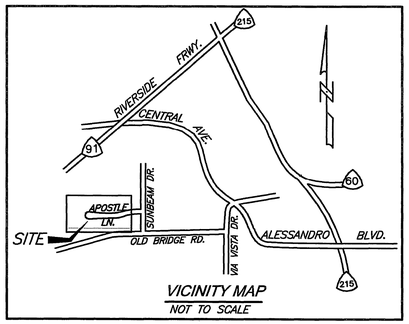
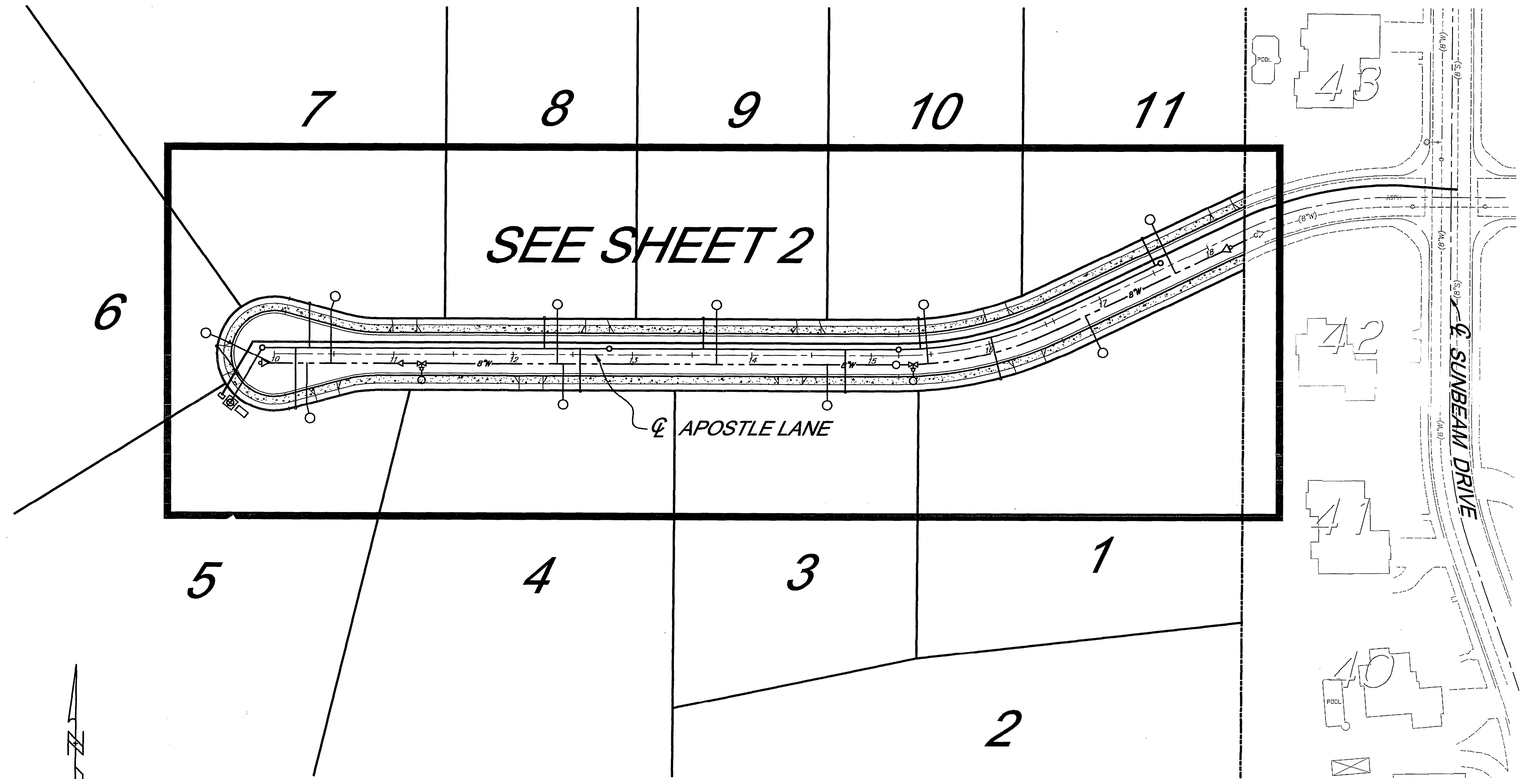
SEWER LIFT STATION PLANS

TRACT 28774



VICINITY MAP
NOT TO SCALE



INDEX MAP
SCALE: 1"=60'

BENCHMARK

POINT ID: F7-J3 ELEV.: 1302.588
P.K. NAIL AND CITY ENGINEER TAG SET IN THE NORTHERLY WALL OF A CATCH BASIN ALONG THE EASTERLY CURB OF ALESSANDRO BLVD., APPROXIMATELY 300' SOUTHEASTERLY OF EL PORTAL.

GENERAL NOTES

1. THE PRIVATE ENGINEER SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THE ACCURACY AND ACCEPTABILITY OF THE WORK HEREON. IN THE EVENT OF DISCREPANCIES ARISING DURING CONSTRUCTION, THE PRIVATE ENGINEER SHALL BE RESPONSIBLE FOR DETERMINING AN ACCEPTABLE SOLUTION AND REVISING THE PLANS FOR APPROVAL BY THE CITY.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR THE RIGHT OF WAY IN ACCORDANCE WITH THE PROVISIONS OF LAW AS IT AFFECTS EACH UTILITY INCLUDING IRRIGATION LINES AND APPURTENANCES AND AT NO COST TO THE CITY.

3. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF RIVERSIDE DEPARTMENT OF PUBLIC WORKS, STANDARDS DRAWINGS, IT'S SUPPLEMENTAL NOTES, AND THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT EDITION.

4. LOCATION OF LATERALS TO BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER. AVOID CONFLICT WITH PROPOSED AND/OR EXISTING FACILITIES.

5. CONTRACTOR IS TO VERIFY EXISTING SEWER ELEVATION PRIOR TO CONSTRUCTION.

6. THE SEWER CONTRACTOR SHALL ADJUST MANHOLES TO FINAL GRADE AFTER PAVING IS COMPLETED.

7. NO FINISH FLOOR ELEVATION SHALL BE LESS THAN 4' ABOVE THE SEWER FLOW LINE AT THE POINT OF CONNECTION WITHOUT HAVING A PROPER BACKWATER VALVE INSTALLED IN THE LATERAL.

8. A PLUG SHALL BE INSTALLED AND WILL REMAIN IN PLACE WHERE THE NEW SEWER CONNECTS WITH THE EXISTING SEWER UNTIL THE NEW SEWER IS ACCEPTED BY THE CITY OF RIVERSIDE.

9. ALL MANHOLES TO BE CITY OF RIVERSIDE STANDARD NO. 500.

10. ALL FLAGGED ELEVATIONS SHALL BE STAKED IN THE FIELD BY THE PRIVATE ENGINEER.

11. THE CONTRACTOR SHALL CALL IN A LOCATIONS REQUEST TO UNDERGROUND SERVICE ALERT (USA), PHONE NO. 1-800-227-2600, TWO WORKING DAYS BEFORE DIGGING. NO CONSTRUCTION PERMIT WILL BE ISSUED BY THE PUBLIC WORKS DEPARTMENT INVOLVING EXCAVATION FOR UNDERGROUND FACILITIES UNLESS THE APPLICANT HAS BEEN PROVIDED AN INQUIRY IDENTIFICATION NUMBER BY USA.

12. THE DEVELOPER SHALL BE RESPONSIBLE FOR PRESERVING OR REESTABLISHING AND REFERENCING SURVEY MONUMENTS DESTROYED, DISTURBED OR BURIED AS A RESULT OF CONSTRUCTION HEREON.

13. NOTICE TO CONTRACTOR: THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

14. QUANTITIES SHOWN ARE FOR INFORMATION ONLY THE CITY OF RIVERSIDE IS NOT RESPONSIBLE FOR THEIR ACCURACY.

15. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSINGS AND CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES AFFECTED. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BEFORE CONSTRUCTION BEGINS.

