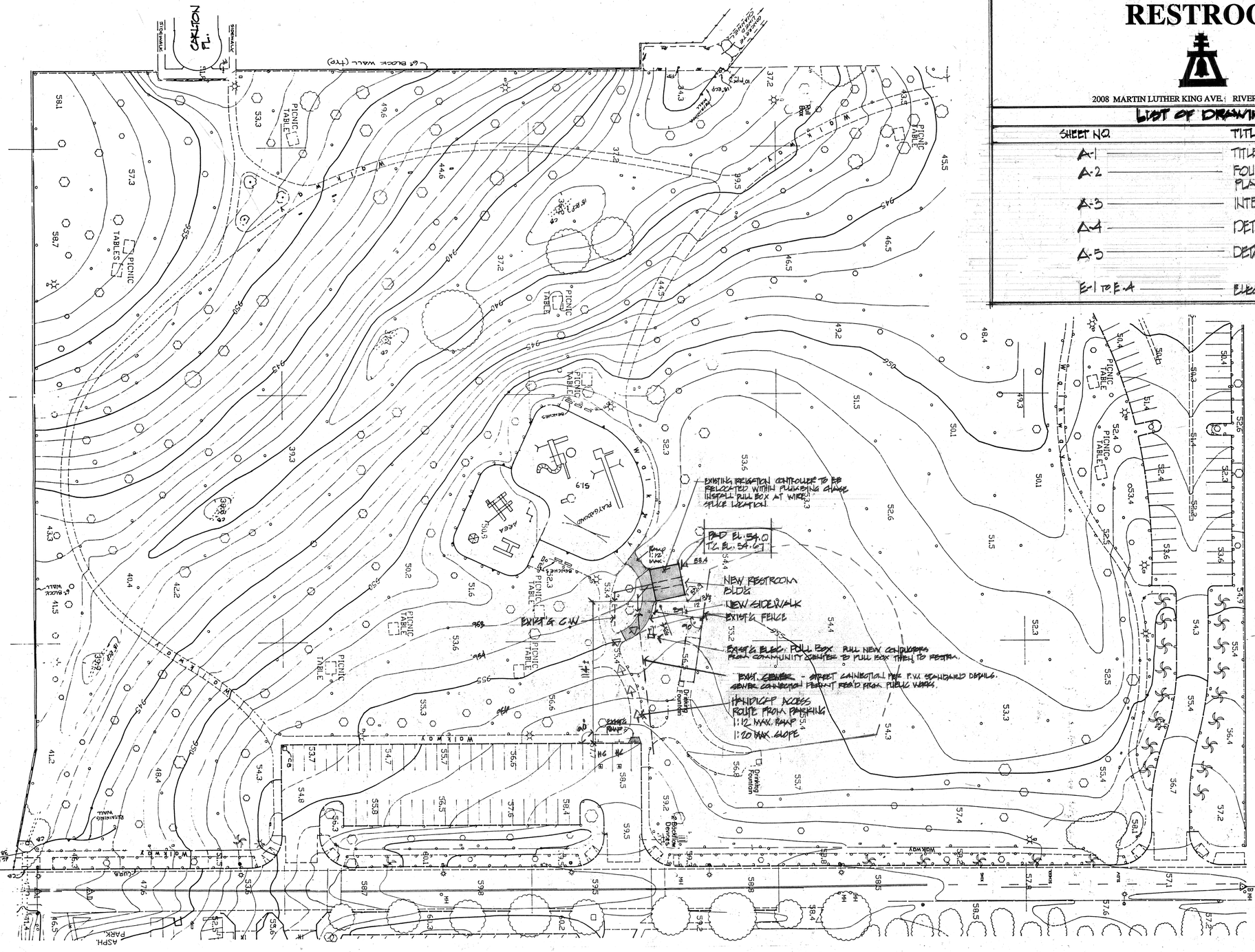
BORDWELL PARK RESTROOM

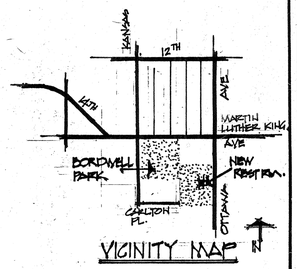
2008 MARTIN LUTHER KING AVE. | RIVERSIDE | CALIFORNIA

LIST OF DRAWINGS

SHEET NO.	TITLE
A-1	TITLE SHEET & SITE PLAN
A-2	FOUNDATION PLAN, FLOOR PLAN, ROOF PLAN & ROOF FRAMING, SECTIONS, ELEV.
A-3	INTERIOR ELEV., ROOM FIN. SCH., DETAILS
A-4	DETAILS, NOTES & PLUMBING
A-5	DETAILS, NOTES
E-1 TO E-4	ELECTRICAL (BY DREAM ENG.)



TYPE OF CONSTRUCTION - V
OCCUPANCY — B
FLOOR AREA — 625 SF



VICINITY MAP

OTTAWA AVE.

SITE PLAN

SCALE: 1" = 40' - 0"

NORTH

NEW

NOTE:
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES
2. CONTRACTOR SHALL OBTAIN PARK & RECREATION DEPARTMENT APPROVAL PRIOR TO FINAL SITING OF RESTRM BLDG IN RELATION TO EXIST'G CONDITIONS
3. PROVIDE MIN. 2% DRAINAGE AWAY FROM BLDG.

REVISIONS	BY

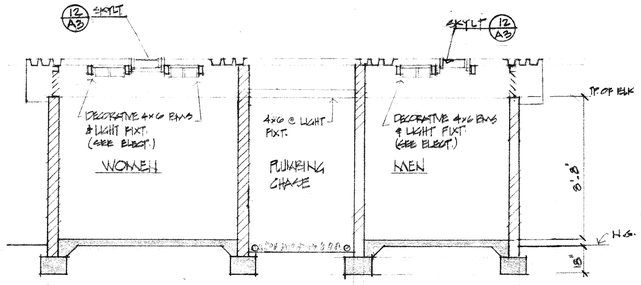
THESE DRAWINGS, DESIGNS AND IDEAS SHALL NOT BE REPRODUCED AND/OR USED WITHOUT THE WRITTEN CONSENT OF L.M. TAKITA ARCHITECT.

city of riverside
park & recreation
department
3900 MAIN ST. RIVERSIDE CALIFORNIA 92522
(909) 715-3464

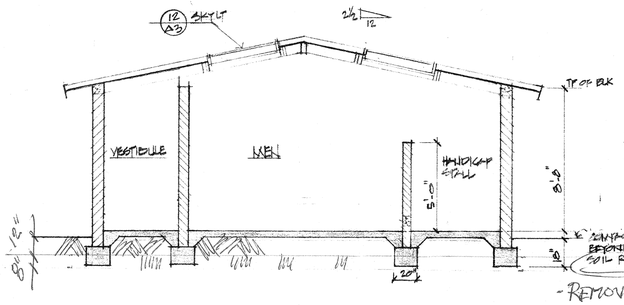
NEW BORDWELL PARK RESTROOM
CITY OF RIVERSIDE PARK & RECREATION DEPARTMENT
2008 MARTIN LUTHER KING AVE. | RIVERSIDE CALIFORNIA

L.M. TAKITA, ARCHITECT
ARCHITECTURE / PLANNING
23121 Plaza Pointe Dr., Ste. 104, Laguna Hills, Ca. 92653 - (714) 586-2719

Date 9/27/96
Scale
Drawn
Job
Sheet A-1 Of 5 Sheets

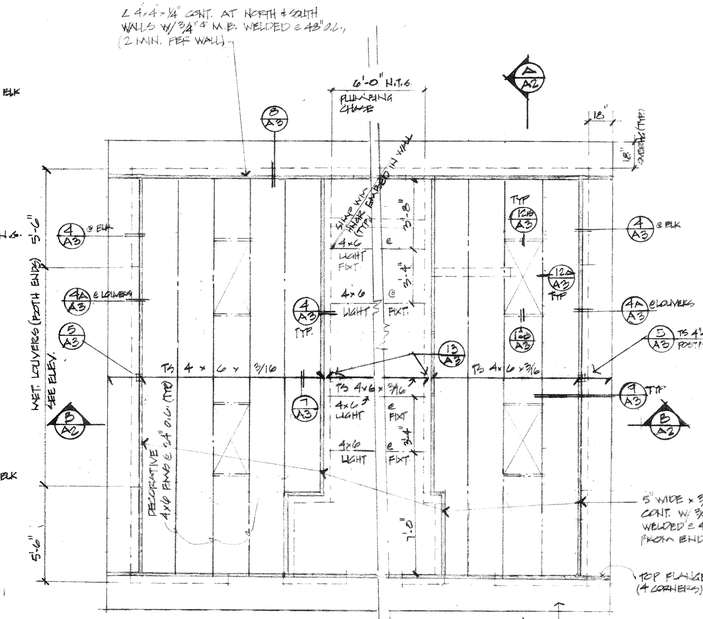


B TYPICAL SECTION
SCALE: 1/4"=1'-0"



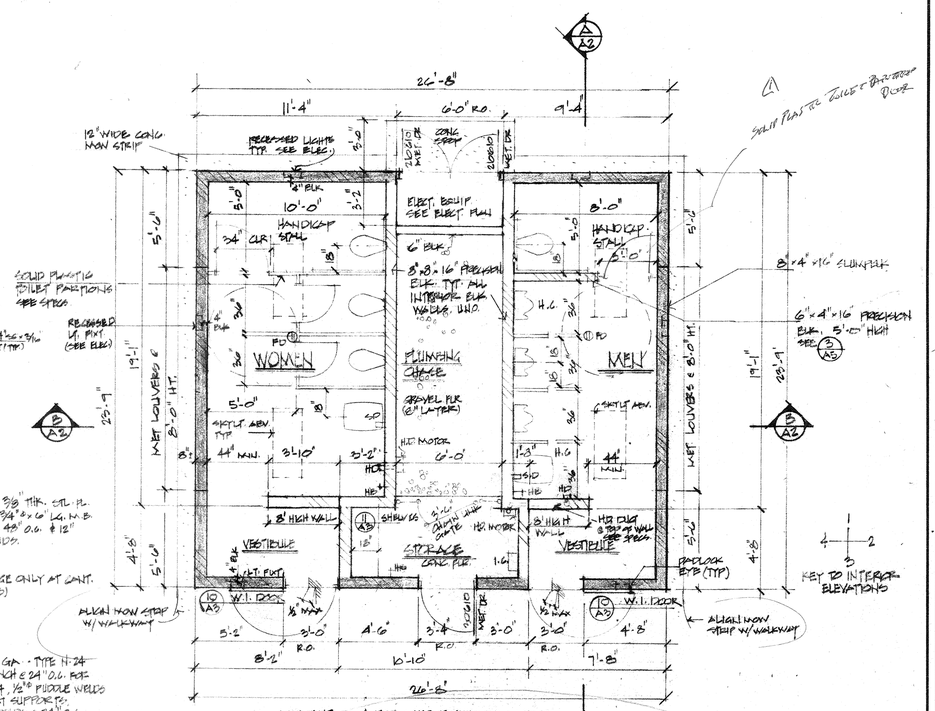
A TYPICAL SECTION
SCALE: 1/4"=1'-0"

- REMOVE SOD
- REMOVE 18" SOIL
- SCARIFY 8" SOIL
- CONSTRUCT STRUCTURAL PAD BY COMPACTING 8" SCARIFICATION 2 LIFTS TO FILL 12" BACKFILL GRADE



