 13 RELATIVE TO BEAMS, DUCTS, OBSTRUCTIONS AND PARTITIONS LOCATIONS.
  - SPRINKLERS WHICH ARE SO LOCATED AS TO BE SUBJECT TO MECHANICAL DAMAGE SHALL BE PROTECTED WITH APPROVED GUARDS.
  - ALL SPRINKLER PIPE AND FITTINGS SHALL BE SO INSTALLED THAT THE SYSTEM MAY BE DRAINED. SPRINKLER PIPE ON BRANCH LINES SHALL BE PITCHED AT LEAST 1/2 INCH IN 10 FEET AND THE PIPE OF MAINS AND FEED MAINS SHALL BE GIVEN A PITCH OF NOT LESS THAN 1/4 INCH IN 10 FEET.
  - AUXILIARY DRAINAGE SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13, SECTION 5-11.
  - DISTANCES ABOVE FINISHED FLOOR ARE MEASURED TO THE CENTERLINE OF THE PIPE.
  - DISTANCE OF ALL DEFLECTORS FROM BOTTOM OF BURLINS TO BE 1".
  - CONTRACTOR SHALL PROVIDE ALL HANGER COMPONENTS OF THE LISTED AND APPROVED TYPE IN ACCORDANCE WITH NFPA 13. SPRINKLER PIPING SHALL NOT BE SUPPORTED FROM ANY MECHANICAL DUCT.

**WATER SUPPLY FOR FIRE PROTECTION**

**FIRE PUMP AND JOCKEY PUMP**

AN AUTOMATIC JOCKEY PUMP WILL BE UTILIZED TO MAINTAIN FIRING SYSTEM STATIC PRESSURE HIGHER THAN THE FIRE PUMP STARTING PRESSURE. REDUCTION OF WATER PRESSURE TO THE YARD PIPING NETWORK CAUSED BY WATERFLOON IN EXCESS OF JOCKEY PUMP CAPACITY ON ACTIVATION OF THE PRE-FIRE ALARM BY A SINGLE DETECTOR ZONE OR ACTIVATION OF ANY MANUAL FIRE ALARM PULL STATION WILL INITIATE THE FIRE PUMP OPERATION IN ACCORDANCE WITH SPECIFICATION SECTIONS 16510 AND 16615. THIS OPERATION WILL BE AUTOMATIC WITH MANUAL SHUTDOWN CAPABILITY.

**SYSTEM TESTING**

THE SYSTEM SHALL BE SUBJECT TO A WITNESSED TEST AS DESCRIBED IN NFPA 20 AND 24 AND THE SPECIFICATIONS. ALL COSTS FOR TEST EQUIPMENT, MATERIALS AND CONTRACTOR'S MANPOWER SHALL BE BORNE BY THE CONTRACTOR. SUCCESSFUL SYSTEM TEST SHALL QUALIFY THE COMPLETED SYSTEM.

**SPRINKLER SYSTEM**

**DESIGN CRITERIA**

THE MINIMUM HYDRAULIC DESIGN DENSITY FOR THE GENERAL BUILDING AREA SHALL BE 0.16 GPM PER SQUARE FOOT OVER THE MOST HYDRAULICALLY REMOTE 1,950 SQUARE FEET. THE SYSTEM DESIGN SHALL INCLUDE AN ALLOWANCE OF 250 GPM FOR ROSE STREAMS WITH THE DEMAND INCLUDED AT THE OUTLET OF THE FIRE PUMP.

**SEQUENCE OF OPERATION**

SMOKE AND HEAT DETECTORS SHALL BE INSTALLED THROUGHOUT THE BUILDINGS, EXCEPT IN THE HALON PROTECTED ROOM, USING THE CROSS ZONE CONCEPT SHOWN. SEE SPECIFICATION SECTIONS 16510 AND 16615 FOR SPRINKLER SYSTEM SEQUENCE OF OPERATION.

**SYSTEM TESTING**

THE SPRINKLER SYSTEM SHALL BE SUBJECT TO A WITNESSED TEST AS DESCRIBED IN NFPA 13 AND THE SPECIFICATIONS. ALL COSTS FOR TEST EQUIPMENT, MATERIALS AND CONTRACTOR'S MANPOWER SHALL BE BORNE BY THE CONTRACTOR. SUCCESSFUL SYSTEM TEST SHALL QUALIFY THE COMPLETED SYSTEM.

**HALON SYSTEM**

**GENERAL**

A TOTAL FLOODING HALON 1301 SUPPRESSION SYSTEM SHALL PROVIDE FIRE PROTECTION FOR THE CONTROL AND MONITOR ROOM.

**SYSTEM DESCRIPTION AND OPERATION**

THE SYSTEM SHALL BE A TOTAL FLOODING HALON 1301 SUPPRESSION SYSTEM DESIGNED TO PROVIDE A MINIMUM UNIFORM DESIGN CONCENTRATION OF 6 PERCENT AND A MAXIMUM DESIGN CONCENTRATION OF 7 PERCENT. THE HALON SYSTEM IS TO BE DESIGNED ACCORDING TO NFPA 12A AND AFM 88-15 WITH A MAXIMUM DISCHARGE TIME OF 10 SECONDS. THE MINIMUM DESIGN CONCENTRATION SHALL BE MAINTAINED FOR A 10 MINUTE PERIOD. SYSTEM SHALL BE PROVIDED WITH 100% CONNECTED RESERVE STORAGE CAPACITY.

**AUTOMATIC OPERATION**

OPERATION OF THE HALON SYSTEM IS BASED ON A CROSS-ZONED SMOKE DETECTION CONCEPT. SEE SPECIFICATION SECTION 16523 FOR DETAILED SEQUENCE OF OPERATION.

**MANUAL OPERATION**

THE HALON SYSTEM SHALL HAVE A SUPPLEMENTAL MANUAL RELEASE SWITCH. SEE SPECIFICATION SECTION 16523 FOR DETAILED SEQUENCE OF OPERATION.

**TECHNICAL EQUIPMENT SHUTDOWN**

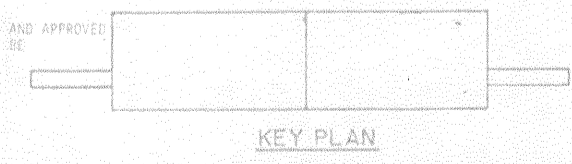
TECHNICAL EQUIPMENT SHALL BE MANUALLY SHUT DOWN BY ACTIVATION OF AN EMERGENCY POWER SHUTOFF AT EACH EXIT DOOR FROM THE HALON-PROTECTED AREA. SEE DWG. E-10. IN THE CONTROL AND MONITOR ROOM, TWO SEPARATE SHUTOFFS SHALL BE PROVIDED FOR TECHNICAL EQUIPMENT AND AIR CONDITIONING EQUIPMENT. TECHNICAL EQUIPMENT MAY BE SHUT DOWN WITHOUT AFFECTING AIR CONDITIONING EQUIPMENT; HOWEVER, IF AIR CONDITIONING IS SHUT DOWN, THE TECHNICAL EQUIPMENT SHALL ALSO BE SHUT DOWN. SEE DRAWING E-10.

**SMOKE EXHAUSTION**

A SMOKE/HALON EXHAUST FAN FOR THE CONTROL AND MONITOR ROOM SHALL BE MANUALLY ACTIVATED SUBSEQUENT TO FIRE AND/OR HALON DISCHARGE. SEE CONTROL DIAGRAM ON DRAWING E-10.

**SYSTEM TESTING**

THE HALON SYSTEM SHALL BE SUBJECT TO A WITNESSED TEST AS DESCRIBED IN NFPA 12A, AFM 88-15 AND THE SPECIFICATIONS. ALL COSTS FOR TEST EQUIPMENT, MATERIALS AND CONTRACTOR'S MANPOWER SHALL BE BORNE BY THE CONTRACTOR. SUCCESSFUL SYSTEM TESTS SHALL QUALIFY THE COMPLETED SYSTEMS.

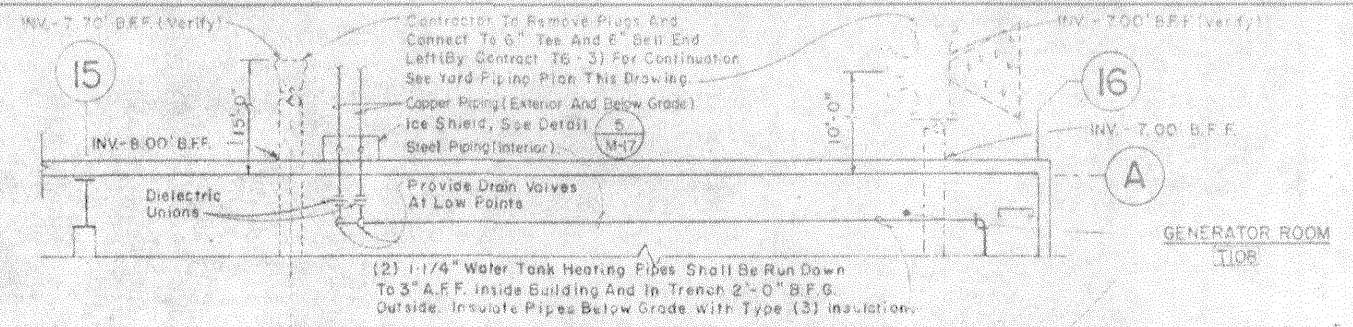


		<b>REVISION - 0</b>	
		<b>GENERAL ELECTRIC</b> AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>FIRE PROTECTION &amp; DOOR          ALARM PLAN - RIGHT HALF</b>	
DRAWING NO. F19226-B6-C-0174	DATE 2 JULY 1987	SIZE E 03538	DRAWING NO. T6 M-16
CHECKED 30 NOV 1987	DATE NOV 30 1987	SCALE AS SHOWN	SHEET NO. 50
NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION FROM SUB-DIVISION 4 OF THE NEW YORK STATE EDUCATION LAW			FILE NO. 456 005

