P R O J E C T M A N U A L

FAMILY PARTNERS MANCHESTER
351-377 FOREST SUMMIT COURT
MANCHESTER, MISSOURI 63021

ZWICK + GANDT PROJECT NO. 18036.00
MAY 30, 2019

ZWICK + GANDT ARCHITECTURE INC

DEDICATION LEADERSHIP CREATIVITY RESPONSIVENESS

ZWICK + GANDT ARCHITECTURE, INC.
9109 WATSON ROAD, SUITE 110
ST. LOUIS, MISSOURI 63126

RESPONSIBLE PARTIES INVOLVED WITH PROJECT

OWNER: [redacted]

FAMILY PARTNERS MANCHESTER, llc

12880 Manchester rd.
St. Louis, MO 63131
314-863-9912

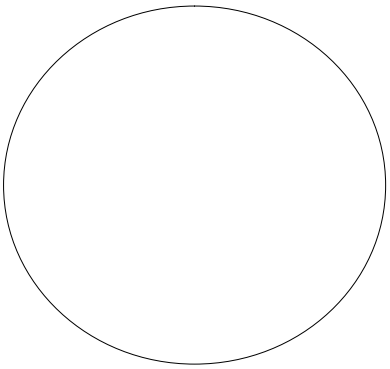
CONTACT:
Mr. Barth Holohan MSW, MBA

The Seal and Signatures below represent each portion of the project that has been prepared under his/her immediate supervision.

ARCHITECTECTURE: [redacted]

ZWICK + GANDT ARCHITECTURE, INC.
9109 Watson Road, Ste. 110
St. Louis, Missouri
314-962-9292
314-962-9293 FAX

CONTACT:
Brian Zwick
bzwick@zgarch-stl.com



Missouri State Certificate of Authority
A-2005007814-D

TABLE OF CONTENTS

- 030500 Common Work Results for Concrete
- 031000 Concrete Forming and Accessories
- 031513 Concrete Accessories
- 032100 Reinforcing Steel
- 032200 Welded Wire Fabric Reinforcing
- 033000 Footings
- 033001 Slab Foundations
- 033500 Concrete Finishing

Division 040000 – Masonry

- 040000 Masonry
- 047300 Manufactured Stone Veneer

Division 050000 - Metals

- 051200 Metals
- 050523 Metal Fastenings
- 051010 Structural Metal Framing
- 055000 Metal Fabrications

Division 060000 – Wood, Plastics, and Composites

- 060000 Wood, Plastics and Composites
- 061000 Rough Carpentry
- 061100 Wood Framing
- 061600 Sheathing
- 061813 Glued-Laminated Beams
- 062000 Finish Carpentry
- 062200 Millwork

Division 070000 – Thermal and Moisture Protection

- 070000 Thermal and Moisture Protection
- 071313 Felt
- 072000 Thermal Protection
- 073113 Asphalt Shingles
- 074600 Siding
- 076000 Flashing and Sheet Metal
- 077123 Manufactured Gutters and Downspouts
- 077200 Roof Accessories
- 079200 Joint Sealants

Division 080000 - Openings

- 080000 Openings
- 081100 Metal Doors and Frames
- 081101 Exterior Doors
- 081400 Interior Doors

- 085000 Windows
- 085166 Metal Window Screens
- 087100 Door Hardware
- 088300 Mirrors

Division 090000 – Finishes

- 090000 Finishes
- 092900 Gypsum Board
- 095000 Ceilings
- 096000 Flooring
- 097000 Wall Finishes
- 099000 Painting and Coating
- 099113 Exterior Painting
- 099123 Interior Painting
- 099300 Interior Wood

Division 100000 - Specialties

- 100000 Specialties
- 102000 Aluminum Louvers
- 102816 Bath Accessories
- 105700 Wardrobe and Closet Specialties

Division 110000 - Equipment

- 110000 Equipment
- 123000 Casework

Division 130000 – Special Construction

- 130000 Special Construction

Division 310000 - Earthwork

- 311000 Site Clearing
- 311100 Clearing and Grubbing
- 312000 Earth Moving
- 312200 Grading
- 312213 Rough Grading
- 312219 Finish Grading
- 312300 Excavation and Fill
- 312316 Excavation
- 312319 Dewatering
- 312323 Select Borrow
- 312323.13 Backfill
- 312500 Erosion and Sedimentation Controls
- 313116 Termite Control
- 313116.19 Termite Control Barriers

END OF SECTION - TABLE OF CONTENTS

SECTION 000100 INSTRUCTIONS TO BIDDERS

1. THE PROJECT

FAMILY PARTNERS
MANCHESTER

Project is located at:
351-377 FOREST SUMMIT COURT,
MANCHESTER, MO 63021

2. THE OWNER

FAMILY PARTNERS MANCHESTER, llc
12880 Manchester rd.
St. Louis, MO 63131
Attn: Mr. Barth Holohan MSW, MBA

Telephone: 314-863-9912
http://familypartners.com/

3. THE ARCHITECT

The Architect for the project is:

Zwick + Gandt Architecture, Inc.
9109 Watson Road, Suite 110
St. Louis, MO 63126

Phone: 314-962-9292
Email: bzwick@zgarch-stl.com
Contact: Brian Zwick

4. CONSULTANTS

The Structural Engineer for the project is:

Ron Romacker
Phone: (636) 667-7937
Email: rsquareromacker@gmail.com

The Civil Engineer for the project is:

David Vonarx
Phone: (636) 797-8425
Email: dvonarx@vonarxengineering.com

5. SECURING DOCUMENTS

4.1 Bidding documents are made available thru printer, Owner and Architect.

4.2 All documents are available for down load on Architects Google Drive using the following link:
https://drive.google.com/drive/folders/1Yz_t4LveQlkDjWjH1oIFpnsqjbeF0xNI?usp=sharing

6. BID FORM

5.1 Bid shall be received at the office of the Owner on the bid form.

5.2 All bids, mailed or otherwise delivered, shall be filed at or before the date and time designated in the Advertisement for Bids.

5.3 Bids may be WITHDRAWN by written or telegraphic notice, provided such notice is received prior to the time set for the opening of bids.

5.4 Sums shall be expressed in both words and figures. In case of discrepancy, the amount writer in words shall govern.

5.5 The Owner shall have forty-five (45) days after the Bid time specified for evaluation of bids and to make an award. No bidder shall withdraw during this period.

5.6 The fact that a Subcontractor submits a bid will be construed to mean that he agrees to carry out all provisions set forth in the drawings and specifications according to their full intent and meaning.

5.7 It shall be the responsibility of the bidders to deliver their proposals at the proper place and time. The mere dispatching of proposals will not entitle same to consideration if they arrive after the time prescribed for receipt of bids.

5.8 Bidders are hereby informed that firm bids only will be accepted. Proposals reiterating the work to be done or containing escalator clauses, unauthorized conditions, limitations, qualifications, or provisions attached to the bid will be considered irregular/ void and cause for rejection of the bid.

5.9 No telegraphic bid or telegraphic modification of a bid will be considered. No bids received after the time fixed for receiving them will be considered.

5.10 The Owner reserves the privilege of extending the time of receiving bids. In the event the time is extended, all holders of bidding documents will be informed simultaneously by written instructions issued through the Architect's office.

5.11 Each copy of the Bid shall state the legal name of the Bidder and the nature of legal form of the Bidder. The Bidder shall provide evidence of legal authority to perform within the jurisdiction of the Work. Each copy shall be signed by the person or persons legally authorized to bind the bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent’s authority to bind the Bidder.

6. BID SECURITY

6.1 NONE REQUIRED.

7. BONDS

7.1 NONE REQUIRED.

8. EXAMINATION OF DOCUMENTS AND SITE OF WORK

8.1 Before submitting a bid, each bidder shall examine the Drawings carefully, shall read the Specifications and all other proposed Contract Documents, and shall visit the site where work will be performed. Each Bidder shall fully inform itself, prior to bidding, as to existing conditions and limitations under which the Work is to be performed, and shall include in its bid a sum to cover the cost of all items necessary to perform the Work as set forth in the proposed Contract Documents. No allowance will be made to a bidder because of the lack of such examination or knowledge. The submission of a bid will be considered as conclusive evidence that the Bidder has made such examination.

8.2 Adequate time and facilities have been made available by the Owner for the Bidders to satisfy themselves as to the conditions of the bid, and no adjustments of any kind will be made in the Contract Sum or Time as a result of Bidder’s failure to acquaint itself with these conditions.

8.3 Submitting a bid shall constitute full evidence that the Bidder has examined the site, read the specifications, examined the drawings, and is fully cognizant of the conditions under which the work will be conducted.

9. BIDDER AND SUBCONTRACTORS

9.1 The Bidder shall have sufficient means and experience in the types of work called for to assure completion of the Contract in a satisfactory manner.

9.2 The Bidder by making a Bid represents that:

9.2.1 The Bidder has read and understands the Bidding Documents or Contract Documents, to the extent that such documentation relates to the Work for which the Bid is submitted, and for other portions of the Project, if any, being bid concurrently or presently under construction.

9.2.2 The Bid is made in compliance with the Bidding Documents.

9.2.3 The Bidder has visited the site, become familiar with local conditions under which the Work is to be performed and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.

9.2.4 The Bid is based upon the materials, equipment and systems required by the Bidding Documents without exception.

10. WITHDRAWAL OF BIDS

10.1 A Bidder may withdraw its bid, either personally or by written request, at any time prior to the scheduled time for opening bids.

10.2 No Bidder may withdraw, modify or cancel its bid after the date and time set for opening thereof for a period of forty-five (45) calendar days, and bids shall be subject to acceptance by the Owner during this period strictly in accordance with the proposed Contract Documents.

11. AWARD AND RIGHT OF REFUSAL

11.1 The portion of work Bid, if awarded, will be awarded to one contractor.

11.2 It is the intent of the Owner to award a Contract to the lowest qualified Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's own best interests.

11.3 The Owner reserves the right to reject any or all bids and accept those bids which appear to be in the best interest of the Owner. The Owner reserves the right to waive any informality in, breach of technicality or alleged technicality or reject any or all bids or any part of any bid.

11.4 Bidders are cautioned that the quoted services must be provided at the price submitted. No increase in price will be permitted pending acceptance of rejection of the bid. All bids shall be deemed final and no bid shall be subject to correction or amendment for error or miscalculation. No claim for additional compensation will be entertained on behalf of or paid to Contractor on account of his failure to be fully informed of all requirements of the Contract Documents.

11.5 The Owner reserves the right to make such changes in program or to change and adjust drawings and specifications as may be required to comply with the Owner's budgetary or other requirements.

12. EXECUTION OF AGREEMENT

12.1 Form of contract shall be A.I.A. Form A-101, 2017 Edition, “Standard form of Agreement between Owner and Constructor” where basis of payment is stipulated sum.

CONTRACT SUBMITTALS

12.2 Prior to delivery of the signed Agreement, the Bidder to whom has received Notice of Intent to Award shall deliver to the Owner for review and evaluation the contract submittals indentified in paragraph 12.4 below. Two (2) copies of all contract submittals will be required within 15 days after NOTICE OF INTENT TO AWARD.

12.3 All Contract submittals shall be approved by the Owner before the successful bidder receives Notice to proceed and allows the bidder to proceed with the Work. Failure or refusal to provide the required Contract submittals in a form satisfactory to the Owner shall subject the successful bidder to loss of time from the allowable construction period equal to the time of delay in furnishing the required materials or loss of award. Upon loss of award the Owner will go to the next successful bidder until a Contract is fully executed.

12.4 The Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, after NOTICE OF INTENT TO AWARD, furnish to the Owner through the Architect in writing the following Contract Submittals:

1. Schedule of values
2. Certificate of Insurance

3. Evidence of legal authority to perform work within the jurisdiction of the project
4. Any requirements of Bank, Title Company, etc.
5. Other items identified in the documents.

12.5 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

12.6 Prior to the execution of the Contract, the Owner or Architect will notify the Bidder in writing if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, (1) withdraw the Bid or (2) submit an acceptable substitute person or entity with an adjustment in the Base Bid or Alternate Bid to cover the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

12.7 Persons and entities proposed by the bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be change except with the written consent of the Owner and Architect.

13. INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING

INTERPRETATION

13.1 If any Bidder is in doubt as to the true meaning of any part of the proposed Contract Documents, or finds discrepancies in or omissions from any part of the proposed Contract Documents, it is required to submit to the Owner and Architect a written request for interpretation thereof no later than five (5) business days before bids will be opened. The person submitting the request shall be responsible for its prompt delivery.

ADDENDUM

13.2 Interpretation or correction of proposed Contract Documents will be made only by ADDENDUM and will be mailed, faxed, e-mailed, or delivered to each Bidder. No one is authorized to amend any of the proposed Contract Documents, in any respect, by an oral statement, or to make any representation or interpretation not incorporated into an Addendum.

13.2.1 Addenda will be mailed or faxed to all who are known to have received a complete set of Bidding Documents (Drawings and Specifications).

13.2.2 Copies of Addenda will be made available for review wherever bidding documents are on file for that purpose.

13.2.3 Failure of any bidder to receive any such Addendum will not relieve such Bidder from any obligation set forth in the Bidding Documents (Drawings and Specifications). All addenda become part of the Contract Documents.

13.2.4 Each bidder shall acknowledge receipt of all addenda in his bid by inserting the number and date of each addendum in the space allocated on the bid proposal form.

13.2.5 Addenda will be issued no later than four days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which included postponement of the date for receipt of Bids.

13.2.6 Each Bidder shall ascertain prior to submitting a Bid that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

SUBSTITUTION

13.3 The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.

13.4 No substitution will be considered prior to receipt of Bids unless written request for approval has been received by the Architect at least ten days prior to the date for receipt of Bids. Such requests shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitution including drawings, performance and test data, and other information necessary for an evaluation. A statement setting forth changes in other materials, equipment or other portions of the Work, including changes in the work of other contract that incorporation of the proposed substitution would require, shall be included. The burden of proof of the merit of the proposed substitution is upon the proposer. The Owner or Architects decision of approval or disapproval of the proposed substitution shall be final.

13.5 If the Owner or Architect approves a proposed substitution prior to receipt of Bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

13.6 All Bidders will be informed in writing by the Owner or Architect of all interpretations or acceptable material substitutions made during the time of bidding; IN THE ABSENCE OF SUCH APPROVAL ALL ITEMS SHALL BE FURNISHED AS SPECIFIED. No oral interpretations of the plans or specifications will be made to bidders. Interpretations made will be in the form of written addenda, which, if issued, will be sent to all bidders, providing said interpretations can be made at least 48 hours prior to opening of bids.

13.7 No substitutions will be considered after the Contact award unless specifically provided for tin the Contract Documents.

14. PRE-BID CONFERENCE

14.1 A Pre-Bid Meeting will be performed as designated by the Owner.

16. ALTERNATES, ALLOWANCES AND UNIT PRICES

16.1 The Owner has included Alternate Bids and Unit Prices on the Bid Form that must be completed by the bidder as part of its bid. If the Alternate Bids or unit prices are not completed, the bid may be rejected by the Owner as non-responsive. The Owner may also require allowances applicable to specific portions of the work. The bidder, as part of its bid, must include these allowances. If these allowances are not included, the bid may be rejected by the Owner as non-responsive.

16.2 The Bidder shall carefully review all work described on the drawings and in Section 001210, 001230 and 001432 of the specifications pertaining to Allowances, Unit Prices and Alternatives before bidding.

16.3 Should clarification of alternatives be required; they will be issued to all Bidders by Addendum.

16.4 Alternative prices shall truly reflect all overhead, profit, insurance and taxes.

16.5 The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the low Bidder on the basis of the Sum of the Base Bid and Alternates accepted.

16.6 Each Bidder must bid on all Alternates and Unit Prices listed in the Bid Proposal. They will be fully considered in awarding the Contract.

18. TAXES

18.1 The Contractor shall include all sales and use taxes on materials and equipment included in his Bid Proposal.

19. PERMITS

19.1 The Owner/ Architect will apply for permit and respond to questions to obtain the approval of the plan reviewers. Upon agency acceptance and notice of permit to be picked-up the successful bidder shall pay for and pick up the permit.

Contractor will be responsible for obtaining all permits and giving all required notifications, and shall include all associated costs in their bid. All costs for any additional permits, fees, etc., will be the respective sub-contractor's responsibility.

19.2 All work is to be performed in compliance with all OSHA regulations and Federal Hazard Communication Regulations.

19.3 All work to be governed and controlled by local, state and federal requirements for air pollution and disturbance of the surrounding areas.

20. UNIT PRICES

20.1 The Owner may include Unit Prices in the Bid Form that must be completed by the Bidder as part of its bid. If the Unit Prices are not completed, may be rejected by the Owner as non-responsive.

21. SCHEDULE

21.1 Each bidder, by submitting a bid, certifies that it will meet all schedule milestones and completion dates. A project schedule is to be submitted after bid selection as part of the contract submittals.

22. SMOKING/DRINKING/DRUG USE ON PROPERTY

22.1 The Owner does not allow smoking, the drinking of alcoholic beverages, or the use of illegal drugs on its property. The Owner will also not tolerate the use of profane or vulgar language at any of the jobsites. Contractor and subcontractor employees that do not comply with these policies will not be allowed to work on this project.

23. ESCALATION CLAUSE

25.1 Bidders are hereby informed that the Owner can accept firm bids only. Proposals submitted containing an escalation clause will be considered irregular and void.

END OF SECTION 00100 - INSTRUCTIONS TO BIDDERS

SECTION 000310 – BID FORM

Bidder shall submit its bid only on the Bid Form provided in this Section. All blanks on the form must be filled in for the bid to be considered responsive. Instructions to Bidders in Section 00100 may require Allowances, Alternate Bids and/or Unit Prices. These Allowances, Alternates and/or Unit Prices must be bid in accordance with the plans and specifications.

PROJECT: **FAMILY PARTNERS MANCHESTER**

Project is located at:
351-377 FOREST SUMMIT COURT,
MANCHESTER, MO 63021

TO: **FAMILY PARTNERS MANCHESTER, llc**
12880 Manchester rd.
St. Louis, MO 63131

ATTN: Mr. Barth Holohan MSW, MBA

DATE: _____

NAME AND ADDRESS OF BIDDER:

Bid Proposal of [1]

_____

(hereinafter called "Bidder") a [2]_____ organized and existing under the laws of the State of Missouri.

[1] Insert name of firm.
[2] Insert Corporation, partnership, proprietorship, joint venture, or individual, as applicable.

BIDDER ADDRESS: _____

_____

_____

_____

BIDDER TELEPHONE NUMBER: _____

Email Address: _____

The Bidder, in compliance with your invitation for bids for the construction of Family Partners Manchester, Manchester, MO having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials, and labor, hereby propose to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The Undersigned:

a. acknowledges receipt of the Project Manual/ specifications and Drawings dated 5-23-19 for Family Partners Manchester.

b. has evaluated the work, conditions and material deliveries required and further acknowledges that manpower, equipment, material, etc., as necessary will be available to complete the work on or before this date. The attached schedule demonstrates the proposed timeline.

c. **ADDENDA:**

Bidder acknowledges receipt and inclusion of all items in the addenda listed below:

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

BASE PROPOSAL: Bidder proposes to perform all of the work described in the specifications and shown on the plans for the sum of

_____

_____($_____) (Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

ALTERNATE PROPOSALS:

In addition, the undersigned hereby proposes to perform all work for the following alternates as specified in the Bid Documents for the following amounts (Refer to Supplementary General Conditions, Appendix "C" and related technical specification section 012300 and drawings.) All alternatives shall include in each, the cost of the Performance Bond and Payment Bond as required. (Provide bid amount both written and numerically).

Alternate No. 1: to omit wood trim around bedroom windows

(Deduct/Add) the sum of _____
(***Circle One***)

_____($_____)
(*Print Add or Deduct***)**

Alternate No.2: Provide generator for entire house

(Deduct/Add) the sum of _____
(***Circle One***)

_____($_____)
(*Print Add or Deduct***)**

Alternate No. 3: [***Describe Alternate***]

(Deduct/Add) the sum of _____
(***Circle One***)

_____($_____)
(*Print Add or Deduct***)**

UNIT PRICES: The undersigned agrees to perform work as required by latent conditions, for the following unit prices; said prices to include all labor, material, supervision, equipment,

services, bond, overhead and profit, and other general expenses to fabricate and install in place unless noted otherwise in the Unit Price description.

The undersigned further agrees that if the quantities of the work shall change, the Base Bid will be adjusted by an amount equal to the net difference of quantities multiplied by the below listed Unit Prices.

The Unit Prices shall be based upon the specified materials and methods of installation.

		(*Complete both Add & Deduct Lines*) Add	Deduct
A.	General machine excavation, removed from site, per cubic yard.	$_____	$_____
B.	Machine trench excavation, removed from site, per cubic yard.	$_____	$_____
C.	Backfill due to extra excavation; furnish, place and compact, per cubic yard.	$_____	$_____
D.	Specified Concrete in place, per cubic yard.	$_____	$_____
E.	Reinforcing steel in place, per ton.	$_____	$_____
F.	Installation of light fixture, each	$_____	$_____

MARKUP ON MODIFICATIONS:

General Contractor to maintain his profit and overhead percentages for the duration of the project for any modification to this proposal.

Overhead_____%

[*Complete both*]

Profit _____%

General Contractors' Subcontractors to maintain his profit and overhead percentages for the duration of the project for any modification to this proposal.

Overhead_____%

[*Complete both*]

Profit _____%

General Contractors' Sub-Subcontractors to maintain his profit and overhead percentages for the duration of the project for any modification to this proposal.

Overhead_____%

[*Complete both*]

Profit _____%

TAXES:

The Contract amount as stated above includes all sales taxes, excise taxes, and any other taxes for all materials and appliances subject to and upon which taxes are levied.

TIME:

The Bidder hereby agrees to commence work as stipulated in the Contract Documents.

The Bidder hereby agrees to complete the project by _____, 20___, and would require _____ calendar days as further defined in General and Supplementary Conditions, Article 8, Time and Completion.

The Bidder hereby certifies:

The Bidder agrees that this Bid constitutes a firm offer to the Owner, which cannot be withdrawn for sixty (60) calendar days from the due date or until a Contract is fully executed.

The Bidder certifies that it has examined and is fully familiar with all of the provisions of the Contract Documents and any Addenda thereto; and it has carefully reviewed all the words and figures shown in the Bid Documents and the accuracy of all statements in this Bid, and that it understands and agrees that the Owner will not be responsible for any errors or omissions on the part of the Undersigned in preparing this Bid.

The Bidder represents that it has, by careful examination of the actual site conditions, satisfied itself as to the nature and location of all work, the general and location conditions to be encountered in the performance of any work, and requirements of the Contract and all other matter which can in any way affect the work or the cost thereof.

The Bidder does hereby affirm that the address listed below is the legal address to which all notices, direction or other communications may be served or mailed and further affirms that persons listed below as Company Officers have been duly and legally elected and authorized to serve in their respective capacities and are presently so serving.

The Bidder certifies that its' proposal is genuine and is not made in the interest of or on behalf of any undisclosed person, firm, or corporation, and is not submitted in conformity with any agreement or rules of any group, association, or corporation.

The Bidder certifies it has not directly or indirectly induced or solicited any other Bidder to put in a false or sham proposal.

The Bidder certifies that it has not solicited or induced any person, firm, or corporation to refrain from bidding and that it has not sought by collusion or otherwise to obtain for itself any advantage over any other Bidder or over the Owner.

The Bidder certifies that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin in connection with the performance of the work.

If awarded a Contract, The Bidder agrees to execute the Contract and deliver within three (3) calendar days after award of the Contract, the necessary certificates of insurance and performance and payment bonds and other required submittals. The Bidder further agrees to commence the work in accordance with the project schedule and it shall be carried out and completed.

The Bidder is cautioned that all required documentation must be in the Owner's possession PRIOR to ANY mobilization on the project site.

Bidder's Signature if a Corporation:

Name of corporation:

_____

Address for communications:

_____

_____

Incorporated under the laws of the state of_____

Licensed to do business in the state of Missouri? Yes _____ No _____

Signature of officer:

_____

Typed name & title of officer:

_____

Date: _____

Bidder's Signature if a Partnership:

Name of partnership:

_____

Signature of partner or partners:

_____

_____

_____

Names and addresses of all partners:

_____

_____

Address for communications:

_____

_____

Date:

_____

Bidder's Signature if an Individual:

_____

Name of individual:

_____

Signature of individual:

_____

Address for communication:

_____

_____

Residence address:

_____

_____

Date:

_____

Project: **FAMILY PARTNERS MANCHESTER**

Owner: **FAMILY PARTNERS MANCHESTER, llc**

By virtue of statutory authority, a preference shall be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri; provided, however, that the price does not exceed that of outstate products, and the quality is best suited for the Owner's intended purpose.

Any alterations, erasures, or corrections will render the bid void. BID MUST BE SIGNED WITH CORPORATE, FIRM OR TRADE NAME BY OFFICER OR PARTNER. For further information, call Zwick + Gandt Architecture, Inc., 314-962-9292.

END OF SECTION 00310 - BID FORM

BID FORM STATEMENT OF INSURABILITY
(INCLUDE WITH BID IN SEALED ENVELOPE)

Contractor Name and Address:

As the Insurance Carrier for the aforementioned contractor, we have reviewed the insurance requirements for the project identified above. We will insure the contractor for the amounts and types of coverages that the Owner is requiring. If the contractor is awarded a contract for this project, we will provide the Owner with a certificate of insurance for the specified coverages within three (3) calendar days after the notice of award to contractor.

Signature: _____

Name: _____

Title: _____

Company: _____

Date: _____

SECTION 000700 – GENERAL CONDITIONS

PART 1 – GENERAL

General conditions of the contract are AIA A201, General Conditions of the Contract, 2007 edition. This document is mentioned for reference and standard in the industry available for viewing and download at https://www.aiacontracts.org/.

It is the responsibility of each bidder to become familiar with this document and the supplementary conditions the are referenced in this Project manual and are considered in the preparation of a bid and the execution of the work.

END OF SECTION 000700 A201 GENERAL CONDITIONS

SECTION 000800 - SUPPLEMENT TO GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION

These SUPPLEMENTARY GENERAL CONDITIONS modify, change, delete from or add to the "General Conditions of the Contract for Construction", AIA Document A201 2007 Edition. Where any Article of the General Conditions is modified, or any Article, Section, Paragraph, Subparagraph or Sub-subparagraph thereof is modified or deleted by these SUPPLEMENTARY GENERAL CONDITIONS, the unaltered provisions of that Article, Section, Paragraph, Subparagraph or Sub-subparagraph shall remain in effect.

The articles of the SUPPLEMENTARY GENERAL CONDITIONS use Articles, Numbers and Titles which relate to the AIA document A201, General Conditions of the Contract. As an example, **1.2.3.4** indicates a reference to Article **1**, Paragraph **2**, and Subparagraph **3**, and Sub-subparagraph **4** of the AIA General Conditions original document.

All Divisions of the Specifications shall be subject to the requirements of the General Conditions and Supplementary General Conditions.

TABLE OF CONTENTS OF STANDARD ARTICLES AMENDED BY THE SUPPLEMENTARY CONDITIONS

ARTICLE 1 - GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Delete Subparagraph 1.1.1 and substitute the following subparagraph:

1.1.1 The Contract Documents consist of ALL BIDDING DOCUMENTS, the AGREEMENT BETWEEN THE OWNER AND THE CONTRACTOR, THE CONDITIONS OF THE CONTRACT (GENERAL, SUPPLEMENTARY, SPECIAL AND OTHER CONDITIONS), INVITATION TO BIDDERS, INSTRUCTIONS TO BIDDERS, BID FORM, PERFORMANCE and LABOR AND MATERIALS PAYMENT BONDS, THE DRAWINGS, THE SPECIFICATIONS OR PROJECT MANUAL, ALL ADDENDA issued prior to and all MODIFICATIONS issued after execution of the Contract. A modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a written order in the form of a Construction Change Directive pursuant to paragraph 7.3 or (4) a written order for a minor change in the Work issued by the Architect pursuant to paragraph 7.4.

Add the following Subparagraphs to Paragraph 1.1:

1.1.9 ADDENDA

1.1.9 Addenda are written or graphic instruments issued by the Architect prior to receipt of the bids which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections.

1.1.10 BID

1.1.10 A Bid is a complete and properly signed proposal to do the Work for the sums stipulated therein, submitted in accordance with Bidding Documents. Acceptance of the Bid by the Owner will result in a contract between the Owner and Contractor.

1.1.11 BASE BID

1.1.11 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

1.1.12 ALTERNATE BID

1.1.12 An Alternate Bid (or Alternate) is the amount stated in the Bid to be added or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

1.1.13 BIDDER

1.1.13 A Bidder is a person or entity who submits a Bid.

1.1.14 SUB-BIDDER

1.1.14 A Sub-bidder is a Person or entity who submits a Bid to a Bidder for materials, equipment, or labor for a portion of the Work.

1.1.15 FINAL COMPLETION

1.1.15 Final Completion is achieved at the time that final project review has been performed by the Architect and the final Certificate for Payment issued by the Architect to the Owner.

1.1.16 JOBSITE

1.1.16 The Jobsite shall mean the area in which the Work is to be performed and such other areas as may be designated by OWNER for the storage of CONTRACTOR's materials and equipment.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following sentence to end of Subparagraph 1.2.1:

"If the Contract Documents do not specifically allow CONTRACTOR a choice as to quality or cost of items to be furnished, but could be interpreted to permit such a choice, they shall be construed to require CONTRACTOR to furnish the best quality and most expensive items."

1.4 INTERPRETATION

Add the following sentences to Subparagraph 1.4.1:

"Specifications and drawings are to be interpreted according to the full intent, meaning and spirit, whether taken together or separately. Taken together, they shall be deemed to mutually explain each other and to be descriptive of the work to be performed under the Contract."

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Add the following Subparagraph 1.5.3 to paragraph 1.5:

1.5.3 CONTRACTOR'S USE OF INSTRUMENTS OF SERVICE IN ELECTRONIC FORM

1.5.3.1 The Architect may, with the concurrence of the Owner, furnish to the Contractor versions of Instruments of Service in electronic form. The Contract Documents executed or identified in accordance with Subparagraph 1.5.1 shall prevail in case of an inconsistency with subsequent versions made through manipulatable electronic operations involving computers.

1.5.3.2 The Contractor shall not transfer or reuse Instruments of Service in electronic or machine-readable form without the prior written consent of the Architect.

1.5.3.3 All Contract Documents furnished by OWNER are and shall remain OWNER's property. They are not to be published or used by CONTRACTOR on any other project and, with the exception of one complete set for CONTRACTOR, are to be returned to OWNER upon completion of the work.

Add the following Subparagraphs to Article 1:

1.6 EXECUTION OF CONTRACT DOCUMENTS

1.6.1 Execution of Contract: The successful bidder shall execute a contract per Section 00100, Instructions to Bidders with written Notice of Intent to Award the contract. The executed contract will use form "Agreement between Contractor and Owner (Form A-101, issued by the AIA, 2007 edition).

1.6.2 CONTRACTOR warrants and represents that, in executing the Agreement and undertaking the Work, it has not relied upon any oral inducement or representation by OWNER, OWNER'S REPRESENTATIVE, the Architect/Engineer or any of their officers of agents as to the nature of the Work, the Project conditions or otherwise.

1.7 COORDINATION

1.7.1 Representatives of the Owner, Contractor and Architect shall meet periodically at mutually agreed-upon intervals for the purpose of establishing procedures to facilitate cooperation, communication and timely responses among the participants. By participating in this arrangement, the parties do not intend to create additional contractual obligations or modify the legal relationships which may otherwise exist.

ARTICLE 2 - OWNER

2.1 GENERAL

The following Sub-Subparagraphs added to Subparagraph 2.1.1:

2.1.1.1 The OWNER'S REPRESENTATIVE or ARCHITECT, with the written consent of Family Partners llc, is the only person or organization authorized and empowered to issue Modifications. If the CONTRACTOR should proceed with any work without a written Modification from the OWNER'S REPRESENTATIVE or ARCHITECT countersigned by Family Partners llc, it shall constitute a waiver by the CONTRACTOR of any claim for an increase in the Contract Price or an extension of the Contract Time resulting from that work activity, and the CONTRACTOR shall be stopped from asserting any claim under Article 13 as a result of its actions in this regard.

2.1.1.2 With respect to any provisions of the Contract which require CONTRACTOR to indemnify OWNER, to provide insurance for the protection of OWNER or to release OWNER from, or waive, any claims CONTRACTOR may have against it, the term "OWNER" shall mean OWNER and OWNER'S REPRESENTATIVE, and their officers, directors, agents, employees and assigns of each and shall to the extent applicable, include the parent, related, affiliated and subsidiary companies of OWNER'S REPRESENTATIVE and the officers, directors, agents, employees and assigns of each.

2.1.1.3 OWNER'S REPRESENTATIVE is the person or organization designated from time to time by OWNER to act as its representative and is identified in Article 3 of the Agreement or the most current amendment thereto. Except as otherwise provided in the Contract Documents and until CONTRATOR is notified in writing by OWNER to the contrary, all actions to be taken by, all approvals, notices, consents, directions and instructions to be given by, all notices and other matters to be delivered to, all determinations and decisions to be made by, and, in general, all other action to be taken by, or given to OWNER shall be taken, given and made by, or delivered or given to OWNER'S REPRESENTATIVE and Family Partners llc; provided, however, that OWNER (and not OWNER'S REPRESENTATIVE) shall be solely obligated to CONTRACTOR for all compensation required to be paid by OWNER to CONTRACTOR hereunder. OWNER'S REPRESENTATIVE is referred to throughout the Contract Documents as if singular in number and neutral in gender. If OWNER'S

REPRESENTATIVE is an organization, then it shall, in turn, act through such person or persons as it may designate in writing from time to time. Only those so designated are authorized to grant on behalf of OWNER'S REPRESENTATIVE any approval, consent or waiver with respect to the Contract Documents or the Work, or to otherwise act for OWNER'S REPRESENTATIVE in any capacity whatsoever. All communication with the OWNER'S REPRESENTATIVE or such other person as it may designate. Any reliance, act or omission on the part of CONTRACTOR not authorized or approved by OWNER'S REPRESENTATIVE and Family Partners llc shall be at the sole risk and expense of the CONTRACTOR.

Add the following Subparagraph to Paragraph 2.1:

2.1.3 "The Owner" refers to:
FAMILY PARTNERS MANCHESTER, llc
12880 Manchester rd.
St. Louis, MO 63131

2.1.3.1 "The Owner's Representative" refers to Nick Walker, (314) 565-4847, nwalker@buildwithimpact.com.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

Add the following Subparagraphs to Paragraph 2.2:

2.2.6 Access. Owner shall at all times have access to the Work at each and every stage of preparation and progress. CONTRACTOR shall provide facilities for such access. The CONTRACTOR shall not inhibit free and direct access to properties neighboring the Project site.

2.2.7 General. The foregoing is in addition to all other rights, privileges, duties and responsibilities of OWNER enumerated in these Contract Documents.

ARTICLE 3 - CONTRACTOR

3.1 GENERAL

Add following Sub-Subparagraph to Subparagraph 3.1.1:

3.1.1.1 The term "CONTRACTOR" means the CONTRACTOR, its project manager (or such other title used by CONTRACTOR to designate its on-site representative responsible for the performance of the Work) and such other person of persons designated in writing to OWNER from time to time by CONTRACTOR to act as its representative and who shall have the authority to binding CONTRACTOR. The CONTRACTOR shall so designate a sufficient number of representatives that

there shall be at least one authorized representative on the Jobsite at all times in which the Work is being performed.

Add the following Subparagraph to Paragraph 3.1:

3.1.4 No Oral Waiver. The provisions of this Contract cannot be amended, modified, varied or waived in any respect except by a writing signed by OWNER. CONTRACTOR is hereby given notice that no person has authority to orally waive, or to release CONTRACTOR from, any of CONTRACTOR'S duties or obligations under or arising out of this Contract. Any waiver, approval or consent granted to CONTRACTOR shall be limited to those matters specifically and expressly stated thereby to be waived, approved or consented to and shall not relieve CONTRACTOR of the obligation to obtain any future waiver, approval or consent.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Delete the first sentence of Subparagraph 3.2.2 and substitute the following sentence:

"The Contractor to carefully study and compares the Contract Documents with each other PRIOR TO EVERY SEQUENCE OF WORK in the construction schedule and with information furnished by the Owner pursuant to subparagraph 2.2.2 (for the duration of the project) and report to the Architect, in writing, immediately, errors, inconsistencies, or omissions discovered."

Delete Subparagraph 3.2.4 and substitute the following Subparagraph:

3.2.4 The Contractor shall perform the work in accordance with the Contract Documents and submittals reviewed for general compliance with the Contract Documents and as necessary and reasonably inferable to produce the intended results, and pursuant to paragraph 3.12. Should it appear that work intended to be described, or any of the matters relative thereto, is not sufficiently detailed or explained on the drawings or in the specifications, the Contractor shall apply, in writing, immediately to the Architect, for such drawings or explanations as may be necessary, and shall conform to the same as far as they shall be consistent with original documents.

Add the following Subparagraphs to Paragraph 3.2:

3.2.5 The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect (due to delays in completion beyond the completion date) when providing: additional management of the project, evaluation and responses to the Contractor's requests for information (where such information was available to the Contractor from a careful study and comparison of the Contract Documents & field conditions or other Owner-provided information or Contractor-prepared coordination drawings or prior Project correspondence or documentation.

3.2.6 Any errors or omissions appearing in the drawings or specifications shall be called to the attention of the Owner's Representative or Architect by the Contractor before the bids are received or, in any case, BEFORE WORK PROCEEDS. It shall also be the obligation of the CONTRACTOR to review the Contract Documents to determine and to notify the OWNER of any discrepancy between building codes and regulations of which the CONTRACTOR has knowledge or should be reasonably able to determine. The CONTRACTOR shall not violate any applicable laws, codes and ordinances, or of any recorded covenants of which the CONTRACTOR has knowledge. If the CONTRACTOR observes that portions of the Contract Documents are at variance with applicable laws, statutes, ordinances, building codes, rules or regulations, the CONTRACTOR promptly shall notify the OWNER in writing. OWNER shall thereafter give appropriate written instructions to CONTRACTOR, and such instructions shall be final.

Should CONTRACTOR fail to report in writing an error in the Contract Documents or, having reported the same, fail to wait for OWNER's instructions as aforesaid prior to proceeding with the Work, then any Work performed by or on behalf of CONTRACTOR, directly or indirectly, after its discovery of an error in the Contract Documents shall be at CONTRACTOR'S own risk and expense, and CONTRACTOR shall be liable for all damages and corrective action resulting there from. Further, any defective Work performed by or on behalf of CONTRACTOR, directly or indirectly, as a result of an undiscovered error in the Contract Documents which CONTRACTOR should have discovered by careful study and comparing the same shall be at CONTRACTOR'S own risk and expense, and CONTRACTOR shall be liable for all damages and corrective action resulting there from.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Delete Subparagraph 3.3.1 and substitute the following Subparagraph:

3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

3.3.1.1 The Contractor executing this contract shall be responsible for coordinating and scheduling this work and the work of his subcontractors, sub-subcontractors, material suppliers, fabricators, and all other agents, employees, or other persons performing portions of the work.

3.3.1.2 Where required by local codes, jurisdictions, etc., this Contractor shall arrange for the proper installation of such components or items of the work included, that are not a part of the work normally done by his personnel, by securing the services of personnel properly qualified for such work or by subcontracting such portions of the work to qualified firms.

Add the following Subparagraphs to Subparagraph 3.3:

3.3.4 Measurements: Verify all measurements at the job. No extra charges or compensation will be allowed as a result of failure to verify dimensions before ordering materials or fabricating items.

3.3.5 Layout: Contractor and all Subcontractors shall be fully responsible for the accurate placement and installation of their work.

3.3.6 Job Site Administration: The Contractor is to provide full time on-site supervision by a competent project superintendent. This individual is to be present at each weekly project meeting. This individual is to be dedicated to this project full-time for the duration of the Contract.

3.3.7 Weekly Project Meetings: The Contractor is to have the on-site superintendent at weekly project meetings on the site, for the duration of the Contract. These meetings are primarily to review progress and address potential problems that need to be addressed. The Contractor is to prepare and distribute typed written minutes within two days of the meeting. Meeting minutes DO NOT fulfill the requirements for written confirmation or notification as prescribed elsewhere in the Contract. Meeting minutes to identify: Old Business, New Business, and Responsible Party for each item. These meeting will be held in the General Contractor's construction trailer. The Contractor will be required to submit the previous weeks daily construction log along with a thorough schedule review. Meeting agenda to include but not limited to: Construction Progress, Shop drawing submittal progress, Review of RFI's, schedule progress, current construction issues, Coordination of Owner's on-going use of site with construction activities, subcontractor issues from previous meeting, and any other issues. General Contractor weekly meetings with subcontractors is to be held prior to the Owner's weekly Project Meetings, NO EXCEPTIONS.

3.3.8 Surveying, Layout and Controls: The Contractor shall establish and maintain lines, levels, and benchmarks. Furthermore, the Contractor shall employ a surveyor licensed by the State of Missouri to establish and maintain all lines, levels and benchmarks necessary for the location and construction of the project. It is preferred the licensed surveyor be the civil engineer of record given their knowledge of the existing conditions and proposed work. Before proceeding with the work, check the information shown on the drawings with the existing conditions; verify that there are not discrepancies prior to start of work.

3.3.9 CONTRACTOR shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by the activities or duties of OWNER, OWNER'S REPRESENTATIVE or the Architect/Engineer in their administration of this Contract or by inspections, tests or approvals required or performed under Paragraph 13.5 herein by persons other than CONTRACTOR.

