GENERAL

TYPICAL DETAILS AND GENERAL NOTES SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE DRAWINGS. WHERE NO DETAIL IS SHOWN, CONSTRUCTION SHALL BE AS SHOWN FOR OTHER SIMILAR WORK. NO DEVIATIONS FROM THE DRAWINGS SHALL BE PERMITTED WITHOUT THE PERMISSION OF THE ENGINEER.

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SLAB DEPRESSIONS, SLOPES, CURBS, DRAINS, OPENINGS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS. ALL MECH. & ELECT. EQUIP. SHALL BE BRACED & ANCHORED ADEQUATELY FOR SEISMIC LOADS PER TITLE 24, SECTION 2-2312 (g), & TABLE 2-23J, PART B.

WHERE CONSTRUCTION MATERIALS ARE TEMPORARILY STORED ON THE ROOF FRAMING, THEY SHALL BE DISTRIBUTED SO THAT THE LOAD DOES NOT EXCEED 20 LBS /SF.

THE CONTRACTOR SHALL:

1. VERIFY ALL (E) EXISTING CONDITIONS AND DIMENSIONS AND REPORT ANY DIFFERENCES IN ASSUMED CONDITIONS TO THE ARCHITECT PRIOR TO PROCEEDING.
2. PROVIDE & BE SOLELY RESPONSIBLE FOR ALL TEMPORARY SHORING, GUYS AND BRACING NECESSARY FOR STRUCTURAL WORK SHOWN ON THESE DRAWINGS.
3. PERFORM ALL WORK AND RECEIVE ALL TESTS AND INSPECTIONS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, DRAWINGS AND TITLE 24, PART 2 OF THE CALIFORNIA ADMINISTRATIVE CODE.
4. BE SOLELY RESPONSIBLE FOR CONDITIONS AT THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.

ALL WORK TO BE PERFORMED UNDER CONTINUOUS INSPECTION OF OSA APPROVED INSPECTOR.

FOUNDATIONS

FOOTINGS AND SLABS SHALL BE PLACED ONLY ON FIRM BEARING AND NOT ON LOOSE SOIL OR UNCOMPACTED FILL.

SOIL TYPE: SANDY LOAM (VERIFY & TYPE OF CONSTRUCTION BY SOILS ENGINEER & APPROVED BY OWNER)

BASIC ALLOWABLE BEARING PRESSURE: 1000 PSF (PER UBC TABLE 29-B, ITEM 5)

CONTRACTOR SHALL PERFORM ALL WORK AND RECEIVE ALL REQUIRED TESTS AND INSPECTIONS IN ACCORDANCE WITH THE SPECIFICATIONS, TITLE 24 SECTION 2-2903

REINFORCING STEEL

MATERIALS SHALL BE GRADE 40, CONTINUOUS, DEFORMED BARS, CONFORMING TO ASTM A615. ~~SPLICE CONTINUOUS BARS WITH A MINIMUM LAP OF 30 BAR DIAMETERS (2'0" MIN.)~~ CONCRETE COVERAGE FOR REINFORCEMENT CAST AGAINST EARTH AND PERMANENTLY EXPOSED TO EARTH SHALL BE 3".

CONTINUOUS BAR SPLICES SHALL BE(U.N.O.)
MASONRY.... 30 BAR DIAMETERS
CONCRETE.... 60 BAR DIAMETERS

CONCRETE

MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
FORTLAND CEMENT (ONE BRAND ONLY: DOMESTIC).....ASTM C150
WATER.....DOMESTIC SUPPLY
AGGREGATES (FINE & COARSE)..... T-24 SECTION 2603 d & ASTM C33
(AGGREGATES SHALL CONTAIN NOT MORE THAN 2% SHALE OR OTHER DELETERIOUS PARTICLES.)
ADMIXTURES (TYPE A, WATER REDUCING) T-24 SECTION 2603 j & ASTM C494
CURING COMPOUND.....ASTM C309
(SHALL NOT IMPAIR IN ANY WAY THE APPLICATION OF FINISHES, COVERINGS, OR PAINT)
CONCRETE MIX AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:
ALL CONCRETE - TYPE II, REGULAR WEIGHT (145 LBS)
MINIMUM ULTIMATE COMPRESSIVE STRENGTH @ 28 DAYS... 3000 PSI
MAXIMUM SLUMP (PER ASTM C-143)..... 4 INCHES
MAXIMUM AGGREGATE SIZE..... 1/2 INCHES
MINIMUM CEMENT CONTENT..... 5 SACKS/CY
MAXIMUM WATER/CEMENT RATIO..... .67