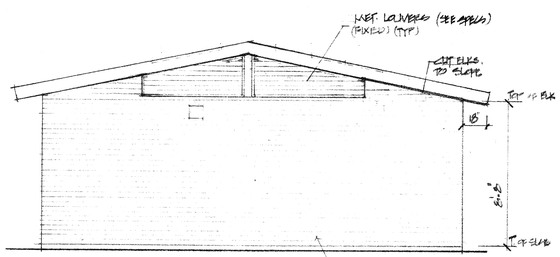
NORTH
ROOF PLAN & ROOF FRAMING
SCALE: 1/4"=1'-0"

METAL ROOF DECKING: INVERTED VERCO 18 GA. TYPE H-24 DECK W/ BUTTON PUNCH @ 24" O.C. PER SEAM. ATTACH W/ #4 1/2" PUDDLE WELDS PER PANEL ENDS & AT SUPPORTS AND 1/2" PUDDLE WELDS @ 24" O.C. FOR MARGINAL WELDS

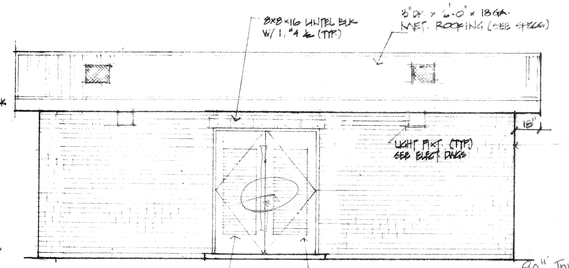


FLOOR PLAN
SCALE: 1/4"=1'-0"

8"x4"x16" SLUMPBLK. (SEE SPECS)
8"x8"x16" PRECISION BLK. & INTERIOR U.N.O. (SEE SPECS)



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



NORTH ELEVATION
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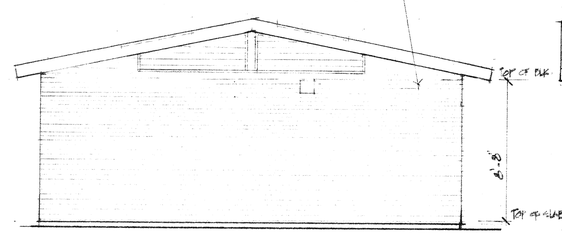
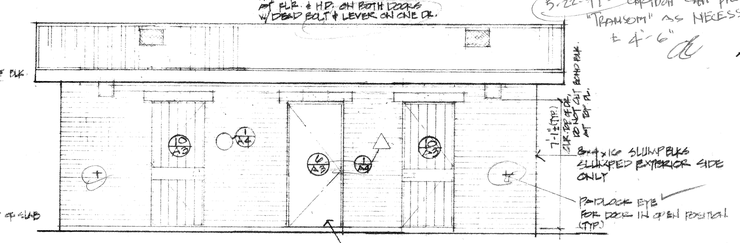
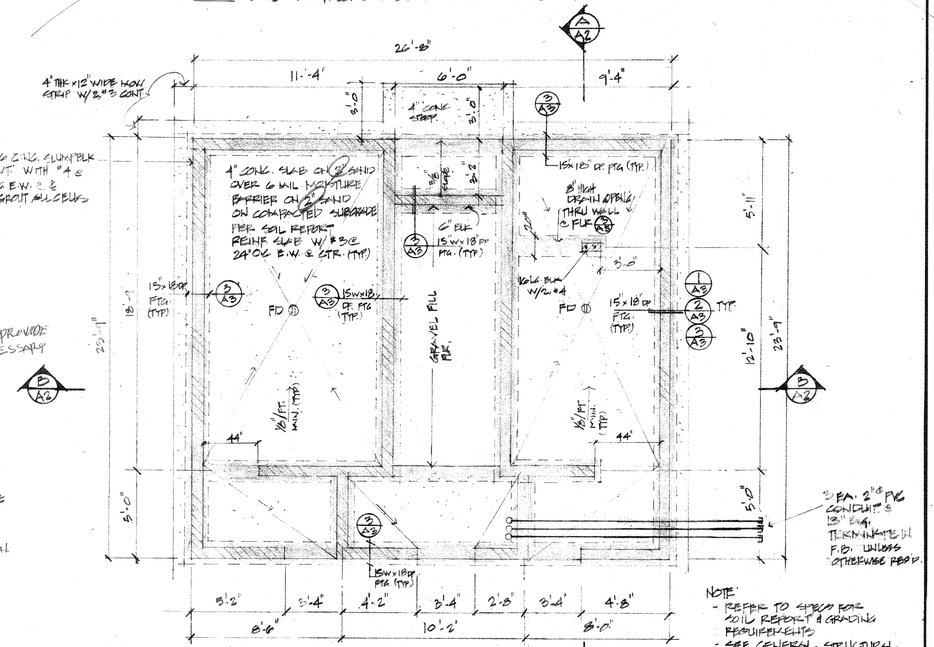


EAST ELEVATION
SCALE: 1/4"=1'-0"



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



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

NOTE:
- REFER TO SPECS FOR SOIL REPORT & GRADING REQUIREMENTS
- SEE GENERAL STRUCTURAL NOTES SHT. S-1

BID SET
DEC 18 1996

REVISIONS	BY

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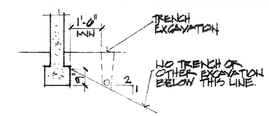
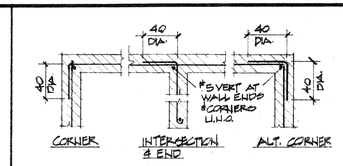
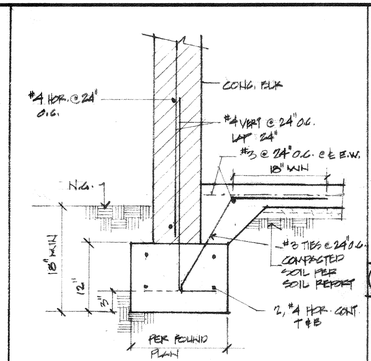


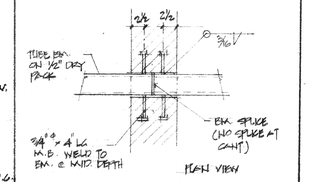
1 PIPES & TRENCHING @ FOOTING



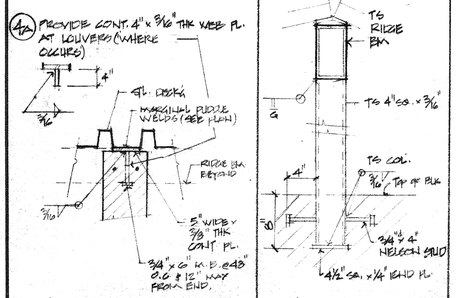
2 REINFORCING @ CORNERS, INTERSECTIONS & END



3 TYPICAL BLK. WALL @ FOOTING

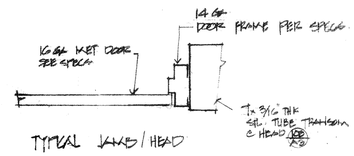


13 EMB. @ INTERIOR BLK. WALL



4 TYP. TOP PL. @ GABLE END WALLS

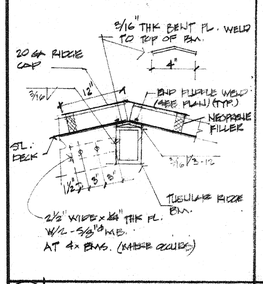
5 POST @ RIDGE BM.



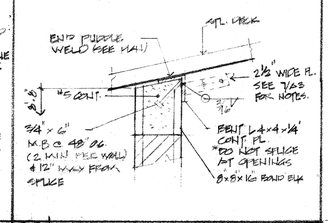
TYPICAL JAMB / HEAD

NOTE: CONTRACTOR SHALL PROVIDE SHOP DRAWINGS PRIOR TO CONST.

