CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0010990
Insp Area: 2

Site Address: 7710 STOCKTON BL SAC
Parcel No: 118-0131-042 STOCKTON AND MACK

Sub-Type: REM
Housing (Y/N): N

CONTRACTOR

OWNER
RADIANT LIFE CHURCH
7710 STOCKTON BL
SACRAMENTO CA 95831

ARCHITECT
JOSEPHINE MARK
844 WEST COVE WAY
SAC CA 95831

Nature of Work: INTERIOR AND EXTERIOR REMODEL OF BOWLING ALLEY TO CHURCH, NEW COVERED ENTRY

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name _____ Lender'sAddress _____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class_____ License Number _____ Date_____ Contractor Signature_____

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code: any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500.00).

____ I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

→ ✓ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

____ I am exempt under Sec. _____ B & PC for this reason: _____

APR 1 2001

NEIGHBORHOODS, PLANNING & DEVELOPMENT SERVICES

X Date April 11, 2001 Owner Signature _____

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Y Date April 11, 2001 Applicant/Agent Signature _____

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

____ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, forthe performance of work for which the permit is issued.

____ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier	Policy Number	Exp Date

→ ____ (This section need not be completed if the permit is for $100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Y Date April 11, 2001 Applicant Signature _____

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

CITY OF SACRAMENTO

30 DAY TEMPORARY
Certificate of Occupancy

For Information Contact (916) 264-5716

Building Address: 7710 STOCKTON BL Permit No. 0010990

Building Use: CHURCH Occupancy: A2.1/E

Building Owner: RADIANT LIFE CHURCH Construction Type: V-1HR

Owner Address: 7710 STOCKTON BL SAC Sprinkled? [X] Yes [ ] No

Portion of Building Occupied: ENTIRE Area: 43604 Sq. Ft.

Specific purpose for temporary occupancy and/or conditions/limitations of temporary occupancy:

3/15/02 **DENNIS RICHARDSON**

Date By:Print Sign CITY BUILDING OFFICIAL

[TCO approvals:RY,TNG,DV,MJG CE]

BC 109.4 TEMPORARY CERTIFICATE

If the Chief Building Official finds that no substantial hazard will result from occupancy of any building or portion thereof before the same is completed, a temporary Certificate of Occupancy may be issued for the use of a portion or portions of a building or structure prior to the completion for the entire building or structure.

POST IN A CONSPICUOUS PLACE

REVISION ON ACTIVE PERMIT

(2)

NEW PLAN CHECK NO#: 0200604 DATE: 1-16-02
OLD PLAN CHECK NO#: 0010990

This sheet is to be used only when a permit has been issued, is still active, and the applicant wishes to make changes to the existing approved plans.

All revisions clouded? YES X NO _____

JOB ADDRESS 7710 Stockton Blvd SUITE _____ PERMIT NO _____

AREA: _____ DBA Radiant Life Church

DESCRIPTION OF REVISIONS Revision of Service from 1600 to 1200 Amp

DISCIPLINE	B	L	P	M	E	F	S	R	D
CHECKED BY					WH				
ROUTE TO									
CODE					13				
HOURS SPENT					1				

CONTACT: Robert Krezman W/G&S Electric

ADDRESS: 1604 Basler St
Sacramento, CA

PHONE#: 916-442-7714

OF PLANS SUBMITTED 3 SUBMITTED TO Beth

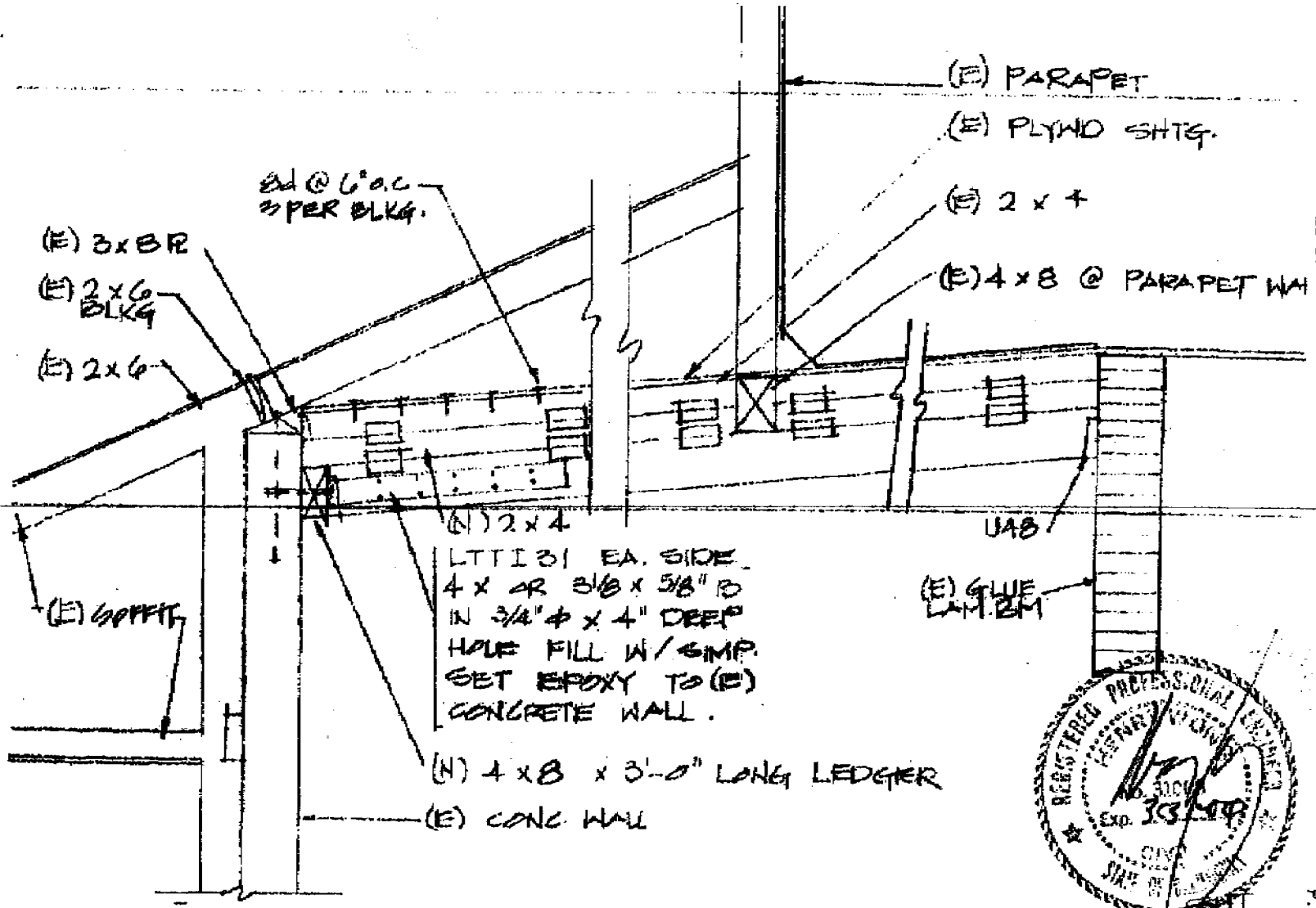
I understand that I am responsible for all plan check fees that I incur during the course of this additional plan check and that any approved plans not claimed and paid for within 3 months of notification will be disposed of and an invoice procedure for the amount due will be initiated. I further understand that an unclaimed revision may result in delay of final approval for the subject project.

