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Trade

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Street Number

5538

Street Dir

Document Date

8/6/90

Suite

Street Name

MONTEREY

Street Type

RD

Tract Number

Address Key

257973

Doc Type

PL

Sub Doc Type

BL

Permit Key

135865

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| **Initials** | Shirin | | | |
| **Date** | 9-17-01 | | | |

Address Verified

~~5524~~
Monterey
Rd
"TacoBell"
PD 90-5-35
B/P 89362

~~5524~~ Monterey
Road
PD 90-5-35
B/P 89362V

BEST
AVAILABLE COPY

Please Mail to
Cal Select.
Thank Kx

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# County of Santa Clara

Health Department

2220 Moorpark Avenue
San Jose, California 95128


July 24, 1990

Ed Owen
1650 Borel Place #101
San Mateo, CA 94402

**PROJECT NUMBER:** 2186

**PROJECT NAME:** TACO BELL

**PROJECT ADDRESS:** MONTEREY ROAD / BLOSSOM HILL RD, SAN JOSE

The plans submitted to this department have been reviewed and approved subject to the conditions as listed on the attached sheet.

Two (2) copies of the approved plans, stamped by this department, are available to be picked up at the above address. Please present one (1) copy to your local building official for the required approval and retain the second copy on the job site. A FOOD FACILITY CONSTRUCTION CARD will be attached to the job copy and must be posted with the other building permits.

Please be advised that you are responsible to contact this office to **arrange a construction inspection** prior to installation of equipment and again upon completion of the project.

Absolutely no food storage or food preparation will be allowed on-site until this department issues you your Permit to Operate. This permit will be issued upon the successful conclusion to our final construction inspection. You will also be asked to submit verification of garbage collection prior to the issuance of the Permit to Operate.

If you have any further questions or would like to call for an inspection appointment please contact the undersigned at (408) 299-6060 between 8:00 a.m. and 9:30 a.m. Monday through Friday.

Gene Nelson

GENE NELSON, R.E.H.S.
SENIOR ENVIRONMENTAL HEALTH SPECIALIST
PLAN REVIEW AND CONSTRUCTION UNIT
ENVIRONMENTAL HEALTH SERVICES

GN:er


**Board of Supervisors:** Susanne Wilson, Zoe Lofgren, Ron Gonzales, Rod Diridon, Dianne McKenna
**County Executive:** Sally R. Reed


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**CORRECTION LIST:**

1. Surface mounted piping is **not acceptable.** Piping and conduit of all types must be concealed within walls, floors, ceilings (including condensate drain lines, water heater pressure relief lines and soda lines).

2. Install fiberglass reinforced paneling on walls behind all sinks. Paneling to be installed to a minimum height of 48 inches from floor.

PLANNED DEVELOPMENT (PD) PERMIT (File No. PD 90-5-35) FOR THE PLANNED DEVELOPMENT DISTRICT, OR PORTION THEREOF, ESTABLISHED BY ORDINANCE NO. 22786 OF THE CITY OF SAN JOSE FOR THE PROPERTY SITUATED ON THE EAST SIDE OF MONTEREY ROAD BETWEEN BLOSSOM HILL ROAD AND FORD ROAD.

WHEREAS, pursuant to the provisions of Part 4 of Chapter 44 of Title 20 of the San Jose Municipal Code, Taco Bell Corporation, hereinafter referred to as "Applicant," on May 8, 1990 filed PD Permit Petition No. PD 90-5-35 for a PD Permit for a Planned Development situate within the (PD) district established by Ordinance No. 22786 of the City of San Jose on the property, hereinafter referred to as "subject property," described in Exhibit "A", which is attached hereto and made a part hereof by reference as though fully set forth herein; and

WHEREAS, pursuant to and in accordance with the provision of said Part 4, notice of the time, place, and purpose of the hearing on said petition was duly given as required by said Part 4; and

WHEREAS, pursuant to and in accordance with the provisions of said Part 4, the Director of Planning of the City of San Jose did duly commence and conduct said hearing at the time and place specified in said notice; i.e., June 20, 1990 at 10:00 a.m. in the City Council Chambers at San Jose City Hall; and

WHEREAS, at said hearing said Director gave all persons full opportunity to be heard and to present evidence and testimony regarding the matter being heard and did receive evidence and testimony respecting said matter, and

WHEREAS, at said hearing said Director received in evidence a development plan for the subject property entitled, "Taco Bell" dated May 8, 1990, last revised June 4, 1990, consisting of 8 sheets. Said development plan is on

Monterey Rd
PD 90-5-35
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file in the office of the Department of City Planning and is available for inspection by anyone interested therein, and said development plan is by this reference adopted and incorporated herein the same as if it were fully set forth herein; and

WHEREAS, said hearing was conducted in all respects as required by law; and

WHEREAS, the Director of Planning of the City of San Jose, is the decision making body regarding approval of Planned Development Permits,

NOW, THEREFORE, the Director of Planning hereby certifies that, as a decision making body he has considered and approved a Negative Declaration prepared for File No. PDC 87-11-90, which includes the subject real property embraced by said Planned Development Permit under File No. PD 90-5-35 and said Negative Declaration became final on March 7, 1988.

SECTION 1. Said Director hereby finds, determines, and declares that if a Planned Development Permit for the Planned Development set forth in said development plan is granted subject to the conditions hereinafter set forth in Section 2, then in such event, but not otherwise, said Planned Development (1) conforms to the PD Zoning for the PD District in which the subject property is situate, (2) is essential and desirable for the public convenience and welfare, and (3) would develop the subject property in conformity with the general purposes of said Title 20 and in a manner better calculated to obviate the occurrence of blight and to promote the public peace, health, safety, and welfare than any use which could be made of the subject property if it were in the base district alone.

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SECTION 2. In accordance with the findings set forth in Section 1 hereof, a PD Permit for the Planned Development shown in said development plan is hereby granted to Applicant for development of the subject property, provided, however, that this PD Permit is granted upon and subject to each and all of the conditions hereinafter set forth in this section and said Director expressly declares that he would not have granted this PD Permit except upon and subject to each and all of said conditions, each and all of which conditions shall be binding upon the Applicant and all subsequent owners of the subject property and all persons who use the subject property for the uses shown in the PD Permit granted hereby. The conditions referred to in the preceding sentence are the following, to wit:

1. Except as provided below, the project shall be constructed by Applicant and maintained by Applicant and his successors in interest in the subject property in precise conformance with the approved development plan set on file with the Department of City Planning of the City of San Jose, including but not limited to: (1) the location and dimensions of all things which comprise the development plan including all proposed subdivisions of land; all public and private uses, all things to be constructed or planted, and all things which will be situate or done on the property including, without limiting the generality of the foregoing (a) all lots, (b) all buildings and other structures, (c) all public open space and all common private open space, (d) each different public or private use and the location and dimensions of the area to be devoted to each such use, (e) all off-street parking and off-street loading areas, (f) all private streets, pedestrian ways, utility, flood, drainage and sewer easements and rights-of-way, and all other public or private easement and rights-of-way of any kind, (g) all landscaping areas and all common private open space areas, (h) the location, size, shape, colors, illumination and structural and support elements of any signs, (2) the size, shape, elevations, and architectural character of each building and other structure which will be situate or constructed on the subject property; (3) all public and private landscaped areas to be generally maintained, to be irrigated by an automatic irrigation system, and all dead plant materials to be removed and replaced by the property owner/developer or his designated agent as necessary to maintain the project landscaping in conformance with the approved landscape plan.

2. This PD Permit shall lapse and become null and void upon the expiration of thirty (30) months from and after the date of recordation with the County Recorder of said PD Permit if within such thirty (30) month period construction of said buildings or alteration of said buildings or other improvements, pursuant to and in accordance with the provisions of this PD Permit, has not commenced, or, in the event no construction is required to

implement the intended use of the subject property pursuant to this PD Permit, said intended use has not been commenced and all conditions specified herein this PD Permit have not been satisfied; provided, however, that upon receipt of a written request by the owner(s) of the subject property at least thirty (30) days prior to the expiration of the herein Permit, on forms provided by the Director, the Director may, at his discretion, approve one or more extensions of the effective period of this Permit, not to exceed a total of two (2) years; the Permit shall become null and void if construction of said buildings has not commenced within the effective date of said Permit as may have been extended by the Director. The Director's action in granting or denying such requested extension shall be final.

3. Applicant shall pay all recordation fees which may be charged by the County Recorder for recordation of this PD Permit.

4. Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California: In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified by the applicant and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the applicant shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

5. Pursuant to Section 20.44.140 of the San Jose Municipal Code, any person responsible for construction on this site, including, but not limited to, the permit holder and any contractor thereof, shall keep the public right-of-way free from construction dirt and debris. All on-site construction debris shall be removed at least weekly.

6. Applicant shall provide public (off-site) and private (on-site) fire hydrants as required by the Fire Department. Contact the Fire Protection Engineering Section of the Fire Department for exact locations.

7. Required fire flow for this project is 2,000 gallons per minute.

8. All Fire Lanes shall have red painted curbs and be properly signed indicating "Fire Lane - No Parking" in accordance with the requirements of the San Jose Police Department Tow Liaison Unit, (Ph: (408) 277-4636) upon completion of each phase of the road work and prior to occupancy of the units of that phase.

9. All buildings shall be provided with automatic fire extinguishing systems as required by the Fire Department. Said system shall provide supervision by a remote station alarm for any fire extinguishing systems serving more than one hundred sprinkler heads.

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10. Landscape planting and irrigation is to be provided as indicated, in the approved Planned Development Permit Plan Set. The operation of the irrigation system shall conform to the Landscape and Irrigation Guidelines.

11. All garbage enclosures and stress pads shall be maintained in good condition. All garbage containers shall be maintained within the provided enclosures.

12. All colors and materials are to be as specified on the Approved Plan Set. Any variation from the approved materials or colors will require approval by the Director of Planning.

13. In order to reduce water consumption during drought conditions, the planting of live landscape materials required by this permit may be delayed until January 1, 1991, or until such later date as may be established by the City Council. For this purpose this allowance does not relieve the requirement to install landscape irrigations systems in a timely manner.

14. This PD Permit does not allow for a use operating between the hours of 12:00 midnight and 6:00 am.

15. The signs approved with this PD Permit constitute the entire sign program intended for the project. No monument signs are intended or approved for this pad.

16. All trees are to be preserved should be protected by means of temporary barricades prior to any construction activity in the area and remain during the entire duration of construction. The temporary barricades should be placed at the drip line of the trees. Temporary barricades may be of chain link, wood picket fence or plastic tensar type fencing and shall be a minimum of four (4) feet in height.

17. Where pruning for clearance or tree removals are required, it should be accomplished prior to other construction activity and prior to placement of the recommended temporary barricades.

SECTION 4. This PD Permit shall lapse and become null and void and be no longer of any force or effect upon the expiration of sixty (60) days from and after the date the said Director takes written action hereon and files same in his office if within said sixty (60) day period Applicant has not accepted this permit and consented and agreed to comply with, be bound by, and do all things required of Applicant by all the terms, provisions, and conditions of this permit. This permit shall be subject to the provisions of Section 20.44.210 and 20.44.220 of the San Jose Municipal Code.

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SECTION 5. When (a) the provisions of Section 20.44.220 of the San Jose Municipal Code have been complied with and (b) Applicant has paid whatever recordation fees may be charged by the County Recorder for recordation of a Notice of Granting of PD Permit, but not otherwise, the Director shall cause said Notice to be recorded in the office of the Santa Clara County Recorder.

Said Notice shall not be recorded prior to the time that said Director takes written action hereon nor prior to the time that the Acceptance, Agreement and Consent shall have been made nor unless such Acceptance, Agreement and Consent shall have been made within sixty (60) days after the issuance of this PD Permit.

DATED THIS 27th DAY OF June 1990.

Gary J. Schoennauer
Director of Planning

Deputy

GJS:JD:TM:SO:mt
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## DESCRIPTION OF SUBJECT PROPERTY

EXHIBIT "A"

**The subject property is all that real property situate in the City of San Jose, County of Santa Clara, State of California, described as follows:**

All that certain real property situate in the City of San Jose, County of Santa Clara, State of California, being a portion of Parcel 3 as shown on that certain Parcel Map filed for record in Book 597 of Maps at pages 8 and 9, Santa Clara County Records, being more particularly described as follows:

BEGINNING at the most southerly corner of above said Parcel 3; thence from said POINT OF BEGINNING along the Southwesterly line of above said Parcel 3 and the Northerly line of Monterey Road as shown on above said Parcel Map, the following courses: N53°09'47"W 25.95 feet, N57°40'57"W 110.40 feet and N52°27'39"W 210.68 feet; thence leaving said Southwesterly line of Parcel 3 and Northerly line of Monterey Road at a right angle N37°32'21"E 46.00 feet to the TRUE POINT OF BEGINNING; thence from said TRUE POINT OF BEGINNING the following courses: N37°32'21"E 80.00 feet, N52°27'39"W 44.00 feet, S37°32'21"W 80.00 feet and S52°27'39"E 44.00 feet to the TRUE POINT OF BEGINNING.

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This document is part of the PD Permit PD 90-5-35 issued by the Director of Planning of the City of San Jose.

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TACO BELL®

# TACO BELL RESTAURANT
# M-60-H
# SPECIFICATIONS

**10-1-88**

THESE ARE "MASTER SPECIFICATIONS" AND ARE INTENDED TO PROVIDE MINIMUM STANDARDS. THERE MAY BE SOME SECTIONS THAT WILL NOT APPLY ON A SPECIFIC PROJECT. THE DRAWINGS SHALL SUPERCEDE THESE SPECIFICATIONS WHERE THERE IS A CONFLICT.

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**TACO BELL ARCHITECTURE & ENGINEERING DEPARTMENT**

**17901 VON KARMAN AVE. IRVINE, CALIFORNIA**

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## INSTRUCTIONS TO BIDDERS

**00100.11 GENERAL:**

A. The project is to be bid by the Contractor(s) exactly as drawn and specified, and all proposals shall be complete and inclusive of all work as shown and/or specified and as required by all applicable building codes. All Contractors and Sub-Contractors are held to have fully examined all drawings and specifications, not only of their particular concern but of allied trades as well, and to be fully familiar with conditions under which he will assume his work. Particular attention is drawn to the General Conditions and the Supplementary General Conditions of the specifications. The Contract shall be in the form of a single, lump sum of type of agreement.

**00100.12 PROPOSALS:**

A. Sealed proposals shall be received by the Owner at such time and place as may be designated by him. Proposals shall be submitted in accordance with the Taco Bell 'Invitation To Bid'. Proposals shall be signed by legal authorized parties of companies only and titles of same shall be stated. The Owner shall retain the right to reject any and/or all proposals.

**00100.13 ACCEPTANCE OR WITHDRAWAL OF PROPOSALS:**

A. Any Contractor who has submitted a proposal to the Owner may withdraw this proposal at any time prior to the scheduled time for opening of same; however, once proposals are opened the Contractor agrees to honor same for a minimum of thirty (30) days after scheduled date of opening.

**00100.14 DISCREPANCIES:**

A. Should a bidder find discrepancies or ambiguities in, or omissions from, the drawings and/or the specifications, or be in doubt as to their meaning or intent, he shall notify the Area Construction Manager for Taco Bell in time to allow for issuance of clarification by means of Addenda for delivery in sufficient time before proposals are due.

**00100.15 QUALIFICATION OF CONTRACTORS:**

A. The Owner reserves the right to require any Contractor submitting a proposal to furnish any or all of the following information prior to award of the Contract.

1. Performance record of project completed over the previous two (2) years.
2. Address and description of plant or permanent place of business.
3. An itemized list of equipment.
4. Additional information as shall satisfy the Owner that the Contractor is adequately prepared to fulfill all requirements of the Contract, such as contained in A.I.A. document A305 - Contractor's Qualification Statement.

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00100.16 DISTRIBUTION OF DOCUMENTS:

A. Contractor desiring to bid the work may obtain plans, specification and Supplemental Bidders Package from the Taco Bell Region Construction Office. Plans and specifications to remain the property of the Owner and are to be returned to him, complete and in good condition. Use by unauthorized persons for any purpose whatsoever shall be strictly prohibited and is punishable under federal copyright laws.

00100.17 CONDITIONS:

A. Submittal of a proposal by any Contractor shall constitute full acceptance by that Contractor of all conditions as herein stated.

00100.18 BUILDING PACKAGE:

A. General Contractor shall receive a number of miscellaneous items and install same as part of the General Contract. These items shall be found through the drawing labeled "BY TACO BELL". Contractor shall allow three (3) weeks notice for delivery, and shall furnish all labor and materials required for the unloading, receiving, safe guarding and installation of these items.

00100.19 ALTERNATES:

A. Specific manufacturers for various Contractor furnished items are noted on the Drawings. If approved alternate manufacturer's products are furnished, this information shall be so noted on the Proposal. Additionally, proposed substitutions of non-approved manufacturers shall be done in compliance with the respective section of the General Conditions.

00100.20 AS-BUILD PLANS:

A. Prior to release of the final retention, the contractor shall furnish to Taco Bell a complete set of plans red-lined with all deviations made during construction plus the permit set of plans maintained at the site.

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DIVISION 1 - GENERAL REQUIREMENTS

## SECTION 01000 - SUPPLEMENTARY GENERAL CONDITIONS

### 01000.1 GENERAL:

#### 01000.11 DEFINITIONS:

A. Owner: the Owner shall be defined a TACO BELL CORP., 16808 Armstrong Avenue, Irvine, California, 92714, (714) 863-4690, and the Region Taco Bell Corp. office through which the 'Invitation To Bid' was provided. The Owner's representative for administrating the Contract shall be the Area Construction Manager.

B. Architect: The Architect, for the purposes of this project, shall be Phillip N. Gilbert, Director of Architecture and Engineering for Taco Bell. The Architects representative for administrating the Contract shall be the Taco Bell Area Construction Manager.

C. Contractor or General Contractor: The person(s), company(ies) or corporation(s) with whom the Owner makes a direct Contract for the work or any portion thereof, or for any materials or related services required thereto.

D. Sub-Contractor: Any person(s), company(ies), or corporation(s) with whom a contractor makes a Contract to furnish labor and/or service and/or material in connection with the project. Within the specifications and working drawings, the term "Contractor" shall be interpreted to mean Sub-Contractor where applicable unless further defined.

E. Project: The project shall be defined as the complete labor, materials and services required for construction of a Taco Bell Restaurant and all related work as described in the Contract documents.

F. Site: The property on which the project is located.

G. Contract Documents: The Contract documents shall consist of (1) The Building Construction Contract, (2) The Drawings, (3) The Specifications, (4) Soils Report. The dates including revisions dates of all drawings and specification shall be included on the proposal form.

#### 01000.12 GENERAL CONDITIONS:

A. The Standard Form of General Conditions published by the American Institute of Architects (A.I.A.) form A201, latest edition, shall be binding and the General conditions included herein shall be supplementary thereto. In the event of conflict, the Supplementary General Conditions shall govern over general conditions, as well as the Taco Bell Construction Contract over the Supplementary General Conditions.

B. The Taco Bell Construction Contract, Contractor's Draw Schedule, Contract Change Order and Final Waiver of Lien shall be used. Copies of the above forms are on file at the Owner's office.

C. It shall be accepted as a fact that all Contractors have



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inspected the site prior to submitting their bid and no additional compensation shall be allowed for failure to fulfill this requirement. It is not to be construed; however, that the Contractors have included in their bids amounts to cover unforseen conditions or obstacles other than those indicated on the drawings or visually apparent at the site. Should unforseen conditions arise the Owner shall be notified immediately.

D. The following specifications are divided into chapters and each Contractor is to figure on that portion with which he is concerned. It shall be the responsibility of each Contractor to read and familiarize himself with the General Conditions and Supplementary General Conditions which shall be considered equally binding with the remaining specifications.

E. Any controversy or claim arising due to a labor conflict caused by the wording or assignment of these specifications shall be settled in accordance with local governing labor practice.

F. Alternates, whether specified by the Owner or suggested by the Contractor, shall be listed separately on the proposal. The Contractor shall indicate the cost of materials and labor required to complete the alternate and the credit due the Owner for any materials and/or labor not required due to the alternate installation.

G. The Area Construction Manager shall be Owner's and Architect's sole representatives during the administration of the construction contract (this additionally refers to the Region and Senior Construction Managers).

01000.13 DRAWINGS AND SPECIFICATIONS:

A. All work shall be executed according to the true meaning and intent of the drawings and specifications which are intended to include everything required and necessary for the proper and entire finishing of the work, notwithstanding that each and every item necessarily involved in the work is not specifically mentioned, and the work, when completed shall be delivered to the Owner in a perfect and undamaged condition without exception.

B. The drawings and specifications are intended to be cooperative and the work or materials called for by the drawings and not mentioned in the specifications or vice-versa shall be furnished and performed in as faithful a manner as though treated by both. The specifications are intended to represent minimum design and shall be superseded by the drawings.

C. Before submitting his estimate each bidder shall carefully check the drawings and specifications and should he find conflict, uncertainty or discrepancy as to his requirements, he shall report same to the Owner immediately, who will make a ruling on each report and will notify all concerned bidders as to his decisions. Should such conflict, etc., be discovered after signing of the Contract, it shall be called to the attention of the Owner and his decision in regard thereto shall be final.

01000.14 PRECEDENCE OF DRAWINGS:

A. The order of precedence of drawings shall be as follows:

1. Taco Bell's drawings over Taco Bell's specifications.
2. Larger scale drawings over smaller scale drawings.
3. Figured drawings over scale drawings.
4. Supplementary General Conditions over A.I.A. General Conditions.
5. Architectural drawings over mechanical and electrical drawings.
6. Any addenda over all material of an earlier date.
7. Equipment drawings, as may be provided by the Owner, over architectural and mechanical drawings of earlier dates.

01000.15 SALES TAX:

A. Each Contractor shall include in his proposal, the payment of all state and local sales and occupational taxes as may be levied by the governmental agencies regarding the work.

01000.16 SUBSTITUTION:

A. Any substitution must be approved in ADVANCE OF CONSTRUCTION in writing by the Owner upon receipt and study of complete information regarding same, including any credits or additional costs.

01000.17 MATERIALS AND WORKMANSHIP:

A. Unless otherwise particularly stated, the Contractor shall furnish and install ALL materials and labor mentioned in these specifications and/or shown on the drawings, and all work shall be executed in a neat and skillful manner to the entire satisfaction of the Owner.

01000.18 SUB-CONTRACTS:

A. As required by the Owner, the names of all proposed Sub-Contractors shall be approved by the Owner prior to award of the Contract. The Sub-Contractor shall be bound by the specifications. No Contractor or Sub-Contractor shall sublet or assign his Contract or any part thereof without the written approval of the Owner.

01000.19 LAWS AND ORDINANCES:

A. The Contractor(s) and all Sub-Contractor(s) shall comply in all respects with all laws and ordinances having jurisdiction over the work and/or materials or methods employed in performing same. No additional compensation shall be allowed Contractors for failure to familiarize themselves with all conditions under which they will perform their work unless these conditions are brought to the Owner's attention prior to signing of Contracts and provisions for adjusting costs are made at that time.

01000.110 PERMITS, BONDS, LICENSES:

A. The Contractor(s) shall take out and pay for all permits,

bonds, etc. Should separate Contracts be awarded, each Contractor shall be responsible for permits, fees, bonds, licenses, etc., as may be required by work covered under his portion of the Contract. Receipts for same shall be turned over to the Owner upon completion . At the Owner's election, the Owner may obtain any of the Permits.

01000.111 PROTECTION:

A. Each Contractor shall barricade and/or shelter his work as to reasonably protect it from damage. All barricades shall be so arranged as to insure a reasonable visual and physical warning for workmen and the public. Provide flashing type blinkers around open trenches.

B. The Contractor(s) shall be held responsible for any damage to his work as may be due to negligence of the above, or as may be caused by accident, wind, rain, snow, freezing, riot, malicious mischief or labor commotion, theft, etc., if due to his acts, omissions or negligence, and shall, if such damage occur, restore the work to its previous condition at no cost to the Owner.

C. Contractor(s) shall protect all adjoining property from damage during the course of the work. If required by local laws or ordinances, he shall issue notices to Owner of said property. No use of adjacent privately owned property by an Contractor without written permission by its Owner shall be allowed.

01000.112 INSURANCE:

A. In general, the Contractor(s) shall maintain such insurance as shall protect him the Owner and the Owner's agents and representatives from any and all claims under Workmen's Compensation Acts and from all claims for damages because of bodily injury, including death, and all claims for property damage arising from his operations and/or the operations of Sub-Contractors employed by him, and shall be to the amount stated herein. Sub-contractor(s), if not covered by the Contractor(s) insurance, shall provide similar insurance of their own. Coverage shall be obtained from a company holding a General rating of 'A' or better as set forth in the most current issue of Best's Key Rating Insurance Guide.

B. "Hold Harmless" Clause: The certificate shall state that this endorsement is included in the policy(ies).

C. This Contractor assumes the liability for all losses, damages (including loss of use), expenses, demands and claims in connection with or arising out of any injury or alleged injury to persons (including death) or damages or alleged damage to property, sustained or alleged to have been sustained, in connection with or to have arisen out or the performance of the work by the Contractor, his Sub-Contractors, and their agents, servants and employees, including losses, expenses, or damages sustained by the Owner and the Architect. The Contractor hereby undertakes and agrees to indemnify and hold harmless the Owner and the Architect, their agents, servants, and employees, from any

and all such losses, expenses, damages (including loss of use), demands and claims, and shall defend any suit or action brought against any of them, based on any alleged injury (including death) or damage (including loss of use) and shall pay all damages, judgements, costs and expenses, including attorney's fees, in connection with said demands and claims resulting therefrom.

D. The above clause shall apply in all states unless restricted by state statute. Should this be the case, the maximum form of "Hold Harmless" allowed by the law shall be provided.

E. Comprehensive General Liability Insurance including a Broad Form endorsement and a Broad Form Property Damage endorsement with limits not less than $1 million CSL (Combined Single Limit). If appropriate, Contractor shall also maintain scaffolding and demolition insurance.

F. Workers Compensation Insurance in accordance with applicable state requirements.

G. Employers' Liability Insurance in an amount not less than $100,000.

H. Comprehensive Automobile Liability including owned, non-owned and hire coverage in an amount not less than $500,000 CSL (Combined Single Limit).

I. Contractor shall also satisfy any insurance requirements necessitated by any pertinent governmental authority.

J. At Owner's election, Contractor shall maintain Builder's Risk insurance covering the premises. Such insurance shall be written on an all risk basis, and will cover all the work until Owner's final acceptance of same.

K. Insurance policies shall be taken out by the Contractor(s) immediately after award of contract and prior to <u>any</u> work being done. Upon obtaining policies the Contractor(s) shall notify the Owner and certificates and/or duplicate policies from insurance companies shall be filed with the Owner showing policy numbers, dates policies shall be in effect, and all limitations and exclusions. Certificates shall state that the insurance company shall notify the Owner by registered mail thirty (30) days prior to the expiration or cancellation of any policy.

<u>01000.113</u> <u>PERFORMANCE, MATERIAL AND LABOR BONDS:</u>

A. Performance bonds, labor and material payment bonds shall be supplied to the Owner, at this election, by the General Contractor prior to start of work.

<u>01000.114</u> <u>TEMPORARY FACILITIES:</u>

A. The General Contractor shall be in charge of the premises from the start to the completion of the project and shall furnish the following:

1. Laying out of all work and establishing building lines and levels; this to be confirmed with the Owner.
2. Temporary electric power and telephone during the period of construction. This does not include portable generators for use of other trades.



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3. Heating of building for working and drying purposes during the period of construction.
4. Temporary ladders as required for access to all work.
5. Water for construction use.
6. Acceptance, unloading and storage if found necessary by Contractor's negligence, of Owner's equipment delivered to the site are the responsibility of the General Contractor.
7. Temporary toilet facilities for workers.
8. Twenty-five foot long enclosed and secured trailer for storage of Owner supplied items.

01000.115 INSPECTION AND TESTS:

A. The Sub-Contractors shall call for all inspections as may be required by local authorities and listed therein allowing a minimum of two (2) days notice for inspections to be made.

B. The Owner shall be specifically notified for inspection one week prior the installation of the items specified in the 'Invitation To Bid'.

C. The Owner has the right to order tests and/or laboratory examination of any material or work used or performed on the project should he suspect such material or work to be of lesser quality than specified herein. The costs of all such tests shall be paid by the Owner unless they indicate work or materials to be of lesser quality in which case they shall be paid for by the Contractor(s) concerned, along with any expenses incurred in correction of the work.

01000.116 PRECEDING WORK:

A. Before starting work each contractor shall examine work previously installed and shall immediately report to the Owner any visible defects or conditions which adversely affect the quality and/or completion of this work. It shall be assumed all conditions are acceptable if no such report is received.

01000.117 CUTTING AND FITTING:

A. Each Contractor shall execute all cutting and fitting of his work as may be required by other trades so as to insure as near perfect fit of materials as possible.

01000.118 DAMAGED WORK:

A. Each Contractor shall pay for replacement of any work damaged by him or those employed by him in connection with the Contract, and such patching or replacement shall be performed by skilled men specializing in the particular trade so as to restore damaged work to completely acceptable condition. Should responsibility for damage be unable to be determined, the cost of repairing same shall be prorated among Contractors working on the job at the time the damage occurred as determined by the Owner. The decision of the Owner shall be final.

01000.119 ADVERTISING:

A. No advertising shall be allowed.

01000.120 COMPLETED WORK:

A. Completed work as called for by the Contract shall be delivered to the Owner free from liens, claims or encumbrances of any description whatsoever against the Owner. Acceptance of such work shall be defined as approval of final payout.