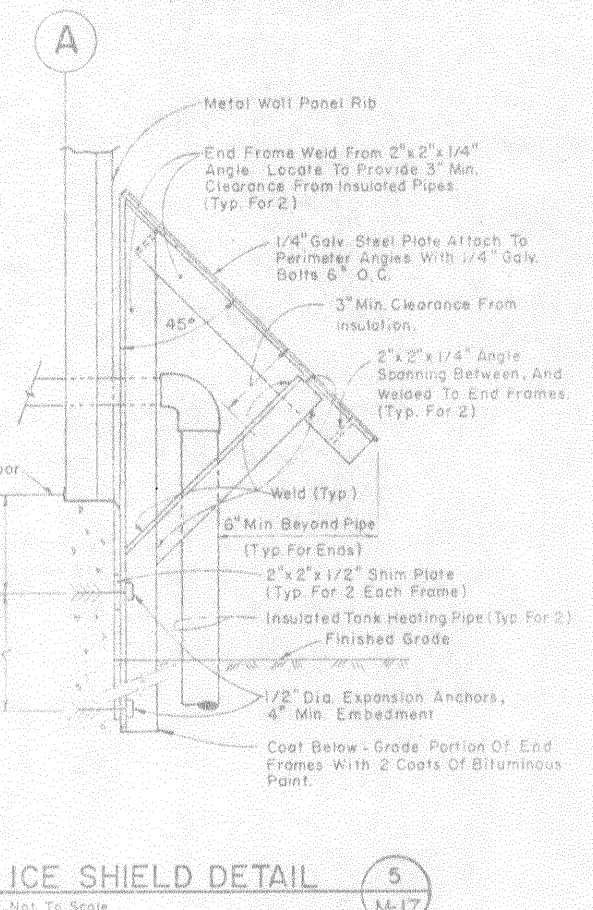
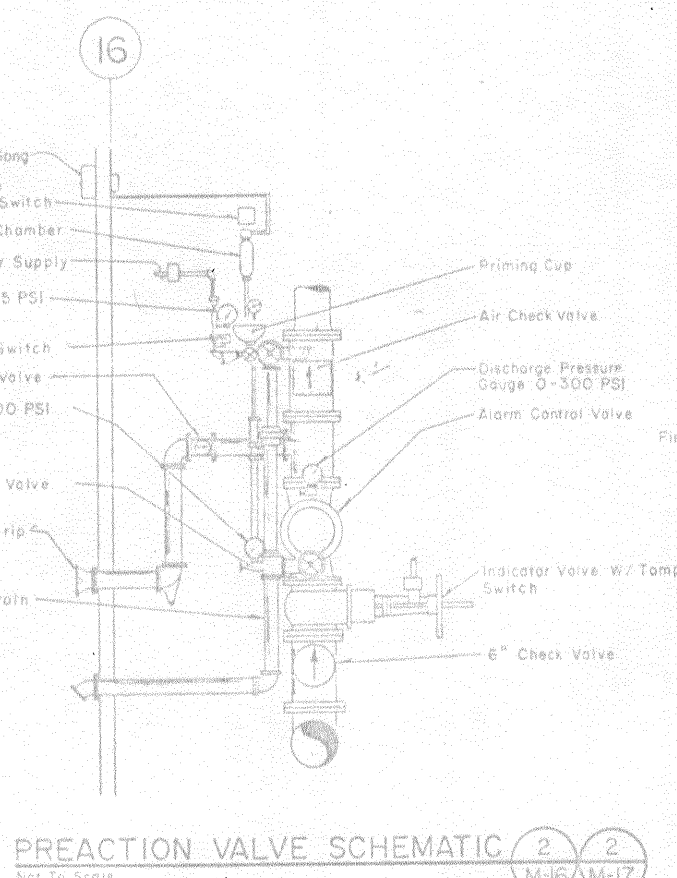
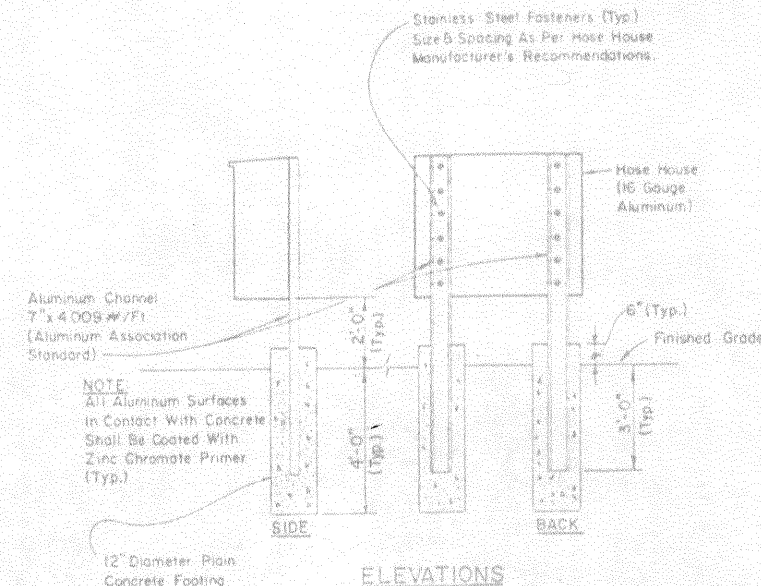
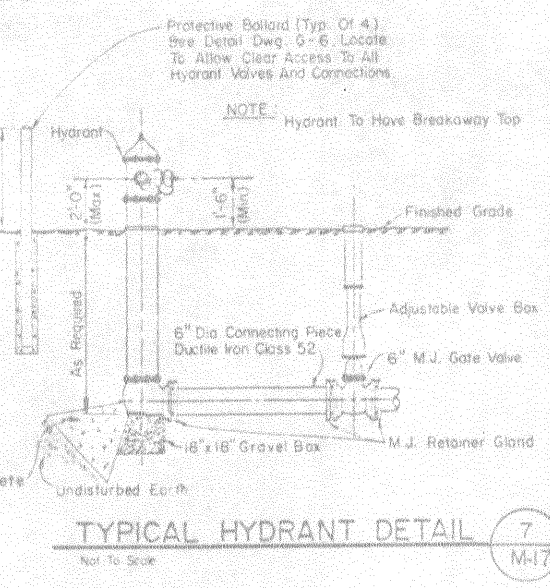
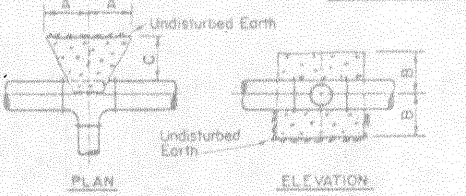
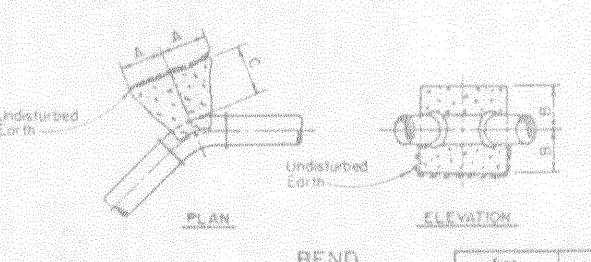
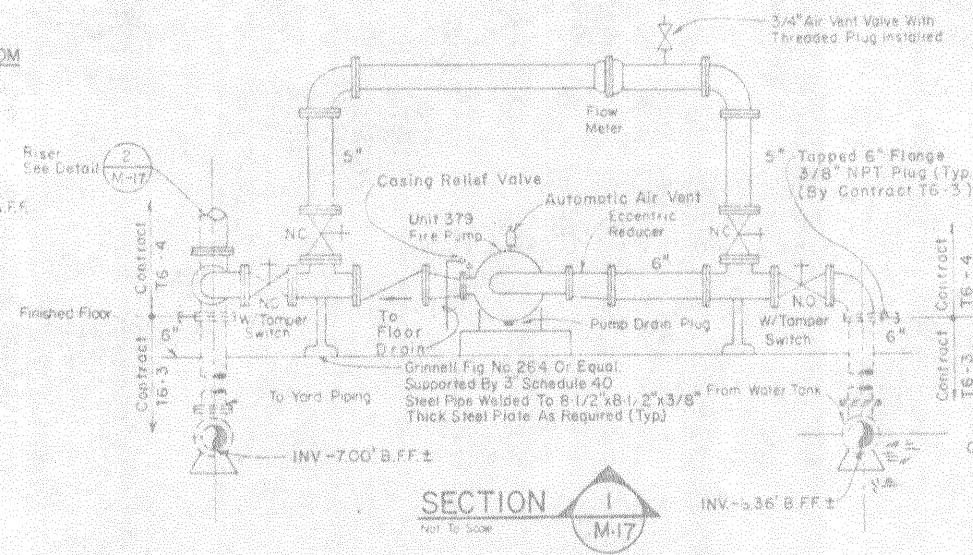
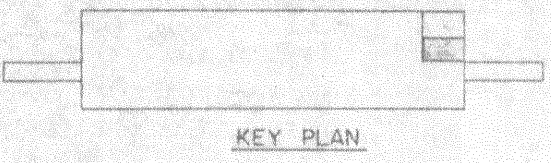
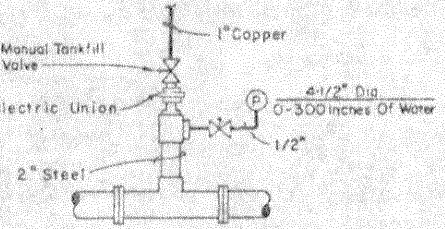
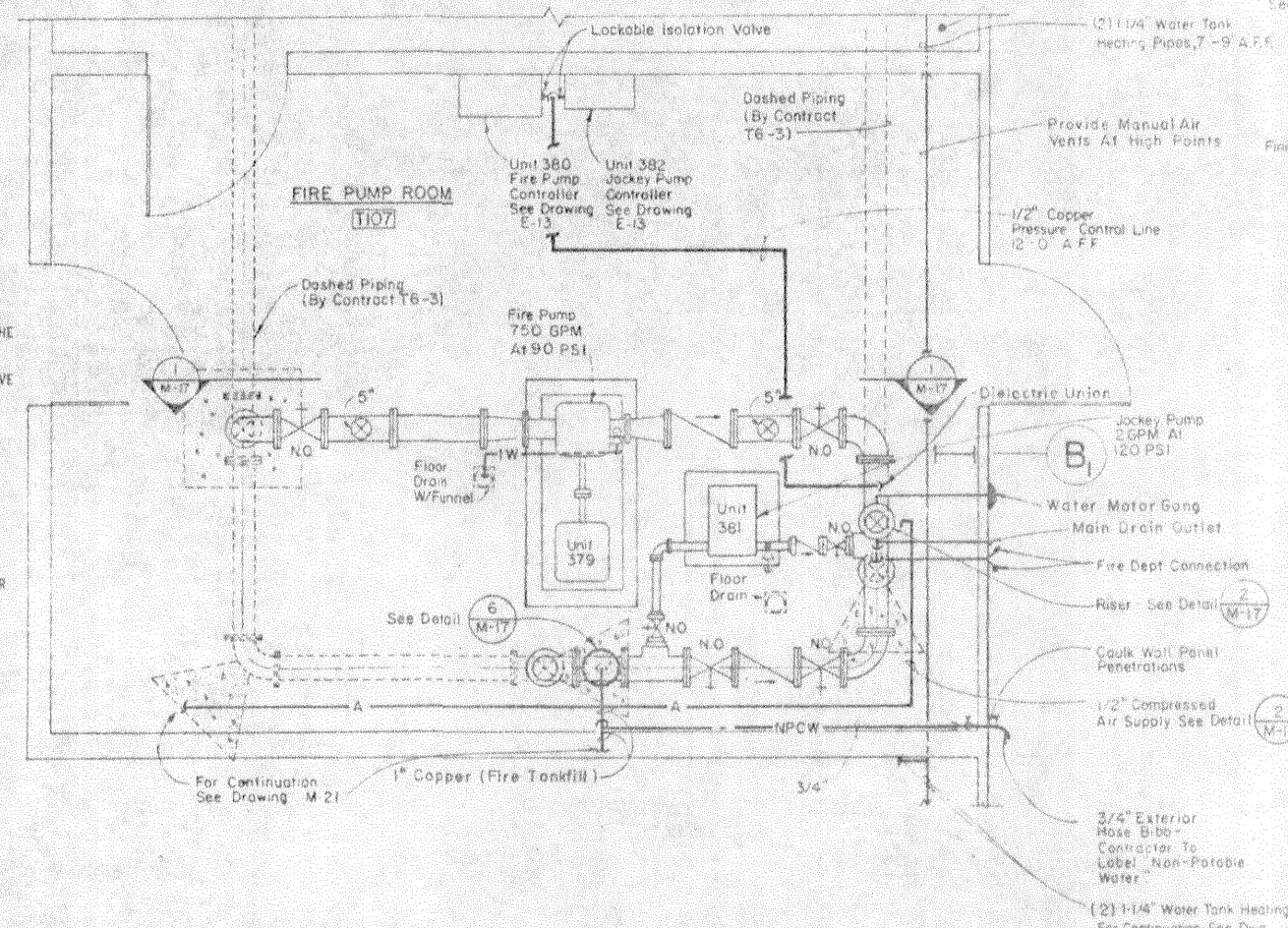