DATE NOTIFIED	PLAN BIN

APP FEE	PAID

Applicant signature 1-16-01 Date

AGENCY	TOTAL HRS	TOTAL FEES
BLDG	1	$85.-
PW		
PLEASE PAY THIS AMOUNT		$85.-

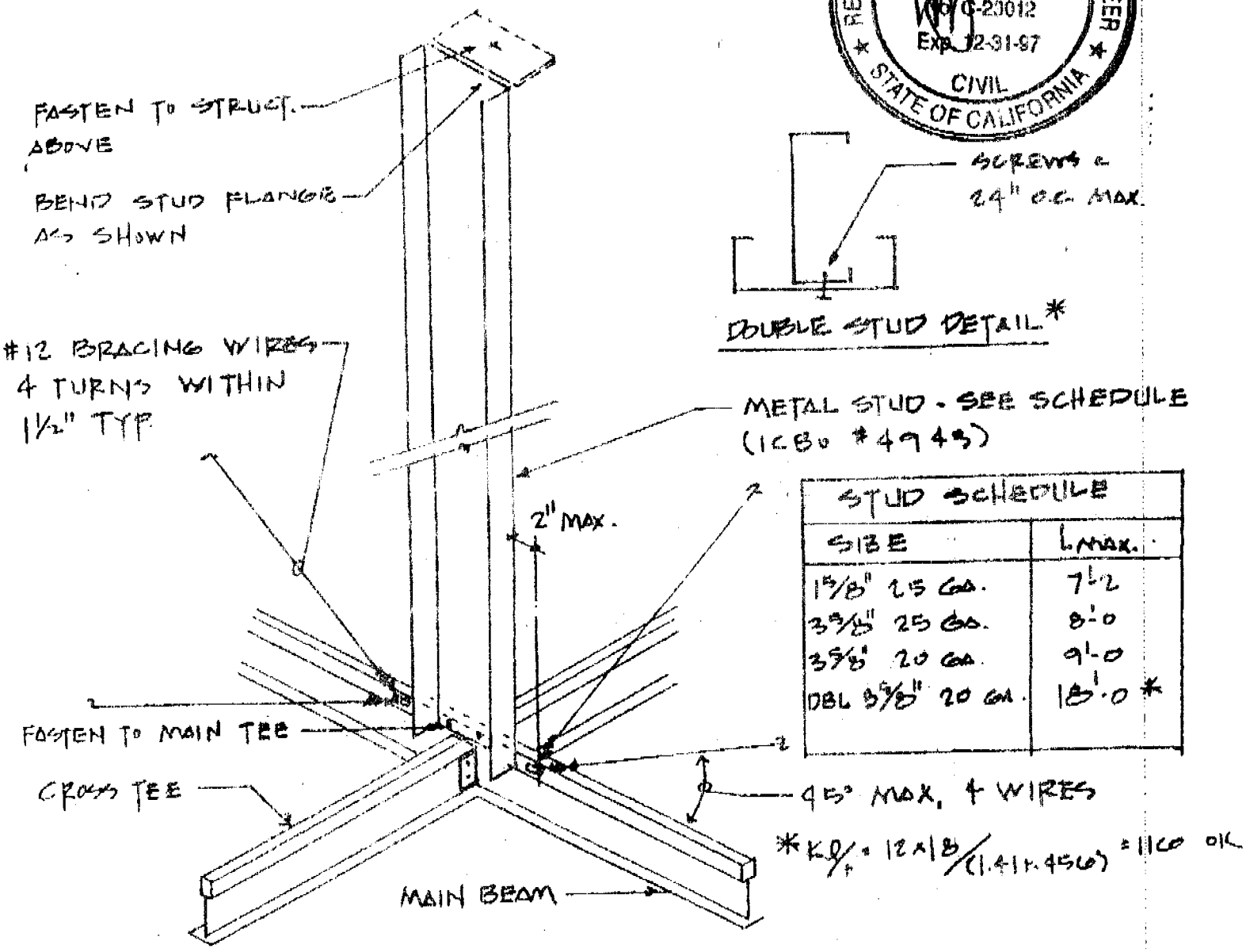


REVISED DTL REFERENCE TO (6) PERMIT DWG

C1.1

HANDLEY ENGINEERING
130 El Camino Real #200
Tustin, CA 92680
(714) 669-1141

REGISTERED PROFESSIONAL ENGINEER
WILLIAM J. HANDLEY
No. C-20012
Exp. 12-31-97
CIVIL
STATE OF CALIFORNIA



STUD SCHEDULE	
SIZE	L MAX.
1⅝" 25 GA.	7'-2
3⅝" 25 GA.	8'-0
3⅝" 20 GA.	9'-0
DBL 3⅝" 20 GA.	18'-0 *

* $KL/r = 12 \times 18 / (1.41 \times .456) = 110$ OK

LATERAL FORCE BRACING DETAIL

FIRST PLACEMENT WITHIN 6' OF EA. WALL
THEN AT 12' MAX x 12' MAX INTERVALS (A = 144 SF MAX)

ICBO Evaluation Service, Inc.

Accredited by the American National Standards Institute

5360 WORKMAN MILL ROAD • WHITTIER, CALIFORNIA 90601-2299

A subsidiary corporation of the International Conference of Building Officials

EVALUATION REPORT

ER-2244

Reissued December 1, 2000

Filing Category: SUSPENDED CEILINGS (262)

DONN AND SIMPLICITEE NONRATED AND FIRE-RATED EXPOSED AND CONCEALED CEILING SUSPENSION SYSTEMS

USG INTERIORS, INC.
1000 CROCKER ROAD
WESTLAKE, OHIO 44145

1.0 SUBJECT

Donn and Simplicitee Nonrated and Fire-Rated Exposed and Concealed Ceiling Suspension Systems.

2.0 DESCRIPTION

2.1 Donn DX and Simplicitee SDX Nonrated Suspended Ceiling Systems:

The Donn DX and SDX concealed or exposed nonfire-rated grid systems consisting of Donn DX and SDX main tees and Donn DXD, DX and SDX cross tees are designed to support approved acoustical interior finish tiles. The main and cross tees consist of roll-formed, inverted-tee sections with a lower flange width of $^{15}/_{16}$ inch. The depth and metal thickness of the main and cross tees are noted in Table 1. The DX and SDX cross tees are identical to DXD cross tees except for an offset end connection versus a butt cut end.

All members are supported with No. 12 gage galvanized wire at the maximum spans indicated in Table 1.

