PUMPS

TAG	TYPE	ELECTRICAL		SPECIFICATION
SE 1-2	SEWAGE EJECTOR	½ HP (EACH)	230 1ø	COMPLETE DUPLEX SEWAGE EJECTOR SYSTEM BY ZOLLER INCLUDING: TWO # 282-0003 PUMPS. TWO # 39-009X RAIL DISCONNECT SYSTEM. ONE # 10-1043 DUPLEX CONTROL PANEL WITH ALARM. TWO # 30-0152 CHECK VALVES. ONE # 10-0438 FLOAT SWITCH BRACKET & CABLE. TWO # 39-0032 LIFTING ASSEMBLY & CABLE. TWO # 016803 LIFTING & HDWE BRACKET.

SPECIFICATIONS

PLUMBING

PART 1 -- GENERAL

1.1 WORK
A. Provide and install plumbing as show on the Drawings and as specified herein. The Work shown on Drawings is diagrammatic. Vary piping as required to avoid structure and other interferences as approved by the Architect.
B. Plumbing includes: Sewage ejector system, including the concrete sump basin with traffic rated air tight cover.

1.2 QUALITY STANDARDS
A. Provide experienced, well-trained workers competent to complete the work as specified.
B. Unless approved by the Architect, provide related products and accessories from one manufacturer.
C. All work shall comply with manufacturer's instructions and governing building and safety codes.

1.3 SUBMITTALS
A. Submit the following after receiving the Notice to Proceed.
Submit list of materials to be provided for this work.
Submit manufacturer's specifications required to prove compliance with these specifications.
Submit manufacturer's installation instructions.
Submit Shop Drawings as required with complete details and assembly instructions.
At the close of this work, provide copies of manufacturer's installation, maintenance, and warranty information.

1.4 MATERIALS HANDLING
A. Provide all materials required to complete the work as shown on Drawings and specified herein. Deliver, store, and transport materials to avoid damage to the product or to any other work. Reject and return any products or materials delivered in a damaged or unsatisfactory condition. Materials and products delivered will be certified by the manufacturer to be as specified.
B. Store materials indoors, protected from dirt, moisture, contaminants, and weather.

1.5 PRECONSTRUCTION AND PREPARATION
A. Examine and verify that job conditions are satisfactory for speedy and acceptable work. Maintain and use up-to-date trade standards and manufacturer's instructions.
B. Verify site conditions and points of connection. Confirm there are no conflicts between this work and work of other trades. All work shall be in accordance to local and State Codes. Confirm that work of other trades that must precede this work has been completed. Meet all requirements to secure warranty.
C. Notify Architect when work is scheduled to be installed. Use agreed schedule for installation and for field observation by Architect.

PART 2 -- MATERIALS

2.1 GRAVITY SANITARY SEWER
A. Gravity sanitary sewer piping shall be ABS Pipe: ASTM D2661 or ASTM D2751, with ABS ASTM D2662 fittings, and ASTM D2235 solvent welded joints.

2.2 FORCED SANITARY SEWER
A. Forced sanitary sewer piping shall be Schedule 80 PVC, ASTM D2665 or ASTM D 3034 with PVC fittings and ASTM D2855 solvent weld with ASTM D2564 solvent cement joints.

2.3 LIFT STATION
A. As specified on Drawings. Install in accordance with manufacturer's instructions and recommendations.

