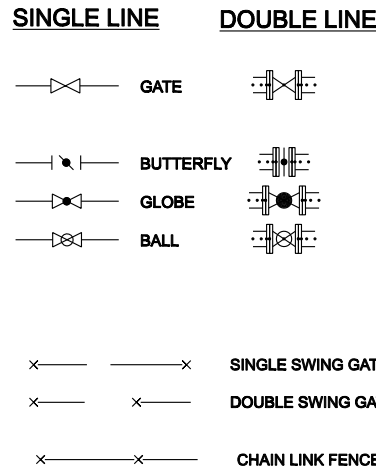


ABBREVIATIONS

ADDL	ADDITIONAL	NO.	NUMBER
ADJ	ADJACENT	NOM	NOMINAL
APPROX	APPROXIMATE	NPT	NATIONAL PIPE THREADS
APVD	APPROVED	NS	NON-SHRINK
AUX	AUXILIARY	NTS	NOT TO SCALE
AVRV	AIR VACUUM RELEASE VALVE	OC	ON CENTER
BF	BLIND FLANGE, BOTTOM FACE	OD	OUTSIDE DIAMETER
BFV	BUTTERFLY VALVE	OPER	OPERATOR
BLDG	BUILDING	PCV	PRESSURE CONTROL VALVE
BOT	BOTTOM	PE	PLAIN END
BV	BALL VALVE, BLOCK VENT	PNL	PANEL
CI	CAST IRON	PP	POWER POLE
CL	CENTERLINE	PRES	PRESSURE
CLDI	CEMENT LINED DUCTILE IRON	PSI	POUNDS PER SQUARE INCH
CLR	CLEAR, CLEARANCE	PVC	POLYVINYL CHLORIDE
CONC	CONCRETE	PVMT	PAVEMENT
CONT	CONTINUOUS	RD	ROAD, ROOF DRAIN
COORD	COORDINATE	RDCR	REDUCER
CTR	CENTER	REF	REFER OR REFERENCE
CY	CUBIC YARD	REQD	REQUIRED
DEG	DEGREE	RPM	REVOLUTIONS PER MINUTE
DET	DETAIL	RT	RIGHT
DI	DUCTILE IRON	R/W	RIGHT OF WAY
DIA	DIAMETER	SLOPE, SOUTH, SWITCH	
DIP	DUCTILE IRON PIPE	SCHED	SCHEDULE
DWG	DRAWING	SECT	SECTION
EL	ELEVATION	SPEC	SPECIFICATIONS
ELEC	ELECTRIC, ELECTRICAL	SPG	SPACING
ENGR	ENGINEER	SQ	SQUARE
EQL	EQUAL	SQ FT	SQUARE FOOT, FEET
EXST	EXISTING	SST	STAINLESS STEEL
FCA	FLANGED COUPLING ADAPTER	ST	STRAIGHT
FLG	FLANGE	STD	STANDARD
FT	FOOT OR FEET	STL	STEEL
G, GND	GROUND	STRUCT	STRUCTURE
GALV	GALVANIZED	TEMP	TEMPORARY
GVL	GRAVEL	THD	THREAD
GW	GROUNDWATER	THK	THICKNESS
HGT	HEIGHT	THRU	THROUGH
HORIZ	HORIZONTAL	TOC	TOP OF CONCRETE
HP	HORSEPOWER	TYP	TYPICAL
ID	INSIDE DIAMETER	VERT	VERTICAL
IN	INCH	W	WEST
LF	LINEAR FEET		
LG	LONG		
LT	LEFT		
MAX	MAXIMUM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MJ	MECHANICAL JOINT		
N	NORTH, NEUTRAL		