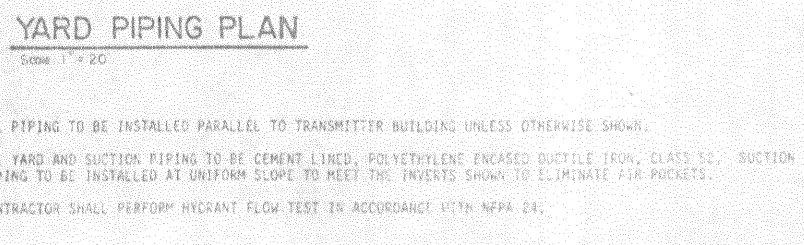
NO.	REVISIONS	DESCRIPTION	DATE
16	1	REVISED	11/30/87



- NOTES:**
- THE FOLLOWING WERE INSTALLED BY CONTRACT T6-3:
    - 6" DUCTILE IRON PIPE BELOW SLAB AND EXTENDED BEYOND THE BUILDING AS SHOWN.
    - ONE (1) POST INDICATOR VALVE WITHOUT WALK SUPERVISORY SWITCH.
    - FIRE AND JOCKEY PUMP FOUNDATION PADS.
    - FLOOR DRAINS.
  - THE CONTRACTOR SHALL VERIFY PAD AND PIPING LOCATIONS PRIOR TO PREPARING SHOP DRAWINGS.
  - REFER TO SPECIFICATION 15610 FOR INTERIOR FIRE PIPING MATERIALS.



- YARD PIPING NOTES:**
- THE FIRST LENGTH OF 6" O.D. YARD PIPING EXTENDING NORTHEAST FROM THE TEE INSTALLED BY CONTRACT T6-3 IS TO SLOPE UPWARD TO PROVIDE A MINIMUM OF 1'-0" CLEARANCE ABOVE THE 6" O.D. SUCTION PIPING INSTALLED BY CONTRACT T6-3. THE LENGTH OF THE FIRST PIECE OF YARD PIPING SHALL BE ADJUSTED SO ITS ENDING INVERT IS -6.00' B.F.F. ALL YARD PIPING BEYOND THE FIRST SLOPING LENGTH SHALL BE INSTALLED LEVEL WITH INVERT -6.00' B.F.F. UNLESS OTHERWISE SHOWN.
  - THE CONTRACTOR SHALL VERIFY THE INVERTS OF BOTH THE TEE AND 6" O.D. PIPING INSTALLED BY CONTRACT T6-3 PRIOR TO COMMENCING INSTALLATION UNDER THIS CONTRACT.
  - NUMEROUS UNDERGROUND CONDUITS, PIPES, ETC. HAVE BEEN STUBBED OUT OF THE BUILDING BY CONTRACT T6-3. STUBOUT DISTANCES ARE GENERALLY 7' FROM THE STRUCTURAL LINE. BURIAL DEPTHS VARY. THE CONTRACTOR SHALL REFER TO DRAWINGS E-2, M-20 AND M-21 FOR APPROXIMATE STUBOUT LOCATIONS AND SHALL EXCAVATE WITH CARE TO AVOID DAMAGING EXISTING WORK. ANY DAMAGE SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS DIRECTED BY THE SITE ENGINEER. ALL COSTS OF SUCH REPAIRS OR REPLACEMENT SHALL BE BORNE BY THE CONTRACTOR.
  - ALL PIPING TO BE INSTALLED PARALLEL TO TRANSMITTER BUILDING UNLESS OTHERWISE SHOWN.
  - ALL YARD AND SUCTION PIPING TO BE CEMENT LINED, POLYETHYLENE ENCASED DUCTILE IRON, CLASS 50. SUCTION PIPING TO BE INSTALLED AT UNIFORM SLOPE TO MEET THE INVERTS SHOWN TO ELIMINATE AIR POCKETS.
  - CONTRACTOR SHALL PERFORM HYDRANT FLOW TEST IN ACCORDANCE WITH NFPA 24.





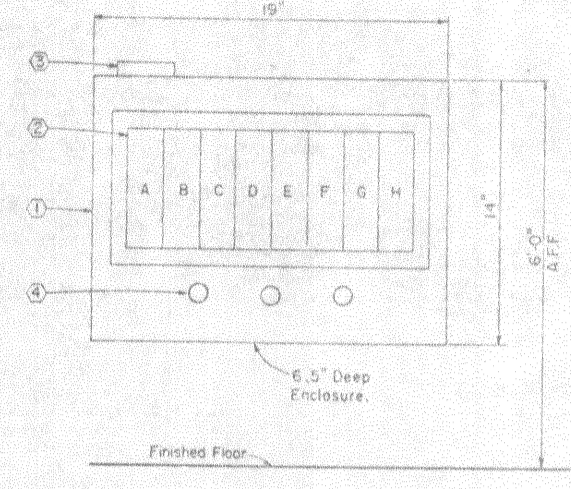
REVISIONS	
1	REVISIONS

LEGEND FOR DOOR ALARM MODULES

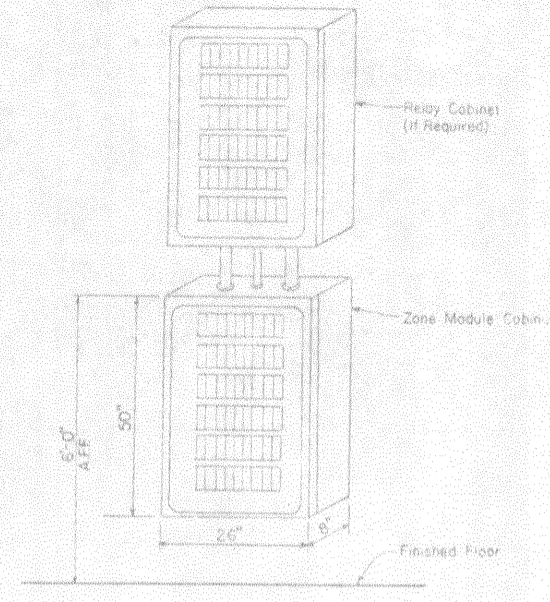
MODULE	ENGRAVING LINE 1	ENGRAVING LINE 2	ENGRAVING LINE 3
J	SUPERVISOR	MODULE	ROOM EXIT
P	ZONE 1	STORAGE & MAINTENANCE	ROOM EXIT
C	ZONE 2	FIRE PUMP	ROOM EXIT
D	ZONE 3	OVERHEAD	DOOR
F	SIGNAL	CIRCUIT MODULE	
G	TIMED	EXIT/ENTRY	
H	TV	REGULATOR	

- NOTES TO SHOP DETAIL
- NEMA 3 ENCLOSURE WITH VIEW GLASS WINDOW OVER MODULES.
  - BUILDING DOOR ALARM MODULES WITH CONTROLS AND POWER SUPPLY. FOUR ZONES WITH INDIVIDUAL ZONE BYPASS SWITCH AND SUPERVISOR. PROVIDE MASTER BYPASS SWITCH WITH SUPERVISOR TO CONTROL ALL ZONES.
  - ALARM BELL WITH ADJUSTABLE DAMPENING.
  - TEST/ACKNOWLEDGE/RESET PUSHBUTTONS.

SYSTEM TESTING  
EACH SYSTEM SHALL BE SUBJECT TO A WITNESSED TEST AS DESCRIBED IN THE SPECIFICATIONS. ALL COSTS FOR TEST EQUIPMENT, MATERIALS AND CONTRACTORS MANPOWER SHALL BE BORNE BY THE CONTRACTOR. SUCCESSFUL SYSTEM TEST SHALL QUALIFY AS A COMPLETED SYSTEM.



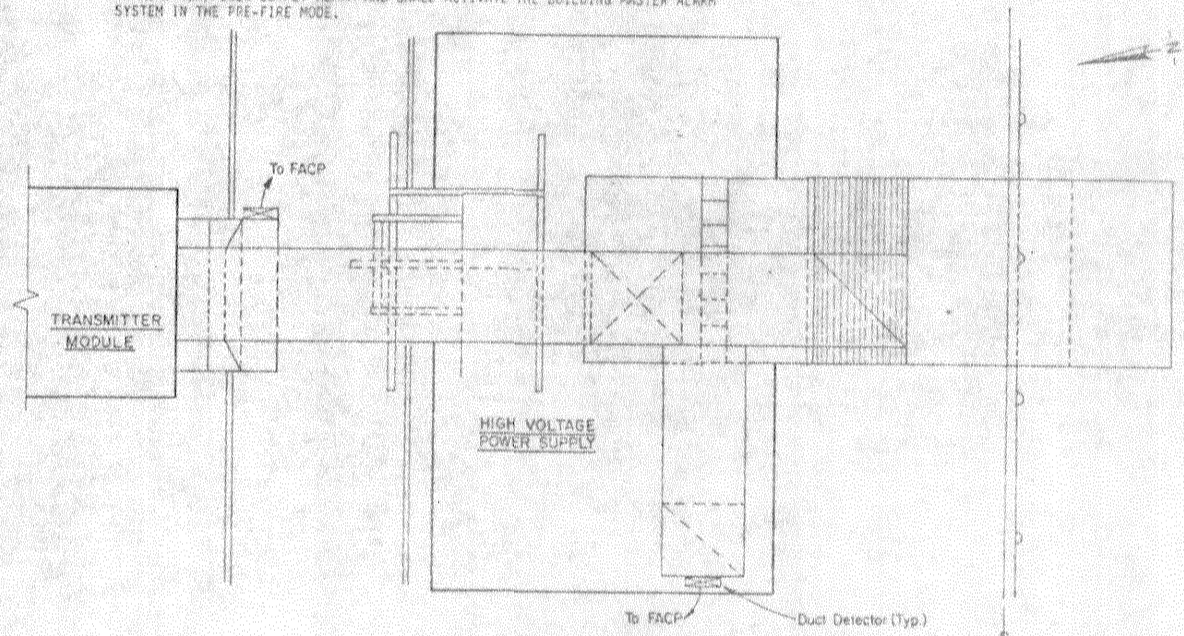
UNIT 333-1 DOOR ALARM PANEL (DAP)  
Not To Scale