2.2 Donn DXL and Simplicitee SDXL Suspended Two-hour Fire-rated Exposed Floor-ceiling System:

The DXL and SDXL systems consist of a bulb tee with $^{15}/_{16}$-inch wide lower flange and main and cross-tee sizes shown in Table 1. The main tees are spaced 4 feet on center and cross tees 2 feet on center. The main tees are supported 48 inches on center with No. 12 gage galvanized steel wires. Additionally, the same wires support the four corners of light fixtures and at the center of each cross tee adjacent to the fixtures and air outlet ducts. The structural framing system consists of a W8 x 15 minimum steel beam that supports a minimum No. 18 gage $1^1/_2$-inch-deep steel deck with flutes spaced 6 inches on center. The deck is welded to supports at 12 inches on center with welded or button-punched seams spaced 36 inches on center. Cellular steel decks may also be used. The decks are covered with normal-weight concrete having a minimum compressive strength of 3,500 psi to a thickness of $2^1/_2$ inches over the top flute. Approved recessed 2-foot-by-4-foot light fixtures may be used in the ceiling when spaced up to 16 square feet per 100 square feet of ceiling area. Approved air duct openings with approved dampers with a maximum opening dimension of 12 inches may be used in the ceiling, provided they are spaced up to 113 square inches per 100 square feet of ceiling area. The lay-in acoustical material is USG Interiors, Inc., $^5/_8$-inch-thick Type GR(s) nonperforated tile. The acoustical material is also used for protection of recessed light fixtures and consists of a three-sided enclosure cut to provide a 1-inch clearance around the fixture. The pieces are held together with three 6d nails on each side. Light fixtures located below or adjacent to a beam must have an additional piece of acoustical material laid on top of the enclosure. Holddown clips spaced 2 feet on center are used to anchor the acoustical material. The overall assembly depth is $24^3/_8$ inches. The restrained and unrestrained rating of the assembly is two hours. The unrestrained beam rating is four hours. See Table 1 for allowable loads.

2.3 Donn DXL and Simplicitee SDXL Suspended One-hour Fire-rated Exposed Roof-ceiling System:

The DXL and SDXL systems consist of a bulb tee with $^{15}/_{16}$-inch wide lower flange and main and cross-tee sizes shown in Table 1. The main tees are spaced 4 feet on center and cross tees 2 feet on center. The main tees are supported 48 inches on center with No. 12 gage galvanized steel wires. Additionally, the same size wires support the four corners of light fixtures and at the center of each cross tee adjacent to the fixtures and air outlet ducts. Approved recessed 2-foot-by-4-foot light fixtures may be used in the ceiling when spaced up to 24 square feet per 100 square feet of ceiling area. Approved air duct openings with approved dampers may be used in ceilings that have a maximum opening dimension of 30 inches, and these are spaced up to 576 square inches per 100 square feet of ceiling area for steel ducts. The lay-in acoustical material is USG Interiors, Inc., $^5/_8$-inch-thick Type GR-1 non-perforated tile. The acoustical material is also used for protection of recessed light fixtures and consists of a three-sided rectangular enclosure cut to provide a 1-inch clearance around the fixture. The pieces are held together with three 6d nails on each side. Light fixtures located below or adjacent to a beam must have an additional piece of acoustical material laid on top of the enclosure. The overall assembly depth is 24 inches. The restrained and unrestrained assembly rating is one hour.

The roof consists of minimum No. 22 gage (0.020 inch thick) 1-inch-deep galvanized steel deck, with 1-inch-wide flutes at $3^1/_2$ inches on center. Steel joists, 10 inches deep, are spaced 48 inches on center. Decking is secured to the joists with $^1/_2$-inch-diameter puddle welds through weld washers at 12 inches on center. United States Gypsum Company Type SCX gypsum wallboard, 4 feet wide and $^5/_8$ inch thick, is placed with the long dimension perpendicular to the deck. Board end joints must be staggered one foot minimum from adjacent courses. A layer of vinyl vapor barrier is laminated over the wallboard. One or more layers of mineral and fiber insulation boards comprise the roof insulation. The boards are minimum 24 inches by 48 inches, by 1 inch thick.

The first layer is placed perpendicular to the gypsum sheathing with end joints staggered 2 feet minimum from adjacent courses. Subsequent insulation board layers must have all joints staggered from adjacent layers 12 inches minimum. The first two layers are secured through the gypsum sheathing into the decking with mechanical fasteners. Additional insulation board layers are adhered with hot asphalt or coal tar pitch at a rate not exceeding 25 pounds per square. A Class A, B or C built-up roof covering is applied over the insulation. The suspended grid system is hung by No. 12 gage galvanized steel wires, 48 inches on center, tied to main runners and bottom chord of joists. The ceiling must be suspended a minimum of 24 inches below the bottom of the roof deck and 12 inches minimum below joists.

2.4 Donn DXL and Simplicitee SDXL One-hour Fire-rated and Concealed Suspended Ceiling Systems with Stabilizer Bars:

These systems support an approved $^3/_4$-inch-thick, 12-inch square nonventilating acoustical mineral tile with kerfed edges. Holddown clips are used for each tile around the perimeter. The galvanized steel DXL24 or SDXL24 main tee and DXL424 or SDXL424 cross-tee framing members support 2-foot-by-4-foot approved recessed light fixtures having slotted air openings on each side for $34^1/_2$-inch-long-by-$1^1/_4$-inch-wide air boots. All air boots are provided with approved fire dampers. The stabilizer bars oppose the cross tees that support the long edge of the light fixtures and are connected to the main tee. Light fixture framing members are supported at each corner of the fixture and at midspan of the cross tees along the long edge of the fixture. Hanger wires are No. 12 gage galvanized steel. All main runners are supported with the hanger wires at 48 inches on center, except at light fixtures where the supports are at the fixture corners. For additional support and installation details, see Figure 1. All light fixtures are protected above by a rectangular-shaped box consisting of $^5/_8$-inch thick approved mineral fiber board.

Each side of the box is fastened to the top with four 7d coated nails. The structural framing system consists of open web steel joists spaced at 24 inches on center and supported by steel beams. The top and bottom of the joists are braced with $^1/_2$-inch-diameter steel bars spaced at 7 feet on center and welded to each joist. Expanded 3.4-pound, $^3/_8$-inch-ribbed metal lath is placed over the joists with ribs transverse to the joists. Normal-weight concrete with 28-day compressive strength of 3,000 psi and an average thickness of $2^3/_4$ inches is placed over the metal lath. The entire assembly is $21^1/_2$ inches deep, including the ceiling and concrete.

The approved light fixtures may be 16 square feet maximum per 100 square feet of ceiling area. See Table 1 for allowable loads.

2.5 Donn Paraline™ Linear Metal Ceiling Systems:

This is a suspended ceiling consisting of $3^1/_4$-inch-wide channel-shaped Paraline pans of 0.015-inch to 0.021-inch steel or 0.018-inch to 0.024-inch aluminum that are snap-locked to the bottom of DXP or DXLP paralok main tees. The system may be used as the following nonrated assembly or two-hour and three-hour fire-rated assemblies. See Table 1 for allowable loads.

2.5.1 Nonfire-rated Systems: The systems consist of the DXP bulb-shaped main tees and DX cross tees with construction similar to the fire-rated systems, except main tees are spaced at 48 inches on center and no acoustical board is required. One-to-two-inch-thick black fiberglass insulation may be used on top of the metal pans.

2.5.2 Two-hour and Three-hour Restrained or Unrestrained Assembly: This consists of the DXLP $1^1/_2$-inch-deep bulb-shaped steel main tees spaced at 48 inches on center with $1^1/_2$-inch-deep, DXL steel cross tees spaced at 24 inches on center, suspended by No. 12 gage galvanized steel hanger wires, 19 inches below minimum No. 20 gage fluted, or No. 22/22 gage cellular, $1^1/_2$-inch-deep steel decks. The decks shall have $3^1/_2$-inch-wide flutes spaced at 6 inches on center. Allowable loading on the steel decks must be based on noncomposite design. When the deck is covered with $2^1/_2$-inch-thick 4,500 psi normal-weight concrete, the assembly has a two-hour fire-resistive rating, and with $3^1/_4$-inch-thick concrete, a three-hour fire rating. The steel decks are supported by a minimum W8 x 15. The hanger wires are spaced a maximum of 48 inches on center along each main runner adjacent to intersection with cross tees; at the four corners of grid modules containing light fixtures and/or air boots; main runners at all four corners of air boots; at center of all cross tees located adjacent to and parallel with walls; and within 6 inches of each main runner splice location. The following light fixtures may be used individually or mixed:

1. Nominal 24-inch-by-48-inch fixtures spaced so that the area does not exceed 20 square feet per 100 square feet of ceiling area.
2. Nominal 9-inch-by-48-inch fixtures spaced so that the number of fixtures does not exceed nine per 200 square feet of ceiling area.
3. Nominal 5-inch-by-48-inch fixtures spaced so that the number of fixtures does not exceed six per 100 square feet of ceiling area.

