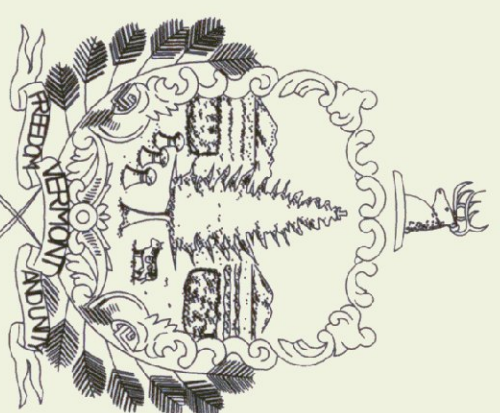


State of Vermont
Department of Buildings & General Services
RUTLAND STATE AIRPORT
FIRE/CRASH RESCUE BUILDING
ADDITION
Clarendon, Vermont

AGENCY OF ADMINISTRATION
DEPT. OF BUILDINGS & GENERAL SERVICES
2 GOVERNOR AIKEN AVENUE
MONTPELIER, VERMONT 05633-5801
THOMAS W. TORTI, COMMISSIONER



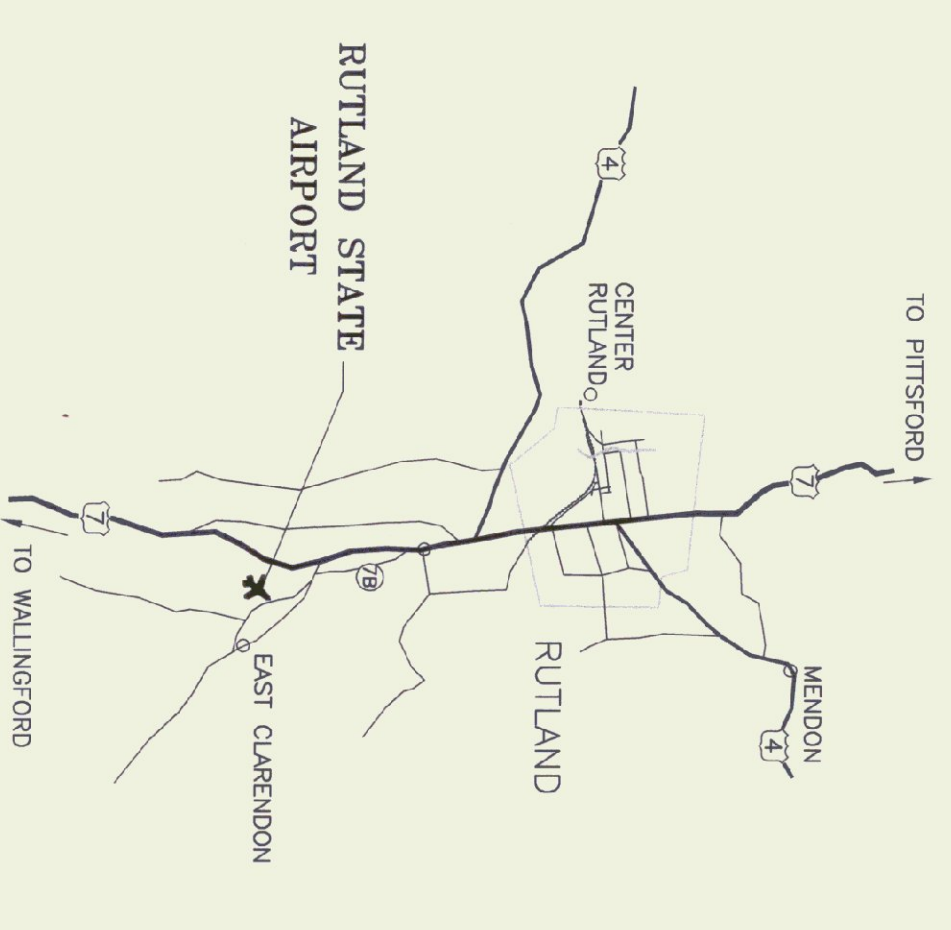
Howard Dean, M.D.
Governor

JULY 2002

INDEX OF SHEETS

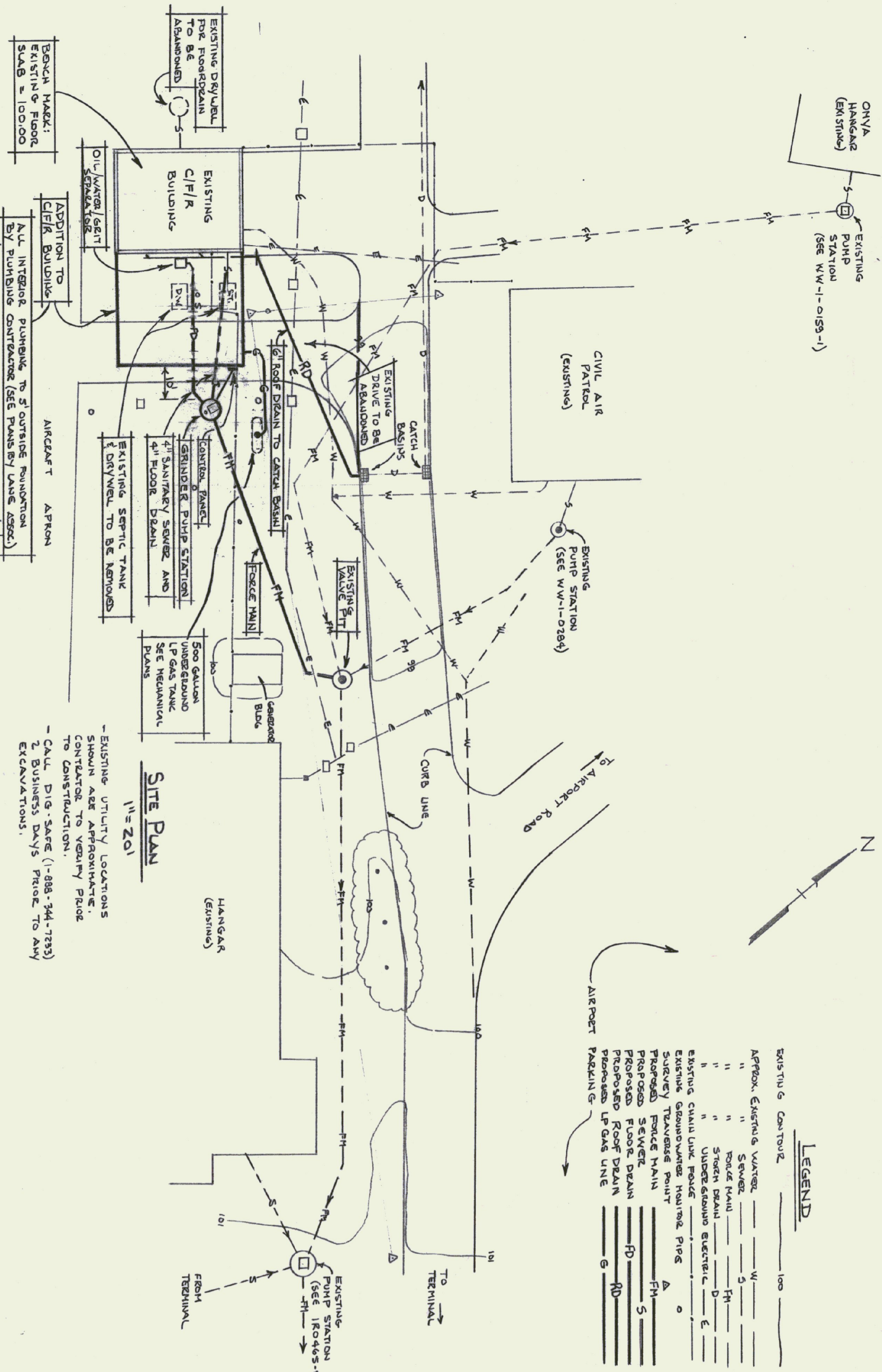
C1	SITE PLAN & DETAILS
A1	FOUNDATION PLAN/ROOF FRAMING PLAN
A2	FLOOR PLAN AND DETAILS
A3	BUILDING AND WALL SECTIONS
A4	EXTERIOR ELEVATIONS
M1	MAIN FLOOR PLAN MECHANICAL LAYOUT
M2	MECHANICAL SCHEDULES AND SPECIFICATIONS
P1	MAIN FLOOR PLAN - PLUMBING AND DETAILS
P2	PLUMBING SCHEDULES, SPECIFICATIONS AND DETAILS
E1	MAIN FLOOR PLAN - ELECTRICAL
E2	SITE PLAN ELECTRICAL
E3	ELECTRICAL SPECIFICATIONS AND DETAILS

AGENCY OF TRANSPORTATION
DIVISION OF RAIL AND AIR
NATIONAL LIFE BUILDING
MONTPELIER, VERMONT 05633-5001
GLENN GERSHANECK, SECRETARY



PROJECT LOCATION

ONVIA HANGAR (EM STN 100)
EXISTING PUMP STATION (SEE W-1-0153-1)