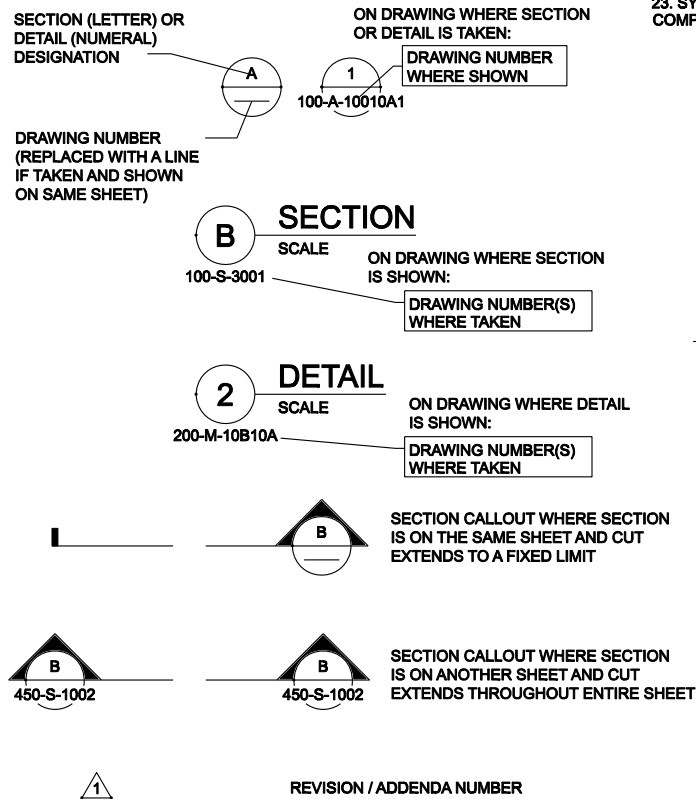
VALVE SYMBOLS



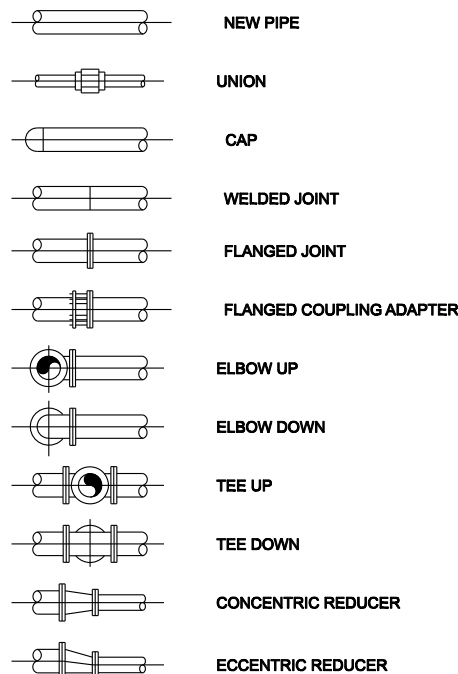
GENERAL CONSTRUCTION NOTES

- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND APPROVALS OF LIKE KIND PRIOR TO START OF CONSTRUCTION.
- EXISTING FENCING THAT IS NOT DESIGNATED FOR REMOVAL SHALL NOT BE DISTURBED. ANY FENCING THAT IS DISTURBED OR ALTERED BY THE CONTRACTOR SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. IF THE CONTRACTOR DESIRES TO REMOVE FENCING TO ACCOMMODATE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL OBTAIN THE OWNER'S WRITTEN PERMISSION BEFORE FENCE IS REMOVED. CONTRACTOR SHALL RESTORE THE FENCE TO ITS ORIGINAL CONDITION AT THE EARLIEST OPPORTUNITY TO THE SATISFACTION OF THE OWNER. WHILE ANY FENCING IS REMOVED, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SECURITY OF THE SITE UNTIL THE FENCE IS RESTORED.
- AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL CLEAN AND PICK UP THE WORK AREA TO THE SATISFACTION OF THE ENGINEER/PROJECT MANAGER. AT NO TIME SHALL THE WORK BE LEFT IN A MANNER THAT COULD ENDANGER THE WORKERS OR THE PUBLIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY OF ALL WORK.
- REFERENCES MADE TO STANDARD SPECIFICATIONS AND STANDARD DRAWINGS REFER TO THE CITY OF LAKE HAVASU, ENGINEERING DIVISION STANDARD DETAILS.
- THE CONTRACTOR SHALL NOT INSTALL ITEMS AS SHOWN ON THESE PLANS WHEN IT IS OBVIOUS THAT FIELD CONDITIONS ARE DIFFERENT THAN SHOWN IN THE PLANS. SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY MANNER. IN THE EVENT THE CONTRACTOR DOES NOT NOTIFY THE ENGINEER IN A TIMELY MANNER, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY AND EXPENSE FOR ANY REVISIONS NECESSARY, INCLUDING ENGINEERING DESIGN FEES.
- EXISTING SITE IMPROVEMENTS WHICH ARE DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION OF THE REPAIRS. REPAIRS SHALL BE ACCEPTED BY THE OWNER PRIOR TO FINAL PAYMENT.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST SEVEN (7) DAYS BEFORE BEGINNING ANY CONSTRUCTION ACTIVITY THAT COULD DAMAGE OR DISPLACE SURVEY MONUMENTS, PROPERTY CORNERS, OR PROJECT BENCHMARKS SO THESE ITEMS MAY BE RELOCATED.
- ANY SURVEY MONUMENTS, PROPERTY CORNERS, OR BENCHMARKS THAT ARE NOT IDENTIFIED FOR RELOCATION ARE THE RESPONSIBILITY OF THE CONTRACTOR TO PRESERVE, PROTECT, RELOCATE OR REPLACE. RELOCATION OR REPLACEMENT OF THESE ITEMS SHALL BE DONE BY THE OWNER'S SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL WORK WITHIN EXISTING RIGHT-OF-WAY, PLANNED RIGHT-OF-WAY, OR PLANNED OPEN SPACE AS INDICATED ON THE PLANS. EQUIPMENT TRAFFIC OUTSIDE THESE LIMITS SHALL NOT BE PERMITTED WITHOUT WRITTEN PERMISSION OF THE OWNER, CONSTRUCTION MANAGER, OR ENGINEER.
- THE CONTRACTOR SHALL LOCATE UTILITIES AT LEAST FIVE WORKING DAYS BEFORE BEGINNING CONSTRUCTION. AFTER THE UTILITIES ARE SPOTTED, THE CONTRACTOR SHALL EXPOSE ALL PERTINENT UTILITIES TO VERIFY THEIR VERTICAL AND HORIZONTAL LOCATION. IF A CONFLICT EXISTS BETWEEN EXISTING UTILITIES AND PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMAL DELAY.
- THE CONTRACTOR SHALL EXERCISE DUE CARE TO AVOID DISTURBING ANY EXISTING UTILITIES, ABOVE OR BELOW GROUND. UTILITIES THAT ARE DAMAGED BY CARELESS CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE ANY REQUIRED UTILITY INTERRUPTIONS WITH THE OWNER AND AFFECTED UTILITY COMPANY A MINIMUM OF FIVE (5) WORKING DAYS BEFORE THE INTERRUPTION.
- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TRAFFIC CONTROL PLANS AND TRAFFIC CONTROL EQUIPMENT. ALL SIGNS, BARRICADES, CHANNELIZATION DEVICES, SIGN FRAMES AND ERECTION OF SUCH DEVICES SHALL CONFORM TO THE REQUIREMENTS OF "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" LATEST EDITION. TRAFFIC CONTROL PLANS SHALL BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
- SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS FOR ADJACENT STRAIGHT RUN OF PIPE.
- ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURE SPECIFIED.
- SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.

SECTION / DETAIL DESIGNATIONS

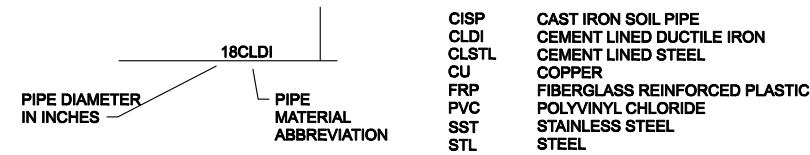


PIPE AND FITTING SYMBOLS

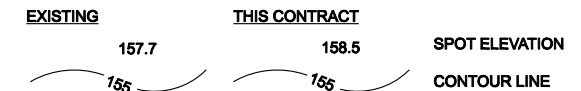


LINE SIZE AND MATERIAL IDENTIFICATION

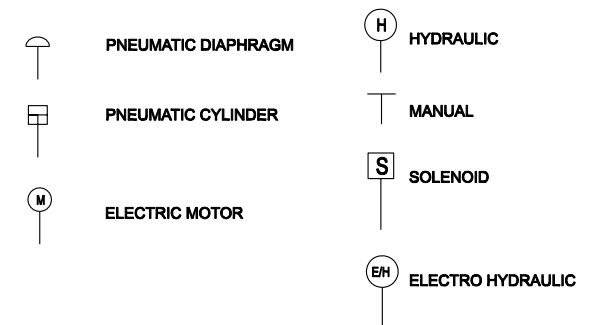
(FOR REFERENCE ONLY. SEE SITE AND MECHANICAL DRAWINGS)