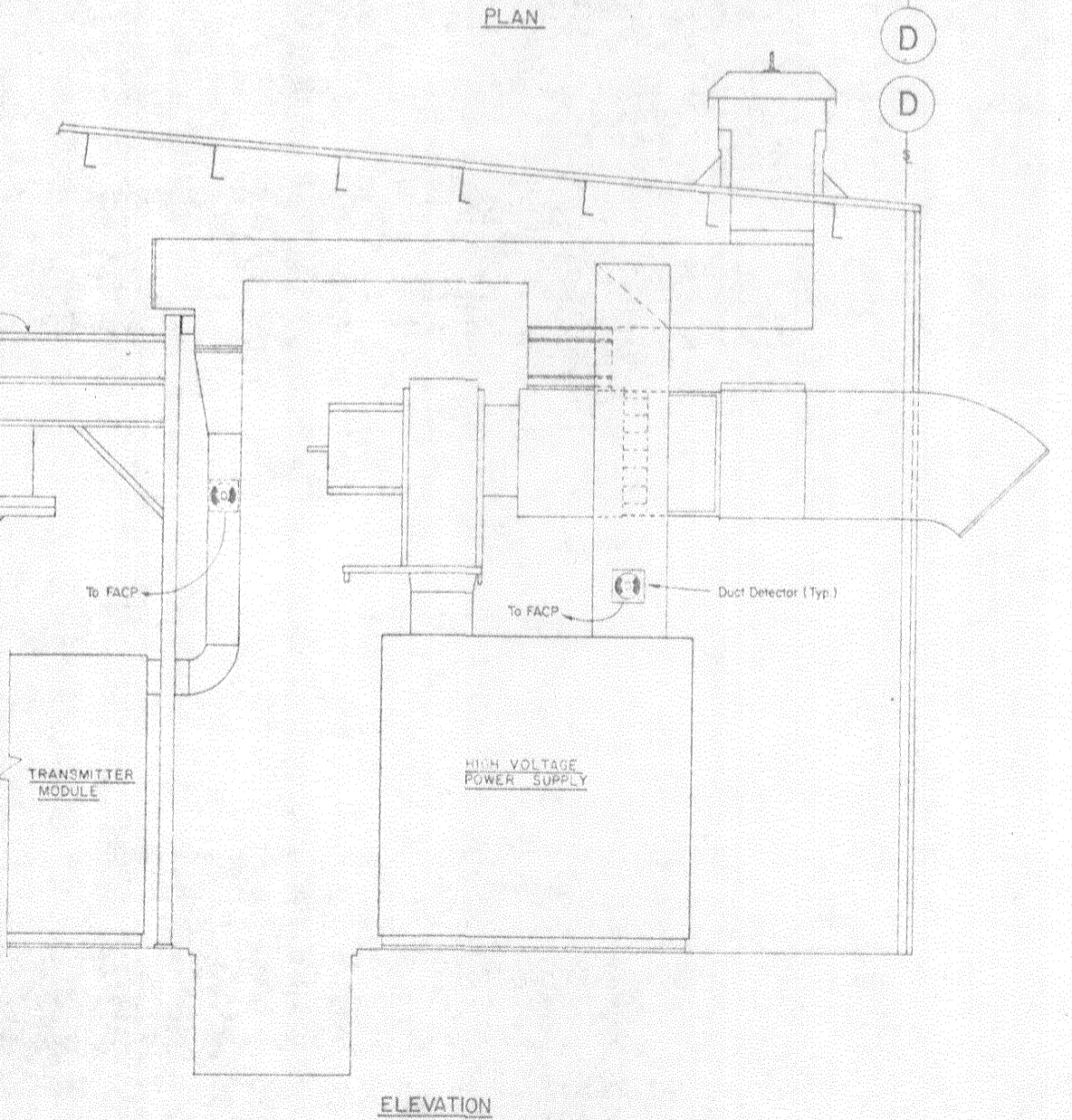
UNIT 323 FIRE ALARM CONTROL PANEL (FACP)  
(TRANSMITTER AREA)  
Not To Scale

TRANSMITTER POWER SUPPLY DETECTION SYSTEM

SEQUENCE OF OPERATION  
DUCT DETECTORS SHALL BE COMBUSTION SMOKE DETECTORS OPERATING ON THE IONIZATION PRINCIPLE AND LOCATED IN THE TRANSMITTER AND POWER SUPPLY DISCHARGE DUCTS.  
ACTIVATION OF A TRANSMITTER OR POWER SUPPLY DUCT DETECTOR SHALL BE ANNUNCIATED AT THE FIRE ALARM CONTROL PANEL SHOWING THE TRANSMITTER/POWER SUPPLY UNIT NUMBER. SHALL BE ANNUNCIATED AT THE ALARM ANNUNCIATOR PANEL AS A MASTER SYSTEM TRANSMITTER/POWER SUPPLY ALARM AND SHALL ACTIVATE THE BUILDING MASTER ALARM SYSTEM IN THE PRE-FIRE MODE.

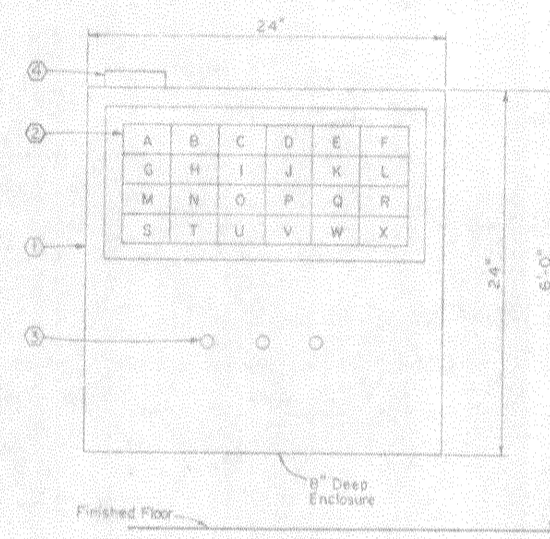


PLAN



ELEVATION

TRANSMITTER- POWER SUPPLY DETECTION SYSTEM  
Not To Scale



- NOTES TO SHOP DETAIL
- NEMA 4 ENCLOSURE WITH MOUNTING BACKBOARD, RINGED COVER WITH LATCH.
  - SOLID STATE ANNUNCIATOR, 3" x 2" WINDOW, SEQUENCE RPM WITH ACTION LOGIC, TEST, RESET LOGIC, BETALARM SERIES 1000, BETA PRODUCTS CORP., CARROLLTON, TEXAS 75006.
  - ACKNOWLEDGE/TEST/RESET PUSHBUTTONS.
  - AUDIBLE DEVICE.

UNIT 333-2 ALARM ANNUNCIATOR PANEL (AAP)  
Not To Scale

LEGEND FOR ANNUNCIATOR

WINDOW	COLOR	ENGRAVING LINE 1	ENGRAVING LINE 2
A	BLUE	FIRE MASTER ALARM	
B	YELLOW	DOOR MASTER ALARM	
C	RED	FIRE ALARM	MANUAL PULL STATION
D	RED	PRE-FIRE ALARM	SPRINKLER DETECTION
E	RED	FIRE ALARM	SPRINKLER DETECTION
F	RED	PRE-FIRE ALARM	CONTROL & MONITOR ROOM
G	RED	HAZIN DISCHARGE	CONTROL & MONITOR ROOM
H	RED	FIRE PUMP RUNNING	
I	RED	FIRE ALARM	TV/WPS
J	RED	FIRE ALARM SYSTEM	PRIMARY POWER FAILURE
K	RED	(SPARE)	
L	WHITE	Jockey Pump Power Failure	SPRINKLER SYSTEM
M	WHITE	LOW AIR PRESSURE	SPRINKLER SYSTEM
N	WHITE	FIRE PUMP POWER FAILURE	SPRINKLER SYSTEM
O	WHITE	FIRE PUMP POWER	PHASE REVERSAL
P	WHITE	HAZIN TROUBLE	CONTROL & MONITOR ROOM
Q	WHITE	FIRE SYSTEM TROUBLE	TV/WPS
R	WHITE	GENERATOR RUNNING	
S	WHITE	VALVE TAMPER	OUTSIDE WATER SUPPLY
T	WHITE	VALVE TAMPER	INSIDE WATER SUPPLY
U	WHITE	FLOW SPRINKLER	SYSTEM
V	WHITE	WATER TANK	LOW LEVEL
W	WHITE	WATER TANK	LOW TEMPERATURE

FIRE ALARM SYSTEM SCHEDULE

Fire Alarm Control Panel Zone Module Number	Area/Device Served	Response																
		Operate P.W.L. Contacts (Contact Nos. Indicated Open Upon Zone Initiation)	Illuminate Alarm Annunciator Panel Windows	Operate Alarm Bells/Lights Pulsating	Operate Alarm Bells/Lights Steady	Operate Fire Pump	Open Pre-Action Valve and Initiate Automatic Shutdown Of Equipment	Signal "Fire System Trouble" (FME) 139-140 And 1 N.O. + 1 N.C. Dry Contacts	Signal "Fire System Master Alarm" (FME) 137-138 And 1 N.O. + 1 N.C. Dry Contacts (FME) 167-168									
1	Fire Alarm - Manual Fire Alarm	149-150	C															
2	Pre-Fire Alarm - Building Detection - Zone 1*	145-146	D*															
3	Fire Alarm - Building Detection - Zone 2**	147-148*	C*															
4	Pre-Fire Alarm - Control & Monitor Room	141-142	F															
5	Fire Alarm - Control & Monitor Room	143-144	F															
6	Haoin Discharge - Control & Monitor Room	151-152	G															
7	Pre-Fire Alarm - Trans/Power Supply 110/122	175-176	H															
8	Pre-Fire Alarm - Trans/Power Supply 111/123	177-178	H															
9	Pre-Fire Alarm - Trans/Power Supply 112/124	179-180	H															
10	Pre-Fire Alarm - Trans/Power Supply 113/125	181-182	H															
11	Pre-Fire Alarm - Trans/Power Supply 114/126	183-184	H															
12	Pre-Fire Alarm - Trans/Power Supply 115/127	185-186	H															
13	Pre-Fire Alarm - Trans/Power Supply 116/128	187-188	H															
14	Pre-Fire Alarm - Trans/Power Supply 117/129	189-190	H															
15	Pre-Fire Alarm - Trans/Power Supply 118/130	191-192	H															
16	Pre-Fire Alarm - Trans/Power Supply 119/131	193-194	H															
17	Pre-Fire Alarm - Trans/Power Supply 120/132	195-196	H															
18	Pre-Fire Alarm - Trans/Power Supply 121/133	197-198	H															
19	Sprinkler System - Waterflow Alarm	169-170	J															
20	Preaction Sprinkler System - Low Air		Q															
21	Fire Pump - Running		I															
22	Fire Pump - Power Failure	173-174	N															
23	Fire Pump Power - Phase Reversal		O															
24	Valve Tamper - Outside Water Supply		R															
25	Valve Tamper - Inside Water Supply		S															
26	Water Tank - Water Low Level	199-200	T															
27	Water Tank - Water Low Temperature	201-202	U															
28	Haoin Trouble - Control & Monitor Room	153-154	V															
29	Jockey Pump - Power Failure	171-172	F															
30	Detection System - Primary Power Failure	133-134	M															
31	TX/WPS Detection Trouble		W															

\* Operations Shown Assume That Building Detection Zone 1 Will Initiate First And Zone 2 Will Initiate Last Building Detection Zones Consist Of Cross-Zoned Smoke And Heat Detectors. The FACP Relays And Internal Wiring Shall Be Such That Whichever Detection Zone Initiates First, The Pre-Fire Signals Shown Will Be Activated, Followed By The Fire Alarm Signals If The Other Zone Also Initiates Trouble Circuits From Each Zone Module Shall Be Connected To "Fire System Trouble". In Addition To These Signals, Zone Module Activations As Shown Shall Also Trigger The "Trouble" Signal.