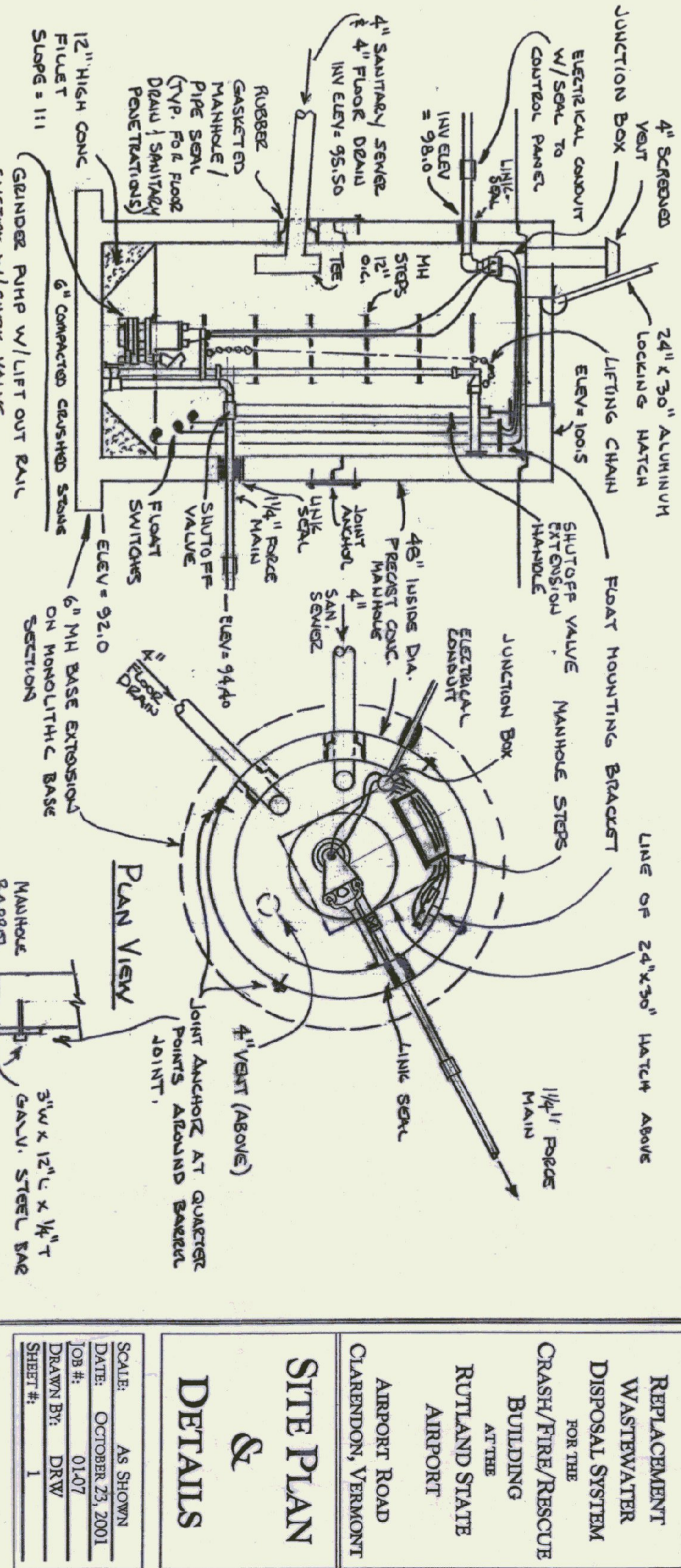
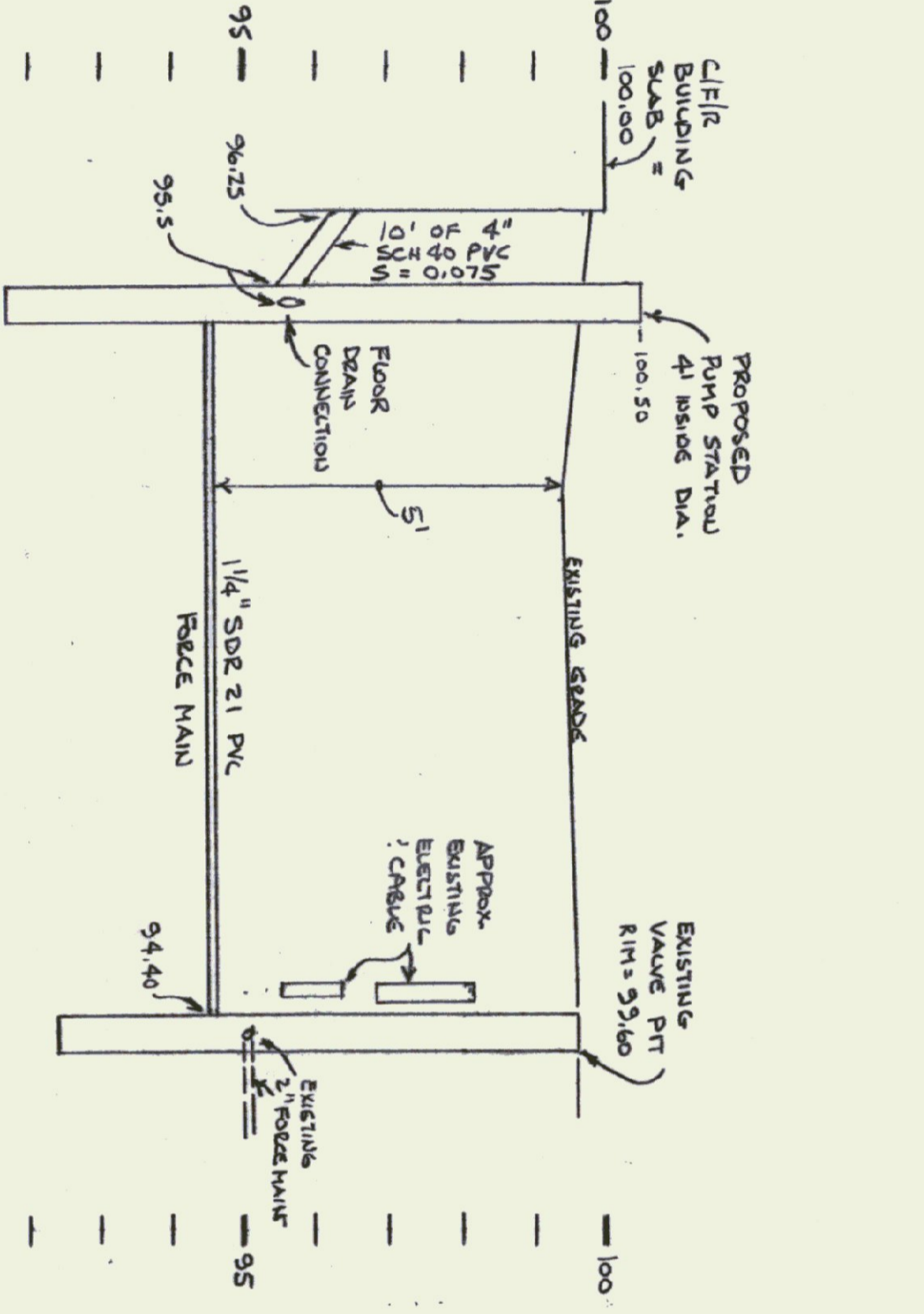
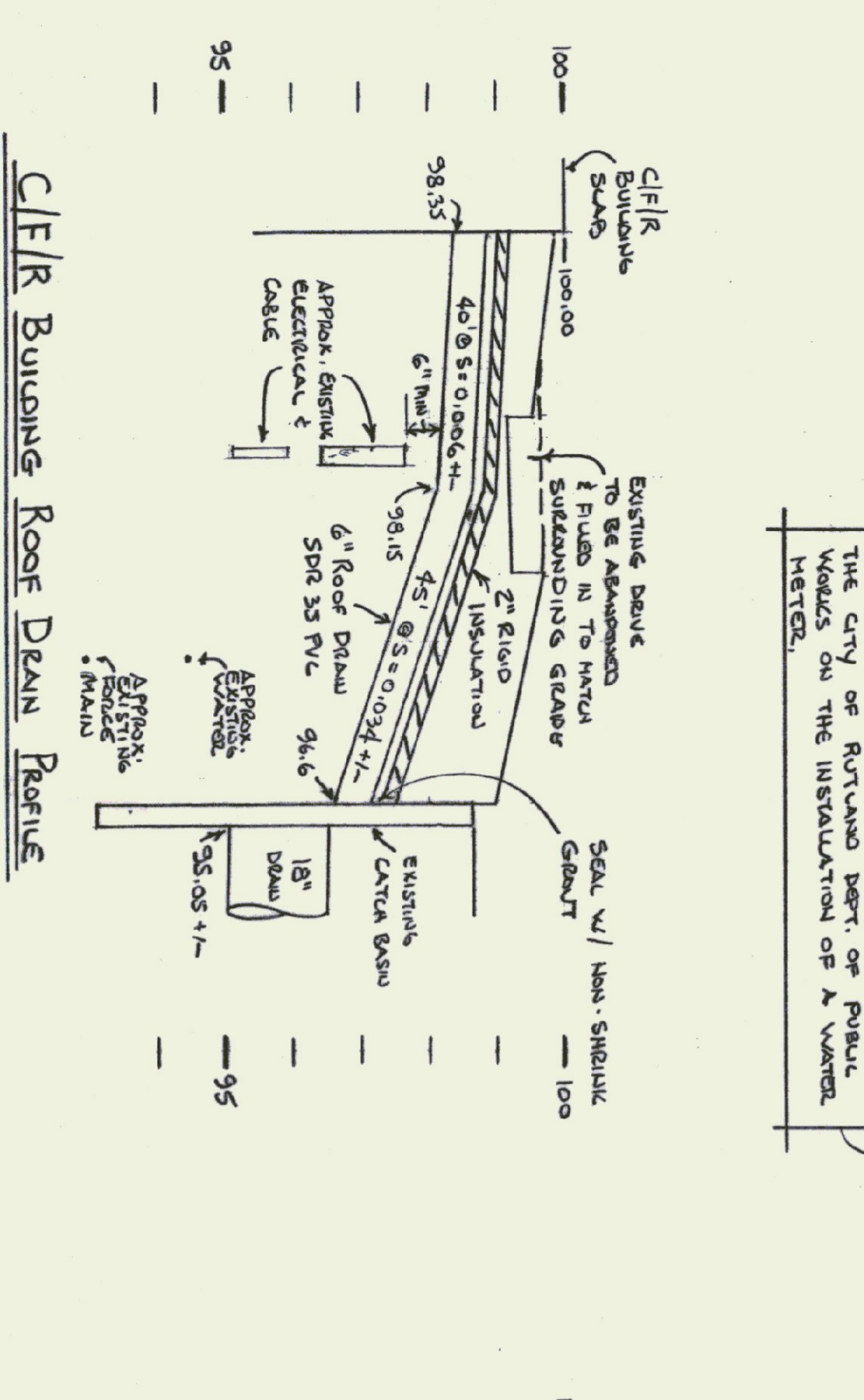
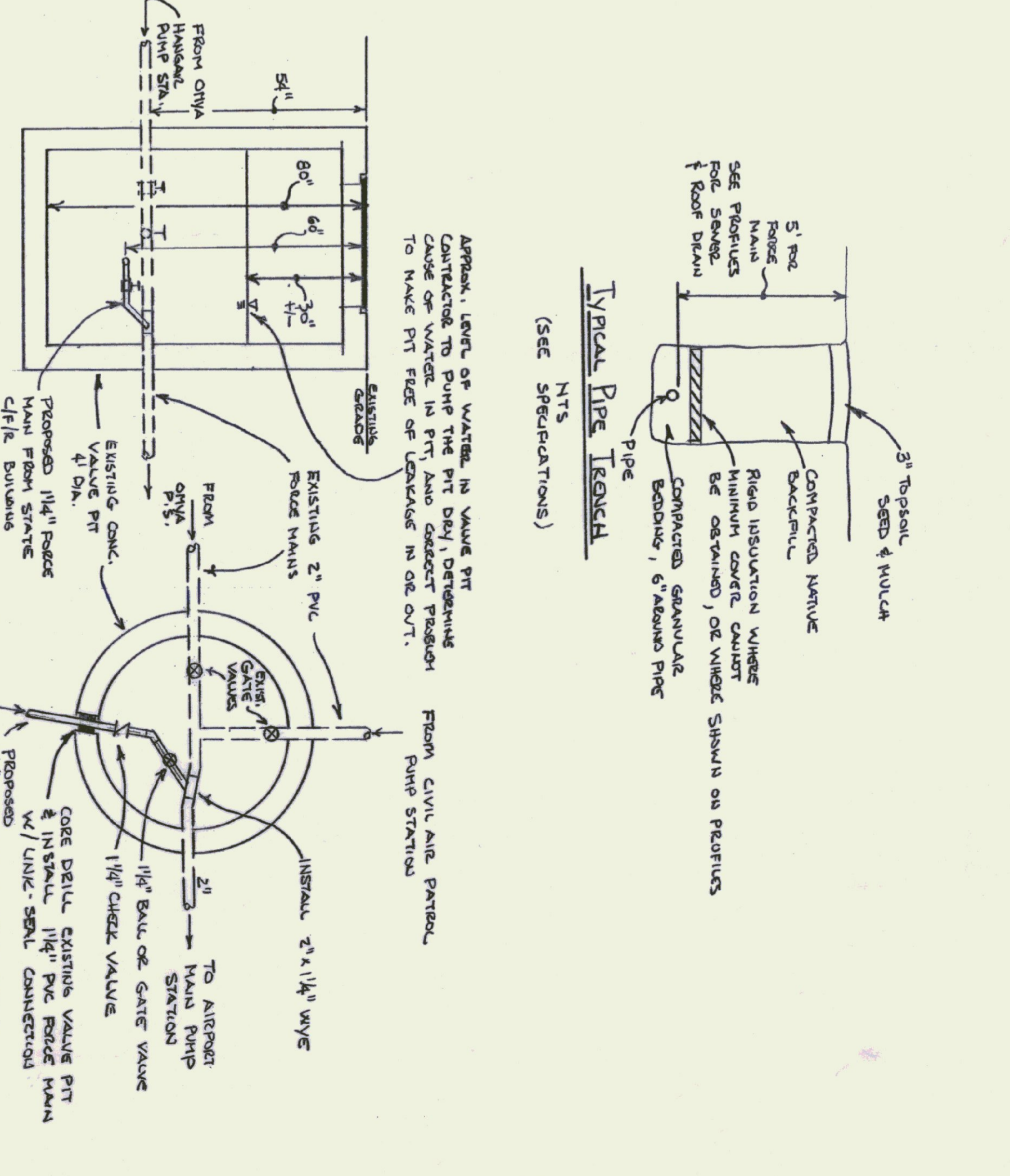
SITE PLAN
1" = 20'

EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY PRIOR TO CONSTRUCTION.

CALL DIG-SAFE (1-888-344-7233) 2 BUSINESS DAYS PRIOR TO ANY EXCAVATIONS.

LEGEND

EXISTING CONTOUR	---
APPROX. EXISTING WATER	---
" " " " " " " "	---
" " " " " " " "	---
" " " " " " " "	---
EXISTING CHASE LINK POWER	---
EXISTING TRANSMISSION HOUSING PIPES	---
PROPOSED TRANSMISSION HOUSING PIPES	---
PROPOSED SEWER MAIN	---
PROPOSED FORCE MAIN	---
PROPOSED FLOOR DRAIN	---
PROPOSED ROOF DRAIN	---
PROPOSED LP GAS LINE	---
PROPOSED PACKING	---



C/F/R Building Roof Drain Profile
SCALE: H: 1" = 2'
V: 1" = 2'

EXISTING ELECTRICAL, CABLE, WATER, & FORCE MAIN LOCATIONS & DEPTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY PRIOR TO INSTALLATION OF DRAIN.

C/F/R Building Force Main Profile
SCALE: H: 1" = 2'
V: 1" = 2'

CONTRACTOR TO VERIFY LOCATION & DEPTH OF EXISTING UTILITIES PRIOR TO INSTALLATION OF PUMP STATION & FORCE MAIN.

SECTION
1" = 2'

GRINDER PUMP STATION
1" = 2'

NOTE: THERE IS A SEPARATE DOCUMENT FOR THE SPECIFICATIONS AND DESIGN CRITERIA FOR THIS PROJECT, AND SHOULD BE ATTACHED TO THIS SITE PLAN. IT CONTAINS IMPORTANT INFORMATION FOR THE CONSTRUCTION OF THE PROJECT, AND IT IS IMPORTANT TO REVIEW AND REFERENCE THE SPECIFICATIONS, PRIOR TO AND DURING THE ACTUAL CONSTRUCTION OF THE PROJECT. IF THIS DOCUMENT IS NOT ATTACHED TO THE SITE PLAN, CONTACT THE PROJECT OWNER OR THE DESIGN ENGINEER TO OBTAIN A COPY.

REVISIONS:

DATE	DESCRIPTION
10/27/2010	AS SHOWN
01/27/2011	DRW

SCALE: AS SHOWN
DATE: OCTOBER 23, 2010
JOB #: 0127
DRAWN BY: DRW
SHEET #: 1

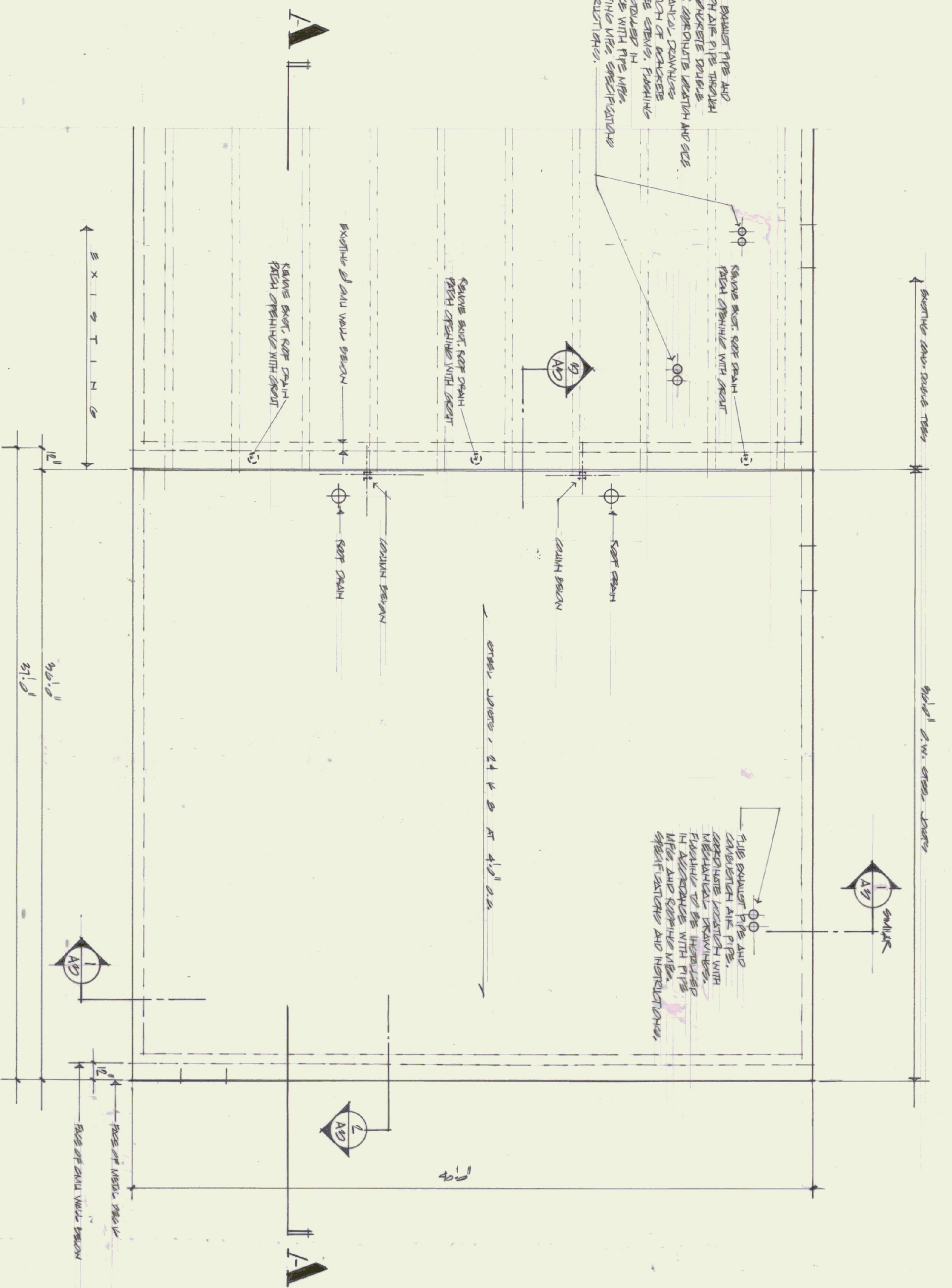
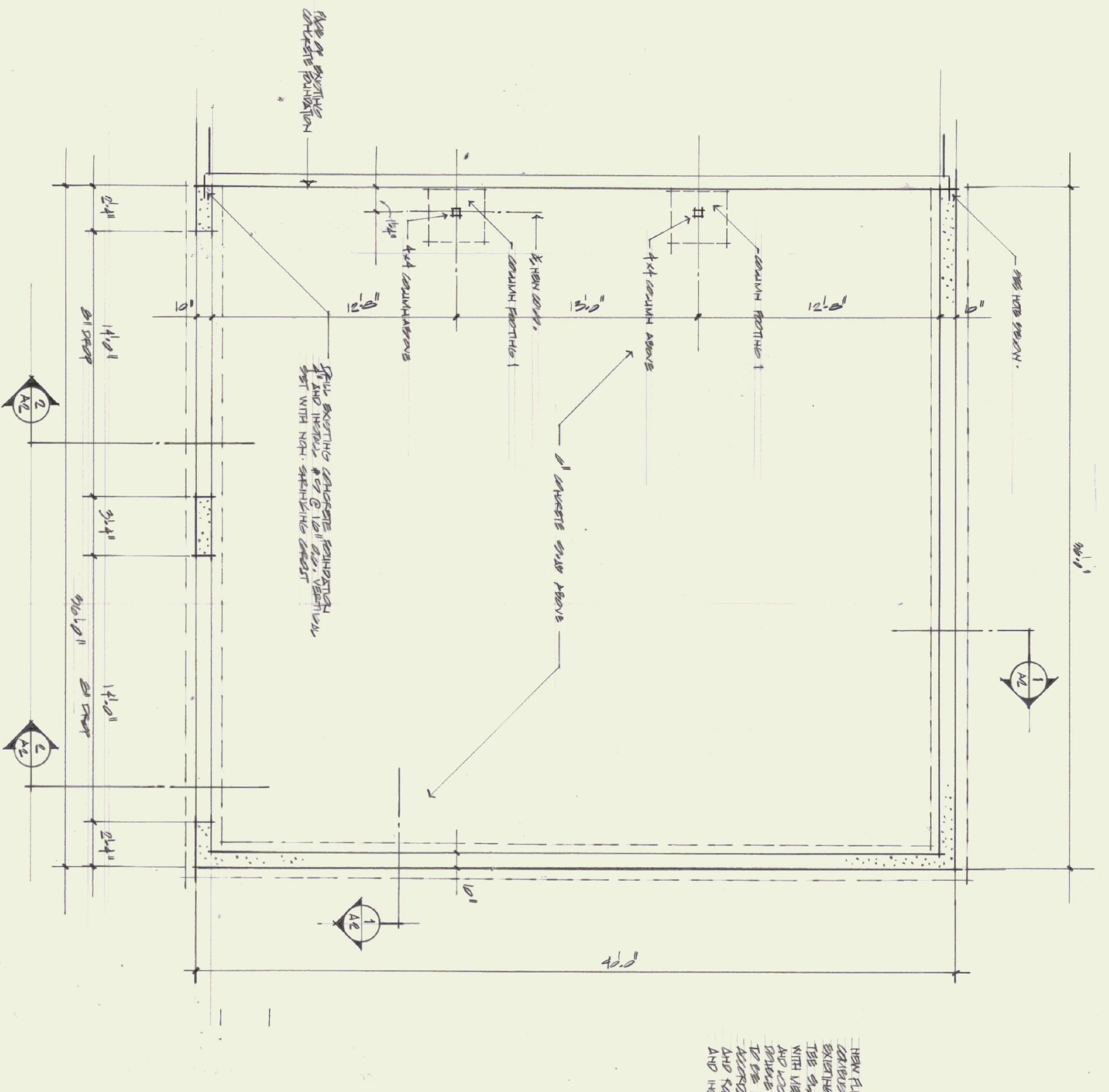
WOODS & CO.
CIVIL ENGINEERING
4175 CENTER ROAD
NORTH CALANDRON, VT 05759
802/730-0333