CIVIL LEGEND



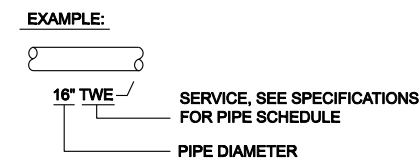
ACTUATOR SYMBOLS



FLOW STREAM IDENTIFICATION

- D DRAIN
- FW FINISHED WATER
- GW GROUND WATER
- SA SAMPLE

PIPING DESIGNATION



NO.	DATE	REVISION	BY
1		DR KBRAL	APVD KBRAL
2		CHK REDWARDS	APVD KBRAL

CONSTRUCTION OF NORTH WELFIELD PUMP AND DOWNHOLE IMPROVEMENTS 108032

LAKE HAVASU CITY, AZ N. 1928 895-2116

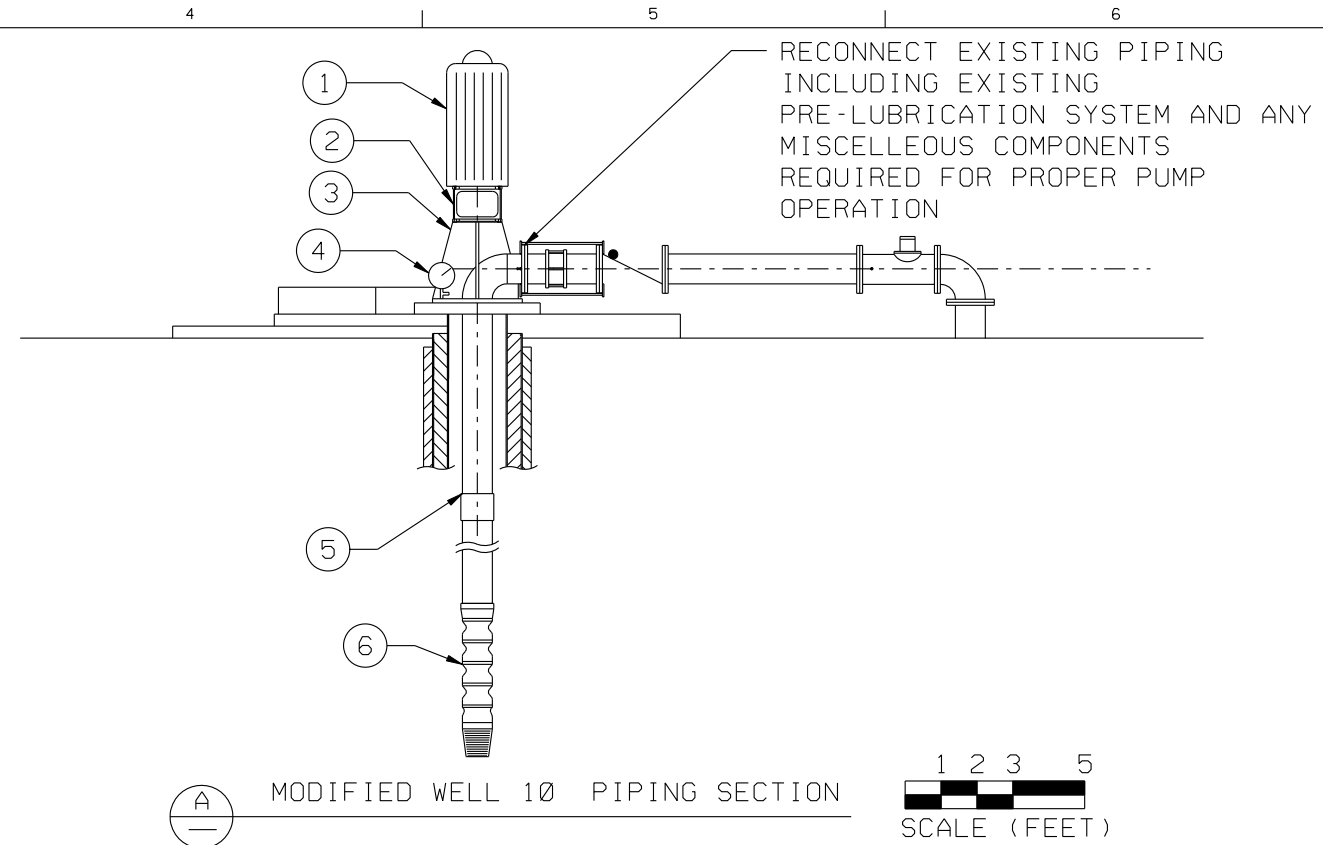
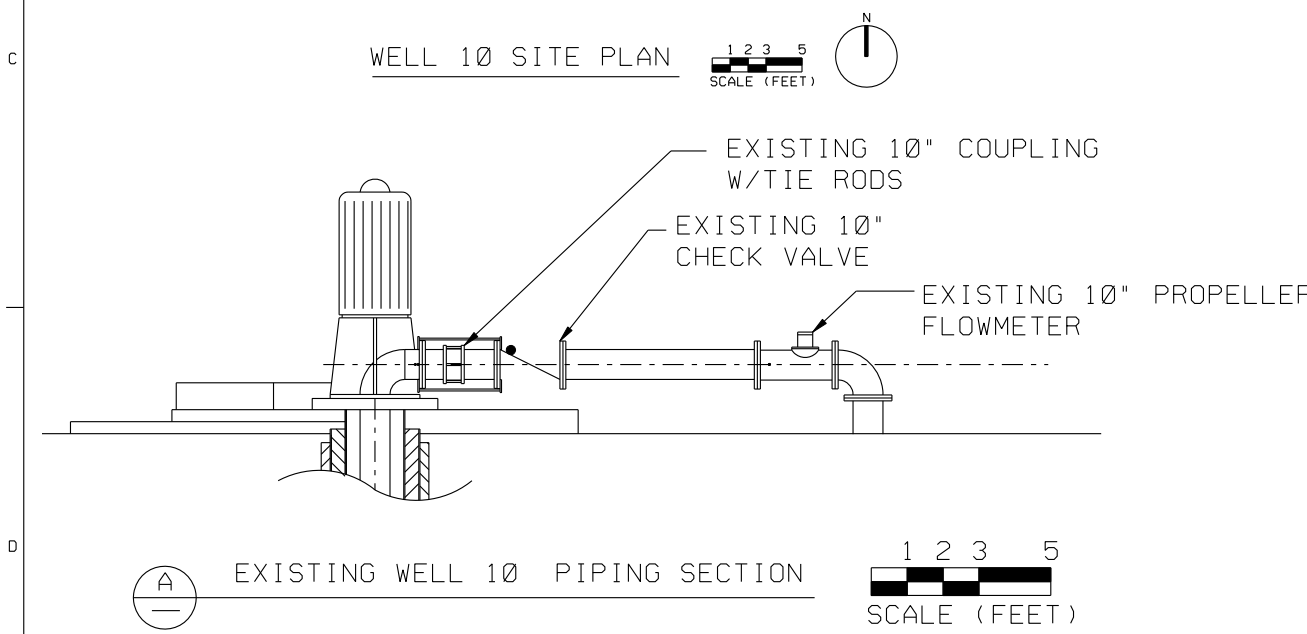
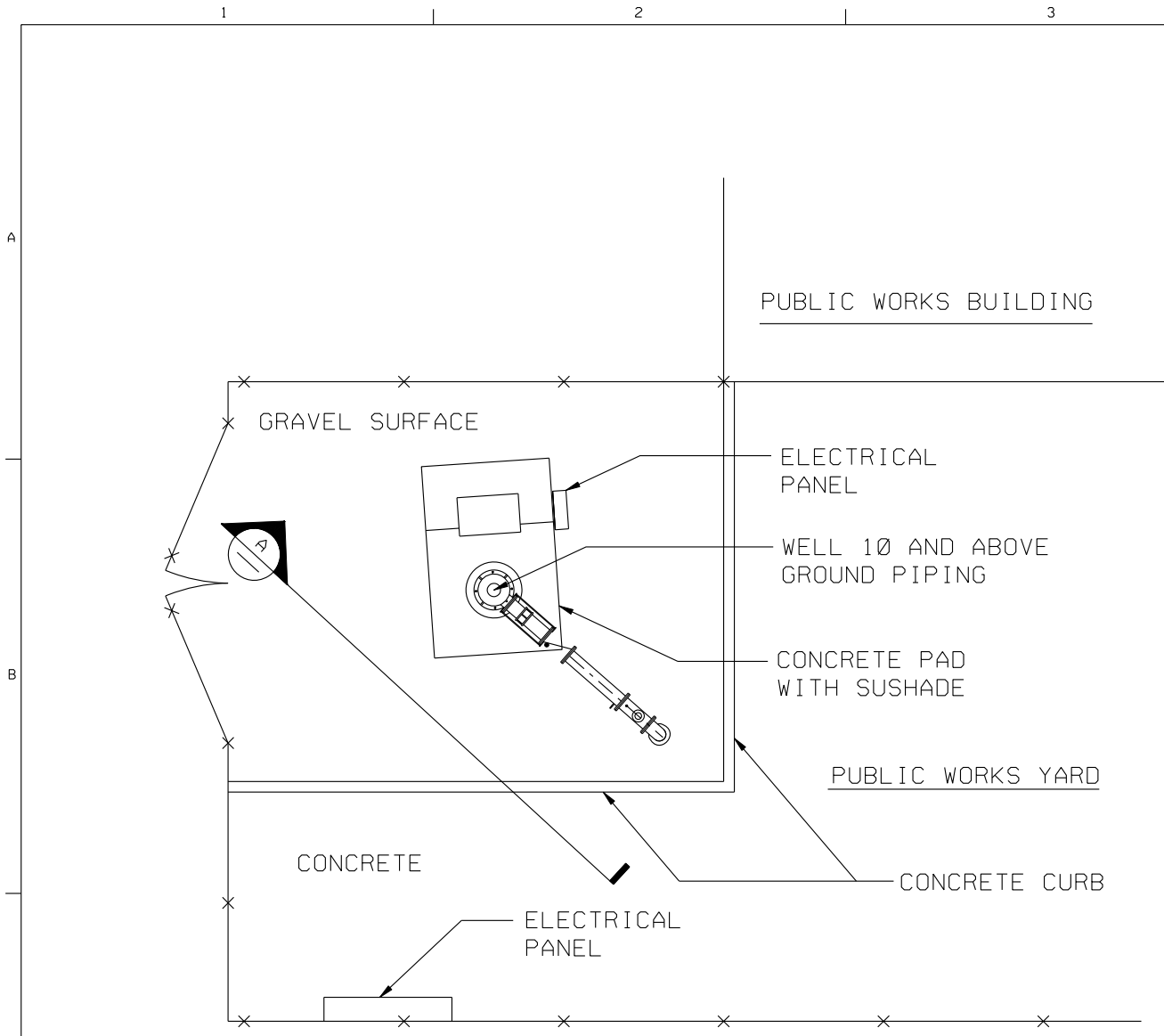
ABREVIATIONS, MECHANICAL AND CIVIL LEGENDS, SYMBOLS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

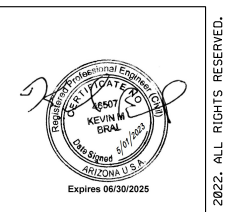
DATE	May 2023
PROJ	108032
DWG	G-02
SHEET	2 of 6

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NOTES

- ① PROVIDE NEW USEM VERTICAL HOLLOWSHAFT MOTOR, 100 HP. SEE SPECIFICATIONS
- ② PROVIDE NEW 12" TALL MOTOR BASE. SEE DETAIL (1/M-1)
- ③ REFURBISH EXISTING DISCHARGE HEAD. SEE SPECIFICATIONS
- ④ NEW DIRECT READ WATER LEVEL GAUGE AND AIRLINE. SEE SPECIFICATIONS.
- ⑤ NEW 100' OF 10" COLUMN, LINESHAFT, SPIDERS, BEARINGS, SEE SPECIFICATIONS.
- ⑥ INSPECT EXISTING VLT PUMP. REFURBISH OR REPLACE. SEE SPECIFICATIONS.