01000.121 MAINTENANCE AND CLEANING:

A. Throughout the period of construction each Contractor or Sub-Contractor shall be responsible for satisfactorily maintaining the premises in a neat and clean condition insofar as his respective trade is concerned. This shall mean removal or all refuse and debris from the premises.

B. All equipment and materials shall be stored in a neat manner and as to protect them from any damage from the elements. Building shall be maintained in a generally clean condition during the period of construction and upon final completion a professional services shall be supplied by General Contractor to thoroughly clean all glass, floors furniture and equipment.

01000.122 GUARANTEE:

A. All labor, materials, and equipment required by the Owner-Contractor Agreement(s) shall be fully and unconditionally guaranteed by the Contractor for a period of one (1) year from the date of final acceptance or the date the restaurant is opened for business by the Owner, unless otherwise specified in specific chapters herein.

01000.123 CHANGES:

A. The Owner, without invalidating the Contract, may order changes in the work within the general scope of the Contract consisting of additions deletions or other revision, the Contract sum and the Contract time being adjusted accordingly. A Taco Bell Contract Change Order may be issued by a Regional Construction Manager but must be approved by the Region Vice-President and Vice-President Facility Development prior to payment.

B. The cost of credit to the Owner resulting from a change in the work shall be determined by mutual agreement. All work shall be performed under the applicable conditions of the Contract documents.

C. Written authorization for changes in the work (Construction Work Order) shall be obtained form the Area Construction Manager prior to completion of the work.

01000.125 RECEIPT OF EQUIPMENT:

A. During the course of construction the General Contractor will be receiving party for deliveries of equipment and miscellaneous items made to the job site by common carrier.



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If, during the receipts of those items by the General Contractor's representatives any missing or damaged items are observed, the receiving person must:

1. Make a notation of the discrepancy on the delivery ticket.
2. Call Bell Foods (714) 863-4907 and advise them of the problem within 24 hours.
3. Call the delivery carrier and file claim.

END OF SECTION 01000

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DIVISION 2 - SITE WORK

## SECTION 02110 - SITE CLEARING

### 02110.1 General

02110.11 RELATED DOCUMENTS
A. Drawings, Specification Division 1 and Contract.

02110.12 DESCRIPTION OF WORK:
A. Site clearing includes, but is not limited to:
1. Protection of existing trees.
2. Removal of trees and other vegetation.
3. Topsoil stripping.
4. Clearing and grubbing.
5. Removing above-grade improvements.
6. Removing below-grade improvements.

02110.13 JOB CONDITIONS:
A. Protect existing improvements: Trees and vegetation to remain as necessary to prevent damage.
B. Salvable improvements to be removed and stored where directed by Owner.

### 02110.3 EXECUTION:

02110.31 SITE CLEARING:
A. Remove vegetation (stumps and roots), improvements, or obstructions interfering with installation of new construction.
B. Strip topsoil within pavement and building areas.
C. Stockpile topsoil where directed. Remove excess topsoil after completion of landscaping.
D. Fill depressions in landscaping areas caused by clearing and grubbing operations with satisfactory soil material.
E. See additional recommendations in the Soil Reports supplied by the Owner.

02110.32 DISPOSAL OF WASTE MATERIALS:
A. Burning is not permitted on Owner's property
B. Dispose of all items not salvaged of site.

END OF SECTION 02110

DIVISION 2 - SITE WORK

## SECTION 02200 - EARTHWORK

### 02200.1 GENERAL:

02200.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1 and Contract.

02200.12 DESCRIPTION OF WORK:
A. The extent of earthwork is shown on drawings.
B. The specification is intended to outline minimum work and shall be superseded by the Soil Report and Drawings in that order.

02200.13 JOB CONDITIONS:
A. Locate existing underground utilities in area of work, protect those to remain.
   1. Uncharted piping or other utilities encountered during excavation should be brought to the Owners immediate attention.
B. The use of explosives is not permitted.
C. Barricade open excavations and post with warning lights.
D. Protect structures, utilities, sidewalks, pavements, and other facilities from damage due to earthwork operations.

### 02200.2 PRODUCTS:

02200.21 SOIL MATERIALS:
A. Subbase material shall be crushed gravel, crushed stone, natural or crushed sand.
B. Backfill and fill materials shall be soil free of clay, 2" or larger rock, debris, frozen materials, and deleterious matter.

### 02200.3 EXECUTION:

02200.31 EXCAVATION:
A. Excavation includes removal of pavement and other obstructions visible on ground surface, underground structures and utilities indicated to be demolished and removed.
B. Under footings, fill excessive excavation by extending indicated bottom elevation without altering required top elevation.
C. If unsuitable bearing materials are encountered at required subgrade elevations, contact the Architect for direction.
D. Slope sides of excavations to comply with local codes or shore and brace where sloping is not possible.
E. Do not allow water to accumulate in excavations in order to prevent softening of foundation bottoms.
F. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10'.
G. In excavating for footings and foundations, excavate by ha

to final grade just before concrete reinforcement is placed.

H. Cut surface under pavements to comply with cross-sections, elevations and grades as shown.

J. Protect excavation bottoms against freezing when a atmospheric temperature is less than 35 degrees F.

02200.32 COMPACTION:

A. Compact each layer of all fill to not less than 95% maximum dry density or 90% relative dry density.

B. Compaction Certificates shall be provided by the Contractor for the parking lot, building foundation and floor slab.

02200.33 BACKFILL AND FILL:

A. Place acceptable material in layers to required subgrade elevations.

1. Satisfactory excavated or borrow at excavations and grassed areas.

2. Subbase material under walks, pavements, slabs, and structures.

B. Backfill excavations as promptly as work permits.

C. Remove vegetation, debris, and deleterious materials prior to placement of new fill.

D. Place backfill and fill materials in layers not more than 8" in loose depth for machine compaction, and not more than 4" in loose depth for hand-operated tampers.

E. Place backfill and fill materials evenly adjacent to structures and carry material uniformly around structure to approximately same elevation in each lift.

02200.34 GRADING:

A. Uniformly grade areas within limits of grading with uniform levels or slopes between points where elevations are shown and/or existing grades.

1. Allow for installation of 4" of topsoil to be spread over areas to receive sod.

B. Grade areas adjacent to building lines to drain away from structures.

02200.35 SUBBASE COURSE:

A. Subbase course consists of placing subbase material, in 6" thick maximum layers over subgrade surface to support a pavement and concrete slab (interior and exterior) base course.

02200.36 MAINTENANCE:

A. Repair and re-establish grades in settled, eroded, and rutted areas.

02200.37 DISPOSAL OF EXCESS AND WASTE MATERIALS:

A. Remove from site waste materials, including unacceptable excavated material, trash and debris.

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02200.38 GUARANTEE:

A. All work performed under this section shall be guaranteed for a period of one (1) year from date of acceptance against any settlement or other faults detrimental to the appearance of quality of the finished project. Repair and replacement costs of this work and any other work as a result of faults shall be paid by the contractor.

END OF SECTION 02200

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DIVISION 2 - SITE WORK

SECTION 02281 - TERMITE DOCUMENTS

02281.1 GENERAL:

02281.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division I and Contract.

02281.12 DESCRIPTION OF WORK:

A. Provide soil treatment for termite control as herein specified.

02281.13 QUALITY ASSURANCE:

A. Engage a professional pest control operator, licensed in accordance with regulations of governing authorities for application of soil treatment solution.

02218.14 JOB CONDITIONS:

A. Do not apply soil treatment solution until excavating, filling and grading operations are completed.

B. Do not apply soil treatment to frozen of excessively wet soils or during inclement weather.

02281.15 SPECIFIC PRODUCT WARRANTY:

A. Furnish written warranty certifying if subterranean termite activity is discovered, contractor will re-treat soil and repair or replace damage caused by termite infestation.

B. Provide warranty for period of five (5) years from date of treatment, signed by applicator and Contractor.

02281.2 PRODUCTS:

02281.21 SOIL TREATMENT SOLUTION:

A. Use an emulsible concentrate insecticide for dilution with water. Fuel oil will not be permitted as a diluent. Provide a working solution of one of the following chemical elements:

1. Chlorpyrifos (Dursban)

2. Permethrin (Torperdo & Dragent)

3. Cypermethrin (Demon)

4. Fenvalerate

5. Isofendnos (Pryfon 6 or Oftanol 6)

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B. Other solutions may be used as recommend by Applicator and if acceptable to local governing authorities. Use only soil treatment solutions which are not injurious to planting.

02281.3 EXECUTION:

02281.31 APPLICATION:

A. Remove foreign matter which could decrease effectiveness of treatment on areas to be treated.

B. Under slab-on-grade structures, treat fill before concrete slabs are places using either power sprayer or tank-type sprayer.

1. Apply 4 gallons of chemical solution per 10 linear feet along inside of foundation walls, along both sides of interior partition walls and around plumbing.

2. Apply one gallon of chemical solution per 10 square feet as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel.

3. Apply four gallons of chemical solution per 10 linear feet of trench, for each foot of depth from grade to footing, along outside edge of building. Dig a trench 6" to 8" wide along outside of foundation to a depth of not less than 12". Punch holes to top of footing at not more than 12" o.c. and apply chemical solution.

C. Allow not less than 12 hours for drying after application, before beginning concrete placement or other construction activities.

D. Post signs in areas of application warning workers that soil poisoning has been applied.

END OF SECTION 02281

DIVISION 2 - SITE WORK

## SECTION 02444 - CHAIN LINK FENCING AND GATES

### 02444.1 GENERAL

02444.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract.

02444.12 DESCRIPTION OF WORK:

A. Extent of chain link fences and gates is shown on drawings.

### 02444.2 PRODUCTS

02444.21 STEEL FENCING:

A. Fabric: No. 9 gauge steel wires, 2" mesh, both top and bottom selvages twisted and barded.
   1. One-piece fabric widths.
   2. Galvanized with not less than 1.2 ounce zinc per square foot of surface.
B. Galvanized steel framework with not less than 1.8 ounce zinc per square foot of surface.
C. Galvanized accessories and hardware.

02444.22 FRAMING AND ACCESSORIES:

A. End, Corner, Pull and Gate Posts: Minimum 4.0" OD steel pipe 9.11 pounds per linear foot, .266" wall thickness.
B. Line Posts: Minimum 1.0" OD steel pipe, 2.72 pounds per linear foot, .145" wall thickness.
C. Tension Wire: 7 gauge, coated coil spring wire, metal and finish to match fabric. Locate top and bottom of fabric.
D. Post tops: Weathertight closure cap, one cap for each post.
E. Stretcher Bars: One piece lengths equal to full height of fabric, with minimum cross-section of 3/16" x 3/4". Provide with bands at 15" o.c.
F. Swing gate to have perimeter frames of 1.9" OD pipe, finished to match framework, with horizontal and vertical members to ensure proper gate operation and for attachment of fabric, hardware and accessories. Use same fabric as for fence. Provide diagonal cross-bracing consisting of 3/8" diameter adjustable length truss rods on gates.
G. Furnish the following hardware and accessories for each gate.
   1. Hinges: One and one-half pair to suit gate size, non-lift-off type offset to permit 180 degrees gate opening.
   2. Latch: Forked type and plunger-bar type to permit operations from either side of gate, with padlock eye.
H. Slats to be 2-3/8" wide x 3/8" thick redwood.
I. Use wire ties spaced 12" o.c. for tying fabric to tension wire.
J. Provide concrete with a minimum 28-day compressive strength of 3000 psi using at least 5-1/2 sacks of cement per cubic

yard, 1" miximum size aggregate, maximum 4" slump, and 2% to 4% entrained air.

02444.3 EXECUTION:

02444.31 INSTALLATION:

A. Drill holes for posts of minimum 8" diameter and spacings shown. Excavate hole depths 3" lower than post bottom, with bottom of posts set not less than 36" below finish grade surface.

B. Center and align posts in holes 3" above bottom. Place concrete around posts and vibrate or tamp. Hold in vertical position during placement and finishing operations.

C. Install brace assemblies so posts are plumb when diagonal rod is under proper tension.

D. Install tension wires before stretching fabric and tie to each posts.

E. Install fabric on security side of fence with 2" between finish grade and bottom selvage. Pull fabric taut and tie to posts, rails, and tension wires.

F. Install vertical slats between fabric links for full fabric height.

G. Install gates plumb, level, and secure for full opening without interference.

H. Use U-shaped wire clasping pipe and fabric firmly with ends twisted at least two (2) full turns.

I. Install nuts for tension bands and hardware bolts on side of fence opposite fabric side and peen ends of bolts.

END OF SECTION 02444

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DIVISION 2 - SITE WORK

## SECTION 02513 - ASPHALT CONCRETE PAVING

### 02513.1 GENERAL

02513.11 RELATED DOCUMENTS:

A. Drawings, Specification Division 1 and Contract

02513.12 DESCRIPTION OF WORK:

A. Extent of asphalt concrete paving and stone/base work with required thicknesses is shown on drawings.

B. The specification is intended to outline minimum work and shall be superseded by the soil report and drawings in that order.

02513.13 JOB CONDITIONS:

A. Construct asphalt concrete wearing course only when atmospheric temperature is above 40 degrees F. (4 degrees C), and when base is dry.

1. When asphalt plants are closed, the contractor shall install a temporary pavement of compacted stone base with final pavement installed under the Original Contract.

### 02513.2 PRODUCTS

02513.21 MATERIALS:

A. Use locally available materials and gradations which exhibit a satisfactory record of previous installations.

B. Binder Course Aggregate to be sound, angular crushed stone, crushed gravel, or crushed slag, sand, stone, or slag screenings.

C. Wearing Course Aggregate to be crushed stone, crushed gravel, crushed slag or sharp-edged natural sand with 80% passing No. 10 sieve.

D. Mineral Filler to be limestone dust, portland cement, or other material.

E. Asphalt Cement to have visocity grade of AC-20, AR-8000.

F. Stone Base to be naturally or artifically graded mixture of natural or crushed gravel, crushed stone, natural or crushed sand.

G. Car Bumpers to be precast concrete 6' long with beveled sides and provided with minimum of 2 holes for dowel anchoring.

H. Prime Coat to be cut-back asphalt type: MC-30, MC-70 or MC-250.

I. Lane Markeing Paint to be white pavement marking paint as found in painting section of Finish division of Specification.

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02513.22 ASPHALT-AGGREGATE MIXTURE:

A. Provide plant mixed asphalt-aggregate mixture as approved and specified by local highway authorities to suit project location and conditions.

02513.3 EXECUTION

02513.31 SURFACE PREPARATION:

A. Subgrade shall be prepared according to the soils report or the following, whichever is greater.
   1. Subgrade shall be established within 0.10" of the elevation necessary to provide required pavement thickness at finished grade.
   2. All subgrades shall consist of and be (a) underlain by suitable bearing material, and (b) free of all organic, frozen or other deleterious material. Preparation of subgrades after stripping shall consist of (a) proof-rolling to detect unstable areas that must be undercut, (b) scarifying top 6 to 8 inches, and (c) compaction to prescribe minimum density.
   3. Subgrade surface shall be compacted to 95 to 100 percent of the maximum dry density as determined by the Modified Proctor Method (ASTM D-1557) for cohesive or granular soils respectively. The upper 12 inches of structural fill underlying pavement shall be compacted.

B. Spread gravel base course so that final thickness is as noted on drawings.
   1. Compaction shall start at the center and proceed toward the edges of the pavement.
   2. Compaction is to continue until the stone base ceases to creep or wave ahead of the roller.

C. If base course does not consist of a mix of course and fine stone that provides a solid compacted base, spread a course of fines over the surface and saturate with water. Compact until grout formed by fines and water has filled voids and forms a small wave in front of the roller.

D. Paving Contractor takes responsibility for subbase and base as being satisfactory for installation of pavement at the completion of the compaction.

02513.32 PLACING MIX:

A. Place asphalt concrete mixture on prepared surface, spread and strikeoff. Spread mixture at minimum temperature of 250 degrees F. Place inaccessible and small areas by hand. Place each course to required grade, cross-section, and compacted thickness.

B. Place asphalt concrete mixture by paver in strips not less than 10' wide. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete binder course for entire site before placing wearing course.

C. Joints: Make joints between old and new pavements to ensure continuous bond between adjoining work. Construct joints to

have same texture, density and smoothness as other sections of asphalt concrete course.

D. Prime coat spread at a rate of 0.25 to 0.50 gallons per square yard is to be applied to the binder course prior to installation of the wearing course.

02513.33 ROLLING:

A. Roll pavement with tandom steel wheel eight ton roller when mixture will bear roller weight without excessive displacement.

B. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

C. Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge.

D. Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained maximum density.

E. Remove and replace paving areas mixed with foreign materials and defective areas.

F. After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

02513.34 PAVEMENT MARKINGS AND CAR BUMPERS:

A. Anchor concrete car bumpers to pavement with two each 2' long dowels driven through holes in bumper into pavements and fill around dowels with concrete.

B. Apply two (2) coats pavement markeing paint with mechanical equipment to product uniform straight edges.

02513.35 FIELD QUALITY CONTROL:

A. Test finished surface of each asphalt concrete course for smoothness, using 10' straightedge applied parallel with, and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding 1/2" in smoothness.

B. Final surface shall have a compacted density of a minimum 93% of the maximum possible density of a voidless mixture composed of the same materials in like proportions.

02513.36 GUARANTEE:

A. Work under this section shall be guaranteed for a period of one (1) year against settlement, cracking, crumbling and other defects. Repair costs of any failures shall be paid by the Contractor.

END OF SECTION 02513

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DIVISION 2 - SITE WORK

## SECTION 02515 - EXTERIOR PORTLAND CEMENT CONCRETE

### 02515.1 GENERAL

02515.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract

02515.12 DESCRIPTION OF WORK:

A. Extent of exterior portland cement concrete is shown on drawings, including curbs, gutters, walks, and paving.

### 02515.2 PRODUCTS

02515.21 MATERIALS:

A. Forms to be steel, wood or other suitable material of size and strength to resist movement during concrete placement.
   1. Use flexible spring steel forms or laminated boards to form radius bends as required.
B. Coat forms with a non-staining form release agent that will not discolor or deface surface of concrete.
C. Welded Wire Mesh to be welded plain cold-drawn steel wire fabric.
D. Reinforcing bars to be deformed steel bars.
E. Guard posts to be standard weight steel pipe of nominal diameter indicated on drawings.
F. Comply with requirements of applicable Division 3 sections for concrete materials, curing materials and others as required.
   1. Six (6) percent air-entraining admixture required in all exterior concrete.
G. Comply with requirements of applicable Division 7 sections for preformed expansion joint fillers and sealers.
H. Prefabricated steel light pole bases where noted (to be filled with concrete will be supplied by the Owner.
I. Stone Base to be naturally or artifically graded mixture of natural or crushed gravel, crushed stone, natural or crushed sand compacted per Earthwork Section this Division.

02515.22 CONCRETE MIX AND DESIGN:

A. Comply with requirements of applicable Division 3 sections for concrete mix design, and quality control.

### 02515.3 EXECUTION:

02515.31 SURFACE PREPARATION:

A. Remove loose material from compacted base surface immediately before placing concrete.
B. Proof-roll prepared subbase with tandom dump truck to check for unstable areas and need for additional compaction.

02515.32 FORM CONSTRUCTION:

A. Set forms to required grades and lines, rigidly braced and secured with sufficient quantity of forms to allow continuous progress of work.

B. Clean forms after each use, and coat with form release agent as often as required to ensure separation from concrete without damage.

02515.33 REINFORCEMENT:

A. Locate, place and support reinforcement as specified in Division 3, sections, unless otherwise indicated.

02515.34 CONCRETE PLACEMENT:

A. Comply with requirements of Division 3 sections for mixing and placing concrete, and as herein specified.

B. Place concrete using methods which prevent segregation of mix.

C. Automatic machine may be used for curb and gutter placement at Contractor's option. Machine placement must produce curbs and gutters to required cross-section, lines, grades finish, and jointing as specified for formed concrete.

02515.35 JOINTS:

A. Construct expansion, and construction joints true-to-line with face perpendicular to surface of concrete.

B. Provide premolded full size, one piece joint fillers for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects.

1. Locate expansion joints at 20' o.c. for walks and curbs.

2. Locate expansion joints at changes in sidewalk direction or intersection.

02515.36 CONCRETE FINISHING:

A. After striking-off and consolidating concrete, smooth surface by screeding and mechanical floating.

B. After floating, test surface for trueness with a 10' straight edge. Refloat as required to provide a continuous smooth finish.

C. Work edges of slabs, gutters, back top edge of curb, and formed joints with 9-1/2" radius edging tool.

D. Light Broom finish, by drawing a fine-hair broom across concrete surface perpendicular to line of traffic.

E. Strike contraction joints in the sidewalks exterior slabs at a maximum of 5' o.c. that extend 1/4 the depth of the concrete and are perpendicular to the edges of the concrete.

F. Alternate exposed aggrate walks where noted on the drawings shall be as follows:

1. In lieu of light broom finish, evenly distribute a single layers of water worn durable gravel, 3/8" maximum and 1/8" minimum of tanbeige color.

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2. Embed the aggregate by patting with a darby and float and darby until all aggregate is thoroughly embedded just beneath the surface.
3. Expose the aggregate as soon as the grout covering the aggregate can be removed by simultaneously brushing and hosing with water.

02515.37 CURING:

A. Protect and moist cure finished concrete paving, comply with applicable requirements of Division 3 sections.

02515.38 REPAIRS AND PROTECTION:

A. Protect concrete from damage until acceptance of work. Exclude traffic from pavement for at least 7 days after placement.

END OF SECTION 02515

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DIVISION 3 - CONCRETE

## SECTION 03010 - CONCRETE WORK

### 03010.1 GENERAL

03010.11 RELATED DOCUMENTS:
A. Drawings, Specifications, Division 1 and Contract.

03010.12 DESCRIPTION OF WORK:
A. The extent of concrete work shown on drawings.

03010.13 QUALITY ASSURANCE:
A. Comply with provisions American Concrete Institute 318-83 "Building Code Requirements for Reinforced Concrete" and 301-72 except where more stringent requirements are shown or specified.
B. All footing and foundations shall be formed. Unformed placement of concrete is not allowed.

### 03010.2 PRODUCTS

03010.21 FORM MATERIALS:
A. Form for concrete surfaces to be plywood, lumber, metal, or other acceptable material.
B. Provide commercial formulation form-coating compounds that will not bond with, stain nor adversely affect concrete surfaces.

03010.22 REINFORCING MATERIALS:
A. Reinforcing bars to be ASTM A-615 Grade 60, deformed.
B. Welded Wire Fabric to be plain cold-drawn welded steel wire, ASTM A-185.
C. Provide metal bolsters, chairs and other devices for spacing, supporting and fastening reinforcing bars and welded wire fabric in place.

03010.23 CONCRETE MATERIALS:
A. Portland Cement to be ASTM C150,, Type II.
B. Normal Weight Aggregates to meet ASTM C33, with maximum 1-1/2" for footing and other mass concrete and 3/4" maximum for other concrete.
C. Water to be portable.
D. Calcium chloride not permitted.
E. Admixtures shall not be used without approval.

03010.24 RELATED MATERIALS:
A. Provide 6 mil polyethyelene vapor barrier cover over prepared base material for all floor slabs.
B. Provide base course for all floor slabs of evenly graded natural gravel 3/8" maximum to 1/8" minimum (pea gravel) or natural sand.



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C. Non-shrink cement grout below column base plates shall be non-metalic, flowable, high strength (4000 psi min at 7 days) conforming with CRD-C 621.

03010.25 PROPORTIONING AND DESIGN OF MIXES:

A. Proprietary standard design mixed that meet the following qualities shall be used and the supplier shall furnish satisfactory evidence of such. A delivery ticket shall accompany each mixer truck and shall note type of concrete and materials. Location of placement of each load will be noted on these tickets and all tickets will be filed on the job site.

B. Concrete to have 3000 psi @ 28-day compressive strength with 517 pounds cement per cubic yard minimum; water/cement ratio of 0.58% maximum and slump of 2 1/2" to 4 1/2" at placement.

03010.26 CONCRETE MIXES:

A. Ready-Mix concrete shall comply with requirements of ASTM C 94, and as herein specified.

1. Addition of water to the batch with insufficient slump will not be permitted.
2. When air temperature is between 85 degrees F (30 degrees C) and 90 degrees F (32 degrees C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 degrees F (32 degrees C), reduce mixing and delivery time to 60 minutes.

03010.3 EXECUTION

03010.31 FORMS:

A. Formwork to be readily removable without damage to cast-in-place concrete surfaces and adjacent materials.

B. Construction forms to sizes, shapes, lines and dimensions shown, and to obtain accurate alignment, location, grades, levels and plumb work. Support brace and maintain formwork to support vertical and lateral loads until such loads can be supported by concrete.

C. Form Ties to be factory-fabricated, adjustable-length, removable or snap-off metal form ties.

D. Provide openings in concrete formwork or accommodate work of other trades.

03010.32 PLACING REINFORCEMENT:

A. Accurately position, support and secure reinforcement against displacement by formwork, construction, or concrete placement operations.

1. All bars shall be continuous in longest length possible with minimum 36 bar diameter laps.
2. Bent corner reinforcing shall be provided to lap and match horizontal reinforcement.
3. Minimum coverage for any reinforcing steel shall be 2"
4. Welding for fabrication and installation and is not permitted.

B. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least two full mesh and lace splices with wire.

03010.33 INSTALLATION OF EMBEDDED ITEMS:

A. Set and build into work anchorage devices and other embedded items required for other work that is attached to, or supported by, cast-in-place concrete.

03010.34 PREPARATION OF FORM SURFACES:

A. Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

03010.35 CONCRETE PLACEMENT:

A. Comply with American Concrete Institute 304, and herein specified.
B. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness.
C. Consolidate placed concrete by mechanical vibrating equipment supplement by hand spading, rodding or tamping (except for slabs).
D. Deposit and consolidate concrete slabs in a continuous operation.
E. Bring slab surfaces to correct level with straightedge and strikeoff. Use bull floats or darbies to smooth surface, free of humps of hollows.
F. Maintain mesh reinforcing in approximately the middle of slab during concrete placement operations.
G. Protect concrete work from physical damage or reduced strength with could be caused by frost, freezing actions, or low temperatures.
H. Do not use calcium chloride, salt and other materials containing antifreeze agents or chemical accelerators.
I. When hot weather conditions exist that would seriously impair quality and strength of concrete place concrete in compliance with American Concrete Institute 305.

03010.36 FINISH IF FORMED SURFACES:

A. Concrete surfaces not exposed-to-view in the finish work to have texture imparted by form facing material used, with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4" in height chipped off.

03010.37 MONOLITHIC SLAB FINISHES:

A. Apply float finish to monolithic slab surfaces. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating when surface water has disappeared or when concrete has stiffened sufficiently to permit operation or power driven floats. Check and level surface plane to a tolerance not exceeding 1/4" in 10' when tested with a 10' straightedge.
B. Provide 1/2" pitch in 4'-0" diameter of all floor drains.

03010.38 CONCRETE SLAB CURING AND PROTECTION:

A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Provide moisture curing by one of the following methods for a period of 7 days.

1. Covering concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet.
2. Covering concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width.
3. Curing compounds in accordance with ASTM C-309 may be used as directed by the Owner.

03010.39 REMOVAL OF FORMS:

A. Formwork may not be removed in less than 5 days or until concrete has attained sufficient strength to carry loads.

03010.310 CONCRETE SURFACE REPAIRS:

A. Cut out honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth of less than 1". Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water and brush-coat the area to be patched with specified bonding agent. Place patching mortar after bonding compound has dried.

END OF SECTION 03010

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DIVISION 5 - METALS

## SECTION 05010 - METAL MATERIALS

### 05010.1 GENERAL

05010.11 RELATED DOCUMENTS:
- A. Drawings, Specifications, Division 1, 1/3 contract.
- B. Section 03010 for concrete 1/3 masonry steel reinforcement.

05010.12 DESCRIPTION OF WORK:
- A. Structural steel, bolts, 1/3 welds.

05010.13 QUALITY ASSURANCE:
- A. Latest AISC codes 1/3 Handbooks apply.

### 05010.2 PRODUCTS:
- A. Welding to conform with AWS D1.1-82 of the American Welding Society.
- B. Rolled sections and plates: ASTM a-36, FY = 36 k.s.i., except where specifically noted on drawings.
- C. Structural pipes: ASTM A501, FY = 36 k.s.i., or A53, Grade B, FY = 35 k.s.i.
- D. Structural tubes: ASTM A500, Grade B, FY = 46 k.s.i.
- E. Bolts and plain anchors: ASTM A-307 or A36.
- F. Welding rods: E-70 Series low hydrogen.

### 05010.3 EXECUTION:
- A. Expansion bolts in concrete: ICBO approved drilled anchors (Hilti or Ramset). Tighten to manufacturer's specifications. Where expansion bolts are used to connect wood ledgers or plates, provide a minimum 4" x 4" x 1/4" plate washer to tighten the nut against to set the expander.
- B. Comply with American Welding Society Standards. All welders shall hold valid certificates and have current experience in the type of weld called for. Certificates shall be those issued by an accepted testing agency.
- C. The burning of new or enlargement of bolt holes is not permitted.
- D. Non-bolted connections where the weld symbol is not shown shall be welded at all available areas with the minimum size fillet weld per AISC.
- E. A testing laboratory shall ultra-sonically test all full penetration welds and 20% of all partial penetration welds. Visually inspect fillet welds.
- F. Welds indicated with a shop weld symbol may be made in the field with approval of the Structural Engineer through the Architect.
- G. Minimum embedment of bolts in masonry, grout, or concrete: 8" with a head at the embedded end or 5" with a 3" hook at the embedded end.