16. NO PERSON SHALL PERFORM ANY CONSTRUCTION ACTIVITY OR INSTALL ANY OBJECTS WITHIN THE PUBLIC RIGHTS-OF-WAY OR EASEMENTS OF THE CITY OF RIVERSIDE WITHOUT A VALID CONSTRUCTION PERMIT OR, A STREET OPENING PERMIT OR AN ENCROACHMENT PERMIT ISSUED BY THE CITY'S PUBLIC WORKS DEPARTMENT.

NOTICE TO CONTRACTOR

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS.

THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON ON THESE PLANS.

CALL UNDERGROUND SERVICE ALERT (USA) 1-800-227-2600 AT LEAST 48 HOURS PRIOR TO EXCAVATION.

THE QUANTITY ESTIMATE SHOWN HEREON IS FOR THE USE OF GOVERNING AGENCIES IN DETERMINING BOND AMOUNTS AND/OR FEES AND IS NOT TO BE USED FOR BID PURPOSES.

LEGEND

PROPOSED 8" V.C.P. SEWER MAIN	8"S
PROPOSED SEWER LATERAL WITH CLEANOUT	
PROPOSED SEWER MANHOLE	
EXISTING SEWER MAIN	(18"S)
WATER LATERAL AND METER	
8" WATER MAIN	8"W

CONSTRUCTION NOTES AND QUANTITIES:

(1)	CONSTRUCT SEWER MANHOLE PER CITY OF RIVERSIDE STD. 500	4 L.S.
(2)	CONSTRUCT 8" V.C.P. SEWER MAIN	823 L.F.
(3)	CONSTRUCT 4" SEWER LATERAL PER CITY OF RIVERSIDE STD. 562A	338.54 LF
(4)	LIFT STATION (SEE SHEETS 3, 4, AND 5)	1 L.S.
(5)	CONSTRUCT 4" AWWA C-900 CL-100 FORCE MAIN	1,092 L.F.
(6)	CONNECT TO EXISTING SEWER MANHOLE	1 L.S.

Underground Service Alert
CALL BEFORE YOU DIG
CALL:TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG.

APPROVED BY:
WATER DEPARTMENT
DATE 6/29/99

CITY BUSINESS TAX CERTIFICATE NO. 062888 EXP. DATE 4/00
Land Development LDC Consultants
CIVIL ENGINEERING SURVEYING LAND PLANNING
5029 La Mart Dr. Suite E, Riverside, CA 92507
(909) 684-0815

REGISTERED PROFESSIONAL ENGINEER BRIAN G. ESGATE No. 21884 Exp. 9-30-01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:
BRIAN G. ESGATE DATE 6/28/99
R.C.E.#: 21884 EXP.: 9-30-01

MARK	REVISIONS	APPR.	DATE

DESIGNED BY A.W. DRAWN BY J.B. CHECKED BY B.G.E.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. ENGINEERING MANAGER		7/6/99
PRINCIPAL ENGINEER		7/6/99
STREET SERVICES		
TRAFFIC DIVISION		
PARKS DEPARTMENT		
WASTE WATER		6/24/99

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 9-10-99

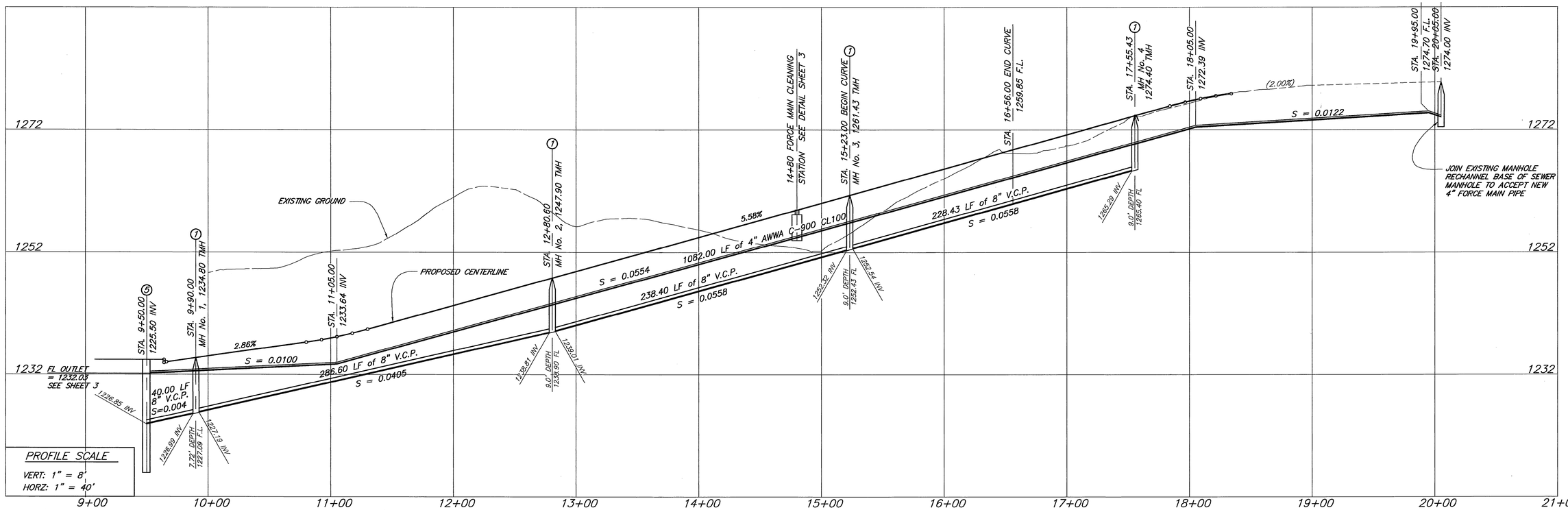
TRACT NO. 28774
SEWER PLAN AND PROFILE
APOSTLE LANE

HORIZ. SCALE: AS SHOWN

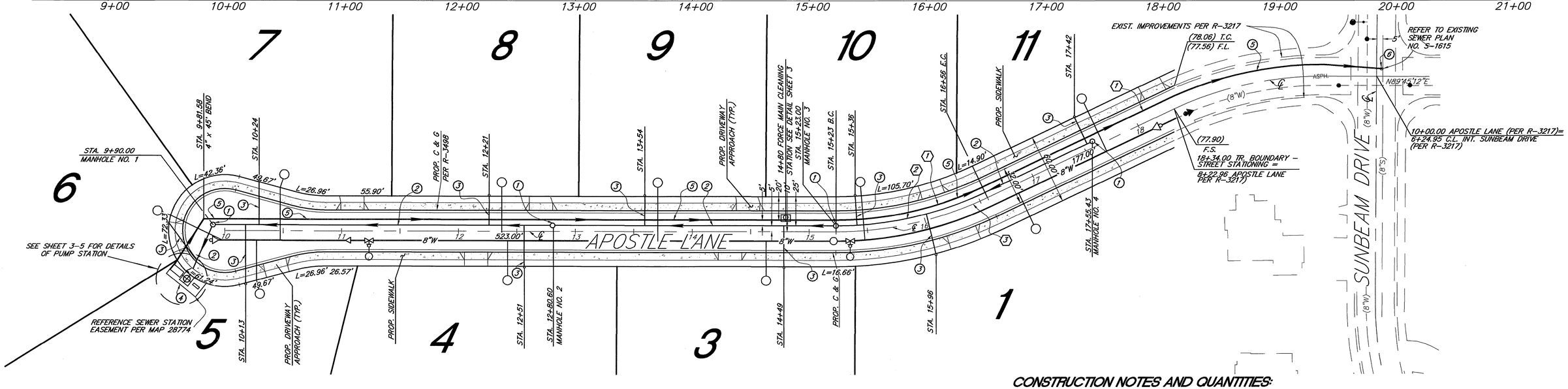
S-1706
SHEET 1 OF 5
JOB NO. 97149

PC-4109-S

INDEXED 9-16-99 FH



PROFILE SCALE
VERT: 1" = 8'
HORZ: 1" = 40'