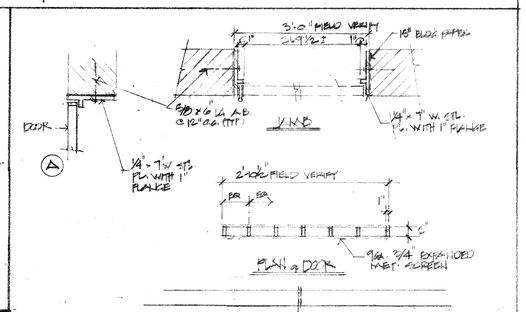
6 METAL DOOR

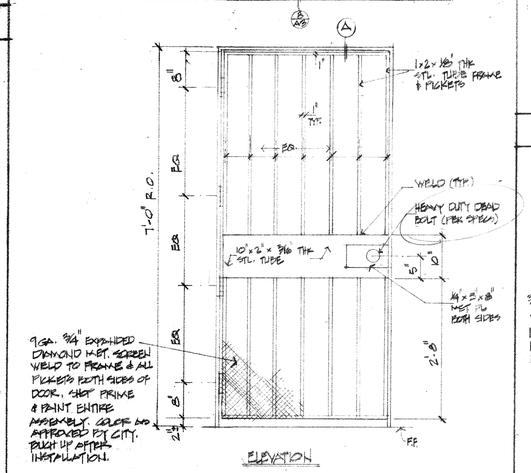


7 TYPICAL RIDGE

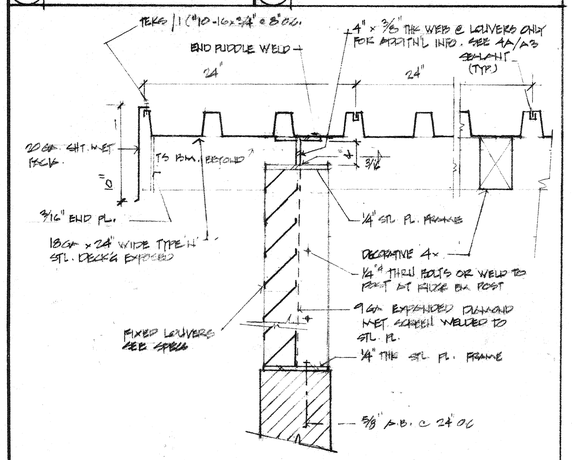


8 TYPICAL TOP PL.

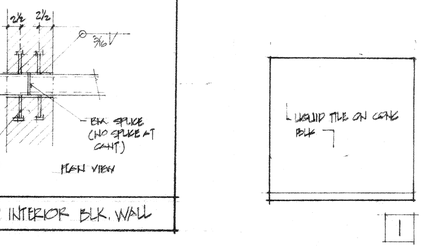


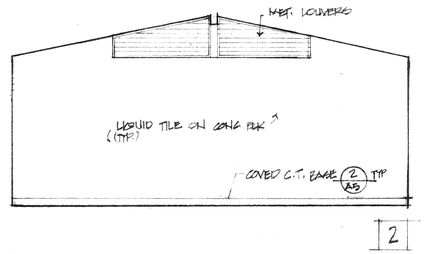


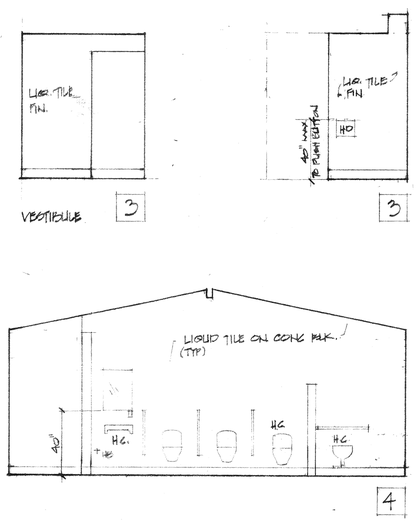
10 TYPICAL W. I. DOOR



9 TYPICAL ROOF OVERHANG & MET. LOUVERS

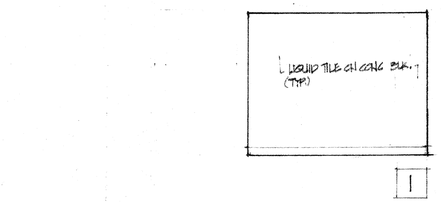


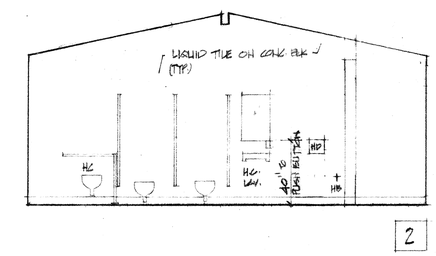


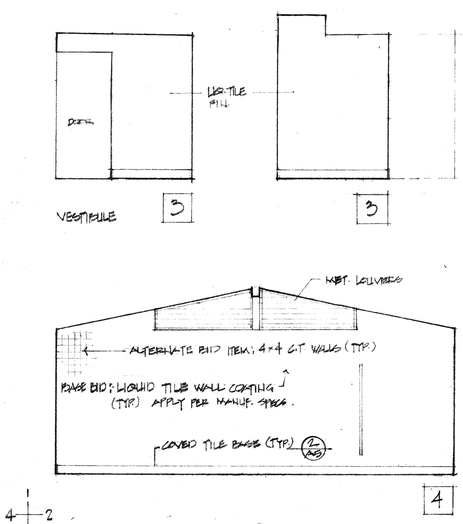


4 1 2 3 PLAN KEY

MEN | INTERIOR ELEVATIONS

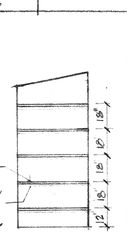




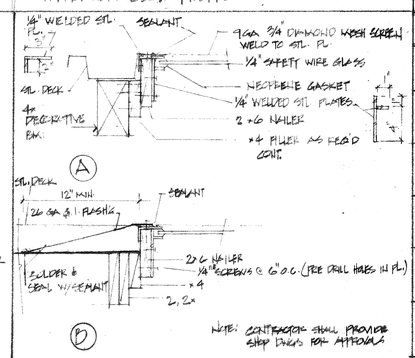


4 1 2 3 PLAN KEY

WOMEN | INTERIOR ELEVATIONS



TYPICAL ELEVATION



NOTE: CONTRACTOR SHALL PROVIDE SHOP DWGS FOR APPROVALS

11 STORAGE SHELVES | 12 SKYLIGHT

ROOM FINISH SCHEDULE

ROOM	FLOOR	WALLS 1	WALLS 2	WALLS 3	WALLS 4	CEILING	REMARKS
WOMEN	NAT. CONC. TROWEL FIN. C.T. BASE COVED	BLK. W/ LIQUID TILE COATING	BLK W/ LIQUID TILE COATING	BLK. W/ LIQUID TILE COATING	BLK. W/ LIQUID TILE COATING	OPEN BM.	SEE SPECS FOR ALT/ADD BID ITEMS FOR WALLS & FLRS. COVED BASE FLUSH W/ FLR. (2/A5)
MEN	"	"	"	"	"	"	"
VESTIBULE	"	"	"	"	"	"	"
STORAGE	NAT. CONC.	CHAIN LINK DR.	NAT. BLK	NAT BLK	NAT. BLK	"	
FLUMES CHASE	8" THK PER STRUCT.	BLK	"	CHAIN LINK DR.	"	"	

NOTE: FLRS SHALL HAVE SLIP RESISTANT FINISH.

4 1 2 3 KEY TO INTERIOR ELEVATIONS

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DEC 18 1996

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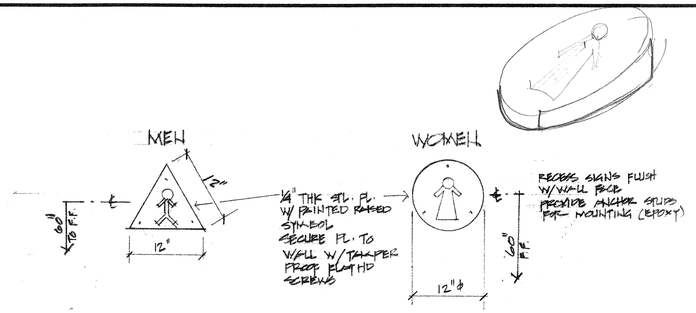
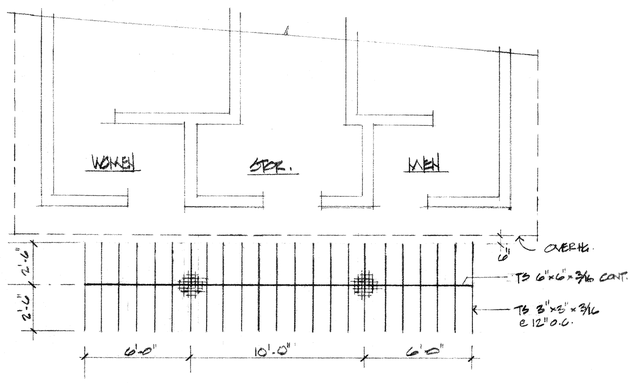
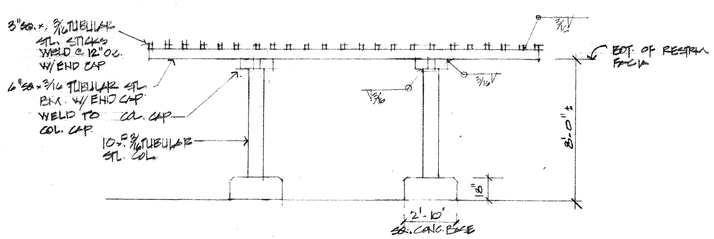


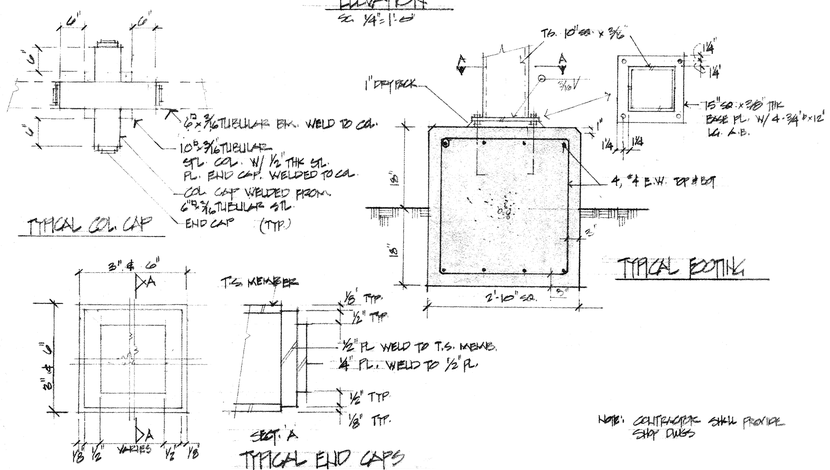
1 RESTROOM SYMBOLS (CONSTRUCT PER HANDICAPPED CODE)



PLAN
SC. 1/4"=1'-0"



ELEVATION
SC. 1/4"=1'-0"



NOTE: CONTRACTOR SHALL PROVIDE SHOP DWGS

2 METAL TRELLIS (ADDITIVE BID ITEM)

PLUMBING FIXTURE SCHEDULE

SYM	FIXTURE	CW	HW	W	V	T	REMARKS
WC A4	WATER CLOSET	1"		3"	2"	INT.	VITREOUS CHINA SEE SPECS MOUNT 1 FOR H.C.
L A4	LAVATORY	1/2"		2"	2"	2"	"
U A4	URINAL	3/4"		2"	2"	2"	"
FD A4	FLOOR DRAIN			4"	2"	4"	SEE SPECS
HB A4	HOSE BIBB	3/4"					

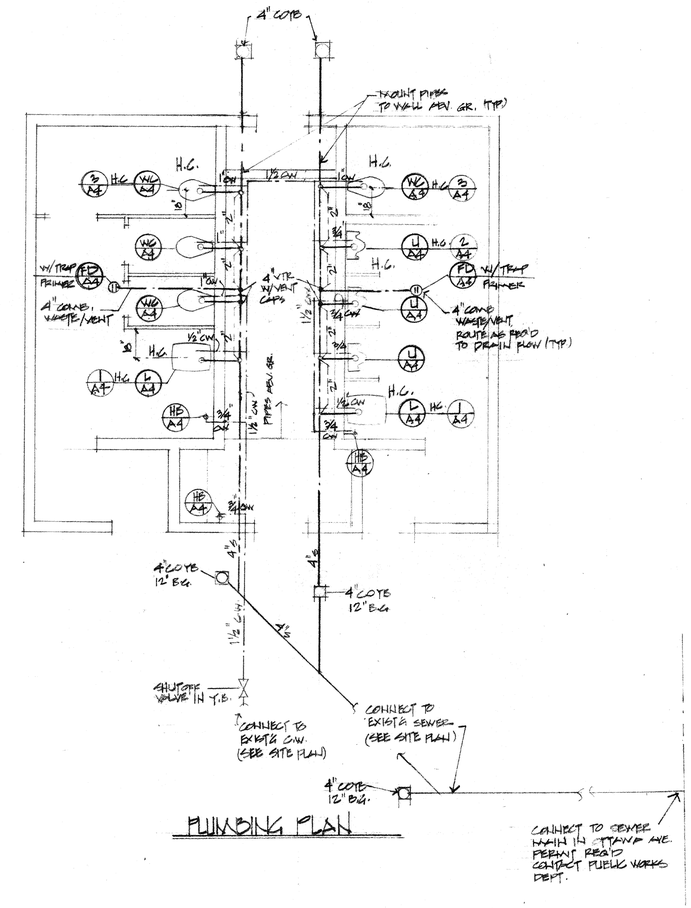
NOTES:
1. ALL VTR SHALL BE 4"ø
2. SEE SPECS FOR ADDITN'L INFO.

PLUMBING SYMBOLS

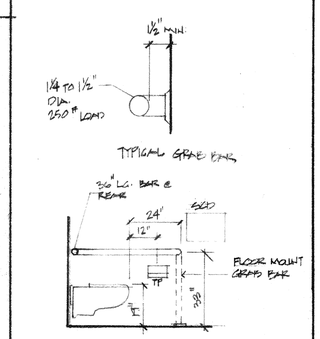
	S or W	soil or waste abv. flr.
	S or W	soil or waste below flr.
	V	vent
	CW	cold water
	FCO/COTG	flr cleanout/cleanout to grade
	COYB	cleanout in yard box
	WCO	wall cleanout
	SOV	shutoff valve
	U	union
	HB	hose bibb
	HW	hot water
	FD	floor drain

PLUMBING NOTES

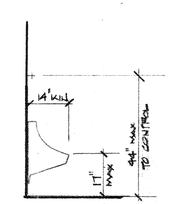
1. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES.
2. CONTRACTOR SHALL PAY FOR ALL PERMITS AND FEES
3. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES PRIOR TO BID AND CONSTRUCTION AND NOTIFY THE CITY OF ANY DISCREPANCIES REGARDING EXISTING CONDITIONS.
4. CAST IRON SOIL PIPING SHALL BE 'NO - HUB' TYPE PIPING.
5. COLD WATER PIPING SHALL BE TYPE 'L' COPPER.
6. MOUNT ALL HANDICAPPED FIXTURES PER TITLE 24 REQUIREMENTS
7. PROVIDE DIELECTRIC UNIONS AT ALL DISSIMILAR METAL PIPE CONNECTIONS.
8. CONTRACTOR SHALL VERIFY WATER PRESSURE AND PROVIDE PRESSURE REDUCING VALVE AS REQUIRED FOR THE PROPER OPERATION OF FIXTURES.
9. ALL WASTE LINES SHALL HAVE 22 1/2 DEGREE BENDS.
10. CLEAN-OUTS SHALL BE 4" MIN.
11. VTR SHALL BE INDIVIDUAL VENT LINES, EACH EXTENDED THROUGH THE ROOF PER CODE. DO NOT MANIFOLD.