H. The surfaces of structural steel members which are to be welded shall not be painted until after the welding at the shop or filed has been completed.

I. Where slotted holes for bolts occur, the bolt shall be placed in the center of the slot.

J. Structural steel shall be prepared for painting in accordance with AISC Specifications and then painting with a 2 mil dry thickness of rust inhibitor metal primer. Touch-up all surfaces in the field where the paint has been damaged or removed. Do not paint steel which is to be embedded in concrete or covered with spray-on fireproofing.

END OF SECTION 05010

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DIVISION 6 - WOOD AND PLASTICS

## SECTION 06100 - ROUGH CARPENTRY

### 06100.1 GENERAL

06100.11 RELATED DOCUMENTS:
A. Drawings, Specifications, Division 1 and Contract.

06100.12 DESCRIPTION OF WORK:
A. Rough carpentry includes carpentry work not specified as part of other sections and which is generally not exposed, expect as otherwise indicated. Types of work in this section include rough carpentry for:
1. Wood framing/Glued Laminated Beams.
2. Wood grounds, nailers, blocking and sleepers.
3. Wood furring.
4. Sheathing.
5. Fabricated solid web roof joists.

06100.13 REFERENCES:
A. Comply with Product Standard 20 for lumber.
B. Comply with Product Standard 1 for plywood or with applicable APA Performance Standard for type of panel indicated.
C. Comply with Product Standard 56 for glued laminated timber.
D. Comply with National Research Board (NRB) requirements (BOCA, ICBO, & SBCC) for fabricated solid web roof/floor joists.

06100.14 PRODUCT HANDLING:
A. Keeping materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces.

06100.15 JOB CONDITIONS:
A. Fit carpentry work to other work; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow proper attachment of other work.

### 06100.2 PRODUCTS

06100.21 MATERIALS:
A. Nominal sizes are indicated, except as shown by detail dimensions.
1. Provide dressed lumber, S4S, unless otherwise indicated.
2. Provide seasoned lumber with 19% maximum moisture content at time of dressing.
B. For framing (2 x 4, 6 & 8 Interior) provide construction grade Douglas Fir, Western Hemlock or Southern Pine.

C. For structural framing (4" & 6" nominal thickness) provide No. 1 Douglas Fir or No. 1 K.D. Southern Yellow Pine with minimum f = 1500 p.s.i.

D. For headers, rafters, ledgers, and exterior 2 x 6 walls provide No. 2 Grade Douglas Fir or No. 2 Dense K.D. Southern Pine with minimum f = 1250 p.s.i.

E. Plywood panels shall be APA performance - rated panels complying with requirements indicated for grade designation, span rating, exposure durability classification. Identify each panel with appropriate APA trademark.

1. Wall Sheathing:
   a. Exposure Durability Classification: Exterior.
   b. Span Rating: 24/0 (16/0 for curved members).
2. Roof Sheathing:
   a. Exposure Durability Classification: Exterior
   b. Span Rating: 32/16.

F. Locate termite shield at all exterior walls of 20 gauge sheet metal with a hot-dip zinc coating and mechanically broke to configuration indicated.

G. Provide anchorages of size, type, material and finish as indicated. Provide metal hangers and framing anchors of the size and type recommended by the manufacturer. Fastners in contact with stucco and used with floor plates to have hot-dip zinc coating.

H. Building paper to be 15# Asphalt saturated felt, non-perforated for vertical surfaces and 43# Asphalt saturated felt, non-perforated for horizontal and sloped surfaces.

I. Glued laminated beams to be constructed of any softwood lumber and meet or exceed Fc = 2400 p.s.i., Fv = 94 p.s.i., Fc (tension face) = 218 p.s.i, Fc (compression face_ = 318 p.s.i. and E = 1,600,000 p.s.i. (U.B.C. 24 F-V3). Waterproof adhesive is to be used and end sealer is to be used by manufacturer. Units shall be manufactured by AITC - licensed firm and shall be industrial grade AITC 110 with a comber of 1/180 of the span.

J. Fabricated roof joists shall be constructed of solid lumber or laminated lumber (3 1/2 x 1 1/2 actual size) top and bottom flange with 1/2" structural plywood web. Units shall be designed for structureal constraints on drawings with maximum spacing of 24" o.c.

06100.22 WOOD TREATMENT:

A. Where lumber or plywood is indicated as "Treated", or is specified herein to be "Treated", comply with applicable requirements. Mark each treated item with the AWPB Quality Mark Requirements.

1. Pressure-treat above-ground items with water-borne preservatives complying with AWPB LP-2. After treatment, kiln-dry to a maximum moisture content of 15%. Treat indicated items and the following:
   a. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with the floor or foundation.

b. Wood curbs, blocking and nailers located above the roof sheathing.

B. Glued laminate units shall receive heavy saturation coat of penetrating sealer on all surfaces after fabrication, sanding and end-coat sealing.

06100.3 EXECUTION

06100.31 INSTALLATION:

A. General:

1. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
2. Securely attach carpentry work to substate by anchoring and fastening as shown. Countersink nail heads on exposed carpentry work and fill holes. Use common wire nails, except as otherwise indicated. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials.

B. Stud Framing:

1. Provide stud framing as shown. Provide single bottom plate and double-top plates 2" thick by width of studs. Nail or anchor plates to supporting construction.
2. Construct corners and intersections with 3 studs. Provide miscellaneous blocking and framing as shown and as required for support of facing materials, fixtures, specialty items and trim.
   a. Provide continuous horizontal blocking row at mid-height of exterior walls, using 2" thick members of same width as wall or partitions.
3. Frame openings with headers, beams, columns or posts of multiple members of size and quantity as noted on drawings. Set headers and beams on edge and support as noted by not less than width of studs. Extend stud full height of wall at each end of header and beam.
   a. Headers and posts to be nailed units of wood members. Nails to be of sufficient length to penetrate all members. nail from both sides with two rows of nails on each side and space nails 12" o.c. staggered over lengths.

C. Joist Framing:

1. Provide framing of sizes and spacing shown. Install with crown edge up and support ends of each member with joist hangers of 1 1/2" of bearing on wood or metal and/or 3" on masonry where applicable. Do not notch in middle third of joists; limit notches to 1/6 depth of joist, 1/3 at ends. Do not bore holes larger than 1/3 depth of joists or locate closer than 2" from top or bottom.
2. Prefabricated roof joists are to have no holes cut through web in field.

D. Installation of Plywood:

1. Install roof sheathing with face grain accross supports using panels continuous over 2 or more spans with end joints between panels staggered and located over center of supports as noted on shear wall schedule. Provide edge blocking as noted and support of unsupported log edges with "plyclips" elsewhere. Use nails as noted on shear wall schedule.
2. Install wall sheathing vertically with long edges parallel to and centered over studs. Provide solid wood blocking wherever end joints do not bear against framing sills or plates. Stagger horizontal joints. Nail to each support around perimeter at edge, end supports, and at intermediate supports as noted on shear wall schedule. Use nails as noted on shear wall schedule.
3. Allow 1/8" open space between edges and ends of adjacent panels for all sheathing.

E. Glued Laminated Beams:
1. Install in compliance with AITC 108 "Standard for Heavy timer Construction".
2. Beams are not to be cut in the field except for fastener drilling and other minor cutting. No holes are to be cut thru units in field.

F. Miscellaneous Installation:
1. Termite shield to be punched to fit anchor bolt locations and set in a bed of bitumen cement.
2. One layer of #15 building paper shall be applied horizontal to all vertical surfaces to receive a stucco finish. Two layers of #43 building paper shall be applied to all horizontal surfaces to receive a stucco finish. All building paper is to be lapped 4" at edges and ends with nails at 6" o.c. at all studs.

END OF SECTION 06100

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DIVISION 6 - WOOD AND PLASTICS

SECTION 06192 - PREFABRICATED WOOD TRUSSES

06192.1 GENERAL

06192.11 RELATED DOCUMENTS:

A. Drawing, Specifications, Division 1 and Contract.

B. Consult drawings for recommended panel configuration and required truss profile with minimum member design.

06192.12 DESCRIPTION OF WORK

A. Prefabricated planar structural units consisting of metal plate connectors and dimension lumber assembled prior to delivery to the job site.

B. Prefabricated TJI joists consisting of 1 1/2" x 3 1/2" micro-lam lumber web material and 1/2" structural 1 plywood or other approved material.

06192.13 QUALITY ASSURANCE

A. The design and fabrication criteria of all wood trusses shall meet with "National Design Specifications for Stress-Grade Lumber and its Fastenings" by National Forest Products Association (latest revision); "Timber Construction Standards" by American Institute of Timber Construction (latest revision) the same as if these specifications and all their references were set out in full herein.

B. The fabricator shall be an established firm regularly involved in the engineering and fabrication of the type trusses required and subscribe to Truss Plate Institute (T.P.I.) in-plant inspection.

06192.14 MINIMUM DESIGN CRITERIA

A. Designs of plates, lumber and configuration to be in accordance with the approved values as accepted by local code authorities.

B. Repetitive member stress increase is permitted for trusses 2'-9" O.C. (lumber only).

C. Live load design is to be for a minimum 40 P.S.F. (20 P.S.F where allowed by local code) with greater loading as required by local code authorities. Mechanical equipment load is to be additive to live load.

D. Spacing indicated on the drawings is to be maintained with design calculations based on 2'-0" O.C. spacing.

E. Duration load increase of 15% maximum for snow conditions is permitted (lumber and connectors inclusive).

F. Deflection to be limited to 1/240.

06192.15 SUBMITTAL:

A. Two copies of the design/shop drawings and structural calculations shall be forwarded to the Region Construction Department for permanent files. The following information is to be noted on the drawing and calculations.

1. Name, seal and or registration number of a licensed structural engineer.

2. Design and fabrication data.

3. Metal connectors: Manufacturer, size, gauge and location.

4. Lumber grading for each number.

5. Pitch, span and spacing of trusses.

6. Design loading and allowable unit stress increases.

7. Tension or compression force for each member.

8. Building size and address.

9. Handling and erection instructions.

06192.2 PRODUCTS

06192.21 LUMBER

A. All lumber used should bear a grade-mark stamp indicating type grade, mill and grading agency. All top and bottom chord members of each truss shall have a grade-mark in place upon delivery to the job site. TG1 flange material shall be minimum 1 1/2" x 3 1/2" micro-lam lumber and 1/2" structural 1 plywood web material.

B. Minimum nominal lumber size to be 2x6 with top and bottom chords sized larger as required be design. The minimum lumber grading acceptable to be:

1. Top chord: No. 2-KD15 - Southern Pine or Douglas Fir - Larch MC15.

2. Bottom chord: No. 2 KD15 - Southern Pine or Douglas Fir - Larch MC15.

3. Mansard chords: No. 2 - DK15 - Southern Pine or Douglas Fir - Larch MC15.

4. Web Members: No. 3 SDry 19 - Southern Pine or Douglas Fir - Larch MC19.

C. Hem-Fir lumber is not acceptable species of lumber for chords or web members.

D. No lumber shall be used at that has a slope of grain exceeding the standard 1" slope to 8" run.

E. No dead knots shall be accepted in any lumber.

F. The open web joist, TJ1 joist, and MICRO-LAM lumber specified in these plans are to be manufactured by Trus Joist Corporation of Boise, Idaho. The products have been designed in accordance with one or more of the following: National Research Board reports 148, 200, 126, 119, Los Angeles City Research Reports RR 22614-T, 23664, RR 24399, RR 24317, and RR 24297. Any trusses other than those specified are to be bid as an alternate, and are subject to review and approval of both the architect and the owner.

For further information contact your Trus Joist Corporation representative at 1-800-824-0958 or (714) 937-5055.

06192.22 CONNECTORS

A. All truss connector plates shall be manufactured from only prime commercial quality galvanized sheet of no less than 20 gauge (0.036") thickness which has a minimum yield of 33,000 P.S.I. and a minimum ultimate tensile strength of 48,000 P.S.I. The corrosion resistant coating shall be 1.25 oz. per square foot, commercial class, hot dipped galvanized or equivalent. All connectors shall conform with design specifications for light metal plate connected wood trusses by Truss Plate Institute.

B. Each plate shall bear the stamped name of its manufacturer which shall be the same as the company furnishing the engineering truss design.

C. Where field connections of truss sub-assemblies are necessary, special nail on splice plates are acceptable, providing the plate sizes and potions are shown on the truss engineering design as approved by the truss plate manufacture.

06192.23 FASTENERS AND ANCHORAGE

A. Provide size and type of nails, screws, bolts, nuts, washers and anchorage devices as notes on the drawings.

06192.24 FABRICATION:

A. All truss members shall be accurately cut to length, angle and true to line to assure tight joints for finished truss.

B. Connector Plates shall be simultaneously pressed into each side of the joints using a minimum vertical pressure of 50 tons while all truss members are tightly clamped to special jigs.

C. No open joints which depend on stiffness of the metal connector plate to transmit stresses not improper fitting joints will be allowed.

D. No wane or knot's shall enter the joint or connection under the nail plate.

E. No more than one (1) live knot of a size specified and conforming to the proper grade mark will be accepted in total between the two members jointed at a single connection.

F. Each truss shall be permanently stamped with the name and address of the truss fabricator.

G. Each truss shall be clearly marked and/or flagged indicating points of pick-up.

H. All trusses shall be banded together for shipment to the job site.

I. Multiple trusses of two units shall be nailed together from both sides with two rows of nails on each side of top, bottom and mansard chord spaced 12" o.c. staggered over length and one row at 12" o.c. each side of web members.

J. Multiple trusses of three units shall be bolted together with 1/2" M.B. at 24" o.c. for top, bottom and mansard chord and one each web.

06192.3 EXECUTION

06192.31 STORING OF TRUSSES

A. Trusses stored prior to erection shall be set in vertical position with support at final bearing points and braced to eliminate unusual bracing or tipping over.

B. All banding placed on trusses at the fabricator's plant shall remain intact until installation.

06192.32 INSTALLATION OF TRUSSES:

A. Trusses shall be lifted in the vertical position with extreme care being taken to eliminate horizontal bending which would damage truss integrity.

B. A spreader bar shall be used to lift the truss with the minimum length being one-half the truss length. Sling lines shall connect vertically downward from the tow ends and the mid-point of the spreader bar providing a three point pick-up.

C. Installation of trusses shall be completed by experienced craftsmen following suggested guidelines of the fabricator. Anchorage indicated on the drawing shall be completed as the truss installation progresses.

D. Trusses shall be installed straight and plumb using a string line between supports and a level at each bracing and bearing location to assure accuracy.

E. Temporary top chord lateral bracing shall be 2x4's laid flat at locations indicated on the drawings. The bottom bracing is to be laid perpendicular to the plane of the truss and installed on the top of the bottom chord with 2-16D nails at each truss.

F. Concentrated loads shall not be set atop the trusses until the completion of the permanent equipment shall not be placed on the roof until the installation and final nailing of the entire roof sheathing has been completed.

END OF SECTION 06192

DIVISION 6 - WOOD AND PLASTICS

## SECTION 06200 - FINISH CARPENTRY

### 06200.1 GENERAL

06200.11 RELATED DOCUMENTS:

A. Drawings, Specifications , Division 1 and Contract.

06200.12 DESCRIPTION OF WORK:

A. Finish carpentry includes carpentry work which is exposed to view, and is non-structural. Types of finish carpentry work in this section include:
   1. Exterior trim.
   2. Plywood siding.
   3. Plastic laminated countertops and backsplashes.
   4. Wood shelving and cabinets.
   5. Prefinished paneling.

06200.13 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Protect finish carpentry materials during transit, delivery, storage, and handling.

06200.14 JOB CONDITIONS:

A. Installation of interior finish carpentry materials shall not be started until the building is weathertight and wet work has been completed in installation areas.

B. Installation of all finish carpentry materials shall be done so as the coordinate with application of finishes without undo exposure.

### 06200.2 PRODUCTS

06200.22 MATERIALS

A. Nominal sizes are indicated, except as shown by detailed dimensions. Provide dressed or worked and dressed lumber.

B. Provide kiln-dried lumber having a moisture content not greater than values required by the applicable grading rules.

C. Exterior trim to be "C Select" (IWP-Choice) S4S Douglas Fir or Southern Pine.

D. Exterior plywood to be fir, special exterior grade with all heartwood face veneer and rough sawn texture (APA 303 siding).

E. Shelving material:
   1. A-A interior grade Douglas Fir plywood with solid wood edge band (exposed edges).
   2. "Clear" S4S Douglas Fir or Southern Pine.

F. Countertops and Backsplashes:
   1. Interior grade plywood or 45# particle board of minimum 3/4" thickness.

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2. .039" thick, General Purpose Type (high-pressure) plastic laminate with Glossometer rating lengthwise of 6+-2.
3. Fabricate countertops and backsplashes as single units.

G. Prefinished Paneling:
1. Fiberglass reinforced polyester panels 1/8" thick with pebble grained finish and matching PVC moldings.

H. Provide nails, screws and other anchoring devices of the proper type, size, material and finish for application indicated to provide secure attachment, concealed where possible.

I. Screen for soffit and mansard vents to be 4" wide mesh of plastic coated fiber threads, with white finish.

## 06200.3 EXECUTION

### 06200.31 INSTALLATION

A. Discard units of material which are unsound, warped, bowed, twisted, or too small to fabricate work.

B. Install the work plumb, level, true and straight with no distortion. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level countertops.

C. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.

D. Install trim with minimum number of joints possible, using full-length pieces. Stagger joints in adjacent and related members. Cope at returns, miter at corners and use scarf joints for end-to-end joints.

E. Anchor finish carpentry work to blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Use fine finishing nails for exposed nailings, countersunk and filled flush with finished surface.

F. Install prefinished paneling in accordance with manufacturer's instructions using the manufacturer's adhesive, clips and suggested nailing. Install division, corner and edge moldings as supplied by paneling manufacturer for color and design of paneling.

G. Anchor countertops securely to base units and ohter support systems using concealed screws. Seal joint between backsplashes and vertical/horizontal surfaces with continuous silicone rubber sealant.

### 06200.32 ADJUSTMENT, CLEANING, FINISHING AND PROTECTION:

A. Repair or replace damaged and defective finish carpentry work wherever possible to eliminate defects functionally and visually.

B. Clean finish carpentry work on exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06200

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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

## SECTION 07200 - INSULATION

### 07200.1 GENERAL

07200.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract.

07200.12 DESCRIPTION OF WORK:

A. Extent of insulation work is shown on drawings, be generic names or by abbreviations. Applications of insulation specified include the following:
   1. Foundation wall insulation.
   2. Blanket-type building insulation.

07200.13 PRODUCT HANDLING:

A. Do not allow insulation materials to become wet, soiled, or covered with ice or snow. Comply with manufacturer's recommendations for handling, storage and protection during installation.

### 07200.2 PRODUCTS

07200.21 MATERIALS:

A. Rigid insulation to be extruded polystyrene plastic board insulation with integral high density skin; minimum 30 p.s.i. compressive strength; k-value of 0.20; 0.1% maximum water absorption; manufacturer's standard lengths and widths.
   1. "Styrofoam SM" by Dow Chemical U.S.A.
   2. U.C. Industries "Foamular 400".

B. Mineral/glass fiber blanket/batt insulation to be inorganic fibers formed into flexible resilient blankets; density as indicated, but 1.0 pound minimum; k-value of 0.27; manufacturer's standard lengths and widths as required to coordinate with spaces to be insulated; Type III, reflective aluminum foil facing with integral nailing flanges, flame spread rating of 25; R=19.

### 07200.3 EXECUTION

07200.31 INSPECTION:

A. Installer must examine substrate and condition under which insulation work is to be performed and must notify contractor of unsatisfactory conditions.

07200.32 INSTALLATION:

A. General:
   1. Comply with manufacturer's instructions for particular conditions of installation in each case.

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2. Extend insulation full thickness as shown over entire area to be insulated. Cut and fit tightly around obstructions, and fill voids with insulation.
3. Apply a single layer of insulation of required thickness, unless otherwise shown.

B. Perimeter Insulation:
1. Set units in accordance with manufacturer's instructions.

C. General Building Insulation:
1. Apply insulation units to substrate complying with manufacturer's recommendations to provide permanent placement and support.
2. Set vapor barrier to warm side of construction. Do not obstruct ventilation spaces, except for firestopping.
3. Provide continuous support of insulation to maintain position between trusses at to top chord elevation.

END OF SECTION 07200

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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

## SECTION 07310 - ROOFING TILES

### 07310.1 GENERAL

07310.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract.
B. See Section 06100 for building paper.

07310.12 DESCRIPTION OF WORK:

A. Extent of tiles is shown on drawing and is hereby defined to include units employed as weather protection for walls as well as for roofs. Types of tile applications specified include:
   1. Concrete roofing tiles.
   2. Alternate fired clay 'S-shaped' red roof tiles may be used upon submission of sample to Region Construction Department for approval. Substitution shall also be noted on bid proposal.

07310.13 JOB CONDITIONS:

A. Proceed with tiling work only after substrate construction and penetrating work have been completed.
B. Proceed with tiling work only when weather conditions are in compliance with manufacturer's recommendations and when substrate is completely dry.

### 07310.2 PRODUCTS

07310.21 CONCRETE TILE ROOFING MATERIALS:

A. Extruded concrete tiles and tile fittings (ridge, top filler, eave closure, etc.) shall be Series 2000 Double Roman in terra cotta as manufactured by Westile.
   1. Contractor may obtain pricing from Westile, Carder Concrete Products co., Littleton, Co, Attention Rob Reberg (303) 797-0630.
B. Asphalt-saturated felt to be 43 pound.
C. Nails for tiles and cleats to be 11 gauge copper ring shank nail in length to give proper penetration. Nails for felt to be hot-dipped zinc-coated 11 or 12 gauge barbed shank, minimum 3/8" diameter head, sharp pointed conventional roofing nails, in length to penetrate sheathing.
D. Plastic cement for gable rakes to be non-running, heavy body plastic cement composed of asbestos fibers, asphalt and other mineral ingredients.
E. Provide 1" nominal treated wood battens and ridge stringers.
F. Provide galvanized sheet metal flashing at vertical walls and fascia top.

### 07310.3 EXECUTION

07310.31 INSPECTION:

A. Installer of tiles must examine substrate and conditions under which tile work is to be performed and must notify Contractor of unsatisfactory conditions.

07301.32 PREPARATION OF SUBSTRATE:

A. Coordinate installation of tiles with flashing and other adjoining work to insure proper sequencing.

07310.33 INSTALLATION:

A. Comply with instruction and recommendations of tile manufacturer, except to extend more stringent requirements are indicated.

B. Apply one layer of felt over entire surface parallel to ground level. Lap succeeding course vertical 6" minimum and roll ends (horizontally) 2-1/2 minimum. Fasten all edges with nails at 6" centers.

C. Install Flashing at intersection of tile roofing and vertical walls. Extend flashing 8" minimum.

1. Install flashing at eave. Extend flashing 12" minimum up mansard over roofing felt and down over fascia face 2" minimum.

D. Chaulk horizontal on felt to guide application of battens and tiles for an installation that is weather tight and of good architectural appearance.

1. Lay tile to straight lines parallel to ground level. Lap tile 3" minimum vertically so that exposure length does not exceed 1/4" variation from average. full tiles shall be used for all courses with tile lap, varying and required.
2. Fasten each tile with 1,2, or 3 nails as required in each tile or fitting. Fasten tiles overlapping flashing with cooper wire nails and cement.
3. Cement gable rakes, top fixtures, and eave closures to field tiles and fasten with nails.
4. Cement ridges in laps and where they rest on roof tiles.

07310.34 GUARANTEE:

A. Installer and Contractor shall guarantee in writing, unconditionally, for a period of two (2) years from date of acceptance of the work, all work to be watertight and free from leaks.

END OF SECTION 07310

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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

## SECTION 07510 - BUILT-UP ROOFING SYSTEM

### 07510.1 GENERAL

**07510.11 RELATED DOCUMENTS:**

A. Drawings, Specifications Division 1 and Contract.

**07510.12 DESCRIPTION OF WORK:**

A. The extent of built-up roofing system work is indicated on the drawings and is defined to include roofing, composition flashing, and stripping, and roofing accessories integrally related to roofing installation, with the following types:
   1. Mineral surface cap sheet roofing.

**07510.13 QUALITY ASSURANCE:**

A. A single Installer (Roofer) shall perform the work of this section; and shall be a firm specializing in roofing work.

B. Provide roof covering materials bearing UL labels with fire exposure 'Class A'.

**07510.14 PRODUCT HANDLING:**

A. Handle and store roofing system products in a manner which will ensure no possibility of significant moisture pick-up. Do not leave unprotected materials on roof over night. Store rolls of felt and other sheet materials on end.
   1. Do not store materials on roof decks, nor position roofing installation equipment on roof decks, in concentrations exceeding live loading.

**07510.15 JOB CONDITIONS:**

A. Proceed with roofing system installation only when weather conditions are in accordance with requirements and recommendations of manufacturer of primary roofing system materials.

B. When adverse weather conditions or other conditions make roofing system installation unadvisable, and other work must not be delayed by roofing delay (as determined by Contractor), provide temporary roofing.
   1. Apply paper slip sheet then two (2) plies of 15# roofing felt with inter-ply mopping and coating of steep asphalt. Anchor to substrate so as to provide adequate (temporary) anchorage and facilities removal and clean-up.
   2. Remove temporary roofing (completely) immediately before installation of permanent roofing system.

**07510.16 WARRANTIES:**

A. Submit two (2) executed copies of a 2 year "Roofing Guarantee", covering work of this section, signed and countersigned by Installer (Roofer) and Contractor. Date of warranty is the date of acceptance of the work by the Owner.



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07510.2 PRODUCTS

07510.21 MEMBRANE MATERIALS:

A. Slip sheet to be red rosen-sized paper, 5 pounds per square.
B. Ply sheets to be asphalt-impregnated glass-fiber mat complying with ASTM 2178, Type IV.
C. Base ply to be asphalt-coated heavy-weight glass fiber base sheet.
D. Cap sheet to be heavy-weight glass fiber mat with asphalt coating and factory-applied opaque mineral granules (white), complying with ASTM D3909.
E. Bituminum to be asphalt complying with ASTM 312, Type II.

07510.22 EDGE/PENETRATION MATERIALS:

A. Asphaltic plastic roofing cement.
B. Reinforced asbestos flashing to be 55 pound sheet of asphalt laminated and coated asbestos felt and glass fiber fabric with mineral stabilizers and surfacers.
C. Coated abestos felt to be 18 pound sheet, of asphalt-asbestos felt.
D. Preformed edge strips to be asphalt-impregnated organic fiber insulation units, molded to form 3-1/2" x 3-1/2" x 45 degrees cant strips.

07510.23 SHEET METAL ACCESSORY MATERIALS:

A. Zinc-coated steel to be hot-dip galvanized; 0.0359" thick (20 gauge), except as otherwise indicated.

07510.24 MISCELLANEOUS MATERIALS:

A. Comply with requirements of "Carpentry" sections of these specifications for nailers and other wood members.
B. Provide industry-standard types of non-corrosive fasteners and nails for roofing work. Provide either 1" diameter nail heads or 1-3/8" diameter by 30 gauge sheet metal caps for nails used to hold sheets (felts) of roofing.

07510.25 FABRICATION OF SHEET METAL ACCESSORIES:

A. Conform work with details shown, and with "Architectural Sheet Metal Manual" by Sheet Metal and Air Conditioning contractors National Association.
B. Prefabricate units as indicated, or provide standard manufactured units complying with requirements; fabricate from sheet metal indicated.
C. Provide 4" wide flanges for setting on membrane with concealment by composition stripping.

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07510.3 EXECUTION:

07510.31 GENERAL INSTALLATION REQUIREMENTS:

A. Installer must examine condition of substrates to receive roofing and conditions under which work will be performed, and notify contractor of unsatisfactory conditions.
B. Protect other work from spillage of roofing materials, and prevent liquid materials from entering or clogging drains

and conductors. Replace or restore other work damaged by performance of roofing work.

C. Coordinate the installation of roofing sheets, flashings, stripping, coatings and surfacings, so that felts are not exposed to precipitation nor exposed overnight. It is intended that the installation be started and completed in a single day.

D. Do not raise bitumen temperature above minimum 170 degrees F fluid-holding temperature more than one hour prior to time of application.

07510.32 SUBSTRATE PREPARATIONS:

A. Do not apply hot bitumen on substrates when foaming results.

B. For direct application on wood, apply lapped course of slip sheet under membrane, nailing at laps 18" o.c.

07510.33 MEMBRANE INSTALLATION:

A. Build-up roofing sytem as outlined in this specification is to be a four ply mineral surface cap sheet build-up roof:
   1. Johns-Manville (spec #4GNC).
   2. Owens-Corning (spec #41-NC).

B. Install membrane with ply sheets shigled uniformly to achieve required number in thickness of membrane everywhere. Shingle in proper direction to shed water.

C. Comply with prime roofing manufacturer's recommendation for nailing, but not less than one nail per 1.5 square foot of roofing.

D. Install one lapped course of the following base sheet nailed to substrate.
   1. Asphalt-coated glass fiber base sheet.
      a. Start at low edge with 18" wide ply followed by felts applied full width. Lap each felt 2" over preceding felt and nail at 9" centers. Down longitudinal center of each felt nail two rows with rows spaced 11" apart and nails staggered on 18" centers.