Further, notwithstanding the fact that a dispute, controversy or other question may have arisen between the parties hereto relating to the execution or progress of the work, the interpretation of the Contract Documents, the payment of any monies, the delivery of any materials or any other

matter whatsoever, CONTRACTOR shall not be relieved of its obligations under the Contract Documents pending the determination of such dispute, controversy or other question.

3.3.10 CONTRACTOR shall in all respects comply with, and shall cooperate with the OWNER in enforcing all site procedures, conditions and rules established by the OWNER which affect any of the Work being performed for the Project or at the Jobsite, including but not limited to Project schedules; access; security; traffic and solicitation; work and storage areas; utilities; safety, medical and first aid facilities; fire and explosion precautions; pollution; sanitation; cleanup and work conditions. CONTRACTOR shall be required to attend all Jobsite or Project meetings held by the OWNER in regard to site control, procedures, schedule or coordination.

3.4 LABOR AND MATERIALS

Add the following Sub-subparagraphs to Subparagraph3.4.1:

3.4.1.1 The name of a certain brand, make, or manufacturer shall set forth and convey the style, type, character, capacity, function, quality, performance requirement, design, and appearance of the article required.

3.4.1.2 The Contract is based on the products (materials, components, assemblies, and equipment) specified.

3.4.1.3 All materials shall be factory labeled or shall be shipped in labeled containers describing the contents. Labels and containers shall be retained as necessary for review by the Architect.

3.4.1.4 Erection, application, or installation shall be in accordance with manufacturer's specifications and best standard, and architectural and engineering practice.

3.4.1.5 SUBSTITUTIONS MAY BE MADE PROVIDED THEY HAVE THE WRITTEN APPROVAL OF THE ARCHITECT ISSUED PRIOR TO SUBMISSION OF BIDS AS OUTLINED IN THE "INSTRUCTIONS TO BIDDERS" SECTION. IN THE ABSENCE OF SUCH APPROVAL, ALL MATERIALS SHALL BE BID AND FURNISHED AS SPECIFIED, REFER TO ARTICLE 3.4.1.6.

3.4.1.6 After the Contract has been executed, the Owner and the Architect will consider a formal request for the substitution of products in place of those specified, only under the conditions set forth herein, and where circumstances require consideration, as determined by the Owner and the Architect.

(a) The Contractor, subcontractor, sub-subcontractor, material supplier, manufacturer, or fabricator certifies in writing that a specific material, product, component, assembly, or item specified or required as part of the work is

no longer manufactured, produced, fabricated, or has materially changed from the intended item specified;

(b) Due to adverse conditions of timely availability and/or delivery as necessary to maintain the construction sequence or schedule of the work which are beyond the control of the Contractor, and which can be proven to the satisfaction of the Owner and Architect that the Contractor has fully endeavored to secure the availability and/or timely delivery of the specified item of which the substitution request is subsequently being made.

3.4.1.7 By making written requests for substitutions based on Clause 3.4.1.6 (a) or (b) above, the Contractor:

(a) represents that the Contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified, utilizing the characteristics as defined in paragraph 3.4.1.1, and the relevant appropriate technical specification sections, drawings, and project manual information as a basis for selection and submission as a substitution;

(b) represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;

(c) will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.

(d) certifies that the cost data presented is complete and includes all related costs under this Contract but excludes costs under separate contracts, and excludes the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently becomes apparent; and

(e) the Contractor shall endeavor to select an acceptable substitution which meets the appropriate criteria and does not require an adjustment to the Contract Sum.

Add the following Subparagraphs to Paragraph 3.4:

3.4.4 Acceptance of Previous Work: Any Contractor or Subcontractor who installs work over surfaces of previous work accepts same as being satisfactory to provide a substantial first-class workmanship installation. If undersurface is such that this is not possible, then said Contractor shall notify the Owner's Representative or the Owner so that proper corrective steps may be taken before any installation is made.

3.4.5 CONTRACTOR shall assign to and maintain on the Work a force of experienced employees in the knowledge and skills to perform the work. Equipment and tools to be in first

class operating condition, adequate to complete the work within the prescribed time schedule and shall furnish careful, efficient and experienced business administration and supervision of the work force.

3.4.6 Any of CONTRACTOR's assigned personnel or subcontractors whom the OWNER may consider to be incompetent, careless, insubordinate or otherwise objectionable, or whose conduct or presence is considered to be detrimental to the best interests of the Project, or who are not required for the Work shall be removed at OWNER's request. OWNER shall not incur any liability, responsibility or obligation whatsoever in regard to exercising its rights herein either to CONTRACTOR or any other person.

3.4.7 If OWNER requires, CONTRACTOR shall give, or shall require its suppliers or the manufacturers to give, full and accurate information in writing to OWNER on any questions concerning the kind and quality, performance and/or delivery status of any materials and equipment, or such other data with respect thereto as may be requested by OWNER, and shall obtain for OWNER the written assurances of a manufacturer that its material and/or equipment is designed and appropriate for the use intended.

3.4.8 The Contractor, subcontractors, sub-subcontractors and any other person's part of the work force to complete the work; must install all products and materials per the manufacturer's latest installation instructions and procedures. Whether shown on the documents or not. A brief review of the contract documents and the manufactures installation instructions is to be performed by the superintendent and/or subcontractor performing the work; PRIOR TO ANY WORK STARTING. Any discrepancies between installation instructions/ procedures and the Documents are to be brought to the attention of the Architect for a resolution prior to performing the work. Failure to follow this subparagraph is cause to remove work in place and properly reinstall the products, materials or systems as required at no additional expense to the Owner. The objective in subparagraphs 3.4.10, 3.4.11, and 3.4.12 are to improve the quality of the installation, but more importantly to take advantage of the skill and expertise of the installers to promote communication early to resolve potential conflicts.

3.5 WARRANTY

Subparagraph 3.5 – Delete words "of good quality and" in the first sentence.

Add the following Sub-Subparagraph to Subparagraph 3.5:

3.5.1 The CONTRACTOR agrees that this warranty and others specified in the Contract Documents shall be expressly included in its subcontracts and purchase orders, and those subcontracts and purchase orders shall further provide that either the CONTRACTOR and/or OWNER may enforce these warranties in any manner provided by law or the Contract Documents. The CONTRACTOR shall further require its subcontractors to provide identical terms in its

subcontracts and purchase orders to the ultimate effect that the OWNER can enforce such warranties on its behalf if that is deemed necessary or desirable by the OWNER.

The CONTRACTOR shall assemble all warranties set forth in the Contract Documents into the operation and maintenance manuals required in the Contract Documents. The OWNER shall be supplied un-priced subcontracts and purchase orders from the CONTRACTOR and its subcontractors to verify that these warranty protections and the other requirements of the Contract Documents are being imposed as required.

3.6 TAXES

Add the following Sub-Subparagraph to Subparagraph 3.6:

3.6.1 CONTRACTOR shall pay, or cause to be paid, all sales, consumer, use, excise and other similar taxes required to be paid in connection with the Work or upon materials, tools or equipment brought to the Jobsite or used in the Work, and all ad valorem personal property taxes levied against any tools or equipment utilized by CONTRACTOR or its Subcontractors or Sub-Subcontractors in the performance of the Work, all of which shall be deemed included in the Contract Price, except the taxes described in Paragraph 3.6.

If any of the foregoing taxes are not paid in a timely manner, OWNER may withhold the amount of any such taxes from any amounts owing to CONTRACTOR under the Contract Documents, submit the amount so withheld to the appropriate taxing authority on behalf of CONTRATOR and credit said amount against the Contract Price.

3.7 PERMITS, FEES, NOTICES, AND COMPLIANCE WITH LAWS

Delete Subparagraph 3.7.1 and add the following Subparagraph to Paragraph 3.7:

Delete words in first sentence up to the first comma in Subparagraph 3.7.1 and add the following:

"The Owner has paid application fees to start the processing of the General Building permit from the City of Manchester and the West County Fire Department prior to start of bidding. Since application the Architect has responded to questions and clarifications to enable the permit to be picked up upon notice to proceed or soon there after, …."

Add the following Subparagraphs to Paragraph 3.7:

3.7.6 In addition to the permits and licenses necessary and required for the prosecution of the project, the Contractor shall secure and pay for all fees, repairs or cleaning of streets and adjacent property, and other damages in the course of the construction work. Upon completion,

the Contractor shall secure and deliver all of the certificates of inspection, approval and occupancy permits to the Owner.

3.7.7 All contractors, subcontractors, sub-subcontractors, etc. shall be licensed by the prevailing city and/or municipality at the location of the Work. As required the Contractor and shall submit to the city a copy of their State Workmen's Compensation insurance policy.

3.7.9 CONTRACTOR shall secure and pay for all governmental fees and licenses which OWNER is not specifically required to provide and pay for under the Contract Documents. The OWNER will pay for all fees and charges related to the supply of permanent power to the Project, from the local utility company.

3.7.10 Compliance with Laws. CONTRACTOR shall, at its cost and expense, comply with every federal, state and local law, ordinance, code, rule and regulation, as well as the lawful order or decree of any public or quasi-public authority, bearing on the performance of the Work, specifically including, but not limited to, those specified in Article 10 and applicable building codes.

It shall be the responsibility of CONTRACTOR to familiarize itself with all of the same, and any performance of the Work by or on behalf of CONTRACTOR which is not in compliance therewith shall be at CONTRACTOR's sole risk and expense. It shall be the further responsibility of CONTRACTOR to give all notices required to be given by it pursuant to applicable law.

3.9 SUPERINTENDENT

Subparagraph 3.9.1; revise all terms "superintendent" with "project manager/ superintendent".

Add the following sentences to Subparagraph 3.9.1:

"The Contractor will be required to provide a full time (40 hours/ week) Superintendent on each jobsite. The Superintendent shall be satisfactory to the Owner, Architect and shall not be changed except with the consent of the Owner and Architect, unless the Superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ."

Add the following Subparagraphs to Paragraph 3.9:

3.9.4 The Contractor shall employ a superintendent or an assistant to the superintendent with knowledge to act as a coordinator for Mechanical, Electrical, Plumbing and Fire Protection work.

The Coordinator shall be knowledgeable in all MEP/FP systems and capable of reading, interpreting and coordinating Drawings, Specifications, and shop drawings pertaining to such

systems. The coordinator shall assist the Subcontractors in arranging space conditions to eliminate interference between the mechanical and electrical systems and other Work and shall supervise the preparation of coordination drawings documenting the spatial arrangements for such systems within restricted spaces to maintain the finished ceiling design effect and proper clearances for maintenance access. The coordinator shall assist in planning and expediting the proper sequence of delivery of mechanical and electrical equipment to the site.

3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

Add the following Sub-subparagraphs to Subparagraph 3.10.1:

3.10.1.1 Prepare and submit a written copy of an itemized construction schedule indicating starting and completion dates of the major and critical items of work. If changes become necessary, the Contractor shall revise the schedule and resubmit for approval. It shall be noted that certain work under this project must be scheduled in advance to permit the Owner's staff to make necessary adjustments in the Owner's operation which will allow the Contractor to perform his work. Therefore, the Contractor must follow the agreed upon schedule unless he receives subsequent approval from the Owner for rescheduling individual items. The schedule shall be a bar chart or similar graph based on the items of work listed on the "Schedule of Estimated Values". The schedule shall be submitted two (2) weeks after the Notice to Proceed and updated monthly at time of each partial payment submittal. Payments will not be processed unless the updated schedule is attached.

3.10.1.2 Contractor shall inform Owner of both starting and completion dates of the site work prior to beginning any particular phase of work at the site.

3.10.1.3 Prior to commencing work, the contractor shall meet with the Architect's and/or Owner's representative to discuss routing of delivery trucks to the site, location of storage areas, requirements for parking permits and locations.

3.10.1.4 It is hereby understood and mutually agreed, by and between the Contractor and Owner, that if applicable to the Work of the project, that the Owner must maintain continued use and operation of the Owner's site and facilities during the execution of the work. The Contractor shall be required to schedule and sequence any work as necessary to maintain the Owner's activities of use and operations at no additional cost to the Owner.

Delete Subparagraph 3.10.2 and add the following:

3.10.2 The Contractor shall prepare and keep current, for the Architect's review, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect one (1) week to review submittals. No more than five (5) submittals are to be submitted at one time.

Add the following Subparagraphs to Paragraph 3.10:

3.10.4 72 Hour notice: If ever, in the opinion of the Owner, the project is either insufficiently manned or is significantly behind schedule, a seventy-two (72) hour notice will be given to the contractor to appropriately staff the job so that it is brought back on schedule. If the Contractor fails to respond to this seventy-two (72) hour notice, the Owner reserves the right to staff the project with its own forces in order to maintain schedule and charge the expense to the Contractor.

3.10.5 Substantial Completion.

Requests for extension of time by the Contractor will be granted for delays that the Contractor could not have reasonably foreseen. The Contractor will foresee, and include in the bid, an average number of working days lost to weather, typical for the time of year. This average will be defined by records compiled by the National Weather Service Climate Center. In addition, the Contractor will include twenty-five (25) days lost to weather. The Contractor shall be prepared to provide temporary facilities and protection that allow construction to proceed during typical weather encountered on this project.

The Contractor shall not be entitled to extensions of time for delays resulting from any condition or cause unless it shall have given the Owner written notice within three calendar days following the commencement of each condition or cause, and unless it shall have received written consent to the time extension from the Owner. Meeting Minutes, submittals, RFI's, or answers to RFI's DO NOT fulfill the requirement for written consent from the Owner or for written notice from the Contractor (see Paragraph 13.3 of the General Conditions of the Contract for Construction for the definition of "written notice"). A time extension incurred due to a change in the Contract must be included in a Charge Order for the associated additional work. No extension of time will result in claims for additional compensation for general conditions (including supervision). The Contractor is to submit a proposal schedule upon award of contract, showing activities, durations, milestones, and the Substantial Completion Dates set by the Contract. The current schedule will be reviewed at each weekly project meeting. The Contractor will update and reissue the schedule each month.

If, in the judgment and discretion of the Owner, the Contractor is unable to maintain the schedule, Owner shall reserve the right to require the Contractor to supplement the work force and/ or work overtime hours, all at no additional expense to the Owner, until a time that the project schedule is met.

If a delay affects the Notice to Proceed date of the Contractor, then the date of Substantial Completion will be postponed by exactly the number of working days that the Notice to Proceed date was postponed.

A reasonable delay claim by a Contractor will only affect the date of Substantial Completion for the particular activity giving rise to the claim.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Subparagraph to Paragraph 3.11:

3.11.1 Record Drawings in accordance with the General Requirements shall be signed by the CONTRACTOR, certifying that they show complete and exact "as-built" conditions, including dimensions, locations and other similar pertinent information. The CONTRACTOR will maintain all approved permit drawings in a manner so as to make them accessible to governmental inspectors and other authorized persons. All drawings shall be wrapped, marked and delivered to the OWNER within 60 days of completion of the Work.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

Add Subparagraph 3.12.11 to Paragraph 3.12:

3.12.11 The Architect's review of Contractor's submittals will be limited to examination of an initial submittal and one resubmittal. The Architect's review of additional submittals will be made only with the consent of the Owner after notification by the Architect. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect for evaluation of such additional resubmittals.

3.12.12 The Contractor shall prepare and submit a complete schedule of submittal dates and estimated fabrication times. This shall be submitted to the Architect within fourteen days from Notice to Proceed.

3.12.13 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Contract Documents by the Architects' approval thereof.

3.14 CUTTING AND PATCHING

Add the following Subparagraph to Paragraph 3.14:

3.14.3 The Contractor shall locate, protect and save from injury utilities of all kinds, either above or below grade found in the areas affected by his work. He shall be responsible for all damage caused to such utility by the operation of equipment or delivery of materials or as the direct or indirect result of any of his work, and shall repair all such damage at his expense and as a part of the work included in the Contract Documents. The Contractor shall not be entitled to any increase in the Contract Sum or the Contract Time on account of such damage to any utility.

3.15 CLEANING UP

Add the following Subparagraphs to Paragraph 3.15:

3.15.3 Immediately after unpacking materials, all packing case lumber or other materials, excelsior, wrappings, or other like flammable rubbish shall be collected and removed from the building and/or premises by the Contractor or subcontractor furnishing material or equipment. Before the interior painting is begun, or at such time as may be directed by the Architect, the General Contractor shall be responsible for ensuring that all trades supply all labor and material required to thoroughly "broom clean" the spaces to be painted. This cleaning shall include the removal of all surplus materials from all surfaces; and all surfaces which are to be finished shall be left in a clean and suitable condition for painting and finishing.

3.15.4 During the progress of the work and upon completion of the work, the immediate construction site premises and adjoining drives, parking areas and sidewalks shall be maintained neat and free of dirt and debris resulting from this work. Accumulations of daily trash shall be periodically removed from the site. Area shall be left in a "broom Clean" condition when completed for final inspection. Hardware, equipment, and all other exposed finish materials shall be cleaned of all extraneous paint, mortar, dirt, etc., immediately prior to the final inspection of the work. All equipment with removable or detachable panels, covers, plates, etc., shall be cleaned on the inside before the apparatus is turned over for use by the Owner. All marred finishes shall be repaired, touched-up or replaced.

ARTICLE 4 - ARCHITECT

4.1 GENERAL

Subparagraph 4.1.1 -- The following Clause added to 4.1.1:

"The "Architect" refers Zwick + Gandt Architecture, Inc., 9109 Watson road, Suite 110, St. Louis, Missouri 63126, whose name appears on the drawings and who by Contract with the Owner, is authorized to prepare all drawings, specifications, and details of this Work."

Add the following Subparagraph to Paragraph 4.1:

4.1.4 Disputes arising under Subparagraphs 4.1.2 and 4.1.3 shall be subject to mediation.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

Subparagraph 4.2.7 -- Last sentence revised to read as follows:

"The Architect's review of a specific item shall not indicate approval of an assembly of which the item is a component."

Add the following Sub-subparagraph to Subparagraph 4.2.7:

4.2.7.1 Architect's review will include review of all appearance and performance characteristics. In the case of structural work (structural steel, reinforcing steel, etc.), the Architect and the appropriate consulting engineer will check cross sectional size and structural adequacy of members, but not dimensions affecting placement with respect to other members. In the case of mechanical or electrical equipment, the Architect and the appropriate consulting engineer will check performance characteristics, finishes and general arrangement of components.

Delete Subparagraph 4.2.8 and substitute the following:

4.2.8 The Contractor will prepare RFI's, and Construction Change Proposals from proposal requests or other means. The Architect will prepare: responses to RFI's, review CCP's, prepare and issue Change Orders, Proposal Requests, Architect's Supplementary Instructions, Construction Change Directives, and may authorize minor changes in the Work as provided in Paragraph 7.4.

Subparagraph 4.2.9 – Omit words "inspections or inspection" and replace with "site visit".

Delete Subparagraph 4.2.11 and substitute the following:

4.2.11 The Architect will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made with reasonable promptness and within time limits mutually agreed upon. Should a request for an interpretation of the requirements of the Contract Documents by the Owner or Contractor require a decision and/ or interpretation within a specific amount of time, determined as necessary to maintain the project's schedule or timely sequence of work, by either party, the party shall so identify such requirement in writing with the request for interpretation. The Architect's action will be taken with such reasonable promptness as to endeavor to render such interpretation within a reasonably requested time period, while allowing sufficient time n the Architect's professional judgment to permit adequate review. Failure of the Architect to render such interpretation within the requested period of time shall not be cause for claim or damages against the Architect as provided in Article 3.18.

ARTICLE 5 – SUBCONTRACTORS

5.1 DEFINITIONS

Delete first sentence of Subparagraph 5.1.1, and substitute with the following:

"A Subcontractor is a person or organization having a direct contract with CONTRACTOR to perform any of the Work at the Jobsite or to supply any materials or equipment to be incorporated in, or utilized in connection with the Work."

Delete first sentence of Subparagraph 5.1.2, and substitute with the following:

"A Sub-subcontractor is a person or organization having a direct or indirect contract with a Subcontractor to perform any of the Work at the Jobsite or to supply any materials or equipment to be incorporated in, or utilized in connection with, the Work."

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

The first sentence of the Section is amended to read as follows:

5.2.1 The Contractor shall, within fifteen (15) working days after the Notice of Intent to Award the contract, furnish to the Architect, in writing, for acceptance by the Owner, Two (2) copies of the complete list of Subcontractors, Sub-subcontractors to perform the work, including their names, address, telephone & fax number, and email address along with the brand or trade names of the major materials and products they will supply and install.

Add the following subparagraphs to Paragraph 5.2:

5.2.5 The list of subcontractors and suppliers submitted with the bid will be approved prior to award of the Contract unless otherwise indicated in the Notice to Proceed. The Contractor may not change any subcontractor and/ or supplier without written consent from the Owner. The Contractor may not give access of the site to anyone without previously approved in writing by the Owner.

5.3 SUBCONTRACTUAL RELATIONS

Add the following Subparagraphs to Paragraph 5.3:

5.3.1 The Contractor and subcontractor(s) are obligated not to discriminate in employment practices.

5.3.2 The list of subcontractors and suppliers submitted with the bid form will be approved prior to award of the Contract unless otherwise indicated in the Notice to Proceed. The Contractor may not change any subcontractor and /or supplier without prior written consent from the Owner. The Contractor may not give access of the site to anyone not previously approved in writing by the Owner.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Add the following Subparagraphs to Paragraph 5.4:

5.4.4 Each subcontract shall provide for its termination by CONTRACTOR if, in OWNER'S opinion, the Subcontractor fails to comply with the requirements of the Contract Documents insofar as the same may be applicable to its portion of the Work; and each Subcontractor shall be required to insert a similar provision in each of its subcontracts. In the event of any such failure by a Subcontractor or Sub-subcontractor, as the case may be, shall be removed immediately from the Work and shall not again be employed on the Work. CONTRACTOR shall be responsible for all costs and expenses arising out of, and shall defend, indemnify and hold OWNER harmless on account of, any such failure by a Subcontractor or Sub-subcontractor (specifically including, without limitation, a failure to pay for labor or materials or to comply with the provisions of the union and/or trade agreements applicable to the Work).

ARTICLE 7 – CHANGES IN THE WORK

Add new paragraph to Article 7 as follows:

7.0 REQUEST FOR INFORMATION

7.0.1 The contractor shall issue RFI's well in advance of current and prior to upcoming construction activities to proactively obtain clarifications to the construction documents. RFI's are the contractor's responsibility to issue. A schedule of all RFI's is to be prepared and maintained by the contractor identifying each RFI with its identifying number, description, and approval status. RFI's that are extremely time sensitive are to be clearly identified.

7.0.2 The architect or others, so as to avoid delays in construction activities, must prepare a response to RFI's in a timely manner. Contractors must also keep in mind that a response to an RFI may require input from, but not limited to, the architect, Owner, other consultants, manufacturers and/ or suppliers; therefore, it is the contractor's sole responsibility to allocate adequate time for a response that he/ she considers critical.

7.1 GENERAL

Add the following Subparagraphs to Paragraph 7.1:

7.1.4 When changes are required or requested by Owner, Architect shall issue a description of proposed changes in the work that may require adjustment to the Contract Sum or Time. Such changes are issued to the Contractor in the form of a Proposal Request.

7.1.5 Contractor shall submit a CCP (Construction Change Proposal) to the Architect for review of completeness, and any revisions to, Contract Sum, Time or scope. CCP are to be submitted within 5 days of receipt of the Proposal Request. The CCP shall include all work necessary due to project requirements and field conditions. The CCP shall provide information including material and labor unit costs and quantities. CCP's include, but are not limited to: Proposal Requests issued by the Architect, Architect's Supplementary Instructions, responses to RFI's, field issues, Owner directed items and Contractor Items.

7.1.5.1 The CCP shall be complete and inclusive of all items necessary for the scope of changes requested. After a proposal is accepted, additional claims for the same changes will not be considered. Failure to identify required changes in scope on a proposal does not relieve the Contractor from completing the changes in the work as accepted.

7.1.5.2 The Contractors CCP will be reviewed by the architect. Additional back-up may be requested and provided by the Contractor. After finalizing the review, the Architect will make a recommendation to the Owner. Based on the Owners' decision a letter will issued by the Architect identifying acceptance or rejection of the CCP. Upon acceptance a modification to the contract will be prepared and signed by all parties in the form of a Change Order.

7.1.5.3 Upon disagreement of the CCP by the Owner or Architect a written response will be submitted to the Contractor with the reasons for the disagreement for clarification or adjustment. It is the intent of the Owner to pay fair market value for the work that may result in addition or subtraction of cost or time to the project. Additional documentation may be necessary to fully understand the Contractor's Change Proposal. Unclear documentation or unsubstantiated claims will not allow the contractor extensions in time for delays due to proposal acceptance. CLEAR and prompt descriptions/ documentation on the costs by the contractor will allow prompt approvals and is the contractor's sole responsibility.

7.1.5.4 A schedule of all CCP's is to be maintained by the Contractor identifying each CCP with its identifying number, description, and approval status. The status is to be reviewed by the Contractor at regular intervals to assist in maintaining progress towards review and approvals.

7.1.5.6 The contractor shall not be entitled to an increase in contract price resulting from any claim unless it shall have given the Owner written notice within three calendar days after the occurrence of the event giving rise to the claim, AND unless it shall have received prior written authorization to proceed with the change from the Owner.

7.1.6 Meeting minutes, verbal direction, reviewed submittals, RFI's or answers to RFI's, DO NOT fulfill the requirements for written authorization from the Owner or for written notice from the Contractor (see paragraph 13.3 of the General Conditions of the Contract for Construction for the definition of "written notice"). ONLY THE OWNER MAY AUTHORIZE THE MODIFICATION OF THE CONTRACT. THE CONTRACTOR MUST HAVE WRITTEN AUTHORIZATION TO PROCEED WITH WORK ASSOCIATED WITH A CHANGE IN THE CONTRACT AMOUNT. ANY ADDITIONAL WORK THAT THE CONTRACTOR EXECUTES WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE OWNER WILL BE AT THE CONTRACTOR'S EXPENSE. THE OWNER'S AGREEMENT TO PAY FOR PREVIOUSLY UNAUTHORIZED WORK ALREADY COMPLETED SHALL NOT OBLIGATE, NORSET A PRECEDENCE FOR, THE OWNER TO DO SO AGAIN IN THE FUTURE. ADDITIONAL COSTS DUE TO THE FAILURE OF THE CONTRACTOR TO COORDINATE PORTIONS OF THE WORK WILL NOT BE THE RESPONSIBILITY OF THE OWNER. Written authorization from the Owner may be via facsimile transmission, but must be on the Owner's letterhead and signed by the Owner. The written authorization MUST specify the change to the work and, either the total cost to the change, or the method of compensation to the Contractor (i.e. unit prices, time and materials, etc.). If the total cost of the change is not included in the written authorization, then the contractor shall have until thirty (30) days past the completion of the work associated with the change to submit a total cost to the Owner.

7.1.7 The only means for modification and/ or adjustments of scope, cost or time to the contract between the Owner and the Contractor will be from the following documents:

(a) a Change Order;
(b) a Directive; or
(c) any other written amendment to the Contract signed by both parties.

A Modification may be made only after execution of the Contractual Agreement.

7.2 CHANGE ORDERS

Delete Subparagraph 7.2.1 and substitute the following:

7.2.1 A Change Order is a written Modification prepared by the ARCHITECT OR CONTRACTOR and signed by the Owner, and constitutes of additions, deletions or other revisions to the Contract. A Change Order may be accompanied by and/or may identify additional or revised Drawings, sketches or other written instructions which become and form a part of the Contract Documents by virtue of the executed Change Order. Except as otherwise provided in Subparagraph 1.1.5, a change in the scope of the Work, the Contract Time or the Contract Price shall become the subject of a Change Order.

A schedule of all Change Orders is to be prepared and maintained by the ARCHITECT OR CONTRACTOR identifying each change order with its number, date, description, and approval

status by each party (contractor, owner, and architect). The contractor to review the status of change order approvals at regular intervals as necessary to assist the architect and owner in understanding the urgency of any approvals that jeopardize the construction schedule

Add the following sub-paragraphs to sub-paragraph 7.2:

7.2.2 Methods used in determining adjustments to the Contract shall include those listed in subparagraphs7.3.3, 7.3.3.1, 7.3.3.2, 7.3.3.3, and 7.3.3.4, as recommended by the Architect. The cost or credit to the Owner resulting from a change to the Work shown on the Change Order shall reflect the entire effect of the change and its cost impact on all other portions and facets of the work. Additional compensation will not be granted to the Contractor for additional work or extended time as required by a Change Order, but not claimed at the time the initiating Change Order is issued.

7.2.3 The Contractor will be allowed to mark-up self-performed work and subcontractor or sub-subcontractors work using the percentages indicated on the bid form Proposal. This mark-up will cover all elements of overhead and profit (including, but not limited to, supervision, estimating, schedule, procurement, cleanup, delivery, temporary utilities/ facilities, consumables, insurance, performance/ Labor and Materials payment bonds, safety, quality control/ assurance, protection, security, small tools, radios, vehicles, and all home/ site office costs and expenses). Unit prices are to include the markup. Any deduct Modification will include the markup.

ARTICLE 8 - TIME

8.1 DEFINITIONS

Delete Subparagraph 8.1.4 and substitute the following:

8.1.4 The term "day" as used in the Contract Documents shall mean working day, excluding weekends and legal holidays

8.2 PROGRESS AND COMPLETION

Add the following Sub-subparagraph to Subparagraph 8.2.1:

8.2.1.1 The Contractor agrees that said work shall be prosecuted regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the Contractor and the Owner, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the usual construction conditions prevailing in this locality.

Add the following Subparagraphs to Paragraph 8.2:

8.2.4 Start to Work Order: When above has been completed to the satisfaction of the Owner and when necessary building permits have been received by the Contractor, the Architect will notify the Contractor in writing of the "DATE TO START WORK.", however unless identified otherwise will be “NOTICE TO PROCEED”.

8.2.6 Completion of Work: Upon receipt of this notice, the Contractor shall cause the work to proceed as rapidly as possible to completion and is to include in his proposal his estimate of consecutive calendar days he will require to complete the project.

8.2.7 The Contractor shall submit a project schedule after the Notice of Intent to Award identifying all major areas of work and corresponding dates. The schedule shall include quantity of weather days and schedule float. The schedule is to be updated once a month and submitted with monthly pay requests during the course of the project.

8.3 DELAYS AND EXTENSIONS OF TIME

Delete Subparagraph 8.3.1 and substitute the following:

8.3.1 If the Contractor is delayed at any time in progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

Add the following Subparagraph to Paragraph 8.3:

8.3.4 Any approved extension of time, shall be based upon working days.

ARTICLE 9 - PAYMENTS AND COMPLETION

9.2 SCHEDULE OF VALUES

Add the following sentence to Subparagraph 9.2.1 before the last sentence:

“The schedule must be prepared in such a manner that each major item of work and each subcontracted item of work is shown as a single line item on AIA Document G703, Certificated for Payment, Continuation Sheet.”

9.3 APPLICATIONS FOR PAYMENTS

Add the following sentence to Subparagraph 9.3.1:

"The form of Application for Payment, duly notarized, shall be current authorized edition of AIA Document G702, Application and Certification for Payment, supported by a current authorized edition of AIA Document G703, Continuation Sheet."

Add the following Sub-subparagraphs to Subparagraph 9.3.1:

9.3.1.3 The Owner shall pay 90 percent of the amount due the contractor on account of progress payments. Retainage shall be held individually by Subcontractor or Material Supplier only when required by prevailing law. Release of retainage shall be upon final completion and acceptance of the Work covered under the contract, or with acceptable substitute security tendered to the Owner by the Contractor as prescribed by prevailing law. Form of substitute security shall be acceptable by Owner.

9.3.1.4 Waivers of Lien: Each monthly request for payment shall be accompanied by waivers of lien (one original and two copies) covering the full amount paid by the Owner to the Contractor the immediate previous month, and in no case shall more than thirty (30) days elapse between receipt of payment from the Owner and the submission of waivers of lien. Such waivers shall be submitted by the Contractor and each Subcontractor to the extent involved. Contractor shall deliver to the Owner final waivers of lien and guarantees with last certificate for payment.

9.4 CERTIFICATES FOR PAYMENT

Add the following Subparagraphs to Paragraph 9.4:

9.4.3 No Payment made by the Owner shall be considered as evidence of satisfactory performance of the work, either wholly or in part, nor construed as acceptance of defective work or as relieving the Contractor from its full responsibility under the agreement.

9.8 SUBSTANTIAL COMPLETION

Revise subparagraph 9.8.2 as follows: "….the Architect shall prepare a comprehensive list of items…"

Delete Subparagraph 9.8.3 and substitute the following:

9.8.3 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect, the Owner may make payment,

reflecting adjustments in retainage, if any, for such Work or portion thereof as provided in the Contract Documents.

The Owner retains sole right to retain the full retainage, plus such amounts as the Architect shall determine for all incomplete work and unsettled claims, on the entire work of the project until final completion of the project.

Acceptance of Contractor of the final payment under the agreement shall constitute a waiver of all claims which Contractor may have against the Owner.

Add the following Sub-subparagraph to Subparagraph 9.8.3:

9.8.3.1 Except with the consent of the Owner, the Architect will perform no more than TWO (2) site reviews to determine whether the Work or a designated portion thereof has attained Substantial Completion in accordance with the Contract Documents. The Owner shall be entitled to deduct from the Contract Sum amounts paid to the Architect, per 9.8.2, for any additional site reviews of completed work.

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Sub-subparagraph to Subparagraph 10.2.2:

10.2.2.1 The Contractor, subcontractor, sub-subcontractor, and any person, firm or entity involved in any aspect of the execution of the work of the project shall be experienced in the type of work or trade to be performed, shall be suitably trained and supervised as necessary, and shall be responsible for performing all work in accordance with all applicable laws, ordinances, rules, regulations and lawful orders of federal, state and local public authorities, and public or private utility companies bearing on the safety of persons or property or their protection from damage, injury or loss. The Contractor shall be required to contact public authorities, and public or private utility companies prior to execution of any work as required by the appropriate authority, for review and approval prior to starting work.

Add the following Subparagraphs to Paragraph 10.2:

10.2.9 The Contractor shall provide temporary weather tight enclosures for openings, and shall keep building secure and watertight.

10.2.10 The Owner reserves the right to approve or deny access to the site of any persons, subcontractor and/or supplier.

It is the responsibility of the Contractor to provide for a safe work environment for all of its employees and subcontractors. The Contractor shall comply with all local, state, and federal safety regulations and regulatory agencies.

If the Owner deems any situation resulting from the Contractor activities to be an emergency, the Owner has the right to correct the situation and withhold cost from the Contract amount

10.2.11 The Contractor, subcontractor, sub-subcontractor, material supplier and all parties directly or indirectly involved in the work of the project shall not incorporate any asbestos-containing materials in the work of the project.

ARTICLE 11 - INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

Add the following Subparagraphs to Paragraph 11.1.1:

11.1.1.9 Liability Insurance shall include all major divisions or coverage and be on a comprehensive basis including:

1. Premises Operations (including X-C/U).

2. Independent Contractor's Protective.

3. Products and Completed Operations.

4. Personal Injury Liability with Employment Exclusion deleted.

5. Contractual - including specified provision for Contractor's obligation under Paragraph 4.18.

6. Owner, non-owned and hired motor vehicles.

7. Broad Form Property Damage including Completed Operations.

8. Umbrella Excess Liability.

11.1.1.10 The Contractor, subcontractor, sub-subcontractor and material supplier or distributor shall provide all necessary property insurance coverages to fully cover all materials and equipment stored off site and during transit.

Delete Subparagraph 11.1.2 and substitute the following:

11.1.2 The insurance required by subparagraph 11.1.1 shall be written for not less than the limits of liability specified in Appendix "A", following the Supplementary Conditions, or as required by law, whichever is greater. Appendix "A" shall be included as part of the Contract Documents. All insurance coverage shall be written on an "Occurrence" basis, and shall be maintained without interruption from the commencement of work until date of final payment and termination of any coverage required to be maintained after final payment.

Add the following Subparagraph to Paragraph 11.1:

11.1.5 Each Subcontractor shall procure and maintain during the life of his contract, insurance of the type and in the same amount as listed in this Article. Certificates of Insurance shall be submitted by each Subcontractor to the Contractor no later than fifteen (15) days after the award of subcontract and prior to the commencement of his work. No Subcontractor shall be allowed to continue on site after the expiration of full insurance coverage.

11.3 PROPERY INSURANCE

Add the following sentences to Sub-subparagraph 11.3.1.1:

"The Owner's Property Insurance will not include provisions for theft, mysterious disappearance, or glass breakage. The Contractor is hereby made aware that he will be held responsible for a complete job in every detail, and shall replace any contract items which are stolen, or which mysteriously disappear and shall replace any broken glass before Owner's acceptance."

Add the following sentences to Sub-subparagraph 11.3.1.3:

"This property insurance is written with a deductible of $_____ per occurrence with a deductible aggregate of $_____."

Delete Subparagraph 11.3.1.4 and substitute the following:

11.3.1.4 The Contractor shall at the Contractor's own expense provide insurance coverage for materials stored off the site after written approval of the Owner at the value established in the approval, and also for portions of the Work in transit until such materials are permanently attached to the Work.

Delete the third sentence in Subparagraph 11.3.9 and substitute the following:

"The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may read, or in accordance with a mediation award in which case the procedure shall be as provided in Paragraph 15.3."

Delete Subparagraph 11.3.10 and substitute the following:

11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection be made, mediators shall be chosen as provided in Paragraph 15.3. The Owner as fiduciary shall, in that case, make settlement with insurers in accordance with directions of such mediators. If distribution of insurance proceeds by mediation is required, the mediators will direct such distribution.

ARTICLE 12 – UNCOVERING AND CORRECTION OF WORK

12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

Add the following Sub-subparagraph to Subparagraph 12.2.1:

12.2.1.2 If the Contractor fails to correct such work within ten (10) days after receipt of written notice from the Owner or Architect, the owner shall have the work done and the cost thereof charged to the Contractor.

ARTICLE 13 – MISCELLANEOUS PROVISIONS

13.5 TESTS AND INSPECTIONS

Add the following Sub-subparagraphs to subparagraph 13.5.4:

13.5.4.1 Testing: General Contractor will retain professional materials testing company to provide testing for soil compaction, asphalt placement, concrete strength, reinforcing bar inspection, and steel erection. It will be the responsibility of the Contractor to notify the testing company twenty-four hours prior to necessary testing.

The testing company will make and collect concrete test cylinders. It is the Contractor's responsibility to notify the testing company of any on-site changes made to delivery of concrete.

The Contractor shall provide a schedule showing anticipated dates and durations for activities involving the testing company.

The Contractor shall not consider directives or suggestions from representatives of the testing company as an authorization for changes to the Contract, or for any action that may result in a change to the Contract or an extension of time.

13.5.4.2 Any other testing required will be the responsibility of the Contractor. Owner may require any special inspection, testing or approval of the Work not included under Subparagraph 13.5.1, or any more stringent inspection, testing or approval thereof, in which event it shall instruct Contractor to order such inspection, testing or approval, and Contractor shall advise Owner in a timely manner (in writing, if practicable) as in Subparagraph 13.5.1. If such inspection or testing reveals any failure of the Work or the performance thereof to comply with the more stringent of:

(a) the requirements of the Contract documents
(b) applicable industry standards, or
(c) applicable laws, ordinances, rules, regulations, or orders of any public or quasi-public authority having jurisdiction,
(d) and/or reveals any defect in the Work, Contractor shall bear the costs of such inspection or testing and all costs to correct the Work to the satisfaction of Owner, including compensation for any additional Architect/Engineering, management, or administrative services made necessary by such failure, the latter of which, if incurred by Owner, may be offset by Owner against any amounts then or thereafter due to Contractor. If such inspection or testing proves that the Work was performed properly, Owner shall bear the costs of such inspection or testing.

ARTICLE 14 – TERMINATION OR SUSPENSION OF THE CONTRACT

14.4 TEMINATION BY THE OWNER FOR CONVENIENCE

Delete Subparagraph 14.4.3 and substitute the following:

14.4.3 In case of termination for the Owner's convenience, the Contractor shall be entitled to receive payment for work executed and costs incurred by reason of such termination to the date of termination.

ARTICLE 15 – CLAIMS AND DISPUTES

4.3 CLAIMS AND DISPUTES

Subparagraph 15.1.3 -- Revised to read as follows:

15.1.3 Continuing Contract Performance. Pending final resolution of a Claim including mediation, unless otherwise agreed in writing the Contractor shall proceed diligently with

performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

Add the following Sub-subparagraphs to Subparagraph 15.1.5

15.1.5.3 Claims for increase in the Contract Time shall set forth in detail the circumstances that form the basis for the Claim, written notice as provided herein shall be given, the date upon which each cause of delay began to affect the progress of the Work, the specific number of calendar days increase in the Contract Time claimed, Justification for the requested extension and the probable effect of delay on the progress of the work as a consequence of each such cause of delay. The Contractor shall provide such supporting documentation as the Owner may require including, where appropriate, a revised construction schedule indicating all the activities affected by the circumstances forming the basis of the Claim. A request for time extension which requires an adjustment to Contract Sum which is due solely to the claim for extension of time shall only be considered when sufficient documentation, as determined necessary in the professional judgment of the Architect, is submitted for review.

15.1.5.4 The Contractor shall not be entitled to a separate increase in the Contact Time for each one of the number of causes of delay which may have concurrent or interrelated effects on the progress of the Work, or for concurrent delays due to the fault of the Contractor.

15.1.5.5 If the number of actual adverse weather delay days exceeds the number of days listed, the Contractor shall notify the Architect in writing that the adverse weather delay days have been met or exceeded. Claims for increases in the Contract Time due to adverse weather conditions shall be submitted on a monthly basis **only** and must be submitted by the end of the month following the adverse weather conditions. Failure to timely submit any such request to the Architect will constitute a waiver of any such Claim.