CURVE DATA

	Δ	R	L	T
(1)	25°36'37"	290.00'	129.62'	65.91'
(2)	25°11'33"	295.00'	129.71'	65.92'
(3)	25°35'32"	300.00'	134.00'	68.14'

CONSTRUCTION NOTES AND QUANTITIES:

(1)	CONSTRUCT SEWER MANHOLE PER CITY OF RIVERSIDE STD. 500	4 L.S.
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BENCHMARK

POINT ID: F7-J3 ELEV.: 1302.588
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227-2600
TWO WORKING DAYS BEFORE YOU DIG

40 0 40 80 120
Scale 1" = 40'

APPROVED BY:
WATER DEPARTMENT
DATE

CITY BUSINESS TAX CERTIFICATE NO. 062688 EXP. DATE 4/00
Land Development LDC Consultants
CIVIL ENGINEERING SURVEYING LAND PLANNING
5029 La Mart Dr. Suite E, Riverside, CA 92507
(909) 684-9615

REGISTERED PROFESSIONAL ENGINEER BRIAN G. ESCATE No. 21884 Exp. 9-30-01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:
BRIAN G. ESCATE 8/31/99
BRIAN G. ESCATE DATE
R.C.E.#: 21884 EXP.: 9-30-01

MARK	REVISIONS	APPR.	DATE

DESIGNED BY A.W. DRAWN BY J.B. CHECKED BY B.G.E.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. ENGINEERING MANAGER		
PRINCIPAL ENGINEER		
STREET SERVICES		
TRAFFIC DIVISION		
PARKS DEPARTMENT		
WASTE WATER		

APPROVED BY
PUBLIC WORKS DIRECTOR
DATE 9-10-99

TRACT NO. 28774
SEWER PLAN AND PROFILE
APOSTLE LANE

S-1706
SHEET 2 OF 5
HORIZ. SCALE: 1" = 40' VERT. SCALE: 1" = 8'
JOB NO. 97149

INDEXED 9-16-99 (FH)

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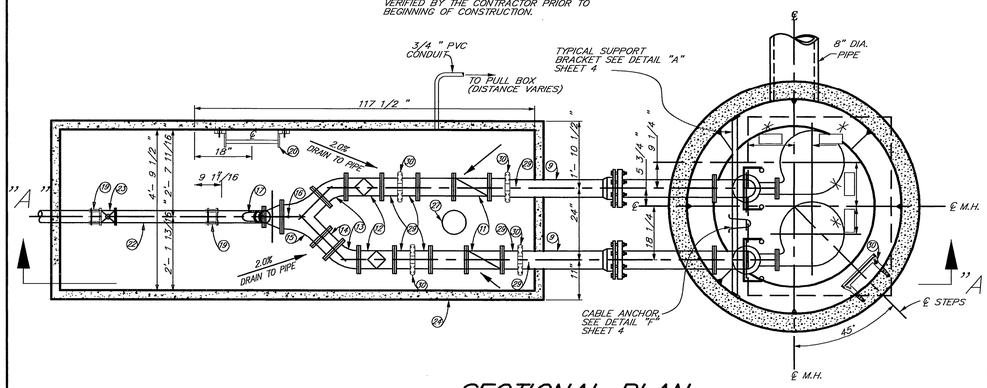
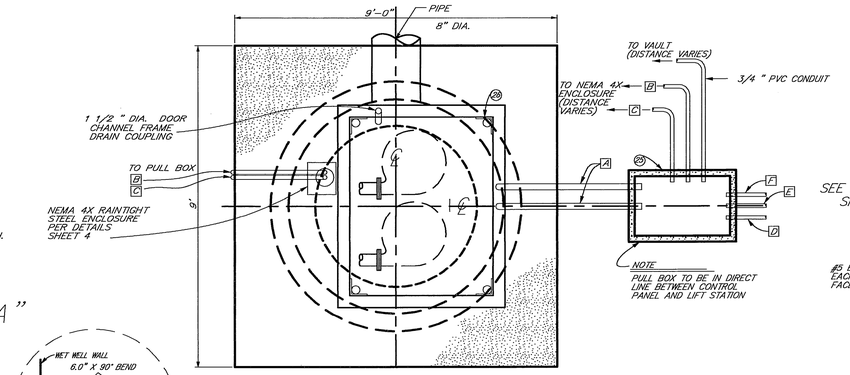
(*) NOTE:
THESE DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION.



SECTIONAL PLAN

NOT TO SCALE



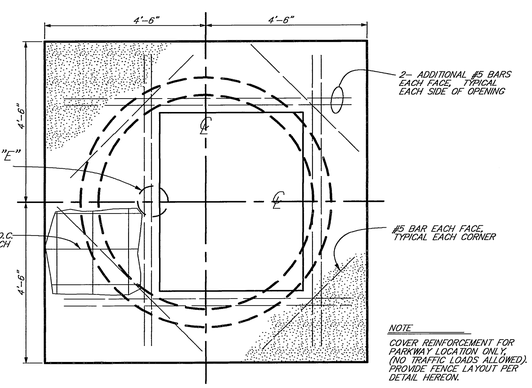
COVER PLAN

NOT TO SCALE

CONDUIT SCHEDULE

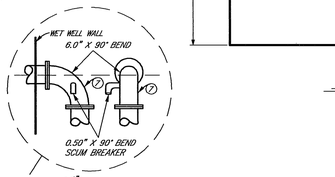
- [A] — 2" CONDUIT FOR PUMPS (2-EA)
- [B] — 3/4" CONDUIT FOR FLOAT SWITCHES
- [C] — 3/4" CONDUIT FOR MILLTRONIC HYDRORANGER
- [D] — 3/4" CONDUIT FOR MILLTRONIC HYDRORANGER WITH 3/8" POLYETHYLENE TUBE
- [E] — 3/4" CONDUIT FOR CONTROL CABLE
- [F] — 1" CONDUIT FOR PUMPS