CONTRACTOR SHALL SUBMIT THE CONCRETE DESIGN MIX, APPROVED BY A CALIFORNIA LICENSED CIVIL ENGINEER, TO THE ARCHITECT FOR REVIEW 15 WORKING DAYS PRIOR TO CONCRETE PLACEMENT. MIX DESIGN SHALL BE IN ACCORDANCE W/ METHOD B OR C, T-24 SECTION 2604 (c)

PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:
ALL CONCRETE ANCHOR BOLTS OF THE EXPANSION TYPE WHERE NOT USED FOR EQUIPMENT ANHORAGE (LOADED IN EITHER PULLOUT OR SHEAR) SHALL HAVE 50 PERCENT OF THE BOLTS (ALTERNATE BOLTS IN ANY GROUP ARRANGEMENT) PROOF TESTED IN TENSION TO TWICE THE ALLOWABLE TENSION LOAD. IF THERE ARE ANY FAILURES, THE IMMEDIATELY ADJACENT BOLTS MUST THEN ALSO BE TESTED. ALL BOLTS MUST HAVE I.C.B.O. APPROVAL.

TYPE OF MATERIALS	TYPE OF TEST	BOLT DIAMETER			
		3/8"	1/2"	5/8"	3/4"
HARD ROCK CONCRETE	DIRECT PULL-TENSION, LBS.	1300	2000	2900	4300
	TORQUE WRENCH-TORQUE, FT. LBS.	25	50	110	150

MASONRY

CONCRETE BLOCK SHALL BE GRADE N-1, MEDIUM OR LIGHT WEIGHT (WITH A DRY NET WEIGHT OF NOT MORE THAN 115 LBS. PER CUBIC FOOT), OPEN-END UNITS AND CONFORM TO ASTM C-90 (ALL USE STANDARD) MINIMUM COMPRESSIVE STRENGTHS. 2000

MINIMUM MORTAR STRENGTH @ 28 DAYS.....1800 PSI MIX PER SECT 2-2403 (c-1)
(SHALL CONTAIN NO ADMIXTURES)
MINIMUM GROUT STRENGTH @ 28 DAYS.....2000 PSI MIX PER SECT 2-2403(3)
(SHALL CONTAIN "SIKA GROUT AID, TYPE II" AS PER MANUFACTURERS RECOMMENDATIONS. NO OTHER ADMIXTURE SHALL BE ADDED.)

FILL ALL CELLS WITH GROUT. NO SPLICES SHALL BE PERMITTED IN VERTICAL REINFORCING EXCEPT WHERE DETAILED ON THE DRAWINGS. ALL ISOLATED BOLTS EMBEDDED IN MASONRY SHALL BE GROUTED SOLIDLY IN PLACE WITH NOT LESS THAN 1" OF GROUT SURROUNDING THE BOLT. IF WORK IS STOPPED FOR ONE HOUR OR LONGER, PROVIDE HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT 1" BELOW THE TOP OF THE BLOCK.

ALL MASONRY WORK SHALL BE CONTINUOUSLY INSPECTED BY AN OSA APPROVED INSPECTOR.

STRUCTURAL STEEL

MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
SHAPES, PLATES, BARS, RODS, ETC.....ASTM A36...Fy=36 ksi
PIPES.....GRADE B, ASTM A53...Fy=35 ksi
SQUARE AND RECTANGULAR TUBING.....GRADE B, ASTM A500..Fy=46 ksi
LIGHT GAGE STEEL..... GRADE C, ASTM A611..Fy=33 ksi
(OTHER THAN METAL DECKING AND LIGHTGAGE METAL FRAMING)
WELDING ELECTRODES.....AWS E70XX
MACHINE BOLTS AND ANCHOR BOLTS (U.N.O.).....ASTM A36 OR ASTM A307

WELDING SHALL BE DONE BY THE ELECTRIC SHIELDED ARC OR SUBMERGED ARC PROCESS. WELDERS SHALL BE CERTIFIED AND WORK DONE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODES, AWS D1.1. FABRICATION AND ERECTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATIONS. ALL STEEL NOT IN CONTACT WITH CONCRETE SHALL RECEIVE ONE COAT OF SHOP PAINT IN ACCORDANCE WITH THE PROVISIONS OF THE CODE OF STANDARD PRACTICE OF AISC AND SPECIFICATIONS.