E. Provide the following inter-ply mopping bitumens.
   1. Type II asphalt applied at a nominal rate of 25 pounds per square per ply.

F. Provide the following number of plys of types of sheets (felts) indicated, lapped (shingled) proper amount to form a continuous uniform membrane with bitumen mopping between sheets so that ply sheet does not touch ply sheet.
   1. Three (3) ply-sheet courses (24.7" laps).
   2. Asphalt-impregnated glass fiber mat.
   3. Start at low edge and apply one 12" wide, then over that one 24" wide, then over both a full 36" wide ply. Following felts are to be applied full width over lapping the preceding felt by 24.7" in such a manner that at least 3 plies cover the base felt at all locations.
   4. At edges and penetrations: Extend roofing felts at least 2" to 4" above the top of the cant strips and leave dry to provide a slippage plan.

G. Embed 12 foot lengths of mineral-coated cap sheet with 2 inch side and end laps into uniform mopping of hot asphalt-using a nominal 25 pounds per square. End laps shall be staggered minimum 3 feet.

07510.34 EDGES/PENETRATIONS:

A. Install a preformed cant edge strip at all vertical walls, curbs, and equipment by setting strip in bed of hot bitumen applied at a rate of 30 pounds per square foot.

B. Install reinforced asbestos flashing system:

1. Johns-Manville (spec #FE-1).
2. Owens-Corning.
   a. Apply one layer of #18 asbestos felt extending from the flashing point down to a line along the middle of the cant. Lap the ends 3" and nail the entire layer on 8" centers in both directions.
   b. Apply one layer of reinforced asbestos flashing extending from the flashing point down over the cant and onto the roof at least 6". The back surface of base flashing shall be mopped with hot bitumen before application and the flashing shall be imbedded in a mopping of hot bitumen. Lap the ends of the flashing 3" and nail the top edge, and laps at 4" o.c.
   c. Cover the end laps and the roof edge with a 4" wide strip of asbestos felt embeded in hot bitumen.
   d. Glaze-coat with 20 pounds mopping of bitumen.

07510.35 ROOFING ACCESSORY INSTALLATIONS:

A. Install acessory items where shown or specified, complying with combined instructions and recommendations of accessory manufacturer and primary roofing materials manufacturer.

B. Locate and place sheet metal items plumb, level and in proper alignment with adjacent work.

C. Form tight joints with exposed connections accurately fitted together. Provide reveals and openings for sealants and joint fillers.

D. Anchor flanges to substrate at corners and a minimum of 4" o.c. along the length.

E. Provide gaskets, sealant and fillers as the work progresses to make the installations weathertight and sealed.

07510.36 PROTECTION:

A. The Installer of roofing shall advise Contractor of recommended protection during remainder of construction period.

END OF SECTION 07510

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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

## SECTION 07600 - SHEET METAL AND ROOF ACCESSORIES

### 07600.1 GENERAL

07600.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, and Contract.
B. See Section 06100 for termite shield.
C. See Drawings for roof hatch.

07600.12 DESCRIPTION OF WORK:

A. The extent of each type of roof accessories and sheet metal work is indicated on the drawings and by provisions of this section with the following work specified herein:
   1. Metal wall cap.
   2. Gravel Steps.
   3. Fascia Cap Flashing.

07600.13 JOB CONDITIONS:

A. Coordinate work with interfacing and adjoining work for proper sequencing of each installation.

### 07600.2 PRODUCTS

07600.21 SHEET METAL MATERIALS:

A. Zinc-coated steel to be commercial quality with 0.20% cooper, hot-dip galvanized; 0.0359" thick (20 gauge) except as otherwise indicated.
B. Matic sealant to be polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.
C. Provide sheet metal clips, straps, anchoring devices and similar accessory units as required for installation of work, matching or compatible with material being installed.

07600.22 FABRICATED UNITS:

A. Shop-fabricated work to greatest extent possible. Comply with details shown, and with applicable requirements of Sheet Metal and Air Conditioning Contractors National Association "Architectural Sheet Metal Manual". Fabricate for waterproof and weather-resistant performance; with expansion provisions for running work. Form work to fit substrates. Form exposed sheet metal work without excessive oil-canning, buckling and tool marks, true to line and levels as indicated, with exposed edges folded back to form hems.
B. Fabricate nonmoving seams in sheet metal with flat-lock seams. Tin edges to be seamed, form seams and solder.
C. Non-expansion type joints are to provide for proper installation of elastomeric sealant.
D. Provide for separation of metal from noncompatible metal or corrosive substrates by coating concealed surfaces to

location of contact, with bituminois coating or other permanent separation.

E. Wall cap is to be a snapped in place system with concealed clips at a maximum of 32" O.C.
   1. Provide a minimum 12" long joint plate at all splices.
   2. Corners and ends are to be shop fabricated and have a minimum leg.

## 07600.3 EXECUTION

### 07600.31 INSTALLATION REQUIREMENTS:

A. Comply with manufacture's installation instruction and recommendations, and with Sheet Metal and Air Condition Contractors National Association "Architectural Sheet Metal Manual". Anchor units of work securely in place, providing for thermal expansion of metal units; conceal fasteners where possible, and set units true to line and level. Install work with laps, joints and seams which will be permanently watertight and weatherproof.

B. Cap flashings are to be set in a thick bead of mastic sealant at all splice plates.

### 07600.32 CLEANING AND PROTECTION:

A. Clean exposed metal surfaces, removing substances which might cause corrosion of metal or deterioration of finishes.

END OF SECTION 07600

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DIVISION 7 - THERMAL AND MOISTURE PROTECTION

## SECTION 07900 - JOINT SEALERS

### 07900.1 GENERAL

07900.11 RELATED DOCUMENTS:
A. Drawings, Specifications, Division 1, and Contract.

07900.12 DESCRIPTION OF WORK:
A. The applications for joint sealers includes the following:
1. Expansion joints.
2. Caulking compounds.

07900.13 JOB CONDITIONS:
A. Do not proceed with installation of liquid sealants under unfavorable weather conditions, as recommended by manufacturer for installation.

### 07900.2 PRODUCTS

07900.21 MATERIALS:
A. Provide colors indicated or, if not otherwise indicated, as selected by Owner's Representative from manufacturer's standard colors. Select materials for compatibility with joint surfaces as recommended by manufacturer for each application indicated.
B. Silicone rubber sealant to be silicone rubber-based, one-part elastomeric sealant, recommended by manufacturer for exterior joints.
C. Expansion joint to be one of the following:
1. Resilient and non-extruding type premolded cork units.
2. Resilient and non-extruding type premoled bituminous impregnated fiber board units.
D. Sealant backer road to be compressible rod stock of flexible, permanent, durable nonabsorptive material as recommended by sealant manufacturer for compatability with sealant.

### 07900.3 EXECUTION

07900.31 MANUFACTURER'S INSTRUCTIONS:
A. Comply with manufacturer's printed instructions except where more stringent requirements are shown or specified.

07900.32 JOINT PREPARATION:
A. Clean joint surfaces immediately before installation of sealant or caulking compound. Where required on masonry construction etch concrete and masonry joint surfaces as recommended by sealant manufacturer.
B. Prime or seal joint surfaces where indicated, and where recommended by sealant manufacturer.

07900.33 INSTALLAITON:

A. Set joint filler untis at proper depth or position in joint to coordinate with other work, including installation of backer rods and sealants.

B. Install sealant backer road for liquid elastomeric sealants as recommended by sealant manufacturer for applicaiton indicated.

C. Employ only proven installation techniques, which will ensure that sealants are depcsited without gaps or air pockets, with complete "wetting: of joint fill sealant rabbet to a slightly concave surface. Where horizontal joints are between a horizontal surface and vertical surface, fill joint to form a slight cove, so that joint will not trap moisture.

D. Install sealant to depths recommended by sealant manufacturer.

E. Do not allow sealants or compounds to overflow or spill onto adjoining surfaces. Clean Adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

07900.34 CURE AND PROTECTION:

A. Cure sealants and caulking compounds in compliance with manufacturer's instructions and recommendations.

END OF SECTION 07900

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DIVISION 8 - DOORS AND WINDOWS

## SECTION 08100 - STEEL DOORS AND FRAMES

### 08100.1 GENERAL

08100.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract.

B. See Drawings for extent of doors and frames to be furnished by owner and installed by contractor.

08100.12 DESCRIPTION OF WORK:

A. Extent of standard steel doors and frames is shown and scheduled on drawings.

08100.13 QUALITY ASSURANCE:

A. Provide doors and frames complying with Steel Door Institute "Recommended Specifications: Standard Steel Doors and Frames".

B. Provide standard steel doors and frames by one of the following:
   1. Amweld Building Products Division
   2. Ceco Corporation
   3. SteelCraft Manufacturing Company

08100.14 DELIVERY, STORAGE, AND HANDLING:

A. Deliver hollow metal work cartoned or crated to provide protection during transit and job storage.

B. Store doors and frames at building site under cover in vertical position. Place units on wood sills and provide spacers between each unit.

### 08100.2 PRODUCTS

08100.21 MATERIALS:

A. Hot-rolled steel sheets and strip to be commercial quality carbon steel, pickled and oiled.

B. Cold-rolled steel sheets to be commercial quality carbon steel.

C. Galvanized steel sheets to be zinc-coated carbon steel sheets of commercial quality.

D. Fabricate supports and anchors of not less than 18 gauge galvanized sheet steel.

E. Inserts, bolts, and fasteners to be manufacturer's standard units except hot-dip galvanize items to be built into exterior walls.

F. Shop applied primer to be rust inhibitive enamel or paint suitable as a base for specified finish paints..

08100.22 FABRICATION:

A. General:
   1. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle.

2. Fabricate exposed faces of doors and panels from only cold-rolled steel.
3. Fabricate frames, concealed stiffeners, reinforcement, and edge channels, from either cold-rolled or hot-rolled steel (at fabricator's option).
4. Fabricate exterior doors, panels, and frames from galvanized sheet steel. Close top and bottom edges of doors with flush channel as integral part of door construction.
5. Unless otherwise indicated, provide countersunk flat Phillips heads for exposed screws and bolts.

B. Finish Hardware Preparation:
1. Prepare doors and frames to receive mortised and concealed finish hardware in accordance with finish hardware.
2. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.
3. Locate finish hardware in accordance with "Recommended Locations for Builder's Hardware", published by Door and Hardware Institute and local codes.

C. Shop Painting:
1. Clean, treat and paint exposed surfaces of steel door and frame units, including galvanized surfaces.

08100.23 STANDARD STEEL DOORS:
A. Provide metal doors equal to Ceco Regent for full flush type design with 16 gauge skins and stiffened with on-piece resin-impregnated full honeycomb core. Top and bottom channels are to be flush.

08100.24 STANDARD STEEL FRAMES:
A. Provide 16 gauge metal frames for doors and other openings, of sizes as shown on drawings with concealed fastenings, unless otherwise show.
1. Fabricate frames with mitered corners, welded construction for exterior applications and knocked-down for field assembly at interior applications. Ship welded frames to site with removable steel spreader at bottom which is not to be removed until completion of wall construction.

B. Form exterior frames of hot-dip galvaized steel.
C. Provide two (2) silencers on strick jambs of single-swing frames.

08100.3 EXECUTION

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08100.31 INSPECTION:
A. Installer must examine substrate and conditions under which steel doors and frames are to be installed and must notify Contractor of any conditions detrimental to proper and timely completion of work.

08100.32 INSTALLATION:

A. Install standard steel doors, frames, and accessories in accordance with manufacturer's data, and as herein specified.

B. Placing Frames:

1. Comply with provisions of "Recommended Erection Instructions for Steel Frames", unless otherwise indicated.

2. Place frames prior to construction of enclosing walls and ceilings. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set.

a. Locate three (3) concealed wall anchors of proper design for wall condition per jamb, one each at hinge and strike levels. Also provide angle floor clip for each jamb with floor fastener to suit floor construction.

C. Door Installation:

1. Fit hollow metal doors accurately in frames, within clearances specified in "Recommended Specifications Standard Steel Doors and Frames".

D. Adjust and Clean:

1. After erection, sand smooth and rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

2. Check and readjust operating finish hardware items, leaving steel doors and frames proper operating condition.

END OF SECTION 08100

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DIVISION 8 - DOORS AND WINDOWS

## SECTION 08210 - WOOD DOORS

### 08210.1 GENERAL

08210.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1, and Contract.

08210.12 DESCRIPTION OF WORK:
A. Extent and location of each type of wood door is shown on drawings and in schedules to be the following:
1. Solid core flush wood doors with medium density overlay faces.

08210.13 QUALITY ASSURANCE:
A. Submit written agreement on door manufacturer's standard form signed by Manufacturer, Installer, and Contractor agreeing to repair or replace defective doors which have warped (bow, cup or twist) or which show photographing of construction below in face veneers.
1. Warranty shall be in effect for a five (5) year period following date of substantial completion.

08210.14 PRODUCT DELIVERY, STORAGE, AND HANDLING:
A. Protect wood doors during transit, storage and handling to prevent damage, soiling and deterioration.

### 08210.2 PRODUCTS

08210.21 MATERIALS AND COMPONENTS:
A. Face panels to be manufacturer's standard 2-ply face panels, unless otherwise indicated.
B. Exposed surfaces to be as specified with same exposed surface material on both faces.

08210.22 SOLID CORE WOOD DOORS:
A. Provide solid core wood doors by one of the following:
1. Cal-Wood
2. Eggers
B. Core construction to be mat formed particle board.
C. Face panels to be manufacturer's standard 2-ply face panels of medium density over-lay applied over manufacturer's standard thickness hardwood face veneer. Provide any close grain hardwood for exposed edges and other exposed solid wood components.

08210.23 SHOP-PRIMING:
A. Before delivery of door to project site, shop-prime exposed portion of wood doors.

### 08210.3 EXECUTION

08210.31 INSPECTION:

A. Installer must examine door frames and verify that frames are correct type and have been installed as required for proper hanging of corresponding doors and notify contractor of conditions detrimental to proper ant timely installation of wood doors.

08210.32 INSTALLATION:

A. Condition doors to average prevailing humidity in installation area prior to hanging by delivery to site four (4) days prior to installation.

B. Install wood doors in accordance with manufacturer's instructions and as shown.

C. Align doors to frames for proper fit and uniform clearance at each edge and machine for hardware. Seal cut surfaces after fitting and machining.

1. Bevel non-fire rated doors 1/8" in 2" at lock and hinged edges.

D. For non-fire doors provide clearances of 1/16" at jambs and heads; and 1/4" from bottom of door to top of decorative floor finish or covering.

08210.33 ADJUST AND CLEAN:

A. Rehang or replace doors which do not swing or operate freely, as directed by Owner's Representative.

END OF SECTION 08210

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DIVISION 8 - DOORS AND WINDOWS

## SECTION 08410 - ALUMINUM ENTRANCES AND WINDOWS

### 08410.1 GENERAL

08410.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, and Contract.

08410.12 DESCRIPTION OF WORK:

A. Extent of aluminum entrances and storefronts is shown on drawings and schedules and includes the following:
   1. Exterior entrance doors and frames.
   2. Arched aluminum windows.
   3. Fixed aluminum windows.
   4. Storefront type framing system.

08410.13 QUALITY ASSURANCE:

A. Comply with applicable provisions of "Metal Curtain Wall, Window, Storefront, and Entrance Guide specifications Manual", by Architectural Aluminum Manufacturer's Association.

B. Provide aluminum entrances and window framing system produced by the following manufacturers through National Accounts Departments:
   1. Kawneer Company, Inc.
      (317) 738-2600
   2. Vista Wall Corp.
      (214) 563-2624

C. Performance and Testing:
   1. Fabricate exterior components from stock systems which have been designed to provide for expansion and contraction resulting from ambient temperature range of 120 degrees F (49 degrees C).
   2. Fabricate exterior components from stock systems which have been tested to withstand uniform pressure of 20 psf inward and 20 psf outward.
   3. Fabricate exterior storefront components from stock systems which have been tested to demonstrate permanent resistance to leakages as follows:
      a. Air infiltration to be not more than 0.06 cfm per square foot.
      b. Water infiltration to be no uncontrolled water penetration.

D. Wherever possible, take field measurements to insure proper fitting of work. However, proceed with fabrication and coordiante installation tolerances as necessary when field measurements might delay work.

E. Shop drawings for standard units are available from the manufacturer upon request.

### 08410.2 PRODUCTS

08410.21 MATERIALS AND ACCESSORIES:

A. Aluminum members to be alloy and temper recommended by manufacturer for strength, corrosion resistance, and application of required finish. Main extrusions shall be of 6063-T5 extruded aluminum alloy of 0.125" minimum wall thickness.

B. Fasteners to be aluminum, non-magnetic stainless steel, or other materials warranted by manufacturer to be non-corrosive and compatible with aluminum components.
   1. Do not use exposed fasteners except where unavoidable for application of hardware. Match finish of adjoining metal and use Phillips flat-head machine screws.
   2. Reinforce aluminum less than 0.125" thick with aluminum or non-magnetic stainless steel at screw anchors.

C. Concealed flashing to be dead-soft stainless steel, 26 gauge minimum, type selected by manufacturer for compatibility.

D. Brackets and reinforcements to be manufacturer's high-strength aluminum units where feasible; otherwise, non-magnetic stainless steel or hot-dip galvanized steel.

E. Masonry inserts where required to be cast iron, malleable iron, or 12 gauge steel hot-dip galvanized.

F. Bituminois coatings to be cold-applied asphalt mastic for 30-mil thickness per coat.

G. Clear protective coatings to be applied for protection of aluminum finish during construction.

H. Compression weatherstripping to be manufacturer's standard replaceable stripping of either molded neoprene gaskets (molded PVC gaskets) or molded expanded neoprene gaskets.

J. Systems shall be 4 1/2" x 1 3/4" for 1/4" glazing and 1" glazing.

K. Arch windows shall be Kawneer 2 3/4" x 2" frame for 1" glazing, 2" x 2" frame for 1/4" glazing or Vista Wall 3" x 1 1/2" frame.

08410.22 HARDWARE:

A. Provide door manufacturer's standard heavy-duty hardware units as shown, scheduled, or required for operation of each door:
   1. Offset pivots to be cast aluminum alloy with steel pins and oilite bearings (ball bearings bottom pivots).
   2. Overhead exposed closers to be Norton #1605 surface closer with delayed action for handicapped use.
   3. Deadlocks to be Adams Rite MS-1850A deadlock with 1-3/8" standard throw stainless steel strike box and interior MS-4590 thumb turn.
   4. Construction cylinders to be supplied in deadlocks and to be replaced with Falcon cylinders supplied per hardware section of specifications.
   5. Push-pull set to be style F-2.
   6. Thresholds to be extruded aluminum in mill finish, complete with anchors and clips. coordinated with pivots.

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08410.23 FABRICATION:

A. General:

1. Required sizes for door and window units are shown on drawings.
   a. Details shown are based on standard details by manufacturer indicated.
2. To greatest extend possible, complete fabrication, assembly, finishing, hardware application, and other work before shipment to project site.
   a. Preglaze door and window units to greatest extent possible.
   b. Do not drill and tap for surface-mounted hardware items until time of installation at project site.
   c. Arched windows to be factory formed and glazed with tape and wedge.
3. Complete cutting, fitting, forming, drilling, and grinding of metal work prior to cleaning, finishing, surface treatment, and application of finishes.
4. Install reinforcing as necessary for performance requirements; separate dissimilar metals with bituminous paint or other separator which will prevent corrosion.
5. Maintain accurate relation of planes and angles, with hairline fit of contacting members.
6. Conceal fasteners wherever possible.
7. For exterior doors, provide compression weather-stripping against fixed stops; at other edges, provide sliding weatherstripping retained in adjustable strip mortised in to door edge.
   a. Provide heavy-duty, hollow, compression weatherstripping in bottom door rail, adjustable for contact with threshold.
   b. At interior doors provide neoprene silencers on strips to prevent metal-to-metal contact.

B. Storefront Framing System:

1. Inside-outside matched resilient flush-glazed system fabricated for stick-type erection procedure with provision for glass replacemnt.

C. Stile-and-Rail Type Aluminum Doors:

1. Provide tubular frame members, fabricated with mechanical joints using heavy inserted reinforcing plates and concealed tie-rods or j-bolts, and fabricate with structurally welded joints.
2. Except as otherwise shown or scheduled, provide doors 1-3/4" thick with narrow stile (2" nominal width).
3. Fabricate doors to facilitate replacement of glass or panels, without disassembly of door stiles and rails. Provide snap-on extruded aluminum glazing stops, with exterior stops anchored for non-removal.

D. Windows:

1. Provide commercial windows (grade A2).
2. Provide manufacturers standard fabrication and accessories which comply with indicated standards and are re-glazable without dismantling.



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3. Provide water shed members at lines of natural water penetration.
4. Provide subframes with anchors for units where shown.

08410.24 FINISHES:

A. Anodized aluminum finishes to be equal to Kawneer #40 permanodic Dark Bronze (minimum thickness 0.3 mils).

08410.3 EXECUTION

08410.31 INSTALLATION:

A. Comply with manufacturer's instructions and recommendations for installation of aluminum entrances and windows.
B. Set units plumb, level, and true to line, without warp or rack of framing members, doors, or panels. Anchor securely in place, separating aluminum and other corrodible metal surfaces.
C. Drill and tap frames and doors and apply surface-mounted hardware items, complying with hardware manufacturer's instructions and template requirements. Use concealed fasteners wherever possible.
D. Set sill members and other members in bed of compound, or with joint fillers or gaskets to provide weathertight construction.

08410.32 ADJUST AND CLEAN:

A. Adjust operating hardware to function properly, without binding and to provide tight fit at contact points and weatherstripping.
B. Clean completed system, inside and out, promptly after erection and installation of glass and sealants.
C. Remove protective coating when completion of construction activities no longer requires its retention.

END OF SECTION 08410

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DIVISION 8 - DOORS AND WINDOWS

## SECTION 08700 - BUILDERS HARDWARE

### 08700.1 GENERAL

#### 08700.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, and Contract.
B. See drawings for hardware supplied by owner and installed by contractor.

#### 08700.12 DESCRIPTION OF WORK:

A. "Builders Hardware" includes items known commercially as builders hardware which are required for swing, sliding and folding doors. Types of items in this section include (but are not necessarily limited to):
1. hinges;
2. locks, lock cylinders, and keys;
3. exit devices;
4. push/pull units;
5. closers;
6. door trim units;
7. weatherstripping and thresholds for exterior doors.

#### 08700.13 QUALITY ASSURANCE:

A. Obtain each kind of hardware (latch, and lock set, hinges, closers, etc.) from only one manufacturer.

#### 08700.14 JOB CONDITIONS:

A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for proper installation and function.

### 08700.2 PRODUCTS

#### 08700.21 SCHEDULED HARDWARE:

A. Products are identified by using hardware designation numbers of the following one manufacturer for each hardware type required. All items (except locks) are listed by Manufacturer for the purpose of establishing minimum requirements.
1. Locks and lock cylinders are to be supplied only by the listed manufacturer and supplier.
2. All other hardware is to be from listed alternate manufacturers.

#### 08700.22 MATERIALS AND FABRICATION:

A. The drawings show the direction of swing or hand of each door. Furnish each item of hardware for proper installation and operation of the door movement as shown.

B. Produce hardware units of the base metal and forming method using the manufacturer's standard.
C. Manufactured hardware to conform to published templates, generally prepared for machine screw installation.
D. Furnish screws for installation, with each hardware item. Provide Phillips flat-head screws with finish of exposed (exposed under any condition), screws to match the hardware finish.
E. Provide concealed fasteners for hardware units which are exposed when the door is closed, except to the extent no standard units of the type specified are available with concealed fasteners.

08700.23 HINGES, BUTTS:
A. Provide only template-produced units.
B. Furnish Phillips flat-head all-purpose or machine screws for installation of units. Finish screw heads to match surface of hinges or pivots.
C. Hinge pins are to be non-removable and non-rising.
   1. Interior hinges (non-ball bearing) to have steel pins.
   2. Exterior hinges and ball bearing interior hinges to have stainless steel pins.
D. Interior hinges are to be two (2) knuckle steel with oil-impregnated stainless steel bearing. McKinney TA-2731.
   1. Doors over 36" wide and/or 75" high shall have five (5) knuckle steel with ball bearing. McKinney TB-3386.
E. Exterior hinges are to be five (5) knuckle brass, bronze, or stainless steel with ball bearing. McKinney T4B-3386.
F. Size of all hinges is to be 4-1/2" x 4-1/2".
G. All doors shall have 1-1/2 pair of hinges per leaf.
   1. Doors over 36" wide and/or 72" high shall have two (2) pair of hinges per leaf.
H. Alternate manufacturers: Hager and Stanley.
I. Hinges for Serving Area door are to be invisible from the public side of the door.

08700.24 LOCKS, LOCK CYLINDERS, AND KEYING:
A. All locks, and lock cylinders to be keyed alike.
B. Lock cylinders parts to be constructed from brass/bronze, stainless steel or nickel silver.
C. Provide manufacturer's standard wrought box strike for each lock bolt, with curved lip extended to protect frame, finish to match hardware set.
D. Provide 1/2" minimum throw of latch bolts.
   1. Provide 1" minimum throw of dead bolts.
E. Order "Falcon" locks and lock cylinders (for exterior aluminum entrance doors) from:
   1. M & F Builders Supply, Inc., (312) 439-9490, Attn: Jerry Warren
   2. Felix Thompson Co., (501) 646-7321, Attn: Donnie Sharp
   3. Architectural Specialties, (215) 322-2460, Attn: Bruce Cordon

F. All locks and lock cylinders to be furnished with six (6) pin interchangeable-core tumbler. Furnish only temporary inserts for the construction period.
   1. Permanent inserts to be shipped to the District Manager who will remove and replace the construction cores.
G. Knob and rose style to be Elite-Gala.
   1. Rose style for mortise lock to be 2-1/4: x 8" escutcheon.
H. Back set to be 2-3/4".
I. Lock functions:
   1. Toilet doors to be privacy, Falcon S301EG (or X301 as shown on drawings)
   2. Office, kitchen and janitor doors to be office door, Falcon S521 DLXEG.
   3. Exterior Door (except aluminum entrances) to be mortise exit door, Falcon M2510 with no external knob and interian thumb turn only.
J. Provide a lock cylinder for each exterior aluminum door, Falcon #986-106, except on drive-thru side of building.
K. Exit control lock/alarm shall be provided for the aluminum door on the drive-thru side of building, Detex ECL-230H. Falcon cylinder #986-106 shall be provided to replace manufacturer furnished cylinder.

08700.25 CLOSERS AND DOOR CONTROL DEVICES:
A. Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit.
B. Toilet, corridor and kitchen doors to be LCN 1053 (prime finish).
   1. Doors over 36" wide to be LCN 4114H SNB (prime finish).
C. Exterior doors (except aluminum entrances) to be LCN 4116H SNB (prime finish).
D. Closers for doors opening into the corridor shall be mounted on side of door opposite corridor.
E. Alternate manufacturers: Yale and Norton.

08700.26 DOOR TRIM UNITS:
A. Provide manufacturer's standard exposed fasteners for door trim units.
B. Fabricate protection plates not more than 1-1/2" on stop side smaller than the door width.
   1. Metal plates to be stainless steel, 18 gauge, Brookline 18" high, exterior kitchen door.
   2. Plastic plates, to be acrylic plastic, 1/8" thick brown, Brookline 8" high, kitchen doors (kitchen side only).
C. All interior doors to have a stop:
   1. Floor stops to be Ives 438B.
D. Alternate manufacturers: Quality and Hiawatha.

08700.27 WEATHERSTRIPPING AND THRESHOLDS:
A. Weatherstripping at jamb and heads to be spring type stripping of manufacturer's standard design.

1. Metal to be spring bronze, 0.009" minimum thickness for sliding compression, 0.005" minimum thickness for direct compression.

B. Weatherstripping at door bottoms to be threshold contact-type resilient insert and metal housing.
   1. Extruded aluminum with natural anodized finish, 0.062" minimum thickness of main walls and flanges.
   2. Flexible vinyl wiper or sweep seal strip.

C. Provide single piece extruded aluminum threshold .125 thick with smooth commercial finish and grooved tread in manufacturers standard with strips of abrasive finish. Profile and with to be as necessary to fit the conditions as shown on the drawings.

D. Exterior doors (except aluminum entrances):
   1. Head and jamb weatherstripping to be Reese 350.
   2. Sill weatherstripping to be Reese 362 A.
   3. Threshold to be Reese S512A0

E. Alternate manufacturers: Zero and Pemko.

08700.28 HARDWARE FINISHES:

A. Provide matching finishes for hardware units at each door or opening, to the greatest extent possible, and except as otherwise indicated.

B. Provide protective lacquer coating on all exposed hardware finishes of aluminum, except as otherwise indicated.

C. The designations used in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.

D. Finish on all hardware (except aluminum entrances) to be US 26D Satin Chrome Plate finish.

08700.3 EXECUTION

08700.31 INSTALLATION:

A. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware" for Standard Steel Doors and Frames, by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations.

B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate.

C. Set units level, plumb and true to line and locations. Adjustment reinforce the attachement substrate as necessary for proper installation and operation.

D. Drill and counter sink units which are not factory-prepared for anchorage fasteners.

E. Thresholds:
   1. On concrete substrates, install lead-shield anchors, accurately places to receive machine screw anchors at locations pre-drilled and evenly spaced in threshold units (spaced not more than 12" o.c.).