REVISION-0

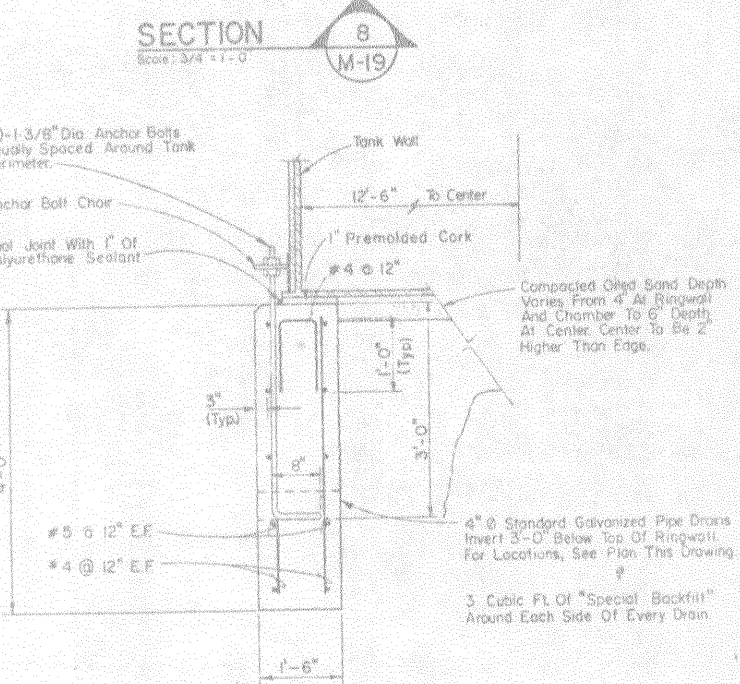
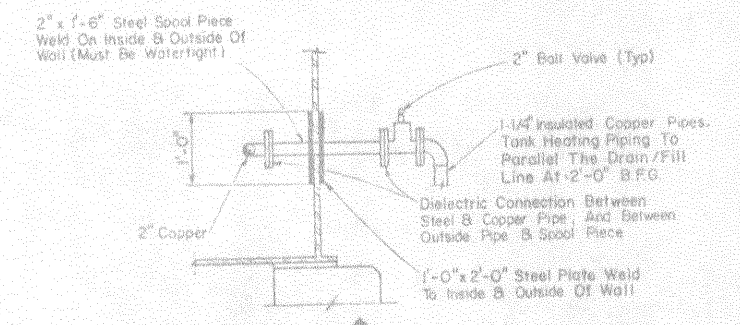
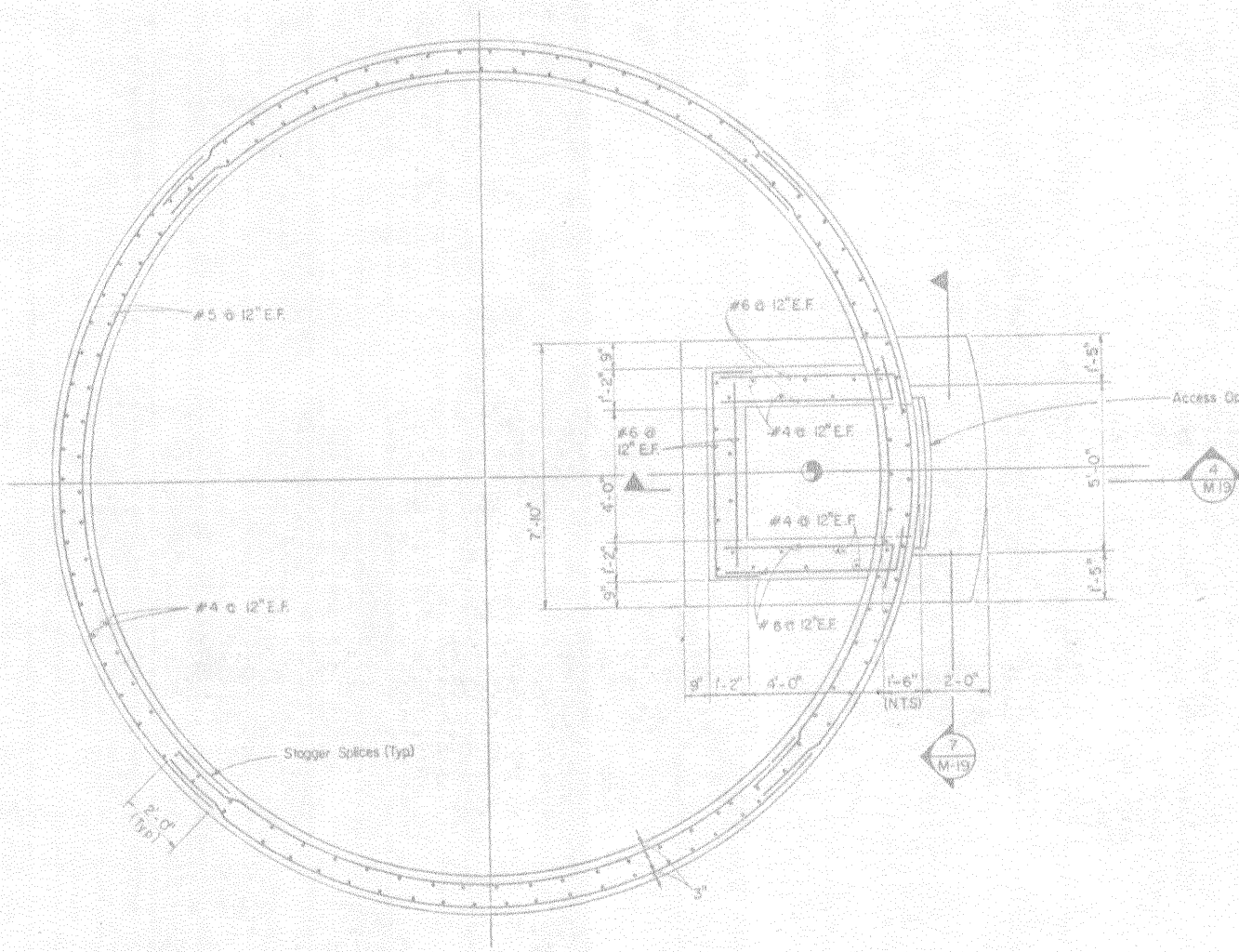
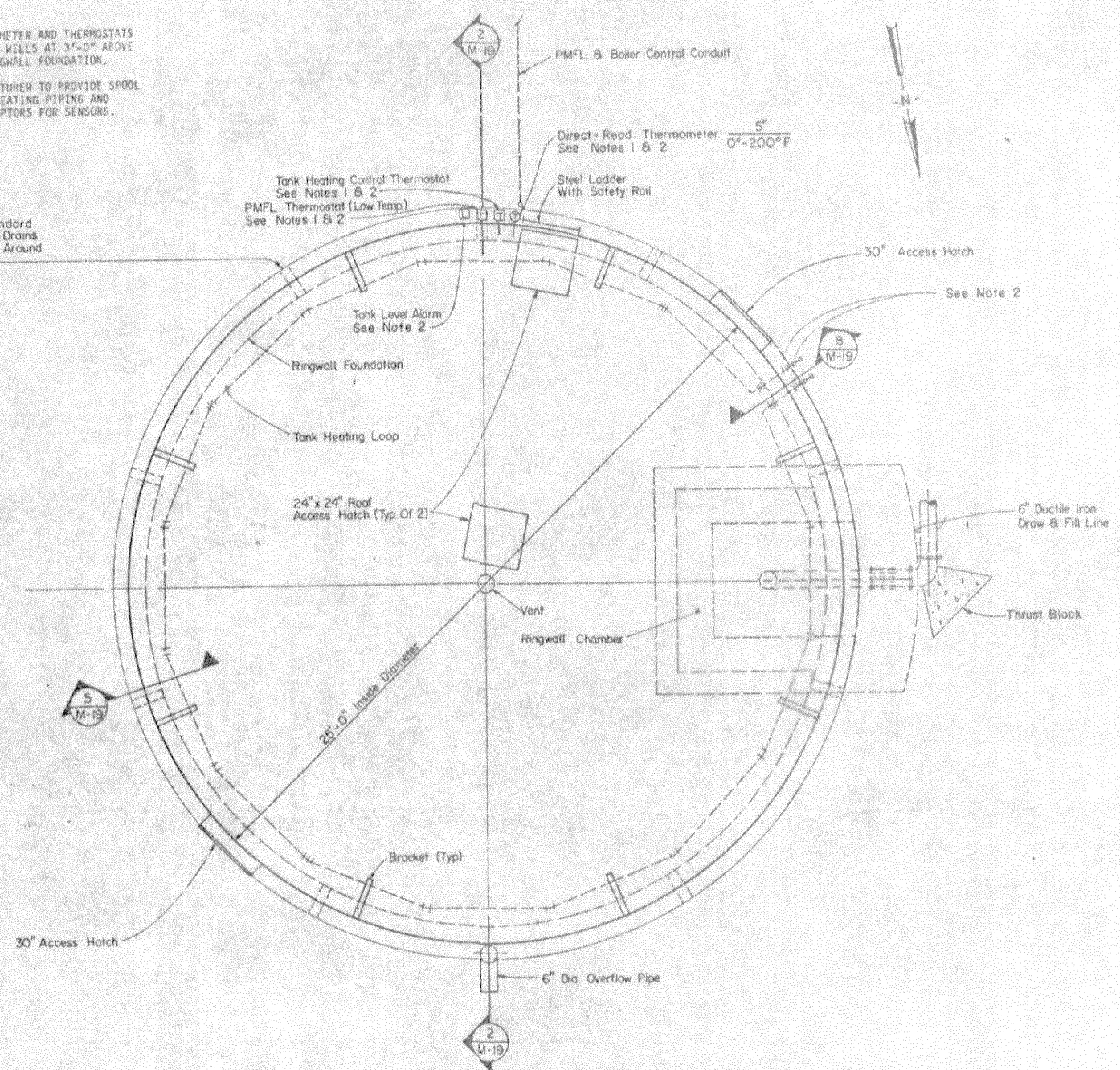
DATE: NOV 30, 1987 SCALE: NOT TO SCALE FILE: 60486.D05	GENERAL ELECTRIC DETECTOR DIV. AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>DETECTION AND ANNUNCIATOR DETAILS</b>	SHEET NO. <b>52</b>
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REVISIONS		
LT#	DESCRIPTION	DATE