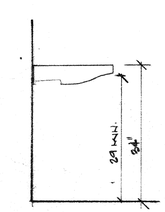
PLUMBING PLAN



3 HANDICAPPED W.C.



2 HANDICAPPED URINAL



1 HANDICAPPED LAVATORY

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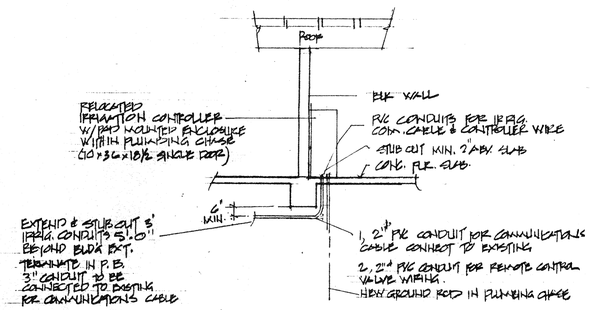


1 TYPICAL SECTION @ IRRIGATION CONTROLLER

GENERAL STRUCTURAL NOTES

EARTHWORK AND FOUNDATION

A. Soils Report as prepared by: GEO-TEK
Dated: 5/21/96

B. Refer to the soils report and all amendments there of for all site preparation and foundation requirements.

C. The contractor shall take all necessary measures to fully protect adjacent properties.

D. All site preparation such as grading and compaction of the fill shall be performed under the soil engineer's supervision. The contractor shall follow the soil engineer's recommendations as included in the latest soil report and any additional recommendations during construction.

E. All footing excavations shall be inspected and approved by the soils engineer prior to placing of concrete.

F. Backfill shall not be placed until supporting foundations, walls, and slab have attained sufficient strength to support the applied lateral soil pressures.

G. No pipes and conduits shall extend under isolated column footing or under continuous wall footing, grade beams etc. unless specifically detailed.

H. All planters adjacent to the exterior walls shall be lined with water proofing membrane and the excess water shall be drained away from the walls.

I. All footings shall bear on natural undisturbed soil as per code.

CONCRETE:

A. Cement shall be Type II conforming to ASTM C-150 unless otherwise required by the soil engineer due to soil conditions.

B. Water shall be clean, fresh and suitable for concrete use, meeting requirements of ASTM C94.

C. Aggregates shall conform to ASTM C33 1 1/2" max. typical and 3/4" max. for 4" thick slabs. Aggregates for lightweight concrete shall conform to ASTM C330 (expanded shale, clay slate, slag, or manufactured lightweight aggregate, rocklite or ridgelite may be used)

D. All concrete shall achieve a minimum strength of 2,500 psi in 28 days unless noted otherwise.

E. Minimum concrete protection for reinforcing steel shall be as follows:

Concrete poured against soil:	3"
Concrete formed against soil:	2"
Exterior exposed concrete faces:	2"
Floor slab on grade:	1"
Beams and columns (not exposed) clear cover to ties:	1 1/2"
Beams and columns (not exposed) clear cover to main bars:	2"

MASONRY:

A. Concrete block : ASTM C90 Grade N , solid grouted ~~unless~~, medium wt. aggregate.

B. Mortar: One part portland cement and from 1/4 to 1/2 part lime putty or hydrated lime, and damp loose sand not less than three times the sum of the volume of cement and lime used. Minimum compressive strength of 1800psi at 28 days. Type S, ASTM C270.

C. Grout: Per ASTM C 476 minimum strength of 2000 psi at 28 days
1 part Portland cement
2 1/2 parts sand
2 parts pea gravel
water to yeild 8 to 10 inch slump

D. Inspection: Special inspection by a registered deputy inspector is required where called for on the plans.

E. All masonry shall be constructed in running bond pattern u.n.o. Cells shall be in vertical alignment to provide a minimum unobstructed core of 3"x3". Dowels from footings shall be set to align with cores containing reinforcing.

F. All cells containing ~~reinforcing, anchors or inserts~~ shall be filled solid with grout, typical except as noted on plans. ~~At retaining and basement walls solid grout all cells.~~

G. Concrete surfaces shall be cleaned of all laitance prior to setting blocks. Wet set first course of masonry.

H. Provide keyed expansion joints at 30'-0" O.C. maximum with horizontal reinforcing continuous across joint. Location of joints to be approved by structural engineer.

I. Steel bars shall conform to ASTM A615 and be Grade 40 u.n.o.

J. Dowels between footings and walls shall be the same grade, size, and spacing or number as the vertical reinforcing, respectively.

K. Hold vertical reinforcing in position at top and bottom and at intervals not exceeding 192 bar diameters in masonry walls.

L. Reinforcing bars shall be spliced with a minimum lap of 40 bar dia. lap u.n.o.

M. All reinforcing bar bends shall be made cold.

N. All anchor bolts and inserts shall be secured in place prior to placing concrete or grouting masonry.

O. All grout shall be poured in lifts of 4'-0" or less unless highlift grouting is specified on drawings. Stop grouting 1 1/2" below last course to make a key at cold joint between two lifts of grout.

STRUCTURAL HARDWARE AND ACCESSORIES:

A. Anchor bolts shall be manufactured of ASTM A 307 steel.

B. Shotpins shall be ICBO approved.

C. Expansion bolts (wedge anchors) shall be ICBO approved and accepted by the governing building department.

D. Fabricated accessories shall be in compliance with the section under metals.

E. The installation of drilled in dowels and bolts other than expansion anchors shall be installed and inspected as per code.

F. Epoxy Resin anchors shall be ICBO approved and accepted by the governing building department.

G. Anchor bolts shall be installed to meet the minimum concrete edge distance requirement

REINFORCING STEEL:

A. Steel bars shall conform to ASTM A615 and be grade 40, except as noted otherwise on the plans.

B. Tie wire shall be 16 gauge, black annealed conforming to ASTM A-82.

C. Wire fabric shall conform to ASTM A185 for smooth wire fabric and ASTM A-497 for deformed wire fabric.

D. Minimum splice lengths, shall be 40 bar diameters (24" min.) unless detailed otherwise.

E. All reinforcement shall conform to the latest edition of ACI Code.

F. All reinforcement shall be supported by aluminum chairs or concrete. No brick or pourous material shall be used to support reinforcing bars.

G. Location of splices not specifically detailed shall be subject to review and approval by the structural engineering of record.

STRUCTURAL METALS

A. All structural steel shall be fabricated and erected according to the latest edition of AISC specifications.

B. All shop welding and fabrication shall be done in the shop of a city approved steel fabricator.

C. All welding shall be performed by operators who have been recently qualified by the American Welding Society. Prior to welding the "Carbon Equivalent" (CE) of steel shall be determined.

D. Welds shall be made with ASTM A-233, E-70 series electrodes for steel to steel connections. Welding of reinforcing bars shall be done with electrodes as approved by the testing laboratory. Welding to be done per latest specification of the American Welding Society Structural Welding Codes for Steel, Sheet Metal and Reinforcement.

E. Use all means necessary to protect structural steel before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage immediately make all repairs and replacements necessary to the approval of and at no additional expense to the owner.

F. Structural steel shapes and plates shall meet the requirements of ASTM-A36.

G. Pipe columns shall conform with ASTM A53 Grade B. Structural tubing shall conform with ASTM A500 Grade B.

H. High-strength bolts shall comply with ASTM A-325 N. Bearing type connection with threads included in shear plane. Other machine bolts and anchors shall meet the requirements of ASTM A-307.

I. Holes for bolts in structural steel shall be drilled or punched. Burning of holes shall not be permitted.

J. All structural steel shapes shall be primed with a rust resistant primer before shipment to the project site.

K. After erection is complete touch-up all shop priming coats damaged during transportation and erection.

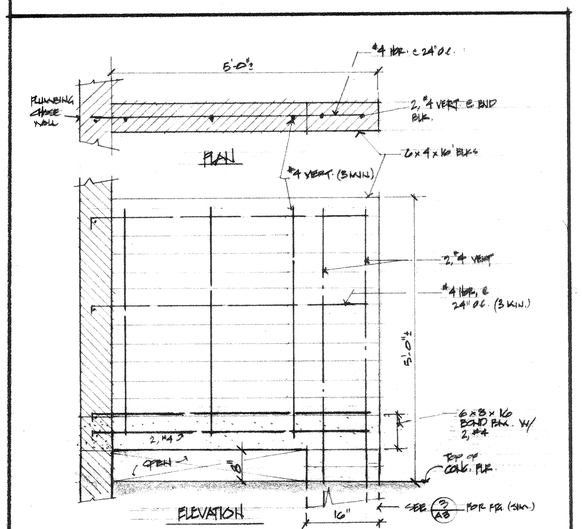
L. All beams and columns shall be of unspliced lengths except as shown on drawings. No welded splices are permitted.

M. No holes other than those specially detailed shall be allowed through structural steel members.

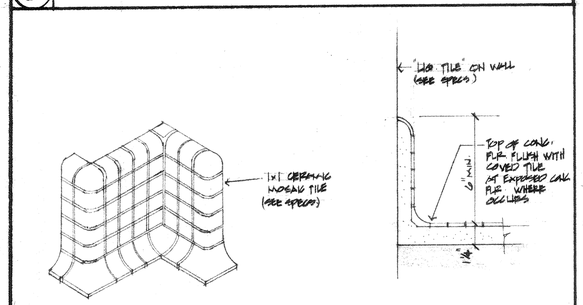
N. Continuous inspection is required for all field welds, welding rebar, and full penetration welds. All reinf. steel welding requires cont. inspection by A.R.D.B.I.

O. Drypack and grout under base plates and other locations shall be I.C.B.O. approved non shrink grout. Minimum strength same as supporting concrete.

P. Reinforcing steel shall extend minimum 24" around all corners and into intersections.



3 TYPICAL TOILET SCREEN WALL (MEN)



2 TYPICAL CERAMIC TILE BASE

BID SET

DEC 18 1996

REVISIONS	BY

THESE DRAWINGS, DESIGNS AND IDEAS SHALL NOT BE REPRODUCED AND/OR USED WITHOUT THE WRITTEN CONSENT OF L.M. TAKITA ARCHITECT.