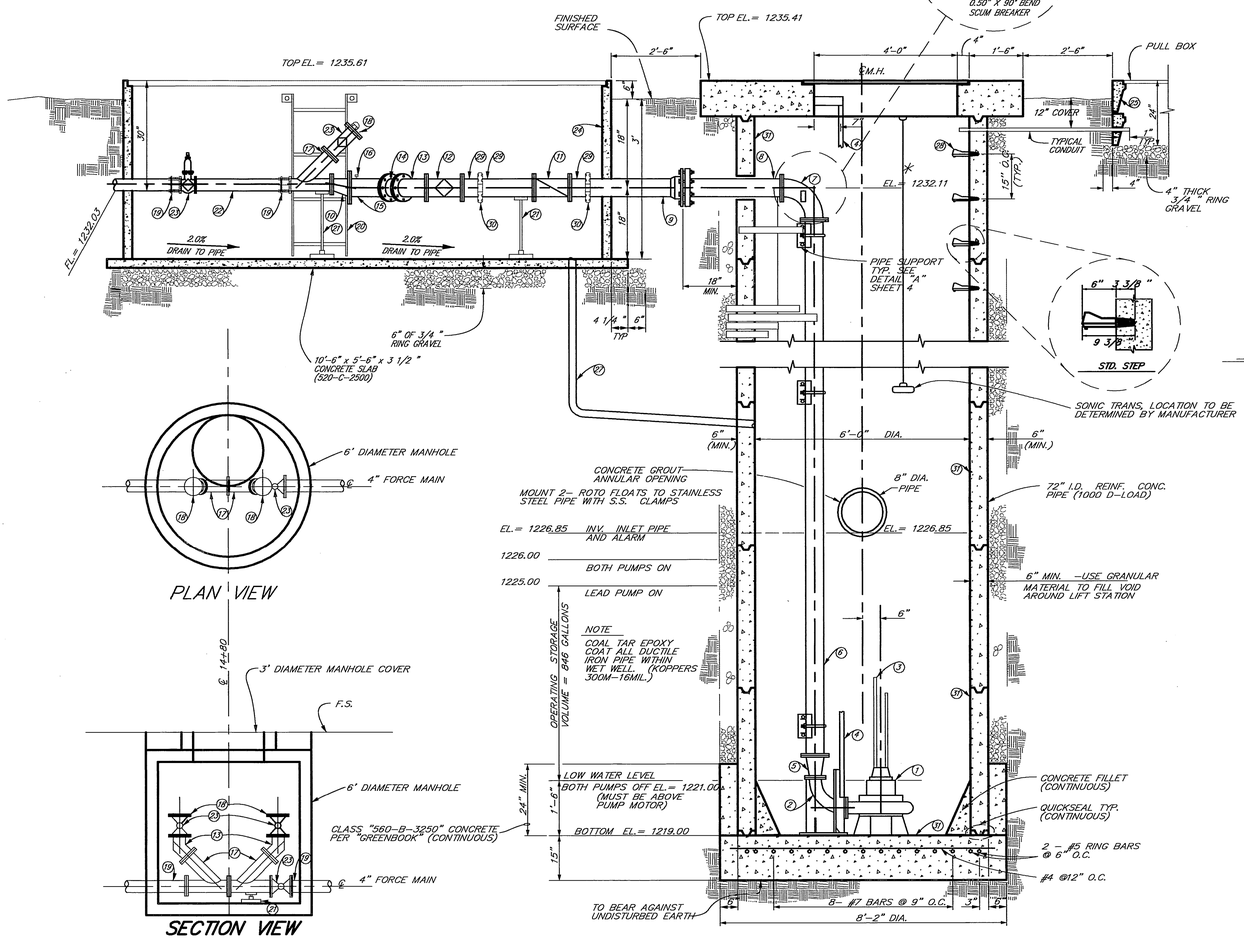
NOTE
ALL CONDUIT SHALL BE PVC, SCHEDULE 80. ALL CONDUITS INTO WET WELL AND PULL BOX TO BE SEALED WITH SILICON.



COVER REINFORCING PLAN

NOT TO SCALE





FORCE MAIN CLEANING STATION

NOT TO SCALE

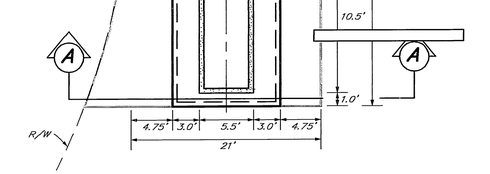
SECTION "A" - "A"

NOT TO SCALE

MATERIALS DESCRIPTION

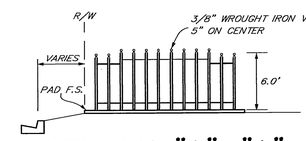
(O.A.E. = OR APPROVED EQUAL)

1. SUBMERSIBLE SEWAGE PUMP (CONTRACTOR TO SUPPLY PUMP SPECIFICATIONS AND PERFORMANCE CURVES FOR CITY APPROVAL) TDH 57.4 GPM 80 RPM 1750
2. MATING 90° ELBOW FOR SLIDE-AWAY COUPLING
3. 1/4 " x 5/16 " STAINLESS STEEL NYLON COVERED LIFTING CABLE WITH STAINLESS STEEL EYEBOLT
4. 1 1/2 " SCHEDULE 40 STAINLESS STEEL PIPE GUIDE RAILS, AS SUPPLIED BY PUMP MANUFACTURER (TO BE ADJUSTED AS NECESSARY PER PUMP MANUFACTURER'S SPECIFICATIONS)
5. 6" x 4" FLANGED CAST IRON REDUCER, CLASS 150
6. 6" DUCTILE IRON PIPE WITH FLANGED ENDS, A.N.S.I. CLASS 150
7. 6" x 90° FLANGED CAST IRON ELBOW, CLASS 150
8. 6" x 30" LONG, FLANGE x PLAIN END DUCTILE IRON SPOOL, CLASS 150
9. 6" DUCTILE IRON PIPE, MECHANICAL JOINT x VICTAULIC END, CLASS 150
10. 6" x 4" FLANGED ECCENTRIC REDUCER
11. 6" FLANGED CUSHIONED CHECK VALVE, CLASS 150, APCO 6000 (O.A.E.) W/EXTERNAL ARM
12. 6" FLANGED BALLCENTRIC VALVE, CLASS 150, DEZURIK (O.A.E.) W/FULL DIAMETER OPENING
13. 6" x 45° FLANGED CAST IRON ELBOW, CLASS 150
14. 6" FLANGED DUCTILE IRON SPOOL, CLASS 150
15. 6" x 6" x 6" FLANGED CAST IRON TRUE=WYE, CLASS 150
16. 1/4 " N.P.T. TAP WITH CORPORATION STOP
17. 4" x 4" x 4" FLANGED CAST IRON 45° WYE, CLASS 150
18. 2" x 4" CAST IRON REDUCING FLANGE, CLASS 150, W/2" THREADED PLUG
19. 4" FLANGED CAST IRON COUPLING ADAPTER, DRESSER STYLE 127 (O.A.E.)
20. 5 FT. LONG GALVANIZED VAULT LADDER PER ALHAMBRA FOUNDARY A-3400 (O.A.E.)
21. PIPE SUPPORT PER DETAIL "D" SHEET 4
22. 4" X 24" LONG , FLANGE x PLAIN END, DUCTILE IRON SPOOL, CLASS 150
23. 4" FLANGED PLUG VALVE, CLASS 150, CLOW (O.A.E.)
24. BROOKS PRODUCTS 800 SERIES PRECAST VAULT (57 1/2 " x 117 1/2 " INSIDE DIMENSION) WITH ARMORED TOP SECTION AND BOLT DOWN COVER (3 PIECE TOP) (O.A.E.) INSTALL ON 10'-6" x 5'-6" x 3 1/2" CONCRETE SLAB (520-C-2500)
25. BROOKS PRODUCTS 67PB PRECAST PULL BOX (24" x 36" x 24" DEEP) WITH CAST IRON COVER (O.A.E.)
26. 5' WIDE x 4' LONG DOUBLE LEAF ALUMMINUM ACCESS DOOR WITH STAINLESS STEEL HARDWARE AND COMPRESSION SPRING OPERATORS, 300 P.S.F. LIVE LOAD, BILCO TYPE "JD" (O.A.E.), INSTALL PER MANUFACTURER'S RECOMMENDATIONS
27. 6" PVC DRAIN PIPE TO WET WELL
28. 1/2 " DIA. ENCAPSULATED WITH PLASTIC STEEL STEP, PRECAST OR GROUTED IN PLACE @ 15" O.C.
29. 6" FLANGE x VICTAULIC SPOOL
30. 6" VICTAULIC COUPLING
31. ALL WET WELL INTERIOR CONCRETE TO BE SPRAYED WITH ZEBRON / PURETHANE COATING MANUFACTURED BY AMCHEM PRODUCTS, P.O. BOX 19537, PORTLAND, OREGON 503-244-1349



PAD AND FENCE LAYOUT PLAN

NOT TO SCALE



SECTION "A"-"A"

NOT TO SCALE

NOTE:

CONTRACTOR SHALL OBTAIN SERVICES OF PUMP MANUFACTURER'S ENGINEERING REPRESENTATIVE TO REVIEW AND APPROVE INSTALLATION OF PUMPS. CONTRACTOR SHALL DEMONSTRATE REMOVAL AND REPLACEMENT OF BOTH PUMPS AS PART OF INSTRUCTION OF CITY'S PERSONNEL.