Nominal 4-foot-long Donn Corporation air boots with 6-inch-diameter inlet may also be used in the system. Spacing of air boots shall not exceed one per 100 square feet of ceiling area.

All light fixtures must be completely enclosed with $^5/_8$-inch-thick Type GR(s) acoustical boards manufactured by USG Interiors, Inc., that are held together with three 6d nails on each side. The same acoustical board, 24 inches by 48 inches, is laid in between all cross tees and main runners. Holddown clips are placed over the cross tees symmetrically at 2 feet on center. Access clips may be used in lieu of holddown clips where required.

The Paraline plain or perforated metal pans Types PSS, PSR, PSSP and PSRP (steel units) may be used for the two-hour or three-hour fire ratings. The Types PAR, PASP and PARP (aluminum pans) are for use only with the two-hour fire rating.

2.6 Donn DXF, DXFF, DXFH and DXFFH Fineline Nonrated Systems:

The Donn Fineline suspension systems are manufactured from No. 27 gage commercial quality cold-rolled prepainted steel with a base metal thickness of 0.014 inch. The Fineline sections are roll-formed into an inverted-tee shape $1^{13}/_{16}$ inches high, with a $^1/_4$-inch-by-$^1/_2$-inch bulb section at the top. A No. 27 gage (0.014 inch base metal thickness) reinforcement strip, knitted to the inside of the bulb, is provided for use in the DXFH and DXFFH heavy-duty ceiling systems. The face is box-shaped, $^5/_{16}$ inch high, $^9/_{16}$ inch wide and has a $^1/_4$-inch or $^1/_8$-inch opening between the horizontal exposed face flanges. All members are supported with minimum No. 12 gage galvanized steel wire for maximum loads and spans indicated in Table 1.

The Fineline main tees are available in lengths up to 12 feet and are joined by an integral reversible splice with interlocking tabs. To accept the intersecting cross tee, the main tee is notched at 24 or 30 inches on center, with the first notch 12 inches in from each end.

The Fineline cross tees are assembled with a high-tensile steel end clinched to the body of the tee. The tees have mitered ends and are notched at the centerline to accept intersecting tees. Cross tees are 48 inches long with a notch at the center for 24-inch-by-24-inch modules; 60 inches long for 30-inch-by-30-inch modules; 24 inches or 30 inches long for two-directional systems.

The Fineline suspension systems can be installed in two-directional patterns using main runners 144 inches long and 48- or 60-inch cross tees perpendicular to the main tees and 24- or 30-inch cross tees perpendicular to the 48- or 60-inch cross tees and parallel to the main runners.

2.7 Donn DXLF Fineline One-hour Fire-rated Floor-ceiling System:

The Donn Fineline suspension system is designed to support acoustical panels in one-hour fire-resistive floor-ceiling assemblies as noted in Figure 2. The main runners, 4-foot-long cross tees and 2-foot-long cross tees are designated DXLF-29, DXLF-429 and DXLF-229, respectively. The overall depth and thickness of the runners and cross tees are described in Table 1.

2.8 Donn DXLF Fineline One-hour Roof-ceiling Fire-rated System:

The same framing members described in Section 2.6 of this report may be used as part of a one-hour fire-resistive restrained roof-ceiling assembly described as follows: The main runners are spaced 4 feet on center. Cross tees, 4 feet long, are spaced 2 feet on center inserted into main runners. Cross tees 2 feet long are inserted perpendicular to the 4-foot cross tees and spaced 2 feet on center to provide 24-inch by 24-inch modules. Ceiling panels are USG Interiors, Inc., GR-1(s) perforated, with dimensions of 24 inches by 24 inches by $^3/_4$ inch thick. Panels at walls are supported by No. 26 gage steel angles with $1^3/_{16}$-inch and $^5/_8$-inch legs.

The roof consists of minimum No. 22 gage, $1^1/_2$-inch-deep galvanized steel deck, with flutes at 6 inches on center. Steel joists, 10 inches deep, are spaced 48 inches on center. Decking is secured to the joists with $^1/_2$-inch-diameter puddle welds through weld washers at 12 inches on center. Water-resistant core gypsum sheathing, 4 feet wide and $^5/_8$ inch thick, is placed with the long dimension perpendicular to the deck.

Board end joints must be staggered 1 foot minimum from adjacent courses. Optional mineral and fiber insulation boards manufactured by Manville comprise the roof insulation. The boards are minimum 24 inches by 48 inches by 1 inch thick. The first layer is placed perpendicular to the gypsum sheathing with end joints staggered 2 feet minimum from adjacent courses. Subsequent insulation board layers must have all joints staggered from adjacent layers 12 inches minimum. The first two layers are secured through the gypsum sheathing into the decking with $3^1/_4$-inch-long screws having a 0.203-inch-diameter shank. The screws have a special tip that locks against the steel deck underside. The screws are placed through $2^1/_8$-inch-diameter, 0.030-inch-thick steel discs at each board corner. Additional insulation board layers are adhered with hot asphalt or coal-tar pitch at a rate not exceeding 25 pounds per square. A Class A, B or C built-up roof covering is applied over the insulation. The suspended grid system is hung by No. 12 gage galvanized steel wires, 48 inches on center, tied to main runners and bottom chord joists. The soffit of the ceiling must be suspended a minimum of 20 inches below the bottom of the roof deck and 10 inches minimum below joists.

2.9 Donn Reflectee Nonrated Suspended Ceiling System:

The Donn Reflectee Ceiling System consists of Donn DX main tees and cross tees supported as set forth in Section 2.1 of this report. It provides for installation of the Reflectee light fixtures which are 8 feet long and support the ends and midspan by bridging tees designed to interlock with the DX cross tees, spaced 48 inches on center. The bridging tees are supported by the adjacent main tees spaced 12 inches apart. The bridging tees are 12 inches wide and are die-formed from 0.048-inch-thick commercial-quality cold-rolled steel. End details are fabricated in the bridging tee to interlock with the cross tees and main tees. An 8-foot-long reflector and ballast cover is supported at the bottom flange of the main tee and light fixture with one fastener at each end.

2.10 Donn DXT Centricitee Nonrated Suspended Ceiling System:

The Type DXT nonrated exposed system is designed to support an approved acoustical interior finish tile. The main and cross tees are roll formed into a double-web inverted-tee shape with a $^9/_{16}$-inch face and overall depth and thickness as noted in Table 1. The face has a prepainted cap applied during the roll-forming operation.

All members are supported with No. 12 gage galvanized wire at the maximum spans indicated in Table 1.