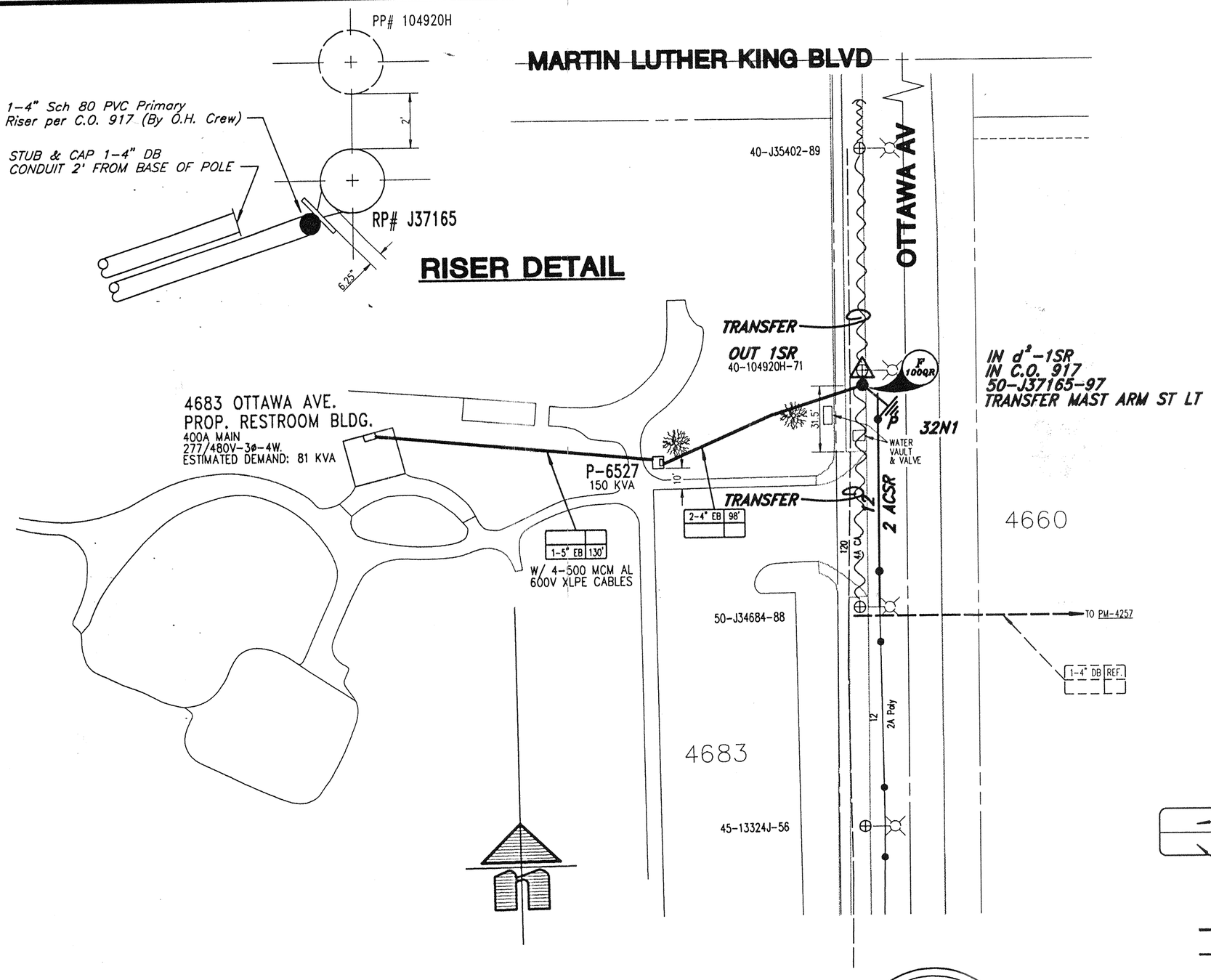
city of riverside
park & recreation
department
3900 MAIN ST. RIVERSIDE, CALIFORNIA 92522
(909) 715-3464

NEW BORDWELL PARK RESTROOM
CITY OF RIVERSIDE PARK & RECREATION DEPARTMENT
2008 MARTIN LUTHER KING AVE.: RIVERSIDE CALIFORNIA

L.M. TAKITA, ARCHITECT
ARCHITECTURE / PLANNING
23121 Plaza Pointe Dr., Ste. 104, Laguna Hills, Ca. 92653 . (714) 586-2719

Date 9/27/96
Scale
Drawn
Job
Sheet A-5 Of 5 Sheets

CONTRACTOR



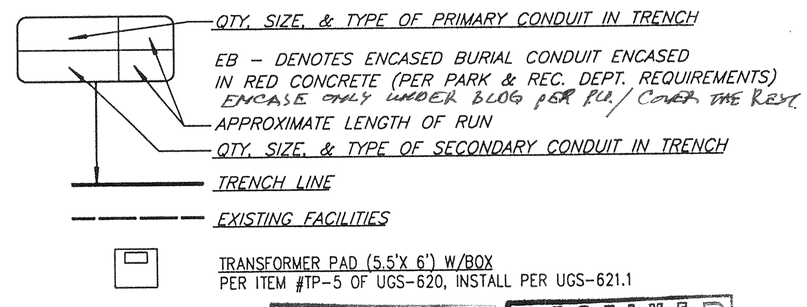
DEVELOPER PARTICIPATION

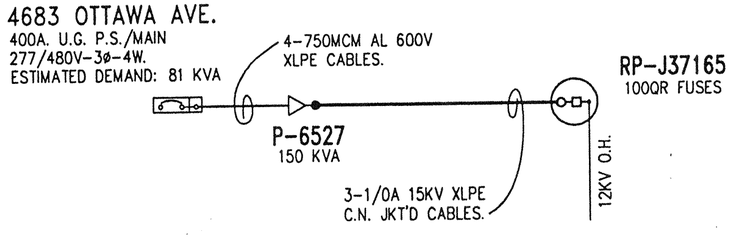
1. ALL FACILITIES INSTALLED BY ~~DEVELOPER~~ SHALL BE INSPECTED AND APPROVED BY THE DEPARTMENT CONSTRUCTION INSPECTOR (PH. 782-5429). ANY CHANGES SHALL BE APPROVED BY THE DEPARTMENT PRIOR TO EXECUTION. THE ~~DEVELOPER~~ SHALL BE RESPONSIBLE FOR COORDINATING ALL PHASES OF CONSTRUCTION WITH THE DEPARTMENT CONSTRUCTION SUPT. (PH. 351-6300) AFTER THE INSPECTOR HAS NOTIFIED CONSTRUCTION THAT THE ~~CUSTOMER'S~~ WORK IS COMPLETE AND READY FOR DEPARTMENT WORK.
2. PROVIDE AND INSTALL ALL SUBSTRUCTURES, CONDUITS, (POLE RISER CONDUIT EXCEPTED) TRENCHING, BACKFILLING, AND RESURFACING AS SHOWN IN CONFORMANCE WITH THE FOLLOWING STANDARD DRAWINGS; UGS-100, 100.1, 101, 115.1, AND 116.
3. ALL CONTRACTORS WORKING ON OR AROUND THE DEPARTMENTS UNDERGROUND ELECTRICAL FACILITIES MUST HAVE THE PROPERLY QUALIFIED PERSONNEL AND EQUIPMENT TO PERFORM THE SPECIFIED WORK. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE TO ESTABLISH AND MAINTAIN A SAFE WORKING ENVIRONMENT INCLUDING, BUT NOT LIMITED TO WORK AROUND ENERGIZED HIGH VOLTAGE FACILITIES, GAS TESTING OF CONFINED SPACES, TRAFFIC AND PROTECTION. THE DEPARTMENT'S POLICY IS TO PROVIDE ONE (1) QUALIFIED OBSERVER AFTER 24 HOURS NOTICE, TO STAND BY DURING WORK AND PROVIDE RADIO CONTACT WITH CITY OPERATIONS CONTROL.
4. THE CITY OBSERVER HAS THE AUTHORITY TO STOP THE CONTRACTOR'S WORK IF HE DETERMINES THAT ADEQUATE SAFETY PRECAUTIONS ARE NOT BEING TAKEN. HOWEVER, THE PRESENCE OF THE CITY OBSERVER DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR INSURING SAFE AND APPROPRIATE WORK PRACTICES.
5. ACQUIRE A STREET OPENING PERMIT PRIOR TO EXCAVATING IN STREET RIGHT-OF-WAY.
6. METER ROOM DOOR TO HAVE SCHLAGE LOCK KEYED TO DEPARTMENT MASTER KEY; OR DOUBLE HASP.

DEPARTMENT PARTICIPATION

1. PROVIDE AND INSTALL ALL POLE RISER CONDUITS, CABLES. TERMINATIONS AND TRANSFORMERS FROM SOURCE TO TERMINATING PULLSECTION OR PULLBOX AS SHOWN IN CONFORMANCE WITH STANDARD CONSTRUCTION METHODS. MATERIALS TO BE SPECIFIED ON JOB MATERIAL LISTS.
2. OBTAIN CIRCUIT NUMBER AND RECLOSER TYPE FROM SUBSTATION OPERATOR.
3. CALL PUBLIC WORKS DEPARTMENT INSPECTION DIVISION (PH. 782-5671) FOR INSPECTION OF STREET OR ALLEY RIGHT-OF-WAY EXCAVATIONS.
4. TRANSFORMER IS A 3ø-12470 GRD. Y/7200V-480Y/277V PADMOUNT

SYMBOL LEGEND





SCHEMATIC DIAGRAM

REGISTERED PROFESSIONAL ENGINEER
WILLIAM F. MAINORD
No. E 15284
Exp.3-31-01
ELECTRICAL
STATE OF CALIFORNIA

William F. Mainord
6-9-97

RECEIVED JUN 9 1997 PARK & RECREATION PLANNING & DESIGN

RECEIVED JUN PARK & RECREATION PLANNING & DESIGN

REF DWG: U2-8475

48 HOURS BEFORE YOU DIG
CALL
UNDERGROUND SERVICE ALERT
1-800-227-2600

UNDERGROUND ELECTRICAL SERVICE TO

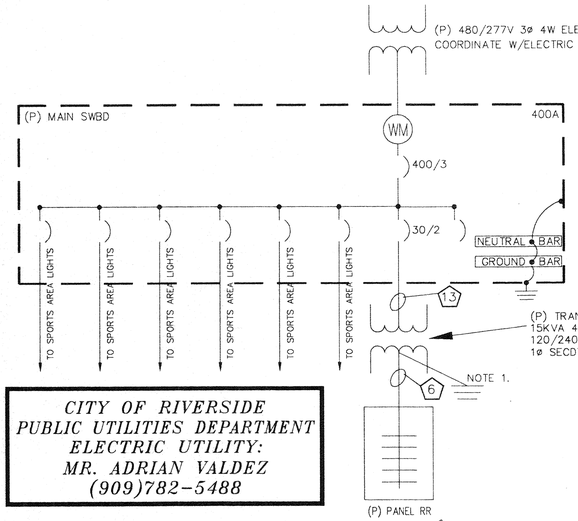
BORDWELL PARK LIGHTING & RESTROOM BLDG

4683 OTTAWA AVE. S/O MARTIN LUTHER KING BLVD.

SCALE 1" = 40'	DRAWN WOODALL / VALDEZ	CITY OF RIVERSIDE DEPARTMENT OF PUBLIC UTILITIES	
DATE 2-3-96	CHECKED Valdez 6-9-97		
JPA NO. CR-7066	APPROVED Valdez 6-9-97	DIV. E	DRAWING NO. U04-604516
MAP BK 40-6	BOARD DATE N/A		SHEET 1 OF 1
INV.MAP	ACCT. 510-764200-470601		

ASBUILT	APPRVD	REVISIONS	DATE

CUSTOMER



NOTES:

1. BOND TRANSFORMER T1 NEUTRAL & ENCLOSURE. CONNECT TO DRIVEN GROUND ROD USE #6 COPPER CONDUCTORS FOR GROUNDING AND #0 COPPER CONDUCTORS FOR BONDING.
2. REFERENCE SITE PLAN AND A.C. BREAKERS ASSIGNMENTS FOR SIZES OF CIRCUIT BREAKERS, CONDUCTORS & CONDUIT
3. AVAILABLE FAULT CURRENT AT THE SERVICE IS 13,668 AMPERES.

CITY OF RIVERSIDE
PUBLIC UTILITIES DEPARTMENT
ELECTRIC UTILITY:
MR. ADRIAN VALDEZ
(909)782-5488

ALL INFORMATION PRESENTED IS FOR REVIEW, APPROVAL INTERPRETATION AND APPLICATION BY A REGISTERED ELECTRICAL ENGINEER ONLY

FAULT STUDY SUMMARY

BUS RECORD NO NAME	VOLTAGE L-L	AVAILABLE RMS DUTIES 3 PHASE	MOMENTARY
1 UTILITY	480.	30000.	48578.
2 UGPS	480.	13821.	13977.
3 METER MAIN	480.	13668.	13818.
4 POLE A2	480.	1968.	1968.
5 XFMR T1	480.	8050.	8050.
6 XFMR T1 SC	208.	1388.	1389.
7 PANEL RR	208.	1233.	1233.