NO.	DATE	REVISION	BY
1	05/01/23	DR KBRAL	APYD KBRAL
2		CHK REDWARDS	APYD KBRAL

CONSTRUCTION OF NORTH WELLFIELD PUMP AND DOWNHOLE IMPROVEMENTS
108032

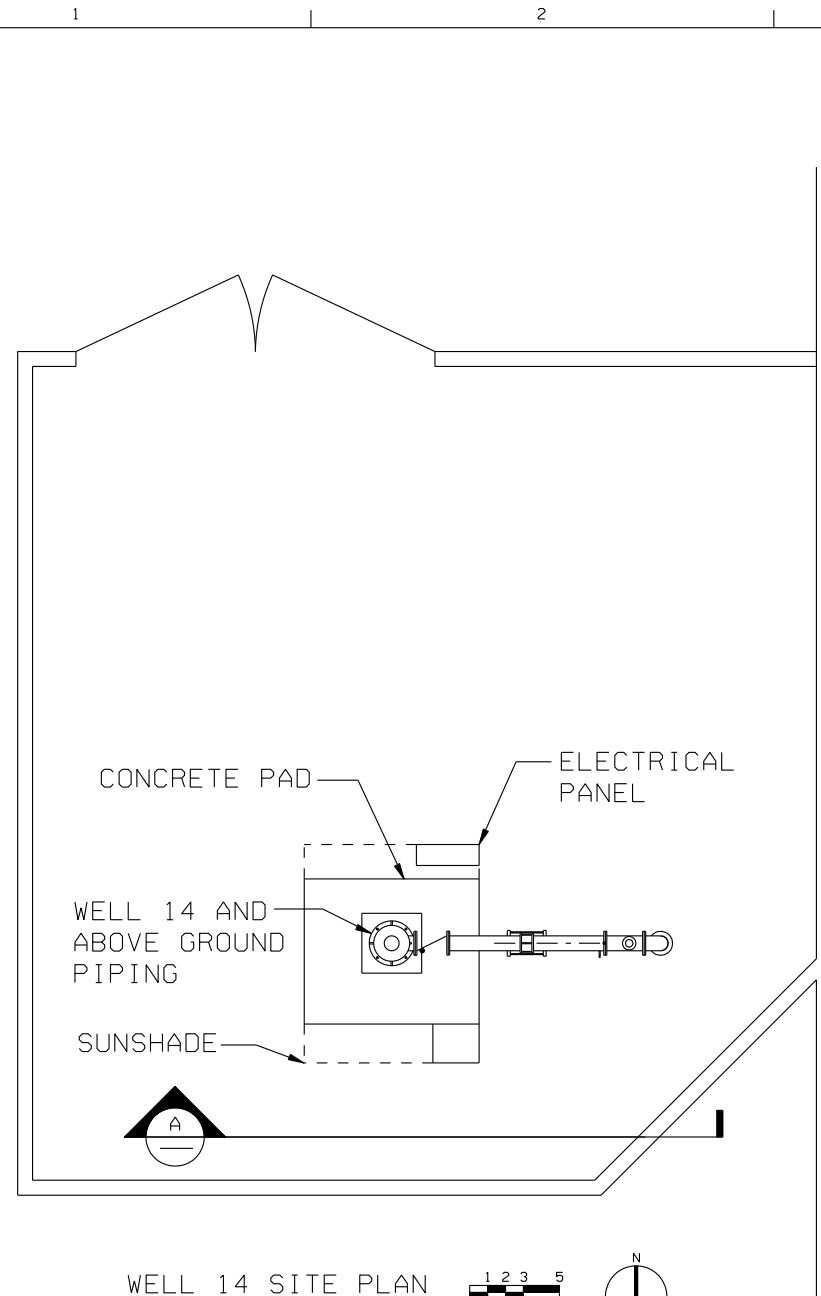
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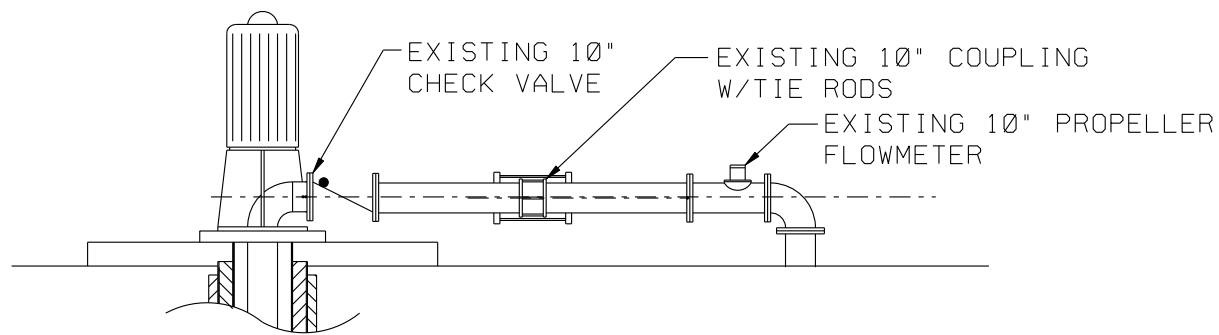
SITE PLAN AND MODIFICATIONS -- WELL 10

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.