ALL WELDING SHALL BE INSPECTED BY AN OSA APPROVED INSPECTOR PER TITLE 24, SECTION 2-2727 (e).

WOOD

FRAMING LUMBER SHALL BE GRADE MARKED AS FOLLOWS (U.N.O.):
2X4 & SMALLER (DOUGLAS FIR)..... CONSTRUCTION OR BETTER
2X6 & DEEPER (DOUGLAS FIR).....NO. 2
3X & LARGER (DOUGLAS FIR).....NO. 1
SILLS (HEM-FIR OR DOUGLAS FIR).....PRESSURE TREATED (LP-2)
FRAMING: RETIGHTEN BOLTS BEFORE CLOSING-IN.
NAILING SCHEDULE:
JOISTS OR RAFTERS TO SIDES OF STUDS
EIGHT (8) INCH JOISTS OR LESS.....3-16d
FOR EACH ADDITIONAL FOUR (4) INCHES IN DEPTH OF JOIST.....1-16d
JOISTS OR RAFTERS AT ALL BEARINGS (T.N., EA. SIDE).....2-10d
CEILING JOISTS, LAPS OVER PARTITIONS (F.N.).....3-16d
CEILING JOISTS TO PARALLEL RAFTERS (F.N.).....3-16d
BLOCKING BETWEEN JOISTS OR RAFTERS
TO JOIST OR RAFTERS (T.N. EA. SIDE, EA. END).....2-10d
TO JOIST OR RAFTER BEARINGS (T.N., EA. SIDE).....3-10d
BLOCKING BETWEEN STUDS (EA. END).....2-10d TOE NAILS OR 2-16d
BRIDGING TO JOIST (T.N., EA. END).....2-8d
SOLE PLATE TO JCIST OR BLOCKING (F.N.).....16d @ 16" O.C.
TOP PLATE TO STUD (END NAIL).....2-16d
STUD TO SOLE PLATE (T.N.).....4-8d
DOUBLED STUDS (F.N.).....16d @ 24" O.C.
TOP PLATES, LAPS AND INTERSECTIONS (F.N.).....2-16d
DOUBLE TOP PLATES (F.N.).....16d @ 12" O.C. U.N.O.
BUILT-UP CORNER STUDS.....16d @ 24" O.C.
RIBBONS TO STUDS - ONE (1) INCH RIBBONS.....2-8d
RIBBONS TO STUDS - TWO (2) INCH RIBBONS.....2-16d
CONTINUOUS HEADER, TWO PIECES.....16d @ 24" O.C. ALONG INCH EDGE
CONTINUOUS HEADER TO STUD (T.N.).....4-8d
1" BRACE TO EACH STUD AND PLATE (F.N.).....3-8d
BUILT-UP GIRDER AND BEAMS.....20d @ 24" O.C. @ TOP & BOTTOM
& STAGGERED PLUS 3-20d @ ENDS & EA. SPLICE
PLUS 2-16d & EA. BEARING

NAILING SCHEDULE NOTES:
1. NAILS SHALL BE THE FOLLOWING SIZES:
8d = .131" DIA. X 2-1/2" LONG ×.25" HEAD
10d = .148" DIA. X 3" LONG × 3/8 HEAD
16d = .162" DIA. X 3-1/2" LONG ×.344 HEAD
20d ×.192" DIA. X 4" LONG WITH A 1/8" PREBORED HOLE ×.406 HEAD
2. TOE NAILS MAY ONLY BE USED WHERE SHOWN
3. ABBREVIATIONS: (T.N.) = TOE NAIL, (F.N.) = FACE NAIL.
4. PLYWD NAILS MAY BE SHORTER BUT SHALL OBTAIN THE EMBEDDMENT SHOWN IN TABLE 25-O OF THE U.B.C.