15.1.5.6 Adverse weather conditions are conditions that are considered abnormal for the applicable time of year and must have actually had an adverse effect on the Work in progress, and must be in excess of the 30-year Normals, Means, and Extremes, as published by the National Weather Service, applicable to the location of the Project.

Add the following sentence to Subparagraph 15.1.6:

"If, before expiration of 30 days from the date of execution for this Agreement, the Owner obtains by separate agreement and furnishes to the Contractor a similar mutual waiver of all claims from the Architect against the Contractor for consequential damages which the Architect may incur as a result of any act or omission of the Owner or Contractor, then the waiver of consequential damages by the Owner and Contractor contained in this Subparagraph 4.3.10 shall by applicable to claims by the Contractor against the Architect."

15.2 INITIAL DECISION

Subparagraph 15.2.1 -- Revised to read as follows:

15.2.1 Decision of Architect (Initial Decision Maker). Claims, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided in Paragraph 15.2. A decision by the Architect, as provided in Subparagraph 15.2.4, shall be required as a condition precedent to mediation or litigation of a Claim between the Contractor and Owner as to all such matters arising prior to the date final payment is due, regardless of

.1 whether such matters relate to execution and progress of the Work or

.2 the extent to which the Work has been completed.

The decision by the Architect in response to a Claim shall not be a condition precedent to mediation or litigation in the event

.3 the position of Architect is vacant,

.4 the Architect has not received evidence or has failed to render a decision within agreed time limits,

.5 the Architect has failed to take action required under Subparagraph 15.2.4 within 30 days after the Claim is made,

.6 45 days have passed after the Claim has been referred to the Architect or

.7 the Claim relates to a mechanic's lien.

Add the following Subparagraph to Paragraph 15.2.4:

15.2.4.1 If a Claim has not been resolved after consideration of the foregoing and of further evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within ten days, which decision shall be final and binding on the parties but subject to mediation. Upon expiration of such time period, the Architect will render to the parties the Architect's written decision relative to the Claim, including any change in the Contract Sum or Contract Time or both. If there is a surety and there appears to be a possibility of a Contractor's default, the Architect may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

15.3 MEDIATION

Subparagraphs 15.3.1 through 15.3.6, deleted, and replaced with the following:

15.3 DISPUTE RESOLUTION

15.3.1 In an effort to resolve any conflicts that arise during the design or construction phases of the project, the Owner and Architect agree that all disputes between them arising out of or

relating to this Agreement shall be first submitted to nonbinding mediation unless the parties mutually agree otherwise.

15.3.2 The Owner and the Architect further agree to include similar mediation provisions in all agreements with independent contractors and consultants retained for the project and to require all independent contractors and consultants also to include a similar mediation provision in all agreements with subcontractors, suppliers or fabricators so retained, thereby providing for mediation as the primary method for dispute resolution between the parties to those agreements.

15.3.3 Conflicts that arise after the date of Substantial Completion shall be first submitted to nonbinding mediation unless the parties mutually agree otherwise. If mediation is not agreed upon, resolution shall be by way of litigation.

END OF SECTION 000800

OUTLINE SPECIFICATION

DIVISION 001000 GENERAL REQUIREMENTS

001210 – Allowances:

Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when direction will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

At the earliest practical date after award of the Contract, advise Owner/ Architect of the date when final selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.

At Owner/ Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.

Purchase products and systems selected by Owner/ Architect from the designated supplier.

Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and under allowance shall be **included as part of the Contract Sum and not part of the allowance**.

Unused Materials: Return unused materials purchased under an allowance to manufacturer or supplier for credit to Owner, after installation has been completed and accepted.

If requested by Architect, retain and prepare unused material for storage by Owner. Deliver unused material to Owner's storage space as directed.

Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between purchase amount and the allowance, multiplied by Unit Price Quantities identified in Unit Prices. If applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.

Installation costs ARE TO BE INCLUDE IN THE CONTRACT sum. If requested, prepare explanation and documentation to substantiate distribution of overhead costs and other margins claimed. Submit substantiation of a change in scope of work, if any, claimed in Change Orders related to unit-cost allowances. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

001230 – Alternates:

Alternate: an amount proposed by bidders and stated on the bid form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if owner decides to accept a corresponding change either in the amount of

construction to be completed or in the products, materials, equipment, systems, or installation methods described in the contract documents.

Alternates described in this section are part of the work only if enumerated in the agreement.

The cost or credit for each alternate is the net addition to or deduction from the contract sum to incorporate alternate into the work. No other adjustments are made to the contract sum.

Procedures:

Coordination: revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into project.

Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

Notification: immediately following award of the contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

Execute accepted alternates under the same conditions as other work of the contract.

Schedule: a schedule of alternates is included at the end of this section. Specification sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

001330 - Shop Drawings:

Prior to fabrication and delivery, contractor must submit shop drawings/submittals and receive approval from the architect on the following products:

A. Windows,
B. All cabinetry,
C. Molding and trim,
D. All siding,
E. Stone,
F. Shingles,
G. Fencing,
H. Framing,
I. Sheathing,
J. Concrete,
K. Hardware,
L. Doors/ Frames,
M. Sheetmetal,

N. Plumbing,
O. Mechanical,
P. Electrical,
Q. Fire protection systems,

Failure to use this process is at contractor's own risk and architect reserves the right to have items removed or replaced, at no cost to the owner, which do not meet items specified.

001432 – Unit Prices:

DEFINITIONS

Unit price is **an amount incorporated in the Agreement, applicable during the duration of the Work as** a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

PROCEDURES

Unit prices include all necessary material, plus cost for delivery, installation, insurance, **applicable taxes,** overhead, and profit.

Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

List of Unit Prices: A schedule of unit prices is included on the bid form. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

001500 - Temporary Facilities and Controls
This work shall consist of the application of temporary measures throughout the life of the project.

001510 - Temporary Utilities
All connections and extensions required to provide temporary utilities shall be made by the Contractor at the Contractor’s expense.

001511 - Temporary Electricity

Contractor to provide and install temporary power for construction site. Connect to existing power service without disrupting local service requirements. Power feeder service characteristics shall be compatible with the service from which it is taken. Size, type and loading shall be per requirements as established by the National Electric Code (NEC). The contractor shall provide main service disconnect and over-current protection at a convenient location in accordance with the NEC. The Contractor shall provide power outlets for construction operations, with branch wiring and distribution boxes located as necessary and shall provide flexible power cords as required. Provide and install distribution equipment, wiring and outlets to provide single phase branch circuits for power and lighting.

001512 - Temporary Heating, Cooling, and Ventilating

Contractor to provide and install temporary heating, cooling and ventilation for construction site. Contractor to maintain system during construction, while exercising measures to conserve energy. Ventilate enclosed areas to assist cure of materials, to dissipate humidity and to prevent accumulation of dust, fumes, vapors or gases. Supplement with temporary fan units as required maintaining clean air for construction operation.

001512.6 - Temporary Lighting

Contractor to provide and install temporary lighting for construction site. Provide and install temporary lighting in all work areas sufficient to maintain a lighting level during working hours not less than the lighting level required by OSHA standards. As permanent lighting facilities are completed, they may be used in lieu of temporary facilities. Provide temporary lighting as required to satisfy safety and security requirements. Maintain a minimum illumination level of 30 foot-candles measured 3 ft. above floor in areas where finish trades are performing work

001520 - Construction Facilities

Field offices will be allowed on the site.

001521 - Sanitary Facilities

Existing facilities shall not be used. Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as will comply with laws and regulations. Temporary toilet facilities may consist of portable toilets. The number shall be based on number of workers, 1 toilet per 15 workers. Toilet facilities shall be kept supplied and clean and in sanitary condition until the completion of the work and then shall be removed from the site. Upon removal the site shall be properly cleaned and graded.

001530 - Temporary Construction

The contractor shall provide and maintain for duration of work all required temporary stairs, ladders, ramps, runways and hoists for use of all trades.

001540 - Construction Aides

The contractor to provide all construction aids needed during construction which shall include but not limited to; elevators, hoists, cranes, etc.

001542 - Temporary Scaffolding and Platforms

The contractor shall provide and maintain for duration of work all required temporary standing scaffolding. 'Independent tied' scaffolds will normally be provided for painting, pointing or other maintenance work. 'Putlog scaffolds', used for the construction of brick walls, have only one row of standards which are usually erected some 3’ 0” from the face of the wall, with the boards carried on horizontal members known as 'putlogs'. When used in new construction, the flattened ends of the putlogs are built into the bed joints as work proceeds and then withdrawn on completion, the resulting hole being pointed up.

001550 - Vehicular Access and Parking

Construct and maintain temporary roads accessing public thoroughfares to serve construction area. Arrange parking areas to accommodate construction personnel. Do not allow vehicle parking on existing pavement. When site space is not adequate provide additional off-site parking.

001560 - Temporary Barriers and Enclosures

The contractor shall provide barriers to prevent unauthorized entry into construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition. Install barricades and covered walkways required by governing authorities for public right of ways. When necessary install chain link fence around job site.

001570 - Temporary Controls

This work shall consist of the application of temporary measures throughout the life of the project to control erosion and siltation. Such measures shall include, but are not limited to, the use of berms, dikes, dams, sediment basins, fiber mats, silt fences, straw bales, washed gravel or crushed stone, mulch, grasses, slope drains, temporary seeding and other methods. Temporary erosion and siltation control measures as described herein, shall be applied to erodible material exposed by any activity associated with the construction and consistent with state and local control standard.

001580 - Project Identification

Within 15 days after the commencement of work, provide one project identification sign at the locations indicated. Maintain sign throughout the life of the project. On the sign, list two points of contact by name and telephone number.

001600 - Product Requirements

All materials shall be installed in strict accordance with the manufacturer’s written specifications or Material’s Institute Standards. Where the manufacturer’s recommended details are used, the manufacturer shall be responsible for the performance of their product. All Items not specifically mentioned that are required to make the work complete and operational shall be included.

Installation and Storage - All materials, supplies and equipment shall be installed per manufacturer’s recommendations and per applicable codes and requirements. Material stored on site shall be protected from damage by moisture, wind, sun, abuse or any other harmful effects.

001640 - Owner-Furnished Products

Contractor is not responsible for products furnished by the owner that are damaged prior to opening or receiving. Additional work required to install owner furnished products will be charged to the owner and due upon installation.

001700 - Execution and Closeout Requirements

The execution of all work shall be in strict accordance with these specifications and manufacturer's written specifications or Material's Institute Standards. Where the manufacturer's recommended details are used, the manufacturer shall be responsible for the performance of their product. All work not specifically mentioned that is required to make the work complete and operational shall be included.

Codes - Construction shall comply with all applicable national, state and local building codes. It is the responsibility of the Contractor to ensure compliance with said codes and modify the specifications as needed to comply with such codes.

Measurements - The Contractor shall check and verify all dimensions and conditions before proceeding with construction. Do not scale drawings. Noted dimensions take precedence.

Workmanship - Workmanship shall conform to the best and highest standards of quality in each trade and shall include all items of fabrication, construction and installation. All work shall be completed by skilled tradesmen and mechanics. Installation of all equipment and materials shall be in strict accordance with manufacturer's recommendations.

Insurance - Builders Risk Insurance shall be maintained by the contractor during the course of construction until final acceptance by the owner. All bonding and insurance requirements shall be coordinated with the Owner prior to beginning construction. All contractors shall provide and be solely responsible for necessary barricades and safety precautions, and strictly adhere to all governing codes on safety, including the OSHA Act.

001710 - Local Conditions

Building requirements shall be in compliance with all applicable local and regional Ordinances, codes, construction techniques and weather conditions.

001740 - Cleaning and Waste Management

Construction site to be in a clean and orderly condition throughout the construction process. Clean interior spaces prior to the start of finish painting and the application of other finishes. At the conclusion of construction, the project shall be properly cleaned. This should include but not be limited to; cleaning the interior and exterior glass, surfaces exposed to view, remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surface areas, sweep and mop all tiled surfaces, etc. Replace filters of operating equipment. Clean equipment and fixtures to a sanitary condition. Clean exterior such as debris from roof, gutters, landscape areas, driveways and walks, etc. Remove all waste and surplus materials.

001760 - Protecting Installed Construction

Contractor to protect all installed construction. If products or materials come with a protective coating, contractor shall maintain protective coating until construction is complete. Contractor shall replace any items that become defective or damaged.

DIVISION 020000 EXISTING CONDITIONS

020000 - Existing Conditions

Contractor shall review construction documents and provide necessary site work, excavation and grading as required to construct said project.

024100 - Demolition

Provide all labor, materials and equipment to perform the required demolition of existing pavement no longer needed for access or parking, abandoned utilities and structures which interfere with the proposed construction. When required install chain link fencing around the area of demolition work. Protect all adjacent areas not to be demolished. Remove all debris from job site before construction begins.

DIVISION 030000 CONCRETE

030000 - Concrete

Contractor shall review construction documents and provide labor and materials pertaining to concrete and foundations as required in said documents and as specified herein, while complying with all applicable building codes.

030500 - Common Work Results for Concrete

All concrete work shall be designed on the basis of “Strength Design” in accordance with ACI 318 “Building Code Requirements for reinforced Concrete.” Concrete work shall be proportioned in accordance with ACI 301 “Specifications for Structural Concrete” and ACI 211.1 “Recommended Practice for Selecting Proportions for Normal Weight Concrete”. Concrete slabs, patios, driveways, walls and foundations shall be constructed of a minimum 3000 to 3600 psi concrete, 28-day test, with a 4” minimum to 6” maximum slump maximum, air-entrained to 5 - 8%. No additional water shall be added to concrete after slump test is recorded. Cylinders shall be taken from every batch truck and tested for compressive strength at 7 and 28 days. Concrete should be a mix of high-grade Portland cement, clean sand or granular fill and washed gravel or crushed stone as coarse aggregate per ACI 530. Maximum aggregate size shall be ¾”. All aggregates shall conform to ASTM C33. Gravel should be well graded and not exceed 1 1/2” in size. Water shall not exceed 5 1/2 gallons for each bag, unless sand is very dry. Concrete shall be mixed using an approved batch machine or mobile mixer until uniform in color and providing a 4” minimum to 6” maximum slump.

031000 - Concrete Forming and Accessories

Provide all labor, materials and equipment necessary for the completion of the plain and reinforced concrete called for on the plans. Concrete when deposited shall have a temperature

ranging between a minimum of 50 degrees Fahrenheit and a maximum of 90 degrees Fahrenheit.

Construction of Forms - Construct wood forms of sound material, and of the correct shape and dimensions, constructed tightly and of sufficient strength. Brace and tie the forms together. Make joints and seams mortar tight. Install leakage control materials in accordance with manufacturer's installation instructions.

Chamfered Corners - Unless otherwise noted, provide chamfered corners on all exposed corners. Provide 3/4-inch moldings in forms for all chamfering required.

Embedded Items - make provisions for sleeves, anchors, inserts, water-stops and other features.

Form Ties - Use form ties of sufficient strength and in sufficient quantities to prevent spreading of the forms. Place ties at least 1 inch away from the finished surface of the concrete. Do not use ties consisting of twisted wire loops. Leave inner rods in concrete when forms are stripped. Space all form ties equidistant and symmetrical and line up both vertically and horizontally.

Cleanouts and Access Panels - Provide removable cleanout sections or access panels at the bottom of all forms to permit inspection and effective cleaning of loose dirt, debris and water material. Clean all forms and surfaces to receive concrete of all chips, sawdust, and other debris and thoroughly blow out with compressed air just before concrete is placed.

031513 - Concrete Accessories

Provide 1/2" thick by 4" wide bituminous expansion joint material at all surfaces where slabs adjoin raised slab, crawlspace or basement stem-wall CMU or poured foundations.

032100 - Reinforcing Steel

Reinforcing steel (rebar) shall be minimum ASTM A615, grade 40. All reinforcement splices shall be as follows: #5 bars 25" minimum, #7 bars 35" minimum. All rebar (reinforcing steel) shall be located 3" clear from bottom and side of footing and 2" clear from top. Locate vertical rebar (reinforcing steel) 4'-0" on center (OC). All reinforcement splices shall be in accordance with ACI 318 for "Strength Design." All reinforcement steel shall be accurately placed, rigidly supported, and firmly tied in place with bar supports and spacers in accordance with ACI 301 and ACI 318.

032200 - Welded Wire Fabric Reinforcing

Welded wire fabric shall conform to ASTM A105 and be located in the center of the depth. Install at slab on grade conditions.

033000 - Footings

Center all footings on walls, piers, or columns above unless otherwise noted. All footings shall rest on undisturbed virgin soil, tested for 95 percent compaction, or 3/4" stone compacted in 12"

lifts to 95 percent density if fill is required. Footings to be constructed of concrete strength as shown on the structural drawings. Provide rebar (reinforcing steel) continuous through footers as shown on the structural drawings. Provide #5 rebar (reinforcing steel) corner bars at all corners and intersections of footers, beams and walls. Each side should overlap 2'-0", with a 90-degree bend. Footers shall bear on undisturbed soil and kept free from ground water. Underneath load-bearing walls and interior or exterior column footings, thicken slabs within a 1' radius to 12" thick.

033001 - Slab Foundations

Concrete floor slabs shall be constructed of 3000 psi concrete, 4" thick reinforced with 10 gauge 6" x 6" welded-wire mesh continuous and rebar (reinforcing steel) as per plans. Place slabs over well-compacted granular fill compacted in 12-inch lifts to 95 percent density per AASHTO T-180 Proctor, and a 4 or 6 mil vapor barrier. Construction or control joints shall be provided in slabs on grade so that the maximum area between joints shall be 400 sq. ft. and the length of that area is not more than twice the width. Provide smooth steel trowel finish for all interior slab areas and garage surfaces. Provide broom finish texture for all exterior slabs. Slope exterior patio or porch slabs away from building at 1/4" of drop in elevation for every 1'-0" in distance. At garage slab, provide positive drainage and taper lip at garage/overhead door.

033500 - Concrete Finishing

Repair of surface defects shall begin immediately after removal of form or pouring of slab foundation. Provide smooth steel trowel finish for all interior slab areas and garage surfaces. Provide broom finish texture for all exterior slabs. Slope exterior patio or porch slabs away from building at 1/4" of drop in elevation for every 1'-0" in distance. At garage slab, provide positive drainage and taper lip at garage/overhead door. Patch all voids and depressions exceeding 3/8 inch in any direction.

DIVISION 040000 MASONRY

040000 - Masonry

Contractor shall review construction documents and provide labor and materials pertaining to masonry work as required in said documents and as specified herein, while complying with all applicable building codes.

047300 – Manufactured Stone Veneer

This work includes manufactured stone veneer and trims units as shown on the drawings. Install in accordance with manufacturer's instructions. Install manufactured stone masonry veneer in accordance with MVMA Installation Guide for Adhered Manufactured Stone Veneer, ASTM C 1780 and applicable Codes. Install/Apply Related Materials in accordance with type of substrate and manufactured stone veneer manufacture's installation instructions. General:

Walls: Provide with Blended Color / Texture specified.

Special Shapes: Color to match stones specified.

a. Provide Stones manufactured specifically for installation at corners where located on the Drawings.

Mortar Joints a. Style: Standard 1/2 inch tooled

Include weep screeds, metal trims and flashings taped to substrate sheathing material.

Substrate to be combination of mortar and lathe for a standard watertight system.

DIVISION 050000 METALS

050000 - Metals

Contractor shall review construction documents and provide labor and materials pertaining to metal work as required in said documents and as specified herein, while complying with all applicable building codes.

050523 - Metal Fastenings

Provide 1/2" diameter x 10" long anchor bolts in filled cells and poured concrete walls at 48" on center (OC) maximum at all window locations and on each side of exterior doors. For slabs, install appropriate tie downs or straps as required by applicable building codes.

051010 - Structural Metal Framing

All structural metal for beams and plates shall be in accordance with ASTM A-36. All structural steel for steel columns shall comply with ASTM specification A-53 Grade B or A-501. Structural steel columns shall be 3" minimum inside diameter, unless noted otherwise. All steel details and connections shall be in accordance with the requirements of the latest AISC specifications and latest revisions. Provide all required anchor bolts, bearing plates and metal ties required by standard practice and as noted below.

Tubular Steel shall be in conformance with ASTM A500 Grade B
Steel pipe shall be in conformance with ASTM A-53, Type E or S, Grade A or B.
Cast Iron shall be in conformance with ASTM A-48, Class 30, unless otherwise noted.
Welding Electrodes shall be as permitted by AWS Code D1.0.

055000 - Metal Fabrications

Install metal detailing as specified on construction documents. Install metal gates, grilles, iron work, etc. to meet all applicable building codes, with appropriate detailing and patterns as shown in construction documents. Metal shall be shop built, welded together, cleaned thoroughly and painted with two coats of an anti-rust primer. After installation, apply an additional coat and anti-rust primer in preparation for finish coats.

DIVISION 060000 WOOD, PLASTICS, AND COMPOSITES

060000 - Wood, Plastics, and Composites

Contractor shall review construction documents and provide labor and materials pertaining to carpentry work as required in said documents and as specified herein, while complying with all applicable building codes.

061000 - Rough Carpentry

Lumber shall be of live, sound stock and properly dried. Pressure treated lumber shall be used where any lumber shall come into contract with concrete, masonry block or soil and when using as support members for decks, porches or balconies. Lumber for use at exterior shall have a maximum 12 percent moisture content, for dry climates 9 percent is recommended. Provide adequate bracing and shoring during the construction process. Studs and joists cut to install plumbing and/or wiring shall be reinforced by adding metal or wood structural reinforcing to strengthen member back to original capacity and maintain structural integrity. Holes bored shall not be larger than 1/3 the depth and not closer than 2" to the top or bottom of the joist.

Wood Species: as shown on the structural drawings.

061100 - Wood Framing

Exterior Walls - All exterior walls shall be constructed with 2"x 6" wood studs at 16" on center (OC), with single bottom plates and double top plates throughout. Provide solid blocking at mid-height of all walls. For exterior corner joints, install (3) 2"x 6"'s nailed together. Where interior partitions meet exterior walls, install 2 studs fastened together with 2"x 6" blocks approximately one foot long. One block is placed at the bottom, one at the top and one about center of the studs.

2"x 4" studs placed 16" on center (OC) - typical
2"x 6" studs placed 16" on center (OC) - for higher ceilings and higher insulation values

Where exterior openings occur on 2"x 6" exterior walls, provide structural headers designed with (3) pieces of 2"x 10" lumber with a 1/2" continuous plywood flitch plate glued and nailed between the 2"x 10" s. At window sills, provide a single piece of, 2"x 6" lumber. Provide double jacks or liners for openings 6'-0" wide or greater, unless otherwise noted. At exterior walls provide shear walls where shown and detailed on the structural drawings.

Fascia and Soffit - Provide and install smooth fiber cement panel fascia and soffit. See construction documents for complete architectural details. For wood soffit continuous aluminum soffit vents as required by applicable building codes and roofing manufactures guidelines for ventilation.

Interior Walls

All interior walls shall be wood studs, with single bottom plates and double top plates throughout. Provide solid blocking at mid-height of all walls which exceed 9'-0" in height.

2"x 4" studs placed 16" on center (OC) - typical

Roof Decking - Provide and install exterior sheathing of APA rated and code certified CDX plywood panels or OSB. Sheathing shall be installed with the face grain running across the rafters, vertical joints staggered. Nails shall be 6d or 8d common smooth, ring-shank or spiral

thread nails spaced 6” apart on the ends and 12” apart inside. Install with plywood “H” clips between each piece of decking, every 48”. Install one layer of moisture barrier 15# felt, overlapped a minimum of 6”.

Blocking – Provide wall and ceiling blocking as required for all equipment, accessories, devices.

Fireblocking/ draftstoping – Provide fireblocking and draftstoping as required by building codes.

061600 - Sheathing

Provide and install Wall sheathing with integral water-resistive barrier and air barrier manufactured from by Huber Engineered Woods LLC, Charlotte NC; Phone: (800) 933-9220; Website: www.zipsystem.com; www.huberwood.com

A. Provide 1” thick R-zip panels and 7/16” zip panels where shown. R-zip panels to be 1” thick with combination of Insulation and 7/16” sheathing installed around building thermal envelope whether shown or not. Zip panels to be used on columns, walls or other surfaces that are not part of the thermal envelope enclosing of the interior space. For locations beyond the thermal envelope, above or adjacent to the use of R-zip panels that require the exterior wall surface to remain aligned the use of R-zip panels may be required.

B. Fasteners, General: Size and type complying with manufacturer's written instructions for Project conditions and requirements of authorities having jurisdiction.

C. Self-Adhering Seam and Flashing Tape: Pressure-sensitive, self-adhering, cold-applied, seam tape consisting of polyolefin film with acrylic adhesive, meeting ICC-ES AC148, and tested as part of an assembly meeting performance requirements.

1. Provide Huber Engineered Woods; ZIP System Tape and –Stretch Tape.

D. Install sheathing panels in accordance with manufacturer's written instructions, requirements of applicable Evaluation Reports, and requirements of authorities having jurisdiction.

E. Air and Moisture Barrier: Coordinate sheathing installation with flashing and joint sealant sequencing and installation and with adjacent building air and moisture barrier components to provide complete, continuous air- and moisture- barrier.

061813 - Glued-Laminated Beams

For large spans, structural laminated beams will be required as set forth in the construction documents or by applicable building codes. Laminated timber is hereby defined to include engineered stress-rated products of wood members fabricated from 1” to 2” nominal thickness lumber glued face to face to a depth of four laminations or more.

Glue-lam Beams shall have a minimum bending design values (Fb) of 2400 psi and a modulus of elasticity of 1,800,000. Install with crown up.

Micro-Lam Lumber shall have a minimum bending design values (Fb) of 2,800 psi and a modulus of elasticity of 2,000,000 psi.

Parallam Beams shall have a minimum bending design values (Fb) 2900 psi and a modulus of elasticity of 2,000,000 psi

062000 - Finish Carpentry

All architectural trim and woodwork shall be No. 1 grade material suitable for appropriate finishes. Wood that will be stained shall be clear of knots with concealed joints.

062200 - Millwork

Moisture content for interior woodwork shall be 8-10 percent to reduce excess shrinking. Provide and install interior wood trim as shown in construction documents.

DIVISION 070000 THERMAL AND MOISTURE PROTECTION

070000 - Thermal and Moisture Protection

Contractor shall review construction documents and provide labor and materials pertaining to thermal and moisture protection work as required in said documents and as specified herein, while complying with all applicable building codes.

071313 - Felt

On all roof surfaces install a minimum 15, asphalt impregnated rooting felt. For roofs that are steeper than a 6:12 pitch use a single layer of felt. For roofs with less than a 6:12 pitch install a double layer of felt and overlap a minimum of 18". Overlap felt a minimum of 4" vertically and 12" horizontally. Continue felt 6" up all vertical surfaces and 4" over gutter and valley metal. Fasten all edges with large headed galvanized nails on 6" centers. Lay courses parallel with eaves. Do not stretch courses.

072000 - Thermal Protection

Effective R values shall be in accordance with local and state energy codes. Floor, walls and ceilings insulation shall be constructed with: batt, blanket, insulation.
All plumbing chases in interior and exterior walls shall be insulated with batt insulation for sound attenuation.

073113 - Asphalt Shingles

Provide 30-year Composite/Asphalt three tab, dimensional, shadow line shingles over one, layer of 15# felt. Minimum recommended pitch is a 4:12 slope. Support roof system with joist/rafter system or pre-engineered truss system to meet dead and live load requirements as specified by manufacturer.

Asphalt shingles shall be: GAF Timberline Prestique 30 or sim.

Ice and water shield, self-adhered roofing underlayment to be installed where shown on the documents. 3 ft wide rolls similar to “Grace Ice & Water Shield”.

074600 - Siding

Provide and install siding exterior in accordance with applicable building codes and manufacturers guidelines.

Fiber Cement Siding - Install siding by James Hardie or similar, as specified in construction documents. Provide all necessary starter strips, drip cap, corner detailing, etc. required by manufacturer and as stated in construction documents. Include manufacturer’s prefinished corner trims and smooth panels. Install all materials using manufacturer’s latest published installation instructions.

Overhangs and soffits – Install 5/16” smooth Hardie panel soffit material at all locations. Where shown install Hardie Porch beading panels with 1X3 composite trim around perimeter at the rear exit way. All other locations to have crown molding trim at perimeter.

076000 - Flashing and Sheet Metal

Install appropriate flashing at all joints of chimneys, dormers, walls, vent pipes and other connection points to prevent the infiltration of water. Flashing shall be assembled of 26-gauge minimum prefinished colors, corrosion resistant sheet metal. Valleys shall be wrapped with 20” wide galvanized flashing and extend 10” in each direction from center-line of valley. Use 4” wide x 4” high x 10’long galvanized flashing between wall siding and roof surfaces and step flashing between masonry and roof surfaces. Keep flashing concealed except where exposed on vertical surfaces or counter flashing.

077123 - Manufactured Gutters and Downspouts

Install metal gutters downspouts. Attach every 2’-6” on center (OC) with straps and/or fasteners. Metal should be 20-gauge aluminum prefinished with Kynar 500 for gutters and 24-guage for downspouts. Install expansion joints and all typical construction complying with SMACNA standards. All gutters to receive leaf guards.

077200 - Roof Accessories

Vents - Proper roof ventilation requires a minimum 1 sq inch of vent area for every 2.08 square feet of attic floor area. Provide a minimum of 144 square inches of free air ventilation for every 300 square feet of attic floor area. 50% of the roof ventilation should be located adjacent the roof peak with the other 50% located in the soffit area under the eaves to provide natural convection throughout the attic area. Check ventilation requirements with roof system manufacturer.

Ridge Vents - Install aluminum ridge vents at top of ridge for the removal of heated attic air. See construction documents for location. All ridge vents to have wind baffles.

079200 - Joint Sealants

Use a 50-year warranty silicon-based caulk at high expansion/compression areas, such as around chimneys, tile, ceramic, and around enamel and pre-fabricated tubs and showers. For

exterior windows, door frames, interior trim, woodwork and other paintable surfaces use a clear, colored Latex based caulk. Color shall match wood stain or paint.

DIVISION 080000 OPENINGS

080000 - Openings

Contractor shall review construction documents and provide labor and materials pertaining to the doors and windows as required in said documents and as specified herein, while complying with all applicable building codes. In all sleeping areas provide an operable egress standard window or door directly to exterior.

081100 - Metal Doors and Frames

Describe each exterior door used and specify in chart below. Allowances for all doors are stated in the Contract Documents.

081101 - Exterior Doors

All exterior doors shall be solid core, insulated and swing inside with weather-tight thresholds. Install black weather-stripping around all doors.

Standard Exterior Door - Fiberglass, insulated panel Fiberglas w/ ½ lite, 1 3/4" thick, with full weather-stripping and metal, ADA compliant threshold. Provide necessary hardware per door schedule below.

Location: Entry
Style: Raised Panel, ¾ lite w/ wood texture.
Specify: 3'0"x 6'8" similar to Masonite, Belleville 1 panel Hollister Entry Door.

081400 - Interior Doors

Interior doors shall be pre-hung split-jamb units, including casing on both sides of the door.

Standard Interior Door - Wood door, solid core. Provide necessary hardware per door schedule.

Type: Solid core
Style: per door types on documents.
Type: 2 panel, smooth
Material: Masonite decora,
Specify: 3'0"x6'8" Similar to Masonite, raised panel Door

Interior Door Frames - Install pre-hung split-jamb units with interior casing, interior casing as shown on documents for paint finish.

085000 - Windows

Confirm that openings are compliant with all applicable building codes concerning egress, lighting and ventilation requirements. Temper all glass at locations required by building codes.

Provide and install necessary windows and appropriate hardware to operate and lock windows. Hardware Finish shall be: white or brushed stainless.

Windows:

Drawings are based on Anderson "Silverline" V1 series vinyl windows.
Frame: vinyl
Style: single-hung, fixed.
Glazing options: Clear Glazing
Insulation options: Double,
Options:
Low-E coating: Yes
Gas-Fills: Yes
Specify: Verify current window size and type, replace with same type.

085166 - Metal Window Screens

Exterior frames shall be a metal finish with joints welded and sanded smooth. Wire mesh shall be aluminum "charcoal". Screens will be installed for easy removal as recommended by manufacturer's guidelines.

087100 - Door Hardware

Finish hardware shall include materials as shown on drawings at all doors. Specific doors will require connection to access control system. Fire doors are also shown on hold-open.

Type: lever door hardware.
Finish: Brushed stainless
Door Hardware: see schedule on drawings,

088300 - Mirrors

Install mirrors as noted in construction documents. Install with silicon sealant and spacer strips per manufacturers recommendations.

DIVISION 090000 FINISHES

090000 - Finishes

Contractor shall review construction documents and provide labor and materials pertaining to the finishes as required in said documents and as specified herein, while complying with all applicable building codes.

092900 - Gypsum Board

Gypsum board must be held firmly against the framing while fastening to avoid later movement of gypsum board on the shank of the nails or screws.

Nails or Screws: Nails and screws shall be a minimum 3/8" and a maximum of 1/2" from edges and ends of wallboard and the heads shall be seated slightly below the surface without breaking the paper. Nails shall be spaced not to exceed 7" on ceilings or 8" on sidewalls. Head diameter shall be a nominal 1/4" with the length 1 1/2" to penetrate a minimum of 7/8" into nailing

member. Nails shall meet the minimum requirements of ASTM C514 and may include coated, etched treated or annular ring shanks to improve withdrawal resistance. Drywall screws shall meet the minimum requirements of ASTM C1002. Bugle-shaped heads shall be 0.315" in nominal diameter and contain a No. 2 Phillips driving recess. Type "W" screws are designed for easier fastening in wood.

Joints: At gypsum wallboard joints install a 2" strong, cross threaded tape with a cross tensile strength of 45 lbs per lineal inch. Press a strong, good quality tape firmly onto sheathing joints and around openings, imbedded in joint cement. At corners and angles, install metal corner beads as specified by manufacturer. If corners are rounded, install corner reinforcement as required. Spread gypsum wallboard mud at all tape joints, corner beads, nails and screw penetrations and where a smooth surface is needed. Apply second coat of wallboard mud after a minimum 24 hours. After drying (minimum 48 hours), sand all joints and other areas to a smooth consistent surface.

Interior Walls: Sheath walls with 5/8" gypsum wallboard, either vertically with long edges parallel to framing, or horizontally with long edges at right angles to framing members. Apply one layer of 5/8" x 4' x, 8', 9', 10' or 12' foot lengths to all wall surfaces. Offset joints between layers at least 10".

Ceilings: Apply a single layer of 5/8" gypsum wallboard across the supports and fasten with nails or screws. Offset joints between layers at least 10". Nails are spaced 6" on center (OC) with 1 1/4" heads. Screws are spaced 12" on center (OC). Ceiling finish shall be smooth.

Fire-Rated Gypsum Wallboard: where shown and around gas water heaters and as required by applicable building codes, install 5/8" Type "X" fire-rated gypsum wallboard. Nails shall be 1 3/4" long, spaced a maximum of 4" on center (OC) around perimeter and 8" on center (OC) in the field of the board.

Water Resistant Gypsum Wallboard: Around showers, tubs, whirlpools, or as required by applicable building codes, install 5/8" water resistant drywall (green board).

095000 - Ceilings

Ceilings shall have a smooth finish. See Construction Documents for information on the construction of the Ceiling details.

096000 - Flooring

Contractor shall properly clean all surfaces to be covered and install appropriate underlayment or preparation per manufacturers recommendations.

Vinyl sheet flooring
As specified on the documents,

Adhesives Waterproof,

Leveling and patching compound Latex type recommended by flooring manufacturer.

Resilient wall base, Style as scheduled, provide standard shapes as required for inside and outside corners.

Resilient accessories Vinyl resilient flooring adaptor, between differing materials.

097000 - Wall Finishes

Walls shall be clean and free of defects such as cracks or unfinished joints prior to installation of wall finishes. If mildew is evident, mildew must be removed and surface properly treated to inhibit further mildew growth.

099000 - Painting and Coating

Prepare each surface to receive scheduled work as set forth below.

099113 - Exterior Painting

All nail heads shall be set below the surface and finished smooth. If mildew is evident, the mildew must be removed and surface treated to inhibit further mildew growth. Clean and prep surfaces to be painted per manufacturer before application of an y paint products.

1. Exterior
    a. Metals — 1 coat rust inhibiting primer and, 2 coats of semi-gloss enamel paint
    b. Ceilings — 1 coat primer and, 2 coats of flat enamel paint
2. Interior
    a. Metal — 1 coat rust inhibiting primer and, 2 coats of semi-gloss enamel paint
    b. Ceilings — 1 coat primer and, 2 coats of flat latex paint
    c. Walls — 1 coat primer and, 2 coats of eggshell enamel paint
    d. Wood ptd — 1 coat primer and, 2 coats of semi-gloss enamel paint

099123 - Interior Painting

All nail heads shall be set below the surface and finished smooth. Joints should be taped and covered with a suitable drywall joint compound. Sand the spackled nail heads and joint compound smooth and dust well before priming. Interior walls shall receive a primer coat and two coats of flat or eggshell paint. Surfaces shall be sanded before each finish layer is applied.

099300 - Interior Wood

Wood surfaces shall be sanded smooth before finish is applied. Putty areas with a wood-based filler where nails or other defects appear in the surface.

DIVISION 100000 SPECIALITIES

100000 - Specialties

Contractor shall review construction documents and provide labor and materials pertaining to the specialties as required in said documents and as specified herein, while complying with all applicable building codes.

102000 - Aluminum louvers

furnish and install where indicated on the drawings extruded aluminum louver as manufactured by construction specialties, Inc. Or similar. Louvers shall be fabricated form .050" (1.27 mm) thick aluminum sections, 6063-t52 alloy.

Blades to be vertical type rigidly secured in place. All frames to be mitered at corners and reinforced with corner brackets. Standard baked on enamel finish.

102816 - Bath Accessories

Contractor shall install accessories as shown on the drawings. Install per manufacturer's strict installation instructions.

105700 - Wardrobe and Closet Specialties

Install shelving as indicated on construction documents for all closets, storage areas and pantries. Metal shelving shall be fabricated of heavy-gauge vinyl coated welded steel rod with deck rod spacing having a maximum distance of 1". Provide supports every 3'-6" maximum on center (OC). In coat closets where shown provide a combination wire shelf and clothes rod.

DIVISION 110000 EQUIPMENT

110000 - Equipment

Contractor shall review construction documents and provide labor and materials pertaining to the equipment as required in said documents and as specified herein, while complying with all applicable building codes.

123000 - Casework

Install pre-fabricated cabinetry as specified in construction documents. Dimensions of base cabinets shall be: refer to drawings. Provide concealed or decorative hinges and cabinet hardware as specified in finish schedules.

1. All hardware to be brushed stainless.
2. Pulls: to be selected by owner.
3. Shelves: Provide minimum 1 shelf per cabinet or 12" on center vertically. Provide adjustable pin construction with 20% extra stock.
4. All cabinets in public spaces to be stained premium grade wood with style as selected by manufacturer. Cabinetry in the Nurse & Laundry to be plastic laminate as selected from full range of laminates.

5. All countertops in public spaces are to be solid surface per drawings and all others plastic laminate.

DIVISION 130000 SPECIAL CONSTRUCTION

130000 - Special Construction

Contractor shall review construction documents and provide labor and materials pertaining to the specialty systems as required in said documents and as specified herein, while complying with all applicable building codes.

DIVISION 310000 EARTHWORK

311000 - Site Clearing

The area of clearing shall be maintained within the limits shown on the appropriate site plans.

Soil Bearing - Foundation designs are based on a soil bearing value to be determined by soils report. Foundations and slabs are designed to uniformly bear on well-compacted, well-drained non-expansive soils. A certified soils engineer shall review foundation designs and building loads and compare with subsurface soil investigation. Should on-site observations show that foundation designs are not satisfactory, a structural engineer should be contacted immediately to redesign foundations to accommodate conditions.

311100 - Clearing and Grubbing

Clear and grub the construction site. Grade building site with appropriate soils. Existing trees to remain shall be marked prior to clearing and protected to prevent damage. If any damage is done to walkways, driveways, etc, needed repairs shall be provided by the contractor. Repair or replace any damaged vegetation or terrain that is indicated to be protected or is more than eight feet from the edge of any construction.

312000 - Earth Moving

Excavate bottom of all foundation walls and footings at building perimeter a minimum of 12" below frost line and 20" wide, (check with local building officials for frost line level requirements). Base of footings shall extend down to undisturbed virgin soil which has been compacted to 95 percent proctor density. All excavation shall be to a level below existing demolition debris. Board form all footing as required by soil conditions.

At slab foundations, compact sub-grade under slabs to a minimum 95% density. Compact backfill areas not under slabs or foundation to a minimum 90% ASTM D-689. Sub-base directly under concrete slabs on grade shall be a minimum of four inches of compacted granular fill.

312200 - Grading

Carefully remove loam and topsoil to be incorporated in the finished work and store separate from the other excavated material. Failure to isolate loam and topsoil from the other excavations shall require that said soils not be used as topsoil.

312213 - Rough Grading

Prior to commencement of earthwork, perform such soil and rock removal and filling as may be required to facilitate the progress of the work and bring all elevations to the rough grade lines indicated on the Contract Documents. Fill or backfill as required.

312219 - Finish Grading

Keep exterior finished grade a minimum of 6" below finished floor elevation (see construction documents for exact locations) by backfilling with appropriate soils. Provide swales with positive outfall and slope grade away from building to allow water to drain away from the building foundation. Do not backfill against foundation until project is completely framed and roof structure is in place. Soil type of fill shall be specified by Geotechnical Engineer.