7 BUSES, 7 BRANCHES, 1 CONTRIBUTIONS
*** SHORT CIRCUIT STUDY COMPLETE ***

CONDUCTOR SCHEDULE

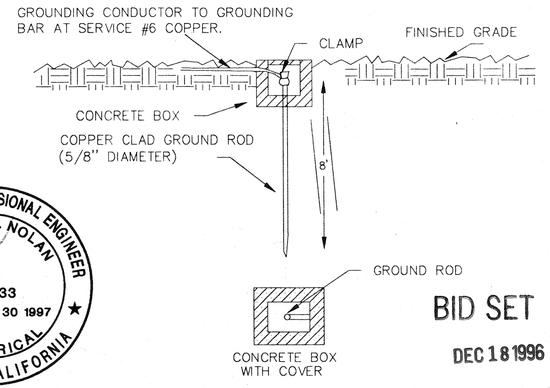
RUN	ø & NEUTRAL	GROUNDING	CONDUIT	% FILL
1	(P) 3#6	(P)1#10	(E)1"	20.24
2	(P) 3#6 3#12	(P)1#10	(E)1"	24.33
~~3~~	~~(P) 3#8~~	~~(P)1#10~~	~~(E)1"~~	~~15.15~~
~~4~~	~~(P) 6#8~~	~~(P)1#10~~	~~(E)1"~~	~~28.10~~
~~5~~	~~(P) 3#6 6#8 2#12~~	~~(P)1#10~~	~~(E)1-1/4"~~	~~28.09~~
6	(P) 3#6	(P)1#10	(P)1"	20.24
7	(P) 3#8	(P)1#10	(P)3/4"	24.58
8	(P) 9#12	(P)1#12	(P)3/4"	22.30
9	(P) 6#6 6#8 6#12	(P)1#10	(P)1-1/2"	30.58
10	(P) 6#12	(P)1#12	(P)1/2"	27.30
11	(P) 3/16" PULLROPE		(P)1"	--
12	----		(P)4" DB	--
13	(P) 2#10	(P)1#10	(P)1/2"	18.40

VOLTAGE DROP CALCULATIONS

POLE #	FIXTURE QTY	VOLTAGE	AMPS	CONDR SIZE	Rac	DIST	VOLT DROP	%
A1	6	480	11.59	#12	2.0000	235	10.89	2.27
A2	6	480	11.59	#12	2.0000	60	2.78	0.58
B1	12	480	23.18	#6	0.4900	345	7.84	1.63
B2	12	480	23.18	#6	0.4900	50	1.14	0.24
C1	10	480	20.73	#8	0.7800	440	14.23	2.96
C2	10	480	20.73	#8	0.7800	265	8.57	1.79

ELECTRICAL NOTES & SYMBOLS

1. ALL WORK TO BE DONE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE CODE 1996 EDITION
2. ALL UNDERGROUND OUTSIDE BRANCH CIRCUIT AND FEEDER CIRCUITS ARE TO BE RUN IN NONMETALLIC CONDUIT SCHEDULE 40.
3. ALL ELECTRICAL CONDUCTORS ARE TO BE THWN COPPER.
4. ALL ELECTRICAL SYMBOLS PER ANSI Y32.9 1972. REAFFIRMED 1989.
5. ALL REMOVED SOD MUST BE REPLACED WITH SOD TO ORIGINAL CONDITION.
6. ANY CUT SEWER OR SPRINKLER MUST BE REPLACED BY CONTRACTOR AT HIS EXPENSE.
7. UTILITIES AND LIGHTING EQUIPMENT ARE DRAWN DIAGRAMMATICALLY. SCALED DIMENSIONS ARE APPROXIMATE ONLY. BEFORE PROCEEDING WITH WORK, CAREFULLY CHECK AND VERIFY DIMENSIONS, IMMEDIATELY NOTIFY ENGINEER OF DISCREPANCIES BETWEEN DRAWINGS OR SPECIFICATIONS AND ACTUAL CONDITIONS, ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE, IT IS NOT WITHIN SCOPE OF THE DRAWINGS TO SHOW NECESSARY OFFSETS, OBSTRUCTIONS, OR SITE CONDITIONS. THE CONTRACTOR WILL BE RESPONSIBLE TO INSTALL WORK IN SUCH A MANNER THAT IT WILL CONFIRM TO SITE CONDITIONS, COMPLETE AND IN GOOD WORKING ORDER.
8. WITH REFERENCE TO ELECTRICAL UTILITIES THIS IS A PRELIMINARY PLAN ONLY, AND IS NOT BE USED FOR CONSTRUCTION PURPOSES.
9. SWITCHGEAR SHOP DRAWINGS TO BE PROVIDED TO THE ELECTRICAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
11. — — — CONDUCTORS W/GROUND RUN UNDERGROUND. REF SITE PLAN FOR SIZES OF CONDUCTORS AND CONDUITS.
12. ——— CONDUCTORS W/GROUND RUN CONCEALED IN CEILING OR WALL. REF PANEL ASSIGNMENTS FOR WIRE SIZES.
13. (1/E1) INDICATES DETAIL # / INDICATES SHEET #
14. — - — SERVICE LATERAL TRENCH
15. (LCC) LIGHTING CONTACTOR COIL.
16. ⊣ ⊢ LIGHTING CONTACTOR – CONTACTS. N.O. – LETTERS INDICATE COIL CONTROLLING CONTACTS.
17. (A1) POLE MOUNTED LUMINAIRE. LETTER INDICATES STYLE AS INDICATED ON LUMINAIRE SCHEDULE.
18. EXISTING ELECTRIC UTILITY SERVICE POLE.
19. (TC) TIME CLOCK.
20. (P) PROPOSED. TO BE PROVIDED BY CONTRACTOR, UNLESS OTHERWISE NOTED.
21. (E) EXISTING. TO BE REUSED, UNLESS OTHERWISE NOTED.
22. E.C. ELECTRICAL CONTRACTOR.
23. UNDERGROUND CONCRETE PULLBOX #3-1/2 (17.5"X12.5"X12.5" PREFAB CONCRETE WITH TRAFFIC COVER WHERE SUBJECT TO VEHICULAR TRAFFIC.
24. (E) UNDERGROUND CONCRETE PULLBOX #3-1/2 (17.5"X12.5"X12.5" PREFAB CONCRETE WITH TRAFFIC COVER WHERE SUBJECT TO VEHICULAR TRAFFIC.
25. LUMINAIRE MOUNTED ON SPORTS AREA POLE AIM IN DIRECTION DIRECTION OF ARROW. REF LUMINAIRE SCHEDULE FOR PN, BALLAST VOLTAGE ETC. REF POLE DETAIL ON E-4 FOR MOUNTING.

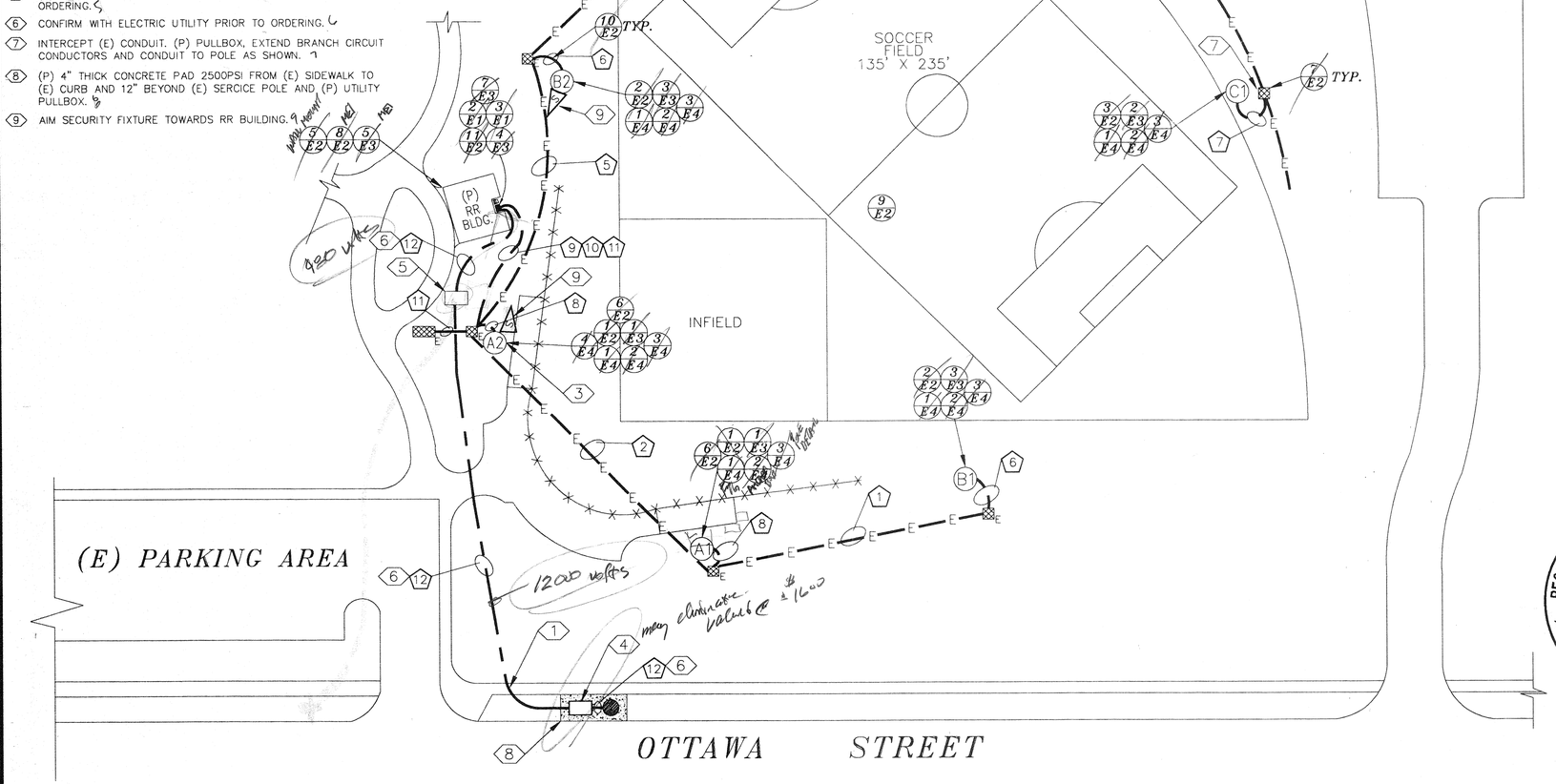


DRIVEN GROUND ROD DETAIL (3/E1)
NO SCALE

SINGLE LINE DIAGRAM (2/E1)
NO SCALE

Key Notes

1. COORDINATE EXACT LOCATION, ROUTING AND DISTANCE OF SERVICE LATERAL TRENCH WITH ELECTRICAL UTILITY – CITY OF RIVERSIDE. 1
2. PULL CONDUCTORS IN (E) CONDUIT TO THIS POINT. PROVIDE NEW CONDUCTORS AND CONDUIT AS SHOWN, FROM THIS POINT ON TO POLE. 2
3. MOUNT PUSHBUTTON ENCLOSURE ON THIS POLE. REF DETAIL ON SHEET E4. 3
4. (P) UTILITY PULLBOX 3' X 5'. CONFIRM WITH ELECTRIC UTILITY PRIOR TO ORDERING. 4
5. (P) TP5 UTILITY TRANSFORMER PAD. CONFIRM WITH ELECTRIC UTILITY PRIOR TO ORDERING. 5
6. CONFIRM WITH ELECTRIC UTILITY PRIOR TO ORDERING. 6
7. INTERCEPT (E) CONDUIT. (P) PULLBOX, EXTEND BRANCH CIRCUIT CONDUCTORS AND CONDUIT TO POLE AS SHOWN. 7
8. (P) 4" THICK CONCRETE PAD 2500PSI FROM (E) SIDEWALK TO (E) CURB AND 12" BEYOND (E) SERCICE POLE AND (P) UTILITY PULLBOX. 8
9. AIM SECURITY FIXTURE TOWARDS RR BUILDING. 9