Underground Service Alert
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CALL:TOLL FREE
1-800
227-2600
TWO WORKING DAYS BEFORE YOU DIG

CITY BUSINESS TAX CERTIFICATE NO. 062688 EXP. DATE 4/00

Land Development LDC Consultants
CIVIL ENGINEERING SURVEYING LAND PLANNING
5029 La Mart Dr. Suite E, Riverside, CA 92507
(909) 684-8615

REGISTERED PROFESSIONAL ENGINEER BRIAN G. ESGATE No. 21884 Exp. 9-30-01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:
BRIAN G. ESGATE 8/3/99 DATE
R.C.E.#: 21884 EXP.: 9-30-01

MARK	REVISIONS	APPR.	DATE

DESIGNED BY A.W. DRAWN BY J.B. CHECKED BY B.G.E.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. ENGINEERING MANAGER		9/10/99
PRINCIPAL ENGINEER		9/9/99
STREET SERVICES		
TRAFFIC DIVISION		
PARKS DEPARTMENT		
WASTE WATER		

APPROVED BY R. McGrath PUBLIC WORKS DIRECTOR
DATE 9-10-99

TRACT NO. 28774
SEWER PLAN AND PROFILE
APOSTLE LANE

HORIZ. SCALE: AS SHOWN

S-1706
SHEET 3 OF 5
JOB NO. 97149

INDEXED 9-16-99 GH

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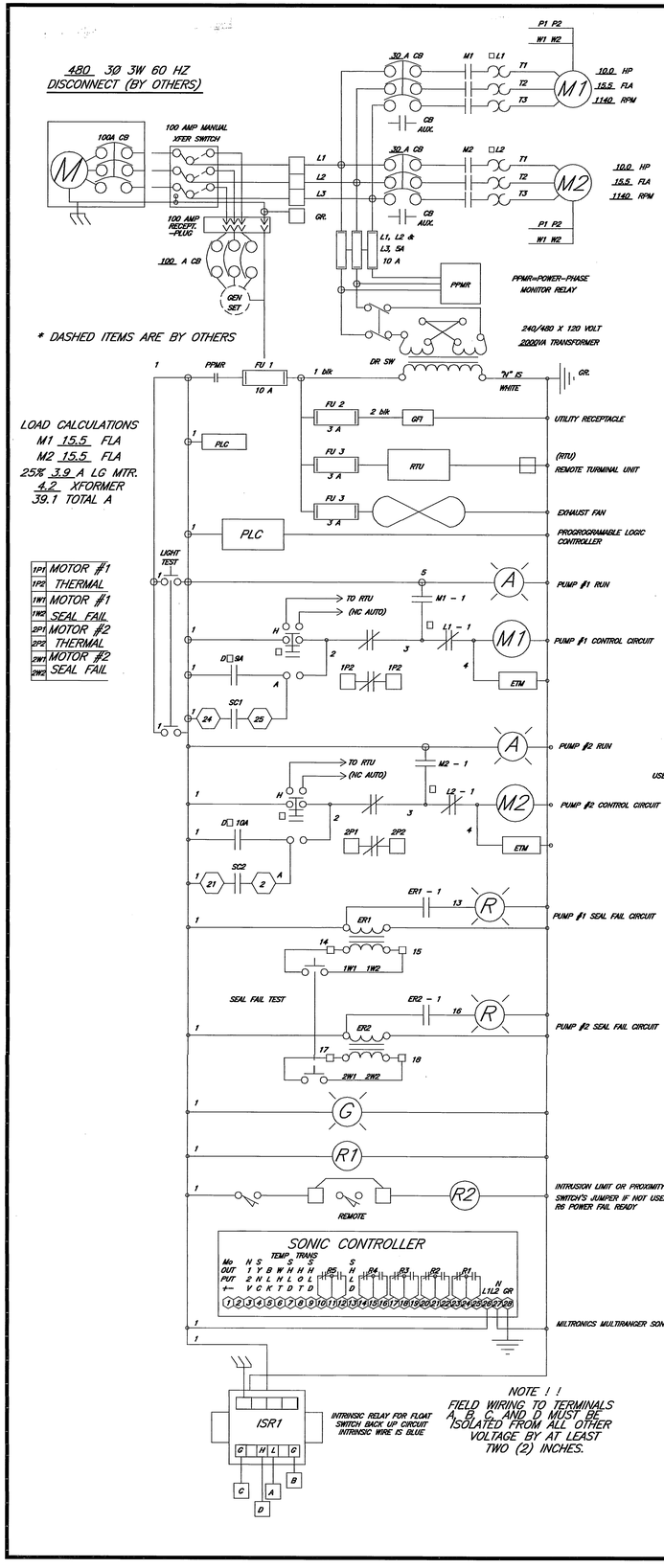
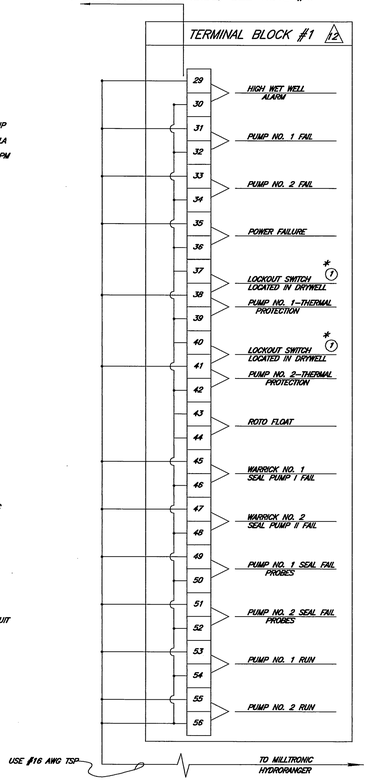


NOTE ! !
FIELD WIRING TO TERMINALS A, B, C, AND D MUST BE ISOLATED FROM ALL OTHER VOLTAGE BY AT LEAST TWO (2) INCHES.

† BY CITY OF RIVERSIDE, SEE NOTE #6



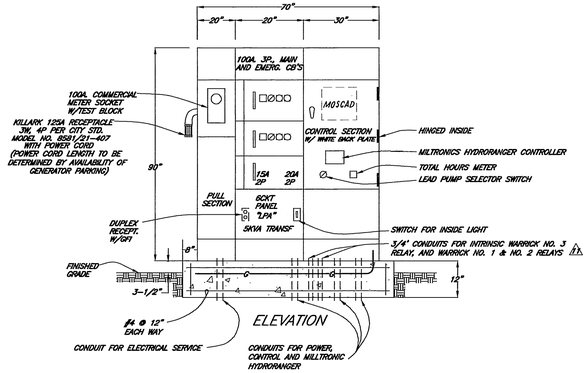
NOTES:

1. ⊡ DENOTES TERMINALS REQUIRING WIRES TO BE CONNECTED FROM CONTROL PANEL TO REMOTE EQUIPMENT.
2. PANEL TO BE COMPLETELY WIRED WITH ALL WIRES AND TERMINALS NUMBERED AND TERMINATED ON TERMINAL STRIPS. WIRING DIAGRAM TO BE GIVEN TO CITY OF RIVERSIDE
3. MANUFACTURER TO BE ALLEN BRADLEY, FURNAS, TOSHIBA OR CUTLER HAMMER.
4. PROVIDE NECESSARY CONDUITS TO PUMP LOCATION FROM M.C.C. (ONE FOR POWER, ONE FOR CONTROL, ONE FOR MILLTRONIC HYDRORANGER)
5. SEPERATE THE FLOAT SWITCH WIRES FEEDING INTRINSIC RELAY (WARRICK NO. 3) AND RUN IN SEPERATE 3/4" CONDUIT. SEPERATE LEADS TO WARRICK RELAY NO. 1 & NO. 2 COMING FROM SEAL PROBES AND RUN IN 3/4" CONDUIT.
6. ITEMS TO BE FURNISHED AND INSTALLED BY CITY OF RIVERSIDE AT DEVELOPERS EXPENSE INDICATED BY: †
7. FLUORESCENT LIGHT TO BE INSTALLED IN CONTROL PANEL FOR NIGHT MAINTENANCE.