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2. Screw thresholds to substrate with no. 10 or larger screws, of the proper type for permanent anchorage.
3. Set thresholds in a bed of sealant to completely fill concealed voids.
4. Set threshold units level and accurately aligned with frames and doors, and at proper elevation for door operation.

08700.32 ADJUST AND CLEAN:

A. Adjust and check each operating item of hardware and each door to ensure proper operations or function of every unit.
B. Final check and adjust all hardware items. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilation equipment.

END OF SECTION 08700

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DIVISION 8 - DOORS AND WINDOWS

## SECTION 08800 - GLASS AND GLAZING

### 08800.1 GENERAL

08800.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1, and Contract.

08800.12 DESCRIPTION OF WORK:
A. "Glass" includes prime glass, processed glass, and fabricated glass products and "Glazing" includes glass installation and materials used to install glass. Types of work included herin:
1. Window units.
2. Entrances and other doors.
3. Storefront construction.

08800.13 QUALITY ASSURANCE:
A. Prime Glass manufacturer is to be one of the following:
1. Guardian Industries Corp.
2. Libbey-Owens-Ford Company
3. PPG Industries, Inc.
B. Prime Glass Standard is to be Federal Specification DD-G-451
C. Safety Glass Standard is to be CPSC 16 CFR 1201.

### 08800.2 PRODUCTS

08800.21 GLASS PRODUCTS:
A. Float/plate glass to be type I, clear unless otherwise indicated.

08800.22 FABRICATED GLASS UNITS:
A. Laminated safety glass to be two (2) sheets of clear float glass with a 30 mil film of polyvinyl buteral laminated by manufacturer's standard heat-plus-pressure process; 1/4" thick if not otherwise indicated.
B. Insulating glass to be two (2) sheets 1/4" thick float glass and 1/2" dry air space with Class A sealant-type edge construction to maintain hermetic seal.

08800.23 GLAZING SEALANTS AND COMPONENTS:
A. Provide exposed sealant/compound in bronze color. Comply with manufacturer's recommendations for selection of hardness, depending upon the location of each application.
B. Provide 2-part polysulfide glazing sealant.

08800.24 GLAZING GASKETS:
A. Provide molded or extruded EPDM gaskets of the profile and hardness required for watertight construction.

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08800.25 MISCELLANEOUS GLAZING MATERIALS:

A. Cleaners, primers and sealers shall be type recommended by sealant or gasket manufacturer.

B. Setting Blocks shall be neoprene or EPDM 70-90 durometer hardness with proven compatibility with sealants used.

C. Spacers shall be neoprene or EPDM, 40-50 durometer hardness with proven compatibility with sealantsused.

D. compressible filler shall be closed-cell or waterproof-jacketed rod stock compatible with sealants used.

08800.3 EXECUTION

08800.31 STANDARDS AND PERFORMANCE:

A. Watertight and airtight installation of each glass product is required each installation must withstand normal temperature changes, wind loading and impact loading without defects in the work.

B. Protect glass from edge damage during handling and installation.

08800.32 PREPARATION FOR GLAZING:

A. Clean glazing channel and other framing members to receive glass immediately before glazing.

B. Apply primer or sealant to joint surfaces where recommended by sealant manufacturer.

08800.33 GLAZING:

A. Install setting blocks of proper size in sill rabbet, located 1/4 of glass width from each corner.

B. Provide spacers inside and out, of proper size and spacing, for glass sizes larger than 50 united inches, except where gaskets or preshimmed tapes are used for glazing.

C. Install filler rods in channel at heel of jambs and head (do not leave voids in sill channels), complying with manufacturer's recommendations.

D. Force sealants into channel to eliminate voids and to ensure complete "wetting" or bond of sealant to glass and channel surfaces.

E. Tool exposed surfaces of glazing liquids and compounds to provide a substantial "wash" away from glass. Install pressurized tapes and gaskets to protrude slightly out of channel.

F. Clean and trim excess glazing materials from glass and stops or frames promptly after installaiton, and eliminate stains and discolorations.

G. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage to ensure that gasket will not "walk" out when installation is subjected to movement.

H. Miter cut and bond ends together at corners where gaskets are used for channel glazing, so that gaskets will not pull away from corners.

08800.34 CURE, PROTECTION AND CLEANING:

A. Protect exterior glass from breakage immediately upon installation by use of crossed streamers attached to framing and held away from glass. Do not apply markers to surfaces of glass. Remove nonpermanent labels and clean surfaces.

END OF SECTION 08800

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DIVISION 9 - FINISHES

## SECTION 09210 - STUCCO

### 09210.1 GENERAL

09210.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1 and Contract.

09210.12 DESCRIPTION OF WORK:
A. Type of work includes:
1. Portland cement stucco.

09210.13 QUALITY ASSURANCE:
A. Where stucco assemblies with fire resistance rating are indicated or are required to comply with governing regulations, provide materials and installations identical with applicable assemblies which have been tested and listed by recognized authorities.
1. Provide stucco having the same aggregate as specified for similar non-rated work.
B. Portland Cement and Portland Cement - Lime Plastering, Exterior (stucco) and Interior American National Standards Institute, A42.2-1971.
C. Lathing and Furring for Portland Cement and Portland Cement Lime Plastering, Exterior (Stucco) and Interior, American National Standards Institute, A42.3-1971.

09210.14 PRODUCT HANDLING:
A. Deliver, store, and protect manufactured materials in original and unopened containers.
B. All cementitious material shall be stored off ground under cover.

09210.15 JOB CONDITIONS:
A. Protect contiguous work from harmful effects which might result from stuccoing.

### 09210.2 PRODUCTS

09210.21 LATHING AND ACCESSORY MATERIALS:
A. General:
1. Metals and finishes to be manufacturer's standard galvanized products unless indicated as zinc alloy.
a. Exterior exposed accesssories to be zinc alloy accessories for exterior work, except where full concealed in plaster.
B. Wire ties to be galvanized soft steel wire.
C. Metal lathing materials to be self-furring diamond mesh lath, 3.4 pounds per square yard, standard mesh galvanized copper alloy steel with 1/4" deformations.
D. Metal Stucco Accessories:

1. Coordinate depth of accessory with thickness of and number of coats of stucco to be applied. All material to be zinc alloy of minimum 26 gauge thickness or as noted.
2. Small-nose corner beads to be expanded type with 2-7/8" wide flanges.
3. Cornerite to be standard preformed interior corner reinforcement made from 2.5 pound per square yard diamond mesh lath.
4. Square-edged casing beads to be standard with expanded or short flange to suit application.
5. Expansion joints to be standard on piece joint with expanded flanges equal Milcor #15.
6. Corner reinforcement to be stucco-type woven galvanized wire corner reinforcing strips.
7. Fasteners to be galvanized steel screws or 7/16" head galvanized nails, of type and length suitable for adequate penetration of the substrate.
8. Base screed/flashing to be mechanically broke 20 gauge material bent to configurations shown on drawings.

09210.22 PORTLAND CEMENT STUCCO MATERIALS:

A. Scratch and brown coat cement to be grey portland cement, ASTM C-150 type IIA air entraining.
B. Scratch and brown coat lime to be special finishing hydrated lime ASTM G206 or Type S.
C. Scratch and brown coat aggregate to be clean gradated sand ASTM C-144.
D. Finish coat cement to be waterproofed white portland cement, ASTM C-150 Type I.
E. Finish coat lime to be special finishing hydrated lime ASTM C-206.
F. Finish coat aggregate to be washed silica sand.
G. All water to be potable.
H. Mixed (by volume):
   1. Scratch Coat: 1 part cement
      1/4 part lime
      3 parts aggregate
   2. Brown Coat: 1 part cement
      1/4 part lime
      4-5 parts aggregate
   3. Finish Coat: 1 part cement
      1/2 part lime
      3 parts aggregate
I. Texture to be "Medium Dash" per the "Plaster/Metal Framing Systems/Lath Manual", latest edition.

09210.23 WATERPROOFING:

A. Hydrozo Clear Double 7 mineral gum based material containing approximately 14% solids as manufactured by Hydrozo Coating Company, Lincoln, Nebraska.

09210.3 EXECUTION

09210.31 PREPARATION:

A. Clean stucco bases and substrates prior to stuccoing.

09210.32 INSTALLATION OF LATH AND ACCESSORIES:

A. Frame both sides of control and expansion joints independently, and do not bridge joints with lathing or accessories.

B. Metal Lathing:

1. Install metal lath with long dimension at right angles to supports having 1/2" lap at sides and 1" lap at ends.

a. Screw or nail self-furring diamond mesh directly to substrates indicated at a maximum of 12" o.c. horizontally and 8" o.c. vertically.

C. Stucco Accessories:

1. Anchor each flange of accessories 8" o.c. to base.
2. Miter or cope accessory corners, and install with tight joints accurately aligned.
3. Set accessories plumb, level and true to line, with a tolerance of 1/8" in 10" - 0".
4. Install metal corner beads at external corners.
5. Install casing beads at exposed terminations of stucco work.
6. Install prefabricated expansion joints of one piece design where shown as "Expansion Joint".

09210.33 INSTALLATION OF STUCCO:

A. Mechanically mix stucco materials at the project site. Minimum amount of water shall be used to produce a stucco of workable consistancy.

B. Sequence stucco installation properly with the installation and protection of other work, so that neither will be damaged by the installation of the other.

C. Stucco flush with metal frames and other built-in items or accessories which act as a stucco ground. Stucco terminated at metal without casing beads to be cut free from metal before stucco sets and finish coat grooved at the junctures.

D. Apply stucco in a three coat installation as follows:

1. Scratch coat is to be applied evenly in uniform thickness of 3/8" and squeezed through lath to backing to form mechanical key with mesh. Rake horizontally when stucco is firm but not dry. Apply brown coat when dried and stiffened sufficiently.
2. Brown coat is to be applied uniform and floated level to 3/8" thickness. Lightly score surface. Moist cure 12 - 48 hours with total set of 7 days.
3. Finish coat to be applied to brown coat after dampening. Trowel 1/8" thick in medium dash pattern. Moist cure 12 - 24 hours.

E. Stuccoing shall be protected from uneven and excessive evaporation during hot dry weather.

F. No stuccoing shall be done at an outdoor temperature of less than 40 degrees F unless adequate temporary shelter is

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provided for a period of not less than 48 hours after installation.

09210.34 INSTALLATION OF WATERPROOFING:

A. Apply waterproofing to a clean dry surface when surface air and material temperature is 50 degrees F or higher during application.

B. Apply to stucco after allowing 72 hours drying time.

C. Treat any apparent alkali or effervescence with proper neutralizing compound.

D. Apply one coat to all horizontal surfaces with a brush at a rate of 90-180 square feet per gallon.

09210.35 CUTTING AND PATCHING:

A. Cut, patch, point-up, and repair stucco as necessary to accommodate other work and to restore cracks, dents and imperfections.

09210.36 CLEANING AND PROTECTION:

A. Remove temporary protection and enclosure of other work. Promptly remove stucco from door frames, windows, and other surfaces which are not to be plastered.

B. Installer shall advise the Contractor of requirements for the protection of stucco from deterioration and damage during the remainder of the construction period.

09210.37 GUARANTEE:

A. All stucco work (interior and exterior) shall be guaranteed by the installer and Contractor for a period of two (2) years from the date of acceptance by the Owner.

END OF SECTION 09210

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DIVISION 9 - FINISHES

## SECTION 09250 - GYPSUM BOARD

### 09250.1 GENERAL

09250.11 RELATED DOCUMENTS
A. Drawing, Specification Division 1 and Contract

09250.12 DESCRIPTION OF WORK:
A. Types of work includes:
1. Gypsum board applied to wood framing and furring.
2. Finishing (joint tape-and-compaund treatment).
3. Gypsum board ceiling on direct suspension sytem.

09250.13 QUALITY ASSURANCE:
A. Gypsum Board Standard is to be GA-216 by Gypsum Association.
B. Where gypsum board systems with fire resistance ratings are required to comply with governing regulations, provide materials and installation identical with applicable assemblies which have been tested and listed by recognized authorities.

09250.14 PRODUCT HANDLING:
A. Deliver, identify, store and protect gypsum drywall materials to comply with manufacturer's recommendations.

### 09250.2 PRODUCTS

09250.21 GYPSUM BOARD PRODUCTS:
A. Exposed gypsum board to be regular type with tapered long edges and thickness of 5/8" except where otherwise indicated.
1. Sheet size to be maximum length available which will minimize end joints.
2. All gypsum board to be Type X conforming to ASTM C36 for firerating.
3. Gypsum board installed in toilet rooms and walls receiving ceramic tile to be water-resistant.

09250.22 TRIM ACCESSORIES:
A. Provide standard trim accessories of types indicated for gypsum board work, formed of galvanized steel, with either knurled and perforated flanges for nailing or stapling, and beaded for concealment of flanges in joint compound.

09250.23 JOINT TREATMENT MATERIALS:
A. Type recommended by the manufacturer for the application indicated.
B. Joint tape to be perforated type.
C. Joint compound to be ready-mixed vinyl-type for interior use.

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09250.24 MISCELLANEOUS MATEIRALS:

A. Provide auxiliary materials for gypsum board work of the type and grade recommended by the manufacturer of the gypsum board.

09250.25 DIRECT SUSPENSION SYSTEM:

A. Direct suspension system to be manufacturers standard zinc-coated system of furring runners, furring tees and accessories designed for concealed support of ceiling. Equal to U.S.G. Co. standard system.

09250.3 EXECUTION

09250.31 GENERAL GYPSUM BOARD INSTALLATION REQUIREMENTS:

A. Locate exposed end-butt joints as far from center of wall and ceilings as possible.

B. Install exposed gypsum board with face side out. Butt boards together for a light contact at edges and ends with not more than 1/16" open space between boards.

C. Located either edge or end joints over supports. Position boards so that both tapered edge joints abut, and mill-cut or field-cut end joints abut. Stagger vertical joints over different studs on opposite side of partitions. Locate end-butt joints as far as possible from center of wall and ceiling.

D. Attach gypsum board to framing and blocking as required for additional support at openings and cutouts.

E. Space fasteners in gypsum boards in accordance with referenced standards and manufacturer's recommendations.

F. Attach gypsum board directly to direct-hung metal support system for ceilings with member spacing 16" o.c. maximum.

09250.32 METHODS OF GYPSUM BOARD APPLICATION:

A. Install exposed gypsum board in single layer application as follows.

1. On partitions/walls over 8' - 1" apply gypsum board vertically (paralled).
2. On partitions/walls 8' - 1" less in height apply gypsum board horizontally (perpendicular); use maximum length sheets possible to minimize end joints.
3. On ceilings apply prior to installation of partitions/walls.

B. Where gypsum board is base for thin-set ceramic tile and in toliet rooms install water-resistant board.

C. Apply gypsum boards to supports with screws or nails for walls and screws only for ceilings.

09250.33 INSTALLATION OF DRYWALL FINISHING:

A. Apply treatment at gypsum board joints (both directions), flanges of trim accessories, penetrations, fasteners heads, surface defects and elsewhere as required to prepare work for decoration.

1. Apply joint tape at joints between gypsum boards, except where a trim accessory is indicated.
2. Apply joint compound in 3 coats (not including prefill of openings in base), and sand between last 2 coats and after last coat.

B. Tape joints at water-resistant gypsum board base for ceramic tile, prefinished panels and textured paint.

END OF SECTION 09250

DIVISION 9 - FINISHES

## SECTION 09300 - TILE

### 09300.1 GENERAL

09300.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1 and Contract.

09300.12 DESCRIPTION OF WORK:
A. Tile includes ceramic surfacing units made from clay or other ceramic materials and includes:
1. Glazed Wall Tile
2. Quarry Tile

09300.13 QUALITY ASSURANCE:
A. Provide products by the following for each type of tile:
1. Glazed Wall Tile to be as specificed on drawings.
2. Quarry Tile to be as specified on drawings.
B. Tile Council of America Standard 137.1 to be basis for requirements.

09300.14 PRODUCT HANDLING:
A. Deliver packaged materials and store in original containers with seals unbroken and labels intact until time of use.

09300.15 JOB CONDITIONS:
A. Maintain environmental conditions and protect work during and after installation in accordance with manufacturer's recommendations.

### 09300.2 PRODUCTS

09300.21 TILE PRODUCTS:
A. Glazed wall tile to be 4-1/4: x 4-1/4.
B. Quarry tile to be 1/2" thick of sizes noted on drawings.
1. Where shown "Abrasive", provide manufacturer's standard abrasive-surfaced tile.
C. Provide trim shapes of same material and finish as field tile, and as follows:
1. Base to be sanitary cove units.
2. External corners to be bullnose shapes, with a 1/4" radius.

09300.22 MORTAR AND GROUT:
A. Latex-portland cement mortar to be latex modified portland cement dry-set mortar.
B. Organic Adhesive to be of proper type for intended use as certified by adhesive manufacturer with primer-sealer where recommended by manufacturer.
C. Epoxy Adhesive to be two-component epoxy resin and hardener.

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D. Latex-portland cement grout to be proprietary compund composed of portland cement with latex additive.
   1. Provide product with latex additive which is compatible with latex additive in latex-portland cement mortar.
   2. Colors to be as noted on the drawings.

09300.3 EXECUTION

09300.31 TILE INSTALLATION STANDARDS:
A. Comply with applicable requirements of the following American National Standards Institute standards:
   1. A108.4 for tile installed with organic adhesive.
   2. A108.5 for tile installed with dry-set portland cement mortar or latex-portland cement mortar.
   3. A108.6 for tile installed with epoxy adhesive.
B. Comply with manufacturer's instructions for mixing and installation of proprietary materials.

09300.32 INSTALLATION:
A. Extend tile work into recesses and under or behind equipment and fixtures, to form a complete covering without interruptions.
B. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish or built-in items for straight aligned joints.
C. Install tile using the following setting beads as shown or scheduled.
   1. Quarry tile floors to be dry-set portland cement mortar or latex-portland cement mortar over concrete.
   2. Glazed wall tile to be organic adhesive.
   3. Quarry tile floors in cooler to be set with epoxy adhesive.
D. Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls and trim are same size. Layout tile work and center tile fields in both directions in each space. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise shown.

09300.33 CLEANING AND PROTECTION:
A. Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
B. Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective tile work.
C. Prohibit foot and wheel traffic from using tiled floors for at least three (3) days after grouting is completed.
D. All tile floors are to be covered with "Kraft Paper" in all areas and the paper not to be removed until final clean-up at completion of construction.

END OF SECTION 09300

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DIVISION 9 - FINISHES

## SECTION 09510 - ACOUSTICAL CEILINGS

### 09510.1 GENERAL

09510.11 RELATED DOCUMENTS:
A. Drawings, Specifications Division 1 and Contract

09510.12 DESCRIPTION OF WORK:
A. Extent of each type of acoustical ceiling is shown and scheduled on drawings and includes:
1. Vinyl faced panel ceilings, exposed suspension.
2. Acoustical lay-in panel ceilings, exposed suspension.

09510.13 QUALITY ASSURANCE:
A. Where acoustical ceilings and components of roof or beam assemblies required for compliance with governing regulations, provide acoustical materials and application or suspension bearing UL Classification Marking for applicable UL design number listed in UL "Fire Resistance Index".

09510.14 JOB CONDITIONS:
A. Do not install interior acoustical ceilings until space is enclosed and weatherproof, wet-work in space is completed, work above ceilings is completed, and ambient conditions of temperature and humidity will be continuously maintained.

### 09510.2 PRODUCT

09510.21 CEILING UNITS:
A. Provide United States Gypsum 5/8" x 24' x 48" white stipple shell vinyl faced panels with square edge for kitchen and office.
B. Provide United States Gypsum 3/4" x 24" x 48" Glacier Acoustone lay-in panels with square edge where shown on the Drawings.

09510.22 CEILING SUSPENSION MATERIALS:
A. Coordinate with other work supported by or penetrating through ceilings, including light fixtures and HVAC equipment.
B. Type of system to be either direct-hung, or indirect-hung suspension system, at contractor's option.
C. Exposed suspension systems to be Conwed 250 Series Fire-Rated system with exposed cross runners coped to lay flush with main runners.
1. Provide uniform factory-applied finish on aluminum caps of ceiling suspension system, including moldings, trim, and accessories of manufacturer's standard baked enamel white.

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09510.23 MISCELLANEOUS MATERIALS:

A. Provide standard spring steel hold-down clips.

09510.3 EXECUTION

09510.31 INSPECTION:

A. Installer must examine conditions under which acoustical ceiling work is to be performed and must notify Contractor of unsatisfactory conditions.

09510.32 PREPARATION:

A. Establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less-than-half width units at boarders and comply with reflected ceiling plans wherever possible.

09510.33 INSTALLATION:

A. Install materials in accordance with manufacturer's printed instructions, and to comply with governing regulations, fire resistance rating requirements as indicated, and industry standards applicable to work.

B. Install suspension systems with hangers supported only from building structural members. Locate hangers near each end and spaced 4'-0" along each carrying channel or direct-hung runner, unless otherwise indicated, leveling to tolerance of 1/8" in 12'-0".

1. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eye-screws, or other devices which are secure.

C. Install edge moldings at perimeter of acoustical ceiling area and at locations where necessary to conceal edges of acoustical units.

1. Attach moldings to substrate at intervals not over 16" o.c. and not more than 3" from ends, leveling with ceiling suspension system to tolerance of 1/8" in 12'-0". Miter corners accurately and connect securely.

D. Install acoustical panels in co-ordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at borders and at penetrations.

1. Install hold-down clips in all areas.

09510.34 ADJUST AND CLEAN:

A. clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage.

END OF SECTION 09510.

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DIVISION 9 - FINISHES

## SECTION 09900 - PAINTING

### 09900.1 GENERAL

09900.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, Contract.

09900.12 DESCRIPTION OF WORK:

A. The extent work includes painting and finishing of interior and exterior exposed items and surfaces throughout project as shown on the drawings.
   1. Surface preparation, priming, and coats of paint specified are in addition to shop-priming and surface treatment specified under other sections of work.

09900.13 DELIVERY AND STORAGE:

A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label.

09900.14 JOB CONDITIONS:

A. Apply water-base paints only when temperature of surfaces to be painted and surrounding air temperatures and between 50 degrees F (10 degrees C) and 90 degrees F (32 degrees C), unless otherwise permitted by paint manufacturer's painted instructions.

B. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45 degrees F (7 degrees C) and 95 degrees F (35 degrees C), unless otherwise permitted by paint manufacturer's painted instructions.

C. Do not apply paint in snow, rain, fog or mist.

### 09900.2 PRODUCTS

09900.21 COLORS AND FINISHES:

A. Paint colors, surface treatments, and finishes, are indicated in "schedules" of the contract Documents.

B. Provide finish coats which are compatible with prime paints used. Notify Regional Construction Manager of any anticipated problems using specified coating systems with substrates primed by others.

09900.22 MATERIAL QUALITY

A. Products of a single manufacturer are listed but products of one of the following manufacturers will be accepted so long as they are similar in quality and identical in finish (color and texture):
   1. Benjamin-Moore
   2. Pratt and Lambert
   3. Pittsburgh

09900.23 EXTERIOR PAINT SYSTEMS:

A. Concrete and Stucco: Finish - Benjamin Moore "Moor Grad Latex House Paint" (103).

B. Ferrous Metal: Primer - Benjamin Moore "Iron Clad Retardo Rust Inhibitive Paint" (163); Finish - Benjamin Moore "Moor-Grad Latex House Paint" (103).

C. Galvanized Metal: Primer - Benjamin Moore "Iron Clad Galvanized Metal Primer" (155); Finish - Benjamin Moore "MoorGrad Latex House Paint" (103).

D. Pavement Markings: Pratt & Lambert "Traffic Paint".

09900.24 INTERIOR PAINT SYSTEMS:

A. Gypsum board: Primer - Benjamin Moore "Latex Quick Dry Prime Seal" (201); Finish - Benjamin Moore "Impervo High Gloss Enamel" (133).

B. Wood Shelves: Primer - Benjamin Moore "Alkyd Enamel Underbody" (217); Finish - Benjamin Moore "Impervo High Gloss Enamel" (133).

C. Gypsum board (to receive covering): Benjamin Moore "Wall-Grip Latex Sealer" (203).

D. Ferrous Metal (Employee Side): Primer - Benjamin Moore "Irion Clad Retardo Rust Inhibitive Paint" (163); finish - Benjamin Moore "Satin Improvo Enamel" (235).

E. Galvanized Metal: Primer - Benjamin Moore "Iron Clad Galvanized Metal Primer" (155); Finish - Benjamin Moore "Impervo High Gloss Enamel" (133).

F. Wood Doors (Employee Side): Primer - Benjamin Moore "Alkyd Enamel Underbody" (217); Finish Benjamin Moore "Satin Impervo Enamel" (235).

G. Equipment Touch up: Benjamin Moore "Porch and Floor Enamel". (122).

09900.3 EXECUTION

09900.31 INSPECTION:

A. Applicator must examine areas and conditions under which painting work is to be applied and notify contractor of conditions detrimental to proper and timely completion of work.

09900.32 SURFACE PREPARATION:

A. Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions, for each particular substrate condition.

B. Remove and reinstall hardware, hardware accessories, plates, lighting, fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection.

C. Seal tops, bottoms, and cut-outs of unprimed wood doors with a heavy coat of varnish or equivalent sealer.

09900.33 MATERIALS PREPARATIONS:

A. Mix and prepare painting materials in accordance with manufacturer's directions.

B. Stir materials before applications to produce a mixture of uniform density, and stir as required during application.

09900.34 APPLICATION:

A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied. Spray application is recommended for general exterior stucco painting.

B. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently-fixed equipment or furniture with prime coat.

C. Finish exterior doors on tops, bottoms and side edges same as exterior faces, unless otherwise indicated.

D. Sand lightly between each succeeding enamel coat.

E. Apply sufficient time between successive coatings to permit proper drying.

F. Apply first-coat material to surfaces as soon as practicable.

G. Apply materials at not less than manufacturer's recommended spreading rate.

H. Apply one (1) coat of primer (if indicated) and two (2) coats of the finish paint or other paint indicated for all items interior and exterior to be painted.

1. The first finish coat is to be tinted to a shade lighter than the final coat noted on the schedule.

I. Kitchen equipment touch-up is to be done as necessary.

09900.35 CLEAN-UP AND PROTECTION

A. During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day.

B. Protect work of other trades, whether to be painted or not, against damaged by painting and finishing work.

C. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

END OF SECTION 09900

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DIVISION 9 - FINISHES

## SECTION 09950 - WALL COVERING

### 09950.1 GENERAL

09950.11 RELATED DOCUMENTS
A. Drawings, Specifications Division 1, Contract.

09950.12 DESCRIPTION OF WORK:
A. The extent of vinyl wall covering required is indicated in the drawings and in schedules.

09950.13 QUALITY ASSURANCE:
A. Wall covering shall be produced by a single manufacturer as specified in the drawings and shall all be from a single batch, run, etc. by that manufacturer.
B. Wall covering shall bear UL label for flame spread of less than 25, fuel contribution of less than 15 and smoke developed of less than 25.

09950.14 DELIVERY AND STORAGE:
A. Wall covering to be delivered in original packages or containers clearly labeling the manufacturer and product.
B. Wall covering shall be stored flat off the floor in an area with minimum 40 Degree F temperature.

09950.15 JOB CONDITIONS
A. Installation shall not take place until temperature is maintained at 60 degrees F for 72 hours before and 48 hours after installation.
B. Installation shall not be started until temporary heating has been removed and heating is being provided by the final building heating units.

### 09950.2 PRODUCTS

09950.21 WALL COVERING:
A. Wall covering shall be provided in minimum 54 inch wide rolls and have a total weight of 22 oz. minimum.
B. Adhesive shall be per wall covering manufacturer recommendations and are mildew resistant and non-straining to wall covering.
C. Release coat shall be as specified under section 09900 painting.

### 09950.3 EXECUTION

09950.31 PREPARATION:
A. All surface-mounted fixtures (wall plates, etc.) in area to receive wall covering are to be removed.
B. Substrate to receive wall covering to be surface sealed per section 09900 painting prior to installation.

09950.32 INSTALLATION:

A. Place wall covering in panels consecutively in order cut from rolls including filling of spaces above and below windows. Hang by reversing alternate strips except on match patterns.

B. Apply adhesive to back of wall covering and place in accordance with manufacturer's instructions. Seams shall be vertically plumb and a minimum 6 inches from corners. Overlap seams and double-cut to assure tight closure roll, brush or use broad knife to remove all defects.

C. Trim selvages as required to assure color uniformity.

D. Remove excess adhesive along finished seams if it is still wet using warm water and clean sponge, and wipe dry.

END OF SECTION 09950.

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DIVISION 10 - SPECIALTIES

## SECTION 10800 - ACCESSORIES, LOUVRES, FIRE EXTINGUISHERS

### 10800.1 GENERAL

#### 10800.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contact.
B. See the drawings for accessories to be furnished by Owner and installed by contractor.

#### 10800.12 DESCRIPTION OF WORK

A. Extent of each type of accessory is shown on drawings and includes:
   1. paper towel dispensers;
   2. monitor shelves;
   3. toilet tissue dispensers;
   4. grab bars;
   5. soap dispensers;
   6. stainless steel framed mirrors;
   7. electric hand dryers;
   8. protable fire extinguishers.
B. Consult drawings to verify items provided by owner and installed by contractor.

#### 10800.13 QUALITY ASSURANCE:

A. Coordinate accessory locations with other work to avoid interference and to assure proper operation and servicing of accessory units.
B. Proprietary names used to designate design and construction of specific products. Similar items by Bobrick, Bradely, or Watrous will be acceptable.