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PROJ	108032
DWG	C-01
SHEET	3 of 6



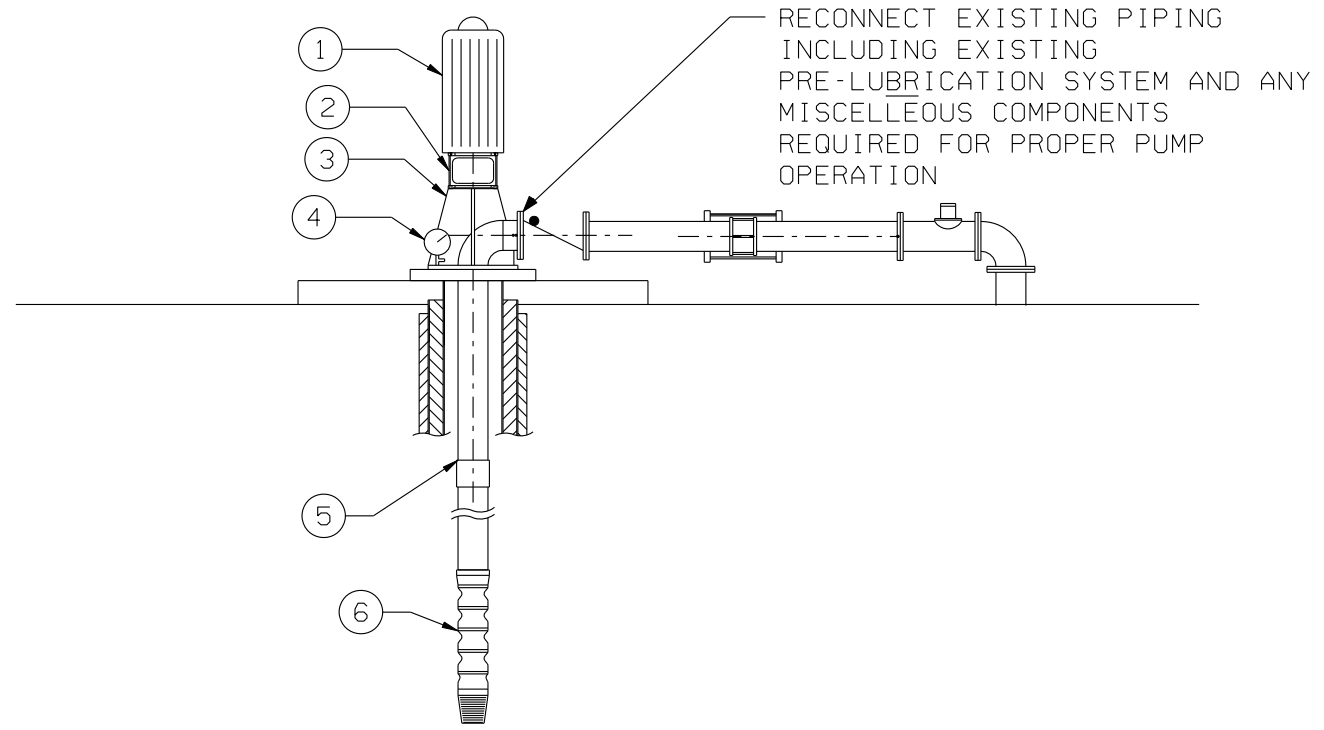
LAKE SIDE STORAGE



EXISTING WELL 14 PIPING SECTION

SCALE (FEET)

1 2 3 5



MODIFIED WELL 14 PIPING SECTION

SCALE (FEET)

1 2 3 5

NOTES

- ① PROVIDE NEW USEM VERTICAL HOLLOWSHAFT MOTOR, 100 HP. SEE SPECIFICATIONS
- ② NEW 12" TALL MOTOR BASE. SEE DETAIL $\frac{1}{C-5}$
- ③ REFURBISH EXISTING DISCHARGE HEAD. SEE SPECIFICATIONS
- ④ NEW DIRECT READ WATER LEVEL GAUGE AND AIRLINE. SEE SPECIFICATIONS.
- ⑤ NEW 100' OF 10" COLUMN, LINESHAFT, SPIDERS, BEARINGS, SEE SPECIFICATIONS.
- ⑥ INSPECT EXISTING VLT PUMP. REFURBISH OR REPLACE. SEE SPECIFICATIONS.