REPLACEMENT WASTEWATER DISPOSAL SYSTEM FOR THE CRASH/FIRE/RESCUE BUILDING AT THE RUTLAND STATE AIRPORT

AIRPORT ROAD CLARENDON, VERMONT

SITE PLAN & DETAILS

C1

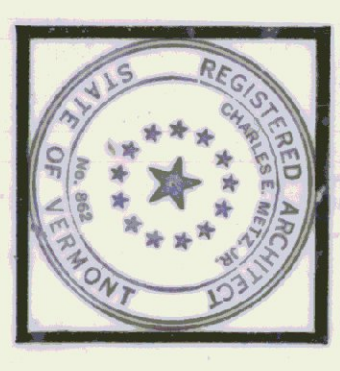
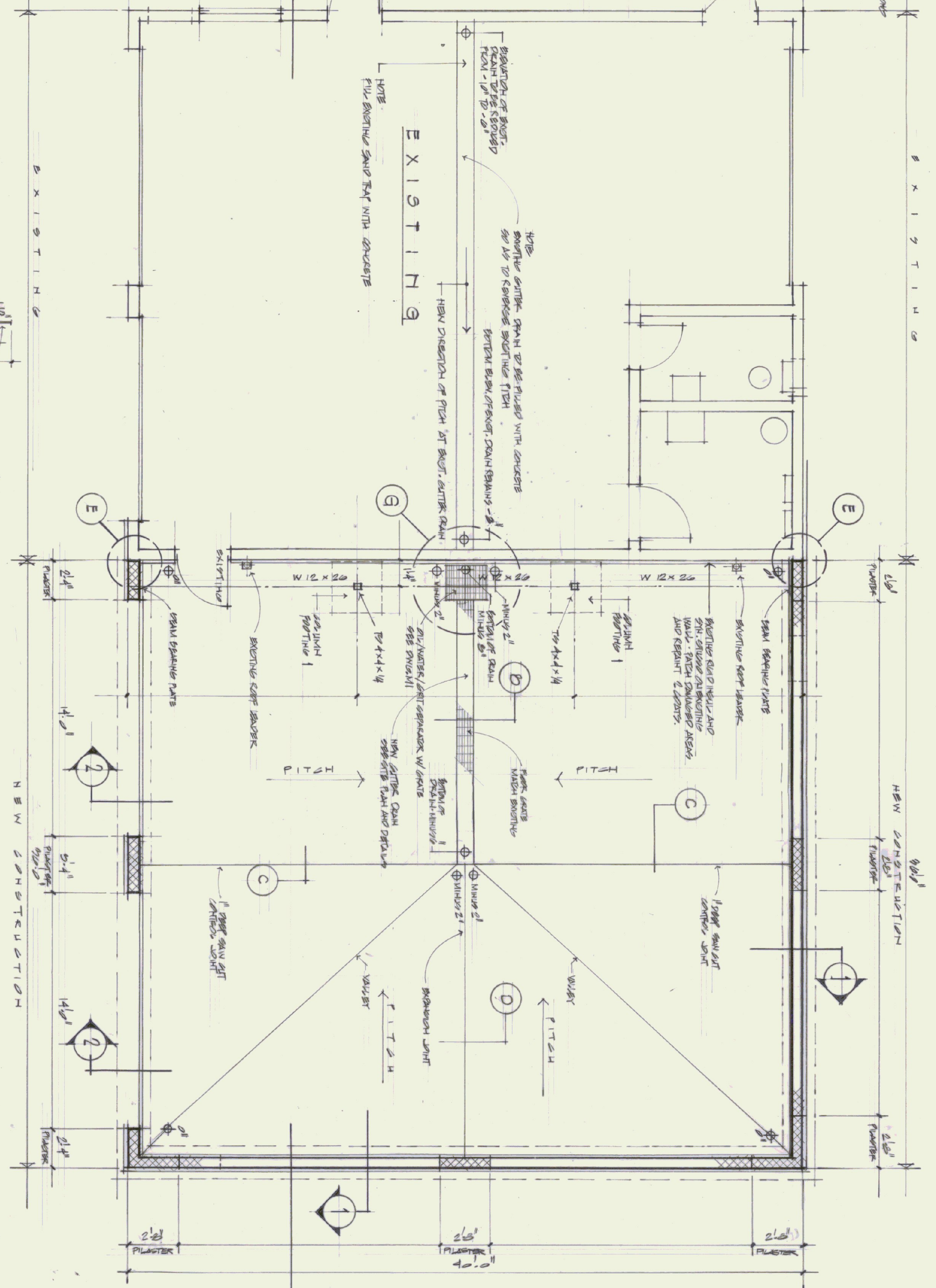
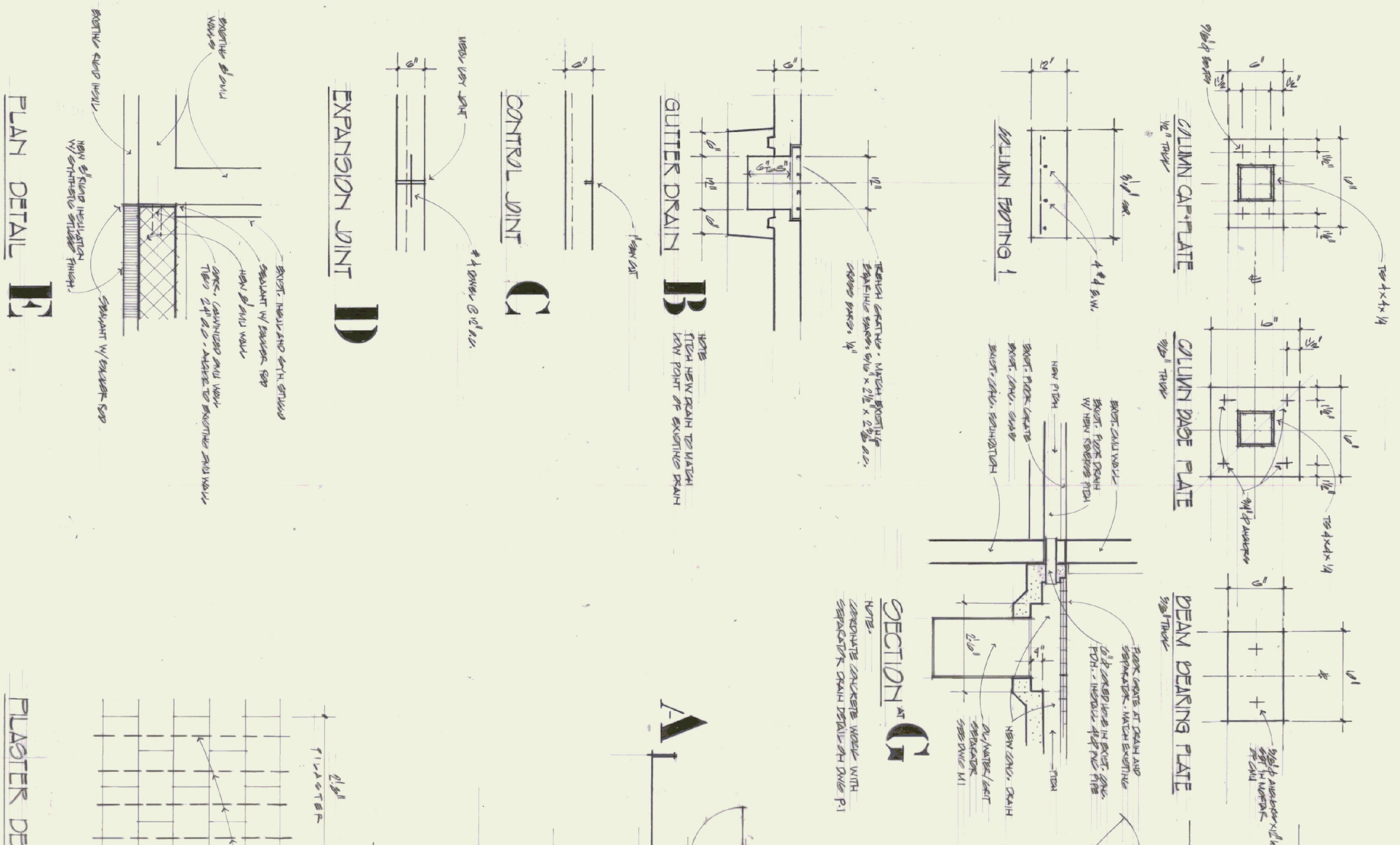


CHARLES E. METZ
 ARCHITECT
 THE GRIST MILL
 BRADFORD VT 05033

REGISTERED ARCHITECT
 STATE OF VERMONT
 PROJECT: RUTLAND STATE AIRPORT
 GARESON VARIANT
 ADDITION TO
 TITLE: FIVE CRASH/RESOLVE BLDGS
 FOUNDATION PLAN
 ROOF FRAMING PLAN