312300 - Excavation and Fill

Backfill material to be used from the excavations shall be of such nature that after it has been placed and properly compacted, it will make a dense, stable fill. It shall not contain vegetation, masses of roots, stones over 3-inches in diameter, or porous matter and shall not be saturated. Organic matter shall not exceed minor quantities and shall be well distributed.

312316 - Excavation

Carry out the excavation, dewatering, sheeting and bracing in such manner as to eliminate any possibility of undermining or disturbing the foundations or any existing structure or any work previously completed.

Excavate pipe trenches to the necessary depth as shown on plans. Trenches over 5 feet in depth shall be properly sloped, shored, braced or otherwise supported in conformance with the OSHA Construction Safety and Health Standards.
Excavate trenches to provide a uniform and continuous bearing and support for the pipe and appurtenant structures on solid and undisturbed ground and at the specified grade at every point.

Excavation for structures and pipelines shall include the disposal of materials unsuitable for reuse for backfill. Excavation activities shall include the stockpiling of suitable materials which shall be incorporated into the project at a later date of different location.

312319 - Dewatering

At all times during construction - provide, place and maintain ample means and devices with which to remove promptly all water entering trenches and other excavations. Keep excavations dry until the structures, pipes and appurtenances to be built therein have been completed and backfilled. Dispose of all water pumped or drained from the work without interference with other work, traffic or injury to public or private property. Prevent siltation of storm water facilities or receiving waterways.

312323 - Select Borrow

Material needed in addition to that available from construction operations shall be defined as select borrow. Select borrow shall consist of durable natural granular material or granular

aggregates mixed or blended with sand, stone dust, soil or other filler materials to provide a well graded mixture meeting the requirements herein specified.

These materials shall be free from vegetable or organic matter, lumps or an excessive quantity or clay or other objectionable or foreign substances, but may contain a maximum of ten percent of shale by weight.

The size and gradation of the material shall range from stone no larger than 3 inches across its maximum dimension to soil passing a No 200 sieve. The gradation shall be well dispersed through the borrow.

312323.13 - Backfill

Correct any part of the trench bottom excavated below the specified grade with approved materials and thoroughly compact.

Complete all backfilling to the dimensions and levels shown on the construction documents. Where excavated material or any portion thereof is deemed unsuitable for backfilling material, procure and place approved select borrow materials.

Backfill as promptly as is consistent with non-damage to the installed structures. Do not place frozen material in the backfill.

No material shall be placed or compacted when it is too wet or frozen or when the sub-grade or previously placed material is too wet or frozen.

312500 - Erosion and Sedimentation Controls

Clear the top layer of soil and place in a designated area for use at the end of the project. Provide swales with positive outfall, and slope grade away from building to allow water to drain away from the foundation. Backfill around building with subsoil graded free of lumps larger than 6”, rocks larger than 3” and debris. Keep finished grade elevations a minimum of 6” below finished floor elevation (see construction documents for exact locations. Do not backfill against foundation, until home is completely framed and roof structure is in place.

313116 - Termite Control

If required, Foundations shall be pre-treated under all slabs and crawlspace areas between vapor barrier and granular sub-base to conform with HUD minimum standards and applicable building codes. Treatments shall not be made when soil is excessively wet or after heavy rains. Contractor shall provide a one-year renewable warranty.

313116.19 - Termite Control Barriers

At pier and perimeter foundations, install continuous flashing on all sides and top surface to prevent sub-terrain termites from penetrating the wood structure.

315000 - Excavation Support and Protection

Install excavation support systems for safety preservation of existing improvements. Design criteria of support systems shall consider all loads in a manner which will allow the safe and expeditious construction of permanent structures without movement or settlement of the ground.

DIVISION 320000 EXTERIOR IMPROVEMENTS

320190 - Operation and Maintenance of Planting

All plants shall be kept in healthy, growing condition by replacement of dead or dying plants where necessary, by watering, weeding, cultivating, pruning, spraying, trimming, protection from wind, and by performing any other necessary operations or maintenance for a period of 30 days or until acceptance of the planting at the time of the final inspection. A final weeding of all plant areas shall be made immediately prior to final inspection. Newly planted trees shall be pruned as necessary. All dead branches shall be removed. Rootstock shoots from grafted material shall be removed.

320190.13 - Fertilizing

Commercial fertilizer to mix with backfill soil shall be ammonium phosphate 16-20-0 applied at twenty (20) pounds actual nitrogen per 1000 square feet (12.5 pounds of ammonium phosphate applied to each 1000 square foot area). Use Agriform tablets at twice label recommendations for tree and shrub materials. Fertilizer will be applied for seeding areas disturbed by clearing operations. Spread soil conditioners and fertilizers and thoroughly incorporate by rototilling work into topsoil to a depth of 4". Rake topsoil until the surface is finely pulverized and smooth.

321313 - Concrete Pads and Walks

Provide light duty paving for pavements on sub-grade compacted to 98 percent density. Consult site plan for additional information. Expansion joints shall be installed as in standard concrete practices. Control joints shall be installed at pre-determined locations no later than 12 hours after installation.

Design mix to produce normal-weight concrete consisting of portland cement, aggregate, air entraining admixture and water to produce the following properties:

Compressive strength: 4000 psi, minimum at 28 days. Slump range: 3 inches air content: 5 to 8 percent

Contraction joints: construct at a depth equal to at least 1/4 concrete thickness using tooled joints.

Expansion joints: extend joint fillers full width and depth of joint and not less than 1/2" or more than 1" below finished surface. Fill with sealant.

322832- Dry-set masonry retaining wall

Provide masonry units from versa-lok wall system as distributed by f.f. kkchner, inc. Install on compacted granular fill using versa-tuff pins and geogrid fabric. Backfill as required. Provide solid cap units.

323000 - Site Improvements

Provide and install landscaping accessories as specified in construction documents. Edging materials, tree grates, etc.

323100 - Fences and Gates

Provide and install fence and gates at locations shown in construction documents. Support as required by manufacturer. Installation of fencing shall not be started until final grading has been completed. Posts shall be plumb and rigid after installation. Rails shall be straight and tight. Drill holes for post footings in firm, undisturbed or compacted soil. Footing holes shall be not less than 9 inches in diameter and 38 inches in depth. Post embedment in concrete shall be 36 inches. Excavate deeper as required for adequate support in soft and loose soils, and for posts with heavy lateral loads.

Gates - Gates shall be installed plumb, level and secure for full opening without interference. Install ground-set items in concrete for anchorage as recommended by the fence manufacturer. Adjust hardware for smooth operation and lubricate. Sliding gates shall operate smoothly and easily under minimum pressure.

Concrete - Place concrete around posts in a continuous pour. Check each post for plumb and vertical and top alignment and hold in position during placement and finishing operations. Trowel finish tops of footings and slope or dome to direct water away from posts. Set keepers, stops, sleeves, tracks, eye bolts and other accessories into concrete as required. Wheel rolling area for sliding gates shall be steel towel smooth finish concrete.

323123 - Plastic Fences and Gates

Install pre-fabricated fence and gates. Provide fence and gate size, style & locations as shown in construction documents. Support as required by manufacturer.

Manufacturer: Woodland Select or similar
Color: to be selected with woodgrain finish
Style: Privacy or picket where shown

329000 - Planting

Provide and install all plants, materials, and labor required to execute the landscaping as described in the Contract Documents. Landscape site per construction documents with appropriate sod, plants, trees, and shrubs suitable for local climate and site requirements as listed below. Landscaping budget shall be determined by an allowance as stated in the Contract Documents.

329113 - Soil Preparation

Do not plant until finish grades are established and planting areas are properly prepared and graded. When preliminary grading, including weeding and fertilizing, has been completed and the soil may be readily worked, grade all planting areas to a smooth, even and uniform plane with no abrupt change in surface. Slope soil areas adjacent to buildings away from the

buildings, and direct surface drainage as indicated on the drawings. Grading shall provide for natural runoff of water without low spot or pockets. Finish grade of earth in landscaped areas shall be 3 1/2 inches below the top of adjacent pavement, curbs or headers.

329113.16 - Mulching

Apply mulch immediately after seeding. Loosen baled straw and thoroughly break up before placing. Begin placement of mulch on the windward side and from the toe to slopes. On slopes 2 to 1 and greater provide jute matting stapled 18 inches to 3 feet apart using closer spacing around curves and areas of concentrated storm water runoff. Soil amendment and mulch shall consist of Cedar-soil or equal, composted, nitrogen-stabilized, water-holding materials with long residual life.

329119.13 - Topsoil Placement and Grading

A three (3") inch cover of topsoil or appropriate soil amendment shall be spread uniformly over the soil (9 yards per 1000 sq. ft.) and tilled into the top six (6") inches of soil. Topsoil shall be a natural, fertile, friable soil, typical of productive soil in the vicinity, obtained from naturally well drained areas. Rototill all areas indicated on plans and on areas damaged by construction, to depth of 4", removing stumps, all foreign objects and stones larger than one inch diameter. Place topsoil on all areas and incorporate by rototilling into subsoil.

329219 - Seeding

Seed only when weather conditions are suitable. All newly seeded turf areas shall be free of broadleaf weeds. Sow seed with mechanical spreaders at the specified rate on a calm day. Sow one half the seed in one direction and the other half at right angles. Seed shall be raked lightly into the soil to a depth of 1/4 inch and rolled with a roller weighing not more than 100 pounds per linear foot of tread. Keep the surface moist by a fine spray until the grass shows uniform germination over the entire area. Wherever poor germination occurs in areas larger than three (3) square feet, reseed, roll and water as necessary to obtain proper germination. Infested areas shall be treated with a selective broadleaf insecticide; Trimec or approved equal.

329223 - Sodding

Plant only certified sod only when the soil is moist and favorable for growth. Shape the area to be sodded and finish to the lines and grades indicated on the plans. Loosen the surface prior to placing sod. Keep the grade moist by sprinkling, if necessary, sod on the prepared surface with the edges in close contact. Each piece of sod laid shall be fitted and tamped into place with hand tampers not less than one hundred square inches in area. Apply a sufficient quantity of water to all sod after laying and to prevent the sod from drying out for a period at least two weeks to ensure growth.

329300 - Plants

Shrubs and trees shall be of a variety, size and quantity shown in the Construction Documents. Cut burlap, twin and wire baskets from top 12 inches of root-ball and remove from site. Backfill with 1/2 clean existing soil, 1/4 sand and 1/4 peat moss. Plants shall bear some relation to soil level when planted as they did when in container. Place each plant in center of plant pit. Firmly tap backfill material into plant pits around and under the root ball to force out all air pockets.

Backfill as specified on the plans. Thoroughly water to saturate the root ball and backfill. Stake all trees with hardwood stakes driven 2' into firm ground and secure tree to stake.

DIVISION 330000 UTILITIES

334613.13 – Retaining wall Drainage Piping

Install a minimum 5" slotted drain pipe with a positive outflow around exterior basement wall footings, imbedded in a loose fill gravel, minimum 12" deep. Slotted drain pipe should be wrapped with an appropriate geo-technical fabric to prevent silt buildup. Install other drains necessary for positive site drainage.

END OF OUTLINE SPECIFICATION

DIVISION 415300 - FIRE PROTECTION SYSTEM DESIGN CRITERIA

PART 1 – GENERAL

1.1 SUMMARY

Scope of Work:

1. Work under this general heading consists of design, engineering, permitting and construction for all required labor, materials, equipment and service necessary to provide complete automatic sprinkler protection in accordance with NFPA13, (latest required edition) for a residential care home as hereinafter described. All work to be designed by a licensed engineer

2. Automatic sprinkler protection shall be installed in the following areas:

   a. Entire home to be fully sprinklered.
   b. All other areas required by codes.

1.2 CODES AND ORDINANCES:

1. Nothing in this Specification shall be interpreted to conflict with any City or State law, regulation, code, ordinance, ruling or Fire Underwriters' requirement applicable to this class of work.

2. Governing agencies: All work shall be installed in accordance with, but not limited to, the applicable provisions of:

   a. latest edition of National Fire Protection Association Pamphlet No. 13 and,

   b. shall meet requirements of Factory Mutual Engineering Division and,

   c. NFPA 101, Life Safety Code, 2000 edition and,

   d. State of Missouri Department of Health and Senior Services, Chapter 86 – Residential Care Facilities and Assisted Living Facilities and,

   e. Any other required Division or Chapter of the rules and regulations from the State Department of Health and Senior Services and,

   f. the State fire Marshall and,

   g. City or St. Louis County adopted HVAC Codes and,

   h. Americans with Disabilities Act, ANSI or other required accessibility regulations.

i. Compliance as may be required with locally adopted energy code.

3. All materials under this section of specifications shall be listed by Factory Mutual as approved for fire protection installation.

4. Fire protection system shall be designed and installed as approved by Factory Mutual. Where each code/ regulation / rule defines a design requirement; each code/ regulation / rule is to be compared for their specific conditions and parameters for design. The most extreme case is to be followed. By doing so the proposed system will comply with all governing codes including but not limited to those indicated above.

1.3 SUPERVISION

1. Work shall be done under personal supervision of HVAC sub-Contractor, who shall provide a competent foreman to lay out work. Work shall be laid out with due regard for space requirements of other Contractors. This contractor shall report any conflicts or difficulties in regard to installation immediately.

1.4 DESIGN

1. Fire Protection design and engineering work supplied by Fire Protection Contractor is insured against design errors and omissions by Engineers Errors and Omissions Insurance.

2. The scope of work for this project includes engineering/design for Fire Protection plans and specifications and all engineering fees provided by a licensed engineer in the state of the project.

3. Fire Protection System Design Conditions to comply with all governing codes.

4. Base drawings in AutoCAD LT format will be provided for preparation of construction and permit documents.

5. There shall be no exposed piping, wiring, hangers, or supports. The design and routing of the proposed system is to fit within the space available on the current architectural drawings. No soffits will be added for required ductwork, piping etc. The intent is for the entire system to be concealed in the walls and/ or ceilings for an acceptable design.

6. <u>Pipe routing</u> – All pipes to be routed:
   a. in concealed spaces above suspended ceilings,
   b. below the thermal envelope,
   c. within walls,
   d. within existing soffits shown,
   e. any piping routing or coverage outside the thermal envelope are to be a dry system and included in this proposal.
   f. Provide as little underground piping as possible.

1 Coordination:
   a. Include revisions as necessary to coordinate the systems into the building construction with the architect.
   b. Coordinate any HVAC, plumbing, and electrical requirements along with the Fire Protection system design.
   c. Concealed spaces: The installation of fire protection systems can be eliminated in concealed spaces, overhangs and other locations allowed by governing fire suppression codes. In most cases the option to eliminate the fire suppression work in these areas requires work by other trades such as filling cavities with non-combustible insulation, creating fire compartments, fire blocking or other means. Therefore, either a fire suppression system or the work of the other trades will be required as a cost to the project by the general contractor to satisfy the codes. This work (fire suppression or the other required work) in concealed and other space is to be coordinated between the general contractor and the fire suppression system designer/ subcontractor and all design/ materials/ labor cost to satisfy this requirement is to be included in the contract for General construction.

2. Approval:
   a. Final design Submittal - to be submitted to architect, owner, owner's representative for approval of layout, aesthetic use and location of devices and equipment. All sprinkler head styles, finish and equipment to be submitted for review prior to submission for permit approval.

1.5 MISCELLANEOUS REQUIREMENTS

1. Include Crane, lifts or other required equipment as necessary for hoisting and setting the Fire Protection equipment.

2. Include all Federal, state and local taxes.

3. Include Fire Protection permits and fees. This proposal to include all costs to submit and obtain approval from the governing agencies in a timely fashion so as to maintain the project schedule.

4. Additions and Changes to Work Included: Any changes to work, and any work in addition to work herein specified and/or shown on accompanying drawings, must be authorized in writing by General Contractor, Construction Manager, and Owner.

1.6 CLOSEOUT – WARRANTIES

1. Final testing and inspections of Fire Protection systems, supervised and certified by required personnel. Testing reports to be submitted to Owner, architect, owner's representative for approval and acceptance.

2. A complete record set of "as-built" Fire Protection plans in AutoCAD and paper form to be supplied to owner at job completion.

3. Operating and Maintenance Instructions: At time designated by Owner, Architect shall provide service of a competent operator to instruct representatives of Owner in maintenance and operation of system.

4. Operating and Service Manuals: At completion of project, Fire Protection Contractor shall be required to provide 3 volumes of Operating and Service Manuals containing the following:

5. Start up and Shutdown Procedures: Provide a step-by-step write up of major equipment. When manufacturer`s printed start up, trouble shooting and shutdown procedures are available they may be incorporated into operating manual for reference.

6. One (1) year guarantee on installation against new equipment, defective workmanship and materials as described in this proposal, with the guarantee period beginning on date of acceptance of certificate of final inspection and approval by inspection authorities having jurisdiction. This guarantee does not include standard preventive maintenance as specified by equipment manufacturers maintenance instructions, and this guarantee can only be honored if specified preventive maintenance is performed. Any equipment found defective during that period shall be replaced without cost to Owner.

7. Cleaning: Scale and dirt shall be thoroughly cleaned and blow out of piping, and equipment on completion of installation and before starting system in operation.

8. Stocking of extra supplies, tools, heads, etc. as required.

PART 2 – PRODUCTS

2.1 MISCELLLANEOUS EQUIPMENT

1. Service entrance- Lead-in and yard main from public mains shall be located as to run directly into building from street or main water main feeding the development. Service entrance to be from the side or rear of the home only.

2. Devices –
   A. Sprinkler heads in the home shall be white "semi-recessed" heads.

   B. Sprinkler guards are to be provided on sprinklers located less than 7'-0" from finished floor and where subject to mechanical injury.

3. High temperature sprinklers of proper degree rating shall be installed where necessary to meet Factory Mutual and plant process ambient requirements.

4. Alarm valve, drains, fire department hose connections, indicator post, fire hose and racks, etc., shall be included as required.

5. Portable fire extinguishers shall be furnished and installed by others.

2.2 OVERHEAD PIPE AND FITTINGS:

1. Overhead pipe shall be standard weight, black steel pipe.

2. Fittings shall be screwed or flanged black cast-iron.

3. Reducing bushings are not permitted in more than one outlet of any tee or any two outlets of any cross. Bushings are not permitted in any elbows or when reduction in size of outlet is less than 1/2-inch.

2.3 HANGERS AND SLEEVES:

1. Hangers shall be of Factory Mutual approved materials and spaced in accordance with NFPA Pamphlet No. 13.

2. Sleeves shall be set for pipes passing through concrete floors and masonry walls and shall be packed watertight with flexible caulking. Approved UL designed collars and/ or penetration assemblies to be used at all fire and smoke rated partitions.

3. Factory finish" white" escutcheon plates shall be provided at sleeves.

2.4 WATER FLOW INDICATORS:

1. At each system riser, furnish and install a Factory Mutual approved paddle-type water flow switch, a Factory Mutual approved electric alarm bell mounted on inside of adjacent wall, a pressure gauge with gauge cock, and a drain valve with drain connection as indicated on drawings.

2. Exclude:
   A. Back flow prevention device.
   B. Annunciator and electrical wiring of flow switches and bells are not included in sprinkler contract.

3. A sprinkler cabinet shall be furnished and installed at each system riser. Cabinet shall be stocked with a sprinkler head wrench and twelve extra sprinkler heads. Types and temperatures of extra sprinklers to be in proportion to those installed on the system.

2.5 UNDERGROUND PIPING:

1. An underground line with divisional valves from utility main shall be furnished and installed.

2. Underground pipe shall be enameline cast-iron or P.V.C. Class 150 with cast-iron Class 250 fittings.

3. Joints in underground pipe shall be mechanical joints with high-strength, cast-iron tee head bolts with hex nuts, cast-iron guards, and plain molded rubber gaskets.

4. Flange spigots, bends and tee in underground pipe are to be rodded and clamped. Rods, clamps, nuts and washers are to be coated with quick drying asphaltic paint.

5. Bends and tees are to be provided with concrete thrust blocks of sufficient size to prevent rupture of joints due to movement of pipe.

2.6 INSPECTORS' TEST CONNECTIONS AND SIGNS:

1. Furnish and install inspectors' test connections. Test connections shall extend down and through wall and terminate in a threaded and capped connection extending 4 inches beyond outside of building wall at each location.

2. Approved enameled metal signs shall be securely attached at main drains, auxiliary drains, inspectors' test connections, control valves and alarm bells.

3. Entire automatic sprinkler system piping shall be tested in presence of an authorized representative of owner and governing agencies having jurisdiction of approval.

4. Overhead and underground piping shall be tested hydro-statically at not less than 200 psi for two hours in accordance with NFPA Pamphlet No. 13, Sections 1630 and 1650.

2.7 PAINTING:

1. Painting of sprinkler piping, except as hereinbefore stated, is not included in this contract.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Install identifying devices after completion of coverings and painting.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. For labels that are installed using pressure-sensitive adhesives, clean piping and equipment surfaces of substances that could impair bond of identification devices, including dirt, oil, grease, release agents, and incompatible primers, paints, and encapsulants.

C. For pipe markers that are pre-coiled or strap-on type and do not adhere directly to the piping, no surface preparation is necessary.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Equipment Labels:
   a. Install or permanently fasten labels on each major item of fire suppression equipment.
   b. Locate equipment labels where accessible and visible.

3.4 Access Panel and Door Markers.
A. Install or permanently fasten markers on access panels and door for fire suppression equipment.
   a. Locate equipment labels where accessible and visible.

B. Pipe Labels: Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and exterior exposed locations as follows:
   a. Near each valve and control device.
   b. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
   c. Near penetrations and on both sides of through walls, floors, ceilings, and inaccessible enclosures.
   d. At access doors, manholes, and similar access points that permit view of concealed piping.
   e. Near major equipment items and other points of origination and termination.
   f. Spaced at maximum intervals of 50 feet along each run. Reduce intervals to 25 feet in areas of congested piping and equipment.

3.5 Valve Tags: Install tags on all shut-off valves and control devices in piping systems, except valves within factory-fabricated equipment units.

3.5.1 Warning Tags:
3.5.1.1 Install or warning tags on each major item of fire suppression equipment to have a warning tag.
3.5.1.2 Locate tags where accessible and visible.

3.5.2 Mark location of equipment or valves located above ceilings with identifying "buttons" to help in identification for maintenance.

3.6 PROTECTION

3.6.1 Protect installed products until completion of project.

3.6.2 Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 15300 – FIRE PROTECTION SYSTEM DESIGN CRITERIA

SECTION 415400 – PLUMBING SYSTEM DESIGN CRITERIA

PART 1 – GENERAL

1.1 SUMMARY

Scope of Work:

1. Work consists of design, engineering, permitting and construction to furnishing labor, material and tools necessary to install a complete system of plumbing and sewers in accordance with this outline specification, for construction of a Home for Residential Care.

1.2 CODES AND ORDINANCES:

2. Nothing in this Specification shall be interpreted to conflict with any City or State law, regulation, code, ordinance, ruling or Fire Underwriters' requirement applicable to this class of work.

3. Governing agencies - All work shall be installed in accordance with, but not limited to, the applicable provisions of:

   a. NFPA 101, Life Safety Code, 2000 edition and,

   b. State of Missouri Department of Health and Senior Services, Chapter 86 – Residential Care Facilities and Assisted Living Facilities and,

   c. Any other required Division or Chapter of the rules and regulations from the State Department of Health and Senior Services and,

   d. the State fire Marshall and,

   e. City or St. Louis County adopted HVAC Codes and,

   f. Americans with Disabilities Act, ANSI or other required accessibility regulations.

   g. Compliance as may be required with locally adopted energy code.

1.3 SUPERVISION

1. Work shall be done under personal supervision of Plumbing sub-Contractor, who shall provide a competent foreman to lay out work. Work shall be laid out with due regard for space requirements of other Contractors. This contractor shall report any conflicts or difficulties in regard to installation immediately.

1.4 DESIGN

1. An electronic file of the architectural drawings is available in AutoCAD Lt or Revit format and made available at the start of design.

2. Plumbing design work supplied by Plumbing Contractor is insured against design errors and omissions by Engineers Errors and Omissions Insurance.

3. Plumbing engineering design fees for completion of H.V.A.C. plans and specifications by a licensed engineer in the state of the project.

4. Plumbing System Design Conditions to comply with all governing codes.

5. There shall be no exposed piping, hangers, or supports. The design and routing of the proposed system is to fit within the space available on the current architectural drawings. No soffits will be added for required ductwork, piping etc. The intent is for the entire system to be concealed in the walls and/ or ceilings for an acceptable design.

6. Coordination:
   - Include revisions as necessary to coordinate the systems into the building construction with the architect.
   - Coordinate any HVAC, electrical and fire protection requirements along with the Plumbing system design.

7. Approval: Final design Submittal to be submitted to architect, owner, owner's representative for approval of layout, aesthetic use and location of devices and equipment. All plumbing fixtures with styles, finish and equipment to be submitted for review prior to submission for permit approval.

8. Permits: This proposal to include all costs to submit and obtain approval from the governing agencies in a timely fashion so as to maintain the project schedule.

1.5 MISCELLANEOUS REQUIREMENTS

1. Federal, state and local taxes.

2. H.V.A.C. permits and fees.

3. Additions and Changes to Work Included: Any changes to work, and any work in addition to work herein specified and/or shown on accompanying drawings, must be authorized in writing by General Contractor, Construction Manager, and Owner.

1.6 CLOSEOUT – WARRANTIES

1. A complete set of Plumbing plans in AutoCAD and paper form to be supplied to Owner at job completion.

2. Operating and Maintenance Instructions: At time designated by Architect, Contractor shall provide service of a competent operator to instruct representatives of Owner in maintenance and operation of system.

3. Operating and Service Manuals: At completion of project, Plumbing Contractor shall be required to provide 3 volumes of Operating and Service Manuals containing the following:

   Start up and Shutdown Procedures: Provide a step-by-step write up of major equipment. When manufacturer`s printed start up, trouble shooting and shutdown procedures are available they may be incorporated into operating manual for reference.

4. One (1) year guarantee on new equipment, materials, and workmanship, with the guarantee period beginning on date of startup of Plumbing. system. This guarantee does not include standard preventive maintenance as specified by equipment manufacturers maintenance instructions, and this guarantee can only be honored if specified preventive maintenance is performed.

5. Cleaning: Scale and dirt shall be thoroughly cleaned before starting system operation.

PART 2 – PRODUCTS

.

1.1 MATERIALS

1. Sanitary Sewers:
   a. See civil drawings for Sewers inside building shall be Schedule 40 Plastic pipe and fittings.

   b. Sewers outside building shall be PVC ASTM D-3034 SOR-35 pipe and fittings.

2. Drains:
   a. Required floor drains in toilet rooms and mechanical rooms and where required shall be cast iron with polished brass strainers.

   b. All cleanouts to be polished brass and centered in hallways.

3. Water Piping:

   a. Extend domestic water service in from street main, provide meter box. meter and connect to all plumbing fixtures and water heaters. All water piping to be overhead and within concealed walls as shown the architectural drawings.

b. Service entrance to be from the side or rear of the home only.

c. Water piping underground shall be type "L" copper pipe and fitting.

d. Water piping above grade shall be type "M" copper pipe and fitting.

e. Provide building water service shut-off as well as pressure reducing valve if required.

f. All hot water piping to be insulated.

4. Plumbing Fixtures - Plumbing fixtures shall be new, as listed:

   a. Waterclosets: see drawing schedule.

   b. Urinals: see drawing schedule.

   c. Lavatories: see drawing schedule.

   d. Service sink: see drawing schedule.

   e. Drinking Fountains: see drawing schedule.

   f. Kitchen Sink: see drawing schedule, with garbage disposal.

   g. Wall Hydrants: Freeze-proof type with handle.

   h. Roof Drainage: Gutter and downspouts are to be connected to below grade piping with size and quantity to adequately handle roof area. These drawings are to be piped to external storm sewer system designed and detailed by the civil engineer. Storm retention basins are shown on the civil drawings.

   i. Water Heater(s): Multiple gas water heaters as shown sized to provide adequate hot water requirements for building usage. On-demand water heaters are not allowed. For long runs provide a recirculating pump to maintain water pressure.

   j. Provide backflow preventer for connection of the connection of outdoor Landscape irrigation system.

   k. Provide water shut-off for each wing to allow maintenance/ repair without shutting down entire building.

5. Storm Water - All storm water to be connected to storm sewer and or retention basin system. System to be approved by St. Louis County Plumbing Dept. and M.S.D. as required. See Civil drawings.

6. Provide flush metal access panels with keyed access (field painted) where required.

7. See Civil drawings for location of all utilities.

PART 3 – EXECUTION

3.1 EXAMINATION

1. Examine roughing-in of water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing-fixture installation.

2. Examine walls, floors, cabinets, and counters for suitable conditions where fixtures will be installed.

3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

1. Install plumbing fixtures level and plumb according to roughing-in drawings.

2. Install floor-mounted water closets on closet flange attachments to drainage piping.

3. Install counter-mounting fixtures in and attached to casework.

4. Install pedestal lavatories on pedestals and secured to wood blocking in wall.

5. Install water-supply piping with stop on each supply to each fixture to be connected to water distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.

6. Use ball, gate, or globe valves if supply stops are not specified with fixture.

7. Install tanks for accessible, tank-type water closets with lever handle mounted on wide side of compartment.

8. Install toilet seats on water closets.

9. Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts if faucets are not available with required rates and patterns. Include adapters if required.

10. Install shower flow-control fittings with specified maximum flow rates in shower arms.

11. Install traps on fixture outlets.

12. Install disposer in outlet of each sink indicated to have a disposer. Install switch where indicated or in wall adjacent to sink if location is not indicated.

13. Install dishwasher air-gap fitting at each sink indicated to have air-gap fitting. Connect inlet hose to dishwasher and outlet hose to disposer.

14. Install hot-water dispensers in back top surface of sink or in countertop with spout over sink.

15. Set bathtubs in leveling bed of cement grout.

16. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories and sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

17. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings.

18. Seal joints between plumbing fixtures, counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color.

3.3 ADJUSTING

1. Operate and adjust plumbing fixtures and controls. Replace damaged and malfunctioning fixtures, fittings, and controls.

2. Adjust water pressure at faucets to produce proper flow.

3.4 CLEANING AND PROTECTION

1. After completing installation of plumbing fixtures, inspect and repair damaged finishes.

2. Clean plumbing fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.

3. Provide protective covering for installed plumbing fixtures and fittings.

4. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

3.5 IDENTIFICATION

1. Comply with requirements in "Earth Moving" for underground utility identification devices. Arrange for installation of green warning tapes directly over piping and at outside edges of underground manholes.

2. Use detectable warning tape over ferrous piping.

END OF SECTION 15400 – PLUMBING SYSTEM DESIGN CRITERIA

Plumbing Fixture Cut Sheets

Below are cut sheets for plumbing fixtures be used/installed for Family Partners Care Home project. Cut sheets are labeled per tag from Plumbing Fixture Schedule from Architectural Drawings. Plumbing fixtures are subject to change and this list may not be final.

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER
P-1	Tub	Invacare	3752G
P-2	Vanity Sink	Gerber	Luxoval 12-780
P-3	Utility Sink	Proflow	PFLT2522D
P-4	Mop Basin	Fiat	MSBID2424
P-5	ADA Toilet	Gerber	Maxwell ER60HEIGHT21-918
P-6	ADA shower head	Delta	Innovations Monitor 17
P-7	Floor Drain	Kohler	K-9136
P-8	Kitchen Sink	Elkay	DXUH312010RDF
P-9	single sink	Elkay	ECTRU30179RTC
P-10	Garbage Disposal	Insinkerator/Emerson	Evolution Pro 880LT

Search

Products

Product Literature Search

Product Catalog

New Zone

Bariatric Products

Beds and Bed-Related Products

Lifts and Slings

Merchandising Program

Power Operated Vehicles

Respiratory

Seating and Positioning

Self-Care and Patient Aids

Therapeutic Support Surfaces

Uni-Recliners

Wheelchairs and Top End

You are here: Home / Product Catalog

Click image for larger view

RECESSED SIDE ENTRY WHIRLPOOL

Recessed Side-Entry Bath

Product ID: IH3752G
HMESA CODE: 10-90-23-00

Configure

Find a Provider

Price Not Available

Glossy Sell Sheet
Glossy Sell Sheet
Owner's Manual

Print This Page

Related Product(s)

SIDE ENTRY WHIRLPOOL TUB (72 INLX34 INW) K Base Seat

Lifter/Transporter

Product Description

Therapure Recessed Side-Entry Whirlpool Bathing Tub with User Controls

Features

- Four easily cleaned pipeless whirlpool jets aid in increasing blood circulation,relieving pain and facilitating healing.
- User console provides the resident with easy access to the auto-fill/ auto shut-off and anti-scald mixing valve, thermometer and whirlpool jet controls.
- Fiberglass end panels are avaialbe for corner or one wall installations.
- The 40 inch wide side entry door swings to a full open position and is easily locked/unlocked with padded handle.
- Three year warranty on the tub and a lifetime warranty on the door seal.

* MSRP - Manufacturer's Suggested Retail Price does not include optional equipment and accessories that may be available for this product.

Documents are available for download in PDF format. Download Adobe Acrobat PDF reader.

GERBER

VITREOUS CHINA

LAVATORY
12-780

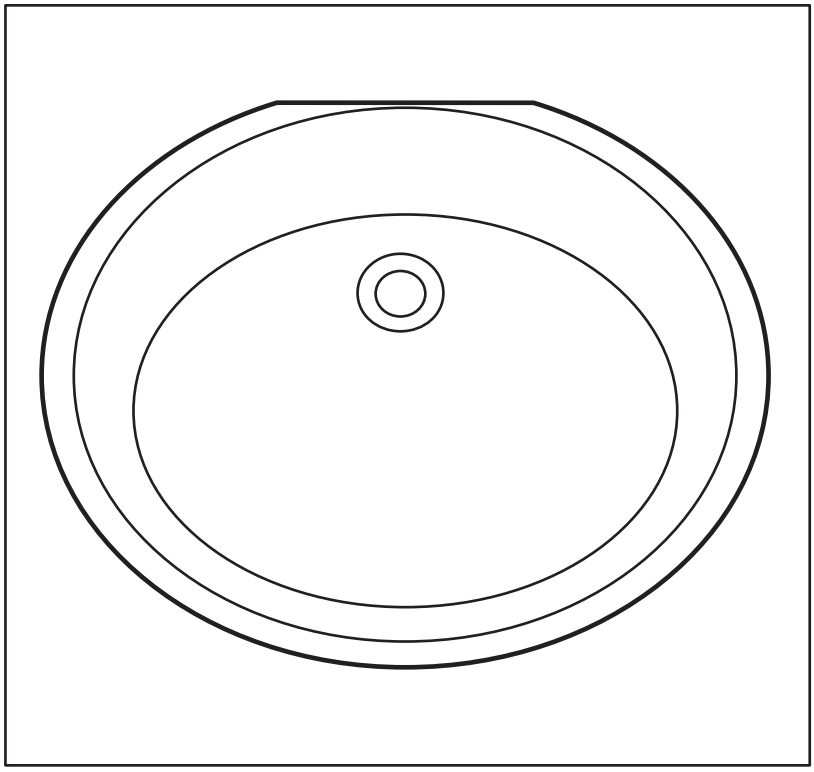
LUXOVAL™ Undercounter

Features:

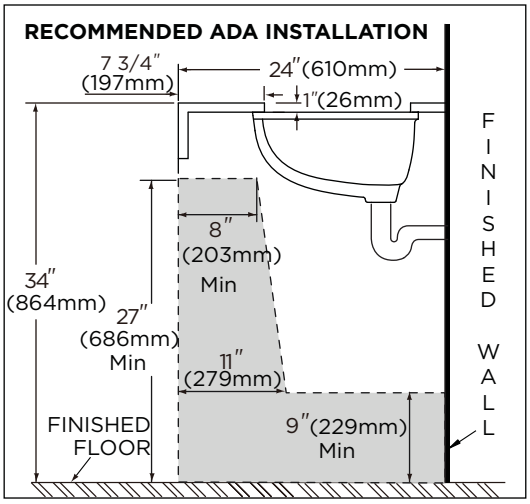
- 19 1/8" x 15" Oval Lavatory
- 17 1/8" x 13 1/4" Bowl
- Installs with #99-190 Anchoring Kit (Not Included)

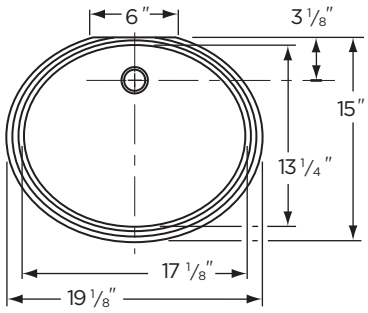
Dimensions:

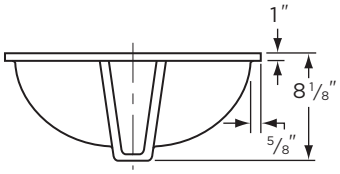
Height	8 1/8"
Width	19 1/8"
Depth	15"
Shipping Weight	20 lbs



Drain not included







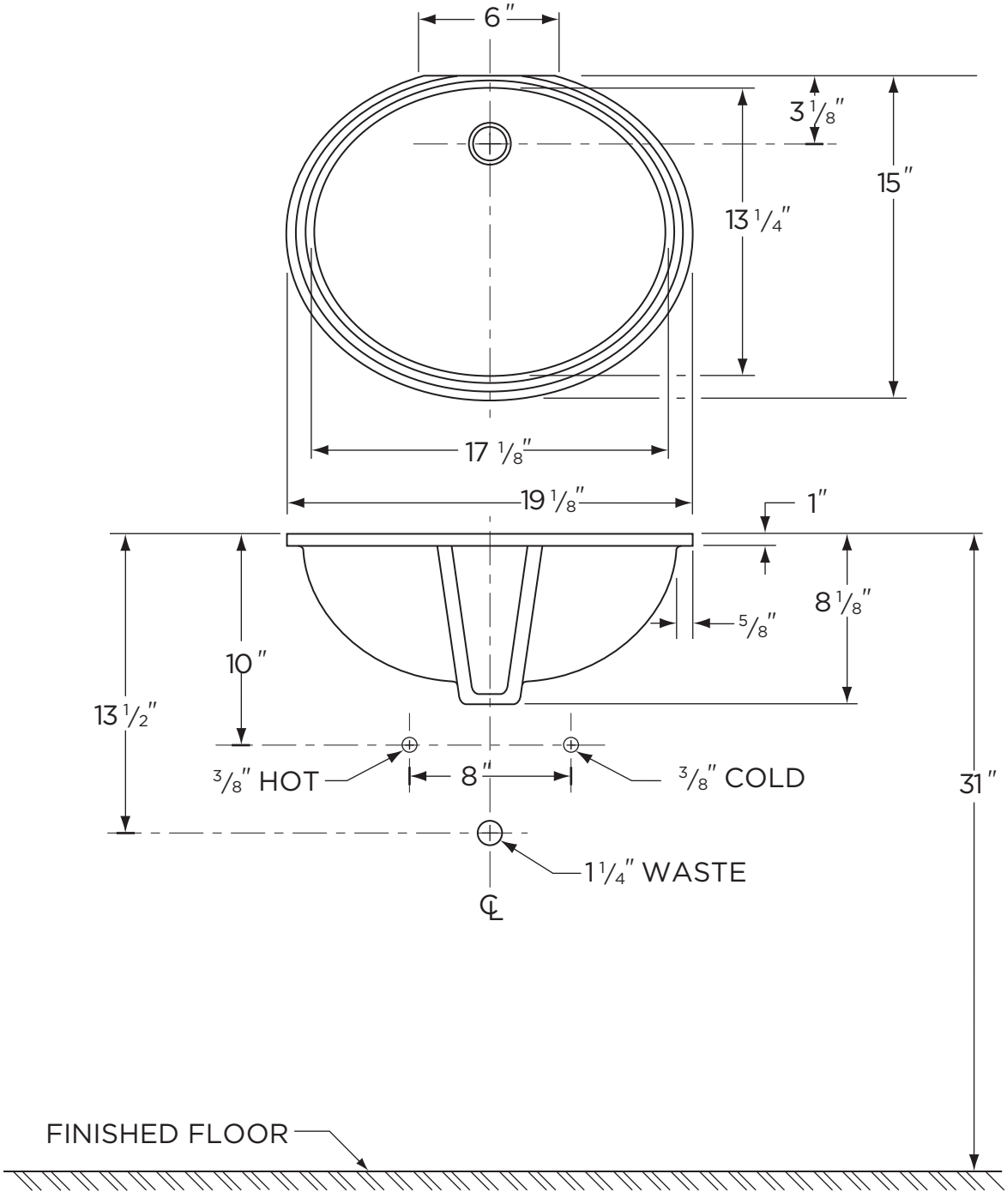
Job Name	
Date	
Model Specified	
Quantity	
Customer	
Contractor	
Architect/engineer	

www.gerberonline.com

GERBER

LUXOVAL™

12-780
Undercounter



NOTES:
All dimensions are in inches.
Sealing compound containing oil should never be used when installing basin under marble slab.
Due to variation in ware we recommend using basin as a template.
Anchoring device furnished only when specified.
Illustrations may not be drawn to scale.

IMPORTANT:
Dimensions of fixtures are nominal and may vary within the range of tolerances established by ASME Standard A 112.19.2.