NO.	DATE	DR	REVISION	CHK	BY
				REDWARDS	APVD KBRAL
					APVD

CONSTRUCTION OF NORTH WELLSFIELD PUMP AND DOWNHOLE IMPROVEMENTS

1088032

PHOENIX, ARIZONA

2308 WILLOW BLVD. N.

LAKE HAVASU CITY, AZ 86403

(928) 855-2116

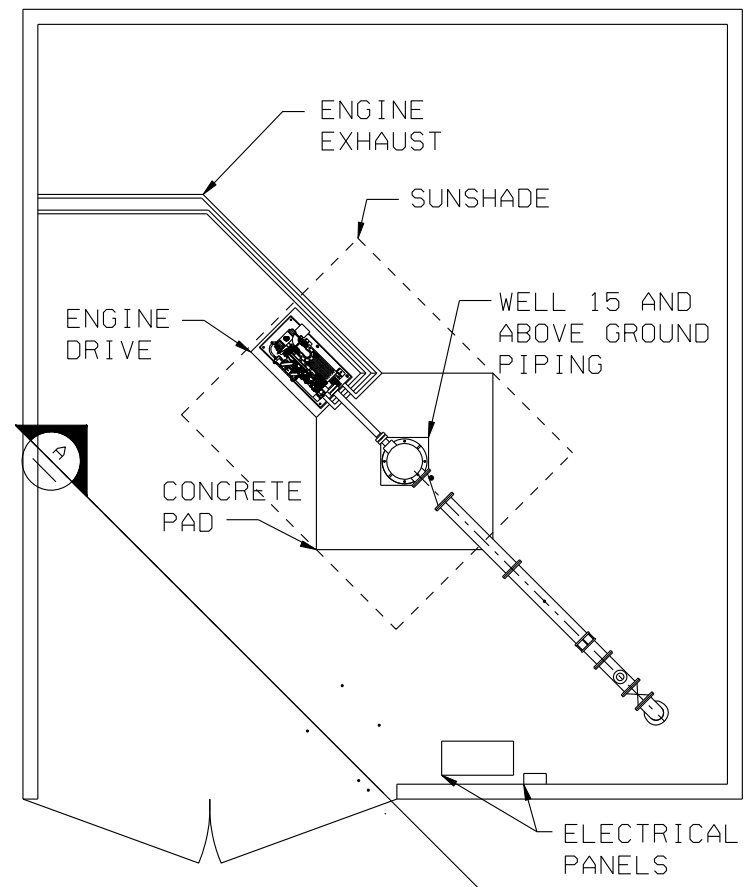
SITE PLAN AND MODIFICATIONS -- WELL 14

VERIFY SCALE

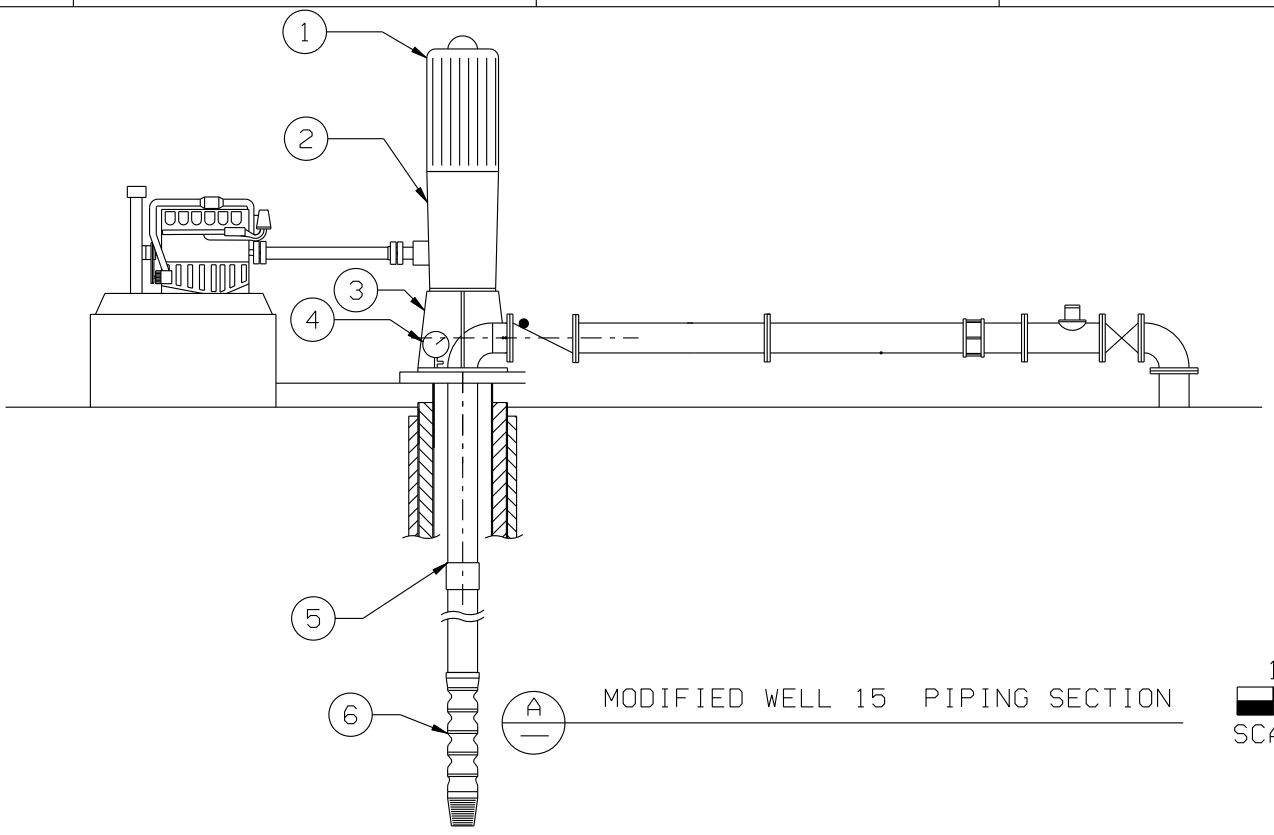
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DWG	C-02
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WELL 15 SITE PLAN
SCALE (FEET)

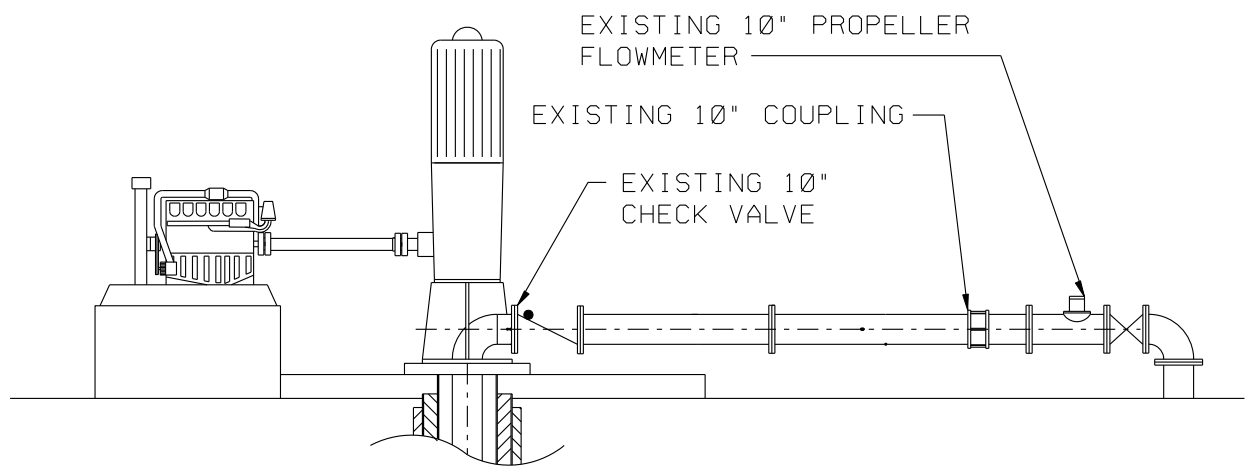


MODIFIED WELL 15 PIPING SECTION

SCALE (FEET)

NOTES

- ① PROVIDE NEW USEM VERTICAL HOLLOWSHAFT MOTOR, 125 HP. SEE SPECIFICATIONS
- ② EXISTING ENGINE GEAR DRIVE
- ③ REFURBISH EXISTING DISCHARGE HEAD. SEE SPECIFICATIONS
- ④ NEW DIRECT READ WATER LEVEL GAUGE AND AIRLINE. SEE SPECIFICATIONS.
- ⑤ NEW 100' OF 10" COLUMN, LINESHAFT, SPIDERS, BEARINGS, SEE SPECIFICATIONS.
- ⑥ INSPECT EXISTING VLT PUMP. REFURBISH OR REPLACE. SEE SPECIFICATIONS.