2.11 Donn DXLT Centricitee One-hour Fire-rated System:

The Donn DXLT Centricitee exposed grid system is designed to support lay-in acoustical panels in a one-hour fire-resistive floor-ceiling assembly. See Figure 2 for description. The main runners, 4-foot-long cross tees and 2-foot-long cross tees are designated as DXLT-24, DXLT-424 and DXLT-218, respectively. The overall depth and thickness of the runners and cross tees are described in Table 1.

2.12 Donn DXM Meridian Nonrated Suspended Ceiling System:

The Donn DXM Meridian nonrated exposed system is designed to support an approved acoustical interior finish tile. The main and cross tees are roll formed into a double-web inverted-tee shape with an exposed $^9/_{16}$-inch face having a $^9/_{64}$-inch-wide and $^1/_4$-inch-deep reveal slot centered in the face. The overall depth and base metal thickness(es) are noted in Table 1. The tees, having a prepainted steel or aluminum cap applied during the manufacturing operation, are designated as DXM and DXMA, respectively.

2.13 Donn DXLA and ZXLA Nonrated Suspended Ceiling Systems:

The Donn DXLA and ZXLA concealed or exposed nonfire-rated grid systems, consisting of Donn DXLA and ZXLA main tees and cross tees, are designed to support approved acoustical interior finish tiles. The main and cross tees consist of roll-formed inverted-tee sections with a lower flange width of $^{15}/_{16}$ inch. DXLA and ZXLA products both have steel tee bodies, with aluminum caps. All members are supported with No. 12 gage galvanized wire at the maximum spans indicated in Table 1.

2.14 Donn Telescoping Seismic Compression Post:

The Donn Telescoping Seismic Compression Post is designed for use as a compression post for installation between the suspended ceiling and the structural roof or floor members above. The posts are located at the lateral force bracing locations. The compression strut consists of a $^3/_4$-inch-diameter tube inserted within and projecting out of a 1-inch-diameter tube, two plastic bushings and a spring-steel tension ring fastened with a No. 10 by 1-inch-long, hex washerhead, self-tapping steel screw to the bushing located in the end of the $^3/_4$-inch-diameter tube which is inserted into the 1-inch-diameter tube. The tubes are formed from AISI 1010 steel having a minimum yield strength of 36 ksi. A spring-steel clip inserted into the upper end of the compression post is used with a mechanical fastener to attach the compression post to the structural roof or floor framing. A plastic clip in the opposite end of the compression post snaps onto the bulb of the main tee. The compression post is also connected to the suspended ceiling members by wire tying the post to the hanger wires or fastening the plastic end clip to the main tee with a No. 10 by 1-inch-long bolt and hex nut. Details and allowable loads are noted in Table 2.

2.15 Accessories:

Each suspended ceiling system is provided with the necessary wall panels, angles, moldings, access angles and corner caps. Light fixture installations in nonfire-rated suspension systems may be included within the suspended ceiling construction, utilizing cross tees as boundary elements.

2.16 Materials:

Cross tees, main tees and Paraline metal pans are formed from steel having a minimum yield strength of 33,000 pounds per square inch. The steel of the ZXLA-24 main tee, ZXLA-26 main tee, ZXLA-224 cross tee and ZXLA-424 cross tee is galvanized prior to being painted. The galvanized coating is Type G 60 and complies with ASTM A 527. Steel with a base metal thickness of 0.014 inch and greater is commercial quality, cold-rolled sheet steel complying with ASTM A 336 and A 568. Steel with a base metal thickness less than 0.014 inch is single reduced black plate complying with ASTM A 625 and A 623. The Paraline metal pans may also be formed from 3003-H25 aluminum complying with ASTM B 209. All exposed surfaces are covered with a prepainted flange capping of either steel or aluminum. The end clips of DX cross tees are high-strength, low alloy steel complying with ASTM A 568 and ASTM A 591. The end clips of the ZXLA cross tees are formed from Type 301 or 302 stainless steel complying with ASTM A 167.

2.17 Identification:

Each carton of parts for the various suspension systems has the part name and part number printed on the carton.

3.0 EVIDENCE SUBMITTED

Structural test data and reports of fire tests complying with UBC Standard 7-1 and UBC Standard 25-2.

4.0 FINDINGS

That the Donn and Simplicitee Nonrated and Fire-rated Exposed and Concealed Ceiling Suspension Systems described in this report comply with the 1997 *Uniform Building Code*™, subject to the following conditions:

4.1 Ceiling grid systems are braced as required for earthquake forces in Table 16-O of the code and UBC Standard 25-2.

4.2 The systems are installed in accordance with this report, UBC Standard 25-2 and the manufacturer's instructions.

4.3 Ceiling access complies with Footnote 4, Table 16-B of the code.

This report is subject to re-examination in one year.

TABLE 1—ALLOWABLE LOADS AND SPANS FOR MAIN AND CROSS TEES[1,2,3]

ITEM NUMBER	PART NUMBER	MEMBER	DEPTH OF MEMBER (inches)	BASE METAL THICKNESS (inch)	MAXIMUM SPAN (inches)	MAXIMUM SPACING (inches)	CEILING LOAD (pounds per square foot)	SIMPLE SPAN (pounds per lineal foot)	REQUIRED LATERAL SUPPORT (inches on center)
1	DX-24, SDX-24 DX140	Main Tee	1 1/2	0.0164	48	48	3.1	12.5	24
1a	DXL-24, SDXL-24	Main Tee	1 1/2	0.017	48	48	3.2	12.7	24
2	DXLA-24 ZXLA-24	Main Tee	1 1/2	0.0175	48	48	3.2	12.7	24
3	DX-26	Main Tee	1 1/2	0.0218	48	48	4.1	16.5	24
3a	DXL-26	Main Tee	1 1/2	0.024	48	48	4.1	16.4	24
4	DXLA-26 ZXLA-26	Main Tee	1 1/2	0.0234	48	48	4.0	16.2	24
5	DX-216 SDX-216 DXD-216	Cross Tee	1	0.010	24	60	2.9	14.8	24
6	DXL-216 SDXL-216	Cross Tee	1	0.0142	24	24	7.4	27.3	24
7	DXLA-216	Cross Tee	1	0.014	24	24	12.5	25.0	24
8	DX-20	Cross Tee	1	0.010	20	60	5.3	26.5	20
9	DX-30	Cross Tee	1	0.0138	30	60	2.7	13.6	30
10	DX-316 DXD-316	Cross Tee	1	0.010	36	36	1.9	7.7	36
11	DX-416 DXD-416 SDX-416	Cross Tee	1	0.0138	48	48	1.0	4.2	48
12	DX-422 SDX-422	Cross Tee	1 1/2	0.0104	48	48	2.3	9.1	48
13a	ZXLA-224	Cross Tee	1 1/2	0.0147	24	24	15.0	30.0	24
13b	DX-424 SDX-424 DXL-424 SDXL-424 DXD-424	Cross Tee	1 1/2	0.017	48	48	3.4	13.8	48
14	DXLA-424 ZXLA-424	Cross Tee	1 1/2	0.0172	48	48	3.2	12.8	48
15	DX-426	Cross Tee	1 1/2	0.0217	48	48	4.1	16.7	48
16	DX-522	Cross Tee	1 1/2	0.0104	60	24	1.0	4.3	60

(Continued)

TABLE 1—ALLOWABLE LOADS AND SPANS FOR MAIN AND CROSS TEES[1,2,3]—(Continued)