ELECTRICAL SITE PLAN (1/E1)
SCALE 1" = 30'

REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. NOLAN
NO E 9333
EXP: SEP 30 1997
ELECTRICAL
STATE OF CALIFORNIA

BID SET
DEC 18 1996

UNDERGROUND SERVICE ALERT
CALL TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

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REVISION:	BY

BORDWELL PARK
SPORTS AREA LIGHTING
CITY OF RIVERSIDE
RIVERSIDE, CALIFORNIA

DREAM
ENGINEERING INC
CONSULTING ELECTRICAL ENGINEERS
APPLE VALLEY (619)242-3369
PALM DESERT (619)773-4478
FAX (619)242-1092

ELECTRICAL SITE PLAN

PROJ. #9604051
DATE: 06/10/96
DWG. FILE: BORDWLE2.DWG

E-1

LUMINAIRE SCHEDULE

DETAIL NAME	STYLE	MFGR	PART NO.	LAMPS	QTY	DESCRIPTION	MH FIELD	POLE FOOT DETAIL	EPA	MH GROUND	POLE LENGTH	BURIAL DEPTH	GROUND ELEV.
1/E2	A 1,2	CROUSE-HINDS	1500-6P	6X1500WMHX480V		6 LAMP LUMINAIRE ASSEMBLY	70'	1/E4	19.2	70'	70'	1/E4	0'
2/E2	B 1,2	CROUSE-HINDS	1500-12P	12X1500WMHX480V		12 LAMP LUMINAIRE ASSEMBLY	70'	1/E4	38.4	70'	70'	1/E4	0'
3/E2	C 1	CROUSE-HINDS	1500-10P	10X1500WMHX480V		10 LAMP LUMINAIRE ASSEMBLY	70'	1/E4	32	70'	70'	1/E4	0'
4/E2	C 2	CROUSE-HINDS	1500-10P	10X1500WMHX480V		10 LAMP LUMINAIRE ASSEMBLY	65'	1/E4	32	70'	70'	1/E4	-5'
5/E2	D 1	SPAULDING	MRK-70-HPS	1X70WHPSX120V		WALL MOUNTED LUMINAIRE REF DETAIL 5/E3	N/A	N/A	N/A	REF DETAIL	N/A	N/A	N/A
6/E2	S 1	CROUSE-HINDS	MVD-4LEC-277-PC-SF-VS-ML5541	1X400WHPSX277V		POLE MOUNTED SECURITY LUMINAIRE. REF DETAIL ON SHEET E4 FOR MOUNTING.	30'	N/A	3.1	30'	N/A	N/A	N/A
12/E2	n	KENNAL	7270	1X40WFLX120V		CIELING MOUNTED FLOURESCENT FIXTURE W/ PRISMATIC LENSE. MOUNT TO 4X BEAMS.	N/A	N/A	N/A	N/A	N/A	N/A	N/A

A.C. BREAKER ASSIGNMENTS

MANF	SQUARE D	PANEL	BASEBALL
VOLTS	277/480	LOCATION – REF SITE PLAN	
PHASE	3	FEEDER – REF. A.C. SINGLE LINE	
WIRE	4	AMPS	400
M.O.C.D.	400 AMPS	MOUNTING – PAD	

CKT #	DESCRIPTION/ LOCATION	LOAD TYPE	VOLT AMPS	PHASE	CKT BKR AMPS	POLES	BCCNTCH	GCONRD
1	POLE A1 (6)	LIGHTS	3210	A	20	3	#12	#12
2	POLE A2 (6)	LIGHTS	3210	A	20	3	#12	#12
3	POLE A1 (6)	LIGHTS	3210	B	--		#12	
4	POLE A2 (6)	LIGHTS	3210	B	--		#12	
5	POLE A1 (6)	LIGHTS	3210	C	--		#12	
6	POLE A2 (6)	LIGHTS	3210	C	--		#12	
7	POLE B1 (12)	LIGHTS	6420	A	40	3	#6	#10
8	POLE B2 (12)	LIGHTS	6420	A	40	3	#6	#10
9	POLE B1 (12)	LIGHTS	6420	B	--		#6	
10	POLE B2 (12)	LIGHTS	6420	B	--		#6	
11	POLE B1 (12)	LIGHTS	6420	C	--		#6	
12	POLE B2 (12)	LIGHTS	6420	C	--		#6	
13	POLE C1 (10)	LIGHTS	5350	A	30	3	#8	#10
14	POLE C2 (10)	LIGHTS	5350	A	30	3	#8	#10
15	POLE C1 (10)	LIGHTS	5350	B	--		#8	
16	POLE C2 (10)	LIGHTS	5350	B	--		#8	
17	POLE C1 (10)	LIGHTS	5350	C	--		#8	
18	POLE C2 (10)	LIGHTS	5350	C	--		#8	
19	SECURITY LIGHTS	LIGHTS	930	A	20	1	#12	#12
20	TIME CLOCK & COIL	LIGHTS	500	A	20	1	#12	#12
21	TRANSFORMER T1 (15KVA)	MISC	8250	B	30	2	#10	#10
22	SPARE			B	20	1		
23	TRANSFORMER T1 (15KVA)	MISC	8250	C	--		#10	
24	SPARE			C	20	1		
25	SPARE			A	20	1		
26	SPARE			A	20	1		
27	SPARE			B	20	1		
28	SPARE			B	20	1		
29	SPARE			C	20	1		
30	SPARE			C	20	1		

PROPOSED TOTAL VOLT AMPS	107240
FUTURE TENNIS LIGHTING	12000
PROPOSED AMPS/LEG	143
PROPOSED BUSS RATING	400

NOTE: 1. MAIN OVER CURRENT DEVICE TO BE 14KAIC.
2. ALL BRANCH CIRCUIT BREAKERS TO BE 10KAIC.

MANF	SQUARE D	PANEL	RR
VOLTS	120/240	LOCATION – REF SITE PLAN	
PHASE	1	FEEDER – REF. A.C. SINGLE LINE	
WIRE	3	AMPS	100
M.O.C.D.	60 AMPS	MOUNTING – RECESSED	

CKT #	DESCRIPTION/ LOCATION	LOAD TYPE	VOLT AMPS	PHASE	CKT BKR AMPS	POLES	BCCNTCH	GCONRD
1	BUILDING EXTERIOR	LITES	500	A	20	1	#12	#12
2	BUILDING INTERIOR	LITES	800	A	20	1	#12	#12
3	HAND DRYER MENS	MISC	1020	C	20	1	#12	#12
4	HAND DRYER WOMEN'S	MISC	1020	C	20	1	#12	#12
5	SPARE			A	20	1		
6	SPARE			A	20	1		
7	OUTLET MEN'S	RECEPT	180	C	20	1	#12	#12
8	OUTLET WOMEN'S	RECEPT	180	C	20	1	#12	#12
9	OUTLET CHASE	RECEPT	180	A	20	1	#12	#12
10	OUTLET SWITCHBOARD	RECEPT	180	A	20	1	#12	#12
11	IRRIGATION CONTROLLER	MISC	500	C	20	1	#12	#12
12	ELAPSED TIME METER.	MISC	400	C	20	1	#12	#12
13	SPARE			A	20	1		
14	SPARE			A	20	1		
15	SPARE			C	20	1		
16	SPARE			C	20	1		
17	SPARE			A	20	1		
18	SPARE			A	20	1		
19	SPARE			C	20	1		
20	SPARE			C	20	1		

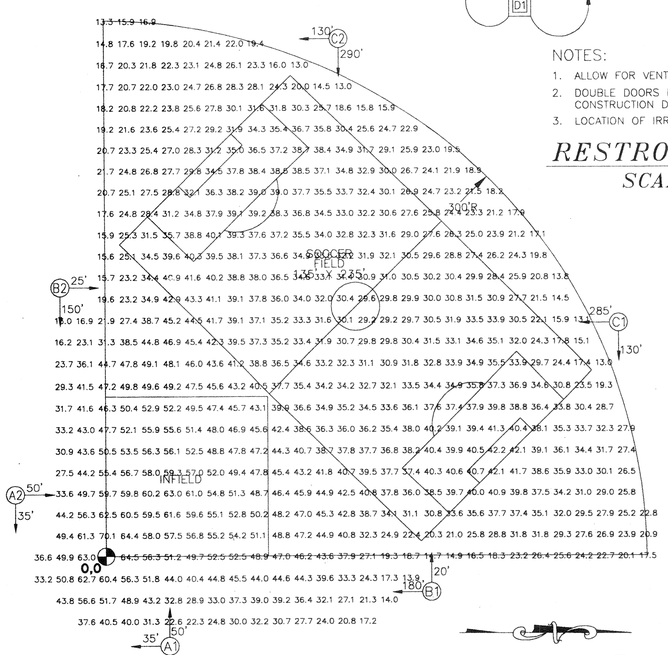
PROPOSED TOTAL VOLT AMPS	4960
PROPOSED AMPS/LEG	21
PROPOSED BUSS RATING	100

NOTE: 1. MAIN OVER CURRENT DEVICE TO BE 10KAIC.
2. ALL BRANCH CIRCUIT BREAKERS TO BE 10KAIC.

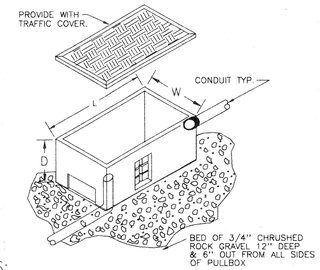
INFIELD AREA AVERAGE MAINTAINED FOOTCANDLES	52.67
MAX/MIN RATIO	1.61:1
LIGHT LOSS FACTOR	.800

SOCCER FIELD AVERAGE MAINTAINED FOOTCANDLES	33.2
MAX/MIN RATIO	3.52:1
LIGHT LOSS FACTOR	.800

OUTFIELD AREA AVERAGE MAINTAINED FOOTCANDLES	32.04
MAX/MIN RATIO	3.78:1
LIGHT LOSS FACTOR	.800

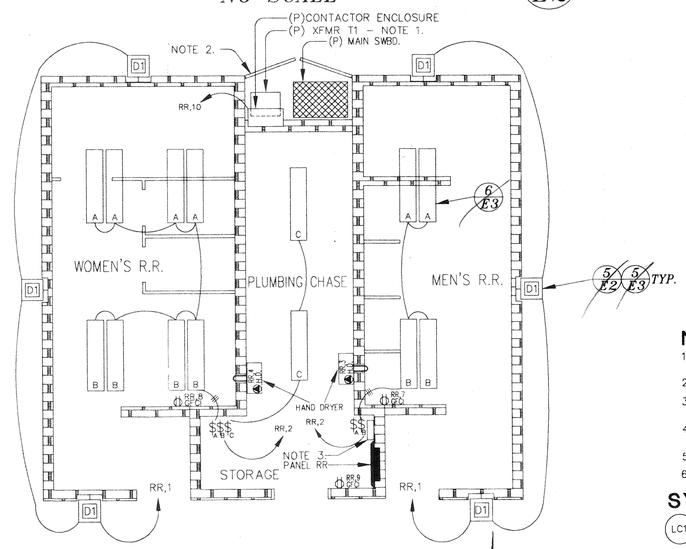


PHOTOMETRIC SITE PLAN 9/E2
SCALE – 1"= 40'



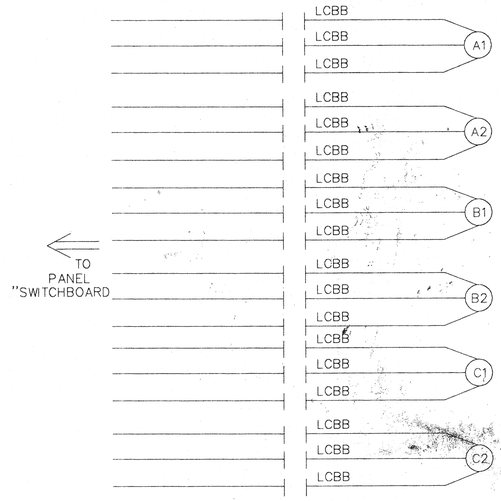
NOTES:
1. REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION ON PULLBOX.
2. REFERENCE ELECTRICAL SITE PLAN FOR SIZE OF CONDUITS
3. DIMENSIONS SHOWN FOR PULLBOX ARE TO BE PROVIDED UNLESS INDICATED OTHERWISE ON ELECTRICAL SITE PLAN NOTES.
4. PROVIDE ~~SCHEDULE 80~~ SWEEPS INTO PULLBOX.