PART 3 -- CONSTRUCTION AND INSTALLATION

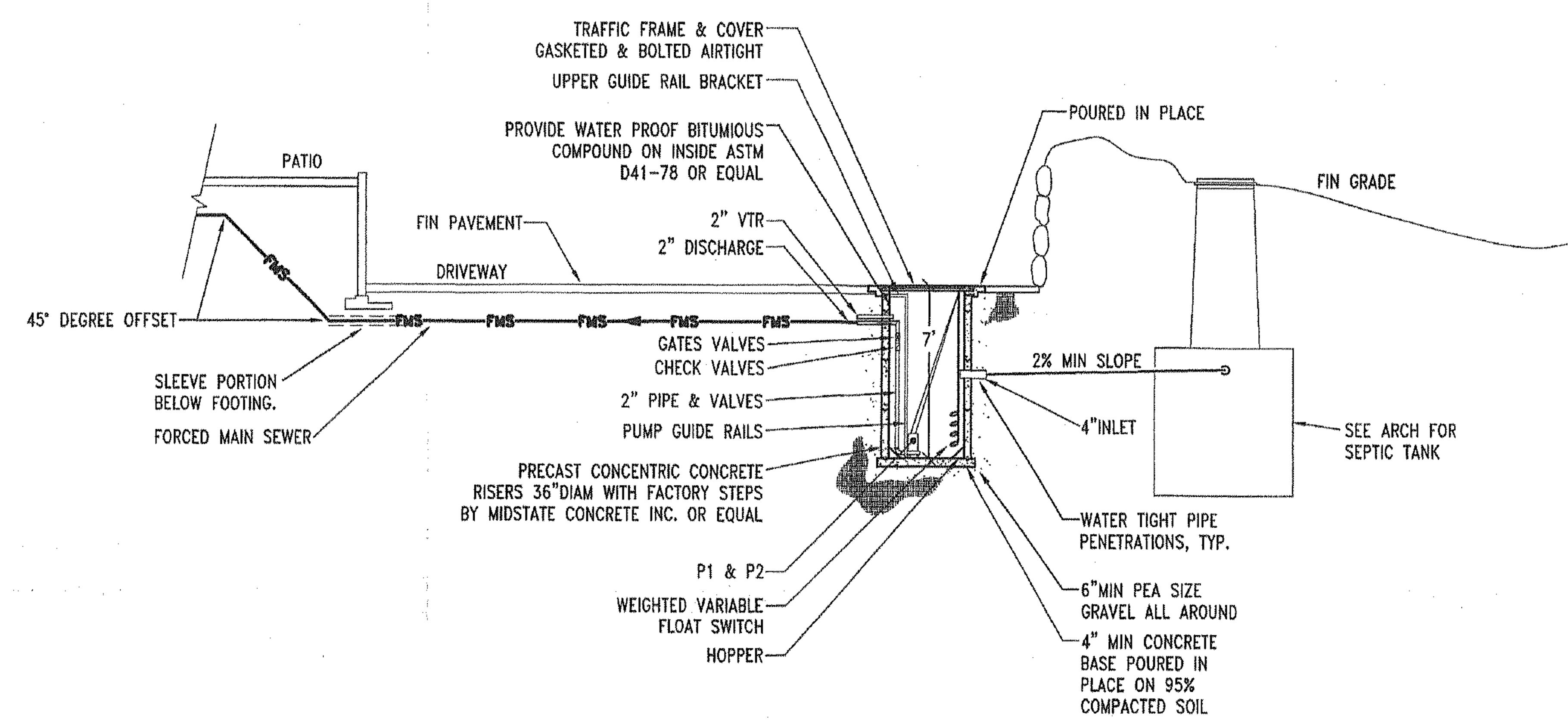
3.1 WORK CONDITIONS
A. Correct any conditions not in compliance with Section 1.5.A. noted above.
B. All work conditions shall be as per manufacturer's instructions, trade association standards, and governing building and safety codes.