MAY 2002

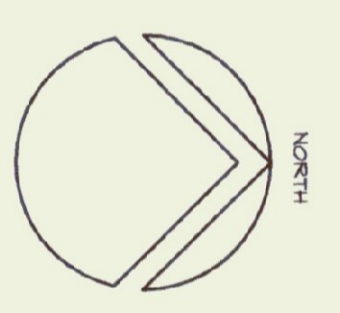
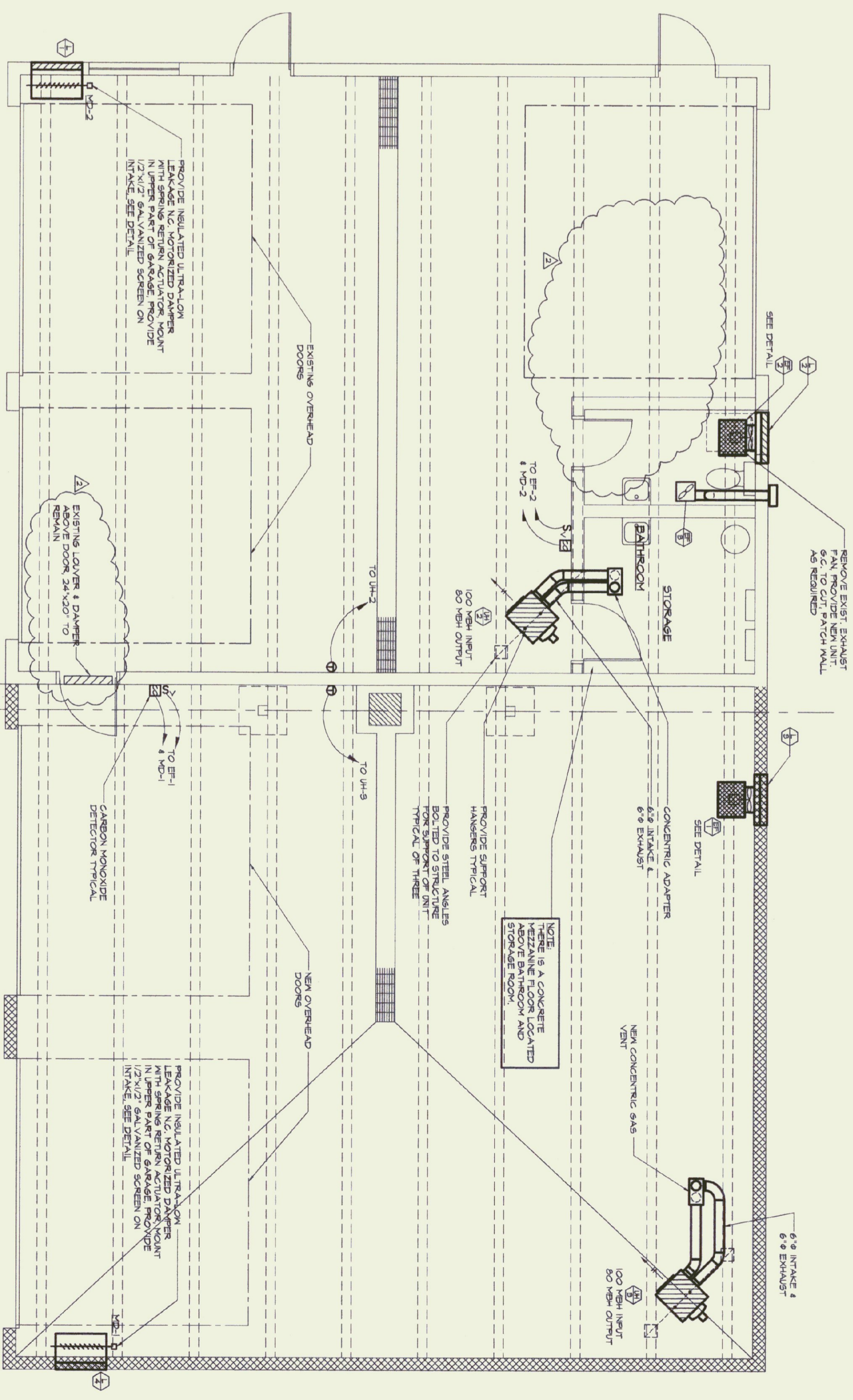
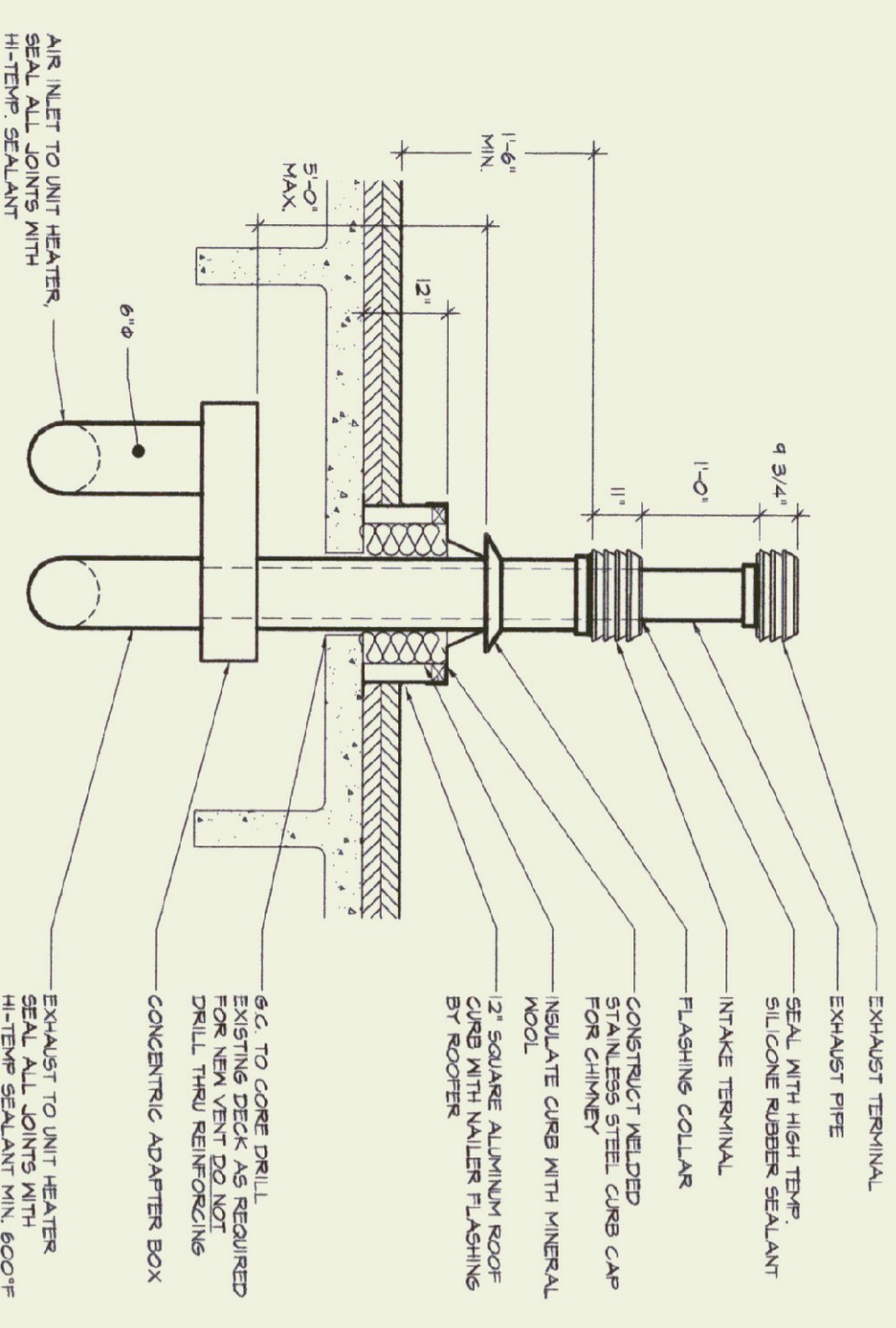
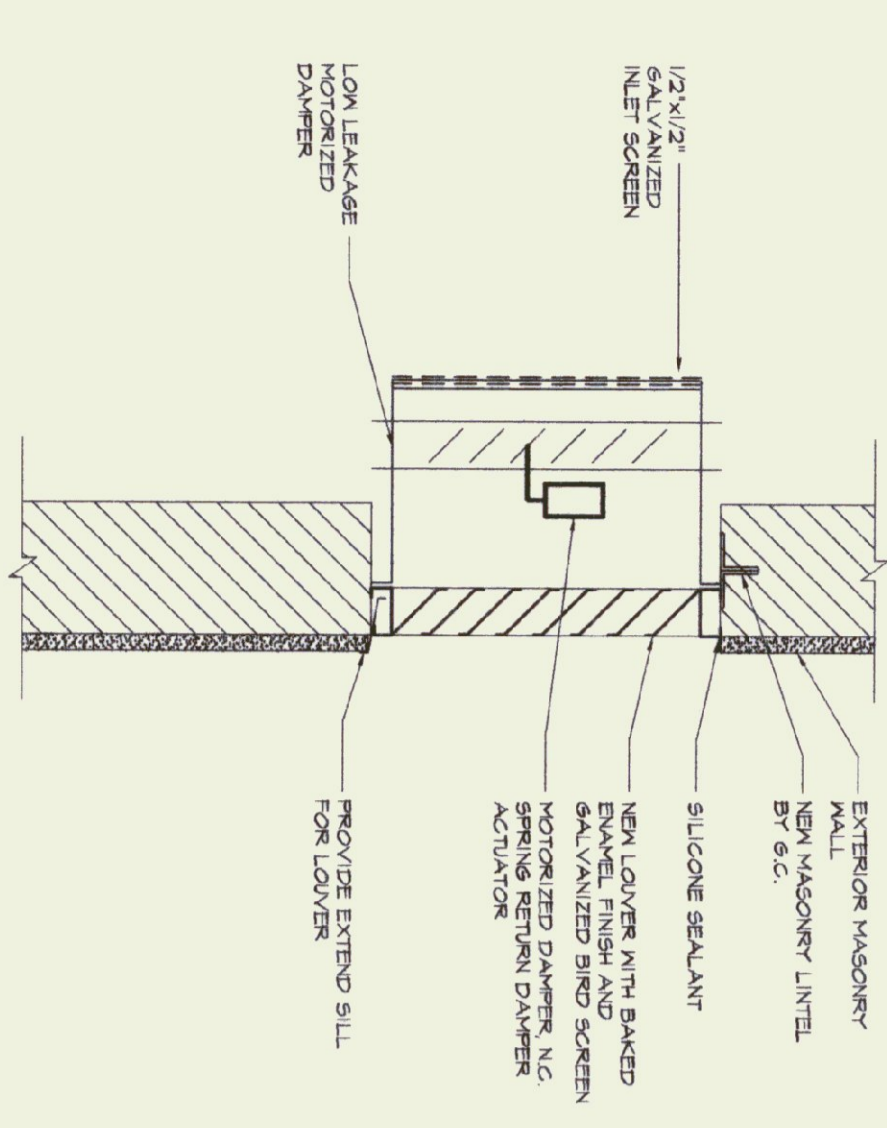
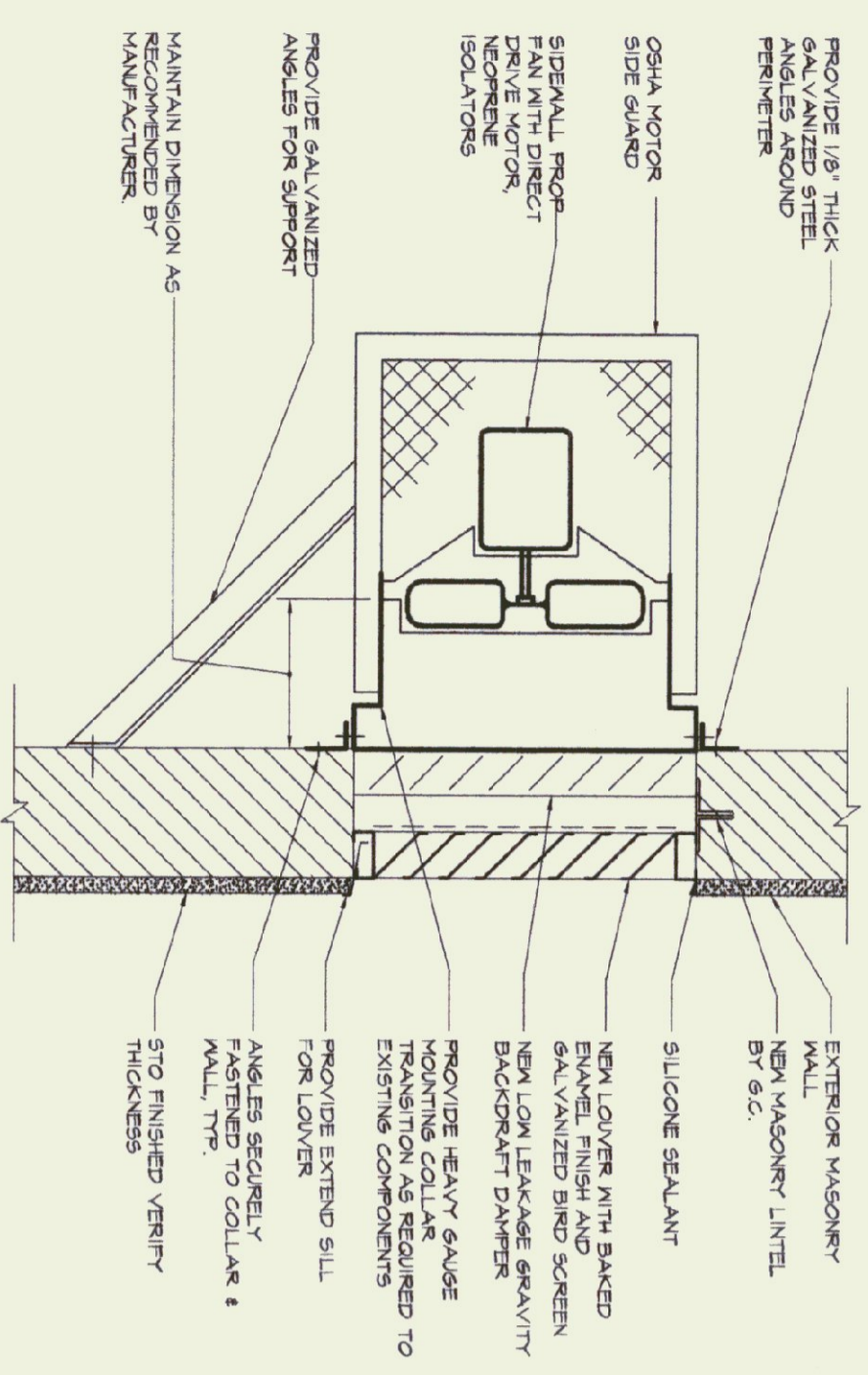
DRAWING:
A1



CHARLES E. METZ
ARCHITECT
THE GRIST MILL
BRADFORD VT 05033

PROJECT: RUTLAND STATE AIRPORT
LOCATION: BRADFORD, VERMONT
TITLE: ADDITION TO FIRE/CRAQRESILIENT BLDG.
FLOOR PLAN AND DETAILS

DRAWING:
A9



FLOOR PLAN - MECHANICAL LAYOUT
SCALE 1/4"=1'-0"

EXIST. BLDG. ← → NEW ADDITION

NO	REVISION	DATE
1	COST REDUCING CHANGES BIDDING	7-22-02 5-24-02



LANE ASSOCIATES
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51 KILLINGTON AVENUE
RUTLAND, VERMONT 05701
TELEPHONE: (802) 747-3346
FAX/WORDER: (802) 747-3388

HEATING, VENTILATION, & AIR CONDITIONING,
PLUMBING, FIRE PROTECTION, & ELECTRICAL

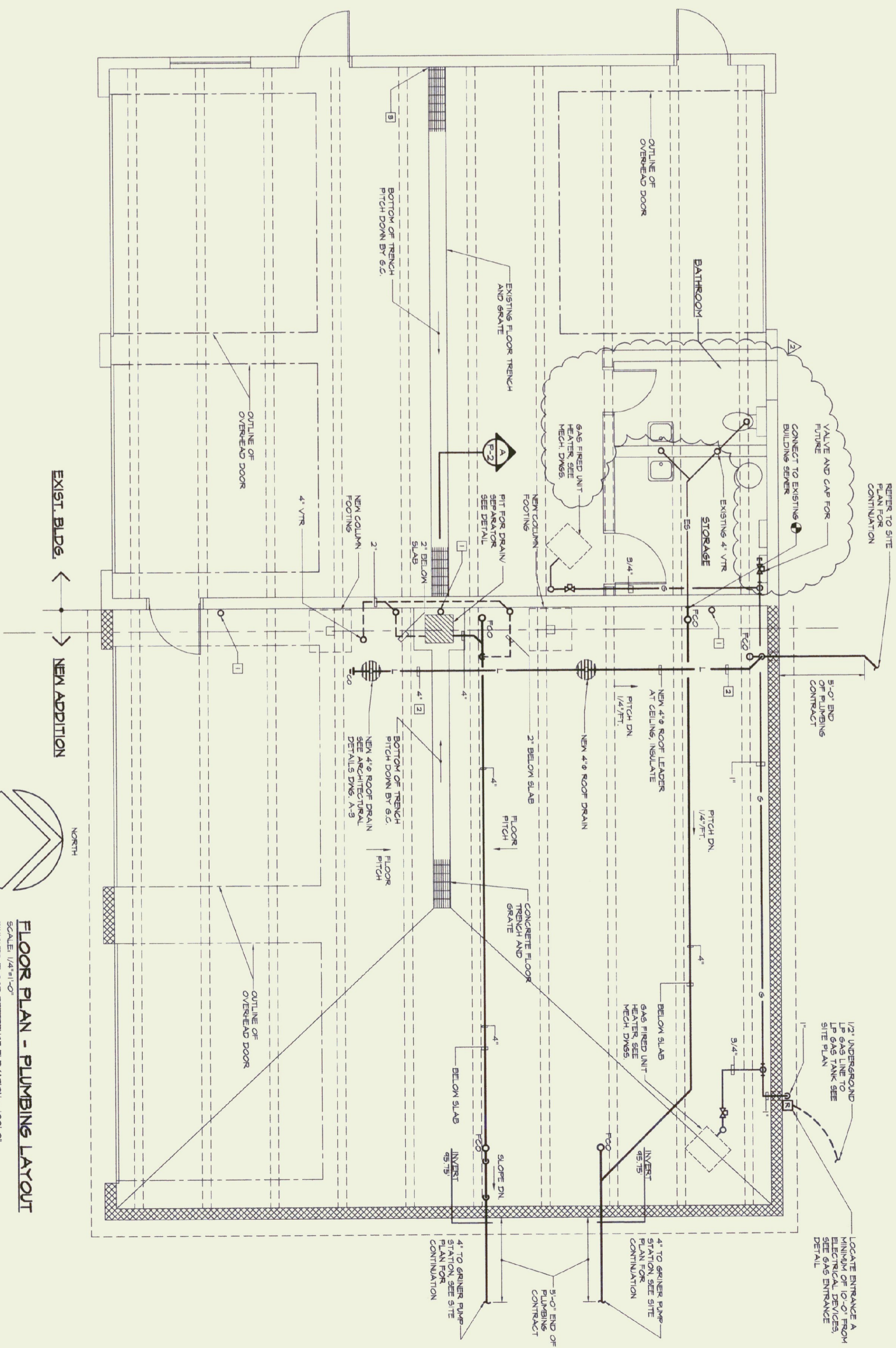
MAIN FLOOR PLAN
MECHANICAL LAYOUT
RUTLAND STATE AIRPORT
CLARENDON, VERMONT
ADDITION TO FIRE/CRASH/
RESCUE BUILDING

M1

APPR. DWD DRAWN. BWM SCALE: AS NOTED PROJ. NO. 0132-01

PLUMBING LEGEND

- | | | | |
|-----|---|------|-----------------------|
| --- | EXISTING PIPING TO BE REMOVED | B4 | GATE VALVE |
| --- | EXISTING SANITARY (EDWARDIST GOLD, EDWARDIST HOT, EDWARDIST FIRE) | B4 | GLOBE VALVE |
| --- | SANITARY WASTE AND SOIL PIPING | B4 | BALL VALVE |
| --- | SANITARY VENT PIPING | B4 | GAS COCK |
| --- | EXISTING SANITARY PIPING | CO | CLEANOUT |
| --- | RAIN LEADER PIPING | CO | SIDE CLEANOUT |
| --- | GAS PIPING | CO | PIPE CAP |
| --- | PIPE RISER | CO | FLOOR CLEANOUT |
| --- | PIPE DROP | CO | ROOF DRAIN |
| --- | PIPE UNION | ND | |
| | | MC | MECHANICAL CONTRACTOR |
| | | PC | PLUMBING CONTRACTOR |
| | | VTR | VENT THROUGH ROOF |
| | | N/C | NOT IN CONTRACT |
| | | G.C. | GENERAL CONTRACTOR |
| | | | CONNECT TO EXISTING |



FLOOR PLAN - PLUMBING LAYOUT

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

FINISHED FLOOR REFERENCE ELEVATION = 100'-0"

DRAWING NOTES: (APPLY TO THIS DRAWING ONLY)

- 1 REMOVE EXISTING ROOF LEADER AND SOIL DRAIN AND ALL ASSOCIATED PIPING AND ACCESSORIES.
- 2 INSULATE NEW ROOF LEADER AT CEILING.

MAIN FLOOR PLAN - PLUMBING AND DETAILS

**RUTLAND STATE AIRPORT
CLARENDON, VERMONT
ADDITION TO FIRE/CRASH/
RESCUE BUILDING**

P1



NO	ISSUED FOR	DATE
1	BIDDING	5-24-02
	COST REDUCING CHANGES	7-22-02

LANE ASSOCIATES
CONSULTING ENGINEERS, P.C.