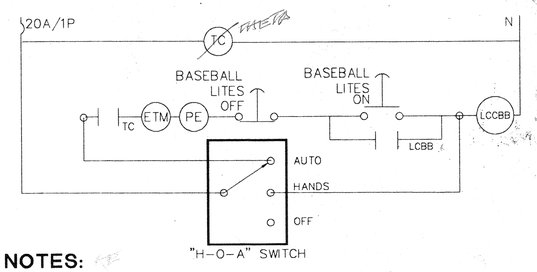
PULLBOX INSTALLATION DETAIL 7/E2
NO SCALE



NOTES:
1. ALLOW FOR VENTILATION PER MANUF. INSTRUCTIONS.
2. DOUBLE DOORS MOUNTED TO RR BUILDING. REF RR CONSTRUCTION DETAILS.
3. LOCATION OF IRRIGATION CONTROLLER ~~BY OTHERS~~.

RESTROOM LAYOUT 8/E2
SCALE 1/4"=1'



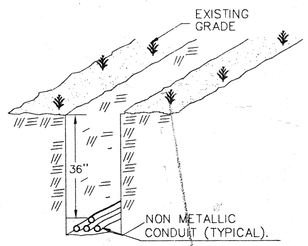


NOTES:
1. ALL CONTROL WIRING TO BE #12THWN COPPER, UNLESS OTHERWISE INDICATED, IN 1/2"C WHERE EXPOSED.
2. RATING OF CONTACTORS TO MATCH CIRCUIT BREAKERS.
3. MOUNT TIMECLOCK, CONTACTORS , H-O-A SWITCH IN SEPARATE HINGED ENCLOSURE REF SWITCHBOARD ELEVATION.
4. DIAGRAM IS DIAGRAMMATICAL. NUMBER OF CONTACTS TO MATCH NUMBER OF POLES ON BRANCH CIRCUIT BREAKER.
5. INSTALL PUSHBUTTON ON POLE REF SITE PLAN AND DETAIL.
6. MOUNT PHOTO CELL ON ROOF DIRECTLY ABOVE CONTROL ENCLOSURE.

SYMBOLS:

- LC1 – LIGHTING CONTACTOR COIL FIELD LIGHTS.
- PE – PHOTO-ELECTRIC CELL
- ETM – ELAPSED TIME METER. 99,999.9 HRS 120V NON-RESETABLE FUSED SQUARE D, G.E. OR CITY APPROVED EQUAL.
- PUSH BUTTON MOMENTARY CONTACT – ON
- PUSH BUTTON MOMENTARY CONTACT – OFF
- LC1 – LIGHTING CONTACT CONTROLLED BY LC1.

LIGHTING CONTROL DIAGRAM 11/E2
NO SCALE



NOTES:
1. LAY CONDUIT, FILL, COMPACT TO 90.% MATCH SURROUNDING.
2. AREAS SUBJECT TO HEAVY VEHICULAR TRAFFIC, SUCH AS THOROUGHFARES, SHALL HAVE A MINIMUM COVER OF 36 INCHES.

BRANCH CIRCUIT TRENCH DETAIL 10/E2
NO SCALE

REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. NOLAN
NO E 9333
EXP: SEP 30 1997
ELECTRICAL
STATE OF CALIFORNIA

BID SET
DEC 18 1996

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REVISION:	BY

BORDWELL PARK
SPORTS AREA LIGHTING
CITY OF RIVERSIDE
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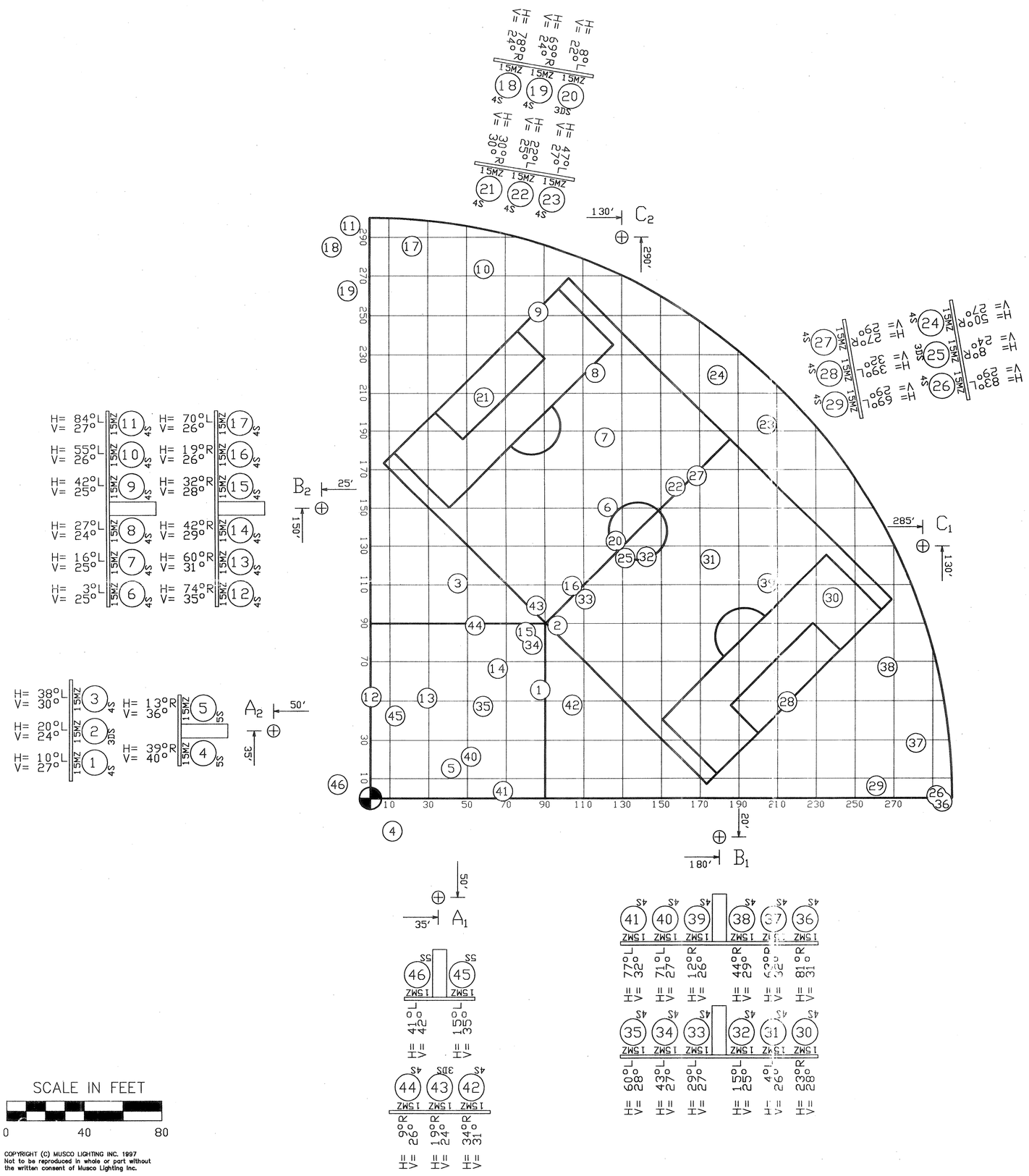
LUMINAIRE SCHEDULE

PROJ.#9604051
DATE: 06/10/96
DWG. FILE: BORDWLE2.DWG

E-2



SCALE IN FEET

0 40 80

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NOTES:

Pole location dimensions are relative to the 0,0 reference point which is home plate of the playing field as indicated by....

** Overcurrent devices and conductors MUST be sized using the ballast Manufacturer's rated amperage draw per fixture (kVA). Using the kW rating can result in undersized calculations. Refer to Musco's Ballast Specification Chart (located below) for manufacturer's amperage draw.**

This drawing is per scan number(s): 23435SBD1 DATED: 25-JUN-97

FIELD LIGHTING EQUIPMENT

APPROXIMATE FOOTCANDLE LEVEL:	50/30	30	.8 MAINT.		LAMP TYPE: 1500W MHZ			
MAX. TO MIN. RATIO NOT TO EXCEED:	2:1/3:1	2.5:1			FINISH: GALVANIZED			
PRODUCT TYPE: LIGHT STRUCTURE					LUMINAIRES		ELECTRICAL LOAD	WIND EPA
POLE QUANTITY	POLE DESIGNATION	MOUNTING HEIGHT	POLE CLASS	ELEV. VAR.	FIXTURE TYPE(S)	FIXTURES PER POLE	KILOWATT CONSUMPTION PER POLE.	PER POLE INC. CROSSARM
2	A1,A2	70'	70A	–	SC-2	5	8.0	
2	B1,B2	70'	70B	–	SC-2	12	19.2	
1	C1	70'	70A	–	SC-2	6	9.6	
1	C2	65'	70A	-5	SC-2	6	9.6	
6	← TOTALS →					46	73.6	

BALLAST SPECIFICATIONS .90 Minimum Power Factor	VOLTAGE: 480 1 PHASE						
SINGLE PHASE VOLTAGE (Also applicable to each single phase of a 3 phase system)	120	208	240	277	380	415	480
1500 WATT METAL HALIDE LAMP Operating line amperage per fixture, max. draw	14.2	8.1	7.1	6.1	4.4	4.0	3.5
1000 WATT METAL HALIDE LAMP Operating line amperage per fixture, max. draw	9.1	5.3	4.6	3.9	3.0	2.7	2.2

Sportscluster® Light-Structure System™ and Light-Pak™ are covered by one of more of the following U.S. patents: 4725934, 4190881, 4374407, D257891, 4729077, 4450507, 4816974, 4947303, 5016150, 5134557, 5075828, D337168, 5229681, 5211473, 4994718, 5161883. Canadian patents: 1114798, 1181380, RD 1992 Musco #70479 RD 1994 Musco #73755. Other patents pending.

BORDWELL PARK BALLFIELD
RIVERSIDE, CA

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DATE:	BY:	LEVEL:	REVISIONS:

PROJECT NUMBER: 14023435
ORDER NUMBER: 21464
REPRESENTATIVE: B. MARCHETTI
DRAWN BY: LGJ
CHECKED BY: LGJ / DC
DATE: 25-JUN-97
DRAWING NUMBER: 23435
1 OF 1 SHEETS