3.2 PREPARATION
A. Vents and related support construction for equipment must be as required by the building department.

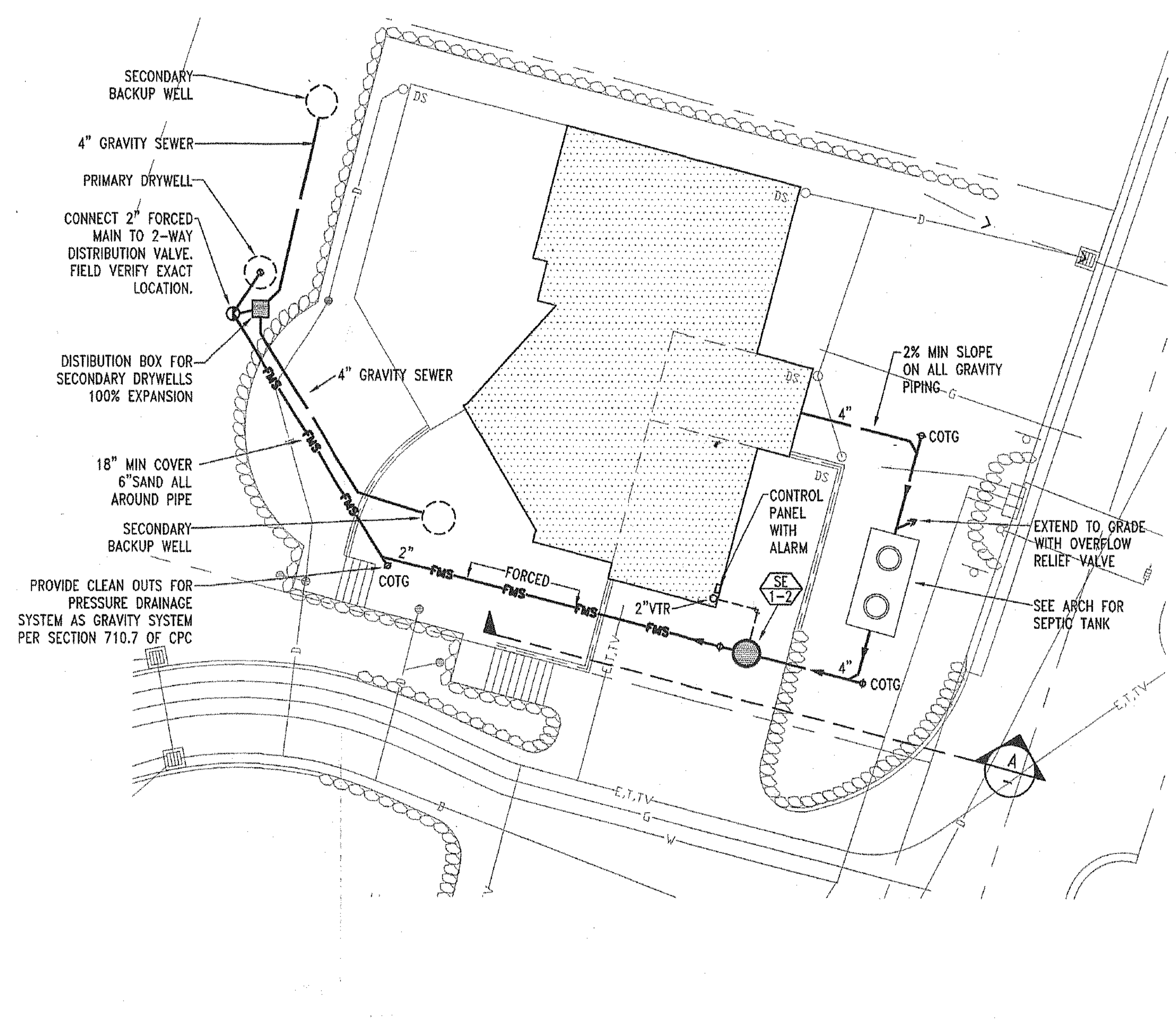
3.3 INSTALLATION
A. Install products as per Drawings and these Specifications.
B. Provide all necessary sawcutting, excavation, shoring, backfilling and compaction required for the proper installation of the Work of this Section. Lay underground lines on undisturbed soil where possible. Place 6" of clean cohesionless sand all around pipes. After underground piping has been tested and accepted, backfill with the excavated material or acceptable imported soil. Backfill material shall be free of clods or stone larger than 2" in dimension. Install backfill material in thin layers (less than ten inches uncompacted thickness), brought to near the optimum moisture content and compacted to a minimum of 95% of the maximum density obtainable by ASTM Test Method D1557, unless higher density is specified in Division 1 "Earthwork" Section. If it becomes necessary to import materials from offsite to complete site grading, imported soils should consist of essentially granular, silty sands with low expansion potential and free of grasses, weeds, debris, rocks larger than 3 inches in maximum dimension, and soluble sulfates in excess of 200 parts per million. Sawcut existing surface to facilitate new piping. Locate existing underground Work prior to marking cut lines. Do not allow cut path to disturb existing Work without prior review from the Architect. Segregate and dispose of demolished concrete or asphalt concrete. Evaluate excavated soil for re-use in same location. Dispose of soil if it is not in compliance with the Contract Documents or not acceptable to Soils Engineer. Carefully excavate trench to prevent damage to existing Work. Restore existing Work found damaged to its intended condition. Comply with requirements for excavation, backfill and compaction specified in Division 2 "Earthwork" Section.
C. Install piping to allow for expansion and contraction without stressing pipe, joints, or connections to equipment.