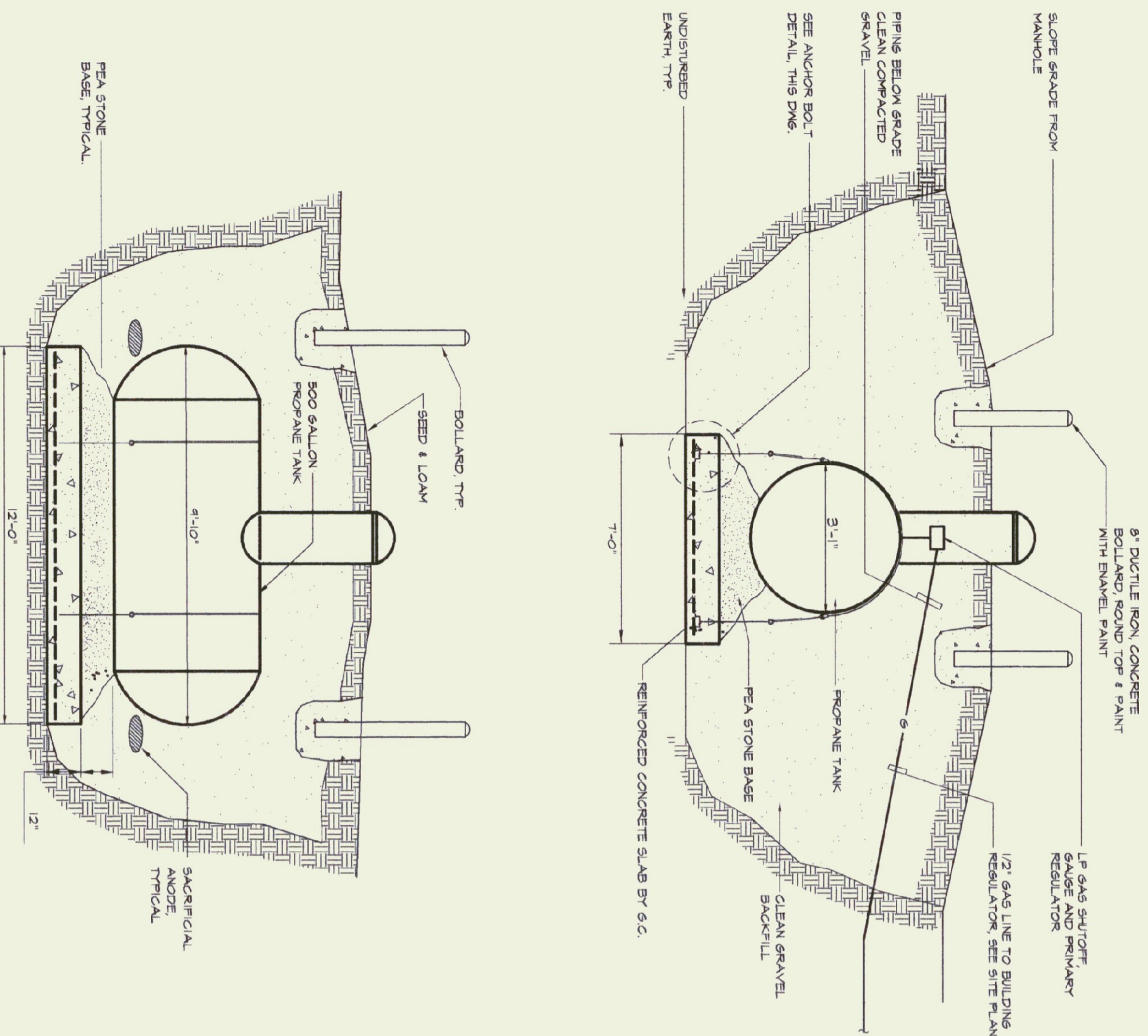
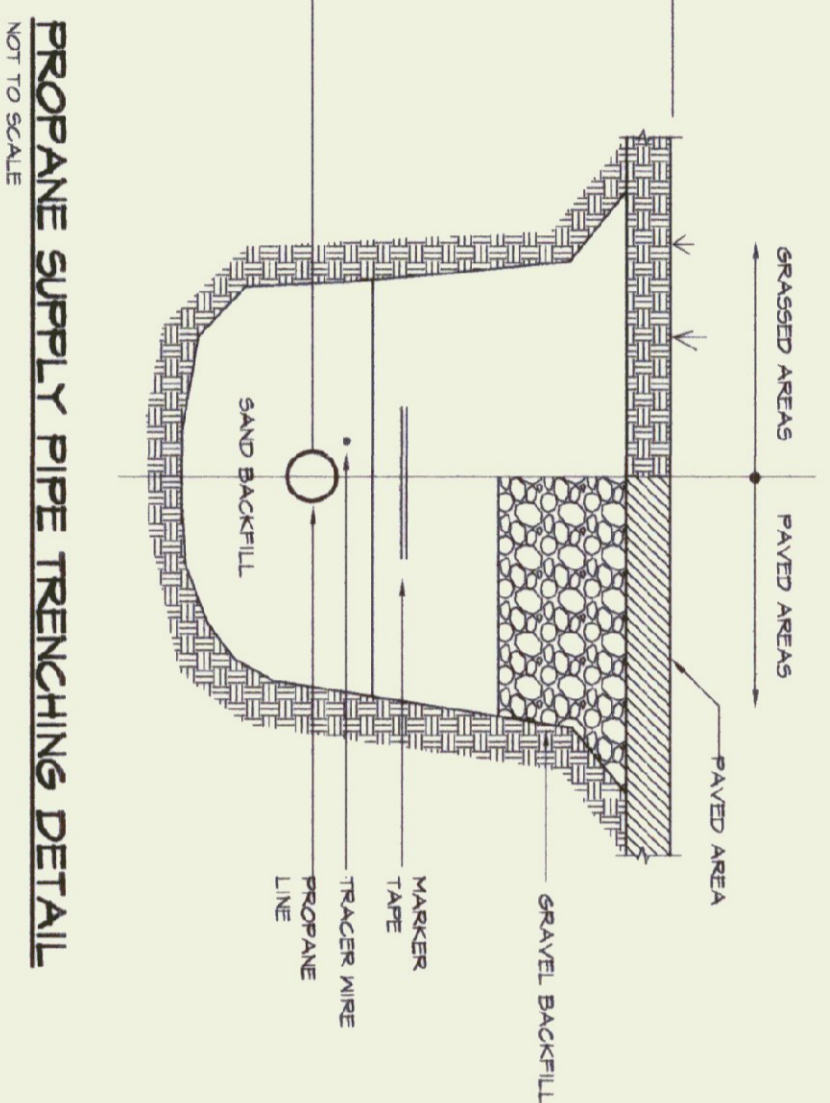
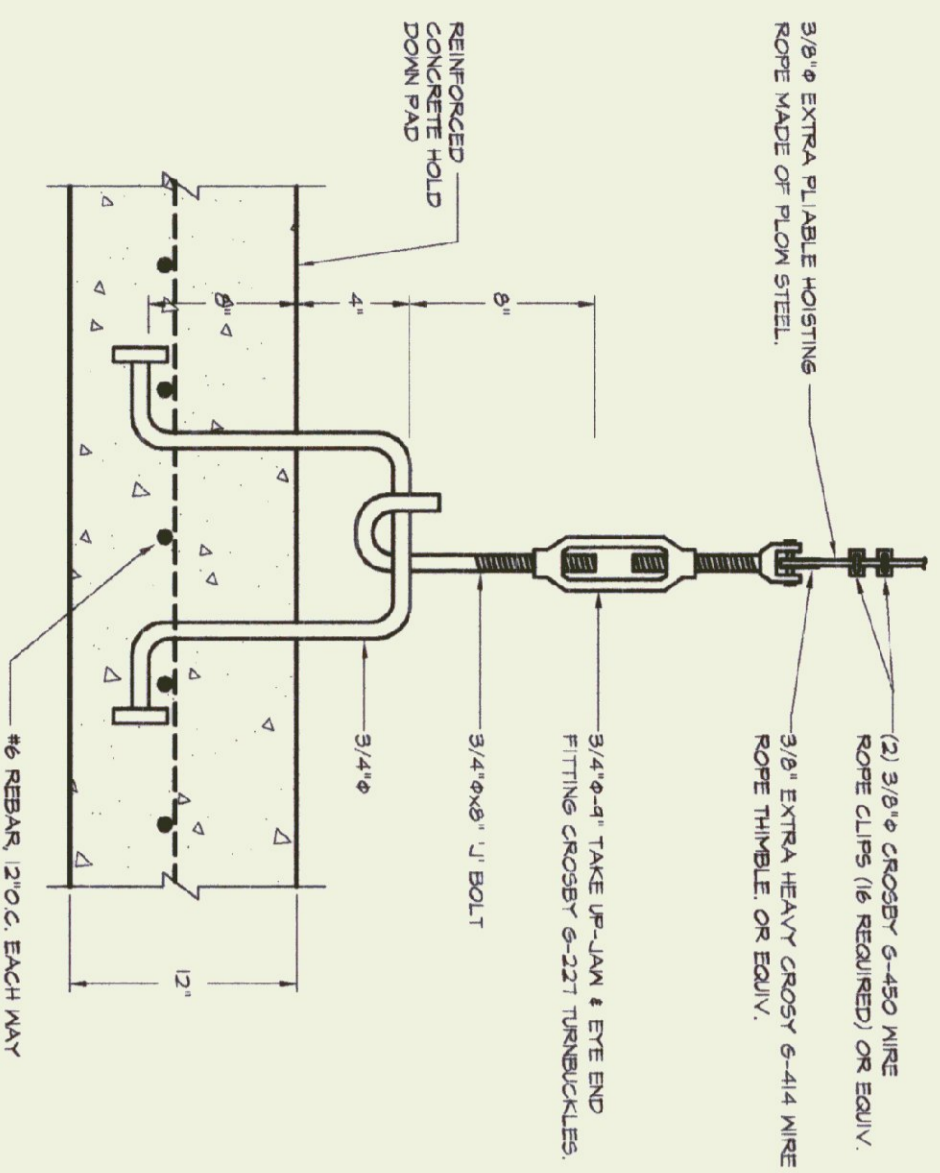
HEATING, VENTILATION & AIR CONDITIONING,
PLUMBING, FIRE PROTECTION, & ELECTRICAL

CHARLES F. LANE, P.E.
DANIEL W. DERRAS, P.E.

51 RUTLAND AVENUE
RUTLAND, VERMONT 05701
TELEPHONE: (802)747-3346
FAX/MODERN: (802)747-3386

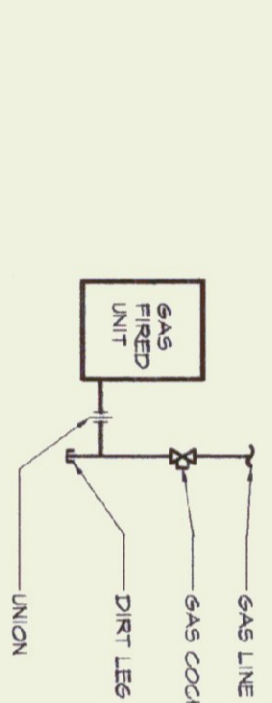
APPR:	DVD	DRAWN:	BWB/SWL	SCALE:	AS NOTED

PROJ. NO.	0132-01
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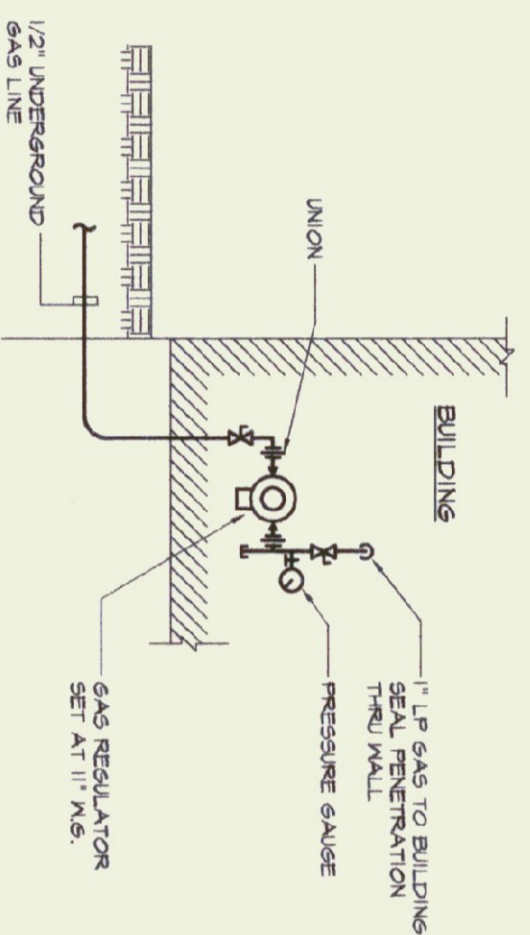


UNDERGROUND PROPANE TANK DETAILS
NOT TO SCALE

NOTE:
TANK, REGULATORS, PIPING AND ACCESSORIES INCLUDING 1ST AND 2ND STAGE REGULATOR TO BE FINISHED AND INSTALLED BY CONTRACTOR COORDINATE INSTALLATION WITH OWNERS GAS SUPPLIER.



GAS CONNECTION DETAIL
NOT TO SCALE



MAIN GAS ENTRANCE DETAIL
NOT TO SCALE

MATERIAL SPECIFICATIONS

CODES AND STANDARDS
COMPLY WITH THE LATEST EDITION OF THE STATE OF VERMONT LP GAS CODE NATIONAL BOCA PLUMBING CODE INCORPORATING THE MID STATE OF VERMONT PLUMBING RULES AND ALL LOCAL CODES AND REGULATIONS.

SEMITALS
SUBMIT ALL EQUIPMENT, PIPING, TANKS AND ACCESSORIES PRIOR TO CONSTRUCTION.

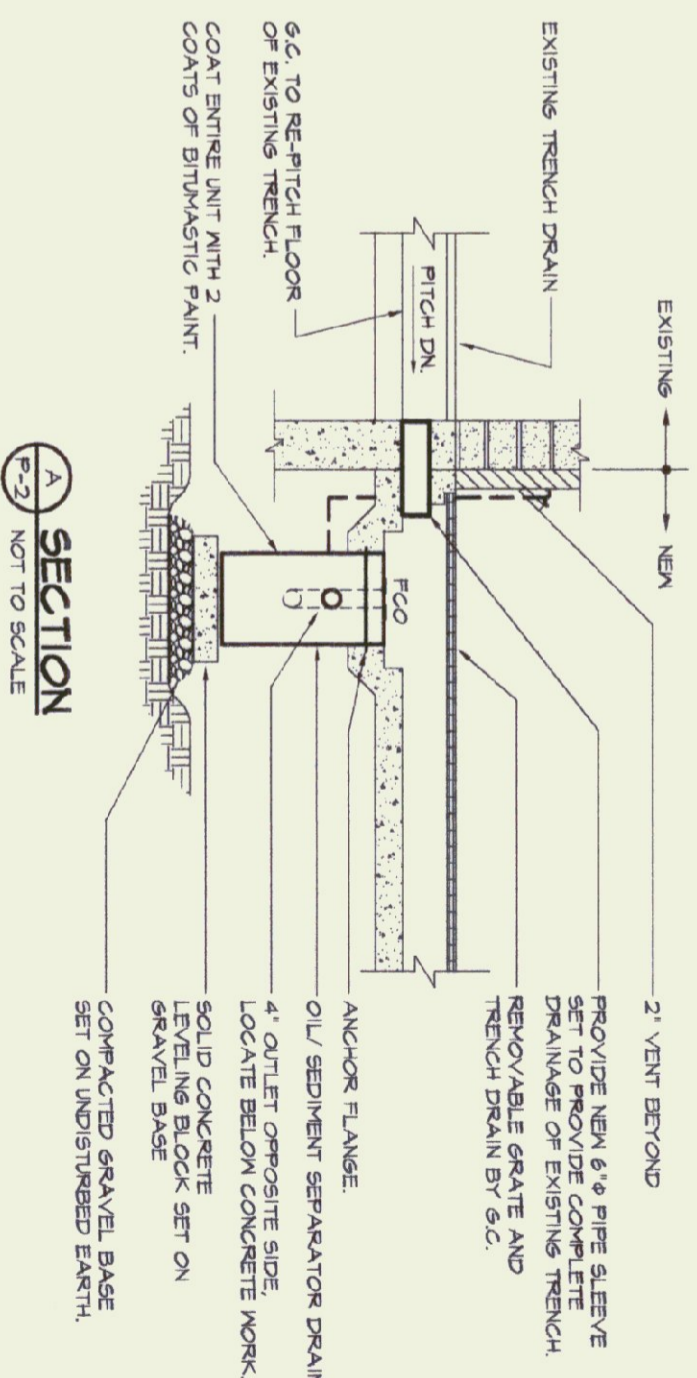
EPE AND VALVES
ALL SOFT WARE IRON AND ROOF DRAINAGE PIPING SHALL BE CAST IRON UNLESS SHOWN OTHERWISE. FITTINGS AT ALL JOINTS OF IRON PIPING 1/2" AND SMALLER ABOVE GRADE SHALL BE THE "D" W/ CONE WITH SOLDER TYPE FITTINGS.