PLYWOOD SHEATHING AND NAILING NOTES:
1. PLYWOOD AND NAILING SHALL BE AS SHOWN ON THE DRAWINGS AND SCHEDULES.
2. PLYWOOD SHALL BE APPLIED DIRECTLY TO WOOD MEMBERS AND STAGGERED AS SHOWN ON DRAWINGS.
3. USE OF MACHILIE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND THE OFFICE OF THE STATE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY.

METAL DECKING

METAL DECKING, WELDING AND ACCESSORIES SHALL BE OF THE DEPTH, GAGE AND TYPE INDICATED ON THE DRAWINGS AND AS SHOWN BELOW & CONFORM TO T-24, SECTION 2-2726

MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

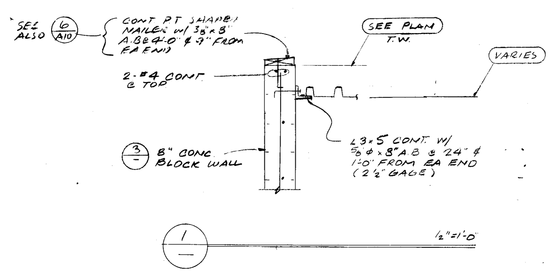
METAL DECK TYPE ..... "ASC. TYPE NR-ROOP DECK"
METAL DECK UNITS..... GRADE A or G, ASTM A-446 (Fy = 33 ksi)
METAL DECK GALVANIZING..... ASTM A-525 (G-90)

FASTENERS
FASTENERS SHALL BE #12 DIAMETER "TEKS" SELF-DRILLING FASTENERS FOR SHEETING w/ WATER-TIGHT WASHERS.

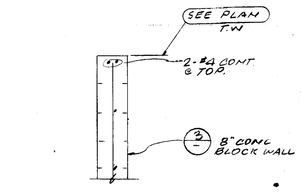
FASTENER PATTERN SHALL BE:
2 FASTENERS PER FOOT AT ALL ENDS AND END LAPS
1 FASTENER PER FOOT AT EACH INTERMEDIATE SUPPORT
1 FASTENER PER 2'-6" O.C. AT SIDE LAPS

SECTION PROPERTIES:
SHEETING MATERIAL ..... 18 GAGE (.043 INCHES THICK)
SECTION MODULUS(S) PER FOOT OF WIDTH ..... .735 (INCHES³)
MOMENT OF INERTIA (I) PER FOOT OF WIDTH ..... 1.222 (INCHES⁴)

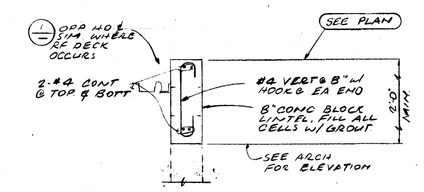
DECKING CROSS SECTION:



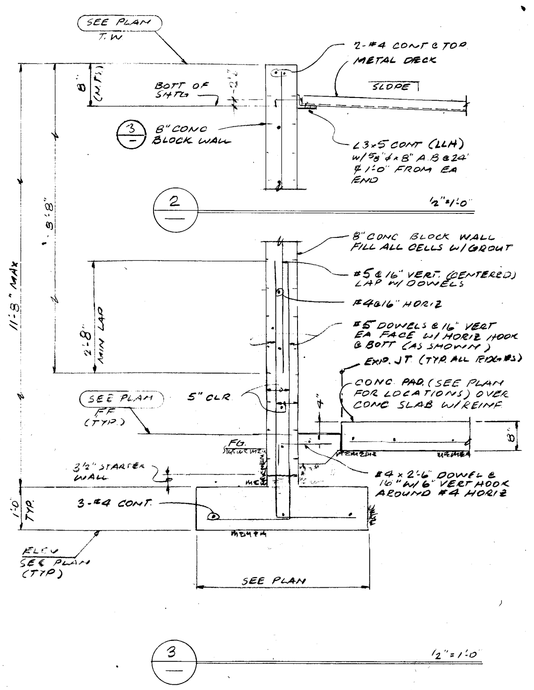
1 — ½"=1'-0



6 — ½"=1'-0

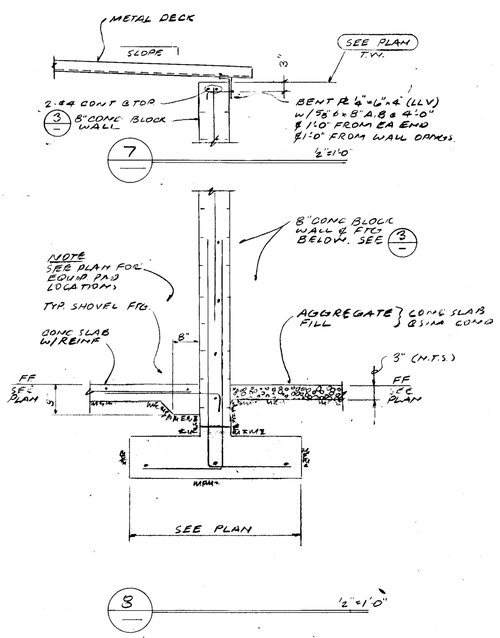


12 — ½"=1'-0



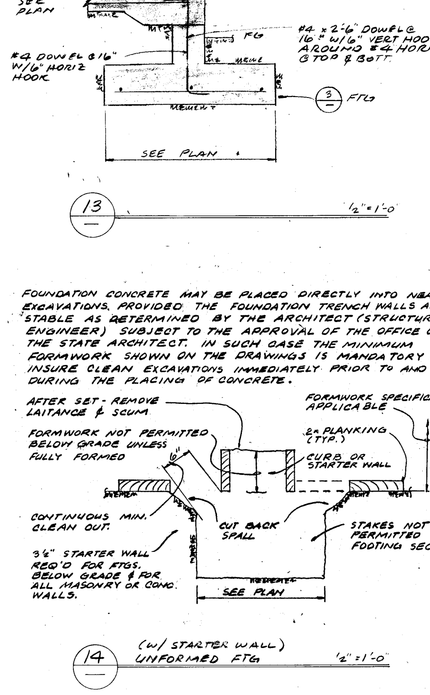
2 — ½"=1'-0

3 — ½"=1'-0



7 — ½"=1'-0

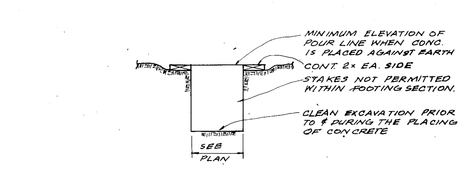
8 — ½"=1'-0



13 — ½"=1'-0

FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS, PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT (STRUCTURAL ENGINEER) SUBJECT TO THE APPROVAL OF THE OFFICE OF THE STATE ARCHITECT. IN SUCH CASE THE MINIMUM FORMWORK SHOWN ON THE DRAWINGS IS MERELY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE.

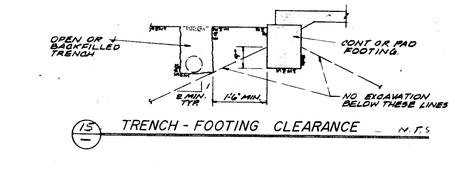
14 — (w/ STARTER WALL) UNFORMED FTG — ½"=1'-0



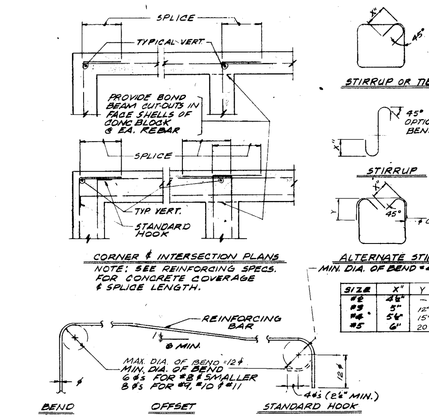
NOTE: FOUNDATION CONCRETE MAY BE PLACED AS SHOWN ABOVE (DIRECTLY INTO NEAT EXCAVATIONS) PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE, AS DETERMINED BY STRUCTURAL ENGINEER AND O.S.A.

(W/O STARTER WALL)

9 — UNFORMED FOOTING — N.T.S.