D. Collect vents to minimize roof penetrations and maintain the integrity of the roof assembly.
E. Provide for maintenance of this work for one year following final approval by governing agencies. Maintenance includes all work required in manufacturer's instructions such as inspection, adjustment, repair and replacement of parts as required.
F. Identify all piping with the words "GRAVITY SEWER" and "FORCED SEWER" every six feet.
G. Sleeve pipes passing through and below concrete.
H. Install valves to shut off and isolate equipment.
I. Maintain minimum one quarter of an inch per foot slope on all gravity drainage piping.
J. Install cleanouts and backflow preventors in accordance to local and State codes.
K. Test all new piping systems as specified. Install shut-off valves to isolate existing systems that do not require testing. Existing systems that have been connected to by new systems shall be tested to the extent of the closest new connection. Tests must be performed and systems approved prior to painting, covering, or concealing piping. Provide all test equipment, instrumentation and labor in conjunction with tests. Prior to test, protect or remove all devices, and other items which are not designed to stand pressures used in test. Accomplish testing of piping in sections so as not to leave any portion of pipe or joints untested. Obtain prior approval for test procedures. Responsibility for Damages: Bear costs of repair and restoration of Work of other trades damaged by tests or cutting done in connection with tests. Forced sewer and storm drain: Test all portions of pressure sewer systems at hydrostatic pressure of not less than 120 psig, with 5 psig permissible drop at end of four hours. Gravity Drainage Systems: Fill entire waste and vent system with water to level of highest vent stack. System shall hold water for two hours.
L. Upon completion, secure all required pressure tests, inspections, and approvals of the completed system. Make all required adjustments and corrections at no added cost to the Owner.