EXISTING WELL 15 PIPING SECTION

SCALE (FEET)



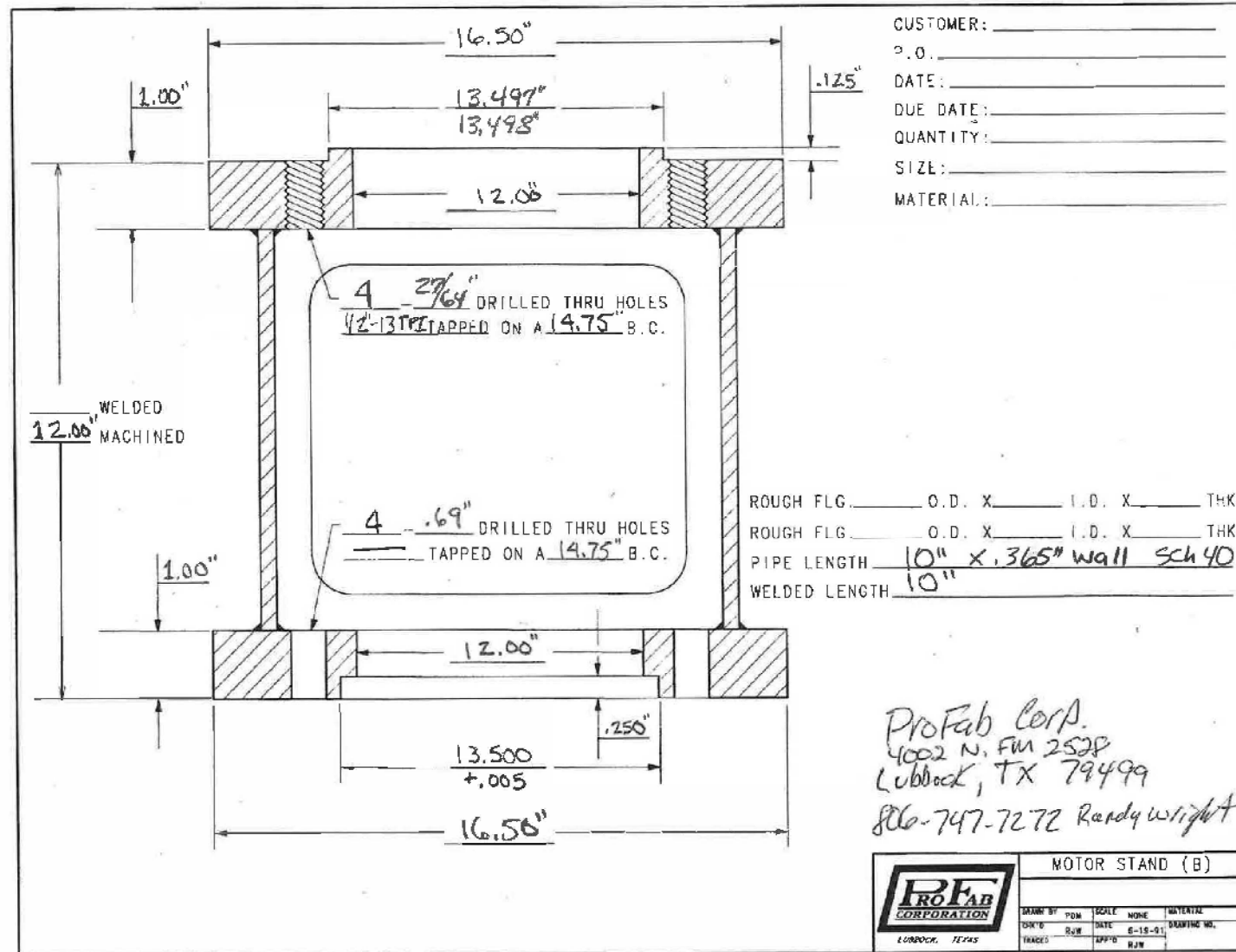
NO.	DATE	DR	CHK	REVISION	BY
		KBRAL			APYD
			KBRAL		APYD
			REDWARDS		KBRAL

CONSTRUCTION OF NORTH WELLFIELD PUMP AND DOWNHOLE IMPROVEMENTS
108032
LAKE MARY CITY, ARIZONA
2338 MCALLISTER BLVD N.
LAKE HAVASU CITY, AZ 86403
1928 895-2118

SITE PLAN AND MODIFICATIONS -- WELL 15

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CUSTOMER: _____
 P.O. _____
 DATE: _____
 DUE DATE: _____
 QUANTITY: _____
 SIZE: _____
 MATERIAL: _____

ROUGH FLG. _____ O.D. X _____ I.D. X _____ THK
 ROUGH FLG. _____ O.D. X _____ I.D. X _____ THK
 PIPE LENGTH 10" X .365" wall sch 40
 WELDED LENGTH 10"

ProFab Corp.
 4002 N. FM 252P
 Lubbock, TX 79499
 806-747-7272 Randy Wright

PRO FAB CORPORATION			
Lubbock, Texas			
MOTOR STAND (B)			
DRAWN BY	PDM	SCALE	NONE
CHK'D	RJM	DATE	6-15-01
TRACED	APP'D	RJM	
DRAWING NO.			

1 FABRICATED MOTOR BASE
 NTS
 C-5

NOTES

- 1 FABRICATE FROM STEEL AT PRO FAB CORPORATION AS SHOWN
- 2 FABRICATE TO FIT MOTORS AND DISCHARGE HEAD AS SPECIFIED
- 3 SUPPLY MOTOR BASE WITH TWO OPPOSING WINDOWS.



NO.	DATE	REVISION	BY
		CHK REDWARDS	APVD KBRAL
		DR KBRAL	

CONSTRUCTION OF NORTH WELLFIELD
 PUMP AND DOWNHOLE IMPROVEMENTS
 108032
 LAKE HAVASU CITY, ARIZONA
 LAKE HAVASU CITY, AZ 86403
 (928) 855-2116

MECHANICAL DETAILS

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 DWG DWG M-01
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