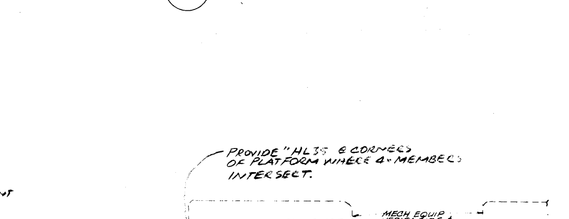


15 — TRENCH - FOOTING CLEARANCE — N.T.S.



SIZE	A	Y
#3	45°	1"
#4	60°	1½"
#5	75°	2"
#6	90°	2½"

16 — REINFORCING DETAILS — N.T.S.



NOTES: 1. #10d NAILS SHALL BE ANNULAR RING NAILS. PLACING IN PREDRILLED HOLES.
2. ALL METAL CONNECTORS SHALL BE SIMPSON.
3. SEE ALSO OPNG. DETAIL & ROOF FRAMING PLAN FOR ADDITIONAL DETAILS & HARDWARE NOT SHOWN ABV.

4 — EQUIP. PLATFORM — N.T.S.

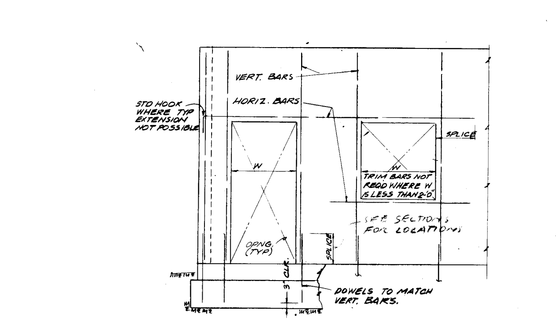
TOP OF FOOTING LEVEL — TOP OF FOOTING STEPPED

NOTE: SEE REINFORCING SPECIFICATION FOR CONCRETE COVERAGE & SPLICE LENGTH

10 — STEP FOOTINGS — N.T.S.

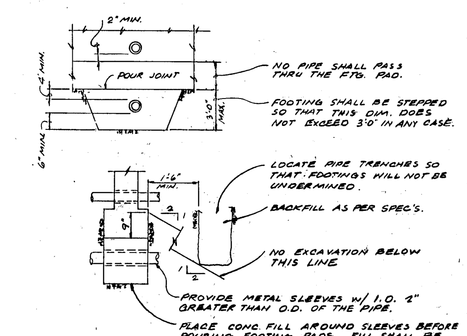
SIZE	A	Y
#3	45°	1"
#4	60°	1½"
#5	75°	2"
#6	90°	2½"

16 — REINFORCING DETAILS — N.T.S.

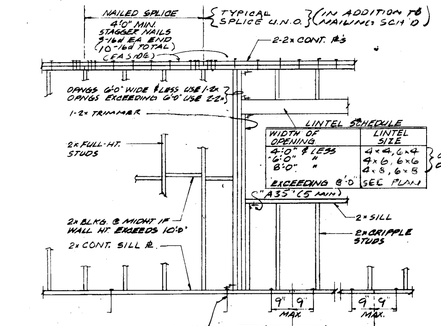


1. REINF. BARS SHOWN ARE IN ADDITION TO TYPICAL WALL REINF. VERT. BARS: 1-#4 @ 4'-0" (U.N.O. ON PLAN)
HORIZ. BARS: SAME AS INTERSECTING VERT. BARS (U.N.O.)
2. SEE SPECIFICATIONS FOR SPLICE LENGTH.

5 — CONCRETE BLOCK WALL OPENINGS (INT.)



11 — PIPES at FOOTINGS — N.T.S.



WIDTH OF OPNG	LINTEL SIZE
2'-0" & LESS	4"x6" C.M.
2'-6" & 3'-0"	4"x8" C.M.
3'-6" & 4'-0"	6"x8" C.M.
4'-6" & 5'-0"	6"x10" C.M.

U.N.O. ON PLAN

17 — WALL FRAMING DETAILS — N.T.S.

bfgc architects planners

APPLICATION NO. 77/50602

approved

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GENERAL NOTES & TYPICAL DETAILS.

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BAKERSFIELD, CALIFORNIA 93307

job 87-126
date 1 FEB. 1989
sheet S-1

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