### 10800.2 PRODUCTS

#### 10800.21 FABRICATION:

A. Recessed Paper Towel Dispensers: Bobrick Model B-359.
B. Surface-Mounted Paper Towel Dispenser: Bobrick Model B-262.
C. Monitor Shelves: Bradley Model 7512.
D. Recessed Multi-Roll Toilet Tissue Dispenser: Bobrick Model B-388.
E. Grab Bars with Concealed Mounting: Bobrick Model B-6206.99 in length required by local codes.
F. Recessed Soap Dispensers: Bobrick Model B-306.
G. Stainless Steel Channel Frame Mirrors: Bobrick Model 165 in 24" x 30" and 18" x 30" sizes.
H. Recessed Electric Hand Driers: World Model RA in No. 865 Chamois.
I. Fire extinguishers to be dry chemical type with UL rating noted on drawings in manufacturer's standard for specified size extinguisher.

### 10800.3 EXECUTION

10800.31 INSPECTION:

A. Installer must examine substrates and other conditions under which installation is to occur, and notify contractor of conditions detrimental to proper and timely completion of work.

10800.32 INSTALLATION:

A. Install accessory units in accordance with manufacturer's instructions, using fasteners which are appropriate to substrate and recommended by manufacturer of unit. Install units plumb and level, firmly anchored in locations indicated.

10800.33 ADJUST AND CLEAN:

A. Adjust accessories for proper operations and verify that mechanisms function smoothly.

B. Clean and polish all exposed surfaces of factory finished accessories after removing protective coatings.

END OF SECTION 10800

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DIVISION 11 - EQUIPMENT

## SECTION 11400 - OWNER FURNISHED EQUIPMENT

### 11400.1 GENERAL

11400.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1 and Contract.

11400.12 DESCRIPTION OF WORK:

A. Extent of equipment is shown on drawings and includes the following:
   1. Kitchen Preparation Equipment.
   2. Kitchen Serving Equipment.
   3. Walk-in Cooler.
   4. Exhaust Hood.
   5. Storage Shelving.
   6. Employee Lockers.
   7. Clock, Time Card Rack.
   8. Miscellaneous Kitchen Equipment.

B. A separate contract will be issued by the Owner for installation of the drive-thru order system. Contractor is only to install buried sensor loop in pavement.

C. Installation of electrical rough-ins for items to be installed under separate contracts is as shown on the drawings.

D. A separate contract will be issued by the Owner for installation of exterior signage to include:
   1. Taco Bell pole sign with necesary foundation.
   2. Drive-thru menu board and directional signs with necessary foundation.
   3. Taco Bell building sign.

E. A separate Contract will be issued by the Owner for installation of Computer system to include:
   1. Cash Registers with cash drawers.
   2. Printer.
   3. Cabel assembly.
   4. Video monitors.

11400.13 PRODUCT HANDLING:

A. Upon delivery of the equipment, it is to be unloaded and stored until installation. Protection from exposure to weather and continuing construction is to be provided.

### 11400.2 EXECUTION

11400.21 INSTALLATION:

A. All equipment is to be assembled and set according to manufacturer's shop drawings and instructions. Blocking, spacers, fillers and connectors shall be provided as necessary to insure a final installation that is plumb, level, and firmly anchored in locations indicated.

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1. Install Stainless Steel Food Service Equipment (4 pieces). Set each piece in approximate final location.
   a. Provide 1" copper waste lines (not PVC) to all separate equipment drain locations (3) shown on drawings. Proper support of these waste lines to equipment frames and separate terminations into drain is necessary.
   b. Provide electrical service to prewired electrical panel.
   c. Provide cold water and hot water service to solenoid valves at service shaft.
   d. Install pizza melters on shelf and connect water lines (quick disconnect), plug in electrical and install flexible drain lines from melter to inside unit.
   e. Final leveling and connection of unit will be by unit manufacturer.
2. Install Ice Machine per instructions found in packing list. Set unit in place, level and make final connections. Waste lines should be insulated from exit location to drain. Set remote condensing unit on roof providing necessary prefabricated support rails and refrigerant line pitch pan. Install refrigerant lines and provide necessary insulation. Provide copper waste lines as shown on the drawings.
3. Install Drink Dispensing System:
   a. Set two (2) dispensing units with ice bins at indicated locations and position tight against wall.
   b. Set remote condensing unit on roof providing necessary prefabricated support rails and refrigerant line pitch pan.
   c. Install service shafts from dispensing units to above ceiling. Cut ceiling to neatly fit shaft configuration and provide horizontal bracing of shaft to ceiling grid system above ceiling.
   d. Install beverage lines from syrup/CO2 location to master unit and from master unit to slave unit.
   e. Install refrigerant lines from master unit to roof mounted condenser. Provide required insulation.
   f. Provide copper waste lines as shown on the drawings.
4. Exhaust Hood Installations:
   a. Roll exhaust hood on casters and hydraulically jack in place, level with ceiling and an imaginary line on support wall where hood is attached. Remove filters and reach in and up high enough as to be out of sight and install 5" lay screws 16" O.C. at each stud location across the back of hood.
   b. Drill 3/8" holes from the top of hood and provide "all-thread" rod from this area up into truss space and bolt to top of hood support area using 2 washers (1 flat, lock type).

c. A 1/8" steel angle iron is to be lag-screwed with 1 1/2" lag-screws into and across 2 joist spaces to support "all-thread" rod. Drill 3/8" hole in angle iron and bolt with lock washer.

d. Exhaust hood is to be leveled to ceiling by adjusting front all-thread rod. NOTE: It is absolutely necessary that the hood first be leveled at the wall mount locations prior to installing angle iron and front support system.

e. Exhaust ducts into hood (both exhaust and make-up air) fit inside the collared flange openings in the top of the hood and the duct should be welded from inside the hood and not from the roof.

5. Single/Three Compartments Sink Installation:

a. A bracket-screed is supplied with sinks for proper sink hanging at the wall. Install this bracket in the prescribed location for both respective sinks.

b. Install faucets (Chicago #445LD) provided by equipment supplier to splash before installing sink to bracket assembly on wall.

c. Slide sinks into respective locations and provide continuous caulking along wall on three sides.

6. Work Table: Install on casters and place next to fryer.

7. Fryer: Install, set and start up with water in unit to ensure proper operation. A gas regulator is to be installed prior to fryer quick-disconnect connection.

8. Taco Range: Quick-disconnect and regulator come with equipment. Install the same, adjust flame on pilots at regulator and test equipment for proper start up.

9. Pizza Hood: Provide 2"0 exhaust duct from steam relief grill duct to pizza hood location and extend down through ceiling. Hang pizza hood from duct and enclose duct with stainless steel enclosure provided.

B. Installation of the tile base and wood fillers at Owner furnished and installed safe is to be completed after it has been set in place. Contractor to provide 1"0 x 12" lg. expansion bolt into concrete floor for anchorage of safe after being set in place by the shipper.

11400.22 CLEANING, RESTORING FINISHES:

A. After completion of installation, and completion of other major work, remove protective coverings (if any) and clean all items, internally and externally. Restore exposed and semi-exposed finishes to remove abrasions and other damages; polish exposed-metal surfaces and touch-up paint surfaces.

END SECTION 11400

DIVISION 15 - MECHANICAL

## SECTION 15100 - GENERAL MECHANICAL REQUIREMENT

15100.1 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, and Contract.

B. See Drawings for materials to be furnished by Owner and installed by Contractor.

15100.2 SCOPE OF WORK:

A. The work to be accomplished under this section of specifications includes the furnishing of all labor, supervision, and equipment for the complete installation of air conditioning, heating, ventilation, plumbing, together with all the necessary auxiliaries and appurtenances. Plus the furnishing of all plumbing materials as noted on the drawings.

15100.3 PRODUCTS AND EXECUTION:

A. Except for such items as are normally wired up at their point of manufacture and so delivered, and unless specifically noted to the contrary herein, the Electrical Contractor will do all electric wiring of every character for power supply and including control wiring. This Contractor shall erect all motors in place ready for connection. Starters shall be furnished by this contractor with each such motor of the type required and deliver it in good condition to the Electrical Contractor at the job. The Electrical Contractor will mount all such starters.

15100.4 PERMITS, FEES, AND CODE REGULATIONS:

A. Obtain all permits required to do this work and pay any fees required for such permits.

B. Conform to all state and local ordinances and rulings applicable to this work and in effect at the time the work is performed.

15100.5 STRUCTURAL AND SPACE CONDITION:

A. It shall be the responsibility of this Contractor to install his work to conform to the structure, avoid obstructions and interferences with other trades, preserve headroom, and keep openings and passageways clear.

15100.6 DRAWINGS:

A. The drawings as prepared are diagrammatic but shall be followed as closely as actual construction of the project and the work of the trades will permit.

15100.7 AS-BUILT DRAWINGS:

A. Provide to the Area Construction Manager a complete record set of blue line prints which shall show every change from the original contract drawings per the contract.



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15100.8 WORKMANSHIP:

A. Labor shall be performed in a workmanlike manner by mechanics skilled in their particular trade. Pipe and equipment shall be installed square and plumb and accessible for proper operation and service.

15100.9 VIBRATION AND NOISE:

A. Each of the various pieces of equipment shall operate without objectionable vibration or noise.

15100.10 ADJUSTING AND BALANCING:

A. Clean out all lines, adjust all valves, and clean all plumbing fixtures and equipment.

15100.11 CUTTING AND PATCHING:

A. Cutting or patching necessary to permit the installation of any work under this Contract shall be the responsibility of this contractor.

15100.12 EXCAVATION AND BACKFILLING:

A. Provide necessary excavating and backfilling for the installation of work specified in this Division. After the pipe has been installed, tested and approved, the trenches shall be backfilled to grade with approved material, well tamped or puddled compactly in place. All piping outside the building shall be installed below the frost line.

15100.13 FLASHINGS:

A. Flash around all pipes passing through the roof in connection with this contract, with sheet lead built a minimum of 10" into the roofing, in all directions from the outside of the pipe.

15100.14 EXAMINATION OF THE SITE AND DRAWINGS:

A. All Contractors shall examine the site and review the Drawings and Specifications prior to submitting a proposal.

15100.15 GUARANTEE:

A. Guarantee for water heater shall be for five (5) years.

END OF SECTION 15100

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DIVISION 15 - MECHANICAL

## SECTION 15400 - PLUMBING

### 15400.1 GENERAL

15400.11 RELATED DOCUMENTS:

A. Drawings, Specifications Division 1, General Mechanical Requirements this Division, and Contract.

15400.12 SCOPE OF WORK:

A. Furnishing of all labor, materials, tools, transportation, services, etc., necessary to complete the installation of the plumbing system as illustrated on the Drawings and as follows:

1. Hot and cold water system with complete connections from the water meter to all plumbing fixtures and equipment requiring water connections.
2. Soil, waste, vent systems and condensate lines outside and inside the building.
3. Plumbing fixtures, including all the required trim and supports.
4. Trenching and backfilling.
5. Rough-in and final connection to equipment in the kitchen and service area.
6. Final plumbing connections to heating and air conditioning equipment.
7. Meters and utility connections.
8. Gas piping to heating, ventilating and air conditioning units, water heaters, ranges, and fryers.
9. Empty PVC piping in ceiling space for beverage lines.

### 15400.2 PRODUCTS

15400.21 DESCRIPTION:

A. Soil, waste and vent piping below floor to 5'-0" outside building shall be standard weight coated cast iron soil pipe and cast iron/neoprene gasket fittings. Yard piping shall be extra strength vitrified clay pipe and fittings. A.B.S. or P.V.C. Schedule 40 pipe and fittings may be installed, as approved by local authority in concealed locations only.

B. Soil, waste and vent piping above floor shall be standard weight coated cast iron pipe and stainless steel/neoprene gasket fitting, or A.B.S. or P.V.C. Schedule 40, as approved by local authority in concealed locations.

C. Hot and cold water piping above the floor shall be type "L" copper with shall be type "K" soft drawn copper tubing without joints.

D. Condensate drain piping shall be type "M" copper, galvanized Schedule 40.

E. Indirect waste piping shall be type "M" copper with 50/50 sweat solder and wrought copper fittings.



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F. Beverage line pipe to be electrical P.V.C. pipe with 30" full 90 degrees sweeps.

G. Underground gas piping shall be Schedule 40 black steel pipe with long radius steel welding fittings. Installation of gas service piping shall be in vented conduit and shall meet with the local gas company's approval.

H. Gas piping above ground shall be Schedule 40 black steel with 125 pound black malleable iron screwed fittings. Gas piping compund at joints shall be in compliance with NFPA Bulletin #54 and local applicable codes and suitable for natural gas service. Moisture traps shall be installed on HVAC, water heater, and kitchen equipment.

15400.22 INSULATION:

A. All hot and cold water copper piping shall be insulated with at least 1/2" thick foam rubber or foam plastic type pipe insulation.

15400.23 FIXTURES:

A. All fixtures shall be as shown on the drawings with equal products furnished by American Standard, Kohler, or Eljer.

15400.24 CLEANOUTS, FLOOR DRAINS & FLOOR SINKS:

A. All accessories shall be as shown on the drawings with equal products furnished by Wade, Josam, or Zurn being acceptable.

15400.25 EQUIPMENT:

A. Water heater shall be as shown on the drawings with equal products furnished by Ruud, State, or Rheem. A gas water heater shall be provided with class "B" U.L. labeled flue vent similar to Metalbestos Type RV complete with fittings, ceiling collar, tall roof, flashing, weathertight top. Water heater shall be provided with all temperature and safety controls including ASME rated T. and P. relief valve, gas pressure regulator, drain valve, etc.

B. Fire Supression System: Provide complete Ansul R-101-30 fire protection system as shown on drawings for installation in the range exhaust hood and shall comply with all local codes NPPA Bulletin #96.

C. Cutoff valves underneath lavatories and tank type water closets shall be chrome plated angle stop valves with chrome plated escutcheon plates.

D. Hose cocks to be non-freeze type.

15400.3 INSTALLATION

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15400.31 PIPING:

A. All piping shall be run concealed except where shown otherwise on drawings.

B. Valves, traps, clean-outs and other apparatus shall be installed in an easily accessible location.

C. Soil, waste vent offsets and house drains shall be installed with a minimun, uniform grade of 1/4" to the foot.

D. Hot and cold water lines shall be at least 6" apart where piping is parallel.
E. Escutcheon plates shall be provided where all pipe passes through a finished wall.

15400.32 HANGERS AND SUPPORTS:
A. Copper piping shall be supported at intervals not to exceed 7'-0" and at each change in horizontal or vertical direction.

15400.33 PLUMBING FIXTURES:
A. Furnish and install all plumbing fixtures complete with all equipment fittings, trimmings, and accessories.
B. All fixtures shall be Grade A and shall be white
C. Exposed piping to fixtures shall be a product of the fixture manufacturer.
D. Stops as manufactured by the fixture manufacturer, with metal-to-metal seat, shall be provided for all fixtures and equipment.

15400.34 TEST:
A. The plumbing system and associated system shall be subject to final approval of the Owner's Representative, and Code Authorities having jurisdiction. Tests required to show code compliance, shall be performed as directed.

15400.35 CLEANING AND PROTECTION:
A. After the plumbing piping has been installed, inspected, and approved, the piping system shall be flushed to remove any foreign matter from the pipes. Where required with chlorine or HTH solution to sanitize the new piping.

15400.36 MAINTENANCE:
A. All parts of the plumbing fixtures and associated equipment shall be maintained by the Contractor throughout the guarantee period of one month after final acceptance of the building.

END OF SECTION 15400

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DIVISION 15 - MECHANICAL

## SECTION 15700 - HEATING, VENTILATING AND AIR CONDITIONING

### 15700.1 GENERAL

15700.11 RELATED DOCUMENTS:

A. Drawings, specifications Division 1, General Mechanical Requirements this Division, and Contracts.

15700.12 WORK INCLUDED:

A. A heating, ventilating and air condition package will be provided by the Owner through a designated National HVAC Package Vendor.

B. The heating, ventilating and air conditioning contractor shall only furnish all necessary labor and equipment to completely install the National HVAC Package as noted on the drawings.

15700.13 CODES AND STANDARDS:

A. All installations shall be done in accordance with the latest standards as recognized by ASHRAE, SMACNA and any applicable state and local codes or ordinances.

15700.14 PERMITS AND FEES:

A. The installing contractor shall be responsible for all necessary permits required to do the work and any fees required for such permits.

15700.15 BALANCING AND TESTING:

A. Within two calendar weeks of the restaurant opening a representative of the National HVAC Package Vendor shall visit the site and perform the following:

1. Inspect, adjust and balance the complete installation of all HVAC equipment, exhaust fan systems and other applicable mechanical equipment for proper installation and operation.
2. The National HVAC Vendor shall than submit a complete Inspection and Balance Report to the Architect and Area Construction Manager.
3. The National HVAC Vendor shall also prepare an inspection report that will be the basis of the Construction Inspection Report for the heating, ventilating and air conditioning installation.

15700.16 INSTALLATION ADJUSTMENT:

A. The Heating, Ventilating and Air Conditioning Contractor shall be responsible for correcting all items determined to be the result of improper or incomplete installation as outlined on the Taco Bell Construction Inspection Report.

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15700.17 WARRANTY:

A. The National HVAC Vendor shall warranty all equipment and material supplied by him for a period of one (1) year from date of restaurant opening against defects in materials and workmanship. The warranty shall include the cost of all labor and material.

B. The Heating, Ventilating and Air Conditioning Contractor shall warranty his installation for a period of one (1) year from the date of restaurant opening against defects in workmanship. This warranty shall include the cost of all labor and material.

END OF SECTION 15700

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DIVISION 16 - ELECTRICAL

## SECTION 16100 - GENERAL REQUIREMENTS

16100.1 RELATED DOCUMENTS:

A. Drawings, Specification Division 1, and Contract.

16100.2 SCOPE OF WORK:

A. The work covered by this Division consists of furnishing all materials, labor, equipment, and apparatuses and performing all operations required for complete installation of a complete and properly operating electrical system, in strict accordance with the applicable Drawings and Specifications.

16100.3 APPLICABLE STANDARDS AND CODES:

A. Materials, equipment and installation of the electrical system shall conform to the latest standards of the following Publications: (including all addenda, ammendments or supplements thereto).
   1. National Electrical Code (NEC).
   2. National Fire Protection Association (NFPA).
   3. All governing codes and local ordinances.

16100.4 PROCEDURES:

A. All permits, licenses and bonds necessary for the complete installation of the electrical systems shall be obtained by the Contractor.

B. A set of prints shall be kept at the job site upon which all changes and deviations from the original layout are to be recorded.

C. The Contractor shall furnish the Unit Supervisor two (2) sets of complete maintenance and operating instructions for the electrical equipment.

D. The Contractor shall furnish to the Owner's Representative, a written guarantee covering his work, including all equipment, material and workmanship against all defects for a period of one (1) year from the date of acceptance.

16100.5 CONTRACT DOCUMENTS:

A. The Drawings determine the general design of the equipment. Exact disposition of the equipment is subject to the requirements and construction of the manufacturer's standard but the space occupied and general design shall correspond to that shown on the drawings.

16100.6 WORKING SPACE:

A. In the installation of all apparatus called for, special attention shall be given to the accessibility of the apparatus and controlling parts.

16100.7 WORK BUILT IN:

A. All work to be built in shall be ready for installation at the proper time in order that there may be no delay in the progress of the work.

16100.8 MATERIALS, EQUIPMENT, AND WORKMANSHIP:

A. Materials and equipment used throughout shall be new and the best of their respective kinds. All work shall be executed with safety and good workmanship by competent workmen.

16100.9 CONCEALED WORK:

A. No work of any kind shall be covered up before it has been examined and approved by the proper inspection authority.

16100.10 PROTECTION:

A. All work, equipment, and material shall be protected at all times. All conduits and pipe openings shall be closed with caps or plugs during construction.

16100.11 WALL CHASES AND OPENINGS IN FLOOR AND WALLS:

A. The Contractor shall layout and construct all sleeves, forms and chases and required openings in floors, and walls for his work. After conduit has been installed, openings shall be sealed to restore the fire and smoke rating of walls and floors.

16100.12 FLASHING:

A. Conduits, etc., passing through walls or roof shall be properly flashed and counterflashed, and caulked to provide a weathertight installation.

16100.13 KEYS:

A. Provide three (3) sets of keys for each key operated device furnished under this division of work. Equipment of same kind shall be keyed alike. Deliver keys with tags to Unit Supervior.

16100.14 IDENTIFICATION:

A. Equipment, disconnect switches, motor starters, pushbutton stations, panels, switchgear, special device plates, and similar materials shall be clearly and permanently marked.

B. Provide typewritten directories in panels with clear plastic protection shields and mounted in card holders.

16100.15 TESTING:

A. Test complete electric system for grounds and short circuits before final acceptance in accordance with code and utility company requirements.

16100.16 WIRING:

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A. The contractor shall be responsible to make final connections and provide wiring for the following items:

1. Food service equipment (including condensing units).

2. HVAC units and fans.
3. All low voltage wiring.
4. Lot lights as shown on site plan.
5. Sound system.
6. Identification signs.
7. Menu-order boards (interior and exterior).

END OF SECTION 16100

DIVISION 16 - ELECTRICAL

SECTION 16200 - PRODUCTS

16200.1 CONDUIT:

A. Rigid conduit shall be zinc-coated exterior with zinc or enamel interior and shall be used when installed in or under concrete slabs, in contact with the earth, under public roadways, in masonry walls or exposed on building exterior.

B. Electrical metallic conduit shall be used only for interior runs. Fittings shall be gland ring compression type.

C. Flexible metallic conduit may be used in concealed locations less than 6' long where permitted by code. Fittings shall be "Jake" or "Squeeze" type.

D. Fiber conduit shall be Type I and may be used on concrete encased underground installations in lieu of rigid steel conduit as permitted by code and other governing authorities. Provide a code sized insulated conductor (green) ground wire in conduit for continuity of equipment ground.

E. PVC conduit may be used for exterior installations where permitted by code and governing authorities. Green wire ground wire shall be provided when using PVC.

F. Flexible non-metalic sheathed cable used only for interconnection of units with roof mounted condensers.

16200.2 OUTLET BOXES AND JUNCTION BOXES:

A. Outlet and junction boxes used in concealed work shall be galvanized or sherardized one-piece, pressed steel, knock out type size in accordance with the code. Plastering rings shall be provided for all flush mounted boxes.

B. Outlet and junction boxes used outside of building, on roof, or in landscaped areas shall be waterproof cast aluminum with conduit hubs as required.

16200.3 WIRE AND CABLE (600 VOLTS AND LESS):

A. Type of wire shall be as follows:

1. Unless otherwise indicated all wire shall be type THHN; in wet locations, it shall by Type THWN or XHHW.
2. Wiring adjacent to heat producing equipment shall be Type AVA.
3. No wire smaller than #12 gauge shall be used, except for signal or control systems.
4. Wire installation:
   a. Wire shall not be installed until all work of any nature that may cause injury to the wire is completed.
   b. Mechanical means shall not be used in pulling wires #8 or smaller.
   c. Approved wire pulling lubricant shall be used as required to prevent insulation damage and overstressing of the wire while pulling through conduit.

d. All wiring of panelboards, cabinets, etc., shall be neatly wrapped, taped, or laced into groups to provide a neat and orderly appearance.

e. If the size and number of conductors in a conduit on the drawing is not show, then it shall be assumed to 2 #12 wires.

f. All secondary branch circuit and feeder conductors shall be color coded to comply with Art. 210-5 of NEC.

5. No. 10AWG and smaller shall be solid and No. 8AWG and larger shall be standed.

6. Conductors shall be copper, softdrawn of not less than 98% conductivity, conforming to ASTM specification and latest requirement of NEC.

7. All conductors shall be new and shall be delivered to the site in their original packages.

16200.4 POWER AND LIGHT PANELBOARDS AND CABINETS:

A. Furnish and install circuit breaker branch circuit panelboards as indicated in the panelboard schedule. Panelboards shall be of a dead-front safety-type, equipped with thermal magnetic molded case, snap-in type circuit breakers. Bus structure and main lugs or main breaker shall have current and voltage ratings as shown on the panelboard schedule. Load centers are not acceptable.

B. All panelboards shall be equipped with neutral bar equipment grounding bus and isolated ground bus.

C. The panelboard bus assembly shall be enclosed in a steel cabinet fabricated from galvanized steel or equivalent rust-resistant steel. Fronts shall include doors and have flush, brushed stainless steel, cylinder tumbler-type locks with catches and springloaded door pulls. Fronts shall not be removable with door in the locked position.

D. Circuit breakers shall be arranged and numbered as shown on panelboard schedule.

E. Terminals for feeder conductors to the panelboard mains and neutral shall be suitable for the type of conductor specified.

F. Circuit breakers shall be all molded case quick-make, quick-break, thermal magnetic, trip indication and have common trip on all multipole breakers. The circuit breakers shall be labeled or imprinted on the case with frame size, trip size, voltage rating, UL approved and shall be factory sealed at the factory.

G. Panelboards shall be Square D or General Electric.

16200.5 ELECTRICAL SERVICE AND SERVICE EQUIPMENT:

A. Furnish and install 120/208 volt, 3 phase, 4 wire wye overhead or underground incoming secondary electrical service, service attachment, service head, conduit, wire panelboards, C/T cabinets, local utility company metering, interconnecting wiring, and grounding as shown on the plans.

a. The Electrical Contractor is responsible and shall furnish all labor and material to assure compatible electrical services.

16200.6 SAFETY SWITCHES:

A. Furnish and install safety switches as indicated on the Drawings. Switches shall be of size and fused as indicated on the Drawings.

B. Switches shall have a quick-make, and quick-break operating handle and mechanism which shall be an integral part of the box, not the cover, Padlocking provisions shall be provided for padlocking in the OFF position only. Switches shall have a dual cover interlock to prevent unauthorized opening of the switch door in the ON position or closing of the switch mechanism with the door open.

C. Switches shall be as manufactured by Square D, General Electric, Westinghouse, or ITE of heavy-duty type and motor rated.

16200.7 FUSES:

A. The Contractor shall provide fuses as called for on the Drawings. Where the fuse size is not indicated the contractor shall size the fuse for the actual load installed.

B. All fuses shall be non-renewable, current limiting rejection element timelag type. The fuses shall have an interrupting capacity of 200,000 amps R.M.S. symmetrical.

C. The contractor shall provide on (1) spare fuse for every fuse size installed.

D. The fuses shall be buss, or Gould-Shawmut.

16200.8 LIGHTING FIXTURES:

A. Shall be as indicated on Drawings and shall be complete with all required supports, hangers, etc. Provide attached junction boxes for incandescent units. Contractor shall receive, unpack, assemble and install fixtures indicated to be furnished by others. Fixtures in one hr rated ceilings shall have one hr rated enclosure.

16200.9 LAMPS:

A. All lamps shall be of the size and type indicated on the Drawings.

B. Incandescent lamps shall be medium base, inside frosted, extended service type, rated at 130 volts.

C. Fluorescent lamps for general use shall be energy saving type cool white.

D. All high intensity discharge lamps shall be provided with a mogul screw shell base.

E. The Contractor shall furnish and install all lamps in all fixtures of size shown on the drawings. All lamps shall be General Electric, Sylvania, or Westinghouse.

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16200.10 BALLAST:

A. All ballasts shall have voltage rating in accordance with these specifications. Each ballast shall be designed to operate the type of high intensity discharge or fluorescent lamp(s) installed in its fixture.

B. Fluorescent ballasts shall be high power factor, rapid start, dry fill type with built-in thermal protection.

C. All high intensity discharge ballasts shall have a .9 minimum power factor.

D. All ballasts shall be CBM-ETL H.P.F. certified, Underwriter' Laboratories approved and shall have a "A" sound rating.

E. Ballasts for fixtures installed in outdoors shall be suitable for operation at -20 degrees F.

16200.11 PARKINGLOT LIGHTING:

A. Contractor to install parking lot lights where indicated on the site plan.

16200.12 EXTERIOR SIGNS:

A. Owner shall furnish and install exterior signs in yard and on building.

B. Electrical Contractor shall furnish and install wiring to sign junction boxes.

16200.13 MISCELLANEOUS CONTROL AND EQUIPMENT WIRING:

A. See Mechanical Drawings for wiring diagrams and related work.

16200.14 LIGHT SWITCHES:

A. Wall switches for general lighting control shall be specification grade, quite type, totally enclosed, ivorcolor, and shall be as manufactured by Hubbell, Slater, or Pass and Seymour equal to the following Hubbell Products:

| | | |
|---|---|---|
| 1. | Single Pole | #1221 |
| 2. | Double Pole | #1222 |
| 3. | Three-Way | #1223 |
| 4. | Four-Way | #1224 |
| 5. | Dimmer (Lutron) | #D-1.8P |
| 6. | Key Type | Same as above except key operation |

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16200.15 RECEPTACLE OUTLETS:

A. Single or duplex convenience receptacle for general use are to be installed vertical and shall be specification grade, 20 ampere, 125 volt, grounding type, ivory color, and shall be Hubbell, Slater, or Pass and Seymour equal to Hubbell #5361 and #5362.

B. Other receptacles indicated on drawings by NEMA designation shall be Hubbell, Slater, or Pass and Seymour equal to Hubbell listed:

1. NEMA 6-20 shall be a 2-pole, 3 wire, 250 volt, 20 ampere outlet, Hubbell #5461.
2. NEMA 6-30 shall be a 2-pole, 3 wire, 250 volt, 30 ampere outlet, Hubbell #9330.