ITEM NUMBER	PART NUMBER	MEMBER	DEPTH OF MEMBER (Inches)	BASE METAL THICKNESS (Inch)	MAXIMUM SPAN (Inches)	MAXIMUM SPACING (Inches)	CEILING LOAD (pounds per square foot)	SIMPLE SPAN (pounds per lineal foot)	REQUIRED LATERAL SUPPORT (Inches on center)
17	DX-524 DXL-524 DXD-524	Cross Tee	1 1/2	0.017	60	24	1.4	7.15	60
18	DX-526	Cross Tee	1 1/2	0.0212	60	60	1.8	9.3	60
19	DXP	Main Tee	1 1/2	0.020	48	24	3.2	12.9	24
19a	DXLP	Main Tee	1 1/2	0.0219	48	24	3.3	13.2	24
20	DXFF-29	Main Tee	1 7/8	0.015	48	48	3.1	12.5	24
21	DXFFH-29 [4]	Main Tee	1 7/8	0.015	48	48	4.1	16.3	24
22	DXFF-229	Cross Tee	1 7/8	0.0153	24	60	10.0	50.0	24
23	DXFF-429N	Cross Tee	1 7/8	0.0153	48	48	3.1	12.6	48
24	DXFF-529N	Cross Tee	1 7/8	0.0153	60	60	1.4	7.2	30
25	DXF-29	Main Tee	1 7/8	0.0168	48	60	3.1	12.3	24
25a	DXLF-29	Main Tee	1 7/8	0.0167	48[5]	48	3.6[5]	14.5[5]	24
26	DXFH-29 [4]	Main Tee	1 7/8	0.015	48	60	3.3	16.7	24
27	DXF-129	Cross Tee	1 7/8	0.016	12	60	10.0	50.0	12
28	DXF-20	Cross Tee	1 7/8	0.0153	20	60	10.0	50	20
29	DXF-229 DXLF-229	Cross Tee	1 7/8	0.0153	24	60	10.0	50	24
30	DXF-30	Cross Tee	1 7/8	0.0153	30	60	6.7	33.6	30
31	DXF-329	Cross Tee	1 7/8	0.0153	36	36	7.3	22.0	18
32	DXF-429N DXLF-429N	Cross Tee	1 7/8	0.0153	48	48	3.0	12.2	24
33	DXF-529N	Cross Tee	1 7/8	0.0153	60	24	1.4	6.9	30
34	DXT-24	Main Tee	1 1/2	0.0161	48	48	3.2	12.6	24
34a	DXLT-24	Main Tee	1 1/2	0.0198	48	48	3.1	12.2	24
35	DXT-26 [4]	Main Tee	1 1/2	0.019	48	48	4.2	16.8	24
36	DXT-524	Cross Tee	1 1/2	0.0159	60	60	1.3	6.7	30
37	DXT-424 DXLT-424	Cross Tee	1 1/2	0.0158	48	48	3.1	12.4	24
38	DXT-418	Cross Tee	1 1/8	0.0142	48	48	0.8	3.3	48
39	DXT-218 DXLT-218	Cross Tee	1 1/8	0.014	24	24	7.8	15.6	24
40	DXM-24	Main Tee	1 1/8	0.020	48 36	48 60	3.0 1.3	12.1 6.5	24 18
41	DXM-224	Cross Tee	1 1/8	0.0166	24	24	25.0	50.0	24
42	DXM-424	Cross Tee	1 1/2	0.0169	48	48	2.6	10.3	48
43	DXM-524	Cross Tee	1 1/2	0.0168	60	24	1.1	5.4	60

[1]Allowable loads are based on ultimate strength divided by a safety factor of 2.0 or a test deflection of L/360, whichever governs. As an alternate to the ultimate strength safety factor of 2.0, allowable loads are based on a bending stress of 20,000 pounds per square inch. Allowable loads indicated are to include the weight of the system as well as superimposed loads.

[2]When loading any system uniformly, the weight in pounds per square foot may not exceed the strength of its weakest member. Individual members are to be checked for possible overload from concentrated loads acting in conjunction with tributary uniform loads.

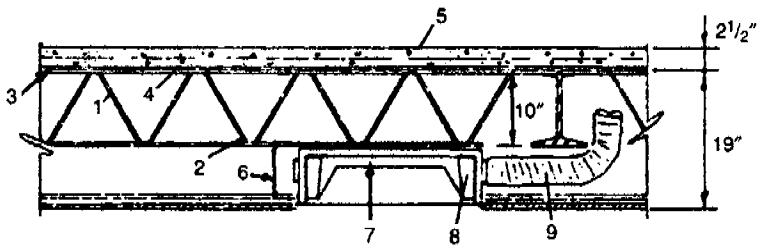
[3]Allowable uniform loads for one- and two-span main tee installations are limited to the value set forth for the simple-span condition.

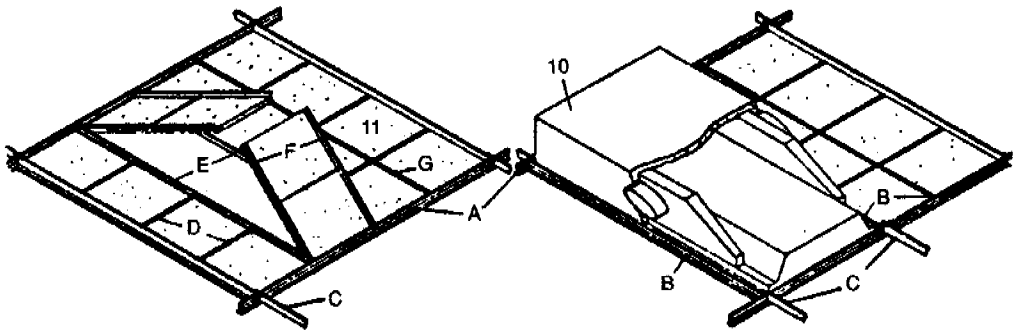
[4]Section is provided with reinforcement strip inside the bulb.

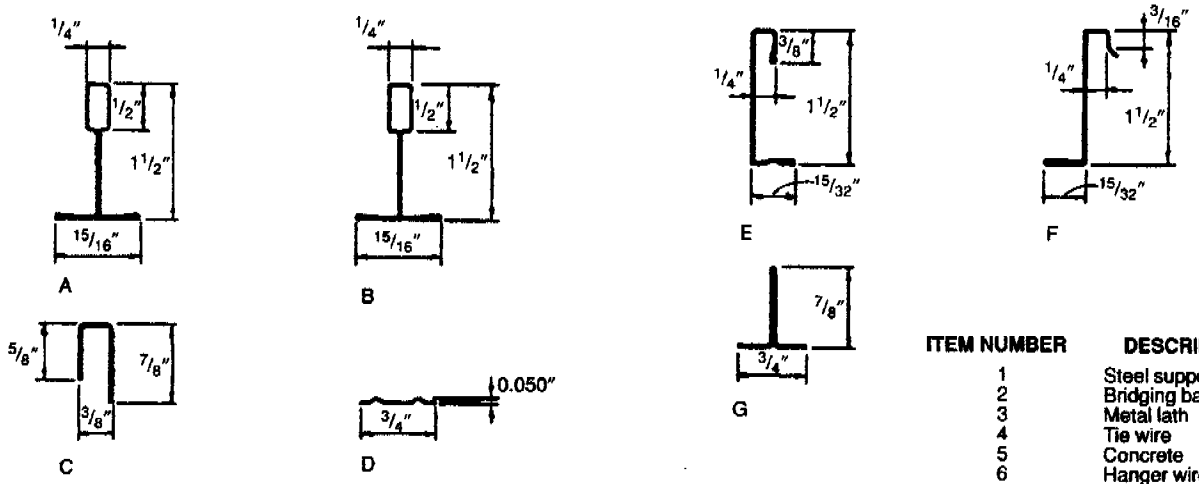
[5]Hanger wires must be installed a maximum of 6 inches from the center line of the fire expansion relief of the DXLF-29 main tee.