RTU
SHALL MONITOR ONLY, NOT CONTROL
INDICATE LOW LEVEL (D1)
INDICATE WET WELL LEVEL ANALOG OUTPUT (D)
INDICATE SITE ENTRY (D1)
INDICATE AC FAILURE (D1)
INDICATE INDIVIDUAL PUMP FAILURE (D1)
INDICATE PUMP AUTO, PUMP NOT AUTO (D1)
HAND SWITCH: POSTION HAND/OFF/AUTO
INDICATE PUMP RUN STATUS (DI)
INDICATE ULTRASONIC FAILURE (D1)

CONTROLS
HAND SHALL BYPASS: LEVELS, PLC, MILTRONICS, ETC. AND SHALL DIRECTLY ENERGIZE THE STARTERS
AUTO FUNCTION SHALL BE CONTROLLED BY THE PLC OR IN EVENT OF THE PLC FAILURE, THE MILTRONICS WILL PROVIDE BACKUP CONTROL START, STOP, AND ALTERNATE LEAD AND LAG PUMPS.

CONTROL LOGIC NOTES
THE PLC WILL PERFORM THE FOLLOWING CONTROL FUNCTIONS:
1. CYCLE PUMPS ON AND OFF ACCORDING WET WELL LEVELS.
2. ALTERNATE LEAD AND LAG PUMPS EACH CYCLE.
3. RECORD PUMP LAPSED TIME RUN HOURS.
4. PROVIDE LOW LEVEL AND HIGH LEVEL ALARMS.
5. TURN OFF PUMPS ON SEAL FAILURE.
6. TURN OFF PUMPS ON THERMAL OVERLOAD.
7. CALL LAG PUMP IN EVENT OF LEAD PUMP FAILURE.
8. RECOGNIZE ULTRASONIC LEVEL CONTROL SYSTEM FAILURE AND CLOSE ALARM CONTACT.
9. RECOGNIZE PUMP HAND SWITCH POSITION AND ADJUST CONTROL LOGIC.
10. RECOGNIZE ANY FAILURE CONDITION AND CLOSE BEACON LIGHT CONTACT.
11. RECOGNIZE POWER FAILURE AND CLOSE ALARM CONTACT.
12. RECOGNIZE SITE ENTRIES AND CLOSE ALARM CONTACT.
13. MILTRONICS LEVEL CONTROLLERS SHALL PROVIDE BACKUP PUMP CONTROL IN EVENT OF PLC FAILURE.
ALL ALARM CONTACTS AND SIGNALS TO THE RTU WILL BE CONTROLLED BY THE PLC.



TYPE "D" WIRING

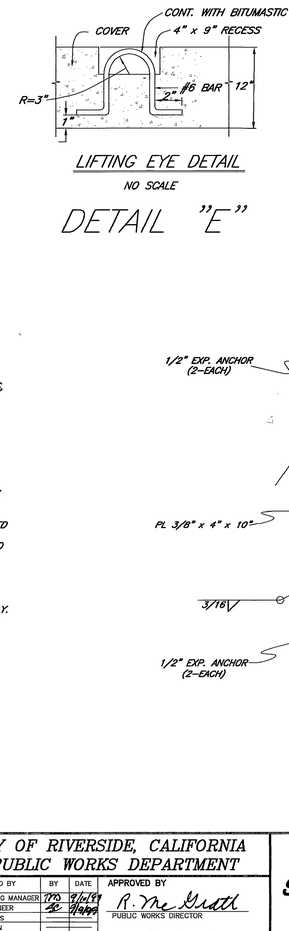
MAIN CONTROL CENTER (NEMA 3R)

LIFT STATION NOTES
GENERAL NOTES:
1. ALL HATCHES AND HATCH HARDWARE SHALL BE STAINLESS STEEL (NOTE ON PLANS)
2. THE INTERIOR OF THE GRAVITY MANHOLES NEED TO BE CORROSION PROTECTED
3. THE CONTRACTOR MUST SUBMIT MAINTENANCE AND SPARE PARTS INFORMATION FOR THE PUMPS, VALVES, ELECTRICAL AND INSTRUMETATION COMPONENTS. MECHANICAL COMPONENTS MUST HAVE SECTION VIEWS, EXPLODED VIEWS, AND A COMPLETE PARTS LISTING. THE NAME, ADDRESS AND TELEPHONE NUMBER FOR ALL SUPPLIERS MUST BE PROVIDED.
4. THE CONTRACTOR MUST PROVIDE SPARE PARTS.
5. THREE PHASE POWER IS REQUIRED FOR LIFT STATION (480 VAC)
6. THE THE PUMP MOTORS MUST BE SIZED NOT TO EXCEED THEIR RATED HORSE POWER AT ANY POINT ON THE PUMP CURVE.
7. THE CONTRACTOR MUST PROVIDE A 20 FOOT JUMPER FROM THE CONTROL PANEL TO THE GENERATOR FOR EMERGENCY POWER CONNECTION.
8. CONTRACTOR MUST PROVIDE COMPLETE AS-BUILT DRAWINGS OF THE ELECTRICAL SYSTEM. THIS INCLUDES THE GENERAL WIRING AND THE INTERNAL WIRING OF THE PANELS. THE CITY WILL REVIEW AND APPROVE THE DRAWINGS THE CONTRACTOR WILL MAKE ANY CHANGES AND SUBMIT FINAL SETS. COMPLETED RECORDED DRAWINGS ARE REQUIRED BEFORE FIANL PAYMENT IS RECEIVED BY THE CONTRACTOR.
9. ALL WIRES MUST BE INDIVIDUALLY TAGGED. THEY MUST BE TAGGED AT EVERY TERMINATION AND INSIDE EVERY JUNCTION BOX. WIRE NUMBERING AND TAGGING SYSTEMS MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.

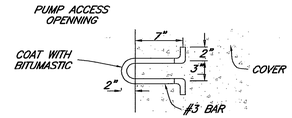
INSTRUMENTATION & CONTROL NOTES
1. CONTROL PANEL MUST BE CUSTOM BUILT TO THE CITY REQUIREMENTS.
2. CONTRACTOR MUST SUBMIT ALL WIRING DIAGRAMS FRO REVIEW BY THE CITY PRIOR TO ASSEMBLY.
3. CONTRACTOR MUST PROVIDE THE CITY THE OPPORTUNITY TO INSPECT PANEL DURING ASSEMBLY.
4. THE PANEL SHALL BE NEMA 4X.
5. PUMPS SHALL BE CONTROLLED USING A SQUARE D PLC. NO SUBSTITUTIONS. THIS IS REQUIRED FOR STANDARDIZATION.
6. CONTRACTOR MUST SUBMIT A COPY OF THE PLC PROGRAM FOR REVIEW AND APPROVAL. A FINAL FULLY ANNOTATED PROGRAM MUST BE PROVIDED WITH THE AS-BUILT DRAWINGS.
7. WET WELL LEVEL MUST BE MONITIRED USING A MILTRONICS MULTIRANGER ULTRASONIC LEVEL METER. NO SUBSTITUTIONS. THIS IS REQUIRED FOR STANDARDIZATION.
8. THE LIFT STATION SHALL BE EQUIPPED WITH ULTRASONIC FAILURE INDICATOR.
9. THE CONTROL PANEL SHALL BE EQUIPPED WITH ACROSS THE LINE STARTING SO THE PUMPS CAN BE OPERATED MANUALLY IN THE EVENT OF PLC OR OTHER EQUIPMENT FAILURE.
10. THE CONTROL PANEL MUST BE EQUIPPED WITH MOTOROLA MOSCAD RTU. THE RTU WILL COMMUNICATED WITH THE INTRAC BASE STATION AT THE RECLAMATION PLANT.
11. THE CONTRACTOR MUST CONNECT AND TEST THE RTU TO ESTABLISH COMMUNICATION WITH PLANT BASE. THE CITY WILL INTEGRATE THE RTU INTO PLANT SCADA CONTROL SYSTEM.