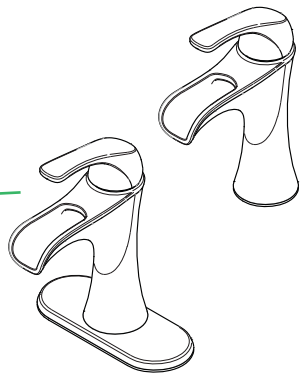
PFISTER

LAV

Jaida™

Single Control Lavatory Faucet

LF-042-JDCC Finish*(CC)* ❑
LF-042-JDCW Finish*(CW)* ❑
LF-042-JDKK Finish*(KK)* ❑
LF-042-JDYY Finish*(YY)* ❑



- 1 or 3-Hole Installation
- Pforever Seal
- Push and Seal™ Pop-Up

Specifications

Features

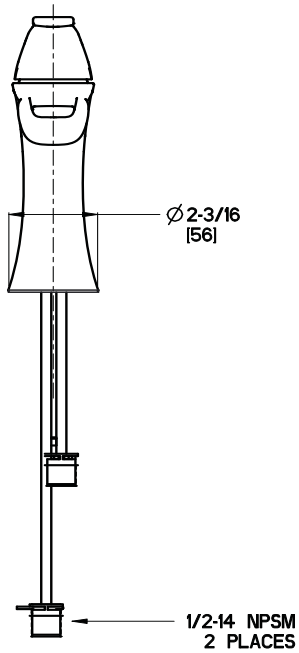
- 1.2 GPM Flow Rate
- 1 or 3-Hole Installation; Deck Plate or Single Hole Mounting Option
- Push and Seal™ Pop-Up
- Waterfall Through Spout
- Pforever Seal Ceramic Disc Valves
- Pforever Warranty®

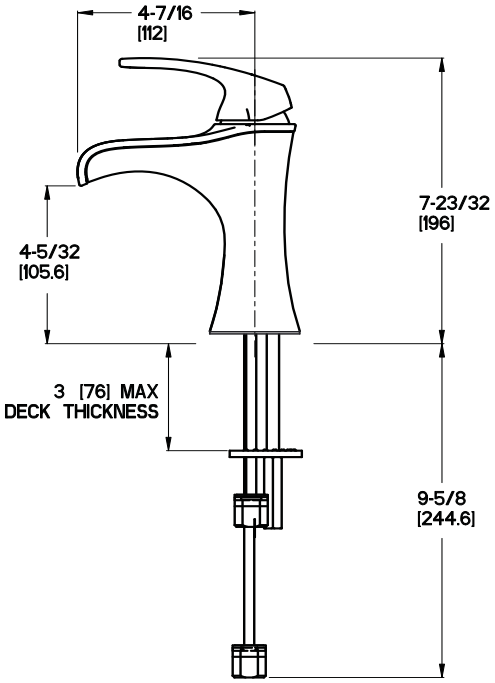
Code Compliance

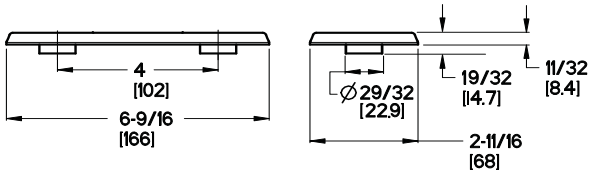
Pfister products are designed and manufactured in compliance with the following standards and codes:

- IAPMO Certified
- CSA B125 Certified
- ASME A112.18.1
- NSF 61/9 Annex G (Low lead)
- EPA WaterSense Certification 1.2 gpm, 4.5 L/Min
- ADA Compliant-ANSI A117.1 (Lever handles only)

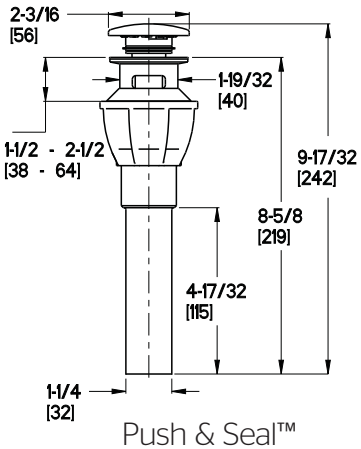
Dimensions







Optional Deck and Putty Plate



Push & Seal™

Ø1 Min to Ø1-1/2 Max. Deck Hole Openings

PROFLO PFLT2522D 24-1/2" Single Basin Drop-In Composite Laundry Sink

21 Reviews | Write a Review

$99.59

MSRP $117.16, You Save 15%

Finish: White

White
$99.59
1238 In Stock
Leaves the Warehouse Tomorrow, May 24th

Select

Free Shipping!

Delivered to 63123 by Wednesday, May 29th (Change Zip)

1238 In Stock

− 1 + Add to Cart

Add to Project | ☐ Compare | ♥ 176

Buy Now, Take 12 Months to Pay On orders of $1,000 or more
With the Build.com Credit Card
Apply Now

Customers Also Viewed

PROFLO PFLT2123W	PROFLO PFLT2123	Design House 557686	Toto LT233	PROFLO PFLT2522D	PROFLO PFLT2024
(9)	(3)	(0)	(0)	(21)	(17)
Starting at $96.91	Starting at $85.51	Starting at $135.30	Starting at $97.77	Starting at $99.59	Starting at $76.04

Overview | **Reviews** 21 | **Product Q&A** 5 | **Matching Products**

Product Overview

ProFlo PFLT2522D Features:

- Single basin design provides maximum workspace
- Rectangular basin gives a utilitarian look to your laundry application
- Covered under ProFlo's one year limited warranty
- Constructed of Sheet Molding Compound (SMC) plastic composite, delivering unparalleled strength and dependability
- Center drain location provides optimal drainage capability

ProFlo PFLT2522D Specifications:

- Height: 13-1/2" (measured from the bottom of sink to the top of the rim)
- Overall Width: 22" (measured from the back outer rim to the front outer rim)
- Overall Length: 24-1/2" (measured from the left outer rim to the right outer rim)
- Basin Width: 17" (measured from the back inner rim to the front inner rim)
- Basin Length: 22-1/8" (measured from the left inner rim to the right inner rim)
- Basin Depth: 12-3/4" (measured from the center of basin to the rim)
- Installation Type: Drop-in
- Drain Outlet Connection: 1-1/2"

Additional PROFLO Links

- View the Manufacturer Warranty
- Browse All PROFLO Products

This product is listed under the following manufacturer number(s):

PROFLO PFLT2522D
White

Manufacturer Resources

Specification Sheet

Installation Sheet

Dimensions and Measurements

Basin Depth	?	12.75 in.
Basin Length	?	22.125 in.
Basin Width	?	17 in.
Drain Connection	?	1.5 in.
Height	?	10 in.
Length	?	24.5 in.
Width	?	22 in.

Included Components

Faucet Included	?	No

Characteristics and Features

Basin Split	?	Single Basin
Drain Placement	?	Center
Installation Type	?	Drop In
Material	?	Composite

View More

Related PROFLO Categories

Browse by Brand
PROFLO Shop All

Chat with an E…

FIAT® PRODUCTS

MOLDED STONE® INTEGRAL DRAIN MOP SERVICE BASIN MSBID2424

MOLDED STONE® INTEGRAL DRAIN MOP SERVICE BASIN

❑ **MSBID2424**
- Molding done in matched metal dies under heat and pressure resulting in a one-piece homogeneous product
- Integral drain is molded into a one piece unit and designed to connect to a 3" (76mm) drain pipe with a QIC3XH gasket
- Stainless steel strainer included

Nominal Dimensions:
24" x 24" x 10"
(610 x 610 x 254mm)

Shipping Weight:
27lbs. (12.3 Kg)

Optional Components:

❑ **QIC32** Quick Drain Connector for 2" pipe. Order separately.

❑ **QIC3SN** Quick Drain Connector for 3" cast iron soil pipe. Order separately

❑ **830AA** Service Faucet:
- Chrome plated with vacuum breaker, integral stops, adjustable wall brace, pail hook and 3/4" hose thread on spout

❑ **832AA** Hose & Hose Bracket

❑ **889CC** Mop Hanger

❑ **833AA** Silicone Sealant

❑ **E77AA24** Vinyl Bumperguard

❑ **MSG2424** Stainless Steel Wall Guard

Compliance Certifications -
Meets or Exceeds the Following Specifications:
- IAPMO / ANSI Z124.6-2007
- ASME A112.18.2 / CSA B125.2
- CSA B45.5
- Made in U.S.A.

SEE REVERSE FOR ROUGHING-IN DIMENSIONS

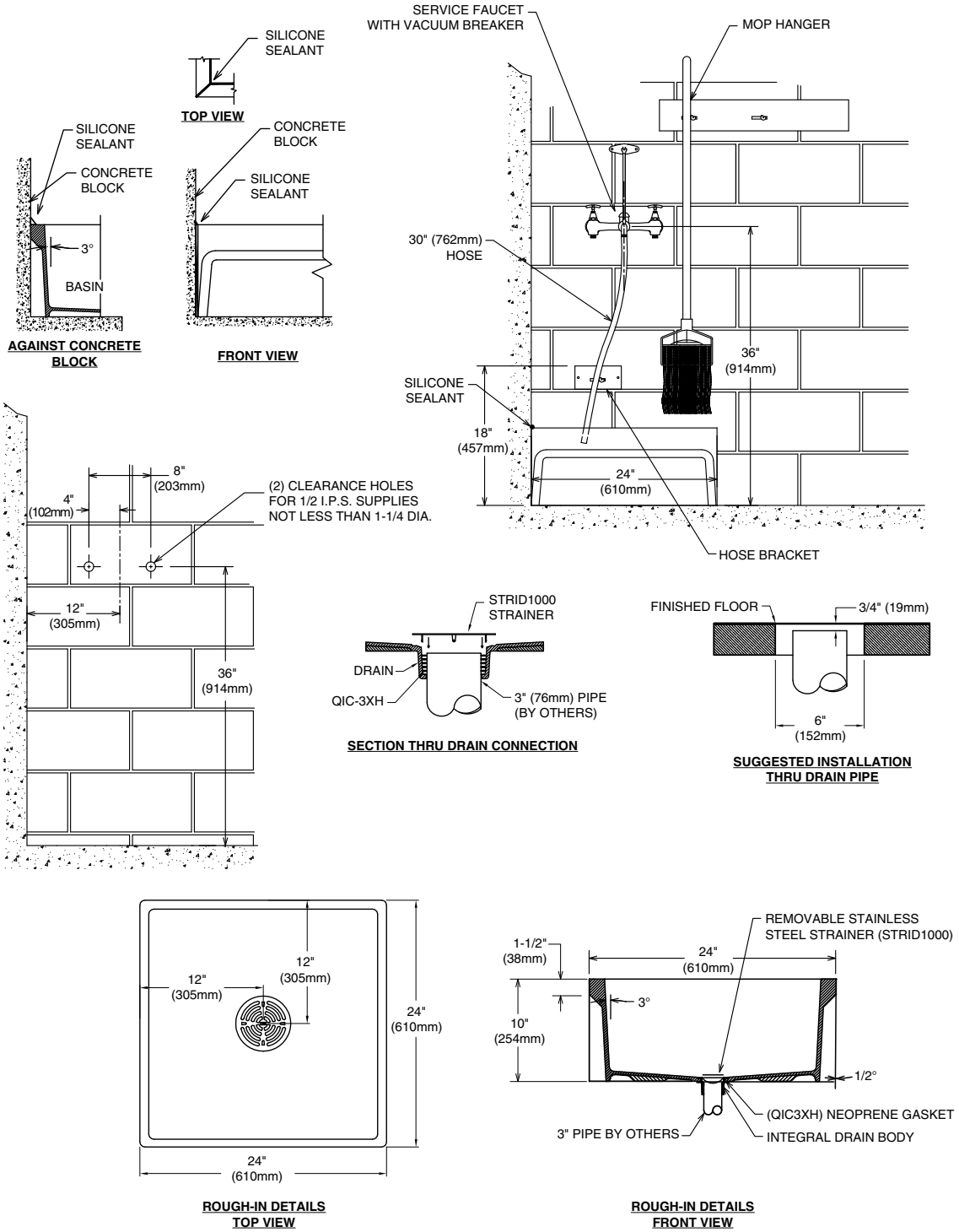
FIAT
QUALITY FOR LIFE

Customer Service Canada
1-800-387-0369
www.fiat.ca

Customer Service United States
1-800-442-1902
www.fiatproducts.com

FIAT® PRODUCTS

MOLDED STONE® INTEGRAL DRAIN MOP SERVICE BASIN MSBID2424



Installation Note : QIC32 Quick Drain Connector for 2" pipe or QIC3SN Quick Drain Connector for cast iron soil pipe must be ordered separately.

IMPORTANT: Roughing-in dimensions may vary 1/2" and are subject to change or cancellation without prior notice.

FIAT
QUALITY FOR LIFE

Customer Service Canada
1-800-387-0369
www.fiat.ca

Customer Service United States
1-800-442-1902
www.fiatproducts.com

MECHANICAL FAUCETS

897-RCF

Manual Faucets

MOP BASIN

Product Type

Wall Mounted 8" Body, Adjustable Arms 7-5/8" - 8-3/8" Hot and Cold Water Sink Faucet

Features & Specifications

- 8" Body, Adjustable Arms 7-5/8" - 8-3/8"
- 2-3/8" Vandal Proof Lever
- Ceramic
- 1/2" NPT Adjustable Female Union Nut Supply Arms
- 3/4" Male Hose Thread Outlet
- Round Wall Escutcheons
- Integral Stop Valves for Servicing the product
- Atmospheric Vacuum Breaker, Not Intended for Continuous Pressure Applications
- Vacuum Breaker Spout with Pail Hook and Wall Brace
- Atmospheric Vacuum Breaker, Not Intended for Continuous Pressure Applications
- CFNow! Item Ships in 3 Days

Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140ºF

Warranty

- Lifetime Limited Faucet Warranty
- 5-Year Limited Cartridge Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

- ASME A112.18.1/CSA B125.1
- ADA ANSI/ICC A117.1

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

[ ] Submitted as Shown [ ] Submitted with Variations

Date _____

2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

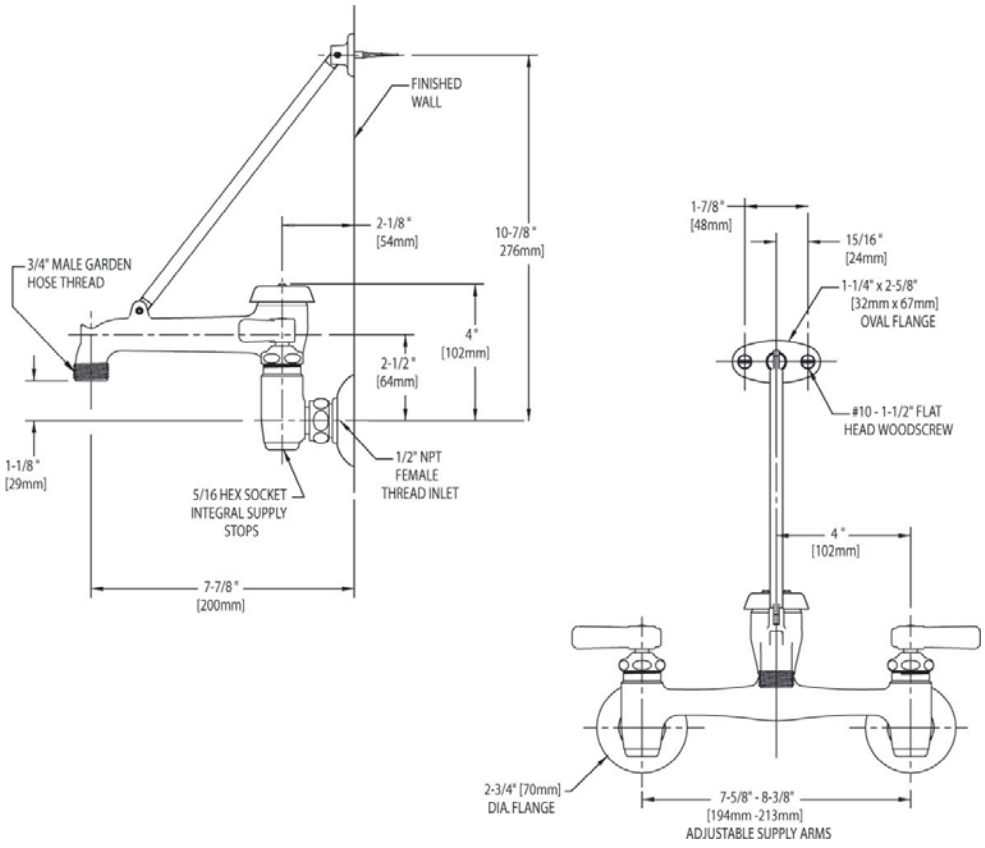
897-RCF

Manual Faucets

MOP BASIN

Architect/Engineer Specification

Chicago Faucets No. 897-RCF, Sink Faucet for hot and cold water, wall-mounted with 7-5/8" - 8-3/8" adjustable centers. Rough chrome plated. Vacuum breaker spout with pail hook and wall brace. 2-3/8" metal, vandal-proof, lever handles with sixteen-point, tapered broach and secured blue and red index buttons. Quaturn™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square, tapered stem. Adjustable supply arms include 1/2" NPT female union nut. 3/4" male hose thread outlet. Round wall escutcheons. Integral stop valves for servicing the faucet. NOTE: Atmospheric vacuum breaker is NOT intended for continuous pressure applications. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1.



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.

2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

12" Rough-in

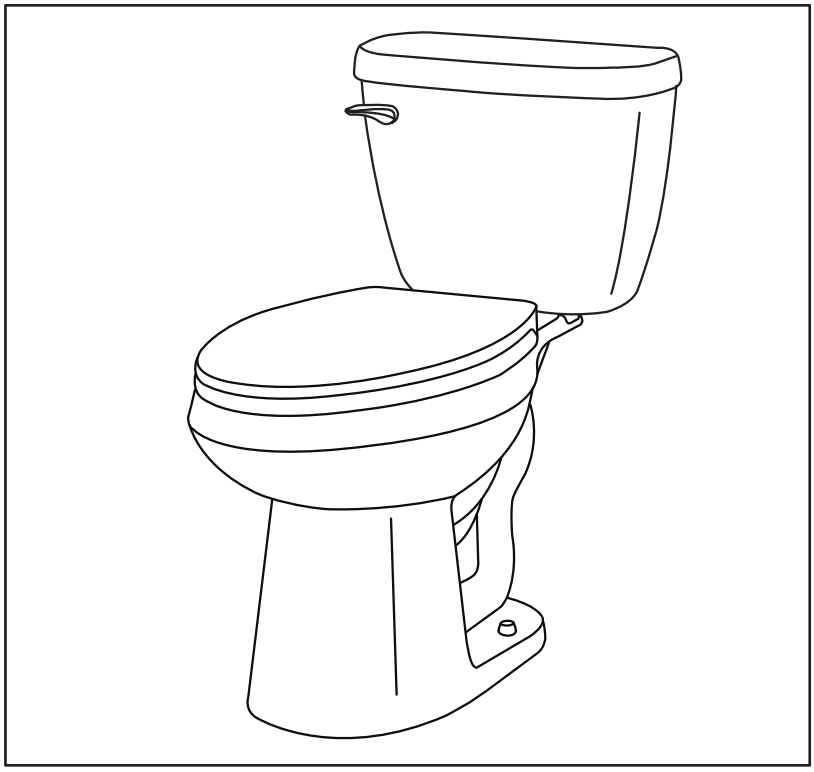
MAXWELL® 1.28 ErgoHeight™ 17" High Elongated Toilet

Features:

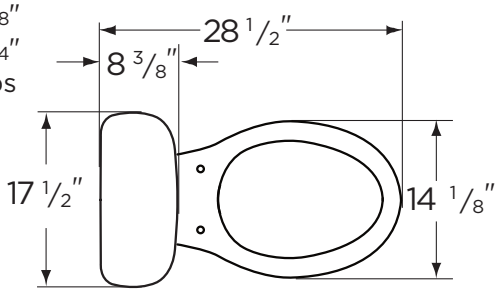
- 1.28 gpf/4.8 Lpf high efficiency two-piece toilet
- Elongated ErgoHeight™ bowl
- Dual-fed siphon jet
- Pilot fill valve
- 3" flush valve
- 2" glazed trapway
- Color matched front tank lever (white only)
- Optional insulated non-sweating tank
- Optional right-handed trip lever
- Available in White, Bone and Biscuit
- 2 bolt caps
- ADA Compliant

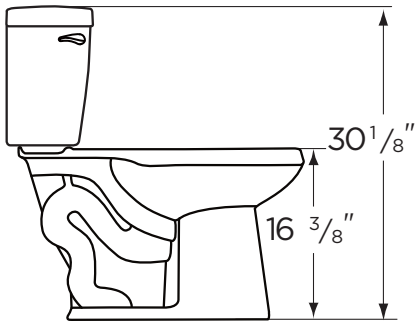
Dimensions:

Height	30 1/8"
Width	17 1/2"
Depth	28 1/2"
Rough-in	12"
Water Surface from Rim	6 1/2"
Trapway	2"
Water Surface	8 7/8" x 7 3/8"
Water Seal	2 1/4"
Shipping Weight	85.5 lbs



Specifications: *Bowl*—#21-928 Front Bowl *Tank*—#28-990
Seat not included





THIS FIXTURE QUALIFIES ACCORDING TO ASME TEST PROCEDURES AS A HIGH EFFICIENCY WATER CLOSET WITH AN AVERAGE CONSUMPTION OF 1.28 gpf (4.8 Lpf) OR LESS.

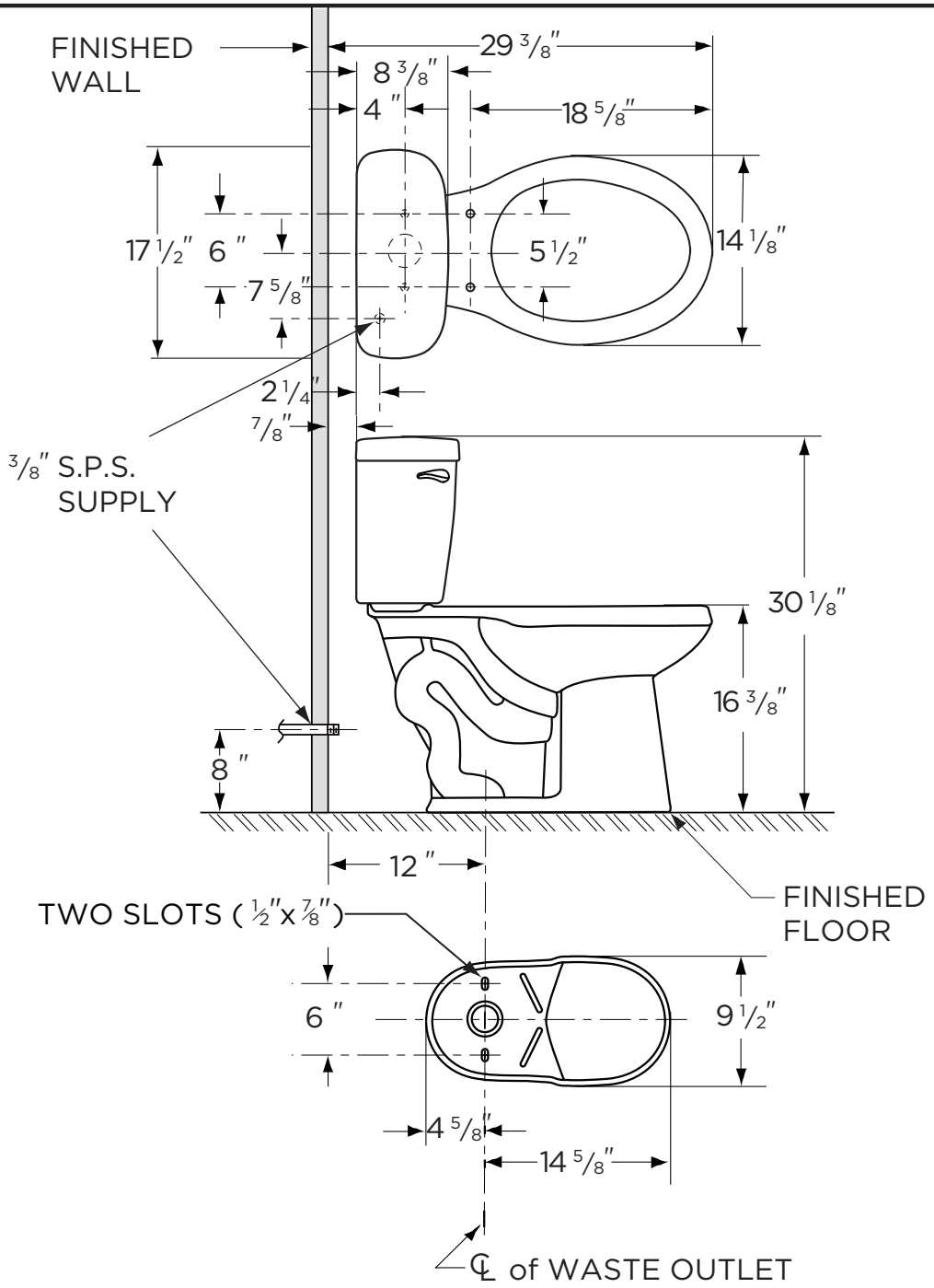
HIGH EFFICIENCY TOILET
HET

www.gerberonline.com

Job Name	
Date	
Model Specified	
Quantity	
Customer	
Contractor	
Architect/engineer	

1.28 gpf (4.8 Lpf) MAXWELL® 1.28 TOILET

21-918
17" High Elongated, 12" Rough-in
(Bowl 21-928 with Tank 28-990)



NOTES:
All dimensions are in inches.

Illustrations may not be drawn to scale.

IMPORTANT:
Dimensions of fixtures are nominal and may vary within the range of tolerances established by ASME Standard A 112.19.2.

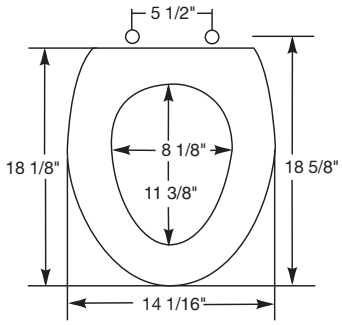
THIS FIXTURE QUALIFIES ACCORDING TO ASME TEST PROCEDURES AS A HIGH EFFICIENCY WATER CLOSET WITH AN AVERAGE CONSUMPTION OF 1.28 gpf (4.8 Lpf) OR LESS.

RESIDENTIAL PLASTIC SEATS

WATER CLOSET

MODEL 170

- **ELONGATED SEAT, CLOSED FRONT WITH COVER**
- **SOLID PLASTIC**
- **TOP-LOC® HINGES WITH NON-CORROSIVE BOLTS AND WING NUTS**



Ring thickness is 3/8"
Ring thickness including the bumper is 5/8"
Height of the seat with cover is 1-1/2"

Seats shall be No. 170 as manufactured by Church Seats. Seats shall be standard weight and injection molded of solid plastic. Seats shall be closed front with cover for elongated bowl and feature molded-in bumpers. Color-matched hinges with non-corrosive top-tightening bolts and wing nuts. Color to be _____. (specify white or fixture manufacturer's color)

Church Seats, Sheboygan Falls, WI 53085
www.ChurchSeats.com

Phone: 920-467-2664 800-233-7328 Fax: 920-467-8573

Delta Innovations Monitor 17 Series Shower System CH with Shower Head, Diverter Trim, Slide Bar Hand Shower and Wall Supply

from the Classic Collection

Write a Review

$529.35

MSRP $861.30, You Save 39%

Chat with an E…

Finish: Chrome

Chrome
$529.35
69 In Stock
Leaves the Warehouse Tomorrow, May 24th

Select

Free Shipping!
Leaves the Warehouse Tomorrow, May 24th (Change Zip)

69 In Stock

− 1 +

Add to Cart

Add to Project | ☐ Compare | ♥ 58

Buy Now, Take 12 Months to Pay On orders of $1,000 or more
With the Build.com Credit Card
Apply Now

This package includes the following items

T17230
$118.54

50560
$33.14

R11000
$80.17

T11800
$102.45

Chat with an E…

57014
$174.22

R10000-UNBXHF
$37.20

These items purchased separately would cost $545.72.**You save 3%!**

Customers Also Viewed

Delta DSS-Lahara-1701	Delta DSS-Lahara-1401	Delta DSS-Vero-1701	Delta DSS-Trinsic-1701	Delta DSS-Ashlyn-1401	Kohler Moxie HydroRail Custom Shower System
(3)	(0)	(3)	(0)	(0)	(1)
Starting at $554.84	Starting at $515.84	Starting at $751.41	Starting at $557.09	Starting at $527.81	Starting at $699.00

Overview | **Reviews** | **Product Q&A 4** | **Matching Products**

Product Overview

Delta Innovations Monitor 17 Series Shower System Includes:

- Innovations Monitor 17 Series Shower Trim with Shower Head (T17230)
- 3 Setting Diverter Trim (T11800)
- 6 Setting Diverter Rough (R11000)
- Slide Bar Hand Shower (57014)
- Wall Supply Elbow (50560)
- Mixing Rough-In Valve (R10000-UNBXHF)

Delta Innovations Monitor 17 Shower Package Features:

- **Pressure Balanced Valve & Trim Features:**
  - Pressure balanced bath mixing valve with Scald-Guard
  - Maintains a balanced pressure of hot and cold water even when a valve is turned on or off elsewhere in the system
  - Back-to-back installation capable
  - Solid brass forged valve body
  - Lever volume control handle; temperature adjustment dial
  - Field adjustable to limit rotation into hot water zone
  - All parts are replaceable from the front of the valve
  - Maximum dial rotation adjustable between 90 and 180 degrees
- **Diverter Trim Features:**
  - Three function diverter: 2 individual positions, 1 shared position
  - 1/2" rough-in
- **Slide Bar Hand Shower Features:**
  - Multi-Function Hand Shower with five settings
  - 69" long hose for a long reach within the shower
  - Hose is constructed from flexible plastic in matching finish to avoid scalding
  - Includes wall bar with adjustable slide for tall or short bathers
  - Certified dual check valves

- 2.5gpm @ 80psi

Wall Elbow Features:

- 90° wall elbow
- Solid brass construction
- 1/2" female NPT inlet
- 1/2" male NPSM outlet for connecting to shower hose
- Personal shower wall supply

- **Diverter Rough-In Features:**
  - Three port diverter rough-in valve
  - For use with 3 or 6 function diverters
  - Forged brass body

Delta Smart Features:

- **ADA Compliant :** Some people, and some local codes, require fixtures that are compliant with the Americans with Disabilities Act. If someone may visit who has special needs, or if you believe future buyers might appreciate this feature, this shower package meets those specifications.
- **MultiChoice Valve :** Flexibility is the big benefit of the MultiChoice Universal Valve. Once the MultiChoice rough is installed, future shower function upgrades or style changes can easily be made without altering the plumbing behind the wall.
- **Monitor Technology:** Delta Monitor® faucets feature pressure balance valves, which protect against sudden temperature or pressure changes to keep the water in the shower within a safe ±3° F.
- **With Volume Control :** This Smart Feature provides separate controls for the temperature and volume, allowing you to set the temperature and keep it consistent shower after shower.
- **Touch Clean Technology :** Only Delta faucets are equipped with Touch-Clean soft, rubber nubbins that allow you to easily wipe away calcium and lime build-up with the touch of a finger.

Delta Innovations Monitor 17 Series Shower System Specifications

- Shower Valve Trim Dimensions: 7-1/2"W x 7-1/2"H
- Valve Type: Dual-function pressure balance cartridge
- Diverter Trim Dimensions: 4-1/2"W x 4-1/2"H
- Wall Bar Length: 24"
- Hand Shower Flow Rate: 2.5gpm @ 80psi
- Hand Shower Spray Settings: Full Body Spray, Massage Spray, Full Spray with Massage, Soft Drench Spray, Soft Drench Spray with Massage

Additional Notes :

Do you like this shower system, but would like to make minor changes to it? Maybe you would like to add a body spray or another shower head? For any questions regarding changes to the configuration of this shower system, please visit our contact page or get in touch with one of our experts by calling the number at the top of this page

Additional Delta Links

- View the Manufacturer Warranty
- Browse All Delta Products
- Delta Classic Collection

This product is listed under the following manufacturer number(s):

Delta Innovations Monitor 17 Series Shower System CH
Chrome

Manufacturer Resources

Exploded Parts

Manufacturer Warranty

Installation Guides

Specification Sheet

Dimensions and Measurements

Flow Rate (GPM)	?	2.5

KOHLER K-9136-CP Square Design Tile-In Shower Drain, Polished Chrome

★★★★½ 210 reviews


About this product

- Inside tailpiece for 2 In. drains and outside tailpiece 3 In. drains
- Matches KOHLER faucet finishes
- Tarnish resistant
- Grooved collar works as weep holes while the grooved flange adapter provides a strong seal
- Durable construction and Kohler quality

Color: Polished Chrome

Free delivery W
Jun 11

Ship to 6312€

Sold by Fish
Return-eligi

DEAL: 20% OFF YO

$85.78

Ac

20% off your first order, u
MAYSAVE19. Expires Ju
See Terms.

Google
Google Express work
make checkout easy
Learn more

Your Stores
Many stores

Free deliver
On orders a

No member
No annual f

About this product

Complete your custom shower installation with the superior quality and reliability of this KOHLER drain. Designed for tile-in applications, it is available in a myriad of finishes to complement any style.

Similar items

More options — $105.00 FREE

More options — $83.63 ~~$111.50~~

$34.86 5–14 days

$26.71 FREE

$65.00 6–11 days

$58.63 FREE

$36.80 ~~$49.68~~

$65.55 FREE

More options — $48.99 FREE

$24.69 FREE

More options — $92.99 FREE

9135-CP Round Design ... Shower Drain, Polished Chrome	Shower Grid Drain...Gasket, Matte Black, K-9132-BL	Caregiver Drain Kit	ACO 37100 2" Tile-In Shower Drain	Mo... Shower Drain with Solid Cover	60.300A Drain Kit	Drain 03-1224	FD2210-PV3 3" Outlet Conn...ion Adjustable PVC Floor Drain	Westbrass 2 in. PVC Shower Dra...ly and Grid | Black | D206P-62	10307P Low Profile Shower Drain	Shower Drain Channel Side...th Adjustable Feet - DHC320004
★★★★½ 21	★★★★½ 109				★★★★½ 22	★★★★½ 84				
Fishp...	eFau...	Reso...	Fishp...	BlueB...	Fishp...	Comf...	Fishp...	Wayf...	NuW...	Wayf...
Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to cart	Add to

Product details

General

Assembled Depth (In)	6.5 in
Assembled Height (In)	4.125 in
Assembled Width (In)	6.5 in
Assembled Weight (Lbs)	1.91 lbs
Item Has MSDS (SDS)?	N
Item Is Shipped At This Packaging Level	Y

MORE DETAILS

Reviews summary

4.6
★★★★½
210 reviews

5	77%
4	14%
3	2%
2	1%
1	3%

Top positive review

I originally purchased the the drain in "oil rubbed bronze" to match the fixtures in my bathroom....

★★★★★ August 9, 2018

I originally purchased the the drain in "oil rubbed bronze" to match the fixtures in my bathroom. It was painted brown and was chipping before we even installed it. I then purchased the drain in "vibrant brushed bronze". Much better. It is actually a finish and not painted and the color, while not oil rubbed bronze goes great with the ... Show more

Reviewed on Home Depot

See all 194 positive reviews

VS

Top critical review

I ordered this shower drain for my new shower remodel. For $ WAS NOT expecting th...

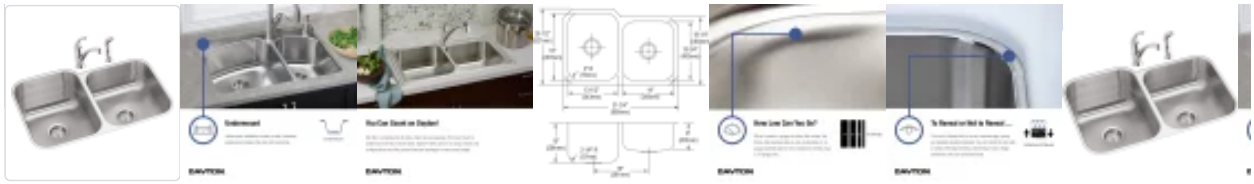
★☆☆☆☆ September 26, 2018

I ordered this shower drain for my new shower remodel. For $72, I cert expecting the "oil rubbed bronze" drain cover to be dark gray/black pla seemed to be of good quality, but you can't see the drain, it is in the flo which you can see looked like cheap plastic. Definitely WOULD ... Sho

Reviewed on Home Depot

See all 11 critical reviews

ELKAY



Elkay DXUH312010RDF Dayton 31-3/4" Double Basin Undermount Stainless Steel Kitchen Sink with Kitchen Faucet - Includes Sidespray and Drain

from the Dayton Collection

Write a Review

$364.75

MSRP $585.00, You Save 38%

Finish: Stainless Steel

Stainless Steel
$364.75
1 In Stock
Leaves the Warehouse in 1 to 3 weeks

Select

Free Shipping!
Leaves the Warehouse in 1 to 3 weeks (Change Zip)

1 In Stock

− 1 +

Add to Cart

Add to Project | ☐ Compare | ♥ 1

Buy Now, Take 12 Months to Pay On orders of $1,000 or more
With the Build.com Credit Card
Apply Now

Customers Also Viewed

Elkay ELUHAQD3218	Elkay ELUHAQD32179	Elkay ETRU31189PD	Kohler K-3838-3	Elkay ECTSRAO33229BG	Kraus KBU23-KPF1612-KSD30
(4)	(5)	(1)	(2)	(0)	(6)
Starting at $571.40	Starting at $502.57	Starting at $541.45	Starting at $614.25	Starting at $558.25	Starting at $389.95

Overview | **Reviews** | **Product Q&A** | **Matching Products**

Product Overview

This product has additional required/recommended options. To configure, add to your cart.


Basin Rack Recommended


Cutting Board Recommended


Garbage Disposal Recommended


Rinsing Basket Recommended

Package Includes:

- Faucet
- Sink
- Drain

Product Technologies / Benefits:

- **Sound Deadening:** Sound-deadening material minimizes sound and vibration for a quieter time at the sink.

Sink Features:

- Double basin sink with a 50/50 split provides increased versatility for any task
- Covered under Elkay's limited lifetime residential warranty
- Constructed of 18 gauge premium grade stainless steel - guaranteed to never rust or corrode
- Undermount installation provides a seamless transition between countertop and sink
- Center drain location provides optimal drainage capability

Faucet Features:

- Covered under Elkay's limited lifetime warranty
- Premier finishing process - finishes will resist corrosion and tarnishing through everyday use
- Single handle operation
- Side spray with hose aids with a variety of kitchen tasks
- Spout swivels 360 degrees, providing greater access to more areas of the sink
- ADA compliant - complies with the standards set forth by the Americans with Disabilities Act for kitchen faucets
- WaterSense Certified product - using at least 30% less water than standard 2.2 GPM faucets, while still meeting strict performance guide lines

Manufacturer Resources

Installation Sheet

Specification Sheet

Dimensions and Measurements

Basin Depth	?	10, 8 in.
Basin Depth (Left)	?	10 in.
Basin Depth (Right)	?	8 in.
Basin Length (Left)	?	13.5 in.
Basin Length (Right)	?	14 in.
Basin Width (Left)	?	18 in.
Basin Width (Right)	?	15.75 in.
Connection Size	?	.5 in.
Drain Connection	?	3.5 in.
Faucet Height	?	7.375 in.
Flow Rate (GPM)	?	1.5
Gauge	?	18
Height	?	10 in.
Length	?	31.75 in.
Max Deck Thickness	?	2.5 in.
Minimum Cabinet Size	?	36 in.

Sink Specifications:

- Height: 10" (measured from the bottom of sink to the top of the rim)
- Overall Width: 20-1/2" (measured from the back outer rim to the front outer rim)
- Overall Length: 31-3/4" (measured from the left outer rim to the right outer rim)
- Basin Width: (measured from the back inner rim to the front inner rim)
  - Left: 18"
  - Right: 15-3/4"
- Basin Length: (measured from the left inner rim to the right inner rim)
  - Left: 13-1/2"
  - Right: 14"
- Basin Depth: (measured from the center of basin to the rim)
  - Left: 10"
  - Right: 8"
- Installation Type: Undermount
- Drain Outlet Connection: 3-1/2"
- Minimum Base Cabinet Width: 36"

Faucet Specifications:

- Overall Height: 7-3/8" (measured from counter top to highest part of faucet)
- Spout Height: 4-7/8" (measured from counter top to spout outlet)
- Spout Reach: 8" (measured from center of faucet base to center of spout outlet)
- Flow Rate: 1.5 GPM (gallons per minute)
- Maximum Deck Thickness: 2-1/2" (cannot mount to thicker decks without use of extension kit)
- 1 handle included with faucet
- Designed for use with standard U.S. plumbing connections

Additional Elkay Links

- View the Manufacturer Warranty
- Browse All Elkay Products
- Elkay Dayton Collection

This product is listed under the following manufacturer number(s):

Elkay DXUH312010RDF
Stainless Steel

Nominal Length	?	32 in.
Sink Length	?	31.75 in.
Spout Height	?	4.875 in.
Spout Reach	?	8 in.
Spout Swivel	?	360 Degrees
Width	?	20.5 in.

Included Components

Basin Rack Included	?	No
Basket Strainer Included	?	Yes
Colander Included	?	No
Cutting Board Included	?	No
Drain Assembly Included	?	Yes
Escutcheon Included	?	No
Faucet Included	?	Yes
Filtering	?	No
Handles Included	?	Yes
Sidespray	?	Yes
Soap Dispenser Included	?	No
Valve Included	?	Yes

Characteristics and Features

Basin Split	?	50/50
Connection Type	?	IPS
Corner Sink	?	No
Drain Placement	?	Center
Electronic	?	No

View More

Related Elkay Categories

Browse by Brand
Elkay Commercial Sale
Elkay Sale Products
Elkay Kitchen Sinks
Elkay Kitchen Faucets
Elkay Drinking Fountains
Elkay Kitchen Accessories
Elkay Commercial Products

Questions about Elkay DXUH312010RDF?