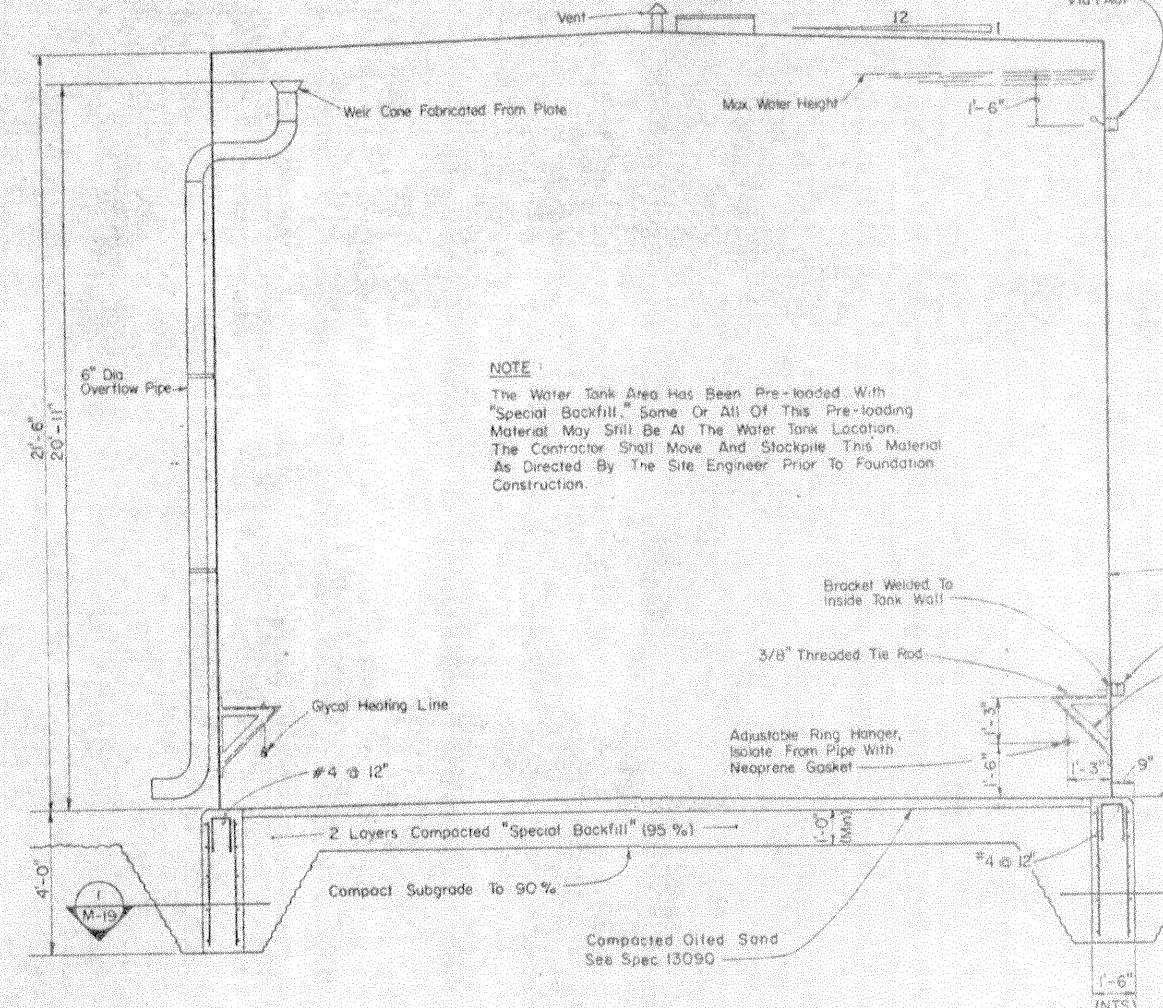
- NOTES:
1. MOUNT THERMOMETER AND THERMOSTATS IN SEPARABLE KELLS AT 2'-0" ABOVE CONCRETE RINGWALL FOUNDATION.
  2. TANK MANUFACTURER TO PROVIDE SPOOL PIECES FOR HEATING PIPING AND THREADED ADAPTORS FOR SENSORS.

100'-4" Dia Standard Galvanized Pipe Drains Equally Spaced Around Foundation.



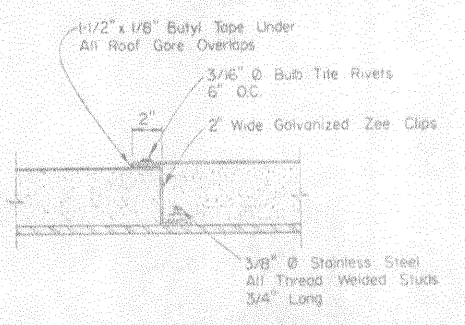
**75,000 GALLON STORAGE TANK PLAN**

**UNIT 300**

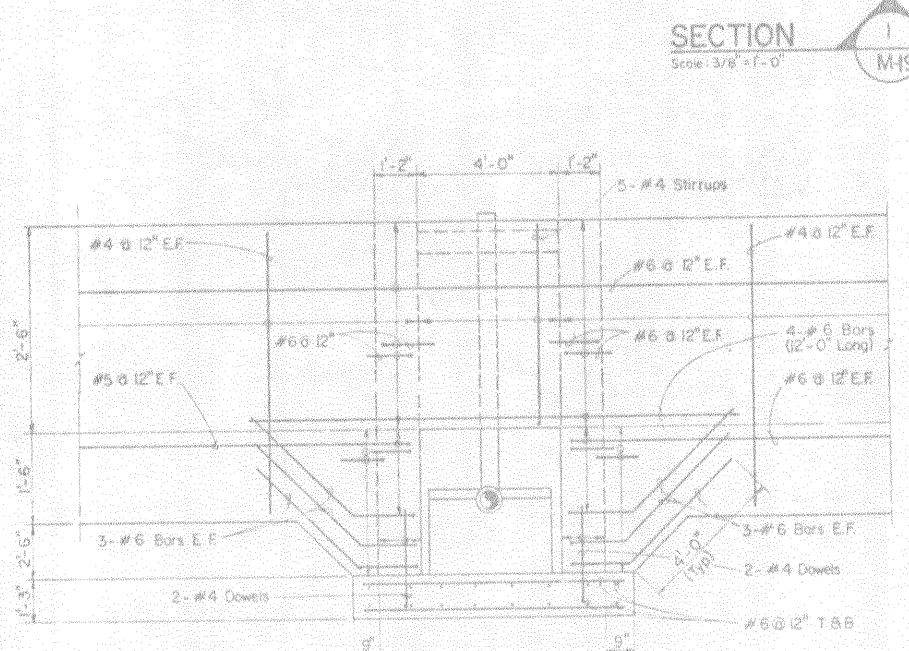


NOTE:  
The Water Tank Area Has Been Pre-loaded With "Special Backfill". Some Or All Of This Pre-loading Material May Still Be At The Water Tank Location. The Contractor Shall Move And Stockpile This Material As Directed By The Site Engineer Prior To Foundation Construction.

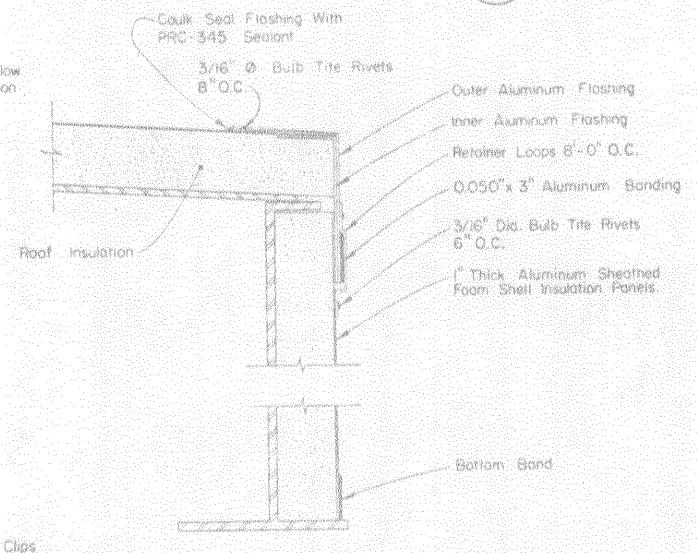
**SECTION 2**  
Scale: 3/8" = 1'-0"



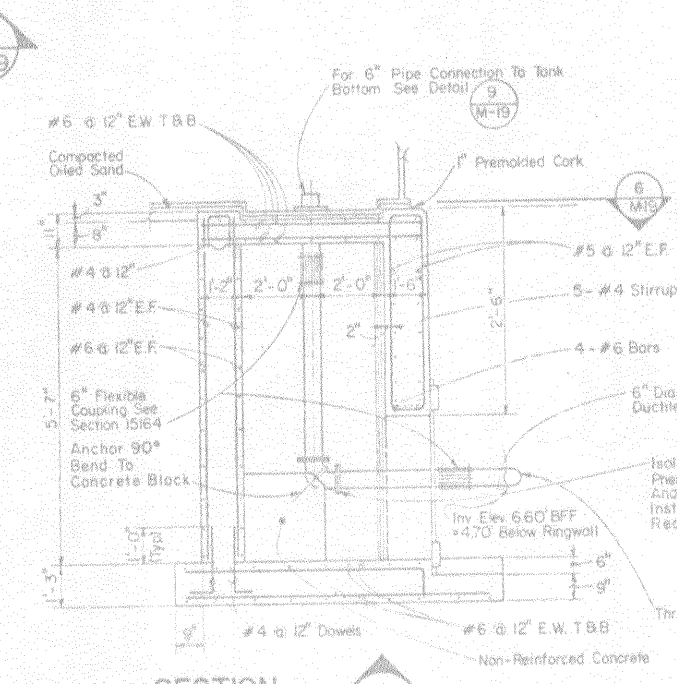
TYPICAL ROOF GORE SEAM DETAIL  
Not To Scale