LP GAS PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL. PIPING WITH SCREEN TYPE FITTINGS, ALL FITTINGS TO BE VALUABLE IRON SCREEN TYPE FITTINGS. TEST AND INSTALL ALL GAS PIPING IN ACCORDANCE WITH NFPA 54 AND THE STATE OF VERMONT GAS CODE. PROVIDE GAS COOK AND DIRT LEG AT ALL EQUIPMENT CONNECTIONS.

FLOOR CLEANOUTS
FINISH AND INSTALL FLOOR CLEANOUTS FOR ROOF DRAINAGE AND SANITARY WASTE PIPING AS INDICATED ON THE HEAVY DUTY.

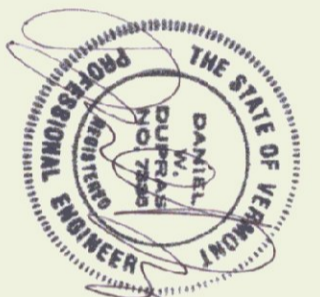
EPE INSULATION
ALL ROOF DRAINAGE PIPING LOCATED ABOVE FINISHED FLOORING SHALL BE INSULATED WITH 1/2" THICK POLYURETHANE INSULATION. PIPING ABOVE FINISHED FLOORING SHALL BE INSULATED WITH 1" THICK POLYURETHANE INSULATION. MANUFACTURERS INSTRUCTIONS SHOWS SELF-SEALING CONVENTIONAL LAP JOINTS. TAPE ON ALL BUTT JOINTS. USE PVC REINFORCED COVERS FOR ALL FITTINGS AND VALVES.

LP GAS TANK AND PIPING
FINISH AND INSTALL 800 GALLON UNDERGROUND LP GAS TANK. THE LP GAS TANK AND PIPING FROM THE TANK TO THE BUILDING INCLUDING THE MAIN REGULATOR GAS SHUT-OFF AND VALVES SHALL BE FINISHED AND GRADE PROTECTED WITH 1/2" THICK CONCRETE. THE UNDERGROUND GAS PIPING EXTENDING TO THE BUILDING SHALL BE UL APPROVED FLASTIC PIPING, APTV DRESS WITH ELECTRIC CORROSION RESISTANT TRACER WIRE MINIMUM 1/4" AWG BUNDLED WITH THE LINE TO FACILITATE IDENTIFICATION. ONE END SHALL BE BROUGHT TO THE SURFACE AND KITTED WITH THE LINE TO FACILITATE IDENTIFICATION. THE OTHER END SHALL BE BROUGHT TO THE SURFACE AND KITTED WITH THE LINE TO FACILITATE IDENTIFICATION. PROVIDE SECOND STAGE REGULATOR 300 VENT MINIMUM CAPACITY SET AT 11" WC. PROVIDE THE FOLLOWING TANK APPURTENANCES FOR THE TANK: DOUBLE CHECK TILLER VALVE, GAUGE ACTIVATED LIQUID LEVEL MITIGATOR EXCESS FLOW VALVE AND ALL OTHER ACCESSORIES REQUIRED BY CODE. INSTALLATION OF TANK AND PIPING SHALL COMPLY WITH NFPA 54 AND NFPA 58 INCLUDING ALL STATE AND LOCAL CODES.



SECTION
NOT TO SCALE

CALL SEPARATOR: RECORDERD
OIL SEPARATOR: RECORDERD
GALLON LIQUID CAPACITY OF OUTLET 2" VENT
22 SQ. INCH GRAVE AREA, ALL WELDED STEEL
CONCRETE ON CONCRETE ANCHOR FLANGE.
5" MINIMUM STEEL GRADE.



NO.	ISSUED FOR	DATE
1	BIDDING	5-24-02
	COST REDUCING CHANGES	7-22-02

LANE ASSOCIATES CONSULTING ENGINEERS, P.C.

HEATING, VENTILATION, & AIR CONDITIONING, PLUMBING, FIRE PROTECTION, & ELECTRICAL

CHARLES F. LANE, P.E.
DANIEL W. DERRIS, P.E.
51 BURLINGTON AVENUE
RUTLAND, VERMONT 05701
TELEPHONE: (802)747-3346
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PLUMBING SCHEDULES, SPECIFICATIONS AND DETAILS

RUTLAND STATE AIRPORT CLARENDON, VERMONT ADDITION TO FIRE/CRASH/ RESCUE BUILDING

AFFR: DWD
DRAWN: BKL/BWM
SCALE: AS NOTED
PROJ NO: 0132-0

P2

ELECTRICAL LEGEND & ABBREVIATIONS

- ① SURFACE MOUNTED FLUORESCENT FIXTURE TYPE AS INDICATED.
- ② RECESSED MOUNTED FLUORESCENT FIXTURE TYPE AS INDICATED.
- ③ SWITCHGEAR, N.E. = UNMOUNTED NIGHT LIGHT, P. = PHOTO CONTROLLER.
- ④ MOUNTED NIGHT LIGHT.
- ⑤ WALL MOUNTED UNANSWERED CONTACT FLUORESCENT OR HID FIXTURE.
- ⑥ REFER TO SCHEDULE AND SPECIFICATIONS TYPE AS INDICATED. SUBSCRIPTS: a = SWITCHGEAR, N.E. = UNMOUNTED NIGHT LIGHT, P. = PHOTO CONTROLLER, M = MOTION SENSOR CONTROLLER.
- ⑦ SINGLE POLE SWITCH, MH = 4'-0" UON.
- ⑧ DOUBLE POLE SWITCH, MH = 2'-0" UON, XX' = MOUNTING HEIGHT XX'.
- ⑨ DUPLEX RECEPTACLE WITH 3 MA GFCI, MH = 2'-0" UON, XX' = MOUNTING HEIGHT XX'.
- ⑩ MOTION DETECTOR SENSOR.
- ⑪ BRANCH CIRCUIT MINUS.
- ⑫ HOSE RUN TO PANEL BOARD AND CIRCUIT BREAKER INDICATED.
- ⑬ PANEL BOARD WITH DESIGNATION 120/240 VOLTS, REFER TO SCHEDULE, MH = 6'-0" TO TOP.
- ⑭ UTILITY METER, MH = 5'-0".
- ⑮ CONTROL TRANSFORMER (20/240) PROVIDED BY M.C.
- ⑯ MOTOR WITH HOSEPOWER DESIGNATED, F = FRACTIONAL HORSEPOWER, LESS THAN 1/8 HP.
- ⑰ PRE-WIRED CONTROL PACKAGE FINISHED WITH EQUIPMENT.
- ⑱ TOSSEL TYPE MOTOR DISCONNECT SWITCH, HP RATED, MH = 4'-6" UON ON EQUIPMENT.
- ⑳ BURNER EMERGENCY SWITCH, REFER TO SPECIFICATIONS, MH = 4'-6" UON PROVIDED WITH RED EMERGENCY FACE PLATE.
- ㉑ EXHAUST FAN - FRACTIONAL HP.
- ㉒ UNIT HEATER PROVIDED BY MECH. CONTR. MOUNTED BY ELECT. CONTR. 60W GAS FIRED UNIT HEATER.
- ㉓ FIRE-MANUAL SWITCH CEILING MOUNTED.
- ㉔ DISCONNECT SWITCH, MH = 6' - 0" OR ON EQUIPMENT, 60/40 = FRACTIONAL SIZE N = NOT FIRED.
- ㉕ MOTORIZED DAMPER PROVIDED BY MECH. CONTR. MOUNTED BY ELECT. CONTR. SIZE N = NOT FIRED.
- ㉖ TELEPHONE OUTLET, MH = 2'-0" UON, SUBSCRIPT: M = WALL MOUNTED AT 5'-0".
- ㉗ EXISTING USED WHEN DAMPER SYMBOLS ARE NOT CLEAR.
- ㉘ EXISTING LIGHT FIXTURES ARE TYPE E.
- ㉙ EXISTING AND RELOCATED DEVICE.
- ㉚ MOUNTING HEIGHT TO CENTER OF OUTLET ABOVE FINISHED FLOOR OR GRADE.
- ㉛ UNLESS OTHERWISE NOTED.
- ㉜ MEANTHROOM, NEMA 3R MINIMUM.
- ㉝ TYPICAL.
- ㉞ UNDERGROUND ELECTRIC SERVICE.
- ㉟ UNDERGROUND TELEPHONE.
- ㊱ USE — UNDERGROUND ELECTRIC BRANCH CIRCUIT.
- ㊲ TELEPHONE NETWORK DEPARCATION POINT.
- ㊳ TELEPHONE GARDSS CONNECT BLOCK.
- ㊴ SEWAGE PUMP CONTROL PANEL - SUPPLIED BY MECHANICAL CONTRACTOR.

NOTE: ALL SYMBOLS DRAWN DASHED INDICATES EXISTING FIXTURES, DEVICES, OUTLETS OR MINORS.

PANEL SCHEDULE

PANEL	LP	MANUF.	TYPE	SIZE	BRANCHES	TITLE	MOUNTING	VOLTS	PHASE	WIRE	GROUND	DOOR	LOCK
20	POLES												
2000	A.I.C.												

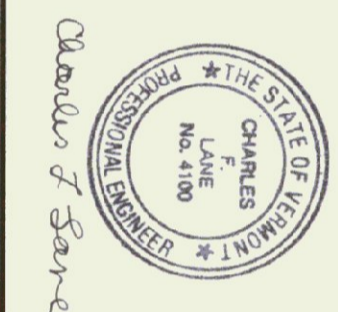
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	Pole	Amp.	Rt.			Kv.	Hp.
1	1	20	1		EXISTING	EXIST.	EXIST.
2,2A	1	20	1		EXISTING	EXIST.	EXIST.
9	1	20	1		EXIST.	EXIST.	EXIST.
4,4A	1	20	1		EXISTING	EXIST.	EXIST.
5,17	2	50	1	45	EXISTING DOOR NOT WATER HEATER	EXIST.	EXIST.
4,10	2	30	1	2	EXISTING GARDSS TYPE SPARE	EXIST.	EXIST.
11	1	20	1	2 0 1/8	U-2 AND U-3 RECEPTACLES	EXIST.	EXIST.
14	1	20	1	0 1/4	OVERHEAD DOOR #6	EXIST.	EXIST.
16	1	20	1	1 1/4	OVERHEAD DOOR #4	EXIST.	EXIST.
17	1	20	1	1 1/4	OVERHEAD LIGHTS	EXIST.	EXIST.
18	1	20	1	1/4	B-F-1	EXIST.	EXIST.
19,20	1	20	1	1/4	B-F-2	EXIST.	EXIST.
4,20	1	20	1		SPACES	EXIST.	EXIST.

- ① EXISTING TANDEN CIRCUIT BREAKER.
- ② REMOVE 30A-2P BREAKER AND INSTALL 200A-1P BREAKERS
- ③ PROVIDE NEW BREAKER IN EXISTING SPACE
- ④ CONNECT TO EXISTING CIRCUIT BREAKER

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	STYLE	CATALOG #	FINISH	DIFFUSER	MOUNTING	LAMPS	REMARKS
A	STONCO	FLOOD	LF50-70MA-PR-PR50A	DR BRONZE	-	SURFACE	1 @ 70 MH	
B	LITHONIA	INDUSTRIAL	DM6-9-32-AR-120-AL	WHITE	GASKETED	SUSPENDED	3 @ 32 (T8)	
E	EXISTING FIXTURES	-	-	-	-	-	-	

REMARKS:
 1. PROVIDE INTERVAL PHOTOCELL SCHEDULE BELOW.
 2. MOUNT FIXTURES ON CONCRETE FLOOR ROOF CENTERED BETWEEN PRE-CAST TEES.
 3. MOUNT FIXTURES 8' AWAY FROM WALL WITH BOTTOM OF BEAMS.



Charles F. Lane

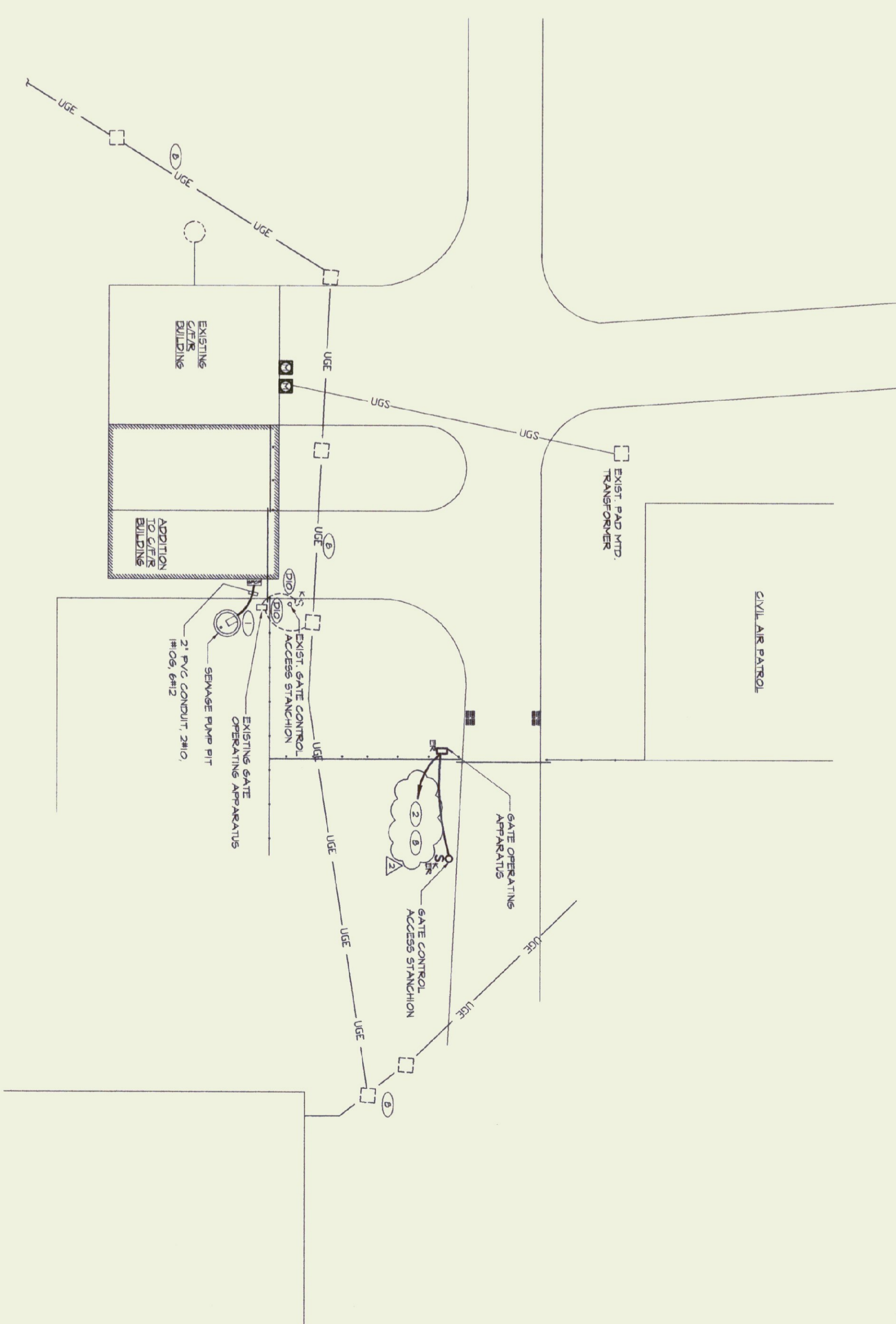
NO.	ISSUED FOR	DATE
1	COST REDUCING CHANGES	7-22-02
	BIDDING	5-24-02

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 FAX/MOBILE: (802) 747-3356

SITE PLAN ELECTRICAL
 RUTLAND STATE AIRPORT
 CLARENDON, VERMONT
 ADDITION TO FIRE/CRASH/RESCUE BUILDING

APPR. _____ CHL. _____ DRAWN: _____ P.E. _____ SCALE: AS NOTED PROJ. NO. 0132-01

SITE PLAN-ELECTRICAL
 SCALE: 1"=20'-0"



ELECTRICAL GENERAL SPECIFICATIONS

GENERAL REQUIREMENTS

THE GENERAL CONDITIONS OF THE CONTRACT ARE HEREBY MADE A PART OF THIS SPECIFICATION. CONTRACTOR SHALL PROVIDE ALL ITEMS, ARTICLES, MATERIALS OR METHODS LISTED, MENTIONED OR SCHEDULED, INCLUDING ALL LABOR MATERIALS EQUIPMENT AND INCIDENTS NECESSARY AND REQUIRED FOR THE COMPLETION OF THE PROJECT.