ELKAY

Elkay ECTRU30179RTC Crosstown 31-1/2" Undermount Single Basin Stainless Steel Kitchen Sink with Sound Dampening - Includes Basket Strainer and Sink Grid

from the Crosstown Collection

Write a Review

$334.75

MSRP $515.00, You Save 35%

Finish: Stainless Steel

Stainless Steel
$334.75
32 In Stock
Leaves the Warehouse Tomorrow, May 24th

Chat with an E…

Select

Free Shipping!
Delivered to 63123 by Wednesday, May 29th (Change Zip)

32 In Stock

− 1 +

Add to Cart

Add to Project | ☐ Compare | ♥ 14

Buy Now, Take 12 Months to Pay On orders of $1,000 or more
With the Build.com Credit Card
Apply Now

Customers Also Viewed

Elkay EFRU311610T	Elkay ETRU30179PD	Elkay ELUH2317	Kohler K-5409	Elkay ECTRUF30179R	Blanco 518172
(0)	(4)	(5)	(4)	(0)	(0)
Starting at $399.10	Starting at $508.30	Starting at $360.57	Starting at $621.75	Starting at $419.90	Starting at $348.00

Overview | **Reviews** | **Product Q&A** | **Matching Products**

Product Overview

This product has additional required/recommended options. To configure, add to your cart.

Cutting Board Recommended

Elkay Crosstown is the ultimate mix of beauty, function and modern design. Tight corners provide more space inside the sink for stacking and washing dishes. The striking geometric aesthetic has universal appeal and makes an impact in any space.

Elkay ECTRU30179RTC Features:

- Covered under Elkay's limited lifetime warranty
- Coordinates flawlessly with items from the Crosstown collection by Elkay
- Sink is installed in an undermount configuration beneath the countertop creating a seamless appearance between the sink and the countertop
- Single bowl gives you uninterrupted space for washing and stacking dishes or other household tasks
- Highest quality 18-gauge thickness and type 304 stainless steel for lasting durability, performance and lustrous beauty
- Sound-deadening pad minimizes sound and vibration for a quieter time at the sink
- Fresh, geometric design offers straight sidewalls and a flat bottom for a modern look and more usable space
- Offset drain placement provides more usable space on the bottom of the sink and in the cabinet below
- High-capacity bowl offers more room inside for stacking dishes, filling stockpots, and handling large baking sheets and roasters
- Creased accent lines in the sink bottom deliver superior drainage and give the sink a professional appearance

Elkay ECTRU30179RTC Specifications:

- Length: 31-1/2" (from left to right)
- Width: 18-1/2" (from front to back)
- Height: 9" (from top to bottom)
- Basin Dimensions: 30" L x 17" W x 9" D
- Minimum Cabinet Size: 36"
- Drain Connection: 3-1/2"

Additional Elkay Links

- View the Manufacturer Warranty
- Browse All Elkay Products
- Elkay Crosstown Collection

Manufacturer Resources

Specification Sheet

Installation Guide

Care and Cleaning

Dimensions and Measurements

Basin Depth	?	9 in.
Basin Length	?	30 in.
Basin Width	?	17 in.
Drain Connection	?	3.5 in.
Faucet Centers	?	0 in.
Gauge	?	18
Height	?	9 in.
Length	?	31.5 in.
Minimum Cabinet Size	?	36 in.
Nominal Length	?	32 in.
Sink Length	?	31.5 in.
Width	?	18.5 in.

Included Components

Basin Rack Included	?	Yes
Basket Strainer Included	?	Yes

Evolution Pro 880LT Garbage Disposal, 7/8 HP

Read all 333 reviews | Write a review

More performance in a compact size.InSinkErator® is offering professionals a distinct advantage with the PRO Series Food Waste Disposers and Water Dispensing Technologies. PRO Series Disposers provide the most power and performance your customers can buy, while the instant hot water dispenser sits right on the edge of the kitchen sink, ready to dispense steaming hot water at your command.

EvoPro880LT

Select Power Cord Attached

–

Price Not Available

1

NOT AVAILABLE

Feedback

Features

- 7/8 HP
- 8-Year warranty
- Auto-Reverse
- Anti-Microbial Baffle

Specifications

DOWNLOAD FULL SPECS

Warranty	8 Year We Come To You® In-Home Limited Warranty
Type of Feed	Continuous
On/Off Control	Wall Switch
Motor	Single Phase
Horsepower	7/8 HP
Time Rating	Intermittent
Lubrication	Permanently Lubricated Upper & Lower Bearings
Unit Finish	Black Enamel
Overall Height	12-1/4"
Soundseal Technology	Anti-Vibration Mount™, Anti-Vibration Tailpipe Mount™, Sink Baffle, Multi-Layer SoundLimiter™ Insulation
MultiGrind Technology	GrindShear Ring®
Grind Chamber Capacity	34.6 oz
Motor Protection	Manual Reset Overload
Average Water Usage	Approx. 1 Gallon Per Person Per Day

Documents & Drawings

ENGLISH

DATA SHEETS & BULLETINS

MANUALS & GUIDES

Evolution Pro 880LT Specifications

English .PDF

Evolution Pro 880LT Warranty

English .PDF

Feedback

SECTION 415500 - HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM DESIGN CRITERIA

PART 1 – GENERAL

1.1 SUMMARY

Scope of Work:

1. Work under this general heading consists of design, engineering, permitting and construction to furnishing labor and material necessary for complete installation of Heating, Ventilating and Air Conditioning and their component systems.

2. A new ground up residential care home to be designed with 3 separate areas:
   a. The central common living area: Living, Dining, Activity, Corridors, Kitchen, (one zone),
   b. Each wing of bedrooms for the residents (two zones – one per wing).
   c. Each wing of support spaces for residents (two zones – one per wing).
   d. Based upon the above criteria, provide a HVAC system with 5 zones.

3. The design-build HVAC subcontractor is to determine the best systems to supply HVAC to all 3 areas using the space available shown on the architectural documents.

4. Proposed population to include; one resident in each bedroom, a staff of 3 persons and brief visits from family members in the Common areas assuming ten guests at any one time. The resident bedrooms do not have a requirement for individual temperature control and could be one common system.

5. The ComCHECK listed on the drawings identifies the R-values of the building envelope as well as thermal resistance of the windows and other construction materials.

1.2 CODES AND ORDINANCES:

1. Nothing in this Specification shall be interpreted to conflict with any City or State law, regulation, code, ordinance, ruling or Fire Underwriters' requirement applicable to this class of work.

2. Governing agencies - All work shall be installed in accordance with, but not limited to, the applicable provisions of:
   a. NFPA 101, Life Safety Code, 2000 edition and,

   b. State of Missouri Department of Health and Senior Services, Chapter 86 – Residential Care Facilities and Assisted Living Facilities and,

c. Any other required Division or Chapter of the rules and regulations from the State Department of Health and Senior Services and,

d. the State fire Marshall and,

e. City or St. Louis County adopted HVAC Codes and,

f. Americans with Disabilities Act, ANSI or other required accessibility regulations.

g. Compliance as may be required with locally adopted energy code.

1.3 SUPERVISION

1. Work shall be done under personal supervision of HVAC sub-Contractor, who shall provide a competent foreman to lay out work. Work shall be laid out with due regard for space requirements of other Contractors. This contractor shall report any conflicts or difficulties in regard to installation immediately.

1.4 DESIGN

1. An electronic file of the architectural drawings is available in AutoCAD Lt or Revit format and will be made available at the start of design.

2. H.V.A.C. design work supplied by Mechanical Contractor is insured against design errors and omissions by Engineers Errors and Omissions Insurance. A copy of the insurance certificate is to be made available upon request.

3. H.V.A.C. engineering design fees are to be included in the H.V.A.C. design-build cost. H.V.A.C. plans and specifications are to be prepared by a licensed engineer in the state of the project.

4. H.V.A.C. System Design Conditions to comply with all governing codes.

5. There shall be no exposed ductwork, piping, wiring, hangers, or supports. The design and routing of the proposed system is to fit within the space available on the current architectural drawings. No soffits will be added for required ductwork, piping etc. The intent is for the entire system to be concealed in the walls and/ or ceilings for an acceptable design.

6. Provide gas piping with standard black iron pipe from a gas meter, (meter furnished and installed by others) to gas fired H.V.A.C. equipment, hot water heaters.

7. Complete electric temperature control system using programable thermostats with an internet connection.

8. Coordination:

- Include revisions as necessary to coordinate the systems into the building construction with the architect.
- Coordinate with civil, architectural, structural, plumbing, electrical and fire protection with the HVAC system design.

9. A humidification system is to be included.

10. Approval: Final design Submittal to be submitted to architect, owner, owner's representative for approval of layout, aesthetic use and location of devices and equipment. All sprinkler head styles, finish and equipment to be submitted for review prior to submission for permit approval.

11. Permits: This proposal to include all costs to submit and obtain approval from the governing agencies in a timely fashion so as to maintain the project schedule.

12. Design of all H.V.A.C. systems to meet fresh air requirements.

13. Laundry, toilet rooms, and kitchen exhaust is to be included.

1.5 MISCELLANEOUS REQUIREMENTS

1. Crane service for hoisting and setting the H.V.A.C. equipment.

2. Federal, state and local taxes.

3. H.V.A.C. permits and fees.

4. Additions and Changes to Work Included: Any changes to work, and any work in addition to work herein specified and/or shown on accompanying drawings, must be authorized in writing by General Contractor, Construction Manager, and Owner.

1.6 CLOSEOUT – WARRANTIES

1. Complete balance of H.V.A.C. systems, supervised by N.E.B.B. certified personnel. Balance report to be submitted to Owner, architect, owner's representative for approval and acceptance.

2. A complete set of H.V.A.C. plans in AutoCAD and paper form to be supplied to purchaser at job completion.

3. A complete typed sequence of operation, wiring, diagram and mechanical service check list given to Owners building operating personnel at job completion.

4. Operating and Maintenance Instructions: At time designated by Architect, Contractor shall provide service of a competent operator to instruct representatives of Owner in maintenance and operation of system.

5. Operating and Service Manuals: At completion of project, H.V.A.C. Contractor shall be required to provide 3 volumes of Operating and Service Manuals containing the following:
   a. Start up and Shutdown Procedures: Provide a step-by-step write up of major equipment. When manufacturer`s printed start up, trouble shooting and shutdown procedures are available they may be incorporated into operating manual for reference.

6. One (2) year guarantee on new equipment, materials, and workmanship supplied by Climate as described in this proposal, with the guarantee period beginning on date of startup of H.V.A.C. system. This guarantee does not include standard preventive maintenance as specified by equipment manufacturers maintenance instructions, and this guarantee can only be honored if specified preventive maintenance is performed. Compressors shall have a minimum 5-year factory warranty.

7. Cleaning: Scale and dirt shall be thoroughly cleaned and blow out of piping, ductwork and equipment on completion of installation and before starting plant in operation.

PART 2 – PRODUCTS

2.1 CUTTING AND PATCHING:

1. This Contractor shall do cutting and repairing necessary for installation of apparatus included under this contract. Cutting shall be neatly done, and in no case shall holes be cut larger than necessary to allow convenient installation of work.

2. General Contractor shall provide sufficient openings in areas required for admission of new equipment to be installed under this contract. This Contractor shall inform General Contractor as to sizes and location of openings required.

3. Required patching and repairing of walls, floors, roofs and ceilings shall be neatly done and shall be furnished to match existing surfaces.

2.2 SHEET METAL WORK:

1. Installation: Sheet metal work as shown on drawings shall be followed except that Contractor shall examine actual installation of other members, such as beams, piping, conduit, etc. and shall offset or provide transition pieces as necessary to avoid interferences with others.

2. There shall be no exposed ductwork, piping wiring, hangers or supports.

3. Work includes connection to and between equipment access doors, setting automatic dampers, elbows, offsets, transitions, volume dampers, grilles, registers and diffusers, fire and radiation dampers.

4. Duct shall be constructed in strict accordance with S.M.A.C.N.A. and A.S.H.R.E. standards for that classification of duct.

5. Reinforce ducts to prevent buckling, breathing vibrations or unnecessary noise, such as may be required to meet job conditions.

6. Longitudinal and cross joints, elbows, transitions, etc., all to be furnished as specified in "Duct Manual".

7. Support ducts with hangers to suit constructions as shown in "Duct Manual".

8. Ducts shall be neatly furnished on outside with sharp edges removed.

9. Inside surfaces shall be smooth with not projection into air stream except where otherwise noted.

10. Fasteners and attachments shall be made on same material as ducts or of corrosion resistant material.

11. Provide smoke or fire dampers in smoke or fire rated walls installed complying with U.L. approved design assemblies.

12. All ductwork run in attic space is be to fully insulated.

2.3 GRILLES, REGISTERS AND DIFFUSERS:

1. Grilles, registers and diffusers to be submitted to construction manager and architect for review.

2. Duct Insulation: Exterior duct insulation shall be insulated with 1-1/2 inches, 3 lbs./ft. density J-M Microlate or approved equal fiberglass duct liner and meet the requirements of NFPA pamphlet No. 90A insulate as indicated on plans.

3. Internal acoustical duct liners shall be installed in accordance with manufacturer's instructions utilizing "gripnail" or approved equal mechanical fasteners. Insulate duct as required for a proper system. At a minimum, duct insulation internal liner shall extend 15 feet from top of unit down supply and return trunk lines.

2.4 PIPING WORK:

1. Contractor shall furnish and install, as shown on drawings or as necessary to complete working system in accordance with intent of drawings and specifications, a complete system of piping subject to requirements of heating, ventilating and air conditioning system.

2. Erection: Piping shall be installed by experienced mechanics, properly supported with provisions made for expansion, contraction, slope and anchorage. Pipes shall have burr and cutting slag removed by reaming or other cleaning methods. Changes in direction shall be made with fittings, except that bending of pipe will be permitted providing a pipe bender is used to prevent kinks, wrinkles, or other malformations. Work shall be performed in a workmanlike manner.

3. Pipe sleeves shall be installed and properly secured in place at joints where pipes pass through masonry or concrete, as shown on drawings.

2.5 PIPE HANGERS:

1. Horizontal piping above grade shall be supported by rod unless otherwise detailed. Rods shall be protected against corrosion by being cadmium-plated so as to prevent oxidation.

2. Hangers shall be connected to structure with beam clamps, uni-strut, or concrete inserts.

2.6 TOOLS Scaffolding:

1. This contractor shall furnish drayage labor, materials, apparatus, scaffolding and tools necessary for performance of work in accordance with plans and specifications.

2.7 CONCRETE WORK AND FOUNDATION:

2. Concrete pads and foundations for mechanical equipment shall be provided by General Contractor.

3. Each concrete pad shall be sized to conveniently accommodate equipment set thereon. This Contractor shall coordinate with concrete flatwork Contractor giving him necessary information. This Contractor shall furnish and install anchor bolts required.

2.8 WIRING AND WIRING DIAGRAMS:

1. Wiring from power sources to motors on this project (through disconnect switches or mains and starters) will be furnished and installed by Electrical Contractor.

2. Temperature control wiring shall be furnished and installed by H.V.A.C. Contractor.

3. This Contractor shall deliver to equipment location when required, and properly identified, detached motors, controls, starters, etc., specified for Electrical Contractor who will install them together with wiring in connection with same. This Contractor shall furnish instructions and necessary wiring diagrams of electrical equipment and controls furnished by him and shall be responsible for their proper working installation.

4. Wiring furnished or furnished and installed by this Contractor to conform with all codes for this project.

2.9 GAS:

1. Service entrance to be from the side or rear of the home only.

2.10 MECHANICAL SYSTEMS:

1. High efficiency split systems sized for the heat/ cooling loss of the thermal envelope. Provide concrete pads, disconnects, piping, insulation, ductwork, etc. for a complete installation.

PART 3 – EXECUTION

END OF SECTION 15500 HVAC SYSTEMS DESIGN CRITERIA

SECTION 416000 – ELECTRICAL SYSTEM DESIGN CRITERIA

PART 1 – GENERAL

1.1 SUMMARY

Scope of Work:

1. Work under this general heading consists of design, engineering, permitting and construction to furnishing labor and material necessary for complete installation of Electrical work and their component systems including the following:
   - Power.
   - Lighting.
   - Fire Alarm.
   - Telephone.
   - Cable TV/ Internet/ Data/ WiFi.
   - Security Cameras.
   - Access Controls.
   - Lightning Protection.

2. A new ground up residential care home to be designed with 3 separate areas:
   a. The central common living area: Living, Dining, Activity, Corridors, Kitchen,
   b. Each wing of bedrooms for the residents.
   c. Support spaces for residents.

1.2 CODES AND ORDINANCES:

1. Nothing in this Specification shall be interpreted to conflict with any City or State law, regulation, code, ordinance, ruling or Fire Underwriters' requirement applicable to this class of work.

2. Governing agencies - All work shall be installed in accordance with, but not limited to, the applicable provisions of:
   a. NFPA 101, Life Safety Code, 2000 edition and,

   b. State of Missouri Department of Health and Senior Services, Chapter 86 – Residential Care Facilities and Assisted Living Facilities and,

   c. Any other required Division or Chapter of the rules and regulations from the State Department of Health and Senior Services and,

   d. the State fire Marshall and,

e. City or St. Louis County adopted Electric Codes and,

f. Americans with Disabilities Act, ANSI or other required accessibility regulations.

g. Compliance as may be required with locally adopted energy code.

1.3 SUPERVISION

1. Work shall be done under personal supervision of Electrical sub-Contractor, who shall provide a competent foreman to lay out work. Work shall be laid out with due regard for space requirements of other Contractors. This contractor shall report any conflicts or difficulties in regard to installation immediately.

1.4 DESIGN

1. An electronic file of the architectural drawings is available in AutoCAD Lt or Revit format and made available at the start of design.

2. Electrical design work supplied by Electrical Contractor is insured against design errors and omissions by Engineers Errors and Omissions Insurance.

3. Electrical engineering design fees for completion of Electrical plans and specifications by a licensed engineer in the state of the project.

4. Electrical System Design Conditions to comply with all governing codes.

5. There shall be no exposed piping, wiring, hangers, or supports. The design and routing of the proposed system is to fit within the space available on the current architectural drawings. No soffits will be added for required equipment, piping etc. The intent is for the entire system to be concealed in the walls and/ or ceilings for an acceptable design.

6. A complete electric temperature control system using programable thermostats will be provided and installed by the HVAC contractor. Coordinate any electrical needs with HVAC contractor for a complete system.

7. Coordination:
   - Include revisions as necessary to coordinate the systems into the building construction with the architect.
   - Coordinate and provide all electrical needs as required with the HVAC, plumbing and fire protection work as part of the Electrical system design and scope.

8. Approval: Final design Submittal to be submitted to architect, owner, owner's representative for approval of layout, aesthetic use and location of devices and equipment. All fixtures and equipment to be submitted for review prior to submission for permit approval.
   Light fixture layout will not be approved until the review and approval of the photometric study has been completed.

9. Permits: This proposal to include all costs to submit and obtain approval from the governing agencies in a timely fashion so as to maintain the project schedule.

10. Investigate and offer tax credits or other energy savings available from local programs on any proposed system.

1.5 MISCELLANEOUS REQUIREMENTS

1. Crane service for hoisting and setting the Electrical equipment.

2. Any federal, state and local taxes.

3. Electrical permits and fees.

4. Additions and Changes to Work Included: Any changes to work, and any work in addition to work herein specified and/or shown on accompanying drawings, must be authorized in writing by General Contractor, Construction Manager, and Owner.

1.6 CLOSEOUT – WARRANTIES

1. Complete balance of H.V.A.C. systems, supervised by N.E.B.B. certified personnel. Balance report to be submitted to Owner, architect, owner's representative for approval and acceptance.

2. A complete set of H.V.A.C. plans in AutoCAD and paper form to be supplied to purchaser at job completion.

3. A complete typed sequence of operation, wiring, diagram and mechanical service check list given to Owners building operating personnel at job completion.

4. Operating and Maintenance Instructions: At time designated by Architect, Contractor shall provide service of a competent operator to instruct representatives of Owner in maintenance and operation of system.

5. Operating and Service Manuals: At completion of project, H.V.A.C. Contractor shall be required to provide 3 volumes of Operating and Service Manuals containing the following:

6. Start up and Shutdown Procedures: Provide a step-by-step write up of major equipment. When manufacturer`s printed start up, trouble shooting and shutdown procedures are available they may be incorporated into operating manual for reference.

7. One (1) year guarantee on new equipment, materials, and workmanship supplied by Climate as described in this proposal, with the guarantee period beginning on date of startup of H.V.A.C. system. This guarantee does not include standard preventive maintenance as specified by equipment manufacturers maintenance instructions, and this guarantee can only be honored if specified preventive maintenance is performed. Compressors shall have a minimum 5-year factory warranty.

8. Cleaning: Scale and dirt shall be thoroughly cleaned and blow out of piping, ductwork and equipment on completion of installation and before starting plant in operation.

PART 2 – PRODUCTS

2.1 TEMPORARY ELECTRICAL POWER:

1. Electrical Contractor shall furnish, install and maintain temporary lighting in accordance with applicable OSHA regulations and standards and power system for use of contractors.

2. Ground fault interrupter protection is to be furnished by each contractor requiring use of extension cords.

3. Utility charges for 1 and 2 indicated above and power consumption would not be included in our proposal.

2.2 ELECTRICAL SERVICE:

1. Service to building will be underground from a utility owned pole-mounted transformer.

2. Service will be sized to handle requirements for entire home along with spare capacity.

3. Electrical service entrance to be from the side or rear of the home only.

2.3 POWER DISTRIBUTION:

1. Electrical service to enter building from sides or rear of building.

2. The 277/480V/3/4 wire will be distributed from main panel to localized panels. Lighting will be at 120 volts and receptacle circuits will be at 120/3 wire through dry-type transformers.

3. Panelboards will be provided with 20 percent spare capacity.

2.4 CONDUCTORS:

1. Aluminum conductors will be provided from pole mounted transformers to main service switchboard.

2. All other feeders and branch circuit conductors shall be copper "THHN/THW" insulated for 600 volts.

3.5 POWER:

1. Outlets:
   A. Receptacles will be provided as shown on the drawings.

   B. Convenience outlets will be provided for TV’s, computers, equipment in living room cabinets, & kitchen equipment, as required. Outlets may not be shown in all locations on the drawings and final power needs, height, location, access to be coordinated with final equipment to be installed.

   C. Provide dedicated circuit for tub or other equipment as required.

D. All devices and cover plates to “white”.

2. Motor Control HVAC units mounted on the will be furnished complete with controllers and disconnects.

3. Individual units such as air handling units, exhaust fans, etc., will be provided with individual motor starters by Mechanical Contractor and disconnects by Electrical Contractor.

2.6 LIGHTING:

1. Interior lighting will be as follows:

Nurse Station: 100-foot candles.

Corridors: 40 to 50-foot candles.

Toilets: 50-foot candles.

Storage and Mechanical Area: 20-foot candles.

Dining, Private Dining, Living Room, Activity Room: 60 to 75-foot candles.

Bedrooms: 40 to 50-foor candles.

a. Light fixture selections and quantities shown on the drawings are for bidding purposes only and have not been analyzed for proper light levels. Electrical Design-Build designer to prepare a photometric drawing showing the achieved light level with the current fixture layout using light fixtures selected, fixture spacing and mounting heights.

i. Photometric drawing to be prepared only after all light fixtures have been selected and approved thru submittal process.

ii. The completed photometric drawing to be compares against the minimum light levels indicated above for each location in the building.

iii. Any additional lighting needed to achieve the proper light level is to be shown on an adjusted photometric drawing to indicating the number and proposed location of the additional fixtures.

b. Emergency and exit lighting will be provided at main entrance to building.

2. Exterior lighting will be as follows:

Landscape lighting will be provided at front elevation of the building.

Parking Lot lighting: Floor lighting at sides of main entrance.

Soffit Lighting: As indicated on the plans.

Building accent lighting as shown on the drawings.

3. Lighting Switches:
   A. All devices & faceplates to be “white”.

   B. All corridor switches to be “Hubbell” or sim industrial grade key lock, wall and dimer light switch.

   C. Bedroom, Bathrooms 1 thru 4, Nurse, Lounge, sunroom, Private dining, Dining, Kitchen, Foyer, Living Room to have on/ off toggle switch with mini slider to dim or brighten.

   D. All other areas to have on/ off toggle switches.

   E. Exterior Lighting Switches:
      a. Front accent lighting, parking lot floodlights, & front entry decorative fixture to be connected to photocell and timer.

      b. All other lighting to have on/ off toggle switch.

      c. Timer to be individual seven-day automatic timing device located in nurses office cabinet.

2.7 TELEPHONE SYSTEMS:

1. Service entrance to the building to be from the sides or rear only.

2. Incoming underground telephone service shall be from nearby public utility.

3. Telephone service shall terminate within nurse’s office.

4. Telephone outlets will be fished in voids provided within walls and run thru attic. In areas that have non-accessible ceilings telephone outlets will be installed with conduit.

5. Furnish and install telephone outlets, wiring, power, as required for a complete system. Phone system will be VOIP.

2.8 FIRE ALARM AND SMOKE DETECTION SYSTEM:

1. Electrical Contractor will furnish and install a complete fire alarm system, as required by governing codes.

2. All devices & faceplates be “white”.

3. Smoke and/ or Heat detection system shall be installed in accordance with St. Louis County requirements.

4. Doors shown to be connected by hold-open devices are to be released upon the detection of smoke. Hold-open device are to be included in the scope of work. Provide shims or other devices to allow the hold-open device to adjust the pocket door angle to allow it lay parallel to the adjacent wall.

5. Water flow and tamper switches for sprinkler system shall be furnished and installed by sprinkler contractor and wired to fire alarm system by electrical contractor.

6. Provide fire alarm panel where shown on the drawings.

7. Provide strobes, alarms, pull stations, and all other required devices by governing codes.

8. All required heat and smoke detectors, strobes, alarms, pull stations or other devices may not be identified on the drawings. The electrical designer for the selected design-build electrical systems are to investigate required codes and included in the scope of this work all required devices.

2.8 TEMPERATURE CONTROL:

1. wiring shall be furnished and installed by temperature control contractor under HVAC contractor's scope. Coordinate and provide any power needs.

2.9 SECURITY CAMERAS

1. Provide Speco Technologies security camera system.
   a. exterior coverage for the front and back of the building including rear courtyard, rear exit way.
   b. Interior coverage to include all halls and all common areas.
   c. System to be monitored from the Nurse's Station with separate monitor at the desk area.
   d. All equipment to be located in Nurse's station equipment cabinet.
   e. Provide any wiring, cameras, recorders, software and or other equipment for a complete system.
      i. Cameras to be 1080p night vision all-weather, see plans for camera locations.
      ii. Infinite loop recording
      iii. Monitor at nurse desk
      iv. IP based with apps
   f. Provide sleeve/ conduit from cabinet to attic and from attic to desk area.
   g. Provide a 5-year warranty.

2.10 ACCESS CONTROLS:

1. Provide complete access control system including but not limited to design and installation on all devices, wiring, control panels, software, and related equipment to all exterior doors and rear courtyard gates.

2. Access controls to be connected to the PC in the Nurse's station and be 'IP' based. Any other controls to be in equipment cabinet in nurse's station.

3. The system to have the ability to unlock all egress door from a remote location.

4. Readers (Keypad or swipe controls) to be provided on inside and outside of all exterior doors. Style to be approved by owner, architect.

5. Electric strikes are indicated on hardware schedules and to be provided by hardware supplier. The wiring of the strikes is to be included in this scope of work. All wiring to be thru frame fully concealed. Coordinate as may be required with delay egress hardware scheduled.

6. Magnetic locks to be installed on rear courtyard gates. Locks to be connected to the fire alarm system. Upon activation of the fire alarm the locks are to be released allowing emergency exiting of the fenced area.

2.11 CABLE/ INTERNET/ DATA/ WiFi:

1. Provide local cable internet/ data service to the building including all equipment and wiring.
2. Main box to be located in the nurse's equipment cabinet.
3. DVR and Wifi router to be located in the cabinetry in the Living Room next to the fireplace.
4. Provide (pucks) network bridge as required to extend the Wifi signal to the remote points of the building. All exposed devices to be "white".
5. Provide high speed internet service minimum 100bps with options to faster speeds for the owner to consider.

2.12 LIGHTNING PROTECTION:

1. Provide a complete lightning protection system for the building.

2.13 EMERGENCY GENERATOR:

1. Provide emergency Generator System for house sized for the following:
    a. **Base bid system** to include enough power to allow the home to operate with minimal electric to energize the bedrooms, one toilet room in each wing, core lighting for the entire home, any emergency systems, kitchen appliances, enough air-conditioning and heat to keep the bedrooms comfortable, Hot water tanks.
    b. **Alternate bid system** to include the entire home.
2. **Sizing** - the wattage required to start many of these devices will require a lot more power than just running them and plan accordingly to make sure you have the surplus required. Startup wattage must be considered.
3. **Generator** - Make sure the operating capacity is not at full wattage measurement of the generator. 80% of the listed maximum capacity to be safe running measurement during operation. Engines to be cast iron. Sound absorbing, weather-proof housing, a very good noise reduction muffler, and a slower 1800 RPM engine. Provide grid quality sinewave output with a rock stable voltage throughout the full capacity range of the generator
4. Fuel – Natural gas with nearby shut-off.
5. Provide automatic transfer switch as necessary to go off when the power is cut and bring the generator to life in order to make sure that you're back online as soon as possible.
6. Provide concrete pad, wiring, disconnects, switches, etc. for a complete system.
7. Locate generator to prevent noise from bedrooms and neighbors.

END OF SECTION 16000 ELECTRICAL SYSTEM DESIGN CRITERIA

1

Lighting Cut Sheets

Below are cut sheets for lighting to be used/installed for Family Partners Care Home project. Cut sheets are labeled per tag from Light Fixture Schedule from Architectural Drawings. Model numbers are excluded from this list. Light Fixtures are subject to change and this list may not be final.

LIGHT FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	ALLOWANCE
LT-1	Surface Mounted	E Lighting	$85.00
LT-2	Square Downlight	Lightolier	$N/A
LT-3	Wall Sconce	E Lighting	$125.00
LT-4	Surface Mounted	N/A	$85.00
LT-5	Square Downlight	Lightolier	$N/A
LT-7	Decorative Pendant	E Lighting	$75.00
LT-8	N/A	N/A	$N/A
LT-9	Decorative Low Voltage Pendant	E Lighting	$55.00
LT-10	Outdoor Decorative Pendant	N/A	$175.00
LT-11	N/A	N/A	$N/A
LT-12	Square Downlight	N/A	$N/A
LT-14	Cove Light	Philips	$35.00/ft.
LT-15	Surface Mounted	N/A	$N/A
LT-16	Slim Wall Pack/Flood	E Lighting	$N/A
LT-17	Outdoor Exit Lights	Lightolier	$N/A
FP-1	Ceiling Mounted Exit Light	N/A	$N/A
FP-2	Emergency Light	N/A	$N/A

CEILING

4404

- Brushed Nickel, or Chrome
- Frosted Glass
- 2 Sockets
- Ceiling mount
- 14.5" W x 5.5" H
- Lamp Sold Separately

4406

- Brushed Nickel, or Chrome
- Frosted Glass
- 3 Sockets
- Ceiling mount
- 19" W x 5.5" H
- Lamp Sold Separately

4394

- Brushed Nickel, or Chrome
- Frost White Glass
- 3 Sockets
- Ceiling mount
- 15" W x 5.25" H
- Lamp Sold Separately

Euro Style

easy access for lamp changes

Lift & Shift Acrylic Lens

4573

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- White Acrylic Lens
- 1 Socket
- Ceiling mount
- 13" W x 3.75" H
- Lamp Sold Separately

4578

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- White Acrylic Lens
- 2 Sockets
- Ceiling mount
- 17" W x 3.75" H
- Lamp Sold Separately

4579

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- White Acrylic Lens
- 3 Sockets
- Ceiling mount
- 20" W x 3.75" H
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC4404	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4404	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4404	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4406	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4406	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4406	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4394	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4394	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4394	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4573	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL4573	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED4573	GU24	LED	7	B2107	110-277	BN, CH, ORB	27K	450	82	40,000
INC4578	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL4578	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED4578	GU24	LED	7	B2107	110-277	BN, CH, ORB	27K	450	82	40,000
INC4579	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL4579	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED4579	GU24	LED	7	B2107	110-277	BN, CH, ORB	27K	450	82	40,000

PENDANTS & SEMI-FLUSH

2762

- White Opal glass
- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Ceiling mount
- 2 Sockets
- 14" W x 12" H
- Lamps Sold Separately

2652

- White Opal glass
- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Ceiling mount
- 2 Sockets
- 14" W x 21" H
- Lamps Sold Separately

2752

- White Opal glass with Cream Fabric
- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Ceiling mount
- 2 Sockets
- 13" W x 11" H
- Lamps Sold Separately

2653

- White Opal glass
- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Ceiling mount
- 3 Sockets
- 16" W x 21" H
- Lamps Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC2652	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2652	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2652	GU24	LED	7	B1006	110-277	BN, ORB, CH	27K	600	75	50,000
INC2653	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2653	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2653	GU24	LED	7	B1006	110-277	BN, ORB, CH	27K	600	75	50,000
INC2752	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2752	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2752	GU24	LED	7	B1006	110-277	BN, ORB, CH	27K	600	75	50,000
INC2762	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2762	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2762	GU24	LED	7	B1006	110-277	BN, ORB, CH	27K	600	75	50,000

OUTDOOR FAN

THE WEATHER WIZE™

Specification Features	
Hanging:	Dual Mount Aluminum Ball with 5" Downrod
Housing:	280mm Steel Housing
Lead Wire:	54" Lead Wire
UL Listing:	OutdoorLocations
Blade Span:	(5) 52" ABS 12° Pitch
Motor Size:	153 x 13mm
Motor Style:	Silicon Steel - High Quality
Speeds:	3 Speeds - Reversible
Rotation:	100mm Switch Housing
Capacitor:	Triple-Capacitor
Light Kit:	Adaptable, Not Included
Voltage:	120V
Control:	Pull Chain
Instructions:	Easy to Follow & Illustrated
Warranty:	Limited Lifetime All other components of our fan, plus light kits, and electronics are covered by a 1 year warranty

Performance & Energy Information			
Fan Speed	**CFM**	**Watts**	**CFM/Watt**
High	5172	57.4	90
Medium	3486	33.2	105
Low	2257	13.3	169

Item Number	Finish	Blade Side 1	Blade Side 2	Blade Options
F600BN	Brushed Nickel	Maple	Maple	
F602BK	Black	Black	Black	
F604WH	White	White	White	
F606ORB	Oil Rubbed Bronze	Oil Rubbed Bronze	Oil Rubbed Bronze	

FAN LIGHT KITS

9330

- Brushed Nickel, Oil Rubbed Bronze, or White
- (1) E26 or GU24 Socket for A-19 Lamp
- Opal Glass
- Lamps Sold Separately

9620

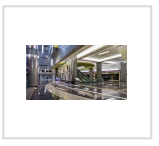
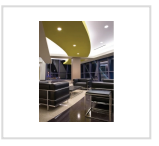
- Brushed Nickel, Oil Rubbed Bronze, or White
- (2) E26 or GU24 Sockets for A-19 Lamp
- Frost White Glass
- Lamps Sold Separately

9345

- Brushed Nickel, Oil Rubbed Bronze, or White
- (2) E26 or GU24 Sockets for A-19 Lamp
- Alabaster Glass
- Lamps Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC9330	E26	INC	60	B11018	120	BN, ORB, WH	27K	545	80	5,000
CFL9330	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, WH	27K	600	82	10,000
LED9330	GU24	LED	7	B1006	110-277	BN, ORB, WH	28K	450	75	40,000
INC9345	E26	INC	60	B11018	120	BN, ORB, WH	27K	545	80	5,000
CFL9345	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, WH	27K	600	82	10,000
LED9345	GU24	LED	7	B1006	110-277	BN, ORB, WH	28K	450	75	40,000
INC9620	E26	INC	60	B11018	120	BN, ORB, WH	27K	545	80	5,000
CFL9620	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, WH	27K	600	82	10,000
LED9620	GU24	LED	7	B1006	110-277	BN, ORB, WH	28K	450	75	40,000

VAYA COVE LP 3000K 0.3M (1FT) UL/CE DIMMABLE

$31.90

☆☆☆☆☆ Write a review
Ask a question

★ REVIEWS

CEILING

4518

- Brushed Nickel, White, or Oil Rubbed Bronze
- White Acrylic Lens
- 2 Sockets
- Ceiling mount
- 11" W x 3" H
- Lamp Sold Separately

4530

- Brushed Nickel, White, or Oil Rubbed Bronze
- White Acrylic Lens
- 3 Sockets
- Ceiling mount
- 14" W x 3" H
- Lamp Sold Separately

4532

- Brushed Nickel, White, or Oil Rubbed Bronze
- White Acrylic Lens
- 4 Sockets
- Ceiling mount
- 19" W x 4.5" H
- Lamp Sold Separately

4518EM

- Brushed Nickel, White, or Oil Rubbed Bronze
- White Acrylic Lens
- 2 Sockets
- Ceiling mount
- Emergency Back Up Battery
- 11" W x 6" H
- Lamp Sold Separately

4530EM

- Brushed Nickel, White, or Oil Rubbed Bronze
- White Acrylic Lens
- 3 Sockets
- Ceiling mount
- Emergency Back Up Battery
- 14" W x 6" H
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
CFL4518	GU24	CFL	13	LVC-13-SP-27	120	BN, WH, ORB	27K	800	82	10,000
LED4518	GU24	LED	7	B1006	110-277	BN, WH, ORB	27K	450	82	40,000
CFL4518EM	G24Q-1	CFL	13	EP606	120	BN, WH, ORB	27K	900	82	10,000
LED4518EM	GU24	LED	7	B1006	110-277	BN, WH, ORB	27K	450	82	40,000
CFL4530	GU24	CFL	13	LVC-13-SP-27	120	BN, WH, ORB	27K	800	82	10,000
LED4530	GU24	LED	7	B1006	110-277	BN, WH, ORB	27K	450	82	40,000
CFL4530EM	G24Q-1	CFL	13	EP606	120	BN, WH, ORB	27K	900	82	10,000
LED4530EM	GU24	LED	7	B1006	110-277	BN, WH, ORB	27K	450	82	40,000
CFL4532	GU24	CFL	13	LVC-13-SP-27	120	BN, WH, ORB	27K	800	82	10,000
LED4532	GU24	LED	7	B1006	110-277	BN, WH, ORB	27K	450	82	40,000

LED ARCHITECTURAL SLIM WALL PACK/FLOOD

Features

Classic adjustable design slim wall packs/floods offer maximum light output for general purpose area and security lighting. Rugged die cast aluminum construction features a back box with secure lock hinges.

Small

Dimensions: 7 ¾"H x 6 ½" x 4 ¼" ext.
Mounting Ht.: 8 to 20 feet.
Hood lifts to 20°
Typical Spacing: 1 to 2 times the mounting height.
LEDAS940-30w
LEDAS940-40w

Large

Dimensions: 9 ½"H x 11 ¼" x 5 ¾" ext.
Mounting Ht.: 8 to 25 feet.
Hood lifts to 20°
Typical Spacing: 1 to 2 times the mounting height.
LEDAS940-70w
LEDAS940-90w

Applications

Ideal for Security, Pathway and Perimeter Lighting. Building Entryways and Walkways.

Specification Features

UL Listing:	Suitable for wet location. IP65 Rated.
DLC:	Approved. UL1598, UL8750.
Housing:	Die cast aluminum housing glass.
Lens:	UV Stabilized Polycarbonate.
Finish:	Powder coat dark bronze.
LED Chip	Cree CXA Series. LM 80 certified.
Voltage:	Universal 120v-277v operational.
Color Temps:	5000K.
Cold Weather:	Cold Weather Starting-40°C/-40°F
Wattage:	30, 40, 70, 90 watts.
DLC:	Listed
Mounting:	Wall mount, mounts over a 4" square or octagonal junction box.
Mounting Height:	8 to 20 feet small. 8 to 25 feet large.
Spacing:	1 to 2 times mounting height.
Dimensions:	Body Ht. 4.96" Width 8.67"
Options:	Photo Control - is field installed and drilling of the back box is required.

Options

Photo Cell: AT120 field installed

Item Number	Wattage	Voltage	Kelvin	Lumens	CRI	Equivalent Wattage	Beam Angle	Optic
LEDAS940-30	30w	120v / 277v	5000k	3.000lm	75+	50w MH	120°	Type 111
LEDAS940-40	40w	120v / 277v	5000k	4,500lm	75+	100w MH	120°	Type 111
LEDAS940-70	70w	120v / 277v	5000k	7,500lm	75+	175w MH	120°	Type 111
LEDAS940-90	90w	120v / 277v	5000k	9,700lm	75+	250w MH	120°	Type 111

PHILIPS
LIGHTOLIER

Downlighting

SlimSurface LED

4" and 6" square aperture surface mount downlight

SlimSurface LED is a 5/8" thick surface mounted luminaire with the appearance of a recessed downlight. Easy to install into most standard j-boxes, the SlimSurface LED square apertures are available as a 4" 650lm & 6" 1000lm fixture.