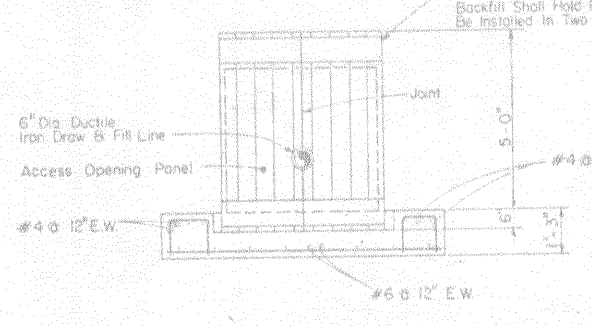
**SECTION 3**  
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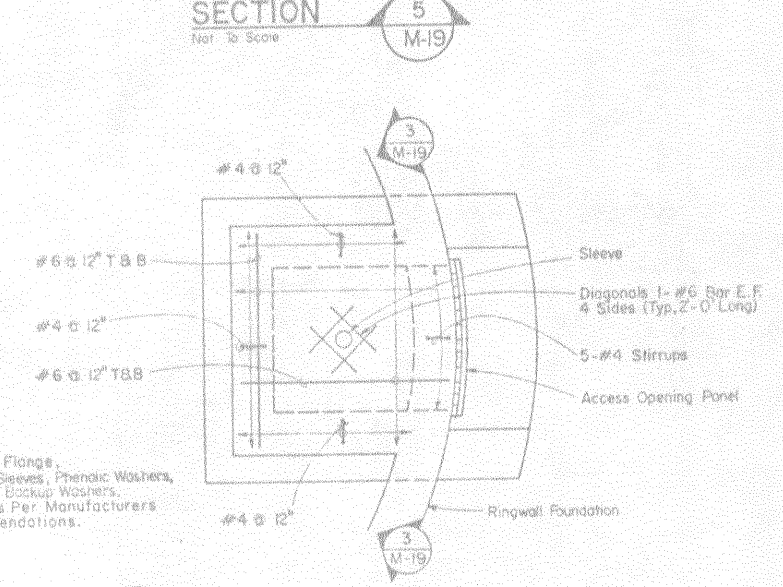
TYPICAL INSULATION DETAIL  
Not To Scale



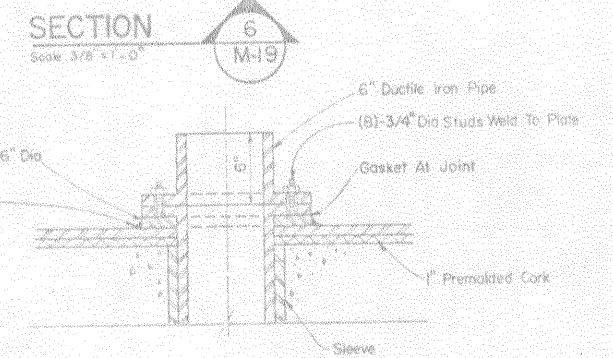
**SECTION 4**  
Not To Scale



**SECTION 7**  
Scale: 3/8" = 1'-0"



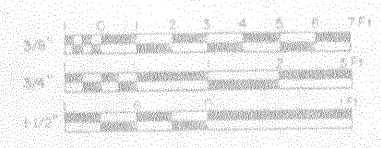
**SECTION 5**  
Not To Scale



**SECTION 6**  
Scale: 3/8" = 1'-0"

**PIPE CONNECTION DETAIL 9**  
Scale: 1 1/2" = 1'-0"

REVISION - 0



SEAL OF THE STATE OF NEW YORK  
OFFICE OF THE ENGINEER  
No. 2678  
Professional Seal

*James J. Dolan*

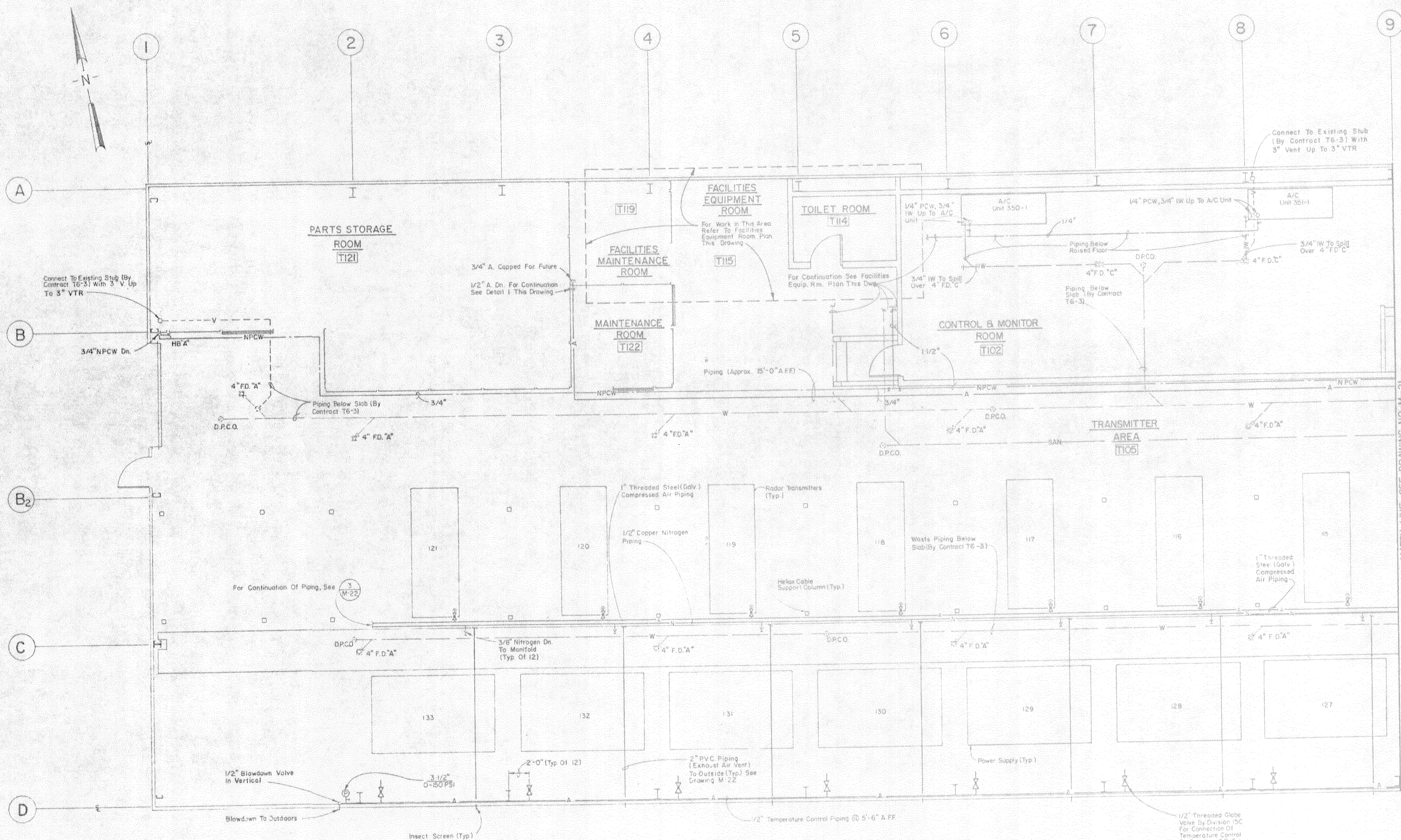
CONT NO. F19638-BB-C-0174 DATE OF DRAWING 2 JULY 1987 DRAWN ENGR CHECKED ISSUED 30 NOV 1987	<b>GENERAL ELECTRIC</b> ESD SYRACUSE, NY <b>AN/FPS-118</b> <b>SECTOR 6 TRANSMIT FACILITY</b> <b>CONTRACT T6-4</b> <b>WATER TANK</b>
SIZE CODE IDENT NO DRAWING NO E 03538 T6 M-19	DATE: NOV 30, 1987 SCALE: AS SHOWN SHEET NO: 53

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

DATE: NOV 30, 1987  
SCALE: AS SHOWN  
SHEET NO: 53

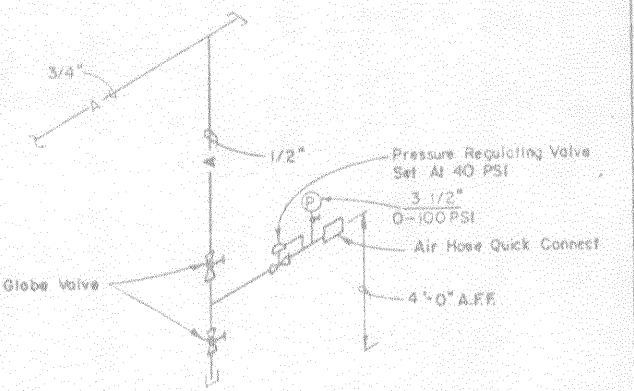


REVISIONS		
NO.	DESCRIPTION	DATE

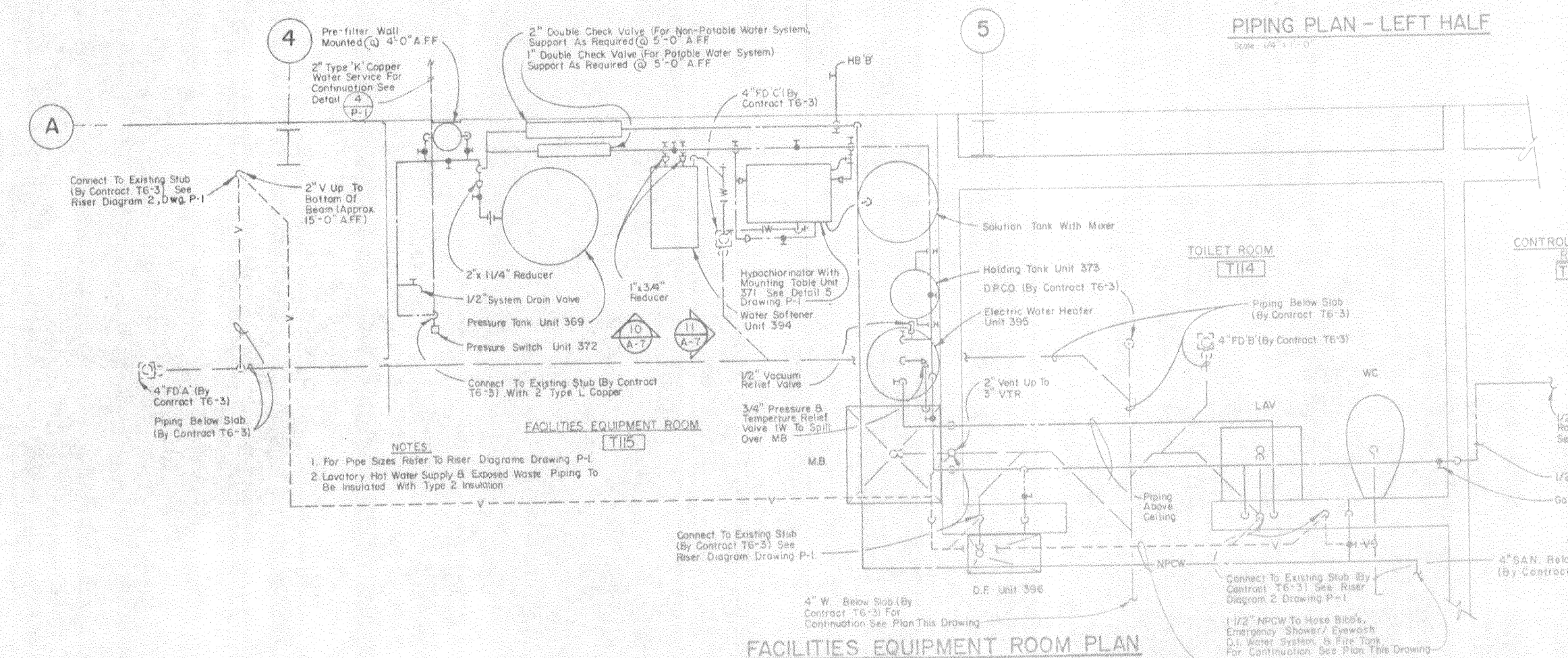


MATCH LINE - SEE DRAWING NO. M-21

- GENERAL NOTES**
- SEE DRAWING G-3 FOR SYMBOLS LIST.
  - PIPE SIZES SHOWN ARE NOMINAL PIPE SIZES.
  - ALL COMPRESSED AIR PIPING SHALL BE SLOPED DOWN TO DRAIN VALVES TO ALLOW FOR DRAINAGE.
  - PITCH 3/4" CONDENSATE DRAIN PIPING TO FLOOR DRAIN.
  - REFER TO DRAWING M-22 FOR TRANSMITTER NITROGEN MANIFOLD DETAIL.
  - REFER ALSO TO DRAWING M-9 FOR TEMPERATURE CONTROL PIPING.
  - ALL PIPING BELOW SLAB, FLOOR DRAINS AND DECK PLATE CLEANOUTS BY CONTRACT T6-3.
  - NO PIPING SHALL BE INSTALLED IN THE INACCESSIBLE SPACE BETWEEN THE CONTROL & MONITOR ROOM CEILING AND THE FLOOR.