DRAWINGS AND SPECIFICATIONS

CONTRACT DRAWINGS FOR ELECTRICAL WORK ARE IN PART DIAGNOSTIC, INTENDED TO CONVEY SCOPE OF WORK AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT. ELECTRICAL TRACES ON DRAWINGS ARE INTENDED TO SHOW THE GENERAL CONCEPT OF ELECTRICAL CONNECTIONS. DRAWINGS SHALL BE CONSIDERED AS SUPPLEMENTARY TO THE GENERAL SPECIFICATIONS. ANY SPACES IN WHICH THEIR WORK WILL BE INSTALLED BY MEASUREMENTS ON THE JOB. DO NOT SCALE DRAWINGS.

EACH CONTRACTOR OR HIS REPRESENTATIVE SHALL VISIT THE SITE AND MAKE AN ESTIMATE OF THE WORK TO BE DONE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURACY OF HIS WORK BECAUSE OF DISCREPANCIES IN SUCH ESTIMATES.

SCOPE OF WORK

PROVIDE ALL LABOR MATERIAL EQUIPMENT AND INCIDENTS FOR COMPLETE AND FULLY OPERATING ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE GENERAL SPECIFICATIONS AND THE DRAWINGS. LIMITED TO REPAIRS, LIGHTING, POWER OUTLETS, BRANCH CIRCUITS AND DISCONNECTING MEANS, SAVE AND MAINTAIN ALL WORK NOT DESIGNATED TO BE REMOVED OR RELOCATED.

PERSONNEL

ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER IN PERFECT OPERATING ORDER TO THE SATISFACTION OF THE OWNER. REPAIR OR REPLACE ALL WORK SELECTED BY THE ENGINEER AT NO ADDITIONAL COST. ALL WORK SHALL BE IN ACCORDANCE WITH THE NEC.

MATERIAL AND SUBSTITUTIONS

EXCEPT WHERE INDICATED OTHERWISE, ALL MATERIALS SHALL BE NEW AND CONFORM TO STANDARDS ESTABLISHED IN PLANS AND SPECIFICATIONS. REFER TO ENGINEER'S GENERAL CONDITIONS FOR SUBSTITUTIONS AND SHOP DRAWING REQUIREMENTS.

EQUIPMENT MATERIALS OR ITEMS OF OTHER MANUFACTURERS OF EQUIVALENT DESIGN QUALITY AND PERFORMANCE SHALL BE ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING WORK.

IDENTIFY MATERIALS AND EQUIPMENT WHERE RELOCATED OR PROPOSED BY CONTRACTOR SHALL BE IDENTIFIED AND SHOWN ON DRAWINGS. IDENTIFY MATERIALS AND EQUIPMENT WHERE RELOCATED OR PROPOSED BY CONTRACTOR SHALL BE IDENTIFIED AND SHOWN ON DRAWINGS. IDENTIFY MATERIALS AND EQUIPMENT WHERE RELOCATED OR PROPOSED BY CONTRACTOR SHALL BE IDENTIFIED AND SHOWN ON DRAWINGS.

MATERIALS AND EQUIPMENT NOT APPROVED SHALL NOT BE USED IN CONSTRUCTION.

ALL EQUIPMENT SHALL BE UL LISTED AND LABELED. MEMBER/UL STANDARDS HAVE BEEN DEVELOPED AND APPLIED FOR SAID EQUIPMENT.

WORK AND MATERIALS PROVIDED BY OTHER TRADES

RELOCATION OF EXIST OPERATOR AND CONTROL STATION, SPARE RAMP STATION AND CONTROLS, NEW LIGHTING AND SIGNAL FANS, VENTILATED DAMPERS, TEMPERATURE CONTROL DEVICES AND LOW VOLTAGE (24VAC) WIRING. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER AND CONTROL WIRING AT 20VAC AND ABOVE.

CLEANING

EACH CONTRACTOR SHALL CLEAN AWAY ALL DEBRIS SURPLUS MATERIALS, ETC. RESULTING FROM HIS WORK OR OPERATION, LEAVING THE JOB AND EQUIPMENT FINISHED IN A CLEAN, FIRST-CLASS CONDITION.

GUARANTEE SERVICE AND REPLACEMENT

EXCEPT AS A LONGER PERIOD MAY BE PROVIDED IN THIS SPECIFICATION, THIS CONTRACTOR SHALL GUARANTEE THE WORK TO THE FULL EXTENT OF THE PROVISIONS OF THE DRAWINGS, THIS SPECIFICATION AND THE GENERAL CONDITIONS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE ENGINEER AS EVIDENCED BY THE ENGINEER'S FINAL CERTIFICATE.

THIS CONTRACTOR SHALL SERVICE ALL INSTALLED EQUIPMENT FREE OF CHARGE DURING THE GUARANTEE PERIOD.

ANY APPARATUS OR EQUIPMENT THAT REQUIRES EXCESSIVE SERVICE DURING THE GUARANTEE PERIOD SHALL BE CONSIDERED DEFECTIVE AND SHALL BE REPLACED BY THIS CONTRACTOR WITHOUT ADDITIONAL COST TO OWNER.

CODES, RULES AND REGULATIONS

CONFORM WITH THE LATEST EDITION OF ALL APPLICABLE CODES, RULES, LAWS, ORDINANCES AND REGULATIONS, INCLUDING BUT NOT LIMITED TO STATE AND LOCAL LAWS AND ORDINANCES, AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), BOCA, BASIC BUILDING CODE AND APPLICABLE INSULATED WIRE RULES (IWR) AND THE NATIONAL ELECTRICAL CODE (NEC). THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE ENGINEER, (IEEE) NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), UNDERWRITERS LABORATORIES (UL), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) AND NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).

OBTAIN AND PAY FOR STATE OF VERMONT CERTIFICATE OF INSPECTION AND APPROVAL.

SUBMITTALS

PROVIDE SUBMITTAL DATA AND/OR SHOP DRAWING IN ACCORDANCE WITH THE GENERAL PROVISIONS FOR EACH OF THE FOLLOWING: CIRCUIT BREAKERS, LIGHTING FIXTURES, LAMPS AND BALLASTS, WIRING DEVICES, SURFACE RACKWAY, AND MOTION SENSORS.

GENERAL MATERIALS

GENERAL MATERIALS SHALL BE THE MANUFACTURER AND MODEL NUMBER INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN, OR EQUAL.

CONDUIT TYPES

CONDUITORS SHALL BE COPPER, 600 VOLT INSULATION SOLID THROUGH 1/2 AND 3/4, STRANDED ABOVE INSULATION TYPES XHHN OR XHHW-2 - 75 DEGREE CELSIUS DAMP OR WET LOCATIONS.

ALL CONDUITORS SHALL BE COLOR-CODED AS FOLLOWS: PHASE A - BLACK, PHASE B - RED, NEUTRAL - WHITE AND EARTH - GREEN OR BROWN.

BACKSPLAT

CONDUIT SHALL BE PVC SCHEDULE 40, LIQUID TIGHT, THREADED METAL END, INTERGRATE METAL OR GALVANIZED RIBBED STEEL, EQUAL TO CARLON JONES AND LARSEN, MANACONDA OR ALLED TYPE.

CONNECTIONS

AT EACH SPlice TAP OR TERMINATION PROVIDE A COMPLETE ASSEMBLY OF LUGS, TERMINATORS, CONNECTORS AND INSULATION AS REQUIRED. USE PRESERVE TYPE CONNECTORS AND SET SCREW LUGS FOR COPPER CONNECTIONS.

CONNECTORS AND TERMINATIONS AS MANUFACTURED BY BUNROY, S.M., LECO OR EQUAL.

BOXES AND FITTINGS

PROVIDE OUTLET, PULL AND JUNCTION BOXES AS REQUIRED FOR EACH APPLICATION. BOXES SHALL BE MINIMUM 1/2" DEEP. INTERIOR BOXES SHALL BE STANDARD STAMPED STEEL. EXTERIOR BOXES SHALL BE CAST IRON WITH GASKETED WEATHERPROOF COVERS WITH SPRING LOADED DEVICE LIDS EQUAL TO GERRILL OR BELL.

CIRCUIT BREAKERS

PROVIDE THERMAL-MAGNETIC TRIP CIRCUIT BREAKERS AS REQUIRED TO FIT EXISTING SQUARE D RELOCATED BREAKERS SHALL HAVE A MINIMUM RATING OF 10000 A.I.C. UNLESS OTHERWISE INDICATED. BREAKERS SHALL BE 20A - 1P.

WIRING DEVICES

ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, NEMA STANDARD CONFIGURATION. ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, NEMA STANDARD CONFIGURATION. ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, NEMA STANDARD CONFIGURATION. ALL WIRING DEVICES SHALL BE COMMERCIAL SPECIFICATION GRADE, NEMA STANDARD CONFIGURATION.

PROVIDE HANGERS, STRAPS, STRAPS, ETC. BY THOMAS AND BETTS OR EQUAL. WIRE CHAIN OR PERFORATED STRAP SHALL NOT BE USED FOR SUPPORTING DEVICES. ACROSTICAL CEILING TIE WRES SHALL NOT BE USED TO SUPPORT CABLES.

LIGHTING SYMBOLS AND DIMENSIONS

PROVIDE LIGHTING FIXTURES AS SCHEDULED ON THE DRAWINGS COMPLETE WITH HOUSINGS, DIFFUSERS, TRIMS, LAMPS, BALLASTS AND ACCESSORIES NECESSARY FOR COMPLETE INSTALLATION.

PROVIDE LAMPS AS FOLLOWS:

FLUORESCENT, T8, 32 MAINT, and 3500 DEE K COLOR TEMP. INCANDESCENT, A, SINGLE LONG LIFE OR 150 VOLT RATED.

FLUORESCENT BALLASTS, PROVIDE ELECTRONIC BALLASTS WITH L85% THAN 15% TOTAL HARMONIC DISTORTION AT MAXIMUM LAMP-BALLAST RATING. CREST FACTOR MAINTAINED BELOW 1.7 AND BALLAST FACTOR GREATER THAN 75. BALLASTS SHALL BE UL LISTED AND CBM CERTIFIED. SOLID RATED A AND POWER FACTOR EXCEEDING 90% WHEN OPERATING AT 20 HZ OR HIGHER OUTPUT FREQUENCY. PROVIDE MOTION SENSOR EQUAL TO STONKO HO-301.

EQUIPMENT INSTALLATION

INSTALL ALL EQUIPMENT AT THE LOCATIONS INDICATED IN ACCORDANCE WITH NEC, U.L. AND BOCA REQUIREMENTS.

WIRING METHODS

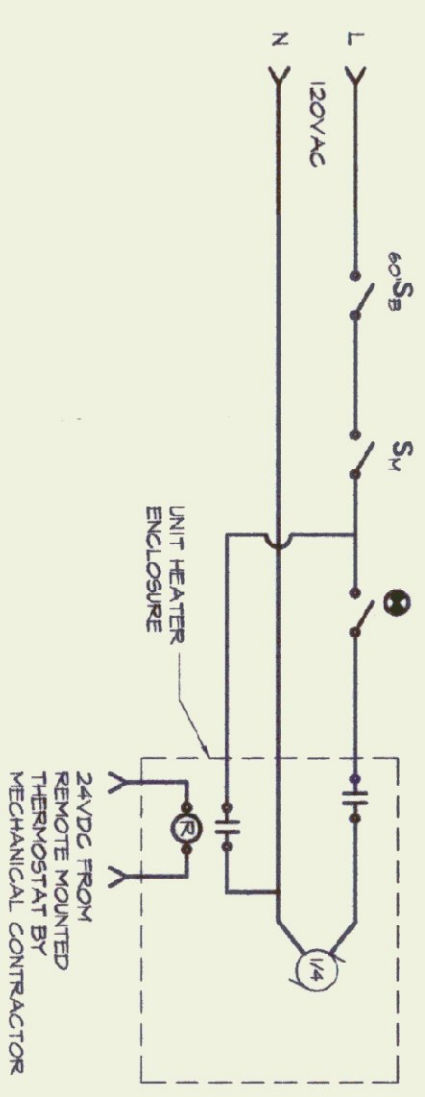
ALL WIRING SHALL BE INSTALLED IN CONDUIT. USE EXIT FOR INTERIOR DRY LOCATIONS, RIGID OR INTERMEDIATE STEEL FOR SERVICE RAMP PIT AND PVC FOR OTHER UNDERGROUND WORK. USE FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO MOTORS, LIQUID TIGHT FOR OUTDOOR USE.

TESTING AND CLEANING

TEST ALL SYSTEMS IN THE PRESENCE OF THE ENGINEER AND DEMONSTRATE FREEDOM FROM SHORTS AND GROUNDING AND PROPER OPERATION OF ALL SWITCHES AND CONTROLS. CORRECT ANY DEFECTS NOTED DURING TESTING AND RE-TEST UNTIL PROPER OPERATION IS OBTAINED. AFTER TESTING, CLEAN ALL SYSTEMS AND REMOVE ALL DEBRIS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND LIBERATE ALL WORKMANS AS REQUIRED AND REPLACE ANY LAMPS THAT ARE NOT CORRECT DIM.

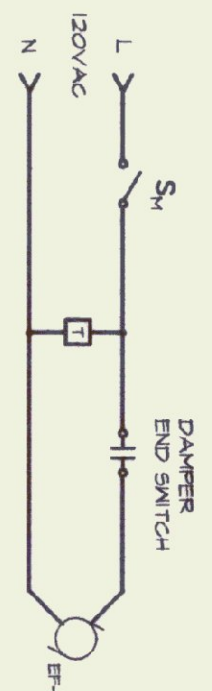
COLOR-CODED Wires

CIRCUITS ON OPPOSITE PHASES SHALL NOT BE COMBINED WITH COMMON NEUTRALS EXCEPT WHERE MULTI-PHASE CIRCUIT DIAGRAMS ARE USED.