Project:
Location:
Cat.No:
Type:
Lamps: Qty:
Notes:

Ordering guide

example: S4S830K7AL

Family	CRI	CCT	Lumens	Finish	Dimming
S4S SlimSurface 4" Square	**8** 80 **9** 90[1]	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K	**7** 650lm	**blank** White **AL** Aluminum **BK** Black	**blank** ELV / Triac (120V)
				W White **AL** Aluminum **BK** Black	**Z10U** 0-10V (120V-277V)
S6S SlimSurface 6" Square	**8** 80 **9** 90[1]	**27K** 2700K **30K** 3000K **35K** 3500K **40K** 4000K	**10** 1000lm	**blank** White **AL** Aluminum **BK** Black	**blank** ELV / Triac (120V)
				W White **AL** Aluminum **BK** Black	**Z10U** 0-10V (120V-277V)

1. Configurations using 90 CRI are only available with 2700K and 3000K CCT.

White


Black


Aluminum

Features

1. **Flange:** One piece plastic flange. Injection molded white, applied aluminum or black.
2. **Lens:** High transmittance lens allowing for smooth, comfortable light pattern.
3. **Power supply:** Integral class 2 driver. Factory wired electronic LED driver (see Electrical section for specifications)
4. **LED Strip:** Utilizes Philips LEDs.
5. **Lifetime:** Expected lifetime 50,000 hours and backed by a 5-year warranty (see Philips.com/warranties for details).
6. **Compliance:** Non-conductive fixture for shower light application.

Electrical

Electronic power supply: RoHS compliant. Class 2 power unit. Unit tolerates sustained open circuit and short circuit output conditions without damage.

Dimming: Intended for ELV/Triac (120V) or 0-10V dimming (120V-277V) based on the configuration. Min 90°C supply conductors.

Labels

cULus listed.
Wall-mounted: damp location only.
Ceiling-mounted: wet location.
Title 24 (JA8-2016) on 90CRI S6S models.
ENERGY STAR® certified.

Electrical specifications	Dimming	Input volts	Input frequency	Input current	Input Power	THD Factor	Power Factor	Minimum Operating Temp.
Slim 4" 650lm	Triac	120V	50/60Hz	0.08A	9.5W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.08A	10.0W	<20%	>0.9	-20°C
		277V	50/60Hz	0.04A	10.2W	<20%	>0.9	-20°C
Slim 6" 1000lm	Triac	120V	50/60Hz	0.13A	14.2W	<15%	>0.9	-20°C
	0-10V	120V	50/60Hz	0.12A	14.5W	<20%	>0.9	-20°C
		277V	50/60Hz	0.06A	14.7W	<20%	>0.9	-20°C

For more details, please see LED-DIM spec sheet.

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

Compatibility

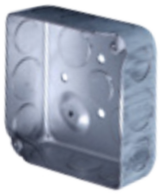
Installs into standard J-box applications:

3½" round (plastic)

4" square (plastic)

Not compatible with S5R

4" octagonal (metal)



4" square (metal)

Not compatible with S5R

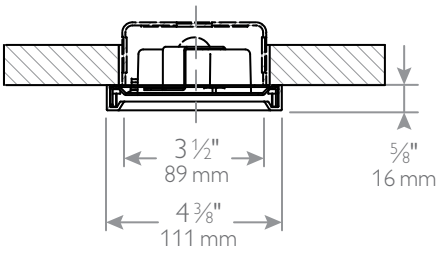
Fire rated J-box

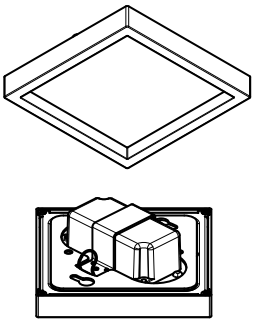
Fire rated classification is per the ceiling and junction box ratings.

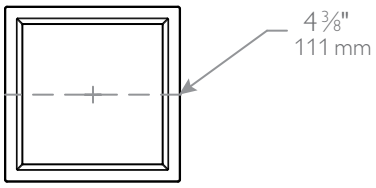
Note: A 2 1/8" deep octagon junction box is recommended for through circuit wiring applications.

Dimensions

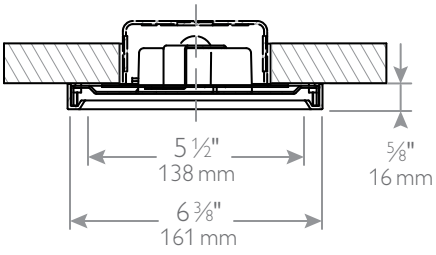
SlimSurface LED 4" downlight

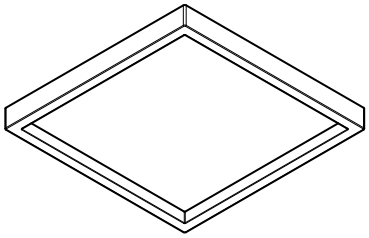


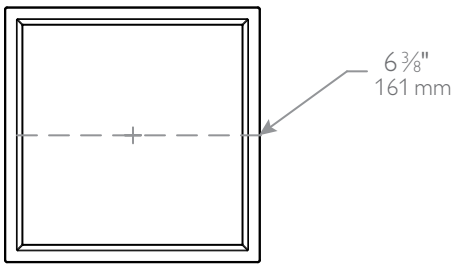




SlimSurface LED 6" downlight





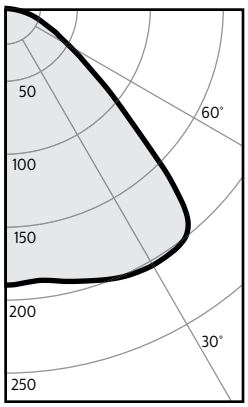


S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S927K7 • 10 W LED, 90 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	189	
5	188	18
10	189	
15	193	55
20	198	
25	201	93
30	203	
35	202	126
40	196	
45	153	116
50	103	
55	71	66
60	51	
65	39	38
70	28	
75	21	21
80	13	
85	4	5
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	8	7.5'
6'	5	9.0'
7'	4	10.5'
8'	3	12.0'
9'	2	13.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	22.5	0.40
6'	14.7	0.26
7'	10.5	0.19
8'	8.8	0.16
9'	7.0	0.13

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	85	78	74
3	93	84	76	70	82	70	79	68	76	67	64
4	86	75	67	61	73	60	71	59	69	59	56
5	79	67	59	53	66	52	64	52	62	51	49
6	73	61	52	46	60	46	58	46	56	45	43
7	68	55	47	41	54	41	53	41	52	40	38
8	63	50	42	37	50	37	48	36	47	36	34
9	59	46	38	33	46	33	45	33	44	33	31
10	55	43	35	30	42	30	41	30	40	30	28

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	166	30.7%
0-40	292	54.2%
0-60	474	88.0%
0-90	539	100.0%

CRI and CCT adjustment factors

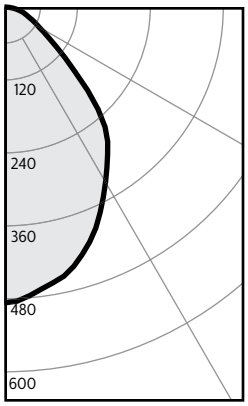
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 943GFR

Output lumens:	539 lms	Efficacy:	59.3 lm/w
Spacing Criterion:	1.5	CCT[3]:	2700 K
Beam Angle:	86°	CRI:	90 min
Input Watts[2]:	9.1 W		

S6S927K10 • 14 W LED, 90 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	486	
5	476	45
10	460	
15	441	123
20	410	
25	373	170
30	333	
35	296	184
40	258	
45	193	147
50	131	
55	90	83
60	65	
65	51	50
70	39	
75	30	30
80	20	
85	9	9
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	19	5.5'
6'	14	6.6'
7'	10	7.7'
8'	8	8.8'
9'	6	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	21.8	2.80
6'	14.2	1.84
7'	10.2	1.31
8'	8.5	1.09
9'	6.8	0.88

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	98	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	70	65	77	64	74	63	72	63	60
5	82	71	63	57	70	57	68	56	66	56	53
6	76	65	57	51	64	51	62	51	61	50	48
7	71	59	52	46	59	46	57	46	56	45	43
8	67	55	47	42	54	42	53	42	52	41	39
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	338	40.2%
0-40	522	62.1%
0-60	753	89.5%
0-90	841	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 957GFR

Output lumens:	841 lms	Efficacy:	63.2 lm/w
Spacing Criterion:	1.1	CCT[3]:	2700 K
Beam Angle:	82°	CRI:	90 min
Input Watts[2]:	13.3 W		

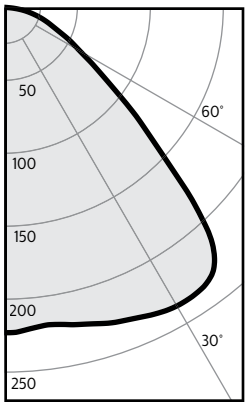
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S827K7 • 10 W LED, 80 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	223	
5	221	21
10	221	
15	225	64
20	229	
25	233	108
30	237	
35	236	146
40	224	
45	175	133
50	121	
55	83	76
60	60	
65	44	44
70	33	
75	24	25
80	15	
85	5	6
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	9	7.5'
6'	6	9.0'
7'	5	10.5'
8'	3	12.0'
9'	3	13.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	25.9	0.41
6'	17.0	0.27
7'	12.1	0.19
8'	10.1	0.16
9'	8.1	0.13

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	85	78	74
3	93	84	76	70	82	70	79	69	77	67	64
4	86	75	67	61	74	60	71	59	69	59	56
5	79	67	59	53	66	53	64	52	62	51	49
6	73	61	52	46	60	46	58	46	57	45	43
7	68	55	47	41	55	41	53	41	52	41	38
8	63	51	42	37	50	37	49	37	47	36	34
9	59	46	38	33	46	33	45	33	44	33	31
10	55	43	35	30	42	30	41	30	40	30	28

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	192	30.9%
0-40	338	54.4%
0-60	547	88.0%
0-90	622	100.0%

CRI and CCT adjustment factors

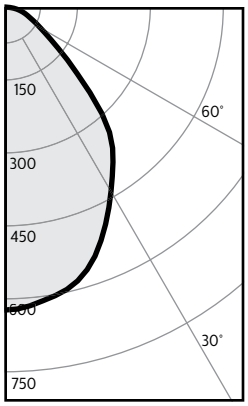
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 944GFR

Output lumens:	622 lms	Efficacy:	67.6 lm/w
Spacing Criterion:	1.5	CCT[3]:	2700 K
Beam Angle:	101°	CRI:	80 min
Input Watts[2]:	9.2 W		

S6S827K10 • 14 W LED, 80 CRI, 2700 K

Candela Curves



Angle	Mean CP	Lumens
0	625	
5	618	59
10	604	
15	584	164
20	546	
25	494	227
30	440	
35	390	244
40	337	
45	250	193
50	170	
55	117	108
60	85	
65	65	65
70	51	
75	39	41
80	27	
85	12	13
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	25	5.5'
6'	17	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	24.2	3.68
6'	15.8	2.42
7'	11.3	1.73
8'	9.5	1.44
9'	7.5	1.15

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	98	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	70	65	77	64	74	63	72	63	60
5	82	71	63	57	70	57	68	56	66	56	53
6	76	65	57	51	64	51	62	51	61	50	48
7	71	59	52	46	59	46	57	46	56	45	43
8	67	55	47	42	54	42	53	42	52	41	39
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	449	40.4%
0-40	693	62.3%
0-60	994	89.3%
0-90	1113	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 964GFR

Output lumens:	1113 lms	Efficacy:	83.1 lm/w
Spacing Criterion:	1.1	CCT[3]:	2700 K
Beam Angle:	83°	CRI:	80 min
Input Watts[2]:	13.4 W		

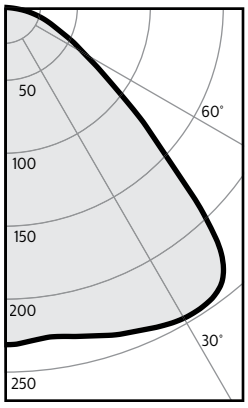
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S830K7 • 10W LED, 80CRI, 3000K

Candela Curves



Angle	Mean CP	Lumens
0	231	
5	229	22
10	230	
15	236	67
20	241	
25	246	113
30	248	
35	247	153
40	237	
45	185	139
50	125	
55	87	80
60	63	
65	47	47
70	34	
75	25	26
80	15	
85	5	6
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	9	7.5'
6'	6	9.0'
7'	5	10.5'
8'	4	12.0'
9'	3	13.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	27.2	0.40
6'	17.9	0.26
7'	12.8	0.19
8'	10.6	0.16
9'	8.5	0.13

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	85	78	74
3	93	84	76	70	82	70	79	69	77	67	64
4	86	75	67	61	74	60	71	59	69	59	56
5	79	67	59	53	66	52	64	52	62	51	49
6	73	61	52	46	60	46	58	46	57	45	43
7	68	55	47	41	55	41	53	41	52	40	38
8	63	51	42	37	50	37	49	36	47	36	34
9	59	46	38	33	46	33	45	33	44	33	31
10	55	43	35	30	42	30	41	30	40	30	28

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	202	30.9%
0-40	355	54.3%
0-60	574	87.9%
0-90	653	100.0%

CRI and CCT adjustment factors

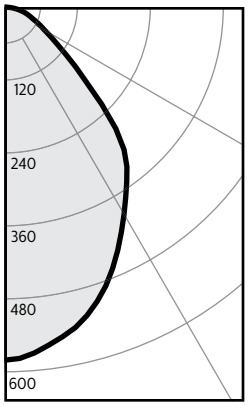
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 945GFR

Output lumens:	653 lms	Efficacy:	71.8 lm/w
Spacing Criterion:	1.5	CCT[3]:	3000 K
Beam Angle:	86°	CRI:	80 min
Input Watts[2]:	9.1 W		

S6S830K10 • 14W LED, 80CRI, 3000K

Candela Curves



Angle	Mean CP	Lumens
0	582	
5	572	54
10	551	
15	526	148
20	489	
25	442	203
30	394	
35	351	220
40	307	
45	227	176
50	153	
55	106	99
60	77	
65	59	60
70	45	
75	34	36
80	22	
85	10	10
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	23	5.5'
6'	16	6.6'
7'	12	7.7'
8'	9	8.8'
9'	7	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	26.2	3.33
6'	17.1	2.18
7'	12.2	1.56
8'	10.2	1.30
9'	8.1	1.04

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	98	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	70	65	77	64	74	63	72	63	60
5	82	71	63	57	70	57	68	56	66	56	53
6	76	65	57	51	64	51	62	51	61	50	48
7	71	59	52	46	59	46	57	46	56	45	43
8	67	55	47	42	54	42	53	42	52	41	39
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	405	40.2%
0-40	625	62.1%
0-60	900	89.5%
0-90	1006	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 958GFR

Output lumens:	1006 lms	Efficacy:	75.1 lm/w
Spacing Criterion:	1.1	CCT[3]:	3000 K
Beam Angle:	82°	CRI:	80 min
Input Watts[2]:	13.4 W		

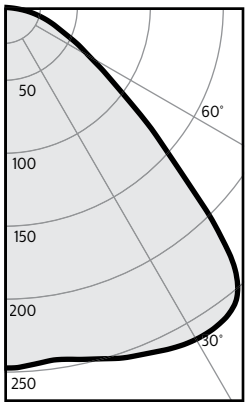
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S835K7 • 10 W LED, 80 CRI, 3500 K

Candela Curves



Angle	Mean CP	Lumens
0	247	
5	245	23
10	245	
15	249	71
20	255	
25	259	121
30	263	
35	262	163
40	249	
45	194	149
50	135	
55	93	86
60	67	
65	50	50
70	37	
75	27	28
80	17	
85	6	7
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	10	7.5'
6'	7	9.0'
7'	5	10.5'
8'	4	12.0'
9'	3	13.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	29.1	0.40
6'	19.1	0.26
7'	13.6	0.19
8'	11.4	0.16
9'	9.1	0.13

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	85	78	74
3	93	84	76	70	82	70	79	69	77	67	64
4	86	75	67	61	74	60	71	59	69	59	56
5	79	67	59	53	66	53	64	52	62	51	49
6	73	61	52	46	60	46	58	46	57	45	43
7	68	55	47	41	55	41	53	41	52	40	38
8	63	51	42	37	50	37	49	36	47	36	34
9	59	46	38	33	46	33	45	33	44	33	31
10	56	43	35	30	42	30	41	30	40	30	28

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	216	30.9%
0-40	379	54.3%
0-60	614	87.9%
0-90	698	100.0%

CRI and CCT adjustment factors

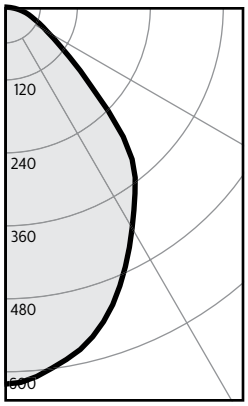
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 946GFR

Output lumens:	698 lms	Efficacy:	76.7 lm/w
Spacing Criterion:	1.5	CCT[3]:	3500 K
Beam Angle:	99°	CRI:	80 min
Input Watts[2]:	9.1 W		

S6S835K10 • 14 W LED, 80 CRI, 3500 K

Candela Curves



Angle	Mean CP	Lumens
0	620	
5	610	58
10	589	
15	561	157
20	521	
25	471	217
30	420	
35	375	235
40	327	
45	242	188
50	163	
55	113	106
60	82	
65	63	64
70	48	
75	37	38
80	24	
85	11	11
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	25	5.5'
6'	17	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	28.6	3.58
6'	18.7	2.35
7'	13.3	1.68
8'	11.2	1.40
9'	8.9	1.12

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	98	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	70	65	77	64	74	63	72	63	60
5	82	71	63	57	70	57	68	56	66	56	53
6	76	65	57	51	64	51	62	51	61	50	48
7	71	59	52	46	59	46	57	46	56	45	43
8	67	55	47	42	54	42	53	42	52	41	39
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	432	40.2%
0-40	667	62.1%
0-60	961	89.5%
0-90	1074	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 959GFR

Output lumens:	1074 lms	Efficacy:	80.8 lm/w
Spacing Criterion:	1.1	CCT[3]:	3500 K
Beam Angle:	82°	CRI:	80 min
Input Watts[2]:	13.3 W		

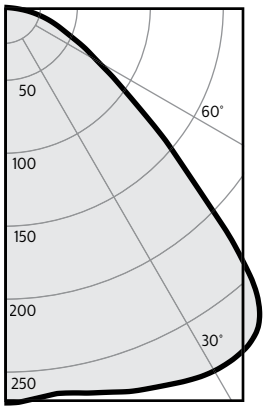
1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

S4S & S6S SlimSurface LED

4" and 6" square aperture surface mount downlight

S4S840K7 • 10W LED, 80CRI, 4000K

Candela Curves



Angle	Mean CP	Lumens
0	271	
5	269	26
10	269	
15	273	78
20	279	
25	284	133
30	288	
35	287	179
40	272	
45	212	163
50	148	
55	103	94
60	74	
65	55	55
70	41	
75	30	30
80	19	
85	6	8
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	11	7.5'
6'	8	9.0'
7'	6	10.5'
8'	4	12.0'
9'	3	13.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	31.9	0.40
6'	20.9	0.26
7'	15.0	0.19
8'	12.5	0.16
9'	10.0	0.13

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	110	106	102	99	104	97	100	94	96	91	87
2	101	94	88	83	92	82	89	80	85	78	74
3	93	84	76	70	82	70	79	68	76	67	64
4	86	75	67	60	73	60	71	59	69	58	56
5	79	67	59	53	66	52	64	52	62	51	49
6	73	61	52	46	60	46	58	46	56	45	43
7	68	55	47	41	54	41	53	41	51	40	38
8	63	50	42	37	50	37	48	36	47	36	34
9	59	46	38	33	46	33	45	33	43	33	31
10	55	43	35	30	42	30	41	30	40	30	28

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	237	30.9%
0-40	416	54.3%
0-60	674	87.9%
0-90	766	100.0%

CRI and CCT adjustment factors

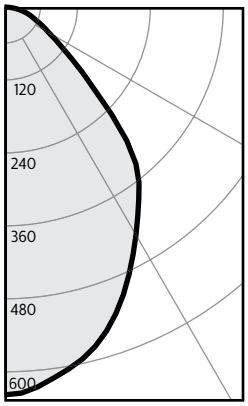
90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 947GFR

Output lumens:	766 lms	Efficacy:	84.2 lm/w
Spacing Criterion:	1.5	CCT[3]:	4000K
Beam Angle:	99°	CRI:	80 min
Input Watts[2]:	9.1W		

S6S840K10 • 14W LED, 80CRI, 4000K

Candela Curves



Angle	Mean CP	Lumens
0	637	
5	626	59
10	604	
15	577	162
20	535	
25	484	223
30	432	
35	385	241
40	336	
45	249	193
50	168	
55	116	109
60	84	
65	65	66
70	49	
75	38	39
80	25	
85	11	12
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	25	5.5'
6'	18	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	9.9'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	30.3	3.68
6'	19.8	2.41
7'	14.1	1.72
8'	11.8	1.44
9'	9.4	1.15

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	111	107	103	100	105	98	100	95	97	93	88
2	103	96	90	85	94	84	90	82	87	80	77
3	95	86	79	74	85	73	82	72	79	71	68
4	88	78	70	65	77	64	74	63	72	63	60
5	82	71	63	57	70	57	68	56	66	56	53
6	76	65	57	51	64	51	62	51	61	50	48
7	71	59	52	46	59	46	57	46	56	45	43
8	67	55	47	42	54	42	53	42	52	41	39
9	63	51	43	38	50	38	49	38	48	38	36
10	59	47	40	35	47	35	46	35	45	35	33

Room Cavity Ratio

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	443	40.2%
0-40	685	62.1%
0-60	987	89.5%
0-90	1103	100.0%

CRI and CCT adjustment factors

90 CRI 2700K = 84%
80 CRI 2700K = 100%
80 CRI 3000K = 100%
80 CRI 3500K = 105%
80 CRI 4000K = 109%

Report[1]: 960GFR

Output lumens:	1103 lms	Efficacy:	82.9 lm/w
Spacing Criterion:	1.1	CCT[3]:	4000K
Beam Angle:	82°	CRI:	80 min
Input Watts[2]:	13.3W		

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

Philips Lighting North America Corporation
200 Franklin Square Drive, Somerset, NJ 08873
Tel. 855-486-2216

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008

VANITY

6570

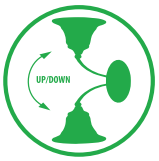
- Brushed Nickel or Chrome
- Satin Etched Glass
- 2 Sockets
- 14.5" W x 7.5" H x 6" Ext
- Lamp Sold Separately

6572

- Brushed Nickel or Chrome
- Satin Etched Glass
- 3 Sockets
- 24.5" W x 7.5" H x 6" Ext
- Lamp Sold Separately

6574

- Brushed Nickel or Chrome
- Satin Etched Glass
- 4 Sockets
- 34.5" W x 7.5" H x 6" Ext
- Lamp Sold Separately



6560

- Brushed Nickel or Chrome
- Frosted Glass
- 2 Sockets
- 14.25" W x 9.875" H x 6.125" Ext
- Lamp Sold Separately

6562

- Brushed Nickel or Chrome
- Frosted Glass
- 3 Sockets
- 24.5" W x 7.5" H x 6.125" Ext
- Lamp Sold Separately

6564

- Brushed Nickel or Chrome
- Frosted Glass
- 4 Sockets
- 34.5" W x 7.5" H x 6.125" Ext
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC6570	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6570	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6570	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC6572	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6572	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6572	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC6574	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6574	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6574	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC6560	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6560	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6560	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC6562	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6562	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6562	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC6564	E26	INC	60	B11018	120	BN, CH	27K	645	97	750
CFL6564	GU24	CFL	13	LVC-13-SP-27K	120	BN, CH	27K	800	82	10,000
LED6564	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000

CEILING

4676

- Brushed Nickel, or Chrome
- Opal Glass
- 1 Socket
- Ceiling mount
- 12.25" W x 4.75" H
- Lamp Sold Separately

4677

- Brushed Nickel, or Chrome
- Opal Glass
- 2 Sockets
- Ceiling mount
- 15.25" W x 5.25" H
- Lamp Sold Separately

4678

- Brushed Nickel, or Chrome
- Opal Glass
- 3 Sockets
- Ceiling mount
- 18" W x 7" H
- Lamp Sold Separately

4802

- Chrome
- Opal Glass
- 1 Socket
- Ceiling mount
- 10" W x 5" H
- Lamp Sold Separately

4804

- Chrome
- Opal Glass
- 2 Sockets
- Ceiling mount
- 12" W x 5" H
- Lamp Sold Separately

4806

- Chrome
- Opal Glass
- 3 Sockets
- Ceiling mount
- 15.5" W x 5.5" H
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC4676	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4676	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4676	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4677	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4677	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4677	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4678	E26	INC	60	B11018	120	BN, CH	27K	550	97	750
CFL4678	GU24	CFL	13	LVC-13-SP-27	120	BN, CH	27K	800	82	10,000
LED4678	GU24	LED	7	B1006	110-277	BN, CH	27K	450	82	40,000
INC4802	E26	INC	60	B11018	120	CH	27K	550	97	750
CFL4802	GU24	CFL	13	LVC-13-SP-27	120	CH	27K	800	82	10,000
LED4802	GU24	LED	7	B1006	110-277	CH	27K	450	82	40,000
INC4804	E26	INC	60	B11018	120	CH	27K	550	97	750
CFL4804	GU24	CFL	13	LVC-13-SP-27	120	CH	27K	800	82	10,000
LED4804	GU24	LED	7	B1006	110-277	CH	27K	450	82	40,000
INC4806	E26	INC	60	B11018	120	CH	27K	550	97	750
CFL4806	GU24	CFL	13	LVC-13-SP-27	120	CH	27K	800	82	10,000
LED4806	GU24	LED	7	B1006	110-277	CH	27K	450	82	40,000

PENDANTS

2110

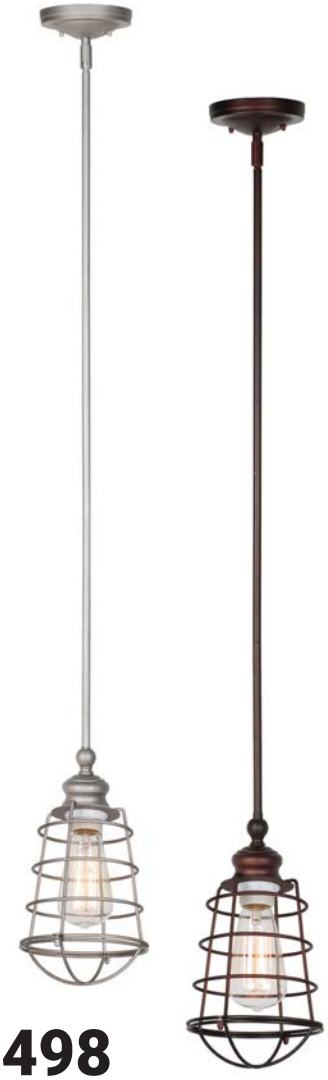
- Alabaster glass diffuser
- Brushed Nickel or Oil Rubbed Bronze
- Ceiling mount
- 3 Sockets
- 20" W x 20" H
- Lamps Sold Separately

2626

- Alabaster glass diffuser
- Brushed Nickel or Oil Rubbed Bronze
- Ceiling mount
- 3 Sockets
- 24" W x 24" H
- Lamps Sold Separately

2112

- Alabaster glass diffuser
- Brushed Nickel or Oil Rubbed Bronze
- Ceiling mount
- 3 Sockets
- 28" W x 28" H
- Lamps Sold Separately



2498

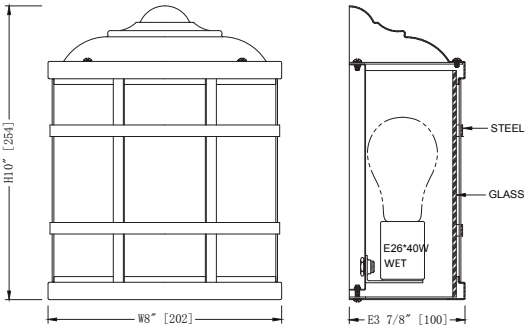
- Metal Cage around lamp
- Brushed Nickel or Oil Rubbed Bronze
- Ceiling mount
- 1 Socket
- 6.4" W x 50.8" OAH
- Lamps Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC2110	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2110	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2110	GU24	LED	7	B2107	110-277	BN, ORB, CH	27K	450	82	40,000
INC2112	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2112	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2112	GU24	LED	7	B2107	110-277	BN, ORB, CH	27K	450	82	40,000
INC2626	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
CFL2626	GU24	CFL	13	LVC-13-SP-27	120	BN, ORB, CH	27K	800	82	10,000
LED2626	GU24	LED	7	B2107	110-277	BN, ORB, CH	27K	450	82	40,000
INC2498	E26	INC	60	B11018	120	BN, ORB, CH	27K	550	97	750
LED2498	E26	LED	7	B6054	110-277	BN, ORB, CH	27K	800	80	25,000
LED2626	GU24	LED	7	B1006	110-277	BN, ORB, CH	27K	450	82	40,000

OUTDOOR

5954

- Black, Bronze, Oil Rubbed Bronze, Silver, White
- White Opal Glass
- 1 Socket
- 8" W x 10" H x 3.875" Ext
- Lamp Sold Separately



5956

- Black or White
- White Opal Glass
- 1 Socket
- 6.15" W x 10" H x 7.3" Ext
- Lamp Sold Separately

5957

- Black or White
- White Opal Glass
- 1 Socket
- 8" W x 12.25" H x 9.5" Ext
- Lamp Sold Separately

5958

- Black or White
- White Opal Glass
- 1 Socket
- 9" W x 14.5" H x 10.5" Ext
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC5954	E26	INC	60	B11018	120	BK, ORB, SI, WH	27K	645	97	750
CFL5954	GU24	CFL	13	LVC-13-SP-27	120	BK, ORB, SI, WH	27K	600	82	10,000
LED5954	GU24	LED	7	B1006	110-277	BK, ORB, SI, WH	28K	450	75	40,000
INC5956	E26	INC	60	B11018	120	BK, WH	27K	645	97	750
CFL5956	GU24	CFL	13	LVC-13-SP-27	120	BK, WH	27K	600	82	10,000
LED5956	GU24	LED	7	B1006	110-277	BK, WH	28K	450	75	40,000
INC5957	E26	INC	60	B11018	120	BK, WH	27K	645	97	750
CFL5957	GU24	CFL	13	LVC-13-SP-27	120	BK, WH	27K	600	82	10,000
LED5957	GU24	LED	7	B1006	110-277	BK, WH	28K	450	75	40,000
INC5958	E26	INC	60	B11018	120	BK, WH	27K	645	97	750
CFL5958	GU24	CFL	13	LVC-13-SP-27	120	BK, WH	27K	600	82	10,000
LED5958	GU24	LED	7	B1006	110-277	BK, WH	28K	450	75	40,000

BAR PENDANTS

2803

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Tuscan Scavo Glass
- Ceiling mount
- 1 Socket
- 6.25" W x 5" H
- Lamp Sold Separately

2802

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- Alabaster Glass
- Ceiling mount
- 1 Socket
- 6" W x 5" H
- Lamp Sold Separately

2138

- Available finish: Brushed Nickel, or Chrome
- Hand blown art glass
- Ceiling mount
- 1 Socket
- 4.5" W x 6.5" H
- Lamp Sold Separately

2805

- Brushed Nickel, Chrome, or Oil Rubbed Bronze
- White Opal Glass
- Ceiling mount
- 1 Socket
- 6.25" W x 5" H
- Lamp Sold Separately

Item Number	Socket	Lamp Type	Wattage	Recommended Lamp	Voltage	Avail. Finishes	Kelvin	Lumens	CRI	Rated Hours
INC2802	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL2802	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED2802	GU24	LED	7	B1006	110-277	BN, CH, ORB	27K	450	82	40,000
INC2803	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL2803	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED2803	GU24	LED	7	B1006	110-277	BN, CH, ORB	27K	450	82	40,000
INC2805	E26	INC	60	B11018	120	BN, CH, ORB	27K	550	97	750
CFL2805	GU24	CFL	13	LVC-13-SP-27	120	BN, CH, ORB	27K	800	82	10,000
LED2805	GU24	LED	7	B1006	110-277	BN, CH, ORB	27K	450	82	40,000
INC2138	T4	INC	50	B14800	120	BN, CH, ORB	35K	430	82	2,000
LED2138	GU10	LED	7	B1066	110-277	BN, CH, ORB	27K	450	82	40,000

Lighting Dimmer, 1-Pole, Toggle, White

LUTRON | **Zoro #: G2441932** | Mfr #: AY-600PH-WH

No Reviews | **Write the First Review**

Rated

In stock

$13.06 /ea

Item ships from Zoro in **1 business day.**

qty 1

Add to Cart

Orders over $50.00 ship FREE. Details.
Standard ground shipping.

Details:

Description/Special Features: Toggle On/Off and Mini Slider to Dim or Brighten
Switch Type: 1-Pole
Lamp Type: Incandescent/Halogen

View Full Product Details

Guides:
Technical Guide

Appliance Cut Sheets

Below are cut sheets for appliances to be used/installed for Family Partners Care Home project. Cut sheets are labeled per tag from Appliance Schedule from Architectural Drawings. Appliances are subject to change and this list may not be final.

APPLIANCE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER
A1	Refrigerator	Whirlpool	WSR57R18DM
A2	Freezer	Whirlpool	WSZ57L18DM
	Trim Kit for A1 & A2	Whirlpool	SKT60M
B	Surface Cooktop	GE	PHP9036DJBB
C	30” Double Wall Oven	Kitchenaid	KODE500ESS
D	Dishwasher w/ HD Grinder	Maytag	MDB8989SHZ
E (Option 1)	15” Icemaker with Drain Pump	Kitchenaid	KUIX335ESS
E (Option 2)	15” Icemaker w/o Drain Pump	Kitchenaid	KUIX535ESS
F	Upright Freezer	Whirlpool	WZF34X18DW
G	Front Load Washer	Whirlpool	WFW6620HW
H	Front Load Gas Dryer	Whirlpool	WGD6620HW
	Pedestals for G & H each	Whirlpool	WFP2715HW
J	30” Warming Drawer	Kitchenaid	KOWT100ESS
K	36” Ventless Hood	Whirlpool	UXT5236BDS
L	Undercounter Refrigerator	GE	GCE06GSHSB

A1

Item # 658933 Model #
WSR57R18DM

Whirlpool SideKick 17.7-cu ft Freezerless Refrigerator (Monochromatic Stainless Steel)

$1,484.00 Was $1,649.00

- Whirlpool SideKicks® freezerless refrigerator upgrades your kitchen while keeping your foods a…
- Convenient, up-front electronic temperature controls let you choose the ideal temperature for whatever…
- 4 humidity-controlled crispers help preserve the freshness of your fruits and vegetables

A2

Item # 624984 Model #
WSZ57L18DM

Whirlpool SideKick 17.7-cu ft Frost-free Upright Freezer (Monochromatic Stainless Steel)

$1,484.00 Was $1,649.00

PLUS, up to $25 in Rebates >

- 17.7-cu ft capacity gives you plenty of space to stock up so you'll always have food on hand
- Stainless steel exterior is durable and easy to clean
- 4 freezer shelves, 4 door shelves and a slide-out basket keep your foods organized and easily…

Item # 666841 Model # SKT60M

Whirlpool Freezerless Refrigerator Trim Kit (Stainless Steel)

$449.00 Was $499.00

- This trim kit for the Whirlpool SideKicks refrigerator and freezer pair provides a custom look that gives…
- Combined with the new technology and styling of the SideKicks pair, the trim kit provides a built-in…
- It is easy to install and easy to maintain

B

GE APPLIANCES

Home / Products / Cooktops

1 of 4



GE Profile™ Series 36" Built-In Touch Control Induction Cooktop

PHP9036DJBB

4.4 (296) Write a review

$2029 MSRP

Approx. Product Dimensions (WxHxD) (in.)
36 in x 4 5/8 in x 20 3/8 in

Cutout Dimensions (WxD) (in.)
33-7/8 x 19-1/8

C

Item # 668300 Model #
KODE500ESS

KitchenAid Self-Cleaning Convection Double Electric Wall Oven (Stainless Steel) (Common: 30-in; Actual: 30-in)

$2,799.00 Was $3,599.00

- Even-Heat™ True Convection oven (both ovens)- provides consistent heating and even cooking on …
- Temperature probe (both ovens) - allows accurate measurement of internal temperature of meats,…
- Professionally - inspired design - features satin textured handles, precision touch controls, a…

Manufacturer Color/Finish

Stainless Steel

D

Item # 1083902 **Model #**
MDB8989SHZ

Maytag 48-Decibel Hard Food Disposer Built-in Dishwasher (Fingerprint-Resistant Stainless Steel) (Common: 24 Inch; Actual: 23.875-in) ENERGY STAR

$679.00 Was $899.00

PLUS, up to $700 in Rebates >

- The 4-blade stainless steel chopper disintegrates the food particles that come off your dishes so the…
- PowerBlast™ cycle removes stuck-on food with high pressure spray jets, increased temperature a…
- Run the long PowerDry option for decreased humidity and 60% better drying without using rins…

Manufacturer Color/Finish

Fingerprint Resistan

E (Option 1)

KitchenAid Ice Cube Maker - 14.9" - Stainless Steel - KUIX305ESS

$1,747.00

KitchenAid Ice Cube Maker - 14.9" - Stainless Steel

**** Sale Price "C" Grade Model is $1547.00***

This automatic ice maker uses Clear Ice Technology to create a uniform cube size and shape that is ideal...

Read More

Brand:
KitchenAid
Model Number:
KUIX305ESS
Condition:
New
Category:
Refrigerators
Depth:
25.60
Width:
14.90
Height:
34.40
Availability:
In Stock

E (Option 2)

KitchenAid

15'' Automatic Ice Mak

4.1 (122) Write a review

Model: KUIX505ESS

Color: Stainless Steel

MSRP: $2,799.00

F

Item # 637399 | **Model #** WZF34X18DW

Whirlpool 17.7-cu ft Frost-free Reversible Door Upright Freezer (White)

$ 579.00 | **Qty:** 1

G

Item # 1216365 Model #
WFW6620HW

Whirlpool Load & Go 4.5-cu ft High Efficiency Stackable Front-Load Washer (White) ENERGY STAR

$1,049.00

- Load & Go™ XL dispenser - skip adding detergent to every load
- Get enough space to handle larger loads with 4.5 cu-ft capacity
- Help remove everyday stains with the Steam Clean option

H

Item # 1216367 Model #
WGD6620HW

Whirlpool 7.4-cu ft Stackable Gas Dryer with Steam Cycles (White) ENERGY STAR

$1,149.00

- Get room to handle large loads with 7.4 cu-ft capacity
- Create customized cycles in a few touches with Intuitive Controls
- Help keep wrinkles from setting with continued tumbling with steam

Item # 1171555 Model #
WFP2715HW

Whirlpool 15.5-in x 27.0-in Universal laundry pedestal with Storage Drawer

$239.00 Was $289.00

- Raise your Laundry Pair for easier loading and unloading
- Optional laundry pedestal also provides space-saving storage for detergent, fabric softener, dryer…
- Storage for detergent, fabric softener, dryer sheets and other supplies

J

Item # 484078 Model #
KOWT100ESS

KitchenAid Warming Drawer (Stainless Steel) (Common: 30-in; Actual: 29.75-in)

$1,394.00 Was $1,549.00

- KitchenAid warming drawer with a 1.5-cu ft capacity allows you to warm, slow cook or prepare bread...
- Custom-control technology with 3 distinct zones takes the guesswork out of selecting the correct...
- Sensor temperature control prevents food from drying out in the warming drawer

K

Item # 617195 Model #
UXT5236BDS

Whirlpool 36-in Convertible Stainless Steel Undercabinet Range Hood (Common: 36 Inch; Actual: 35.938-in)

$369.00

- Fit system eliminates measuring, cutting and filler strips for a perfect fit every time - the fit system…
- Premium hood sound levels - this hood features the quiet operation of 7 sones at the hood's highest…
- Hidden vent - this sleek and stylish hidden vent matches almost every modern or traditional kitchen

L

Item # 773350 **Model #**
GCE06GSHSB

GE 5.6-cu ft Built-In/Freestanding Mini Fridge Freezer Compartment (Stainless Steel)

$386.00 Was $429.00

PLUS, up to $25 in Rebates >

- 5.6 cu ft capacity compact refrigerator with freezer is perfect for small spaces, dorm…
- Built-in or freestanding capability allows for flexible installation undercounter
- Interior lighting - makes it easy to see what is inside

Medical Equipment Cut Sheets

Below are cut sheets for medical equipment to be used/installed for Family Partners Care Home project. Cut sheets are labeled per tag from Medical Equipment Schedule from Architectural Drawings. Manufacturers for individual equipment are subject to change and this list may not be final.

MEDICAL EQUIPMENT SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER
MED-1	Patient Lift	Hoyer	HOY-ADVANCE-E
MED-2	Storage Cart	Phoenix LTC	108DSP

MED-1

Hoyer Advance-E 340 Patient Lift

SKU#: HOY-ADVANCE-E

$2,799.99 Earn **47** Rewards Points

Payments as low as $130/month

Features :

- No-tools folding design and easy to transport
- Over-sized handle make it easier to maneuver
- stands unaided when being stored
- Easy to use foot-pad to open/close base
- Lightweight, aluminum construction
- Intuitive Push Pad assists with initiating movement
- Swan Neck style legs allow Advance to get closer to the resident

SPECS

Max Lifting Capacity:	340 lbs.
Lifting Range:	15.3" to 66.5"
Lifts Patient From Floor:	Yes
Overall Product Weight:	69 lbs.
Disassembles for Transport/Storage:	Yes
Power Operated Base Available:	No
Base Width Open:	42.5"
Base Width Closed:	26.3"
Internal Base Width Open:	39.3"
Internal Base Width Closed:	22.4"
Furniture Clearance Needed:	4.5"
Base Height:	4.5"
Overall Height:	73"
Overall Length:	51"
Front Caster Size:	3"
Front Caster Size:	4"

Shipping Dimensions

Shipping Type:	Ground
Weight:	85 lbs
Dimensions:	31" (L) x 41" (W) x 22" (H)

WARRANTY

PHOENIX LTC
LONG TERM CARE MEDICATION AND STORAGE CARTS

855.MED.CART
(633.2278)

PHOENIX SERIES
108DSP

REMOVABLE PLASTIC TOP
Easy to remove and clean. Dark gray finish hides unsightly pen marks.