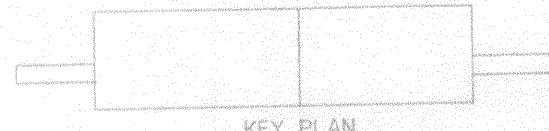


**AIR CONNECTION DETAIL**  
NOT TO SCALE



- NOTES**
- For Pipe Sizes Refer To Riser Diagrams Drawing P-1.
  - Lavatory Hot Water Supply & Exposed Waste Piping To Be Insulated With Type 2 Insulation.

**FACILITIES EQUIPMENT ROOM PLAN**  
Scale: 3/4" = 1'-0"



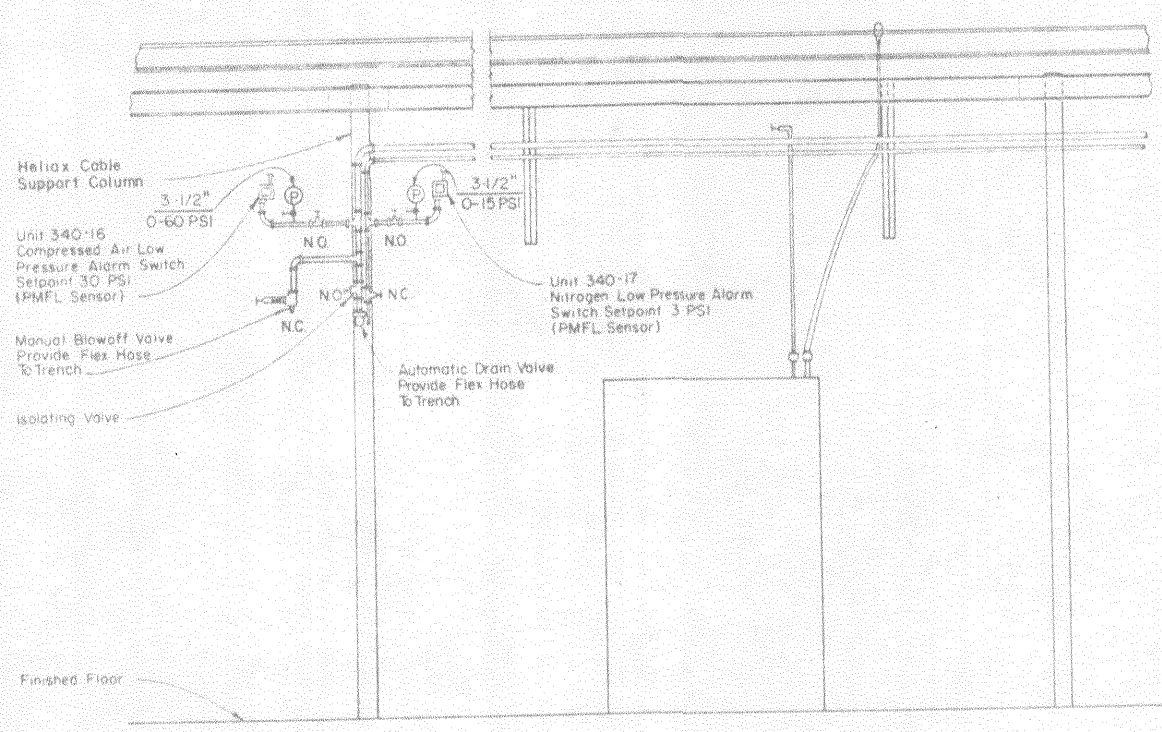
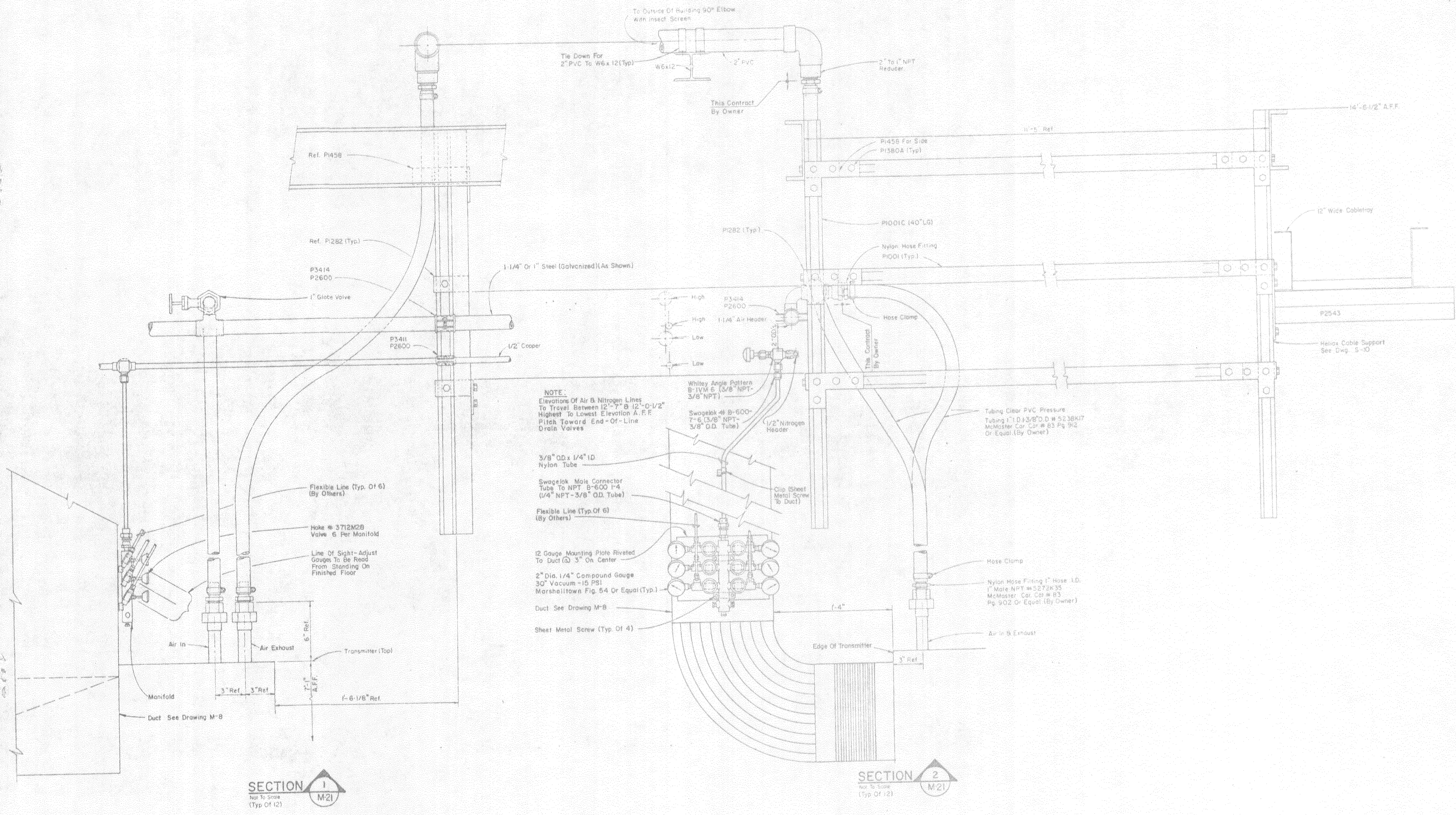
REVISION - 0

	CONTRACT: FINE28-B6-G-0174 DATE OF DRAWING: 2 JULY, 1987 ORGAN: ENGR: CHECKED: ISSUED: 30 NOV, 1987	<b>GENERAL ELECTRIC</b> AN/EPIS-118 <b>SECTOR 6 TRANSMIT FACILITY</b> <b>CONTRACT T6-4</b> <b>COMPRESSED AIR,</b> <b>NITROGEN &amp; PLUMBING</b> <b>PLAN-LEFT HALF</b>	SCALE: AS SHOWN FILE NO: 458 000
	SIZE: CODE IDENT NO. DRAWING NO. E 03538 T6 M-20	DATE: NOV 30, 1987 SHEET NO.: 54	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 2209 SUB-DIVISION OF THE NEW YORK STATE EDUCATION LAW.

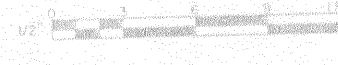








**NOTE:**  
1. MODEL NUMBERS OF PIPE & TUBING SUPPORT MEMBERS ARE SHOWN FOR THE PRODUCTS OF THE UNIVERSIT COMPANY. EQUAL PRODUCTS OF POKERSTRUT, KINDORF OR EQUAL WILL BE CONSIDERED FOR REVIEW.



REVISION- 0

	CONT NO: F19628-85-C-004 DRG DATE OF DRAWING: 2 JULY 1987 DRAWN: [Signature] ENGR: [Signature] CHECKED: [Signature] ISSUED: 30 NOV 1987	<b>GENERAL ELECTRIC</b> SYRACUSE, NY AN/FPS-118 SECTOR 6 TRANSMIT FACILITY CONTRACT T6-4 <b>COMPRESSED AIR &amp; NITROGEN DETAILS</b>		
	SIZE: E CODE IDENT NO: 03538 DRAWING NO: T6 M-22	DATE: NOV 30, 1987 SCALE: AS SHOWN FILE NO: 454 005	SHEET NO: 56	
	NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7204 SUB-DIVISION 2 OF THE NEW YORK STATE EDUCATION LAW		Calcestron & Spink CONSULTING ENGINEERS Liverpool, New York 13088	
	END OF LINE ELEVATION			