3. NEMA L5-20 shall be a 2-pole, 3 wire, 125 volt, 20 ampere outlet, Hubbell #2310.
4. NEMA L6-20 shall be a 2-pole, 3 wire, 250 volt, 20 ampere outlet, Hubbell #2320.

C. Ground fault receptacles shall be 20 ampere devices with single outlet and test and reset push buttoms. Receptacle shall be equal to Square D #GFSR-120-1.

D. Receptacles for computer cash register system to be Hubbell #5262 IG duplex as noted on Drawings.

16200.16 OUTLET AND SWITCH COVER PLATE:

A. A device plate shall be provided for each outlet of one-piece thermoplastic type in ivory color.

B. Weatherproof duplex receptacle cover plates shall be gray cast aluminum with spring loaded double lift covers to automatically snap shut equal to Hubbell #5205.

16200.17 TELEPHONE SYSTEM:

A. Contractor shall furnish and install the telephone empty conduit, pullwire, terminal boxes, junction boxes, and outlet boxes, in building where shown on the Drawings.

16200.18 SOUND SYSTEMS:

A. Install interior sound system supplied by Owner as shown on Drawings.

16200.19 COMPUTER CASH REGISTER SYSTEM:

A. Provide necessary conduit and outlets, and power wiring for computerized cash register system as indicated on the Drawings. Provide pull-string in all empty conduit.

16200.20 TIME CLOCK:

A. Contractor shall furnish and install 7-day calendar dial time clock where indicated on drawings for exterior lights.

B. Upon completion of the installation, the Contractor shall set the time controls per the Owner's Representative's schedule.

16200.21 DRIVE-THRU ORDER SYSTEM:

A. Provide necessary conduit outlets and power wiring for drive-thru order system as indicated in the Drawings. Provide pull-string in all empty conduit.

END OF SECTION 16200

DIVISION 16 - ELECTRICAL

SECTION 16300 - EXECUTION

16300.11 GROUNDING:

A. The equipment grounding system shall be such that all metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, and other conductive items associated with electrical circuits operate continuously at ground potential and provide a low impedance path for possible ground fault currents.

B. The service neutral shall be solidly connected to the incoming building water service ahead of the main cutoff valve.

C. Equipment ground wire shall be THW insulated and shall be green in color.

D. Ground for computerized cash register system to be separate from system ground with separate connection to water system.

16300.12 CONDUIT USAGE:

A. Rigid steel conduit shall be used for all conduit two (2) inches and larger.

B. Conduit runs in floor slabs, under floor slabs, or in poured concrete walls shall be rigid steel.

C. Conduit run above switch height in wall or above ceiling to be EMT or flexible conduit as permitted by local codes.

D. Conduit run exposed to the weather shall be rigid steel.

16300.13 CONDUIT INSTALLATION:

A. A conduit system shall be installed for the connection of all outlet boxes junction boxes, panel boards, cabinets, etc., as indicated on drawings.

B. Where conduits pass through exterior concrete walls or footings below grade, the entrance shall be made watertight.

C. All conduits where they enter panelboards, pull boxes, or outlet voxes shall be secured in place by galvanized locknuts and insulating bushings.

16300.14 BENDING CONDUIT:

A. Rigid and EMT field bends shall be made with standard tools and equipment. Conduits shall not be bent through more than 90 degrees.

B. Plastic conduit shall not be bent in the field.

C. Size of conduit shall not be less than that required by the National Electrical Code. The Contractor shall install larger size conduits than detailed where there is an excessive length of unbroken run or an excessive number of bends.

D. Runs in slabs shall be installed with as few bends as possible, and in such a manner as to avoid moisture entrapment.

E. All conduit joints shall be made up tight. Where metallic conduits are cut the inside edge shall be reamed smooth to

prevent injury to conductors. During construction, all installed conduits shall be temporarily capped or corked.

F. Set screw connections shall not be used on any conduit.

G. Plastic conduit joints shall be solvent welded in accordance with the recommendation of the manufacturer.

16300.15 INSTALLATION OF CONDUCTORS:

A. Conductors shall be continuous between outlets or junction box and no splices shall be made except in outlet boxes, pullboxes, panelboard gutters or hand-holes. Provide 8" pigtails at all connections.

16300.16 INSTALLATION OF EQUIPMENT AND FIXTURES:

A. Install all equipment and fixtures forming part of the work of this section in complete accordance with the manufacturers' recommendations and all pertinent codes and regulations.

END OF SECTION 16300

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CD 8

BEST AVAILABLE COPY

CBBJLF CITY OF SAN JOSE, BUILDING DIVISION 02-AUG-90

Estimated fees for project : TACO BELL

| BLDG ID | AREA (SQ FT) | BLDG VALUATION | PERMIT FEE | # OF BLDGS | REMARKS |
|---|---|---|---|---|---|
| FL1 | 1,969 $ | 149,000.00 $ | 840.00 | 1 | |
| | 1,969 $ | 149,000.00 $ | 840.00 | 1 | |

| | | AMOUNTS DUE |
|---|---|---|
| Supplemental Plan Check Fees: | | |
| Plan Check Fee ..... | | $ .00 |
| F. D. Plan Check Fee ..... | | .00 |
| Total Permit Fee ..... | $ 840.00 | |
| Energy Inspection Fee ..... | .00 | |
| Site Inspection Fee ..... | 25 .00 | |
| Document Processing Fee ..... | .00 | |
| Survey ..... | .00 | |
| S.M.I.P.A. ..... | 22.35 | |
| B & E Tax ..... | 2,235.00 | |
| D. R. K. P. Tax ..... | 4,470.00 | $ 7,567.35 + 252 = 7542.35 |
| Comm. Taxes & Com Area Fee: | | |
| Construction Tax ..... | 157.52 | |
| Common Area Fee ..... | .00 | $ 157.52 |
| TOTAL AMOUNT DUE & PAYABLE ... | | $ 7,724.87 + 25.00 = |

Notes:

- Above estimate does not include electrical, plumbing and mechanical fees.
- Permit fees are subject to change July 1.
- Building valuation is subject to change January 1.
- Change in fee schedule or valuation requires revision of this estimate.

new fees

89362 =

**R K ASSOCIATES**

821 Century Way, Danville, CA 94526

(415) 820-4816
FAX (415) 820-6513

June 28, 1990

Mr. Robert Steele
City of San Jose
Neighborhood Preservation
801 North First Street Room 200
San Jose, CA., 95110

Subject: Taco Bell @ Monterey Rd.
City of San Jose
P.C. No. 90-00075

The following drawings and calculations, have been reviewed for the compliance of the minimum requirements of the Uniform Building Code (1988). These documents are recommended for approval. The following drawings and calculations are enclosed herewith.

| | | |
|---|---|---|
| Drawing Sheet No. | Cover Sh. A1A A3 A4 | Dated Jun 21,1990 |
| | A2 A5 thru A12 ID1 ID2 | Jun 04,1990 |
| Structural Calcs. | | Dated May ,1990 |
| Enery Calcs. | | Dated May 29,1990 |

Thank you

Sincerely,

Ray Kansara
R K Associates

Encl. As above
Soil report & Specs.

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PUBLIC WORKS CLEARANCE

RESIDENTIAL (single family)

PROJECT LOCATION: _____

PROJECT DESCRIPTION: _____

TRACT NO. _____ LOT NO. _____ AF NO. _____

NON RESIDENTIAL (Tenant Improvement/Interior Alteration)

PROJECT LOCATION: E/S Monterey Highway Pad K North of Ford Rd.

PROJECT DESCRIPTION: construct ± 1,969 sq. ft. fast food restaurant under PD90-5-35

TENANT'S NAME Taco Bell

PLAN CHECK NO. 90-00075 AF NO 3-7566 old APN NO. 684-41-8,9.

89362

This is to certify that the Area Fees and Sewage Treatment Plant Connection Fees are satisfied for the current project.

DATE July 27, 1990 SIGNED Gary J. Jensen

Public Works, Room 340,
City Hall 277-5161

89362



8780W(MD)

Mr. Phil Ribbs
Chief Plumbing Inspector
801 North First St., Room 200
San Jose, CA 95110

SUBJECT: Taco Bell
Monterey Hwy & Blossom Hill Rd. Pad K
San Jose, CA

Plans submitted show the following sources of wastewater:

- ___ Wok Range
- ___ Dishwasher
- ✓ Garbage Grinder
- ✓ Pot Sink(s) No. 1
- ✓ Floor Drains No. 7
- ✓ Floor Sinks No. 6
- ✓ Mop Sink (EMF)
- ✓ Other Veg Prep Sink

Seating Capacity: 68

REQUIREMENT:

- ___ Clarifier
- ___ Pound grease trap
- 1000 Gallon grease interceptor
- ___ Gallon per minute power operated grease removal device

This unit is to be plumbed to accept the wastewater flow from the items checked below:

- ___ Wok Range
- ___ Dishwasher
- ✓ Garbage Grinder
- ✓ Pot Sink(s) No. 1
- ✓ Floor Drains No. 7
- ___ Floor Sinks No. ___
- ___ Mop Sink (EMF)
- ___ Other

COMMENTS: 1) 1000 Gal Grease Interceptor cleaned as needed
2) All floor drains plumbed to interceptor

Very truly yours,

Bruce R. Frisbey

Industrial Waste Inspector

89362

V = 149 000
Resubmittal on 6.4.90

DATE APRIL 9,1990

CITY OF SAN JOSE
NEIGHBORHOOD PRESERVATION DEPARTMENT
BUILDING DIVISION

WORKSHEET FOR COMMERCIAL/INDUSTRIAL PLAN CHECKING

VVN APPLICATION IS HEREBY MADE FOR CHECKING PLANS FOR A ONE STORY, TYPE V-N BUILDING, TO BE OCCUPIED AS TACO BELL RESTAURANT IN ACCORDANCE WITH PLANS, SPECIFICATIONS AND PLOT-PLAN FILED HEREWITH. IT IS HEREBY AGREED THAT THE CONSTRUCTION, LOCATION AND USE OF BUILDINGS WITHIN THE CITY OF SAN JOSE SHALL COMPLY WITH REQUIREMENTS OF THE SAN JOSE MUNICIPAL CODE AND ALL OTHER APPLICABLE LAWS.

DESCRIBE JOB A NEW 1969 S.F. TACO BELL RESTAURANT WITH DRIVE THRU AND SEATING FOR 64 CUSTOMERS.

**JOB LOCATION**

STREET NAME MONTEREY HWY. @FORD RD.
DIRECTION (N,S,E,W) N.E.
STREET NUMBER
ST,BL,AV,RD,DR,ETC.
BLDG # UNIT/SUITE #

**PROJECT DESCRIPTION**

PROJECT NAME TACO BELL
TRACT # LOT #
MODEL/PLAN NO.STR & UNITS
SQ.FT. 1969 EVALUATION $149,000
ZONE C-1/C PD # 85-05-25

**OWNER** [X] **DEVELOPER** [ ]

NAME TACO BELL CORP.
ADDRESS 17901 VON KARMAN AVE.
CITY IRVINE
STATE CALIFORNIA ZIP 97214
PHONE # (714) 863-4690

**GENERAL CONTRACTOR**

NAME
ADDRESS
CITY
STATE ZIP
PHONE # ( )

PERMIT/AGENT FIRM TACO BELL 89362
CONTACT PERSON ED OWEN PHONE # (415) 574-2455
ARCHITECT FIRM TACO BELL A.& E.
CONTACT PERSON RAY SAYLOR PHONE # (714) 863-4685
ENGINEERING FIRM TACO BELL
CONTACT PERSON RAY TAYLOR PHONE # (714) 863-4685
NO. OF PLANS (3) NO. OF STRUCT CALCS (2)
NO. OF ENERGY CALCS (2) NO. OF SPECS (1)
NO. OF SOIL REPORTS (1)
PLANNING DEPT FILE NO. IF KNOWN (H,PD,CUP) Part of PD # 85-05-25
IS BLDG HEATED OR COOLED (YES) / NO
HAZARDOUS MATERIALS ON SITE? YES / (NO) PROJECT NO. 06-351

Plan Check No

8202V

# Certificate of Compliance (Part 1 of 2)

Prescriptive Requirements CF-1A

TACO BELL — Project Title
29 May 1990 — Date of Certificate
Fredric C. Divine Assoc. Architects — Project Architect/Engineer
Monterey Rd + Blossom Hill Rd — Project Location
San Jose, CA — City/Town
Eric J. Torney, Architect (415) 461-8077 — Documentation Author/Firm, Telephone

For Enforcement Agency Use Only

Building Permit Number
Plan Checked By — Date
Field Checked By — Date
Approved By — Date

**Principal Designer.** The proposed building will be in substantial compliance with the California Building Energy Efficiency Standards provided it is built according to the plans and specifications and provided future improvements are completed according to the requirements indicated on this Certificate of Compliance. The plans and specifications have been prepared to include all significant energy conservation features required for compliance with the Standards. Building areas that are unconditioned and/or not subject to the standards are indicated on the plans.

6-4-90 — Plans dated
8-4-86 — Specs dated
x [signature] — Signature
6/4/90 — Date
Fredric C. Divine — Name/Title
Fredric C. Divine Assoc. — Company
704 Mission Ave — Address
San Rafael CA 94901 — City/State/Zip
(415) 457-0220 — Telephone
Cal. License No.

**Owner.** The energy conservation features and performance specifications indicated on this document and on the plans and specifications shall apply to future alterations, unless compliance is demonstrated anew and a new Certificate of Compliance is submitted. A copy of this Certificate will be retained and transmitted to future tenants, subsequent owners or others with responsibility for making improvements or modifications to the building. If this certificate is lost, a new Certificate may be required before a permit is issued for alterations. Unconditioned areas are indicated on the plans and, if these areas are conditioned in the future, they must be made to comply with the applicable energy standards then in effect.

x Ed Owen — Signature
6-4-90 — Date
ED OWEN CONSTRUCTION MANAGER — Name/Title
TACO BELL CORPORATION — Company
1650 BOREL PLACE #101 — Address
SAN MATEO CA 94402 — City/State/Zip

**Enforcement Agency.** The proposed building, and future alterations will comply with the California Building Energy Efficiency Standards, provided future alterations meet the requirements indicated on this Certificate and all applicable mandatory measures, as long as the building occupancy type remains unchanged.

Signature — Date
Name/Title
Agency
Address
City/State/Zip

**General**

| | | | |
|---|---|---|---|
| 1 | Unconditioned or Multi-tenant shell? | No | |
| 2 | CEC Occupancy Type | Restaurant | |
| 3 | UBC Occupancy Group/Division | A3 | |
| 4 | Edition of Standards | 1988 | date |
| 5 | Conditioned Floor Area | 2240 | sf |
| 6 | Unconditioned Floor Area | Ø | sf |
| **1st Generation Occupancy Types** | | | |
| 7 | Location Code Number | 197 | |
| 8 | Occupancy Code Number | 034 | |
| 9 | Maximum Allowable $U_{overall}$ | 0.255 | Btu/h-sf-F |
| 10 | Standard OTTV | 19.74 | Btu/h-sf |
| **2nd Generation Occupancy Types** | | | |
| 11 | Climate Zone | / | |
| 12 | Package Selected | / | |
| 13 | HVAC Power Criteria Set (if applic.) | / | |

**Note:** List other options and requirements significant for compliance below or on an attached supplement. For example, include tenant improvement specifications. Additional requirements should be further detailed in the energy compliance documentation. Attachment becomes part of Certificate of Compliance.

14 Supplement Attached? No (Y/N)

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# Certificate of Compliance (Part 2 of 2)

Prescriptive Compliance CF-1A

TACO BELL — Project Title
29 May '90 — Date of Certificate
2240 — Cond. Flr Area
Eric J. Torney, Architect — Documentation Author/Firm
(415) 461-8077 — Telephone
Restaurant — CEC Occ. Type
For Enforcement Agency Use Only
Plan Checked By — Date

**Note.** More than one Part 2 may be submitted, but all must reference the same Part 1. The person responsible for the design compliance for each major building system acknowledges the following compliance statement by signing the appropriate space below.

**Compliance Statement.** The proposed building improvements substantially comply with the requirements indicated on the Certificate of Compliance for this building, dated 29 May '90. The plans and specifications include the significant energy conservation features and the compliance documentation is consistent with the plans and specifications.

## Envelope

SEE FORM 1 Attached

| | | Allowed | Proposed | |
|---|---|---|---|---|
| 1 | Roof/Ceiling $R_t$ | | | h-F-sf/Btu |
| 2 | Exterior Floor $R_t$ | | | h-F-sf/Btu |
| 3 | Opaque Wall $R_t$ | | | h-F-sf/Btu |
| 4 | Exterior Wall Area | | | sf |
| 5 | Wall Glazing Area | | | sf |
| 6 | Average SC (Wall) | | | |
| 7 | Total Wall % Glazing | | | % |
| 8 | West Exterior Wall Area* (if applic.) | | | sf |
| 9 | Glazing Area (West Wall)* (if applic.) | | | sf |
| 10 | Average SC (West Wall)* (if applic.) | | | |
| 11 | West Wall % Glazing* | | | % |
| 12 | Roof Glazing? (attach CF-6) | | | (Y/N) |

* Lowrise office Pkgs. D, E, & F and all highrise office Pkgs.

New Restaurant — Extent of Improvements
Plans dated — Specs dated 29 May '90
Eric J. Torney — Signature — Date
Eric J. Torney, Architect — Name/Title
Company
207 Kent Ave #1 — Address
Kentfield CA 94904 — City/State/Zip
(415) 461-8077 — Telephone
C-013197 — Cal. License No.
Enforcement Agency — Date

## Lighting

13 Basis of Allowed LPD: Tailored

| | | Allowed | Proposed | |
|---|---|---|---|---|
| 14 | LPD | 1.23 | | watts/sf |
| 15 | Package Lighting Reduction | Ø | | watts/sf |
| 16 | Adjusted LPD | 1.23 | 1.21 | watts/sf |
| 17 | Lighting Control Credits? | | No | (Y/N) |

Other requirements:

New Lighting — Extent of Improvements
Plans dated — Specs dated 29 May '90
Eric J. Torney — Signature — Date
Eric J. Torney, Architect — Name/Title
Company
207 Kent Ave #1 — Address
Kentfield CA 94904 — City/State/Zip
(415) 461-8077 — Telephone
C-013197 — Cal. License No.
Enforcement Agency — Date

## Mechanical

SEE FORM 4 ATTACHED

| | | Allowed | Proposed | |
|---|---|---|---|---|
| 18 | Whole Building HVAC Set#? (WS-4A) | | | (Y/N) |
| | a. Fan Wattage Index | | | watts/sf |
| | b. Cooling Power Index | | | Btu/sf |
| | c. Heating Power Index | | | Btu/sf |
| 19 | Tailored HVAC Approach? (WS-4B) | | | (Y/N) |
| | a. Heating Capacity | | | (units) |
| | b. Cooling Capacity | | | (units) |
| | c. Fan Performance Index | | | cfm-in/sf |
| 20 | Simultaneous heat/cool? (WS-4C) | | | (Y/N) |

Other requirements:

NEW MECHANICAL — Extent of Improvements
6.4.90 — Plans dated — Specs dated 8.4.86
Signature — Date 6.4.90
FREDERIC C. DIVINE ARCH. — Name/Title
FREDERIC C. DIVINE ASSOC — Company
704 MISSION AVE. — Address
SAN RAFAEL CA 94901 — City/State/Zip
415 457-0220 — Telephone
C8811 — Cal. License No.
Enforcement Agency — Date

# Mandatory Measures Checklist

MF-1

TACO BELL
Project Title

Documentation Author/Firm Date

For Enforcement Agency Use Only

Plan Checked By Date

This Checklist is applicable to both First and Second Generation Nonresidential Standards Compliance.

Reference in Construction Documents

## Envelope Measures

[ ] Certified insulation materials per 2-5311(a) . . . . . ____

[ ] Insulation installed to meet flame spread and smoke density requirements of 2-5311(b) . . . . . ____

[ ] Urea formaldehyde foam insulation is installed per 2-5311(c) . . . . . ____

[ ] Retrofit insulation specified as per 2-5313 . . . . . N.A.

[ ] Air infiltration is minimized by specification of tested manufactured doors and windows, proper sealing and caulking of joints and openings in exterior walls, and weatherstripping as per Section 2-5317 . . . . . ____

## Lighting System Measures

[ ] Certified luminaires/ballasts per 2-5314(b) . . . . . E2

[ ] Independent control w/ enclosed areas per 2-5319(a) . . E2

[ ] Manual switching readily accessible per 2-5319(b) . . . E2

[ ] Reduction of lighting load to at least one half per 2-5319(c). Occupancy sensors or programmable timers meeting CEC criteria may substitute . . . . . E2

[ ] Separate switching of daylit areas per 2-5319(d) . . . . E2

[ ] Separate switching of display and valance lighting in retail and wholesale stores per 2-5319(h) . . . . . N.A.

[ ] Automatic control of display lighting in retail and wholesale stores per 2-5319(h) . . . . . N.A.

[ ] Tandem wiring of one- and three-lamp luminaires per 2-5319(i). . . . . E2

## Daylighting and Lumen Maintenance Controls (when applicable)

[ ] Uniformly illumination reduction to one-half per 2-5319(e)1 . . . . . E2

[ ] Flicker free operation and no premature lamp failure per 2-5319(e)2 . . . . . N.A.

[ ] Time delays to prevent undesirable cycling per 2-5319(e)3 . . . . . N.A.

[ ] Step switching devices with separation between on/off settings per 2-5319(e)4 . . . . . ____

[ ] Photocell sensors with a diffusing cover and no opaque cover per 2-5319(e)5 . . . . . N.A.

[ ] Manufacturer's instructions provided for installation and calibration per 2-5319(e)6 . . . . . N.A.

[ ] Proper installation of controls including sensor location, certification of initial calibration and control of luminaires only within daylit area per 2-5319(e)8 . . . . . N.A.

[ ] Visible or audible malfunction alarms per 2-5319(g) . . . N.A.

## Occupancy Sensing Devices (when applicable)

[ ] Visible or audible malfunction alarms per 2-5319(g) . . . N.A.

[ ] Limits on emissions per exceptions to 2-5319(e) . . . . N.A.

## HVAC and Plumbing System Measures

[ ] Piping insulated as required by 2-5312 . . . . . ____

[ ] Certified HVAC equipment per 2-5314(a) . . . . . ____

[ ] Certified plumbing equipment per 2-5314(a) . . . . . ____

[ ] Heating and cooling equipment efficiency per 2-5314(b) . ____

[ ] Pilotless ignition of gas appliances per 2-5314(c) . . . . ____

[ ] Automatic controls for off-hours per 2-5315(a)1 . . . . . ____

[ ] Thermostat set point requirements per 2-5315(a) . . . . ____

[ ] Sequential control of heating and cooling per 2-5315(a)3 ____

[ ] Automatic exhaust fan dampers per 2-5316(b) . . . . . ____

[ ] Thermostat controls for each zone per 2-5315(b) . . . . ____

[ ] Ventilation provided per 2-5316 and 2-5343 . . . . . ____

[ ] Ventilation and recirculation air quantity information provided per 1403(b)3 . . . . . ____

[ ] Heaters for domestic hot water and/or pools per 2-5318 . ____

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BUILDING DATA FORM
BUILDING ENVELOPE COMPLIANCE

# Form 1

Project Title TACO BELL

Location

Project Designer

Documented by DJL

Date

Checked by

Date

**SITE DESCRIPTION**

| | | |
|---|---|---|
| Location Code Number (from Table 2 of Appendix 1) | 1 | 197 |
| Latitude | 2 | 37.3 |
| Degree Days-heating (from Table 2 of Appendix 1) | 3 | 2656 |
| SF, Solar Factor (from Fig. 4.1.17 or Table 2 of Appendix 1) | 4 | 12513 |
| ΔT, ASHRAE design temp – 78° (from Table 2 of Appendix 1) | 5 | 10 |

**BLDG. DESCRIPTION**

| | | |
|---|---|---|
| Occupancy Type Code Number (from Table 1 of Appendix 1) | 6 | 034 |
| Gross heated floor area, sq. ft. | 7 | 2240 |
| Number of floors | 8 | 1 |
| Ground Floor Perimeter, ft. | 9 | 204 |
| Longest diagonal dimension at ground floor, ft. | 10 | 73 |
| Height, ft. | 11 | 17 |

*Record the detailed materials data on the Materials Data Form - Form 2*

**Wall**

Surface Areas

| | | |
|---|---|---|
| $A_{opaque\ wall}$ | 12 | 2191.65 |
| $A_{window}$ | 13 | 484.75 |
| $A_{door}$ | 14 | 26.6 |
| Total $A_{ow}$ Line 12 + 13 + 14 | 15 | 2703 |

Heat Transfer Coefficients (see Section 4.1.8)

| | | | |
|---|---|---|---|
| winter (heating) | $U_{wall}$ | 16 | .0472 |
| | $U_{window}$ | 17 | 1.13 |
| | $U_{door}$ | 18 | .59 |
| summer (cooling) | $U_w$ | 19 | .0470 |
| | U | 20 | 1.06 |
| | $U_{door}$ | 21 | .58 |
| Shading coefficient of glass, (from Table 3 of Appendix 1) | SC | 22 | .95 |
| Weight of Wall Construction, lb/ft$^2$ | W | 23 | 14.0 |
| Mass Correction Factor (from Fig. 4.1.16) | MCF | 24 | 1.0 |
| Equivalent Temperature Difference (from Fig. 4.1.16) | $TD_{eq}$ | 25 | 44 |

**Roof**

Surface Areas

| | | | |
|---|---|---|---|
| | $A_{opaque\ roof}$ | 26 | 2240 |
| | $A_{skylight}$ | 27 | 0 |
| Total | $A_{or}$ (26 + 27) | 28 | 2240 |
| % skylights | (27/28) | 29 | N.A. |

*Note: If Line 29 is 5% or greater, automatic light-sensitive switching systems are required in the area lighted by skylight.*

| | | |
|---|---|---|
| Enter the difference between line 27 and 5% of line 28, or zero, whichever is the greater | 30 | N.A. |
| Enter the sum of line 26 and line 30 | 31 | 2240 |

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**PROJECT TITLE** _____

Heat Transfer Coefficients (See Section 4.1.8)

| | | | |
|---|---|---|---|
| winter (heating) | $U_{roof}$ | 32 | .0425 |
| | $U_{skylight}$ | 33 | — |
| summer (cooling) | $U_r$ | 34 | .0418 |
| | $U_s$ | 35 | — |
| Shading Coefficient of skylight (from Table 3 of Appendix 1) | $SC_s$ | 36 | — |
| Mass Coefficient (from Fig. 4.1.16) | $M_c$ | 37 | 1.0 |
| Absorptance (from Fig. 4.1.16) | $A_c$ | 38 | .79 |

**Floor**

| | | | |
|---|---|---|---|
| Floor Area over unheated space | $A_{of}$ | 39 | 0 |
| U-value for floor | $U_{of}$ | 40 | 0 |

**HEATING DESIGN CRITERION**

| | | |
|---|---|---|
| Standard $U_{ow}$ (from Fig. 4.1.2) | 43 | 0.414 |
| Standard $U_{or}$ (from Fig. 4.1.3) | 44 | 0.100 |
| Standard $U_{of}$ (from Fig. 4.1.4) | 45 | — |
| Maximum allowable $U_o$ (from Fig. 4.1.1) | 46 | 0.255 |
| Proposed $U_{ow}$ (from Fig. 4.1.7) | 47 | .246 |
| Proposed $U_{or}$ (from Fig. 4.1.10) | 48 | .042 |
| Proposed $U_{of}$ (from line 40) | 49 | — |
| Proposed $U_o$ (from Fig. 4.1.1) | 50 | .152 |

Line 50 must not exceed line 46

*Note: $U_{or}$ is calculated from the equation of Fig. 4.1.10 for the proposed building using the value from line 30 for the area of skylights, and the value from line 31 for the overall roof area $A_{or}$*

**COOLING DESIGN CRITERION**

| | | |
|---|---|---|
| Standard $OTTW_w$ (from Fig. 4.1.15) | 51 | 32.7 |
| Standard $OTTV_r$ (41 x line 44) | 52 | 4.10 |
| Standard OTTV (from Fig. 4.1.13) | 53 | 19.74 |
| Proposed $OTTV_w$ (from Fig. 4.1.14) | 54 | 26.74 |
| Proposed $OTTV_r$ (from Fig. 4.1.14) | 55 | .90 |
| Proposed OTTV (from Fig. 4.1.13) | 56 | 15.03 |

Line 56 must not exceed line 53

89362 = —

*Note: $OTTV_r$ for the proposed building is calculated from the equation of Fig. 4.1.14 using the value from line 27 for the area of skylights, and the value from line 28 for the overall roof area $A_{or}$*

Pg 5 of 15

TACO BELL

engineering data sheet

PROJECT NAME TACO BELL BY RGS DATE

PROJECT NO. CHECKED PAGE 1 OF 1

LINE 46: $U_o$ (ALLOWABLE) $= \frac{2191.65 \times 0.414 + 2240 \times 0.100}{2191.65 + 2240} = 0.255$

LINE 47: $U_{OW} = \frac{1.0 \times 2191.65 \times .0472 + 1.13 \times 484.75 + .59 \times 266}{2703} = .246$

LINE 48: $U_{OR} = \frac{2240 \times .0425}{2240} = .042$

LINE 50: $U_o$ (PROPOSED) $= \frac{2703 \times .246 + 2240 \times .042}{2703 + 2240} = .152$