PULL-OUT WORK TRAY
It is large enough to actually use.

QUICK CHANGE PANELS & DRAWER FRONTS
Refurbish your cart with new panels and extend the life of your asset.

ERGONOMIC HANDLES
Easy to clean and do not catch clothing.

REMOVABLE WASTE CONTAINER
Now with easy install hang holes.

CORNER BUMPERS
Easy to clean with no crevasses to trap dirt.

MED CASTERS
Casters designed specifically for the medical industry. The nylon construction wears better than steal and operates quieter. The wheel cover keeps out dirt , hair and mop strings.

108DSP SPECIFICATIONS

CARD CAPACITY: 108

WORK HEIGHT: 43.5" (110.49cm)

FINISH COLORS:

Neutral Crème | Natural Oak | Carmine Cherry | Manhatten Walnut

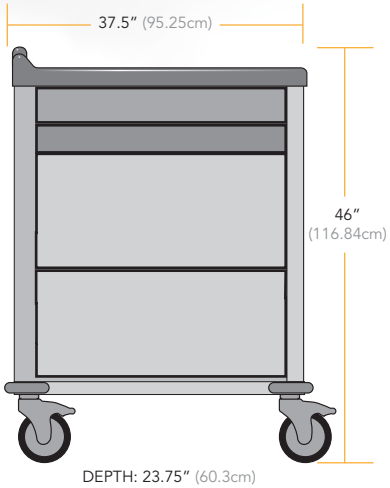
NOTE: Homewood finishes are available at additional cost and include Maui Granite tops and drawer knobs. See next page for more details.

SECURITY: Cart...Best/Delta
NARC...Dispill Box/
Armstrong Lock

HANDLES: Brushed aluminum

DRAWERS
30.25"w x 18"d (76.84 x 45.75cm):

- (1) 4"h (7.6cm) | 5 dividers/6 subdividers
- (1) 3"h (7.62cm) | 5 dividers/6 subdividers
- (2) 13.5"h (34.29cm) | dispill divider kit



CONSTRUCTION FEATURES

DURABLE WELDED FRAME
Modular and lightweight aluminum components are securely attached with screws into durable threaded steel.

SELF-CLOSING DRAWER SLIDES
Ensures that drawers are in proper position for locking.

INTERCHANGEABLE DRAWERS
Allows different drawer sizes to easily exchange positions.

DOUBLE SLIDE FOR LARGE DRAWERS
Allows the bottom drawer to handle the weight of bulk and liquid medication, as well as the "kick close."

ERGOTRON LX® POLE ADAPTER COMPATIBLE
This sturdy adapter connects directly to the frame with zero top-space wasted.

ROUNDED LOCK PIN OPENINGS
Never allows the pin to make contact with any sharp edges that cause premature wear.

QUICK-CHANGE LOCK
It allows easy access to two internal screws that release the lock.

Exteriors and Finishes

Neutral Crème

Durable Base Model

The cream textured finish is a durable powder-coated vinyl that is baked on at 400 F°. This finish releases grime and pen marks keeping it looking new through years of service. For cleaning, we recommend using a water-based biodegradable product such as Motsenbocker's Lift Off that may be found at most hardware stores. The removable top can withstand years of punishment and lifts off easily for cleaning. Also, the dark gray color hides the pen marks and stains that light-colored tops just seem to emphasize. The drawers are equipped with tough and attractive brushed aluminum handles to withstand years of pulling and tugging.

Homewood Collection

Simulated wood finishes

You may choose to upgrade your cart to our distinctive Homewood Collection of finishes that are at home in any décor. This attractive furniture finish is adorned on the functional, durable and light-weight Phoenix frame. Choose from four handsome finishes; Natural Oak, Carmine Cherry or Manhattan Walnut. To complete the appearance we mount a striking Maui-granite finished top that is not just beautiful but also functional. It is formed with an edged lip that catches pens and paper from dropping to the floor. The finishing touch is your choice of the brushed aluminum handles or a more furniture styled, brushed nickel pull handle.

Natural Oak

Carmine Cherry

Manhattan Walnut

Toilet Accessories Cut Sheets

Below are cut sheets for toilet accessories to be used/installed for Family Partners Care Home project. Cut sheets are labeled per tag from Toilet Accessories Schedule from Architectural Drawings. Toilet Accessories are subject to change and this list may not be final.

TOILET ACCESSORIES SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	MODEL NUMBER
1	18” Grab Bar	Bobrick	B-5806x18
2	24” Grab Bar	Bobrick	B-5806x24
3	36” Grab Bar	Bobrick	B-5806x36
4	42” Grab Bar	Bobrick	B-5806x42
5	48” Grab Bar	Bobrick	B-5806x48
6	Sanitary Napkin Disposal	Bobrick	B-270
7	18”x30” Frameless Mirror	Bobrick	B-1556
8	Soap Dispenser	Bobrick	B-2111
9	Toilet Tissue Dispenser	Bobrick	B-6867
10	ADA Shower Seat	Bobrick	B-5181
11	Mop & Broom Holder	Bobrick	B-223x24
12	Adjustable Shower Curtain Rod	----------TBD----------	
13	Curtain	----------TBD----------	

BOBRICK

Technical Data

1¼" (32mm) DIAMETER STAINLESS STEEL GRAB BARS WITH SNAP FLANGE

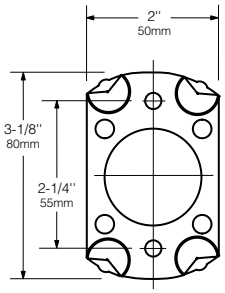
B-5806 SERIES

Specify Finish Required:

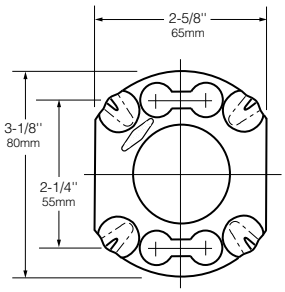
- ❑ Satin finish
- ❑ Satin finish with peened gripping surface; add suffix .99 to model number

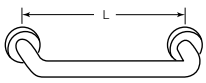
1 B-5806x18 (Vertical)
2 B-5806x24 (Horizontal)
3 B-5806x36 (Horizontal)
4 B-5806x42 (Horizontal)
5 B-5806x48 (Horizontal)

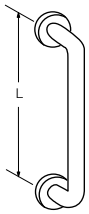
End Mounting Flange



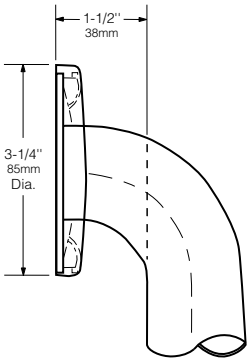
Intermediate Flange

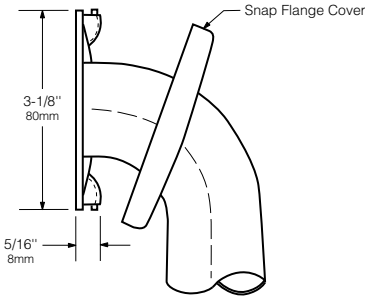


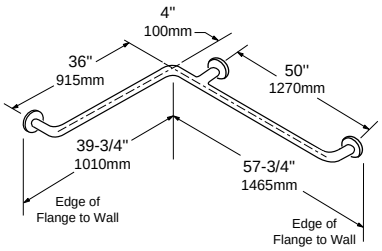




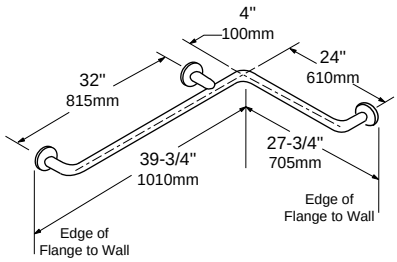
HORIZONTAL	VERTICAL
B-5806 x 18, 24, 30, 36, 42, 48	



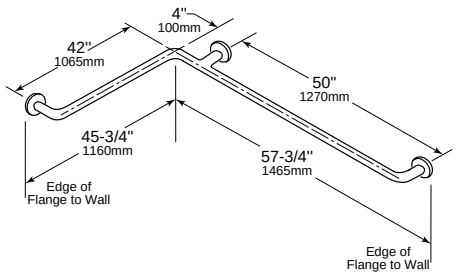




TWO-WALL TUB / SHOWER COMPARTMENT BAR
B-5837



HORIZONTAL TUB / SHOWER COMPARTMENT BAR 24 x 36
B-58616



TWO-WALL TOILET COMPARTMENT BAR 42 x 54
B-5897

continued . . .

Rev. 8/10/18S/B Printed in U.S.A.

MATERIALS:

Grab Bar — 18-8, Type-304, 18-gauge (1.2mm) stainless steel tubing with satin-finish. 1-1/4" (32mm) outside diameter. Ends are heliarc welded to concealed mounting flanges. Clearance between the grab bar and wall is 1-1/2" (38mm).

Concealed Mounting Flanges — 18-8, Type-304, 11-gauge (3.2mm) thick, stainless steel plate; end flanges 2" x 3-1/8" (50 x 80mm) with holes for attachment to wall. Intermediate flanges 2-5/8" x 3-1/8" (65 x 80mm) wide x 3-1/8" (80mm) diameter.

Snap Flange Covers — 18-8, Type-304, 22-gauge (0.8mm) drawn stainless steel with satin-finish. 3-1/4" (85mm) diameter x 5/8" (16mm) deep. Each cover snaps over mounting flange to conceal mounting screws.

STRENGTH:

Bobrick grab bars that provide 1-1/2" (38mm) clearance from wall can support loads in excess of 900 pounds (408kg) if properly installed. Other grab bar configurations can support loads in excess of 250 pounds (113kg) if properly installed, complying with accessible design (including ADAAG in the U.S.A.) for structural strength.

Safety Warning: Grab bars are no stronger than the anchors and walls to which they are attached and, therefore, must be firmly secured in order to support the loads for which they are intended. To avoid potential injury, the building owner or maintenance personnel should remove the grab bar from service if the grab bar is not adequately secured to wall or if there is any observed damage to the welds.

INSTALLATION:

Provide concealed anchor device or backing as specified or required in accordance with local building codes before wall is finished. Fasten concealed mounting flanges to anchor device or backing with at least two screws opposing each other in each flange. Snap flange covers over each mounting flange to conceal mounting screws. Concealed anchor devices and mounting screws are not included with Bobrick grab bars and must be specified as an accessory.

For Grab Bars with an Intermediate Flange(s), Pull Snap-Flange Covers away from mounting flanges. Place grab bar in desired mounting location. Use intermediate flange as a template to mark location of mounting screws at intermediate flange only. Mark screw locations at the center of the slot in the middle of the double-keyhole shaped mounting holes (2) in the intermediate flange. Remove grab bar from wall. Drive the intermediate flange mounting screws into wall at marked locations. **Note:** Make sure to leave a space of just over 1/8" (3.17mm) between the underside of the screw head and the wall. Install grab bar on the wall by placing the round ends of the intermediate flange double-keyhole shaped mounting holes over the mounting screws (2) are located in the middle of the flange slots. Install the mounting screws into the wall at the end flanges and secure tightly. Tighten the mounting screws at the intermediate flange. Press all snap-flange covers into place to conceal mounting flanges.

Note: Recommend use of 1/4" or #14 sheet metal or wood screws to install Intermediate Flange. #12 screws may also be used.

Important Notes:

1. **Mounting Kits —** Bobrick offers a mounting kit for installing grab bars; **one Bobrick mounting kit is required for each flange.**

Mounting Kit No.	Description
252-30	Consists of (3) #14 x 2½" Type-304 stainless steel, Phillips round-head, sheet-metal screws.

2. **Grab Bar Fastener —** Bobrick offers a grab bar fastening system that secures all Bobrick grab bar series; **one Bobrick fastener is required for each flange.** Install grab bar without backing in wall requires minimum 5/8" (16mm) thick painted or tiled drywall.

WingIt™ Fastener No.	Description
251-4	Consists of 10–32 x 5/16" round-head, Phillips 18/8 stainless steel screws. (1) WingIt grab bar fastener.

3. **Optional Anchor Device —** Bobrick grab bar anchor device includes stainless steel machine screws to be used for attaching grab bars to anchors. **one Bobrick concealed anchor device is required for each flange.**

Optional Anchor No.	Description
2583	Anchor for 3/4" to 1" (19-25mm) panel 1 anchor required for each flange.
2586	Anchor for 1/2" to 1" (13mm) panel 1 anchor required for each flange.

SPECIFICATION:

Grab bar shall be Type-304 stainless steel with satin-finish. Grab bar shall have 18-gauge (1.2mm) wall thickness and 1-1/4" (32mm) outside diameter. Clearance between the grab bar and wall shall be 1-1/2" (38mm). Concealed mounting flanges shall be 11-gauge (3.2 mm) thick stainless steel plate, 2" x 3-1/8" (50 x 80mm), and equipped with at least two screw holes for attachment to wall. Flange covers shall be 22-gauge (0.8mm) stainless steel, 3-1/4" (85mm) diameter, and shall snap over mounting flanges to conceal mounting screws and/or WingIt fasteners. Ends of grab bar shall pass through concealed mounting flanges and be heliarc welded to form one structural unit. Grab bar shall comply with accessible design (including ADAAG in the U.S.A.) for structural strength.

Grab Bar shall be Model _____ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; and Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

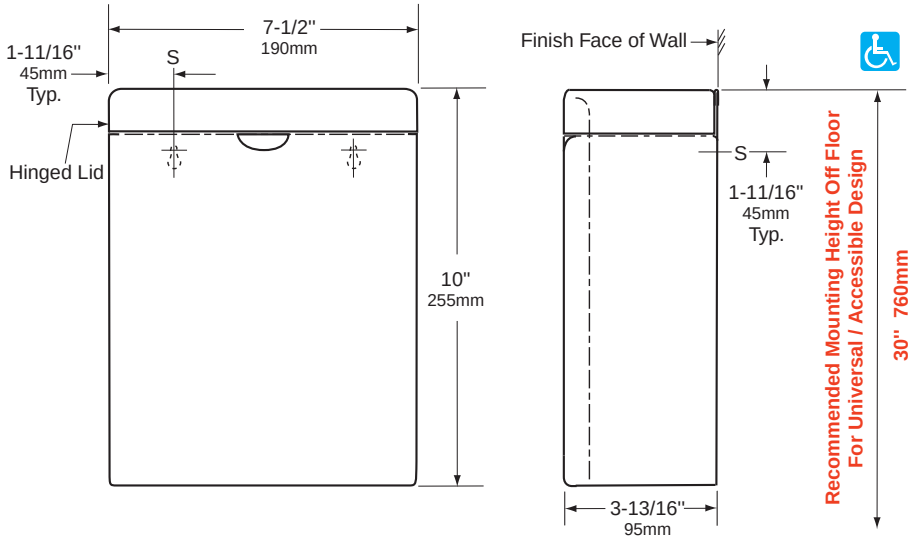
B-5806 r8/10/18S/B Printed in U.S.A.

BOBRICK

Technical Data

ConturaSeries® SURFACE-MOUNTED SANITARY NAPKIN DISPOSAL

B-270



MATERIALS:

Container — 18-8, type-304, 22-gauge (0.8mm) stainless steel. All-welded construction. Exposed surfaces have satin finish. Integral finger depression for opening cover. Front of container has same degree of arc as front of cover and other Bobrick ConturaSeries washroom accessories. Radius on side edges of container match corners and edges of cover and other ConturaSeries accessories.

Cover — 18-8, type-304, 22-gauge (0.8mm) stainless steel with satin finish. Drawn, one-piece, seamless construction. Front of cover has same degree of arc as front of container and other Bobrick Contura Series washroom accessories. Radius on corners and edges of cover match side edges of container and other Contura Series accessories. Secured to container with a full-length stainless steel piano-hinge.

OPERATION:

Cover flips up for disposal of sanitary napkins and for servicing container.

INSTALLATION:

For partitions with particle-board or other solid core, secure with two #8 x 3/4" (4.2 x 19mm) sheet-metal screws (not furnished) at all points indicated by an *S*, or provide through-bolts, nuts, and washers.

For hollow-core metal partitions, provide solid backing into which sheet-metal screws can be secured. If two units are installed back-to-back, then provide threaded sleeves and machine screws for the full thickness of partition.

For masonry walls, provide fiber plugs or expansion shields for use with sheet-metal screws, or provide 3/16" (5mm) toggle bolts or expansion bolts.

For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws.

SPECIFICATION:

Surface-mounted sanitary napkin disposal shall be type-304 stainless steel with all-welded construction; exposed surfaces shall have satin finish. Front of sanitary napkin disposal shall have same degree of arc and match other Bobrick ConturaSeries accessories in the washroom. Radius on corners and edges of sanitary napkin disposal shall complement other Bobrick ConturaSeries washroom accessories. Cover shall be drawn, one-piece, seamless construction and secured to container with a full-length stainless steel piano-hinge. Container shall have integral finger depression for opening cover.

Surface-Mounted Sanitary Napkin Disposal shall be Model B-270 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

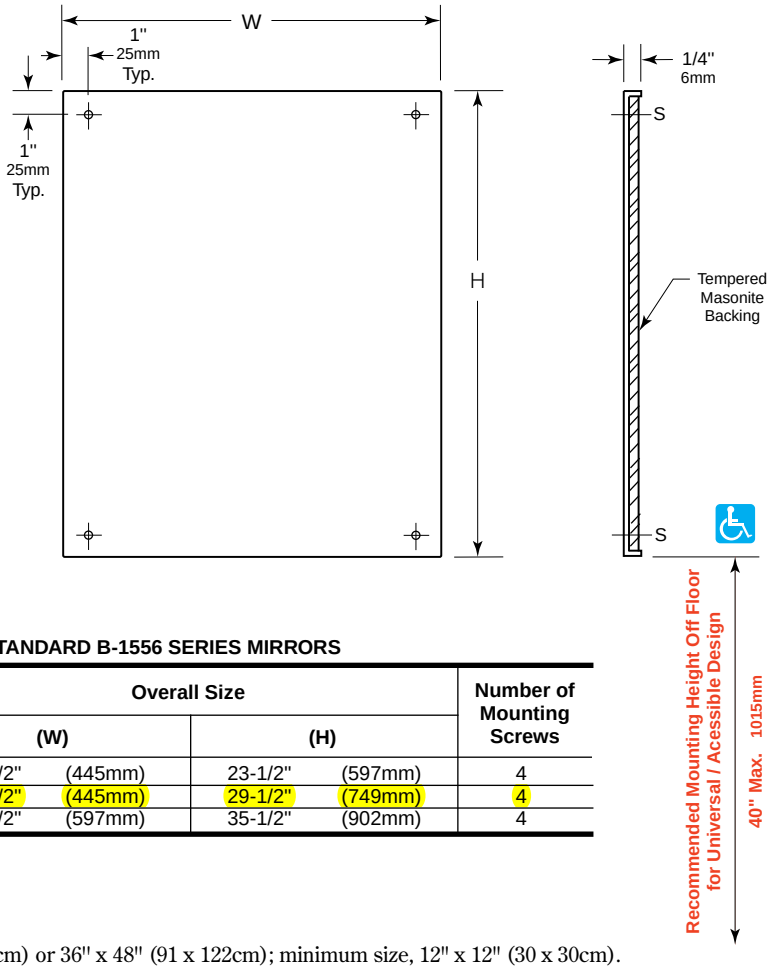
Revised 10/18/13 Printed in U.S.A.

BOBRICK

Technical Data

FRAMELESS STAINLESS STEEL MIRROR

B-1556 SERIES



STANDARD B-1556 SERIES MIRRORS

Model No.	Overall Size (W)		Overall Size (H)		Number of Mounting Screws
B-1556 1824	17-1/2"	(445mm)	23-1/2"	(597mm)	4
B-1556 1830	17-1/2"	(445mm)	29-1/2"	(749mm)	4
B-1556 2436	23-1/2"	(597mm)	35-1/2"	(902mm)	4

Designer's Notes:

1. Special-order sizes available on request.
2. Maximum size mirror available, 48" x 36" (122 x 91cm) or 36" x 48" (91 x 122cm); minimum size, 12" x 12" (30 x 30cm).
3. Overall width and height of custom 1556-series mirrors will be 1/2" (12mm) smaller than dimension specified.

MATERIALS:

Mirror — 18-8, type-304, 20 gauge (0.9mm) stainless steel polished to a No. 8 mirror finish. Mirror has 1/4" (6mm) return.

Backing — 1/4" (6mm) thick tempered masonite.

INSTALLATION:

Mount mirror on wall with four #8 oval head screws, furnished by manufacturer, at points indicated by an *S*. For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws furnished. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws furnished, or provide 1/8" (3mm) toggle bolts or expansion bolts.

SPECIFICATION:

Frameless stainless steel mirror shall be 18-8, type-304, 20-gauge (0.9mm) stainless steel polished to a No. 8 mirror finish. Mirror shall have 1/4" (6mm) return concealing 1/4" (6mm) tempered masonite backing. Four corner countersunk holes provide flush fit of mounting screws with mirror surface.

Mirror shall be Model B-1556 _____ (insert width and height) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario: Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

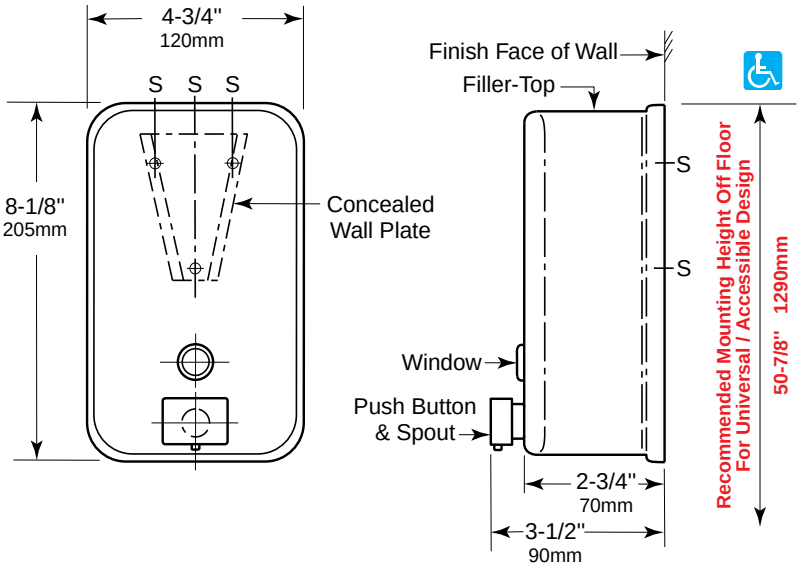
B-1556 Rev. 4/01/16R/A, S/A Printed in U.S.A.

BOBRICK

Technical Data

ClassicSeries® SURFACE-MOUNTED SOAP DISPENSER

B-2111



MATERIALS:

Container — 18-8, Type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Body is drawn, one-piece, seamless construction. Back plate has mounting bracket attached. Furnished with concealed wall plate. Equipped with a clear acrylic refill-indicator window and a locked, hinged stainless steel lid for top filling. Capacity: 40-fl oz (1.2-L).

Valve — Black molded plastic push button and spout. Soap head-holding mushroom valve. Stainless steel spring. U-packing seal and duckbill. Antibacterial-soap-resistant plastic cylinder.

OPERATION:

Corrosion-resistant valve dispenses commercially marketed all-purpose hand soaps. To prevent corrosion of the tank, use only chloride-free pH-neutral liquid soaps. Valve is operable with one hand, without tight grasping, pinching, or twisting of the wrist, and with less than 5 pounds of force (22.2 N) to comply with accessible design guidelines (including ADAAG in the U.S.A.). Window indicates when refill is required. The locked, hinged lid opens for top filling only with special key provided. Concealed, vandal-resistant mounting.

INSTALLATION:

Secure wall plate to the wall with three sheet-metal screws, furnished by manufacturer, at points indicated by an *S*. Slide mounting bracket of container down onto wall plate and secure unit with furnished locking-screw. For plaster or dry wall construction, provide concealed backing to comply with local building codes and secure with sheet-metal screws furnished. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws furnished, or provide 1/8" (3mm) toggle bolts or expansion bolts.

Note: Surface-mount the dispenser plumb and true with valve 6" (150mm) to right or left of lavatory center. Provide 4" (100mm) minimum clearance from the lid to the underside of any horizontal projection. Push buttons should be located 44" (1120mm) maximum above the finish floor.

SPECIFICATION:

Surface-mounted soap dispenser shall be Type-304 stainless steel with satin-finish. Corrosion-resistant valve shall dispense commercially marketed all-purpose hand soaps, non-iodine based soaps and do not use alcohol based sanitisers. To prevent corrosion of the tank, use only chloride-free pH-neutral liquid soaps. Valve shall be operable with one hand and with less than 5 pounds of force (22.2 N) to comply with accessible design guidelines (including ADAAG in the U.S.A.). Container shall be equipped with a clear acrylic refill-indicator window; a locked, hinged stainless steel lid for top filling; and shall have a capacity of 40-fl oz (1.2-L). Unit shall have concealed, vandal-resistant mounting.

Surface-Mounted Soap Dispenser shall be Model B-2111 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

Revised 1/22/18 Printed in U.S.A.

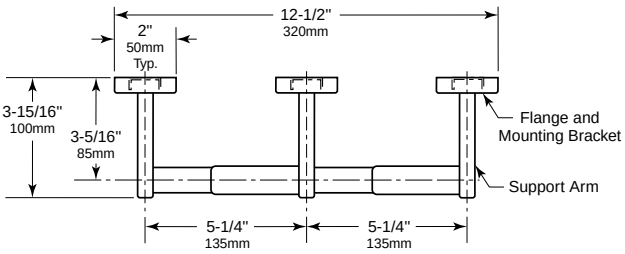
BOBRICK

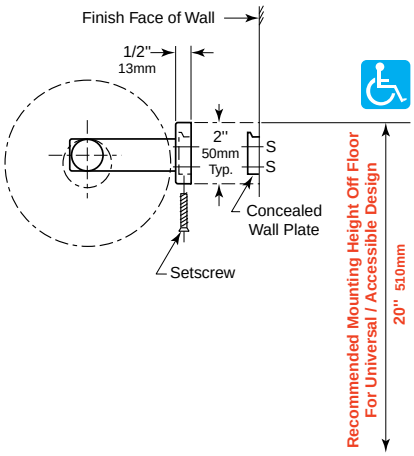
Technical Data

DOUBLE-ROLL TOILET TISSUE DISPENSER

B-686
B-6867

Specify Model Required: ☐ Model B-686 Bright polished stainless steel
☐ Model B-6867 Satin-finish stainless steel





MATERIAL:

Flanges and Support Arms (3) — 18-8, type-304, 22-gauge (0.8mm) stainless steel. Concealed, 16-gauge (1.6mm) stainless steel mounting bracket is welded inside each flange. Secured to wall plate with setscrew.

Concealed Wall Plates (3) — 18-8, type-304, 16-gauge (1.6mm) stainless steel.

Spindles (2) — Chrome-plated plastic. Equipped with heavy-duty internal springs.

Designer's Note: Theft-resistant spindles, which are removable only with special key provided, are available as optional accessories. To specify, add part no. 283-604.

INSTALLATION:

To remove concealed wall plates from back of flanges and mounting brackets, loosen setscrews. Mount each wall plate with prongs at top; secure with sheet-metal screws furnished by manufacturer at points indicated by an *S*. Engage mounting brackets onto prongs of wall plate, then secure into position by tightening setscrews at bottom of flanges.

Note: Center-to-center of concealed wall plates must be within 1/16" (1.6mm) of dimension shown.

For partitions with particle-board or other solid core: Secure with sheet-metal screws furnished by manufacturer or provide through-bolts, nuts, and washers.

For hollow-core metal partitions: Provide solid backing into which the furnished sheet-metal screws can be secured. If two units are installed back-to-back, then provide threaded sleeves and machine screws for the full thickness of partition.

For masonry walls: Provide fiber plugs or expansion shields for use with sheet-metal screws furnished by manufacturer, or provide 1/8" (3mm) toggle bolts or expansion bolts.

For plaster or dry wall construction: Provide concealed backing to comply with local building codes, then secure the unit with sheet-metal screws furnished.

SPECIFICATION:

Double-roll toilet tissue dispenser shall be type-304 stainless steel with _____ (insert one: bright polished or satin) finish. Unit shall accommodate two standard-core toilet paper rolls up to 5-1/2" (140mm) diameter (1800 sheets). Flanges shall be equipped with concealed, 16-gauge (1.6mm) stainless steel mounting brackets that are secured to concealed stainless steel wall plates with stainless steel setscrews. *Spindles shall be equipped with a heavy-duty internal spring.

**To specify theft-resistant spindles as an optional accessory, add to specification:* Theft-resistant spindles shall be removable only with special key provided.

Double-Roll Toilet Tissue Dispenser shall be Model _____ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

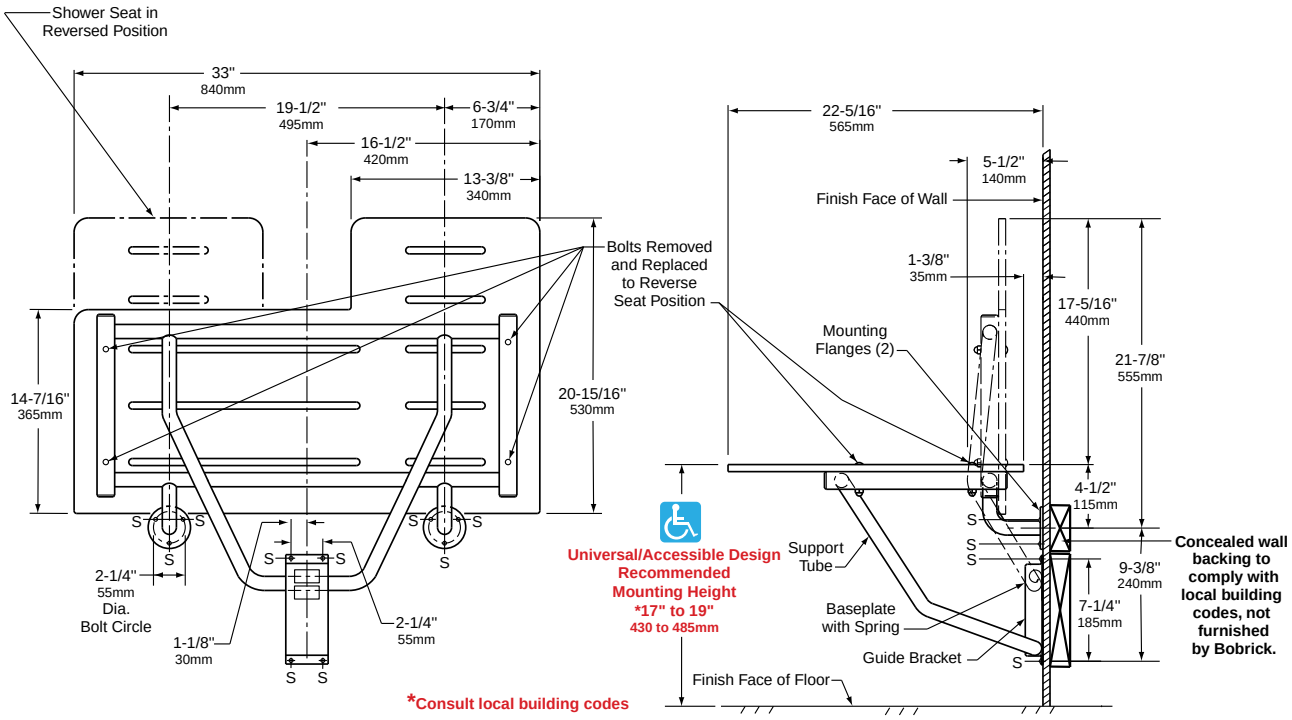
Revised 5/23/16 Printed in U.S.A.

BOBRICK

Technical Data

REVERSIBLE SOLID PHENOLIC FOLDING SHOWER SEAT

B-5181



Left-Hand Seat Shown

MATERIALS:

Seat — One-piece, 1/2" (13mm) thick, solid phenolic with matte-finish, antique white-colored, melamine surfaces and black phenolic-resin core — cannot delaminate. Integral slots for water drainage. Secured to frame with stainless steel carriage bolts and acorn nuts. Reversible for left- or right-hand installation in the field.

Frame — 18-8, Type-304, stainless steel with satin finish. 16-gauge (1.6mm), 1-1/4" (30mm) square tubing and 18-gauge (1.2mm), 1" (25mm) diameter seamless tubing.

Mounting Flanges (2) — 18-8, Type-304, 3/16" (5mm) thick stainless steel with satin finish. 3" (75mm) diameter with three mounting screw holes.

Baseplate — 18-8, Type-304, heavy-gauge stainless steel.

Spring — 17-7, Type-301, 24-gauge (0.6mm) stainless steel. Spot-welded to baseplate.

Guide Bracket — 18-8, Type-304, 16-gauge (1.6mm) stainless steel with satin finish.

continued . . .

r1/8/18 Series E Printed in U.S.A.

OPERATION:

Shower seat folds up against wall when not in use. The spring at the top of the baseplate holds seat in upright position until released by pulling the top of the seat away from the wall. Bobrick Folding Shower Seats are not spring-loaded. The seats do not return automatically to the upright position after use. Mounting flanges and guide bracket allow for varying mounting heights and leave the floor clear for easy cleaning. Nonporous solid phenolic seat has slots to permit water to drain, does not splinter or require oiling, and will not support growth of bacteria. Slotless round-head carriage bolts and acorn nuts provide additional safety to user. Bobrick shower seats, when properly installed, have sufficient strength to support 360 lbs., (163 kg) complying with accessible design guidelines (including ADAAG in the U.S.A.).

INSTALLATION:

Installation to Wall. Secure unit to wall at points indicated by an *S*, with the two mounting flanges located at top and the baseplate and guide bracket below. The bottom of the support tube must be positioned within the baseplate and guide bracket before they are secured to wall. Mounting height of shower seat must comply with local building codes.

For stud walls, provide concealed backing to comply with local building codes and secure with #14 x 2-1/2" (6.3 x 65mm) stainless steel sheet-metal screws furnished by manufacturer.

For prefabricated shower stalls, provided adequate backing by the shower stall manufacturer. Secure with #14 x 2-1/2" (6.3 x 65mm) stainless steel mounting screws furnished by manufacturer. Bobrick offers a mounting kit for installing shower seats. For additional mounting kits please order 252-30. One mounting kit is required for each flange.

For masonry walls, provide fiber plugs or expansion shields for use with furnished screws, or provide 1/4" (6mm) toggle bolts or expansion bolts.

INSTALL SAFETY PLATE TO WALL:

Safety Plate is to be mounted on wall near Shower Seat in order to properly advise users of the Seat's weight restrictions. Correct installation of the Safety Plate will ensure that the Shower Seat meets A.N.S.I. Standards.

Permanently affix Safety Plate to wall on either side of the Shower Seat at a minimum height of 30" (760mm). If mounted above Seat, the Plate must be high enough so that it is not covered when Seat is on the up position. Mounting screws (4) are recommended, but double-sided tape on rear of Plate may be used for very smooth, non-porous surfaces.

SAFETY WARNING: Shower seats are no stronger than the anchors and walls to which they are attached and must be firmly secured in order to support the loads for which they are intended. Consult and comply with local building codes. To avoid potential injury, the building owner or maintenance personnel should remove the shower seat from service if the shower seat is not adequately secured to the wall. Unit shall support static loads of up to 360 lbs (163 kg) when properly installed and used. To avoid potential seat malfunction, DO NOT use seat if weight exceeds 360 lbs (163 kg).

How to Reverse Shower Seat. The solid phenolic shower seat surface may be positioned on the stainless steel frame with the longer 20-15/16" (530mm) side on the left or right. The repositioning of the shower seat surface may be done on the frame before installation on the wall, or after the unit has been installed.

If repositioning the seat surface before installation of the unit on the wall; place entire unit on a horizontal surface; remove carriage bolts and acorn nuts (4); turn seat over reversing position of long and short ends; reinstall carriage bolts and acorn nuts.

If repositioning the seat surface after the unit has been installed on the wall; lower folding seat to horizontal position; remove carriage bolts and acorn nuts (4); turn seat over reversing position of long and short ends; reinstall carriage bolts and acorn nuts.

Important Notes: Support square frame tubes when loosening and removing carriage bolts and acorn nuts; the square frame tubes may separate from the round tubes that support the solid phenolic shower seat. If square and round frame tubes come apart when solid phenolic shower seat is removed, reassemble by placing round frame tube ends in the round holes on the sides of the square frame tubes.

SPECIFICATION:

Reversible folding shower seat shall have a frame constructed of Type-304, satin-finish stainless steel that consists of 16-gauge (1.6mm), 1-1/4" (30mm) square tubing and 18-gauge (1.2mm), 1" (25mm) diameter seamless tubing. Seat shall be one-piece, 1/2" (13mm) thick, solid phenolic with matte-finish, antique white-colored, melamine surfaces, and black phenolic-resin core; secured to frame with stainless steel carriage bolts and acorn nuts. Seat shall be reversible for left- or right-hand installation in the field. Shower seat shall be equipped with two 3" (75mm) diameter mounting flanges constructed of Type-304, 3/16" (5mm) thick, satin-finish stainless steel; a guide bracket constructed of Type-304, 16-gauge (1.6mm), satin-finish stainless steel; and a spring constructed of Type-301, 24-gauge (0.6mm) stainless steel that is spot-welded to a baseplate of Type-304, heavy-gauge stainless steel. Seat shall remain in upright position when not in use. Shower seat shall comply with accessible design guidelines (including ADAAG in the U.S.A.).

Reversible Folding Shower Seat shall be Model B-5181 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

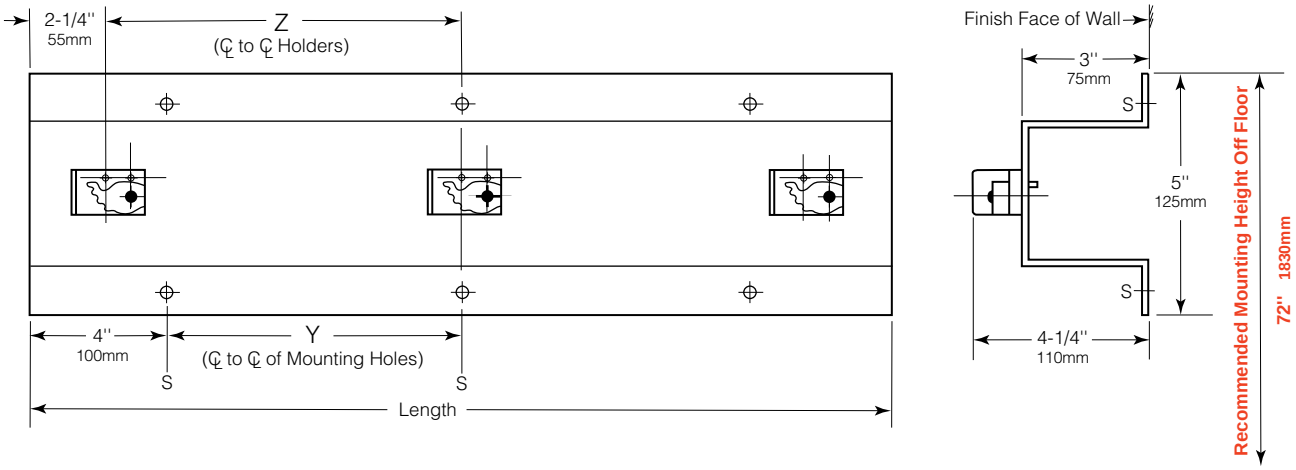
B-5181 S/E r1/8/18 Printed in U.S.A.

BOBRICK

Technical Data

STAINLESS STEEL MOP AND BROOM HOLDER

B-223



STANDARD STOCK SIZES

Model No.	Length	No. of Holders	Dim. Y	No. of Mtg. Holes	Dim. Z
B-223 x 24	24" (610mm)	3	8" (205mm)	6	9-3/4" (250mm)
B-223 x 36	36" (915mm)	4	14" (355mm)	6	10-1/2" (265mm)

MATERIALS:

Mounting Base — 18-8, type-304, 22-gauge (0.8mm) stainless steel with satin finish.

Mop and Broom Holders — Spring-loaded rubber cam holders with anti-slip coating. Powder coated steel retainers.

OPERATION:

Surface-mounted holder is designed to keep mops and brooms away from wall. Spring-loaded rubber cam holders accommodate handles from 7/8" to 1-1/4" (20 to 30mm) diameter.

INSTALLATION:

Secure unit to wall with six sheet-metal screws, furnished by manufacturer, at points indicated by an *S*. For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with stainless steel mounting screws. For other wall surfaces, provide fiber plugs or expansion shields for use with stainless steel mounting screws, or provide 1/8" (3mm) toggle bolts or expansion bolts.

SPECIFICATION:

Mop and broom holder shall be type-304 stainless steel with satin finish. Unit shall be _____ (insert length) long with _____ (insert number) spring-loaded rubber cam holders.

Stainless Steel Mop and Broom Holder shall be Model _____ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

Rev. 6/30/15 R/A, S/B Printed in U.S.A.