TABLE 2—DONN COMPRESSION POST

TYPE	TUBE LENGTHS (Inches)		OVERALL COMPRESSION POST LENGTH (Inches)	
	1-Inch Diameter	3/4-Inch Diameter	Minimum	Maximum
VSA 18/30	17	17	18	30
VSA 30/48	24	30	30	48
VSA 48/84	48	40	48	84
VSA 84/102	72	40	84	102







ITEM NUMBER	DESCRIPTION
1	Steel supports
2	Bridging bars
3	Metal lath
4	Tie wire
5	Concrete
6	Hanger wire
7	Recessed lighting fixtures
8	Air boots
9	Flexible air ducts
10	Light fixture protection
11	Acoustical material

FIGURE 1—DONN DXL ONE-HOUR FIRE-RATED AND CONCEALED CEILING SYSTEMS

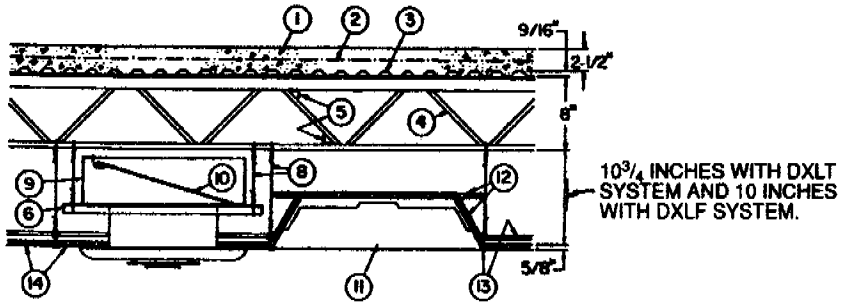


FIGURE 2—DONN DXLT AND DXLF ONE-HOUR FIRE-RATED SYSTEMS

1 **Normal-weight Concrete.** Carbonate or siliceous aggregate, 150 ± 3-pcf unit weight, 3,500-psi compressive strength with DXLT system and 2,500 psi with DXLF system.

2 **Welded Wire Fabric.** 6 x 6-W1.4 x W1.4 or heavier.

3 **Steel Form Units.** Minimum $^{9}/_{16}$-inch-deep corrugated unites of minimum No. 24 MSG galvanzied steel, welded to supports with $^{1}/_{2}$-inch puddle welds through welding washers. Welds located at each joist. Adjacent units overlapped one corrugation at the sides.

4 **Steel Joists.** Type 8H3 minimum size; spaced 24 inches on center, welded to end supports.

5 **Bridging.** One by 1-inch steel angles, welded to top and bottom chord of each joist.

6 **Duct Supports.** Nominal 1 by 1 by $^{1}/_{8}$-inch-thick steel angles or No. 16 MSG cold-rolled steel channels, $1^{1}/_{2}$ inches deep, suspended from lower chord of joists with No. 12 SWG galvanized steel wire to form a trapeze. Duct supports must be spaced at 48 inches on center maximum along length of duct and at air duct outlets.

7 **Cold-rolled Channels.** (Not shown)—No. 16 MSG cold-rolled steel channels, $1^{1}/_{2}$ inches deep with $^{9}/_{16}$-inch flanges, located as needed to provide means of attachment for hanger wires located away from steel joists. Placed on top and secured to lower chord of joists with No. 18 SWG galvanized steel wire.

8 **Hanger Wire.** No. 12 SWG galvanized steel wire, twist-tied to lower chord of joists, spaced not over 48 inches on center along main runners adjacent to cross-tee intersections. If not already present, hanger wires shall also be provided at the four corners of light fixtures, at center of cross tees supporting the long sides of light fixtures and at center of cross tees adjacent to air duct outlets.

9 **Air Duct.** No. 22 MSG minimum galvanized steel. Total area of duct openings not to exceed 113 square inches per each 100 square feet of ceiling area. Area of individual duct opening not to exceed 113 square inches. Maximum dimension of opening 12 inches.

10 **Damper.** No. 16 MSG galvanized steel, sized to overlap duct opening 1 inch minimum. Protected on both surfaces with $^{1}/_{16}$-inch-thick ceramic fiber paper and held open with a fusible link.

11 **Fixtures, Recessed Light.** Fluorescent lamp-type, steel housing, 2 by 4 foot size with DXLT system and 2 by 2 foot size with DXLF system. Fixtures spaced so their area does not exceed 24 square feet per each 100 square feet of ceiling area. Wired in conformance with the National Electrical Code.

12 **Fixture Protection—Acoustical Materials.** $^{5}/_{8}$-inch-thick USG Acoustical Products Co. GR-1(s) tiles having surface perforations cut into pieces to form a three-sided enclosure with open ends and trapezoidal in cross-section. Fixture protection consists of a $23^{3}/_{4}$-by-$47^{3}/_{4}$-inch top piece, with DXLT system and $23^{3}/_{4}$-by-$23^{3}/_{4}$-inch top piece with DXLF system, two side pieces of a width which will provide a minimum $^{5}/_{8}$ inch clearance between top piece and the fixture housing and are $47^{3}/_{4}$ and $23^{3}/_{4}$ inches long for the DXLT and DXLF systems, respectively. The side pieces are placed against the sides of the fixture and the top piece is placed on top of the side pieces. The pieces are held together by 6d nails near the center and near the ends on each long side of the fixture.

13 **Steel Framing Members.** DXLT or DXLF main runners, nominal 12 feet long spaced 4 feet on center. Cross tees, nominal 4 feet long installed perpendicular to main runners and spaced 2 feet on center. Cross tees, nominal 2 feet long, installed perpendicuair to the 4-foot cross tees and spaced 2 feet on center.

14 **Acoustical Material.** Nominal 24 by 24 by $^{5}/_{8}$-inch-thick USG Acoustical Products Co. GR-1(s) or GR-2(s). Border panels supported at walls by No. 26 MSG painted steel angles with $^{3}/_{4}$-inch and 1-inch legs or channels $1^{5}/_{8}$ inches deep with 1-inch bottom and $^{3}/_{4}$-inch top flanges. (S) = Surface perforations.