3.4 REPAIR AND CLEANUP
A. After installation, inspect all work for improper installation or damage.
B. Operating pump system must perform smoothly. Repair or replace any defective work. Repair work will be undetectable. Redo repairs if work is still defective, as directed by the Architect or governing safety regulatory agency.
C. Clean the work area and remove all scrap and excess materials from the site.

END OF SECTION



DUPLEX PUMP LIFT STATION SECTION (A) NTS



PARTIAL PLUMBING SITE PLAN 1" = 10'

ABBREVIATIONS

A	COMPRESSED AIR	MTL	METAL
AFF	ABOVE FINISHED FLOOR	(N)	NEW
AFS	AUTOMATIC FIRE SPRINKLER SYSTEM	N/A	NOT APPLICABLE
AP	ACCESS PANEL	NC	NORMALLY CLOSED
ARCH	ARCHITECTURAL DRAWINGS	NIC	NOT IN CONTRACT
BHP	BRAKE HORSEPOWER	NTS	NOT TO SCALE
BS	BIRD SCREEN	OD	OUTSIDE DIAMETER
BTU	BRITISH THERMAL UNIT	OFD	OVERFLOW DRAIN
CA	COMBUSTION AIR	OFL	OVERFLOW RAINWATER LEADER
CFH	CUBIC FEET PER HOUR	OW	OILY WASTE
CLG	CEILING	P&T	PRESSURE & TEMPERATURE RELIEF
CO	CLEANOUT	PH	PHASE
CONT	CONTINUATION	PLCS	PLACES
COTG	CLEAN OUT TO GRADE	POC	POINT OF CONNECTION
CW	COLD WATER DOMESTIC	PPM	PARTS PER MILLION
D	CONDENSATE OR EQUIPMENT DRAIN	PRESS	PRESSURE
DIA	DIAMETER	PRV	PRESSURE REDUCING VALVE
DN	DOWN	PSI	POUNDS PER SQUARE INCH
DWGS	DRAWINGS	(R)	REMOVE
(E)	EXISTING	RD	ROOF DRAIN
ELEC	ELECTRICAL DRAWINGS	REQD	REQUIRED
ELEV	ELEVATION	RLA	RATED LOAD AMPS
EWH	ELECTRIC WATER HEATER	RPM	REVOLUTIONS PER MINUTE
(F)	FUTURE	RWL	RAIN WATER LEADER
FCO	FLOOR CLEAN OUT	SD	STORM DRAIN OR GROUND WATER
FF	FINISHED FLOOR ELEVATION	SF	SQUARE FEET
FL	FLOW LINE	SMH	SEWER MAN HOLE
FLD	FLOOR DRAIN	SOV	SHUT OFF VALVE
FLR	FLOOR	SP	STATIC PRESSURE
FMS	FORCED MAIN SEWER	SPEC	SPECIFICATIONS
FPM	FEET PER MINUTE	STD	STANDARD
FS	FLOOR SINK	STL	STEEL
FT	FEET	STRUCT	STRUCTURAL DRAWINGS
G	GAS LINE (FUEL GAS)	SW	SOFTENED WATER
GA	GAUGE	TW	TEMPERED WATER
GAL	GALLONS	TYP	TYPICAL
GALV	GALVANIZED	U	URINAL
GC	GENERAL CONTRACTOR	UL	UNDERWRITERS' LABORATORIES, INC.
GI	GALVANIZED IRON	UNO	UNLESS NOTED OTHERWISE
GPM	GALLONS PER MINUTE	UTR	UP THROUGH ROOF
HB	HOSE BIBB	V	SANITARY VENT
HP	HORSEPOWER	VAC	HOUSE VACUUM
HW	HOT WATER DOMESTIC	VB	VACUUM BREAKER
HWR	HOT WATER RETURN DOMESTIC	VR	VANDAL RESISTANT
IW	INDIRECT WASTE	VTR	VENT THROUGH ROOF
KW	KILOWATT	W	SANITARY WASTE
LAV	LAVATORY	W.C.	WATER COLUMN
MBH	THOUSAND BTU PER HOUR	WC	WATER CLOSET
MCA	MINIMUM CIRCUIT AMPACITY	WCO	WALL CLEAN OUT
MFR	MANUFACTURER	WH	WATER HEATER
MH	MANHOLE	WHA	WATER HAMMER ARRESTER
MIN	MINIMUM	WM	WATER METER
MTD	MOUNTED	WT	WEIGHT

SYMBOLS

GRADE CLEAN OUT	STORM DRAIN OR GROUND WATER
PIPE DROP	SANITARY SEWER
PIPE RISER	VENT
POINT OF CONNECTION	FORCED MAIN SEWER

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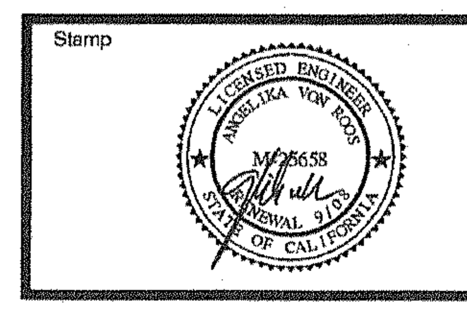
Project Title

ORANGE GROVE NEW HOME
FOR PAUL & CLAUDIA COOK & MARY BURKE
1453 ORANGE GROVE
SANTA BARBARA, CA

Stamp



Revisions

Project#	BCA 701
Project Manager	LLA
Drawn By	NV
Scale	
Date	MAY 1, 2007

Sheet Title
LOT 2
PLUMBING PLAN & SPECIFICATIONS

Sheet
P1.1

11-4-08