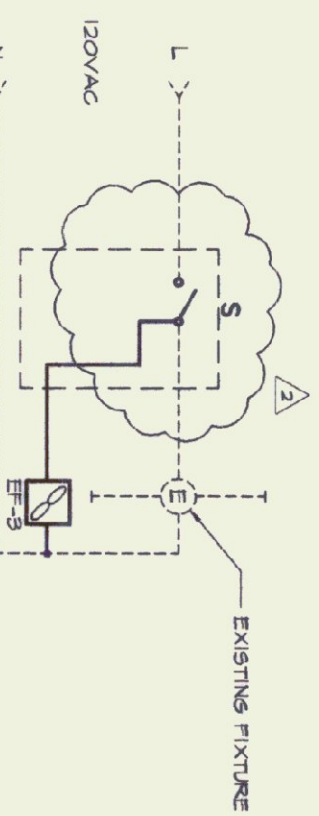
UNIT HEATER (UH-2) WIRING DIAGRAM

NOTE:
1. BONDING CONDUCTOR NOT SHOWN
2. SIMILAR FOR UHS



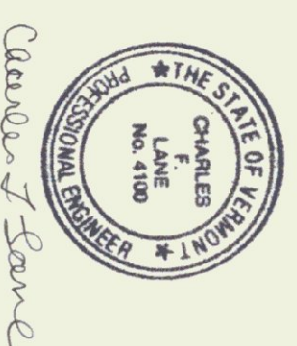
EXHAUST FAN DETAIL (EF-1)

NOTE:
1. BONDING CONDUCTOR NOT SHOWN
2. DAMPER END SWITCH PROVIDED BY V.C.
3. EF-2 SIMILAR



EXHAUST FAN DETAIL (EF-2)

NOTE:
1. BONDING CONDUCTOR NOT SHOWN
2. NOT USED
3. NOT USED



Charles F. Lane

NO.	ISSUED FOR	DATE
1	COST REDUCING CHANGES BIDDING	1-22-02 5-24-02



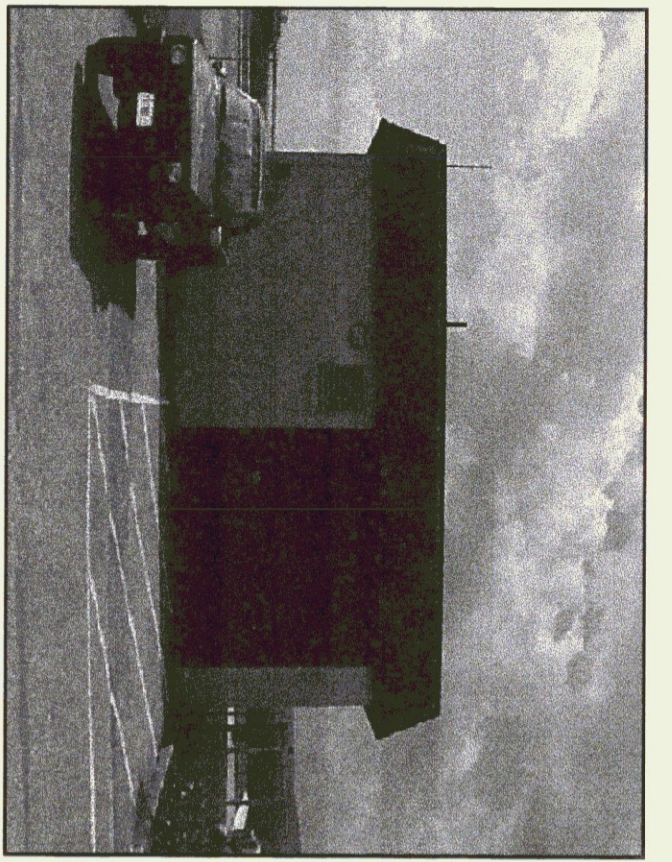
HEATING, VENTILATION, & AIR CONDITIONING,
PLUMBING, FIRE PROTECTION, & ELECTRICAL

CHARLES F. LANE, P.E.
DANIEL W. DUPRES, P.E.

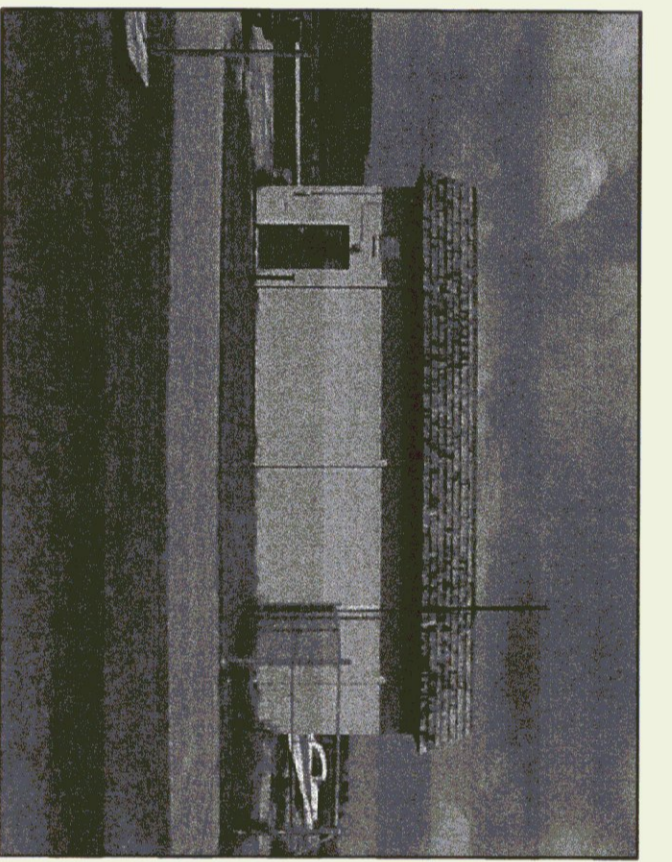
51 KILINGTON AVENUE,
RUTLAND, VERMONT 05701
TELEPHONE: (802) 747-3346
FAX/ANSWER: (802) 747-3359

ELECTRICAL SPECIFICATIONS AND DETAILS

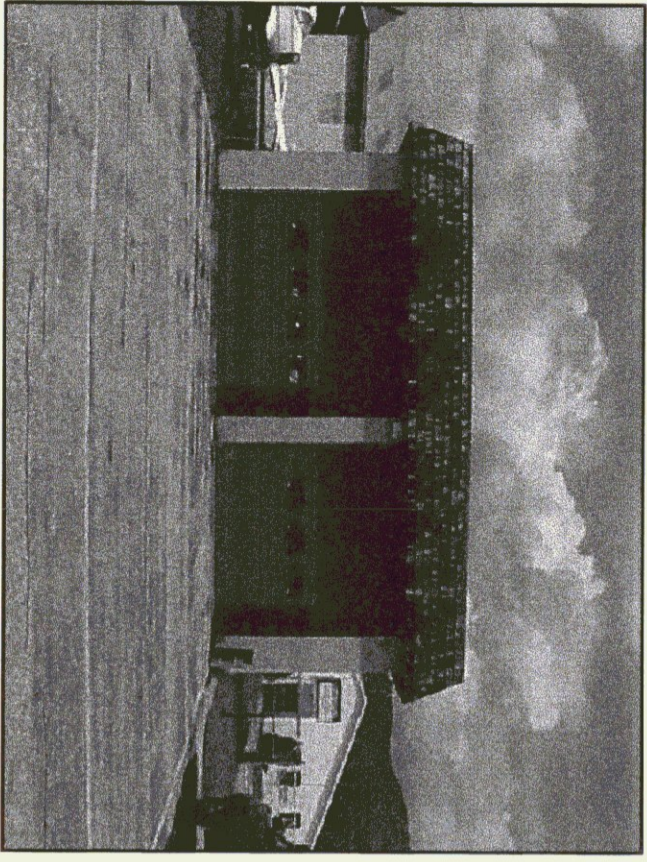
RUTLAND STATE AIRPORT
CLARENDON, VERMONT
ADDITION TO FIRE/CRASH/
RESCUE BUILDING



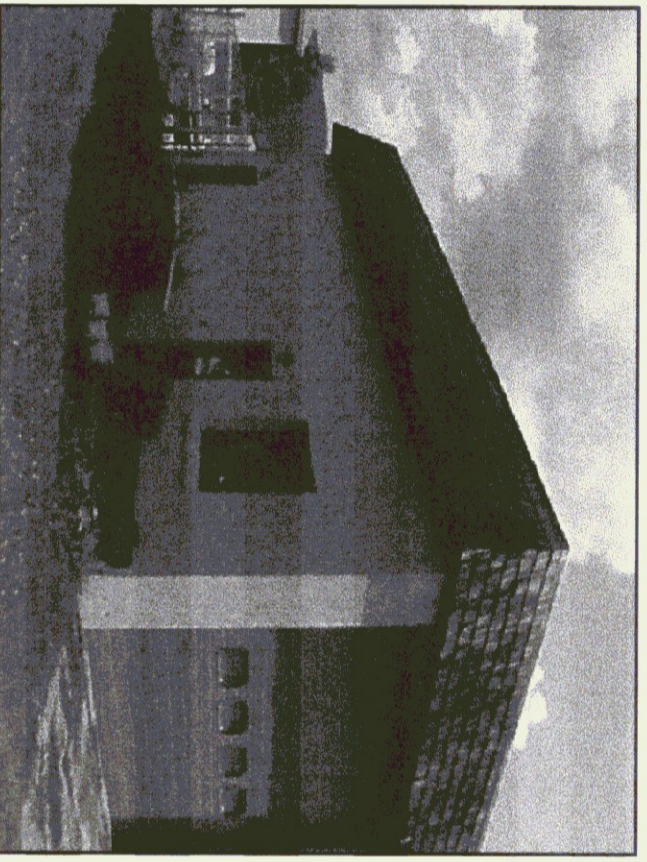
NORTH ELEVATION



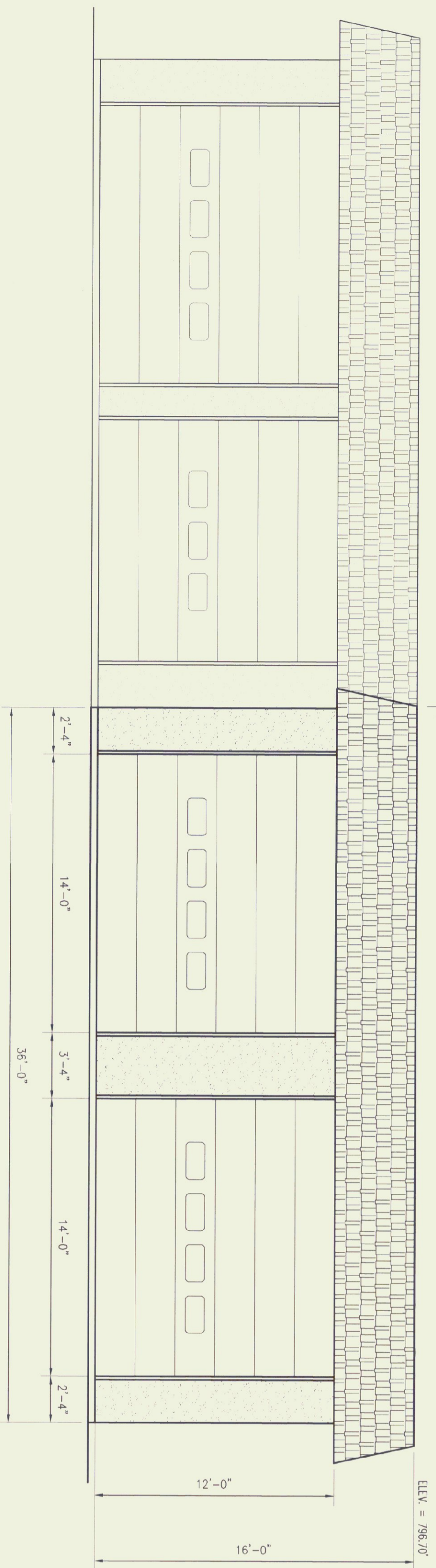
EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION



PROPOSED SOUTH ELEVATION

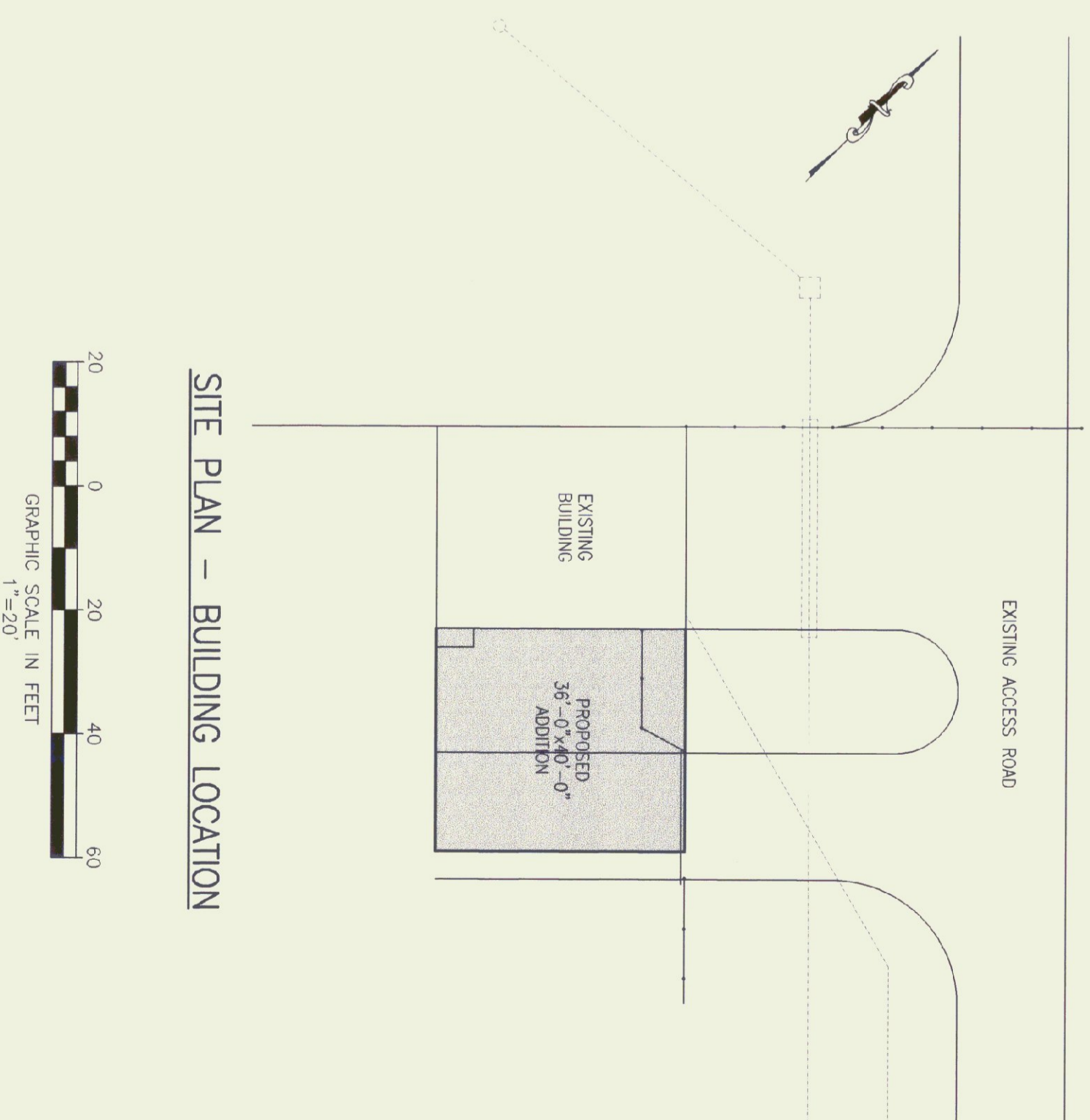
SCALE: 1/4"=1'-0"

NOTES:

1. FINISH GRADE TO BE WITHIN 6" OF TOP OF FOUNDATION.
2. FINAL GRADE SHALL BE SUCH THAT DRAINAGE IS AWAY FROM THE BUILDING.
3. TWO COATS OF PAINT ON NEW DOORS.
4. EXTERIOR CONCRETE BLOCKS SHALL BE COVERED WITH 3" DRYPIT INSULATION.
5. REPAIR ALL EXISTING STUCCO AND REPLACE ALL CEDAR SHINGLES.

NOTE:
ONE OF THE NEW OVERHEAD DOORS TO HAVE PASS/PEDESTRIAN DOOR INCLUDED.

SITE PLAN -- BUILDING LOCATION



GRAPHIC SCALE IN FEET
1"=20'