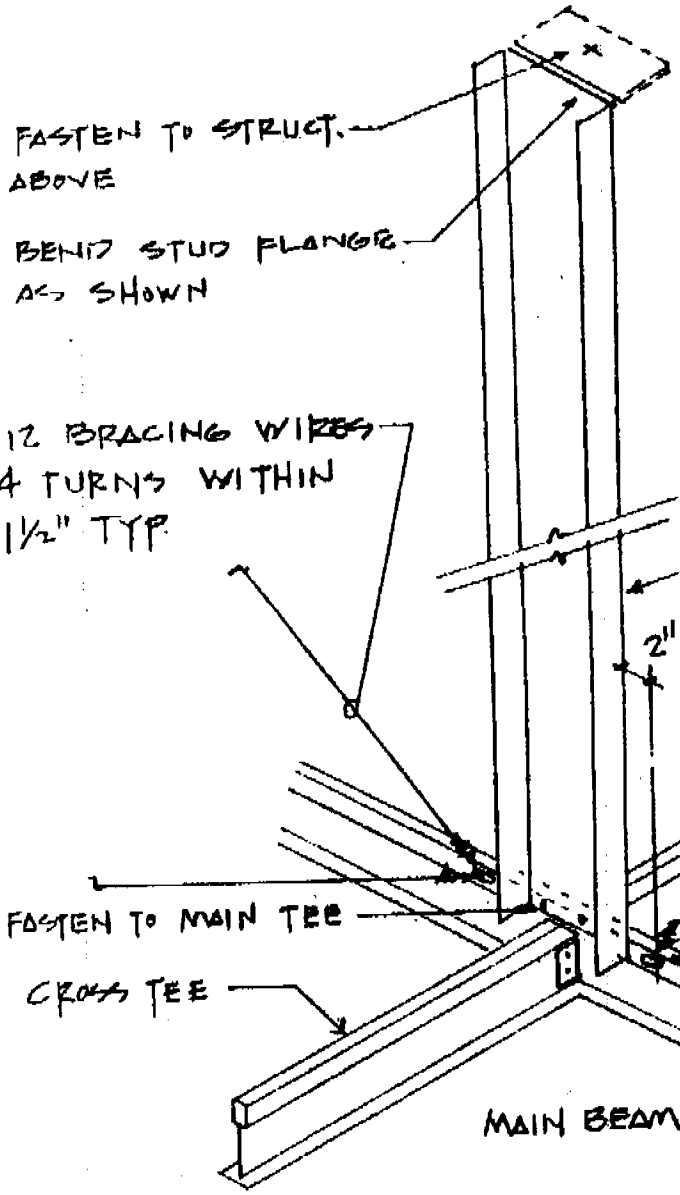
Fax

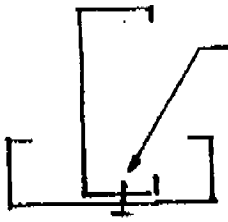
To: **Ron Yasui**
From: **Josephine Chan Mark**
Date: **April 16, 2002**
Subject: **Radiant Life Church, Suspended Ceiling**

I have consulted with the owner on the one hour suspended ceiling. **They will install the hold down clips** per Building Department approved installation for the one hour suspended ceiling. Enclosed is a copy of engineering detail for utilizing metal stud in replacement of compression post for the suspended ceiling for your review and approval. Please give me a call at (916)296-0537 to confirm the approval of using the metal stud. Thank You!!

Josephine Chan, Architect
844 West Cove Way
Sacramento, CA 95831

HANDLEY ENGINEERING
130 El Camino Real #200
Tustin, CA 92680
(714) 669-1141





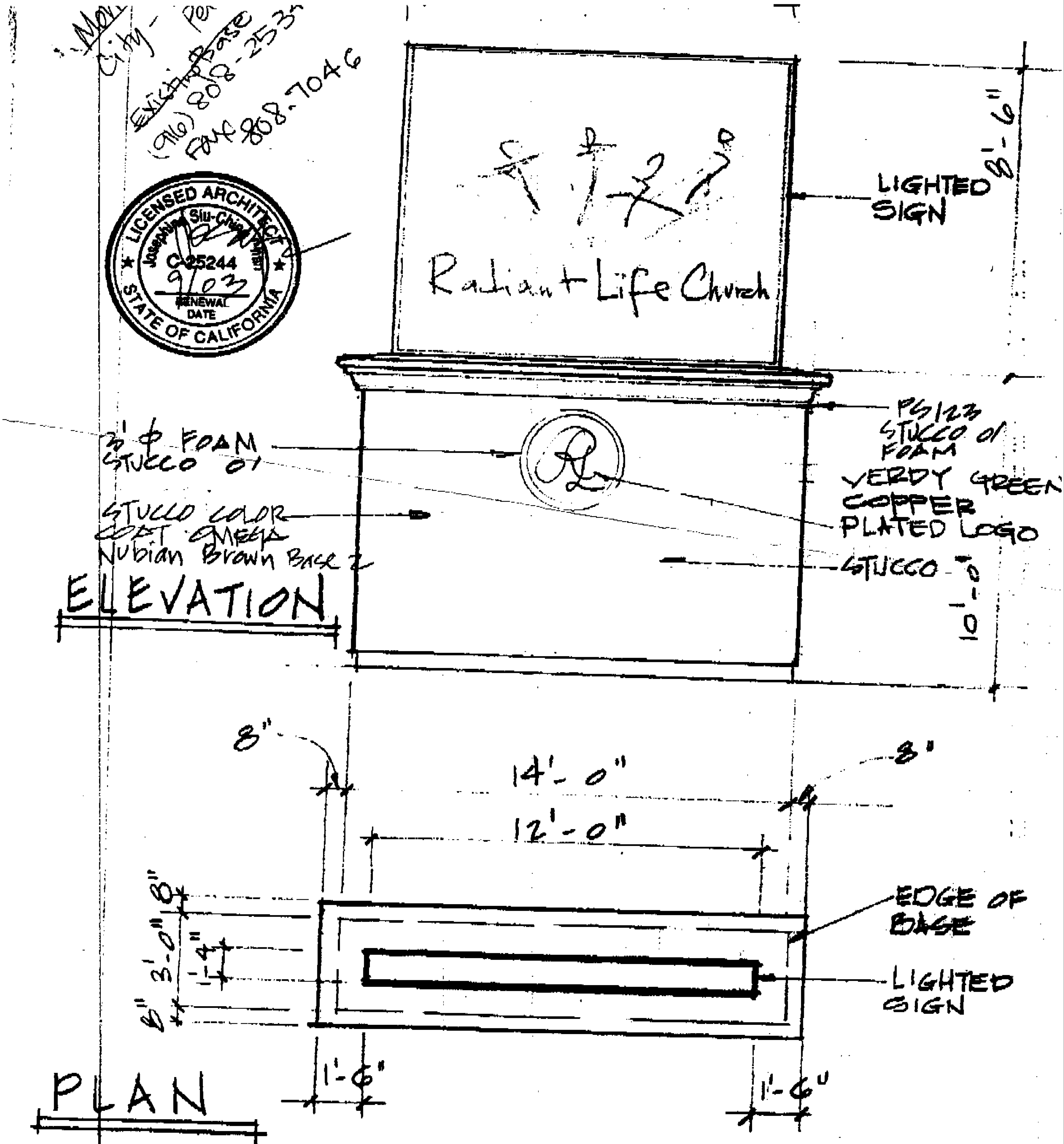
DOUBLE STUD DETAIL*

STUD SCHEDULE	
SIZE	L MAX.
1⅝" 25 GA.	7'-2
3⅝" 25 GA.	8'-0
3⅝" 20 GA.	9'-0
DBL 3⅝" 20 GA.	18'-0 *

* $Kl/r = 12 \times 18 / (1.41 \times .456) = 110$ OK

LATERAL FORCE BRACING DETAIL

FIRST PLACEMENT WITHIN 6' OF EA. WALL
THEN AT 12' MAX x 12' MAX INTERVALS (A = 144 SF MAX)



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

Radiant Life Church
7710 Stockton Blvd, Sacto