CONTROL EQUIPMENT LIST

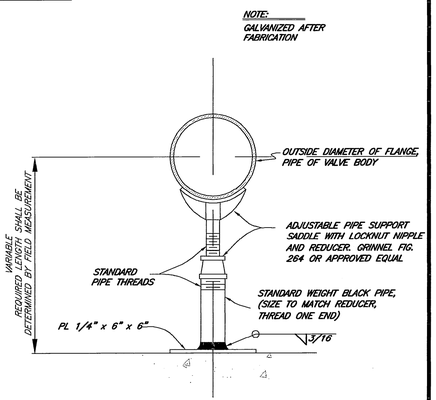
DESIGNATION	DESCRIPTION	QUANTITY
⊡	A.B. BULLETIN 800T QT 10 PUSH-TO-TEST	8
* PS1, PS2	A.B. BULLETIN 836-C2A, TYPE "C"	2
* MS1, MS2	MAG. STARTERS A.B.	2
* R1	P.B. KRPA11 AG120V. A.C.	1
* R2	P.B. KRPA14 AG120V. A.C.	1
* SS1, SS2, SS3	A.B. "H.O.A." BULLETIN 800T-J2A	3
SS4	LEAD LAG 800T H2B	1
* ETM 10-11-12	ENGLER 10 N L 7	3
* WARRICK NO.S 1, 2 & 3	INTRINSIC TYPE 27A1G0	3
* FLOAT SWITCH	ROTO FLOAT 53W 120	1
* TIME DELAY	OMRON 5TP TYPE	1



LIFTING EYE DETAIL
NO SCALE
DETAIL "E"

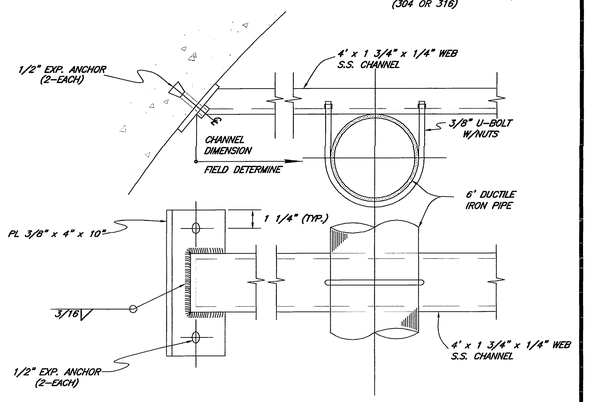


CABLE ANCHOR DETAIL
NO SCALE
DETAIL "F"



PIPE SUPPORT DETAIL
NO SCALE
DETAIL "D"

NOTE:
ALL PLATES, CHANNELS, BOLTS ETC. SHALL BE STAINLESS STEEL (304 OR 316)



TYPICAL PIPE SUPPORT BRACKET DETAILS
(3 REQUIRED)
NO SCALE
DETAIL "A"

CITY BUSINESS TAX CERTIFICATE NO. 062688 EXP. DATE 4/00

Land Development LDC Consultants
CIVIL ENGINEERING SURVEYING LAND PLANNING
5029 La Mart Dr. Suite E, Riverside, CA 92507
(909) 684-9615

REGISTERED PROFESSIONAL ENGINEER BRIAN G. ESQATE No. 21884 Exp. 9-30-01 CIVIL STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF:
BRIAN G. ESQATE 9/7/99
BRIAN G. ESQATE DATE
R.C.E.#: 21884 EXP.: 9-30-01

MARK	REVISIONS	APPR.	DATE

DESIGNED BY A.W. DRAWN BY J.B. CHECKED BY B.G.E.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. ENGINEERING MANAGER	[illegible]	9/14/99
PRINCIPAL ENGINEER	[illegible]	9/14/99
STREET SERVICES		
TRAFFIC DIVISION		
PARKS DEPARTMENT		
WASTE WATER		

APPROVED BY R. McGrath PUBLIC WORKS DIRECTOR
DATE 9-10-99

TRACT NO. 28774
SEWER PLAN AND PROFILE
APOSTLE LANE

S-1706

SHEET 4 OF 5

HORIZ. SCALE: AS SHOWN

JOB NO. 97149

PC-4109-S

INDEXED 9-16-99 GH

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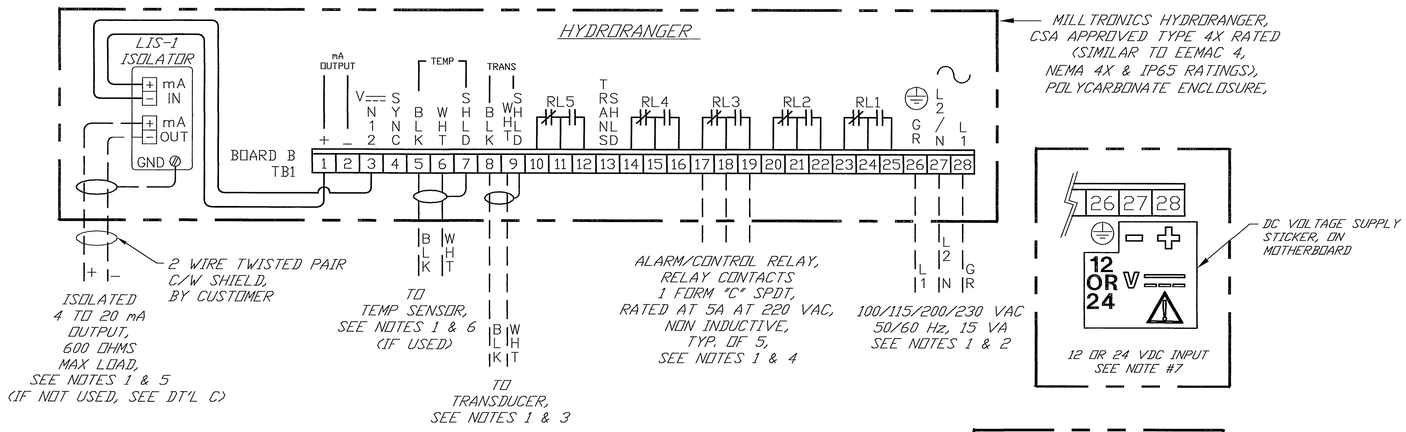
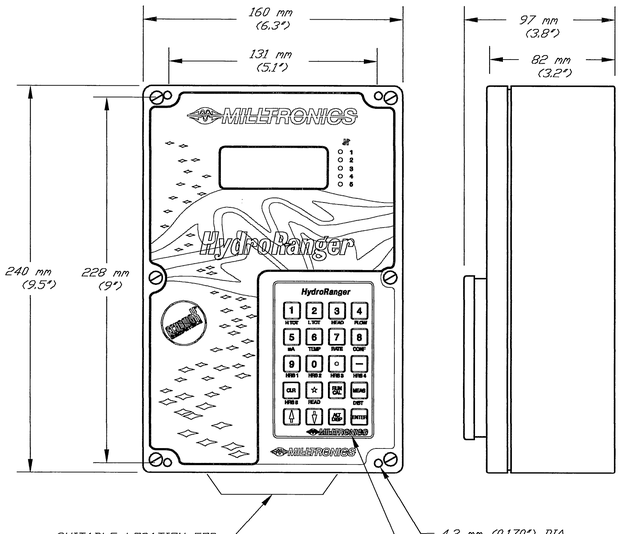
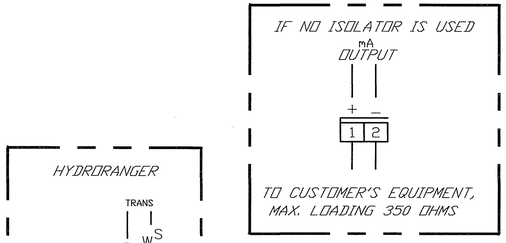