LINE 53: OTTV (ALLOWABLE) $= \frac{2703 \times 32.7 + 2240 \times 4.10}{2703 + 2240} = 19.74$

LINE 54: $OTTV_W = \frac{2191.65 \times .0472 \times 44 + 484.75 \times .95 \times 1253}{+ 1.13 \times 484.75 \times 10}$ $= 26.74$

$2703$

LINE 55: $OTTV_R = \frac{41 \times .0425 \times 2240 \times 1.0 \times .52}{2240} = .90$

LINE 56: OTTV (PROPOSED) $= \frac{2703 \times 26.74 + 2240 \times .90}{2703 + 2240} = 15.03$

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MATERIALS DATA FORM
BUILDING ENVELOPE COMPLIANCE

# Form 2

Project Title TACO BELL

Location

Project Designer

Documented by DJL

Date 2-14-89

Checked by

Date

Wall

Wall Type 1

Weight of wall construction, lb/ft$^2$ (see Sec. 4.1.8)
Heat Transfer Coefficient (see Sec. 4.1.8)
Surface Areas (attach sheets to document any additional compass orientations)

| | | |
|---|---|---|
| $W_1$ | 1 | 14 |
| $U_1$ | 2 | .047 |
| FRONT Orientation | 3 | |
| Area | 4 | 348.08 |
| RIGHT Orientation | 5 | |
| Area | 6 | 651.89 |
| REAR Orientation | 7 | |
| Area | 8 | 470.40 |
| LEFT Orientation | 9 | |
| Area | 10 | 721.29 |

Wall Type 2
Weight of wall construction, lb/ft$^2$
Heat Transfer Coefficient
Surface Areas (Attach sheets to document any additional compass orientations)

| | | |
|---|---|---|
| $W_2$ | 11 | |
| $U_2$ | 12 | |
| Orientation | 13 | |
| Area | 14 | |
| Orientation | 15 | |
| Area | 16 | |
| Orientation | 17 | |
| Area | 18 | |
| Orientation | 19 | |
| Area | 20 | |

Wall Type 3
Weight of wall construction, lb/ft$^2$
Heat Transfer Coefficient
Surface Areas (Attach sheets to document any additional compass orientations)

| | | |
|---|---|---|
| $W_3$ | 21 | |
| $U_3$ | 22 | |
| Orientation | 23 | |
| Area | 24 | |
| Orientation | 25 | |
| Area | 26 | |
| Orientation | 27 | |
| Area | 28 | |
| Orientation | 29 | |
| Area | 30 | |

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PROJECT TITLE TACO BELL

Wall Type 4
Weight of wall construction, lb/ft$^2$ — $W_4$ 31 _____
Surface Areas (Attach sheets to document any additional compass orientations) — $U_4$ 32 _____
Orientation 33 _____
Area 34 _____
Orientation 35 _____
Area 36 _____
Orientation 37 _____
Area 38 _____
Orientation 39 _____
Area 40 _____

Glass Type 1 1/4"
Shading coefficient (from Table 3 of Appendix 1 or mfrs. data) — 41 .95
Heat Transfer Coefficient (from mfrs. data) — 42 1.13
Surface Areas (Attach sheets to document any additional compass orientations) — Orientation 43 FRONT
Area 44 155.42
Orientation 45 RIGHT
Area 46 196.12
Orientation 47 REAR
Area 48 6.5
Orientation 49 LEFT
Area 50 126.71

Glass Type 2
Shading coefficient (from Table 3 of Appendix 1 or mfrs. data) — 51 _____
Heat Transfer Coefficient (from mfrs. data) — 52 _____
Surface Areas (Attach sheets to document any additional compass orientations) — Orientation 53 _____
Area 54 _____
Orientation 55 _____
Area 56 _____
Orientation 57 _____
Area 58 _____
Orientation 59 _____
Area 60 _____

Glass Type 3
Shading coefficient (from Table 3 of Appendix 1 or mfrs. data) — 61 _____
Heat Transfer Coefficient (from mfrs.data) — 62 _____
Surface Areas (Attach sheets to document any additional compass orientations) — Orientation 63 _____
Area 64 _____
Orientation 65 _____
Area 66 _____
Orientation 67 _____
Area 68 _____
Orientation 69 _____
Area 70 _____

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PROJECT TITLE TACO BELL

Glass Type 4

| | | |
|---|---|---|
| Shading coefficient (from Table 3 of Appendix 1 or mfrs. data) | | 71 |
| Heat Transfer Coefficient (from mfrs. data) | | 72 |
| Surface Areas (Attach sheets to document any additional compass orientations). | Orientation | 73 |
| | Area | 74 |
| | Orientation | 75 |
| | Area | 76 |
| | Orientation | 77 |
| | Area | 78 |
| | Orientation | 79 |
| | Area | 80 |

**Roof**

Roof Type 1

| | |
|---|---|
| Weight of roof construction, lb/ft$^2$ (see Section 4.1.8) | 81 15 |
| Heat Transfer Coefficient (see Section 4.1.8) | 82 .048 |
| Surface Area (Attach sheets to document any additional roof types) | 83 2240 |
| Skylight Area | 84 — |
| Skylight Shading Coefficient (from Table 3 of Appendix 1) | 85 |
| Skylight Heat Transfer Coefficient (U-value) | 86 |

**Floor**

Floor Type 1 (floors over non-air conditioned spaces only)

| | |
|---|---|
| Weight of floor construction, lb/ft$^2$ (see Section 4.1.8) | 87 |
| Heat Transfer Coefficient (see Section 4.1.8) | 88 |
| Surface Area (attach sheets to document any additional floor types) | 89 |

**Doors**

| | |
|---|---|
| Surface Area | 90 26.6 |
| Heat Transfer Coefficient (U-value, see Table 4 of Appendix 1) | 91 .59 |

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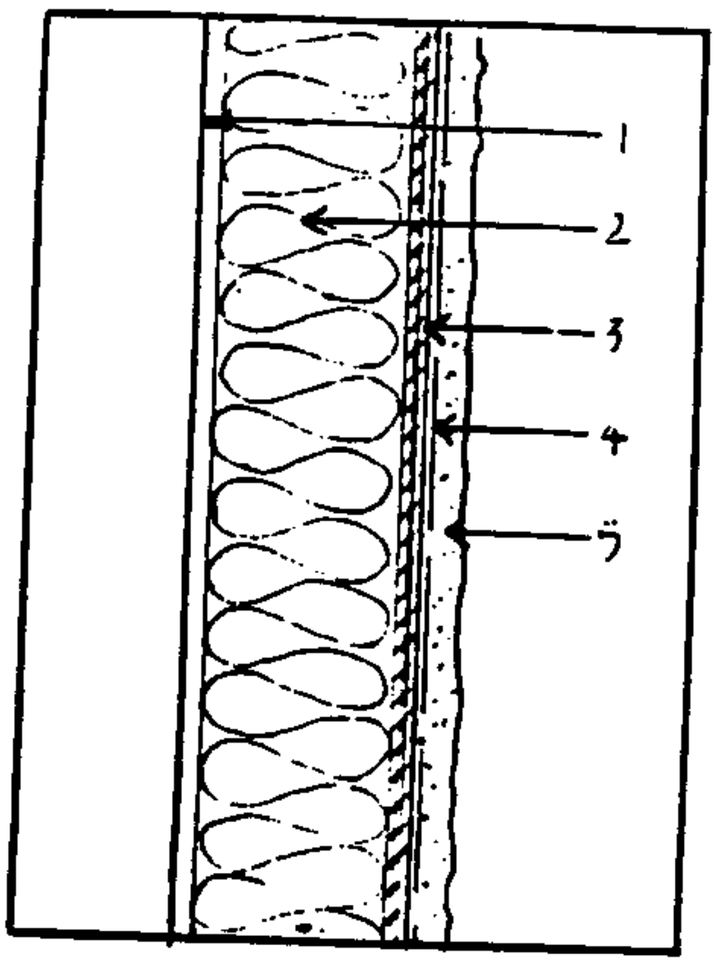
**HEAT TRANSFER COEFFICIENT**
**PROPOSED CONSTRUCTION ASSEMBLY**

# Form 3

(Rev 1 5-78)




Sketch of Construction Assembly

| List of Construction Components | R |
|---|---|
| 1. 5/8' GYPSUM BOARD | .56 |
| 2. 6" BATT INSULATION | 19.0 |
| 3. 3/8" PLYWOOD SHEATHING | .62 |
| 4. BUILDING PAPER | — |
| 5. 3/4" STUCCO | .15 |
| 6. | |
| 7. | |
| 8. | |
| 9. | |
| 10. SUB-TOTAL | 20.33 |

| | cooling | heating |
|---|---|---|
| Inside Surface Air Film | .68 | .68 |
| Outside Surface Air Film | .25 | .17 |
| Total Resistance $R_t$ | 21.26 | 21.18 |
| U-Value ($1/R_t$) | .0470 | .0472 |

Check one:

Wall ✓

Roof ___

Floor ___

WEIGHT: 14.0 lb/ft$^2$

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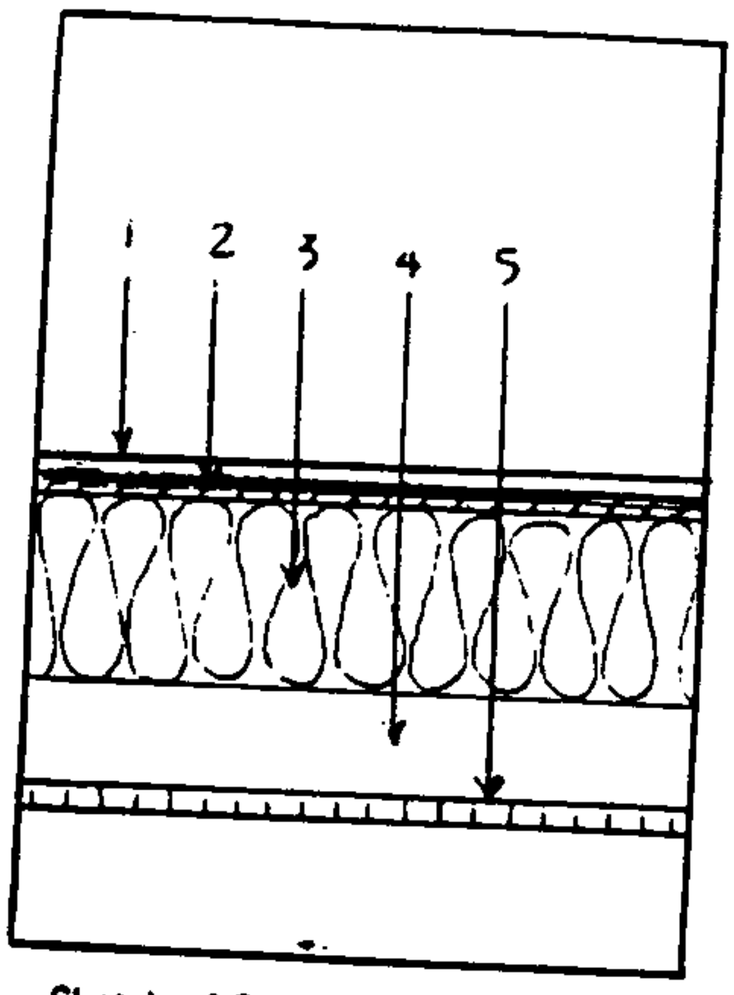
Pg 10 of 15

**HEAT TRANSFER COEFFICIENT**
**PROPOSED CONSTRUCTION ASSEMBLY**

# Form 3

(Rev 1 5 78)




Sketch of Construction Assembly

**List of Construction Components**

| | R |
|---|---|
| 1. 4 PLY BUILT-UP ROOFING | .33 |
| 2. 5/8" PLYWOOD SHEATHING | .78 |
| 3. 6" BATT INSULATION | 19.9 |
| 4. AIR SPACE | .80 |
| 5. ACOUSTICAL TILE | 1.80 |
| 6. | |
| 7. | |
| 8. | |
| 9. | |
| 10. SUB-TOTAL | 22.71 |

| | cooling | heating |
|---|---|---|
| Inside Surface Air Film | .92 | .61 |
| Outside Surface Air Film | .25 | .17 |
| Total Resistance $R_t$ | 23.88 | 23.49 |
| U-Value ($1/R_t$) | .0418 | .0425 |

Check one:

Wall ____

Roof ✓

Floor ____

WEIGHT: 15.0 lb/ft$^2$

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# Installed Lighting Summary

CF-5

TACO BELL
Project Title

Eric J. Torney, Architect 29 May 90
Documentation Author/Firm Date

For Enforcement Agency Use Only

Plan Checked By Date

## Proposed Adjusted LPD

| | | | |
|---|---|---|---|
| 1 | Total Installed Lighting Watts (from below) | 2719 | Watts |
| 2 | Control Credit Watts (WS-5A) | ø | Watts |
| 3 | Adjusted Watts (Line 1 - Line 2) | 2719 | Watts |
| 4 | Conditioned Floor Area (from CF-1) | 2240 | ft² |
| 5 | Adjusted Lighting Power Density (Line 3/Line4) | 1.21 | Watts/ft² |
| 6 | ☐ Allowed Whole Building LPD (from CF-1, Part 1) or ☐ Allowed Tailored LPD (from Line 5 of WS-5C) | 1.23 | Watts/ft² |

## Installed Lighting Schedule

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| Luminaire Reference Code | Reference in Construction Documents | Luminaire Description | Number of Luminaires | Watts per Luminaire (incl. ballast) Non-standard value? ✓ | Total Watts |
| A | E-2 | 4'-3 Tube Fluorescent | 7 | 117 | 819 |
| B | E-2 | 4'-2 Tube Fluorescent | 5 | 76 | 380 |
| C | E-2 | 4'-2 Tube Fluorescent | 20 | 76 | 1520 |

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Page Total 2719

Building Total 2719

# Room Cavity Ratio Worksheet (RCR>=3.5)

WS-5B

Project Title

Documentation Author/Firm Date

For Enforcement Agency Use Only

Plan Checked By Date

## Rectangular Spaces

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| Room Number | IES/CEC Area/Activity Description | Room Length (L) | Room Width (W) | Room Cavity Height (H) | Room Cav. Ratio 5 x H x (L+W) /(L x W) |
| 100, 101 | Dining | 35 | 25 | 7 | 2.4 |
| 102 | Cashier | 12 | 7 | 7 | 7.9 |
| 102+103+104 | Kitchen | 27 | 18 | 5.5 | 2.5 |
| 106 | Storage | 15.5 | 5 | 5.5 | 7.3 |
| 109 | Office | 5.5 | 4.5 | 5.5 | 11.1 |
| 107+108 | Toilet | 6 | 8 | 5.5 | 8.0 |
| 111 | Corridor | 9.5 | 3.5 | 5.5 | 10.8 |
| | | | | | |
| | | | | | |
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| | | | | | |

## Irregular Shaped Spaces

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| Room Number | IES/CEC Area/Activity Description | Room Area (A) | Room Perimeter (P) | Room Cavity Height (H) | Room Cav. Ratio 2.5 x H x P /A |
| | | | | | |
| | | | | | |
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| | | | | | |

89362

# Tailored LPD Summary and Worksheet

WS-5C

TACO BELL
Project Title

Eric J. Torney, Architect — 29 May 90
Documentation Author/Firm — Date

For Enforcement Agency Use Only

Plan Checked By — Date

## Tailored LPD Summary

| | | | |
|---|---|---|---|
| 1 | Watts for Illuminance Categories: A - E (from below) | 2758 | watts |
| 2 | Watts for Illuminance Categories: F - I (WS-5D) | Ø | watts |
| 3 | Total Allowed Watts (lines 1 + 2) | 2758 | watts |
| 4 | Conditioned Floor Area | 2240 | sf |
| 5 | Maximum Allowed LPD (line 3 / line 4) | 1.23 | watts/sf |

## Illuminance Categories A through E Worksheet

Note: Illuminance Category E may not be used for tasks where visual task quality can readily be improved (Sec. 2-5342(d)2.a(1))

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| Room Number | Task/Activity | IES Illuminance Catogory | Room Cavity Ratio | Floor Area | Allowed LPD | Allowed Watts (Col E x Col F) |
| 100 | DINING | B | ≤3.5 | 420 | 0.4 | 168 |
| 100 | CIRCULATION | C | ≤3.5 | 336 | 0.8 | 269 |
| 101/102 | CASHIER | D | ≤3.5 | 318 | 1.2 | 382 |
| 103/104 | KITCHEN | E | ≤3.5 | 743 | 1.9 | 1412 |
| 106 | STORAGE | C | 7.3 | 186 | 1.2 | 223 |
| 107/108 | TOILETS | C | 8.0 | 134 | 1.2 | 161 |
| 109 | OFFICE | D | 11.1 | 32 | 1.8 | 58 |
| 111 | CORRIDOR | C | 10.8 | 71 | 1.2 | 85 |
| | | | | | | |
| | | | | | | |
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| | | | | | | |

The Illuminance category E tasks listed on this form are required for the function of my business and are not "intermittent" or "poor quality" tasks per the standards

Page Total 2240 ~~89362~~ = 2758

Building Total

Tenant Signature — Type of Business

DOCUMENTATION FORM &
HVAC EQUIPMENT COMPLIANCE

Form 6

References giving the specification page or drawing sheet number or manufacturer's data must be submitted to demonstrate compliance with Division 6 of the standards.

| | | |
|---|---|---|
| ELECTRICALLY OPERATED COOLING SYSTEM EQUIPMENT | Standard rating capacity, Btu/hr | 206,000 |
| | Minimum EER (COP) | 8.3 |
| | Reference | MFR INFO |
| ABSORPTION WATER CHILLING COOLING SYSTEM EQUIPMENT | Heat source (check one) | |
| | Direct fired (gas-oil) | — |
| | Indirect fired (steam-hot water) | — |
| | Minimum EER (COP) | — |
| | Reference | — |
| COMBUSTION HEATING EQUIPMENT (Oil and gas-fired comfort heating equipment— | Minimum combustion efficiency at maximum rated output | 80 |
| | Reference | MFR. INFO |
| ELECTRICALLY OPERATED HEATING HEAT PUMPS | Minimum EER (COP) | — |
| | Reference | — |
| | Supplementary Heater Control | — |
| | Reference | — |
| ELECTRICAL RESISTANCE SPACE HEATING EQUIPMENT | REFERENCE FOR FULL-LOAD ENERGY INPUT AND OUTPUT | — |

REQUIREMENT FOR MAINTENANCE FOR MANUFACTURER'S MAINTENANCE AND, FULL AND PARTIAL CAPACITY AND STAND-BY INPUT(S) AND OUTPUT(S) SPECIFICATION REFERENCE

SEE MECH. DRWG.

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HVAC SYSTEMS COMPLIANCE (Complete for each system)

# Form 4

(Rev. 1 5/75)

Project Title TACO BELL

Location BLOSSOM HILL & MONTEREY, SAN JOSE

Project Designe: FREDRIC C. DIWINK ASSOC.

Documented by DJL

Date 2-14-89

Checked by

Date 5-29-90

## DESIGN CONDITIONS

| | |
|---|---|
| Building occupancy type (Table 1 of Appendix I) | 034 |
| Project Latitude (Table 2 of Appendix I) | 37.3 |
| Heating Degree Days (Table 2 of Appendix I) | 7656 |

## HEATING LOAD DOCUMENTATION (Attach calculations)

| | | |
|---|---|---|
| Outdoor Design Temperature, Winter | 28 | °F |
| Indoor Design Temperature | 68 | °F |
| Outdoor Air | — | CFM |
| Heat Loss From Outdoor Air | — | Btu/Hr. |
| Temperature of adjacent unheated spaces | — | °F |
| Transmission Heating Losses | 29794.2 | Btu/Hr. |
| Infiltration Air | — | CFM |
| Heat Loss From Infiltration | — | Btu/Hr. |
| Ventilation Air | 21.6 | CFM |
| Heat Loss From Ventilation | 518400 | Btu/Hr. |
| Outdoor Air for Special Processes | — | CFM |
| Heat Loss From Process Air | — | Btu/Hr. |
| Other Heat Losses (describe) | — | Btu/Hr. |
| Total Heat Losses | 548194.2 | Btu/Hr. |

## COOLING LOAD DOCUMENTATION (Attach calculations)

| | | |
|---|---|---|
| Outdoor Design Temperature, summer, dry bulb | SEE CALCS | °F |
| Outdoor Design Temperature, summer, wet bulb | SEE CALCS | °F |
| Indoor Design Temperature, summer, dry bulb | 78 | °F |
| Indoor Design Temperature, summer, wet bulb | 75 | °F |
| Transmission Heat Gain | 12543.9 | Btu/Hr. |
| Infiltration Air | — | CFM |
| Heat Gain From Infiltration | — | Btu/Hr. |
| Outdoor Air for Special Processes | — | CFM |
| Heat Gain for Process Air | — | Btu/Hr |
| Solar Heat Gain Through Windows, etc. | 26278.9 | Btu/Hr. |
| Heat Gain From Lights, Equipment, People, etc. | 65480 | Btu/Hr. |
| Heat Gain From Other Sources | — | Btu/Hr. |

Outdoor Air:

Fixed Minimum Type System

| | | |
|---|---|---|
| CFM Per Person (Not to Exceed Tabulated Minimum Ventilation Rates) | 15 | CFM/Person |
| Heat Gain From Outdoor Air | 84645 | Btu/Hr. |

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## COOLING LOAD DOCUMENTATION (Continued)

System Utilizing Outside Air For Cooling
CFM Per Person (Not to Exceed 33% of Tabulated Recommended Ventilation Rates) . — CFM/Person
Heat Gain From Outdoor Air. . . . . — Btu/Hr.

Total Cooling Load . . . . . 188947.8 Btu/Hr.

## TEMPERATURE CONTROL

Attach manufacturer's data or other, give specification or drawing reference which shows in detail the following information:

REFERENCE
(page or sheet No.)

- capability to sequence heating and cooling . . . . . SEE MECH'L DWGS
- temperature control device set point limits. . . . . ↓
- temperature set point range between full heating and full cooling . . . . . ↓
- setback and shutoff controls . . . . . ↓
- capability to terminate heating at 70° F and cooling at 78° F . . . . . ↓

Indicate drawing or specification reference where the temperature control device requirements given below are documented.
An automatic temperature control device shall be provided for:

- each separate HVAC system . . . . . ↓
- each zone. . . . . ↓

## SIMULTANEOUS HEATING AND COOLING

The following requirements apply to the use of new energy and need not be complied with when recovered energy is used to control temperature.

In each case, when resetting hot and cold deck temperatures, one representative zone may be chosen to represent no more than ten zones with similar heating or cooling requirements.

Concurrent operation of independent heating and cooling systems serving common spaces must provide either or both of the controls given below. List reference specification page or drawing number where control requirements can be verified.

REFERENCE

- Sequential temperature control of heating and cooling systems . . . . . —
- Automatic reset of heating temperature, to limit energy input only to that level to offset heat loss due to transmission and infiltration . . . . . —

Reheat systems — give reference specifications page or drawing number which will show compliance with the following when reheating 20% or more of the total air in the system.

- When serving multiple zones, controls must automatically reset the cold air supply to the highest temperature level of the zone requiring the most cooling . . . . . —
- Single zone reheat systems shall be controlled to sequence heating and cooling . . . . . —

Dual-duct or multizone systems — give reference specifications page or drawing number which will show compliance with the following:

REFERENCE

- Hot deck temperature — must be automatically reset to the lowest temperature necessary to satisfy the zone requiring the most heating. . . . . — _____
- Cold deck temperature — must be automatically reset to the highest temperature necessary to satisfy the zone requiring the most cooling. . . . . — _____

Recooling systems — give reference specifications page or drawing number which shows compliance with the following if recooling 20% or more of the total air in the system.

- Controls must automatically reset the temperature of heated supply air to the lowest temperature necessary to satisfy the zone requiring the most heating. . . . . — _____

## HVAC SYSTEM RESTRICTIONS & SPECIAL REQUIREMENTS

Several HVAC System types have special requirements or restrictions. In this section, the type of system used in the design must be listed and any special restrictions given here referenced to show compliance. Supply references to proper specifications page or drawing numbers.

Type HVAC Systems Used — List type of system to be used here (include all systems for heating or cooling in the building) include reference for specifications for each system.

ROOFTOP PACKAGE UNITS W/ GAS HEAT AND ELECTRIC COOLING, NOT TO EXCEED 2 - 7½ TON CAPACITY.

Constant volume reheat system — when serving both interior and exterior zones — separate cooling coils are required if the exterior zone exceeds 20% of the total air quantity through the cooling coil.

REFERENCE — _____

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## DUAL DUCT AND MULTIZONE SYSTEMS

Constant volume duct or multizone systems which utilize new energy to simultaneously heat and cool air streams which are subsequently mixed for temperature control are prohibited for buildings larger than 20,000 square feet of conditioned space. If used, the air leakage for dampers utilized for the mixing of heating and cooling air shall be limited to a maximum leakage of 3% of the total air quantity handled by the dampers when operating at the maximum system pressure to which the dampers will be subjected. Manufacturer's label or nameplate shall state leakage rates.

REFERENCE —

Economizer Cycle — For each cooling fan system, for other than dual-duct or multizone systems, which serve zones having total cooling capacity greater than 134,000 Btu/hr or more than 5,000 CFM must have an economizer cycle unless one of the exceptions allowed is claimed.

REFERENCE —

Electric Resistance Heating Systems — These systems shall not be used unless the total installed electric resistance heat does not exceed 10% (ten percent) of the annual heating energy requirement or a life cycle cost analysis, Form 8 (see Section 4.2 of this manual) shows an alternate system life cycle cost exceeds that of the electric resistance system. Give reference if less than 10% or include Form 8 if calculating life cycle cost.

REFERENCE —

## MECHANICAL AND GRAVITY VENTILATION

Mechanical ventilation — Dampers which are automatically interlocked and closed on fan shutdown are required.

REFERENCE SEE MECH'L DWGS.

Gravity Ventilators — Either automatic or readily accessible manually operated dampers must be provided for all openings to the outside with the exception of combustion air openings.

REFERENCE —

## POWER CONSUMPTION IN FANS

| | REFERENCE | |
|---|---|---|
| **Constant volume system** | | |
| Total Supply Air Quantity | | CFM |
| Total Pressure of Supply Fan | | Inches Water |
| Total Supply Air Quantity Adjusted for Process Loads | | CFM |
| Total Gross Floor Area | | Sq. Ft. |
| Net Fan Performance Index (FPI) | | |
| **Variable volume system** | | |
| Total Supply Air Quantity at Maximum Flow | — | |
| Total Pressure of Supply Fan at Maximum Flow | — | Inches Water |
| Total Gross Floor Area | — | Sq. Ft. |
| Fan Performance Index at Maximum Flow ($FPI_m$) | — | CFM |
| Variable Volume Adjustment Constant | — | |
| Adjusted Fan Performance Index, $FPI_a$ | — | |

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## POWER CONSUMPTION IN FANS (continued)

Fan Performance Index at Maximum Flow ($FPI_m$), CFM
Variable Volume Adjustment Constant
Adjusted for Performance Index, FPIa

## PIPING AND DUCT INSULATION AND DUCT CONSTRUCTION

References to the piping insulation, duct insulation and duct construction requirements presented in Section 4.2 of the Energy Conservation Design Manual must be given below:

REFERENCE SEE MECH'L DWGS.

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TACO BELL

LOCATION: SAN JOSE
DATE: 11.30.88 PAGE: 1 OF 2

## HEATING LOAD CALCULATIONS:

### TRANSMISSION LOSSES:

| TYPE | $U_o$ | AREA | T.D. | SENSIBLE |
|---|---|---|---|---|
| 1/4" GLASS | 1.13 | 434.75 | 40 | 21910.7 |
| WALL | .047 | 2191.65 | 40 | 4120.3 |
| ROOF | .042 | 2240 | 40 | 3763.2 |
| VENTILATION & INFILTRATION: | | | | |
| 1200 · 21.6 CFM · 20 | | | | 518400 |
| | | | TOTAL | 548194.2 |

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TACO BELL

LOCATION: SAN JOSE
DATE: 11-30-86 PA - 2 OF 2

## COOLING LOAD CALCULATIONS:

TRANSMISSION GAIN:

| SURFACE: | U. | A | CLTD | SENSIBLE | LATENT |
|---|---|---|---|---|---|
| ROOF | .042 | 2240 | 23 | 2163.8 | |
| WALL (E) | .047 | 721.29 | 31 | 1050.9 | |
| (W) | .047 | 651.89 | 41 | 1256.1 | |
| (N) | .047 | 348.08 | 23 | 376.3 | |
| (S) | .047 | 470.40 | 46 | 1017.0 | |
| GLASS 1/4" | 1.06 | 484.75 | 13 | 667985 | |

SOLAR GAIN:

| SURFACE: | A | SC | SHGF | CLF | | |
|---|---|---|---|---|---|---|
| GLASS (E) | 126.71 | .95 | 218 | .32 | 8397.3 | |
| (W) | 196.12 | .95 | 218 | .32 | 12997.2 | |
| (N) | 155.42 | .95 | 36 | .82 | 4358.6 | |
| (S) | 6.5 | .95 | 131 | .65 | 525.8 | |

INTERNAL LIGHTS:
3595 WATTS x .89 — 3199.5

PEOPLE:
70 PEOPLE x 255 x .49 — 8746.5
70 PEOPLE x 325 — 22750

APPLIANCES:
20800 x .48 — 9984
20800 — 20800

VENTILATION + INFILTRATION:
1.10 x 4050 x 19 — 84645

| | |
|---|---|
| 145397.8 | 43550 |

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TOTAL 188947.8