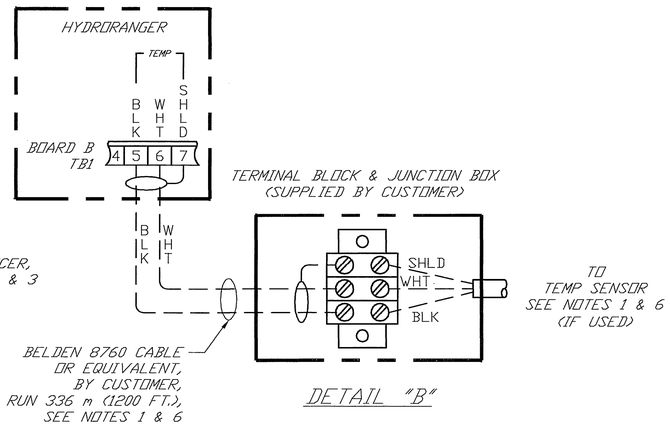
NOTES:

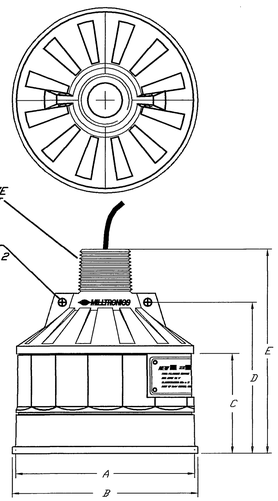
1) ——— DENOTES WIRING BY MILLTRONICS.
— — — DENOTES WIRING BY CUSTOMER.
ALL WIRING MUST BE DONE IN CONJUNCTION WITH APPROVED CONDUIT BOXES, AND FITTINGS AND TO PROCEDURES IN ACCORDANCE WITH ALL GOVERNING REGULATIONS.
2) SELECT CORRECT VOLTAGE VIA SELECTOR SW1 ON BOARD B, BY CUSTOMER.
3) TRANSDUCER CABLE, COAXIAL RG-62U OR EQUIVALENT, MUST BE RUN IN A GROUNDED METAL CONDUIT OR EMT WITH NO OTHER ELECTRICAL CIRCUITS. GROUND SHIELD AT THE MULTIRANGER ONLY. FOR CABLE RUNS LONGER THAN THE TRANSDUCER CABLE SEE DETAIL "A". INSULATE SHIELD AT JUNCTIONS TO PREVENT INADVERTENT GROUNDING.
4) CONTACTS OF RELAYS SHOWN IN DE-ENERGIZED ALARM CONDITION. ALL RELAYS ARE CERTIFIED FOR USE IN EQUIPMENT WHERE SHORT CIRCUIT CAPACITY OF THE CIRCUITS IN WHICH THEY ARE CONNECTED IS LIMITED BY FUSES HAVING RATINGS NOT EXCEEDING THE RATINGS OF THE RELAYS.
5) ROUTE 4-20 mA CABLE IN A SEPARATE CONDUIT, ENTERING THE ENCLOSURE AS NEAR AS POSSIBLE TO THE ISOLATOR. KEEP WIRING AS SHORT AS POSSIBLE. DO NOT ROUTE CABLE ALONG TERMINAL BLOCK. KEEP SHEILD INTACT UP TO OUTPUT TERMINALS.
6) CHANGE SW2 POSITION IF USING A SEPARATE TEMPERATURE SENSOR. TEMPERATURE SENOR CABLE, BELDEN 8760 OR EQUIVALENT, MAY BE RUN IN CONDUIT WITH THE TRANSDUCER CABLE. FOR CABLE RUNS LONGER THAN THE TEMPERATURE SENSOR CABLE SEE DETAIL "B". CHANGE SW2 POSITION BACK IF THE TEMPERATURE SENSOR IS REMOVED.
7) CUSTOMER TO VERIFY THAT THE DC INPUT VOLTAGE CONFORMS TO THE VOLTAGE STATED ON THE INPUT VOLTAGE STICKER, (ON MOTHERBOARD).
8) FOR FURTHER INFORMATION REFER TO THE HYDRORANGER INSTRUCTION MANUAL OR CONTACT THE NEAREST MILLTRONICS REPRESENTATIVE.

SEE INSTRUCTION MANUAL FOR PROPER OPERATION.



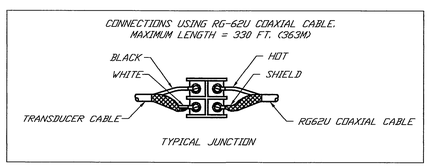


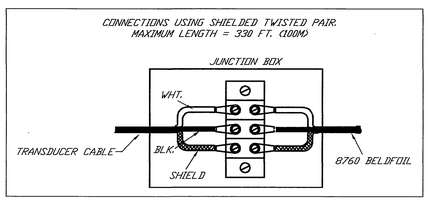




STANDARD TRANSDUCER

1. TRANSDUCER CABLE CONNECTION MAY BE SOLDERED OR ASSEMBLED ON A TERMINAL STRIP.
2. ALL PULL BOXES, CONDUITS, AND JUNCTION BOXES MUST BE GROUNDED TO THE CONDUIT.
3. TRANSDUCER CABLE MUST BE RUN IN A GROUNDED CONDUIT SYSTEM WITH NO OTHER ELECTRICAL CIRCUITS.
4. ROUTE CONDUIT FOR LOWEST EMF INTERFERENCE FROM MOTOR DRIVES, POWER BUSSES, ETC.
5. OBSERVE STANDARD WORK PRACTICES, THE NEC, AND LOCAL REGULATIONS.





TRANSDUCER TYPE	DIMENSIONS [METRIC] 'A'	'B'	'C'	'D'	'E'	'F'	THREAD SIZE	CABLE TYPE
XCT-8	3.2 [81.3]	3.45 [87.6]	2.6 [66.0]	3.6 [91.4]	4.8 [121.9]	0.15 [3.8]	1"NPT	LR29248
XCT-12	4.5 [114.3]	4.75 [120.7]	2.6 [66.0]	3.85 [97.8]	5.17 [131.3]	0.20 [5.1]	1"NPT	LR29248
XPS-10	3.2 [81.3]	3.45 [87.6]	2.6 [66.0]	3.6 [91.4]	4.8 [121.9]	0.15 [3.8]	1"NPT	YR40154
XPS-15	4.5 [114.3]	4.75 [120.7]	2.6 [66.0]	3.85 [97.8]	5.17 [131.3]	0.20 [5.1]	1"NPT	YR40154
XPS-30	6.6 [167.6]	6.92 [175.8]	4.58 [116.3]	6.4 [162.6]	7.7 [195.6]	0.20 [5.1]	1.5"NPT	YR40154
XPS-40	7.8 [198.1]	8.10 [205.7]	5.5 [139.7]	7.6 [193.0]	9.15 [232.4]	0.30 [7.6]	1.5"NPT	YR40154

MILLTRONICS HYDRORANGER

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TWO WORKING DAYS BEFORE YOU DIG

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(909) 684-9515

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PREPARED UNDER THE SUPERVISION OF:
BRIAN G. ESCATE 6/29/99
BRIAN G. ESCATE DATE
R.C.E.#: 21884 EXP.: 9-30-01

MARK	REVISIONS	APPR.	DATE

DESIGNED BY A.W. DRAWN BY J.B. CHECKED BY B.G.E.

CITY OF RIVERSIDE, CALIFORNIA
PUBLIC WORKS DEPARTMENT

APPROVED BY	BY	DATE
P.W. ENGINEERING MANAGER	[illegible]	7/6/99
PRINCIPAL ENGINEER	[illegible]	9/9/99
STREET SERVICES		
TRAFFIC DIVISION		
PARKS DEPARTMENT		
WASTE WATER	[illegible]	10/28/99

APPROVED BY R. McGrath PUBLIC WORKS DIRECTOR
DATE 9-10-99

TRACT NO. 28774
SEWER PLAN AND PROFILE
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HORIZ. SCALE: AS SHOWN

S-1706
SHEET 5 OF 5
JOB NO. 97149

PC-4109-S

INDEXED 9-16-99 GH

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